Map Plan and Report for Sewer District #6 Sanitary Sewer Extension No. 6

For Sanitary Sewer Service to

Curtis Lumber

1657 Columbia Turnpike
Schodack, New York

August 2019
Revised May 2020

Applicant: **Curtis Lumber**
1657 Columbia Turnpike
Schodack, New York

Prepared by: **Advance Engineering & Surveying PLLC**
11 Herbert Drive
Latham, New York 12110

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INTRODUCTION

The purpose of this report is to describe the existing system conditions and proposed methods, which will be utilized to provide Sanitary Sewer Service to the proposed Curtis Lumber new building. The project site is located outside the boundaries of Sewer District #6 and the provisions of sanitary sewer service to the new building located at 1657 Columbia Turnpike will require the extension of the boundaries of Sewer District #6 to include the project site which is composed of Tax ID Nos. 189.01-4-1. A legal description and map of the proposed Sanitary Sewer Extension No. 6 is included in Appendix C.

EXISTING CONDITIONS

Curtis Lumber is located at 1657 Columbia Turnpike, on the easterly side of Columbia Turnpike. The existing conditions are shown on the plan prepared by W. J. O'Rourke, LS. There are two existing force mains located on the easterly side of the Columbia Turnpike corridor. The size of the force mains is 1.5-inch & 6-inch diameter, respectively. It is the intention of the owners of the Curtis Lumber facility to connect to the existing 1.5-inch diameter force main.

SITE TOPOGRAPHY, VEGETATION AND EXISTING SOILS

Vegetative Cover

The subject site consists mostly of asphalt pavement and buildings which are utilized in the retail sale and supply of lumber products that are used by the local builders. There are some vegetation in this area which mainly consists lawns and landscaped areas that are located easterly of the access drive which traverses the site in a north to south direction. The easterly and southerly sides of the site are adjacent to Interstate 90 and the exit ramp and are vegetated with some mature trees.

Topography

The topography of the parcel can generally be described as sloping from the center towards the east and west at about 5% to 10%. The project site generally rises in grade from approximately elevation 358 feet at the center of the site and to an elevation of 334 feet at the Columbia Turnpike (westerly side) and 342 feet at the easterly side (I-90) of the site.

Soils

The National Cooperative Soil Survey (NCSS) indicates that the site soils for 1657 Columbia Turnpike are: Chenango (ChA) & Hoosic (HoD & HoE).

The above-identified soils are further classified by the Soils Conservation Service (SCS) depending on the soils type, into a hydrologic soil group. Depending upon the cover type and the hydrologic condition, the soil groups are assigned curve numbers that represent the storm water runoff condition. The following is a tabular summary of these parameters for the soils component of the project site that will be developed with the proposed building addition.

Soil Name and Symbol	Hydrologic Group
Chenango (ChA)	A
Hooosic (HoD & HoE)	A

Hydraulic Group C/D soils have high runoff potential and low infiltration rates.

As shown above, the site soils are composed of Hydrologic Group "A" soils; it appears that the proposed work will occur in the area with Chenango soils which are in the Hydrologic Soil Group "A".

LAND USE AND ZONING

In general the area is dominated by commercial properties. The predominant zoning in the area is Highway Commercial (HC); this parcel is zoned Highway Commercial (HC).

EXISTING UTILITIES

Water: - A Town of Schodack 12 inch Water main exists along the project site frontage on Columbia Turnpike.

Sanitary Sewer: - The existing Curtis Lumber facility located at 1657 Columbia Turnpike discharges the sanitary sewage waste into an on-site subsurface sanitary sewage disposal system. There is a Town of Schodack 1.5-inch diameter PVC and 6 inch diameter PVC sanitary sewer force main along the east side of Columbia Turnpike that can provide municipal sanitary sewer service to the site.

Other Utilities: - Electric, telephone, CATV and gas utilities exist along Columbia Turnpike along the property frontage or in close proximity to the property and provides service to the site.

PROPOSED DEVELOPMENT

The proposed site improvements are shown on a Site Plan prepared by Creighton Manning Engineering, LLP. The proposed site improvements include the construction of a new building with an area of approximately 25,294 square feet (SF). Associated parking areas and loading areas are also shown on the Site Plan.

The owners of Curtis Lumber have requested permission to discharge the sanitary sewers generated from the new building to be constructed at 1657 Columbia Turnpike into the existing 1.5-inch force main located on the easterly side of the Columbia Turnpike corridor and just west of the proposed building. To facilitate this connection it is proposed to construct a sanitary sewage grinder pump and a 225 LF small diameter force main and connect it to the existing 1.5-inch diameter force main. This existing force main already has two other sanitary sewage grinder pumps connected to it conveying the sanitary sewage flows from the nearby Dunkin Donuts and the "My Place & Co." restaurant.

Our analysis and investigations have focused on constructing this connection from 1657 Columbia Turnpike and the resulting impact to the existing system.

DESIGN STANDARDS ESTIMATED FLOW

The proposed Sanitary Sewer System components consisting of an E-One grinder pump station and small diameter force main are designed to receive and convey the peak sanitary flows at velocities sufficient to prevent deposition of solids.

The hydraulic loading is computed as follows.

Design Average Daily Flow:

- My Place & Co. Restaurant – From 2013 and 2014 water use records, maximum usage for 3 month period = 870 gallons per day (GPD), use 1,000 GPD.
- Dunkin Donuts – 3,300 gallons per day (GPD)

Design Peak hourly Flow:

- Peak hourly flow - Curtis Lumber. Retail and Warehouse use

Hydraulic Loading from the NYSDEC Wastewater Design Standards 15 GPD/Employee; Total Employees = 25

25 Employees x 15 GPD/Employee = 375 GPD

375 GPD / 1,440 = 0.26 gallons per minute (GPM) x 4 (Peaking Factor) = 1.04 GPM peak.

For a 12 hour operation day the peak would be 375 GPD / 720 = 0.52 GPM x 4 (Peaking Factor) = 2.08 GPM peak.

- Peak hourly flow - My Place & Co. Restaurant = 1,000 GPD / 1,440 = 0.69 gallons per minute (GPM) x 4 (Peaking Factor) = 2.76 GPM peak. For a 12 hour operation day the peak would be 1,000 GPD / 720 = 1.39 GPM x 4 (Peaking Factor) = 5.56 GPM peak.
- Peak hourly flow - Dunkin Donuts = 3,300 GPD / 1,440 = 2.29 gallons per minute (GPM) x 4 (Peaking Factor) = 9.16 GPM peak.

PUMP STATION DESIGN AND ANALYSIS

System Design

We have analyzed two scenarios; one scenario is based on the existing system with Dunkin Donuts and My Place & Co. Restaurant pumps operating only and the second scenario is based on the existing system with the addition of the proposed Curtis Lumber development pump station at 1657 Columbia Turnpike.

- Analysis modeling of the existing force main(s) for the two noted scenarios showing the hydraulic operation of the (1) existing system in the existing state; (2) with the connection of the Curtis Lumber force main extension. Figure 1 shows the overall schematic of the system that represents the enclosed analysis.

As shown on the enclosed summary sheet of the above noted system analysis, the existing 1.5-inch force main has sufficient capacity to manage the additional flows generated at 1657 Columbia Turnpike. Zone 1 of the existing 1.5-inch force main would require some flushing maintenance until future sites are connected; this condition already exists with the system and is not changed as a result of the proposed connection. The attached hydraulic summary shows that the existing Dunkin Donuts and My Place & Co. Restaurant pumps experiences a TDH of approximately 144 feet and 51 feet respectively and a pumping rate of 8.5 GPM and

12.7 GPM respectively. Upon connection of the proposed lateral from Curtis Lumber development pump station at 1657 Columbia Turnpike the Dunkin Donuts and My Place & Co. Restaurant pumps experiences a TDH of approximately 166 feet and 51 feet respectively and a pumping rate of 7.6 GPM and 12.7 GPM respectively. The proposed E-One grinder pump serving Curtis Lumber development pump station at 1657 Columbia Turnpike would operate against TDH of 92 feet with 2 pumps on the system running. The pumping rate of this pump at 91 feet TDH is 10.9 GPM which is adequate to manage the flows generated from the 1657 Columbia Turnpike site. If in the future the town decides to put the existing 6 inch force main along Kraft road into service the 1.25-inch lateral from Curtis Lumber could be connected to the 6 inch main without impact to the system.

WASTEWATER COLLECTION AND TREATMENT

The sanitary sewer system for the project site will consist of proposed E-One model DH152 sanitary sewage grinder pump station that will connect to a proposed 285 LF long, 1.25-inch diameter discharge force main. This force main will deliver the generated sanitary sewage to the existing 1.5-inch diameter force main located on the easterly side of the Columbia Turnpike corridor. The existing 1.5-inch diameter force main connects into an existing gravity manhole at elevation 356.40. The finished grade at the pump station is elevation 358.00. The high point of this section force main is elevation 354.00. The low water elevation of the proposed grinder pump station will be set at a minimum elevation of approximately 351.00. To avoid siphoning the station dry, a vacuum relief valve will be included in the pump station package. The discharge MH is located just easterly of the intersection of Lisa Lane with Kraft Road and is approximately 1,400 LF from the point where the 1.25-inch diameter force main from My Place & Co. Restaurant connects to the existing 1.5-inch diameter force main. The manhole is on an 8 inch gravity sewer. This 8-inch gravity sewer main eventually discharges into an existing pump station known as Pump Station No. 2 located at the southerly end of Empire State Boulevard. The existing pump station is tributary to the Town Trunk sewer that eventually discharges into the Town of East Greenbush Wastewater Treatment Plant for treatment prior to discharge into the Hudson River.

The proposed sanitary sewer force main will be constructed of High Density Polyethylene (HDPE). The minimum cover for the proposed force main will be 5 feet. The proposed force main will be pressure tested in accordance with ASTM Standards. The proposed work will be performed in accordance with the requirements and recommendations of the New York State Department of Environmental Conservation and the Rensselaer County Health Department. Approval from NYSDOT will be necessary prior to construction. The proposed pumps should be set to cycle more often for shorter durations. The property owner shall be responsible for the operation, maintenance and repair or replacement of the proposed lateral and pump system, up to and including the connection to the forcemain. All structures in pavement or adjacent to the NYSDOT right of way shall be able to withstand H20 loading. Structures in the grass areas shall be adequately protected from accidental vehicle traffic.

FINANCING

Installation of the proposed sanitary sewer improvements in connection with 1657 Columbia Turnpike Curtis Lumber will be performed by the project developer/owner at their expense. An opinion of costs is included in Appendix B.

SEWER DISTRICT EXTENSION

This project will require an extension to Sewer District #6 incorporating the lands of 1657 Columbia Turnpike. The parcel of land contains 11.8 acres more or less. A map and description of the parcel is included in Appendix C.

USER COSTS AND CONNECTION FEES

The property to be serviced by this sewer district extension will become a rate payer in Sewer District No. 6. Based on the Town of Schodack sewer use regulations and more particularly Section 176-7 "Unit Schedule", the 1657 Columbia Turnpike facility would be assigned 3 capital units based on its function as a retail building with public rest rooms. However, since there are no capital costs attributable to the district, there is no capital unit charge effect. Sewer District No. 6 currently has no debt and as such there is no immediate capital charge to 1657 Columbia Turnpike Curtis Lumber facility. There is, however, a one-time charge for

sewer connection fees for Curtis Lumber required by the Towns of Schodack and East Greenbush. The Town of Schodack does not maintain a treatment facility; sewage from the district is treated by the Town of East Greenbush. The East Greenbush charge is a one-time connection fee that the Town of Schodack is required to collect from the applicant and remit to the Town of East Greenbush. The estimated one-time connection fee is $10,880.00. The calculations for estimating this fee was provided by the Town of Schodack and are shown in Appendix "D". A copy of the Town regulation is also attached in Appendix D.

Sewer user rates for 2020 are currently $7.50 per 1,000 gallons. For the 1657 Columbia Turnpike facility, based on a water use of 375 gallons per day, this would result in an annual sewer usage fee of $7.50 x 0.375 per day x 365 days = $1,026.56 per year. The actual sewer use fee will fluctuate based on actual water use.

CONCLUSION

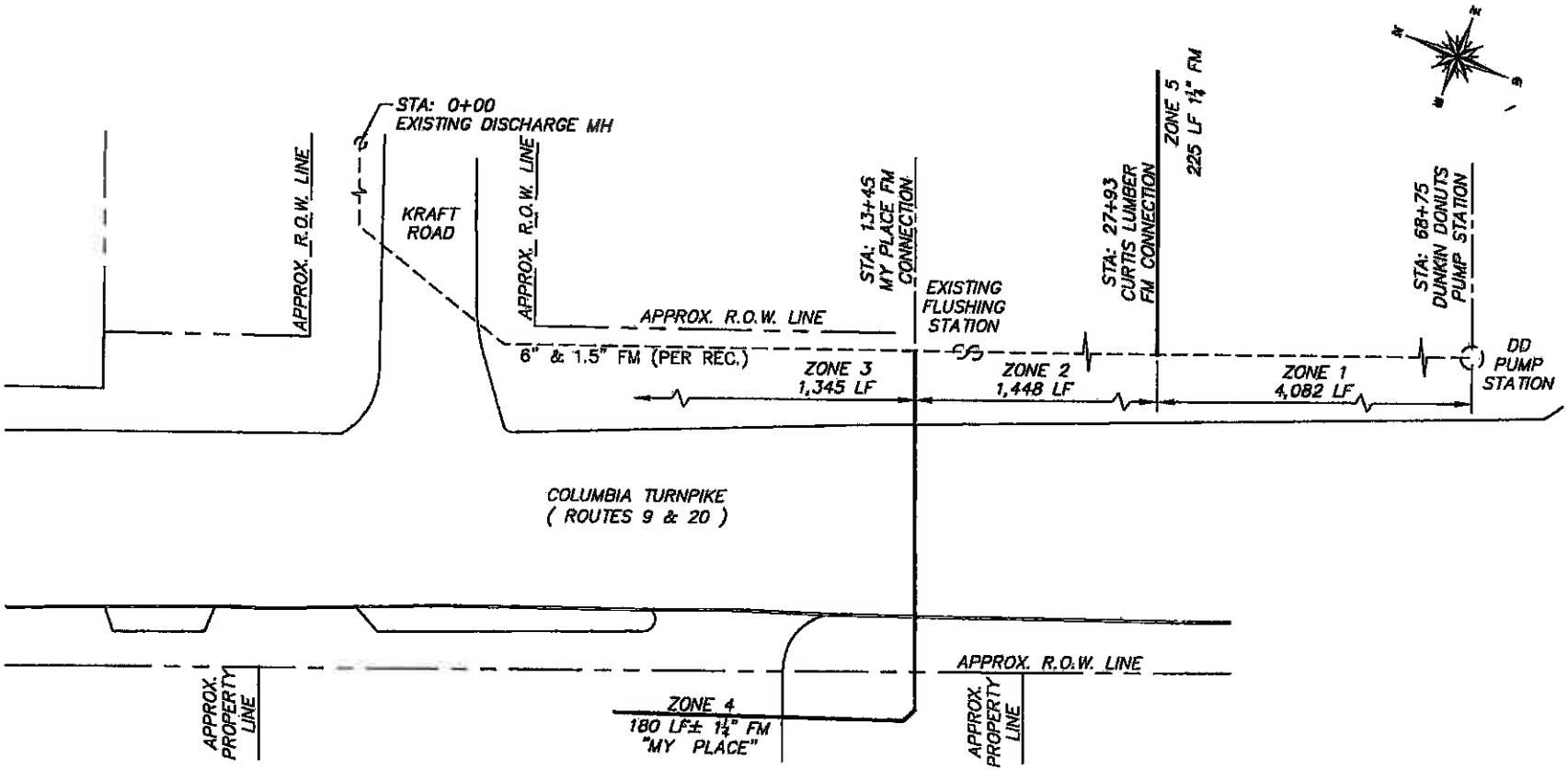
It is our opinion, based on the enclosed analysis, that 1657 Columbia Turnpike can be connected to the existing force main system without substantial impacts to the operations of the existing force main system. Based on future demands and connections that will be placed on the existing force main system, it may become necessary to abandon the existing 1.5-inch diameter force main and switch over to the existing 6-inch force main. The switch shall be completed as per the recommendation noted in the above cited reports prepared by the Laberge Group. The proposed 1.25-inch lateral from Curtis Lumber could be connected to the 6 inch main without impact to the system.

Respectfully submitted:
Advance Engineering & Surveying PLLC

Nicholas Costa, PE

Appendix A

Proposed Pump Selection
&
Supporting Documentation



NO.	REVISION	DATE
1	REVISED PER TDE COMMENTS	NOV. 16, 2019

Design of:
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FORCE MAIN

CURTIS LUMBER - COLUMBIA TURNPIKE

TOWN OF SCHODACK
COUNTY OF RENSSELAER NEW YORK

SCALE: NONE
SHEET 1 OF 1 19124

DATE: AUGUST 22, 2019

SEWER SYSTEMS

Environment One Corporation

Pressure Sewer Preliminary Cost and Design Analysis For Curtis Lumber - Existing LP System Analysis 1657 Columbia Turnpike, Schodack, NY

Prepared For:
Advance Engineering & Surveying PLLC
11 Herbert Dr
Latham NY 12110
Tel:
Fax:
Prepared By: WJB
August 23, 2019

'epared By:
'JB

PRELIMINARY PRESSURE SEWER- PIPE SIZING AND BRANCH ANALYSIS

Curtis Lumber - Existing LP System Analysis

1657 Columbia Turnpike, Schodack, NY

August 23, 2019

Zone Number	Connects to Zone	Number of Pumps in Zone	Accum Pumps in Zone	Gals/day per Pump	Max Flow Per Pump (gpm)	Max Sim Ops	Max Flow (GPM)	Pipe Size (inches)	Max Velocity (FPS)	Length of Main this Zone	Friction Loss Factor (ft/100 ft)	Friction Loss This Zone	Accum Fric Loss (feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (feet)	Total Dynamic Head (ft)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE											Friction loss calculations were based on a Constant for inside roughness "C" of: 150						
1.00	2.00	1	1	3300	8.52	1	8.52	1.50	1.44	4,082.00	0.61	24.82	77.84	359.00	292.00	67.00	144.84
2.00	3.00	0	1	0	12.61	1	8.52	1.50	1.44	1,448.00	0.61	8.80	53.02	359.00	359.00	0.00	53.02
3.00	3.00	0	2	0	13.00	2	21.19	1.50	3.58	1,345.00	3.29	44.22	44.22	357.00	357.00	0.00	44.22
4.00	3.00	1	1	1000	12.67	1	12.67	1.25	2.81	180.00	2.45	4.40	48.62	365.00	362.00	3.00	51.62

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

Prepared By:
WJB

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)

Curtis Lumber - Existing LP System Analysis
1657 Columbia Turnpike, Schodack, NY

August 23, 2019

Zone Number	Connects to Zone	Accumulated Total of Pumps this Zone	Pipe Size (inches)	Gallons per 100 lineal feet	Length of Zone	Capacity of Zone	Average Daily Flow	Average Fluid Changes per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE									Gals per Day per Dwelling	200
1.00	2.00	1	1.50	9.85	4,082.00	402.20	3,300	8.20	2.93	4.70
2.00	3.00	1	1.50	9.85	1,448.00	142.67	3,300	23.13	1.04	1.78
3.00	3.00	2	1.50	9.85	1,345.00	132.52	4,300	32.45	0.74	0.74
4.00	3.00	1	1.25	7.52	180.00	13.54	1,000	73.85	0.32	1.06

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One

SEWER SYSTEMS

Environment One Corporation

Pressure Sewer Preliminary Cost and Design Analysis For Curtis Lumber - Proposed Pump Station Analysis 1657 Columbia Turnpike, Schodack, NY

Prepared For:
Advance Engineering & Surveying PLLC
11 Herbert Dr
Latham NY 12110
Tel:
Fax:
Prepared By: WJB
March 4, 2020

PRELIMINARY PRESSURE SEWER- PIPE SIZING AND BRANCH ANALYSIS

Prepared By:
WJB

Curtis Lumber - Proposed Pump Station Analysis
1657 Columbia Turnpike, Schodack, NY

March 4, 2020

Zone Number	Connects to Zone	Number of Pumps in Zone	Accum Pumps in Zone	Gals/day per Pump	Max Flow Per Pump (gpm)	Max Sim Ops	Max Flow (GPM)	Pipe Size (inches)	Max Velocity (FPS)	Length of Main this Zone	Friction Loss Factor (ft/100 ft)	Friction Loss This Zone	Accum Fric Loss (feet)	Max Main Elevation	Minimum Pump Elevation	Static Head (feet)	Total Dynamic Head (ft)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE											Friction loss calculations were based on a Constant for inside roughness "C" of:				150		
1.00	2.00	1	1	3300	7.55	1	7.55	1.50	1.28	4,082.00	0.49	19.84	99.50	359.00	292.00	67.00	166.50
2.00	3.00	0	2	0	11.42	2	18.47	1.50	3.12	1,448.00	2.55	36.92	79.66	359.00	359.00	0.00	79.66
3.00	3.00	0	3	0	13.06	2	20.80	1.50	3.52	1,345.00	3.18	42.74	42.74	357.00	357.00	0.00	42.74
4.00	3.00	1	1	1000	12.73	1	12.73	1.25	2.82	180.00	2.47	4.44	47.18	365.00	362.00	3.00	50.18
5.00	2.00	1	1	375	10.92	1	10.92	1.25	2.42	225.00	1.86	4.18	83.84	359.00	352.00	7.00	90.84

Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)

Prepared By:
WJB

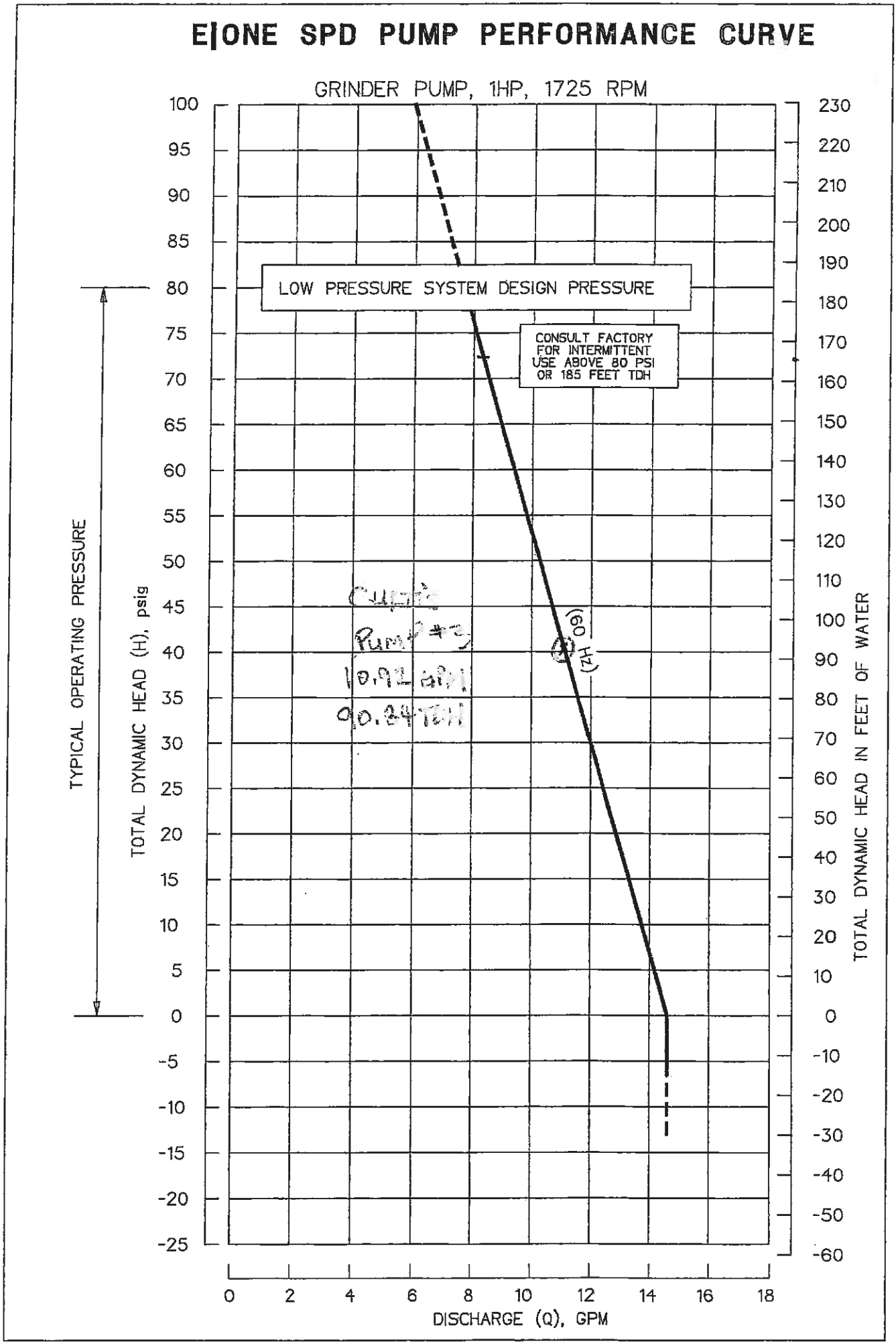
Curtis Lumber - Proposed Pump Station Analysis
1657 Columbia Turnpike, Schodack, NY

March 4, 2020

Zone Number	Connects to Zone	Accumulated Total of Pumps this Zone	Pipe Size (inches)	Gallons per 100 lineal feet	Length of Zone	Capacity of Zone	Average Daily Flow	Average Fluid Changes per Day	Average Retention Time (Hr)	Accumulated Retention Time (Hr)
This spreadsheet was calculated using pipe diameters for: SDR11HDPE								Gals per Day per Dwelling		200
1.00	2.00	1	1.50	9.85	4,082.00	402.20	3,300	8.20	2.93	4.54
2.00	3.00	2	1.50	9.85	1,448.00	142.67	3,675	25.76	0.93	1.61
3.00	3.00	3	1.50	9.85	1,345.00	132.52	4,675	35.28	0.68	0.68
4.00	3.00	1	1.25	7.52	180.00	13.54	1,000	73.85	0.32	1.01
5.00	2.00	1	1.25	7.52	225.00	16.93	375	22.15	1.08	2.70

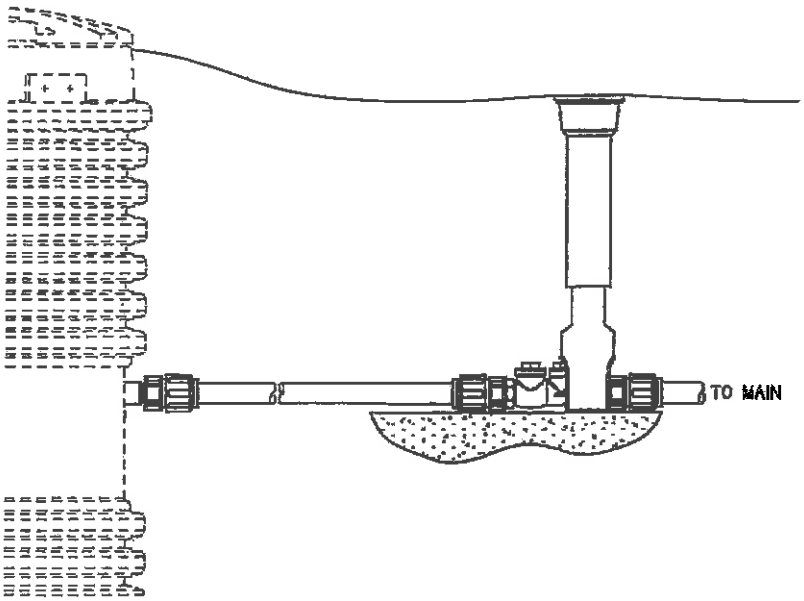
Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One

E|ONE SPD PUMP PERFORMANCE CURVE



E/ONE EXTREME SERIES

Forced Sewer Main Service Lateral Kits SDR 11 HDPE Pipe featuring SS Valves and Engineered Thermoplastic Fittings



Description

These kits feature all components commonly needed to connect an Environment One grinder pump station to the corporation stop/saddle tap on a sewer main. The kit is designed to be used with SDR 11 HDPE pipe, high density polyethylene pipe (provided by others) and includes compression fittings for fast, easy field installation. The curb stop assembly integrates a robust stainless steel ball valve curb stop and a stainless steel flapper type check valve. Adjustable height, curb boxes are supplied in Arch pattern.

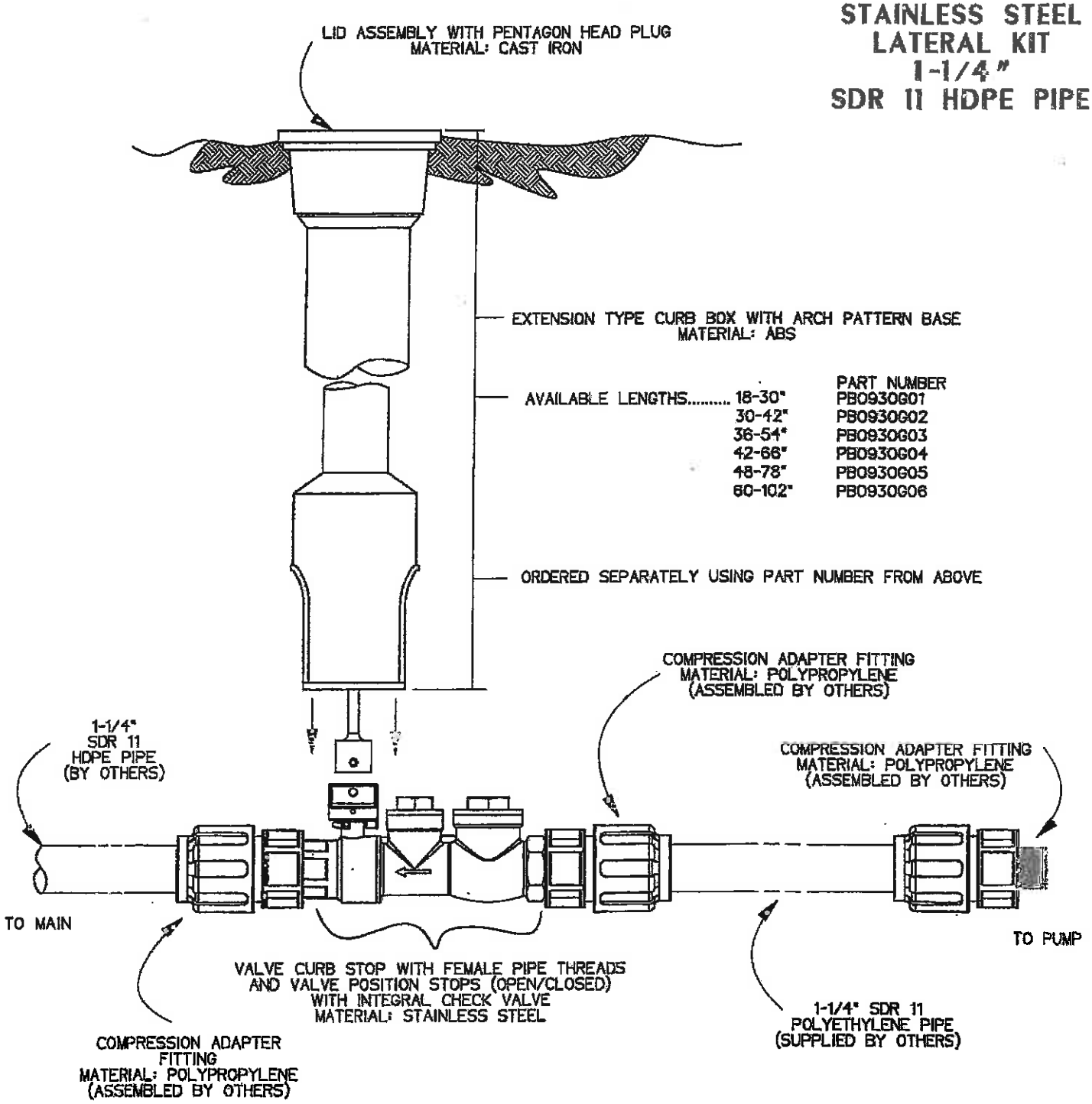
Standard Features

- Compression couplings for 1-1/4" SDR 11 HDPE pipe
- All fittings rated for 150 psi service pressure, minimum
- Fittings provided for field assembly
- Integrated stainless steel ball valve curb stop and stainless steel check valve assembly
- Arch pattern curb boxes in heights from 1-1/2 feet to 8-1/2 feet
- Curb boxes are ABS with a cast iron cover
- Curb Stop/Check Valve component rated for 235 psi

Optional Features

- Compression couplings for 1-1/2" SDR 11 HDPE pipe
- PVC solvent weld fittings for 1-1/4" Schedule 40 pipe
- Curb boxes available in several sizes

STAINLESS STEEL LATERAL KIT 1-1/4" SDR 11 HDPE PIPE



KIT PARTS ARE NOT ASSEMBLED

NOTES:

1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY, TO BE ASSEMBLED BY OTHERS
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, AND A LAYER OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER THE MANUFACTURER'S INSTRUCTIONS
3. ASSEMBLY IS TO BE PRESSURE TESTED (BY OTHERS)
4. ASSEMBLY IS TO BE USED WITH SDR11 HDPE PIPE
5. TO ORDER SS LATERAL KIT, USE PART NUMBER NC0193G01
6. CURB BOX IS TO BE ORDERED SEPARATELY, SEE ABOVE

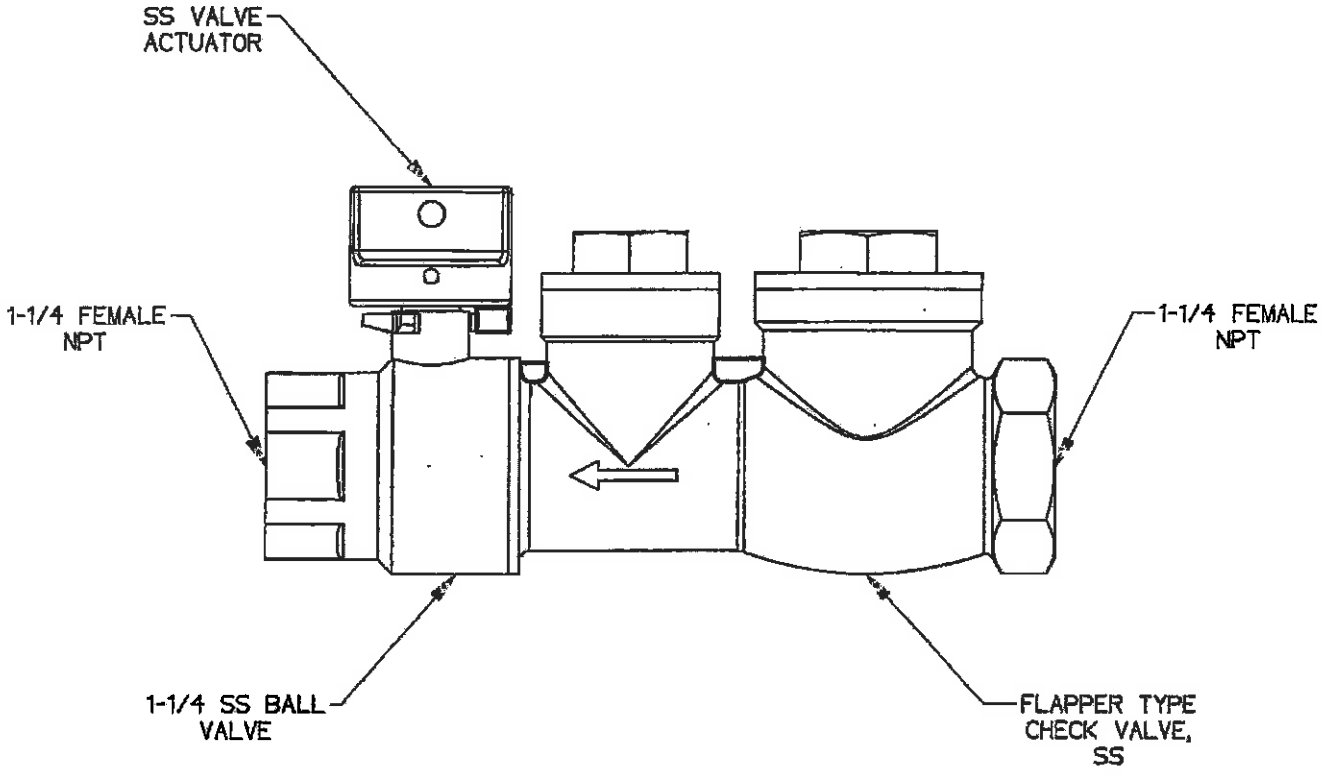
SGS	DN	11/02/11	A	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE

SEWER SYSTEMS

STAINLESS STEEL LATERAL KIT
1-1/4" SDR 11 HDPE PIPE

NA0330P02

STAINLESS STEEL LATERAL ASSEMBLY NO FITTINGS



PART IS A BALL VALVE CURB STOP WITH FEMALE PIPE THREADS, VALVE POSITION STOPS (OPEN/CLOSED), AND INTEGRAL CHECK VALVE
MATERIAL: STAINLESS STEEL

PRESSURE RATING: 235 PSI

TO ORDER SS LATERAL, NO FITTINGS
USE PART NUMBER NB0184P01

SGS	DN	09/20/11	-	3/16
DR BY	CHK'D	DATE	ISSUE	SCALE

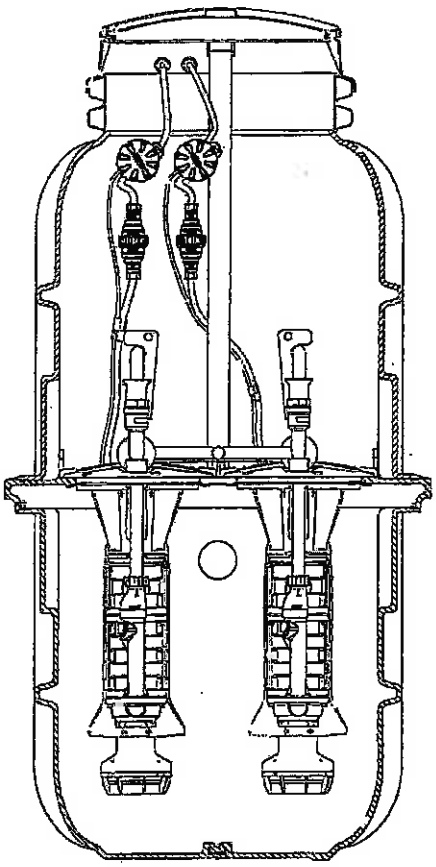
SEWER SYSTEMS

STAINLESS STEEL LATERAL ASSEMBLY
NO FITTINGS

NA0330P05

E/ONE EXTREME SERIES

DH152/DR152



General Features

The model DH152 or DR152 grinder pump station is a complete unit that includes: two grinder pumps, check valve, HDPE (high density polyethylene) tank, controls, and alarm panel. A single DH152 or DR152 is ideal for up to four, average single-family homes and can also be used for up to 12 average single-family homes where codes allow and with consent of the factory.

- Rated for flows of 3000 gpd (11,356 lpd)
- 150 gallons (568 liters) of capacity
- Indoor or outdoor installation
- Standard outdoor heights range from 93 inches to 160 inches

The DH152 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The DR152 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

Motor
1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections
4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

Discharge Connections
Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge
15 gpm at 0 psig (0.95 lps at 0 m)
11 gpm at 40 psig (0.69 lps at 28 m)
7.8 gpm at 80 psig (0.49 lps at 56 m)

Accessories

E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

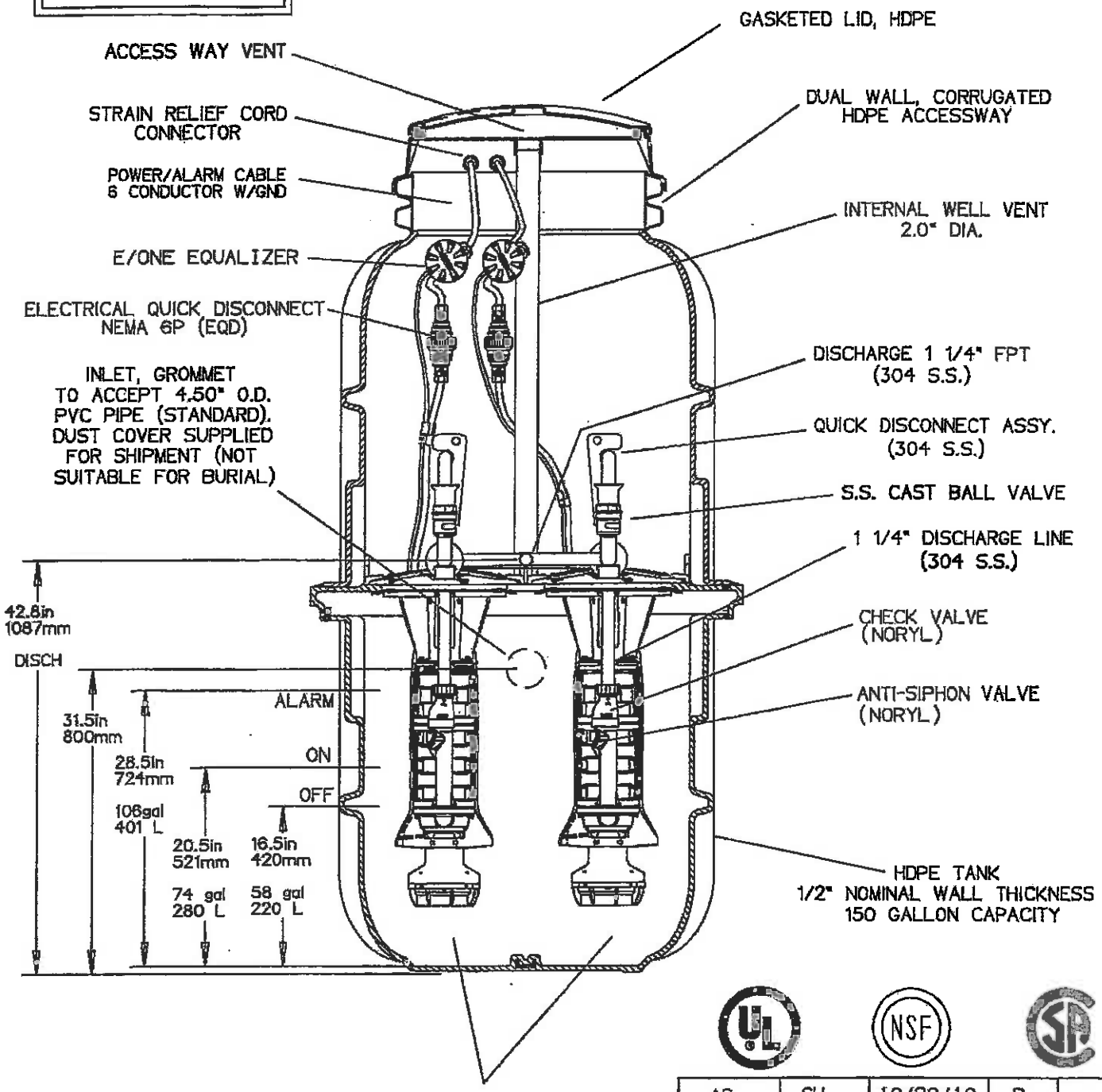
Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

Patent Numbers: 5,752,315
5,562,254 5,439,180

OPTIONS : ☐ DH152 (HARD WIRED LEVEL CONTROLS)
☐ DR152 (WIRELESS LEVEL CONTROLS)

FIELD JOINT REQUIRED FOR MODELS



SEMI-POSITIVE DISPLACEMENT TYPE PUMP
EACH DIRECTLY DRIVEN BY A 1 HP MOTOR

CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

AD	CH	10/20/10	D	
DR BY	CHK'D	DATE	ISSUE	SCALE

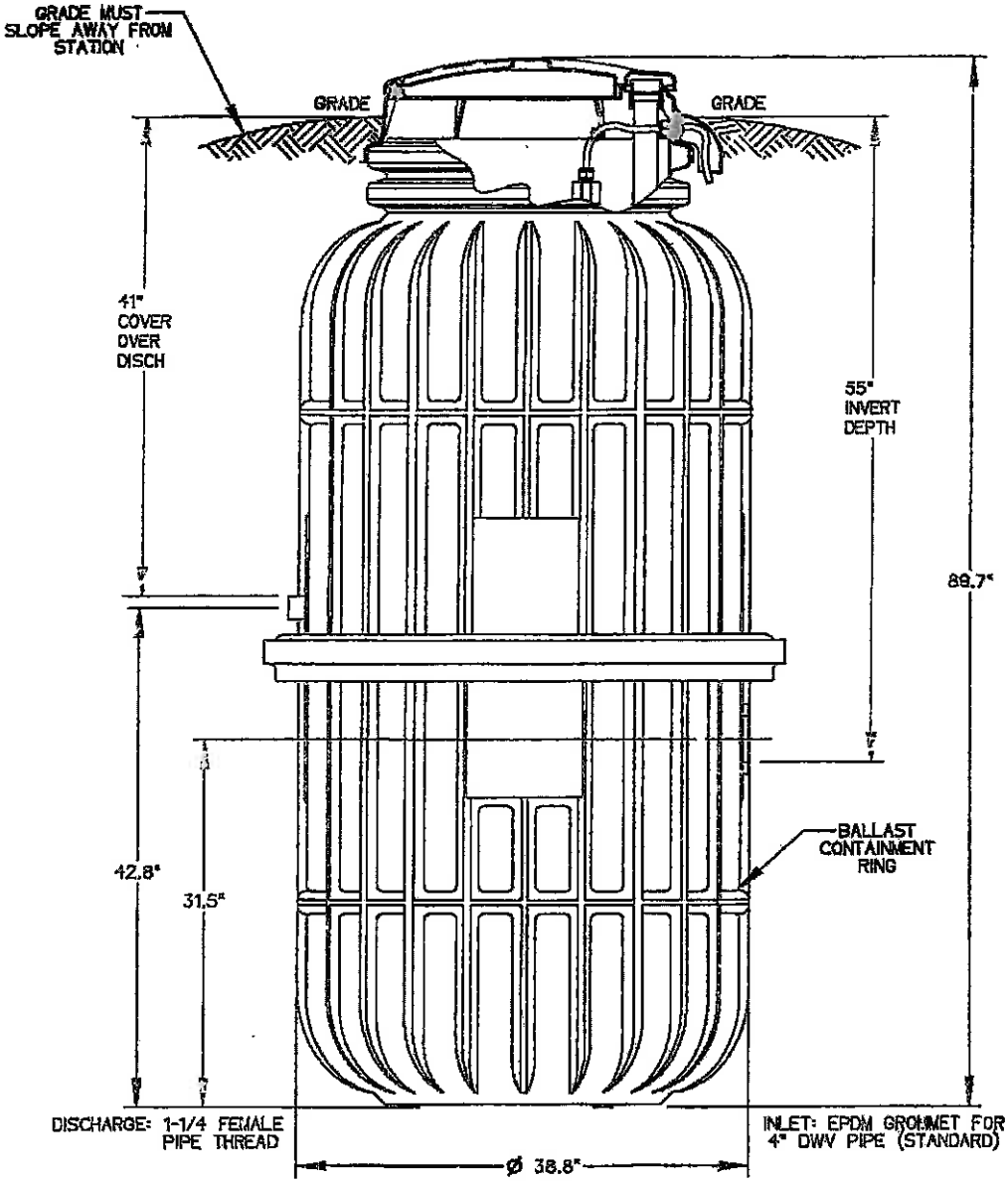
SEWER SYSTEMS

MODEL DH152 / DR152
DETAIL SHEET

NA0052P02

OPTIONS : ☐ DH152-93 (HARD WIRED LEVEL CONTROLS)

☐ DR152-93 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY

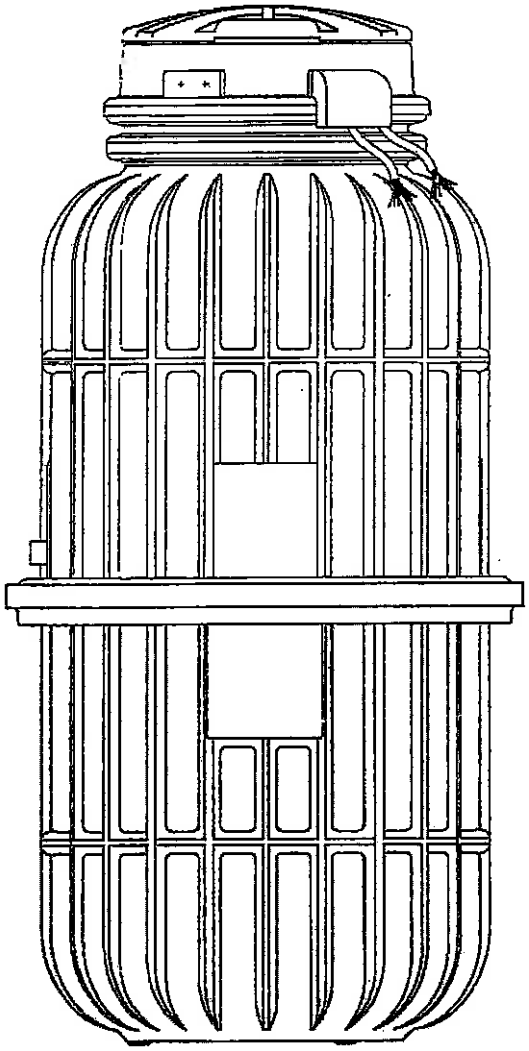
AD	CAH	7/13/07	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE

e/one SEWER SYSTEMS

MODEL DH152-93 / DR152-93

NA0052P04

E/ONE EXTREME SERIES



DH152 & DR152

Typical Installation Instructions & Warranty Information

Duplex Station
150-Gal. Capacity

EONE is proudly represented by:
SIEWERT EQUIPMENT
ATTN: WILL STRADLING
244 1ST STREET
TROY NY 12180
(518) 272-3431

Environment One Grinder Pump Feature Identification

1. GRINDER PUMP BASIN – High density polyethylene (HDPE)

2. ACCESSWAY COVER – HDPE

3. ELECTRICAL QUICK DISCONNECT (EQD) – Cable from pump core terminates here.

4. POWER AND ALARM CABLE – Circuits to be installed in accordance with local codes.

5. ALARM PANEL – NEMA 4X enclosure. Equipped with circuit breakers. Locate according to local codes.

6. ALARM DEVICE – Every installation is to have an alarm device to alert the homeowner of a potential malfunction. Visual devices should be placed in very conspicuous locations.

7. INLET – EPDM grommet (4.5" ID). For 4.5" OD DWV pipe.

8. WET WELL VENT – 2.0" tank vent, supplied by factory in units with accessways.

9. GRAVITY SERVICE LINE – 4" DWV, (4.5" OD). Supplied by others.

9a. STUB-OUT – 4" X 5' Long **watertight** stub-out, to be installed at time of burial unless the gravity service line is connected during installation. Supplied by others.

10. DISCHARGE VALVE – 1-1/4" Female pipe thread.

11. DISCHARGE LINE – 1-1/4" Nominal pipe size. Supplied by others.

12. CONCRETE ANCHOR – See Ballast Calculations for specific weight for your station height. Supplied by others.

13. BEDDING MATERIAL – 6" minimum depth, round aggregate (gravel). Supplied by others.

14. FINISHED GRADE – Grade line to be 1 to 4 inches below removable lid and slope away from the station.

15. VENT – Indoor installation. See section 6, Venting, on page 6.

16. VALVE – Full ported ball valve. Recommended option, for use during service operations. Supplied by others.

17. CONDUIT – 1" or 1-1/4", material and burial depth as required per national and local codes. Conduit must enter panel from bottom and be sealed per NEC section 300.5 & 300.7. Supplied by others.

18. UNION – 1-1/4" or compression type coupling. Supplied by others. (Do not use rubber sleeve and hose clamp type coupling.)

19. VALVE – Ball valve, must provide a full-ported 1-1/4" round passage when open. Supplied by others.

20. REBAR – Required to lift tank after ballast (concrete anchor) has been attached, 4 places, evenly spaced around tank.

Figure 1a

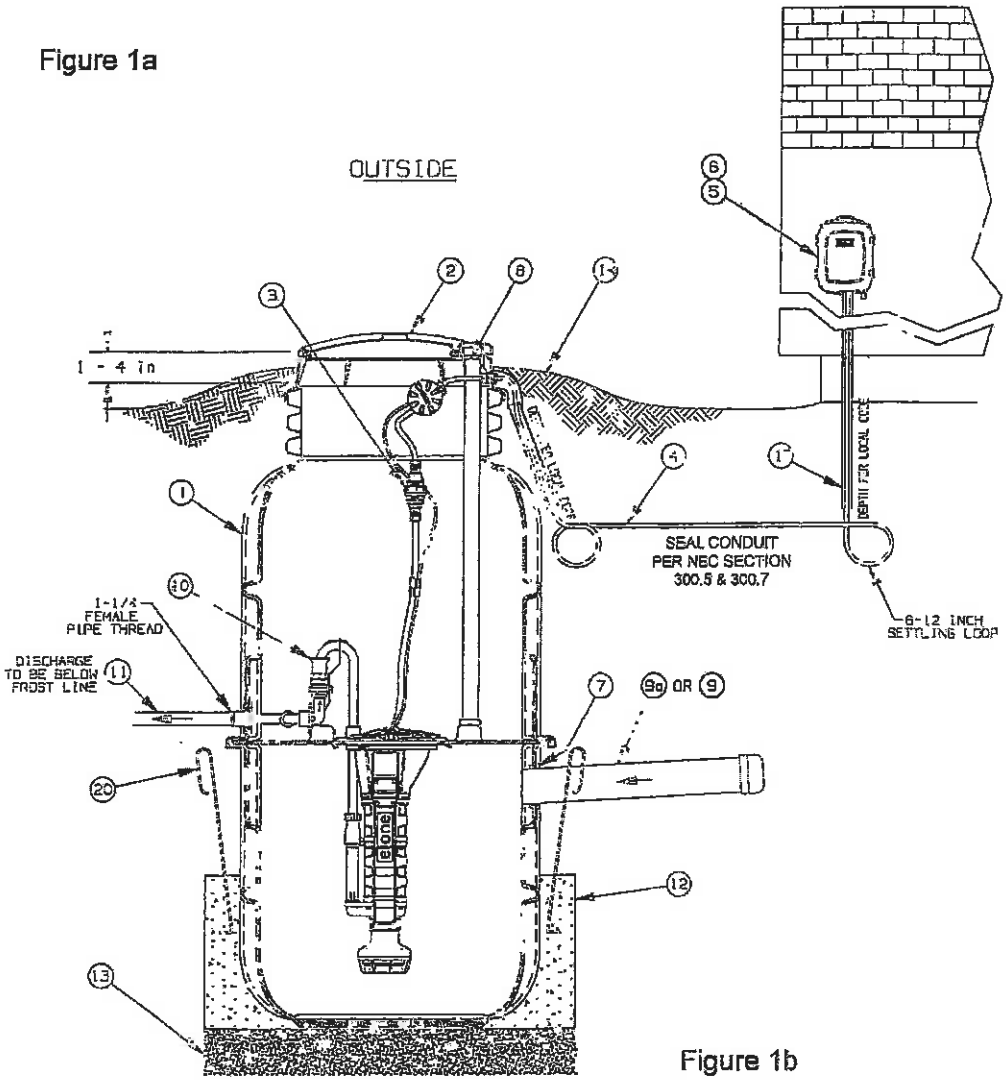
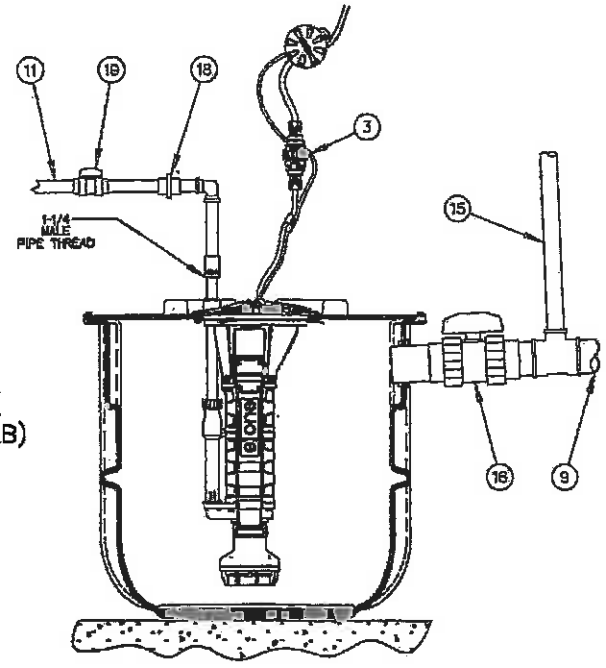


Figure 1b



INSIDE
(ON-SLAB)

FAILURE TO COMPLY WITH INSTALLATION INSTRUCTIONS WILL VOID WARRANTY

The Environment One grinder pump is a well-engineered, reliable and proven product; proper installation will assure years of trouble-free service. The following instructions define the recommended procedure for installing the grinder pump station. These instructions cover the installation of units with and without accessways.

This is a sewage handling pump and must be vented in accordance with local plumbing codes. This pump is not to be installed in locations classified as hazardous in accordance with National Electric Code, ANSI / NFPA 70. All piping and electrical systems must be in compliance with applicable local and state codes.

1. REMOVE PACKING MATERIAL: The User Instructions must be given to the homeowner. Hardware supplied with the unit, if any, will be used at installation.

2. TANK INSTALLATION:

Lift the station using only the methods described on page 9, Lifting Instructions. The tank is supplied with a standard grommet for connecting the 4" DWV (4.50" outside dia.) incoming sewer drain. Other inlet types and sizes are optional (Caution: 4" DR-35 pipe has a smaller diameter and won't create a watertight joint with the standard grommet). Please confirm that you have the correct inlet before continuing. If a concrete ballast is attached to the tank, lift only by the lifting eyes (rebar) embedded in the concrete. **Do not drop, roll, or lay tank on its side. This will damage the unit and void the warranty.**

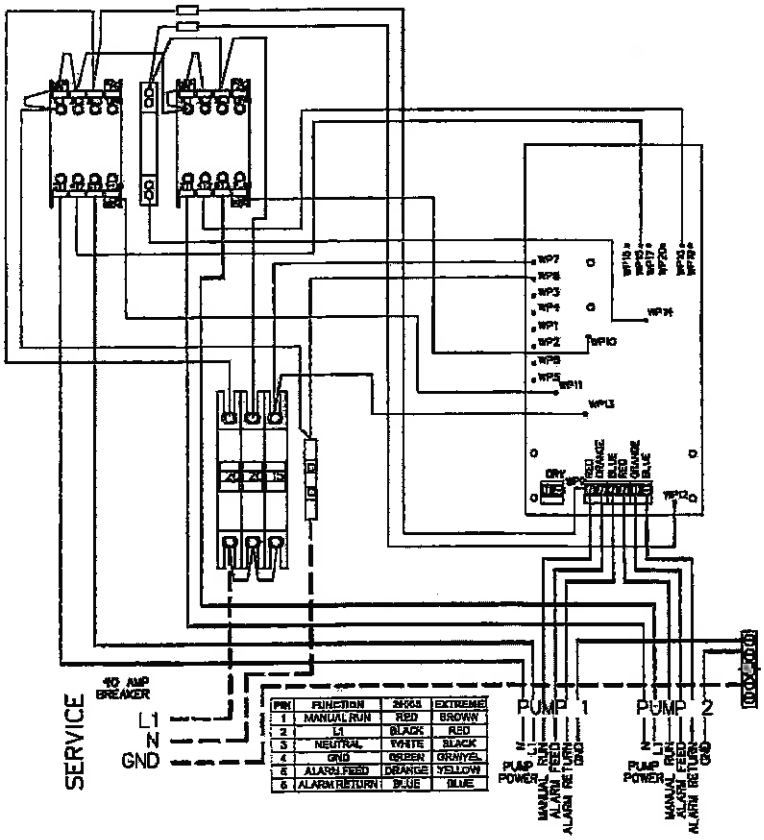
• **If the tank has no accessway (Fig. 1b): (Indoor installation):** The pump may be installed on or in the basement floor (see Fig. 1b). If the tank is to be set on the floor, it must be a flat and level bearing surface. If the tank is to go into the basement floor, it must be anchored to prevent unit from floating due to high ground water (see Chart 1, page 12 for weight).

• **If the tank is to go in the floor:** A hole of the correct width and depth should be excavated. The tank must be placed on a 6" bed of gravel made up of naturally rounded aggregate, clean and free flowing, with particle size not less than 1/8" or more than 3/4" in diameter. The wetwell should be leveled and filled with water prior to pouring the concrete to prevent the tank from shifting. If it is necessary to pour the concrete to a level above the inlet, the inlet must be sleeved with an 8" tube before pouring.

There must be a minimum clearance of three feet directly above the tank to allow for removal of the pump.

• **If the tank has an accessway (Fig. 1a):** Excavate a hole to a depth, so that the removable cover extends above the finished grade line. The grade should slope away from the unit. The diameter of the hole must be large enough to allow for a concrete anchor. Place the unit on a bed of gravel, naturally rounded aggregate, clean and

Figure 2a



120 VOLT DUPLEX WIRING

free flowing, with particles not less than 1/8" or more than 3/4" in diameter. The concrete anchor is not optional. (See Chart 1 on page 12 for specific requirements for your unit.)

The unit should be leveled and the wetwell filled with water to the bottom of the inlet to help prevent the unit from shifting while the concrete is being poured. The concrete must be vibrated to ensure there are no voids.

If it is necessary to pour the concrete to a higher level then the inlet, the inlet must be sleeved with an 8" tube before pouring.

If your unit is a model taller than 93" it may be shipped in two sections, requiring field assembly. See Field Joint Assembly Instructions on page 8 for additional information.

3. INLET PIPE INSTALLATION: Mark the inlet pipe 3-1/2" from the end to be inserted. Inlet pipe should be chamfered and lubricated with a soap solution. Lubricate the inlet grommet with soap solution as well. Insert the pipe into the grommet up to the 3-1/2" mark. Inspect to ensure the grommet has remained intact and in place.

4. DISCHARGE: The use of 1-1/4" PVC pressure pipe Schedule 40 and polyethylene pipe SDR 11 or SIDR 7 are recommended. If polyethylene is chosen, use compression type fittings to provide a smooth inner passage. It is recommended that a Redundant Check Valve Assembly (E/One part no. NC0042GXX) be installed between the pump discharge and the street main on all installations. Never use a ball type valve as a check valve. E/One recommends the valve be installed as close to the public right-of-way as possible. Check local codes for applicable requirements.

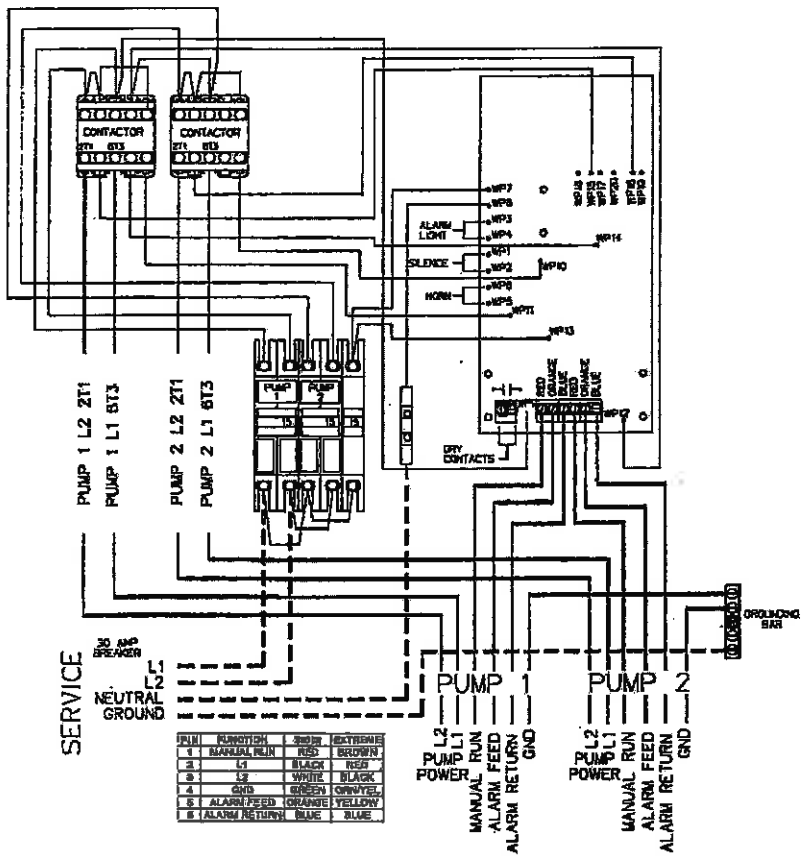
CAUTION: *Redundant check valves on station laterals and anti-siphon/check valve assemblies on grinder pump cores should not be used as system isolation valves during line tests.*

• **If the tank has no accessway: (Indoor Installation)** The discharge connection is a 1-1/4" male NPT. The discharge piping must incorporate a shut-off valve and a union with a minimum pressure rating of 160 psi, or a suitable piping disconnect to allow for removal of the pump core. The valve should be of the type that provides a full-ported passage (i.e. a ball or gate valve). A standard 1-1/4" union or a compression type coupling should be used as a disconnect joint.

• **If the tank has an accessway:** There is a ball valve and a quick disconnect pre-installed in the accessway. There is a 1-1/4" female NPT discharge connection on the outside of the tank 41" above the bottom of the tank.

5. BACKFILL REQUIREMENTS: Proper backfill is essential to the long term reliability of any underground structure. Several methods of backfill are available to produce favorable results with different native soil

Figure 2b



240 VOLT DUPLEX WIRING

conditions.

The recommended method of backfilling is to surround the unit to grade using Class I or Class II backfill material as defined in ASTM 2321. Class 1A and Class 1B are recommended where frost heave is a concern; Class 1B is a better choice when the native soil is sand or if a high, fluctuating water table is expected. Class I, angular crushed stone, offers an added benefit in that it needs minimal compaction. Class II, naturally rounded stone, may require more compactive effort, or tamping, to achieve the proper density.

If the native soil condition consists of clean, compactible soil with less than 12% fines, free of ice, rocks, roots, and organic material, it may be an acceptable backfill. Such soil must be compacted in lifts not to exceed one foot to reach a final Proctor Density between 85% and 90%. Non-compactible clays and silts are **not** suitable backfill for this or any underground structure such as inlet or discharge lines. If you are unsure of the consistency of the native soil, it is recommended that a geotechnical evaluation of the material be obtained before specifying backfill.

Another option is the use of a flowable fill (i.e., low slump concrete). This is particularly attractive when installing grinder pump stations in augured holes where tight clearances make it difficult to assure proper backfilling and compaction with dry materials. Flowable fills should not be dropped with more than 4 feet between the discharge nozzle and the bottom of the hole because this can cause separation of the constituent materials.

6. VENTING: The unit must be properly vented to assure correct operation of the pump. If you have an indoor unit, it can be vented through the 2" port supplied at the top of the wetwell or through the incoming sewer line with a 2" pipe (the vent must be within 4 feet of the grinder pump, and before the first change of direction fitting).

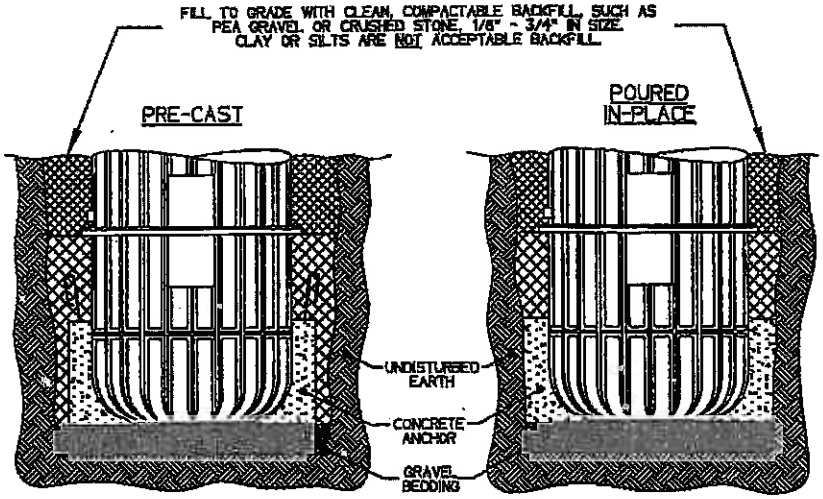
The outdoor units are supplied with a vent pipe from the wetwell to the top of the accessway. Failure to *properly vent* the tank will result in faulty operation and will void the warranty.

7. ELECTRICAL CONNECTION: (Supply panel to E/One Alarm Panel) Before proceeding, verify that the service voltage is the same as the motor voltage shown on the name plate. An alarm device is to be installed in a conspicuous location where it can be readily seen by the homeowner. An alarm device is required on every installation. There shall be no exceptions.

Wiring of supply panel and alarm panel shall be per Figures 2a and 2b, alarm panel wiring diagrams and local codes. A dedicated 30 amp breaker is required before a 240V duplex alarm panel, and a dedicated 40 amp breaker is required before a 120V duplex alarm panel.

8. ELECTRICAL CONNECTION: (Pump to Panel) (Fig. 4) The grinder pump station is provided with a cable for connection between the station and the alarm panel (supply cable). The supply cable is shipped inside the station with a small portion fed through the cable connector mounted on the wall of the fiberglass shroud. The supply cable, a six conductor tray cable, meets

Figure 3



TYPICAL IN-GROUND SECTION VIEW

NEC requirements for direct burial as long as a minimum of 24" burial depth is maintained. Those portions of the cable which have less than 24" of cover must be contained in suitable conduit. This includes the vertical portion dropping to a 24" depth at the station and the length rising out of the ground at the control panel. *NOTE: Wiring must be installed per national and local codes. Conduit must enter panel from bottom and be sealed per NEC section 300.5 & 300.7.*

8a. Installing E/One supply cable:

1) Open the lid of the station. Locate the cable and the feed-thru connector on the wall of the shroud. If the station has a field joint and was delivered in two pieces, be sure both halves of the EQD are securely assembled together. Loosen the nut on the connector and pull the supply cable out through the connector until it hits the crimped-on stop feature on the cable, approximately 24" from the EQD. ***IMPORTANT:** *All but 24" of the cable must be pulled out of the station, and the EQD and Equalizer should be hung as high in the station as possible to ensure that the pump functions properly. Do not leave the excess cable in the station.*

2) Retighten the nut. This connection must be tight or ground water will enter the station.

3) Feed the wire through the length of conduit (contractor provided), which will protect it until it is below the 24" burial depth.

4) Position the conduit vertically below the cable connector along side of the station reaching down into the burial depth. Attach the small guard (protective shroud) provided with the station to protect the exposed cable where it enters the station. Four self-tapping screws are provided.

5) Run the cable underground, in a trench or tunnel, to the location of the alarm panel. Leave a 6- to 12-inch loop of cable at each end to allow for shifting and settling. Connections made at the panel are shown in Figures 2a and 2b.

9. DEBRIS REMOVAL: Prior to start-up test procedure, the core must be removed and the incoming sewer line flushed to force all miscellaneous debris into the tank. Next, all liquid and debris must be removed. Once tank is clean, reinstall the pump and proceed with the test.

10. TEST PROCEDURE: When the system is complete and ready for use, the following steps should be taken to verify proper pump and high level alarm operation:

a) Make sure that the discharge shutoff valve is fully open. This valve must not be closed when the pump is operating. In some installations there may be a valve, or valves, at the street main that must also be open.

(Ignore all Trouble indications, LEDs and/or messages until the panel is reset at the end of this procedure.)

For model DH152:

b) Turn on the alarm breaker.

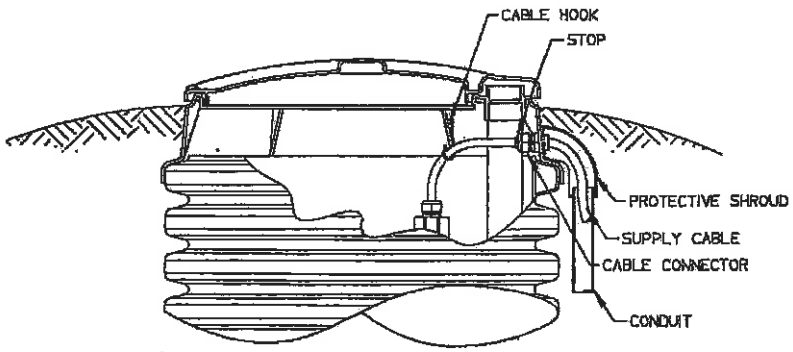
c) Fill tank with water until the high level alarm turns on. Shut off water.

d) Turn on pump breaker; the pump should turn on immediately. Verify that the high level alarm turns off and then the pump turns off. Proceed to Step E.

For model DR152:

b) Fill tank with 100 gallons of

Figure 4



Power at the station must not drop below 10% of nameplate voltage. Maximum Recommended Length:
120 Volt 60' (min. voltage at pump — 108V)
240 Volt 150' (min. voltage at pump — 216V)
Consult factory for longer lengths

TYPICAL SUPPLY CABLE CONFIGURATION

water.

c) Turn on pump and alarm breakers; the pump and high level alarm should turn on immediately.

d) Verify that the high level alarm turns off and then the pump turns off.

e) Clear/Reset the alarm panel:

Sentry and T260 panels: Reset is not required.

Protect Panel: Turn pump and alarm breakers off and back on simultaneously.

Protect Plus Panels: Perform a "cold start" from the Initialize System menu. Any user setting that were previously chosen will not be reset.

f) If any Trouble or alarm conditions are indicated after the panel is reset, contact your local service provider.

Field Joint Assembly Instructions

IT IS EXTREMELY IMPORTANT THAT THE JOINT IS SEALED PROPERLY BEFORE BACKFILLING. EXCAVATING A UNIT FOR REPAIR IS VERY EXPENSIVE AND CAN BE EASILY AVOIDED BY USING PROPER CAUTION DURING THE FOLLOWING PROCEDURE.

Parts included in Field Joint Kit: Identify all parts before proceeding with installation.

(16) 3/8-16 x 1-1/2 long screws
(16) 3/8-16 Elastic Stop Nuts
(32) Flat Washers
(1) Length Sealant (Sika) Tape
(1) Hole Punch
(1) Vent Pipe Extension

1) Carefully clean and dry both accessway flanges with solvent. **IMPORTANT: Sealing surfaces must be dry to ensure the sealant adheres correctly.**

2) Starting at one hole of tank flange, apply two layers of Sika Tape around the inside half of the flange. Align the outside edge of the tape with the bolt circle. Move to the adjacent hole and apply one layer of Sika Tape around the outside of the flange. Align inside of tape with the bolt circle. Remove the backing paper as you lay the adhesive on the flange. **Do not stretch Sika tape during application; it may result in a leak.** The tape should overlap at the end by approximately 1/2 inch, as shown in Fig. 5a. If a section of Sika Tape is misapplied, the bad section may be cut out and replaced. Cut away the poorly laid portion cleanly with a knife and be sure to over lap the tape at each end about 1/2 inch.

3) Using the tool provided, punch a hole through the tape at each of the 16 existing bolt holes in the flange. **Be careful to keep the exposed sealant clean and dry.**

4) Insert three of the sixteen 3/8-16 x 1-1/2" long bolts, with a flat washer, into the flange attached to the upper part of the accessway. These will act as guides while aligning the bolt pattern of the two flanges.

5) Support the upper accessway section a few inches over the tank, making sure to align the vent port in the lid with the vent pipe in the tank. Once aligned, lower the upper section onto the mating flange using the three bolts to guide it to the proper position. See Fig. 5b.

6) Insert the remaining 13 bolts with flat washers into the flanges. Place a flat washer and elastic stop nut on the end of each bolt, turning the nut on just enough to hold the washer in place.

7) Tighten the bolts until the sealant begins to squeeze out from between the flanges. To ensure a consistent, sturdy seal, tighten them in the following sequence: 1, 9; 5, 13; 3, 11; 7, 15; 2, 10; 4, 12; 6, 14; 8, 16. Always be sure to tighten one bolt and then the bolt at the position 180° from it; see Fig. 1 for position numbers.

8) Using the same sequence as in Step 7, tighten each bolt to 60 in-lbs. Visually inspect the joint, each bolt and each nut should have a flat washer between it and the flange, and a uniform amount of sealant should be protruding from the seam along the entire perimeter.

In the event that there are any voids in the sealant, the joint may leak. Take corrective actions if necessary and be sure that the joint is leak free before continuing.

9) Install the vent pipe extension piece, which was shipped inside the upper piece of the accessway. Push the extension pipe into the bell mouth fitting on the pipe installed in the wet well tank. Be sure the pipe is seated correctly. Slide the top end of the extension pipe into the receptacle on the bottom of the lid.

Figure 5a

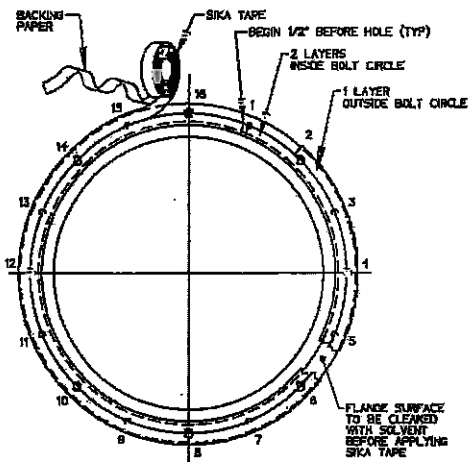
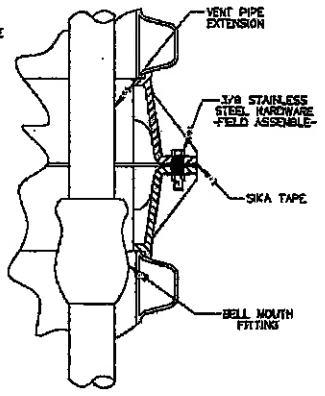
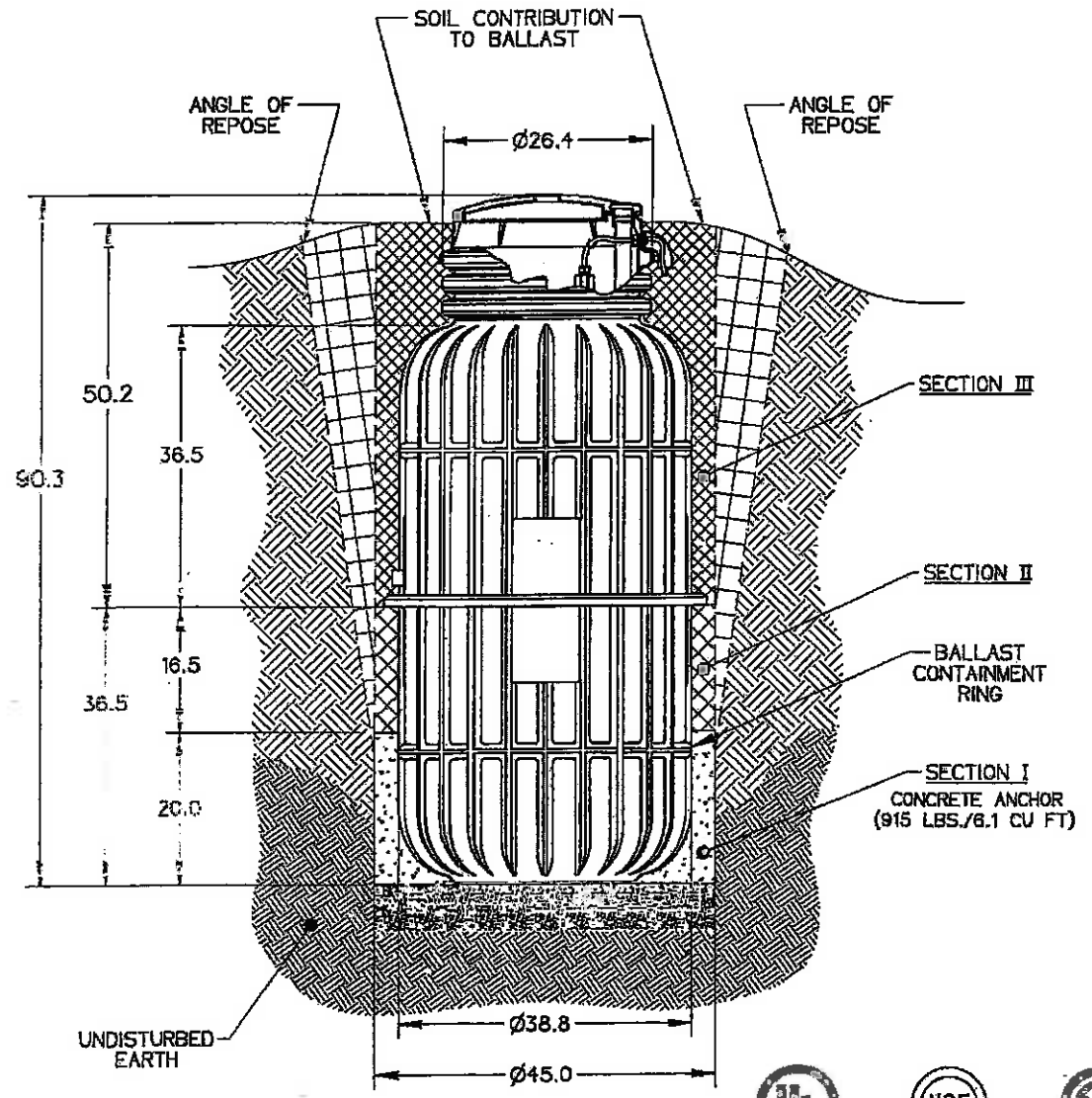


Figure 5b





SECTION III - DRY SOIL (ACCESS WAY)

SECTION II - SATURATED SOIL (WET WELL)

SECTION I - CONCRETE ANCHOR

ROUND AGGREGATE (GRAVEL)

AD	CH	07/19/07	-	1/20
DR BY	CHK'D	DATE	ISSUE	SCALE

SEWER SYSTEMS

BALLAST INFORMATION

Adjusting the Height of the Grinder Pump Station

TO INCREASE STATION HEIGHT 6 INCHES

1. Increasing station height can be done without cutting the station. Use the E/One Extender cover shroud kit (ND0082G01) and follow the instructions that are included with the kit.

TO INCREASE STATION HEIGHT MORE THAN 6 INCHES or TO REDUCE THE STATION HEIGHT:

REMOVE EXISTING COVER ASSEMBLY (Fig. 6)

If your existing station has a welded-on cover shroud you will need the appropriate replacement cover kit (see Table 2, page 15).

1. Turn off all power to the grinder pump station.
2. Remove the tank lid and the electrical shroud.
3. Unplug the electrical quick disconnect (EQD) and remove the EQD from the supply cable. *Note: DO NOT CUT CABLE.* Loosen liquid tight cable connector and pull the supply cable out through the connector on the side of tank.
4. Tape the pump breather cable to the vent pipe in the tank.
5. Remove the soil around the tank, exposing three of the tank corrugations below grade. Use caution not to damage buried cable.
6. Remove existing cover shroud.

6a. Welded-on shroud (standard) - Using a hand saw, cut the tank in the valley between the two corrugations at grade, discard existing welded-on shroud and attached corrugations *(shroud is not to be reused). Caution: Be careful not to cut either the vent pipe or the pump breather cable.*

6b. Clamped-on shroud - Remove band clamp and cover shroud.

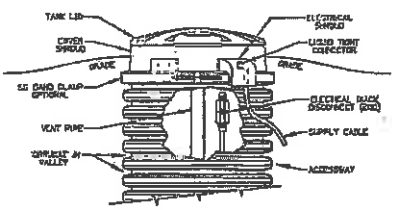


Figure 6

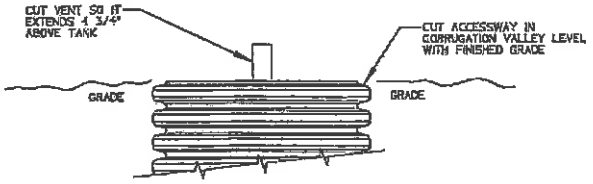


Figure 7

REDUCING STATION HEIGHT (Fig. 7)

7. Using a hand saw, cut the tank in the valley between the two corrugations at grade.
8. Cut vent pipe 4 ¾" above the cut made on the tank. *Proceed to step 16.*

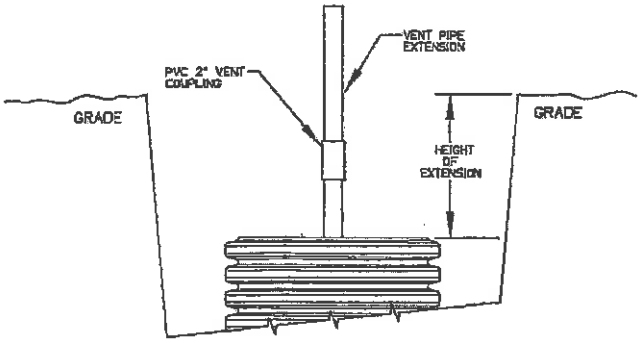


Figure 8

INCREASING STATION HEIGHT (Fig. 8 and Fig. 9)

9. Remove the soil around the tank exposing it 18" deeper than the extension being installed. For example, if you have a 2' extension (not including the coupler) you must dig down 3'6" minimum from grade; if you have a 4' extension (not including the coupler) you must dig down 5'6" minimum from grade. Use caution not to damage buried cable.
10. Measure from grade down 2' (for a 2' extension) or 4' (for a 4' extension) and mark accessway. Using a hand saw, cut the tank in the valley between the two corrugations that are closest to your mark. *Note: Make sure the welded-on shroud of the extension will be at grade level. Be sure you are not cutting into the wet well and you must have two corrugations below your cut, if there are less than two corrugations, this extension kit can not be used.*

Caution: *Be careful not to cut either the vent pipe or the pump breather cable.*

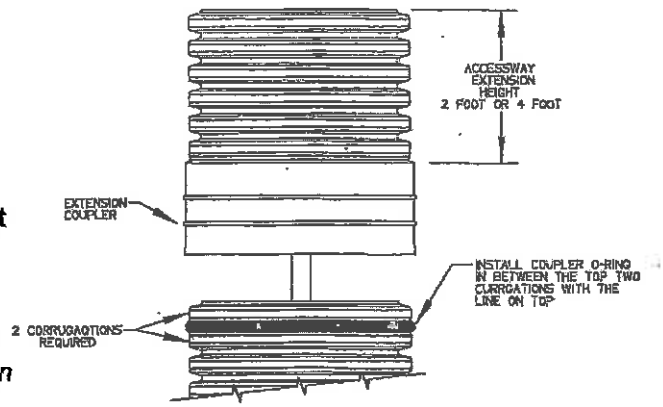


Figure 9

11. Attach the vent pipe extension with the 2" vent coupling, bringing the vent well above grade.

12. Clean all dirt and debris from top four corrugations on tank. Install the 24" coupler O-ring on the tank between the top two corrugations with the white or yellow line facing out and on top.

13. Lube extension coupler and coupler O-ring with pipe lube or dish soap.

14. Manually press coupling evenly over lubricated O-ring. If additional force is needed, place a plywood cover over the accessway and apply gentle mechanical pressure to the coupler. *Note: Care must be used when pushing down on the coupler. Excessive force or impact may result in damage and leakage.*

15. Frequent visual inspections during installation must be performed to determine when the tank has fully engage the coupler.

INSTALL REPLACEMENT COVER ASSEMBLY (Fig. 10)

16. Clean top corrugation on accessway extension and mating surface of replacement shroud with acetone.

17. Liberally apply the silicone sealer provided to the under side of the replacement shroud where it will come in contact with the accessway extension.

18. Lube wet well vent grommet and vent pipe extension with pipe lube, non-grit hand cleaner or dish soap and slide vent pipe through grommet until tank shroud seats to accessway.

19. Place SS band clamp around top corrugation and the replacement shroud. Tap with a mallet around clamp to help seat the clamp. Torque stud assembly on band clamp to a maximum 125 inlb.

20. Reinstall the supply cable, EQD**, tank lid and electrical shroud and tighten cable connector. (**See "EQD wiring order," Table 1)

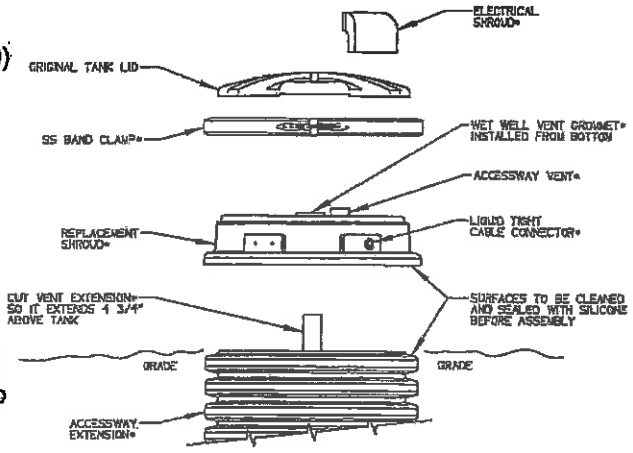


Figure 10

21. Follow start-up procedures to ensure proper pump operation (you will find the start-up instructions in our service manual or the station installation instruction guide).

**EQD wiring order

PIN #	COLOR
1	Brown
2	Red
3	Black
4	Grn/Yellow
5	Yellow
6	Blue

Table 1

Table 2

DESCRIPTION	PART NO.
Simplex station	NC0022G15
Simplex, flood plain config	NC0022G16
Duplex station	NC0022G17
Duplex, flood plain config	NC0022G18

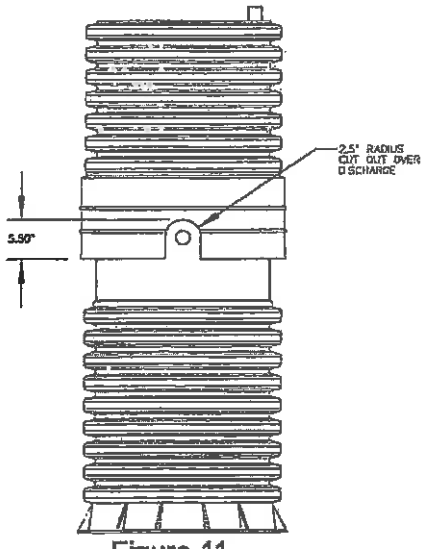


Figure 11

NOTE: IF EXISTING ACCESSWAY HAS ONLY 2 CORRUGATIONS (Fig. 11)

- If the coupler will not engage completely because the discharge piping is in the way, and it doesn't have a cut out, you will need to cut a slot in the coupler.
- Using a hand, reciprocating or hole saw, cut an arch in the coupler; the cut-out is not to exceed 5.50" tall or 5.00" wide.

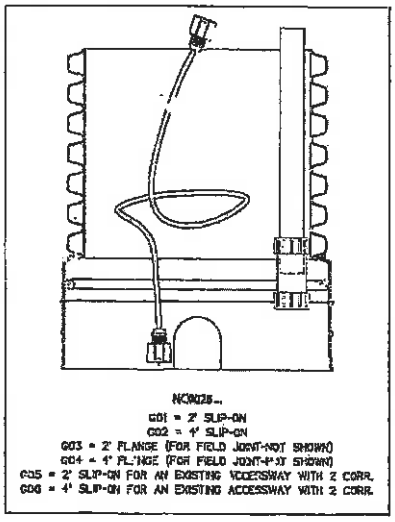


Figure 12

A Precision Castparts Company

Environment One Corporation
2773 Balltown Road
Niskayuna, New York 12309–1090

Voice: (01) 518.346.6161
Fax: 518.346.6188

www.eone.com

NA0063P01 Rev E
4/13

User Instructions for the Environment One Grinder Pump

General Information

Your home is served by a low pressure sewer system; the key element is an Environment One grinder pump. The tank collects all solid materials and wastewater from the house. The solid materials are then ground to a small size suitable for pumping as a slurry with the wastewater. The grinder pump generates sufficient pressure to pump this slurry from your home to the wastewater treatment receiving line and/or disposal plant.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference; and 2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Care and Use of your Grinder Pump

The Environment One grinder pump is capable of accepting and pumping a wide range of materials, and an extensive grind test is required in order to obtain NSF approval. However, regulatory agencies advise that the following items should not be introduced into any sewer, either directly or through a kitchen waste disposal unit:

Glass	Seafood shells	Diapers, socks, rags or cloth	Syringes
Cotton swabs	Personal/cleaning wipes & sponges	Disposable toothbrushes	Latex/vinyl items
Metal	Plastic objects (toys, utensils, etc.)	Kitty litter	Dental floss
Aquarium gravel	Sanitary napkins or tampons	Cigarette butts	

Caution: Kitchen garbage disposals do not keep grease/oil out of the plumbing system

In addition, you must **never** introduce into any sewer:

Explosives	Strong chemicals	Lubricating oil and/or grease
Flammable material	Gasoline	

Items introduced into the sewer system from your home can potentially impact the water environment. Proper disposal of household wastes such as window cleaners, unused/expired pharmaceuticals, paint thinners, fats, fruit labels, etc. is important. For more information, visit http://www.wef.org.

Periods of Disuse

If your home or building is left unoccupied for longer than a couple of weeks, perform the following procedure:

Purge the System. Run clean water into the unit until the pump activates. Immediately turn off the water and allow the grinder pump to run until it shuts off automatically.

Duplex Units. Special attention must be taken to ensure that both pumps turn on when clean water is added to the tank.

Caution: Do not disconnect power to the unit

Power Failure

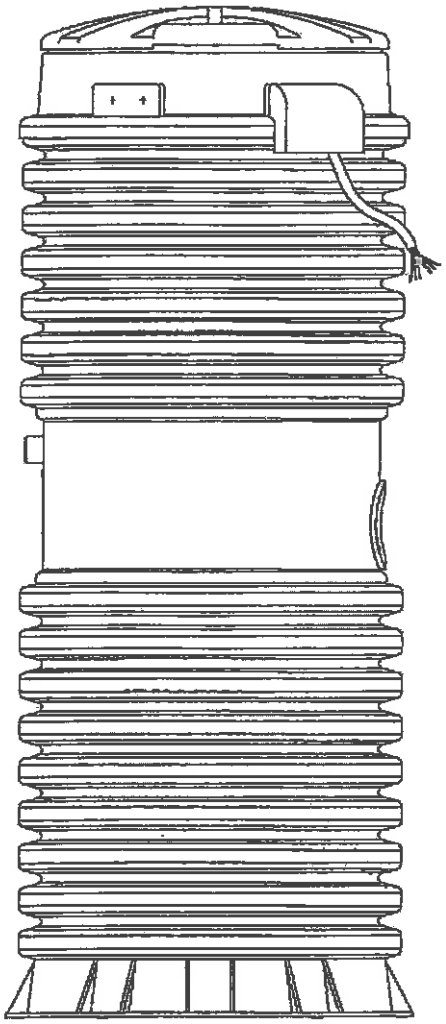
Your grinder pump cannot dispose of wastewater without electrical power. If electrical power service is interrupted, keep water usage to a minimum.

Pump Failure Alarm

Your Environment One grinder pump has been manufactured to produce an alarm signal (120 volt) in the event of a high water level in the basin. The installer must see that the alarm signal provided is connected to an audible and/or visual alarm in such a manner as to provide adequate warning to the user that service is required. During the interim prior to the arrival of an authorized service technician, water usage must be limited to the reserve capacity of the tank.

For service, please call your local distributor:

E/One Sewers™



Limited Warranty

For E/One Extreme D-Series, W-Series & Upgrade

Environment One Corporation offers a limited warranty that guarantees its product to be free from defects in material and factory workmanship for a period of two years from the date of installation, or 27 months from the date of shipment, whichever occurs first, provided the product is properly installed, serviced and operated under normal conditions and according to manufacturer's instructions. Repair or parts replacement required as a result of such defect will be made free of charge during this period upon return of the defective parts or equipment to the manufacturer or its nearest authorized service center.

Model Number: _____

Serial Number: _____

Installation Date: _____

e/one SEWER SYSTEMS

2773 Balltown Rd • Niskayuna NY USA 12309

(01) 518.346.6161 • www.eone.com

Appendix B

Opinion of Costs

Curtis Lumber

OPINION OF COSTS FOR SANITARY SEWER IMPROVEMENTS

CURRENT DATE:November 15, 2019

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COST
SANITARY SEWER SYSTEM				
Flushing Vault	1.0	EA	$1,500.00	$1,500
1.25" HDPE DR-11 Force main	225.0	LF	$100.00	$22,500
E-One Duplex Grinder Station	1.0	LS	$10,000.00	$10,000
Connection to Existing Force Main	1.0	EA	$1,000.00	$1,000
				$35,000
Engineering Services (15%)				$5,250
Legal Services (7%)				$2,450
Administratives (5%)				$1,750
			TOTAL PROJECT COST=	**$44,450**

PREPARED BY: Advance Engineering & Surveying PLLC

Appendix C

Legal Description & Map

Description

Sewer District #6

Sanitary Sewer Extension No. 6

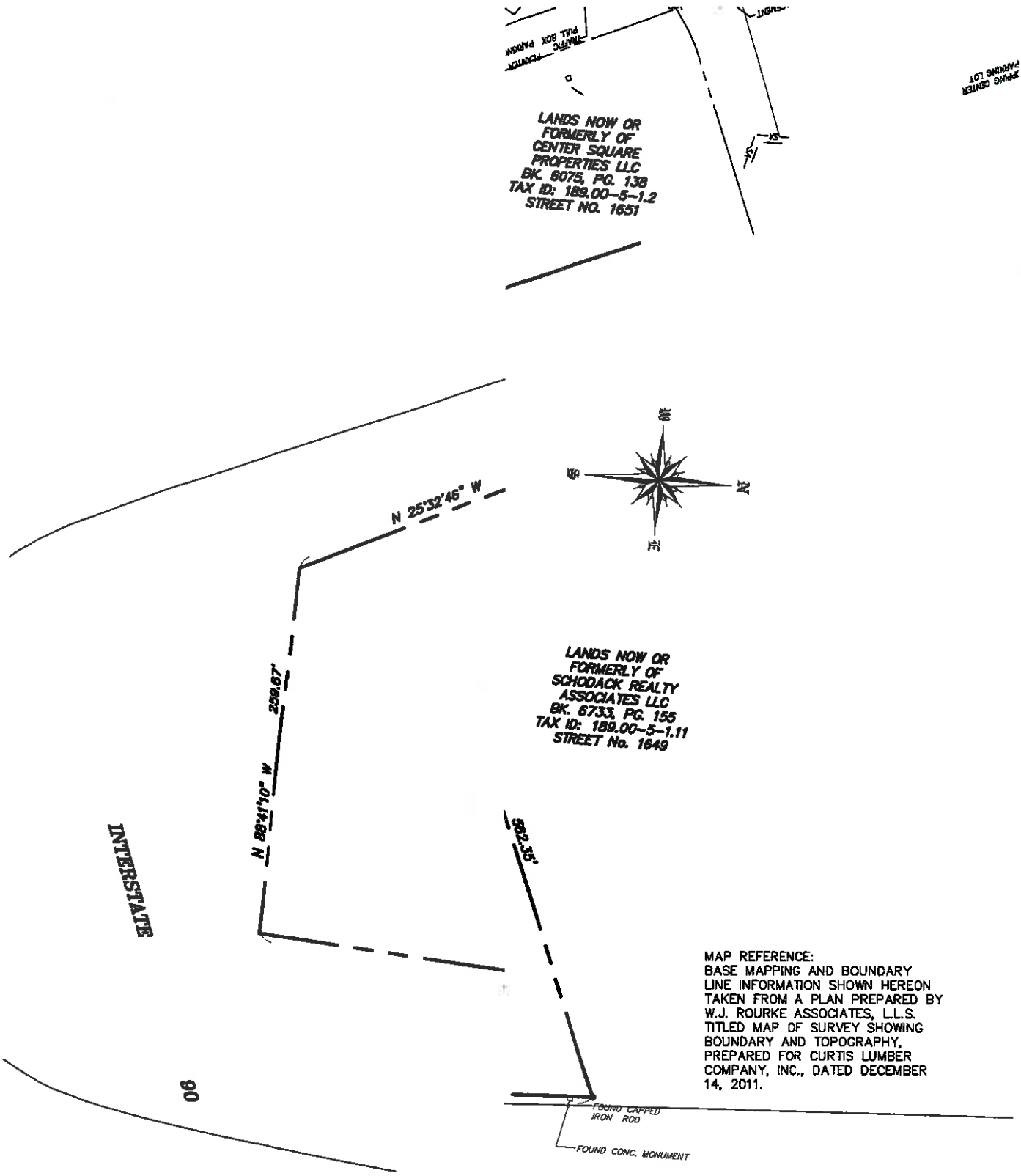
Lands now or formerly of Parkview at Ticonderoga LLC

All that tract or parcel of land situate, lying in the Town of Schodack, County of Rensselaer, State of New York, (being tax map parcel 189.00-4-1) on the easterly side of Columbia Turnpike (Routes 9 & 20) and being shown on a plan titled "Map of Survey showing Boundary and Topography, prepared for Curtis Lumber Company, Inc.", dated December 14, 2011, as prepared by W.J. Rourke, P.L.S. and being more particularly bounded and described as follows:

Beginning at a point in the easterly highway boundary of Columbia Turnpike (Routes 9 & 20) at its intersection with the division line between lands now or formerly of Center Square Properties LLC on the north and lands now or formerly of Parkview at Ticonderoga LLC on the south; thence from said point of beginning along said division line North 67°-54'-57" East, 182.87 feet to a point in the division line between lands of the aforementioned Parkview at Ticonderoga LLC on the west and south and lands now or formerly of Schodack Realty Associates LLC on the east and north; thence along said division line South 24°-06'-00" East, 100.06 feet to a point and North 67°-54'-57" East, 562.35 feet to a point in the division line between lands of the aforementioned Parkview at Ticonderoga LLC on the west and north and lands of the People of the State of New York (Interstate Route 90) on the east and south; thence along said division line the following three (3) courses and distances:

1) South 02°-27'-14" East, 426.13 feet to a point; thence
2) South 03°-49'-49" West, 676.77 feet to a point; thence
3) North 88°-41'-10" West, 259.67 feet to a point in the aforementioned easterly highway boundary of Columbia Turnpike (Routes 9 & 20); thence along said easterly highway boundary the following three (3) courses and distances:

1) North 25°-32'-46" West, 348.09 feet to a point; thence
2) North 27°-25'-11" West, 562.32 feet to a point; thence
3) North 21°-02'-24" West, 99.64 feet to the point and place of beginning.



MAP REFERENCE:
BASE MAPPING AND BOUNDARY LINE INFORMATION SHOWN HEREON TAKEN FROM A PLAN PREPARED BY W.J. ROURKE ASSOCIATES, L.L.S. TITLED MAP OF SURVEY SHOWING BOUNDARY AND TOPOGRAPHY, PREPARED FOR CURTIS LUMBER COMPANY, INC., DATED DECEMBER 14, 2011.

NO.	REVISION	DATE
1)		

EWER DISTRICT #6
SANITARY SEWER EXTENSION No. 6
URTIS LUMBER - COLUMBIA TURNPIKE

OLUMBIA TURNPIKE TOWN OF SCHODACK
UNTY OF RENSSELAER NEW YORK

SCALE: 1" = 100'	DATE: MARCH 16, 2020
SHEET 1 OF 1	19124-DISTEXT

Appendix D

Town of Schodack Sewer User Regulations (Partial)

And

One-Time Connection Fee Estimate

The design, material and construction methods shall conform to the applicable sections of the current editions and subsequent revisions of the following documents. These documents may be reviewed at the Department.

A.
Recommended Standards for Wastewater Facilities, Great Lakes — Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

B.
Rural Sewage Disposal, Rensselaer County Department of Health.

C.
Articles II and IX, Sanitary Code of Rensselaer County.

D.
Parts 74 and 75, New York State Department of Health Regulations, 10 NYCRR.

E.
Design Standards for Wastewater Treatment Works, Intermediate Sized Sewerage Facilities, New York State Department of Environmental Conservation.

F.
Individual Residential Wastewater Treatment Systems Design Handbook, New York State Department of Health.

G.
Design and Construction of Sanitary and Storm Sewers, Manual of Practice No. 8, Water Pollution Control Federation.

H.
Standard Methods for the Examination of Water and Sewage, Published by the American Public Health Association.

§ 174-31 Public safety.

§ 174-18 Permit required.

No unauthorized person shall uncover, make any connections with or openings into, use, alter or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the Department.

§ 174-19 Separate service lines required.

Separate and independent service lines shall be provided for every applicant.

§ 174-20 Use of old service lines.

Old service lines may be used in connection with new applicants only when they are found, on examination and tested by the Department, to meet all requirements of this chapter. This examination may require exposing of the old line by excavation, which will be furnished and paid for by the applicant.

§ 174-21 Service line specifications.

A.
The service lines shall be cast-iron soil pipe (hub and spigot), ASTM Specification A74 (1979) or other suitable material approved by the Department. Joints shall be tight and waterproof. If installed in filled or unstable ground, the service line shall be of cast-iron soil pipe or approved nonmetallic material and shall be laid on a suitable concrete bed or cradle as approved by the Department.

B.
The size and slope of the service line shall be subject to the approval of the Department, but in no event shall the diameter be less than four inches. The slope of such four-inch pipe shall not be less than 1/4 inch per foot. The slope of a six-inch pipe shall be not less than 1/8 inch per foot.

C.
Whenever possible, the service line shall be brought to the structure at an elevation below the basement floor. No service line shall be laid parallel to and within three feet of any bearing wall, which might thereby be weakened. The depth shall be sufficient to afford protection from frost. The service line shall be laid at uniform grade and in straight alignment. Changes in direction shall be made only with properly curved pipe and fittings and with approval of the Department. Accessible cleanouts may be required by the Department in cases of sharp alignment changes or extremely long runs of pipe.

D.
For applicants in which any service line is too low to permit gravity flow to the public sewer, sanitary sewage carried by such service line shall be lifted by approved mechanical means and discharged to the service line. The mechanical means shall be owned and maintained by the applicant, meet all applicable specifications and be approved by the Department.

§ 174-22 Prohibited connections.

The applicant shall not make connection of roof downspouts, foundation drains, cellar drains, areaway drains, building drains or other sources of surface runoff or groundwater to a service line or drain which in turn is connected directly or indirectly to a public sewer.

§ 174-23 Excavation requirements.

All excavations required for the installation of a service line shall be open trench work unless otherwise approved by the Department. Pipe-laying and backfill shall be performed in general accordance with the latest version of ASTM Specification C12, C13, the Manual of Practice No. 37, Design and Construction of Sanitary and Storm Sewers (ASCE), and in full accordance with local building codes, except that no backfill shall be placed until the work has been inspected and approved by the Department.

§ 174-24 Joints.

A.
All joints and connections shall be made gastight and watertight in accordance with the applicable specifications.

B.
Hub and spigot joints shall be furnished in patterns and sizes in accordance with ASTM A-74.

§ 174-25 Connection to service line.

The connection of the service line into an existing public sewer shall be made at the property line, or, if a service line connection has not previously been provided, the service line will be connected to the existing public sewer. The cost of constructing and maintaining the service line from the public sewer to the property line will be at the district's expense. The cost of constructing and maintaining the service line from the property line to the structure will be at the applicant's expense. All costs and expense incidental to the installation, connection and maintenance of the service line, either new or existing, shall be borne by the applicant. The applicant shall indemnify the district and the town from any loss or damage that may, directly or indirectly, be occasioned by the installation of the service line. The method of connection of the service line to the public sewer will be dependent upon the type of sewer material used and in all cases shall be approved by the Department.

§ 174-26 Supervision and inspection of connections and trenches.

A.
The applicant for the service line permit shall notify the Department when the service line is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the Department.

B.
When trenches are opened for the laying of service line pipes, such trenches shall be inspected by the Department before the trenches are filled, and the applicant performing such work shall notify the Department when the laying of service line is completed.

C.
"As-built" drawings shall be provided to the Department by the applicant within 30 days of completion of the project.

§ 174-27 Permit required prior to excavation.

Prior to any excavation for service line installation, a permit for such excavation shall be obtained from the Department.

§ 174-28 Service line traps.

Service line traps shall be located within the property line, inside the structure wherever practicable, on the service line within two feet of exterior wall of the structure and on the sewer side of all connections except those approved by the Department. Trap cleanouts in structures are required to be level with the finished basement or cellar floor.

§ 174-29 Fresh-air inlets.

Every sanitary service line equipped with a trap, sewage sump, ejector, receiving tank, oil separator or similar equipment shall be provided with a fresh-air inlet pipe connected

to the service line immediately upstream from and within four feet of such trap or equipment. The fresh-air inlet pipe shall be extended to the outer air and shall be terminated in an open end at least six inches above grade. The open end shall be protected by a perforated metal plate permanently fixed in the mouth of the inlet. A return bend with its protected open end at least six inches above grade shall be installed within the property line in an approved location, when the trap is located outside the structure. The size of the fresh-air inlet pipe shall be at least 1/2 of the diameter of the service line at the point of connection, but not less than three inches.

§ 174-30 Backwater valves.

In areas where sanitary sewers drain to a wastewater pumping station, an approved backwater valve shall be installed, at the applicant's expense, in all structures subject to flooding during a failure of the pumping facilities. The location of said backwater valve shall be as indicated on the drawing for a typical applicant's connection from the Department.

§ 174-31 Public safety.

Whenever any street or public grounds shall be opened for the purpose of making a connection with the mains or for the laying of sewer lines or fixtures, public safety and convenience shall be duly regarded, and the street or public place shall be restored to its original condition as soon as possible, and all work must conform to the safety requirements as set forth by the State of New York and OSHA. The applicant must obtain, from the appropriate departments, the required permits and display the same in the Town of Schodack.

§ 174-41 Grease, oil and sand interceptors.

A.

Grease, oil and sand interceptors shall be provided when the above set limits for those substances are exceeded or when, in the opinion of the engineer and/or Department, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts or any flammable wastes, sand and other harmful ingredients, except that such interceptors shall not be required for private living quarters or dwelling units. All interceptors shall be of a type and capacity approved by the engineer and shall be so located as to be readily and easily accessible for cleaning and inspection.

B.

Grease and oil interceptors shall be constructed of impervious materials capable of withstanding abrupt and extreme changes in temperature. They will be of substantial construction, watertight and equipped with easily removable covers, which, when bolted in place, shall be gastight and watertight.

C.

Where installed, all grease, oil and sand interceptors shall be purchased and maintained by the applicant, at his expense, in continuously efficient operation at all times and shall be readily accessible and open to inspection by the Department at any time.

I have been contacted by Nicholas Costa, the engineer preparing the MP&R for the Curtis Lumber Sewer Extension, to provide the estimated costs to include the above property in Sewer District #6. I have forwarded the EG Sewer Connection charge ($2,813=375GPD*60%/400*$5,000) in accordance with the current EG Sewer Agreement, to Supervisor Conway for approval. Once returned, I will forward the estimates below to Nicholas for inclusion in the MP&R that should be deposited with the Town upon application to the Building Department. The Town engineering and legal fees are estimated based upon previous Town extensions.

Est Town Engineering Costs	$3,300.00
Est Town Legal Costs	4,500.00
Est Sewer Insp Fee	50.00
Est Admin Fee	225.00
Est EG Connection Fee	2,813.00
Total estimated Sewer Fees	10,888.00

Est Building Water Insp Fee	50.00
Est Meter Inspection Fee	25.00
Est Admin Fee	225.00
Est Water Meter (3/4" only)	275.00
Total estimated Water fees	575.00

Total Water/Sewer Fees	$11,463.00

The Town only maintains inventory of ¾ inch water meters supplied to applicants at a cost of $275.00. Should the service line installed be in excess of ¾", Curtis will need to contact Ti-Sales (Jason Matt @ 518-588-6543) to purchase the appropriate water meter directly and no charge will be collected by the Town upon application to the building department.

All water and sewer connection costs to Town mains for the new Curtis Lumber structure will be paid for by the applicant.

The current quarterly 2020 Sewer usage rate is $7.50 per 1000 gallons of metered water. The 2020 Water usage rate includes a minimum of $45.00 plus an additional $3.00/1000 gallons in excess of 18,000 gallons per quarter. Invoices are usually mailed within the first week after the end of the calendar quarter. While the property is currently provided water by a private well, extension was previously granted by the Town Board to include in Consolidated Water District 101, for which it is currently contributing to the district's capital costs. For 2020, Curtis Lumber was responsible for 6 equivalent dwelling units (EDU's) for the Consolidated Water District 101's capital costs @ $365.00 per EDU or $2,190.00. Currently Sewer District #6 has no debt service, but should the district acquire debt, EDU's would be equal to the EDU's for Consolidated District 101.

Please contact me with any changes you may have. Thanks.

INTERMUNICIPAL AGREEMENT FOR
POLICE TACTICAL TEAM
COOPERATION

This agreement is made this ____day of _____ 2020 between the Town of North Greenbush, a municipal corporation with its principal place of business at the North Greenbush Town Hall, 2 Douglas Street Wynantskill, New York, the Town of East Greenbush a municipal corporation within its principal place of business at the East Greenbush Town Hall 225 Columbia Turnpike East Greenbush, New York, the Town of Schodack a municipal corporation within its principal place of business at the Schodack Town Hall 265 Schuurman Rd Castleton, New York, and the City of Rensselaer a municipal corporation within its principal place of business at Rensselaer City Hall 62 Washington St. Rensselaer, New York

RECITALS

WHEREAS, Section 119-o (3) of the General Municipal Law permits municipal corporations to enter into agreements for the performance amongst themselves, or one for the other, of their respective functions, powers and duties, on a cooperative or contract basis, or for the provision of a joint service; and

WHEREAS, the parties hereto have experienced the need within their jurisdictions, and foresee future potential needs, for certain law enforcement missions that require intense effort in order to meet the industry standard for acceptable delivery of service in each case. Typically, this activity is associated with the need for specialized equipment and specially trained employees.

NOW THEREFORE, the parties do mutually agree pursuant to the terms and provisions of this High Intensity Law Enforcement Activity Agreement as follows:

ARTICLE ONE
Purpose of the Agreement

The purpose of this Agreement is to:

1. Formalize the relationship between the joint cooperative Multi-Jurisdictional SWAT Team comprised of police officers of the Town of North Greenbush Police Department, Town of East Greenbush Police Department, Town of Schodack Police Department and the City of Rensselaer Police Department (hereinafter referred to as "Tactical Team") and the use of the combined tactical team resources;
2. Eliminate the need to follow the formal procedure set forth in GML §209-m to request assistance from the other parties in the form of personnel and or equipment;
3. Make available to each party; the specialized equipment and the specially trained employees among the parties to provide an acceptable and cost-effective response to certain high intensity cases,
4. Provide for more efficient utilization of law enforcement resources and services;

ARTICLE SIX
Privileges and Immunities

To the extent permitted by law, all the powers, duties, rights, privileges and immunities from liability which surround the activities of any participating tactical team or agency when performing its functions within the public agency's territorial limits shall apply to the activities of that agency's tactical team while furnishing tactical assistance outside its territorial limits under the terms of this Agreement.

Specifically, pursuant to sections § 119-n(c) and § 119-o GML, police officers assisting another local government outside their normal geographical area of employment shall have all powers and authority of law enforcement officers in such other jurisdiction as provided by law, including the power of arrest.

ARTICLE SEVEN
Line of Duty Death or Injury

The effect of the death, injury or disability of any officer who is killed, injured or disabled outside the territorial limits of either participating entity while in the performance of this agreement, shall be the same as if they were killed, injured or were to become disabled while that officer was functioning within its own territorial limits, and such injury or death shall be considered to be in the line of duty.

ARTICLE EIGHT
Liability and Indemnification

Neither party shall be required to indemnify the other for any claim arising out of participating under this Agreement. Each party shall be responsible for defending its own respective entity in any action or dispute that arises in connection with or as a result of this Agreement and that each party will be responsible for bearing their own costs, damages, losses, expenses and attorney fees. Each party shall be obligated to notify the other of any claims or lawsuits received arising out of tactical team operations.

No agency or government entity which is a party to this agreement shall be liable for any lost property, damaged property, medical expenses, property replacement, or other damages or any other claim made by any employee of a grantor agency arising out of participation in this agreement.

ARTICLE NINE
Administration

It is the intention of the participants that no separate legal entity is created by this Agreement to carry out its provisions. To the extent this Agreement requires administration other than as set forth herein; it shall be administered by the governing bodies or an appointee of the governing bodies hereto acting as a joint board. No real or personal property shall be acquired by the participants because of this Agreement.

Each party shall have equal access to the records created by the other party related to incidents responded to under this Agreement.

this time the Town of East Greenbush will continue to provide a central point of purchasing.

To the extent that this Agreement should require administration other than as set forth herein, it shall be administered by the governing bodies or an appointee of the governing bodies hereto, acting as a joint board.

ARTICLE THIRTEEN
SHARED SERVICES OPERATING ACCOUNT

If the parties to this agreement decide to create a Shared Services Operating Account to cover the costs of supplies, maintenance etc. of shared equipment or any other shared property or materials, those costs will be evenly shared. The amount of funds from each party and the administration of such account will be mutually agreed upon by each Chief's Panel or their designee.

ARTICLE FOURTEEN
Approval, Duration and Termination

1. This Agreement shall not be effective until approved by a majority vote, as required by section 119-o (3) of the General Municipal Law, of the governing body of each party.

2. This agreement may be changed, modified or amended by written agreement of the participants, subject to the requirements of paragraph 1 of this Article.

3. This Agreement shall terminate on this ____day of_____ 2025. The terms herein shall continue from year to year thereafter so long as such legislative bodies have approved, at least annually, the renewal/extension of this agreement. Any party may terminate any rights and obligations under this Agreement at any time by giving to the other participating entities thirty days prior written notice of its intent to withdraw from this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement the date and year above written.

TOWN OF NORTH GREENBUSH

By_____
Supervisor Joseph Bott

By _____
Chief David Keevern

TOWN OF EAST GREENBUSH

By_____
Supervisor John J. Conway

By:_____
Chief Elaine M. Rudzinski

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **PATRICK MADDEN,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **BRIAN OWENS,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **JOHN J. CONWAY,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **ELAINE M. RUDZINSKI** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

MUTUAL COMMUNITY SHARING PLANS FOR
HIGH INTENSITY LAW ENFORCEMENT ACTIVITY

This agreement is made this _____**day of** _____**, 2020** between the Town of East Greenbush, a municipal corporation with its principal place of business at 225 Columbia Turnpike, Rensselaer, NY 12144; the Town of Schodack, a municipal corporation with its principal place of business at 265 Schuurman Road Castleton NY 12033, the Town of North Greenbush, a municipal corporation with its principal place of business at 2 Douglas Street, Wynantskill, NY 12198, the City of Rensselaer, a municipal corporation with its principal place of business at 62 Washington St, Rensselaer, NY 12144, the Village of Nassau, a municipal corporation with its principal place of business at 40 Malden Street Nassau N.Y 12123, and the City of Troy, a municipal corporation with its principal place of business at 433 River Street Troy NY 12180

RECITALS

WHEREAS, Article 5-G, subdivision 3 of Section 119-o of the General Municipal Law permits municipal corporations to enter into agreements for the performance amongst themselves or one for the other of their respective functions, powers and duties on a cooperative or contract basis for the provisions of a joint service; and

WHEREAS, the parties hereto have experienced the need within their jurisdictions, and foresee future potential needs, for certain law enforcement missions that require intense effort in order to meet the industry standard for acceptable delivery of service in each case. Typically, this activity is associated with the need for specialized equipment and specially trained employees.

NOW THEREFORE, the parties do mutually agree pursuant to the terms and provisions of this HIGH INTENSITY LAW ENFORCEMENT ACTIVITY AGREEMENT as follows:

ARTICLE ONE

PURPOSE OF THE AGREEMENT

The purpose of this agreement is to:

1. formalize the relationship of the parties, being the Town of East Greenbush Police Department, the Town of Schodack Police Department, the Town of North Greenbush Police Department, the City of Rensselaer Police Department, the Village of Nassau Police Department and the City of Troy Police Department; and

2. Clarify the obligations of the parties; and

3. Make available to each party; the specialized equipment and the specially trained employees among the parties to provide an acceptable and cost-effective response to certain high intensity cases.

Services to be covered;

Emergency Response Team: Make available to each participating entity, the tactical team resources, to include but not limited to tactical operators, sniper team element, and explosive breaching team of the other participating entity in the event of an emergency in accordance with the provisions of this Agreement.

Hostage Negotiators: for those occurrences where skilled negotiators may serve to de-escalate a critical incident.

Accident Investigation: Serious injury or fatal traffic accident investigations.

Arson Investigation: Fire investigations forensics, evidence recovery and scene documentation.

Crime Scene Investigation: Major case forensics, evidence recovery and scene documentation.

Training: In-Service training (i.e.; Legal Updates, Defensive Tactics, and Immediate Rapid Deployment) and other training as needed.

Communications: To provide call taking & dispatch services or any other communications need as agreed upon by the agencies.

Special Vehicles: To include but not limited to All-Terrain Vehicles (ATV's), Bicycles, HUMMWV, Personnel Carrier, Communications Vehicles.

ARTICLE TWO

PERSONNEL AND EQUIPMENT

Each party agrees that their Police Department (grantor) may supply personnel, equipment and other available resources to the other (grantee) upon request in the event of an emergency, if their respective Police Chief or chief's panel or their designees, deems it appropriate. The number of personnel, if any and the amount or type of equipment to be dispatched by the grantor agency shall be determined by that agency's Police Chief or Chief's Panel or their designees.

ARTICLE THREE

RETAINED PERSONNEL AND EQUIPMENT

The agencies agree that the grantor agency which is responding to the request of any grantee agency, shall hold back sufficient personnel and equipment to maintain adequate services within the territory of said grantor. Should the need arise, any grantor agency may recall any personnel and equipment or any part thereof. The grantor shall inform the grantee of its intent to withdraw from the situation.

ARTICLE FOUR

COMPENSATION

No participant, as a grantee, shall be obligated to compensate any grantor, for services rendered or for injuries sustained by any grantee, or for the use or damage to the grantor's equipment. Specifically, and without limiting the foregoing, the grantee shall have no obligation for payment of wages or withholding for unemployment, workers compensation, or for the payment of any other benefits to the personnel of the grantor. Each party hereto hereby expressly waives any and all claims to whatever type or nature, except for gross negligence, against the other and its personnel, which may arise out of the performance of this Agreement.

ARTICLE FIVE

CONTROL OF PERSONNEL AND EQUIPMENT

The person in charge of the personnel and equipment of the grantor agencies shall report to the Incident Commander, Tactical Team Leader, Supervisor or other person in charge of the incident in the territory of the grantee agency at the location of the incident. Thereafter, the parties shall devise a plan pertaining to the deployment of the personnel and equipment.

ARTICLE SIX

PRIVILEGES AND IMMUNITIES

To the extent permitted by law, all privileges and immunities from liability which normally attach to the activities of any party while performing its functions within that party's normal geographic area of employment, shall also apply to the activities of that party while acting in the capacity as a grantor agency under the terms and conditions of this agreement.

ARTICLE SEVEN

LINE OF DUTY DEATH OR INJURY

The effect of death, injury, or disability to any officer while acting outside their normal geographic area of employment, while participating under the terms and conditions of this agreement, shall be the same as if as if they were killed, injured or were to become disabled while acting within their normal geographic area of employment, and any such injury, disability or death shall be considered to be in the line of duty.

ARTICLE EIGHT

INDEMNIFICATION

No agency or government entity which is a party to this agreement shall be liable for any lost property, damaged property, medical expenses, property replacement, or other damages or any other claim made by any employee of a grantor agency arising out of participation in this agreement.

ARTICLE NINE

ADMINISTRATION

It is the intention of the participants that no separate legal entity be created by this agreement to carry out its provisions. To the extent this Agreement requires administration other than as set forth herein, it shall be administered by the governing bodies or an appointee of the governing bodies hereto acting as joint board. No real or personal property shall be acquired by the participants as a result of this Agreement.

ARTICE TEN

DISCHARGE OF PUBLIC DUTY

This Agreement shall not relieve any participant of any obligation or responsibility imposed upon it by law except that performance of any grantor may be offered in satisfaction of any such obligation or responsibility to the extent of actual and timely performance thereof by the responding party.

ARTICLE ELEVEN

COMPLIANCE WITH LAWS

Each participant agrees that each will comply with all applicable Federal, State and Local Laws, Rules and Regulations applicable to the respective entities and employees in connection with the performance of this Agreement.

ARTICLE TWELVE
APPROVAL, DURATION, AND TERMINATION

1. This Agreement shall not be effective until approved by a majority vote, as required by section 119-o (3) of the General Municipal Law, of the governing body of each agency.

2. This Agreement may be changed, modified or amended by written agreement of the participants, subject to the requirements of paragraph 1 of this Article.

3. This Agreement shall terminate on **December 31, 2025.** The terms herein shall continue thereafter so long as such legislative bodies have approved, at least annually, the renewal/extension of this agreement. Any party may terminate any rights and obligations under this Agreement at any time by giving to the other participating entities thirty days prior written notice of its intent to withdraw from this Agreement.

4. All notices shall be provided to:

A. Town of East Greenbush
Officer of the Town Attorney
225 Columbia Turnpike
Rensselaer, NY 12144

B. Town of Schodack
Office of the town of Attorney
265 Schuurman Road
Castleton, NY 12033

C. Town of North Greenbush
Office of the Town Attorney
2 Douglas Street
Wynantskill, NY 12198

D. City of Rensselaer
Office of City Attorney
62 Washington Street
Rensselaer, New York

E. Village of Nassau
40 Malden Street
Nassau NY 12123

F. City of Troy
Office of City Attorney
433 River Street
Troy, NY 12180

SO AGREED AND APPROVED!

_____
Jack Conway, Supervisor

_____
David Harris, Supervisor

_____
Joseph H. Bott III, Supervisor

_____
Michael Stammel, Mayor

_____
Robert Valenty, Mayor

_____
Wm. Patrick Madden, Mayor

INTERMUNICIPAL AGREEMENT FOR
POLICE TACTICAL TEAM
COOPERATION

This agreement is made this ____day of _____ 2020 between the Town of North Greenbush, a municipal corporation with its principal place of business at the North Greenbush Town Hall, 2 Douglas Street Wynantskill, New York, the Town of East Greenbush a municipal corporation within its principal place of business at the East Greenbush Town Hall 225 Columbia Turnpike East Greenbush, New York, the Town of Schodack a municipal corporation within its principal place of business at the Schodack Town Hall 265 Schuurman Rd Castleton, New York, and the City of Rensselaer a municipal corporation within its principal place of business at Rensselaer City Hall 62 Washington St. Rensselaer, New York

RECITALS

WHEREAS, Section 119-o (3) of the General Municipal Law permits municipal corporations to enter into agreements for the performance amongst themselves, or one for the other, of their respective functions, powers and duties, on a cooperative or contract basis, or for the provision of a joint service; and

WHEREAS, the parties hereto have experienced the need within their jurisdictions, and foresee future potential needs, for certain law enforcement missions that require intense effort in order to meet the industry standard for acceptable delivery of service in each case. Typically, this activity is associated with the need for specialized equipment and specially trained employees.

NOW THEREFORE, the parties do mutually agree pursuant to the terms and provisions of this High Intensity Law Enforcement Activity Agreement as follows:

ARTICLE ONE
Purpose of the Agreement

The purpose of this Agreement is to:

1. Formalize the relationship between the joint cooperative Multi-Jurisdictional SWAT Team comprised of police officers of the Town of North Greenbush Police Department, Town of East Greenbush Police Department, Town of Schodack Police Department and the City of Rensselaer Police Department (hereinafter referred to as "Tactical Team") and the use of the combined tactical team resources;
2. Eliminate the need to follow the formal procedure set forth in GML §209-m to request assistance from the other parties in the form of personnel and or equipment;
3. Make available to each party; the specialized equipment and the specially trained employees among the parties to provide an acceptable and cost-effective response to certain high intensity cases,
4. Provide for more efficient utilization of law enforcement resources and services;

Services to be covered;

Shared Services Emergency Response Team: as described herein at Article XII.

ARTICLE TWO
Personnel and Equipment

Each party agrees that their police department may supply tactical team personnel, equipment and other available resources to the other upon request in the event of an emergency, if their respective police chief, or his designee, deems it appropriate. The number of personnel, if any, and the amount or type of equipment to be dispatched by the responding party shall be determined by that agency's police chief, or Chief's Panel or their designees.

In furtherance of this Agreement, the parties agree to conduct joint training for all employees participating in tactical team operations, subject to the terms of this Agreement. Such training shall take place at a time and place mutually agreed upon between the parties and approved by the Chief's Panel.

ARTICLE THREE
Retained Personnel and Equipment

Each party agrees that the responding party may hold back sufficient personnel and equipment to provide adequate protection within the territory of the responding party. Should a need for the loaned personnel and equipment arise within the territory of the responding party, then the responding party may recall such personnel and equipment or any part thereof. The responding party shall inform the requesting party of its intent to withdraw from the situation.

ARTICLE FOUR
Compensation

Neither participant, as a requesting party, shall be obligated to compensate the responding party for services rendered by or injuries to the responding party's personnel, or for the use or damage to the responding tactical team's equipment. Specifically, and without limiting the foregoing, the requesting party shall have no obligation for payment of wages or withholding for unemployment, workers compensation, or for the payment of any other benefits to the personnel of the responding party. Each participant hereto hereby expressly waives all claims of whatever type or nature, except for gross negligence, against the other and its personnel, which may arise out of the performance of this Agreement.

ARTICLE FIVE
Control of Personnel and Equipment

The person in charge of the personnel and equipment of the grantor agencies shall report to the Incident Commander, Tactical Team Leader, Supervisor or other person in charge of the incident in the territory of the grantee agency at the location of the incident. Thereafter, the parties shall devise a plan pertaining to the deployment of the personnel and equipment

ARTICLE SIX
Privileges and Immunities

To the extent permitted by law, all the powers, duties, rights, privileges and immunities from liability which surround the activities of any participating tactical team or agency when performing its functions within the public agency's territorial limits shall apply to the activities of that agency's tactical team while furnishing tactical assistance outside its territorial limits under the terms of this Agreement.

Specifically, pursuant to sections § 119-n(c) and § 119-o GML, police officers assisting another local government outside their normal geographical area of employment shall have all powers and authority of law enforcement officers in such other jurisdiction as provided by law, including the power of arrest.

ARTICLE SEVEN
Line of Duty Death or Injury

The effect of the death, injury or disability of any officer who is killed, injured or disabled outside the territorial limits of either participating entity while in the performance of this agreement, shall be the same as if they were killed, injured or were to become disabled while that officer was functioning within its own territorial limits, and such injury or death shall be considered to be in the line of duty.

ARTICLE EIGHT
Liability and Indemnification

Neither party shall be required to indemnify the other for any claim arising out of participating under this Agreement. Each party shall be responsible for defending its own respective entity in any action or dispute that arises in connection with or as a result of this Agreement and that each party will be responsible for bearing their own costs, damages, losses, expenses and attorney fees. Each party shall be obligated to notify the other of any claims or lawsuits received arising out of tactical team operations.

No agency or government entity which is a party to this agreement shall be liable for any lost property, damaged property, medical expenses, property replacement, or other damages or any other claim made by any employee of a grantor agency arising out of participation in this agreement.

ARTICLE NINE
Administration

It is the intention of the participants that no separate legal entity is created by this Agreement to carry out its provisions. To the extent this Agreement requires administration other than as set forth herein; it shall be administered by the governing bodies or an appointee of the governing bodies hereto acting as a joint board. No real or personal property shall be acquired by the participants because of this Agreement.

Each party shall have equal access to the records created by the other party related to incidents responded to under this Agreement.

ARTICLE TEN
Compliance with Laws

Each participant agrees that each will comply with all applicable, federal, state and local laws, rules and regulations applicable to the respective entities and employees in connection with the performance of this Agreement.

ARTICLE ELEVEN
DISCHARGE OF PUBLIC DUTY

This Agreement shall not relieve any participant of any obligation or responsibility imposed upon it by law except that performance of any grantor may be offered in satisfaction of any such obligation or responsibility to the extent of actual and timely performance thereof by the responding party.

ARTICLE TWELVE
SHARED SERVICES EMERGENCY RESPONSE TEAM

The parties agree to operate a Shared Services Emergency Response Team (TEAM), under the supervision of a Chief's Panel, according to the command and control policies and organizational provisions of the Manual of Standard Operating Guidelines of the TEAM. No separate legal entity is created by this Article nor is any required to carry out the provisions herein.

The Chief's panel will meet at least once a quarter.

No real or personal property shall be acquired through operation of this Agreement.

The ownership of supplies, material or public property, acquired by any Party hereto in the furtherance of the mission of the TEAM or of this Agreement, shall be retained by said Party and accounted for by said Party pursuant to applicable law.

An inventory of such supplies, material or public property as described above, and the manner of its acquisition shall be maintained in accordance with industry standard recordkeeping practices.

The Parties agree to evenly share the cost of supplies, material or public property which is acquired at the direction of the aforesaid Chief's Panel which has established an Annual Contribution to be made in the amount of the following;

2020 - $4750.00
2021 - $5000.00
2022 - $5250.00
2023 - $5500.00
2024 - $5725.00

for each party that contributes members to the TEAM. Contributions are due by March 1st of each year. Unused funds will carry over from year to year.

A central point of purchasing shall coordinate such authorized expenses, including maintaining a journal thereof and evenly distributing said authorized costs to each Party. At

this time the Town of East Greenbush will continue to provide a central point of purchasing.

To the extent that this Agreement should require administration other than as set forth herein, it shall be administered by the governing bodies or an appointee of the governing bodies hereto, acting as a joint board.

ARTICLE THIRTEEN
SHARED SERVICES OPERATING ACCOUNT

If the parties to this agreement decide to create a Shared Services Operating Account to cover the costs of supplies, maintenance etc. of shared equipment or any other shared property or materials, those costs will be evenly shared. The amount of funds from each party and the administration of such account will be mutually agreed upon by each Chief's Panel or their designee.

ARTICLE FOURTEEN
Approval, Duration and Termination

1. This Agreement shall not be effective until approved by a majority vote, as required by section 119-o (3) of the General Municipal Law, of the governing body of each party.

2. This agreement may be changed, modified or amended by written agreement of the participants, subject to the requirements of paragraph 1 of this Article.

3. This Agreement shall terminate on this ____day of_____ 2025. The terms herein shall continue from year to year thereafter so long as such legislative bodies have approved, at least annually, the renewal/extension of this agreement. Any party may terminate any rights and obligations under this Agreement at any time by giving to the other participating entities thirty days prior written notice of its intent to withdraw from this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement the date and year above written.

TOWN OF NORTH GREENBUSH

By_____
Supervisor Joseph Bott

By _____
Chief David Keevern

TOWN OF EAST GREENBUSH

By_____
Supervisor John J. Conway

By:_____
Chief Elaine M. Rudzinski

CITY OF TROY

By _____
Mayor Patrick Madden

By _____
Chief Brian Owens

TOWN OF SCHODACK

By:_____
Supervisor David Harris

By _____
Chief John Hourigan

CITY OF RENSSELAER

By _____
Mayor Michael Stammel

By:_____
Chief James Frankoski

State of New York)
County of Rensselaer) ss.:

On the _____ day of _____, in the year 2020, before me, the undersigned, personally appeared **JOSEPH BOTT,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **DAVID KEEVERN,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **PATRICK MADDEN,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **BRIAN OWENS,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **JOHN J. CONWAY,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **ELAINE M. RUDZINSKI** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the _____ day of _____ in the year 2020, before me, the undersigned, personally appeared **DAVID HARRIS,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the _____ day of _____ in the year 2020, before me, the undersigned, personally appeared **JOHN HOURIGAN,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **MICHAEL STAMMEL,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

State of New York)
County of Rensselaer) ss.:

On the___day of_____in the year 2020, before me, the undersigned, personally appeared **JAMES FRANKOSKI,** 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 the same in his/her capacity, and that by his/her signatures on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public

Laberge Group

ENGINEERING • ARCHITECTURE • SURVEYING • PLANNING

1964-2014 50 YEARS OF EXCELLENCE

3

May 8, 2020

VIA EMAIL & MAIL

David B. Harris, Town Supervisor
Town of Schodack
265 Schuurman Road
Castleton, New York 12033

Re: **Concept Plan & Next Steps**
Transfer Station Improvements
Town of Schodack, New York

Dear Supervisor Harris:

Please find attached the concept plan for the Town Transfer Station. As requested we have prepared this concept for a new transfer station layout based upon the following:

- The "Town of Schodack Residential Transfer Station Alternatives Analysis" June 2010 Report;
- Transfer Station Operator's recommendations for improved operations such as traffic queuing, flow of traffic, equipment access, etc.;
- Consultation with equipment manufacturers for roll-off containers and compactors; and
- The NYS DEC Division of Materials Management.

Site Improvements

The new transfer station layout concept has incorporated various desirous elements from the three transfer station layout reconfigurations as recommended in the June 2010 report. These elements along with operator suggested improvements and compactor manufacturer recommendations include:

1. Improved entry queuing for traffic;

the compactor below. Chutes, like the compactors, would also be located under the canopy. As noted in the previous report by others, the compactors should be equipped with "...an advanced full warning system, which alerts the operator when the unit is 80% full."

Preliminary Opinion of the Probable Cost to Construct

The following table provides a breakdown of the estimated budget costs to implement the project:

New & reconstructed pavements, concrete slabs on grade, gates and fencing, signage	$55,000
Site grading, relocation of existing walls, , establishment of lawns and minor landscaping	$65,000
New reinforced retaining walls and canopies	$185,000
Electric: Service relocation, new service panel, meter, disconnect and controls, lighting,	$60,000
New compactors, with roll-off containers (equipment only)	$70,000
Stormwater and leachate systems	$40,000
Contingency 20% +/-	$100,000
Surveying, Geotechnical, Engineering, Permitting, Grant Writing	$30,000
Construction Admin Assistance & Observation	$15,000
Total:	$620,000

Grant Funding

This project may be able to utilize the New York State's Environmental Protection Fund (EPF) as a partial source of funding; EPF grants require matching funds. Funding for this project would be administered by the Department of Environmental Conservation (DEC) under the Municipal Waste Reduction and Recycling Program (MWR&R).

Projects must demonstrate that they will enhance the municipalities' capacity to collect, aggregate, sort and process recyclable materials. Under the MWR&R Program the project could be partially funded for implementation of a waste reduction and recycling project with a goal of increased public participation in recycling. Equipment and portions of the proposed

4. Design. Perform detailed design for site layout, grading, reinforced concrete retaining walls and slabs on grade, power and electrical control systems and preparation of contract documents for project bidding.

5. Permitting. Review the current and future anticipated of wastes to be accepted at the transfer station and review permit requirements (Part 360). While the transfer station is currently permitted by NYS DEC as 360 Permit Number: 42R44, and reported to be an exempt facility (362-3.2 Exempt facilities); it is likely that future operations may require a permit modification.

6. Construction & Observation. Bid the project, award and construct the facility.

7. Train operators in the use of the equipment.

8. Educate users in the proper access and use of the facility.

As always, please do not hesitate to call with any questions or comments you may have regarding the information provided herein.

Very truly yours,
LABERGE GROUP

By: Philip E. Koziol, P.E. /jkb
Philip E. Koziol, P.E.
Project Manager

PEK: jkb

Enc.
C: Town Board Members (w/enc.)
Bruce Goodall, Director of Transfer Station Operations (w/enc.)

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NEW YORK

CASTLETON VOLUNTEER AMBULANCE SERVICE, INC.
1700 BROOKVIEW ROAD
CASTLETON-ON-HUDSON, NY 12033
PHONE: (518) 732-2563

Honorable David Harris
Supervisor
Schodack Town Hall
225 Schuurman Rd.
Castleton, New York 12033

May, 5 2020

ar Supervisor Harris and Town Board Members;

ntly it has been brought to my attention that the State of New York will be or has already approved
ke adjustments to the Volunteer Firefighters Length of Service Award Program aka, LOSAP by
sing there point system to five points a month due to the Covid -19 Pandemic.

an excellent idea and I would implore our Town Board to do the same or more for Castleton
er Ambulance Service members as they too will be having difficulty achieving the 50 points

we would have the assistance of our local Fire Agencies but at this time due to social
hey are no longer responding with us on all EMS calls except for traffic accidents.

are unable to get points for drills, training any community service programs, recruitment
eetings . We also have lost revenue for hall rentals.

one time line item starting with February and every month until the current situation
ed.

dented times anything the Board can do for us that is positive, would be an emotional
e of the wonderful people who unselfishly volunteer in the Community.

consideration of this matter, and I will look forward to hearing from you soon.

- (518) 944-3165

Sincer
Janice L
LOSAP

CC: Mi
Sco
Jim
Trac
achment:-