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Kellard Sessions Review Memo, dated December 13, 2018		
Cover letter, JMC Site Development Consultants, dated November 29, 2018		
Referral Review, Westchester County Planning Board, dated November 30, 2018		
Architectural drawings, Sullivan Architecture, dated November 30, 2018		
Comment letter, R. W. Bandy, dated August 22, 2018		
Engineering drawings and site details, JMC, dated November 29, 2018		
Cover letter and traffic study, JMC Site Development Consultants, dated November 16, 2018		
EAF, Part 1, JMC Site Development Consultants, dated January 19, 2018		
Phase 1 Site Assessment, SSG-BARCO, dated June 8, 2016		
Chain of Title Report, EDR, May 25, 2016		
EAF, Part 2, uncited, undated		
Expanded Env'l Assessment, JMC Site Development Consultants, dated November 29, 2018		
Phase 2 Subsurface Investigation Report, SSG-BARCO, dated June 21, 2016		
Spill Records, DEP, closed 5/14/2009 and 2/01/2012		
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KULANGARA RESIDENCE, 25 FAIRMOUNT ROAD, GOLDENS BRIDGE	**Cal #09-18PB**	
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Survey, Ward Carpenter Engineers, dated September 20, 2018		**953**
Emails between Suzanne Whalen, Esq. and Thomas Antonecchia, Esq., dated September 10, 2018		**954**
Title Insurance Policy, First American Title Insurance Co., dated June 10, 1987		**955**
POTZ RESIDENCE, 1178 ROUTE 35, SOUTH SALEM	**Cal# 1-18WV**	
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Survey, Albert Trimarchi, dated March 30, 1966		**963**
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MENDOLA RESIDENCE, 1320 ROUTE 35, SOUTH SALEM	**Cal# 3-18WV**	
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LORDI RESIDENCE, 2 CHEYENNE COURT, KATONAH	**Cal #04-18WV**	
No new materials		**-**
WACCABUC COUNTRY CLUB WASH FACILITY/BULK STORAGE, 90 MEAD STREET, WACCABUC	**Cal #08-18WP**	**Cal #81-18WP**
Kellard Sessions Review Memo, dated December 13, 2018	**Cal#10-18SW**	**976**
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Survey, Bunney Associates, dated March 21, 2004		**985**
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PlantStar Chemical Mix and Recapture Systems, undated		**1011**
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Advanced Washwater Recycle Systems, CARBTROL Corporation; dated March 7, 2002		**1017**
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Cover letter, Insite Engineering, dated November 29, 2018	**Cal #20-17WP**	**1019**
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Mitigation Plan, Tim Millers Associates, dated August 2, 2018		**1059**
REQUESTS FOR RELAXATION ON SEPTIC REQUIREMENTS PER PLANNING BOARD RESOLUTIONS AND WETLAND PERMITS	**Various Cal #s**	
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OAKRIDGE COMMONS, 450 OAKRIDGE COMMON, SOUTH SALEM	**Cal #08-17PB**	**Cal#16-17SW**
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TOWN OF LEWISBORO
Westchester County, New York

Planning Board
79 Bouton Road
South Salem, New York 10590

Tel: (914) 763-5592
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AGENDA

Tuesday, December 18, 2018

79 Bouton Road, South Salem
Justice Court

Note: Meeting will start at 7:30 p.m. and end at or before 11:00 p.m.

I. PUBLIC HEARINGS

Cal #06-18PB
King Lumber, Meadow Street, Goldens Bridge, NY 10526, Sheet 4A, Block 11111, Lot 2, Sheet 4A, Block 11113, Lots 7 & 9, Sheet 4A, Block 12035, Lot 5 (King Lumber Realty and King Meadow Street Realty – owners of record) - Application for Site Plan Review for lumber yard and U-Haul rental facility.

Cal #56-18WP, #09-18SW
Hidden Point Farms, 153 Silver Springs Road, Wilton, CT 06897, Sheet 48, Block 10057, Lot 46 (Hidden Point Farms, LLC, owner of record) – Application for a pool, related structures, utilities and construction access road.

II. SKETCH PLAN REVIEW

Cal #10-17PB
Mercedes Benz of Goldens Bridge, 321 Main Street, Goldens Bridge, NY 10526, Sheet 4E, Block 11135, Lots 1, 2, 3, 4, 6 & 7 (Charisma Holding Corp., owner of record); Sheet 4E, Block 11135, Lot 5 (Spencemorg, LLC., owner of record) and Sheet 4E, Block 11137, Lot 42 (Robert Castelli, owner of record) – Application for Site Plan Review for additions to existing auto showroom and service buildings, additional parking spaces and construction of a parking garage.

III. WAIVER OF SITE DEVELOPMENT PLAN

Cal #09-18PB
Kulangara Residence, 25 Fairmount Road, Goldens Bridge, NY 10526, Sheet 7I, Block 11127, Lot 2 (Kulangara Trust, owner of record) – Application for Waiver of Site Development Plan for an existing deck.

IV. WETLAND VIOLATIONS

Cal #01-18WV, #76-18WP
Potz Residence, 1178 Route 35, South Salem, NY 10590, Sheet 27, Block 10805, Lot 29 (Siegfried and Karen Potz, owner of record)

Cal #03-18WV, #70-18WP
Mendola Residence, 1320 Route 35, South Salem, NY 10590, Sheet 39, Block 10543, Lot 39 (Anthony and Anne Marie Mendola, owners of record)

Cal #04-18WV
Lordi Residence, 2 Cheyenne Court, Katonah, NY 10536, Sheet 10, Block 11152, Lot 140 (William and Marianne Lordi, owners of record)

V. SITE DEVELOPMENT PLANS

Cal #08-18PB, #81-18WP, #10-18SW
Waccabuc Country Club, 90 Mead Street, Waccabuc NY 10597, Sheet 22, Block 10802, Lots 61 & 37 (Waccabuc Country Club, owner of record) – Application for Waiver of Site Development Plan Procedures for a wash facility and bulk storage.

Cal #10-15 PB, Cal #20-17WP, Cal #5-17SW
Wilder Balter Partners, NY State Route 22, Goldens Bridge, NY 10526, Sheet 5, Block 10776, Lots 19, 20 & 21 (Property Group Partners, LLC, owner of record) – Application for a 42-unit MF development on a ±35.4-acre parcel.

VI. REQUESTS FOR RELAXATION ON SEPTIC REQUIREMENTS PER PLANNING BOARD RESOLUTIONS AND WETLAND PERMITS

VII. CORRESPONDENCE

Correspondence from Oakridge Commons Daycare Center, for posting of bond for paving and landscape plantings.

VIII. DISCUSSION

2019 Meeting Dates and Deadlines

Press Requests

Distribution of late materials to the Planning Board and its consultants

Adjournments and Wetland Violations

Hardcopies of Materials

IX. MINUTES OF January 16, 2018; MINUTES OF February 27, 2018; MINUTES OF March 20, 2018; MINUTES OF March 27, 2018; MINUTES OF April 17, 2018, MINUTES OF June 19, 2018, MINUTES OF July 21, 2018 MINUTES OF August 14, 2018; MINUTES OF August 21, 2018; MINUTES OF September 11, 2018; MINUTES OF October 16, 2018 and MINUTES OF November 20, 2018.

STORMWATER POLLUTION PREVENTION PLAN

MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22
TOWN OF LEWISBORO, NEW YORK

Applicant/Operator/ **Celebrity Motor Car, LLC**
130 Route 10
Whippany, NJ 07981

Owner: **c/o Mr. Tom Maoli**
973-727-7016

Prepared by:

JMC Project 16124

Dated: 09/06/2018
Revised: 11/29/2018

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APPENDICES

FIGURES	DESCRIPTION
1.	Site Location Map
2.	Impervious Coverage Areas

APPENDIX	**DESCRIPTION**
A.	Existing Hydrologic Calculations
B.	Proposed Hydrologic Calculations
C.	NYSDEC Stormwater Sizing Calculations
D.	Soil Boring and Infiltration Test Results
E.	Temporary Erosion and Sediment Control Inspection and Maintenance Checklist Permanent Stormwater Practice Operation, Maintenance and Management Inspection Checklist
F.	Maintenance Agreement
G.	Drawings DA-1 "Existing Drainage Area Map" DA-2 "Proposed Drainage Area Map"

REFERENCED DRAWINGS FOR SWPPP DESIGN AND DETAILS

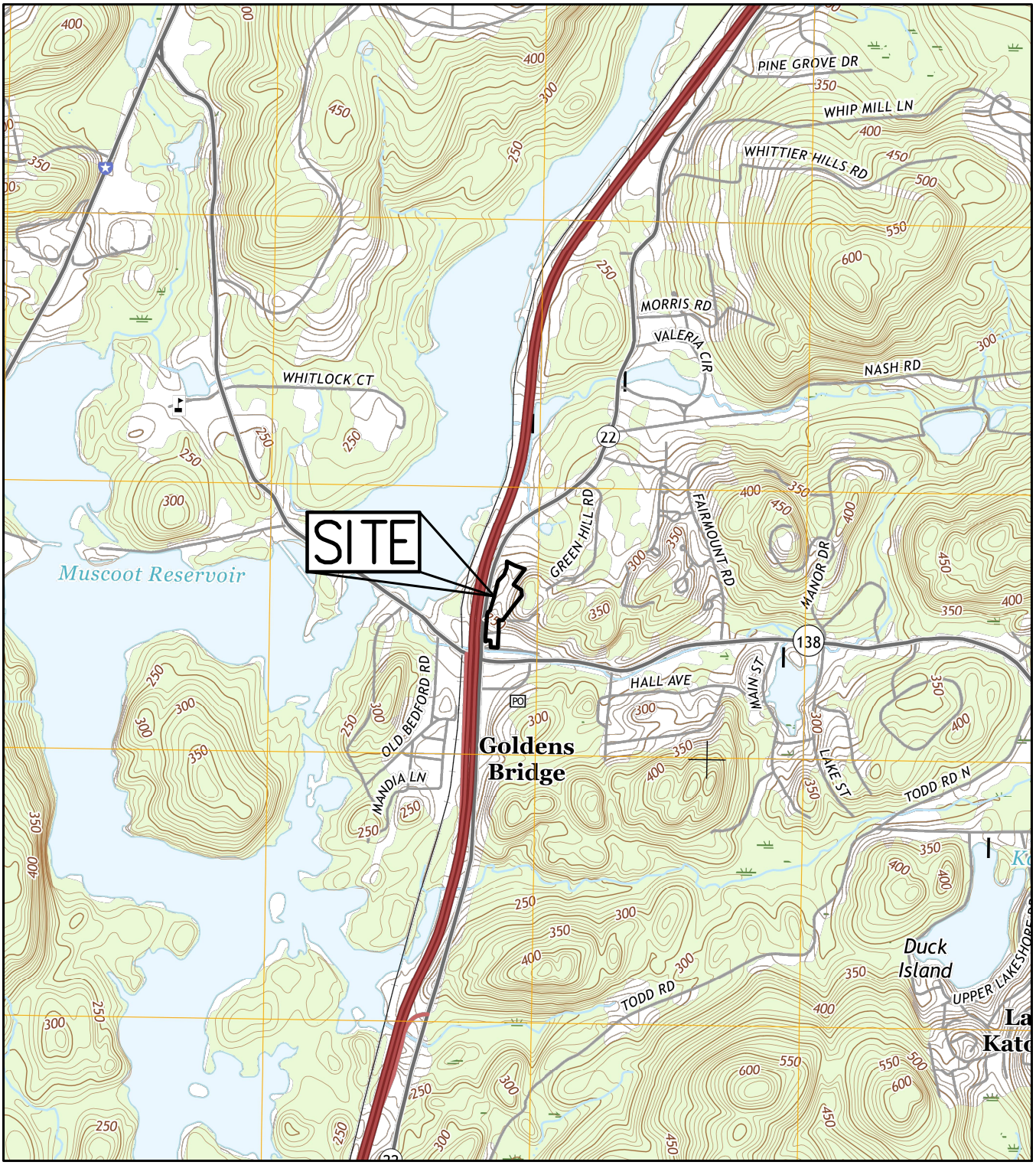
1. JMC SITE PLANS

Dwg. No.	Title
C-000	"Cover Sheet"
C-010	"Existing Conditions Plan"
C-020	"Demolition Plan"
C-030	"Tree Removal Plan"
C-100	"Layout Plan"
C-101	"Parking Plan"
C-200	"Grading & Drainage Plan"
C-201	"Site Sections Plan"
C-300	"Utilities Plan"
C-313	"Sanitary Force Main Profiles"
C-314	"Road Profiles"
C-401	"Phase 1 Plan"
C-402	"Phase 2 Plan"
C-403	"Phase 3 Plan"
C-700	"Vehicle Delivery Truck Plan"
C-701	"Fire Truck Plan"
C-702	"Fire Truck Plan"
C-900	"Construction Details"
C-901	"Construction Details"
C-902	"Construction Details"
C-903	"Construction Details"
C-904	"Construction Details"
C-905	"Construction Details"
C-906	"Construction Details"
C-907	"Construction Details"
L-100	"Landscaping Plan"

2. Sullivan Architecture, P.C. Building Drawings:

A1.01	"Service Building Proposed Lower Level"
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"
A2.03	"Showroom Building Proposed Lower Level"
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"
A2.05	"Showroom Building Proposed Upper Level"
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"
A2.07	"Showroom Building Roof Plan"

A3.0 "Showroom Building Proposed Exterior Elevations"
A3.01 "Service Building Exterior Elevations"



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

SITE LOCATION MAP

DATE: 09/04/2018 — JMC PROJECT: 16124

FIGURE: 01 — SCALE: 1" = 2,000'

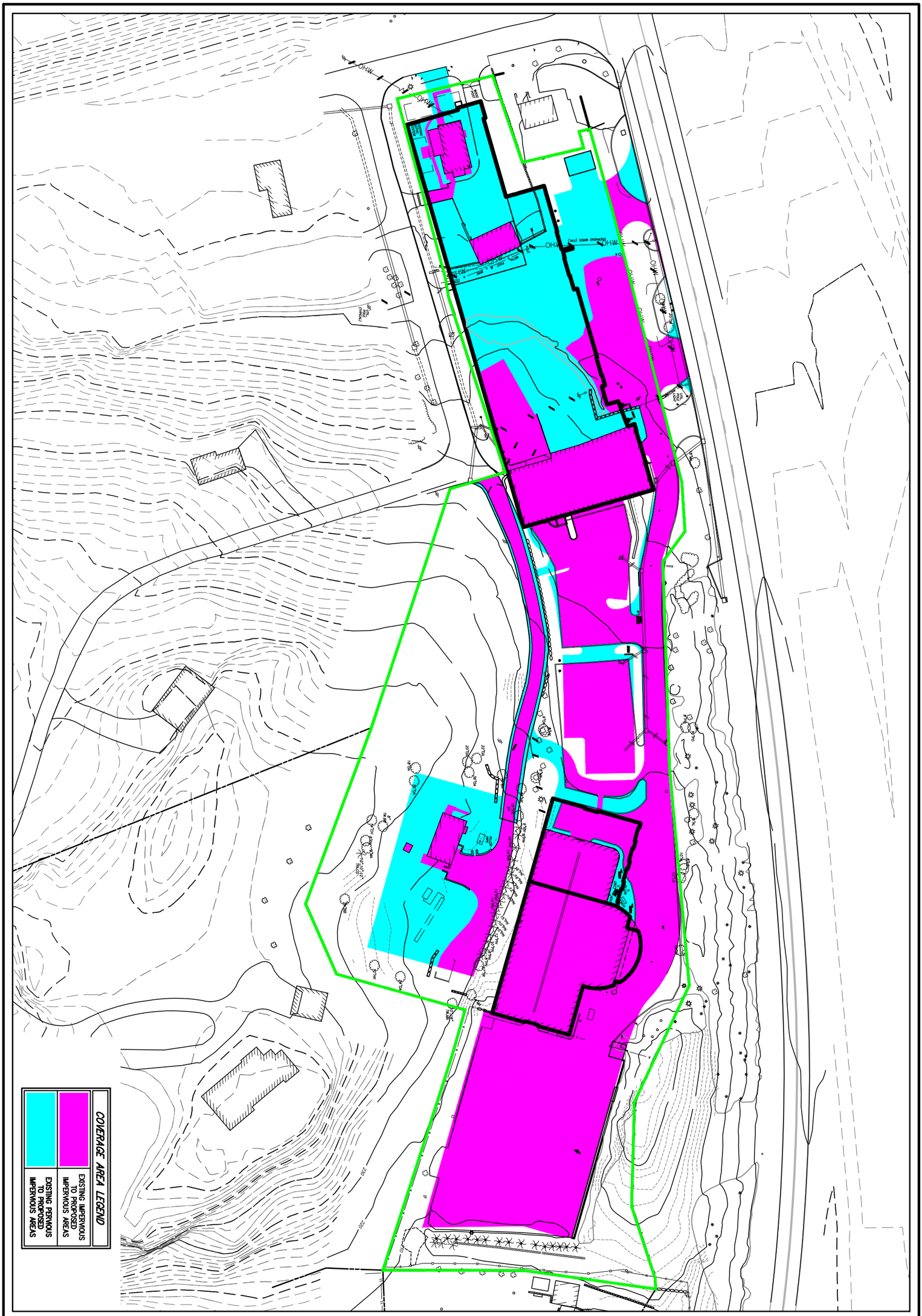
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16124–SLM.dwg; SLM.tab



MERCEDES BENZ OF GOLDENS BRIDGE

NYS ROUTE 22 — TOWN OF LEWISBORO, NY

IMPERVIOUS COVERAGE AREAS

DATE: 09/06/2018 — JMC PROJECT: 16124

FIGURE: 2 — SCALE: 1"=80'

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I. INTRODUCTION

This Stormwater Pollution Prevention Plan has been prepared for the 4.966-acre Mercedes Benz of Goldens Bridge site, located in the Town of Lewisboro, Westchester County, New York (hereinafter referred to as the "Site"). The site is bordered by residences to the north and east, Anderson Road to the south, and Route 22 to the west. The proposed development includes an expansion and updating to the existing automobile dealership on the site. The development has been designed in accordance with the following:

- Requirements of the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015, last modified November 23, 2016.
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended April 4, 2010.
- Chapter 188 "Storm Sewer System" of the Town of Lewisboro Zoning Code
- Chapter 189 "Stormwater Management and Erosion and Sediment Control" of the Town of Lewisboro Zoning Code

The project includes a Showroom Building expansion of 38,500 s.f., to the existing 12,400 s.f. Showroom Building, bringing the new Showroom Building total to 50,900 s.f. A 2,700 s.f. expansion is also proposed to the existing 18,200 s.f. Service Building, bringing the new Service Building total to 20,900 s.f. The Service Building was planned to be demolished under the previous approval. A 3 level parking garage is also proposed attached to the Showroom Building expansion. The total net increase in building area is approximately 41,200 s.f. An inventory storage parking lot is also proposed on the adjacent residential lot in contract.

The proposed project will also include various site upgrades including new parking and vehicle storage areas, site drainage, site lighting and extensive landscaping improvements. The modified design of the project will likely require all of the same or similar variances and will require approvals from the same outside agencies. The SWPPP was approved by the Town of Lewisboro

on May 15, 2012 and NYCDEP on September 26, 2012. The SWPPP approval was recently renewed by NYCDEP on September 27, 2017.

II. STORMWATER MANAGEMENT PLANNING

In order to be eligible for coverage under the NYSDEC SPDES General Permit No. GP-0-15-002 for Stormwater Discharges from Construction Activities, the Stormwater Pollution Prevention Plan (SWPPP) includes stormwater management practices (SMP's) from the publication "New York State Stormwater Management Design Manual," last revised January 2015.

A Stormwater Pollution Prevention Plan has been prepared for this project because it is a construction activity that involves soil disturbances of one (1) or more acres of land.

The proposed stormwater facilities have been designed such that the quantity and quality of stormwater runoff during and after construction are not adversely altered or are enhanced when compared to pre-development conditions.

Based on the GIS information provided by the website of the New York State Office of Parks, Recreation and Historic Places, the site does not contain, nor is it immediately adjacent to any properties listed on the State or National Register of Historic Places.

The Six Step Process for Stormwater Site Planning and Practice Selection

Stormwater management using green infrastructure is summarized in the six step process described below. The six step process was adhered to when developing this SWPPP. Information is provided in this SWPPP which documents compliance with the required process as follows:

Step 1: Site Planning

Implement planning practices that protect natural resources and utilize the hydrology of the site. Strong consideration must be given to reducing impervious cover to aid in the preservation of

natural resources including protecting natural areas, avoiding sensitive areas and minimizing grading and soil disturbance.

Step 2: Determine Water Quality Treatment Volume (WQv)

Determine the required WQv for the site based on the site layout, impervious areas and sub-catchments. This initial calculation of WQv will have to be revised after green infrastructure techniques are applied. The following method has been used to calculate the WQv.

- **Enhanced Phosphorus Removal Standard -** Since the project is located within the New York City watershed, enhanced phosphorus removal must be achieved by the stormwater improvements. For enhanced phosphorus removal, the water quality volume is sized for the 1 year, 24 hour storm event. Standard stormwater measures must be sized to treat the 1 year, 24 hour storm for 25% of existing impervious areas plus 100% of new impervious areas.

The NYSDEC Redevelopment Standards include specific criteria for the implementation of surface water quality improvements. A combination of standard and non-standard practices are proposed and all facilities will treat the required water quality volume from the entire contributing area. Therefore, Water Quality Treatment Options II & III will be utilized. According to Option III of the Redevelopment Standards, alternative or non-standard practices such as manufactured treatment devices are acceptable if they treat 75% of the water quality volume from the disturbed areas as well as any additional runoff directed to the practice. According to Option II, standard practices such as subsurface infiltration systems can be sized to treat the water quality volume generated from 25% of the existing impervious area plus 100% of the new impervious area. Green practices such as green roofs and porous pavement can be used towards credit in meeting the water quality volume requirements.

Proposed standard SMP's will effectively treat 100% of the 1 year storm for all existing and new impervious areas and the proposed alternative SMP's will also treat 100% of the 1 year storm for all existing impervious areas which is above and beyond the water quality requirements for

Redevelopment Projects.

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

RRv is required for this project since it is a combination of both new development and redevelopment.

Green infrastructure techniques or standard SMP's with RRv capacity can potentially reduce the required WQv by incorporating combinations of green infrastructure techniques and standard SMP's within each drainage area on the site.

Green infrastructure techniques are grouped into two categories:

- Practices resulting in a reduction of contributing area such as preservation/restoration of conservation areas, vegetated channels, etc.
- Practices resulting in a reduction of contributing volume such as green roofs, stormwater planters, and rain gardens.

Apply a combination of green infrastructure techniques and standard SMPs with RRv capacity to provide 100% of the WQv calculated in Step 2. If the RRv calculated in this step is greater than or equal to the WQv in Step 2, the RRv requirement has been met and Step 4 can be skipped. If the RRv provided cannot meet or exceed 100% of the WQv, the project must, at a minimum, reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S).

The following green infrastructure techniques and practices are provided in the Design Manual:

- **Conservation of Natural Areas**
  - The entire site is developed and has been for decades. There are no undisturbed areas that could be planned to be included within a conservation easement. Therefore, there is no area to be subtracted from the contributing area for the WQv calculation.
- **Sheet flow to Riparian Buffers or Filter Strips**
  - There are no well vegetated areas on-site with acceptable slopes that lend an opportunity as a buffer and still meet the minimum contributing length of flow. This practice is not practical for this project since these items are typically used in a residential application.
- **Vegetated Swales**
  - The use of sheet flow into vegetated swales cannot be implemented along the existing driveways and roadways because of the steep slopes or throughout the parking areas due to the limited flow lengths, rock outcroppings, etc.
- **Tree Planting / Tree Pits**
  - The project includes extensive tree planting around its perimeter as part of the proposed landscaping plan. Trees will be planted adjacent to the new impervious site entrances located in the DOT right-of-way as a runoff reduction technique.
- **Disconnection of Rooftop Runoff**
  - This practice is not practical for this project since these items are typically used in a residential application for small rooftop areas.
- **Stream Daylighting**
  - This practice is not possible for this project since there are no existing streams.
- **Rain Gardens**
  - This practice is not practical for this project since a contributing drainage area is limited to 1,000 square feet of rooftop. This practice is typically used in a residential application.
- **Green Roofs**
  - This practice is proposed for the Showroom Building expansion. An extensive green roof will provide RRv for the Showroom Building Expansion. This proposed green infrastructure technique is well suited and effective to treat the rooftop runoff for this type of project.

- **Stormwater Planters**
  - Stormwater planters are not used on this project due to the roofs already being treated using green roofs. Steep slopes along the Showroom Building and limited space also make it difficult to proposed planters.
- **Rain Barrels and Cisterns**
  - Underground storage tanks installed to collect stormwater runoff to be used for irrigation purposes are impractical since the project will not have an irrigation system for the landscaped areas.
- **Porous Paving**
  - This practice is being utilized at the upper vehicle storage area east of the Service Building. Porous pavement can be used to provide RRv because the soil on-site is classified as hydrologic soil group B. Soil tests have been performed that show adequate groundwater/bedrock separation and infiltration rates. The other paved areas of the site are not acceptable for porous pavement because they will be high traffic areas, have steep slopes, or are over a septic field.
- **Standard Practices with RRv Capacity**
  - **Biofilters and Bioretention Basins –** These practices are not proposed because other practices more suitable to treat RRv are provided.
  - **Infiltration Practices –** A subsurface infiltration system is proposed to treat and retain runoff from the majority of the site.

The Minimum RRv capacity required must be provided by green infrastructure techniques to verify that the RRv requirement has been met. The RRv that is provided by the green infrastructure techniques can then be subtracted from the Total Required WQv that must be provided by the SMP's.

<u>Step 4: Determine the minimum RRv Required</u>

The minimum RRv is calculated similar to the WQV. However, it is determined using only the new impervious cover and accounts for the hydrologic soil group present. In no case shall the runoff reduction achieved from the newly constructed impervious area be less than the minimum runoff reduction volume (RRv_{min}).

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

Apply the standard SMP's to meet additional water quality volume requirements that cannot be addressed by applying the green infrastructure techniques. The standard SMP's with RRv capacity must be implemented to verify that the RRv requirement has been met.

- **Green Roofs –** A green roof consists of a layer of vegetation and soil installed on a conventional roof. The rooftop vegetation captures rainwater allowing evaporation and evapotranspiration processes to reduce the amount of runoff entering downstream systems, effectively reducing stormwater runoff volumes and attenuating peak flows. This project makes use of existing roofs and turns them into extensive green roofs that have a thin soil layer and require low maintenance.

- **Subsurface Infiltration System –** This practice captures and temporary stores the WQv before allowing it to infiltrate into the soil. Smaller storms are completely infiltrated while the overflow from the larger storms is released into the storm sewer system using an overflow weir.

- **Porous Pavement** – Permeable paving provides an alternative to conventional asphalt and concrete surfaces and are designed to convey rainfall through the surface into an underlying reservoir where it can infiltrate, thereby reducing stormwater runoff from a site. This project is proposing pervious pavement on the dealership storage parking area.

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

The Channel Protection Volume (CPv), Overbank Flood Control (Qp) and Extreme Flood Control (Qf) must be met for the plan to be completed. This is accomplished by using practices such as subsurface infiltration systems detention systems, etc. to meet water quantity requirements. The following standards must be met:

1. Stream Channel Protection (CPv)

Stream Channel Protection Volume Requirements (CPv) are designed to protect stream channels from erosion. In New York State this goal is accomplished by providing 24-hour extended detention of the one-year, 24-hour storm event, remained from runoff reduction. Reduction of runoff for meeting stream channel protection objectives, where site conditions allow, is encouraged and the volume reduction achieved through green infrastructure can be deducted from CPv. Trout waters may be exempted from the 24-hour ED requirement, with only 12 hours of extended detention required to meet this criterion. Detention time may be calculated using either a center of mass method or plug flow calculation method.

- CPv for a redevelopment project is not required if there is no increase in impervious area or changes to hydrology that increase the discharge rate. This criterion, as defined in Chapter 4 of New York State Stormwater Design Manual, is not based on a pre versus post-development comparison. However, for a redevelopment project this requirement is relaxed. If the hydrology and hydraulic study shows that the post-construction 1-year 24 hour discharge rate and velocity are less than or equal to the pre-construction discharge rate, providing 24 hour detention of the 1-year storm to meet the channel protection criteria is not required.
- According to Section 10.4.3 of the Design Manual, infiltration practices sized for enhanced phosphorus removal automatically meet channel protection requirements.

2. Overbank Flood (Qp) which is the 10 year storm.

Overbank control requires storage to attenuate the post development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates.

The overbank flood control requirement (Qp) does not apply in certain conditions, including:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.

- A downstream analysis reveals that overbank control is not needed.

- If redevelopment results in an increase in impervious area or changes to hydrology that increase the discharge rate from the site, the ten year criteria does not apply.

3. Extreme Storm (Qf) which is the 100 year storm.

100 Year Control requires storage to attenuate the post development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates.

The 100-year storm control requirement can be waived if:

- The site discharges directly tidal waters or fifth order (fifth downstream) or larger streams.

- Development is prohibited within the ultimate 100-year floodplain

- A downstream analysis reveals that 100-year control is not needed.

- If redevelopment results in no increase in impervious area or changes to hydrology that increase the discharge rate from the site the hundred-year criteria does not apply.

Based on the foregoing, this project is eligible for coverage under NYSDEC SPDES General Permit No. GP-0-15-002.

III. STUDY METHODOLOGY

Runoff rates were calculated based upon the standards set forth by the United States Department of Agriculture Natural Resources Conservation Service Technical Release 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986. The methodology set forth in TR-55 considers a multitude of characteristics for watershed areas including soil types, soil permeability, vegetative cover, time of concentration, topography, rainfall intensity, ponding areas, etc.

The 1, 10 & 100 year storm recurrence intervals were reviewed in the design of the stormwater management facilities (see Appendices A & B Existing/Proposed Hydrologic Calculations).

Anticipated drainage conditions were analyzed taking into account the rate of runoff which will result from the construction of buildings, parking areas and other impervious surfaces associated with the site development.

Base Data and Design Criteria

For the stormwater management analysis, the following base information and methodology were used:

1. The site drainage patterns and outfall facilities were reviewed by JMC personnel for the purpose of gathering background data and confirming existing mapping of the watershed areas.

2. An Existing Drainage Area Map was developed from the topographical survey. The drainage area map reflects the existing conditions within and around the project area.

3. A Proposed Drainage Area Map was developed from the proposed grading design superimposed over the topographical survey. The drainage area map reflects the proposed conditions within the project area and the existing conditions to remain in the surrounding area.

4. The United States Department of Agriculture (USDA) Web Soil Survey of the site available on its website at http://websoilsurvey.nrcd.usda.gov.

5. The United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook, Section 4 - Hydrology", dated March 1985.

6. The United States Department of Agriculture Natural Resources Conservation Service Technical Report No. 55, Urban Hydrology for Small Watersheds (TR-55), dated June 1986.

7. United States Department of Commerce Weather Bureau Technical Release No. 40 Rainfall Frequency Atlas of the United States.

The time of concentration was calculated using the methods described in Chapter 3 of TR-55, Second Edition, June 1986. Manning's kinematics wave equation was used to determine the travel time of sheet flow. The 2-year 24 hour precipitation amount of 3.44 inches was used in the equation for all storm events. The travel time for shallow concentrated flow was computed using Figure 3-1 and Table 3-1 of TR-55. Manning's Equation was used to determine the travel time for channel reaches.

8. All hydrologic calculations were performed with the Bentley PondPack software package version 10.0.

9. All hydraulic calculations were performed with the Civil 3D Storm Sewer Analysis software package version 2018.

10. The New York State Stormwater Management Design Manual, revised January 2015.

11. New York Standards and Specifications for Erosion and Sediment Control, November 2016.

12. The NYCEP Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, as amended April 4, 2010.

13. New York City Department of Environmental Protection, 2009 Watershed Water Quality Annual Report, Updated May 2011.

14. The storm flows for the 1, 10 & 100 year recurrence interval storms were analyzed for the total watershed areas. The Type III distribution design storm for a 24 hour duration was used and the mass rainfall for each design storm was taken from the Extreme Precipitation in New York & New England developed by the Natural Resource Conservation Service (NRCS) and the Northeast Regional Climate Center (NRCC) as follows:

24 Hour Rainfall Amounts

Design Storm Recurrence Interval	Inches of Rainfall
1 Year	3.00
10 Year	5.50
100 Year	9.00

IV. EXISTING CONDITIONS

The site is currently developed as a Mercedes-Benz dealership of which a majority of the property is impervious. The site also consists of an existing residence to the east and a commercial business to the south. The site is located within the drainage basin of the Muscoot Reservoir and the New York City Watershed. Stormwater runoff is collected on-site and conveyed via corrugated metal pipes to the New York State Department of Transportation storm drainage system off-site within NYS Route 22 which eventually discharges to the Muscoot Reservoir.

The following natural features, conservation areas, resource areas and drainage patterns of the project site have been identified and utilized to develop Drawing DA-1 "Existing Drainage Area Map" which is included in Appendix G:

- Forest, vegetative cover
- Topography (contour lines, existing flow paths, steep slopes, etc.)
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geology features

Based on the USDA Web soil survey, most of the on-site soils are moderately drained and belong to hydrological group B, with a small area belonging to the hydrological group D. The soil types, boundaries and drainage areas/designations are depicted on Drawing DA-1 within Appendix G.

Three separate Design Points (DP-1 through DP-3) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, four separate drainage areas were identified in existing conditions based on the existing drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the existing conditions analysis:

Existing Drainage Area 1A (EDA-1A) is 0.89 acres in size and is located on the southwestern portion of the site along NYS Route 22. This area consists of existing pavement and a small amount of landscaping. This drainage area drains towards the storm sewer system on NYS Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 87 and 5 minutes, respectively. Refer to Drawing DA-1 in Appendix G.

Existing Drainage Area 1B (EDA-1B) is 1.22 acres in size and is located on the western portion of the site along the western property line near NYS Route 22. This area consists of existing pavement and a portion of the existing Service Building. This drainage area drains towards the storm sewer system on NYS Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 86 and 5 minutes, respectively. Refer to Drawing DA-1 in Appendix G.

Existing Drainage Area 2 (EDA-2) is 3.26 acres in size and is located on the southern and eastern portions of the site and off-site along Anderson Lane and Green Hill Road. This area consists of the existing commercial property south of the dealership and about half of the large uphill residential area off-site to the east of the dealership. This drainage area drains towards the vegetated area south of the property along Anderson Lane. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 68 and 16 minutes, respectively. Refer to Drawing DA-1 in Appendix G.

Existing Drainage Area 3 (EDA-3) is 2.77 acres in size and is located on the northern and eastern portions of the site and off-site including a portion of the uphill residential area. This area consists of the existing northern dealership parking lot and about half of the large uphill residential area to the east of the dealership. This drainage area drains towards the adjacent residential lots south of the property. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 72 and 15 minutes, respectively. Refer to Drawing DA-1 in Appendix G.

The peak rates of runoff to the design points from the drainage areas for each storm are shown in the table below:

Table 1
Summary of Peak Rates of Runoff in Existing Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1 year	3.72	1.42	1.73
10 year	8.42	6.00	6.05
100 year	14.98	13.86	13.01

V. PROPOSED CONDITIONS

The project includes a Showroom Building expansion and Service Building expansion as well as the redevelopment of adjacent residential and commercial lots in contract. The proposed

project will also include various site upgrades including new parking and vehicle storage areas, site drainage, site lighting and landscaping improvements.

The proposed drainage improvements include a variety of stormwater practices, such as green roofs, porous pavement, rain gardens and an underground infiltration system. The vegetated practices and overland discharges provide multiple opportunities for water quality enhancement and infiltration in addition to the proposed stormwater management basins.

On October 29th and 30th, 2018 soil percolation tests were done within the future 100% expansion area within the upper/northern parking lot. The pre-soaks were done on October 29th and the two separate percolation tests were done on October 30th. The tests resulted in acceptable percolation rates. The tests were witnessed by JMC, the Westchester County Health Department, The Town Engineer Consultant and performed by Carlin-Simpson Associates. On November 2, 2018 a soil boring was advanced in the same location. It was witnessed by NYCDEP, WCDH, Town Engineer Consultant, JMC and Carlin-Simpson Associates. The soil is sandy, groundwater and bedrock were not encountered within 5 feet of the bottom of the future seepage pits therefore the location is suitable for future use. Refer to the Soil Testing Data Sheet and the Report on Subsurface Soil Investigation prepared by Carlin-Simpson Associates in Appendix D.

This section describes the design and analysis of the proposed conditions used to demonstrate that the SWPPP meets the requirements of the General Permit.

The Six Step Process For Stormwater Site Planning and Practice Selection

Step 1: Site Planning

The following practices and site features were incorporated in the site design:

- Preserving hydrology - Maintaining drainage divides

- Forest, vegetative cover – The maximum amount of forest and vegetative cover has been maintained and/or provided.
- Critical areas have been preserved.
- Topography (contour lines, existing flow paths, steep slopes, etc.) has been maintained or disturbed to the minimum extent practicable.
- Soil (hydrologic soil groups, highly erodible soils, etc.)
- Bedrock, significant geology features have been accounted for.

Step 2: Determine Water Quality Treatment Volume (WQv)

Step 3: Runoff Reduction Volumes (RRv) by Applying Green Infrastructure Techniques and Standard SMP's

- Green Roofs
- Subsurface Infiltration System
- Permeable Paving

Step 4: Determine the minimum RRv Required

RRv_{min} calculations can be found in Appendix 'C'. RRv_{min} was met through

- Green Roofs
- Subsurface Infiltration System
- Permeable Paving

Step 5: Apply Standard Stormwater Management Practices to Address Remaining Water Quality Volume

- **INFILTRATION SYSTEMS**

  Subsurface Infiltration System (I-2)

Description

An infiltration practice that stores the water quality volume in an underground system, before it is infiltrated it into the ground.

Non Standard/Alternative SMP's to Address Remaining Water Quality Volume (for Redevelopment Projects)

- **Hydrodynamic Separators**

Step 6: Apply Volume and Peak Rate Control Practices to Meet Water Quantity Requirements

- **INFILTRATION SYSTEMS**

Subsurface Infiltration System (I-2)

Description

An infiltration practice that stores the water quality volume in an underground system, before it is infiltrated it into the ground.

All practices exceed the required elements of SMP criteria as outlined in Chapter 6 of the NYS Stormwater Management Design Manual. A summary of each category is provided below.

1. Feasibility – Ponds are designed based upon unique physical environmental considerations noted in the NYS Stormwater Management Design Manual (NYSSMDM) Table 7.2 "Physical Feasibility Matrix".

2. Conveyance – The design conveys runoff to the designed pond in a manner that is safe, minimizes erosion and disruption to natural drainage channel and promotes filtering and infiltration.

3. Pretreatment – All pond provide pretreatment in accordance with NYSSMDM design guidelines.

4. Treatment Geometry – The plan provides water quality treatment in accordance with NYSSMDM guidelines noted Table 6.1 "Water Quality Volume Distributing in Pond Design".

5. Environmental/Landscaping –Extensive landscaping has been provided for each proposed practice to enhance pollutant removal and provide aesthetic enhancement to the property.

6. Maintenance – Maintenance for the environment practices has been provided and is detain the SWPPP Report as required. Maintenance access is provided in the design plans.

In order to determine the post-development rates of runoff generated on-site, the following drainage areas were analyzed in the post-development conditions. These areas are graphically depicted on Drawing DA-2 "Proposed Drainage Area Map" located in Appendix "G".

Three separate Design Points (DP-1 through DP-3) were identified for comparing peak rates of runoff in existing and proposed conditions. Similarly, seven separate drainage areas were identified in proposed conditions based on the proposed drainage divides at the site. The numbers included in the name of each drainage area correspond to the Design Point they drain towards.

The following is a description of each of the drainage areas analyzed in the proposed conditions analysis:

Proposed Drainage Area 1A (PDA-1A) is 1.97 acres in size and is located on the western portion of the site on the north and west sides of the proposed Showroom Building, the addition of the Maintenance Building, and the stormwater which drains onto the existing driveway along the east side of the site. This area consists of the parking areas associated with the Showroom Building, as well as some landscaping and existing brush area to remain and the driveway to the uphill storage area. This drainage area drains towards a proposed subsurface infiltration system consisting of 92 StormTech MC-3500 Chambers where it receives treatment. Prior to entering the system, the

runoff is pre-treated by a water quality structure, then an isolator row of chambers wrapped in filter fabric. Excess stormwater is directed to the exiting storm sewer system located on New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 84 and 11 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 1B (PDA-1B) is 3.09 acres in size and is located on the northeastern portion of the site. This area consists of the Service Building and vehicle storage areas to the north and east. This drainage area also includes the existing uphill forested area to remain. This drainage area drains towards a proposed subsurface detention system consisting of 132 StormTech MC-4500 chambers with a liner where it is held and released slowly over time. Prior to entering the system, stormwater runoff is treated by a water quality structure. The stormwater is then directed to the portion of the on-site stormwater system that discharges to the existing storm sewer system located on New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 75 and 14 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 1C (PDA-1C) is 0.50 acres in size and is located on the western frontage of the site along New York State Route 22. This area consists of a portion of NYS Route 22, the entrance driveways and a landscape area which separates the site from the road. This impervious area is directly connected to tree plantings which are used as an area reduction technique. After passing through the tree plantings, the stormwater flows into the existing storm sewer system located on New York State Route 22 similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 83 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 1D (PDA-1D) is 0.45 acres in size and is located on the south-center portion of the site. This area consists of the proposed Showroom Building expansion not including the attached parking garage. The Showroom Building will include an extensive green roof which will provide initial stormwater treatment. After passing through the green roof, the stormwater will be directed to the proposed subsurface infiltration system This drainage area drains towards the existing storm sewer system located on New York State Route 22 similar to

existing conditions. Excess stormwater is directed to the exiting storm sewer system located on New York State Route 22. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 12 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 2A (PDA-2A) is 0.22 acres in size and is located on the south-center portion of the site. This area consists of the proposed Showroom Building parking garage. The parking garage will include an extensive green roof which will provide initial stormwater treatment. After passing through the green roof, the stormwater will be directed to the proposed stormwater conveyance system along Green Hill Road and Anderson Lane. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 98 and 12 minutes, respectively. Refer to Drawing DA-2 in Appendix G. The proposed pipes and structures replace the existing inadequate conveyance system along Green Hill Road.

Proposed Drainage Area 2B (PDA-2B) is 1.75 acres in size and is located on the southeastern portion of the site. This area consists of Green Hill Road and the forested uphill area which drains onto Green Hill Road. This area also consists of Anderson Lane and the landscaped areas which drain onto Anderson Lane. There is a reduction of impervious area and no new impervious within PDA-2B so green infrastructure practices were not required. The stormwater will be directed to the existing drainage ditch located on the south side of Anderson Lane, similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 63 and 14 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 2C (PDA-2C) is 0.08 acres in size and is located on the southern portion of the site. This area consists of the new access driveway to the proposed parking garage and the landscaping along the road. This drainage area makes use of tree planting along both sides of the driveway to apply an area reduction to the new impervious. After passing through the tree plantings, the stormwater will be directed to the existing drainage ditch located on the south side of Anderson Lane, similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 71 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

Proposed Drainage Area 3 (PDA-3) is 0.10 acres in size and is located on the north end of the site. This area consists of the landscaped areas which separate the Site from the residential property to the north. The area has been greatly reduced from existing conditions. The stormwater will sheet flow off the site to the north, similar to existing conditions. The Curve Number (CN) and Time of Concentration (Tc) for this drainage area are 60 and 5 minutes, respectively. Refer to Drawing DA-2 in Appendix G.

The peak rates of runoff to the design point of each of the analyzed drainage areas for each storm are shown on the table below:

Table 2
Summary of Proposed Peak Rates of Runoff in Proposed Conditions
(Cubic Feet per Second)

Storm Recurrence Interval	DP-1	DP-2	DP-3
1 year	1.52	0.57	0.02
10 year	7.17	3.40	0.15
100 year	14.80	8.20	0.41

The reductions in peak rates of runoff from proposed to existing conditions are shown on the table below:

Table 3
Percent Reductions in Peak Rates of Runoff (Existing vs. Proposed Conditions)
(Cubic Feet per Second)

Design Point	Storm Recurrence Frequency (Years)	Existing Peak Runoff Rate (cfs)	Proposed Peak Runoff Rate (cfs)	Percent Reduction (%)
1	1 year	3.72	1.52	59.1
	10 year	8.42	7.17	14.8
	100 year	14.98	14.80	1.2
2	1 year	1.42	0.57	59.9
	10 year	6.00	3.40	43.3
	100 year	13.86	8.20	40.8
3	1 year	1.73	0.02	98.8
	10 year	6.05	0.15	97.5
	100 year	13.01	0.41	96.8

As demonstrated in Table 3, the proposed stormwater improvements will result in significant reductions of peak rates of runoff for all storms and design points analyzed.

VI. SOIL EROSION & SEDIMENT CONTROL

A potential impact of the proposed development on any soils or slopes will be that of erosion and transport of sediment during construction. An Erosion and Sediment Control Management Program will be established for the proposed development, beginning at the start of construction and continuing throughout its course, as outlined in the "New York State Standards and Specifications for Erosion and Sediment Control," November 2016. A continuing maintenance program will be implemented for the control of sediment transport and erosion control after construction and throughout the useful life of the project.

The Operator shall have a qualified professional conduct an assessment of the site prior to the commencement of construction and certify that the appropriate erosion and sediment controls, as shown on the Sediment & Erosion Control Plans, have been adequately installed to ensure overall preparedness of the site for the commencement of construction. In addition, the Operator shall have a qualified professional conduct one site inspection at least every seven calendar days.

Prior to the commencement of construction activity, the owner or operator must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The owner or operator shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the trained contractor. The owner or operator shall ensure that at least one trained contractor is on site on a daily basis when soil disturbance activities are being performed.

The owner or operator shall have each of the contractors and subcontractors identified above sign a copy of the certification statement to be provided in before they commence any construction activity.

Soil Description

As provided by the United States Department of Agriculture, Soil Conservation Service "Web Soil Survey," soil classifications which exist on the subject site are described below.

Soils are placed into four hydrologic groups: A, B, C, and D. In the definitions of the classes, infiltration rate is the rate at which water enters the soil at the surface and is controlled by the surface conditions. Transmission rate is the rate at which water moves in the soil and is controlled by soil properties. Definitions of the classes are as follows:

A. (Low runoff potential). The soils have a high infiltration rate even when thoroughly wetted. They chiefly consist of deep, well drained to excessively drained sands or gravels. They have a high rate of water transmission.

B. The soils have a moderate infiltration rate when thoroughly wetted. They chiefly are moderately deep to deep, moderately well drained to well drained soils that have moderately fine to moderately coarse textures. They have a moderate rate of water transmission.

C. The soils have a slow infiltration rate when thoroughly wetted. They chiefly have a layer that impedes downward movement of water or have moderately fine to fine texture. They have a slow rate of water transmission.

D. (High runoff potential). The soils have a very slow infiltration rate when thoroughly wetted. They chiefly consist of clay soils that have a high swelling potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. They have a very slow rate of water transmission.

A soil's tendency to erode is also described in the USDA web soil survey. The ratings in this interpretation indicate the hazard of soil loss from unsurfaced areas. The ratings are based on soil erosion factor K, slope, and content of rock fragments. The hazard is described as "slight," "moderate," or "SEVERE." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the temporarily unsurfaced / unstabilized during construction may require occasional maintenance, and that simple erosion-control measures are needed; and "SEVERE" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that erosion-control measures are needed.
Per the Soil Survey, the following soils listed below are present at the site. Following this list is a detailed description of each soil type found on the property:

SYM.	HYDRO. SOIL GROUP	DESCRIPTION
CrC	**B**	**Charlton-Chatfield Complex Rolling, 0 to 15%**
CsD	**B**	**Chatfield-Charlton Complex Hilly, 15 to 35%**
CtC	**B**	**Chatfield-Hollis-Rock Outcrop Complex, 0 to 15%**
CuD	**D**	**Chatfield-Hollis-Rock Outcrop Complex, 15 to 35%**

CrC, Charlton-Chatfield complex, rolling, very rocky, 0 to 15 percent slopes

This unit consists of the very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well drained Charlton soil. It is on hilltops and hillsides that are underlain by highly folded bedrock. Slopes range from 0 to 15 percent. Individual areas are highly irregular in shape and range from 3 to 100 acres in size. They are about 50 percent Charlton soil, 30 percent Chatfield soil, and 20 percent other soils and rock outcrop. The rock outcrop covers 2 to 10 percent of the surface. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low to moderate.

Hydrologic group: **B**
Erosion Hazard Rating: **Moderate**

CsD, Chatfield-Charlton complex, hilly, very rocky, 15 to 35 percent slopes

This unit consists of the very deep and moderately deep, well drained and somewhat excessively drained Chatfield soil and the well drained Charlton soil. It is on the tops and sides of hills that

are underlain by highly folded bedrock. Slopes range from 15 to 35 percent. Individual areas are highly irregular in shape and range from 3 to 75 acres in size. They are about 45 percent Chatfield soil, 35 percent Chatfield soil, and 20 percent other soils and rock outcrop. The rock outcrop covers 2 to 10 percent of the surface. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low to moderate.

Hydrologic group: **B**
Erosion Hazard Rating: **Severe**

CtC, Chatfield-Hollis-Rock outcrop complex, rolling, 0 to 15 percent slopes

This unit consists of the rolling, moderately deep, well drained and somewhat excessively drained Chatfield soil, the shallow, well drained and somewhat excessively drained Hollis soil, and areas of Rock outcrop, dominate granite, gneiss, and schist. This unit is on hilltops and narrow ridges in bedrock-controlled landscapes. Slopes dominantly range from 3 to 15 percent. Individual areas of this unit are mostly irregular in shape and range from 2 to 100 acres in size. They are typically about 30 percent Chatfield soil, 20 percent Hollis soil, 20 percent rock outcrop, and 20 percent other soils. Depth to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low.

Hydrologic group: **B**
Erosion Hazard Rating: **Moderate**

CuD, Chatfield-Hollis-Rock outcrop complex, hilly, 15 to 35 percent slopes

This unit consists of the moderately deep, well drained and somewhat excessively drained Chatfield soil, the shallow, well drained and somewhat excessively drained Hollis soil, and areas of Rock outcrop, dominantly granite, schist, and gneiss. The unit is on hillsides in bedrock-controlled landscapes. Slopes are dominantly 15 to 35 percent. Very steep or nearly vertical bedrock escarpments are common landscape features. Individual areas of this unit are mostly long and narrow and range from 2 to 200 acres in size. They are typically about 30 percent Chatfield soil, 30 percent Hollis soil, 25 percent Rock outcrop, and 15 percent other soils. Depth

to the top of a seasonal high water table is more than 6 feet throughout the year. Available water capacity is low.

Hydrologic group: **D**
Erosion Hazard Rating: **Severe**

Phases of Construction

Prior to the start of any grading or construction on the subject property, temporary sediment and erosion control measures will be installed. Storm drain inlet protection shall be provided for all existing and proposed stormwater catch basins and inlets with the use of stone and block inlet protection and curb gutter inlet protection structures that keep silt, sediment and construction litter and debris out of the stormwater drainage system. As construction progresses, inlet protection, silt fence and silt traps will be installed consistent with the progress of each phase of construction.

Construction shall be sequenced in such a manner that any area which is disturbed shall first be protected with Sediment & Erosion Controls as indicated on each Phasing Plan. Particular requirements are given as follows:

Phase 1:

1A. Installation of Phase 1 Sediment & Erosion Controls required for Phase 1.

1B. Demolition of existing frame houses, curbs, pavements and utility services as required. Provide staging area as required. The existing drainage pipe connecting EX. CB 5 and EX. CB 6 should remain and be protected.

1C. Install Infiltration System 1A, its pretreatment water quality structure and the drainage conveyance pipes from the existing catch basin (EX. CB 5). Place a cap on the drainage pipe outlet leaving Ex. CB 5 until the uphill areas are stabilized.

1D. Install the drainage conveyance pipes from DMH A-1-1 to DI A-1-2, leaving a stub to the future DI A-1-3 through the proposed retaining wall. Install the drainage conveyance pipes

from the existing catch basin (EX. CB 6) to CI C-7, including the two temporary 15" storm pipes which allow the stormwater to be directed around the future Detention system. Place a cap on the drainage pipe between CI C-3 and DMH A-1-1 and the drainage pipe between DMH C-2C and DMH C-2B until the uphill areas are stabilized. Install the proposed drainage system along Green Hill Road. Install inlet protection on all new drain inlets.

1E. Remove or abandon existing drainage structures and pipes along Green Hill Road as indicated.

1F. Install the RDL on the existing Showroom Building and allow the stormwater to run overland into the proposed DI B-4 structure until DI A-1-5 is installed in Phase 3.

1G. Install the precast septic tank and wet well pump station by the Showroom Building. Install the sanitary line from the Showroom Building to the existing 1,500 gallon septic tank by the Service Building. Repair and regrade the OWTS seepage pits in the upper parking lot.

1H. The lower parking lot above Infiltration System 1A shall be rough graded and stabilized with pavement sub-base on top of the facility to protect the soils surrounding the infiltration system.

1I. Make the connection of the proposed drainage system to the existing NYSDOT drainage system along NYS Route 22. The proposed Infiltration System 1A will not be connected to the pipe conveyance system until all upstream contributing drainage areas are stabilized.

1J. Inspection of all work associated with the proposed drainage system by the Town Engineer to determinate the system substantially complete prior to the issuance of a building permit to renovate the existing Showroom Building.

1K. Clear and excavate south of existing Showroom Building and begin Showroom Building expansion construction.

1L. Fill and finish grade the area behind the building expansion, redistribute top soil, establish vegetation and install landscaping.

1M. Construct parking area on north side of the existing Showroom Building, proposed retaining walls along the existing driveway, proposed retaining walls and fences surrounding the middle parking area.

IN. Install Detention System 1C, its pretreatment water quality structure, inlet and outlet pipes. Connect to the remainder of the previously installed portion of the drainage system

from earlier in Phase 1 and remove or abandon and plug the temporary pipe installed in between CI C-4-1 and CI C-4 in Phase 1.

1O. Install public utilities (gas, electric and telephone) as required.

1P. Finish grading, redistribute topsoil and establish vegetation and/or landscaping. Complete asphalt paving top course for Phase 1 and apply pavement striping.

1Q. Clean all new drain inlets, trench drains, conveyance pipes, etc. of any sediment and debris. Remove cap between EX. CB 5 and proposed Infiltration System 1A and remove or abandon and plug the existing drainage pipe between EX. CB 5 and EX. CB 6.

Phase 2:

2A. Installation of Phase 2 Sediment & Erosion Controls required for Phase 2.

2B. Install proposed water service line to water service Well No.2, underground water storage tank and dry hydrant.

2C. Begin retaining wall and fence construction along the east side of the service building continuing through the northern parking area. Temporary shoring shall be implemented where required. Install roof drain leaders and connections to previously installed portion of the drainage system. Install inlet protection on all new drain inlets.

2D. Inspection of all work associated with the proposed drainage system by the Town Engineer to determinate the system substantially complete prior to the issuance of a building permit to renovate the existing Service Building.

2E. Clear and excavate south of existing Service Building and begin Service Building expansion construction.

2F. Install public utilities (gas, electric and telephone) as required.

2G. Fill and finish grade the area on east side of behind the Service Building, redistribute top soil, establish vegetation and install landscaping.

2H. Begin construction of parking areas and roadways on north, west, and south sides of the Service Building.

2I. Complete remaining parking lot construction, fine grading, and install asphalt concrete pavement. Remove or abandon and plug the temporary pipe installed in between CI C-3 and DMH 1C-2 in Phase 1.

2J. Finish grading, redistribute topsoil, and establish vegetation and/or landscaping. Complete asphalt paving top course for Phase 2 and apply pavement striping.

2K. Clean pavements and storm drain system of all accumulated sediment in conjunction with the removal of all temporary sediment and erosion control devices.

Phase 3:

3A. Installation of Phase 3 Sediment & Erosion Controls required for Phase 3.

3B. Demolition of existing frame house, curbs, pavements and utility services as required. Provide staging area as required.

3C. Install proposed retaining wall and fence along the north, east, and south sides of the upper parking lot area.

3D. Install the drainage conveyance pipes from DI A-1-3 to DI A-1-6, leaving the inlets covered until the uphill areas are stabilized. Tie in previously relocated RDL from the existing Showroom Building into DI A-1-5.

3E. Construct the upper parking lot and driveway expansion. Complete asphalt paving and porous concrete placement.

3F. Remove caps from inlets located in driveway leading to upper parking area.

3G. Complete all necessary improvements to Anderson Lane and Green Hill Road.

3H. Clean pavements and storm drain system of all accumulated sediment in conjunction with the removal of all temporary sediment and erosion control devices.

All phases of the site construction are to be inspected by the Town Engineer and determined to be complete prior to the issuance of building certificates of occupancy.

On-Site Pollution Prevention

There are temporary pollution prevention measures used to control litter and construction debris on site, such as:

- Silt Fence
- Silt Sack

- Excavated Drop Inlet Protection
- Haybales

There will be inlet protection provided for all storm drains and inlets with the use of curb gutter inlet protection structures, stone & block drop inlet protection and silt sacks, which keep silt, sediment and construction litter and debris out of the on-site and stormwater drainage system.

Temporary Control Measures

Temporary control measures and facilities will include silt fences, interceptor swales, stabilized construction entrances, temporary seeding, mulching, haybales, etc.

Throughout the construction of the proposed redevelopment, temporary control facilities will be implemented to control on-site erosion and sediment transfer. Interceptor swales, if required, will be used to direct stormwater runoff to temporary sediment traps for settlement. Descriptions of the temporary sediment & erosion controls that will be used during the development of the site are as follows:

1. Silt Fence is constructed using a geotextile fabric. The fence will be either 18 inches or 30 inches high. The height of the fence can be increased in the event of placing these devices on uncompacted fills or extremely loose undisturbed soils. The fences will not be placed in areas which receive concentrated flows such as ditches, swales and channels nor will the filter fabric material be placed across the entrance to pipes, culverts, spillway structures, sediment traps or basins.

2. Stabilized Construction Entrance consists of AASHTO No. 1 rock. The rock entrance will be a minimum of 50 feet in length by 20 feet in width by 8 inches in depth.

3. Seeding will be used to create a vegetative surface to stabilize disturbed earth until at least 70% of the disturbed area has a perennial vegetative cover. This amount is required to adequately function as a sediment and erosion control facility. Grass lining will also be used to line temporary channels and the surrounding disturbed areas.

4. Mulching is used as an anchor for seeding and disturbed areas to reduce soil loss due to storm events. These areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket. Mulch must be placed after seeding or within 48 hours after seeding is completed.

5. Inlet Protection will be provided for all stormwater basins and inlets with the use of curb & gutter inlet protection and stone & block inlet protection structures, which will keep silt, sediment and construction debris out of the storm system. Existing structures within existing paved areas will be protected using "Silt Sacks" inside the structures.

6. Dust Control will be used and consists of spraying the ground surface with water to prevent dust emissions from vehicular and construction traffic.

7. Temporary Swales may be created to prevent stormwater runoff from flowing into construction areas where disturbed soil is present. The swales can intercept and divert runoff to stabilized, undisturbed areas of the site or into a sediment pit.

8. Sediment Sump Pits are temporary excavations constructed to capture and filter runoff and accumulated water for pumping to stabilized areas or catch basins.

9. Haybales may be used along existing paved areas to intercept sediment from stormwater runoff generated by upstream soil disturbance. Haybales may also be placed around temporary soil stockpile areas on pavement.

The contractor shall be responsible for maintaining the temporary sediment and erosion control measures throughout construction. This maintenance will include, but not be limited to, the following tasks:

1. For dust control purposes, moisten all exposed graded areas with water at least twice a day in those areas where soil is exposed and cannot be planted with a temporary cover due to construction operations or the season (December through March).

2. Inspection of erosion and sediment control measures shall be performed at the end of each construction day and immediately following each rainfall event. All required repairs shall be immediately executed by the contractor.

3. Sediment deposits shall be removed when they reach approximately ⅓ the height of the silt fence. All such sediment shall be properly disposed of in fill areas on the site, as directed by the Owner's Field Representative. Fill shall be protected following disposal with mulch, temporary and/or permanent vegetation and be completely circumscribed on the downhill side by silt fence.

4. Rake all exposed areas parallel to the slope during earthwork operations.

5. Following final grading, the disturbed area shall be stabilized with a permanent surface treatment (i.e. turf grass, pavement or sidewalk). During rough grading, areas which are not to be disturbed for fourteen or more days shall be stabilized with the temporary seed mixture, as defined on the plans. Seed all piles of dirt in exposed soil areas that will not receive a permanent surface treatment.

<u>Concrete Material and Equipment Management</u>

Concrete washouts shall be used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solid for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Solids that are improperly disposed of can clog storm drain pipes and cause flooding. Installing concrete washout facilities not only prevents pollution but also is a matter of good housekeeping at your construction site.

Prefabricated concrete washout containers can be delivered to the site to provide maintenance and disposal of materials. Regular pick-ups of solid and liquid waste materials will be necessary. To prevent leaks on the job site, ensure that prefabricated washout containers are watertight. A self installed concrete washout facility can be utilized although they are much less reliable than prefabricated containers and are prone to leaks. There are many design options for the washout, but they are preferably built below-grade to prevent breaches and reduce the likelihood of runoff. Above-grade structures can also be used if they are sized and constructed correctly and are diligently maintained. One of the most common problems with self-installed concrete washout facilities is that they can leak or be breached as a result of constant use, therefore the contractor shall be sure to use quality materials and inspect the facilities on a daily basis.

Washouts must be sized to handle solids, wash water, and rainfall to prevent overflow. Concrete Washout Systems, Inc. estimates that 7 gallons of wash water are used to wash one truck chute and 50 gallons are used to wash out the hopper of a concrete pump truck.

For larger sites, a below-grade washout should be at least 10 feet wide and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 12-inches of freeboard must be provided. The pit must be lined with plastic sheeting of at least 10-mil thickness without holes or tears to prevent leaching of liquids into the ground. Concrete wash water should never be placed in a pit that is connected to the storm drain system or that drains to nearby waterways.

An above-grade washout can be constructed at least 10 feet wide by 10 feet long and sized to contain all liquid and solid waste expected to be generated in between cleanout periods. A minimum of 4-inches of freeboard must be provided. The washout structures can be constructed with staked straw bales or sandbags double-or triple lined with plastic sheeting of at least 10-mil thickness without holes or tears.
Concrete washout facilities shall not be located within 50 feet of storm drains, open ditches, or water bodies and should be placed in locations that allow for convenient access for concrete trucks. The contractor shall check all concrete washout facilities daily to determine if they have

been filled to 75 percent capacity, which is when materials need to be removed. Both above-and below-ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Prefabricated washout containers should be inspected daily as well as to ensure the container is not leaking or nearing 75 percent capacity. Inspectors should also note whether the facilities are being used regularly. Additional signage for washouts may be needed in more convenient locations if concrete truck operators are not utilizing them.

The washout structures must be drained or covered prior to predicted rainstorms to prevent overflows. Hardened solids either whole or broken must be removed and then they may be reused onsite or hauled away for recycling.

Once materials are removed from the concrete washout, a new structure must be built or excavated, or if the previous structure is still intact, inspect it for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic be used after every cleaning because pumps and concrete removal equipment can damage the existing liner.

Construction Site Chemical Control

The purpose of this management measure is to prevent the generation of nonpoint source pollution from construction sites due to improper handling and usage of nutrients and toxic substances, and to prevent the movement of toxic substances from the construction site.

Many potential pollutants other than sediment are associated with construction activities. These pollutants include pesticides; fertilizers used for vegetative stabilization; petrochemicals; construction chemicals such as concrete products, sealers, and paints; wash water associated with these products; paper; wood; garbage; and sanitary waste.
Disposal of excess pesticides and pesticide-related wastes should conform to registered label directions for the disposal and storage of pesticides and pesticide containers set forth in

applicable Federal, State and local regulations that govern their usage, handling, storage, and disposal.

Pesticides should be disposed of through either a licensed waste management firm or a treatment, storage and disposal (TSD) facility. Containers should be triple-rinsed before disposal, and rinse waters should be reused as product.
Other practices include setting aside a locked storage area, tightly closing lids, storing in a cool, dry place, checking containers periodically for leaks or deterioration, maintaining a list of products in storage, using plastic sheeting to line the storage areas, and notifying neighboring property owners prior to spraying.

When storing petroleum products, follow these guidelines:

- Create a shelter around the area with cover and wind protection;
- Line the storage area with a double layer of plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity of 110 percent greater than that of the largest container;
- Clearly label all products;
- Keep tanks off the ground; and
- Keep lids securely fastened.

Post spill procedure information and have persons trained in spill handling on site or on call at all times. Materials for cleaning up spills should be kept on site and easily available. Spills should be cleaned up immediately and the contaminated material properly disposed of. Maintain and wash equipment and machinery in confined areas specifically designed to control runoff.

Thinners or solvents should not be discharged into sanitary or storm systems when cleaning machinery. Use alternative methods for cleaning larger equipment parts, such as high-pressure, high-temperature water washes, or steam cleaning. Equipment-washing detergents can be used, and wash water may be discharged into sanitary sewers if solids are removed from the solution first. (This practice should be verified with the local sewer authority.) Small parts can be cleaned

with degreasing solvents, which can then be reused or recycled.

Solid Waste Management and Portable Sanitary Management

The purpose of this management measure is to prevent the potential for solid waste such as construction debris, trash, etc. from construction sites due to improper handling and storage. Debris and litter should be removed periodically from the BMP's and surrounding areas to prevent clogging of pipes and structures. All construction material shall be stored in designated staging areas. Roll-off containers shall be placed on site and all empty containers, construction debris and litter shall be placed in the containers.

Portable sanitary units may be utilized on-site or bathrooms will be provided within construction trailers. A sanitation removal company will be hired to pump/remove any sanitary waste. In the event that portable sanitary units are used and then cleaned after being emptied, the rinse water may not be disposed of to the storm drain system. It shall be contained for later disposal if it can't be disposed of on-site. Remove paper and trash before cleaning the portable sanitary units. The portable sanitary units shall be located away from the storm drain system if possible. Provide over head cover for wash areas if possible. Maintain spill response material and equipment on site to eliminate the potential for contaminants and wash water from entering the storm drain system.

Permanent Control Measures and Facilities for Long Term Protection

Towards the completion of construction, permanent sediment and erosion control measures will be developed for long term erosion protection. The following permanent control measures and facilities have been proposed to be implemented for the project:

1. The CDS Water Quality Structures must provide water quality for 75% of existing impervious areas for the 1 year, 24 hour storm in accordance with the requirements of the New York State Department of Conservation (NYSDEC). The CDS Water Quality Structures have been designed to treat up to the required water quality volume and appropriately handle all storm frequencies without the resuspension of solids. The systems

will provide 80% TSS removal rate for particles having a mean particle size of 125 microns for stormwater runoff. The treated stormwater will then be discharged into the subsurface detention system and then piped to the existing storm drainage system along NYS Route 22.

2. Detention System (StormTech Chambers) which is a standard SMP that will be used to treat the runoff volume generated from a portion of the developed area. The StormTech MC-4500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void and released slowly. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is detained underground through the chambers and surrounding crushed stone and will release through an orifice to control peak flows leaving the site.

3. Infiltration System (StormTech Recharge Chambers)
   The StormTech MC-3500 Recharge Chambers are domed shaped fully opened bottom corrugated chambers with perforated side walls. Chambers allow stormwater to be stored within the dome void until it can infiltrate into the ground. They are able to be used for residential, commercial or industrial applications and provide an easy way to treat and dispose of stormwater runoff underground. Water is infiltrated into the ground through the chambers and surrounding crushed stone and will replenish the groundwater as a natural condition.

   The Isolator Row is a row of StormTech chambers that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as stormwater rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage access of the adjacent stone and chambers from sediment accumulation.

   The Isolator Row is designed to capture the "first flush" and offers the versatility to be sized

on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but includes a high flow weir such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other standard chambers. By treating stormwater prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured.

4. Vegetated Swales will function to provide additional treatment of stormwater runoff by removal of pollutants and will promote a reduction of peak flows and provide runoff infiltration.

5. Catch Basins and trench drains will be used to remove some of the coarse sand and grit sediment before entering the drainage system. Each catch basin will be constructed with an 18 inch deep sump and the trench drain will be constructed with a 24 inch deep sump.

6. Seeding of at least 70% perennial vegetative cover will be used to produce a permanent uniform erosion resistant surface. The seeded areas will be mulched with straw at a rate of 3 tons per acre such that the mulch forms a continuous blanket.

7. Green Roof - The proposed building will be constructed with an extensive green roof which will provide hydrologic source control and water quality volume for the rooftop runoff. The green roof must provide volume reduction equal to or greater than the required minimum RRv. This reduction is achieved when runoff is captured, routed through green infrastructure, infiltrated to the ground, reused, reduced by evapotranspiration and eventually removed from the stormwater discharge from the site. After determining the minimum RRv required, which depends on factors such as the Hydrologic Soil Group (HSG) and the amount of impervious area within the targeted drainage area, the remaining water quality volume is directed to a standard practice.

8. Porous Pavement is proposed in the upper parking lot to capture and treat/infiltrate stormwater runoff. Porous pavement can be used to provide RRv because the soil on-site is

classified as hydrologic soil group B. The project is proposing the use of Stormcrete Modular Precast Porous Concrete which is typically 5 foot by 5 foot panels of precast porous concrete laid on top of a thick crushed stone bed that acts as a reservoir. These panels will account for the new impervious area and will receive the stormwater runoff from within the parking lot.

Specifications for Soil Restoration

Prior to the final stabilization of the disturbed areas, soil restoration will be required for all vegetated areas to recover the original properties and porosity of the soil. Soil Restoration Requirements are provided on Table 4 below:

Table 4
Soil Restoration Requirements

Type of Soil Disturbance	Soil Restoration Requirement		Comments/Examples
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only – no change in grade	HSG A&B	HSG C&D	Protect area from any ongoing construction activities
	apply 6 inches of topsoil	Aerate* and apply 6 inches of topsoil	
Areas of cut or fill	HSG A&B	HSG C&D	Clearing and grubbing
	Aerate and apply 6 inches of topsoil	Apply full Soil Restoration**	
Heavy traffic areas on site (especially) in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost enhancement)		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area.
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area.		

* Aeration includes the use of machines such as tractor-drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini-subsoiler.

** Per "Deep Ripping and De-compaction, DEC 2008."

During periods of relatively low to moderate subsoil moisture, the disturbed subsoils are returned to rough grade and the following full soil restoration steps applied:

1. Apply 3 inches of compost over subsoil.

2. Till compost into subsoil to a depth of at least 12 inches using a cat-mounted ripper, tractor-mounted disc, or tiller, mixing, and circulating air and compost into subsoils.

3. Rock-pick until uplifted stone/rock materials of four inches and larger size are cleaned off the site.

Specifications for Final Stabilization of Graded Areas

Final stabilization of graded areas consists of the placement of topsoil and installation of landscaping (unless the area is to be paved, or a building is to be constructed in the location). Topsoil is to be spread as soon as grading operations are completed. Topsoil is to be placed to a minimum depth of six inches on all embankments, planting areas and seeding/sod areas. The subgrade is to be scarified to a depth of two inches to provide a bond of the topsoil with the subsoil. Topsoil is to be raked to an even surface and cleared of all debris, roots, stones and other unsatisfactory material.

Planting operations shall be conducted under favorable weather conditions as follows:

- Permanent Lawns - April 15 (provided soil is frost-free and not excessively moist) to May 15; August 15 to October 15.
- Temporary Lawn Seeding - if outside of the time periods noted above, the areas shall be seeded immediately on completion of topsoil operations with annual ryegrass (Italian rye) at a rate of six pounds per 1,000 square feet. Temporary lawn installation is permitted provided the soil is frost-free and not excessively moist. The permanent lawn is to be installed the next planting season.

On slopes with a grade of 3 horizontal to 1 vertical or greater, and in swales, a geotextile netting or mat shall be installed for stabilization purposes as shown on the Plans. Seeded areas are to be mulched with straw or hay at an application rate of 70-90 pounds per 1,000 s.f. Straw or hay

mulch must be spread uniformly and anchored immediately after spreading to prevent wind blowing. Mulches must be inspected periodically and in particular after rainstorms to check for erosion. If erosion is observed, additional mulch must be applied. Netting shall be inspected after rainstorms for dislocation or failure; any damage shall be repaired immediately.

All denuded surfaces which will be exposed for a period of over two months or more shall be temporarily hydroseeded with (a) perennial ryegrass at a rate of 40 lbs per acre (1.0 lb per 1000 square feet); (b) Certified "Aroostook" winter rye (cereal rye) @ 100 lb per acre (2.5 lb/1000 s.f.) to be used in the months of October and November.

Permanent turfgrass cover is to consist of a seed mixture as follows:

(a) Sunny sites

Kentucky Bluegrass	2.0-2.6 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	0.4-0.6 pounds/1000 square feet

(b) Shady sites

Kentucky Bluegrass	0.8-1.0 pounds/1000 square feet
Perennial Ryegrass	0.6-0.7 pounds/1000 square feet
Fine Fescue	2.6-3.3 pounds/1000 square feet

All plant materials shall comply with the standards of the American Association Of Nurserymen with respect to height and caliper as described in its publication American Standard for Nursery Stock, latest edition.

VII. CONSTRUCTION PHASE AND POST-CONSTRUCTION MAINTENANCE

During the construction phase and following construction of the project, a number of maintenance measures will be taken with respect to the site maintenance. Measures to be taken included the following:

1. During Construction

A comprehensive sediment and erosion control plan will be in place during the construction period. Maintenance measures for sediment and erosion controls will include:

A qualified professional acceptable to the municipality will be hired by the owner or operator to monitor the installation and maintenance of the sediment and erosion control plans. The qualified professional shall report directly to the Engineering Consultant and shall be responsible for ensuring compliance with the design of the sediment and erosion control plans.

The qualified professional so hired will inspect all sediment and erosion control measures at least every seven calendar days. In the event that there has been a variance with the design of the sediment and erosion control measures so that the ability of the measures to adequately perform the intended function is lessened or compromised and/or the facilities are not adequately maintained, the qualified professional shall be required to report such variance to the Engineering Consultant within 48 hours and shall be empowered to order immediate repairs to the sediment and erosion control measures.

The qualified professional will also be responsible for observing the adequacy of the vegetation growth (trees, shrubs, groundcovers and turfgrasses) in newly graded areas and for ordering additional plantings in the event that the established plant materials do not adequately protect the ground surface from erosion.

2. Following Construction

Site maintenance activities on the property will include:

- Grounds maintenance, including mowing of lawns;
- Planting of trees, shrubs and groundcovers; pruning of trees and shrubs;
- Application of fertilizer and herbicides;
- Maintenance of stormwater management practices;

Grounds maintenance on the site will be performed by a landscaping contractor and a qualified stormwater management practice maintenance contractor will be hired to clean, monitor and maintain all post-construction practices.

Fertilizer is typically applied twice in the year - once in the spring and once in the fall. The application of fertilizer is usually necessary to maintain healthy lawn growth due to competition for nutrients with trees and shrubs and since the clippings are often removed. It is not recommended that fertilizer be applied during the summer. It is at this time that lawns are typically dormant.

Fertilizers come in three basic types: (1) Organic; (2) Soluble synthetic and (3) Slow release.

Organic fertilizers are derived from plant or animal waste. Since they are heavier and bulkier than other fertilizers, it is necessary to apply a much greater amount at one time. Soluble synthetic fertilizers are predictable with determining the exact impact on a lawn. However more applications are necessary since their effect is often short term. Slow release fertilizers have a high percentage of nitrogen so quantities that need be handled at one time are smaller. Slow release fertilizers will be utilized by the project.

A complete fertilizer contains all three of the primary nutrients - nitrogen (N), phosphorus (P) and potassium in the form of potash (K). Typically, a 3-1-2 ratio of nutrients (N-P-K) is used for lawn applications.

Fertilizer shall be applied by the landscape contractor in accordance with the manufacturer's instructions. The application of fertilizer does require some skill on the part of the operator. Should there be a spill of fertilizer, the landscape contractor shall be required to scrape or vacuum it up. The area will then be watered in accordance with the manufacturer's instructions to ensure that the fertilizer becomes soluble and available to plants and does not run off.

Mercedes Benz of Goldens Bridge will be responsible for the long-term operation and maintenance of the permanent stormwater management practices. The permanent stormwater management practices shall be maintained in accordance with the Maintenance Inspection Checklists provided in Appendix E.

VIII. CONCLUSION

This Stormwater Pollution Prevention Plan has been prepared to describe the project's pre and post-development stormwater management improvements and its sediment and erosion control improvements to be utilized during construction. The proposed permanent improvements and the interim improvements to be utilized during construction have been designed in accordance with the requirements of the:

- New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit No. GP-0-15-002, effective January 29, 2015, last modified November 23, 2016.
- New York City Environmental Protection (NYCEP, formerly NYCDEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, amended April 4, 2010.
- Chapter 188 "Storm Sewer System" of the Town of Lewisboro Zoning Code
- Chapter 189 "Stormwater Management and Erosion and Sediment Control" of the Town of Lewisboro Zoning Code

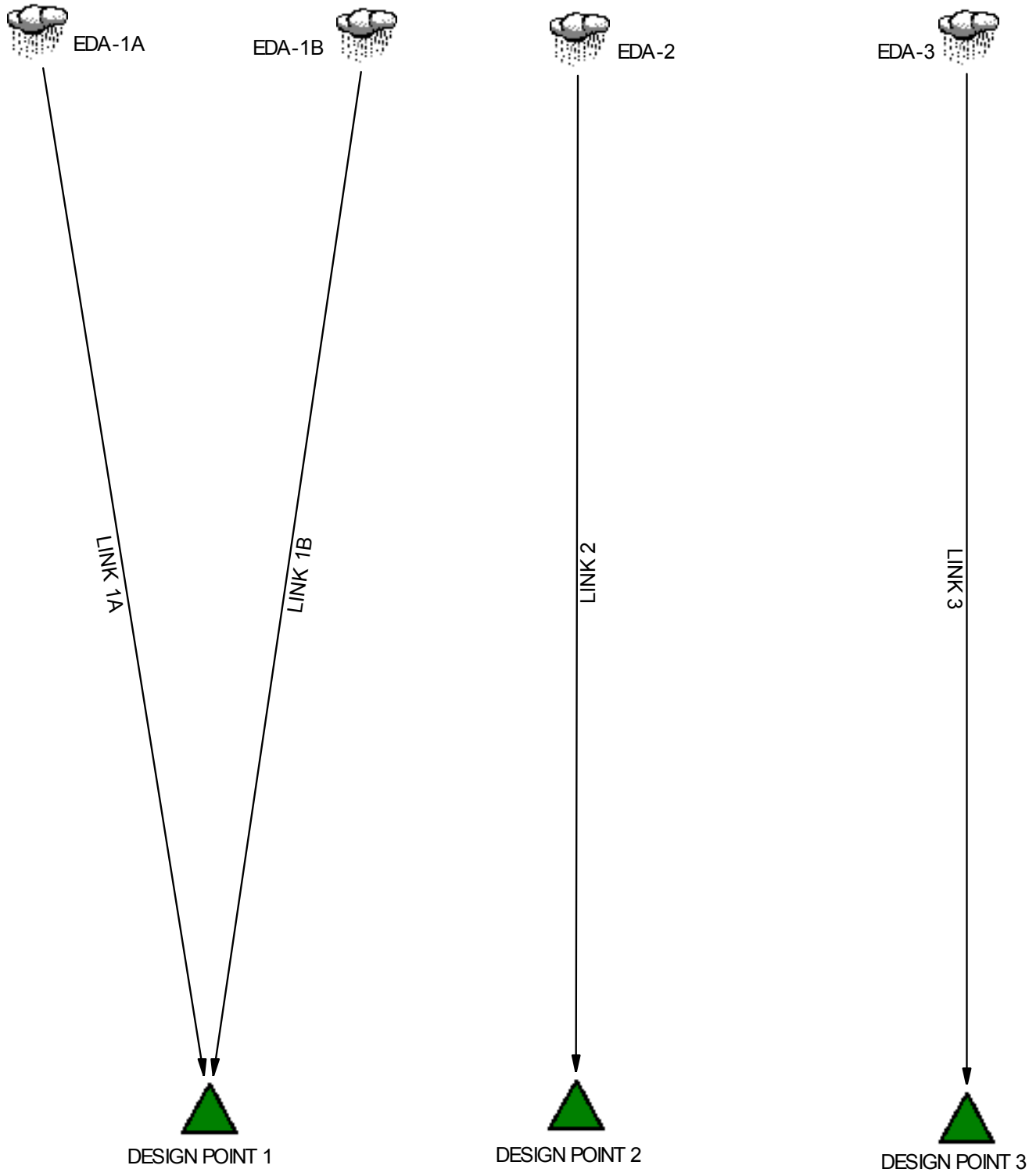
The project employs a variety of practices to enhance stormwater quality and reduce peak rates of runoff associated with the proposed building expansion and improvements. These measures

include green roofs, subsurface detention and infiltration systems, and rain gardens. These improvements will also mitigate runoff volumes from the proposed improvements as runoff volumes will be slightly reduced or maintained in all the analyzed storms.

Based on the foregoing, it is our professional opinion that the proposed improvements will provide water quantity and quality enhancements which exceed the above mentioned requirements and are not anticipated to have any adverse impacts to the site or any surrounding areas.

APPENDIX A

EXISTING HYDROLOGIC CALCULATIONS


EDA-1A
EDA-1B
EDA-2
EDA-3
LINK 1A
LINK 1B
LINK 2
LINK 3
DESIGN POINT 1
DESIGN POINT 2
DESIGN POINT 3

==========
JOB TITLE
==========

Project Date: 11/29/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

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MASTER DESIGN STORM SUMMARY

Network Storm Collection: WESTCHESTER-NEW

Return Event	Total Depth in	Rainfall Type	RNF ID
1Y	3.0000	Synthetic Curve	TypeIII 24hr
10Y	5.5000	Synthetic Curve	TypeIII 24hr
100Y	9.0000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DESIGN POINT 1	JCT	1	13029		12.1000	3.72		
*DESIGN POINT 1	JCT	10	30599		12.1000	8.42		
*DESIGN POINT 1	JCT	100	56548		12.1000	14.98		
*DESIGN POINT 2	JCT	1	7415		12.2500	1.42		
*DESIGN POINT 2	JCT	10	26546		12.2000	6.00		
*DESIGN POINT 2	JCT	100	60208		12.2000	13.86		
*DESIGN POINT 3	JCT	1	8128		12.2000	1.73		
*DESIGN POINT 3	JCT	10	26047		12.2000	6.05		
*DESIGN POINT 3	JCT	100	56147		12.2000	13.01		
EDA-1A	AREA	1	5643		12.1000	1.61		
EDA-1A	AREA	10	13111		12.1000	3.60		
EDA-1A	AREA	100	24098		12.1000	6.36		
EDA-1B	AREA	1	7386		12.1000	2.11		
EDA-1B	AREA	10	17488		12.1000	4.83		
EDA-1B	AREA	100	32450		12.1000	8.62		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
EDA-2	AREA	1	7415		12.2500	1.42		
EDA-2	AREA	10	26546		12.2000	6.00		
EDA-2	AREA	100	60208		12.2000	13.86		
EDA-3	AREA	1	8128		12.2000	1.73		
EDA-3	AREA	10	26047		12.2000	6.05		
EDA-3	AREA	100	56147		12.2000	13.01		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	13029		12.1000	3.72	
Outfall DESIGN POINT 2	JCT	7415		12.2500	1.42	
Outfall DESIGN POINT 3	JCT	8128		12.2000	1.73	
EDA-1A	AREA	5643		12.1000	1.61	
EDA-1B	AREA	7386		12.1000	2.11	
EDA-2	AREA	7415		12.2500	1.42	
EDA-3	AREA	8128		12.2000	1.73	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	5643		12.1000	1.61	EDA-1A
		DL	5643		12.1000	1.61	
		DN	13029		12.1000	3.72	DESIGN POINT 1
LINK 1B	ADD	UN	7386		12.1000	2.11	EDA-1B
		DL	7386		12.1000	2.11	
		DN	13029		12.1000	3.72	DESIGN POINT 1
LINK 2	ADD	UN	7415		12.2500	1.42	EDA-2
		DL	7415		12.2500	1.42	
		DN	7415		12.2500	1.42	DESIGN POINT 2
LINK 3	ADD	UN	8128		12.2000	1.73	EDA-3
		DL	8128		12.2000	1.73	
		DN	8128		12.2000	1.73	DESIGN POINT 3

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	30599		12.1000	8.42	
Outfall DESIGN POINT 2	JCT	26546		12.2000	6.00	
Outfall DESIGN POINT 3	JCT	26047		12.2000	6.05	
EDA-1A	AREA	13111		12.1000	3.60	
EDA-1B	AREA	17488		12.1000	4.83	
EDA-2	AREA	26546		12.2000	6.00	
EDA-3	AREA	26047		12.2000	6.05	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	13111		12.1000	3.60	EDA-1A
		DL	13111		12.1000	3.60	
		DN	30599		12.1000	8.42	DESIGN POINT 1
LINK 1B	ADD	UN	17488		12.1000	4.83	EDA-1B
		DL	17488		12.1000	4.83	
		DN	30599		12.1000	8.42	DESIGN POINT 1
LINK 2	ADD	UN	26546		12.2000	6.00	EDA-2
		DL	26546		12.2000	6.00	
		DN	26546		12.2000	6.00	DESIGN POINT 2
LINK 3	ADD	UN	26047		12.2000	6.05	EDA-3
		DL	26047		12.2000	6.05	
		DN	26047		12.2000	6.05	DESIGN POINT 3

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	56548		12.1000	14.98	
Outfall DESIGN POINT 2	JCT	60208		12.2000	13.86	
Outfall DESIGN POINT 3	JCT	56147		12.2000	13.01	
EDA-1A	AREA	24098		12.1000	6.36	
EDA-1B	AREA	32450		12.1000	8.62	
EDA-2	AREA	60208		12.2000	13.86	
EDA-3	AREA	56147		12.2000	13.01	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
LINK 1A	ADD	UN	24098		12.1000	6.36	EDA-1A
		DL	24098		12.1000	6.36	
		DN	56548		12.1000	14.98	DESIGN POINT 1
LINK 1B	ADD	UN	32450		12.1000	8.62	EDA-1B
		DL	32450		12.1000	8.62	
		DN	56548		12.1000	14.98	DESIGN POINT 1
LINK 2	ADD	UN	60208		12.2000	13.86	EDA-2
		DL	60208		12.2000	13.86	
		DN	60208		12.2000	13.86	DESIGN POINT 2
LINK 3	ADD	UN	56147		12.2000	13.01	EDA-3
		DL	56147		12.2000	13.01	
		DN	56147		12.2000	13.01	DESIGN POINT 3

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	EDA-1A	Subarea	EDA-1A	Add Hyd	EDA-1A
SCS UH	EDA-3	Subarea	EDA-3	Add Hyd	EDA-3
SCS UH	EDA-1B	Subarea	EDA-1B	Add Hyd	EDA-1B
SCS UH	EDA-2	Subarea	EDA-2	Add Hyd	EDA-2

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd LINK 2	Subarea EDA-2	Jct DESIGN POINT 2
Add Hyd LINK 3	Subarea EDA-3	Jct DESIGN POINT 3
Add Hyd LINK 1A	Subarea EDA-1A	Jct DESIGN POINT 1
Add Hyd LINK 1B	Subarea EDA-1B	Jct DESIGN POINT 1

Title... Project Date: 11/29/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

DESIGN STORMS SUMMARY

Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0030	.0060	.0090	.0120
.5000	.0150	.0180	.0210	.0240	.0270
1.0000	.0300	.0330	.0360	.0390	.0420
1.5000	.0450	.0480	.0510	.0540	.0570
2.0000	.0600	.0630	.0661	.0692	.0724
2.5000	.0756	.0788	.0821	.0854	.0888
3.0000	.0923	.0957	.0992	.1028	.1064
3.5000	.1101	.1138	.1175	.1213	.1251
4.0000	.1290	.1329	.1369	.1409	.1450
4.5000	.1491	.1532	.1574	.1616	.1659
5.0000	.1703	.1746	.1790	.1835	.1880
5.5000	.1926	.1972	.2018	.2065	.2112
6.0000	.2160	.2209	.2259	.2311	.2364
6.5000	.2419	.2475	.2533	.2592	.2653
7.0000	.2715	.2779	.2844	.2911	.2979
7.5000	.3049	.3120	.3193	.3267	.3343
8.0000	.3420	.3500	.3583	.3670	.3760
8.5000	.3853	.3950	.4051	.4154	.4262
9.0000	.4373	.4487	.4604	.4726	.4850
9.5000	.4978	.5110	.5245	.5383	.5525
10.0000	.5670	.5821	.5978	.6143	.6316
10.5000	.6495	.6682	.6875	.7076	.7285
11.0000	.7500	.7733	.7993	.8281	.8597
11.5000	.8940	.9429	1.0182	1.1199	1.2480
12.0000	1.5000	1.7520	1.8801	1.9818	2.0571
12.5000	2.1060	2.1403	2.1719	2.2007	2.2267
13.0000	2.2500	2.2715	2.2924	2.3125	2.3318
13.5000	2.3505	2.3684	2.3857	2.4022	2.4179
14.0000	2.4330	2.4475	2.4617	2.4755	2.4890
14.5000	2.5022	2.5150	2.5274	2.5396	2.5513
15.0000	2.5628	2.5738	2.5846	2.5949	2.6050
15.5000	2.6147	2.6240	2.6330	2.6417	2.6500
16.0000	2.6580	2.6657	2.6733	2.6807	2.6880
16.5000	2.6951	2.7021	2.7089	2.7156	2.7221
17.0000	2.7285	2.7347	2.7408	2.7467	2.7525
17.5000	2.7581	2.7636	2.7689	2.7741	2.7791
18.0000	2.7840	2.7888	2.7935	2.7982	2.8028
18.5000	2.8074	2.8120	2.8165	2.8210	2.8254
19.0000	2.8298	2.8341	2.8384	2.8426	2.8468
19.5000	2.8509	2.8550	2.8591	2.8631	2.8671
20.0000	2.8710	2.8749	2.8787	2.8826	2.8863
20.5000	2.8901	2.8938	2.8975	2.9011	2.9047
21.0000	2.9083	2.9119	2.9154	2.9189	2.9223
21.5000	2.9257	2.9291	2.9324	2.9357	2.9390

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
22.0000	2.9423	2.9455	2.9486	2.9518	2.9549
22.5000	2.9579	2.9610	2.9640	2.9670	2.9699
23.0000	2.9728	2.9757	2.9785	2.9813	2.9841
23.5000	2.9868	2.9895	2.9922	2.9948	2.9974
24.0000	3.0000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.0000	.0055	.0110	.0165	.0220
.5000	.0275	.0330	.0385	.0440	.0495
1.0000	.0550	.0605	.0660	.0715	.0770
1.5000	.0825	.0880	.0935	.0990	.1045
2.0000	.1100	.1156	.1212	.1269	.1327
2.5000	.1385	.1445	.1505	.1566	.1629
3.0000	.1691	.1755	.1819	.1885	.1951
3.5000	.2018	.2086	.2154	.2224	.2294
4.0000	.2365	.2437	.2510	.2583	.2658
4.5000	.2733	.2809	.2886	.2963	.3042
5.0000	.3121	.3202	.3282	.3364	.3447
5.5000	.3530	.3615	.3700	.3786	.3873
6.0000	.3960	.4050	.4142	.4237	.4334
6.5000	.4435	.4538	.4644	.4752	.4864
7.0000	.4978	.5095	.5214	.5337	.5462
7.5000	.5590	.5720	.5854	.5990	.6129
8.0000	.6270	.6416	.6569	.6728	.6893
8.5000	.7064	.7242	.7426	.7616	.7813
9.0000	.8016	.8226	.8441	.8664	.8892
9.5000	.9127	.9368	.9615	.9869	1.0129
10.0000	1.0395	1.0671	1.0960	1.1263	1.1579
10.5000	1.1908	1.2250	1.2605	1.2973	1.3355
11.0000	1.3750	1.4177	1.4654	1.5182	1.5761
11.5000	1.6390	1.7287	1.8667	2.0532	2.2880
12.0000	2.7500	3.2120	3.4469	3.6333	3.7714
12.5000	3.8610	3.9239	3.9818	4.0346	4.0823
13.0000	4.1250	4.1645	4.2027	4.2395	4.2750
13.5000	4.3093	4.3421	4.3737	4.4040	4.4329
14.0000	4.4605	4.4871	4.5131	4.5385	4.5632
14.5000	4.5873	4.6108	4.6336	4.6559	4.6774
15.0000	4.6984	4.7187	4.7384	4.7574	4.7758
15.5000	4.7936	4.8107	4.8272	4.8431	4.8584
16.0000	4.8730	4.8872	4.9011	4.9147	4.9280
16.5000	4.9411	4.9539	4.9664	4.9786	4.9906
17.0000	5.0023	5.0137	5.0248	5.0357	5.0463
17.5000	5.0566	5.0666	5.0764	5.0859	5.0951
18.0000	5.1040	5.1127	5.1214	5.1300	5.1385
18.5000	5.1470	5.1553	5.1636	5.1718	5.1798
19.0000	5.1879	5.1958	5.2037	5.2114	5.2191
19.5000	5.2267	5.2342	5.2417	5.2490	5.2563
20.0000	5.2635	5.2706	5.2777	5.2847	5.2916
20.5000	5.2985	5.3053	5.3120	5.3187	5.3253
21.0000	5.3319	5.3384	5.3448	5.3512	5.3576
21.5000	5.3638	5.3700	5.3761	5.3822	5.3882

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	5.3941	5.4000	5.4058	5.4116	5.4173
22.5000	5.4229	5.4285	5.4340	5.4394	5.4448
23.0000	5.4502	5.4554	5.4606	5.4657	5.4709
23.5000	5.4759	5.4808	5.4857	5.4905	5.4953
24.0000	5.5000				

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs

Time hrs	Time on left represents time for first value in each row.				
.0000	.0000	.0090	.0180	.0270	.0360
.5000	.0450	.0540	.0630	.0720	.0810
1.0000	.0900	.0990	.1080	.1170	.1260
1.5000	.1350	.1440	.1530	.1620	.1710
2.0000	.1800	.1891	.1983	.2076	.2171
2.5000	.2267	.2364	.2463	.2563	.2665
3.0000	.2768	.2872	.2977	.3084	.3192
3.5000	.3302	.3413	.3525	.3639	.3754
4.0000	.3870	.3988	.4107	.4227	.4349
4.5000	.4472	.4596	.4722	.4849	.4978
5.0000	.5108	.5239	.5371	.5505	.5640
5.5000	.5777	.5915	.6054	.6195	.6337
6.0000	.6480	.6627	.6777	.6933	.7092
6.5000	.7257	.7425	.7599	.7776	.7959
7.0000	.8145	.8337	.8532	.8733	.8937
7.5000	.9147	.9360	.9579	.9801	1.0029
8.0000	1.0260	1.0499	1.0749	1.1009	1.1279
8.5000	1.1560	1.1850	1.2152	1.2463	1.2785
9.0000	1.3118	1.3460	1.3813	1.4177	1.4550
9.5000	1.4935	1.5329	1.5734	1.6149	1.6574
10.0000	1.7010	1.7462	1.7935	1.8430	1.8947
10.5000	1.9485	2.0045	2.0626	2.1229	2.1854
11.0000	2.2500	2.3198	2.3980	2.4844	2.5790
11.5000	2.6820	2.8287	3.0546	3.3597	3.7440
12.0000	4.5000	5.2560	5.6403	5.9454	6.1713
12.5000	6.3180	6.4210	6.5156	6.6020	6.6802
13.0000	6.7500	6.8146	6.8771	6.9374	6.9955
13.5000	7.0515	7.1053	7.1570	7.2065	7.2538
14.0000	7.2990	7.3426	7.3851	7.4266	7.4671
14.5000	7.5065	7.5450	7.5823	7.6187	7.6540
15.0000	7.6883	7.7215	7.7537	7.7848	7.8150
15.5000	7.8440	7.8721	7.8991	7.9251	7.9501
16.0000	7.9740	7.9972	8.0199	8.0422	8.0640
16.5000	8.0854	8.1063	8.1268	8.1468	8.1664
17.0000	8.1855	8.2042	8.2224	8.2402	8.2575
17.5000	8.2744	8.2908	8.3068	8.3223	8.3374
18.0000	8.3520	8.3663	8.3805	8.3946	8.4085
18.5000	8.4223	8.4360	8.4495	8.4629	8.4761
19.0000	8.4893	8.5022	8.5151	8.5278	8.5404
19.5000	8.5528	8.5651	8.5773	8.5893	8.6012
20.0000	8.6130	8.6246	8.6362	8.6477	8.6590
20.5000	8.6702	8.6814	8.6924	8.7034	8.7142
21.0000	8.7250	8.7356	8.7461	8.7566	8.7669
21.5000	8.7771	8.7872	8.7972	8.8072	8.8170

CUMULATIVE RAINFALL DEPTHS (in)
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	8.8268	8.8364	8.8459	8.8553	8.8646
22.5000	8.8738	8.8830	8.8920	8.9009	8.9097
23.0000	8.9185	8.9270	8.9356	8.9439	8.9523
23.5000	8.9605	8.9686	8.9766	8.9845	8.9923
24.0000	9.0000				

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	55.00 ft
2yr, 24hr P	3.5000 in
Slope	.182000 ft/ft
Avg.Velocity	.26 ft/sec

Segment #1 Time: .0583 hrs

Segment #2: Tc: TR-55 Sheet

Mannings n	.0110
Hydraulic Length	95.00 ft
2yr, 24hr P	3.5000 in
Slope	.084200 ft/ft
Avg.Velocity	2.53 ft/sec

Segment #2 Time: .0104 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	45.00 ft
Slope	.089000 ft/ft
Paved	
Avg.Velocity	6.06 ft/sec

Segment #3 Time: .0021 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	4.9100	sq.ft
Wetted Perimeter	7.85	ft
Hydraulic Radius	.63	ft
Slope	.021100	ft/ft
Mannings n	.0110	
Hydraulic Length	238.00	ft

Avg.Velocity 14.39 ft/sec

Segment #4 Time: .0046 hrs

Total Tc: .0754 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.0110
Hydraulic Length	71.00 ft
2yr, 24hr P	3.5000 in
Slope	.113000 ft/ft
Avg.Velocity	2.69 ft/sec

Segment #1 Time: .0073 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	86.00 ft
Slope	.186000 ft/ft
Unpaved	
Avg.Velocity	6.96 ft/sec

Segment #2 Time: .0034 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	125.00 ft
Slope	.032000 ft/ft
Paved	
Avg.Velocity	3.64 ft/sec

Segment #3 Time: .0095 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300	sq.ft
Wetted Perimeter	3.93	ft
Hydraulic Radius	.31	ft
Slope	.173900	ft/ft
Mannings n	.0120	
Hydraulic Length	23.00	ft

Avg.Velocity 23.87 ft/sec

Segment #4 Time: .0003 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.113200	ft/ft
Mannings n	.0150	
Hydraulic Length	204.00	ft

Avg.Velocity 21.05 ft/sec

Segment #5 Time: .0027 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	4.9060	sq.ft
Wetted Perimeter	7.85	ft
Hydraulic Radius	.62	ft
Slope	.021100	ft/ft
Mannings n	.0110	
Hydraulic Length	320.00	ft

Avg.Velocity 14.38 ft/sec

Segment #6 Time: .0062 hrs

Total Tc: .0295 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 150.00 ft
2yr, 24hr P 3.5000 in
Slope .140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 189.00 ft
Slope .238000 ft/ft
Unpaved

Avg.Velocity 7.87 ft/sec

Segment #2 Time: .0067 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 80.00 ft
Slope .100000 ft/ft
Paved

Avg.Velocity 6.43 ft/sec

Segment #3 Time: .0035 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.102300	ft/ft
Mannings n	.0110	
Hydraulic Length	46.00	ft
Avg.Velocity	27.29	ft/sec

Segment #4 Time: .0005 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	2.0000	sq.ft
Wetted Perimeter	4.00	ft
Hydraulic Radius	.50	ft
Slope	.192000	ft/ft
Mannings n	.1500	
Hydraulic Length	83.25	ft
Avg.Velocity	2.74	ft/sec

Segment #5 Time: .0084 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.106000	ft/ft
Mannings n	.0110	
Hydraulic Length	56.50	ft
Avg.Velocity	27.78	ft/sec

Segment #6 Time: .0006 hrs

Segment #7: Tc: TR-55 Channel

Flow Area	2.0000 sq.ft
Wetted Perimeter	4.00 ft
Hydraulic Radius	.50 ft
Slope	.070000 ft/ft
Mannings n	.1500
Hydraulic Length	56.47 ft
Avg.Velocity	1.66 ft/sec

Segment #7 Time: .0095 hrs

Segment #8: Tc: TR-55 Channel

Flow Area	.1963 sq.ft
Wetted Perimeter	1.57 ft
Hydraulic Radius	.13 ft
Slope	.133330 ft/ft
Mannings n	.0110
Hydraulic Length	15.00 ft
Avg.Velocity	12.37 ft/sec

Segment #8 Time: .0003 hrs

Segment #9: Tc: TR-55 Channel

Flow Area	2.0000 sq.ft
Wetted Perimeter	4.00 ft
Hydraulic Radius	.50 ft
Slope	.050000 ft/ft
Mannings n	.1500
Hydraulic Length	79.46 ft
Avg.Velocity	1.40 ft/sec

Segment #9 Time: .0158 hrs

Total Tc: .2625 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000
Hydraulic Length	150.00 ft
2yr, 24hr P	3.5000 in
Slope	.140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	180.00 ft
Slope	.105550 ft/ft

Unpaved

Avg.Velocity 5.24 ft/sec

Segment #2 Time: .0095 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length	213.00 ft
Slope	.028000 ft/ft

Paved

Avg.Velocity 3.40 ft/sec

Segment #3 Time: .0174 hrs

Segment #4: Tc: TR-55 Shallow

Hydraulic Length 48.45 ft
Slope .041300 ft/ft
Unpaved

Avg.Velocity 3.28 ft/sec

Segment #4 Time: .0041 hrs

Total Tc: .2484 hrs

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Dirt (w/ right-o	82	.027			82.00
Impervious Areas - Paved parking lo	98	.616			98.00
Open space (Lawns,parks etc.) - Goo	61	.251			61.00
COMPOSITE AREA & WEIGHTED CN --->		.894			87.13 (87)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.868			98.00
Open space (Lawns,parks etc.) - Goo	61	.271			61.00
Brush - brush, weed, grass mix - go	48	.085			48.00
COMPOSITE AREA & WEIGHTED CN --->		1.224			86.34 (86)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.609			98.00
ROCK	98	.006			98.00
Open space (Lawns,parks etc.) - Goo	61	.462			61.00
Impervious Areas - Gravel (w/ right	85	.414			85.00
Woods - good	55	1.769			55.00
COMPOSITE AREA & WEIGHTED CN --->		3.260			67.77 (68)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.958			98.00
Woods - Soil B	55	1.549			55.00
Woods - Soil D	77	.264			77.00
COMPOSITE AREA & WEIGHTED CN --->		2.771			71.96 (72)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1A 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = 1.61 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 1.61 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

1.7391 in
5644 cu.ft

HYG Volume... 5643 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1A 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 3.60 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 3.60 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

4.0404 in
13112 cu.ft

HYG Volume... 13111 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1A 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .894 acres Runoff CN= 87

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 6.36 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 6.36 cfs
==========

DRAINAGE AREA

ID:EDA-1A
CN = 87
Area = .894 acres
S = 1.4943 in
0.2S = .2989 in

Cumulative Runoff

7.4259 in
24099 cu.ft

HYG Volume... 24098 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1A)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.16 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1B 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = 2.12 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 2.11 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

1.6625 in
7387 cu.ft

HYG Volume... 7386 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1B 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 4.83 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 4.83 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

3.9361 in
17489 cu.ft

HYG Volume... 17488 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-1B 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = 1.224 acres Runoff CN= 86

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 8.62 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 8.62 cfs
==========

DRAINAGE AREA

ID:EDA-1B
CN = 86
Area = 1.224 acres
S = 1.6279 in
0.2S = .3256 in

Cumulative Runoff

7.3037 in
32451 cu.ft

HYG Volume... 32450 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: EDA-1B)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 16.64 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-2 1Y
Tc = .2625 hrs
Drainage Area = 3.260 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.2507 hrs
Computed Peak Flow = 1.42 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2500 hrs
Peak Flow, Interpolated Output = 1.42 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.260 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

.6266 in
7415 cu.ft

HYG Volume... 7415 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.07 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-2 10Y
Tc = .2625 hrs
Drainage Area = 3.260 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.2157 hrs
Computed Peak Flow = 6.01 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.00 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.260 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

2.2432 in
26546 cu.ft

HYG Volume... 26546 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.07 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-2 100Y
Tc = .2625 hrs
Drainage Area = 3.260 acres Runoff CN= 68

==========
Computational Time Increment = .03500 hrs
Computed Peak Time = 12.1807 hrs
Computed Peak Flow = 13.93 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 13.86 cfs
==========

DRAINAGE AREA

ID:EDA-2
CN = 68
Area = 3.260 acres
S = 4.7059 in
0.2S = .9412 in

Cumulative Runoff

5.0878 in
60208 cu.ft

HYG Volume... 60208 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .26252 hrs (ID: EDA-2)
Computational Incr, Tm = .03500 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.07 cfs
Unit peak time Tp = .17501 hrs
Unit receding limb, Tr = .70004 hrs
Total unit time, Tb = .87505 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-3 1Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.2200 hrs
Computed Peak Flow = 1.73 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 1.73 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

.8081 in
8128 cu.ft

HYG Volume... 8128 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-3 10Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.1869 hrs
Computed Peak Flow = 6.10 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.05 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

2.5896 in
26048 cu.ft

HYG Volume... 26047 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - EDA-3 100Y
Tc = .2484 hrs
Drainage Area = 2.771 acres Runoff CN= 72

==========
Computational Time Increment = .03312 hrs
Computed Peak Time = 12.1869 hrs
Computed Peak Flow = 13.17 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 13.01 cfs
==========

DRAINAGE AREA

ID:EDA-3
CN = 72
Area = 2.771 acres
S = 3.8889 in
0.2S = .7778 in

Cumulative Runoff

5.5821 in
56148 cu.ft

HYG Volume... 56147 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .24837 hrs (ID: EDA-3)
Computational Incr, Tm = .03312 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 12.64 cfs
Unit peak time Tp = .16558 hrs
Unit receding limb, Tr = .66233 hrs
Total unit time, Tb = .82791 hrs

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	1Y
LINK 1B	EDA-1B		EDA-1B	1Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	1Y	5643	12.1000	1.61
	EDA-1B	1Y	7386	12.1000	2.11

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	1Y	13029	12.1000	3.72

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 1Y

Peak Discharge = 3.72 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 13029 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6000	.00	.00	.00	.00	.00
7.8500	.00	.00	.00	.00	.01
8.1000	.01	.01	.01	.01	.01
8.3500	.01	.01	.01	.02	.02
8.6000	.02	.02	.02	.02	.02
8.8500	.03	.03	.03	.03	.03
9.1000	.04	.04	.04	.04	.04
9.3500	.05	.05	.05	.05	.05
9.6000	.06	.06	.06	.06	.07
9.8500	.07	.07	.07	.08	.08
10.1000	.08	.09	.09	.10	.10
10.3500	.10	.11	.11	.12	.12
10.6000	.13	.13	.14	.14	.15
10.8500	.16	.16	.17	.17	.18
11.1000	.19	.21	.22	.24	.26
11.3500	.27	.29	.31	.33	.39
11.6000	.47	.61	.77	.94	1.12
11.8500	1.32	1.54	2.25	3.17	3.52
12.1000	3.72	3.13	2.29	1.94	1.71
12.3500	1.51	1.30	1.09	.88	.74
12.6000	.61	.57	.54	.52	.49
12.8500	.47	.45	.43	.40	.39
13.1000	.37	.37	.36	.35	.35
13.3500	.34	.34	.33	.32	.32
13.6000	.31	.31	.30	.29	.29
13.8500	.28	.28	.27	.26	.26
14.1000	.26	.25	.25	.25	.24
14.3500	.24	.24	.24	.23	.23
14.6000	.23	.22	.22	.22	.22
14.8500	.21	.21	.21	.20	.20
15.1000	.20	.19	.19	.19	.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.3500	.18	.18	.18	.17	.17
15.6000	.17	.16	.16	.16	.16
15.8500	.15	.15	.15	.14	.14
16.1000	.14	.14	.14	.13	.13
16.3500	.13	.13	.13	.13	.13
16.6000	.13	.12	.12	.12	.12
16.8500	.12	.12	.12	.12	.11
17.1000	.11	.11	.11	.11	.11
17.3500	.11	.10	.10	.10	.10
17.6000	.10	.10	.10	.10	.09
17.8500	.09	.09	.09	.09	.09
18.1000	.09	.09	.09	.09	.09
18.3500	.08	.08	.08	.08	.08
18.6000	.08	.08	.08	.08	.08
18.8500	.08	.08	.08	.08	.08
19.1000	.08	.08	.08	.08	.08
19.3500	.08	.08	.08	.08	.08
19.6000	.08	.07	.07	.07	.07
19.8500	.07	.07	.07	.07	.07
20.1000	.07	.07	.07	.07	.07
20.3500	.07	.07	.07	.07	.07
20.6000	.07	.07	.07	.07	.07
20.8500	.07	.07	.07	.07	.07
21.1000	.07	.06	.06	.06	.06
21.3500	.06	.06	.06	.06	.06
21.6000	.06	.06	.06	.06	.06
21.8500	.06	.06	.06	.06	.06
22.1000	.06	.06	.06	.06	.06
22.3500	.06	.06	.06	.06	.06
22.6000	.06	.06	.06	.06	.05
22.8500	.05	.05	.05	.05	.05
23.1000	.05	.05	.05	.05	.05
23.3500	.05	.05	.05	.05	.05
23.6000	.05	.05	.05	.05	.05
23.8500	.05	.05	.05	.05	.03
24.1000	.01	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	10Y
LINK 1B	EDA-1B		EDA-1B	10Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	10Y	13111	12.1000	3.60
	EDA-1B	10Y	17488	12.1000	4.83

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	10Y	30599	12.1000	8.42

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 10Y

Peak Discharge = 8.42 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 30599 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
5.0000	.00	.00	.00	.00	.00
5.2500	.00	.00	.00	.01	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.02
6.0000	.02	.02	.02	.02	.02
6.2500	.02	.02	.03	.03	.03
6.5000	.03	.03	.03	.03	.04
6.7500	.04	.04	.04	.04	.04
7.0000	.05	.05	.05	.05	.05
7.2500	.06	.06	.06	.06	.06
7.5000	.07	.07	.07	.07	.08
7.7500	.08	.08	.08	.09	.09
8.0000	.09	.09	.10	.10	.10
8.2500	.11	.11	.12	.12	.12
8.5000	.13	.13	.14	.14	.15
8.7500	.15	.16	.16	.17	.17
9.0000	.18	.18	.19	.19	.20
9.2500	.20	.21	.22	.22	.23
9.5000	.23	.24	.25	.25	.26
9.7500	.26	.27	.28	.28	.29
10.0000	.30	.31	.31	.32	.34
10.2500	.35	.36	.37	.38	.39
10.5000	.41	.42	.43	.44	.46
10.7500	.47	.48	.49	.51	.52
11.0000	.53	.56	.58	.62	.66
11.2500	.70	.75	.79	.83	.88
11.5000	.93	1.10	1.30	1.65	2.04
11.7500	2.46	2.89	3.34	3.81	5.47
12.0000	7.50	8.15	8.42	6.99	5.05
12.2500	4.24	3.72	3.25	2.80	2.34
12.5000	1.88	1.57	1.30	1.20	1.14

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.7500	1.09	1.04	.99	.95	.90
13.0000	.85	.81	.78	.76	.75
13.2500	.74	.73	.71	.70	.69
13.5000	.68	.66	.65	.64	.63
13.7500	.61	.60	.59	.57	.56
14.0000	.55	.54	.53	.52	.52
14.2500	.51	.50	.50	.49	.49
14.5000	.48	.47	.47	.46	.45
14.7500	.45	.44	.44	.43	.42
15.0000	.42	.41	.41	.40	.39
15.2500	.39	.38	.37	.37	.36
15.5000	.36	.35	.34	.34	.33
15.7500	.32	.32	.31	.31	.30
16.0000	.29	.29	.28	.28	.28
16.2500	.28	.27	.27	.27	.26
16.5000	.26	.26	.26	.25	.25
16.7500	.25	.25	.24	.24	.24
17.0000	.23	.23	.23	.23	.22
17.2500	.22	.22	.22	.21	.21
17.5000	.21	.20	.20	.20	.20
17.7500	.19	.19	.19	.19	.18
18.0000	.18	.18	.18	.18	.17
18.2500	.17	.17	.17	.17	.17
18.5000	.17	.17	.17	.17	.17
18.7500	.17	.16	.16	.16	.16
19.0000	.16	.16	.16	.16	.16
19.2500	.16	.16	.16	.15	.15
19.5000	.15	.15	.15	.15	.15
19.7500	.15	.15	.15	.15	.15
20.0000	.15	.14	.14	.14	.14
20.2500	.14	.14	.14	.14	.14
20.5000	.14	.14	.14	.14	.14
20.7500	.14	.14	.13	.13	.13
21.0000	.13	.13	.13	.13	.13
21.2500	.13	.13	.13	.13	.13
21.5000	.13	.13	.13	.12	.12
21.7500	.12	.12	.12	.12	.12
22.0000	.12	.12	.12	.12	.12
22.2500	.12	.12	.12	.12	.11
22.5000	.11	.11	.11	.11	.11
22.7500	.11	.11	.11	.11	.11
23.0000	.11	.11	.11	.11	.11
23.2500	.10	.10	.10	.10	.10
23.5000	.10	.10	.10	.10	.10
23.7500	.10	.10	.10	.10	.10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
24.0000	.10	.06	.01	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
LINK 1A	EDA-1A		EDA-1A	100Y
LINK 1B	EDA-1B		EDA-1B	100Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	EDA-1A	100Y	24098	12.1000	6.36
	EDA-1B	100Y	32450	12.1000	8.62

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	100Y	56548	12.1000	14.98

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 100Y

Peak Discharge = 14.98 cfs
Time to Peak = 12.1000 hrs
HYG Volume = 56548 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.01	.01	.01	.01
3.8000	.01	.01	.02	.02	.02
4.0500	.02	.02	.02	.03	.03
4.3000	.03	.03	.03	.04	.04
4.5500	.04	.04	.04	.04	.05
4.8000	.05	.05	.05	.05	.06
5.0500	.06	.06	.06	.06	.07
5.3000	.07	.07	.07	.07	.08
5.5500	.08	.08	.08	.08	.09
5.8000	.09	.09	.09	.09	.10
6.0500	.10	.10	.10	.11	.11
6.3000	.11	.12	.12	.12	.13
6.5500	.13	.13	.14	.14	.15
6.8000	.15	.15	.16	.16	.17
7.0500	.17	.17	.18	.18	.19
7.3000	.19	.20	.20	.20	.21
7.5500	.21	.22	.22	.23	.23
7.8000	.24	.24	.25	.25	.26
8.0500	.26	.27	.28	.29	.29
8.3000	.30	.31	.32	.33	.34
8.5500	.35	.36	.37	.38	.39
8.8000	.40	.41	.42	.43	.44
9.0500	.45	.46	.47	.48	.49
9.3000	.50	.51	.52	.53	.55
9.5500	.56	.57	.58	.59	.60
9.8000	.61	.63	.64	.65	.66
10.0500	.68	.69	.71	.73	.75
10.3000	.77	.80	.82	.84	.86
10.5500	.88	.91	.93	.95	.97
10.8000	1.00	1.02	1.04	1.07	1.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.0500	1.13	1.18	1.25	1.33	1.41
11.3000	1.49	1.57	1.65	1.73	1.81
11.5500	2.14	2.53	3.18	3.91	4.68
11.8000	5.46	6.26	7.08	10.03	13.61
12.0500	14.64	14.98	12.34	8.87	7.43
12.3000	6.48	5.65	4.85	4.06	3.25
12.5500	2.72	2.25	2.07	1.97	1.88
12.8000	1.80	1.71	1.63	1.54	1.46
13.0500	1.40	1.34	1.31	1.29	1.27
13.3000	1.25	1.23	1.20	1.18	1.16
13.5500	1.14	1.12	1.09	1.07	1.05
13.8000	1.03	1.01	.98	.96	.94
14.0500	.92	.90	.89	.88	.87
14.3000	.86	.85	.84	.83	.82
14.5500	.81	.80	.79	.78	.77
14.8000	.76	.74	.73	.72	.71
15.0500	.70	.69	.68	.67	.66
15.3000	.65	.64	.63	.62	.61
15.5500	.60	.59	.57	.56	.55
15.8000	.54	.53	.52	.51	.50
16.0500	.49	.48	.48	.47	.47
16.3000	.46	.46	.45	.45	.45
16.5500	.44	.44	.43	.43	.42
16.8000	.42	.41	.41	.40	.40
17.0500	.39	.39	.38	.38	.38
17.3000	.37	.37	.36	.36	.35
17.5500	.35	.34	.34	.33	.33
17.8000	.32	.32	.32	.31	.30
18.0500	.30	.30	.30	.30	.29
18.3000	.29	.29	.29	.29	.29
18.5500	.29	.28	.28	.28	.28
18.8000	.28	.28	.28	.27	.27
19.0500	.27	.27	.27	.27	.27
19.3000	.26	.26	.26	.26	.26
19.5500	.26	.26	.26	.25	.25
19.8000	.25	.25	.25	.25	.25
20.0500	.24	.24	.24	.24	.24
20.3000	.24	.24	.24	.24	.23
20.5500	.23	.23	.23	.23	.23
20.8000	.23	.23	.23	.23	.22
21.0500	.22	.22	.22	.22	.22
21.3000	.22	.22	.22	.21	.21
21.5500	.21	.21	.21	.21	.21
21.8000	.21	.21	.20	.20	.20
22.0500	.20	.20	.20	.20	.20

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
22.3000	.20	.20	.20	.19	.19
22.5500	.19	.19	.19	.19	.19
22.8000	.19	.19	.18	.18	.18
23.0500	.18	.18	.18	.18	.18
23.3000	.18	.17	.17	.17	.17
23.5500	.17	.17	.17	.17	.17
23.8000	.17	.16	.16	.16	.16
24.0500	.10	.02	.01	.00	

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8.08

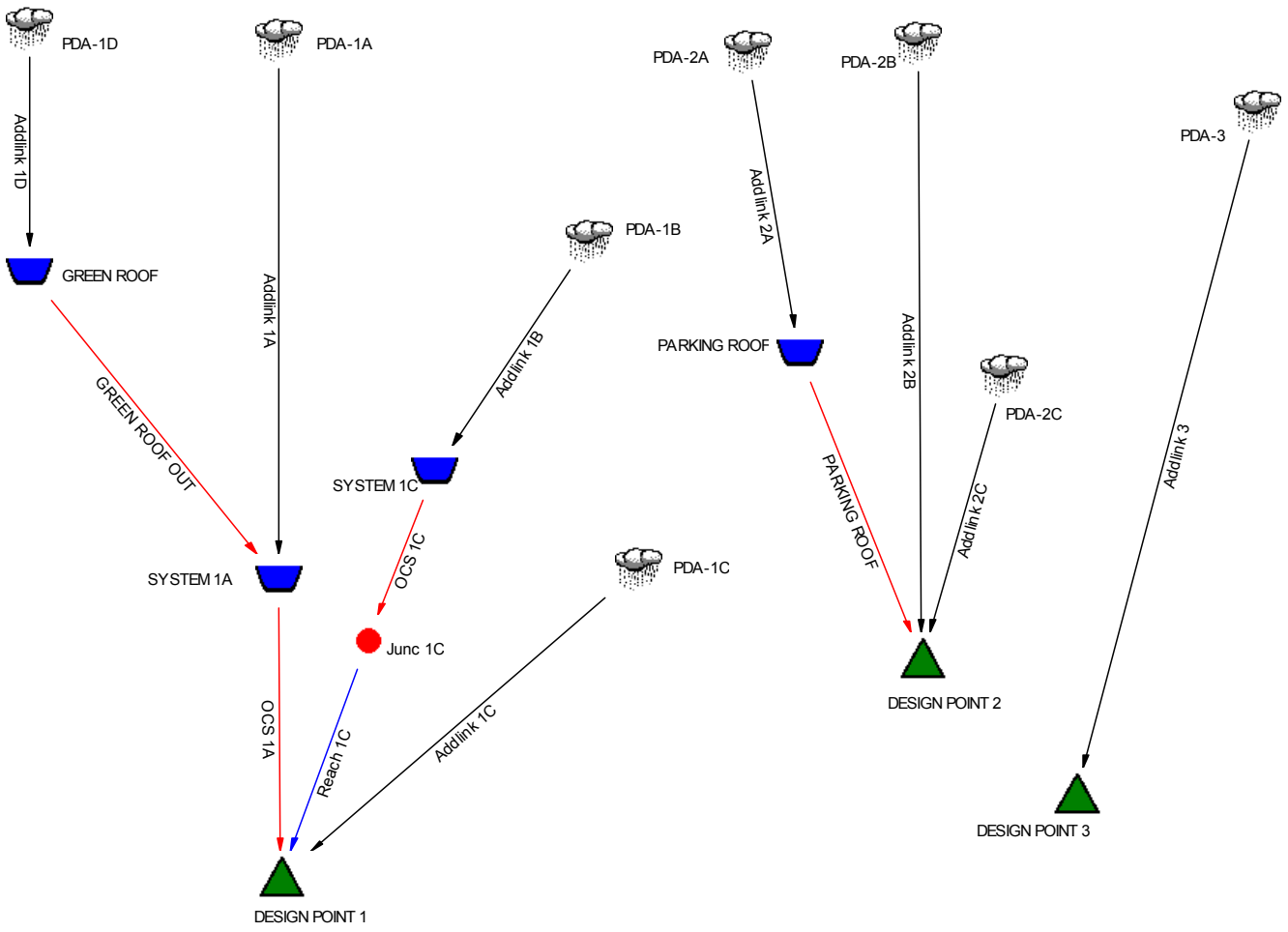
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7.03
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PROPOSED HYDROLOGIC CALCULATIONS


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PDA-3
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Addlink 1A
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Addlink 2A
PARKING ROOF
Addlink 2B
PDA-2C
GREEN ROOF OUT
Addlink 1B
SYSTEM 1C
PARKING ROOF
Addlink 2C
Addlink 3
SYSTEM 1A
OCS 1C
PDA-1C
Junc 1C
OCS 1A
Reach 1C
Addlink 1C
DESIGN POINT 2
DESIGN POINT 3
DESIGN POINT 1

==========
JOB TITLE
==========

Project Date: 11/29/2018
Project Engineer: Michael Thompson, PE
Project Title: Mercedes Benz of Goldens Bridge
Project Comments:

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Executive Summary (Nodes) 2.04
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PDA-1B..... Runoff CN-Area 5.02

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PDA-1C..... 10Y
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PDA-1C..... 100Y
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PDA-1D..... 1Y
Unit Hyd. Summary 6.10

PDA-1D..... 10Y
Unit Hyd. Summary 6.11

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Unit Hyd. Summary 6.12

PDA-2A..... 1Y
Unit Hyd. Summary 6.13

PDA-2A..... 10Y
Unit Hyd. Summary 6.14

PDA-2A..... 100Y
Unit Hyd. Summary 6.15

PDA-2B..... 1Y
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PDA-3..... 10Y
Unit Hyd. Summary 6.23

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Unit Hyd. Summary 6.24

********** REACH ROUTING **********

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REACH 1C..... 1Y
Reach Routing Summary 7.04

REACH 1C..... 10Y
Reach Routing Summary 7.05

REACH 1C..... 100Y
Reach Routing Summary 7.06

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DESIGN POINT 1.. 10Y
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DESIGN POINT 1.. 100Y
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DESIGN POINT 2.. 1Y
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********** TIME VS.ELEV **********

GREEN ROOF OUT 1Y
Time-Elev 9.01

GREEN ROOF OUT 10Y
Time-Elev 9.04

GREEN ROOF OUT 100Y
Time-Elev 9.07

PARKING ROOF OUT 1Y
Time-Elev 9.10

PARKING ROOF OUT 10Y
Time-Elev 9.13

PARKING ROOF OUT 100Y
Time-Elev 9.16

SYSTEM 1A..... 1Y
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SYSTEM 1A..... 10Y
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SYSTEM 1A..... 100Y
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SYSTEM 1C OUT 1Y
Time-Elev 9.26

SYSTEM 1C OUT 10Y
Time-Elev 9.28

SYSTEM 1C OUT 100Y
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********** TIME VS.VOL **********

GREEN ROOF OUT 1Y
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PARKING ROOF OUT 1Y
Time vs. Volume 10.10

PARKING ROOF OUT 10Y
Time vs. Volume 10.13

PARKING ROOF OUT 100Y
Time vs. Volume 10.16

SYSTEM 1A..... 1Y
Time vs. Volume 10.19

SYSTEM 1A..... 10Y
Time vs. Volume 10.21

SYSTEM 1A..... 100Y
Time vs. Volume 10.23

SYSTEM 1C OUT 1Y
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SYSTEM 1C OUT 10Y
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SYSTEM 1C OUT 100Y
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GREEN ROOF IN 10Y
Node: Pond Inflow Summary 13.06

GREEN ROOF IN 100Y
Node: Pond Inflow Summary 13.10

GREEN ROOF OUT 1Y
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GREEN ROOF OUT 10Y
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GREEN ROOF OUT 100Y
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GREEN ROOF OUT.. 1Y
Diverted Hydrograph 13.17

GREEN ROOF OUT.. 10Y
Diverted Hydrograph 13.19

GREEN ROOF OUT.. 100Y
Diverted Hydrograph 13.21

OCS 1A..... 1Y
Diverted Hydrograph 13.23

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OCS 1A..... 10Y
Diverted Hydrograph 13.24

OCS 1A..... 100Y
Diverted Hydrograph 13.25

OCS 1C..... 1Y
Diverted Hydrograph 13.27

OCS 1C..... 10Y
Diverted Hydrograph 13.30

OCS 1C..... 100Y
Diverted Hydrograph 13.33

PARKING ROOF.... Pond E-V-Q Table 13.36

PARKING ROOF.... 1Y
Diverted Hydrograph 13.37

PARKING ROOF.... 10Y
Diverted Hydrograph 13.39

PARKING ROOF.... 100Y
Diverted Hydrograph 13.41

PARKING ROOF IN 1Y
Node: Pond Inflow Summary 13.43

PARKING ROOF IN 10Y
Node: Pond Inflow Summary 13.47

PARKING ROOF IN 100Y
Node: Pond Inflow Summary 13.51

PARKING ROOF OUT 1Y
Pond Routing Summary 13.55

PARKING ROOF OUT 10Y
Pond Routing Summary 13.56

PARKING ROOF OUT 100Y
Pond Routing Summary 13.57

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SYSTEM 1A IN 1Y
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SYSTEM 1A INF 10Y
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SYSTEM 1A INF 100Y
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SYSTEM 1A OUT 1Y
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SYSTEM 1A OUT 10Y
Pond Routing Summary 13.81

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SYSTEM 1C IN 10Y
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SYSTEM 1C IN 100Y
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SYSTEM 1C OUT 1Y
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SYSTEM 1C OUT 10Y
Pond Routing Summary 13.97

SYSTEM 1C OUT 100Y
Pond Routing Summary 13.98

MASTER DESIGN STORM SUMMARY

Network Storm Collection: WESTCHESTER-NEW

Return Event	Total Depth in	Rainfall Type	RNF ID
1Y	3.0000	Synthetic Curve	TypeIII 24hr
10Y	5.5000	Synthetic Curve	TypeIII 24hr
100Y	9.0000	Synthetic Curve	TypeIII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
*DESIGN POINT 1	JCT	1	13361		12.3500	1.52		
*DESIGN POINT 1	JCT	10	51936		12.4500	7.17		
*DESIGN POINT 1	JCT	100	116600		12.3500	14.80		
*DESIGN POINT 2	JCT	1	4010		12.3500	.57		
*DESIGN POINT 2	JCT	10	15419		12.2000	3.40		
*DESIGN POINT 2	JCT	100	35831		12.2000	8.20		
*DESIGN POINT 3	JCT	1	113		12.1000	.02		
*DESIGN POINT 3	JCT	10	558		12.1000	.15		
*DESIGN POINT 3	JCT	100	1428		12.1000	.41		
GREEN ROOF	IN	POND 1	4470		12.1500	1.00		
GREEN ROOF	IN	POND 10	8499		12.1500	1.85		
GREEN ROOF	IN	POND 100	14148		12.1500	3.04		
GREEN ROOF	OUT	POND 1	2370		12.5000	.33	210.16	2583
GREEN ROOF	OUT	POND 10	6399		12.3000	1.25	210.23	3540
GREEN ROOF	OUT	POND 100	12047		12.2500	2.23	210.27	4263

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
JUNC 1C	JCT	1	10747		12.5000	1.28		
JUNC 1C	JCT	10	32049		12.5500	2.99		
JUNC 1C	JCT	100	66719		12.5500	5.35		
PARKING ROOF IN	POND	1	2209		12.1500	.49		
PARKING ROOF IN	POND	10	4201		12.1500	.92		
PARKING ROOF IN	POND	100	6994		12.1500	1.50		
PARKING ROOF OUT	POND	1	1040		12.5000	.17	210.15	1306
PARKING ROOF OUT	POND	10	3032		12.2500	.65	210.19	1700
PARKING ROOF OUT	POND	100	5825		12.2500	1.24	210.22	1969
PDA-1A	AREA	1	10833		12.1500	2.74		
PDA-1A	AREA	10	26656		12.1500	6.67		
PDA-1A	AREA	100	50435		12.1500	12.24		
PDA-1B	AREA	1	10773		12.2000	2.45		
PDA-1B	AREA	10	32076		12.2000	7.60		
PDA-1B	AREA	100	66745		12.1500	15.70		
PDA-1C	AREA	1	2614		12.1000	.75		
PDA-1C	AREA	10	6561		12.1000	1.84		
PDA-1C	AREA	100	12539		12.1000	3.39		
PDA-1D	AREA	1	4470		12.1500	1.00		
PDA-1D	AREA	10	8499		12.1500	1.85		
PDA-1D	AREA	100	14148		12.1500	3.04		
PDA-2A	AREA	1	2209		12.1500	.49		
PDA-2A	AREA	10	4201		12.1500	.92		
PDA-2A	AREA	100	6994		12.1500	1.50		
PDA-2B	AREA	1	2755		12.2500	.45		
PDA-2B	AREA	10	11680		12.2000	2.66		
PDA-2B	AREA	100	28462		12.2000	6.71		

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage cu.ft
PDA-2C	AREA	1	215		12.1000	.06		
PDA-2C	AREA	10	707		12.1000	.20		
PDA-2C	AREA	100	1544		12.1000	.44		
PDA-3	AREA	1	113		12.1000	.02		
PDA-3	AREA	10	558		12.1000	.15		
PDA-3	AREA	100	1428		12.1000	.41		
SYSTEM 1A IN	POND	1	13203		12.1500	2.74		
SYSTEM 1A IN	POND	10	33054		12.1500	7.62		
SYSTEM 1A IN	POND	100	62482		12.1500	14.15		
SYSTEM 1A OUT	POND	1	0		8.6500	.00	171.60	5041
SYSTEM 1A OUT	POND	10	13326		12.4500	3.74	172.76	9671
SYSTEM 1A OUT	POND	100	37343		12.3500	8.77	174.64	15162
SYSTEM 1C IN	POND	1	10773		12.2000	2.45		
SYSTEM 1C IN	POND	10	32076		12.2000	7.60		
SYSTEM 1C IN	POND	100	66745		12.1500	15.70		
SYSTEM 1C OUT	POND	1	10748		12.5000	1.28	192.68	2405
SYSTEM 1C OUT	POND	10	32050		12.5500	2.99	194.16	8991
SYSTEM 1C OUT	POND	100	66719		12.5500	5.35	197.54	20760

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	13361		12.3500	1.52	
Outfall DESIGN POINT 2	JCT	4010		12.3500	.57	
Outfall DESIGN POINT 3	JCT	113		12.1000	.02	
GREEN ROOF IN	POND	4470		12.1500	1.00	
GREEN ROOF OUT	POND	2370		12.5000	.33	210.16
JUNC 1C	JCT	10747		12.5000	1.28	
PARKING ROOF IN	POND	2209		12.1500	.49	
PARKING ROOF OUT	POND	1040		12.5000	.17	210.15
PDA-1A	AREA	10833		12.1500	2.74	
PDA-1B	AREA	10773		12.2000	2.45	
PDA-1C	AREA	2614		12.1000	.75	
PDA-1D	AREA	4470		12.1500	1.00	
PDA-2A	AREA	2209		12.1500	.49	
PDA-2B	AREA	2755		12.2500	.45	
PDA-2C	AREA	215		12.1000	.06	
PDA-3	AREA	113		12.1000	.02	
SYSTEM 1A IN	POND	13203		12.1500	2.74	
SYSTEM 1A OUT	POND	0		8.6500	.00	171.60
SYSTEM 1C IN	POND	10773		12.2000	2.45	
SYSTEM 1C OUT	POND	10748		12.5000	1.28	192.68

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 1Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 1 yr
Total Rainfall Depth= 3.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 1A	ADD	UN	10833		12.1500	2.74	PDA-1A
		DL	10833		12.1500	2.74	
		DN	13203		12.1500	2.74	SYSTEM 1A IN
ADDLINK 1B	ADD	UN	10773		12.2000	2.45	PDA-1B
		DL	10773		12.2000	2.45	
		DN	10773		12.2000	2.45	SYSTEM 1C IN
ADDLINK 1C	ADD	UN	2614		12.1000	.75	PDA-1C
		DL	2614		12.1000	.75	
		DN	13361		12.3500	1.52	DESIGN POINT 1
ADDLINK 1D	ADD	UN	4470		12.1500	1.00	PDA-1D
		DL	4470		12.1500	1.00	
		DN	4470		12.1500	1.00	GREEN ROOF IN
ADDLINK 2A	ADD	UN	2209		12.1500	.49	PDA-2A
		DL	2209		12.1500	.49	
		DN	2209		12.1500	.49	PARKING ROOF IN
ADDLINK 2B	ADD	UN	2755		12.2500	.45	PDA-2B
		DL	2755		12.2500	.45	
		DN	4010		12.3500	.57	DESIGN POINT 2
ADDLINK 2C	ADD	UN	215		12.1000	.06	PDA-2C
		DL	215		12.1000	.06	
		DN	4010		12.3500	.57	DESIGN POINT 2

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 3	ADD	UN	113		12.1000	.02	PDA-3
		DL	113		12.1000	.02	
		DN	113		12.1000	.02	DESIGN POINT 3
GREEN ROOF OUT	PONDrt	UN	4470		12.1500	1.00	GREEN ROOF IN
GREEN ROOF OUT			2370		12.5000	.33	GREEN ROOF OUT
		DL	2370		12.5000	.33	
		DN	13203		12.1500	2.74	SYSTEM 1A IN
OCS 1A	PONDrt	UN	13203		12.1500	2.74	SYSTEM 1A IN
OCS 1A			0		8.6500	.00	SYSTEM 1A OUT
		DL	0		8.6500	.00	
		DN	13361		12.3500	1.52	DESIGN POINT 1
OCS 1C	PONDrt	UN	10773		12.2000	2.45	SYSTEM 1C IN
OCS 1C			10748		12.5000	1.28	SYSTEM 1C OUT
		DL	10747		12.5000	1.28	
		DN	10747		12.5000	1.28	JUNC 1C
PARKING ROOF	PONDrt	UN	2209		12.1500	.49	PARKING ROOF IN
PARKING ROOF			1040		12.5000	.17	PARKING ROOF OUT
		DL	1040		12.5000	.17	
		DN	4010		12.3500	.57	DESIGN POINT 2
REACH 1C	REACH	UN	10747		12.5000	1.28	JUNC 1C
		DL	10747		12.5000	1.28	
		DN	13361		12.3500	1.52	DESIGN POINT 1

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	51936		12.4500	7.17	
Outfall DESIGN POINT 2	JCT	15419		12.2000	3.40	
Outfall DESIGN POINT 3	JCT	558		12.1000	.15	
GREEN ROOF IN	POND	8499		12.1500	1.85	
GREEN ROOF OUT	POND	6399		12.3000	1.25	210.23
JUNC 1C	JCT	32049		12.5500	2.99	
PARKING ROOF IN	POND	4201		12.1500	.92	
PARKING ROOF OUT	POND	3032		12.2500	.65	210.19
PDA-1A	AREA	26656		12.1500	6.67	
PDA-1B	AREA	32076		12.2000	7.60	
PDA-1C	AREA	6561		12.1000	1.84	
PDA-1D	AREA	8499		12.1500	1.85	
PDA-2A	AREA	4201		12.1500	.92	
PDA-2B	AREA	11680		12.2000	2.66	
PDA-2C	AREA	707		12.1000	.20	
PDA-3	AREA	558		12.1000	.15	
SYSTEM 1A IN	POND	33054		12.1500	7.62	
SYSTEM 1A OUT	POND	13326		12.4500	3.74	172.76
SYSTEM 1C IN	POND	32076		12.2000	7.60	
SYSTEM 1C OUT	POND	32050		12.5500	2.99	194.16

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 10Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 10 yr
Total Rainfall Depth= 5.5000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 1A	ADD	UN	26656		12.1500	6.67	PDA-1A
		DL	26656		12.1500	6.67	
		DN	33054		12.1500	7.62	SYSTEM 1A IN
ADDLINK 1B	ADD	UN	32076		12.2000	7.60	PDA-1B
		DL	32076		12.2000	7.60	
		DN	32076		12.2000	7.60	SYSTEM 1C IN
ADDLINK 1C	ADD	UN	6561		12.1000	1.84	PDA-1C
		DL	6561		12.1000	1.84	
		DN	51936		12.4500	7.17	DESIGN POINT 1
ADDLINK 1D	ADD	UN	8499		12.1500	1.85	PDA-1D
		DL	8499		12.1500	1.85	
		DN	8499		12.1500	1.85	GREEN ROOF IN
ADDLINK 2A	ADD	UN	4201		12.1500	.92	PDA-2A
		DL	4201		12.1500	.92	
		DN	4201		12.1500	.92	PARKING ROOF IN
ADDLINK 2B	ADD	UN	11680		12.2000	2.66	PDA-2B
		DL	11680		12.2000	2.66	
		DN	15419		12.2000	3.40	DESIGN POINT 2
ADDLINK 2C	ADD	UN	707		12.1000	.20	PDA-2C
		DL	707		12.1000	.20	
		DN	15419		12.2000	3.40	DESIGN POINT 2

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points
ADDLINK 3	ADD	UN	558		12.1000	.15	PDA-3
		DL	558		12.1000	.15	
		DN	558		12.1000	.15	DESIGN POINT 3
GREEN ROOF OUT	PONDrt	UN	8499		12.1500	1.85	GREEN ROOF IN
GREEN ROOF OUT			6399		12.3000	1.25	GREEN ROOF OUT
		DL	6399		12.3000	1.25	
		DN	33054		12.1500	7.62	SYSTEM 1A IN
OCS 1A	PONDrt	UN	33054		12.1500	7.62	SYSTEM 1A IN
OCS 1A			13326		12.4500	3.74	SYSTEM 1A OUT
		DL	13326		12.4500	3.74	
		DN	51936		12.4500	7.17	DESIGN POINT 1
OCS 1C	PONDrt	UN	32076		12.2000	7.60	SYSTEM 1C IN
OCS 1C			32050		12.5500	2.99	SYSTEM 1C OUT
		DL	32049		12.5500	2.99	
		DN	32049		12.5500	2.99	JUNC 1C
PARKING ROOF	PONDrt	UN	4201		12.1500	.92	PARKING ROOF IN
PARKING ROOF			3032		12.2500	.65	PARKING ROOF OUT
		DL	3032		12.2500	.65	
		DN	15419		12.2000	3.40	DESIGN POINT 2
REACH 1C	REACH	UN	32049		12.5500	2.99	JUNC 1C
		DL	32049		12.5500	2.98	
		DN	51936		12.4500	7.17	DESIGN POINT 1

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak hrs	Qpeak cfs	Max WSEL ft
Outfall DESIGN POINT 1	JCT	116600		12.3500	14.80	
Outfall DESIGN POINT 2	JCT	35831		12.2000	8.20	
Outfall DESIGN POINT 3	JCT	1428		12.1000	.41	
GREEN ROOF IN	POND	14148		12.1500	3.04	
GREEN ROOF OUT	POND	12047		12.2500	2.23	210.27
JUNC 1C	JCT	66719		12.5500	5.35	
PARKING ROOF IN	POND	6994		12.1500	1.50	
PARKING ROOF OUT	POND	5825		12.2500	1.24	210.22
PDA-1A	AREA	50435		12.1500	12.24	
PDA-1B	AREA	66745		12.1500	15.70	
PDA-1C	AREA	12539		12.1000	3.39	
PDA-1D	AREA	14148		12.1500	3.04	
PDA-2A	AREA	6994		12.1500	1.50	
PDA-2B	AREA	28462		12.2000	6.71	
PDA-2C	AREA	1544		12.1000	.44	
PDA-3	AREA	1428		12.1000	.41	
SYSTEM 1A IN	POND	62482		12.1500	14.15	
SYSTEM 1A OUT	POND	37343		12.3500	8.77	174.64
SYSTEM 1C IN	POND	66745		12.1500	15.70	
SYSTEM 1C OUT	POND	66719		12.5500	5.35	197.54

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

DEFAULT Design Storm File,ID = WESTCHESTER-NEW

Storm Tag Name = 100Y

Data Type, File, ID = Synthetic Storm TypeIII 24hr
Storm Frequency = 100 yr
Total Rainfall Depth= 9.0000 in
Duration Multiplier = 1
Resulting Duration = 24.0000 hrs
Resulting Start Time= .0000 hrs Step= .1000 hrs End= 24.0000 hrs

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 1A	ADD	UN	50435		12.1500	12.24	PDA-1A	
		DL	50435		12.1500	12.24		
		DN	62482		12.1500	14.15	SYSTEM 1A	IN
ADDLINK 1B	ADD	UN	66745		12.1500	15.70	PDA-1B	
		DL	66745		12.1500	15.70		
		DN	66745		12.1500	15.70	SYSTEM 1C	IN
ADDLINK 1C	ADD	UN	12539		12.1000	3.39	PDA-1C	
		DL	12539		12.1000	3.39		
		DN	116600		12.3500	14.80	DESIGN POINT 1	
ADDLINK 1D	ADD	UN	14148		12.1500	3.04	PDA-1D	
		DL	14148		12.1500	3.04		
		DN	14148		12.1500	3.04	GREEN ROOF	IN
ADDLINK 2A	ADD	UN	6994		12.1500	1.50	PDA-2A	
		DL	6994		12.1500	1.50		
		DN	6994		12.1500	1.50	PARKING ROOF	IN
ADDLINK 2B	ADD	UN	28462		12.2000	6.71	PDA-2B	
		DL	28462		12.2000	6.71		
		DN	35831		12.2000	8.20	DESIGN POINT 2	
ADDLINK 2C	ADD	UN	1544		12.1000	.44	PDA-2C	
		DL	1544		12.1000	.44		
		DN	35831		12.2000	8.20	DESIGN POINT 2	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time hrs	Peak Q cfs	End Points	
ADDLINK 3	ADD	UN	1428		12.1000	.41	PDA-3	
		DL	1428		12.1000	.41		
		DN	1428		12.1000	.41	DESIGN POINT 3	
GREEN ROOF OUT	PONDrt	UN	14148		12.1500	3.04	GREEN ROOF	IN
GREEN ROOF OUT			12047		12.2500	2.23	GREEN ROOF	OUT
		DL	12047		12.2500	2.23		
		DN	62482		12.1500	14.15	SYSTEM 1A	IN
OCS 1A	PONDrt	UN	62482		12.1500	14.15	SYSTEM 1A	IN
OCS 1A			37343		12.3500	8.77	SYSTEM 1A	OUT
		DL	37343		12.3500	8.77		
		DN	116600		12.3500	14.80	DESIGN POINT 1	
OCS 1C	PONDrt	UN	66745		12.1500	15.70	SYSTEM 1C	IN
OCS 1C			66719		12.5500	5.35	SYSTEM 1C	OUT
		DL	66719		12.5500	5.35		
		DN	66719		12.5500	5.35	JUNC 1C	
PARKING ROOF	PONDrt	UN	6994		12.1500	1.50	PARKING ROOF	IN
PARKING ROOF			5825		12.2500	1.24	PARKING ROOF	OUT
		DL	5825		12.2500	1.24		
		DN	35831		12.2000	8.20	DESIGN POINT 2	
REACH 1C	REACH	UN	66719		12.5500	5.35	JUNC 1C	
		DL	66718		12.6000	5.35		
		DN	116600		12.3500	14.80	DESIGN POINT 1	

NETWORK RUNOFF NODE SEQUENCE

Runoff Data		Apply to Node		Receiving Link	
SCS UH	PDA-2B	Subarea	PDA-2B	Add Hyd	PDA-2B
SCS UH	PDA-3	Subarea	PDA-3	Add Hyd	PDA-3
SCS UH	PDA-1C	Subarea	PDA-1C	Add Hyd	PDA-1C
SCS UH	PDA-1D	Subarea	PDA-1D	Add Hyd	PDA-1D
SCS UH	PDA-1A	Subarea	PDA-1A	Add Hyd	PDA-1A
SCS UH	PDA-1B	Subarea	PDA-1B	Add Hyd	PDA-1B
SCS UH	PDA-2A	Subarea	PDA-2A	Add Hyd	PDA-2A
SCS UH	PDA-2C	Subarea	PDA-2C	Add Hyd	PDA-2C

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node	DNstream Node
Add Hyd ADDLINK 1D	Subarea PDA-1D	Pond GREEN ROOF IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond GREEN ROOF IN	Outflow GREEN ROOF OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet GREEN ROOF OUT	Outflow GREEN ROOF OUT	Pond SYSTEM 1A IN
Add Hyd ADDLINK 1B	Subarea PDA-1B	Pond SYSTEM 1C IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond SYSTEM 1C IN	Outflow SYSTEM 1C OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet OCS 1C	Outflow SYSTEM 1C OUT	Jct JUNC 1C
Add Hyd ADDLINK 1A	Subarea PDA-1A	Pond SYSTEM 1A IN
POND ROUTE INFILTRATION AND TOTAL OUTFLOW...		
Infiltration	Pond SYSTEM 1A IN	Infilt. SYSTEM 1A INF
Total Pond Outflow	Pond SYSTEM 1A IN	Outflow SYSTEM 1A OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet OCS 1A	Outflow SYSTEM 1A OUT	Jct DESIGN POINT 1
Add Hyd ADDLINK 2A	Subarea PDA-2A	Pond PARKING ROOF IN
POND ROUTE TOTAL OUTFLOW...		
Total Pond Outflow	Pond PARKING ROOF IN	Outflow PARKING ROOF OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...		
Outlet PARKING ROOF	Outflow PARKING ROOF OUT	Jct DESIGN POINT 2
Reach REACH 1C	Jct JUNC 1C	Jct DESIGN POINT 1
Add Hyd ADDLINK 1C	Subarea PDA-1C	Jct DESIGN POINT 1
Add Hyd ADDLINK 3	Subarea PDA-3	Jct DESIGN POINT 3
Add Hyd ADDLINK 2C	Subarea PDA-2C	Jct DESIGN POINT 2
Add Hyd ADDLINK 2B	Subarea PDA-2B	Jct DESIGN POINT 2

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
.0000	.000	.001	.002	.003	.004
.5000	.005	.006	.007	.008	.009
1.0000	.010	.011	.012	.013	.014
1.5000	.015	.016	.017	.018	.019
2.0000	.020	.021	.022	.023	.024
2.5000	.025	.026	.027	.028	.030
3.0000	.031	.032	.033	.034	.035
3.5000	.037	.038	.039	.040	.042
4.0000	.043	.044	.046	.047	.048
4.5000	.050	.051	.052	.054	.055
5.0000	.057	.058	.060	.061	.063
5.5000	.064	.066	.067	.069	.070
6.0000	.072	.074	.075	.077	.079
6.5000	.081	.083	.084	.086	.088
7.0000	.091	.093	.095	.097	.099
7.5000	.102	.104	.106	.109	.111
8.0000	.114	.117	.119	.122	.125
8.5000	.128	.132	.135	.138	.142
9.0000	.146	.150	.153	.158	.162
9.5000	.166	.170	.175	.179	.184
10.0000	.189	.194	.199	.205	.211
10.5000	.217	.223	.229	.236	.243
11.0000	.250	.258	.266	.276	.287
11.5000	.298	.314	.339	.373	.416
12.0000	.500	.584	.627	.661	.686
12.5000	.702	.713	.724	.734	.742
13.0000	.750	.757	.764	.771	.777
13.5000	.784	.789	.795	.801	.806
14.0000	.811	.816	.821	.825	.830
14.5000	.834	.838	.842	.847	.850
15.0000	.854	.858	.862	.865	.868
15.5000	.872	.875	.878	.881	.883
16.0000	.886	.889	.891	.894	.896
16.5000	.898	.901	.903	.905	.907
17.0000	.910	.912	.914	.916	.918
17.5000	.919	.921	.923	.925	.926
18.0000	.928	.930	.931	.933	.934
18.5000	.936	.937	.939	.940	.942
19.0000	.943	.945	.946	.948	.949
19.5000	.950	.952	.953	.954	.956
20.0000	.957	.958	.960	.961	.962
20.5000	.963	.965	.966	.967	.968
21.0000	.969	.971	.972	.973	.974
21.5000	.975	.976	.977	.979	.980

CUMULATIVE RAINFALL FRACTIONS
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
22.0000	.981	.982	.983	.984	.985
22.5000	.986	.987	.988	.989	.990
23.0000	.991	.992	.993	.994	.995
23.5000	.996	.997	.997	.998	.999
24.0000	1.000				

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000	
Hydraulic Length	100.00	ft
2yr, 24hr P	3.5000	in
Slope	.120000	ft/ft
Avg.Velocity	.17	ft/sec

Segment #1 Time: .1671 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	70.00	ft
Slope	.514000	ft/ft
Unpaved		
Avg.Velocity	11.57	ft/sec

Segment #2 Time: .0017 hrs

Segment #3: Tc: TR-55 Channel

Flow Area	1.0000	sq.ft
Wetted Perimeter	4.00	ft
Hydraulic Radius	.25	ft
Slope	.044400	ft/ft
Mannings n	.0110	
Hydraulic Length	180.00	ft
Avg.Velocity	11.33	ft/sec

Segment #3 Time: .0044 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300	sq.ft
Wetted Perimeter	3.93	ft
Hydraulic Radius	.31	ft
Slope	.005000	ft/ft
Mannings n	.0110	
Hydraulic Length	255.00	ft
Avg.Velocity	4.42	ft/sec

Segment #4 Time: .0160 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.085000	ft/ft
Mannings n	.0110	
Hydraulic Length	200.00	ft
Avg.Velocity	24.88	ft/sec

Segment #5 Time: .0022 hrs

==========
Total Tc: .1915 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 100.00 ft
2yr, 24hr P 3.5000 in
Slope .130000 ft/ft

Avg.Velocity .17 ft/sec

Segment #1 Time: .1619 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 438.00 ft
Slope .121000 ft/ft
Unpaved

Avg.Velocity 5.61 ft/sec

Segment #2 Time: .0217 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 132.50 ft
Slope .007500 ft/ft
Paved

Avg.Velocity 1.76 ft/sec

Segment #3 Time: .0209 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	1.2300	sq.ft
Wetted Perimeter	3.93	ft
Hydraulic Radius	.31	ft
Slope	.010000	ft/ft
Mannings n	.0120	
Hydraulic Length	585.00	ft

Avg.Velocity 5.73 ft/sec

Segment #4 Time: .0284 hrs

Total Tc: .2328 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400	
Hydraulic Length	31.30	ft
2yr, 24hr P	3.5000	in
Slope	.128000	ft/ft
Avg.Velocity	.20	ft/sec

Segment #1 Time: .0427 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length	174.00	ft
Slope	.034500	ft/ft
Paved		
Avg.Velocity	3.78	ft/sec

Segment #2 Time: .0128 hrs

Segment #3: Tc: TR-55 Channel

Flow Area	4.9100	sq.ft
Wetted Perimeter	7.85	ft
Hydraulic Radius	.63	ft
Slope	.021100	ft/ft
Mannings n	.0120	
Hydraulic Length	48.00	ft
Avg.Velocity	13.19	ft/sec

Segment #3 Time: .0010 hrs

==========
Total Tc: .0565 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
==========

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	60.00 ft
2yr, 24hr P	3.5000 in
Slope	.010417 ft/ft
Avg.Velocity	.08 ft/sec

Segment #1 Time: .1962 hrs

Total Tc: .1962 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.2400
Hydraulic Length	60.00 ft
2yr, 24hr P	3.5000 in
Slope	.010417 ft/ft
Avg.Velocity	.08 ft/sec

Segment #1 Time: .1962 hrs

Total Tc: .1962 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n .4000
Hydraulic Length 150.00 ft
2yr, 24hr P 3.5000 in
Slope .140000 ft/ft

Avg.Velocity .19 ft/sec

Segment #1 Time: .2173 hrs

Segment #2: Tc: TR-55 Shallow

Hydraulic Length 189.00 ft
Slope .238000 ft/ft
Unpaved

Avg.Velocity 7.87 ft/sec

Segment #2 Time: .0067 hrs

Segment #3: Tc: TR-55 Shallow

Hydraulic Length 80.00 ft
Slope .100000 ft/ft
Paved

Avg.Velocity 6.43 ft/sec

Segment #3 Time: .0035 hrs

Segment #4: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.108900	ft/ft
Mannings n	.0240	
Hydraulic Length	26.80	ft
Avg.Velocity	12.91	ft/sec

Segment #4 Time: .0006 hrs

Segment #5: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.154300	ft/ft
Mannings n	.0120	
Hydraulic Length	97.00	ft
Avg.Velocity	30.73	ft/sec

Segment #5 Time: .0009 hrs

Segment #6: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.047000	ft/ft
Mannings n	.0120	
Hydraulic Length	210.00	ft
Avg.Velocity	16.96	ft/sec

Segment #6 Time: .0034 hrs

Segment #7: Tc: TR-55 Channel

Flow Area	3.1400	sq.ft
Wetted Perimeter	6.28	ft
Hydraulic Radius	.50	ft
Slope	.005000	ft/ft
Mannings n	.0120	
Hydraulic Length	48.00	ft

Avg.Velocity 5.53 ft/sec

Segment #7 Time: .0024 hrs

Total Tc: .2348 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: User Defined

Segment #1 Time: .0830 hrs

Total Tc: .0830 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs

::
TIME OF CONCENTRATION CALCULATOR
::

Segment #1: Tc: TR-55 Sheet

Mannings n	.4000
Hydraulic Length	27.00 ft
2yr, 24hr P	3.5000 in
Slope	.129630 ft/ft
Avg.Velocity	.13 ft/sec

Segment #1 Time: .0568 hrs

==========
Total Tc: .0568 hrs

Calculated Tc < Min.Tc:
Use Minimum Tc...
Use Tc = .0833 hrs
==========

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	1.306			98.00
Open space (Lawns,parks etc.) - Goo	61	.273			61.00
Brush - brush, weed, grass mix - go	48	.019			48.00
Woods - good	55	.370			55.00
COMPOSITE AREA & WEIGHTED CN --->		1.968			84.30 (84)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Woods - good	55	1.118			55.00
Porous Pavement	92	.350			92.00
Impervious Areas - Paved parking lo	98	1.007			98.00
Open space (Lawns,parks etc.) - Goo	61	.282			61.00
BRUSH GOOD COND. HSG B	48	.068			48.00
Woods - good	77	.264			77.00
COMPOSITE AREA & WEIGHTED CN --->		3.089			75.48 (75)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.300			98.00
Open space (Lawns,parks etc.) - Goo	61	.198			61.00
COMPOSITE AREA & WEIGHTED CN --->		.498			83.29 (83)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.078			98.00
Open space (Lawns,parks etc.) - Goo	61	.005			61.00
Green Roof	98	.362			98.00
COMPOSITE AREA & WEIGHTED CN --->		.445			97.58 (98)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.019			98.00
Green Roof	98	.201			98.00
COMPOSITE AREA & WEIGHTED CN --->		.220			98.00 (98)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved parking lo	98	.240			98.00
Open space (Lawns,parks etc.) - Goo	61	.328			61.00
Woods - good	55	1.156			55.00
Impervious Areas - Gravel (w/ right	85	.030			85.00
COMPOSITE AREA & WEIGHTED CN --->		1.754			62.52 (63)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
Impervious Areas - Paved; curbs and	98	.022			98.00
Open space (Lawns,parks etc.) - Goo	61	.056			61.00
COMPOSITE AREA & WEIGHTED CN --->		.078			71.44 (71)

RUNOFF CURVE NUMBER DATA

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
LAWN GOOD COND. HSG B	69	.010			69.00
Woods - good	55	.078			55.00
Impervious Areas - Paved parking lo	98	.008			98.00
COMPOSITE AREA & WEIGHTED CN --->		.096			60.04 (60)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1A 1Y
Tc = .1915 hrs
Drainage Area = 1.968 acres Runoff CN= 84

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 2.75 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 2.74 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 84
Area = 1.968 acres
S = 1.9048 in
0.2S = .3810 in

Cumulative Runoff

1.5163 in
10832 cu.ft

HYG Volume... 10833 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 11.65 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1A 10Y
Tc = .1915 hrs
Drainage Area = 1.968 acres Runoff CN= 84

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 6.67 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 6.67 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 84
Area = 1.968 acres
S = 1.9048 in
0.2S = .3810 in

Cumulative Runoff

3.7308 in
26652 cu.ft

HYG Volume... 26656 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 11.65 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1A 100Y
Tc = .1915 hrs
Drainage Area = 1.968 acres Runoff CN= 84

==========
Computational Time Increment = .02553 hrs
Computed Peak Time = 12.1527 hrs
Computed Peak Flow = 12.25 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 12.24 cfs
==========

DRAINAGE AREA

ID:PDA-1A
CN = 84
Area = 1.968 acres
S = 1.9048 in
0.2S = .3810 in

Cumulative Runoff

7.0590 in
50429 cu.ft

HYG Volume... 50435 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19148 hrs (ID: PDA-1A)
Computational Incr, Tm = .02553 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 11.65 cfs
Unit peak time Tp = .12765 hrs
Unit receding limb, Tr = .51062 hrs
Total unit time, Tb = .63827 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1B 1Y
Tc = .2328 hrs
Drainage Area = 3.089 acres Runoff CN= 75

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1992 hrs
Computed Peak Flow = 2.45 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 2.45 cfs
==========

DRAINAGE AREA

ID:PDA-1B
CN = 75
Area = 3.089 acres
S = 3.3333 in
0.2S = .6667 in

Cumulative Runoff

.9608 in
10773 cu.ft

HYG Volume... 10773 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.03 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1B 10Y
Tc = .2328 hrs
Drainage Area = 3.089 acres Runoff CN= 75

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1682 hrs
Computed Peak Flow = 7.70 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 7.60 cfs
==========

DRAINAGE AREA

ID:PDA-1B
CN = 75
Area = 3.089 acres
S = 3.3333 in
0.2S = .6667 in

Cumulative Runoff

2.8605 in
32075 cu.ft

HYG Volume... 32076 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.03 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1B 100Y
Tc = .2328 hrs
Drainage Area = 3.089 acres Runoff CN= 75

==========
Computational Time Increment = .03104 hrs
Computed Peak Time = 12.1682 hrs
Computed Peak Flow = 15.92 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 15.70 cfs
==========

DRAINAGE AREA

ID:PDA-1B
CN = 75
Area = 3.089 acres
S = 3.3333 in
0.2S = .6667 in

Cumulative Runoff

5.9524 in
66744 cu.ft

HYG Volume... 66745 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23281 hrs (ID: PDA-1B)
Computational Incr, Tm = .03104 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.03 cfs
Unit peak time Tp = .15521 hrs
Unit receding limb, Tr = .62083 hrs
Total unit time, Tb = .77603 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1C 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .75 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .75 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

1.4466 in
2615 cu.ft

HYG Volume... 2614 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1C 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 1.84 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 1.84 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

3.6298 in
6562 cu.ft

HYG Volume... 6561 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1C 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .498 acres Runoff CN= 83

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.0995 hrs
Computed Peak Flow = 3.39 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 3.39 cfs
==========

DRAINAGE AREA

ID:PDA-1C
CN = 83
Area = .498 acres
S = 2.0482 in
0.2S = .4096 in

Cumulative Runoff

6.9365 in
12539 cu.ft

HYG Volume... 12539 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-1C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.77 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1D 1Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 1.01 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.00 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

2.7683 in
4472 cu.ft

HYG Volume... 4470 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1D 10Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 1.86 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.85 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

5.2625 in
8501 cu.ft

HYG Volume... 8499 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-1D 100Y
Tc = .1962 hrs
Drainage Area = .445 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1372 hrs
Computed Peak Flow = 3.06 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 3.04 cfs
==========

DRAINAGE AREA

ID:PDA-1D
CN = 98
Area = .445 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

8.7596 in
14150 cu.ft

HYG Volume... 14148 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-1D)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 2.57 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52316 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2A 1Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = .50 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .49 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

2.7683 in
2211 cu.ft

HYG Volume... 2209 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2A 10Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = .92 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .92 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

5.2625 in
4203 cu.ft

HYG Volume... 4201 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2A 100Y
Tc = .1962 hrs
Drainage Area = .220 acres Runoff CN= 98

==========
Computational Time Increment = .02616 hrs
Computed Peak Time = 12.1371 hrs
Computed Peak Flow = 1.51 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = 1.50 cfs
==========

DRAINAGE AREA

ID:PDA-2A
CN = 98
Area = .220 acres
S = .2041 in
0.2S = .0408 in

Cumulative Runoff

8.7596 in
6995 cu.ft

HYG Volume... 6994 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .19618 hrs (ID: PDA-2A)
Computational Incr, Tm = .02616 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.27 cfs
Unit peak time Tp = .13079 hrs
Unit receding limb, Tr = .52315 hrs
Total unit time, Tb = .65394 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2B 1Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.2393 hrs
Computed Peak Flow = .45 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2500 hrs
Peak Flow, Interpolated Output = .45 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

.4328 in
2756 cu.ft

HYG Volume... 2755 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2B 10Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.1766 hrs
Computed Peak Flow = 2.66 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 2.66 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

1.8345 in
11680 cu.ft

HYG Volume... 11680 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2B 100Y
Tc = .2348 hrs
Drainage Area = 1.754 acres Runoff CN= 63

==========
Computational Time Increment = .03130 hrs
Computed Peak Time = 12.1766 hrs
Computed Peak Flow = 6.80 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 6.71 cfs
==========

DRAINAGE AREA

ID:PDA-2B
CN = 63
Area = 1.754 acres
S = 5.8730 in
0.2S = 1.1746 in

Cumulative Runoff

4.4704 in
28463 cu.ft

HYG Volume... 28462 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .23477 hrs (ID: PDA-2B)
Computational Incr, Tm = .03130 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 8.47 cfs
Unit peak time Tp = .15651 hrs
Unit receding limb, Tr = .62605 hrs
Total unit time, Tb = .78256 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2C 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1217 hrs
Computed Peak Flow = .06 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .06 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

.7604 in
215 cu.ft

HYG Volume... 215 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2C 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .20 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .20 cfs
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

2.5014 in
708 cu.ft

HYG Volume... 707 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-2C 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .078 acres Runoff CN= 71

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .44 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .44 cfs
==========

DRAINAGE AREA

ID:PDA-2C
CN = 71
Area = .078 acres
S = 4.0845 in
0.2S = .8169 in

Cumulative Runoff

5.4585 in
1546 cu.ft

HYG Volume... 1544 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-2C)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.06 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 1 year storm
Duration = 24.0000 hrs Rain Depth = 3.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-3 1Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1329 hrs
Computed Peak Flow = .02 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1500 hrs
Peak Flow, Interpolated Output = .02 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

.3333 in
116 cu.ft

HYG Volume... 113 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 10 year storm
Duration = 24.0000 hrs Rain Depth = 5.5000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-3 10Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .16 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .15 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

1.6026 in
558 cu.ft

HYG Volume... 558 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 9.0000 in
Rain Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Rain File -ID = - TypeIII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
HYG File - ID = - PDA-3 100Y
Tc (Min. Tc) = .0833 hrs
Drainage Area = .096 acres Runoff CN= 60

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 12.1106 hrs
Computed Peak Flow = .41 cfs

Time Increment for HYG File = .0500 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = .41 cfs
==========

DRAINAGE AREA

ID:PDA-3
CN = 60
Area = .096 acres
S = 6.6667 in
0.2S = 1.3333 in

Cumulative Runoff

4.1008 in
1429 cu.ft

HYG Volume... 1428 cu.ft (area under HYG curve)

***** SCS UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08333 hrs (ID: PDA-3)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 1.31 cfs
Unit peak time Tp = .05555 hrs
Unit receding limb, Tr = .22221 hrs
Total unit time, Tb = .27777 hrs

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0372 hrs (based on Wtd.Q = .57 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
204.00	.00	0	0	.00	.00	.00
204.04	.03	11	394	.00	.03	.15
204.08	.15	30	551	.00	.15	.48
204.12	.35	54	668	.00	.35	.95
204.16	.64	83	762	.00	.64	1.56
204.20	1.02	115	841	.00	1.02	2.29
204.24	1.49	150	910	.00	1.49	3.15
204.28	2.05	188	971	.00	2.05	4.13
204.32	2.69	228	1024	.00	2.69	5.22
204.36	3.42	269	1072	.00	3.42	6.42
204.40	4.23	313	1114	.00	4.23	7.71
204.44	5.12	358	1152	.00	5.12	9.11
204.48	6.09	405	1185	.00	6.09	10.59
204.52	7.12	453	1215	.00	7.12	12.16
204.56	8.22	502	1242	.00	8.22	13.80
204.60	9.38	553	1265	.00	9.38	15.52
204.64	10.60	604	1284	.00	10.60	17.31
204.68	11.88	655	1301	.00	11.88	19.16
204.72	13.20	708	1315	.00	13.20	21.06
204.76	14.56	760	1327	.00	14.56	23.01

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0372 hrs (based on Wtd.Q = .57 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
204.80	15.97	814	1335	.00	15.97	25.01
204.84	17.41	867	1341	.00	17.41	27.04
204.88	18.87	921	1344	.00	18.87	29.10
204.92	20.36	975	1345	.00	20.36	31.19
204.96	21.86	1028	1345	.00	21.86	33.29
205.00	23.37	1082	1345	.00	23.37	35.40
205.04	24.89	1136	1345	.00	24.89	37.50
205.08	26.40	1189	1345	.00	26.40	39.61
205.12	27.90	1241	1345	.00	27.90	41.69
205.16	29.39	1293	1345	.00	29.39	43.76
205.20	30.85	1345	1345	.00	30.85	45.79
205.24	32.28	1395	1345	.00	32.28	47.78
205.28	33.67	1445	1345	.00	33.67	49.72
205.32	35.01	1493	1345	.00	35.01	51.60
205.36	36.29	1541	1345	.00	36.29	53.41
205.40	37.50	1587	1345	.00	37.50	55.14
205.44	38.64	1631	1345	.00	38.64	56.77
205.48	39.68	1674	1345	.00	39.68	58.29
205.52	40.62	1715	1345	.00	40.62	59.68
205.56	41.44	1754	1345	.00	41.44	60.93

MODIFIED PULS REACH DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - JUNC 1C 1Y
Outflow HYG file = NONE STORED - REACH 1C 1Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0372 hrs (based on Wtd.Q = .57 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
205.60	42.11	1790	1345	.00	42.11	62.01
205.64	42.62	1824	1345	.00	42.62	62.89
205.68	42.93	1855	1345	.00	42.93	63.53
205.71	42.99	1873	1345	.00	42.99	63.81

MODIFIED PULS REACH ROUTING SUMMARY

```
HYG Dir          = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow  HYG file = NONE STORED - JUNC 1C          1Y
Outflow HYG file = NONE STORED - REACH 1C         1Y

Reach Link Data  = REACH 1C
Reach Length     = 739.00 ft
Approx. Total Tt = .0372 hrs  (based on Wtd.Q = .57 cfs)
Reach Channel    = Chn-Cir - 1C  (Chn-Circular)
Overflow Elev.   = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS
----------------------------------
Starting WS Elev   =   204.00 ft
Starting Volume    =        0 cu.ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0500 hrs


INFLOW/OUTFLOW HYDROGRAPH SUMMARY
=====================================================
Peak Inflow       =      1.28 cfs    at   12.5000 hrs
Peak Outflow      =      1.28 cfs    at   12.5000 hrs
=====================================================


MASS BALANCE (cu.ft)
--------------------------
+ Initial Vol  =           0
+ HYG Vol IN   =       10747
- Infiltration =           0
- HYG Vol OUT  =       10747
- Retained Vol =           1
                ----------
Unrouted Vol =           0 cu.ft  (.000% of Inflow Volume)


WARNING: For weighted average inflow, the approximate total
travel time through entire reach is shorter than
the inflow hydrograph time step. Consider reducing
calculation time step.
Wtd.Avg.Q = .57 cfs   Approx.Total Tt = .0372 hrs
```

MODIFIED PULS REACH ROUTING SUMMARY

```
HYG Dir          = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow  HYG file = NONE STORED - JUNC 1C          10Y
Outflow HYG file = NONE STORED - REACH 1C         10Y

Reach Link Data  = REACH 1C
Reach Length     = 739.00 ft
Approx. Total Tt = .0277 hrs  (based on Wtd.Q = 1.53 cfs)
Reach Channel    = Chn-Cir - 1C  (Chn-Circular)
Overflow Elev.   = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS
---------------------------------
Starting WS Elev   =   204.00 ft
Starting Volume    =        0 cu.ft
Starting Outflow   =      .00 cfs
Starting Infiltr.  =      .00 cfs
Starting Total Qout=      .00 cfs
Time Increment     =    .0500 hrs


INFLOW/OUTFLOW HYDROGRAPH SUMMARY
=====================================================
Peak Inflow       =      2.99 cfs    at   12.5500 hrs
Peak Outflow      =      2.98 cfs    at   12.5500 hrs
=====================================================


MASS BALANCE (cu.ft)
--------------------------
+ Initial Vol  =           0
+ HYG Vol IN   =       32049
- Infiltration =           0
- HYG Vol OUT  =       32049
- Retained Vol =           1
                ----------
Unrouted Vol =           0 cu.ft  (.000% of Inflow Volume)


WARNING: For weighted average inflow, the approximate total
travel time through entire reach is shorter than
the inflow hydrograph time step. Consider reducing
calculation time step.
Wtd.Avg.Q = 1.53 cfs   Approx.Total Tt = .0277 hrs
```

MODIFIED PULS REACH ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - JUNC 1C 100Y
Outflow HYG file = NONE STORED - REACH 1C 100Y

Reach Link Data = REACH 1C
Reach Length = 739.00 ft
Approx. Total Tt = .0234 hrs (based on Wtd.Q = 2.73 cfs)
Reach Channel = Chn-Cir - 1C (Chn-Circular)
Overflow Elev. = 205.71 ft
Overflow Channel = NONE

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 204.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY
==========
Peak Inflow = 5.35 cfs at 12.5500 hrs
Peak Outflow = 5.35 cfs at 12.6000 hrs
==========

MASS BALANCE (cu.ft)

\+ Initial Vol = 0
\+ HYG Vol IN = 66719
\- Infiltration = 0
\- HYG Vol OUT = 66718
\- Retained Vol = 1

Unrouted Vol = - cu.ft (.000% of Inflow Volume)

WARNING: For weighted average inflow, the approximate total travel time through entire reach is shorter than the inflow hydrograph time step. Consider reducing calculation time step.
Wtd.Avg.Q = 2.73 cfs Approx.Total Tt = .0234 hrs

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	1Y
ADDLINK 1C	PDA-1C		PDA-1C	1Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	1Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	1Y	10747	12.5000	1.28
	PDA-1C	1Y	2614	12.1000	.75
	OCS 1A	1Y	0	8.6500	.00

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	1Y	13361	12.3500	1.52

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 1Y

Peak Discharge = 1.52 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 13361 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.9500	.00	.00	.00	.00	.00
9.2000	.00	.00	.00	.00	.00
9.4500	.00	.00	.01	.01	.01
9.7000	.01	.01	.01	.01	.01
9.9500	.01	.01	.01	.01	.01
10.2000	.01	.01	.01	.01	.02
10.4500	.02	.02	.02	.02	.02
10.7000	.02	.02	.02	.02	.03
10.9500	.03	.03	.03	.03	.04
11.2000	.04	.04	.05	.05	.05
11.4500	.06	.06	.08	.09	.12
11.7000	.15	.19	.23	.28	.35
11.9500	.52	.75	.92	1.11	1.23
12.2000	1.31	1.42	1.49	1.52	1.52
12.4500	1.50	1.47	1.44	1.40	1.37
12.7000	1.34	1.29	1.25	1.20	1.15
12.9500	1.09	1.02	.96	.90	.84
13.2000	.79	.73	.69	.65	.62
13.4500	.59	.57	.54	.52	.51
13.7000	.49	.47	.46	.45	.44
13.9500	.43	.42	.41	.40	.39
14.2000	.38	.37	.37	.36	.35
14.4500	.35	.34	.33	.33	.33
14.7000	.32	.32	.31	.31	.30
14.9500	.30	.30	.29	.29	.29
15.2000	.28	.28	.27	.27	.27
15.4500	.26	.26	.26	.25	.25
15.7000	.25	.24	.24	.23	.23
15.9500	.23	.22	.22	.22	.21
16.2000	.21	.21	.20	.20	.20
16.4500	.20	.19	.19	.19	.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.7000	.19	.18	.18	.18	.18
16.9500	.18	.17	.17	.17	.17
17.2000	.17	.16	.16	.16	.16
17.4500	.16	.16	.15	.15	.15
17.7000	.15	.15	.15	.14	.14
17.9500	.14	.14	.14	.14	.13
18.2000	.13	.13	.13	.13	.13
18.4500	.13	.12	.12	.12	.12
18.7000	.12	.12	.12	.12	.12
18.9500	.12	.11	.11	.11	.11
19.2000	.11	.11	.11	.11	.11
19.4500	.11	.11	.11	.11	.11
19.7000	.10	.10	.10	.10	.10
19.9500	.10	.10	.10	.10	.10
20.2000	.10	.10	.10	.10	.10
20.4500	.10	.10	.10	.10	.10
20.7000	.10	.09	.09	.09	.09
20.9500	.09	.09	.09	.09	.09
21.2000	.09	.09	.09	.09	.09
21.4500	.09	.09	.09	.09	.09
21.7000	.09	.09	.09	.09	.09
21.9500	.09	.09	.09	.08	.08
22.2000	.08	.08	.08	.08	.08
22.4500	.08	.08	.08	.08	.08
22.7000	.08	.08	.08	.08	.08
22.9500	.08	.08	.08	.08	.08
23.2000	.08	.08	.08	.08	.07
23.4500	.07	.07	.07	.07	.07
23.7000	.07	.07	.07	.07	.07
23.9500	.07	.07	.07	.06	.06
24.2000	.06	.06	.05	.05	.05
24.4500	.05	.04	.04	.04	.04
24.7000	.04	.03	.03	.03	.03
24.9500	.03	.03	.03	.03	.02
25.2000	.02	.02	.02	.02	.02
25.4500	.02	.02	.02	.02	.02
25.7000	.02	.02	.02	.02	.02
25.9500	.02	.02	.02	.02	.02
26.2000	.02	.02	.01	.01	.01
26.4500	.01	.01	.01	.01	.01
26.7000	.01	.01	.01	.01	.01
26.9500	.01	.01	.01	.01	.01
27.2000	.01	.01	.01	.01	.01
27.4500	.01	.01	.01	.01	.01
27.7000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
27.9500	.01	.01	.01	.01	.01
28.2000	.01	.01	.01	.01	.01
28.4500	.01	.01	.01	.01	.01
28.7000	.01	.01	.01	.01	.01
28.9500	.00	.00	.00	.00	.00
29.2000	.00	.00	.00	.00	.00
29.4500	.00	.00	.00	.00	.00
29.7000	.00	.00	.00	.00	.00
29.9500	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	10Y
ADDLINK 1C	PDA-1C		PDA-1C	10Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	10Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	10Y	32049	12.5500	2.98
	PDA-1C	10Y	6561	12.1000	1.84
	OCS 1A	10Y	13326	12.4500	3.74

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	10Y	51936	12.4500	7.17

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 10Y

Peak Discharge = 7.17 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 51936 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.4000	.00	.00	.00	.00	.00
6.6500	.00	.00	.00	.00	.00
6.9000	.00	.00	.00	.00	.00
7.1500	.01	.01	.01	.01	.01
7.4000	.01	.01	.01	.01	.01
7.6500	.01	.01	.01	.01	.01
7.9000	.01	.01	.01	.01	.01
8.1500	.01	.01	.02	.02	.02
8.4000	.02	.02	.02	.02	.02
8.6500	.02	.02	.02	.03	.03
8.9000	.03	.03	.03	.03	.04
9.1500	.04	.04	.04	.04	.04
9.4000	.05	.05	.05	.05	.06
9.6500	.06	.06	.07	.07	.07
9.9000	.08	.08	.09	.10	.10
10.1500	.11	.12	.13	.13	.14
10.4000	.15	.16	.17	.18	.19
10.6500	.21	.22	.23	.24	.26
10.9000	.27	.29	.31	.32	.34
11.1500	.36	.39	.41	.44	.47
11.4000	.50	.54	.58	.65	.73
11.6500	.85	.99	1.16	1.38	1.61
11.9000	1.85	2.34	2.93	3.25	3.56
12.1500	3.92	4.66	5.64	6.45	6.94
12.4000	7.17	7.17	7.02	6.78	6.47
12.6500	6.16	5.85	5.54	5.27	5.02
12.9000	4.79	4.58	4.38	4.19	4.03
13.1500	3.87	3.72	3.58	3.45	3.33
13.4000	3.21	3.10	3.00	2.90	2.80
13.6500	2.71	2.63	2.54	2.46	2.38
13.9000	2.31	2.23	2.16	2.09	2.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.1500	1.96	1.90	1.85	1.79	1.74
14.4000	1.68	1.63	1.57	1.52	1.47
14.6500	1.41	1.35	1.29	1.24	1.19
14.9000	1.14	1.10	1.05	1.02	.98
15.1500	.95	.92	.90	.87	.85
15.4000	.83	.81	.79	.77	.75
15.6500	.73	.72	.70	.68	.66
15.9000	.65	.63	.61	.60	.58
16.1500	.57	.56	.55	.54	.53
16.4000	.51	.50	.50	.49	.48
16.6500	.47	.46	.45	.44	.43
16.9000	.43	.42	.41	.40	.39
17.1500	.39	.38	.38	.37	.37
17.4000	.36	.36	.35	.35	.34
17.6500	.34	.33	.33	.32	.32
17.9000	.32	.31	.31	.31	.30
18.1500	.30	.30	.29	.29	.29
18.4000	.28	.28	.28	.28	.28
18.6500	.27	.27	.27	.27	.26
18.9000	.26	.26	.26	.26	.26
19.1500	.25	.25	.25	.25	.25
19.4000	.25	.25	.24	.24	.24
19.6500	.24	.24	.24	.24	.24
19.9000	.23	.23	.23	.23	.23
20.1500	.23	.23	.23	.22	.22
20.4000	.22	.22	.22	.22	.22
20.6500	.22	.22	.21	.21	.21
20.9000	.21	.21	.21	.21	.21
21.1500	.21	.21	.21	.20	.20
21.4000	.20	.20	.20	.20	.20
21.6500	.20	.20	.20	.20	.19
21.9000	.19	.19	.19	.19	.19
22.1500	.19	.19	.19	.19	.19
22.4000	.19	.18	.18	.18	.18
22.6500	.18	.18	.18	.18	.18
22.9000	.18	.18	.18	.17	.17
23.1500	.17	.17	.17	.17	.17
23.4000	.17	.17	.17	.17	.16
23.6500	.16	.16	.16	.16	.16
23.9000	.16	.16	.16	.15	.14
24.1500	.13	.13	.12	.12	.11
24.4000	.10	.10	.09	.08	.08
24.6500	.08	.07	.07	.06	.06
24.9000	.06	.06	.05	.05	.05
25.1500	.05	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.4000	.03	.03	.03	.03	.03
25.6500	.03	.03	.03	.02	.02
25.9000	.02	.02	.02	.02	.02
26.1500	.02	.02	.02	.02	.02
26.4000	.02	.02	.02	.02	.02
26.6500	.02	.02	.02	.02	.02
26.9000	.02	.01	.01	.01	.01
27.1500	.01	.01	.01	.01	.01
27.4000	.01	.01	.01	.01	.01
27.6500	.01	.01	.01	.01	.01
27.9000	.01	.01	.01	.01	.01
28.1500	.01	.01	.01	.01	.01
28.4000	.01	.01	.01	.01	.01
28.6500	.01	.01	.01	.01	.01
28.9000	.01	.01	.01	.01	.01
29.1500	.01	.01	.01	.01	.01
29.4000	.01	.01	.01	.01	.00
29.6500	.00	.00	.00	.00	.00
29.9000	.00	.00	.00	.00	.00
30.1500	.00	.00	.00	.00	.00
30.4000	.00	.00	.00	.00	.00
30.6500	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 1

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
REACH 1C	JUNC 1C		REACH 1C	100Y
ADDLINK 1C	PDA-1C		PDA-1C	100Y
OCS 1A	SYSTEM 1A	IN	OCS 1A	100Y

INFLOWS TO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	REACH 1C	100Y	66718	12.6000	5.35
	PDA-1C	100Y	12539	12.1000	3.39
	OCS 1A	100Y	37343	12.3500	8.77

TOTAL FLOW INTO: DESIGN POINT 1

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 1	100Y	116600	12.3500	14.80

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 1
HYG Tag = 100Y

Peak Discharge = 14.80 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 116600 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.3500	.00	.00	.00	.00	.00
4.6000	.00	.00	.00	.00	.00
4.8500	.00	.00	.01	.01	.01
5.1000	.01	.01	.01	.01	.01
5.3500	.01	.01	.01	.01	.01
5.6000	.01	.01	.01	.01	.01
5.8500	.01	.01	.01	.01	.01
6.1000	.01	.02	.02	.02	.02
6.3500	.02	.02	.02	.02	.02
6.6000	.02	.02	.02	.02	.03
6.8500	.03	.03	.03	.03	.03
7.1000	.03	.04	.04	.04	.04
7.3500	.04	.04	.05	.05	.05
7.6000	.05	.06	.06	.06	.06
7.8500	.06	.07	.07	.08	.08
8.1000	.09	.10	.10	.11	.11
8.3500	.12	.13	.13	.14	.15
8.6000	.16	.17	.18	.19	.20
8.8500	.21	.22	.23	.24	.25
9.1000	.26	.28	.29	.30	.32
9.3500	.33	.34	.36	.37	.39
9.6000	.40	.42	.43	.45	.47
9.8500	.49	.50	.52	.54	.55
10.1000	.57	.59	.61	.63	.66
10.3500	.68	.70	.73	.75	.78
10.6000	.80	.83	.87	.90	.93
10.8500	.96	.99	1.02	1.05	1.08
11.1000	1.11	1.15	1.20	1.25	1.30
11.3500	1.36	1.41	1.47	1.52	1.64
11.6000	1.77	1.97	2.22	2.59	3.15
11.8500	3.94	4.94	6.65	8.86	10.90

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.1000	12.41	13.23	13.73	14.30	14.66
12.3500	14.80	14.75	14.56	14.25	13.78
12.6000	13.23	12.68	12.09	11.49	10.88
12.8500	10.27	9.47	8.78	8.26	7.83
13.1000	7.46	7.14	6.86	6.62	6.39
13.3500	6.19	6.01	5.84	5.68	5.53
13.6000	5.39	5.26	5.13	5.00	4.88
13.8500	4.76	4.65	4.53	4.43	4.32
14.1000	4.22	4.12	4.03	3.93	3.84
14.3500	3.75	3.66	3.58	3.50	3.42
14.6000	3.34	3.26	3.19	3.12	3.05
14.8500	2.98	2.90	2.83	2.77	2.71
15.1000	2.64	2.58	2.52	2.46	2.40
15.3500	2.34	2.29	2.23	2.18	2.12
15.6000	2.07	2.02	1.97	1.93	1.88
15.8500	1.83	1.79	1.74	1.70	1.65
16.1000	1.60	1.55	1.50	1.46	1.41
16.3500	1.36	1.30	1.26	1.22	1.18
16.6000	1.14	1.10	1.07	1.04	1.01
16.8500	.99	.96	.94	.92	.90
17.1000	.88	.87	.85	.83	.82
17.3500	.80	.79	.78	.76	.75
17.6000	.73	.72	.71	.69	.68
17.8500	.67	.66	.64	.63	.62
18.1000	.61	.60	.59	.58	.57
18.3500	.57	.56	.55	.54	.54
18.6000	.53	.53	.52	.51	.51
18.8500	.50	.50	.49	.49	.48
19.1000	.48	.47	.47	.46	.46
19.3500	.45	.45	.45	.44	.44
19.6000	.44	.43	.43	.43	.43
19.8500	.42	.42	.42	.41	.41
20.1000	.41	.41	.40	.40	.40
20.3500	.40	.40	.39	.39	.39
20.6000	.39	.39	.38	.38	.38
20.8500	.38	.38	.38	.37	.37
21.1000	.37	.37	.37	.37	.36
21.3500	.36	.36	.36	.36	.36
21.6000	.35	.35	.35	.35	.35
21.8500	.35	.34	.34	.34	.34
22.1000	.34	.34	.33	.33	.33
22.3500	.33	.33	.33	.32	.32
22.6000	.32	.32	.32	.32	.32
22.8500	.31	.31	.31	.31	.31
23.1000	.31	.30	.30	.30	.30

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
23.3500	.30	.30	.30	.29	.29
23.6000	.29	.29	.29	.29	.28
23.8500	.28	.28	.28	.28	.26
24.1000	.24	.23	.22	.21	.19
24.3500	.18	.17	.15	.14	.14
24.6000	.13	.12	.11	.10	.09
24.8500	.09	.08	.08	.07	.07
25.1000	.07	.06	.06	.06	.05
25.3500	.05	.05	.05	.04	.04
25.6000	.04	.04	.04	.03	.03
25.8500	.03	.03	.03	.03	.03
26.1000	.03	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.02	.02	.02	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.01	.01
28.8500	.01	.01	.01	.01	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.01	.01	.01	.01	.01
29.8500	.01	.01	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00	.00	.00
30.8500	.00	.00	.00	.00	.00
31.1000	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	1Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	1Y
ADDLINK 2B	PDA-2B		PDA-2B	1Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	1Y	215	12.1000	.06
	PARKING ROOF	1Y	1040	12.5000	.17
	PDA-2B	1Y	2755	12.2500	.45

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	1Y	4010	12.3500	.57

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 1Y

Peak Discharge = .57 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 4010 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.5000	.00	.00	.00	.00	.00
11.7500	.01	.01	.01	.02	.04
12.0000	.09	.18	.30	.40	.47
12.2500	.50	.55	.57	.57	.55
12.5000	.52	.47	.43	.38	.34
12.7500	.31	.29	.27	.25	.24
13.0000	.23	.21	.20	.19	.19
13.2500	.18	.18	.17	.17	.16
13.5000	.16	.16	.16	.15	.15
13.7500	.15	.14	.14	.14	.14
14.0000	.13	.13	.13	.13	.13
14.2500	.12	.12	.12	.12	.12
14.5000	.12	.12	.11	.11	.11
14.7500	.11	.11	.11	.11	.11
15.0000	.10	.10	.10	.10	.10
15.2500	.10	.10	.10	.09	.09
15.5000	.09	.09	.09	.09	.09
15.7500	.08	.08	.08	.08	.08
16.0000	.08	.08	.07	.07	.07
16.2500	.07	.07	.07	.07	.07
16.5000	.07	.07	.07	.07	.07
16.7500	.06	.06	.06	.06	.06
17.0000	.06	.06	.06	.06	.06
17.2500	.06	.06	.06	.06	.06
17.5000	.05	.05	.05	.05	.05
17.7500	.05	.05	.05	.05	.05
18.0000	.05	.05	.05	.05	.05
18.2500	.05	.05	.05	.04	.04
18.5000	.04	.04	.04	.04	.04
18.7500	.04	.04	.04	.04	.04
19.0000	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.2500	.04	.04	.04	.04	.04
19.5000	.04	.04	.04	.04	.04
19.7500	.04	.04	.04	.04	.04
20.0000	.04	.04	.04	.04	.04
20.2500	.04	.04	.04	.04	.04
20.5000	.04	.04	.04	.04	.04
20.7500	.04	.04	.04	.04	.04
21.0000	.04	.04	.04	.04	.03
21.2500	.03	.03	.03	.03	.03
21.5000	.03	.03	.03	.03	.03
21.7500	.03	.03	.03	.03	.03
22.0000	.03	.03	.03	.03	.03
22.2500	.03	.03	.03	.03	.03
22.5000	.03	.03	.03	.03	.03
22.7500	.03	.03	.03	.03	.03
23.0000	.03	.03	.03	.03	.03
23.2500	.03	.03	.03	.03	.03
23.5000	.03	.03	.03	.03	.03
23.7500	.03	.03	.03	.03	.03
24.0000	.03	.02	.02	.02	.01
24.2500	.01	.01	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	10Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	10Y
ADDLINK 2B	PDA-2B		PDA-2B	10Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	10Y	707	12.1000	.20
	PARKING ROOF	10Y	3032	12.2500	.65
	PDA-2B	10Y	11680	12.2000	2.66

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	10Y	15419	12.2000	3.40

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 10Y

Peak Discharge = 3.40 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 15419 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.6000	.00	.00	.00	.00	.00
9.8500	.00	.00	.00	.00	.00
10.1000	.00	.00	.00	.00	.00
10.3500	.00	.00	.00	.00	.00
10.6000	.01	.01	.01	.01	.02
10.8500	.02	.03	.03	.04	.04
11.1000	.05	.05	.06	.07	.08
11.3500	.09	.10	.11	.13	.14
11.6000	.17	.21	.28	.41	.56
11.8500	.73	.93	1.23	1.69	2.27
12.1000	2.87	3.29	3.40	3.27	3.01
12.3500	2.74	2.48	2.23	1.97	1.72
12.6000	1.48	1.28	1.13	1.01	.92
12.8500	.84	.79	.73	.69	.65
13.1000	.61	.58	.56	.54	.52
13.3500	.51	.50	.49	.48	.47
13.6000	.46	.45	.44	.43	.42
13.8500	.42	.41	.40	.39	.38
14.1000	.38	.37	.36	.36	.35
14.3500	.35	.34	.34	.34	.33
14.6000	.33	.32	.32	.32	.31
14.8500	.31	.30	.30	.30	.29
15.1000	.29	.29	.28	.28	.27
15.3500	.27	.27	.26	.26	.25
15.6000	.25	.24	.24	.24	.23
15.8500	.23	.22	.22	.22	.21
16.1000	.21	.20	.20	.20	.20
16.3500	.19	.19	.19	.19	.19
16.6000	.18	.18	.18	.18	.18
16.8500	.18	.17	.17	.17	.17
17.1000	.17	.16	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.3500	.16	.15	.15	.15	.15
17.6000	.15	.15	.14	.14	.14
17.8500	.14	.14	.13	.13	.13
18.1000	.13	.13	.13	.13	.12
18.3500	.12	.12	.12	.12	.12
18.6000	.12	.12	.12	.12	.12
18.8500	.12	.12	.12	.12	.12
19.1000	.12	.11	.11	.11	.11
19.3500	.11	.11	.11	.11	.11
19.6000	.11	.11	.11	.11	.11
19.8500	.11	.11	.11	.11	.10
20.1000	.10	.10	.10	.10	.10
20.3500	.10	.10	.10	.10	.10
20.6000	.10	.10	.10	.10	.10
20.8500	.10	.10	.10	.10	.10
21.1000	.10	.09	.09	.09	.09
21.3500	.09	.09	.09	.09	.09
21.6000	.09	.09	.09	.09	.09
21.8500	.09	.09	.09	.09	.09
22.1000	.09	.09	.09	.09	.09
22.3500	.08	.08	.08	.08	.08
22.6000	.08	.08	.08	.08	.08
22.8500	.08	.08	.08	.08	.08
23.1000	.08	.08	.08	.08	.08
23.3500	.08	.08	.08	.07	.07
23.6000	.07	.07	.07	.07	.07
23.8500	.07	.07	.07	.07	.07
24.1000	.06	.04	.03	.02	.01
24.3500	.01	.01	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DESIGN POINT 2

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2C	PDA-2C		PDA-2C	100Y
PARKING ROOF	PARKING ROOF IN		PARKING ROOF	100Y
ADDLINK 2B	PDA-2B		PDA-2B	100Y

INFLOWS TO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2C	100Y	1544	12.1000	.44
	PARKING ROOF	100Y	5825	12.2500	1.24
	PDA-2B	100Y	28462	12.2000	6.71

TOTAL FLOW INTO: DESIGN POINT 2

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	DESIGN POINT 2	100Y	35831	12.2000	8.20

TOTAL NODE INFLOW...
HYG file =
HYG ID = DESIGN POINT 2
HYG Tag = 100Y

Peak Discharge = 8.20 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 35831 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
7.6500	.00	.00	.00	.00	.00
7.9000	.00	.00	.00	.00	.00
8.1500	.00	.00	.00	.00	.00
8.4000	.00	.00	.00	.00	.00
8.6500	.00	.00	.01	.01	.01
8.9000	.01	.02	.02	.02	.03
9.1500	.03	.03	.04	.04	.05
9.4000	.05	.06	.06	.06	.07
9.6500	.07	.08	.08	.09	.10
9.9000	.10	.11	.11	.12	.13
10.1500	.14	.17	.19	.21	.23
10.4000	.25	.26	.28	.30	.31
10.6500	.33	.34	.36	.37	.39
10.9000	.40	.42	.43	.45	.47
11.1500	.49	.52	.55	.59	.63
11.4000	.67	.71	.76	.83	.92
11.6500	1.08	1.29	1.58	1.93	2.34
11.9000	2.80	3.48	4.57	5.88	7.24
12.1500	8.13	8.20	7.67	6.86	6.06
12.4000	5.35	4.69	4.06	3.49	3.00
12.6500	2.58	2.25	2.01	1.83	1.69
12.9000	1.58	1.48	1.39	1.31	1.24
13.1500	1.18	1.13	1.09	1.06	1.04
13.4000	1.01	.99	.97	.95	.93
13.6500	.91	.90	.88	.86	.84
13.9000	.83	.81	.79	.78	.76
14.1500	.75	.73	.72	.71	.70
14.4000	.69	.69	.68	.67	.66
14.6500	.65	.64	.64	.63	.62
14.9000	.61	.60	.59	.59	.58
15.1500	.57	.56	.55	.55	.54

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
15.4000	.53	.52	.51	.50	.50
15.6500	.49	.48	.47	.46	.45
15.9000	.45	.44	.43	.42	.41
16.1500	.41	.40	.39	.39	.38
16.4000	.38	.38	.37	.37	.36
16.6500	.36	.36	.35	.35	.35
16.9000	.34	.34	.34	.33	.33
17.1500	.32	.32	.32	.31	.31
17.4000	.31	.30	.30	.29	.29
17.6500	.29	.28	.28	.28	.27
17.9000	.27	.26	.26	.26	.25
18.1500	.25	.25	.25	.24	.24
18.4000	.24	.24	.24	.24	.24
18.6500	.24	.23	.23	.23	.23
18.9000	.23	.23	.23	.23	.23
19.1500	.22	.22	.22	.22	.22
19.4000	.22	.22	.22	.22	.21
19.6500	.21	.21	.21	.21	.21
19.9000	.21	.21	.21	.20	.20
20.1500	.20	.20	.20	.20	.20
20.4000	.20	.20	.20	.20	.19
20.6500	.19	.19	.19	.19	.19
20.9000	.19	.19	.19	.19	.19
21.1500	.19	.18	.18	.18	.18
21.4000	.18	.18	.18	.18	.18
21.6500	.18	.18	.17	.17	.17
21.9000	.17	.17	.17	.17	.17
22.1500	.17	.17	.17	.17	.16
22.4000	.16	.16	.16	.16	.16
22.6500	.16	.16	.16	.16	.16
22.9000	.16	.15	.15	.15	.15
23.1500	.15	.15	.15	.15	.15
23.4000	.15	.15	.15	.14	.14
23.6500	.14	.14	.14	.14	.14
23.9000	.14	.14	.14	.13	.11
24.1500	.08	.05	.04	.02	.02
24.4000	.01	.01	.01	.00	.00

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.7500	210.00	210.00	210.00	210.00	210.00
2.0000	210.00	210.00	210.00	210.00	210.00
2.2500	210.00	210.00	210.00	210.00	210.00
2.5000	210.00	210.00	210.00	210.00	210.00
2.7500	210.00	210.00	210.00	210.00	210.00
3.0000	210.00	210.00	210.00	210.00	210.00
3.2500	210.00	210.00	210.00	210.00	210.00
3.5000	210.00	210.00	210.00	210.00	210.00
3.7500	210.00	210.00	210.00	210.00	210.00
4.0000	210.00	210.00	210.00	210.00	210.00
4.2500	210.00	210.00	210.00	210.00	210.00
4.5000	210.00	210.00	210.00	210.00	210.00
4.7500	210.00	210.00	210.00	210.00	210.00
5.0000	210.00	210.00	210.01	210.01	210.01
5.2500	210.01	210.01	210.01	210.01	210.01
5.5000	210.01	210.01	210.01	210.01	210.01
5.7500	210.01	210.01	210.01	210.01	210.01
6.0000	210.01	210.01	210.01	210.01	210.01
6.2500	210.01	210.01	210.01	210.01	210.01
6.5000	210.01	210.01	210.01	210.01	210.01
6.7500	210.01	210.01	210.01	210.01	210.01
7.0000	210.01	210.01	210.01	210.01	210.01
7.2500	210.01	210.01	210.01	210.01	210.01
7.5000	210.01	210.01	210.02	210.02	210.02
7.7500	210.02	210.02	210.02	210.02	210.02
8.0000	210.02	210.02	210.02	210.02	210.02
8.2500	210.02	210.02	210.02	210.02	210.02
8.5000	210.02	210.02	210.02	210.02	210.02
8.7500	210.02	210.02	210.02	210.02	210.02
9.0000	210.03	210.03	210.03	210.03	210.03
9.2500	210.03	210.03	210.03	210.03	210.03
9.5000	210.03	210.03	210.03	210.03	210.03
9.7500	210.03	210.03	210.03	210.04	210.04
10.0000	210.04	210.04	210.04	210.04	210.04
10.2500	210.04	210.04	210.04	210.04	210.04
10.5000	210.04	210.05	210.05	210.05	210.05
10.7500	210.05	210.05	210.05	210.05	210.05
11.0000	210.05	210.05	210.06	210.06	210.06
11.2500	210.06	210.06	210.06	210.06	210.06
11.5000	210.07	210.07	210.07	210.07	210.07
11.7500	210.08	210.08	210.08	210.09	210.09
12.0000	210.10	210.11	210.12	210.13	210.14
12.2500	210.15	210.16	210.16	210.16	210.16

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
12.5000	210.16	210.16	210.16	210.16	210.16
12.7500	210.16	210.16	210.16	210.16	210.15
13.0000	210.15	210.15	210.15	210.15	210.15
13.2500	210.15	210.15	210.15	210.15	210.15
13.5000	210.15	210.14	210.14	210.14	210.14
13.7500	210.14	210.14	210.14	210.14	210.14
14.0000	210.14	210.14	210.14	210.14	210.14
14.2500	210.14	210.14	210.14	210.14	210.14
14.5000	210.14	210.14	210.14	210.14	210.14
14.7500	210.14	210.14	210.14	210.14	210.14
15.0000	210.14	210.14	210.14	210.14	210.14
15.2500	210.14	210.14	210.14	210.14	210.14
15.5000	210.14	210.14	210.14	210.14	210.14
15.7500	210.14	210.14	210.14	210.14	210.14
16.0000	210.14	210.14	210.14	210.14	210.14
16.2500	210.14	210.14	210.14	210.14	210.14
16.5000	210.14	210.14	210.14	210.14	210.14
16.7500	210.14	210.14	210.14	210.14	210.14
17.0000	210.14	210.14	210.14	210.14	210.14
17.2500	210.14	210.14	210.14	210.14	210.14
17.5000	210.14	210.14	210.14	210.14	210.14
17.7500	210.14	210.14	210.14	210.14	210.14
18.0000	210.14	210.14	210.14	210.14	210.14
18.2500	210.14	210.14	210.14	210.14	210.14
18.5000	210.14	210.14	210.14	210.14	210.14
18.7500	210.14	210.14	210.14	210.14	210.14
19.0000	210.14	210.14	210.14	210.14	210.14
19.2500	210.14	210.14	210.14	210.14	210.14
19.5000	210.14	210.14	210.14	210.14	210.14
19.7500	210.14	210.14	210.14	210.14	210.14
20.0000	210.14	210.14	210.14	210.14	210.14
20.2500	210.14	210.14	210.14	210.14	210.14
20.5000	210.14	210.14	210.13	210.13	210.13
20.7500	210.13	210.13	210.13	210.13	210.13
21.0000	210.13	210.13	210.13	210.13	210.13
21.2500	210.13	210.13	210.13	210.13	210.13
21.5000	210.13	210.13	210.13	210.13	210.13
21.7500	210.13	210.13	210.13	210.13	210.13
22.0000	210.13	210.13	210.13	210.13	210.13
22.2500	210.13	210.13	210.13	210.13	210.13
22.5000	210.13	210.13	210.13	210.13	210.13
22.7500	210.13	210.13	210.13	210.13	210.13
23.0000	210.13	210.13	210.13	210.13	210.13
23.2500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.5000	210.13	210.13	210.13	210.13	210.13
23.7500	210.13	210.13	210.13	210.13	210.13
24.0000	210.13	210.13	210.13	210.13	210.13
24.2500	210.13	210.13	210.13	210.13	210.13
24.5000	210.13	210.13	210.13	210.13	210.13
24.7500	210.13				

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.9500	210.00	210.00	210.00	210.00	210.00
1.2000	210.00	210.00	210.00	210.00	210.00
1.4500	210.00	210.00	210.00	210.00	210.00
1.7000	210.00	210.00	210.00	210.00	210.00
1.9500	210.00	210.00	210.00	210.00	210.00
2.2000	210.00	210.00	210.00	210.00	210.00
2.4500	210.00	210.00	210.00	210.00	210.00
2.7000	210.00	210.00	210.00	210.00	210.00
2.9500	210.00	210.00	210.00	210.00	210.01
3.2000	210.01	210.01	210.01	210.01	210.01
3.4500	210.01	210.01	210.01	210.01	210.01
3.7000	210.01	210.01	210.01	210.01	210.01
3.9500	210.01	210.01	210.01	210.01	210.01
4.2000	210.01	210.01	210.01	210.01	210.01
4.4500	210.01	210.01	210.01	210.01	210.01
4.7000	210.01	210.01	210.01	210.01	210.01
4.9500	210.01	210.01	210.02	210.02	210.02
5.2000	210.02	210.02	210.02	210.02	210.02
5.4500	210.02	210.02	210.02	210.02	210.02
5.7000	210.02	210.02	210.02	210.02	210.02
5.9500	210.02	210.02	210.02	210.02	210.02
6.2000	210.02	210.02	210.02	210.02	210.03
6.4500	210.03	210.03	210.03	210.03	210.03
6.7000	210.03	210.03	210.03	210.03	210.03
6.9500	210.03	210.03	210.03	210.03	210.03
7.2000	210.03	210.03	210.03	210.03	210.04
7.4500	210.04	210.04	210.04	210.04	210.04
7.7000	210.04	210.04	210.04	210.04	210.04
7.9500	210.04	210.04	210.04	210.04	210.04
8.2000	210.05	210.05	210.05	210.05	210.05
8.4500	210.05	210.05	210.05	210.05	210.05
8.7000	210.05	210.05	210.05	210.06	210.06
8.9500	210.06	210.06	210.06	210.06	210.06
9.2000	210.06	210.06	210.06	210.07	210.07
9.4500	210.07	210.07	210.07	210.07	210.07
9.7000	210.07	210.07	210.08	210.08	210.08
9.9500	210.08	210.08	210.08	210.08	210.09
10.2000	210.09	210.09	210.09	210.09	210.09
10.4500	210.09	210.10	210.10	210.10	210.10
10.7000	210.10	210.10	210.11	210.11	210.11
10.9500	210.11	210.11	210.11	210.12	210.12
11.2000	210.12	210.12	210.13	210.13	210.13
11.4500	210.13	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.7000	210.15	210.15	210.15	210.16	210.16
11.9500	210.17	210.18	210.19	210.20	210.21
12.2000	210.22	210.22	210.23	210.22	210.22
12.4500	210.22	210.21	210.21	210.21	210.20
12.7000	210.20	210.19	210.19	210.19	210.18
12.9500	210.18	210.18	210.17	210.17	210.17
13.2000	210.17	210.16	210.16	210.16	210.16
13.4500	210.16	210.16	210.16	210.16	210.15
13.7000	210.15	210.15	210.15	210.15	210.15
13.9500	210.15	210.15	210.15	210.15	210.15
14.2000	210.15	210.15	210.15	210.15	210.15
14.4500	210.15	210.15	210.15	210.15	210.15
14.7000	210.14	210.14	210.14	210.14	210.14
14.9500	210.14	210.14	210.14	210.14	210.14
15.2000	210.14	210.14	210.14	210.14	210.14
15.4500	210.14	210.14	210.14	210.14	210.14
15.7000	210.14	210.14	210.14	210.14	210.14
15.9500	210.14	210.14	210.14	210.14	210.14
16.2000	210.14	210.14	210.14	210.14	210.14
16.4500	210.14	210.14	210.14	210.14	210.14
16.7000	210.14	210.14	210.14	210.14	210.14
16.9500	210.14	210.14	210.14	210.14	210.14
17.2000	210.14	210.14	210.14	210.14	210.14
17.4500	210.14	210.14	210.14	210.14	210.14
17.7000	210.14	210.14	210.14	210.14	210.14
17.9500	210.14	210.14	210.14	210.14	210.14
18.2000	210.14	210.14	210.14	210.14	210.14
18.4500	210.14	210.14	210.14	210.14	210.14
18.7000	210.14	210.14	210.14	210.14	210.14
18.9500	210.14	210.14	210.14	210.14	210.14
19.2000	210.14	210.14	210.14	210.14	210.14
19.4500	210.14	210.14	210.14	210.14	210.14
19.7000	210.14	210.14	210.14	210.14	210.14
19.9500	210.14	210.14	210.14	210.14	210.14
20.2000	210.14	210.14	210.14	210.14	210.14
20.4500	210.14	210.14	210.14	210.14	210.14
20.7000	210.14	210.14	210.14	210.14	210.14
20.9500	210.14	210.14	210.14	210.14	210.14
21.2000	210.14	210.14	210.14	210.14	210.14
21.4500	210.14	210.14	210.14	210.14	210.14
21.7000	210.14	210.14	210.14	210.14	210.14
21.9500	210.14	210.14	210.14	210.14	210.14
22.2000	210.14	210.14	210.14	210.14	210.14
22.4500	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.7000	210.14	210.14	210.14	210.14	210.14
22.9500	210.14	210.14	210.14	210.14	210.14
23.2000	210.14	210.14	210.14	210.14	210.14
23.4500	210.14	210.14	210.14	210.14	210.14
23.7000	210.14	210.14	210.14	210.14	210.14
23.9500	210.14	210.14	210.14	210.14	210.14
24.2000	210.14	210.13	210.13	210.13	210.13
24.4500	210.13	210.13	210.13	210.13	210.13
24.7000	210.13	210.13	210.13	210.13	210.13
24.9500	210.13	210.13			

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
.6000	210.00	210.00	210.00	210.00	210.00
.8500	210.00	210.00	210.00	210.00	210.00
1.1000	210.00	210.00	210.00	210.00	210.00
1.3500	210.00	210.00	210.00	210.00	210.00
1.6000	210.00	210.00	210.00	210.00	210.00
1.8500	210.00	210.00	210.00	210.00	210.01
2.1000	210.01	210.01	210.01	210.01	210.01
2.3500	210.01	210.01	210.01	210.01	210.01
2.6000	210.01	210.01	210.01	210.01	210.01
2.8500	210.01	210.01	210.01	210.01	210.01
3.1000	210.01	210.01	210.01	210.01	210.01
3.3500	210.01	210.02	210.02	210.02	210.02
3.6000	210.02	210.02	210.02	210.02	210.02
3.8500	210.02	210.02	210.02	210.02	210.02
4.1000	210.02	210.02	210.02	210.02	210.02
4.3500	210.02	210.02	210.03	210.03	210.03
4.6000	210.03	210.03	210.03	210.03	210.03
4.8500	210.03	210.03	210.03	210.03	210.03
5.1000	210.03	210.03	210.03	210.03	210.04
5.3500	210.04	210.04	210.04	210.04	210.04
5.6000	210.04	210.04	210.04	210.04	210.04
5.8500	210.04	210.04	210.04	210.04	210.05
6.1000	210.05	210.05	210.05	210.05	210.05
6.3500	210.05	210.05	210.05	210.05	210.05
6.6000	210.05	210.05	210.05	210.06	210.06
6.8500	210.06	210.06	210.06	210.06	210.06
7.1000	210.06	210.06	210.06	210.06	210.07
7.3500	210.07	210.07	210.07	210.07	210.07
7.6000	210.07	210.07	210.07	210.07	210.08
7.8500	210.08	210.08	210.08	210.08	210.08
8.1000	210.08	210.08	210.08	210.09	210.09
8.3500	210.09	210.09	210.09	210.09	210.09
8.6000	210.10	210.10	210.10	210.10	210.10
8.8500	210.10	210.10	210.11	210.11	210.11
9.1000	210.11	210.11	210.11	210.12	210.12
9.3500	210.12	210.12	210.12	210.12	210.13
9.6000	210.13	210.13	210.13	210.13	210.14
9.8500	210.14	210.14	210.14	210.14	210.14
10.1000	210.14	210.14	210.15	210.15	210.15
10.3500	210.15	210.15	210.15	210.15	210.15
10.6000	210.15	210.15	210.15	210.15	210.15
10.8500	210.15	210.15	210.15	210.16	210.16
11.1000	210.16	210.16	210.16	210.16	210.16

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.3500	210.16	210.16	210.16	210.16	210.16
11.6000	210.17	210.17	210.17	210.17	210.18
11.8500	210.19	210.19	210.20	210.21	210.23
12.1000	210.24	210.26	210.27	210.27	210.27
12.3500	210.27	210.26	210.25	210.25	210.24
12.6000	210.23	210.22	210.22	210.21	210.21
12.8500	210.20	210.20	210.20	210.19	210.19
13.1000	210.19	210.18	210.18	210.18	210.18
13.3500	210.17	210.17	210.17	210.17	210.17
13.6000	210.17	210.17	210.16	210.16	210.16
13.8500	210.16	210.16	210.16	210.16	210.16
14.1000	210.16	210.16	210.16	210.16	210.16
14.3500	210.15	210.15	210.15	210.15	210.15
14.6000	210.15	210.15	210.15	210.15	210.15
14.8500	210.15	210.15	210.15	210.15	210.15
15.1000	210.15	210.15	210.15	210.15	210.15
15.3500	210.15	210.15	210.15	210.15	210.15
15.6000	210.15	210.15	210.15	210.15	210.15
15.8500	210.15	210.15	210.15	210.15	210.15
16.1000	210.15	210.14	210.14	210.14	210.14
16.3500	210.14	210.14	210.14	210.14	210.14
16.6000	210.14	210.14	210.14	210.14	210.14
16.8500	210.14	210.14	210.14	210.14	210.14
17.1000	210.14	210.14	210.14	210.14	210.14
17.3500	210.14	210.14	210.14	210.14	210.14
17.6000	210.14	210.14	210.14	210.14	210.14
17.8500	210.14	210.14	210.14	210.14	210.14
18.1000	210.14	210.14	210.14	210.14	210.14
18.3500	210.14	210.14	210.14	210.14	210.14
18.6000	210.14	210.14	210.14	210.14	210.14
18.8500	210.14	210.14	210.14	210.14	210.14
19.1000	210.14	210.14	210.14	210.14	210.14
19.3500	210.14	210.14	210.14	210.14	210.14
19.6000	210.14	210.14	210.14	210.14	210.14
19.8500	210.14	210.14	210.14	210.14	210.14
20.1000	210.14	210.14	210.14	210.14	210.14
20.3500	210.14	210.14	210.14	210.14	210.14
20.6000	210.14	210.14	210.14	210.14	210.14
20.8500	210.14	210.14	210.14	210.14	210.14
21.1000	210.14	210.14	210.14	210.14	210.14
21.3500	210.14	210.14	210.14	210.14	210.14
21.6000	210.14	210.14	210.14	210.14	210.14
21.8500	210.14	210.14	210.14	210.14	210.14
22.1000	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.3500	210.14	210.14	210.14	210.14	210.14
22.6000	210.14	210.14	210.14	210.14	210.14
22.8500	210.14	210.14	210.14	210.14	210.14
23.1000	210.14	210.14	210.14	210.14	210.14
23.3500	210.14	210.14	210.14	210.14	210.14
23.6000	210.14	210.14	210.14	210.14	210.14
23.8500	210.14	210.14	210.14	210.14	210.14
24.1000	210.14	210.14	210.14	210.14	210.14
24.3500	210.14	210.14	210.14	210.13	210.13
24.6000	210.13	210.13	210.13	210.13	210.13
24.8500	210.13	210.13	210.13	210.13	210.13
25.1000	210.13	210.13	210.13		

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
2.0500	210.00	210.00	210.00	210.00	210.00
2.3000	210.00	210.00	210.00	210.00	210.00
2.5500	210.00	210.00	210.00	210.00	210.00
2.8000	210.00	210.00	210.00	210.00	210.00
3.0500	210.00	210.00	210.00	210.00	210.00
3.3000	210.00	210.00	210.00	210.00	210.00
3.5500	210.00	210.00	210.00	210.00	210.00
3.8000	210.00	210.00	210.00	210.00	210.00
4.0500	210.00	210.00	210.00	210.00	210.00
4.3000	210.00	210.00	210.00	210.00	210.00
4.5500	210.00	210.00	210.00	210.00	210.00
4.8000	210.00	210.00	210.00	210.00	210.00
5.0500	210.00	210.00	210.00	210.00	210.00
5.3000	210.00	210.01	210.01	210.01	210.01
5.5500	210.01	210.01	210.01	210.01	210.01
5.8000	210.01	210.01	210.01	210.01	210.01
6.0500	210.01	210.01	210.01	210.01	210.01
6.3000	210.01	210.01	210.01	210.01	210.01
6.5500	210.01	210.01	210.01	210.01	210.01
6.8000	210.01	210.01	210.01	210.01	210.01
7.0500	210.01	210.01	210.01	210.01	210.01
7.3000	210.01	210.01	210.01	210.01	210.01
7.5500	210.01	210.01	210.01	210.01	210.01
7.8000	210.01	210.01	210.01	210.02	210.02
8.0500	210.02	210.02	210.02	210.02	210.02
8.3000	210.02	210.02	210.02	210.02	210.02
8.5500	210.02	210.02	210.02	210.02	210.02
8.8000	210.02	210.02	210.02	210.02	210.02
9.0500	210.02	210.02	210.02	210.02	210.02
9.3000	210.03	210.03	210.03	210.03	210.03
9.5500	210.03	210.03	210.03	210.03	210.03
9.8000	210.03	210.03	210.03	210.03	210.03
10.0500	210.03	210.03	210.03	210.04	210.04
10.3000	210.04	210.04	210.04	210.04	210.04
10.5500	210.04	210.04	210.04	210.04	210.04
10.8000	210.04	210.04	210.05	210.05	210.05
11.0500	210.05	210.05	210.05	210.05	210.05
11.3000	210.05	210.05	210.06	210.06	210.06
11.5500	210.06	210.06	210.06	210.07	210.07
11.8000	210.07	210.07	210.08	210.08	210.09
12.0500	210.10	210.11	210.12	210.13	210.13
12.3000	210.14	210.15	210.15	210.15	210.15
12.5500	210.15	210.15	210.15	210.15	210.15

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
12.8000	210.14	210.14	210.14	210.14	210.14
13.0500	210.14	210.14	210.14	210.14	210.14
13.3000	210.14	210.14	210.14	210.14	210.14
13.5500	210.14	210.14	210.14	210.14	210.14
13.8000	210.14	210.14	210.14	210.14	210.14
14.0500	210.14	210.14	210.14	210.14	210.14
14.3000	210.14	210.14	210.14	210.14	210.14
14.5500	210.14	210.14	210.14	210.14	210.14
14.8000	210.14	210.14	210.14	210.14	210.14
15.0500	210.14	210.14	210.14	210.14	210.14
15.3000	210.14	210.14	210.14	210.14	210.14
15.5500	210.14	210.14	210.14	210.14	210.14
15.8000	210.14	210.14	210.14	210.14	210.14
16.0500	210.14	210.14	210.14	210.14	210.14
16.3000	210.14	210.14	210.14	210.13	210.13
16.5500	210.13	210.13	210.13	210.13	210.13
16.8000	210.13	210.13	210.13	210.13	210.13
17.0500	210.13	210.13	210.13	210.13	210.13
17.3000	210.13	210.13	210.13	210.13	210.13
17.5500	210.13	210.13	210.13	210.13	210.13
17.8000	210.13	210.13	210.13	210.13	210.13
18.0500	210.13	210.13	210.13	210.13	210.13
18.3000	210.13	210.13	210.13	210.13	210.13
18.5500	210.13	210.13	210.13	210.13	210.13
18.8000	210.13	210.13	210.13	210.13	210.13
19.0500	210.13	210.13	210.13	210.13	210.13
19.3000	210.13	210.13	210.13	210.13	210.13
19.5500	210.13	210.13	210.13	210.13	210.13
19.8000	210.13	210.13	210.13	210.13	210.13
20.0500	210.13	210.13	210.13	210.13	210.13
20.3000	210.13	210.13	210.13	210.13	210.13
20.5500	210.13	210.13	210.13	210.13	210.13
20.8000	210.13	210.13	210.13	210.13	210.13
21.0500	210.13	210.13	210.13	210.13	210.13
21.3000	210.13	210.13	210.13	210.13	210.13
21.5500	210.13	210.13	210.13	210.13	210.13
21.8000	210.13	210.13	210.13	210.13	210.13
22.0500	210.13	210.13	210.13	210.13	210.13
22.3000	210.13	210.13	210.13	210.13	210.13
22.5500	210.13	210.13	210.13	210.13	210.13
22.8000	210.13	210.13	210.13	210.13	210.13
23.0500	210.13	210.13	210.13	210.13	210.13
23.3000	210.13	210.13	210.13	210.13	210.13
23.5500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.8000	210.13	210.13	210.13	210.13	210.13
24.0500	210.13	210.13	210.13	210.13	210.13
24.3000	210.13	210.13			

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.0500	210.00	210.00	210.00	210.00	210.00
1.3000	210.00	210.00	210.00	210.00	210.00
1.5500	210.00	210.00	210.00	210.00	210.00
1.8000	210.00	210.00	210.00	210.00	210.00
2.0500	210.00	210.00	210.00	210.00	210.00
2.3000	210.00	210.00	210.00	210.00	210.00
2.5500	210.00	210.00	210.00	210.00	210.00
2.8000	210.00	210.00	210.00	210.00	210.00
3.0500	210.00	210.00	210.00	210.00	210.00
3.3000	210.01	210.01	210.01	210.01	210.01
3.5500	210.01	210.01	210.01	210.01	210.01
3.8000	210.01	210.01	210.01	210.01	210.01
4.0500	210.01	210.01	210.01	210.01	210.01
4.3000	210.01	210.01	210.01	210.01	210.01
4.5500	210.01	210.01	210.01	210.01	210.01
4.8000	210.01	210.01	210.01	210.01	210.01
5.0500	210.01	210.01	210.01	210.01	210.01
5.3000	210.02	210.02	210.02	210.02	210.02
5.5500	210.02	210.02	210.02	210.02	210.02
5.8000	210.02	210.02	210.02	210.02	210.02
6.0500	210.02	210.02	210.02	210.02	210.02
6.3000	210.02	210.02	210.02	210.02	210.02
6.5500	210.02	210.02	210.02	210.02	210.03
6.8000	210.03	210.03	210.03	210.03	210.03
7.0500	210.03	210.03	210.03	210.03	210.03
7.3000	210.03	210.03	210.03	210.03	210.03
7.5500	210.03	210.03	210.03	210.03	210.03
7.8000	210.04	210.04	210.04	210.04	210.04
8.0500	210.04	210.04	210.04	210.04	210.04
8.3000	210.04	210.04	210.04	210.04	210.04
8.5500	210.04	210.05	210.05	210.05	210.05
8.8000	210.05	210.05	210.05	210.05	210.05
9.0500	210.05	210.05	210.05	210.06	210.06
9.3000	210.06	210.06	210.06	210.06	210.06
9.5500	210.06	210.06	210.06	210.07	210.07
9.8000	210.07	210.07	210.07	210.07	210.07
10.0500	210.07	210.07	210.08	210.08	210.08
10.3000	210.08	210.08	210.08	210.08	210.08
10.5500	210.09	210.09	210.09	210.09	210.09
10.8000	210.09	210.10	210.10	210.10	210.10
11.0500	210.10	210.10	210.11	210.11	210.11
11.3000	210.11	210.11	210.12	210.12	210.12
11.5500	210.12	210.13	210.13	210.13	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.8000	210.14	210.15	210.15	210.16	210.16
12.0500	210.17	210.18	210.19	210.19	210.19
12.3000	210.19	210.19	210.19	210.19	210.18
12.5500	210.18	210.17	210.17	210.17	210.16
12.8000	210.16	210.16	210.15	210.15	210.15
13.0500	210.15	210.15	210.15	210.15	210.14
13.3000	210.14	210.14	210.14	210.14	210.14
13.5500	210.14	210.14	210.14	210.14	210.14
13.8000	210.14	210.14	210.14	210.14	210.14
14.0500	210.14	210.14	210.14	210.14	210.14
14.3000	210.14	210.14	210.14	210.14	210.14
14.5500	210.14	210.14	210.14	210.14	210.14
14.8000	210.14	210.14	210.14	210.14	210.14
15.0500	210.14	210.14	210.14	210.14	210.14
15.3000	210.14	210.14	210.14	210.14	210.14
15.5500	210.14	210.14	210.14	210.14	210.14
15.8000	210.14	210.14	210.14	210.14	210.14
16.0500	210.14	210.14	210.14	210.14	210.14
16.3000	210.14	210.14	210.14	210.14	210.14
16.5500	210.14	210.14	210.14	210.14	210.14
16.8000	210.14	210.14	210.14	210.14	210.14
17.0500	210.14	210.14	210.14	210.14	210.14
17.3000	210.14	210.14	210.14	210.14	210.14
17.5500	210.14	210.14	210.14	210.14	210.14
17.8000	210.14	210.14	210.14	210.14	210.14
18.0500	210.14	210.14	210.14	210.14	210.14
18.3000	210.14	210.14	210.14	210.14	210.14
18.5500	210.14	210.14	210.14	210.14	210.14
18.8000	210.14	210.14	210.14	210.14	210.14
19.0500	210.14	210.14	210.14	210.14	210.14
19.3000	210.14	210.14	210.14	210.14	210.13
19.5500	210.13	210.13	210.13	210.13	210.13
19.8000	210.13	210.13	210.13	210.13	210.13
20.0500	210.13	210.13	210.13	210.13	210.13
20.3000	210.13	210.13	210.13	210.13	210.13
20.5500	210.13	210.13	210.13	210.13	210.13
20.8000	210.13	210.13	210.13	210.13	210.13
21.0500	210.13	210.13	210.13	210.13	210.13
21.3000	210.13	210.13	210.13	210.13	210.13
21.5500	210.13	210.13	210.13	210.13	210.13
21.8000	210.13	210.13	210.13	210.13	210.13
22.0500	210.13	210.13	210.13	210.13	210.13
22.3000	210.13	210.13	210.13	210.13	210.13
22.5500	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.8000	210.13	210.13	210.13	210.13	210.13
23.0500	210.13	210.13	210.13	210.13	210.13
23.3000	210.13	210.13	210.13	210.13	210.13
23.5500	210.13	210.13	210.13	210.13	210.13
23.8000	210.13	210.13	210.13	210.13	210.13
24.0500	210.13	210.13	210.13	210.13	210.13
24.3000	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
.6500	210.00	210.00	210.00	210.00	210.00
.9000	210.00	210.00	210.00	210.00	210.00
1.1500	210.00	210.00	210.00	210.00	210.00
1.4000	210.00	210.00	210.00	210.00	210.00
1.6500	210.00	210.00	210.00	210.00	210.00
1.9000	210.00	210.00	210.00	210.00	210.00
2.1500	210.01	210.01	210.01	210.01	210.01
2.4000	210.01	210.01	210.01	210.01	210.01
2.6500	210.01	210.01	210.01	210.01	210.01
2.9000	210.01	210.01	210.01	210.01	210.01
3.1500	210.01	210.01	210.01	210.01	210.01
3.4000	210.01	210.01	210.01	210.01	210.02
3.6500	210.02	210.02	210.02	210.02	210.02
3.9000	210.02	210.02	210.02	210.02	210.02
4.1500	210.02	210.02	210.02	210.02	210.02
4.4000	210.02	210.02	210.02	210.02	210.02
4.6500	210.02	210.03	210.03	210.03	210.03
4.9000	210.03	210.03	210.03	210.03	210.03
5.1500	210.03	210.03	210.03	210.03	210.03
5.4000	210.03	210.03	210.03	210.03	210.03
5.6500	210.04	210.04	210.04	210.04	210.04
5.9000	210.04	210.04	210.04	210.04	210.04
6.1500	210.04	210.04	210.04	210.04	210.04
6.4000	210.04	210.05	210.05	210.05	210.05
6.6500	210.05	210.05	210.05	210.05	210.05
6.9000	210.05	210.05	210.05	210.05	210.05
7.1500	210.06	210.06	210.06	210.06	210.06
7.4000	210.06	210.06	210.06	210.06	210.06
7.6500	210.06	210.07	210.07	210.07	210.07
7.9000	210.07	210.07	210.07	210.07	210.07
8.1500	210.07	210.08	210.08	210.08	210.08
8.4000	210.08	210.08	210.08	210.08	210.08
8.6500	210.09	210.09	210.09	210.09	210.09
8.9000	210.09	210.09	210.10	210.10	210.10
9.1500	210.10	210.10	210.10	210.10	210.11
9.4000	210.11	210.11	210.11	210.11	210.11
9.6500	210.12	210.12	210.12	210.12	210.12
9.9000	210.13	210.13	210.13	210.13	210.13
10.1500	210.13	210.14	210.14	210.14	210.14
10.4000	210.14	210.14	210.14	210.14	210.14
10.6500	210.14	210.14	210.14	210.14	210.14
10.9000	210.14	210.14	210.14	210.15	210.15
11.1500	210.15	210.15	210.15	210.15	210.15

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.4000	210.15	210.15	210.15	210.15	210.15
11.6500	210.15	210.15	210.16	210.16	210.17
11.9000	210.17	210.18	210.18	210.20	210.21
12.1500	210.22	210.22	210.22	210.22	210.22
12.4000	210.21	210.21	210.20	210.20	210.19
12.6500	210.19	210.18	210.18	210.17	210.17
12.9000	210.16	210.16	210.16	210.16	210.16
13.1500	210.15	210.15	210.15	210.15	210.15
13.4000	210.15	210.15	210.15	210.15	210.15
13.6500	210.15	210.15	210.15	210.15	210.15
13.9000	210.14	210.14	210.14	210.14	210.14
14.1500	210.14	210.14	210.14	210.14	210.14
14.4000	210.14	210.14	210.14	210.14	210.14
14.6500	210.14	210.14	210.14	210.14	210.14
14.9000	210.14	210.14	210.14	210.14	210.14
15.1500	210.14	210.14	210.14	210.14	210.14
15.4000	210.14	210.14	210.14	210.14	210.14
15.6500	210.14	210.14	210.14	210.14	210.14
15.9000	210.14	210.14	210.14	210.14	210.14
16.1500	210.14	210.14	210.14	210.14	210.14
16.4000	210.14	210.14	210.14	210.14	210.14
16.6500	210.14	210.14	210.14	210.14	210.14
16.9000	210.14	210.14	210.14	210.14	210.14
17.1500	210.14	210.14	210.14	210.14	210.14
17.4000	210.14	210.14	210.14	210.14	210.14
17.6500	210.14	210.14	210.14	210.14	210.14
17.9000	210.14	210.14	210.14	210.14	210.14
18.1500	210.14	210.14	210.14	210.14	210.14
18.4000	210.14	210.14	210.14	210.14	210.14
18.6500	210.14	210.14	210.14	210.14	210.14
18.9000	210.14	210.14	210.14	210.14	210.14
19.1500	210.14	210.14	210.14	210.14	210.14
19.4000	210.14	210.14	210.14	210.14	210.14
19.6500	210.14	210.14	210.14	210.14	210.14
19.9000	210.14	210.14	210.14	210.14	210.14
20.1500	210.14	210.14	210.14	210.14	210.14
20.4000	210.14	210.14	210.14	210.14	210.14
20.6500	210.14	210.14	210.14	210.14	210.14
20.9000	210.14	210.14	210.14	210.14	210.14
21.1500	210.14	210.14	210.14	210.14	210.14
21.4000	210.14	210.14	210.14	210.14	210.14
21.6500	210.14	210.14	210.14	210.14	210.14
21.9000	210.14	210.14	210.14	210.14	210.14
22.1500	210.14	210.14	210.14	210.14	210.14

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs

Time hrs | Time on left represents time for first value in each row.

Time hrs					
22.4000	210.14	210.14	210.14	210.14	210.14
22.6500	210.14	210.14	210.14	210.14	210.14
22.9000	210.14	210.14	210.14	210.14	210.14
23.1500	210.14	210.14	210.14	210.14	210.14
23.4000	210.14	210.14	210.14	210.14	210.14
23.6500	210.14	210.14	210.14	210.14	210.14
23.9000	210.14	210.14	210.14	210.14	210.13
24.1500	210.13	210.13	210.13	210.13	210.13
24.4000	210.13	210.13	210.13	210.13	210.13

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
8.6000	170.00	170.00	170.00	170.00	170.00
8.8500	170.00	170.00	170.00	170.00	170.00
9.1000	170.00	170.00	170.00	170.00	170.00
9.3500	170.00	170.00	170.00	170.01	170.01
9.6000	170.01	170.01	170.01	170.01	170.01
9.8500	170.01	170.01	170.01	170.01	170.01
10.1000	170.01	170.01	170.01	170.01	170.01
10.3500	170.01	170.02	170.02	170.02	170.02
10.6000	170.02	170.02	170.02	170.02	170.02
10.8500	170.02	170.03	170.03	170.03	170.03
11.1000	170.03	170.03	170.03	170.04	170.04
11.3500	170.04	170.04	170.05	170.05	170.05
11.6000	170.06	170.07	170.08	170.09	170.11
11.8500	170.15	170.19	170.26	170.35	170.49
12.1000	170.67	170.81	170.91	171.00	171.08
12.3500	171.15	171.22	171.27	171.32	171.36
12.6000	171.40	171.42	171.45	171.47	171.49
12.8500	171.50	171.51	171.53	171.54	171.55
13.1000	171.55	171.56	171.57	171.57	171.58
13.3500	171.58	171.59	171.59	171.59	171.59
13.6000	171.59	171.60	171.60	171.60	171.60
13.8500	171.60	171.60	171.60	171.59	171.59
14.1000	171.59	171.59	171.59	171.58	171.58
14.3500	171.58	171.57	171.57	171.57	171.56
14.6000	171.56	171.55	171.55	171.54	171.54
14.8500	171.54	171.53	171.52	171.52	171.51
15.1000	171.51	171.50	171.50	171.49	171.48
15.3500	171.48	171.47	171.47	171.46	171.45
15.6000	171.44	171.44	171.43	171.42	171.42
15.8500	171.41	171.40	171.39	171.38	171.37
16.1000	171.37	171.36	171.35	171.34	171.33
16.3500	171.32	171.31	171.30	171.30	171.29
16.6000	171.28	171.27	171.26	171.25	171.24
16.8500	171.23	171.22	171.21	171.20	171.19
17.1000	171.18	171.17	171.16	171.15	171.14
17.3500	171.13	171.12	171.11	171.10	171.09
17.6000	171.08	171.07	171.06	171.05	171.03
17.8500	171.02	171.01	171.00	170.99	170.98
18.1000	170.97	170.96	170.95	170.93	170.92
18.3500	170.91	170.90	170.89	170.88	170.87
18.6000	170.86	170.84	170.83	170.82	170.81
18.8500	170.80	170.78	170.77	170.75	170.73
19.1000	170.72	170.70	170.68	170.65	170.63

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
19.3500	170.60	170.58	170.55	170.52	170.50
19.6000	170.47	170.45	170.42	170.39	170.37
19.8500	170.34	170.31	170.29	170.26	170.24
20.1000	170.21	170.18	170.16	170.13	170.10
20.3500	170.08	170.06	170.05	170.04	170.04
20.6000	170.03	170.03	170.03	170.03	170.02
20.8500	170.02	170.02	170.02	170.02	170.02
21.1000	170.02	170.02	170.02	170.02	170.02
21.3500	170.02	170.02	170.02	170.02	170.02
21.6000	170.02	170.02	170.02	170.02	170.02
21.8500	170.02	170.02	170.02	170.02	170.02
22.1000	170.02	170.02	170.02	170.02	170.02
22.3500	170.02	170.02	170.02	170.02	170.02
22.6000	170.02	170.02	170.02	170.02	170.02
22.8500	170.02	170.02	170.02	170.02	170.02
23.1000	170.02	170.02	170.02	170.02	170.02
23.3500	170.02	170.02	170.02	170.02	170.02
23.6000	170.02	170.02	170.02	170.02	170.02
23.8500	170.02	170.02	170.02	170.02	170.02
24.1000	170.01	170.01	170.01	170.01	170.01
24.3500	170.01	170.01	170.00	170.00	170.00
24.6000	170.00	170.00	170.00	170.00	170.00
24.8500	170.00				

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.0000	170.00	170.00	170.00	170.00	170.00
6.2500	170.00	170.00	170.00	170.00	170.00
6.5000	170.00	170.00	170.00	170.00	170.00
6.7500	170.00	170.00	170.00	170.00	170.00
7.0000	170.00	170.01	170.01	170.01	170.01
7.2500	170.01	170.01	170.01	170.01	170.01
7.5000	170.01	170.01	170.01	170.01	170.01
7.7500	170.01	170.01	170.01	170.01	170.01
8.0000	170.01	170.01	170.01	170.02	170.02
8.2500	170.02	170.02	170.02	170.02	170.02
8.5000	170.02	170.02	170.02	170.02	170.02
8.7500	170.02	170.03	170.03	170.03	170.03
9.0000	170.03	170.03	170.03	170.03	170.03
9.2500	170.04	170.04	170.04	170.04	170.04
9.5000	170.04	170.04	170.04	170.05	170.05
9.7500	170.05	170.05	170.05	170.05	170.05
10.0000	170.06	170.06	170.06	170.06	170.06
10.2500	170.06	170.07	170.07	170.07	170.07
10.5000	170.08	170.08	170.08	170.08	170.09
10.7500	170.09	170.09	170.10	170.10	170.10
11.0000	170.11	170.11	170.12	170.13	170.14
11.2500	170.15	170.17	170.19	170.21	170.23
11.5000	170.26	170.30	170.35	170.41	170.50
11.7500	170.61	170.73	170.83	170.93	171.05
12.0000	171.21	171.43	171.69	171.99	172.27
12.2500	172.49	172.64	172.72	172.76	172.76
12.5000	172.75	172.71	172.67	172.62	172.56
12.7500	172.51	172.47	172.43	172.39	172.36
13.0000	172.33	172.30	172.28	172.25	172.23
13.2500	172.21	172.19	172.17	172.16	172.14
13.5000	172.13	172.12	172.10	172.09	172.08
13.7500	172.07	172.06	172.05	172.04	172.03
14.0000	172.02	172.02	172.01	172.00	171.99
14.2500	171.99	171.98	171.97	171.97	171.96
14.5000	171.95	171.95	171.94	171.94	171.93
14.7500	171.93	171.92	171.92	171.91	171.91
15.0000	171.90	171.90	171.89	171.89	171.88
15.2500	171.88	171.87	171.87	171.86	171.86
15.5000	171.86	171.85	171.85	171.84	171.84
15.7500	171.83	171.83	171.82	171.82	171.81
16.0000	171.81	171.80	171.80	171.79	171.79
16.2500	171.78	171.78	171.77	171.77	171.76
16.5000	171.76	171.75	171.75	171.75	171.74

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.7500	171.74	171.73	171.73	171.72	171.72
17.0000	171.71	171.71	171.70	171.70	171.69
17.2500	171.69	171.68	171.68	171.67	171.67
17.5000	171.66	171.66	171.65	171.65	171.64
17.7500	171.63	171.63	171.62	171.61	171.61
18.0000	171.60	171.60	171.59	171.58	171.57
18.2500	171.57	171.56	171.55	171.55	171.54
18.5000	171.53	171.52	171.52	171.51	171.50
18.7500	171.49	171.49	171.48	171.47	171.46
19.0000	171.45	171.45	171.44	171.43	171.42
19.2500	171.42	171.41	171.40	171.39	171.38
19.5000	171.38	171.37	171.36	171.35	171.34
19.7500	171.33	171.33	171.32	171.31	171.30
20.0000	171.29	171.28	171.27	171.27	171.26
20.2500	171.25	171.24	171.23	171.22	171.21
20.5000	171.20	171.20	171.19	171.18	171.17
20.7500	171.16	171.15	171.14	171.13	171.12
21.0000	171.11	171.11	171.10	171.09	171.08
21.2500	171.07	171.06	171.05	171.04	171.03
21.5000	171.02	171.01	171.00	170.99	170.98
21.7500	170.97	170.97	170.96	170.95	170.94
22.0000	170.93	170.92	170.91	170.90	170.89
22.2500	170.88	170.87	170.86	170.85	170.84
22.5000	170.83	170.82	170.81	170.80	170.79
22.7500	170.77	170.76	170.74	170.73	170.72
23.0000	170.70	170.68	170.66	170.64	170.61
23.2500	170.59	170.57	170.54	170.52	170.50
23.5000	170.48	170.45	170.43	170.41	170.38
23.7500	170.36	170.34	170.31	170.29	170.26
24.0000	170.24	170.22	170.19	170.16	170.13
24.2500	170.10	170.08	170.06	170.04	170.03
24.5000	170.02	170.02	170.01	170.01	170.01
24.7500	170.01	170.00	170.00	170.00	170.00
25.0000	170.00	170.00	170.00	170.00	

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
4.1000	170.00	170.00	170.00	170.00	170.00
4.3500	170.00	170.00	170.00	170.00	170.00
4.6000	170.00	170.00	170.00	170.00	170.00
4.8500	170.00	170.01	170.01	170.01	170.01
5.1000	170.01	170.01	170.01	170.01	170.01
5.3500	170.01	170.01	170.01	170.01	170.01
5.6000	170.01	170.01	170.01	170.01	170.01
5.8500	170.01	170.01	170.01	170.02	170.02
6.1000	170.02	170.02	170.02	170.02	170.02
6.3500	170.02	170.02	170.02	170.02	170.02
6.6000	170.02	170.02	170.02	170.02	170.03
6.8500	170.03	170.03	170.03	170.03	170.03
7.1000	170.03	170.03	170.03	170.03	170.03
7.3500	170.04	170.04	170.04	170.04	170.04
7.6000	170.04	170.04	170.04	170.04	170.04
7.8500	170.05	170.05	170.05	170.05	170.05
8.1000	170.05	170.05	170.05	170.06	170.06
8.3500	170.06	170.06	170.06	170.06	170.07
8.6000	170.07	170.07	170.07	170.07	170.08
8.8500	170.08	170.08	170.08	170.09	170.09
9.1000	170.09	170.09	170.10	170.10	170.10
9.3500	170.10	170.11	170.11	170.12	170.12
9.6000	170.13	170.14	170.15	170.16	170.18
9.8500	170.19	170.21	170.23	170.25	170.28
10.1000	170.31	170.34	170.37	170.40	170.44
10.3500	170.48	170.52	170.56	170.61	170.66
10.6000	170.70	170.74	170.77	170.81	170.83
10.8500	170.86	170.89	170.92	170.95	170.99
11.1000	171.02	171.06	171.10	171.14	171.18
11.3500	171.23	171.28	171.34	171.40	171.46
11.6000	171.53	171.62	171.72	171.84	171.98
11.8500	172.15	172.32	172.50	172.72	173.00
12.1000	173.33	173.71	174.09	174.41	174.59
12.3500	174.64	174.58	174.44	174.25	174.04
12.6000	173.83	173.63	173.43	173.26	173.09
12.8500	172.95	172.83	172.74	172.66	172.60
13.1000	172.55	172.50	172.46	172.43	172.40
13.3500	172.37	172.35	172.33	172.31	172.30
13.6000	172.28	172.27	172.25	172.24	172.23
13.8500	172.22	172.21	172.20	172.19	172.18
14.1000	172.17	172.16	172.15	172.15	172.14
14.3500	172.13	172.12	172.12	172.11	172.10
14.6000	172.10	172.09	172.09	172.08	172.08

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.8500	172.07	172.07	172.06	172.06	172.05
15.1000	172.05	172.04	172.04	172.03	172.03
15.3500	172.02	172.02	172.01	172.01	172.00
15.6000	172.00	171.99	171.99	171.98	171.98
15.8500	171.97	171.97	171.96	171.96	171.95
16.1000	171.95	171.94	171.94	171.93	171.93
16.3500	171.92	171.92	171.91	171.91	171.91
16.6000	171.90	171.90	171.89	171.89	171.89
16.8500	171.88	171.88	171.88	171.87	171.87
17.1000	171.86	171.86	171.86	171.85	171.85
17.3500	171.85	171.84	171.84	171.83	171.83
17.6000	171.83	171.82	171.82	171.82	171.81
17.8500	171.81	171.80	171.80	171.80	171.79
18.1000	171.79	171.79	171.78	171.78	171.77
18.3500	171.77	171.77	171.76	171.76	171.75
18.6000	171.75	171.75	171.74	171.74	171.74
18.8500	171.73	171.73	171.73	171.72	171.72
19.1000	171.72	171.71	171.71	171.71	171.70
19.3500	171.70	171.70	171.69	171.69	171.69
19.6000	171.68	171.68	171.68	171.67	171.67
19.8500	171.67	171.66	171.66	171.66	171.65
20.1000	171.65	171.64	171.64	171.64	171.63
20.3500	171.63	171.62	171.62	171.62	171.61
20.6000	171.61	171.60	171.60	171.59	171.59
20.8500	171.59	171.58	171.58	171.57	171.57
21.1000	171.56	171.56	171.55	171.55	171.54
21.3500	171.54	171.53	171.53	171.52	171.52
21.6000	171.51	171.51	171.50	171.49	171.49
21.8500	171.48	171.48	171.47	171.47	171.46
22.1000	171.46	171.45	171.44	171.44	171.43
22.3500	171.43	171.42	171.41	171.41	171.40
22.6000	171.39	171.39	171.38	171.38	171.37
22.8500	171.36	171.36	171.35	171.34	171.34
23.1000	171.33	171.32	171.32	171.31	171.30
23.3500	171.29	171.29	171.28	171.27	171.27
23.6000	171.26	171.25	171.24	171.24	171.23
23.8500	171.22	171.21	171.21	171.20	171.19
24.1000	171.18	171.17	171.16	171.15	171.13
24.3500	171.12	171.10	171.09	171.07	171.06
24.6000	171.04	171.03	171.01	171.00	170.98
24.8500	170.97	170.95	170.94	170.92	170.91
25.1000	170.89	170.88	170.86	170.85	170.83
25.3500	170.82	170.80	170.78	170.76	170.74
25.6000	170.72	170.69	170.66	170.62	170.59

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
25.8500	170.56	170.52	170.49	170.45	170.42
26.1000	170.39	170.35	170.32	170.28	170.25
26.3500	170.22	170.18	170.15	170.11	170.08
26.6000	170.06	170.04	170.03	170.02	170.01
26.8500	170.01	170.01	170.01	170.00	170.00
27.1000	170.00	170.00	170.00	170.00	

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
10.7000	191.75	191.75	191.75	191.75	191.75
10.9500	191.75	191.75	191.76	191.76	191.76
11.2000	191.76	191.77	191.77	191.77	191.78
11.4500	191.78	191.79	191.80	191.81	191.82
11.7000	191.83	191.85	191.88	191.91	191.95
11.9500	192.00	192.06	192.16	192.28	192.41
12.2000	192.51	192.58	192.62	192.65	192.67
12.4500	192.68	192.68	192.68	192.67	192.66
12.7000	192.64	192.62	192.59	192.57	192.55
12.9500	192.52	192.50	192.47	192.45	192.42
13.2000	192.39	192.37	192.35	192.33	192.31
13.4500	192.30	192.28	192.27	192.26	192.25
13.7000	192.24	192.23	192.23	192.22	192.21
13.9500	192.21	192.20	192.19	192.19	192.18
14.2000	192.18	192.17	192.17	192.16	192.16
14.4500	192.15	192.15	192.15	192.14	192.14
14.7000	192.14	192.14	192.13	192.13	192.13
14.9500	192.12	192.12	192.12	192.12	192.11
15.2000	192.11	192.11	192.10	192.10	192.10
15.4500	192.10	192.09	192.09	192.09	192.09
15.7000	192.08	192.08	192.08	192.08	192.07
15.9500	192.07	192.07	192.06	192.06	192.06
16.2000	192.06	192.05	192.05	192.05	192.05
16.4500	192.05	192.04	192.04	192.04	192.04
16.7000	192.04	192.03	192.03	192.03	192.03
16.9500	192.03	192.02	192.02	192.02	192.02
17.2000	192.02	192.02	192.01	192.01	192.01
17.4500	192.01	192.01	192.00	192.00	192.00
17.7000	192.00	192.00	192.00	191.99	191.99
17.9500	191.99	191.99	191.99	191.99	191.99
18.2000	191.98	191.98	191.98	191.98	191.98
18.4500	191.98	191.98	191.97	191.97	191.97
18.7000	191.97	191.97	191.97	191.97	191.97
18.9500	191.97	191.97	191.96	191.96	191.96
19.2000	191.96	191.96	191.96	191.96	191.96
19.4500	191.96	191.96	191.96	191.96	191.96
19.7000	191.96	191.96	191.95	191.95	191.95
19.9500	191.95	191.95	191.95	191.95	191.95
20.2000	191.95	191.95	191.95	191.95	191.95
20.4500	191.95	191.95	191.95	191.95	191.95
20.7000	191.95	191.94	191.94	191.94	191.94
20.9500	191.94	191.94	191.94	191.94	191.94
21.2000	191.94	191.94	191.94	191.94	191.94

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
21.4500	191.94	191.94	191.94	191.94	191.94
21.7000	191.93	191.93	191.93	191.93	191.93
21.9500	191.93	191.93	191.93	191.93	191.93
22.2000	191.93	191.93	191.93	191.93	191.93
22.4500	191.93	191.93	191.93	191.93	191.92
22.7000	191.92	191.92	191.92	191.92	191.92
22.9500	191.92	191.92	191.92	191.92	191.92
23.2000	191.92	191.92	191.92	191.92	191.92
23.4500	191.92	191.92	191.91	191.91	191.91
23.7000	191.91	191.91	191.91	191.91	191.91
23.9500	191.91	191.91	191.91	191.91	191.91
24.2000	191.90	191.90	191.90	191.89	191.89
24.4500	191.88	191.88	191.88	191.87	191.87
24.7000	191.87	191.87	191.86	191.86	191.86
24.9500	191.85	191.85	191.85	191.85	191.85
25.2000	191.84	191.84	191.84	191.84	191.84
25.4500	191.84	191.83	191.83	191.83	191.83
25.7000	191.83	191.83	191.82	191.82	191.82
25.9500	191.82	191.82	191.82	191.81	191.81
26.2000	191.81	191.81	191.81	191.81	191.81
26.4500	191.81	191.81	191.80	191.80	191.80
26.7000	191.80	191.80	191.80	191.80	191.80
26.9500	191.80	191.79	191.79	191.79	191.79
27.2000	191.79	191.79	191.79	191.79	191.79
27.4500	191.79	191.79	191.79	191.78	191.78
27.7000	191.78	191.78	191.78	191.78	191.78
27.9500	191.78	191.78	191.78	191.78	191.78
28.2000	191.78	191.78	191.78	191.78	191.78
28.4500	191.77	191.77	191.77	191.77	191.77
28.7000	191.77	191.77	191.77	191.77	191.77
28.9500	191.77	191.77	191.77	191.77	191.77
29.2000	191.77	191.77	191.77	191.77	191.77
29.4500	191.77	191.77	191.77	191.77	191.76
29.7000	191.76	191.76	191.76	191.76	191.76
29.9500	191.76	191.76	191.76	191.76	

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
8.4000	191.75	191.75	191.75	191.75	191.75
8.6500	191.75	191.75	191.75	191.76	191.76
8.9000	191.76	191.76	191.76	191.77	191.77
9.1500	191.77	191.78	191.78	191.79	191.79
9.4000	191.80	191.80	191.81	191.81	191.82
9.6500	191.82	191.83	191.84	191.85	191.85
9.9000	191.86	191.87	191.88	191.89	191.89
10.1500	191.90	191.91	191.92	191.93	191.94
10.4000	191.95	191.96	191.97	191.98	191.99
10.6500	192.00	192.01	192.03	192.04	192.05
10.9000	192.06	192.07	192.08	192.10	192.11
11.1500	192.12	192.13	192.15	192.16	192.18
11.4000	192.20	192.22	192.24	192.26	192.28
11.6500	192.31	192.35	192.41	192.47	192.52
11.9000	192.58	192.65	192.74	192.88	193.05
12.1500	193.26	193.48	193.68	193.84	193.96
12.4000	194.05	194.12	194.15	194.16	194.16
12.6500	194.13	194.09	194.04	193.99	193.94
12.9000	193.88	193.82	193.76	193.70	193.64
13.1500	193.59	193.53	193.48	193.42	193.37
13.4000	193.32	193.27	193.22	193.18	193.14
13.6500	193.09	193.05	193.01	192.98	192.94
13.9000	192.91	192.87	192.84	192.81	192.78
14.1500	192.75	192.72	192.70	192.67	192.65
14.4000	192.62	192.60	192.58	192.57	192.55
14.6500	192.52	192.51	192.49	192.47	192.46
14.9000	192.44	192.42	192.41	192.39	192.38
15.1500	192.37	192.36	192.35	192.34	192.34
15.4000	192.33	192.32	192.31	192.31	192.30
15.6500	192.30	192.29	192.29	192.28	192.27
15.9000	192.27	192.26	192.26	192.25	192.25
16.1500	192.25	192.24	192.24	192.23	192.23
16.4000	192.22	192.22	192.22	192.21	192.21
16.6500	192.21	192.20	192.20	192.20	192.19
16.9000	192.19	192.19	192.19	192.18	192.18
17.1500	192.18	192.17	192.17	192.17	192.17
17.4000	192.16	192.16	192.16	192.16	192.16
17.6500	192.15	192.15	192.15	192.15	192.14
17.9000	192.14	192.14	192.14	192.13	192.13
18.1500	192.13	192.12	192.12	192.12	192.12
18.4000	192.11	192.11	192.11	192.11	192.11
18.6500	192.11	192.10	192.10	192.10	192.10
18.9000	192.10	192.10	192.10	192.09	192.09

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.1500	192.09	192.09	192.09	192.09	192.09
19.4000	192.09	192.09	192.08	192.08	192.08
19.6500	192.08	192.08	192.08	192.08	192.08
19.9000	192.08	192.08	192.07	192.07	192.07
20.1500	192.07	192.07	192.07	192.07	192.07
20.4000	192.07	192.07	192.07	192.06	192.06
20.6500	192.06	192.06	192.06	192.06	192.06
20.9000	192.06	192.06	192.06	192.06	192.06
21.1500	192.06	192.06	192.05	192.05	192.05
21.4000	192.05	192.05	192.05	192.05	192.05
21.6500	192.05	192.05	192.05	192.05	192.05
21.9000	192.05	192.04	192.04	192.04	192.04
22.1500	192.04	192.04	192.04	192.04	192.04
22.4000	192.04	192.04	192.04	192.03	192.03
22.6500	192.03	192.03	192.03	192.03	192.03
22.9000	192.03	192.03	192.03	192.03	192.03
23.1500	192.02	192.02	192.02	192.02	192.02
23.4000	192.02	192.02	192.02	192.02	192.02
23.6500	192.02	192.01	192.01	192.01	192.01
23.9000	192.01	192.01	192.01	192.01	192.01
24.1500	192.00	192.00	191.99	191.98	191.97
24.4000	191.96	191.96	191.95	191.94	191.94
24.6500	191.93	191.92	191.92	191.91	191.91
24.9000	191.90	191.90	191.89	191.89	191.89
25.1500	191.88	191.88	191.87	191.87	191.87
25.4000	191.87	191.86	191.86	191.86	191.86
25.6500	191.85	191.85	191.85	191.85	191.84
25.9000	191.84	191.84	191.84	191.84	191.84
26.1500	191.83	191.83	191.83	191.83	191.83
26.4000	191.83	191.82	191.82	191.82	191.82
26.6500	191.82	191.82	191.82	191.81	191.81
26.9000	191.81	191.81	191.81	191.81	191.81
27.1500	191.81	191.80	191.80	191.80	191.80
27.4000	191.80	191.80	191.80	191.80	191.80
27.6500	191.79	191.79	191.79	191.79	191.79
27.9000	191.79	191.79	191.79	191.79	191.79
28.1500	191.79	191.79	191.79	191.78	191.78
28.4000	191.78	191.78	191.78	191.78	191.78
28.6500	191.78	191.78	191.78	191.78	191.78
28.9000	191.78	191.78	191.78	191.78	191.77
29.1500	191.77	191.77	191.77	191.77	191.77
29.4000	191.77	191.77	191.77	191.77	191.77
29.6500	191.77	191.77	191.77	191.77	191.77
29.9000	191.77	191.77	191.77	191.77	191.77

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
30.1500	191.77	191.77	191.77	191.76	191.76
30.4000	191.76	191.76	191.76	191.76	191.76
30.6500	191.76	191.76	191.76		

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.2500	191.75	191.75	191.75	191.75	191.75
6.5000	191.75	191.75	191.75	191.75	191.76
6.7500	191.76	191.76	191.76	191.76	191.77
7.0000	191.77	191.77	191.77	191.78	191.78
7.2500	191.79	191.79	191.79	191.80	191.80
7.5000	191.81	191.81	191.82	191.82	191.83
7.7500	191.84	191.84	191.85	191.86	191.86
8.0000	191.87	191.88	191.88	191.89	191.90
8.2500	191.91	191.91	191.92	191.93	191.94
8.5000	191.95	191.96	191.96	191.97	191.98
8.7500	191.99	192.00	192.01	192.02	192.03
9.0000	192.04	192.05	192.06	192.07	192.08
9.2500	192.09	192.10	192.11	192.12	192.13
9.5000	192.14	192.15	192.16	192.17	192.18
9.7500	192.19	192.20	192.21	192.22	192.23
10.0000	192.24	192.25	192.26	192.27	192.28
10.2500	192.29	192.30	192.31	192.32	192.33
10.5000	192.34	192.35	192.37	192.38	192.39
10.7500	192.40	192.42	192.43	192.44	192.46
11.0000	192.46	192.47	192.48	192.49	192.51
11.2500	192.52	192.54	192.55	192.57	192.59
11.5000	192.61	192.63	192.66	192.69	192.74
11.7500	192.81	192.90	193.01	193.16	193.34
12.0000	193.58	193.91	194.33	194.83	195.37
12.2500	195.87	196.32	196.69	197.00	197.27
12.5000	197.45	197.53	197.54	197.47	197.35
12.7500	197.20	197.04	196.89	196.74	196.60
13.0000	196.47	196.33	196.20	196.07	195.94
13.2500	195.82	195.70	195.58	195.47	195.36
13.5000	195.25	195.15	195.05	194.96	194.87
13.7500	194.77	194.69	194.60	194.52	194.44
14.0000	194.36	194.28	194.21	194.14	194.06
14.2500	194.00	193.93	193.87	193.80	193.74
14.5000	193.69	193.63	193.58	193.53	193.48
14.7500	193.43	193.38	193.33	193.29	193.25
15.0000	193.21	193.17	193.13	193.09	193.06
15.2500	193.03	192.99	192.96	192.93	192.90
15.5000	192.87	192.85	192.82	192.79	192.77
15.7500	192.75	192.72	192.70	192.68	192.66
16.0000	192.64	192.62	192.60	192.58	192.57
16.2500	192.55	192.53	192.51	192.50	192.48
16.5000	192.47	192.46	192.45	192.43	192.42
16.7500	192.41	192.40	192.39	192.38	192.37

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
17.0000	192.37	192.36	192.36	192.35	192.35
17.2500	192.34	192.34	192.33	192.33	192.32
17.5000	192.32	192.31	192.31	192.31	192.30
17.7500	192.30	192.29	192.29	192.29	192.28
18.0000	192.28	192.27	192.27	192.27	192.26
18.2500	192.26	192.26	192.25	192.25	192.25
18.5000	192.25	192.24	192.24	192.24	192.24
18.7500	192.24	192.23	192.23	192.23	192.23
19.0000	192.23	192.23	192.22	192.22	192.22
19.2500	192.22	192.22	192.22	192.22	192.21
19.5000	192.21	192.21	192.21	192.21	192.21
19.7500	192.21	192.20	192.20	192.20	192.20
20.0000	192.20	192.20	192.20	192.20	192.19
20.2500	192.19	192.19	192.19	192.19	192.19
20.5000	192.19	192.19	192.18	192.18	192.18
20.7500	192.18	192.18	192.18	192.18	192.18
21.0000	192.18	192.17	192.17	192.17	192.17
21.2500	192.17	192.17	192.17	192.17	192.17
21.5000	192.17	192.16	192.16	192.16	192.16
21.7500	192.16	192.16	192.16	192.16	192.16
22.0000	192.16	192.15	192.15	192.15	192.15
22.2500	192.15	192.15	192.15	192.15	192.15
22.5000	192.15	192.14	192.14	192.14	192.14
22.7500	192.14	192.14	192.14	192.14	192.14
23.0000	192.13	192.13	192.13	192.13	192.13
23.2500	192.13	192.13	192.13	192.12	192.12
23.5000	192.12	192.12	192.12	192.12	192.12
23.7500	192.12	192.12	192.11	192.11	192.11
24.0000	192.11	192.11	192.10	192.10	192.09
24.2500	192.08	192.06	192.05	192.04	192.02
24.5000	192.01	192.00	191.99	191.98	191.97
24.7500	191.96	191.96	191.95	191.94	191.93
25.0000	191.93	191.92	191.92	191.91	191.91
25.2500	191.90	191.90	191.89	191.89	191.88
25.5000	191.88	191.88	191.87	191.87	191.87
25.7500	191.86	191.86	191.86	191.86	191.85
26.0000	191.85	191.85	191.85	191.85	191.84
26.2500	191.84	191.84	191.84	191.84	191.83
26.5000	191.83	191.83	191.83	191.83	191.83
26.7500	191.82	191.82	191.82	191.82	191.82
27.0000	191.82	191.82	191.81	191.81	191.81
27.2500	191.81	191.81	191.81	191.81	191.81
27.5000	191.80	191.80	191.80	191.80	191.80
27.7500	191.80	191.80	191.80	191.80	191.80

TIME vs. ELEVATION (ft)

Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
28.0000	191.79	191.79	191.79	191.79	191.79
28.2500	191.79	191.79	191.79	191.79	191.79
28.5000	191.79	191.79	191.78	191.78	191.78
28.7500	191.78	191.78	191.78	191.78	191.78
29.0000	191.78	191.78	191.78	191.78	191.78
29.2500	191.78	191.78	191.78	191.77	191.77
29.5000	191.77	191.77	191.77	191.77	191.77
29.7500	191.77	191.77	191.77	191.77	191.77
30.0000	191.77	191.77	191.77	191.77	191.77
30.2500	191.77	191.77	191.77	191.77	191.77
30.5000	191.77	191.77	191.77	191.76	191.76
30.7500	191.76	191.76	191.76	191.76	191.76
31.0000	191.76	191.76	191.76		

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.7500	0	0	0	0	0
2.0000	0	0	2	2	3
2.2500	3	4	4	5	5
2.5000	6	6	7	8	8
2.7500	9	10	11	12	13
3.0000	13	14	15	16	17
3.2500	18	19	20	22	23
3.5000	24	25	26	28	29
3.7500	31	32	33	35	36
4.0000	38	39	41	43	44
4.2500	46	47	49	51	53
4.5000	55	56	58	60	62
4.7500	64	66	68	70	72
5.0000	74	76	78	81	83
5.2500	85	87	90	92	94
5.5000	97	99	102	104	107
5.7500	109	112	114	117	120
6.0000	122	125	128	130	133
6.2500	136	139	142	145	148
6.5000	151	154	158	161	164
6.7500	168	171	175	178	182
7.0000	186	190	193	197	201
7.2500	205	210	214	218	222
7.5000	227	231	236	240	245
7.7500	250	254	259	264	269
8.0000	274	279	284	290	295
8.2500	301	306	312	318	324
8.5000	330	336	342	349	356
8.7500	363	370	377	384	391
9.0000	399	407	414	422	430
9.2500	439	447	456	464	473
9.5000	482	491	500	510	519
9.7500	529	539	549	559	569
10.0000	580	590	601	612	623
10.2500	634	646	658	670	683
10.5000	696	709	722	736	750
10.7500	764	778	793	809	824
11.0000	840	856	872	889	907
11.2500	925	945	965	987	1010
11.5000	1034	1059	1086	1118	1155
11.7500	1200	1254	1318	1392	1478
12.0000	1586	1722	1885	2062	2227
12.2500	2357	2449	2511	2551	2574

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
12.5000	2583	2581	2570	2552	2531
12.7500	2509	2487	2466	2446	2427
13.0000	2408	2391	2376	2361	2347
13.2500	2334	2322	2312	2302	2293
13.5000	2285	2278	2271	2265	2259
13.7500	2253	2248	2243	2239	2235
14.0000	2231	2227	2223	2220	2217
14.2500	2214	2211	2208	2206	2204
14.5000	2201	2199	2197	2195	2194
14.7500	2192	2190	2189	2187	2186
15.0000	2184	2183	2181	2180	2179
15.2500	2178	2176	2175	2174	2173
15.5000	2171	2170	2169	2168	2167
15.7500	2166	2165	2163	2162	2161
16.0000	2160	2159	2158	2156	2155
16.2500	2154	2154	2153	2152	2151
16.5000	2150	2149	2148	2148	2147
16.7500	2147	2146	2145	2145	2144
17.0000	2143	2143	2142	2142	2141
17.2500	2141	2140	2140	2139	2139
17.5000	2138	2137	2137	2137	2136
17.7500	2136	2135	2135	2134	2134
18.0000	2133	2133	2132	2132	2131
18.2500	2131	2130	2130	2130	2129
18.5000	2129	2129	2128	2128	2128
18.7500	2128	2127	2127	2127	2127
19.0000	2127	2126	2126	2126	2126
19.2500	2126	2126	2126	2125	2125
19.5000	2125	2125	2125	2125	2124
19.7500	2124	2124	2124	2124	2124
20.0000	2123	2123	2123	2123	2123
20.2500	2123	2122	2122	2122	2122
20.5000	2122	2122	2122	2122	2121
20.7500	2121	2121	2121	2121	2121
21.0000	2121	2121	2120	2120	2120
21.2500	2120	2120	2120	2120	2120
21.5000	2120	2120	2120	2119	2119
21.7500	2119	2119	2119	2119	2119
22.0000	2119	2118	2118	2118	2118
22.2500	2118	2118	2118	2118	2118
22.5000	2117	2117	2117	2117	2117
22.7500	2117	2117	2117	2117	2116
23.0000	2116	2116	2116	2116	2116
23.2500	2116	2116	2115	2115	2115

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
23.5000	2115	2115	2115	2115	2115
23.7500	2115	2114	2114	2114	2114
24.0000	2114	2114	2114	2113	2111
24.2500	2110	2109	2107	2106	2105
24.5000	2104	2103	2102	2102	2101
24.7500	2100				

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.9500	0	0	0	0	0
1.2000	2	3	3	4	5
1.4500	6	7	9	10	11
1.7000	13	14	16	17	19
1.9500	21	22	24	26	28
2.2000	30	32	34	36	39
2.4500	41	43	46	48	51
2.7000	53	56	59	62	64
2.9500	67	70	73	77	80
3.2000	83	86	89	93	96
3.4500	100	103	107	111	114
3.7000	118	122	126	130	134
3.9500	138	142	146	150	154
4.2000	159	163	167	172	177
4.4500	181	186	190	195	200
4.7000	204	209	214	219	224
4.9500	229	234	240	245	250
5.2000	255	260	266	271	277
5.4500	282	288	293	299	305
5.7000	310	316	322	328	334
5.9500	340	346	352	358	364
6.2000	371	377	383	390	397
6.4500	403	410	417	424	431
6.7000	439	446	454	461	469
6.9500	477	485	493	502	510
7.2000	519	527	536	545	554
7.4500	563	572	581	591	600
7.7000	610	620	630	639	650
7.9500	660	670	681	691	702
8.2000	713	724	736	747	759
8.4500	771	784	797	809	822
8.7000	836	850	863	878	892
8.9500	907	922	937	953	968
9.2000	984	1001	1017	1034	1051
9.4500	1068	1086	1104	1122	1140
9.7000	1159	1178	1197	1216	1236
9.9500	1256	1276	1296	1317	1338
10.2000	1360	1381	1404	1427	1450
10.4500	1474	1499	1524	1549	1575
10.7000	1602	1629	1657	1685	1714
10.9500	1744	1773	1804	1835	1868
11.2000	1901	1936	1973	2012	2053
11.4500	2096	2138	2178	2217	2259

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.7000	2306	2361	2426	2500	2583
11.9500	2679	2799	2957	3142	3320
12.2000	3452	3523	3540	3520	3478
12.4500	3423	3360	3293	3224	3157
12.7000	3092	3028	2968	2911	2858
12.9500	2809	2764	2722	2683	2647
13.2000	2614	2584	2557	2532	2510
13.4500	2490	2471	2454	2439	2425
13.7000	2412	2400	2389	2379	2369
13.9500	2360	2352	2344	2336	2329
14.2000	2323	2317	2311	2306	2301
14.4500	2296	2292	2288	2284	2280
14.7000	2277	2274	2271	2267	2265
14.9500	2262	2259	2256	2254	2251
15.2000	2249	2246	2244	2242	2239
15.4500	2237	2235	2233	2231	2228
15.7000	2226	2224	2222	2220	2217
15.9500	2215	2213	2211	2209	2207
16.2000	2205	2203	2201	2200	2198
16.4500	2197	2195	2194	2192	2191
16.7000	2190	2189	2187	2186	2185
16.9500	2184	2183	2182	2181	2180
17.2000	2179	2178	2177	2176	2175
17.4500	2174	2173	2172	2171	2170
17.7000	2170	2169	2168	2167	2166
17.9500	2165	2164	2163	2162	2161
18.2000	2160	2160	2159	2158	2158
18.4500	2157	2156	2156	2155	2155
18.7000	2154	2154	2154	2153	2153
18.9500	2152	2152	2152	2151	2151
19.2000	2151	2150	2150	2150	2149
19.4500	2149	2149	2149	2148	2148
19.7000	2148	2148	2147	2147	2147
19.9500	2146	2146	2146	2146	2145
20.2000	2145	2145	2144	2144	2144
20.4500	2144	2143	2143	2143	2143
20.7000	2142	2142	2142	2142	2142
20.9500	2142	2141	2141	2141	2141
21.2000	2141	2140	2140	2140	2140
21.4500	2139	2139	2139	2139	2139
21.7000	2138	2138	2138	2138	2138
21.9500	2137	2137	2137	2137	2137
22.2000	2136	2136	2136	2136	2136
22.4500	2135	2135	2135	2135	2135

TIME vs. VOLUME (cu.ft)

Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
22.7000	2134	2134	2134	2134	2134
22.9500	2133	2133	2133	2133	2132
23.2000	2132	2132	2132	2132	2131
23.4500	2131	2131	2131	2131	2131
23.7000	2130	2130	2130	2130	2130
23.9500	2129	2129	2129	2128	2126
24.2000	2124	2122	2119	2117	2114
24.4500	2112	2110	2109	2107	2106
24.7000	2105	2104	2103	2102	2102
24.9500	2101	2100			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6000	0	0	0	0	2
.8500	4	5	7	9	11
1.1000	13	15	18	21	24
1.3500	27	30	33	37	40
1.6000	44	48	52	56	60
1.8500	64	68	73	77	82
2.1000	86	91	96	101	105
2.3500	110	116	121	126	132
2.6000	137	143	148	154	160
2.8500	166	172	178	185	191
3.1000	197	204	211	217	224
3.3500	231	238	245	252	259
3.6000	266	274	281	289	296
3.8500	304	312	319	327	335
4.1000	343	352	360	368	376
4.3500	385	393	402	410	419
4.6000	428	437	446	454	464
4.8500	473	482	491	501	510
5.1000	519	529	539	548	558
5.3500	568	578	588	598	608
5.6000	618	628	638	649	659
5.8500	669	680	691	701	712
6.1000	723	734	745	756	767
6.3500	779	790	803	815	827
6.6000	839	852	865	878	891
6.8500	904	918	931	945	959
7.1000	974	988	1003	1018	1033
7.3500	1048	1063	1079	1095	1111
7.6000	1127	1143	1160	1177	1193
7.8500	1211	1228	1245	1263	1281
8.1000	1299	1317	1336	1355	1374
8.3500	1394	1414	1435	1455	1477
8.6000	1499	1521	1544	1567	1590
8.8500	1614	1638	1663	1688	1714
9.1000	1740	1767	1794	1821	1849
9.3500	1877	1905	1934	1964	1994
9.6000	2024	2055	2086	2116	2144
9.8500	2169	2191	2211	2230	2246
10.1000	2261	2275	2288	2300	2312
10.3500	2323	2333	2343	2353	2362
10.6000	2371	2380	2389	2397	2406
10.8500	2414	2422	2430	2438	2446
11.1000	2454	2462	2472	2483	2496

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.3500	2509	2525	2542	2560	2580
11.6000	2604	2637	2684	2747	2828
11.8500	2928	3045	3183	3353	3564
12.1000	3801	4024	4187	4263	4257
12.3500	4197	4108	4002	3886	3765
12.6000	3644	3528	3421	3327	3246
12.8500	3178	3119	3065	3014	2966
13.1000	2920	2877	2838	2801	2767
13.3500	2737	2709	2683	2660	2638
13.6000	2618	2599	2582	2566	2552
13.8500	2538	2524	2512	2500	2489
14.1000	2478	2468	2458	2449	2441
14.3500	2433	2426	2419	2412	2406
14.6000	2400	2395	2389	2384	2380
14.8500	2375	2370	2366	2362	2357
15.1000	2353	2350	2345	2342	2338
15.3500	2334	2330	2327	2323	2319
15.6000	2316	2312	2309	2305	2302
15.8500	2298	2295	2291	2288	2284
16.1000	2281	2278	2274	2271	2268
16.3500	2265	2263	2260	2258	2256
16.6000	2254	2251	2249	2248	2246
16.8500	2244	2242	2240	2238	2237
17.1000	2235	2233	2232	2230	2228
17.3500	2227	2225	2224	2222	2221
17.6000	2219	2218	2216	2215	2213
17.8500	2212	2210	2209	2207	2206
18.1000	2204	2203	2201	2200	2199
18.3500	2198	2197	2196	2195	2194
18.6000	2193	2192	2192	2191	2190
18.8500	2189	2189	2188	2188	2187
19.1000	2187	2186	2185	2185	2184
19.3500	2184	2183	2183	2182	2182
19.6000	2181	2181	2181	2180	2180
19.8500	2179	2179	2178	2178	2177
20.1000	2177	2176	2176	2176	2175
20.3500	2175	2174	2174	2174	2173
20.6000	2173	2172	2172	2172	2171
20.8500	2171	2171	2170	2170	2170
21.1000	2169	2169	2169	2168	2168
21.3500	2168	2167	2167	2167	2166
21.6000	2166	2165	2165	2165	2165
21.8500	2164	2164	2164	2163	2163
22.1000	2163	2162	2162	2162	2161

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.3500	2161	2161	2160	2160	2159
22.6000	2159	2159	2159	2158	2158
22.8500	2158	2157	2157	2157	2156
23.1000	2156	2156	2155	2155	2155
23.3500	2154	2154	2154	2153	2153
23.6000	2153	2152	2152	2152	2151
23.8500	2151	2151	2150	2150	2149
24.1000	2148	2146	2142	2138	2133
24.3500	2130	2126	2122	2119	2117
24.6000	2114	2112	2110	2109	2107
24.8500	2106	2105	2104	2103	2102
25.1000	2102	2101	2100		

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
2.0500	0	0	0	0	0
2.3000	1	1	1	2	2
2.5500	2	3	3	3	4
2.8000	4	5	5	5	6
3.0500	6	7	7	8	8
3.3000	9	9	10	11	11
3.5500	12	12	13	14	14
3.8000	15	16	16	17	18
4.0500	19	20	20	21	22
4.3000	23	24	24	25	26
4.5500	27	28	29	30	31
4.8000	32	33	34	35	36
5.0500	37	38	39	40	41
5.3000	42	44	45	46	47
5.5500	48	49	51	52	53
5.8000	54	56	57	58	59
6.0500	61	62	64	65	66
6.3000	68	69	71	72	74
6.5500	75	77	79	80	82
6.8000	84	86	87	89	91
7.0500	93	95	97	99	101
7.3000	103	105	107	109	111
7.5500	113	116	118	120	122
7.8000	125	127	130	132	135
8.0500	137	140	142	145	148
8.3000	150	153	156	159	162
8.5500	165	168	172	175	178
8.8000	182	185	189	192	196
9.0500	200	204	208	212	216
9.3000	220	224	228	233	237
9.5500	242	246	251	256	260
9.8000	265	270	275	280	286
10.0500	291	296	301	307	313
10.3000	318	324	330	336	343
10.5500	349	356	363	369	377
10.8000	384	391	399	406	414
11.0500	422	430	438	447	456
11.3000	466	476	487	498	510
11.5500	522	536	552	570	592
11.8000	619	651	687	730	783
12.0500	851	931	1019	1104	1179
12.3000	1235	1270	1291	1303	1306
12.5500	1304	1298	1290	1281	1272

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
12.8000	1263	1255	1249	1243	1237
13.0500	1233	1228	1224	1221	1218
13.3000	1216	1213	1212	1210	1208
13.5500	1207	1206	1205	1204	1203
13.8000	1202	1201	1201	1200	1199
14.0500	1198	1198	1197	1196	1196
14.3000	1195	1195	1194	1194	1194
14.5500	1193	1193	1192	1192	1192
14.8000	1191	1191	1191	1190	1190
15.0500	1190	1189	1189	1189	1188
15.3000	1188	1188	1187	1187	1187
15.5500	1187	1186	1186	1186	1185
15.8000	1185	1185	1184	1184	1184
16.0500	1183	1183	1183	1183	1182
16.3000	1182	1182	1182	1181	1181
16.5500	1181	1181	1181	1181	1181
16.8000	1180	1180	1180	1180	1180
17.0500	1180	1179	1179	1179	1179
17.3000	1179	1179	1179	1179	1178
17.5500	1178	1178	1178	1178	1178
17.8000	1178	1177	1177	1177	1177
18.0500	1177	1177	1177	1177	1177
18.3000	1176	1176	1176	1176	1176
18.5500	1176	1176	1176	1176	1176
18.8000	1176	1176	1176	1176	1176
19.0500	1176	1175	1175	1175	1175
19.3000	1175	1175	1175	1175	1175
19.5500	1175	1175	1175	1175	1175
19.8000	1175	1175	1175	1175	1175
20.0500	1175	1175	1175	1175	1175
20.3000	1175	1175	1175	1174	1174
20.5500	1174	1174	1174	1174	1174
20.8000	1174	1174	1174	1174	1174
21.0500	1174	1174	1174	1174	1174
21.3000	1174	1174	1174	1174	1174
21.5500	1174	1174	1174	1174	1174
21.8000	1174	1174	1174	1173	1173
22.0500	1173	1173	1173	1173	1173
22.3000	1173	1173	1173	1173	1173
22.5500	1173	1173	1173	1173	1173
22.8000	1173	1173	1173	1173	1173
23.0500	1173	1173	1173	1173	1173
23.3000	1173	1173	1173	1173	1173
23.5500	1173	1173	1173	1172	1172

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
23.8000	1172	1172	1172	1172	1172
24.0500	1172	1172	1172	1171	1171
24.3000	1170	1169			

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
1.0500	0	0	0	0	1
1.3000	1	2	2	3	3
1.5500	4	5	5	6	7
1.8000	7	8	9	10	11
2.0500	12	13	14	15	16
2.3000	17	18	19	20	21
2.5500	22	24	25	26	27
2.8000	29	30	32	33	34
3.0500	36	38	39	41	42
3.3000	44	46	47	49	51
3.5500	53	54	56	58	60
3.8000	62	64	66	68	70
4.0500	72	74	76	78	80
4.3000	82	85	87	89	91
4.5500	94	96	98	101	103
4.8000	105	108	110	113	115
5.0500	118	121	123	126	128
5.3000	131	134	136	139	142
5.5500	145	147	150	153	156
5.8000	159	162	165	168	170
6.0500	173	176	180	183	186
6.3000	189	192	195	199	202
6.5500	206	209	213	216	220
6.8000	224	228	231	235	239
7.0500	243	247	252	256	260
7.3000	264	269	273	278	282
7.5500	287	291	296	301	306
7.8000	311	316	321	326	331
8.0500	336	341	346	352	357
8.3000	363	369	375	381	387
8.5500	393	399	406	413	419
8.8000	426	433	440	448	455
9.0500	463	470	478	486	494
9.3000	502	511	519	527	536
9.5500	545	554	563	572	582
9.8000	591	601	610	620	630
10.0500	640	651	661	672	682
10.3000	694	705	717	728	741
10.5500	753	766	779	792	805
10.8000	819	833	847	862	877
11.0500	892	907	923	940	957
11.3000	975	994	1015	1036	1058
11.5500	1081	1107	1136	1171	1208

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.8000	1245	1282	1321	1362	1413
12.0500	1477	1550	1620	1672	1699
12.3000	1700	1684	1658	1627	1592
12.5500	1555	1517	1480	1445	1415
12.8000	1388	1365	1346	1329	1315
13.0500	1302	1291	1282	1274	1267
13.3000	1261	1256	1252	1248	1245
13.5500	1242	1240	1237	1235	1234
13.8000	1232	1230	1229	1227	1226
14.0500	1225	1223	1222	1221	1220
14.3000	1219	1218	1217	1216	1215
14.5500	1215	1214	1213	1213	1212
14.8000	1211	1211	1210	1210	1209
15.0500	1208	1208	1207	1207	1206
15.3000	1206	1205	1204	1204	1203
15.5500	1203	1202	1202	1201	1200
15.8000	1200	1199	1199	1198	1198
16.0500	1197	1196	1196	1195	1195
16.3000	1194	1194	1194	1193	1193
16.5500	1193	1192	1192	1192	1191
16.8000	1191	1191	1191	1190	1190
17.0500	1190	1190	1189	1189	1189
17.3000	1189	1188	1188	1188	1188
17.5500	1187	1187	1187	1187	1186
17.8000	1186	1186	1186	1185	1185
18.0500	1185	1185	1184	1184	1184
18.3000	1184	1184	1184	1183	1183
18.5500	1183	1183	1183	1183	1183
18.8000	1183	1183	1183	1183	1182
19.0500	1182	1182	1182	1182	1182
19.3000	1182	1182	1182	1182	1182
19.5500	1182	1181	1181	1181	1181
19.8000	1181	1181	1181	1181	1181
20.0500	1181	1181	1181	1181	1181
20.3000	1181	1180	1180	1180	1180
20.5500	1180	1180	1180	1180	1180
20.8000	1180	1180	1180	1180	1180
21.0500	1180	1180	1179	1179	1179
21.3000	1179	1179	1179	1179	1179
21.5500	1179	1179	1179	1179	1179
21.8000	1179	1179	1179	1179	1179
22.0500	1179	1178	1178	1178	1178
22.3000	1178	1178	1178	1178	1178
22.5500	1178	1178	1178	1178	1178

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.8000	1178	1178	1177	1177	1177
23.0500	1177	1177	1177	1177	1177
23.3000	1177	1177	1177	1177	1177
23.5500	1177	1177	1177	1177	1177
23.8000	1177	1177	1176	1176	1176
24.0500	1176	1176	1175	1174	1173
24.3000	1172	1171	1171	1170	1169

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
.6500	0	0	0	1	2
.9000	2	3	4	5	6
1.1500	7	9	10	11	13
1.4000	15	16	18	20	22
1.6500	23	25	27	29	31
1.9000	34	36	38	40	42
2.1500	45	47	49	52	54
2.4000	57	59	62	65	68
2.6500	70	73	76	79	82
2.9000	85	88	91	94	97
3.1500	100	104	107	110	114
3.4000	117	121	124	128	131
3.6500	135	139	142	146	150
3.9000	154	158	161	165	169
4.1500	173	177	181	186	190
4.4000	194	198	202	207	211
4.6500	215	220	224	229	233
4.9000	238	242	247	252	256
5.1500	261	266	271	275	280
5.4000	285	290	295	300	305
5.6500	310	315	320	325	330
5.9000	336	341	346	352	357
6.1500	362	368	373	379	385
6.4000	390	396	402	408	414
6.6500	421	427	433	440	447
6.9000	453	460	467	474	481
7.1500	488	495	503	510	518
7.4000	525	533	541	549	557
7.6500	565	573	581	590	598
7.9000	607	615	624	633	642
8.1500	651	660	669	679	689
8.4000	699	709	719	730	741
8.6500	752	763	774	786	798
8.9000	810	822	835	847	860
9.1500	873	886	900	914	928
9.4000	942	956	971	985	1000
9.6500	1016	1031	1047	1062	1078
9.9000	1095	1111	1128	1145	1162
10.1500	1178	1192	1203	1213	1221
10.4000	1227	1233	1238	1243	1247
10.6500	1250	1253	1256	1259	1262
10.9000	1264	1267	1269	1271	1274
11.1500	1276	1279	1283	1287	1292

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
11.4000	1297	1303	1309	1315	1324
11.6500	1336	1354	1379	1411	1450
11.9000	1495	1548	1619	1715	1820
12.1500	1908	1960	1969	1945	1904
12.4000	1859	1814	1770	1725	1678
12.6500	1630	1584	1542	1504	1472
12.9000	1443	1419	1398	1380	1364
13.1500	1350	1338	1327	1318	1311
13.4000	1304	1298	1293	1289	1285
13.6500	1282	1278	1276	1273	1270
13.9000	1268	1265	1263	1261	1259
14.1500	1257	1255	1253	1251	1250
14.4000	1249	1247	1246	1245	1244
14.6500	1243	1242	1241	1239	1239
14.9000	1238	1237	1236	1235	1234
15.1500	1233	1232	1231	1230	1229
15.4000	1228	1227	1226	1225	1224
15.6500	1223	1222	1221	1220	1220
15.9000	1219	1218	1217	1216	1215
16.1500	1214	1213	1212	1212	1211
16.4000	1210	1210	1209	1209	1208
16.6500	1208	1207	1207	1206	1206
16.9000	1206	1205	1205	1204	1204
17.1500	1204	1203	1203	1202	1202
17.4000	1201	1201	1201	1200	1200
17.6500	1199	1199	1199	1198	1198
17.9000	1197	1197	1197	1196	1196
18.1500	1195	1195	1195	1194	1194
18.4000	1194	1194	1194	1193	1193
18.6500	1193	1193	1193	1192	1192
18.9000	1192	1192	1192	1192	1192
19.1500	1192	1191	1191	1191	1191
19.4000	1191	1191	1191	1191	1190
19.6500	1190	1190	1190	1190	1190
19.9000	1190	1190	1189	1189	1189
20.1500	1189	1189	1189	1189	1189
20.4000	1189	1188	1188	1188	1188
20.6500	1188	1188	1188	1188	1188
20.9000	1188	1187	1187	1187	1187
21.1500	1187	1187	1187	1187	1187
21.4000	1187	1187	1187	1186	1186
21.6500	1186	1186	1186	1186	1186
21.9000	1186	1186	1186	1185	1185
22.1500	1185	1185	1185	1185	1185

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
22.4000	1185	1185	1185	1185	1185
22.6500	1184	1184	1184	1184	1184
22.9000	1184	1184	1184	1184	1184
23.1500	1183	1183	1183	1183	1183
23.4000	1183	1183	1183	1183	1183
23.6500	1183	1183	1182	1182	1182
23.9000	1182	1182	1182	1182	1181
24.1500	1180	1179	1177	1175	1174
24.4000	1173	1172	1171	1170	1170

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
8.6000	0	0	0	1	1
8.8500	1	2	2	3	4
9.1000	4	5	5	6	7
9.3500	8	8	9	10	11
9.6000	12	13	14	15	15
9.8500	16	17	19	20	21
10.1000	22	23	24	26	27
10.3500	28	30	32	33	35
10.6000	37	39	41	43	45
10.8500	47	49	52	54	56
11.1000	59	62	65	69	74
11.3500	79	85	91	97	105
11.6000	115	129	150	179	221
11.8500	284	374	499	684	955
12.1000	1311	1721	2142	2534	2879
12.3500	3182	3452	3688	3892	4064
12.6000	4207	4324	4421	4504	4576
12.8500	4640	4697	4748	4792	4831
13.1000	4865	4894	4919	4941	4960
13.3500	4977	4991	5004	5014	5023
13.6000	5030	5035	5039	5040	5041
13.8500	5040	5037	5033	5027	5020
14.1000	5012	5003	4992	4980	4968
14.3500	4955	4941	4926	4911	4895
14.6000	4878	4860	4842	4823	4804
14.8500	4784	4763	4742	4720	4697
15.1000	4674	4650	4625	4600	4574
15.3500	4548	4521	4493	4465	4436
15.6000	4407	4377	4346	4315	4283
15.8500	4250	4217	4183	4149	4114
16.1000	4078	4042	4006	3969	3932
16.3500	3894	3856	3818	3779	3740
16.6000	3701	3662	3622	3582	3542
16.8500	3501	3460	3419	3377	3335
17.1000	3293	3251	3208	3165	3122
17.3500	3079	3035	2991	2947	2902
17.6000	2858	2813	2767	2722	2676
17.8500	2630	2583	2537	2490	2442
18.1000	2395	2347	2299	2251	2203
18.3500	2155	2106	2058	2009	1961
18.6000	1912	1863	1814	1765	1716
18.8500	1664	1596	1528	1460	1428
19.1000	1397	1366	1319	1269	1219

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
19.3500	1169	1119	1069	1018	968
19.6000	917	867	816	765	714
19.8500	664	613	561	510	459
20.1000	408	356	305	253	202
20.3500	156	123	100	83	71
20.6000	62	56	52	49	46
20.8500	45	43	42	42	41
21.1000	41	40	40	40	39
21.3500	39	39	39	39	38
21.6000	38	38	38	38	38
21.8500	37	37	37	37	37
22.1000	36	36	36	36	36
22.3500	36	35	35	35	35
22.6000	35	34	34	34	34
22.8500	34	34	33	33	33
23.1000	33	33	32	32	32
23.3500	32	32	32	31	31
23.6000	31	31	31	30	30
23.8500	30	30	30	29	29
24.1000	28	25	22	18	15
24.3500	12	10	8	6	5
24.6000	4	4	3	3	2
24.8500	1				

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.0000	0	0	0	1	1
6.2500	1	2	2	3	3
6.5000	3	4	5	5	6
6.7500	6	7	7	8	9
7.0000	9	10	11	11	12
7.2500	13	14	15	15	16
7.5000	17	18	19	20	21
7.7500	21	22	23	24	25
8.0000	26	27	28	29	31
8.2500	32	33	35	36	38
8.5000	39	41	43	44	46
8.7500	48	50	52	54	56
9.0000	58	60	62	65	67
9.2500	69	72	74	77	79
9.5000	82	84	87	89	92
9.7500	95	98	100	103	106
10.0000	109	112	115	118	122
10.2500	125	129	134	138	143
10.5000	148	153	158	163	169
10.7500	174	180	185	191	198
11.0000	205	216	228	245	265
11.2500	291	322	360	404	455
11.5000	515	589	683	805	968
11.7500	1183	1424	1810	2235	2755
12.0000	3435	4334	5444	6660	7780
12.2500	8628	9181	9498	9647	9671
12.5000	9607	9475	9301	9104	8903
12.7500	8715	8543	8387	8246	8117
13.0000	7999	7890	7789	7696	7607
13.2500	7526	7452	7384	7320	7261
13.5000	7206	7154	7106	7061	7017
13.7500	6976	6935	6897	6860	6824
14.0000	6789	6756	6723	6692	6662
14.2500	6633	6605	6577	6551	6525
14.5000	6500	6476	6453	6430	6408
14.7500	6387	6366	6346	6327	6307
15.0000	6289	6270	6252	6233	6214
15.2500	6196	6177	6158	6139	6120
15.5000	6101	6082	6063	6044	6025
15.7500	6006	5986	5967	5948	5929
16.0000	5910	5890	5871	5852	5832
16.2500	5813	5793	5773	5753	5733
16.5000	5713	5693	5673	5653	5633

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
16.7500	5613	5593	5573	5553	5533
17.0000	5514	5494	5474	5455	5435
17.2500	5415	5394	5373	5352	5330
17.5000	5308	5285	5263	5239	5215
17.7500	5191	5166	5140	5114	5088
18.0000	5060	5033	5004	4975	4946
18.2500	4917	4887	4857	4827	4796
18.5000	4766	4735	4704	4673	4641
18.7500	4610	4578	4546	4514	4482
19.0000	4449	4416	4384	4351	4317
19.2500	4284	4250	4217	4183	4149
19.5000	4115	4080	4046	4011	3976
19.7500	3941	3906	3870	3835	3799
20.0000	3763	3728	3692	3655	3619
20.2500	3582	3545	3508	3471	3434
20.5000	3396	3359	3321	3283	3246
20.7500	3208	3169	3131	3093	3054
21.0000	3016	2977	2938	2899	2860
21.2500	2821	2781	2742	2702	2663
21.5000	2623	2583	2543	2502	2462
21.7500	2421	2381	2340	2299	2258
22.0000	2217	2176	2135	2093	2051
22.2500	2010	1968	1926	1884	1841
22.5000	1799	1756	1714	1670	1611
22.7500	1552	1493	1447	1420	1393
23.0000	1366	1325	1281	1237	1192
23.2500	1148	1104	1059	1015	970
23.5000	925	880	835	789	744
23.7500	699	653	607	561	515
24.0000	469	422	373	320	262
24.2500	202	148	108	79	58
24.5000	43	32	24	18	14
24.7500	11	8	7	5	4
25.0000	3	2	2	1	

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
4.1000	0	0	1	1	1
4.3500	2	3	3	4	5
4.6000	6	6	7	8	9
4.8500	9	10	11	12	13
5.1000	14	14	15	16	17
5.3500	18	19	20	20	21
5.6000	22	23	24	25	26
5.8500	27	28	29	29	30
6.1000	31	32	33	34	36
6.3500	37	38	39	41	42
6.6000	44	45	47	48	50
6.8500	51	53	55	56	58
7.1000	60	62	63	65	67
7.3500	69	71	73	75	77
7.6000	79	81	83	85	87
7.8500	89	91	93	95	98
8.1000	100	102	105	108	111
8.3500	114	118	121	125	129
8.6000	133	137	141	145	149
8.8500	154	158	162	167	171
9.1000	176	181	186	190	195
9.3500	201	209	218	230	243
9.6000	257	274	292	314	340
9.8500	372	408	449	494	543
10.1000	596	653	715	781	852
10.3500	928	1008	1093	1182	1276
10.6000	1370	1435	1555	1700	1818
10.8500	1941	2068	2200	2337	2479
11.1000	2627	2782	2947	3124	3313
11.3500	3516	3733	3964	4211	4477
11.6000	4775	5122	5541	6043	6626
11.8500	7270	7953	8676	9517	10528
12.1000	11698	12927	13984	14702	15070
12.3500	15162	15050	14778	14380	13861
12.6000	13283	12666	12041	11441	10872
12.8500	10356	9913	9563	9277	9039
13.1000	8837	8664	8514	8384	8270
13.3500	8171	8082	8003	7932	7868
13.6000	7810	7756	7705	7657	7611
13.8500	7568	7526	7487	7449	7412
14.1000	7375	7339	7305	7272	7241
14.3500	7212	7184	7157	7132	7108
14.6000	7085	7062	7040	7018	6996

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
14.8500	6975	6954	6933	6913	6893
15.1000	6873	6853	6834	6814	6795
15.3500	6776	6757	6738	6720	6701
15.6000	6683	6664	6644	6625	6605
15.8500	6584	6564	6543	6522	6501
16.1000	6480	6459	6438	6418	6398
16.3500	6379	6360	6343	6325	6309
16.6000	6292	6277	6261	6245	6230
16.8500	6214	6198	6183	6167	6152
17.1000	6136	6121	6106	6090	6075
17.3500	6060	6045	6030	6014	5999
17.6000	5984	5969	5954	5939	5924
17.8500	5909	5895	5880	5865	5850
18.1000	5834	5818	5802	5786	5770
18.3500	5754	5738	5722	5707	5692
18.6000	5676	5661	5646	5631	5617
18.8500	5602	5588	5573	5559	5545
19.1000	5532	5518	5504	5491	5478
19.3500	5465	5452	5439	5425	5412
19.6000	5398	5384	5370	5355	5341
19.8500	5326	5312	5297	5282	5266
20.1000	5251	5235	5219	5203	5187
20.3500	5170	5154	5136	5119	5102
20.6000	5084	5066	5048	5029	5011
20.8500	4992	4973	4954	4934	4914
21.1000	4895	4875	4854	4834	4813
21.3500	4792	4771	4749	4728	4706
21.6000	4684	4661	4639	4616	4593
21.8500	4570	4547	4523	4500	4476
22.1000	4452	4427	4403	4378	4353
22.3500	4327	4302	4276	4250	4224
22.6000	4198	4171	4144	4117	4090
22.8500	4063	4035	4007	3979	3951
23.1000	3923	3894	3865	3836	3806
23.3500	3777	3747	3717	3687	3657
23.6000	3627	3596	3565	3533	3502
23.8500	3470	3438	3405	3373	3339
24.1000	3302	3258	3206	3150	3091
24.3500	3031	2969	2907	2844	2781
24.6000	2717	2653	2589	2524	2460
24.8500	2395	2330	2265	2200	2135
25.1000	2069	2004	1938	1872	1806
25.3500	1740	1674	1583	1492	1433
25.6000	1392	1344	1278	1212	1145

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
25.8500	1079	1013	947	881	815
26.1000	749	683	617	551	485
26.3500	419	353	287	221	160
26.6000	114	81	57	41	29
26.8500	20	15	10	7	5
27.1000	4	3	2	1	

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
10.7000	0	0	1	2	3
10.9500	5	8	11	15	20
11.2000	25	32	40	49	59
11.4500	71	85	101	119	142
11.7000	171	210	261	326	409
11.9500	514	656	852	1102	1386
12.2000	1621	1913	2104	2242	2334
12.4500	2387	2405	2389	2345	2276
12.7000	2191	2096	1997	1898	1801
12.9500	1676	1561	1511	1466	1403
13.2000	1344	1293	1248	1208	1173
13.4500	1142	1113	1088	1066	1045
13.7000	1026	1009	992	977	963
13.9500	949	936	923	911	900
14.2000	889	879	869	860	852
14.4500	844	837	830	823	816
14.7000	810	803	797	791	785
14.9500	779	773	767	762	756
15.2000	750	745	739	734	728
15.4500	723	717	712	706	701
15.7000	695	690	684	679	673
15.9500	668	662	657	651	646
16.2000	640	635	630	625	621
16.4500	616	612	607	603	599
16.7000	595	591	587	583	579
16.9500	575	571	567	564	560
17.2000	556	553	549	545	542
17.4500	538	535	531	528	524
17.7000	521	517	514	511	507
17.9500	504	500	497	493	490
18.2000	487	484	481	478	475
18.4500	472	470	467	465	463
18.7000	460	458	456	454	453
18.9500	451	449	447	446	444
19.2000	443	441	440	438	437
19.4500	436	434	433	432	431
19.7000	429	428	427	426	425
19.9500	423	422	421	420	419
20.2000	418	417	416	415	414
20.4500	412	411	410	409	408
20.7000	407	406	405	404	403
20.9500	402	400	399	398	397
21.2000	396	395	394	393	392

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
21.4500	391	390	389	387	386
21.7000	385	384	383	382	381
21.9500	380	379	378	376	375
22.2000	374	373	372	371	370
22.4500	369	368	366	365	364
22.7000	363	362	361	360	359
22.9500	358	356	355	354	353
23.2000	352	351	350	348	347
23.4500	346	345	344	343	342
23.7000	341	339	338	337	336
23.9500	335	334	332	330	326
24.2000	320	313	305	297	289
24.4500	281	274	266	259	252
24.7000	246	240	234	229	223
24.9500	218	214	209	205	201
25.2000	197	193	189	185	181
25.4500	177	174	170	167	163
25.7000	160	157	153	150	147
25.9500	144	141	138	135	133
26.2000	130	127	125	122	120
26.4500	117	115	112	110	108
26.7000	106	103	101	99	97
26.9500	95	93	91	89	88
27.2000	86	84	82	81	79
27.4500	77	76	74	73	71
27.7000	70	68	67	65	64
27.9500	63	62	60	59	58
28.2000	57	55	54	53	52
28.4500	51	50	49	48	47
28.7000	46	45	44	43	42
28.9500	41	41	40	39	38
29.2000	37	37	36	35	34
29.4500	34	33	32	32	31
29.7000	30	30	29	29	28
29.9500	27	27	26	26	

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
8.4000	0	0	1	2	3
8.6500	5	7	9	13	16
8.9000	20	25	30	36	43
9.1500	50	57	66	74	84
9.4000	94	105	116	128	141
9.6500	155	169	184	199	216
9.9000	232	249	266	284	301
10.1500	320	338	357	377	397
10.4000	418	440	461	483	506
10.6500	529	552	575	599	624
10.9000	649	673	698	723	748
11.1500	774	802	832	864	898
11.4000	935	974	1016	1061	1112
11.6500	1176	1260	1372	1496	1671
11.9000	1941	2248	2677	3284	4085
12.1500	5025	5997	6874	7583	8122
12.4000	8514	8782	8937	8991	8954
12.6500	8843	8675	8469	8240	7996
12.9000	7745	7491	7235	6978	6721
13.1500	6466	6216	5971	5732	5500
13.4000	5275	5058	4848	4645	4449
13.6500	4260	4078	3903	3733	3570
13.9000	3412	3261	3114	2973	2838
14.1500	2707	2582	2462	2347	2238
14.4000	2134	2037	1946	1861	1777
14.6500	1676	1587	1538	1505	1475
14.9000	1442	1405	1372	1343	1317
15.1500	1294	1273	1255	1237	1221
15.4000	1206	1192	1178	1165	1152
15.6500	1140	1128	1117	1106	1095
15.9000	1084	1073	1063	1052	1042
16.1500	1032	1023	1013	1004	995
16.4000	987	979	971	964	957
16.6500	950	944	937	931	925
16.9000	919	913	908	902	897
17.1500	891	886	881	876	870
17.4000	865	860	855	850	845
17.6500	840	835	830	825	819
17.9000	814	808	803	797	792
18.1500	786	781	775	770	766
18.4000	761	757	753	749	745
18.6500	741	738	735	732	729
18.9000	726	723	721	718	715

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
19.1500	713	711	708	706	704
19.4000	701	699	697	695	693
19.6500	691	689	687	685	683
19.9000	681	679	677	675	673
20.1500	671	669	667	665	664
20.4000	662	660	658	657	655
20.6500	654	652	650	649	647
20.9000	646	644	643	641	640
21.1500	638	637	635	634	632
21.4000	631	629	628	627	625
21.6500	624	622	621	619	617
21.9000	616	614	613	611	609
22.1500	608	606	604	603	601
22.4000	599	597	596	594	592
22.6500	590	589	587	585	583
22.9000	581	580	578	576	574
23.1500	572	570	569	567	565
23.4000	563	561	559	558	556
23.6500	554	552	550	548	546
23.9000	545	543	541	538	534
24.1500	526	514	498	482	465
24.4000	448	432	417	403	389
24.6500	376	363	351	340	329
24.9000	319	309	300	291	283
25.1500	275	267	260	253	247
25.4000	241	235	229	224	219
25.6500	214	210	206	201	197
25.9000	193	189	185	182	178
26.1500	174	171	167	164	160
26.4000	157	154	151	148	145
26.6500	142	139	136	133	130
26.9000	128	125	122	120	117
27.1500	115	113	110	108	106
27.4000	104	102	100	97	95
27.6500	93	92	90	88	86
27.9000	84	83	81	79	78
28.1500	76	74	73	71	70
28.4000	69	67	66	64	63
28.6500	62	60	59	58	57
28.9000	56	55	53	52	51
29.1500	50	49	48	47	46
29.4000	45	44	43	43	42
29.6500	41	40	39	38	38
29.9000	37	36	35	35	34

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
30.1500	33	32	32	31	31
30.4000	30	29	29	28	27
30.6500	27	26	26		

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
6.2500	0	0	1	1	2
6.5000	4	5	7	10	13
6.7500	16	20	24	29	34
7.0000	39	45	52	59	66
7.2500	74	83	91	101	111
7.5000	121	132	143	155	168
7.7500	180	194	208	222	236
8.0000	251	266	280	295	311
8.2500	326	342	359	376	393
8.5000	411	429	448	466	485
8.7500	504	523	543	563	583
9.0000	603	624	644	665	686
9.2500	706	727	747	768	789
9.5000	810	831	852	873	893
9.7500	913	934	954	974	994
10.0000	1014	1034	1054	1075	1095
10.2500	1116	1138	1161	1184	1208
10.5000	1233	1259	1285	1311	1338
10.7500	1365	1393	1420	1448	1471
11.0000	1489	1509	1530	1553	1596
11.2500	1660	1733	1810	1880	1960
11.5000	2051	2154	2278	2441	2665
11.7500	2971	3380	3906	4559	5372
12.0000	6442	7879	9705	11803	13941
12.2500	15866	17433	18640	19548	20171
12.5000	20569	20757	20760	20613	20354
12.7500	20021	19643	19234	18809	18372
13.0000	17928	17475	17019	16560	16104
13.2500	15652	15206	14768	14339	13916
13.5000	13503	13099	12704	12316	11937
13.7500	11565	11201	10845	10498	10155
14.0000	9821	9495	9175	8864	8559
14.2500	8265	7975	7696	7425	7163
14.5000	6908	6662	6424	6194	5971
14.7500	5754	5546	5344	5149	4961
15.0000	4779	4602	4432	4268	4109
15.2500	3956	3808	3665	3527	3394
15.5000	3265	3141	3020	2904	2792
15.7500	2684	2579	2478	2380	2285
16.0000	2193	2106	2023	1944	1869
16.2500	1798	1710	1629	1561	1531
16.5000	1504	1480	1457	1427	1399
16.7500	1375	1354	1335	1318	1302

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
17.0000	1288	1275	1263	1252	1241
17.2500	1231	1221	1212	1202	1193
17.5000	1184	1175	1167	1158	1150
17.7500	1142	1133	1125	1117	1109
18.0000	1101	1093	1085	1077	1070
18.2500	1063	1056	1050	1044	1039
18.5000	1034	1029	1025	1021	1017
18.7500	1013	1009	1005	1002	998
19.0000	995	992	988	985	982
19.2500	979	976	973	970	967
19.5000	964	962	959	956	953
19.7500	950	947	945	942	939
20.0000	936	934	931	928	925
20.2500	923	920	918	915	913
20.5000	910	908	906	903	901
20.7500	899	897	894	892	890
21.0000	888	886	884	882	880
21.2500	877	875	873	871	869
21.5000	867	865	863	861	859
21.7500	856	854	852	850	848
22.0000	846	844	842	840	838
22.2500	836	834	832	830	827
22.5000	825	823	821	818	816
22.7500	814	811	809	807	804
23.0000	802	799	797	794	792
23.2500	789	787	784	781	779
23.5000	776	774	771	769	766
23.7500	764	761	759	756	753
24.0000	751	747	740	727	706
24.2500	680	652	624	597	571
24.5000	546	523	501	480	461
24.7500	444	427	412	398	384
25.0000	371	359	347	336	326
25.2500	315	306	297	288	280
25.5000	272	265	258	251	245
25.7500	239	233	228	223	218
26.0000	213	208	204	200	196
26.2500	192	188	184	180	177
26.5000	173	169	166	163	159
26.7500	156	153	150	147	144
27.0000	141	138	135	132	129
27.2500	127	124	122	119	117
27.5000	114	112	110	107	105
27.7500	103	101	99	97	95

TIME vs. VOLUME (cu.ft)

Time hrs	Output Time increment = .0500 hrs Time on left represents time for first value in each row.				
28.0000	93	91	89	87	85
28.2500	84	82	80	79	77
28.5000	75	74	72	71	69
28.7500	68	67	65	64	63
29.0000	61	60	59	58	56
29.2500	55	54	53	52	51
29.5000	50	49	48	47	46
29.7500	45	44	43	42	41
30.0000	41	40	39	38	37
30.2500	37	36	35	34	34
30.5000	33	32	32	31	30
30.7500	30	29	28	28	27
31.0000	27	26	26		

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
210.00	-----	15769	0	0	0
210.13	-----	15679	47171	2044	2044
210.33	-----	15769	47171	3145	5189

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
210.00	-----	8756	0	0	0
210.13	-----	8756	26268	1138	1138
210.33	-----	8756	26268	1751	2889

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

USER DEFINED VOLUME RATING TABLE

Elevation (ft)	Volume (cu.ft)
170.00	0
170.75	1459
171.00	2530
171.25	3590
171.50	4639
171.75	5673
172.00	6691
172.25	7690
172.50	8666
172.75	9616
173.00	10536
173.25	11421
173.50	12263
173.75	13053
174.00	13776
174.25	14379
174.50	14896
175.50	16840

USER DEFINED VOLUME RATING TABLE

Elevation (ft)	Volume (cu.ft)
191.75	0
192.50	1564
192.75	2705
193.00	3840
193.25	4966
193.50	6082
193.75	7187
194.00	8280
194.25	9358
194.50	10420
194.75	11463
195.00	12487
195.25	13488
195.50	14465
195.75	15413
196.00	16329
196.25	17208
196.50	18044
196.75	18828
197.00	19541
197.25	20137
197.50	20684
198.50	22770

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 210.00 ft
Increment = .10 ft
Max. Elev.= 210.33 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	R3	--->	TW	210.133	210.330
Stand Pipe	R6	--->	TW	210.133	210.330
Stand Pipe	R2	--->	TW	210.133	210.330
Stand Pipe	R4	--->	TW	210.133	210.330
Stand Pipe	R1	--->	TW	210.133	210.330
Stand Pipe	R5	--->	TW	210.133	210.330

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = R3
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R6
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

OUTLET STRUCTURE INPUT DATA

Structure ID = R2
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R4
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

OUTLET STRUCTURE INPUT DATA

Structure ID = R1
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = R5
Structure Type = Stand Pipe
---
of Openings = 1
Invert Elev. = 210.13 ft
Diameter = .6700 ft
Orifice Area = .3526 sq.ft
Orifice Coeff. = .600
Weir Length = 2.10 ft
Weir Coeff. = 3.300
K, Reverse = 1.000
Mannings n = .0000
Kev,Charged Riser = .000
Weir Submergence = No
Orifice H to crest= Yes

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R3 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, ft	Device Q, cfs	Tail Water TW Elev, ft	Converge +/-ft	Notes / Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R6 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall Weir: H =.00ft
210.20	.12	Free Outfall Weir: H =.07ft
210.30	.47	Free Outfall Weir: H =.17ft
210.33	.61	Free Outfall Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R2 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, ft	Device Q, cfs	Tail Water TW Elev, ft	Converge +/-ft	Notes / Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R4 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R1 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q	Tail Water	Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
210.00	.00	Free Outfall
		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall
		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall
		Weir: H =.00ft
210.20	.12	Free Outfall
		Weir: H =.07ft
210.30	.47	Free Outfall
		Weir: H =.17ft
210.33	.61	Free Outfall
		Weir: H =.20ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = R5 (Stand Pipe)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, ft	Device Q, cfs	Tail Water TW Elev, ft	Converge +/-ft	Notes / Computation Messages
210.00	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.10	.00	Free Outfall		HW & TW < Inv.El.=210.133
210.13	.00	Free Outfall		Weir: H =.00ft
210.20	.12	Free Outfall		Weir: H =.07ft
210.30	.47	Free Outfall		Weir: H =.17ft
210.33	.61	Free Outfall		Weir: H =.20ft

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
210.00	.00	Free Outfall		None contributing
210.10	.00	Free Outfall		None contributing
210.13	.00	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.20	.72	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.30	2.84	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5
210.33	3.63	Free Outfall		R3 +R6 +R2 +R4 +R1 +R5

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 170.00 ft
Increment = .10 ft
Max. Elev.= 175.50 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Orifice-Circular	O1	--->	CV	171.650	175.500
Weir-Rectangular	W2	--->	CV	175.000	175.500
Culvert-Circular	CV	--->	TW	170.000	175.500

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = O1
Structure Type = Orifice-Circular
---
of Openings = 1
Invert Elev. = 171.65 ft
Diameter = 1.2500 ft
Orifice Coeff. = .600

Structure ID = W2
Structure Type = Weir-Rectangular
---
of Openings = 1
Crest Elev. = 175.00 ft
Weir Length = 4.00 ft
Weir Coeff. = 3.300000

Weir TW effects (Use adjustment equation)

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels = 1
Barrel Diameter = 1.2500 ft
Upstream Invert = 170.00 ft
Dnstream Invert = 167.30 ft
Horiz. Length = 54.00 ft
Barrel Length = 54.07 ft
Barrel Slope = .05000 ft/ft

OUTLET CONTROL DATA...
Mannings n = .0120
Ke = .5000 (forward entrance loss)
Kb = .019790 (per ft of full flow)
Kr = .5000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form = 2
Inlet Control K = .5340
Inlet Control M = .5550
Inlet Control c = .01960
Inlet Control Y = .9000
T1 ratio (HW/D) = 1.070
T2 ratio (HW/D) = 1.189
Slope Factor = -.500

Use unsubmerged inlet control Form 2 equ. below T1 elev.
Use submerged inlet control Form 2 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev = 171.34 ft ---> Flow = 4.80 cfs
At T2 Elev = 171.49 ft ---> Flow = 5.49 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.65	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.70	.01	171.70	Free	170.06	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .011ft	Dcr= .039ft		CRIT.DEPTH	Hev= .00ft
171.80	.08	171.80	Free	170.17	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .038ft	Dcr= .111ft		CRIT.DEPTH	Hev= .00ft
171.90	.23	171.90	Free	170.28	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .064ft	Dcr= .187ft		CRIT.DEPTH	Hev= .00ft
172.00	.45	172.00	Free	170.40	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .091ft	Dcr= .260ft		CRIT.DEPTH	Hev= .00ft
172.10	.72	172.10	Free	170.51	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .118ft	Dcr= .332ft		CRIT.DEPTH	Hev= .00ft
172.20	1.05	172.20	Free	170.62	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .146ft	Dcr= .403ft		CRIT.DEPTH	Hev= .00ft
172.30	1.44	172.30	Free	170.74	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .176ft	Dcr= .474ft		CRIT.DEPTH	Hev= .00ft
172.40	1.87	172.40	Free	170.85	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .207ft	Dcr= .544ft		CRIT.DEPTH	Hev= .00ft
172.50	2.33	172.50	Free	170.97	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .238ft	Dcr= .611ft		CRIT.DEPTH	Hev= .00ft
172.60	2.85	172.60	Free	171.09	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .273ft	Dcr= .678ft		CRIT.DEPTH	Hev= .00ft
172.70	3.37	172.70	Free	171.20	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .308ft	Dcr= .741ft		CRIT.DEPTH	Hev= .00ft
172.80	3.94	172.80	Free	171.32	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .348ft	Dcr= .803ft		CRIT.DEPTH	Hev= .00ft
172.90	4.67	172.90	Free	171.48	.000	.000	Free Outfall	
		H =.63						
173.00	5.03	173.00	Free	171.55	.000	.000	Free Outfall	
		H =.73						
173.10	5.36	173.10	Free	171.63	.000	.000	Free Outfall	
		H =.83						
173.20	5.68	173.20	171.69	171.69	.000	.000	Free Outfall	
		H =.93						
173.30	5.98	173.30	171.76	171.76	.000	.000	Free Outfall	
		H =1.03						
173.40	6.26	173.40	171.82	171.82	.000	.000	Free Outfall	
		H =1.13						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.50	6.54	173.50	171.88	171.88	.000	.000	Free Outfall	
		H =1.23						
173.60	6.80	173.60	171.94	171.94	.000	.000	Free Outfall	
		H =1.33						
173.70	7.05	173.70	172.00	172.00	.000	.000	Free Outfall	
		H =1.43						
173.80	7.29	173.80	172.06	172.06	.000	.000	Free Outfall	
		H =1.53						
173.90	7.53	173.90	172.11	172.11	.000	.000	Free Outfall	
		H =1.63						
174.00	7.76	174.00	172.17	172.17	.000	.000	Free Outfall	
		H =1.73						
174.10	7.98	174.10	172.23	172.23	.000	.000	Free Outfall	
		H =1.83						
174.20	8.18	174.20	172.28	172.28	.000	.000	Free Outfall	
		H =1.92						
174.30	8.32	174.30	172.32	172.32	.000	.000	Free Outfall	
		H =1.98						
174.40	8.46	174.40	172.35	172.35	.000	.000	Free Outfall	
		H =2.05						
174.50	8.59	174.50	172.39	172.39	.000	.000	Free Outfall	
		H =2.11						
174.60	8.72	174.60	172.42	172.42	.000	.000	Free Outfall	
		H =2.18						
174.70	8.84	174.70	172.46	172.46	.000	.000	Free Outfall	
		H =2.24						
174.80	8.97	174.80	172.49	172.49	.000	.000	Free Outfall	
		H =2.31						
174.90	9.10	174.90	172.53	172.53	.000	.000	Free Outfall	
		H =2.37						
175.00	9.22	175.00	172.56	172.56	.000	.000	Free Outfall	
		H =2.44						
175.10	9.20	175.10	172.67	172.68	.005	.000	Free Outfall	
		H =2.43						
175.20	9.04	175.20	172.86	172.86	.000	.000	Free Outfall	
		H =2.34						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O1 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
175.30	8.77	175.30	173.09	173.09	.000	.000	Free Outfall	
		H =2.21						
175.40	8.42	175.40	173.37	173.37	.000	.000	Free Outfall	
		H =2.03						
175.50	7.97	175.50	173.68	173.68	.000	.000	Free Outfall	
		H =1.82						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.65	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
172.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
173.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
174.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
175.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
175.10	.42	175.10	Free	172.68	.000	.000	Free Outfall	
	H=.10; Htw=.00; Qfree=.42;							
175.20	1.17	175.20	Free	172.86	.000	.000	Free Outfall	
	H=.20; Htw=.00; Qfree=1.17;							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = W2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = CV (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
175.30	2.14	175.30	Free	173.09	.000	.000	Free Outfall	
		H=.30; Htw=.00; Qfree=2.14;						
175.40	3.27	175.40	Free	173.37	.000	.000	Free Outfall	
		H=.40; Htw=.00; Qfree=3.27;						
175.50	4.55	175.50	Free	173.68	.000	.000	Free Outfall	
		H=.50; Htw=.00; Qfree=4.55;						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
170.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.70	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.80	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
170.90	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.00	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.10	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.20	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.30	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.40	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.50	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.60	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
171.65	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
171.70	.01	170.06	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .013ft	Dcr= .039ft		CRIT.DEPTH	Hev= .00ft
171.80	.08	170.17	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .038ft	Dcr= .111ft		CRIT.DEPTH	Hev= .00ft
171.90	.23	170.28	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .064ft	Dcr= .187ft		CRIT.DEPTH	Hev= .00ft
172.00	.44	170.40	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .091ft	Dcr= .259ft		CRIT.DEPTH	Hev= .00ft
172.10	.72	170.51	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .118ft	Dcr= .332ft		CRIT.DEPTH	Hev= .00ft
172.20	1.05	170.62	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .146ft	Dcr= .403ft		CRIT.DEPTH	Hev= .00ft
172.30	1.44	170.74	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .176ft	Dcr= .475ft		CRIT.DEPTH	Hev= .00ft
172.40	1.87	170.85	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .207ft	Dcr= .544ft		CRIT.DEPTH	Hev= .00ft
172.50	2.34	170.97	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .239ft	Dcr= .611ft		CRIT.DEPTH	Hev= .00ft
172.60	2.84	171.09	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .273ft	Dcr= .677ft		CRIT.DEPTH	Hev= .00ft
172.70	3.37	171.20	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .308ft	Dcr= .741ft		CRIT.DEPTH	Hev= .00ft
172.80	3.94	171.32	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .347ft	Dcr= .803ft		CRIT.DEPTH	Hev= .00ft
172.90	4.67	171.48	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .401ft	Dcr= .876ft		CRIT.DEPTH	Hev= .00ft
173.00	5.03	171.55	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .430ft	Dcr= .910ft		CRIT.DEPTH	Hev= .00ft
173.10	5.37	171.63	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .457ft	Dcr= .939ft		CRIT.DEPTH	Hev= .00ft
173.20	5.68	171.69	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .485ft	Dcr= .966ft		CRIT.DEPTH	Hev= .00ft
173.30	5.98	171.76	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .513ft	Dcr= .989ft		CRIT.DEPTH	Hev= .00ft
173.40	6.26	171.82	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .540ft	Dcr= 1.010ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
173.50	6.53	171.88	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .567ft	Dcr= 1.029ft		CRIT.DEPTH	Hev= .00ft
173.60	6.80	171.94	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .596ft	Dcr= 1.048ft		CRIT.DEPTH	Hev= .00ft
173.70	7.05	172.00	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .624ft	Dcr= 1.063ft		CRIT.DEPTH	Hev= .00ft
173.80	7.30	172.06	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .653ft	Dcr= 1.078ft		CRIT.DEPTH	Hev= .00ft
173.90	7.53	172.11	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .682ft	Dcr= 1.091ft		CRIT.DEPTH	Hev= .00ft
174.00	7.75	172.17	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .711ft	Dcr= 1.103ft		CRIT.DEPTH	Hev= .00ft
174.10	7.98	172.23	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .741ft	Dcr= 1.114ft		CRIT.DEPTH	Hev= .00ft
174.20	8.19	172.28	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .771ft	Dcr= 1.124ft		CRIT.DEPTH	Hev= .00ft
174.30	8.32	172.32	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .790ft	Dcr= 1.129ft		CRIT.DEPTH	Hev= .00ft
174.40	8.45	172.35	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .810ft	Dcr= 1.135ft		CRIT.DEPTH	Hev= .00ft
174.50	8.58	172.39	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .830ft	Dcr= 1.140ft		CRIT.DEPTH	Hev= .00ft
174.60	8.72	172.42	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .851ft	Dcr= 1.145ft		CRIT.DEPTH	Hev= .00ft
174.70	8.85	172.46	Free	Free	.000	.008	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .872ft	Dcr= 1.150ft		CRIT.DEPTH	Hev= .00ft
174.80	8.97	172.49	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .891ft	Dcr= 1.154ft		CRIT.DEPTH	Hev= .00ft
174.90	9.09	172.53	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .912ft	Dcr= 1.159ft		CRIT.DEPTH	Hev= .00ft
175.00	9.22	172.56	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .933ft	Dcr= 1.163ft		CRIT.DEPTH	Hev= .00ft
175.10	9.60	172.68	Free	Free	.000	.007	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.001ft	Dcr= 1.174ft		CRIT.DEPTH	Hev= .00ft
175.20	10.20	172.86	Free	Free	.000	.010	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= 1.113ft	Dcr= 1.188ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = CV (Culvert-Circular)

Mannings open channel maximum capacity: 16.83 cfs
UPstream ID's= O1, W2
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft	
175.30	10.91	173.09	Free	Free	.000	.006	Free Outfall		
		CRIT.DEPTH	CONTROL	Vh= 1.261ft	Dcr= 1.202ft		CRIT.DEPTH	Hev= .00ft	
175.40	11.70	173.37	Free	Free	.000	.004	Free Outfall		
		CRIT.DEPTH	CONTROL	Vh= 1.437ft	Dcr= 1.213ft		CRIT.DEPTH	Hev= .00ft	
175.50	12.53	173.68	Free	Free	.000	.003	Free Outfall		
		CRIT.DEPTH	CONTROL	Vh= 1.638ft	Dcr= 1.222ft		CRIT.DEPTH	Hev= .00ft	

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
170.00	.00	Free Outfall		(no Q: O1,W2,CV)
170.10	.00	Free Outfall		(no Q: O1,W2,CV)
170.20	.00	Free Outfall		(no Q: O1,W2,CV)
170.30	.00	Free Outfall		(no Q: O1,W2,CV)
170.40	.00	Free Outfall		(no Q: O1,W2,CV)
170.50	.00	Free Outfall		(no Q: O1,W2,CV)
170.60	.00	Free Outfall		(no Q: O1,W2,CV)
170.70	.00	Free Outfall		(no Q: O1,W2,CV)
170.80	.00	Free Outfall		(no Q: O1,W2,CV)
170.90	.00	Free Outfall		(no Q: O1,W2,CV)
171.00	.00	Free Outfall		(no Q: O1,W2,CV)
171.10	.00	Free Outfall		(no Q: O1,W2,CV)
171.20	.00	Free Outfall		(no Q: O1,W2,CV)
171.30	.00	Free Outfall		(no Q: O1,W2,CV)
171.40	.00	Free Outfall		(no Q: O1,W2,CV)
171.50	.00	Free Outfall		(no Q: O1,W2,CV)
171.60	.00	Free Outfall		(no Q: O1,W2,CV)
171.65	.00	Free Outfall		(no Q: O1,W2,CV)
171.70	.01	Free Outfall		O1,CV (no Q: W2)
171.80	.08	Free Outfall		O1,CV (no Q: W2)
171.90	.23	Free Outfall		O1,CV (no Q: W2)
172.00	.45	Free Outfall		O1,CV (no Q: W2)
172.10	.72	Free Outfall		O1,CV (no Q: W2)
172.20	1.05	Free Outfall		O1,CV (no Q: W2)
172.30	1.44	Free Outfall		O1,CV (no Q: W2)
172.40	1.87	Free Outfall		O1,CV (no Q: W2)
172.50	2.34	Free Outfall		O1,CV (no Q: W2)
172.60	2.84	Free Outfall		O1,CV (no Q: W2)
172.70	3.37	Free Outfall		O1,CV (no Q: W2)
172.80	3.94	Free Outfall		O1,CV (no Q: W2)
172.90	4.67	Free Outfall		O1,CV (no Q: W2)
173.00	5.03	Free Outfall		O1,CV (no Q: W2)
173.10	5.37	Free Outfall		O1,CV (no Q: W2)
173.20	5.68	Free Outfall		O1,CV (no Q: W2)
173.30	5.98	Free Outfall		O1,CV (no Q: W2)
173.40	6.26	Free Outfall		O1,CV (no Q: W2)
173.50	6.53	Free Outfall		O1,CV (no Q: W2)
173.60	6.80	Free Outfall		O1,CV (no Q: W2)

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
173.70	7.05	Free Outfall		O1,CV (no Q: W2)
173.80	7.30	Free Outfall		O1,CV (no Q: W2)
173.90	7.53	Free Outfall		O1,CV (no Q: W2)
174.00	7.75	Free Outfall		O1,CV (no Q: W2)
174.10	7.98	Free Outfall		O1,CV (no Q: W2)
174.20	8.19	Free Outfall		O1,CV (no Q: W2)
174.30	8.32	Free Outfall		O1,CV (no Q: W2)
174.40	8.45	Free Outfall		O1,CV (no Q: W2)
174.50	8.58	Free Outfall		O1,CV (no Q: W2)
174.60	8.72	Free Outfall		O1,CV (no Q: W2)
174.70	8.85	Free Outfall		O1,CV (no Q: W2)
174.80	8.97	Free Outfall		O1,CV (no Q: W2)
174.90	9.09	Free Outfall		O1,CV (no Q: W2)
175.00	9.22	Free Outfall		O1,CV (no Q: W2)
175.10	9.61	Free Outfall		O1,W2,CV
175.20	10.20	Free Outfall		O1,W2,CV
175.30	10.91	Free Outfall		O1,W2,CV
175.40	11.70	Free Outfall		O1,W2,CV
175.50	12.53	Free Outfall		O1,W2,CV

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 191.75 ft
Increment = .10 ft
Max. Elev.= 198.50 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Orifice-Circular	O0	--->	C1	191.750	198.500
Culvert-Circular	C1	--->	TW	191.750	198.500

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = O0
Structure Type = Orifice-Circular
---
of Openings = 1
Invert Elev. = 191.75 ft
Diameter = .8333 ft
Orifice Coeff. = .600

OUTLET STRUCTURE INPUT DATA

Structure ID = C1
Structure Type = Culvert-Circular

No. Barrels = 1
Barrel Diameter = 1.2500 ft
Upstream Invert = 191.75 ft
Dnstream Invert = 189.75 ft
Horiz. Length = 68.00 ft
Barrel Length = 68.03 ft
Barrel Slope = .02941 ft/ft

OUTLET CONTROL DATA...
Mannings n = .0120
Ke = .5000 (forward entrance loss)
Kb = .019790 (per ft of full flow)
Kr = .5000 (reverse entrance loss)
HW Convergence = .001 +/- ft

INLET CONTROL DATA...
Equation form = 2
Inlet Control K = .5340
Inlet Control M = .5550
Inlet Control c = .01960
Inlet Control Y = .9000
T1 ratio (HW/D) = 1.070
T2 ratio (HW/D) = 1.199
Slope Factor = -.500

Use unsubmerged inlet control Form 2 equ. below T1 elev.
Use submerged inlet control Form 2 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control,
interpolate between flows at T1 & T2...
At T1 Elev = 193.09 ft ---> Flow = 4.80 cfs
At T2 Elev = 193.25 ft ---> Flow = 5.49 cfs

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 40
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .00 cfs
Max. Q tolerance = .00 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
191.75	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
191.85	.02	191.85	191.84	191.84	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .011ft hwDi= .089ft Lbw= .0ft Hev= .00ft							
191.95	.08	191.95	191.92	191.92	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .032ft hwDi= .167ft Lbw= .0ft Hev= .00ft							
192.05	.17	192.05	191.99	191.99	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .060ft hwDi= .240ft Lbw= .0ft Hev= .00ft							
192.15	.29	192.15	192.06	192.06	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .088ft hwDi= .312ft Lbw= .0ft Hev= .00ft							
192.25	.43	192.25	192.14	192.14	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .113ft hwDi= .387ft Lbw= .0ft Hev= .00ft							
192.35	.60	192.35	192.21	192.21	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .139ft hwDi= .461ft Lbw= .0ft Hev= .00ft							
192.45	.79	192.45	192.29	192.29	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .165ft hwDi= .535ft Lbw= .0ft Hev= .00ft							
192.55	1.03	192.55	192.37	192.37	.000	.000	Free Outfall	
	BACKWATER CONTROL.. Vh= .183ft hwDi= .617ft Lbw= .0ft Hev= .00ft							
192.65	1.23	192.65	192.43	192.43	.000	.000	Free Outfall	
	H =.22							
192.75	1.38	192.75	192.47	192.47	.000	.000	Free Outfall	
	H =.28							
192.85	1.53	192.85	192.51	192.51	.000	.000	Free Outfall	
	H =.34							
192.95	1.66	192.95	192.55	192.55	.000	.000	Free Outfall	
	H =.40							
193.05	1.79	193.05	192.58	192.58	.000	.000	Free Outfall	
	H =.47							
193.15	1.92	193.15	192.62	192.62	.000	.000	Free Outfall	
	H =.53							
193.25	2.04	193.25	192.65	192.65	.000	.000	Free Outfall	
	H =.60							
193.35	2.16	193.35	192.68	192.68	.000	.000	Free Outfall	
	H =.67							
193.45	2.27	193.45	192.70	192.70	.000	.000	Free Outfall	
	H =.75							

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
193.55	2.38	193.55	192.73	192.73	.000	.000	Free Outfall	
		H =.82						
193.65	2.48	193.65	192.75	192.75	.000	.000	Free Outfall	
		H =.90						
193.75	2.59	193.75	192.78	192.78	.000	.000	Free Outfall	
		H =.97						
193.85	2.69	193.85	192.80	192.80	.000	.000	Free Outfall	
		H =1.05						
193.95	2.79	193.95	192.82	192.82	.000	.000	Free Outfall	
		H =1.13						
194.05	2.88	194.05	192.84	192.84	.000	.000	Free Outfall	
		H =1.21						
194.15	2.98	194.15	192.87	192.87	.001	.000	Free Outfall	
		H =1.28						
194.25	3.07	194.25	192.88	192.89	.003	.000	Free Outfall	
		H =1.37						
194.35	3.16	194.35	192.91	192.91	.001	.000	Free Outfall	
		H =1.45						
194.45	3.24	194.45	192.92	192.92	.000	.000	Free Outfall	
		H =1.53						
194.55	3.33	194.55	192.94	192.94	.000	.000	Free Outfall	
		H =1.61						
194.65	3.41	194.65	192.96	192.96	.000	.000	Free Outfall	
		H =1.69						
194.75	3.49	194.75	192.98	192.98	.000	.000	Free Outfall	
		H =1.77						
194.85	3.57	194.85	193.00	193.00	.001	.000	Free Outfall	
		H =1.85						
194.95	3.65	194.95	193.01	193.01	.000	.000	Free Outfall	
		H =1.94						
195.05	3.73	195.05	193.03	193.03	.000	.000	Free Outfall	
		H =2.02						
195.15	3.81	195.15	193.05	193.05	.000	.000	Free Outfall	
		H =2.10						
195.25	3.88	195.25	193.06	193.06	.001	.000	Free Outfall	
		H =2.19						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
195.35	3.96	195.35	193.08	193.08	.000	.000	Free Outfall	
		H =2.27						
195.45	4.03	195.45	193.09	193.09	.000	.000	Free Outfall	
		H =2.36						
195.55	4.10	195.55	193.11	193.11	.003	.000	Free Outfall	
		H =2.44						
195.65	4.17	195.65	193.12	193.13	.003	.000	Free Outfall	
		H =2.53						
195.75	4.24	195.75	193.14	193.14	.000	.000	Free Outfall	
		H =2.61						
195.85	4.31	195.85	193.15	193.15	.000	.000	Free Outfall	
		H =2.70						
195.95	4.38	195.95	193.17	193.17	.000	.000	Free Outfall	
		H =2.78						
196.05	4.45	196.05	193.18	193.18	.000	.000	Free Outfall	
		H =2.87						
196.15	4.51	196.15	193.20	193.20	.000	.000	Free Outfall	
		H =2.95						
196.25	4.58	196.25	193.21	193.21	.000	.000	Free Outfall	
		H =3.04						
196.35	4.64	196.35	193.22	193.22	.000	.000	Free Outfall	
		H =3.13						
196.45	4.71	196.45	193.24	193.24	.002	.000	Free Outfall	
		H =3.21						
196.55	4.77	196.55	193.25	193.25	.000	.000	Free Outfall	
		H =3.30						
196.65	4.83	196.65	193.26	193.26	.000	.000	Free Outfall	
		H =3.39						
196.75	4.89	196.75	193.27	193.27	.000	.000	Free Outfall	
		H =3.48						
196.85	4.95	196.85	193.29	193.29	.000	.000	Free Outfall	
		H =3.56						
196.95	5.01	196.95	193.30	193.30	.000	.000	Free Outfall	
		H =3.65						
197.05	5.07	197.05	193.31	193.31	.000	.000	Free Outfall	
		H =3.74						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = O0 (Orifice-Circular)

Upstream ID = (Pond Water Surface)
DNstream ID = C1 (Culvert-Circular)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
197.15	5.13	197.15	193.32	193.32	.000	.000	Free Outfall	
		H =3.83						
197.25	5.19	197.25	193.34	193.34	.000	.000	Free Outfall	
		H =3.91						
197.35	5.25	197.35	193.35	193.35	.000	.000	Free Outfall	
		H =4.00						
197.45	5.31	197.45	193.36	193.36	.000	.000	Free Outfall	
		H =4.09						
197.55	5.36	197.55	193.37	193.38	.004	.000	Free Outfall	
		H =4.18						
197.65	5.42	197.65	193.39	193.39	.000	.000	Free Outfall	
		H =4.26						
197.75	5.48	197.75	193.40	193.40	.000	.000	Free Outfall	
		H =4.35						
197.85	5.53	197.85	193.41	193.41	.000	.000	Free Outfall	
		H =4.44						
197.95	5.59	197.95	193.42	193.42	.000	.000	Free Outfall	
		H =4.53						
198.05	5.64	198.05	193.43	193.43	.000	.000	Free Outfall	
		H =4.62						
198.15	5.69	198.15	193.45	193.45	.000	.000	Free Outfall	
		H =4.71						
198.25	5.75	198.25	193.46	193.46	.000	.000	Free Outfall	
		H =4.79						
198.35	5.80	198.35	193.47	193.47	.000	.000	Free Outfall	
		H =4.88						
198.45	5.85	198.45	193.48	193.48	.000	.000	Free Outfall	
		H =4.97						
198.50	5.88	198.50	193.49	193.49	.000	.000	Free Outfall	
		H =5.01						

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
191.75	.00	...	...	...	...	...	Free Outfall	
	WS below an invert; no flow.							
191.85	.02	191.84	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .020ft	Dcr= .059ft	CRIT.DEPTH Hev= .00ft				
191.95	.08	191.92	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .038ft	Dcr= .111ft	CRIT.DEPTH Hev= .00ft				
192.05	.17	191.99	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .054ft	Dcr= .159ft	CRIT.DEPTH Hev= .00ft				
192.15	.28	192.06	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .071ft	Dcr= .206ft	CRIT.DEPTH Hev= .00ft				
192.25	.43	192.14	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .089ft	Dcr= .254ft	CRIT.DEPTH Hev= .00ft				
192.35	.60	192.21	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .107ft	Dcr= .301ft	CRIT.DEPTH Hev= .00ft				
192.45	.79	192.29	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .125ft	Dcr= .348ft	CRIT.DEPTH Hev= .00ft				
192.55	1.03	192.37	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .145ft	Dcr= .400ft	CRIT.DEPTH Hev= .00ft				
192.65	1.23	192.43	Free	Free	.000	.002	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .160ft	Dcr= .437ft	CRIT.DEPTH Hev= .00ft				
192.75	1.38	192.47	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .172ft	Dcr= .465ft	CRIT.DEPTH Hev= .00ft				
192.85	1.52	192.51	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .182ft	Dcr= .489ft	CRIT.DEPTH Hev= .00ft				
192.95	1.66	192.55	Free	Free	.000	.002	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .192ft	Dcr= .511ft	CRIT.DEPTH Hev= .00ft				
193.05	1.79	192.58	Free	Free	.000	.000	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .201ft	Dcr= .532ft	CRIT.DEPTH Hev= .00ft				
193.15	1.92	192.62	Free	Free	.000	.002	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .210ft	Dcr= .551ft	CRIT.DEPTH Hev= .00ft				
193.25	2.04	192.65	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .218ft	Dcr= .569ft	CRIT.DEPTH Hev= .00ft				
193.35	2.15	192.68	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .226ft	Dcr= .586ft	CRIT.DEPTH Hev= .00ft				
193.45	2.27	192.70	Free	Free	.000	.001	Free Outfall	
	CRIT.DEPTH CONTROL	Vh= .234ft	Dcr= .602ft	CRIT.DEPTH Hev= .00ft				

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
193.55	2.38	192.73	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .241ft	Dcr= .617ft		CRIT.DEPTH	Hev= .00ft
193.65	2.49	192.75	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .249ft	Dcr= .631ft		CRIT.DEPTH	Hev= .00ft
193.75	2.59	192.78	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .255ft	Dcr= .645ft		CRIT.DEPTH	Hev= .00ft
193.85	2.69	192.80	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .262ft	Dcr= .658ft		CRIT.DEPTH	Hev= .00ft
193.95	2.79	192.82	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .269ft	Dcr= .670ft		CRIT.DEPTH	Hev= .00ft
194.05	2.88	192.84	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .275ft	Dcr= .682ft		CRIT.DEPTH	Hev= .00ft
194.15	2.97	192.87	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .281ft	Dcr= .693ft		CRIT.DEPTH	Hev= .00ft
194.25	3.06	192.89	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .287ft	Dcr= .704ft		CRIT.DEPTH	Hev= .00ft
194.35	3.15	192.91	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .293ft	Dcr= .715ft		CRIT.DEPTH	Hev= .00ft
194.45	3.24	192.92	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .299ft	Dcr= .726ft		CRIT.DEPTH	Hev= .00ft
194.55	3.33	192.94	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .305ft	Dcr= .735ft		CRIT.DEPTH	Hev= .00ft
194.65	3.41	192.96	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .311ft	Dcr= .745ft		CRIT.DEPTH	Hev= .00ft
194.75	3.50	192.98	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .317ft	Dcr= .755ft		CRIT.DEPTH	Hev= .00ft
194.85	3.57	193.00	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .322ft	Dcr= .763ft		CRIT.DEPTH	Hev= .00ft
194.95	3.65	193.01	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .327ft	Dcr= .772ft		CRIT.DEPTH	Hev= .00ft
195.05	3.73	193.03	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .333ft	Dcr= .781ft		CRIT.DEPTH	Hev= .00ft
195.15	3.80	193.05	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .338ft	Dcr= .788ft		CRIT.DEPTH	Hev= .00ft
195.25	3.88	193.06	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .343ft	Dcr= .796ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
195.35	3.96	193.08	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .349ft	Dcr= .805ft		CRIT.DEPTH	Hev= .00ft
195.45	4.03	193.09	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .354ft	Dcr= .813ft		CRIT.DEPTH	Hev= .00ft
195.55	4.09	193.11	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .359ft	Dcr= .819ft		CRIT.DEPTH	Hev= .00ft
195.65	4.17	193.13	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .364ft	Dcr= .827ft		CRIT.DEPTH	Hev= .00ft
195.75	4.24	193.14	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .369ft	Dcr= .834ft		CRIT.DEPTH	Hev= .00ft
195.85	4.31	193.15	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .375ft	Dcr= .841ft		CRIT.DEPTH	Hev= .00ft
195.95	4.38	193.17	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .379ft	Dcr= .848ft		CRIT.DEPTH	Hev= .00ft
196.05	4.45	193.18	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .384ft	Dcr= .854ft		CRIT.DEPTH	Hev= .00ft
196.15	4.52	193.20	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .390ft	Dcr= .861ft		CRIT.DEPTH	Hev= .00ft
196.25	4.58	193.21	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .394ft	Dcr= .867ft		CRIT.DEPTH	Hev= .00ft
196.35	4.64	193.22	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .399ft	Dcr= .873ft		CRIT.DEPTH	Hev= .00ft
196.45	4.70	193.24	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .404ft	Dcr= .879ft		CRIT.DEPTH	Hev= .00ft
196.55	4.77	193.25	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .409ft	Dcr= .885ft		CRIT.DEPTH	Hev= .00ft
196.65	4.83	193.26	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .414ft	Dcr= .891ft		CRIT.DEPTH	Hev= .00ft
196.75	4.89	193.27	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .419ft	Dcr= .897ft		CRIT.DEPTH	Hev= .00ft
196.85	4.95	193.29	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .424ft	Dcr= .903ft		CRIT.DEPTH	Hev= .00ft
196.95	5.01	193.30	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .428ft	Dcr= .908ft		CRIT.DEPTH	Hev= .00ft
197.05	5.07	193.31	Free	Free	.000	.000	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .433ft	Dcr= .914ft		CRIT.DEPTH	Hev= .00ft

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = C1 (Culvert-Circular)

Mannings open channel maximum capacity: 12.91 cfs
UPstream ID = O0 (Orifice-Circular)
DNstream ID = TW (Pond Outfall)

Pond WS. Elev. ft	Device Q cfs	(into) HW HGL ft	Converge DS HGL ft	Next DS HGL ft	DS HGL Error +/-ft	Q SUM Error +/-cfs	DS Chan. TW ft	TW Error +/-ft
197.15	5.13	193.32	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .438ft	Dcr= .918ft		CRIT.DEPTH	Hev= .00ft
197.25	5.19	193.34	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .443ft	Dcr= .924ft		CRIT.DEPTH	Hev= .00ft
197.35	5.25	193.35	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .448ft	Dcr= .929ft		CRIT.DEPTH	Hev= .00ft
197.45	5.30	193.36	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .452ft	Dcr= .934ft		CRIT.DEPTH	Hev= .00ft
197.55	5.36	193.38	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .457ft	Dcr= .938ft		CRIT.DEPTH	Hev= .00ft
197.65	5.42	193.39	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .462ft	Dcr= .944ft		CRIT.DEPTH	Hev= .00ft
197.75	5.47	193.40	Free	Free	.000	.003	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .467ft	Dcr= .948ft		CRIT.DEPTH	Hev= .00ft
197.85	5.53	193.41	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .471ft	Dcr= .953ft		CRIT.DEPTH	Hev= .00ft
197.95	5.58	193.42	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .476ft	Dcr= .957ft		CRIT.DEPTH	Hev= .00ft
198.05	5.64	193.43	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .481ft	Dcr= .962ft		CRIT.DEPTH	Hev= .00ft
198.15	5.69	193.45	Free	Free	.000	.002	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .486ft	Dcr= .966ft		CRIT.DEPTH	Hev= .00ft
198.25	5.74	193.46	Free	Free	.000	.005	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .490ft	Dcr= .970ft		CRIT.DEPTH	Hev= .00ft
198.35	5.80	193.47	Free	Free	.000	.004	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .496ft	Dcr= .975ft		CRIT.DEPTH	Hev= .00ft
198.45	5.85	193.48	Free	Free	.000	.006	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .500ft	Dcr= .979ft		CRIT.DEPTH	Hev= .00ft
198.50	5.88	193.49	Free	Free	.000	.001	Free Outfall	
		CRIT.DEPTH	CONTROL	Vh= .503ft	Dcr= .981ft		CRIT.DEPTH	Hev= .00ft

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
191.75	.00	Free Outfall		(no Q: O0,C1)
191.85	.02	Free Outfall		O0,C1
191.95	.08	Free Outfall		O0,C1
192.05	.17	Free Outfall		O0,C1
192.15	.28	Free Outfall		O0,C1
192.25	.43	Free Outfall		O0,C1
192.35	.60	Free Outfall		O0,C1
192.45	.79	Free Outfall		O0,C1
192.55	1.03	Free Outfall		O0,C1
192.65	1.23	Free Outfall		O0,C1
192.75	1.38	Free Outfall		O0,C1
192.85	1.52	Free Outfall		O0,C1
192.95	1.66	Free Outfall		O0,C1
193.05	1.79	Free Outfall		O0,C1
193.15	1.92	Free Outfall		O0,C1
193.25	2.04	Free Outfall		O0,C1
193.35	2.15	Free Outfall		O0,C1
193.45	2.27	Free Outfall		O0,C1
193.55	2.38	Free Outfall		O0,C1
193.65	2.49	Free Outfall		O0,C1
193.75	2.59	Free Outfall		O0,C1
193.85	2.69	Free Outfall		O0,C1
193.95	2.79	Free Outfall		O0,C1
194.05	2.88	Free Outfall		O0,C1
194.15	2.97	Free Outfall		O0,C1
194.25	3.07	Free Outfall		O0,C1
194.35	3.15	Free Outfall		O0,C1
194.45	3.24	Free Outfall		O0,C1
194.55	3.33	Free Outfall		O0,C1
194.65	3.41	Free Outfall		O0,C1
194.75	3.50	Free Outfall		O0,C1
194.85	3.57	Free Outfall		O0,C1
194.95	3.65	Free Outfall		O0,C1
195.05	3.73	Free Outfall		O0,C1
195.15	3.80	Free Outfall		O0,C1
195.25	3.88	Free Outfall		O0,C1
195.35	3.96	Free Outfall		O0,C1
195.45	4.03	Free Outfall		O0,C1

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
195.55	4.10	Free Outfall		O0,C1
195.65	4.17	Free Outfall		O0,C1
195.75	4.24	Free Outfall		O0,C1
195.85	4.31	Free Outfall		O0,C1
195.95	4.38	Free Outfall		O0,C1
196.05	4.45	Free Outfall		O0,C1
196.15	4.52	Free Outfall		O0,C1
196.25	4.58	Free Outfall		O0,C1
196.35	4.64	Free Outfall		O0,C1
196.45	4.70	Free Outfall		O0,C1
196.55	4.77	Free Outfall		O0,C1
196.65	4.83	Free Outfall		O0,C1
196.75	4.89	Free Outfall		O0,C1
196.85	4.95	Free Outfall		O0,C1
196.95	5.01	Free Outfall		O0,C1
197.05	5.07	Free Outfall		O0,C1
197.15	5.13	Free Outfall		O0,C1
197.25	5.19	Free Outfall		O0,C1
197.35	5.25	Free Outfall		O0,C1
197.45	5.30	Free Outfall		O0,C1
197.55	5.36	Free Outfall		O0,C1
197.65	5.42	Free Outfall		O0,C1
197.75	5.47	Free Outfall		O0,C1
197.85	5.53	Free Outfall		O0,C1
197.95	5.58	Free Outfall		O0,C1
198.05	5.64	Free Outfall		O0,C1
198.15	5.69	Free Outfall		O0,C1
198.25	5.74	Free Outfall		O0,C1
198.35	5.80	Free Outfall		O0,C1
198.45	5.85	Free Outfall		O0,C1
198.50	5.88	Free Outfall		O0,C1

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - GREEN ROOF IN 1Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 1Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 210.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
210.00	.00	0	15769	.00	.00	.00
210.10	.00	1574	15699	.00	.00	17.48
210.13	.00	2096	15680	.00	.00	23.29
210.20	.72	3143	15710	.00	.72	35.64
210.30	2.84	4716	15755	.00	2.84	55.24
210.33	3.63	5189	15769	.00	3.63	61.29

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1D	PDA-1D		PDA-1D	1Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	1Y	4470	12.1500	1.00

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	1Y	4470	12.1500	1.00

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 1Y

Peak Discharge = 1.00 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 4470 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.7500	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.2500	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
2.7500	.00	.00	.00	.00	.00
3.0000	.01	.01	.01	.01	.01
3.2500	.01	.01	.01	.01	.01
3.5000	.01	.01	.01	.01	.01
3.7500	.01	.01	.01	.01	.01
4.0000	.01	.01	.01	.01	.01
4.2500	.01	.01	.01	.01	.01
4.5000	.01	.01	.01	.01	.01
4.7500	.01	.01	.01	.01	.01
5.0000	.01	.01	.01	.01	.01
5.2500	.01	.01	.01	.01	.01
5.5000	.01	.01	.01	.01	.01
5.7500	.01	.01	.01	.01	.01
6.0000	.01	.01	.02	.02	.02
6.2500	.02	.02	.02	.02	.02
6.5000	.02	.02	.02	.02	.02
6.7500	.02	.02	.02	.02	.02
7.0000	.02	.02	.02	.02	.02
7.2500	.02	.02	.02	.02	.02
7.5000	.02	.02	.03	.03	.03
7.7500	.03	.03	.03	.03	.03
8.0000	.03	.03	.03	.03	.03
8.2500	.03	.03	.03	.03	.03
8.5000	.03	.04	.04	.04	.04
8.7500	.04	.04	.04	.04	.04
9.0000	.04	.04	.04	.04	.05
9.2500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5000	.05	.05	.05	.05	.05
9.7500	.05	.06	.06	.06	.06
10.0000	.06	.06	.06	.06	.06
10.2500	.06	.07	.07	.07	.07
10.5000	.07	.07	.08	.08	.08
10.7500	.08	.08	.08	.08	.09
11.0000	.09	.09	.09	.10	.10
11.2500	.11	.11	.12	.12	.13
11.5000	.14	.14	.16	.19	.23
11.7500	.27	.33	.38	.44	.52
12.0000	.67	.84	.97	1.00	.92
12.2500	.79	.66	.56	.48	.41
12.5000	.35	.29	.24	.20	.18
12.7500	.16	.15	.14	.13	.12
13.0000	.12	.11	.11	.10	.10
13.2500	.10	.09	.09	.09	.09
13.5000	.09	.08	.08	.08	.08
13.7500	.08	.08	.08	.07	.07
14.0000	.07	.07	.07	.07	.07
14.2500	.06	.06	.06	.06	.06
14.5000	.06	.06	.06	.06	.06
14.7500	.06	.06	.05	.05	.05
15.0000	.05	.05	.05	.05	.05
15.2500	.05	.05	.05	.05	.05
15.5000	.04	.04	.04	.04	.04
15.7500	.04	.04	.04	.04	.04
16.0000	.04	.04	.04	.04	.03
16.2500	.03	.03	.03	.03	.03
16.5000	.03	.03	.03	.03	.03
16.7500	.03	.03	.03	.03	.03
17.0000	.03	.03	.03	.03	.03
17.2500	.03	.03	.03	.03	.03
17.5000	.03	.03	.03	.02	.02
17.7500	.02	.02	.02	.02	.02
18.0000	.02	.02	.02	.02	.02
18.2500	.02	.02	.02	.02	.02
18.5000	.02	.02	.02	.02	.02
18.7500	.02	.02	.02	.02	.02
19.0000	.02	.02	.02	.02	.02
19.2500	.02	.02	.02	.02	.02
19.5000	.02	.02	.02	.02	.02
19.7500	.02	.02	.02	.02	.02
20.0000	.02	.02	.02	.02	.02
20.2500	.02	.02	.02	.02	.02
20.5000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
20.7500	.02	.02	.02	.02	.02
21.0000	.02	.02	.02	.02	.02
21.2500	.02	.02	.02	.02	.02
21.5000	.02	.02	.02	.02	.02
21.7500	.02	.01	.01	.01	.01
22.0000	.01	.01	.01	.01	.01
22.2500	.01	.01	.01	.01	.01
22.5000	.01	.01	.01	.01	.01
22.7500	.01	.01	.01	.01	.01
23.0000	.01	.01	.01	.01	.01
23.2500	.01	.01	.01	.01	.01
23.5000	.01	.01	.01	.01	.01
23.7500	.01	.01	.01	.01	.01
24.0000	.01	.01	.01	.01	.00
24.2500	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1D	PDA-1D		PDA-1D	10Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	10Y	8499	12.1500	1.85

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	10Y	8499	12.1500	1.85

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 10Y

Peak Discharge = 1.85 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 8499 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.9500	.00	.00	.00	.00	.00
1.2000	.00	.00	.00	.01	.01
1.4500	.01	.01	.01	.01	.01
1.7000	.01	.01	.01	.01	.01
1.9500	.01	.01	.01	.01	.01
2.2000	.01	.01	.01	.01	.01
2.4500	.01	.01	.01	.01	.01
2.7000	.01	.02	.02	.02	.02
2.9500	.02	.02	.02	.02	.02
3.2000	.02	.02	.02	.02	.02
3.4500	.02	.02	.02	.02	.02
3.7000	.02	.02	.02	.02	.02
3.9500	.02	.02	.02	.02	.02
4.2000	.02	.02	.02	.02	.03
4.4500	.03	.03	.03	.03	.03
4.7000	.03	.03	.03	.03	.03
4.9500	.03	.03	.03	.03	.03
5.2000	.03	.03	.03	.03	.03
5.4500	.03	.03	.03	.03	.03
5.7000	.03	.03	.03	.03	.03
5.9500	.03	.03	.03	.03	.03
6.2000	.03	.04	.04	.04	.04
6.4500	.04	.04	.04	.04	.04
6.7000	.04	.04	.04	.04	.04
6.9500	.04	.04	.05	.05	.05
7.2000	.05	.05	.05	.05	.05
7.4500	.05	.05	.05	.05	.05
7.7000	.05	.05	.06	.06	.06
7.9500	.06	.06	.06	.06	.06
8.2000	.06	.06	.06	.07	.07
8.4500	.07	.07	.07	.07	.07

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.7000	.08	.08	.08	.08	.08
8.9500	.08	.08	.09	.09	.09
9.2000	.09	.09	.09	.09	.10
9.4500	.10	.10	.10	.10	.10
9.7000	.10	.11	.11	.11	.11
9.9500	.11	.11	.11	.12	.12
10.2000	.12	.12	.13	.13	.13
10.4500	.13	.14	.14	.14	.15
10.7000	.15	.15	.16	.16	.16
10.9500	.16	.17	.17	.18	.18
11.2000	.19	.20	.21	.22	.23
11.4500	.24	.26	.27	.30	.35
11.7000	.43	.51	.61	.71	.82
11.9500	.97	1.25	1.57	1.79	1.85
12.2000	1.71	1.45	1.21	1.04	.89
12.4500	.76	.64	.54	.44	.37
12.7000	.32	.29	.27	.25	.24
12.9500	.23	.22	.20	.19	.19
13.2000	.18	.18	.17	.17	.17
13.4500	.16	.16	.16	.15	.15
13.7000	.15	.14	.14	.14	.14
13.9500	.13	.13	.13	.12	.12
14.2000	.12	.12	.12	.12	.11
14.4500	.11	.11	.11	.11	.11
14.7000	.11	.10	.10	.10	.10
14.9500	.10	.10	.10	.09	.09
15.2000	.09	.09	.09	.09	.09
15.4500	.08	.08	.08	.08	.08
15.7000	.08	.08	.07	.07	.07
15.9500	.07	.07	.07	.07	.06
16.2000	.06	.06	.06	.06	.06
16.4500	.06	.06	.06	.06	.06
16.7000	.06	.06	.06	.06	.05
16.9500	.05	.05	.05	.05	.05
17.2000	.05	.05	.05	.05	.05
17.4500	.05	.05	.05	.05	.05
17.7000	.05	.04	.04	.04	.04
17.9500	.04	.04	.04	.04	.04
18.2000	.04	.04	.04	.04	.04
18.4500	.04	.04	.04	.04	.04
18.7000	.04	.04	.04	.04	.04
18.9500	.04	.04	.04	.04	.04
19.2000	.04	.04	.04	.04	.03
19.4500	.03	.03	.03	.03	.03
19.7000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.9500	.03	.03	.03	.03	.03
20.2000	.03	.03	.03	.03	.03
20.4500	.03	.03	.03	.03	.03
20.7000	.03	.03	.03	.03	.03
20.9500	.03	.03	.03	.03	.03
21.2000	.03	.03	.03	.03	.03
21.4500	.03	.03	.03	.03	.03
21.7000	.03	.03	.03	.03	.03
21.9500	.03	.03	.03	.03	.03
22.2000	.03	.03	.03	.03	.03
22.4500	.03	.03	.03	.03	.03
22.7000	.03	.02	.02	.02	.02
22.9500	.02	.02	.02	.02	.02
23.2000	.02	.02	.02	.02	.02
23.4500	.02	.02	.02	.02	.02
23.7000	.02	.02	.02	.02	.02
23.9500	.02	.02	.02	.02	.01
24.2000	.01	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: GREEN ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1D	PDA-1D		PDA-1D	100Y

INFLOWS TO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1D	100Y	14148	12.1500	3.04

TOTAL FLOW INTO: GREEN ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	GREEN ROOF IN	100Y	14148	12.1500	3.04

TOTAL NODE INFLOW...
HYG file =
HYG ID = GREEN ROOF IN
HYG Tag = 100Y

Peak Discharge = 3.04 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 14148 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6000	.00	.00	.00	.00	.01
.8500	.01	.01	.01	.01	.01
1.1000	.01	.01	.01	.02	.02
1.3500	.02	.02	.02	.02	.02
1.6000	.02	.02	.02	.02	.02
1.8500	.02	.02	.02	.02	.03
2.1000	.03	.03	.03	.03	.03
2.3500	.03	.03	.03	.03	.03
2.6000	.03	.03	.03	.03	.03
2.8500	.03	.03	.03	.03	.04
3.1000	.04	.04	.04	.04	.04
3.3500	.04	.04	.04	.04	.04
3.6000	.04	.04	.04	.04	.04
3.8500	.04	.04	.04	.04	.04
4.1000	.04	.05	.05	.05	.05
4.3500	.05	.05	.05	.05	.05
4.6000	.05	.05	.05	.05	.05
4.8500	.05	.05	.05	.05	.05
5.1000	.05	.05	.05	.05	.05
5.3500	.05	.06	.06	.06	.06
5.6000	.06	.06	.06	.06	.06
5.8500	.06	.06	.06	.06	.06
6.1000	.06	.06	.06	.06	.06
6.3500	.06	.07	.07	.07	.07
6.6000	.07	.07	.07	.07	.07
6.8500	.07	.08	.08	.08	.08
7.1000	.08	.08	.08	.08	.08
7.3500	.09	.09	.09	.09	.09
7.6000	.09	.09	.09	.09	.09
7.8500	.10	.10	.10	.10	.10
8.1000	.10	.10	.10	.11	.11

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.3500	.11	.11	.12	.12	.12
8.6000	.12	.12	.13	.13	.13
8.8500	.13	.14	.14	.14	.14
9.1000	.15	.15	.15	.15	.16
9.3500	.16	.16	.16	.16	.17
9.6000	.17	.17	.17	.18	.18
9.8500	.18	.18	.19	.19	.19
10.1000	.19	.20	.20	.21	.21
10.3500	.21	.22	.22	.23	.23
10.6000	.24	.24	.25	.25	.26
10.8500	.26	.27	.27	.28	.28
11.1000	.29	.30	.31	.33	.35
11.3500	.37	.38	.40	.42	.45
11.6000	.50	.58	.70	.85	1.01
11.8500	1.17	1.35	1.60	2.06	2.58
12.1000	2.95	3.04	2.80	2.38	1.99
12.3500	1.70	1.46	1.25	1.05	.88
12.6000	.73	.61	.53	.48	.44
12.8500	.42	.39	.37	.35	.34
13.1000	.32	.31	.30	.29	.28
13.3500	.28	.27	.27	.26	.26
13.6000	.25	.25	.24	.24	.23
13.8500	.23	.22	.22	.21	.21
14.1000	.20	.20	.20	.19	.19
14.3500	.19	.19	.18	.18	.18
14.6000	.18	.17	.17	.17	.17
14.8500	.17	.16	.16	.16	.16
15.1000	.15	.15	.15	.15	.14
15.3500	.14	.14	.14	.14	.13
15.6000	.13	.13	.13	.12	.12
15.8500	.12	.12	.11	.11	.11
16.1000	.11	.11	.10	.10	.10
16.3500	.10	.10	.10	.10	.10
16.6000	.10	.09	.09	.09	.09
16.8500	.09	.09	.09	.09	.09
17.1000	.09	.08	.08	.08	.08
17.3500	.08	.08	.08	.08	.08
17.6000	.08	.07	.07	.07	.07
17.8500	.07	.07	.07	.07	.07
18.1000	.07	.07	.06	.06	.06
18.3500	.06	.06	.06	.06	.06
18.6000	.06	.06	.06	.06	.06
18.8500	.06	.06	.06	.06	.06
19.1000	.06	.06	.06	.06	.06
19.3500	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.6000	.06	.06	.06	.05	.05
19.8500	.05	.05	.05	.05	.05
20.1000	.05	.05	.05	.05	.05
20.3500	.05	.05	.05	.05	.05
20.6000	.05	.05	.05	.05	.05
20.8500	.05	.05	.05	.05	.05
21.1000	.05	.05	.05	.05	.05
21.3500	.05	.05	.05	.05	.05
21.6000	.05	.05	.05	.05	.05
21.8500	.04	.04	.04	.04	.04
22.1000	.04	.04	.04	.04	.04
22.3500	.04	.04	.04	.04	.04
22.6000	.04	.04	.04	.04	.04
22.8500	.04	.04	.04	.04	.04
23.1000	.04	.04	.04	.04	.04
23.3500	.04	.04	.04	.04	.04
23.6000	.04	.04	.04	.04	.04
23.8500	.04	.04	.04	.03	.03
24.1000	.03	.02	.01	.00	.00
24.3500	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - GREEN ROOF IN 1Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 1Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.00 cfs	at	12.1500 hrs
Peak Outflow	=	.33 cfs	at	12.5000 hrs
Peak Elevation	=	210.16 ft		
Peak Storage	=	2583 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	4470
- Infiltration	=	0
- HYG Vol OUT	=	2370
- Retained Vol	=	2100
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - GREEN ROOF IN 10Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 10Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.85 cfs	at	12.1500 hrs
Peak Outflow	=	1.25 cfs	at	12.3000 hrs
Peak Elevation	=	210.23 ft		
Peak Storage	=	3540 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	8499
- Infiltration	=	0
- HYG Vol OUT	=	6399
- Retained Vol	=	2100
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - GREEN ROOF IN 100Y
Outflow HYG file = NONE STORED - GREEN ROOF OUT 100Y

Pond Node Data = GREEN ROOF
Pond Volume Data = GREEN ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	3.04 cfs	at	12.1500 hrs
Peak Outflow	=	2.23 cfs	at	12.2500 hrs
Peak Elevation	=	210.27 ft		
Peak Storage	=	4263 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	14148
- Infiltration	=	0
- HYG Vol OUT	=	12047
- Retained Vol	=	2100
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 1Y

Peak Discharge = .33 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 2370 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.1500	.00	.09	.18	.24	.28
12.4000	.31	.33	.33	.33	.32
12.6500	.31	.30	.28	.27	.25
12.9000	.24	.23	.21	.20	.19
13.1500	.18	.17	.16	.16	.15
13.4000	.14	.14	.13	.12	.12
13.6500	.12	.11	.11	.10	.10
13.9000	.10	.10	.09	.09	.09
14.1500	.08	.08	.08	.08	.08
14.4000	.08	.07	.07	.07	.07
14.6500	.07	.07	.07	.06	.06
14.9000	.06	.06	.06	.06	.06
15.1500	.06	.06	.06	.05	.05
15.4000	.05	.05	.05	.05	.05
15.6500	.05	.05	.05	.05	.05
15.9000	.05	.04	.04	.04	.04
16.1500	.04	.04	.04	.04	.04
16.4000	.04	.04	.04	.04	.04
16.6500	.04	.03	.03	.03	.03
16.9000	.03	.03	.03	.03	.03
17.1500	.03	.03	.03	.03	.03
17.4000	.03	.03	.03	.03	.03
17.6500	.03	.03	.03	.03	.03
17.9000	.03	.03	.03	.02	.02
18.1500	.02	.02	.02	.02	.02
18.4000	.02	.02	.02	.02	.02
18.6500	.02	.02	.02	.02	.02
18.9000	.02	.02	.02	.02	.02
19.1500	.02	.02	.02	.02	.02
19.4000	.02	.02	.02	.02	.02
19.6500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.9000	.02	.02	.02	.02	.02
20.1500	.02	.02	.02	.02	.02
20.4000	.02	.02	.02	.02	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.01	.01	.01	.01
22.4000	.01	.01	.01	.01	.01
22.6500	.01	.01	.01	.01	.01
22.9000	.01	.01	.01	.01	.01
23.1500	.01	.01	.01	.01	.01
23.4000	.01	.01	.01	.01	.01
23.6500	.01	.01	.01	.01	.01
23.9000	.01	.01	.01	.01	.01
24.1500	.01	.01	.01	.01	.01
24.4000	.01	.01	.01	.00	.00
24.6500	.00	.00	.00		

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 10Y

Peak Discharge = 1.25 cfs
Time to Peak = 12.3000 hrs
HYG Volume = 6399 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.4500	.00	.03	.06	.08	.11
11.7000	.14	.18	.23	.28	.33
11.9500	.40	.48	.59	.72	.96
12.2000	1.13	1.23	1.25	1.23	1.17
12.4500	1.10	1.01	.92	.83	.74
12.7000	.68	.64	.60	.56	.52
12.9500	.49	.46	.43	.40	.38
13.2000	.36	.33	.32	.30	.28
13.4500	.27	.26	.25	.24	.23
13.7000	.22	.21	.20	.19	.19
13.9500	.18	.18	.17	.16	.16
14.2000	.16	.15	.15	.14	.14
14.4500	.14	.13	.13	.13	.13
14.7000	.12	.12	.12	.12	.12
14.9500	.11	.11	.11	.11	.11
15.2000	.10	.10	.10	.10	.10
15.4500	.10	.10	.09	.09	.09
15.7000	.09	.09	.09	.08	.08
15.9500	.08	.08	.08	.08	.08
16.2000	.07	.07	.07	.07	.07
16.4500	.07	.07	.07	.07	.07
16.7000	.06	.06	.06	.06	.06
16.9500	.06	.06	.06	.06	.06
17.2000	.06	.06	.06	.05	.05
17.4500	.05	.05	.05	.05	.05
17.7000	.05	.05	.05	.05	.05
17.9500	.05	.05	.05	.05	.04
18.2000	.04	.04	.04	.04	.04
18.4500	.04	.04	.04	.04	.04
18.7000	.04	.04	.04	.04	.04
18.9500	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
19.2000	.04	.04	.04	.04	.04
19.4500	.04	.04	.04	.04	.04
19.7000	.04	.04	.03	.03	.03
19.9500	.03	.03	.03	.03	.03
20.2000	.03	.03	.03	.03	.03
20.4500	.03	.03	.03	.03	.03
20.7000	.03	.03	.03	.03	.03
20.9500	.03	.03	.03	.03	.03
21.2000	.03	.03	.03	.03	.03
21.4500	.03	.03	.03	.03	.03
21.7000	.03	.03	.03	.03	.03
21.9500	.03	.03	.03	.03	.03
22.2000	.03	.03	.03	.03	.03
22.4500	.03	.03	.03	.03	.03
22.7000	.03	.03	.03	.03	.03
22.9500	.03	.03	.03	.03	.02
23.2000	.02	.02	.02	.02	.02
23.4500	.02	.02	.02	.02	.02
23.7000	.02	.02	.02	.02	.02
23.9500	.02	.02	.02	.02	.02
24.2000	.02	.02	.02	.01	.01
24.4500	.01	.01	.01	.01	.01
24.7000	.01	.01	.00	.00	.00
24.9500	.00	.00			

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = GREEN ROOF OUT
HYG Tag = 100Y

Peak Discharge = 2.23 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 12047 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.7000	.00	.01	.03	.05	.07
9.9500	.08	.09	.10	.11	.12
10.2000	.13	.14	.15	.16	.16
10.4500	.17	.18	.18	.19	.19
10.7000	.20	.21	.21	.22	.22
10.9500	.23	.23	.24	.25	.25
11.2000	.26	.27	.27	.28	.29
11.4500	.31	.32	.33	.35	.37
11.7000	.40	.45	.50	.57	.65
11.9500	.77	1.00	1.29	1.60	1.90
12.2000	2.12	2.23	2.22	2.14	2.02
12.4500	1.87	1.72	1.56	1.39	1.24
12.7000	1.09	.97	.86	.77	.70
12.9500	.66	.63	.60	.56	.54
13.2000	.51	.48	.46	.44	.42
13.4500	.40	.39	.37	.36	.35
13.7000	.33	.32	.31	.30	.29
13.9500	.29	.28	.27	.26	.25
14.2000	.25	.24	.24	.23	.23
14.4500	.22	.22	.21	.21	.20
14.7000	.20	.20	.19	.19	.19
14.9500	.19	.18	.18	.18	.17
15.2000	.17	.17	.17	.16	.16
15.4500	.16	.16	.15	.15	.15
15.7000	.15	.14	.14	.14	.14
15.9500	.13	.13	.13	.13	.12
16.2000	.12	.12	.12	.12	.11
16.4500	.11	.11	.11	.11	.11
16.7000	.11	.10	.10	.10	.10
16.9500	.10	.10	.10	.10	.09
17.2000	.09	.09	.09	.09	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.4500	.09	.09	.09	.08	.08
17.7000	.08	.08	.08	.08	.08
17.9500	.08	.08	.07	.07	.07
18.2000	.07	.07	.07	.07	.07
18.4500	.07	.07	.07	.07	.07
18.7000	.07	.06	.06	.06	.06
18.9500	.06	.06	.06	.06	.06
19.2000	.06	.06	.06	.06	.06
19.4500	.06	.06	.06	.06	.06
19.7000	.06	.06	.06	.06	.06
19.9500	.06	.06	.06	.06	.06
20.2000	.05	.05	.05	.05	.05
20.4500	.05	.05	.05	.05	.05
20.7000	.05	.05	.05	.05	.05
20.9500	.05	.05	.05	.05	.05
21.2000	.05	.05	.05	.05	.05
21.4500	.05	.05	.05	.05	.05
21.7000	.05	.05	.05	.05	.05
21.9500	.05	.05	.05	.05	.05
22.2000	.05	.04	.04	.04	.04
22.4500	.04	.04	.04	.04	.04
22.7000	.04	.04	.04	.04	.04
22.9500	.04	.04	.04	.04	.04
23.2000	.04	.04	.04	.04	.04
23.4500	.04	.04	.04	.04	.04
23.7000	.04	.04	.04	.04	.04
23.9500	.04	.04	.04	.04	.03
24.2000	.03	.03	.03	.02	.02
24.4500	.02	.02	.01	.01	.01
24.7000	.01	.01	.01	.01	.01
24.9500	.01	.00	.00	.00	.00
25.2000	.00				

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 1Y

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs			
8.6000	.00	.00	.00

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 10Y

Peak Discharge = 3.74 cfs
Time to Peak = 12.4500 hrs
HYG Volume = 13326 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.0500	.00	.01	.43	1.33	2.29
12.3000	3.03	3.48	3.70	3.74	3.64
12.5500	3.45	3.20	2.92	2.65	2.40
12.8000	2.19	2.00	1.84	1.69	1.56
13.0500	1.44	1.34	1.25	1.16	1.08
13.3000	1.02	.96	.91	.86	.82
13.5500	.77	.73	.70	.67	.64
13.8000	.61	.59	.56	.54	.51
14.0500	.49	.47	.45	.43	.42
14.3000	.40	.39	.37	.36	.35
14.5500	.33	.32	.31	.30	.29
14.8000	.28	.27	.26	.25	.24
15.0500	.23	.22	.21	.21	.20
15.3000	.19	.19	.18	.17	.17
15.5500	.16	.15	.14	.14	.13
15.8000	.12	.12	.11	.10	.10
16.0500	.09	.08	.08	.08	.07
16.3000	.07	.06	.06	.06	.05
16.5500	.05	.05	.04	.04	.04
16.8000	.03	.03	.03	.02	.02
17.0500	.01	.01	.01	.01	.01
17.3000	.01	.01	.00	.00	.00
17.5500	.00	.00			

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1A
HYG Tag = 100Y

Peak Discharge = 8.77 cfs
Time to Peak = 12.3500 hrs
HYG Volume = 37343 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.02	.14	.41	.87
11.9000	1.51	2.35	3.51	5.02	6.07
12.1500	7.07	7.95	8.46	8.70	8.77
12.4000	8.69	8.51	8.25	7.83	7.36
12.6500	6.87	6.36	5.85	5.35	4.85
12.9000	4.16	3.58	3.17	2.83	2.57
13.1500	2.33	2.15	2.00	1.86	1.75
13.4000	1.65	1.57	1.49	1.42	1.36
13.6500	1.31	1.26	1.21	1.17	1.12
13.9000	1.08	1.05	1.02	.98	.95
14.1500	.93	.90	.87	.84	.82
14.4000	.80	.78	.75	.73	.72
14.6500	.70	.69	.67	.66	.64
14.9000	.63	.61	.60	.58	.57
15.1500	.56	.54	.53	.52	.50
15.4000	.49	.48	.47	.45	.44
15.6500	.43	.42	.41	.40	.39
15.9000	.38	.37	.36	.35	.34
16.1500	.32	.31	.30	.29	.28
16.4000	.27	.26	.25	.25	.24
16.6500	.23	.22	.22	.21	.21
16.9000	.20	.20	.19	.18	.18
17.1500	.17	.17	.16	.16	.15
17.4000	.15	.14	.13	.13	.12
17.6500	.12	.11	.11	.10	.10
17.9000	.09	.08	.08	.08	.08
18.1500	.07	.07	.07	.06	.06
18.4000	.06	.06	.05	.05	.05
18.6500	.04	.04	.04	.04	.03
18.9000	.03	.03	.03	.02	.02
19.1500	.02	.02	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.01	.01	.01	.01	.01
19.6500	.01	.01	.00	.00	.00
19.9000	.00	.00	.00	.00	

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 1Y

Peak Discharge = 1.28 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 10747 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.0000	.00	.00	.00	.00	.00
11.2500	.00	.00	.01	.01	.01
11.5000	.01	.01	.01	.02	.02
11.7500	.02	.04	.06	.08	.12
12.0000	.19	.30	.48	.72	.94
12.2500	1.09	1.17	1.23	1.26	1.28
12.5000	1.28	1.28	1.26	1.24	1.21
12.7500	1.17	1.12	1.08	1.04	.97
13.0000	.91	.85	.80	.74	.68
13.2500	.64	.59	.56	.53	.51
13.5000	.49	.47	.45	.43	.42
13.7500	.41	.39	.38	.37	.36
14.0000	.35	.35	.34	.33	.32
14.2500	.32	.31	.30	.30	.29
14.5000	.29	.28	.28	.27	.27
14.7500	.27	.26	.26	.26	.25
15.0000	.25	.25	.24	.24	.24
15.2500	.24	.23	.23	.23	.22
15.5000	.22	.22	.21	.21	.21
15.7500	.21	.20	.20	.20	.19
16.0000	.19	.19	.18	.18	.18
16.2500	.18	.17	.17	.17	.17
16.5000	.16	.16	.16	.16	.16
16.7500	.16	.15	.15	.15	.15
17.0000	.15	.15	.14	.14	.14
17.2500	.14	.14	.14	.14	.13
17.5000	.13	.13	.13	.13	.13
17.7500	.12	.12	.12	.12	.12
18.0000	.12	.12	.11	.11	.11
18.2500	.11	.11	.11	.11	.11
18.5000	.11	.10	.10	.10	.10

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.7500	.10	.10	.10	.10	.10
19.0000	.10	.10	.10	.09	.09
19.2500	.09	.09	.09	.09	.09
19.5000	.09	.09	.09	.09	.09
19.7500	.09	.09	.09	.09	.09
20.0000	.09	.08	.08	.08	.08
20.2500	.08	.08	.08	.08	.08
20.5000	.08	.08	.08	.08	.08
20.7500	.08	.08	.08	.08	.08
21.0000	.08	.08	.08	.08	.08
21.2500	.08	.08	.08	.08	.08
21.5000	.08	.08	.07	.07	.07
21.7500	.07	.07	.07	.07	.07
22.0000	.07	.07	.07	.07	.07
22.2500	.07	.07	.07	.07	.07
22.5000	.07	.07	.07	.07	.07
22.7500	.07	.07	.07	.07	.07
23.0000	.07	.07	.07	.07	.06
23.2500	.06	.06	.06	.06	.06
23.5000	.06	.06	.06	.06	.06
23.7500	.06	.06	.06	.06	.06
24.0000	.06	.06	.06	.06	.06
24.2500	.05	.05	.05	.05	.04
24.5000	.04	.04	.04	.04	.03
24.7500	.03	.03	.03	.03	.03
25.0000	.03	.02	.02	.02	.02
25.2500	.02	.02	.02	.02	.02
25.5000	.02	.02	.02	.02	.02
25.7500	.02	.02	.02	.02	.02
26.0000	.02	.02	.02	.02	.01
26.2500	.01	.01	.01	.01	.01
26.5000	.01	.01	.01	.01	.01
26.7500	.01	.01	.01	.01	.01
27.0000	.01	.01	.01	.01	.01
27.2500	.01	.01	.01	.01	.01
27.5000	.01	.01	.01	.01	.01
27.7500	.01	.01	.01	.01	.01
28.0000	.01	.01	.01	.01	.01
28.2500	.01	.01	.01	.01	.01
28.5000	.01	.01	.01	.01	.01
28.7500	.01	.01	.00	.00	.00
29.0000	.00	.00	.00	.00	.00
29.2500	.00	.00	.00	.00	.00
29.5000	.00	.00	.00	.00	.00
29.7500	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs			
30.0000	.00	.00	.00

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 10Y

Peak Discharge = 2.99 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 32049 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.7000	.00	.00	.00	.00	.00
8.9500	.00	.00	.00	.00	.01
9.2000	.01	.01	.01	.01	.01
9.4500	.01	.01	.01	.02	.02
9.7000	.02	.02	.02	.03	.03
9.9500	.04	.04	.05	.05	.06
10.2000	.06	.07	.07	.08	.08
10.4500	.09	.10	.11	.12	.13
10.7000	.14	.15	.16	.17	.18
10.9500	.20	.21	.22	.24	.25
11.2000	.27	.28	.30	.33	.35
11.4500	.38	.41	.44	.48	.54
11.7000	.61	.71	.83	.97	1.10
11.9500	1.23	1.37	1.56	1.80	2.06
12.2000	2.30	2.52	2.68	2.80	2.89
12.4500	2.94	2.98	2.99	2.98	2.96
12.7000	2.92	2.88	2.83	2.77	2.72
12.9500	2.66	2.60	2.54	2.48	2.42
13.2000	2.36	2.30	2.24	2.18	2.12
13.4500	2.06	2.01	1.95	1.90	1.85
13.7000	1.80	1.74	1.70	1.65	1.60
13.9500	1.55	1.51	1.47	1.42	1.38
14.2000	1.34	1.30	1.26	1.23	1.18
14.4500	1.14	1.10	1.06	1.03	.97
14.7000	.92	.88	.84	.81	.77
14.9500	.74	.71	.68	.66	.64
15.2000	.62	.60	.59	.57	.56
15.4500	.55	.54	.53	.52	.51
15.7000	.50	.49	.48	.47	.46
15.9500	.45	.44	.44	.43	.42
16.2000	.41	.41	.40	.40	.39

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.4500	.38	.38	.37	.37	.36
16.7000	.36	.36	.35	.35	.34
16.9500	.34	.34	.33	.33	.32
17.2000	.32	.32	.31	.31	.31
17.4500	.30	.30	.30	.29	.29
17.7000	.28	.28	.28	.28	.27
17.9500	.27	.27	.26	.26	.26
18.2000	.25	.25	.25	.25	.24
18.4500	.24	.24	.24	.24	.23
18.7000	.23	.23	.23	.23	.22
18.9500	.22	.22	.22	.22	.22
19.2000	.22	.22	.21	.21	.21
19.4500	.21	.21	.21	.21	.21
19.7000	.20	.20	.20	.20	.20
19.9500	.20	.20	.20	.20	.19
20.2000	.19	.19	.19	.19	.19
20.4500	.19	.19	.19	.19	.19
20.7000	.18	.18	.18	.18	.18
20.9500	.18	.18	.18	.18	.18
21.2000	.18	.18	.17	.17	.17
21.4500	.17	.17	.17	.17	.17
21.7000	.17	.17	.17	.17	.17
21.9500	.17	.16	.16	.16	.16
22.2000	.16	.16	.16	.16	.16
22.4500	.16	.16	.16	.16	.16
22.7000	.15	.15	.15	.15	.15
22.9500	.15	.15	.15	.15	.15
23.2000	.15	.15	.15	.14	.14
23.4500	.14	.14	.14	.14	.14
23.7000	.14	.14	.14	.14	.14
23.9500	.14	.13	.13	.13	.13
24.2000	.12	.12	.11	.10	.10
24.4500	.09	.08	.08	.08	.07
24.7000	.07	.06	.06	.06	.06
24.9500	.05	.05	.05	.05	.04
25.2000	.04	.04	.04	.03	.03
25.4500	.03	.03	.03	.03	.03
25.7000	.02	.02	.02	.02	.02
25.9500	.02	.02	.02	.02	.02
26.2000	.02	.02	.02	.02	.02
26.4500	.02	.02	.02	.02	.02
26.7000	.02	.02	.02	.02	.01
26.9500	.01	.01	.01	.01	.01
27.2000	.01	.01	.01	.01	.01
27.4500	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
27.7000	.01	.01	.01	.01	.01
27.9500	.01	.01	.01	.01	.01
28.2000	.01	.01	.01	.01	.01
28.4500	.01	.01	.01	.01	.01
28.7000	.01	.01	.01	.01	.01
28.9500	.01	.01	.01	.01	.01
29.2000	.01	.01	.01	.01	.01
29.4500	.01	.01	.00	.00	.00
29.7000	.00	.00	.00	.00	.00
29.9500	.00	.00	.00	.00	.00
30.2000	.00	.00	.00	.00	.00
30.4500	.00	.00	.00	.00	.00
30.7000	.00	.00			

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = OCS 1C
HYG Tag = 100Y

Peak Discharge = 5.35 cfs
Time to Peak = 12.5500 hrs
HYG Volume = 66719 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.6000	.00	.00	.00	.00	.00
6.8500	.00	.00	.00	.00	.01
7.1000	.01	.01	.01	.01	.01
7.3500	.01	.01	.01	.01	.02
7.6000	.02	.02	.02	.02	.02
7.8500	.02	.03	.03	.04	.04
8.1000	.04	.05	.05	.06	.06
8.3500	.07	.07	.08	.08	.09
8.6000	.10	.10	.11	.12	.13
8.8500	.14	.14	.15	.16	.17
9.1000	.18	.19	.20	.21	.23
9.3500	.24	.25	.26	.27	.28
9.6000	.30	.31	.33	.34	.35
9.8500	.37	.38	.39	.41	.42
10.1000	.44	.45	.47	.49	.51
10.3500	.52	.54	.56	.58	.60
10.6000	.63	.65	.68	.70	.73
10.8500	.75	.78	.80	.83	.85
11.1000	.87	.90	.93	.96	1.00
11.3500	1.04	1.07	1.11	1.15	1.19
11.6000	1.24	1.29	1.37	1.46	1.59
11.8500	1.75	1.93	2.14	2.41	2.75
12.1000	3.14	3.56	3.97	4.33	4.62
12.3500	4.85	5.05	5.20	5.30	5.35
12.6000	5.35	5.31	5.25	5.16	5.07
12.8500	4.98	4.89	4.80	4.71	4.63
13.1000	4.55	4.46	4.37	4.29	4.20
13.3500	4.12	4.04	3.96	3.88	3.81
13.6000	3.74	3.66	3.58	3.52	3.44
13.8500	3.37	3.30	3.23	3.16	3.09
14.1000	3.03	2.96	2.90	2.83	2.77

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.3500	2.70	2.64	2.58	2.52	2.47
14.6000	2.41	2.35	2.30	2.24	2.19
14.8500	2.14	2.09	2.04	1.99	1.94
15.1000	1.90	1.85	1.80	1.76	1.72
15.3500	1.68	1.63	1.59	1.56	1.52
15.6000	1.48	1.44	1.41	1.37	1.34
15.8500	1.31	1.27	1.24	1.21	1.17
16.1000	1.13	1.10	1.07	1.04	.99
16.3500	.95	.91	.87	.84	.82
16.6000	.79	.76	.74	.71	.69
16.8500	.68	.66	.64	.63	.62
17.1000	.61	.60	.59	.58	.57
17.3500	.56	.56	.55	.54	.54
17.6000	.53	.52	.52	.51	.50
17.8500	.50	.49	.48	.48	.47
18.1000	.46	.46	.45	.44	.44
18.3500	.43	.43	.43	.42	.42
18.6000	.42	.41	.41	.41	.41
18.8500	.40	.40	.40	.40	.39
19.1000	.39	.39	.39	.38	.38
19.3500	.38	.38	.38	.37	.37
19.6000	.37	.37	.37	.36	.36
19.8500	.36	.36	.36	.35	.35
20.1000	.35	.35	.35	.35	.34
20.3500	.34	.34	.34	.34	.34
20.6000	.33	.33	.33	.33	.33
20.8500	.33	.32	.32	.32	.32
21.1000	.32	.32	.32	.31	.31
21.3500	.31	.31	.31	.31	.31
21.6000	.30	.30	.30	.30	.30
21.8500	.30	.30	.29	.29	.29
22.1000	.29	.29	.29	.29	.28
22.3500	.28	.28	.28	.28	.28
22.6000	.28	.28	.27	.27	.27
22.8500	.27	.27	.27	.27	.27
23.1000	.26	.26	.26	.26	.26
23.3500	.26	.26	.25	.25	.25
23.6000	.25	.25	.25	.25	.24
23.8500	.24	.24	.24	.24	.24
24.1000	.23	.23	.21	.20	.18
24.3500	.17	.16	.15	.14	.13
24.6000	.12	.11	.10	.09	.09
24.8500	.08	.08	.07	.07	.07
25.1000	.06	.06	.06	.05	.05
25.3500	.05	.05	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
25.6000	.04	.04	.03	.03	.03
25.8500	.03	.03	.03	.03	.02
26.1000	.02	.02	.02	.02	.02
26.3500	.02	.02	.02	.02	.02
26.6000	.02	.02	.02	.02	.02
26.8500	.02	.02	.02	.02	.02
27.1000	.02	.02	.01	.01	.01
27.3500	.01	.01	.01	.01	.01
27.6000	.01	.01	.01	.01	.01
27.8500	.01	.01	.01	.01	.01
28.1000	.01	.01	.01	.01	.01
28.3500	.01	.01	.01	.01	.01
28.6000	.01	.01	.01	.01	.01
28.8500	.01	.01	.01	.01	.01
29.1000	.01	.01	.01	.01	.01
29.3500	.01	.01	.01	.01	.01
29.6000	.01	.01	.01	.01	.01
29.8500	.00	.00	.00	.00	.00
30.1000	.00	.00	.00	.00	.00
30.3500	.00	.00	.00	.00	.00
30.6000	.00	.00	.00	.00	.00
30.8500	.00	.00	.00	.00	.00
31.1000	.00				

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - PARKING ROOF IN 1Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 1Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
210.00	.00	0	8756	.00	.00	.00
210.10	.00	876	8756	.00	.00	9.73
210.13	.00	1167	8756	.00	.00	12.97
210.20	.72	1751	8756	.00	.72	20.17
210.30	2.84	2627	8756	.00	2.84	32.02
210.33	3.63	2889	8756	.00	3.63	35.74

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 1Y

Peak Discharge = .17 cfs
Time to Peak = 12.5000 hrs
HYG Volume = 1040 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
12.2000	.00	.01	.08	.13	.15
12.4500	.17	.17	.17	.16	.15
12.7000	.14	.13	.12	.11	.10
12.9500	.09	.09	.08	.07	.07
13.2000	.07	.06	.06	.06	.05
13.4500	.05	.05	.05	.05	.05
13.7000	.04	.04	.04	.04	.04
13.9500	.04	.04	.04	.04	.04
14.2000	.04	.03	.03	.03	.03
14.4500	.03	.03	.03	.03	.03
14.7000	.03	.03	.03	.03	.03
14.9500	.03	.03	.03	.03	.03
15.2000	.03	.03	.03	.03	.02
15.4500	.02	.02	.02	.02	.02
15.7000	.02	.02	.02	.02	.02
15.9500	.02	.02	.02	.02	.02
16.2000	.02	.02	.02	.02	.02
16.4500	.02	.02	.02	.02	.02
16.7000	.02	.02	.02	.02	.02
16.9500	.02	.02	.02	.01	.01
17.2000	.01	.01	.01	.01	.01
17.4500	.01	.01	.01	.01	.01
17.7000	.01	.01	.01	.01	.01
17.9500	.01	.01	.01	.01	.01
18.2000	.01	.01	.01	.01	.01
18.4500	.01	.01	.01	.01	.01
18.7000	.01	.01	.01	.01	.01
18.9500	.01	.01	.01	.01	.01
19.2000	.01	.01	.01	.01	.01
19.4500	.01	.01	.01	.01	.01
19.7000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.9500	.01	.01	.01	.01	.01
20.2000	.01	.01	.01	.01	.01
20.4500	.01	.01	.01	.01	.01
20.7000	.01	.01	.01	.01	.01
20.9500	.01	.01	.01	.01	.01
21.2000	.01	.01	.01	.01	.01
21.4500	.01	.01	.01	.01	.01
21.7000	.01	.01	.01	.01	.01
21.9500	.01	.01	.01	.01	.01
22.2000	.01	.01	.01	.01	.01
22.4500	.01	.01	.01	.01	.01
22.7000	.01	.01	.01	.01	.01
22.9500	.01	.01	.01	.01	.01
23.2000	.01	.01	.01	.01	.01
23.4500	.01	.01	.01	.01	.01
23.7000	.01	.01	.01	.01	.01
23.9500	.01	.01	.01	.01	.01
24.2000	.00	.00	.00	.00	

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 10Y

Peak Discharge = .65 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 3032 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
11.6500	.00	.00	.05	.10	.14
11.9000	.19	.24	.30	.38	.47
12.1500	.56	.62	.65	.65	.63
12.4000	.60	.56	.52	.48	.43
12.6500	.38	.34	.30	.27	.24
12.9000	.22	.20	.18	.17	.15
13.1500	.14	.13	.12	.12	.11
13.4000	.10	.10	.10	.09	.09
13.6500	.09	.08	.08	.08	.08
13.9000	.08	.07	.07	.07	.07
14.1500	.07	.07	.06	.06	.06
14.4000	.06	.06	.06	.06	.06
14.6500	.06	.06	.05	.05	.05
14.9000	.05	.05	.05	.05	.05
15.1500	.05	.05	.05	.05	.05
15.4000	.05	.04	.04	.04	.04
15.6500	.04	.04	.04	.04	.04
15.9000	.04	.04	.04	.04	.04
16.1500	.03	.03	.03	.03	.03
16.4000	.03	.03	.03	.03	.03
16.6500	.03	.03	.03	.03	.03
16.9000	.03	.03	.03	.03	.03
17.1500	.03	.03	.03	.03	.03
17.4000	.03	.03	.02	.02	.02
17.6500	.02	.02	.02	.02	.02
17.9000	.02	.02	.02	.02	.02
18.1500	.02	.02	.02	.02	.02
18.4000	.02	.02	.02	.02	.02
18.6500	.02	.02	.02	.02	.02
18.9000	.02	.02	.02	.02	.02
19.1500	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.4000	.02	.02	.02	.02	.02
19.6500	.02	.02	.02	.02	.02
19.9000	.02	.02	.02	.02	.02
20.1500	.02	.02	.02	.02	.02
20.4000	.02	.02	.02	.02	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.01	.01	.01
21.1500	.01	.01	.01	.01	.01
21.4000	.01	.01	.01	.01	.01
21.6500	.01	.01	.01	.01	.01
21.9000	.01	.01	.01	.01	.01
22.1500	.01	.01	.01	.01	.01
22.4000	.01	.01	.01	.01	.01
22.6500	.01	.01	.01	.01	.01
22.9000	.01	.01	.01	.01	.01
23.1500	.01	.01	.01	.01	.01
23.4000	.01	.01	.01	.01	.01
23.6500	.01	.01	.01	.01	.01
23.9000	.01	.01	.01	.01	.01
24.1500	.01	.01	.01	.01	.00
24.4000	.00	.00	.00		

DIVERTED HYDROGRAPH...
HYG file =
HYG ID = PARKING ROOF
HYG Tag = 100Y

Peak Discharge = 1.24 cfs
Time to Peak = 12.2500 hrs
HYG Volume = 5825 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.1000	.00	.01	.03	.04	.06
10.3500	.07	.07	.08	.09	.09
10.6000	.10	.10	.11	.11	.11
10.8500	.12	.12	.12	.12	.13
11.1000	.13	.13	.14	.14	.15
11.3500	.15	.16	.17	.17	.18
11.6000	.19	.21	.23	.26	.30
11.8500	.35	.40	.47	.55	.67
12.1000	.88	1.10	1.22	1.24	1.19
12.3500	1.09	.98	.87	.76	.69
12.6000	.63	.57	.51	.46	.41
12.8500	.37	.34	.31	.28	.26
13.1000	.24	.22	.21	.20	.19
13.3500	.18	.17	.16	.15	.15
13.6000	.14	.14	.14	.13	.13
13.8500	.13	.12	.12	.12	.11
14.1000	.11	.11	.11	.11	.10
14.3500	.10	.10	.10	.10	.10
14.6000	.09	.09	.09	.09	.09
14.8500	.09	.09	.08	.08	.08
15.1000	.08	.08	.08	.08	.08
15.3500	.08	.07	.07	.07	.07
15.6000	.07	.07	.07	.07	.07
15.8500	.06	.06	.06	.06	.06
16.1000	.06	.06	.06	.06	.05
16.3500	.05	.05	.05	.05	.05
16.6000	.05	.05	.05	.05	.05
16.8500	.05	.05	.05	.05	.05
17.1000	.04	.04	.04	.04	.04
17.3500	.04	.04	.04	.04	.04
17.6000	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
17.8500	.04	.04	.04	.04	.04
18.1000	.03	.03	.03	.03	.03
18.3500	.03	.03	.03	.03	.03
18.6000	.03	.03	.03	.03	.03
18.8500	.03	.03	.03	.03	.03
19.1000	.03	.03	.03	.03	.03
19.3500	.03	.03	.03	.03	.03
19.6000	.03	.03	.03	.03	.03
19.8500	.03	.03	.03	.03	.03
20.1000	.03	.03	.03	.03	.03
20.3500	.03	.03	.03	.03	.03
20.6000	.03	.03	.03	.03	.03
20.8500	.02	.02	.02	.02	.02
21.1000	.02	.02	.02	.02	.02
21.3500	.02	.02	.02	.02	.02
21.6000	.02	.02	.02	.02	.02
21.8500	.02	.02	.02	.02	.02
22.1000	.02	.02	.02	.02	.02
22.3500	.02	.02	.02	.02	.02
22.6000	.02	.02	.02	.02	.02
22.8500	.02	.02	.02	.02	.02
23.1000	.02	.02	.02	.02	.02
23.3500	.02	.02	.02	.02	.02
23.6000	.02	.02	.02	.02	.02
23.8500	.02	.02	.02	.02	.02
24.1000	.02	.02	.01	.01	.01
24.3500	.01	.01	.01	.00	.00
24.6000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	1Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	1Y	2209	12.1500	.49

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	1Y	2209	12.1500	.49

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 1Y

Peak Discharge = .49 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 2209 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
2.0500	.00	.00	.00	.00	.00
2.3000	.00	.00	.00	.00	.00
2.5500	.00	.00	.00	.00	.00
2.8000	.00	.00	.00	.00	.00
3.0500	.00	.00	.00	.00	.00
3.3000	.00	.00	.00	.00	.00
3.5500	.00	.00	.00	.00	.00
3.8000	.00	.00	.00	.00	.00
4.0500	.00	.00	.00	.00	.00
4.3000	.00	.00	.00	.00	.00
4.5500	.01	.01	.01	.01	.01
4.8000	.01	.01	.01	.01	.01
5.0500	.01	.01	.01	.01	.01
5.3000	.01	.01	.01	.01	.01
5.5500	.01	.01	.01	.01	.01
5.8000	.01	.01	.01	.01	.01
6.0500	.01	.01	.01	.01	.01
6.3000	.01	.01	.01	.01	.01
6.5500	.01	.01	.01	.01	.01
6.8000	.01	.01	.01	.01	.01
7.0500	.01	.01	.01	.01	.01
7.3000	.01	.01	.01	.01	.01
7.5500	.01	.01	.01	.01	.01
7.8000	.01	.01	.01	.01	.01
8.0500	.01	.01	.01	.01	.02
8.3000	.02	.02	.02	.02	.02
8.5500	.02	.02	.02	.02	.02
8.8000	.02	.02	.02	.02	.02
9.0500	.02	.02	.02	.02	.02
9.3000	.02	.02	.02	.02	.02
9.5500	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
9.8000	.03	.03	.03	.03	.03
10.0500	.03	.03	.03	.03	.03
10.3000	.03	.03	.03	.03	.04
10.5500	.04	.04	.04	.04	.04
10.8000	.04	.04	.04	.04	.04
11.0500	.04	.05	.05	.05	.05
11.3000	.06	.06	.06	.06	.07
11.5500	.07	.08	.09	.11	.14
11.8000	.16	.19	.22	.26	.33
12.0500	.42	.48	.49	.46	.39
12.3000	.32	.28	.24	.20	.17
12.5500	.14	.12	.10	.09	.08
12.8000	.07	.07	.06	.06	.06
13.0500	.05	.05	.05	.05	.05
13.3000	.05	.05	.04	.04	.04
13.5500	.04	.04	.04	.04	.04
13.8000	.04	.04	.04	.04	.03
14.0500	.03	.03	.03	.03	.03
14.3000	.03	.03	.03	.03	.03
14.5500	.03	.03	.03	.03	.03
14.8000	.03	.03	.03	.03	.03
15.0500	.03	.03	.02	.02	.02
15.3000	.02	.02	.02	.02	.02
15.5500	.02	.02	.02	.02	.02
15.8000	.02	.02	.02	.02	.02
16.0500	.02	.02	.02	.02	.02
16.3000	.02	.02	.02	.02	.02
16.5500	.02	.02	.02	.02	.02
16.8000	.02	.01	.01	.01	.01
17.0500	.01	.01	.01	.01	.01
17.3000	.01	.01	.01	.01	.01
17.5500	.01	.01	.01	.01	.01
17.8000	.01	.01	.01	.01	.01
18.0500	.01	.01	.01	.01	.01
18.3000	.01	.01	.01	.01	.01
18.5500	.01	.01	.01	.01	.01
18.8000	.01	.01	.01	.01	.01
19.0500	.01	.01	.01	.01	.01
19.3000	.01	.01	.01	.01	.01
19.5500	.01	.01	.01	.01	.01
19.8000	.01	.01	.01	.01	.01
20.0500	.01	.01	.01	.01	.01
20.3000	.01	.01	.01	.01	.01
20.5500	.01	.01	.01	.01	.01
20.8000	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	10Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	10Y	4201	12.1500	.92

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	10Y	4201	12.1500	.92

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 10Y

Peak Discharge = .92 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 4201 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
1.0500	.00	.00	.00	.00	.00
1.3000	.00	.00	.00	.00	.00
1.5500	.00	.00	.00	.00	.00
1.8000	.00	.00	.00	.00	.00
2.0500	.01	.01	.01	.01	.01
2.3000	.01	.01	.01	.01	.01
2.5500	.01	.01	.01	.01	.01
2.8000	.01	.01	.01	.01	.01
3.0500	.01	.01	.01	.01	.01
3.3000	.01	.01	.01	.01	.01
3.5500	.01	.01	.01	.01	.01
3.8000	.01	.01	.01	.01	.01
4.0500	.01	.01	.01	.01	.01
4.3000	.01	.01	.01	.01	.01
4.5500	.01	.01	.01	.01	.01
4.8000	.01	.01	.01	.01	.01
5.0500	.01	.01	.01	.01	.01
5.3000	.01	.01	.02	.02	.02
5.5500	.02	.02	.02	.02	.02
5.8000	.02	.02	.02	.02	.02
6.0500	.02	.02	.02	.02	.02
6.3000	.02	.02	.02	.02	.02
6.5500	.02	.02	.02	.02	.02
6.8000	.02	.02	.02	.02	.02
7.0500	.02	.02	.02	.02	.02
7.3000	.02	.02	.02	.03	.03
7.5500	.03	.03	.03	.03	.03
7.8000	.03	.03	.03	.03	.03
8.0500	.03	.03	.03	.03	.03
8.3000	.03	.03	.03	.03	.03
8.5500	.04	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.8000	.04	.04	.04	.04	.04
9.0500	.04	.04	.04	.04	.05
9.3000	.05	.05	.05	.05	.05
9.5500	.05	.05	.05	.05	.05
9.8000	.05	.05	.05	.06	.06
10.0500	.06	.06	.06	.06	.06
10.3000	.06	.06	.07	.07	.07
10.5500	.07	.07	.07	.07	.08
10.8000	.08	.08	.08	.08	.08
11.0500	.08	.09	.09	.09	.10
11.3000	.10	.11	.11	.12	.13
11.5500	.13	.15	.18	.21	.25
11.8000	.30	.35	.41	.48	.62
12.0500	.78	.89	.92	.84	.72
12.3000	.60	.51	.44	.38	.32
12.5500	.26	.22	.18	.16	.14
12.8000	.13	.13	.12	.11	.11
13.0500	.10	.10	.09	.09	.09
13.3000	.09	.08	.08	.08	.08
13.5500	.08	.08	.07	.07	.07
13.8000	.07	.07	.07	.07	.06
14.0500	.06	.06	.06	.06	.06
14.3000	.06	.06	.06	.06	.05
14.5500	.05	.05	.05	.05	.05
14.8000	.05	.05	.05	.05	.05
15.0500	.05	.05	.05	.05	.04
15.3000	.04	.04	.04	.04	.04
15.5500	.04	.04	.04	.04	.04
15.8000	.04	.04	.04	.03	.03
16.0500	.03	.03	.03	.03	.03
16.3000	.03	.03	.03	.03	.03
16.5500	.03	.03	.03	.03	.03
16.8000	.03	.03	.03	.03	.03
17.0500	.03	.03	.03	.03	.02
17.3000	.02	.02	.02	.02	.02
17.5500	.02	.02	.02	.02	.02
17.8000	.02	.02	.02	.02	.02
18.0500	.02	.02	.02	.02	.02
18.3000	.02	.02	.02	.02	.02
18.5500	.02	.02	.02	.02	.02
18.8000	.02	.02	.02	.02	.02
19.0500	.02	.02	.02	.02	.02
19.3000	.02	.02	.02	.02	.02
19.5500	.02	.02	.02	.02	.02
19.8000	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
20.0500	.02	.02	.02	.02	.02
20.3000	.02	.02	.02	.02	.02
20.5500	.02	.02	.02	.02	.01
20.8000	.01	.01	.01	.01	.01
21.0500	.01	.01	.01	.01	.01
21.3000	.01	.01	.01	.01	.01
21.5500	.01	.01	.01	.01	.01
21.8000	.01	.01	.01	.01	.01
22.0500	.01	.01	.01	.01	.01
22.3000	.01	.01	.01	.01	.01
22.5500	.01	.01	.01	.01	.01
22.8000	.01	.01	.01	.01	.01
23.0500	.01	.01	.01	.01	.01
23.3000	.01	.01	.01	.01	.01
23.5500	.01	.01	.01	.01	.01
23.8000	.01	.01	.01	.01	.01
24.0500	.01	.01	.00	.00	.00
24.3000	.00				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PARKING ROOF IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 2A	PDA-2A		PDA-2A	100Y

INFLOWS TO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-2A	100Y	6994	12.1500	1.50

TOTAL FLOW INTO: PARKING ROOF IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PARKING ROOF IN	100Y	6994	12.1500	1.50

TOTAL NODE INFLOW...
HYG file =
HYG ID = PARKING ROOF IN
HYG Tag = 100Y

Peak Discharge = 1.50 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 6994 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
.6500	.00	.00	.00	.00	.00
.9000	.00	.00	.01	.01	.01
1.1500	.01	.01	.01	.01	.01
1.4000	.01	.01	.01	.01	.01
1.6500	.01	.01	.01	.01	.01
1.9000	.01	.01	.01	.01	.01
2.1500	.01	.01	.01	.01	.01
2.4000	.01	.01	.01	.02	.02
2.6500	.02	.02	.02	.02	.02
2.9000	.02	.02	.02	.02	.02
3.1500	.02	.02	.02	.02	.02
3.4000	.02	.02	.02	.02	.02
3.6500	.02	.02	.02	.02	.02
3.9000	.02	.02	.02	.02	.02
4.1500	.02	.02	.02	.02	.02
4.4000	.02	.02	.02	.02	.02
4.6500	.02	.02	.02	.02	.03
4.9000	.03	.03	.03	.03	.03
5.1500	.03	.03	.03	.03	.03
5.4000	.03	.03	.03	.03	.03
5.6500	.03	.03	.03	.03	.03
5.9000	.03	.03	.03	.03	.03
6.1500	.03	.03	.03	.03	.03
6.4000	.03	.03	.03	.03	.03
6.6500	.03	.04	.04	.04	.04
6.9000	.04	.04	.04	.04	.04
7.1500	.04	.04	.04	.04	.04
7.4000	.04	.04	.04	.04	.04
7.6500	.05	.05	.05	.05	.05
7.9000	.05	.05	.05	.05	.05
8.1500	.05	.05	.05	.05	.05

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.4000	.06	.06	.06	.06	.06
8.6500	.06	.06	.06	.07	.07
8.9000	.07	.07	.07	.07	.07
9.1500	.07	.07	.08	.08	.08
9.4000	.08	.08	.08	.08	.08
9.6500	.08	.09	.09	.09	.09
9.9000	.09	.09	.09	.09	.10
10.1500	.10	.10	.10	.10	.11
10.4000	.11	.11	.11	.12	.12
10.6500	.12	.12	.13	.13	.13
10.9000	.13	.13	.14	.14	.14
11.1500	.15	.16	.16	.17	.18
11.4000	.19	.20	.21	.22	.25
11.6500	.29	.35	.42	.50	.58
11.9000	.67	.79	1.02	1.27	1.46
12.1500	1.50	1.39	1.18	.99	.84
12.4000	.72	.62	.52	.43	.36
12.6500	.30	.26	.24	.22	.21
12.9000	.19	.18	.17	.17	.16
13.1500	.15	.15	.14	.14	.14
13.4000	.13	.13	.13	.13	.12
13.6500	.12	.12	.12	.11	.11
13.9000	.11	.11	.11	.10	.10
14.1500	.10	.10	.10	.09	.09
14.4000	.09	.09	.09	.09	.09
14.6500	.09	.09	.08	.08	.08
14.9000	.08	.08	.08	.08	.08
15.1500	.07	.07	.07	.07	.07
15.4000	.07	.07	.07	.07	.06
15.6500	.06	.06	.06	.06	.06
15.9000	.06	.06	.06	.05	.05
16.1500	.05	.05	.05	.05	.05
16.4000	.05	.05	.05	.05	.05
16.6500	.05	.05	.05	.05	.04
16.9000	.04	.04	.04	.04	.04
17.1500	.04	.04	.04	.04	.04
17.4000	.04	.04	.04	.04	.04
17.6500	.04	.04	.04	.04	.03
17.9000	.03	.03	.03	.03	.03
18.1500	.03	.03	.03	.03	.03
18.4000	.03	.03	.03	.03	.03
18.6500	.03	.03	.03	.03	.03
18.9000	.03	.03	.03	.03	.03
19.1500	.03	.03	.03	.03	.03
19.4000	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
19.6500	.03	.03	.03	.03	.03
19.9000	.03	.03	.03	.03	.03
20.1500	.03	.03	.03	.03	.03
20.4000	.03	.03	.03	.03	.02
20.6500	.02	.02	.02	.02	.02
20.9000	.02	.02	.02	.02	.02
21.1500	.02	.02	.02	.02	.02
21.4000	.02	.02	.02	.02	.02
21.6500	.02	.02	.02	.02	.02
21.9000	.02	.02	.02	.02	.02
22.1500	.02	.02	.02	.02	.02
22.4000	.02	.02	.02	.02	.02
22.6500	.02	.02	.02	.02	.02
22.9000	.02	.02	.02	.02	.02
23.1500	.02	.02	.02	.02	.02
23.4000	.02	.02	.02	.02	.02
23.6500	.02	.02	.02	.02	.02
23.9000	.02	.02	.02	.02	.01
24.1500	.01	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - PARKING ROOF IN 1Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 1Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	.49 cfs	at	12.1500 hrs
Peak Outflow	=	.17 cfs	at	12.5000 hrs
Peak Elevation	=	210.15 ft		
Peak Storage	=	1306 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	2209
- Infiltration	=	0
- HYG Vol OUT	=	1040
- Retained Vol	=	1169
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - PARKING ROOF IN 10Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 10Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	.92 cfs	at	12.1500 hrs
Peak Outflow	=	.65 cfs	at	12.2500 hrs
Peak Elevation	=	210.19 ft		
Peak Storage	=	1700 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	4201
- Infiltration	=	0
- HYG Vol OUT	=	3032
- Retained Vol	=	1169
Unrouted Vol	=	0 cu.ft (.001% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - PARKING ROOF IN 100Y
Outflow HYG file = NONE STORED - PARKING ROOF OUT 100Y

Pond Node Data = PARKING ROOF
Pond Volume Data = PARKING ROOF
Pond Outlet Data = GREEN ROOF OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	210.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	1.50 cfs	at	12.1500 hrs
Peak Outflow	=	1.24 cfs	at	12.2500 hrs
Peak Elevation	=	210.22 ft		
Peak Storage	=	1969 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	6994
- Infiltration	=	0
- HYG Vol OUT	=	5825
- Retained Vol	=	1170
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
170.00	.00	0	.00	.00	.00
170.10	.00	195	.37	.37	2.53
170.20	.00	389	.37	.37	4.69
170.30	.00	583	.37	.37	6.85
170.40	.00	778	.37	.37	9.01
170.50	.00	972	.37	.37	11.17
170.60	.00	1167	.37	.37	13.33
170.70	.00	1361	.37	.37	15.49
170.80	.00	1673	.37	.37	18.96
170.90	.00	2102	.37	.37	23.72
171.00	.00	2530	.37	.37	28.48
171.10	.00	2954	.37	.37	33.19
171.20	.00	3378	.37	.37	37.90
171.30	.00	3800	.37	.37	42.59
171.40	.00	4219	.37	.37	47.25
171.50	.00	4639	.37	.37	51.91
171.60	.00	5053	.37	.37	56.51
171.65	.00	5259	.37	.37	58.80
171.70	.01	5466	.37	.38	61.11
171.80	.08	5877	.37	.45	65.75

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
171.90	.23	6284	.37	.60	70.42
172.00	.45	6691	.37	.81	75.16
172.10	.72	7091	.37	1.09	79.87
172.20	1.05	7490	.37	1.42	84.64
172.30	1.44	7885	.37	1.80	89.42
172.40	1.87	8276	.37	2.24	94.19
172.50	2.34	8666	.37	2.70	98.99
172.60	2.84	9046	.37	3.21	103.72
172.70	3.37	9426	.37	3.74	108.47
172.80	3.94	9800	.37	4.30	113.19
172.90	4.67	10168	.37	5.04	118.02
173.00	5.03	10536	.37	5.40	122.46
173.10	5.37	10890	.37	5.73	126.73
173.20	5.68	11244	.37	6.05	130.98
173.30	5.98	11589	.37	6.35	135.12
173.40	6.26	11926	.37	6.63	139.14
173.50	6.53	12263	.37	6.90	143.16
173.60	6.80	12579	.37	7.17	146.94
173.70	7.05	12895	.37	7.42	150.69
173.80	7.30	13198	.37	7.66	154.30

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev = 170.00 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
173.90	7.53	13487	.37	7.90	157.75
174.00	7.75	13776	.37	8.12	161.19
174.10	7.98	14017	.37	8.34	164.09
174.20	8.19	14258	.37	8.55	166.98
174.30	8.32	14482	.37	8.69	169.60
174.40	8.45	14689	.37	8.82	172.03
174.50	8.58	14896	.37	8.95	174.46
174.60	8.72	15090	.37	9.08	176.75
174.70	8.85	15285	.37	9.22	179.05
174.80	8.97	15479	.37	9.34	181.33
174.90	9.09	15674	.37	9.46	183.61
175.00	9.22	15868	.37	9.58	185.89
175.10	9.61	16062	.37	9.97	188.45
175.20	10.20	16257	.37	10.56	191.19
175.30	10.91	16451	.37	11.28	194.07
175.40	11.70	16646	.37	12.06	197.01
175.50	12.53	16840	.37	12.89	200.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	1Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	1Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	1Y	10833	12.1500	2.74
	GREEN ROOF OUT	1Y	2370	12.5000	.33

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	1Y	13203	12.1500	2.74

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 1Y

Peak Discharge = 2.74 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 13203 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.6000	.00	.00	.00	.00	.00
8.8500	.01	.01	.01	.01	.01
9.1000	.01	.01	.01	.02	.02
9.3500	.02	.02	.02	.02	.03
9.6000	.03	.03	.03	.03	.03
9.8500	.04	.04	.04	.04	.05
10.1000	.05	.05	.05	.06	.06
10.3500	.06	.07	.07	.07	.08
10.6000	.08	.08	.09	.09	.10
10.8500	.10	.11	.11	.11	.12
11.1000	.13	.13	.14	.15	.17
11.3500	.18	.19	.21	.22	.24
11.6000	.28	.34	.42	.52	.65
11.8500	.79	.95	1.18	1.61	2.13
12.1000	2.55	2.74	2.67	2.42	2.15
12.3500	1.95	1.77	1.59	1.41	1.24
12.6000	1.08	.95	.86	.79	.74
12.8500	.70	.66	.63	.60	.57
13.1000	.54	.52	.50	.48	.47
13.3500	.45	.44	.43	.42	.41
13.6000	.40	.39	.38	.37	.36
13.8500	.36	.35	.34	.33	.32
14.1000	.32	.31	.31	.30	.30
14.3500	.29	.29	.28	.28	.28
14.6000	.27	.27	.26	.26	.26
14.8500	.25	.25	.25	.24	.24
15.1000	.24	.23	.23	.23	.22
15.3500	.22	.22	.21	.21	.21
15.6000	.20	.20	.19	.19	.19
15.8500	.18	.18	.18	.17	.17
16.1000	.17	.17	.16	.16	.16

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.3500	.16	.16	.15	.15	.15
16.6000	.15	.15	.15	.14	.14
16.8500	.14	.14	.14	.14	.13
17.1000	.13	.13	.13	.13	.13
17.3500	.13	.12	.12	.12	.12
17.6000	.12	.12	.11	.11	.11
17.8500	.11	.11	.11	.11	.10
18.1000	.10	.10	.10	.10	.10
18.3500	.10	.10	.10	.10	.10
18.6000	.10	.10	.09	.09	.09
18.8500	.09	.09	.09	.09	.09
19.1000	.09	.09	.09	.09	.09
19.3500	.09	.09	.09	.09	.09
19.6000	.09	.09	.09	.08	.08
19.8500	.08	.08	.08	.08	.08
20.1000	.08	.08	.08	.08	.08
20.3500	.08	.08	.08	.08	.08
20.6000	.08	.08	.08	.08	.08
20.8500	.08	.08	.08	.08	.07
21.1000	.07	.07	.07	.07	.07
21.3500	.07	.07	.07	.07	.07
21.6000	.07	.07	.07	.07	.07
21.8500	.07	.07	.07	.07	.07
22.1000	.07	.07	.07	.07	.07
22.3500	.07	.07	.07	.06	.06
22.6000	.06	.06	.06	.06	.06
22.8500	.06	.06	.06	.06	.06
23.1000	.06	.06	.06	.06	.06
23.3500	.06	.06	.06	.06	.06
23.6000	.06	.06	.06	.06	.06
23.8500	.06	.06	.05	.05	.05
24.1000	.04	.03	.02	.01	.01
24.3500	.01	.01	.01	.01	.00
24.6000	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	10Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	10Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	10Y	26656	12.1500	6.67
	GREEN ROOF OUT	10Y	6399	12.3000	1.25

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	10Y	33054	12.1500	7.62

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 10Y

Peak Discharge = 7.62 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 33054 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.0000	.00	.00	.00	.00	.00
6.2500	.00	.01	.01	.01	.01
6.5000	.01	.01	.01	.01	.01
6.7500	.01	.02	.02	.02	.02
7.0000	.02	.02	.02	.03	.03
7.2500	.03	.03	.03	.03	.04
7.5000	.04	.04	.04	.04	.04
7.7500	.05	.05	.05	.05	.05
8.0000	.06	.06	.06	.06	.06
8.2500	.07	.07	.07	.08	.08
8.5000	.08	.09	.09	.09	.10
8.7500	.10	.11	.11	.11	.12
9.0000	.12	.13	.13	.13	.14
9.2500	.14	.15	.15	.16	.16
9.5000	.17	.17	.18	.18	.19
9.7500	.19	.20	.20	.21	.22
10.0000	.22	.23	.23	.24	.25
10.2500	.26	.27	.28	.29	.30
10.5000	.31	.32	.33	.34	.35
10.7500	.36	.37	.38	.39	.40
11.0000	.42	.43	.45	.47	.49
11.2500	.52	.56	.59	.63	.67
11.5000	.74	.82	.95	1.14	1.40
11.7500	1.73	2.10	2.50	2.95	3.57
12.0000	4.71	6.02	7.06	7.62	7.30
12.2500	6.50	5.70	5.06	4.49	3.96
12.5000	3.43	2.95	2.51	2.16	1.92
12.7500	1.77	1.65	1.55	1.46	1.38
13.0000	1.30	1.23	1.16	1.11	1.06
13.2500	1.03	.99	.96	.94	.91
13.5000	.89	.86	.84	.82	.80

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
13.7500	.78	.76	.74	.73	.71
14.0000	.69	.67	.66	.65	.63
14.2500	.62	.61	.60	.59	.59
14.5000	.58	.57	.56	.55	.54
14.7500	.54	.53	.52	.51	.51
15.0000	.50	.49	.48	.48	.47
15.2500	.46	.46	.45	.44	.43
15.5000	.43	.42	.41	.41	.40
15.7500	.39	.38	.38	.37	.36
16.0000	.36	.35	.34	.34	.33
16.2500	.33	.32	.32	.32	.31
16.5000	.31	.31	.30	.30	.30
16.7500	.29	.29	.29	.28	.28
17.0000	.28	.27	.27	.27	.26
17.2500	.26	.26	.25	.25	.25
17.5000	.25	.24	.24	.24	.23
17.7500	.23	.23	.22	.22	.22
18.0000	.21	.21	.21	.21	.20
18.2500	.20	.20	.20	.20	.20
18.5000	.20	.20	.19	.19	.19
18.7500	.19	.19	.19	.19	.19
19.0000	.19	.19	.18	.18	.18
19.2500	.18	.18	.18	.18	.18
19.5000	.18	.18	.17	.17	.17
19.7500	.17	.17	.17	.17	.17
20.0000	.17	.17	.17	.16	.16
20.2500	.16	.16	.16	.16	.16
20.5000	.16	.16	.16	.16	.16
20.7500	.16	.15	.15	.15	.15
21.0000	.15	.15	.15	.15	.15
21.2500	.15	.15	.15	.15	.15
21.5000	.15	.14	.14	.14	.14
21.7500	.14	.14	.14	.14	.14
22.0000	.14	.14	.14	.14	.14
22.2500	.13	.13	.13	.13	.13
22.5000	.13	.13	.13	.13	.13
22.7500	.13	.13	.13	.13	.12
23.0000	.12	.12	.12	.12	.12
23.2500	.12	.12	.12	.12	.12
23.5000	.12	.12	.12	.12	.11
23.7500	.11	.11	.11	.11	.11
24.0000	.11	.10	.08	.06	.04
24.2500	.03	.02	.02	.01	.01
24.5000	.01	.01	.01	.01	.01
24.7500	.01	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs	
25.0000	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1A IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1A	PDA-1A		PDA-1A	100Y
GREEN ROOF OUT	GREEN ROOF	IN	GREEN ROOF OUT	100Y

INFLOWS TO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1A	100Y	50435	12.1500	12.24
	GREEN ROOF OUT	100Y	12047	12.2500	2.23

TOTAL FLOW INTO: SYSTEM 1A IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1A IN	100Y	62482	12.1500	14.15

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1A IN
HYG Tag = 100Y

Peak Discharge = 14.15 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 62482 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.1000	.00	.00	.00	.00	.01
4.3500	.01	.01	.01	.01	.01
4.6000	.01	.02	.02	.02	.02
4.8500	.02	.02	.03	.03	.03
5.1000	.03	.03	.03	.04	.04
5.3500	.04	.04	.04	.04	.05
5.6000	.05	.05	.05	.05	.05
5.8500	.06	.06	.06	.06	.06
6.1000	.06	.07	.07	.07	.07
6.3500	.08	.08	.08	.08	.09
6.6000	.09	.09	.10	.10	.10
6.8500	.11	.11	.11	.12	.12
7.1000	.12	.13	.13	.13	.14
7.3500	.14	.14	.15	.15	.16
7.6000	.16	.16	.17	.17	.18
7.8500	.18	.18	.19	.19	.20
8.1000	.20	.21	.21	.22	.23
8.3500	.23	.24	.25	.26	.26
8.6000	.27	.28	.29	.30	.31
8.8500	.31	.32	.33	.34	.35
9.1000	.36	.37	.38	.39	.40
9.3500	.41	.41	.42	.43	.44
9.6000	.45	.46	.47	.50	.53
9.8500	.56	.58	.61	.63	.65
10.1000	.67	.70	.72	.75	.77
10.3500	.80	.83	.85	.88	.90
10.6000	.93	.96	.98	1.01	1.03
10.8500	1.06	1.09	1.11	1.14	1.17
11.1000	1.21	1.25	1.31	1.38	1.45
11.3500	1.53	1.61	1.70	1.78	1.91
11.6000	2.13	2.46	2.95	3.54	4.23

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.8500	4.95	5.74	6.89	9.04	11.47
12.1000	13.37	14.15	13.36	11.76	10.22
12.3500	9.01	7.94	6.97	6.01	5.14
12.6000	4.36	3.74	3.28	2.95	2.70
12.8500	2.50	2.34	2.22	2.10	1.99
13.1000	1.90	1.81	1.75	1.69	1.64
13.3500	1.60	1.56	1.52	1.48	1.45
13.6000	1.41	1.38	1.35	1.32	1.29
13.8500	1.26	1.23	1.20	1.17	1.15
14.1000	1.12	1.10	1.08	1.06	1.04
14.3500	1.03	1.01	1.00	.98	.97
14.6000	.96	.94	.93	.92	.90
14.8500	.89	.88	.87	.85	.84
15.1000	.83	.82	.80	.79	.78
15.3500	.77	.75	.74	.73	.72
15.6000	.70	.69	.68	.67	.66
15.8500	.64	.63	.62	.61	.60
16.1000	.58	.57	.57	.56	.55
16.3500	.55	.54	.53	.53	.52
16.6000	.52	.51	.50	.50	.49
16.8500	.49	.48	.48	.47	.47
17.1000	.46	.45	.45	.44	.44
17.3500	.43	.43	.42	.42	.41
17.6000	.41	.40	.40	.39	.39
17.8500	.38	.37	.37	.36	.36
18.1000	.35	.35	.35	.34	.34
18.3500	.34	.34	.34	.33	.33
18.6000	.33	.33	.33	.32	.32
18.8500	.32	.32	.32	.32	.31
19.1000	.31	.31	.31	.31	.31
19.3500	.30	.30	.30	.30	.30
19.6000	.30	.30	.29	.29	.29
19.8500	.29	.29	.29	.28	.28
20.1000	.28	.28	.28	.28	.28
20.3500	.27	.27	.27	.27	.27
20.6000	.27	.27	.27	.26	.26
20.8500	.26	.26	.26	.26	.26
21.1000	.26	.25	.25	.25	.25
21.3500	.25	.25	.25	.25	.24
21.6000	.24	.24	.24	.24	.24
21.8500	.24	.24	.24	.23	.23
22.1000	.23	.23	.23	.23	.23
22.3500	.23	.22	.22	.22	.22
22.6000	.22	.22	.22	.22	.22
22.8500	.21	.21	.21	.21	.21

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.1000	.21	.21	.21	.20	.20
23.3500	.20	.20	.20	.20	.20
23.6000	.20	.19	.19	.19	.19
23.8500	.19	.19	.19	.19	.18
24.1000	.14	.10	.06	.05	.03
24.3500	.03	.02	.02	.02	.01
24.6000	.01	.01	.01	.01	.01
24.8500	.01	.01	.01	.00	.00
25.1000	.00	.00	.00		

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 1Y

Peak Discharge = .37 cfs
Time to Peak = 11.8000 hrs
HYG Volume = 13202 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.6000	.00	.00	.00	.00	.00
8.8500	.00	.00	.00	.01	.01
9.1000	.01	.01	.01	.01	.01
9.3500	.01	.02	.02	.02	.02
9.6000	.02	.02	.03	.03	.03
9.8500	.03	.03	.03	.04	.04
10.1000	.04	.04	.05	.05	.05
10.3500	.05	.06	.06	.06	.07
10.6000	.07	.07	.08	.08	.08
10.8500	.09	.09	.10	.10	.11
11.1000	.11	.12	.12	.13	.14
11.3500	.15	.16	.17	.18	.20
11.6000	.22	.24	.28	.34	.37
11.8500	.37	.37	.37	.37	.37
12.1000	.37	.37	.37	.37	.37
12.3500	.37	.37	.37	.37	.37
12.6000	.37	.37	.37	.37	.37
12.8500	.37	.37	.37	.37	.37
13.1000	.37	.37	.37	.37	.37
13.3500	.37	.37	.37	.37	.37
13.6000	.37	.37	.37	.37	.37
13.8500	.37	.37	.37	.37	.37
14.1000	.37	.37	.37	.37	.37
14.3500	.37	.37	.37	.37	.37
14.6000	.37	.37	.37	.37	.37
14.8500	.37	.37	.37	.37	.37
15.1000	.37	.37	.37	.37	.37
15.3500	.37	.37	.37	.37	.37
15.6000	.37	.37	.37	.37	.37
15.8500	.37	.37	.37	.37	.37
16.1000	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
16.3500	.37	.37	.37	.37	.37
16.6000	.37	.37	.37	.37	.37
16.8500	.37	.37	.37	.37	.37
17.1000	.37	.37	.37	.37	.37
17.3500	.37	.37	.37	.37	.37
17.6000	.37	.37	.37	.37	.37
17.8500	.37	.37	.37	.37	.37
18.1000	.37	.37	.37	.37	.37
18.3500	.37	.37	.37	.37	.37
18.6000	.37	.37	.37	.37	.37
18.8500	.37	.37	.37	.37	.37
19.1000	.37	.37	.37	.37	.37
19.3500	.37	.37	.37	.37	.37
19.6000	.37	.37	.37	.37	.37
19.8500	.37	.37	.37	.37	.37
20.1000	.37	.37	.37	.37	.37
20.3500	.30	.23	.19	.16	.13
20.6000	.12	.11	.10	.09	.09
20.8500	.08	.08	.08	.08	.08
21.1000	.08	.08	.08	.07	.07
21.3500	.07	.07	.07	.07	.07
21.6000	.07	.07	.07	.07	.07
21.8500	.07	.07	.07	.07	.07
22.1000	.07	.07	.07	.07	.07
22.3500	.07	.07	.07	.07	.07
22.6000	.07	.06	.06	.06	.06
22.8500	.06	.06	.06	.06	.06
23.1000	.06	.06	.06	.06	.06
23.3500	.06	.06	.06	.06	.06
23.6000	.06	.06	.06	.06	.06
23.8500	.06	.06	.06	.06	.05
24.1000	.05	.05	.04	.03	.03
24.3500	.02	.02	.01	.01	.01
24.6000	.01	.01	.01	.01	.00
24.8500	.00				

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 10Y

Peak Discharge = .37 cfs
Time to Peak = 10.9500 hrs
HYG Volume = 19727 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.0000	.00	.00	.00	.00	.00
6.2500	.00	.00	.00	.00	.01
6.5000	.01	.01	.01	.01	.01
6.7500	.01	.01	.01	.02	.02
7.0000	.02	.02	.02	.02	.02
7.2500	.02	.03	.03	.03	.03
7.5000	.03	.03	.04	.04	.04
7.7500	.04	.04	.04	.05	.05
8.0000	.05	.05	.05	.06	.06
8.2500	.06	.06	.07	.07	.07
8.5000	.07	.08	.08	.08	.09
8.7500	.09	.09	.10	.10	.11
9.0000	.11	.11	.12	.12	.13
9.2500	.13	.14	.14	.14	.15
9.5000	.15	.16	.16	.17	.17
9.7500	.18	.18	.19	.19	.20
10.0000	.21	.21	.22	.22	.23
10.2500	.24	.24	.25	.26	.27
10.5000	.28	.29	.30	.31	.32
10.7500	.33	.34	.35	.36	.37
11.0000	.37	.37	.37	.37	.37
11.2500	.37	.37	.37	.37	.37
11.5000	.37	.37	.37	.37	.37
11.7500	.37	.37	.37	.37	.37
12.0000	.37	.37	.37	.37	.37
12.2500	.37	.37	.37	.37	.37
12.5000	.37	.37	.37	.37	.37
12.7500	.37	.37	.37	.37	.37
13.0000	.37	.37	.37	.37	.37
13.2500	.37	.37	.37	.37	.37
13.5000	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
13.7500	.37	.37	.37	.37	.37
14.0000	.37	.37	.37	.37	.37
14.2500	.37	.37	.37	.37	.37
14.5000	.37	.37	.37	.37	.37
14.7500	.37	.37	.37	.37	.37
15.0000	.37	.37	.37	.37	.37
15.2500	.37	.37	.37	.37	.37
15.5000	.37	.37	.37	.37	.37
15.7500	.37	.37	.37	.37	.37
16.0000	.37	.37	.37	.37	.37
16.2500	.37	.37	.37	.37	.37
16.5000	.37	.37	.37	.37	.37
16.7500	.37	.37	.37	.37	.37
17.0000	.37	.37	.37	.37	.37
17.2500	.37	.37	.37	.37	.37
17.5000	.37	.37	.37	.37	.37
17.7500	.37	.37	.37	.37	.37
18.0000	.37	.37	.37	.37	.37
18.2500	.37	.37	.37	.37	.37
18.5000	.37	.37	.37	.37	.37
18.7500	.37	.37	.37	.37	.37
19.0000	.37	.37	.37	.37	.37
19.2500	.37	.37	.37	.37	.37
19.5000	.37	.37	.37	.37	.37
19.7500	.37	.37	.37	.37	.37
20.0000	.37	.37	.37	.37	.37
20.2500	.37	.37	.37	.37	.37
20.5000	.37	.37	.37	.37	.37
20.7500	.37	.37	.37	.37	.37
21.0000	.37	.37	.37	.37	.37
21.2500	.37	.37	.37	.37	.37
21.5000	.37	.37	.37	.37	.37
21.7500	.37	.37	.37	.37	.37
22.0000	.37	.37	.37	.37	.37
22.2500	.37	.37	.37	.37	.37
22.5000	.37	.37	.37	.37	.37
22.7500	.37	.37	.37	.37	.37
23.0000	.37	.37	.37	.37	.37
23.2500	.37	.37	.37	.37	.37
23.5000	.37	.37	.37	.37	.37
23.7500	.37	.37	.37	.37	.37
24.0000	.37	.37	.37	.37	.37
24.2500	.37	.28	.20	.15	.11
24.5000	.08	.06	.04	.03	.03
24.7500	.02	.02	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs				
25.0000	.01	.00	.00	.00

HYG file =
HYG ID = SYSTEM 1A INF
HYG Tag = 100Y

Peak Discharge = .37 cfs
Time to Peak = 9.3000 hrs
HYG Volume = 25137 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
4.1000	.00	.00	.00	.00	.00
4.3500	.00	.01	.01	.01	.01
4.6000	.01	.01	.01	.01	.02
4.8500	.02	.02	.02	.02	.02
5.1000	.03	.03	.03	.03	.03
5.3500	.03	.04	.04	.04	.04
5.6000	.04	.04	.05	.05	.05
5.8500	.05	.05	.05	.06	.06
6.1000	.06	.06	.06	.06	.07
6.3500	.07	.07	.07	.08	.08
6.6000	.08	.09	.09	.09	.09
6.8500	.10	.10	.10	.11	.11
7.1000	.11	.12	.12	.12	.13
7.3500	.13	.13	.14	.14	.14
7.6000	.15	.15	.16	.16	.16
7.8500	.17	.17	.18	.18	.18
8.1000	.19	.19	.20	.20	.21
8.3500	.22	.22	.23	.24	.24
8.6000	.25	.26	.27	.27	.28
8.8500	.29	.30	.31	.31	.32
9.1000	.33	.34	.35	.36	.37
9.3500	.37	.37	.37	.37	.37
9.6000	.37	.37	.37	.37	.37
9.8500	.37	.37	.37	.37	.37
10.1000	.37	.37	.37	.37	.37
10.3500	.37	.37	.37	.37	.37
10.6000	.37	.37	.37	.37	.37
10.8500	.37	.37	.37	.37	.37
11.1000	.37	.37	.37	.37	.37
11.3500	.37	.37	.37	.37	.37
11.6000	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
11.8500	.37	.37	.37	.37	.37
12.1000	.37	.37	.37	.37	.37
12.3500	.37	.37	.37	.37	.37
12.6000	.37	.37	.37	.37	.37
12.8500	.37	.37	.37	.37	.37
13.1000	.37	.37	.37	.37	.37
13.3500	.37	.37	.37	.37	.37
13.6000	.37	.37	.37	.37	.37
13.8500	.37	.37	.37	.37	.37
14.1000	.37	.37	.37	.37	.37
14.3500	.37	.37	.37	.37	.37
14.6000	.37	.37	.37	.37	.37
14.8500	.37	.37	.37	.37	.37
15.1000	.37	.37	.37	.37	.37
15.3500	.37	.37	.37	.37	.37
15.6000	.37	.37	.37	.37	.37
15.8500	.37	.37	.37	.37	.37
16.1000	.37	.37	.37	.37	.37
16.3500	.37	.37	.37	.37	.37
16.6000	.37	.37	.37	.37	.37
16.8500	.37	.37	.37	.37	.37
17.1000	.37	.37	.37	.37	.37
17.3500	.37	.37	.37	.37	.37
17.6000	.37	.37	.37	.37	.37
17.8500	.37	.37	.37	.37	.37
18.1000	.37	.37	.37	.37	.37
18.3500	.37	.37	.37	.37	.37
18.6000	.37	.37	.37	.37	.37
18.8500	.37	.37	.37	.37	.37
19.1000	.37	.37	.37	.37	.37
19.3500	.37	.37	.37	.37	.37
19.6000	.37	.37	.37	.37	.37
19.8500	.37	.37	.37	.37	.37
20.1000	.37	.37	.37	.37	.37
20.3500	.37	.37	.37	.37	.37
20.6000	.37	.37	.37	.37	.37
20.8500	.37	.37	.37	.37	.37
21.1000	.37	.37	.37	.37	.37
21.3500	.37	.37	.37	.37	.37
21.6000	.37	.37	.37	.37	.37
21.8500	.37	.37	.37	.37	.37
22.1000	.37	.37	.37	.37	.37
22.3500	.37	.37	.37	.37	.37
22.6000	.37	.37	.37	.37	.37
22.8500	.37	.37	.37	.37	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
23.1000	.37	.37	.37	.37	.37
23.3500	.37	.37	.37	.37	.37
23.6000	.37	.37	.37	.37	.37
23.8500	.37	.37	.37	.37	.37
24.1000	.37	.37	.37	.37	.37
24.3500	.37	.37	.37	.37	.37
24.6000	.37	.37	.37	.37	.37
24.8500	.37	.37	.37	.37	.37
25.1000	.37	.37	.37	.37	.37
25.3500	.37	.37	.37	.37	.37
25.6000	.37	.37	.37	.37	.37
25.8500	.37	.37	.37	.37	.37
26.1000	.37	.37	.37	.37	.37
26.3500	.37	.37	.37	.37	.30
26.6000	.21	.15	.11	.08	.05
26.8500	.04	.03	.02	.01	.01
27.1000	.01	.00	.00	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 1Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	2.74 cfs	at	12.1500 hrs
Peak Outflow	=	.00 cfs	at	8.6500 hrs
Peak Infiltration	=	.37 cfs	at	11.8000 hrs

Peak Elevation	=	171.60 ft
Peak Storage	=	5041 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	13203
- Infiltration	=	13202
- HYG Vol OUT	=	0
- Retained Vol	=	1
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 10Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 10Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	7.62 cfs	at	12.1500 hrs
Peak Outflow	=	3.74 cfs	at	12.4500 hrs
Peak Infiltration	=	.37 cfs	at	10.9500 hrs

Peak Elevation	=	172.76 ft
Peak Storage	=	9671 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	33054
- Infiltration	=	19727
- HYG Vol OUT	=	13326
- Retained Vol	=	1
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1A IN 100Y
Outflow HYG file = NONE STORED - SYSTEM 1A OUT 100Y

Pond Node Data = SYSTEM 1A
Pond Volume Data = SYSTEM 1A
Pond Outlet Data = OCS 1A

Infiltration = .37 cfs

INITIAL CONDITIONS

Starting WS Elev	=	170.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	14.15 cfs	at	12.1500 hrs
Peak Outflow	=	8.77 cfs	at	12.3500 hrs
Peak Infiltration	=	.37 cfs	at	9.3000 hrs

Peak Elevation	=	174.64 ft
Peak Storage	=	15162 cu.ft

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	62482
- Infiltration	=	25137
- HYG Vol OUT	=	37343
- Retained Vol	=	1
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
191.75	.00	0	.00	.00	.00
191.85	.02	209	.00	.02	2.34
191.95	.08	417	.00	.08	4.72
192.05	.17	626	.00	.17	7.12
192.15	.28	834	.00	.28	9.55
192.25	.43	1043	.00	.43	12.01
192.35	.60	1251	.00	.60	14.50
192.45	.79	1460	.00	.79	17.01
192.55	1.03	1792	.00	1.03	20.95
192.65	1.23	2249	.00	1.23	26.22
192.75	1.38	2705	.00	1.38	31.44
192.85	1.52	3159	.00	1.52	36.62
192.95	1.66	3613	.00	1.66	41.80
193.05	1.79	4065	.00	1.79	46.96
193.15	1.92	4516	.00	1.92	52.09
193.25	2.04	4966	.00	2.04	57.22
193.35	2.15	5412	.00	2.15	62.29
193.45	2.27	5859	.00	2.27	67.37
193.55	2.38	6303	.00	2.38	72.41
193.65	2.49	6745	.00	2.49	77.43

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
193.75	2.59	7187	.00	2.59	82.44
193.85	2.69	7624	.00	2.69	87.40
193.95	2.79	8061	.00	2.79	92.36
194.05	2.88	8496	.00	2.88	97.28
194.15	2.97	8927	.00	2.97	102.16
194.25	3.07	9358	.00	3.07	107.04
194.35	3.15	9783	.00	3.15	111.85
194.45	3.24	10208	.00	3.24	116.66
194.55	3.33	10629	.00	3.33	121.42
194.65	3.41	11046	.00	3.41	126.14
194.75	3.50	11463	.00	3.50	130.86
194.85	3.57	11873	.00	3.57	135.49
194.95	3.65	12282	.00	3.65	140.12
195.05	3.73	12687	.00	3.73	144.70
195.15	3.80	13088	.00	3.80	149.22
195.25	3.88	13488	.00	3.88	153.75
195.35	3.96	13879	.00	3.96	158.17
195.45	4.03	14270	.00	4.03	162.58
195.55	4.10	14655	.00	4.10	166.93
195.65	4.17	15034	.00	4.17	171.21

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
195.75	4.24	15413	.00	4.24	175.50
195.85	4.31	15779	.00	4.31	179.64
195.95	4.38	16146	.00	4.38	183.77
196.05	4.45	16505	.00	4.45	187.83
196.15	4.52	16856	.00	4.52	191.81
196.25	4.58	17208	.00	4.58	195.78
196.35	4.64	17542	.00	4.64	199.56
196.45	4.70	17877	.00	4.70	203.33
196.55	4.77	18201	.00	4.77	207.00
196.65	4.83	18514	.00	4.83	210.54
196.75	4.89	18828	.00	4.89	214.09
196.85	4.95	19113	.00	4.95	217.32
196.95	5.01	19398	.00	5.01	220.55
197.05	5.07	19660	.00	5.07	223.52
197.15	5.13	19899	.00	5.13	226.23
197.25	5.19	20137	.00	5.19	228.93
197.35	5.25	20356	.00	5.25	231.42
197.45	5.30	20575	.00	5.30	233.91
197.55	5.36	20788	.00	5.36	236.34
197.65	5.42	20997	.00	5.42	238.72

LEVEL POOL ROUTING DATA

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 191.75 ft
Starting Volume = 0 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .0500 hrs

Elevation ft	Outflow cfs	Storage cu.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
197.75	5.47	21206	.00	5.47	241.09
197.85	5.53	21414	.00	5.53	243.46
197.95	5.58	21623	.00	5.58	245.83
198.05	5.64	21831	.00	5.64	248.21
198.15	5.69	22040	.00	5.69	250.58
198.25	5.74	22249	.00	5.74	252.95
198.35	5.80	22457	.00	5.80	255.32
198.45	5.85	22666	.00	5.85	257.69
198.50	5.88	22770	.00	5.88	258.88

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1B	PDA-1B		PDA-1B	1Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	1Y	10773	12.2000	2.45

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	1Y	10773	12.2000	2.45

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 1Y

Peak Discharge = 2.45 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 10773 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
10.7000	.00	.00	.00	.01	.01
10.9500	.01	.02	.02	.03	.03
11.2000	.04	.04	.05	.06	.07
11.4500	.08	.09	.10	.13	.16
11.7000	.20	.27	.36	.46	.59
11.9500	.78	1.11	1.55	2.01	2.35
12.2000	2.45	2.30	2.08	1.85	1.66
12.4500	1.47	1.29	1.11	.94	.80
12.7000	.70	.62	.57	.53	.50
12.9500	.47	.45	.43	.41	.39
13.2000	.38	.37	.36	.35	.35
13.4500	.34	.34	.33	.33	.32
13.7000	.32	.31	.31	.30	.29
13.9500	.29	.28	.28	.27	.27
14.2000	.26	.26	.26	.25	.25
14.4500	.25	.25	.24	.24	.24
14.7000	.24	.23	.23	.23	.22
14.9500	.22	.22	.22	.21	.21
15.2000	.21	.20	.20	.20	.20
15.4500	.19	.19	.19	.18	.18
15.7000	.18	.17	.17	.17	.17
15.9500	.16	.16	.16	.15	.15
16.2000	.15	.15	.15	.14	.14
16.4500	.14	.14	.14	.14	.14
16.7000	.13	.13	.13	.13	.13
16.9500	.13	.13	.12	.12	.12
17.2000	.12	.12	.12	.12	.12
17.4500	.11	.11	.11	.11	.11
17.7000	.11	.11	.10	.10	.10
17.9500	.10	.10	.10	.10	.09
18.2000	.09	.09	.09	.09	.09

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
18.4500	.09	.09	.09	.09	.09
18.7000	.09	.09	.09	.09	.09
18.9500	.09	.09	.09	.09	.09
19.2000	.09	.09	.08	.08	.08
19.4500	.08	.08	.08	.08	.08
19.7000	.08	.08	.08	.08	.08
19.9500	.08	.08	.08	.08	.08
20.2000	.08	.08	.08	.08	.08
20.4500	.08	.08	.08	.07	.07
20.7000	.07	.07	.07	.07	.07
20.9500	.07	.07	.07	.07	.07
21.2000	.07	.07	.07	.07	.07
21.4500	.07	.07	.07	.07	.07
21.7000	.07	.07	.07	.07	.07
21.9500	.07	.07	.07	.07	.07
22.2000	.06	.06	.06	.06	.06
22.4500	.06	.06	.06	.06	.06
22.7000	.06	.06	.06	.06	.06
22.9500	.06	.06	.06	.06	.06
23.2000	.06	.06	.06	.06	.06
23.4500	.06	.06	.06	.06	.06
23.7000	.06	.05	.05	.05	.05
23.9500	.05	.05	.05	.04	.03
24.2000	.02	.01	.01	.00	.00
24.4500	.00	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1B	PDA-1B		PDA-1B	10Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	10Y	32076	12.2000	7.60

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	10Y	32076	12.2000	7.60

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 10Y

Peak Discharge = 7.60 cfs
Time to Peak = 12.2000 hrs
HYG Volume = 32076 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
8.4000	.00	.00	.00	.01	.01
8.6500	.01	.01	.02	.02	.02
8.9000	.03	.03	.03	.04	.04
9.1500	.05	.05	.06	.06	.06
9.4000	.07	.07	.08	.08	.09
9.6500	.09	.10	.11	.11	.12
9.9000	.12	.13	.14	.14	.15
10.1500	.16	.17	.17	.18	.19
10.4000	.20	.21	.22	.23	.25
10.6500	.26	.27	.28	.29	.31
10.9000	.32	.33	.35	.36	.38
11.1500	.40	.43	.46	.49	.53
11.4000	.56	.60	.65	.70	.80
11.6500	.94	1.14	1.41	1.75	2.13
11.9000	2.57	3.17	4.19	5.49	6.76
12.1500	7.55	7.60	6.96	6.12	5.34
12.4000	4.70	4.10	3.54	3.02	2.54
12.6500	2.15	1.86	1.65	1.50	1.40
12.9000	1.31	1.24	1.17	1.11	1.06
13.1500	1.01	.98	.95	.93	.91
13.4000	.89	.88	.86	.85	.83
13.6500	.82	.80	.79	.77	.76
13.9000	.74	.73	.71	.70	.68
14.1500	.67	.66	.65	.64	.63
14.4000	.63	.62	.61	.60	.60
14.6500	.59	.58	.57	.57	.56
14.9000	.55	.55	.54	.53	.52
15.1500	.52	.51	.50	.49	.49
15.4000	.48	.47	.46	.46	.45
15.6500	.44	.43	.43	.42	.41
15.9000	.40	.39	.39	.38	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time hrs | Time on left represents time for first value in each row.

Time hrs					
16.1500	.37	.36	.36	.35	.35
16.4000	.34	.34	.34	.33	.33
16.6500	.33	.32	.32	.32	.31
16.9000	.31	.31	.30	.30	.30
17.1500	.29	.29	.29	.28	.28
17.4000	.28	.27	.27	.27	.26
17.6500	.26	.26	.25	.25	.25
17.9000	.24	.24	.24	.23	.23
18.1500	.23	.22	.22	.22	.22
18.4000	.22	.22	.22	.22	.22
18.6500	.21	.21	.21	.21	.21
18.9000	.21	.21	.21	.21	.21
19.1500	.20	.20	.20	.20	.20
19.4000	.20	.20	.20	.20	.20
19.6500	.19	.19	.19	.19	.19
19.9000	.19	.19	.19	.19	.19
20.1500	.18	.18	.18	.18	.18
20.4000	.18	.18	.18	.18	.18
20.6500	.18	.18	.17	.17	.17
20.9000	.17	.17	.17	.17	.17
21.1500	.17	.17	.17	.17	.17
21.4000	.16	.16	.16	.16	.16
21.6500	.16	.16	.16	.16	.16
21.9000	.16	.16	.16	.15	.15
22.1500	.15	.15	.15	.15	.15
22.4000	.15	.15	.15	.15	.15
22.6500	.15	.14	.14	.14	.14
22.9000	.14	.14	.14	.14	.14
23.1500	.14	.14	.14	.14	.13
23.4000	.13	.13	.13	.13	.13
23.6500	.13	.13	.13	.13	.13
23.9000	.13	.12	.12	.12	.10
24.1500	.07	.04	.03	.02	.01
24.4000	.01	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SYSTEM 1C IN

HYG Directory: P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
ADDLINK 1B	PDA-1B		PDA-1B	100Y

INFLOWS TO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	PDA-1B	100Y	66745	12.1500	15.70

TOTAL FLOW INTO: SYSTEM 1C IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time hrs	Peak Flow cfs
	SYSTEM 1C IN	100Y	66745	12.1500	15.70

TOTAL NODE INFLOW...
HYG file =
HYG ID = SYSTEM 1C IN
HYG Tag = 100Y

Peak Discharge = 15.70 cfs
Time to Peak = 12.1500 hrs
HYG Volume = 66745 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
6.2500	.00	.00	.00	.00	.01
6.5000	.01	.01	.01	.02	.02
6.7500	.02	.02	.03	.03	.03
7.0000	.04	.04	.04	.05	.05
7.2500	.05	.06	.06	.07	.07
7.5000	.07	.08	.08	.09	.09
7.7500	.09	.10	.10	.11	.11
8.0000	.12	.12	.13	.13	.14
8.2500	.15	.15	.16	.17	.17
8.5000	.18	.19	.20	.21	.22
8.7500	.23	.23	.24	.25	.26
9.0000	.27	.28	.30	.31	.32
9.2500	.33	.34	.35	.36	.38
9.5000	.39	.40	.41	.43	.44
9.7500	.45	.47	.48	.49	.51
10.0000	.52	.53	.55	.57	.59
10.2500	.61	.63	.65	.67	.70
10.5000	.72	.75	.77	.80	.83
10.7500	.85	.88	.91	.94	.97
11.0000	1.00	1.03	1.07	1.11	1.17
11.2500	1.24	1.32	1.40	1.49	1.58
11.5000	1.68	1.80	2.01	2.34	2.81
11.7500	3.43	4.17	5.00	5.93	7.18
12.0000	9.26	11.87	14.30	15.70	15.58
12.2500	14.10	12.27	10.61	9.25	8.03
12.5000	6.89	5.84	4.90	4.14	3.56
12.7500	3.15	2.87	2.65	2.49	2.35
13.0000	2.22	2.10	2.00	1.91	1.84
13.2500	1.79	1.75	1.71	1.68	1.65
13.5000	1.62	1.59	1.56	1.53	1.50
13.7500	1.47	1.44	1.41	1.39	1.36

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .0500 hrs
Time on left represents time for first value in each row.

Time hrs					
14.0000	1.33	1.30	1.27	1.25	1.23
14.2500	1.21	1.19	1.18	1.16	1.15
14.5000	1.13	1.12	1.11	1.09	1.08
14.7500	1.06	1.05	1.04	1.02	1.01
15.0000	.99	.98	.97	.95	.94
15.2500	.92	.91	.90	.88	.87
15.5000	.85	.84	.82	.81	.80
15.7500	.78	.77	.75	.74	.72
16.0000	.71	.70	.68	.67	.66
16.2500	.65	.65	.64	.63	.62
16.5000	.62	.61	.61	.60	.59
16.7500	.59	.58	.57	.57	.56
17.0000	.56	.55	.54	.54	.53
17.2500	.52	.52	.51	.51	.50
17.5000	.49	.49	.48	.47	.47
17.7500	.46	.46	.45	.44	.44
18.0000	.43	.42	.42	.41	.41
18.2500	.41	.40	.40	.40	.40
18.5000	.40	.39	.39	.39	.39
18.7500	.39	.38	.38	.38	.38
19.0000	.38	.38	.37	.37	.37
19.2500	.37	.37	.36	.36	.36
19.5000	.36	.36	.35	.35	.35
19.7500	.35	.35	.35	.34	.34
20.0000	.34	.34	.34	.33	.33
20.2500	.33	.33	.33	.33	.33
20.5000	.32	.32	.32	.32	.32
20.7500	.32	.31	.31	.31	.31
21.0000	.31	.31	.31	.31	.30
21.2500	.30	.30	.30	.30	.30
21.5000	.30	.29	.29	.29	.29
21.7500	.29	.29	.29	.28	.28
22.0000	.28	.28	.28	.28	.28
22.2500	.27	.27	.27	.27	.27
22.5000	.27	.27	.26	.26	.26
22.7500	.26	.26	.26	.26	.25
23.0000	.25	.25	.25	.25	.25
23.2500	.25	.24	.24	.24	.24
23.5000	.24	.24	.24	.23	.23
23.7500	.23	.23	.23	.23	.23
24.0000	.22	.21	.18	.13	.08
24.2500	.05	.03	.02	.01	.01
24.5000	.00	.00	.00		

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 1Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 1Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	2.45 cfs	at	12.2000 hrs
Peak Outflow	=	1.28 cfs	at	12.5000 hrs
Peak Elevation	=	192.68 ft		
Peak Storage	=	2405 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	10773
- Infiltration	=	0
- HYG Vol OUT	=	10748
- Retained Vol	=	26
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 10Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 10Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	7.60 cfs	at	12.2000 hrs
Peak Outflow	=	2.99 cfs	at	12.5500 hrs
Peak Elevation	=	194.16 ft		
Peak Storage	=	8991 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	32076
- Infiltration	=	0
- HYG Vol OUT	=	32050
- Retained Vol	=	26
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = P:\2016\16124\DRAINAGE\PONDPACK\2018-11-29\
Inflow HYG file = NONE STORED - SYSTEM 1C IN 100Y
Outflow HYG file = NONE STORED - SYSTEM 1C OUT 100Y

Pond Node Data = SYSTEM 1C
Pond Volume Data = SYSTEM 1C
Pond Outlet Data = OCS 1C

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	191.75 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.0500 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	15.70 cfs	at	12.1500 hrs
Peak Outflow	=	5.35 cfs	at	12.5500 hrs
Peak Elevation	=	197.54 ft		
Peak Storage	=	20760 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	66745
- Infiltration	=	0
- HYG Vol OUT	=	66719
- Retained Vol	=	26
Unrouted Vol	=	0 cu.ft (.000% of Inflow Volume)

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APPENDIX C

NYSDEC STORMWATER SIZING CALCULATIONS

RUNOFF REDUCTION VOLUME, WATER QUALITY VOLUME AND STREAM CHANNEL PROTECTION SIZING CALCULATIONS

Mercedes Benz of Goldens Bridge

NYS Route 22

Lewisboro, NY

JMC Project: **16124**

Drawing Reference: **DA-1, DA-2**

Computed by: **MT**

Checked by: **SS**

Date Printed: 11/28/2018

WATER QUALITY VOLUME WORKSHEET JMC Project: **16124**

FOR REDEVELOPMENT PROJECTS Design Point: **1**

Mercedes Benz of Goldens Bridge Drainage Area: **PDA 1A,B,C,D**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE							
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						**28,690**

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit	0.02	
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL	**0.021**	
UNITS	Ac	Ac

Net Water Quality Treatment Volume = Adjusted WQv - Provided RRv

Initial Water Quality Treatment Volume	28,690	CF
Adjusted Water Quality Treatment Volume	28,580	CF
Provided Runoff Reduction Volume	18,809	CF
Net Water Quality Treatment Volume	9,771	CF

Date Printed: 11/28/2018

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	**16124**
Design Point:	**1**

Mercedes Benz of Goldens Bridge	Drainage Area:	**PDA 1A,B,C,D**

Total Water Quality Treatment Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume Required	WQ_V	**28,580**	CF

Minimum Runoff Reduction Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Total Area of *new* Impervious Cover	Aic	0.86	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.34	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**3,545**	CF

Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
Green Roof #1	RR_V	1,971	CF
Subsurface Infiltration System	RR_V	13,203	CF
Porous Pavement	RR_V	3,635	CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
TOTAL	RR_V	**18,809**	CF

Runoff Reduction

Is Total RR_V > Adjusted WQ_V ?	**NO**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 11/28/2018

INFILTRATION WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1A,D**

Subsurface Infiltration System #1

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P		In
Impervious Area	I		Ac
Area	A		Ac
Percent Impervious	%I		%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V		CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V		CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**13,203**	CF

Water Quality Volume Provided			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
1 Year Storm Entering System	Q_1 IN	13,203	CF
1 Year Storm Exiting System	Q_1OUT	0	CF
Runoff Volume Infiltrated		**13,203**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**13,203**	CF
Total Area of Infiltration Basin Provided	A_p		SF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**13,203**	CF

Date Printed: 11/28/2018

INFILTRATION WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1B**

Porous Pavement

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I	0.35	Ac
Area	A	0.35	Ac
Percent Impervious	%I	100.00	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**3,635**	CF

Minimum Porous Pavement Area			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	3,635	CF
Porosity	*n*	0.40	Ft / Day
Trench Depth	d_t	1.00	Ft
Surface Area Required [$A_R = WQ_v / (n \times d_t)$]	A_R	**9,087**	SF

Proposed Porous Pavement			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Surface Area of Porous Pavement Provided [A_p]	A_p	**15,305**	SF
Actual Volume Provided	WQ_{VP}	6,122	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
100% Runoff Reduction capacity	RR_V	**3,635**	CF

GREEN ROOF WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1D**

Green Roof

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I_N	0.44	
Area	A	0.45	Ac
Percent Impervious	%I	98.88	%
Runoff Volume [0.05 + 0.009 x %I]	R_V	0.94	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**4,470**	CF

Proposed Green Roof			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Green Roof surface AREA	A_{RG}	15,769.00	SF
DEPTH of the Soil Media	D_{SM}	0.21	Ft
DEPTH of the Drainage Layer	D_{DL}	0.17	Ft
DEPTH of Ponding above surface	D_P	0.04	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	25%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	657.04	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	657.04	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		657.04	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**1,971**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Runoff Reduction volume provided	RR_V	**1,971**	CF

PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1A**

Continuous Deflective Separation Unit

Rainfall Distribution Type: **III**

		A	B	C
Coefficients for the equation unit peak [$R = I_a / P$] [$C_i = A \times R^2 + B \times R + C$]	C_0	-1.774	0.3301	2.4577
	C_1	1.8622	-0.7397	-0.4627
	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.31	Ac
Area	A	1.97	Ac
Percent Impervious	%I	66.36	%
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.65	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**6,936**	CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**10,833**	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	10,833	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Time of Concentration	t_c	0.0833	Hr
Runoff Volume [$Q = WQ_V / (A \times 3630)$]	Q	1.52	In
Curve Number [$CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\ QP)^{½}$]	CN	84.00	
Curve Number	CN	84	
Initial Abstraction [$I_a = 200 / CN - 2$]	I_a	0.38	In
Ratio [$R = I_a / P$]	R	0.13	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.47	
$C_1 = A \times R2 + B \times R + C$	C_1	-0.53	
$C_2 = A \times R2 + B \times R + C$	C_2	-0.17	
Unit Peak Discharge	q_u	702.65	$cfs/mi^2/in$
Peak Discharge [$Q_p = q_u \times A \times Q / 640$]	Q_p	**3.28**	cfs

Proposed Device			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**3.8**	cfs
Water Quality Volume Provided [$WQ_V = 640 \times 3600 \times Q_P / q_u$]	WQ_V	**12,460**	CF
Model Designation		CDS3035-6-C	
Quantity		1	

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PROPRIETARY PRACTICE WORKSHEET

JMC Project:	**16124**
Design Point:	**1**
Drainage Area:	**1B**

Continuous Deflective Separation Unit

Rainfall Distribution Type: **III**

Coefficients for the equation unit peak [$R = I_a / P$] [$C_i = A \times R^2 + B \times R + C$]		A	B	C
	C_0	-1.774	0.3301	2.4577
	C_1	1.8622	-0.7397	-0.4627
	C_2	-0.0648	0.2276	-0.1932

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	1.5	In
Impervious Area	I	1.36	Ac
Area	A	3.09	Ac
Percent Impervious	%I	43.93	%
Runoff Coefficient [$0.05 + 0.009 \times \%I$]	R_V	0.45	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**7,491**	CF
Design Storm [1-yr Storm Depth]	P	3.0	In
TOTAL VOLUME Required *(TMDL)* [WQ_V = 1-yr Storm Runoff]	WQ_V	**10,773**	CF

Water Quality Peak Flow Calculation			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Volume	WQ_V	10,773	CF
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Time of Concentration	t_c	0.2333	Hr
Runoff Volume [$Q = WQ_V / (A \times 3630)$]	Q	0.96	In
Curve Number [$CN = 1000 / (10 + 5P + 10Q - 10 \times (Q^2 + 1.25\ QP)^{½}$]	CN	75.00	
Curve Number	CN	75	
Initial Abstraction [$I_a = 200 / CN - 2$]	I_a	0.67	In
Ratio [$R = I_a / P$]	R	0.22	
$C_0 = A \times R^2 + B \times R + C$	C_0	2.44	
$C_1 = A \times R2 + B \times R + C$	C_1	-0.54	
$C_2 = A \times R2 + B \times R + C$	C_2	-0.15	
Unit Peak Discharge	q_u	528.94	$cfs/mi^2/in$
Peak Discharge [$Q_p = q_u \times A \times Q / 640$]	Q_p	**2.45**	cfs

Proposed Device			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Water Quality Peak Flow Provided	Q_p	**2.5**	cfs
Water Quality Volume Provided [$WQ_V = 640 \times 3600 \times Q_P / q_u$]	WQ_V	**10,890**	CF
Model Designation		CDS3025-6-C	
Quantity		1	

Date Printed: 11/28/2018

WATER QUALITY VOLUME WORKSHEET JMC Project: **16124**

FOR REDEVELOPMENT PROJECTS Design Point: **2**

Mercedes Benz of Goldens Bridge Drainage Area: **PDA 2A,C**

Initial Water Quality Treatment Volume

DESCRIPTION	Design Storm	Area	Existing Impervious Area	New Impervious Area	Percent Impervious	Runoff Coefficient	Total Required WQ Volume
SYMBOL	P	A	I_E	I_N	%I	R_V	WQ_V
VALUE							
UNITS	In	Ac	Ac	Ac	%	CF	CF
VALUE	Enhanced Phosphorus Removal (WQ_V = 1-yr Storm Runoff)						**2,424**

Runoff Reduction Techniques (Area)

DESCRIPTION	Total Area	Impervious Area
SYMBOL	A	I
Conservation of Natural Areas		
Sheetflow to Riparian Buffers or Filter Strips		
Vegetated Swale		
Tree Planting / Tree Pit	0.02	
Disconnection of Rooftop Runoff		
Stream Daylighting		
TOTAL	**0.02**	
UNITS	Ac	Ac

Net Water Quality Treatment Volume = Adjusted WQv - Provided RRv

Initial Water Quality Treatment Volume	2,424	CF
Adjusted Water Quality Treatment Volume	2,290	CF
Provided Runoff Reduction Volume	2,335	CF
Net Water Quality Treatment Volume	-45	CF

Date Printed: 11/28/2018

RUNOFF REDUCTION VOLUME WORKSHEET

JMC Project:	16124
Design Point:	2

Mercedes Benz of Goldens Bridge	Drainage Area:	PDA 2A, C

Total Water Quality Treatment Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Initial Water Quality Volume	WQ_V	**2,290**	CF

Minimum Runoff Reduction Volume

DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number] **or** [1-yr Storm Depth]	P	3.0	In
Total Area of *new* Impervious Cover	Aic	0.18	Ac
Hydrologic Soil Group (HSG) Specific Reduction Factor	S	0.40	
Runoff Coefficient [0.05 + 0.009 x %I]	R_V	0.95	CF
Impervious Cover targeted for Runoff Reduction [S x Aic]	Ai	0.07	Ac
TOTAL VOLUME Required [RR_V = (P x R_V x Ai) / 12]	RR_V	**731**	CF

Runoff Reduction Techniques (Volume)

GREEN INFRASTRUCTURE PRACTICE / SMP	*SYMBOL*	*VALUE*	*UNITS*
Green Roof #2	RR_V	2,335	CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
	RR_V		CF
TOTAL	RR_V	**2,335**	CF

Runoff Reduction

Is Total RR_V > Adjusted WQ_V ?	**YES**
Is Total RR_V > Minimum RR_V ?	**YES**

Date Printed: 11/28/2018

GREEN ROOF WORKSHEET

JMC Project:	**16124**
Design Point:	**2**
Drainage Area:	**2A**

Green Roof

Site Data for Drainage Area to be Treated by Practice			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Design Storm [90% Rainfall Event Number]	P	3.0	In
Impervious Area	I_N	0.20	
Area	A	0.22	Ac
Percent Impervious	%I	91.36	%
Runoff Volume [0.05 + 0.009 x %I]	R_V	0.87	CF
TOTAL VOLUME Required [$WQ_V = (P \times R_V \times A) / 12$]	WQ_V	**2,090**	CF

Proposed Green Roof			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Green Roof surface AREA	A_{RG}	8,756.00	SF
DEPTH of the Soil Media	D_{SM}	0.50	Ft
DEPTH of the Drainage Layer	D_{DL}	0.50	Ft
DEPTH of Ponding above surface	D_P	0.04	Ft
Porosity of the Soil Media	n_{SM}	20%	%
Porosity of the Drainage Layer	n_{DL}	25%	%
VOLUME provided in Soil Media [$V_{SM} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{SM}	875.60	CF
VOLUME provided in Drainage Layer [$V_{DL} = A_{RG} \times D_{SM} \times n_{SM}$]	V_{DL}	1,094.50	CF
VOLUME provided in Ponding Area [$D_P \times A_{RG}$]		364.83	CF
TOTAL VOLUME Provided [$WQv \leq V_{SM} + V_{DL} + (D_P \times A_{RG})$]	WQ_V	**2,335**	CF

Runoff Reduction			
DESCRIPTION	*SYMBOL*	*VALUE*	*UNITS*
Runoff Reduction volume provided	RR_V	**2,335**	CF

APPENDIX D

SOIL BORING & INFILTRATION TEST RESULTS

CARLIN • SIMPSON & ASSOCIATES

Consulting Engineers
Geotechnical & Environmental

PRELIMINARY SUBSURFACE INVESTIGATION MEMO

DATE: **28 November 2018**

TO: **Stephen Spina, P.E.**
JMC Site Development Consultants

FROM: **Robert B. Simpson, P.E.**
Stephen Rossi, E.I.T

RE: **Proposed Development**
Mercedes-Benz of Goldens Bridge
Goldens Bridge, NY

JOB NO: **17-121**

In accordance with our proposal revised 25 September 2018, we have performed a Subsurface Soil and Foundation Investigation at the referenced site. The following is a summary of the preliminary subsurface investigation information attained during this study. The recommendations below are considered preliminary in nature and are intended to give guidance in the planning and designing of the new construction.

We understand that the planned construction will consists of two new additions, a three-story parking garage, stormwater detention systems, septic system, retaining walls, parking areas and driveways, and parking lifts.

We understand that a geotechnical report was prepared by McLaren Engineering Group in July 2011. A summary of the boring observations performed during this investigation are provided in Table 1, below. The McLaren report is attached for your reference.

We performed an additional subsurface investigation for the proposed development that included fifteen (15) borings and testing for the proposed stormwater and septic systems. summary of our boring observations is provided in Table 2, below.

Table 1 - McLaren Engineering Boring Observation Summary

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Parking/Driveway	B-1	+211.8	NE	15.0' (+196.8)	NE to 17.0'	+213.0	1.2
Parking/Driveway	B-2	+211.6	NE	NE to 17.0’	AR @ 5.0' (+206.6)	+214.5	2.9
Northern Stormwater Detention System	B-3	+210.2	NE	16.0' (+194.2)	Cored @ 19.0' (+191.2)	+191.8	-18.5
Parking/Driveway	B-4	+202.1	NE	NE to 6.0’	AR @ 6.0' (+196.1)	+199.5	-2.6
Parking/Driveway	B-5	+197.6	9.0' (+188.6)	NE to 20.5’	CWR @ 20.5' (+177.1)	+199.8	2.2
Southern Addition	B-6	+199.2	1.5' (+197.7)	NE to 2.0’	AR @ 2.0' (+197.2)	+182.0	-17.2
Southern Addition	B-7	+189.0	2.0' (+187.0)	NE to 4.0’	AR @ 4.0' (+185.0)	+182.0	-7.0
Southern Addition	B-7B	+189.1		NE to 3.0’	AR @ 3.0' (+186.1)	+182.0	-7.1
Southern Stormwater Detention System	B-8	+179.8	5.5' (+183.6)	8.5’ (+171.3)	CWR @ 9.5' (+170.3)	+169.5	-10.3
Southern Addition	B-9	+180.3	2.0' (+178.3)	NE to 3.0’	Cored @ 3.0' (+177.3)	+182.0	1.7
Southern Addition	B-10	+195.0	4.0' (+191.0)	NE to 13.0’	AR @ 13.0' (+182.0)	+182.0	-13.0
Southern Addition	B-11	+175.5	NE	NE to 11.0’	CWR @ 11.0' (+164.5)	+182.0	6.5
Southern Addition	B-12	+175.4	4.0' (+171.4)	10.5' (+164.9)	CWR @ 22.0' (+153.4)	+182.0	6.6
Southern Stormwater Detention System	B-13	+176.0	6.0' (+170.0)	16.5' (+159.5)	NE to 17.0'	+169.5	-6.5
Southern Addition	B-14	+173.0	6.0' (+167.0)	NE to 17.0’	NE to 17.0'	+182.0	9.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Table 2 - CSA Boring Observations

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Northern Septic System	SB-1	+210.0	3.0' (+207.0)	12.5' (+197.5)	AR @ 26.5' (+183.5)	+200.0	-10.0
Northern Stormwater Detention System	SB-2	+209.0	2.5' (+206.5)	NE to 16.0'	AR @ 16.0' (+193.0)	+191.8	-17.3
Northern Stormwater Detention System	SB-3	+201.5	3.5' (+198.0)	NE to 8.5'	NE to 8.5'	+191.8	-9.8
Upper Parking Porous Pavement	SB-4	+234.0	3.0' (+231.0)	NE to 12.0'	NE to 12.0'	+230.3	-3.7
Upper Parking Porous Pavement	SB-5	+234.0	NE	NE to 9.0'	NE to 9.0'	+230.3	-3.7
Southern Parking Structure	SB-6	+165.0	4.0' (+161.0)	5.0' (+160.0)	NE to 17.0'	+168.0	3.0
Southern Parking Structure	SB-7	+166.0	8.0' (+158.0)	7.0' (+159.0)	NE to 22.0'	+168.0	2.0
Rain Garden	SB-8	+173.0	6.0' (+167.0)	NE to 17.0'	NE to 17.0'	+169.3	-3.8
Rain Garden	SB-9	+177.0	7.0' (+170.0)	NE to 17.0'	NE to 17.0'	+169.3	-7.8
Rain Garden	SB-10	+178.0	>3.5'	NE to 3.5'	NE to 3.5'	+169.3	-8.8
Northern Addition	SB-11	+216.0	2.5' (+213.5)	NE to 13.5'	AR @ 13.5' (+202.5)	+216.3	0.3
Southern Addition	SB-12	+198.0	2.0' (+196.0)	NE to 2.0'	Cored @ 2.0' (+196.0)	+182.0	-16.0
Southern Addition	SB-13	+191.0	2.5' (+188.5)	NE to 4.0'	4.0' (+187.0)	+182.0	-9.0
Southern Addition	SB-14	+176.0	1.5' (+174.5)	NE to 6.0'	AR @ 6.0' (+170.0)	+182.0	6.0
Southern Parking Structure	SB-15	+169.0	1.5' (+167.5)	9.5' (+159.5)	NE to 27.0'	+168.0	-1.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Soil Conditions

Stratum 1A Topsoil — The surface layer in portions of the site consist of topsoil that ranges from approximately 3 to 8 inches of topsoil.

Stratum 1B Asphalt — The surface layer in portions of the site consist of asphalt that ranges from approximately 1 to 6 inches of topsoil.

Stratum 2 Existing Fill — Below the surface layers in each of the borings is existing fill that generally consists of brown, gray coarse to fine SAND, little (to and) Silt, trace (to some) coarse to fine Gravel. The existing fill extends to depths ranging from 1.5 to 9.0 feet below the existing ground surface.

Stratum 3 Silty Sand with cobbles and boulders — Underlying the surface layers and existing fill is medium dense to dense brown coarse to fine SAND, trace (to and) Silt, trace (to some) coarse to fine Gravel, with cobbles and boulders. The Silty Sand extends to depths ranging from 3.0 to greater than 27.0 feet below the existing ground surface. Several borings were terminated in this stratum at auger refusal on probable bedrock at depths ranging from 2.0 to 26.5 feet below the existing ground surface.

Stratum 5 Weathered Schist — Underlying the Silty Sand with Gravel and existing fill throughout the site is completely to highly weathered Schist. This layer is soil like in state, however, there could be denser pockets that cannot be conventionally excavated. The weathered Schist is present at depths ranging from 8.5 to 22.0 feet below the existing ground surface.

Stratum 6 Schist Bedrock — Schist bedrock was cored at borings B-3, B-9, SB-12, and SB-13 for vertical distances of 10, 10, 10, and 5 feet respectively. The rock quality designation (RQD) of the recovered cores were 90% and 10% (B-1), 42% and 76% (B-9), 90% and 100% (SB-12), and 88% (SB-13). The Schist ranges from moderately weathered to fresh and is in a crushed to intact state.

Groundwater

- Groundwater was encountered in portions of the site above the bedrock surface at depths ranging from 5.0 to 18.5 feet below the existing ground surface. These depths correspond to groundwater elevations between +198.3 and +159.0.

- Groundwater on this site will be controlled by topography and the underlying bedrock surface.

Bedrock

- Schist bedrock ranging from dense completely weathered rock to intact, bedrock was encountered in the borings. Hard rock will be encountered during construction, particularly in the northeastern portion of the proposed southern addition.

- The rock conditions within the proposed building footprint will be variable. Harder bedrock may be encountered between boring locations.

- The completely weathered bedrock may be "rippable" to some extent using large construction equipment. However, penetration into the completely weathered bedrock and the underlying harder bedrock with excavation equipment will depend of the degree of weathering and fracturing in the rock. We anticipate that the "rippability" of the bedrock will be variable and may be limited. Zones of harder rock may be present at shallower depths and zones of weathered rock may be present at deeper intervals. Depending on the proposed grades, rock blasting and/or the use of hydraulic hammers may be required to excavate bedrock at the subject site.

Septic System

- Two modified percolation tests were performed in accordance with modifications accepted by the Goldens Bridge Health Inspector.

- Percolation tests were performed for the proposed septic system in the areas of SB-1 (BH-1A and BH-1B).

- The test depths and percolation rates are provided in Table 3, below.

Table 3 – Septic System Percolation Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Percolation Test Depth (Elevation)	Percolation Rate (mpi)
Northern Septic System	BH-1A BH-1B	12.5' (+197.5)	7.0' (+203.0) 4.5' (+205.5)	3.5 5.0

- Groundwater was encountered in boring SB-1 at a depth of 12.5 feet below the existing ground surface. This depth corresponds to elevation +198.3.

- No evidence of seasonal high groundwater was encountered, however seasonal high groundwater should be taken as 2'0" above the encountered groundwater.

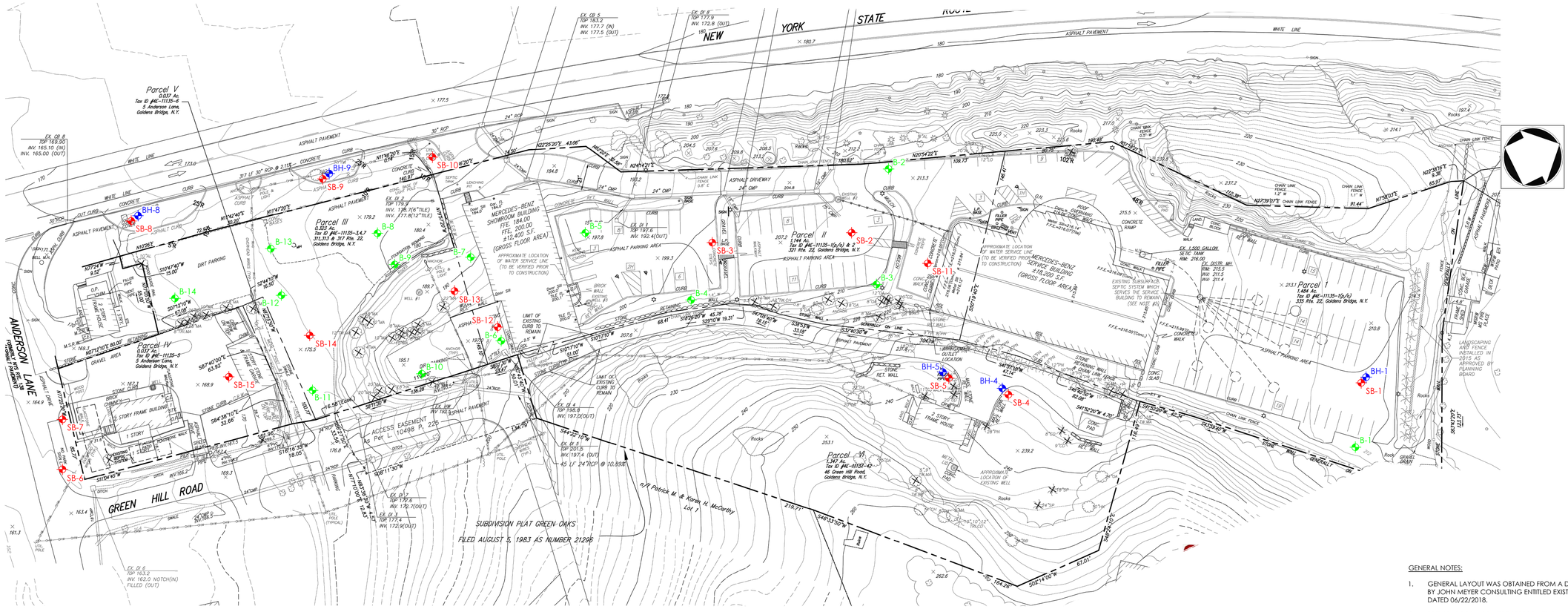
Stormwater Management Systems

- Borehole permeability tests were performed throughout the site in order to determine the infiltration characteristics of the site soils for the proposed stormwater management systems.

- The test depths and infiltration rates are provided in Table 4, below.

Table 4 – Stormwater Management Systems Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Borehole Permeability Test Depth (Elevation)	Infiltration Rate
Upper Parking Porous Pavement	SB-4	NE to 12.0'	5.5' (+228.5)	2.0 in/hr
Upper Parking Porous Pavement	SB-5	NE to 9.0'	5.5' (+229.5)	15.0 in/hr
Rain Garden	SB-8	NE to 17.0'	5.5' (+167.5)	20.0 in/hr
Rain Garden	SB-9	NE to 17.0'	9.0' (+168.0)	19.0 in/hr



GENERAL NOTES:

1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING THAT WAS PREPARED BY JOHN MEYER CONSULTING ENTITLED EXISTING CONDITIONS PLAN, DATED 06/22/2018.
2. PREVIOUS BORINGS WERE PERFORMED BY MCLAREN ENGINEERING GROUP IN JULY 2011.
3. BORING LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
4. BORINGS WERE PERFORMED BY GENERAL BORINGS INC. IN OCTOBER 2018 UNDER THE FULL TIME INSPECTION OF CSA.
5. LOCATIONS ARE APPROXIMATE.

LEGEND:

- - MCLAREN ENGINEERING BORING LOCATION (2011)
- - CSA BORING LOCATION
- - CSA BORE HOLE PERMEABILITY TEST LOCATION

ROBERT B. SIMPSON, P.E.
PROFESSIONAL ENGINEER

LICENSE NO. | SIGNATURE | DATE

BORING LOCATION PLAN

PROPOSED DEVELOPMENT - MERCEDES-BENZ
321 ROUTE 22
GOLDEN BRIDGE, NEW YORK

DRAWN: SR	SCALE: 1" = 40'
CHECKED: RBS	DATE: 27-NOV-18
PROJECT NO.: 17-121	DWG NO.: FIG - 1
APPROVED:	

CARLIN-SIMPSON AND ASSOCIATES
61 Main Street
Sayreville, NJ 08872
Consulting Geotechnical and Environmental Engineers

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 2
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
24-Oct-18	1045	12'6"	HSA	DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. Mcgovern
				FALL		30"			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15		FILL (Br gr cf S, s (-) $, l cf G))	
2		S-1	17		**FILL (Brown gray coarse to fine SAND, some (-) Silt, little coarse to fine Gravel)**	Rec = 15"
			34			moist
3			29		3'0"	
			12			
4		S-2	15		Br cf S, s $, s (-) cf G	Rec = 6"
			28			moist
5			50/2"			Refusal on spoon @ 4'8"
			38			
6		S-3	50		same	Rec = 16"
			57			moist
7			51			
			35			
8		S-4	30		Br cf S, a (-) $, s (-) cf G	Rec = 18"
			35			moist
9			33			
10						
			16			
11		S-5	14		same, s (-) $	Rec = 13"
			10		**Brown coarse to fine Sand, some Silt, some coarse to fine Gravel**	moist to wet
12			12			
			10			
13		S-6	15		same	Rec = 19"
			19			wet
14			27			
15						
			23			
16		S-7	34		same	Rec = 0"
			43			wet
17			39			
18						
19						
20						
			11			
21		S-8	18		Gr cf S, l (+) $, l (-) cf G	Rec = 19"
			23			wet
22			23			

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**	**SHEET NO.:** 2 of 2
Client:	**Celebrity Motor Car LLC**	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24						
25					**Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel**	
26		**S-9**	22 40 30/1"		same, probably bedrock 26'6"	Rec = 7" wet
27					**End of Boring @ 26'6"**	
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-1A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 2-Nov-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 2-Nov-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
2		**S-1**	20 19		FILL (Br cf S, l (+) $, l cf G w/ cobbles)	Rec = 17"
3			19 38		**FIILL (Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel with cobbles)**	moist
4		**S-2**	21 26		same	Rec = 17"
5			31 30		4'3" Br cf S, s $	moist
6		**S-3**	24 46		Br cf S, s (-) $, s (-) cf G	Rec = 16"
7			36 26			moist
8		**S-4**	32 20		Br cf S, s (-) $, l (-) mf G	Rec = 14"
9			19 22		**Brown coarse to fine SAND, some Silt**	moist
10						
11		**S-5**	8 12		same	Rec = 19"
12			11 13		12'0"	moist Tip wet
13					**End of Boring @ 12'0"**	
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-2
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +209.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 24-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 24-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Brown coarse to fine SAND, some Silt, little coarse to fine Gravel)**	
			15			
2		**S-1**	50/3"		FILL (Br cf S, s $, l cf G)	Rec = 7"
					2'6"	moist
3					**Brown coarse to fine SAND, some (-) Silt, trace coarse to fine Gravel)**	
			10			
4		**S-2**	16		Br cf S, s (-) $, t cf G	Rec = 4"
			50/3"		4'3"	moist
5						Refusal on boulder @ 5'
					Boulders	attempted to core broke
6					6'0"	through @ 5'10"
						Boulder
7						Rec = 6"
			27			moist
8		**S-3**	61		Gr br cf S, l $, s cf G	Refusal on spoon @ 10'2"
			50/4"			auger to 15' very dense
9						with boulder
10					**Gray brown coarse to fine SAND,**	
		S-4	50/2"		same **little Silt, some coarse to fine Gravel**	Rec = 0"
11					**with cobbles and boulders**	moist
12						
13						
14						
15						
			55		same	Rec = 4"
16		**S-4**	50/3"		16'0"	moist
					End of Boring @ 16'0"	Auger Refusal on probable
17						bedrock @ 16'0"
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-3
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +201.5

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'2"	
2		S-1	8 9		FILL (Dk br cf S, a (+) $, t (+) mf G)	Rec = 18"
3			9 18		**FILL (Dark brown coarse to fine SAND, and (+) Silt, trace (+) medium to fine Gravel)**	moist many cobbles
4		S-2	11 28		FILL (same) 3'6" Br cf S, l (+) $, l cf G	Rec = 17"
5			21 37			moist
6		S-3	29 50/2"		same **Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel, with many cobbles and boulders**	Rec = 8" moist many cobbles and boulders
7						
8					8'6"	Auger refusal @ 8'6"
9					**End of Boring @ 8'6"**	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-4
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
1		S-1	3 7		**Topsoil**	0'8"	Rec = 10"
2			7 6		FILL (Br cf S, s (+) $, t mf G) **FILL (Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel)**		moist
3		S-2	5 5		FILL (same)	3'0"	Rec = 18"
4			20 39		Br cf S, s (+) $, l cf G		moist
5							
6		S-3	17 38		same		Rec = 10"
7			35 45		**Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel**		moist
8							
9							
10							
11		S-4	19 33		same		Rec = 15"
12			21 25			12'0"	moist
13					**End of Boring @ 12'0"**		
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER BH-4A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 29-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 29-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
			9		FILL (Br cf S, s (+) $, t mf G)	
2		S-1	5		**FILL (Brown coarse to fine SAND,**	Rec = 15"
			5		**some (+) Silt, trace medium to fine Gravel)**	moist
3			10		FILL (same) 3'0"	
			34		Br cf S, s (+) $, l cf G	
4		S-2	44			Rec = 16"
			50/3"			moist
5						
			17			
6		S-3	35		same	Rec = 16"
			37		**Brown coarse to fine SAND,**	moist
7			30		**some (+) Silt, little coarse to**	
			20		**fine Gravel**	
8		S-4	55		same	Rec = 11"
			37			moist
9			20			
10						
			15			
11		S-5	17		same	Rec = 17"
			20			moist
12			29		12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-5
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15			
2		S-1	14		Br cf S, l (+) $, t mf G	Rec = 18"
			22			moist
3			25			
			23		**Brown coarse to fine SAND,**	
4		S-2	29		same **little (+) Silt, trace medium to**	Rec = 18"
			26		**fine Gravel**	moist
5			53			
			12			
6		S-3	12		same	Rec = 14"
			12		6'6"	moist
7			18		Br cf S, t (+) $, s (+) cf G	
			26		**Brown coarse to fine SAND,**	
8		S-4	28		same **trace (+) Silt, trace medium**	Rec = 6"
			36		**to fine Gravel**	moist
9			40		9'0"	
					End of Boring @ 9'0"	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-6
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +165.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**900**	**8'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
25-Oct-18	**915**	**5'0"**	**NONE**	**WGHT**		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'4"	
1						
			12			
2		**S-1**	13		FILL (Dk br cf S, a (-) $, t mf G)	Rec = 18"
			9		**FILL (Dark brown, brown coarse to fine SAND,**	moist
3			9		**and (-) Silt, trace medium to fine Gravel)**	
			15			
4			16		FILL (same) 4'0"	
		S-2	13		Lt br cf S, l $, t cf G	Rec = 15"
5			12		**Light brown coarse to fine SAND,**	moist
			9		**little Silt, trace coarse to fine Gravel**	
6		**S-3**	13		same, vvd	Rec = 18"
			13			moist
7			12		7'0"	
			12			
8		**S-4**	12		Lt br $ t (-), cf S	Rec = 17"
			13			wet
9			12			Liqui fiable when shook
						slightl vvd
10					**Light brown SILT trace (-), coarse to fine Sand**	
			3			
11		**S-5**	5		same, vvd	Rec = 18"
			7			wet
12			12			
13						
14					14'0"	
15					**Light brown coarse to fine SAND,**	
			2		**little Silt, trace fine Gravel**	
16		**S-6**	7		Lt br cf S, l $, t f G	Rec = 17"
			11			wet
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-7
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +166.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**1030**	**7'0"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'7"	
1		**S-1**	7		FILL (Br cf S, l (-) $, t mf G)	Rec = 18"
			5			moist
2			4			
			2			
3		**S-2**	1		FILL (same)	Rec = 10"
			2		**FILL (Brown coarse to fine SAND, little (-) Silt, trace medium to fine Gravel)**	moist
4			2			
5						
			3			
6		**S-3**	2		FILL (same)	Rec = 13"
			8			moist
7			9			
8					8'0"	
9						
10						
			2			
11		**S-4**	3		Lt br cf S, s (-) $, t f G	Rec = 19"
			5		**Light brown coarse to fine SAND, some (-) Silt, trace fine Gravel**	wet
12			7			vvd
13						
14					14'0"	
15						
			7			
16		**S-5**	10		Lt br cf S, l (-) $, t (-) f G	Rec = 18"
			12			wet
17			13			
18						
					Light brown coarse to fine SAND, little (-) Silt, trace (-) fine Gravel	
19						
20						
			4			
21		**S-6**	7		same, t mf G	Rec = 20"
			10			wet
22			12		**End of Boring @ 22'0"** 22'0"	

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-8
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +173.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			4		**Topsoil** 0'6"	
1		S-1	6		FILL (Br cf S, s (+) $, t (+) mf G)	Rec = 10"
			6			moist
2			6			
			9			
3		S-2	9		FILL (same)	Rec = 12"
			12		**FILL (Brown coarse to fine SAND, some (+)**	moist
4			18		**Silt, trace (+) medium to fine Gravel)**	
5						
			15			
6		S-3	16		FILL (same) 6'0"	Rec = 17"
			6		Lt br cf S, l $, t mf G	moist
7			7			
			13			
8		S-4	14		same	Rec = 12"
			15			moist
9			20		**Light brown coarse to fine SAND,**	
					little Silt, trace medium to fine Gravel	
10						
			15			
11		S-5	11		same	Rec = 0
			9			moist
12			10			
13						
14						
15						
			8			
16		S-6	12		same, l (+) cf G	Rec = 15"
			14			moist
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-9
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +177.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1						
			7			
2		S-1	9		FILL (Dk br cf S, l (+) $, s (+) cf G, w/debris)	Rec = 13"
			18		**FILL (Dark brown coarse to fine SAND,**	moist
3			39		**little (+) Silt, some (+) coarse to fine**	
			43		**Gravel, with debris)**	
4		S-2	42		FILL (same)	Rec = 10"
			21			moist
5			50/3"		5'0"	Auger refusal @ 6'0"
			4			Moved hole 5' east
6		S-3	4		FILL (Br cf S, s $, t mf G)	Rec = 18"
			6		**FILL (Brown coarse to fine SAND, some Silt,**	moist
7			11		**trace medium to fine Gravel)** 7'0"	
			8			
8		S-4	17		Lt br cf S, t (+) $, t mf G	Rec = 17"
			20			moist
9			20			
10						
			12			
11		S-5	13		same	Rec = 15"
			17		**Light brown coarse to fine SAND, trace (+)**	moist
12			23		**Silt, trace medium to fine Gravel**	
13						
14						
15						
			7			
16		S-6	10		same	Rec = 15"
			9			moist
17			14		17'0"	
18					**End of Boring @ 17'0"**	
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-10
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +178.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	2 6		**Topsoil** 0'8"	Rec = 10"
2			10 22		FILL (Br cf S, l (-) $, s cf G) **FILL (Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel)**	moist
3		S-2	11 50/5"		FILL (same)	Rec = 11"
4					3'6" **End of Boring @ 3'6"**	moist When augering to 5' metal grinding noise, aborted hole
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-11
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +216.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1					**FILL (Brown coarse to fine SAND,**	
			16		**little (+) Silt, some coarse to fine Gravel)**	
2		S-1	23		FILL (Br cf S, l (+) $, s cf G)	Rec = 18"
			18		2'6"	moist
3			16		Br cf S, t (+) $, l (+) cf G	
			13			
4		S-2	19		same	Rec = 15"
			21			moist
5			15			
			3			
6		S-3	55		same	Rec = 17"
			50/0"		**Brown coarse to fine SAND,**	moist
7					**trace (+) Silt, little (+) coarse to**	
					fine Gravel	
8						
						many cobbles and boulders
9						
10						
			03			
11		S-4	3		same, l $ s, cf G	Rec = 10"
			10			moist
12			46			
13						
					13'6"	Auger refusal @ 13'6"
14					**End of Boring @ 13'6"**	
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-12

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+198.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**	**NX**			**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**	**2 3/8"**			**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Light brown coarse to fine SAND,**	
			11		**trace (+) Silt, little coarse to fine Gravel)**	
2		**S-1**	50/4"		FILL (Lt br cf S, t (+) $, l cf G) 2'0"	Rec = 3"
						moist
3						
4						
		Run			**Gray Schist, intact, fresh**	Run #1
5		**#1**				2'0" - 7'0"
						Run = 60"
6						Rec = 100%
						RQD = 90%
7						
8						
9						
		Run			same	Run #2
10		**#2**				7'0" - 12'0"
						Run = 60"
11						Rec = 100%
						RQD = 100%
12					12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-13

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+191.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**				**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**				**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
			4		**Topsoil**	0'8"	
1		**S-1**	4		FILL (Dk br cf S, s (+) $, t (-) f G)		Rec = 8"
			6		**FILL (Dark brown coarse to fine SAND,**		moist
2			10		**some (+) Silt, trace (-) fine Gravel)**		
			18		FILL (same)	2'6"	
3		**S-2**	12		Lt br cf S, l (+) $, t f G		Rec = 10"
			23		**Light brown coarse to fine SAND,**		moist
4			50/3"		**little Silt, trace fine Gravel**	4'0"	
5							
					Gray Schist massive, moderately jointed		
6					**fresh**		
		Run					Run #1
7		**#1**					4'0" - 9'0"
							Run = 60"
8							Rec = 57" = 100%
							RQD = 88%
9						9'0'	
10					**End of Boring @ 9'0"**		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-14
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +176.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 26-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 26-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	11 15		**FILL (Dark brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel with debris** 1'6"	Rec = 10" moist
2			15 8		Lt br $ a, cf S, t mf G	
3		S-2	6 7		same **Light brown SILT and, coarse to fine Sand, trace medium to fine Gravel**	Rec = 14" moist
4			7 8			
5					4'6" **Brown coarse to fine SAND, trace (+) Silt, trace coarse to fine Gravel**	
6		S-3	42 50/0"		Br cf S, t (+) $, t cf G 6'0"	Rec = 6"
7					**End of Boring @ 6'0"**	moist Auger refusal @ 6'0" Probable bedrock
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG DRAFT					BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY								**SHEET NO.:** 1 of 2
Client:	Celebrity Motor Car LLC								**JOB NUMBER:** 17-121
Drilling Contractor:	General Borings Inc								**ELEVATION:** +169.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 26-Oct-18
26-Oct-18	**1230**	**9'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 26-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			17		**Surface Gravel** 0'1"	
1		S-1	12		**FILL (Dark brown coarse to fine SAND,**	Rec = 10"
			5		**some Silt, trace medium to fine Gravel)** 1'6"	moist
2			4		Rd br cf S, l (+) $, t f G	
			3			
3		S-2	3		same	Rec = 12"
			3			moist
4			4			
5						
			7			
6		S-3	7		same, lt br s (-) $	Rec = 15"
			9			moist
7			12			
			11			
8		S-4	9		same, s (-) $	Rec = 17"
			10			moist
9			12		**Light brown coarse to fine SAND,**	
					some (-) Silt, trace fine Gravel	
10						
			6			
11		S-5	9		same, l $	Rec = 17"
			11			wet
12			14			
13						
14						
15						
			5			
16		S-6	4		same	Rec = 15"
			5			wet
17			8			Layer of vvd $ like in B-6 & 7
18					18'0"	
19						
20					**Light brown coarse to fine SAND,**	
			7		**trace (+) Silt, trace medium to fine**	
21		S-7	9		**Gravel**	
			50/5"		Lt br cf S, t (+) $, t mf G	Rec = 18"
22						wet
						Running sands

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY	**SHEET NO.:** 2 of 2
Client:	Celebrity Motor Car LLC	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24					**Light brown coarse to fine SAND, trace (+) Silt, trace medium to fine Gravel**	
25						
26		**S-8**	15 8		same, l cf G	
27			15 13		27'0"	
28					**End of Boring @ 27'0"**	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-4

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0918	*Start Water Level:*	25"	*Total Water Level Drop (in):*	2.0
1	*End Time:*	1018	*Final Water Level:*	23"	**Rate (in/hr):**	**2.0 in/hr**
Notes:						
Test No:	*Start Time:*	1025	*Start Water Level:*	25"	*Total Water Level Drop (in):*	3.0
2	*End Time:*	1125	*Final Water Level:*	22"	**Rate (in/hr):**	**3.0 in/hr**
Notes:						
Test No:	*Start Time:*	1127	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
3	*End Time:*	1227	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*	1230	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
4	*End Time:*	1330	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-5

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0906	*Start Water Level:*	30"	*Total Water Level Drop (in):*	21.5
1	*End Time:*	1006	*Final Water Level:*	8.5"	**Rate (in/hr):**	**21.5 in/hr**
Notes:						
Test No:	*Start Time:*	1010	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
2	*End Time:*	1110	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1113	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1213	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1217	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1317	*Final Water Level:*	8.5"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST		BOREHOLE NO: BH-8	
Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY		**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees		**Surface Elevation:**	+173.0

Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 17.0'			**Test Elevation:**	+167.5
Bedrock:	NE to 17.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 17.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	**ATTEMPTED TO PRESOAK, WATER DRAINED**
Depth to Top of Remaining Water:			-	**IN LESS THAN 10 MINUTES**
Height of Remaining Water:			0"	**INFILTRATION RATE >20IN/HR**

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-9

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+177.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	9.0'
Water Table:	NE to 12.0'			**Test Elevation:**	+168.0
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	1117	*Start Water Level:*	24"	*Total Water Level Drop (in):*	21.0
1	*End Time:*	1217	*Final Water Level:*	3"	**Rate (in/hr):**	**21.0 in/hr**
Notes:						
Test No:	*Start Time:*	1218	*Start Water Level:*	24"	*Total Water Level Drop (in):*	23.0
2	*End Time:*	1318	*Final Water Level:*	1"	**Rate (in/hr):**	**23.0 in/hr**
Notes:						
Test No:	*Start Time:*	1318	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1418	*Final Water Level:*	3"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1420	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1450	*Final Water Level:*	4"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

GEOTECHNICAL REPORT

Estate Motors
Goldens Bridge New York

Prepared for:

Charisma Holding Corporation

July 2011
MEG Project No. 111299

Prepared by:
McLaren Engineering Group
100 Snake Hill Road
West Nyack, NY 10994
(845) 353-6400

McLaren ENGINEERING GROUP

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APPENDIX

Appendix A Site Map
Appendix B Preliminary Grading Plan
Appendix C Boring Location Plan
Appendix D Boring Logs
Appendix E Soil Profiles

1. INTRODUCTION

1.1 General

McLaren Engineering Group (MEG) has developed and implemented a geotechnical investigation to evaluate site conditions for a previously developed parcel of land, herein referred to as the *project site*, located at 321 Route 22 in Goldens Bridge New York (see Site Location Map, Appendix A). This geotechnical program consisted of soil boring, rock coring, soil identification, and classification of soil stratigraphy, recommendations for use of excavated material, retaining walls, site earthwork, and foundation construction.

The exiting Estate Motors facility comprises a two-story building, housing an auto showroom and offices, and a second building, containing the vehicle service department. The site is located along a section of NYS Route 22 that parallels I-684, north of the NYS Route 138. The project site is part of a 3.3-acre parcel, owned by Charisma Holding Corporation.

1.2 Proposed Development

The proposed development of the site includes construction of a 32,000 square foot building adjacent to the existing show room, removal of the existing service department building, installation of a vehicle show canopy, and the modification of vehicle parking throughout the site. Large underground storm water retaining facilities are proposed between the new building and Route 22. This study has been based on the "Grading and Drainage Plan", dated August 01, 2009, prepared by John Meyers Consulting P.C. (see Appendix B).

1.3 Scope of Work

The Scope of the Geotechnical Investigation for the project site included the following tasks:

a) Establish a soil investigation program to include exploratory soil borings, rock coring and specifications for retrieval of soil samples.

b) Evaluate the findings of the soil investigation program to include definition of the characteristics of each significant soil stratum.

c) Evaluate geotechnical information to determine site-specific needs.

d) Perform a site-specific seismic evaluation utilizing on-site boring data, rock core data, and soil properties obtained throughout the site.

2. FIELD INVESTIGATION

MEG retained the services of Soil Testing Inc., 140 Oxford Road Oxford, CT 06478 to perform soil borings and rock cores. The work was initiated on July 6, 2011 and concluded on July 8, 2011.

Fourteen (14) borings were advanced to depths ranging between 3 feet and 29 feet. (See Boring Location Plan, Appendix C). Soil samples were extracted continuously from the surface to a depth of 12 feet and then in five (5) foot intervals. Ten-foot rock cores were taken at two locations, Borings B-3 and B-9.

Soil samples were obtained using the Standard Penetration Test (ASTM D-1586-84) using a split spoon sampler with a 2-inch O.D., 1 3/8-inch I.D. driven into the soil with a 140-pound hammer falling freely from a height of 30-inches. The SPT-N value given as blows per foot (bpf) is defined as the total number of blows required to drive the sampler from 6 to 18 inches, and this N-Value shown on the boring logs. (see Boring Logs, Appendix D).

Soil borings and rock cores were performed under the supervision of a qualified representative of MEG.

3. EXISTING CONDITIONS

3.1 Surface Conditions

The project site has two large buildings (each in excess of 20,000 square feet) and the remainder of the site is predominantly covered with asphalt roads and parking, with some landscape islands. In the southern portion of the site, south of the existing showroom building, is an asphalt parking area and a two (2) story wood structure believed to be a residential house which is not currently in use.

The site has large outcroppings of rock scattered throughout the site. There is a large change in elevation from the northern end of the site at elevation 211.8 to the southern end at elevation 173.0. On the western side of the site there is a large (greater than 30 feet high) cut face of rock, which was created by the construction of I-684.

3.2 Geology and Subsurface Conditions

The project site is located within the Hudson Highlands geologic region. Underlying bedrock is composed of metamorphic and igneous rock. This formation is predominantly composed of gneisses.

A review of the USDA Natural Resources Conservation Service, National Cooperative Soil Survey indicates that their two types of soil present on the project site. The soil

classifications within the project area are CrC Charlton –Chatfield complex and CsD Charlton –Chatfield complex. Both soil groups are characterized as hilly and rocky having slopes from 2 to 15 % slopes that are well draining.

(USDA Soil Properties)

Map Unit	Area (acres)	Soil Name(s)	Groundwater Depth (ft)	Depth to Bedrock	Hydrologic Group
Csd[1]	3.0	Charlton – Chatfield complex	8.5-15' [2]	8.5'-Greater than 20	B
CrC [1]	1.0	Charlton – Chatfield complex	8.5'-15' [2]	2' to greater than 20'	B

Source:

1. Natural Resource Conservation Center Web Soil Survey
2. Appendix D - Boring Logs

The primary subsurface strata encountered are shown on the Soil Profiles in Appendix E and are described as follows:

- Asphalt/Pavement - Most of the borings were performed on areas with paved surfaces. Approximately 2-4 inches of asphalt pavement was encountered at these locations.

- Topsoil – The surface layer in the areas not asphalt was a brown or dark brown sandy topsoil that ranges from 6 to 8 inches in depth.

- Fill - Underlying the surface layers in Borings B-5, B-11, B-12, B-14 there is a layer of fill. The material used as fill was generally a homogenous mix of sand-silt but has some traces of brick and ash in it. The SPT-N values in the fill material are good, except in Boring B-5 where the fill is most extensive (to 8 feet) and there is a layer of top soil/ at the 8-foot level.

- Sand with little silt and some gravel - Beneath the surface materials are layers of fine to medium dense brown and light brown medium to fine sand, little silt with some gravel with occasional cobbles and boulders. The sand layer varies from 3 to 20 feet thick.

- Rock stratum – Underlying the existing fill and sand layers is a Gneiss Bedrock. All but two of the borings (B-1 and B-14) were terminated in the bedrock or at refusal of on the probable bedrock surface at depths ranging from 2 to19 feet below the surface.

3.3 Summary of Boring Data

Table 1 provides a summary of the boring data, including resultant depth to bedrock, ground water elevation where obtainable, and the Rock Quality Index (RQD). The test boring locations and their corresponding logs are shown in Appendix C and Appendix D, respectively.

Table 1
Boring Data Summary

Boring Number	Surface Elevation (Approx.)	Depth to Bedrock (Fi)	Bedrock Elevation	Bedrock RQD	Comments
1	211.8	-	-		GW @ El. 196.8 (-15)*
2	211.6	5	206.6		
3	210.2	19	191.2	TOP=0.95, BOT=0.12	GW @ El. 200.2 (-10)*
4	202.1	6	196.1		
5	197.6	20.5	177.1		GW @ El. 189.1(-8.5)*
6	199.2	2	197.2		
7	189.0	4	185.0		
7B	189.1	3	186.1		
8	179.8	9.5	170.3		GW @ El. 171.3 (-8.5)*
9	180.3	3	177.3	TOP=0.42, BOT=0.76	
10	195.0	13	182.0		
11	175.5	11	164.5		
12	175.4	22	153.4		GW @ El. 164.9 (-10.5)*
13	176.0	16.5	159.5		GW @ El. 161 (-15)*
14	173.0				GW @ El.163.0 (-10)*

1. RQD = Rock Quality Index Defined as the cumulative length of core pieces longer than 10cm in a run divided by the total length of the core run.
2. GW = Observed Ground Water *(feet below Grade)
3. TOP refers to the first 60" core. BOT refers to the second 60" core.

3.4 Groundwater

Groundwater was observed between 8.5 and 15 feet below the natural ground surface. The approximate ground water table has been shown on the Soil Profile in Appendix E. The level of ground water is approximate and will vary seasonally.

inches below the floor slab and a 12-inch layer of crushed stone provided between the rock and floor slab.

4.3 Settlement

Foundations placed on the in-situ silt material and fill are expected to have minimal settlements, both long and short term. Based on the fill anticipated by the preliminary grading plan a maximum settlement of 0.5 inch is anticipated.

4.4 Lateral Design Loads

Basements of the new structures shall be designed to resist stress produced by lateral forces in accordance with Section 1610.1 of the New York State Building Code 2010 Edition, (NYSBC). The lateral loads that should be used are an active pressure of 45 pcf per foot of depth and an at rest pressure of 60 pcf per foot of depth.

4.5 Seismic Design Considerations

The material conforms to the properties that define Site Class C as determined in Section 1613.5.2, Site Classification, of the NYSBC. Accordingly, the following values should be used for the project:

Mapped Spectral Response Acceleration for Short Periods [Fig. 1615(1)]	S_S = 0.313g
Mapped Spectral Response Acceleration for 1-Second Period [Fig. 1615 (2)]	S_1 = 0.068g
Site Coefficient [Table 1615.1.2(1)]	F_a = 1.6
Site Coefficient [Table 1615.1.2(2)]	F_v = 2.40
Max. Considered Earthquake Spectral Response for Short Periods [Eq. 16-38]	S_{MS} = 0.485g
Max. Considered Earthquake Spectral Response for 1-Second Period [Eq. 16-39]	S_{M1} = 0.164g
Design Spectral Response Acceleration for Short Periods [Eq. 16-40]	S_{DS} = 0.32g
Design Spectral Response Acceleration for 1-Second Period [Eq. 16-41]	S_{D1} = 0.109g

A retail or similar facility is anticipated to be Seismic Use Group II (Table 1604.5). Based on the above values and New York State Building Code 2010, all structures shall be designed to Seismic Design Category "B" (Table 1613.5.6 (1) and 1613.5.6 (2)). The Seismic Use Group and Seismic Design Category and values for design must be confirmed by the project's structural engineer.

5. CONSTRUCTION RECOMMENDATIONS

5.1 Site Preparation

The initial site preparation should commence with the removal and stock piling of topsoil if present. An approximate depth of 6 inches should be anticipated, although depths may vary.

The Contractor shall be responsible at all times for conducting all earthwork operations in a safe and prudent manner such that all workmen and the general public will be protected from hazards. The Contractor shall observe all applicable Local, State and/or Federal requirements.

5.2 Building Subgrade

As stated in Section 4.1, in the area of Boring B-11, approximately 5 feet of material should be removed. This is near the area of the septic system soil that will need to be removed as described below. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

Boring B-6 revealed that a considerable amount of rock would need to be removed to place the northeastern portion of the proposed building. Boring B-6 has an elevation of rock at approximately 198.0 and the proposed basement floor is Elevation 183.9. This will require a removal of up to approximately 14 feet of rock. This depth of rock removal is reduced in the westerly direction to 2 feet at Boring B-7 and 2 feet at Boring B-10. The depth of rock removal does not account for any over excavation for the floor slab, stone base or footings.

Foundation drains will be required; as it is likely that ground water will be present and travel along the surface of the rock. The drains shall be a minimum of four (4) inches, surrounded by 12 inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.3 Rock Removal

In the areas of rock removal, the contractor should use line drilling and pneumatic hammer for removal. It is our understanding that while blasting is permissible in the Town of Lewisboro, the Owner did not propose during the Site Plan Approval process. All rock removed shall be performed without damage to the existing buildings scheduled to remain.

5.4 Re-use of Excavated Material

The excavated material may be used as fill, provided any organic materials, or large rocks greater than six (6) inches are removed. The rock that is removed for the building slab can be crushed and reused on site.

Recommendations for reuse of the excavated material are summarized as follows:

a) Prior to placement of the fill, the existing original ground surface should be stripped to a depth of 1 foot to remove all topsoil and the upper zone of subsoil. These soils can be used in landscaping or for nonstructural fill.

b) The fill should be placed in maximum eight (8)-inch thick lifts and compacted to at least 95% of the maximum dry density, determined using ASTM D-1557, beneath and within 3 feet outside of building areas, and to at least 92% of maximum dry density beneath parking areas and roadways. All earthwork activities shall be observed and tested by qualified geotechnical engineering.

5.5 Retaining Walls and Earth Supporting Structures

For the design and construction of new retaining walls or other earth supporting structures on site, MEG recommends that the following parameters be applied if supporting on-site soils:

Total Unit Weight = 120 pcf
Angle of Internal Friction = 35^0

Retaining wall shall be provided with foundation drains. The drains shall be a minimum of four (4) inches, surrounded by twelve (12) inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.6 Removal of Existing Building

The wooden two-story building on the southern end of the site will be demolished. The basement slab, if it exists, shall be broken and all subsurface utilities within the building pad area should be removed. The excavated areas shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.7 Removal of Existing Septic Field

The proposed building site is going to be placed on an existing septic field. Soils in this area should be removed to a depth of 3.5 feet below grade including the septic tanks and all piping. The ground surface shall be inspected by the geotechnical engineer and proof rolled. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.8 Placement of Fill for the Proposed Building

On the southern end of the proposed building the topography of the site slopes off and the area of the new buildings floor slab will be above the existing grade. In this area the foundation must be placed on virgin soil and the area below the foundation must be backfilled with select material and compacted.

5.9 Borrow Material

All fill soil should consist of predominately sandy soil and gravel with no more than 15% passing the 200 sieve, and have no particle greater than 6 inches, containing no deleterious material or environmental contaminants. Borrow material must undergo environmental testing to satisfy the Commercial soil standard per the NYSDEC Part 375 regulation.

5.10 Compaction

Fill sections and embankments shall be constructed of acceptable material and deposited in successive lifts with a loose thickness of each lift not to be more than nine (9) inches before compaction. The soil shall be compacted to the maximum dry density obtained in the lab (ASTM D-1557) as follows:

LOCATION	PERCENT OF MAXIMUM LABORATORY DENSITY ASTM D698
Subgrade & Fill Below Structures and Pavement	95
Subgrade & Fill in All other Areas	92

Contractor must maintain moisture content of not less than 2 percent below and not more than 4 percent above optimum moisture content of fill materials to attain required compaction density. Installation of fill should be performed under the supervision of a qualified Geotechnical Engineer.

5.11 Excavation & Temporary Soil Support

Where space limitations may preclude performance of open trenching operations, it may be necessary to perform the required excavations via earth support provisions such as sheeting and bracing. Areas which are not restricted by space constraints, may, in all likelihood, be performed within open excavations in conformance with applicable local, state and federal OSHA safety regulations.

5.12 Dewatering

It is anticipated that groundwater will be encountered at depths ranging from 8.5 to 11 feet below the existing ground surface. Dewatering may be necessary in excavations below these depths. The Contractor is responsible for means and methods for this operation.

This report has been respectfully submitted in accordance with the request of Charisma Holding Corporation and is, to the best of our knowledge, accurate and complete. Any questions regarding its content should be addressed to: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, New York 10994.

Respectfully submitted,

The Office of
McLaren Engineering Group
M.G. McLAREN, P.C.

Malcolm G. McLaren, P.E., SECB
President

MGMcL/SLG/LAD/rjk

cc: File 110472

Appendix A
Site Location Map



LOCATION MAP

COPYRIGHT © 2011 , McLAREN ENGINEERING GROUP

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP
M. G. McLAREN, P.C.
Tel. (845) 353-6400 Fax. (845) 353-6509
www.mgmclaren.com

PROJECT
ESTATE MOTORS
GOLDENS BRIDGE NEW YORK

SHEET TITLE
SITE LOCATION MAP
BUILDINGS 1 & 2

PROJECT NO.	111299
SCALE	NO SCALE
DATE	02-08-11
DRAWN BY	DT
CHECKED BY	LAD
DRAWING NO.	1
	1 OF 1 SHTS

FILE NAME: Q:\Cadd111\111299\SITE LOCATION MAP.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:20pm LAST SAVE: Wed, 20 Jul 2011 - 5:50pm BY: jmagycwe

3 2 1 0 0.5 1

Appendix B
Proposed Site Plan

APPROVED by Planning Board Resolution No._____, Dated _____.

_____ Date
Owner
CHARISMA HOLDING CORPORATION
ROUTE 22/P.O. BOX 711
GOLDEN'S BRIDGE, NY 10526

_____ Date
Planning Board Chairman
JEROME KERNER, AIA
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

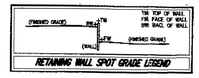
_____ Date
Planning Administrator
AIMEE HODGES
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

_____ Date
Town Engineer's Certification
Reviewed for compliance with the Planning Board Resolution dated_____.
RYAN COYNE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
TOWN CONSULTING ENGINEER

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CHARISMA HOLDING CORPORATION, AS PREPARED BY BUNNEY ASSOCIATES, DATED APRIL 12, 2010.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC UTILITY INFORMATION WAS TAKEN FROM AS BUILTS ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983 AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. ALL EXISTING STRUCTURES TO REMAIN SHALL HAVE THEIR TOPS AND GRATES ADJUSTED TO PROPOSED FINISHED GRADE.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ROOF DRAIN LEADERS AND FOUNDATION DRAINS FOR CONNECTION INTO THE NEW STORMWATER MANAGEMENT SYSTEM.
5. THE TOWN OF LEWISBORO ENGINEER SHALL INSPECT ALL WORK ASSOCIATED WITH THE PROPOSED DRAINAGE SYSTEM AND DETERMINE THE SYSTEM SUBSTANTIALLY COMPLETE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX, REPAIR OR REPLACE ANY AND ALL ITEMS NECESSARY IN THE EVENT IT IS DETERMINED BY THE TOWN ENGINEER THAT THE DRAINAGE SYSTEM IS NOT COMPLETED PER TOWN STANDARDS.
6. RETAINING WALL DESIGN BY OTHERS.



RETAINING WALL SPOT GRADE LEGEND

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- +328 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING PAVEMENT EDGE OR CURB LINE
- X X EXISTING FENCE
- EXISTING TREE LINE
- 220 EXISTING INDEX CONTOUR
- 172 EXISTING MINOR CONTOUR
- 296 APPROXIMATE EXISTING GIS INDEX CONTOUR
- 186 APPROXIMATE EXISTING GIS MINOR CONTOUR
- EXISTING TREE
- EXISTING ROCK LEDGE
- WELL 24" CMP EXISTING WELL
- EXISTING STORM LINE
- 30" CMP EXISTING STORM LINE TO BE REMOVED
- 202 PROPOSED FINISHED GRADE
- + 416.50 PROPOSED SPOT GRADE
- DMH PROPOSED DRAINAGE MANHOLE
- CI & DI PROPOSED DRAIN INLET, TYPE CI & DI
- WQS PROPOSED WATER QUALITY STRUCTURE
- PROPOSED RETAINING WALL (NOTE 6)
- 15" HDPE PROPOSED STORM LINE
- 3.70% FINISHED GRADE SLOPE AND DIRECTION
- DDI DOUBLE DRAIN INLET
- TRENCH DRAIN

NO.	REVISION	DATE
1.	SUBMISSION TO BUILDING DEPARTMENT	10/19/2009
2.	PLANNING BOARD SUBMISSION	12/21/2009
3.	RESPOND TO TOWN COMMENTS	04/01/2010
4.	SUBMISSION TO WESTCHESTER COUNTY HEALTH DEPARTMENT	08/10/2010
5.	REVISED PER HEALTH DEPARTMENT COMMENTS	09/17/2010
6.	RESPOND TO TOWN COMMENTS	12/23/2010

Preliminary Not Final Preliminary Not Final

APPLICANT: ESTATE MOTORS, ROUTE 22, P.O. BOX 711, GOLDEN'S BRIDGE, NY 10526

ATTORNEY: DELBELLO DONNELLAN WEINGARTEN WISE & WIEDERKEHR, LLP, ONE NORTH LEXINGTON AVENUE, WHITE PLAINS, NEW YORK 10601

ARCHITECT: SULLIVAN ARCHITECTURE, P.C., 31 MAMARONECK AVENUE, WHITE PLAINS, NEW YORK 10601

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GRADING & DRAINAGE PLAN

ESTATE MOTORS MERCEDES-BENZ
321 ROUTE 22
TOWN OF LEWISBORO, NY

RECEIVED
JAN 05 2011
SULLIVAN ARCHITECTURE, PC

DRAWN: SS APPROVED: RR
SCALE: 1" = 30'
DATE: 08/10/2009
PROJECT No: 9065
DWG: 9065-GE TAB: GRADING SCR: 1-GRAD
DRAWING No: SP-6

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GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

NOT FOR CONSTRUCTION

Appendix C
Boring Location Plan

Plot on Site Plans (Grading)

NORTH

ALIGNMENT P1

ALIGNMENT P2

B-1 B-2 B-3 B-4 B-5 B-6 B-7b B-8 B-9 B-10 B-11 B-12 B-13 B-14

0+00 1+00 2+00 3+00 4+00 5+00 6+00 6+50 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+

79' 58' 12' 5' 56' 5' 11' 2' 31+00 32+00 237' 22' 63' 138' 382' 22' 10' 65' 83' 82'

PROPOSED CANOPY

PROPOSED BLDG.

STATE MOTORS MERCEDES-BENZ SHOWROOM BUILDING

B-13 16.5' -15.5'(GW)

B-8 9.5' -8.5'(GW)

B-12 22' -10.5(GW)

B-14 -10'(GW)

FF 181-182

LEVEL 20'x2'

LEGEND

B-1 ⊕ DENOTES BORING LOCATION PLAN

30' 0 30' 60' FEET

SCALE: 1" = 30'

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NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied logic, inc.
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-4400 F. (845) 353-4509 www.mgmclaren.com

PROJECT

ESTATES MOTORS

GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING LOCATION PLAN

PROJECT NO.	111299.00
SCALE	AS NOTED
DATE	07-05-11
DRAWN BY	DT
CHECKED BY	LAD

DRAWING NO.

B-1

____ OF ____ SHTS

FILE NAME: d:\Codd111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:18pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmcgwire

Appendix D
Boring Logs

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-1
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/6/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/6/11
AT 15 FT AFTER 0 HOURS	HAMMER WT.: 140# / BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	10"	2'0"	9 / 15		dry compact	0'3"	TOPSOIL; F GRAVEL and brn C-F sand,tr silt
							20 / 11				
		2	ss	24"	20"	4'0"	24 / 35		dry dense		brn F-C SAND,sm silt F gravel
							44 / 41				
5		3	ss	11"	11"	4'11"	51 / 100/5"		v dense		brn/gry FM SAND & SILT,lit F gravel,C sand,tr cobble
											SAME
		4	ss	24"	24"	8'0"	42 / 37		moist/dry		lt brn FM SAND,tr C sand,F gravel,silt
							23 / 23		dense		
		5	ss	24"	20"	10'0"	13 / 22		moist		brn VF F SAND,sm silt,lit M-C sand,tr F gravel
10							22 / 22		compact		
		6	ss	24"	18"	12'0"	24 / 27		moist		brn F-C SAND and F gravel
							24 / 24		compact		
15											
		7	ss	24"	10"	17'0"	9 / 24		wet		brn F-C SAND & F GRAVEL,lit silt,tr cobble
							20 / 51		compact	17'0"	
											E.O.B. 17'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-1

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE M = MEDIUM F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-2
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	2 / 44		dry	0'3"	ASPHALT; bm FM SAND,sm silt,F gravel,lit C sand,tr cobble,roots
							53 / 65		dense		
		2	ss	5"	5"	2'5"	50/5"		dense		brn FM SAND,sm silt,F gravel,tr C sand
									dry		bm FM SAND,sm silt,F gravel,lit C sand,tr weathered rock
5		3	ss	3"	3"	4'3"	50/3"		dense	5'0"	Auger refusal
											E.O.B. 5'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-2

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-3
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 16 FT AFTER 0 HOURS AT __FT AFTER __HOURS		DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	14"	12"	1'2"	3 / 8		dry	0'4"	ASPHALT; brn F SAND & SILT,lit MC sand,F gravel,tr roots
							50/2"		dense		sm cobbles & sm boulders 1'6" - 2'6"
		2	ss	24"	18"	4'0"	18 / 22		dry		brn/lt brn VF F SAND & SILT,tr MC sand,F gravel,roots
							21 / 27		dense		
5		3	ss	24"	20"	6'0"	52 / 35		dry		SAME
							44 / 37		dense		brn/lt brn VF F SAND,sm silt,lit M-C sand,F gravel
		4	ss	24"	18"	8'0"	41 / 65		dry		lt brn FM SAND,sm C sand,F gravel,lit silt,tr weathered cobble
							52 / 51		v dense		
		5	ss	7"	7"	8'7"	47 / 50/1"		dense		brn F-C SAND & F GRAVEL,sm silt
10											
		6	ss	24"	18"	12'0"	37 / 33		mst/v mst		gry/lt brn F-C SAND & SILT,sm F gravel
							40 / 43		dense		
15											
		7	ss	24"	10"	17'0"	21 / 39		wet		brn VF F SAND & SILT,tr M-C sand,F gravel,cobble
							35 / 47		dense		
										18'6"	Auger refusal
											(set 3" FW casing at 19'0")
20		1	c	60"	60"	24'0"	RQD = 95%	1.5			BEDROCK
								2.5			
								3			
								3			
								3.5			
25		2	c	60"	29"	29'0"	RQD = 10%	3			highly fractured BEDROCK
								4			
								4			
								4.5			
								6		29'0"	
30											E.O.B. 29'0"
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-3

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE M = MEDIUM F = FINE

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-4
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	3 / 4		moist	0'6"	TOPSOIL; brn SILT & VF F SAND,tr M-C sand,F gravel,roots
							5 / 3		loose	2'0"	
		2	ss	24"	17"	4'0"	5 / 11		wet/dry		brn FM SAND & SILT,sm C sand,F gravel,tr cobble,roots
							88 / 51		v dense		
5		3	ss	17"	17"	5'5"	56 / 70				brn FM SAND & SILT,sm C sand,F gravel,tr cobble
							100/5"		v dense	6'0"	Auger refusal
											E.O.B. 6'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-4

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-5
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 3 ¾" / 1 3/8" HAMMER WT.: 140# BIT HAMMER FALL: 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	5 / 11		dry	0'2"	ASPHALT; drk brn FM SAND & SILT,lit C sand,F gravel,tr boulder
							15 / 18		compact		
		2	ss	22"	15"	3'10"	19 / 37		dry		brn F-C SAND & F GRAVEL,cobble,boulder,tr silt,building rubble (fill)
							28 / 100/4"		dense		
5		3	ss	24"	18"	6'0"	23 / 28		dry		SAME; and silt
							18 / 17		compact		SAME; and silt
		4	ss	24"	15"	8'0"	16 / 30		dry		SAME; and silt (fill)
							27 / 19		compact		
		5	ss	24"	17"	10'0"	15 / 4		moist/wet	9'0"	TOPSOIL (drk brn organic SILT)
10							3 / 6		soft	10'0"	brn SILT & F SAND,tr M-C sand,F gravel,clay,roots
		6	ss	24"	11"	12'0"	17 / 15		moist		brn C-F SAND,sm F gravel,tr silt
							18 / 37		compact		
									moist		
15		7	ss	6"	6"	15'6"	50/6"		dense	15'6"	brn F-C SAND,sm F gravel,tr silt
											fractured BEDROCK, rock frags
									moist		
20		8	ss	9"	9"	20'9"	50 / 50/3"		dense	20'9"	SAME
											E.O.B. 20'9"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-5

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-6
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE HSA / SS	DATE START 7/8/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D. 3 ¾" / 1 3/8"	DATE FINISH 7/8/11
	HAMMER WT. 140# BIT	SURFACE ELEV.
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	10"	1'6"	11 / 10 / 50/6"		dry/moist dense	0'2" 1'6" 2'0"	ASPHALT; brn FM SAND & SILT,sm F gravel,lit C sand,tr ash, cinders (fill) Auger refusal weathered BEDROCK or BOULDERS
5											E.O.B. 2'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-6

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-7, B-7A
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 3 ¾" / 1 3/8" HAMMER WT. 140# / BIT HAMMER FALL 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	16"	2'0"	18 / 16		dry	0'2"	TOPSOIL and blasted ROCK;brn FM SAND,sm silt,C sand,F gravel,
							24 / 14		compact		tr brick,ash,building rubble (fill)
		2	ss	22"	2"	3'10"	5 / 5		dry	3'0"	BOULDERS
							9 / 50/4"		loose	4'0"	Auger refusal
5											
											E.O.B. 4'0"
											(5' offset)
0											B-7A
										3'0"	Auger refusal
5											E.O.B. 3'0"
10											
15											
20											
25											
30											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-7, B-7A

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-8
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT 8'6" FT AFTER 0 HOURS AT __FT AFTER __HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6	6 - 12	12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	15"	2'0"		6			dry	0'6"	ASPHALT & PROCESS GRAVEL; brn FM SAND & SILT,sm
							7	4			loose		F gravel,lit C sand,tr brick,glass (fill)
		2	ss	24"	14"	4'0"	3	4			dry		SAME
							5	12			loose		
5		3	ss	24"	20"	6'0"	5	8			dry/moist	5'6"	SAME
							9	8			loose		brn F-C SAND,F gravel,tr silt
		4	ss	24"	14"	8'0"	43	42			moist		lt gry FM SAND,sm silt,lit C sand,F gravel,tr cobble
							31	12			dense	8'10"	lt gry FM SAND,lit C sand,F gravel,tr silt
		5	ss	10"	6"	8'10"	24	50/4"			wet/dense	9'6"	fractured ROCK Auger refusal
10													
													E.O.B. 9'6"
15													
20													
25													
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. **HOLE NO. B-8**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-9
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

OFFSET
DATE START 7/8/11
DATE FINISH 7/8/11
SURFACE ELEV.
GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 - 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	12"	2"	2'0"			dry	0'6"	2" ASPHALT/4" process STONE and WOOD (2x4's)
							7 14		loose	1'0"	concrete slab
		2	ss	3"	3"	2'3"	50/3"		dense	2'0"	concrete rubble/cobbles
		1	c	60"	52"	8'0"	RQD = 42%	2.0			bm FM SAND,sm silt,lit C sand,F gravel,tr weathered rock frags
5								2.5		3'0"	Auger refusal
								3.0			(set 3" FW casing at 3'0")
								3.5			BEDROCK
								5.0			
		2	c	60"	60"	13'0"	RQD = 75%	2.0			
10								3.0			
								3.5			
								3.5			
								3.0		13'0"	
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-9

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-10
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/8/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/8/11
AT none FT AFTER 0 HOURS	HAMMER WT.: 140# BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	21"	10"	1'9"	19 / 9		dry compact	0'2"	TOPSOIL; drk brn FM SAND,sm silt,F gravel,lit C sand,tr roots, cobble,boulders (fill)
							13 / 75/3"				BOULDERS 2' - 4' (fill)
										4'0"	
5		2	ss	24"	12"	6'0"	10 / 9		dry compact		brn/gry F SAND,lit M sand,F gravel,tr roots
							20 / 36				
		3	ss	24"	12"	8'0"	46 / 42		dry dense		brn/gry FM SAND,sm C sand,F gravel,tr silt,cobble
							41 / 28				
		4	ss	24"	20"	10'0"	43 / 32		dry dense		lt brn/brn F-C SAND,sm F gravel,lit silt
10							40 / 48				
		5	ss	10"	10"	10'10"	21 / 100/4"		v dense	11'0"	brn FM SAND,sm silt,F gravel,lit C sand,tr weathered rock frags
										13'0"	fractured BEDROCK Auger refusal
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____ CASING THEN _____ CASING TO _____FT. **HOLE NO. B-10**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-11
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING: HSA; SAMPLER: SS; CORE BAR:	OFFSET
	TYPE: HSA; SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾"; 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	14"	2'0"	10		dry	0'2"	1" ASPHALT/1" proc stone;drk brn F SAND & SILT,tr M sand,F
							6 5		loose		gravel,roots
		2	ss	24"	16"	4'0"	5 3		dry		brn/lt brn VF F SAND,sm silt,tr M sand,F gravel,roots
							4 4		v loose		
5		3	ss	24"	22"	6'0"	5 8		dry		lt brn/tan FM SAND,sm silt,tr C sand
							11 10		loose		
		4	ss	24"	18"	8'0"	11 13		dry		lt brn VF F SAND,sm silt,tr M sand
							13 14		compact		
		5	ss	24"	17"	10'0"	97 40		dry		brn FM SAND,sm C sand,F gravel,cobble,lit silt,tr
10							33		dense	10'0"	weathered rock frags
		6	ss	10"	10"	10'5"	100/5"		v dense	11'0"	fractured ROCK Auger refusal
15											E.O.B. 11'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-11

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-12
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 10'6" FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	17"	2'0"	20	23			dry compact		brn/brk brn F-C SAND & SILT,sm F gravel,tr ash,roots (fill)
							15	14					
		2	ss	24"	16"	4'0"	15	12			dry compact		brn/drk brn SILT & F SAND,tr M-C sand,F gravel,roots
							14	13				4'0"	
5		3	ss	24"	17"	6'0"	9	10			dry loose		brn/lt brn F SAND,sm silt,tr M sand,clay,root
							8	8					
		4	ss	24"	20"	8'0"	8	13			dry compact		lt gry/lt brn FM SAND,sm silt,lilt C sand,F gravel
							21	21					
		5	ss	24"	16"	10'0"	11	13			moist compact		gry F SAND & SILT,tr M sand
10							15	19					
		6	ss	24"	16"	12'0"	17	19			wet compact		SAME
							21	28					brn F-C SAND,sm F gravel,tr weathered BOULDER
15													
		7	ss	24"	15"	17'0"	18	12			dry/moist compact		brn C-F SAND and F GRAVEL,tr silt
							20	14					
													some cobble at 18'
20		8	ss	7"	6"	20'7"	88	50/1"			v moist dense	20'6"	brn/gry F-C SAND & F GRAVEL,weathered rock frags
												22'0"	weathered ROCK Auger refusal
25													E.O.B. 22'0"
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-12

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-13
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	TYPE: CASING HSA, SAMPLER SS, CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT 16'6" FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	6 / 11		dry	0'2"	ASPHALT;brn F-C SAND & SILT,sm F gravel,tr brick,ash,root
							49 / 17		dense		
		2	ss	24"	12"	4'0"	6 / 9		dry		drk brn F SAND & SILT,lit M-C sand,F gravel,tr brick,ash,roots (fill)
							23 / 14		compact		
5		3	ss	24"	12"	6'0"	8 / 9		dry		SAME
							9 / 9		loose	6'0"	
		4	ss	24"	19"	8'0"	13 / 18		dry		brn FM SAND,sm silt,lit C sand,F gravel
							17 / 20		compact		gry VF F SAND,sm silt,tr F gravel
		5	ss	24"	24"	10'0"	24 / 20		dry		gry VF F SAND,sm silt,tr M-C sand,F gravel
10							19 / 23		compact		
		6	ss	24"	16"	12'0"	27 / 19		dry		brn FM SAND,lit C sand,tr F gravel
							16 / 20		compact		
15											
		7	ss	24"	16"	17'0"	16 / 29		moist/wet		lt brn F-C SAND & SILT,sm M sand,lit C sand,tr F gravel
							20 / 15		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-13

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-14
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	20"	2'0"	5 / 13		dry	0'1"	ASPHALT;brk brn FM SAND & SILT,sm F gravel,tr brick,ash
							17 / 6		compact		
		2	ss	24"	22"	4'0"	12 / 17		dry		drk brn FM SAND,sm C sand,F gravel,silt,tr roots,cobble
							33 / 56		dense		
5		3	ss	24"	18"	6'0"	29 / 11		dry		drk brn/brn F SAND & SILT,lit F gravel,tr M-C sand,ash,brick (fill)
							7 / 5		loose	6'0"	
		4	ss	24"	22"	8'0"	1 / 5		dry		brn FM SAND & SILT,lit F gravel,tr C sand,roots
							6 / 6		loose		brn F-C SAND,lit F gravel,silt
		5	ss	24"	16"	10'0"	8 / 7		dry		SAME
10							12 / 13		compact		
		6	ss	24"	18"	12'0"	20 / 19		moist		lt brn/tan F SAND,sm silt,tr M sand,F gravel
							17 / 19		compact		
15											
		7	ss	24"	18"	17'0"	9 / 10		dry		lt brn/tan FM SAND,lit C sand,F gravel
							11 / 17		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-14

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

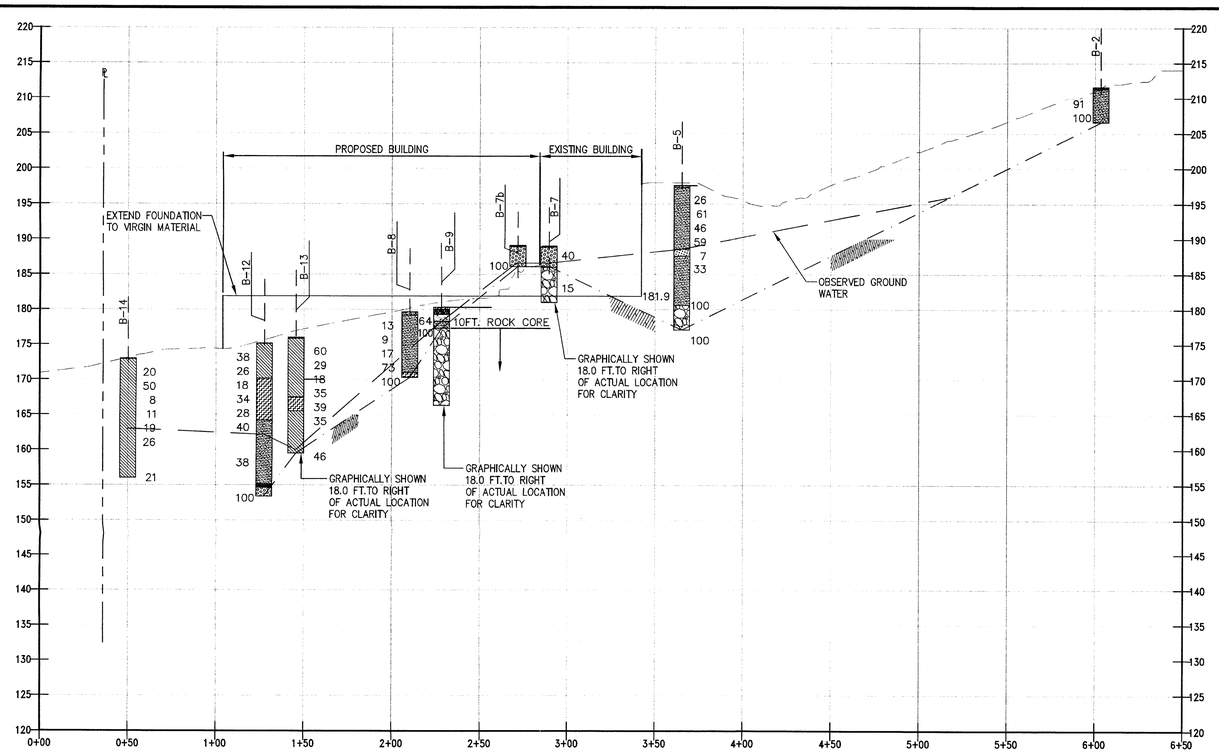
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

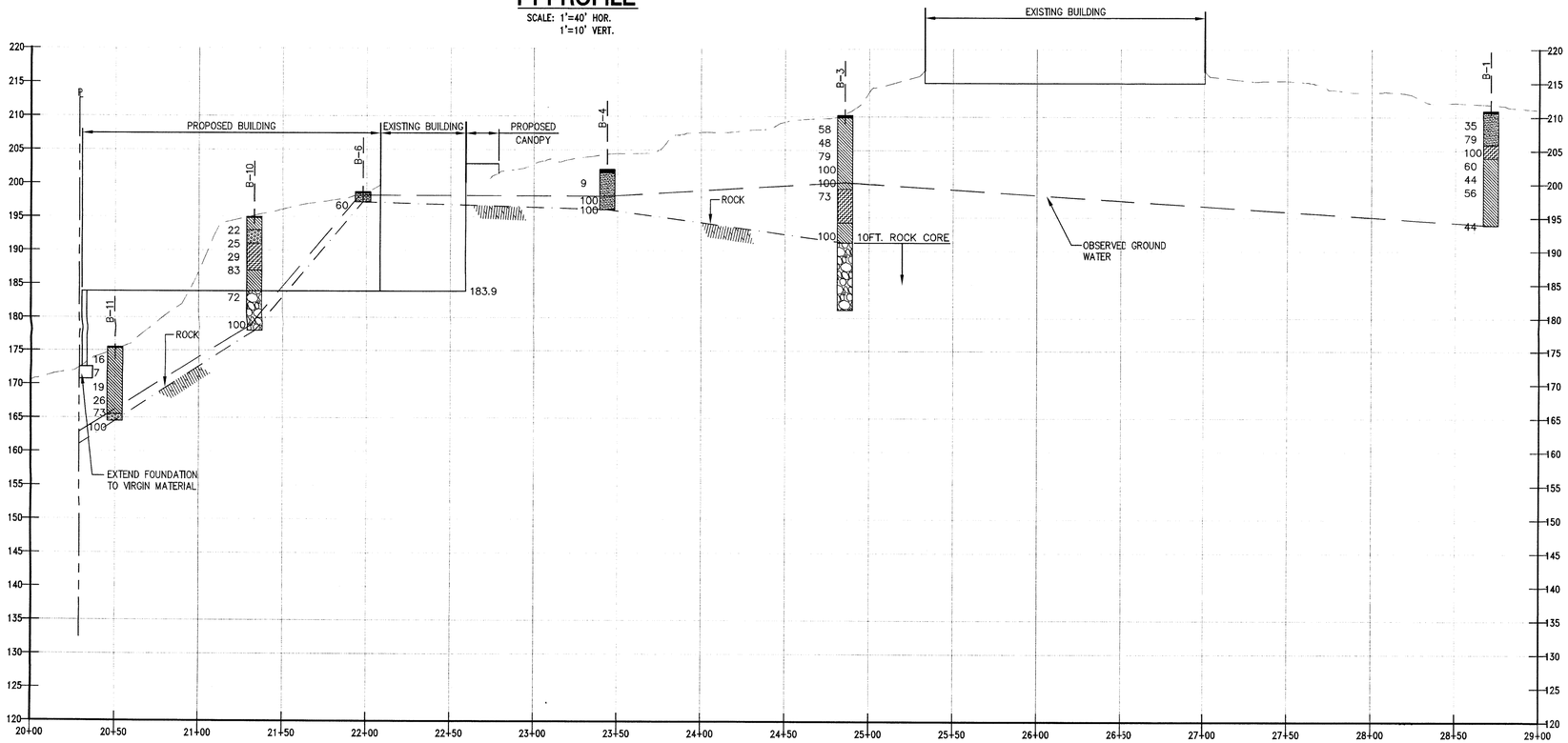
C = COARSE
M = MEDIUM
F = FINE

Appendix E
Soil Profiles



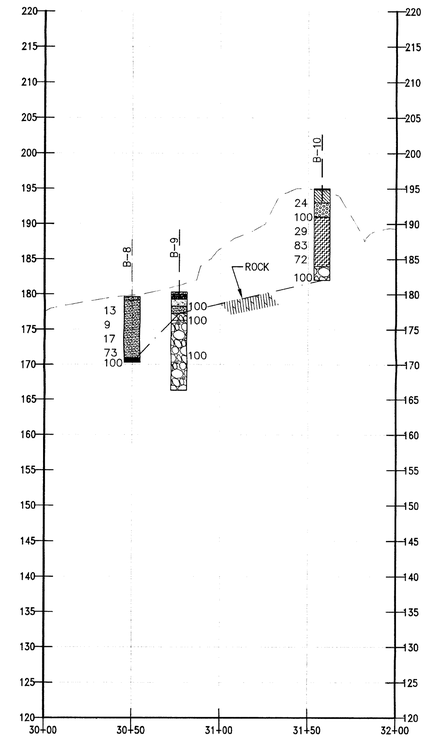
P1 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P2 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P3 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.

NOTE: *GROUNDWATER RUNS PARALLEL TO TOP OF ROCK

LEGEND

- BRN/TAN F-C SAND WITH SOME SILT AND GRAVEL
- F-C SAND SOME SILT AND GRAVEL
- PROCESSED STONE & WOOD
- F-C BRN/GRAY SAND/SILT
- ASPHALT/TOPSOIL
- TOPSOIL
- EL. ELEVATION
- ROCK/STONE/BOULDERS
- BPF BLOWS PER FOOT (SHOWN BESIDE SOIL PROFILES)
- CONCRETE
- GROUND WATER
- TOP OF BEDROCK
- GROUND SURFACE ELEVATION
- BEDROCK

*NOTE: THE GROUNDWATER ELEVATION SHOWN IS APPROXIMATE AND IS SUBJECT TO SEASONAL VARIATIONS AND IS SHOWN AT 1 FOOT IN AREAS WHERE GROUNDWATER WAS DETECTED AT ROCK. IT IS SHOWN 1 FOOT HIGHER THAN THE BEDROCK ELEVATION FOR ILLUSTRATIVE PURPOSE.

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied research
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-6400 F. (845) 353-6509 www.mgmclaren.com

PROJECT

ESTATES MOTORS
GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING PROFILES

PROJECT NO.	111299
SCALE	AS NOTED
DATE	07-05-2011
DRAWN BY	DB
CHECKED BY	CB
DRAWING NO.	B-2
	2 OF 2 SHTS

COPYRIGHT © 2011, McLAREN ENGINEERING GROUP

FILE NAME: G:\cadd\111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:22pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmayowe

JMC
JOHN MEYER CONSULTING, PC

- SITE PLANNING
- CIVIL ENGINEERING
- LANDSCAPE ARCHITECTURE
- TRANSPORTATION ENGINEERING
- LAND SURVEYING
- ENVIRONMENTAL STUDIES
- HAZARDOUS WASTE
- CONSTRUCTION SERVICES

DESIGN DATA SHEET - SEPARATE SEWERAGE SYSTEM JOB NO. 9065

Owner Estate Motors Mercedes Benz Address 321 Main Street (NYS Route 22)

Located at (Street) Between Anderson Lane & Green Hill Road Sec. Block 11135 Lot 1
(Indicate nearest cross st.)

Municipality Lewisboro, NY Watershed New York City

SOIL PERCOLATION TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

Presoak Date: 8/4/2011 9am for Hole#1
1pm for Hole#2 Run Date: 8/4/2011 & 8/5/2011

Hole #	CLOCK TIME				PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapse Time Min.	Depth of Top of Pipe From Grade (in)	Starting Depth to water from Grade (in)	Water Level Drop (in)	Soil Rate Min/In Drop
PT-1	1	1:56 PM	2:56 PM	60	5' 5"	6' 2"	10 1/4	5.9
	2	2:58 PM	3:58 PM	60	5 '5"	6' 2"	10	6.0
	3	8:20 AM	9:20 AM	60	5' 5"	6' 2"	8	7.5
	4	9:24 AM	10:24 AM	60	5' 5"	6' 2"	7	8.6
PT-2	1	1:21 PM	1:22 PM	1	8' 3"	8' 4"	29	<1
	2	1:24 PM	1:25 PM	1	8' 3"	8' 4"	29	<1
	3	1:27 PM	1:29 PM	2	8' 3"	8' 4"	29	<1
	4	1:31 PM	1:46 PM	15	8' 3"	8' 4"	29	<1

Notes: Perc test done by: SS

1) Tests to be repeated at same depth until approximately equal soil rates are obtained at each percolation test hole. All tests were witnessed by NYCDEP and the Town of Lewisboro Engineering Consultant.
2) Depth measurements to be made from top of hole.
3) Excavated down to ±2 feet above the proposed bottom of infiltration system gravel bed and then dug a 6 inch diameter hole with post hole digger down 2 feet. Therefore the percolation tests were done at the proposed bottom elevation of the infiltration system gravel bed.

JMC
JOHN MEYER CONSULTING, PC

- SITE PLANNING
- CIVIL ENGINEERING
- LANDSCAPE ARCHITECTURE
- TRANSPORTATION ENGINEERING
- LAND SURVEYING
- ENVIRONMENTAL STUDIES
- HAZARDOUS WASTE
- CONSTRUCTION SERVICES

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. 1	HOLE NO. 2	HOLE NO.	HOLE NO.
G.L.	Dirt	Pavement		
6"	Dark Brown	Pavement		
12"	Dark Brown	Concrete		
24"	Dark Brown	Pea Gravel		
36"	Dark Brown	Dark Brown		
48"	Light Brown Sandy Loam	Light Brown Sandy Loam		
60"	Light Brown	Light Brown		
72"	Sand	Light Brown		
84"	Sand	Sand		
96"	Sand	Sand		
108"	Sand	Sand		
120"	Sand	Sand		
132"	Sand, ends at 129"	Sand		
144"	-	Sand		
156"	-	Sand		
168"	-	Sand, ends at 165"		

WAS GROUNDWATER ENCOUNTERED? No
INDICATE LEVEL AT WHICH GROUND WATER IS ENCOUNTERED N/A
INDICATE LEVEL AT WHICH WATER RISES AFTER BEING ENCOUNTERED N/A
DEEP TESTS MADE BY SS DATE OF DEEP TESTS 8/4/2011

DESIGN

Design Soil Rate Used: 12 Min/1" Drop (5"/hr)

Name Robert Roth, PE, CPESC Signature

Address John Meyer Consulting, PC
120 Bedford Road
Armonk, NY 10504

SEAL



APPENDIX E

TEMPORARY EROSION AND SEDIMENTCONTROL INSPECTION AND MAINTENANCE CHECKLIST PERMANENT STORMWATER PRACTICE OPERATION, MAINTENANCE AND MANAGEMENT INSPECTION CHECKLIST

JMC Project 16124
Mercedes Benz of Goldens Bridge
NYS Route 22
Town of Lewisboro, NY

Temporary Erosion and Sediment Control Inspection and Maintenance Checklist

Erosion and Sediment Control Measure	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Stabilized Construction Entrance	Daily	• Periodic top dressing with additional aggregate as required • Clean sediment in public right-of-ways immediately
Silt Fence	Weekly + After Each Rain	• Remove & redistribute sediment when bulges develop in the silt fence.
Inlet Protection	Weekly + After Each Rain	• Refer to Figures A5.11, A5.12, A5.13 & A5.14 within the NYSDEC New York State Standard and Specifications for Erosion and Sediment Control
Temporary Swale	Weekly + After Each Rain	• Immediately remove any sediment and reestablish vegetative cover as required. • Inspect entire swale and surrounding area for rilling and repair as required with the placement of additional topsoil, then seeding and mulching, as outlined in Figure No. 5A.2 of the NYSDEC New York State Standards and Specifications for Erosion and Sediment Control.

JMC Project 16124
Mercedes Benz of Goldens Bridge
NYS Route 22
Town of Lewisboro, NY

Permanent Stormwater Management Practice Inspection and Maintenance Checklist

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Vegetated Swale	Monthly	• Check that contributing area is clean of debris. • Confirm vegetation is adequately maintained (mowing, fertilizer, etc.) • Check for rilling/erosion and repair as needed. • Confirm dewatering occurs between storms.
Drain Inlets	Monthly	• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary. • Check for sediment and debris collected within sumps and clean out as necessary.
Vegetated Swale/Open Channel/Level Spreader	Annually + After Major Storms	• Clean sediment and re-vegetate as necessary. • Check condition of outlet and repair as necessary

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Subsurface Stormwater Management Detention Facility	Annually + After Major Storms	• Check level of sediment and debris accumulated within the system. • Check structural integrity of the system pipes, structures, etc. for cracking, bulging or deterioration. Repair/remove as necessary. • Confirm all inlets and outlet structures/pipes are operating properly.
StormTech Subsurface Retention Facility		• Check level of sediment accumulated within the isolator row through the access manhole. If 3 inches of sediment or greater, clean out utilizing a high pressure water nozzle to scour and suspend sediments. • Flush all sediment to access manhole and remove using a vacuum truck.

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
CDS Water Quality Structure		• Open access cover for visual inspection and measure the distance from the standing water surface to the sediment pile with a measuring stick or tape. If less than 4 feet, insert hose from vacuum truck into the sump and screen through both access covers to clean out the standing water, layer of oil, sediment, trash, etc. • The screen must be powerwashed to ensure it is free of trash and debris.
Porous Pavement and Permeable Pavers	Monthly and As Needed	• Ensure that paving area is clean of debris • Ensure that paving dewaters between storms • Ensure that the area is clean of sediments • Mow upland and adjacent areas, and seed bare areas
	Quarterly	• Vacuum sweep frequently to keep surface free of sediments
	Annually	• Inspect the surface for deterioration or spalling

Permanent Stormwater Management Practice Inspection and Maintenance Checklist (Cont'd)

Stormwater Management Practice	Inspection/Maintenance Intervals	Inspection/Maintenance Requirements
Green Roof	Spring	• Annual Soil Test by removing small soil quantities and sending to a testing laboratory for nutrient content, etc. • Begin biweekly weed inspection and removal. • Judiciously apply phosphorus free fertilizer if needed based on the annual soil test results. • Biweekly check for displaced soil, inspect roof drains, remove debris and check for pests.
	Summer	• Continue biweekly weed inspection and removal. • Continue biweekly inspection for soil displacement, roof drains, debris, pest control, etc. • Irrigation may be required every 2 or 3 weeks during prolonged hot, dry weather.
	Fall	• Continue biweekly weed inspection and removal. • Continue biweekly inspection for soil displacement, roof drains, debris, pest control, etc.
	Winter	• Remove snow as needed from access walkways.

The owner/operator responsible for inspection and maintenance as outlined above:

Celebrity Motor Car, LLC
Mr. Tom Maoli
130 Route 10
Whippany, NJ 07981
Phone: 973-727-7016
Fax: 973-319-1013
Email: tmaoli@lexusofroute10.com

p:\2016\16124\drainage\temporary & permanent s&e inspection and maintenance checklist.docx

APPENDIX F

SAMPLE MAINTENANCE AGREEMENT

DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS FOR
Mercedes Benz of Goldens Bridge

DECLARATION made as of the 8th day of 11, 2017, by Whippoorwill Club with an address at 150 Whippoorwill Road, Armonk, NY 10504. (hereinafter referred to as the "Declarant").

W I T N E S S E T H:

WHEREAS, Declarant is the owner of all that certain property located on the east side of NYS Route 22 in Town of Lewisboro, County of Westchester and State of New York, which property is also know and designated on the tax assessment map of the Town, being designated as Block 11135, Lots 1, 2, 3, 4, 6, 7, 8, and 42 as shown on the tax assessment maps.

WHEREAS, such improvements are subject to Section 18-39 of the *Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and Its Sources*, Title 10 New York Codes, Rules and Regulations Part 128-3.9(b)(3)(i); Title 15 Rules of the City of New York Chapter 18-39(b)(3)(x) ("Watershed Regulations"); and

WHEREAS, the Watershed Regulations require Declarant to prepare a Stormwater Pollution Prevention Plan ("SWPPP") and submit the SWPPP to the New York City Department of Environmental Protection ("DEP") for its review and approval so that stormwater generated by precipitation during and after soil disturbing activities and runoff from newly created impervious surfaces is captured and treated, thus reducing or eliminating a pollution discharge; and

WHEREAS, Declarant has submitted a SWPPP application to DEP for the Property described above, "Mercedes-Benz of Goldens Bridge *Stormwater Pollution Prevention Plan* (SWPPP)", and received an approval from DEP for such SWPPP, dated _____, such SWPPP approval being attached hereto as Exhibit __; and

WHEREAS, Declarant desires to declare the following covenants, conditions and restrictions to govern the future development, use and maintenance of any lots that are part of the Property that may be conveyed to future owners, including the Declarant's respective heirs, successors, and assigns, and to subject any deed of conveyance of any such lots to this Declaration, by reference thereto, to the covenants, conditions and restrictions described herein,

NOW, THEREFORE, Declarant hereby declares that the Property shall be held, sold, conveyed, transferred and occupied subject to the following covenants, conditions, and restrictions which are for the benefit of the consumers of the New York City drinking water supply system as well as for the owners of the Property and which shall be perpetual so long as the provisions of the SWPPP continue to be required by the Watershed Regulations, shall run with the Property and be binding on the Declarant, its heirs, successors and assigns and be binding upon each successive owner of any Property parcel or lot described in the subdivision plan and the heirs, successors and assigns of each subsequent party having or acquiring any right, title or interest in the Property or any part thereof.

1. Declarant hereby acknowledges, covenants, warrants, and represents that it shall install and maintain any and all erosion and sediment controls and stormwater

management practices on the Property in accordance with the SWPPP approved by DEP, dated _____, last revised _____, and any and all amendments to the SWPPP that may be required and that DEP may approve.

2. Declarant's installation and maintenance of the erosion and sediment controls and stormwater management practices shall be for the benefit of the consumers of the New York City drinking water supply system as well as for the owners of the Property.

3. Declarant's obligation to install and maintain any and all erosion and sediment controls and stormwater management practices on the Property in accordance with the DEP approved SWPPP and any and all amendments to the SWPPP that DEP may approve shall be perpetual so long as the provisions of the SWPPP continue to be required by the Watershed Regulations.

4. Declarant hereby acknowledges, covenants and warrants that this Property shall be subject to the maintenance obligations set forth and described in the SWPPP, with respect to any stormwater management practices or treatment of runoff located on areas commonly owned by multiple property owners or a homeowner's association in the subdivision.

5. Declarant hereby covenants, warrants, and represents that any lease, mortgage, subdivision, or other transfer of the Property, or any interest therein, shall be subject to the restrictive covenants contained herein pertaining to the installation and maintenance of erosion and sediment control and stormwater management practices, and any deed, mortgage, or other instrument of conveyance shall be subject to and, specifically refer to, the attached SWPPP approval and shall specifically state that the interest thereby conveyed is subject to the covenants and restrictions contained herein and therein.

6. These covenants, conditions and restrictions shall run with the land and shall apply to, inure to the benefit of, and bind the Declarant and all subsequent heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, Declarant has executed this document this ____ day of _____, 2019.

_____

Signature

STATE OF NEW YORK)

)

COUNTY OF WESTCHESTER)

On _____, 2016, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his/her capacity, and that by his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____

Notary Public

APPENDIX G

DRAWINGS

SOIL TYPE TABLE

DESIGNATION	HYDROLOGIC GROUP	DESCRIPTION
CrC	B	CHARLTON–CHATFIELD COMPLEX ROLLING, 0 TO 15% SLOPES, VERY ROCKY.
CsD	B	CHATFIELD–CHARLTON COMPLEX HILLY, VERY ROCKY, 15 TO 35% SLOPES
CtC	B	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 0 TO 15% SLOPES
CuD	D	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 15 TO 35% SLOPES

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CELEBRITY OF WESTCHESTER, LLC., AS PREPARED BY INSITE ENGINEERS, SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
2. THE SOIL TYPES, HYDROLOGIC SOIL GROUPS AND BOUNDARY INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA) WEB SOIL SURVEY.
3. THE TOPOGRAPHIC CONTOURS DEPICTED ON THIS PLAN HAVE BEEN SUPPLEMENTED BY THE WESTCHESTER COUNTY GIS BASE MAP. THE WESTCHESTER COUNTY GIS DATASET CONTAINS CONTOUR LINES MODELED AT A TWO FOOT INTERVAL. THE SOURCE INFORMATION USED IN THE COLLECTION OF THE DATASET WAS PART OF THE NEW YORK STATE DIGITAL ORTHOIMAGERY PROGRAM; PHOTOS TAKEN IN APRIL 2004. THE VERTICAL DATUM IS NAVD88. THE COUNTY OF WESTCHESTER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE COMPLETENESS OR ACCURACY OF THE DATA AND ASSUMES NO LIABILITY WHATSOEVER FOR ANY PRODUCT OR ANALYSIS DERIVED FROM OR BASED ON THE DATA.

EXISTING DRAINAGE LEGEND

- EXISTING BUILDING
- EXISTING CURB
- +101 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- OHW OHW OHW EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE
- PROPERTY LINE
- 197 EXISTING CONTOUR
- 200 EXISTING INDEX CONTOUR
- WELL EXISTING WELL
- 30" RCP EXISTING STORM LINE
- DRAINAGE AREA BOUNDARY LINE
- TC FLOW PATH LINE
- CuD SOIL TYPE AND DESIGNATION

No.	Revision	Date	By
	Preliminary Edition October		

PREPARED FOR/OWNER:
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WHIPPANY, NJ 07981

ARCHITECT:
SULLIVAN ARCHITECTURE
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WHITE PLAINS, NY 10601

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EXISTING DRAINAGE AREA MAP

MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Drawn:	SS	Approved:	AN
Scale:	1" = 30'		
Date:	09/06/2018		
Project No:	16124		
16124-Drainage	EDA	---	

DA–1

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SOIL TYPE TABLE

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CsD	B	CHATFIELD–CHARLTON COMPLEX HILLY, VERY ROCKY, 15 TO 35% SLOPES
CtC	B	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 0 TO 15% SLOPES
CuD	D	CHATFIELD–HOLLIS–ROCK OUTCROP COMPLEX, 15 TO 35% SLOPES

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1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CELEBRITY OF WESTCHESTER, L.L.C, AS PREPARED BY INSITE ENGINEERING SURVEYING & LANDSCAPE ARCHITECTURE, P.C., DATED AUGUST 17, 2017.
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4. THE BORING LOCATIONS, DESIGNATIONS AND INFORMATION SHOWN ON THIS PLAN WERE TAKEN FROM THE "GEOTECHNICAL REPORT" DATED JULY 2011, PREPARED BY MCLAREN ENGINEERING GROUP.
5. THE DEEP HOLE & PERCOLATION TEST LOCATIONS & DESIGNATIONS SHOWN ON THIS PLAN WERE PERFORMED BY JMC ON AUGUST 4, 2011 AND WITNESSED BY THE TOWN OF LEWISBORO ENGINEERING CONSULTANT AND NYCDEP.

PROPOSED DRAINAGE LEGEND

- EXISTING BUILDING
- EXISTING CURB
- +201 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- EXISTING OVERHEAD WIRES
- EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE
- PROPERTY LINE
- 197 EXISTING CONTOUR
- 200 EXISTING INDEX CONTOUR
- WELL EXISTING WELL
- PROPOSED BUILDING
- 202 / 201 PROPOSED FINISHED GRADE
- +203.00 PROPOSED SPOT GRADE
- PROPOSED MANHOLE
- PROPOSED RETAINING WALL
- PROPOSED DRAIN INLET
- PROPOSED WATER QUALITY STRUCTURE
- 30" RCP EXISTING STORM LINE
- 24" HDPE PROPOSED STORM LINE
- DRAINAGE SUBAREA
- DRAINAGE AREA
- TC FLOW PATH LINE
- CuD SOIL TYPE AND DESIGNATION
- BORING LOCATION & DESIGNATION
- DEEP HOLE & PERCOLATION TEST DESIGNATION & LOCATION

No.	Revision	Date	By

Proposed Editions Obsolete

CELEBRITY MOTOR CAR, LLC
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PROPOSED DRAINAGE AREA MAP
MERCEDES BENZ OF GOLDENS BRIDGE
NYS ROUTE 22
TOWN OF LEWISBORO, NY

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Scale:	1" = 30'		
Date:	09/06/2018		
Project No:	16124		
16124-Drainage	PDA		--
Drawing No:	DA-2		

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ENGINEERING REPORT- ONSITE WASTEWATER TREATMENT SYSTEM

MERCEDES BENZ OF GOLDENS BRIDGE

321 NYS ROUTE 22
TOWN OF LEWISBORO, NY

Prepared for: **Celebrity Motor Car, LLC**
130 Route 10
Whippany, NJ 07981

Prepared by:

JMC Project 16124

Date: 07/10/2018
Revised: 11/29/2018

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III.	SANITARY SEWER SYSTEM	6
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V.	APPENDICES	

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B. Mercedes Benz of Goldens Bridge letter, dated February 5, 2018

C. Pump Station Performance Data

D. Environmental Maintenance Contractors, Inc. letter dated December 12, 2011

E. OWTS Repair and Remediation Data Form, dated January 20, 2012

F. Drawing No. 5 "Sewage Disposal & Water Supply Plan," by James Albert Holt Architect/Joseph Coleman, PE, revised August 31, 1983

G. OWTS Septic Tank Maintenance Records

H. Westchester County Subsurface Treatment System Inspection Form and Septic System Inspection Documents

I. Existing and Projected Employee Plus Customer Data, prepared by Celebrity of Westchester, LLC D/B/A

J. Soil Testing Design Data Sheet, dated October 30, 2018

K. Carlin Simpson Associates Report on Subsurface Soil Investigation, dated November 28, 2018

L. Square Footage Analysis prepared by Sullivan Architecture, dated October 22, 2018

VI. SUPPORTING REFERENCE DRAWINGS

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC Drawings:

Dwg. No.	Title
C-000	"Cover Sheet"
C-010	"Existing Conditions"
C-020	"Demolition Plan"
C-030	"Tree Removal Plan"
C-100	"Layout Plan"
C-101	"Parking Plan"
C-200	"Grading & Drainage Plan"
C-201	"Site Sections Plan"
C-300	"Utilities Plan"
C-313	"Sanitary Force Main Profile"
C-401	"Phase 1 Plan"
C-402	"Phase 2 Plan"
C-403	"Phase 3 Plan"
C-700	"Vehicle Delivery Plan"
C-701	"Fire Truck Plan"
C-702	"Fire Truck Plan"
C-900	"Construction Details"
C-901	"Construction Details"
C-902	"Construction Details"
C-903	"Construction Details"
C-904	"Construction Details"
C-905	"Construction Details"
C-906	"Construction Details"
C-907	"Construction Details"
L-100	"Landscaping Plan"

Sullivan Architecture, PC Drawings:

Dwg. No.	Title
A1.01	"Service Building Proposed Lower Level"
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"
A2.03	"Showroom Building Proposed Lower Level"
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"
A2.05	"Showroom Building Proposed Upper Level"
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"
A2.07	"Showroom Building Roof Plan"
A3.0	"Showroom Building Proposed Exterior Elevations"
A3.01	"Service Building Proposed Exterior Elevations"

I. INTRODUCTION

This Engineering Report has been prepared for the Westchester County Department of Health (WCDOH) review and approval of an existing Onsite Wastewater Treatment System (OWTS) which presently serves the Service Building for the Motors Mercedes-Benz of Goldens Bridge auto dealership. The dealership proposes to renovate and expand its present Showroom Building along with adding a small addition to the existing Service Building. The dealership is located at 321 Main Street (NYS Route 22) in Goldens Bridge, Town of Lewisboro, NY (see Drawing C-000 "Cover Sheet").

The property is located on the easterly side of NYS Route 22, just north of its intersection with NYS Route 138 in Goldens Bridge, NY. The property is approximately 4.97 acres in size and is located in the "GB-General Business" zoning district within the Town of Lewisboro. The property is currently utilized as the principal place of business for the automobile sales dealership known as the Mercedes-Benz of Goldens Bridge. The property has been used by the applicant for automobile sales and service since 1969.

The proposed Showroom Building will be increased from 12,400 s.f. to a total of 50,900 s.f. and, the Service Building will be increase from 18,200 s.f. to a total of 20,900 s.f. Two existing wood frame houses and one large garage will be demolished (see Drawing C-020 "Demolition Plan"). Sullivan Architecture, PC prepared a Square Footage Analysis to summarize the proposed building expansion, refer to Appendix L.

The proposed building renovations and additions will also include various site improvements including reconstructed parking and vehicle storage areas, stormwater management, new site lighting and landscaping. The project is currently under review of the Town of Lewisboro Planning Board for Site Development Plan Approval.

The dealership is comprised of several tax parcels. Parcel 4, located at the southern end of the property, is developed with a two story wood frame house utilized as an office and a one story stone and wood frame garage used as storage for construction equipment. Parcel 6, located at the eastern side of the property, is developed with a two story wood frame

residential house. Both parcels have an OWTS and are served by an existing well (see JMC Drawing C-010 "Existing Conditions"). The buildings are to be demolished and the existing wells and OWTS' are to be removed/abandoned in accordance with the Westchester County Health Department Rules and Regulations as indicated on Drawing C-020 "Demolition Plan", Notes 11 and 13. Parcel 3 is part of the existing dealership property that previously had a 3-bedroom house and a 2-bedroom house. Both houses have since been demolished and so has the existing OWTS serving the two homes. The existing well (Well #1) was abandoned in accordance with the Westchester County Health Department Rules and Regulations. Parcels 1, 2, and 5 of the property make up the remainder of the dealership, including the separate Showroom and Service Buildings. The existing OWTS serving the Showroom Building is a small dry well and tank in front of the building below the existing driveway. The Showroom Building OWTS is proposed to be removed. The existing OWTS serving the Service Building is discussed in more detail within the Sanitary Sewer System section of this report and will remain unmodified and unaltered. The Showroom Building will be connected to the existing OWTS servicing the Service Building by use of a proposed Septic Tank and a Wet Well Pump Station in front of the Showroom Building (See JMC Drawing C-300 "Utilities Plan"). Existing Wells #2 and #3 will remain in service and are discussed within the Existing Water System and Usage section of this report.

The WCDOH issued an Approval of Plans for Water Supply Improvement on September 5, 2008. The improvements were completed in the two separate Showroom and Service buildings in 2009. The WCDOH also issued Construction Approval for the Change In Use for the existing OWTS adjacent to the Service Building on March 25, 2013. That construction has not taken place and new changes to the project are proposed.

This report contains 18 months of water usage data which is reported monthly to the WCDOH by the water system operator, Allied Pollution Control, Inc. (Appendix A). The analysis of the data herein proves that the existing OWTS presently serving the Service Building is capable of treating all domestic wastewater flows from the existing Showroom and Service Buildings. The calculations within this report demonstrate that the existing OWTS presently serving the Service Building is also capable of treating the anticipated wastewater flows from the expanded Showroom and Service Buildings.

II. EXISTING WATER SYSTEM AND USAGE

The existing water system at the property consists of three (3) separate wells which are described below (see JMC Drawing C-010 "Existing Conditions" for location of wells):

Well #1:

Well #1 is situated in Lot 3 and served the now-demolished residences which were located to the south of the Showroom Building. Well #1, which is abandoned, will be removed in accordance with Westchester County Department of Health requirements in order to allow for the expansion of the Showroom Building.

Well #2

Well # 2, referred to as the "Service Building Well-Upper Well," is located near the southwest corner of the Service Building. An existing water service line brings water from Well #2 into the Service Building at the west wall into the utility room which is located in the south west corner of the building. This well is proposed to remain but be upgraded by removing the covered pit, raising the well with a gasketed sanitary cap and installing a pitless adaptor connection to the existing water service line to the Service Building.

Well #3:

Well #3, referred to as the "Showroom Building Well-Lower Well", is located near the northeast corner of the Showroom Building. An existing water service line brings water from Well #3 into the lower level of the Showroom Building at the northern side of the building.

Vehicles are washed by hand and hosed off in the lower level of the Showroom Building. The water utilized for washing vehicles is accounted for in the water usage data since it is recorded by the meter for the building.

The existing wells serving the existing buildings on Parcels 4 and 6 will be removed in accordance with Westchester County Department of Health requirements.

The Westchester County Department of Health, Bureau of Environmental Quality (WCDOH) issued the Approval of Plans for Public Water Supply Improvement on 09/05/2008 which involved water storage and treatment systems for each building. The systems were installed in 2009 and have been in successful operation. The proposed expansion project will involve designing expansions/upgrades to the current water supply and treatment systems for each building.

Existing water usage was determined by monitoring the daily water readings at both the Showroom and Service Buildings as reported to WCDOH for the period from January 2017 thru June 2018. The records confirm a long term average combined demand of 493 gallons per day (gpd) with a maximum of 931 gpd and a minimum of 265 gpd (Appendix A). The maximum monthly average of 931 gpd is for April 2018, where bathroom and kitchen fixtures were left running and were detected after a few days. May 2017, May 2018 and June 2018 also have a few dates when higher than usual water usage was recorded. Building maintenance staff have indicated that there were repairs made to leaking fixtures or employees left fixtures running during those times.

The existing water usage record summary was also modified to demonstrate the difference in daily flows if the spikes in daily recorded water usage are eliminated from the analysis. The modified records confirm a long term average combined demand of 438 gallons per day (gpd) with a maximum of 654 gpd and a minimum of 265 gpd (Appendix A). The maximum monthly average of 654 gpd is for June 2018 which has the highest water usage for the Showroom Building, likely due to washing vehicles. The modified summary does not include daily meter readings when bathroom and kitchen fixtures were left running and were detected after a few days. The difference between the raw data (493 gpd) and the modified data (438 gpd) is 55 gpd. However, the daily average utilized in the report is 493 gpd, to be conservative.

According to observations by dealership employees, the number of patrons who visit the dealership to purchase or service a vehicle and actually use its bathroom facilities is relatively

low. Therefore, in order to express the domestic usage as a population based rate, the number of employees are used. Thus, the following conversions are made:

Total domestic usage ÷ number of employees = usage per employee

As stated in the Mercedes Benz of Goldens Bridge letter, dated February 5, 2018 (Appendix B), a total of 58 employees currently work for the dealership. Of the 58 employees, 9 of them are drivers who are not at the dealership most of the time. In addition, 3 employees are located at the Celebrity Motor Car, LLC corporate headquarters in New Jersey. The remaining number of employees on-site is 46. Although the 9 drivers may use restrooms at the beginning and end of the day, they have been excluded to provide a more conservative rate of flow per employee. Thus, the average daily domestic consumption per employee is as follows:

493 gpd ÷ 46 employees = 10.72 gpd per employee.

Refer to the Existing and Projected Employee Plus Customer Data (Appendix I), the dealership anticipates an additional 7 employees, for a total of 65 employees. Similar to current conditions, there would be 9 drivers but only 2 off-site employees. Therefore, only 54 of the 65 employees will be on-site. 54 employees x 10.72 gpd per employee = 578.88, say 579 gpd. This would increase the usage to 579 gpd. This would increase the usage to 579 gpd. Therefore a modest average increase of 86 gallons per day is anticipated based on the current usage and the increase in employees. It is fully anticipated that the existing water supply wells can accommodate the slight increase in demand.

It is important to note that the dealership franchise area is not being enlarged. There are three new Mercedes-Benz dealerships which have been established at the perimeter of the Goldens Bridge franchise and market area, including Mercedes-Benz of Danbury, Mercedes-Benz of White Plains and Pepe Luxury Motors of New Rochelle. There are also other new luxury automobile dealerships which have opened in the immediate area including Mt. Kisco Lexus and Mt. Kisco BMW. Therefore, patronage by the Goldens Bridge current customer

base and franchise area is expected to remain about the same, due to new area competition and upgrades to other adjacent dealerships.

In addition, as part of the renovation work, the existing plumbing fixtures and devices will be replaced with modern water saving fixtures which are expected to reduce water consumption by approximately 20%. The vehicles are proposed to be washed by hand only, similar to the current operations. The project does not propose any automated vehicle washing systems. The proposed improvements will also include gray water reclamation systems to recycle water from sinks to be re-used within toilet tanks. The car wash/detail bays in the building will be for hand washing the vehicles only. The floor drains will also connected to the gray water reclamation system to help reuse the water for washing down vehicles. The reclamation system is anticipated to reuse approximately 50% of the water. However, for the purpose of a conservative engineering analysis, the 10.72 gpd/employee rate based on the current empirical data is used.

III. SANITARY SEWER SYSTEM

The OWTS serving the existing Showroom Building is located just west of the existing building within a paved driveway. The system is relatively old, and its condition and capacity are unknown, although it presently is effective in serving the 192 gallon average daily wastewater discharge from the Showroom Building which includes the water from washing vehicles that drains to floor drains and out to the septic tank. As previously stated, the existing OWTS at the Showroom Building will be removed as part of the renovation project.

The newer OWTS which serves the Service Building is located at the northern end of the site and is topographically higher than the finished floor elevation of the renovated Showroom Building. The Service Building OWTS was constructed in the mid 1980's. The existing system consists of a 1,500 gallon concrete septic tank and nine (9) – eight (8) foot diameter seepage pits. The WCDOH approved capacity of the existing system is 810 gpd as indicated on the approved record Drawing No. 5 in Appendix F. The approved 100% reserve septic expansion area is indicated on Drawing No. 5 and shown to accommodate the required separation distances on JMC Drawing C-300 "Utilities Plan." The seepage pits of the existing OWTS at

the Service Building are proposed to be protected during the renovation project to remain and serve the renovated buildings. The existing 1,500 gallon septic tank will remain and a new pre-cast concrete baffle box is proposed to be installed before it for a proposed force main from the Showroom Building. A new 1,250 gallon septic tank and wet well pump station are proposed at the renovated Showroom Building, as described below.

As previously noted, the property included two houses on Parcel 3 served by one OWTS, which have been demolished and removed as part of a previous Site Plan Approval from the Town in 2014. In addition, the existing 2 story frame commercial/office house on Parcel 4 and the existing house on Parcel 6 will also be demolished, along with their associated OWTS's. The removal of 5 out of 6 existing OWTS's (Showroom Building, the two previously removed homes on Parcel 3, Parcel 4 commercial/office house, Parcel 6 house) will greatly reduce the overall wastewater effluent and eliminate forever a potential source of pollution, which is a significant benefit to the environment and the NYCDEP watershed.

The existing underground oil storage tank servicing the existing Service Building is proposed to be removed as part of the project. There is an existing above ground oil storage tank within the existing Showroom Building that will remain. New above ground oil tanks will be proposed within or outside the buildings.

Service Building Septic System Repair in 2011/2012

At the request of the WCDOH, an evaluation of the existing OWTS serving the existing Service Building was conducted in November 2011 which was observed by a representative of JMC. The existing OWTS is located north of the Service Building within the paved parking area. The evaluation included an inspection of the septic tank and distribution box which were found to be in good condition and working order. The evaluation also included the excavation of three (3) of the nine (9) existing cylindrical seepage pits as indicated on the Drawing No. 5 in Appendix F. The excavation exposed the top and partial side wall area of the three (3) seepage pits. All three (3) seepage pits were found to be holding wastewater, although the system had never backed up to provide any indication of partial failure, since the seepage pits were still capable of discharging the small volume of daily wastewater generated by the Service Building. However, the wastewater in the seepage pits pools also exhibited an oil "sheen" on

its surface. Accordingly, a qualified environmental consultant, Environmental Maintenance Contractors, Inc. (EMC) was retained by the dealership to conduct an investigation. (Appendix D). The consultant collected readings with a Photo Ionization Detector (PID) and concluded that there was a form of oil contamination. The consultant opined that at the time of the inspection there was no appearance that the environment had been impacted by oil product, but was rather contained within the seepage pits and the leach field. A NYSDEC Spill Number was assigned (1110538) and a clean-up was conducted under the supervision of EMC and JMC. EMC submitted its report to NYSDEC on December 12, 2012. EMC noted in its report "*It is our understanding that the possible source of oil had been abated in 2008 as part of the NYSDEC Spill Number 0813260 project. It is possible that some of the oil contamination from the previous spill may have made its way into leachate basin #4 and the worked its way into each of the other leachate basins, #1-3 and #5-9, through the network of PVC piping that interconnects the leachate field*".

Following the environmental investigation, the dealership retained MTEK Contracting, a WCDOH licensed septic system contractor (License No. 508). MTEK proceeded with repairing the existing seepage pits and leach field under the observation of JMC and EMC to confirm the area was not contaminated with oil. The repair work included removal of all wastewater, followed by removal of all gravel and native soil around each of the nine (9) seepage pits. Each concrete seepage pit was power washed clean. New 1 ½ to 2 ½ inch diameter clean stone was placed to a minimum thickness of 12 inches around the full perimeter and height of each seepage pit, which were then backfilled with run-of-bank soil. In addition, each of the 4 inch diameter PVC connecting pipes were televised, inspected and cleaned. The contractor tested the system to confirm proper percolation, repaved the disturbed area and placed the system back in normal service. The contractor also filed a Repair and Remediation Data Form and Sketch with the WCDOH on January 20, 2012 (Appendix E).

The dealership has diligently maintained the Showroom Building OWTS and Service Building OWTS. Regular pumping of the septic tanks is done for each OWTS every 6 months. Refer to Appendix G for recent records of maintenance.

Service Building Septic System Investigation and Planned Repairs in 2018

As requested the Westchester County Subsurface Sewage Treatment System Inspection Form has been completed and is included within Appendix H of this report.

The form was completed based on the Septic System Data Form provided by the septic tank maintenance contractor, Vogler Brothers Inc. The existing seepage pits do not have access manhole covers and therefore in order to inspect that portion of the septic system, a separate inspection contractor, J.D.M. Maintenance , Inc. was hired to video inspect from the existing distribution manhole to the seepage pits to determine conditions. The report from J.D.M. Maintenance , Inc is also included within Appendix H. The report concludes that six of the nine seepage pits appear to be operating properly. Two of the seepage pits were full of effluent. The camera encountered the effluent in the distribution pipe on the way to the seepage pit. It was determined that this is caused by the distribution pipes for these two seepage pits being slightly lower than the other distribution pipes within the distribution manhole. Therefore two of the seepage pits appear to be receiving all of the effluent from the Service Building.

The seepage pits do appear to be slowly infiltrating the effluent since water was not backing up out of the pipes into the distribution manhole. There was a steady stream of incoming effluent into the distribution manhole which is indicative of a leaking fixture causing continuously running water. One of the seepage pits could not be inspected since the distribution piping leading to it was slightly flattened and the camera would not fit through the pipe. Overall the system appeared to be operating however it is not operating correctly since only two of the nine seepage pits were receiving effluent.

Shortly after, JMC and the dealership reviewed the reports and met on-site to assess the conditions with a licensed septic repair contractor. The septic system is proposed to be repaired by the licensed septic system contractor. The proposal for the work is also included within Appendix H of this report. It is proposed to replace the distribution manhole so that all of the seepage pits receive equal effluent as originally intended. The frame and grate of the distribution manhole also need to be slightly adjusted to match the proposed grade according to the Site Plans. The septic repair contractor will install access manholes on each of the

seepage pits so they can be monitored going forward and easily maintained. Any stone or soil around the two full seepage pits will be cleaned and replaced. The contractor will also repair the distribution piping that is flattened to one of the seepage pits.

On October 29th and 30th, 2018 soil percolation tests were done within the future 100% expansion area within the upper/northern parking lot. The pre-soaks were done on October 29th and the two separate percolation tests were done on October 30th. The tests resulted in acceptable percolation rates. The tests were witnessed by JMC, the Westchester County Health Department, The Town Engineer Consultant and performed by Carlin-Simpson Associates. On November 2, 2018 a soil boring was advanced in the same location. It was witnessed by NYCDEP, WCDH, Town Engineer Consultant, JMC and Carlin-Simpson Associates. The soil is sandy, groundwater and bedrock were not encountered within 5 feet of the bottom of the future seepage pits therefore the location is suitable for future use. Refer to the Soil Testing Data Sheet in Appendix J and the Report on Subsurface Soil Investigation prepared by Carlin-Simpson Associates in Appendix K.

Wet Well Pump Station Design

As noted above, since the renovated Showroom Building will be at a topographically lower elevation than is the existing Service Building OWTS, it will be necessary to pump the clarified effluent portion of the wastewater from the Showroom Building. The system to serve the renovated Showroom Building will consist of a 1,250 gallon concrete septic tank and a separate wet well pump chamber including a submersible pump within a 6 foot diameter manhole. Out of the current 58 employees, with 46 being on-site, approximately 25 employees are located within the Showroom Building. Approximately 7 new employees are anticipated for the Showroom Building once expanded. Therefore, the flow from the expanded Showroom Building is expected to be 32 employees x 10.72 gpd per employee = 343 gpd. Although, the average daily flow from the Showroom Building is expected to only be 343 gallons, since the permitted daily flow to the existing OWTS is 810 gallons, the proposed wet well chamber has been conservatively sized to store 814 gallons for emergency overflow conditions which is greater than the approved flow for the entire dealership. The existing 1,500 gallon concrete septic tank near the Service Building will remain, however a pre-cast concrete baffle box is

proposed for the termination of the force main and then a short gravity pipe will discharge to the existing septic tank.

It is noted that periodic dosing of wastewater to an array of nine (9) seepage pits is a superior delivery method to the current gravity configuration. Dosing promotes a more effective distribution of clarified effluent and provides the absorption component with a resting period between pump cycles.

The design of the sanitary pump station is based on the following criteria for the Showroom Building:

1. Peak Flow Calculations:

32 (Employees on-site at Showroom Building)
x 10.72 Gal./Person/Day
343 gpd
÷ 720 (minutes within 12 hour period)
0.477 gpm
x 8 Peak Flow Factor
3.82 gpm

2. Head Loss Calculations:

a. Pump "off" elevation 172.90
Sanitary Force Main Discharge Elevation into Baffle Box - 214.69
41.79 feet

b. Length of 2" (SDR-26) PVC Force Main 500 feet
(From Showroom Building Pump Station to Service Building Baffle Box)

Total equivalent pipe length in	
Fitting and valves	27 feet
Total equivalent pipe length	527 feet
Total Friction Loss at 30 gpm	
(1.81 feet/100 x 500)	= 9.05 feet

Total Dynamic Head (THD) = 41.79 feet + 9.05 feet = 50.84 feet, say 51 feet

3. Pump Selection

Use two (2) ½ BHP Hydromatic Model SHEF50 submersible effluent pump @ 3,450 RPM which, at 51 feet of TDH will discharge 28 gpm and maintain a flow velocity of approximately 3 feet per second through the 2 inch diameter PVC pipe.

4. Wet Well Selection

6 foot diameter, 11.35 feet deep precast manhole, providing 6 inches of liquid storage between lead "on" and "off" mechanically activated floats with storage volume of approximately 105.73 gallons which will discharge at 28 gpm in 3.78 minutes. Storage will accumulate at an average in-flow rate of 0.477 gpm in approximately 3 hours and 41 minutes. The pump station also provides liquid storage of 3.85 feet for 24 hour overflow storage above the alarm float. The volume equals 814 gallons which is greater than the anticipated 579 gallons of daily domestic water usage for the entire dealership, let alone the Showroom Building and the presently permitted 810 gpd discharge to the existing OWTS. Based on the anticipated flow for just the Showroom Building, 343 gpd can be stored in the overflow volume above the alarm float and below the incoming sewer service pipe for approximately 57 hours.

IV. CONCLUSION

The dealership renovation involves additions to the Showroom and Service Buildings. As previously stated, there are a total of 58 current employees and only 55 on-site workers (including the 9 drivers that are off-site all day). There is an anticipated net increase of 7 employees to a total of 65 employees with 63 working on the site. The Goldens Bridge franchise area is not being enlarged. There are three newer Mercedes-Benz dealerships which have been established at the perimeter of the market area and other newer luxury automobile dealerships which have opened in the immediate area. Therefore, patronage by the current customer base and franchise area is expected to remain the same. The existing OWTS planned for reuse by the renovated buildings has a capacity and a permitted discharge of 810 gpd. Based on 18 months of monitoring existing water usage at the site, the wastewater generation from the renovated buildings is expected to only be 579 gpd, which is well within the system's capacity and permitted discharge of 810 gpd.

The modified water usage data, discounting the abnormally high spikes in water usage from leaking features, etc., is 438 gpd. We believe the modified data more accurately reflects the actual water usage. However, to be conservative, it was not used in the analysis. Actual per capita data based on the 46 employees working at the dealership confirms a wastewater generation rate of 10.72 gpd per employee. Extrapolation of the data within the limit of the 810 gpd permitted discharge concludes that the existing OWTS has capacity to serve more than 75 employees. Therefore, it is unlikely that the expanded dealership business operations will ever contribute a wastewater volume beyond its permitted capacity.

In addition, as part of the renovation work, the existing plumbing fixtures and devices will be replaced with modern water saving fixtures which are expected to reduce water consumption by approximately 20%. The proposed improvements will also include gray water reclamation systems to recycle water from sinks to be re-used within toilet tanks.

Oil/water separators are proposed to treat the internal drainage system for each building prior to discharge to the sanitary sewer service lateral to the OWTS. These measures will further protect the OWTS.

The proposed "Autohaus" renovation work will include the removal of the Showroom Building OWTS and the demolition of four buildings and respective OWTS's, which results in the removal of 5 out of 6 septic systems which presently exist within and adjacent to the property. The removal of 5 OWTS's which the associated potential wastewater discharge of is a significant benefit to the environment and the NYCDEP watershed.

The effluent from the Showroom and Service Building to be conveyed to the existing OWTS is expected to be approximately 579 gpd, which is well within its capacity and permitted flow of 810 gpd. There will be no physical modification or alteration of the distribution or seepage pit array of the existing OWTS. Periodic dosing is a superior delivery method of wastewater into the existing array of nine seepage pits, as opposed to the current gravity configuration.

Respectfully submitted,
JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Stephen Spina, PE
Project Manager

APPENDIX A

WATER USAGE RECORDS SUMMARY AND ALLIED POLLUTION CONTROL, INC. MONTHLY WATER SYSTEM OPERATION REPORTS

APPENDIX B

MERCEDES BENZ OF GOLDENS BRIDGE LETTER DATED FEBRUARY 5, 2018

APPENDIX C

PUMP STATION PERFORMANCE DATA

APPENDIX D

ENVIRONMENTAL MAINTENANCE CONTRACTORS, INC. LETTER DATED DECEMBER 12, 2011

APPENDIX E

OWTS REPAIR AND REMEDIATION FORM, DATED JANUARY 20, 2012

APPENDIX F

DRAWING NO. 5 "SEWAGE DISPOSAL & WATER SUPPLY PLAN", BY JAMES ALBERT HOLT ARCHITECT, JOSEPH COLEMAN, PE, REVISED AUGUST 31, 1983

APPENDIX G

OWTS SEPTIC TANK MAINTENANCE RECORDS

APPENDIX H

WESTCHESTER COUNTY SUBSURFACE SEWAGE TREATMENT SYSTEM INSPECTION FORM AND SEPTIC SYSTEM INSPECTION DOCUMENTS

APPENDIX I

EXISTING AND PROJECTED EMPLOYEE PLUS CUSTOMER DATA, PREPARED BY CELEBRITY OF WESTCHESTER, LLC D/B/A

APPENDIX J

SOIL TESTING DATA SHEET, DATED OCTOBER 30, 2018

APPENDIX K

CARLIN-SIMPSON ASSOCIATES REPORT ON SUBSURFACE SOIL INVESTIGATION, DATED NOVEMBER 28, 2018

APPENDIX L

SQUARE FOOTAGE ANALYSIS PREPARED BY SULLIVAN ARCHITECTURE, DATED OCTOBER 22, 2018

ENGINEERING REPORT- ONSITE WASTEWATER TREATMENT SYSTEM

MERCEDES BENZ OF GOLDENS BRIDGE

321 NYS ROUTE 22
TOWN OF LEWISBORO, NY

Prepared for: **Celebrity Motor Car, LLC**
130 Route 10
Whippany, NJ 07981

Prepared by:

JMC Project 16124

Date: 07/10/2018
Revised: 11/29/2018

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III.	SANITARY SEWER SYSTEM	6
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V.	APPENDICES	

A. Water Usage Records Summary and Allied Pollution Control, Inc. Monthly Water System Operation Reports

B. Mercedes Benz of Goldens Bridge letter, dated February 5, 2018

C. Pump Station Performance Data

D. Environmental Maintenance Contractors, Inc. letter dated December 12, 2011

E. OWTS Repair and Remediation Data Form, dated January 20, 2012

F. Drawing No. 5 "Sewage Disposal & Water Supply Plan," by James Albert Holt Architect/Joseph Coleman, PE, revised August 31, 1983

G. OWTS Septic Tank Maintenance Records

H. Westchester County Subsurface Treatment System Inspection Form and Septic System Inspection Documents

I. Existing and Projected Employee Plus Customer Data, prepared by Celebrity of Westchester, LLC D/B/A

J. Soil Testing Design Data Sheet, dated October 30, 2018

K. Carlin Simpson Associates Report on Subsurface Soil Investigation, dated November 28, 2018

L. Square Footage Analysis prepared by Sullivan Architecture, dated October 22, 2018

VI. SUPPORTING REFERENCE DRAWINGS

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC Drawings:

Dwg. No.	Title
C-000	"Cover Sheet"
C-010	"Existing Conditions"
C-020	"Demolition Plan"
C-030	"Tree Removal Plan"
C-100	"Layout Plan"
C-101	"Parking Plan"
C-200	"Grading & Drainage Plan"
C-201	"Site Sections Plan"
C-300	"Utilities Plan"
C-313	"Sanitary Force Main Profile"
C-401	"Phase 1 Plan"
C-402	"Phase 2 Plan"
C-403	"Phase 3 Plan"
C-700	"Vehicle Delivery Plan"
C-701	"Fire Truck Plan"
C-702	"Fire Truck Plan"
C-900	"Construction Details"
C-901	"Construction Details"
C-902	"Construction Details"
C-903	"Construction Details"
C-904	"Construction Details"
C-905	"Construction Details"
C-906	"Construction Details"
C-907	"Construction Details"
L-100	"Landscaping Plan"

Sullivan Architecture, PC Drawings:

Dwg. No.	Title
A1.01	"Service Building Proposed Lower Level"
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"
A2.03	"Showroom Building Proposed Lower Level"
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"
A2.05	"Showroom Building Proposed Upper Level"
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"
A2.07	"Showroom Building Roof Plan"
A3.0	"Showroom Building Proposed Exterior Elevations"
A3.01	"Service Building Proposed Exterior Elevations"

I. INTRODUCTION

This Engineering Report has been prepared for the Westchester County Department of Health (WCDOH) review and approval of an existing Onsite Wastewater Treatment System (OWTS) which presently serves the Service Building for the Motors Mercedes-Benz of Goldens Bridge auto dealership. The dealership proposes to renovate and expand its present Showroom Building along with adding a small addition to the existing Service Building. The dealership is located at 321 Main Street (NYS Route 22) in Goldens Bridge, Town of Lewisboro, NY (see Drawing C-000 "Cover Sheet").

The property is located on the easterly side of NYS Route 22, just north of its intersection with NYS Route 138 in Goldens Bridge, NY. The property is approximately 4.97 acres in size and is located in the "GB-General Business" zoning district within the Town of Lewisboro. The property is currently utilized as the principal place of business for the automobile sales dealership known as the Mercedes-Benz of Goldens Bridge. The property has been used by the applicant for automobile sales and service since 1969.

The proposed Showroom Building will be increased from 12,400 s.f. to a total of 50,900 s.f. and, the Service Building will be increase from 18,200 s.f. to a total of 20,900 s.f. Two existing wood frame houses and one large garage will be demolished (see Drawing C-020 "Demolition Plan"). Sullivan Architecture, PC prepared a Square Footage Analysis to summarize the proposed building expansion, refer to Appendix L.

The proposed building renovations and additions will also include various site improvements including reconstructed parking and vehicle storage areas, stormwater management, new site lighting and landscaping. The project is currently under review of the Town of Lewisboro Planning Board for Site Development Plan Approval.

The dealership is comprised of several tax parcels. Parcel 4, located at the southern end of the property, is developed with a two story wood frame house utilized as an office and a one story stone and wood frame garage used as storage for construction equipment. Parcel 6, located at the eastern side of the property, is developed with a two story wood frame

residential house. Both parcels have an OWTS and are served by an existing well (see JMC Drawing C-010 "Existing Conditions"). The buildings are to be demolished and the existing wells and OWTS' are to be removed/abandoned in accordance with the Westchester County Health Department Rules and Regulations as indicated on Drawing C-020 "Demolition Plan", Notes 11 and 13. Parcel 3 is part of the existing dealership property that previously had a 3-bedroom house and a 2-bedroom house. Both houses have since been demolished and so has the existing OWTS serving the two homes. The existing well (Well #1) was abandoned in accordance with the Westchester County Health Department Rules and Regulations. Parcels 1, 2, and 5 of the property make up the remainder of the dealership, including the separate Showroom and Service Buildings. The existing OWTS serving the Showroom Building is a small dry well and tank in front of the building below the existing driveway. The Showroom Building OWTS is proposed to be removed. The existing OWTS serving the Service Building is discussed in more detail within the Sanitary Sewer System section of this report and will remain unmodified and unaltered. The Showroom Building will be connected to the existing OWTS servicing the Service Building by use of a proposed Septic Tank and a Wet Well Pump Station in front of the Showroom Building (See JMC Drawing C-300 "Utilities Plan"). Existing Wells #2 and #3 will remain in service and are discussed within the Existing Water System and Usage section of this report.

The WCDOH issued an Approval of Plans for Water Supply Improvement on September 5, 2008. The improvements were completed in the two separate Showroom and Service buildings in 2009. The WCDOH also issued Construction Approval for the Change In Use for the existing OWTS adjacent to the Service Building on March 25, 2013. That construction has not taken place and new changes to the project are proposed.

This report contains 18 months of water usage data which is reported monthly to the WCDOH by the water system operator, Allied Pollution Control, Inc. (Appendix A). The analysis of the data herein proves that the existing OWTS presently serving the Service Building is capable of treating all domestic wastewater flows from the existing Showroom and Service Buildings. The calculations within this report demonstrate that the existing OWTS presently serving the Service Building is also capable of treating the anticipated wastewater flows from the expanded Showroom and Service Buildings.

II. EXISTING WATER SYSTEM AND USAGE

The existing water system at the property consists of three (3) separate wells which are described below (see JMC Drawing C-010 "Existing Conditions" for location of wells):

Well #1:

Well #1 is situated in Lot 3 and served the now-demolished residences which were located to the south of the Showroom Building. Well #1, which is abandoned, will be removed in accordance with Westchester County Department of Health requirements in order to allow for the expansion of the Showroom Building.

Well #2

Well # 2, referred to as the "Service Building Well-Upper Well," is located near the southwest corner of the Service Building. An existing water service line brings water from Well #2 into the Service Building at the west wall into the utility room which is located in the south west corner of the building. This well is proposed to remain but be upgraded by removing the covered pit, raising the well with a gasketed sanitary cap and installing a pitless adaptor connection to the existing water service line to the Service Building.

Well #3:

Well #3, referred to as the "Showroom Building Well-Lower Well", is located near the northeast corner of the Showroom Building. An existing water service line brings water from Well #3 into the lower level of the Showroom Building at the northern side of the building.

Vehicles are washed by hand and hosed off in the lower level of the Showroom Building. The water utilized for washing vehicles is accounted for in the water usage data since it is recorded by the meter for the building.

The existing wells serving the existing buildings on Parcels 4 and 6 will be removed in accordance with Westchester County Department of Health requirements.

The Westchester County Department of Health, Bureau of Environmental Quality (WCDOH) issued the Approval of Plans for Public Water Supply Improvement on 09/05/2008 which involved water storage and treatment systems for each building. The systems were installed in 2009 and have been in successful operation. The proposed expansion project will involve designing expansions/upgrades to the current water supply and treatment systems for each building.

Existing water usage was determined by monitoring the daily water readings at both the Showroom and Service Buildings as reported to WCDOH for the period from January 2017 thru June 2018. The records confirm a long term average combined demand of 493 gallons per day (gpd) with a maximum of 931 gpd and a minimum of 265 gpd (Appendix A). The maximum monthly average of 931 gpd is for April 2018, where bathroom and kitchen fixtures were left running and were detected after a few days. May 2017, May 2018 and June 2018 also have a few dates when higher than usual water usage was recorded. Building maintenance staff have indicated that there were repairs made to leaking fixtures or employees left fixtures running during those times.

The existing water usage record summary was also modified to demonstrate the difference in daily flows if the spikes in daily recorded water usage are eliminated from the analysis. The modified records confirm a long term average combined demand of 438 gallons per day (gpd) with a maximum of 654 gpd and a minimum of 265 gpd (Appendix A). The maximum monthly average of 654 gpd is for June 2018 which has the highest water usage for the Showroom Building, likely due to washing vehicles. The modified summary does not include daily meter readings when bathroom and kitchen fixtures were left running and were detected after a few days. The difference between the raw data (493 gpd) and the modified data (438 gpd) is 55 gpd. However, the daily average utilized in the report is 493 gpd, to be conservative.

According to observations by dealership employees, the number of patrons who visit the dealership to purchase or service a vehicle and actually use its bathroom facilities is relatively

low. Therefore, in order to express the domestic usage as a population based rate, the number of employees are used. Thus, the following conversions are made:

Total domestic usage ÷ number of employees = usage per employee

As stated in the Mercedes Benz of Goldens Bridge letter, dated February 5, 2018 (Appendix B), a total of 58 employees currently work for the dealership. Of the 58 employees, 9 of them are drivers who are not at the dealership most of the time. In addition, 3 employees are located at the Celebrity Motor Car, LLC corporate headquarters in New Jersey. The remaining number of employees on-site is 46. Although the 9 drivers may use restrooms at the beginning and end of the day, they have been excluded to provide a more conservative rate of flow per employee. Thus, the average daily domestic consumption per employee is as follows:

493 gpd ÷ 46 employees = 10.72 gpd per employee.

Refer to the Existing and Projected Employee Plus Customer Data (Appendix I), the dealership anticipates an additional 7 employees, for a total of 65 employees. Similar to current conditions, there would be 9 drivers but only 2 off-site employees. Therefore, only 54 of the 65 employees will be on-site. 54 employees x 10.72 gpd per employee = 578.88, say 579 gpd. This would increase the usage to 579 gpd. This would increase the usage to 579 gpd. Therefore a modest average increase of 86 gallons per day is anticipated based on the current usage and the increase in employees. It is fully anticipated that the existing water supply wells can accommodate the slight increase in demand.

It is important to note that the dealership franchise area is not being enlarged. There are three new Mercedes-Benz dealerships which have been established at the perimeter of the Goldens Bridge franchise and market area, including Mercedes-Benz of Danbury, Mercedes-Benz of White Plains and Pepe Luxury Motors of New Rochelle. There are also other new luxury automobile dealerships which have opened in the immediate area including Mt. Kisco Lexus and Mt. Kisco BMW. Therefore, patronage by the Goldens Bridge current customer

base and franchise area is expected to remain about the same, due to new area competition and upgrades to other adjacent dealerships.

In addition, as part of the renovation work, the existing plumbing fixtures and devices will be replaced with modern water saving fixtures which are expected to reduce water consumption by approximately 20%. The vehicles are proposed to be washed by hand only, similar to the current operations. The project does not propose any automated vehicle washing systems. The proposed improvements will also include gray water reclamation systems to recycle water from sinks to be re-used within toilet tanks. The car wash/detail bays in the building will be for hand washing the vehicles only. The floor drains will also connected to the gray water reclamation system to help reuse the water for washing down vehicles. The reclamation system is anticipated to reuse approximately 50% of the water. However, for the purpose of a conservative engineering analysis, the 10.72 gpd/employee rate based on the current empirical data is used.

III. SANITARY SEWER SYSTEM

The OWTS serving the existing Showroom Building is located just west of the existing building within a paved driveway. The system is relatively old, and its condition and capacity are unknown, although it presently is effective in serving the 192 gallon average daily wastewater discharge from the Showroom Building which includes the water from washing vehicles that drains to floor drains and out to the septic tank. As previously stated, the existing OWTS at the Showroom Building will be removed as part of the renovation project.

The newer OWTS which serves the Service Building is located at the northern end of the site and is topographically higher than the finished floor elevation of the renovated Showroom Building. The Service Building OWTS was constructed in the mid 1980's. The existing system consists of a 1,500 gallon concrete septic tank and nine (9) – eight (8) foot diameter seepage pits. The WCDOH approved capacity of the existing system is 810 gpd as indicated on the approved record Drawing No. 5 in Appendix F. The approved 100% reserve septic expansion area is indicated on Drawing No. 5 and shown to accommodate the required separation distances on JMC Drawing C-300 "Utilities Plan." The seepage pits of the existing OWTS at

the Service Building are proposed to be protected during the renovation project to remain and serve the renovated buildings. The existing 1,500 gallon septic tank will remain and a new pre-cast concrete baffle box is proposed to be installed before it for a proposed force main from the Showroom Building. A new 1,250 gallon septic tank and wet well pump station are proposed at the renovated Showroom Building, as described below.

As previously noted, the property included two houses on Parcel 3 served by one OWTS, which have been demolished and removed as part of a previous Site Plan Approval from the Town in 2014. In addition, the existing 2 story frame commercial/office house on Parcel 4 and the existing house on Parcel 6 will also be demolished, along with their associated OWTS's. The removal of 5 out of 6 existing OWTS's (Showroom Building, the two previously removed homes on Parcel 3, Parcel 4 commercial/office house, Parcel 6 house) will greatly reduce the overall wastewater effluent and eliminate forever a potential source of pollution, which is a significant benefit to the environment and the NYCDEP watershed.

The existing underground oil storage tank servicing the existing Service Building is proposed to be removed as part of the project. There is an existing above ground oil storage tank within the existing Showroom Building that will remain. New above ground oil tanks will be proposed within or outside the buildings.

Service Building Septic System Repair in 2011/2012

At the request of the WCDOH, an evaluation of the existing OWTS serving the existing Service Building was conducted in November 2011 which was observed by a representative of JMC. The existing OWTS is located north of the Service Building within the paved parking area. The evaluation included an inspection of the septic tank and distribution box which were found to be in good condition and working order. The evaluation also included the excavation of three (3) of the nine (9) existing cylindrical seepage pits as indicated on the Drawing No. 5 in Appendix F. The excavation exposed the top and partial side wall area of the three (3) seepage pits. All three (3) seepage pits were found to be holding wastewater, although the system had never backed up to provide any indication of partial failure, since the seepage pits were still capable of discharging the small volume of daily wastewater generated by the Service Building. However, the wastewater in the seepage pits pools also exhibited an oil "sheen" on

its surface. Accordingly, a qualified environmental consultant, Environmental Maintenance Contractors, Inc. (EMC) was retained by the dealership to conduct an investigation. (Appendix D). The consultant collected readings with a Photo Ionization Detector (PID) and concluded that there was a form of oil contamination. The consultant opined that at the time of the inspection there was no appearance that the environment had been impacted by oil product, but was rather contained within the seepage pits and the leach field. A NYSDEC Spill Number was assigned (1110538) and a clean-up was conducted under the supervision of EMC and JMC. EMC submitted its report to NYSDEC on December 12, 2012. EMC noted in its report "*It is our understanding that the possible source of oil had been abated in 2008 as part of the NYSDEC Spill Number 0813260 project. It is possible that some of the oil contamination from the previous spill may have made its way into leachate basin #4 and the worked its way into each of the other leachate basins, #1-3 and #5-9, through the network of PVC piping that interconnects the leachate field*".

Following the environmental investigation, the dealership retained MTEK Contracting, a WCDOH licensed septic system contractor (License No. 508). MTEK proceeded with repairing the existing seepage pits and leach field under the observation of JMC and EMC to confirm the area was not contaminated with oil. The repair work included removal of all wastewater, followed by removal of all gravel and native soil around each of the nine (9) seepage pits. Each concrete seepage pit was power washed clean. New 1 ½ to 2 ½ inch diameter clean stone was placed to a minimum thickness of 12 inches around the full perimeter and height of each seepage pit, which were then backfilled with run-of-bank soil. In addition, each of the 4 inch diameter PVC connecting pipes were televised, inspected and cleaned. The contractor tested the system to confirm proper percolation, repaved the disturbed area and placed the system back in normal service. The contractor also filed a Repair and Remediation Data Form and Sketch with the WCDOH on January 20, 2012 (Appendix E).

The dealership has diligently maintained the Showroom Building OWTS and Service Building OWTS. Regular pumping of the septic tanks is done for each OWTS every 6 months. Refer to Appendix G for recent records of maintenance.

Service Building Septic System Investigation and Planned Repairs in 2018

As requested the Westchester County Subsurface Sewage Treatment System Inspection Form has been completed and is included within Appendix H of this report.

The form was completed based on the Septic System Data Form provided by the septic tank maintenance contractor, Vogler Brothers Inc. The existing seepage pits do not have access manhole covers and therefore in order to inspect that portion of the septic system, a separate inspection contractor, J.D.M. Maintenance , Inc. was hired to video inspect from the existing distribution manhole to the seepage pits to determine conditions. The report from J.D.M. Maintenance , Inc is also included within Appendix H. The report concludes that six of the nine seepage pits appear to be operating properly. Two of the seepage pits were full of effluent. The camera encountered the effluent in the distribution pipe on the way to the seepage pit. It was determined that this is caused by the distribution pipes for these two seepage pits being slightly lower than the other distribution pipes within the distribution manhole. Therefore two of the seepage pits appear to be receiving all of the effluent from the Service Building.

The seepage pits do appear to be slowly infiltrating the effluent since water was not backing up out of the pipes into the distribution manhole. There was a steady stream of incoming effluent into the distribution manhole which is indicative of a leaking fixture causing continuously running water. One of the seepage pits could not be inspected since the distribution piping leading to it was slightly flattened and the camera would not fit through the pipe. Overall the system appeared to be operating however it is not operating correctly since only two of the nine seepage pits were receiving effluent.

Shortly after, JMC and the dealership reviewed the reports and met on-site to assess the conditions with a licensed septic repair contractor. The septic system is proposed to be repaired by the licensed septic system contractor. The proposal for the work is also included within Appendix H of this report. It is proposed to replace the distribution manhole so that all of the seepage pits receive equal effluent as originally intended. The frame and grate of the distribution manhole also need to be slightly adjusted to match the proposed grade according to the Site Plans. The septic repair contractor will install access manholes on each of the

seepage pits so they can be monitored going forward and easily maintained. Any stone or soil around the two full seepage pits will be cleaned and replaced. The contractor will also repair the distribution piping that is flattened to one of the seepage pits.

On October 29th and 30th, 2018 soil percolation tests were done within the future 100% expansion area within the upper/northern parking lot. The pre-soaks were done on October 29th and the two separate percolation tests were done on October 30th. The tests resulted in acceptable percolation rates. The tests were witnessed by JMC, the Westchester County Health Department, The Town Engineer Consultant and performed by Carlin-Simpson Associates. On November 2, 2018 a soil boring was advanced in the same location. It was witnessed by NYCDEP, WCDH, Town Engineer Consultant, JMC and Carlin-Simpson Associates. The soil is sandy, groundwater and bedrock were not encountered within 5 feet of the bottom of the future seepage pits therefore the location is suitable for future use. Refer to the Soil Testing Data Sheet in Appendix J and the Report on Subsurface Soil Investigation prepared by Carlin-Simpson Associates in Appendix K.

Wet Well Pump Station Design

As noted above, since the renovated Showroom Building will be at a topographically lower elevation than is the existing Service Building OWTS, it will be necessary to pump the clarified effluent portion of the wastewater from the Showroom Building. The system to serve the renovated Showroom Building will consist of a 1,250 gallon concrete septic tank and a separate wet well pump chamber including a submersible pump within a 6 foot diameter manhole. Out of the current 58 employees, with 46 being on-site, approximately 25 employees are located within the Showroom Building. Approximately 7 new employees are anticipated for the Showroom Building once expanded. Therefore, the flow from the expanded Showroom Building is expected to be 32 employees x 10.72 gpd per employee = 343 gpd. Although, the average daily flow from the Showroom Building is expected to only be 343 gallons, since the permitted daily flow to the existing OWTS is 810 gallons, the proposed wet well chamber has been conservatively sized to store 814 gallons for emergency overflow conditions which is greater than the approved flow for the entire dealership. The existing 1,500 gallon concrete septic tank near the Service Building will remain, however a pre-cast concrete baffle box is

proposed for the termination of the force main and then a short gravity pipe will discharge to the existing septic tank.

It is noted that periodic dosing of wastewater to an array of nine (9) seepage pits is a superior delivery method to the current gravity configuration. Dosing promotes a more effective distribution of clarified effluent and provides the absorption component with a resting period between pump cycles.

The design of the sanitary pump station is based on the following criteria for the Showroom Building:

1. Peak Flow Calculations:

32 (Employees on-site at Showroom Building)
x 10.72 Gal./Person/Day
343 gpd
÷ 720 (minutes within 12 hour period)
0.477 gpm
x 8 Peak Flow Factor
3.82 gpm

2. Head Loss Calculations:

a. Pump "off" elevation 172.90
Sanitary Force Main Discharge Elevation into Baffle Box - 214.69
41.79 feet

b. Length of 2" (SDR-26) PVC Force Main 500 feet
(From Showroom Building Pump Station to Service Building Baffle Box)

Total equivalent pipe length in	
Fitting and valves	27 feet
Total equivalent pipe length	527 feet
Total Friction Loss at 30 gpm	
(1.81 feet/100 x 500)	= 9.05 feet

Total Dynamic Head (THD) = 41.79 feet + 9.05 feet = 50.84 feet, say 51 feet

3. Pump Selection

Use two (2) ½ BHP Hydromatic Model SHEF50 submersible effluent pump @ 3,450 RPM which, at 51 feet of TDH will discharge 28 gpm and maintain a flow velocity of approximately 3 feet per second through the 2 inch diameter PVC pipe.

4. Wet Well Selection

6 foot diameter, 11.35 feet deep precast manhole, providing 6 inches of liquid storage between lead "on" and "off" mechanically activated floats with storage volume of approximately 105.73 gallons which will discharge at 28 gpm in 3.78 minutes. Storage will accumulate at an average in-flow rate of 0.477 gpm in approximately 3 hours and 41 minutes. The pump station also provides liquid storage of 3.85 feet for 24 hour overflow storage above the alarm float. The volume equals 814 gallons which is greater than the anticipated 579 gallons of daily domestic water usage for the entire dealership, let alone the Showroom Building and the presently permitted 810 gpd discharge to the existing OWTS. Based on the anticipated flow for just the Showroom Building, 343 gpd can be stored in the overflow volume above the alarm float and below the incoming sewer service pipe for approximately 57 hours.

IV. CONCLUSION

The dealership renovation involves additions to the Showroom and Service Buildings. As previously stated, there are a total of 58 current employees and only 55 on-site workers (including the 9 drivers that are off-site all day). There is an anticipated net increase of 7 employees to a total of 65 employees with 63 working on the site. The Goldens Bridge franchise area is not being enlarged. There are three newer Mercedes-Benz dealerships which have been established at the perimeter of the market area and other newer luxury automobile dealerships which have opened in the immediate area. Therefore, patronage by the current customer base and franchise area is expected to remain the same. The existing OWTS planned for reuse by the renovated buildings has a capacity and a permitted discharge of 810 gpd. Based on 18 months of monitoring existing water usage at the site, the wastewater generation from the renovated buildings is expected to only be 579 gpd, which is well within the system's capacity and permitted discharge of 810 gpd.

The modified water usage data, discounting the abnormally high spikes in water usage from leaking features, etc., is 438 gpd. We believe the modified data more accurately reflects the actual water usage. However, to be conservative, it was not used in the analysis. Actual per capita data based on the 46 employees working at the dealership confirms a wastewater generation rate of 10.72 gpd per employee. Extrapolation of the data within the limit of the 810 gpd permitted discharge concludes that the existing OWTS has capacity to serve more than 75 employees. Therefore, it is unlikely that the expanded dealership business operations will ever contribute a wastewater volume beyond its permitted capacity.

In addition, as part of the renovation work, the existing plumbing fixtures and devices will be replaced with modern water saving fixtures which are expected to reduce water consumption by approximately 20%. The proposed improvements will also include gray water reclamation systems to recycle water from sinks to be re-used within toilet tanks.

Oil/water separators are proposed to treat the internal drainage system for each building prior to discharge to the sanitary sewer service lateral to the OWTS. These measures will further protect the OWTS.

The proposed "Autohaus" renovation work will include the removal of the Showroom Building OWTS and the demolition of four buildings and respective OWTS's, which results in the removal of 5 out of 6 septic systems which presently exist within and adjacent to the property. The removal of 5 OWTS's which the associated potential wastewater discharge of is a significant benefit to the environment and the NYCDEP watershed.

The effluent from the Showroom and Service Building to be conveyed to the existing OWTS is expected to be approximately 579 gpd, which is well within its capacity and permitted flow of 810 gpd. There will be no physical modification or alteration of the distribution or seepage pit array of the existing OWTS. Periodic dosing is a superior delivery method of wastewater into the existing array of nine seepage pits, as opposed to the current gravity configuration.

Respectfully submitted,
JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

Stephen Spina, PE
Project Manager

APPENDIX A

WATER USAGE RECORDS SUMMARY AND ALLIED POLLUTION CONTROL, INC. MONTHLY WATER SYSTEM OPERATION REPORTS

WATER USAGE RECORDS

Mercedes-Benz of Goldens Bridge
Town of Lewisboro, NY
JMC Project 16124

MONTH	SERVICE BUILDING (WELL #2) GALLONS PER DAY	SHOWROOM BUILDING (WELL #3) GALLONS PER DAY	TOTAL TREATED FLOW
JANUARY (2017)	181	107	**288**
FEBRUARY (2017)	154	134	**288**
MARCH (2017)	168	97	**265**
APRIL (2017)	210	238	**448**
MAY (2017)	500	205	**705**
JUNE (2017)	300	263	**563**
JULY (2017)	197	180	**377**
AUGUST (2017)	200	165	**365**
SEPTEMBER (2017)	223	144	**367**
OCTOBER (2017)	371	171	**542**
NOVEMBER (2017)	260	164	**424**
DECEMBER (2017)	206	169	**375**
JANUARY (2018)	277	174	**451**
FEBRUARY (2018)	279	203	**482**
MARCH (2018)	284	168	**452**
APRIL (2018)	743	188	**931**
MAY (2018)	468	296	**764**
JUNE (2018)	399	386	**785**
AVERAGE	301	192	**493**

WATER USAGE RECORDS (MODIFIED)

Mercedes-Benz of Goldens Bridge
Town of Lewisboro, NY
JMC Project 16124

MONTH	SERVICE BUILDING (WELL #2) GALLONS PER DAY	SHOWROOM BUILDING (WELL #3) GALLONS PER DAY	TOTAL TREATED FLOW
JANUARY (2017)	181	107	**288**
FEBRUARY (2017)	154	134	**288**
MARCH (2017)	168	97	**265**
APRIL (2017)	210	238	**448**
MAY (2017)*	215	205	**420**
JUNE (2017)	300	263	**563**
JULY (2017)	197	180	**377**
AUGUST (2017)	200	165	**365**
SEPTEMBER (2017)	223	144	**367**
OCTOBER (2017)	371	171	**542**
NOVEMBER (2017)	260	164	**424**
DECEMBER (2017)	206	169	**375**
JANUARY (2018)	277	174	**451**
FEBRUARY (2018)	279	203	**482**
MARCH (2018)	284	168	**452**
APRIL (2018)*	366	188	**554**
MAY (2018)*	289	279	**568**
JUNE (2018)*	344	310	**654**
AVERAGE	251	187	**438**

*Higher than normal water usage was observed during a short period of time due to a running fixture. The running fixture was eventually found and repaired. The water usage data quickly returned to normal averages afterward. The spikes in daily recorded water usage have been eliminated from the analysis to level the data and demonstrate a more accurate/actual usage.

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	1/1/2017	2/4/2017	☐Surface ☑Ground ☐GWUDI ☐Blog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid							
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
1	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
2	#2 & #3	320				0.9	1.0					
3	#2 & #3	320				0.8	1.0					
4	#2 & #3	420				1.2	1.1					
5	#2 & #3	310				0.9	1.0					
6	#2 & #3	320				1.1	0.9					
7	#2 & #3	500				0.9	1.0					
8	#2 & #3	CLOSED				CLOSED	CLOSED					
9	#2 & #3	220				1.2	1.0					
10	#2 & #3	240				0.9	1.0					
11	#2 & #3	260				1.0	1.0					
12	#2 & #3	340				0.9	0.9					
13	#2 & #3	220				1.0	1.0					
14	#2 & #3	720				1.2	0.9					
15	#2 & #3	CLOSED				CLOSED	CLOSED					
16	#2 & #3	140				1.2	1.0					
17	#2 & #3	430				0.9	1.0					
18	#2 & #3	310				0.9	1.0					
19	#2 & #3	310				0.9	0.9					
20	#2 & #3	330				1.0	1.0					
21	#2 & #3	500				1.2	0.9					
22	#2 & #3	CLOSED				CLOSED	CLOSED					
23	#2 & #3	230				0.9	1.0					
24	#2 & #3	250				0.9	1.0					
25	#2 & #3	380				0.9	1.1					
26	#2 & #3	420				0.9	1.0					
27	#2 & #3	420				0.9	1.0					
28	#2 & #3	510				0.9	0.9					
29	#2 & #3	CLOSED				CLOSED	CLOSED					
30	#2 & #3	150				0.9	0.9					
31	#2 & #3	340				0.9	1.0					
Total		8,910				25.3	25.5					
AVG.		287				0.98	0.98					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 2/4/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Well#2 Service 1st Fl. Mens' Rm.	1/12/17	1	☐Yes ☑No	☐Yes ☑No	0.9
Well#3 Showroom 1st Fl. Mens' Rm.	1/12/17	1	☐Yes ☑No	☐Yes ☑No	0.9
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jan-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
2	200	120	320	0.9	1.0
3	200	120	320	0.8	1.0
4	200	220	420	1.2	1.1
5	200	110	310	0.9	1.0
6	300	20	320	1.1	0.9
7	400	100	500	0.9	1.0
8	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9	100	120	220	1.2	1.0
10	100	140	240	0.9	1.0
11	100	160	260	1.0	1.0
12	100	240	340	0.9	0.9
13	100	120	220	1.0	1.0
14	500	220	720	1.2	0.9
15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
16	100	40	140	1.2	1.0
17	200	230	430	0.9	0.9
18	200	110	310	0.9	1.0
19	200	110	310	0.9	1.0
20	200	130	330	1.0	1.0
21	300	200	500	1.2	0.9
22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
23	200	30	230	0.9	1.0
24	200	50	250	0.9	1.0
25	200	180	380	0.9	1.1
26	300	120	420	0.9	1.0
27	300	120	420	0.9	1.0
28	400	110	510	0.9	0.9
29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
30	100	50	150	0.9	0.9
31	200	140	340	0.9	1.0
Total	5,600	3,310	8,910	25.3	25.5
Avg	181	107	287	0.94	0.94

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/12/17	10:15
Location Code:	APC	Received by:	B	01/12/17	15:52
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBX21612
Phoenix ID: BX21612

Project ID: ESTATE MOTORS WELL #2
Client ID: 1ST FLOOR MEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04
Total Coliforms	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
January 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/12/17	10:00
Location Code:	APC	Received by:	B	01/12/17	15:52
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBX21611
Phoenix ID: BX21611

Project ID: ESTATE MOTORS WELL #3
Client ID: 1ST FL MEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04
Total Coliforms	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
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Phyllis Shiller, Laboratory Director
January 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	2/1/2017	3/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	240				0.9	1.0					
2	#2 & #3	270				0.9	0.9					
3	#2 & #3	340				0.9	1.1					
4	#2 & #3	410				0.8	1.0					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	550				1.0	1.0					
7	#2 & #3	320				1.0	0.9					
8	#2 & #3	160				0.9	0.9					
9	#2 & #3	210				1.0	0.9					
10	#2 & #3	200				0.8	0.9					
11	#2 & #3	250				1.2	1.0					
12	#2 & #3	CLOSED				1.0	CLOSED					
13	#2 & #3	250				0.9	1.0					
14	#2 & #3	350				1.0	1.0					
15	#2 & #3	390				0.9	1.1					
16	#2 & #3	400			1	0.8	0.9					
17	#2 & #3	400				0.8	1.1					
18	#2 & #3	210				0.8	1.0					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	270				0.9	1.0					
21	#2 & #3	490				0.9	0.9					
22	#2 & #3	310				0.9	1.0					
23	#2 & #3	350				0.9	1.0					
24	#2 & #3	480				0.8	1.0					
25	#2 & #3	380				1.0	1.1					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	220				0.8	1.1					
28	#2 & #3	490				0.9	1.0					
29	#2 & #3											
30	#2 & #3											
31	#2 & #3											
Total		7,940			1	22.7	23.8					
AVG.		284			1	0.91	0.99					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 3/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Feb-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	140	240	0.9	1.0
2	100	170	270	0.9	0.9
3	200	140	340	0.9	1.1
4	300	110	410	0.8	1.0
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	200	350	550	1.0	1.0
7	200	120	320	1.0	0.9
8	100	60	160	0.9	0.9
9	100	110	210	1.0	0.9
10	100	100	200	0.8	0.9
11	100	150	250	1.2	1.0
12	100	CLOSED	CLOSED	1.0	CLOSED
13	100	150	250	0.9	1.0
14	200	150	350	1.0	1.0
15	100	290	390	0.9	1.1
16	200	200	400	0.8	0.9
17	200	200	400	0.8	1.1
18	100	110	210	0.8	1.0
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	100	170	270	0.9	1.0
21	300	190	490	0.9	0.9
22	200	110	310	0.9	1.0
23	200	150	350	0.9	1.0
24	300	180	480	0.8	1.0
25	200	180	380	1.0	1.1
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	100	120	220	0.8	1.1
28	400	90	490	0.9	1.0
29					
30					
31					
Total	4,300	3,740	7,940	22.7	23.8
Avg	154	134	284	0.91	0.99

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	3/1/2017	4/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	410				1.3	1.1					
2	#2 & #3	410				1.4	1.0					
3	#2 & #3	350				1.2	0.9					
4	#2 & #3	230				1.2	0.9					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	120				0.9	1.0					
7	#2 & #3	410				1.0	1.0					
8	#2 & #3	300				1.2	1.1					
9	#2 & #3	400				1.2	1.1					
10	#2 & #3	160				1.0	1.0					
11	#2 & #3	190				1.0	0.9					
12	#2 & #3	CLOSED				CLOSED	CLOSED					
13	#2 & #3	250				1.2	1.0					
14	#2 & #3	270				1.0	1.0					
15	#2 & #3	230				1.0	1.0					
16	#2 & #3	60				1.2	1.1					
17	#2 & #3	130				1.0	1.1					
18	#2 & #3	350				1.2	1.1					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	320				1.0	1.1					
21	#2 & #3	340				1.2	1.0					
22	#2 & #3	500				1.0	1.1					
23	#2 & #3	500				1.0	1.1					
24	#2 & #3	340				1.2	1.1					
25	#2 & #3	360				1.0	1.0					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	270				1.2	1.1					
28	#2 & #3	380				1.0	1.0					
29	#2 & #3	320				1.0	0.9					
30	#2 & #3	230				1.0	1.0					
31	#2 & #3	390				1.2	1.0					
Total		8,220				29.8	27.7					
AVG.		265				1.10	1.03					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: John P. Muro Date: 4/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Mar-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	110	410	1.3	1.1
2	300	110	410	1.4	1.0
3	200	150	350	1.2	0.9
4	100	130	230	1.2	0.9
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	100	20	120	0.9	1.0
7	200	210	410	1.0	1.0
8	200	100	300	1.2	1.1
9	300	100	400	1.2	1.1
10	100	60	160	1.0	1.0
11	100	90	190	1.0	0.9
12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
13	200	50	250	1.2	1.0
14	200	70	270	1.0	1.0
15	200	30	230	1.0	1.0
16	0	60	60	1.2	1.1
17	100	30	130	1.0	1.1
18	200	150	350	1.2	1.1
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	200	120	320	1.0	1.1
21	200	140	340	1.2	1.0
22	200	300	500	1.0	1.1
23	300	200	500	1.0	1.1
24	100	240	340	1.2	1.1
25	300	60	360	1.0	1.0
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	200	70	270	1.2	1.1
28	300	80	380	1.0	1.0
29	200	120	320	1.0	0.9
30	100	130	230	1.0	1.0
31	300	90	390	1.2	1.0
Total	5,200	3,020	8,220	29.8	27.7
Avg	168	97	265	1.10	1.03

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	4/1/2017	5/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	300				1.0	1.1					
2	#2 & #3	CLOSED				CLOSED	CLOSED					
3	#2 & #3	560				1.1	1.0					
4	#2 & #3	500				1.0	1.1					
5	#2 & #3	440				1.2	1.1					
6	#2 & #3	640				1.0	1.1					
7	#2 & #3	330				1.0	1.1					
8	#2 & #3	560				1.1	1.0					
9	#2 & #3	CLOSED				CLOSED	CLOSED					
10	#2 & #3	700				1.0	1.0					
11	#2 & #3	330				1.1	1.0					
12	#2 & #3	480				1.1	1.2					
13	#2 & #3	1400				0.9	1.2					
14	#2 & #3	520				1.0	1.2					
15	#2 & #3	610				1.0	1.0					
16	#2 & #3	CLOSED				CLOSED	CLOSED					
17	#2 & #3	520				1.1	1.0					
18	#2 & #3	500				1.0	1.0					
19	#2 & #3	500				1.0	1.0					
20	#2 & #3	330				1.0	1.1					
21	#2 & #3	520				1.2	1.0					
22	#2 & #3	421				1.0	1.1					
23	#2 & #3	CLOSED				CLOSED	CLOSED					
24	#2 & #3	480				1.2	1.0					
25	#2 & #3	520				1.1	1.0					
26	#2 & #3	510				1.0	1.1					
27	#2 & #3	680				1.0	1.0					
28	#2 & #3	600				1.0	1.0					
29	#2 & #3	500				1.0	1.1					
30	#2 & #3	CLOSED				CLOSED	CLOSED					
31	#2 & #3											
Total		13,451				26.1	26.5					
AVG.		448				1.04	1.06					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 5/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Well #2 Service Breakroom	4/12/17	1	☐Yes ☑No	☐Yes ☑No	1.1
Well #3 Showroom Kitchen	4/12/17	1	☐Yes ☑No	☐Yes ☑No	1.2
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

- Actual number of samples is fewer than required
- Did not collect/analyze repeat sample
- Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

- For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).
- For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).
- The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/12/17	11:30
Location Code:	APC	Received by:	LB	04/12/17	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBY03413
Phoenix ID: BY03413

Project ID: ESTATE MOTORS WELL #2
Client ID: BREAKROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/12/17 19:50	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/12/17 19:50	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
April 14, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/12/17	11:30
Location Code:	APC	Received by:	SW	04/12/17	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBY03414
Phoenix ID: BY03414

Project ID: ESTATE MOTORS WELL #3
Client ID: KITCHEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/12/17 20:00	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/12/17 20:00	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
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Phyllis Shiller, Laboratory Director
April 14, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Apr-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	200	100	300	1.0	1.1
2	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
3	300	260	560	1.1	1.0
4	300	200	500	1.0	1.1
5	200	240	440	1.2	1.1
6	300	340	640	1.0	1.1
7	200	130	330	1.0	1.1
8	300	260	560	1.1	1.0
9	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
10	200	500	700	1.0	1.0
11	200	130	330	1.1	1.0
12	200	280	480	1.1	1.2
13	200	1200	1400	0.9	1.2
14	200	320	520	1.0	1.2
15	200	410	610	1.0	1.0
16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
17	300	220	520	1.1	1.0
18	300	200	500	1.0	1.0
19	300	200	500	1.0	1.0
20	200	130	330	1.0	1.1
21	300	220	520	1.2	1.0
22	200	221	421	1.0	1.1
23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
24	300	180	480	1.2	1.0
25	300	220	520	1.1	1.0
26	200	310	510	1.0	1.1
27	300	380	680	1.0	1.0
28	300	300	600	1.0	1.0
29	300	200	500	1.0	1.1
30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
Total	6,300	7,151	13,451	26.1	26.5
Avg	210	238	448	1.04	1.06

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	5/1/2017	6/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	780				1.0	1.1					
2	#2 & #3	910				1.0	1.1					
3	#2 & #3	740				1.2	1.0					
4	#2 & #3	450				1.0	1.1					
5	#2 & #3	250				1.0	1.1					
6	#2 & #3	410				1.2	1.0					
7	#2 & #3	CLOSED				CLOSED	CLOSED					
8	#2 & #3	530				1.5	1.0					
9	#2 & #3	710				1.2	1.1					
10	#2 & #3	890				1.0	1.1					
11	#2 & #3	400				1.0	1.1					
12	#2 & #3	390				1.0	1.1					
13	#2 & #3	250				1.2	1.0					
14	#2 & #3	CLOSED				CLOSED	CLOSED					
15	#2 & #3	500				1.2	1.1					
16	#2 & #3	400				1.0	1.1					
17	#2 & #3	400				1.2	1.1					
18	#2 & #3	470				1.2	1.0					
19	#2 & #3	300				1.0	1.1					
20	#2 & #3	900				1.2	1.0					
21	#2 & #3	CLOSED				CLOSED	CLOSED					
22	#2 & #3	700				1.2	1.1					
23	#2 & #3	320			1.5	1.0	1.1					
24	#2 & #3	380				1.0	1.0					
25	#2 & #3	410				1.1	1.5					
26	#2 & #3	430				1.0	1.1					
27	#2 & #3	3420				1.1	1.0					
28	#2 & #3	CLOSED				CLOSED	CLOSED					
29	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
30	#2 & #3	3830				1.0	1.1					
31	#2 & #3	2670				1.2	1.2					
Total		21,840			1.5	28.7	28.3					
AVG.		705				1.10	1.09					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: John P. Muro Date: 6/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

May-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	480	780	1.0	1.1
2	500	410	910	1.0	1.1
3	200	540	740	1.2	1.0
4	100	350	450	1.0	1.1
5	100	150	250	1.0	1.1
6	200	210	410	1.2	1.0
7	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
8	300	230	530	1.5	1.0
9	400	310	710	1.2	1.1
10	400	490	890	1.0	1.1
11	200	200	400	1.0	1.1
12	200	190	390	1.0	1.1
13	100	150	250	1.2	1.0
14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
15	200	300	500	1.2	1.1
16	100	300	400	1.0	1.1
17	200	200	400	1.2	1.1
18	300	170	470	1.2	1.0
19	100	200	300	1.0	1.1
20	600	300	900	1.2	1.0
21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
22	600	100	700	1.2	1.1
23	200	120	320	1.0	1.1
24	200	180	380	1.0	1.0
25	200	210	410	1.1	1.5
26	300	130	430	1.0	1.1
27	3300	120	3420	1.1	1.0
28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
29	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
30	3700	130	3830	1.0	1.1
31	2500	170	2670	1.2	1.2
Total	15,500	6,340	21,840	28.7	28.3
Avg	500	205	705	1.10	1.09

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	6/1/2017	7/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	760				1.1	1.2					
2	#2 & #3	1100				1.1	1.2					
3	#2 & #3	1400				1.0	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	1500				1.2	1.2					
6	#2 & #3	900				1.0	1.9					
7	#2 & #3	1330				1.2	1.9					
8	#2 & #3	410				1.0	1.7					
9	#2 & #3	480				1.0	1.8					
10	#2 & #3	550				1.2	1.8					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	670				1.2	1.4					
13	#2 & #3	790				1.0	0.9					
14	#2 & #3	590				1.0	0.8					
15	#2 & #3	620				1.2	0.8					
16	#2 & #3	370				1.2	0.9					
17	#2 & #3	500				1.0	0.9					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	260				1.2	1.5					
20	#2 & #3	370				1.0	1.2					
21	#2 & #3	510				1.0	1.2					
22	#2 & #3	450				1.2	1.4					
23	#2 & #3	480				1.2	1.2					
24	#2 & #3	510				1.0	1.3					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	270				1.0	1.3					
27	#2 & #3	330				1.1	1.9					
28	#2 & #3	440				1.1	1.9					
29	#2 & #3	660				1.1	1.4					
30	#2 & #3	650				1.1	1.3					
31	#2 & #3											
Total		16,900				28.4	35.2					
AVG.		563				1.09	1.35					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 7/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jun-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	500	260	760	1.1	1.2
2	800	300	1100	1.1	1.2
3	1100	300	1400	1.0	1.2
4			CLOSED		
5	1100	400	1500	1.2	1.2
6	500	400	900	1.0	1.9
7	200	1130	1330	1.2	1.9
8	300	110	410	1.0	1.7
9	300	180	480	1.0	1.8
10	300	250	550	1.2	1.8
11			CLOSED		
12	200	470	670	1.2	1.4
13	300	490	790	1.0	0.9
14	200	390	590	1.0	0.8
15	200	420	620	1.2	0.8
16	200	170	370	1.2	0.9
17	300	200	500	1.0	0.7
18			CLOSED		
19	100	160	260	1.2	1.5
20	100	270	370	1.0	1.2
21	300	210	510	1.0	1.2
22	300	150	450	1.2	1.4
23	300	180	480	1.2	1.2
24	200	310	510	1.0	1.3
25			CLOSED		
26	100	170	270	1.0	1.3
27	200	130	330	1.1	1.9
28	300	140	440	1.1	1.9
29	300	360	660	1.1	1.4
30	300	350	650	1.1	1.3
Total	9,000	7,900	16,900	28.4	35.0
Avg	300	263	563	1.09	1.35

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	7/1/2017	8/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	480				1.0	1.4					
2	#2 & #3											
3	#2 & #3	770				1.2	1.3					
4	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
5	#2 & #3	450				1.0	1.6					
6	#2 & #3	550				1.0	1.6					
7	#2 & #3	360				1.0	1.3					
8	#2 & #3	320				1.0	1.5					
9	#2 & #3											
10	#2 & #3	450				1.0	1.2					
11	#2 & #3	450				1.2	1.5					
12	#2 & #3	460				1.2	1.2					
13	#2 & #3	370				1.0	1.2					
14	#2 & #3	310				1.2	1.6					
15	#2 & #3	290				1.0	1.5					
16	#2 & #3											
17	#2 & #3	450				1.2	1.2					
18	#2 & #3	400				1.2	1.0					
19	#2 & #3	570				1.0	1.0					
20	#2 & #3	360				1.0	1.5					
21	#2 & #3	520				1.2	1.2					
22	#2 & #3	380				1.2	1.1					
23	#2 & #3											
24	#2 & #3	810				1.0	0.8					
25	#2 & #3	500				1.2	1.2					
26	#2 & #3	480				1.1	1.1					
27	#2 & #3	440				1.0	1.2					
28	#2 & #3	520				1.0	1.2					
29	#2 & #3	270				1.0	1.4					
30	#2 & #3											
31	#2 & #3	710				1.0	1.3					
Total		11,670				26.9	32.1					
AVG.		376				1.08	1.28					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 8/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service Well #2 Handwash Sink	7/11/17	1	☐Yes ☑No	☐Yes ☑No	1.2
Showroom Well #2 Men's Room	7/11/17	1	☐Yes ☑No	☐Yes ☑No	1.5
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jul-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	180	480	1.0	1.4
2					
3	700	70	770	1.2	1.3
4	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
5	200	250	450	1.0	1.6
6	200	350	550	1.0	1.6
7	200	160	360	1.0	1.3
8	100	220	320	1.0	1.5
9					
10	200	250	450	1.0	1.2
11	200	250	450	1.2	1.5
12	200	260	460	1.2	1.2
13	200	170	370	1.0	1.2
14	200	110	310	1.2	1.6
15	100	190	290	1.0	1.5
16					
17	200	250	450	1.2	1.2
18	300	100	400	1.2	1.0
19	200	370	570	1.0	1.0
20	200	160	360	1.0	1.5
21	400	120	520	1.2	1.2
22	300	80	380	1.2	1.1
23					
24	300	510	810	1.0	0.8
25	200	300	500	1.2	1.2
26	200	280	480	1.1	1.1
27	100	340	440	1.0	1.2
28	200	320	520	1.0	1.2
29	200	70	270	1.0	1.4
30					
31	500	210	710	1.0	1.3
Total	6,100	5,570	11,670	26.9	32.1
Avg	197	180	376	1.08	1.28

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	07/11/17	13:00
Location Code:	APC	Received by:	LK	07/11/17	17:18
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBY56865
Phoenix ID: BY56865

Project ID: ESTATE MOTORS SERVICE WELL #2
Client ID: HANDWASH SINK

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
July 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	07/11/17	12:45
Location Code:	APC	Received by:	LK	07/11/17	17:18
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBY56866
Phoenix ID: BY56866

Project ID: ESTATE MOTORS SHOWROOM WELL #3
Client ID: MENS ROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
July 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	8/1/2017	9/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	380				1.0	1.5					
2	#2 & #3	400				1.0	1.4					
3	#2 & #3	170				1.0	1.5					
4	#2 & #3	610				1.2	1.4					
5	#2 & #3	540				1.0	1.2					
6	#2 & #3											
7	#2 & #3	350				1.2	1.5					
8	#2 & #3	500				1.0	1.4					
9	#2 & #3	460				1.2	1.3					
10	#2 & #3	500				1.2	1.3					
11	#2 & #3	410				1.2	1.4					
12	#2 & #3	350				1.0	1.2					
13	#2 & #3											
14	#2 & #3	360				1.0	1.4					
15	#2 & #3	580				1.2	1.2					
16	#2 & #3	510				1.0	1.2					
17	#2 & #3	320				1.0	1.3					
18	#2 & #3	420				1.2	1.2					
19	#2 & #3	210				1.0	1.4					
20	#2 & #3											
21	#2 & #3	460				1.0	1.2					
22	#2 & #3	500				1.0	1.2					
23	#2 & #3	530				1.0	1.3					
24	#2 & #3	790				1.0	1.2					
25	#2 & #3	400				1.0	1.1					
26	#2 & #3	340				1.0	1.2					
27	#2 & #3											
28	#2 & #3	200				1.2	1.3					
29	#2 & #3	490				1.0	1.1					
30	#2 & #3	230				1.2	1.3					
31	#2 & #3	290				0.9	1.3					
Total		11,300				28.7	35.0					
AVG.		365				1.06	1.30					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 9/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Aug-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	280	380	1.0	1.5
2	100	300	400	1.0	1.4
3	100	70	170	1.0	1.5
4	300	310	610	1.2	1.4
5	300	240	540	1.0	1.2
6					
7	300	50	350	1.2	1.5
8	300	200	500	1.0	1.4
9	200	260	460	1.2	1.3
10	200	300	500	1.2	1.3
11	200	210	410	1.2	1.4
12	200	150	350	1.0	1.2
13					
14	300	60	360	1.0	1.4
15	400	180	580	1.2	1.2
16	400	110	510	1.0	1.2
17	100	220	320	1.0	1.3
18	300	120	420	1.2	1.2
19	100	110	210	1.0	1.4
20					
21	300	160	460	1.0	1.2
22	300	200	500	1.0	1.2
23	200	330	530	1.0	1.3
24	400	390	790	1.0	1.2
25	300	100	400	1.0	1.1
26	100	240	340	1.0	1.2
27					
28	200	0	200	1.2	1.3
29	300	190	490	1.0	1.1
30	100	130	230	1.2	1.3
31	100	190	290	0.9	1.3
Total	6,200	5,100	11,300	28.7	35.0
Avg	200	165	365	1.06	1.30

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	9/1/2017	10/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	220				1.1	1.2					
2	#2 & #3	250				1.1	1.1					
3	#2 & #3	CLOSED										
4	#2 & #3	480				1.0	1.2					
5	#2 & #3	340				1.0	1.1					
6	#2 & #3	570				1.0	1.3					
7	#2 & #3	420				1.0	1.2					
8	#2 & #3	200				1.0	1.2					
9	#2 & #3	330				1.0	1.1					
10	#2 & #3	CLOSED										
11	#2 & #3	300				0.9	1.2					
12	#2 & #3	300				0.9	1.1					
13	#2 & #3	300				1.0	1.1					
14	#2 & #3	520				1.4	1.1					
15	#2 & #3	380				1.1	1.3					
16	#2 & #3	550				0.9	1.1					
17	#2 & #3	CLOSED										
18	#2 & #3	270				1.0	1.2					
19	#2 & #3	460				1.0	1.1					
20	#2 & #3	380				1.0	1.3					
21	#2 & #3	420				1.0	1.2					
22	#2 & #3	610				1.1	1.3					
23	#2 & #3	430				1.1	1.1					
24	#2 & #3	CLOSED										
25	#2 & #3	720				1.0	1.1					
26	#2 & #3	520				1.0	1.3					
27	#2 & #3	610				1.1	1.1					
28	#2 & #3	510				1.0	1.1					
29	#2 & #3	500				1.1	1.2					
30	#2 & #3	440				1.1	1.3					
31	#2 & #3											
Total		11,030				26.9	30.6					
AVG.		368				1.03	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 10/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Sep-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	120	220	1.1	1.2
2	100	150	250	1.1	1.1
3			CLOSED		
4	300	180	480	1.0	1.2
5	300	40	340	1.0	1.1
6	400	170	570	1.0	1.3
7	300	120	420	1.0	1.2
8	100	100	200	1.0	1.2
9	100	230	330	1.0	1.1
10			CLOSED		
11	100	200	300	0.9	1.2
12	200	100	300	0.9	1.1
13	200	100	300	1.0	1.1
14	200	320	520	1.4	1.1
15	200	180	380	1.1	1.3
16	400	150	550	0.9	1.1
17			CLOSED		
18	100	170	270	1.0	1.2
19	200	260	460	1.0	1.1
20	200	180	380	1.0	1.3
21	300	120	420	1.0	1.2
22	400	210	610	1.1	1.3
23	200	230	430	1.1	1.1
24			CLOSED		
25	500	220	720	1.0	1.1
26	400	120	520	1.0	1.3
27	400	210	610	1.1	1.1
28	300	210	510	1.0	1.1
29	400	100	500	1.1	1.2
30	300	140	440	1.1	1.3
31					
Total	6,700	4,330	11,030	26.9	30.6
Avg	223	144	368	1.03	1.18

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	10/1/2017	11/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Rpg treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED										
2	#2 & #3	1020				1.2	1.1					
3	#2 & #3	500				1.2	1.4					
4	#2 & #3	400				1.1	1.3					
5	#2 & #3	510				0.9	1.3					
6	#2 & #3	670				1.3	1.1					
7	#2 & #3	510				1.3	1.1					
8	#2 & #3	CLOSED										
9	#2 & #3	460				1.4	1.2					
10	#2 & #3	810				1.0	1.1					
11	#2 & #3	640				1.1	1.2					
12	#2 & #3	340				1.0	1.3					
13	#2 & #3	950				1.0	1.2					
14	#2 & #3	880				1.1	1.3					
15	#2 & #3	CLOSED										
16	#2 & #3	800				0.9	1.2					
17	#2 & #3	690				0.8	1.1					
18	#2 & #3	840				1.0	1.2					
19	#2 & #3	400				1.0	1.1					
20	#2 & #3	340				1.0	1.1					
21	#2 & #3	660				1.0	1.1					
22	#2 & #3	CLOSED										
23	#2 & #3	600				1.0	1.1					
24	#2 & #3	900				1.4	1.1					
25	#2 & #3	730				1.2	1.1					
26	#2 & #3	1090				1.1	1.4					
27	#2 & #3	510				1.0	1.1					
28	#2 & #3	680				1.0	1.2					
29	#2 & #3	CLOSED										
30	#2 & #3	450				0.9	1.1					
31	#2 & #3	420				1.0	1.3					
Total		16,800				27.9	30.8					
AVG.		542				1.07	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 11/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service Well #2 1st Fl. Ladies Rm.	10/17/17	1	☐Yes ☑No	☐Yes ☑No	0.8
Showroom Well #3 Kitchen	10/17/17	1	☐Yes ☑No	☐Yes ☑No	1.1
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below.

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 19, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	10/17/17	11:30
Location Code:	APC	Received by:	LB	10/17/17	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ22540
Phoenix ID: BZ22540

Project ID: MERCEDES BENZ OF GB SERVICE WELL #2
Client ID: 1ST FL LADIES

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
October 19, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 19, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	10/17/17	11:45
Location Code:	APC	Received by:	LB	10/17/17	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ22539
Phoenix ID: BZ22539

Project ID: MERCEDES BENZ OF GB SHOW WELL #3
Client ID: KITCHEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
October 19, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Oct-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1			CLOSED		
2	900	120	1020	1.2	1.1
3	300	200	500	1.2	1.4
4	200	200	400	1.1	1.3
5	400	110	510	0.9	1.3
6	400	270	670	1.3	1.1
7	300	210	510	1.3	1.1
8			CLOSED		
9	300	160	460	1.4	1.2
10	500	310	810	1.0	1.1
11	300	340	640	1.1	1.2
12	200	140	340	1.0	1.3
13	800	150	950	1.0	1.2
14	800	80	880	1.1	1.3
15			CLOSED		
16	600	200	800	0.9	1.2
17	500	190	690	0.8	1.1
18	600	240	840	1.0	1.2
19	300	100	400	1.0	1.1
20	200	140	340	1.0	1.1
21	300	360	660	1.0	1.1
22			CLOSED		
23	400	200	600	1.0	1.1
24	700	200	900	1.4	1.1
25	500	230	730	1.2	1.1
26	900	190	1090	1.1	1.4
27	300	210	510	1.0	1.1
28	400	280	680	1.0	1.2
29			CLOSED		
30	200	250	450	0.9	1.1
31	200	220	420	1.0	1.3
Total	11,500	5,300	16,800	27.9	30.8
Avg	371	171	542	1.07	1.18

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	11/1/2017	12/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	700				1.0	1.2					
2	#2 & #3	300				1.2	1.2					
3	#2 & #3	410				1.1	1.2					
4	#2 & #3	430				1.1	1.2					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	530				1.1	1.1					
7	#2 & #3	1080				1.1	1.1					
8	#2 & #3	800				1.2	1.3					
9	#2 & #3	440				1.2	1.1					
10	#2 & #3	340				1.3	1.1					
11	#2 & #3	210				1.1	1.1					
12	#2 & #3	CLOSED				CLOSED	CLOSED					
13	#2 & #3	680				1.1	1.2					
14	#2 & #3	710				1.1	1.0					
15	#2 & #3	520				1.0	1.3					
16	#2 & #3	660				1.2	1.1					
17	#2 & #3	600				1.2	1.1					
18	#2 & #3	230				1.1	1.1					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	380				1.1	1.1					
21	#2 & #3	700				1.1	1.1					
22	#2 & #3	410				1.2	1.1					
23	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
24	#2 & #3	270				1.0	1.1					
25	#2 & #3	270				1.1	1.1					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	220				1.2	1.3					
28	#2 & #3	530			1	1.2	1.1					
29	#2 & #3	500				1.2	1.0					
30	#2 & #3	800				1.1	1.1					
31	#2 & #3											
Total		12,720			1	28.3	28.4					
AVG.		424				1.13	1.14					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc - John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 12/6/2017 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes" check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Nov-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	500	200	700	1.0	1.2
2	200	100	300	1.2	1.2
3	300	110	410	1.1	1.2
4	200	230	430	1.1	1.2
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	400	130	530	1.1	1.1
7	900	180	1080	1.1	1.1
8	500	300	800	1.2	1.3
9	200	240	440	1.2	1.1
10	200	140	340	1.3	1.1
11	100	110	210	1.1	1.1
12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
13	500	180	680	1.1	1.2
14	400	310	710	1.1	1.0
15	300	220	520	1.0	1.3
16	300	360	660	1.2	1.1
17	300	300	600	1.2	1.1
18	200	30	230	1.1	1.1
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	300	80	380	1.1	1.1
21	400	300	700	1.1	1.1
22	200	210	410	1.2	1.1
23	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
24	200	70	270	1.0	1.1
25	200	70	270	1.1	1.1
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	100	120	220	1.2	1.3
28	300	230	530	1.2	1.1
29	300	200	500	1.2	1.0
30	300	500	800	1.1	1.1
Total	7,800	4,920	12,720	28.3	28.4
Avg	260	164	424	1.13	1.14

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	12/1/2017	1/6/2018	☐Surface ☑Ground ☐SWUDI ☐Slog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	350				1.1	1.3					
2	#2 & #3	550				1.0	1.1					
3	#2 & #3	CLOSED				CLOSED	CLOSED					
4	#2 & #3	400				1.3	1.2					
5	#2 & #3	500				1.3	1.3					
6	#2 & #3	400				1.2	1.2					
7	#2 & #3	500				1.1	1.1					
8	#2 & #3	550				1.2	1.1					
9	#2 & #3	410				1.2	1.3					
10	#2 & #3	CLOSED				CLOSED	CLOSED					
11	#2 & #3	510				1.2	1.1					
12	#2 & #3	410				1.1	1.2					
13	#2 & #3	850				1.0	1.3					
14	#2 & #3	420				1.0	1.3					
15	#2 & #3	320				1.1	1.2					
16	#2 & #3	470				1.0	1.1					
17	#2 & #3	CLOSED				CLOSED	CLOSED					
18	#2 & #3	660				1.0	1.0					
19	#2 & #3	620				1.1	1.1					
20	#2 & #3	400				1.0	1.1					
21	#2 & #3	360				1.0	1.1					
22	#2 & #3	400				1.0	1.2					
23	#2 & #3	430				1.1	1.2					
24	#2 & #3	CLOSED				CLOSED	CLOSED					
25	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
26	#2 & #3	510				1.0	1.1					
27	#2 & #3	590				1.1	1.2					
28	#2 & #3	420				1.1	1.2					
29	#2 & #3	400				1.1	1.1					
30	#2 & #3	220				1.0	1.1					
31	#2 & #3	CLOSED				CLOSED	CLOSED					
Total		11,650				27.3	29.2					
AVG.		376				1.09	1.17					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 1/6/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Dec-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	50	350	1.1	1.3
2	500	50	550	1.0	1.1
3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
4	200	200	400	1.3	1.2
5	300	200	500	1.3	1.3
6	100	300	400	1.2	1.2
7	100	400	500	1.1	1.1
8	300	250	550	1.2	1.1
9	200	210	410	1.2	1.3
10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
11	400	110	510	1.2	1.1
12	300	110	410	1.1	1.2
13	300	550	850	1.0	1.3
14	200	220	420	1.0	1.3
15	200	120	320	1.1	1.2
16	200	270	470	1.0	1.1
17	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
18	400	260	660	1.0	1.0
19	300	320	620	1.1	1.1
20	100	300	400	1.0	1.1
21	200	160	360	1.0	1.1
22	300	100	400	1.0	1.2
23	300	130	430	1.1	1.2
24	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
25	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
26	400	110	510	1.0	1.1
27	300	290	590	1.1	1.2
28	200	220	420	1.1	1.2
29	200	200	400	1.1	1.1
30	100	120	220	1.0	1.1
31	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
Total	6,400	5,250	11,650	27.3	29.2
Avg	206	169	376	1.09	1.17

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	1/1/2018	2/6/2018	☐Surface ☒Ground ☐SWUDI ☐Blog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED				CLOSED	CLOSED					
2	#2 & #3	350				1.0	1.0					
3	#2 & #3	320				1.1	1.1					
4	#2 & #3	250				1.1	1.1					
5	#2 & #3	170				1.0	1.1					
6	#2 & #3	340				1.0	1.2					
7	#2 & #3	CLOSED				CLOSED	CLOSED					
8	#2 & #3	420				1.2	1.2					
9	#2 & #3	410				1.2	1.3					
10	#2 & #3	430				1.0	1.1					
11	#2 & #3	500				1.1	1.0					
12	#2 & #3	370				1.1	1.2					
13	#2 & #3	470				1.0	1.1					
14	#2 & #3	CLOSED				CLOSED	CLOSED					
15	#2 & #3	460				1.2	1.1					
16	#2 & #3	500				1.1	1.1					
17	#2 & #3	1170				1.3	1.3					
18	#2 & #3	400				1.1	1.2					
19	#2 & #3	500				1.1	1.3					
20	#2 & #3	610				1.1	1.1					
21	#2 & #3	CLOSED				CLOSED	CLOSED					
22	#2 & #3	730				1.2	1.1					
23	#2 & #3	800				1.2	1.2					
24	#2 & #3	1120				1.3	1.1					
25	#2 & #3	380				1.2	1.0					
26	#2 & #3	450				1.3	1.1					
27	#2 & #3	630				1.2	1.0					
28	#2 & #3	CLOSED				CLOSED	CLOSED					
29	#2 & #3	780				1.2	1.1					
30	#2 & #3	700				1.2	1.0					
31	#2 & #3	730				1.1	1.0					
Total		13,990				29.6	29.1					
AVG.		451				1.14	1.12					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P Muro

Date: 2/6/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service well #2 1st Fl. mens' room	1/16/18	1	☐Yes ☑No	☐Yes ☑No	1.1
Shorwoom well #3 1st Fl. bath.	1/16/18	1	☐Yes ☑No	☐Yes ☑No	1.1
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 18, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/16/18	13:00
Location Code:	APC	Received by:	SW	01/16/18	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ73682
Phoenix ID: BZ73682

Project ID: MERCEDES BENZ OF GB SHOWEOOM
Client ID: 1ST FL BATH

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/17/18 10:40	RM/RM	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		01/17/18 10:40	RM/RM	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
January 18, 2018
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 18, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/16/18	13:05
Location Code:	APC	Received by:	SW	01/16/18	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ73684
Phoenix ID: BZ73684

Project ID: MERCEDES BENZ OF GB SERVICE
Client ID: 1ST FL MENS RM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/17/18 10:50	RM/RM	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		01/17/18 10:50	RM/RM	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
January 18, 2018
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Jan-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
2	200	150	350	1.0	1.0
3	200	120	320	1.1	1.1
4	100	150	250	1.1	1.1
5	100	70	170	1.0	1.1
6	100	240	340	1.0	1.2
7	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
8	100	320	420	1.2	1.2
9	200	210	410	1.2	1.3
10	300	130	430	1.0	1.1
11	200	300	500	1.1	1.0
12	200	170	370	1.1	1.2
13	300	170	470	1.0	1.1
14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
15	200	260	460	1.2	1.1
16	300	200	500	1.1	1.1
17	800	370	1170	1.3	1.3
18	200	200	400	1.1	1.2
19	300	200	500	1.1	1.3
20	400	210	610	1.1	1.1
21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
22	500	230	730	1.2	1.1
23	600	200	800	1.2	1.2
24	900	220	1120	1.3	1.1
25	200	180	380	1.2	1.0
26	300	150	450	1.3	1.1
27	500	130	630	1.2	1.0
28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
29	600	180	780	1.2	1.1
30	500	200	700	1.2	1.0
31	300	430	730	1.1	1.0
Total	8,600	5,390	13,990	29.6	29.1
Avg	277	174	451	1.14	1.12

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	2/1/2018	3/6/2018	☐Surface ☑Ground ☐GWUDI ☐Slog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	550				1.1	1.2					
2	#2 & #3	480				1.2	1.1					
3	#2 & #3	240				1.2	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	460				1.2	1.2					
6	#2 & #3	430				1.3	1.2					
7	#2 & #3	320				1.2	1.2					
8	#2 & #3	370				1.2	1.3					
9	#2 & #3	300				1.2	1.3					
10	#2 & #3	380				1.2	1.1					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	790				1.2	1.3					
13	#2 & #3	520				1.1	1.2					
14	#2 & #3	320				1.2	1.2					
15	#2 & #3	630				1.1	1.1					
16	#2 & #3	290				1.1	1.2					
17	#2 & #3	610				1.2	1.3					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	490				1.2	1.2					
20	#2 & #3	380				1.2	1.0					
21	#2 & #3	860				1.0	1.1					
22	#2 & #3	900				1.0	1.0					
23	#2 & #3	800				0.9	1.2					
24	#2 & #3	600				0.9	1.1					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	910				0.8	1.1					
27	#2 & #3	900				0.9	1.1					
28	#2 & #3	950				0.8	1.3					
29	#2 & #3											
30	#2 & #3											
31	#2 & #3											
Total		13,480				26.4	28.2					
AVG.		481				1.10	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 3/6/2018 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Feb-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	400	150	550	1.1	1.2
2	200	280	480	1.2	1.1
3	0	240	240	1.2	1.2
4	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
5	300	160	460	1.2	1.2
6	200	230	430	1.3	1.2
7	200	120	320	1.2	1.2
8	300	70	370	1.2	1.3
9	200	100	300	1.2	1.3
10	100	280	380	1.2	1.1
11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
12	400	390	790	1.2	1.3
13	300	220	520	1.1	1.2
14	200	120	320	1.2	1.2
15	300	330	630	1.1	1.1
16	100	190	290	1.1	1.2
17	400	210	610	1.2	1.3
18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
19	300	190	490	1.2	1.2
20	200	180	380	1.2	1.0
21	500	360	860	1.0	1.1
22	500	400	900	1.0	1.0
23	600	200	800	0.9	1.2
24	200	400	600	0.9	1.1
25	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
26	500	410	910	0.8	1.1
27	600	300	900	0.9	1.1
28	800	150	950	0.8	1.3
Total	7,800	5,680	13,480	26.4	28.2
Avg	279	203	481	1.10	1.18

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	3/1/2018	4/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	210				0.9	1.2					
2	#2 & #3	470				0.9	1.3					
3	#2 & #3	220				1.0	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	480				0.9	1.5					
6	#2 & #3	700			1	0.8	1.6					
7	#2 & #3	710				0.8	1.5					
8	#2 & #3	370				0.8	1.5					
9	#2 & #3	420				0.8	1.2					
10	#2 & #3	330				0.9	1.4					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	560				0.8	1.1					
13	#2 & #3	590				0.8	1.2					
14	#2 & #3	690				0.8	1.1					
15	#2 & #3	500				0.8	1.2					
16	#2 & #3	590				0.9	1.3					
17	#2 & #3	510				0.9	1.1					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	460				1.5	1.2					
20	#2 & #3	510				1.1	1.1					
21	#2 & #3	430				1.1	1.3					
22	#2 & #3	920				1.1	1.2					
23	#2 & #3	640				1.0	1.1					
24	#2 & #3	520				1.1	1.0					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	620				1.0	1.0					
27	#2 & #3	400				1.0	1.1					
28	#2 & #3	700				0.9	1.1					
29	#2 & #3	600				1.3	1.1					
30	#2 & #3	320				1.3	1.1					
31	#2 & #3	530				1.1	1.2					
Total		14,000			1	26.3	32.9					
AVG.		452				0.97	1.22					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 4/5/2018 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Mar-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	110	210	0.9	1.2
2	300	170	470	0.9	1.3
3	100	120	220	1.0	1.2
4	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
5	200	280	480	0.9	1.5
6	600	100	700	0.8	1.6
7	500	210	710	0.8	1.5
8	200	170	370	0.8	1.5
9	300	120	420	0.8	1.2
10	200	130	330	0.9	1.4
11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
12	300	260	560	0.8	1.1
13	200	390	590	0.8	1.2
14	400	290	690	0.8	1.1
15	300	200	500	0.8	1.2
16	500	90	590	0.9	1.3
17	300	210	510	0.9	1.1
18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
19	300	160	460	1.5	1.2
20	200	310	510	1.1	1.1
21	300	130	430	1.1	1.3
22	700	220	920	1.1	1.2
23	400	240	640	1.0	1.1
24	300	220	520	1.1	1.0
25	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
26	400	220	620	1.0	1.0
27	300	100	400	1.0	1.1
28	500	200	700	0.9	1.1
29	400	200	600	1.3	1.1
30	200	120	320	1.3	1.1
31	300	230	530	1.1	1.2
Total	8,800	5,200	14,000	26.3	32.9
Avg	284	168	452	0.97	1.22

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report
For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	4/1/2018	5/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination

Public Water Supply ID Number	County	Town, Village, or City
NY-5930018	Westchester	Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED				CLOSED	CLOSED					
2	#2 & #3	500				1.2	1.1					
3	#2 & #3	700				1.2	1.0					
4	#2 & #3	580				1.8	1.2					
5	#2 & #3	620				1.1	1.1					
6	#2 & #3	610				1.2	1.1					
7	#2 & #3	6820				1.1	1.3					
8	#2 & #3	CLOSED				CLOSED	CLOSED					
9	#2 & #3	860				1.0	1.2					
10	#2 & #3	650				1.0	1.3					
11	#2 & #3	840				1.1	1.1					
12	#2 & #3	1090				1.8	1.0					
13	#2 & #3	1020				1.0	1.2					
14	#2 & #3	810				1.1	1.1					
15	#2 & #3	CLOSED				CLOSED	CLOSED					
16	#2 & #3	710				1.0	1.1					
17	#2 & #3	350				1.0	1.0					
18	#2 & #3	500				1.8	1.3					
19	#2 & #3	830				1.3	1.0					
20	#2 & #3	530				1.0	1.0					
21	#2 & #3	830				1.2	1.1					
22	#2 & #3	CLOSED				CLOSED	CLOSED					
23	#2 & #3	510				1.8	1.3					
24	#2 & #3	720				0.9	1.2					
25	#2 & #3	510				1.0	1.1					
26	#2 & #3	1320				1.0	1.2					
27	#2 & #3	3270				1.2	1.3					
28	#2 & #3	450				1.1	1.1					
29	#2 & #3	CLOSED				CLOSED	CLOSED					
30	#2 & #3	450				1.3	1.0					
31	#2 & #3											
Total		26,080				30.2	28.4					
AVG.		869				1.21	1.14					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P Muro

Date: 5/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service - Breakroom	4/9/18	1	☐Yes ☑No	☐Yes ☑No	1.0
Showroom - 2nd Floor Bathroom	4/9/18	1	☐Yes ☑No	☐Yes ☑No	1.2
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Report

April 10, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/09/18	11:15
Location Code:	APC	Received by:	SW	04/09/18	16:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA16398
Phoenix ID: CA16398

Project ID: MERCEDES BENZ OF GB SERVICE WELL #2
Client ID: BREAKROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
April 10, 2018
Reviewed and Released by: Deb Lawrie, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 10, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/09/18	11:10
Location Code:	APC	Received by:	SW	04/09/18	16:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA16397
Phoenix ID: CA16397

Project ID: MERCEDES BENZ CT GB SHOW WELL #3
Client ID: BATHROOMS 2ND FL

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
April 10, 2018
Reviewed and Released by: Deb Lawrie, Project Manager

Apr-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
2	300	200	500	1.2	1.1
3	500	200	700	1.2	1.0
4	500	80	580	1.8	1.2
5	500	120	620	1.1	1.1
6	500	110	610	1.2	1.1
7	6700	120	6820	1.1	1.3
8	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9	500	360	860	1.0	1.2
10	500	150	650	1.0	1.3
11	500	340	840	1.1	1.1
12	700	390	1090	1.8	1.0
13	600	420	1020	1.0	1.2
14	500	310	810	1.1	1.1
15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
16	500	210	710	1.0	1.1
17	200	150	350	1.0	1.0
18	300	200	500	1.8	1.3
19	700	130	830	1.3	1.0
20	300	230	530	1.0	1.0
21	600	230	830	1.2	1.1
22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
23	300	210	510	1.8	1.3
24	500	220	720	0.9	1.2
25	200	380	580	1.0	1.1
26	1100	220	1320	1.0	1.2
27	3000	270	3270	1.2	1.3
28	2000	230	2230	1.1	1.1
29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
30	300	150	450	1.3	1.0
Total	22,300	5,630	27,930	30.2	28.4
Avg	743	188	931	1.21	1.14

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	5/1/2018	6/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	700				1.0	1.1					
2	#2 & #3	670				1.0	1.2					
3	#2 & #3	410				1.0	1.0					
4	#2 & #3	420				1.1	1.1					
5	#2 & #3	410				1.0	1.1					
6	#2 & #3	CLOSED				CLOSED	CLOSED					
7	#2 & #3	640				1.0	1.0					
8	#2 & #3	900				0.8	1.1					
9	#2 & #3	650				1.2	1.1					
10	#2 & #3	500				1.2	1.0					
11	#2 & #3	870				1.1	1.1					
12	#2 & #3	640				1.1	1.2					
13	#2 & #3	CLOSED				CLOSED	CLOSED					
14	#2 & #3	480				0.8	1.1					
15	#2 & #3	930				1.0	1.0					
16	#2 & #3	CLOSED				CLOSED	CLOSED					
17	#2 & #3	620				0.8	0.8					
18	#2 & #3	800				1.1	1.1					
19	#2 & #3	640				1.0	1.0					
20	#2 & #3	CLOSED				CLOSED	CLOSED					
21	#2 & #3	550				1.0	1.1					
22	#2 & #3	770				2.0	1.8					
23	#2 & #3	980				1.8	1.1					
24	#2 & #3	800				1.8	1.8					
25	#2 & #3	2200				1.2	1.8					
26	#2 & #3	1500				1.3	1.6					
27	#2 & #3	CLOSED				CLOSED	CLOSED					
28	#2 & #3	390				CLOSED	1.0					
29	#2 & #3	1600				1.6	1.6					
30	#2 & #3	3200				1.8	1.6					
31	#2 & #3	1400				1.0	1.0					
Total		23,670				29.7	31.4					
AVG.		764				1.19	1.21					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc - John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: Jack P Muro

Date: 6/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

May-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	400	700	1.0	1.1
2	500	170	670	1.0	1.2
3	300	110	410	1.0	1.0
4	100	320	420	1.1	1.1
5	100	310	410	1.0	1.1
6	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
7	300	340	640	1.0	1.0
8	600	300	900	0.8	1.1
9	200	450	650	1.2	1.1
10	300	200	500	1.2	1.0
11	600	270	870	1.1	1.1
12	200	440	640	1.1	1.2
13	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
14	200	280	480	0.8	1.1
15	500	430	930	1.0	1.0
16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
17	400	220	620	0.8	0.8
18	600	200	800	1.1	1.1
19	400	240	640	1.0	1.0
20	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
21	300	250	550	1.0	1.1
22	500	270	770	2.0	1.8
23	500	480	980	1.8	1.1
24	300	500	800	1.8	1.8
25	1800	400	2200	1.2	1.8
26	1100	400	1500	1.3	1.6
27	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
28	CLOSED	390	390	CLOSED	1.0
29	1000	600	1600	1.6	1.6
30	2800	400	3200	1.8	1.6
31	600	800	1400	1.0	1.0
Total	14,500	9,170	23,670	29.7	31.4
Avg	468	296	764	1.19	1.21

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	6/1/2018	7/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ 4log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point (mg/l)	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	1270				1.6	1.6					
2	#2 & #3	500				1.7	1.1					
3	#2 & #3	CLOSED				CLOSED	CLOSED					
4	#2 & #3	1550				1.8	1.3					
5	#2 & #3	1400				1.2	1.2					
6	#2 & #3	530				1.6	1.4					
7	#2 & #3	630				1.2	1.3					
8	#2 & #3	840				1.8	1.2					
9	#2 & #3	870				1.8	1.1					
10	#2 & #3	CLOSED				CLOSED	CLOSED					
11	#2 & #3	650				0.9	0.9					
12	#2 & #3	670				0.9	1.5					
13	#2 & #3	1210				1.0	1.4					
14	#2 & #3	520				1.2	1.1					
15	#2 & #3	1240				1.0	1.5					
16	#2 & #3	940				1.3	1.3					
17	#2 & #3	CLOSED				CLOSED	CLOSED					
18	#2 & #3	890				1.8	1.4					
19	#2 & #3	650				1.3	0.8					
20	#2 & #3	1250				1.8	1.4					
21	#2 & #3	540				1.2	1.4					
22	#2 & #3	990				1.7	1.2					
23	#2 & #3	1370				1.8	1.1					
24	#2 & #3	CLOSED				CLOSED	CLOSED					
25	#2 & #3	670				1.9	1.0					
26	#2 & #3	810				1.6	1.6					
27	#2 & #3	1090				1.8	1.1					
28	#2 & #3	900			2	1.1	1.4					
29	#2 & #3	750				1.0	1.4					
30	#2 & #3	820				1.3	1.1					
31	#2 & #3											
Total		23,550				37.3	32.8					
AVG.		785				1.43	1.26					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 7/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐ Yes ☑ No

If "Yes," check reason (s) below:

____ Actual number of samples is fewer than required

____ Did not collect/analyze repeat sample

____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐ Yes ☑ No

Was triggered source water monitoring required? ☐ Yes ☑ No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jun-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	900	370	1270	1.6	1.6
2	80	420	500	1.7	1.1
3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
4	300	1250	1550	1.8	1.3
5	300	1100	1400	1.2	1.2
6	400	130	530	1.6	1.4
7	300	330	630	1.2	1.3
8	400	440	840	1.8	1.2
9	300	570	870	1.8	1.1
10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
11	300	350	650	0.9	0.9
12	300	370	670	0.9	1.5
13	800	410	1210	1.0	1.4
14	300	220	520	1.2	1.1
15	600	640	1240	1.0	1.5
16	600	340	940	1.3	1.3
17	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
18	400	490	890	1.8	1.4
19	400	250	650	1.3	0.8
20	1000	250	1250	1.8	1.4
21	300	240	540	1.2	1.4
22	600	390	990	1.7	1.2
23	500	870	1370	1.8	1.1
24	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
25	300	370	670	1.9	1.0
26	400	410	810	1.6	1.6
27	700	390	1090	1.8	1.1
28	600	300	900	1.1	1.4
29	500	250	750	1.0	1.4
30	400	420	820	1.3	1.1
Total	11,980	11,570	23,550	37.3	32.8
Avg	399	386	785	1.43	1.26

APPENDIX B

MERCEDES BENZ OF GOLDENS BRIDGE LETTER DATED FEBRUARY 5, 2018

MERCEDES BENZ OF GOLDENS BRIDGE

February 5, 2018

John Sullivan
Architect
Sullivan Architecture, PC
31 Mamaroneck Avenue
White Plains, NY 10601

Stephen Spina
Project Manager
JMC Engineering
120 Bedford Road
Armonk, NY 10504

Re: Mercedes Benz of Goldens Bridge
Septic System/Employee count

Dear John and Stephen,

As per your Planning Board meeting on January 16, 2018 with the Lewisboro Planning Board, the question arose about the number of employees due to the increase of building size for the existing septic system.

Please be advised, we believe there is no concern and of no issue for the following reasons:

1. Currently we have 58 employees. See attached employee list by department and physical locations. Please note 9 of the employees on our list are drivers and are on the road and not at the dealership 90% of the day.
2. Management, administration and accounting is based out of our corporate headquarters at 130 Route 10, Whippany, New Jersey 07981.
3. The increase in building size is to accommodate all Mercedes Benz Autohaus requirements.
    a. Specific Design and Furniture which Estate Motors was not compliant with.
    b. Additional cars/trucks/Sprinter Models released. Estate Motors did not have Sprinters vans in their space to lease or sell. They have special requirements and take up larger showroom space.
    c. Number of Bays for service
    d. Specific square footage of various areas
4. The car sales process has changed dramatically. 2017 – 15% of new and used car sales were from online sales and growing day by day
5. 60% of business is servicing cars and they are drop off and pick up at customers' homes and businesses by the 9 drivers. Clients do not even visit the dealership premises.
6. We will not be hosting any events at the dealership.

We firmly believe this is not an issue.

If you have any other questions, please do not hesitate to contact me.

Thank you,

Thomas Maoli
Dealer Principal

321 ROUTE 22
GOLDENS BRIDGE, NEW YORK 10526
914-232-8122

Meredes Benz Employee List				
	Employee	**Department**	**Status**	**Physical Location**
1	PLUMMER, MELODY C.	Accounting	Full Time	Corporate - NJ
2	LOMBARDO, VIKKI	Accounting	Full Time	Corporate - NJ
4	PETRUCELLI, KRISTA	BDC - Internet Manager	Full Time	Goldens Bridge, NY
40	MASON, BRIANA	BDC - Service	Full Time	Goldens Bridge, NY
42	D'ONOFRIO, ANNMARIE C.	BDC - Service	Full Time	Goldens Bridge, NY
44	ZERVAS, JACQUELYN E.	BDC - Service	Full Time	Goldens Bridge, NY
5	FESSMAN, ZENABEL	Billing	Full Time	Goldens Bridge, NY
39	SANTACRUZ, CARLOS R.	Cleaning	Full Time	Goldens Bridge, NY
41	ROCHE, PATRICK W.	Cleaning	Full Time	Goldens Bridge, NY
10	SIMON, ROGER L.	Conceirge	Full Time	Goldens Bridge, NY
7	O'BRIEN, SHANNON V.	DMV Clerk	Full Time	Goldens Bridge, NY
11	SOTO, NOEL	Driver	Full Time	Goldens Bridge, NY
12	KOLAJ, GJON	Driver	Full Time	Goldens Bridge, NY
14	BRECHTER, RALPH K.	Driver	Full Time	Goldens Bridge, NY
19	MCSWIGGAN, LAWRENCE J.	Driver	Full Time	Goldens Bridge, NY
38	DIBENEDETTO, JASON M.	Driver	Full Time	Goldens Bridge, NY
43	GILLIARD, RONALD S.	Driver	Full Time	Goldens Bridge, NY
45	ALVARADO, ROBERTO	Driver	Full Time	Goldens Bridge, NY
46	COVERT, WALTER J.	Driver	Full Time	Goldens Bridge, NY
48	JAKAJ, THOMAS J.	Driver	Full Time	Goldens Bridge, NY
9	RADULIC, JULIA	Finance Director	Full Time	Corporate - NJ
8	SIERADZKI, PAMELA	Finance Manager	Full Time	Goldens Bridge, NY
13	MADURO, MANUEL	Fleet Driver (wholesale)	Full Time	Goldens Bridge, NY
6	GARLAND, JENNA K.	Inventory/HR	Full Time	Goldens Bridge, NY
23	TOWERS, MATTHEW L.	New & Used Car Sales	Full Time	Goldens Bridge, NY
24	PIERRO, ROBERT	New & Used Car Sales	Full Time	Goldens Bridge, NY
25	GIULINO, ADRIA	New & Used Car Sales	Full Time	Goldens Bridge, NY
26	SHEPPARD, JAMES L.	New & Used Car Sales	Full Time	Goldens Bridge, NY
27	VARGA, VICTOR	New & Used Car Sales	Full Time	Goldens Bridge, NY
28	BATISTA, JOSE	New & Used Car Sales	Full Time	Goldens Bridge, NY
29	CONTRERAS, CARLOS	New & Used Car Sales	Full Time	Goldens Bridge, NY
30	BRECHTER, ROBERT	New & Used Car Sales	Full Time	Goldens Bridge, NY
32	PENSA, WALTER	New Car Manager	Full Time	Goldens Bridge, NY
16	AUSTIN, RUSSELL B.	Parts Counter	Full Time	Goldens Bridge, NY
18	MARQUEZ, JASON	Parts Counter	Full Time	Goldens Bridge, NY
17	KORKATZIS, DEMETRIOS	Parts Manager	Full Time	Goldens Bridge, NY
3	KNEUER, KIM M.	Pre-Owned - Admin	Full Time	Goldens Bridge, NY
21	BELLUCCI, ANN	Reception	Full Time	Goldens Bridge, NY
22	VON HELMS, ELLA CRISTINA L.	Reception	Full Time	Goldens Bridge, NY

37	BEATO, ALBERTO	Roadside Assistance/Driver	Full Time	Goldens Bridge, NY
33	CHIPMAN, JOHN A.	Service Advisor	Full Time	Goldens Bridge, NY
34	FENYO, EVAN R.	Service Advisor	Full Time	Goldens Bridge, NY
35	THOMPSON, WILLIAM F.	Service Advisor	Full Time	Goldens Bridge, NY
15	KORKATZIS, PANAYIOTIS P.	Service Shop Foreman	Full Time	Goldens Bridge, NY
20	BRENNAN, THOMAS	Service/Parts Director	Full Time	Goldens Bridge, NY
49	LICHT, JAMES E.	Technician	Full Time	Goldens Bridge, NY
50	MARRALHEIRO, DENNIS S.	Technician	Full Time	Goldens Bridge, NY
51	NRECAJ, NIKE	Technician	Full Time	Goldens Bridge, NY
52	OLSEN, GEORGE A.	Technician	Full Time	Goldens Bridge, NY
53	KACMARCZYK, DEAN	Technician	Full Time	Goldens Bridge, NY
54	NRECAJ, LORENC	Technician	Full Time	Goldens Bridge, NY
55	MASPONS, DENNIS O.	Technician	Full Time	Goldens Bridge, NY
56	CLAFFEY, CHARLES	Technician	Full Time	Goldens Bridge, NY
57	ORTIZ, ANTHONY	Technician	Full Time	Goldens Bridge, NY
58	ASKEW, JOHN G.	Technician	Full Time	Goldens Bridge, NY
31	CHAKAMIAN, ROBERT	Used Car Manager	Full Time	Goldens Bridge, NY
47	SPENCE, ERDLIE	Valet	Full Time	Goldens Bridge, NY
36	WEISS, SUSAN A.	Warranty Admin	Full Time	Goldens Bridge, NY

APPENDIX C

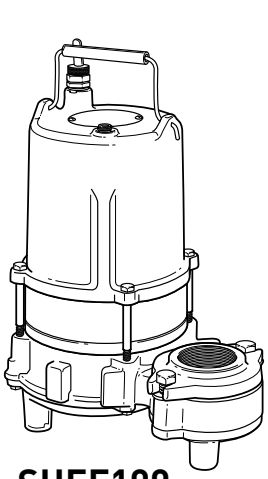
PUMP STATION PERFORMANCE DATA

HYDROMATIC®

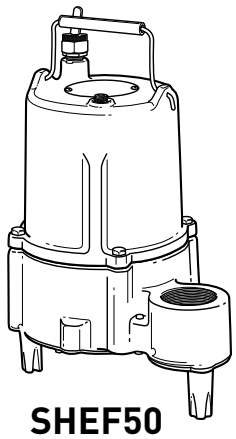
PERFORMANCE DATA

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

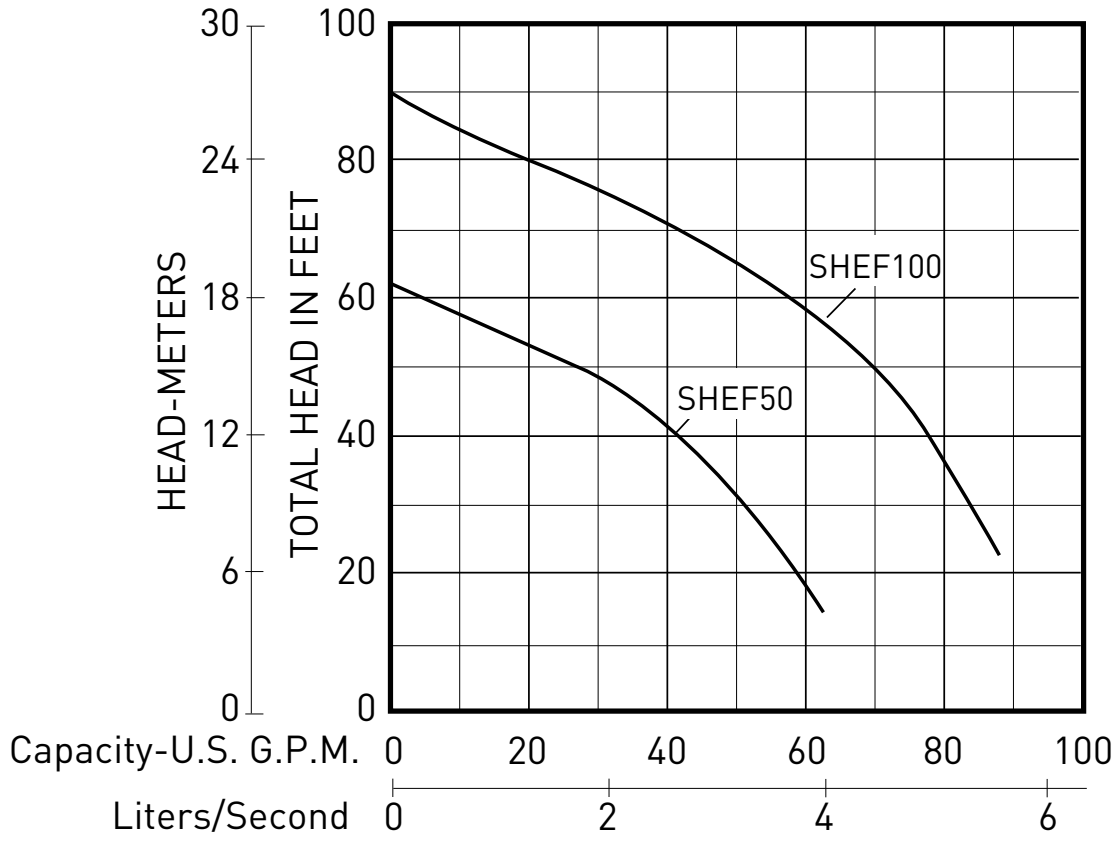
Wholesale Products Page: 6370-1
Dated: January 2001
RPM: **3450** Discharge: **2"** Solids: **¾"**



SHEF100



SHEF50



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

PENTAIR

Conditions of Service:

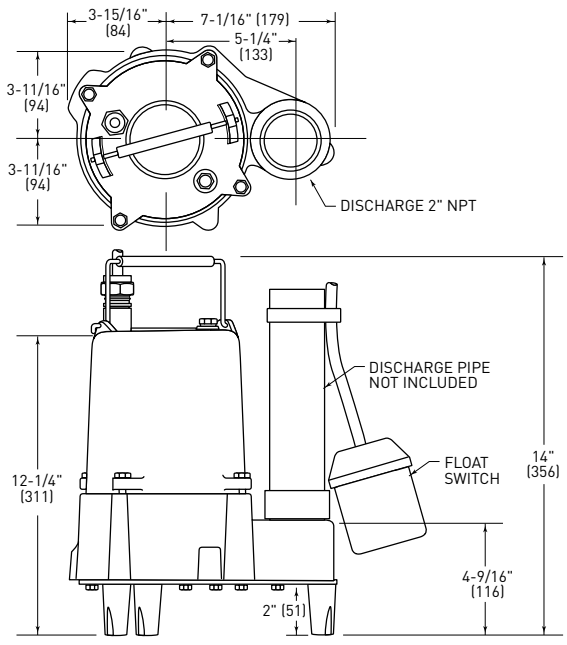
GPM:_____ **TDH**:_____

HYDROMATIC®

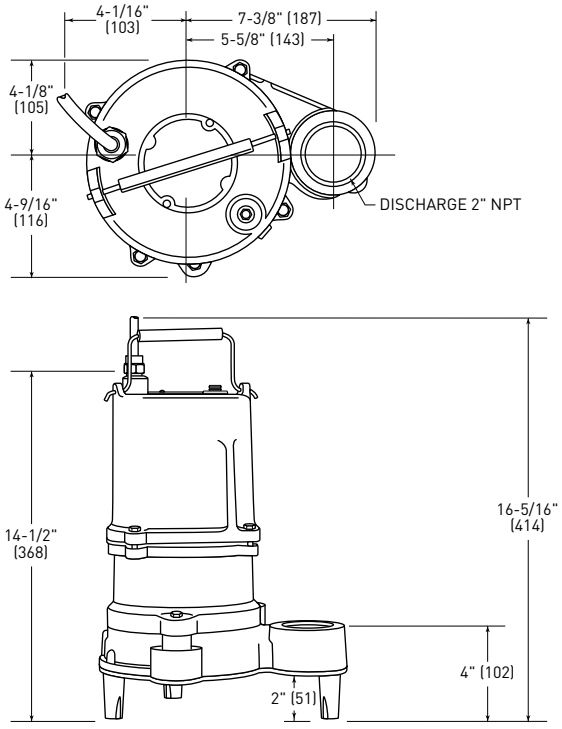
SHEF50/100

SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-2
Dated: January 2001



SHEF50



SHEF100

All dimensions in inches. Metric for international use. Component dimensions may vary ± 1/8 inch. Dimensional data not for construction purpose unless certified. Dimensions and weights are approximate. On/Off level adjustable. We reserve the right to make revisions to our product (s) and the product (s) specifications without notice.

HYDROMATIC®

SHEF50

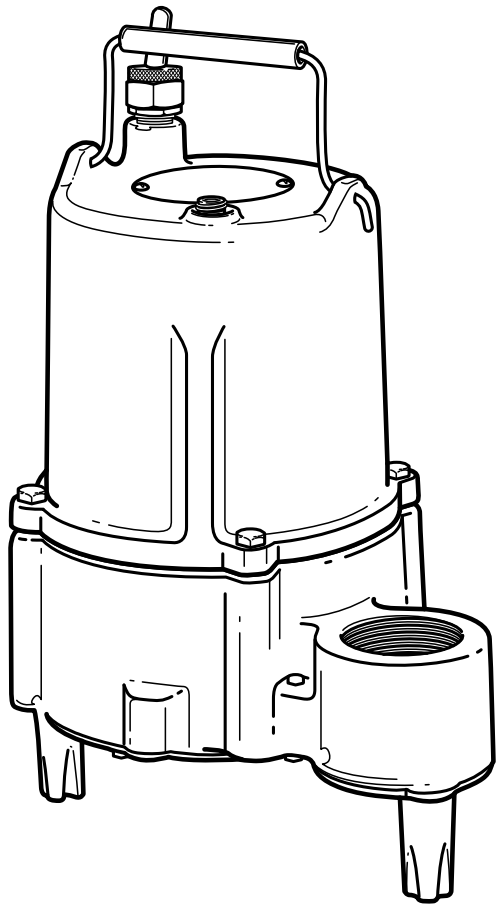
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-3
Dated: January 2001

MODEL: SHEF50

R.P.M.	3450
MOTOR TYPE	THERMAL OVERLOAD WITH AUTOMATIC RESET
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1/2	115	1	-	1	14.5
	200				7.6
	230	3			3.1
	460				1.6
	575				1.2



PENTAIR

HYDROMATIC®

SHEF100

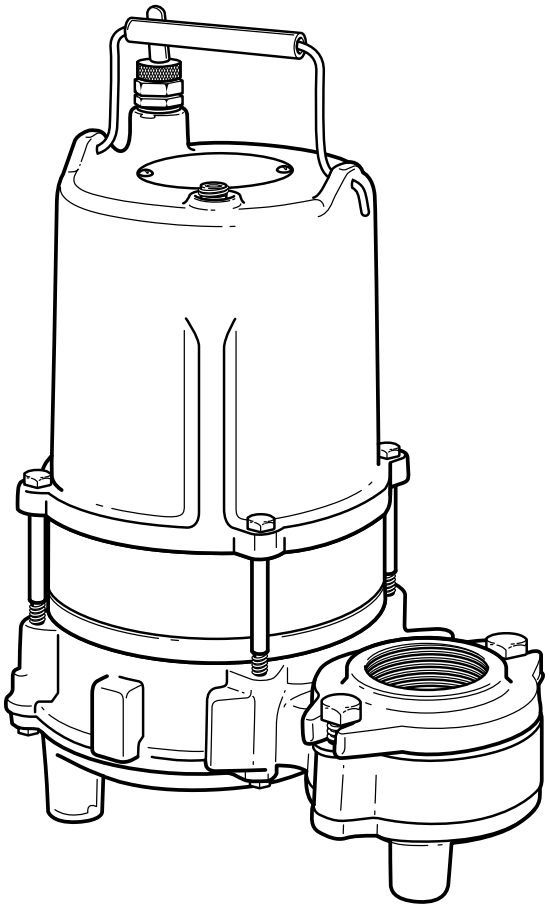
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-4
Dated: January 2001

MODEL: SHEF100

R.P.M.	3450
MOTOR TYPE	OIL FILLED WITH AUTOMATIC RESET THERMAL OVERLOAD
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1	200	1	-	1	12.1
	230				12.1
	230	3			5.8
	460				2.8
	575				1.9



PENTAIR

HYDROMATIC®
SHEF50
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-5
Dated: January 2001

MODEL: SHEF50

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	416 STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

HYDROMATIC®
SHEF100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-6
Dated: January 2001

MODEL: SHEF100

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY, DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-7
Dated: January 2001

MODELS: SHEF50 and SHEF100

1.01 **GENERAL**

Contractor shall furnish all labor, materials, equipment and incidentals required to provide _____ (Qty.) submersible centrifugal high head effluent pump(s) as specified herein. The pump models covered in this specification are the SHEF 50 and SHEF100. The pump furnished for this application shall be MODEL _____ as manufactured by Hydromatic Pumps.

2.01 **DESIGN CONDITIONS**

Each pump shall be rated _____ H.P., _____ volts, _____ phase, _____ hertz and operate at _____ RPM.

3.01 **OPERATING CONDITIONS**

The pump shall deliver _____ U.S. GPM/LPS at feet/meters TDH, and handle a _____ inch solid. The curve submitted for approval shall state, in addition to head and capacity performance, solid handling capability, amp rating, and design impeller diameter.

4.01 **CONSTRUCTION**

Each pump shall be of the sealed submersible type, incorporating features normally found in pumps furnished for the residential market.

These features include:

1. The pump volute, motor, and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30.
2. The pump inlet shall be open and clear, without screening to provide access for effluent and septic tank solids.
3. All external mating parts shall be machined and Buna N, O-Ring sealed.
4. All fasteners exposed to the pumped liquid shall be 300 series stainless steel.
5. All power cords shall be water resistant UL or CSA approved, with double insulation, and sized as a function of Amp. draw.

5.01 **MOTOR AND SHAFT**

The stator, rotor and bearings shall be mounted in a sealed submersible type housing. Single phase motors shall be split phase with centrifugal switch and start capacitor. Three phase motors shall be Polyphase. Full Load and Locked Rotor Amps as well as Start and Run winding resistance shall be tabulated for each pump.

6.01 **BEARINGS, SHAFT AND MECHANICAL SEAL**

An upper radial and lower thrust bearing shall be required. The upper and lower bearings in the SHEF50 and SHEF100 shall be heavy duty single row ball bearings. The bearings will be permanently and continuously lubricated and cooled by the dielectric oil which fills the motor housing. The motor shaft shall be corrosion resistant steel and sealed from the pumped liquid with a carbon ceramic mechanical seal.

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

7.01 **IMPELLER**

The Impeller in the SHEF50/100 shall be high capacity, two vane, high head design with four pump out vanes on the back side. These vanes wash out grit and stringy material that will damage the shaft and mechanical seal.

8.01 **AUTOMATIC CONTROL**

All single phase pumps should be capable of automatic operation.

9.01 **FLOAT SWITCH**

The SHEF50 and SHEF100 pumps are supplied with a tilt sensitive wide-angle float switch which is sealed in a non-corrosive PVC enclosure. The switch is UL listed for water and sewage and CSA certified. The float switch shall also be fitted with a piggy-back plug that allows the pump to be operated manually without removal from the sump.

10.01 **PAINTING**

All cast iron parts shall be painted before assembly with a water reducible alkyd air dried enamel. The paint shall be applied in one coat with a minimum thickness of 3 to 4 mils.

11.01 **TESTING**

All pumps shall be individually tested to include the following:

1. The pump and power cord shall be visually inspected for imperfections, cuts or nicks.
2. The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for moisture content and/or insulation defects.
3. The motor and volute housing shall be pressurized and a 10 second air leak decay test run.
4. Oil is added, and the pump is run. Voltage and current are monitored visually, electronically, and the tester listens for any noise or malfunction.

PENTAIR

USA
293 WRIGHT STREET, DELAVAN, WI 53115 WWW.HYDROMATIC.COM
PH: 888-957-8677 ORDERS FAX: 800-426-9446

CANADA
269 TRILLIUM DRIVE, KITCHENER, ONTARIO, CANADA N2G 4W5
PH: 519-896-2163 ORDERS FAX: 519-896-6337

Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.

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APPENDIX D

ENVIRONMENTAL MAINTENANCE CONTRACTORS, INC. LETTER DATED DECEMBER 12, 2011

Established in 1995
NYS DOL Asbestos Handling License #05-0348
EPA Lead Paint Certification #NY-62470-1
NYS DEC Waste Transporter Permit #3A-812

Richard Stumbo
President

ENVIRONMENTAL MAINTENANCE CONTRACTORS, INC.

Environmental Consulting, Testing, Reporting and Remedial / Abatement Services

December 12, 2011

Todd Ghiosay
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
One Hunters Point Plaza
47-40 21st Street, Long Island City
New York, New York 11101-5407

RE: NYS DEC Spill Number 1110538
Estate Motors, 321 Route 22, Goldens Bridge, New York 10526

November 14, 2011

- Environmental Maintenance Contractors, Inc. (EMC) was called to inspect and assess the water in the Leachate Field (which was currently under repair by the ownerships contractor) at the rear of the Service Building of the above referenced property address.
- The visual inspection and Photo Ionization Detector (PID) readings indicated that there was a form of oil contamination sitting on top of the water in each of the leachate basins of the Leachate Field inspected. This conclusion was based on a visible oil type "sheen" sitting on the water in each basin and the PID readings collected in excess of 50 ppm.
- At the time of the inspection it did not appear that the environment had been impacted by oil product but was rather contained within the leachate basins of the Leachate Field.

November 21, 2011

- EMC retained Enviro Waste whom mobilized a truck to vacuum out the oil contaminated water from each of the leachate basins where the oil type "sheen" was visible.
- All visible oil type products was removed from each of the leachate basins, however it did appear that the oil may have made its way outside each of the leachate basins impacting the subsurface soils surrounding them.
- After further review of the circumstances of the project with the ownership, contractor and construction management firm a call was made to the NYS DEC Spill Hotline and NYS DEC Spill Number 1110538 was generated.

November 29, 2011

- After reviewing the current site conditions and proposed scope of work with Mr. Todd Ghiosay of the NYS DEC EMC scheduled with the ownerships contractor to excavate the subsurface soils surrounding the leachate basins that appeared to have been most effected (#5 and #9) and further assess the subsurface soils surrounding them.

Established in 1995
NYS DOL Asbestos Handling License #05-0348
EPA Lead Paint Certification #NY-62470-1
NYS DEC Waste Transporter Permit #3A-812

Richard Stumbo
President

December 5, 2011

- EMC mobilized an environmental field technician(s) to the Subject Site to further assess the Leachate Field including removing soils from around leachate basin #5 and #9.
- EMC screened subsurface soils excavated from leachate basin #5 and #9 utilizing a PID.
- EMC collected the soil sample (from leachate basin #9) that indicated the highest PID reading (3.2 ppm) for analysis via Volatile Organic Compounds (VOC's) and Semil-Volatile Organic Compounds (SVOC's) by NYSTARS 8260 and 8270 respectively.
- Soil sample(s) was containerized and transported to a New York State accredited/approved laboratory, PHOENIX Environmental Laboratories, Inc., with a certified chain of custody for analysis via VOC's and SVOC's by NYSTARS 8260 and 8270. Please find attached a copy of the drawing indicating the location of samples collected.

Results

- Based on the review of the field data presented there were no visible observations of oil contamination in subsurface soils surrounding the two leachate basins #5 and #9 at the time of the inspection.
- PID readings of soils screened were not indicative of oil contamination (<5 ppm) during the inspection.
- Laboratory data reported for the soil sample collected indicate that levels of contaminants were at Non-Detect or below the NYS DEC Recommended Soil Cleanup Objectives (Groundwater Standard Criteria). Please find attached a copy of the laboratory data for the sample analyzed.

Recommendations

- It is our understanding that the possible source of the oil had been abated in 2008 as part of the NYS DEC Spill Number 0813260 project. It is possible that some of the oil contamination form the previous spill may have made its way into leachate basin #4 and then worked its way into each of the other leachate basins, #1-3 and # 5-9, through the network of PVC piping that interconnects the Leachate Field.
- EMC recommends that the PVC pipe system be inspected to ensure that there is no contamination within the piping itself and if so either be cleaned out of its contents or removed and replaced.
- EMC also recommends further assessment via visual inspection and PID reading collection during the repair work of the Leachate Field in order to confirm that the subsurface soils surrounding the remaining leachate basins have not been compromised with oil contamination.

Should you have any questions or require additional information please do not hesitate to contact me.

Sincerely,
Environmental Maintenance Contractors, Inc.
Richard Stumbo
President

Attachment: Drawings, Laboratory Sample Results

Cc: John Lennon

APPENDIX E

OWTS REPAIR AND REMEDIATION FORM, DATED JANUARY 20, 2012

ONSITE WASTEWATER TREATMENT SYSTEM (OWTS)
REPAIR AND REMEDIATION DATA FORM

Municipality: WESTCHESTER

Property Mailing Address (No. & Street): ESTATE MOTORS 321 ROUTE 22

Town/ Village: GOLDENS BRIDGE State: N.Y. Zip: 10526

Owner: CHARISMA HOLDING INC

Owner Mailing Address (No. & Street) (if different): PO BOX 711

Town/ Village: GOLDENS BRIDGE State: NY Zip: 10526

Property Use: [] Single Family [] Multi-Family [] Industrial [X] Commercial

[] Other - Describe: _____

OWTS Remediation ☐ **WCDH File #:** N/A

Remediation shall mean installation, replacement, or expansion of onsite wastewater treatment system components to correct an OWTS failure, or impending failure, resulting in, or that may result in, the discharge of sewage or domestic wastes or trade wastes or offensive material on to the surface of the ground, into a storm sewer, or into a watercourse or water body. Remediation shall not include repairs, as defined above, to correct an OWTS failure.

OR

OWTS Repair ☒ **Complete the following information.**

Repair shall mean the repair, maintenance, and replacement in kind and in situ; of broken, damaged, or worn onsite wastewater treatment system components.

Number of Bedrooms N/A Number of Bathrooms: 3 Water Supply Type: Public ☐ Well ☒

Please note below only components that have been repaired or replaced.

Repaired	Replaced	
☒	☐	House Sewer or other Solid Pipe(s)
☐	☐	Septic Tank#1 Size(gallons): _____
☐	☐	Septic Tank#2: Size (gallons): _____
☐	☐	Junction/Distribution Box(es)
☐	☐	Sewage Pump(s) or other Dosing Equipment
☐	☐	Absorption Trench Length _____ ft. X Trench Width _____ ft.
☒	☐	Seepage Pit(s)
☐	☐	Galley(s)
☐	☐	Gravelless Trench(es)
☐	☐	75-A Alternative System
☐	☐	Other Advanced Alternative System
☐	☐	Other System Component(s) - Describe: _____

DRAW BUILDING AND LOCATION OF WORK PERFORMED ON BACK OF THIS FORM

SEE ATTACHED FORM PAGE #2

☐ **Entire System Replaced**

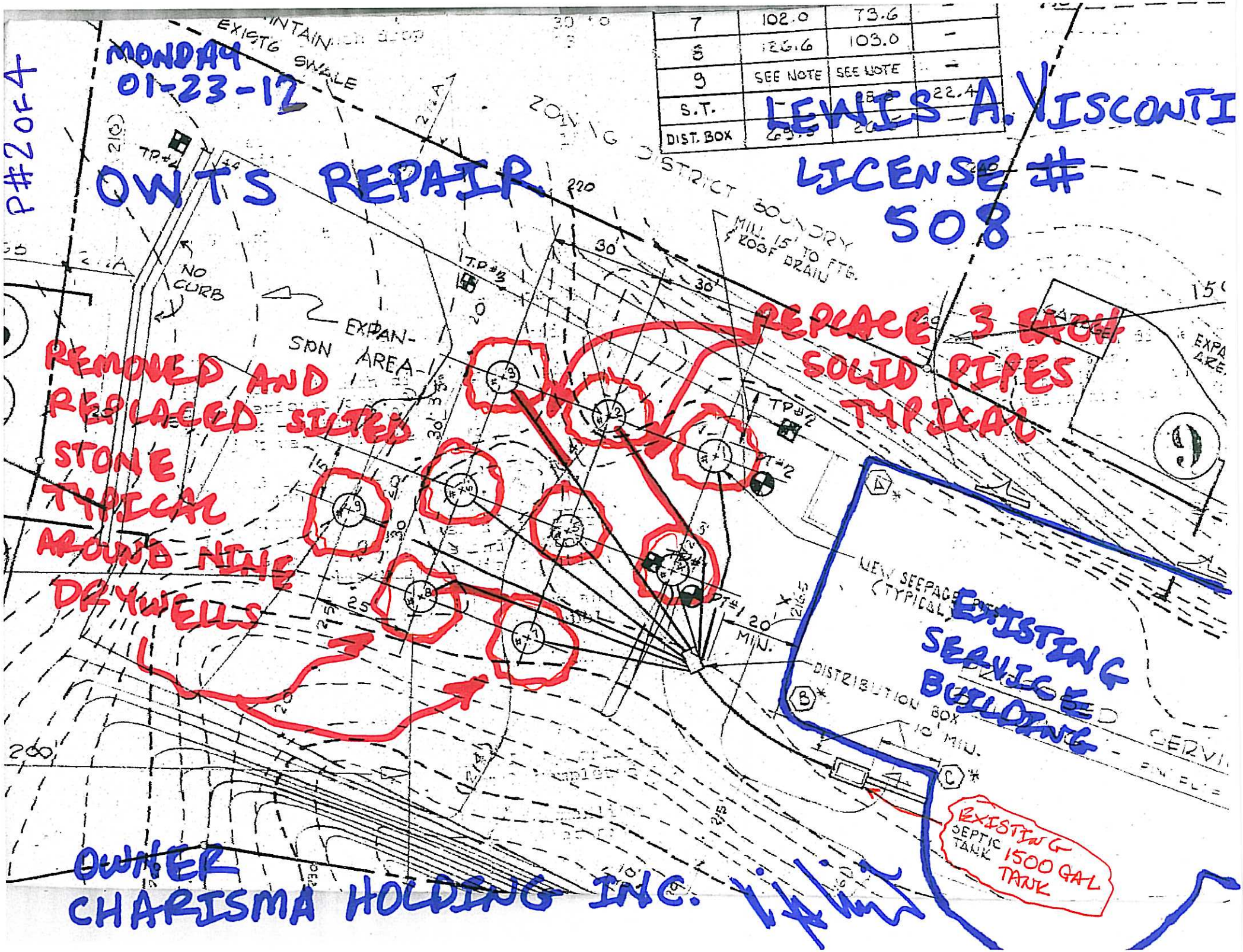
Contractor's Name (print): MTEK CONTRACTING Date Repair/Remediation Completed: 01-20-12

Contractor's Signature: _____ License No.: 508

Upon completion please remit to:

Westchester County Department of Health- BEQ
118 North Bedford Road, RM 100
Mt. Kisco, NY 1049
Attn: Patricia Tornello-Adams

Repair File #: REP_____
(WCDH Staff only)


P#2 of 4
MONDAY
01-23-12
OWTS REPAIR
LEWIS A. VISCONTI
LICENSE #
508
REMOVED AND
REPLACED
STONE
TYPICAL
AROUND NINE
DRYWELLS
SILTED
REPLACE 3 EACH
SOLID PIPES
TYPICAL
EXISTING
SERVICED
BUILDING
EXISTING
SEPTIC TANK
1500 GAL
TANK
OWNER
CHARISMA HOLDING INC.
7 102.0 73.6 -
8 [illegible] 103.0 -
9 SEE NOTE SEE NOTE -
S.T. [illegible] 22.4
DIST. BOX [illegible]
EXISTG SWALE
ZONING DISTRICT
BOUNDRY
MIN. 15' TO FTG.
ROOF DRAIN
NO CURB
EXPAN-
SION
AREA
TP#1
TP#2
TP#3
TP#4
NEW SEEPAGE PIT
(TYPICAL)
DISTRIBUTION BOX
10' MIN.
20' MIN.
30'
25'

Westchester gov.com

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
SEPTIC SYSTEM CONTRACTOR LICENSE

LICENSE NO. 508

This is to certify that: Lewis Visconti is granted permission to construct, install, remediate, repair and service.

ONSITE WASTEWATER TREATMENT SYSTEMS

Pursuant to Chapter 873, Article VIII of the Laws of Westchester County for use in the County of Westchester, State of New York under the following conditions:

- THAT the licensee shall comply with all applicable provisions of Chapter 873, Article VIII of the Laws of Westchester County and with rules and regulations of the Westchester County Department of Health.
- THAT the licensee shall perform construction, installation and remediation work in complete conformity with plans approved by the Department of Health, or approved amendments thereof, and with rules, regulations and standards of the Department of Health.
- THAT the license is granted subject to any and all applicable, state, local and municipal laws, ordinances, codes, rules and regulations.

Sherlita Amler M.D

SHERLITA AMLER, M.D.

Sherlita Amler, M.D.
Commissioner of Health

Lou Carrea, PE., Associate Engineer
Bureau of Environmental Quality

Date of Issue: 11/14/2011

This license expires on 10/31/2013 and may be revoked or suspended for cause.

This license is non-transferable.

P#4 of 4

LICENSE # 508

Westchester gov.com

Westchester County

HEALTH DEPARTMENT

LICENSED SEPTIC SYSTEM CONTRACTOR

EXPIRES: 10/31/2013

Westchester gov.com

Department of Health

Septic System Contractor

License No. 508

Lewis Visconti

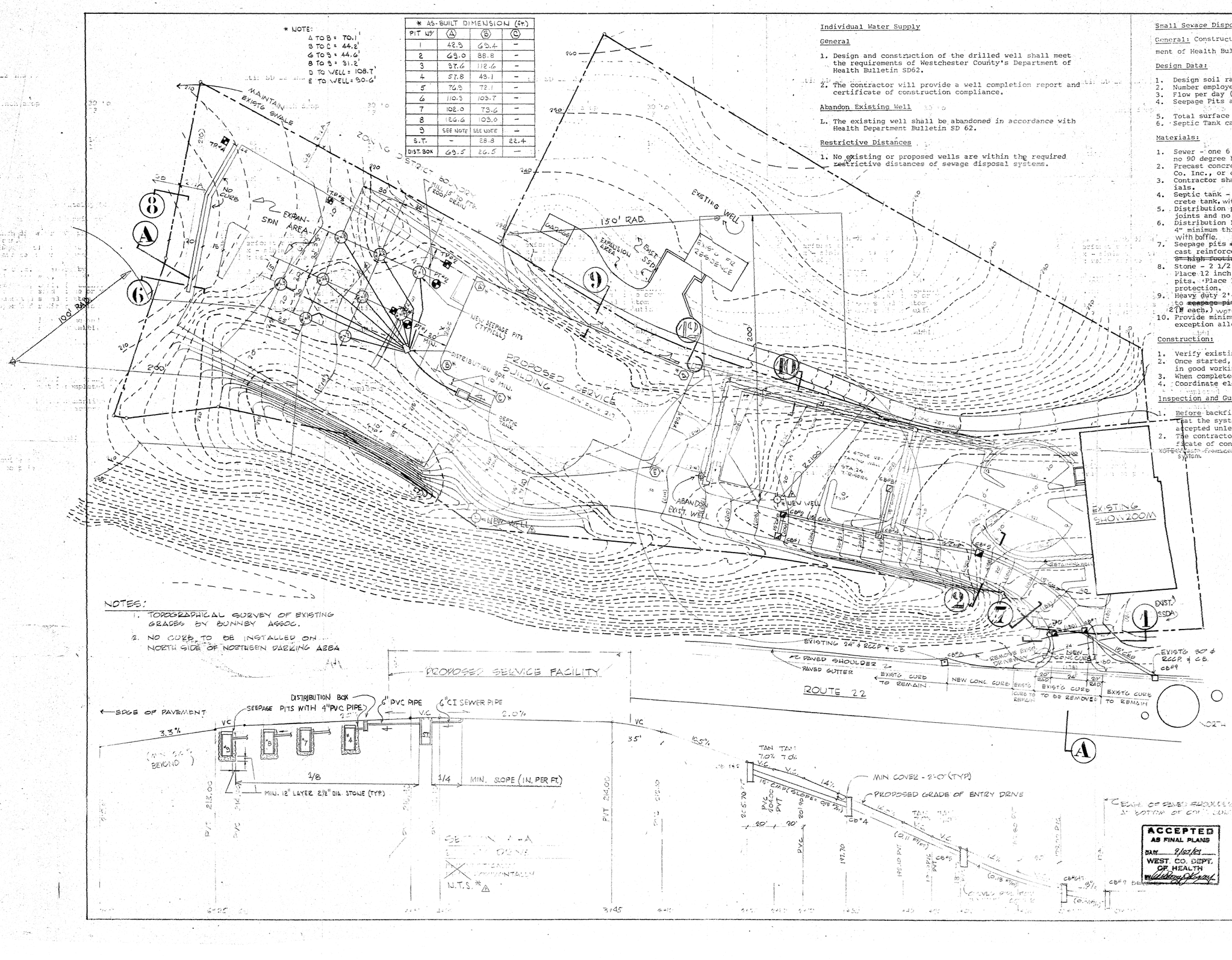
(name)

APPENDIX F

DRAWING NO. 5 "SEWAGE DISPOSAL & WATER SUPPLY PLAN", BY JAMES ALBERT HOLT ARCHITECT, JOSEPH COLEMAN, PE, REVISED AUGUST 31, 1983

* NOTE:
A TO B = 70.1'
B TO C = 44.2'
G TO B = 44.6'
B TO B = 31.2'
D TO WELL = 108.7'
E TO WELL = 80.6'

* AS-BUILT DIMENSION (FT.)			
PIT NO	(A)	(B)	(C)
1	42.9	65.4	–
2	69.0	88.8	–
3	97.6	112.6	–
4	57.8	43.1	–
5	76.8	72.1	–
6	110.3	103.7	–
7	102.0	73.6	–
8	126.6	103.0	–
9	SEE NOTE	SEE NOTE	–
S.T.	–	28.8	22.4
DIST. BOX	69.5	26.5	–



NOTES:
1. TOPOGRAPHICAL SURVEY OF EXISTING GRADES BY BUNNBY ASSOC.
2. NO CURB TO BE INSTALLED ON NORTH SIDE OF NORTHERN PARKING AREA

Individual Water Supply

General

1. Design and construction of the drilled well shall meet the requirements of Westchester County's Department of Health Bulletin SD62.
2. The contractor will provide a well completion report and certificate of construction compliance.

Abandon Existing Well

1. The existing well shall be abandoned in accordance with Health Department Bulletin SD 62.

Restrictive Distances

1. No existing or proposed wells are within the required restrictive distances of sewage disposal systems.

Small Sewage Disposal System

General: Construction shall meet the Westchester County's Department of Health Bulletin SD 22 and N.Y. State's DEC Standards.

Design Data:

1.	Design soil rate per 1 inch drop	30 to 45 minutes
2.	Number employees	23 each
3.	Flow per day (450 * 24 x 15)	810 gallons
4.	Seepage Pits and dome (8 Ft. Dia.)	9 each
5.	Total surface area	1400 sq. ft.
6.	Septic Tank capacity	1500 gallons

Materials:

1. Sewer - one 6 inch cast iron sewer pipe; no 90 degree bends.
2. Precast concrete shall be as manfactured by Fort Miller Co. Inc., or equal.
3. Contractor shall submit manufactures catalog for all materials.
4. Septic tank - ~~1250~~ 1500 gallon precast 4000 psi, reinforced concrete tank, with two compartments. Bituminous coat above liquid level.
5. Distribution pipe - 4 inch diameter PVC pipe, with tight joints and no perforations.
6. Distribution Box - minimum 9 hole precast concrete box with 4" minimum thick walls and cast iron frame and cover (1 each). with baffle.
7. Seepage pits ~~and cones~~ - 8 Ft. diameter by ~~4'~~ 5' deep pit, pre-cast reinforced 4000 psi. concrete, with 8' diameter ~~by H-20 SLAB 8" high footing, and 3' 6" deep cone,~~ (9 each).
8. Stone - 2 1/2 inch diameter crushed stone or washed gravel. Place 12 inch layer around sides and bottom of all seepage pits. Place 12 inch layer under distribution box, for frost protection.
9. Heavy duty 2'-0" diameter cast iron frame and cover for access to ~~seepage pits~~ and distribution box; Cambell #309 A&D, or equal: 2 (1 each.) Water Tight. SEPTIC TANK
10. Provide minimum 8" of brick under cast iron frames - no exception allowed.

Construction:

1. Verify existing conditions; notify if any changes.
2. Once started, continue working until completed and system put in good working condition.
3. When completed, clean up site in a workmanlike manner.
4. Coordinate elevations with paving contractor.

Inspection and Guarantee:

1. Before backfilling, the contractor shall notify the engineer that the system is ready for inspection. The work is not accepted unless this inspection is satisfactorily completed.
2. The contractor will provide a 2 year guarantee and a certificate of construction compliance.

~~NOTE: Roof Drainage Operation not to be connected into sewage disposal system.~~

ACCEPTED AS FINAL PLANS
DATE 9/07/83
WEST. CO. DEPT. OF HEALTH
BY William Gilmartin

JOSEPH COLEMAN, P.E.
CONSULTING ENGINEER
ROUTE 100
SOMERS, N.Y.

6	RCV	REDESIGN FOR FIELD CONDITIONS	6-6-83
5	JC	CITY DWR NOTES	5-28-82
4	JC	GRADES	5-5-82
3		EXISTG & PROPOSED GRADES	4-7-82
2	J.C.	GRADES, ETC. (2-25-82 LETTER)	3-15-82
1		GENERAL	1-12-82
No	By	Revision	Date
7	RCV	* AS-BUILT	8-31-83

Project: ESTATE MOTORS SERVICE
ROUTE 22
GOLDENS BRIDGE NEW YORK

Title: SEWAGE DISPOSAL & WATER SUPPLY

james albert holt
architect
route 116 purdys, new york 10578

Seal: LICENSED PROFESSIONAL ENGINEER JOSEPH PETER COLEMAN No. 049880 STATE OF NEW YORK

Scale	Date	Drawing No
1" = 20' U.T.S.	MAR. 31, 1982	SI 5
Project No	Drawn by	

9065

APPENDIX G

OWTS SEPTIC TANK MAINTENANCE RECORDS

Due 2/14

Invoice

Vogler Brothers Inc.
39 North Street
Katonah, New York 10536

(914) 232-5535

Date	Invoice #
1/11/2018	91891

Bill To
Mercedez Benz of Goldens Bridge Attn: Sal P O Box 681 Goldens Bridge, NY 10526

Bills are due when received... A Finance charge of 1½% per month will be charged on all past due Accounts. We Now accept Visa, Discover, MasterCard and American Express.

PO No.	Terms
2328125	Due on receipt

Item	Quantity	Description	Rate	Amount
Septic		Cleaned main septic tank for upper building 6 month cleaning at 313 Rte 22, Goldens Bridge	375.00	375.00T
		Sales Tax	7.375%	27.66

Jan : 35053
680 401
6809 401

Total	$402.66
Payments/Credits	$0.00
Balance Due	$402.66

Vogler Brothers Inc.
39 North Street
Katonah, New York 10536

(914) 232-5535

Invoice

Date	Invoice #
5/24/2018	93318

Bill To
Mercedez Benz of Goldens Bridge Attn: Sal P O Box 681 Goldens Bridge, NY 10526

Bills are due when received... A Finance charge of 1½% per month will be charged on all past due Accounts. We Now accept Visa, Discover, MasterCard and American Express.

PO No.	Terms
2328125	Due on receipt

Item	Quantity	Description	Rate	Amount
Septic		Cleaned 1-3500 gallon load of sewerage main tank and leach tank for lower building	730.00	730.00T
		Sales Tax	7.375%	53.84

May: 35053

POSTED

Total	$783.84
Payments/Credits	$0.00
Balance Due	$783.84

APPENDIX H

WESTCHESTER COUNTY SUBSURFACE SEWAGE TREATMENT SYSTEM INSPECTION FORM AND SEPTIC SYSTEM INSPECTION DOCUMENTS

J.D.M. Maintenance, Inc.
P.O. Box 39
Hawthorne, N.Y. 10532
(914)-906-9237

Re: Septic Field Inspection 8/29/18

Mercedes Benz of Goldens Bridge
321 Route 22
Lewisboro, NY 10526

Services rendered:

-High pressure water jet 9 seepage pit drains from distribution tank to seepage pits
-Ran camera from distribution tank to seepage pits via drains
-Marked out location and depths of seepage pits and determined if pits were functioning

Diagnosis:

Of 9 seepage pits, 6 seem to be absorbing properly without issue. Two pits (#s 4 and 5 on sketch) look as if they are being fed unevenly, with more effluent reaching these pits. This is causing these two pits to not absorb at rate being fed, which was observed by water backing into drain pipe from distribution tank. One drain, (#2 on sketch) has a spot where is partially crushed and couldn't get camera to seepage pit. (I will attach picture of crushed spot)
I do believe this seepage pit was functioning, as there wasn't any water backing into drain at point I reached with camera.
Also, through entire duration of inspection, (6 hours) there was a steady stream of water entering the distribution tank. This is indicative of something leaking/ running within the building which will shorten the life span of the absorption area of system.

I will attach a crude sketch of system just to provide general numbering of seepage pits- this does not show correct location of pits.

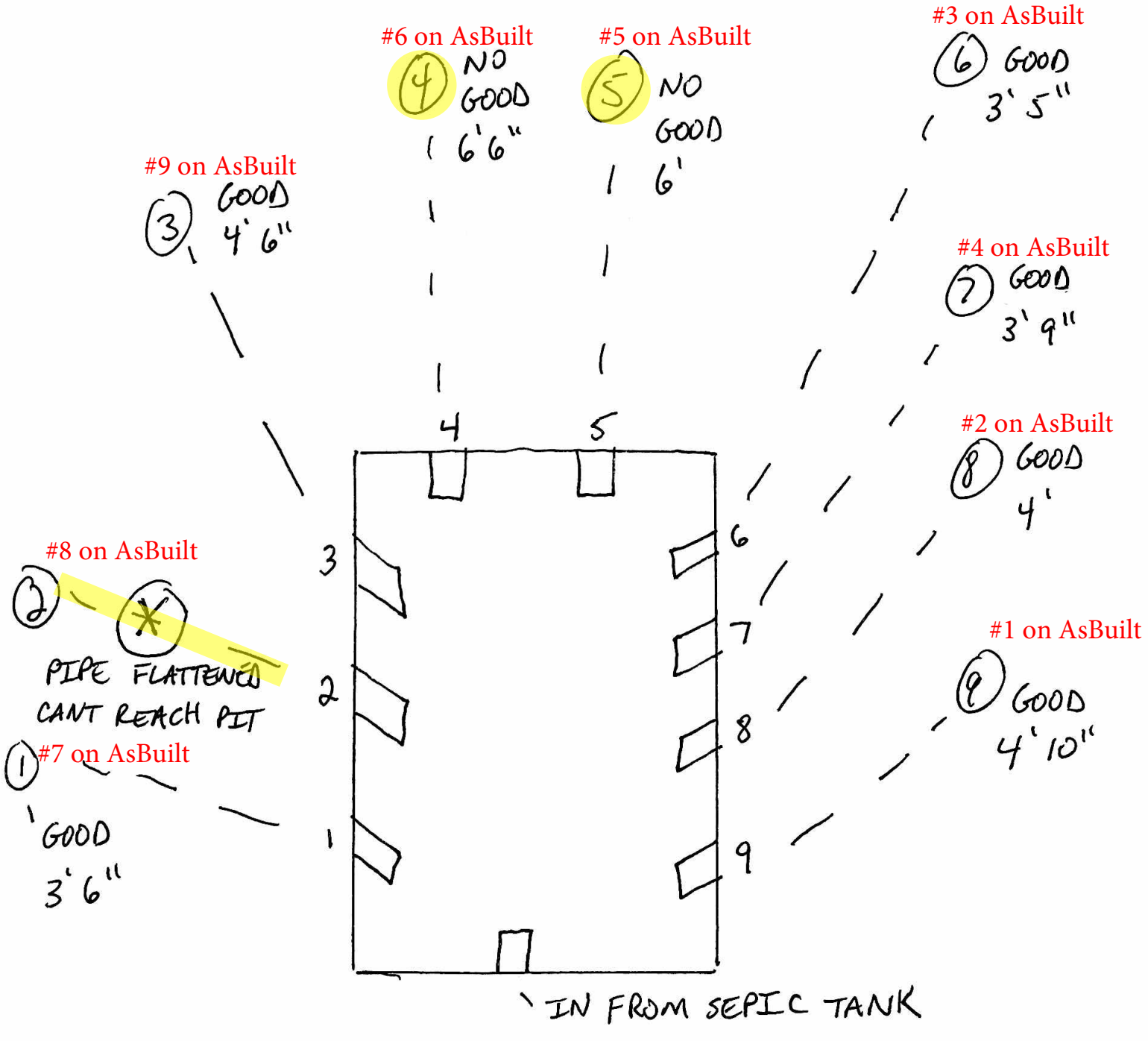
If you have any questions or concerns, please feel free to contact me.

Thank You,

Dave Milstein
Wc-DOH Lic# 514

This report is not a warranty and cannot guarantee the system will function properly for any period of time

MEASUREMENTS ARE DEPTH'S



Proposal

PECORD
EXCAVATING & CONTRACTING CORP

1340 Hayes Drive
Yorktown Heights, NY 10598

(914) 962-5136
Pecord@Yahoo.com

Date	Proposal #
9/14/2018	1144

Mercedes Benz of Goldens Bridge
NYS Route 22
Lewisboro, NY 10526

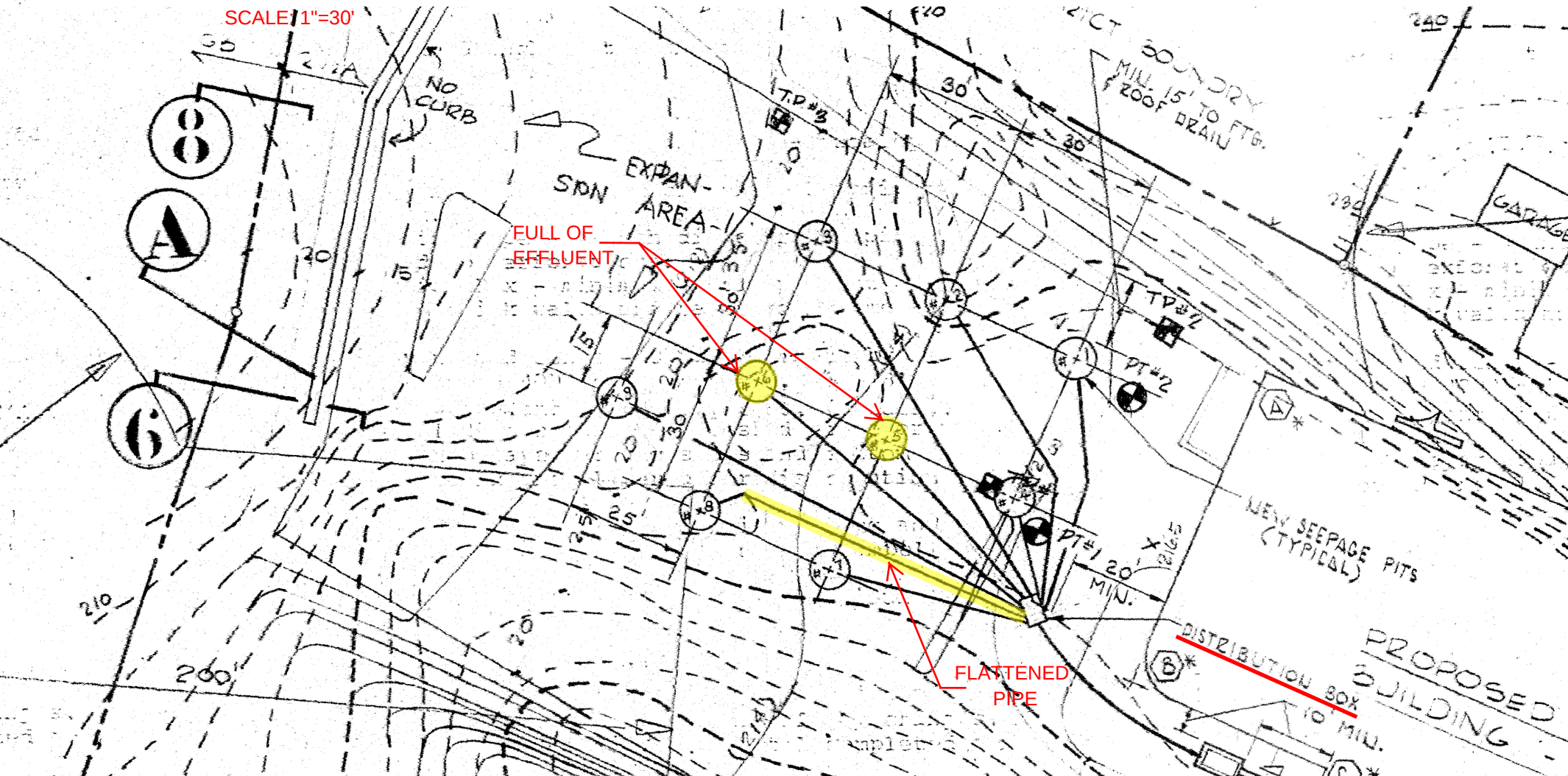
Project

Description	Total
Pump existing septic tank. Excavate distribution box and reset piping for proper flow to leaching tanks. Replace broken 4" service line to one of the leaching tanks. Install new riser over distribution box. Excavate and install risers on all nine leaching tanks with cast iron frame and covers. Remove excess fill and patch blacktop where repairs were made.	32,000.00

Total $32,000.00

RESULTS OF CAMERA INSPECTION BY J.D.M. MAINTENANCE, DATED 08/29/2018

(ZOOMED IN VIEW OF AS-BUILT SITE PLAN PREPARED BY JAMES ALBERT HOLT ARCHITECT/JOSEPH COLEMAN, LAST REVISED 08/31/1983)



Westchester gov.com

COUNTY OF WESTCHESTER
DEPARTMENT OF HEALTH
145 Huguenot Street, 7th Floor, New Rochelle, NY 10801

SEPTIC SYSTEM DATA FORM

Vehicle License # 61740R Vehicle Rated Tank Capacity 2500 Gallons

County Health Department Septage Collection Vehicle Decal # 354

Warning: The discharge of waste originating from outside the County into the County trunk sewer system is prohibited under section 824.221 of the laws of Westchester County. Any violation of applicable sections of the Sewer Act may subject you to civil liability fines and/or imprisonment and also may subject you to civil liability including that which is set forth in section 824.371 of the laws of Westchester County.

This form shall be completed in its entirety and a copy shall be provided to the property owner for all septage collected in Westchester County pursuant to Chapter 873, Article VIII, Section 873.724 of the Laws of Westchester County. The original of this form is to be submitted with the Sanitary Waste Contractor Disposal Permit at time of disposal at a County facility. For disposal outside of Westchester County, the original is to be submitted to the Westchester County Department of Health, 145 Huguenot Street, 7th Floor, New Rochelle, NY 10801. Failure to provide legible and complete information on this form will prevent allowance of vehicle discharge.

Contact person must be indicated only if customer serviced is other than a single-family residence.

Property Owner ESTATE MOTORS

Contact Person on Site BETH GRISTEN Tel. # 232 8122

Property Address (No. & Street) 313 MAIN ST.

Post Office GOLDENS BRIDGE Zip Code 10526

Municipality LEWISBORO Date of Service 7/13/18

Property Type (circle): Single Family Multi-Family Industrial (Commercial) Other _____

Number of Bedrooms _____

Indicate the number of each type of component evacuated and the gallons evacuated from each component.

Number		Gallons	Tank Depth (feet)	Scum Layer Thickness (inches)	Sludge Layer Thickness (inches)
1	Septic tank	1250	5	8	14
_____	Cesspool	_____			
_____	Seepage Pit	_____			
_____	Other	_____ Describe _____			
_____	Total	_____			

Is there any evidence of exposed or discharged septage onto ground surface? (circle): Yes (No)

Name of Septage Collector RICHARD MUNOZ License # 202

Signature [signature] Date 7/13/18

Name of Septage Collection Company VOGLER Tel. # 232 5535

Septage Receiving Facility:

X Hawthorne Manhole WCDEF Ticket Number 150288

_____ Other: _____

Disposal Date 7/13/18

All Licensed Septage Collectors shall be required to maintain their Westchester County License and must be displayed to the property owner upon request.

WHITE – COUNTY COPY YELLOW – VENDOR COPY PINK - CUSTOMER COPY

APPENDIX I

EXISTING AND PROJECTED EMPLOYEE PLUS CUSTOMER DATA, PREPARED BY CELEBRITY OF WESTCHESTER, LLC D/B/A

MERCEDES BENZ OF GOLDENS BRIDGE EXISTNG AND PROJECTED EMPLOYEE PLUS CUSTOMER DATA

Service Building	Autohaus Requirement	Employee Name	Existing Count	Proposed Count	Remarks/Comments
25 bays	1	James Licht	1	1	There are currently 5 service technicians for the existing Service Building and additional technicians are not required. Some bays are just prep and details bays. Many bays will be used for customer vehicle storage while the vehicle is awaiting prep and detail or customer pick-up/delivery. The amount of bays are not needed by the dealership but are required to meet minimum Autohaus requirements. The majority of vehicle service will take place in the Showroom Building.
Typcially a ratio of 1 service technician for every 2.5 service bays is required.	2	Dennis Marralheiro	2	2	
	3	Nike Nrecaj	3	3	
	4	George Olsen	4	4	
	5	Dean Macmarzyk	5	5	
	6				
	7				
	8	**Not needed by dealership**			
	9				
	10				
Showroom Building					
24 Service Bays	1	Lorenc Nrecaj	1	1	**It is estimated that 5 additional service technicians will be hired for the Showroom Building.** Typcially a ratio of 1 service technician for every 2.5 service bays is required. Therefore 24 service bays will require about 10 service technicians.
Typcially a ratio of 1 service technician for every 2.5 service bays is required.	2	Dennis Maspons	2	2	
	3	Charles Claffey	3	3	
	4	Anthony Ortiz	4	4	
	5	John Askew	5	5	
	6			**6**	
	7			**7**	
	8	**Plan for future capacity**		**8**	
	9			**9**	
	10			**10**	
Service Advisors	1	John Chipman	1	1	There are 8 service advisor stations per Autohaus requirements. However, only 4 service advisors are currently employed and 1 additional is anticipated. **It is estimated that 1 additional service advisor will be hired for the Showroom Building.**
	2	Evan Fenyo	2	2	
	3	William Thompson	3	3	
	4	Panayiotis Korkatzis	4	4	
	5	Plan for future capacity		**5**	
	6				
	7	**Not needed by dealership**			
	8				
Cashier - Greeter	1	Roger Simon	1	1	There are 2 cashier/greeter seats per Autohaus requirements. However, only 1 cashier/greeter is currently employed and an increase is not anticipated.
	2	**Not needed by dealership**			
Service Administration (BDC)	1	Krista Petrucelli	1	1	There are 5 service administration work spaces per Autohaus requirements and there are currently 5 employed and an increase is not anticipated.
	2	Briana Mason	2	2	
	3	Annmarie D'Onofrio	3	3	
	4	Jacquelyn Zervas	4	4	
	5	Shannon O'Brien	5	5	
Service Manager	1	Thomas Brennan	1	1	1 service manager office is needed per Autohaus requirements. There is currently 1 employed and an increase is not required.
Parts Manager	1	Demetrios Korkatzis	1	1	1 parts manager office is needed per Autohaus requirements. There is currently 1 employed and an increase is not required.
Parts Supply Couter	1	Russell Austin	1	1	There are 2 current employees for parts delivery and storage and an increase is not required.
	2	Jason Marquez	2	2	
Customer Seating Count Lower Level	10	Capacity doesn't mean all at the same time	5	5	There are 10 customer lounge seats/spaces per Autohaus requirements. There are currently 5 customer lounge seats/spaces available and current operations have not experienced the spaces being used close to capacity. Therefore, not more than 5 customers are anticipated at one time.
Reception	1	Ann Bellucci	1	1	There are 2 current employees for reception and an increase is not required.
	2	Ella Cristina Von Helms	2	2	
New Car Sales	1	Matthew Towers	1	1	There are 11 new car sales offices per Autohaus requirements. However, only 6 new car sales people are currently employed and an increase is not anticipated. **It is estimated that 2 additional new car sales people will be hired for the Showroom Building.**
	2	Robert Pierro	2	2	
	3	Adria Giulino	3	3	
	4	James Sheppard	4	4	
	5	Victor Varga	5	5	
	6	Jose Batista	6	6	
	7	**Plan for future capacity**		7	
	8			8	
	9				
	10	**Not needed by dealership**			
	11				
New Sales Manager/General Manager	1	Walter Pensa	1	1	1 new sales manager/general manager office is needed per Autohaus requirements. There is currently 1 new sales/general manager employed and an increase is not required.
New Car Assistant Sales Manager	**1**	**Not needed**			1 new car assistant sales manager space is needed per Autohaus requirements. The duties of the position are currently the responsibility of the current sales/general manager. It is not anticipated that one will be employed.
Pre-Owned Sales Manager	1	Robert Chakamian	1	1	1 pre-owned sales manager space is needed per Autohaus requirements. There is currently 1 pre-owned sales manager employed and an increase is not required.
Pre-Owned Sales	1	Robert Brechter	1	1	There are 5 pre-owned sales spaces per Autohaus requirements. However, only 2 pre-owned sales people are currently employed and an increase is not anticipated.
	2	Carlos Contreras	2	2	
	3				
	4				
	5				
F&I	1	Pamela Sieradzki	1	1	There are 3 F&I manager offices per Autohaus requirements and 3 F&I managers are currently employees for the dealership but at the off-site corporate offices. It is anticipated that 1 of the postiions will not be needed. **Therefore, it is estimated that 1 less employee will be needed.**
	2	Susan Weiss	2	2	
	3	Julia Radulic	3	**Not needed**	
Business Manager	**1**	**Not needed**			1 business manager office is needed per Autohaus requirements. The duties of the position are currently the responsibility of the current sales/general manager. It is not anticipated that one will be employed.
General Office - Accounting	1	Melody Plummer	1	1	These employees are located off-site in the NJ corporate offices.
	2	Vikki Lombardi	2	2	
	3	Zenabel Fessman	3	3	
Administration Assistants	1	Jenna Garland	1	1	
	2	Kim Kneuer	2	2	There are 2 current administrative assistants and an increase is not required.
Miscellaneous	1	Carlos Santacruz	1	1	There are 3 current custodial/maintenance employees and an increase is not anticpated.
	2	Patrick Roche	2	2	
	3	Erdlie Spence	3	3	
Drivers		Noel Soto	1	1	There are 9 current vehicle pick-up/delivery drivers and an increase is not anticpated. Not all of the drivers are on-site at the same time and they are on the road most of day.
		Gjon Kolaj	2	2	
		Ralph Brechter	3	3	
		Lawrence McSwiggan	4	4	
		Jason Dibenedetto	5	5	
		Ronald Gilliard	6	6	
		Roberto Alvarado	7	7	
		Walter Covert	8	8	
		Thomas Jakaj	9	9	
Pick-up and Delivery/Driver Coordinators		Manuel Maduro	1	1	There are 2 current driver coordiantors and an increase is not anticpated.
		Alberto Beato	2	2	
Customer Seating Count Upper Level	9	Capacity doesn't mean all at the same time	5	5	There are 9 customer lounge seats/spaces per Autohaus requirements. There are currently 5 customer lounge seats/spaces available and current operations have not experienced the spaces being used close to capacity. Therefore, not more than 5 customers are anticipated at one time.
Total Employee Count	**72**		**58**	**65**	**A net increase of 7 employees is anticipated based on the above explanations and information provided by the dealership. 2 of the employees will continue to work off-site and the 9 drivers will continue to spend most of the day on the road.**
Total Customer Count	**19**		**10**	**10**	
	Autohaus Requirement		**Existing Count**	**Proposed Count**	

APPENDIX J

SOIL TESTING DATA SHEET, DATED OCTOBER 30, 2018

Westchester County Department of Health
Bureau of Environmental Quality
25 Moore Avenue
Mt. Kisco, NY 10549

DESIGN DATA SHEET - SEPARATE SEWERAGE SYSTEM FILE NO. _____

Owner Mercedes Benz of Goldens Bridge Address 321 NY Route 22, Goldens Bridge, NY

Located at (Street) Anderson Lane Sec. 004E Block 11135 11137 Lot 1,2,3,4,5,6,7 42
(Indicate nearest cross st.)

Municipality Lewisboro Watershed NYCDEP - Muscoot Reservior

SOIL PERCOLATION TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

Presoak Date: 10/29/2018 Run Date: 10/30/2018

Hole #	CLOCK TIME			PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapse Time Min.	Depth From Grd inches	To surface water	Water Level Drop In Inches	Soil Rate Min/In Drop
BH-1A	1	9:45:00 AM	9:48:00 AM	3:00	84"	85"	1	3:00
90" Deep	2	9:48:00 AM	9:51:30 AM	3:30	84"	85"	1	3:30
	3	9:51:30 AM	9:55:00 AM	3:30	84"	85"	1	3:30
BH-1B	1	10:01:00 AM	10:05:30 AM	4:30	54"	55"	1	4:30
60" Deep	2	10:05:30 AM	10:10:30 AM	5:00	54"	55"	1	5:00
	3	10:10:30 AM	10:15:30 AM	5:00	54"	55"	1	5:00

Notes: Perc test done by: Carlin-Simpson Associates

1) Tests to be repeated at same depth until approximately equal soil rates are obtained at each percolation test hole. All data to be submitted for review.
2) Depth measurements to be made from top of hole. DO NOT REPORT INCREMENTS OF LESS THAN ONE INCH

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. 1	HOLE NO.	HOLE NO.	HOLE NO.
G.L.	Refer to Soil Borings in Geotechnical Report prepared by Carlin-Simpson Associates			
6"				
12"				
18"				
24"				
30"				
36"				
42"				
48"				
52"				
60"				
66"				
72"				
78"				
84"				
85"				

WAS GROUNDWATER ENCOUNTERED? No

BEDROCK WAS ENCOUNTERED? No

INDICATE LEVEL AT WHICH WATER RISES AFTER BEING ENCOUNTERED

DEEP TESTS MADE BY _____ DATE OF DEEP TESTS _____

Name Stephen Spina Signature _____

Address JMC, PLLC
120 Bedford Road
Armonk, NY 10504

SEAL



APPENDIX K

CARLIN-SIMPSON ASSOCIATES REPORT ON SUBSURFACE SOIL INVESTIGATION, DATED NOVEMBER 28, 2018

CARLIN • SIMPSON & ASSOCIATES

Consulting Engineers
Geotechnical & Environmental

PRELIMINARY SUBSURFACE INVESTIGATION MEMO

DATE: **28 November 2018**

TO: **Stephen Spina, P.E.**
JMC Site Development Consultants

FROM: **Robert B. Simpson, P.E.**
Stephen Rossi, E.I.T

RE: **Proposed Development**
Mercedes-Benz of Goldens Bridge
Goldens Bridge, NY

JOB NO: **17-121**

In accordance with our proposal revised 25 September 2018, we have performed a Subsurface Soil and Foundation Investigation at the referenced site. The following is a summary of the preliminary subsurface investigation information attained during this study. The recommendations below are considered preliminary in nature and are intended to give guidance in the planning and designing of the new construction.

We understand that the planned construction will consists of two new additions, a three-story parking garage, stormwater detention systems, septic system, retaining walls, parking areas and driveways, and parking lifts.

We understand that a geotechnical report was prepared by McLaren Engineering Group in July 2011. A summary of the boring observations performed during this investigation are provided in Table 1, below. The McLaren report is attached for your reference.

We performed an additional subsurface investigation for the proposed development that included fifteen (15) borings and testing for the proposed stormwater and septic systems. summary of our boring observations is provided in Table 2, below.

Table 1 - McLaren Engineering Boring Observation Summary

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Parking/Driveway	B-1	+211.8	NE	15.0' (+196.8)	NE to 17.0'	+213.0	1.2
Parking/Driveway	B-2	+211.6	NE	NE to 17.0’	AR @ 5.0' (+206.6)	+214.5	2.9
Northern Stormwater Detention System	B-3	+210.2	NE	16.0' (+194.2)	Cored @ 19.0' (+191.2)	+191.8	-18.5
Parking/Driveway	B-4	+202.1	NE	NE to 6.0’	AR @ 6.0' (+196.1)	+199.5	-2.6
Parking/Driveway	B-5	+197.6	9.0' (+188.6)	NE to 20.5’	CWR @ 20.5' (+177.1)	+199.8	2.2
Southern Addition	B-6	+199.2	1.5' (+197.7)	NE to 2.0’	AR @ 2.0' (+197.2)	+182.0	-17.2
Southern Addition	B-7	+189.0	2.0' (+187.0)	NE to 4.0’	AR @ 4.0' (+185.0)	+182.0	-7.0
Southern Addition	B-7B	+189.1		NE to 3.0’	AR @ 3.0' (+186.1)	+182.0	-7.1
Southern Stormwater Detention System	B-8	+179.8	5.5' (+183.6)	8.5’ (+171.3)	CWR @ 9.5' (+170.3)	+169.5	-10.3
Southern Addition	B-9	+180.3	2.0' (+178.3)	NE to 3.0’	Cored @ 3.0' (+177.3)	+182.0	1.7
Southern Addition	B-10	+195.0	4.0' (+191.0)	NE to 13.0’	AR @ 13.0' (+182.0)	+182.0	-13.0
Southern Addition	B-11	+175.5	NE	NE to 11.0’	CWR @ 11.0' (+164.5)	+182.0	6.5
Southern Addition	B-12	+175.4	4.0' (+171.4)	10.5' (+164.9)	CWR @ 22.0' (+153.4)	+182.0	6.6
Southern Stormwater Detention System	B-13	+176.0	6.0' (+170.0)	16.5' (+159.5)	NE to 17.0'	+169.5	-6.5
Southern Addition	B-14	+173.0	6.0' (+167.0)	NE to 17.0’	NE to 17.0'	+182.0	9.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Table 2 - CSA Boring Observations

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Northern Septic System	SB-1	+210.0	3.0' (+207.0)	12.5' (+197.5)	AR @ 26.5' (+183.5)	+200.0	-10.0
Northern Stormwater Detention System	SB-2	+209.0	2.5' (+206.5)	NE to 16.0'	AR @ 16.0' (+193.0)	+191.8	-17.3
Northern Stormwater Detention System	SB-3	+201.5	3.5' (+198.0)	NE to 8.5'	NE to 8.5'	+191.8	-9.8
Upper Parking Porous Pavement	SB-4	+234.0	3.0' (+231.0)	NE to 12.0'	NE to 12.0'	+230.3	-3.7
Upper Parking Porous Pavement	SB-5	+234.0	NE	NE to 9.0'	NE to 9.0'	+230.3	-3.7
Southern Parking Structure	SB-6	+165.0	4.0' (+161.0)	5.0' (+160.0)	NE to 17.0'	+168.0	3.0
Southern Parking Structure	SB-7	+166.0	8.0' (+158.0)	7.0' (+159.0)	NE to 22.0'	+168.0	2.0
Rain Garden	SB-8	+173.0	6.0' (+167.0)	NE to 17.0'	NE to 17.0'	+169.3	-3.8
Rain Garden	SB-9	+177.0	7.0' (+170.0)	NE to 17.0'	NE to 17.0'	+169.3	-7.8
Rain Garden	SB-10	+178.0	>3.5'	NE to 3.5'	NE to 3.5'	+169.3	-8.8
Northern Addition	SB-11	+216.0	2.5' (+213.5)	NE to 13.5'	AR @ 13.5' (+202.5)	+216.3	0.3
Southern Addition	SB-12	+198.0	2.0' (+196.0)	NE to 2.0'	Cored @ 2.0' (+196.0)	+182.0	-16.0
Southern Addition	SB-13	+191.0	2.5' (+188.5)	NE to 4.0'	4.0' (+187.0)	+182.0	-9.0
Southern Addition	SB-14	+176.0	1.5' (+174.5)	NE to 6.0'	AR @ 6.0' (+170.0)	+182.0	6.0
Southern Parking Structure	SB-15	+169.0	1.5' (+167.5)	9.5' (+159.5)	NE to 27.0'	+168.0	-1.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Soil Conditions

Stratum 1A Topsoil — The surface layer in portions of the site consist of topsoil that ranges from approximately 3 to 8 inches of topsoil.

Stratum 1B Asphalt — The surface layer in portions of the site consist of asphalt that ranges from approximately 1 to 6 inches of topsoil.

Stratum 2 Existing Fill — Below the surface layers in each of the borings is existing fill that generally consists of brown, gray coarse to fine SAND, little (to and) Silt, trace (to some) coarse to fine Gravel. The existing fill extends to depths ranging from 1.5 to 9.0 feet below the existing ground surface.

Stratum 3 Silty Sand with cobbles and boulders — Underlying the surface layers and existing fill is medium dense to dense brown coarse to fine SAND, trace (to and) Silt, trace (to some) coarse to fine Gravel, with cobbles and boulders. The Silty Sand extends to depths ranging from 3.0 to greater than 27.0 feet below the existing ground surface. Several borings were terminated in this stratum at auger refusal on probable bedrock at depths ranging from 2.0 to 26.5 feet below the existing ground surface.

Stratum 5 Weathered Schist — Underlying the Silty Sand with Gravel and existing fill throughout the site is completely to highly weathered Schist. This layer is soil like in state, however, there could be denser pockets that cannot be conventionally excavated. The weathered Schist is present at depths ranging from 8.5 to 22.0 feet below the existing ground surface.

Stratum 6 Schist Bedrock — Schist bedrock was cored at borings B-3, B-9, SB-12, and SB-13 for vertical distances of 10, 10, 10, and 5 feet respectively. The rock quality designation (RQD) of the recovered cores were 90% and 10% (B-1), 42% and 76% (B-9), 90% and 100% (SB-12), and 88% (SB-13). The Schist ranges from moderately weathered to fresh and is in a crushed to intact state.

Groundwater

- Groundwater was encountered in portions of the site above the bedrock surface at depths ranging from 5.0 to 18.5 feet below the existing ground surface. These depths correspond to groundwater elevations between +198.3 and +159.0.

- Groundwater on this site will be controlled by topography and the underlying bedrock surface.

Bedrock

- Schist bedrock ranging from dense completely weathered rock to intact, bedrock was encountered in the borings. Hard rock will be encountered during construction, particularly in the northeastern portion of the proposed southern addition.

- The rock conditions within the proposed building footprint will be variable. Harder bedrock may be encountered between boring locations.

- The completely weathered bedrock may be "rippable" to some extent using large construction equipment. However, penetration into the completely weathered bedrock and the underlying harder bedrock with excavation equipment will depend of the degree of weathering and fracturing in the rock. We anticipate that the "rippability" of the bedrock will be variable and may be limited. Zones of harder rock may be present at shallower depths and zones of weathered rock may be present at deeper intervals. Depending on the proposed grades, rock blasting and/or the use of hydraulic hammers may be required to excavate bedrock at the subject site.

Septic System

- Two modified percolation tests were performed in accordance with modifications accepted by the Goldens Bridge Health Inspector.

- Percolation tests were performed for the proposed septic system in the areas of SB-1 (BH-1A and BH-1B).

- The test depths and percolation rates are provided in Table 3, below.

Table 3 – Septic System Percolation Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Percolation Test Depth (Elevation)	Percolation Rate (mpi)
Northern Septic System	BH-1A BH-1B	12.5' (+197.5)	7.0' (+203.0) 4.5' (+205.5)	3.5 5.0

- Groundwater was encountered in boring SB-1 at a depth of 12.5 feet below the existing ground surface. This depth corresponds to elevation +198.3.

- No evidence of seasonal high groundwater was encountered, however seasonal high groundwater should be taken as 2'0" above the encountered groundwater.

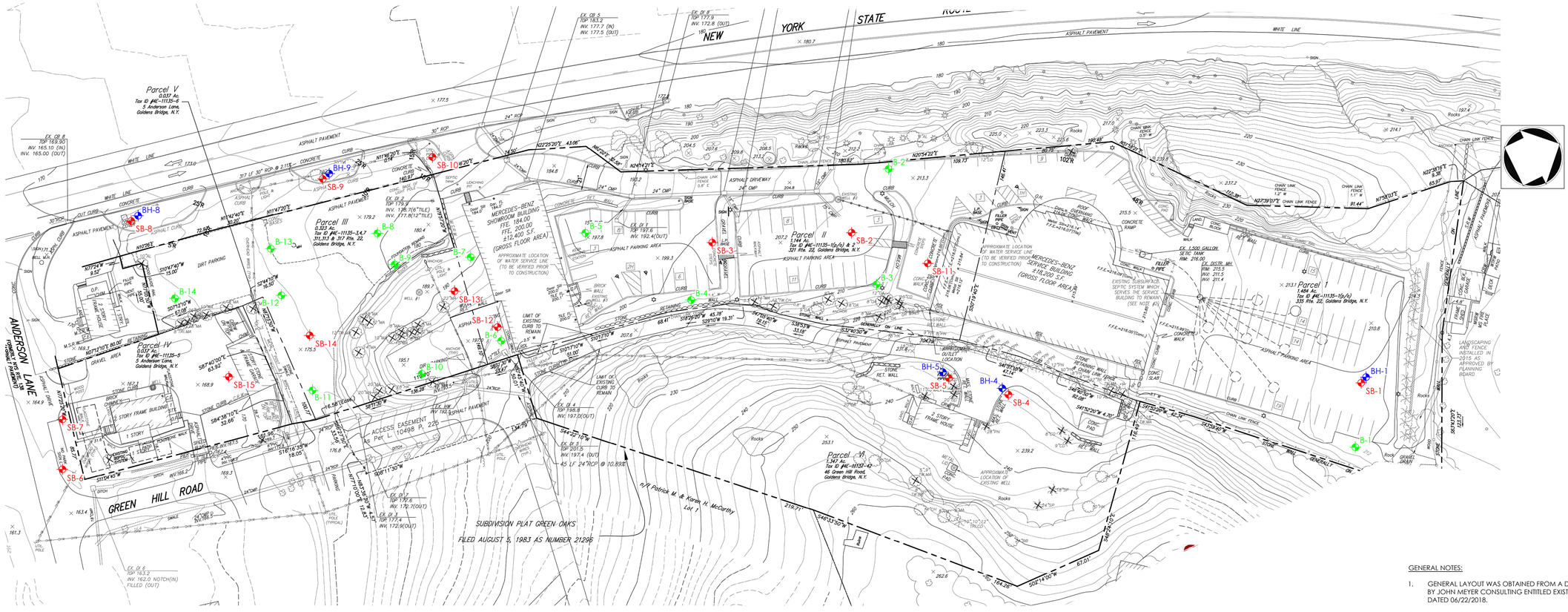
Stormwater Management Systems

- Borehole permeability tests were performed throughout the site in order to determine the infiltration characteristics of the site soils for the proposed stormwater management systems.

- The test depths and infiltration rates are provided in Table 4, below.

Table 4 – Stormwater Management Systems Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Borehole Permeability Test Depth (Elevation)	Infiltration Rate
Upper Parking Porous Pavement	SB-4	NE to 12.0'	5.5' (+228.5)	2.0 in/hr
Upper Parking Porous Pavement	SB-5	NE to 9.0'	5.5' (+229.5)	15.0 in/hr
Rain Garden	SB-8	NE to 17.0'	5.5' (+167.5)	20.0 in/hr
Rain Garden	SB-9	NE to 17.0'	9.0' (+168.0)	19.0 in/hr



GENERAL NOTES:

1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING THAT WAS PREPARED BY JOHN MEYER CONSULTING ENTITLED EXISTING CONDITIONS PLAN, DATED 06/22/2018.
2. PREVIOUS BORINGS WERE PERFORMED BY MCLAREN ENGINEERING GROUP IN JULY 2011.
3. BORING LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
4. BORINGS WERE PERFORMED BY GENERAL BORINGS INC. IN OCTOBER 2018 UNDER THE FULL TIME INSPECTION OF CSA.
5. LOCATIONS ARE APPROXIMATE.

LEGEND:

- - MCLAREN ENGINEERING BORING LOCATION (2011)
- - CSA BORING LOCATION
- - CSA BORE HOLE PERMEABILITY TEST LOCATION

ROBERT B. SIMPSON, P.E.
PROFESSIONAL ENGINEER

LICENSE NO. | SIGNATURE | DATE

BORING LOCATION PLAN

PROPOSED DEVELOPMENT - MERCEDES-BENZ
321 ROUTE 22
GOLDEN BRIDGE, NEW YORK

DRAWN: SR	SCALE: 1" = 40'
CHECKED: RBS	DATE: 27-NOV-18
PROJECT NO.: 17-121	DWG NO.: FIG - 1
APPROVED:	

CARLIN-SIMPSON AND ASSOCIATES
61 Main Street
Sayreville, NJ 08872
Consulting Geotechnical and Environmental Engineers

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 2
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
24-Oct-18	1045	12'6"	HSA	DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. Mcgovern
				FALL		30"			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15		FILL (Br gr cf S, s (-) $, l cf G))	
2		S-1	17		**FILL (Brown gray coarse to fine SAND, some (-) Silt, little coarse to fine Gravel)**	Rec = 15"
			34			moist
3			29		3'0"	
			12			
4		S-2	15		Br cf S, s $, s (-) cf G	Rec = 6"
			28			moist
5			50/2"			Refusal on spoon @ 4'8"
			38			
6		S-3	50		same	Rec = 16"
			57			moist
7			51			
			35			
8		S-4	30		Br cf S, a (-) $, s (-) cf G	Rec = 18"
			35			moist
9			33			
10						
			16			
11		S-5	14		same, s (-) $	Rec = 13"
			10		**Brown coarse to fine Sand, some Silt, some coarse to fine Gravel**	moist to wet
12			12			
			10			
13		S-6	15		same	Rec = 19"
			19			wet
14			27			
15						
			23			
16		S-7	34		same	Rec = 0"
			43			wet
17			39			
18						
19						
20						
			11			
21		S-8	18		Gr cf S, l (+) $, l (-) cf G	Rec = 19"
			23			wet
22			23			

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**	**SHEET NO.:** 2 of 2
Client:	**Celebrity Motor Car LLC**	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24						
25					**Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel**	
26		**S-9**	22 40 30/1"		same, probably bedrock 26'6"	Rec = 7" wet
27					**End of Boring @ 26'6"**	
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-1A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 2-Nov-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 2-Nov-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
2		**S-1**	20 19		FILL (Br cf S, l (+) $, l cf G w/ cobbles)	Rec = 17"
3			19 38		**FIILL (Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel with cobbles)**	moist
4		**S-2**	21 26		same	Rec = 17"
5			31 30		4'3" Br cf S, s $	moist
6		**S-3**	24 46		Br cf S, s (-) $, s (-) cf G	Rec = 16"
7			36 26			moist
8		**S-4**	32 20		Br cf S, s (-) $, l (-) mf G	Rec = 14"
9			19 22		**Brown coarse to fine SAND, some Silt**	moist
10						
11		**S-5**	8 12		same	Rec = 19"
12			11 13		12'0"	moist Tip wet
13					**End of Boring @ 12'0"**	
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-2
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +209.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 24-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 24-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Brown coarse to fine SAND, some Silt, little coarse to fine Gravel)**	
			15			
2		**S-1**	50/3"		FILL (Br cf S, s $, l cf G)	Rec = 7"
					2'6"	moist
3					**Brown coarse to fine SAND, some (-) Silt, trace coarse to fine Gravel)**	
			10			
4		**S-2**	16		Br cf S, s (-) $, t cf G	Rec = 4"
			50/3"		4'3"	moist
5						Refusal on boulder @ 5'
					Boulders	attempted to core broke
6					6'0"	through @ 5'10"
						Boulder
7						Rec = 6"
			27			moist
8		**S-3**	61		Gr br cf S, l $, s cf G	Refusal on spoon @ 10'2"
			50/4"			auger to 15' very dense
9						with boulder
10					**Gray brown coarse to fine SAND,**	
		S-4	50/2"		same **little Silt, some coarse to fine Gravel**	Rec = 0"
11					**with cobbles and boulders**	moist
12						
13						
14						
15						
			55		same	Rec = 4"
16		**S-4**	50/3"		16'0"	moist
					End of Boring @ 16'0"	Auger Refusal on probable
17						bedrock @ 16'0"
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-3
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +201.5

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'2"	
2		S-1	8 9		FILL (Dk br cf S, a (+) $, t (+) mf G)	Rec = 18"
3			9 18		**FILL (Dark brown coarse to fine SAND, and (+) Silt, trace (+) medium to fine Gravel)**	moist many cobbles
4		S-2	11 28		FILL (same) 3'6" Br cf S, l (+) $, l cf G	Rec = 17"
5			21 37			moist
6		S-3	29 50/2"		same **Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel, with many cobbles and boulders**	Rec = 8" moist many cobbles and boulders
7						
8					8'6"	Auger refusal @ 8'6"
9					**End of Boring @ 8'6"**	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-4
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
1		S-1	3 7		**Topsoil**	0'8"	Rec = 10"
2			7 6		FILL (Br cf S, s (+) $, t mf G) **FILL (Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel)**		moist
3		S-2	5 5		FILL (same)	3'0"	Rec = 18"
4			20 39		Br cf S, s (+) $, l cf G		moist
5							
6		S-3	17 38		same		Rec = 10"
7			35 45		**Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel**		moist
8							
9							
10							
11		S-4	19 33		same		Rec = 15"
12			21 25			12'0"	moist
13					**End of Boring @ 12'0"**		
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER BH-4A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 29-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 29-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
			9		FILL (Br cf S, s (+) $, t mf G)	
2		S-1	5		**FILL (Brown coarse to fine SAND,**	Rec = 15"
			5		**some (+) Silt, trace medium to fine Gravel)**	moist
3			10		FILL (same) 3'0"	
			34		Br cf S, s (+) $, l cf G	
4		S-2	44			Rec = 16"
			50/3"			moist
5						
			17			
6		S-3	35		same	Rec = 16"
			37		**Brown coarse to fine SAND,**	moist
7			30		**some (+) Silt, little coarse to**	
			20		**fine Gravel**	
8		S-4	55		same	Rec = 11"
			37			moist
9			20			
10						
			15			
11		S-5	17		same	Rec = 17"
			20			moist
12			29		12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-5
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15			
2		S-1	14		Br cf S, l (+) $, t mf G	Rec = 18"
			22			moist
3			25			
			23		**Brown coarse to fine SAND,**	
4		S-2	29		same **little (+) Silt, trace medium to**	Rec = 18"
			26		**fine Gravel**	moist
5			53			
			12			
6		S-3	12		same	Rec = 14"
			12		6'6"	moist
7			18		Br cf S, t (+) $, s (+) cf G	
			26		**Brown coarse to fine SAND,**	
8		S-4	28		same **trace (+) Silt, trace medium**	Rec = 6"
			36		**to fine Gravel**	moist
9			40		9'0"	
					End of Boring @ 9'0"	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-6
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +165.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**900**	**8'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
25-Oct-18	**915**	**5'0"**	**NONE**	**WGHT**		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'4"	
1						
			12			
2		**S-1**	13		FILL (Dk br cf S, a (-) $, t mf G)	Rec = 18"
			9		**FILL (Dark brown, brown coarse to fine SAND,**	moist
3			9		**and (-) Silt, trace medium to fine Gravel)**	
			15			
4			16		FILL (same) 4'0"	
		S-2	13		Lt br cf S, l $, t cf G	Rec = 15"
5			12		**Light brown coarse to fine SAND,**	moist
			9		**little Silt, trace coarse to fine Gravel**	
6		**S-3**	13		same, vvd	Rec = 18"
			13			moist
7			12		7'0"	
			12			
8		**S-4**	12		Lt br $ t (-), cf S	Rec = 17"
			13			wet
9			12			Liqui fiable when shook
						slightl vvd
10					**Light brown SILT trace (-), coarse to fine Sand**	
			3			
11		**S-5**	5		same, vvd	Rec = 18"
			7			wet
12			12			
13						
14					14'0"	
15					**Light brown coarse to fine SAND,**	
			2		**little Silt, trace fine Gravel**	
16		**S-6**	7		Lt br cf S, l $, t f G	Rec = 17"
			11			wet
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-7
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +166.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**1030**	**7'0"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'7"	
1		**S-1**	7		FILL (Br cf S, l (-) $, t mf G)	Rec = 18"
			5			moist
2			4			
			2			
3		**S-2**	1		FILL (same)	Rec = 10"
			2		**FILL (Brown coarse to fine SAND, little (-) Silt, trace medium to fine Gravel)**	moist
4			2			
5						
			3			
6		**S-3**	2		FILL (same)	Rec = 13"
			8			moist
7			9			
8					8'0"	
9						
10						
			2			
11		**S-4**	3		Lt br cf S, s (-) $, t f G	Rec = 19"
			5		**Light brown coarse to fine SAND, some (-) Silt, trace fine Gravel**	wet
12			7			vvd
13						
14					14'0"	
15						
			7			
16		**S-5**	10		Lt br cf S, l (-) $, t (-) f G	Rec = 18"
			12			wet
17			13			
18						
					Light brown coarse to fine SAND, little (-) Silt, trace (-) fine Gravel	
19						
20						
			4			
21		**S-6**	7		same, t mf G	Rec = 20"
			10			wet
22			12		**End of Boring @ 22'0"** 22'0"	

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-8
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +173.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			4		**Topsoil** 0'6"	
1		S-1	6		FILL (Br cf S, s (+) $, t (+) mf G)	Rec = 10"
			6			moist
2			6			
			9			
3		S-2	9		FILL (same)	Rec = 12"
			12		**FILL (Brown coarse to fine SAND, some (+)**	moist
4			18		**Silt, trace (+) medium to fine Gravel)**	
5						
			15			
6		S-3	16		FILL (same) 6'0"	Rec = 17"
			6		Lt br cf S, l $, t mf G	moist
7			7			
			13			
8		S-4	14		same	Rec = 12"
			15			moist
9			20		**Light brown coarse to fine SAND,**	
					little Silt, trace medium to fine Gravel	
10						
			15			
11		S-5	11		same	Rec = 0
			9			moist
12			10			
13						
14						
15						
			8			
16		S-6	12		same, l (+) cf G	Rec = 15"
			14			moist
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-9
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +177.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1						
			7			
2		S-1	9		FILL (Dk br cf S, l (+) $, s (+) cf G, w/debris)	Rec = 13"
			18		**FILL (Dark brown coarse to fine SAND,**	moist
3			39		**little (+) Silt, some (+) coarse to fine**	
			43		**Gravel, with debris)**	
4		S-2	42		FILL (same)	Rec = 10"
			21			moist
5			50/3"		5'0"	Auger refusal @ 6'0"
			4			Moved hole 5' east
6		S-3	4		FILL (Br cf S, s $, t mf G)	Rec = 18"
			6		**FILL (Brown coarse to fine SAND, some Silt,**	moist
7			11		**trace medium to fine Gravel)** 7'0"	
			8			
8		S-4	17		Lt br cf S, t (+) $, t mf G	Rec = 17"
			20			moist
9			20			
10						
			12			
11		S-5	13		same	Rec = 15"
			17		**Light brown coarse to fine SAND, trace (+)**	moist
12			23		**Silt, trace medium to fine Gravel**	
13						
14						
15						
			7			
16		S-6	10		same	Rec = 15"
			9			moist
17			14		17'0"	
18					**End of Boring @ 17'0"**	
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-10
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +178.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	2 6		**Topsoil** 0'8"	Rec = 10"
2			10 22		FILL (Br cf S, l (-) $, s cf G) **FILL (Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel)**	moist
3		S-2	11 50/5"		FILL (same)	Rec = 11"
4					3'6" **End of Boring @ 3'6"**	moist When augering to 5' metal grinding noise, aborted hole
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-11
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +216.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1					**FILL (Brown coarse to fine SAND,**	
			16		**little (+) Silt, some coarse to fine Gravel)**	
2		S-1	23		FILL (Br cf S, l (+) $, s cf G)	Rec = 18"
			18		2'6"	moist
3			16		Br cf S, t (+) $, l (+) cf G	
			13			
4		S-2	19		same	Rec = 15"
			21			moist
5			15			
			3			
6		S-3	55		same	Rec = 17"
			50/0"		**Brown coarse to fine SAND,**	moist
7					**trace (+) Silt, little (+) coarse to**	
					fine Gravel	
8						
						many cobbles and boulders
9						
10						
			03			
11		S-4	3		same, l $ s, cf G	Rec = 10"
			10			moist
12			46			
13						
					13'6"	Auger refusal @ 13'6"
14					**End of Boring @ 13'6"**	
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-12

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+198.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**	**NX**			**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**	**2 3/8"**			**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Light brown coarse to fine SAND,**	
			11		**trace (+) Silt, little coarse to fine Gravel)**	
2		**S-1**	50/4"		FILL (Lt br cf S, t (+) $, l cf G) 2'0"	Rec = 3"
						moist
3						
4						
		Run			**Gray Schist, intact, fresh**	Run #1
5		**#1**				2'0" - 7'0"
						Run = 60"
6						Rec = 100%
						RQD = 90%
7						
8						
9						
		Run			same	Run #2
10		**#2**				7'0" - 12'0"
						Run = 60"
11						Rec = 100%
						RQD = 100%
12					12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-13

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+191.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**				**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**				**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
			4		**Topsoil**	0'8"	
1		**S-1**	4		FILL (Dk br cf S, s (+) $, t (-) f G)		Rec = 8"
			6		**FILL (Dark brown coarse to fine SAND,**		moist
2			10		**some (+) Silt, trace (-) fine Gravel)**		
			18		FILL (same)	2'6"	
3		**S-2**	12		Lt br cf S, l (+) $, t f G		Rec = 10"
			23		**Light brown coarse to fine SAND,**		moist
4			50/3"		**little Silt, trace fine Gravel**	4'0"	
5							
					Gray Schist massive, moderately jointed		
6					**fresh**		
		Run					Run #1
7		**#1**					4'0" - 9'0"
							Run = 60"
8							Rec = 57" = 100%
							RQD = 88%
9						9'0'	
10					**End of Boring @ 9'0"**		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-14
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +176.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 26-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 26-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	11 15		**FILL (Dark brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel with debris** 1'6"	Rec = 10" moist
2			15 8		Lt br $ a, cf S, t mf G	
3		S-2	6 7		same **Light brown SILT and, coarse to fine Sand, trace medium to fine Gravel**	Rec = 14" moist
4			7 8			
5					4'6" **Brown coarse to fine SAND, trace (+) Silt, trace coarse to fine Gravel**	
6		S-3	42 50/0"		Br cf S, t (+) $, t cf G 6'0"	Rec = 6"
7					**End of Boring @ 6'0"**	moist Auger refusal @ 6'0" Probable bedrock
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG DRAFT					BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY								**SHEET NO.:** 1 of 2
Client:	Celebrity Motor Car LLC								**JOB NUMBER:** 17-121
Drilling Contractor:	General Borings Inc								**ELEVATION:** +169.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 26-Oct-18
26-Oct-18	**1230**	**9'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 26-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			17		**Surface Gravel** 0'1"	
1		S-1	12		**FILL (Dark brown coarse to fine SAND,**	Rec = 10"
			5		**some Silt, trace medium to fine Gravel)** 1'6"	moist
2			4		Rd br cf S, l (+) $, t f G	
			3			
3		S-2	3		same	Rec = 12"
			3			moist
4			4			
5						
			7			
6		S-3	7		same, lt br s (-) $	Rec = 15"
			9			moist
7			12			
			11			
8		S-4	9		same, s (-) $	Rec = 17"
			10			moist
9			12		**Light brown coarse to fine SAND,**	
					some (-) Silt, trace fine Gravel	
10						
			6			
11		S-5	9		same, l $	Rec = 17"
			11			wet
12			14			
13						
14						
15						
			5			
16		S-6	4		same	Rec = 15"
			5			wet
17			8			Layer of vvd $ like in B-6 & 7
18					18'0"	
19						
20					**Light brown coarse to fine SAND,**	
			7		**trace (+) Silt, trace medium to fine**	
21		S-7	9		**Gravel**	
			50/5"		Lt br cf S, t (+) $, t mf G	Rec = 18"
22						wet
						Running sands

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY	**SHEET NO.:** 2 of 2
Client:	Celebrity Motor Car LLC	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24					**Light brown coarse to fine SAND, trace (+) Silt, trace medium to fine Gravel**	
25						
26		**S-8**	15 8		same, l cf G	
27			15 13		27'0"	
28					**End of Boring @ 27'0"**	
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-4

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0918	*Start Water Level:*	25"	*Total Water Level Drop (in):*	2.0
1	*End Time:*	1018	*Final Water Level:*	23"	**Rate (in/hr):**	**2.0 in/hr**
Notes:						
Test No:	*Start Time:*	1025	*Start Water Level:*	25"	*Total Water Level Drop (in):*	3.0
2	*End Time:*	1125	*Final Water Level:*	22"	**Rate (in/hr):**	**3.0 in/hr**
Notes:						
Test No:	*Start Time:*	1127	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
3	*End Time:*	1227	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*	1230	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
4	*End Time:*	1330	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-5

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0906	*Start Water Level:*	30"	*Total Water Level Drop (in):*	21.5
1	*End Time:*	1006	*Final Water Level:*	8.5"	**Rate (in/hr):**	**21.5 in/hr**
Notes:						
Test No:	*Start Time:*	1010	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
2	*End Time:*	1110	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1113	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1213	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1217	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1317	*Final Water Level:*	8.5"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-8

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY	**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees	**Surface Elevation:**	+173.0

Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***		
				Test Depth:	5.5'
Water Table:	NE to 17.0'			**Test Elevation:**	+167.5
Bedrock:	NE to 17.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 17.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	**ATTEMPTED TO PRESOAK, WATER DRAINED**
Depth to Top of Remaining Water:			-	**IN LESS THAN 10 MINUTES**
Height of Remaining Water:			0"	**INFILTRATION RATE >20IN/HR**

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-9

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+177.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	9.0'
Water Table:	NE to 12.0'			**Test Elevation:**	+168.0
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	1117	*Start Water Level:*	24"	*Total Water Level Drop (in):*	21.0
1	*End Time:*	1217	*Final Water Level:*	3"	**Rate (in/hr):**	**21.0 in/hr**
Notes:						
Test No:	*Start Time:*	1218	*Start Water Level:*	24"	*Total Water Level Drop (in):*	23.0
2	*End Time:*	1318	*Final Water Level:*	1"	**Rate (in/hr):**	**23.0 in/hr**
Notes:						
Test No:	*Start Time:*	1318	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1418	*Final Water Level:*	3"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1420	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1450	*Final Water Level:*	4"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

GEOTECHNICAL REPORT

Estate Motors
Goldens Bridge New York

Prepared for:

Charisma Holding Corporation

July 2011
MEG Project No. 111299

Prepared by:
McLaren Engineering Group
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McLaren ENGINEERING GROUP

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APPENDIX

Appendix A Site Map
Appendix B Preliminary Grading Plan
Appendix C Boring Location Plan
Appendix D Boring Logs
Appendix E Soil Profiles

1. INTRODUCTION

1.1 General

McLaren Engineering Group (MEG) has developed and implemented a geotechnical investigation to evaluate site conditions for a previously developed parcel of land, herein referred to as the *project site*, located at 321 Route 22 in Goldens Bridge New York (see Site Location Map, Appendix A). This geotechnical program consisted of soil boring, rock coring, soil identification, and classification of soil stratigraphy, recommendations for use of excavated material, retaining walls, site earthwork, and foundation construction.

The exiting Estate Motors facility comprises a two-story building, housing an auto showroom and offices, and a second building, containing the vehicle service department. The site is located along a section of NYS Route 22 that parallels I-684, north of the NYS Route 138. The project site is part of a 3.3-acre parcel, owned by Charisma Holding Corporation.

1.2 Proposed Development

The proposed development of the site includes construction of a 32,000 square foot building adjacent to the existing show room, removal of the existing service department building, installation of a vehicle show canopy, and the modification of vehicle parking throughout the site. Large underground storm water retaining facilities are proposed between the new building and Route 22. This study has been based on the "Grading and Drainage Plan", dated August 01, 2009, prepared by John Meyers Consulting P.C. (see Appendix B).

1.3 Scope of Work

The Scope of the Geotechnical Investigation for the project site included the following tasks:

a) Establish a soil investigation program to include exploratory soil borings, rock coring and specifications for retrieval of soil samples.

b) Evaluate the findings of the soil investigation program to include definition of the characteristics of each significant soil stratum.

c) Evaluate geotechnical information to determine site-specific needs.

d) Perform a site-specific seismic evaluation utilizing on-site boring data, rock core data, and soil properties obtained throughout the site.

2. FIELD INVESTIGATION

MEG retained the services of Soil Testing Inc., 140 Oxford Road Oxford, CT 06478 to perform soil borings and rock cores. The work was initiated on July 6, 2011 and concluded on July 8, 2011.

Fourteen (14) borings were advanced to depths ranging between 3 feet and 29 feet. (See Boring Location Plan, Appendix C). Soil samples were extracted continuously from the surface to a depth of 12 feet and then in five (5) foot intervals. Ten-foot rock cores were taken at two locations, Borings B-3 and B-9.

Soil samples were obtained using the Standard Penetration Test (ASTM D-1586-84) using a split spoon sampler with a 2-inch O.D., 1 3/8-inch I.D. driven into the soil with a 140-pound hammer falling freely from a height of 30-inches. The SPT-N value given as blows per foot (bpf) is defined as the total number of blows required to drive the sampler from 6 to 18 inches, and this N-Value shown on the boring logs. (see Boring Logs, Appendix D).

Soil borings and rock cores were performed under the supervision of a qualified representative of MEG.

3. EXISTING CONDITIONS

3.1 Surface Conditions

The project site has two large buildings (each in excess of 20,000 square feet) and the remainder of the site is predominantly covered with asphalt roads and parking, with some landscape islands. In the southern portion of the site, south of the existing showroom building, is an asphalt parking area and a two (2) story wood structure believed to be a residential house which is not currently in use.

The site has large outcroppings of rock scattered throughout the site. There is a large change in elevation from the northern end of the site at elevation 211.8 to the southern end at elevation 173.0. On the western side of the site there is a large (greater than 30 feet high) cut face of rock, which was created by the construction of I-684.

3.2 Geology and Subsurface Conditions

The project site is located within the Hudson Highlands geologic region. Underlying bedrock is composed of metamorphic and igneous rock. This formation is predominantly composed of gneisses.

A review of the USDA Natural Resources Conservation Service, National Cooperative Soil Survey indicates that their two types of soil present on the project site. The soil

classifications within the project area are CrC Charlton –Chatfield complex and CsD Charlton –Chatfield complex. Both soil groups are characterized as hilly and rocky having slopes from 2 to 15 % slopes that are well draining.

(USDA Soil Properties)

Map Unit	Area (acres)	Soil Name(s)	Groundwater Depth (ft)	Depth to Bedrock	Hydrologic Group
Csd[1]	3.0	Charlton – Chatfield complex	8.5-15' [2]	8.5'-Greater than 20	B
CrC [1]	1.0	Charlton – Chatfield complex	8.5'-15' [2]	2' to greater than 20'	B

Source:

1. Natural Resource Conservation Center Web Soil Survey
2. Appendix D - Boring Logs

The primary subsurface strata encountered are shown on the Soil Profiles in Appendix E and are described as follows:

- Asphalt/Pavement - Most of the borings were performed on areas with paved surfaces. Approximately 2-4 inches of asphalt pavement was encountered at these locations.

- Topsoil – The surface layer in the areas not asphalt was a brown or dark brown sandy topsoil that ranges from 6 to 8 inches in depth.

- Fill - Underlying the surface layers in Borings B-5, B-11, B-12, B-14 there is a layer of fill. The material used as fill was generally a homogenous mix of sand-silt but has some traces of brick and ash in it. The SPT-N values in the fill material are good, except in Boring B-5 where the fill is most extensive (to 8 feet) and there is a layer of top soil/ at the 8-foot level.

- Sand with little silt and some gravel - Beneath the surface materials are layers of fine to medium dense brown and light brown medium to fine sand, little silt with some gravel with occasional cobbles and boulders. The sand layer varies from 3 to 20 feet thick.

- Rock stratum – Underlying the existing fill and sand layers is a Gneiss Bedrock. All but two of the borings (B-1 and B-14) were terminated in the bedrock or at refusal of on the probable bedrock surface at depths ranging from 2 to19 feet below the surface.

3.3 Summary of Boring Data

Table 1 provides a summary of the boring data, including resultant depth to bedrock, ground water elevation where obtainable, and the Rock Quality Index (RQD). The test boring locations and their corresponding logs are shown in Appendix C and Appendix D, respectively.

Table 1
Boring Data Summary

Boring Number	Surface Elevation (Approx.)	Depth to Bedrock (Fi)	Bedrock Elevation	Bedrock RQD	Comments
1	211.8	-	-		GW @ El. 196.8 (-15)*
2	211.6	5	206.6		
3	210.2	19	191.2	TOP=0.95, BOT=0.12	GW @ El. 200.2 (-10)*
4	202.1	6	196.1		
5	197.6	20.5	177.1		GW @ El. 189.1(-8.5)*
6	199.2	2	197.2		
7	189.0	4	185.0		
7B	189.1	3	186.1		
8	179.8	9.5	170.3		GW @ El. 171.3 (-8.5)*
9	180.3	3	177.3	TOP=0.42, BOT=0.76	
10	195.0	13	182.0		
11	175.5	11	164.5		
12	175.4	22	153.4		GW @ El. 164.9 (-10.5)*
13	176.0	16.5	159.5		GW @ El. 161 (-15)*
14	173.0				GW @ El.163.0 (-10)*

1. RQD = Rock Quality Index Defined as the cumulative length of core pieces longer than 10cm in a run divided by the total length of the core run.
2. GW = Observed Ground Water *(feet below Grade)
3. TOP refers to the first 60" core. BOT refers to the second 60" core.

3.4 Groundwater

Groundwater was observed between 8.5 and 15 feet below the natural ground surface. The approximate ground water table has been shown on the Soil Profile in Appendix E. The level of ground water is approximate and will vary seasonally.

inches below the floor slab and a 12-inch layer of crushed stone provided between the rock and floor slab.

4.3 Settlement

Foundations placed on the in-situ silt material and fill are expected to have minimal settlements, both long and short term. Based on the fill anticipated by the preliminary grading plan a maximum settlement of 0.5 inch is anticipated.

4.4 Lateral Design Loads

Basements of the new structures shall be designed to resist stress produced by lateral forces in accordance with Section 1610.1 of the New York State Building Code 2010 Edition, (NYSBC). The lateral loads that should be used are an active pressure of 45 pcf per foot of depth and an at rest pressure of 60 pcf per foot of depth.

4.5 Seismic Design Considerations

The material conforms to the properties that define Site Class C as determined in Section 1613.5.2, Site Classification, of the NYSBC. Accordingly, the following values should be used for the project:

Mapped Spectral Response Acceleration for Short Periods [Fig. 1615(1)]	S_S = 0.313g
Mapped Spectral Response Acceleration for 1-Second Period [Fig. 1615 (2)]	S_1 = 0.068g
Site Coefficient [Table 1615.1.2(1)]	F_a = 1.6
Site Coefficient [Table 1615.1.2(2)]	F_v = 2.40
Max. Considered Earthquake Spectral Response for Short Periods [Eq. 16-38]	S_{MS} = 0.485g
Max. Considered Earthquake Spectral Response for 1-Second Period [Eq. 16-39]	S_{M1} = 0.164g
Design Spectral Response Acceleration for Short Periods [Eq. 16-40]	S_{DS} = 0.32g
Design Spectral Response Acceleration for 1-Second Period [Eq. 16-41]	S_{D1} = 0.109g

A retail or similar facility is anticipated to be Seismic Use Group II (Table 1604.5). Based on the above values and New York State Building Code 2010, all structures shall be designed to Seismic Design Category "B" (Table 1613.5.6 (1) and 1613.5.6 (2)). The Seismic Use Group and Seismic Design Category and values for design must be confirmed by the project's structural engineer.

5. CONSTRUCTION RECOMMENDATIONS

5.1 Site Preparation

The initial site preparation should commence with the removal and stock piling of topsoil if present. An approximate depth of 6 inches should be anticipated, although depths may vary.

The Contractor shall be responsible at all times for conducting all earthwork operations in a safe and prudent manner such that all workmen and the general public will be protected from hazards. The Contractor shall observe all applicable Local, State and/or Federal requirements.

5.2 Building Subgrade

As stated in Section 4.1, in the area of Boring B-11, approximately 5 feet of material should be removed. This is near the area of the septic system soil that will need to be removed as described below. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

Boring B-6 revealed that a considerable amount of rock would need to be removed to place the northeastern portion of the proposed building. Boring B-6 has an elevation of rock at approximately 198.0 and the proposed basement floor is Elevation 183.9. This will require a removal of up to approximately 14 feet of rock. This depth of rock removal is reduced in the westerly direction to 2 feet at Boring B-7 and 2 feet at Boring B-10. The depth of rock removal does not account for any over excavation for the floor slab, stone base or footings.

Foundation drains will be required; as it is likely that ground water will be present and travel along the surface of the rock. The drains shall be a minimum of four (4) inches, surrounded by 12 inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.3 Rock Removal

In the areas of rock removal, the contractor should use line drilling and pneumatic hammer for removal. It is our understanding that while blasting is permissible in the Town of Lewisboro, the Owner did not propose during the Site Plan Approval process. All rock removed shall be performed without damage to the existing buildings scheduled to remain.

5.4 Re-use of Excavated Material

The excavated material may be used as fill, provided any organic materials, or large rocks greater than six (6) inches are removed. The rock that is removed for the building slab can be crushed and reused on site.

Recommendations for reuse of the excavated material are summarized as follows:

a) Prior to placement of the fill, the existing original ground surface should be stripped to a depth of 1 foot to remove all topsoil and the upper zone of subsoil. These soils can be used in landscaping or for nonstructural fill.

b) The fill should be placed in maximum eight (8)-inch thick lifts and compacted to at least 95% of the maximum dry density, determined using ASTM D-1557, beneath and within 3 feet outside of building areas, and to at least 92% of maximum dry density beneath parking areas and roadways. All earthwork activities shall be observed and tested by qualified geotechnical engineering.

5.5 Retaining Walls and Earth Supporting Structures

For the design and construction of new retaining walls or other earth supporting structures on site, MEG recommends that the following parameters be applied if supporting on-site soils:

Total Unit Weight = 120 pcf
Angle of Internal Friction = 35^0

Retaining wall shall be provided with foundation drains. The drains shall be a minimum of four (4) inches, surrounded by twelve (12) inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.6 Removal of Existing Building

The wooden two-story building on the southern end of the site will be demolished. The basement slab, if it exists, shall be broken and all subsurface utilities within the building pad area should be removed. The excavated areas shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.7 Removal of Existing Septic Field

The proposed building site is going to be placed on an existing septic field. Soils in this area should be removed to a depth of 3.5 feet below grade including the septic tanks and all piping. The ground surface shall be inspected by the geotechnical engineer and proof rolled. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.8 Placement of Fill for the Proposed Building

On the southern end of the proposed building the topography of the site slopes off and the area of the new buildings floor slab will be above the existing grade. In this area the foundation must be placed on virgin soil and the area below the foundation must be backfilled with select material and compacted.

5.9 Borrow Material

All fill soil should consist of predominately sandy soil and gravel with no more than 15% passing the 200 sieve, and have no particle greater than 6 inches, containing no deleterious material or environmental contaminants. Borrow material must undergo environmental testing to satisfy the Commercial soil standard per the NYSDEC Part 375 regulation.

5.10 Compaction

Fill sections and embankments shall be constructed of acceptable material and deposited in successive lifts with a loose thickness of each lift not to be more than nine (9) inches before compaction. The soil shall be compacted to the maximum dry density obtained in the lab (ASTM D-1557) as follows:

LOCATION	PERCENT OF MAXIMUM LABORATORY DENSITY ASTM D698
Subgrade & Fill Below Structures and Pavement	95
Subgrade & Fill in All other Areas	92

Contractor must maintain moisture content of not less than 2 percent below and not more than 4 percent above optimum moisture content of fill materials to attain required compaction density. Installation of fill should be performed under the supervision of a qualified Geotechnical Engineer.

5.11 Excavation & Temporary Soil Support

Where space limitations may preclude performance of open trenching operations, it may be necessary to perform the required excavations via earth support provisions such as sheeting and bracing. Areas which are not restricted by space constraints, may, in all likelihood, be performed within open excavations in conformance with applicable local, state and federal OSHA safety regulations.

5.12 Dewatering

It is anticipated that groundwater will be encountered at depths ranging from 8.5 to 11 feet below the existing ground surface. Dewatering may be necessary in excavations below these depths. The Contractor is responsible for means and methods for this operation.

This report has been respectfully submitted in accordance with the request of Charisma Holding Corporation and is, to the best of our knowledge, accurate and complete. Any questions regarding its content should be addressed to: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, New York 10994.

Respectfully submitted,

The Office of
McLaren Engineering Group
M.G. McLAREN, P.C.

Malcolm G. McLaren, P.E., SECB
President

MGMcL/SLG/LAD/rjk

cc: File 110472

Appendix A
Site Location Map



LOCATION MAP

COPYRIGHT © 2011 , McLAREN ENGINEERING GROUP

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP
M. G. McLAREN, P.C.
Tel. (845) 353-6400 Fax. (845) 353-6509
www.mgmclaren.com

PROJECT
ESTATE MOTORS
GOLDENS BRIDGE NEW YORK

SHEET TITLE
SITE LOCATION MAP
BUILDINGS 1 & 2

PROJECT NO.	111299
SCALE	NO SCALE
DATE	02-08-11
DRAWN BY	DT
CHECKED BY	LAD
DRAWING NO.	1
	1 OF 1 SHTS

FILE NAME: Q:\Cadd111\111299\SITE LOCATION MAP.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:20pm LAST SAVE: Wed, 20 Jul 2011 - 5:50pm BY: jmagycwe

3 2 1 0 0.5 1

Appendix B
Proposed Site Plan

APPROVED by Planning Board Resolution No._____, Dated _____.

_____ Date
Owner
CHARISMA HOLDING CORPORATION
ROUTE 22/P.O. BOX 711
GOLDEN'S BRIDGE, NY 10526

_____ Date
Planning Board Chairman
JEROME KERNER, AIA
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

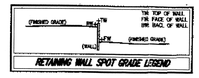
_____ Date
Planning Administrator
AIMEE HODGES
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

_____ Date
Town Engineer's Certification
Reviewed for compliance with the Planning Board Resolution dated_____.
RYAN COYNE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
TOWN CONSULTING ENGINEER

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CHARISMA HOLDING CORPORATION, AS PREPARED BY BUNNEY ASSOCIATES, DATED APRIL 12, 2010.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC UTILITY INFORMATION WAS TAKEN FROM AS BUILTS ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983 AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. ALL EXISTING STRUCTURES TO REMAIN SHALL HAVE THEIR TOPS AND GRATES ADJUSTED TO PROPOSED FINISHED GRADE.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ROOF DRAIN LEADERS AND FOUNDATION DRAINS FOR CONNECTION INTO THE NEW STORMWATER MANAGEMENT SYSTEM.
5. THE TOWN OF LEWISBORO ENGINEER SHALL INSPECT ALL WORK ASSOCIATED WITH THE PROPOSED DRAINAGE SYSTEM AND DETERMINE THE SYSTEM SUBSTANTIALLY COMPLETE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX, REPAIR OR REPLACE ANY AND ALL ITEMS NECESSARY IN THE EVENT IT IS DETERMINED BY THE TOWN ENGINEER THAT THE DRAINAGE SYSTEM IS NOT COMPLETED PER TOWN STANDARDS.
6. RETAINING WALL DESIGN BY OTHERS.



RETAINING WALL SPOT GRADE LEGEND

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- +328 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING PAVEMENT EDGE OR CURB LINE
- X X EXISTING FENCE
- EXISTING TREE LINE
- 220 EXISTING INDEX CONTOUR
- 172 EXISTING MINOR CONTOUR
- 296 APPROXIMATE EXISTING GIS INDEX CONTOUR
- 186 APPROXIMATE EXISTING GIS MINOR CONTOUR
- EXISTING TREE
- EXISTING ROCK LEDGE
- WELL 24" CMP EXISTING WELL
- EXISTING STORM LINE
- 30" CMP EXISTING STORM LINE TO BE REMOVED
- 202 PROPOSED FINISHED GRADE
- + 416.50 PROPOSED SPOT GRADE
- DMH PROPOSED DRAINAGE MANHOLE
- CI & DI PROPOSED DRAIN INLET, TYPE CI & DI
- WQS PROPOSED WATER QUALITY STRUCTURE
- PROPOSED RETAINING WALL (NOTE 6)
- 15" HDPE PROPOSED STORM LINE
- 3.70% FINISHED GRADE SLOPE AND DIRECTION
- DDI DOUBLE DRAIN INLET
- TRENCH DRAIN

NO.	REVISION	DATE
1.	SUBMISSION TO BUILDING DEPARTMENT	10/19/2009
2.	PLANNING BOARD SUBMISSION	12/21/2009
3.	RESPOND TO TOWN COMMENTS	04/01/2010
4.	SUBMISSION TO WESTCHESTER COUNTY HEALTH DEPARTMENT	08/10/2010
5.	REVISED PER HEALTH DEPARTMENT COMMENTS	09/17/2010
6.	RESPOND TO TOWN COMMENTS	12/23/2010

Preliminary Not Final Preliminary Not Final

APPLICANT: ESTATE MOTORS, ROUTE 22, P.O. BOX 711, GOLDEN'S BRIDGE, NY 10526

ATTORNEY: DELBELLO DONNELLAN WEINGARTEN WISE & WIEDERKEHR, LLP, ONE NORTH LEXINGTON AVENUE, WHITE PLAINS, NEW YORK 10601

ARCHITECT: SULLIVAN ARCHITECTURE, P.C., 31 MAMARONECK AVENUE, WHITE PLAINS, NEW YORK 10601

JMC
JOHN MEYER CONSULTING, PC
120 Bedford Road
Armonk, NY 10504
voice 914.273.5225 · fax 914.273.2102
www.johnmeyerconsulting.com

GRADING & DRAINAGE PLAN

ESTATE MOTORS MERCEDES-BENZ
321 ROUTE 22
TOWN OF LEWISBORO, NY

RECEIVED
JAN 05 2011
SULLIVAN ARCHITECTURE, PC

DRAWN: SS APPROVED: RR
SCALE: 1" = 30'
DATE: 08/10/2009
PROJECT No: 9065
DWG: 9065-GE TAB: GRADING SCR: 1-GRAD
DRAWING No: SP-6

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GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

NOT FOR CONSTRUCTION

Appendix C
Boring Location Plan

Plot on Site Plans (Grading)

NORTH

ALIGNMENT P1

ALIGNMENT P2

B-1 B-2 B-3 B-4 B-5 B-6 B-7b B-8 B-9 B-10 B-11 B-12 B-13 B-14

0+00 1+00 2+00 3+00 4+00 5+00 6+00 6+50 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+

79' 58' 12' 5' 56' 5' 11' 2' 31+00 32+00 237' 22' 63' 138' 382' 22' 10' 65' 83' 82'

PROPOSED CANOPY

PROPOSED BLDG.

STATE MOTORS MERCEDES-BENZ SHOWROOM BUILDING

B-13 16.5' -15.5'(GW)

B-8 9.5' -8.5'(GW)

B-12 22' -10.5(GW)

B-14 -10'(GW)

FF 181-182

LEVEL 20'x2'

LEGEND

B-1 ⊕ DENOTES BORING LOCATION PLAN

30' 0 30' 60' FEET

SCALE: 1" = 30'

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NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied logic, inc.
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-4400 F. (845) 353-4509 www.mgmclaren.com

PROJECT

ESTATES MOTORS

GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING LOCATION PLAN

PROJECT NO.	111299.00
SCALE	AS NOTED
DATE	07-05-11
DRAWN BY	DT
CHECKED BY	LAD

DRAWING NO.

B-1

____ OF ____ SHTS

FILE NAME: d:\Codd111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:18pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmcgwire

Appendix D
Boring Logs

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-1
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/6/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/6/11
AT 15 FT AFTER 0 HOURS	HAMMER WT.: 140# / BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	10"	2'0"	9 / 15		dry compact	0'3"	TOPSOIL; F GRAVEL and brn C-F sand,tr silt
							20 / 11				
		2	ss	24"	20"	4'0"	24 / 35		dry dense		brn F-C SAND,sm silt F gravel
							44 / 41				
5		3	ss	11"	11"	4'11"	51 / 100/5"		v dense		brn/gry FM SAND & SILT,lit F gravel,C sand,tr cobble
											SAME
		4	ss	24"	24"	8'0"	42 / 37		moist/dry		lt brn FM SAND,tr C sand,F gravel,silt
							23 / 23		dense		
		5	ss	24"	20"	10'0"	13 / 22		moist		brn VF F SAND,sm silt,lit M-C sand,tr F gravel
10							22 / 22		compact		
		6	ss	24"	18"	12'0"	24 / 27		moist		brn F-C SAND and F gravel
							24 / 24		compact		
15											
		7	ss	24"	10"	17'0"	9 / 24		wet		brn F-C SAND & F GRAVEL,lit silt,tr cobble
							20 / 51		compact	17'0"	
											E.O.B. 17'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-1

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE M = MEDIUM F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-2
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	2 / 44		dry	0'3"	ASPHALT; bm FM SAND,sm silt,F gravel,lit C sand,tr cobble,roots
							53 / 65		dense		
		2	ss	5"	5"	2'5"	50/5"		dense		brn FM SAND,sm silt,F gravel,tr C sand
									dry		bm FM SAND,sm silt,F gravel,lit C sand,tr weathered rock
5		3	ss	3"	3"	4'3"	50/3"		dense	5'0"	Auger refusal
											E.O.B. 5'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-2

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-3
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 16 FT AFTER 0 HOURS AT __FT AFTER __HOURS		DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	14"	12"	1'2"	3 / 8		dry	0'4"	ASPHALT; brn F SAND & SILT,lit MC sand,F gravel,tr roots
							50/2"		dense		sm cobbles & sm boulders 1'6" - 2'6"
		2	ss	24"	18"	4'0"	18 / 22		dry		brn/lt brn VF F SAND & SILT,tr MC sand,F gravel,roots
							21 / 27		dense		
5		3	ss	24"	20"	6'0"	52 / 35		dry		SAME
							44 / 37		dense		brn/lt brn VF F SAND,sm silt,lit M-C sand,F gravel
		4	ss	24"	18"	8'0"	41 / 65		dry		lt brn FM SAND,sm C sand,F gravel,lit silt,tr weathered cobble
							52 / 51		v dense		
		5	ss	7"	7"	8'7"	47 / 50/1"		dense		brn F-C SAND & F GRAVEL,sm silt
10											
		6	ss	24"	18"	12'0"	37 / 33		mst/v mst		gry/lt brn F-C SAND & SILT,sm F gravel
							40 / 43		dense		
15											
		7	ss	24"	10"	17'0"	21 / 39		wet		brn VF F SAND & SILT,tr M-C sand,F gravel,cobble
							35 / 47		dense		
										18'6"	Auger refusal
											(set 3" FW casing at 19'0")
20		1	c	60"	60"	24'0"	RQD = 95%	1.5			BEDROCK
								2.5			
								3			
								3			
								3.5			
25		2	c	60"	29"	29'0"	RQD = 10%	3			highly fractured BEDROCK
								4			
								4			
								4.5			
								6		29'0"	
30											E.O.B. 29'0"
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-3

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE M = MEDIUM F = FINE

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-4
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	3 / 4		moist	0'6"	TOPSOIL; brn SILT & VF F SAND,tr M-C sand,F gravel,roots
							5 / 3		loose	2'0"	
		2	ss	24"	17"	4'0"	5 / 11		wet/dry		brn FM SAND & SILT,sm C sand,F gravel,tr cobble,roots
							88 / 51		v dense		
5		3	ss	17"	17"	5'5"	56 / 70				brn FM SAND & SILT,sm C sand,F gravel,tr cobble
							100/5"		v dense	6'0"	Auger refusal
											E.O.B. 6'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-4

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-5
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 3 ¾" / 1 3/8" HAMMER WT.: 140# BIT HAMMER FALL: 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	5 / 11		dry	0'2"	ASPHALT; drk brn FM SAND & SILT,lit C sand,F gravel,tr boulder
							15 / 18		compact		
		2	ss	22"	15"	3'10"	19 / 37		dry		brn F-C SAND & F GRAVEL,cobble,boulder,tr silt,building rubble (fill)
							28 / 100/4"		dense		
5		3	ss	24"	18"	6'0"	23 / 28		dry		SAME; and silt
							18 / 17		compact		SAME; and silt
		4	ss	24"	15"	8'0"	16 / 30		dry		SAME; and silt (fill)
							27 / 19		compact		
		5	ss	24"	17"	10'0"	15 / 4		moist/wet	9'0"	TOPSOIL (drk brn organic SILT)
10							3 / 6		soft	10'0"	brn SILT & F SAND,tr M-C sand,F gravel,clay,roots
		6	ss	24"	11"	12'0"	17 / 15		moist		brn C-F SAND,sm F gravel,tr silt
							18 / 37		compact		
									moist		
15		7	ss	6"	6"	15'6"	50/6"		dense	15'6"	brn F-C SAND,sm F gravel,tr silt
											fractured BEDROCK, rock frags
									moist		
20		8	ss	9"	9"	20'9"	50 / 50/3"		dense	20'9"	SAME
											E.O.B. 20'9"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-5

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-6
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE HSA / SS	DATE START 7/8/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D. 3 ¾" / 1 3/8"	DATE FINISH 7/8/11
	HAMMER WT. 140# BIT	SURFACE ELEV.
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	10"	1'6"	11 / 10 / 50/6"		dry/moist dense	0'2" 1'6" 2'0"	ASPHALT; brn FM SAND & SILT,sm F gravel,lit C sand,tr ash, cinders (fill) Auger refusal weathered BEDROCK or BOULDERS
5											E.O.B. 2'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-6

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-7, B-7A
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 3 ¾" / 1 3/8" HAMMER WT. 140# / BIT HAMMER FALL 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	16"	2'0"	18 / 16		dry	0'2"	TOPSOIL and blasted ROCK;brn FM SAND,sm silt,C sand,F gravel,
							24 / 14		compact		tr brick,ash,building rubble (fill)
		2	ss	22"	2"	3'10"	5 / 5		dry	3'0"	BOULDERS
							9 / 50/4"		loose	4'0"	Auger refusal
5											
											E.O.B. 4'0"
											(5' offset)
0											B-7A
										3'0"	Auger refusal
5											E.O.B. 3'0"
10											
15											
20											
25											
30											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-7, B-7A

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-8
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT 8'6" FT AFTER 0 HOURS AT __FT AFTER __HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6	6 - 12	12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	15"	2'0"		6			dry	0'6"	ASPHALT & PROCESS GRAVEL; brn FM SAND & SILT,sm
							7	4			loose		F gravel,lit C sand,tr brick,glass (fill)
		2	ss	24"	14"	4'0"	3	4			dry		SAME
							5	12			loose		
5		3	ss	24"	20"	6'0"	5	8			dry/moist	5'6"	SAME
							9	8			loose		brn F-C SAND,F gravel,tr silt
		4	ss	24"	14"	8'0"	43	42			moist		lt gry FM SAND,sm silt,lit C sand,F gravel,tr cobble
							31	12			dense	8'10"	lt gry FM SAND,lit C sand,F gravel,tr silt
		5	ss	10"	6"	8'10"	24	50/4"			wet/dense	9'6"	fractured ROCK Auger refusal
10													
													E.O.B. 9'6"
15													
20													
25													
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. **HOLE NO. B-8**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-9
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

OFFSET
DATE START 7/8/11
DATE FINISH 7/8/11
SURFACE ELEV.
GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 - 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	12"	2"	2'0"			dry	0'6"	2" ASPHALT/4" process STONE and WOOD (2x4's)
							7 14		loose	1'0"	concrete slab
		2	ss	3"	3"	2'3"	50/3"		dense	2'0"	concrete rubble/cobbles
		1	c	60"	52"	8'0"	RQD = 42%	2.0			bm FM SAND,sm silt,lit C sand,F gravel,tr weathered rock frags
5								2.5		3'0"	Auger refusal
								3.0			(set 3" FW casing at 3'0")
								3.5			BEDROCK
								5.0			
		2	c	60"	60"	13'0"	RQD = 75%	2.0			
10								3.0			
								3.5			
								3.5			
								3.0		13'0"	
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-9

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-10
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/8/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/8/11
AT none FT AFTER 0 HOURS	HAMMER WT.: 140# BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	21"	10"	1'9"	19 / 9		dry compact	0'2"	TOPSOIL; drk brn FM SAND,sm silt,F gravel,lit C sand,tr roots, cobble,boulders (fill)
							13 / 75/3"				BOULDERS 2' - 4' (fill)
										4'0"	
5		2	ss	24"	12"	6'0"	10 / 9		dry compact		brn/gry F SAND,lit M sand,F gravel,tr roots
							20 / 36				
		3	ss	24"	12"	8'0"	46 / 42		dry dense		brn/gry FM SAND,sm C sand,F gravel,tr silt,cobble
							41 / 28				
		4	ss	24"	20"	10'0"	43 / 32		dry dense		lt brn/brn F-C SAND,sm F gravel,lit silt
10							40 / 48				
		5	ss	10"	10"	10'10"	21 / 100/4"		v dense	11'0"	brn FM SAND,sm silt,F gravel,lit C sand,tr weathered rock frags
										13'0"	fractured BEDROCK Auger refusal
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____ CASING THEN _____ CASING TO _____FT. **HOLE NO. B-10**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-11
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING: HSA; SAMPLER: SS; CORE BAR:	OFFSET
	TYPE: HSA; SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾"; 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	14"	2'0"	10		dry	0'2"	1" ASPHALT/1" proc stone;drk brn F SAND & SILT,tr M sand,F
							6 5		loose		gravel,roots
		2	ss	24"	16"	4'0"	5 3		dry		brn/lt brn VF F SAND,sm silt,tr M sand,F gravel,roots
							4 4		v loose		
5		3	ss	24"	22"	6'0"	5 8		dry		lt brn/tan FM SAND,sm silt,tr C sand
							11 10		loose		
		4	ss	24"	18"	8'0"	11 13		dry		lt brn VF F SAND,sm silt,tr M sand
							13 14		compact		
		5	ss	24"	17"	10'0"	97 40		dry		brn FM SAND,sm C sand,F gravel,cobble,lit silt,tr
10							33		dense	10'0"	weathered rock frags
		6	ss	10"	10"	10'5"	100/5"		v dense	11'0"	fractured ROCK Auger refusal
15											E.O.B. 11'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-11

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-12
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 10'6" FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	17"	2'0"	20	23			dry compact		brn/brk brn F-C SAND & SILT,sm F gravel,tr ash,roots (fill)
							15	14					
		2	ss	24"	16"	4'0"	15	12			dry compact		brn/drk brn SILT & F SAND,tr M-C sand,F gravel,roots
							14	13				4'0"	
5		3	ss	24"	17"	6'0"	9	10			dry loose		brn/lt brn F SAND,sm silt,tr M sand,clay,root
							8	8					
		4	ss	24"	20"	8'0"	8	13			dry compact		lt gry/lt brn FM SAND,sm silt,lilt C sand,F gravel
							21	21					
		5	ss	24"	16"	10'0"	11	13			moist compact		gry F SAND & SILT,tr M sand
10							15	19					
		6	ss	24"	16"	12'0"	17	19			wet compact		SAME
							21	28					brn F-C SAND,sm F gravel,tr weathered BOULDER
15													
		7	ss	24"	15"	17'0"	18	12			dry/moist compact		brn C-F SAND and F GRAVEL,tr silt
							20	14					
													some cobble at 18'
20		8	ss	7"	6"	20'7"	88	50/1"			v moist dense	20'6"	brn/gry F-C SAND & F GRAVEL,weathered rock frags
												22'0"	weathered ROCK Auger refusal
25													E.O.B. 22'0"
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-12

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-13
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	TYPE: CASING HSA, SAMPLER SS, CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT 16'6" FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	6 / 11		dry	0'2"	ASPHALT;brn F-C SAND & SILT,sm F gravel,tr brick,ash,root
							49 / 17		dense		
		2	ss	24"	12"	4'0"	6 / 9		dry		drk brn F SAND & SILT,lit M-C sand,F gravel,tr brick,ash,roots (fill)
							23 / 14		compact		
5		3	ss	24"	12"	6'0"	8 / 9		dry		SAME
							9 / 9		loose	6'0"	
		4	ss	24"	19"	8'0"	13 / 18		dry		brn FM SAND,sm silt,lit C sand,F gravel
							17 / 20		compact		gry VF F SAND,sm silt,tr F gravel
		5	ss	24"	24"	10'0"	24 / 20		dry		gry VF F SAND,sm silt,tr M-C sand,F gravel
10							19 / 23		compact		
		6	ss	24"	16"	12'0"	27 / 19		dry		brn FM SAND,lit C sand,tr F gravel
							16 / 20		compact		
15											
		7	ss	24"	16"	17'0"	16 / 29		moist/wet		lt brn F-C SAND & SILT,sm M sand,lit C sand,tr F gravel
							20 / 15		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-13

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-14
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	20"	2'0"	5 / 13		dry	0'1"	ASPHALT;brk brn FM SAND & SILT,sm F gravel,tr brick,ash
							17 / 6		compact		
		2	ss	24"	22"	4'0"	12 / 17		dry		drk brn FM SAND,sm C sand,F gravel,silt,tr roots,cobble
							33 / 56		dense		
5		3	ss	24"	18"	6'0"	29 / 11		dry		drk brn/brn F SAND & SILT,lit F gravel,tr M-C sand,ash,brick (fill)
							7 / 5		loose	6'0"	
		4	ss	24"	22"	8'0"	1 / 5		dry		brn FM SAND & SILT,lit F gravel,tr C sand,roots
							6 / 6		loose		brn F-C SAND,lit F gravel,silt
		5	ss	24"	16"	10'0"	8 / 7		dry		SAME
10							12 / 13		compact		
		6	ss	24"	18"	12'0"	20 / 19		moist		lt brn/tan F SAND,sm silt,tr M sand,F gravel
							17 / 19		compact		
15											
		7	ss	24"	18"	17'0"	9 / 10		dry		lt brn/tan FM SAND,lit C sand,F gravel
							11 / 17		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-14

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

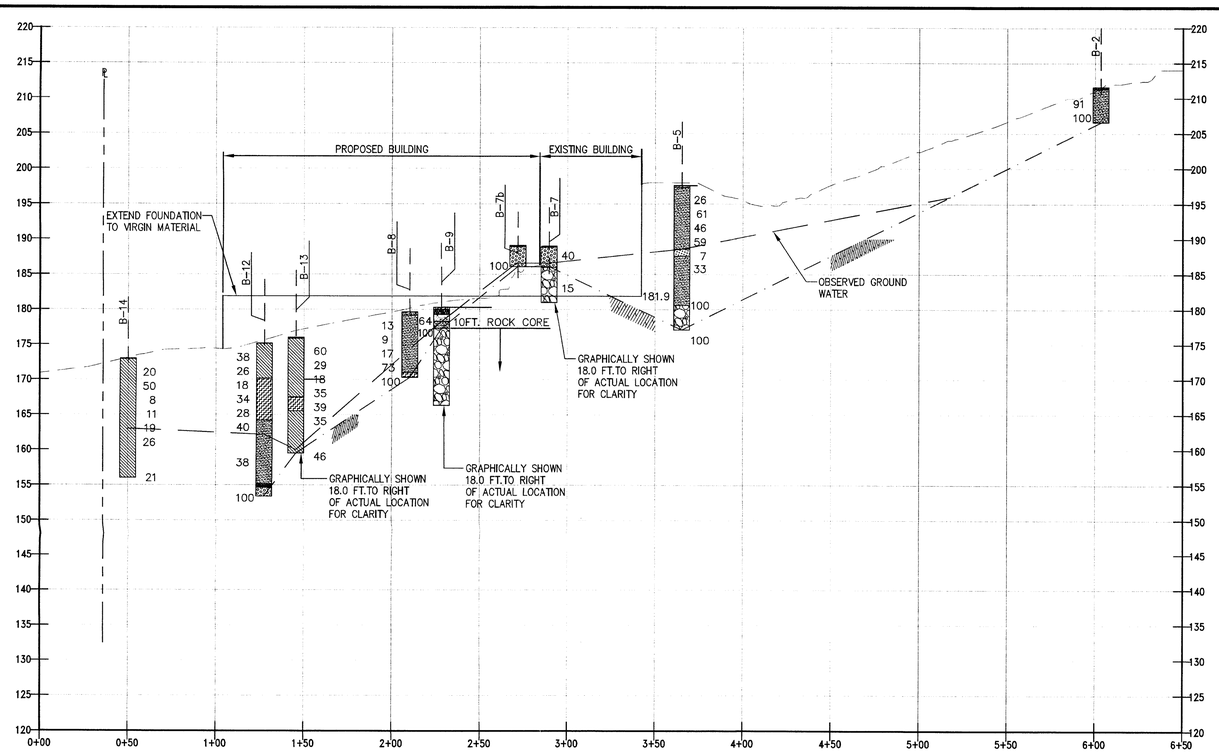
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

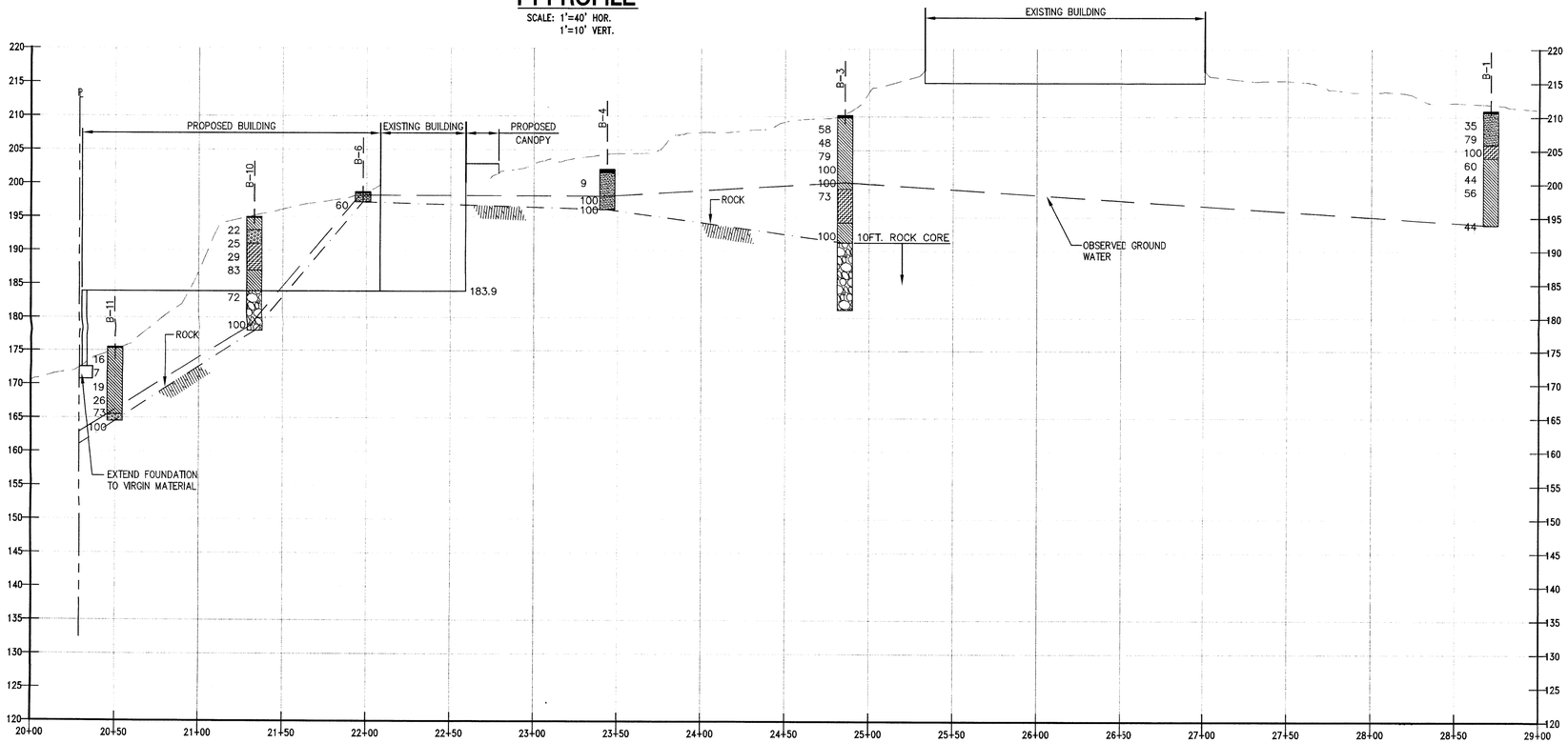
C = COARSE
M = MEDIUM
F = FINE

Appendix E
Soil Profiles



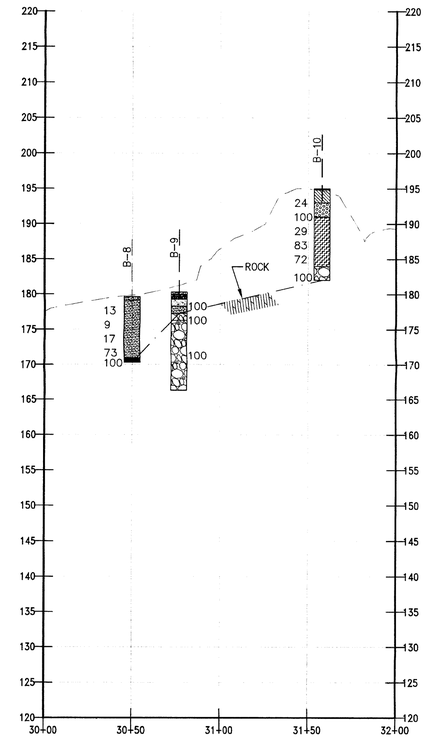
P1 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P2 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P3 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.

NOTE: *GROUNDWATER RUNS PARALLEL TO TOP OF ROCK

LEGEND

- BRN/TAN F-C SAND WITH SOME SILT AND GRAVEL
- F-C SAND SOME SILT AND GRAVEL
- PROCESSED STONE & WOOD
- F-C BRN/GRAY SAND/SILT
- ASPHALT/TOPSOIL
- TOPSOIL
- EL. ELEVATION
- ROCK/STONE/BOULDERS
- BPF BLOWS PER FOOT (SHOWN BESIDE SOIL PROFILES)
- CONCRETE
- GROUND WATER
- TOP OF BEDROCK
- GROUND SURFACE ELEVATION
- BEDROCK

*NOTE: THE GROUNDWATER ELEVATION SHOWN IS APPROXIMATE AND IS SUBJECT TO SEASONAL VARIATIONS AND IS SHOWN AT 1 FOOT IN AREAS WHERE GROUNDWATER WAS DETECTED AT ROCK. IT IS SHOWN 1 FOOT HIGHER THAN THE BEDROCK ELEVATION FOR ILLUSTRATIVE PURPOSE.

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied research
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-6400 F. (845) 353-6509 www.mgmclaren.com

PROJECT

ESTATES MOTORS
GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING PROFILES

PROJECT NO.	111299
SCALE	AS NOTED
DATE	07-05-2011
DRAWN BY	DB
CHECKED BY	CB
DRAWING NO.	B-2
	2 OF 2 SHTS

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FILE NAME: G:\cadd\111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:22pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmayowe

APPENDIX L

SQUARE FOOTAGE ANALYSIS PREPARED BY SULLIVAN ARCHITECTURE, DATED OCTOBER 22, 2018

ARCHITECTURE
SITE PLANNING
URBAN DESIGN

Mercedes-Benz of Goldens Bridge

Square Footage Analysis

October 22, 2018

Service Building

- Existing Building: 18,200 sq. ft.
- Proposed Building: 20,900 sq. ft. (14.8% increase)

	Existing	Proposed	
Space	**Sq. Ft. / % of Building**	**Sq. Ft. / % of Building**	**% Increase of Sq. Ft.**
Service Area (Work Stalls)	9,000 sq. ft. 50%	12,740 sq. ft. 61%	+ 42%
Office / Service Technicians	1,700 sq. ft. 9%	140 sq. ft. 0.7%	- 92%
Employee Lounge / Lockers	255 sq. ft. 1.4%	250 sq. ft. 1.2%	0%

Note: The remainder of the buildings square footage is un-occupiable general storage, parts storage, mechanical and circulation spaces.

31 Mamaroneck Avenue
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(914) 761-6006 Fax: (914) 761-4919
E-mail: jpsfaia@sullivanarch.com
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ARCHITECTURE
SITE PLANNING
URBAN DESIGN

Mercedes-Benz of Goldens Bridge

Square Footage Analysis

October 22, 2018

Showroom Building

- Existing Building: 12,400 sq. ft.
- Proposed Building: 50,900 sq. ft. (310.5% increase)

	Existing	Proposed	
Space	**Sq. Ft. / % of Building**	**Sq. Ft. / % of Building**	**% Increase of Sq. Ft.**
Service Area (Work Stalls)	5,662 sq. ft. 46%	13,636 sq. ft. 27%	+ 141%
Office / Conference / Sales	2,095 sq. ft. 17%	5,460 sq. ft. 11%	+ 160%
Employee Breakroom	123 sq. ft. 1%	492 sq. ft. 1%	+ 300%
Showroom / Lobby / Customer	2,576 sq. ft. 21%	15,200 sq. ft. 30%	+ 490%
Car Delivery	609 sq. ft. 5%	1,800 sq. ft. 3.5%	+ 195%
Service Advisors	0 sq. ft. 0%	1,000 sq. ft. 2%	N/A

Note: The remainder of the buildings square footage is un-occupiable general storage, parts storage, internal car drop-off, mechanical and circulation spaces.

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E-mail: jpsfaia@sullivanarch.com
www.sullivanarch.com

WATER USAGE RECORDS

Mercedes-Benz of Goldens Bridge
Town of Lewisboro, NY
JMC Project 16124

MONTH	SERVICE BUILDING (WELL #2) GALLONS PER DAY	SHOWROOM BUILDING (WELL #3) GALLONS PER DAY	TOTAL TREATED FLOW
JANUARY (2017)	181	107	**288**
FEBRUARY (2017)	154	134	**288**
MARCH (2017)	168	97	**265**
APRIL (2017)	210	238	**448**
MAY (2017)	500	205	**705**
JUNE (2017)	300	263	**563**
JULY (2017)	197	180	**377**
AUGUST (2017)	200	165	**365**
SEPTEMBER (2017)	223	144	**367**
OCTOBER (2017)	371	171	**542**
NOVEMBER (2017)	260	164	**424**
DECEMBER (2017)	206	169	**375**
JANUARY (2018)	277	174	**451**
FEBRUARY (2018)	279	203	**482**
MARCH (2018)	284	168	**452**
APRIL (2018)	743	188	**931**
MAY (2018)	468	296	**764**
JUNE (2018)	399	386	**785**
AVERAGE	301	192	**493**

WATER USAGE RECORDS (MODIFIED)

Mercedes-Benz of Goldens Bridge
Town of Lewisboro, NY
JMC Project 16124

MONTH	SERVICE BUILDING (WELL #2) GALLONS PER DAY	SHOWROOM BUILDING (WELL #3) GALLONS PER DAY	TOTAL TREATED FLOW
JANUARY (2017)	181	107	**288**
FEBRUARY (2017)	154	134	**288**
MARCH (2017)	168	97	**265**
APRIL (2017)	210	238	**448**
MAY (2017)*	215	205	**420**
JUNE (2017)	300	263	**563**
JULY (2017)	197	180	**377**
AUGUST (2017)	200	165	**365**
SEPTEMBER (2017)	223	144	**367**
OCTOBER (2017)	371	171	**542**
NOVEMBER (2017)	260	164	**424**
DECEMBER (2017)	206	169	**375**
JANUARY (2018)	277	174	**451**
FEBRUARY (2018)	279	203	**482**
MARCH (2018)	284	168	**452**
APRIL (2018)*	366	188	**554**
MAY (2018)*	289	279	**568**
JUNE (2018)*	344	310	**654**
AVERAGE	251	187	**438**

*Higher than normal water usage was observed during a short period of time due to a running fixture. The running fixture was eventually found and repaired. The water usage data quickly returned to normal averages afterward. The spikes in daily recorded water usage have been eliminated from the analysis to level the data and demonstrate a more accurate/actual usage.

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	1/1/2017	2/4/2017	☐Surface ☑Ground ☐GWUDI ☐Blog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid							
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
1	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
2	#2 & #3	320				0.9	1.0					
3	#2 & #3	320				0.8	1.0					
4	#2 & #3	420				1.2	1.1					
5	#2 & #3	310				0.9	1.0					
6	#2 & #3	320				1.1	0.9					
7	#2 & #3	500				0.9	1.0					
8	#2 & #3	CLOSED				CLOSED	CLOSED					
9	#2 & #3	220				1.2	1.0					
10	#2 & #3	240				0.9	1.0					
11	#2 & #3	260				1.0	1.0					
12	#2 & #3	340				0.9	0.9					
13	#2 & #3	220				1.0	1.0					
14	#2 & #3	720				1.2	0.9					
15	#2 & #3	CLOSED				CLOSED	CLOSED					
16	#2 & #3	140				1.2	1.0					
17	#2 & #3	430				0.9	1.0					
18	#2 & #3	310				0.9	1.0					
19	#2 & #3	310				0.9	0.9					
20	#2 & #3	330				1.0	1.0					
21	#2 & #3	500				1.2	0.9					
22	#2 & #3	CLOSED				CLOSED	CLOSED					
23	#2 & #3	230				0.9	1.0					
24	#2 & #3	250				0.9	1.0					
25	#2 & #3	380				0.9	1.1					
26	#2 & #3	420				0.9	1.0					
27	#2 & #3	420				0.9	1.0					
28	#2 & #3	510				0.9	0.9					
29	#2 & #3	CLOSED				CLOSED	CLOSED					
30	#2 & #3	150				0.9	0.9					
31	#2 & #3	340				0.9	1.0					
Total		8,910				25.3	25.5					
AVG.		287				0.98	0.98					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 2/4/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Well#2 Service 1st Fl. Mens' Rm.	1/12/17	1	☐Yes ☑No	☐Yes ☑No	0.9
Well#3 Showroom 1st Fl. Mens' Rm.	1/12/17	1	☐Yes ☑No	☐Yes ☑No	0.9
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jan-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
2	200	120	320	0.9	1.0
3	200	120	320	0.8	1.0
4	200	220	420	1.2	1.1
5	200	110	310	0.9	1.0
6	300	20	320	1.1	0.9
7	400	100	500	0.9	1.0
8	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9	100	120	220	1.2	1.0
10	100	140	240	0.9	1.0
11	100	160	260	1.0	1.0
12	100	240	340	0.9	0.9
13	100	120	220	1.0	1.0
14	500	220	720	1.2	0.9
15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
16	100	40	140	1.2	1.0
17	200	230	430	0.9	0.9
18	200	110	310	0.9	1.0
19	200	110	310	0.9	1.0
20	200	130	330	1.0	1.0
21	300	200	500	1.2	0.9
22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
23	200	30	230	0.9	1.0
24	200	50	250	0.9	1.0
25	200	180	380	0.9	1.1
26	300	120	420	0.9	1.0
27	300	120	420	0.9	1.0
28	400	110	510	0.9	0.9
29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
30	100	50	150	0.9	0.9
31	200	140	340	0.9	1.0
Total	5,600	3,310	8,910	25.3	25.5
Avg	181	107	287	0.94	0.94

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/12/17	10:15
Location Code:	APC	Received by:	B	01/12/17	15:52
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBX21612
Phoenix ID: BX21612

Project ID: ESTATE MOTORS WELL #2
Client ID: 1ST FLOOR MEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04
Total Coliforms	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
January 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/12/17	10:00
Location Code:	APC	Received by:	B	01/12/17	15:52
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBX21611
Phoenix ID: BX21611

Project ID: ESTATE MOTORS WELL #3
Client ID: 1ST FL MEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04
Total Coliforms	Absent	0	1	/100 mls		0		01/12/17 18:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
January 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	2/1/2017	3/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	240				0.9	1.0					
2	#2 & #3	270				0.9	0.9					
3	#2 & #3	340				0.9	1.1					
4	#2 & #3	410				0.8	1.0					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	550				1.0	1.0					
7	#2 & #3	320				1.0	0.9					
8	#2 & #3	160				0.9	0.9					
9	#2 & #3	210				1.0	0.9					
10	#2 & #3	200				0.8	0.9					
11	#2 & #3	250				1.2	1.0					
12	#2 & #3	CLOSED				1.0	CLOSED					
13	#2 & #3	250				0.9	1.0					
14	#2 & #3	350				1.0	1.0					
15	#2 & #3	390				0.9	1.1					
16	#2 & #3	400			1	0.8	0.9					
17	#2 & #3	400				0.8	1.1					
18	#2 & #3	210				0.8	1.0					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	270				0.9	1.0					
21	#2 & #3	490				0.9	0.9					
22	#2 & #3	310				0.9	1.0					
23	#2 & #3	350				0.9	1.0					
24	#2 & #3	480				0.8	1.0					
25	#2 & #3	380				1.0	1.1					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	220				0.8	1.1					
28	#2 & #3	490				0.9	1.0					
29	#2 & #3											
30	#2 & #3											
31	#2 & #3											
Total		7,940			1	22.7	23.8					
AVG.		284			1	0.91	0.99					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 3/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Feb-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	140	240	0.9	1.0
2	100	170	270	0.9	0.9
3	200	140	340	0.9	1.1
4	300	110	410	0.8	1.0
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	200	350	550	1.0	1.0
7	200	120	320	1.0	0.9
8	100	60	160	0.9	0.9
9	100	110	210	1.0	0.9
10	100	100	200	0.8	0.9
11	100	150	250	1.2	1.0
12	100	CLOSED	CLOSED	1.0	CLOSED
13	100	150	250	0.9	1.0
14	200	150	350	1.0	1.0
15	100	290	390	0.9	1.1
16	200	200	400	0.8	0.9
17	200	200	400	0.8	1.1
18	100	110	210	0.8	1.0
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	100	170	270	0.9	1.0
21	300	190	490	0.9	0.9
22	200	110	310	0.9	1.0
23	200	150	350	0.9	1.0
24	300	180	480	0.8	1.0
25	200	180	380	1.0	1.1
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	100	120	220	0.8	1.1
28	400	90	490	0.9	1.0
29					
30					
31					
Total	4,300	3,740	7,940	22.7	23.8
Avg	154	134	284	0.91	0.99

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	3/1/2017	4/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	410				1.3	1.1					
2	#2 & #3	410				1.4	1.0					
3	#2 & #3	350				1.2	0.9					
4	#2 & #3	230				1.2	0.9					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	120				0.9	1.0					
7	#2 & #3	410				1.0	1.0					
8	#2 & #3	300				1.2	1.1					
9	#2 & #3	400				1.2	1.1					
10	#2 & #3	160				1.0	1.0					
11	#2 & #3	190				1.0	0.9					
12	#2 & #3	CLOSED				CLOSED	CLOSED					
13	#2 & #3	250				1.2	1.0					
14	#2 & #3	270				1.0	1.0					
15	#2 & #3	230				1.0	1.0					
16	#2 & #3	60				1.2	1.1					
17	#2 & #3	130				1.0	1.1					
18	#2 & #3	350				1.2	1.1					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	320				1.0	1.1					
21	#2 & #3	340				1.2	1.0					
22	#2 & #3	500				1.0	1.1					
23	#2 & #3	500				1.0	1.1					
24	#2 & #3	340				1.2	1.1					
25	#2 & #3	360				1.0	1.0					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	270				1.2	1.1					
28	#2 & #3	380				1.0	1.0					
29	#2 & #3	320				1.0	0.9					
30	#2 & #3	230				1.0	1.0					
31	#2 & #3	390				1.2	1.0					
Total		8,220				29.8	27.7					
AVG.		265				1.10	1.03					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: John P. Muro Date: 4/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Mar-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	110	410	1.3	1.1
2	300	110	410	1.4	1.0
3	200	150	350	1.2	0.9
4	100	130	230	1.2	0.9
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	100	20	120	0.9	1.0
7	200	210	410	1.0	1.0
8	200	100	300	1.2	1.1
9	300	100	400	1.2	1.1
10	100	60	160	1.0	1.0
11	100	90	190	1.0	0.9
12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
13	200	50	250	1.2	1.0
14	200	70	270	1.0	1.0
15	200	30	230	1.0	1.0
16	0	60	60	1.2	1.1
17	100	30	130	1.0	1.1
18	200	150	350	1.2	1.1
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	200	120	320	1.0	1.1
21	200	140	340	1.2	1.0
22	200	300	500	1.0	1.1
23	300	200	500	1.0	1.1
24	100	240	340	1.2	1.1
25	300	60	360	1.0	1.0
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	200	70	270	1.2	1.1
28	300	80	380	1.0	1.0
29	200	120	320	1.0	0.9
30	100	130	230	1.0	1.0
31	300	90	390	1.2	1.0
Total	5,200	3,020	8,220	29.8	27.7
Avg	168	97	265	1.10	1.03

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	4/1/2017	5/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	300				1.0	1.1					
2	#2 & #3	CLOSED				CLOSED	CLOSED					
3	#2 & #3	560				1.1	1.0					
4	#2 & #3	500				1.0	1.1					
5	#2 & #3	440				1.2	1.1					
6	#2 & #3	640				1.0	1.1					
7	#2 & #3	330				1.0	1.1					
8	#2 & #3	560				1.1	1.0					
9	#2 & #3	CLOSED				CLOSED	CLOSED					
10	#2 & #3	700				1.0	1.0					
11	#2 & #3	330				1.1	1.0					
12	#2 & #3	480				1.1	1.2					
13	#2 & #3	1400				0.9	1.2					
14	#2 & #3	520				1.0	1.2					
15	#2 & #3	610				1.0	1.0					
16	#2 & #3	CLOSED				CLOSED	CLOSED					
17	#2 & #3	520				1.1	1.0					
18	#2 & #3	500				1.0	1.0					
19	#2 & #3	500				1.0	1.0					
20	#2 & #3	330				1.0	1.1					
21	#2 & #3	520				1.2	1.0					
22	#2 & #3	421				1.0	1.1					
23	#2 & #3	CLOSED				CLOSED	CLOSED					
24	#2 & #3	480				1.2	1.0					
25	#2 & #3	520				1.1	1.0					
26	#2 & #3	510				1.0	1.1					
27	#2 & #3	680				1.0	1.0					
28	#2 & #3	600				1.0	1.0					
29	#2 & #3	500				1.0	1.1					
30	#2 & #3	CLOSED				CLOSED	CLOSED					
31	#2 & #3											
Total		13,451				26.1	26.5					
AVG.		448				1.04	1.06					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 5/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Well #2 Service Breakroom	4/12/17	1	☐Yes ☑No	☐Yes ☑No	1.1
Well #3 Showroom Kitchen	4/12/17	1	☐Yes ☑No	☐Yes ☑No	1.2
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

- Actual number of samples is fewer than required
- Did not collect/analyze repeat sample
- Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

- For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).
- For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).
- The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/12/17	11:30
Location Code:	APC	Received by:	LB	04/12/17	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBY03413
Phoenix ID: BY03413

Project ID: ESTATE MOTORS WELL #2
Client ID: BREAKROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/12/17 19:50	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/12/17 19:50	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
April 14, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 14, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/12/17	11:30
Location Code:	APC	Received by:	SW	04/12/17	16:42
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBY03414
Phoenix ID: BY03414

Project ID: ESTATE MOTORS WELL #3
Client ID: KITCHEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/12/17 20:00	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/12/17 20:00	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
April 14, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Apr-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	200	100	300	1.0	1.1
2	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
3	300	260	560	1.1	1.0
4	300	200	500	1.0	1.1
5	200	240	440	1.2	1.1
6	300	340	640	1.0	1.1
7	200	130	330	1.0	1.1
8	300	260	560	1.1	1.0
9	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
10	200	500	700	1.0	1.0
11	200	130	330	1.1	1.0
12	200	280	480	1.1	1.2
13	200	1200	1400	0.9	1.2
14	200	320	520	1.0	1.2
15	200	410	610	1.0	1.0
16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
17	300	220	520	1.1	1.0
18	300	200	500	1.0	1.0
19	300	200	500	1.0	1.0
20	200	130	330	1.0	1.1
21	300	220	520	1.2	1.0
22	200	221	421	1.0	1.1
23	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
24	300	180	480	1.2	1.0
25	300	220	520	1.1	1.0
26	200	310	510	1.0	1.1
27	300	380	680	1.0	1.0
28	300	300	600	1.0	1.0
29	300	200	500	1.0	1.1
30	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
Total	6,300	7,151	13,451	26.1	26.5
Avg	210	238	448	1.04	1.06

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Estate Motors (Combined)	5/1/2017	6/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	780				1.0	1.1					
2	#2 & #3	910				1.0	1.1					
3	#2 & #3	740				1.2	1.0					
4	#2 & #3	450				1.0	1.1					
5	#2 & #3	250				1.0	1.1					
6	#2 & #3	410				1.2	1.0					
7	#2 & #3	CLOSED				CLOSED	CLOSED					
8	#2 & #3	530				1.5	1.0					
9	#2 & #3	710				1.2	1.1					
10	#2 & #3	890				1.0	1.1					
11	#2 & #3	400				1.0	1.1					
12	#2 & #3	390				1.0	1.1					
13	#2 & #3	250				1.2	1.0					
14	#2 & #3	CLOSED				CLOSED	CLOSED					
15	#2 & #3	500				1.2	1.1					
16	#2 & #3	400				1.0	1.1					
17	#2 & #3	400				1.2	1.1					
18	#2 & #3	470				1.2	1.0					
19	#2 & #3	300				1.0	1.1					
20	#2 & #3	900				1.2	1.0					
21	#2 & #3	CLOSED				CLOSED	CLOSED					
22	#2 & #3	700				1.2	1.1					
23	#2 & #3	320			1.5	1.0	1.1					
24	#2 & #3	380				1.0	1.0					
25	#2 & #3	410				1.1	1.5					
26	#2 & #3	430				1.0	1.1					
27	#2 & #3	3420				1.1	1.0					
28	#2 & #3	CLOSED				CLOSED	CLOSED					
29	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
30	#2 & #3	3830				1.0	1.1					
31	#2 & #3	2670				1.2	1.2					
Total		21,840			1.5	28.7	28.3					
AVG.		705				1.10	1.09					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: John P. Muro Date: 6/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

May-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	480	780	1.0	1.1
2	500	410	910	1.0	1.1
3	200	540	740	1.2	1.0
4	100	350	450	1.0	1.1
5	100	150	250	1.0	1.1
6	200	210	410	1.2	1.0
7	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
8	300	230	530	1.5	1.0
9	400	310	710	1.2	1.1
10	400	490	890	1.0	1.1
11	200	200	400	1.0	1.1
12	200	190	390	1.0	1.1
13	100	150	250	1.2	1.0
14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
15	200	300	500	1.2	1.1
16	100	300	400	1.0	1.1
17	200	200	400	1.2	1.1
18	300	170	470	1.2	1.0
19	100	200	300	1.0	1.1
20	600	300	900	1.2	1.0
21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
22	600	100	700	1.2	1.1
23	200	120	320	1.0	1.1
24	200	180	380	1.0	1.0
25	200	210	410	1.1	1.5
26	300	130	430	1.0	1.1
27	3300	120	3420	1.1	1.0
28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
29	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
30	3700	130	3830	1.0	1.1
31	2500	170	2670	1.2	1.2
Total	15,500	6,340	21,840	28.7	28.3
Avg	500	205	705	1.10	1.09

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	6/1/2017	7/5/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	760				1.1	1.2					
2	#2 & #3	1100				1.1	1.2					
3	#2 & #3	1400				1.0	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	1500				1.2	1.2					
6	#2 & #3	900				1.0	1.9					
7	#2 & #3	1330				1.2	1.9					
8	#2 & #3	410				1.0	1.7					
9	#2 & #3	480				1.0	1.8					
10	#2 & #3	550				1.2	1.8					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	670				1.2	1.4					
13	#2 & #3	790				1.0	0.9					
14	#2 & #3	590				1.0	0.8					
15	#2 & #3	620				1.2	0.8					
16	#2 & #3	370				1.2	0.9					
17	#2 & #3	500				1.0	0.9					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	260				1.2	1.5					
20	#2 & #3	370				1.0	1.2					
21	#2 & #3	510				1.0	1.2					
22	#2 & #3	450				1.2	1.4					
23	#2 & #3	480				1.2	1.2					
24	#2 & #3	510				1.0	1.3					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	270				1.0	1.3					
27	#2 & #3	330				1.1	1.9					
28	#2 & #3	440				1.1	1.9					
29	#2 & #3	660				1.1	1.4					
30	#2 & #3	650				1.1	1.3					
31	#2 & #3											
Total		16,900				28.4	35.2					
AVG.		563				1.09	1.35					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 7/5/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jun-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	500	260	760	1.1	1.2
2	800	300	1100	1.1	1.2
3	1100	300	1400	1.0	1.2
4			CLOSED		
5	1100	400	1500	1.2	1.2
6	500	400	900	1.0	1.9
7	200	1130	1330	1.2	1.9
8	300	110	410	1.0	1.7
9	300	180	480	1.0	1.8
10	300	250	550	1.2	1.8
11			CLOSED		
12	200	470	670	1.2	1.4
13	300	490	790	1.0	0.9
14	200	390	590	1.0	0.8
15	200	420	620	1.2	0.8
16	200	170	370	1.2	0.9
17	300	200	500	1.0	0.7
18			CLOSED		
19	100	160	260	1.2	1.5
20	100	270	370	1.0	1.2
21	300	210	510	1.0	1.2
22	300	150	450	1.2	1.4
23	300	180	480	1.2	1.2
24	200	310	510	1.0	1.3
25			CLOSED		
26	100	170	270	1.0	1.3
27	200	130	330	1.1	1.9
28	300	140	440	1.1	1.9
29	300	360	660	1.1	1.4
30	300	350	650	1.1	1.3
Total	9,000	7,900	16,900	28.4	35.0
Avg	300	263	563	1.09	1.35

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	7/1/2017	8/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	480				1.0	1.4					
2	#2 & #3											
3	#2 & #3	770				1.2	1.3					
4	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
5	#2 & #3	450				1.0	1.6					
6	#2 & #3	550				1.0	1.6					
7	#2 & #3	360				1.0	1.3					
8	#2 & #3	320				1.0	1.5					
9	#2 & #3											
10	#2 & #3	450				1.0	1.2					
11	#2 & #3	450				1.2	1.5					
12	#2 & #3	460				1.2	1.2					
13	#2 & #3	370				1.0	1.2					
14	#2 & #3	310				1.2	1.6					
15	#2 & #3	290				1.0	1.5					
16	#2 & #3											
17	#2 & #3	450				1.2	1.2					
18	#2 & #3	400				1.2	1.0					
19	#2 & #3	570				1.0	1.0					
20	#2 & #3	360				1.0	1.5					
21	#2 & #3	520				1.2	1.2					
22	#2 & #3	380				1.2	1.1					
23	#2 & #3											
24	#2 & #3	810				1.0	0.8					
25	#2 & #3	500				1.2	1.2					
26	#2 & #3	480				1.1	1.1					
27	#2 & #3	440				1.0	1.2					
28	#2 & #3	520				1.0	1.2					
29	#2 & #3	270				1.0	1.4					
30	#2 & #3											
31	#2 & #3	710				1.0	1.3					
Total		11,670				26.9	32.1					
AVG.		376				1.08	1.28					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 8/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service Well #2 Handwash Sink	7/11/17	1	☐Yes ☑No	☐Yes ☑No	1.2
Showroom Well #2 Men's Room	7/11/17	1	☐Yes ☑No	☐Yes ☑No	1.5
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jul-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	180	480	1.0	1.4
2					
3	700	70	770	1.2	1.3
4	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
5	200	250	450	1.0	1.6
6	200	350	550	1.0	1.6
7	200	160	360	1.0	1.3
8	100	220	320	1.0	1.5
9					
10	200	250	450	1.0	1.2
11	200	250	450	1.2	1.5
12	200	260	460	1.2	1.2
13	200	170	370	1.0	1.2
14	200	110	310	1.2	1.6
15	100	190	290	1.0	1.5
16					
17	200	250	450	1.2	1.2
18	300	100	400	1.2	1.0
19	200	370	570	1.0	1.0
20	200	160	360	1.0	1.5
21	400	120	520	1.2	1.2
22	300	80	380	1.2	1.1
23					
24	300	510	810	1.0	0.8
25	200	300	500	1.2	1.2
26	200	280	480	1.1	1.1
27	100	340	440	1.0	1.2
28	200	320	520	1.0	1.2
29	200	70	270	1.0	1.4
30					
31	500	210	710	1.0	1.3
Total	6,100	5,570	11,670	26.9	32.1
Avg	197	180	376	1.08	1.28

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	07/11/17	13:00
Location Code:	APC	Received by:	LK	07/11/17	17:18
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBY56865
Phoenix ID: BY56865

Project ID: ESTATE MOTORS SERVICE WELL #2
Client ID: HANDWASH SINK

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
July 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

July 13, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	07/11/17	12:45
Location Code:	APC	Received by:	LK	07/11/17	17:18
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	APC				

Laboratory Data

SDG ID: GBY56866
Phoenix ID: BY56866

Project ID: ESTATE MOTORS SHOWROOM WELL #3
Client ID: MENS ROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		07/11/17 19:00	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
July 13, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	8/1/2017	9/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	380				1.0	1.5					
2	#2 & #3	400				1.0	1.4					
3	#2 & #3	170				1.0	1.5					
4	#2 & #3	610				1.2	1.4					
5	#2 & #3	540				1.0	1.2					
6	#2 & #3											
7	#2 & #3	350				1.2	1.5					
8	#2 & #3	500				1.0	1.4					
9	#2 & #3	460				1.2	1.3					
10	#2 & #3	500				1.2	1.3					
11	#2 & #3	410				1.2	1.4					
12	#2 & #3	350				1.0	1.2					
13	#2 & #3											
14	#2 & #3	360				1.0	1.4					
15	#2 & #3	580				1.2	1.2					
16	#2 & #3	510				1.0	1.2					
17	#2 & #3	320				1.0	1.3					
18	#2 & #3	420				1.2	1.2					
19	#2 & #3	210				1.0	1.4					
20	#2 & #3											
21	#2 & #3	460				1.0	1.2					
22	#2 & #3	500				1.0	1.2					
23	#2 & #3	530				1.0	1.3					
24	#2 & #3	790				1.0	1.2					
25	#2 & #3	400				1.0	1.1					
26	#2 & #3	340				1.0	1.2					
27	#2 & #3											
28	#2 & #3	200				1.2	1.3					
29	#2 & #3	490				1.0	1.1					
30	#2 & #3	230				1.2	1.3					
31	#2 & #3	290				0.9	1.3					
Total		11,300				28.7	35.0					
AVG.		365				1.06	1.30					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 9/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Aug-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	280	380	1.0	1.5
2	100	300	400	1.0	1.4
3	100	70	170	1.0	1.5
4	300	310	610	1.2	1.4
5	300	240	540	1.0	1.2
6					
7	300	50	350	1.2	1.5
8	300	200	500	1.0	1.4
9	200	260	460	1.2	1.3
10	200	300	500	1.2	1.3
11	200	210	410	1.2	1.4
12	200	150	350	1.0	1.2
13					
14	300	60	360	1.0	1.4
15	400	180	580	1.2	1.2
16	400	110	510	1.0	1.2
17	100	220	320	1.0	1.3
18	300	120	420	1.2	1.2
19	100	110	210	1.0	1.4
20					
21	300	160	460	1.0	1.2
22	300	200	500	1.0	1.2
23	200	330	530	1.0	1.3
24	400	390	790	1.0	1.2
25	300	100	400	1.0	1.1
26	100	240	340	1.0	1.2
27					
28	200	0	200	1.2	1.3
29	300	190	490	1.0	1.1
30	100	130	230	1.2	1.3
31	100	190	290	0.9	1.3
Total	6,200	5,100	11,300	28.7	35.0
Avg	200	165	365	1.06	1.30

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	9/1/2017	10/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	220				1.1	1.2					
2	#2 & #3	250				1.1	1.1					
3	#2 & #3	CLOSED										
4	#2 & #3	480				1.0	1.2					
5	#2 & #3	340				1.0	1.1					
6	#2 & #3	570				1.0	1.3					
7	#2 & #3	420				1.0	1.2					
8	#2 & #3	200				1.0	1.2					
9	#2 & #3	330				1.0	1.1					
10	#2 & #3	CLOSED										
11	#2 & #3	300				0.9	1.2					
12	#2 & #3	300				0.9	1.1					
13	#2 & #3	300				1.0	1.1					
14	#2 & #3	520				1.4	1.1					
15	#2 & #3	380				1.1	1.3					
16	#2 & #3	550				0.9	1.1					
17	#2 & #3	CLOSED										
18	#2 & #3	270				1.0	1.2					
19	#2 & #3	460				1.0	1.1					
20	#2 & #3	380				1.0	1.3					
21	#2 & #3	420				1.0	1.2					
22	#2 & #3	610				1.1	1.3					
23	#2 & #3	430				1.1	1.1					
24	#2 & #3	CLOSED										
25	#2 & #3	720				1.0	1.1					
26	#2 & #3	520				1.0	1.3					
27	#2 & #3	610				1.1	1.1					
28	#2 & #3	510				1.0	1.1					
29	#2 & #3	500				1.1	1.2					
30	#2 & #3	440				1.1	1.3					
31	#2 & #3											
Total		11,030				26.9	30.6					
AVG.		368				1.03	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 10/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Sep-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	120	220	1.1	1.2
2	100	150	250	1.1	1.1
3			CLOSED		
4	300	180	480	1.0	1.2
5	300	40	340	1.0	1.1
6	400	170	570	1.0	1.3
7	300	120	420	1.0	1.2
8	100	100	200	1.0	1.2
9	100	230	330	1.0	1.1
10			CLOSED		
11	100	200	300	0.9	1.2
12	200	100	300	0.9	1.1
13	200	100	300	1.0	1.1
14	200	320	520	1.4	1.1
15	200	180	380	1.1	1.3
16	400	150	550	0.9	1.1
17			CLOSED		
18	100	170	270	1.0	1.2
19	200	260	460	1.0	1.1
20	200	180	380	1.0	1.3
21	300	120	420	1.0	1.2
22	400	210	610	1.1	1.3
23	200	230	430	1.1	1.1
24			CLOSED		
25	500	220	720	1.0	1.1
26	400	120	520	1.0	1.3
27	400	210	610	1.1	1.1
28	300	210	510	1.0	1.1
29	400	100	500	1.1	1.2
30	300	140	440	1.1	1.3
31					
Total	6,700	4,330	11,030	26.9	30.6
Avg	223	144	368	1.03	1.18

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	10/1/2017	11/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Rpg treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (1,000 gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED										
2	#2 & #3	1020				1.2	1.1					
3	#2 & #3	500				1.2	1.4					
4	#2 & #3	400				1.1	1.3					
5	#2 & #3	510				0.9	1.3					
6	#2 & #3	670				1.3	1.1					
7	#2 & #3	510				1.3	1.1					
8	#2 & #3	CLOSED										
9	#2 & #3	460				1.4	1.2					
10	#2 & #3	810				1.0	1.1					
11	#2 & #3	640				1.1	1.2					
12	#2 & #3	340				1.0	1.3					
13	#2 & #3	950				1.0	1.2					
14	#2 & #3	880				1.1	1.3					
15	#2 & #3	CLOSED										
16	#2 & #3	800				0.9	1.2					
17	#2 & #3	690				0.8	1.1					
18	#2 & #3	840				1.0	1.2					
19	#2 & #3	400				1.0	1.1					
20	#2 & #3	340				1.0	1.1					
21	#2 & #3	660				1.0	1.1					
22	#2 & #3	CLOSED										
23	#2 & #3	600				1.0	1.1					
24	#2 & #3	900				1.4	1.1					
25	#2 & #3	730				1.2	1.1					
26	#2 & #3	1090				1.1	1.4					
27	#2 & #3	510				1.0	1.1					
28	#2 & #3	680				1.0	1.2					
29	#2 & #3	CLOSED										
30	#2 & #3	450				0.9	1.1					
31	#2 & #3	420				1.0	1.3					
Total		16,800				27.9	30.8					
AVG.		542				1.07	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY) Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Date: 11/6/2017 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service Well #2 1st Fl. Ladies Rm.	10/17/17	1	☐Yes ☑No	☐Yes ☑No	0.8
Showroom Well #3 Kitchen	10/17/17	1	☐Yes ☑No	☐Yes ☑No	1.1
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below.

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 19, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	10/17/17	11:30
Location Code:	APC	Received by:	LB	10/17/17	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ22540
Phoenix ID: BZ22540

Project ID: MERCEDES BENZ OF GB SERVICE WELL #2
Client ID: 1ST FL LADIES

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
October 19, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

October 19, 2017

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	10/17/17	11:45
Location Code:	APC	Received by:	LB	10/17/17	16:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ22539
Phoenix ID: BZ22539

Project ID: MERCEDES BENZ OF GB SHOW WELL #3
Client ID: KITCHEN

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		10/17/17 18:55	CB/CB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
October 19, 2017
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Oct-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1			CLOSED		
2	900	120	1020	1.2	1.1
3	300	200	500	1.2	1.4
4	200	200	400	1.1	1.3
5	400	110	510	0.9	1.3
6	400	270	670	1.3	1.1
7	300	210	510	1.3	1.1
8			CLOSED		
9	300	160	460	1.4	1.2
10	500	310	810	1.0	1.1
11	300	340	640	1.1	1.2
12	200	140	340	1.0	1.3
13	800	150	950	1.0	1.2
14	800	80	880	1.1	1.3
15			CLOSED		
16	600	200	800	0.9	1.2
17	500	190	690	0.8	1.1
18	600	240	840	1.0	1.2
19	300	100	400	1.0	1.1
20	200	140	340	1.0	1.1
21	300	360	660	1.0	1.1
22			CLOSED		
23	400	200	600	1.0	1.1
24	700	200	900	1.4	1.1
25	500	230	730	1.2	1.1
26	900	190	1090	1.1	1.4
27	300	210	510	1.0	1.1
28	400	280	680	1.0	1.2
29			CLOSED		
30	200	250	450	0.9	1.1
31	200	220	420	1.0	1.3
Total	11,500	5,300	16,800	27.9	30.8
Avg	371	171	542	1.07	1.18

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	11/1/2017	12/6/2017	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	700				1.0	1.2					
2	#2 & #3	300				1.2	1.2					
3	#2 & #3	410				1.1	1.2					
4	#2 & #3	430				1.1	1.2					
5	#2 & #3	CLOSED				CLOSED	CLOSED					
6	#2 & #3	530				1.1	1.1					
7	#2 & #3	1080				1.1	1.1					
8	#2 & #3	800				1.2	1.3					
9	#2 & #3	440				1.2	1.1					
10	#2 & #3	340				1.3	1.1					
11	#2 & #3	210				1.1	1.1					
12	#2 & #3	CLOSED				CLOSED	CLOSED					
13	#2 & #3	680				1.1	1.2					
14	#2 & #3	710				1.1	1.0					
15	#2 & #3	520				1.0	1.3					
16	#2 & #3	660				1.2	1.1					
17	#2 & #3	600				1.2	1.1					
18	#2 & #3	230				1.1	1.1					
19	#2 & #3	CLOSED				CLOSED	CLOSED					
20	#2 & #3	380				1.1	1.1					
21	#2 & #3	700				1.1	1.1					
22	#2 & #3	410				1.2	1.1					
23	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
24	#2 & #3	270				1.0	1.1					
25	#2 & #3	270				1.1	1.1					
26	#2 & #3	CLOSED				CLOSED	CLOSED					
27	#2 & #3	220				1.2	1.3					
28	#2 & #3	530			1	1.2	1.1					
29	#2 & #3	500				1.2	1.0					
30	#2 & #3	800				1.1	1.1					
31	#2 & #3											
Total		12,720			1	28.3	28.4					
AVG.		424				1.13	1.14					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc - John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 12/6/2017 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes" check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Nov-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	500	200	700	1.0	1.2
2	200	100	300	1.2	1.2
3	300	110	410	1.1	1.2
4	200	230	430	1.1	1.2
5	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
6	400	130	530	1.1	1.1
7	900	180	1080	1.1	1.1
8	500	300	800	1.2	1.3
9	200	240	440	1.2	1.1
10	200	140	340	1.3	1.1
11	100	110	210	1.1	1.1
12	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
13	500	180	680	1.1	1.2
14	400	310	710	1.1	1.0
15	300	220	520	1.0	1.3
16	300	360	660	1.2	1.1
17	300	300	600	1.2	1.1
18	200	30	230	1.1	1.1
19	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
20	300	80	380	1.1	1.1
21	400	300	700	1.1	1.1
22	200	210	410	1.2	1.1
23	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
24	200	70	270	1.0	1.1
25	200	70	270	1.1	1.1
26	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
27	100	120	220	1.2	1.3
28	300	230	530	1.2	1.1
29	300	200	500	1.2	1.0
30	300	500	800	1.1	1.1
Total	7,800	4,920	12,720	28.3	28.4
Avg	260	164	424	1.13	1.14

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	12/1/2017	1/6/2018	☐Surface ☑Ground ☐SWUDI ☐Slog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	350				1.1	1.3					
2	#2 & #3	550				1.0	1.1					
3	#2 & #3	CLOSED				CLOSED	CLOSED					
4	#2 & #3	400				1.3	1.2					
5	#2 & #3	500				1.3	1.3					
6	#2 & #3	400				1.2	1.2					
7	#2 & #3	500				1.1	1.1					
8	#2 & #3	550				1.2	1.1					
9	#2 & #3	410				1.2	1.3					
10	#2 & #3	CLOSED				CLOSED	CLOSED					
11	#2 & #3	510				1.2	1.1					
12	#2 & #3	410				1.1	1.2					
13	#2 & #3	850				1.0	1.3					
14	#2 & #3	420				1.0	1.3					
15	#2 & #3	320				1.1	1.2					
16	#2 & #3	470				1.0	1.1					
17	#2 & #3	CLOSED				CLOSED	CLOSED					
18	#2 & #3	660				1.0	1.0					
19	#2 & #3	620				1.1	1.1					
20	#2 & #3	400				1.0	1.1					
21	#2 & #3	360				1.0	1.1					
22	#2 & #3	400				1.0	1.2					
23	#2 & #3	430				1.1	1.2					
24	#2 & #3	CLOSED				CLOSED	CLOSED					
25	#2 & #3	HOLIDAY				HOLIDAY	HOLIDAY					
26	#2 & #3	510				1.0	1.1					
27	#2 & #3	590				1.1	1.2					
28	#2 & #3	420				1.1	1.2					
29	#2 & #3	400				1.1	1.1					
30	#2 & #3	220				1.0	1.1					
31	#2 & #3	CLOSED				CLOSED	CLOSED					
Total		11,650				27.3	29.2					
AVG.		376				1.09	1.17					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 1/6/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Dec-17					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	50	350	1.1	1.3
2	500	50	550	1.0	1.1
3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
4	200	200	400	1.3	1.2
5	300	200	500	1.3	1.3
6	100	300	400	1.2	1.2
7	100	400	500	1.1	1.1
8	300	250	550	1.2	1.1
9	200	210	410	1.2	1.3
10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
11	400	110	510	1.2	1.1
12	300	110	410	1.1	1.2
13	300	550	850	1.0	1.3
14	200	220	420	1.0	1.3
15	200	120	320	1.1	1.2
16	200	270	470	1.0	1.1
17	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
18	400	260	660	1.0	1.0
19	300	320	620	1.1	1.1
20	100	300	400	1.0	1.1
21	200	160	360	1.0	1.1
22	300	100	400	1.0	1.2
23	300	130	430	1.1	1.2
24	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
25	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY	HOLIDAY
26	400	110	510	1.0	1.1
27	300	290	590	1.1	1.2
28	200	220	420	1.1	1.2
29	200	200	400	1.1	1.1
30	100	120	220	1.0	1.1
31	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
Total	6,400	5,250	11,650	27.3	29.2
Avg	206	169	376	1.09	1.17

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	1/1/2018	2/6/2018	☐Surface ☒Ground ☐SWUDI ☐Blog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**	**Town, Village, or City**	
NY-5930018	Westchester	Goldens Bridge	

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED				CLOSED	CLOSED					
2	#2 & #3	350				1.0	1.0					
3	#2 & #3	320				1.1	1.1					
4	#2 & #3	250				1.1	1.1					
5	#2 & #3	170				1.0	1.1					
6	#2 & #3	340				1.0	1.2					
7	#2 & #3	CLOSED				CLOSED	CLOSED					
8	#2 & #3	420				1.2	1.2					
9	#2 & #3	410				1.2	1.3					
10	#2 & #3	430				1.0	1.1					
11	#2 & #3	500				1.1	1.0					
12	#2 & #3	370				1.1	1.2					
13	#2 & #3	470				1.0	1.1					
14	#2 & #3	CLOSED				CLOSED	CLOSED					
15	#2 & #3	460				1.2	1.1					
16	#2 & #3	500				1.1	1.1					
17	#2 & #3	1170				1.3	1.3					
18	#2 & #3	400				1.1	1.2					
19	#2 & #3	500				1.1	1.3					
20	#2 & #3	610				1.1	1.1					
21	#2 & #3	CLOSED				CLOSED	CLOSED					
22	#2 & #3	730				1.2	1.1					
23	#2 & #3	800				1.2	1.2					
24	#2 & #3	1120				1.3	1.1					
25	#2 & #3	380				1.2	1.0					
26	#2 & #3	450				1.3	1.1					
27	#2 & #3	630				1.2	1.0					
28	#2 & #3	CLOSED				CLOSED	CLOSED					
29	#2 & #3	780				1.2	1.1					
30	#2 & #3	700				1.2	1.0					
31	#2 & #3	730				1.1	1.0					
Total		13,990				29.6	29.1					
AVG.		451				1.14	1.12					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P Muro

Date: 2/6/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service well #2 1st Fl. mens' room	1/16/18	1	☐Yes ☑No	☐Yes ☑No	1.1
Shorwoom well #3 1st Fl. bath.	1/16/18	1	☐Yes ☑No	☐Yes ☑No	1.1
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 18, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/16/18	13:00
Location Code:	APC	Received by:	SW	01/16/18	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ73682
Phoenix ID: BZ73682

Project ID: MERCEDES BENZ OF GB SHOWEOOM
Client ID: 1ST FL BATH

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/17/18 10:40	RM/RM	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		01/17/18 10:40	RM/RM	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
January 18, 2018
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

January 18, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	01/16/18	13:05
Location Code:	APC	Received by:	SW	01/16/18	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GBZ73684
Phoenix ID: BZ73684

Project ID: MERCEDES BENZ OF GB SERVICE
Client ID: 1ST FL MENS RM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		01/17/18 10:50	RM/RM	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		01/17/18 10:50	RM/RM	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
January 18, 2018
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

Jan-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
2	200	150	350	1.0	1.0
3	200	120	320	1.1	1.1
4	100	150	250	1.1	1.1
5	100	70	170	1.0	1.1
6	100	240	340	1.0	1.2
7	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
8	100	320	420	1.2	1.2
9	200	210	410	1.2	1.3
10	300	130	430	1.0	1.1
11	200	300	500	1.1	1.0
12	200	170	370	1.1	1.2
13	300	170	470	1.0	1.1
14	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
15	200	260	460	1.2	1.1
16	300	200	500	1.1	1.1
17	800	370	1170	1.3	1.3
18	200	200	400	1.1	1.2
19	300	200	500	1.1	1.3
20	400	210	610	1.1	1.1
21	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
22	500	230	730	1.2	1.1
23	600	200	800	1.2	1.2
24	900	220	1120	1.3	1.1
25	200	180	380	1.2	1.0
26	300	150	450	1.3	1.1
27	500	130	630	1.2	1.0
28	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
29	600	180	780	1.2	1.1
30	500	200	700	1.2	1.0
31	300	430	730	1.1	1.0
Total	8,600	5,390	13,990	29.6	29.1
Avg	277	174	451	1.14	1.12

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	2/1/2018	3/6/2018	☐Surface ☑Ground ☐GWUDI ☐Slog treatment required ☐Purchase with subsequent chlorination ☐Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	550				1.1	1.2					
2	#2 & #3	480				1.2	1.1					
3	#2 & #3	240				1.2	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	460				1.2	1.2					
6	#2 & #3	430				1.3	1.2					
7	#2 & #3	320				1.2	1.2					
8	#2 & #3	370				1.2	1.3					
9	#2 & #3	300				1.2	1.3					
10	#2 & #3	380				1.2	1.1					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	790				1.2	1.3					
13	#2 & #3	520				1.1	1.2					
14	#2 & #3	320				1.2	1.2					
15	#2 & #3	630				1.1	1.1					
16	#2 & #3	290				1.1	1.2					
17	#2 & #3	610				1.2	1.3					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	490				1.2	1.2					
20	#2 & #3	380				1.2	1.0					
21	#2 & #3	860				1.0	1.1					
22	#2 & #3	900				1.0	1.0					
23	#2 & #3	800				0.9	1.2					
24	#2 & #3	600				0.9	1.1					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	910				0.8	1.1					
27	#2 & #3	900				0.9	1.1					
28	#2 & #3	950				0.8	1.3					
29	#2 & #3											
30	#2 & #3											
31	#2 & #3											
Total		13,480				26.4	28.2					
AVG.		481				1.10	1.18					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 3/6/2018 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Feb-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	400	150	550	1.1	1.2
2	200	280	480	1.2	1.1
3	0	240	240	1.2	1.2
4	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
5	300	160	460	1.2	1.2
6	200	230	430	1.3	1.2
7	200	120	320	1.2	1.2
8	300	70	370	1.2	1.3
9	200	100	300	1.2	1.3
10	100	280	380	1.2	1.1
11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
12	400	390	790	1.2	1.3
13	300	220	520	1.1	1.2
14	200	120	320	1.2	1.2
15	300	330	630	1.1	1.1
16	100	190	290	1.1	1.2
17	400	210	610	1.2	1.3
18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
19	300	190	490	1.2	1.2
20	200	180	380	1.2	1.0
21	500	360	860	1.0	1.1
22	500	400	900	1.0	1.0
23	600	200	800	0.9	1.2
24	200	400	600	0.9	1.1
25	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
26	500	410	910	0.8	1.1
27	600	300	900	0.9	1.1
28	800	150	950	0.8	1.3
Total	7,800	5,680	13,480	26.4	28.2
Avg	279	203	481	1.10	1.18

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	3/1/2018	4/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	210				0.9	1.2					
2	#2 & #3	470				0.9	1.3					
3	#2 & #3	220				1.0	1.2					
4	#2 & #3	CLOSED				CLOSED	CLOSED					
5	#2 & #3	480				0.9	1.5					
6	#2 & #3	700			1	0.8	1.6					
7	#2 & #3	710				0.8	1.5					
8	#2 & #3	370				0.8	1.5					
9	#2 & #3	420				0.8	1.2					
10	#2 & #3	330				0.9	1.4					
11	#2 & #3	CLOSED				CLOSED	CLOSED					
12	#2 & #3	560				0.8	1.1					
13	#2 & #3	590				0.8	1.2					
14	#2 & #3	690				0.8	1.1					
15	#2 & #3	500				0.8	1.2					
16	#2 & #3	590				0.9	1.3					
17	#2 & #3	510				0.9	1.1					
18	#2 & #3	CLOSED				CLOSED	CLOSED					
19	#2 & #3	460				1.5	1.2					
20	#2 & #3	510				1.1	1.1					
21	#2 & #3	430				1.1	1.3					
22	#2 & #3	920				1.1	1.2					
23	#2 & #3	640				1.0	1.1					
24	#2 & #3	520				1.1	1.0					
25	#2 & #3	CLOSED				CLOSED	CLOSED					
26	#2 & #3	620				1.0	1.0					
27	#2 & #3	400				1.0	1.1					
28	#2 & #3	700				0.9	1.1					
29	#2 & #3	600				1.3	1.1					
30	#2 & #3	320				1.3	1.1					
31	#2 & #3	530				1.1	1.2					
Total		14,000			1	26.3	32.9					
AVG.		452				0.97	1.22					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY) Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro Title: Vice President NYS DOH Operator Number: 32623

Signature: Jack P Muro Date: 4/5/2018 (MM/DD/YY) Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Mar-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	100	110	210	0.9	1.2
2	300	170	470	0.9	1.3
3	100	120	220	1.0	1.2
4	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
5	200	280	480	0.9	1.5
6	600	100	700	0.8	1.6
7	500	210	710	0.8	1.5
8	200	170	370	0.8	1.5
9	300	120	420	0.8	1.2
10	200	130	330	0.9	1.4
11	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
12	300	260	560	0.8	1.1
13	200	390	590	0.8	1.2
14	400	290	690	0.8	1.1
15	300	200	500	0.8	1.2
16	500	90	590	0.9	1.3
17	300	210	510	0.9	1.1
18	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
19	300	160	460	1.5	1.2
20	200	310	510	1.1	1.1
21	300	130	430	1.1	1.3
22	700	220	920	1.1	1.2
23	400	240	640	1.0	1.1
24	300	220	520	1.1	1.0
25	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
26	400	220	620	1.0	1.0
27	300	100	400	1.0	1.1
28	500	200	700	0.9	1.1
29	400	200	600	1.3	1.1
30	200	120	320	1.3	1.1
31	300	230	530	1.1	1.2
Total	8,800	5,200	14,000	26.3	32.9
Avg	284	168	452	0.97	1.22

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report
For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	4/1/2018	5/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Blog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination

Public Water Supply ID Number	County	Town, Village, or City
NY-5930018	Westchester	Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	CLOSED				CLOSED	CLOSED					
2	#2 & #3	500				1.2	1.1					
3	#2 & #3	700				1.2	1.0					
4	#2 & #3	580				1.8	1.2					
5	#2 & #3	620				1.1	1.1					
6	#2 & #3	610				1.2	1.1					
7	#2 & #3	6820				1.1	1.3					
8	#2 & #3	CLOSED				CLOSED	CLOSED					
9	#2 & #3	860				1.0	1.2					
10	#2 & #3	650				1.0	1.3					
11	#2 & #3	840				1.1	1.1					
12	#2 & #3	1090				1.8	1.0					
13	#2 & #3	1020				1.0	1.2					
14	#2 & #3	810				1.1	1.1					
15	#2 & #3	CLOSED				CLOSED	CLOSED					
16	#2 & #3	710				1.0	1.1					
17	#2 & #3	350				1.0	1.0					
18	#2 & #3	500				1.8	1.3					
19	#2 & #3	830				1.3	1.0					
20	#2 & #3	530				1.0	1.0					
21	#2 & #3	830				1.2	1.1					
22	#2 & #3	CLOSED				CLOSED	CLOSED					
23	#2 & #3	510				1.8	1.3					
24	#2 & #3	720				0.9	1.2					
25	#2 & #3	510				1.0	1.1					
26	#2 & #3	1320				1.0	1.2					
27	#2 & #3	3270				1.2	1.3					
28	#2 & #3	450				1.1	1.1					
29	#2 & #3	CLOSED				CLOSED	CLOSED					
30	#2 & #3	450				1.3	1.0					
31	#2 & #3											
Total		26,080				30.2	28.4					
AVG.		869				1.21	1.14					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P Muro

Date: 5/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
Service - Breakroom	4/9/18	1	☐Yes ☑No	☐Yes ☑No	1.0
Showroom - 2nd Floor Bathroom	4/9/18	1	☐Yes ☑No	☐Yes ☑No	1.2
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 2

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Report

April 10, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/09/18	11:15
Location Code:	APC	Received by:	SW	04/09/18	16:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA16398
Phoenix ID: CA16398

Project ID: MERCEDES BENZ OF GB SERVICE WELL #2
Client ID: BREAKROOM

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
April 10, 2018
Reviewed and Released by: Deb Lawrie, Project Manager

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

April 10, 2018

FOR: Attn: Mr. John Muro II
Allied Pollution Control
1273 Route 311
Patterson, NY 12563

Sample Information		Custody Information		Date	Time
Matrix:	DRINKING WATER	Collected by:	BV	04/09/18	11:10
Location Code:	APC	Received by:	SW	04/09/18	16:03
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCA16397
Phoenix ID: CA16397

Project ID: MERCEDES BENZ CT GB SHOW WELL #3
Client ID: BATHROOMS 2ND FL

Parameter	Result	RL/ PQL	DIL	Units	AL	MCL	MCLG	Date/Time	By	Reference
Escherichia Coli	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-97
Total Coliforms	Absent	0	1	/100 mls		0		04/09/18 17:20	CB/KDB	SM9223B-04

RL/PQL=Reporting/Practical Quantitation Level DIL=Dilution (analysis required diluting to evaluate) ND=Not Detected
BRL=Below Reporting Level (less than the reporting level, the lowest amount the laboratory can detect and report.)
AL = Action Level MCL = Maximum Contaminant Level MCLG = Maximum Contaminant Level Goal

Comments:

Maximum Contaminant Level (MCL) (Lower of): 40 CFR Part 141; Public Health Law, Section 225 Part 5. The highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards.

Action Level (AL): (Lower of): 40 CFR Part 141.80; Public Health Law, Section 225 Part 5.

Secondary DW Maximum Contaminant Level Goal (MCLG): (Lower of): 40 CFR Part 141; 40 CFR Part 143. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are non-enforceable public health goals.

Bacteria Analysis Comment: This sample was treated for chlorine at time of sample collection with sodium thiosulfate.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
April 10, 2018
Reviewed and Released by: Deb Lawrie, Project Manager

Apr-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
2	300	200	500	1.2	1.1
3	500	200	700	1.2	1.0
4	500	80	580	1.8	1.2
5	500	120	620	1.1	1.1
6	500	110	610	1.2	1.1
7	6700	120	6820	1.1	1.3
8	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
9	500	360	860	1.0	1.2
10	500	150	650	1.0	1.3
11	500	340	840	1.1	1.1
12	700	390	1090	1.8	1.0
13	600	420	1020	1.0	1.2
14	500	310	810	1.1	1.1
15	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
16	500	210	710	1.0	1.1
17	200	150	350	1.0	1.0
18	300	200	500	1.8	1.3
19	700	130	830	1.3	1.0
20	300	230	530	1.0	1.0
21	600	230	830	1.2	1.1
22	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
23	300	210	510	1.8	1.3
24	500	220	720	0.9	1.2
25	200	380	580	1.0	1.1
26	1100	220	1320	1.0	1.2
27	3000	270	3270	1.2	1.3
28	2000	230	2230	1.1	1.1
29	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
30	300	150	450	1.3	1.0
Total	22,300	5,630	27,930	30.2	28.4
Avg	743	188	931	1.21	1.14

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	5/1/2018	6/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ Slog treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	700				1.0	1.1					
2	#2 & #3	670				1.0	1.2					
3	#2 & #3	410				1.0	1.0					
4	#2 & #3	420				1.1	1.1					
5	#2 & #3	410				1.0	1.1					
6	#2 & #3	CLOSED				CLOSED	CLOSED					
7	#2 & #3	640				1.0	1.0					
8	#2 & #3	900				0.8	1.1					
9	#2 & #3	650				1.2	1.1					
10	#2 & #3	500				1.2	1.0					
11	#2 & #3	870				1.1	1.1					
12	#2 & #3	640				1.1	1.2					
13	#2 & #3	CLOSED				CLOSED	CLOSED					
14	#2 & #3	480				0.8	1.1					
15	#2 & #3	930				1.0	1.0					
16	#2 & #3	CLOSED				CLOSED	CLOSED					
17	#2 & #3	620				0.8	0.8					
18	#2 & #3	800				1.1	1.1					
19	#2 & #3	640				1.0	1.0					
20	#2 & #3	CLOSED				CLOSED	CLOSED					
21	#2 & #3	550				1.0	1.1					
22	#2 & #3	770				2.0	1.8					
23	#2 & #3	980				1.8	1.1					
24	#2 & #3	800				1.8	1.8					
25	#2 & #3	2200				1.2	1.8					
26	#2 & #3	1500				1.3	1.6					
27	#2 & #3	CLOSED				CLOSED	CLOSED					
28	#2 & #3	390				CLOSED	1.0					
29	#2 & #3	1600				1.6	1.6					
30	#2 & #3	3200				1.8	1.6					
31	#2 & #3	1400				1.0	1.0					
Total		23,670				29.7	31.4					
AVG.		764				1.19	1.21					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc - John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: Jack P Muro

Date: 6/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	
			☐Yes ☐No	☐Yes ☐No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐Yes ☑No

If "Yes," check reason (s) below:

_____ Actual number of samples is fewer than required

_____ Did not collect/analyze repeat sample

_____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐Yes ☑No

Was triggered source water monitoring required? ☐Yes ☑No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

_____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

_____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

_____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

May-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	300	400	700	1.0	1.1
2	500	170	670	1.0	1.2
3	300	110	410	1.0	1.0
4	100	320	420	1.1	1.1
5	100	310	410	1.0	1.1
6	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
7	300	340	640	1.0	1.0
8	600	300	900	0.8	1.1
9	200	450	650	1.2	1.1
10	300	200	500	1.2	1.0
11	600	270	870	1.1	1.1
12	200	440	640	1.1	1.2
13	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
14	200	280	480	0.8	1.1
15	500	430	930	1.0	1.0
16	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
17	400	220	620	0.8	0.8
18	600	200	800	1.1	1.1
19	400	240	640	1.0	1.0
20	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
21	300	250	550	1.0	1.1
22	500	270	770	2.0	1.8
23	500	480	980	1.8	1.1
24	300	500	800	1.8	1.8
25	1800	400	2200	1.2	1.8
26	1100	400	1500	1.3	1.6
27	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
28	CLOSED	390	390	CLOSED	1.0
29	1000	600	1600	1.6	1.6
30	2800	400	3200	1.8	1.6
31	600	800	1400	1.0	1.0
Total	14,500	9,170	23,670	29.7	31.4
Avg	468	296	764	1.19	1.21

NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Water System Operation Report

For Systems that Treat with Chlorine and/or Ultraviolet Radiation

Public Water System Name	Reporting Month/Year	Date Report Submitted	Source Water Type(s)
Mercedes-Benz of Goldens Bridge (Combined)	6/1/2018	7/5/2018	☐ Surface ☑ Ground ☐ GWUDI ☐ 4log treatment required ☐ Purchase with subsequent chlorination ☐ Purchase w/out subsequent chlorination
Public Water Supply ID Number	**County**		**Town, Village, or City**
NY-5930018	Westchester		Goldens Bridge

DATE	Source(s) in use	Treated water volume (gallons/day)	Chlorination					Ultraviolet Radiation / Other Treatments				
			Gaseous		Liquid	Service free chlorine residual at entry point (mg/l)	Showroom Free Chlorine residual at entry point (mg/l)	UV Unit Active (Yes/No)	Intensity Meter > 70%	Quartz Sleeve Cleaned (Yes/No)	Checked by (Initials)	
			Cylinder weight (lbs.)	Chlorine used per day (lbs.)	Hypochlorite added to crock (gallons or quarts)							
1	#2 & #3	1270				1.6	1.6					
2	#2 & #3	500				1.7	1.1					
3	#2 & #3	CLOSED				CLOSED	CLOSED					
4	#2 & #3	1550				1.8	1.3					
5	#2 & #3	1400				1.2	1.2					
6	#2 & #3	530				1.6	1.4					
7	#2 & #3	630				1.2	1.3					
8	#2 & #3	840				1.8	1.2					
9	#2 & #3	870				1.8	1.1					
10	#2 & #3	CLOSED				CLOSED	CLOSED					
11	#2 & #3	650				0.9	0.9					
12	#2 & #3	670				0.9	1.5					
13	#2 & #3	1210				1.0	1.4					
14	#2 & #3	520				1.2	1.1					
15	#2 & #3	1240				1.0	1.5					
16	#2 & #3	940				1.3	1.3					
17	#2 & #3	CLOSED				CLOSED	CLOSED					
18	#2 & #3	890				1.8	1.4					
19	#2 & #3	650				1.3	0.8					
20	#2 & #3	1250				1.8	1.4					
21	#2 & #3	540				1.2	1.4					
22	#2 & #3	990				1.7	1.2					
23	#2 & #3	1370				1.8	1.1					
24	#2 & #3	CLOSED				CLOSED	CLOSED					
25	#2 & #3	670				1.9	1.0					
26	#2 & #3	810				1.6	1.6					
27	#2 & #3	1090				1.8	1.1					
28	#2 & #3	900			2	1.1	1.4					
29	#2 & #3	750				1.0	1.4					
30	#2 & #3	820				1.3	1.1					
31	#2 & #3											
Total		23,550				37.3	32.8					
AVG.		785				1.43	1.26					

Chlorine Mix Ratio = 1 quarts/gallons of 12.5 % chlorine added to 25 gallons of water in crock

Date UV quartz sleeve last cleaned: N/A (MM/DD/YY)

Date UV lamp replaced: N/A (MM/DD/YY)

Alarm activation (yes or no) If "yes," date of activation

Required Treatment Residual Level: 0.8 mg/l

Reported by: Allied Pollution Control, Inc.- John P. Muro

Title: Vice President

NYS DOH Operator Number: 32623

Signature: John P. Muro

Date: 7/5/2018 (MM/DD/YY)

Operator Grade Level: C

Microbiological Samples and Free Chlorine Residual

Sample Location	Date of Sample	Sample Type: 1. Routine 2. Repeat 3. Triggered	Total Coliform Positive	E.coli Positive	Free Chlorine Residual (mg/l)
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	
			☐ Yes ☐ No	☐ Yes ☐ No	

Population Served: less than 100

Number of microbiological monitoring samples required: 2/Q

Number of microbiological monitoring samples taken: 0

Did an M&R violation occur? ☐ Yes ☑ No

If "Yes," check reason (s) below:

____ Actual number of samples is fewer than required

____ Did not collect/analyze repeat sample

____ Did not collect/analyze for E. coli for positive total coliform from routine/repeat sample

Did an MCL violation occur? ☐ Yes ☑ No

Was triggered source water monitoring required? ☐ Yes ☑ No

If "Yes," check reason(s) below (see also Part 5, Table 6 for additional information).

____ For systems collecting less than 40 samples per month: two or more of the samples (routine and /or repeat) are positive for total coliform (= total coliform MCL violation).

____ For systems collecting 40 or more samples per month: more than 5% of the samples (routine and/or repeat) are positive for total coliform (= total coliform MCL violation).

____ The original sample was E.coli positive and at least 1 repeat sample was positive for total coliform (= E.coli MCL violation).

Reminder: System must collect a minimum of five (5) routine microbiological monitoring samples during the month following a repeat sample collection unless waived (to minimum of one sample) in writing by the local health department.

As required by 5-1.72, "Operation of a Public Water System," a copy of this form shall be sent to your local health department by the 10th calendar day of the next reporting period.

Sample Collector(s): Allied Pollution Control, Inc.

Name of NYSDOH Certified Laboratory: Phoenix Environmental Laboratories

Did any MCL violation occur? If so, please describe: No

Did an emergency or low pressure problem occur? Did source water bypass an existing treatment process in the system? If so, please explain No

Comments:

Jun-18					
Date	Well 2 Flow	Well 3 Flow	Total Flow Wells 2 & 3	Well 2 Cl2	Well 3 Cl2
1	900	370	1270	1.6	1.6
2	80	420	500	1.7	1.1
3	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
4	300	1250	1550	1.8	1.3
5	300	1100	1400	1.2	1.2
6	400	130	530	1.6	1.4
7	300	330	630	1.2	1.3
8	400	440	840	1.8	1.2
9	300	570	870	1.8	1.1
10	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
11	300	350	650	0.9	0.9
12	300	370	670	0.9	1.5
13	800	410	1210	1.0	1.4
14	300	220	520	1.2	1.1
15	600	640	1240	1.0	1.5
16	600	340	940	1.3	1.3
17	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
18	400	490	890	1.8	1.4
19	400	250	650	1.3	0.8
20	1000	250	1250	1.8	1.4
21	300	240	540	1.2	1.4
22	600	390	990	1.7	1.2
23	500	870	1370	1.8	1.1
24	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
25	300	370	670	1.9	1.0
26	400	410	810	1.6	1.6
27	700	390	1090	1.8	1.1
28	600	300	900	1.1	1.4
29	500	250	750	1.0	1.4
30	400	420	820	1.3	1.1
Total	11,980	11,570	23,550	37.3	32.8
Avg	399	386	785	1.43	1.26

MERCEDES BENZ OF GOLDENS BRIDGE

February 5, 2018

John Sullivan
Architect
Sullivan Architecture, PC
31 Mamaroneck Avenue
White Plains, NY 10601

Stephen Spina
Project Manager
JMC Engineering
120 Bedford Road
Armonk, NY 10504

Re: Mercedes Benz of Goldens Bridge
Septic System/Employee count

Dear John and Stephen,

As per your Planning Board meeting on January 16, 2018 with the Lewisboro Planning Board, the question arose about the number of employees due to the increase of building size for the existing septic system.

Please be advised, we believe there is no concern and of no issue for the following reasons:

1. Currently we have 58 employees. See attached employee list by department and physical locations. Please note 9 of the employees on our list are drivers and are on the road and not at the dealership 90% of the day.
2. Management, administration and accounting is based out of our corporate headquarters at 130 Route 10, Whippany, New Jersey 07981.
3. The increase in building size is to accommodate all Mercedes Benz Autohaus requirements.
    a. Specific Design and Furniture which Estate Motors was not compliant with.
    b. Additional cars/trucks/Sprinter Models released. Estate Motors did not have Sprinters vans in their space to lease or sell. They have special requirements and take up larger showroom space.
    c. Number of Bays for service
    d. Specific square footage of various areas
4. The car sales process has changed dramatically. 2017 – 15% of new and used car sales were from online sales and growing day by day
5. 60% of business is servicing cars and they are drop off and pick up at customers' homes and businesses by the 9 drivers. Clients do not even visit the dealership premises.
6. We will not be hosting any events at the dealership.

We firmly believe this is not an issue.

If you have any other questions, please do not hesitate to contact me.

Thank you,

Thomas Maoli
Dealer Principal

321 ROUTE 22
GOLDENS BRIDGE, NEW YORK 10526
914-232-8122

Meredes Benz Employee List				
	Employee	**Department**	**Status**	**Physical Location**
1	PLUMMER, MELODY C.	Accounting	Full Time	Corporate - NJ
2	LOMBARDO, VIKKI	Accounting	Full Time	Corporate - NJ
4	PETRUCELLI, KRISTA	BDC - Internet Manager	Full Time	Goldens Bridge, NY
40	MASON, BRIANA	BDC - Service	Full Time	Goldens Bridge, NY
42	D'ONOFRIO, ANNMARIE C.	BDC - Service	Full Time	Goldens Bridge, NY
44	ZERVAS, JACQUELYN E.	BDC - Service	Full Time	Goldens Bridge, NY
5	FESSMAN, ZENABEL	Billing	Full Time	Goldens Bridge, NY
39	SANTACRUZ, CARLOS R.	Cleaning	Full Time	Goldens Bridge, NY
41	ROCHE, PATRICK W.	Cleaning	Full Time	Goldens Bridge, NY
10	SIMON, ROGER L.	Conceirge	Full Time	Goldens Bridge, NY
7	O'BRIEN, SHANNON V.	DMV Clerk	Full Time	Goldens Bridge, NY
11	SOTO, NOEL	Driver	Full Time	Goldens Bridge, NY
12	KOLAJ, GJON	Driver	Full Time	Goldens Bridge, NY
14	BRECHTER, RALPH K.	Driver	Full Time	Goldens Bridge, NY
19	MCSWIGGAN, LAWRENCE J.	Driver	Full Time	Goldens Bridge, NY
38	DIBENEDETTO, JASON M.	Driver	Full Time	Goldens Bridge, NY
43	GILLIARD, RONALD S.	Driver	Full Time	Goldens Bridge, NY
45	ALVARADO, ROBERTO	Driver	Full Time	Goldens Bridge, NY
46	COVERT, WALTER J.	Driver	Full Time	Goldens Bridge, NY
48	JAKAJ, THOMAS J.	Driver	Full Time	Goldens Bridge, NY
9	RADULIC, JULIA	Finance Director	Full Time	Corporate - NJ
8	SIERADZKI, PAMELA	Finance Manager	Full Time	Goldens Bridge, NY
13	MADURO, MANUEL	Fleet Driver (wholesale)	Full Time	Goldens Bridge, NY
6	GARLAND, JENNA K.	Inventory/HR	Full Time	Goldens Bridge, NY
23	TOWERS, MATTHEW L.	New & Used Car Sales	Full Time	Goldens Bridge, NY
24	PIERRO, ROBERT	New & Used Car Sales	Full Time	Goldens Bridge, NY
25	GIULINO, ADRIA	New & Used Car Sales	Full Time	Goldens Bridge, NY
26	SHEPPARD, JAMES L.	New & Used Car Sales	Full Time	Goldens Bridge, NY
27	VARGA, VICTOR	New & Used Car Sales	Full Time	Goldens Bridge, NY
28	BATISTA, JOSE	New & Used Car Sales	Full Time	Goldens Bridge, NY
29	CONTRERAS, CARLOS	New & Used Car Sales	Full Time	Goldens Bridge, NY
30	BRECHTER, ROBERT	New & Used Car Sales	Full Time	Goldens Bridge, NY
32	PENSA, WALTER	New Car Manager	Full Time	Goldens Bridge, NY
16	AUSTIN, RUSSELL B.	Parts Counter	Full Time	Goldens Bridge, NY
18	MARQUEZ, JASON	Parts Counter	Full Time	Goldens Bridge, NY
17	KORKATZIS, DEMETRIOS	Parts Manager	Full Time	Goldens Bridge, NY
3	KNEUER, KIM M.	Pre-Owned - Admin	Full Time	Goldens Bridge, NY
21	BELLUCCI, ANN	Reception	Full Time	Goldens Bridge, NY
22	VON HELMS, ELLA CRISTINA L.	Reception	Full Time	Goldens Bridge, NY

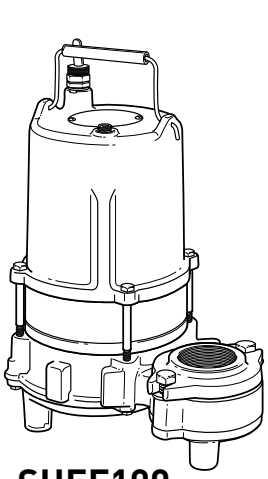
37	BEATO, ALBERTO	Roadside Assistance/Driver	Full Time	Goldens Bridge, NY
33	CHIPMAN, JOHN A.	Service Advisor	Full Time	Goldens Bridge, NY
34	FENYO, EVAN R.	Service Advisor	Full Time	Goldens Bridge, NY
35	THOMPSON, WILLIAM F.	Service Advisor	Full Time	Goldens Bridge, NY
15	KORKATZIS, PANAYIOTIS P.	Service Shop Foreman	Full Time	Goldens Bridge, NY
20	BRENNAN, THOMAS	Service/Parts Director	Full Time	Goldens Bridge, NY
49	LICHT, JAMES E.	Technician	Full Time	Goldens Bridge, NY
50	MARRALHEIRO, DENNIS S.	Technician	Full Time	Goldens Bridge, NY
51	NRECAJ, NIKE	Technician	Full Time	Goldens Bridge, NY
52	OLSEN, GEORGE A.	Technician	Full Time	Goldens Bridge, NY
53	KACMARCZYK, DEAN	Technician	Full Time	Goldens Bridge, NY
54	NRECAJ, LORENC	Technician	Full Time	Goldens Bridge, NY
55	MASPONS, DENNIS O.	Technician	Full Time	Goldens Bridge, NY
56	CLAFFEY, CHARLES	Technician	Full Time	Goldens Bridge, NY
57	ORTIZ, ANTHONY	Technician	Full Time	Goldens Bridge, NY
58	ASKEW, JOHN G.	Technician	Full Time	Goldens Bridge, NY
31	CHAKAMIAN, ROBERT	Used Car Manager	Full Time	Goldens Bridge, NY
47	SPENCE, ERDLIE	Valet	Full Time	Goldens Bridge, NY
36	WEISS, SUSAN A.	Warranty Admin	Full Time	Goldens Bridge, NY

HYDROMATIC®

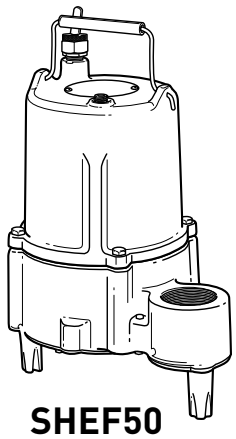
PERFORMANCE DATA

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

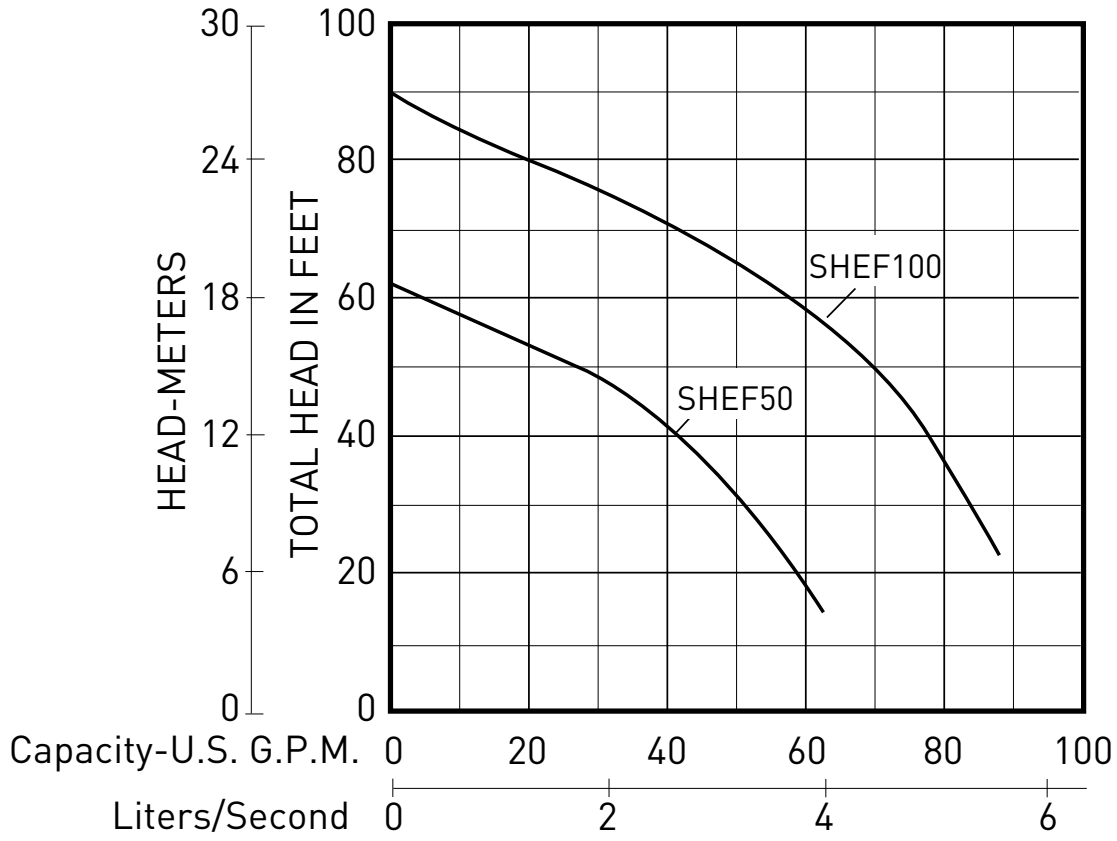
Wholesale Products Page: 6370-1
Dated: January 2001
RPM: **3450** Discharge: **2"** Solids: **¾"**



SHEF100



SHEF50



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

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Conditions of Service:

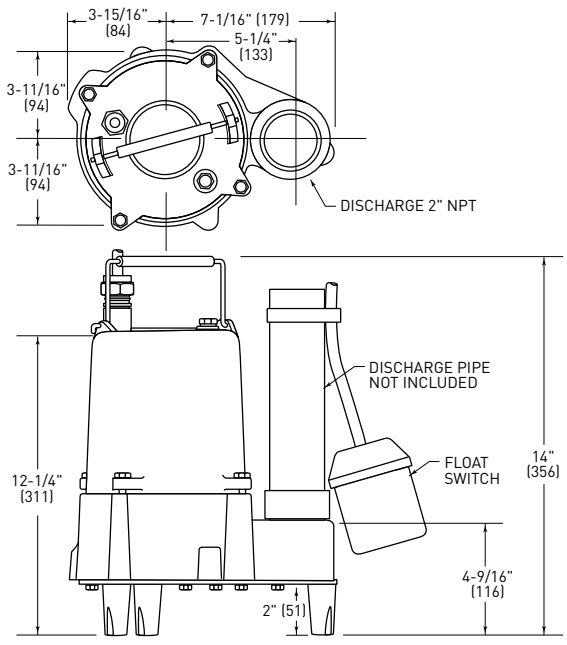
GPM:_____ **TDH**:_____

HYDROMATIC®

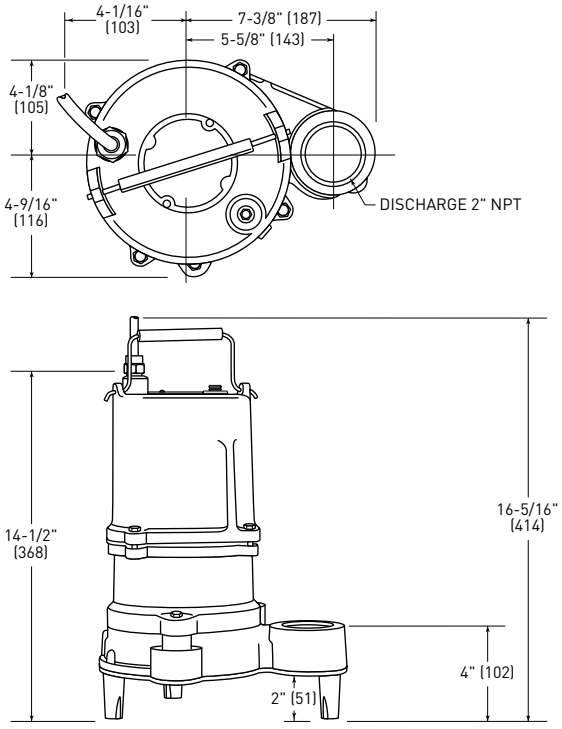
SHEF50/100

SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-2
Dated: January 2001



SHEF50



SHEF100

All dimensions in inches. Metric for international use. Component dimensions may vary ± 1/8 inch. Dimensional data not for construction purpose unless certified. Dimensions and weights are approximate. On/Off level adjustable. We reserve the right to make revisions to our product (s) and the product (s) specifications without notice.

HYDROMATIC®

SHEF50

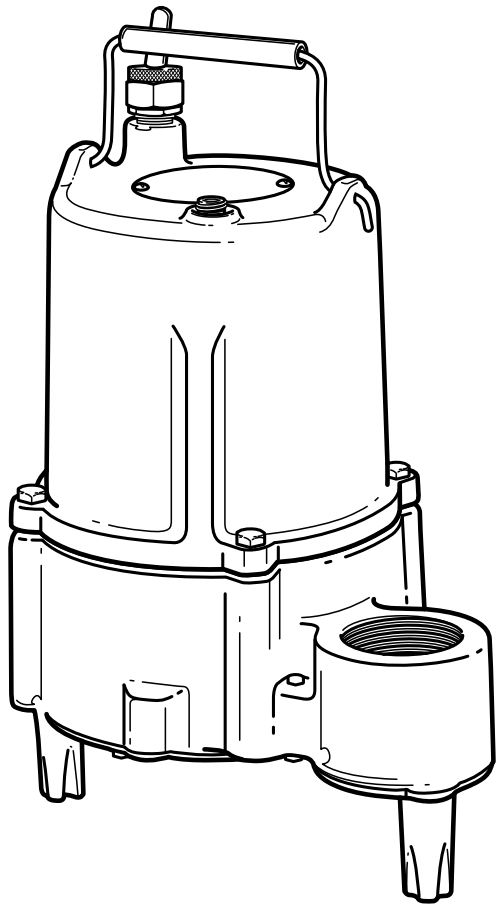
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-3
Dated: January 2001

MODEL: SHEF50

R.P.M.	3450
MOTOR TYPE	THERMAL OVERLOAD WITH AUTOMATIC RESET
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1/2	115	1	-	1	14.5
	200				7.6
	230	3			3.1
	460				1.6
	575				1.2



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HYDROMATIC®

SHEF100

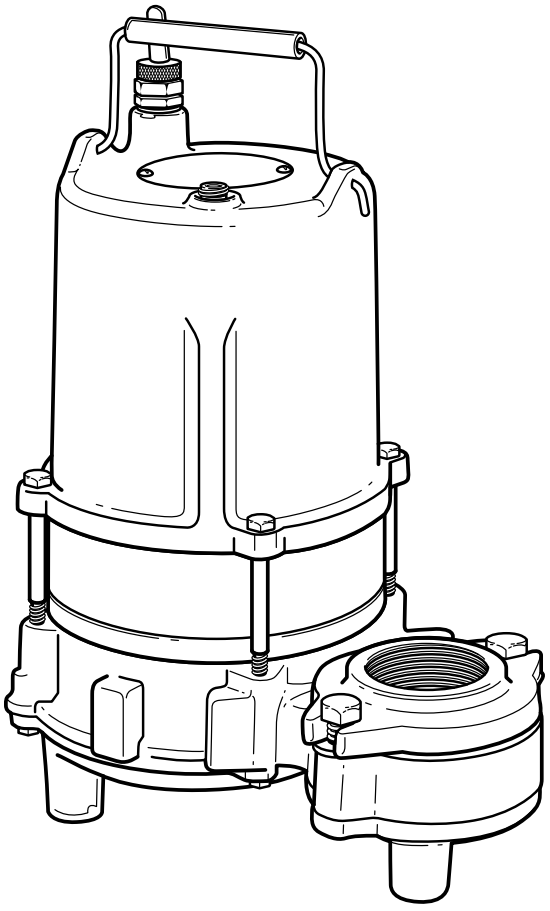
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-4
Dated: January 2001

MODEL: SHEF100

R.P.M.	3450
MOTOR TYPE	OIL FILLED WITH AUTOMATIC RESET THERMAL OVERLOAD
MOTOR PROTECTION	AUTOMATIC RESET / THERMAL OVERLOAD

HP	VOLTAGE	PHASE	NEC CODE	SERVICE FACTOR	FULL LOAD AMPS
1	200	1	-	1	12.1
	230				12.1
	230	3			5.8
	460				2.8
	575				1.9



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HYDROMATIC®
SHEF50
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-5
Dated: January 2001

MODEL: SHEF50

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	416 STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

HYDROMATIC®
SHEF100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-6
Dated: January 2001

MODEL: SHEF100

Physical Data

DISCHARGE SIZE	2" NPT
SOLIDS SIZE	¾"
IMPELLER TYPE	NON CLOG
CABLE LENGTH	20' STANDARD 30' OPTIONAL
PAINT	PAINTED AFTER ASSEMBLY, DARK GREEN, WATER REDUCIBLE ENAMEL, ONE COAT, AIR DRIED.

Temperature

MAXIMUM LIQUID	140°F
MAXIMUM STATOR	-
OIL FLASH POINT	-

Technical Data

POWER CORD TYPE		SJTW / STW-A
MATERIALS OF CONSTRUCTION	MOTOR HOUSING	CAST IRON
	CASING	CAST IRON
	IMPELLER	THERMOPLASTIC
	MOTOR SHAFT	STAINLESS STEEL
	HARDWARE	STAINLESS STEEL
	"O" RINGS	BUNA-N
MECHANICAL SEALS Standard:		CARBON / CERAMIC
UPPER BEARING		BALL
LOWER BEARING		BALL

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

Wholesale Products Page: 6370-7
Dated: January 2001

MODELS: SHEF50 and SHEF100

1.01 **GENERAL**

Contractor shall furnish all labor, materials, equipment and incidentals required to provide _____ (Qty.) submersible centrifugal high head effluent pump(s) as specified herein. The pump models covered in this specification are the SHEF 50 and SHEF100. The pump furnished for this application shall be MODEL _____ as manufactured by Hydromatic Pumps.

2.01 **DESIGN CONDITIONS**

Each pump shall be rated _____ H.P., _____ volts, _____ phase, _____ hertz and operate at _____ RPM.

3.01 **OPERATING CONDITIONS**

The pump shall deliver _____ U.S. GPM/LPS at feet/meters TDH, and handle a _____ inch solid. The curve submitted for approval shall state, in addition to head and capacity performance, solid handling capability, amp rating, and design impeller diameter.

4.01 **CONSTRUCTION**

Each pump shall be of the sealed submersible type, incorporating features normally found in pumps furnished for the residential market.

These features include:

1. The pump volute, motor, and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30.
2. The pump inlet shall be open and clear, without screening to provide access for effluent and septic tank solids.
3. All external mating parts shall be machined and Buna N, O-Ring sealed.
4. All fasteners exposed to the pumped liquid shall be 300 series stainless steel.
5. All power cords shall be water resistant UL or CSA approved, with double insulation, and sized as a function of Amp. draw.

5.01 **MOTOR AND SHAFT**

The stator, rotor and bearings shall be mounted in a sealed submersible type housing. Single phase motors shall be split phase with centrifugal switch and start capacitor. Three phase motors shall be Polyphase. Full Load and Locked Rotor Amps as well as Start and Run winding resistance shall be tabulated for each pump.

6.01 **BEARINGS, SHAFT AND MECHANICAL SEAL**

An upper radial and lower thrust bearing shall be required. The upper and lower bearings in the SHEF50 and SHEF100 shall be heavy duty single row ball bearings. The bearings will be permanently and continuously lubricated and cooled by the dielectric oil which fills the motor housing. The motor shaft shall be corrosion resistant steel and sealed from the pumped liquid with a carbon ceramic mechanical seal.

SHEF50/100
SUBMERSIBLE HIGH HEAD EFFLUENT

7.01 **IMPELLER**

The Impeller in the SHEF50/100 shall be high capacity, two vane, high head design with four pump out vanes on the back side. These vanes wash out grit and stringy material that will damage the shaft and mechanical seal.

8.01 **AUTOMATIC CONTROL**

All single phase pumps should be capable of automatic operation.

9.01 **FLOAT SWITCH**

The SHEF50 and SHEF100 pumps are supplied with a tilt sensitive wide-angle float switch which is sealed in a non-corrosive PVC enclosure. The switch is UL listed for water and sewage and CSA certified. The float switch shall also be fitted with a piggy-back plug that allows the pump to be operated manually without removal from the sump.

10.01 **PAINTING**

All cast iron parts shall be painted before assembly with a water reducible alkyd air dried enamel. The paint shall be applied in one coat with a minimum thickness of 3 to 4 mils.

11.01 **TESTING**

All pumps shall be individually tested to include the following:

1. The pump and power cord shall be visually inspected for imperfections, cuts or nicks.
2. The pump shall have a ground continuity check and the motor chamber shall be Hi-potted to test for moisture content and/or insulation defects.
3. The motor and volute housing shall be pressurized and a 10 second air leak decay test run.
4. Oil is added, and the pump is run. Voltage and current are monitored visually, electronically, and the tester listens for any noise or malfunction.

PENTAIR

USA
293 WRIGHT STREET, DELAVAN, WI 53115 WWW.HYDROMATIC.COM
PH: 888-957-8677 ORDERS FAX: 800-426-9446

CANADA
269 TRILLIUM DRIVE, KITCHENER, ONTARIO, CANADA N2G 4W5
PH: 519-896-2163 ORDERS FAX: 519-896-6337

Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice.

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Established in 1995
NYS DOL Asbestos Handling License #05-0348
EPA Lead Paint Certification #NY-62470-1
NYS DEC Waste Transporter Permit #3A-812

Richard Stumbo
President

ENVIRONMENTAL MAINTENANCE CONTRACTORS, INC.

Environmental Consulting, Testing, Reporting and Remedial / Abatement Services

December 12, 2011

Todd Ghiosay
New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 2
One Hunters Point Plaza
47-40 21st Street, Long Island City
New York, New York 11101-5407

RE: NYS DEC Spill Number 1110538
Estate Motors, 321 Route 22, Goldens Bridge, New York 10526

November 14, 2011

- Environmental Maintenance Contractors, Inc. (EMC) was called to inspect and assess the water in the Leachate Field (which was currently under repair by the ownerships contractor) at the rear of the Service Building of the above referenced property address.
- The visual inspection and Photo Ionization Detector (PID) readings indicated that there was a form of oil contamination sitting on top of the water in each of the leachate basins of the Leachate Field inspected. This conclusion was based on a visible oil type "sheen" sitting on the water in each basin and the PID readings collected in excess of 50 ppm.
- At the time of the inspection it did not appear that the environment had been impacted by oil product but was rather contained within the leachate basins of the Leachate Field.

November 21, 2011

- EMC retained Enviro Waste whom mobilized a truck to vacuum out the oil contaminated water from each of the leachate basins where the oil type "sheen" was visible.
- All visible oil type products was removed from each of the leachate basins, however it did appear that the oil may have made its way outside each of the leachate basins impacting the subsurface soils surrounding them.
- After further review of the circumstances of the project with the ownership, contractor and construction management firm a call was made to the NYS DEC Spill Hotline and NYS DEC Spill Number 1110538 was generated.

November 29, 2011

- After reviewing the current site conditions and proposed scope of work with Mr. Todd Ghiosay of the NYS DEC EMC scheduled with the ownerships contractor to excavate the subsurface soils surrounding the leachate basins that appeared to have been most effected (#5 and #9) and further assess the subsurface soils surrounding them.

Established in 1995
NYS DOL Asbestos Handling License #05-0348
EPA Lead Paint Certification #NY-62470-1
NYS DEC Waste Transporter Permit #3A-812

Richard Stumbo
President

December 5, 2011

- EMC mobilized an environmental field technician(s) to the Subject Site to further assess the Leachate Field including removing soils from around leachate basin #5 and #9.
- EMC screened subsurface soils excavated from leachate basin #5 and #9 utilizing a PID.
- EMC collected the soil sample (from leachate basin #9) that indicated the highest PID reading (3.2 ppm) for analysis via Volatile Organic Compounds (VOC's) and Semil-Volatile Organic Compounds (SVOC's) by NYSTARS 8260 and 8270 respectively.
- Soil sample(s) was containerized and transported to a New York State accredited/approved laboratory, PHOENIX Environmental Laboratories, Inc., with a certified chain of custody for analysis via VOC's and SVOC's by NYSTARS 8260 and 8270. Please find attached a copy of the drawing indicating the location of samples collected.

Results

- Based on the review of the field data presented there were no visible observations of oil contamination in subsurface soils surrounding the two leachate basins #5 and #9 at the time of the inspection.
- PID readings of soils screened were not indicative of oil contamination (<5 ppm) during the inspection.
- Laboratory data reported for the soil sample collected indicate that levels of contaminants were at Non-Detect or below the NYS DEC Recommended Soil Cleanup Objectives (Groundwater Standard Criteria). Please find attached a copy of the laboratory data for the sample analyzed.

Recommendations

- It is our understanding that the possible source of the oil had been abated in 2008 as part of the NYS DEC Spill Number 0813260 project. It is possible that some of the oil contamination form the previous spill may have made its way into leachate basin #4 and then worked its way into each of the other leachate basins, #1-3 and # 5-9, through the network of PVC piping that interconnects the Leachate Field.
- EMC recommends that the PVC pipe system be inspected to ensure that there is no contamination within the piping itself and if so either be cleaned out of its contents or removed and replaced.
- EMC also recommends further assessment via visual inspection and PID reading collection during the repair work of the Leachate Field in order to confirm that the subsurface soils surrounding the remaining leachate basins have not been compromised with oil contamination.

Should you have any questions or require additional information please do not hesitate to contact me.

Sincerely,
Environmental Maintenance Contractors, Inc.
Richard Stumbo
President

Attachment: Drawings, Laboratory Sample Results

Cc: John Lennon

ONSITE WASTEWATER TREATMENT SYSTEM (OWTS)
REPAIR AND REMEDIATION DATA FORM

Municipality: WESTCHESTER

Property Mailing Address (No. & Street): ESTATE MOTORS 321 ROUTE 22

Town/ Village: GOLDENS BRIDGE State: N.Y. Zip: 10526

Owner: CHARISMA HOLDING INC

Owner Mailing Address (No. & Street) (if different): PO BOX 711

Town/ Village: GOLDENS BRIDGE State: NY Zip: 10526

Property Use: [] Single Family [] Multi-Family [] Industrial [X] Commercial

[] Other - Describe: _____

OWTS Remediation ☐ **WCDH File #:** N/A

Remediation shall mean installation, replacement, or expansion of onsite wastewater treatment system components to correct an OWTS failure, or impending failure, resulting in, or that may result in, the discharge of sewage or domestic wastes or trade wastes or offensive material on to the surface of the ground, into a storm sewer, or into a watercourse or water body. Remediation shall not include repairs, as defined above, to correct an OWTS failure.

OR

OWTS Repair ☒ **Complete the following information.**

Repair shall mean the repair, maintenance, and replacement in kind and in situ; of broken, damaged, or worn onsite wastewater treatment system components.

Number of Bedrooms N/A Number of Bathrooms: 3 Water Supply Type: Public ☐ Well ☒

Please note below only components that have been repaired or replaced.

Repaired	Replaced	
☒	☐	House Sewer or other Solid Pipe(s)
☐	☐	Septic Tank#1 Size(gallons): _____
☐	☐	Septic Tank#2: Size (gallons): _____
☐	☐	Junction/Distribution Box(es)
☐	☐	Sewage Pump(s) or other Dosing Equipment
☐	☐	Absorption Trench Length _____ ft. X Trench Width _____ ft.
☒	☐	Seepage Pit(s)
☐	☐	Galley(s)
☐	☐	Gravelless Trench(es)
☐	☐	75-A Alternative System
☐	☐	Other Advanced Alternative System
☐	☐	Other System Component(s) - Describe: _____

DRAW BUILDING AND LOCATION OF WORK PERFORMED ON BACK OF THIS FORM

SEE ATTACHED FORM PAGE #2

☐ **Entire System Replaced**

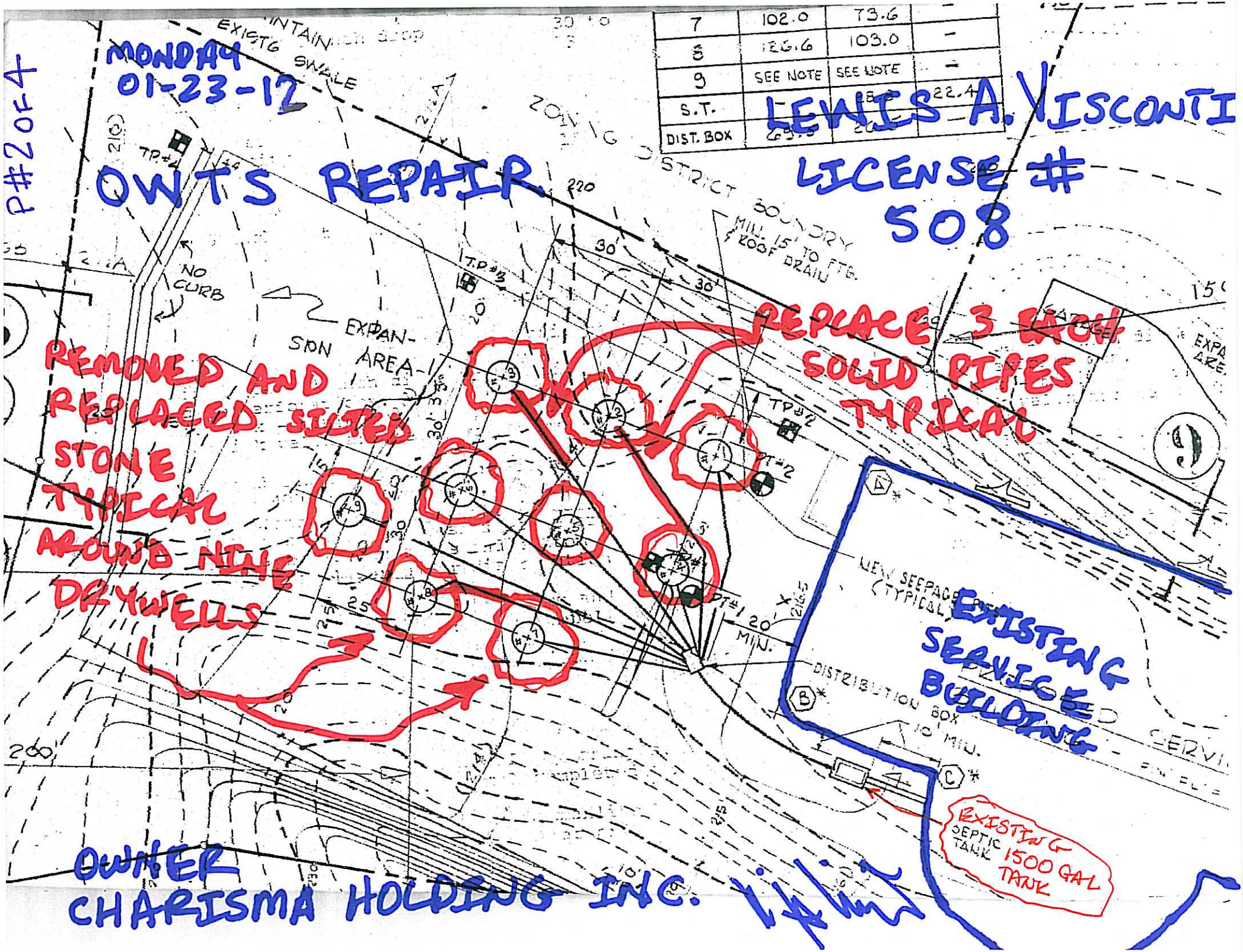
Contractor's Name (print): MTEK CONTRACTING Date Repair/Remediation Completed: 01-20-12

Contractor's Signature: _____ License No.: 508

Upon completion please remit to:

Westchester County Department of Health- BEQ
118 North Bedford Road, RM 100
Mt. Kisco, NY 1049
Attn: Patricia Tornello-Adams

Repair File #: REP_____
(WCDH Staff only)


P#2 of 4
MONDAY
01-23-12
OWTS REPAIR
LEWIS A. VISCONTI
LICENSE #
508
REMOVED AND
REPLACED
STONE
TYPICAL
AROUND NINE
DRYWELLS
SILTED
REPLACE 3 EACH
SOLID PIPES
TYPICAL
EXISTING
SERVICED
BUILDING
EXISTING
SEPTIC TANK
1500 GAL
TANK
OWNER
CHARISMA HOLDING INC.
7 102.0 73.6 -
8 [illegible] 103.0 -
9 SEE NOTE SEE NOTE -
S.T. [illegible] 22.4
DIST. BOX [illegible]
EXISTG SWALE
ZONING DISTRICT
BOUNDRY
MIN. 15' TO FTG.
ROOF DRAIN
NO CURB
EXPAN-
SION
AREA
TP#1
TP#2
TP#3
TP#4
NEW SEEPAGE PIT
(TYPICAL)
DISTRIBUTION BOX
10' MIN.
20' MIN.
30'
25'

Westchester gov.com

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
SEPTIC SYSTEM CONTRACTOR LICENSE

LICENSE NO. 508

This is to certify that: Lewis Visconti is granted permission to construct, install, remediate, repair and service.

ONSITE WASTEWATER TREATMENT SYSTEMS

Pursuant to Chapter 873, Article VIII of the Laws of Westchester County for use in the County of Westchester, State of New York under the following conditions:

- THAT the licensee shall comply with all applicable provisions of Chapter 873, Article VIII of the Laws of Westchester County and with rules and regulations of the Westchester County Department of Health.
- THAT the licensee shall perform construction, installation and remediation work in complete conformity with plans approved by the Department of Health, or approved amendments thereof, and with rules, regulations and standards of the Department of Health.
- THAT the license is granted subject to any and all applicable, state, local and municipal laws, ordinances, codes, rules and regulations.

Sherlita Amler M.D

SHERLITA AMLER, M.D.

Sherlita Amler, M.D.
Commissioner of Health

Lou Carrea, PE., Associate Engineer
Bureau of Environmental Quality

Date of Issue: 11/14/2011

This license expires on 10/31/2013 and may be revoked or suspended for cause.

This license is non-transferable.

P#4 of 4

LICENSE # 508

Westchester gov.com

Westchester County

HEALTH DEPARTMENT

LICENSED SEPTIC SYSTEM CONTRACTOR

EXPIRES: 10/31/2013

Westchester gov.com

Department of Health

Septic System Contractor

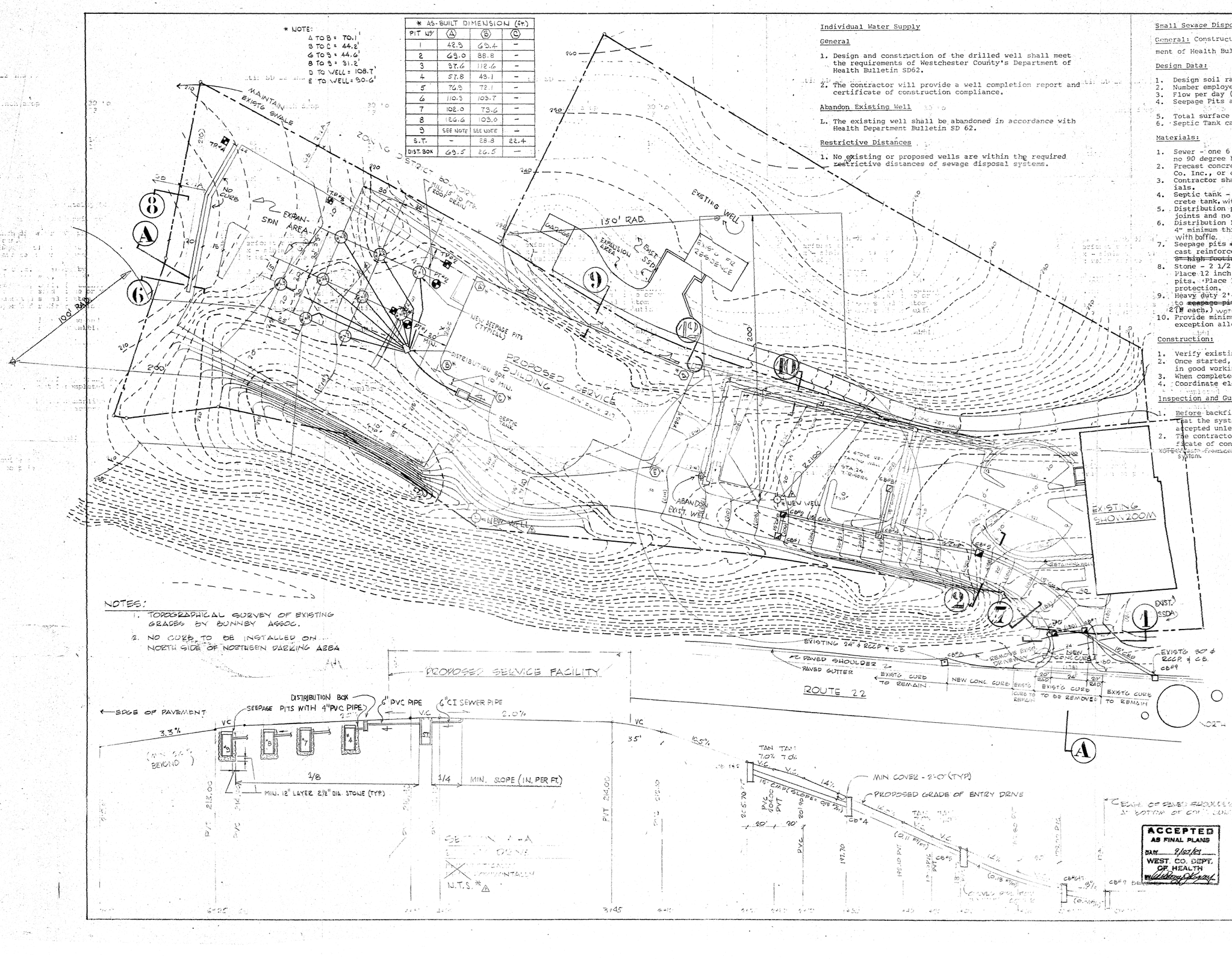
License No. 508

Lewis Visconti

(name)

* NOTE:
A TO B = 70.1'
B TO C = 44.2'
G TO B = 44.6'
B TO B = 31.2'
D TO WELL = 108.7'
E TO WELL = 80.6'

* AS-BUILT DIMENSION (FT.)			
PIT NO	(A)	(B)	(C)
1	42.9	65.4	–
2	69.0	88.8	–
3	97.6	112.6	–
4	57.8	43.1	–
5	76.8	72.1	–
6	110.3	103.7	–
7	102.0	73.6	–
8	126.6	103.0	–
9	SEE NOTE	SEE NOTE	–
S.T.	–	28.8	22.4
DIST. BOX	69.5	26.5	–



NOTES:
1. TOPOGRAPHICAL SURVEY OF EXISTING GRADES BY BUNNBY ASSOC.
2. NO CURB TO BE INSTALLED ON NORTH SIDE OF NORTHERN PARKING AREA

Individual Water Supply

General

1. Design and construction of the drilled well shall meet the requirements of Westchester County's Department of Health Bulletin SD62.
2. The contractor will provide a well completion report and certificate of construction compliance.

Abandon Existing Well

1. The existing well shall be abandoned in accordance with Health Department Bulletin SD 62.

Restrictive Distances

1. No existing or proposed wells are within the required restrictive distances of sewage disposal systems.

Small Sewage Disposal System

General: Construction shall meet the Westchester County's Department of Health Bulletin SD 22 and N.Y. State's DEC Standards.

Design Data:

1.	Design soil rate per 1 inch drop	30 to 45 minutes
2.	Number employees	23 each
3.	Flow per day (450 * 24 x 15)	810 gallons
4.	Seepage Pits and dome (8 Ft. Dia.)	9 each
5.	Total surface area	1400 sq. ft.
6.	Septic Tank capacity	1500 gallons

Materials:

1. Sewer - one 6 inch cast iron sewer pipe; no 90 degree bends.
2. Precast concrete shall be as manfactured by Fort Miller Co. Inc., or equal.
3. Contractor shall submit manufactures catalog for all materials.
4. Septic tank - ~~1250~~ 1500 gallon precast 4000 psi, reinforced concrete tank, with two compartments. Bituminous coat above liquid level.
5. Distribution pipe - 4 inch diameter PVC pipe, with tight joints and no perforations.
6. Distribution Box - minimum 9 hole precast concrete box with 4" minimum thick walls and cast iron frame and cover (1 each). with baffle.
7. Seepage pits ~~and cones~~ - 8 Ft. diameter by ~~4'~~ 5' deep pit, pre-cast reinforced 4000 psi. concrete, with 8' diameter ~~by H-20 SLAB 8" high footing, and 3' 6" deep cone,~~ (9 each).
8. Stone - 2 1/2 inch diameter crushed stone or washed gravel. Place 12 inch layer around sides and bottom of all seepage pits. Place 12 inch layer under distribution box, for frost protection.
9. Heavy duty 2'-0" diameter cast iron frame and cover for access to ~~seepage pits~~ and distribution box; Cambell #309 A&D, or equal: 2 (1 each.) Water Tight. SEPTIC TANK
10. Provide minimum 8" of brick under cast iron frames - no exception allowed.

Construction:

1. Verify existing conditions; notify if any changes.
2. Once started, continue working until completed and system put in good working condition.
3. When completed, clean up site in a workmanlike manner.
4. Coordinate elevations with paving contractor.

Inspection and Guarantee:

1. Before backfilling, the contractor shall notify the engineer that the system is ready for inspection. The work is not accepted unless this inspection is satisfactorily completed.
2. The contractor will provide a 2 year guarantee and a certificate of construction compliance.

~~NOTE: Roof Drainage Operation not to be connected into sewage disposal system.~~

ACCEPTED AS FINAL PLANS
DATE 9/07/83
WEST. CO. DEPT. OF HEALTH
BY William Gilmartin

JOSEPH COLEMAN, P.E.
CONSULTING ENGINEER
ROUTE 100
SOMERS, N.Y.

6	RCV	REDESIGN FOR FIELD CONDITIONS	6-6-83
5	JC	CITY DWR NOTES	5-28-82
4	JC	GRADES	5-5-82
3		EXISTG & PROPOSED GRADES	4-7-82
2	J.C.	GRADES, ETC. (2-25-82 LETTER)	3-15-82
1		GENERAL	1-12-82
No	By	Revision	Date
7	RCV	* AS-BUILT	8-31-83

Project: ESTATE MOTORS SERVICE
ROUTE 22
GOLDENS BRIDGE NEW YORK

Title: SEWAGE DISPOSAL & WATER SUPPLY

james albert holt
architect
route 116 purdys, new york 10578

Seal: LICENSED PROFESSIONAL ENGINEER JOSEPH PETER COLEMAN No. 049880 STATE OF NEW YORK

Scale	Date	Drawing No
1" = 20' U.T.S.	MAR. 31, 1982	SI 5
Project No	Drawn by	

9065

Due 2/14

Invoice

Vogler Brothers Inc.
39 North Street
Katonah, New York 10536

(914) 232-5535

Date	Invoice #
1/11/2018	91891

Bill To
Mercedez Benz of Goldens Bridge Attn: Sal P O Box 681 Goldens Bridge, NY 10526

Bills are due when received... A Finance charge of 1½% per month will be charged on all past due Accounts. We Now accept Visa, Discover, MasterCard and American Express.

PO No.	Terms
2328125	Due on receipt

Item	Quantity	Description	Rate	Amount
Septic		Cleaned main septic tank for upper building 6 month cleaning at 313 Rte 22, Goldens Bridge	375.00	375.00T
		Sales Tax	7.375%	27.66

Jan : 35053
680 401
6809 401

Total	$402.66
Payments/Credits	$0.00
Balance Due	$402.66

Vogler Brothers Inc.
39 North Street
Katonah, New York 10536

(914) 232-5535

Invoice

Date	Invoice #
5/24/2018	93318

Bill To
Mercedez Benz of Goldens Bridge Attn: Sal P O Box 681 Goldens Bridge, NY 10526

Bills are due when received... A Finance charge of 1½% per month will be charged on all past due Accounts. We Now accept Visa, Discover, MasterCard and American Express.

PO No.	Terms
2328125	Due on receipt

Item	Quantity	Description	Rate	Amount
Septic		Cleaned 1-3500 gallon load of sewerage main tank and leach tank for lower building	730.00	730.00T
		Sales Tax	7.375%	53.84

May: 35053

POSTED

Total	$783.84
Payments/Credits	$0.00
Balance Due	$783.84

J.D.M. Maintenance, Inc.
P.O. Box 39
Hawthorne, N.Y. 10532
(914)-906-9237

Re: Septic Field Inspection 8/29/18

Mercedes Benz of Goldens Bridge
321 Route 22
Lewisboro, NY 10526

Services rendered:

-High pressure water jet 9 seepage pit drains from distribution tank to seepage pits
-Ran camera from distribution tank to seepage pits via drains
-Marked out location and depths of seepage pits and determined if pits were functioning

Diagnosis:

Of 9 seepage pits, 6 seem to be absorbing properly without issue. Two pits (#s 4 and 5 on sketch) look as if they are being fed unevenly, with more effluent reaching these pits. This is causing these two pits to not absorb at rate being fed, which was observed by water backing into drain pipe from distribution tank. One drain, (#2 on sketch) has a spot where is partially crushed and couldn't get camera to seepage pit. (I will attach picture of crushed spot)
I do believe this seepage pit was functioning, as there wasn't any water backing into drain at point I reached with camera.
Also, through entire duration of inspection, (6 hours) there was a steady stream of water entering the distribution tank. This is indicative of something leaking/ running within the building which will shorten the life span of the absorption area of system.

I will attach a crude sketch of system just to provide general numbering of seepage pits- this does not show correct location of pits.

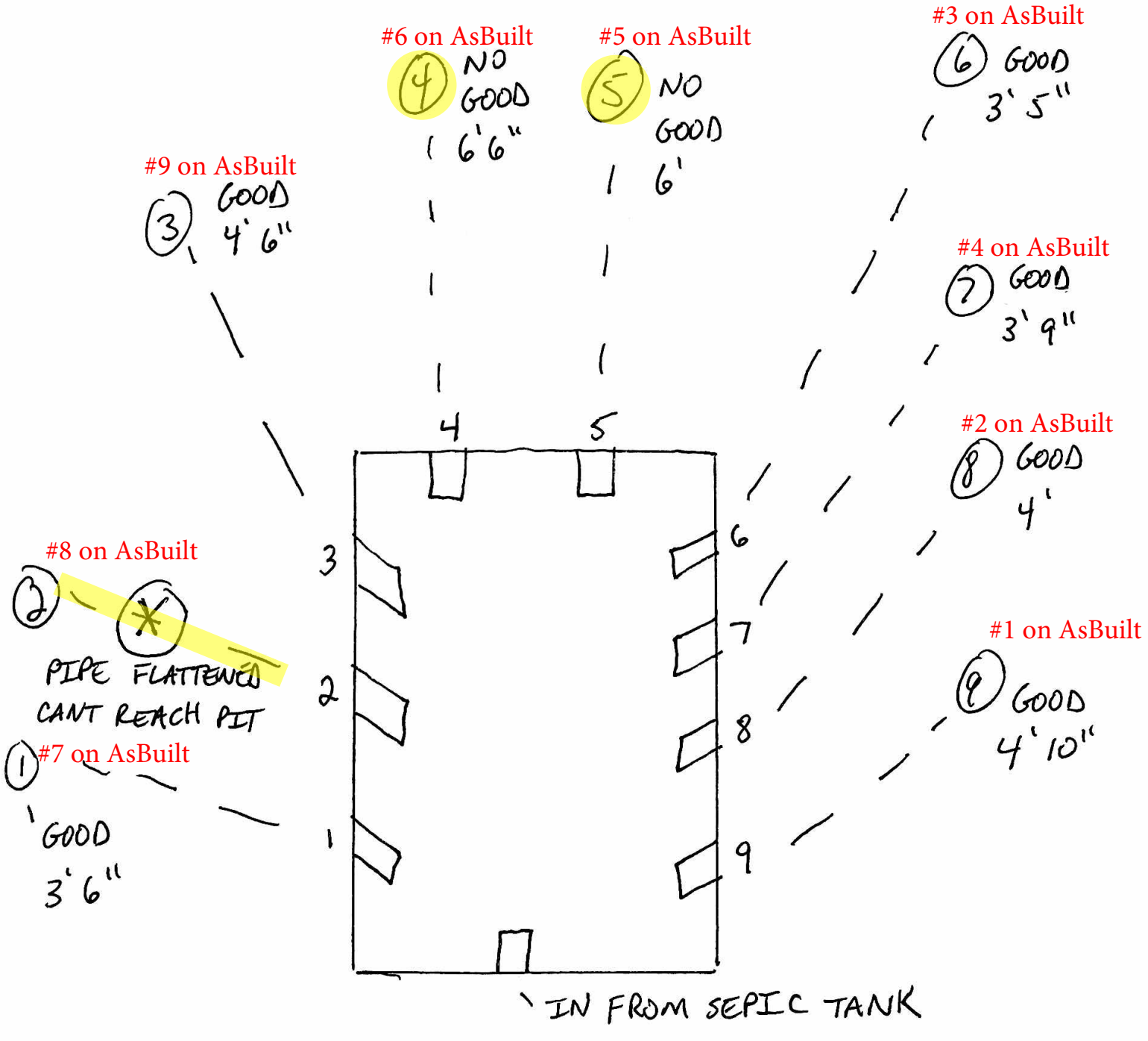
If you have any questions or concerns, please feel free to contact me.

Thank You,

Dave Milstein
Wc-DOH Lic# 514

This report is not a warranty and cannot guarantee the system will function properly for any period of time

MEASUREMENTS ARE DEPTH'S



Proposal

PECORD
EXCAVATING & CONTRACTING CORP

1340 Hayes Drive
Yorktown Heights, NY 10598

(914) 962-5136
Pecord@Yahoo.com

Date	Proposal #
9/14/2018	1144

Mercedes Benz of Goldens Bridge
NYS Route 22
Lewisboro, NY 10526

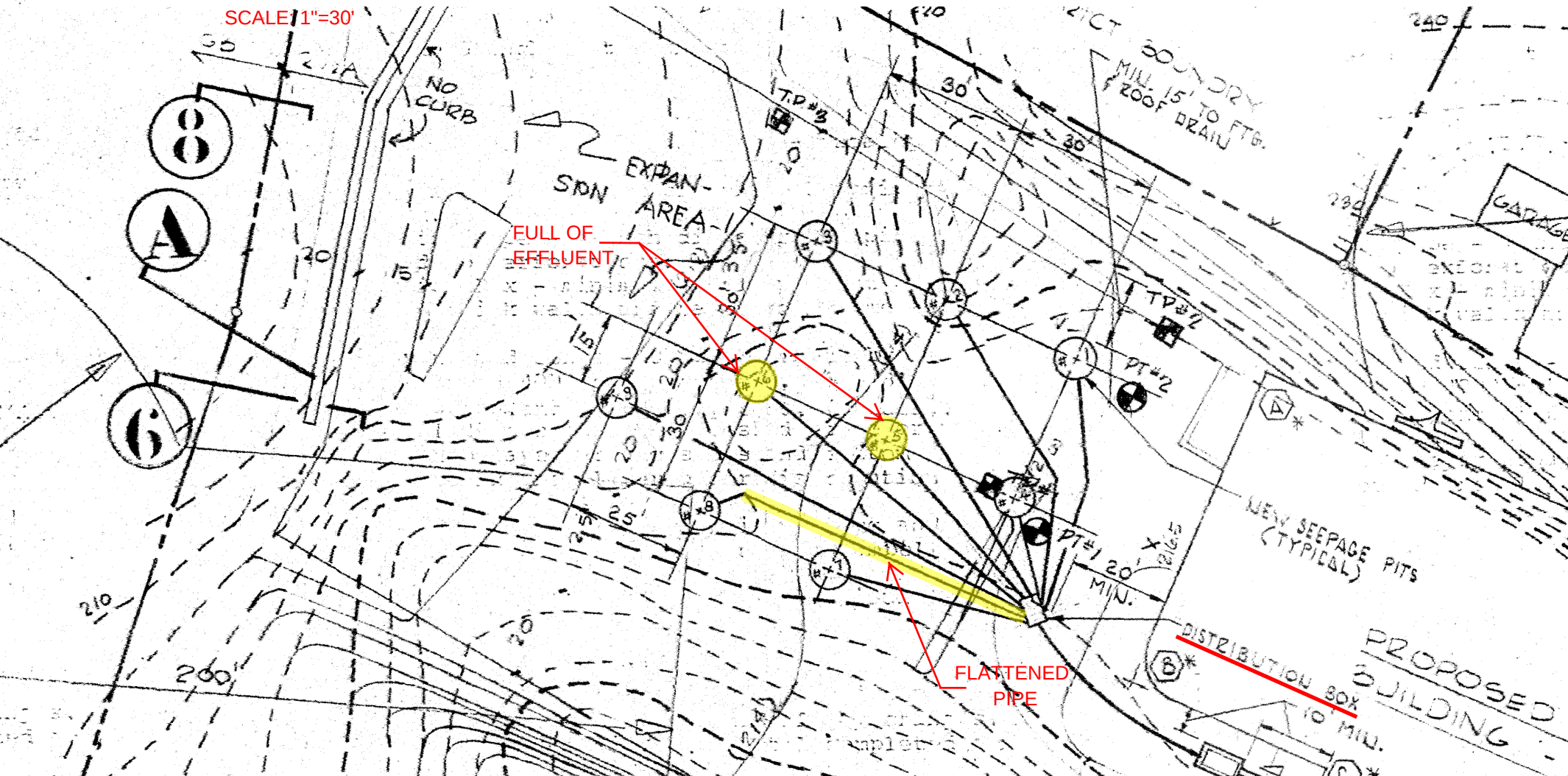
Project

Description	Total
Pump existing septic tank. Excavate distribution box and reset piping for proper flow to leaching tanks. Replace broken 4" service line to one of the leaching tanks. Install new riser over distribution box. Excavate and install risers on all nine leaching tanks with cast iron frame and covers. Remove excess fill and patch blacktop where repairs were made.	32,000.00

Total $32,000.00

RESULTS OF CAMERA INSPECTION BY J.D.M. MAINTENANCE, DATED 08/29/2018

(ZOOMED IN VIEW OF AS-BUILT SITE PLAN PREPARED BY JAMES ALBERT HOLT ARCHITECT/JOSEPH COLEMAN, LAST REVISED 08/31/1983)



Westchester gov.com

COUNTY OF WESTCHESTER
DEPARTMENT OF HEALTH
145 Huguenot Street, 7th Floor, New Rochelle, NY 10801

SEPTIC SYSTEM DATA FORM

Vehicle License # 61740R Vehicle Rated Tank Capacity 2500 Gallons

County Health Department Septage Collection Vehicle Decal # 354

Warning: The discharge of waste originating from outside the County into the County trunk sewer system is prohibited under section 824.221 of the laws of Westchester County. Any violation of applicable sections of the Sewer Act may subject you to civil liability fines and/or imprisonment and also may subject you to civil liability including that which is set forth in section 824.371 of the laws of Westchester County.

This form shall be completed in its entirety and a copy shall be provided to the property owner for all septage collected in Westchester County pursuant to Chapter 873, Article VIII, Section 873.724 of the Laws of Westchester County. The original of this form is to be submitted with the Sanitary Waste Contractor Disposal Permit at time of disposal at a County facility. For disposal outside of Westchester County, the original is to be submitted to the Westchester County Department of Health, 145 Huguenot Street, 7th Floor, New Rochelle, NY 10801. Failure to provide legible and complete information on this form will prevent allowance of vehicle discharge.

Contact person must be indicated only if customer serviced is other than a single-family residence.

Property Owner ESTATE MOTORS

Contact Person on Site BETH GRISTEN Tel. # 232 8122

Property Address (No. & Street) 313 MAIN ST.

Post Office GOLDENS BRIDGE Zip Code 10526

Municipality LEWISBORO Date of Service 7/13/18

Property Type (circle): Single Family Multi-Family Industrial (Commercial) Other _____

Number of Bedrooms _____

Indicate the number of each type of component evacuated and the gallons evacuated from each component.

Number		Gallons	Tank Depth (feet)	Scum Layer Thickness (inches)	Sludge Layer Thickness (inches)
1	Septic tank	1250	5	8	14
_____	Cesspool	_____			
_____	Seepage Pit	_____			
_____	Other	_____ Describe _____			
_____	Total	_____			

Is there any evidence of exposed or discharged septage onto ground surface? (circle): Yes (No)

Name of Septage Collector RICHARD MUNOZ License # 202

Signature [signature] Date 7/13/18

Name of Septage Collection Company VOGLER Tel. # 232 5535

Septage Receiving Facility:

X Hawthorne Manhole WCDEF Ticket Number 150288

_____ Other: _____

Disposal Date 7/13/18

All Licensed Septage Collectors shall be required to maintain their Westchester County License and must be displayed to the property owner upon request.

WHITE – COUNTY COPY YELLOW – VENDOR COPY PINK - CUSTOMER COPY

MERCEDES BENZ OF GOLDENS BRIDGE EXISTNG AND PROJECTED EMPLOYEE PLUS CUSTOMER DATA

Service Building	Autohaus Requirement	Employee Name	Existing Count	Proposed Count	Remarks/Comments
25 bays	1	James Licht	1	1	There are currently 5 service technicians for the existing Service Building and additional technicians are not required. Some bays are just prep and details bays. Many bays will be used for customer vehicle storage while the vehicle is awaiting prep and detail or customer pick-up/delivery. The amount of bays are not needed by the dealership but are required to meet minimum Autohaus requirements. The majority of vehicle service will take place in the Showroom Building.
Typcially a ratio of 1 service technician for every 2.5 service bays is required.	2	Dennis Marralheiro	2	2	
	3	Nike Nrecaj	3	3	
	4	George Olsen	4	4	
	5	Dean Macmarzyk	5	5	
	6				
	7				
	8	**Not needed by dealership**			
	9				
	10				
Showroom Building					
24 Service Bays	1	Lorenc Nrecaj	1	1	**It is estimated that 5 additional service technicians will be hired for the Showroom Building.** Typcially a ratio of 1 service technician for every 2.5 service bays is required. Therefore 24 service bays will require about 10 service technicians.
Typcially a ratio of 1 service technician for every 2.5 service bays is required.	2	Dennis Maspons	2	2	
	3	Charles Claffey	3	3	
	4	Anthony Ortiz	4	4	
	5	John Askew	5	5	
	6			**6**	
	7			**7**	
	8	**Plan for future capacity**		**8**	
	9			**9**	
	10			**10**	
Service Advisors	1	John Chipman	1	1	There are 8 service advisor stations per Autohaus requirements. However, only 4 service advisors are currently employed and 1 additional is anticipated. **It is estimated that 1 additional service advisor will be hired for the Showroom Building.**
	2	Evan Fenyo	2	2	
	3	William Thompson	3	3	
	4	Panayiotis Korkatzis	4	4	
	5	Plan for future capacity		**5**	
	6				
	7	**Not needed by dealership**			
	8				
Cashier - Greeter	1	Roger Simon	1	1	There are 2 cashier/greeter seats per Autohaus requirements. However, only 1 cashier/greeter is currently employed and an increase is not anticipated.
	2	**Not needed by dealership**			
Service Administration (BDC)	1	Krista Petrucelli	1	1	There are 5 service administration work spaces per Autohaus requirements and there are currently 5 employed and an increase is not anticipated.
	2	Briana Mason	2	2	
	3	Annmarie D'Onofrio	3	3	
	4	Jacquelyn Zervas	4	4	
	5	Shannon O'Brien	5	5	
Service Manager	1	Thomas Brennan	1	1	1 service manager office is needed per Autohaus requirements. There is currently 1 employed and an increase is not required.
Parts Manager	1	Demetrios Korkatzis	1	1	1 parts manager office is needed per Autohaus requirements. There is currently 1 employed and an increase is not required.
Parts Supply Couter	1	Russell Austin	1	1	There are 2 current employees for parts delivery and storage and an increase is not required.
	2	Jason Marquez	2	2	
Customer Seating Count Lower Level	10	Capacity doesn't mean all at the same time	5	5	There are 10 customer lounge seats/spaces per Autohaus requirements. There are currently 5 customer lounge seats/spaces available and current operations have not experienced the spaces being used close to capacity. Therefore, not more than 5 customers are anticipated at one time.
Reception	1	Ann Bellucci	1	1	There are 2 current employees for reception and an increase is not required.
	2	Ella Cristina Von Helms	2	2	
New Car Sales	1	Matthew Towers	1	1	There are 11 new car sales offices per Autohaus requirements. However, only 6 new car sales people are currently employed and an increase is not anticipated. **It is estimated that 2 additional new car sales people will be hired for the Showroom Building.**
	2	Robert Pierro	2	2	
	3	Adria Giulino	3	3	
	4	James Sheppard	4	4	
	5	Victor Varga	5	5	
	6	Jose Batista	6	6	
	7	**Plan for future capacity**		7	
	8			8	
	9				
	10	**Not needed by dealership**			
	11				
New Sales Manager/General Manager	1	Walter Pensa	1	1	1 new sales manager/general manager office is needed per Autohaus requirements. There is currently 1 new sales/general manager employed and an increase is not required.
New Car Assistant Sales Manager	**1**	**Not needed**			1 new car assistant sales manager space is needed per Autohaus requirements. The duties of the position are currently the responsibility of the current sales/general manager. It is not anticipated that one will be employed.
Pre-Owned Sales Manager	1	Robert Chakamian	1	1	1 pre-owned sales manager space is needed per Autohaus requirements. There is currently 1 pre-owned sales manager employed and an increase is not required.
Pre-Owned Sales	1	Robert Brechter	1	1	There are 5 pre-owned sales spaces per Autohaus requirements. However, only 2 pre-owned sales people are currently employed and an increase is not anticipated.
	2	Carlos Contreras	2	2	
	3				
	4				
	5				
F&I	1	Pamela Sieradzki	1	1	There are 3 F&I manager offices per Autohaus requirements and 3 F&I managers are currently employees for the dealership but at the off-site corporate offices. It is anticipated that 1 of the postiions will not be needed. **Therefore, it is estimated that 1 less employee will be needed.**
	2	Susan Weiss	2	2	
	3	Julia Radulic	3	**Not needed**	
Business Manager	**1**	**Not needed**			1 business manager office is needed per Autohaus requirements. The duties of the position are currently the responsibility of the current sales/general manager. It is not anticipated that one will be employed.
General Office - Accounting	1	Melody Plummer	1	1	These employees are located off-site in the NJ corporate offices.
	2	Vikki Lombardi	2	2	
	3	Zenabel Fessman	3	3	
Administration Assistants	1	Jenna Garland	1	1	
	2	Kim Kneuer	2	2	There are 2 current administrative assistants and an increase is not required.
Miscellaneous	1	Carlos Santacruz	1	1	There are 3 current custodial/maintenance employees and an increase is not anticpated.
	2	Patrick Roche	2	2	
	3	Erdlie Spence	3	3	
Drivers		Noel Soto	1	1	There are 9 current vehicle pick-up/delivery drivers and an increase is not anticpated. Not all of the drivers are on-site at the same time and they are on the road most of day.
		Gjon Kolaj	2	2	
		Ralph Brechter	3	3	
		Lawrence McSwiggan	4	4	
		Jason Dibenedetto	5	5	
		Ronald Gilliard	6	6	
		Roberto Alvarado	7	7	
		Walter Covert	8	8	
		Thomas Jakaj	9	9	
Pick-up and Delivery/Driver Coordinators		Manuel Maduro	1	1	There are 2 current driver coordiantors and an increase is not anticpated.
		Alberto Beato	2	2	
Customer Seating Count Upper Level	9	Capacity doesn't mean all at the same time	5	5	There are 9 customer lounge seats/spaces per Autohaus requirements. There are currently 5 customer lounge seats/spaces available and current operations have not experienced the spaces being used close to capacity. Therefore, not more than 5 customers are anticipated at one time.
Total Employee Count	**72**		**58**	**65**	**A net increase of 7 employees is anticipated based on the above explanations and information provided by the dealership. 2 of the employees will continue to work off-site and the 9 drivers will continue to spend most of the day on the road.**
Total Customer Count	**19**		**10**	**10**	
	Autohaus Requirement		**Existing Count**	**Proposed Count**	

Westchester County Department of Health
Bureau of Environmental Quality
25 Moore Avenue
Mt. Kisco, NY 10549

DESIGN DATA SHEET - SEPARATE SEWERAGE SYSTEM FILE NO. _____

Owner Mercedes Benz of Goldens Bridge Address 321 NY Route 22, Goldens Bridge, NY

Located at (Street) Anderson Lane Sec. 004E Block 11135 11137 Lot 1,2,3,4,5,6,7 42
(Indicate nearest cross st.)

Municipality Lewisboro Watershed NYCDEP - Muscoot Reservior

SOIL PERCOLATION TEST DATA REQUIRED TO BE SUBMITTED WITH APPLICATION

Presoak Date: 10/29/2018 Run Date: 10/30/2018

Hole #	CLOCK TIME			PERCOLATION			
Hole Number	Run No.	Start	Stop	Elapse Time Min.	Depth From Grd inches	To surface water	Water Level Drop In Inches	Soil Rate Min/In Drop
BH-1A	1	9:45:00 AM	9:48:00 AM	3:00	84"	85"	1	3:00
90" Deep	2	9:48:00 AM	9:51:30 AM	3:30	84"	85"	1	3:30
	3	9:51:30 AM	9:55:00 AM	3:30	84"	85"	1	3:30
BH-1B	1	10:01:00 AM	10:05:30 AM	4:30	54"	55"	1	4:30
60" Deep	2	10:05:30 AM	10:10:30 AM	5:00	54"	55"	1	5:00
	3	10:10:30 AM	10:15:30 AM	5:00	54"	55"	1	5:00

Notes: Perc test done by: Carlin-Simpson Associates

1) Tests to be repeated at same depth until approximately equal soil rates are obtained at each percolation test hole. All data to be submitted for review.
2) Depth measurements to be made from top of hole. DO NOT REPORT INCREMENTS OF LESS THAN ONE INCH

DESCRIPTION OF SOILS ENCOUNTERED IN TEST HOLES

DEPTH	HOLE NO. 1	HOLE NO.	HOLE NO.	HOLE NO.
G.L.	Refer to Soil Borings in Geotechnical Report prepared by Carlin-Simpson Associates			
6"				
12"				
18"				
24"				
30"				
36"				
42"				
48"				
52"				
60"				
66"				
72"				
78"				
84"				
85"				

WAS GROUNDWATER ENCOUNTERED? No

BEDROCK WAS ENCOUNTERED? No

INDICATE LEVEL AT WHICH WATER RISES AFTER BEING ENCOUNTERED

DEEP TESTS MADE BY _____ DATE OF DEEP TESTS _____

Name Stephen Spina Signature _____

Address JMC, PLLC
120 Bedford Road
Armonk, NY 10504

SEAL



CARLIN • SIMPSON & ASSOCIATES

Consulting Engineers
Geotechnical & Environmental

PRELIMINARY SUBSURFACE INVESTIGATION MEMO

DATE: **28 November 2018**

TO: **Stephen Spina, P.E.**
JMC Site Development Consultants

FROM: **Robert B. Simpson, P.E.**
Stephen Rossi, E.I.T

RE: **Proposed Development**
Mercedes-Benz of Goldens Bridge
Goldens Bridge, NY

JOB NO: **17-121**

In accordance with our proposal revised 25 September 2018, we have performed a Subsurface Soil and Foundation Investigation at the referenced site. The following is a summary of the preliminary subsurface investigation information attained during this study. The recommendations below are considered preliminary in nature and are intended to give guidance in the planning and designing of the new construction.

We understand that the planned construction will consists of two new additions, a three-story parking garage, stormwater detention systems, septic system, retaining walls, parking areas and driveways, and parking lifts.

We understand that a geotechnical report was prepared by McLaren Engineering Group in July 2011. A summary of the boring observations performed during this investigation are provided in Table 1, below. The McLaren report is attached for your reference.

We performed an additional subsurface investigation for the proposed development that included fifteen (15) borings and testing for the proposed stormwater and septic systems. summary of our boring observations is provided in Table 2, below.

Table 1 - McLaren Engineering Boring Observation Summary

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Parking/Driveway	B-1	+211.8	NE	15.0' (+196.8)	NE to 17.0'	+213.0	1.2
Parking/Driveway	B-2	+211.6	NE	NE to 17.0’	AR @ 5.0' (+206.6)	+214.5	2.9
Northern Stormwater Detention System	B-3	+210.2	NE	16.0' (+194.2)	Cored @ 19.0' (+191.2)	+191.8	-18.5
Parking/Driveway	B-4	+202.1	NE	NE to 6.0’	AR @ 6.0' (+196.1)	+199.5	-2.6
Parking/Driveway	B-5	+197.6	9.0' (+188.6)	NE to 20.5’	CWR @ 20.5' (+177.1)	+199.8	2.2
Southern Addition	B-6	+199.2	1.5' (+197.7)	NE to 2.0’	AR @ 2.0' (+197.2)	+182.0	-17.2
Southern Addition	B-7	+189.0	2.0' (+187.0)	NE to 4.0’	AR @ 4.0' (+185.0)	+182.0	-7.0
Southern Addition	B-7B	+189.1		NE to 3.0’	AR @ 3.0' (+186.1)	+182.0	-7.1
Southern Stormwater Detention System	B-8	+179.8	5.5' (+183.6)	8.5’ (+171.3)	CWR @ 9.5' (+170.3)	+169.5	-10.3
Southern Addition	B-9	+180.3	2.0' (+178.3)	NE to 3.0’	Cored @ 3.0' (+177.3)	+182.0	1.7
Southern Addition	B-10	+195.0	4.0' (+191.0)	NE to 13.0’	AR @ 13.0' (+182.0)	+182.0	-13.0
Southern Addition	B-11	+175.5	NE	NE to 11.0’	CWR @ 11.0' (+164.5)	+182.0	6.5
Southern Addition	B-12	+175.4	4.0' (+171.4)	10.5' (+164.9)	CWR @ 22.0' (+153.4)	+182.0	6.6
Southern Stormwater Detention System	B-13	+176.0	6.0' (+170.0)	16.5' (+159.5)	NE to 17.0'	+169.5	-6.5
Southern Addition	B-14	+173.0	6.0' (+167.0)	NE to 17.0’	NE to 17.0'	+182.0	9.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Table 2 - CSA Boring Observations

Area	Boring Number	Existing Ground Surface Elevation	Depth to Bottom of Existing Fill (Elevation)	Depth to Groundwater (Elevation)	Depth to Bedrock (Elevation)	Proposed Grade /System Inv. (Eleavation)	Cut (-) and Fill (+) Height to Reach Proposed Grades
Northern Septic System	SB-1	+210.0	3.0' (+207.0)	12.5' (+197.5)	AR @ 26.5' (+183.5)	+200.0	-10.0
Northern Stormwater Detention System	SB-2	+209.0	2.5' (+206.5)	NE to 16.0'	AR @ 16.0' (+193.0)	+191.8	-17.3
Northern Stormwater Detention System	SB-3	+201.5	3.5' (+198.0)	NE to 8.5'	NE to 8.5'	+191.8	-9.8
Upper Parking Porous Pavement	SB-4	+234.0	3.0' (+231.0)	NE to 12.0'	NE to 12.0'	+230.3	-3.7
Upper Parking Porous Pavement	SB-5	+234.0	NE	NE to 9.0'	NE to 9.0'	+230.3	-3.7
Southern Parking Structure	SB-6	+165.0	4.0' (+161.0)	5.0' (+160.0)	NE to 17.0'	+168.0	3.0
Southern Parking Structure	SB-7	+166.0	8.0' (+158.0)	7.0' (+159.0)	NE to 22.0'	+168.0	2.0
Rain Garden	SB-8	+173.0	6.0' (+167.0)	NE to 17.0'	NE to 17.0'	+169.3	-3.8
Rain Garden	SB-9	+177.0	7.0' (+170.0)	NE to 17.0'	NE to 17.0'	+169.3	-7.8
Rain Garden	SB-10	+178.0	>3.5'	NE to 3.5'	NE to 3.5'	+169.3	-8.8
Northern Addition	SB-11	+216.0	2.5' (+213.5)	NE to 13.5'	AR @ 13.5' (+202.5)	+216.3	0.3
Southern Addition	SB-12	+198.0	2.0' (+196.0)	NE to 2.0'	Cored @ 2.0' (+196.0)	+182.0	-16.0
Southern Addition	SB-13	+191.0	2.5' (+188.5)	NE to 4.0'	4.0' (+187.0)	+182.0	-9.0
Southern Addition	SB-14	+176.0	1.5' (+174.5)	NE to 6.0'	AR @ 6.0' (+170.0)	+182.0	6.0
Southern Parking Structure	SB-15	+169.0	1.5' (+167.5)	9.5' (+159.5)	NE to 27.0'	+168.0	-1.0

NE - Not Encountered

AR - Auger Refusal on Probable Bedrock

CWR - Completely Weathered Bedrock

Cored - Cored Bedrock

Soil Conditions

Stratum 1A Topsoil — The surface layer in portions of the site consist of topsoil that ranges from approximately 3 to 8 inches of topsoil.

Stratum 1B Asphalt — The surface layer in portions of the site consist of asphalt that ranges from approximately 1 to 6 inches of topsoil.

Stratum 2 Existing Fill — Below the surface layers in each of the borings is existing fill that generally consists of brown, gray coarse to fine SAND, little (to and) Silt, trace (to some) coarse to fine Gravel. The existing fill extends to depths ranging from 1.5 to 9.0 feet below the existing ground surface.

Stratum 3 Silty Sand with cobbles and boulders — Underlying the surface layers and existing fill is medium dense to dense brown coarse to fine SAND, trace (to and) Silt, trace (to some) coarse to fine Gravel, with cobbles and boulders. The Silty Sand extends to depths ranging from 3.0 to greater than 27.0 feet below the existing ground surface. Several borings were terminated in this stratum at auger refusal on probable bedrock at depths ranging from 2.0 to 26.5 feet below the existing ground surface.

Stratum 5 Weathered Schist — Underlying the Silty Sand with Gravel and existing fill throughout the site is completely to highly weathered Schist. This layer is soil like in state, however, there could be denser pockets that cannot be conventionally excavated. The weathered Schist is present at depths ranging from 8.5 to 22.0 feet below the existing ground surface.

Stratum 6 Schist Bedrock — Schist bedrock was cored at borings B-3, B-9, SB-12, and SB-13 for vertical distances of 10, 10, 10, and 5 feet respectively. The rock quality designation (RQD) of the recovered cores were 90% and 10% (B-1), 42% and 76% (B-9), 90% and 100% (SB-12), and 88% (SB-13). The Schist ranges from moderately weathered to fresh and is in a crushed to intact state.

Groundwater

- Groundwater was encountered in portions of the site above the bedrock surface at depths ranging from 5.0 to 18.5 feet below the existing ground surface. These depths correspond to groundwater elevations between +198.3 and +159.0.

- Groundwater on this site will be controlled by topography and the underlying bedrock surface.

Bedrock

- Schist bedrock ranging from dense completely weathered rock to intact, bedrock was encountered in the borings. Hard rock will be encountered during construction, particularly in the northeastern portion of the proposed southern addition.

- The rock conditions within the proposed building footprint will be variable. Harder bedrock may be encountered between boring locations.

- The completely weathered bedrock may be "rippable" to some extent using large construction equipment. However, penetration into the completely weathered bedrock and the underlying harder bedrock with excavation equipment will depend of the degree of weathering and fracturing in the rock. We anticipate that the "rippability" of the bedrock will be variable and may be limited. Zones of harder rock may be present at shallower depths and zones of weathered rock may be present at deeper intervals. Depending on the proposed grades, rock blasting and/or the use of hydraulic hammers may be required to excavate bedrock at the subject site.

Septic System

- Two modified percolation tests were performed in accordance with modifications accepted by the Goldens Bridge Health Inspector.

- Percolation tests were performed for the proposed septic system in the areas of SB-1 (BH-1A and BH-1B).

- The test depths and percolation rates are provided in Table 3, below.

Table 3 – Septic System Percolation Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Percolation Test Depth (Elevation)	Percolation Rate (mpi)
Northern Septic System	BH-1A BH-1B	12.5' (+197.5)	7.0' (+203.0) 4.5' (+205.5)	3.5 5.0

- Groundwater was encountered in boring SB-1 at a depth of 12.5 feet below the existing ground surface. This depth corresponds to elevation +198.3.

- No evidence of seasonal high groundwater was encountered, however seasonal high groundwater should be taken as 2'0" above the encountered groundwater.

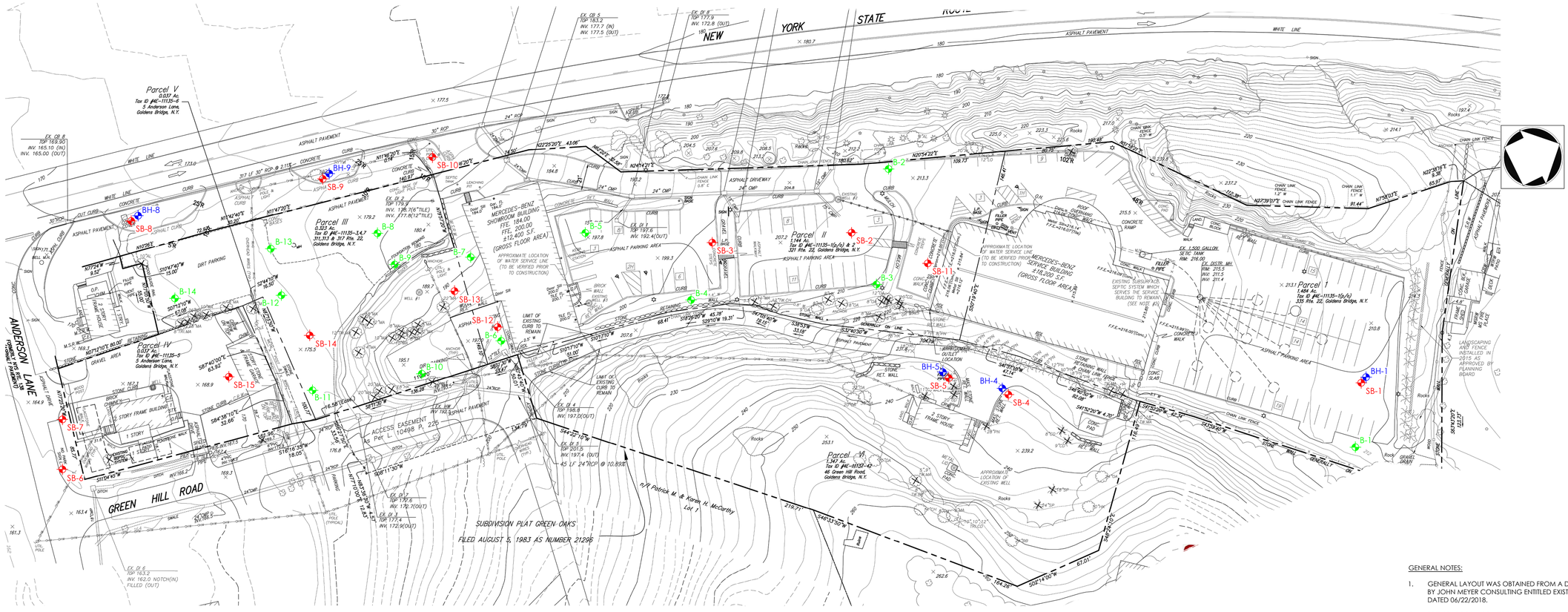
Stormwater Management Systems

- Borehole permeability tests were performed throughout the site in order to determine the infiltration characteristics of the site soils for the proposed stormwater management systems.

- The test depths and infiltration rates are provided in Table 4, below.

Table 4 – Stormwater Management Systems Test Results

Area	Boring Number	Depth to Groundwater (Elevation)	Borehole Permeability Test Depth (Elevation)	Infiltration Rate
Upper Parking Porous Pavement	SB-4	NE to 12.0'	5.5' (+228.5)	2.0 in/hr
Upper Parking Porous Pavement	SB-5	NE to 9.0'	5.5' (+229.5)	15.0 in/hr
Rain Garden	SB-8	NE to 17.0'	5.5' (+167.5)	20.0 in/hr
Rain Garden	SB-9	NE to 17.0'	9.0' (+168.0)	19.0 in/hr



GENERAL NOTES:

1. GENERAL LAYOUT WAS OBTAINED FROM A DRAWING THAT WAS PREPARED BY JOHN MEYER CONSULTING ENTITLED EXISTING CONDITIONS PLAN, DATED 06/22/2018.
2. PREVIOUS BORINGS WERE PERFORMED BY MCLAREN ENGINEERING GROUP IN JULY 2011.
3. BORING LOCATIONS WERE LAID OUT IN THE FIELD BY CARLIN-SIMPSON & ASSOCIATES (CSA).
4. BORINGS WERE PERFORMED BY GENERAL BORINGS INC. IN OCTOBER 2018 UNDER THE FULL TIME INSPECTION OF CSA.
5. LOCATIONS ARE APPROXIMATE.

LEGEND:

- - MCLAREN ENGINEERING BORING LOCATION (2011)
- - CSA BORING LOCATION
- - CSA BORE HOLE PERMEABILITY TEST LOCATION

ROBERT B. SIMPSON, P.E.
PROFESSIONAL ENGINEER

LICENSE NO. | SIGNATURE | DATE

BORING LOCATION PLAN

PROPOSED DEVELOPMENT - MERCEDES-BENZ
321 ROUTE 22
GOLDEN BRIDGE, NEW YORK

DRAWN: SR	SCALE: 1" = 40'
CHECKED: RBS	DATE: 27-NOV-18
PROJECT NO.: 17-121	DWG NO.: FIG - 1
APPROVED:	

CARLIN-SIMPSON AND ASSOCIATES
61 Main Street
Sayreville, NJ 08872
Consulting Geotechnical and Environmental Engineers

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 2
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
24-Oct-18	1045	12'6"	HSA	DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. Mcgovern
				FALL		30"			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15		FILL (Br gr cf S, s (-) $, l cf G))	
2		S-1	17		**FILL (Brown gray coarse to fine SAND, some (-) Silt, little coarse to fine Gravel)**	Rec = 15"
			34			moist
3			29		3'0"	
			12			
4		S-2	15		Br cf S, s $, s (-) cf G	Rec = 6"
			28			moist
5			50/2"			Refusal on spoon @ 4'8"
			38			
6		S-3	50		same	Rec = 16"
			57			moist
7			51			
			35			
8		S-4	30		Br cf S, a (-) $, s (-) cf G	Rec = 18"
			35			moist
9			33			
10						
			16			
11		S-5	14		same, s (-) $	Rec = 13"
			10		**Brown coarse to fine Sand, some Silt, some coarse to fine Gravel**	moist to wet
12			12			
			10			
13		S-6	15		same	Rec = 19"
			19			wet
14			27			
15						
			23			
16		S-7	34		same	Rec = 0"
			43			wet
17			39			
18						
19						
20						
			11			
21		S-8	18		Gr cf S, l (+) $, l (-) cf G	Rec = 19"
			23			wet
22			23			

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-1
Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**	**SHEET NO.:** 2 of 2
Client:	**Celebrity Motor Car LLC**	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24						
25					**Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel**	
26		**S-9**	22 40 30/1"		same, probably bedrock 26'6"	Rec = 7" wet
27					**End of Boring @ 26'6"**	
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-1A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +210.8

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 2-Nov-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 2-Nov-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
2		**S-1**	20 19		FILL (Br cf S, l (+) $, l cf G w/ cobbles)	Rec = 17"
3			19 38		**FIILL (Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel with cobbles)**	moist
4		**S-2**	21 26		same	Rec = 17"
5			31 30		4'3" Br cf S, s $	moist
6		**S-3**	24 46		Br cf S, s (-) $, s (-) cf G	Rec = 16"
7			36 26			moist
8		**S-4**	32 20		Br cf S, s (-) $, l (-) mf G	Rec = 14"
9			19 22		**Brown coarse to fine SAND, some Silt**	moist
10						
11		**S-5**	8 12		same	Rec = 19"
12			11 13		12'0"	moist Tip wet
13					**End of Boring @ 12'0"**	
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-2
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +209.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 24-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 24-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Brown coarse to fine SAND, some Silt, little coarse to fine Gravel)**	
			15			
2		**S-1**	50/3"		FILL (Br cf S, s $, l cf G)	Rec = 7"
					2'6"	moist
3					**Brown coarse to fine SAND, some (-) Silt, trace coarse to fine Gravel)**	
			10			
4		**S-2**	16		Br cf S, s (-) $, t cf G	Rec = 4"
			50/3"		4'3"	moist
5						Refusal on boulder @ 5'
					Boulders	attempted to core broke
6					6'0"	through @ 5'10"
						Boulder
7						Rec = 6"
			27			moist
8		**S-3**	61		Gr br cf S, l $, s cf G	Refusal on spoon @ 10'2"
			50/4"			auger to 15' very dense
9						with boulder
10					**Gray brown coarse to fine SAND,**	
		S-4	50/2"		same **little Silt, some coarse to fine Gravel**	Rec = 0"
11					**with cobbles and boulders**	moist
12						
13						
14						
15						
			55		same	Rec = 4"
16		**S-4**	50/3"		16'0"	moist
					End of Boring @ 16'0"	Auger Refusal on probable
17						bedrock @ 16'0"
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-3
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +201.5

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'2"	
2		S-1	8 9		FILL (Dk br cf S, a (+) $, t (+) mf G)	Rec = 18"
3			9 18		**FILL (Dark brown coarse to fine SAND, and (+) Silt, trace (+) medium to fine Gravel)**	moist many cobbles
4		S-2	11 28		FILL (same) 3'6" Br cf S, l (+) $, l cf G	Rec = 17"
5			21 37			moist
6		S-3	29 50/2"		same **Brown coarse to fine SAND, little (+) Silt, little coarse to fine Gravel, with many cobbles and boulders**	Rec = 8" moist many cobbles and boulders
7						
8					8'6"	Auger refusal @ 8'6"
9					**End of Boring @ 8'6"**	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-4
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
1		S-1	3 7		**Topsoil**	0'8"	Rec = 10"
2			7 6		FILL (Br cf S, s (+) $, t mf G) **FILL (Brown coarse to fine SAND, some (+) Silt, trace medium to fine Gravel)**		moist
3		S-2	5 5		FILL (same)	3'0"	Rec = 18"
4			20 39		Br cf S, s (+) $, l cf G		moist
5							
6		S-3	17 38		same		Rec = 10"
7			35 45		**Brown coarse to fine SAND, some (+) Silt, little coarse to fine Gravel**		moist
8							
9							
10							
11		S-4	19 33		same		Rec = 15"
12			21 25			12'0"	moist
13					**End of Boring @ 12'0"**		
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER BH-4A
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:**
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 29-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 29-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** KWA

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1					**Asphalt** 0'3"	
			9		FILL (Br cf S, s (+) $, t mf G)	
2		S-1	5		**FILL (Brown coarse to fine SAND,**	Rec = 15"
			5		**some (+) Silt, trace medium to fine Gravel)**	moist
3			10		FILL (same) 3'0"	
			34		Br cf S, s (+) $, l cf G	
4		S-2	44			Rec = 16"
			50/3"			moist
5						
			17			
6		S-3	35		same	Rec = 16"
			37		**Brown coarse to fine SAND,**	moist
7			30		**some (+) Silt, little coarse to**	
			20		**fine Gravel**	
8		S-4	55		same	Rec = 11"
			37			moist
9			20			
10						
			15			
11		S-5	17		same	Rec = 17"
			20			moist
12			29		12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-5
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +234.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 24-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 24-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1						
			15			
2		S-1	14		Br cf S, l (+) $, t mf G	Rec = 18"
			22			moist
3			25			
			23		**Brown coarse to fine SAND,**	
4		S-2	29		same **little (+) Silt, trace medium to**	Rec = 18"
			26		**fine Gravel**	moist
5			53			
			12			
6		S-3	12		same	Rec = 14"
			12		6'6"	moist
7			18		Br cf S, t (+) $, s (+) cf G	
			26		**Brown coarse to fine SAND,**	
8		S-4	28		same **trace (+) Silt, trace medium**	Rec = 6"
			36		**to fine Gravel**	moist
9			40		9'0"	
					End of Boring @ 9'0"	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-6
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +165.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**900**	**8'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
25-Oct-18	**915**	**5'0"**	**NONE**	**WGHT**		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'4"	
1						
			12			
2		**S-1**	13		FILL (Dk br cf S, a (-) $, t mf G)	Rec = 18"
			9		**FILL (Dark brown, brown coarse to fine SAND,**	moist
3			9		**and (-) Silt, trace medium to fine Gravel)**	
			15			
4			16		FILL (same) 4'0"	
		S-2	13		Lt br cf S, l $, t cf G	Rec = 15"
5			12		**Light brown coarse to fine SAND,**	moist
			9		**little Silt, trace coarse to fine Gravel**	
6		**S-3**	13		same, vvd	Rec = 18"
			13			moist
7			12		7'0"	
			12			
8		**S-4**	12		Lt br $ t (-), cf S	Rec = 17"
			13			wet
9			12			Liqui fiable when shook
						slightl vvd
10					**Light brown SILT trace (-), coarse to fine Sand**	
			3			
11		**S-5**	5		same, vvd	Rec = 18"
			7			wet
12			12			
13						
14					14'0"	
15					**Light brown coarse to fine SAND,**	
			2		**little Silt, trace fine Gravel**	
16		**S-6**	7		Lt br cf S, l $, t f G	Rec = 17"
			11			wet
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-7
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +166.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
25-Oct-18	**1030**	**7'0"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			2		**Topsoil** 0'7"	
1		**S-1**	7		FILL (Br cf S, l (-) $, t mf G)	Rec = 18"
			5			moist
2			4			
			2			
3		**S-2**	1		FILL (same)	Rec = 10"
			2		**FILL (Brown coarse to fine SAND, little (-) Silt, trace medium to fine Gravel)**	moist
4			2			
5						
			3			
6		**S-3**	2		FILL (same)	Rec = 13"
			8			moist
7			9			
8					8'0"	
9						
10						
			2			
11		**S-4**	3		Lt br cf S, s (-) $, t f G	Rec = 19"
			5		**Light brown coarse to fine SAND, some (-) Silt, trace fine Gravel**	wet
12			7			vvd
13						
14					14'0"	
15						
			7			
16		**S-5**	10		Lt br cf S, l (-) $, t (-) f G	Rec = 18"
			12			wet
17			13			
18						
					Light brown coarse to fine SAND, little (-) Silt, trace (-) fine Gravel	
19						
20						
			4			
21		**S-6**	7		same, t mf G	Rec = 20"
			10			wet
22			12		**End of Boring @ 22'0"** 22'0"	

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-8
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +173.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			4		**Topsoil** 0'6"	
1		S-1	6		FILL (Br cf S, s (+) $, t (+) mf G)	Rec = 10"
			6			moist
2			6			
			9			
3		S-2	9		FILL (same)	Rec = 12"
			12		**FILL (Brown coarse to fine SAND, some (+)**	moist
4			18		**Silt, trace (+) medium to fine Gravel)**	
5						
			15			
6		S-3	16		FILL (same) 6'0"	Rec = 17"
			6		Lt br cf S, l $, t mf G	moist
7			7			
			13			
8		S-4	14		same	Rec = 12"
			15			moist
9			20		**Light brown coarse to fine SAND,**	
					little Silt, trace medium to fine Gravel	
10						
			15			
11		S-5	11		same	Rec = 0
			9			moist
12			10			
13						
14						
15						
			8			
16		S-6	12		same, l (+) cf G	Rec = 15"
			14			moist
17			14		17'0"	
					End of Boring @ 17'0"	
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-9
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +177.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1						
			7			
2		S-1	9		FILL (Dk br cf S, l (+) $, s (+) cf G, w/debris)	Rec = 13"
			18		**FILL (Dark brown coarse to fine SAND,**	moist
3			39		**little (+) Silt, some (+) coarse to fine**	
			43		**Gravel, with debris)**	
4		S-2	42		FILL (same)	Rec = 10"
			21			moist
5			50/3"		5'0"	Auger refusal @ 6'0"
			4			Moved hole 5' east
6		S-3	4		FILL (Br cf S, s $, t mf G)	Rec = 18"
			6		**FILL (Brown coarse to fine SAND, some Silt,**	moist
7			11		**trace medium to fine Gravel)** 7'0"	
			8			
8		S-4	17		Lt br cf S, t (+) $, t mf G	Rec = 17"
			20			moist
9			20			
10						
			12			
11		S-5	13		same	Rec = 15"
			17		**Light brown coarse to fine SAND, trace (+)**	moist
12			23		**Silt, trace medium to fine Gravel**	
13						
14						
15						
			7			
16		S-6	10		same	Rec = 15"
			9			moist
17			14		17'0"	
18					**End of Boring @ 17'0"**	
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-10
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +178.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 25-Oct-18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 25-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	2 6		**Topsoil** 0'8"	Rec = 10"
2			10 22		FILL (Br cf S, l (-) $, s cf G) **FILL (Brown coarse to fine SAND, some (-) Silt, some coarse to fine Gravel)**	moist
3		S-2	11 50/5"		FILL (same)	Rec = 11"
4					3'6" **End of Boring @ 3'6"**	moist When augering to 5' metal grinding noise, aborted hole
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-11
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +216.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 25-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 25-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'3"	
1					**FILL (Brown coarse to fine SAND,**	
			16		**little (+) Silt, some coarse to fine Gravel)**	
2		S-1	23		FILL (Br cf S, l (+) $, s cf G)	Rec = 18"
			18		2'6"	moist
3			16		Br cf S, t (+) $, l (+) cf G	
			13			
4		S-2	19		same	Rec = 15"
			21			moist
5			15			
			3			
6		S-3	55		same	Rec = 17"
			50/0"		**Brown coarse to fine SAND,**	moist
7					**trace (+) Silt, little (+) coarse to**	
					fine Gravel	
8						
						many cobbles and boulders
9						
10						
			03			
11		S-4	3		same, l $ s, cf G	Rec = 10"
			10			moist
12			46			
13						
					13'6"	Auger refusal @ 13'6"
14					**End of Boring @ 13'6"**	
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-12

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+198.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**	**NX**			**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**	**2 3/8"**			**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
					Asphalt 0'2"	
1					**FILL (Light brown coarse to fine SAND,**	
			11		**trace (+) Silt, little coarse to fine Gravel)**	
2		**S-1**	50/4"		FILL (Lt br cf S, t (+) $, l cf G) 2'0"	Rec = 3"
						moist
3						
4						
		Run			**Gray Schist, intact, fresh**	Run #1
5		**#1**				2'0" - 7'0"
						Run = 60"
6						Rec = 100%
						RQD = 90%
7						
8						
9						
		Run			same	Run #2
10		**#2**				7'0" - 12'0"
						Run = 60"
11						Rec = 100%
						RQD = 100%
12					12'0"	
					End of Boring @ 12'0"	
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-13

Project:	**Proposed Development, Mercedes-Benz of Goldens Bridge NY**									**SHEET NO.:**	1 of 1
Client:	**Celebrity Motor Car LLC**									**JOB NUMBER:**	17-121
Drilling Contractor:	**General Borings Inc**									**ELEVATION:**	+191.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**		**DATUM:**	TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**				**START DATE:**	26 Oct 18
No Water Encountered				**DIA.**	**3 1/4"**	**1 3/8"**				**FINISH DATE:**	26 Oct 18
				WGHT		**140#**				**DRILLER:**	T. McGovern
				FALL		**30"**				**INSPECTOR:**	CKS

Depth (ft.)	Casing Blows pre Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION		REMARKS
			4		**Topsoil**	0'8"	
1		**S-1**	4		FILL (Dk br cf S, s (+) $, t (-) f G)		Rec = 8"
			6		**FILL (Dark brown coarse to fine SAND,**		moist
2			10		**some (+) Silt, trace (-) fine Gravel)**		
			18		FILL (same)	2'6"	
3		**S-2**	12		Lt br cf S, l (+) $, t f G		Rec = 10"
			23		**Light brown coarse to fine SAND,**		moist
4			50/3"		**little Silt, trace fine Gravel**	4'0"	
5							
					Gray Schist massive, moderately jointed		
6					**fresh**		
		Run					Run #1
7		**#1**					4'0" - 9'0"
							Run = 60"
8							Rec = 57" = 100%
							RQD = 88%
9						9'0'	
10					**End of Boring @ 9'0"**		
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

CARLIN - SIMPSON & ASSOCIATES Sayreville, NJ	TEST BORING LOG DRAFT	BORING NUMBER SB-14
Project: Proposed Development, Mercedes-Benz of Goldens Bridge NY		**SHEET NO.:** 1 of 1
Client: Celebrity Motor Car LLC		**JOB NUMBER:** 17-121
Drilling Contractor: General Borings Inc		**ELEVATION:** +176.0

GROUNDWATER					CASING	SAMPLE	CORE	TUBE	**DATUM:** TOPO
DATE	TIME	DEPTH	CASING	TYPE	HSA	SS			**START DATE:** 26-Oct-18
No Water Encountered				DIA.	3 1/4"	1 3/8"			**FINISH DATE:** 26-Oct-18
				WGHT		140#			**DRILLER:** T. McGovern
				FALL		30"			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
1		S-1	11 15		**FILL (Dark brown coarse to fine SAND, some (-) Silt, little coarse to fine Gravel with debris** 1'6"	Rec = 10" moist
2			15 8		Lt br $ a, cf S, t mf G	
3		S-2	6 7		same **Light brown SILT and, coarse to fine Sand, trace medium to fine Gravel**	Rec = 14" moist
4			7 8			
5					4'6" **Brown coarse to fine SAND, trace (+) Silt, trace coarse to fine Gravel**	
6		S-3	42 50/0"		Br cf S, t (+) $, t cf G 6'0"	Rec = 6"
7					**End of Boring @ 6'0"**	moist Auger refusal @ 6'0" Probable bedrock
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.				TEST BORING LOG DRAFT					BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY								**SHEET NO.:** 1 of 2
Client:	Celebrity Motor Car LLC								**JOB NUMBER:** 17-121
Drilling Contractor:	General Borings Inc								**ELEVATION:** +169.0
GROUNDWATER					**CASING**	**SAMPLE**	**CORE**	**TUBE**	**DATUM:** TOPO
DATE	**TIME**	**DEPTH**	**CASING**	**TYPE**	**HSA**	**SS**			**START DATE:** 26-Oct-18
26-Oct-18	**1230**	**9'6"**	**HSA**	**DIA.**	**3 1/4"**	**1 3/8"**			**FINISH DATE:** 26-Oct-18
				WGHT		**140#**			**DRILLER:** T. McGovern
				FALL		**30"**			**INSPECTOR:** CKS

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
			17		**Surface Gravel** 0'1"	
1		S-1	12		**FILL (Dark brown coarse to fine SAND,**	Rec = 10"
			5		**some Silt, trace medium to fine Gravel)** 1'6"	moist
2			4		Rd br cf S, l (+) $, t f G	
			3			
3		S-2	3		same	Rec = 12"
			3			moist
4			4			
5						
			7			
6		S-3	7		same, lt br s (-) $	Rec = 15"
			9			moist
7			12			
			11			
8		S-4	9		same, s (-) $	Rec = 17"
			10			moist
9			12		**Light brown coarse to fine SAND,**	
					some (-) Silt, trace fine Gravel	
10						
			6			
11		S-5	9		same, l $	Rec = 17"
			11			wet
12			14			
13						
14						
15						
			5			
16		S-6	4		same	Rec = 15"
			5			wet
17			8			Layer of vvd $ like in B-6 & 7
18					18'0"	
19						
20					**Light brown coarse to fine SAND,**	
			7		**trace (+) Silt, trace medium to fine**	
21		S-7	9		**Gravel**	
			50/5"		Lt br cf S, t (+) $, t mf G	Rec = 18"
22						wet
						Running sands

CARLIN - SIMPSON & ASSOCIATES Sayreville, N.J.	TEST BORING LOG DRAFT	BORING NUMBER SB-15
Project:	Proposed Development, Mercedes-Benz of Goldens Bridge NY	**SHEET NO.:** 2 of 2
Client:	Celebrity Motor Car LLC	**JOB NUMBER:** 17-121

Depth (ft.)	Casing Blows per Foot	Sample Number	Blows on Sample Spoon per 6"	Sym	IDENTIFICATION	REMARKS
23						
24					**Light brown coarse to fine SAND, trace (+) Silt, trace medium to fine Gravel**	
25						
26		**S-8**	15 8		same, l cf G	
27			15 13		27'0"	
28					**End of Boring @ 27'0"**	
29						
30						
31						
32						
33						
34						
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37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-4

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0918	*Start Water Level:*	25"	*Total Water Level Drop (in):*	2.0
1	*End Time:*	1018	*Final Water Level:*	23"	**Rate (in/hr):**	**2.0 in/hr**
Notes:						
Test No:	*Start Time:*	1025	*Start Water Level:*	25"	*Total Water Level Drop (in):*	3.0
2	*End Time:*	1125	*Final Water Level:*	22"	**Rate (in/hr):**	**3.0 in/hr**
Notes:						
Test No:	*Start Time:*	1127	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
3	*End Time:*	1227	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*	1230	*Start Water Level:*	24"	*Total Water Level Drop (in):*	2.5
4	*End Time:*	1330	*Final Water Level:*	21.5"	**Rate (in/hr):**	**2.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-5

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+234.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	5.5'
Water Table:	NE to 12.0'			**Test Elevation:**	+228.5
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	0906	*Start Water Level:*	30"	*Total Water Level Drop (in):*	21.5
1	*End Time:*	1006	*Final Water Level:*	8.5"	**Rate (in/hr):**	**21.5 in/hr**
Notes:						
Test No:	*Start Time:*	1010	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
2	*End Time:*	1110	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1113	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1213	*Final Water Level:*	9"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1217	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1317	*Final Water Level:*	8.5"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-8

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY	**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees	**Surface Elevation:**	+173.0

Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***		
				Test Depth:	5.5'
Water Table:	NE to 17.0'			**Test Elevation:**	+167.5
Bedrock:	NE to 17.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 17.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	**ATTEMPTED TO PRESOAK, WATER DRAINED**
Depth to Top of Remaining Water:			-	**IN LESS THAN 10 MINUTES**
Height of Remaining Water:			0"	**INFILTRATION RATE >20IN/HR**

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	

Notes:

General Notes:

CARLIN-SIMPSON & ASSOCIATES Sayreville, NJ	BOREHOLE PERMEABILITY TEST	BOREHOLE NO: BH-9

Project Name:	Proposed Development, Mercedes-Benz of Goldens Bridge NY			**Job No:**	17-121
Weather:	Partly Sunny, 50 degrees			**Surface Elevation:**	+177.0
Subsurface Notes	**Depth**	**Elev.**	***General Subsurface Notes:***	**Test Depth:**	9.0'
Water Table:	NE to 12.0'			**Test Elevation:**	+168.0
Bedrock:	NE to 12.0'			**Date Start:**	29-Oct-18
Restrictive Layer:	NE to 12.0'			**Date Finish:**	29-Oct-18

Presoak Notes

Presoak (Y/N):	Y	**Date:**	28-Oct-18	***Presoak Notes:***
Water Remaining in Hole (Y/N):			N	
Depth to Top of Remaining Water:			-	
Height of Remaining Water:			0"	

Test No:	*Start Time:*	1117	*Start Water Level:*	24"	*Total Water Level Drop (in):*	21.0
1	*End Time:*	1217	*Final Water Level:*	3"	**Rate (in/hr):**	**21.0 in/hr**
Notes:						
Test No:	*Start Time:*	1218	*Start Water Level:*	24"	*Total Water Level Drop (in):*	23.0
2	*End Time:*	1318	*Final Water Level:*	1"	**Rate (in/hr):**	**23.0 in/hr**
Notes:						
Test No:	*Start Time:*	1318	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.0
3	*End Time:*	1418	*Final Water Level:*	3"	**Rate (in/hr):**	**15.0 in/hr**
Notes:						
Test No:	*Start Time:*	1420	*Start Water Level:*	24"	*Total Water Level Drop (in):*	15.5
4	*End Time:*	1450	*Final Water Level:*	4"	**Rate (in/hr):**	**15.5 in/hr**
Notes:						
Test No:	*Start Time:*		*Start Water Level:*		*Total Water Level Drop (in):*	
	End Time:		*Final Water Level:*		**Rate (in/hr):**	
Notes:						

General Notes:

GEOTECHNICAL REPORT

Estate Motors
Goldens Bridge New York

Prepared for:

Charisma Holding Corporation

July 2011
MEG Project No. 111299

Prepared by:
McLaren Engineering Group
100 Snake Hill Road
West Nyack, NY 10994
(845) 353-6400

McLaren ENGINEERING GROUP

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APPENDIX

Appendix A Site Map
Appendix B Preliminary Grading Plan
Appendix C Boring Location Plan
Appendix D Boring Logs
Appendix E Soil Profiles

1. INTRODUCTION

1.1 General

McLaren Engineering Group (MEG) has developed and implemented a geotechnical investigation to evaluate site conditions for a previously developed parcel of land, herein referred to as the *project site*, located at 321 Route 22 in Goldens Bridge New York (see Site Location Map, Appendix A). This geotechnical program consisted of soil boring, rock coring, soil identification, and classification of soil stratigraphy, recommendations for use of excavated material, retaining walls, site earthwork, and foundation construction.

The exiting Estate Motors facility comprises a two-story building, housing an auto showroom and offices, and a second building, containing the vehicle service department. The site is located along a section of NYS Route 22 that parallels I-684, north of the NYS Route 138. The project site is part of a 3.3-acre parcel, owned by Charisma Holding Corporation.

1.2 Proposed Development

The proposed development of the site includes construction of a 32,000 square foot building adjacent to the existing show room, removal of the existing service department building, installation of a vehicle show canopy, and the modification of vehicle parking throughout the site. Large underground storm water retaining facilities are proposed between the new building and Route 22. This study has been based on the "Grading and Drainage Plan", dated August 01, 2009, prepared by John Meyers Consulting P.C. (see Appendix B).

1.3 Scope of Work

The Scope of the Geotechnical Investigation for the project site included the following tasks:

a) Establish a soil investigation program to include exploratory soil borings, rock coring and specifications for retrieval of soil samples.

b) Evaluate the findings of the soil investigation program to include definition of the characteristics of each significant soil stratum.

c) Evaluate geotechnical information to determine site-specific needs.

d) Perform a site-specific seismic evaluation utilizing on-site boring data, rock core data, and soil properties obtained throughout the site.

2. FIELD INVESTIGATION

MEG retained the services of Soil Testing Inc., 140 Oxford Road Oxford, CT 06478 to perform soil borings and rock cores. The work was initiated on July 6, 2011 and concluded on July 8, 2011.

Fourteen (14) borings were advanced to depths ranging between 3 feet and 29 feet. (See Boring Location Plan, Appendix C). Soil samples were extracted continuously from the surface to a depth of 12 feet and then in five (5) foot intervals. Ten-foot rock cores were taken at two locations, Borings B-3 and B-9.

Soil samples were obtained using the Standard Penetration Test (ASTM D-1586-84) using a split spoon sampler with a 2-inch O.D., 1 3/8-inch I.D. driven into the soil with a 140-pound hammer falling freely from a height of 30-inches. The SPT-N value given as blows per foot (bpf) is defined as the total number of blows required to drive the sampler from 6 to 18 inches, and this N-Value shown on the boring logs. (see Boring Logs, Appendix D).

Soil borings and rock cores were performed under the supervision of a qualified representative of MEG.

3. EXISTING CONDITIONS

3.1 Surface Conditions

The project site has two large buildings (each in excess of 20,000 square feet) and the remainder of the site is predominantly covered with asphalt roads and parking, with some landscape islands. In the southern portion of the site, south of the existing showroom building, is an asphalt parking area and a two (2) story wood structure believed to be a residential house which is not currently in use.

The site has large outcroppings of rock scattered throughout the site. There is a large change in elevation from the northern end of the site at elevation 211.8 to the southern end at elevation 173.0. On the western side of the site there is a large (greater than 30 feet high) cut face of rock, which was created by the construction of I-684.

3.2 Geology and Subsurface Conditions

The project site is located within the Hudson Highlands geologic region. Underlying bedrock is composed of metamorphic and igneous rock. This formation is predominantly composed of gneisses.

A review of the USDA Natural Resources Conservation Service, National Cooperative Soil Survey indicates that their two types of soil present on the project site. The soil

classifications within the project area are CrC Charlton –Chatfield complex and CsD Charlton –Chatfield complex. Both soil groups are characterized as hilly and rocky having slopes from 2 to 15 % slopes that are well draining.

(USDA Soil Properties)

Map Unit	Area (acres)	Soil Name(s)	Groundwater Depth (ft)	Depth to Bedrock	Hydrologic Group
Csd[1]	3.0	Charlton – Chatfield complex	8.5-15' [2]	8.5'-Greater than 20	B
CrC [1]	1.0	Charlton – Chatfield complex	8.5'-15' [2]	2' to greater than 20'	B

Source:

1. Natural Resource Conservation Center Web Soil Survey
2. Appendix D - Boring Logs

The primary subsurface strata encountered are shown on the Soil Profiles in Appendix E and are described as follows:

- Asphalt/Pavement - Most of the borings were performed on areas with paved surfaces. Approximately 2-4 inches of asphalt pavement was encountered at these locations.

- Topsoil – The surface layer in the areas not asphalt was a brown or dark brown sandy topsoil that ranges from 6 to 8 inches in depth.

- Fill - Underlying the surface layers in Borings B-5, B-11, B-12, B-14 there is a layer of fill. The material used as fill was generally a homogenous mix of sand-silt but has some traces of brick and ash in it. The SPT-N values in the fill material are good, except in Boring B-5 where the fill is most extensive (to 8 feet) and there is a layer of top soil/ at the 8-foot level.

- Sand with little silt and some gravel - Beneath the surface materials are layers of fine to medium dense brown and light brown medium to fine sand, little silt with some gravel with occasional cobbles and boulders. The sand layer varies from 3 to 20 feet thick.

- Rock stratum – Underlying the existing fill and sand layers is a Gneiss Bedrock. All but two of the borings (B-1 and B-14) were terminated in the bedrock or at refusal of on the probable bedrock surface at depths ranging from 2 to19 feet below the surface.

3.3 Summary of Boring Data

Table 1 provides a summary of the boring data, including resultant depth to bedrock, ground water elevation where obtainable, and the Rock Quality Index (RQD). The test boring locations and their corresponding logs are shown in Appendix C and Appendix D, respectively.

Table 1
Boring Data Summary

Boring Number	Surface Elevation (Approx.)	Depth to Bedrock (Fi)	Bedrock Elevation	Bedrock RQD	Comments
1	211.8	-	-		GW @ El. 196.8 (-15)*
2	211.6	5	206.6		
3	210.2	19	191.2	TOP=0.95, BOT=0.12	GW @ El. 200.2 (-10)*
4	202.1	6	196.1		
5	197.6	20.5	177.1		GW @ El. 189.1(-8.5)*
6	199.2	2	197.2		
7	189.0	4	185.0		
7B	189.1	3	186.1		
8	179.8	9.5	170.3		GW @ El. 171.3 (-8.5)*
9	180.3	3	177.3	TOP=0.42, BOT=0.76	
10	195.0	13	182.0		
11	175.5	11	164.5		
12	175.4	22	153.4		GW @ El. 164.9 (-10.5)*
13	176.0	16.5	159.5		GW @ El. 161 (-15)*
14	173.0				GW @ El.163.0 (-10)*

1. RQD = Rock Quality Index Defined as the cumulative length of core pieces longer than 10cm in a run divided by the total length of the core run.
2. GW = Observed Ground Water *(feet below Grade)
3. TOP refers to the first 60" core. BOT refers to the second 60" core.

3.4 Groundwater

Groundwater was observed between 8.5 and 15 feet below the natural ground surface. The approximate ground water table has been shown on the Soil Profile in Appendix E. The level of ground water is approximate and will vary seasonally.

inches below the floor slab and a 12-inch layer of crushed stone provided between the rock and floor slab.

4.3 Settlement

Foundations placed on the in-situ silt material and fill are expected to have minimal settlements, both long and short term. Based on the fill anticipated by the preliminary grading plan a maximum settlement of 0.5 inch is anticipated.

4.4 Lateral Design Loads

Basements of the new structures shall be designed to resist stress produced by lateral forces in accordance with Section 1610.1 of the New York State Building Code 2010 Edition, (NYSBC). The lateral loads that should be used are an active pressure of 45 pcf per foot of depth and an at rest pressure of 60 pcf per foot of depth.

4.5 Seismic Design Considerations

The material conforms to the properties that define Site Class C as determined in Section 1613.5.2, Site Classification, of the NYSBC. Accordingly, the following values should be used for the project:

Mapped Spectral Response Acceleration for Short Periods [Fig. 1615(1)]	S_S = 0.313g
Mapped Spectral Response Acceleration for 1-Second Period [Fig. 1615 (2)]	S_1 = 0.068g
Site Coefficient [Table 1615.1.2(1)]	F_a = 1.6
Site Coefficient [Table 1615.1.2(2)]	F_v = 2.40
Max. Considered Earthquake Spectral Response for Short Periods [Eq. 16-38]	S_{MS} = 0.485g
Max. Considered Earthquake Spectral Response for 1-Second Period [Eq. 16-39]	S_{M1} = 0.164g
Design Spectral Response Acceleration for Short Periods [Eq. 16-40]	S_{DS} = 0.32g
Design Spectral Response Acceleration for 1-Second Period [Eq. 16-41]	S_{D1} = 0.109g

A retail or similar facility is anticipated to be Seismic Use Group II (Table 1604.5). Based on the above values and New York State Building Code 2010, all structures shall be designed to Seismic Design Category "B" (Table 1613.5.6 (1) and 1613.5.6 (2)). The Seismic Use Group and Seismic Design Category and values for design must be confirmed by the project's structural engineer.

5. CONSTRUCTION RECOMMENDATIONS

5.1 Site Preparation

The initial site preparation should commence with the removal and stock piling of topsoil if present. An approximate depth of 6 inches should be anticipated, although depths may vary.

The Contractor shall be responsible at all times for conducting all earthwork operations in a safe and prudent manner such that all workmen and the general public will be protected from hazards. The Contractor shall observe all applicable Local, State and/or Federal requirements.

5.2 Building Subgrade

As stated in Section 4.1, in the area of Boring B-11, approximately 5 feet of material should be removed. This is near the area of the septic system soil that will need to be removed as described below. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

Boring B-6 revealed that a considerable amount of rock would need to be removed to place the northeastern portion of the proposed building. Boring B-6 has an elevation of rock at approximately 198.0 and the proposed basement floor is Elevation 183.9. This will require a removal of up to approximately 14 feet of rock. This depth of rock removal is reduced in the westerly direction to 2 feet at Boring B-7 and 2 feet at Boring B-10. The depth of rock removal does not account for any over excavation for the floor slab, stone base or footings.

Foundation drains will be required; as it is likely that ground water will be present and travel along the surface of the rock. The drains shall be a minimum of four (4) inches, surrounded by 12 inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.3 Rock Removal

In the areas of rock removal, the contractor should use line drilling and pneumatic hammer for removal. It is our understanding that while blasting is permissible in the Town of Lewisboro, the Owner did not propose during the Site Plan Approval process. All rock removed shall be performed without damage to the existing buildings scheduled to remain.

5.4 Re-use of Excavated Material

The excavated material may be used as fill, provided any organic materials, or large rocks greater than six (6) inches are removed. The rock that is removed for the building slab can be crushed and reused on site.

Recommendations for reuse of the excavated material are summarized as follows:

a) Prior to placement of the fill, the existing original ground surface should be stripped to a depth of 1 foot to remove all topsoil and the upper zone of subsoil. These soils can be used in landscaping or for nonstructural fill.

b) The fill should be placed in maximum eight (8)-inch thick lifts and compacted to at least 95% of the maximum dry density, determined using ASTM D-1557, beneath and within 3 feet outside of building areas, and to at least 92% of maximum dry density beneath parking areas and roadways. All earthwork activities shall be observed and tested by qualified geotechnical engineering.

5.5 Retaining Walls and Earth Supporting Structures

For the design and construction of new retaining walls or other earth supporting structures on site, MEG recommends that the following parameters be applied if supporting on-site soils:

Total Unit Weight = 120 pcf
Angle of Internal Friction = 35^0

Retaining wall shall be provided with foundation drains. The drains shall be a minimum of four (4) inches, surrounded by twelve (12) inches of ¾ inch clean stone and filter fabric. The drains should connect to the storm drain system or to daylight.

5.6 Removal of Existing Building

The wooden two-story building on the southern end of the site will be demolished. The basement slab, if it exists, shall be broken and all subsurface utilities within the building pad area should be removed. The excavated areas shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.7 Removal of Existing Septic Field

The proposed building site is going to be placed on an existing septic field. Soils in this area should be removed to a depth of 3.5 feet below grade including the septic tanks and all piping. The ground surface shall be inspected by the geotechnical engineer and proof rolled. The excavated area shall be backfilled and compacted with acceptable onsite material or borrow fill.

5.8 Placement of Fill for the Proposed Building

On the southern end of the proposed building the topography of the site slopes off and the area of the new buildings floor slab will be above the existing grade. In this area the foundation must be placed on virgin soil and the area below the foundation must be backfilled with select material and compacted.

5.9 Borrow Material

All fill soil should consist of predominately sandy soil and gravel with no more than 15% passing the 200 sieve, and have no particle greater than 6 inches, containing no deleterious material or environmental contaminants. Borrow material must undergo environmental testing to satisfy the Commercial soil standard per the NYSDEC Part 375 regulation.

5.10 Compaction

Fill sections and embankments shall be constructed of acceptable material and deposited in successive lifts with a loose thickness of each lift not to be more than nine (9) inches before compaction. The soil shall be compacted to the maximum dry density obtained in the lab (ASTM D-1557) as follows:

LOCATION	PERCENT OF MAXIMUM LABORATORY DENSITY ASTM D698
Subgrade & Fill Below Structures and Pavement	95
Subgrade & Fill in All other Areas	92

Contractor must maintain moisture content of not less than 2 percent below and not more than 4 percent above optimum moisture content of fill materials to attain required compaction density. Installation of fill should be performed under the supervision of a qualified Geotechnical Engineer.

5.11 Excavation & Temporary Soil Support

Where space limitations may preclude performance of open trenching operations, it may be necessary to perform the required excavations via earth support provisions such as sheeting and bracing. Areas which are not restricted by space constraints, may, in all likelihood, be performed within open excavations in conformance with applicable local, state and federal OSHA safety regulations.

5.12 Dewatering

It is anticipated that groundwater will be encountered at depths ranging from 8.5 to 11 feet below the existing ground surface. Dewatering may be necessary in excavations below these depths. The Contractor is responsible for means and methods for this operation.

This report has been respectfully submitted in accordance with the request of Charisma Holding Corporation and is, to the best of our knowledge, accurate and complete. Any questions regarding its content should be addressed to: McLaren Engineering Group, 100 Snake Hill Road, West Nyack, New York 10994.

Respectfully submitted,

The Office of
McLaren Engineering Group
M.G. McLAREN, P.C.

Malcolm G. McLaren, P.E., SECB
President

MGMcL/SLG/LAD/rjk

cc: File 110472

Appendix A
Site Location Map



LOCATION MAP

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NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP
M. G. McLAREN, P.C.
Tel. (845) 353-6400 Fax. (845) 353-6509
www.mgmclaren.com

PROJECT
ESTATE MOTORS
GOLDENS BRIDGE NEW YORK

SHEET TITLE
SITE LOCATION MAP
BUILDINGS 1 & 2

PROJECT NO.	111299
SCALE	NO SCALE
DATE	02-08-11
DRAWN BY	DT
CHECKED BY	LAD
DRAWING NO.	1
	1 OF 1 SHTS

FILE NAME: Q:\Cadd111\111299\SITE LOCATION MAP.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:20pm LAST SAVE: Wed, 20 Jul 2011 - 5:50pm BY: jmagycwe

3 2 1 0 0.5 1

Appendix B
Proposed Site Plan

APPROVED by Planning Board Resolution No._____, Dated _____.

_____ Date
Owner
CHARISMA HOLDING CORPORATION
ROUTE 22/P.O. BOX 711
GOLDEN'S BRIDGE, NY 10526

_____ Date
Planning Board Chairman
JEROME KERNER, AIA
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

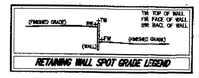
_____ Date
Planning Administrator
AIMEE HODGES
ONATRU FARM
99 ELMWOOD ROAD
SOUTH SALEM, NY 10590

_____ Date
Town Engineer's Certification
Reviewed for compliance with the Planning Board Resolution dated_____.
RYAN COYNE, P.E.
KELLARD SESSIONS CONSULTING, P.C.
TOWN CONSULTING ENGINEER

ANY ALTERATION OF PLANS, SPECIFICATIONS, PLATS AND REPORTS BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LICENSED LAND SURVEYOR IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW, EXCEPT AS PROVIDED FOR BY SECTION 7209, SUBSECTION 2.

NOTES:

1. EXISTING PROPERTY BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION WAS TAKEN FROM "SURVEY OF PROPERTY" AND "TOPOGRAPHIC SURVEY OF PROPERTY" OF CHARISMA HOLDING CORPORATION, AS PREPARED BY BUNNEY ASSOCIATES, DATED APRIL 12, 2010.
2. THE LOCATION OF THE EXISTING SUBSURFACE SEPTIC UTILITY INFORMATION WAS TAKEN FROM AS BUILTS ON DRAWING SI-5 "SEWAGE PROPOSAL AND WATER SUPPLY", LAST REVISED 08/31/1983 AS ACCEPTED BY THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH ON 09/27/1983.
3. ALL EXISTING STRUCTURES TO REMAIN SHALL HAVE THEIR TOPS AND GRATES ADJUSTED TO PROPOSED FINISHED GRADE.
4. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL ROOF DRAIN LEADERS AND FOUNDATION DRAINS FOR CONNECTION INTO THE NEW STORMWATER MANAGEMENT SYSTEM.
5. THE TOWN OF LEWISBORO ENGINEER SHALL INSPECT ALL WORK ASSOCIATED WITH THE PROPOSED DRAINAGE SYSTEM AND DETERMINE THE SYSTEM SUBSTANTIALLY COMPLETE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIX, REPAIR OR REPLACE ANY AND ALL ITEMS NECESSARY IN THE EVENT IT IS DETERMINED BY THE TOWN ENGINEER THAT THE DRAINAGE SYSTEM IS NOT COMPLETED PER TOWN STANDARDS.
6. RETAINING WALL DESIGN BY OTHERS.



RETAINING WALL SPOT GRADE LEGEND

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING BUILDING LINE
- +328 EXISTING SPOT GRADE
- EXISTING MANHOLE
- EXISTING DRAIN INLET
- EXISTING STONE WALL
- EXISTING RETAINING WALL
- EXISTING PAVEMENT EDGE OR CURB LINE
- X X EXISTING FENCE
- EXISTING TREE LINE
- 220 EXISTING INDEX CONTOUR
- 172 EXISTING MINOR CONTOUR
- 296 APPROXIMATE EXISTING GIS INDEX CONTOUR
- 186 APPROXIMATE EXISTING GIS MINOR CONTOUR
- EXISTING TREE
- EXISTING ROCK LEDGE
- WELL 24" CMP EXISTING WELL
- EXISTING STORM LINE
- 30" CMP EXISTING STORM LINE TO BE REMOVED
- 202 PROPOSED FINISHED GRADE
- + 416.50 PROPOSED SPOT GRADE
- DMH PROPOSED DRAINAGE MANHOLE
- CI & DI PROPOSED DRAIN INLET, TYPE CI & DI
- WQS PROPOSED WATER QUALITY STRUCTURE
- PROPOSED RETAINING WALL (NOTE 6)
- 15" HDPE PROPOSED STORM LINE
- 3.70% FINISHED GRADE SLOPE AND DIRECTION
- DDI DOUBLE DRAIN INLET
- TRENCH DRAIN

NO.	REVISION	DATE
1.	SUBMISSION TO BUILDING DEPARTMENT	10/19/2009
2.	PLANNING BOARD SUBMISSION	12/21/2009
3.	RESPOND TO TOWN COMMENTS	04/01/2010
4.	SUBMISSION TO WESTCHESTER COUNTY HEALTH DEPARTMENT	08/10/2010
5.	REVISED PER HEALTH DEPARTMENT COMMENTS	09/17/2010
6.	RESPOND TO TOWN COMMENTS	12/23/2010

Preliminary Not Final Preliminary Not Final

APPLICANT: ESTATE MOTORS, ROUTE 22, P.O. BOX 711, GOLDEN'S BRIDGE, NY 10526

ATTORNEY: DELBELLO DONNELLAN WEINGARTEN WISE & WIEDERKEHR, LLP, ONE NORTH LEXINGTON AVENUE, WHITE PLAINS, NEW YORK 10601

ARCHITECT: SULLIVAN ARCHITECTURE, P.C., 31 MAMARONECK AVENUE, WHITE PLAINS, NEW YORK 10601

JMC
JOHN MEYER CONSULTING, PC
120 Bedford Road
Armonk, NY 10504
voice 914.273.5225 · fax 914.273.2102
www.johnmeyerconsulting.com

GRADING & DRAINAGE PLAN

ESTATE MOTORS MERCEDES-BENZ
321 ROUTE 22
TOWN OF LEWISBORO, NY

RECEIVED
JAN 05 2011
SULLIVAN ARCHITECTURE, PC

DRAWN: SS APPROVED: RR
SCALE: 1" = 30'
DATE: 08/10/2009
PROJECT No: 9065
DWG: 9065-GE TAB: GRADING SCR: 1-GRAD
DRAWING No: SP-6

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GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

NOT FOR CONSTRUCTION

Appendix C
Boring Location Plan

Plot on Site Plans (Grading)

NORTH

ALIGNMENT P1

ALIGNMENT P2

B-1 B-2 B-3 B-4 B-5 B-6 B-7b B-8 B-9 B-10 B-11 B-12 B-13 B-14

0+00 1+00 2+00 3+00 4+00 5+00 6+00 6+50 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+

79' 58' 12' 5' 56' 5' 11' 2' 31+00 32+00 237' 22' 63' 138' 382' 22' 10' 65' 83' 82'

PROPOSED CANOPY

PROPOSED BLDG.

STATE MOTORS MERCEDES-BENZ SHOWROOM BUILDING

B-13 16.5' -15.5'(GW)

B-8 9.5' -8.5'(GW)

B-12 22' -10.5(GW)

B-14 -10'(GW)

FF 181-182

LEVEL 20'x2'

LEGEND

B-1 ⊕ DENOTES BORING LOCATION PLAN

30' 0 30' 60' FEET

SCALE: 1" = 30'

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NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied logic, inc.
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-4400 F. (845) 353-4509 www.mgmclaren.com

PROJECT

ESTATES MOTORS

GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING LOCATION PLAN

PROJECT NO.	111299.00
SCALE	AS NOTED
DATE	07-05-11
DRAWN BY	DT
CHECKED BY	LAD

DRAWING NO.

B-1

____ OF ____ SHTS

FILE NAME: d:\Codd111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:18pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmcgwire

Appendix D
Boring Logs

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-1
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/6/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/6/11
AT 15 FT AFTER 0 HOURS	HAMMER WT.: 140# / BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	10"	2'0"	9 / 15		dry compact	0'3"	TOPSOIL; F GRAVEL and brn C-F sand,tr silt
							20 / 11				
		2	ss	24"	20"	4'0"	24 / 35		dry dense		brn F-C SAND,sm silt F gravel
							44 / 41				
5		3	ss	11"	11"	4'11"	51 / 100/5"		v dense		brn/gry FM SAND & SILT,lit F gravel,C sand,tr cobble
											SAME
		4	ss	24"	24"	8'0"	42 / 37		moist/dry		lt brn FM SAND,tr C sand,F gravel,silt
							23 / 23		dense		
		5	ss	24"	20"	10'0"	13 / 22		moist		brn VF F SAND,sm silt,lit M-C sand,tr F gravel
10							22 / 22		compact		
		6	ss	24"	18"	12'0"	24 / 27		moist		brn F-C SAND and F gravel
							24 / 24		compact		
15											
		7	ss	24"	10"	17'0"	9 / 24		wet		brn F-C SAND & F GRAVEL,lit silt,tr cobble
							20 / 51		compact	17'0"	
											E.O.B. 17'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-1

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE M = MEDIUM F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-2
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	2 / 44		dry	0'3"	ASPHALT; bm FM SAND,sm silt,F gravel,lit C sand,tr cobble,roots
							53 / 65		dense		
		2	ss	5"	5"	2'5"	50/5"		dense		brn FM SAND,sm silt,F gravel,tr C sand
									dry		bm FM SAND,sm silt,F gravel,lit C sand,tr weathered rock
5		3	ss	3"	3"	4'3"	50/3"		dense	5'0"	Auger refusal
											E.O.B. 5'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-2

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-3
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 16 FT AFTER 0 HOURS AT __FT AFTER __HOURS		DATE START 7/6/11 DATE FINISH 7/6/11 SURFACE ELEV. GROUND WATER ELEV.

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	14"	12"	1'2"	3 / 8		dry	0'4"	ASPHALT; brn F SAND & SILT,lit MC sand,F gravel,tr roots
							50/2"		dense		sm cobbles & sm boulders 1'6" - 2'6"
		2	ss	24"	18"	4'0"	18 / 22		dry		brn/lt brn VF F SAND & SILT,tr MC sand,F gravel,roots
							21 / 27		dense		
5		3	ss	24"	20"	6'0"	52 / 35		dry		SAME
							44 / 37		dense		brn/lt brn VF F SAND,sm silt,lit M-C sand,F gravel
		4	ss	24"	18"	8'0"	41 / 65		dry		lt brn FM SAND,sm C sand,F gravel,lit silt,tr weathered cobble
							52 / 51		v dense		
		5	ss	7"	7"	8'7"	47 / 50/1"		dense		brn F-C SAND & F GRAVEL,sm silt
10											
		6	ss	24"	18"	12'0"	37 / 33		mst/v mst		gry/lt brn F-C SAND & SILT,sm F gravel
							40 / 43		dense		
15											
		7	ss	24"	10"	17'0"	21 / 39		wet		brn VF F SAND & SILT,tr M-C sand,F gravel,cobble
							35 / 47		dense		
										18'6"	Auger refusal
											(set 3" FW casing at 19'0")
20		1	c	60"	60"	24'0"	RQD = 95%	1.5			BEDROCK
								2.5			
								3			
								3			
								3.5			
25		2	c	60"	29"	29'0"	RQD = 10%	3			highly fractured BEDROCK
								4			
								4			
								4.5			
								6		29'0"	
30											E.O.B. 29'0"
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-3

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

C = COARSE M = MEDIUM F = FINE

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-4
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	3 / 4		moist	0'6"	TOPSOIL; brn SILT & VF F SAND,tr M-C sand,F gravel,roots
							5 / 3		loose	2'0"	
		2	ss	24"	17"	4'0"	5 / 11		wet/dry		brn FM SAND & SILT,sm C sand,F gravel,tr cobble,roots
							88 / 51		v dense		
5		3	ss	17"	17"	5'5"	56 / 70				brn FM SAND & SILT,sm C sand,F gravel,tr cobble
							100/5"		v dense	6'0"	Auger refusal
											E.O.B. 6'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-4

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-5
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE: HSA / SS SIZE I.D.: 3 ¾" / 1 3/8" HAMMER WT.: 140# BIT HAMMER FALL: 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT __FT AFTER __HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	15"	2'0"	5 / 11		dry	0'2"	ASPHALT; drk brn FM SAND & SILT,lit C sand,F gravel,tr boulder
							15 / 18		compact		
		2	ss	22"	15"	3'10"	19 / 37		dry		brn F-C SAND & F GRAVEL,cobble,boulder,tr silt,building rubble (fill)
							28 / 100/4"		dense		
5		3	ss	24"	18"	6'0"	23 / 28		dry		SAME; and silt
							18 / 17		compact		SAME; and silt
		4	ss	24"	15"	8'0"	16 / 30		dry		SAME; and silt (fill)
							27 / 19		compact		
		5	ss	24"	17"	10'0"	15 / 4		moist/wet	9'0"	TOPSOIL (drk brn organic SILT)
10							3 / 6		soft	10'0"	brn SILT & F SAND,tr M-C sand,F gravel,clay,roots
		6	ss	24"	11"	12'0"	17 / 15		moist		brn C-F SAND,sm F gravel,tr silt
							18 / 37		compact		
									moist		
15		7	ss	6"	6"	15'6"	50/6"		dense	15'6"	brn F-C SAND,sm F gravel,tr silt
											fractured BEDROCK, rock frags
									moist		
20		8	ss	9"	9"	20'9"	50 / 50/3"		dense	20'9"	SAME
											E.O.B. 20'9"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-5

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-6
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE HSA / SS	DATE START 7/8/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D. 3 ¾" / 1 3/8"	DATE FINISH 7/8/11
	HAMMER WT. 140# BIT	SURFACE ELEV.
	HAMMER FALL 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC.	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	10"	1'6"	11 / 10 / 50/6"		dry/moist dense	0'2" 1'6" 2'0"	ASPHALT; brn FM SAND & SILT,sm F gravel,lit C sand,tr ash, cinders (fill) Auger refusal weathered BEDROCK or BOULDERS
5											E.O.B. 2'0"
10											
15											
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-6

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-7, B-7A
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR TYPE HSA / SS SIZE I.D. 3 ¾" / 1 3/8" HAMMER WT. 140# / BIT HAMMER FALL 30"	OFFSET DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	16"	2'0"	18 / 16		dry	0'2"	TOPSOIL and blasted ROCK;brn FM SAND,sm silt,C sand,F gravel,
							24 / 14		compact		tr brick,ash,building rubble (fill)
		2	ss	22"	2"	3'10"	5 / 5		dry	3'0"	BOULDERS
							9 / 50/4"		loose	4'0"	Auger refusal
5											
											E.O.B. 4'0"
											(5' offset)
0											B-7A
										3'0"	Auger refusal
5											E.O.B. 3'0"
10											
15											
20											
25											
30											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-7, B-7A

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-8
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT 8'6" FT AFTER 0 HOURS AT __FT AFTER __HOURS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# / BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6	6 - 12	12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	15"	2'0"		6			dry	0'6"	ASPHALT & PROCESS GRAVEL; brn FM SAND & SILT,sm
							7	4			loose		F gravel,lit C sand,tr brick,glass (fill)
		2	ss	24"	14"	4'0"	3	4			dry		SAME
							5	12			loose		
5		3	ss	24"	20"	6'0"	5	8			dry/moist	5'6"	SAME
							9	8			loose		brn F-C SAND,F gravel,tr silt
		4	ss	24"	14"	8'0"	43	42			moist		lt gry FM SAND,sm silt,lit C sand,F gravel,tr cobble
							31	12			dense	8'10"	lt gry FM SAND,lit C sand,F gravel,tr silt
		5	ss	10"	6"	8'10"	24	50/4"			wet/dense	9'6"	fractured ROCK Auger refusal
10													
													E.O.B. 9'6"
15													
20													
25													
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. **HOLE NO. B-8**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-9
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS		

	CASING	SAMPLER	CORE BAR
TYPE	HSA	SS	NWD4
SIZE I.D.	3 ¾"	1 3/8"	2 ⅛"
HAMMER WT.		140#	BIT
HAMMER FALL		30"	dia

OFFSET
DATE START 7/8/11
DATE FINISH 7/8/11
SURFACE ELEV.
GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 - 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	12"	2"	2'0"			dry	0'6"	2" ASPHALT/4" process STONE and WOOD (2x4's)
							7 14		loose	1'0"	concrete slab
		2	ss	3"	3"	2'3"	50/3"		dense	2'0"	concrete rubble/cobbles
		1	c	60"	52"	8'0"	RQD = 42%	2.0			bm FM SAND,sm silt,lit C sand,F gravel,tr weathered rock frags
5								2.5		3'0"	Auger refusal
								3.0			(set 3" FW casing at 3'0")
								3.5			BEDROCK
								5.0			
		2	c	60"	60"	13'0"	RQD = 75%	2.0			
10								3.0			
								3.5			
								3.5			
								3.0		13'0"	
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-9

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS
SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER
PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-10
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING / SAMPLER / CORE BAR	OFFSET
	TYPE: HSA / SS	DATE START: 7/8/11
GROUND WATER OBSERVATIONS	SIZE I.D.: 3 ¾" / 1 3/8"	DATE FINISH: 7/8/11
AT none FT AFTER 0 HOURS	HAMMER WT.: 140# BIT	SURFACE ELEV.
AT FT AFTER HOURS	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	21"	10"	1'9"	19 / 9		dry compact	0'2"	TOPSOIL; drk brn FM SAND,sm silt,F gravel,lit C sand,tr roots, cobble,boulders (fill)
							13 / 75/3"				BOULDERS 2' - 4' (fill)
										4'0"	
5		2	ss	24"	12"	6'0"	10 / 9		dry compact		brn/gry F SAND,lit M sand,F gravel,tr roots
							20 / 36				
		3	ss	24"	12"	8'0"	46 / 42		dry dense		brn/gry FM SAND,sm C sand,F gravel,tr silt,cobble
							41 / 28				
		4	ss	24"	20"	10'0"	43 / 32		dry dense		lt brn/brn F-C SAND,sm F gravel,lit silt
10							40 / 48				
		5	ss	10"	10"	10'10"	21 / 100/4"		v dense	11'0"	brn FM SAND,sm silt,F gravel,lit C sand,tr weathered rock frags
										13'0"	fractured BEDROCK Auger refusal
15											E.O.B. 13'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____ CASING THEN _____ CASING TO _____FT. **HOLE NO. B-10**

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS C = COARSE

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER M = MEDIUM

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50% F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-11
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	CASING: HSA; SAMPLER: SS; CORE BAR:	OFFSET
	TYPE: HSA; SS	DATE START 7/7/11
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾"; 1 3/8"	DATE FINISH 7/7/11
	HAMMER WT.: 140# BIT	SURFACE ELEV.
	HAMMER FALL: 30"	GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	18"	14"	2'0"	10		dry	0'2"	1" ASPHALT/1" proc stone;drk brn F SAND & SILT,tr M sand,F
							6 5		loose		gravel,roots
		2	ss	24"	16"	4'0"	5 3		dry		brn/lt brn VF F SAND,sm silt,tr M sand,F gravel,roots
							4 4		v loose		
5		3	ss	24"	22"	6'0"	5 8		dry		lt brn/tan FM SAND,sm silt,tr C sand
							11 10		loose		
		4	ss	24"	18"	8'0"	11 13		dry		lt brn VF F SAND,sm silt,tr M sand
							13 14		compact		
		5	ss	24"	17"	10'0"	97 40		dry		brn FM SAND,sm C sand,F gravel,cobble,lit silt,tr
10							33		dense	10'0"	weathered rock frags
		6	ss	10"	10"	10'5"	100/5"		v dense	11'0"	fractured ROCK Auger refusal
15											E.O.B. 11'0"
20											
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-11

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-12
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT 10'6" FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0-6	6-12	12-18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	17"	2'0"	20	23			dry compact		brn/brk brn F-C SAND & SILT,sm F gravel,tr ash,roots (fill)
							15	14					
		2	ss	24"	16"	4'0"	15	12			dry compact		brn/drk brn SILT & F SAND,tr M-C sand,F gravel,roots
							14	13				4'0"	
5		3	ss	24"	17"	6'0"	9	10			dry loose		brn/lt brn F SAND,sm silt,tr M sand,clay,root
							8	8					
		4	ss	24"	20"	8'0"	8	13			dry compact		lt gry/lt brn FM SAND,sm silt,lilt C sand,F gravel
							21	21					
		5	ss	24"	16"	10'0"	11	13			moist compact		gry F SAND & SILT,tr M sand
10							15	19					
		6	ss	24"	16"	12'0"	17	19			wet compact		SAME
							21	28					brn F-C SAND,sm F gravel,tr weathered BOULDER
15													
		7	ss	24"	15"	17'0"	18	12			dry/moist compact		brn C-F SAND and F GRAVEL,tr silt
							20	14					
													some cobble at 18'
20		8	ss	7"	6"	20'7"	88	50/1"			v moist dense	20'6"	brn/gry F-C SAND & F GRAVEL,weathered rock frags
												22'0"	weathered ROCK Auger refusal
25													E.O.B. 22'0"
30													
35													
40													

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-12

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE
M = MEDIUM
F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-13
	PROJECT NO. G87-8898-11	
	PROJECT NAME: Estate Motors	BORING LOCATIONS: per Plan
FOREMAN - DRILLER: TP/djd	LOCATION: 321 Route 22, Town of Lewisboro, NY	
INSPECTOR	TYPE: CASING HSA, SAMPLER SS, CORE BAR	OFFSET
GROUND WATER OBSERVATIONS AT 16'6" FT AFTER 0 HOURS AT FT AFTER HOURS	SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	14"	2'0"	6 / 11		dry	0'2"	ASPHALT;brn F-C SAND & SILT,sm F gravel,tr brick,ash,root
							49 / 17		dense		
		2	ss	24"	12"	4'0"	6 / 9		dry		drk brn F SAND & SILT,lit M-C sand,F gravel,tr brick,ash,roots (fill)
							23 / 14		compact		
5		3	ss	24"	12"	6'0"	8 / 9		dry		SAME
							9 / 9		loose	6'0"	
		4	ss	24"	19"	8'0"	13 / 18		dry		brn FM SAND,sm silt,lit C sand,F gravel
							17 / 20		compact		gry VF F SAND,sm silt,tr F gravel
		5	ss	24"	24"	10'0"	24 / 20		dry		gry VF F SAND,sm silt,tr M-C sand,F gravel
10							19 / 23		compact		
		6	ss	24"	16"	12'0"	27 / 19		dry		brn FM SAND,lit C sand,tr F gravel
							16 / 20		compact		
15											
		7	ss	24"	16"	17'0"	16 / 29		moist/wet		lt brn F-C SAND & SILT,sm M sand,lit C sand,tr F gravel
							20 / 15		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-13

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

C = COARSE

M = MEDIUM

F = FINE

SOILTESTING, INC. 90 DONOVAN RD. OXFORD, CT 06478 CT (203) 262-9328 NY (914) 946-4850	CLIENT: McLaren Engineering	SHEET 1 OF 1 HOLE NO. B-14
	PROJECT NO. G87-8898-11	
	PROJECT NAME Estate Motors	BORING LOCATIONS per Plan
FOREMAN - DRILLER TP/djd	LOCATION 321 Route 22 Town of Lewisboro, NY	
INSPECTOR		OFFSET
GROUND WATER OBSERVATIONS AT none FT AFTER 0 HOURS AT FT AFTER HOURS	TYPE: CASING HSA, SAMPLER SS, CORE BAR SIZE I.D.: 3 ¾", 1 3/8" HAMMER WT.: 140#, BIT HAMMER FALL: 30"	DATE START 7/7/11 DATE FINISH 7/7/11 SURFACE ELEV. GROUND WATER ELEV.

DEPTH	CASING BLOWS PER FOOT	SAMPLE NO	Type	PEN	REC	DEPTH @ BOT	BLOWS PER 6 IN ON SAMPLER (FORCE ON TUBE) 0 - 6 / 6 - 12 / 12 - 18	CORE TIME PER FT (MIN)	DENSITY OR CONSIST / MOIST	STRATA CHANGE DEPTH / ELEV	FIELD IDENTIFICATION OF SOIL REMARKS INCL. COLOR, LOSS OF WASH WATER, SEAMS IN ROCK, ETC.
		1	ss	24"	20"	2'0"	5 / 13		dry	0'1"	ASPHALT;brk brn FM SAND & SILT,sm F gravel,tr brick,ash
							17 / 6		compact		
		2	ss	24"	22"	4'0"	12 / 17		dry		drk brn FM SAND,sm C sand,F gravel,silt,tr roots,cobble
							33 / 56		dense		
5		3	ss	24"	18"	6'0"	29 / 11		dry		drk brn/brn F SAND & SILT,lit F gravel,tr M-C sand,ash,brick (fill)
							7 / 5		loose	6'0"	
		4	ss	24"	22"	8'0"	1 / 5		dry		brn FM SAND & SILT,lit F gravel,tr C sand,roots
							6 / 6		loose		brn F-C SAND,lit F gravel,silt
		5	ss	24"	16"	10'0"	8 / 7		dry		SAME
10							12 / 13		compact		
		6	ss	24"	18"	12'0"	20 / 19		moist		lt brn/tan F SAND,sm silt,tr M sand,F gravel
							17 / 19		compact		
15											
		7	ss	24"	18"	17'0"	9 / 10		dry		lt brn/tan FM SAND,lit C sand,F gravel
							11 / 17		compact	17'0"	
20											E.O.B. 17'0"
25											
30											
35											
40											

NOTE: Subsoil conditions revealed by this investigation represent conditions at specific locations and may not represent conditions at other locations or times.

GROUND SURFACE TO _____FT. USED _____CASING THEN _____ CASING TO _____FT. HOLE NO. B-14

A = AUGER UP = UNDISTURBED PISTON T = THINWALL V = VANE TEST

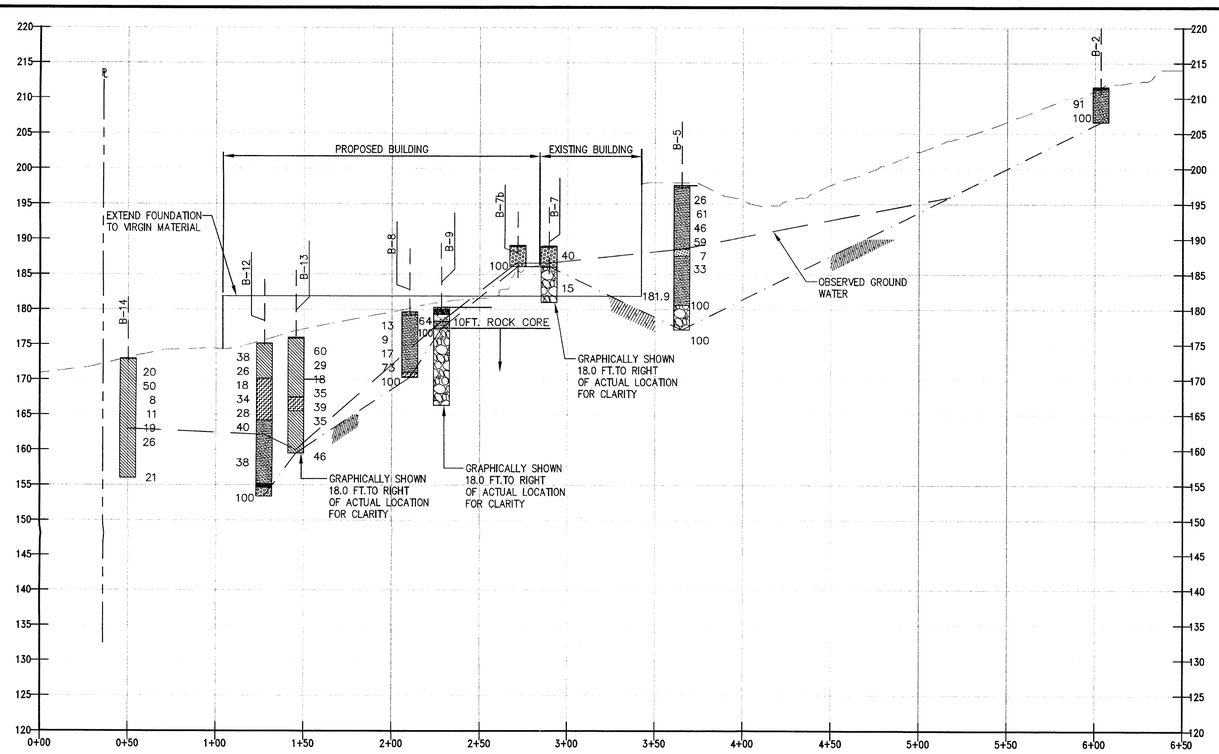
WOR = WEIGHT OF RODS WOH = WEIGHT OF HAMMER & RODS

SS = SPLIT TUBE SAMPLER H.S.A. = HOLLOW STEM AUGER

PROPORTIONS USED: TRACE = 0 - 10% LITTLE = 10 - 20% SOME = 20 - 35% AND =35 - 50%

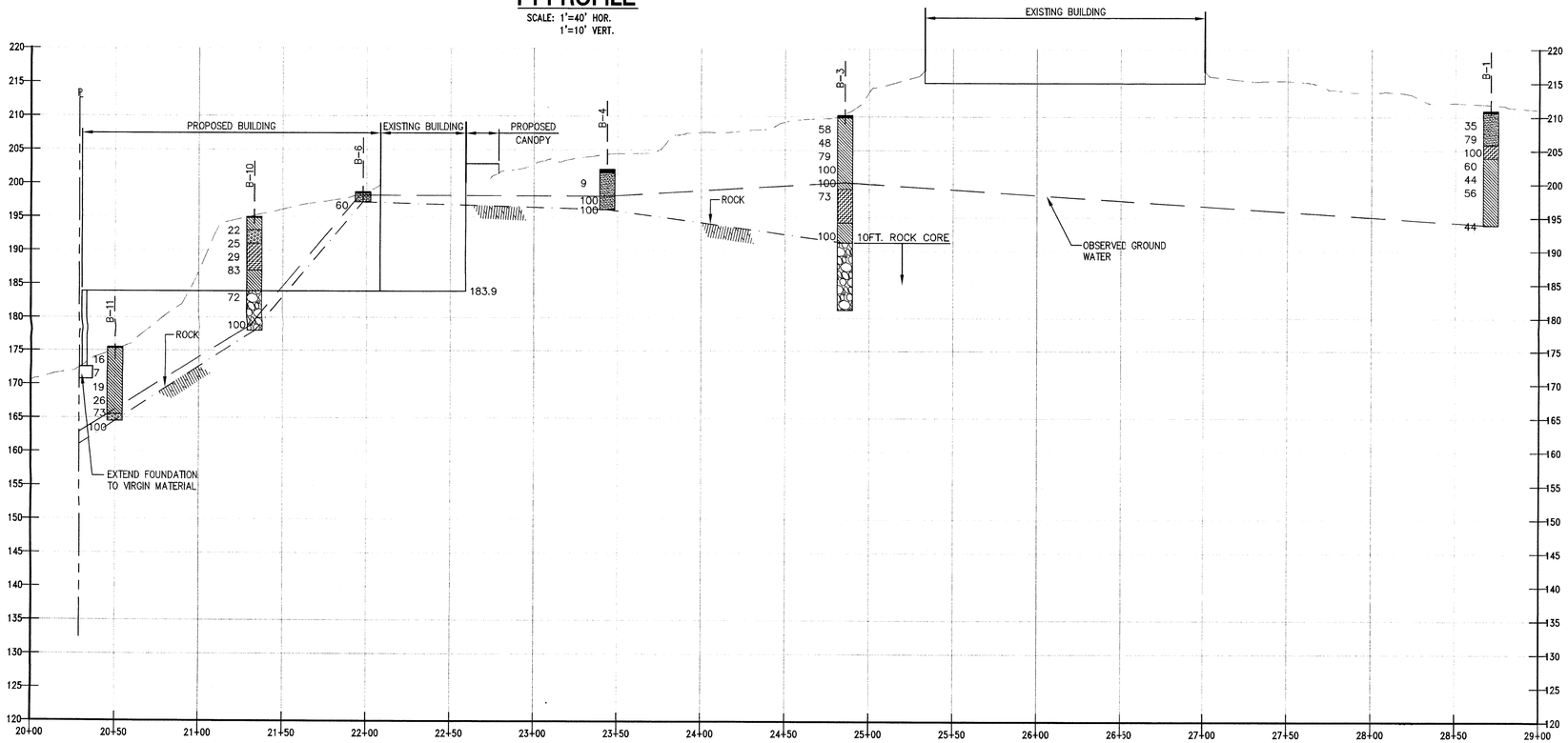
C = COARSE
M = MEDIUM
F = FINE

Appendix E
Soil Profiles



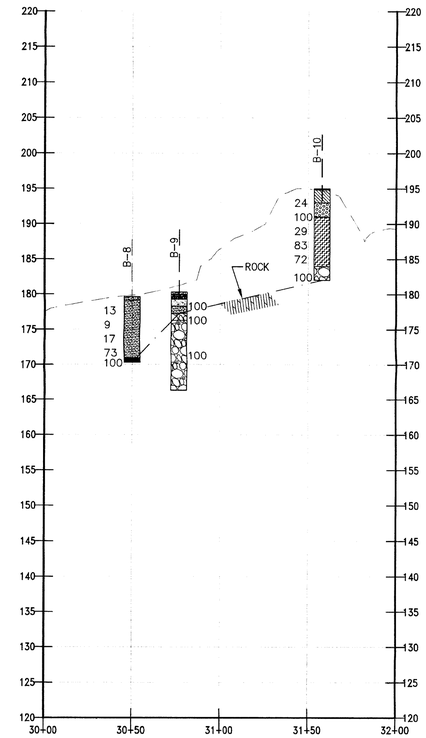
P1 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P2 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.



P3 PROFILE

SCALE: 1'=40' HOR.
1'=10' VERT.

NOTE: *GROUNDWATER RUNS PARALLEL TO TOP OF ROCK

LEGEND

- BRN/TAN F-C SAND WITH SOME SILT AND GRAVEL
- F-C SAND SOME SILT AND GRAVEL
- PROCESSED STONE & WOOD
- F-C BRN/GRAY SAND/SILT
- ASPHALT/TOPSOIL
- TOPSOIL
- EL. ELEVATION
- ROCK/STONE/BOULDERS
- BPF BLOWS PER FOOT (SHOWN BESIDE SOIL PROFILES)
- CONCRETE
- GROUND WATER
- TOP OF BEDROCK
- GROUND SURFACE ELEVATION
- BEDROCK

*NOTE: THE GROUNDWATER ELEVATION SHOWN IS APPROXIMATE AND IS SUBJECT TO SEASONAL VARIATIONS AND IS SHOWN AT 1 FOOT IN AREAS WHERE GROUNDWATER WAS DETECTED AT ROCK. IT IS SHOWN 1 FOOT HIGHER THAN THE BEDROCK ELEVATION FOR ILLUSTRATIVE PURPOSE.

NO.	DATE	REVISION	BY

McLaren ENGINEERING GROUP applied research
M. G. McLAREN, P.C.
100 Snake Hill Road, West Nyack, NY 10994
T. (845) 353-6400 F. (845) 353-6509 www.mgmclaren.com

PROJECT

ESTATES MOTORS
GOLDENS BRIDGE, NEW YORK

SHEET TITLE

BORING PROFILES

PROJECT NO.	111299
SCALE	AS NOTED
DATE	07-05-2011
DRAWN BY	DB
CHECKED BY	CB
DRAWING NO.	B-2
	2 OF 2 SHTS

COPYRIGHT © 2011, McLAREN ENGINEERING GROUP

FILE NAME: G:\cadd\111\111299\B-1 Boring Location Plan.dwg PLOT TIME: Thu, 21 Jul 2011 - 1:22pm LAST SAVE: Thu, 21 Jul 2011 - 9:10am BY: jmayowe

ARCHITECTURE
SITE PLANNING
URBAN DESIGN

Mercedes-Benz of Goldens Bridge

Square Footage Analysis

October 22, 2018

Service Building

- Existing Building: 18,200 sq. ft.
- Proposed Building: 20,900 sq. ft. (14.8% increase)

	Existing	Proposed	
Space	**Sq. Ft. / % of Building**	**Sq. Ft. / % of Building**	**% Increase of Sq. Ft.**
Service Area (Work Stalls)	9,000 sq. ft. 50%	12,740 sq. ft. 61%	+ 42%
Office / Service Technicians	1,700 sq. ft. 9%	140 sq. ft. 0.7%	- 92%
Employee Lounge / Lockers	255 sq. ft. 1.4%	250 sq. ft. 1.2%	0%

Note: The remainder of the buildings square footage is un-occupiable general storage, parts storage, mechanical and circulation spaces.

31 Mamaroneck Avenue
White Plains, New York 10601
(914) 761-6006 Fax: (914) 761-4919
E-mail: jpsfaia@sullivanarch.com
www.sullivanarch.com

ARCHITECTURE
SITE PLANNING
URBAN DESIGN

Mercedes-Benz of Goldens Bridge

Square Footage Analysis

October 22, 2018

Showroom Building

- Existing Building: 12,400 sq. ft.
- Proposed Building: 50,900 sq. ft. (310.5% increase)

	Existing	Proposed	
Space	**Sq. Ft. / % of Building**	**Sq. Ft. / % of Building**	**% Increase of Sq. Ft.**
Service Area (Work Stalls)	5,662 sq. ft. 46%	13,636 sq. ft. 27%	+ 141%
Office / Conference / Sales	2,095 sq. ft. 17%	5,460 sq. ft. 11%	+ 160%
Employee Breakroom	123 sq. ft. 1%	492 sq. ft. 1%	+ 300%
Showroom / Lobby / Customer	2,576 sq. ft. 21%	15,200 sq. ft. 30%	+ 490%
Car Delivery	609 sq. ft. 5%	1,800 sq. ft. 3.5%	+ 195%
Service Advisors	0 sq. ft. 0%	1,000 sq. ft. 2%	N/A

Note: The remainder of the buildings square footage is un-occupiable general storage, parts storage, internal car drop-off, mechanical and circulation spaces.

31 Mamaroneck Avenue
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Site Planning
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November 29, 2018

Mr. Anthony J. Kunny, PE
Westchester County Department of Health
118 Bedford Road
Mount Kisco, NY 10549

RE: JMC Project **16124**
Mercedes-Benz of Goldens Bridge
321 Main Street (NYS Rte. 22)
Town of Lewisboro, New York

Onsite Wastewater Treatment System Improvements

Dear Mr. Kunny:

In response to your letters dated July 27, 2018 and August 17, 2018, we are pleased to submit two (2) sets of the following documents in support of obtaining permits for Construction Approval and a Change of Use of an existing On-Site Wastewater Treatment System:

1. "Engineering Report - Onsite Wastewater Treatment System", prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, revised November 29, 2018.

2. JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC Drawings:

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	3 11/29/2018
C-010	"Existing Conditions"	3 11/29/2018
C-020	"Demolition Plan"	3 11/29/2018
C-100	"Layout Plan"	5 11/29/2018
C-200	"Grading & Drainage Plan"	5 11/29/2018
C-300	"Utilities Plan"	4 11/29/2018
C-313	"Sanitary Force Main Profile"	3 11/29/2018
C-900	"Construction Details"	3 11/29/2018
C-901	"Construction Details"	3 11/29/2018
C-902	"Construction Details"	3 11/29/2018
C-903	"Construction Details"	3 11/29/2018
C-906	"Construction Details"	3 11/29/2018

3. Sullivan Architecture, P.C. Drawings:

Dwg. No.	Title	Rev. #/Date
A1.01	"Service Building Proposed Lower Level"	4 09/06/2018
A2.02	"Showroom Building Proposed Garage Level (Lower Level Parking)"	4 09/06/2018

A2.03	"Showroom Building Proposed Lower Level"	5	11/29/2018
A2.04	"Showroom Building Proposed Lower Level (Middle Level Parking)"	4	09/06/2018
A2.05	"Showroom Building Proposed Upper Level"	4	09/06/2018
A2.06	"Showroom Building Proposed Upper Level (Top Level Parking)"	4	09/06/2018
A3.0	"Showroom Building Proposed Exterior Elevations"	5	09/06/2018
A3.01	"Service Building Proposed Exterior Elevations"	5	09/06/2018

4. "WCDH Certificate of Resolution for Authorization," dated 08/03/2018.

5. WCDH Request for Site Evaluation Inspection, dated 09/18/2018.

6. Celebrity Motor Car Check No. 57207 in the amount of $150.00 for the WCDH Inspection Fee.

7. Mercedes-Benz USA, LLC letter, dated August 22, 2018.

The following are the responses to your comments in your letter dated July 27, 2018.

Comment No. 1

As the applicant is a LLC, a Certificate of Resolution for Authorization is required to be completed and submitted. A copy of the form is enclosed for your use. Please note that the certificate is to authorize an individual of the LLC to execute documents submitted to the Department on behalf of the LLC.

Response No. 1

The document is enclosed.

Comment No. 2

The Engineers Report needs to be signed and stamped by the design engineer.

Response No. 2

The signed/sealed Engineering Report is provided.

Comment No. 3

An up to date Westchester County Subsurface Sewage Treatment System Inspection Form is required. The form is also enclosed for your use. Please note that the form is to be completed by a Westchester County Licensed septic contractor or a NYS Licensed Professional Engineer.

Response No. 3

The signed form is provided within the Engineering Report, Appendix H, along with the septic system inspection documents.

Comment No. 4

Please provide two (2) sets of the proposed floor plans of the addition/expansion of the existing buildings.

Response No. 4

The building drawings are provided.

Comment No. 5

The proposal calls for the modification to the existing water supply system for the property, which is a permitted Public Water Supply System, NY5930018. Any modification to the Non-Transient Non Community Public Water Supply must be approved the Department. Please contact Delroy Taylor, P.E. at 914-864-7296 for further information required for the proposed modification.

Response No. 5

We have discussed the project with Mr. Delroy Taylor and he indicated that a separate approval for the water supply will be needed. We confirmed that a submission can be made at a later date once the building plumbing drawings are prepared.

Comment No. 6

The Engineers Report should indicate if an interior car washing station is proposed and if one is proposed please provide details of same.

Response No. 6

The report has been revised to indicate that service detail bays are proposed for hand washing vehicles. A car washing system/station is not proposed, therefore there is no detail to provide.

Comment No. 7

Please provide a detail of the Wye connection of the outlet pipe from the Distribution Box to the existing building sewer line.

Response No. 7

The detail has been provided on JMC Drawing C-903 "Construction Details".

Comment No. 8

The Schedule of the two (2) inch PVC force main should be provided on the plan profile. The Schedule is shown on the pump chamber detail but not on the profile view.

Response No. 8

JMC Drawing C-313 "Sanitary Force Main Profile" has been updated to reflect the force main material.

Comment No. 9

Please indicate the Schedule of the four (4) inch PVC building sewer pipe to will connect to the proposed septic tank.

Response No. 9

JMC Drawing C-300 "Utilities Plan" has been updated to indicate the gravity service line material.

Comment No. 10

The profile view of the force main should indicate that 3-1/2 feet of cover will be provided above the force main to finished grade.

Response No. 10

The depth of the cover has been revised as shown on JMC Drawing C-313 "Sanitary Force Main Profile".

Comment No. 11

Please remove those plan sheets that are not related to the application for the modification to the OWTS.

Response No. 11

Only applicable drawings have been submitted.

The following are the responses to the NYCDEP comments within your letter dated August 17, 2018:

Comment No. 1

Will the stacked vehicles/structures have an impact on maintenance access to the existing SSTS area? Please evaluate.

Response No. 1

The project proposes access manhole covers for the seepage pits. There is currently no access for maintenance and observation. JMC Drawing C-300 "Utilities Plan" shows the approximate locations of the existing septic seepage pits and the proposed vehicle lifts with a note indicating that the vehicle lifts shall be strategically located to allow access to the manholes.

Comment No. 2

The showroom is proposed to be expanded to about three times the current size, and given the existing count of 25 employees, an increase of a mere 10 employees appears unrealistic. Provide an anticipated employee count base on square footage.

Response No. 2

Providing an anticipated employee count based on square footage is not a true representation of the anticipated employee count. Sullivan Architecture analyzed the building space for the NYS Building Code requirements for the occupant count based on the use of the space. However, when you review the NYS Building Code for the maximum floor area allowances per occupant, the code prescribed occupancy is always higher than the actual daily use. Appendix I of the Engineering Report contains an Existing and Projected Employee Plus Customer Data spreadsheet that was developed by the dealership.

It is based on current operations, future planned operations and experience with all of their other dealerships. An employee count based on square footage is not representative of how the dealership operates. Much of the proposed project is due to the dealership having to meet minimum requirements from Mercedes Benz Autohaus criteria. Refer to the Mercedes Benz USA, LLC letter, dated August 22, 2018. According to the dealership, much of the space proposed is not needed. For scale and reference, Sullivan Architecture, PC prepared a Square Footage Analysis to summarize the proposed building expansion, refer to Appendix L of the Engineering Report.

Comment No. 3

Regarding the 9 drivers, don't these employees spend time at the dealership at the start and end of their work shifts?

Response No. 3

Yes, the drivers likely do spend time at the dealership at the start and end of their work shifts. The drivers are included in the list of employees but they are not included when calculating the flow per employee. This is to be conservative since the calculation is dividing the total flow by the number of employees, excluding drivers, which results in a greater flow rate per employee.

Comment No. 4

As an expansion of a business facility, it is reasonable to anticipate an increase in patron attendance. Account to existing and additional patron water use in the showroom and service buildings.

Response No. 4

According to the dealership, an increase in patron attendance is not anticipated since most, if not all, of their current customers do not visit the property for servicing their vehicles. The dealership provides vehicle pick-up and drop-off services so their customers do not need to visit the dealership. Some customers will drive their vehicles to the property, drop the vehicle off for service and be driven back home or to work, then picked up later. Furthermore, according to the dealership owners, who have several luxury automobile dealerships in NY and NJ, the amount of new and pre-owned vehicle sales through online purchases is increasing every year, resulting in fewer new customers visiting the dealerships. The dealership anticipates that the patron attendance will remain very similar to current conditions. This is noted in the Existing and Projected Employee Plus Customer Data spreadsheet within Appendix I of the Engineering Report.

Comment No. 5

Provide a pump curve and specifications.
Response No. 5

A pump curve is provided in Appendix C of the Engineering Report.

Comment No. 6

Two days flow storage is required for commercial applications with pumped systems. A back-up pump may be used in lieu of increased storage. Provide details.

Response No. 6

The drawings and Engineering Report have been revised to indicate that 2 pumps will be proposed.

Comment No. 7

Provide a profile view of the proposed wet well detail.

Response No. 7

JMC Drawing C-902 "Construction Details", Detail 16 "Duplex Wet Well Pump Station", shows the profile view.

Comment No. 8

Septic tank covers to be 20" diameter minimum.

Response No. 8

JMC Drawing C-901 "Construction Details", Detail 13 "CT 1,250 Loy Boy Gallon Septic Tank", shows 24 inch diameter covers with 22 inch diameter openings.

Comment No. 9

Verify condition of exiting septic tank and replace if necessary.

Response No. 9

The septic tank is in good working order according to the Septic System data Form provided by the septic tank maintenance contractor in Appendix H of the Engineering Report.

Comment No. 10

The area designated as "Future Potential...for 100% expansion" must be soil tested prior to such designation. The testing must be witnessed by a WCDOH representative.

Response No. 10

The enclosed Request for Site Evaluation Inspection and check are provided for the test within the expansion area.

On October 29th and 30th, 2018 soil percolation tests were done within the future 100%

expansion area within the upper/northern parking lot. The pre-soaks were done on October 29th and the two separate percolation tests were done on October 30th. The tests resulted in acceptable percolation rates. The tests were witnessed by JMC, the Westchester County Health Department, The Town Engineer Consultant and performed by Carlin-Simpson Associates. On November 2, 2018 a soil boring was advanced in the same location. It was witnessed by NYCDEP, WCDH, Town Engineer Consultant, JMC and Carlin-Simpson Associates. The soil is sandy, groundwater and bedrock were not encountered within 5 feet of the bottom of the future seepage pits therefore the location is suitable for future use. Refer to the Soil Testing Data Sheet in Appendix J and the Report on Subsurface Soil Investigation prepared by Carlin-Simpson Associates in Appendix K of the "Engineering Report - Onsite Wastewater Treatment System".

Comment No. 11

Provide floor plans for all proposed expanded areas.

Response No. 11

The building drawings are provided.

We trust that the enclosed "Engineering Report - Onsite Wastewater Treatment System", Site Plans, Building Drawings and forms are sufficient for your use in confirming that the existing OWTS is capable of treating the sewer flows generated by the proposed project.

In the interim, if you have any questions or require any additional information, please do not hesitate to contact our office at (914) 273-5225. Thank you for your time and cooperation.

Sincerely,

JMC, PLLC

Stephen Spina, P.E.
Project Manager

cc: Mr. Danny Shedlo, P.E., NYCDEP, w/enc.
Ms. Bernadette Kopec
Mr. Tom Maoli
Mr. John Sullivan, FAIA
Mr. Chris Pelella, Associate AIA
Michael Sirignano, Esq.

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November 29, 2018

Ms. Anne Darelius, PE
Permit Engineer
NYSDOT
1 Dana Road
Valhalla, NY 10595

Re: JMC Project 16124 (SEQR 18-007)
Mercedes-Benz of Goldens Bridge
321 Main Street (NY 22)
Town of Lewisboro, NY

Highway Work Permit Stage 1 Submission

Dear Ms. Darelius:

We have enclosed hard copies and a compact disc of the following materials for your review regarding the requested Highway Work Permit for the above-mentioned property:

1. Perm 33-COM Stage 1, dated and signed 11/29/2018.

2. Traffic Study, dated 11/16/2018 (2 copies)

3. Site Plan Approval Drawings: (2 signed and sealed copies)

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	3 11/29/2018
C-010	"Existing Conditions"	3 11/29/2018
C-100	"Layout Plan"	5 11/29/2018
C-200	"Grading & Drainage Plan"	5 11/29/2018
C-300	"Utilities Plan"	4 11/29/2018
C-314	"Road Profiles"	2 11/29/2018
C-700	"Vehicle Delivery Truck Plan"	2 11/29/2018
C-701	"Fire Truck Plan"	4 11/29/2018
C-702	"Fire Truck Plan"	4 11/29/2018
L-100	"Landscape Plan"	11/29/2018

4. Stormwater Pollution Prevention Plan (SWPPP) prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, revised November 29, 2018 (2 copies).

The property located at 321 Main Street (NY 22) in Lewisboro is currently developed. There is a 12,400 square foot showroom building as well as an 18,200 square foot service building as part of the Mercedes-Benz of Goldens Bridge dealership. There are currently four curb cuts located along NY 22. Access to the existing dealership is mainly served by one of the four existing curb cuts along NY 22.

The previous property owner obtained a prior approval from the Town for a redevelopment of the property. The previously approved project incorporated the demolition of the existing service building and a 31,966 square foot expansion of the existing showroom building. The previous approval involved the consolidation of curb cuts along NY 22 from 4 existing to 2 under proposed conditions. The two proposed driveways were to provide two-way traffic flow at each driveway. This previous project was reviewed and approved by NYSDOT. The NYSDOT issued a Highway Work Permit on April 5, 2012 for the previously approved project (HWP #2012-08-28537).

The current Applicant and property owner (Celebrity Motor Car, LLC) proposes to redevelop the existing property. The current applicant has obtained two adjacent parcels for the proposed redevelopment. The current redevelopment proposes to renovate the existing showroom building and expand the building by 38,500 square feet. In addition, the Applicant proposes to re-utilize the existing service building and expand the building by 2,700 square feet. The proposed redevelopment provides a total of 71,800 square feet for the two buildings. The two adjacent properties which were obtained by the Applicant are proposed to be utilized for a parking garage as well as a surface parking lot for vehicle storage. As previously proposed, the redevelopment proposes to consolidate the existing 4 curb cuts to 2 curb cuts. The two two-way driveways along NY 22 will serve as the main access to and from the development. The two proposed driveways located along NY 22 are proposed in the same locations as previously proposed with the approved development which obtained a Highway Work Permit from NYSDOT. A secondary access is proposed on Anderson Lane for access to and from the proposed parking garage. A gated access is proposed on Green Hill Road to access the surface parking lot for vehicle storage.

The peak rates of stormwater runoff discharged from the site will be reduced as a result of the proposed stormwater improvements associated with the proposed redevelopment which include an underground detention system, an underground infiltration system, green roof and porous pavement. In addition, water quality treatment is being enhanced by proposed water quality structures and vegetated water quality practices. Under exiting conditions, the property is developed and is mostly impervious which ultimately enters the State's drainage system along NY 22. Under proposed conditions, the redevelopment implements several stormwater management features to decrease peak rates of stormwater runoff discharged from the site and trench drains are located at the NY 22 access driveways to collect stormwater from the site prior to being discharged into NY 22. As a result of the proposed redevelopment and its improvements, the peak rates of stormwater runoff which drains towards the State's right-of-way reduces during the 1, 10, 100 year storms compared to pre-development conditions based on Stormwater Pollution Prevention Plan prepared by our office.

We look forward to addressing any comments the NYSDOT may have regarding the proposed redevelopment and proceeding to Stage 2 of the Highway Work Permit process. Thank you for your time and consideration.

Sincerely,

JMC Planning Engineering Landscape Architect & Land Surveying PLLC

Marc Petroro, PE, PTOE
Senior Project Manager

cc: Mr. Lee Zimmer, w/enc.
Mr. Tom Maoli
Ms. Bernadette Kopec
Mr. Chris Pelella, AIA
Mr. John Sullivan, FAIA
Michael Sirignano, Esq.

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November 29, 2018

Ms. Norma V. Drummond
Acting Commissioner
Westchester County Planning Board
148 Martine Avenue
White Plains, NY 10601

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
321 Main Street (NY 22)
Town of Lewisboro, NY

Referral File No. LEW 18-001

Dear Ms. Drummond:

We are in receipt of a review memorandum, dated January 26, 2018 for the above noted project and are pleased to provide one set of the following information in response to the comments:

JMC Planning Engineering Landscape Architecture & Land Surveying ,PLLC Drawings:

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	3 11/29/2018
C-010	"Existing Conditions"	3 11/29/2018
C-020	"Demolition Plan"	3 11/29/2018
C-030	"Tree Removal Plan"	2 11/29/2018
C-100	"Layout Plan"	5 11/29/2018
C-101	"Parking Plan"	1 11/29/2018
C-200	"Grading & Drainage Plan"	5 11/29/2018
C-201	"Site Sections Plan"	2 11/29/2018
C-300	"Utilities Plan"	4 11/29/2018
C-313	"Sanitary Force Main Profile"	2 11/29/2018
C-314	"Road Profiles"	1 11/29/2018
C-315	"Road Profiles"	11/29/2018
C-401	"Phase 1 Plan"	11/29/2018
C-402	"Phase 2 Plan"	11/29/2018
C-403	"Phase 3 Plan"	11/29/2018
C-600	"Site Lighting Plan"	11/29/2018
C-700	"Vehicle Delivery Truck Plan"	2 11/29/2018
C-701	"Fire Truck Plan"	4 11/29/2018
C-702	"Fire Truck Plan"	4 11/29/2018

Dwg. No.	Title	Rev. #/Date
C-900	"Construction Details"	3 11/29/2018
C-901	"Construction Details"	3 11/29/2018
C-902	"Construction Details"	3 11/29/2018
C-903	"Construction Details"	3 11/29/2018
C-904	"Construction Details"	2 11/29/2018
C-905	"Construction Details"	2 11/29/2018
C-906	"Construction Details"	3 11/29/2018
C-907	"Construction Details"	2 11/29/2018
C-908	"Construction Details"	11/29/2018
L-100	"Landscape Plan"	11/29/2018

For your convenience we have identified the comments noted in your letter, which are followed by our responses:

Comment No. 1

NYS DOT review. *NYS Route 22 is a State highway. The Town should forward a copy of the application to NYSDOT to identify any required permits for the proposed project and to evaluate potential traffic impacts to Route 22.*

Response No. 1

A Highway Work Permit Stage 1 Submission including Site Plans, Traffic Study and Stormwater Pollution Prevention Plan (SWPPP) has been made to Ms. Anne Darelius, PE of the NYSDOT.

Comment No. 2

Croton Watershed protection. *The site is located in the Croton Watershed, in close proximity to the Muscoot Reservoir. The proposed development will entail site disturbance during construction and will result in the creation of new impervious surfaces. Components of the site development may be subject to compliance with the New York City Department of Environmental Protection (NYC DEP) Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources, including the preparation of a Stormwater Pollution*

Response No. 2

A Stormwater Pollution Prevention Plan (SWPPP) has been prepared to protect the site and surrounding areas from any pollutants associated with the project. The SWPPP has been submitted to the Town of Lewisboro (MS4), NYCDEP and NYSDOT for review and approval.

Comment No. 3

Green buildings. *We are pleased to note the use of a green roof and pervious pavers for the project. We encourage the applicant to include as much green building technology as possible into the proposed development. We also recommend the applicant provide bicycle parking for employees, since the subject site is within close biking distance of the Goldens Bridge Metro-North station.*

Response No. 3

The project proposes the implementation of green infrastructure practices such as a green roof, porous pavement, grass swales, tree plantings, etc. which all work towards meeting the water quality volume requirements. Bicycle parking for employees will be proposed within the buildings when the building designs are advanced.

We trust that the enclosed Site Plans and above responses are sufficient for review towards addressing the comments. In the interim, if you have any questions or require any additional information, please do not hesitate to contact our office at (914) 273-5225. Thank you for your time and cooperation.

Sincerely,

JMC, PLLC

Stephen Spina, P.E.
Project Manager

cc: Ms. Bernadette Kopec
Mr. Tom Maoli
Mr. John Sullivan, FAIA
Mr. Chris Pelella, Associate AIA
Michael Sirignano, Esq.

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3D Visualization
Laser Scanning

November 29, 2018

Ms. Cynthia Garcia
NYCDEP
SEQRA Coordination Section
465 Columbus Avenue, 1st Floor
Valhalla, NY 10595-1336

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
321 Main Street (NY 22)
Town of Lewisboro, NY

DEP Log #: 1998-MU-0567-SQ.2

Dear Ms. Garcia:

We are in receipt of a review memorandum, dated February 21, 2018 for the above noted project and are pleased to provide one set of the following information in response to the comments:

1. JMC Planning Engineering Landscape Architecture & Land Surveying ,PLLC Drawings:

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	3 11/29/2018
C-010	"Existing Conditions"	3 11/29/2018
C-020	"Demolition Plan"	3 11/29/2018
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C-702	"Fire Truck Plan"	4 11/29/2018
C-900	"Construction Details"	3 11/29/2018
C-901	"Construction Details"	3 11/29/2018
C-902	"Construction Details"	3 11/29/2018

Dwg. No.	Title	Rev. #/Date
C-903	"Construction Details"	3 11/29/2018
C-904	"Construction Details"	2 11/29/2018
C-905	"Construction Details"	2 11/29/2018
C-906	"Construction Details"	3 11/29/2018
C-907	"Construction Details"	2 11/29/2018
C-908	"Construction Details"	11/29/2018
L-100	"Landscape Plan"	11/29/2018

2. Stormwater Pollution Prevention Plan (SWPPP) prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, revised November 29, 2018.

3. "Engineering Report - Onsite Wastewater Treatment System", prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, revised November 29, 2018.

4. JMC Letter to the Westchester County Department of Health (WCDOH), dated November 29, 2018.

For your convenience we have identified the comments noted in your letter, which are followed by our responses:

Comment No. 1

Please note the above referenced parcel lies in a Designated Main Street Area (DMSA), and, as such, the creation of any new impervious surfaces within a DMSA requires a SWPPP in accordance with Section 18-39(b)(3)(x) of the Watershed Regulations.

Response No. 1

The SWPPP is provided for review.

Comment No. 2

The proposed action is comprised of both redevelopment and new development. An overlay showing both pervious areas to new impervious areas and existing impervious to new impervious areas must be shown on the plans in order to identify the limits of the redevelopment and new development. Moreover, it is necessary on order to appropriately apply the NYSDEC Stormwater Management Design Manual requirements for treatment purposes.

Response No. 2

Figure No. 2 "Impervious Coverage Areas" is provided within the SWPPP.

Comment No. 3

It appears that the location of the proposed infiltration systems has not changed from the previous SWPPP that was approved in 2012 and renewed in 2017. If the footprint for the infiltration system has changed or if there was a change in land use, it is recommended that soil testing in the proposed area be witnessed by DEP. The response to section E.2.a of the EAF states that the site is located on shallow bedrock between 0-

5 feet. As such, it is recommended that deep tests pits be conducted in the location for the proposed detention system in order to see if there will be a need for blasting. The applicant's representative may contact Mariyam Zachariah at 914-749-5359 to make arrangements.

Response No. 3

The footprint and location of the previously approved infiltration system has not changed and as discussed with Mariyam Zachariah, the soil re-testing is not needed. On October 29th and 30th, 2018 soil percolation tests were done within the proposed porous pavement area within the upper parking lot east of the Service Building. A boring was done on October 29th as well as pre-soaking two percolation test holes. The two separate percolation tests were done on October 30th. The tests resulted in acceptable percolation rates. The soil is sandy, groundwater and bedrock were not encountered within 3 feet of the bottom of the proposed practice therefore the location is suitable for future use. Refer to the Soil Boring and Infiltration Test Results prepared by Carlin-Simpson Associates in Appendix D of the SWPPP. The tests were witnessed by NYCDEP, Town Engineering Consultant, JMC and Carlin-Simpson Associates.

Comment No. 4

It seems like the proposed porous pavement on the newly acquired lot on Green Hill Road is not being treated as shown. Please note: DEP considers porous pavement to be an impervious surface for the purpose of administering the Watershed Regulations. Therefore, the porous pavement proposed on the adjacent lot (Green Hill Road) must be treated by a standard practice unless the total tributary runoff is being treated fully by a GIP. If the applicant choses to use porous pavement as a GIP, DEP must witness soil testing in the specific area.

Response No. 4

The porous pavement is proposed to treat the water quality volume and runoff reduction volume for the pavement area. As stated above soil percolation tests were done within the proposed porous pavement area and witnessed by NYCDEP.

Comment No. 5

It is important to note that the proposed porous pavement to be located on top of the septic areas is not permitted particularly if the surface is considered a green infrastructure practice (GIP).

Response No. 5

Porous pavement is no proposed above the existing septic system.

Comment No. 6

The EAF indicates a proposed water usage of 785 gpd. The project sponsor should provide a basis showing how this flow was calculated based on existing flows and the proposed dealership expansion. Also, both the existing and anticipated numbers of employees and patrons should be included with this information.

Response No. 6

The enclosed "Engineering Report - Onsite Wastewater Treatment System" provides details regarding the existing and future anticipated flows. The report has been submitted to the Westchester County Department of Health with an extra copy for forwarding to Danny Shedlo for review. Mr. Shedlo has provided comments through the Westchester County Department of Health which have been responded to in the latest attached letter.

Comment No. 7

Please have the project sponsor provide a discussion on the operating condition of the existing septic system and indicate the anticipated changes to enable it to serve the proposed action.

Response No. 7

The enclosed "Engineering Report - Onsite Wastewater Treatment System" provides a detailed investigation and monitoring data for the operating condition of the existing septic system and indicate the anticipated changes to enable it to serve the proposed action.

We trust that the enclosed SWPPP, "Engineering Report - Onsite Wastewater Treatment System", Site Plans, and letter to the Westchester County Department of Health forms are sufficient for review towards addressing the comments. In the interim, if you have any questions or require any additional information, please do not hesitate to contact our office at (914) 273-5225. Thank you for your time and cooperation.

Sincerely,

JMC, PLLC

Stephen Spina, P.E.
Project Manager

cc: Ms. Bernadette Kopec
Mr. Tom Maoli
Mr. John Sullivan, FAIA
Mr. Chris Pelella, Associate AIA
Michael Sirignano, Esq.

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NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, Albany, New York 12233-4757
Phone: (518) 402-8935 • **FAX:** (518) 402-8925

Alexander B. Grannis
Commissioner

October 30, 2009

George Vega
John Meyer Consulting
120 Bedford Road
Armonk, NY 10504

Dear Mr. Vega:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Property Re-development - Car Dealership, Demolition of existing Service Building and Expansion of existing Showroom Building, site as indicated on the map you provided, located at 321 Main Street (Rte 22), Town of Lewisboro, Westchester County.

> We have no records of <u>known</u> occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,
Tara Salerno
Tara Salerno, Information Services
NY Natural Heritage Program

Enc.
cc:

New York State Department of Environmental Conservation

Regional Permit Administrators

Region	Counties	Regional Permit Administrator
1	Nassau & Suffolk FAX: 631-444-0360	Roger Evans NYSDEC 50 Circle Rd SUNY @ Stony Brook Stony Brook, NY 11790-3409 631-444-0365 631-444-0355 (Duty Analyst-M,W&F only)
2	New York City, (Boroughs of Manhattan, Brooklyn, Bronx, Queens & Staten Island) FAX: 718-482-4975	John Cryan NYSDEC One Hunters Point Plaza 47-40 21st St. Long Island City, NY 11101-5407 718-482-4997
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster & Westchester FAX: 845-255-3042	Margaret Duke NYSDEC 21 South Putt Corners Rd. New Paltz, NY 12561-1620 845-256-3054
4	Albany, Columbia, Greene, Montgomery, Rensselaer & Schenectady FAX:518-357-2460	William Clarke NYSDEC 1130 North Westcott Rd. Schenectady, NY 12306-2014 518-357-2069
4 (sub-office)	Delaware, Otsego & Schoharie FAX: 607-652-2342	Kent Sanders* NYSDEC 65561 State Highway - Route 10 HCR #1, Box 3A Stamford, NY 12167-9503 607-652-7741
5	Clinton, Essex, Franklin & Hamilton FAX: 518-897-1394	Michael McMurray NYSDEC Route 86, P.O. Box 296 Ray Brook, NY 12977-0296 518-897-1234
5 (sub-office)	Fulton, Saratoga, Warren & Washington	Marc Migliore* NYSDEC

	FAX: 518-623-3603	P.O. Box 220 232 Golf Course Rd. Warrensburg, NY 12885-0220 518-623-1281
6	Jefferson, Lewis & St. Lawrence FAX: 315-785-2242	Larry Ambeau NYSDEC State Office Bldg. 317 Washington St. Watertown, NY 13601-3787 315-785-2245 or 2246
6 (sub-office)	Herkimer & Oneida FAX: 315-793-2748	Patrick Clearey* NYSDEC State Office Building 207 Genesee St. Utica, NY 13501-3787 315-793-2555
7	Cayuga, Madison, Onondaga & Oswego FAX: 315-426-7425	John Feltman NYSDEC 615 Erie Blvd. West (Env. Permits Room 206) Syracuse, NY 13204-2400 315-426-7438
7 (sub-office)	Broome, Chenango, Cortland, Tioga & Tompkins FAX: 607-753-8532	Michael Barylski* NYSDEC 1285 Fisher Ave. Cortland, NY 13045-1090 607-753-3095
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne & Yates FAX: 585-226-2830	Peter Lent NYSDEC 6274 East Avon Lima Rd. Avon, NY 14414-9519 585-226-5400
9	Erie, Niagara & Wyoming FAX: 716-851-7168	Steve Doleski NYSDEC 270 Michigan Ave. Buffalo, NY 14203-2999 716-851-7165
9 (sub-office)	Allegany, Cattaraugus, & Chautauqua FAX: 716-372-2113	Charles Cranston* NYSDEC Suite 3, 182 East Union Allegany, NY 14706-1328 716-372-0645

*Deputy Regional Permit Administrator

Site Planning
Civil Engineering
Landscape Architecture
Land Surveying
Transportation Engineering
Environmental Studies
Entitlements
Construction Services
3D Visualization
Laser Scanning

November 29, 2018

Ms. Victoria Lawrence
New York State Department of Environmental Protection
Division of Environmental Permits, Region 3
21 South Putt Corners Road
New Paltz, NY 12561-1620

RE: JMC Project 16124
Mercedes-Benz of Goldens Bridge
321 Main Street (NY 22)
Town of Lewisboro, NY

Lead Agency Circulation Response – CH# 7494

Dear Ms. Lawrence:

We are in receipt of a review memorandum, dated February 20, 2018 for the above noted project and are pleased to provide one set of the following information in response to the comments:

JMC Planning Engineering Landscape Architecture & Land Surveying ,PLLC Drawings:

Dwg. No.	Title	Rev. #/Date
C-000	"Cover Sheet"	3 11/29/2018
C-010	"Existing Conditions"	3 11/29/2018
C-020	"Demolition Plan"	3 11/29/2018
C-030	"Tree Removal Plan"	2 11/29/2018
C-100	"Layout Plan"	5 11/29/2018
C-101	"Parking Plan"	1 11/29/2018
C-200	"Grading & Drainage Plan"	5 11/29/2018
C-201	"Site Sections Plan"	2 11/29/2018
C-300	"Utilities Plan"	4 11/29/2018
C-313	"Sanitary Force Main Profile"	2 11/29/2018
C-314	"Road Profiles"	1 11/29/2018
C-315	"Road Profiles"	11/29/2018
C-401	"Phase 1 Plan"	11/29/2018
C-402	"Phase 2 Plan"	11/29/2018
C-403	"Phase 3 Plan"	11/29/2018
C-600	"Site Lighting Plan"	11/29/2018
C-700	"Vehicle Delivery Truck Plan"	2 11/29/2018
C-701	"Fire Truck Plan"	4 11/29/2018
C-702	"Fire Truck Plan"	4 11/29/2018
C-900	"Construction Details"	3 11/29/2018
C-901	"Construction Details"	3 11/29/2018
C-902	"Construction Details"	3 11/29/2018

Dwg. No.	Title	Rev. #/Date
C-903	"Construction Details"	3 11/29/2018
C-904	"Construction Details"	2 11/29/2018
C-905	"Construction Details"	2 11/29/2018
C-906	"Construction Details"	3 11/29/2018
C-907	"Construction Details"	2 11/29/2018
C-908	"Construction Details"	11/29/2018
L-100	"Landscape Plan"	11/29/2018

For your convenience we have identified the comments noted in your letter, which are followed by our responses:

Comment No. 1

Protection of Waters

There are no waterbodies that appear on our regulatory maps at the location you identified.

If a permit is not required, please note, however, you are still responsible for ensuring that work shall not pollute any stream or waterbody. Care shall be taken to stabilize any disturbed areas promptly after construction, and all necessary precautions shall be taken to prevent contamination of the stream or waterbody by silt, sediment, fuels, solvents, lubricants, or any other pollutant associated with the project.

Response No. 1

A Stormwater Pollution Prevention Plan (SWPPP) has been prepared to protect the site and surrounding areas from any pollutants associated with the project. The SWPPP has been submitted to the Town of Lewisboro (MS4), NYCDEP and NYSDOT for review and approval.

Comment No. 2

Freshwater Wetlands

Your site is not within a New York State protected Freshwater Wetland.

Response No. 2

So noted.

Comment No. 3

State-Listed Species

DEC has reviewed the State's Natural Heritage records. We have determined that the site is located within or near known occurrences of the following state-listed species:

Name	*Status*
Northern long-eared bat (Myotis septentrionalis)	*Threatened*

Any potential impacts of the proposed project on this species should be fully evaluated during the review of the project pursuant to SEQR. An Article 11, Title 5 Section 535 of Environmental Conservation Law Threatened and Endangered Species Incidental "Take" Permit is required for the incidental taking of any species identified as "endangered" or "threatened", which can include the removal of habitat.

At a minimum, all tree removal must be conducted during the winter timeframe of November 1st to March 31st to avoid adverse impacts to northern long-eared bat. Please note: a project sponsor may not commence site preparation. including tree clearing. Until the provisions of SEQR are complied with and all necessary permits issued for the proposed project.

If this time of year restriction cannot be followed, or for technical questions regarding threatened and endangered species, the applicant must contact the NYSDEC Bureau of Wildlife at (845) 256-3098.

Response No. 3

Although there are no signs or evidence of the above threatened species, any potential impacts of the proposed project on this species will be fully evaluated prior to construction. During the previous approval and SEQRA process for the previous version of the project, the NYSDEC Natural Heritage Program issued a letter dated 10/30/2009 indicating there are no endangered or threatened species on-site.

All tree removal must be conducted during the winter time frame of November 1st to March 31st to avoid adverse impacts to the northern long-eared bat. If tree removal is planned outside of this time frame, then a site assessment by a bat biologist or a qualified bat surveyor will be performed. Surveys for bats help determine potential environmental concerns around and near prospective projects.

Comment No. 4

SPDES Stormwater (Construction)

The submitted documents indicate that approximately 4.0 acres (of the 4.97 acre site) are 6 be disturbed in order to develop the parcel. Compliance with the current SPDES General Permit for Stormwater Discharges from Construction Activities (GP-0-15-002) is required for projects that disturb one or more acres of land. As more than one acre is proposed to be disturbed, the applicant must prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the current SPDES General Permit noted above.

As the Town of Lewisboro is an MS4 area (Municipal Separate Storm Sewer System), the Town has responsibility for review of the SWPPP. The MS4 Acceptance Form must be submitted to the Department. For information on stormwater and the general permits, see the DEC website at http://www.dec.ny.gov/chemical/8468.html.

Response No. 4

A Stormwater Pollution Prevention Plan (SWPPP) has been prepared to protect the site and surrounding areas from any pollutants associated with the project. The SWPPP has been submitted to the Town of Lewisboro (MS4), NYCDEP and NYSDOT for review and approval.

Comment No. 5

Cultural Resources

We have reviewed the statewide inventory of archaeological resources maintained by the New York State Museum and the New York State Office of Parks, Recreation, and Historic Preservation. These records indicate that the project is not located within an area considered to be sensitive with regard to archaeological resources. For more information, please visit the New York State Office of Historic Preservation website at http://www.nysparks.com/shpo/.

Response No. 5

So noted.

Comment No. 6

Other

Please note that this letter only addresses the requirements for the following permits from the Department: Protection of Waters, State-listed Species, and Freshwater Wetlands. Other permits from this Department or other agencies may be required for projects conducted on this property now or in the future. Also, regulations applicable to the location subject to this determination occasionally are revised and you should, therefore, verify the need for permits if your project is delayed or postponed. This determination regarding the need for permits will remain effective for a maximum of one year unless you are otherwise notified. Applications may be downloaded from our website at www.dec.ny.gov under "Programs" then "Division of Environmental Permits."

Response No. 6

So noted.

We trust that the enclosed Site Plans and above responses are sufficient for review towards addressing the comments. In the interim, if you have any questions or require any additional information, please do not hesitate to contact our office at (914) 273-5225. Thank you for your time and cooperation.

Sincerely,

JMC, PLLC

Stephen Spina, P.E.
Project Manager

cc: Ms. Bernadette Kopec
Mr. Tom Maoli
Mr. John Sullivan, FAIA
Mr. Chris Pelella, Associate AIA
Michael Sirignano, Esq.

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FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

MICHAEL A. GALANTE
MANAGING PRINCIPAL

DAVID H. STOLMAN
AICP, PP, PRINCIPAL

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email@fpclark.com

December 12, 2018

Chairman Jerome Kerner, AIA and
Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, New York 10590

Subject: **Proposal to Provide Traffic Consulting Services – Review of Mercedes Benz of Goldens Bridge, NYS Route 22, Goldens Bridge, New York**

Dear Mr. Kerner:

As requested, we are pleased to submit this proposal to the Lewisboro Planning Board and your office for consideration to assist in a review of the Traffic Report prepared by JMC and dated November 16, 2018 for the proposed expansion of the Dealership.

Project Description

As described by the Applicant's Traffic Consultant, the proposal is to expand the existing Dealership located at 321 NYS Route 22. The current building size comprises 12,400 square feet for a Showroom and an additional 18,200 square feet for the Service Building. There are currently four curb cuts to NYS Route 22, as well as two additional curb cuts to Green Hill Road. In addition to the buildings noted above there is a two-floor structure and garage located at 5 Anderson Lane, which includes two additional driveways, one connecting to Anderson Lane and one connecting to Green Hill Road. There is also a single-family residency located at 46 Green Hill Road, with an additional driveway to Green Hill Road.

The Applicant notes that the Town Planning Board previously approved a Plan dated October 11, 2011 and the Town Zoning Board of Appeals approved an Application dated May 11, 2011. Further, the New York State Department of Transportation (NYSDOT) approved the Road Permit Application on April 5, 2012 for access improvements.

The Applicant indicates that the proposal is to demolish the buildings and structures located at 5 Anderson Lane and 46 Green Hill Road and expand the existing Showroom Building by 38,500 square feet and expand the existing Service Building by an additional 2,700 square feet of floor area. Therefore, the Dealership, with the proposed expansion of the Buildings, as noted above, comprises 71,800 square feet of floor area. Further, the on-site parking will be expanded to accommodate its customers, employees, service and new vehicle inventory.

An important part of this Application is that the existing nine curb cuts, with four curb cuts located on NYS Route 22, the NYS Route 22 curb cuts will be consolidated to two proposed curb cuts, with the elimination of two existing curb cuts. The curb cuts on Green Hill Road will be reduced to one curb cut and the Anderson Lane driveway will be relocated to provide access to a parking area for employees and vehicle inventory. Further, the proposed driveway along Green Hill Road will be improved to serve 46 Green Hill Road and provide access to the proposed vehicle inventory parking area, as well as secondary access to the Service Building.

Scope of Services

Our role will be to review the Traffic Study noted above and to review the Site Plan, as it relates to vehicular and pedestrian access and internal circulation and overall safety.

This traffic review will include an assessment of the baseline traffic volumes, the estimated future no-build traffic volumes and the future build traffic volumes for each of the driveways and the following intersections:

- NYS Route 22 at Connector Road (unsignalized);
- NYS Route 22 at Anderson Lane (unsignalized);
- NYS Route 22 at Site Driveway A (unsignalized);
- NYS Route 22 at Site Driveway B (unsignalized); and,
- NYS Route 138 at Connector Road (signalized).

The Applicant's Traffic Report includes the following peak hour conditions, which will be reviewed as part of the process:

- Weekday morning peak hour;
- Weekday afternoon peak hour; and,

- Saturday midday peak hour.

It is important to note that an initial review of the Applicant's Traffic Study excludes any review of accident history along NYS Route 22, the site existing driveways or along NYS Route 138 and the Connector Road.

Schedule and Fee

We are available to initiate this review within a few days of receiving written authorization. We anticipate that we will need at most three weeks to complete the review, which will include a field investigation and a review of the SYNCHRO analysis, which we will request the actual model from JMC. At the completion of our work, we will prepare a Review Letter and offer our comments and findings.

Our fee to complete this review and prepare this Letter will be up to $4,500, plus out-of-pocket expenses and meetings, if requested to attend. This work will be completed on an hourly basis. A copy of our current Schedule of Hourly Charges for 2018 is attached. If this work continues into 2019 there will be a modest increase in hourly rates of approximately two percent. Attendance at any day or evening meetings will be billed on an hourly basis. If we are requested to review any additional documentation provided by the Applicant, we will bill for this time on an hourly basis. Any additional work will not commence until we receive written authorization from either your office or the Town.

Firm Experience

Frederick P. Clark Associates, Inc. has been providing planning services to municipalities throughout the Hudson Valley and Long Island since 1950. Traffic consulting services began in 1978 to complement the planning services to municipalities.

Clark Associates currently represents or provides traffic consulting services to the following communities either on a regular basis or an as needed basis:

- Village of Buchanan;
- Town of North Castle;
- Village of Pleasantville;
- Town of New Castle;
- Village of Bronxville;
- Town of Wappinger;
- Village of Rye Brook;
- Town of Ridgefield, Connecticut;

- Village of Roslyn Harbor;
- Town of Fairfield, Connecticut;
- Town of Newtown, Connecticut;
- Village of Nyack;
- Village of New Hempstead;
- Village of Tarrytown;
- Village of Fishkill;
- Town of Ramapo;
- Village of Larchmont;
- Town of Somers;
- Town of Darien, Connecticut;
- City of Norwalk, Connecticut;
- Town of Bethel, Connecticut; and,
- Town of Old Saybrook, Connecticut.

General Terms

1. It is agreed that this document will serve as a contract for the proposed professional services.

2. The proposal is valid for a period of 60 days.

3. Payment of the Consultant is expressly not contingent on the formal approval by the Town or others.

4. Payment is required within 30 days of invoicing.

If you agree with this proposal please have the appropriate person on the Planning Board sign in the space provided below and return a copy of the last page to my attention. If you have any questions, please do not hesitate to call.

Sincerely,

Michael A. Galante
Managing Principal

Enclosure

Our fee to complete this Traffic Review will be $4,500, plus out-of-pocket expenses and attendance at any meetings.

Accepted By _____ _____
Date

_____
Typed or Printed Name and Organization (Required)

_____
Address

_____

_____

Telephone _____ Fax _____

Email Address _____

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Traffic and Parking Consultants
Highway and Signal Design
MICHAEL MARIS ASSOCIATES, INC.

December 13, 2018

Chairman Jerome Kerner, AIA and
Members of the Planning Board
Town of Lewisboro
79 Bouton Road
South Salem, NY 10590

RE: Traffic Consulting Services
Town of Lewisboro Planning Board

Dear Chairman Kerner and Members of the Planning Board:

Thank you for the opportunity to submit this proposal to provide traffic consulting services to the Town of Lewisboro Planning Board in connection with an application by Mercedes Benz of Goldens Bridge.

Representatives of Michael Maris Associates, Inc. are very familiar with the requirements of Planning Boards and have provided review services for several municipalities in New York, including the Town of Greenberg for which we were traffic consultants for more than ten years. During this period, we reviewed numerous Traffic Studies relating to development applications and presented our findings to the Greenberg Planning and Zoning Boards, as well as the Town Council at meetings and hearings. We were also retained by the Town to perform several traffic studies relating to Town projects.

Regarding the Mercedes Benz application, we propose to perform the following tasks during our review of the Traffic Study:

1. We will visit the site to observe current traffic flow conditions and collect information regarding existing lane utilization, intersection geometries and traffic controls. During the field observations, we will also perform short-term traffic counts along NY Route 22.

2. We will perform a thorough review and comment on the various Traffic Study components, including the following:

    a. Scope of the Traffic Study, including study intersections and hours of analyses.
    b. Accuracy of the field data and traffic counts.
    c. Methodology and accuracy of the No-build traffic volume estimates.
    d. Methodology and accuracy of the trip generation and distribution estimates and resulting Build traffic volume estimates.
    e. Methodology of the Capacity Analyses and accuracy of the findings.
    f. Accuracy of the Traffic Study conclusions and recommendation.

3. We will prepare a letter report to the Planning Board summarizing the work we performed and our findings and recommendations.

4. When requested, we will attend meetings, hearings and telephone conferences to discuss our analyses and present our findings.

We propose to invoice $ 5,000.00 for the Traffic Study review and comment letter. Since we do not know the amount of time that will be needed for meetings, hearings and conferences, we cannot provide an accurate fee estimate and we will bill our time on an hourly basis per the attached Fee Schedule. For budget purposes, assuming a total of 10 hours, we will bill $ 2,000.00.

We trust that the Scope and Fees presented herein are clear and hope that we will have an opportunity to work with you and the Planning Board. Please do not hesitate to call us if you have any questions or require additional data.

Respectfully submitted,
MICHAEL MARIS ASSOCIATES, INC.

Michael Maris
President
att.

Adler Consulting Transportation Planning & Traffic Engineering
A Chazen COMPANY

1 North Broadway, Suite 803
White Plains, NY 10601-2401
Ph: 914.997.8510
F: 914.997.7140

December 11, 2018

Jerome Kerner, AIA
Planning Board Chairman
Town of Lewisboro
79 Bouton Road
South Salem, NY 10590

Re: Professional Services Proposal
Mercedes Benz of Goldens Bridge
321 NY Route 22, Town of Lewisboro, New York
Adler Consulting Proposal No. PM 18-245

Dear Mr. Kerner:

Thank you for the opportunity to provide you with this proposal for Traffic Engineering Services related to the Mercedes Benz of Goldens Bridge property located at 321 NY Route 22 in the Town of Lewisboro, Westchester County, New York (hereinafter referred to as the "subject site"). Adler Consulting, Transportation Planning and Traffic Engineering, A Chazen Company (Adler Consulting) understands that it has been proposed to expand the existing Showroom Building and the adjacent Service Building from the current 30,600 square feet (sf) to approximately 71,800 sf. Adler Consulting can assist you in reviewing and evaluating the anticipated traffic impact of the proposed expansion on NY Route 22 and the Town of Lewisboro. We will review the Traffic Study prepared for Mercedes Benz of Goldens Bridge, dated, November 16, 2018, which discussed the potential impact of the expansion of the automobile facility at five (5) intersections. We will also review the access and traffic circulation depicted in the Layout Plan, as amended on September 6, 2018. This proposal conveys our understanding of the project and proposes the scope of work we believe is necessary to achieve your goals, along with our schedule and fee.

In accordance with your request for a proposal, Adler Consulting is pleased to submit this letter proposal to provide the necessary services. Adler Consulting will:

- Review the Traffic Study submitted by the Applicant
- Prepare of a Letter Report summarizing our findings and conclusions
- Appear before the Town of Lewisboro Planning Board to present the findings reached during the conduct of this review

The Scope of Services below outlines the efforts to be performed and represents the best efforts of the Adler Consulting based on currently available information.

SCOPE OF SERVICES

Adler Consulting offers the following scope of services which we believe are needed to accomplish your desired objectives. The work schedule and fees associated with these tasks are included in the Fee Summary Table which follows the Scope of Services.

Task 01 – Evaluate the Applicant's Traffic Study

Scope – Adler Consulting will review the analyses and methodologies to ensure that standard engineering practices were employed.

1. With the help of the Client, attempt to obtain traffic volume data from jurisdictional or other private sector studies involving the intersections analyzed by the Applicant to verify the counted traffic volumes.

2. Review the counted traffic volumes to ensure that they were appropriately adjusted to account for any seasonal variations in traffic activity.

3. Confirm that the counted traffic volumes were balanced to ensure uniformity.

4. Confirm traffic related information about the strategic locations and the roadway system in the near vicinity of the Site as it affects intersection capacities.

5. Review the anticipated traffic growth rate for the area and, with the help of the Client, attempt to identify planned projects in the area which may affect traffic flows into the area.

6. Review the Applicant's schedule of development used to establish Horizon Year conditions.

7. Examine the traffic volumes attributed to the development of the identified adjacent developments, used to determine "No-Build" conditions.

8. Evaluate the procedures used and subsequent conclusions regarding the arrival/departure patterns for the new Site-generated traffic.

9. Examine the amount of traffic postulated to be generated by the proposed development.

10. Confirm the correct assignment of project-generated trips to the roadway system in accordance with the arrival/departure patterns, previously established.

11. Confirm the correct application of the background growth, vicinity development and project related traffic volumes to the Existing traffic volumes to obtain the No-Build and Build traffic volumes.

12. Review the intersection capacity analyses undertaken to ensure they incorporate all

known conditions as they relate to capacity and safety and to ensure that the latest Highway Capacity Software is used.

13. Review the Site Plan with respect to internal circulation patterns, parking, emergency access and delivery to ensure that they are treated appropriately.

14. Evaluate the feasibility and effectiveness of all measures needed to improve conditions.

15. Advise the Client of the findings and obtain guidance for the preparation of the Traffic Letter Report.

Task 02 – Traffic Letter Report

Scope – Based on the guidance of the Client, Adler Consulting will prepare a Traffic Letter Report which will document any errors, omissions or inconsistencies identified in the traffic engineering review. Adler will provide an opinion as to the potential consequences of said errors, omissions or inconsistencies and recommend a course of action to see that any necessary information can be included in the Applicant's additional submissions. The Client will be provided with one (1) copy of the Study to review, and we assume only minor edits based on the Client's review. One (1) original copy of the Final report will be provided to the Town of Lewisboro Planning Board.

Task 03 – Additional Efforts

Scope – No scope nor estimated fees have been included herein for efforts beyond that described in Tasks 01 - 02 above, or additional work which may be necessitated based on project changes (e.g., additional information becomes available, a change in the project or approach, additional work is requested by you or a reviewing entity, changes to the documents after submission, etc..). In the event of requested substantive additional efforts a Professional Services Change Order (PSCO) will be provided to you. In the event of a minor request we will bill up to four (4) hours per the attached Billing Rate Schedule.

Task MT00 – Meetings

Scope – Adler Consulting will prepare for and attend public meetings of the Town of Lewisboro Planning Board to present the findings and conclusions of the Letter Report. For budgetary purposes, one (1) such meeting is assumed to be attended by one (1) person for four (4) hours each (including travel). This time will be billed on a Time and Materials basis in accordance with our Fee Schedule.

Task RE00 – Reimbursable Expenses

Scope – This scope of services includes only the cost for the preparation of the work as outlined above and does not include our direct expenses, such as mileage, overnight mailings, photocopying, map reproductions, etc. An initial budget of $100 has been included in the fee schedule for reimbursable expenses. Reimbursables will be billed in accordance with the billing rate schedule in effect at the time of incurring the expense.

ASSUMPTIONS

In addition to assumptions previously described in this Proposal, Adler Consulting assumes that:

- The Client will provide Adler Consulting with access to the site and apprise Adler Consulting of any special conditions that may affect personnel working at the site (e.g., access, safety, environmental issues).
- The Client will provide available records regarding pertinent documents and prior submissions, including Traffic Studies, intersection analyses, record drawings, Site Plans, reports, etc. Documents will be provided in both hard copy and electronic format and Adler Consulting can rely on the accuracy and completeness of information furnished.
- Deliverables and effort estimates are as described above in our tasks. If requested, Adler Consulting can provide a change order for additional efforts other than those included in this scope of services, including additional reports or correspondence, CAD drawings, applications, reviews, permits, fees, analyses, or engineering evaluations or designs, and/or additional meetings/conference calls.

PROFESSIONAL SERVICES FEE SUMMARY

Adler Consulting proposes to bill each task as indicated in the following Fee Summary. Invoices will be issued monthly for all services performed during that month and are payable upon receipt. Lump Sum tasks will be billed commensurately with the percentage of the task that has been completed. Estimated Time and Materials tasks will be invoiced based on the actual hours incurred in accordance with the Rate Schedule in effect at the time of providing services. A copy of our current Billing Rate Schedule is attached to this proposal.

Reimbursable expenses, which include our direct expenses, such as mileage, overnight mailings, extensive photocopying and map reproductions, will be tracked under Task RE00.

Adler Consulting will make its best effort to complete all the identified tasks within the overall estimated project budget. It is possible that it will be necessary to exceed these amounts to complete the scope of services for the project. We will not exceed the total estimated fee without authorization from you.

FEE SUMMARY TABLE

Tasks		Fee Estimates	
Task No.	**Task Description**	**Lump Sum**	**Time & Material Estimate [1]**
01	**Evaluate the Traffic Study**	$6,950	
02	**Traffic Letter Report**	$1,500	
03	**Additional Efforts [3]**		Up to 4 hours at attached billing rates
MT00	**Meetings [2]**		$1,000
RE00	**Reimbursable Expenses [4]**		$100
	Subtotal	$8,450	$1,100
	Total	$9,550	

1. Fees listed for Time and Materials tasks, Sub-Consultants, and Reimbursable Expenses are estimates only. Chazen will bill for actual hours and reimbursable expenses incurred. While Chazen will make its best effort to complete each of these tasks within the estimated amounts, it is possible that it will be necessary to exceed these amounts in order to complete the scope of services for each task.
2. All meetings outlined will be billed on an hourly basis, in accordance with the attached Billing Rate Schedule.
3. Additional efforts beyond the specified estimate provided herein will be provided under a Professional Services Change Order.
4. Reimbursable expenses include mileage, copies, reasonable out-of-pocket costs.

SCHEDULE

The primary elements of the review and the letter report will be completed within three (3) to four (4) weeks following your authorization to proceed, with any follow-up analysis, requested because of the public hearings completed within 30 days thereafter. This schedule is based on currently available information and our resources as of the date of this proposal. Certain aspects of the project are outside of our control the project schedule may necessitate schedule changes.

AGREEMENT

Attached please find a copy of our Standard Agreement. Receipt of an executed copy of this Agreement will be our authorization to schedule the performance of this work. Please be aware that the projected task start and completion dates are based upon timely receipt of the signed Agreement. A delay in returning the necessary documents may require modification of the proposed task start and completion dates as described herein. This proposal is valid for 30 days from the date hereof.

Please note that while Adler Consulting has furnished what we believe is a comprehensive and complete scope of services, we are open to dialogue as to how we may modify our proposal to ensure that our services may better meet your needs, and/or how alternate approaches may be implemented.

Thank you for the opportunity to submit this proposal for consideration. We are excited about the opportunity to assist the Town of Lewisboro. If you have any questions or would like additional information, please contact me at 914.997.8510 or badler@chazencompanies.com.

Sincerely,



Bernard Adler, P.E.
President, Adler Consulting Transportation Planning & Traffic Engineering (A Chazen Company)
Senior Director, Transportation Services, The Chazen Companies

Attachments: [Standard Agreement, Billing Rate Schedule]

Cc: Stuart F. Mesinger, AICP, Senior Principal, VP Land Development
All Proposals

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: December 13, 2018

RE: Waiver of Site Development Plan Procedures
Rose Kulangara
25 Fairmount road
Sheet 71, Block 11127, Lot 2

The subject property is located at 25 Fairmount Road in the Wild Oaks development and contains a single-family residence (attached). A prior owner constructed a 23.6' x 11.9' wood deck attached to the rear of the residence without a Building Permit or Site Development Plan Approval from the Planning Board. The deck is not original to the house, replaced an original at-grade patio, and is located in close proximity to the side property lines.

As the property is located within the R-MF Zoning District, it has been determined that Site Development Plan Approval is required from the Planning Board to legalize the deck. Unfortunately, the originally approved site development plans for Wild Oaks have not been located (despite repeated attempts by Town staff) and, therefore, the zoning setbacks which would have been established for the development at time of approval are unknown at this time.

Prior to taking action on the submitted Site Development Plan Application, a determination will need to be made regarding zoning compliance and whether the location of the as-built deck is compliant.

PLAN REVIEWED, PREPARED BY WARD CARPENTER ENGINEERS, INC., DATED SEPTEMBER 20, 2018:

- Building Survey

DOCUMENTS REVIEWED:

- Planning Board Application

JKJ/JMC/dc

T:\Lewisboro\Correspondence\2018-12-13_LWPB_Kulangara_Review Memo.docx

8-1873

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518 Email: planning@lewisborogov.com Tel: (914) 763-5592

RECEIVED LEWISBORO OCT 30 2018 PLANNING BOARD

app fee & escrow rec'd

Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan Procedures	✓			
Site Development Plan Approval	Step I ☐		Step II ☐	
Special Use Permit Approval	Step I ☐		Step II ☐	
Subdivision Plat Approval	Step I ☐		Step II ☐	Step III ☐

FILE

Project Information

Project Name: ROSE KULANGARA

Project Address: 25 FAIRMOUNT RD. GOLDENS BRIDGE 10526

Gross Parcel Area: 0.005ac Zoning District: RMF Sheet(s): 7I Block (s): 11127 Lot(s): 2

Project Description: LEGALIZING AN EXISTING DECK

Is the site located within 500 feet of any Town boundary? YES ☐ NO ☒

Is the site located within the New York City Watershed? YES ☒ NO ☐

Is the site located on a State or County Highway? YES ☐ NO ☒

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board	☐	ZBA	☐	Building Dept.	☐	Town Highway	☐
ACARC	☐	NYSDEC	☐	NYCDEP	☐	WCDH	☐
NYSDOT	☐	Town Wetland	☐	Town Stormwater	☐		

Other _____

Owner's Information

Name: Joe + Rosamma Kulangara Email: rosamma911@yahoo.com

Address: 20 ADAMS HILL ROAD, Cross River N.Y Phone: 914-977-3707

Applicant's Information (if different)

Name: _____ Email: _____

Address: _____ Phone: _____

Authorized Agent's Information

Name: _____ Email: _____

Address: _____ Phone: _____

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE RKulangara DATE 10/29/18

OWNER'S SIBNATURE RKulangara DATE 10/29/18

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592
Fax: (914) 763-3637

FILE

RECEIVED
LEWISBORO
OCT 30 2018
PLANNING
BOARD

Affidavit of Ownership

State of: NEW YORK

County of: WEST CHESTER

ROSE KULANGARA, being duly sworn, deposes and says that he/she resides at 20 ADAMS HILL RD, CROSS RIVER NY 10518 in the County of WEST CHESTER, State of NY and that he/she is (check one) ✓ the owner, or ____ the _____ of _____

Title

Name of corporation, partnership, or other legal entity

which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of Lewisboro as:

Block 1127, Lot 2, on Sheet 7I.

R Kulangara

Owner's Signature

Sworn to before me this
30TH **day of** October, 2018

ROBIN SUE HARRIS
Notary Public, State of New York
No. 05HA6359305
Qualified in Westchester County
Commission Expires May 30, 2021

Notary Public – affix stamp

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

FILE

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

ROSE KULANGARA — *Name of Applicant*

KULANGARA DECK — *Project Name*

Property Description

Tax Block(s): 1127

Tax Lot(s): 2

Tax Sheet(s): 7I

Property Assessed to:

KULANGARA TRUST — *Name*

25 FAIRMOUNT RD. — *Address*

GOLDENS BRIDGE 10526 — *City State Zip*

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: [signature] 10/30/2018 *Date*

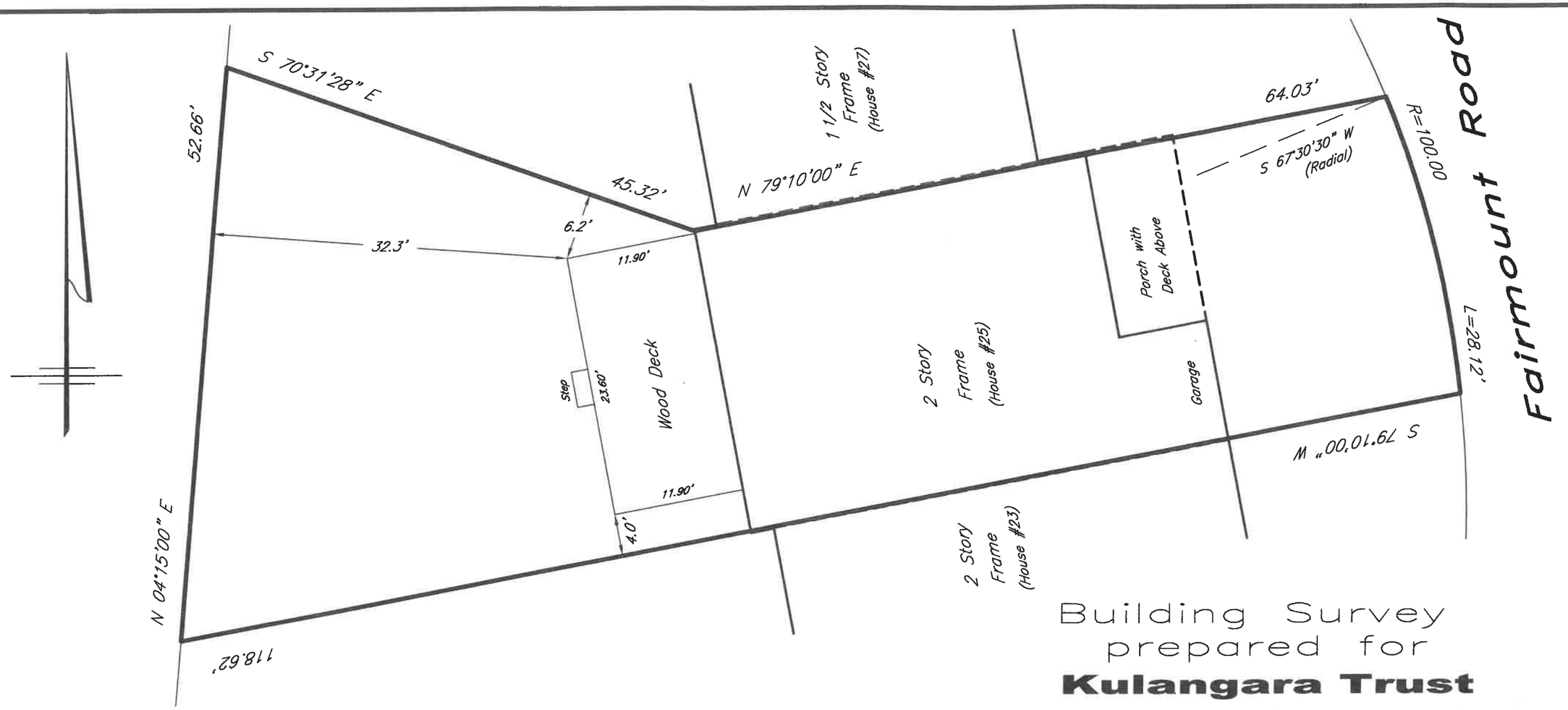
Sworn to before me this

30th day of October, 2018

[signature]

Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020



Building Survey
prepared for
Kulangara Trust
in the Town of
Lewisboro
Westchester County, N.Y.
Scale 1"=10' Sept. 20, 2018

Subsurface structures and their encroachments, if any exist, are not shown hereon.

"Unauthorized alterations or additions to a survey map is a violation of section 7209, sub-division 2, of the New York State Education Law."

"Only copies of the original survey marked with the land surveyor's inked or embossed seal shall be considered a true and valid copy."

"Certifications indicated hereon signify that this survey was prepared in accordance with the existing code of practice for Land Surveys adopted by the New York State Association of Professional Land Surveyors. Said certifications shall run to the person for whom the survey is prepared only, and on his behalf to the Title Company, governmental agency and lending institution listed hereon, and to the assignees of the lending institution. CERTIFICATIONS ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS."

Copyright (c) 2018 Ward Carpenter Engineers, Inc. All Rights Reserved.

Ward Carpenter Engineers, Inc.
76 Mamaroneck Avenue
White Plains, N.Y. 10601

Job # 53715

LDD 53715\dwg\53715.dwg

Subject: Fwd: Survey Reading - TTS 33228 - Kulangara to Agyeman/Tonyminks

From: antonytom@aol.com
To: suzanne@attorneywhalen.com
Date: Monday, September 10, 2018, 10:55:55 AM EDT

Suzanne,
I have also reasearched the issue you raise with regard to clearance above the oil tank and have found no authority for a minimum clearance.
Tom

Sent from AOL Desktop
THOMAS T. ANTONECCHIA
Attorney at Law
155 Katonah Avenue
Katonah, NY 10536
Tel. (914) 232-3185

From: antonytom@aol.com
To: suzanne@attorneywhalen.com
Sent: 9/10/2018 10:38:07 AM Eastern Standard Time
Subject: Survey Reading - TTS 33228 - Kulangara to Agyeman/Tonyminks

Suzanne,
Attached is the survey reading in my client's title insurance policy of 1987. The survey reading shows that a deck was there when they purchased the property and when their mortgage lender closed their mortgage. No one other than you have raised an issue with regard to the deck in the intervening years.
The Building Department has no record of a violation.
Tom

Sent from AOL Desktop
THOMAS T. ANTONECCHIA
Attorney at Law
155 Katonah Avenue
Katonah, NY 10536
Tel. (914) 232-3185
In a message dated 9/5/2018 4:01:45 PM Eastern Standard Time, suzanne@attorneywhalen.com writes:

Hi Tom,

Does your client have a CO for the deck extension/addition referred to in the survey reading?

Suzanne T. Whalen, Esq.
Whalen & Whalen
245 Saw Mill River Rd., Suite 106
Hawthorne, New York 10532
914-533-6544 / 914-533-2126 fax

suzanne@attorneywhalen.com

www.attorneywhalen.com

TITLE INSURANCE POLICY

First American Title Insurance Company of New York

Policy No. Z 355474
Title No. 201-W-7061

In Consideration of the payment of its charges for the examination of title and its premium for insurance, insures the within named insured against all loss or damage not exceeding the amount of insurance stated herein and in addition the costs and expenses of defending the title, estate or interest insured, which the insured shall sustain by reason of any defect or defects of title affecting the premises described in Schedule A or affecting the interest of the insured therein as herein set forth, or by reason of unmarketability of the title of the insured to or in the premises, or by reason of liens or encumbrances affecting title at the date hereof, or by reason of any statutory lien for labor or material furnished prior to the date hereof which has now gained or which may hereafter gain priority over the interest insured hereby, or by reason of a lack of access to and from the premises, excepting all loss and damage by reason of the estates, interests, defects, objections, liens, encumbrances and other matters set forth in Schedule B, or by the conditions of this policy hereby incorporated into this contract, the loss and the amount to be ascertained in the manner provided in said conditions and to be payable upon compliance by the insured with the stipulations of said conditions, and not otherwise.

In Witness Whereof, FIRST AMERICAN TITLE INSURANCE COMPANY OF NEW YORK has caused this policy to be signed and sealed on its date of issue set forth herein, the policy to become valid when countersigned by an authorized signature

COUNTERSIGNED

AUTHORIZED SIGNATURE

FIRST AMERICAN TITLE INSURANCE COMPANY OF NEW YORK

FIRST AMERICAN TITLE INSURANCE COMPANY OF NEW YORK

BY: _____
PRESIDENT

(See Over)

N.Y.B.T.U. FORM 100 D

Policy No. Z 355474
Title No. 201-W-7061

Amount of Insurance $ 186,000.00 **Date of Issue** 6/10/87

Name of Insured: Joe G. Kulangara and Rosamma J. Kulangara, his wife

The estate or interest insured by this policy is FEE SIMPLE **vested in the insured by means of**

Deed dated 6/10/87 made by Frank H. Whalen and Dorothy F. Whalen, his wife to the insured and recorded in the Westchester County Clerk's Office, Division of Land Records.

SCHEDULE A

The premises in which the insured has the estate or interest covered by this policy is described on the description sheet annexed.

SCHEDULE B

The following estates, interests, defects, objections to title, liens and encumbrances and other matters are excepted from the coverage of our standard form of policy:

1. Defects and encumbrances arising or becoming a lien after the date of this policy.
2. Consequences of the exercise and enforcement or attempted enforcement of any governmental war or police powers over the premises.
3. Any laws, regulations or ordinances (including, but not limited to zoning, building, and environmental protection) as to the use, occupancy, subdivision or improvement of the premises, adopted or imposed by any governmental body, or the effect of any non-compliance with, or any violation thereof.
4. Judgments against the insured or estates, interests, defects, objections, liens or encumbrances created, suffered, assumed or agreed to by or with the privity of the insured.
5. Title to any property beyond the lines of the premises, or title to areas within or rights or easements in any abutting streets, roads, avenues, lanes, ways or waterways, or the right to maintain therein vaults, tunnels, ramps or any other structure or improvement, unless this certificate specifically provides that such titles, rights, or easements are insured. Notwithstanding any provisions in this paragraph to the contrary, this certificate, unless otherwise excepted, insures the ordinary rights of access and egress belonging to abutting owners.
6. Title to any personal property, whether the same be attached to or used in connection with said premises or otherwise.

7. Survey Reading: see sheet annexed.

8. Declaration of Restrictions in Liber 7025 cp 559 and Liber 7035 cp 427.

9. Utility Agreements recorded in Liber 6676 cp 593; Liber 6965 cp 734 and Liber 7003 cp 601.

10. Easement for Right of Way and roadway in Liber 3537 cp 80 and Liber 3548 cp 80.

11. Mortgage in the face amount of $130,000.00 plus interest and the terms and conditions thereof held by Ensign Bank F.S.B.

Title No. W-7061

SCHEDULE "A"

ALL that certain plot, piece or parcel of land, situate, lying and being in the Town of Lewisboro, County of Westchester and State of new York, being more particularly bounded and described as follows:

BEGINNING at a point on the westerly side of Fairmont Road distant 1301.39 feet northerly as measured along the westerly side of Fairmont Road from the corner formed by the intersection of the westerly side of Fairmont Road with the northerly side of Turk Hill Road (Route 138);

RUNNING thence South 79 degrees 10' West 118.62 feet;

THENCE North 4 degrees 15' East 52.66 feet;

THENCE South 70 degrees 31' 28" East 45.32 feet;

THENCE North 79 degrees 10' East 64.03 feet to a point on the westerly side of Fairmont Road;

THENCE southerly along the westerly side of Fairmont Road along the arc of a curve to the right having a radius of 100 feet a distance of 28.12 feet to the point and place of beginning.

The policy to be issued under this report will insure the title to such buildings and improvements erected on the premises which by law constitute real property

FOR CONVEYANCING ONLY - TOGETHER with all the right, title and interest of the party of the first part, of, in and to the land lying in the street in front of and adjoining said premises.

Title No.

SCHEDULE "B" (CONTINUED)

SURVEY READING

Survey made by Charles Riley dated 9/4/73 shows a 2 story frame builidng and the following:

a) Party walls on northerly and southerly record lines. Rights of others to use thereof.

Personal Inspection dated 4/27/87 shows:

a) Wood gate and fence on or near southerly reocrd line;

b) Wall and fence on or near northerly protion of premises;

NOTE: Wood deck added to westerly side of building (within record lines).

Application No: 76 -18WP
Fee: #255 Date: 10/3/18

ck#1295
rec#692374

TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 1178 RTE 35 SO. SALEM

Sheet: 27 Block: 10805 Lot(s): 29

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): See Attached

Owner's Information

Owner's Name: S. J. Potz Phone: 914-763-5082

Owner's Address: Box 237. S. Salem, N.Y. 10590 Email: JKPZ@optonline.net

Applicant's Information (if different)

Applicant's Name: S.J. Potz Phone: 914-763-5082

Applicant's Address: Box 237 S. Salem, N.Y. 10590 Email: JKPZ@optonline.Net

Authorized Agent's Information (if applicable)

Agent's Name: _____ Phone: _____

Agent's Adress: _____ Email: _____

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
   ☑ Administrative ☐ Planning Board
2. Is the project located within the NYCDEP Watershed? ☐ Yes ☐ No ?
3. Total area of proposed disturbance: ☑ < 5,000 s.f. ☐ 5,000 s.f. - < 1 acre ☐ ≥1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: No

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: _____ Date: 9-12-18

From: **Jack Potz** jkpz@optonline.net
Subject: Fwd: Project description
Date: Today at 9:46 AM
To: Jack Potz jkpz@optonline.net

Sent from my iPad

Begin forwarded message:

From: Jack <jkpz@optonline.net>
Date: October 10, 2018 at 8:42:56 AM EDT
To: Jack Potz <jkpz@optonline.net>
Subject: Project description

Dear Committee Members,

Project Description

I have attached the 1966 original plan with dimensions of one inch equaling fifty feet ,exhibit A.To get a clearer view, I have enlarged the original plan exhibit B ,to make it easier to read.

My goal was to smooth out a path to my Barn with organic wood chips that would also impede the wild growth of invasive briers.No other material was placed in the high lighted area or anywhere else on my property.Over the last fifty years ,trees have died or have come down due to storms . No logs have been placed on my property from other locations.

To insure minimal damage and disruption to the area ,I plan to distribute the wood chips to the barn as shown on the plan and smooth out the area to grade ,mostly by hand.I will also reclaim area with pachysandra as it seems to thrive in this area.

I do apologize for placing these wood chips in an environmental sensitive area and certainty will not do this in the future .

Thank you.

Jack Potz

Sent from my iPad

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

S. J. Potz
Name of Applicant

Spreading Wood Chips
Project Name

27

Property Description

Tax Block(s): 10805

Tax Lot(s): 29

Tax Sheet(s): 27

Property Assessed to:

S J Potz
Name

1178 Rt 35
Address

S. Salem N.Y. 10590
City *State* *Zip*

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: [signature] 9/19/2018
Date

Sworn to before me this
19th **day of** September, 2018

[signature]
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020

TITLE Nº 6113786

FORMERLY GEORGE H. TATOR
NOW OR FORMERLY
LANDS OF SOUTH SALEM FIRE DISTRICT

S. 13°53'30"E. 417.27'

STONE — WALL — STONE — WALL — STAKE

S. 10°40'40"E. 21.91'
S. 24°13'20"E. 10.29'
S. 0°18'40"E. 11.04'
S. 16°54'10"E. 34.98'
S. 13°49'E. 45.06'

NOW OR FORMERLY HAIGHT

N. 73°13'50"E. 80.15'
N. 72°03'40"E. 138.91'

STONE — WALL

N. 13°07'50"W.

STONE

NOW OR FORMERLY JOSEPH A. CARRON

REMOVED
1 STORY FRAME BUILDING
100'
95'
45'-0"
HOUSE
36'-0"
75'-0"
SEPTIC TANK
138.05
N. 78°51'10"W. 247.03'
WALL
422.08'
STAKE
CROSS RIVER CRAFTS CORNERS RD. (S.H. 899)

Exhibit A

AREA = 2.443 ACRES

CERTIFIED TO THE TITLE GUARANTEE COMPANY AND TO NATIONAL BANK OF WESTCHESTER

SURVEYED & PREPARED BY
BUNNEY ASSOCIATES
ENGINEERS & SURVEYORS
156 KATONAH AVE.
KATONAH, NEW YORK

SURVEYED AS IN POSSESSION

SURVEY OF PROPERTY
BELONGING TO
ALBERT J. TRIMARCHI
SITUATE IN THE
TOWN OF LEWISBORO
WESTCHESTER COUNTY
NEW YORK

SCALE : 1" = 50'

MAR. 30, 1966

BLOCK 1080S
LOTS 39 - 44

FILE NO. T-570-G
P4-17

FORMERLY GEORGE H. TATOR

NOW OR FORMERLY

LANDS OF SOUTH SALEM FIRE DISTRICT

575 Ft

Exhibit B

S. 13°53'30"E.

STONE

50 Ft 25 Ft

138.91'

WALL

50 Ft

N. 73°13'50"E.

80.15'

STONE

50 Ft

N. 12°03'40"E.

Barn

18 Ft

55 Ft

Chips

60 Ft

S. 24°13'20"E. 10.29'

S. 10°40'40"E. 21.91'

S. 5°18'40"E. 11.04'

S. 16°54'10"E. 94.98'

S. 13°49'E. 45.0C

417.27'

WALL

STONE

WALL

STAKE

House

32'

50 Ft

N. 78°5'10"W.

S. H. 899)

ISS RIVER CRAFTS

STONE

N. 13°07'50"W.

450Ft

WALL

122.06'

Application No: 70-18WP

Fee: $255 Date: 9/13/18

ck # 2350

rec # 692367

escrow estab.

TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 1320 Rt 35 South Salem NY 10590

Sheet: 39 Block: 10543 Lot(s): 39

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): About 200 square Feet, Pull Back wood chips that Has slid Down the Hill Due To Rain And Heavy snow / Plant 5 winter Berry Bushes and Allow Natural Growth To grow in

Owner's Information

Owner's Name: Anthony J. Mendola Phone: 914-763-3503

Owner's Address: 1320 Rt 35 South Salem NY 10590 Email:

Applicant's Information (if different)

Applicant's Name: Phone:

Applicant's Address: Email:

Authorized Agent's Information (if applicable)

Agent's Name: Phone:

Agent's Adress: Email:

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)

   ☒ Administrative ☐ Planning Board

2. Is the project located within the NYCDEP Watershed? ☐ Yes ☒ No

3. Total area of proposed disturbance: ☒ < 5,000 s.f. ☐ 5,000 s.f. - < 1 acre ☐ ≥1 acre

4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: NO

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: Anthony J. Mendola Date: Sept, 13 - 2018

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592
Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester

Anthony J. Mendola, being duly sworn, deposes and says that he/she resides at 1330 Rt 35 South Salem NY 10590 in the County of Westchester, State of New York and that he/she is (check one) ✓ (the owner) or ____ the _____ *Title* of _____ *Name of corporation, partnership, or other legal entity* which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of Lewisboro as:

Block 10543, Lot 39, on Sheet 39.

Anthony J. Mendola
Owner's Signature

Sworn to before me this
13 **day of** September, 2018

ROBIN SUE HARRIS
Notary Public, State of New York
No. 05HA6359305
Qualified in Westchester County
Commission Expires May 30, 2021

Notary Public – affix stamp

Revised 5-2017

Source: New York State Department of Environmental Conservation Environmental Resource Mapper

Website: www.DEC.NY.gov/gis/erm/




0
100
200ft


100
100
0
0
0
100
200ft
3

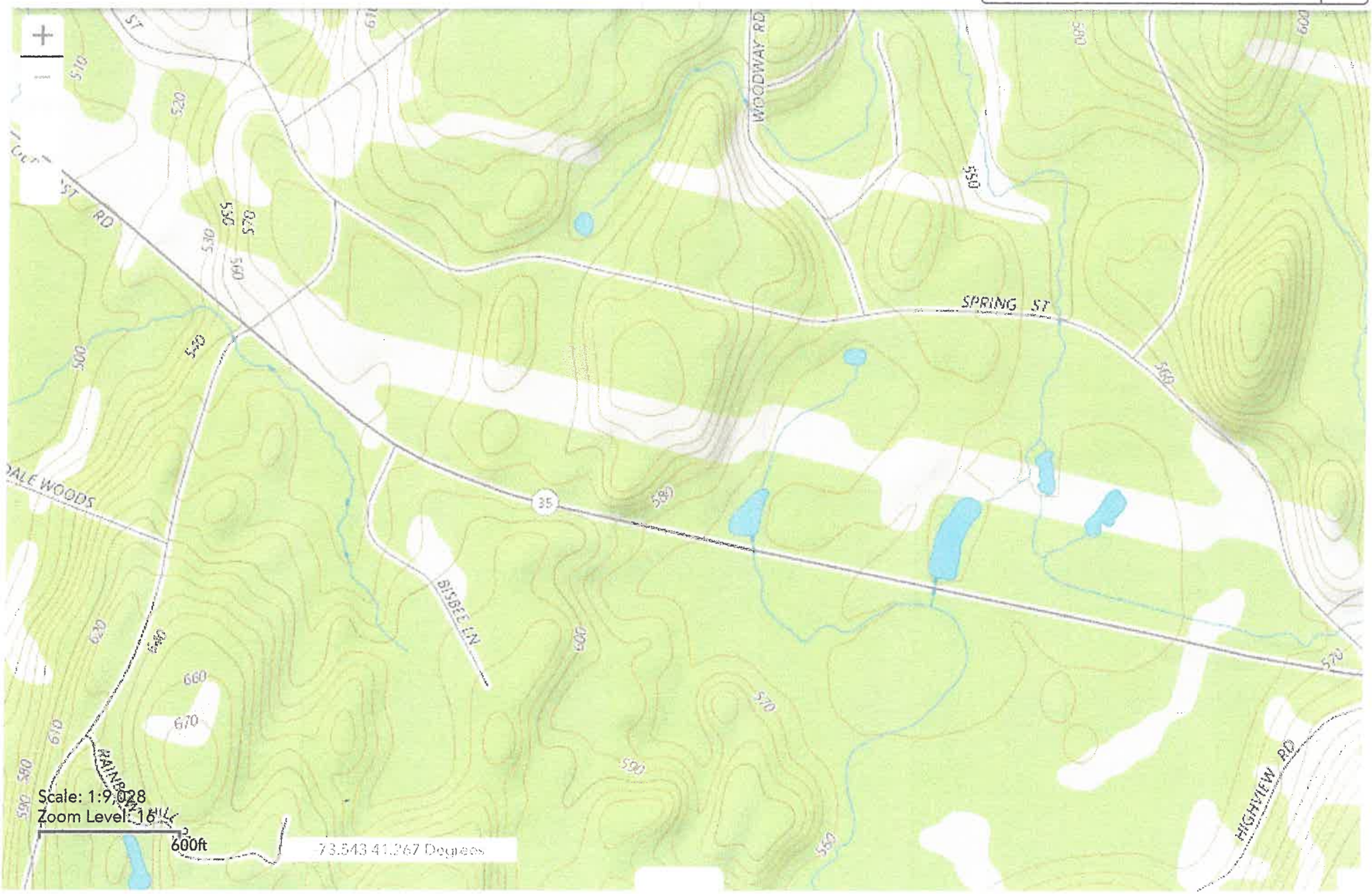

150'-0"
150'-0"
4

USGS science for a changing world

The National Map

Help Data Dov

Find address or place



5

Anthony Mendola
1320 Route 35
South Salem NY 10590

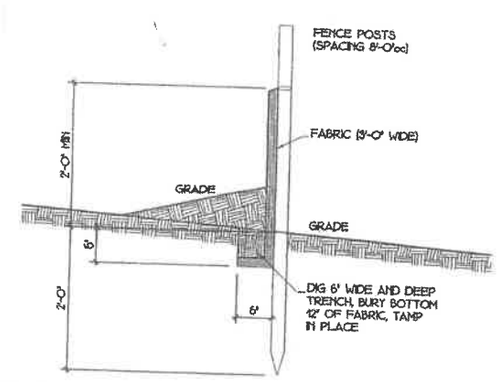
Wetlands Violation -Town of Lewisboro (Cal. No. 3-18 WV)

Sheet 39
Block 10543
Lot 39

Scope of work

Step 1:

Installation of a silt fence within the work area.



Step 2:

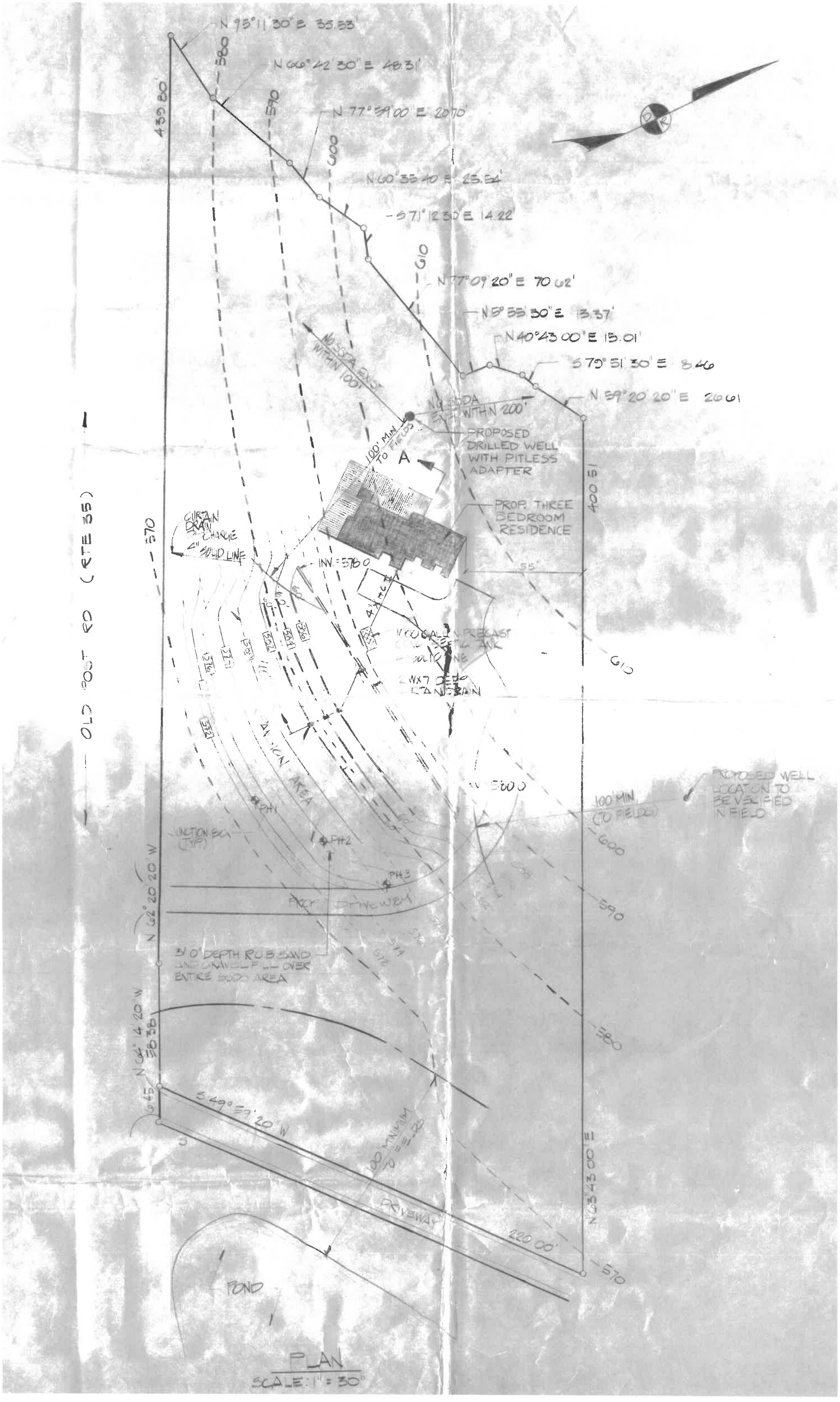
Restoration of the hills original grade. The restoration entails the removal of wood chips that has displaced from property and has deposited beyond the property that is adjacent to Route 35.

Step 3:

Installation of native plants in the area being restored.

Plant material:

- Six winterberry bushes



PLAN

SCALE: 1" = 30'

TOWN OF LEWISBORO PLANNING BOARD

79 Bouton Road, South Salem, NY 10590
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

Anthony T. Mendola
Name of Applicant

3-18WV, 70-18WP
Project Name

Property Description

Tax Block(s): 10543
Tax Lot(s): 39
Tax Sheet(s): 39

Property Assessed to:

Anthony T. Mendola
Name
1320 Rt 35
Address
South Salem NY 10590
City *State* *Zip*

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: [signature] 9/13/2018
Date

Sworn to before me this

13th **day of** September, 2018

[signature]
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020





KEY

- Property Line
- Fence Line
- Affected Area
- Listed Wetland Area

General Notes:

Step 1) Restoration of hills original grade. The restoration entails removal of wood chips that has slid down the hill.

Step 2) Installation of native plants in the area being restored. (Native Plant Material: Six Winterberry Bushes)

Step 3) Extending the fence line along the restoration area in question to avoid wood chips from sliding down the hill again.

COVER SHEET

Sheet No.: 1 of 1

By: Nicholas Mendola

Date: 11/1/2018

Property Owner: Anthony & Anne Mendola

Westchester County

Property Address:
1320 Rt. 35 South Salem N.Y. 10590

Mendola Residence
Wetland Mitigation

KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: Chairman Jerome Kerner, AIA and
Members of Lewisboro Planning Board

CC: Ciorsdan Conran
Judson Siebert, Esq.
Joseph Angiello

FROM: Jan K. Johannessen, AICP
Joseph M. Cermele, P.E., CFM
Town Consulting Professionals

DATE: December 13, 2018

RE: Site Development Plan, Wetland Permit and Stormwater Permit
Waccabuc Country Club
Chemical Wash Station & Bulk Storage Units
90 Mead Street
Sheet 22, Block 10802, Lot 61 & 37

PROJECT DESCRIPTION

The subject property is comprised of ±4.06 acres of land and is part of a larger site owned by the Waccabuc Country Club. The property is located at 90 Mead Street and is within the R-4A Zoning District. The applicant is proposing the construction of a 30' x 105' chemical wash station for the maintenance of its equipment, two 24' x 28' bulk storage containment sheds, drainage, utility and related improvements. The subject property contains a watercourse that is jurisdictional to the Town of Lewisboro and a portion of the wash building and the storage sheds are located within the 150-foot buffer.

SEQRA

The proposed action has been preliminarily identified as a Type II Action and is categorically exempt from the State Environmental Quality Review Act (SEQRA).

REQUIRED APPROVALS

1. Site Development Plan Approval, a Wetland Permit and a Town Stormwater Permit is required from the Planning Board; a public hearing is required to be held.

2. The subject property is located within the Special Character Overlay District and the application should be referred to the Architecture and Community Appearance Review Council (ACARC) for review.

3. Coverage under the New York State Department of Environmental Conservation (NYSDEC) SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) is required.

COMMENTS

1. It is our understanding that the proposed storage sheds are proposed on a separate tax lot (Lot 26); the applicant shall confirm and amend the application accordingly.

2. It appears that one of the two storage sheds are proposed on or over a property line associated with Carriage House Road; all property and tax lot lines shall be clearly identified and pronounced on the plans.

3. A zoning table shall be added to the plans and shall compare the existing and proposed condition to the requirements of the underlying zoning district; any required variances shall be noted (if any).

4. It is recommended that the plans be referred to the Building Inspector for review from zoning perspective; a written report from the Building Inspector should be provided to the Planning Board.

5. As the project is located within the NYC East of Hudson Watershed and given the proximity of the storage sheds to the watercourse, the applicant shall consult with the New York City Department of Environmental Protection (NYCDEP) regarding jurisdiction; correspondence from the NYCDEP shall be provided.

6. The boundary of the jurisdictional watercourse and the Town's 150-foot wetland buffer shall be illustrated on the plans. The applicant shall calculate the area of wetland buffer disturbance (s.f.) and provide a wetland mitigation plan (1:1 mitigation required).

7. The project is located in the Cross River and Waccabuc River Basins which are tributary to the New York City Watershed Basin. Because the project proposes to disturb greater than 5,000 s.f., the applicant is required to develop a Stormwater Pollution Prevention Plan (SWPPP) for

compliance with Chapter 189 – Stormwater Management and Erosion Control of the Town Code, as well as the New York State Department of Environmental Conservation (NYSDEC) General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002 for Erosion and Sediment Control. Please provide a copy of the SWPPP for review.

8. The applicant shall provide a draft Notice of Intent and MS4 SWPPP Acceptance Form for review.

9. The applicant is proposing two (2) infiltration systems for stormwater mitigation; one (1) for the chemical and washdown facility and a second for the storage sheds. A stormwater design report and sizing calculations shall be provided to demonstrate no increase in the peak discharge rate of runoff for the 25-year storm event as a result of the runoff generated by the increased impervious surface.

10. The applicant shall perform deep and percolation soil testing to be witnessed by the Town Engineer. The test locations and results shall be shown on the plan. Contact this office to schedule the testing.

11. The stormwater design shall include supporting calculations demonstrating that the existing storm system can accommodate the added discharge flows form infiltration systems.

12. The plan shall clearly illustrate limits of the existing and proposed gravel and paved drives.

13. It appears that additional stormwater facilities are needed to collect, convey and treat stormwater runoff from all newly paved surfaces.

14. The drives and access areas should be dimensioned to demonstrate adequate vehicle circulation and maneuvering.

15. Provide all rim and invert elevations, pipe material and slope, as appropriate, for all storm and sewer improvements.

16. Additional grading and/or short retaining walls appear to be needed at the southeast driveway reconstruction. As shown, the cross-slope of the drive is ±10% assuming a floor elevation of 382.0. Provide spot grades at all building entry points.

17. Include a north arrow on all site plans.

18. The temporary silt fence shall be shown to be installed downgrade of all disturbances and parallel to the contours. Silt fence crossing access drives should be avoided and alternative measures, such as waterbars, utilized.

19. Illustrate locations for temporary construction access and staging areas. Provide details.

20. The plan proposes to route an underground electric service and maintain existing water service beneath the proposed building. The applicant should consider re-routing these services around the building perimeter.

21. Provide construction details for all improvements, including, but not limited to, the dual-fuel tank and containment pad, drainage structures and facilities, inspection ports, cleanouts, pipe bollards, etc.

22. The pipe bollards should be located on the site plan.

23. The applicant should be prepared to discuss the chemical handling process (delivery, storage, sludge handling and waste removal).

24. Provide spot grades for the bulk storage sheds.

25. Any proposed site lighting (building or pole mounted) shall be illustrated and detailed on the plan.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS REVIEWED, PREPARED BY MARCHETTI CONSULTING ENGINEERS, DATED OCTOBER 10, 2018:

- Site Utility & Drainage Plan (C-1)
- Grading Plan (C-2)
- Details & Sections (C-3, C-4)
- Structural Footing Plan & Details (S-1)
- Details Continued & Specifications (S-2)

PLANS REVIEWED, PREPARED BY DOYLE COFFIN ARCHITECTURE, UNDATED:

- Floor Plan, Door Schedule & Door Details (A1.1)
- Roof Plan & Details (A1.2)
- Elevations & Building Section (A1.3)
- Ref. Ceiling Plan, Building Sections, Details & Symbols (A1.4)
- Storage Shed Drawings (A1.5)

DOCUMENTS REVIEWED:

- Planning Board Application
- Wetland Permit Application
- Stormwater Permit Application

- Advanced Washwater Recycle Systems, prepared by Carbtrol
- Plant Star Chemical Mix and Recapture Systems
- Integrated Chemical Management, prepared by Carbtrol
- Associated Specification Plans, prepared by Carbtrol, dated August 30, 2018
- Topographic Survey, prepared by Bunney Associated, dated March 21, 2004

JKJ/JMC/dc

T:\Lewisboro\Correspondence\2018-12-13_LWPB_Waccabuc CC_Review Memo.docx

7-18 PB

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518 Email: planning@lewisborogov.com Tel: (914) 763-5592

Site Development Plan/Subdivision Plat Application - Check all that apply:

Waiver of Site Development Plan Procedures	☐				
Site Development Plan Approval	Step I	☑	Step II	☐	
Special Use Permit Approval	Step I	☐	Step II	☐	
Subdivision Plat Approval	Step I	☐	Step II	☐	Step III ☐

Project Information

Project Name: Waccabuc Country Club

Project Address: 90 Mead Street, Waccabuc, New York 10597

Gross Parcel Area: ± 9.06 Zoning District: R-4A Sheet(s): 22 Block (s): 10802 Lot(s): 61+37

Project Description: Chemical Wash Station and bulk Storage Units.

Is the site located within 500 feet of any Town boundary?	YES ☐	NO ☑
Is the site located within the New York City Watershed?	YES ☐	NO ☐
Is the site located on a State or County Highway?	YES ☐	NO ☑

Does the proposed action require any other permits/approvals from other agencies/departments?

Town Board	☐	ZBA	☐	Building Dept.	☑	Town Highway	☐
ACARC	☑	NYSDEC	☑	NYCDEP	☐	WCDH	☐
NYSDOT	☐	Town Wetland	☑	Town Stormwater	☑		

Other

Owner's Information

Name: Waccabuc Country Club Email: JDAssumma@optonline.net / Waccabuc1912@optonline.net

Address: 90 Mead Street, Waccabuc, New York 10597 Phone: 914-763-3144, ext # 212

Applicant's Information (if different)

Name: SAME Email: SAME

Address: SAME Phone: SAME

Authorized Agent's Information

Name: John D. Assumma, General Manager Email: SAME

Address: Waccabuc Country Club P.O. Box 400; 90 Mead Street, Waccabuc, N.Y. 10597 Phone: 914-763-3144, ext # 212

THE APPLICANT understands that any application is considered complete only when all information and documents required have been submitted and received by the Planning Board. The applicant further understands that the applicant is responsible for the payment of all application and review fees incurred by the Planning Board.

THE UNDERSIGNED WARRANTS the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief, and authorizes visitation and inspection of the subject property by the Town of Lewisboro and its agents.

APPLICANT'S SIGNATURE John D. Assumma DATE 10-11-18

OWNER'S SIBNATURE John D. Assumma DATE 10-11-18

General Manager - Waccabuc Country Club

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592
Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester

Mark C. Weigel, being duly sworn, deposes and says that he/she resides at 106 Mead St. Waccabuc, NY 10597 in the County of Westchester, State of New York and that he/she is (check one) ____ the owner, or ✓ the Treasurer (Title) of Waccabuc Country Club (Name of corporation, partnership, or other legal entity) which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of Lewisboro as:

Block 10802, Lot 61+37, on Sheet 22.

Owner's Signature

Sworn to before me this

28th day of September, 2018

AMANDA HARRISON
Notary Public - State of New York
NO. 01HA6301194
Qualified in Westchester County
My Commission Expires Apr 14, 2022

Notary Public – affix stamp

Revised 6-2015

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

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To Be Completed by Applicant
(Please type or print)

Wacc. Cntry Club
Name of Applicant

Wash Station & Bulk Storage
Project Name

Property Description

Tax Block(s): 10802

Tax Lot(s): 61.37

Tax Sheet(s): 22

Property Assessed to:

Name: WCC

Address: PO Box 400 90 Mead

City: Waccabuc State: NY Zip: 10597

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: _____ Date: 9/27/2018

Sworn to before me this

27th **day of** Sept., 2018

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020

Janet L Donohue

Signature - Notary Public (affix stamp)

September 27, 2018

Mr. Joseph Angiello
Building Inspector
Fire Inspector
Town of Lewisboro, NY
79 Bouton Road
South Salem, NY 10590

Dear Mr. Angiello,

This letter serves to authorize our General Manager, John Assumma to act as the club's agent on all issues relating to any and all building projects taking place on club property.

If additional information is required, please contact me on my cell 914-424-8426 or email: markcweigel@gmail.com.

In advance, I thank you for your support.

Sincerely,

Mark Weigel
Treasurer

90 Mead Street • P.O. Box 400 • Waccabuc, New York 10597 • 914 763-3144 • Fax 914 763-6324
www.waccabuccc.com • waccabuc1912@optonline.net

NOTE:
ALL DETAIL SHOWN REGARDING THE SEWAGE DISPOSAL SYSTEM IS FROM INFORMATION PROVIDED BY OTHERS AND HAS NOT BEEN VERIFIED IN THE FIELD.

NOW OR FORMERLY NORTH AMERICAN COMMUNICATIONS, INC.

NOW OR FORMERLY LAND TRUST

NOW OR FORMERLY KARIN LOPP

CARRIAGE HOUSE ROAD

FAIRWAY

MW 3
TOP OF CASING=391.6
TOP OF PVC PIPE=391.2

MW 2
TOP OF CASING=392.3
TOP OF PVC PIPE=391.7

MW 1
TOP OF CASING=399.4
TOP OF PVC PIPE=399.2

IRRIGATION CONTROL BOX

TREE LEGEND
MAP.=MAPLE
SPR.=SPRUCE
HICK.=HICKORY
CED.=CEDAR
PINE=PINE
APP.=APPLE
ELM=ELM
WIL.=WILLOW
ASH=ASH
HEM.=HEMLOCK
OAK=OAK
CHRY.=CHERRY
DOG.=DOGWOOD

NOTE
ALL PVC PIPING SHALL BE ASTM D3034 OR EQUAL

4" SOLID PVC CO OUTFALL 0.5% SLOPE

12, 66' 4" PERFORATED PVC DISTRIBUTION PIPES 3' C-C AT ¼" PER FT IN EACH FILTER

6, 66' 4" PERFORATED PVC COLLECTOR PIPE'S 6' C-C AT ½" PER FT IN EACH FILTER

2'# IMPERVIOUS LAYER TO 6" BELOW BOTTOM OF FILTER BED

4" SOLID PVC TIGHT LINES LENGTHS AS REQUIRED (2% MIN SLOPE)

PROVIDE 4 DISTRIBUTION BOXES MODEL #DB-14 WITH BAFFLE AS MFD BY ROTUNDO AND SONS, INC. OR APPROVED EQUAL

LIMITS OF GRASS AREA

EXISTING CURTAIN DRAIN TO BE ABANDONED

PROPOSED 3'W×4" D GRASS LINED DIVERSION SWALE AND 7'-10" DEEP CURTAIN DRAIN PITCHED NORTH AT 1%

EXIST. PUMP CHAMBER TO BE REMOVED AFTER NEW PUMP CHAMBER IS OPERATIONAL

4" PVC OVERFLOW (UNDER FT) TEMPORARY 6"PVC GRAVITY PIPE

1,000 GAL PUMP CHAMBER

12" 6" PVC TO PUMP CHAMBER

FORMED IN-PLACE 12'x24'(I.D) CONCRETE SEPTIC TANK

6" PVC FORCE LINES 65', 28', 17', 54', VARIES ACCORDING TO FILTER BEING CHARGED. EXISTING TANKS TO BE ABANDONED BACKFILLED WITH GRANULAR FILL

PROVIDE 6" PVC VIEWPORTS TO COLLECTOR TRANSMISSION LINE (4 REQUIRED)

PROVIDE 4" PVC VIEW PORTS AT DISCHARGE POINTS FOR EACH FILTER (4 REQUIRED)

6" PVC COLLECTOR TRANSMISSION LINES PER FT/SQFT/RATE FOR EACH BED TO TIE INTO MAIN TRANSMISSION LINE OUTSIDE OF BEDS

4" PVC TRANSMISSION LINE TO CHLORINE TABLET BOX OUTSIDE OF FILTER BEDS ½" PER FT MIN

CONTRACTOR TO LOCATE CHLORINE FEED LINES AND VERIFY THAT THEY ARE A MIN. OF 3' FROM ANY PROPOSED IMPROVEMENTS. RELOCATE SAME AS NECESSARY. THIS LINE IS TO REMAIN IN OPERATION UNTIL AN ALTERATE APPROVED METHOD IS PROVIDED.

CHLORINE TABLET BOX

GO DISCHARGE

STONE COVERS

10" – 4"SOLID PVC (1¼" PER FT MIN)

10' 9" NEW BED TO BE PROPER DIST. (2" MIN) IN CHANNEL UNDER FILTER

FB-1 FB-2 FB-3 FB-4 FB-5 FB-6 FB-7 FB-8 FB-9 FB-10 FB-11 FB-12

END CO

STITCH

SMH

MH

HAY BALE BARRIER

STONE COVERS

PVC COVER

STONE CHANNEL

INV=387.2

INV=384.0

GRAVEL PARKING

CONCRETE BUILDING

1 STORY FRAME BUILDING (GARAGE)

STONE CULVERT

1 STORY FRAME BUILDING

ENC. PORCH

2 STORY FRAME BARN

FRAME GARAGE

FUEL TANK

1 & 2 STORY FRAME HOUSE

1 STORY FRAME HOUSE

STONE PATIO

FLAG WALL

WALK

GRAVEL

DRIVE

STONE WALL

PROPANE TANK COVER

GRAVEL PARKING AREA

1 STORY FRAME HOUSE

O.P.

DECK

2 STY. FRAME HOUSE

1 STORY MAINTENANCE SHED

ROOF OVERHANG

M.S.M.W.

EXISTING WIRING FOR PUMPS AND ALARMS LOCATE IN SCH 80 PVC

PROPANE TANKS

PLATFORM TENNIS COURT

WOOD DECK

DECK

STEPS

2 STORY FRAME BUILDING

DECK (COVER)

OPEN PORCH

GRAVEL WALK

ANCHOR

C.B.

ATTACHED SHED

2 STORY FRAME HOUSE

CONC. G.P.

FRAME BUILDING

INV=390.0

INV=390.2

GRAVEL SURFACE

STOCKADE FENCE

PICKET FENCE

WELL

1 1/2 STORY FRAME HOUSE

CONC. APRON G.F.=384.2

T.F.=385.0

G.F.=389.60

STONE WALK

ASPHALT

DRIVE

RICK. POLE

O.H. WIRES

POLE

ANCHOR POLE

STORM SEWER

SAN. SEWER

GAS LINE

WATER LINE

C.R.W.

M.V.C.

MH

PUTTING GREEN

BUNKER

TEE BOX

CART PATH

GRAVEL PATH

TRIPLE MAP.

UTILITY BOX

HICK.

TWIN OAK

ASH

FENCE

POST & RAIL FENCE

STOCKADE FENCE

PICKET FENCE

264.80'

223.34'

L=154.04'

L=85.60'

L=108.58'

619.84'

210.33'

121.94'

148.20'

97.64'

80.22'

80.21'

86.00'

150.77'

294.55'

639.15'

114.76'



TOPOGRAPHIC SURVEY

SITUATE IN

TOWN OF LEWISBORO

WESTCHESTER COUNTY

NEW YORK

SCALE: 1"=40'

DATE: JUNE 5, 2002
MONITORING WELLS ADDED: AUGUST 21, 2002
SEWAGE DISPOSAL SYSTEM ADDED: MARCH 21, 2004

ALL CERTIFICATIONS HEREON ARE VALID FOR THE MAP AND COPIES THEREOF ONLY IF SAID MAP OR COPIES BEAR THE IMPRESSED SEAL OF THE SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

PREPARED BY
BUNNEY ASSOCIATES
LAND SURVEYORS
301 FIELDS LANE, BREWSTER
NEW YORK 10509
PH. (845) 277-3404

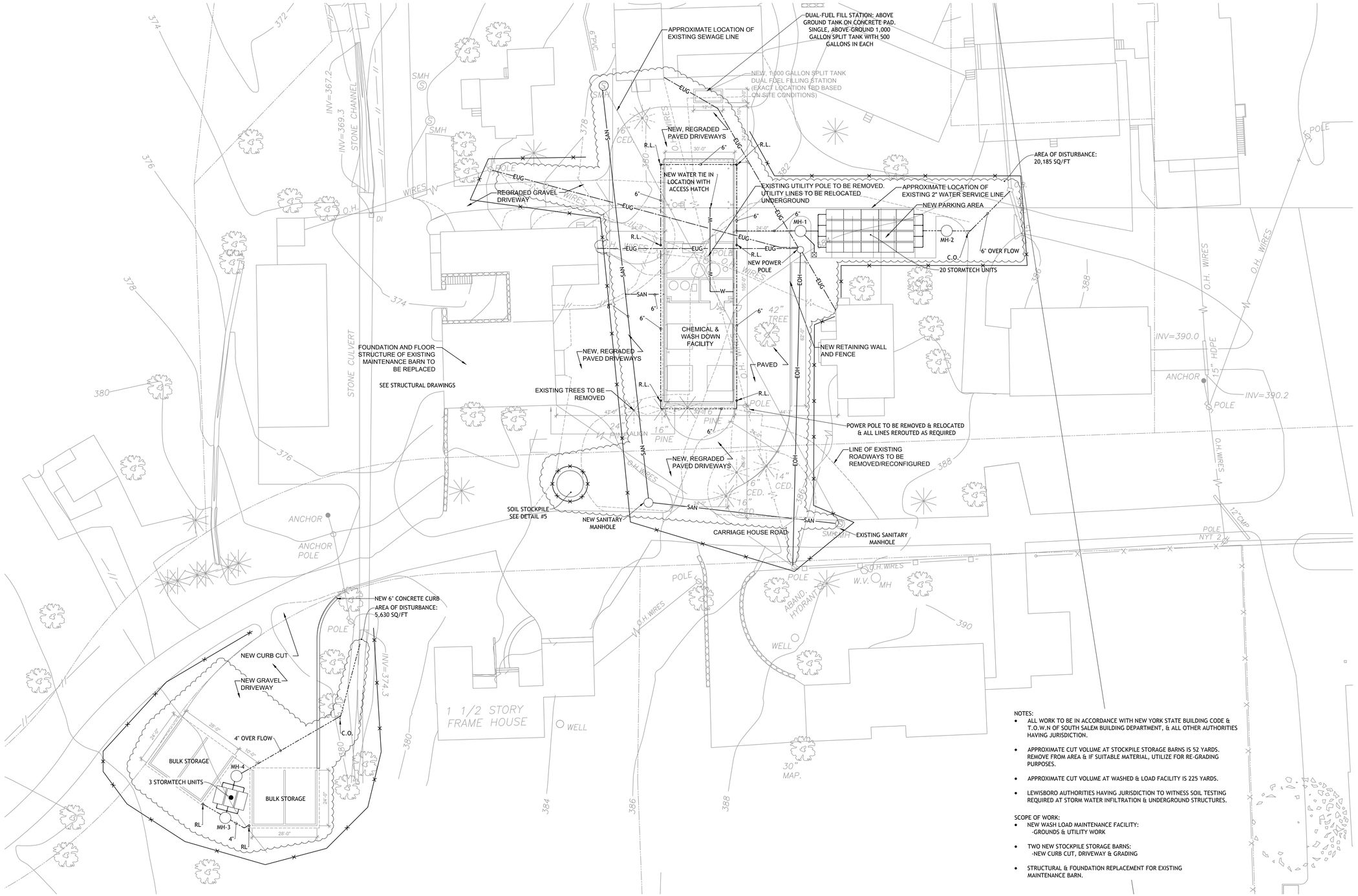
Anthony DePosa
N. Y. S. LIC. No. 49332

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UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

THE LOCATION OF UNDERGROUND IMPROVEMENTS OR ENCROACHMENTS, IF ANY EXIST, ARE NOT CERTIFIED

PREPARED FOR WACCABUC COUNTRY CLUB



SITE UTILITY & DRAINAGE PLAN

SCALE: 1" = 20' - 0"

NOTES:

- ALL WORK TO BE IN ACCORDANCE WITH NEW YORK STATE BUILDING CODE & T.O.W.N OF SOUTH SALEM BUILDING DEPARTMENT, & ALL OTHER AUTHORITIES HAVING JURISDICTION.
- APPROXIMATE CUT VOLUME AT STOCKPILE STORAGE BARNS IS 52 YARDS. REMOVE FROM AREA & IF SUITABLE MATERIAL, UTILIZE FOR RE-GRADING PURPOSES.
- APPROXIMATE CUT VOLUME AT WASHED & LOAD FACILITY IS 225 YARDS.
- LEWISBORO AUTHORITIES HAVING JURISDICTION TO WITNESS SOIL TESTING REQUIRED AT STORM WATER INFILTRATION & UNDERGROUND STRUCTURES.

SCOPE OF WORK:

- NEW WASH LOAD MAINTENANCE FACILITY:
  - -GROUNDS & UTILITY WORK
- TWO NEW STOCKPILE STORAGE BARNS:
  - -NEW CURB CUT, DRIVEWAY & GRADING
- STRUCTURAL & FOUNDATION REPLACEMENT FOR EXISTING MAINTENANCE BARN.

MARCHETTI CONSULTING ENGINEERS

25 High Ridge Rd
Pound Ridge. NY 10576
P (914) 764-9011
F (914) 764-9012
info@marchetticonsultingengineers.com

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LEGEND

C.O.	CLEAN OUT
R.L.	RAIN LEADER
	EROSION CONTROL FENCING
EOH	ELECTRIC OVER HEAD
EUG	ELECTRIC UNDERGROUND
SAN	SANITARY WASTE
W	WATER
384	EXISTING CONTOUR
384	NEW CONTOUR
T.O.W.	TO OF WALL
B.O.W.	BOTTOM OF WALL
	CURB TO BE REMOVED
	CUT AREA

No.	DESCRIPTION	DATE
1	ISSUE FOR PRICING	2018-09-13
	REVISION	2018-10-10

STAMP & SIGN:

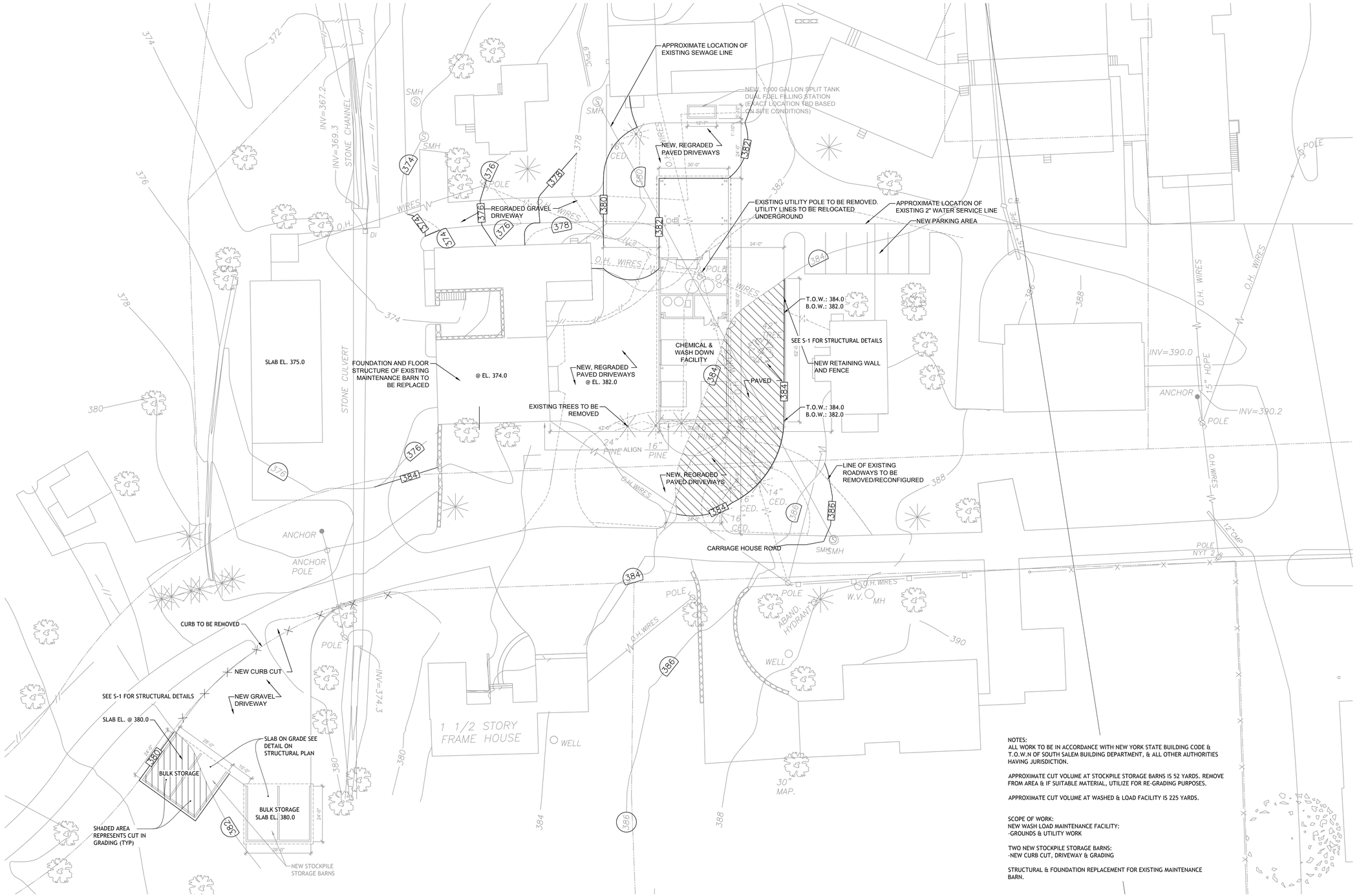
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

SITE UTILITY & DRAINAGE PLAN

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF/RN
CHECKED BY:	PGM

C-1

SCALE: AS NOTED



GRADING PLAN

SCALE: 1" = 20' - 0"

NOTES:
ALL WORK TO BE IN ACCORDANCE WITH NEW YORK STATE BUILDING CODE & T.O.W.N OF SOUTH SALEM BUILDING DEPARTMENT, & ALL OTHER AUTHORITIES HAVING JURISDICTION.

APPROXIMATE CUT VOLUME AT STOCKPILE STORAGE BARNS IS 52 YARDS. REMOVE FROM AREA & IF SUITABLE MATERIAL, UTILIZE FOR RE-GRADING PURPOSES.

APPROXIMATE CUT VOLUME AT WASHED & LOAD FACILITY IS 225 YARDS.

SCOPE OF WORK:
NEW WASH LOAD MAINTENANCE FACILITY:
-GROUNDS & UTILITY WORK

TWO NEW STOCKPILE STORAGE BARNS:
-NEW CURB CUT, DRIVEWAY & GRADING

STRUCTURAL & FOUNDATION REPLACEMENT FOR EXISTING MAINTENANCE BARN.

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EUG	ELECTRIC UNDERGROUND
SAN	SANITARY WASTE
W	WATER
384	EXISTING CONTOUR
384	NEW CONTOUR
T.O.W.	TO OF WALL
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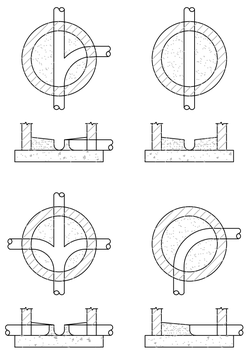
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

GRADING PLAN

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

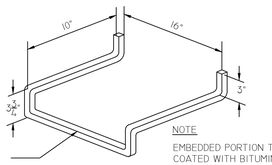
C-2

SCALE: AS NOTED

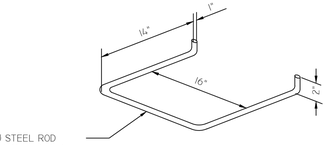


TYPICAL INVERTS

SCALE: 1/4" = 1'-0"



ALUMINUM



GALVANIZED STEEL

MANHOLE STEPS

NOT TO SCALE

NOTES

CASTINGS DESIGNATED AS "HEAVY DUTY" SHALL SAFELY WITHSTAND AASHTO HS20 HIGHWAY LOADING.

ALL STEEL TO BE STRUCTURAL GRADE CONFORMING TO ASTM A36.

CAST IRON SHALL CONFORM TO ASTM A48 CLASS 30.

SEAT OF MANHOLE FRAMES, EDGES AND BOTTOM OF COVERS SHALL BE MACHINED TO A TRUE SURFACE SO COVERS WILL NOT BIND OR ROCK ON FRAMES.

FIRST STEP FROM TOP OF MANHOLE SHALL BE SHORTENED SO AS TO EXTEND NOT MORE THAN 4" FROM WALL OF MANHOLE. ALL OTHER STEPS SHALL EXTEND 6" FROM WALL.

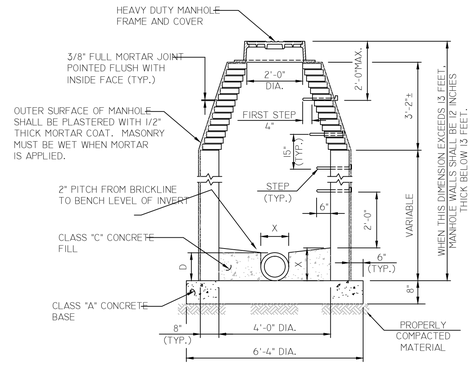
APPROVED CONCRETE BLOCK MAY BE USED IN LIEU OF BRICK IN THE CONSTRUCTION OF CATCH BASINS AND STORM MANHOLES.

WHERE SHOWN, STEEL ITEMS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123 FOR STEEL SHAPES AND PLATES, OR ASTM A153 FOR HARDWARE.

REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:
BAR REINFORCEMENT - ASTM A615 GRADE 60
WELDED WIRE FABRIC - ASTM A184
WELDED DEFORMED WIRE FABRIC - ASTM A497

UNREINFORCED PIPES SHALL BE CUT FLUSH WITH INSIDE FACE OF C.B. WALL. REINFORCED PIPES SHALL BE CUT TO PROVIDE 1" RECESS INTO FACE OF C.B. WALL. CUT END SHALL THEN BE PATCHED WITH MORTAR FLUSH WITH WALL.

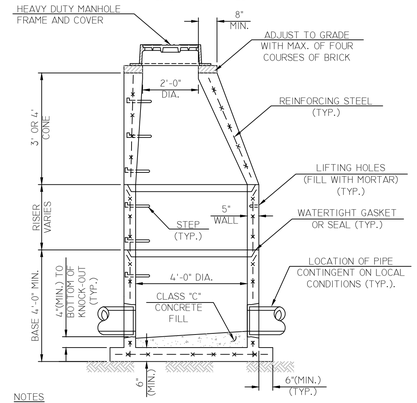
ALL UNUSED KNOCK-OUTS SHALL BE BRICKED UP WHERE DIRECTED BY THE EINGINEER.



NOTES

1. DIMENSIONS "X" VARY ACCORDING TO SIZE OF PIPE. "D" DENOTES OUTSIDE DIAMETER OF PIPE.
2. WHERE 5 FT. & 6 FT. DIA. MANHOLES ARE SHOWN ON THE PLANS, THEY SHALL BE CONSTRUCTED USING PRECAST CONCRETE UNITS.

STANDARD MANHOLE
(LESS THAN 36" PIPE)
(MASONRY CONSTRUCTION)



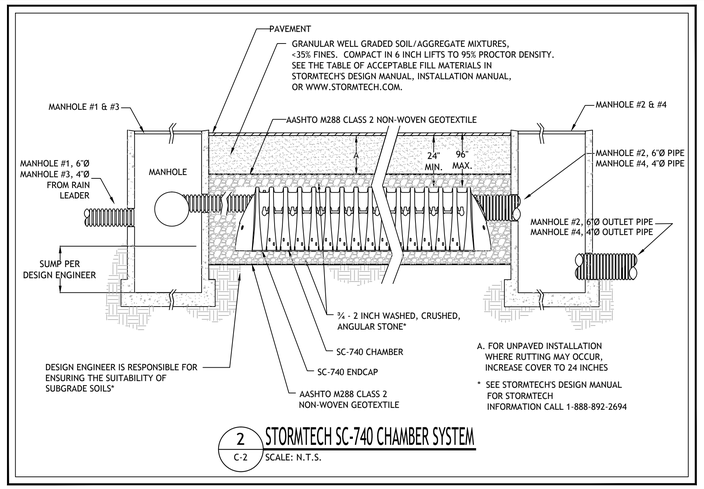
NOTES

1. 5 FT. & 6 FT. DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' AND 6' BASES AS DIRECTED BY THE ENGINEER. WALL THICKNESS TO INCREASE 1 INCH FOR EACH 1 FOOT OF INSIDE DIAMETER INCREASE.
2. FOR ADDITIONAL INFORMATION, SEE "STANDARD MANHOLE (LESS THAN 36" PIPE)" DETAIL, THIS SHEET.

STANDARD MANHOLE
(PRECAST CONCRETE UNITS)

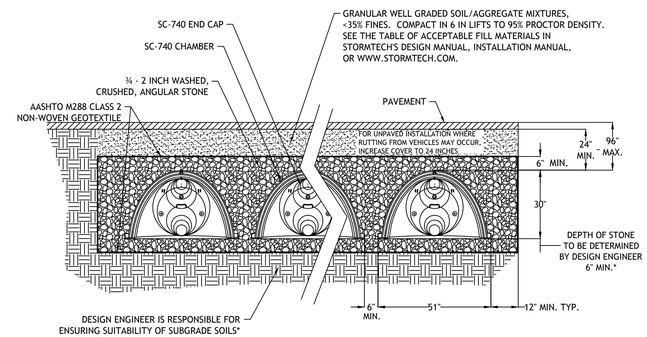
1 C-2 STANDARD MANHOLE

SCALE: N.T.S.



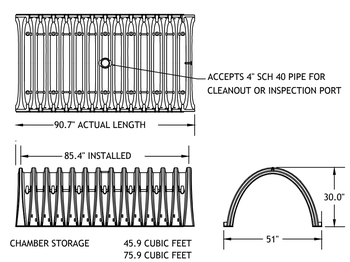
2 C-2 STORMTECH SC-740 CHAMBER SYSTEM

SCALE: N.T.S.



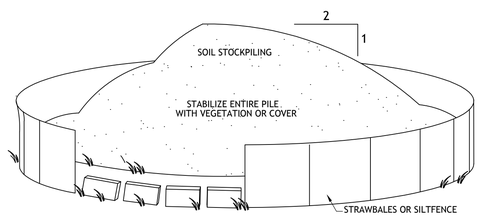
3 C-2 STORMTECH SC-740 CHAMBER SYSTEM TYPICAL CROSS SECTION DETAIL

SCALE: N.T.S.



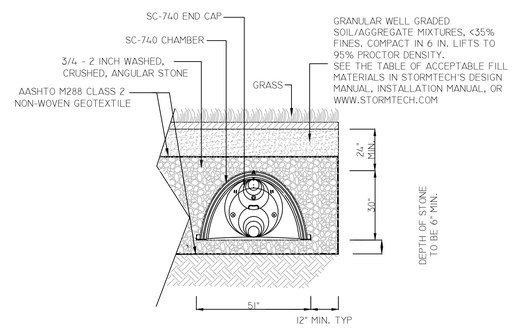
4 C-2 STORMTECH SC-740 CHAMBER INFILTRATOR

SCALE: N.T.S.



5 C-2 STOCKPILE SOIL DETAIL

SCALE: N.T.S.



6 C-2 STORMTECH SC-740 CHAMBER SYSTEM TYPICAL CROSS SECTION DETAIL

SCALE: N.T.S.

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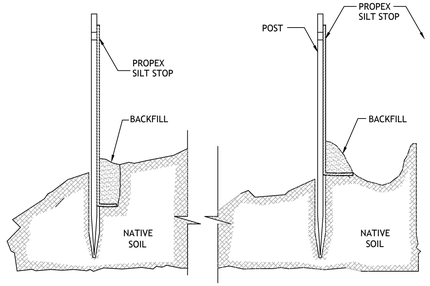
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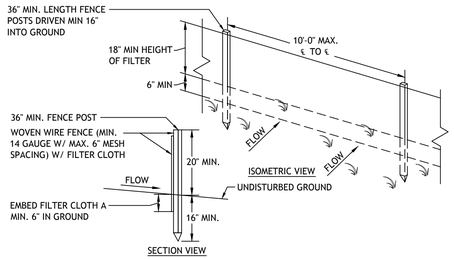
DETAILS & SECTIONS

PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

C-3

SCALE: AS NOTED

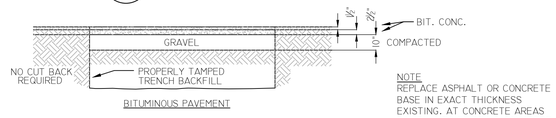




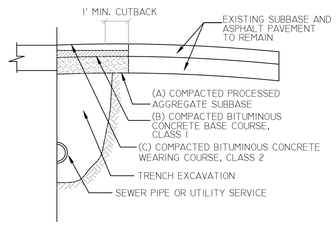
CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE, OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL MEET THE MINIMUM REQUIREMENTS SHOWN.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

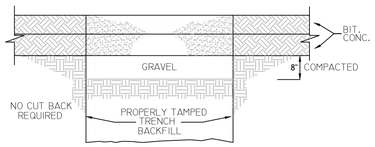
7 SILT FENCE DETAIL
C-2 SCALE: N.T.S.



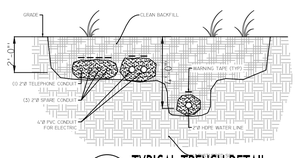
NOTE
REPLACE ASPHALT OR CONCRETE BASE IN EXACT THICKNESS EXISTING. AT CONCRETE AREAS DOWEL INTO EXISTING CONCRETE WITH #5 REBAR @ 1'-0" O.C



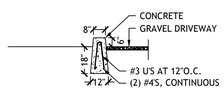
8 PERMANENT TRENCH DETAIL SECTION
C-2 SCALE: N.T.S.



9 GRAVEL AND DIRT ROADS
C-2 SCALE: N.T.S.



10 TYPICAL TRENCH DETAIL
C-2 SCALE: N.T.S.



11 CURB DETAIL
C-2 SCALE: N.T.S.

SCOPE OF WORK:

-THE FOLLOWING IS A LIST OF REQUIRED WORK AT THE SITE. ALL WORK TO BE IN ACCORDANCE WITH TOWN OF SOUTH SALEM BUILDING, PLANNING AND ZONING AND WATER CONTROL AGENCIES AS WELL AS STATE OF NEW YORK BUILDING CODES. THIS LIST IS NOT INTENDED BE ALL INCLUSIVE ALL REQUIRED WORK AND MATERIAL TO BE SUPPLIED AS TO PROVIDE COMPLETED STRUCTURES.

-CHEMICAL & WASH DOWN FACILITY

CONTRACTOR TO PROVIDE AND INSTALL ALL OF THE COMPONENTS AND ANY AND ALL OTHER REQUIRED ITEMS TO ENABLE CONSTRUCTION OF THE WASH & LOAD MAINTENANCE FACILITY INCLUDING BUT NOT LIMITED TO:

-ALL GRADING OF SITE AND ADJACENT DRIVE AREAS.
-ALL FOOTINGS AND FOUNDATIONS, ALL RETAINING WALLS AS DETAILED ON STRUCTURAL DRAWINGS FOR BUILDING.
-ALL PAVED AND UNPAVED AREAS CONSISTING OF BASE, GRAVEL, BASE AND FINISH ASPHALT TOPPINGS AS DETAILED AND AS REQUIRED.
-ALL UTILITY SERVICE HOOKUPS TO NEW BUILDING INCLUDING UNDERGROUND POTABLE WATER, SANITARY WASTE, STORM WATER AND ELECTRIC SERVICE WITH RELOCATION OF SAME AS REQUIRED.
-POTABLE WATER TO BE TIED TO EXISTING 2" MAIN AS SHOWN WITH HIGH DENSITY POLYETHYLENE (HDPE) PIPING.
-SANITARY TO BE TIED INTO EXISTING SERVICE WITH SCHEDULE 80 & 40 PVC.
-A COMPLETE STORM WATER RETENTION SYSTEM AND OVERFLOW WITH ALL STRUCTURES AND PIPING AS SHOWN ON PLANS PIPING TO BE PVC
-A NEW ELECTRIC POWER POLE AND RELOCATION OF OVERHEAD ELECTRIC SERVICE TO UNDERGROUND SERVICE TO ADJACENT BUILDING. ALL POWER LINES TO BE COPPER IN SCHEDULE 40 OR 80 PVC.
-RETAINING WALL AND FENCING AS SHOWN

-BULK STORAGE

-CONTRACTOR TO PROVIDE AND INSTALL ALL THE COMPONENTS AND ANY AND ALL REQUIRED ITEMS TO ENABLE CONSTRUCTION OF THE STOCKPILE STORAGE BARNS INCLUDING BUT NOT LIMITED TO:
-RE-GRADING OF SITE
-CURB CUT AT ENTRANCE TO STORAGE BARNS
-GRAVEL DRIVEWAY AND COMPACTION
-ALL FOOTINGS AND FOUNDATIONS & SLABS AS DETAILED ON DRAWINGS

-FOUNDATION & SLAB INSTALLATION AT MAINTENANCE BUILDING

-CONTRACTOR TO PROVIDE AND INSTALL ALL REQUIRED SHORING, EXCAVATION, SLABS, FOUNDATIONS AS PER THE DRAWINGS AND NOT LIMITED TO:
-SHORING AND UNDERPINNING OF EXISTING BUILDING AND COLLAPSING FOUNDATION AREA
-EXCAVATION AND PLACEMENT OF FOOTINGS AND FOUNDATION AT SAME AREA AS SHOWN ON DRAWINGS
-LEVELING AND GRADING, COMPACTING, AND GRAVEL AND CONCRETE PLACEMENT AT GARAGE AREA OF MAINTENANCE BUILDING INCLUDING, ALL GRAVEL, VAPOR BARRIER, COMPACTION, CONCRETE AND REINFORCEMENT PLACEMENT.
-REPLACEMENT OF ALL EXISTING WOOD COLUMNS WITH 8"X8"X1/2" HSS STEEL COLUMNS ON 4'X4'X12" REINFORCED FOOTINGS.
-ALL REQUIRED CONNECTIONS OF EXISTING BUILDING TO NEW ELEMENTS

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LEGEND

C.O.	CLEAN OUT
R.L.	RAIN LEADER
✕ ✕ ✕	EROSION CONTROL FENCING
—EOH—	ELECTRIC OVER HEAD
—EUG—	ELECTRIC UNDERGROUND
—SAN—	SANITARY WASTE
—W—	WATER
384	EXISTING CONTOUR
384	NEW CONTOUR
T.O.W.	TO OF WALL
B.O.W.	BOTTOM OF WALL
✕ ✕	CURB TO BE REMOVED
▨	CUT AREA

No.	DESCRIPTION	DATE
1	ISSUE FOR PRICING	2018-09-13
	REVISION	2018-10-10

STAMP & SIGN:

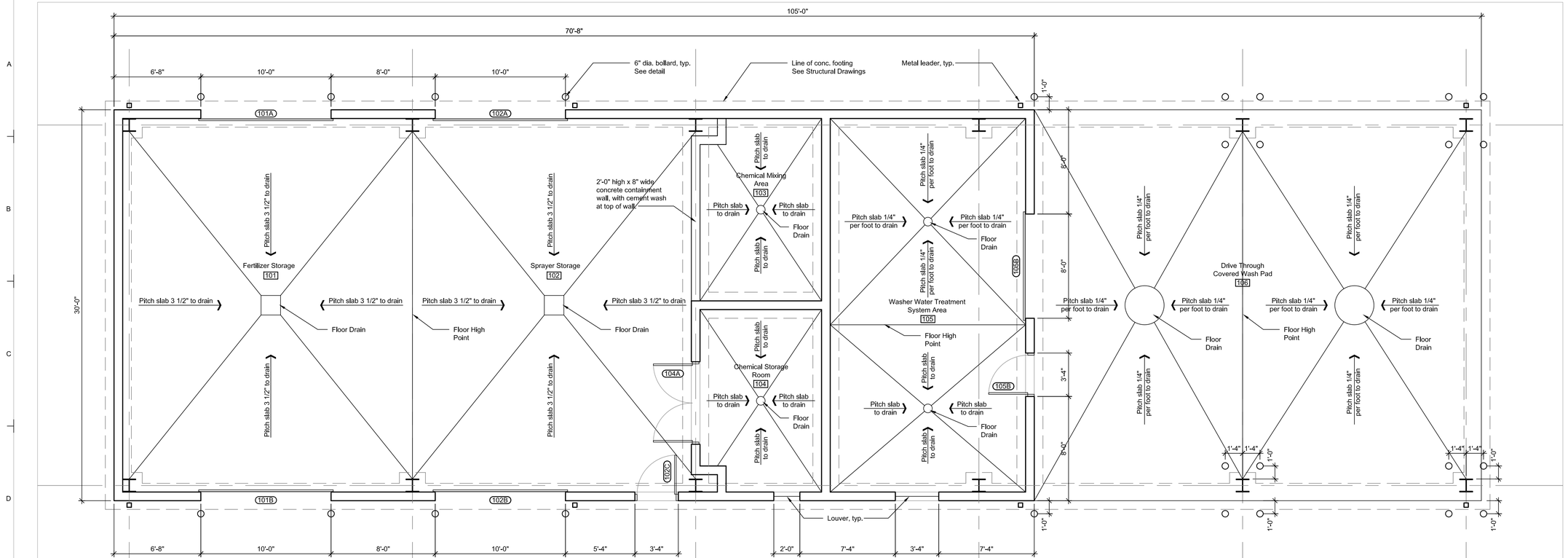
WACCABUC COUNTRY CLUB
90 MEAD STREET
LEWISBORO, NY 10597

DETAILS & SECTIONS

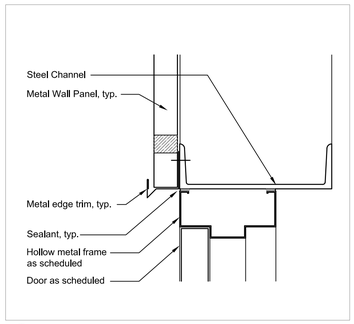
PROJECT NUMBER:	#2018-29
DATE:	2018-09-13
DRAWN BY:	EF
CHECKED BY:	PGM

C-4

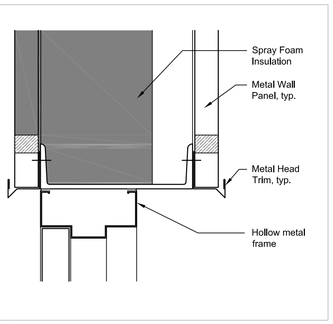
SCALE: AS NOTED



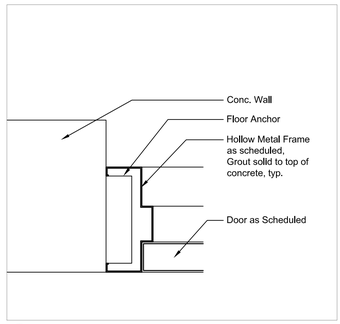
E1 / A1.1 FLOOR PLAN
1/4" = 1'-0"



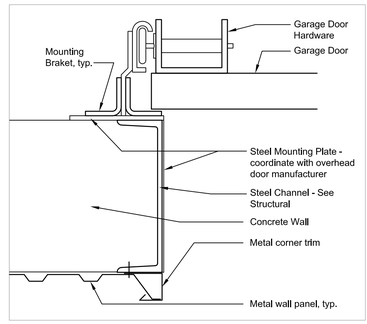
G1 / A1.1 HEAD DETAIL @ METAL PANEL WALL
3" = 1'-0"



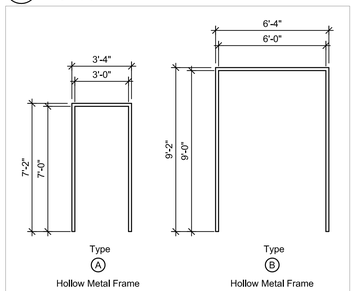
G2 / A1.1 HEAD DETAIL AT INSULATED WALL
3" = 1'-0"



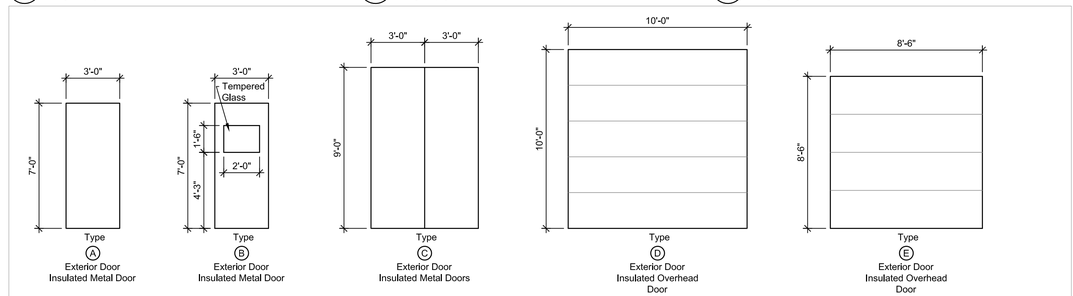
G2 / A1.1 JAMB DETAIL @ CONCRETE WALL
3" = 1'-0"



G2 / A1.1 JAMB DETAIL @ OVERHEAD DOOR
3" = 1'-0"



H1 / A1.1 FRAME TYPES
1/4" = 1'-0"



H2 / A1.1 DOOR TYPES
1/4" = 1'-0"

DOOR SCHEDULE

DOOR							FRAME		FIRE	HARDWARE
NO.	LOCATION	SIZE	TYPE	THICK	MATERIAL	FINISH	MATERIAL	FINISH	RATING	GROUP #
101A	Fertilizer Storage (O.H.)	10'-0"x10'-0"	D	-	-	-	-	-	-	-
101B	Fertilizer Storage (O.H.)	10'-0"x10'-0"	D	-	-	-	-	-	-	-
102A	Sprayer Storage (O.H.)	10'-0"x10'-0"	D	-	-	-	-	-	-	-
102B	Sprayer Storage (O.H.)	10'-0"x10'-0"	D	-	-	-	-	-	-	-
102C	Sprayer Storage	3'-0"x7'-0"	B	1-3/4"	HM	Painted	HM	Painted	-	-
104A	Chemlcal Storage	3'-0"x9'-0"	C	1-3/4"	HM	Painted	HM	Painted	-	-
105A	Treatment Area (O.H.)	8'-0"x8'-0"	E	-	-	-	-	-	-	-
105B	Treatment Area	3'-0"x7'-0"	A	1-3/4"	HM	Painted	HM	Painted	-	-

H8 / A1.1 DOOR SCHEDULE

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NOTES

CHEMICAL MIXING STORAGE AND WASH FACILITY FOR

WACCABUC COUNTRY CLUB

MEAD STREET
WACCABUC, NY 10597

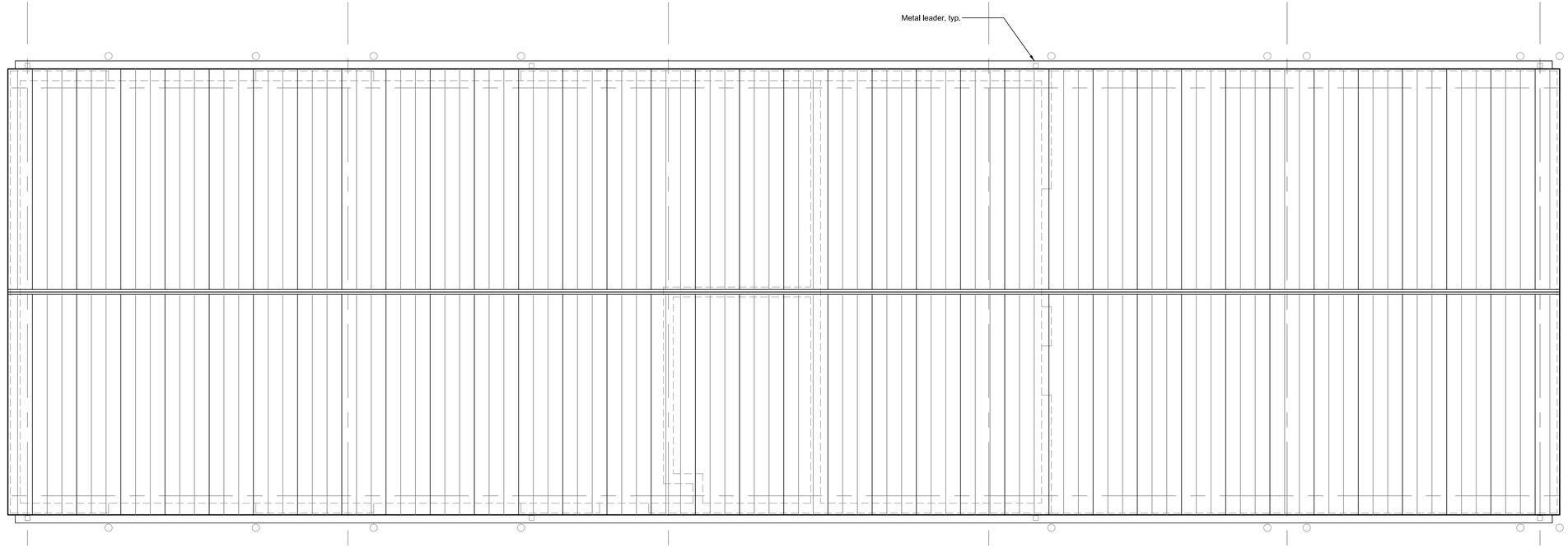
ISSUED	
REVISIONS	XX/XX/15
PRINCIPAL	JMD
P.A.	KJT
JOB NUMBER	885
SCALE	AS NOTED

SCHEMATIC DESIGN

FLOOR PLAN, DOOR SCHEDULE & DOOR DETAILS

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SHEET
A1.1



E1
A1.2
ROOF PLAN
1/4" = 1'-0"



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NOTES

CHEMICAL MIXING
STORAGE AND WASH
FACILITY FOR

WACCABUC COUNTRY CLUB

MEAD STREET
WACCABUC, NY 10597

ISSUED REVISIONS	XX/XX/15

PRINCIPAL JMD	P.A. KJT
JOB NUMBER 885	SCALE AS NOTED

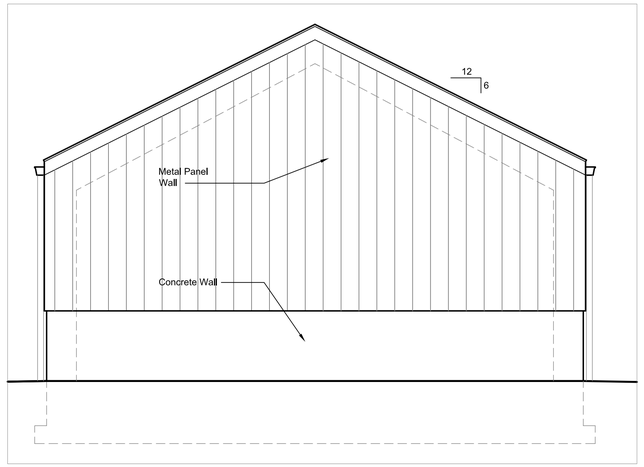
SCHEMATIC DESIGN

ROOF PLAN & DETAILS

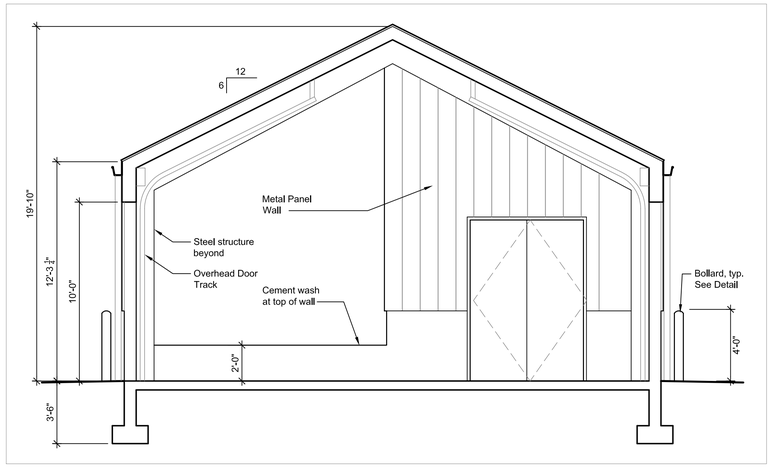
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SHEET

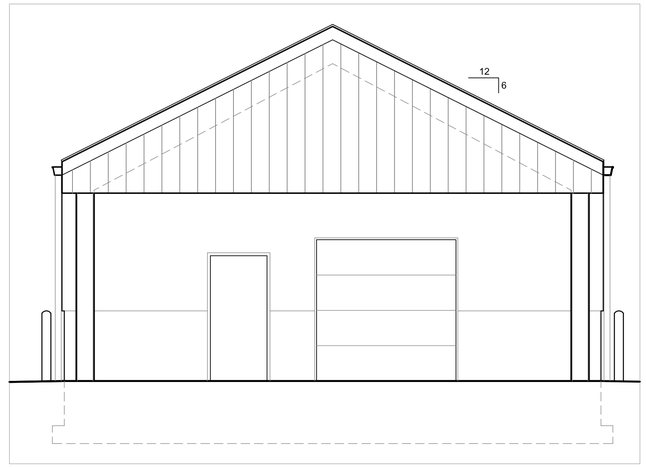
A1.2



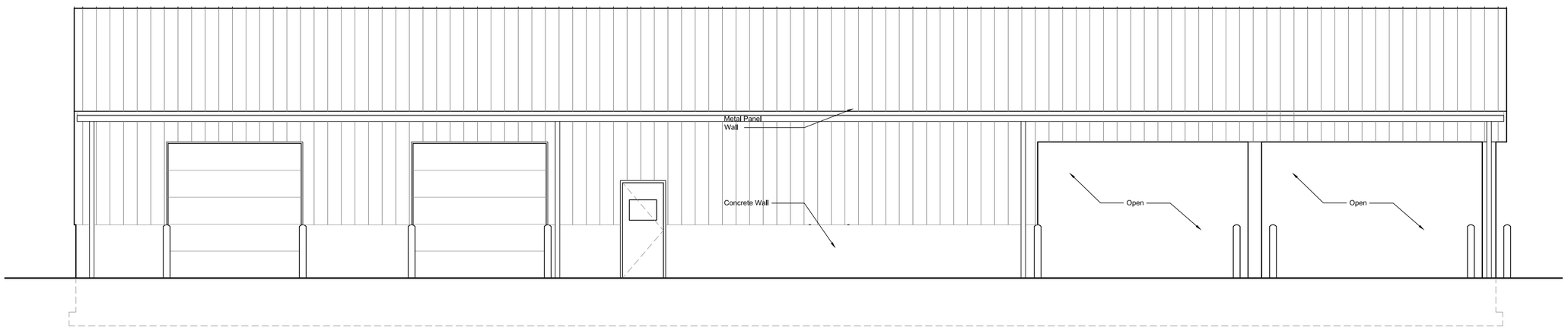
C1 / A1.3 SOUTH ELEVATION
1/4" = 1'-0"



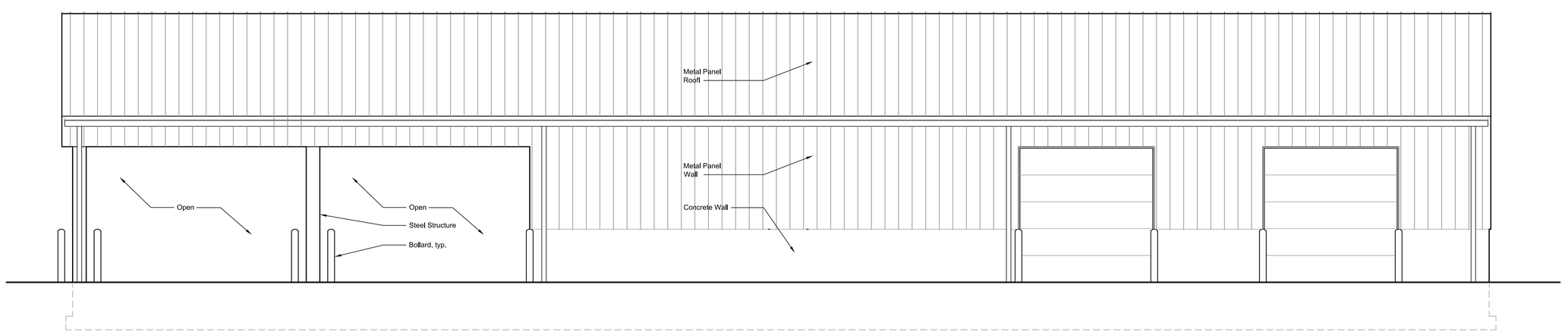
C4 / A1.3 BUILDING SECTION
1/4" = 1'-0"



C7 / A1.3 NORTH ELEVATION
1/4" = 1'-0"



F1 / A1.3 EAST ELEVATION
1/4" = 1'-0"



H1 / A1.3 WEST ELEVATION
1/4" = 1'-0"

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NOTES

CHEMICAL MIXING
STORAGE AND WASH
FACILITY FOR

WACCABUC COUNTRY CLUB

MEAD STREET
WACCABUC, NY 10597

ISSUED / REVISIONS	XX/XX/15

PRINCIPAL	JMD	P.A.	KJT
JOB NUMBER	885	SCALE	AS NOTED

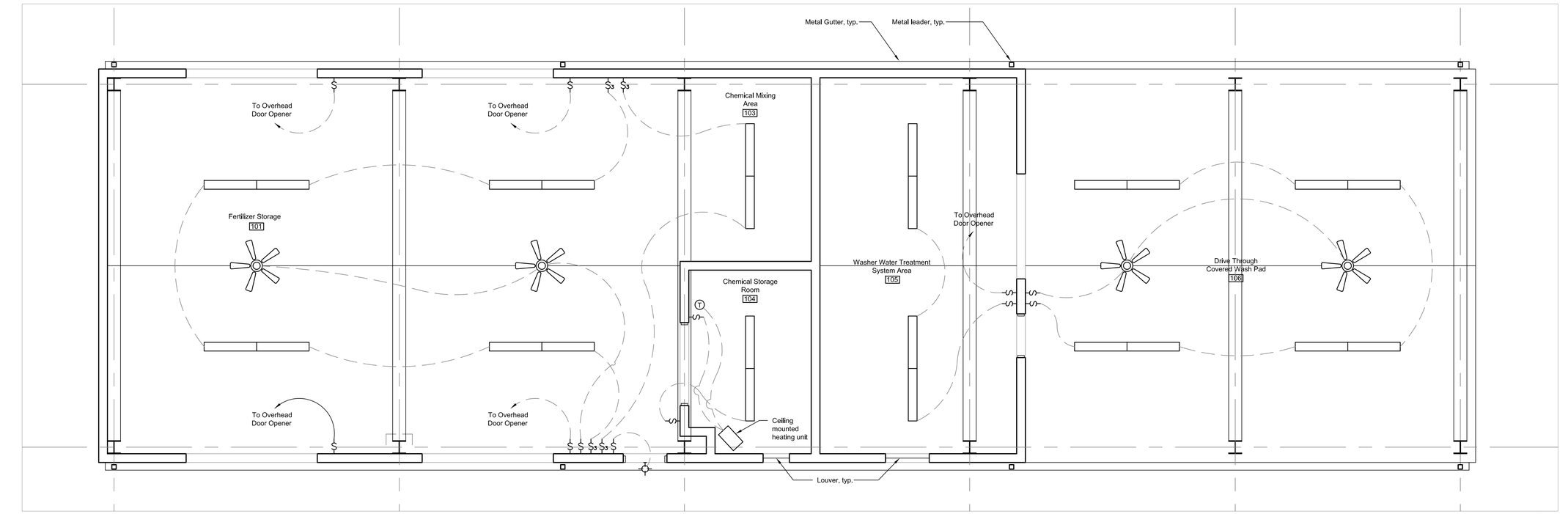
SCHEMATIC DESIGN

ELEVATIONS & BUILDING SECTION

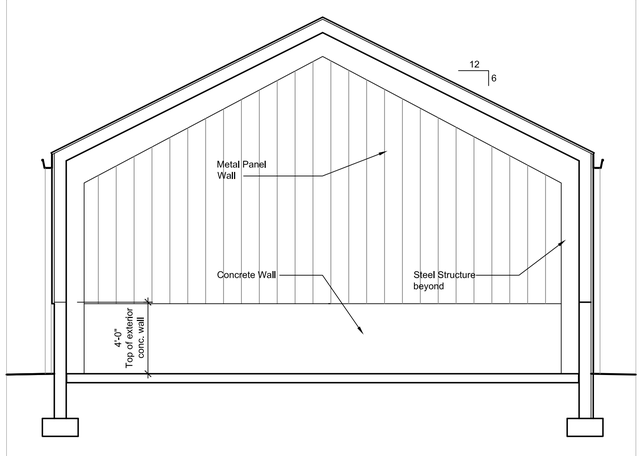
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SHEET

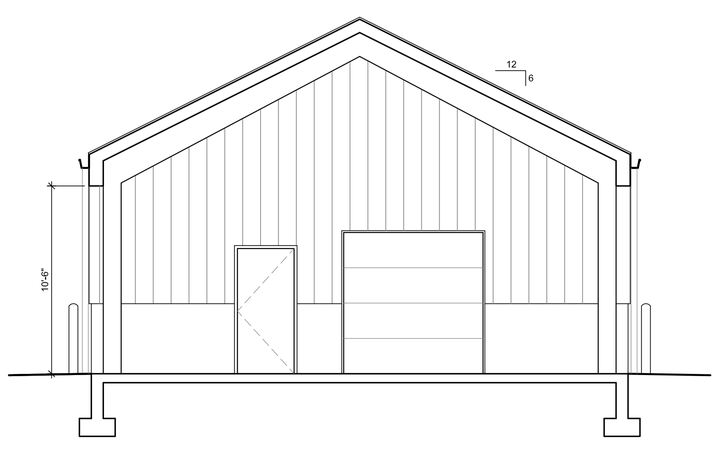
A1.3



E1 / A1.4 REFLECTED CEILING PLAN
1/4" = 1'-0"



H1 / A1.4 BUILDING SECTION
1/4" = 1'-0"



H4 / A1.4 BUILDING SECTION
1/4" = 1'-0"

ELECTRICAL SYMBOLS

SYMBOL	TYPE	MODEL OR ALLOWANCE
	Smoke Detector	Wired Smoke Alarm w/ battery backup
	Carbon Monoxide Detector	Wired Carbon Monoxide Alarm w/ battery backup
	Ceiling Mounted Fixture	
	Pendant Fixture	
	Recessed Fixture	
	Recessed Wallwasher	
	Wall Mounted Sconce	
	Fan/Light	
	Low Voltage	
	Track	
	Linear LED/Fluorescent	
	Linear or tropher LED/Fluorescent	
	Ceiling Fan	
	Spot Lights	
	Single Pole Switch	
	3 Way Switch	

ELECTRICAL SYMBOLS (Continued)

SYMBOL	TYPE	MODEL OR ALLOWANCE
	4 Way Switch	
DIM	Dimmer	
M	Motion Sensor	
	Keypad Switch	
	Duplex Outlet	GE duplex receptcle
	Quad Outlet	GE duplex receptcle (2)
220V	Special Outlet	GE Dryer Power Outlet
GFI +46	Ground Fault Interupter	GE GFCI duplex receptcle
WP	Weatherproof Outlet	GE duplex receptcle with double outlet cover
	Switched Outlet	GE duplex receptcle
	Floor Outlet	
	Telephone Outlet	
	Data/CAT5 Outlet	
TV	Cable/Television Outlet	
	Garage Door Opener	
T	Thermostat	
SP	Speaker	
JB	Junction Box	
	Service Panel	200 amp circuit breaker
	Entrance Meter	

SYMBOLS

	Emergency Lights
EXIT	Exit Sign
	Emergency Pull
	Call For Aid
	ADA push-plate opener
	24"x24" Ceiling Fixture
	HVAC Supply
	HVAC Return
	Dry Compressed Air
V	Vacuum
	Ceiling mounted space heating unit

H7 / A1.4 SYMBOL LEGENDS

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NOTES

CHEMICAL MIXING STORAGE AND WASH FACILITY FOR

WACCABUC COUNTRY CLUB

MEAD STREET
WACCABUC, NY 10597

ISSUED / REVISIONS	XX/XX/15

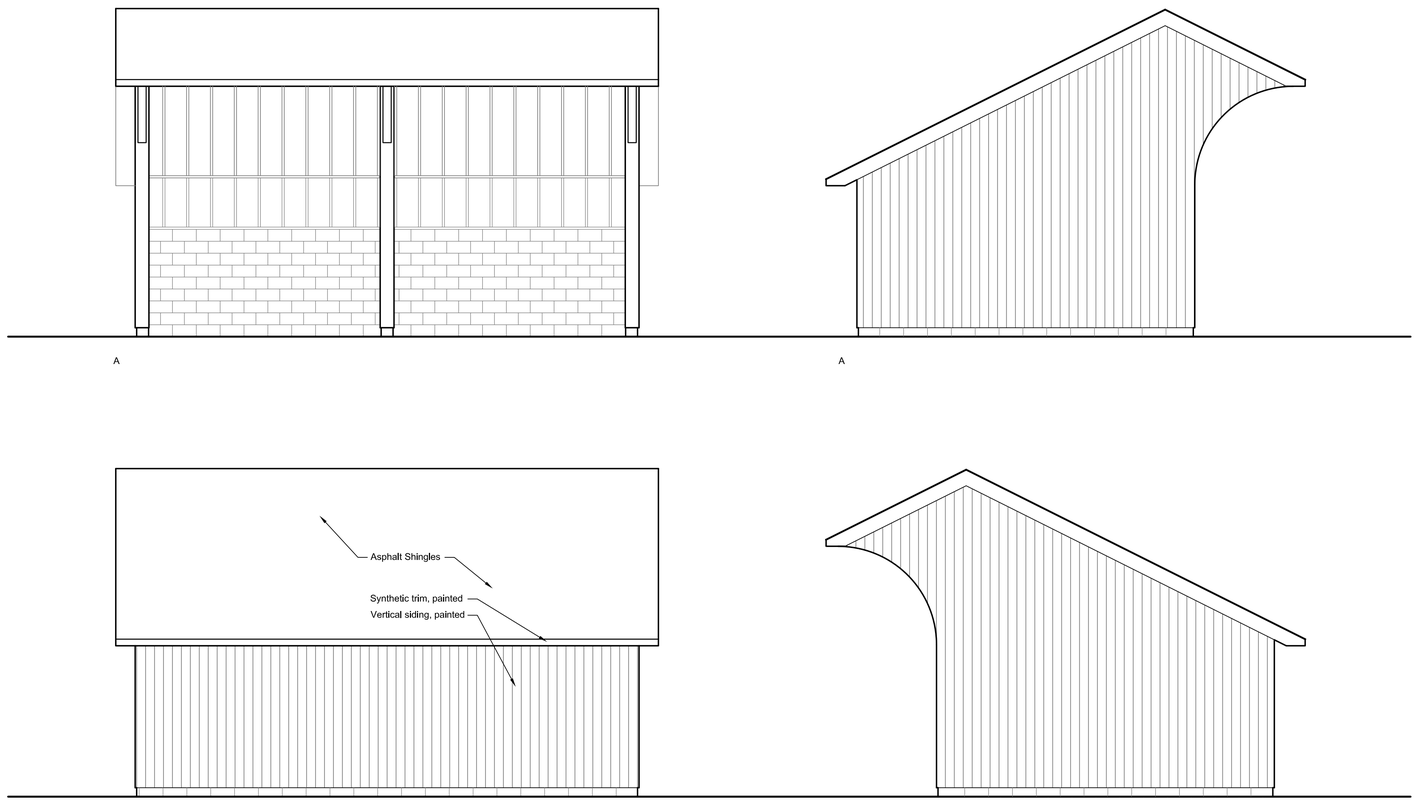
PRINCIPAL	JMD	P.A.	KJT
JOB NUMBER	885	SCALE	AS NOTED

SCHEMATIC DESIGN

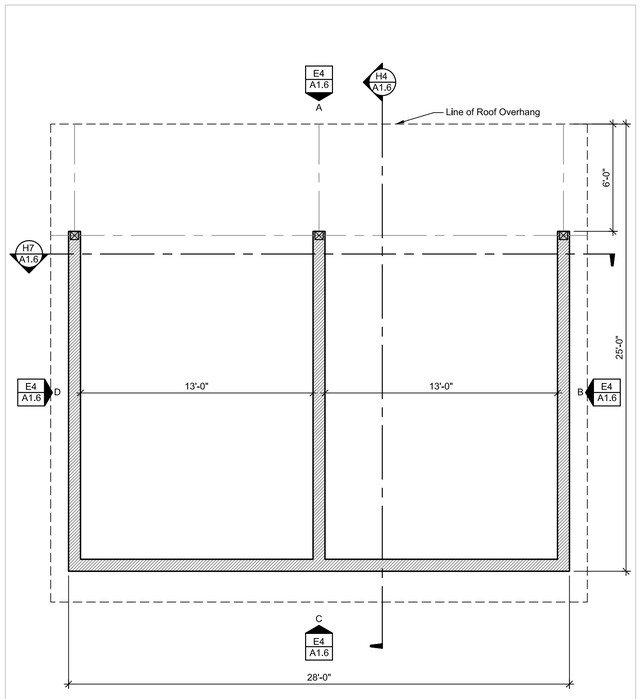
REF. CEILING PLAN, BUILDING SECTIONS, DETAILS & SYMBOLS

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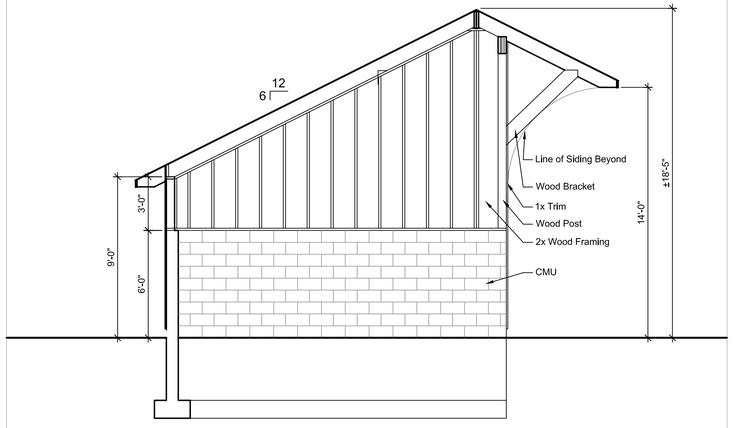
SHEET
A1.4



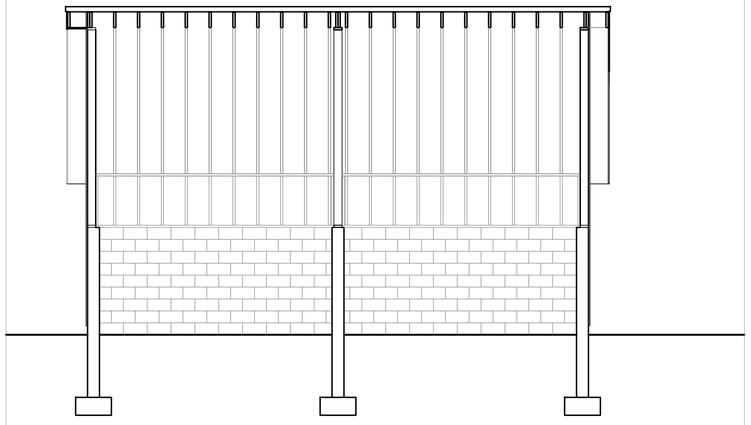
E4 A1.6 EXTERIOR ELEVATIONS
1/4" = 1'-0"



H1 A1.6 TYPICAL PLAN
1/4" = 1'-0"



H4 A1.6 BUILDING SECTION
1/4" = 1'-0"



H7 A1.6 BUILDING SECTION
1/4" = 1'-0"

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NOTES

STOCKPILE STORAGE SHEDS FOR

WACCABUC COUNTRY CLUB

90 MEAD STREET
WACCABUC, NY 10597

09/04/18
07/18/18

PRINCIPAL	JMD	P.A.	KJT
JOB NUMBER	885	SCALE	AS NOTED

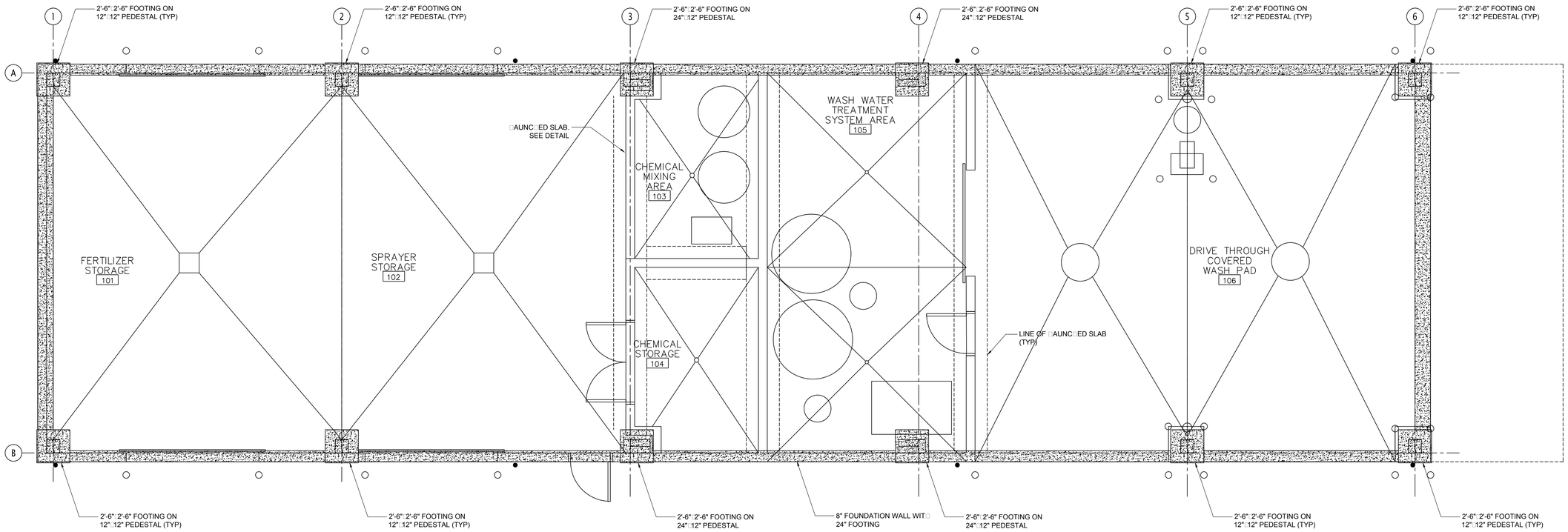
SCHEMATIC DESIGN

STORAGE SHED DRAWINGS

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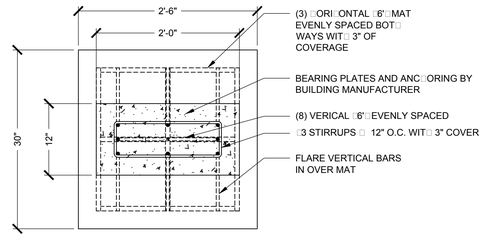
SHEET

A1.5



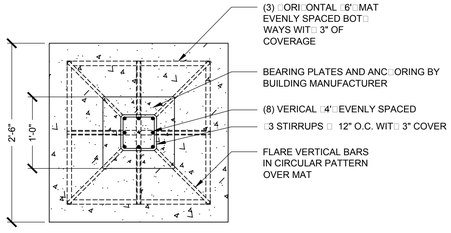
FOOTING LOCATION PLAN

SCALE□1/4"□1'-0"



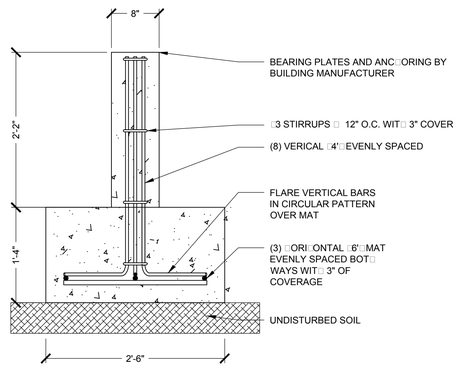
ELONGATED FOOTING DETAIL PLAN

SCALE□1"□1'-0"



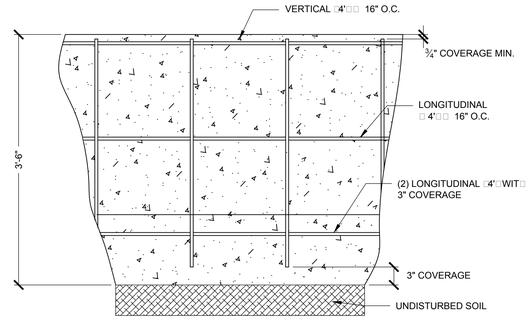
FOOTING DETAIL PLAN

SCALE□1"□1'-0"



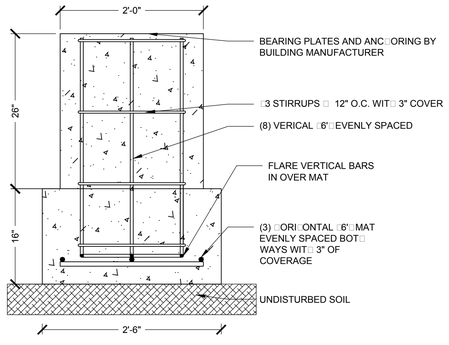
FOOTING SECTION DETAIL

SCALE□1"□1'-0"



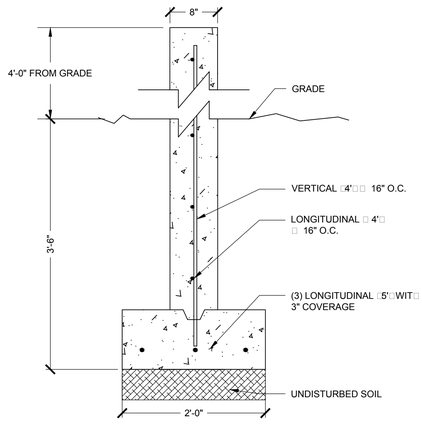
FOUNDATION WALL ELEVATION

SCALE□1"□1'-0"



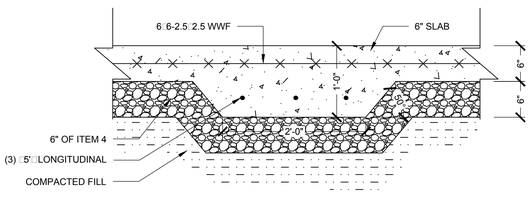
ELONGATED FOOTING SECTION DETAIL

SCALE□1"□1'-0"



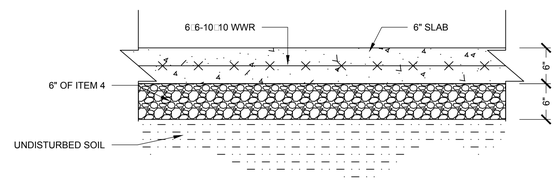
FOUNDATON WALL SECTION

SCALE□1"□1'-0"



□AUNC□ED SLAB SECTION

SCALE□1"□1'-0"



FLOOR SLAB SECTION

SCALE□1"□1'-0"

MARCHETTI CONSULTING ENGINEERS
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Pound Ridge, NY 10576
P (914) 764-9011
F (914) 764-9012
info@marchetticonsultingengineers.com

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No.	DESCRIPTION	DATE
	ISSUE FOR PRICING	09-13-18

STAMP & SIGN:

WACCABUC COUNTRY CLUB
90 MEAD STREET
WACCABUC, NY 10597

STRUCTURAL FOOTING PLAN & DETAILS

PROJECT NUMBER:	#2018-29
DATE:	2018-09-12
DRAWN BY:	RN
CHECKED BY:	PGM

S-1

SCALE: AS NOTED

STRUCTURAL SPECIFICATIONS:

ALL WORK IS TO BE DONE IN ACCORDANCE WIT T E STATE OF NEW YORK BUILDING CODE, TOWN OF LEWISBORO BUILDING DEPT. AND ALL OT ER AUT ORITIES AVING URISDICTION.

T E MATERIALS AND INSTALLATION OF ALL CONCRETE AND REINFORCEMENT TO CONFORM TO AMERICAN CONCRETE INSTITUTE (ACI 318) AND ALL CODES AND STANDARDS APPLICABLE TO T E INSTALLATION.

ALL FOUNDATION WORK IS TO BE APPROVED AND SIGNED OFF AFTER INSTALLATION BY T E ENGINEER OF RECORD, MARC ETTI CONSULTING ENGINEERS.

ALL WORK IS TO BE GUARANTEED FOR A PERIOD OF 1 YEAR AFTER INSTALLATION.

ENGINEER OF RECORD TO BE NOTIFIED OF PLACEMENT OF REINFORCEMENT. PLACEMENT OF CONCRETE IS NOT PERMITTED UNTIL REINFORCEMENT PLACEMENT IS APPROVED BY ENGINEER.

STRUCTURAL NOTES:

CONCRETE
ALL CONCRETE WORK S ALL CONFORM TO T E "AMERICAN CONCRETE INSTITUTE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI301-95)

ALL CONCRETE IS DESIGNED BY ULTIMATE STRENGT MET ODS AND S ALL BE NORMAL WEIG T AIR ENTRAINED WIT A 28 DAY COMPRESSIVE STRENGT .

ALL REINFORCING S ALL BE IG STRENGT DEFORMED BARS ASTM A615 GRADE 60.

PROVIDE REINFORCEMENT BARS AS INDICATED IN CONCRETE FOOTINGS AND FOUNDATION DETAILS.

ALL CONCRETING TO BE 4000 PSI STRENGT AT 28 DAYS.

PROVIDE A AUNC ED SLAB MIN 12".24" TO ALL CMU PARTITIONS/DIVIDERS

SAMPLING
(2) TEST CYLINDERS TO BE TAKEN PER CONCRETE TRUCK TO BE INDEPENDENTLY TESTED BY OT ERS FOR COMPRESSIVE STRENGT TESTING AT 14 AND 28 DAYS.

ALL SAMPLES TO BE TAKEN DURING POURING PROCEDURE AND KEPT IN AN ON-SITE CURING BOX UNTIL TESTING.

SAMPLES TO BE TAKEN BY INDEPENDANT TESTING COMPANY USING STANDARD SAMPLING PROCEEDURES OUTLINED BY ASTM.

COMPRESSIVE TEST RESULTS TO BE SENT TO ENGINEER OF RECORD FOR REVIEW AND FINAL APPROVAL.

MAXIMUM SLUMP 3" MINIMUM SLUMP 1"

SCOPE OF WORK:

-T E FOLLOWING IS A LIST OF RE UIRED WORK AT T E SITE. ALL WORK TO BE IN ACCORDANCE WIT TOWN OF SOUT SALEM BUILDING, PLANNING AND ONING AND WATER CONTROL AGENCIES AS WELL AS STATE OF NEW YORK BUILDING CODES. T IS LIST IS NOT INTENDED BE ALL INCLUSIVE ALL RE UIRED WORK AND MATERIAL TO BE SUPPLIED AS TO PROVIDE COMPLETED STRUCTURES.

-WAS LOAD MAINTENANCE FACILITY-

CONTRACTOR TO PROVIDE AND INSTALL ALL OF T E COMPONENTS AND ANY AND ALL OT ER RE UIRED ITEMS TO ENABLE CONSTRUCTION OF T E WAS LOAD MAINTENANCE FACILITY INCLUDING BUT NOT LIMITED TO

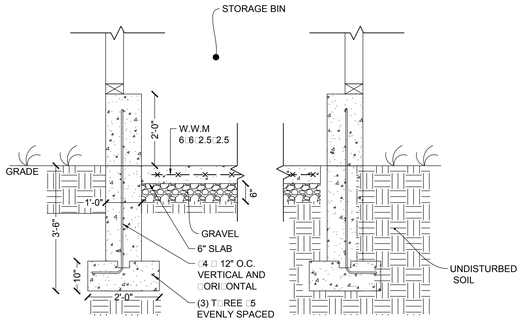
-ALL GRADING OF SITE AND AD ACENT DRIVE AREAS.
-ALL FOOTINGS AND FOUNDATIONS, ALL RETAINING WALLS AS DETAILED ON STRUCTURAL DRAWINGS FOR BUILDING.
-ALL PAVED AND UNPAVED AREAS CONSISTING OF BASE, GRAVEL, BASE AND FINIS ASP ALT TOPPINGS AS DETAILED AND AS RE UIRED.
-ALL UTILITY SERVICE OOKUPS TO NEW BUILDING INCLUDING UNDERGROUND POTABLE WATER, SANITARY WASTE, STORM WATER AND ELECTRIC SERVICE WIT RELOCATION OF SAME AS RE UIRED.
-POTABLE WATER TO BE TIED TO EXISTING 2" MAIN AS SHOWN WITH HIGH DENSITY POLYET YLENE (DPE) PIPING.
-SANITARY TO BE TIED INTO EXISTING SERVICE WIT SC EDULE 80 40 PVC.
-A COMPLETE STORM WATER RETENTION SYSTEM AND OVERFLOW WIT ALL STRUCTURES AND PIPING AS S OWN ON PLANS PIPING TO BE PVC
-A NEW ELECTRIC POWER POLE AND RELOCATION OF OVER EAD ELECTRIC SERVICE TO UNDERGROUND SERVICE TO AD ACENT BUILDING. ALL POWER LINES TO BE COPPER IN SC EDULE 40 OR 80 PVC.
-RETAINING WALL AND FENCING AS S OWN

-STOCKPILE STORAGE BARNS-

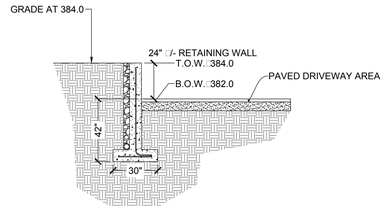
-CONTRACTOR TO PROVIDE AND INSTALL ALL T E COMPONENTS AND ANY AND ALL RE UIRED ITEMS TO ENABLE CONSTRUCTION OF T E STOCKPILE STORAGE BARNS INCLUDING BUT NOT LIMITED TO:
-RE-GRADING OF SITE
-CURB CUT AT ENTRANCE TO STORAGE BARNS
-GRAVEL DRIVEWAY AND COMPACTION
-ALL FOOTINGS AND FOUNDATIONS SLABS AS DETAILED ON DRAWINGS

-FOUNDATION SLAB INSTALLATION AT MAINTENANCE BUILDING

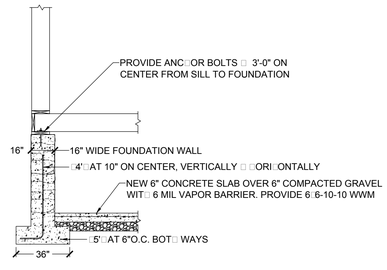
-CONTRACTOR TO PROVIDE AND INSTALL ALL RE UIRED S ORING, EXCAVATION, SLABS, FOUNDATIONS AS PER T E DRAWINGS AND NOT LIMITED TO:
-S ORING AND UNDERPINNING OF EXISTING BUILDING AND COLLAPSING FOUNDATION AREA
-EXCAVATION AND PLACEMENT OF FOOTINGS AND FOUNDATION AT SAME AREA AS S OWN ON DRAWINGS
-LEVELING AND GRADING, COMPACTING, AND GRAVEL AND CONCRETE PLACEMENT AT GARAGE AREA OF MAINTENANCE BUILDING INCLUDING, ALL GRAVEL, VAPOR BARRIER, COMPACTION, CONCRETE AND REINFORCEMENT PLACEMENT.
-REPLACEMENT OF ALL EXISTING WOOD COLUMNS WITH 8"X8"X1/2" HSS STEEL COLUMNS ON 4'X4'X12" REINFORCED FOOTINGS.
-ALL RE UIRED CONNECTIONS OF EXISTING BUILDING TO NEW ELEMENTS



STORAGE BIN SUPPORT/FOOTING DETAIL
SCALE 1" 1'-0"



SECTION AT RETAINING WALL DETAIL
SCALE 1/4" 1'-0"



NOTE
STRUCTURE TO BE S ORED BY APPROPRIATE MEANS DURING DEMOLITION RECONSTRUCTION

SECTION AT SOUT SIDE OF MAINTENANCE DETAIL
SCALE 1/4" 1'-0"

MARCHETTI CONSULTING ENGINEERS
25 High Ridge Rd
Pound Ridge, NY 10576
P (914) 764-9011
F (914) 764-9012
info@marchetticonsultingengineers.com

Drawings and Specifications, as instruments of professional service, are and shall remain the property of the Engineer. Documents are not to be used, in whole or in part, for other projects or purposes or by any other parties than those authorized by contract without the specific written authorization of the Engineer. The use of this document is contingent upon payment to the engineer for services rendered. Non-payment shall give the Engineer the authority to bar document use by any and all parties. If owner disputes any Engineer's statements for services, it is required that the owner advise the engineer in writing with ten (10) days. Remaining, undisputed portions are due and payable upon receipt. The owner shall indemnify the Engineer against any claims alleging damages or delays incurred in the event the Engineer exercises the right to bar document use for non-payment. Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported immediately to the Engineer before proceeding.

No.	DESCRIPTION	DATE
	ISSUE FOR PRICING	09-13-18

STAMP & SIGN:

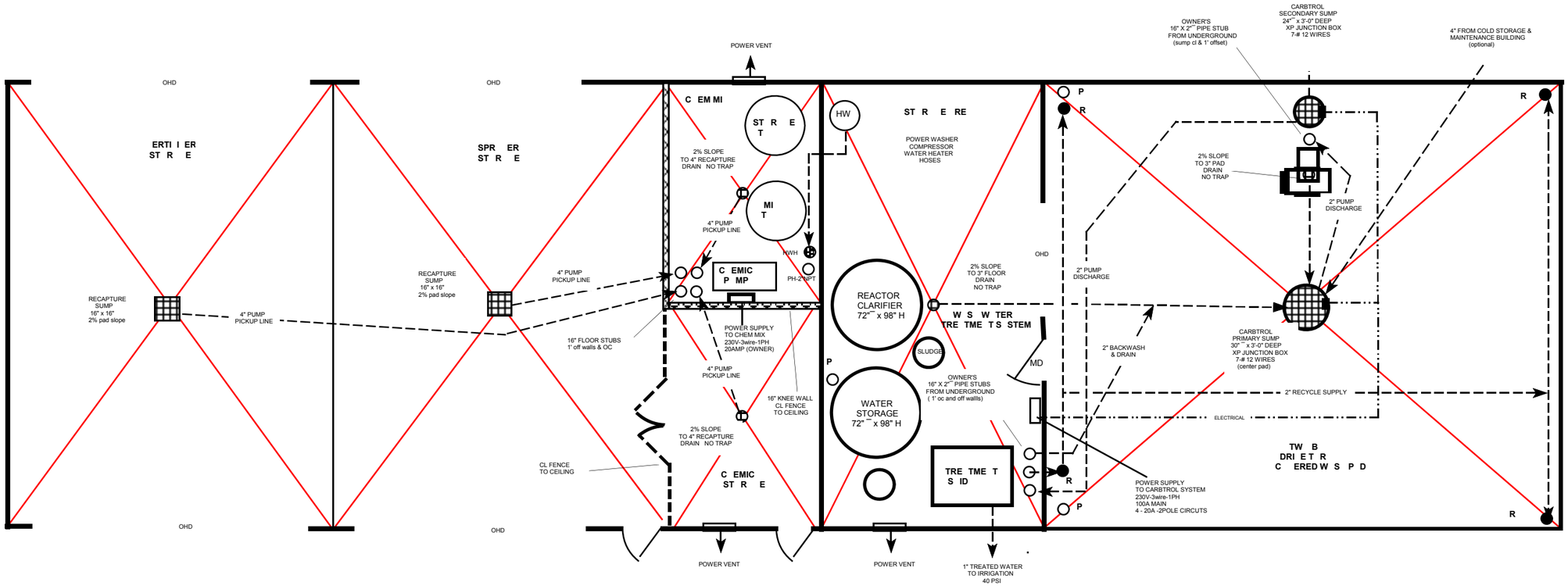
WACCABUC COUNTRY CLUB
90 MEAD STREET
WACCABUC, NY 10597

DETAILS CONTINUED & SPECIFICATIONS

PROJECT NUMBER:	#2018-29
DATE:	2018-09-12
DRAWN BY:	RN
CHECKED BY:	PGM

S-2

SCALE: AS NOTED



NOTE: 1
polyethylene wash pad sumps provided by CARBTROL& installed by owners contractor during slab construction

NOTE: 2
power service and under slab piping & electrical by by owners contractor

NOTE:3
water treatment and chem mix equipment factory wired - final tie in by Carbtrol

NOTE:4
install bollards to protect hydrants & grass screen if rquired

NOTE: 5
recapture sumps provided by Carbtrol and installed by owners contractor during slab construction

○ PH = POTABLE HYDRANT by owner 3/4" hose or 2" NPT

● RH = RECYCLE HYDRANT by owner 3/4" hose

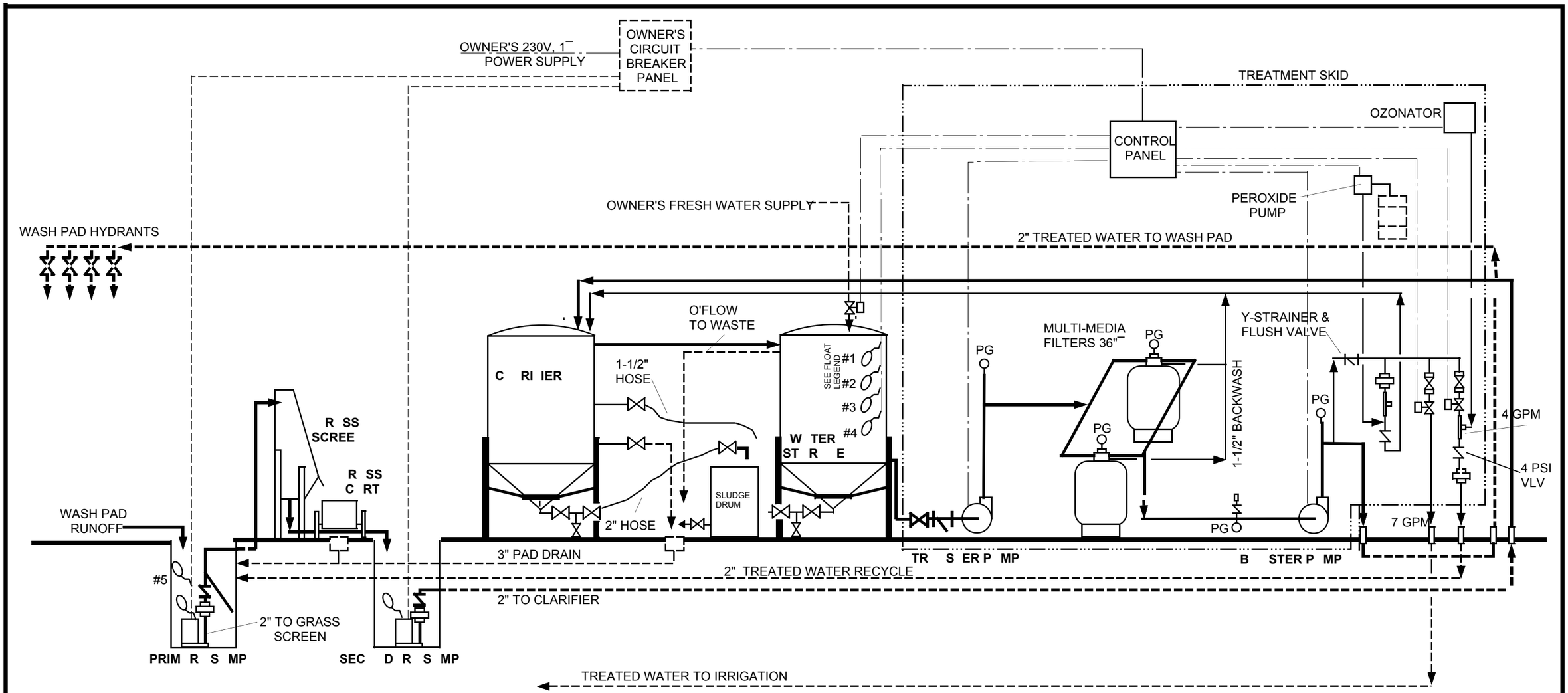
HW = HOT WATER HYDRANT by owner 3/4" hose

PRELIMINARY LAYOUT
(not to scale)

C RBTR
CORPORATION

955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

SCALE	WACCABUC CC	BY ARS
DATE 08.30.18		REV-
E IR ME T M EME T CE TER T		
RR EME T	S	DWG -SPL



FLOAT LEGEND

ACTION ON RISING FLOAT

#1- SECONDARY SUMP PUMP OFF, (N.C. CONTACT)
#2- WASTE SOL. VLV. OPEN (N.O. CONTACT)
#3- MAKE-UP WATER SOL. VLV CLOSED (N.C. CONTACT)
#4- TRANSFER PUMP ON (N.O. CONTACT)
#5- TREATED WATER RECYCE OFF (N.C. CONTACT)

SYMBOL LEGEND

- = PIPING & EQUIPMENT BY CARBTROL
- = ELECTRICAL BY CARBTROL
- = PIPING, EQUIPMENT, ELECTRICAL BY OTHERS
- = FLOAT SWITCH
- = BALL VALVE
- = TRUE UNION BALL VALVE
- = SOLENOID VALVE
- = CHECK VALVE
- = Y-STRAINER
- = UNION

C RBTR
CORPORATION
955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

SCALE ---------	W CC BC CC	BY ARS
DATE 08-30-18		REV

CW- a W S W TER REC C E S STEM

WS EET | S | DWG /

OPTIONAL SUMP RECYCLE SOLENOID

PRIMARY SUMP #1 SHUTOFF LEVEL FLOAT

FLOAT - 1 - hi-hi

CHEMICAL FEED PUMP & TIMER

OZONE GENERATOR

OZONE LINE SOLENOID CHECK

WASTE DISCHARGE LEVEL FLOAT SOLENOID VALVE TIMER & HI LEVEL LIGHT

FLOAT - 2 - hi

WATER MAKE-UP LEVEL FLOAT & SOLENOID VALVE

FLOAT - 3 - lo

TRANSFER PUMP POWER SWITCH & 15A FUSE

TANK LOW LEVEL FLOAT & LO LEVEL LIGHT

FLOAT - 4 lo-lo

TO DOOR G

FIELD TERMINAL STRIP

24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2a 2 1

TB2

NC NO C

24 HR T2

LT R

SS1 ON OFF

TB3

POWER TERMINAL STRIP

G

TB1

1L1 1L2 N 2L1 2L2 PS1 PS2

GREEN BLACK GRAY WHITE RED PINK YELLOW PURPLE

L1 BUSS

36 35 34 33 32 31 30

L1 SWITCHED BUSS

44 43 42 41 40

TB4

15A Fuse

NEUTRAL BUSS

59 58 55 54 53 52 51 50

TB5

24 HR T1

T1

MANUAL OFF AUTO SS2

BOOSTER PUMP CURRENT SWITCH POWER SWITCH WASH TIMER & MOTOR RELAY

AIROTRONICS CURRENT SENSOR & 20A RELAY

N.O. 20A

3 2 2a

2P2 2P1 1P2 1P1

1.5 HP BOOSTER PUMP

1 HP TRANSFER PUMP

CARBTROL RUN FROM CARBTROL CONTROL PANEL TO CB PANEL - (9) #12s + (2) SPARES

OWNER'S RUN FROM CARBTROL SECONDARY SUMP ((2) #12s + G)

OWNER'S C.B. PANEL 208/230V, 1phase

G N

TRANSFER PUMP 208/230V, 1~ 20 A 2 POLE

BOOSTER PUMP 208/230V, 1~ 20 A 2 POLE

OWNERS NEMA 4 JUNCTION BOX

PRIMARY PUMP 208/230V, 1~ 20 A 2 POLE

SECONDARY PUMP 208/230V, 1~ 20 A 2 POLE

OWNER'S RUN FROM CARBTROL PRIMARY SUMP ((2) #12s + G)

1/2 HP

SECONDARY SUMP PUMP FLOAT & JUNCTION BOX

1/2 HP

PRIMARY SUMP PUMP FLOAT & JUNCTION BOX

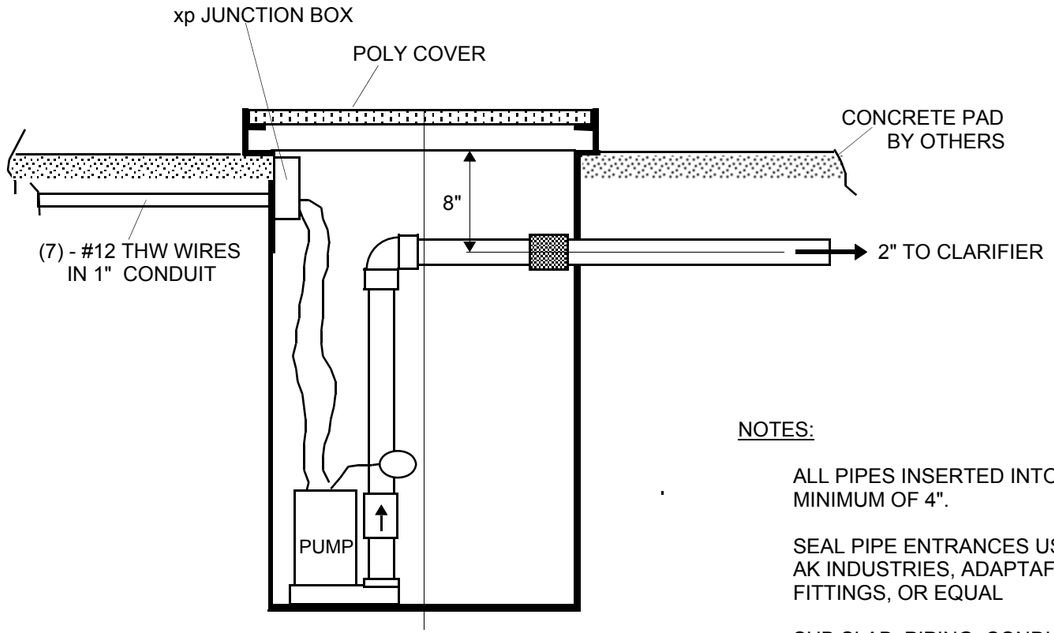
C RBTR CORPORATION

955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

DATE	08.30.18	BY	ARS
SCALE:	-------	REV	

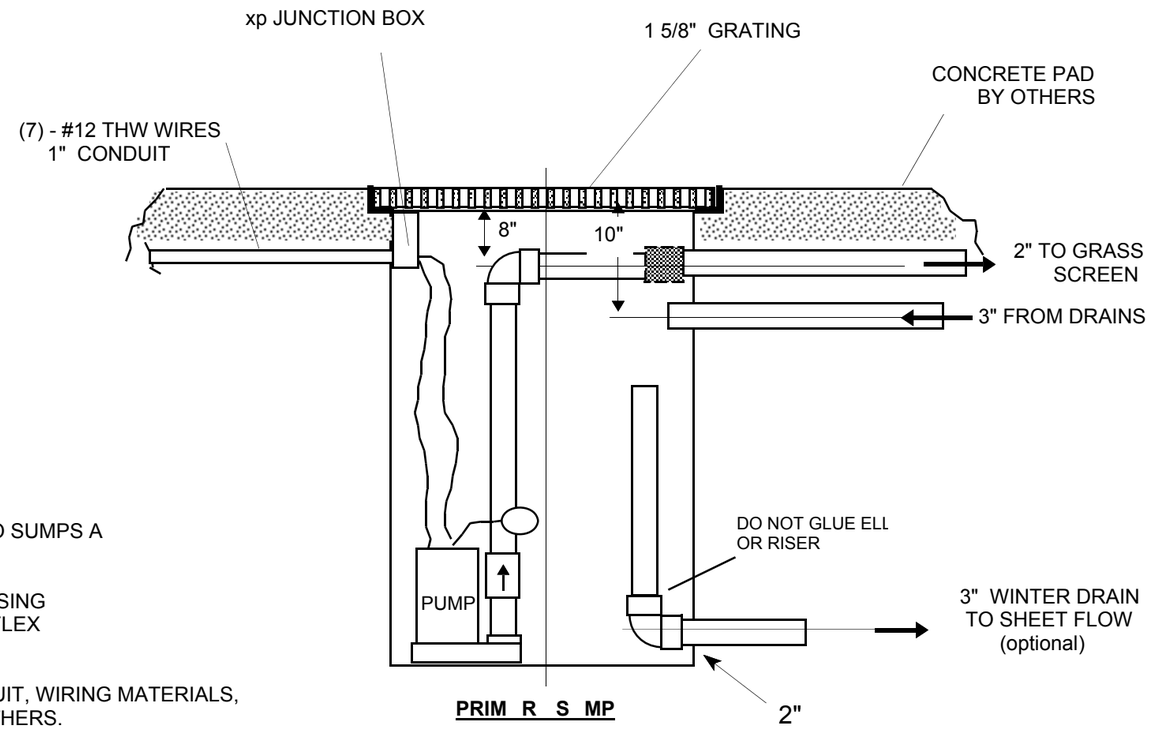
W S W TER REC C E S STEM

/ C TR P E W | **S** | DWG **SP**



SEC D R S MP

24" x 36" DEEP
POLYPROPELENE
FLANGED TANK
WITH SUBMERSIBLE
PUMP AND FLOAT
BY CARBTROL



PRIM R S MP

30" x 36" DEEP
POLYPROPELENE
FLANGED TANK
WITH SUBMERSIBLE
PUMP AND FLOAT
BY CARBTROL

NOTES:

ALL PIPES INSERTED INTO SUMPS A MINIMUM OF 4".

SEAL PIPE ENTRANCES USING AK INDUSTRIES, ADAPTAFLEX FITTINGS, OR EQUAL

SUB SLAB PIPING, CONDUIT, WIRING MATERIALS, AND INSTALLATION BY OTHERS.

ALL COMPONENT WIRE RUNS ARE CONTINUOUS BETWEEN SUMPS AND TREATMENT ROOM JUNCTION BOX.

NUMBER ALL WIRE RUNS ON BOTH ENDS STARTING WITH NUMBER "30"

PRIMARY SUMP
MOTOR WIRES=30, 31, G1.

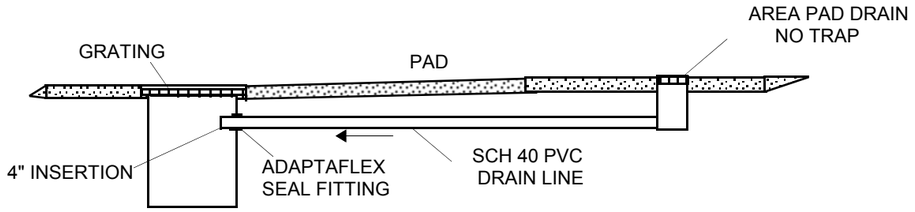
SECONDARY SUMP
MOTOR WIRES=40, 41, G2.

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CORPORATION
955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

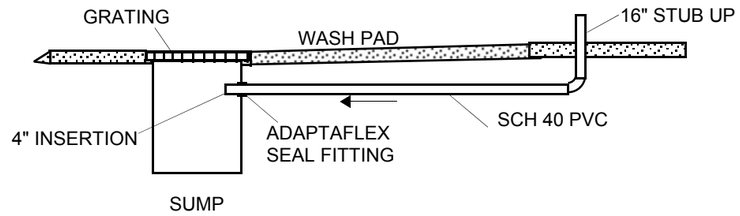
SCALE ----		BY ARS
DATE 08.30.18		REV-

PRIM R D SEC D R S MPS

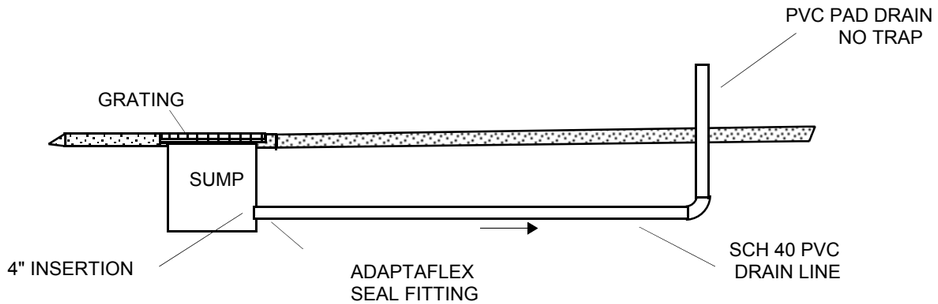
I ST TI DET I S | S | DWG



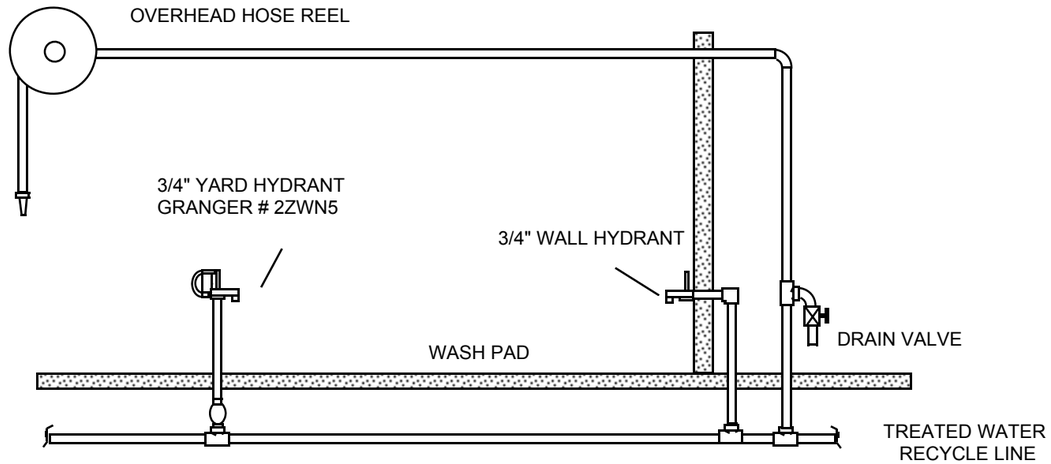
T PIC P D DR I T S MP PIPI



T PIC ST B- P T S MP PIPI



T PIC REC ER S MP T ST B P PIPI



T PIC W ERS TER TI E R DR T PIPI DET I S

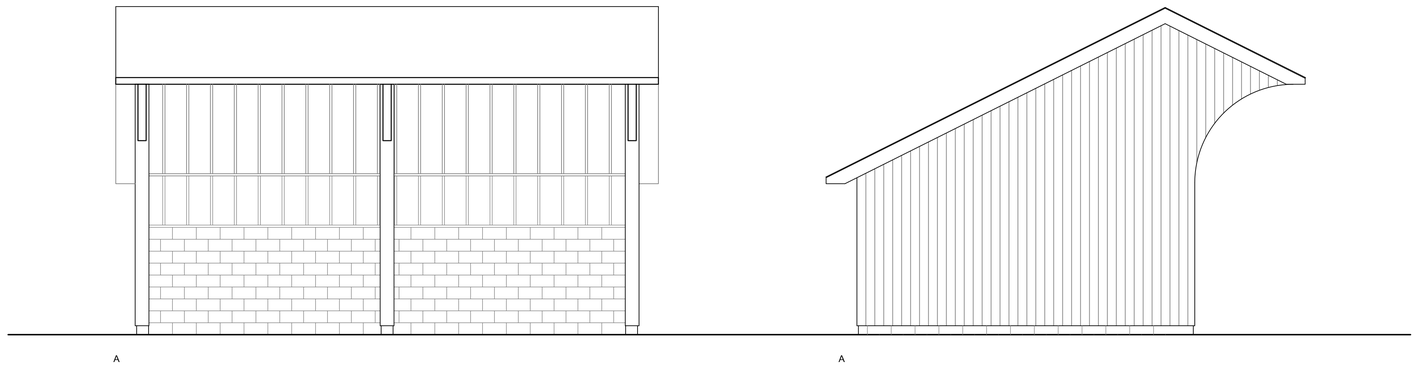
THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF CARBTROL CORPORATION. PERMISSION IS GIVEN TO USE THE INFORMATION CONTAINED HEREIN IN CONNECTION WITH THE USE OF CARBTROL PRODUCTS. NO OTHER USE MAY BE MADE OF THIS INFORMATION WITHOUT WRITTEN PERMISSION FROM CARBTROL CORPORATION.

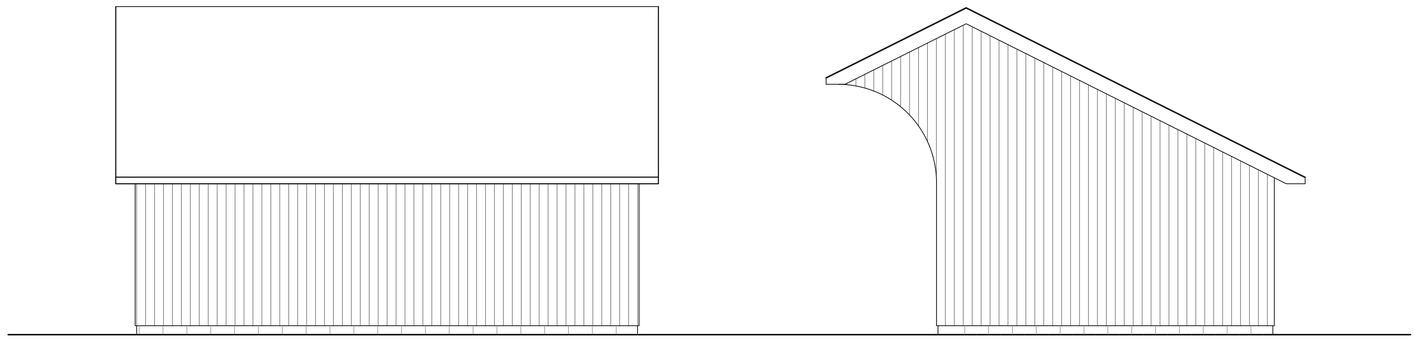
C RBTR
CORPORATION
955 CONNECTICUT AVENUE
BRIDGEPORT CONN. 06607
(203) 337-4340

SCALE ---------
BY ARS
DATE 08.30.18
Wah

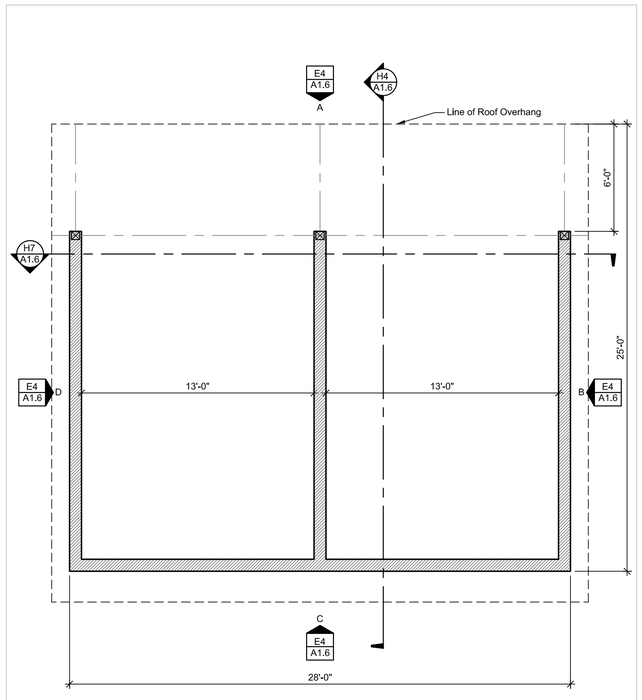
RI S DER R D PIPI

T PIC DET I S | S | DWG /

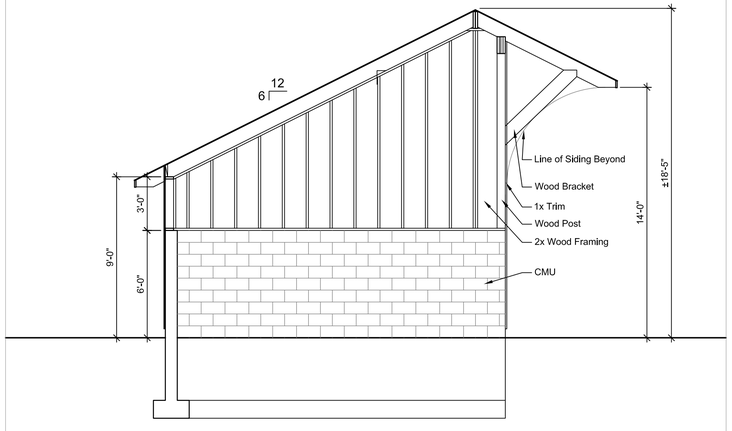




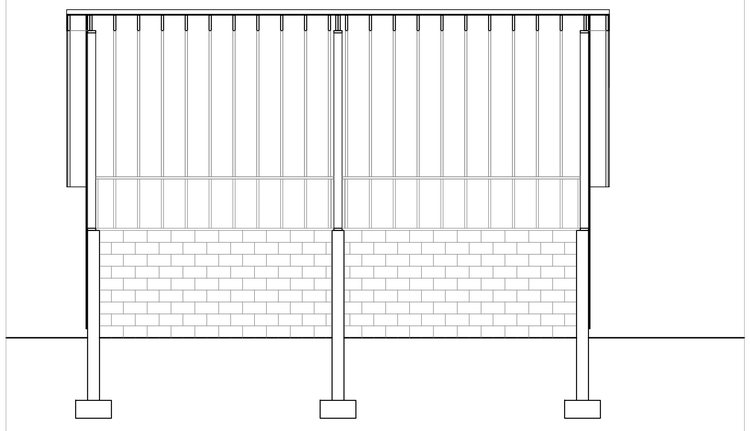
E4 A1.6 EXTERIOR ELEVATIONS
1/4" = 1'-0"



H1 A1.6 TYPICAL PLAN
1/4" = 1'-0"



H4 A1.6 BUILDING SECTION
1/4" = 1'-0"



H7 A1.6 BUILDING SECTION
1/4" = 1'-0"

DOYLE|COFFIN
ARCHITECTURE

Doyle Coffin Architecture, LLC
158 Danbury Road
Ridgefield, Connecticut 06877
203|431|6001
203|431|9764 fax
info@doylecoffinarchitecture.com
doylecoffinarchitecture.com

PRELIMINARY NOT FOR CONSTRUCTION

THIS COMPUTER FILE / DRAWING IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION. DO NOT START CONSTRUCTION WITHOUT A SEALED SET OF CONSTRUCTION DOCUMENTS FROM THE ARCHITECT.

NOTES

STOCKPILE STORAGE SHEDS FOR

WACCABUC COUNTRY CLUB

ADDRESS
TOWN, CT 06XXX

ISSUED FOR PRELIMINARY PRICING	09/04/18
ISSUED FOR PRELIMINARY PRICING	07/18/18

PRINCIPAL	JMD	P.A.	KJT
JOB NUMBER	885	SCALE	AS NOTED

SCHEMATIC DESIGN

STORAGE SHED DRAWINGS

© DOYLE COFFIN ARCHITECTURE, LLC 2015

SHEET

A1.6

Application No: 81 - 18WP
Fee: #265 Date: 10/11/18

ck # 29889
rec # 692383
escrow estab'd.

TOWN OF LEWISBORO
WETLAND PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 90 Mead Street, Waccabuc, N.Y. 10597

Sheet: 22 Block: 10802 Lot(s): 61-37

Project Description (identify the improvements proposed within the wetland/wetland buffer and the approximate amount of wetland/wetland buffer disturbance): _____

Owner's Information

Owner's Name: Waccabuc Country Club Phone: 914-763-3144, ext. 212

Owner's Address: 90 Mead St. Waccabuc, N.Y. 10597 Email: jdassumma@optonline.net
waccabuc1912@optonline.net

Applicant's Information (if different)

Applicant's Name: SAME Phone: " "

Applicant's Address: " " Email: " "

Authorized Agent's Information (if applicable)

Agent's Name: John D. Assumma, General Manager Phone: 914-763-3144, ext. 212
Waccabuc Country Club

Agent's Adress: 90 Mead St., P.O. Box 400, Waccabuc NY 10597 Email: (same above)

To Be Completed By Owner/Applicant

1. What type of Wetland Permit is required? (see §217-5C and §217-5D of the Town Code)
   ☑ Administrative ☐ Planning Board
2. Is the project located within the NYCDEP Watershed? ☐ Yes ☑ No
3. Total area of proposed disturbance: ☐ < 5,000 s.f. ☑ 5,000 s.f. - < 1 acre ☐ ≥1 acre
4. Does the proposed action require any other permits/approvals from other agencies/departments? (Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: YES - Building Department

Note: Initially, all applications shall be submitted with a plan that illustrates the existing conditions and proposed improvements. Said plan must include a line which encircles the total area of proposed land disturbance and the approximate area of disturbance must be calculated (square feet). The Planning Board and/or Town Wetland Inspector may require additional materials, information, reports and plans, as determined necessary, to review and evaluate the proposed action. If the proposed action requires a Planning Board Wetland Permit, the application materials outlined under §217-7 of the Town Code must be submitted, unless waived by the Planning Board. The Planning Board may establish an initial escrow deposit to cover the cost of application/plan review and inspections conducted by the Town's consultants.

For administrative wetland permits, see attached Administrative Wetland Permit Fee Schedule.

Owner/Applicant Signature: John D. Assumma Date: 10-10-18

John D. Assumma, General Manager
Waccabuc Country Club

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592
Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester

Mark C. Weigel, being duly sworn, deposes and says that he/she resides at 106 Mead St. Waccabuc, NY 10597 in the County of Westchester, State of New York and that he/she is (check one) ____ the owner, or ✓ the Treasurer (*Title*) of Waccabuc Country Club (*Name of corporation, partnership, or other legal entity*) which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of Lewisboro as:

Block 10802, Lot 61+37, on Sheet 22

Owner's Signature

Sworn to before me this

26th **day of** September, 2018

AMANDA HARRISON
Notary Public - State of New York
NO. 01HA6301194
Qualified in Westchester County
My Commission Expires Apr 14, 2022

Notary Public – affix stamp

Revised 6-2015

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

Wacc. Cntry Club
Name of Applicant

Wash Station & Bulk Storage
Project Name

Property Description

Tax Block(s): 10802

Tax Lot(s): 61.37

Tax Sheet(s): 22

Property Assessed to:

Name: WCC

Address: PO Box 400 90 Mead

City: Waccabuc State: NY Zip: 10597

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: _____ Date: 9/27/2018

Sworn to before me this 27th **day of** Sept., 2018

Janet L Donohue
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020

September 27, 2018

Mr. Joseph Angiello
Building Inspector
Fire Inspector
Town of Lewisboro, NY
79 Bouton Road
South Salem, NY 10590

Dear Mr. Angiello,

This letter serves to authorize our General Manager, John Assumma to act as the club's agent on all issues relating to any and all building projects taking place on club property.

If additional information is required, please contact me on my cell 914-424-8426 or email: markcweigel@gmail.com.

In advance, I thank you for your support.

Sincerely,

Mark Weigel
Treasurer

90 Mead Street • P.O. Box 400 • Waccabuc, New York 10597 • 914 763-3144 • Fax 914 763-6324
www.waccabuccc.com • waccabuc1912@optonline.net

Application No: 10-18SW
Fee: #155 Date: 10/11/18
ck # 29889
rec #692383

TOWN OF LEWISBORO
STORMWATER PERMIT APPLICATION

79 Bouton Road, South Salem, NY 10590
Phone: 914-763-5592
Fax: 914-763-3637
planning@lewisborogov.com

Project Information

Project Address: 90 Mead St., Waccabuc, N.Y. 10597

Sheet: 22 Block: 10802 Lot(s): 61·37

Project Description (describe overall project including all proposed land development activities):

Owner's Information

Owner's Name: Waccabuc Country Club Phone: 914-763-3144, ext. 212

Owner's Address: 90 Mead St. Waccabuc, N.Y. 10597 Email: jdassumma@optonline.ne
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Agent's Name: John D. Assumma, General Manager Phone: 914-763-3144, ext. 212
Waccabuc Country Club

Agent's Adress: 90 Mead St., POBox 400, Waccabuc NY 10597 Email: (same above)

To Be Completed By Owner/Applicant/Agent

1. The approval authority is? (see §189-5 of the Town Code)

   ☐ Town Engineer and SMO ☑ Planning Board

2. Is the project located within the NYCDEP Watershed? ☐ Yes ☑ No

3. Total area of proposed disturbance: ☑ 5,000 s.f. - < 1 acre ☐ ≥1 acre

4. Will the project require coverage under the NYSDEC General Permit for Stormwater Discharges from Construction Activity? ☐ Yes ☑ No Requires post-construction stormwater practice

5. Does the proposed action require any other permits/approvals from other agencies/departments? (Wetland Inspector, Planning Board, Town Board, Zoning Board of Appeals, Building Department, Town Highway, ACARC, NYSDEC, NYCDEP, WCDOH, NYSDOT, etc): Identify all other permits/approvals required: yes - Building Department

Note: The applicant, owner and/or agent is responsible for reviewing and complying with Chapter 189, "Stormwater Management and Erosion and Sediment Control," of the Town Code. This application must be submitted with all applicable plans, reports and documentation specified under §189-8, "SWPPP requirements," of the Town Code; all SWPPP's shall be prepared in conformance with Chapter 189 and shall be prepared by a qualified professional, as defined therein. The provision for obtaining a Town Stormwater Permit is in addition to the requirement of obtaining coverage under the SPDES General Permit for Stormwater Discharges from Construction Activity, if applicable.

Owner/Applicant Signature: John D. Assumma Date: 10-10-18

John D. Assumma, General Manager
Waccabuc Country Club

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592
Fax: (914) 763-3637

Affidavit of Ownership

State of: New York

County of: Westchester

Mark C. Weigel, being duly sworn, deposes and says that he/she resides at 106 Mead St. Waccabuc, NY 10597 in the County of Westchester, State of New York and that he/she is (check one) ____ the owner, or ✓ the Treasurer (*Title*) of Waccabuc Country Club (*Name of corporation, partnership, or other legal entity*) which is the owner, in fee of all that certain log, piece or parcel of land situated, lying and being in the Town of Lewisboro, New York, aforesaid and know and designated on the Tax Map in the Town of Lewisboro as:

Block 10802, Lot 61+37, on Sheet 22

Owner's Signature

Sworn to before me this

28th **day of** September, 2018

AMANDA HARRISON
Notary Public - State of New York
NO. 01HA6301194
Qualified in Westchester County
My Commission Expires Apr 14, 2022

Notary Public – affix stamp

Revised 6-2015

TOWN OF LEWISBORO PLANNING BOARD

PO Box 725, 20 North Salem Road, Cross River, NY 10518
Email: planning@lewisborogov.com
Tel: (914) 763-5592 Fax: (914) 763-3637

Tax Payment Affidavit Requirement

This form must accompany all applications to the Planning Board.

Under regulations adopted by the Town of Lewisboro, the Planning Board may not accept any application unless an affidavit from the Town of Lewisboro Receiver of Taxes is on file in the Planning Board office. The affidavit must show that all amounts due to the Town of Lewisboro as real estate taxes and special assessments on the total area encompassed by the application, together with all penalties and interest thereon, have been paid.

Under New York State law, the Westchester County Clerk may not accept any subdivision map for filing unless the same type of affidavit from the Town of Lewisboro Receiver of Taxes is submitted by the applicant at the time of filing.

This form must be completed by the applicant and must accompany all applications to the Planning Board. Upon receipt, the Planning Board Secretary will send the form to the Receiver of Taxes for signature and notarization. If preferred, the applicant may directly obtain the signature of the Receiver of Taxes and notarization prior to submission.

To Be Completed by Applicant
(Please type or print)

Wacc. Cntry Club
Name of Applicant

Wash Station & Bulk Storage
Project Name

Property Description

Tax Block(s): 10802

Tax Lot(s): 61.37

Tax Sheet(s): 22

Property Assessed to:

WCC
Name

PO Box 400 90 Mead
Address

Waccabuc NY 10597
City *State* *Zip*

The undersigned, being duly sworn deposes and says that a search of the tax records in the office of the Receiver of Taxes, Town of Lewisboro, reveals that all amounts due to the Town of Lewisboro as real estate taxes and special assessments, together with all penalties and interest thereon, affecting the premises described below, have been paid.

Signature - Receiver of Taxes: [signature] 9/27/2018
Date

Sworn to before me this
27th **day of** Sept., 2018

Janet L Donohue
Signature - Notary Public (affix stamp)

JANET L. DONOHUE
NOTARY PUBLIC, STATE OF NEW YORK
No. 01DO6259627
Qualified in Westchester County
Commission Expires April 16, 2020

September 27, 2018

Mr. Joseph Angiello
Building Inspector
Fire Inspector
Town of Lewisboro, NY
79 Bouton Road
South Salem, NY 10590

Dear Mr. Angiello,

This letter serves to authorize our General Manager, John Assumma to act as the club's agent on all issues relating to any and all building projects taking place on club property.

If additional information is required, please contact me on my cell 914-424-8426 or email: markcweigel@gmail.com.

In advance, I thank you for your support.

Sincerely,

Mark Weigel
Treasurer

90 Mead Street • P.O. Box 400 • Waccabuc, New York 10597 • 914 763-3144 • Fax 914 763-6324
www.waccabuccc.com • waccabuc1912@optonline.net

PlantStar

Chemical Mix and Recapture Systems



360 gallon open top mix tank with jet agitation and 550 gallon storage tank for rinsate or second mix



High volume, heavy duty PlantStar /FlowMax pump insures through agitation and quick transfer of materials



2 inch transfer line connection allows fast, spill free fill rates of 100 GPM or better



System can be integrated with the Carbtrol wash water recycle system or installed as a stand alone unit

Call us today at 706-769-9210, to set up an appointment for us to visit your site and design a system that suits your needs.

P.O.Box 304, Bishop, GA 30621, PH 706-769-9210, FX 706-769-4407

PLANTSTAR

Chemical Mixing and Recapture System

Overview: The PlantStar Chemical Mixing & Recapture System combines the finest components of our chemical handling and couples them with a custom installation to easily mix and contain pesticides, herbicides and soluble fertilizer materials in a closed loop system. This system allows the operator to blend, agitate and pump any chemical solution directly into a sprayer or storage tank with no exposure to the chemicals.

The recapture system also allows for sprayer tanks to be pumped out, washed, drained and the rinsate material collected out of a floor sump and stored for later use in a storage tank. Two additional sumps in the containment area and chemical storage area ensure the total recapture and containment of any spills.

Components:

Liquid Storage: (All tanks have full recirculating ability and jet agitation)
- 1 360 gallon open top mix tank with jet agitation.
- 1 550 gallon upright storage tank for stock solutions and/or rinsate material

Pumps:
- 1 PlantStar-FloMax chemical/fertilizer heavy duty transfer pump with stainless steel impellor and wear plate

Controls: (All controls are installed and mounted in a NEMA 4X enclosure)
- 1 3 HP, single phase or three phase electric motor with push button electrical starter

Accessories:
- 1 Heavy gauge, stainless steel mounting table for pump.
- Custom discharge system for loading/filling of sprayer equipment
- PVC 80 and polypropylene 2" components manifolded to both tanks' intake and discharge.
- Metal sump grate frames
- All technical drawings to ensure proper drainage and secondary containment

Features:

1 Transfer pump allows for close loop recirculation and agitation. Full transfer capabilities from any tank to any other.
2 Transfer pump link to containment sump allows for total recapture and reuse of any spills or rinsate within one of three containment areas.
3 Jet agitation in Mix Tank provides the capability to dissolve and fully mix chemical products with water.
4 Chemicals can be put in solution in Mix Tank then discharged using transfer pump into Storage tank or spray equipment.
5 Two tanks allow for storage of stock solutions and more versatile blending.
6 Water injection allows for full back wash capabilities in all lines supply and return.
7 All discharge connections are quick connect cam locks.

Options:
- Additional Storage and/or mix tanks.
- Wash down storage tank with sump transfer hook up.
- Potable water and Hot water injection for improved mixing and blending.
- Floor grate covers and custom filtration baskets

Requirements:
- Concrete floor system with containment wall and sloping floor to sump pit.
- Underground pipe connecting sump drains to pump intake.
- Water supply with back flow prevention equipment.

Installation Time: Two days (includes hands-on training)

Warranty: System includes a one year parts and labor warranty

Integrated Chemical Management™

For

Golf Course Maintenance Facilities

Austin R. Shepherd, P.E.
CARBTROL Corporation, Bridgeport, CT

An innovative concept for golf course maintenance operations; chemical management, fueling, and vehicle washing operations are combined in one integrated system for collection, recycle and treatment of all discharges. Through the use of Best Available Technology, zero discharge of pollutants can be achieved.

SUMMARY

There is a growing awareness of the potential environmental impacts and liabilities related to vehicle washing, sprayer chemical handling and vehicle refueling operations. Therefore, the design of a maintenance facility should minimize these impacts while simplifying maintenance operations. These issues are regularly addressed during the siting of new courses or during the expansion or renovation of existing facilities.

An innovative approach for golf course maintenance facilities places the fueling, chemical management and equipment washing operations within one containment area. This containment area is supported by state-of-the-art chemical mix and advanced wastewater recycle systems to achieve "zero discharge" of pollutants.

THE INTEGRATED APPROACH

Recently Carbtrol Corp. and PlantStar, Inc. have joined to develop a process to integrate the chemical management operations at golf course maintenance facilities. The cornerstone of this process is a state-of-the-art PlantStar chemical mixing and handling system coupled with a Carbtrol advanced washwater treatment and recycle system. Together these system provide the technology necessary to eliminate all toxic chemical discharges.

Implementation of the integrated chemical management™ concept involves the arrangement of the physical plant (buildings, pads, etc.) in a manner so as to provide a containment envelope for all wash, chemical handling and fueling processes. Any fuels, chemicals, sprayer solutions, or wash waters released within the containment envelope are captured, segregated, and either recycled or treated so as to prevent release to the environment.

In a preferred layout (see attached), separate areas are provided for chemical storage, chemical mixing, sprayer storage, vehicle wash, and fueling operations. Each of these areas is diked or sloped such that any spills, leaks, or wash waters drain to appropriate collection sumps for further processing.

CHEMICAL STORAGE, MIXING AND HANDLING

Chemical storage, mixing and handling operations are supported by a state-of-the-art PlantStar Chemical Mixing System. This includes equipment for the preparation of the various chemical sprayer batches, and for transfer of the chemical solutions from the mix area to individual sprayer

application tanks. A 360-gallon open-top chemical mix tank, a 540-gallon closed-top storage tank, and a high-capacity self-priming pumping station provides the capability to agitate chemical solutions and to rapidly fill sprayer tanks through the use of 2" flex hose fitted with quick-connect couplings. The system is configured so as to minimize worker exposure while maximizing mixing and loading efficiency. Provision is made for mixing chemical batches with cold potable, hot potable, or treated recycle water.

An associated sump collection and recycle system enables any spills in the chemical mixing, chemical storage, or sprayer storage areas to be pumped back to either of the chemical mix tanks for reuse. Water from wash down of the sprayer area or from sprayer nozzle calibration can also be directed back to the chemical mix tanks or to the Advanced Washwater Recycle System where appropriate.

VEHICLE FUELING AND WASHING

A Carbtrol Advanced Washwater Recycle System is provided to treat wastewater generated in vehicle washing and to process any spills or leaks from vehicle fueling or chemical mixing operations. Once treated, the water is recycled back for vehicle washing, thus effectively eliminating any discharge. The Carbtrol system removes grass, dirt, and other solids, as well as any petroleum hydrocarbons, pesticides, herbicides or other toxic chemicals from the wastewater. The system utilizes granular activated carbon adsorption technology together with an advanced chemical oxidation process to provide the highest level of organic chemical treatment (Best Available Technology).

The Carbtrol treatment and recycle system is capable of providing a sustained flow rate of 30 gpm (max 40,000 gpd) to the vehicle washing operation. The recycled water is provided on demand, and in sufficient quantity to meet the most aggressive wash requirements. Unlike most biological processes, the system is not affected by temperature swings, shock loads, or changes in pH or other water chemistry. The system will produce a uniform water quality despite variable conditions or unexpected spills. The objective of the Carbtrol system is to achieve zero discharge of pollutants.

Vehicle fueling and washing operations are accomplished on a covered pad(s) where all wash water and any fueling spills and leaks drain to an agitated central collection sump. The wastewater is then processed by screening and clarification for solids removal prior to treatment in the adsorption/advanced oxidation process. A compressed air pre-clean blow off station is provided to reduce the amount of grass and debris handled. An ozonation system is supplied to ensure that there are no odors.

COSTS AND OPERATING CONSIDERATIONS

While the concept of integrated chemical management™ represents a change from the traditional approach to golf maintenance facility design, it can be viewed as a reorganization and consolidation of activities that would otherwise be separately provided. It has been shown in many cases that chemical management integration can be accomplished for the same or lower cost than traditional facility development.

An added benefit of the concept is a more efficient layout of the fueling, wash, and chemical handling operations. The integrated design promotes a smooth and timely vehicle and operating work flow, and can reduce equipment and personnel downtime.

Carbtrol Corp. – Bridgeport, CT – 800.242.1150
PlantStar, Inc, - Watkinsville, GA 706.769.9210

SUMMARY OF ADVANTAGES

Fast Track Permitting – Recycling of washwater reduces complications with permits for discharge.

Reduced Liability – Positive chemical containment and treatment eliminates the potential liability related to uncontrolled chemical release.

Reduced Personnel Exposure - State of the art chemical mix/handling system significantly reduces personnel exposure to toxic chemicals.

Best Available Technology – The use of granular activated carbon adsorption and advanced chemical oxidation represents the best available technology for treatment of toxic organic chemicals.

Low Maintenance – The PlantStar Chemical Mix System and the Carbtrol Advanced Washwater Recycle System are designed for simplicity of operation and ease of maintenance.

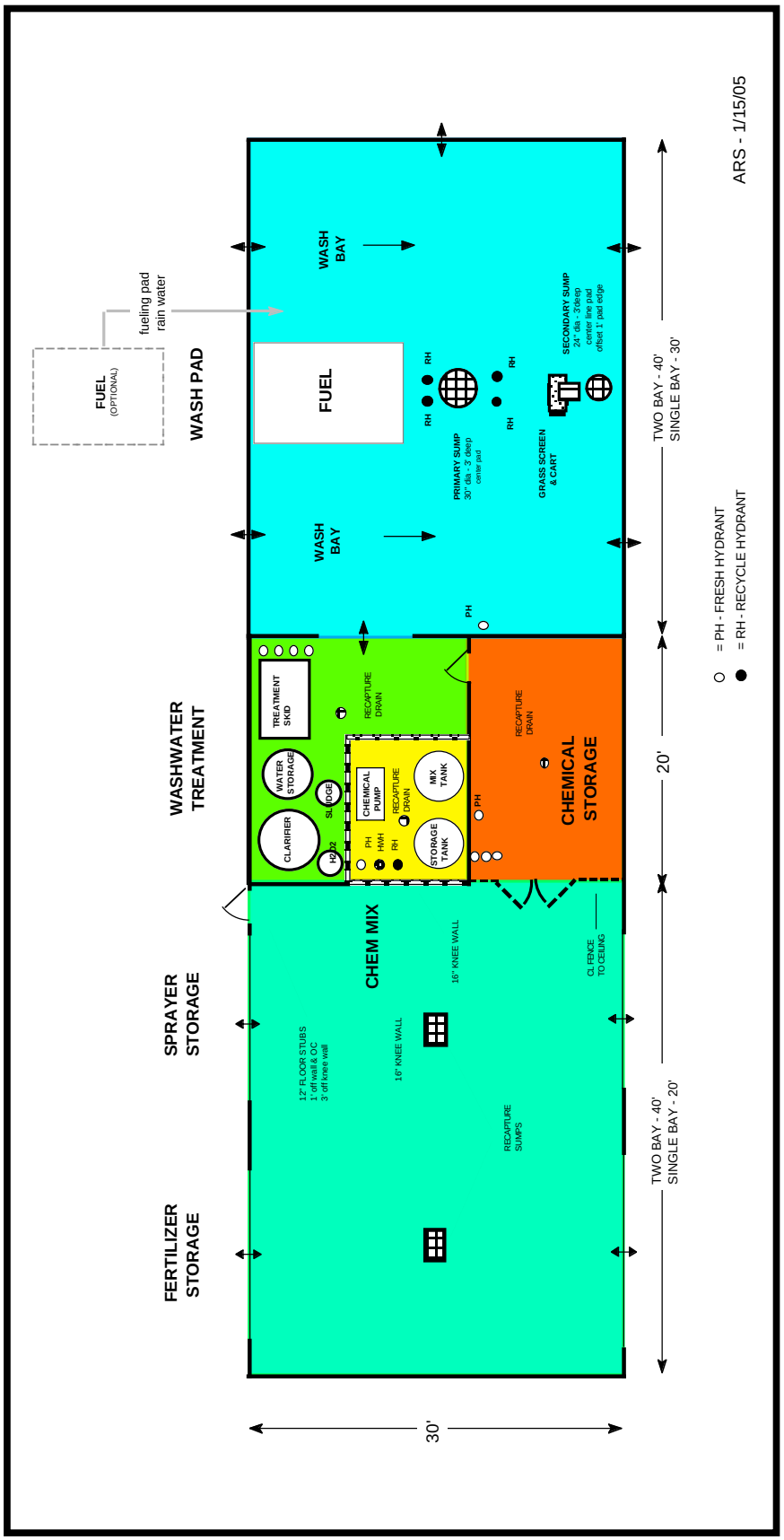
Secure Chemical and Sprayer Storage – Controlled access to chemical mix, chemical storage, and sprayer storage minimizes the potential for vandalism.

Austin R. Shepherd, P.E.
V.P. - Technical Director
Carbtrol Corporation

Carbtrol Corp. - Bridgeport, CT - 800.242.1150
PlantStar, Inc. - Watkinsville, GA - 706.769.9210

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INTEGRATED CHEMICAL MANAGEMENT™ SYSTEM



CARBTROL

ADVANCED WASHWATER RECYCLE SYSTEMS

(Models GCW-3 GCW-4)

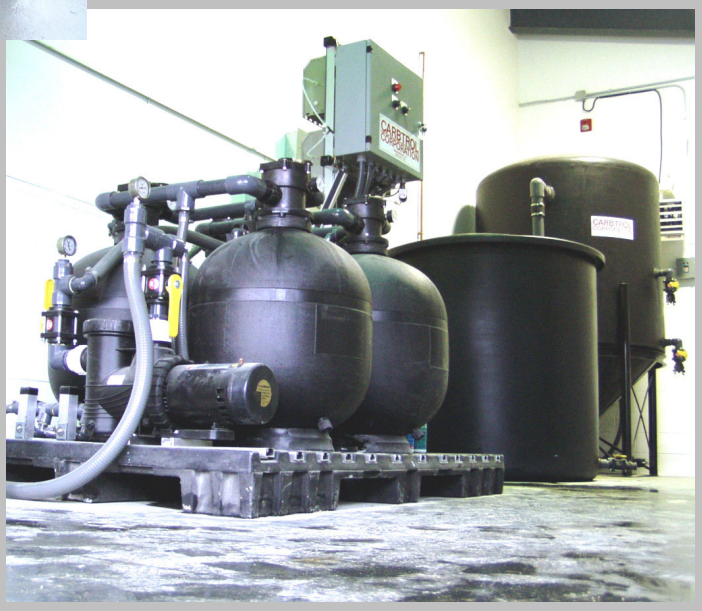


Engineered systems provide:

**** Best Available Technology***
****Closed Loop Recycling***
****High Reliability and Low Maintenance***

Typical Applications:

**** Golf Course Maintenance***
**** Vehicle Washing***
**** Equipment Cleaning***



Carbtrol Corporation
955 Connecticut Ave., Suite 5202
Bridgeport, CT 06607
800.242.1150 - www.carbtrol.com

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CARBTROL

ADVANCED WASHWATER RECYCLE SYSTEM



PRIMARY COLLECTION SUMP

Dirty wash water collects in the primary sump. At water high level, the pump engages. During pumping, the water is vigorously agitated to ensure that grass, and dirt, do not accumulate in the sump.



HYDRO SCREEN AND GRASS CART

Dirty water is pumped from primary sump to the solids separation screen. Grass and dirt are filtered by the screen and collected in a grass cart. Filtered water passes through the screen and flows into a transfer sump.



CLARIFIER & WATER STORAGE

Screened wash water is pumped from transfer sump to the clarifier where additional solids are removed by quiescent settling. The clarified water then flows to a storage tank, prior to final treatment and reuse.



TREATMENT AND RECYCLE PACKAGE

Clarified washwater is pumped to the treatment system which includes sand filtration and activated carbon adsorption. Oxidation using ozone and hydrogen peroxide provides final polishing. Water is available on demand.

INSITE
ENGINEERING, SURVEYING &
LANDSCAPE ARCHITECTURE, P.C.

November 29, 2018

Town of Lewisboro Planning Board
79 Bouton Road
South Salem, New York 10590

RE: Wilder Balter Partners, Inc.
Proposed Affordable Rental Housing Development
NYS Route 22
Tax Map No. 5-10766-19, 20, 21

Dear Chairman Kerner and Members of the Board:

In support of the permits for the above referenced project, please find the following documents (including 9 sets of plans – 6 full scale and 3 reduced scale):

- Site Plan Set (consisting of 18 sheets), last revised November 29, 2018.
- Wetland Buffer Restoration and Enhancement Plan prepared by Tim Miller Associates Inc., last revised August 2, 2018, included in the Site Plan Set as Sheet #18.

The enclosed site plans have been revised to address comments from the Goldens Bridge Fire Department as follows:

1. Note # 7 has been added to the Fire Protection Notes on Drawing OP-1 stating "each building shall be equipped with an additional fire connection and dry line to service sprinkler heads in the building attics."
2. The parking lot drive aisles have been widened to 30' and will be provided with a 5' wide painted median strip down the center as indicated on Drawing SP-1.
3. The center island in the turnaround at the east end of the site has been modified to provide a 25' radius paved island with a mountable curb as shown on Drawing SP-1. The plant bed has been removed.

The Recreation Requirements Table on Drawing OP-1 has been revised per the November 11, 2018 letter from the Building Inspector to include a walking trail on the eastern portion of the site, as shown on the site plans, and to remove to Clubhouse space from the calculation for Recreation Area Provided.

We look forward to meeting with the Board on December 18th, 2018 to discuss the final plans and permits.

Should you have any questions or comments regarding this information, please feel free to contact our office.

Very truly yours,

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.

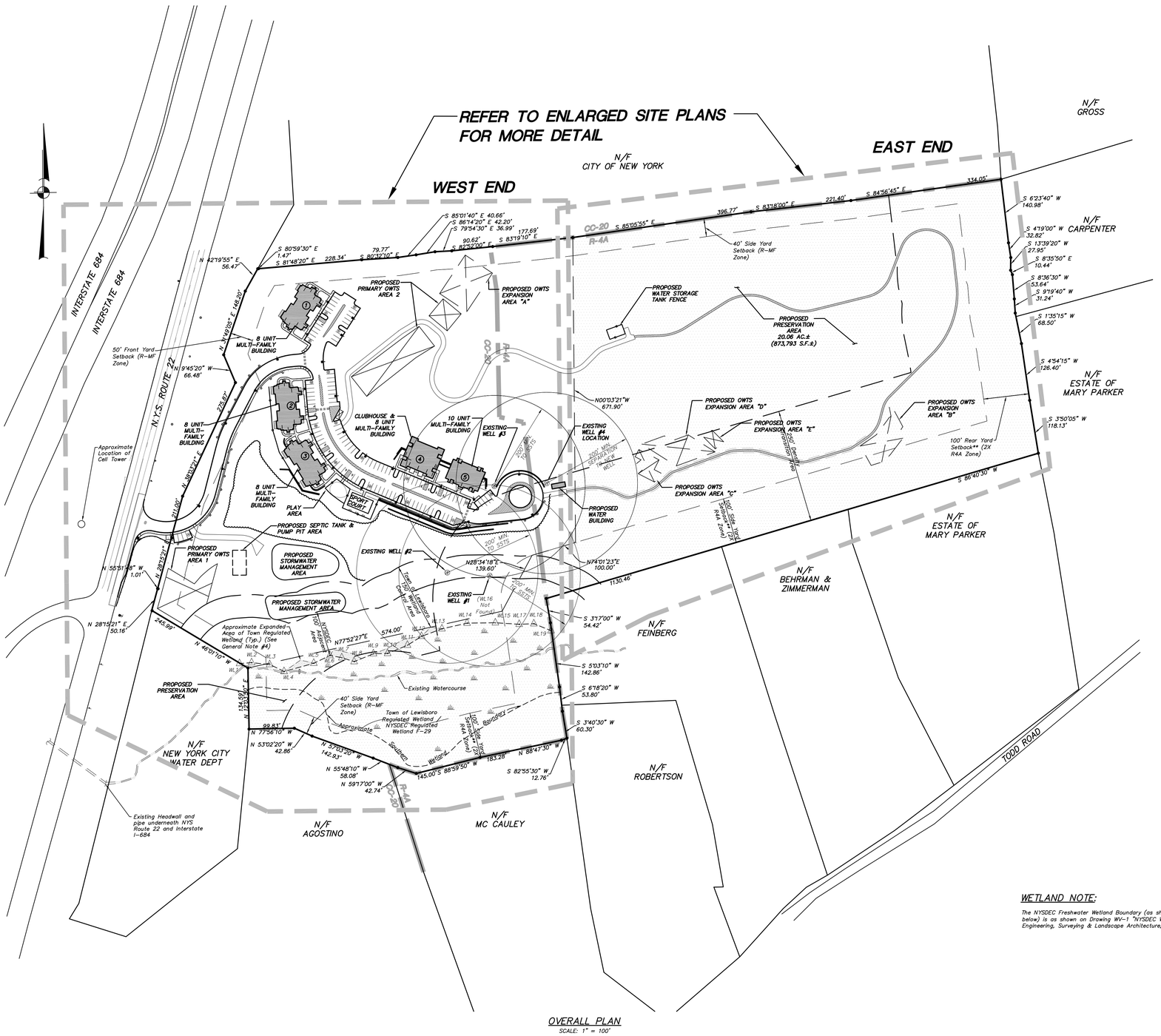
By: _____
Jeffrey J. Contelmo, PE
Senior Principal Engineer

JJC/dlm

Enclosures

cc: John Bainlardi

Insite File No. 15246.100



OVERALL PLAN
SCALE: 1" = 100'

GENERAL NOTES:

1. Property lines as shown hereon are based on a Survey of Property prepared by Bunney Associates Land Surveyors, last revised October 31, 1984.
2. Topography as shown hereon is based on aerial photography dated April 2008, as prepared by Geomaps International. Contour interval is 2'.
3. The wetland flagging as shown hereon was delineated by Steve Marino on November 16, 2015 and survey located by Insite Engineering, Surveying & Landscape Architecture PC, completed November 25, 2015.
4. Approximate location of expanded Town Regulated Wetland area as shown hereon based on sketch provided by Town Wetland Consultant, Kellard Sessions, January 2016.
5. Project proposes merger of (3) tax parcels.
6. There are no FEMA 100-year flood plains on the subject property.
7. SSTS Areas, once established, shall be designated as "Limited Mow Areas" and shall not be mowed more than twice per year. Meadow areas and "Buffer Enhancement Areas", once established, are not intended to be mowed. Stormwater Basins are intended to be maintained in accordance with the project SWPPP and the Permanent Stormwater Facilities Maintenance Schedule on Drawing D-6.

FIRE PROTECTION NOTES:

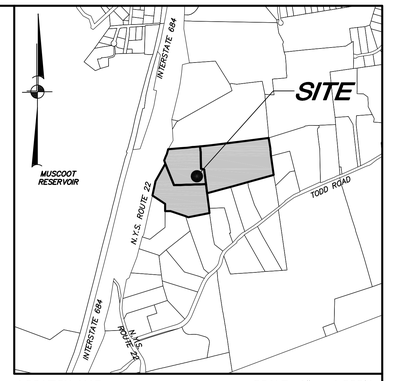
1. The proposed buildings shall include fire sprinkler systems meeting the requirements of NFPA-13R, including decks and the center hall stairwells.
2. The proposed buildings will include central station monitored fire alarm systems with smoke and carbon monoxide detectors, including heat detectors in unfinished, non-habitable attic spaces.
3. Buildings shall include a Knox Box Rapid Entry System in locations coordinated with the Fire Department.
4. Truss construction placards shall be provided on all buildings in locations coordinated with the Fire Department.
5. All buildings will provide fire connections at locations to be coordinated with the fire department.
6. Oversized vehicles (length greater than 18') shall not be permitted to be parked on the site other than in those parking spaces specifically labeled as "Oversized Vehicle Parking Permitted."
7. Each building shall be equipped with an additional fire connection and dry line to service sprinkler heads in the building attics.

WETLAND NOTE:

The NYSDEC Freshwater Wetland Boundary (as shown on this drawing) and validation block (shown below) is as shown on Drawing WV-1 "NYSDEC Wetland Validation Map", prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., dated April 22, 2016.

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1 inch = 100 ft.

LEGEND
- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 – WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL



LOCATION MAP SCALE: 1" = 1,000'±

OWNER:

Property Group Partners, LLC
Attn: Jeffrey Sussman, President
609 Fifth Avenue, 6th Floor
New York, NY 10017

APPLICANT:

Wilder Balter Partners, Inc.
480 North Bedford Road
Building 300, 1st Floor, West Wing
Chappaqua, NY 10514

SITE DATA:

Zone: CC-20 (Campus Commercial) R-4A
Total Acreage 35.43 AC. ±
Tax Map No.: Sheet 5 Block 10766 Lots 19, 20 & 21
Proposed Use: Multi-family Dwellings

R-MF ZONING REQUIREMENTS (CC-20 District):*

* Multifamily dwellings are a permitted use in CC-20 District, subject to the requirements of Section 220-26 R-MF Multifamily Residence District.

	Required:	Provided:
Minimum Permitted Gross Lot Area	5 acres	35.4 ac.±
Minimum Lot Width	250'	800'±
Minimum Yard		
Front (from street center line)	75'	211' ±
Front (from front lot line)	50'	86' ±
Side	40'	43' ±
Side (2X 50' along R4A Zone)	100' **	280' ±
Rear (2X 50' along R4A Zone)	100' **	1,039' ±
Maximum Height	3 stories or 35'	To be determined
Maximum Building Coverage	12%	Less than 2%

DEVELOPMENT DENSITY – DENSITY UNIT CALCULATIONS

OVERALL SITE PERMITTED DENSITY:
Permitted Density Units (2.0 Density Units per Net Lot Area):
Net Lot Area (per Net Lot Area Calculations on Dwg CM-1) = 15.59 Acres x 2.0 Density Units
Total Permitted Density Units for Overall Site: = 31.1 * Density Units

* Before any increase (up to 50%) in Density Units which may be authorized by the PB if applicant constructs at least ½ of additional Density Units as AFFH Units.

Proposed Density Units for Overall Site:
1 bedroom dwelling units 10 / 2.5 density units = 4 Density Units
2 bedroom dwelling units 22 / 2.0 density units = 11 Density Units
3 bedroom dwelling units 10 / 1.5 density units = 6.7 Density Units
Total Proposed Density Units = 21.7 Density Units

DENSITY TRANSITION AREA:
Permitted Density Units within Density Transition Area (1.0 Density Units per Net Lot Area):
Net Lot Area (per Net Lot Area Calculations Plan) = 5.05 Acres x 1.0 Density Units
Permitted Density Units = 5.0 * Density Units
Total Proposed Density Units for Density Transition Area: = 0 Density Units

PARKING REQUIREMENTS:

Required –
2 parking spaces per Dwelling Unit (DU) 42 DU x 2.0 = 84 spaces
plus 1 space for each unit with 2 bdrms or more 32 DU x 1.0 = 32 spaces
Total Parking Spaces Required: 116 spaces
Total Parking Spaces Provided: 116 spaces

RECREATION REQUIREMENTS:

Required –
300 s.f. per Density Unit
21.7 Density Unit x 300 s.f./Density Unit = 6,510 s.f. Recreation Area
Total Recreation Area Required: 6,510 s.f.

Provided –
The following common recreation facilities proposed at the site serve to meet this requirement:
- Play area: 1,400 s.f.±
- Multi-use sport court & perimeter: 3,000 s.f.±
- Walking trails: 5,280 s.f.±

Total Recreation Area Provided: 9,680 s.f.*
*Does not include gym and yoga space in Clubhouse

NO.	DATE	REVISION	BY
16	11-29-18	REVISED PER GBFD COMMENTS	MEU
15	9-27-18	REVISED PER TOWN COMMENTS	BD
14	8-23-18	PLANNING BOARD SUBMISSION	JFR
13	8-2-18	REVISED PER TOWN COMMENTS	JJR
12	6-28-18	REVISED PER TOWN COMMENTS	MEU
11	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
10	11-17-17	REVISED PER NYCDEP COMMENTS	EJP
9	9-01-17	REVISED PER TOWN COMMENTS	ZMP
8	7-27-17	REVISED PER TOWN COMMENTS	EIG
7	6-29-17	REVISED PER TOWN COMMENTS	SJC
6	6-1-17	PLANNING BOARD SUBMISSION	SJC
5	4-27-17	PLANNING BOARD SUBMISSION	CTQ
4	3-31-16	REVISED PER TOWN COMMENTS	MEU
3	2-4-16	REVISED PER TOWN COMMENTS	MEU
2	1-6-16	GENERAL REVISIONS	MEU
1	12-14-15	GENERAL REVISIONS	DLM

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-8690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING: OVERALL SITE PLAN

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	10-20-15	DRAWN BY	S.J.C.
SCALE	1" = 100'	CHECKED BY	D.L.M.

DRAWING NO. OP-1 SHEET 1 / 18

STATE OF NEW YORK – JEFFREY J. CONTENTO – LICENSED PROFESSIONAL ENGINEER

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\E\15246\000\00 OP\Dwg\ 10/20/2015 4:55:37 PM, dlindeman, 1:1

SIGN DATA TABLE

LOCATION NO.	TEXT	M.U.T.C.D. NUMBER	SIZE OF SIGN (s.f.)	DESCRIPTION
1	STOP	R1-1C	30" x 30"	White on Red
2	RESERVED PARKING	R7-8	12" x 18"	Green on White Blue Symbol
3	NO PARKING 8AM-6PM	R7-1	12" x 18"	Red on White
4	ONE WAY	R6-1C	12" x 36"	Block Background White Arrow Black Letters
5	YIELD	R1-2B	30"	White Background Red Symbol
6	NO OUTLET	W14-2	24" x 24"	Black on Yellow
7	OVERSIZE VEHICLE PARKING / OVERSIZE VEHICLE PARKING	–	12" x 18"	Red on White

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 – WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING TREELINE
- EXISTING BRUSHLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED POST & RAIL FENCE
- PROPOSED SITE LIGHTING
- PROPOSED TRAFFIC SIGN
- PROPOSED LANDSCAPING

PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.
12. The plantings included are primarily native plants and drought tolerant, such that a permanent irrigation system will not be required. Temporary irrigation will be required during the first few months after initial planting. Any such irrigation shall be performed by the owner's landscape contractor utilizing water secured from an offsite water supply service, and not utilizing water from the project's water supply system.

PLANT LIST **

SYMBOL	QUANTITY	KEY	BOTANICAL/COMMON NAME	SIZE	ROOT
			EVERGREEN TREES		
	8	PG	Picea glauca / White Spruce	6' – 7' HT.	B & B
	7	PP	Picea pungens glauca / Colorado Blue Spruce	6' – 7' HT.	B & B
	14	PS	Pinus strobus / Eastern White Pine	7' – 8' HT.	B & B
			SHADE TREES		
	6	AR	Acer rubrum 'October Glory' / October Glory Red Maple	3" CAL. *	B & B
	7	AR–1	Acer rubrum 'October Glory' / October Glory Red Maple	5' – 6' HT.	#7 CONT.
	5	BN	Betula nigra / River Birch	10' – 12' HT.	B & B
	6	BN–1	Betula nigra / River Birch	5' – 6' HT.	#7 CONT.
	2	LS	Liquidambar styraciflua / Sweetgum	3" CAL. *	B & B
	8	NS	Nyssa sylvatica / Black Tupelo	3" CAL. *	B & B
	9	OV	Ostrya virginiana / American Hophornbeam	3" CAL. *	B & B
	2	QR	Quercus rubra / Northern Red Oak	3" CAL. *	B & B
	2	QR–1	Quercus rubra / Northern Red Oak	6' – 8' HT.	#10 CONT.
			FLOWERING/SPECIMEN TREES		
	8	AC	Amelanchier canadensis / Shadblow Serviceberry	10' – 12' HT.	B & B
	7	AC–1	Amelanchier canadensis / Shadblow Serviceberry	4' – 5' HT.	#7 CONT.
	5	CF	Cornus florida / White Flowering Dogwood	2" CAL.	B & B
	9	CF–1	Cornus florida / White Flowering Dogwood	5' – 6' HT.	#7 CONT.
	3	HV	Hamamelis virginiana / Witchhazel	5' – 6' HT.	B & B
	10	MC	Malus 'Centurion' / Centurion Crabapple	2" CAL.	B & B
			SHRUBS		
	28	FR	Rosa 'The Fairy' / Fairy Rose	15"–18" HT.	#2 CONT.
	6	HA	Hydrangea arborescens / Smooth Hydrangea	15–18" SPR.	#2 CONT.
	9	IG	Ilex glabra / Inkberry	18"–24" HT.	#3 CONT.
	8	IR	Itea virginica 'Henry's Garnet' / Sweetspire	15"–18" SPR.	#2 CONT.
	3	IV	Ilex verticillata / Winterberry	2' – 3' HT.	#5 CONT.
	12	JC	Juniperus conferta 'Silver Mist' / Silver Mist Shore Juniper	10" – 12" SPR.	#2 CONT.
	11	PA	Picea glauca 'conica' / Dwarf Alberta Spruce	3' HT.	#5 CONT.
	7	PM	Pinus mugo var. pumilio / Dwarf Mugo Pine	2' SPR.	#2 CONT.
	2	RC	Rhododendron catawbiense / Catawba Rhododendron	24"–30" HT.	#5 CONT.
	18	SB	Spiraea japonica 'Crispa' / Crispa Japanese Spirea	15"–18" HT.	#2 CONT.
	5	VC	Vaccinium corymbosum / Highbush Blueberry	15"–18" HT.	#2 CONT.
	14	VD	Viburnum dentatum / Arrowwood viburnum	15"–18" HT.	#2 CONT.
			PERENNIALS		SPACING
	154	EP	Echinacea purpurea 'White Swan' / White Coneflower	#1 CONT.	18" O.C.
	131	LM	Liriope muscari 'Variegata' / Variegated Lilyturf	#1 CONT.	18" O.C.
	44	PV	Panicum virgatum 'Shenandoah' / Red Switchgrass	#1 CONT.	24" O.C.
	102	RF	Rudbeckia fulgida 'Goldsturm' / Blackeyed Susan	#1 CONT.	24" O.C.

* Shade trees shall have a minimum trunk diameter of 3" measured at a height of six inches above finished ground level with a minimum of a seven foot single stem to the first branches above ground level.

** For wetland buffer mitigation/enhancement plantings, refer to the "Wetland Buffer + Enhancement Plan" prepared by Tim Miller Associates.

SEEDING NOTES:

1. All proposed seeded areas to receive 4" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material. Topsoil shall be placed using a method that will not cause compaction.
2. Upon final grading and placement of topsoil and any required soil amendments, areas to receive permanent vegetation cover in combination with suitable mulch as follows:
   - select seed mixture per drawings and seeding notes.
   - Lawn starter fertilizer to be applied only as needed based on results of soil testing and relative recommendations.
   - no fertilizer is to be used in stormwater basins, within wetland buffers, or with native seed mixes within areas to be naturalized. Nutrient requirements shall be met by incorporation of acceptable organic matter based on results of soil testing.
   - mulch: salt hay or small grain straw applied at a rate of 90 lbs./1000 s.f. or 2 tons/acre, to be applied and anchored according to New York State Standards and Specifications for Erosion and Sediment Control, August 2005.
   - if the season prevents the establishment of a permanent vegetation cover, the disturbed areas will be mulched with straw or equivalent.
3. Seeding should begin immediately upon completion of finish grading and seed bed preparation while soil is still friable and before weeds can emerge. If seeding area is crusted or compacted, it should be loosened by discing or tilling. If weeds are present, they should be mowed short and removed or tilled under before seed is applied.
4. Seed mixtures shall be planted between March 21 and May 20, or between August 15, and October 15 or as directed by project representative. The seed mixes as specified on these drawings are as follows:
   A. Seed Mix #1 for lawn areas at a rate of 100 lbs. per acre:

Kentucky Bluegrass	20%
Creeping Red Fescue	40%
Perennial Ryegrass	20%
Annual Ryegrass	20%

   B. Seed Mix #2 for meadow areas, SSTS areas and slopes 3H:1V or steeper, outside the buffer enhancement area shall be (ERNMX-181) Native Steep Slopes Mix with annual ryegrass at a rate of 60lbs. per acre.
   C. Seed Mix #3 for buffer enhancement area, and stormwater basins as shown on "Wetland Buffer + Enhancement Plan" prepared by Tim Miller Associates, shall be (ERNMX-154) Riparian Buffer Mix at a rate of 20 lbs per acre, by Ernst Conservation Seeds of Meadville, PA, or equivalent.
   D. Temporary Seed Mix for temporary seeding shall be annual or perennial ryegrass in spring, summer or early fall, at a rate of 30 lbs. per acre or winter rye (cereal rye) in late fall or early winter at a rate of 100 lbs. per acre.

* REFER TO GENERAL NOTES ON DRAWING OP–1 *

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

NO.	DATE	REVISION	BY
16	11–29–18	REVISED PER GBFD COMMENTS	MEU
15	9–27–18	REVISED PER TOWN COMMENTS	BD
14	8–23–18	PLANNING BOARD SUBMISSION	JFR
13	8–2–18	REVISED PER TOWN COMMENTS	JJR
12	6–28–18	REVISED PER TOWN COMMENTS	MEU
11	3–8–18	REVISED PER NYSDOT COMMENTS	DLM
10	11–17–17	REVISED PER NYCDEP COMMENTS	ZMP
9	9–1–17	REVISED PER TOWN COMMENTS	ZMP
8	7–27–17	REVISED PER TOWN COMMENTS	EIG
7	6–29–17	REVISED PER TOWN COMMENTS	SJC
6	6–1–17	PLANNING BOARD SUBMISSION	SJC
5	4–27–17	PLANNING BOARD SUBMISSION	CTQ
4	3–31–16	REVISED PER TOWN COMMENTS	MEU
3	2–4–16	REVISED PER TOWN COMMENTS	MEU
2	1–6–16	GENERAL REVISIONS	MEU
1	12–14–15	GENERAL REVISIONS	DLM

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
LAYOUT & LANDSCAPE PLAN

STATE OF NEW YORK — JEFFREY J. CONTELMO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	10–20–15	DRAWN BY	S.J.C.
SCALE	1" = 40'	CHECKED BY	D.L.M.

DRAWING NO. SP–1 SHEET 2 / 18

LAYOUT PLAN
SCALE: 1" = 40'

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 — WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR (290)
- PROPOSED 2' CONTOUR (292)
- PROPOSED SPOT GRADE (+ 280.9)
- PROPOSED DRAINAGE PIPE
- PROPOSED ROOF DRAIN (RD)
- PROPOSED FOOTING DRAIN (FD)
- PROPOSED GRASS SWALE
- PROPOSED 8"ø PVC DR-18 WATER MAIN (WM)
- PROPOSED 4"ø PVC DR-18 WATER SERVICE (WS)
- PROPOSED 4"ø PVC DR-18 TANK SUPPLY LINE (TSL)
- PROPOSED 1.5"ø PE WELL SERVICE LINE (WSL)
- PROPOSED SEWER MAIN
- PROPOSED SEWER SERVICE WITH CLEANOUT (SS — CO)
- PROPOSED 2"ø PVC SDR 21 SEWER FORCEMAIN (PRIMARY) (FM)
- PROPOSED 2"ø PVC SDR 21 SEWER FORCEMAIN (EXPANSION) (FM(E))
- PROPOSED UNDERGROUND CABLE, ELECTRIC AND TELECOMMUNICATION TRENCH (CET)
- PROPOSED TRANSFORMER (TX)
- PROPOSED UNDERGROUND PROPANE TANK
- PROPOSED GENERATOR (G)
- PROPOSED CURB STOP (CS)
- PROPOSED GATE VALVE (GV)
- PROPOSED FLUSHING HYDRANT WITH GATE VALVE (FH)
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE

DRAINAGE TABLE

STRUCTURE	RIM	INV.	PIPE SIZE	LENGTH	SLOPE
OS 1.2 IB	222.5	216.0	15"	32 L.F.	6.3%
ES 2	–	214.0			
OS 1.1 EDB	230.3	221.5			
		INV IN 221.1	36"	37 L.F.	1.1%
FS 5	226.0	INV OUT 221.0			
ES 4	–	218.0	36"	50 L.F.	7.0%
FS 5	226.0	221.1			
ES 5A	–	220.0	4"	15 L.F.	7.3%
YD 19	287.3	284.0	15"	23 L.F.	1.3%
CB 18	288.7	283.7	15"	42 L.F.	1.2%
CB 17	288.1	283.2	15"	92 L.F.	1.1%
CB 16	286.6	282.2	15"	27 L.F.	1.1%
CB 15	286.0	281.9	18"	76 L.F.	1.1%
CB 14	287.4	281.1	18"	92 L.F.	1.1%
CB 13	289.3	280.1	24"	68 L.F.	1.0%
DI 12A	288.9	279.2	24"	34 L.F.	1.2%
DMH 12	286.1	278.8	24"	200 L.F.	3.1%
DI 11	277.6	272.7	24"	75 L.F.	9.9%
CB 10	269.5	265.3	24"	182 L.F.	9.9%
CB 9	251.5	247.3	24"	45 L.F.	9.8%
DMH 8	246.9	INV IN 242.8	30"	138 L.F.	6.0%
		INV OUT 235.1			
SDI 7	231.8	227.4	30"	52 L.F.	10.4%
ES 6	–	222.0			
DI 14A	287.8	284.5	15"	92 L.F.	1.1%
CB 14	287.4	INV IN 283.5			
		INV OUT 281.1			
DI 13D	292.3	289.0	15"	26 L.F.	3.1%
CB 13C	291.5	288.2	15"	58 L.F.	1.0%
CB 13B	291.6	287.6	15"	95 L.F.	1.1%
CB 13A	290.5	286.6	18"	96 L.F.	1.1%
CB 13	289.3	INV IN 285.6			
		INV OUT 280.1			
CB 11C	290.7	287.4	15"	166 L.F.	1.5%
CB 11B	292.4	284.9	15"	83 L.F.	1.3%
CB 11A	287.3	283.8	15"	97 L.F.	11.4%
DI 11	277.6	272.7			
CB 11D	287.3	284.0	15"	20 L.F.	1.1%
CB 11A	287.3	283.8			
CB 10A	269.5	266.2	15"	20 L.F.	4.5%
CB 10	269.5	265.3			
SDI 9B	251.8	248.5	15"	25 L.F.	1.2%
CB 9A	251.5	248.2	15"	20 L.F.	4.5%
CB 9	251.5	247.3			
CB 8B	245.0	240.0	15"	42 L.F.	2.4%
CB 8A	245.0	239.0	15"	137 L.F.	1.1%
DMH 8	246.9	INV IN 237.5			
		INV OUT 235.7			
CB 8C	243.9	240.6	15"	138 L.F.	1.2%
CB 8A	245.0	239.0			
DI 15C	295.8	292.2	15"	31 L.F.	25.7%
DI 15B	297.0	284.3	15"	47 L.F.	1.1%
DI 15A	287.1	283.8	15"	75 L.F.	1.5%
CB 15	286.0	INV IN 282.7			
		INV OUT 281.3			

SEWER MAIN TABLE

STRUCTURE	RIM	INV.	PIPE SIZE	LENGTH	SLOPE
SMH 4A	292.9	288.3	8"	211 L.F.	1.0%
SMH 4	292.2	INV IN 286.2			
		INV OUT 278.8			
SMH 5	286.6	281.9	8"	297 L.F.	1.0%
SMH 4	292.2	INV IN 278.9			
		INV OUT 278.8	8"	170 L.F.	10.2%
SMH 3	266.9	INV IN 261.5			
		INV OUT 261.4	8"	169 L.F.	11.3%
SMH 2	248.6	INV IN 243.3			
		INV OUT 243.2	8"	87 L.F.	10.0%
SMH 1	236.8	INV IN 233.4			
		INV OUT 233.4			

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

SEE DRAWING SP-2.2 FOR GRADING & UTILITY PLAN - EAST END



GENERAL UTILITY NOTES:

1. All utilities under pressure (water mains, water service lines and sewer forcemains) shall maintain a minimum 18" separation to drainage.
2. The vertical separation distance between all gravity sewer main and the drainage system crossings are 18" or greater.

GRADING & UTILITY PLAN

SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
19	11-29-18	REVISED PER GBFD COMMENTS	MEU
18	9-27-18	REVISED PER TOWN COMMENTS	BD
17	8-23-18	PLANNING BOARD SUBMISSION	JFR
16	8-2-18	REVISED PER TOWN COMMENTS	JJR
15	6-28-18	REVISED PER TOWN COMMENTS	MEU
14	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
13	1-23-18	REVISED PER NYCDEP COMMENTS	ZMP
12	12-28-17	REVISED PER NYCDEP COMMENTS	ZMP
11	11-17-17	REVISED PER NYCDEP COMMENTS	EJP
10	9-27-17	REVISED FOR RELOCATED PROPOSED WELL #4	MEU
9	9-01-17	REVISED PER TOWN COMMENTS	ZMP
8	7-27-17	REVISED PER TOWN COMMENTS	EIG
7	6-29-17	REVISED PER TOWN COMMENTS	SJC
6	6-1-17	PLANNING BOARD SUBMISSION	SJC
5	4-27-17	PLANNING BOARD SUBMISSION	CTQ
4	3-31-16	REVISED PER TOWN COMMENTS	MEU
3	2-4-16	REVISED PER TOWN COMMENTS	MEU
2	1-6-16	GENERAL REVISIONS	MEU
1	12-14-15	GENERAL REVISIONS	DLM

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PROJECT:
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ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

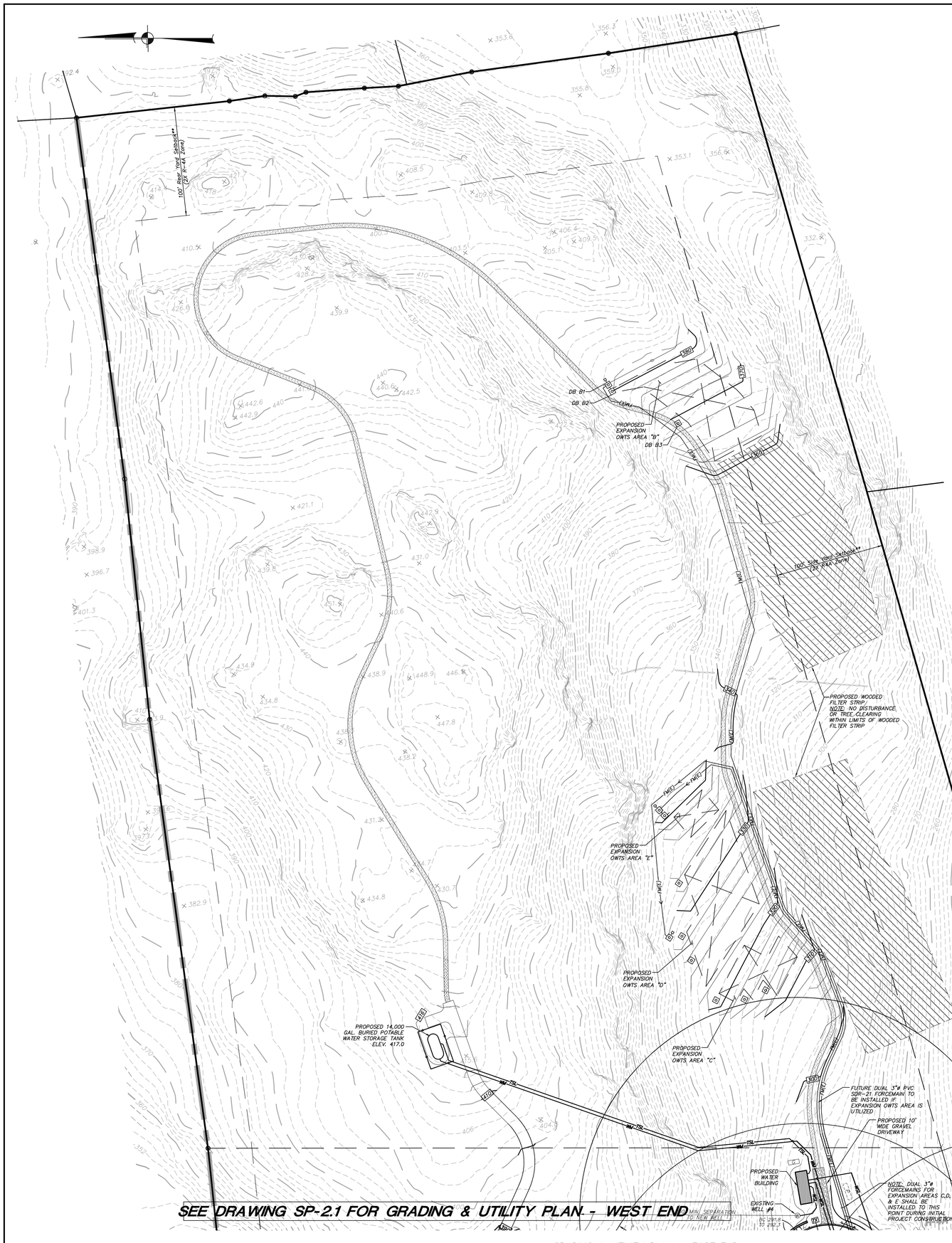
DRAWING:
GRADING & UTILITY PLAN – WEST END

STATE OF NEW YORK — JEFFREY J. CONTENTO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	10-20-15	DRAWN BY	S.J.C.
SCALE	1" = 40'	CHECKED BY	D.L.M.

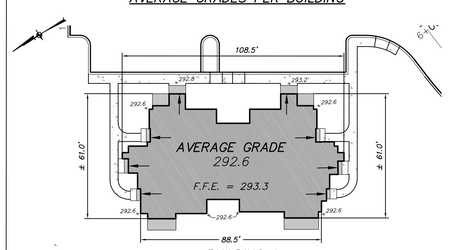
DRAWING NO. SP-2.1
SHEET 3 / 18

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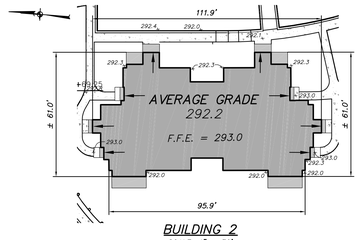


GRADING & UTILITY PLAN – EAST END
SCALE: 1" = 40'

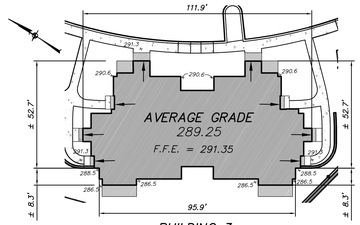
AVERAGE GRADES PER BUILDING



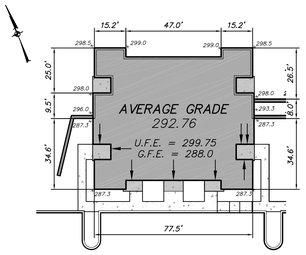
BUILDING 1
SCALE: 1" = 30'



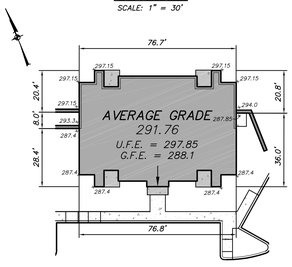
BUILDING 2
SCALE: 1" = 30'



BUILDING 3
SCALE: 1" = 30'



BUILDING 4
SCALE: 1" = 30'



BUILDING 5
SCALE: 1" = 30'

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT GRADE
- PROPOSED DRAINAGE PIPE
- RD PROPOSED ROOF DRAIN
- FD PROPOSED FOOTING DRAIN
- PROPOSED GRASS SWALE
- WM PROPOSED 8"ø PVC DR-18 WATER MAIN
- WS PROPOSED 4"ø PVC DR-18 WATER SERVICE
- TSL PROPOSED 4"ø PVC DR-18 TANK SUPPLY LINE
- WSL PROPOSED 1.5"ø PE WELL SERVICE LINE
- PROPOSED SEWER MAIN
- SS CO PROPOSED SEWER SERVICE WITH CLEANOUT
- FM PROPOSED 2"ø PVC SDR 21 SEWER FORCEMAIN (PRIMARY)
- FM(E) PROPOSED 2"ø PVC SDR 21 SEWER FORCEMAIN (EXPANSION)
- CET PROPOSED UNDERGROUND CABLE, ELECTRIC AND TELECOMMUNICATION TRENCH
- TF PROPOSED TRANSFORMER
- PROPOSED UNDERGROUND PROPANE TANK
- G PROPOSED GENERATOR
- CS PROPOSED CURB STOP
- GV PROPOSED GATE VALVE
- FH PROPOSED FLUSHING HYDRANT WITH GATE VALVE
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
8	11-29-18	REVISED PER GBFD COMMENTS	MEU
7	9-27-18	REVISED PER TOWN COMMENTS	BD
6	8-23-18	PLANNING BOARD SUBMISSION	JFR
5	8-2-18	REVISED PER TOWN COMMENTS	JJR
4	6-28-18	REVISED PER TOWN COMMENTS	MEU
3	11-17-17	REVISED PER NYCDEP COMMENTS	EJP
2	9-27-17	REVISED FOR RELOCATED PROPOSED WELL #4	MEU
1	9-01-17	REVISED PER TOWN COMMENTS	ZMP

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PROJECT:
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ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
GRADING & UTILITY PLAN – EAST END

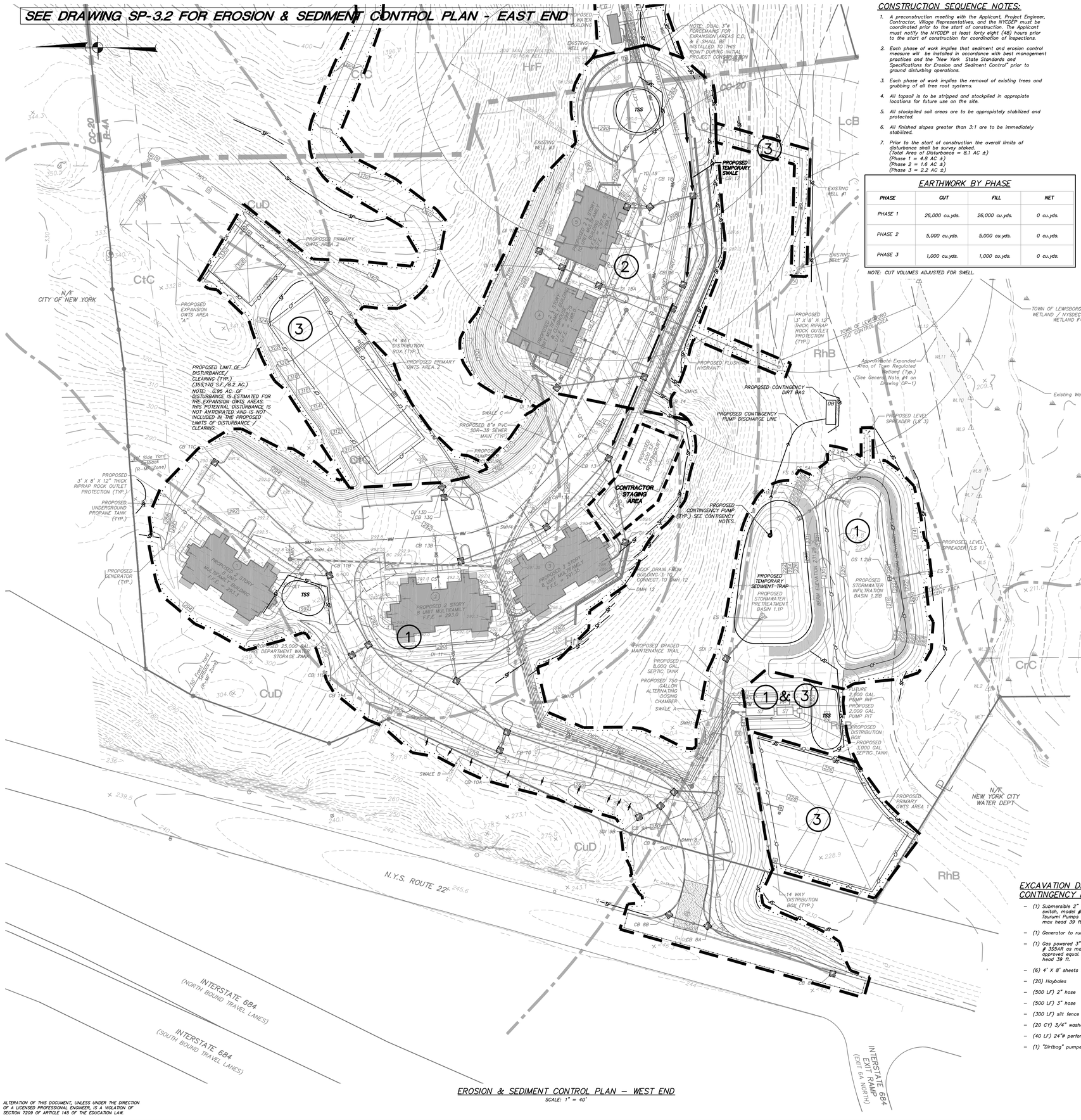
STATE OF NEW YORK – JEFFREY J. CONTELMO – LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	7-27-17	DRAWN BY	S.J.C.	SP-2.2	4 / 18
SCALE	1" = 40'	CHECKED BY	D.L.M.		

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\2015\15246\100\04 SP-2.2.dwg, 11/20/2018 1:05:06 PM, mvillar, 1:1

SEE DRAWING SP-3.2 FOR EROSION & SEDIMENT CONTROL PLAN - EAST END



EROSION & SEDIMENT CONTROL PLAN – WEST END

SCALE: 1" = 40'

CONSTRUCTION SEQUENCE NOTES:

1. A preconstruction meeting with the Applicant, Project Engineer, Contractor, Village Representatives, and the NYCDEP must be coordinated prior to the start of construction. The Applicant must notify the NYCDEP at least forty eight (48) hours prior to the start of construction for coordination of inspections.
2. Each phase of work implies that sediment and erosion control measure will be installed in accordance with best management practices and the "New York State Standards and Specifications for Erosion and Sediment Control" prior to ground disturbing operations.
3. Each phase of work implies the removal of existing trees and grubbing of all tree root systems.
4. All topsoil is to be stripped and stockpiled in appropiate locations for future use on the site.
5. All stockpiled soil areas are to be appropiately stabilized and protected.
6. All finished slopes greater than 3:1 are to be immediately stabilized.
7. Prior to the start of construction the overall limits of disturbance shall be survey staked.
   (Total Area of Disturbance = 8.1 AC ±)
   (Phase 1 = 4.8 AC ±)
   (Phase 2 = 1.6 AC ±)
   (Phase 3 = 2.2 AC ±)

EARTHWORK BY PHASE

PHASE	CUT	FILL	NET
PHASE 1	26,000 cu.yds.	26,000 cu.yds.	0 cu.yds.
PHASE 2	5,000 cu.yds.	5,000 cu.yds.	0 cu.yds.
PHASE 3	1,000 cu.yds.	1,000 cu.yds.	0 cu.yds.

NOTE: CUT VOLUMES ADJUSTED FOR SWELL.

CONSTRUCTION SEQUENCE:

PHASE 1 (4.9 AC ± Disturbance)

1. Prior to the commencement of construction activity the contractor shall schedule a pre-construction meeting onsite with the design engineer and representatives of the NYSDOT, NYCDEP and Town of Lewisboro.
2. Install the section of silt fence downslope of the location of the proposed temporary construction entrance, and contact the Town Wetland Inspector for inspection prior to any ground disturbing activities.
3. Cut trees, place fill, and install stabilized construction entrance with temporary culvert crossing and anti-tracking pad to establish the temporary construction entrance for the site in the general location as shown on the plans.
4. Clear trees within the proposed project limits of disturbance area without removing the stumps.
5. Install remaining silt fence, orange construction fence, and inlet protection in the general locations shown on the plan, and contact the Town Wetland Inspector for inspection prior to further ground disturbance activities.
6. Strip topsoil and stockpile in locations shown on the Erosion and Sediment Control Plan.
7. Establish contractor staging area in location shown on plan. Staging area to remain throughout all phases of construction.
8. Install Level Spreader LS1 & LS3.
9. Begin earthwork activities for installation of Stormwater Basins 1.1P and 1.21B, including associated drainage structures, ES 2, ES 4, ES 5A, OS 1.21B, OS 1.1P, and FS 5.
10. Construct Basin 1.1P to subgrade. Install outlet structure and associated piping and temporarily stabilize for use as a temporary sediment trap during construction. Temporarily close the flow splitter outlet, keeping all from the flow away from infiltration Basin 1.21B and make sure it remains off-line for the duration of construction.
11. Construct Basin 1.21B and permanently stabilize, and install associated drainage structures and piping. Once Basin 1.21B has been constructed, install construction fence surrounding basin as shown on the plan to provide protection of infiltration area to remain in place until end of construction, then removed.

    Note: Infiltration Basin 1.21B, the level spreader and the flow splitter shall not be placed online until all contributing drainage areas have been permanently stabilized.
12. Temporary Sediment Trap 1.1P and Basin 1.21B must be installed and stabilized prior to earthwork activities commencing for Phase 2.
13. Upon completion of temporary sediment trap, begin earthwork operations within the limits of the phase including the access road and building pad areas for Buildings 1, 2 & 3.
14. During road and parking construction install drainage structures ES 6, SDI 7, DMH 8,CB 8A, CB 8B, CB 8C, CB 9, CB 9A, SDI 9B, CB 10, CB 10A, CB 11A, CB 11B, CB 11C, CB 11D, DI 11, DMH 12, CB 13, CB 13A, CB 13B, CB 13C, and DI 13D.
15. Upon completion of mass earthwork operations, begin building construction.
16. Install proposed water and sewer utilities within the limits of the phase. Ending sewer utility at last MH (SMH4) & water utility at last Gate Valve (between building 3 and 4) in phase.
17. Install concrete curbing and finished parking and access drive parking area surfaces for asphalt pavement installation.
18. Once the site has achieved temporary stabilization within the phase, move on to the next phased of work. Silt fence and stabilized construction entrance to remain for protection in future phases.

PHASE 2 (1.6 AC ± Disturbance):

1. Install temporary erosion and sediment control measures in general locations as shown on the plans prior to any ground disturbance activities.
2. Strip topsoil and stockpile for later use in lawn/landscape areas.
3. Grub the limits of Phase 2 and begin earthwork activities within the limits of the phase.
4. Install temporary swales to direct runoff from disturbed areas to the upstream most drainage stucture that discharges to the temprorary sediment trap. As fill is being placed the top of the slope shall be back pitched away from the slope and directed towards the temporary sediment trap for treatment.
5. Begin earthwork operations within the limits of the phase including the continued construction of the access road and building pad areas for Buildings 4 & 5.
6. During continued road and parking construction install drainage structures CB 14, DI 14A, CB 15, DI 15A, DI 15B, DI 15C, CB 16, CB 17 and CB 18.
7. Upon completion of mass earthwork operations, begin building construction.
8. Install proposed water and sewer utilities within the limits of the phase. Ending sewer utility at last MH (SMH5) & water utility at end of Cul-De-Sac with a temporary cap, in phase.
9. Install concrete curbing and finished parking and access drive parking area surfaces for asphalt pavement installation.
10. Once the site has achieved temporary stabilization within the phase, move on to the next phased of work and remove all temporary erosion and sediment control measures.

PHASE 3 (1.8 AC ± Disturbance):

1. Install temporary erosion and sediment control measures in general locations as shown on the plans prior to any ground disturbance activities.
2. Strip topsoil and stockpile for later use in lawn/landscape areas.
3. Grub the limits of Phase 3.
4. Begin earthwork activities associated with the SSTS and water system installation within the limits of the phase.
5. Upon completion of all work, remove staging area and establish sport court and play area.
6. Upon completion of all work, install landscaping and stabilize disturbed areas in accordance with the Erosion and Sediment Control Notes provided on the Erosion and Sediment Control Plan. Permanent stabilization is achieved when 80% of the plant/grass density is established.
7. Once the site has achieved temporary stabilization, convert temporary sediment trap to extended detention basin in accordance with the notes and details.
8. Upon conversion and stabilization of extended detention basin, removed the plug from FS 5 and allow stormwater to flow from the extended detention basin to the infiltration basin.
9. Upon stabilization of phase 3, remove all temporary erosion & sediment controls.

WINTER SITE STABILIZATION NOTES:

1. All bare / exposed soils must be stabilized by an established vegetation, straw or mulch, matting, or other approved product such as rolled erosion control product.
2. Sediment barriers must be properly installed at all necessary perimeter and sensitive locations.
3. All slopes and grades must be properly stabilized with approved methods. Rolled erosion control products must be used on all slopes greater than 3:1, or where conditions for erosion dictate such measures.
4. Stockpiled soils must be protected by the use of established vegetation, an anchored-down straw or mulch, rolled erosion control product or other durable covering. A barrier must be installed around the the pile to prevent erosion away from that location.
5. All entrance / exit locations to the site must be properly stabilized and must be maintained to accommodate snow management as set forth in the NYS Standard and Specifications for Erosion and Sediment Control.
6. Snow management must not destroy or degrade erosion and sediment control devices.

EXCAVATION DEWATERING CONTINGENCY KIT:

- (1) Submersible 2" electric trash pump with float switch, model #HS2.45-61 as manufactured by Tsurumi Pumps or approved equal. 3000 GPH, max head 39 ft.
- (1) Generator to run the electric trash pump.
- (1) Gas powered 3" heavy duty trash pump, model # 3S5AR as manufactured by Gorman Rupp or approved equal. 18,000 GPH, max head 103 ft. head 39 ft.
- (6) 4' X 8' sheets of plywood
- (20) Haybales
- (500 LF) 2" hose
- (500 LF) 3" hose
- (300 LF) silt fence
- (20 CY) 3/4" washed crushed stone
- (40 LF) 24"ø perforated HDPE pipe
- (1) "Dirtbag" pumped silt control system

EXCAVATION DEWATERING NOTES:

1. Should groundwater be encountered during excavation the contractor shall contact the Project Engineer to immediately assess the conditions.
2. The Project Engineer will provide direction to the contractor in the dewatering process to minimize the potential for any turbid discharges from the construction activities.
3. The contractor shall have all of the contents of the Excavation Dewatering Contingency Kit onsite at all times.
4. The primary process to dewater clean groundwater from an excavation shall be with the creation of sump pit and a pumped discharge to a dirtbag silt trapping device. The final location of the "Dirtbag" and the associated erosion controls including downstream silt fence shall be determined by the Project Engineer prior to use. As shown on the plans temporary swales should be used to intercept surface waters only and direct it away from the proposed area of work to the proposed temporary sediment trap.
5. Should the temporary sediment trap need to be dewatered during construction, the contractor shall contact the Project Engineer to determine a location for the proposed "Dirtbag" and associated erosion controls.

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 / WL10A)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- NRCS SOIL BOUNDARY LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR (290)
- PROPOSED 2' CONTOUR (292)
- PROPOSED SPOT GRADE (+ 280.9)
- PROPOSED DRAINAGE PIPE
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET WITH INLET PROTECTION
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED SILT FENCE (SF)
- PROPOSED CONSTRUCTION FENCE (CF)
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SOIL STOCKPILE (TSS / SF)
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED TEMPORARY CHECK DAMS
- PROPOSED PHASE LINE
- PROPOSED PHASE DESIGNATION NUMBER (1)

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton-Chatfield complex, rolling, very rocky	B
CtC	Chatfield-Hollis-Rock outcrop complex, rolling	B
CuD	Chatfield-Hollis-Rock outcrop complex, hilly	B
HrF	Hollis-Rock outcrop complex, very steep	C
LcB	Leicester loam, 3% to 8% slopes, stony	C
Pa	Palms muck	A/D
RhB	Riverhead loam, 3% to 8% slopes	B

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
12	11-29-18	REVISED PER GBFD COMMENTS	MEU
11	9-27-18	REVISED PER TOWN COMMENTS	BD
10	8-23-18	PLANNING BOARD SUBMISSION	JFR
9	8-2-18	REVISED PER TOWN COMMENTS	JJR
8	6-28-18	REVISED PER TOWN COMMENTS	MEU
7	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
6	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
5	9-01-17	REVISED PER TOWN COMMENTS	ZMP
4	7-27-17	REVISED PER TOWN COMMENTS	EIG
3	6-29-17	REVISED PER TOWN COMMENTS	SJC
2	6-1-17	PLANNING BOARD SUBMISSION	SJC
1	3-31-16	REVISED PER TOWN COMMENTS	MEU

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www.insite-eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN-WEST END

STATE OF NEW YORK — JEFFREY J. CONTESTABILE — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	2-4-16	DRAWN BY	S.J.C.
SCALE	1" = 40'	CHECKED BY	D.L.M.

DRAWING NO. SP-3.1 SHEET 5 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 – WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- NRCS SOIL BOUNDARY LINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED 10' CONTOUR (290)
- PROPOSED 2' CONTOUR (292)
- PROPOSED SPOT GRADE (280.9)
- PROPOSED DRAINAGE PIPE
- PROPOSED END SECTION WITH RIPRAP
- PROPOSED DRAINAGE INLET WITH INLET PROTECTION
- PROPOSED OUTLET STRUCTURE
- PROPOSED DRAINAGE MANHOLE
- SF — PROPOSED SILT FENCE
- CF — PROPOSED CONSTRUCTION FENCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- TSS / SF — TEMPORARY SOIL STOCKPILE
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED TEMPORARY CHECK DAMS
- PROPOSED PHASE LINE
- (1) PROPOSED PHASE DESIGNATION NUMBER

SOILS LEGEND

SOILS	DESCRIPTION	HYDROLOGICAL GROUP
CrC	Charlton–Chatfield complex, rolling, very rocky	B
CtC	Chatfield–Hollis–Rock outcrop complex, rolling	B
CuD	Chatfield–Hollis–Rock outcrop complex, hilly	B
HrF	Hollis–Rock outcrop complex, very steep	C
LcB	Leicester loam, 3% to 8% slopes, stony	C
Pa	Palms muck	A/D
RhB	Riverhead loam, 3% to 8% slopes	B

* REFER TO GENERAL NOTES ON DRAWING OP–1 *

NO.	DATE	REVISION	BY
7	11–29–18	REVISED PER GBFD COMMENTS	MEU
6	9–27–18	REVISED PER TOWN COMMENTS	BD
5	8–23–18	PLANNING BOARD SUBMISSION	JFR
4	8–2–18	REVISED PER TOWN COMMENTS	JJR
3	6–28–18	REVISED PER TOWN COMMENTS	MEU
2	11–17–17	REVISED PER NYCDEP COMMENTS	ZMP
1	9–01–17	REVISED PER TOWN COMMENTS	ZMP

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
EROSION & SEDIMENT CONTROL PLAN–EAST END

STATE OF NEW YORK — JEFFREY J. CONTELMO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	7–27–17	DRAWN BY	S.J.C.
SCALE	1" = 40'	CHECKED BY	D.L.M.

DRAWING NO. SP–3.2 — SHEET 6 / 18

EROSION & SEDIMENT CONTROL PLAN – EAST END
SCALE: 1" = 40'

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 — WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING TREELINE
- EXISTING BRUSHLINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED POST & RAIL FENCE
- PROPOSED LIMIT OF DISTURBANCE LINE

TREE INVENTORY LEGEND

Dia. Multi. Common Name

Diameter is in inches at breast height

Trees shown hereon have been located in accordance with Chapter 217 "Wetlands and Watercourses" of the Town of Lewisboro Town Code.

TREE LEGEND

- Existing Tree
- Existing Tree to be Removed

BR	Birch
CH	Cherry
EL	Elm
HK	Hickory
LN	Linden
LO	Locust
MA	Maple
NU	Nut
OA	Oak
PO	Poplar
SP	Spruce
TR	Unknown Species
TRI	Triple
TU	Tulip
TW	Twin
ROT	Rotten

FUTURE PROPOSED SSTS EXPANSION AREA

PROPOSED SSTS AREA

PROPOSED SSTS AREA

PROPOSED LIMIT OF DISTURBANCE (TYP.)

PROPOSED SSTS AREA

(WL16 Not Found)

TOWN OF LEWISBORO REGULATED WETLAND / NYSDEC REGULATED WETLAND F-29

TOWN OF LEWISBORO 150' CONTROL AREA

Approximate Expanded Area of Town Regulated Wetland (Typ.) (See General Note #4 on Drawing GN-1)

Existing Watercourse

NYSDEC 100' ADJACENT AREA

N.Y.S. ROUTE 22

INTERSTATE 684 (NORTH BOUND TRAVEL LANES)

INTERSTATE 684 (SOUTH BOUND TRAVEL LANES)

INTERSTATE 684 EXIT RAMP (EXIT 6A NORTH)

TREE PLAN

SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

NO.	DATE	REVISION	BY
8	11-29-18	REVISED PER GBFD COMMENTS	MEU
7	9-27-18	REVISED PER TOWN COMMENTS	BD
6	8-23-18	PLANNING BOARD SUBMISSION	JFR
5	8-2-18	REVISED PER TOWN COMMENTS	JJR
4	6-28-18	REVISED PER TOWN COMMENTS	MEU
3	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
2	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
1	9-01-17	REVISED PER TOWN COMMENTS	ZMP

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PROJECT:

WILDER BALTER PARTNERS, INC.

ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:

TREE PLAN

STATE OF NEW YORK — JEFFREY J. CONTEGNO — LICENSED PROFESSIONAL ENGINEER

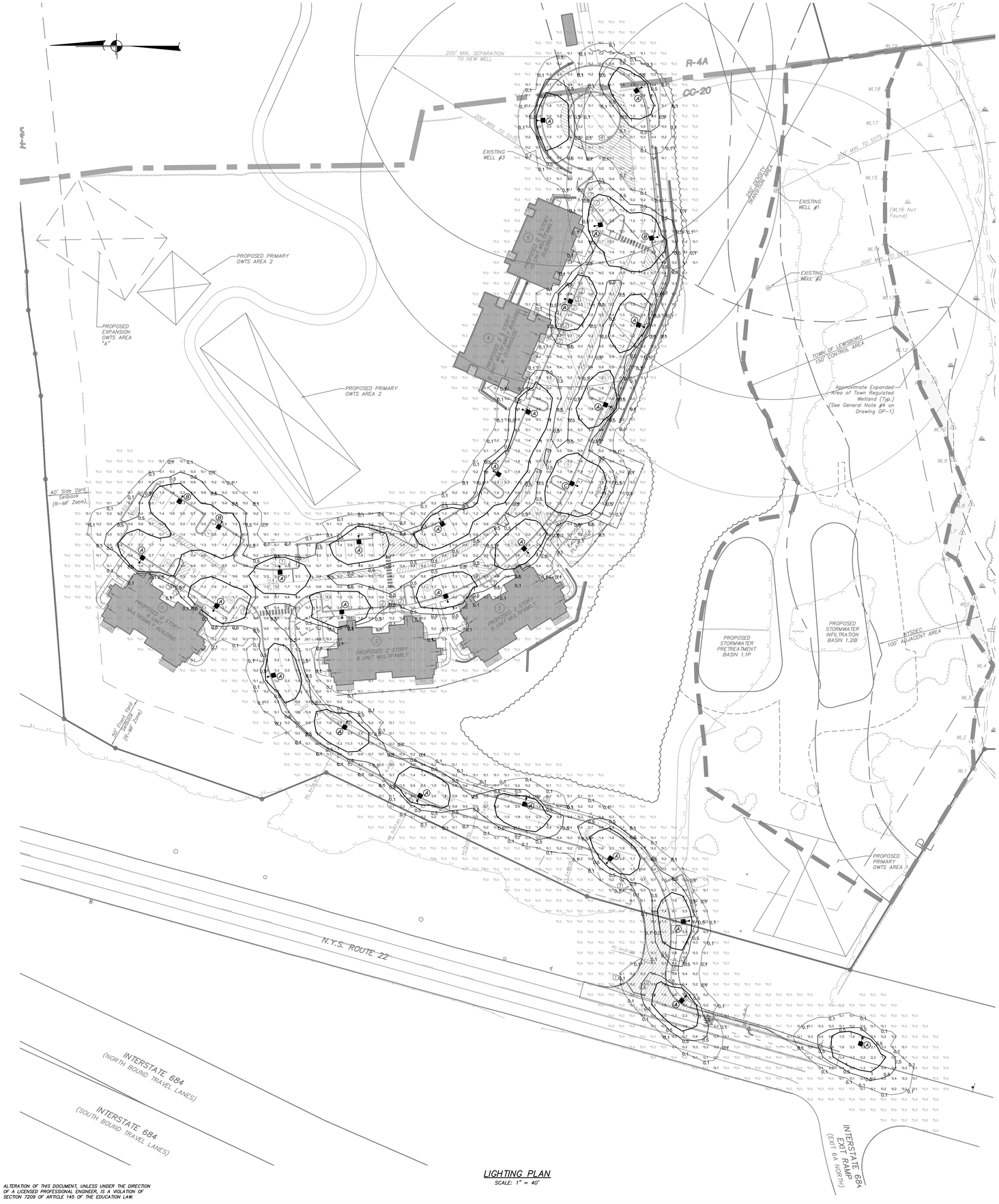
PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	7-27-17	DRAWN BY	M.E.U.
SCALE	1" = 40'	CHECKED BY	D.L.M.

DRAWING NO. TR-1

SHEET 7 / 18

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING WETLAND LIMIT LINE (WL9 — WL10)
- TOWN 150' CONTROL AREA
- NYSDEC 100' ADJACENT AREA
- EXISTING WETLAND SYMBOL
- EXISTING WELL
- EXISTING EDGE OF WATER
- EXISTING TREELINE
- EXISTING BRUSHLINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED RETAINING WALL
- PROPOSED GUIDERAIL
- PROPOSED POST & RAIL FENCE
- PROPOSED SITE LIGHTING

LUMINAIRE SCHEDULE

Symbol	Qty	Catalog Number	Description	Lamp	Mounting Height	Watts
A	24	DSXO LED 20C 700 40K T3M MVOLT	LITHONIA LIGHTING – DSXO LED WITH 20 LEDS @ 700 mA, 4000K, TYPE 3 MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	14'	45
B	3	DSXO LED 20C 700 40K TFTM MVOLT HS	LITHONIA LIGHTING – DSXO LED WITH 20 LEDS @ 700 mA, 4000K, TYPE FORWARD THROW MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	14'	45
C	1	DSXO LED 20C 700 40K T5M MVOLT	LITHONIA LIGHTING – DSXO LED WITH 20 LEDS @ 700 mA, 4000K, TYPE 5 MEDIUM OPTICS	LED	14'	45

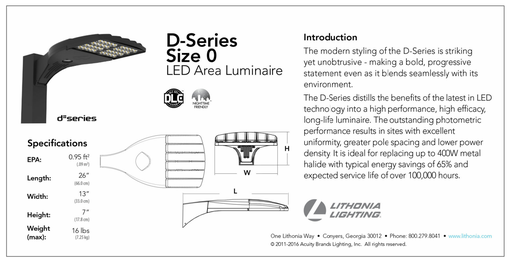
LIGHT CONTOUR LEGEND

- 0.1 — 0.10 Foot Candles
- 0.5 — 0.50 Foot Candles
- 1 — 1.00 Foot Candles

* Photometric calculations shown on plan are in foot candles.

STATISTICS TABLE

Description	Symbol	Ave	Max	Min	Max/Min	Ave/Min
Calc Zone	·	0.5 fc	4.2 fc	0.0 fc	N/A	N/A



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

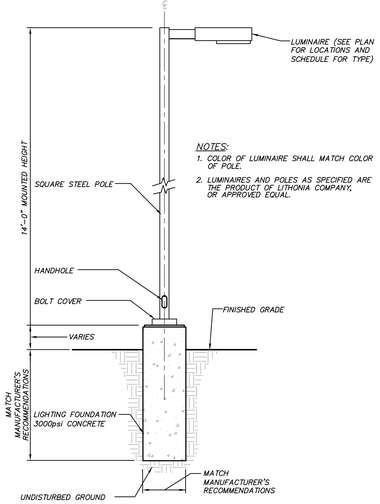
The D-Series distills the benefits of the latest in LED techno ogy into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

POLE MOUNTED PARKING LIGHT:

(Luminaire Type: A, B & C)

LIGHTING NOTES:

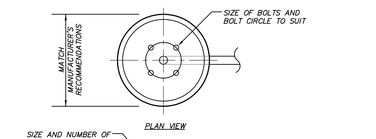
1. All lighting shall be as noted on the plan or approved equal.
2. Style and finish of all luminaires to be selected by owner and approved by the Planning Board.
3. Calculation values shown in this plan are taken on a horizontal plane at ground level using a 0.95 light loss factor for LEDs. Topographical information and landscaping have not been accounted for in these calculations.
4. Mounted heights (MH) vary per luminaire as noted in the Luminaire Schedule and represent the mounted heights of luminaires above proposed parking lot grades.
5. Pole mounted lights will be on photocells and will run from dusk to dawn.



NOTES:
1. COLOR OF LUMINAIRE SHALL MATCH COLOR OF POLE.
2. LUMINAIRES AND POLES AS SPECIFIED ARE THE PRODUCT OF LITHONIA COMPANY, OR APPROVED EQUAL.

POLE MOUNTED LIGHT DETAIL

(N.T.S.)



LIGHT POLE BASE DETAIL

(N.T.S.)

* REFER TO GENERAL NOTES ON DRAWING OP-1 *

NO.	DATE	REVISION	BY
10	11-29-18	REVISED PER GBFD COMMENTS	MEU
9	9-27-18	REVISED PER TOWN COMMENTS	BD
8	8-23-18	PLANNING BOARD SUBMISSION	JFR
7	8-2-18	REVISED PER TOWN COMMENTS	JJR
6	6-28-18	REVISED PER TOWN COMMENTS	MEU
5	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
4	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
3	9-01-17	REVISED PER TOWN COMMENTS	ZMP
2	7-27-17	REVISED PER TOWN COMMENTS	EIG
1	6-29-17	REVISED PER TOWN COMMENTS	SJC

LIGHTING PLAN

SCALE: 1" = 40'

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

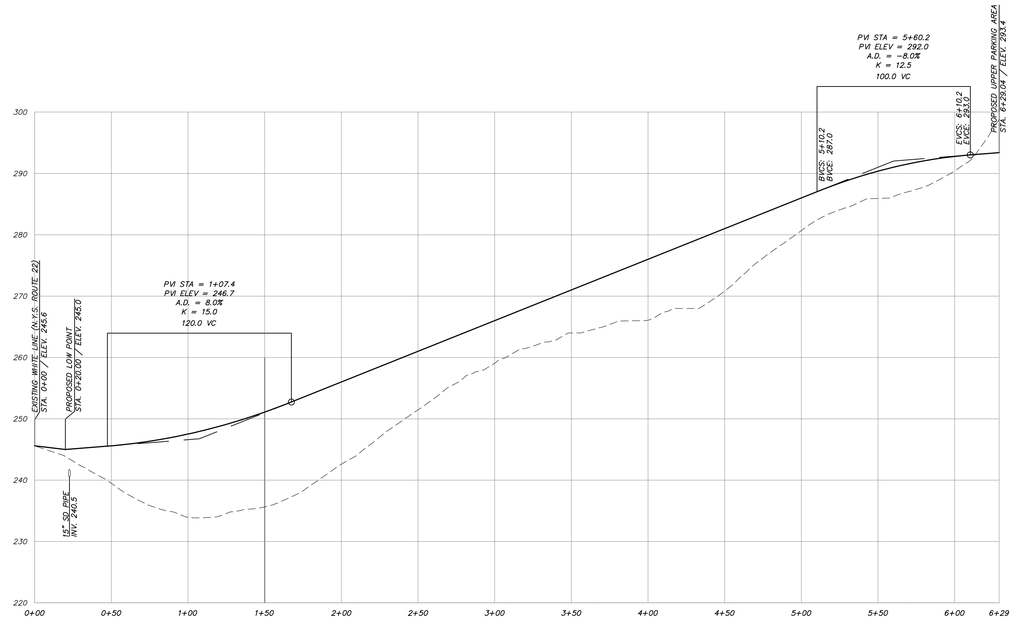
DRAWING:
LIGHTING PLAN

STATE OF NEW YORK — JEFFREY J. CONTELMO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	6-1-17	DRAWN BY	C.T.Q.
SCALE	1" = 40'	CHECKED BY	D.L.M.

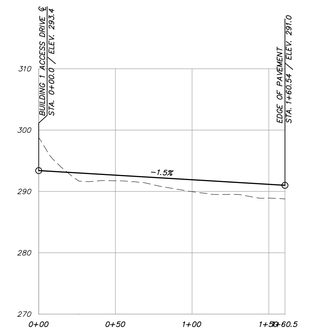
DRAWING NO. LP-1 SHEET 8 / 18

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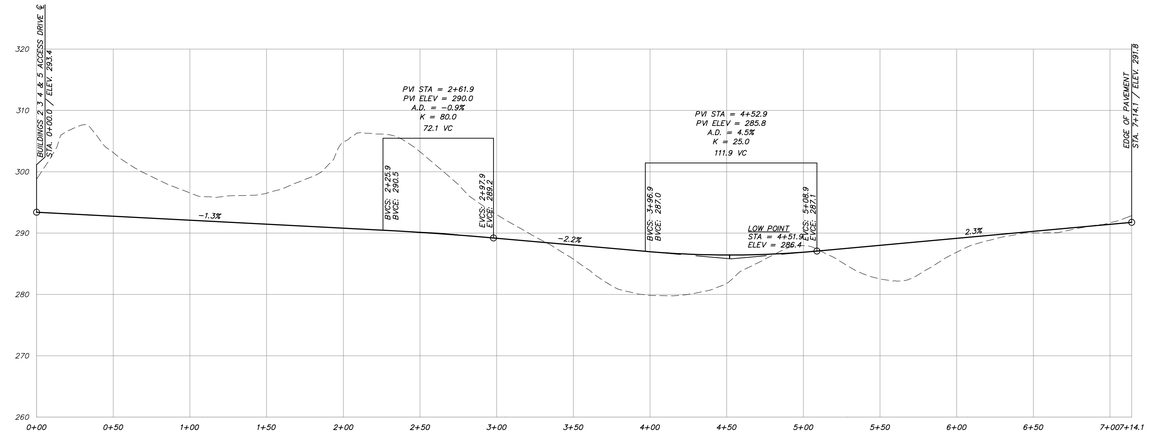
PROPOSED MAIN ACCESS ROAD CENTERLINE PROFILE

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



BUILDING 1 ACCESS ROAD CENTERLINE PROFILE

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



BUILDINGS 2 3 4 & 5 ACCESS ROAD CENTERLINE PROFILE

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

NO.	DATE	REVISION	BY
11	11-29-18	REVISED PER GBFD COMMENTS	MEU
10	9-27-18	REVISED PER TOWN COMMENTS	BD
9	8-23-18	PLANNING BOARD SUBMISSION	JFR
8	8-2-18	REVISED PER TOWN COMMENTS	JJR
7	6-29-18	REVISED PER TOWN COMMENTS	MEU
6	3-8-18	REVISED PER NYSDOT COMMENTS	DLM
5	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
4	9-01-17	REVISED PER TOWN COMMENTS	ZMP
3	7-27-17	REVISED PER TOWN COMMENTS	EIG
2	6-29-17	REVISED PER TOWN COMMENTS	SJC
1	6-1-17	PLANNING BOARD SUBMISSION	SJC

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

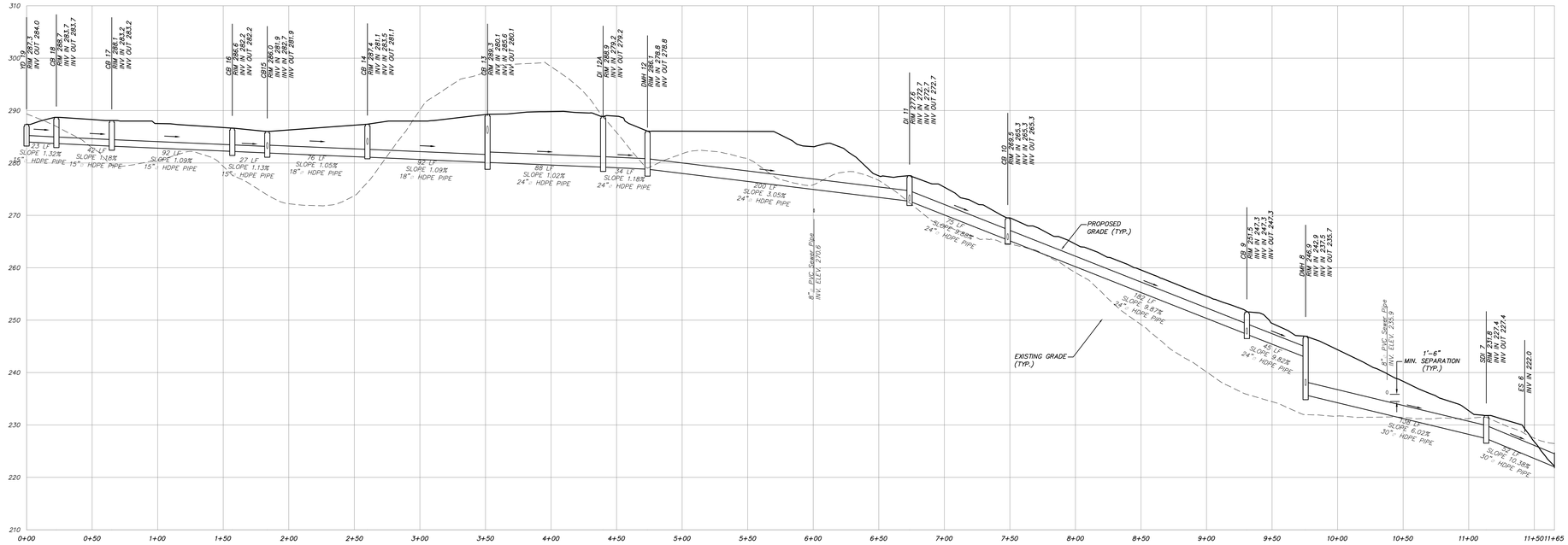
DRAWING:
ENTRY DRIVE & PARKING PROFILES

STATE OF NEW YORK — JEFFREY J. CONTELMO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.	DRAWING NO.	SHEET
DATE	3-31-16	DRAWN BY	S.J.C.	PR-1	9 / 18
SCALE	AS SHOWN	CHECKED BY	D.L.M.		

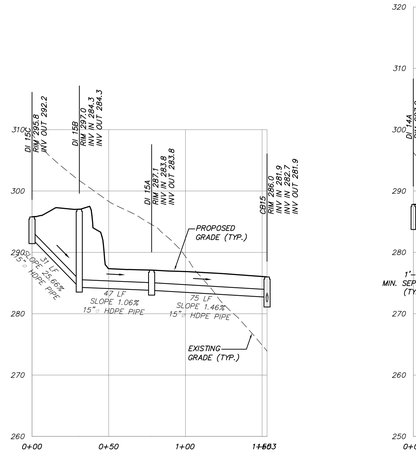
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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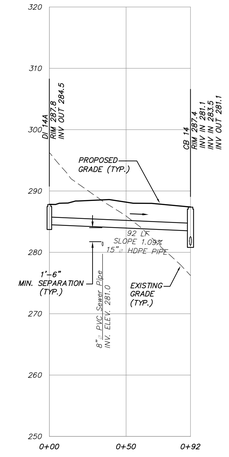
YD 19 TO ES 6

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VERT. 1" = 10'



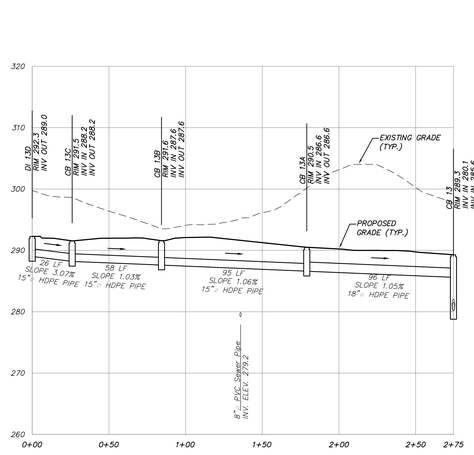
DI 15C TO CB 15

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



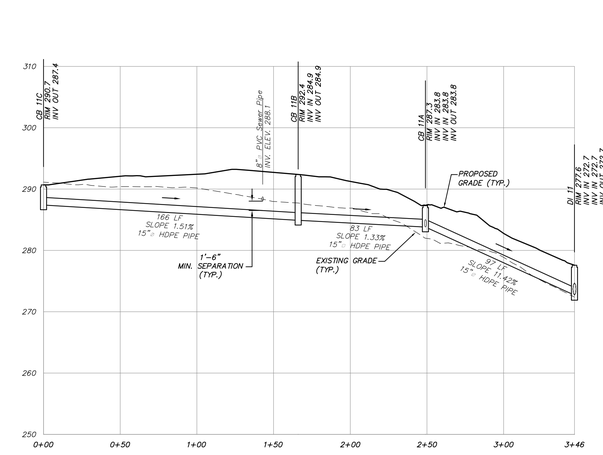
DI 14A TO CB 14

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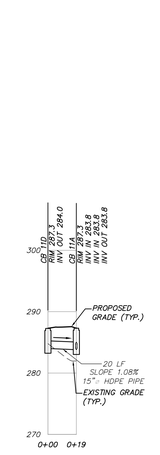
DI 13D TO CB 13

SCALE: HORZ. 1" = 40'
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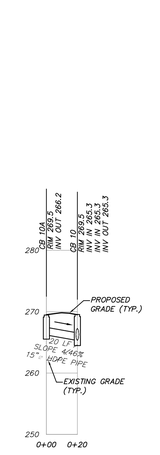
CB 11C TO DI 11

SCALE: HORZ. 1" = 40'
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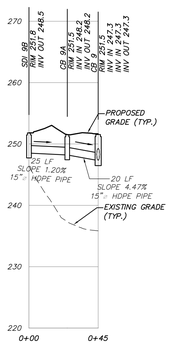
CB 11D TO CB 11A

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



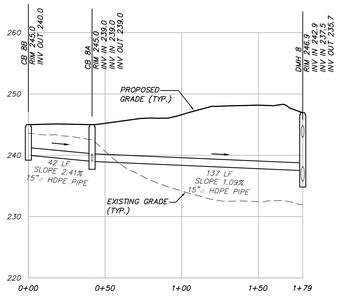
CB 10A TO CB 10

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



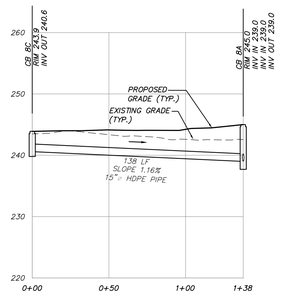
SDI 9B TO CB 9

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



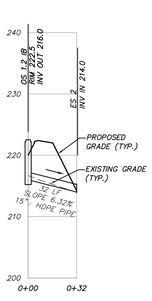
CB 8B TO DMH 8

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



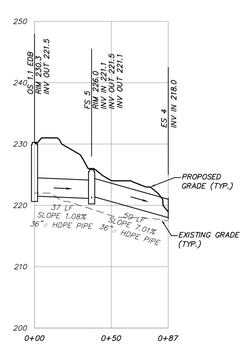
CB 8C TO CB 8A

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VERT. 1" = 10'



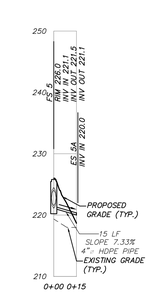
OS 1.2 IB TO ES 2

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



OS 1.1 EDB TO ES 4

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



FS 5 to ES 5A

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
3	11-29-18	REVISED PER GBFD COMMENTS	MEU
2	9-27-18	REVISED PER TOWN COMMENTS	BD
1	8-23-18	PLANNING BOARD SUBMISSION	JFR

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

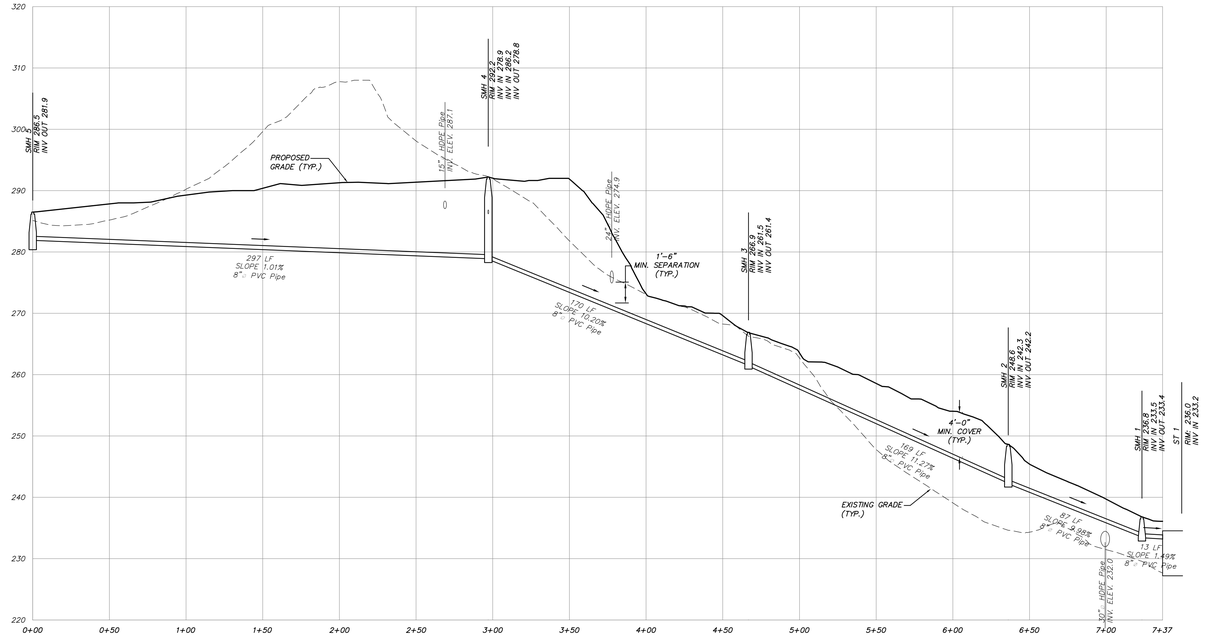
DRAWING:
DRAINAGE PROFILES

STATE OF NEW YORK — JEFFREY J. CONTEGNO — 21 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	8-2-18	DRAWN BY	E.J.P.
SCALE	AS SHOWN	CHECKED BY	Z.M.P.

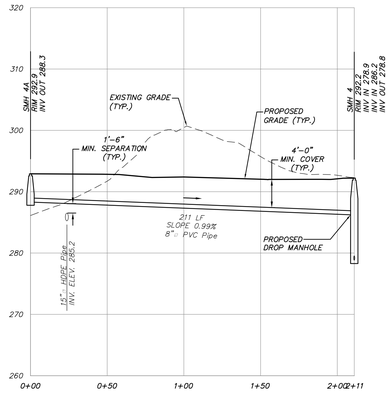
DRAWING NO. PR-2
SHEET 10 / 18

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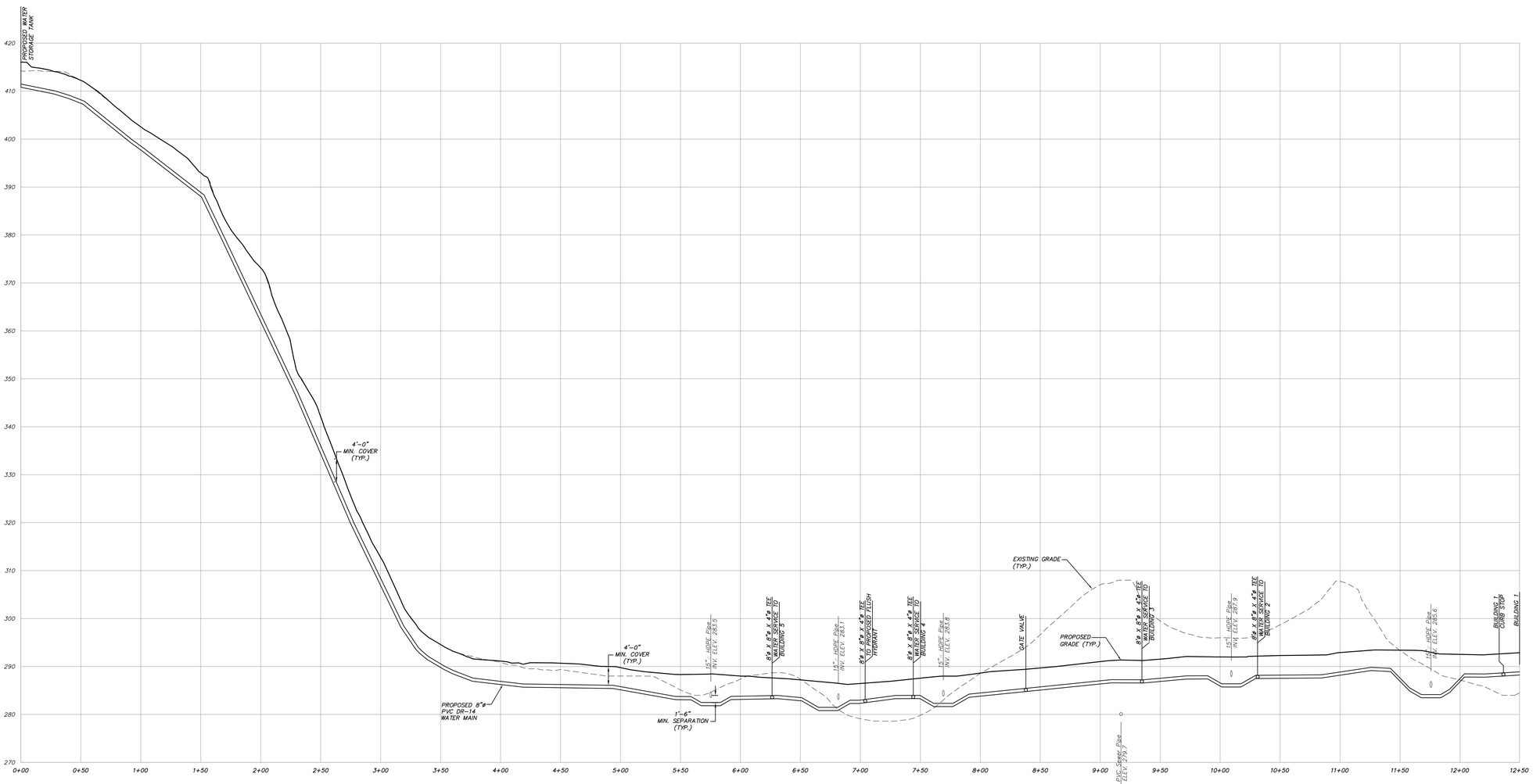
SMH 5 TO SEPTIC TANK

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



SMH 4A TO SMH 4

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'



PROPOSED WATER STORAGE TANK TO BUILDING 1

SCALE: HORZ. 1" = 40'
VERT. 1" = 10'

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
3	11-29-18	REVISED PER GBFD COMMENTS	MEU
2	9-27-18	REVISED PER TOWN COMMENTS	BD
1	8-23-18	PLANNING BOARD SUBMISSION	JFR

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PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

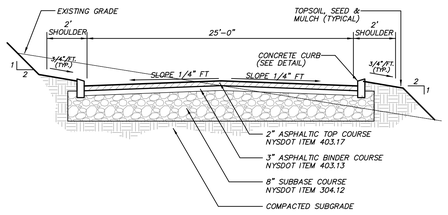
DRAWING:
SEWER & WATER PROFILES

STATE OF NEW YORK — JEFFREY J. COSTELLO — 087 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	8-2-18	DRAWN BY	E.J.P.
SCALE	AS SHOWN	CHECKED BY	Z.M.P.

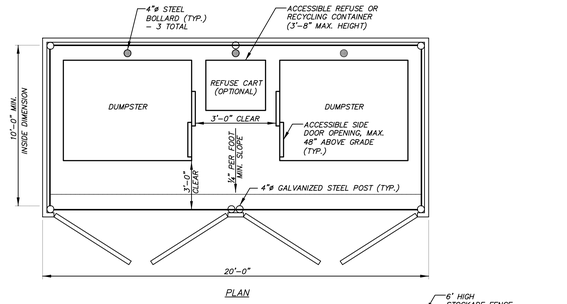
DRAWING NO. PR-3
SHEET 11 / 18

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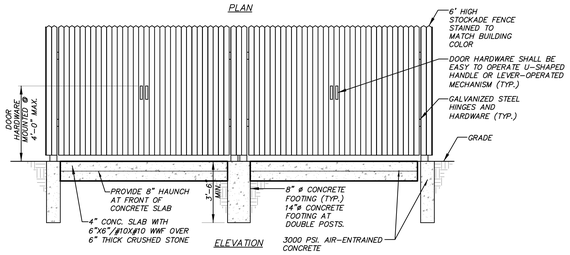


DRIVEWAY PAVEMENT DETAIL

(N.T.S.)



PLAN



ELEVATION

GENERAL NOTES:

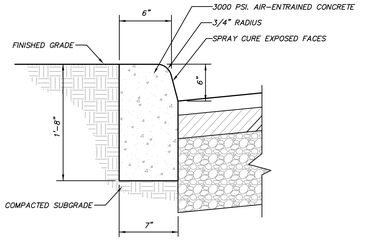
1. CHECK WITH REFUSE HAULER PRIOR TO INSTALLATION OF REFUSE ENCLOSURE FOR FINAL DIMENSIONS.
2. ALL HARDWARE UTILIZED TO ATTACH WOOD FENCE TO POSTS SHALL BE GALVANIZED STEEL.

ACCESSIBILITY NOTES:

1. VERTICAL CHANGE IN LEVEL BETWEEN FINISHED GRADE OF CONCRETE PAD FOR DUMPSTER ENCLOSURE AND ADJACENT PAVEMENT AT GATE OPENINGS SHALL NOT EXCEED 1/4". 1/4" TO 1/2" VERTICAL CHANGE SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 2H:1V.
4. GATE(S) DESIGNATED FOR ACCESSIBLE ENTRY INTO DUMPSTER ENCLOSURE SHALL BE MAINTAINED TO BE RELATIVELY FREE SWINGING AND EASY TO OPEN AND CLOSE.
5. SHOULD INDIVIDUAL GATE BE DESIGNATED FOR ACCESSIBLE ENTRY, IT SHALL BE LABELLED AS SUCH.
6. A 36" MINIMUM CLEAR DISTANCE SHALL BE MAINTAINED BETWEEN DUMPSTERS AND IN FRONT OF DUMPSTER AS NECESSARY TO PROVIDE ACCESSIBLE ROUTE WITHIN DUMPSTER ENCLOSURE TO SIDE ACCESS DOORS TO DUMPSTERS AND / OR REFUSE CARTS.
7. ACCESSIBLE REFUSE CONTAINERS SHALL BE PROVIDED – TRASH CAN(S), REFUSE CARTS, AND/OR DUMPSTERS WITH ACCESSIBLE SIDE OPENINGS.

DUMPSTER ENCLOSURE DETAIL

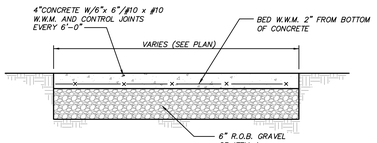
(N.T.S.)



NOTE: ISOLATION JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH CELLULAR COMPRESSION MATERIALS AS SPECIFIED, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB.

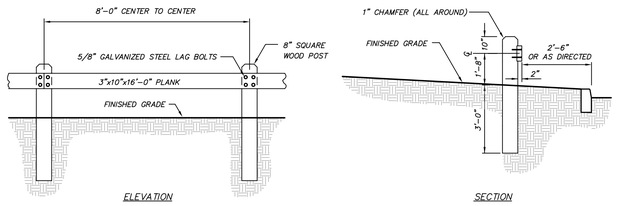
CONCRETE CURB DETAIL

(N.T.S.)



CONCRETE SIDEWALK DETAIL

(N.T.S.)



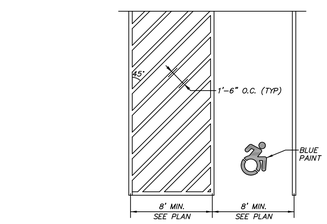
ELEVATION SECTION

NOTES:

1. ALL WOOD TO BE SEASONED NO.1 DOUGLAS FIR, SOUTHERN PINE OR OTHER APPROVED STRUCTURAL LUMBER.
2. ALL WOOD TO BE TREATED WITH AN APPROVED WOOD PRESERVATIVE SUITABLE FOR INSTALLATION IN AND ADJACENT TO GROUND SURFACES.

WOOD GUIDE RAIL DETAIL

(N.T.S.)



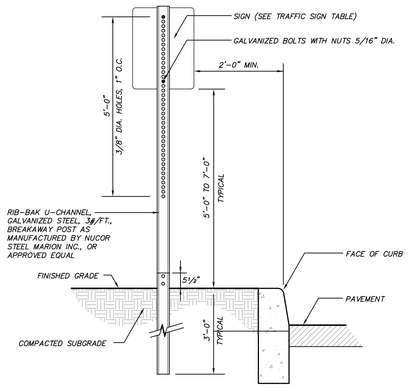
NOTE:
1. ALL HANDICAP STRIPING SHALL BE 4" WIDE BLUE PAINT

PAINTED ACCESSABLE PARKING DETAIL

(N.T.S.)

GENERAL NOTES FOR ACCESSIBLE ROUTES ON THE SITE:

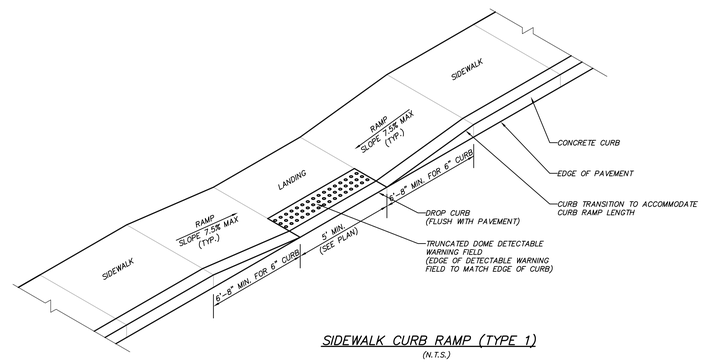
1. ACCESSIBLE ROUTES ON THE SITE INCLUDE MARKED ACCESSIBLE PARKING SPACES AND ACCESS AISLES, SIDEWALK CURB RAMPS, WALKWAYS AND RAMPS.
2. MARKED ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL HAVE SURFACE SLOPES NOT STEEPER THAN 1.5%.
3. SIDEWALK CURB RAMPS SHALL COMPLY WITH THE FOLLOWING ITEMS AS APPLICABLE:
   a. WALKING SURFACES OF SIDEWALK CURB RAMPS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
   b. THE RUNNING SLOPE SHALL NOT EXCEED 7.5%.
   c. THE CROSS SLOPE SHALL NOT EXCEED 1.5%.
   d. LANDINGS AND BLENDED TRANSITIONS SHALL BE CONSTRUCTED TO PREVENT THE ACCUMULATION OF WATER.
   e. WHERE PROVIDED, SIDE FLARES FOR CURB RAMPS SHALL NOT BE STEEPER THAN 9.5% WITHIN PEDESTRIAN WAY.
   f. CURB RAMPS AT MARKED CROSSWALKS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
   g. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE 36 INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING.
   h. WHERE DETECTABLE WARNINGS ARE PROVIDED ON CURB RAMPS, THEY SHALL BE 24 INCHES MINIMUM IN DEPTH IN THE DIRECTION OF TRAVEL, SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, AND BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE CURB LINE.
   i. REFER TO SIDEWALK CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
4. WALKWAYS ALONG AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE FOLLOWING ITEMS AS APPLICABLE:
   a. WALKING SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.
   b. VERTICAL CHANGES IN LEVEL ALONG WALKING SURFACE SHALL NOT EXCEED 1/4". CHANGES IN LEVEL GREATER THAN 1/4" IN HEIGHT AND NOT MORE THAN 1/2" SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2.
   c. THE RUNNING SLOPE OF THE WALKING SURFACES SHALL NOT BE STEEPER THAN 4.5%.
   d. THE CROSS SLOPE OF A WALKING SURFACE SHALL NOT BE STEEPER THAN 1.5%.
   e. THE CLEAR WIDTH OF AN ACCESSIBLE ROUTE SHALL BE 36" MINIMUM.
   f. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60 INCHES SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET MAXIMUM. PASSING SPACES SHALL BE 60 INCH MINIMUM BY 60 INCH MINIMUM.
5. RAMPS ALONG AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE FOLLOWING ITEMS:
   a. RAMP RUNS SHALL HAVE A RUNNING SLOPE GREATER THAN 4.5% AND NOT STEEPER THAN 7.5%
   b. THE CROSS SLOPE OF RAMP RUNS SHALL NOT EXCEED 1.5%.
   c. WALKING SURFACES OF RAMP RUNS AND ASSOCIATED LANDINGS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
   d. THE CLEAR WIDTH OF A RAMP RUN SHALL BE 36 INCHES MINIMUM OR AS SHOWN. HANDRAILS AND HANDRAIL SUPPORTS THAT ARE PROVIDED ON THE RAMP RUN SHALL NOT PROJECT INTO THE REQUIRED CLEAR WIDTH OF THE RAMP RUN OR ASSOCIATED LANDING.
   e. THE MAXIMUM RISE FOR ANY RAMP IS 2'-6".
   f. THE MAXIMUM RUN FOR ANY RAMP IS 30'-0".
   g. RAMPS SHALL HAVE LANDINGS AT THE BOTTOM AND TOP OF EACH RAMP RUN. LANDINGS SHALL HAVE A SLOPE NOT TO EXCEED 1.5% AND SHALL HAVE A CLEAR LENGTH AND WIDTH OF 60" MINIMUM.
   h. ADJACENT FINISHED GRADES ALONG SIDES OF RAMP SHALL NOT HAVE A VERTICAL DROPOFF OF 1/2" WITHIN 10" OF THE EDGE OF THE CONCRETE.
   i. REFER TO CONCRETE HANDICAP RAMP DETAIL FOR ADDITIONAL INFORMATION.



NOTE: FOR HANDICAP PARKING SIGNAGE, SIGNS SHALL BE INSTALLED AT A CLEAR HEIGHT OF BETWEEN 5'-0" AND 7'-0" ABOVE GRADE OF PARKING SPACE AND SUCH THAT SIGNS SHALL NOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.

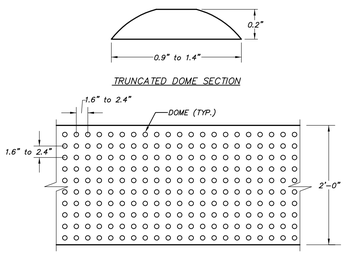
TRAFFIC SIGN DETAIL

(N.T.S.)



SIDEWALK CURB RAMP (TYPE 1)

(N.T.S.)



TRUNCATED DOME SECTION

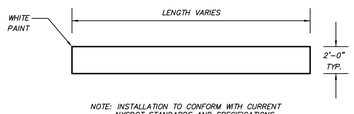
TRUNCATED DOME SPACING

TRUNCATED DOME DETAIL

(N.T.S.)

TRUNCATED DOME DETECTABLE WARNING FIELD NOTES:

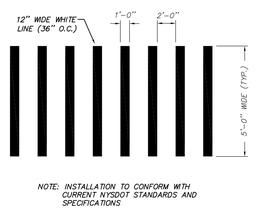
1. The detectable warning field shall consist of raised truncated domes with a nominal diameter of 0.9 inches, a nominal height of 0.2 inches, and a nominal spacing of 2.35 inches on center in accordance with the most recent version of ANSI ICC A117.1.
2. The details provided are not drawn to scale. The quantity of domes depicted on the detectable warning field (the domes and the entire 24 inch level surface) is for illustration only.
3. The size of the detectable warning field shall be 24 inches in the direction of travel and shall extend the full width of the curb ramp or flush surface, exclusive of side flares.
4. Detectable warnings shall be located so that the edge of the warning field nearest to the roadway or street surface is 6 inches to 9 inches from the edge of the roadway/street, or from the front of the dropped curb, where a dropped curb continues across the bottom of the sidewalk curb ramp.
5. Domes shall be aligned on a square grid in the predominant direction of travel.
6. The detectable warning field shall be yellow.



NOTE: INSTALLATION TO CONFORM WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS.

PAINTED STOP BAR DETAIL

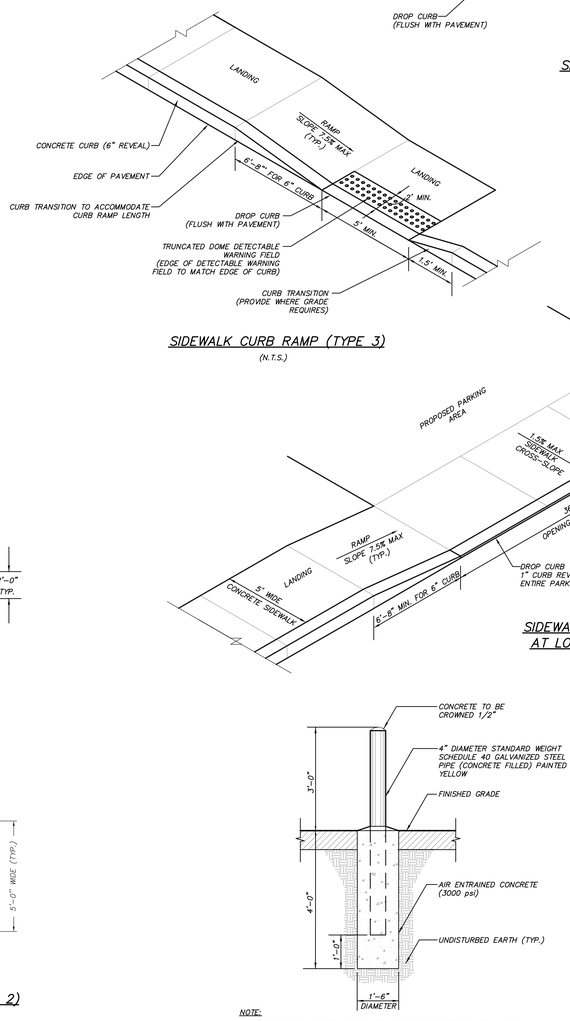
(N.T.S.)



NOTE: INSTALLATION TO CONFORM WITH CURRENT NYSDOT STANDARDS AND SPECIFICATIONS

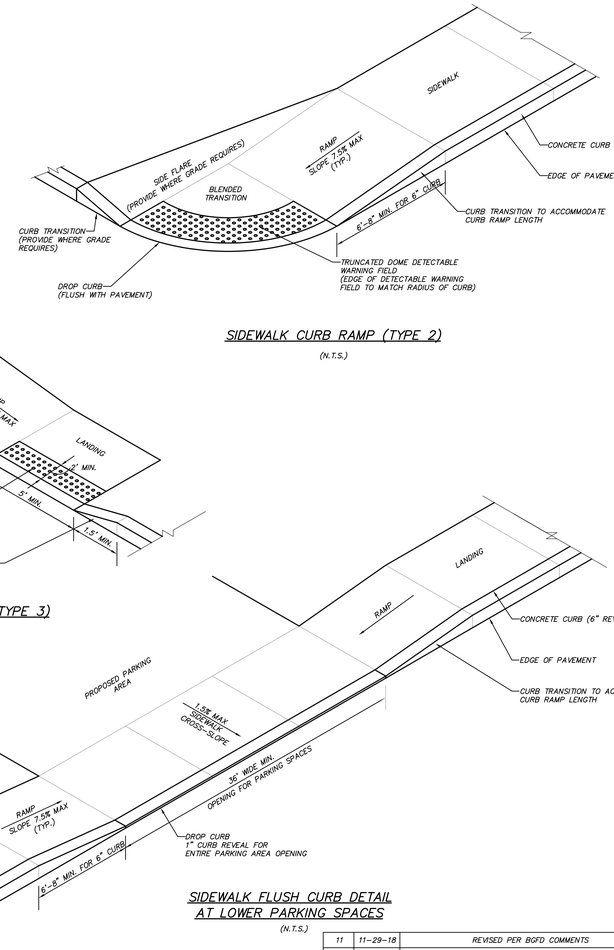
CROSSWALK MARKING DETAIL (TYPE 2)

(N.T.S.)



SIDEWALK CURB RAMP (TYPE 3)

(N.T.S.)



SIDEWALK CURB RAMP (TYPE 2)

(N.T.S.)

SIDEWALK FLUSH CURB DETAIL AT LOWER PARKING SPACES

(N.T.S.)

NOTE:
WHEN PROTECTION POSTS ARE TO BE USED FOR PROTECTION OF HANDICAP PARKING SIGNS OR OTHER TRAFFIC SIGNS, SIGN SUPPORTING POST SHALL BE EMBEDDED A MINIMUM OF THREE (3) FEET INTO THE CONCRETE.

STEEL BOLLARD DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY
11	11-29-18	REVISED PER BGFD COMMENTS	MEU
10	9-27-18	REVISED PER TOWN COMMENTS	BD
9	8-23-18	PLANNING BOARD SUBMISSION	JFR
8	8-2-18	REVISED PER TOWN COMMENTS	JJR
7	6-28-18	REVISED PER TOWN COMMENTS	MEU
6	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
5	9-01-17	REVISED PER TOWN COMMENTS	ZMP
4	7-27-17	REVISED PER TOWN COMMENTS	EIG
3	6-29-17	REVISED PER TOWN COMMENTS	SJC
2	6-1-17	PLANNING BOARD SUBMISSION	SJC
1	3-31-16	REVISED PER TOWN COMMENTS	MEU

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

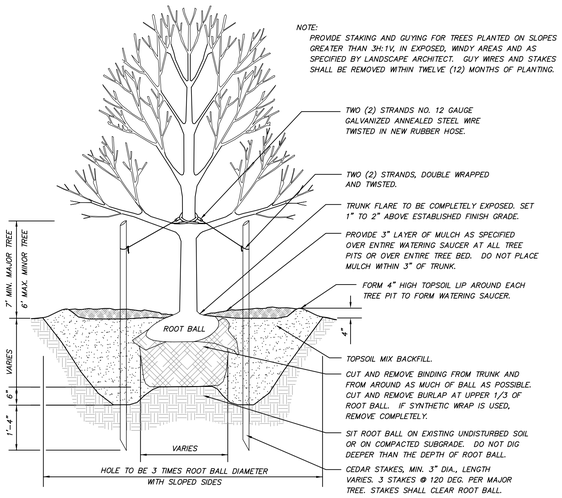
DRAWING:
SITE DETAILS

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	2-4-16	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

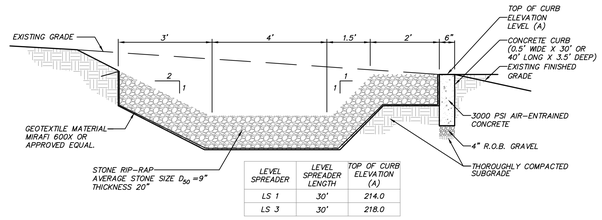
DRAWING NO. D-1
SHEET 12 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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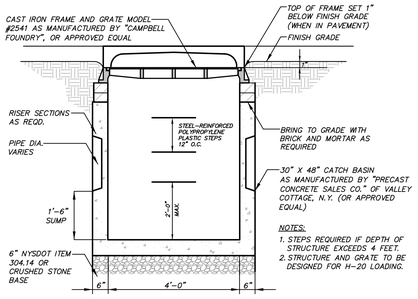


TREE PLANTING DETAIL
(N.T.S.)

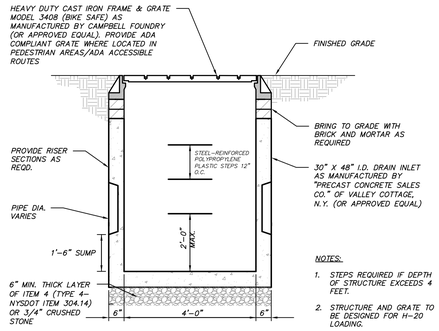


LEVEL SPREADER	LEVEL SPREADER LENGTH	TOP OF CURB ELEVATION (A)
LS 1	30'	214.0
LS 3	30'	218.0

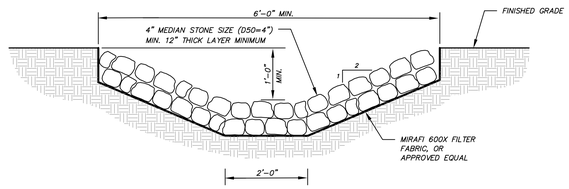
LEVEL SPREADER WITH LEVEL CONCRETE CURB AT OVERFLOW DETAIL
(N.T.S.)



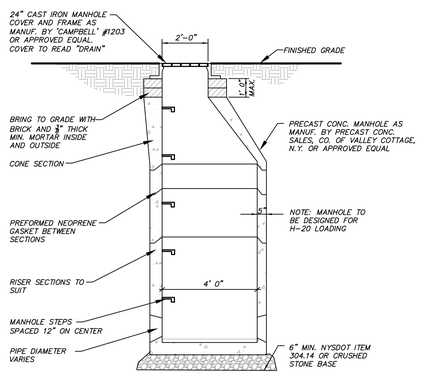
CATCH BASIN DETAIL
(N.T.S.)



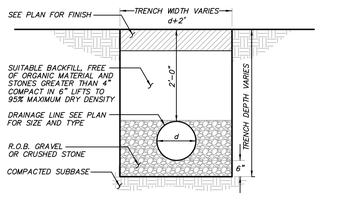
30" X 48" DRAIN INLET DETAIL
(N.T.S.)



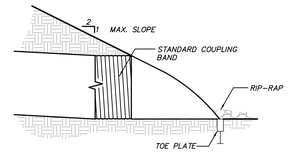
RIP RAP SWALE DETAIL
(N.T.S.)



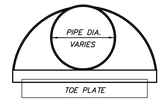
DRAINAGE MANHOLE DETAIL
(N.T.S.)



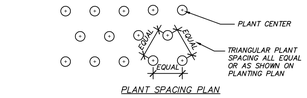
DRAINAGE LINE TRENCH DETAIL
(N.T.S.)



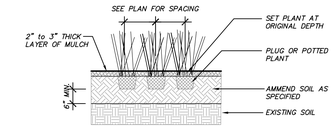
SECTION



ELEVATION



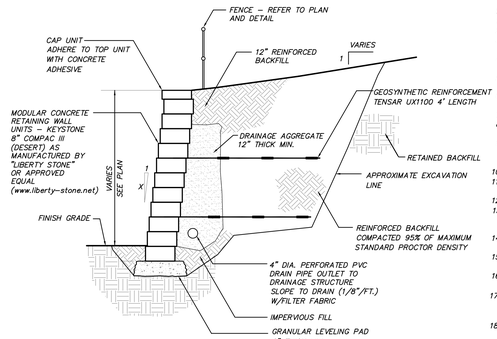
PLANT SPACING PLAN



PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL
(N.T.S.)

NOTE:
PROVIDE STAKING AND GUYING FOR TREES PLANTED ON SLOPES GREATER THAN 3H:1V, IN EXPOSED, WINDY AREAS AND AS SPECIFIED BY LANDSCAPE ARCHITECT. GUY WIRES AND STAKES SHALL BE REMOVED WITHIN TWELVE MONTHS OF PLANTING.

EVERGREEN TREE PLANTING DETAIL
(N.T.S.)



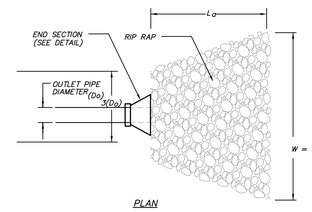
NOTES:
1. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN.
6. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6".
8. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
9. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
10. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
11. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER.
12. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
13. GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
14. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
15. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
16. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. PRIOR TO ISSUANCE OF A BUILDING PERMIT, ALL RETAINING WALLS IN EXCESS OF FOUR (4) FEET SHALL BE DESIGNED AND CERTIFIED BY A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER.
18. PRIOR TO ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, A NEW YORK STATE LICENSED PROFESSIONAL ENGINEER SHALL CERTIFY THE PROPER INSTALLATION AND CONSTRUCTION OF ANY RETAINING WALL IN EXCESS OF FOUR (4) FEET, IN ACCORDANCE WITH THE APPROVED DESIGN.

MODULAR BLOCK RETAINING WALL DETAIL
(N.T.S.)

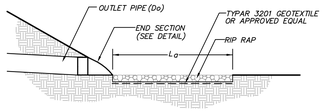
NOTE:
END SECTION CONNECTIONS TO CONFORM TO MANUF. RECOMMENDATIONS FOR VARIOUS PIPE SIZES

PLAN

END SECTION DETAIL
(N.T.S.)

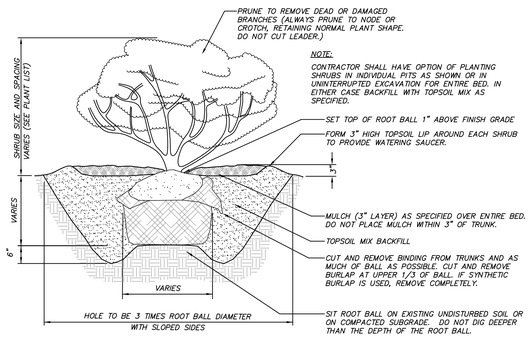


PLAN



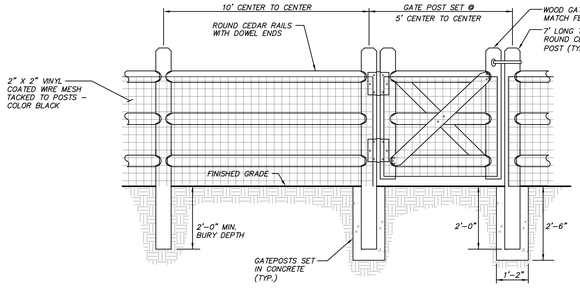
	OUTLET PIPE DIAMETER (D_O)	(D_{50}) RIP RAP SIZE	MAX. RIP RAP SIZE	MIN. RIP RAP BLANKET THICKNESS	LA (MIN.)
ES 6	30"	9"	14"	20"	14 FT.
ES 5A	6"	9"	14"	20"	10 FT.

VELOCITY DISSIPATOR DETAIL

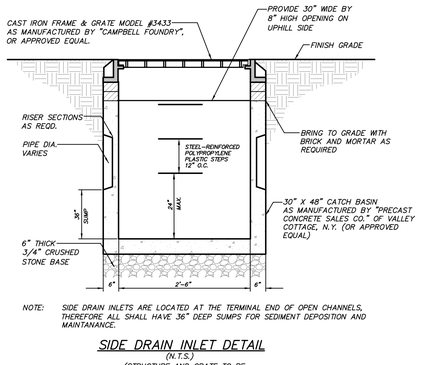


NOTE:
CONTRACTOR SHALL HAVE OPTION OF PLANTING SHRUBS IN INDIVIDUAL PITS AS SHOWN OR IN UNINTERRUPTED EXCAVATION FOR ENTIRE BED. IN EITHER CASE BACKFILL WITH TOPSOIL MIX AS SPECIFIED.

SHRUB PLANTING DETAIL
(N.T.S.)



POST AND RAIL FENCE DETAIL
(N.T.S.)



NOTE: SIDE DRAIN INLETS ARE LOCATED AT THE TERMINAL END OF OPEN CHANNELS, THEREFORE ALL SHALL HAVE 36" DEEP SUMPS FOR SEDIMENT DEPOSITION AND MAINTANANCE.

SIDE DRAIN INLET DETAIL
(N.T.S.)
(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)

NO.	DATE	REVISION	BY
12	11-29-18	REVISED PER GBFD COMMENTS	MEU
11	9-27-18	REVISED PER TOWN COMMENTS	BD
10	8-23-18	PLANNING BOARD SUBMISSION	JFR
9	8-2-18	REVISED PER TOWN COMMENTS	JJR
8	6-28-18	REVISED PER TOWN COMMENTS	MEU
7	1-23-18	REVISED PER NYCDEP COMMENTS	ZMP
6	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
5	9-01-17	REVISED PER TOWN COMMENTS	ZMP
4	7-27-17	REVISED PER TOWN COMMENTS	EIC
3	6-29-17	REVISED PER TOWN COMMENTS	SJC
2	6-1-17	PLANNING BOARD SUBMISSION	SJC
1	3-31-16	REVISED PER TOWN COMMENTS	MEU

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3 Garrett Place
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(845) 225-9690
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www.insite-eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

STATE OF NEW YORK JEFFREY J. CONTELMO 076351 LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	2-4-16	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

DRAWING NO. D-2
SHEET 13 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\CIS\246\100\15 D-2 Det.dwg, 1/30/2018 1:26:05 PM, mvetter, 1:1

REQUIRED EROSION CONTROL SWPPP CONTENTS:

Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all Stormwater Pollution Prevention Plan's (SWPPP) shall include erosion and sediment control practices designed in conformance with the most current version of the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." Where erosion and sediment control practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of required SWPPP components is provided in accordance with Part III.B.1a–i of General Permit GP-0-15-002:

a. *Background Information: The subject project consists of the construction of (45) affordable dwelling units and a caretaker unit with appurtenances and utilities.*

b. *Site map / construction drawing: These plans serve to satisfy this SWPPP requirement.*

c. *Description of the soils present at the site: Onsite soils located within the proposed limits of disturbance consist of Charlton–Chatfield complex (CrC), Chatfield–Hollis–Rock outcrop (CtC & CuD), Hollis–Rock outcrop complex (HrF), Leicester loam (Lc&), Palms muck (Pa) and Riverhead loam (RhB) as identified on the Soil Conservation Service Web Soil Survey. These soil types belong to the Hydrologic Soil Group "A", "A/D", "B", "C" and "C/D."*

d. *Construction phasing plan / sequence of operations: The Construction Sequence and phasing found on these plans provide the required phasing. A Construction Sequence and Erosion and Sediment Control Maintenance Schedule has been provided. The Sedimentation and Erosion Control Notes contained hereon outline a general sequence of operations for the proposed project. In general all erosion and sediment control facilities shall be installed prior to commencement with land disturbing activities, and areas of disturbance shall be limited to the shortest period of time as practicable.*

e. *Description of erosion and sediment control practices: This plan, and details / notes shown hereon serve to satisfy this SWPPP requirement.*

f. *Temporary and permanent soil stabilization plan: The Sedimentation and Erosion Control Notes and Details provided heron identify temporary and permanent stabilization measures to be employed with respect to specific elements of the project, and at the various stages of development.*

g. *Site map / construction drawing: This plan serves to satisfy this SWPPP requirement.*

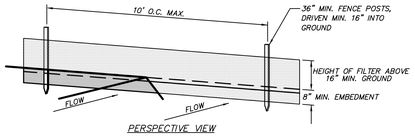
h. *The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices: The details, Erosion and Sediment Control Notes, and Erosion and Sediment Control Maintenance Schedule serve to satisfy this SWPPP requirement.*

i. *An inspection schedule: Inspections are to be performed twice weekly and by a qualified professional as required by the General Permit GP-0-15-002. In addition the NYSDEC Trained Contractor shall perform additional inspections as cited in the Sedimentation and Erosion Control Notes.*

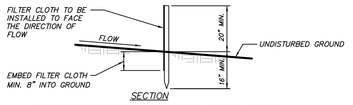
j. *A description of pollution prevention measures that will be used to control litter, construction chemicals and construction debris: In general, all construction litter / debris shall be collected and removed from the site. The general contractor shall supply either waste barrels or dumpster for proper waste disposal. Any construction chemicals utilized during construction shall either be removed from site daily by the contractor or stored in a structurally sound and weatherproof building. No hazardous waste shall be disposed of onsite, and shall ultimately be disposed of in accordance with all federal, state and local regulations. Material Safety Data Sheets (MSDS), material inventory, and emergency contact numbers shall be maintained by the general contractor for all construction chemicals utilized onsite. Finally, temporary sanitary facilities (portable toilets) shall be provided onsite during the entire length of construction, and inspected weekly for evidence of leaking holding tanks.*

k. *A description and location of any stormwater discharges associated with industrial activity other than construction at the site: There are no known industrial stormwater discharges present or proposed at the site.*

l. *Identification of any elements of the design that are not in conformance with the technical standard, "New York Standards and Specifications for Erosion and Sediment Control." All proposed elements of this SWPPP have been designed in accordance with the "New York Standards and Specifications for Erosion and Sediment Control."*



PERSPECTIVE VIEW



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. *FILTER CLOTH TO BE FASTENED SECURELY TO POSTS AT TOP AND MID SECTION.*
2. *WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.*
3. *MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.*

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

SILT FENCE DETAIL

(N.T.S.)

SOIL RESTORATION REQUIREMENTS

The contractor shall be required to perform the following soil restoration techniques prior to installing topsoil, seed and mulch. Items stricken in the following table do not need to be performed.

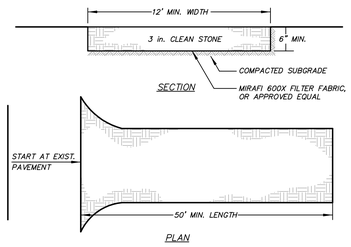
Soil Restoration Requirements[1,2,3] (Onsite soils within the limit of disturbance belong to Hydrologic Soil Groups (HSG) C & D)			
Type of Soil Disturbance	**Soil Restoration Requirement**		**Comments/Examples**
No soil disturbance	Restoration not permitted		Preservation of Natural Features
Minimal soil disturbance	Restoration not required		Clearing and grubbing
Areas where topsoil is stripped only - no change in grade	~~HSG A & B~~	HSG C&D	Protect area from any ongoing construction activities.
	Apply 6 inches of topsoil	Aerate[4] and apply 6 inches of topsoil	
Areas of cut or fill	~~HSG A &B~~	HSG C&D	
	Aerate[4] and apply 6 inches of topsoil	Apply full Soil Restoration[5]	
Heavy traffic areas on site (especially in a zone 5-25 feet around buildings but not within a 5 foot perimeter around foundation walls)	Apply full Soil Restoration (decompaction and compost Enhancement[6])		
Areas where Runoff Reduction and/or Infiltration practices are applied	Restoration not required, but may be applied to enhance the reduction specified for appropriate practices.		Keep construction equipment from crossing these areas. To protect newly installed practice from any ongoing construction activities construct a single phase operation fence area
Redevelopment projects	Soil Restoration is required on redevelopment projects in areas where existing impervious area will be converted to pervious area		

1. *Aeration includes the use of machines such as tractor–drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which function like a mini–subsoiler.*
2. *Per Deep Ripping and De–compaction, DEC 2008 .*
3. *Aeration includes the use of machines such as tractor–drawn implements with coulters making a narrow slit in the soil, a roller with many spikes making indentations in the soil, or prongs which functions like a mini–subsoiler.*
4. *During periods of relatively low to moderate subsoil moisture, the disturbed soils are returned to rough grade and the following Soil Restoration steps applied:*
   - *4.1. Apply 3 inches of compost over subsoil.*
   - *4.2. Till compost into subsoil to a depth of at least 12 inches using a cat–mounted ripper, tractor–mounted disc, or tiller, mixing, and circulating air and compost into subsoils.*
   - *4.3. Rock–pick until uplifted stone/rock materials of four inches and larger size area cleaned off the site.*
   - *4.4. Apply topsoil to a depth of 6 inches.*
   - *4.5. Vegetate as required by seeding notes located on the project drawings.*
   - *4.6. Tilling should not be performed within the drip line of any existing trees or over any utility installations that are within 24 inches of the surface.*
5. *Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a half inch screen and have a pH suitable to grow desired plants.*

REQUIRED POST–CONSTRUCTION STORMWATER MANAGEMENT PRACTICE COMPONENTS:

1. *Pursuant to the NYSDEC "SPDES General Permit for Stormwater Discharges from Construction Activity" (GP-0-15-002), all construction projects needing post–construction stormwater management practices shall prepare a SWPPP that also includes practices designed in conformance with the most current version of the technical standard, New York State Stormwater Management Design Manual ("Design Manual"). Where post–construction stormwater management practices are not designed in conformance with this technical standard, the owner or operator must demonstrate equivalence to the technical standard. The following list of SWPPP components is provided in accordance with Part III.B.2a–g and III.B.3:*
   - *a. Identification of all post–construction stormwater management practices to be constructed as part of the project; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.*
   - *b. A site map/construction drawing(s) showing the specific location and size of each post–construction stormwater management practice; This plan, and details/notes shown hereon serve to satisfy this SWPPP requirement.*

   A Stormwater Modeling and Analysis Report including pre–development conditions, post–development conditions, the results of the stormwater modeling, a summary table demonstrating that each practice has been designed in conformance with the sizing criteria, identification of and justification for any deviations from the Design Manual, and identification of any design criteria that are not required. The required analysis is provided in the report titled Preliminary Stormwater Pollution Prevention Plan for Wilder Balter Partners, Inc.
   - *c. Soil testing results and locations. This SWPPP requirement is provided in the report titled Amended Stormwater Pollution Prevention Plan for Kent Materials.*
   - *d. Infiltration testing results. This SWPPP requirement is provided in the report titled Preliminary Stormwater Pollution Prevention Plan for Wilder Balter Partners, Inc.*
   - *e. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post–construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice. The Permanent Stormwater Facilities Maintenance Schedule provided on these plans serves to satisfy this requirement.*
2. *Enhanced Phosphorus Removal Standards – Beginning on September 30, 2008, all construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post–construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the most current version of the technical standard, New York Stormwater Management Design Manual. At a minimum, the post–construction stormwater management practice component of the SWPPP shall include items 2.a – 2.f above. The permanent stormwater practices for this project have been sized according to chapter 10 of the Design Manual Enhanced Phosphorus Removal Standards. Please see 2.a – 2.f above.*



SECTION

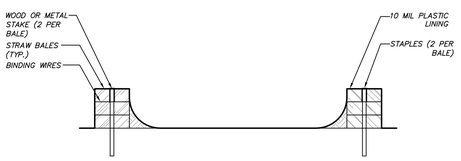
PLAN

INSTALLATION NOTES

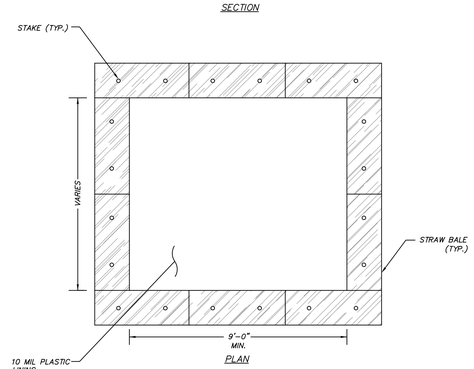
1. *STONE SIZE – USE 3" STONE*
2. *LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.)*
3. *THICKNESS – NOT LESS THAN SIX (6) INCHES.*
4. *WIDTH – 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCUR.*
5. *FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.*
6. *SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE, IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.*
7. *MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED IMMEDIATELY.*
8. *WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.*
9. *PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.*

STABILIZED CONSTRUCTION ENTRANCE DETAIL

(N.T.S.)



SECTION



PLAN

CONCRETE WASHOUT AREA DETAIL

(N.T.S.)

NOTES

1. *TEMPORARY CONCRETE WASHOUT TYPE ABOVE GRADE WILL BE CONSTRUCTED AS SHOWN ABOVE, WITH RECOMMENDED MINIMUM LENGTH AND MINIMUM WIDTH OF 10 FT.*
2. *THE WASHOUT WILL BE MINIMUM OF 50 FT FROM STORM DRAIN INLETS.*
3. *PLASTIC LINING WILL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.*

EROSION AND SEDIMENT CONTROL MAINTENANCE SCHEDULE

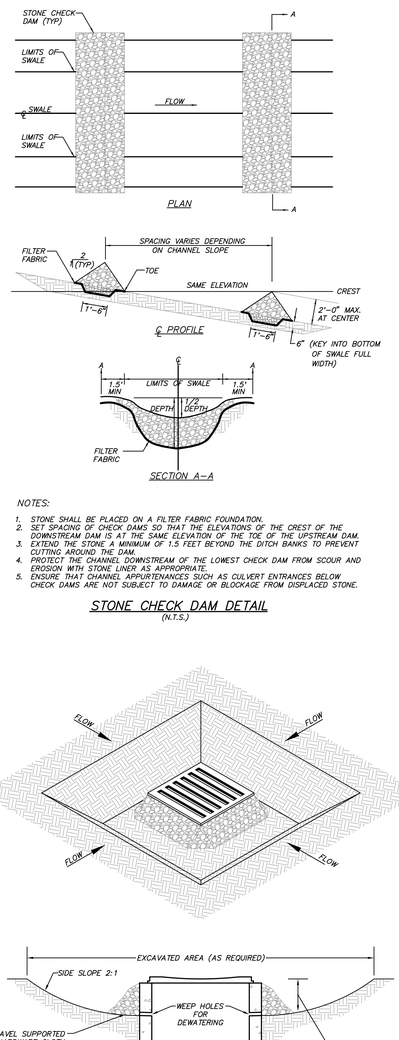
MONITORING REQUIREMENTS				MAINTENANCE REQUIREMENTS	
PRACTICE	**DAILY**	**WEEKLY**	**AFTER RAINFALL**	**DURING CONSTRUCTION**	**AFTER CONSTRUCTION**
SILT FENCE BARRIER	–	Inspect	Inspect	Clean/Replace	Remove
STABILIZED CONSTRUCTION ENTRANCE	Inspect	–	Inspect	Clean/Replace Stone and Fabric	Remove
DUST CONTROL	Inspect	–	Inspect	Mulching/ Spraying Water	N/A
*VEGETATIVE ESTABLISHMENT	–	Inspect	Inspect	Water/Reseed/ Remulch	Reseed to 80% Coverage
INLET PROTECTION	–	Inspect	Inspect	Clean/Repair/ Replace	Remove
SOIL STOCKPILES	–	Inspect	Inspect	Mulching/ Silt Fence Repair	Remove
SWALES	–	Inspect	Inspect	Clean/Mulch/ Repair	Mow Permanent Grass/Replace/ Repair Rip Rap
CHECK DAMS	–	Inspect	Inspect	Clean/Replace Stones/Repair	Clean/Replace Stones/Repair
CONCRETE DRAINAGE STRUCTURES	–	Inspect	Inspect	Clean Sumps/ Remove Debris/ Repair/Replace	Clean Sumps/ Remove Debris/ Repair/Replace
DRAINAGE PIPES	–	Inspect	Inspect	Clean/Repair	Clean/Repair
ROAD & PAVEMENT	–	Inspect	Inspect	Clean	Clean
*STORMWATER TRAP/BASIN	–	Inspect	Inspect	Clean/Mulch/ Repair/Reseed	See Permanent Stormwater Facilities Maintenance Schedule on Drawing D–6

** Permanent vegetation is considered stabilized when 80% of the plant density is established. Erosion control measures shall remain in place until all disturbed areas are permanently stabilized.*

Note: The party responsible for implementation of the maintenance schedule during and after construction is:

Wilder Balter Partners, Inc.
480 North Bedford Road
Building 300, 1st Floor, West Wing
Chappaqua, NY 10514

and/or the current owner(s) of the subject property.



SECTION A–A

NOTES:

1. *STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION.*
2. *SET SPACING OF CHECK DAMS SO THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.*
3. *EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.*
4. *PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE LINER AS APPROPRIATE.*
5. *ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.*

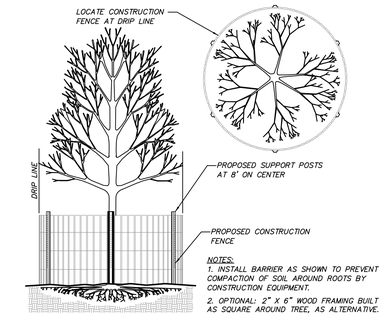
STONE CHECK DAM DETAIL

(N.T.S.)

1. *CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION*
2. *GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN*
3. *WEEP HOLES SHALL BE PROTECTED BY GRAVEL*
4. *UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL EXCAVATION WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY, AND STABILIZE WITH PERMANENT SEEDING*
5. *MAXIMUM DRAINAGE AREA = 1 ACRE*

EXCAVATED DROP INLET PROTECTION DETAIL

(N.T.S.)



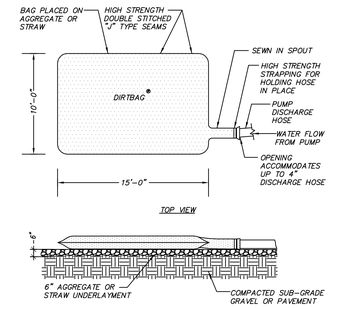
NOTES:
1. INSTALL BARRIER AS SHOWN TO PREVENT COMPACTION OF SOIL AROUND ROOTS BY CONSTRUCTION EQUIPMENT.
2. OPTIONAL: 2" X 6" WOOD FRAMING BUILT AS SQUARE AROUND TREE, AS ALTERNATIVE.

TREE PROTECTION DETAIL

(N.T.S.)

TREE PROTECTION NOTES:

1. *Trees to be preserved in proximity to disturbance areas shall be marked in the field by the Landscape Architect prior to start of construction.*
2. *Install tree protection measures prior to start of site clearing & construction.*
3. *No construction equipment shall be parked and no earth or construction materials shall be stockpiled or stored under the canopy of trees to be preserved.*
4. *During tree removal operations associated with construction, do not damage adjacent trees to remain. Lower limbs and tree trunks, do not drop them.*
5. *Carefully tie back any tree branches that conflict with construction equipment.*
6. *Where trenching for utilities is required within a root zone, tunneling under and around roots shall be by hand digging. If roots 3" or larger are encountered immediately adjacent to the location of new construction and relocation is not practical, the roots shall be hand pruned under the supervision of a Certified Arborist or Landscape Architect to 6" back from the new construction limit. All exposed roots to receive appropriate treatment prior to backfilling.*
7. *If tree protection fencing to protect the root zone is not possible, six to eight inches of wood chip mulch and 3/4 inch plywood shall be placed over the entire affected root zone area to prevent soil compaction.*
8. *Any tree damaged during construction activities must be immediately repaired by a qualified arborist at no additional cost to the owner.*



TOP VIEW



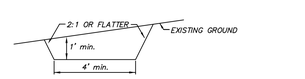
SIDE VIEW

NOTES:

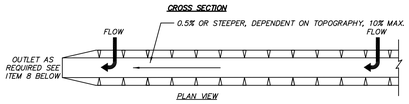
1. *PUMPED SILT CONTROL SYSTEM TO BE LOCATED WHERE WATER, AFTER PASSING THROUGH SYSTEM, WILL NOT CAUSE EROSION.*
2. *PUMPED SILT CONTROL SYSTEM TO BE MONITORED AND MAINTAINED TO ASSURE ADEQUATE FILTRATION.*
3. *PUMPED SILT CONTROL SYSTEM TO BE MANUFACTURED BY ACF ENVIRONMENTAL (1–800–448–3636) OR APPROVED EQUAL.*

"DIRTBAG" PUMPED SILT CONTROL SYSTEM DETAIL

(N.T.S.)



CROSS SECTION



PLAN VIEW

CONSTRUCTION SPECIFICATIONS

1. *ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.*
2. *DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.*
3. *DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON–EROSIVE VELOCITY.*
4. *ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTION–ABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.*
5. *THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULAR–ITIES WHICH WILL IMPEDE NORMAL FLOW.*
6. *FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.*
7. *ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.*
8. *PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PRO–VIDED AFTER EACH RAIN EVENT.*
9. *STABILIZATION SHALL BE SEED WITH JUTE, EXCELSIOR OR OTHER APPROVED ROLLED EROSION CONTROL PRODUCT (RECP)*

TEMPORARY SWALE DETAIL

(N.T.S.)

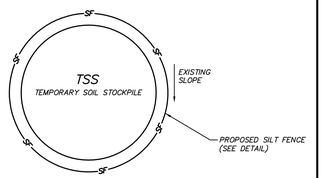
EXCAVATION DEWATERING CONTINGENCY REQUIREMENTS:

The contractor shall maintain a contingency excavation dewatering kit consisting of a minimum of the following:

- *(1) Submersible 2" electric trash pump with float switch, model #HS2.45–61 as manufactured by Tsurumi Pumps or approved equal. 3000 GPH, max head 39 ft.*
- *(1) Generator to run the electric trash pump.*
- *(1) Gas powered 3" heavy duty trash pump, model # 355AR as manufactured by Gorman Rupp or approved equal. 18,000 GPH, max head 103 ft. head 39 ft..*
- *(6) 4' X 8' sheets of plywood*
- *(20) Haybales*
- *(500 LF) 2" hose*
- *(500 LF) 3" hose*
- *(300 LF) silt fence*
- *(20 CY) 3/4" washed crushed stone*
- *(40 LF) 24"ø perforated HDPE pipe*
- *(1) "Dirtbag" pumped silt control system*

EROSION & SEDIMENT CONTROL NOTES:

1. *The Erosion and Sediment Control Plan is only to be referred to for the installation of erosion and sediment control measures. For all other construction related activities, including, but not limited to, grading and utilities, refer to the appropriate drawings.*
2. *Each contractor or subcontractor responsible for soil disturbance shall have a NYSDEC trained contractor onsite during soil disturbing activities. The NYSDEC trained contractor will be responsible to comply with the stormwater pollution prevention plan and for the implementation and maintenance of erosion and sediment control measures on this site prior to and during construction. The NYSDEC trained contractor shall sign a certification statement required by GP–0–15–002.*
3. *All construction activities involving the removal or disposition of soil are to be provided with appropriate protective measures to minimize erosion and contain sediment disposition within. Minimum soil erosion and sediment control measures shall be implemented as shown on the plans and shall be installed in accordance with "New York Standards and Specifications For Erosion and Sediment Control," latest edition.*
4. *Wherever feasible, natural vegetation should be retained and protected. Disturbance shall be minimized in the areas required to perform construction. No more than 5 acres of unprotected soil shall be exposed at any one time, unless prior authorization is granted by the MS4.*
5. *When land is exposed during development, the exposure shall be kept to the shortest practical period of time, but in no case more than 7 days after the construction activity in that portion of the site has ceased. Disturbance shall be minimized in the areas required to perform construction.*
6. *All construction vehicles shall be kept clear of the watercourses and wetland control areas outside the areas of proposed development. Silt fence and orange construction fence shall be installed in the areas where the grading is in close proximity of the watercourses or wetland control areas.*
7. *The stabilized construction entrances, silt fence, and orange construction fence shall be installed as shown on the plans prior to beginning any clearing, grubbing or earthwork.*
8. *All topsoil to be stripped from the area being developed shall be stockpiled and immediately seeded with a rye grass mixture having a quick germination time.*
9. *Any graded areas not subject to further disturbance or construction traffic shall, within 7 days of final grading, receive permanent vegetation cover in combination with a suitable mulch. Refer to "Site Seeding Notes" for additional detail and application rate.*
10. *Grass seed mix may be applied by either mechanical or hydroseeding methods. Turf establishment shall be performed in accordance with the current edition of the "NYSDOT Standard Specification, Construction and Materials, Section 610–3.02, Method No. 1".*
11. *Cut or fill (all) slopes steeper than 3:1 shall be stabilized immediately after grading with a rolled erosion control product (RECP) such as, Curlex I Single Net Erosion Control Blanket, or approved equal.*
12. *Paved roadways shall be kept clean at all times.*
13. *The site shall at all times be graded and maintained such that all stormwater runoff is diverted to soil erosion and sediment control facilities.*
14. *All storm drainage outlets shall be stabilized, as required, before the discharge points become operational.*
15. *Stormwater from disturbed areas must be passed through erosion control barriers before discharge beyond disturbed areas or discharged into other drainage systems.*
16. *Erosion and sediment control measures shall be inspected and maintained on a daily basis by the NYSDEC Trained Contractor, to insure that channels, temporary and permanent ditches and pipes are clear of debris, that embankments and berms have not been breached and that all straw bales and silt fences are intact. Any failure of erosion and sediment control measures shall be immediately repaired by the contractor and inspected for approval by the site engineer.*
17. *Dust shall be controlled by sprinkling or other approved methods as necessary, or as directed by the trained contractor or site engineer.*
18. *Cut and fills shall not endanger adjoining property, nor divert water onto the property of others.*
19. *All fills shall be placed and compacted in 6" lifts to provide stability of material and to prevent settlement.*
20. *The NYSDEC Trained Contractor shall inspect downstream conditions for evidence of sedimentation on a weekly basis and after rainstorms.*
21. *As warranted by field conditions, special additional erosion and sediment control measures, as specified by the site engineer, the Wetlands Inspector, the Town Engineer and/or NYCDEP shall be installed by the contractor.*
22. *Erosion and sediment control measures shall remain in place until all disturbed areas are suitably stabilized.*
23. *After completion of the site improvements, the owner will assume responsibility for maintenance of the roads, parking lots, drainage systems and stormwater facilities. Each spring the paved areas shall be cleaned to remove the winter accumulation of traction sand. After this is completed all drain inlet and catch basin sumps should be cleaned. All pipes should be checked for debris and blockage and cleaned as required. During the cleaning process, the drain inlets, catch basins and pipes should be inspected for structural integrity and overall condition. Repairs and/or replacements should be made as required.*
24. *Inspection of the stormwater basins should be performed every 6 months and after large storm events. These inspections should, at a minimum, check the outlet pipes for blockage and the general overall integrity of the basin and appurtenances.*
25. *Maintain basin vegetation including removal of trees and replacement of vegetation that should die. Remove any litter which accumulates as necessary. Typically, the accumulated silt will be required to be removed every 10 to 20 years. Any accumulated silt shall be removed from the stormwater basins once the site has been stabilized.*
26. *Refer to the Stormwater Pollution Prevention Plan for additional details regarding long–term maintenance of the storm drainage facilities.*



NOTES:

1. *AREA CHOSEN FOR STOCKPILE LOCATION SHALL BE DRY AND STABLE.*
2. *MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.*
3. *UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE IMMEDIATELY SEEDED WITH K31 PERENNIAL TALL FESCUE.*
4. *ALL STOCKPILES SHALL BE PROTECTED WITH SILT FENCING INSTALLED ON THE DOWNGRADIENT SIDE.*

TEMPORARY SOIL STOCKPILE DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY
11	11–29–18	REVISED PER GBFD COMMENTS	MEU
10	9–27–18	REVISED PER TOWN COMMENTS	BD
9	8–23–18	PLANNING BOARD SUBMISSION	JFR
8	8–2–18	REVISED PER TOWN COMMENTS	JJR
7	6–28–18	REVISED PER TOWN COMMENTS	MEU
6	11–17–17	REVISED PER NYCDEP COMMENTS	ZMP
5	9–01–17	REVISED PER TOWN COMMENTS	ZMP
4	7–27–17	REVISED PER TOWN COMMENTS	EIG
3	6–29–17	REVISED PER TOWN COMMENTS	SJC
2	6–1–16	PLANNING BOARD SUBMISSION	MEU
1	3–31–16	REVISED PER TOWN COMMENTS	MEU

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–3690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

STATE OF NEW YORK — JEFFREY J. CONTENTO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	2–4–16	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

DRAWING NO. D–3 — SHEET 14 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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PVC PIPE WATER TESTING PROCEDURES

TESTS ON PRESSURE PIPING FOR TRANSPORT OF WATER

A. *Hydrostatic Pressure Test*
Hydrostatic testing shall be performed in accordance with the revision of AWWA C605, Section 7.3, "Hydrostatic Testing".

1. *Test pressure shall be as scheduled or, where no pressure is scheduled, shall be 150 psi, or 1.25 times the static operating pressure, whichever is higher.*
2. *Test pressure shall be held on the piping for a period of at least 2 hours, unless a longer period is requested by the Engineer.*
3. *The test medium shall be water.*

B. *Hydrostatic Leakage Test*

1. *The leakage test shall be conducted concurrently with the pressure test.*
2. *The rate of leakage shall be determined at 15–minute intervals by means of volumetric measurement of the makeup water added to maintain the test pressure. The test shall proceed until the rate of leakage has stabilized or is decreasing below an allowable value, for three consecutive 15–minute intervals. After this, the test pressure shall be maintained for at least another 15 minutes.*
   a. *At the completion of the test, the pressure shall be released at the furthermost point from the point of application.*
3. *All exposed piping shall be examined during the test and all leaks, defective material or joints shall be repaired or replaced before repeating the tests.*
4. *The allowable leakage will be determined by the following formula.*

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where:
Q = quantity of makeup water, in gallons per hour
L = length of pipe tested, in feet
D = nominal diameter of the pipe, in inches
P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)

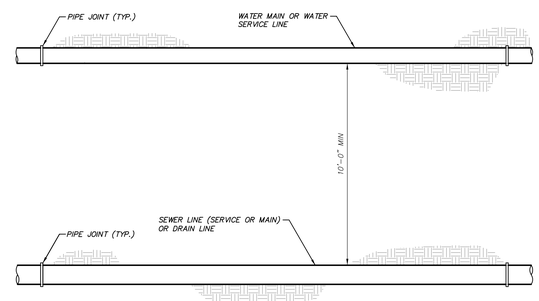
5. *Regardless of the above allowables, any visible leaks shall be permanently stopped.*
6. *The test medium shall be water.*

C. *Disinfection*
Prior to placing the water main into service, the new pipe shall be cleaned and disinfected in accordance with the latest revision of AWWA C651, Section 4.4.3, "The Continuous Feed Method". The "Tablet Method" will not be accepted.

1. *All work under this section shall be performed in the presence of the Design Engineer, and a representative of the public health authority having jurisdiction, as required.*
2. *Chlorination shall be scheduled such that sampling and flushing will be performed during normal daylight working hours. The contractor shall provide acceptable backflow prevention on all supply water to prevent any potential backflow contamination or cross connection.*
3. *Chlorination shall be by the use of a solution of water and liquid chlorine, calcium hypochlorite or sodium hypochlorite and the solution shall be contained in the pipe or structure as specified.*
4. *Prior to chlorination, all dirt and foreign matter shall be removed by a thorough cleaning and flushing of the pipeline or structure.*
5. *The chlorine solution shall be introduced to pipelines through corporation stops placed in the horizontal axis of the pipe, to structures by means of tubing extending directly into the structure, or other approved methods.*
6. *The application of the chlorine solution shall be by means of a controlled solution feed device. The rate of chlorine solution flow shall be in such proportion to the rate of water entering the pipe or structure that the resulting free chlorine residual shall be between 25 and 50 parts per million (PPM) or milligrams per liter (mg/l).*
7. *The chlorine treated water shall be retained in the pipe or structure at least 24 hours, unless otherwise directed. During the retention period, all valves and hydrants within the treated sections shall be operated.*
8. *The chlorine residual shall be not less than 10 PPM (or mg/l) at any point in the pipe or structure at the end of the 24–hour retention period.*
9. *When making repairs to, or when specified, structures and portions of pipelines shall be chlorinated by a concentrated chlorine solution containing not less than 200 PPM (mg/l) of free chlorine. The solution shall be applied with a brush or sprayed on the entire inner surface of the empty pipes or structures. The structures disinfected shall remain in contact with the strong chlorine solution for at least 30 minutes.*
10. *After the required retention of chlorinated water in the pipe or structures, they shall be thoroughly flushed until the replacement water shall, upon test, both chemically and bacteriological, be proven equal to water quality served by the public from the existing water supply system.*
11. *The disposal of chlorinated water from any pipe or structure shall be such that it will not cause damage to any vegetation, fish, or animal life.*
12. *The Contractor shall make all arrangements for the testing of water quality by an approved independent laboratory. Two acceptable bacteriological test, taken at least 24 hours apart, shall be collected from the new water main. At least 1 set of samples must be collected from every 1,000 LF of the new water main, plus one set from the end of the line and at least one set from each branch. The results for all tests shall be forwarded to the Design Engineer and the public health authority having jurisdiction.*
13. *All water quality requirements shall be fulfilled prior to the passage of any water through the new system to a public supply or the use of the new system.*

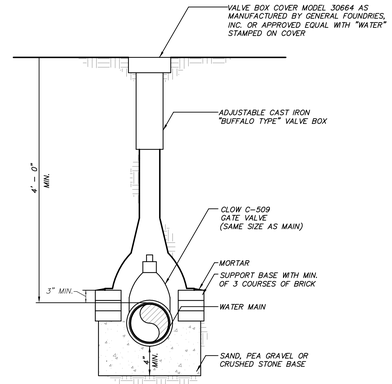
PVC PIPE WATER MAIN NOTES:

1. *All water mains shall be PVC Class 200 DR 14 pipe with factory installed push–on gaskets. All pipe shall be in conformance with the latest edition AWWA C900.*
2. *All water main fittings shall be Class 350 ductile iron mechanical joints in accordance with the latest edition of AWWA/ANSI Standards C111/A21.11. "GRIP RING" restrained joint connections shall be provided at every fitting (as manufactured by ROMAC Industries, Inc. or approved equal).*
3. *Thrust blocks shall be installed at all changes in horizontal or vertical alignment.*
4. *All water mains and appurtenances shall be installed in accordance with the latest edition of AWWA C605.*
5. *Gate valves shall be "Clow" or approved equal, iron body, non–rising stem conventional packing, resilient seated, mechanical joint with restrained joint gaskets, pressure class 350, opening shall be left (CCW) and operation shall be by 2" square wrench nut.*
6. *All water mains and appurtenances (including water service lines up to the curb stop) shall be pressure tested and leakage tested to the satisfaction of the Design Engineer, and the Westchester County Department of Health. This shall be done in accordance with the latest edition of AWWA Standard C605.*
7. *All water mains and appurtenances shall be flushed, disinfected, and tested to the satisfaction of the Design Engineer, and the Westchester County Department of Health. This shall be done in accordance with the latest edition of AWWA Standard C651, section 4.4.3, the "Continuous Feed Method". The "Tablet method" will not be allowed.*
8. *Water mains shall be laid at least 10 feet horizontally from any existing or proposed sanitary or storm sewer main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot separation, the Design Engineer and Westchester County Department of Health may allow deviation with prior approval on a case–by–case basis, if supported by data from the Design Engineer prior to the installation of the water lines. The horizontal separation shall also apply to service connections.*
9. *Water mains crossing sanitary or storm sewer mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. In cases where it is not practical to maintain the 18 inch vertical separation, the Design Engineer and Westchester County Department of Health may allow deviation with prior approval on a case–by–case basis, if supported by data from the Design Engineer prior to the installation of the water lines. The vertical separation also applies to water service connections.*
10. *The Design Engineer, Westchester County Department of Health, and Town's Authorized Representative shall be notified forty eight (48) hours before construction is started.*
11. *The water mains shall not be placed into service until a certificate of construction compliance has been submitted to and accepted by the Westchester County Department of Health.*
12. *The Westchester County Department of Health must be notified forty eight (48) hours prior to pressure testing the water main improvements.*
13. *The contractor shall notify the Design Engineer every day that water main construction shall occur.*

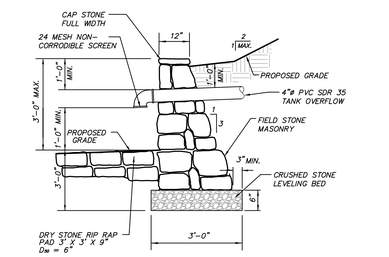


NOTES:
1. *WHEN THE 10' SEPARATION CANNOT BE MAINTAINED, THE WATER LINE SHALL BE ENCASED IN CONCRETE (SEE DETAIL) ONLY WITH PRIOR APPROVAL OF THE DESIGN ENGINEER AND DEPARTMENT OF HEALTH.*
2. *THE 10' SEPARATION APPLIES TO WATER MAINS AND WATER SERVICE CONNECTIONS.*

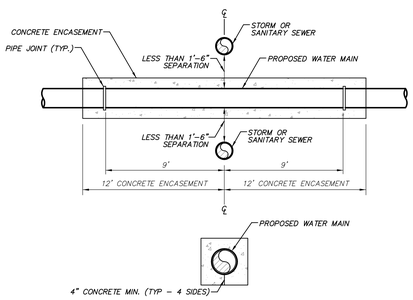
WATER LINE HORIZONTAL SEPARATION DETAIL
(N.T.S.)



WATER MAIN GATE VALVE AND VALVE BOX DETAIL
(N.T.S.)

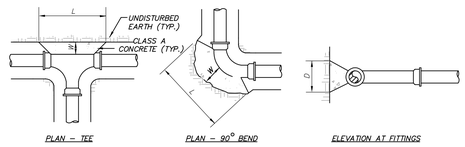


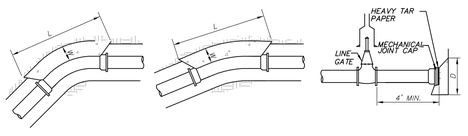
WATER STORAGE TANK OVERFLOW SPLASH PAD DETAIL
(N.T.S.)

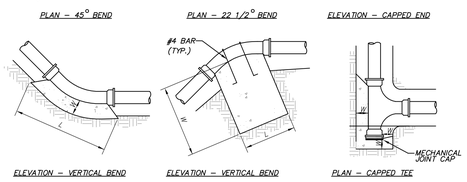


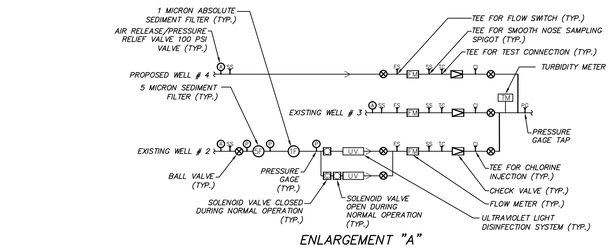
WATER MAIN CONCRETE ENCASEMENT DETAIL
(N.T.S.)

NOTE: *CONCRETE ENCASEMENT IS ONLY TO BE USED WHEN 18" MINIMUM SEPARATION IS NOT POSSIBLE. CONCRETE ENCASEMENT REQUIRES PRIOR APPROVAL BY THE DESIGN ENGINEER & THE DEPARTMENT OF HEALTH.*

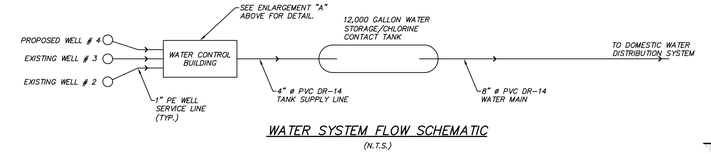




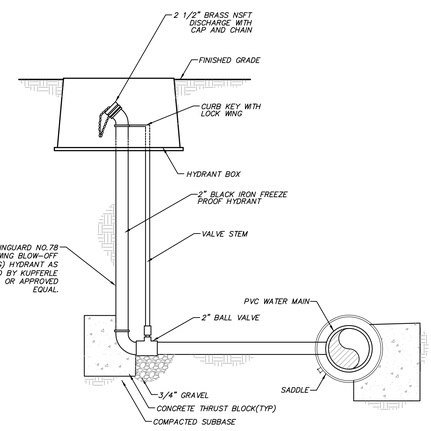




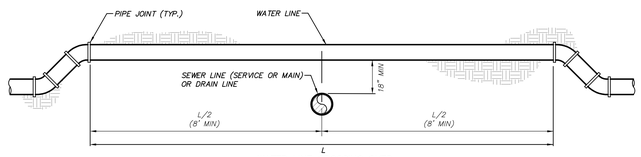
ENLARGEMENT "A"



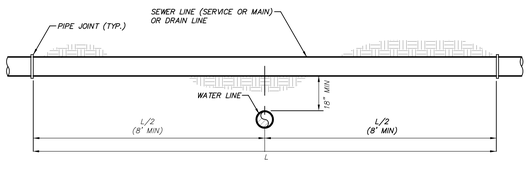
WATER SYSTEM FLOW SCHEMATIC
(N.T.S.)



FLUSHING HYDRANT DETAIL
(N.T.S.)



WATER LINE CROSSING OVER
SANITARY SEWER LINE OR STORM DRAIN LINE



WATER LINE CROSSING UNDER
SANITARY SEWER LINE OR STORM DRAIN LINE

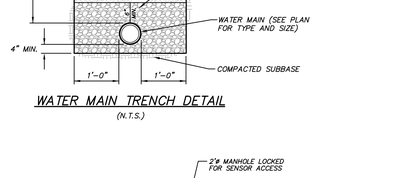
NOTES:
1. *WHEN 18" SEPARATION CANNOT BE MAINTAINED, THE WATER LINE SHALL BE ENCASED IN CONCRETE (SEE DETAIL) ONLY WITH PRIOR APPROVAL OF THE DESIGN ENGINEER AND DEPARTMENT OF HEALTH.*
2. *PROVIDE PIPE AND FITTING RESTRAINT AS REQUIRED.*
3. *THE 18" SEPARATION APPLIES TO WATER MAINS AND WATER SERVICE CONNECTIONS.*

WATER LINE CROSSING DETAIL
(N.T.S.)

THRUST BLOCK SCHEDULE

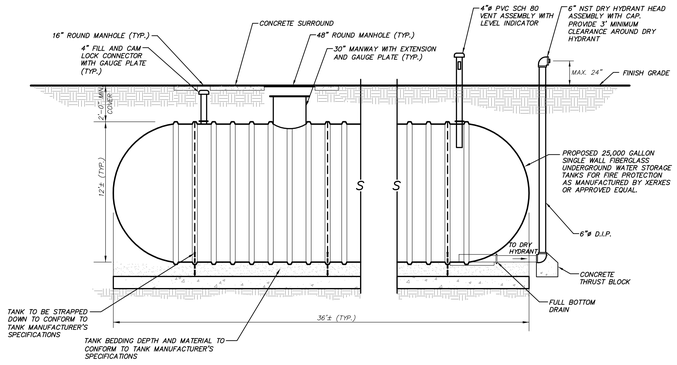
PIPE SIZE	CAP/TEE L	CAP/TEE D	22 1/2° L	22 1/2° D	45° L	45° D	90° L	90° D	W
4"	2'	1.5'	2'	1.5'	2'	1.5'	2'	1.5'	1.5'
6"	2'	1.5'	2'	1.5'	2'	1.5'	2'	1.5'	1.5'
8"	3'	2'	2'	2'	2'	2'	3'	2'	1.5'

THRUST BLOCK DETAILS
(N.T.S.)

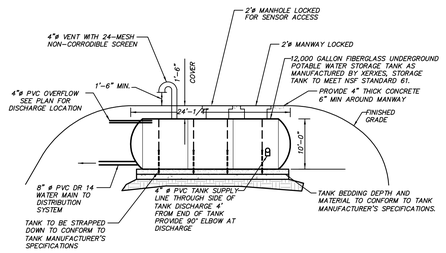


WATER MAIN TRENCH DETAIL
(N.T.S.)

NOTES:
1. *PROVIDE CONCRETE THRUST BLOCKS AT ALL CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS FOR THE DRY HYDRANT AND CONNECTION PIPE.*
2. *PROVIDE LOW LEVEL ALARM IN CLUBHOUSE BUILDING.*



FIRE PROTECTION STORAGE TANK DETAIL
(N.T.S.)



POTABLE WATER STORAGE TANK DETAIL
(NTS)

NO.	DATE	REVISION	BY
9	11–29–18	REVISED PER GBFD COMMENTS	MEU
8	9–27–18	REVISED PER TOWN COMMENTS	BD
7	8–23–18	PLANNING BOARD SUBMISSION	JFR
6	8–2–18	REVISED PER TOWN COMMENTS	JJR
5	6–28–18	REVISED PER TOWN COMMENTS	MEU
4	11–17–17	REVISED PER NYCDEP COMMENTS	ZMP
3	9–01–17	REVISED PER TOWN COMMENTS	ZMP
2	7–27–17	REVISED PER TOWN COMMENTS	EIG
1	6–29–17	REVISED PER TOWN COMMENTS	SJC

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ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

STATE OF NEW YORK — JEFFREY J. CONTELMO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	6–1–17	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

DRAWING NO. D–4
SHEET 15 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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SEWER TESTING PROCEDURES

TESTS FOR NON-PRESSURE PIPELINES FOR TRANSPORT OF SEWAGE

The leakage shall be determined by exfiltration, infiltration or low pressure air.

A. Exfiltration Testing

1. Exfiltration tests shall be made by filling a section of pipeline with water and measuring the quantity of leakage.
2. The head of water at the beginning of the test shall be at least 2 feet above the highest pipe within the section being tested (5 feet for WCDEF sewers).
   a. Should groundwater be present within the section being tested, the head of water for the test shall be 2 feet above the hydraulic gradient of the groundwater.
   b. Should the requirement of 2 feet of water above the highest pipe subject any joint at the lower end of the test section to a differential head of greater than 11.5 feet, another method of testing shall be employed.

B. Infiltration Testing

1. Infiltration tests will be allowed only when the water table gauges determine the groundwater level to be 2 feet or more above the highest pipe of the section being tested.
2. Infiltration test shall be made by measuring the quantity of water leaking into a section of pipeline.
3. Measurement of the infiltration shall be by means of a calibrated weir constructed at the outlet of the section being tested.

C. Allowable Leakage for Non-Pressure Pipelines

1. The allowable leakage (exfiltration or infiltration) for non-pressure pipelines shall not exceed the following in gallons per 24 hours per inch of diameter per 1000 feet of pipe:

Type of Pipe	Leakage
Ductile iron – mechanical or push-on joints	100
Polyvinyl chloride, thermal plastic or fiberglass with rubber joints	100
Cast iron soil pipe	0

2. Regardless of the above allowable leakage, any spurting leaks detected shall be permanently stopped.

D. Low Pressure Air Testing

1. Air testing for acceptance shall not be performed until the backfilling has been completed.
2. Low pressure air tests shall conform to ASTM C 828 or ASTM F1417-92, Section 8.2.2, Time-Pressure Drop Method for a 0.5 psi drop, except as specified herein and shall not be limited to type or size of pipe.
3. All sections of pipelines shall be cleaned and flushed prior to testing.
4. The air test shall be based on the starting pressure of 3.5 to 4.0 psi gauge. The time allowed for the 0.5 psi drop in pressure, measured in seconds, will be computed based on the size and length of the test section by the Engineer.
   a. When groundwater is present, the average test pressure of 3 psig shall be above any back pressure due to the groundwater level.
   b. The maximum pressure allowed under any condition in air testing shall be 10 psig. The maximum groundwater level for air testing is 13 feet above the top of the pipe.
5. The equipment required for air testing shall be furnished by the Contractor and shall include the necessary compressor, valves, gauges and plugs to allow for the monitoring of the pressure, release of pressure and a separable test gauge.
   a. The test gauge shall be sized to allow for the measuring of the 0.5 psig loss allowed during the test period and shall be on a separate line to the test section.

E. Deflection Testing

1. Deflection testing shall be performed 30 days after backfilling. The test shall be made by passing a ball or cylinder no less then 95% of the pipe diameter through the pipe. The test shall be performed without mechanical pulling devices.

F. Manhole Testing

1. General
   a. Each manhole shall be tested by either exfiltration, infiltration or vacuum testing.
   b. A manhole will be acceptable if the leakage does not exceed an allowance of one gallon per vertical foot of depth for 24 hours. Regardless of the allowable leakage, any leaks detected shall be permanently stopped.
2. Exfiltration tests shall be performed after backfilling. The test shall be made by filling the manhole with water and observing the level for a minimum of eight hours.
3. Infiltration tests shall be performed after backfilling when the groundwater level is above the joint of the top section of a precast manhole.
4. Vacuum testing shall be performed after backfilling in accordance with the latest revision of ASTM C1244-02 as follows:
   a. The test head shall be placed at the top of the manhole in accordance with the manufacturer's recommendations.
   b. A vacuum of 10 in. of mercury shall be drawn on the manhole, the valve on the vacuum line of the test head closed, and the vacuum pump shut off. The time shall be measured for the vacuum to drop to 9 in. of mercury.
   c. The manhole shall pass if the time for the vacuum reading to drop from 10 in. of mercury to 9 in. of mercury meets or exceeds the values indicated below:

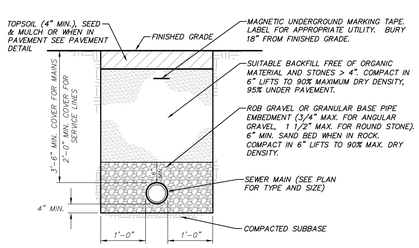
Minimum Test Times for Various Manhole Diameters in Seconds:

Depth (ft)	Diameter (inches)	48	60
		Time (seconds)	
8 or less		20	26
10		25	33
12		30	39
14		35	46
16		40	52
18		45	59
20		50	65

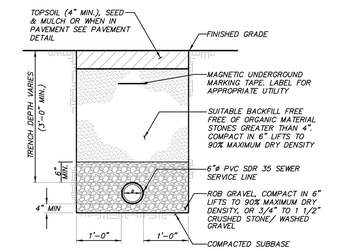
   d. If the manhole fails the initial test, necessary repairs shall be made by an approved method. The manhole shall then be retested until a satisfactory test is obtained.

SEWER MAIN NOTES

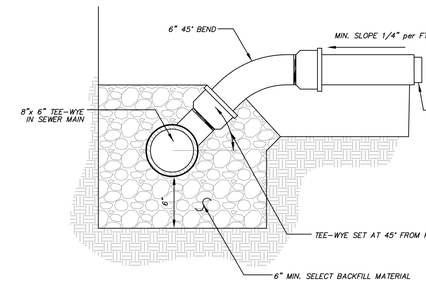
1. All sewer mains & sewer services shown on these plans shall be polyvinyl chloride (PVC) SDR 35.
2. Sewers shall be laid at least 10 feet horizontally from any existing or proposed water main. The distance shall be measured edge to edge. In cases where it is not practical to maintain a 10 foot horizontal separation, the Design Engineer and Westchester County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer. The horizontal separation also applies to service connections.
3. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. In cases where it is not practical to maintain a 10 foot horizontal separation, the Design Engineer and Westchester County Department of Health may allow deviation with prior approval on a case-by-case basis, if supported by data from the Design Engineer prior to sewer line installation. The vertical separation also applies to service connections.
4. Sanitary sewer service lines shall be tested in conjunction with the sewer mains to the property line or easement line, and in accordance with the latest Westchester County Department of Health Rules & Regulations.
5. Testing of the manholes with the pipeline shall not be permitted. Manholes & sanitary sewer lines shall be tested independently of each other.
6. The owner/applicant shall be responsible for acquiring supervision of the construction of the sanitary sewer main system by a person or firm qualified to practice professional engineering in the state of New York.
7. The owner/applicant shall be responsible for providing Three (3) copies of as-built drawings signed and sealed by a licensed and registered New York State Professional Engineer to the Westchester County Department of Health at the completion of the construction.
8. The Design Engineer, Westchester County Department of Health, and Town Engineering Department shall be notified forty eight (48) hours before construction is started.
9. The sanitary sewer mains shall not be placed into service until a certificate of construction compliance has been submitted to and accepted by the Westchester County Department of Health.
10. The Westchester County Department of Health and the New York City Department of Environmental Protection must be notified forty eight (48) hours prior to pressure testing the sewer main improvements.
11. Manhole frames & covers to be Campbell pattern #1007C for 24" opening or approved equal. M.H. covers to be marked "SEWER" and to have six 3/4"ø hole vents. (use solid covers where necessary.)
12. The exterior of all manholes shall be covered with an approved asphalt waterproofing.
13. Concrete base slabs shall be air entrained concrete with a minimum design strength of 3,000 psi.
15. The contractor shall submit shop drawings of the precast manholes to the Design Engineer for review and acceptance.
16. Precast manholes shall have minimum reinforcement of 0.12 sq.. in. per lin. ft. for 48" barrel & be designed in accordance with A.S.T.M. C-478, and withstand an H-20 design loading.
17. Precast base sections to have the required number of gaskets and openings as shown and specified.
18. Precast manhole sections shall employ a watertight gasket arrangement between each section approved by the Design Engineer.
19. Openings for pipes shall be precast or machine cored. Gaskets or collars for pipe connections to manholes shall be resilient and watertight and compatable with the type of pipe being used.
20. The length of pipes entering or leaving any manhole shall be greater than 2'-0".
21. Precast manholes under 6'-0" deep shall have a "Flat Top" slab roof.
22. Gaskets or collars for pipe connections to manhole shall provide a minimum of 0.1' drop across the manhole.



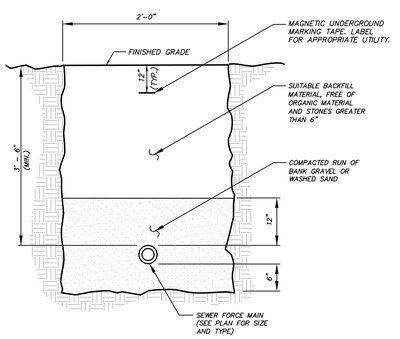
SEWER MAIN TRENCH DETAIL
(N.T.S.)



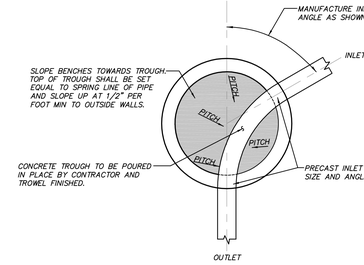
SEWER SERVICE LINE TRENCH DETAIL
(N.T.S.)



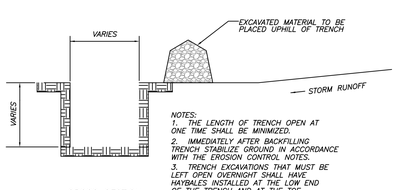
SEWER SERVICE CONNECTION DETAIL
(N.T.S.)



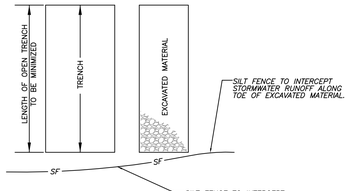
SEWER FORCE MAIN TRENCH DETAIL
(N.T.S.)



TYPICAL MANHOLE TROUGH DETAIL
(N.T.S.)

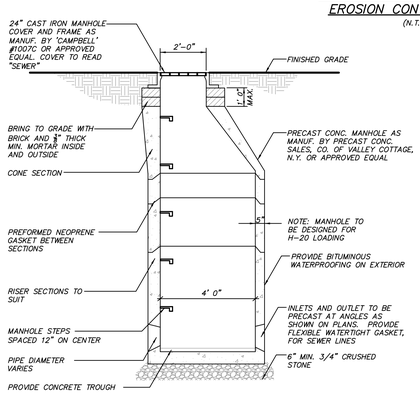


CROSS SECTION

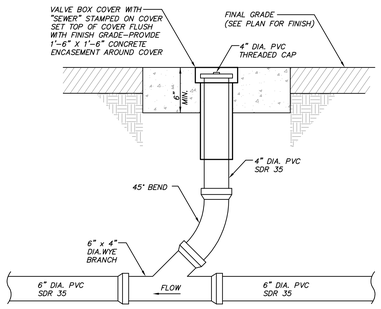


PLAN SECTION

UTILITY TRENCH EXCAVATION EROSION CONTROL DETAIL
(N.T.S.)



SEWER MANHOLE DETAIL
(N.T.S.)



SEWER LINE CLEANOUT DETAIL
(N.T.S.)

NO.	DATE	REVISION	BY
16	11-29-18	REVISED PER GBFD COMMENTS	MEU
15	9-27-18	REVISED PER TOWN COMMENTS	BD
14	8-23-18	PLANNING BOARD SUBMISSION	JFR
13	8-2-18	REVISED PER TOWN COMMENTS	JJR
12	6-28-18	REVISED PER TOWN COMMENTS	MEU
11	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
10	9-01-17	REVISED PER TOWN COMMENTS	ZMP
9	7-27-17	REVISED PER TOWN COMMENTS	EIG
8	6-29-17	REVISED PER TOWN COMMENTS	SJC

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

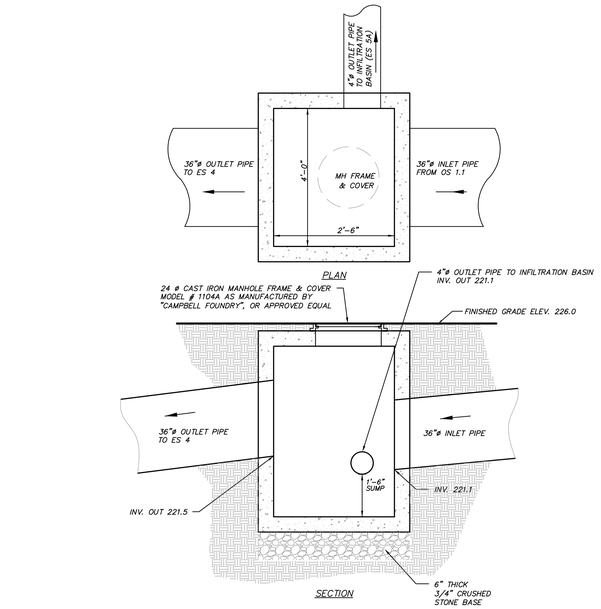
STATE OF NEW YORK — JEFFREY J. CONTEGNO — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	6-1-17	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

DRAWING NO. D-5
SHEET 16 / 18

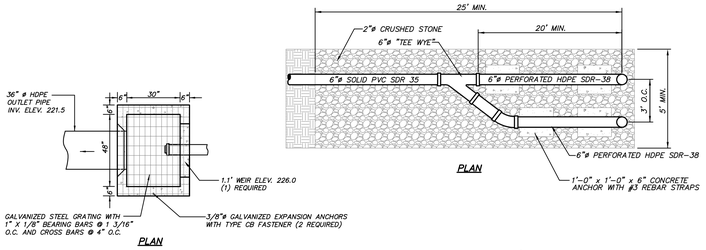
ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

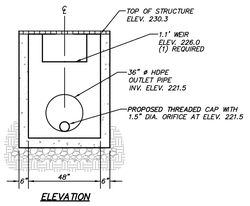
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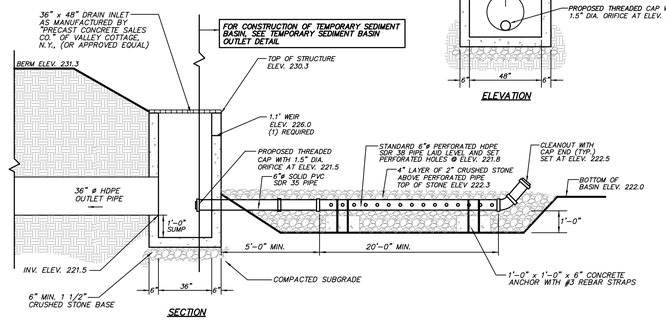


FLOW SPLITTER FS 5 DETAIL

(N.T.S.)

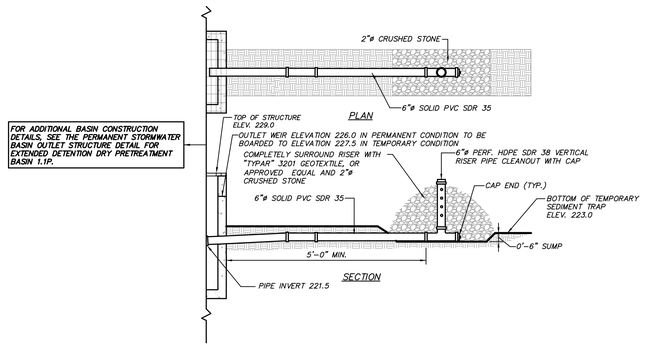






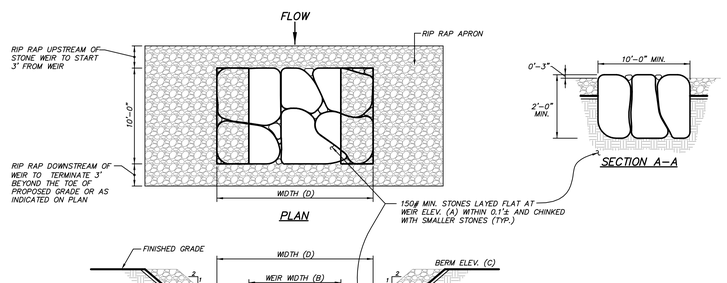
EXTENDED DETENTION DRY PRETREATMENT BASIN 1.1 EDB OUTLET STRUCTURE (OS 1.1 EDB) DETAIL

(N.T.S.)



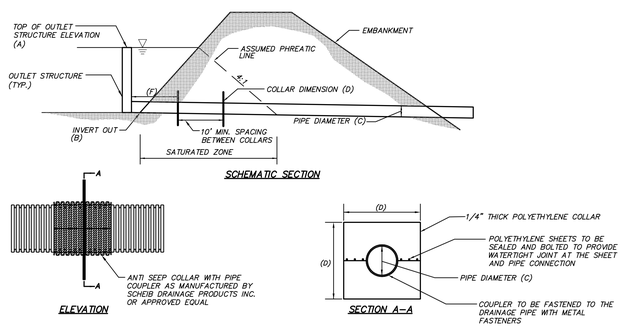
TEMPORARY SEDIMENT TRAP OUTLET STRUCTURE DETAIL

(N.T.S.)



STONE EMERGENCY OVERFLOW DETAIL

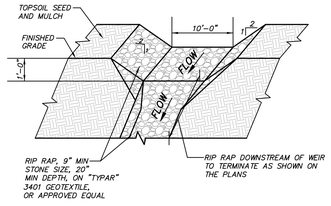
(N.T.S.)



OUTLET STRUCTURE	TOP OF STRUCTURE ELEVATION (A)	INVERT OUT ELEVATION (B)	PIPE DIAMETER (INCHES) (C)	COLLAR DIMENSION (FT.) (D)	NUMBER OF COLLARS REQUIRED	DISTANCE FROM OUTLET STRUCTURE TO FIRST COLLAR (F)
OS 1.1 EDB	230.3	221.5	36"	6'x6'	3	10'
OS 1.2 1B	222.5	216.0	15"	3'x3'	1	10'

ANTI-SEEP COLLAR DETAIL

(N.T.S.)



EMERGENCY OVERFLOW SPILLWAY DETAIL

(N.T.S.)

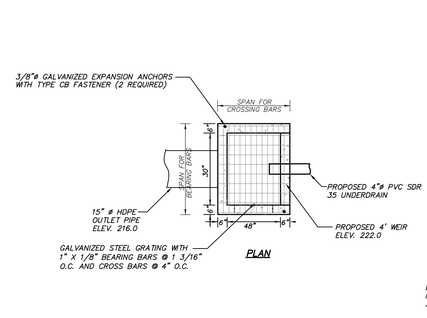
PERMANENT STORMWATER FACILITIES MAINTENANCE SCHEDULE

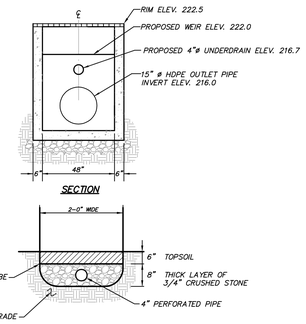
PRACTICE/FACILITY	MONTHLY	AFTER MAJOR STORM EVENTS	BI-ANNUALLY	YEARLY	EVERY 5 to 10 YEARS
RIP RAP SWALES	Ensure contributing areas clean of debris, no evidence of erosion, & mowing performed.	Inspect for erosion, soil permeability & evidence of flow going around structures.	–	Inspect & clean accumulated sediment.	–
SUBSURFACE STORMWATER COLLECTION SYSTEMS	–	–	Inspect & clean	Inspect, clean, repair and/or replace structures. Remove debris.	–
GRASS SWALES	Inspect first few months after construction for eroding soils & slumpage & repair immediately	–	Inspect & clean Mow & remove debris & litter. Revegetate as needed.	–	Inspect for & remove accumulated sediment
DRAINAGE STRUCTURES (CATCH BASINS, DRAIN INLETS, SIDE DRAIN INLETS, AND DRAINAGE MANHOLES)	–	Side drain inlets shall be inspected and any accumulated sediment in sump shall be removed.	Inspect all structures for damage to frame and grate & pipe inlets/outlets. Clean accumulated sediment in sump.	–	–
INFILTRATION BASINS, SEDIMENTATION BASIN	Inspect first few months after construction for eroding soils & slumpage & repair immediately	Inspect orifices, inlets & outlets for clogging, eroding soils on the basin berm & embankments, & sources of erosion; & stabilize and/or repair immediately.	Mow berms and exterior embankments Remove debris & litter from basins & outlet structures. Remove Sediment if accumulated greater than an 1"	–	Inspect for & remove accumulated sediment
WOODED FILTER STRIPS	–	–	Inspect buffer for condition of vegetative cover. Remove any accumulated sediment or debris and repair any areas of erosion	Inspect buffer for condition of vegetative cover. Remove any accumulated sediment or debris and repair any areas of erosion	–

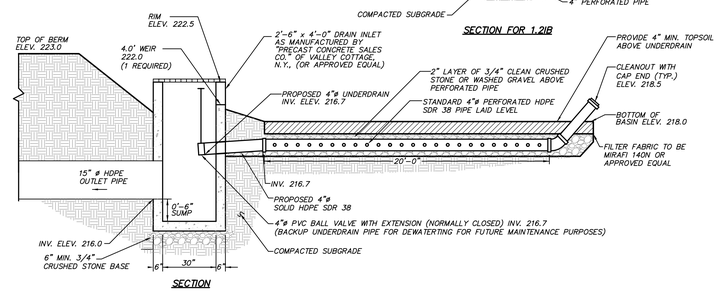
Note: The party responsible for implementation of the maintenance schedule during and after construction is:

Wilder Balter Partners, Inc.
480 North Bedford Road
Building 300, 1st Floor, West Wing
Chappaqua, NY 10514

and/or the current owner(s) of the subject property.







PERMANENT INFILTRATION BASIN 1.2IB OUTLET STRUCTURE (OS 1.2IB) DETAIL

(N.T.S.)

EXTENDED DETENTION DRY PRETREATMENT BASIN & INFILTRATION BASIN OUTLET NOTES

1. THE BASINS ARE PROPOSED TO BE UTILIZED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION.
2. AFTER THE CONTRIBUTING AREAS TO THE BASINS HAVE BEEN PERMANENTLY STABILIZED, THE FOLLOWING SHALL BE ACCOMPLISHED:

FOR EXTENDED DETENTION DRY PRETREATMENT BASIN 1.1 EDB:

A. CLEAN BASIN AND OUTLET STRUCTURE AND REMOVE 6"ø PERFORATED VERTICAL RISER PIPE, CRUSHED STONE AND FILTER FABRIC.
B. ADD THREADED CAP WITH ORIFICE AT DISCHARGE END OF 6"ø SOLID PVC SDR 35 PIPES PER DETAIL.
C. REPLACE THE PERFORATED PIPE AND CRUSHED STONE. DO NOT REPLACE FILTER FABRIC.
D. ESTABLISH THE FINAL VEGETATION IN THE BASIN IN ACCORDANCE WITH THE TYPICAL DRY STORMWATER / INFILTRATION BASIN PLANTING DETAIL.

FOR INFILTRATION BASIN 1.2IB:

A. INFILTRATION BASIN CONSTRUCTED IN ITS FINAL CONDITION PER THE DETAILS SHOWN HEREON DURING INITIAL PHASES OF CONSTRUCTION AND STABILIZED.
B. ALL FLOW SHALL BE DIVERTED AWAY FROM THE BASIN UNTIL ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL NOTES.
C. UPON COMPLETE STABILIZATION OF ALL CONTRIBUTING AREAS AND CONVERSION OF THE TEMPORARY SEDIMENT TRAP TO THE PERMANENT EXTENDED DETENTION DRY PRETREATMENT STORMWATER BASIN. DIRECT ALL TO INFILTRATION BASIN.

3. FOLLOWS: * WHEN INITIALLY USED AS THE TEMPORARY SEDIMENT BASIN DEWATERING DEVICE THE RISER SHALL BE WRAPPED WITH TYPAR 3201 GEOTEXTILE OR APPROVED EQUAL AND SURROUNDED WITH 2"ø STONE. THE TOP OF THE RISER SHALL BE SET AT THE SAME ELEVATION AS THE WEIRS AS SHOWN IN THE STORMWATER BASIN OUTLET STRUCTURE DETAILS.

NO.	DATE	REVISION	BY
11	11-29-18	REVISED PER GBFD COMMENTS	MEU
10	9-27-18	REVISED PER TOWN COMMENTS	BD
9	8-23-18	PLANNING BOARD SUBMISSION	JFR
8	8-2-18	REVISED PER TOWN COMMENTS	JJR
7	6-28-18	REVISED PER TOWN COMMENTS	MEU
6	1-23-18	REVISED PER NYCDEP COMMENTS	ZMP
5	12-28-17	REVISED PER NYCDEP COMMENTS	ZMP
4	11-17-17	REVISED PER NYCDEP COMMENTS	ZMP
3	9-01-17	REVISED PER TOWN COMMENTS	ZMP
2	7-27-17	REVISED PER TOWN COMMENTS	EIG
1	6-29-17	REVISED PER TOWN COMMENTS	SJC

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
WILDER BALTER PARTNERS, INC.
ROUTE 22, TOWN OF LEWISBORO, WESTCHESTER COUNTY, NEW YORK

DRAWING:
SITE DETAILS

PROJECT NUMBER	15246.100	PROJECT MANAGER	J.J.C.
DATE	6-1-17	DRAWN BY	S.J.C.
SCALE	AS SHOWN	CHECKED BY	D.L.M.

DRAWING NO. D-6
SHEET 17 / 18

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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Wetland Buffer Mitigation Plan Notes
Wilder Balter Lewisboro
Route 22, Town of Lewisboro, NY
June 23, 2017
Revised October 11, 2017

Notes:

1. Limits of the wetland buffer enhancement area will be staked out prior to commencement of plant removal.
2. Nuisance and non-native vegetation will be removed, including species listed in the invasive species narrative.
3. Wetland seed mix will be used as specified to supplement plantings at a rate of 4 pounds per acre. Eight pounds of seed will be used for this site.
4. The area chosen for restoration and enhancement is adjacent to the northern side of the wetland, and is the location of past site activities. Historic aerial photos show that agricultural and forestry activities were being conducted on this part of the site as recently as the 1960's. Secondary growth following the cessation of this disturbance includes a number of non-native and invasive species, which will be cleared from the site in accordance with the attached maintenance plan.
5. Two stormwater management basins will be constructed partially within the regulated buffer areas. These basins will be planted as stormwater wetlands, and will also add diversity of vegetation and stormwater quality treatment to the site.
5. A total of 91 shrubs, 12 trees and a number of herbaceous plants will be planted to create a more diverse buffer plant community on site as per the plant list below.

Goals/Offsetting of Proposed Impacts

The proposed impacts to buffers and adjacent areas are associated with the construction of stormwater management basins designed to treat runoff from the newly developed residential units. These basins will be constructed in an area that was previously disturbed and has suitable topography such that the basins can be created with minimal grading and earth movement. The proposed planting plan will improve on this vegetative cover by introducing native species to the area, while providing filtering and flood attenuation of overland runoff before it enters the receiving stream.

It is noted that a portion of the proposal is to eliminate non-native vegetation in some areas of the existing wetland and adjacent areas. In total, the proposed mitigation will include approximately two acres of the site. No direct impacts to wetlands are proposed; approximately 14,500 sf of Town and 7,000 sf of DEC buffer will be affected. Mitigation ratios will therefore be approximately 3.7: and 7.7:1 respectively.

Proposed Wetland Buffer Enhancement

The overall mitigation area, identified on the plans as "wetland/buffer enhancement area", is a disturbed part of the site where previous site work, clearing and grading were done. As noted above, nuisance vegetation, stone piles and rubble will be removed in this area and plants installed as shown on the planting plan.

Planting Details

Plant choices for the wetland expansion were made according to existing site conditions and locally common species.

All planting will proceed by hand. Materials will be brought to the site in good condition (see below) and then placed in central drop locations. The materials will then be hand-carried to their planting locations and in turn, planted by hand. Only rounded, shallow planting shovels will be used in this effort.

Criteria for selecting plant material will include (1) the plant's ability to withstand the expected light and saturation conditions; (2) its demonstrated survival on this site and other nearby sites; (3) the plant must be native and non-invasive; and (4) whether the plant material is available at nurseries in the same region as the site. See Table 1 for complete plant species list. Seed mix was chosen based on the species' ability to survive in moist areas adjacent to the road with some sun.

Planting will be done in spring or early summer (between April 1 and July 1). Shrubs may also be planted in the late summer to early fall (September 1 to October 30). In all cases, a hole will be dug twice as deep as the root ball. The only shovels allowed are rounded, shallow spades. The hole will then be backfilled with a thin layer of rich, organic topsoil, the plant placed inside, the hole backfield to the top and then gently tamped down.

Container-grown plant material delivered to the job site will be inspected to assure moist soil/root masses. Any dry and light weight plants will not be accepted. If not planted immediately the container will be stored out of the sun and wind and kept moist (i.e., a means of watering will be provided and watering will occur daily). When removed from the containers, the plants will be the size of the specified container. If in leaf, the plants will appear healthy with no spots, leaf damage, discoloration, insects or fungus. If not in leaf, the buds will be firm and free of damage, discoloration, insects or fungus. Containers will be a minimum of quart size for shrubs and gallon size for trees.

Bare roots plants will be shipped from the nursery immediately after lifting from the field and will be planted immediately upon arrival at the site. If they cannot be planted as soon as arriving at the site, they will be stored in the shade, protected from sun and wind, and kept moist by the use of straw, peat moss, compost, or other suitable materials. Plants not having an abundance of well developed terminal buds on the leaders and branches will be rejected. The stems and branches of all plants will be turgid and the cambium healthy or the plants rejected. Any bare root plants that are in leaf or have leaflets will be rejected.

Plant Species Choices for Wetland Buffer Enhancement/Restoration

Map Symbol	Quantity	Scientific Name	Common Name	Size
Trees				
Aru	12	Acer rubrum	Red Maple	5' - 6'
Shrubs				
CSe	29	Cornus sericea	Redosier dogwood	3' - 4'
AC	6	Amelanchier canadensis	Shadblow	4' - 5'
SD	14	Salix discolor	Pussy willow	3' - 4'
VC	21	Vaccinium corymbosum	Highbush blueberry	4' - 5'
VD	21	Viburnum dentatum	Arrowwood	4' - 5'
Herbaceous Plants				
CS	100	Carex stricta	Tussock sedge	2" plug
CC	100	Carex crinita	Fringed sedge	2" plug
JE	100	Juncus effusus	Soft rush	2" plug
Seed Mix				
SWM	8 pounds	Riparian Buffer Mix ERNMX-154 Or equivalent		

Wetland Buffer Enhancement Areas

Following the removal of non-native invasive species as specified in the invasive species eradication plan, wetland and buffer areas will be seeded using the following seed mixes:

Buffer Areas - Riparian Buffer Mix (ERNMX-154 or equivalent) at 20 lbs/acre.

Monitoring and Maintenance

At least one pre-construction meeting will occur between the chosen grading and/or planting contractor/subcontractor and the site environmental monitor prior to beginning construction on site. The construction monitor will have experience in wetland construction and a Bachelor of Science degree in Natural and/or Physical Resources.

Monitoring and maintenance efforts for the mitigation plantings will take place over a five year period following construction. This will include bi-weekly visits for the first growing season, and then twice a year for the next four years, with additional inspections as required depending on conditions. The applicant's environmental monitor will conduct a survey of the site and site conditions will be noted and adjusted as necessary. A goal of at least 85% survival and a maximum of 10% non-native species willbe considered acceptable. An annual report will be provided to the Town of Lewisboro and government agencies at the end of the growing season for each of the five years. Deer fence will be utilized as necessary to minimize damage from deer browsing.

Invasive Species Monitoring and Control Program

Japanese barberry, oriental bittersweet, *Phragmites australis* and multifloral rose are all noted as present within and adjacent to the wetlands on the project site. These invasive species favor areas of disturbed soils and edge areas. This plan will implement an invasive species monitoring and manual control program for the duration of construction and development of the project. It has been designed to carry over into the needed maintenance plans that will need to be developed and implemented by the Project Owner.

Those areas of the site that are closest to the existing wetlands and watercourses have been disturbed and re-graded over the years. These are the portions of the site that are known to support invasive species which are altering the character of the wetlands and adjacent areas and represent a long term risk to the native vegetative community.

By controlling exotic vegetation, and reducing deer populations due to increased human activity on the site, nearby native plants will have less competition and therefore have more resources available for their own growth. An invasive species monitoring and control program will be implemented at the project site as part of the overall development plan. Species targeted for removal include the following:

Tree-of-heaven (Ailanthus altissima)
Multiflora rose (Rosa multiflora)
Mugwort (Artemisia vulgaris)
Autumn olive (Eleagnus umbellata)
Garlic mustard (Alliaria petiolata)
Purple loosestrife (Lythrum salicara)
Common reed (Phragmites australis)
Oriental bittersweet (Celastrus orbiculatus)
Porcelainberry (Ampelopsis brevipedunculata)
Japanese Barberry (Berberis thunbergii)
Japanese Stilt Grass (Microstegium vimeneum)
Winged Euonymus (Euonymus alatus)

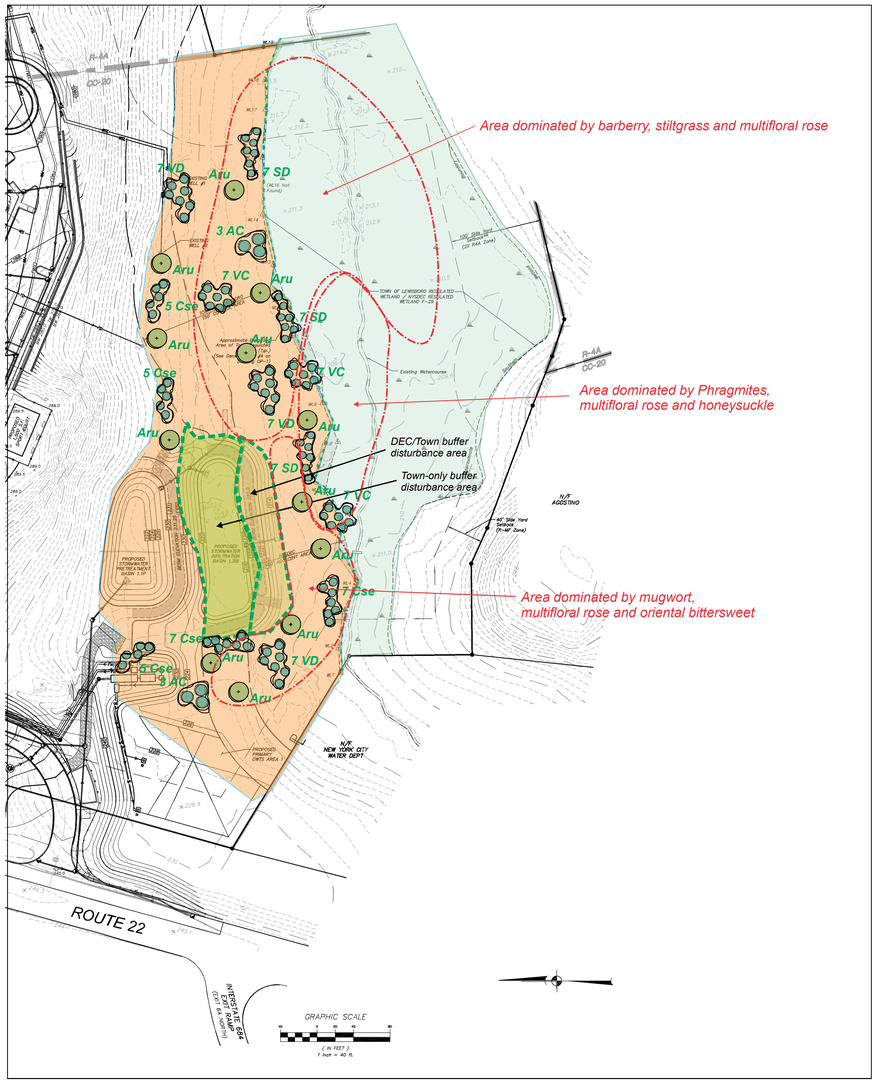
The above listed species and all other invasive non-native plants that are detrimental to the ecology of the project site will be removed during site development to the extent practicable. The goal of this program is to reduce the presence of exotic/invasive species to a threshold of less than ten percent total cover within the areas shown on the Wetland Restoration and Buffer Enhancement Plan (the "Plan"). A qualified biologist/botanist will supervise the removal of invasive species. Invasive species can be removed in several ways, depending on the location and species of the plant:

1. If a shrub is isolated and does not have its root system entwined with other plants, it may be removed mechanically. As much of the root system as possible should be removed to prevent the possibility of the invasive plant sprouting from root pieces left behind.
2. If a shrub is growing amongst other native plants in a way that uprooting it may disturb surrounding native plants warranting preservation, the plant may be most safely and effectively removed by chemical means. To remove by chemical means, the plant shall first be cut back to a few stubs and stumps, about twelve inches from the base. An EPA approved solution of glyphosate (Round-up or equivalent) shall be painted on the ends of the stumps. This technique shall be applied in the early fall months before the onset of plant dormancy. Proper notification must be made prior to the application of all restricted pesticides, and application made by a licensed applicator, if required. During project construction, glyphosate will only be applied by a licensed herbicide applicator, as coordinated with the Environmental Site Monitor. Only hand-cutting and removal will be allowed within the Wetland Controlled Area.
3. Highly invasive groundcovers, such as Japanese honeysuckle, are difficult to eliminate due to their habit of rooting along the stem. Groundcovers of this type will be removed by hand or mechanically. If after the second year of treatment the species persists, it may be sprayed with glyphosate, using a very close and targeted application during the active growing season. If the plant is growing among other herbaceous or shrub material that would be harmed by spraying, the glyphosate shall be applied by brush or mechanical removal should be considered. Repeated treatments may be necessary to remove the plant completely.
4. Highly invasive annuals, such as garlic mustard, are difficult to eliminate due to their growth from seed that is widespread among the soil seed bank where the plants are found. Several methods may be utilized in removing this type of invasive plants. If the species is growing densely without other plants, the area will be sprayed with glyphosate during the active growing season, following the manufacturer's recommendations. Species will also be removed by hand. Both methods should be performed before plants set seed. Both methods shall be performed multiple times over a season and possibly over several seasons to completely eradicate the target species.

Monitoring and Maintenance Schedule

Following development of the site, a maintenance plan will include the regular inspection of undisturbed areas as shown on the Plan, and removal of these species as necessary. This represents the transitional areas that are most susceptible to opportunistic settling of invasive species. It is anticipated that a schedule of inspections three times a year for the first three years following full project build out (early, mid and late growing season) will be adequate for the identification and removal of the invasive species in this area.

The Town Building Inspector and Wetlands Inspector will be consulted prior to the proposed removal of invasive species within the controlled area. In addition, all activities related to invasive species control, monitoring and assessment of achievement of the 10 percent tolerance threshold for coverage by all invasive species on the project site will be coordinated with the Environmental Site Monitor. These inspections will include the mapping and identification of locations and extent of cover of invasive species, and identify the methods to be used for the subsequent removal. Following treatment, a brief report outlining extent, location and removal method for each species shall be prepared and filed with the Town Planning Office.



Buffer area to be enhanced. Invasive species will be removed, new plants installed and area seeded with transitional species mix.

Wetland area where invasive species will be removed.

Total Buffer Disturbance	
New York State DEC/Town of Lewisboro	7,400 sf
Town of Lewisboro only	14,500 sf
Total impervious cover within buffer (existing)	0 sf
Total impervious cover within buffer (proposed)	0 sf
Mitigation/Enhancement	
Wetland/Buffer enhancement area	+/- 40,000 sf
Stormwater Basin planting	+/- 14,000 sf
Total buffer restoration/enhancement	+/- 54,000 sf
Buffer/restoration ratio - DEC/Town	7.7:1
Buffer/restoration ratio - Town	3.7:1

Note: Refer to Site Plans prepared by Insite Engineering, Surveying and Landscape Architecture, P.C. for stormwater basin plantings and other site landscaping.

Mitigation Plan prepared by Frederick P. Wells, RLA and Steve Marino, PWS
Date: June 23, 2017, rev. October 11, 2017
rev. August 2, 2018
Basemap provided by INSITE Engineering

Tim Miller Associates, Inc.
Environmental and Planning Services
10 North Street, Cold Spring, NY
845 265 4400

WETLAND BUFFER RESTORATION AND ENHANCEMENT PLAN
FOR
WILDER BALTER PARTNERS INC.
ROUTE 22
LEWISBORO, WESTCHESTER COUNTY, NEW YORK

CONSERVATION EASEMENT

This Conservation Easement Agreement is made as of this ____day of December, 2018, between Property Group Partners, LLC, having an office at 609 Fifth Avenue, New York, New York 10017 (hereinafter referred to as "Grantor"), and the Lewisboro Land Trust, Inc., a New York not-for-profit corporation with a mailing address of PO Box 496, South Salem, New York 10590 (hereinafter referred to as "Grantee").

WHEREAS, Grantor is the owner in fee of real property located in the Town of Lewisboro, Westchester County, New York, known and designated on the tax map of the Town of Lewisboro as Section 5, Block 1735, Lots 19, 20 and 21, acquired by Grantor by deed from Lewisboro Land Corporation dated 7/22/2011 and recorded on 8/12/2011 in the Westchester County Clerk's office, Division of Land Records at Control Number 511883446, more particularly described in Schedule A attached hereto and incorporated herein by reference (hereinafter the "Property"); and

WHEREAS, Grantor wishes to donate a conservation easement (hereinafter this "Conservation Easement") pursuant to Article 49, Title 3 of the New York Environmental Conservation Law on a 20.06 acre portion of the Property, which is currently primarily undeveloped, more particularly described in Schedule B attached hereto and incorporated herein by reference (hereinafter the "Conservation Area"); and

WHEREAS, Grantee is a publicly supported tax exempt New York not-for-profit corporation within the meaning of Article 49, Title 3, of the Environmental Conservation Law of the State of New York, organized for the purpose, among others, of conserving real property, and is thereby qualified to be the grantee of conservation easements; and

WHEREAS, Grantor wishes to preserve and protect the scenic values and natural habitat, wooded, and wetland areas of the Conservation Area and provide for access to trails on the Conservation Area for the public thereby protecting significant conservation values, including the following:

- Preservation of the Conservation Area preserves land for outdoor recreation for the general public. The Conservation Area connects to a nature preserve maintained by Bedford Audubon which has hiking trails open to the public. The Conservation Area will provide an addition to the existing trail system enhancing the public recreation value of the preserve.

- Preservation of the Conservation Area open space through this Conservation Easement will help protect its wildlife habitat in perpetuity which _____; and

- Preservation of the Conservation Area preserves open space pursuant to clearly delineated State and local government conservation policy and provides a significant public benefit. The Conservation Area is in the Muscoot reservoir watershed , a part of the drinking water supply for New York City and surrounding areas

_____NY Open Space Plan, Lewisboro Master Plan, County of Westchester Croton plan _____; and

WHEREAS, the conservation values of the Conservation Area are documented in a Baseline Data Report dated _____2018, acknowledged by the signatures of Grantor and Grantee, which is to be filed in the office of the Lewisboro Land Trust, Inc. and is incorporated herein by reference, and which includes an inventory of the relevant conservation values, maps, photographs, reports and other documents that the parties agree provide an accurate representation of the Conservation Area at the time of the execution of this Conservation Easement, and which is intended to provide objective baseline information for purposes of future monitoring and enforcement; and

WHEREAS, Grantee agrees to accept this Conservation Easement and to honor the intentions of Grantor as stated herein and to preserve and protect the Conservation Area in perpetuity according to the terms of this Conservation Easement for the benefit of this and future generations.

NOW THEREFORE, in consideration of the foregoing and the mutual covenants, terms, conditions, and restrictions contained herein, the Grantor hereby voluntarily grants and conveys to Grantee this Conservation Easement in perpetuity over the Conservation Area of the nature and character and to the extent set forth herein.

1. Purpose. It is the purpose of this Conservation Easement to assure that the Conservation Area will be retained predominantly in its natural and open space condition for conservation purposes by protecting the Conservation Area from development and other disturbance except as permitted herein, by allowing public use of trails on the Conservation Area and to forever extinguish all development rights inherent in the Conservation Area in excess of those permitted herein, thereby preserving and protecting the significant conservation values of the Conservation Area.

2. Prohibited Uses and Restrictions. Any activity on or use of the Conservation Area inconsistent with the purpose of this Conservation Easement in prohibited. Without limiting the generality of the foregoing provision, the following restrictions specifically apply to the Conservation Area;

a. No quarry, gravel pit, surface or subsurface mining or drilling shall be permitted on or under the Conservation Area except as permitted herein. The foregoing shall not prohibit the construction, operation, maintenance, repair, replacement and/or modification (including expansion) of the water supply facilities (the "Water Supply Facilities") serving other areas of the Property, as shown on the Easement Map attached hereto as Exhibit 1, which Water Supply Facilities may be modified by Grantor from time to time with the approval of the Westchester County Department of Health, the Town of Lewisboro and/or any other agency having jurisdiction. Grantor agrees to promptly restore the Conservation Area as closely to its original condition as may be practicable after the completion of any such construction, maintenance, repair, replacement and/or modification thereof. The parties hereby recognize and acknowledge that the

construction of the Water Supply facilities will require the permanent removal of trees to accommodate same.

b. No dumping or storage of ashes, non-composted organic waste, lawn clippings, leaves, tree branches, tree stumps and similar by-products from the maintenance of the Property, garbage, or any toxic or offensive materials shall be allowed on the Conservation Area. This provision shall not prohibit the construction, operation, repair, maintenance, repair, replacement and/or modification (including expansion) of the on-site wastewater treatment system expansion areas (the "OWTS") serving other areas of the Property as allowed in paragraph 4d and shown on the Easement Map attached hereto as Exhibit 1, which OWTS may be modified by Grantor from time to time with the approval of the Westchester County Department of Health, the Town of Lewisboro and/or any other agency having jurisdiction. Grantor agrees that should the OWTS be required in the future, any resulting disturbance will be promptly restored as closely to its original condition as may be practicable after completion of any such construction, maintenance, repair, replacement and/or modification thereof. The parties hereby recognize and acknowledge that the construction of the OWTS will require the permanent removal of trees to accommodate same.

c. No more than *de minimus* commercial recreational activities may be conducted on the Conservation Area.

d. There shall be no temporary or permanent buildings or structures constructed or placed on the Conservation Area other than those permitted by paragraphs 2a, 2b and 4d herein.

e. There shall be no excavation or removing from the Conservation Area of soil, loam, gravel, sand, rock or other mineral resource or natural deposit except as specifically permitted in paragraphs 2a, 2b, 3b and 4d herein.

f. The use and application of chemically based, non-organic herbicides, pesticides, fertilizers, fungicides, lime and other chemicals are prohibited on the Conservation Area, except to the extent permitted in connection with the Mitigation Plan dated June 24, 2017, rev. October 11, 2017 and August 2, 2018, approved by the NYSDEC pursuant to the Freshwater Wetlands Permit attached hereto as Exhibit 2, as same may be amended from time to time with approval of the NYSDEC and/or the Town of Lewisboro.

g. There shall be no placing, filling, dumping or storage of fill, waste, refuse, trash, debris, junk, garbage or any toxic or offensive materials on the Conservation Area.

h. Notwithstanding any other restriction contained herein, Grantor may take such actions with respect to the Conservation Area as are necessary to protect the health and safety of the public and the persons using the Conservation Area; provided that if any such action is contrary to a restriction contained herein, the action shall be limited to the minimum variation necessary to afford the required protection. Grantor shall provide reasonable prior notice to Grantee of such action.

3. Rights Conveyed to Grantee. To accomplish the purposes of this Conservation Easement, the following rights are conveyed to Grantee by this Conservation Easement.

a. The right to preserve and protect the conservation values of the Conservation Area.

b. The right to clear and mark trails for pedestrian use on the Conservation Area connecting to trails on the adjacent Bedford Audubon property, and to allow public pedestrian use of those trails in reasonable manner and during daylight. Trails on the Conservation Area shall avoid areas containing infrastructure on the Conservation Area permitted by paragraphs 2a, 2b and 4d herein.

c. The right to enter upon the Conservation Area at reasonable times in order to monitor compliance and otherwise enforce the terms of this Conservation Easement. Grantee shall provide Grantor or Grantor's successors, reasonable notice of such entry unless Grantee reasonably determines that immediate entry is required to prevent, terminate or mitigate violations of this Conservation Easement. Notice shall not be required for regular access to the trails on the Conservation Area for trail construction and maintenance or for access to these trails for passive recreational use by the Grantee or the public accessing these trails from adjacent property.

d. The right to prevent any activity on, incursion into, or use of the Conservation Area that is inconsistent with the purposes of this Conservation Easement, and to require the restoration of such areas or features of the Conservation Area that are damaged by any inconsistent activity or use pursuant to the remedies set forth in paragraph 6 herein.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Conservation Area, all rights accruing from its ownership of the Conservation Area, including, without limitation, the right to sell, transfer or encumber the Conservation Area, as owner, subject to the restrictions and covenants set forth in this Conservation Easement; and the right to engage in, or permit others to engage in, all uses of the Conservation Area that are not expressly prohibited herein and are not inconsistent with the purposes of this Conservation Easement. In addition, any other provision of this Conservation Easement to the contrary notwithstanding, Grantor specifically reserves for itself and its successors in interest with respect to the Conservation Area, and they shall enjoy, the following rights with respect to the Conservation Area:

a. Grantor retains the right to remove vegetation that is identified by Grantor in consultation with Grantee as "invasive" from the Conservation Area. Grantor may plant, maintain, trim and remove vegetation and trees (including the removal of vines and those trees that are dead and diseased) and, in accordance with a forest management plan approved by Grantee whose goal and purpose is the preservation of conservation values (in particular natural habitat) and not the conduct of timbering for commercial or domestic purposes, may remove dead and diseased trees and may plant trees native to the Northeast region of the United States**.**

b. Grantor specifically reserves the right to implement the plant removals and additions set forth in the Mitigation Plan, dated June 24, 2017, rev. October 11, 2017 and August 2, 2018, approved by the NYSDEC pursuant to the Freshwater Wetlands Permit incorporated herein and attached hereto as Exhibit 2, as same may be amended from time to time with approval of the NYSDEC and/or the Town of Lewisboro.

c. Grantor retains the right to lease or grant others less-than-fee interests in all or a portion of the Conservation Area for any use permitted to Grantor under this Conservation Easement, provided that such lease or other interest is consistent with and subject to the terms of this Conservation Easement.

d. Grantor specifically reserves the right to construct, operate, maintain, repair, replace, modify and/or expand the OWTS and the Water Supply Facilities within the Conservation Area to support the use and development of the rest of the Property.

e. Grantor specifically reserves the right to control access between the Conservation Area and the rest of the Property, with the expectation that the public access to the Conservation Area will occur from an adjacent property. Access to the Conservation Area from the rest of the Property is granted only to Grantee for purposes of monitoring compliance with this Conservation Easement. Grantor may provide other access from the rest of the Property to the Conservation Area at its discretion.

f. Grantor and Grantee retain the right to post the Conservation Area against hunting and trapping.

5. Enforcement.

a. Notice. If Grantee determines that a violation of this Conservation Easement has occurred or is threatened, Grantee shall give written notice to Grantor of such violation and demand that corrective action sufficient to cure the violation be taken. Where the violation involves injury to the Conservation Area resulting from any use inconsistent with the terms or the purpose of this Conservation Easement, Grantee shall demand that Grantor restore the Conservation Area to its prior condition in accordance with a plan approved by the Grantee.

b. Injunctive Relief. If Grantor fails to cure the violation within 30 days after receipt of notice of a violation from Grantee, or, where the violation cannot reasonably be cured within a 30 day period, Grantor fails to begin curing such violation within a 30 day period, or Grantor fails to diligently continue to cure such violation until it is cured, as its sole remedy Grantee may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Conservation Easement, to enjoin the violation by temporary or permanent injunction, and to require the restoration of the Conservation Area to the condition that existed prior to any such injury.

c. Emergency Enforcement. If Grantee, in its sole discretion, determines that circumstances require immediate action to prevent or mitigate significant damage to the conservation values of the Conservation Area, Grantee may pursue its remedies under this Section 5 without prior notice to Grantor or without waiting for the period for cure to expire.

d. Costs of Enforcement. All reasonable costs of enforcing the terms of this Conservation Easement against Grantor, including but not limited to the costs and expenses of legal action, reasonable attorney's fees, and any costs involved in the restoration of the Conservation Area resulting from Grantor's violation of the terms of this Conservation Easement, shall be borne by Grantor unless Grantor ultimately prevails in judicial enforcement, in which case each party shall bear its own costs.

e. Forbearance. Forbearance or delay by Grantee in the exercise of any of its rights to enforce this Conservation Easement or to exercise any right granted to it under this Conservation Easement shall not be deemed a waiver of such rights or of any of the terms of the Conservation Easement. Grantor hereby waives any defense of laches, estoppel or prescription.

f. Acts Beyond Grantor's Control. Grantee shall have no cause of action under this Conservation Easement against Grantor for injury or damage to the Conservation Area which is beyond Grantor's control, including, without limitation, flood, fire, wind, storms, or earth movement, or from any prudent action taken by Grantor, under emergency conditions, to prevent, abate or mitigate significant injury to the Conservation Area or adjacent properties from such causes.

6. Notices and Approvals. When Grantee's or Grantor's approval is required for any action or activity allowed by this Conservation Easement to be taken only with approval, such approval shall be in writing and signed by both parties to this Conservation Easement or their successors. Any notice required by this Conservation Easement shall be deemed given when received or three days after being mailed by certified or registered mail, return receipt requested, postage prepaid, properly addressed as follows: (a) if to Grantee, at address set forth above; (b) if to Grantor, at the address set forth above; (c) if to any subsequent owner, at the address provided by notice to Grantee of transfer of the Property as required by this paragraph. Any party may change the address to which notices are to be sent to him, her or it by duly giving notice pursuant to this paragraph.

Whenever Grantee's approval is required under this Conservation Easement, Grantee shall grant or withhold its approval in writing within 20 business days of receipt of Grantor's written request therefor. Grantee agrees to evaluate Grantor's requests under this Conservation Easement based on its good faith exercise of professional judgment. In the case of withholding of approval, Grantee shall notify Grantor in writing with reasonable specificity of the reasons for withholding of approval and the conditions, if any, on which approval may otherwise be given. Failure of Grantee to deliver a written response to Grantor within such 20 business days shall be deemed to constitute written approval by Grantee of any request submitted for approval that is clearly not contrary to the express restrictions hereof. Following the receipt of Grantee's

approval, and not less than 7 days prior to the commencement of the approved activity, Grantor shall notify Grantee in writing in the manner described in the preceding paragraph of Grantor's intention to exercise such right.

7. Costs, Liabilities, and Insurance. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Conservation Area. Grantor shall remain solely responsible for obtaining any applicable governmental permits and approvals for any construction or other activity or use permitted by this Conservation Easement, and all such construction and other such activity or use shall be undertaken in accordance with all applicable federal, state, and local laws, regulations, and requirements. Both Grantee and Grantor shall maintain general public liability insurance insuring against claims on account of loss of life, bodily injury or property damage that may arise from any activities conducted on, or any use of, the Conservation Area respectively by Grantee or Grantor, its invitees, successors and or assigns. Said insurance shall name, respectively, Grantor or Grantee as additional insured and shall be carried by an insurance company or companies qualified to do business in the State of New York and shall bear an endorsement to the effect that any additional insured shall be notified not less than ten (10) days in advance of modification or cancellation thereof; further such insurance shall have limits for loss of life or bodily injury in the amounts of not less than $1,000,000 for each person and $1,000,000 for each occurrence.

8. Taxes. Grantor shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Conservation Area by competent authority, including any taxes imposed upon, or incurred as a result of, this Conservation Easement, and shall furnish Grantee with evidence of such payment upon request.

9. Representations and Warranties. Grantor represents and warrants that, after reasonable investigation and to the best of its knowledge, the Conservation Area is in compliance with all federal, state and local laws, regulations and requirements applicable to the Conservation Area or its use, and there is no threatened or pending litigation in any way affecting, involving, or related to the Conservation Area.

10. Subordination of Mortgages. Grantor represents that there are no mortgages on the Conservation Area.

11. Amendment. This Conservation Easement may be amended upon the written consent of Grantee and Grantor; provided that no amendment may alter the restrictions on use, nor shall it allow subdivision that is inconsistent with the purposes of this Conservation Easement, nor shall it in any way limit the perpetual duration of this Conservation Easement. Any such amendment, variance or waiver shall be consistent with the basic purposes of this Conservation Easement and shall comply with Article 49, Title 3, of the Environmental Conservation Law. Any such amendment, variance or waiver that does not comply with Article 49 shall be void and of no force or effect. Any amendment shall be in writing and shall be recorded in the Westchester County Clerk's Office, Division of Land Records.

12. Recordation. Grantee shall record this instrument in a timely fashion in the Westchester County Clerk's Office, Division of Land Records, and may re-record it at any time as may be required to preserve its rights in this Conservation Easement.

13. Assignment. Grantee's rights and obligations under this Conservation Easement may be assigned only to an organization that is a not-for-profit conservation corporation or other entity authorized to take title to a conservation easement under New York Environmental Conservation Law, Article 49, Title 3, and which agrees to continue to carry out the conservation purposes of this Conservation Easement. Any assignee other than a governmental unit must be an entity able to enforce this Conservation Easement, having purposes similar to those of Grantee and which encompass those of this Conservation Easement. Grantee agrees to provide Grantor notice of any assignment pursuant to paragraph 7 herein, 20 days prior to any assignment. Failure to provide such notice prior to assignment shall not affect the validity of the assignment, nor shall it impair the validity of this Conservation Easement or limit its enforceability in any way.

14. Subsequent Transfers. Any subsequent conveyance of any interest in the Conservation Area, including, without limitation, a transfer of title or lease shall be subject to this Conservation Easement, and any deed, lease or other instrument evidencing or effecting such conveyance shall contain language providing that the Conservation Area is subject to a perpetual conservation easement which runs with the land and which was granted to the Lewisboro Land Trust, Inc. The conveyance shall note the date of this Conservation Easement and the Control Number by which the Westchester County Clerk identifies this Conservation Easement. The failure to include such language in any deed or instrument shall not affect the validity or enforceability of this Conservation Easement.

15. Definitions and Binding Effect.

a. The Conservation Area. The provisions of this Conservation Easement shall run with the Conservation Area in perpetuity and shall bind and be enforceable against Grantor and all future owners and any party entitled to possession or use of the Conservation Area or any portion thereof while such party is the owner or entitled to possession or use thereof. Grantor will endeavor to permanently identify those areas as under a conservation easement with a suitable marker.

b. **Owner.** As used in this Conservation Easement, the term "owner" includes the owner of any beneficial equitable interest in the Conservation Area or any portion thereof; the term "Grantor" includes the original Grantor, his, her or their heirs, successors and assigns, all future owners of all or any portion of the Conservation Area, and any party entitled to possession or use thereof; and the term "Grantee" includes the original Grantee and its successors and assigns. Notwithstanding the foregoing, upon any transfer of title, the transferor shall cease being a Grantor or owner for purposes of this Conservation Easement and shall have no further responsibility or liability hereunder for acts done or conditions arising thereafter, but, subject to Section 5b. of this Agreement the transferor shall remain liable for acts and conditions occurring during its ownership of the Property.

16. Extinguishment. If circumstances arise in the future that make the purpose of this Conservation Easement impossible to accomplish, and if this Conservation Easement or any of its restrictions are extinguished by judicial proceeding, then, upon any subsequent sale, exchange or involuntary conversion by Grantor, Grantee shall be entitled to that portion of the proceeds equal to the proportionate value of the conservation restrictions as provided immediately below. Grantor agrees that the conveyance of this Conservation Easement to Grantee gives rise to a property right, immediately vested in Grantee, with a fair market value that is equal to the proportionate value that the conservation restrictions hereby created at the date hereof bears to the value of the Conservation Area as a whole at the date hereof (subject to reasonable adjustment to the extent permissible under Section 170(h) of the Internal Revenue Code for any improvements which may hereafter be made on the Conservation Area). The value of the Conservation Area as of the date hereof shall be determined by a per acre value of the Conservation Area based on the per acre value of the Property as a whole based on Grantor's basis in the Property as a whole. Grantee agrees to use its share of such proceeds in a manner consistent with the conservation purposes of this Conservation Easement.

17. Condemnation. If all or any part of the Conservation Area is taken by the exercise of the power of eminent domain, or acquired by purchase in lieu of condemnation, whether by public, corporate, or other authority, so as to terminate this Conservation Easement, in whole or in part, Grantor and Grantee shall act jointly to recover the full value of the interests in the Conservation Area subject to the taking or in lieu purchase and all direct or incidental damages resulting therefrom. Jointly accrued expenses of actions taken to recover the value of Conservation Area taken by condemnation or in lieu purchase shall be paid out of the amount recovered, and individually accrued expenses shall be paid out of the respective Grantee's or Grantor's share. Grantee's share of the balance of the amount recovered shall be determined by multiplying that balance by the ratio set forth in paragraph 16, but only to the extent it reflects the value of the Conservation Area without this Conservation Easement. To the extent the value for which compensation is paid pursuant to this paragraph is diminished by this Conservation Easement, Grantee's share shall be diminished.

18. Further Acts. Each party shall perform any further acts and execute and deliver any documents, including amendments to this Conservation Easement, which may be reasonably necessary to carry out its provisions or which are necessary to qualify this instrument as a conservation easement under Article 49, Title 3, of the Conservation Law or any regulations promulgated pursuant thereto.

19. Certificate of Compliance. Grantee shall provide Grantor, within 20 days of written request therefor, a written notice stating whether the Property is in compliance with the terms of this Conservation Easement, and if Grantee alleges it is not in compliance, stating the substance of the alleged violation and the proposed remedy therefor.

20. Severability. Invalidation of any provision of this Conservation Easement by court judgment, order, statute or otherwise shall not affect any other provisions, which shall be and remain in force and effect.

21. Authorization. Grantee warrants that acceptance of this Conservation Easement has been duly authorized by Grantee's Board of Directors.

IN WITNESS WHEREOF, the parties have executed this instrument as of the day and year written above.

GRANTOR:

Property Group Partners, LLC

By:_____

GRANTEE:

Lewisboro Land Trust, Inc.

By:_____
Bobbe Stultz, Co-Chair

By:_____

Section: 5
Block: 10776
Lot: 19, 20 & 21
Municipality: Town of Lewisboro

ACKNOWLEDGMENTS

STATE OF NEW YORK)
COUNTY OF WESTCHESTER) ss.:

On the day of , before me, the undersigned, a Notary Public in and for the State, personally appeared , personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed it in his/her capacity, and that by his/her signature on the instrument, the individual executed the instrument.

_____
Notary Public

STATE OF NEW YORK)
COUNTY OF WESTCHESTER) ss.:

On the day of , 201 , before me, the undersigned, a Notary Public in and for the State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed it in his/her capacity, and that by his/her signature on the instrument, the individual executed the instrument.

_____
Notary Public

Record and Return:
Lewisboro Land Trust, Inc.
PO Box 496
South Salem, New York 10590

SCHEDULE A

[Description of the Property]

Benchmark Title Agency, LLC

Title No. BTA73015

SCHEDULE A

ALL that certain plot, piece or parcel of land, situate, lying and being in the Town of Lewisboro, County of Westchester and State of New York, being more particularly bounded and described as follows:

BEGINNING at a point on the easterly side of Route 22, as widened by New York State Highway Taking Map No. 8, Parcel 28 and Taking Map No. 21 Parcel 32, where the same is intersected by the northerly side of land now or formerly of the City of New York;

RUNNING THENCE along said easterly side of Route 22, as widened, the following courses and distances:

North 28 degrees 15 minutes 21 seconds East 260.98 feet;
North 38 degrees 03 minutes 21 seconds East 275.87 feet;
North 9 degrees 45 minutes 20 seconds West 66.48 feet;
North 31 degrees 49 minutes 05 seconds East 148.20 feet; and
North 42 degrees 19 minutes 55 seconds East 56.47 feet to land now and formerly of Route 22 Associates;

RUNNING THENCE along said last mentioned land the following courses and distances:

South 80 degrees 59 minutes 30 seconds East 1.47 feet;
South 81 degrees 48 minutes 20 seconds East 228.34 feet;
South 80 degrees 32 minutes 10 seconds East 79.77 feet;
South 85 degrees 01 minute 40 seconds East 40.66 feet;
South 86 degrees 14 minutes 20 seconds East 42.20 feet;
South 79 degrees 54 minutes 30 seconds East 36.99 feet;
South 82 degrees 52 minutes East 90.62 feet;
South 83 degrees 19 minutes 10 seconds East 177.69 feet;
South 85 degrees 05 minutes 55 seconds East 396.77 feet;
South 83 degrees 18 minutes East 221.40 feet; and
South 84 degrees 56 minutes 45 seconds East 334.05 feet to land now or formerly of Louis McCagg;

THENCE along said land of McCagg and continuing along land now or formerly of Mary W. Parker, the following courses and distances:

South 6 degrees 23 minutes 40 seconds West 140.98 feet;
South 4 degrees 19 minutes West 32.82 feet;

FOR CONVEYANCING ONLY — The policy to be issued under this report will insure the title to such buildings and improvements erected on the premises which by law constitute real property.

SCHEDULE B
(Description of the Conservation Area)

15246.200 September 06,

2018 **WB LEWISBORO CONSERVATION EASEMENT**

All that certain plot, piece or parcel of land situate, lying, and being in the Town of Lewisboro, County of Westchester and State of New York, bounded and described as follows:

COMMENCING at a point on the easterly line of Route 22, as widened by New York State Highway Taking Map No. 8, Parcel 28 and Taking Map No. 21 Parcel 32 filed in the office of the Westchester County Clerk, on March 20, 1967 as map no. 15270, where the same is intersected by a division line between lands of the grantor herein on the North and lands now or formerly of the City of New York Bureau of Water Supply, Taxes on the South; thence along said division line, S58°40’17”E 245.99 feet to the True Point or Place of Beginning of the herein described Preservation Easement;

thence from said point of beginning, turning and crossing through the lands of the grantor herein the following courses and distances:

1) N77°52'27"E 574.00 feet,
2) N28°34'18"E 139.60 feet,
3) N74°01'23"E 100.00 feet and
4) N00°03'21"W 671.90 feet to a point on the southerly line of other lands now or formerly belonging to the City of New York Bureau of Water Supply, Taxes;

thence along the said line, the following courses and distances:

1) N82°14'58"E 396.77 feet,
2) N84°02'53"E 221.40 feet and
3) N82°24'08"E 334.05 feet to a point on the westerly line of the lands now or formerly belonging to Mathew A. and Rebecca H. Carpenter;

thence along said line, and also along the lands now or formerly belonging to Bedford Audubon Society Inc. the following courses and distances:

1) S06°15'27"E 140.98 feet,
2) S08°20'07"E 32.82 feet,
3) S01°00'13"W 27.95 feet,
4) S21°14'57"E 10.44 feet,
5) S04°02'37"E 53.64 feet,
6) S03°19'27"E 31.24 feet,
7) S11°03'52"E 68.50 feet,
8) S07°44'52"E 126.40 feet and
9) S08°49'02"E 118.13 feet to other lands now or formerly belonging to Bedford Audubon Society Inc.;

thence easterly along said lands and also along the lands now or formerly belonging to Lauren Behrman and Jeffrey Zimmerman and lands now or formerly belonging to Alec, Brandon and Heather Fisher, S74°01'23"W 1130.46 feet to a corner;

thence southerly continuing along the lands of Fisher and also along the lands now or formerly of Bryan Robertson the following courses and distances:

1) S09°22'07"E 54.42 feet,
2) S07°35'57"E 142.86 feet,
3) S06°20'47"E 53.80 feet and
4) S08°58'37"E 60.30 feet to a point on the northerly line of the lands now or formerly belonging to Richard and Allison McCauley;

thence along said line, and also along the lands now or formerly belonging to Elizabeth Agostino the following courses and distances:

1) S70°16'23"W 12.76 feet,
2) S78°33'23"W 183.28 feet,
3) S76°20'43"W 145.00 feet,
4) N71°56'07"W 42.74 feet,
5) N68°27'17"W 58.08 feet,
6) N69°42'27"W 142.93 feet,
7) N65°41'27"W 42.86 feet and
5) S89°24'43"W 99.83 feet to a point on the easterly line of the lands of the City of New York Bureau of Water Supply, Taxes;

thence along the said line, N00°35'17"W 134.59 feet to the POINT OR PLACE OF BEGINNING.

Containing 20.060 acres.

EXHIBIT 1

EASEMENT MAP, by Insite Engineering dated Sept. 28, 2018

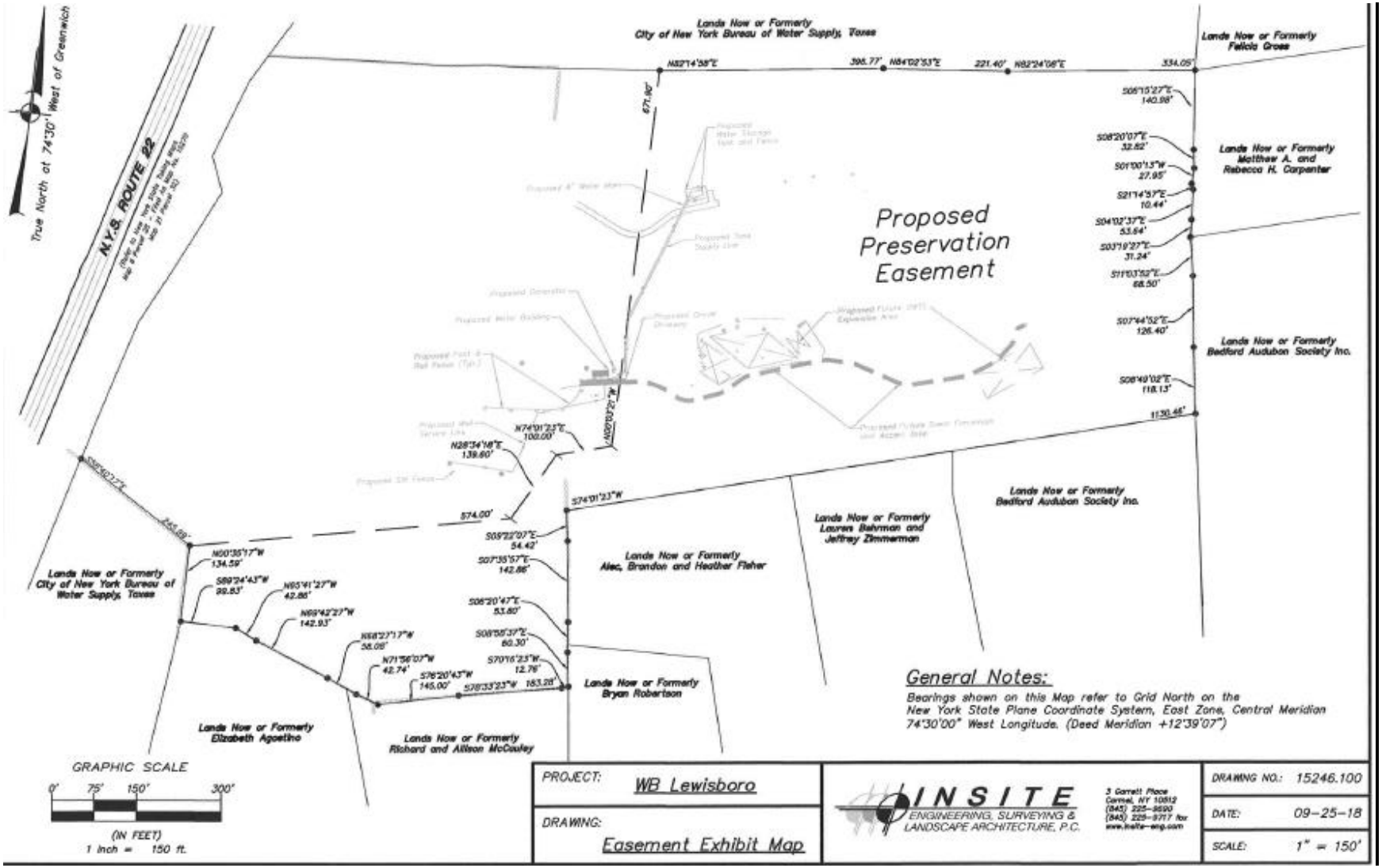
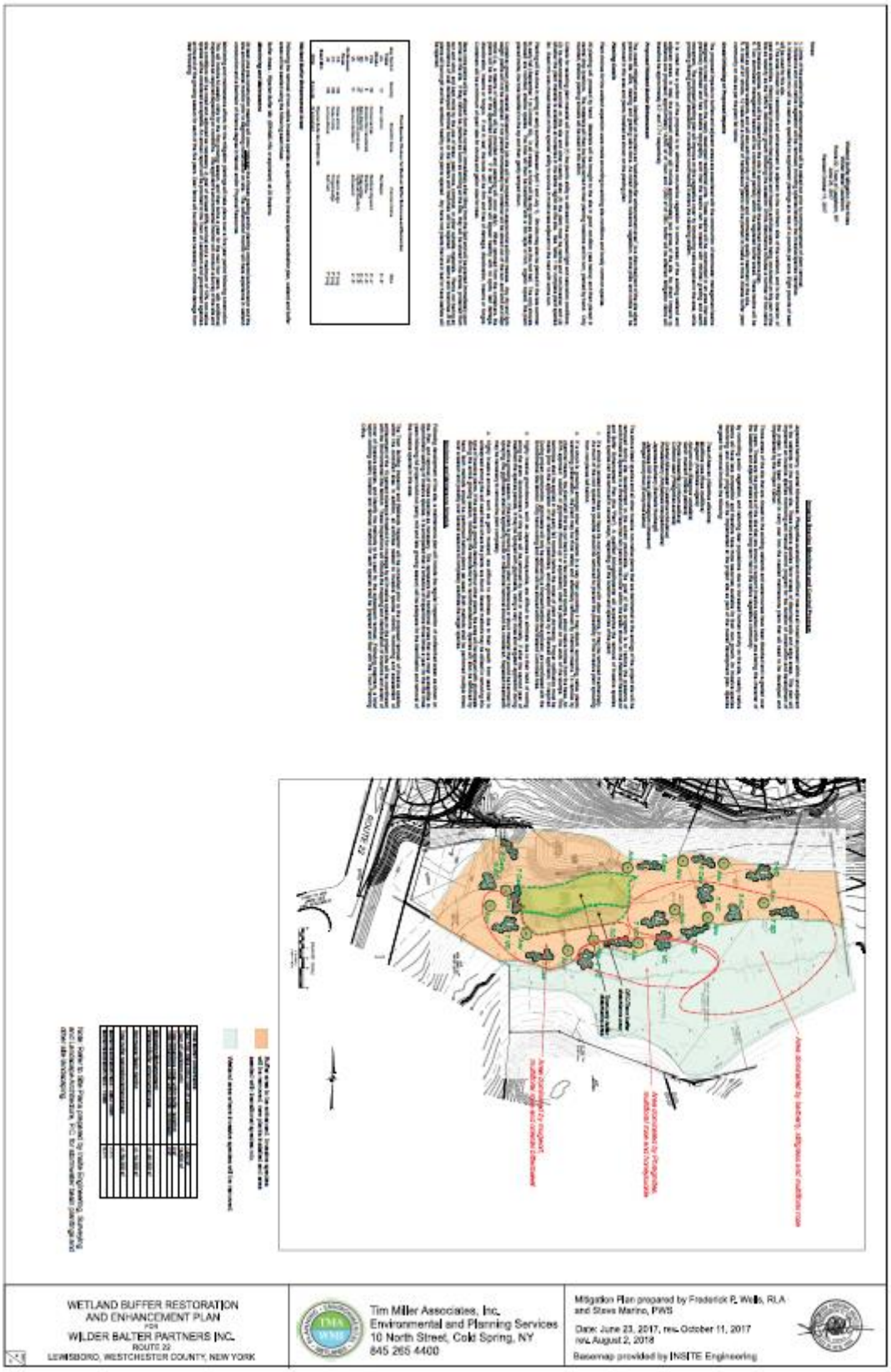

True North at 74°30' West of Greenwich
N.Y.S. ROUTE 22
Lands Now or Formerly
City of New York Bureau of Water Supply, Town
Lands Now or Formerly
Felicia Gross
Lands Now or Formerly
Matthew A. and
Rebecca H. Carpenter
Lands Now or Formerly
Bedford Audubon Society Inc.
Lands Now or Formerly
Bedford Audubon Society Inc.
Lands Now or Formerly
Lauren Bahrman and
Jeffrey Zimmerman
Lands Now or Formerly
Alec, Brandon and Heather Fisher
Lands Now or Formerly
City of New York Bureau of
Water Supply, Town
Lands Now or Formerly
Bryan Robertson
Lands Now or Formerly
Elizabeth Agostino
Lands Now or Formerly
Richard and Allison McCauley
Proposed
Preservation
Easement
N82°14'58"E
395.77'
N84°02'53"E
221.40'
N82°24'08"E
334.05'
671.90'
S05°15'27"E
140.98'
S08°20'07"E
32.62'
S01°00'13"W
27.95'
S21°14'37"E
10.44'
S04°02'37"E
53.64'
S03°19'27"E
31.24'
S11°03'52"E
68.50'
S07°44'52"E
126.40'
S08°49'02"E
118.13'
1130.46'
N60°00'21"W
N74°01'23"E
100.00'
N28°34'18"E
139.60'
S74°01'23"W
574.00'
S58°40'17"E
545.69'
S09°22'07"E
54.42'
S07°35'57"E
142.86'
S06°20'47"E
53.60'
S08°58'37"E
60.30'
S70°16'25"W
12.76'
S78°33'23"W
183.28'
N00°35'17"W
134.59'
S89°24'43"W
99.83'
N85°41'27"W
42.86'
N69°42'27"W
142.93'
N68°27'17"W
58.08'
N71°56'07"W
42.74'
S76°20'43"W
145.00'
General Notes:
Bearings shown on this Map refer to Grid North on the
New York State Plane Coordinate System, East Zone, Central Meridian
74°30'00" West Longitude. (Deed Meridian +12°39'07")
GRAPHIC SCALE
0' 75' 150' 300'
(IN FEET)
1 inch = 150 ft.
PROJECT: WB Lewisboro
DRAWING: Easement Exhibit Map
INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com
DRAWING NO.: 15246.100
DATE: 09-25-18
SCALE: 1" = 150'

EXHIBIT 2

MITIGATION PLAN, by Frederick Wells RLA and Steve Marino PWS
Dated June 23, 2017, rev. October11, 2017 and Aug. 2 2017


ROUTE 22
WETLAND BUFFER RESTORATION
AND ENHANCEMENT PLAN
FOR
WILDER BALTER PARTNERS INC.
ROUTE 22
LEWISBORO, WESTCHESTER COUNTY, NEW YORK
Tim Miller Associates, Inc.
Environmental and Planning Services
10 North Street, Cold Spring, NY
845 265 4400
Mitigation Plan prepared by Frederick P. Wells, RLA
and Steve Marino, PWS
Date: June 23, 2017, rev. October 11, 2017
rev. August 2, 2018
Basemap provided by INSITE Engineering

Smith Ridge Associates LLC

450 Oakridge Commons

South Salem, New York 10590

Telephone 914-533-7424

December 4, 2018

Town of Lewisboro Planning Board

79 Bouton Road

South Salem, New York 10590

Attention: Ciorsdan Conran

RE: Oakridge Commons Shopping Center

Sheet 49D, Block 9829, Lot 10

Cal # 08-17P.B.

Dear Chairman Kerner and Members of the Planning Board:

We would like to be placed on the Planning Board's December 18, 2018 meeting agenda to request Planning Board approval on our posting a cash bond on those items required for a Certificate of Occupancy for the Daycare Center. Following is a list of those items.

1.	Paving	Cost	=	$ 2,380. .
2.	Landscape plantings	Cost	=	6,850.
		Total		**$ 9,230.**

We anticipate completing Items #1 asap, however, any paving work is subject to asphalt plants being open. The landscape will be completed in the Spring of 2019.

Very truly yours,

Philip G. Pine

Managing Member

CC:Jan K. Johannessen, AICP: Kellard Sessions PC

2019 PLANNING BOARD
Town of Lewisboro
MEETING DATES /
SUBMISSION DEADLINES

Planning Board meetings are typically held on the third Tuesday of the month.

Supplemental Wed. meetings are shown in *italics* and will be held if necessary.

Meeting Date Regular and *Supplemental*	Initial Submission Deadline By 10:00 a.m. - 30 days before meeting -	Resubmission Deadline By 10:00 a.m. - 21 days before meeting -
January 15	**December 17**	**December 26**
January 23	*December 24*	*January 2*
February 26	**January 28**	**February 5**
March 19	**February 18**	**February 26**
April 16	**March 18**	**March 26**
May 1	*April 1*	*April 10*
May 21	**April 22**	**April 30**
June 18	**May 20**	**May 28**
July 16	**June 17**	**June 25**
July 24	*June 24*	*July 3*
August 20	**July 22**	**July 30**
September 17	**August 19**	**August 27**
October 15	**September 15**	**September 24**
October 23	*September 23*	*October 2*
November 19	**October 20**	**October 29**
December 17	**November 17**	**November 26**

12/13/2018

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MEMORANDUM

TO: Honorable Jerome Kerner and Members of the Planning Board

FROM: Judson K. Siebert

RE: Revision to Board Internal Guidelines - Media Inquiries

DATE: December 12, 2018

I have attached a draft revision to the Planning Board Internal Guidelines for consideration by the Board. The revision addresses media inquiries posed to Planning Board members and the Planning Board Secretary.

The proposed revision provides that any media inquiries will be referred to the Planning Board attorney for response. It also provides that Planning Board members will not comment to the media on any matters pending before the Planning Board.

The proposed change is found in Section II, H, new paragraph 4 of the guidelines (pages 6 and 7).

The attached is presented for Board review and discussion.

JKS/lt
Enclosure

Town of Lewisboro
Planning Board
Guidelines for Board Practices and Procedures

I. General

A. Purpose

These Guidelines have been adopted to establish fair and equitable rules for the review of matters entertained by the Planning Board pursuant to New York State law and Town Code of the Town of Lewisboro. In adopting these Guidelines, it is the intent of the Planning Board to facilitate a uniform, fair and efficient process for the consideration of matters over which it has authority.

B. Amendments

These Guidelines may be amended by Resolution adopted upon an affirmative vote by a majority of the Planning Board.

C. Membership Expectations

1. Members are expected to attend all duly noticed meetings of the Planning Board on a regular basis.
2. All members shall notify the Planning Board Secretary and Planning Board Chairperson of any expected absences, as soon as practicable.
3. Members shall be familiar with all materials submitted to the Planning Board in connection with pending matters.
4. Members shall be required to complete all training required by law and the Lewisboro Town Board for service as a Planning Board Member.

5. New members shall be provided with reference materials compiled by the Chairperson or Secretary of the Planning Board, or its attorney, concerning applicable laws and procedures relative to the Board, including these Guidelines, with which the new member shall familiarize him/herself.

D. Chairperson

1. The Executive Officer of the Planning Board is the Chairperson, as designated and appointed by the Lewisboro Town Board.
2. The Chairperson shall:
    a. Preside at all meetings and hearings of the Planning Board;
    b. Sign all approved final plats, site plans and permit approvals issued by the Planning Board;
    c. Sign all instruments made and approved by the Planning Board;
    d. Perform such other duties as may, from time to time be required; and
    e. Call special meetings of the Planning Board, as provided herein.

E. Secretary

The Planning Board Secretary is not a member of the Planning Board. The Secretary shall keep the minutes of all Planning Board proceedings, as provided herein. The Planning Board Secretary shall deliver a draft agenda to all Board members at least seven (7) calendar days prior to a regularly scheduled meeting. The Planning Board Secretary shall also post, or arrange to the posting of, the agenda of a regularly scheduled or special meeting, as provided herein. The Planning Secretary shall prepare legally required notices to applicants, all other persons and agencies, and shall

arrange for the publication of all public hearing notices in the official newspaper of the Town of Lewisboro and their posting at the Office of the Town Clerk of the Town of Lewisboro, the Planning Board Office and the Town of Lewisboro website. The Planning Board Secretary shall also file all final decisions with the Office of the Lewisboro Town Clerk upon their issuance and mail final decisions, notices or other communications issued by the Planning Board to applicants or other persons, as directed by the Planning Board or its Chairperson.

II. Meetings

A. Opens Meetings Law

All meetings of the Planning Board will comply with the requirements of the Open Meetings Law, Article 7 of the Public Officers Law. Executive sessions may be held when authorized pursuant to Section 105 of the Public Officers Law or for other lawful purpose, including, without limitation, attorney-client communication.

B. Public Hearings and Public Information Sessions

1. The Planning Board may hold public hearings or public information sessions, in addition to those required by law, when it deems such hearings or sessions to be in the best interest of the public.
2. Any matter for which a public hearing or information session is scheduled by the Planning Board shall be placed on a meeting agenda.

C. Publication of Public Hearing Notices

All public hearings shall be publicized by publication notice in the official newspaper of the Town of Lewisboro, as designated by the Town Board of the Town

Lewisboro, as required by law, and posting in the Office of the Lewisboro Town Clerk, and the Planning Board Office as well as the Town of Lewisboro website.

D. Conduct for Public Hearings

1. Any person wishing to comment at a public hearing shall be recognized by the Chairperson and shall give his or her name and address. All comments shall be addressed to the Planning Board and not to the applicant or any other person. The purpose of public comments is to bring issues to the attention of the Planning Board and not to engage in dialogue with the applicant or other persons. The Planning Board has the sole discretion to permit responses and, if so, when, how and by whom responses may be provided.
2. The Chairperson shall assure an orderly hearing and shall take necessary steps to maintain the order and decorum of the hearing at all times.

E. Agenda

1. The agenda shall be prepared by the Planning Secretary and posted and distributed to the Planning Board and public upon approval of the Planning Board Chairperson.
2. Meeting agendas shall consist of all matters expected to be discussed at an open meeting.
3. The Planning Board Secretary shall also post, or arrange the posting of, the agenda at least three calendar (3) days prior to a regularly scheduled meeting at Lewisboro Town House, the Planning Board Office, the Lewisboro Parks & Recreation Department and the Town of Lewisboro website. In the event of a

special meeting, the Planning Board Secretary shall post, or arrange for the posting of, the agenda of such meeting at the Lewisboro Town House, the Planning Board Office and the Town of Lewisboro website as soon as practicable. The Planning Board Secretary shall also mail copies of the agenda of a regularly scheduled meeting at least three (3) calendar days prior thereto to the Lewisboro Town Library and the Postmaster at the United States Post Offices in Cross River, Goldens Bridge, South Salem, Waccabuc and Vista, New York, accompanied by a request that it be posted at these locations.

4. The Planning Board agenda may be further modified at the discretion of the Planning Board Chairperson with the consent of the majority of the members present at a meeting.

F. Schedule

1. Regular Planning Board meetings will be held each month on a schedule established by the Planning Board. Monthly meetings will usually be held on the third Tuesday of the month, unless otherwise scheduled by the Planning Board. All meetings shall begin at 7:30 p.m., unless otherwise scheduled. If any such day should fall on a legal holiday, or on a day that for other reasons the Planning Board will not meet, another meeting date may be determined by the Planning Board.
2. All meetings are subject to a curfew of 11:00 p.m.
3. Meetings shall be held at the Planning Board office or at such other location as may be determined by the Planning Board at a regularly scheduled meeting.

4. The Planning Board members may, at a regular meeting, set a date for any additional meeting(s) when necessary.

5. The Chairperson may call a previously unscheduled meeting when necessary, and upon concurrence of three (3) members of the Planning Board. All members of the Planning Board shall be notified of such meeting and the date, time, place, and agenda, as soon as practicable.

G. Site Visits

Site visits shall be scheduled at a regularly scheduled meeting of the Planning Board. Site visits shall be conducted by the Planning Board members as a group and are limited to touring and obtaining factual information pertaining to the site and application, without substantive discussion concerning the merits of any application or other matter pending before the Board.

H. Communication with Applicants, Interested Persons and the Media

1. Planning Board Members shall refrain from initiating or engaging in *ex parte* communication with applicants, potential applicants and other persons with an interest in an application or matter pending or likely to be pending before the Board.

2. Should any Planning Board member communicate with an applicant or interested person outside of a public meeting, the member must place on the record, at the next board meeting, the fact that a communication took place, the person(s) with whom such communication was made, and the substance of the communication.

3. In order to avoid the appearance of impropriety, potential applicants and interested persons shall communicate outside of public meetings with the Planning Board Secretary, its consultants or attorney, rather than Planning Board members.

4. In order to ensure that information contained in communications with the media is consistent, accurate, fair and timely, any inquiries made by the media to Planning Board members shall be directed to the Planning Board Attorney for response. Planning Board members shall refrain from commenting on any matter pending before the Planning Board to the media.

III. Proceedings

A. Pre-Application Review

1. All applications and matters to be placed on the agenda of a regularly scheduled Planning Board agenda must be submitted to the Planning Board Office (to the attention of the Planning Board Secretary) by the submission deadline specified on the Board's calendar posted on the Town website for that meeting in order to be placed on the agenda, unless the Planning Board by majority vote allows for extension of the submission deadline or permits the matter to be heard at a meeting.

2. A pre–application conference between an applicant and the Planning Board Secretary and its consultants is encouraged before an application is submitted.

B. Voting

1. Action shall be taken only upon the affirmative vote of a necessary number of members as provided by law, i.e. a quorum, which is a majority of the full

Planning Board. Each member shall have one vote. A majority vote of those members present but not in sufficient number to constitute a majority of the entire membership of the full Planning Board, shall not constitute any formal action by the Board.

2. The Chairperson of the Planning Board shall have the same right to act on matters before the Board as other members, including the right to make and second motions.

C. Disqualification

1. Each member of the Planning Board shall vote on all questions before the Board, unless required to abstain in accordance with any applicable law or regulation or other valid reason. A member abstaining shall cite the reason for the abstention.
2. Members shall be automatically disqualified based upon a business interest or financial interest in the outcome of an application or other matter before the Board or for reasons specified in the Code of Ethics adopted by the Town Board of the Town of Lewisboro, as set forth in Chapter 18 of the Code of the Town of Lewisboro or other governing law.

IV. Advisory Powers

1. The Planning Board may advise and make recommendations to the Town Board relating to any subject matter over which the Planning Board has jurisdiction, including proposed legislation.

2. The Planning Board may make investigations, maps, reports, and recommendations pertaining to planning and development issues, the Comprehensive Plan, use of municipal land, and capital budgets or matters related thereto.

V. Minutes and Records of Meetings

A. Records

1. Minutes shall be kept of all Planning Board meetings and hearings. Minutes shall set forth the names and addresses of persons appearing and addressing the Planning Board; a summary of statements made at public hearings, actions taken and findings made by the Planning Board, if any, and the reasons therefore. The minutes shall record, with regard to any matter voted upon by the Planning Board, the vote of each member upon every question, or if absent or failing to vote, indicating such fact.

2. The official record of meetings shall be the minutes prepared by the Planning Secretary. Should such meetings and hearings be recorded, such recordings shall be retained as part of the official record. The minutes and recordings shall be kept in the Planning Board Office, unless forwarded to the Office of the Town Clerk of the Town of Lewisboro, or to a court pursuant to a valid court order.

B. Draft Minutes and Distribution

Copies of draft meeting minutes shall be distributed by the Planning Board Secretary to members of the Planning Board within fourteen (14) days following the meeting at which they were taken.

C. Adoption

Minutes shall not be considered officially adopted until formally approved by the Planning Board by majority vote at a Planning Board meeting.

D. Resolutions

Resolutions are recorded as part of all minutes taken, since Resolutions are considered official action by the Planning Board. Resolutions are also prepared as separate documents and provided to the Lewisboro Town Clerk within five (5) days of the meeting at which adopted, or as prescribed by law. Resolutions are also kept as part of the official files for the corresponding applications and matters to which they pertain.

VI. Public Information

A. Scope of the Law

In compliance with the Freedom of Information Law (FOIL), the right of the public to access of records of meetings and documents, in accordance with law, shall not be denied. The Town has a designated Records Access Officer, who responds to requests for information as required by the FOIL. The Town Clerk shall collect any fees, as established from time to time by the Town Board, for copies made of any such documents requested.

B. Subject Records

1. All records are subject to the provisions of FOIL, except records or portions of records that fall within § 87(2) of the Public Officer's Law or for reason of lawful privilege. Subject records include audio or visual recordings, data maintained electronically, and paper records.
2. The Planning Board Secretary will endeavor to accommodate requests for Planning Board documents made by written request. The Planning Board Secretary shall collect fees, as established from time to time by the Town Board, for copies made of any such documents provided. Requests for Planning Board documents not readily accessible or capable of prompt assembly, as determined by the Planning Board Secretary, shall be made by FOIL request to the Town Records Access Officer.

VI. Ethics

A. Town Code

1. Rules of ethical conduct for public officers, employees, and administrative Board members of the Town of Lewisboro are governed by the Code of Ethics as adopted by the Town Board of the Town of Lewisboro, which is codified at Chapter 18 of the Code of the Town of Lewisboro. Planning Board members shall abide by the requirements of the Code of Ethics.
2. The Code of Ethics prohibits a Planning Board member from participating in any official action affecting a Board member's own pecuniary or material interests, or that of his or her immediate family or his or her firm, partnership or association; from using the position to obtain an unwarranted privilege or from acting in a

manner that would cause a reasonable person to conclude that the Planning Board member can be improperly influenced or that a person could unduly enjoy favor of any of the Planning Board member in the performance of his or her duty.

B. Member Conduct

Planning Board members shall not engage in impropriety and avoid the appearance of impropriety in the discharge of their duties.

C. Disclosure and Recusal

Any Planning Board member who believes that he or she should not participate in the discussion or vote concerning any matter before the Board shall recuse himself or herself, and publicly disclose on the official record the nature and extent of any direct or indirect financial, or other private interest, in such application or other reason for recusal.