

R-Tanks (Elevation-Volume-Flow Table (Pond), 25 years (Post-Development 25 Year))...44

R-Tanks (OUT) (Pond Routed Hydrograph (total out), 25 years (Post-Development 25 Year))...45, 46

T

Time-Depth - 1 (Time-Depth Curve, 25 years (Post-Development 25 Year))...2, 3

Time-Depth - 1 (Time-Depth Curve, 25 years (Pre-Development 25 Year))...4, 5

## ***APPENDIX B***

# ***NYSDEC STORMWATER SIZING CALCULATIONS***

# CISTERN WORKSHEET

JMC Project: **18100**

Design Point: **DL-1**

## RAINWATER HARVESTING TANK CALCULATIONS

Drainage Area: PDA-1A

### 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	0.14	Ac
Area	A	0.31	Ac
Percent Impervious	%I	45.20	%
Runoff Coefficient [0.05 + 0.009 x %I]	R <sub>v</sub>	0.46	CF
<b>TOTAL VOLUME Required</b> [ $WQ_v = (P \times R_v \times A) / 12$ ]	WQ <sub>v</sub>	<b>760</b>	CF

### Minimum Cistern Size

DESCRIPTION	SYMBOL	VALUE	UNITS
Water Quality Volume	WQ <sub>v</sub>	760	CF
Conversion Factor (7.5 gals/cf)		7.50	Gals/CF
<b>Required Cistern Volume</b> Vol = (WQ <sub>v</sub> x 7.5)	Vol	<b>5,703</b>	Gals

### Proposed Cistern Size

DESCRIPTION	SYMBOL	VALUE	UNITS
Provided Cistern Model	-	Woodards Concrete ST-3000	-
Provided Cistern Volume (Per Cistern)	-	3,000	Gal
<b>Provided Cistern Volume (Length x Width x Height)</b>	<b>PVol</b>	<b>6,000</b>	<b>Gal</b>

## ***APPENDIX C***

# ***TEMPORARY EROSION AND SEDIMENT CONTROL & PERMANENT STORMWATER PRACTICE INSPECTION CHECKLIST***

**Temporary Erosion and Sediment Control Inspection and Maintenance Checklist**

<b>Erosion and Sediment Control Measure</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Stabilized Construction Entrance	Daily	<ul style="list-style-type: none"><li>• Periodic top dressing with additional aggregate as required</li><li>• Clean sediment in public right-of-ways immediately</li></ul>
Silt Fence	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove &amp; redistribute sediment when bulges develop in the silt fence.</li></ul>
Inlet Protection	Weekly + After Each Rain	<ul style="list-style-type: none"><li>• Remove sediment as necessary and replace filter fabric, crushed stone etc.</li><li>• Any broken and damaged components should be replaced.</li><li>• Check all materials for proper anchorage and secure as necessary.</li></ul>

**Permanent Stormwater Management Practice Inspection and Maintenance Checklist**

<b>Stormwater Management Practice</b>	<b>Inspection/Maintenance Intervals</b>	<b>Inspection/Maintenance Requirements</b>
Rip-Rap Apron/Energy Dissipator and Check Dams	Annually + After Major Storms	<ul style="list-style-type: none"> <li>• Check for evidence of flows going around the structure.</li> <li>• Check for evidence at downstream toe and repair as needed.</li> <li>• Clean sediment and install additional aggregate as necessary.</li> </ul>
Drain Inlets	Monthly	<ul style="list-style-type: none"> <li>• Check for blockage and/or erosion at top of each inlet. Repair/remove as necessary.</li> <li>• Check for sediment and debris collected within sumps and clean out as necessary.</li> </ul>
Subsurface Stormwater Management Detention Facility	Annually + After Major Storms	<ul style="list-style-type: none"> <li>• Check level of sediment and debris accumulated within the system.</li> <li>• Check structural integrity of the system pipes, structures, etc. for cracking, bulging or deterioration. Repair/remove as necessary.</li> <li>• Confirm all inlets and outlet structures/pipes are operating properly.</li> </ul>

The owner/operator responsible for inspection and maintenance as outlined above:

Mr. William Fedyna  
219 W 81<sup>st</sup> Street, Apt. 9D  
New York, NY 10024  
Phone: (646) 321-2081

***APPENDIX D***

***CONTRACTOR'S CERTIFICATION***



Site Planning  
 Civil Engineering  
 Landscape Architecture  
 Land Surveying  
 Transportation Engineering

Environmental Studies  
 Entitlements  
 Construction Services  
 3D Visualization  
 Laser Scanning

JMC Project 18100  
 Residential Development  
 1165 Greacen Point Road  
 Village of Mamaroneck, NY

**CONTRACTOR'S CERTIFICATION**

“I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations”

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Permit Identification No.: \_\_\_\_\_

Name and Title of Trained Contractor: \_\_\_\_\_

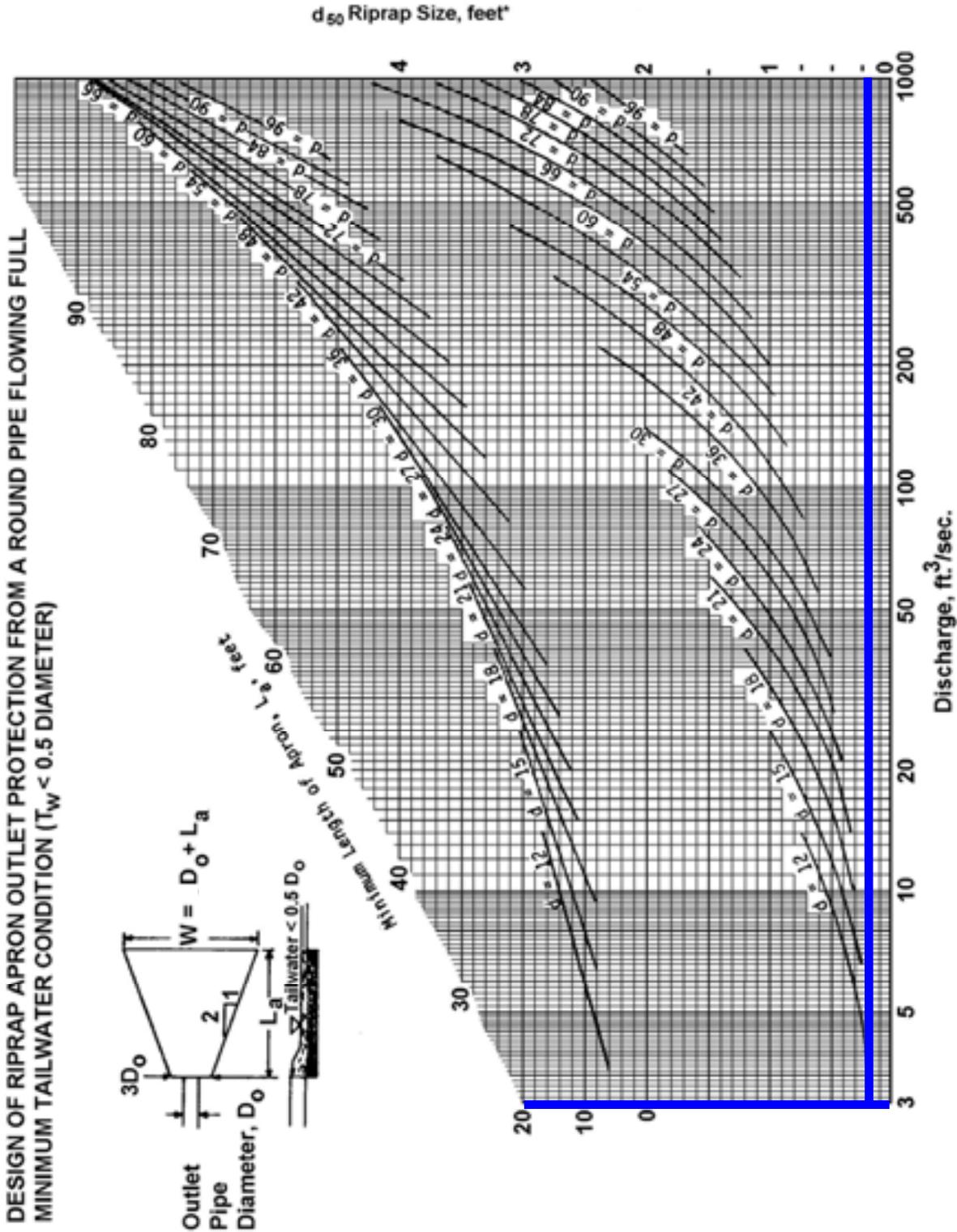
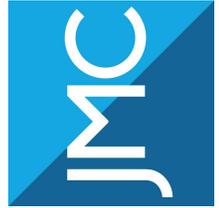
Elements of the SWPPP Contractor is responsible for: \_\_\_\_\_

p:\2018\18100\drainage\reports\2020-06-02\_pd (swppp)\appendices\nys contractors certification.docx

***APPENDIX E***

***STONE OUTLET PROTECTION  
DESIGN CALCULATIONS***

**Figure 3.16**  
**Outlet Protection Design—Minimum Tailwater Condition Chart**  
 (Design of Outlet Protection from a Round Pipe Flowing Full,  
 Minimum Tailwater Condition:  $T_w < 0.5D_o$ ) (USDA - NRCS)



\* For discharge velocities exceeding Maximum Allowable for Riprap indicated, increase  $d_{50}$  stone size and/or provide velocity reduction device.

PIPE DIAMETER: 12"

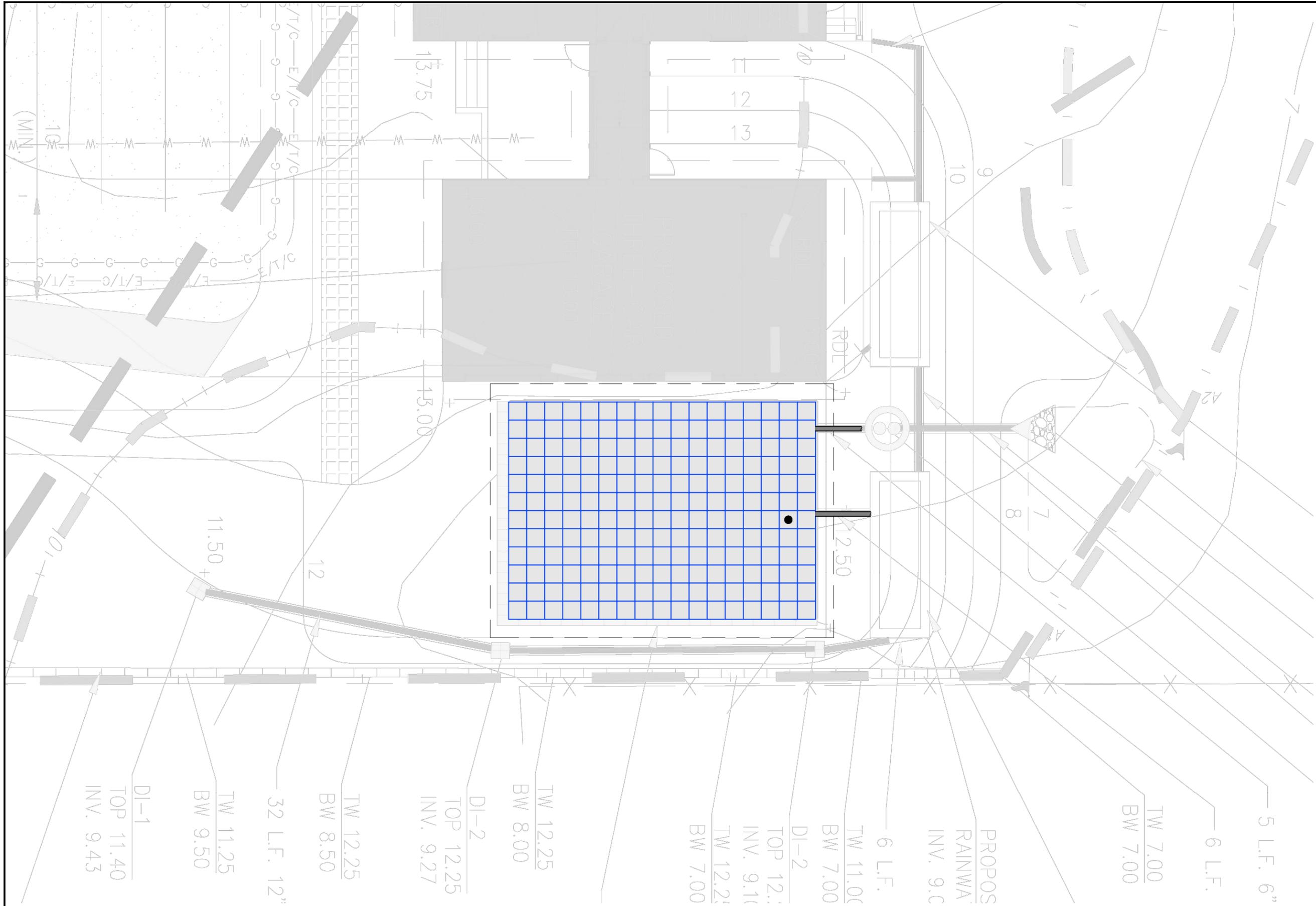
DISCHARGE RATE: 1.72 cfs

$d_{50}$  RIP RAP SIZE: 3"

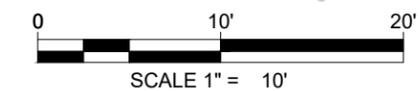
La MINIMUM LENGTH OF APRON: 6'

## ***APPENDIX F***

# ***R-TANK DETAILS AND SPECIFICATIONS***



R-TANK<sup>UD</sup> SYSTEM OVERLAY  
SCALE: 1" = 10'



ENGINEER OF  
RECORD TO  
REVIEW, APPROVE  
AND ENDORSE  
FINAL SITE  
SPECIFIC DESIGN.

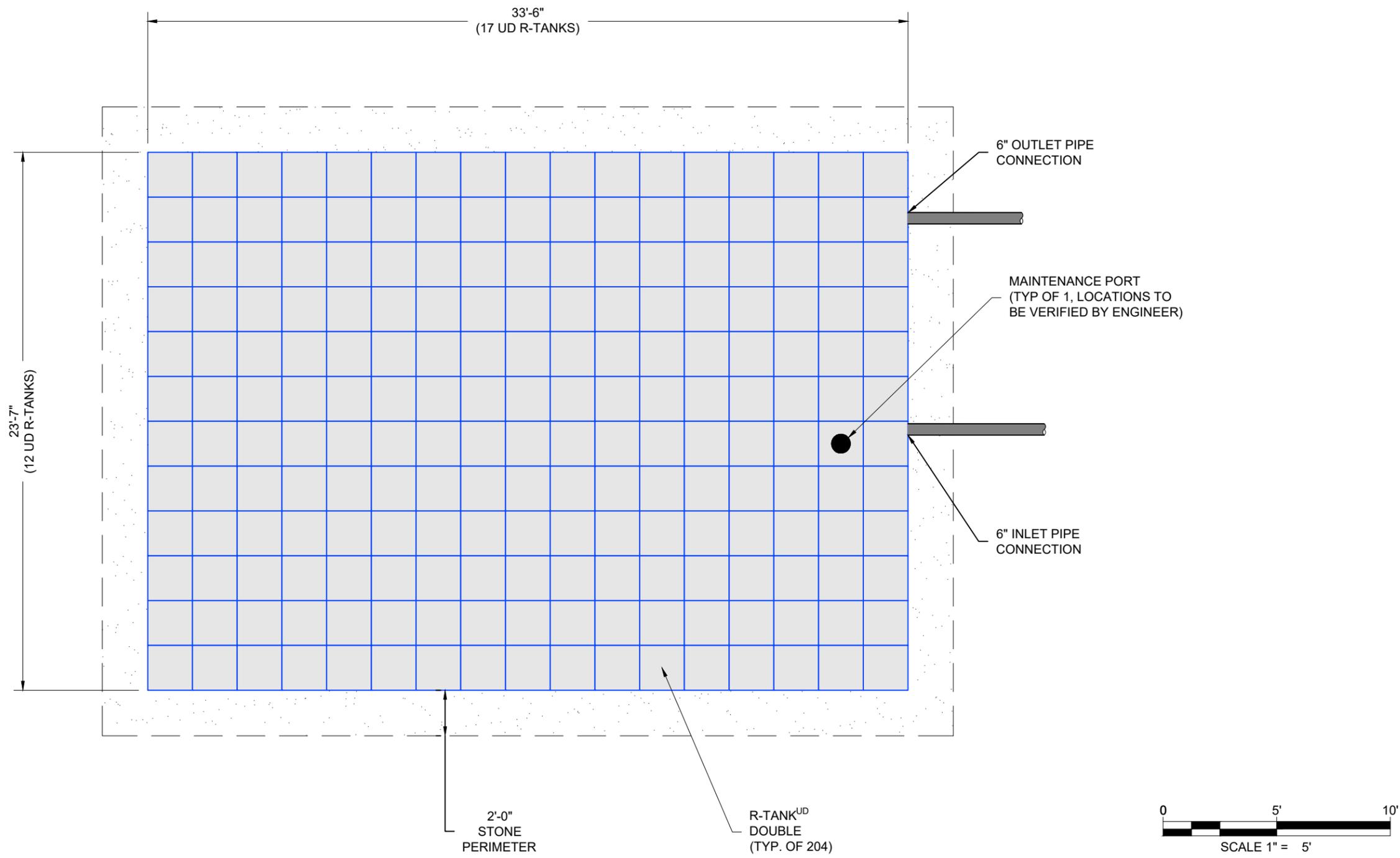
FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
ACF ENVIRONMENTAL 1-800-448-3636  
www.acfenvironmental.com



R-TANK<sup>UD</sup> SYSTEM OVERLAY  
RESIDENTIAL DEVELOPMENT  
MAMARONECK, NY  
SITE DESIGNATION: UGDS

ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

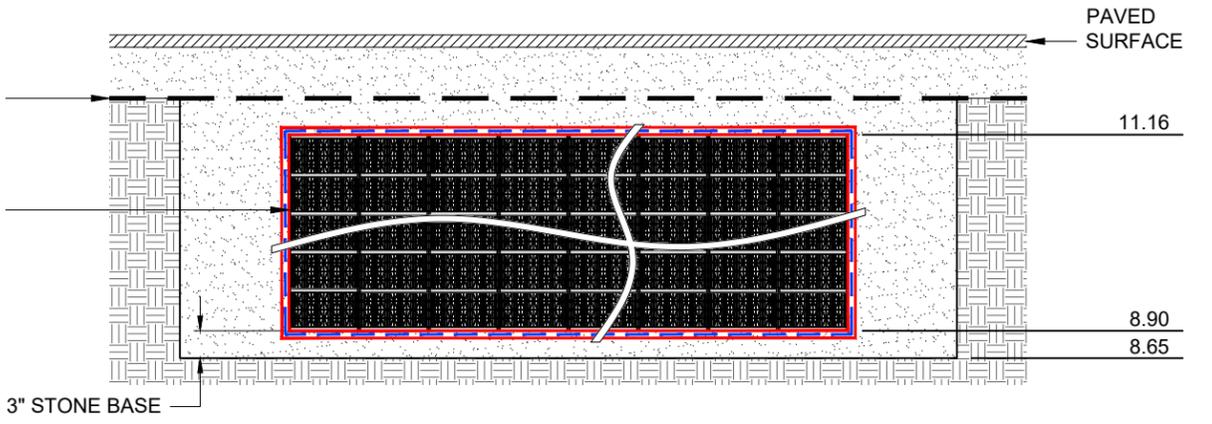
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LAYOUT SCALE	1" = 5'
R-TANK <sup>UD</sup> MODULE TYPE	DOUBLE
TRAFFIC LOAD	HS-20
# OF DOUBLE R-TANKS	204
R-TANK STORAGE VOLUME	1,700 CF
TOP OF COVER STONE ELEV. (6")	11.66
TOP OF R-TANK ELEV.	11.16
TANK INVERT	8.90
INVERT OF STONE BASE (3")	8.65
MIN. STONE PERIMETER WIDTH	2.0 FT
SEE SHEETS 3 - 6 FOR DETAILS AND ADDITIONAL INFORMATION	

GEOGRID (ACF BX-12) PLACED 6" ABOVE THE R-TANK<sup>UD</sup> SYSTEM. OVERLAP ADJACENT PANELS BY 18" MIN. GEOGRID SHOULD EXTEND 3' BEYOND THE EXCAVATION FOOTPRINT.

R-TANK<sup>UD</sup> UNITS WRAPPED WITH 30 MIL. PVC BETWEEN TWO LAYERS OF 8 OZ. NON-WOVEN GEOTEXTILE (OR EQUAL)



**R-TANK<sup>UD</sup> TANK WRAP & EXCAVATION ENVELOPE DETAIL**



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

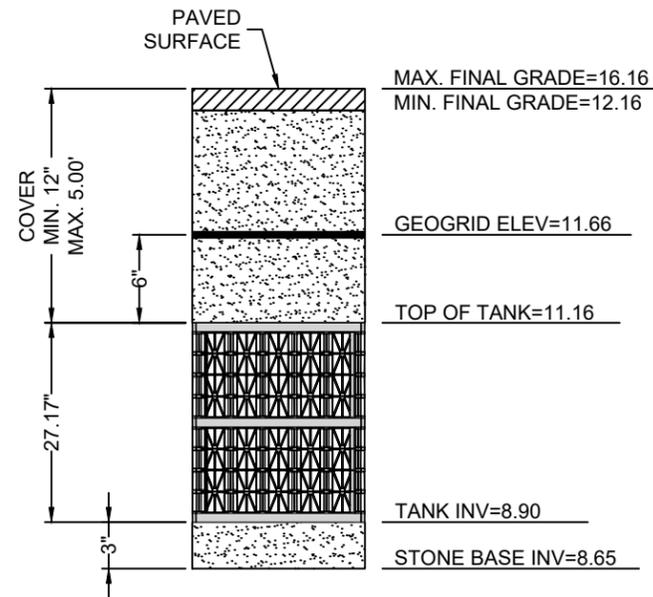
FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
ACF ENVIRONMENTAL 1-800-448-3636  
www.acfenvironmental.com



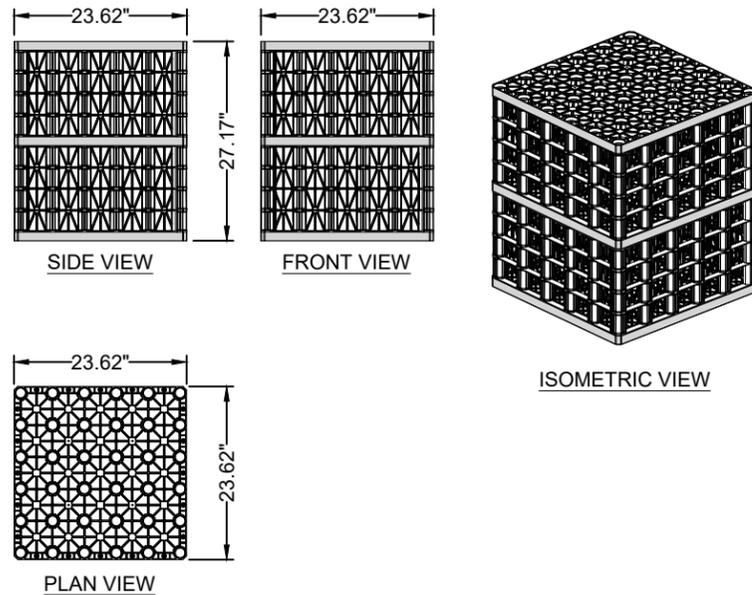
R-TANK<sup>UD</sup> SYSTEM LAYOUT  
RESIDENTIAL DEVELOPMENT  
MAMARONECK, NY  
SITE DESIGNATION: UGDS

ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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**DOUBLE R-TANK<sup>UD</sup> - ELEVATION**



**MODULE DATA**

**GEOMETRY:**  
 LENGTH = 23.62 IN. (600 MM)  
 WIDTH = 23.62 IN. (600 MM)  
 HEIGHT = 27.17 IN. (690 MM)  
 TANK VOLUME = 8.77 CF  
 STORAGE VOLUME = 8.33 CF  
 VOID INTERNAL VOLUME: 95%  
 VOID SURFACE AREA: 90%

**LOAD RATING:**  
 134.2 PSI, (MODULE ONLY)  
 HS20, (WITH ACF COVER SYSTEM)

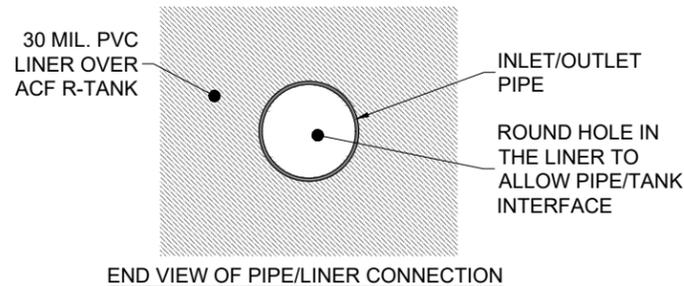
**MATERIAL:**  
 100% RECYCLED POLYPROPYLENE

**DOUBLE R-TANK<sup>UD</sup> - MODULE DETAIL**

R-TANK <sup>UD</sup> QUANTITIES	
R-TANK <sup>UD</sup> MODULE TYPE	DOUBLE
# OF DOUBLE R-TANKS	204
R-TANK STORAGE VOLUME	1,700 CF
STONE BED FOOTPRINT	1,035 SF
STONE QUANTITY	68 CY
30 MIL. PVC LINER TANK WRAP	2,118 SF (235 SY)
8 OZ. NON-WOVEN GEOTEXTILE LINER PROTECTION	4,236 SF (471 SY)
ACF BX-12 GEOGRID	1680 SF (187 SY)
10" MAINTENANCE PORTS	1
6" PIPE BOOTS	2

NOTE: STONE QUANTITY INCLUDES 6" OF COVER AND 3" OF BASE.  
 NOTE: GEOTEXTILE / LINER QUANTITIES INCLUDE A 15% WASTE FACTOR.

CUT A ROUND HOLE IN THE LINER ENVELOPE AND GEOTEXTILE PROTECTION FABRIC THAT IS SLIGHTLY LARGER THAN THE PIPE.

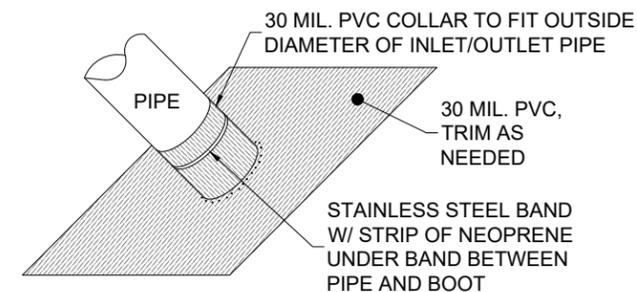


IMPERMEABLE LINER BETWEEN TWO LAYERS OF NON-WOVEN GEOTEXTILE FABRIC OVER ACF R-TANK

AFTER LINER IS CUT AND PIPE INSTALLED, SLIDE BOOT AGAINST TANK AND SECURE WITH STAINLESS STEEL BAND, THEN BOND BOOT TO TANK LINER AND SEAL END OF BOOT WITH SILICONE. REPLACE ANY GEOTEXTILE PROTECTION FABRIC REMOVED DURING BOOT INSTALLATION PROCESS.

NOTE: PIPE MUST BUTT DIRECTLY AGAINST R-TANK

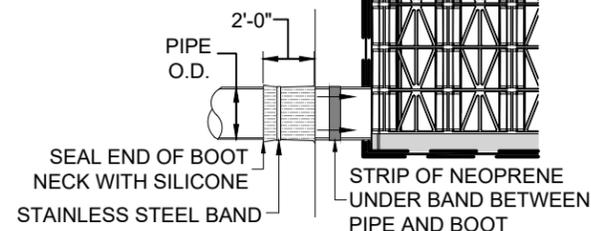
**SIDE VIEW OF PIPE/LINER CONNECTION**



**30 MIL. PVC BOOT**

**FRONT VIEW OF 30 MIL. PVC BOOT**

IMPERMEABLE LINER BETWEEN TWO LAYERS OF NON-WOVEN GEOTEXTILE FABRIC OVER ACF R-TANK



**SIDE VIEW OF 30 MIL PVC BOOT**

**R-TANK<sup>HD</sup> TYPICAL TANK INLET/OUTLET W/ 30 MIL PVC PIPE BOOT DETAIL**



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
 ACF ENVIRONMENTAL 1-800-448-3636  
 www.acfenvironmental.com



R-TANK<sup>UD</sup> SYSTEM DETAILS  
 RESIDENTIAL DEVELOPMENT  
 MAMARONECK, NY  
 SITE DESIGNATION: UGDS

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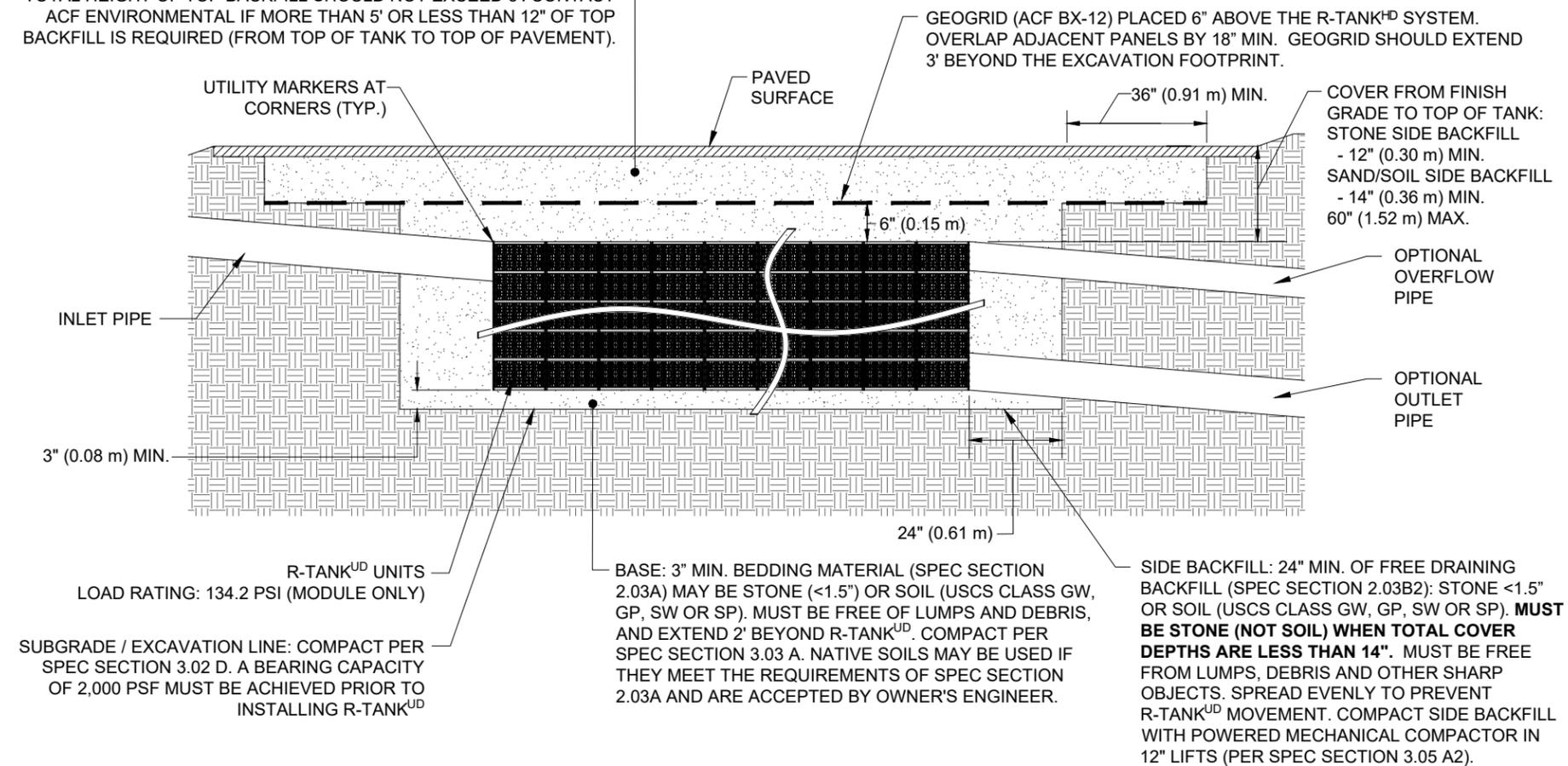
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SHEET NO.

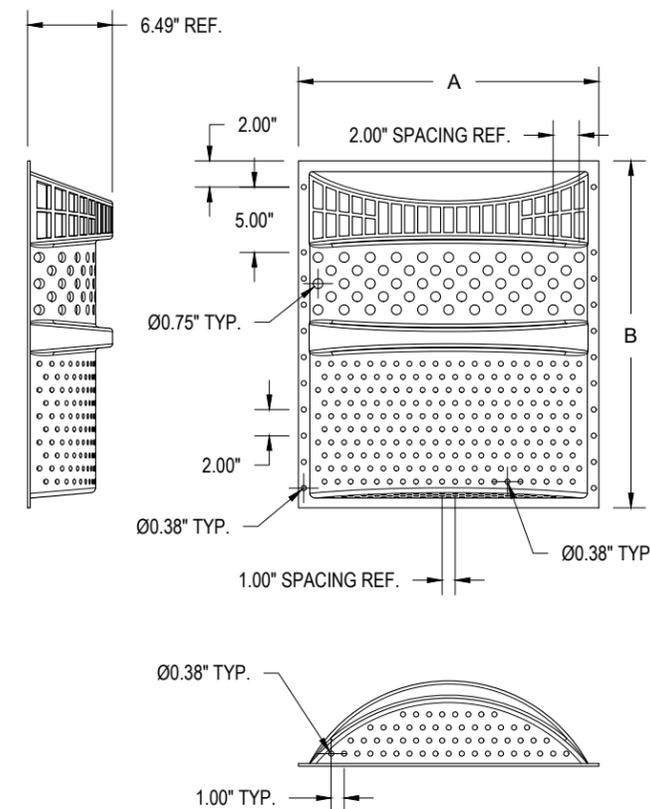
TOTAL COVER: 12"(STONE)/14"(SAND/SOIL) MINIMUM AND 60" MAXIMUM. FIRST 12" (OR FROM TOP OF MODULE TO BOTTOM OF PAVEMENT SECTION WHEN MINIMUM COVER CONDITIONS APPLY) MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B2): STONE <1.5" OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT <10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12" COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 5'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 5' OR LESS THAN 12" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT).

NOTES:

- FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK<sup>UD</sup> MODULE SHEET.
- INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION, 2014 WITH 2015 AND 2016 INTERIM REVISIONS.
- PRE-TREATMENT STRUCTURES NOT SHOWN.
- FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK<sup>UD</sup> FOOTPRINT.



R-TANK<sup>UD</sup> & H-20 LOADS - SECTION VIEW



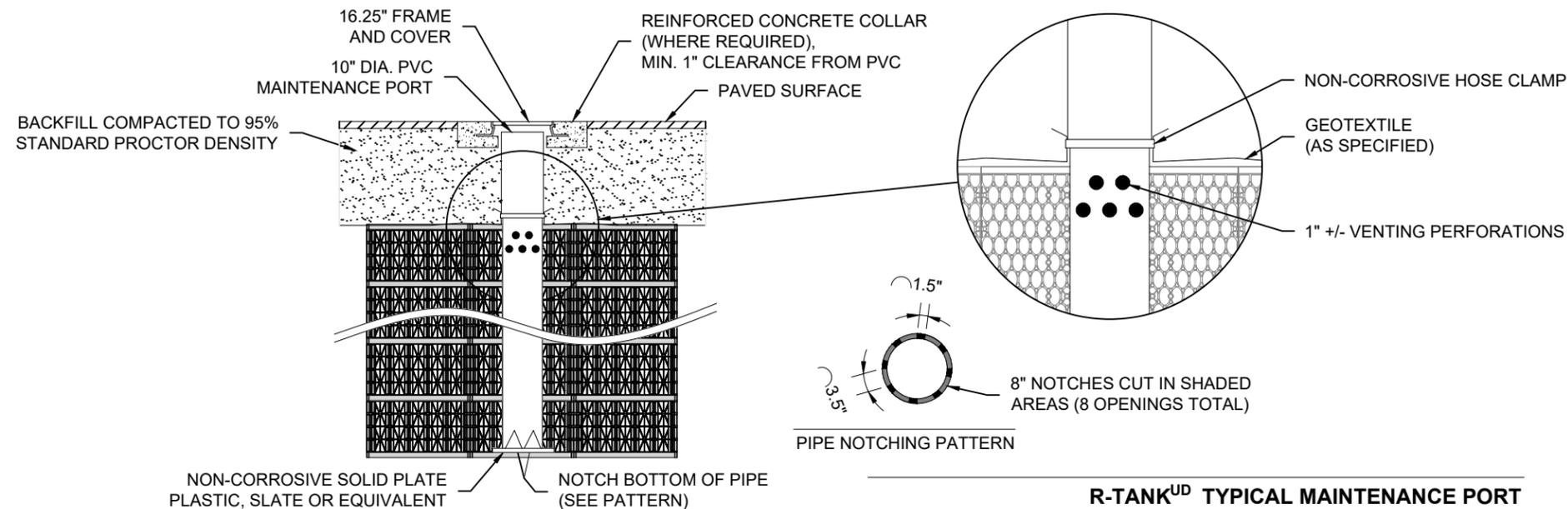
SIZE	A	B
23" x 24"	23"	26.51"
28" x 30"	28"	33.15"
34" x 36"	34"	38.69"

±0.25" TOLERANCE ON DIMENSIONS

TRASHGUARD PLUS PRETREATMENT DETAIL

NOTES

- THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
- MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
- SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.
- IF MAINTENANCE PORT IS LOCATED IN A NON-TRAFFIC AREA, A PLASTIC CAP CAN BE USED IN LEU OF A FRAME AND COVER WITH CONCRETE COLLAR.



R-TANK<sup>UD</sup> TYPICAL MAINTENANCE PORT



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

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www.acfenvironmental.com

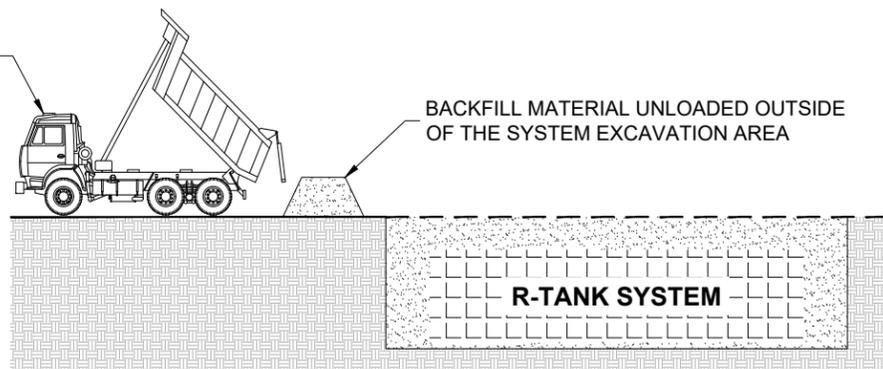


R-TANK<sup>UD</sup> SYSTEM DETAILS  
RESIDENTIAL DEVELOPMENT  
MAMARONECK, NY  
SITE DESIGNATION: UGDS

ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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DUMP TRUCKS AND PANS SHALL NOT OPERATE OVER THE SYSTEM EXCAVATION AREA

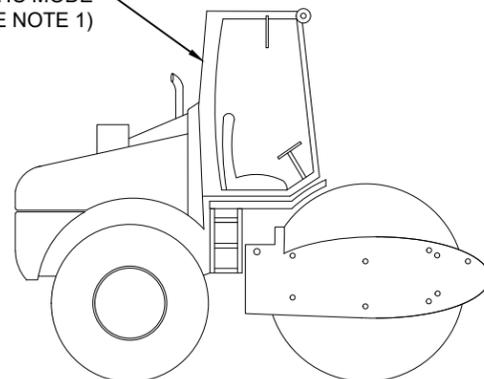


DUMP TRUCK DETAIL (SEE NOTE 3)

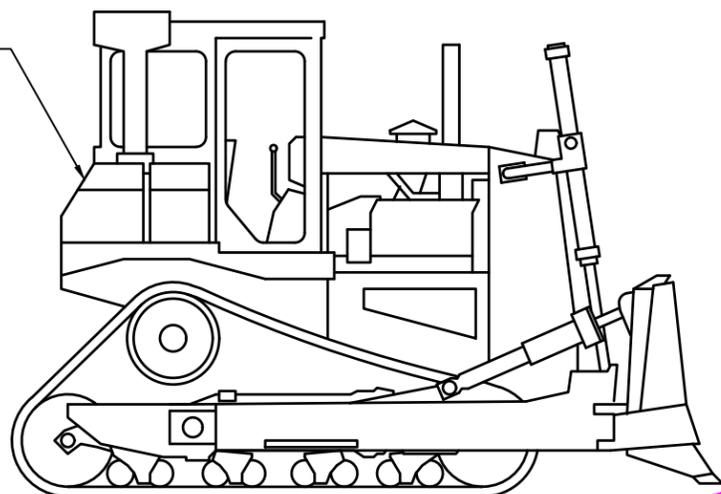
NOTES:

1. FOLLOWING PLACEMENT OF SIDE BACKFILL, A UNIFORM 12" LIFT OF THE FREELY DRAINING MATERIAL (SPEC SECTION 2.03 B) SHALL BE PLACED OVER THE R-TANK AND LIGHTLY COMPACTED USING A WALK-BEHIND TRENCH ROLLER. ALTERNATELY, A ROLLER (MAXIMUM GROSS VEHICLE WEIGHT OF 6 TONS) MAY BE USED. ROLLER MUST REMAIN IN STATIC MODE UNTIL A MINIMUM OF 24" OF COVER HAS BEEN PLACED OVER THE MODULES. SHEEP FOOT ROLLERS SHOULD NOT BE USED. **SPEC SECTION 3.05 A**
2. ONLY LOW PRESSURE TIRE OR TRACK VEHICLES (LESS THAN 7 PSI AND OPERATING WEIGHT OF LESS THAN 20,000 LBS) SHALL BE OPERATED OVER THE R-TANK SYSTEM DURING CONSTRUCTION. **SPEC SECTION 3.05 B**
3. DUMP TRUCKS AND PANS SHALL NOT BE OPERATED WITHIN THE R-TANK SYSTEM AT ANY TIME. WHERE NECESSARY, THE HEAVY EQUIPMENT SHOULD UNLOAD IN AN AREA ADJACENT TO THE R-TANK SYSTEM AND THE MATERIAL SHOULD BE MOVED OVER THE SYSTEM WITH TRACKED EQUIPMENT. **SPEC SECTION 3.05 B**
4. ENSURE THAT ALL UNRELATED CONSTRUCTION TRAFFIC IS KEPT AWAY FROM THE LIMITS OF EXCAVATION UNTIL THE PROJECT IS COMPLETE AND FINAL SURFACE MATERIALS ARE IN PLACE. NO NON-INSTALLATION RELATED LOADING SHOULD BE ALLOWED OVER THE R-TANK SYSTEM UNTIL THE FINAL DESIGN SECTION HAS BEEN CONSTRUCTED (INCLUDING PAVEMENT). **SPEC SECTION 3.05 C**
5. SEE R-TANK INSTALLATION GUIDE OR CONTACT YOUR LOCAL ACF REPRESENTATIVE FOR ADDITIONAL INFORMATION.

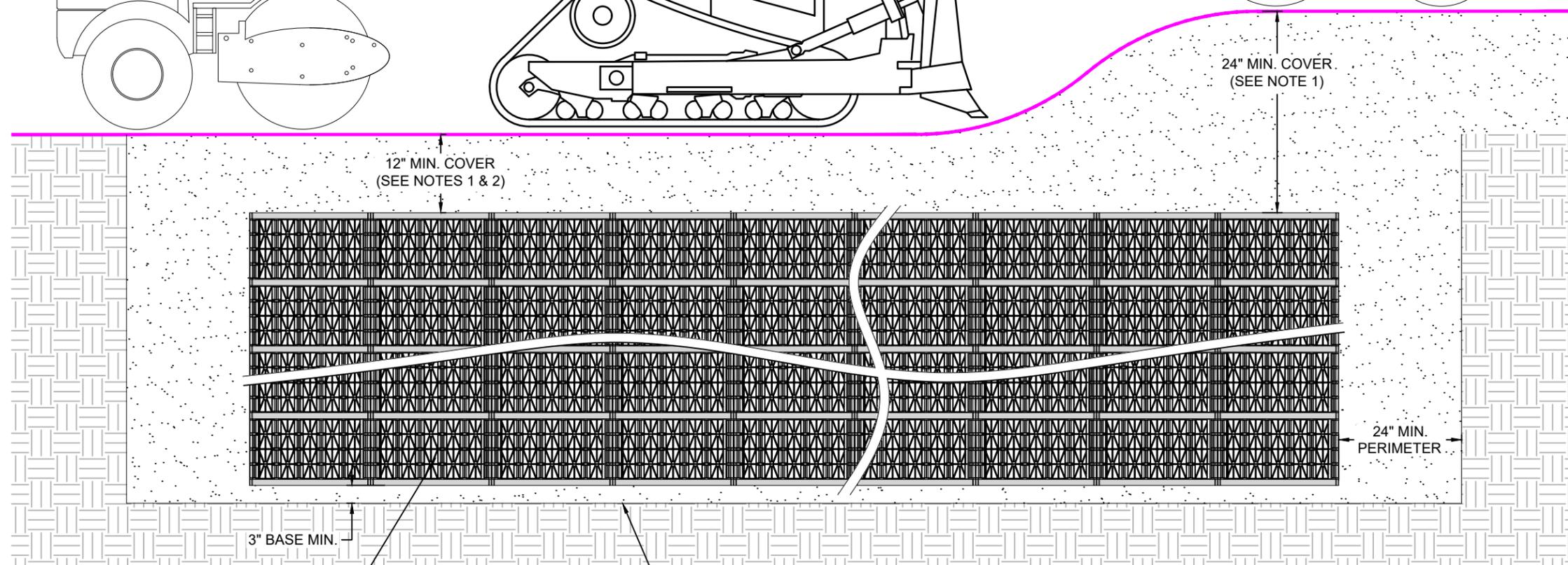
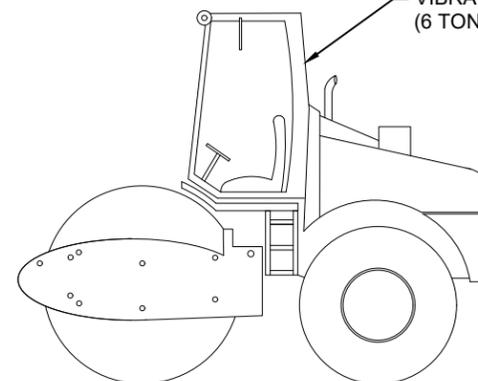
SMOOTH DRUM ROLLER STATIC MODE (6 TON MAX, SEE NOTE 1)



LOW GROUND PRESSURE DOZER (10 TON MAX, SEE NOTE 2)



SMOOTH DRUM ROLLER VIBRATORY MODE (6 TON MAX, SEE NOTE 1)



R-TANK<sup>UD</sup> UNITS  
LOAD RATING: 134.2 PSI (MODULE ONLY)

SUBGRADE / EXCAVATION LINE: COMPACT PER SPEC SECTION 3.02 D. A BEARING CAPACITY OF 2,000 PSF MUST BE ACHIEVED PRIOR TO INSTALLING R-TANK<sup>UD</sup>



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
ACF ENVIRONMENTAL 1-800-448-3636  
www.acfenvironmental.com



R-TANK<sup>UD</sup> CONSTRUCTION EQUIPMENT COVER DETAIL  
RESIDENTIAL DEVELOPMENT  
MAMARONECK, NY  
SITE DESIGNATION: UGDS  
ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

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08/25/20

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# R-TANK SPECIFICATION

## PART 1 - GENERAL

### 1.01 Related Documents

- A. Drawings, technical specification and general provisions of the Contract as modified herein apply to this section.

### 1.02 Description of Work Included

- A. Provide excavation and base preparation per geotechnical engineer's recommendations and/or as shown on the design drawings, to provide adequate support for project design loads and safety from excavation sidewall collapse. Excavations shall be in accordance with the owner's and OSHA requirements.
- B. Provide and install R-Tank<sup>LD</sup>, R-Tank<sup>HD</sup>, R-Tank<sup>SD</sup>, or R-Tank<sup>UD</sup> system (hereafter called R-Tank) and all related products including fill materials, geotextiles, geogrids, inlet and outlet pipe with connections per the manufacturer's installation guidelines provided in this section.
- C. Provide and construct the cover of the R-Tank system including; stone backfill, structural fill cover, and pavement section as specified.
- D. Protect R-Tank system from construction traffic after installation until completion of all construction activity in the installation area.

### 1.03 Quality Control

- A. All materials shall be manufactured in ISO certified facilities.
- B. Installation Contractor shall demonstrate the following experience:
1. A minimum of three R-Tank or equivalent projects completed within 2 years; and,
  2. A minimum of 25,000 cubic feet of storage volume completed within 2 years.
- C. Contractor experience requirement may be waived if the manufacturer's representative provides on-site training and review during construction.
- C. Installation Personnel: Performed only by skilled workers with satisfactory record of performance on bulk earthworks, pipe, chamber, or pond/landfill construction projects of comparable size and quality.
- D. Contractor must have manufacturer's representative available for site review if requested by Owner.

### 1.04 Submittals

- A. Submit proposed R-Tank layout drawings. Drawings shall include typical section details as well as the required base elevation of stone and tanks, minimum cover requirements and tank configuration.
- B. Submit manufacturer's product data, including compressive strength and unit weight.
- C. Submit manufacturer's installation instructions.
- D. Submit R-Tank sample for review. Reviewed and accepted samples will be returned to the Contractor.
- E. Submit material certificates for geotextile, geogrid, base course and backfill materials.
- F. Submit required experience and personnel requirements as specified in Section 1.03.
- G. Any proposed equal alternative product substitution to this specification must be submitted for review and approved prior to bid opening. Review package should include third party reviewed performance data that meets or exceeds criteria in Table 2.01 B.

### 1.05 Delivery, Storage, and Handling

- A. Protect R-Tank and other materials from damage during delivery, and store UV sensitive materials under tarp to protect from sunlight when time from delivery to installation exceeds two weeks. Storage of materials should be on smooth surfaces, free from dirt, mud and debris.
- B. Handling is to be performed with equipment appropriate to the materials and site conditions, and may include hand, handcart, forklifts, extension lifts, etc.
- C. Cold weather:
1. Care must be taken when handling plastics when air temperature is 40 degrees or below as plastic becomes brittle.
  2. Do not use frozen materials or materials mixed or coated with ice or frost.
  3. Do not build on frozen ground or wet, saturated or muddy subgrade.

### 1.06 Preinstallation Conference.

- A. Prior to the start of the installation, a preinstallation conference shall occur with the representatives from the design team, the general contractor, the excavation contractor, the R-Tank installation contractor, and the manufacturer's representative.

### 1.07 Project Conditions

- A. Coordinate installation for the R-Tank system with other on-site activities to eliminate all non-installation related construction traffic over the completed R-Tank system. No loads heavier than the design loads shall be allowed over the system, and in no case shall loads higher than a standard AASHTO HS20 (or HS25, depending on design criteria) load be allowed on the system at any time.
- B. Protect adjacent work from damage during R-Tank system installation.
- C. All pre-treatment systems to remove debris and heavy sediments must be in place and functional prior to operation of the R-Tank system. Additional pretreatment measures may be needed if unit is operational during construction due to increased sediment loads.
- D. Contractor is responsible for any damage to the system during construction.

## PART 2 - PRODUCTS

### 2.01 R-Tank Units

- A. R-Tank - Injection molded plastic tank plates assembled to form a 95% void modular structure of predesigned height (custom for each project).
- B. R-Tank units shall meet the following Physical & Chemical Characteristics:

PROPERTY	DESCRIPTION	R-Tank <sup>LD</sup> VALUE	R-Tank <sup>HD</sup> VALUE	R-Tank <sup>SD</sup> VALUE	R-Tank <sup>UD</sup> VALUE
Void Area	Volume available for water storage	95%	95%	95%	95%
Surface Void Area	Percentage of exterior available for infiltration	90%	90%	90%	90%
Compressive Strength	ASTM D 2412 / ASTM F 2418	30.0 psi	33.4 psi	42.9 psi	134.2 psi
HS-20 Minimum Cover	Cover required to support HS-20 loads	N/A	20"	18"	12" (STONE BACKFILL)
HS-25 Minimum Cover	Cover required to support HS-25 loads	N/A	24"	19"	15" (STONE BACKFILL)
Maximum Cover	Maximum allowable cover depth	3 feet	< 7 feet	< 10 feet	5 feet
Unit Weight	Weight of plastic per cubic foot of tank	3.29 lbs / cf	3.62 lbs/cf	3.96 lbs / cf	4.33 lbs / cf
Rib Thickness	Thickness of load-bearing members	0.18 inches	0.18 inches	0.18 inches	N/A
Service Temperature	Safe temperature range for use	-14 - 167° F			

- C. Supplier: ACF Environmental 2831 Cardwell Road Richmond, VA 23234  
(T): 800-448-3636; (F): 804-743-7779 www.acfenvironmental.com

### 2.02 Geosynthetics

- A. Geotextile. A geotextile envelope is required to prevent backfill material from entering the R-Tank modules.
1. Standard Application: The standard geotextile shall be an 8 oz per square yard nonwoven geotextile (ACF N080 or equivalent).
  2. Infiltration Applications: When water must infiltrate/exfiltrate through the geotextile as a function of the system design, a woven monofilament (ACF M200 or equivalent) shall be used.
- B. Geogrid. For installations subject to traffic loads and/or when required by project plans, install geogrid (ACF BX12 or equivalent) to reinforce backfill above the R-Tank system. Geogrid is not always required for R-Tank<sup>UD</sup> installations, and is often not required for non-traffic load applications.

### 2.03 Backfill & Cover Materials

- A. Bedding Materials: Stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System) shall be used below the R-Tank system (3" minimum). Material must be free from lumps, debris, and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation. For infiltration applications bedding material shall be free draining.
- B. Side and Top Backfill: Free draining material shall be used adjacent to (24" minimum) and above (for the first 12") the R-Tank system. Material must be free from lumps, debris and any sharp objects that could cut the geotextile. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.
1. For LD, HD, and SD modules, backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter) or soil (GW, GP, SW, or SP as classified by the Unified Soil Classification System).
  2. For UD modules in traffic loaded (HS-20) applications with less than 14" of top cover, side backfill materials shall be free draining stone (angular and smaller than 1.5" in diameter). The use of soil backfill on the sides of the UD module is not permitted unless the modules are installed outside of traffic areas or with cover depths of > 14". Top backfill material may be stone or soil as noted above (Section 2.03 B 1).
- C. Additional Cover Materials: Structural Fill shall consist of granular materials meeting the gradational requirements of SM, SP, SW, GM, GP or GW as classified by the Unified Soil Classification System. Structural fill shall have a maximum of 25 percent passing the No. 200 sieve, shall have a maximum clay content of 10 percent and a maximum Plasticity Index of 4. Material shall be within 3 percent of the optimum moisture content as determined by ASTM D698 at the time of installation.

### 2.04 Other Materials

- Utility Marker: Install metallic tape at corners of R-Tank system to mark the area for future utility detection.

## PART 3 - EXECUTION

### 3.01 Assembly of R-Tank Units

- A. Assembly of modules shall be performed in accordance with the R-Tank Installation Manual, Section 2.

### 3.02 Layout and Excavation

- A. Installer shall stake out, excavate, and prepare the subgrade area to the required plan grades and dimensions, ensuring that the excavation is at least 2 feet greater than R-Tank dimensions in each direction allowing for installation of geotextile filter fabric, R-Tank modules, and free draining backfill materials.
- B. All excavations must be prepared with OSHA approved excavated sides and sufficient working space.
- C. Protect partially completed installation against damage from other construction traffic by establishing a perimeter with high visibility construction tape, fencing, barricades, or other means until construction is complete.
- D. Base of the excavation shall be uniform, level, and free of lumps or debris and soft or yielding subgrade areas. A minimum 2,000 pounds per square foot bearing capacity is required.
1. Standard Applications: Compact subgrade to a minimum of 95% of Standard Proctor (ASTM D698) density or as required by the Owner's engineer.
  2. Infiltration Applications: Subgrade shall be prepared in accordance with the contract documents. Compaction of subgrade should not be performed in infiltration applications.
- E. Unsuitable Soils or Conditions: All questions about the base of the excavation shall be directed to the owner's engineer, who will approve the subgrade conditions prior to placement of stone. The owner's engineer shall determine the required bearing capacity of the R-Tank subgrade; however in no case shall a bearing capacity of less than 2,000 pounds per square foot be provided.
1. If unsuitable soils are encountered at the subgrade, or if the subgrade is pumping or appears excessively soft, repair the area in accordance with contract documents and/or as directed by the owner's engineer.
  2. If indications of the water table are observed during excavation, the engineer shall be contacted to provide recommendations.
  3. Do not start installation of the R-Tank system until unsatisfactory subgrade conditions are corrected and the subgrade conditions are accepted by the owner's engineer.

### 3.03 Preparation of Base

- A. Place a thin layer (3" unless otherwise specified) of bedding material (Section 2.03 A), over the subgrade to establish a level working platform for the R-Tank modules. Level to within 1/2" (+/- 1/4") or as shown on the plans. Native subgrade soils or other materials may be used if determined to meet the requirements of 2.03 A and are accepted by the owner's engineer.
1. Standard Applications: Static roll or otherwise compact bedding materials until they are firm and unyielding.
  2. Infiltration Applications: Bedding materials shall be prepared in accordance with the contract documents.
- B. Outline the footprint of the R-Tank system on the excavation floor using spray paint or chalk line to ensure a 2' perimeter is available around the R-Tank system for proper installation and compaction of backfill.

### 3.04 Installation of the R-Tanks

- A. Where a geotextile wrap is specified on the stone base, cut strips to length and install in excavation, removing wrinkles so material lays flat. Overlap geotextile a minimum 12" or as recommended by manufacturer.
- B. Where an impervious liner (for containment) is specified, install the liner per manufacturer's recommendations and the contract documents. The R-Tank units shall be separated from impervious liner by a non-woven geotextile fabric installed accordance with Section 3.04A.
- C. Install R-Tank modules by placing side by side, in accordance with the design drawings. No lateral connections are required. It is advisable to use a string line to form square corners and straight edges along the perimeter of the R-Tank system. The modules are to be oriented as per the design drawing with required depth as shown on plans..
1. For LD, HD, and SD installations, the large side plate of the tank should be placed on the perimeter of the system. This will typically require that the two ends of the tank area will have a row of tanks placed perpendicular to all other tanks. If this is not shown in the construction drawings, it is a simple field adjustment that will have minimal effect on the overall system footprint. Refer to R-Tank Installation Guide for more details
  2. For UD installations, there is no perpendicular end row required.
- D. Wrap the R-Tank top and sides in specified geotextile. Cut strips of geotextile so that it will cover the sides and top, encapsulating the entire system to prevent backfill entry into the system. Overlap geotextile 12" or as recommended by manufacturer. Take great care to avoid damage to geotextile (and, if specified, impervious liner) during placement.
- E. Identify locations of inlet, outlet and any other penetrations of the geotextile (and optional liner). These connections should be installed flush (buted up to the R-Tank) and the geotextile fabric shall be cut to enable hydraulic continuity between the connections and the R-Tank units. These connections shall be secured using pipe boots with stainless steel pipe clamps. Support pipe in trenches during backfill operations to prevent pipe from settling and damaging the geotextile, impervious liner (if specified) or pipe. Connecting pipes at 90 degree angles facilitates construction, unless otherwise specified. Ensure end of pipe is installed snug against R-Tank system.
- F. Install Inspection and Maintenance Ports in locations noted on plans. At a minimum one maintenance port shall be installed within 10' of each inlet & outlet connection, and with a maximum spacing of one maintenance port for every 2,500 square feet. Install all ports as noted in the R-Tank Installation Guide.
- G. If required, install ventilation pipes and vents as specified on drawings to provide ventilation for proper hydraulic performance. The number of pipes and vents will depend on the size of the system. Vents are often installed using a 90 degree elbow with PVC pipe into a landscaped area with 'U' bend or venting bollard to inhibit the ingress of debris. A ground level concrete or steel cover can be used.

### 3.05 Backfilling of the R-Tank Units

- A. Backfill and fill with recommended materials as follows:
1. Place freely draining backfill materials (Section 2.03 B) around the perimeter in lifts with a maximum thickness of 12". Each lift shall be placed around the entire perimeter such that each lift is no more than 24" higher than the side backfill along any other location on the perimeter of the R-Tank system. No fill shall be placed over top of tanks until the side backfill has been completed.
  2. Each lift shall be compacted at the specified moisture content to a minimum of 95% of the Standard Proctor Density until no further densification is observed (for self-compacting stone materials). The side lifts must be compacted with walk behind compaction equipment. Even when "self-compacting" backfill materials are selected, a walk behind vibratory compactor must be used.
  3. Take care to ensure that the compaction process does not allow the machinery to come into contact with the modules due to the potential for damage to the geotextile and R-Tank units.
  4. No compaction equipment is permissible to operate directly on the R-Tank modules.
  5. Top Backfill:
    - a. Typical Applications: Install a 12" (or as shown on plans) lift of freely draining material (Section 2.03 B) over the R-Tank Units, maintaining 12" between equipment tracks and R-Tank System.
    - b. Shallow Applications (< 18" total cover): Install top backfill in accordance with plans. Lightly compacted using a walk-behind trench roller. Alternately, a roller (maximum gross vehicle weight of 6 tons) may be used. Roller must remain in static mode until a minimum of 24" of cover has been placed over the modules. Sheep foot rollers should not be used.
  6. If required, install a geogrid as shown on plans. Geogrid shall extend a minimum of 3 feet beyond the limits of the excavation wall.
  7. Following placement and compaction of the initial cover, subsequent lifts of structural fill (Section 2.03 C) shall be placed at the specified moisture content and compacted to a minimum of 95% of the Standard Proctor Density and shall cover the entire footprint of the R-Tank system. During placement of fill above the system, unless otherwise specified, a uniform elevation of fill shall be maintained to within 12" across the footprint of the R-Tank system. Do not exceed maximum cover depths listed in Table 2.01 B.
  8. Place additional layers of geotextile and/or geogrid at elevations as specified in the design details. Each layer of geosynthetic reinforcement placed above the R-Tank system shall extend a minimum of 3 feet beyond the limits of the excavation wall.
- B. Only low pressure tire or track vehicles shall be operated over the R-Tank system during construction. No machinery should drive on top of the tank until a minimum of 18" of backfill and compaction is achieved. Dump Trucks and Pans shall not be operated within the R-Tank system footprint at any time. Where necessary the heavy equipment should unload in an area adjacent to the R-Tank system and the material should be moved over the system with tracked equipment.
- C. Ensure that all unrelated construction traffic is kept away from the limits of excavation until the project is complete and final surface materials are in place. No non-installation related loading should be allowed over the R-Tank system until the final design section has been constructed (including pavement).
- D. Place surfacing materials, such as groundcovers (no large trees), or paving materials over the structure with care to avoid displacement of cover fill and damage to surrounding areas.
- E. Backfill depth over R-Tank system must be within the limitations shown in the table in Section 2.01 B. If the total backfill depth does not comply with this table, contact engineer or manufacturer's representative for assistance.

## PART 4 - USING THE SYSTEM

### 4.01 Maintenance Requirements

- A. A routine maintenance effort is required to ensure proper performance of the R-Tank system. The Maintenance program should be focused on pretreatment systems. Ensuring these structures are clean and functioning properly will reduce the risk of contamination of the R-Tank system and stormwater released from the site. Pre-treatment systems shall be inspected yearly, or as directed by the regulatory agency and by the manufacturer (for proprietary systems). Maintain as needed using acceptable practices or following manufacturer's guidelines (for proprietary systems).
- B. Inspection and/or Maintenance Ports in the R-Tank system will need to be inspected for accumulation of sediments at least quarterly through the first year of operation and at least yearly thereafter. This is done by removing the cap of the port and using a measuring device long enough to reach the bottom of the R-Tank system and stiff enough to push through the loose sediments, allowing a depth measurement.
- C. If sediment has accumulated to the level noted in the R-Tank Maintenance Guide or beyond a level acceptable to the Owner's engineer, the R-Tank system should be flushed. A flushing event consists of pumping water into the Maintenance Port and/or adjacent structure, allowing the turbulent flows through the R-Tank system to re-suspend the fine sediments. If multiple Maintenance Ports have been installed, water should be pumped into each port to maximize flushing efficiency. Sediment-laden water can be filtered through a Dirlbag or approved equivalent if permitted by the locality.



ENGINEER OF RECORD TO REVIEW, APPROVE AND ENDORSE FINAL SITE SPECIFIC DESIGN.

FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
ACF ENVIRONMENTAL 1-800-448-3636  
www.acfenvironmental.com



R-TANK SPECIFICATION  
RESIDENTIAL DEVELOPMENT  
MAMARONECK, NY  
SITE DESIGNATION: UGDS

ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

DRAWN BY

JPS

DATE

08/25/20

SHEET NO.

6 of 6

***APPENDIX G***

***DRAWINGS***

# SITE PLAN APPROVAL DRAWINGS

# RESIDENTIAL DEVELOPMENT

**TAX MAP SECTION 9 | BLOCK 50 | LOT 373**  
**WESTCHESTER COUNTY**  
**1165 GREACEN POINT ROAD**  
**MAMARONECK, NY, 10543**

**Applicant/Owner:**  
**MR. WILLIAM FEDYNA & ELISABETH FEDYNA**  
 219 W 81ST STREET, APT. 9D  
 NEW YORK, NY, 10024

**Architect:**  
**ARCHI-TECTONICS**  
 111 JOHN ST #700  
 NEW YORK, NY 10038  
 (212)206-0920

**Attorney:**  
**CUDDY & FEDER LLP**  
 445 HAMILTON AVENUE, 14TH FLOOR  
 WHITE PLAINS, NY 10601  
 (914)761-1300

**Surveyor:**  
**SPINELLI SURVEYING**  
 650 HALSTEAD AVENUE  
 MAMARONECK, NY 10543  
 (914) 381-2357

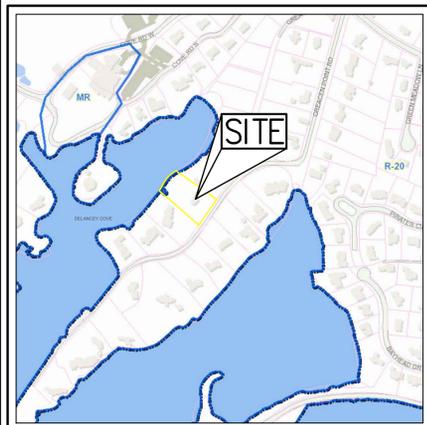
**JMC** Site Planner, Civil & Traffic Engineer,  
 Surveyor and Landscape Architect:  
 120 BEDFORD ROAD  
 ARMONK, NY 10504  
 (914) 273-5225

**JMC Drawing List:**

- C-000 COVER SHEET
- C-010 EXISTING CONDITIONS MAP
- C-020 DEMOLITION & TREE REMOVAL PLAN
- C-100 LAYOUT PLAN
- C-200 GRADING & UTILITY PLAN
- C-300 EROSION & SEDIMENT CONTROL PLAN
- C-900 CONSTRUCTION DETAILS
- C-901 CONSTRUCTION DETAILS
- C-902 CONSTRUCTION DETAILS
- C-903 CONSTRUCTION DETAILS
- L-100 LANDSCAPING & WETLAND MITIGATION PLAN



TABLE OF LAND USE			
SECTION 9, BLOCK 50, LOT 373 ZONE "R-20" - "ONE FAMILY RESIDENTIAL" PROPOSED USE: RESIDENTIAL FIRE DISTRICT: MAMARONECK VILLAGE FD WATER DISTRICT: WESTCHESTER JOINT WATER WORKS SCHOOL DISTRICT: MAMARONECK SEWER DISTRICT: PRIVATE ONSITE WASTEWATER TREATMENT SYSTEM			
DESCRIPTION	REQUIRED	EXISTING	PROPOSED
LOT AREA (FEET)	20,000 MINIMUM	47,560 S.F.	47,560 S.F.
LOT WIDTH (FEET)	100' MINIMUM	177'	177'
LOT FRONTAGE (FEET)	100' MINIMUM	177'	177'
LOT DEPTH (FEET)	100' MINIMUM	280'	280'
BUILDING HEIGHT (STORIES/FEET)	2.5/35'	1.5/21'±	2.5/35'±
GROSS FLOOR AREA (SQUARE FEET)	-	-	-
LOT COVERAGE BY PRINCIPAL BUILDING (PERCENT)	35% MAXIMUM	3.4%	7.7%
OFF STREET PARKING SPACES (EACH)	2	2	3
YARDS			
FRONT YARD SETBACK (FEET)	25' MINIMUM	92'	90'
REAR YARD SETBACK (FEET)	30' MINIMUM	162.9'	149'
SIDE YARD SETBACK (FEET/TOTAL)	20' MIN/45' TOTAL	33.4'/93.8'	23.4'/56.3'
PARKING			
REAR/SIDE PARKING SETBACK (FEET)	5' MINIMUM	26.7±	5'
TOTAL PARKING (SPACES)	2 MINIMUM	1	3



**ZONING / VICINITY MAP**  
 SCALE: N.T.S.  
 SOURCE: WESTCHESTER COUNTY GIS / 2016

LEGEND	
---	SITE PROPERTY LINE
---	ZONING BOUNDARY
MR	MARINE RECREATION
R-20	RESIDENTIAL ZONE

**GENERAL CONSTRUCTION NOTES APPLY TO ALL WORK HEREIN:**

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CALL 811 "DIG SAFELY" (1-800-962-7962) TO HAVE UNDERGROUND UTILITIES LOCATED. EXPLORATORY EXCAVATIONS SHALL COMPLY WITH CODE 753 REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL ALL THE OPERATORS HAVE NOTIFIED THE CONTRACTOR THAT THEIR UTILITIES HAVE BEEN LOCATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESERVATION OF ALL PUBLIC AND PRIVATE UNDERGROUND AND SURFACE UTILITIES AND STRUCTURES AT OR ADJACENT TO THE SITE OF CONSTRUCTION, INsofar AS THEY MAY BE ENDANGERED BY THE CONTRACTOR'S OPERATIONS. THIS SHALL HOLD TRUE WHETHER OR NOT THEY ARE SHOWN ON THE CONTRACT DRAWINGS. IF THEY ARE SHOWN ON THE DRAWINGS, THEIR LOCATIONS ARE NOT GUARANTEED EVEN THOUGH THE INFORMATION WAS OBTAINED FROM THE BEST AVAILABLE SOURCES, AND IN ANY EVENT, OTHER UTILITIES ON THESE PLANS MAY BE ENCOUNTERED IN THE FIELD. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, IMMEDIATELY REPAIR OR REPLACE ANY STRUCTURES OR UTILITIES THAT HE DAMAGES, AND SHALL CONSTANTLY PROCEED WITH CAUTION TO PREVENT UNDUE INTERRUPTION OF UTILITY SERVICE.
2. CONTRACTOR SHALL HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL VERIFY EXISTING UTILITIES DEPTHS AND ADVISE OF ANY CONFLICTS WITH PROPOSED UTILITIES. IF CONFLICTS ARE PRESENT, THE OWNER'S FIELD REPRESENTATIVE, JMC, PLLC AND THE APPLICABLE MUNICIPALITY OR AGENCY SHALL BE NOTIFIED IN WRITING. THE EXISTING/PROPOSED UTILITIES RELOCATION SHALL BE DESIGNED BY JMC, PLLC.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL LOCAL PERMITS REQUIRED.
4. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARDS, ORDINANCES, RULES, AND REGULATIONS. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERETO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA), AND APPLICABLE SAFETY, HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARDING AND PROTECTING ALL OPEN EXCAVATIONS IN ACCORDANCE WITH THE PROVISION OF SECTION 107-05 (SAFETY AND HEALTH REQUIREMENTS) OF THE NYSOT STANDARD SPECIFICATIONS. IF THE CONTRACTOR PERFORMS ANY HAZARDOUS CONSTRUCTION PRACTICES, ALL OPERATIONS IN THE AFFECTED AREA SHALL BE DISCONTINUED AND IMMEDIATE ACTION SHALL BE TAKEN TO CORRECT THE SITUATION TO THE SATISFACTION OF THE APPROVAL AUTHORITY HAVING JURISDICTION.
5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AFFECTED BY THE SCOPE OF WORK SHOWN HEREON AT ALL TIMES TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. RAMPING CONSTRUCTION TO PROVIDE ACCESS MAY BE CONSTRUCTED WITH SUBBASE MATERIAL EXCEPT THAT TEMPORARY ASPHALT CONCRETE SHALL BE PLACED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE PEDESTRIAN ACCESS AT ALL TIMES.
6. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING PAVEMENT TO REMAIN.

**AREA MAP**  
 SCALE: 1" = 100'

Subsurface utility locations are based on a compilation of field evidence, available record plans and/or utility mark-outs. THE LOCATION OR COMPLETENESS OF UNDERGROUND INFORMATION CANNOT BE GUARANTEED. VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION OR CONSTRUCTION.



No.	Revision	Date	By
1.	REVISED BUILDING FOOTPRINT	04/11/2019	SPG
2.	UPDATED WETLAND LINES	02/28/2020	RC
3.	UPDATED SURVEY	05/11/2020	RAR
4.	REVISED PER VILLAGE COMMENTS	06/08/2020	RAR
5.	RESUBMIT TO VILLAGE HCZMC	07/01/2020	RAR
6.	RESPOND TO TOWN COMMENTS	07/22/2020	RAR
7.	RESUBMIT TO VILLAGE HCZMC	09/02/2020	RAR

Previous Editions Obsolete

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.

**JMC**  
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 120 BEDFORD ROAD • ARMONK, NY 10504  
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 www.jmcpllc.com

Drawn: RAR Approved: JAR  
 Scale: NOT TO SCALE  
 Date: 07/24/2018  
 Project No: 18100  
 HROW-SE COVER COVER.scr  
 Drawing No: **C-000**

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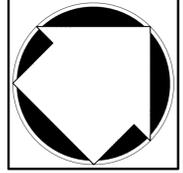


LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING FENCE
	EXISTING FLAGGED WETLAND LINE
	EXISTING TREE AND DESIGNATION
	10 FOOT CONTOUR FROM USGS MAPPING (NYSDEC LIMIT OF ADJACENT AREA)
	EXISTING WETLAND SETBACK
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING OVERHEAD WIRES
	EXISTING MANHOLE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	BORING LOCATION AND DESIGNATION

- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY SPINELLI SURVEYING, DATED 02/22/2018, LAST REVISED 04/23/2020.
  - WETLANDS FLAGGED BY ECOLOGICAL SOLUTIONS L.L.C.
  - THE MEAN LOW WATER BOUNDARY IS BEYOND DRAWING LIMITS TOWARD THE DELANCEY COVE CHANNEL.
  - MEAN HIGH WATER: 3.39'  
MEAN HIGHER HIGH WATER: 3.75'  
MEAN LOW WATER: -3.90'  
MEAN LOWER LOW WATER: -4.14'

APPLICANT/OWNER:  
**MR. WILLIAM FEDYNA & ELISABETH FEDYNA**  
 219 W 81ST STREET, APT. 9D  
 NEW YORK, NY, 10024  
 ARCHITECT:  
**ARCHI-TECTONICS**  
 111 JOHN ST. #700  
 NEW YORK, NY 10038

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 www.jmcpllc.com



**EXISTING CONDITIONS MAP**  
**RESIDENTIAL DEVELOPMENT**  
 1165 GREACEN POINT ROAD  
 MAMARONECK, NY, 10543

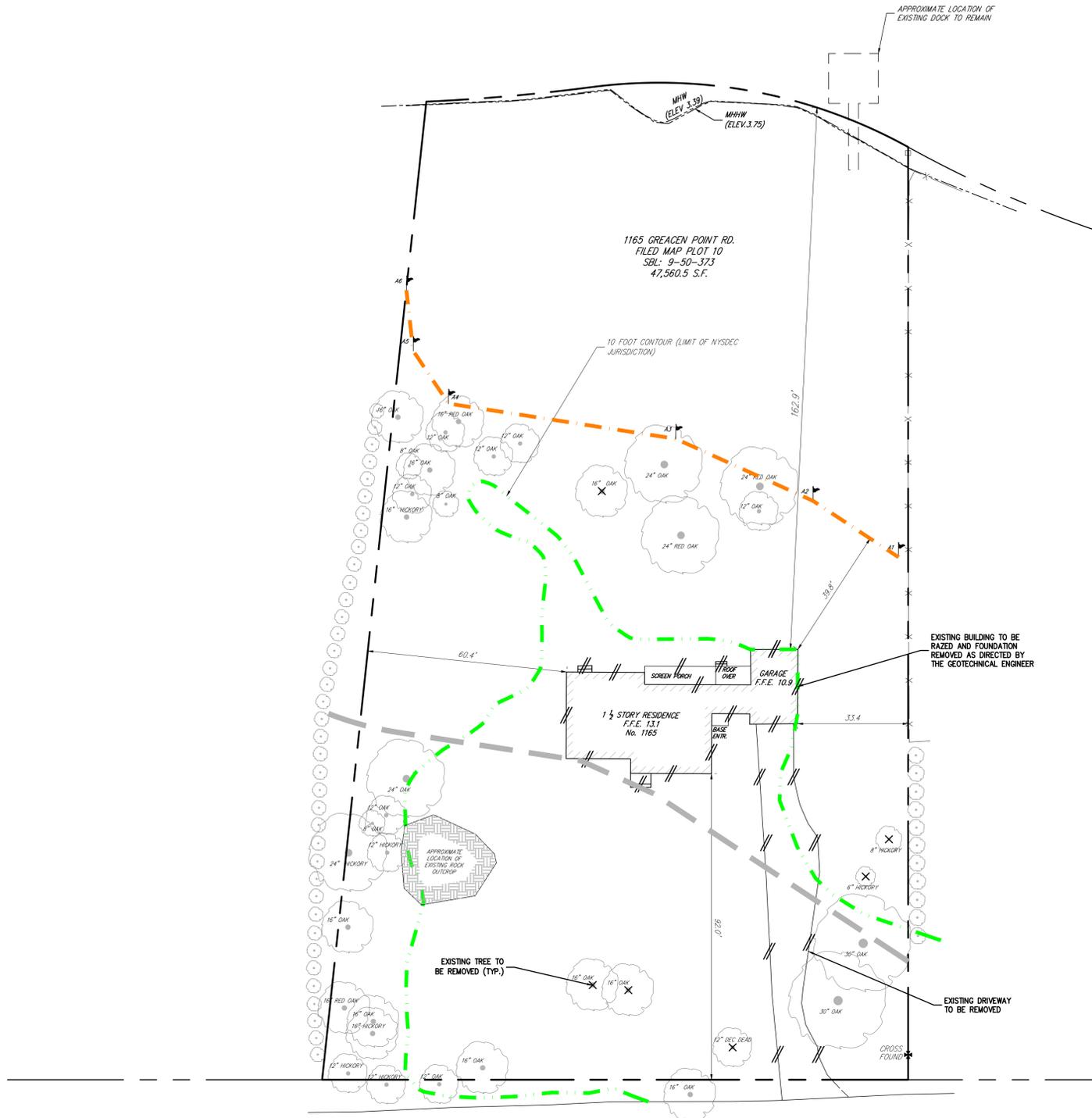
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*Previous Editions Obsolete*

Drawn: RAR	Approved: JAR
Scale: 1" = 20'	
Date: 07/24/2018	
Project No: 18100	
HW-SE	EXIST
EXIST	EXIST
Drawing No:	<b>C-010</b>

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**NOTES:**

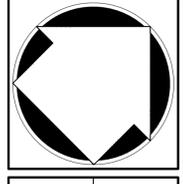
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY SPINELLI SURVEYING, DATED 02/22/2018, LAST REVISED 04/23/2020.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES TO BE DEMOLISHED AND EXISTING UTILITIES TO BE PROTECTED. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR AND JMC PRIOR TO THE START OF CONSTRUCTION.
- PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND/OR APPROVALS FROM THE VILLAGE OF MAMARONECK AND ALL OTHER AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL PAY ALL OUTSTANDING FEES, CHARGES, AND DEPOSITS TO ACQUIRE SAID PERMITS. NO DEMOLITION SHALL COMMENCE UNTIL A PERMIT HAS BEEN OBTAINED FROM THE VILLAGE.
- THE CONTRACTOR SHALL COORDINATE THE DISCONNECTION OF ALL UTILITIES WITH THE UTILITY COMPANY HAVING JURISDICTION PRIOR TO THE START OF DEMOLITION. CONFIRMATION OF DISCONNECTED UTILITIES SHALL BE PROVIDED TO THE VILLAGE OF MAMARONECK BUILDING DEPARTMENT IN ACCORDANCE WITH THEIR REQUIREMENTS. LETTERS FROM THE APPROPRIATE UTILITIES STATING THAT GAS AND ELECTRIC HAVE BEEN CUT OFF SHALL BE PROVIDED TO THE TOWN.
- ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING DEMOLITION/CONSTRUCTION, AS DETERMINED BY THE PROJECT'S GEOTECHNICAL ENGINEER, SHALL BE PROPERLY DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED.
- ANY UNSUITABLE MATERIAL FOUND ON-SITE DURING CONSTRUCTION SHALL BE DISPOSED OF OFF-SITE IN A MANNER APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND REPLACED WITH SUITABLE MATERIAL AS REQUIRED. ALL REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A GEOTECHNICAL ENGINEER.
- ALL DEMOLITION AND/OR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, INCLUDING STREETS AND SIDEWALKS, SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN.
- ALL CONSTRUCTION/DEMOLITION DEBRIS NOT PROPOSED TO BE RECYCLED SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH THE REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AGENCIES HAVING JURISDICTION.
- EXISTING CONCRETE MAY BE STORED ON SITE, AND RECYCLED FOR USE AS COMPACTED FILL. ALL MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
- PRIOR TO THE START OF SITE DEMOLITION, EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THIS PLAN, AS REQUIRED AND/OR DIRECTED BY THE VILLAGE OF MAMARONECK OR JMC.
- EXISTING DRAINAGE PATTERNS ON SITE SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE.
- ALL EXISTING SIDEWALKS, CURBS, PAVEMENT, ETC. TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DUE TO THE NEW CONSTRUCTION, ARE TO BE REPLACED WITH MATERIALS CONSISTENT WITH EXISTING CONDITIONS.
- THESE PLANS ARE TO BE PROVIDED TO BOTH THE DEMOLITION CONTRACTOR AND THE SITE CONTRACTOR FOR THEIR USE, INFORMATION AND COORDINATION. ANY QUESTIONS OF CONTRACTOR RESPONSIBILITY AND/OR SEPARATION OF WORK SHALL BE DIRECTED TO THE GENERAL CONTRACTOR IN WRITING PRIOR TO ISSUANCE OF BID.
- THE OWNER SHALL RETAIN A LICENSED AND QUALIFIED PROFESSIONAL, CERTIFIED BY THE TOWN, TO INSPECT FOR THE PRESENCE OF ASBESTOS AND/OR OTHER HAZARDOUS MATERIALS WITHIN DEMOLITION AREAS PRIOR TO THE COMMENCEMENT OF DEMOLITION. IF REMEDIATION IS REQUIRED, THE OWNER SHALL DO SO IN ACCORDANCE WITH THE COUNTY ASBESTOS RULES AND REGULATIONS AND/OR ANY AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION TO THE TOWN PRIOR TO OBTAINING A DEMOLITION PERMIT.
- PRIOR TO COMMENCEMENT OF DEMOLITION, THE CONTRACTOR MUST PROVIDE 24-HOUR NOTIFICATION TO THE TOWN.

LEGEND	
	EXISTING PROPERTY LINE
	ADJACENT PROPERTY LINE
	EXISTING EASEMENT LINE
	EXISTING BUILDING LINE
	EXISTING PAVEMENT EDGE
	EXISTING CURB LINE
	EXISTING CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING FENCE
	EXISTING TREE AND DESIGNATION
	EXISTING TREE TO BE REMOVED
	EXISTING WETLAND SETBACK
	EXISTING STORM DRAIN LINE AND SIZE
	EXISTING SANITARY LINE AND SIZE
	EXISTING WATER LINE
	EXISTING OVERHEAD WIRES
	EXISTING MANHOLE
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING FEATURE TO BE REMOVED

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**DEMOLITION AND TREE REMOVAL PLAN**  
 RESIDENTIAL DEVELOPMENT  
 1165 GREACEN POINT ROAD  
 MAMARONECK, NY, 10543

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.

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3.	UPDATED SURVEY	05/11/2020	RAR
4.	REVISED PER VILLAGE COMMENTS	06/08/2020	RAR
5.	RESUBMIT TO VILLAGE HCZMC	07/01/2020	RAR
6.	RESPOND TO TOWN COMMENTS	07/22/2020	RAR
7.	RESUBMIT TO VILLAGE HCZMC	09/02/2020	RAR

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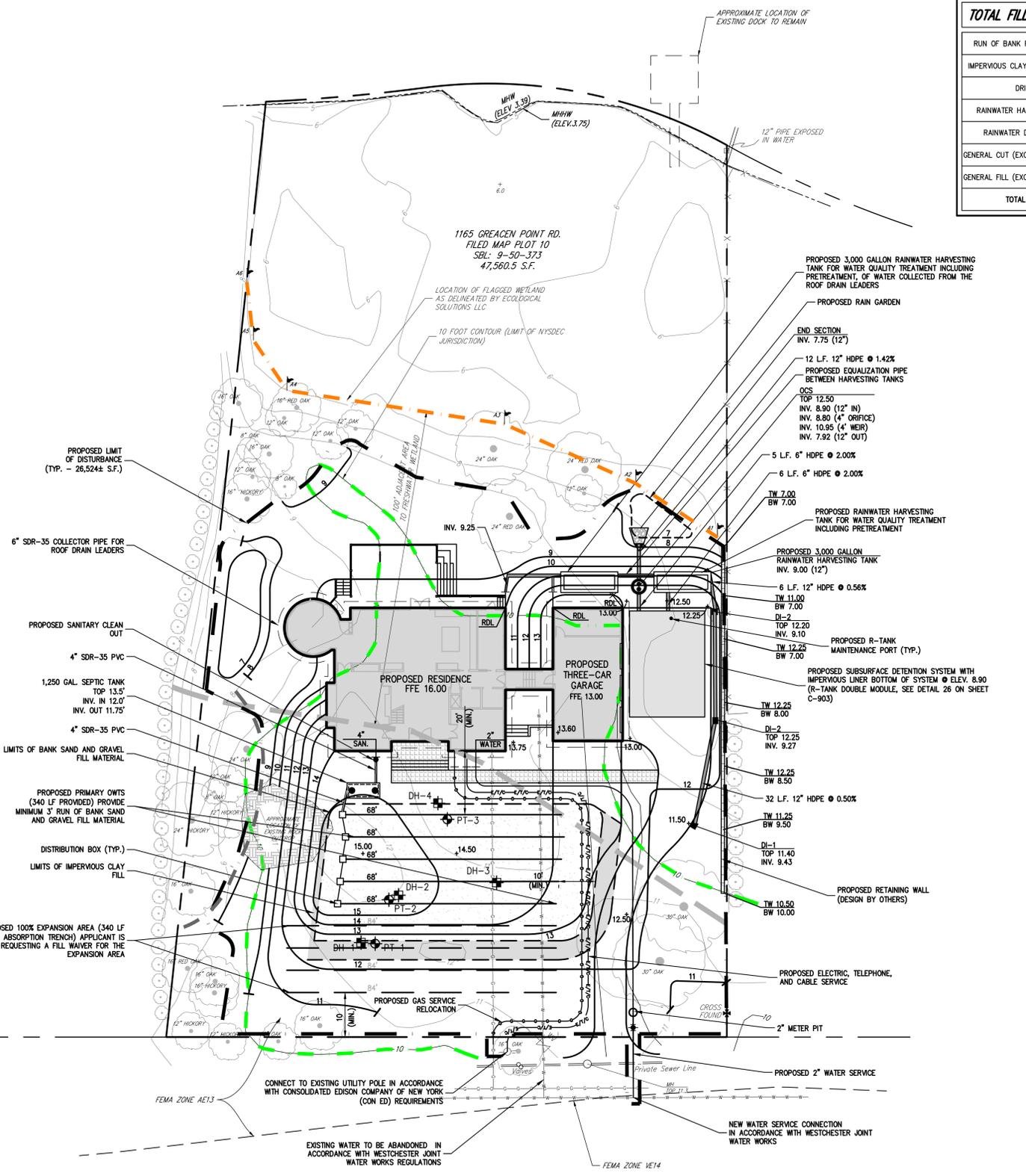
**RETAINING WALL SPOT GRADE LEGEND**

**TOTAL FILL REQUIRED FOR SITE (CUBIC YARDS)**

RUN OF BANK FILL (SEPTIC AREA)	480
IMPERVIOUS CLAY FILL (SEPTIC AREA)	93
DRIVEWAY	58
RAINWATER HARVESTING TANKS	24
RAINWATER DETENTION AREA	63
GENERAL CUT (EXCLUDING SEPTIC AREA)	35
GENERAL FILL (EXCLUDING SEPTIC AREA)	343
<b>TOTAL NET FILL</b>	<b>1,096</b>

**LEGEND**

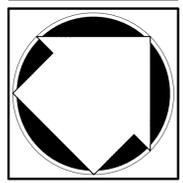
- EXISTING PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING EASEMENT LINE
- EXISTING BUILDING OVERHANG
- EXISTING BUILDING LINE
- EXISTING PAVEMENT EDGE
- EXISTING CONTOUR
- EXISTING INDEX CONTOUR
- EXISTING FENCE
- EXISTING MANHOLE
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING WETLAND LIMITS
- EXISTING WETLAND SETBACK
- USGS 10 FOOT CONTOUR (NYSDEC JURISDICTIONAL LINE)
- PROPOSED BUILDING LINE
- PROPOSED ASPHALT
- PROPOSED PAVER WALKWAY
- PROPOSED FINISHED GRADE
- PROPOSED SPOT GRADE
- PROPOSED RETAINING WALL (DESIGN BY OTHERS)
- PROPOSED CLEANOUT
- PROPOSED WATER LINE & SIZE
- PROPOSED WATER VALVE
- PRIMARY OWTS FIELD WITH DISTRIBUTION BOX
- EXPANSION FIELD
- PROPOSED 1,500 GAL. SEPTIC TANK



- NOTES:**
- EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY SPINELLI SURVEYING, DATED 02/22/2018, LAST REVISED 04/23/2020.
  - ALL FILLS SHALL BE COMPACTED TO PROVIDE STABILITY OF MATERIAL AND TO PREVENT SETTLEMENT.
  - EXCAVATIONS AND FILLS SHALL NOT ENDANGER ADJOINING PROPERTIES, NOR DIVERT WATER ONTO THE PROPERTY OF OTHERS AT ANY TIME DURING THE COURSE OF CONSTRUCTION.
  - CONTRACTOR SHALL REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR FURTHER DIRECTION REGARDING SITE STABILIZATION THROUGHOUT THE COURSE OF CONSTRUCTION.
  - UNLESS OTHERWISE SPECIFIED, PIPE FOR WATER LINES SHALL TYPE 'K' COPPER TUBE IN ACCORDANCE WITH ASTM B-88.
  - ELECTRIC, TELEPHONE, AND CABLE TELEVISION LINES SHALL BE INSTALLED UNDERGROUND IN CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY HAVING JURISDICTION.

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**GRADING & UTILITY PLAN**  
 RESIDENTIAL DEVELOPMENT  
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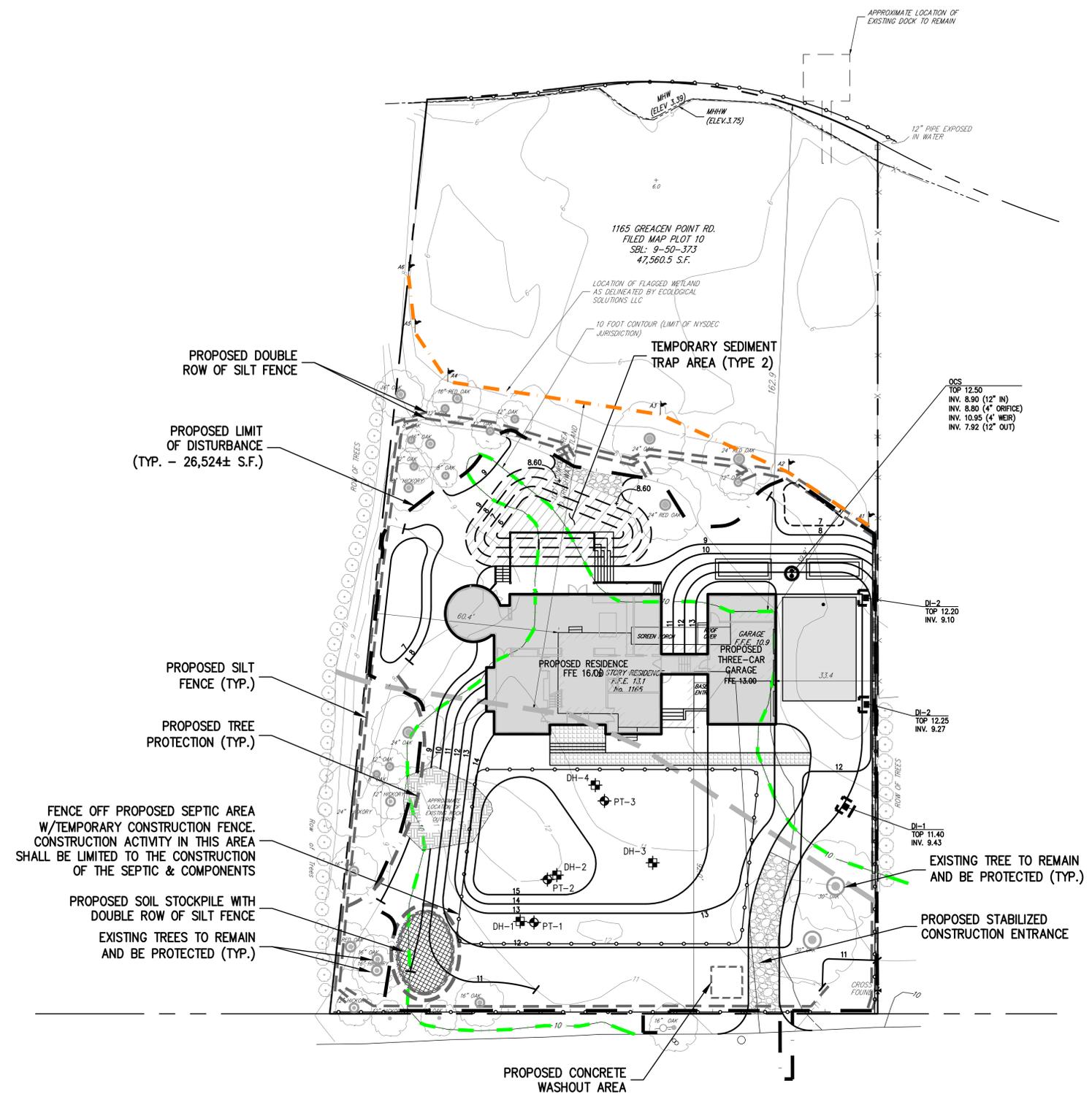
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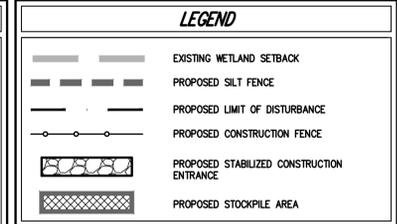
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- ### SEQUENCE OF CONSTRUCTION
- CONSTRUCTION SHALL BE SEQUENCED IN SUCH A MANNER THAT ANY AREA WHICH IS DISTURBED SHALL FIRST BE PROTECTED WITH SEDIMENT EROSION CONTROLS AS INDICATED ON THIS PLAN. PARTICULAR REQUIREMENTS ARE GIVEN AS FOLLOWS:
1. DEMOLITION OF EXISTING BUILDINGS AS REQUIRED.
  2. INSTALLATION OF SEDIMENT AND EROSION CONTROL MEASURES AS INDICATED ON THIS PLAN.
  3. CLEAR UNDEVELOPED PORTION OF PROPERTY WHICH IS TO BE DEVELOPED.
  4. STRIP AND STOCKPILE TOPSOIL.
  5. BEGIN BUILDING AND PARKING LOT CONSTRUCTION, ROUGH GRADING.
  6. INSTALL STORM DRAIN SYSTEM COMPLETE (IMMEDIATELY INSTALL HAYBALE FILTERS ON ALL INLETS).
  7. INSTALL PUBLIC UTILITIES (GAS, ELECTRIC AND TELEPHONE) AS REQUIRED.
  8. INSTALL CONCRETE AND ASPHALT CONCRETE PAVEMENT COMPLETE.
  9. FINISH GRADING, REDISTRIBUTE TOPSOIL AND ESTABLISH VEGETATION AND/OR LANDSCAPING.
  10. CLEAN PAVEMENTS AND STORM DRAIN SYSTEM OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH THE REMOVAL OF ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES.
  11. COMPLETE SITE AND BUILDING CONSTRUCTION.

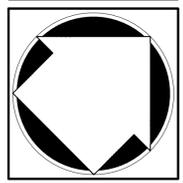


- ### NOTES:
1. EXISTING CONDITIONS DEPICTED ON THIS PLAN HAVE BEEN TAKEN FROM SURVEY PREPARED BY SPINELLI SURVEYING, DATED 02/22/2018, LAST REVISED 04/23/2020.
  2. THIS PLAN IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL INFORMATION ONLY.
  3. PRIOR TO BEGINNING ANY CLEARING, GRUBBING OR EXCAVATION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH ALL THE PLANS AND SPECIFICATIONS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED. FINAL STABILIZATION OF LANDSCAPED AREAS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE PLAN.
  4. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ON-SITE EROSION AND SEDIMENT CONTROL MEASURES ON A DAILY BASIS. ALL COLLECTED SEDIMENT WITHIN SEDIMENT BARRIERS SHALL BE REMOVED PERIODICALLY AS REQUIRED TO MAINTAIN THE FUNCTION OF THE SEDIMENT BARRIERS. ALL SEDIMENT COLLECTED SHALL BE RESPAWN ON-SITE WITHIN STABILIZED AREAS AS DIRECTED BY THE OWNERS REPRESENTATIVE.
  5. THE CONTRACTOR SHALL INSPECT DOWNSTREAM CONDITIONS FOR EVIDENCE OF SEDIMENTATION ON A WEEKLY BASIS. AFTER EACH RAINFALL, AND AS MAY BE REQUIRED OR DIRECTED BY ALL APPLICABLE APPROVALS AND PERMITS, THE CONTRACTOR SHALL IMMEDIATELY PROVIDE A WRITTEN REPORT ON FINDINGS OF SEDIMENT IN DOWNSTREAM AREAS TO ALL AUTHORITIES HAVING JURISDICTION AND MAKE REPAIRS AS REQUIRED OR DIRECTED.
  6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR AS REQUIRED/WARRANTED BY FIELD CONDITIONS AND AS DIRECTED BY THE OWNERS REPRESENTATIVE, JMC, AND/OR ANY AUTHORITY HAVING JURISDICTION.
  7. STOCKPILING OF CONSTRUCTION MATERIAL SHALL BE PLACED ON-SITE IN THE AREA DESIGNATED ON THIS PLAN OR AS APPROVED BY THE OWNERS REPRESENTATIVE. STOCKPILED EXCAVATED MATERIAL SHALL HAVE TWO ROWS OF SILT FENCE LOCATED AROUND ITS PERIMETER. ALL STOCKPILED MATERIAL SHALL BE MAINTAINED IN AN ORDERLY MANNER SO AS NOT TO IMPEDE ON PEDESTRIAN AND/OR VEHICULAR TRAFFIC CIRCULATION ROUTES.
  8. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.
  9. ALL STORMWATER MANAGEMENT PRACTICES SHALL REMAIN UNDISTURBED AND BE PROTECTED FROM HEAVY MACHINERY TRAFFIC DURING CONSTRUCTION. HOWEVER DURING CONSTRUCTION OF THE PRACTICE THE CONTRACTOR SHALL MINIMIZE AND AVOID HEAVY MACHINERY TRAFFIC TO THE MAXIMUM EXTENT PRACTICABLE. THERE SHALL BE NO STORAGE OF MATERIALS WITHIN AREAS TO BE USED FOR STORMWATER MANAGEMENT PRACTICES. THE CONTRACTOR SHALL INSTALL CONSTRUCTION FENCE AROUND THE PRACTICE TO DISCOURAGE VEHICLE TRAFFIC.
  10. ALL EXPOSED SLOPES AND GRADED/DISTURBED AREAS, THAT WILL NOT BE FURTHER DISTURBED WITHIN 14 CALENDAR DAYS (7 DAYS FOR CONSTRUCTION SITES THAT EITHER DIRECTLY DISCHARGE TO ONE OF THE 303(b) SEGMENTS LISTED IN APPENDIX E OF THE GENERAL PERMIT OR ARE LOCATED WITHIN ONE OF THE WATERSHEDS LISTED IN APPENDIX C OF THE GENERAL PERMIT), SHALL BE TEMPORARILY SEEDED WITHIN 24 HOURS OF DISTURBANCE, IN ACCORDANCE WITH THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) "EROSION AND SEDIMENT CONTROL GUIDELINES" AND THE ANSI A300 "BEST MANAGEMENT PRACTICES FOR TREE AND SHRUB PLANTING, TRANSPLANTING, MAINTENANCE AND CARE," PREPARED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA), LATEST EDITIONS, AS FOLLOWS:
    - A. SEED MIXTURE AND RATE OF APPLICATION:
      1. IN SPRING, SUMMER OR EARLY FALL, SEED THE AREA WITH RYEGRASS (ANNUAL OR PERENNIAL) AT 30 POUNDS PER ACRES (APPROXIMATELY 0.7 POUNDS/1000 SQUARE FEET OR USE 1 POUND/1000 SQUARE FEET).
      2. IN LATE FALL OR EARLY WINTER, SEED THE AREA WITH CERTIFIED 'AROSTOOK' WINTER RYE (CEREAL RYE) AT 100 POUNDS PER ACRE (2.5 POUNDS/1000 SQUARE FEET).
    - B. APPLICATION SHALL BE UNIFORM BY MECHANICAL OR HYDROSEED METHODS.
    - C. MULCH ALL SEEDED AREAS WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 POUNDS PER 1,000 SQUARE FEET) SUCH THAT THE MULCH FORMS A CONTINUOUS BLANKET.
  11. TEMPORARY SEED MIXTURES SHALL NOT BE PLACED ON AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED AND TOPSOIL HAS BEEN PLACED UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT.

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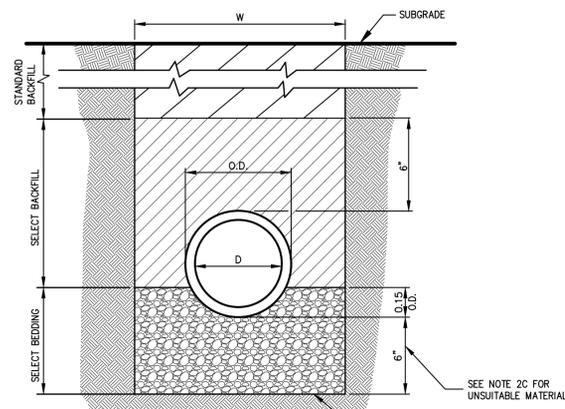
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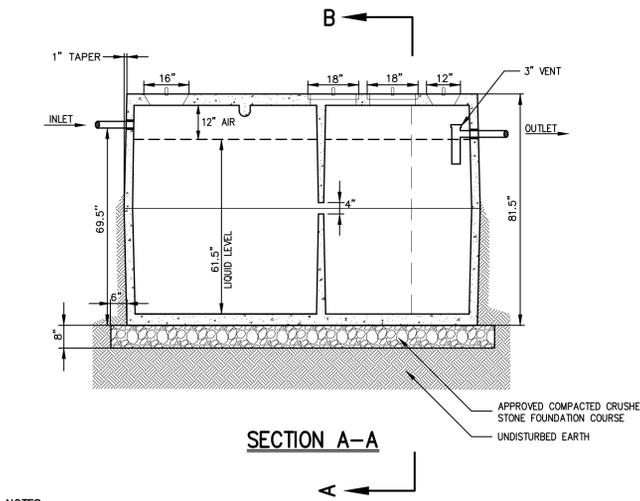
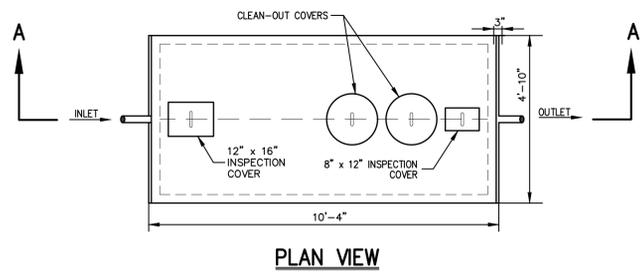
**NOTES:**

- FOR TYPE II TRENCH, MATERIAL FOR SELECT BEDDING AND SELECT BACKFILL SHALL BE:
  - EITHER SAND OR CRUSHED STONE IF NO WATER IS ENCOUNTERED IN TRENCH.
  - 3/4" CRUSHED STONE IF WATER IS ENCOUNTERED IN TRENCH.
- TYPE II TRENCH SHALL BE USED IN ALL OF THE FOLLOWING CASES:
  - FOR ALL CORRUGATED POLYETHYLENE DRAIN PIPE (CPDP) AND PVC PIPE AND CONDUIT INSTALLATION.
  - WHEN ROCK OR HARD PAN IS ENCOUNTERED IN BOTTOM OF TRENCH.
  - WHEN UNSUITABLE MATERIAL IS ENCOUNTERED IN BOTTOM OF TRENCH. IN SUCH CASE DEPTH OF UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER WITH 6" MINIMUM.
- FOR ALL TRENCH EXCAVATION IN FILL AREAS, ALL EMBANKMENTS SHALL BE CONSTRUCTED TO A MINIMUM OF 2 FEET ABOVE THE OUTSIDE TOP (AT THE BELL) OF THE PIPE PRIOR TO BEGINNING ANY TRENCH EXCAVATION.
- BACKFILL FOR PIPE AND CONDUIT SHALL BE PLACED EVENLY AND CAREFULLY AROUND AND OVER THE PIPE OR CONDUIT IN SIX (6) INCH MAXIMUM LAYERS. EACH LAYER SHALL BE THOROUGHLY AND CAREFULLY COMPACTED UNTIL TWELVE (12) INCHES OF COVER EXISTS OVER THE PIPE OR CONDUIT. THE REMAINDER OF THE BACKFILL MAY THEN BE PLACED AND COMPACTED IN A MAXIMUM OF TWELVE (12) INCH LAYERS. EACH LAYER SHALL BE COMPACTED BY APPROVED MECHANICAL TAMPING MACHINES. UNLESS OTHERWISE SPECIFIED BACKFILL SHALL BE COMPACTED TO NOT LESS THAN [92%] MAXIMUM MODIFIED DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D-1557 IN THE MANNER HEREIN DESCRIBED. BACKFILL SHALL PROCEED UP TO THE LINES AND GRADES AS SHOWN ON THE DRAWINGS.

D=INSIDE DIAMETER, SPAN, OR RISE  
 O.D.=OUTSIDE BARREL DIAMETER, SPAN OR RISE  
 H.D.=OUTSIDE DIAMETER, SPAN, OR RISE @ BELL OR BAND  
 W=H.D. + 2.0' - FOR 48" OR SMALLER DIAMETER, SPAN, OR RISE  
 W=H.D. + 2.5' - FOR GREATER THAN 48" DIAMETER, SPAN, OR RISE

**TYPE II TRENCH**

**8**

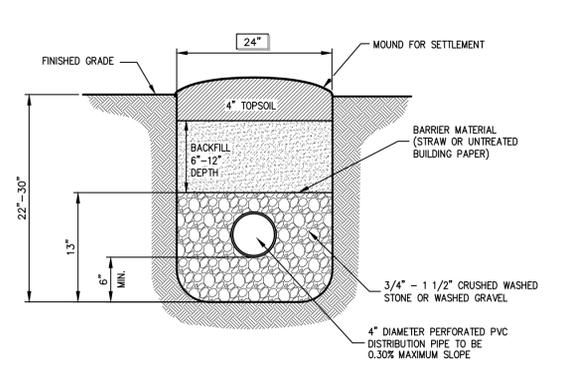


**NOTES:**

- SEPTIC TANK SHALL BE M&M CONCRETE PRODUCTS, INC. PRODUCT NO. S-1000-12, 1,000 GALLON, OR APPROVED EQUAL.
- CONCRETE MINIMUM STRENGTH: 4,000 PSI @ 28 DAYS.
- TANK SHALL BE PLACED ON 3" BED OF SAND OR PEA GRAVEL.

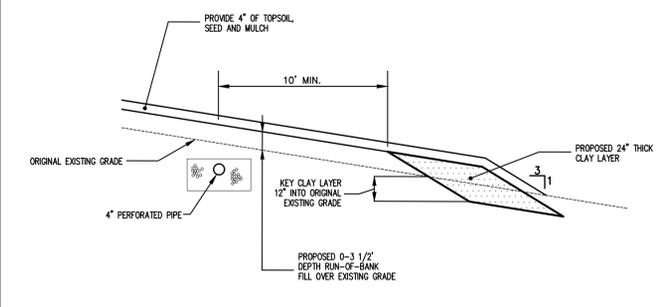
**1,500 GALLON SEPTIC TANK**

**9**



**ABSORPTION TRENCH**

**10**

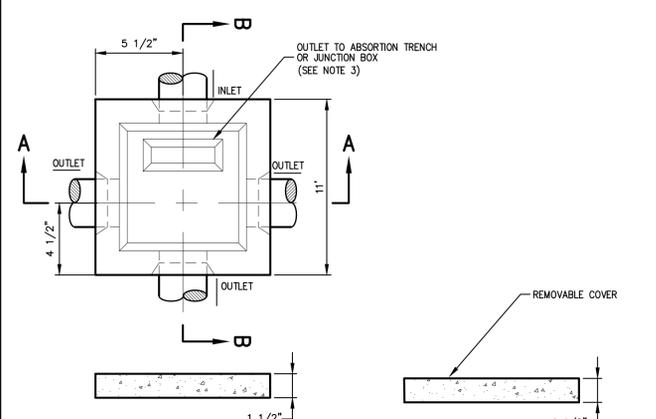


**NOTES:**

- THE "TYPICAL FILL SECTION" IS TO BE INSTALLED AS SHOWN ON PLAN.

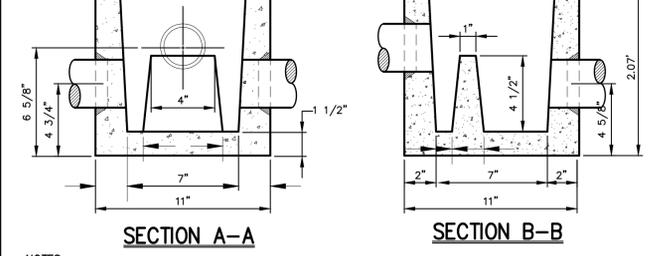
**TYPICAL FILL SECTION**

**11**



**SECTION A-A**

**SECTION B-B**

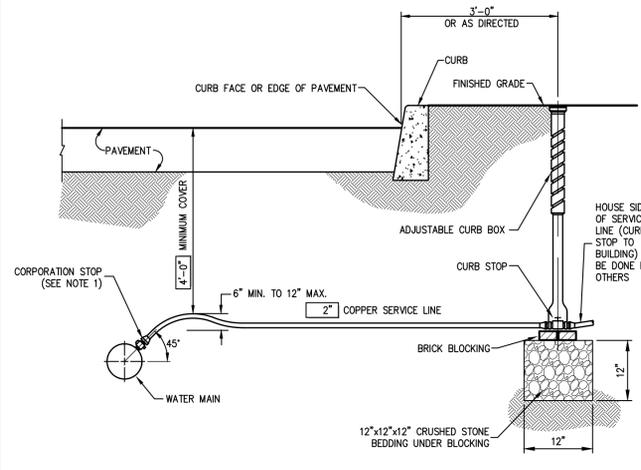


**NOTES:**

- DISTRIBUTION BOX SHALL BE PRECAST CONCRETE CONSTRUCTION AND DESIGNED TO ACCOMMODATE AN H=20 DESIGN LOAD.
- BOTTOM OF BOX SHALL BE LEVEL AND SUPPORTED SOLIDLY BELOW FROST LINE. FOOTING TO EXTEND TO 42" BELOW GROUND LEVEL.
- INSTALL TIGHT JOINT [PVC] PIPE FROM SEPTIC TANK OR EFFLUENT PUMP PIT TO DISTRIBUTION BOX AND BETWEEN ALL JUNCTION BOXES.
- ALL OUTLETS ARE TO BE AT THE SAME ELEVATION.

**3-WAY DISTRIBUTION BOX**

**12**



**SERVICE LINE REQUIREMENTS**

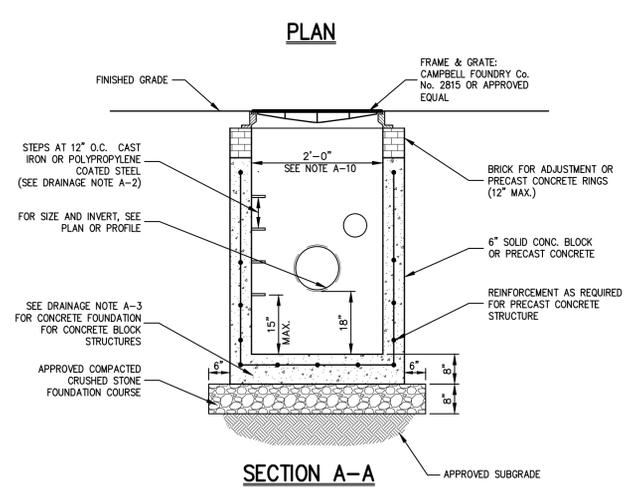
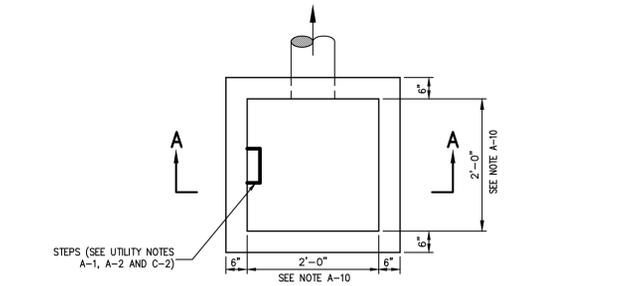
SIZE	SERVICE LINE(MATERIALS)	CORPORATION STOP	CURB STOP	CURB BOX	ENLARGED BASE
2"	COPPER, TYPE K	H-15013 N	H-15214 N	H-10310	H-10349

**NOTES:**

- INSTALLATION OF CORPORATION STOPS SHALL BE MADE IN THE UPPER PIPE QUADRANT, BUT MAY BE MADE AT ANGLES LESS THAN 45° IF APPROVED BY THE OWNER'S FIELD REPRESENTATIVE.
- SERVICE LINE SHALL HAVE NO JOINTS BETWEEN THE WATER MAIN AND CURB STOP.
- CORPORATION STOP, CURB STOP, CURB BOX AND ENLARGED BASE FOR CURB BOX SHALL BE MUELLER COMPANY OR APPROVED EQUAL. CATALOG NUMBERS SHOWN REFER TO MUELLER COMPANY.
- ALL SERVICE BRASS SHALL COMPLY WITH ANWA C-800. COMPONENTS IN CONTACT WITH POTABLE WATER SHALL ALSO COMPLY WITH LATEST REQUIREMENTS OF THE FEDERAL SAFE DRINKING WATER ACT.

**WATER SERVICE CONNECTION**  
(2" OR LESS)

**13**

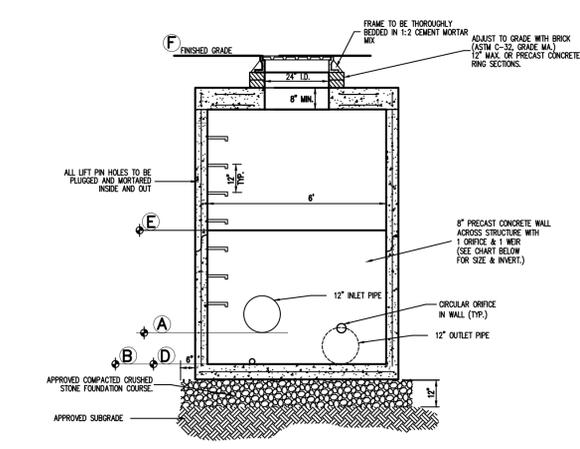


**NOTE:**

- SEE NOTES PERTAINING TO DRAIN INLETS UNDER UTILITY NOTES ON DRAWING [EXX]

**DRAIN INLET (TYPE LI)**  
(WITH SUMP)

**14**

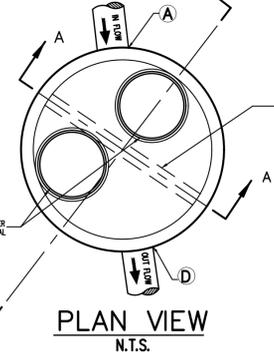
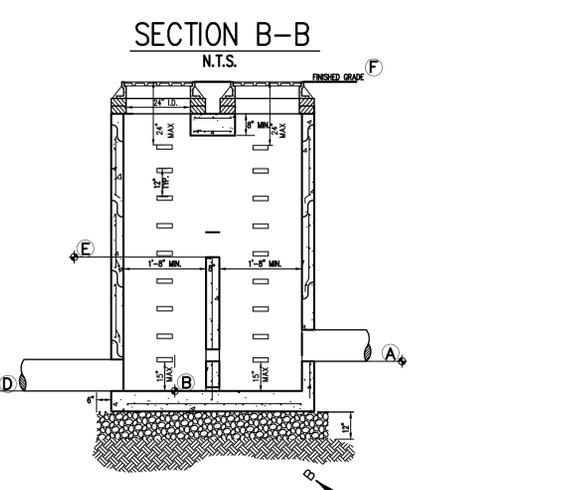


**SECTION A-A**  
N.T.S.

**NOTES:**

- STEPS SHALL BE CAST IRON NEMA# NO. R-1891-0 OR CAMPBELL FOUNDRY NO. 2588-1 OR POLYPROPYLENE COATED STEEL. (SEE SPECIFICATIONS) OR APPROVED EQUAL.
- STRUCTURES SHALL MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.
- STRUCTURES SHALL BE DESIGNED TO ACCOMMODATE H=20 LOADING.
- SEE "NOTES PERTAINING TO MANHOLES" UNDER "UTILITY NOTES" ON DRAWING [C-901]

DESIGNATION	A		B		D		E		F
	INLET	ORIFICE	INLET	ORIFICE	INLET	ORIFICE	INLET	ORIFICE	
OCS	12"	8.80	3"	8.80	12"	7.92	4"	10.60	12.50



**PLAN VIEW**  
N.T.S.

**OUTLET CONTROL STRUCTURE**

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No.	Revision	Date
1.	REVISED BUILDING FOOTPRINT	04/11/2019
2.	UPDATED METLAND LINES	02/28/2020
3.	UPDATED SURVEY	05/11/2020
4.	REVISED PEE VILLAGE COMMENTS	06/08/2020
5.	RESUBMIT TO VILLAGE ICM&C	07/01/2020
6.	RESPOND TO TOWN COMMENTS	07/22/2020
7.	RESUBMIT TO VILLAGE ICM&C	09/02/2020

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**CONSTRUCTION DETAILS**  
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Drawn:	RAR	Approved:	JAR
Scale:	NOT TO SCALE		
Date:	07/24/2018		
Project No.:	18100		
1800-DETAILS	C-901		
Drawing No.:	<b>C-901</b>		