

# **CERTIFICATION REPORT**

## **Settling Pond Sediment Removal and Improvements**

**LOCKWOOD ASH DISPOSAL SITE**

**Prepared on behalf of:**

**Lockwood Hills LLC**  
590 Plant Road  
P.O. Box 187  
Dresden, New York 14441

**Prepared by:**



2620 Grand Island Blvd.  
Grand Island, New York 14072-2131

**December 2019**

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**December 2019**

# CERTIFICATION STATEMENT


Settling Pond Sediment Removal and Improvements

Lockwood Hills, LLC  
Dresden, New York

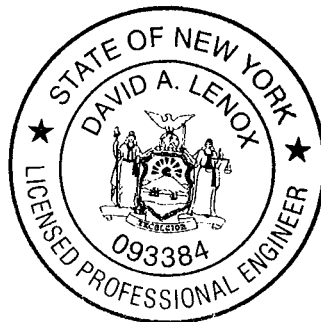
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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, information and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

**Daigler Engineering, P.C.**

  
\_\_\_\_\_  
David A. Lenox, P.E.  
NYPE License No. 093384

\_\_\_\_\_  
12/27/2019  
Date



CERTIFICATION REPORT  
Settling Pond Sediment Removal and Improvements  
**Lockwood Ash Disposal Site**  
Lockwood Hills LLC

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# 1 INTRODUCTION

The Lockwood Ash Disposal Site (Landfill or Lockwood) is located off State Route 14 near the Village of Dresden in the Town of Torrey, Yates County, New York. Coal combustion byproducts (CCBPs) produced by the Greenidge Station during historic coal-fired operations including fly ash, bottom ash, water/wastewater sludge and mill rejects were previously disposed at the Landfill. The Landfill is identified on the map in Figure 1-1.

The Landfill is owned and operated by Lockwood Hills LLC (Lockwood Hills). The operation of the Landfill is carried out in accordance with the requirements of 6 NYCRR Part 360 Solid Waste Management Facility Permit No. 8-5736-00005/00003. Stormwater and leachate discharge from the Landfill are managed in accordance with the requirements of State Pollutant Discharge Elimination System (SPDES) Permit No. NY-0107069.

Lockwood Hills entered into a Consent Order (No. R8-20140710-47) with the New York State Department of Environmental Conservation (NYSDEC or the Department) to, in part, segregate stormwater from leachate, treat and dispose of leachate, and remove and dispose of sediment in the existing leachate pond. The Consent Order also required Lockwood Hills to collect leachate flow measurements and submit a Leachate Monitoring and Analysis Report to the Department.

Segregation of stormwater from the leachate was completed during the 2016 construction season and all remaining stormwater improvements were installed during the 2017 construction season. In accordance with the Consent Order, modifications to the leachate treatment system and installation of the leachate flow metering equipment and appurtenances was completed in late spring/early summer of 2016. The flow meter began recording instantaneous and totalized flow measurements on July 1, 2016. The Leachate Flow Monitoring and Analysis Report was submitted on January 12, 2018 and approved by the NYSDEC on February 15, 2018.



Q:\Lockwood Hills LLC\ACAD\SITE LOCATION MAP.dwg 12/27/2019 10:16 AM



LOCKWOOD ASH DISPOSAL  
SITE PROPERTY BOUNDARY

FACILITY  
LOCATION

### SITE LOCATION MAP

SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS CERTIFICATION REPORT

LOCKWOOD HILLS LLC

TOWN OF TORREY

YATES COUNTY

NEW YORK

December 2019

SCALE: NOT TO SCALE

REVISION # 0

FIGURE  
1-1



CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
(716) 773-6872 (716) 773-6873 FAX

The final design and specifications for the proposed Lockwood leachate treatment system and sediment removal was included in the following documents:

- Engineering Report: *Leachate Management and Pond Sediment Removal Plan*, dated August 2015 and last revised December 2018.
- Construction Drawings and Specifications: Letter to Gregory MacLean, PE and Karis Manning, PE *Lockwood Hills LLC Consent Order Case No. R8-20140710-47 Final Engineering Plans and Specifications*, dated June 13, 2019, with enclosed *Settling Pond Sediment Removal and Improvements Construction Drawings*, dated March 2019 and last revised June 2019.

The Construction Drawings and Specifications were approved in a letter from the NYSDEC dated June 5, 2019, which is included in Appendix A. This Certification Report and the attached Record Drawings document and certify the Settling Pond sediment removal and construction of Settling Pond improvements which occurred during the summer of 2019 and were completed on October 30, 2019. A letter documenting the construction completion dated October 31, 2019 is also included in Appendix A.

## 2 CQA MANAGEMENT ORGANIZATION

City Hill Construction Inc. (City Hill) of Penn Yan, New York managed the construction project and completed the earthwork as the General Contractor. Willson and Associates Registered Land Surveyors of Penn Yan, New York completed the record survey tasks. When Willson was not on site for select construction tasks such as the subgrade over excavation, City Hill completed the record survey tasks. Chenango Contracting, Inc. (Chenango) of Johnson City, New York completed the installation of the containment liner system geosynthetics as the Geosynthetic Contractor.

Lockwood Hills retained Daigler Engineering, P.C. (DE) of Grand Island, New York, to serve as the Project Engineer, CQA Manager, and Construction Observers for this construction. The Construction Quality Assurance and Construction Quality Control Laboratories included:

- 3<sup>rd</sup> Rock, LLC of East Aurora, New York – Peel and shear testing for geomembrane destructive seam samples; and
- RSA Geolab (RSA) of Union, New Jersey – Conformance testing of geosynthetics and soil materials, and interface shear strength testing of soil and geosynthetic materials.

## **3 LEACHATE STORAGE AND TRANSFER AREA**

### **3.1 GENERAL**

The Leachate Storage and Transport Area (LSTA) was designed and constructed to temporarily store leachate for transport to the Greenidge Generation Wastewater Treatment Plant while sediment removal and construction activities occurred. The LSTA construction is described in the following sections, progress photographs of the LSTA construction are included in Appendix C. Daily construction observation reports and activity maps for the LSTA are included in Appendix U and Appendix T respectively.

### **3.2 CONTAINMENT LINER SYSTEM**

The LSTA includes a containment liner system composed of the following elements, in ascending order:

- Prepared subgrade soil layer;
- Geocomposite porewater drain;
- 60-mil textured High Density Polyethylene (HDPE) geomembrane liner;
- 16 oz cushion geotextile; and
- Protective 12-inch (minimum), Type 2 stone layer.

The following sections document the LSTA containment liner system construction.

#### **3.2.1 Interface Shear Testing**

Four individual interfaces of interest were identified to be tested for the LSTA and the Settling Pond containment liner systems, including:

1. Prepared Subgrade Soil / Porewater Geocomposite (LSTA interface);
2. 60-mil HDPE Textured Geomembrane / Porewater Geocomposite (LSTA interface);
3. Type 2 Stone / Cushion Geotextile / 60-mil HDPE Textured Geomembrane (LSTA and Settling Pond interface); and
4. 60-mil HDPE Textured Geomembrane / Type 2 Stone (Settling Pond interface).

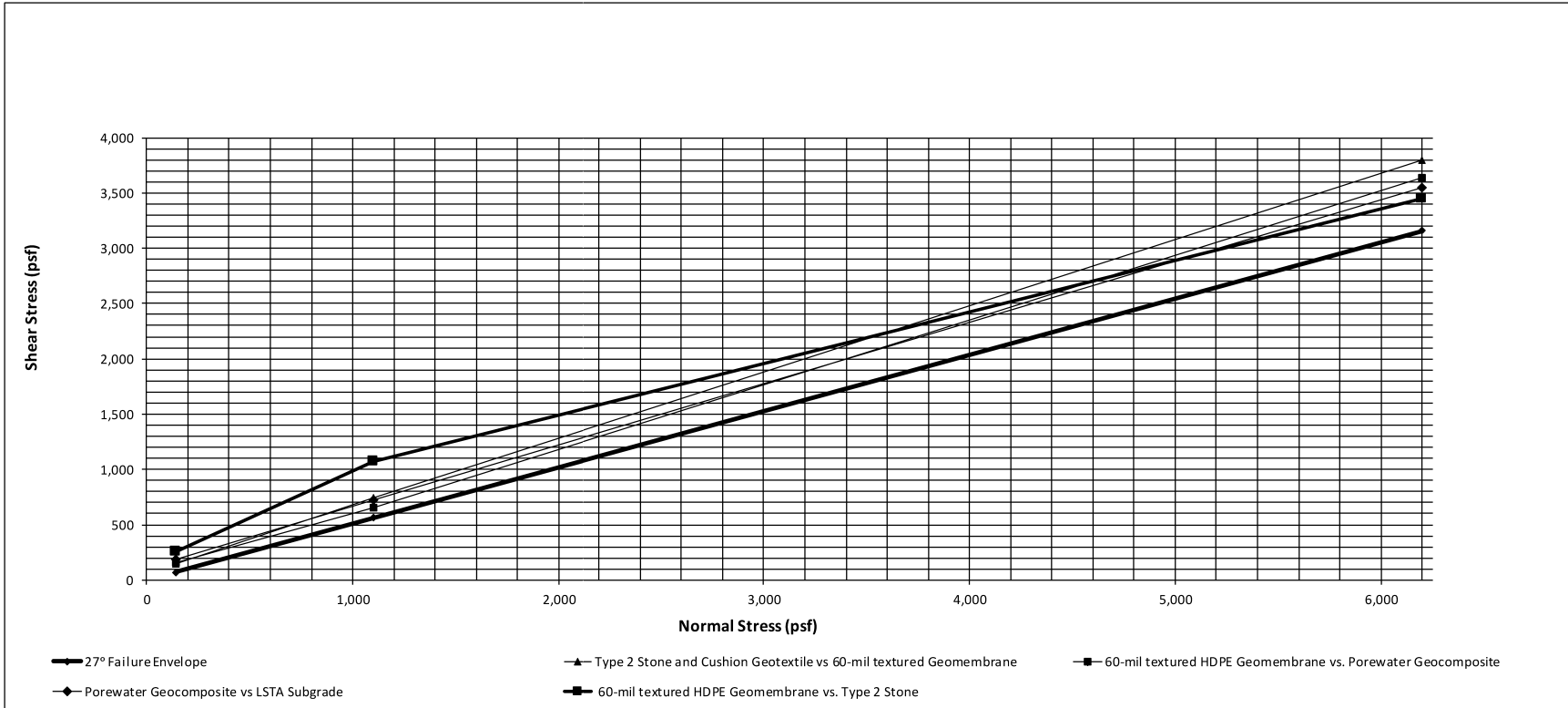
The direct shear test protocol forwarded to RSA assigned a normal load of 140 pounds per square foot (psf), 1,100 psf, and 6,200 psf based on the expected loads overtop of the containment liner systems. Onsite soil was sampled from a test pit within the LSTA on May 29, 2019 for the LSTA subgrade soil. The test pit was excavated to the approximate depth of the LSTA subgrade. The Type 2 stone source at the City Hill Excavation Pit in Penn Yan, New York was sampled and used for the Type 2 stone, and for the Settling Pond subgrade as the soil conditions were expected to be similar, and the Type 2 stone could be used for filling during the Settling Pond Construction. Conformance samples from the manufactured geosynthetic materials were also used in the interface shear testing.

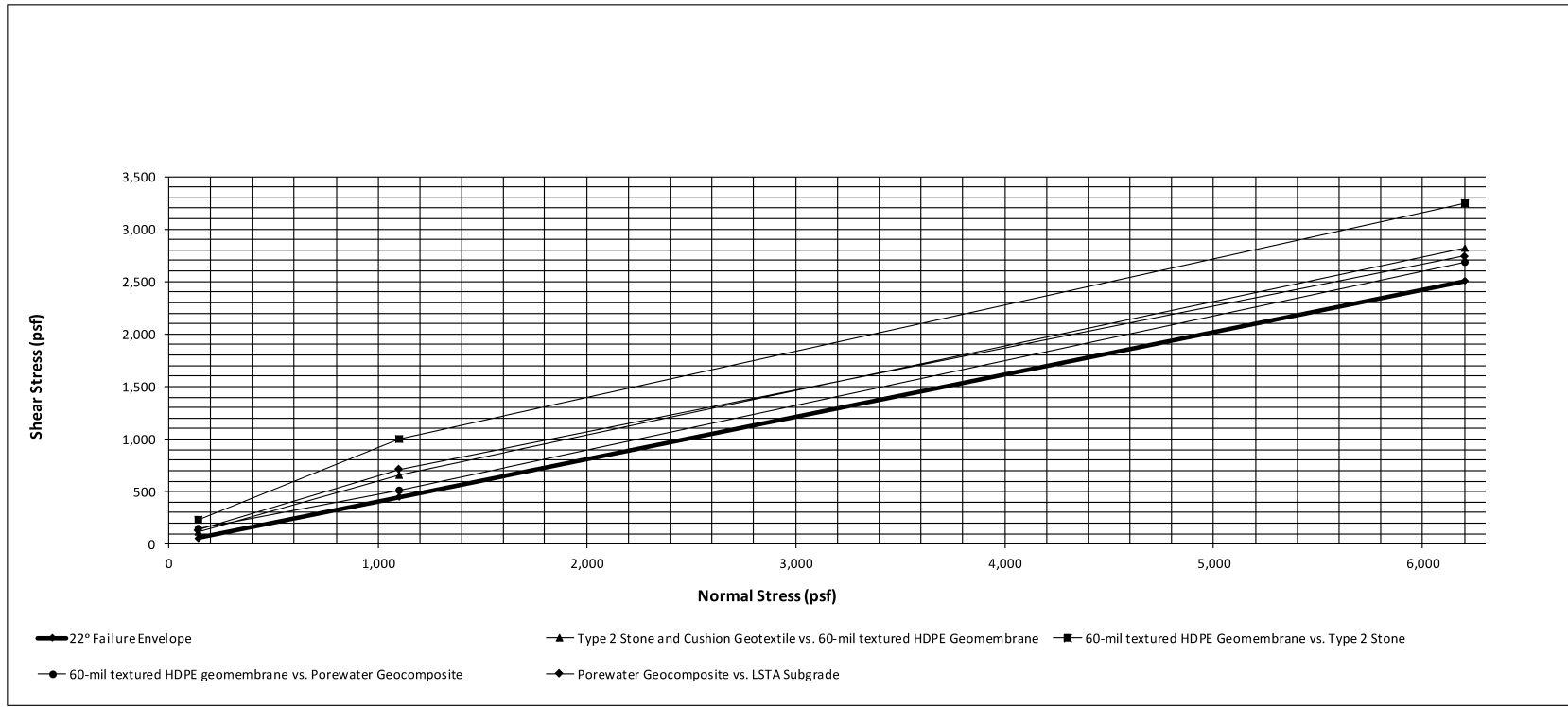
The shear strength values provided by RSA are reported as the slope (friction angle) of the best fit line through the test data and the intercept at zero normal stress (adhesion). To confirm the materials supplied for the project exhibit acceptable shear strength, the normal and shear stress values at failure for each specimen are plotted and compared to the secant failure envelope for peak and large displacement shear strength. The required secant friction angle of 27° and 22° were used for the peak and residual shear strength respectively as shown on Figures 3-1 and 3-2, respectively. All of the interface shear test data plot above the secant failure envelopes, demonstrating the shear strength of all soil and geosynthetic interfaces exceed the minimum requirements.

All of the interface shear test reports are included in Appendix E. Based on the interpretation of the test data and the stability analysis, the materials were determined acceptable for use in the project construction.

### **3.2.2 Subgrade**

City Hill began removing vegetation and stripping topsoil during the week of June 23, 2019. City Hill excavated to the design subgrade elevations utilizing bull dozers and excavators and checking elevations with a GPS rover. Soft wet soils were encountered above and below the design LSTA containment liner system subgrade elevations. The soft wet soils were over excavated and replaced with Structural Fill to form the base and the north and west berms for the LSTA containment liner system. Up to five 12-inch thick lifts of structural fill were placed in the northeast portion of the





LSTA access ramp, and to construct the LSTA containment liner system north and west berms. The Structural Fill source consisted of the dryer soil excavated from the LSTA. A Modified Proctor test was conducted on the onsite soil sampled from the LSTA test pit to determine the maximum dry density. The onsite soil test results are shown on Table 3-1, the laboratory reports are included in Appendix F. The Structural Fill compaction was tested using a nuclear densometer to measure the in-place dry density and moisture content to confirm that 90% of the maximum dry density was achieved. The Construction Observer documented each dry density and soil moisture content measurement on an In-place Soil Moisture/Density Test Report and plotted the test location on the Daily Field Map. The test reports and test location plots for the Structural Fill are included in Appendix F.

Following the Structural Fill placement, the LSTA subgrade was proof rolled using a static smooth drum roller. The Construction Observer observed the proof rolling for permanent ruts or indentations greater than one inch to detect unsuitable soils. Portions of the LSTA containment liner subgrade were still too wet and soft to pass the proof rolling. The remaining wet and soft soil areas were excavated and replaced with one foot of No. 1 stone underlain by a non-woven geotextile on July 22, 2019. The No. 1 stone source was the City Hill Excavation Pit in Penn Yan, New York, the reported gradation is included in Appendix M. The proof rolling maps are included with the Daily Activity Maps in Appendix T. The subgrade design modification is listed in the field change log included in Appendix B. The LSTA containment liner system subgrade elevations are shown on Sheet 1 produced by Willson & Associates included in Appendix D.

### **3.2.3 Porewater Drain**

#### 3.2.3.1 Pre-Construction

The LSTA porewater drain consists of a geocomposite drain which flows to slotted collection pipes within trenches which discharge outside of the containment liner system. The geocomposite material consists of SKAPS Transnet 220-2-6 manufactured by SKAPS of Commerce, Georgia. The MQA/MQC data provided by SKAPS was reviewed and determined to be in compliance with the specifications for the project and is included in Appendix G. Conformance samples of the geocomposite were collected and the geocomposite, the geonet and the geotextile were tested prior to the material being delivered to the site. The test results are shown on Table 3-2, as the table



**TABLE 3-1**  
**PRE-CONSTRUCTION LABORATORY TEST RESULTS**  
**LSTA STRUCTURAL FILL ONSITE SOIL**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

SAMPLE ID	DATE SAMPLED	GRAIN SIZE DISTRIBUTION			MOISTURE CONTENT (%)	ATTERBERG LIMITS			MODIFIED PROCTOR	
		GRAVEL (%)	SAND (%)	FINES (%passing #200)		PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)
		ASTM D422				ASTM D2216	ASTM D4318			ASTM D1557
19-S-Onsite-C-01	6/4/2019	22.5	55.6	21.9	14.5	NV	NP	NP	137.2	8.6

**TABLE 3-2**  
**CONFORMANCE TESTING RESULTS SUMMARY**  
**LSTA POREWATER GEOCOMPOSITE**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

GEONET			GEOTEXTILE											GEOCOMPOSITE		
ROLL NUMBER	DENSITY min. avg. (g/cm <sup>3</sup> )	CARBON BLACK CONTENT range (%)	ROLL NUMBER	WEIGHT PER AREA min. avg. (oz/syd)	CBR PUNCTURE RESISTANCE min. avg. (lbs)	AOS max. avg. (mm)	STRENGTH min. avg. (lbs)	ELONGATIO N min. avg. (%)	STRENGTH min. avg. (lbs)	ELONGATION min. avg. (%)	PERMITTIVITY min. avg. ( / sec)	TRAPEZOIDAL TEAR STRENGTH min. avg. (lbs)		PLY ADHESION min. avg. (lb/in )		Transmissivity min. (m <sup>2</sup> /sec)
	ASTM D1505	ASTM D4218		ASTM D5261	ASTM D6241	ASTM D4751	MD		CMD			MD	CMD	Top	Bottom	
	Grab Tensile Properties - ASTM D4632						ASTM D4491		ASTM D4533			ASTM D7005		ASTM D4716		
	0.95	2.0 - 3.0		6.0	450	.210	160	50	160	50	1.0	65	65	0.5	0.5	7.30E-05
89751010002	0.95	2.23	Side A	6.64	608.9	0.18	165.1	72.8	194.1	83.4	1.717	82.6	92.1	2.8	4.1	6.58E-04
			Side B	6.66	664.5	0.18	181.1	73.9	212.4	84.9	1.738	81.8	105.2			

Notes:

- 1) The minimum permittivity must be equivalent to a permeability two orders of magnitude greater than the adjacent soil material.
- 2) A single transmissivity test must be conducted by the owner on each type of geocomposite prior to delivery of the material.

shows the material met the specification requirements. The conformance test results are also included in Appendix G.

The transmissivity testing program for the TN-220-2-6 was completed by RSA Geolab prior to the material being delivered to the site. The test program demonstrated that the soil and TN-220-2-6 geocomposite combination at the design loading of 140 psf and a gradient of 0.33 produced the lowest test transmissivity of  $6.581 \times 10^{-4} \text{ m}^2/\text{sec}$ , which is higher than the required value of  $7.3 \times 10^{-5} \text{ m}^2/\text{sec}$ .

### 3.2.3.2 Construction

The LSTA porewater geocomposite was installed on July 23, 2019. The geocomposite drainage layer subgrade surface was inspected and observed to be in a clean and smooth condition free from significant amounts of loose soil, sharp objects, sticks, roots, standing water, or foreign material. Subgrade certification was documented by sign-off from the Construction Observer, the certification form is included in Appendix H.

The porewater geocomposite drains to the underlying collection pipe trenches backfilled with No. 1 stone. The porewater drain collection pipe consists of nominal two-inch slotted Sch. 80 PVC pipe manufactured by the North American Pipe Corporation. The collection pipe drains to the north and west to the porewater drain discharge pipe which consists of a nominal four-inch Sch. 80 PVC pipe manufactured by North American Pipe Corporation. The porewater pipe discharges via gravity to a drainage channel to the north of the LSTA. The product information for the porewater drain piping is included in Appendix N. The LSTA porewater discharge pipe was increased from the design two-inch diameter to a four-inch diameter to provide a greater flow capacity, the design modification is noted in the field change log included in Appendix B.

## **3.2.4 60-Mil Textured HDPE Geomembrane Liner**

### 3.2.4.1 Pre-Construction

The nominal 60-mil textured HDPE geomembrane consisted of GMB Atarfil TMT manufactured by Atarfil of Suffolk, Virginia. The MQA/MQC data for the geomembrane was reviewed and was determined to be in compliance with the specifications for the project, and is included in Appendix I. The welding rod used for extrusion welding also was manufactured by Atarfil. The resin welding rod data sheet documenting the melt index and density is included in Appendix I as well.

Conformance sampling and testing of the geomembrane was performed by RSA and TRI Environmental. The geomembrane conformance test results, found in Appendix I, are summarized in Table 3-3 and have been determined to be in compliance with project specifications.

#### 3.2.4.2 Construction

The LSTA geomembrane installation occurred on July 23, 2019. The geomembrane subgrade surface was inspected and approved before deployment of the panels by the Geosynthetic Contractor and the Construction Observer, and the signed subgrade surface acceptance form is included in Appendix J. Trial seam test results for each fusion and extrusion machine/technician combination were observed and documented; the trial seam report is also included in Appendix J. The Daily Panel Placement, Daily Seaming, and Daily Repair Reports documenting the LSTA geomembrane installation are included in Appendix J as well.

Non-destructive testing was completed on all seams along their entire lengths, including repair seams, in the presence of the Construction Observer. The forms summarizing the results of the non-destructive testing are included on the Daily Seaming and Daily Repair Reports in Appendix J.

One destructive sample of the fusion weld production seams was obtained for the LSTA geomembrane. Overall, the QA program provided for an average frequency of one sample for destructive testing for each 590 linear feet of LSTA geomembrane production welding. A summary of the results of the LSTA laboratory destructive tests is provided on Table 3-4. The destructive sample test report is included in Appendix J.

The record drawing for the LSTA geomembrane, identifying the limits of the liner system, all seams, panels, sample locations and repairs is included as Sheet 1 produced by Chenango Contracting Inc. in Appendix D.

### **3.2.5 Cushion Geotextile**

#### 3.2.5.1 Pre-Construction

The cushion geotextile consists of SKAPS GE116, a 16 oz needle-punched, non-woven, staple polypropylene geotextile, manufactured by SKAPS Industries of Athens, Georgia. Prior to the material delivery, MQA/MQC data was reviewed and approved for compliance with the

**TABLE 3-3**  
**CONFORMANCE TESTING RESULTS SUMMARY**  
 60-mil TEXTURED HDPE GEOMEMBRANE  
 Settling Pond Sediment Removal and Improvements  
 Lockwood Hills LLC

ROLL NUMBER	CORE THICKNESS min. avg. (mils)		ASPERITY HEIGHT min. avg. (mils)		DENSITY min. avg. (g/cm <sup>3</sup> )	TENSILE PROPERTIES (min. avg.) Machine Direction (MD)				TENSILE PROPERTIES (min. avg.) Cross Machine Direction (CMD)				CARBON BLACK CONTENT range (%)	CARBON BLACK DISPERSION	OXIDATIVE INDUCTION TIME (min)	TEAR RESISTANCE min. avg. (lb)	TEAR RESISTANCE min. avg. (lb)	PUNCTURE RESISTANCE min. avg. (lb)
						YIELD STRENGTH (lb/in)	YIELD ELONGATION (%)	BREAK STRENGTH (lb/in)	BREAK ELONGATION (%)	YIELD STRENGTH (lb/in)	YIELD ELONGATION (%)	BREAK STRENGTH (lb/in)	BREAK ELONGATION (%)						
	SIDE A	SIDE B	ASTM D1505	ASTM D6693		ASTM D6693	ASTM D1603	ASTM D5596	ASTM D3895	ASTM D1004	ASTM D4833								
	ASTM D5994		ASTM 7466		ASTM D1505	ASTM D6693				ASTM D6693				ASTM D1603	ASTM D5596	ASTM D3895	ASTM D1004		ASTM D4833
	60 mil, nom. (-5%)		16.0	16.0	0.94	126	12	90	100	126	12	90	100	2.0 - 3.0	Note (1)	100	42	42	90
<b>D3V110029Q</b>	60.0	38.1	48.6	0.9406		131.4	15.7	140.1	403.5	130.0	15.8	142.6	476.6	2.11	1	224	46.76	46.23	122.5

Note 1: Carbon Black dispersion for 10 different views: at least nine Categories 1 or 2, one (max.) in Category 3.

**TABLE 3-4**  
**LSTA GEOMEMBRANE SEAM - DESTRUCTIVE TESTING RESULTS SUMMARY**  
**60-Mil HDPE GEOMEMBRANE**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

SAMPLE ID	DATE COLLECTED	WELD TYPE	LOCATION	PEEL STRENGTH					SHEAR STRENGTH					Pass / Fail
				91ppi (Fusion)/78ppi (Extrusion)					120 ppi					
				1	3	5	7	9	2	4	6	8	10	
DS-1	7/23/19	DOUBLE FUSION	P-6/P-7	110.5	107.5	112.1	113.1	108.1	126.3	127.5	132.0	130.3	130.6	PASS

specifications for the project, and is presented in Appendix K. Conformance sampling and testing of the cushion geotextile was performed by RSA. Table 3-5 summarizes the LSTA cushion geotextile conformance test results. All conformance test data were determined to be in compliance with project specifications and are also included in Appendix K as well.

#### 3.2.5.2 Construction

The cushion geotextile was installed on July 23 and 24, 2019. The geomembrane surface was inspected prior to deployment of the cushion geotextile, the subgrade acceptance form is included in Appendix L. Geotextile panels were joined by overlapping the material and heat bonding the overlap using a Demtech VM-20 wedge welder. The cushion geotextile welding was observed by the Construction Observer for any observable damage.

#### **3.2.6 12-Inch Type 2 Stone Wearing Course**

The 12-inch Type 2 Stone wearing course consisted of two-inch minus bank run gravel excavated from the City Hill Excavation pit located in Penn Yan, New York. The Type 2 stone was sampled and tested, the results are included in Table 3-6, and the test reports are included in Appendix M. The Type 2 Stone material has a higher percentage of fines than typical for Type 2 stone. The specified gradation for Type 2 stone includes 10 percent or less passing the No. 200 sieve while 13% of the Type 2 stone from City Hill was finer than the No. 200 sieve. The stone material was accepted as it was still able to compact to a hard consistency with little observable rutting from construction equipment and truck travel overtop. The placement of the Type 2 Stone over top of the cushion geotextile occurred on July 25 and 26, 2019. The stone placement was monitored by the Construction Observer for any observable damage to the cushion geotextile. Eight inches of No. 2 stone was placed within the LSTA Sump and up the northern berm slope to prevent fines from the Type 2 stone wearing course from flowing to the LSTA discharge pipe. This design modification is listed in the Field Change Log included in Appendix B. Sheet-2 produced by Willson & Associates in Appendix D shows the record surface of the top of the Type 2 stone within the LSTA.

**TABLE 3-5**  
**CONFORMANCE TESTING RESULTS SUMMARY**  
**CUSHION GEOTEXTILE**  
 Settling Pond Sediment Removal and Improvements  
 Lockwood Hills, LLC

ROLL NUMBER	MASS PER AREA min. avg. (oz/syd)	Grab Tensile Properties				TRAPEZOIDAL TEAR STRENGTH min. avg. (lbs)		CBR PUNCTURE RESISTANCE min. avg. (lbs)
		STRENGTH min. avg. (lbs)	ELONGATION min. avg. (%)	STRENGTH min. avg. (lbs)	ELONGATION min. avg. (%)	MD	CMD	
	MD	MD	CMD	CMD	MD	CMD		
	ASTM D5261	ASTM D4632				ASTM D4533		ASTM D6241
10	250	50	250	50	100	100	700	
57326.11	16.63	569.8	78.9	533.6	92.3	246.5	266.4	1,695.1



**TABLE 3-6**  
**PRE-CONSTRUCTION LABORATORY TEST RESULTS**  
**TYPE 2 STONE**  
 Settling Pond Sediment Removal and Improvements  
 Lockwood Hills, LLC

SAMPLE ID	DATE SAMPLED	GRAIN SIZE DISTRIBUTION			MOISTURE CONTENT (%)	ATTERBERG LIMITS			MODIFIED PROCTOR	
		GRAVEL (%)	SAND (%)	FINES (%passing #200)		PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	MAX DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)
		ASTM D422				ASTM D2216	ASTM D4318			ASTM D1557
19-G- City Hill-C-01	6/4/2019	53.5	33.4	13.1	5.1	13	18	5	151.0	4.7

### **3.3 LEACHATE STORAGE AND TRANSFER SYSTEM**

Temporary leachate storage was achieved by routing leachate to storage tanks placed within the LSTA containment liner system. Leachate was directed to the Leachate Storage and Transfer System (LSTS) through a new leachate sewer installed from MH Common-1 to the east, which daylighted at the western side slope of the LSTA. The leachate sewer was connected to the southern-most storage tank by a pipe bridge. The location of the installed leachate sewer pipe is shown on Sheet 2 produced by Willson & Associates included in Appendix D. The leachate sewer pipe consists of nominal eight-inch Sch. 80 PVC pipe manufactured by the North American Pipe Corporation. The leachate sewer was fitted with a gate valve installed to the east of MH Common-1 to control flow to the LSTS. The gate valve consists of an eight-inch Type P PVC gate valve manufactured by ASAHI/America. The pipe and gate valve product information are included in Appendix N.

The pipe bridge was placed using an excavator and installation within the LSTA occurred on July 30 and 31, 2019. The pipe bridge was manufactured by the Nucor Vulcraft/Verco Group of Chemung, New York and assembled at the site by City Hill. The pipe bridge submittal approval drawings are included in Appendix O. The pipe bridge was bolted to the concrete footer on the western slope of the LSTA and welded to a W 12 x 19 I Beam placed on top of the storage tank. A bearing plate and elastomeric bearing pads were installed at each end of the pipe bridge. An eight-inch diameter flexible coupling was installed at the western end of the pipe bridge. The piping was strapped to the pipe bridge roof deck using Eaton Corporation B2400-8 pipe straps. Product information for the elastomeric bearing pad and pipe straps (or clamps) is included in Appendix O.

Leachate was diverted to the LSTS on August 5, 2019 by plugging the existing leachate sewer outlet pipe at Manhole MH Common-1. Temporary leachate storage was accommodated using three interconnected 21,000-gallon mobile, steel, fixed-axle tanks from Baker Corp of Swedesboro, New Jersey staged in the LSTA. The tanks were connected via industrial hose such that the liquid level was equalized across the three tanks. One tank was equipped with a high-level alarm and auto dialer to alert on-call personnel of diminished storage capacity. The alarm and auto dialer were powered by the solar panel and battery that was in place to power the leachate flow meter. Leachate was transferred from the tanks to a 4,200-gallon vacuum truck and hauled to the

Greenidge Generation Wastewater Treatment Plant by DC Rauscher of Waterloo, New York. Leachate diversion ended on September 23, 2019.

Once the leachate was diverted to the newly constructed treatment system, the storage tanks were removed, and the remaining pipe and pipe bridge was stored within the LSTA. The LSTA will remain in-place. The LSTA drainpipe gate valve will be left in the open position to freely drain the area when not in use. The LSTA discharge pipe consists of nominal four-inch Sch. 80 PVC pipe manufactured by North American Pipe Corporation. The LSTA discharge pipe gate valve consists of a four-inch Type P PVC gate valve manufactured by ASAHI/America. The gate valve product information is included in Appendix N.

Approximately 12 inches of light stone fill was placed in areas of groundwater seepage along the southern slope of the LSTA, and the perimeter drainage channel for stabilization. This design modification is listed on the Field Change Log included in Appendix B.

## **4 SETTling POND SEDIMENT REMOVAL AND DISPOSAL**

### **4.1 SEDIMENT REMOVAL**

Sediment removal from the Settling Pond began on August 8, 2019 after the Settling Pond was drained and discharged via Outfall 001 in accordance with the Landfill's SPDES Permit and leachate was diverted to the LSTS. The sediment removal first consisted of excavating sediment along the Settling Pond toe of slope using an excavator to create trenches to drain free liquid from the sediment. Remaining free liquid in the Settling Pond was pumped to Manhole MH Common-1 and directed to the LSTS. The next phase of the sediment removal consisted of using a bulldozer to push and stockpile the sediment to the northeast. An excavator staged at the top of slope then excavated the sediment and loaded it into haul trucks. The sediment removal began on the western end of the Settling Pond and moved eastward. The haul trucks transported the sediment to a Confined Disposal Area located on the southwestern area of the Landfill, which is lined with a geosynthetic liner. The sediment removal and hauling were monitored by the Construction Observer for any sediment or liquid spills. The Settling Pond sediment removal was completed on August 22, 2019. Daily construction observation reports and activity maps for the sediment removal are included in Appendix U and Appendix T respectively. Progress photographs of the Settling Pond sediment removal are included in Appendix C.

### **4.2 SEDIMENT DISPOSAL**

Paint filter and moisture content testing was conducted on the Settling Pond sediment during the removal process. The sediment removed from the Settling Pond exhibited free liquid, failed the paint filter test, and had a measured moisture content of approximately 88%. Therefore, all of the sediment removed from the Settling Pond was disposed in a Confined Disposal Area (CDA). The CDA consisted of compacted embankments comprised of the stripped intermediate cover, and remaining soil excavated for the LSTA construction. The CDA included a low-lying sump to collect runoff and liquid draining from the disposed sediment. A vacuum truck was used to remove ponded liquid from the CDA sump and transport the liquid for treatment and disposal at the Greenidge Station Wastewater Treatment Plant while DC Rauscher was onsite. When DC Rauscher was not onsite the ponded water was pumped to the Landfill leachate collection system through a cleanout.

The sediment was allowed to passively dry for a period of about six weeks. A dry hard crust developed over portions of the sediment, however the material below the crust remained saturated, and some free liquid was still observed on top of the sediment and below the cracking crust. On Wednesday October 9, 2019 active stabilization of the sediment began. Consistent with discussions with the NYSDEC, the active stabilization of the sediment consisted of mixing the sediment with underlying fly ash and nearby soils stockpiled from the Settling Pond and LSTA excavation using an excavator. The sediment was stabilized to a condition to allow grading of the material and the placement of the intermediate cover and topsoil layers. The grading of the stabilized sediment, and placement of the intermediate cover and topsoil was completed on October 30, 2019. The final grade of the Sediment Disposal Area is shown on Sheet 3 produced by Willson & Associates included in Appendix D. Daily construction observation reports and activity maps for the sediment disposal are included in Appendix T and Appendix U respectively. Progress photographs of the Settling Pond sediment removal are included in Appendix C.

## **5 SETTling POND IMPROVEMENTS**

### **5.1 GENERAL**

The Lockwood treatment system is designed to treat leachate through aeration and settling. The Settling Pond improvements include the installation of a containment liner system, as well as a cascade aerator inlet structure and new outlet discharge structures. The following sections document the Settling Pond improvements construction. Progress photographs of the Settling Pond improvements construction are included in Appendix C. Daily construction observation reports and activity maps for the Settling Pond improvements construction are included in Appendix U and Appendix T respectively. To differentiate, the Settling Pond with all its improvements will be here forth called the Treatment Pond.

### **5.2 CONTAINMENT LINER SYSTEM**

#### **5.2.1 General**

The Treatment Pond design includes a geomembrane liner containment system composed of the following elements, in ascending order:

- Prepared subgrade soil layer;
- 60-mil textured HDPE geomembrane liner;
- 16 oz. non-woven cushion geotextile; and
- Protective 12-inch (minimum) Type 2 stone layer.

The following sections document the Treatment Pond containment liner system construction. The pre-construction geosynthetic and soil material certification including interface shear and conformance testing is included in Section 3.

#### **5.2.2 Prepared Subgrade**

Once the sediment was removed from the Settling Pond, the subgrade was graded using a bulldozer. The subgrade was proof rolled on September 4 and 5, 2019 using a static smooth drum roller. The Proof Rolling maps are included with the Daily Activity Maps in Appendix T. Loose soil and stones located in the corners and at the toe of slope were removed using an excavator. Soil excavated from the LSTA was used to fill the eastern side slope. The soil was placed in 12-

inch lifts by a bulldozer and compacted by a vibrating smooth drum roller. The north and south side slopes were filled to a slope of 3:1. Sheet 1 produced by Willson & Associates shows the Treatment Pond subgrade elevations and surface contours and is included in Appendix D.

### **5.2.3 60-Mil Textured HDPE Geomembrane**

The Treatment Pond geomembrane installation occurred on September 4 and 5, 2019. The geomembrane subgrade surface was inspected and approved before deployment of the panels by the Geosynthetic Contractor and the Construction Observer, and the signed subgrade surface acceptance forms are included in Appendix R. Trial seam test results for each fusion and extrusion machine/technician combination were observed and documented; the trial seam reports are included in Appendix R. The Daily Panel Placement, Daily Seaming Reports, and Daily Repair Reports documenting the Treatment Pond geomembrane installation also are included in Appendix R.

Non-destructive testing was completed on all seams along their entire lengths, including repair seams, in the presence of the Construction Observer. The forms summarizing the results of the non-destructive testing are included on the Daily Seaming and Daily Repair Reports in Appendix R.

Six destructive samples of the fusion weld production seams were obtained for the Treatment Pond geomembrane. Overall, the QA program provided for an average frequency of one sample for destructive testing for each 860 linear feet of Treatment Pond geomembrane production welding. One of the five shear test specimens for Sample DS-3 failed due to the geomembrane sheet breaking at 117.5 lbs/in, below the required value of 120 lbs/in. Tracking samples DS-3A and DS-3B were collected 10 feet on each side of DS-3 on the Panel 24/Panel 25 seam with passing results. The seam in between the tracking samples was capped with an extrusion welded repair patch which was nondestructively tested by vacuum box. A summary of the results of the laboratory destructive tests is provided on Table 5-1 for the Treatment Pond. The destructive sample test documentation and forms are included in Appendix R.

The record drawing for the Treatment Pond geomembrane, identifying the limits of the liner system, all seams, panels, sample locations and repairs are on Sheet 1 produced by Chenango Contracting Inc. included in Appendix D.

**TABLE 5-1**  
**TREATMENT POND GEOMEMBRANE SEAM - DESTRUCTIVE TESTING RESULTS SUMMARY**  
**60-Mil HDPE GEOMEMBRANE**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

SAMPLE ID	DATE COLLECTED	WELD TYPE	LOCATION	PEEL STRENGTH					SHEAR STRENGTH					Pass / Fail
				91ppi (Fusion)/78ppi (Extrusion)					120 ppi					
				1	3	5	7	9	2	4	6	8	10	
DS-2	9/4/19	DOUBLE FUSION	P-20/P-21	107.2	103.1	108.4	104.1	104.2	129.8	130.8	130.7	132.0	132.2	PASS
DS-3	9/4/19	DOUBLE FUSION	P-24/P-25	113.4	111.4	110.5	122.5	116.4	122.6	130.6	117.5	130.0	128.9	FAIL
DS-3A	9/5/19	DOUBLE FUSION	P-24/P-25 (10 ft South)	107.2	109.1	113.4	105.2	118.8	130.7	132.2	130.5	132.7	132.4	PASS
DS-3B	9/5/19	DOUBLE FUSION	P-24/P-25 (10 ft North)	98.4	101.9	98.9	98.9	98.3	132.3	130.9	133.0	133.2	131.2	PASS
DS-4	9/5/19	DOUBLE FUSION	P-37/P-38	100.3	107.9	106.2	106.5	99.9	122.0	125.3	124.8	122.8	123.0	PASS
DS-5	9/5/19	DOUBLE FUSION	P-42/P-44	115.6	104.9	113.2	101.2	101.1	126.0	124.7	127.1	128.1	129.9	PASS
DS-6	9/5/19	DOUBLE FUSION	P-52/P-53	115.1	113.3	106.1	106.1	110.3	126.0	128.8	129.1	124.6	126.5	PASS
DS-7	9/5/19	DOUBLE FUSION	P-43/P-44	119.2	116.8	113.7	122.7	118.6	127.2	127.3	127.5	127.0	126.5	PASS



#### **5.2.4 16 oz Non-Woven Cushion Geotextile**

The 16 oz cushion geotextile was installed on September 5 and 6, 2019. The geomembrane surface was inspected prior to deployment of the cushion geotextile. Geotextile panels were joined by overlapping the material and heat bonding the overlap using a Demtech VM-20 wedge welder. The geotextile welding was monitored by the Construction Observer for any observable signs of damage. Subgrade acceptance forms documenting the above observations are included in Appendix S.

#### **5.2.5 12-Inch Type 2 Stone Protective Layer**

The 12-inch thick Type 2 stone layer was placed over top of the cushion geotextile from September 10 to September 16, 2019. The Type 2 stone was first placed to create an access road over top of the geotextile to bring the stone into the western area of the Treatment Pond. The Type 2 Stone was then dumped from the access road by haul trucks and spread using a bulldozer. The Type 2 stone placement was monitored by the Construction Observer for any observable damage to the cushion geotextile. The Type 2 stone was compacted using a smooth drum roller. The elevations of the top of the Type 2 stone layer are shown on Sheet 2 produced by Willson & Associates included in Appendix D.

#### **5.2.6 Low Permeability Backfill**

The low permeability backfill was placed over top of the geosynthetics runout around the Treatment Pond perimeter soon after the cushion geotextile installation was completed from September 6 to September 9, 2019. The low permeability backfill consisted of a grey plastic silty clay material excavated from the City Hill Excavation Pit in Penn Yan, New York. The low permeability backfill was placed and compacted using an excavator to consolidate the material. The placement of the low permeability backfill was monitored by the Construction Observer for any observable damage to the geosynthetics runout.

### **5.3 TREATMENT POND INLET**

The Treatment Pond Inlet structure consists of a four by four-foot prefabricated concrete structure with a cascade aerator formed inside. The concrete structure was fabricated by Kistner Concrete Products, Inc. of Pembroke, New York. The shop drawings from Kistner are included in Appendix Q.

The weir steps of the cascade aerator were formed within the bottom of the four-foot by four-foot square concrete structure in the field. The V-Notch Stainless Steel weirs were fabricated by City Hill and bolted to the concrete structure using concrete anchor bolts. The cascade aerator discharges to the Treatment Pond via an eight-inch Sch. 80 PVC pipe with a cleanout manufactured by North American Pipe Corporation as shown on Sheet 2 produced by Willson & Associates included in Appendix D. Light stone fill was placed around the Treatment Pond inlet pipe for erosion protection. No. 2 stone was placed for an access path to the inlet pipe from the top of slope for periodic calibration of the leachate flow meter. These design modifications are listed in the Field Change Log included in Appendix B.

#### **5.4 TREATMENT POND OUTLET**

The Treatment Pond Outlet structures consist of a two by two-foot prefabricated HDPE lower drain structure, and a four-foot diameter prefabricated upper weir structure. The upper weir structure is intended to allow continuous discharge at a point in the future if and when appropriate. A six by six-foot precast concrete vault houses a gate valve to control the discharge from the Treatment Pond. The HDPE structures were fabricated by Specified Fittings, LLC of Bellingham, Washington, the shop drawings from Specified Fittings are included in Appendix P. No. 2 stone was placed around the Treatment Pond HDPE outlet structures for flow diffusion and erosion protection. This design modification is listed in the Field Change Log included in Appendix B.

The gate valve consists of an eight-inch stainless steel metal seated knife gate valve manufactured by Pratt of Woodland, Washington. The gate valve product information is included in Appendix N. The six-foot square precast concrete structure was fabricated by Kistner Concrete Products, Inc. of Pembroke, New York. The shop drawings from Kistner are included in Appendix Q. The gate valve discharges to an excavated channel that drains to Sediment Trap 1 and then through the outfall consistent with the SPDES Permit. The Treatment Pond discharge channel was lined with light stone fill rip rap from the City Hill Excavation pit in Penn Yan, New York. The location of the HDPE Drain structures, the concrete gate valve vault, and the stone lined discharge channel are shown on Sheet 2 produced by Willson & Associates included in Appendix D.

## **5.5 PERIMETER FENCING**

The Treatment Pond perimeter fencing was removed to allow the removal of sediment and construction of the containment liner system. Once the construction of the containment liner system was completed the fencing was replaced. A double gate was installed at the north east corner for access to the Treatment Pond for future sediment removal, and a single gate was installed at the location of the HPDE discharge structures for sample collection.

## 6 CONCLUSION SUMMARY

As demonstrated by the preceding discussions, summary tables and figures, as well as the information included in the Appendices, the Settling Pond Sediment Removal and Improvements project was constructed in accordance with the approved Drawings, Technical Specifications and the 6 NYCRR Part 360 regulations to the extent identified in the Record Drawings in Appendix D, with acceptable modifications as listed in the filed change log and discussed previously with the NYSDEC. With these improvements, the Lockwood onsite leachate treatment system (Treatment Pond) consists of an aerator and a settling pond.



# **Appendix A**

## **Project Correspondence**



# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Materials Management, Region 8  
6274 East Avon-Lima Road, Avon, NY 14414-9516  
P: (585) 226-5411 | F: (585) 226-2909  
[www.dec.ny.gov](http://www.dec.ny.gov)

June 5, 2019

Bethany Acquisto, Ph.D.  
Senior Scientist/Group Manager  
Daigler Engineering, P.C.  
2620 Grand Island Boulevard  
Grand Island NY 14072  
Via email to: [bethany@jadenvgr.com](mailto:bethany@jadenvgr.com)

Re: Lockwood Hills LLC Consent Order Case No. R8-20140710-47  
Engineering Plans and Specifications (April 3, 2019)  
& Revisions (May 6, 2019)

Dear Dr. Acquisto,

The New York State Department of Environmental Conservation (The Department) has completed the review of the above-reference documents. Based on our review and discussions, the Department approves the Engineering Plan and Specifications with one condition:

- The solar power and flow meter control panel must remain in the inlet position as it is right now. The drawing Settling Pond (CD-5) is proposing only a meter in the outlet position. If Lockwood Hills pleases, the Department will consider the addition of a second meter in the outlet section.

As Lockwood Hills LLC progresses with the selection of a firm and before any work officially starts, the Department will need a) a final set of plans and specs addressing the stated condition and b) an updated schedule.

Once construction starts, the Department will reserve the right to visit the construction site at any time. Should you have any questions or comments regarding this letter, do not hesitate to contact us.

Sincerely,

*Yasmin Guevara*  
Environmental Engineer  
P: (585) 226 5412  
[yasminguevara@dec.ny.gov](mailto:yasminguevara@dec.ny.gov)





October 31, 2019

Yasmin Guevara  
Division of Materials Management Environmental Engineer  
**New York State Department of Environmental Conservation**  
6274 East Avon-Lima Road  
Avon, New York 14414

**Re: Lockwood Hills LLC Consent Order Case No. R8-20140710-47  
Notice of Construction Completion**

Dear Ms. Guevara:

The purpose of this letter is to provide notice to the New York State Department of Environmental Conservation (Department) that on October 30, 2019 Lockwood Hills LLC (Lockwood) completed the Sediment Pond Sediment Removal and Improvement work required by the above-referenced Consent Order, and detailed in the Engineering Plans and Specifications approved by the Department on June 5, 2019. The work to stabilize the sediment removed from the Settling Pond and placed within the Confined Disposal Area (CDA) that we discussed during our October 9, 2019 onsite meeting has also occurred.

The stabilization technique consisted of mixing the sediment with underlying fly ash and soil stockpiled near the CDA. The sediment was stabilized to a condition to allow the grading of the material and placement of the overlying intermediate cover and topsoil layer. Based on a site visit on October 30, 2019, the grading of the stabilized sediment, placement of intermediate cover and topsoil, and hydro seeding has been accomplished.

In addition, though not part of the Sediment Pond Sediment Removal and Improvement work required by the Consent Order, Lockwood Hills is also in the process of replacing the Settling Pond perimeter fence as an added safety measure, which is expected to be finished by early next week.

Consistent with the schedule contained in Paragraph III.E of the Consent Order, and the schedule included in the December 2018 Engineering Report approved by the Department on March 12, 2019, Lockwood Hills shall submit the following to the Department for its review and approval within 60 days of the October 30, 2019 construction completion date: documentation demonstrating that all work has been completed; and, an engineering certification that construction and implementation has been completed in accordance with the Department approved Engineering Report.

Please let me know if you have any questions.

Sincerely,

**DAIGLER ENGINEERING, PC**

*David Lenox*

David Lenox, PE  
Project Engineer

cc:

Greg MacLean - NYSDEC DMM  
Karis Manning - NYSDEC DOW  
Daniel Maeso - NYSDEC DMM  
Dennis Harkawik – NYSDEC Regional Attorney  
Dale Irwin – Lockwood Hills LLC  
Harold Sexton – Lockwood Hills LLC  
Chris Gill – Lockwood Hills LLC  
Bethany Acquisto – Daigler Engineering, PC  
Danielle Mettler-LaFeir - Barclay Damon LLP



# **Appendix B**

## **Field Change Log**



**LOCKWOOD HILLS, LLC**  
**SEDIMENT POND SEDIMENT REMOVAL AND IMPROVEMENTS**  
**CONSTRUCTION FIELD CHANGE LOG**

Item	Date	Item	Description	Resolution	Resolution Date
1	7/2/19	Four-inch Pore Water Drain Pipe	Place a four-inch schedule 80 PVC pipe for the Leachate Storage and Transfer Area (LSTA) porewater discharge pipe to provide greater drainage capacity	Four-inch schedule 80 PVC pipe installed for the LSTA porewater discharge pipe.	07/05/19
2	7/9/19	Subgrade Preparation	Place a non-woven geotextile overlain with 12 inches of No.1 stone underneath the porewater geocomposite to provide a hard subgrade surface and drain groundwater.	Non-woven geotextile overlain by 12-inches of No. 1 stone was placed in areas of the LSTA subgrade that did not pass proof rolling.	07/22/19
3	7/10/19	LSTA Slope Stabilization	Place 12 inches of rip rap in areas of groundwater seepage along the southern slope of the LSTA, and the perimeter drainage channel for stabilization.	Approximately 12 inches of rip rap placed in the south west and south east corners of the LSTA and within the bermed perimeter drainage channel.	07/10/19
4	7/31/19	LSTA Sump	Place eight inches of No. 2 stone within the LSTA sump and up the northern berm slope to prevent fines from the Type 2 stone wearing course from flowing into the four inch LSTA discharge pipe.	12-inches of Type 2 stone removed and replaced with eight inches of No. 2 stone in the sump and the berm slope north of the sump.	08/06/19
5	9/18/19	Settling Pond Inlet and Outlet Stone Filling	Place stone rip rap (light stone fill) at the Settling Pond inlet pipe for erosion protection. Place No. 2 stone around the Settling Pond HDPE outlet structures for flow diffusion and erosion protection.	Light stone fill placed at the Settling Pond Inlet pipe overtop of the Type 2 stone to the toe of slope in an expanding fan shape. No. 2 stone placed for an access path to inlet pipe from the top of slope for periodic calibration of the leachate flow meter. Clean No. 2 stone placed around the Settling Pond HDPE outlet structures overtop of the Type 2 stone. No. 2 stone placed as a diffuser around the two by two foot HDPE drain structure drain and up to the four foot diameter HDPE structure invert.	9/19/2019



# **Appendix C**

## **Construction Progress Photographs**







Photo 1 - LSTA Subgrade Excavation Looking Northwest



Photo 2 - LSTA Subgrade Excavation Looking East

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**1**



Photo 3- LSTA Porewater Discharge Pipe Trench Compaction



Photo 4- LSTA North and West Berm Construction Looking East

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**2**



Photo 5- Porewater Discharge Pipe Installation Looking North



Photo 6- Nuclear Densometer Testing on the West Berm Looking East

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**3**



Photo 7- Northern 12- inch Culvert Installation Looking East



Photo 8 - LSTA Subgrade Preparation Looking East

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**4**



Photo 9- Compacting North Berm Looking West



Photo 10- North Drainage Channel at Culverts Looking West

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs  
5**



Photo 11 - LSTA Proofrolling Looking Northeast



Photo 12- LSTA Subgrade Looking Southwest

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**6**



Photo 13- LSTA Pipe Bridge Concrete Footer



Photo 14 - Hydro Seeder

Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC

Progress  
Photographs





Photo 15- LSTA No. 1 Stone Subgrade Looking South



Photo 16 - LSTA Porewater Geocomposite Placement over No. 1 Stone Subgrade

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

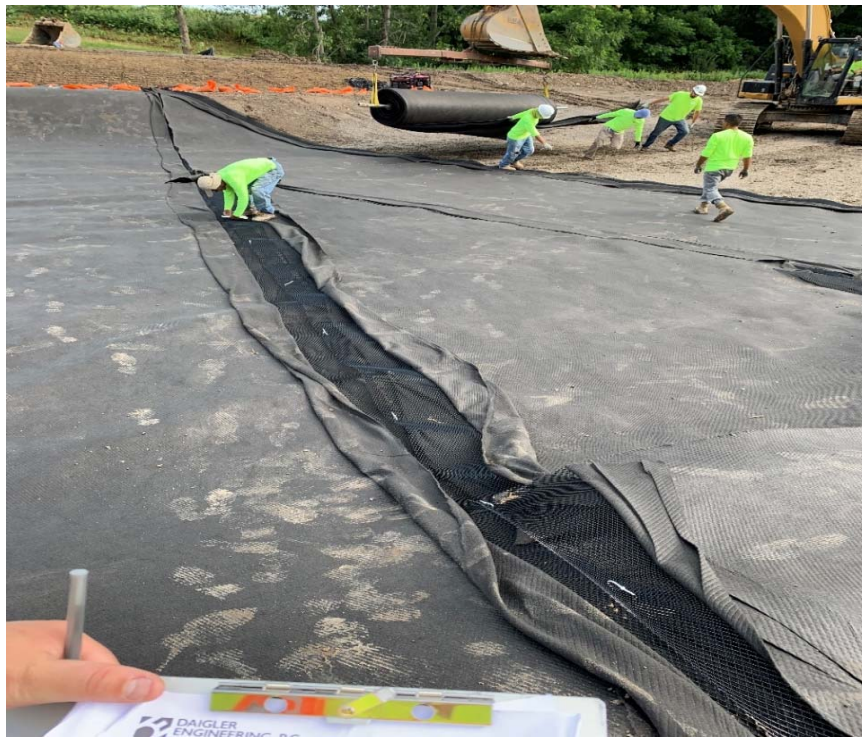


Photo 17- LSTA Porewater Geocomposite Installation



Photo 18 - LSTA Trial Weld Preparation

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**



Photo 19- LSTA 60-mil HDPE Geomembrane Placement



Photo 20 - LSTA 60-mil HDPE Geomembrane Installation



Photo 21- LSTA 60-mil HDPE Geomembrane Installation Looking East



Photo 22- Geomembrane Boot Installation at LSTA Discharge Pipe

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**11**



Photo 23- Geomembrane Boot Installation at LSTA Discharge Pipe



Photo 24- Geomembrane Non-Destructive Seam Air Pressure Testing



Photo 25- Geomembrane Repair Extrusion Welding and Vacuum Box



Photo 26- LSTA Cushion Geotextile Placement



Photo 27- Cushion Geotextile Repair



Photo 28 - Type 2 Stone Placement Over Cushion Geotextile



Photo 29- Placement of Type 2 Stone on the LSTA over the Cushion Geotextile



Photo 30- Grading LSTA Type 2 Stone





Photo 31- Checking LSTA Type 2 Stone Thickness



Photo 32- Grading LSTA Type 2 Stone



Photo 33- Compaction of LSTA Type 2 Stone Looking South



Photo 34 - LSTA Compacted Type 2 Stone Looking Southwest



Photo 35- LSTA Storage Tank Placement

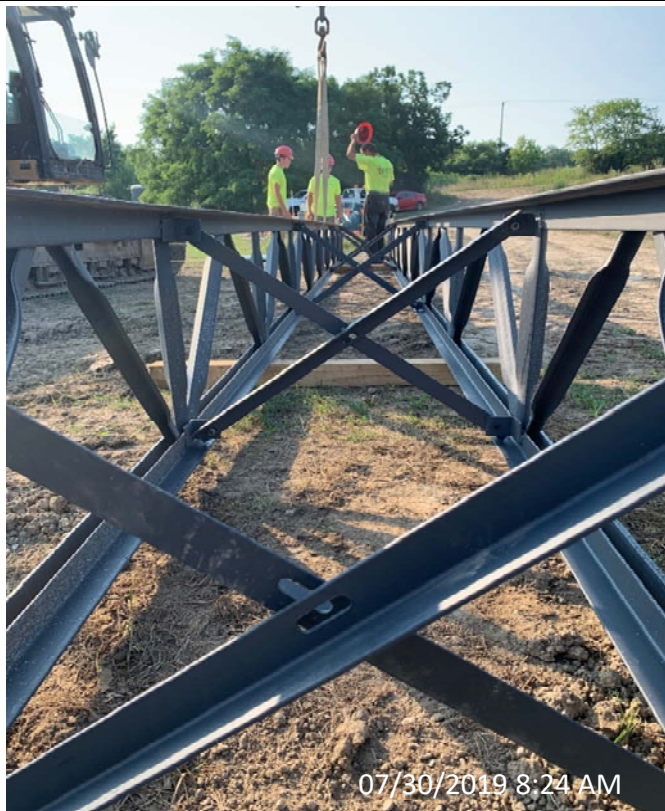


Photo 36- LSTA Pipe Bridge Assembly



Photo 37- Placement of LSTA Pipe Bridge Looking West



Photo 38- LSTA Pipe Brige Pipe Installation Looking East



Photo 39- Gate Valve Installation at Manhole MH Common-1



Photo 40- Leachate Sewer Pipe Installation



Photo 41- Vacuum Truck in LSTA Looking Southeast



Photo 42- Confined Disposal Area for Sediment Disposal Looking Northwest

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**



Photo 43- Excavating Trenches in Settling Pond Sediment Looking North



Photo 44- Bulldozing Settling Pond Sediment to the East Looking Northwest



08/16/2019 10:16 AM

Photo 45- Sediment Disposal in Confined Disposal Area Looking Northwest



08/22/2019 12:38 PM

Photo 46- Settling Pond Sediment Removal From Northeast Corner

**Lockwood Ash Disposal Site**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

**Progress**  
**Photographs**  
**23**





08/26/2019 1:23 PM

Photo 47- Settling Pond North Slope Filling Looking South



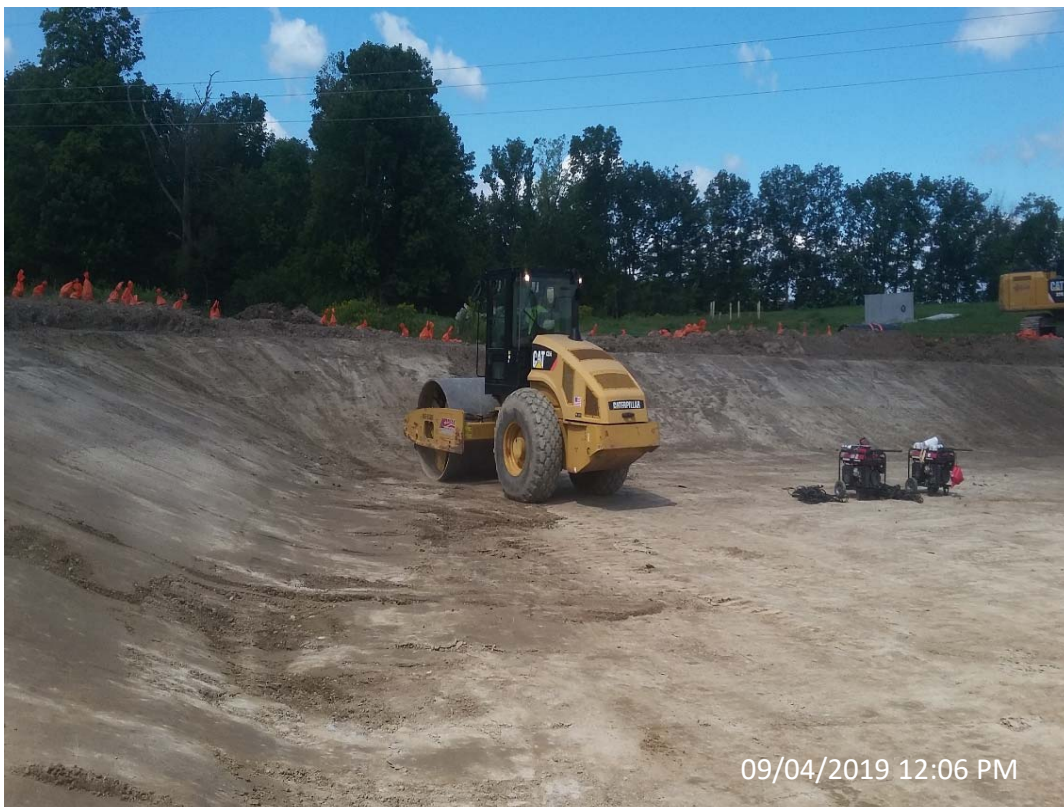
08/26/2019 1:24 PM

Photo 48- Excavation to Settling Pond Subgrade



08/28/2019 12:03 PM

Photo 49- Settling Pond HDPE Outlet Structures Installation



09/04/2019 12:06 PM

Photo 50- Settling Pond Subgrade Proof Rolling



Photo 51- Extrusion Welding Geomembrane to HDPE Outlet Structure Skirt



Photo 52- Fusion Wedge Welding Settling Pond Geomembrane



09/04/2019 3:11 PM

Photo 53- Settling Pond Geomembrane Deployment Looking East



09/04/2019 3:11 PM

Photo 54- Geomembrane Non-Destructive Seam Air Pressure Testing

**Lockwood Ash Disposal Site  
Settling Pond Sediment Removal and Improvements  
Lockwood Hills LLC**

**Progress  
Photographs**

**27**



Photo 55- Settling Pond Cushion Geotextile Deployment Looking Southwest



Photo 56- Low Permeability Backfill Placement Over Settling Pond Runout Looking East



Photo 57- Settling Pond Outlet Gate Valve and Concrete Vault Installation



Photo 58- Settling Pond Cascade Aerator Concrete Steps Installation



Photo 59- Settling Pond Type 2 Stone Placement Looking Northwest



Photo 60- Settling Pond Type 2 Stone Grading Looking East



Photo 61- Settling Pond Type 2 Stone Placement and Compaction Looking Northwest



Photo 62- Settling Pond Cascade Aerator V-Notch Weirs





Photo 63- Settling Pond Discharge Channel Looking East



Photo 64- No. 2 Stone Placement Around Settling Pond HDPE Outlet Structures



Photo 65- Settling Pond Inlet Pipe Stone Rip Rap and Access Path



Photo 66- Sediment Mixing with Underlying Fly Ash in the Confined Disposal Area



Photo 67- Sediment Stabilization and Grading Within the Confined Disposal Area



Photo 68- Graded, Covered, and Hydroseeded Sediment Disposal Area



Photo 69- Finished Settling Pond Looking West



Photo 70- Finished Settling Pond Looking East

**Lockwood Ash Disposal Site**  
**Settling Pond Sediment Removal and Improvements**  
**Lockwood Hills LLC**

**Progress**  
**Photographs**

**35**



# **Appendix D**

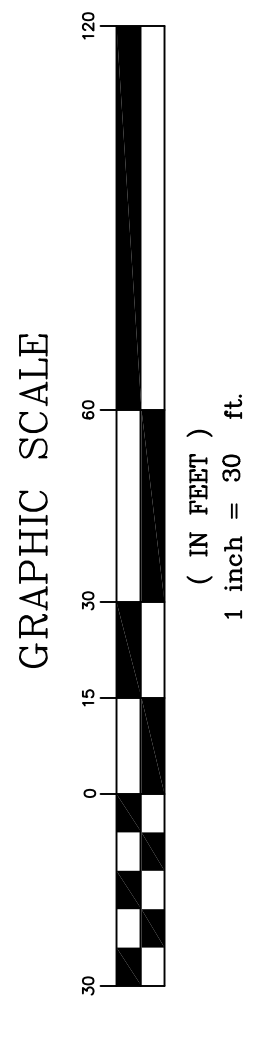
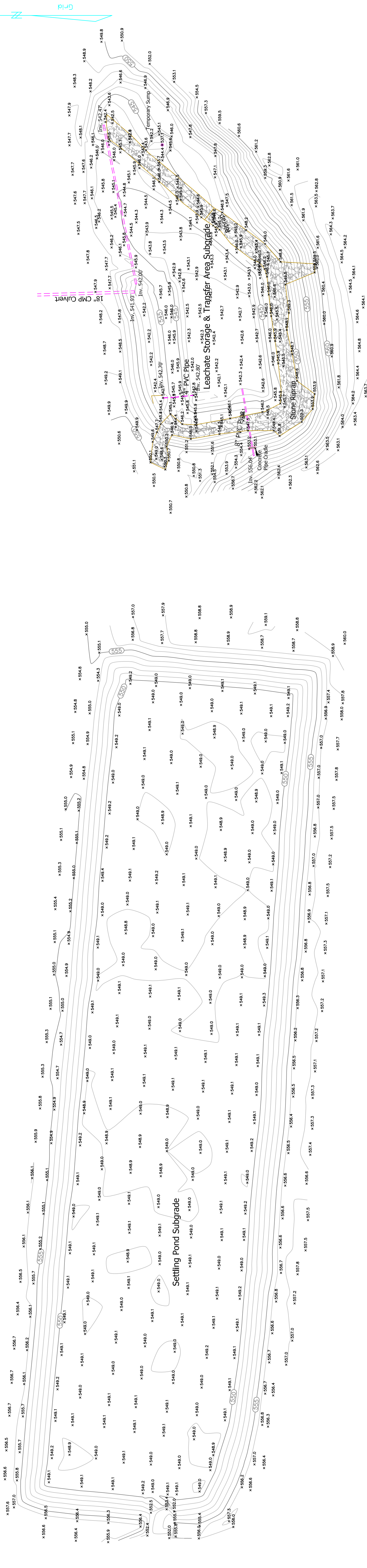
## **Record Drawings**



**Sheet 1 (Willson & Associates) - Settling Pond  
and LSTA Subgrade**







**NOTES II:**

1. DATUM - GREENIDGE STATION PLANT DATUM
2. CONTOUR INTERVAL - 1'
3. MERIDIAN REFERENCED TO NEW YORK STATE GRID
4. NOT ALL SURVEY POINTS ARE SHOWN FOR CLARITY.

**Notes:**

"Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law."  
 "Copies from the original of this survey map not marked with an original or the land surveyor's linked or embossed seal are hereby declared null and void."  
 "This survey conforms with the minimum standards of the Code of Practice for Land Surveyors" as adopted by the New York State Association of Professional Land Surveyors."

Signed: \_\_\_\_\_  
 Richard L. Willson  
 License No. 49409

# RECORD DRAWINGS

## 2019 SETTLLING POND IMPROVEMENTS

### LOCKWOOD HILLS, LLC

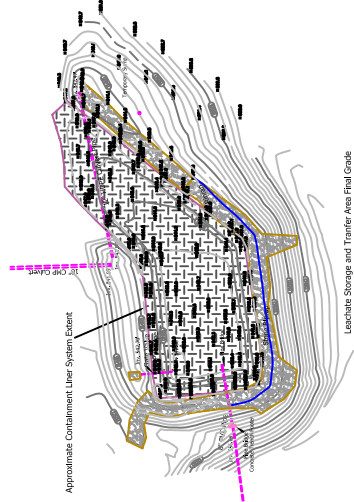
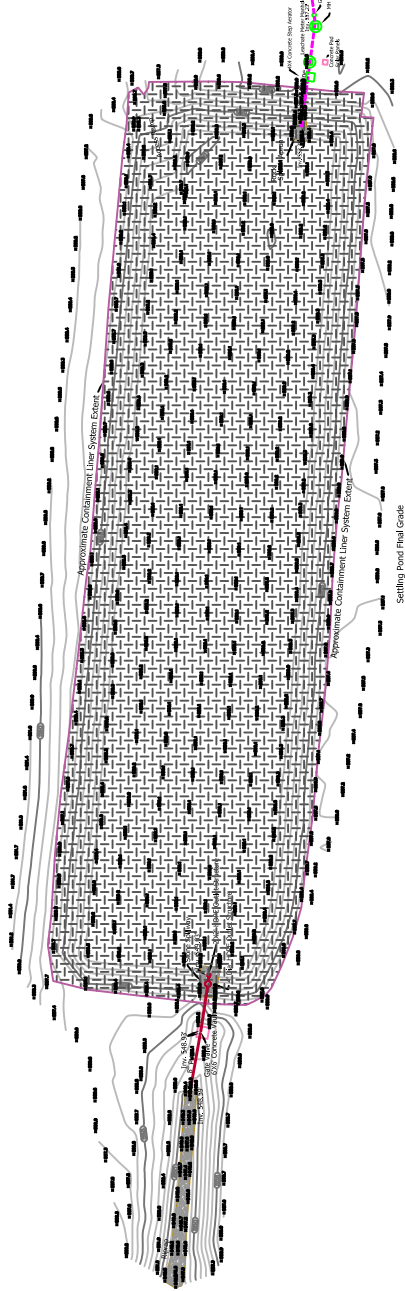
SETTLING POND AND LEACHATE STORAGE & TRANSFER AREA SUBGRADE  
 LOCKWOOD SITE  
 SWARTHOUT ROAD  
 TOWN OF TORREY, YATES COUNTY

SCALE: 1" = 30'



**Sheet 2 (Willson & Associates) - Settling Pond  
and LSTA Final Grade**





**NOTES**

1. DATUM - GREENWICH STATION PLANT DATUM
2. CONTOUR INTERVAL - 1'
3. MERIDIAN REFERENCED TO NEW YORK STATE GRID
4. NOT ALL SURVEY POINTS ARE SHOWN FOR CLARITY

**NOTES II:**

1. DATUM - GREENWICH STATION PLANT DATUM
2. CONTOUR INTERVAL - 1'
3. MERIDIAN REFERENCED TO NEW YORK STATE GRID
4. NOT ALL SURVEY POINTS ARE SHOWN FOR CLARITY



**RECORD DRAWING**  
**2019 SETTLING POND IMPROVEMENTS**  
**LOCKWOOD HILLS, LLC**

SETTLING POND AND LEACHATE STORAGE & TRANSFER AREA FINAL GRADE  
 LOCKWOOD SITE  
 SWARTHOUT ROAD  
 TOWN OF TORREY, YATES COUNTY

SCALE: 1" = 30'

SURVEYED BY  
 LOCKWOOD HILLS, LLC

DESIGNED BY  
 WILSON & ASSOCIATES  
 1000 W. 10TH STREET  
 TORREY, NY 13151

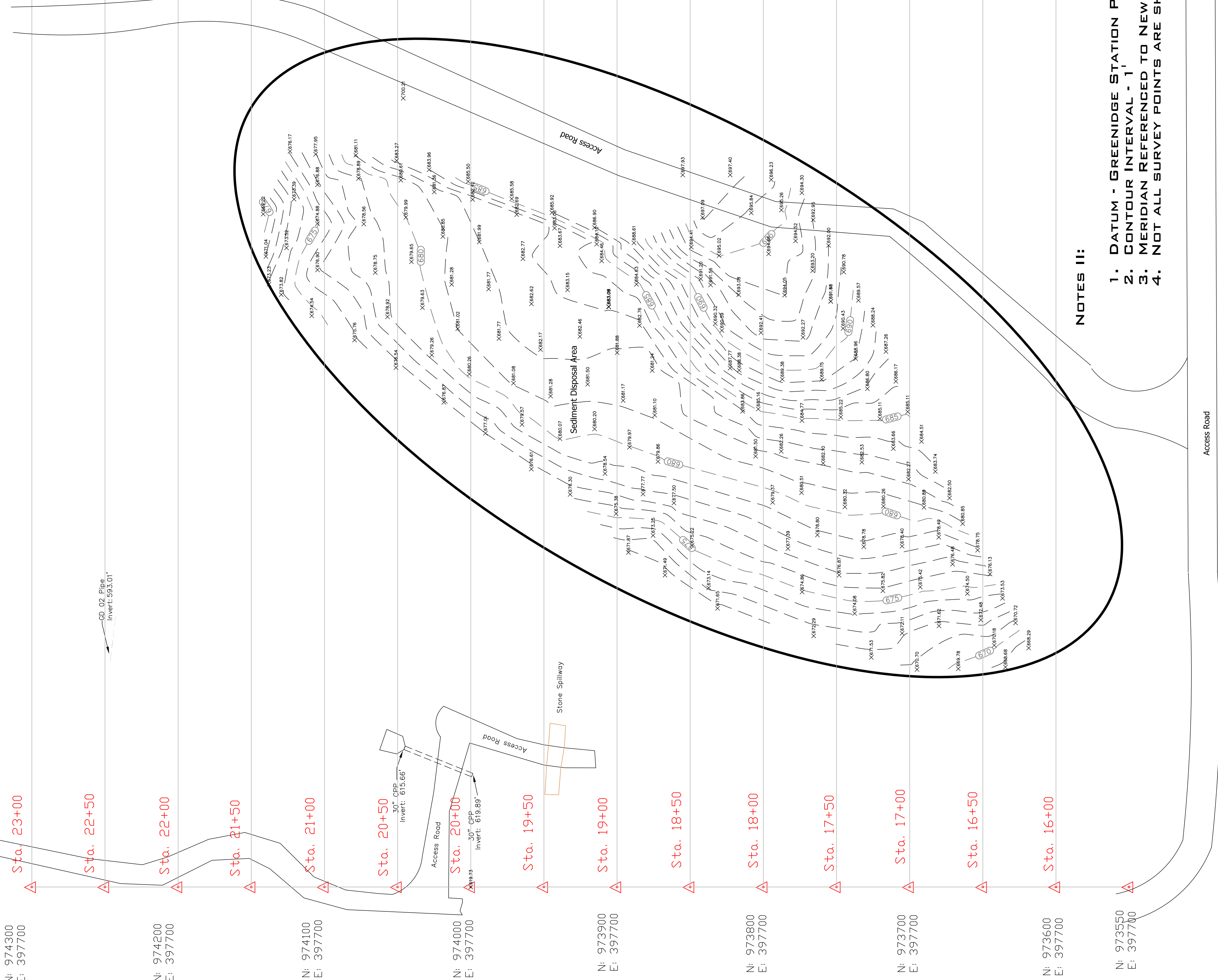
WILSON & ASSOCIATES  
 1000 W. 10TH STREET  
 TORREY, NY 13151



**Sheet 3 (Willson & Associates) - Sediment  
Disposal Area Final Grade**







Notes:

- \*Unauthorized alteration or addition to a survey map bearing a licensed land surveyor's seal is a violation of section 7209, sub-division 2, of the New York State Education Law.
- \*Copies from the original of this survey map not marked with an original of the land surveyor's linked or embossed seal shall not be considered to be a data true copy of the original.
- \*This drawing was prepared in accordance with the provisions of the 'Code of Practice for Land Surveyors' as adopted by the New York State Association of Professional Land Surveyors.

OD 02 Pipe  
Invert: 615.01'

N: 974300  
E: 397700

N: 974200  
E: 397700

N: 974100  
E: 397700

N: 974000  
E: 397700

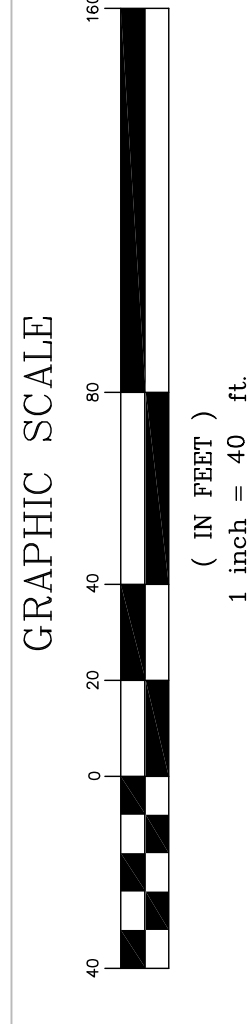
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E: 397700

N: 973800  
E: 397700

N: 973700  
E: 397700

N: 973600  
E: 397700

N: 973550  
E: 397700



NOTES II:

1. DATUM - GREENIDGE STATION PLANT DATUM
2. CONTOUR INTERVAL - 1'
3. MERIDIAN REFERENCED TO NEW YORK STATE GRID
4. NOT ALL SURVEY POINTS ARE SHOWN FOR CLARIFICATION

RECORD DRAWING  
2019 SETTLING POND IMPROVEMENTS  
**LOCKWOOD HILLS, LLC**

SEDIMENT DISPOSAL AREA FINAL GRADE  
LOCKWOOD SITE  
SWARTHOUT ROAD  
TOWN OF TORREY, YATES COUNTY

SCALE: 1" = 40'

SURVEYED BY:  
PENN YAN, N.Y.

TELEPHONE: (315) 536-2618  
WWW.WILLEDONLANDSURVEY.COM

WILLEDON & ASSOCIATES  
JOB NO. 89-100-2019



**Sheet 1 (Chenango Contracting Inc.) -  
Geomembrane Record Drawing**





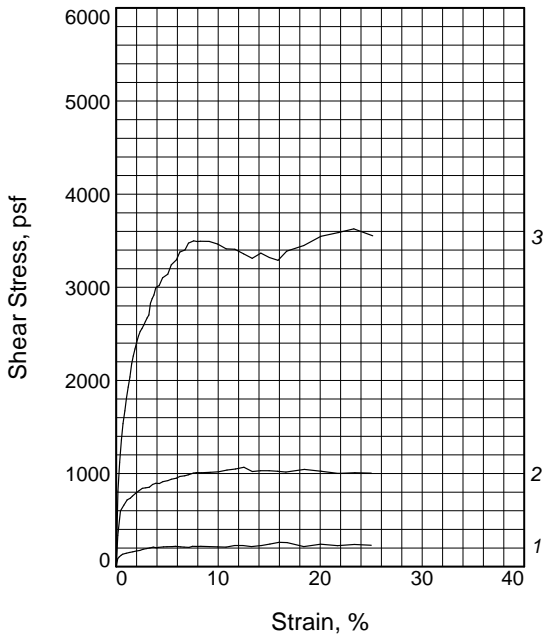
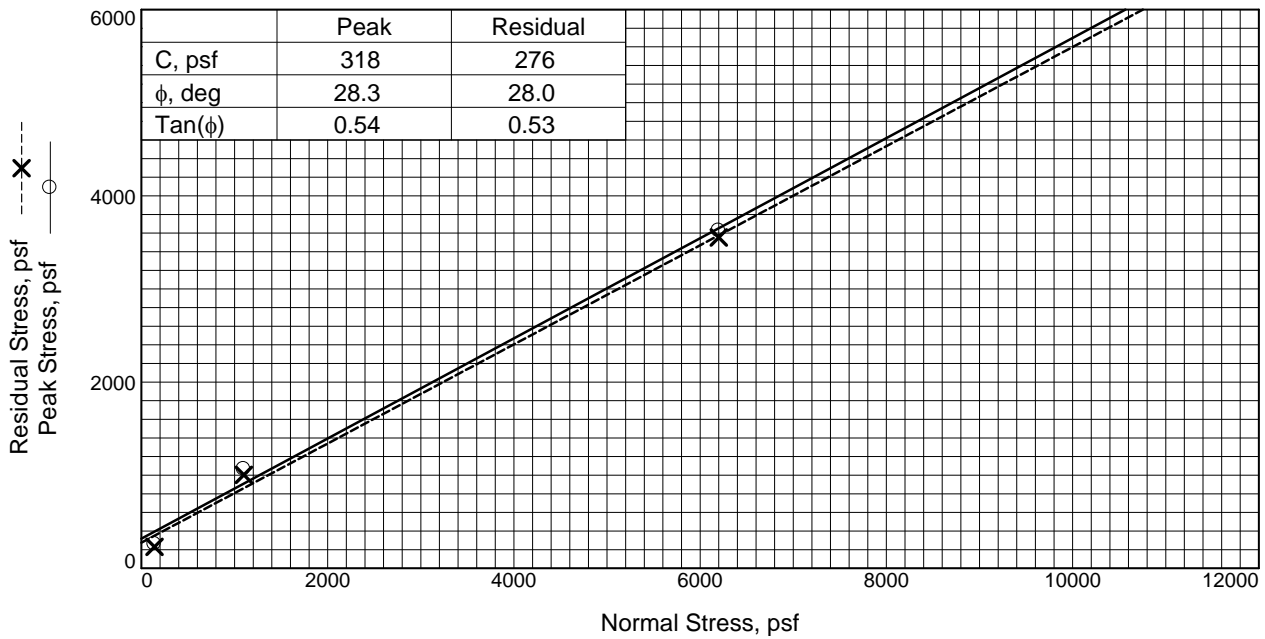


# **Appendix E**

## **Interface Shear Test Results**







Sample No.	1	2	3	
Initial	Water Content, %	5.3	5.6	5.0
	Dry Density, pcf	135.7	135.2	136.0
	Saturation, %	54.6	57.5	52.5
	Void Ratio	0.2651	0.2696	0.2620
	Side Length, in.	12.00	12.00	12.00
	Height, in.	3.00	3.00	3.00
At Test	Water Content, %	8.5	8.5	8.4
	Dry Density, pcf	137.2	138.8	143.0
	Saturation, %	93.5	98.6	115.3
	Void Ratio	0.2511	0.2373	0.2003
	Side Length, in.	12.00	12.00	12.00
	Height, in.	2.97	2.92	2.85
Normal Stress, psf	140	1100	6200	
Peak Stress, psf	261	1067	3627	
Strain, %	16.0	12.5	23.3	
Residual Stress, psf	230	1004	3553	
Strain, %	25.0	25.0	25.2	
Strain rate, in./min.	0.007	0.007	0.007	

**Sample Type:** ASTM D5321

**Description:** THDPE: Atarfil R#D3V110029, Stone: 19-G-City Hill-C-01

**Assumed Specific Gravity=** 2.75

**Remarks:** THDPE (Bottom side tested) clamp bottom box, Type 2 Stone recompacted top box. Tested with water in box. Consolidation/ Saturation time 24 hrs.

**Figure** \_\_\_\_\_

**Client:** Daigler Engineering, P.C.

**Project:** Lockwood Ash Disposal (Greenridge Generation)  
Town of Torrey, Yates County, New York

**Location:** 60 ml THDPE/Type 2 Stone

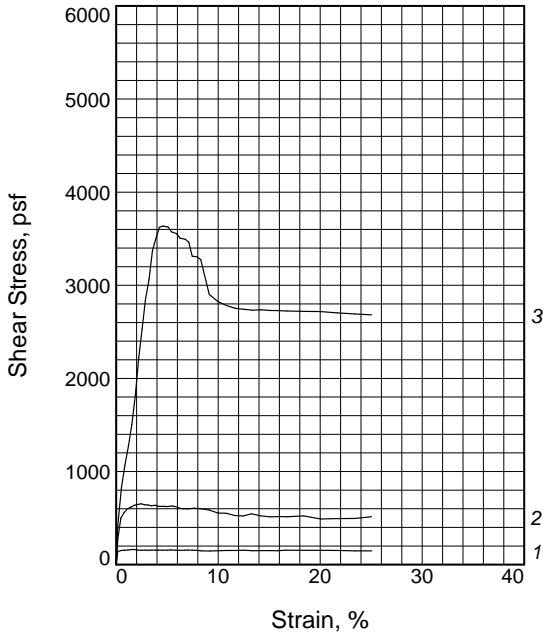
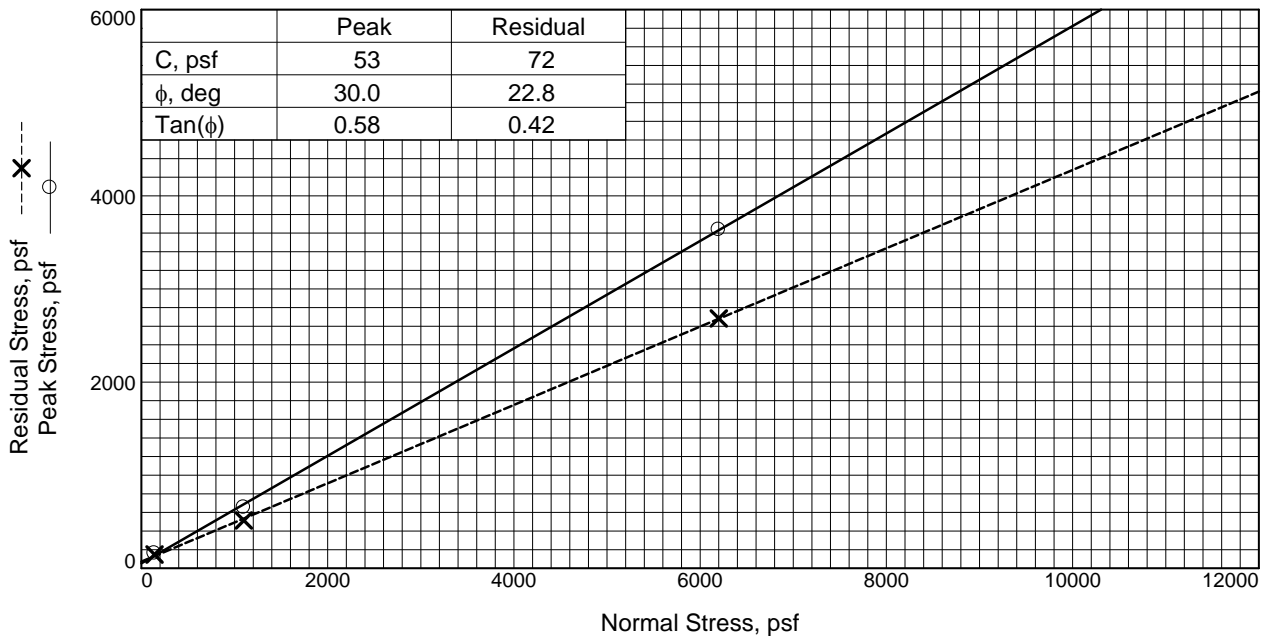
**Proj. No.:** 908

**Date Sampled:** 6-18-19

DIRECT SHEAR TEST REPORT  
RSA Geolab  
Union, New Jersey

**Tested By:** EE \_\_\_\_\_

**Checked By:** KP \_\_\_\_\_



Sample No.	1	2	3
Initial	NO SOIL INVOLVED IN THIS TEST		
Water Content, %			
Dry Density, pcf			
Saturation, %			
Void Ratio			
Side Length, in.	12.00	12.00	12.00
Height, in.			
At Test			
Water Content, %			
Dry Density, pcf			
Saturation, %			
Void Ratio			
Side Length, in.			
Height, in.			
Normal Stress, psf	140	1100	6200
Peak Stress, psf	162	654	3636
Strain, %	1.5	2.4	4.6
Residual Stress, psf	148	514	2683
Strain, %	25.1	25.0	25.0
Strain rate, in./min.	0.040	0.040	0.040

**Sample Type:** ASTM D5321

**Description:** THDPE: Atarfil R#D3V110029,  
Geocomposite: Skaps TN220-2-6 R#89751010002

**Assumed Specific Gravity=**

**Remarks:** THDPE (Bottom Side tested) clamped top box, Geocomposite clamped bottom box. Tested with water in box. Consolidation/Saturation time 1 hr.

**Figure** \_\_\_\_\_

**Client:** Daigler Engineering, P.C.

**Project:** Lockwood Ash Disposal (Greenridge Generation)  
Town of Torrey, Yates County, New York

**Location:** 60 ml THDPE/Type P Geocomposite (Porewater Drainage Layer)

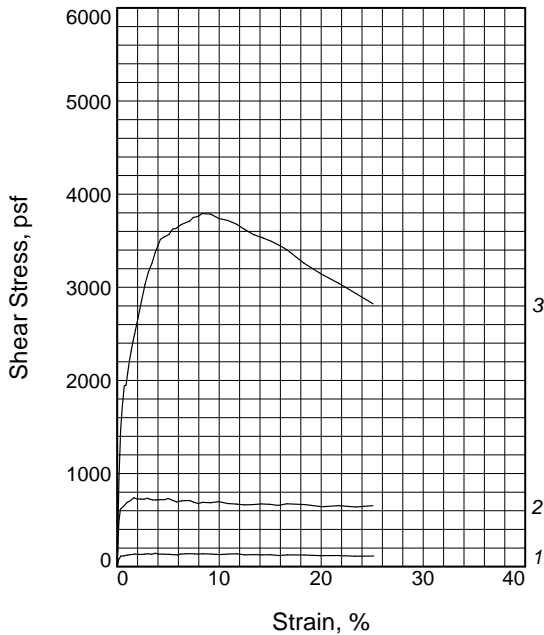
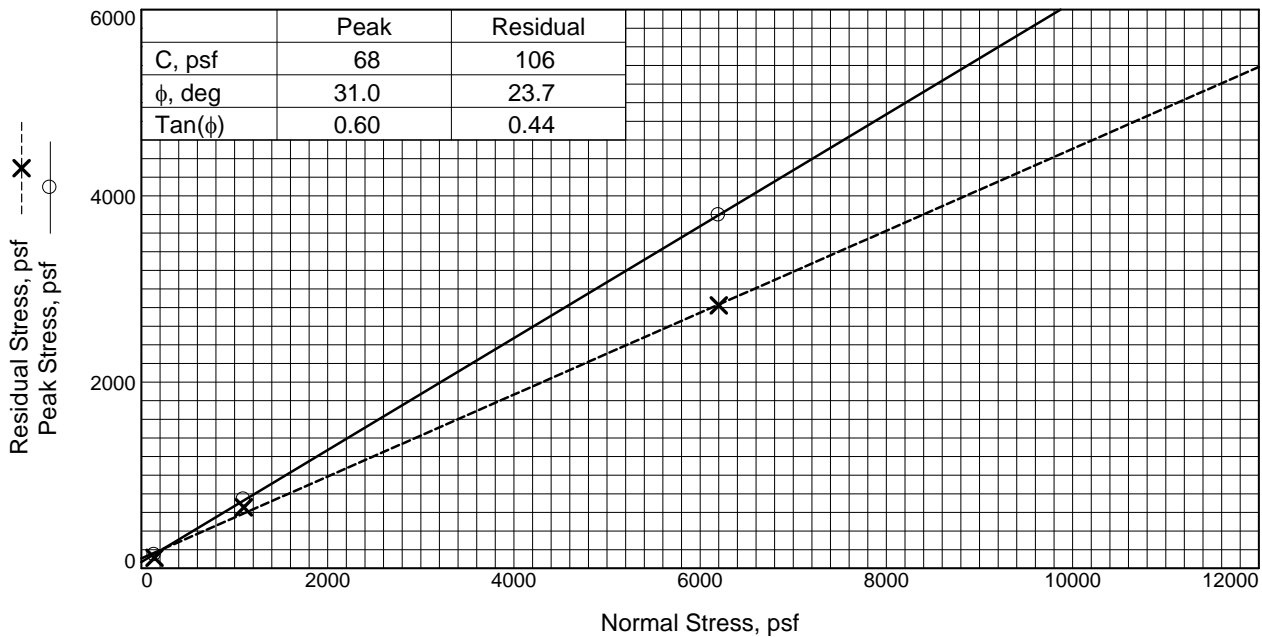
**Proj. No.:** 908

**Date Sampled:** 6-17-19

DIRECT SHEAR TEST REPORT  
RSA Geolab  
Union, New Jersey

Tested By: EE

Checked By: KP



Sample No.	1	2	3	
Initial	Water Content, %	5.3	5.0	5.1
	Dry Density, pcf	135.7	136.1	135.9
	Saturation, %	54.6	52.4	53.5
	Void Ratio	0.2651	0.2618	0.2635
	Side Length, in.	12.00	12.00	12.00
	Height, in.	3.00	3.00	3.00
At Test	Water Content, %	8.5	8.9	8.4
	Dry Density, pcf	137.4	138.3	143.0
	Saturation, %	93.5	100.7	114.4
	Void Ratio	0.2496	0.2418	0.2007
	Side Length, in.	12.00	12.00	12.00
	Height, in.	2.96	2.95	2.85
Normal Stress, psf	140	1100	6200	
Peak Stress, psf	143	739	3792	
Strain, %	3.7	1.6	8.3	
Residual Stress, psf	113	655	2823	
Strain, %	25.1	25.1	25.1	
Strain rate, in./min.	0.040	0.040	0.040	

**Sample Type:** ASTM D5321

**Description:** Stone: 19-G-City Hill-C-01, Geotextile: Skaps GE-116 R#57326.11, THDPE: R#D3V110029

**Assumed Specific Gravity=** 2.75

**Remarks:** Stone recomp. top box, Geotext. clamp top box, THDPE (Top side tested) clamp bottom box. Tested w/water in box. Consol./ Satur. time 1 hr. Failure forced between Geotextile & THDPE.

**Figure** \_\_\_\_\_

**Client:** Daigler Engineering, P.C.

**Project:** Lockwood Ash Disposal (Greenridge Generation)  
Town of Torrey, Yates County, New York

**Location:** Type II Stone/16 oz Cushion Geotextile/Atarfil 60 ml THDPE

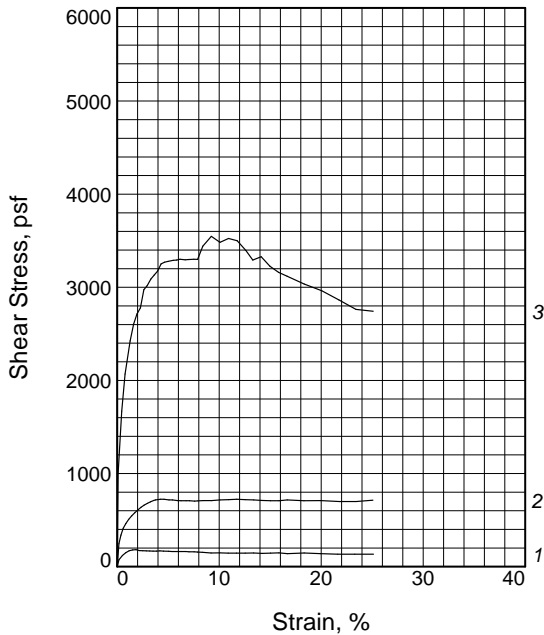
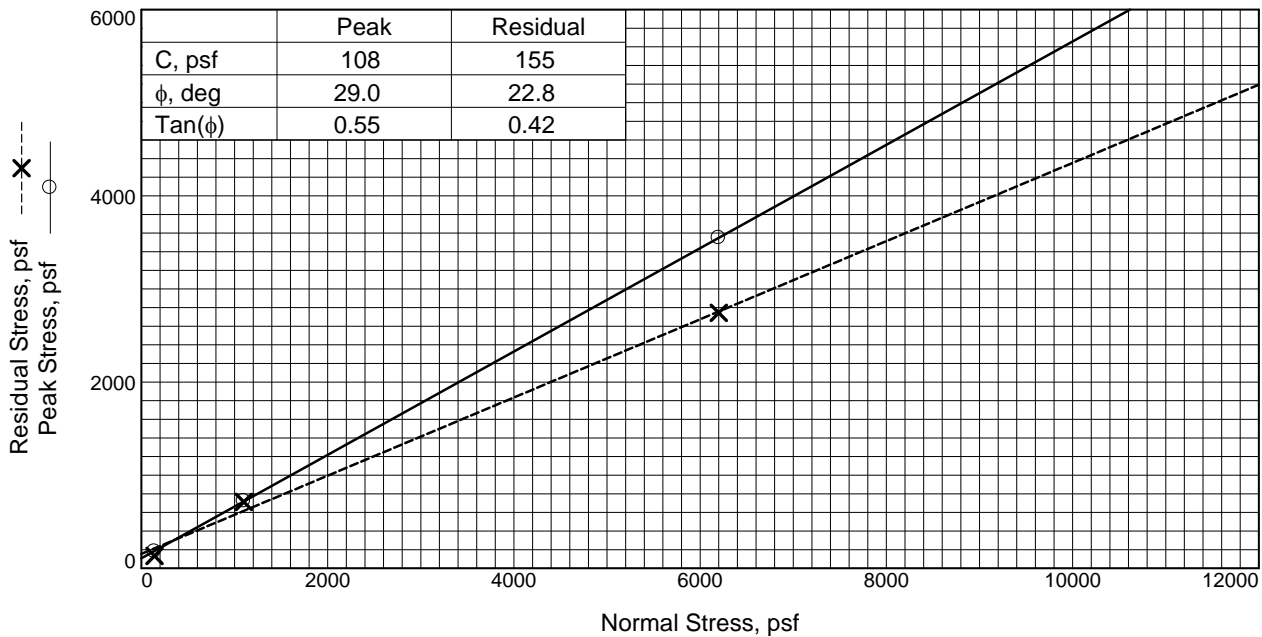
**Proj. No.:** 908

**Date Sampled:** 6-17-19

DIRECT SHEAR TEST REPORT  
RSA Geolab  
Union, New Jersey

Tested By: EE

Checked By: KP



Sample No.	1	2	3	
Initial	Water Content, %	14.5	14.8	14.3
	Dry Density, pcf	123.5	123.2	123.7
	Saturation, %	102.2	103.4	101.5
	Void Ratio	0.3902	0.3939	0.3881
	Side Length, in.	12.00	12.00	12.00
	Height, in.	3.00	3.00	3.00
At Test	Water Content, %	14.7	12.9	13.9
	Dry Density, pcf	123.7	126.0	129.8
	Saturation, %	104.5	97.8	118.2
	Void Ratio	0.3875	0.3627	0.3229
	Side Length, in.	12.00	12.00	12.00
	Height, in.	2.99	2.93	2.86
Normal Stress, psf	140	1100	6200	
Peak Stress, psf	182	723	3548	
Strain, %	1.9	4.3	9.2	
Residual Stress, psf	133	713	2743	
Strain, %	25.1	25.1	25.1	
Strain rate, in./min.	0.007	0.007	0.007	

**Sample Type:** ASTM D5321

**Description:** Geocomposite: Skaps TN220-2-6  
R#89751010002, Soil: 19-S-Onsite-C-01

**Assumed Specific Gravity=** 2.75

**Remarks:** Soil recompacted top box, Geocomposite clamped bottom box. Tested with water in box. Consolidation/Saturation time 24 hrs.

**Figure** \_\_\_\_\_

**Client:** Daigler Engineering, P.C.

**Project:** Lockwood Ash Disposal (Greenridge Generation)  
Town of Torrey, Yates County, New York

**Location:** Type P Geocomp. (Porewater Drainage Layer)/Prepared Soil Layer

**Proj. No.:** 908

**Date Sampled:** 6-17-19

DIRECT SHEAR TEST REPORT  
RSA Geolab  
Union, New Jersey

**Tested By:** EE \_\_\_\_\_

**Checked By:** KP \_\_\_\_\_

# **Appendix F**

## **Nuclear Moisture Density Test Reports and Maps**



**IN-PLACE SOIL MOISTURE/DENSITY TEST REPORT**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

STA count DS = 2369  
 MS = 634

Construction Observer: J. Daigler

Date: 7-3-19

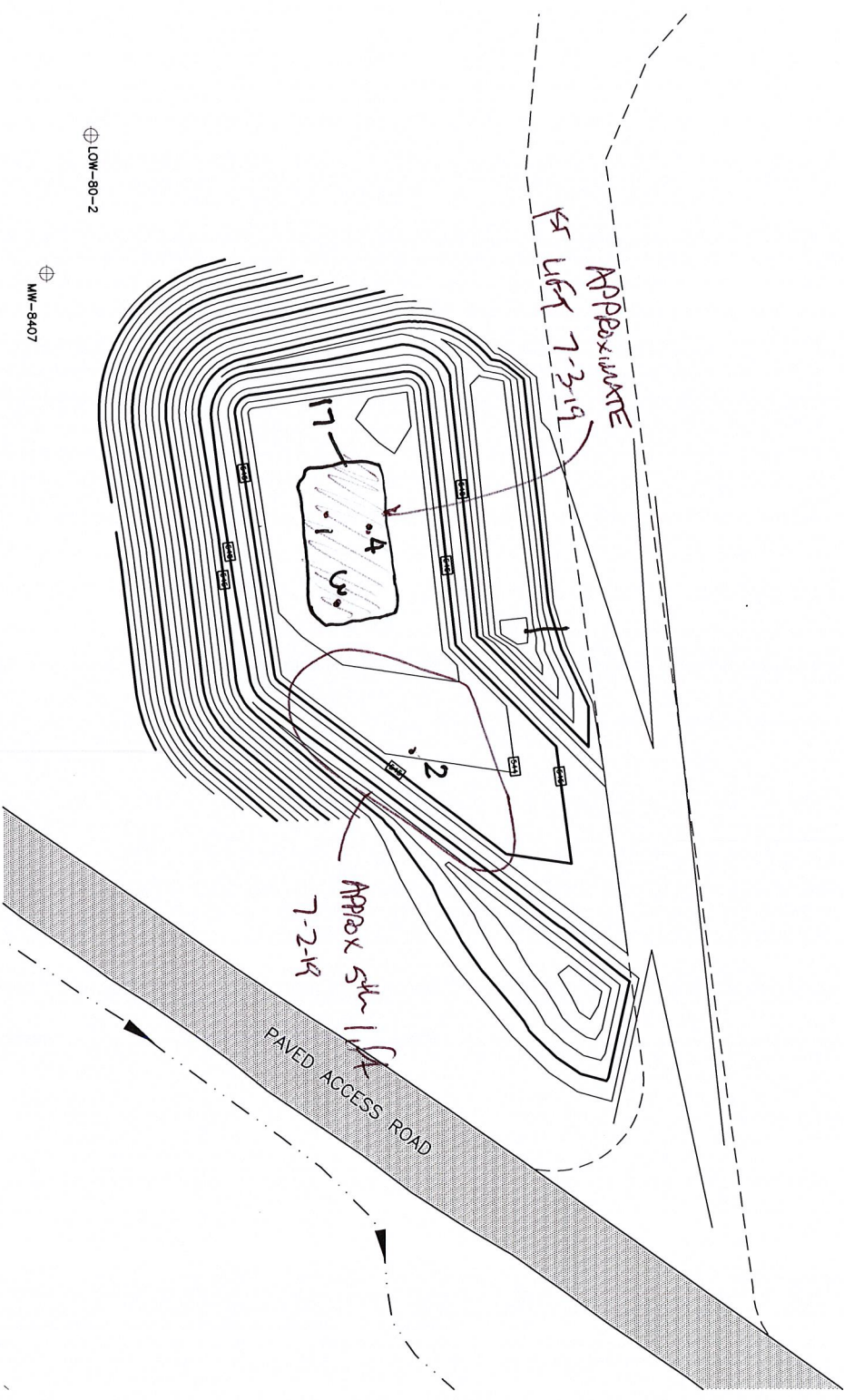
Model: 3440 Optimum Moisture: 8.6%

Soil Type: S & Gravel Maximum Dry Density (MDD) 137.2 pcf

Test No.	Lift Thickness (in)	Probe Depth (in)	Lift #	Moisture Content (%)	Dry Density (pcf)	Percent MDD (%)	Pass/Fail	Retest Test Number	Comment
1	12	6"	1	9%	132.1	96.3	}		appears higher soil content (photo)
2	12	8"	XS	9.0%	127.1	92.7			
3	12	10"	1	7.8%	131.6	95.9			
4	8"	5"	1	8.3%	131.1	95.6			
									moisture & density within acceptable range
									- fails proof rolling
									± 1.1% unacceptable



CONSTRUCTION OBSERVER:	<i>Jim Daigler</i>	SIGNATURE:	<i>Jim Daigler</i>
DATE:	7-3-19		



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	CQA/CQC PLAN
July 2019	TOWN OF TORREY	YATES COUNTY
		NEW YORK
		7-3-19

**IN-PLACE SOIL MOISTURE/DENSITY TEST REPORT**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

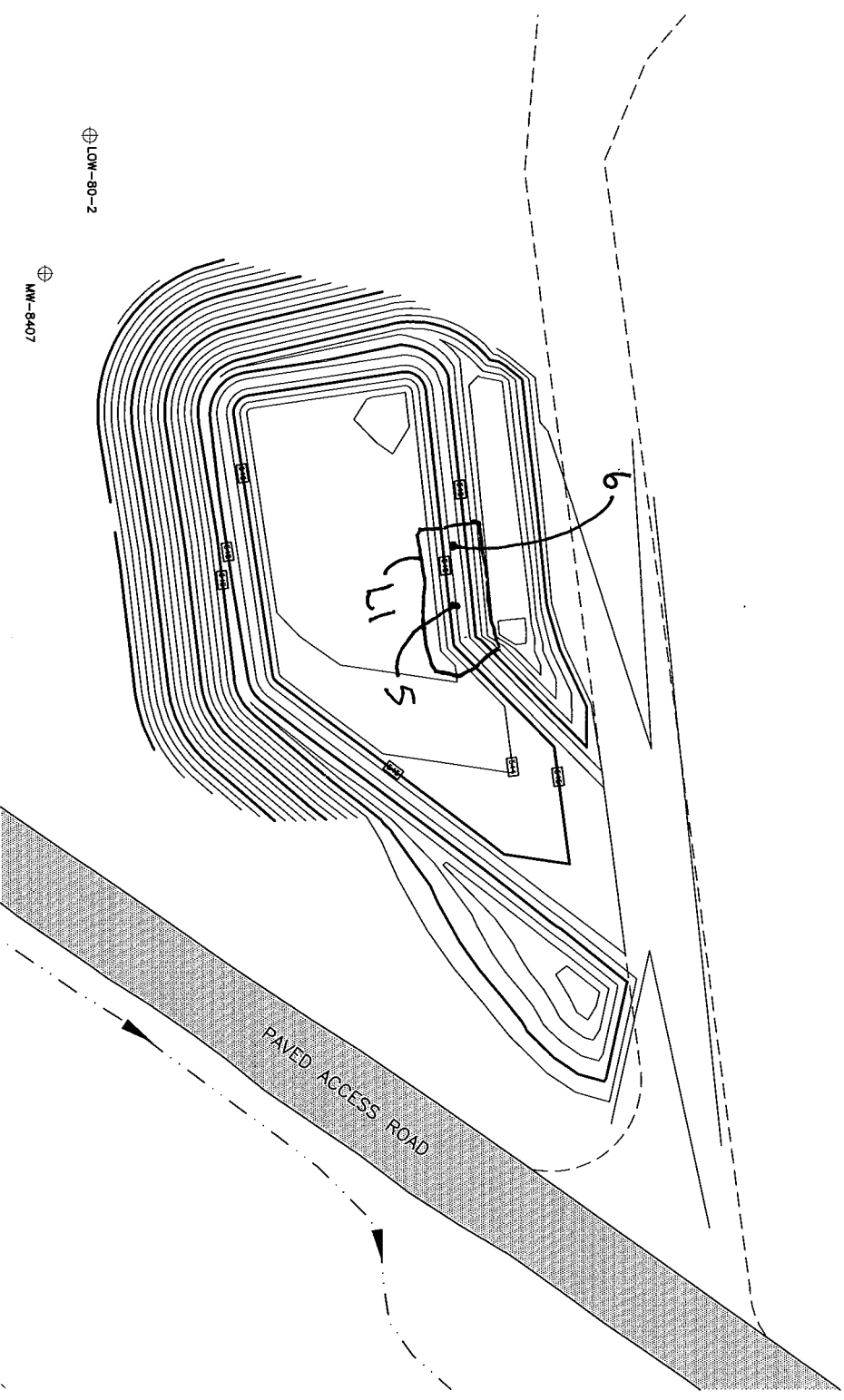
Construction Observer: J. Daigler Date: 7-5-19

Model: 3440 Optimum Moisture: 8.6%

Soil Type: ONSITE Maximum Dry Density (MDD): 137.2

Test No.	Lift Thickness (in)	Probe Depth (in)	Lift #	Moisture Content (%)	Dry Density (pcf)	Percent MDD (%)	Pass/Fail	Retest Test Number	Comment
5	12"	7"	1	6.5%	131.2	95.6			
6	12"	7"	1	6.6%	131.5	95.8			
7	12"	5"	2	5.9	132.4	96.5			
8	12"	4"	2	5.7	128.1	93.2			
9	12"	8"	3	8.4	128.1	93.4			
10	12"	8"	3	6.9	135.8	99.8			

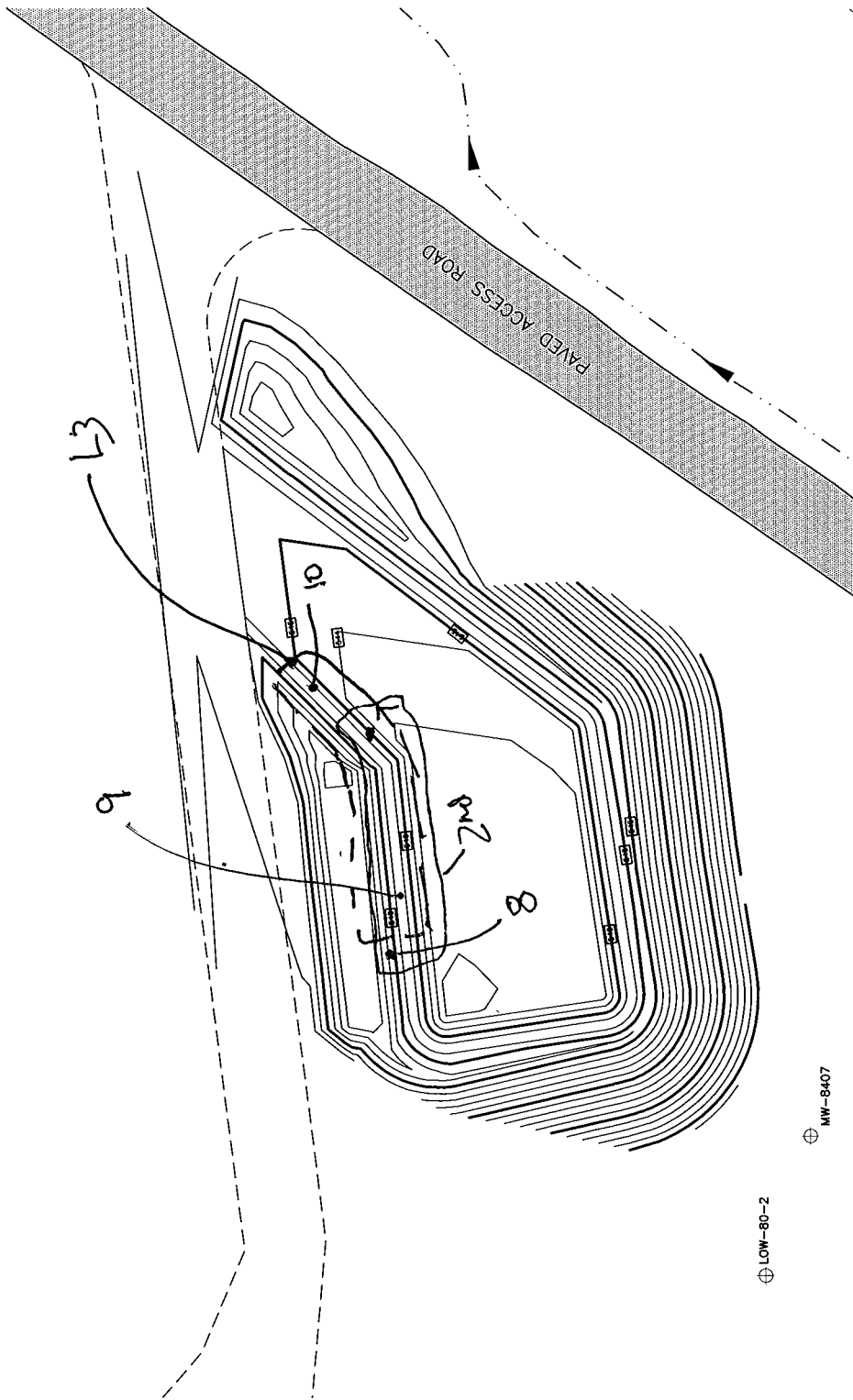
CONSTRUCTION OBSERVER:	<i>Jim Daigler</i>	SIGNATURE:	<i>Jim Daigler</i>
DATE:	7-5-19		



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE:	1"=50'	REVISION #	0
TOWN OF TORREY		YATES COUNTY	
NEW YORK		NEW YORK	
July 2019		<i>7 of 3</i>	

CONSTRUCTION OBSERVER: <b>JIM DAIGLER</b>	SIGNATURE: <i>Jim Daigler</i>
DATE: <b>7-5-19</b>	



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 REVISION # 0  
 JULY 2019

LSTA DAILY FIELD MAP  
 CQA/CQC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

*2019*  
*3053*

**IN-PLACE SOIL MOISTURE/DENSITY TEST REPORT**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Construction Observer: SJD Date: 7-8-14

Model: 3440 Optimum Moisture: 8.6%

Soil Type: ON-SITE Maximum Dry Density (MDD) 137.2

*(Handwritten mark)*

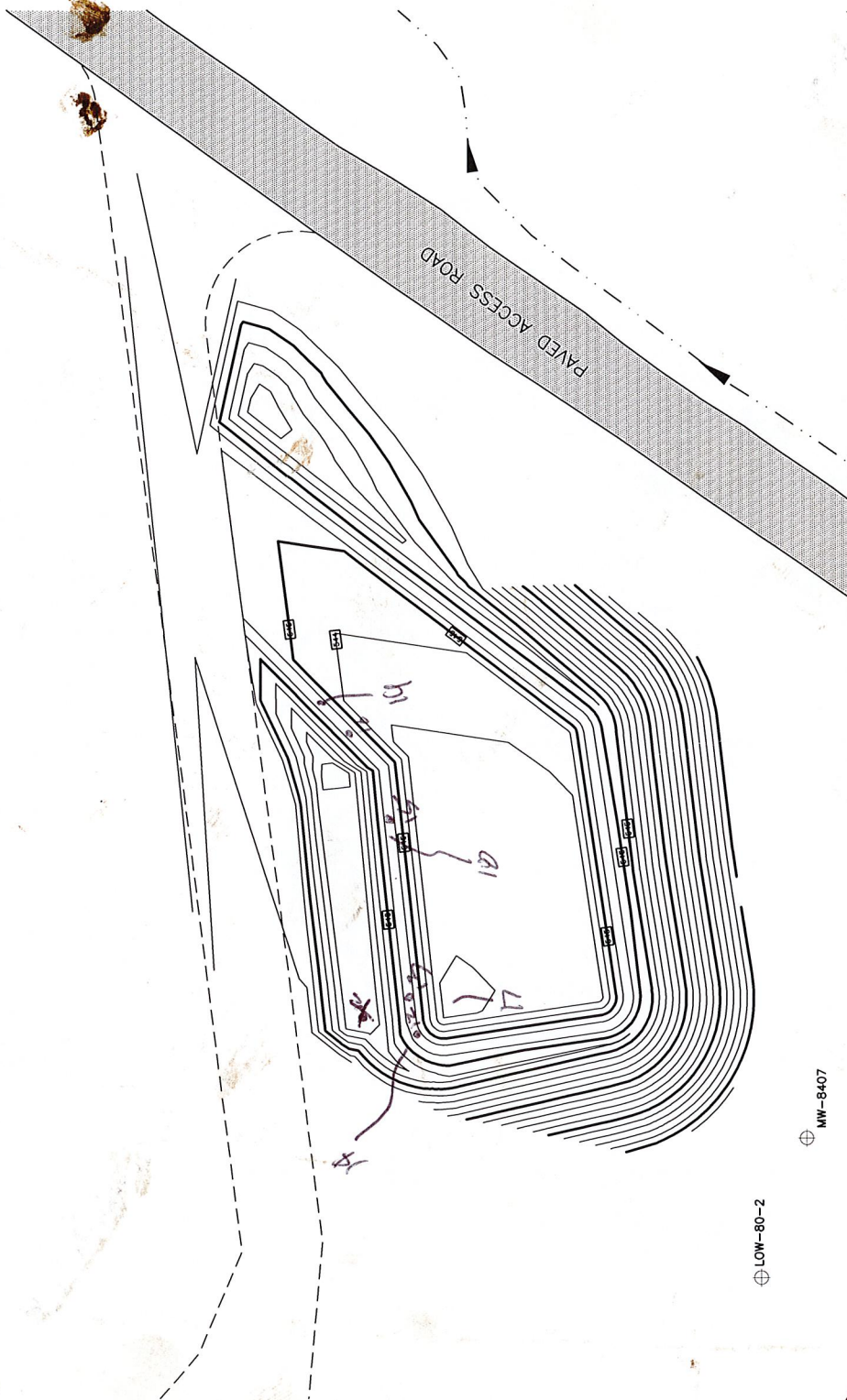
Test No.	Lift Thickness (in)	Probe Depth (in)	Lift #	Moisture Content (%)	Dry Density (pcf)	Percent MDD (%)	Pass/Fail	Retest Test Number	Comment
12	12"	12"	542.7	10.0	125.9	91.8	PASS		FIRST LIFT OF DAY
13	12"	12"	543.7	7.0	133.5	97.3	PASS		2 <sup>nd</sup>
14	12"	12"	544.7	6.3	136.3	99.3	PASS		3 <sup>rd</sup>
15	12"	12"	544.7	8.8	129.0	94.0	PASS		3 <sup>rd</sup>
16	12"	12"	3 <sup>rd</sup>	8.0	140.3	102.2	PASS		2 <sup>nd</sup>
17	12"	12"	4 <sup>th</sup>	8.3	133.5	97.3	PASS		4 <sup>th</sup>
18	12"	12"	4 <sup>th</sup>	7.7	130.4	100.4	PASS		4 <sup>th</sup>
19	12"	12"	4 <sup>th</sup>	6.3	140.2	102.2	PASS		4 <sup>th</sup>

(1)

CONSTRUCTION OBSERVER: SAM S. DAIGLER

DATE: 7-8-19

SIGNATURE:




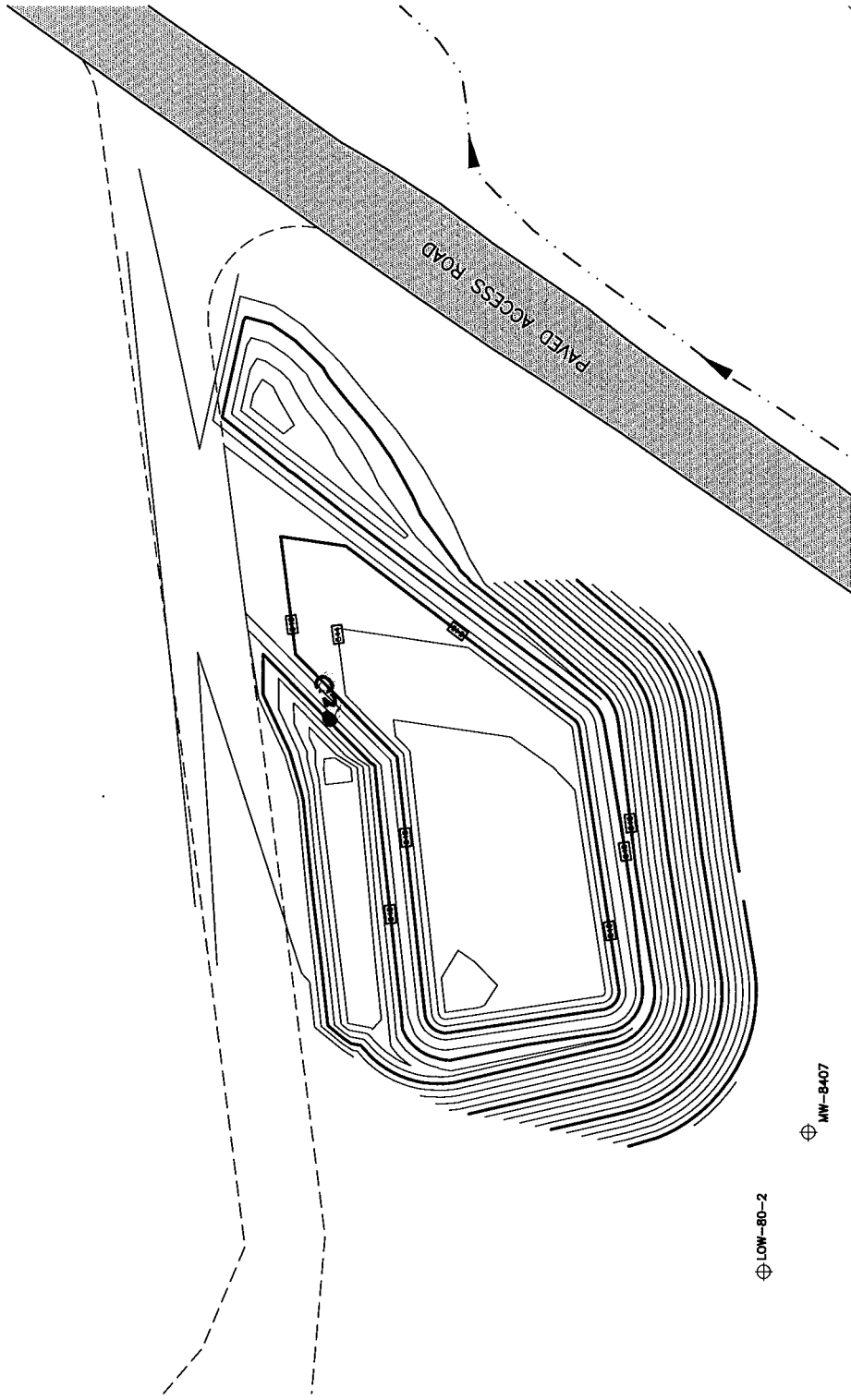
**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 REVISION # 0  
 July 2019

LSTA DAILY FIELD MAP  
 CQA/CQG PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK



CONSTRUCTION OBSERVER: <i>Sam J Daigler</i>	SIGNATURE: 
DATE: <i>7-9-19</i>	



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	REVISION # 0
SCALE: 1"=50'	July 2019

LSTA DAILY FIELD MAP		NEW YORK
CQA/CQC PLAN		YATES COUNTY
TOWN OF TORREY		



**IN-PLACE SOIL MOISTURE/DENSITY TEST REPORT**

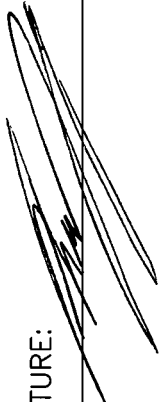
Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

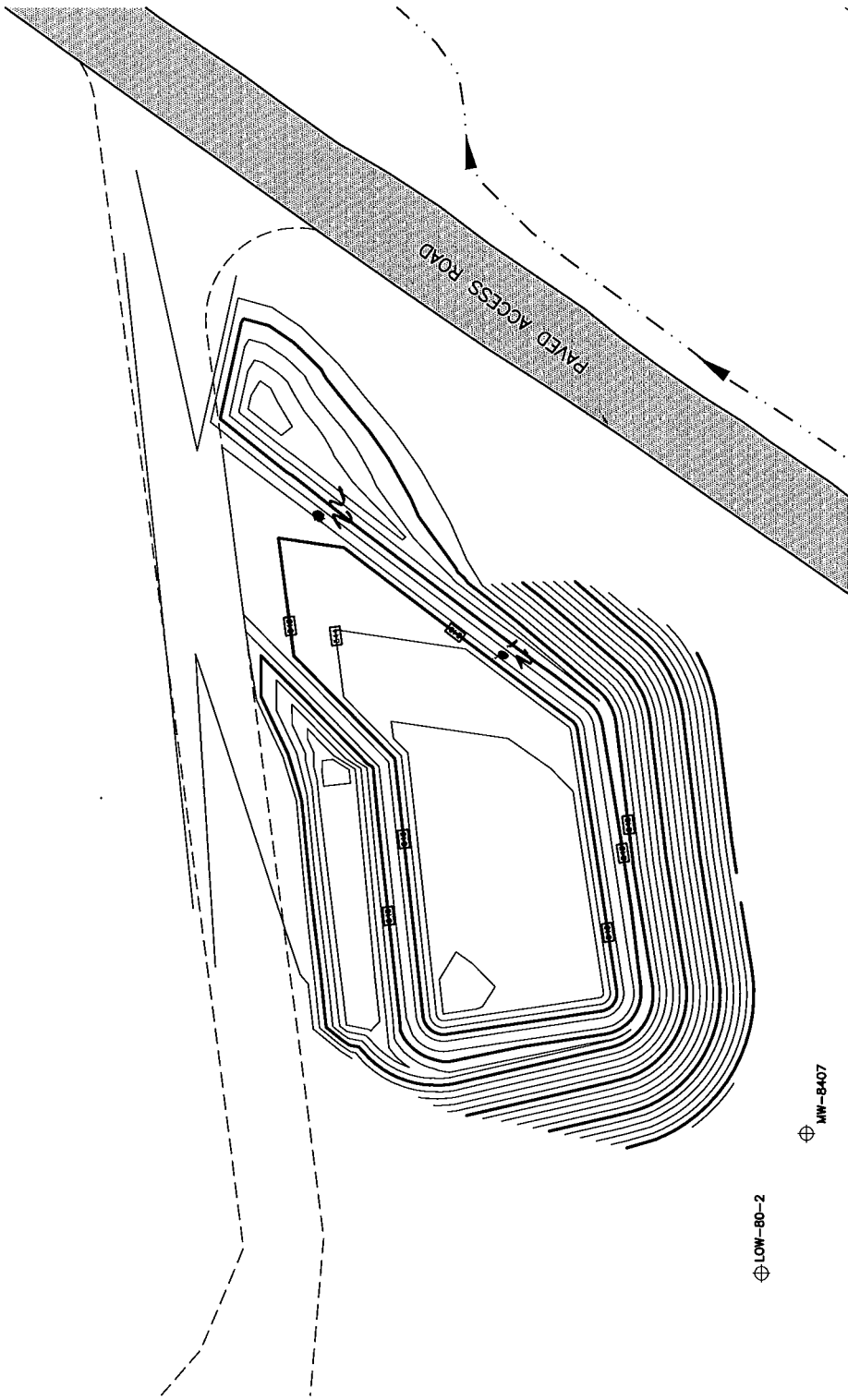
Construction Observer: SJD Date: 7-10-14

Model: 3440 Optimum Moisture: 8.6%

Soil Type: OU-SITE Maximum Dry Density (MDD) 137.4

Test No.	Lift Thickness (in)	Probe Depth (in)	Lift #	Moisture Content (%)	Dry Density (pcf)	Percent MDD (%)	Pass/Fail	Relest Test Number	Comment
<del>21</del>	12"	12"	546	7.0	134.4	97.9	PASS		
22	12"	7"	v	5.9	125.3	91.3	PASS		

CONSTRUCTION OBSERVER: SJD	SIGNATURE: 
DATE: 7-10-19	



LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	CQA/CQC PLAN	
July 2019		TOWN OF TORREY	YATES COUNTY
			NEW YORK

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872 FAX (716) 773-6873



## **Appendix G**

# **Porewater Geocomposite Pre-Construction Documentation**



# **MQA Data**





June 14, 2019  
 Greenridge Generation, LLC  
 590 Plant Road  
 Dresden, NY, 14441

Ref. : Lockwood Ash Disposal Site, NY  
 Customer P.O. # 19-0058HS  
 Product : TN 220-2-6

We hereby certify that the TN 220-2-6 drainage geocomposite, meets or exceeds the project requirements as stated in the specifications. The properties listed in this section are:

Property	Test Method	Unit	Value	Qualifier
<b>Geonet<sup>3</sup></b>				
Thickness	ASTM D 5199	mil	200	MAV <sup>6</sup>
Carbon Black	ASTM D 4218	%	2.0 - 3.0	Range
Melt Flow	ASTM D 1238 <sup>2</sup>	g/10 min	1.0	Maximum
Density	ASTM D 1505	g/cm <sup>3</sup>	0.94	MAV
<b>Composite</b>				
Ply Adhesion	ASTM D 7005	lb/in	1.0	MAV
Transmissivity <sup>1</sup>	ASTM D 4716	m <sup>2</sup> /sec	7.30 x 10 <sup>-5</sup>	MAV
<b>Geotextile<sup>3 &amp; 4</sup></b>				
Fabric Weight	ASTM D 5261	oz/yd <sup>2</sup>	6.0	MARV <sup>5</sup>
Grab Strength	ASTM D 4632	lbs	160	MARV
Grab Elongation	ASTM D 4632	%	50	MARV
Trap Tear Strength	ASTM D 4533	lbs	65	MARV
CBR Puncture	ASTM D 6241	lbs	450	MARV
Permittivity	ASTM D 4491	sec <sup>-1</sup>	1.00	MARV
AOS	ASTM D 4751	US Sieve	70	MaxARV
UV Resistance	ASTM D 4355	%/hrs	70/500	MARV

**Notes:**

1. Transmissivity measured using water at 21 ± 2 ° C (70 ± 4 ° F) with a gradient of 0.02 and a confining pressure of 140 psf between geomembrane & soil after 100 hours.
2. Condition 190/2.16
3. Geotextile and Geonet properties are prior to lamination.
4. Geotextile data is provided by the supplier.
5. MARV is statistically defined as mean minus two standard deviations and it is the value which is exceeded by 97.5% of all the test data.
6. Minium average value

Sincerely,  
*Rajesh Patel*  
 Rajesh Patel  
 QA Manager







**Product:** TN 220-2-6  
**Project:** Lockwood Ash Disposal Site, NY

We hereby certify the following test results for the above referenced product/project :

**Geocomposite**

**Geonet**

Roll Number	Ply Adhesion (lb/in)		Transmissivity (m <sup>2</sup> /sec)	Resin Lot Number	Density (g/cm <sup>3</sup> )	Thickness (mils)	Carbon Black (%)	Transmissivity (m <sup>2</sup> /sec)
	Side "A"	Side "B"						
89751010001	2.39	1.85	6.76 x 10 <sup>-4</sup>	SHQX 041465	0.9576	213	2.30	
89751010002				SHQX 041465	0.9576			
89751010003				SHQX 041465	0.9576			
89751010004				SHQX 041465	0.9576			



# POLYETHYLENE RESIN CERTIFICATION

**Customer Name :** Greenridge Generation, LLC  
**Project Name :** Lockwood Ash Disposal Site, NY  
**Geocomposite Manufacturer :** SKAPS Industries  
**Geocomposite Production Plant :** Commerce, GA  
**Geocomposite Brand Name :** TN 220-2-6

We hereby certify the following test results for the above referenced product/project:

Resin Manufacturer	Resin Lot Number	Property	Test Method	Units	Resin Manufacturer Value	Tested Value*
Chevron Phillips Chemical Company	SHOX 041465	Density	ASTM D1505	g/cm <sup>3</sup>	0.9550	0.9529
		Melt flow Index	ASTM D1238 <sup>(a)</sup>	g/10 min	0.33	0.35

(a) Condition 190/2.16

\* Data from SKAPS Quality Control



# Geotextile Certification

**Product:** TN 220-2-6  
**Project :** Lockwood Ash Disposal Site, NY

We hereby certify the following test results for the above referenced product/project :

GEOCOMP ROLL #	FABRIC SIDE	WEIGHT oz/yd <sup>2</sup>	GRAB lbs. (MD)	GRAB ELG % (MD)	GRAB lbs. (XMID)	GRAB ELG % (XMID)	TRAP lbs. (MD)	TRAP lbs. (XMID)	CBR PUNCTURE lbs	AOS us sieve	PERM-LTY sec <sup>-1</sup>
89751010001	Side A	6.22	166	72	173	76	78	83	483	70	1.77
	Side B	6.22	166	72	173	76	78	83	483	70	1.77

# **Conformance Data**



# RSA Geolab

## GEOTEXTILE CONFORMANCE TESTING

Project: Lockwood Ash Disposal (Greenridge Generation)  
 Town of Torrey, Yates County, New York  
 Client: Daigler Engineering, P.C.

Proj. No. 908  
 Lab No.: 19-205  
 Date: 6-11-19

Sample: R#89751010002 Skaps 6 oz (Side A)

Test Condition: Moisture Equilibrium

### GRAB BREAKING LOAD & ELONGATION

ASTM D4632

Specimen	Machine Direction		Cross Machine Direction	
	Breaking Load (lbs.)	Apparent Elongation %	Breaking Load (lbs.)	Apparent Elongation %
1	167.6	74.0	181.3	83.3
2	168.0	76.7	198.2	81.3
3	161.0	71.0	183.0	88.3
4	160.6	71.3	181.6	80.3
5	164.8	72.0	171.5	83.7
6	167.3	75.3	209.5	79.3
7	170.1	73.0	205.4	83.7
8	160.5	69.0	216.8	82.0
9	163.8	74.0	195.8	87.0
10	166.9	71.7	197.9	84.7
Average	165.1	72.8	194.1	83.4

### TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

Specimen	Machine Direction	Cross Machine Direction
	Breaking Load (lbs.)	Breaking Load (lbs.)
1	87.1	94.7
2	80.1	89.3
3	73.7	83.7
4	79.6	101.3
5	80.3	96.1
6	90.7	103.8
7	85.4	90.4
8	76.9	86.5
9	94.5	79.0
10	77.6	96.0
Average	82.6	92.1

### PUNCTURE STRENGTH

ASTM D6241

Specimen	615.7	564.8	600.8	662.1	603.7	Average
Load (lbs.)	576.9	600.5	612.3	642.9	609.6	608.9

### FABRIC WEIGHT

ASTM D5261

Specimen	1	2	3	4	5	Average
Unit Weight (oz/yd <sup>2</sup> )	6.50	6.56	6.17	6.92	7.03	6.64

Remarks: Sample Size 12" x 12" (approx.)

### APPARENT OPENING SIZE

ASTM D4751

Sieve #	80
mm	0.18

### PERMITTIVITY

ASTM D4491

Permittivity	1.717 s(-1)
--------------	-------------

Remarks: Average of four specimens.

Tested By: EE/MF

Entered By:

KH

Checked By:

KP

# RSA Geolab

## GEOTEXTILE CONFORMANCE TESTING

Project: Lockwood Ash Disposal (Greenridge Generation)  
 Town of Torrey, Yates County, New York  
 Client: Daigler Engineering, P.C.

Proj. No. 908  
 Lab No.: 19-205  
 Date: 6-11-19

Sample: R#89751010002 Skaps 6 oz (Side B)

Test Condition: Moisture Equilibrium

### GRAB BREAKING LOAD & ELONGATION

ASTM D4632

Specimen	Machine Direction		Cross Machine Direction	
	Breaking Load (lbs.)	Apparent Elongation %	Breaking Load (lbs.)	Apparent Elongation %
1	175.9	75.7	225.5	85.3
2	183.7	72.0	212.3	84.3
3	169.1	73.7	246.8	82.7
4	173.7	69.7	196.7	89.7
5	184.7	73.7	210.1	86.3
6	188.2	80.0	193.3	83.3
7	190.7	73.7	220.2	83.7
8	181.4	73.3	199.5	87.0
9	179.6	73.0	216.8	83.0
10	183.8	74.7	202.7	84.0
Average	181.1	73.9	212.4	84.9

### TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

Specimen	Machine Direction	Cross Machine Direction
	Breaking Load (lbs.)	Breaking Load (lbs.)
1	74.8	99.8
2	79.6	120.1
3	82.2	108.6
4	77.7	113.7
5	77.1	95.6
6	80.6	107.0
7	89.4	92.3
8	82.8	101.5
9	77.8	107.9
10	95.7	105.5
Average	81.8	105.2

### PUNCTURE STRENGTH

ASTM D6241

Specimen Load (lbs.)	739.8	570.5	690.3	711.4	658.5	Average
		597.3	620.6	712.8	692.7	651.5

### FABRIC WEIGHT

ASTM D5261

Specimen	1	2	3	4	5	Average
Unit Weight (oz/yd <sup>2</sup> )	6.80	7.04	6.52	6.45	6.51	6.66

Remarks: Sample Size 12" x 12" (approx.)

### APPARENT OPENING SIZE

ASTM D4751

Sieve #	80
mm	0.18

### PERMITTIVITY

ASTM D4491

Permittivity	1.738 s(-1)
--------------	-------------

Remarks: Average of four specimens.

Tested By: EE/MF

Entered By:

KH

Checked By:

KP

**RSA Geolab, LLC**  
**Conformance Sample Test Results**

Project: Lockwood Ash Disposal (Greenridge Generation)  
 Town of Torrey, Yates County, New York  
 Client: Daigler Engineering, P.C.  
 Sample: R#89751010002 SKAPS TN220-2-6 Geocomposite

Proj. No. 908  
 Lab No.: 19-205  
 Date: 6-18-19

**GEONET COMPONENT**

Density (g/cm<sup>3</sup>)  
 ASTM D792

Specimen 1	Specimen 2	Average
0.9443	0.9495	0.9469

Carbon Black Content (%)  
 ASTM D4218

Specimen 1	Specimen 2	Average
2.22	2.23	2.23

**GEOCOMPOSITE**

Hydraulic Transmissivity  
 m<sup>2</sup>/sec (Geocomposite)  
 ASTM D4716

Hyd. Grad.	Time	Trial 1	Trial 2	Trial 3	Average
0.02	1 hr.	1.854 x 10 <sup>(-3)</sup>	1.841 x 10 <sup>(-3)</sup>	1.827 x 10 <sup>(-3)</sup>	1.841 x 10 <sup>(-3)</sup>
0.02	24 hrs.	1.807 x 10 <sup>(-3)</sup>	1.793 x 10 <sup>(-3)</sup>	1.793 x 10 <sup>(-3)</sup>	1.798 x 10 <sup>(-3)</sup>
0.02	100 hrs.	1.735 x 10 <sup>(-3)</sup>	1.735 x 10 <sup>(-3)</sup>	1.722 x 10 <sup>(-3)</sup>	1.731 x 10 <sup>(-3)</sup>
0.33	1 hr.	7.470 x 10 <sup>(-4)</sup>	7.406 x 10 <sup>(-4)</sup>	7.373 x 10 <sup>(-4)</sup>	7.416 x 10 <sup>(-4)</sup>
0.33	24 hrs.	6.745 x 10 <sup>(-4)</sup>	6.681 x 10 <sup>(-4)</sup>	6.649 x 10 <sup>(-4)</sup>	6.692 x 10 <sup>(-4)</sup>
0.33	100 hrs.	6.612 x 10 <sup>(-4)</sup>	6.581 x 10 <sup>(-4)</sup>	6.551 x 10 <sup>(-4)</sup>	6.581 x 10 <sup>(-4)</sup>

Remarks: Normal Compressive Stress: 140 PSF  
 Test Setup: Steel Plate/60 ml THDPE/Geocomposite/Onsite Soil/Steel Plate  
 THDPE: Atarfil 60 ml Textured R#D3V110029  
 Soil: 19-S-Onsite Soil-C-01 (123.5 pcf, 14.5% mc)  
 Sample Size: 12" Length x 12" width  
 Hydraulic Transmissivity O = QL/WH m<sup>2</sup>/sec. at 20°C  
 Initial Unconfined Thickness: 5.49"  
 Thickness of geonet core (ASTM D5199): .2204" (before testing)  
 Thickness of geonet core (ASTM D5199): .2191" (after testing)

Ply Adhesion  
 ASTM D7005  
 Machine Direction

Specimen	Breaking Force (#/in.)	
	Ply 1	Ply 2
1	3.1	5.2
2	2.5	3.3
3	2.3	4.1
4	2.5	4.3
5	3.4	3.9
Average	2.8	4.1

Tested by: MF/EE      Entered by: K.H.      Checked by: KP





# **Appendix H**

## **Porewater Geocomposite Construction Documentation**



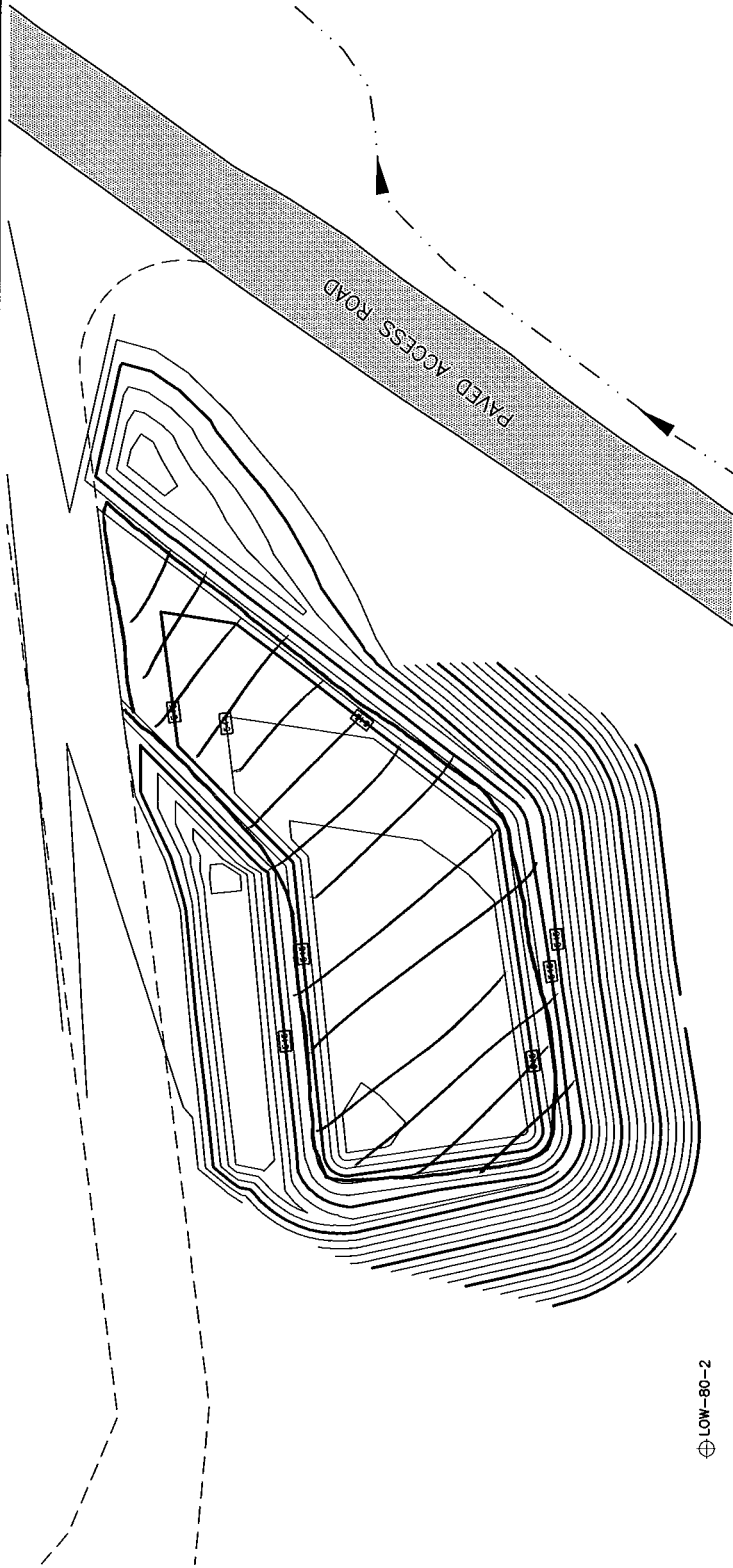
# **Subgrade Acceptance Form**



SUBGRADE ACCEPTANCE CERTIFICATION

I, HEREBY CERTIFY THAT I HAVE INSPECTED THE LSTA - Geocomposite SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS LSTA - Geocomposite SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.  
 I ALSO CERTIFY THAT THE SURFACE COVERED BY THE Geocomposite IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL.  
 THE LSTA - Geocomposite SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL

CONTRACTOR: <u>Moss-Dero</u>	CONSTRUCTION OBSERVER: <u>Sam Daigler</u>
DATE: <u>7-23-19</u>	DATE: <u>7-23-19</u>



⊕ LOW-80-2

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 April 2019  
 REVISION # 0

LSTA SUBGRADE ACCEPTANCE FORM  
 CQA/CQC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

FIGURE 5-2



# **Appendix I**

## **Geomembrane Pre-Construction Documentation**





# **MQA Data**



### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2994 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	60.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	352	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	112	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.26	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

Made by (SEDK)

Approved by (TSM)

Certificate printing date 05/20/2019

QC LABORATORY, ATARFIL



**Roll Data**

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2989 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

**Geomembrane Characteristics**

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	59.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	352	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	112	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
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Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.34	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

**Resin Characteristics**

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

Made by (SEDK)

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**Roll Data**

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2994 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

**Geomembrane Characteristics**

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	61.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
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Dimensional Stability	CMD	ASTM D 1204	-0.11	%
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Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
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High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

**Resin Characteristics**

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

Made by (SEDK)

Approved by (TSM)

Certificate printing date 05/20/2019

QC LABORATORY, ATARFIL



### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2994 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	60.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	325	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	105	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.65	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2976 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	57.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	325	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	105	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.15	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2978 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	61.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	302	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	113	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.57	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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**Roll Data**

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2978 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

**Geomembrane Characteristics**

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	61.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	36.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	302	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	455	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	113	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	121	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.26	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

**Resin Characteristics**

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2989 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	59.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	32.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	302	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	445	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	113	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	123	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.25	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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**Roll Data**

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2978 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

**Geomembrane Characteristics**

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	60.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	32.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	302	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	445	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	113	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	123	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.23	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

**Resin Characteristics**

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2981 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	60.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	32.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	337	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	445	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	114	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	123	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.75	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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**Roll Data**

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 3020 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

**Geomembrane Characteristics**

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	66.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	36.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	32.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	337	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	445	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	114	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	123	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	136	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.09	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

**Resin Characteristics**

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 495 f ±2%      Area: 9,751.50 sqf      Weight: 2985 lbs  
 Width: 19.70 f ±0.7%      Nominal Thickness: 60 mils

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	60.0	mils
Density of Geomembrane		ASTM D 792	0.944	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	33.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	37.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	137	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	398	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	322	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	125	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	115	lb/in
Tear Resistance	MD	ASTM D 1004	45	lb
Tear Resistance	CMD	ASTM D 1004	45	lb
Puncture Resistance		ASTM D 4833	137	lb
Dimensional Stability	MD	ASTM D 1204	-0.77	%
Dimensional Stability	CMD	ASTM D 1204	-0.11	%
Carbon Black Content		ASTM D 4218	2.31	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

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### Roll Data

Length: 128.01 m ±2%    Area: 768.06 m<sup>2</sup>    Weight: 1149 kg  
 Width: 6 m ±0.7%    Nominal Thickness: 1.50 mm

### Geomembrane Characteristics

Properties		Test Method	Value	UNITS
Thickness		ASTM D 5994	59.0	mils
Density of Geomembrane		ASTM D 792	0.943	g/cm <sup>3</sup>
Yield Elongation, GL 1.3 inches	MD	ASTM D 6693, Type IV	35.0	%
Yield Elongation, GL 1.3 inches	CMD	ASTM D 6693, Type IV	34.0	%
Tensile Strength at Yield	MD	ASTM D 6693, type IV	137	lb/in
Tensile Strength at Yield	CMD	ASTM D 6693, type IV	138	lb/in
Elongation at Break, GL 2.0 inches	MD	ASTM D 6693, Type IV	278	%
Elongation at Break, GL 2.0 inches	CMD	ASTM D 6693, Type IV	390	%
Tensile Strength at Break	MD	ASTM D 6693, type IV	119	lb/in
Tensile Strength at Break	CMD	ASTM D 6693, type IV	137	lb/in
Tear Resistance	MD	ASTM D 1004	47	lb
Tear Resistance	CMD	ASTM D 1004	47	lb
Puncture Resistance		ASTM D 4833	131	lb
Dimensional Stability	MD	ASTM D 1204	-0.11	%
Dimensional Stability	CMD	ASTM D 1204	-0.33	%
Carbon Black Content		ASTM D 4218	2.17	%
Carbon Black Dispersion		ASTM D 5596	10	views Cat 1/2
Stress Crack Resistance/SP-NCTL		ASTM D 5397	>= 3,000	h
O.I.T. Standard		ASTM D 3895 ( 200 °C)	>= 100	min
High Pressure OIT		ASTM D 5885	>= 400	min
Asperity Height		ASTM D 7466	>= 30	mils
UV resistance (HP OIT, % retained)		ASTM D7238 & ASTM D5885	>= 0	%
Oven aging at 85°C (HP OIT % retained)		ASTM D5721 & ASTM D5885	>= 80	%

### Resin Characteristics

Properties		Test Method	Value	UNITS
Density		ASTM D 792	>= 0.932	g/cm <sup>3</sup>
Melt Flow Index		ASTM D 1238 (190/2.16)	<= 0.40	gr/10 min

MD=Machine Direction; CMD= Cross Direction;

Note: The dimensions of the roll are conditioned by the factory manufacturing environment and temperature, by dimensional stability and by productive dimensional tolerance. For conversion of N/mm<sup>2</sup> to N/mm, kindly multiply by the thickness. This is system-generated document and it does not require original signature or stamp.

Made by (SEDK)

Approved by (TSM)

Certificate printing date 06/05/2019

QC LABORATORY, ATARFIL





**DATA SHEET WELDING ROD HD**

**Production Order:** 2019-44

**Colour:** BLACK

**Diameter:** 5.00 mm

Tested Property	Test Method	Value	Unit
Density	ASTM D 792	0.946 ± 0.004	g/cm <sup>3</sup>
Melt Flow Index	ASTM D 1238 (190°C/2,16Kg)	≤ 0.40	g/10min
	ASTM D 1238 (190°C/5Kg)	≤ 1.30	
Carbon Black Content	ASTM D 4218	2,00-2.50	%
Diameter	DVS 2211	nominal ± 0,3	mm

50619 4949

<sup>1</sup> Certificates belonging to the Environmental and Quality Integrated System of Atarfil.

This information is provided for reference purposes. ATARFIL assumes no liability in connection with the use of this information or the final use of the product.



# **Conformance Data**



## RSA GEOLAB

### Conformance Sample Test Results

Project: Lockwood Ash Disposal (Greenridge Generation)  
Town of Torrey, Yates County, New York  
Client: Daigler Engineering, P.C.

Proj. No. 908  
Lab No.: 19-208  
Date: 6-13-19

Sample ID: R#D3V1100290      Material: Atarfil 60 ml THDPE

Test	Readings					Average
Thickness (mils)	60.4	58.9	60.2	59.4	61.1	60.0
ASTM D5994	58.6	60.2	60.8	59.7	60.6	

Tear Resistance of Plastics						Average	
(pounds)	Direction A	49.10	46.12	47.07	44.00	47.37	46.76
	ASTM	44.45	48.42	47.97	46.15	46.92	
D1004	Direction B	46.62	46.25	45.00	46.37	45.32	46.23
		46.07	47.29	46.33	45.92	47.13	

Density (g/cm3)	Specimen 1	Specimen 2	Average
ASTM D792	0.9400	0.9411	0.9406

Tensile Properties:		Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
ASTM D6693							
Tensile Strength							
Yield (ppi)	Direction A	133.2	131.4	128.5	133.0	130.7	131.4
	Direction B	128.5	129.8	129.6	130.4	131.4	130.0
Break (ppi)	Direction A	132.0	132.5	139.3	146.8	150.0	140.1
	Direction B	136.4	140.9	141.6	136.7	157.6	142.6
Elongation							
Yield (%)	Direction A	16.9	14.4	17.1	15.1	15.0	15.7
	Direction B	17.9	15.0	15.8	13.5	16.8	15.8
Break (%)	Direction A	380.5	416.5	378.5	414.0	428.0	403.5
	Direction B	463.0	479.0	450.5	466.5	524.0	476.6

Carbon Black, %	Specimen 1	Specimen 2	Average
ASTM D1603	2.06	2.15	2.11

Puncture Resistance (lbs.)	Specimen 1	Specimen 2	Specimen 3	Specimen 4	Specimen 5	Average
ASTM D4833	115.5	124.2	123.0	123.6	126.4	122.5

Carbon Black Dispersion	Category	1	1	1	1	1
ASTM D5596	Category	1	1	1	1	1

Asperity Height (mils)	37.2	38.0	38.3	39.4	38.7	Average
Top Side	36.9	37.5	39.1	38.0	37.6	38.1
GM12/ D7466 Bottom Side	48.4	47.8	49.5	48.7	49.6	Average
	49.2	48.2	48.9	47.5	48.1	48.6

Remarks: Tensile Properties:

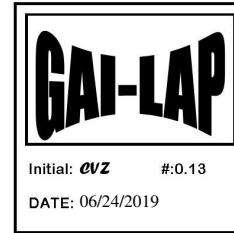
- Grip separation of 2.5".
- Assumed gauge length of 2" for break elongation.
- Direction A = Machine Direction  
Direction B = Cross-Machine Direction

Tested by: EE/MF  
Entered by: KH  
Checked by: KP



June 24, 2019

Rasheed Ahmed  
**RSA Geolab, LLC**  
 1017 Greeley Ave. North  
 Union, NJ 07083



**Re: FINAL LABORATORY TEST REPORT**

Dear Mr. Ahmed:

Thank you for consulting TRI California for your material testing needs.

Enclosed is the **final** laboratory report for the Conformance testing of one (1) HDPE Textured Geomembrane sample.

**PROJECT NAME:** Lockwood Ash Disposal

**DATE REPORTED:** June 24, 2019

**REFERENCE TRI JOB NO.:** G190759

**DATE RECEIVED:** June 19, 2019

**SAMPLE SENT BY:** RSA Geolab

**SAMPLE IDENTIFICATIONS:**

<b>SAMPLE ID</b>	<b>TRI CONTROL NUMBER</b>
D3V110029Q	139144

**TESTS REQUIRED / PERFORMED:**

<b>TEST METHOD</b>	<b>DESCRIPTION</b>
1. ASTM D3895	Oxidative Induction Time

**TEST RESULTS:** The test results are summarized in the attached Table 1.

Note: The general conditioning and testing of the material samples identified in this report were performed within the range of the laboratory environmental conditions; i.e., 20-24°C and 45-65% RH. Otherwise, the actual environmental conditions are indicated in the respective test method reported.

Respectfully,

**TRI Environmental, Inc. - California**

*Maria Espitia*

Maria Espitia  
 Quality Assurance

*CA*

Cora Queja  
 TRI-CA Director

*Signatures are on file*

It shall be noted that the sample tested is believed to be true representatives of the material produced under the designation herein stated. In addition, the attached laboratory tests results are considered indicative only of the quality of samples/specimens that were actually tested. The appropriate test methods hereby employed are based on the current and accepted industry practices. TRI neither accepts responsibility for nor makes claims to the intended final use and purpose of the material. The test data and all associated project information shall be held confidential and not to be reproduced and/or disclosed to other parties except in full and with prior written approval from pertinent entity duly authorized by the respective client or from the client itself. It is our policy to keep physical records of each job for two (2) years commencing from the date of receipt of the samples and keep its corresponding electronic file for seven (7) years. **Retained conformance samples are disposed of after one (1) month.** On the other hand, should you need us to keep them at a longer period, please advise us in writing..

**2 Pages Total (including this sheet)**



TABLE 1.

MATERIAL PROPERTIES

CLIENT: RSA Geolab, LLC

PROJECT: Lockwood Ash Disposal

Date Received: 6/19/2019

Date Reported: 6/24/2019

Client Sample ID: D3V110029Q

Material Description: Atarfil 60mil HDPE Textured Geomembrane

QC'd By: *Maria Espitia*

TRI Job No.: G190759

TRI Control No.: 139144

		SPECIMENS										Proj. Specs.								
		1	2	3	4	5	6	7	8	9	10	Avg.	Std. Dev.	Min.	Max.					
<b>METHOD</b>	<b>DESCRIPTION</b>																			
ASTM D3895	Oxidative Induction Time (min)																			
		232	215														224	12	215	232

(End of Table 1)

(Sheet 1 of 1)

By accepting the data and results presented on this report, the Client agrees to limit the liability of TRI Environmental, Inc. from Client and all other parties for claims on issues, due to the use of this data, to the cost for the respective tests presented in this report; and the Client agrees to indemnify and hold harmless TRI Environmental, Inc. from and against all liabilities in excess of the aforementioned limit.



# **Appendix J**

## **Leachate Storage and Transfer Area Geomembrane Construction Documentation**





# **Subgrade Acceptance Form**



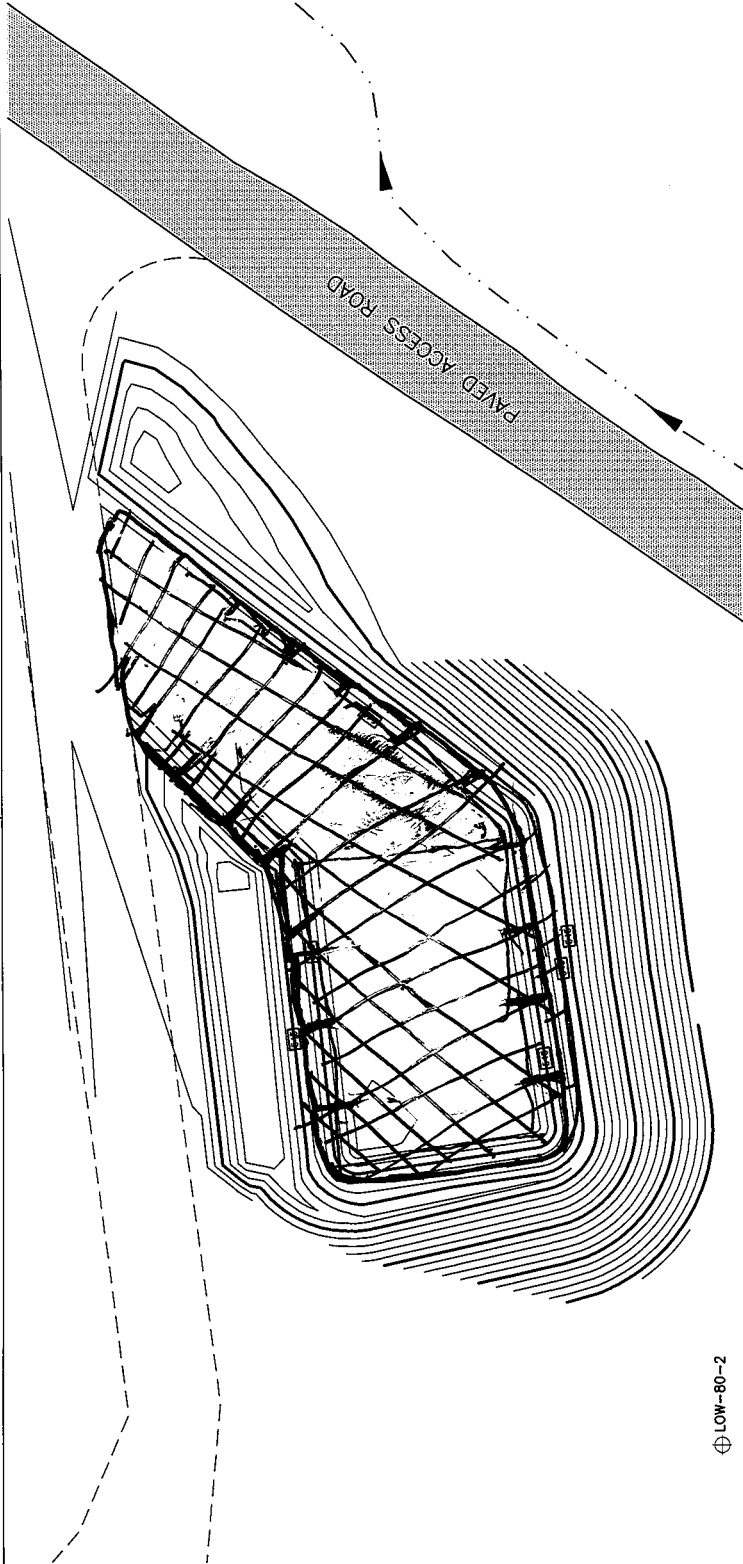
Geomembrane

SUBGRADE ACCEPTANCE CERTIFICATION

I HEREBY CERTIFY THAT I HAVE INSPECTED THE Geomembrane SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS Geomembrane SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.

I ALSO CERTIFY THAT THE SURFACE COVERED BY THE Geomembrane IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL. THE Subgrade SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL

CONTRACTOR: <u>Matt's Trees</u>	CONSTRUCTION OBSERVER: <u>Verginia Vorobeychik</u>
DATE: <u>7-23-19</u>	DATE: <u>7/23/19</u>



⊕ LOW-80-2

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	LSTA SUBGRADE ACCEPTANCE FORM		FIGURE 5-2
SCALE: 1"=50'	REVISION # 0	CQA/CQC PLAN	
April 2019	TOWN OF TORREY	YATES COUNTY	NEW YORK



# **Panel Placement Report**









# **Trial Weld Report**





CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
2620 Grand Island Boulevard, Grand Island NY 14072

Ph: (716) 773-6872 / Fax: (716) 773-6873 www.daiglerengineering.com

**HDPE Geomembrane Trial Weld Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

I have observed the set-up, maintenance and adjustment process, as well as the settings/conditions of the welding equipment. I certify that the welding technicians have properly maintained and set-up the welding equipment prior to seaming operations.

Date: 7-23-19

Test Requirements:

Peel Fusion

91 ppi

Construction Observer: SJD

Peel Ext

78 ppi

Weather/Wind Speed/ Ambient Air Temp. Cloudy/0-5 mph/70°

Shear

120 ppi

QA Observer: SAM DAKLER

Sample ID Number	Peel (lbs.)	Locus of Break	Shear (lbs.)	Locus of Break	Pass/Fail (PF)	Comments	
Operator - <u>J.K.</u>	<u>115</u>	<u>SE1</u>	<u>130</u>	<u>SE1</u>	<u>P</u>	<u>SMOOTH/SMOOTH</u>	
Machine - <u>W52</u>	<u>115</u>	<u>SE1</u>	<u>129</u>	<u>SE1</u>	<u>P</u>		
Time - <u>12:55pm</u>	<u>120</u>	<u>SE1</u>	<u>128</u>	<u>SE1</u>	<u>P</u>		
Temp - <u>452°</u>	<u>116</u>	<u>SE1</u>	<u>132</u>	<u>SE1</u>	<u>P</u>		
Pressure Setting -	<u>107</u>	<u>SE1</u>	<u>133</u>	<u>SE1</u>	<u>P</u>		
Speed/Pre-Heat - <u>700 84MIN</u>							
Operator - <u>J.K.</u>	<u>100</u>	<u>SE1</u>	<u>129</u>	<u>SE1</u>	<u>P</u>		<u>SMOOTH/TEXTURED</u>
Machine - <u>W52</u>	<u>105</u>	<u>SE1</u>	<u>126</u>	<u>SE1</u>	<u>P</u>		
Time - <u>12:55pm</u>	<u>98</u>	<u>SE1</u>	<u>140</u>	<u>SE1</u>	<u>P</u>		
Temp - <u>452°</u>	<u>114</u>	<u>SE1</u>	<u>137</u>	<u>SE1</u>	<u>P</u>		
Pressure Setting -	<u>107</u>	<u>SE1</u>	<u>131</u>	<u>SE1</u>	<u>P</u>		
Speed/Pre-Heat - <u>700 70PMIN</u>							
Operator - <u>S.R.</u>	<u>122</u>	<u>SE1</u>	<u>141</u>	<u>SE1</u>	<u>P</u>		
Machine - <u>X-27</u>	<u>130</u>	<u>SE1</u>	<u>134</u>	<u>SE1</u>	<u>P</u>		
Time - <u>4:45pm</u>	<u>116</u>	<u>SE1</u>	<u>135</u>	<u>SE1</u>	<u>P</u>		
Temp - <u>475</u>	<u>123</u>	<u>SE1</u>	<u>138</u>	<u>SE1</u>	<u>P</u>		
Pressure Setting -	<u>125</u>	<u>SE1</u>	<u>144</u>	<u>SE1</u>	<u>P</u>		
Speed/Pre-Heat - <u>475</u>							
Operator -							
Machine -							
Time -							
Temp -							
Pressure Setting -							
Speed/Pre-Heat -							



# **Seaming and Non-Destructive Test Report**



**Daily Seaming & Non-Destructive Seam Test Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Construction Observer: SAM DAIGLER

Material: ATAFAC GOMIC HOPE

Weather: CLOUDY

Initial Air Pressure: 30 psi (min) to 35 psi (max)  
 Allowable Pressure Drop: 2 psi  
 Test Duration: 5 minutes

Phone: (716) 773-6872 / Fax: (716) 773-6873 www.daiglerengineering.com

DATE: 7-23-19

Previous sheets total seam length: NA

LEACHATE STORAGE AND TRANSFER AREA 3:21

Panels Adjacent Seam Number	Welder/Machine ID	Seam Type Ext./Fus	Finish Time	Seam Length	Daily Cumulative Seam Length	Tested By	Seam Testing				Pass/Fail	Vacuum Box Tested	Destructive Sample No. and Location/Comments	
							Pressure Start	Pressure End	Pressure Drop	Time Start				
1/2	JK W52	Fus	1:15pm	70'	70'	NICK	32	31	1	3:16	3:26	PASS		1:37pm START
2/3	J5 W52	Fus	1:52pm	69'	139'	NICK	34	34	0	3:19	3:24	PASS		1:47pm START
3/4	J5 W52	Fus	2:01pm	69'	208'	NICK	32	30	2	3:29	3:34	PASS		1:54pm START
5/6	J5 W52	Fus	2:08pm	34'	242'	KO	33	30	3	3:33	3:38	FAIL		2:02pm START
4/5	J5 W52	Fus	2:12pm	33'	275'	KO	35	35	0	3:55	4:00	PASS		2:07pm START
4/6	J5 W52	Fus	2:17pm	36'	311'	KO	31	31	0	4:00	4:05	PASS		2:12pm START
6/7	J5 W52	Fus	2:37pm	60'	371'	KO	32	31	1	4:04	4:09	PASS		2:12pm START
7/8	J5 W52	Fus	2:45pm	52'	423'	KO	32	32	0	4:08	4:13	PASS		2:38pm START
8/9	J5 W52	Fus	2:53pm	50'	473'	KO	34	33	1	4:15	4:20	PASS		2:48pm START
9/10	J5 W52	Fus	3:03pm	49'	522'	KO	31	31	0	4:18	4:23	PASS		2:58pm START
10/11	J5 W52	Fus	3:14pm	43'	565'	KO	35	34	1	4:25	4:30	PASS		3:08pm START
11/12	J5 W52	Fus	3:29pm	25'	590'	KO	31	30	1	4:27	4:32	PASS		3:16pm START
5/16						KO	35	35	0	3:47	4:02	PASS		Moved needle up and passed
														- AIR LEAKING AT GAUGE - RETESTED





# **Repair Report**







# **Destructive Seam Test Report**





**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering	<b>Date:</b>	7/24/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	DS#1 7/23/19 P6/P7	<b>Lab ID No.:</b>	19-611
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	75 deg F	<b>Liner:</b>	HDPE 60 mil

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.986	109	110.5	SE1
	3	0.987	106	107.5	SE1
	5	0.991	111	112.1	SE1
	7	0.990	112	113.1	SE1
	9	0.990	107	108.1	SE1
			<b>109.0</b>	<b>110.3</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.991	125	126.3	SE1	10.696	1070
	4	0.988	126	127.5	SE1	11.6	1160
	6	0.991	131	132.0	SE1	5.461	546
	8	0.990	129	130.3	SE1	11.227	1123
	10	0.988	129	130.6	SE1	11.733	1173
		<b>Average</b>	<b>128.0</b>	<b>129.4</b>			

<b>Rupture Mode Selection</b>	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**





# **Appendix K**

## **Cushion Geotextile Pre-Construction Documentation**



# **MQA Data**





SKAPS Industries (Nonwoven Division)  
335, Athena Drive  
Athens, GA 30601 (U.S.A.)  
Phone (706) 354-3700 Fax (706) 354-3737  
E-mail: contact@skaps.com

**May 15, 2019**

**Greenridge Generation, LLC**

590 Plant Road  
Dresden, NY 14441  
**PO : 19-0058HS**

Dear Sir/Madam:

This is to certify that SKAPS GE116 is a high quality needle-punched nonwoven geotextile made of 100% polypropylene staple fibers, randomly networked to form a high strength dimensionally stable fabric. SKAPS GE116 resists ultraviolet deterioration, rotting, biological degradation. The fabric is inert to commonly encountered soil chemicals. Polypropylene is stable within a pH range of 2 to 13. SKAPS GE116 conforms to the property values listed below:

<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>UNITS</b>	<b>M.A.R.V. Minimum Average Roll Value</b>
Weight	ASTM D 5261	oz/sy (g/m <sup>2</sup> )	16.00 (543)
Grab Tensile	ASTM D 4632	lbs (kN)	380 (1.69)
Grab Elongation	ASTM D 4632	%	50
Trapezoidal Tear	ASTM D 4533	lbs (kN)	150 (0.67)
CBR Puncture	ASTM D 6241	lbs (kN)	1200 (5.34)
UV Resistance	ASTM D 4355	%/hrs	70/500

**Notes:**

\* At the time of manufacturing. Handling may change these properties.

**KOUROSH SABZEVARI**  
QUALITY CONTROL MANAGER

[www.skaps.com](http://www.skaps.com)

**Product : GE116-180**

ROLL # ASTM METHOD UNITS TARGET	WEIGHT D5261 oz/sq yd 16.00	MD TENSILE D4632 lbs. 380	MD ELONG D4632 % 50	XMD TENSILE D4632 lbs 380	XMD ELONG D4632 % 50	MD TRAP D4533 lbs. 150	XMD TRAP D4533 lbs 150	CBR PUNCTURE D6241 lbs. 1200
57326.1	16.12	432	74	453	82	154	165	1235
57326.2	16.12	432	74	453	82	154	165	1235
57326.3	16.12	432	74	453	82	154	165	1235
57326.4	16.12	432	74	453	82	154	165	1235
57326.5	16.67	436	78	461	86	154	165	1235
57326.6	16.67	436	78	461	86	154	165	1235
57326.7	16.67	436	78	461	86	154	165	1235
57326.8	16.67	436	78	461	86	154	165	1235
57326.9	16.67	436	78	461	86	154	165	1235
57326.10	16.18	430	72	455	80	156	167	1210
57326.11	16.18	430	72	455	80	156	167	1210
57326.12	16.18	430	72	455	80	156	167	1210
57326.13	16.18	430	72	455	80	156	167	1210
57326.14	16.18	430	72	455	80	156	167	1210
57326.15	16.65	438	76	465	90	156	167	1210
57326.16	16.65	438	76	465	90	156	167	1210
57326.17	16.65	438	76	465	90	156	167	1210
57326.18	16.65	438	76	465	90	156	167	1210
57326.19	16.65	438	76	465	90	156	167	1210
57326.20	16.14	434	70	451	84	152	163	1227
57326.21	16.14	434	70	451	84	152	163	1227
57326.22	16.14	434	70	451	84	152	163	1227

\*All values are MARV.

# **Conformance Data**





# RSA Geolab

## GEOTEXTILE CONFORMANCE TESTING

Project: Lockwood Ash Disposal (Greenridge Generation) Proj. No. 908  
 Client: Daigler Engineering, PC Lab No.: 19-193  
 Date: 6-6-19  
 Sample: 16 oz Cushion Geotextile Roll#: 57326.11  
 Test Condition: Moisture Equilibrium

### GRAB BREAKING LOAD & ELONGATION

ASTM D4632

Specimen	Machine Direction		Cross Machine Direction	
	Breaking Load (lbs.)	Apparent Elongation %	Breaking Load (lbs.)	Apparent Elongation %
1	548.4	77.7	563.1	92.3
2	585.1	80.0	540.0	91.3
3	577.1	76.7	580.9	94.3
4	572.1	79.7	497.5	94.0
5	563.1	77.7	484.6	88.0
6	540.3	79.3	508.8	91.3
7	567.6	82.0	532.9	92.7
8	585.7	72.7	508.3	95.7
9	591.0	79.7	565.7	94.0
10	567.9	83.3	553.7	89.7
Average	569.8	78.9	533.6	92.3

### TRAPEZOIDAL TEARING STRENGTH

ASTM D4533

Specimen	Machine Direction	Cross Machine Direction
	Breaking Load (lbs.)	Breaking Load (lbs.)
1	212.1	308.4
2	236.2	244.0
3	298.4	265.0
4	243.1	240.0
5	221.8	264.0
6	251.4	258.2
7	260.3	249.7
8	243.0	271.3
9	272.2	300.9
10	226.0	262.1
Average	246.5	266.4

### PUNCTURE STRENGTH

ASTM D6241

Load (lbs.)	1	2	3	4	5	Average
		1628.1	1644.3	1882.8	1550.9	1550.9
	1743.0	1687.5	1701.8	1749.1	1812.4	1695.1

### FABRIC WEIGHT

ASTM D5261

Specimen	1	2	3	4	5	Average
Unit Weight (oz/yd <sup>2</sup> )	16.73	16.04	16.99	16.96	16.42	16.63

Remarks: Sample Size 12" x 12" (approx.)

Tested By: EE/MF Entered By: KH Checked By: KP



# **Appendix L**

## **Leachate Storage and Transfer Area Cushion Geotextile Construction Documentation**



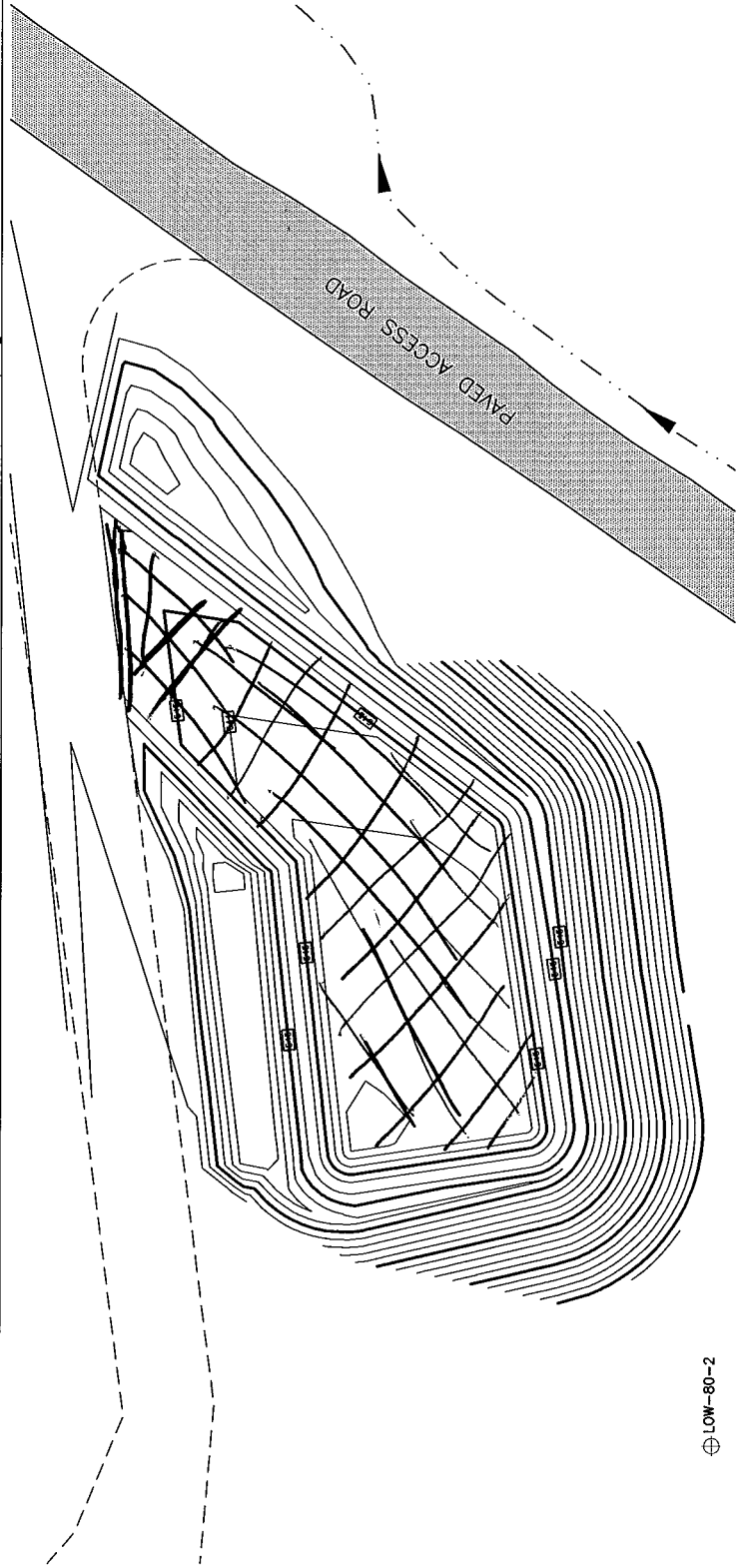
# **Subgrade Acceptance Form**



SUBGRADE ACCEPTANCE CERTIFICATION

I HEREBY CERTIFY THAT I HAVE INSPECTED THE Geotextile SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS Geotextile SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.  
 I ALSO CERTIFY THAT THE SURFACE COVERED BY THE Geotextile IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL.  
 THE Geotextile SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL

CONTRACTOR: <del>Verdugo</del> <u>CHENANGO CONTRACTING</u> <u>VERBALLY APPROVED</u>	CONSTRUCTION OBSERVER: <u>Paul Verdu</u> <u>Verdu@ny.com</u>
DATE: <u>7/19/2019</u>	DATE: <u>7/19/2019</u>



⊕ LOW-60-2

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC

SCALE: 1"=50' REVISION # 0

April 2019

TOWN OF TORREY

YATES COUNTY

NEW YORK

LSTA SUBGRADE ACCEPTANCE FORM

COA/CQC PLAN

FIGURE 5-2





# **Appendix M**

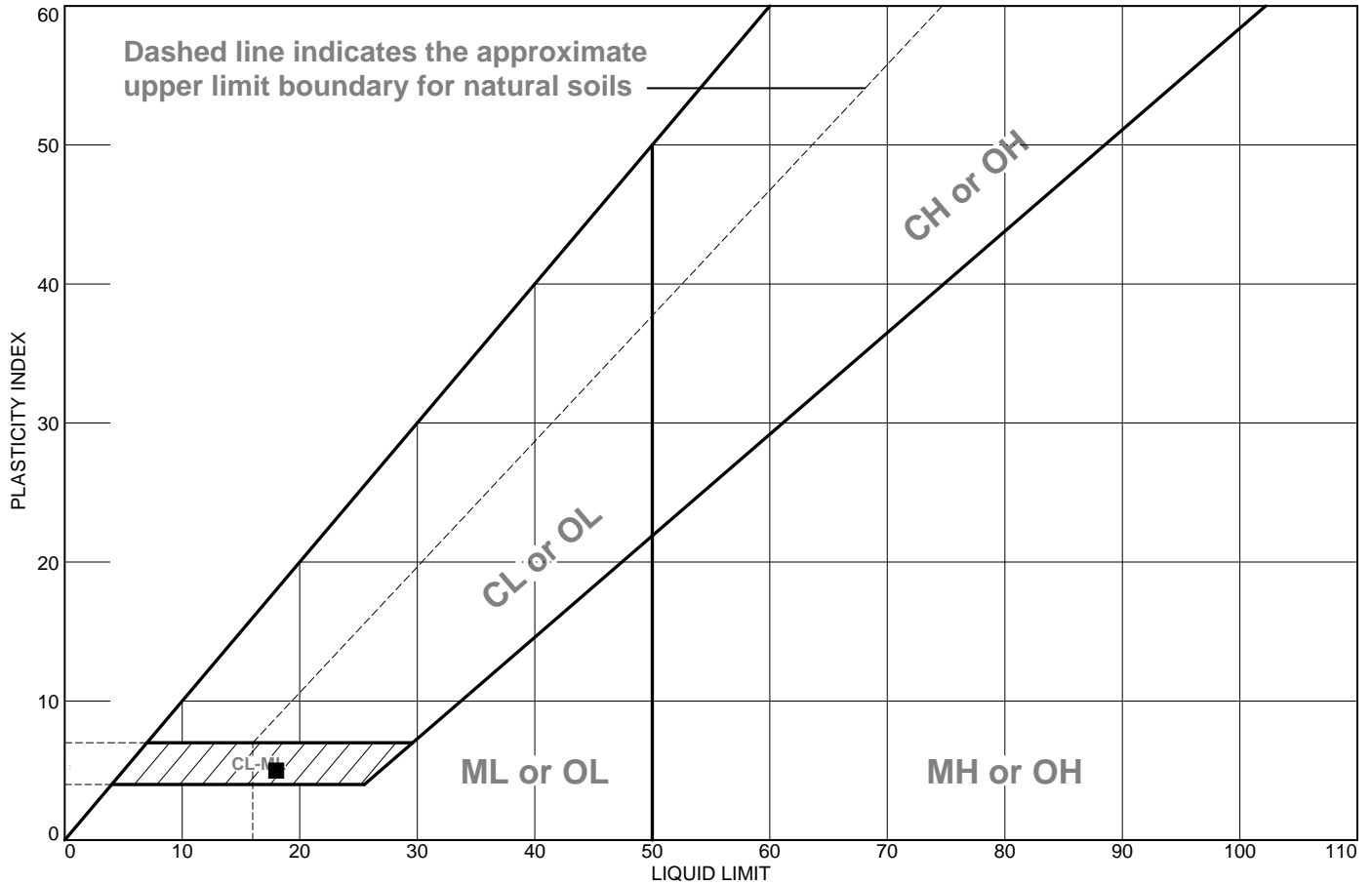
## **Soil and Stone Aggregate Documentation**







# LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Light Olive Brown silty sand with gravel	NV	NP	NP	52.6	21.9	SM
■	Brown silty clayey gravel with sand	18	13	5	24.0	13.1	GC-GM

**Project No.** 908      **Client:** Daigler Engineering, P.C.  
**Project:** Lockwood Hills, LLC  
**● Location:** 19-S-Onsite Soil-C-01  
**■ Location:** 19-G-City Hill-C-01

---

**RSA Geolab**  
 Union, New Jersey

**Remarks:**  
 ■ 6-4-19

Figure

**Tested By:** EE      **Checked By:** KP







<b>RSA Geolab</b>		<b>MOISTURE CONTENTS</b>	
		TEST METHOD ASTM D-2216	
CLIENT:	Daigler Engineering, P.C.	DATE:	04-Jun-19
PROJECT:	Lockwood Hills, LLC	PROJECT #	908

HOLE #/ SAMPLE #	19-G-City Hill-C-01	19-S-Onsite Soil-C-01			
DEPTH					
WET WGT. + tare (gms.)	1895.4	650.2			
DRY WGT. + tare (gms.)	1804.5	568.7			
WGT. WATER (gms.)	90.9	81.5	0.0	0.0	0.0
TARE (gms.)	13.9	7.6			
DRY WGT. (gms.)	1790.6	561.1	0.0	0.0	0.0
MOISTURE CONTENT	5.1%	14.5%			

HOLE #/ SAMPLE #					
DEPTH					
WET WGT. + tare (gms.)					
DRY WGT. + tare (gms.)					
WGT. WATER (gms.)	0.0	0.0	0.0	0.0	0.0
TARE (gms.)					
DRY WGT. (gms.)	0.0	0.0	0.0	0.0	0.0
MOISTURE CONTENT					

Performed by: EE      Entered by: KH      Checked by: KP



## Lockwood Hills Settling Pond Materials Bid

**Pit Location:** 2199 State Route 14  
Penn Yan, NY 14527

Located about 1.5 miles south of the Lockwood Hills Site.

**Production and Delivery:** The larger quantity of material would take about 2 weeks total time to make, and everything else would be a week or less. We would just need to know when the material would be needed. Deliver can be very flexible since the site is so close. At least a week notice for the larger quantity of material would be preferred. The materials with smaller quantities can be scheduled a day or 2 before they are needed.

**Payment:** Due within 30 days from the date of the invoice.

### Material Specifications and Information:

**Note:** All specifications are from in house testing or testing from prior years, we will provide up to date testing results if we are the successful bidder.

Type 1 Stone- 3" Minus Crushed or Round Gravel

GRADATION			
REG. SAMPLE DESIGNATION			
SIEVE SIZES	4" / 100.0mm	% PASSING BY WEIGHT	100
	3" / 75.0mm		100
	2" / 50.0mm		93
	1.5" / 37.5mm		
	1" / 25.0mm		78
	3/4" / 19.0mm		
	1/2" / 12.5mm		60
	1/4" / 6.3mm		47
	#10 / 2.00mm		34
	#20 / 0.850mm		27
	#40 / 0.425mm		22
	#100 / 0.150mm		13
	#200 / 0.075mm		9
QUALITY	MEAN		
Mg So <sub>4</sub> Soundness % Loss by Wt.		13	
Plasticity Index		NP	
PH		8.5	

## Type 2 Stone- 2" Minus Crushed or Round Gravel

<u>Sieve Size</u>	<u>Sieve Size (mm)</u>	<u>% Passing by Dry Weight Sample # RL-11853</u>
3"	75.0	100
2"	50.0	100
1 1/2"	37.5	100
1"	25.0	95
3/4"	19.0	93
1/2"	12.5	83
3/8"	9.50	76
1/4"	6.25	64
#4	4.75	56
#10	2.00	40
#20	0.850	32
#40	0.425	27
#50	0.180	24
#100	0.150	18
#200	0.075	12

## No. 1 Stone- #1 Crushed Washed Stone

## 1) Sample Identification (ASTM D-2488-Visual-Manual):

Sample ID	Sample Type	Material Source
RL-12384	#1 Round Stone	City Hill Gravel Pit

## 2) Mechanical Analysis (ASTM C-136 &amp; D-1140):

	Percent Passing by Weight
Sieve Size	RL-12384
1"	100
3/4"	99
1/2"	66
3/8"	30
1/4"	4
No. 4	2
No. 10	1
No. 200	0.8

## Ballast Sand- Ice Control Sand

## 1) Sample Identification (ASTM D-2488-Visual-Manual):

Sample ID	Sample Type	Material Source
RL-12386	Ice Control Sand	City Hill Gravel Pit

## 2) Mechanical Analysis (ASTM C-136 &amp; D-1140):

Sieve Size	Percent Passing by Weight
	RL-12386
1/2"	100
3/8"	99
1/4"	97
No. 4	86
No. 10	53
No. 20	33
No. 40	19
No. 50	12
No. 100	4
No. 200	1.5

Low Permeability Soil and Light Stone Fill: We do not have any results on those materials currently. Those can be provided if we are awarded the project.



# **Appendix N**

## **Piping and Appurtenances Documentation**



# **Pipe Material Information**



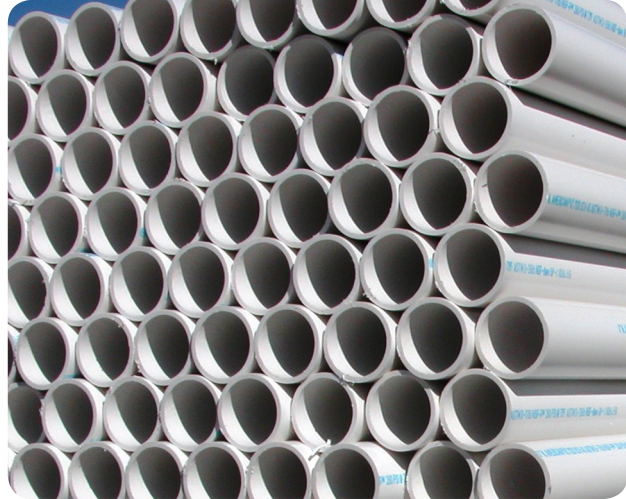




**ASTM D1785/D2665 Sch. 40 PVC Pressure/DWV Pipe  
ASTM D1785 Sch. 80 PVC Pressure Pipe  
SOLVENT WELD**

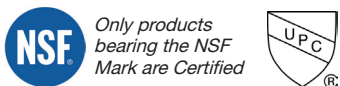
North American Pipe Corporation's ASTM D1785 Solvent Weld PVC Pipe product line is manufactured to meet the needs of residential, commercial, & industrial plumbing systems, and other pressure applications. With top quality raw materials and modern processing technology, our ASTM D1785 pipe meets all industry standards in addition to our own rigorous quality control standards.

For sizes 1 1/4" and larger, our ASTM D1785 Schedule 40 pipe is also dual rated to ASTM D2665 for DWV applications. This gives the designer, installer, and end user the flexibility of one product for two distinct applications. North American Pipe produces ASTM D1785 Solvent Weld pipe in both solid wall and various perforated styles.



Short Form Specification		
<b>Pipe Standard:</b>	ASTM D1785 & ASTM D2665** Sch. 40	ASTM D1785 Sch. 80
<b>Applications:</b>	Water DWV**	Water
<b>Diameter Std.:</b>	Iron Pipe Size (IPS)	
<b>Nominal Sizes:</b>	1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2", 3", 4", 5", 6", 8", 10", 12", 14", 16", 18", 20", 24"	
<b>Pressure Ratings:</b>	See Next Page	
<b>Length:</b>	10' or 20'	
<b>Color:</b>	White	Gray
<b>Pipe Compound:</b>	ASTM D1784 Cell Class 12454	
<b>Pipe Joint Std.:</b>	ASTM D2672	
<b>Pipe Options:</b>	Solid Wall Plain End (M x M) Solid Wall Bell End (M x F) 2 Hole Perforated Bell End (M x F) 3 Hole Perforated Bell End (M x F)	
<b>Certifications:</b>	NSF 14 & NSF 61 IAPMO Uniform Plumbing Code*	
<b>Installation Std.:</b>	ASTM D2774 & ASTM D2855	

\*IAPMO Uniform Plumbing Code listed products must be requested at time of order.  
\*\*Sizes 1/2", 3/4", 1" & 5" are not included in the ASTM D2665 DWV pipe standard.



**USE OF PVC PIPE IN EXHAUST SYSTEMS**

**WARNING:** Failure to follow these instructions exactly could result in serious injury, death, or property damage.

**WARNING:** Flue gas temperature should not exceed 140° Fahrenheit. PVC pipe exposed to temperatures higher than 140° Fahrenheit may melt or change shape, resulting in leakage of exhaust fumes and property damage.

**WARNING CARBON MONOXIDE POISONING HAZARD:** Vent pipe must be properly installed in accordance with all local and national plumbing and HVAC installation standards and codes.

North American Pipe Corporation assumes no responsibility for equipment installed in violation of any code or regulation.

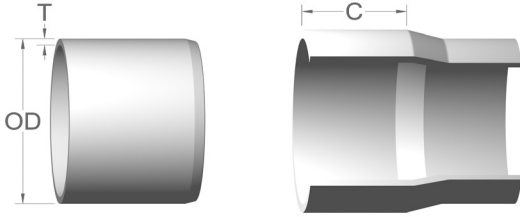
**NorthAmericanPipe.com**

1.855.624.7473 PL-PS-001 0117

North American Pipe Corporation, a Westlake company  
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**ASTM D1785/D2665 Sch. 40 PVC Pressure/DWV Pipe  
ASTM D1785 Sch. 80 PVC Pressure Pipe  
SOLVENT WELD**



**Notes:**

1. These dimensions are for estimating purposes only. All dimensions are in inches unless otherwise specified.
2. ASTM Pressure Rating @ 73°F and includes 2:1 safety factor.
3. Internal diameter calculated using nominal outside diameter and minimum wall thickness.

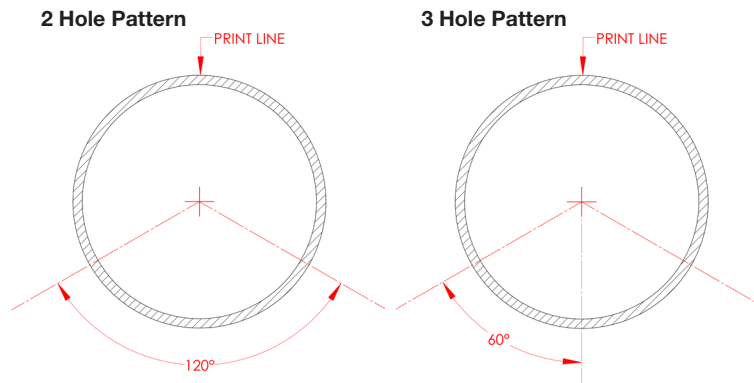
**D1785 PIPE DIMENSIONS & PERFORMANCE**

Nominal Size	Outside Diameter (OD)	Class	Pressure Rating (psi)	Min. Wall Thickness (T1)	Internal Diameter (ID)	Bell Depth (C)
½"	0.840	Sch. 40	600	0.109	0.622	1.750
		Sch. 80	850	0.147	0.546	
¾"	1.050	Sch. 40	480	0.113	0.824	2.500
		Sch. 80	690	0.154	0.742	
1"	1.315	Sch. 40	450	0.133	1.049	2.500
		Sch. 80	630	0.179	0.957	
1¼"	1.660	Sch. 40	370	0.140	1.380	2.500
		Sch. 80	520	0.191	1.278	
1½"	1.900	Sch. 40	330	0.145	1.610	2.500
		Sch. 80	470	0.200	1.500	
2"	2.375	Sch. 40	280	0.154	2.067	3.250
		Sch. 80	400	0.218	1.939	
2½"	2.875	Sch. 40	300	0.203	2.469	3.500
		Sch. 80	420	0.276	2.323	
3"	3.500	Sch. 40	260	0.216	3.068	4.250
		Sch. 80	370	0.300	2.900	
4"	4.500	Sch. 40	220	0.237	4.026	5.500
		Sch. 80	320	0.337	3.826	
5"	5.563	Sch. 40	190	0.258	5.047	6.000
		Sch. 80	290	0.375	4.813	
6"	6.625	Sch. 40	180	0.280	6.065	7.000
		Sch. 80	280	0.432	5.761	
8"	8.625	Sch. 40	160	0.322	7.981	7.500
		Sch. 80	250	0.500	7.625	
10"	10.750	Sch. 40	140	0.365	10.020	8.500
		Sch. 80	230	0.593	9.564	
12"	12.750	Sch. 40	130	0.406	11.938	10.000
		Sch. 80	230	0.687	11.376	
14"	14.000	Sch. 40	130	0.437	13.126	10.000
16"	16.000	Sch. 40	130	0.500	15.000	10.000
18"	18.000	Sch. 40	130	0.562	16.876	12.000
20"	20.000	Sch. 40	120	0.593	18.814	12.000
24"	24.000	Sch. 40	120	0.687	22.626	12.000



**ASTM D1785/D2665 Sch. 40 PVC Pressure/DWV Pipe  
ASTM D1785 Sch. 80 PVC Pressure Pipe  
SOLVENT WELD**

D1785 PIPE PERFORATION PATTERNS					
Nominal Size	Perforation Rows	Circumferential Hole Spacing	Longitudinal Hole Spacing (in)	Hole Diameter (in)	Inlet Area (in <sup>2</sup> /ft pipe)
4"	2	120°	5.000	0.500	0.942
	3	60°-60°	5.000	0.500	1.414
6"	2	120°	5.000	0.500	0.942
	3	60°-60°	5.000	0.500	1.414
8"	2	120°	5.000	0.500	0.942
	3	60°-60°	5.000	0.500	1.414



**PRODUCT SPECIFICATION**



# **PVC Gate Valve Material Information**





**Gate Valve**

**Specifications**  
**Sizes:** 1-1/2" - 14"  
**Body:** High Impact PVC  
**Models:** Flanged (ANSI)

**Types/Sizes:** "P" Type: PP, 1-1/2" - 14"  
**Seals:** EPDM, FKM(Optional)

Sizes 1-1/2" - 14" **PVC/PP/EPDM/FKM**  
 NSF-61 Certified

**Standard Features (Sizes 1-1/2" - 14")**

- Straight through flow with minimal pressure drop
- Unique sliding cylindrical plug design provides larger seating area than conventional gate valves
- Made of durable, corrosion resistant plastic
- No metal to media contact anywhere in valve
- Clean-out (drain) plug in bottom area of valve body
- Rated for full vacuum service
- Lightweight for easier and economical installation
- Positive bubble-tight shut-off
- Visual position indicator

**Options**

- 2" square operating nut
- Stem extensions
- Locking handles
- Electric actuation, up to 3"
- FKM seals

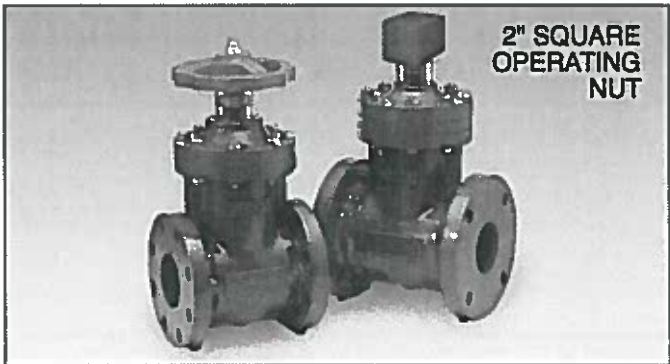
**Caution**

- Never remove valve from pipeline under pressure.
- Always wear protective gloves and goggles.

**Type P Parts (Sizes 1-1/2" - 6")**

PARTS			
NO.	DESCRIPTION	PCS.	MATERIAL
1	Body	1	HI-PVC
2	Gate (Plug)	1	PP
3	Stem	1	HI-PVC
4	Bonnet (A)	1	HI-PVC
5	Bonnet (B)*	1	HI-PVC
6	Thrust Bearing	1 Set	PP
7	Bolt, Nut, Washer	1	Stainless Steel 304
8	Hand Wheel	1	PP
9	Indicating Cover	1	PC
10	Indicating Ring	1	PVC
11	Guide Pin	1	Stainless Steel 304
12	Guide Pin Holder	1	PVC
13	Gasket	1	EPDM
14	O-Ring (A)	1	EPDM
15	Washer	1	PVC
16	Nut	1	Stainless Steel 304
17	O-Ring (B)	1	EPDM, FKM
18	O-Ring (C)	2	EPDM, FKM
23	Sheet Gasket	1	EPDM, FKM
24	Plug	1	PVC

\* Stem holder

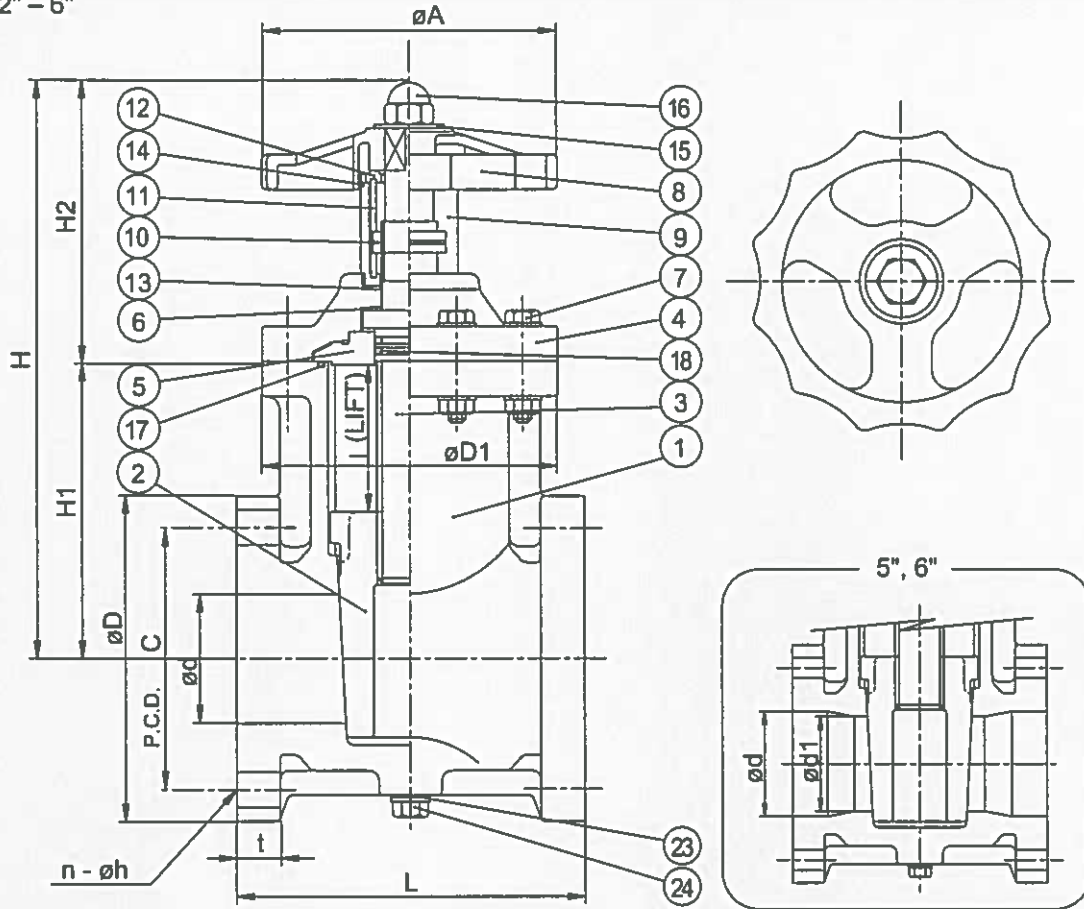




# Type P

# Gate Valves

Sizes 1-1/2" - 6"



## Troubleshooting

### What if fluid still flows when fully closed?

1. Body or plug is worn or damaged. Replace valve.
2. Seat is worn or damaged. Replace.
3. Foreign material caught at the bottom of body. Needs cleaning.

### What if handle does not engage with stem?

1. Stem damaged or broken. Replace valve..

2. Engaging part of stem and/or plug damaged or broken. Replace valve.

### What if there are leaks between bonnet and body?

1. Bolts are not tightened properly. Tighten diagonally and evenly.
2. O-ring between body and bonnet damaged or worn. Change O-ring.

## Dimensions (Sizes 1-1/2" - 6") (in.)

## Pressure vs. Temp. (psi, water, non-shock)

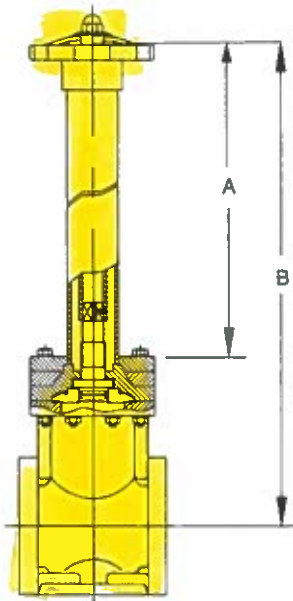
NOMINAL SIZE INCHES mm	ANSI CLASS 150														
	d	d1	D	C	n	h	L	t	D1	A	l	H1	H2	H	
1-1/2	40	1.57	-	5.00	3.88	4	0.62	6.5	0.87	4.72	4.72	1.93	4.21	5.20	9.41
2	50	1.97	-	6.00	4.75	4	0.75	7.01	0.91	5.12	5.12	2.36	5.28	5.35	10.63
2-1/2	65	2.56	-	7.00	5.50	4	0.75	7.48	0.94	6.10	6.10	2.95	5.98	5.91	11.89
3	80	2.95	-	7.50	6.00	4	0.75	7.99	0.98	6.69	6.69	3.35	6.69	6.10	12.79
4	100	3.94	-	9.00	7.50	8	0.75	9.02	1.06	7.68	7.68	4.33	8.15	6.42	14.57
5	125	4.92	4.33	10.00	8.50	8	0.88	10.24	1.06	9.25	9.25	4.61	8.94	7.09	16.03
6	150	5.91	5.12	11.00	9.50	8	0.88	10.51	1.06	10.63	10.63	5.43	10.35	7.17	17.52

NOMINAL SIZE		30° F
INCHES	mm	120° F
1-1/2 - 8	40-200	150
10	250	110
12 - 14	300-350	75

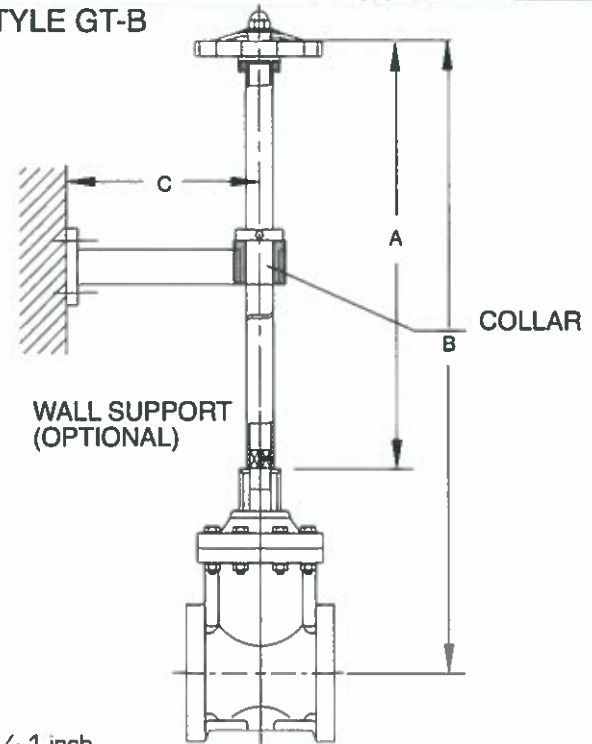
# Options

# Gate Valves

## STYLE GT-A



## STYLE GT-B



All stem extension tolerances +/- 1 inch

Please use Stem Extension Work Sheet on Page 23 when ordering any stem extension

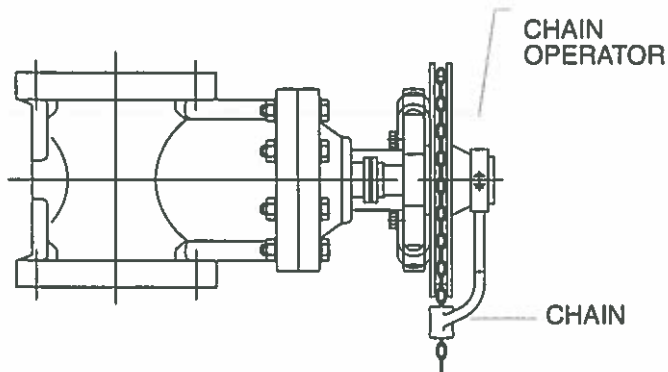
### Two-piece Stem Housing

For submerged or buried applications. PVC housing protects stem extensions from aggressive environments. Stems are available in carbon steel with baked powder epoxy coating, stainless steel (303 and 316, etc.)

### Single Stem Extensions (Non-supported)

Valve handle can be extended away from the valve for out-of-reach locations. Stems come in carbon steel with baked powder epoxy coating, stainless steel (303 and 316, etc.)

**Option:** Wall-support (patented) and collar



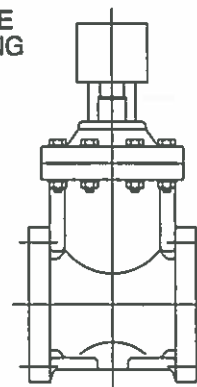
### Chain Operator

For overhead, out-of-reach locations. The valve is operated by pulling on the chain installed on round handwheel.

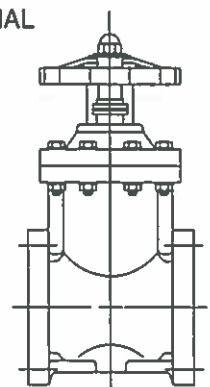
### Locking Mechanism

Prevents unauthorized cycling of a valve. Designed to be secured with a padlock. Two designs.

### 2" SQUARE OPERATING NUT



### ORIGINAL GATE VALVE



### Remote Operating Nuts

2" square configuration on valve stem, replacing the handwheel. Used for remote operation of a valve by an extended wrench.

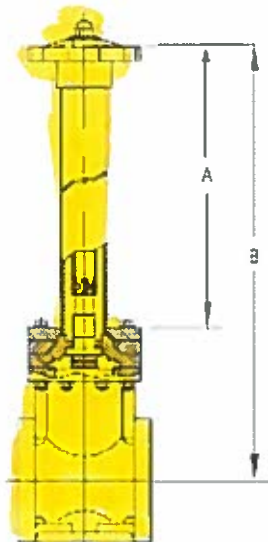
Material: 6061 aluminum, anodized finish

# Gate Valves

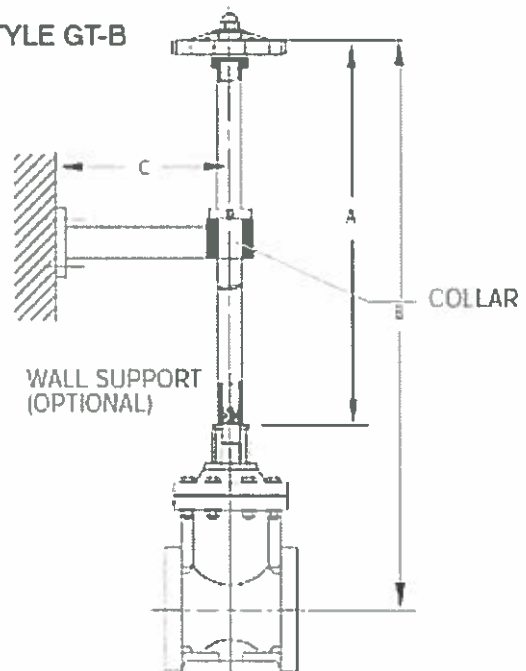
## STEM EXTENSION DATA SHEET

1. SO# \_\_\_\_\_ QTY: 1 Date: 6/25/19
2. Valve Size 4"
3. Extension Style Letter A  B
4. Extension Length 12 Ft 0 In. Dimension: A  B
5. Wall Support Length \_\_\_\_\_
6. Top Valve Style: Hand Wheel  Square Nut
7. Inner Material: \_\_\_\_\_ 316SS  Carbon Steel
8. Outer Material: Powder Coated Carbon Steel  PVC
9. Special Instructions:

STYLE GT-A



STYLE GT-B





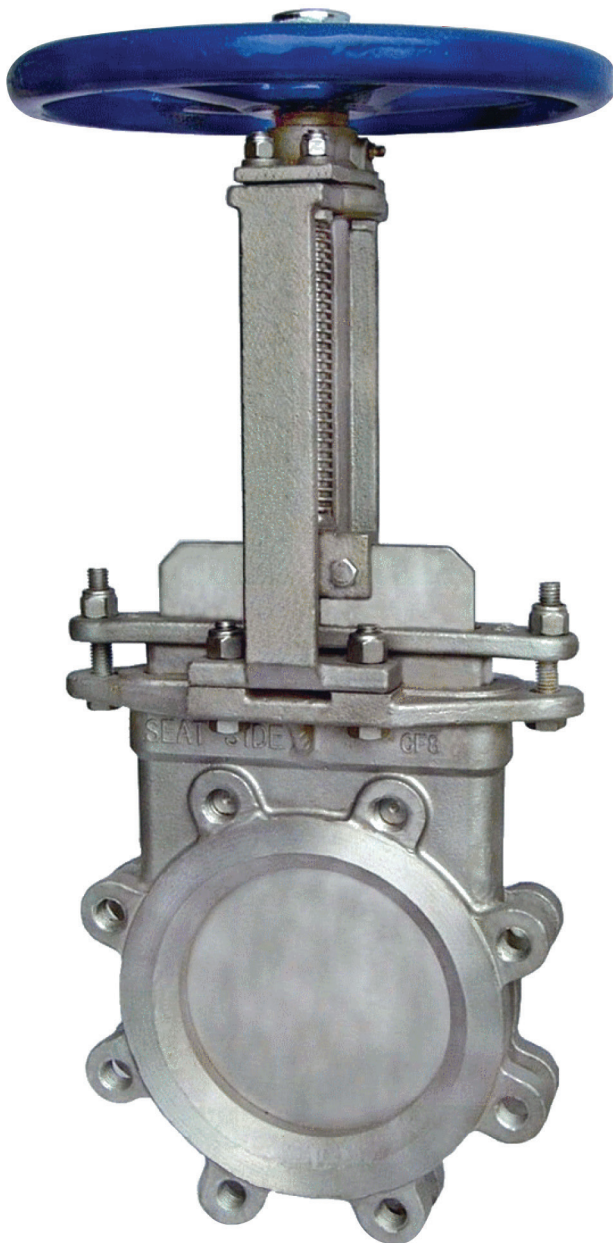


# **Stainless Steel Gate Valve Material Information**



## LVC Figure 93 Stainless Steel Metal Seated Knife Gate Valve

675 Mitchell Avenue  
Woodland, WA 98674  
Phone: 360-225-1230  
888-256-5779  
Fax: 360-225-1235  
www.henrypratt.com



### Features

- Cast stainless steel body, packing gland, and yoke.
- Heavy duty body designed to resist deflection from line loads and internal pressure.
- Body cavity, seat configuration and beveled gate design provides shut-off capability in thick media such as pulp stock and slurries, or solid media such as pellets and powders.
- Heavy duty cast stainless steel yoke will not bend or twist under extreme loads.
- Easy conversion from handwheel operator to hydraulic or pneumatic cylinder, bevel gear, chainwheel, electric motor, or fail safe spring cylinder operator using existing cast yoke.
- Enclosed bronze stem bushing provides reduced operating torque and protection of the stem bushing in harsh environments.
- Hard faced seat available to prevent galling in high cycle and/or high end pressure or abrasive applications.
- Factory installed V-Port inserts available for metering or throttling service.
- O-Ring resilient seat available.
- Precision machined stainless steel gate provides superior seating capability.
- Gate designed to withstand full 150 PSI rated pressure as required by MSS-SP-81.
- Stainless steel stem resists corrosion.
- Various wiper materials available in packing to provide gate support and stabilize packing seal.
- Standard TFE lubricated synthetic packing (TLSP) rated to 500° F and pH range of 3-11.
- Full port ID.
- MSS SP-81 Stainless Steel, Bonnetless, Flanged Knife Gate Valves.
- AWWA C520-10 Knife Gate Valves, 2in.—96in.



## LVC Figure 93 Stainless Steel Metal Seated Knife Gate Valve

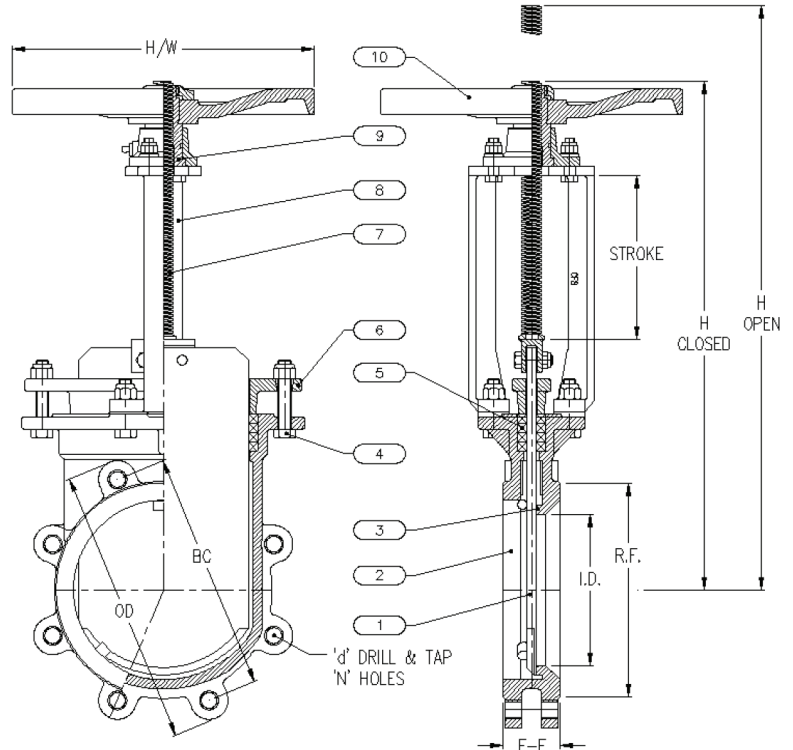
### Materials of Construction

Model	93
1 Gate	SS
2 Body	SS
3 Seat	SS
4 Bolts	SS
5 Packing	TLSP*
6 Gland	SS
7 Stem	SS
8 Yoke	SS
9 Stem Nut	Bronze
10 Handwheel	DI

\*TLSP = TFE Lubricated Synthetic Packing.

Stocked in 304 and 316 SS. 317 SS Available.

Normally supplied with handwheel for manual operation, but can be modified for chainwheel, bevel gear, fail safe spring cylinder, electric motor, hydraulic or pneumatic cylinder operator.



### Dimensions (Inches) and Weights

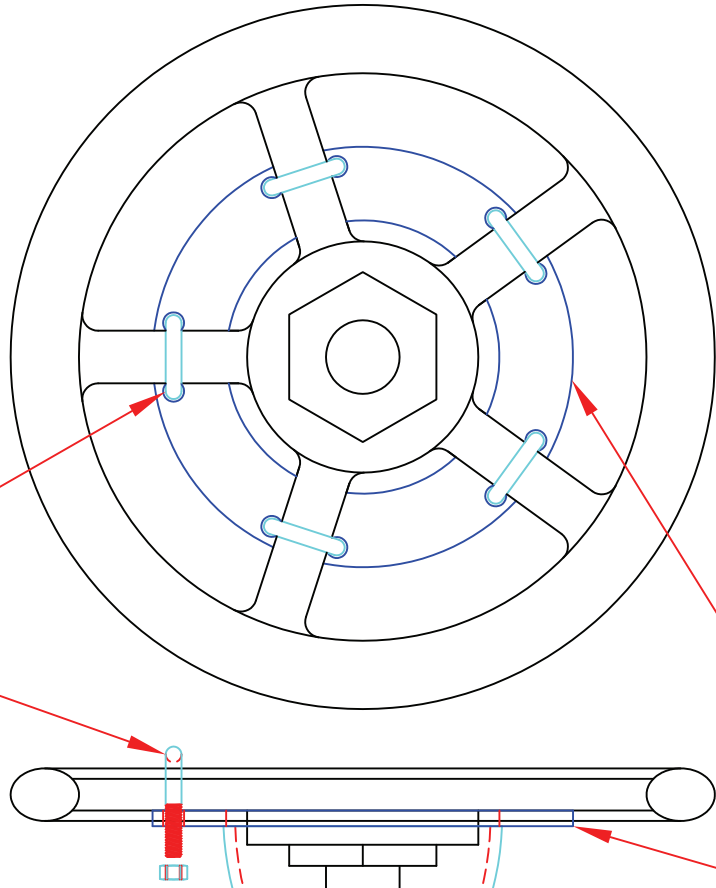
	Size	2	3	4	6	8	10	12	14	16	18	20	24
Face-to-Face	F-F	1-7/8	2	2	2-1/4	2-3/4	2-3/4	3	3	3-1/2	3-1/2	4-1/2	4-1/2
Flange OD	OD	6	7-1/2	9	11	13-1/2	16	19	21	23-1/2	25	27-1/2	32
Bolt Circle	BC	4-3/4	6	7-1/2	9-1/2	11-3/4	14-1/4	17	18-3/4	21-1/4	22-3/4	25	29-1/2
Flanged Raised Face	RF	3-5/8	5	6-3/16	8-1/2	10-5/8	12-3/4	15	16-1/4	18-1/2	21	23	27-1/4
Inside Diameter	ID	2	3	4	6	8	10	12	13-1/4	15-1/4	17-1/4	19-1/4	23-1/4
No. of Bolt Holes	N	4	4	8	8	8	12	12	12	16	16	20	20
Hole D&T Size	D	5/8"-11	5/8"-11	5/8"-11	3/4"-10	3/4"-10	7/8"-9	7/8"-9	1"-8	1"-8	1-1/8"-7	1-1/8"-7	1-1/4"-7
C/L to Top-Closed	H-CLS	14-5/8	15-1/16	16-11/16	20-3/16	23-7/16	27-3/4	31-9/16	37-3/4	43-1/8	46-3/8	50-1/8	55-11/16
C/L to Top-Open	H-OPN	17-1/8	18-9/16	21-3/16	26-11/16	31-15/16	38-1/4	44-1/16	51-3/4	58-7/8	64-3/8	69-3/4	79-7/8
Handwheel Dia.	H/W	8	8	8	12	12	16	16	20	20	20	20	20
Weight - lbs	WT	24	28	36	54	76	124	174	234	330	376	620	804
Stroke	S	2-1/2	3-1/2	4-1/2	6-1/2	8-1/2	10-1/2	12-1/2	13-7/8	16	18	20-1/8	24-3/16

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Form 13249 9/2016

U-bolts (5) with hex nuts



Fillet Weld, all around

2" Sqr. Operating Nut  
Pinned to 2" pipe

Existing valve stem  
open position

2" pipe - Length varies  
to suit customer specs.

3/8" Plate

**TRUMBULL INDUSTRIES**

P.O. BOX 1556 1040 N. MERIDIAN ROAD  
YOUNGSTOWN, OHIO 44506-1556

330-799-3333 FAX: 330-797-3215

ITEM : VALVE STEM EXTENSION

PRODUCT FAMILY : SPECIAL, 2" PIPE W/ ADAPTER

PRODUCT SIZE : FITS 16-3/4" DIA. HANDWHEEL

DRAWING NUMBER : C120793C TYPE : FABRICATION

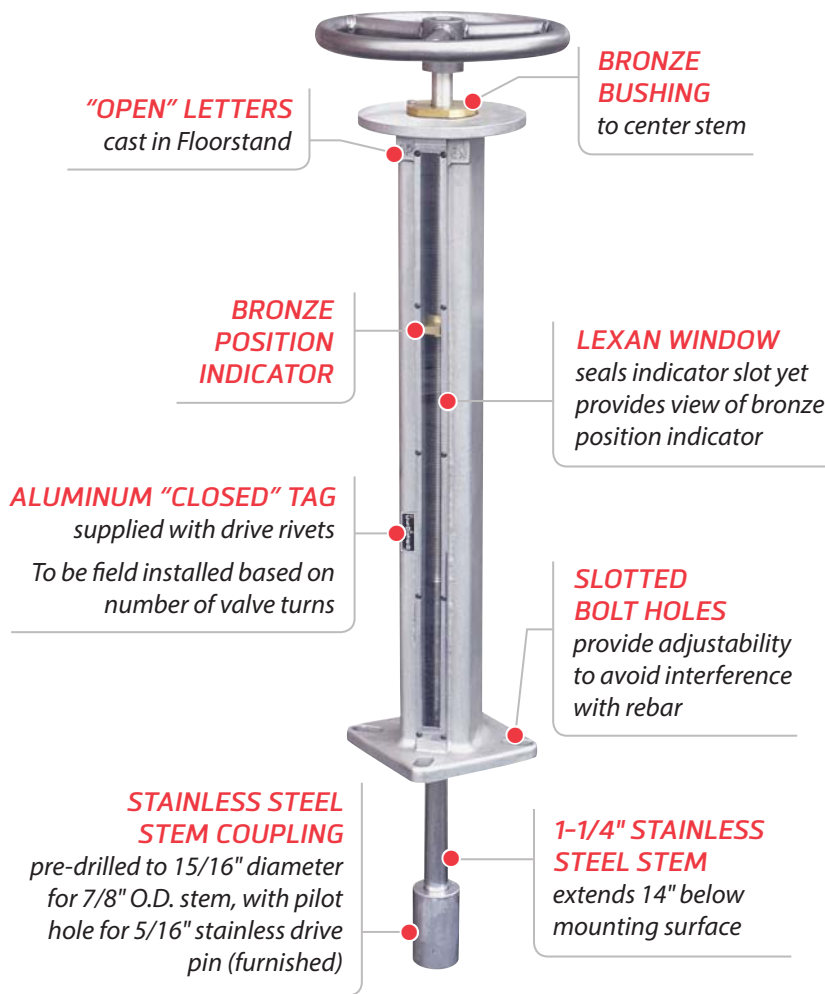
DRAWN BY : FCN REVISION : D

DATE : 11/09/06 REVISED : 10/29/08 FILE : 081029D

## 36" Stainless Indicating Floorstand

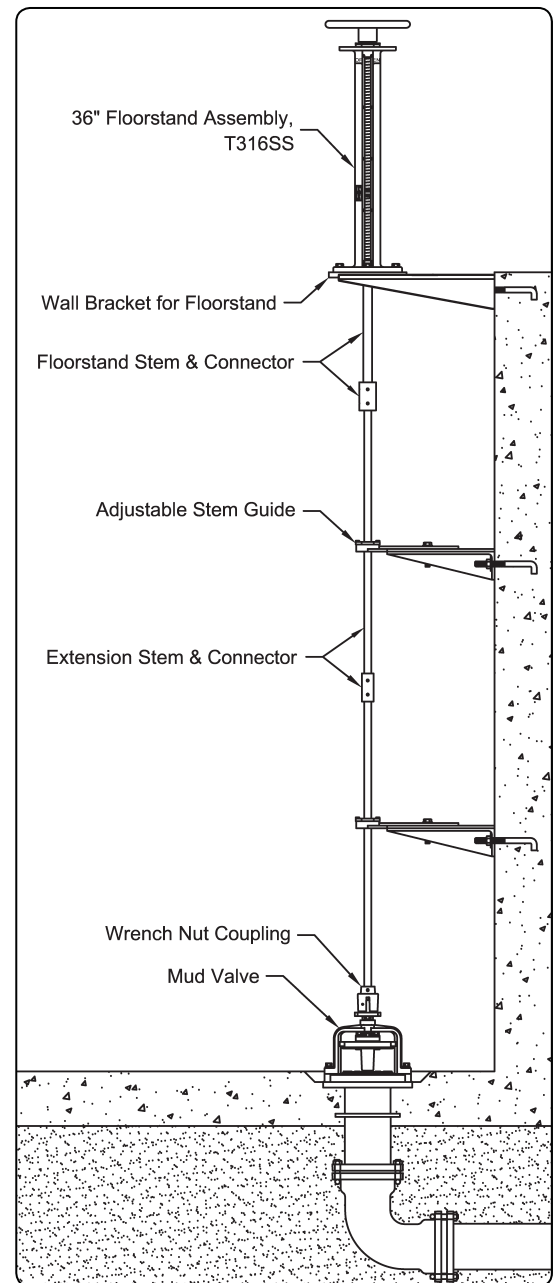
### Sealed Indicator Slot

TRUMBULL 36" STAINLESS STEEL INDICATING FLOORSTANDS are designed for installation in treatment plants and pump stations to allow operation of valves at a lower elevation. Stainless steel drive pin secures handwheel to stem. Flange can be machined to facilitate mounting of actuator, if required (also available with gear operators). Standard stem threading allows up to 196 turns; optional threading allows up to 784 turns. Also available in ductile iron (see page G-41 and G-42). See page G-28 for custom Floorstand options. See reverse side for drawing.

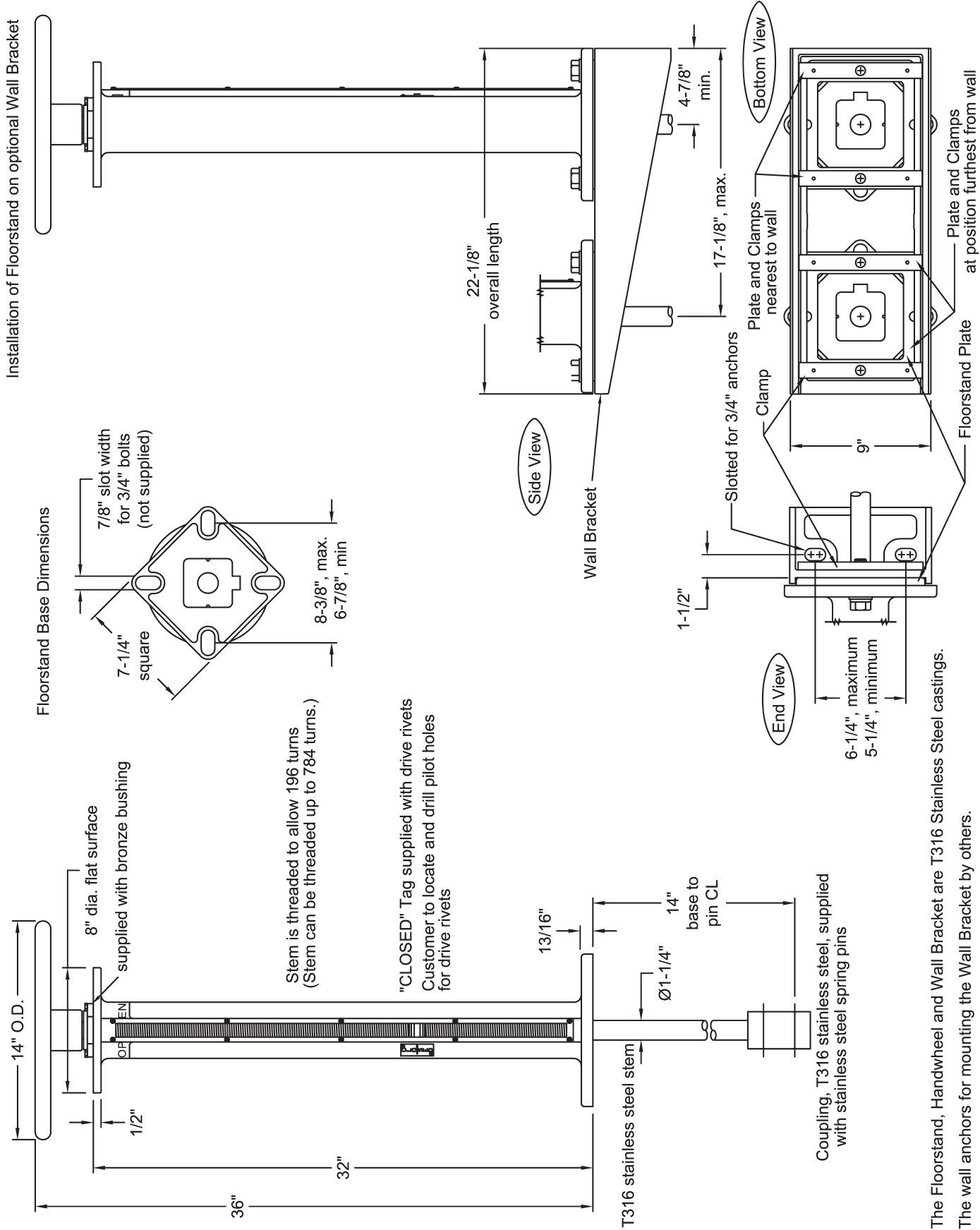


### Ordering Instructions

1. Quantity required
2. Floorstand item number: **367-2431**
3. O.D. of extension stem being used, for drilling of connecting couplings
4. Stainless steel Wall Bracket, if required: item number: **367-2461**



Typical Floorstand installation



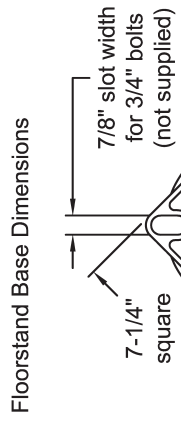
Drawn:	Drawing Revision:	
Date	Rev.	Date
5/20/08	G	11/11/2012

**TRUMBULL INDUSTRIES**  
 P.O. Box 1556  
 1040 N. Meridian Rd.  
 Youngstown, Ohio 44501

Drawn to Scale  
**INDICATING FLOORSTAND**  
**36" STAINLESS STEEL**

The Floorstand, Handwheel and Wall Bracket are T316 Stainless Steel castings.  
 The wall anchors for mounting the Wall Bracket by others.

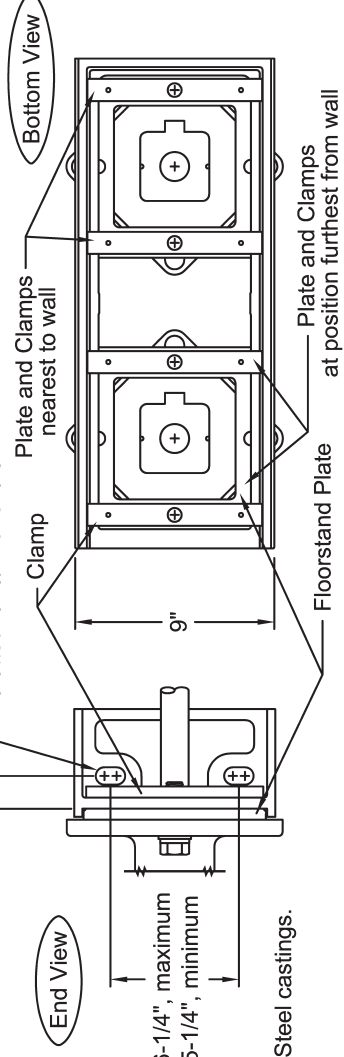
Installation of Floorstand on optional Wall Bracket



Stem is threaded to allow 196 turns  
 (Stem can be threaded up to 784 turns.)

"CLOSED" Tag supplied with drive rivets  
 Customer to locate and drill pilot holes  
 for drive rivets

Coupling, T316 stainless steel, supplied  
 with stainless steel spring pins





## **Appendix O**

### **Pipe Bridge Documentation**



# **Pipe Bridge Approval Drawings**









# **Pipe Clamp Information**



# Pipe Clamps

## B2400 - Standard Pipe Strap

**Size Range:** 1/2" (15mm) thru 24" (600mm) pipe

**Material:** Steel

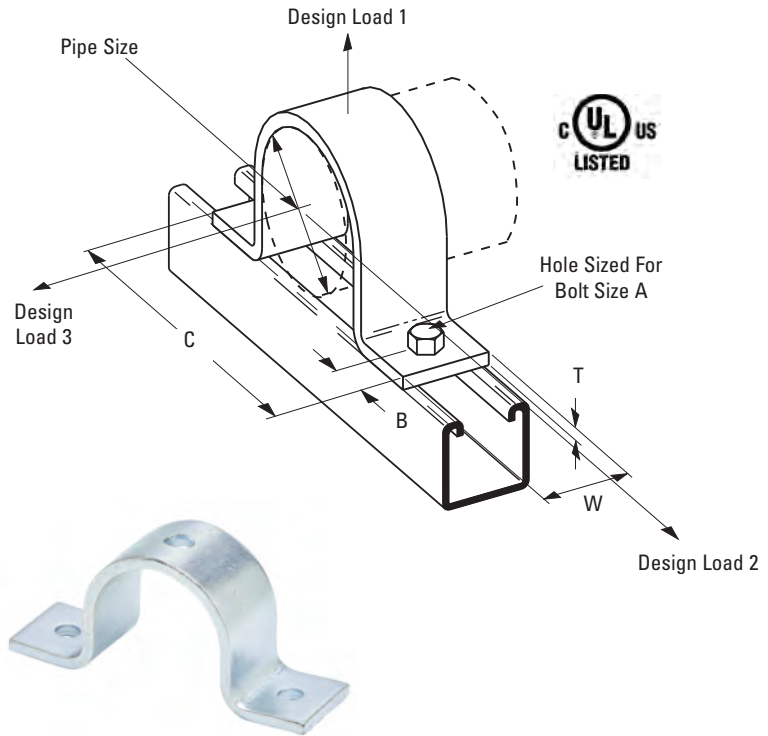
**Function:** Designed for supporting pipe runs from strut supports.

**Approvals:** Underwriters Laboratories Listed for B2400-3/4" thru B2400-8" for Design Load 1 only. Conforms to Federal Specification WW-H-171E & A-A-1192A, Type 26 and Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58, Type 26.

**Finish:** Electro-Galvanized. Contact customer service for alternative finishes and materials.

**Order By:** Part number, pipe size and finish

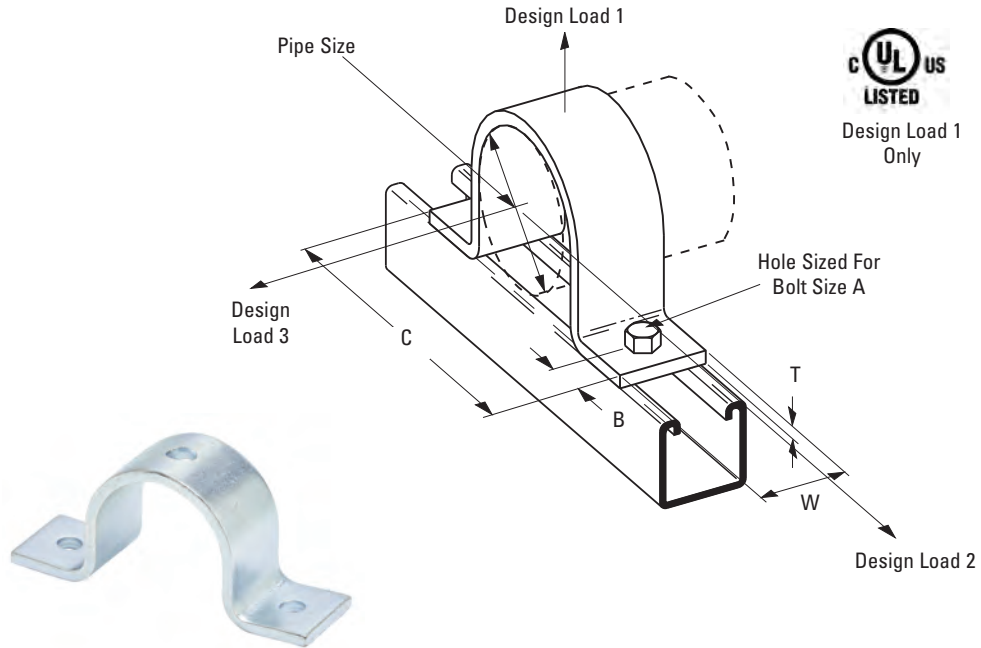
**Note:** Ductile iron sizes available. Special "B" dimensions available on request, consult factory.



Part No.	Pipe Size in. (mm)	Bolt Size A	B		C		T		W	
			in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
B2400-1/2	1/2" (15)	1/4"	7/16"	(11.1)	2 <sup>13</sup> / <sub>16</sub> "	(71.4)	10 Ga.	(3.4)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-3/4	3/4" (20)	1/4"	7/16"	(11.1)	3"	(76.2)	10 Ga.	(3.4)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-1	1" (25)	1/4"	7/16"	(11.1)	3 <sup>17</sup> / <sub>32</sub> "	(89.7)	10 Ga.	(3.4)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-1 1/4	1 1/4" (32)	1/4"	7/16"	(11.1)	3 <sup>3</sup> / <sub>4</sub> "	(95.2)	10 Ga.	(3.4)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-1 1/2	1 1/2" (40)	1/4"	7/16"	(11.1)	4 <sup>1</sup> / <sub>16</sub> "	(103.2)	10 Ga.	(3.4)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-2	2" (50)	3/8"	1 1/16"	(17.4)	5 <sup>21</sup> / <sub>32</sub> "	(143.6)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-2 1/2	2 1/2" (65)	3/8"	1 1/16"	(17.4)	6 <sup>5</sup> / <sub>32</sub> "	(156.3)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-3	3" (80)	3/8"	1 1/16"	(17.4)	6 <sup>25</sup> / <sub>32</sub> "	(172.2)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-3 1/2	3 1/2" (90)	3/8"	1 1/16"	(17.4)	7 <sup>9</sup> / <sub>32</sub> "	(184.9)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-4	4" (100)	1/2"	1 1/16"	(17.4)	7 <sup>25</sup> / <sub>32</sub> "	(197.6)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-5	5" (125)	1/2"	1 1/16"	(17.4)	8 <sup>7</sup> / <sub>8</sub> "	(225.4)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-6	6" (150)	1/2"	1 1/16"	(17.4)	9 <sup>15</sup> / <sub>16</sub> "	(252.4)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-8	8" (200)	1/2"	1 1/16"	(17.4)	11 <sup>31</sup> / <sub>32</sub> "	(304.0)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-10	10" (250)	1/2"	1 1/16"	(17.4)	14"	(355.6)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-12	12" (300)	1/2"	1 1/16"	(17.4)	16"	(406.4)	1/4"	(6.3)	1 <sup>5</sup> / <sub>8</sub> "	(41.3)
B2400-14	14" (350)	7/8"	1 5/16"	(33.3)	20 <sup>3</sup> / <sub>8</sub> "	(517.5)	3/8"	(9.5)	1 3/4"	(44.4)
B2400-16	16" (400)	7/8"	1 5/16"	(33.3)	22 <sup>3</sup> / <sub>8</sub> "	(568.3)	3/8"	(9.5)	1 3/4"	(44.4)
B2400-18	18" (450)	7/8"	1 5/16"	(33.3)	26 <sup>1</sup> / <sub>8</sub> "	(663.6)	1/2"	(12.7)	1 3/4"	(44.4)
B2400-20	20" (500)	7/8"	1 5/16"	(33.3)	28 <sup>1</sup> / <sub>8</sub> "	(714.4)	1/2"	(12.7)	1 3/4"	(44.4)
B2400-24	24" (600)	7/8"	1 5/16"	(33.3)	32 <sup>1</sup> / <sub>8</sub> "	(816.0)	1/2"	(12.7)	1 3/4"	(44.4)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

## B2400 - Standard Pipe Strap cont.



Part No.	Design Load 1		Design Load 2		Design Load 3		Approx. Wt./100	
	Lbs.	(kN)	Lbs.	(kN)	Lbs.	(kN)	Lbs.	(kg)
B2400-1/2	600	(2.67)	150	(.67)	105	(.47)	23	(10.4)
B2400-3/4	600	(2.67)	150	(.67)	105	(.47)	26	(11.8)
B2400-1	600	(2.67)	150	(.67)	120	(.53)	31	(14.0)
B2400-1 1/4	600	(2.67)	150	(.67)	120	(.53)	36	(16.3)
B2400-1 1/2	600	(2.67)	150	(.67)	120	(.53)	39	(17.7)
B2400-2	1200	(5.34)	480	(2.14)	180	(.80)	93	(42.2)
B2400-2 1/2	1200	(5.34)	480	(2.14)	180	(.80)	106	(48.1)
B2400-3	1200	(5.34)	480	(2.14)	300	(1.33)	132	(59.9)
B2400-3 1/2	1200	(5.34)	480	(2.14)	300	(1.33)	151	(68.5)
B2400-4	1500	(6.67)	600	(2.67)	450	(2.00)	160	(72.6)
B2400-5	1500	(6.67)	600	(2.67)	450	(2.00)	192	(87.1)
B2400-6	1500	(6.67)	600	(2.67)	450	(2.00)	219	(99.3)
B2400-8	2000	(8.90)	800	(3.56)	600	(2.67)	297	(134.7)
B2400-10	2000	(8.90)	800	(3.56)	600	(2.67)	465	(210.9)
B2400-12	2000	(8.90)	800	(3.56)	600	(2.67)	560	(254.0)
B2400-14	2000	(8.90)	800	(3.56)	600	(2.67)	761	(345.2)
B2400-16	2000	(8.90)	800	(3.56)	600	(2.67)	861	(390.5)
B2400-18	2000	(8.90)	800	(3.56)	600	(2.67)	1297	(588.3)
B2400-20	2000	(8.90)	800	(3.56)	600	(2.67)	1426	(646.8)
B2400-24	2000	(8.90)	800	(3.56)	600	(2.67)	1682	(762.9)

All dimensions in charts and on drawings are in inches. Dimensions shown in parentheses are in millimeters unless otherwise specified.

# **Elastomeric Pad Information**







**Specification Sheet**

<b>Material</b>	<b>M251-06 (2011) Plain Neoprene Elastomer Bridge Bearings</b>
BRP Style	Grade 2 - 50, 60 , 70 Duro and Grade 3 - 50, 60, 70
Finish	Smooth
ASTM Callout	See specification below

**Physical Properties**

Requirement	Condition			
Hardness, Original	ASTM D2240	50 ±5	60 ±5	70 ±5
Tensile, Original	ASTM D412 - MPa / PSI Min	15.5 / 2,248	15.5 / 2,248	15.5 / 2,248
Elongation, Original	ASTM D412 - %	400	350	300

**Heat Resistance, Test Method D 573, 70 h @ 100°C**

Hardness Change	Points	+ 15	+ 15	+ 15
Tensile Change	%	- 15	-15	- 15
Elongation Change	%	- 40	- 40	- 40

**Compression Set, Test Method B ASTM D395 S, max, % 22 h @ 100C**

Compression Set	%	35	35	35
-----------------	---	----	----	----

**Low Temperature Brittleness, Test Method D746 Procedure B**

Grade 0 and 2	No Test Required			
Grade 3	- 40 C°	Pass	Pass	Pass
Grade 4	- 48 C°	Pass	Pass	Pass
Grade 5	- 57 C°	Pass	Pass	Pass

Operating Temperature Range -29° - 100° C



# **Appendix P**

## **Prefabricated HDPE Outlet Structures Documentation**



# **Two by Two Foot HDPE Drain Structure**



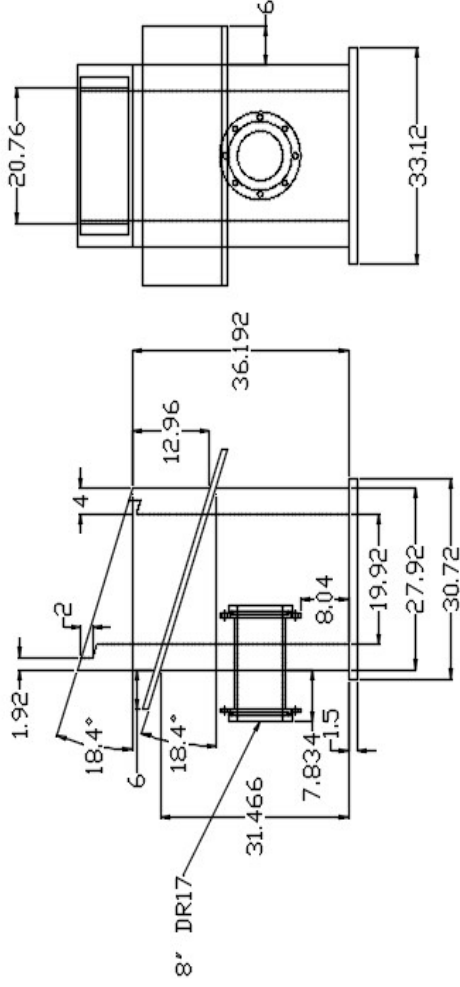
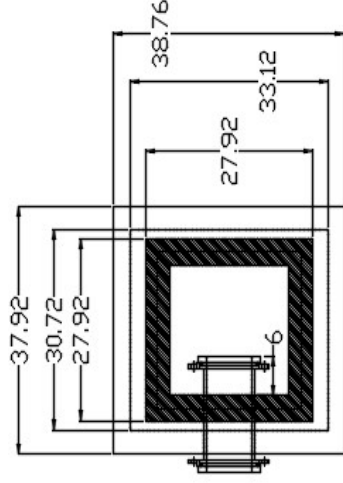


# Specified Fittings, LLC

164 West Smith Road • PO Box 28157 • Bellingham, WA 98228-0157 | Email: sales@specified.com

Bellingham: 360-398-7700 | 360-398-7051 Fax  
Stevensville: 406-777-3466 | 406-777-7181 Fax  
Mexico (Toll Free): 800-429-1705 | 800-574-1075 Fax

## SIGNED DRAWINGS MUST ACCOMPANY PURCHASE ORDER OR DIMENSIONS OF FITTINGS WILL NOT BE GUARANTEED



### **DISCLAIMER - PLEASE READ**

- 1) All dimensions approximate, subject to change without notice  
--Angle tolerance is +/- 2 degrees  
--All other dimensions to +/- 1"
- 2) This drawing only applicable if a copy is referenced at time of order.  
--Without a copy of drawing, fitting construction may differ from that shown.
- 3) Subject to Specified Fittings Standard Terms and Conditions.

6/20/2019

Description: HDPE DRAIN

Material: HDPE 4710

Size: 8" IPS FLANGE

SALES	NS
CAD TECH	DE





# **Four Foot Diameter HDPE Discharge Structure**



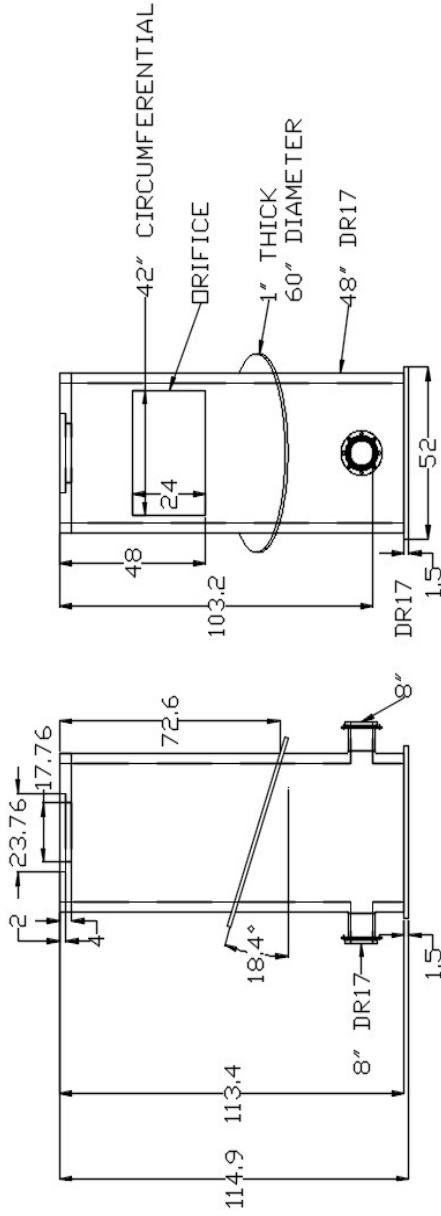


# Specified Fittings, LLC

164 West Smith Road • PO Box 28157 • Bellingham, WA 98228-0157 | Email: sales@specified.com

Bellingham: 360-398-7700 | 360-398-7051 Fax  
Stevensville: 406-777-3466 | 406-777-7181 Fax  
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### **DISCLAIMER - PLEASE READ**

- 1) All dimensions approximate, subject to change without notice  
     --Angle tolerance is +/- 2 degrees  
     --All other dimensions to +/- 1"
- 2) This drawing only applicable if a copy is referenced at time of order.  
     --Without a copy of drawing, fitting construction may differ from that shown.
- 3) Subject to Specified Fittings Standard Terms and Conditions.

6/20/2019	
Description:	DISCHARGE STRUCTURE
Material:	HDPE 4710-MADE FROM DR17
Size:	48" IPS X 8" IPS

SALES	NS
CAD TECH	DE



# **Appendix Q**

## **Precast Concrete Structures Documentation**



# **Step Aerator Concrete Inlet Structure**







Kistner Concrete Products, Inc.  
 8713 Read Road East Pembroke, NY 14056  
 Ph:585-762-8216 Fax:585-762-8315

Project: Lockwood Ash Disposal  
 Location: Torrey, NY  
 Cust # & Name: 31606 City Hill

Size: 48" x 48"  
 Type: 30"x30" cast in  
 Bid Item ID:  
 Rim: 561.2'  
 Invert: 553.56'  
 Rim to Invert: 7.64'  
 F&C & adjustment: 0.04'  
 Catch: 0.4'  
 Floor (Top): 553.16'  
 Floor (Bot): 552.66'

Str#: **4x4 Pond Inlet 6" wall**

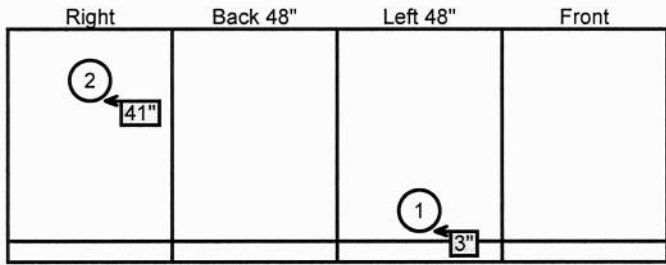
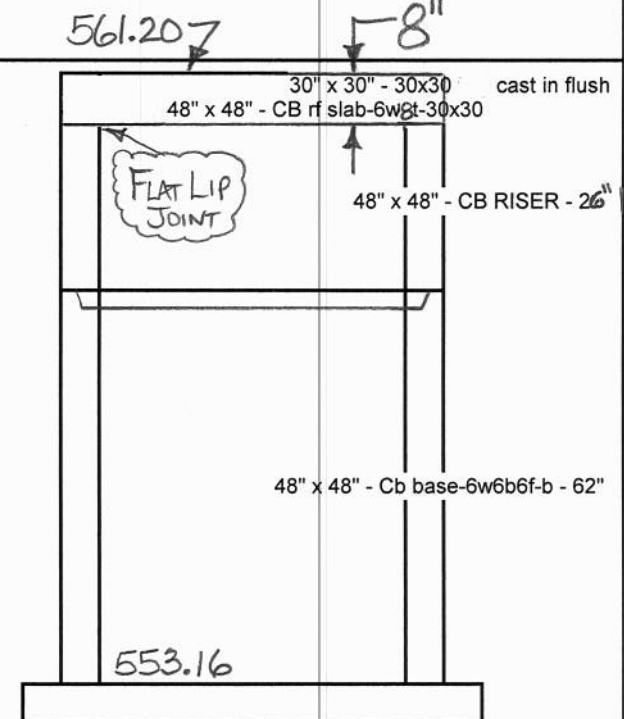
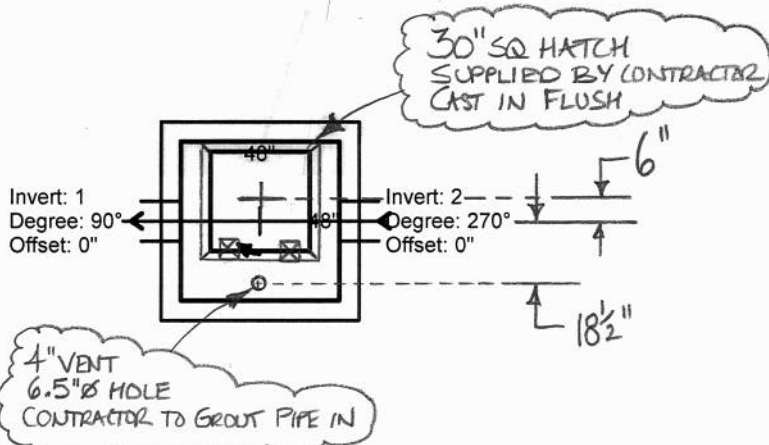
**Structure Notes: 6" Walls & base & 8" roof (NON-TRAFFIC DESIGN)**  
 Inc: 6" wide flanged base  
 30"sq hatch (H30301001) supplied by contractor, Cast in flush & located as shown.  
 4" vent pipe, 6.5" hole, Contractor to grout pipe in  
 Steps not available in 48"sq, Proposed Alum-poly ladder, See attached submittal if acceptable  
 Contractor to form/pour/install interior "step aerator" in the field

**Shop Drawing Approval**

Contr initial:	Date:
Engineer initial:	Date:
30" x 30" - 30x30 f&g cast in flush	0 lb
48" x 48" - CB rf slab-6w6t-30x30 - 30"sq opng	1639 lb
48" x 48" - CB RISER - 28"	3111 lb
48" x 48" - Cb base-6w6b6f-b - 62"	9439 lb
1) 1" - Mh roof opng-Labor to cast in f&g/hatch	0 lb
1) 1" - 1misc - holes*	0 lb
1) 1" - 1misc - keyway & inserts*	0 lb
2) 8" - MH Boot-st - PSX12-08DD(8-8.63)	0 lb
1) Steps - NOT REQ'D	0 lb
8. VtFt) NONE REQ'D [INT]	0 lb
8.5 VtFt) NONE REQ'D [EXT]	0 lb
<b>Structure Total:</b>	<b>14189 lb</b>

Total Precast Height: 8.5'

**Planview - Upright Position**



**Outside Wall Dimensions**

Position	Elev	Angle	Offset	Pipe	Pipe OD	Connector	UP ( )
Rim	561.2'						
Reducer							
Invert 1	553.56'	90°	0"	8" HDPE DR17	8.625"	8" MH Boot-st PSX12-08DD(8-8.63)	3"
Invert 2	556.73'	270°	0"	8" Pvc-sch80	8.625"	8" MH Boot-st PSX12-08DD(8-8.63)	41"
Invert 3							
Invert 4							
Invert 5							
Invert 6							
Invert 7							
Invert 8							





KISTNER CONCRETE PRODUCTS INC.  
8713 READ ROAD  
E. PEMBROKE, N.Y.  
14056  
(716) 894-2267

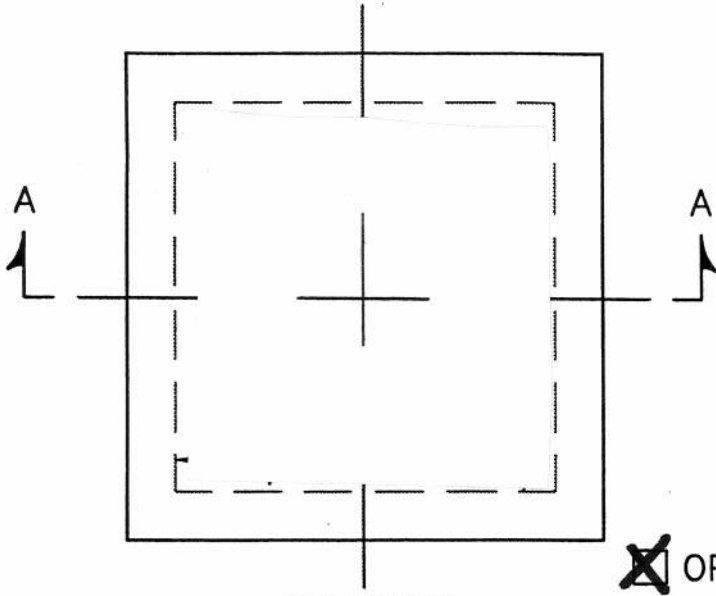
PRODUCT DESIGNATION

48" SQ. CATCH BASIN

DWG. NO.

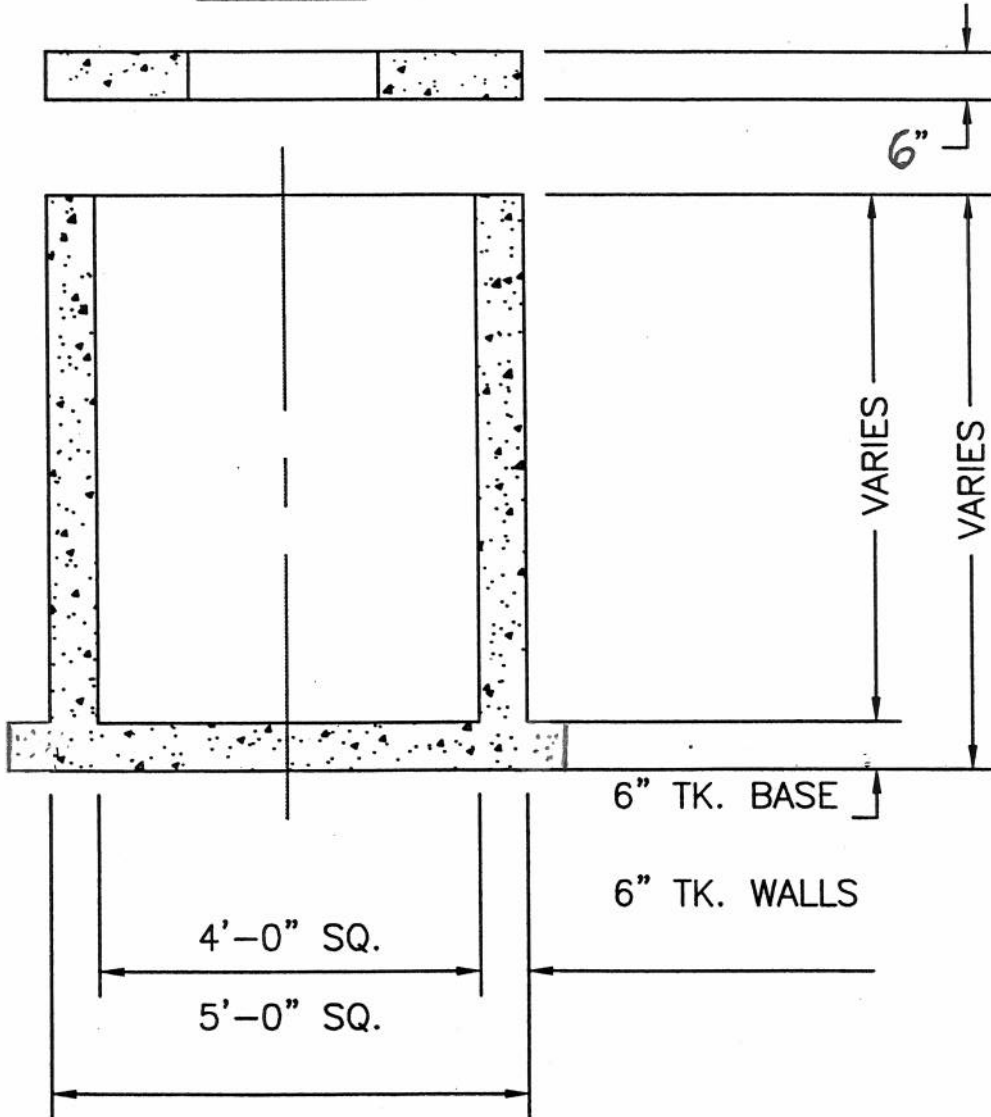
CB-CB48SQ ©

1-18-00



TOP VIEW

OPTIONAL ROOF SLAB



SECTION A-A

6" TK. BASE

6" TK. WALLS

4'-0" SQ.

5'-0" SQ.

VARIES

VARIES

6"



KISTNER CONCRETE PRODUCTS INC.  
8713 READ ROAD  
E. PEMBROKE, N.Y.  
14056  
(716) 894-2267

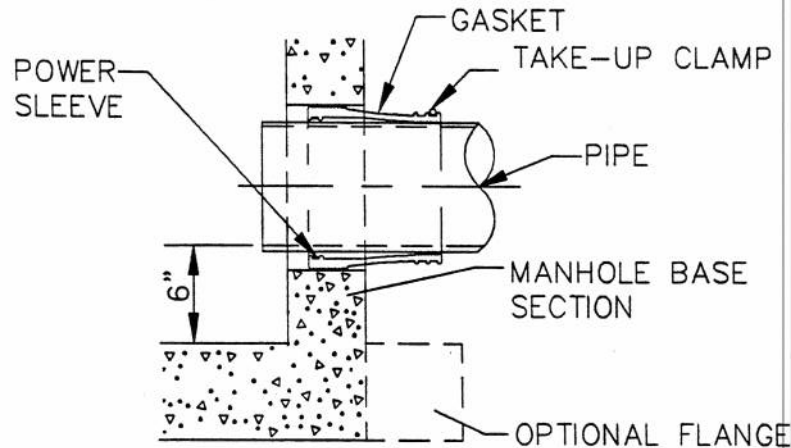
PRODUCT DESIGNATION

WATERTIGHT PIPE TO MANHOLE BOOT SEAL

DWG. NO.

MH-MHPSX ©

9-8-93



SPECIFICATIONS

BOOT ADAPTABLE FOR PIPE O.D.'S OF 3"-51"  
ASSEMBLY COMPONENTS MEET AND/OR EXCEED ALL MATERIAL SPECIFICATIONS OF ASTM C-923

GASKET: MINIMUM THICKNESS OF GASKET MATERIAL  
 PSX 8" HOLES THRU 16" HOLE SIZES .290" ± .025  
 PSX-2 18" HOLES AND LARGER HOLE SIZES .300" ± .025  
 MINIMUM COMPOUND TENSILE STRENGTH OF RUBBER 1800 PSI  
 ELONGATION OF RUBBER 450%-550%  
 SHORE A DUROMETER OF RUBBER 42 + 5  
 RUBBER COMPOUND MEETS AND/OR EXCEEDS ASTM C-923 REQUIREMENTS.

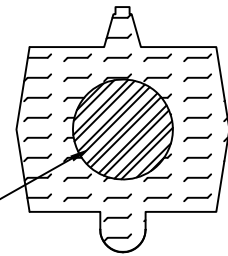
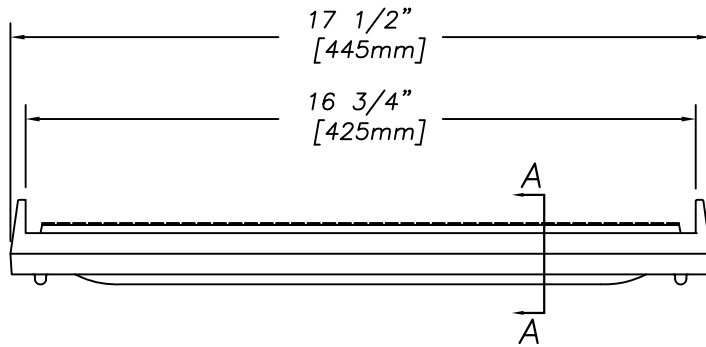
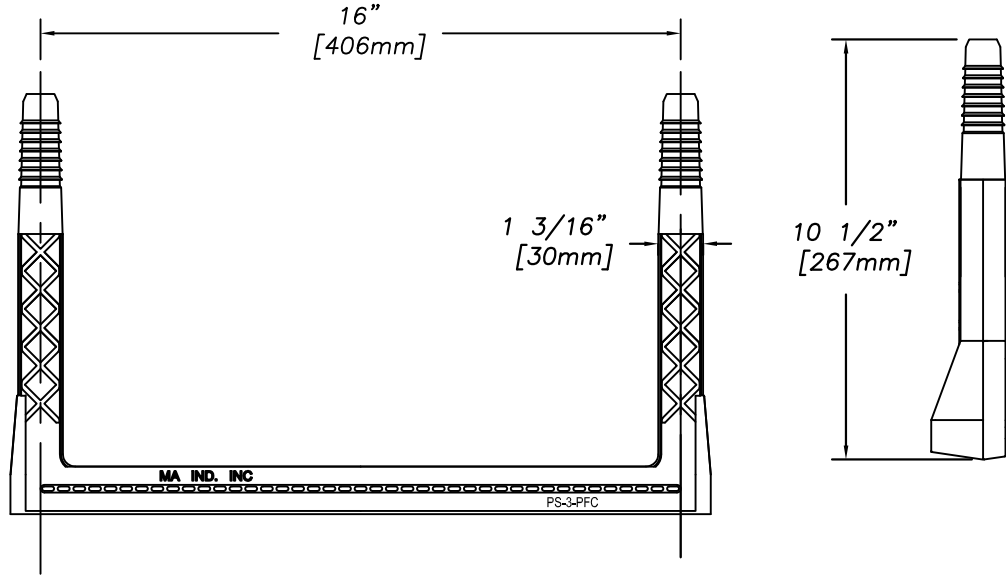
POWER SLEEVE: TYPE 304 STAINLESS STEEL  
 TENSILE STRENGTH OF STEEL 85,000 PSI  
 YIELD STRENGTH OF STEEL 35,000PSI  
 8" THRU 26" HOLE SIZES 1.5" WIDE 11 GAUGE  
 28" HOLE SIZES AND LARGER 1.5" WIDE 10 GAUGE  
 POWER SLEEVE STAINLESS STEEL MEETS AND/OR EXCEEDS ALL ASTM C-923 REQUIREMENTS.

TAKE-UP CLAMPS: ALL STAINLESS STEEL CLAMP BAND, SADDLE AND HOUSING MADE OF TYPE 302  
 SCREW MADE OF TYPE 305 STAINLESS STEEL  
 STAINLESS STEEL TAKE-UP CLAMPS MEET AND/OR EXCEED ALL ASTM C-923 REQUIREMENTS.

FOR PIPES WITH O.D.'S. LESS THAN 14.5" (PSX), A SINGLE CLAMP IS STANDARD; (PSX-2) DOUBLE CLAMPS IS OPTIONAL. FOR PIPES WITH O.D.'S. LARGER THAN 14.5" DOUBLE CLAMPS (PSX-2) IS STANDARD. FOR PROPER CLAMP SIZING SEE PSX CLAMP ACCOMMODATION CHART.

SUPPLIED BY: PRESS SEAL GASKET CORPORATION, 6935 LINCOLN PARKWAY. FORT WAYNE, IN., 46804  
 PHONE: (800) 348-7325 OR (219) 436-0521  
 FAX: (219) 436-1908 (OR EQUAL)

- PIPE INSTALLATION:
1. AFTER MANHOLE HAS BEEN SET TO GRADE, INSPECT AND CLEAN OUT INSIDE OF CONNECTOR. CLEAN SURFACE OF PIPE BARREL TO BE INSTALLED.
  2. INSERT PIPE INTO CONNECTOR UNTIL END OF PIPE BREAKS INSIDE PLANE OF MANHOLE WALL. **POSITION PIPE IN CENTER OF CONNECTOR.**
  3. INSTALL TAKE-UP CLAMP(S) IN GROOVE(S) AT PIPE RECEIVING END OF GASKET. CHECK AGAIN TO MAKE SURE INTERIOR OF CONNECTOR AND PIPE BARREL SURFACES ARE CLEAN.
  4. TIGHTEN TAKE-UP CLAMP(S) WITH RATCHET OR TORQUE WRENCH TO 60 IN./LBS. TORQUE.
  5. ADJUST PIPE TO LINE AND GRADE. USE PROPER BEDDING, BACKFILL MATERIALS AND TECHNIQUES.
  6. ANY PIPE STUBS INSTALLED IN THE MANHOLE MUST BE RESTRAINED FROM MOVEMENT.

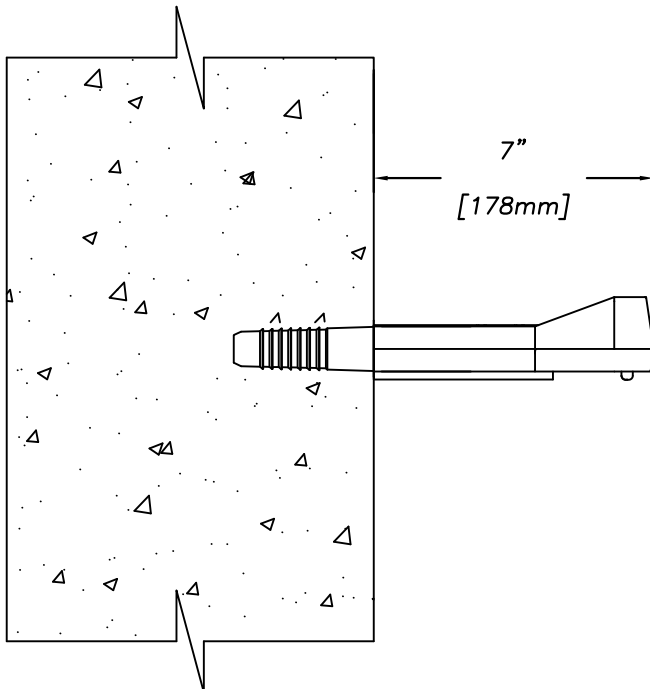


**Copolymer Polypropylene Plastic**

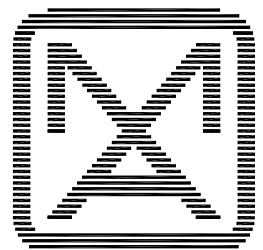
16mm  
5/8"

**GRADE 60 STEEL REINFORCEMENT**

**SECTION-A**



- MEETS: OPSS 1351.08.02**
- BNQ**
- ASTM C-478**
- ASTM D-4101**
- ASTM A-615**
- AASHTO M-199**



**M . A . I N D U S T R I E S , I N C .**

# ALN1 Pedestrian Rated Aluminum Hatch



Style ALN1 access hatch, as manufactured by EJ.

Material shall be 6061-T6 aluminum for bars, angles, and extrusions. 1/4" diamond plate shall be 5086 aluminum.

Unit designed pedestrian rated, for a minimum live load of 300 lbs./sq.ft.

Frame shall be of extruded aluminum with a continuous 1-1/4" anchor flange, having the seat as an integral part of the extrusion.

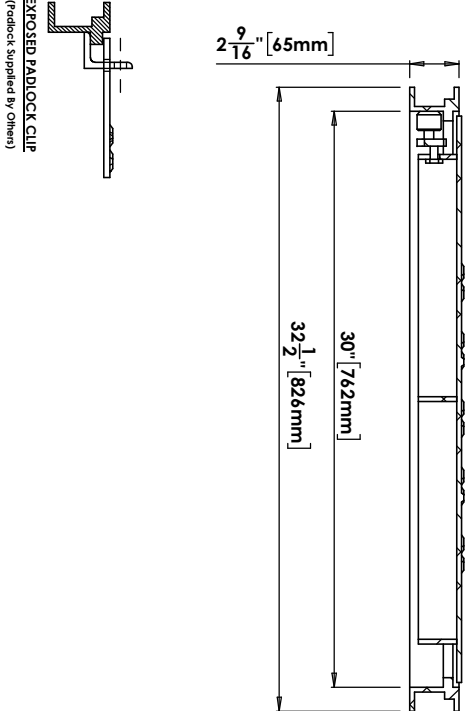
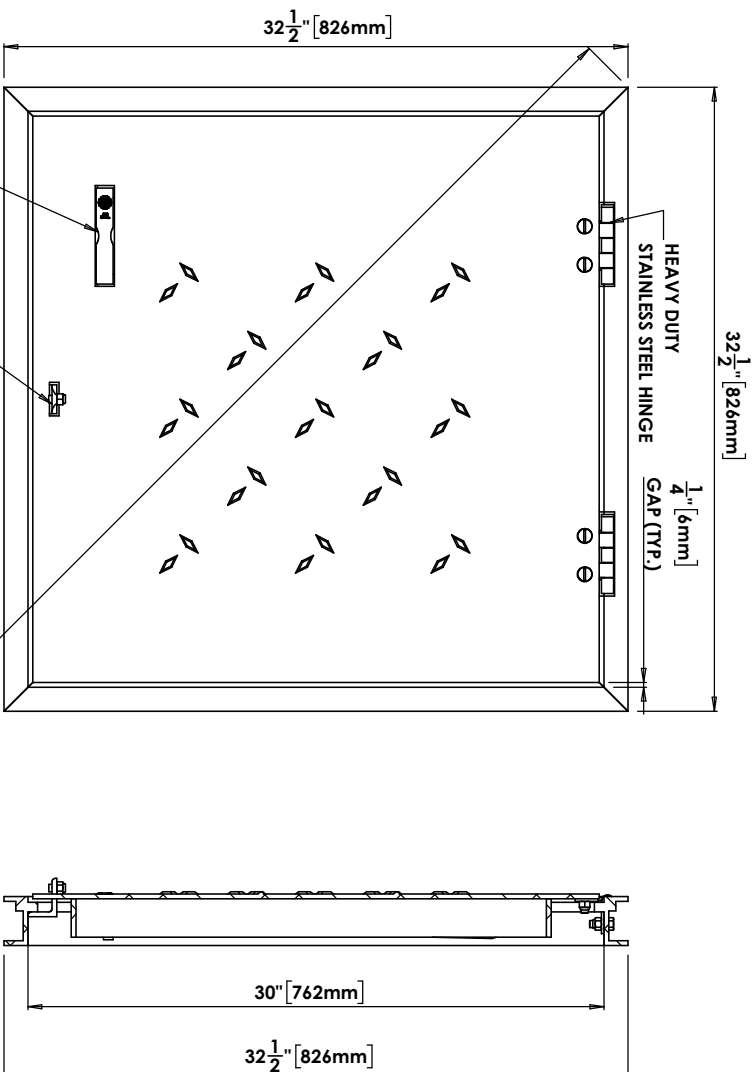
Each door shall be equipped with a hold open arm. Door shall lock open in the 90 degree position. Hold open arm shall be fastened to the frame with a 1/2" grade 316 stainless steel bolt.

Each hatch shall be supplied with grade 316 stainless steel hinges.

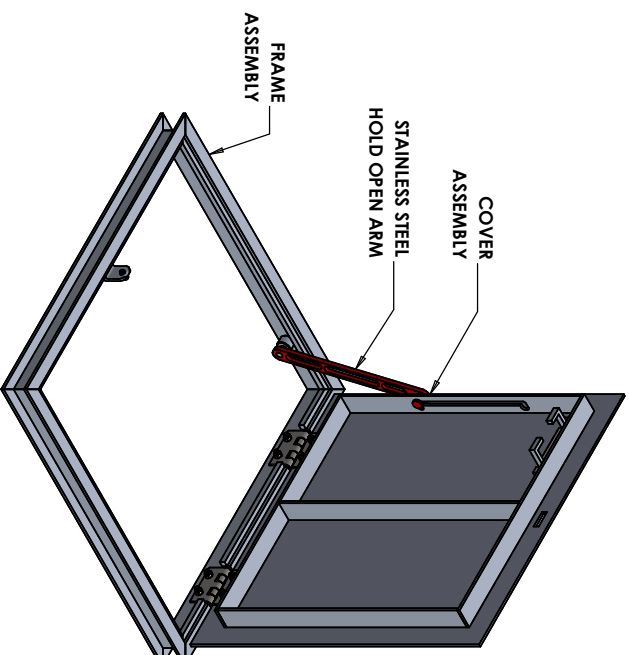
All hardware shall be stainless steel.

Each hatch shall be equipped with an aluminum lift handle. The lift handle shall be flush with the top of the 1/4" diamond plate.

Each hatch shall be supplied with an exposed pad lock clip, for owner supplied pad lock.



EXPOSED PADLOCK CLIP  
(Padlock Supplied By Others)



**Product Number**  
H30301001

**Design Features**

- Materials  
6061AL, 5086AL & 316SSS
- Design Load  
300 psf
- Open Area
- Coating  
Mill Finish
- ∨ Designates Machined Surface

**Certification**

- NPR16-xxxx
- WT 51 lbs
- Country of Origin: USA

**Drawing Revision**

11/9/2016 Designer: RJM  
Revised By:

**Disclaimer**

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

CONFIDENTIAL: This drawing is the property of EJ Group, Inc. and embodies confidential information, registered marks, patents, trade secret information, and/or right © 2012 EJ Group, Inc. All rights reserved.

**Contact**

800 626 4653  
ejco.com

# **Gate Valve Concrete Vault Outlet Structure**







Kistner Concrete Products, Inc.  
 8713 Read Road East Pembroke, NY 14056  
 Ph:585-762-8216 Fax:585-762-8315

Project: Lockwood Ash Disposal  
 Location: Torrey, NY  
 Cust # & Name: 31606 City Hill

Size: 74" x 74"  
 Type: 6w8r6b-24"X24"  
 Bid Item ID:  
 Rim: 552.25'  
 Invert: 548.75'  
 Rim to Invert: 3.5'  
 F&C & adjustment: 0'  
 Catch: 1.492'  
 Floor (Top): 547.258'  
 Floor (Bot): 546.758'

Str#: **6'-2" Sq Pond Outlet 6" wall**

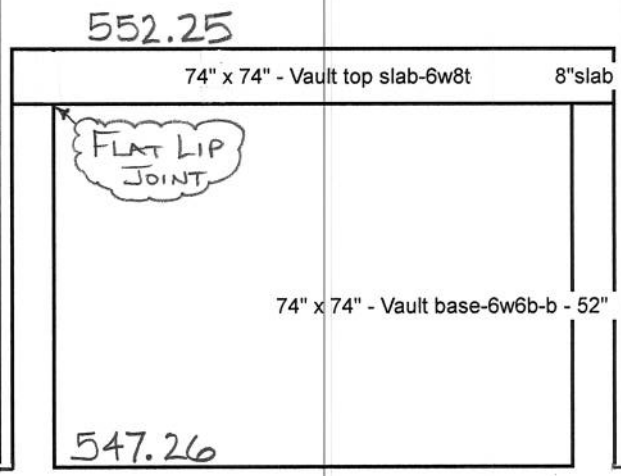
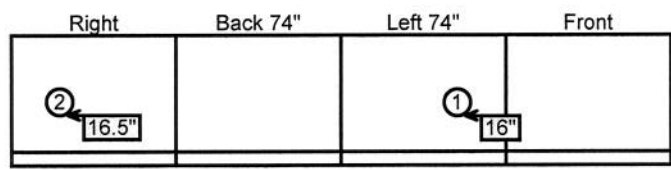
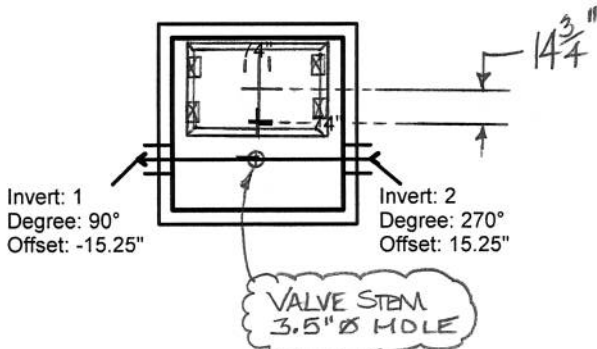
**Structure Notes:** 6" Walls & base & 8" roof (NON-TRAFFIC DESIGN)  
 Inc: 6" wide flanged base  
 36" x 60" Hatch supplied by contractor, Cast in flush & located as shown here  
 3.5" hole in top for valve stem  
 Steps not available in 74"sq,  
 Proposed Alum-poly ladder, See attached submittal if acceptable

**Shop Drawing Approval**

Contr initial:	Date:
Engineer initial:	Date:
74" x 74" - Vault top slab-6w8t-24x24 - 8"slab	4678 lb
74" x 74" - Vault base-6w6b-b - 52"	12247 lb
1) 1" - Mh roof opng-Labor to cast in f&g/hatch	0 lb
1) 1" - 1 misc - holes*	0 lb
1) 1" - 1 misc - keyway & inserts*	0 lb
2) 8" - MH Boot-st - PSX12-08DD(8-8.63)	0 lb
1) Steps - NOT REQ'D	0 lb
4.99 VtFt) NONE REQ'D [INT]	0 lb
5.49 VtFt) NONE REQ'D [EXT]	0 lb
<b>Structure Total:</b>	<b>16925 lb</b>

Total Precast Height: 5.492'

**Planview - Upright Position**



**Outside Wall Dimensions**

Position	Elev	Angle	Offset	Pipe	Pipe OD	Connector	UP ( )
Rim	552.25'						
Reducer							
Invert 1	548.75'	90°	-15.25"	8" Pvc-sch80	8.625"	8" MH Boot-st PSX12-08DD(8-8.63)	16"
Invert 2	548.79'	270°	15.25"	8" Pvc-sch80	8.625"	8" MH Boot-st PSX12-08DD(8-8.63)	16.5"
Invert 3							
Invert 4							
Invert 5							
Invert 6							
Invert 7							
Invert 8							





KISTNER CONCRETE  
PRODUCTS INC.  
8713 READ ROAD  
E. PEMBROKE, N.Y.  
14056  
(716) 894-2267

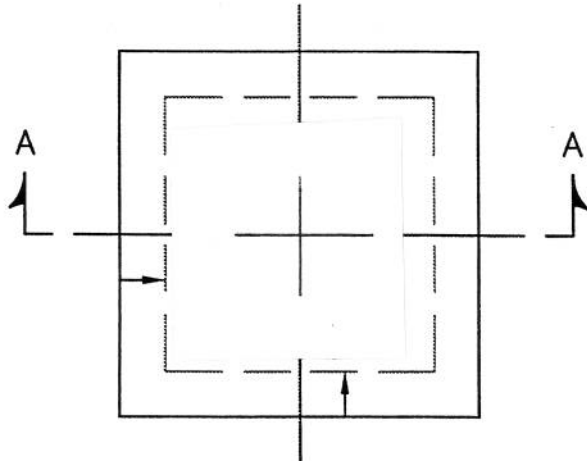
PRODUCT DESIGNATION

74" SQ. CATCH BASIN

DWG. NO.

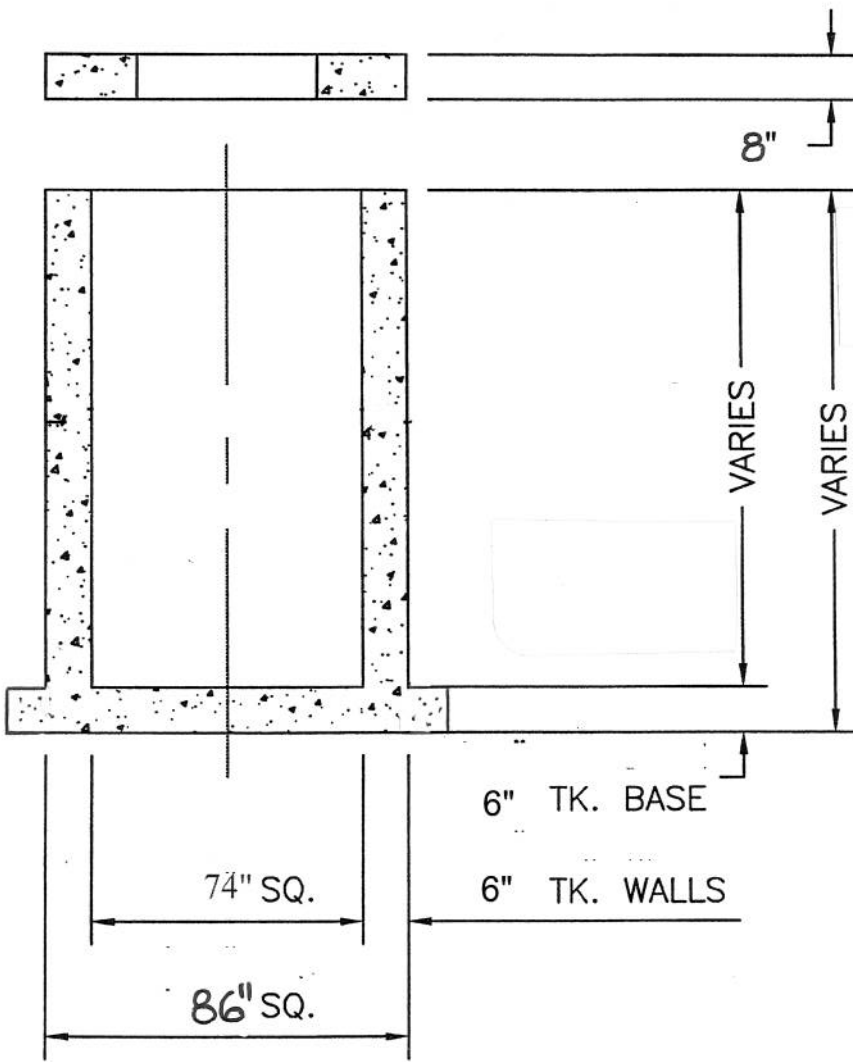
CB-CB74X74 ©

1-18-00



TOP VIEW

OPTIONAL ROOF SLAB



SECTION A-A



KISTNER CONCRETE PRODUCTS INC.  
8713 READ ROAD  
E. PEMBROKE, N.Y.  
14056  
(716) 894-2267

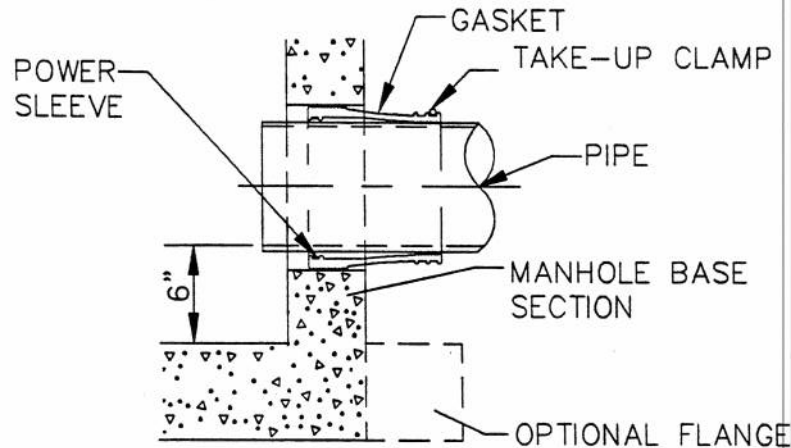
PRODUCT DESIGNATION

WATERTIGHT PIPE TO MANHOLE BOOT SEAL

DWG. NO.

MH-MHPSX ©

9-8-93



SPECIFICATIONS

BOOT ADAPTABLE FOR PIPE O.D.'S OF 3"-51"  
ASSEMBLY COMPONENTS MEET AND/OR EXCEED ALL MATERIAL SPECIFICATIONS OF ASTM C-923

GASKET: MINIMUM THICKNESS OF GASKET MATERIAL  
 PSX 8" HOLES THRU 16" HOLE SIZES .290" ± .025  
 PSX-2 18" HOLES AND LARGER HOLE SIZES .300" ± .025  
 MINIMUM COMPOUND TENSILE STRENGTH OF RUBBER 1800 PSI  
 ELONGATION OF RUBBER 450%-550%  
 SHORE A DUROMETER OF RUBBER 42 + 5  
 RUBBER COMPOUND MEETS AND/OR EXCEEDS ASTM C-923 REQUIREMENTS.

POWER SLEEVE: TYPE 304 STAINLESS STEEL  
 TENSILE STRENGTH OF STEEL 85,000 PSI  
 YIELD STRENGTH OF STEEL 35,000PSI  
 8" THRU 26" HOLE SIZES 1.5" WIDE 11 GAUGE  
 28" HOLE SIZES AND LARGER 1.5" WIDE 10 GAUGE  
 POWER SLEEVE STAINLESS STEEL MEETS AND/OR EXCEEDS ALL ASTM C-923 REQUIREMENTS.

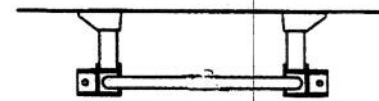
TAKE-UP CLAMPS: ALL STAINLESS STEEL CLAMP BAND, SADDLE AND HOUSING MADE OF TYPE 302  
 SCREW MADE OF TYPE 305 STAINLESS STEEL  
 STAINLESS STEEL TAKE-UP CLAMPS MEET AND/OR EXCEED ALL ASTM C-923 REQUIREMENTS.

FOR PIPES WITH O.D.'S. LESS THAN 14.5" (PSX), A SINGLE CLAMP IS STANDARD; (PSX-2) DOUBLE CLAMPS IS OPTIONAL. FOR PIPES WITH O.D.'S. LARGER THAN 14.5" DOUBLE CLAMPS (PSX-2) IS STANDARD. FOR PROPER CLAMP SIZING SEE PSX CLAMP ACCOMMODATION CHART.

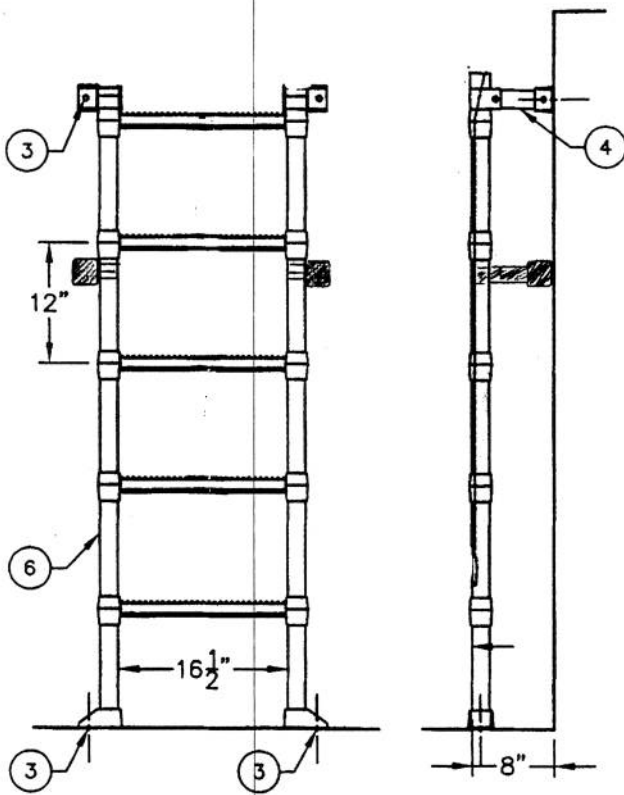
SUPPLIED BY: PRESS SEAL GASKET CORPORATION, 6935 LINCOLN PARKWAY. FORT WAYNE, IN., 46804  
 PHONE: (800) 348-7325 OR (219) 436-0521  
 FAX: (219) 436-1908 (OR EQUAL)

- PIPE INSTALLATION:
1. AFTER MANHOLE HAS BEEN SET TO GRADE, INSPECT AND CLEAN OUT INSIDE OF CONNECTOR. CLEAN SURFACE OF PIPE BARREL TO BE INSTALLED.
  2. INSERT PIPE INTO CONNECTOR UNTIL END OF PIPE BREAKS INSIDE PLANE OF MANHOLE WALL. **POSITION PIPE IN CENTER OF CONNECTOR.**
  3. INSTALL TAKE-UP CLAMP(S) IN GROOVE(S) AT PIPE RECEIVING END OF GASKET. CHECK AGAIN TO MAKE SURE INTERIOR OF CONNECTOR AND PIPE BARREL SURFACES ARE CLEAN.
  4. TIGHTEN TAKE-UP CLAMP(S) WITH RATCHET OR TORQUE WRENCH TO 60 IN./LBS. TORQUE.
  5. ADJUST PIPE TO LINE AND GRADE. USE PROPER BEDDING, BACKFILL MATERIALS AND TECHNIQUES.
  6. ANY PIPE STUBS INSTALLED IN THE MANHOLE MUST BE RESTRAINED FROM MOVEMENT.

# The Lane Polypropylene Vault Ladder

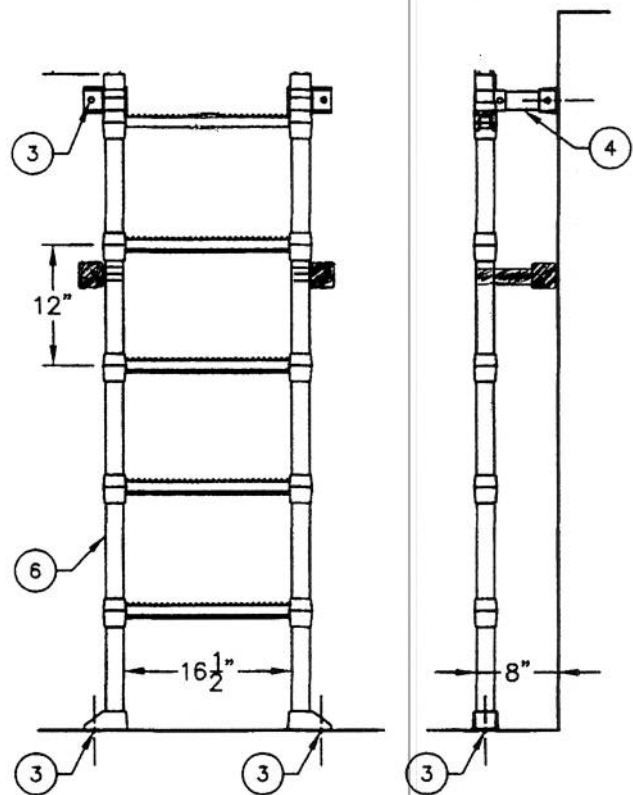


TOP VIEW



FRONT VIEW

SIDE VIEW



FRONT VIEW

SIDE VIEW

## NOTES:

1. LADDERS AVAILABLE IN 3 RUNG THROUGH 12 RUNG.
2. POLYPROPYLENE CONFORMS TO ASTM D-4101. LADDERS MEET ALL ASTM C-497 LOAD REQUIREMENTS.
3. FASTEN LADDER TO FLOOR AND WALL WITH 1/2"x 3-3/4" ANCHORS. ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
4. ATTACH ADJUSTABLE MOUNTING BRACKET WITH 1/4" S.S. FASTENERS.
6. ALUMINUM AND STEEL REINFORCED COPOLYMER POLYPROPYLENE LADDER.

# VAULT LADDER ASSEMBLY INSTRUCTIONS

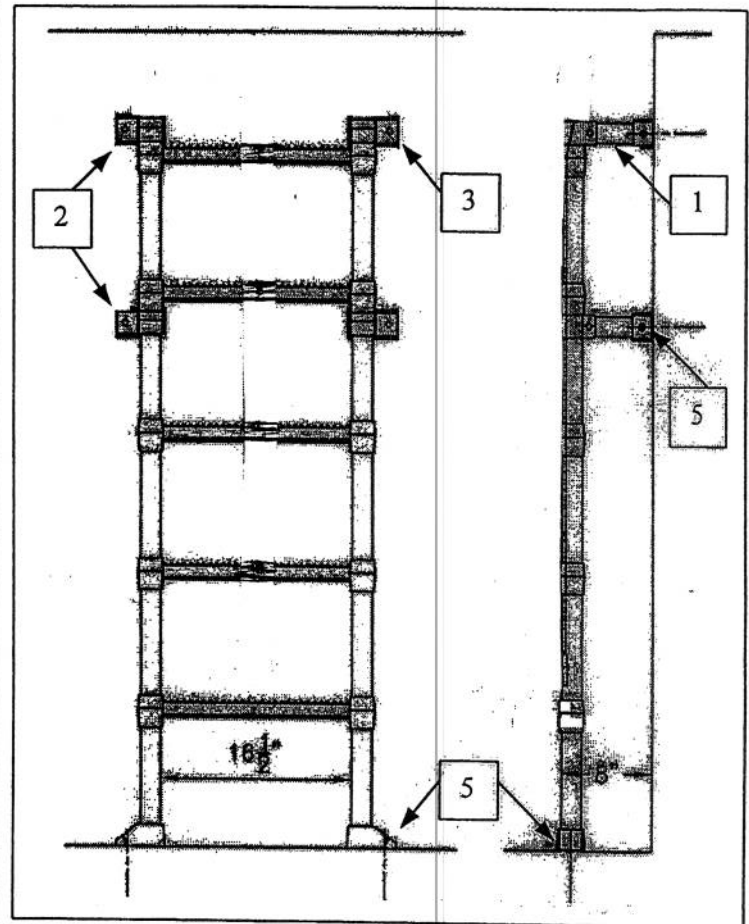
HOW TO ASSEMBLE AND MOUNT THE LANE POLYPROPYLENE VAULT LADDER

Revised 4-15-02

Kistner Concrete Products, Inc.

CODE IS-INST-APL

1. To attach the Mounting Brackets to the ladder, remove the hex nut, washer and carriage bolt near the plastic U-shaped piece (strap).
2. Place the strap on the ladder rail where you want to mount the ladder to the wall. The top Mounting Brackets should be installed as close to the top of the ladder as possible.
3. Reassemble the Mounting Brackets by replacing the carriage bolt, washer and hex nut and tighten. (Make sure the hole on the connection piece is to the outside.)
4. The Mounting Brackets may be slid up or down on the rail for exact positioning.
5. Use the ½" anchor bolts (provided) to affix the ladder to the wall and floor.
6. **Note:** 6' and 7' ladders have two sets of Wall Mounting Brackets and they should be placed per the illustration. 10' ladders have three sets of Wall Mounting Brackets. The first two sets are to be placed per the illustration, and the third set is to be placed between the second set of brackets and the floor.



\* The numbers on the drawing correspond to the numbers in the instructions.

**LANE** INTERNATIONAL  
CORPORATION

# ALN2 Pedestrian Rated Aluminum Hatch



STYLE ALN2 ACCESS HATCH, AS MANUFACTURED BY EJ.

MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES, AND EXTRUSIONS. 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM.

UNIT DESIGNED PEDESTRIAN RATED, FOR A MINIMUM LIVE LOAD OF 300 LBS./SQ.FT.

FRAME SHALL BE OF EXTRUDED ALUMINUM WITH A CONTINUOUS 1-1/4" ANCHOR FLANGE, HAVING THE SEAT AS AN INTEGRAL PART OF THE EXTRUSION.

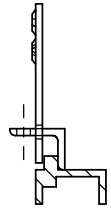
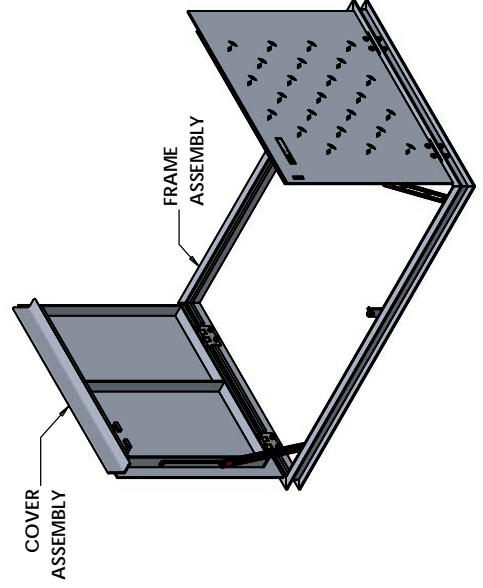
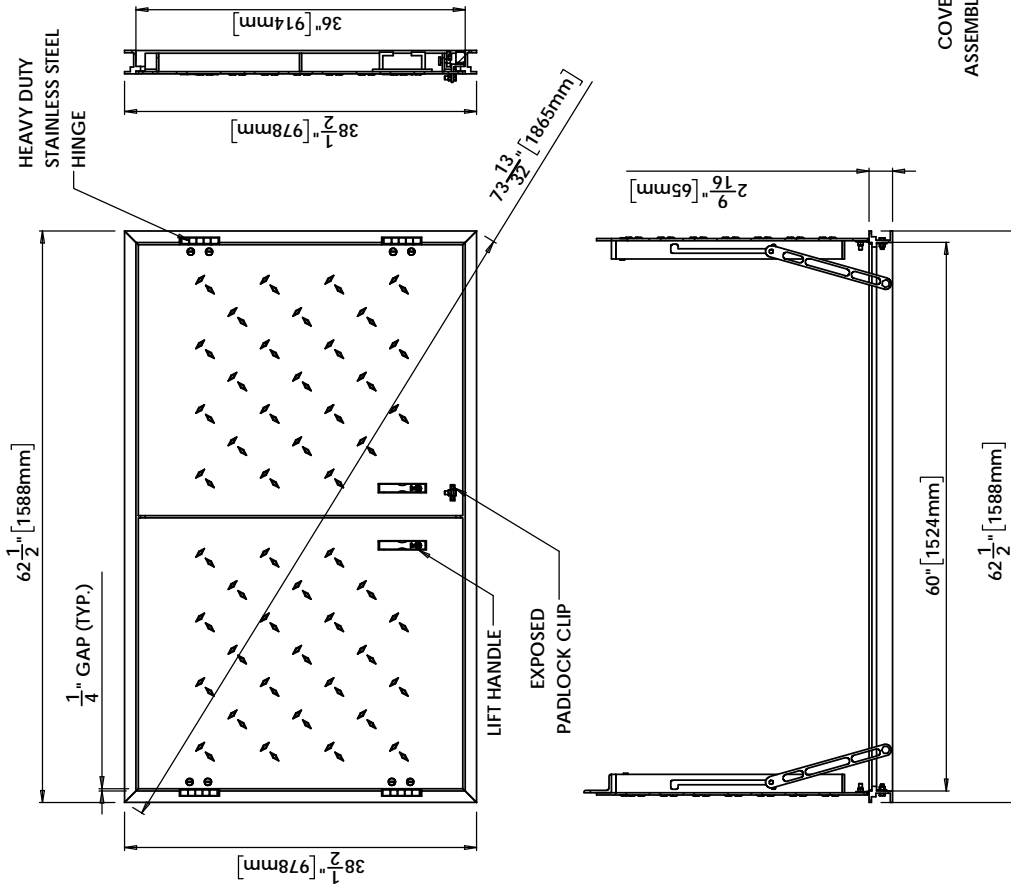
EACH DOOR SHALL BE EQUIPPED WITH A HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.

EACH HATCH SHALL BE SUPPLIED WITH GRADE 316 STAINLESS STEEL HINGES.

ALL HARDWARE SHALL BE STAINLESS STEEL.

EACH HATCH SHALL BE EQUIPPED WITH AN ALUMINUM LIFT HANDLE. THE LIFT HANDLE SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE.

EACH HATCH SHALL BE SUPPLIED WITH AN EXPOSED PAD LOCK CLIP, FOR OWNER SUPPLIED PAD LOCK.



EXPOSED PADLOCK CLIP  
(PADLOCK SUPPLIED BY OTHERS)

## Product Number

H36601101

## Design Features

- Materials Aluminum
- Design Load Pedestrian Rated 300 psf
- Open Area
- Coating Mill Finish
- √ Designates Machined Surface

## Certification

- NPR17-XXXX
- WT 108 lbs
- ALN2
- Country of Origin: USA

## Drawing Revision

9/28/2018 Designer: EJP

Revised By:

## Disclaimer

Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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## Contact

800 626 4653  
ejco.com





# **Appendix R**

## **Settling Pond Geomembrane Construction Documentation**



# **Subgrade Acceptance Forms**

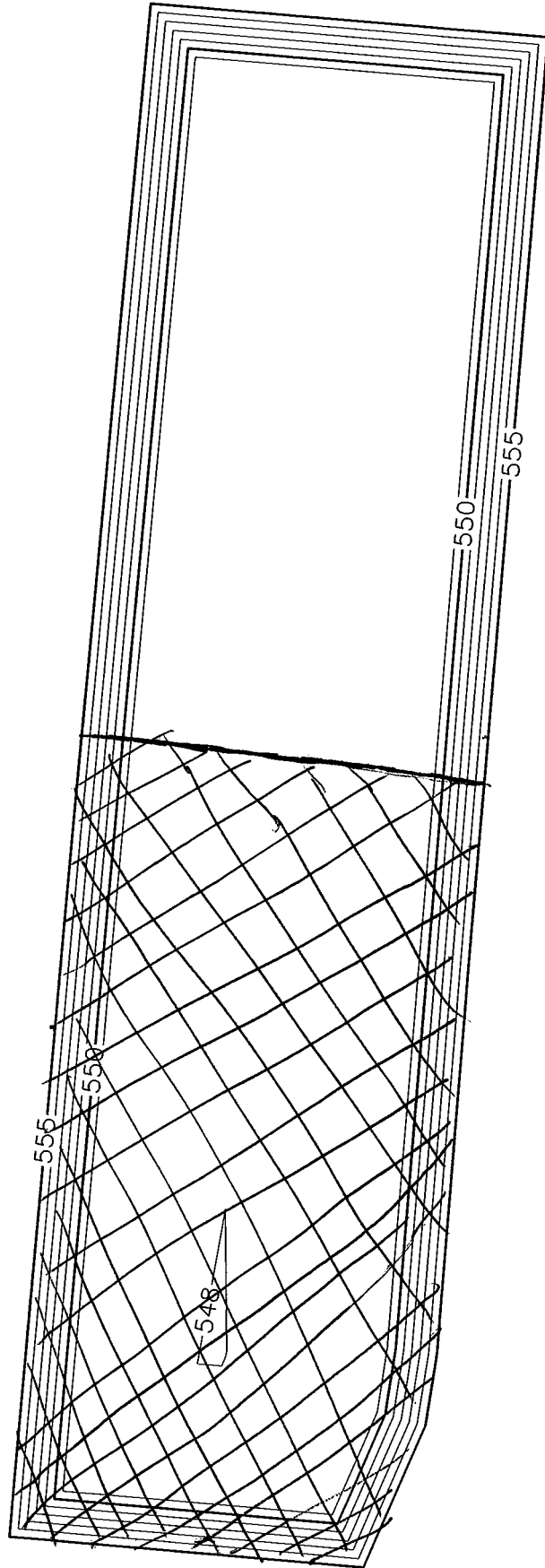


SUBGRADE ACCEPTANCE CERTIFICATION

I HEREBY CERTIFY THAT I HAVE INSPECTED THE GEOMEMBRANE SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS GEOMEMBRANE SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.  
 I ALSO CERTIFY THAT THE SURFACE COVERED BY THE GEOMEMBRANE IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL.  
 THE GEOMEMBRANE SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL



CONTRACTOR: <u>PETE WARD - CHEMUNGO QUALITY ASSURANCE VERBALLY APPROVED SUBGRADE</u>	CONSTRUCTION OBSERVER: <u>Paul Leonard</u> <b>DAVID LEVOK</b> <i>DAIGLER ENGINEERING, PC</i>
DATE: <u>9/9/2019</u>	DATE: <u>9/4/2019</u>



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2630 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	
SCALE: 1" = 60'	REVISION # 0
August 2019	

SETTLING POND SUBGRADE ACCEPTANCE	
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS	
TOWN OF TORREY	YATES COUNTY
	NEW YORK

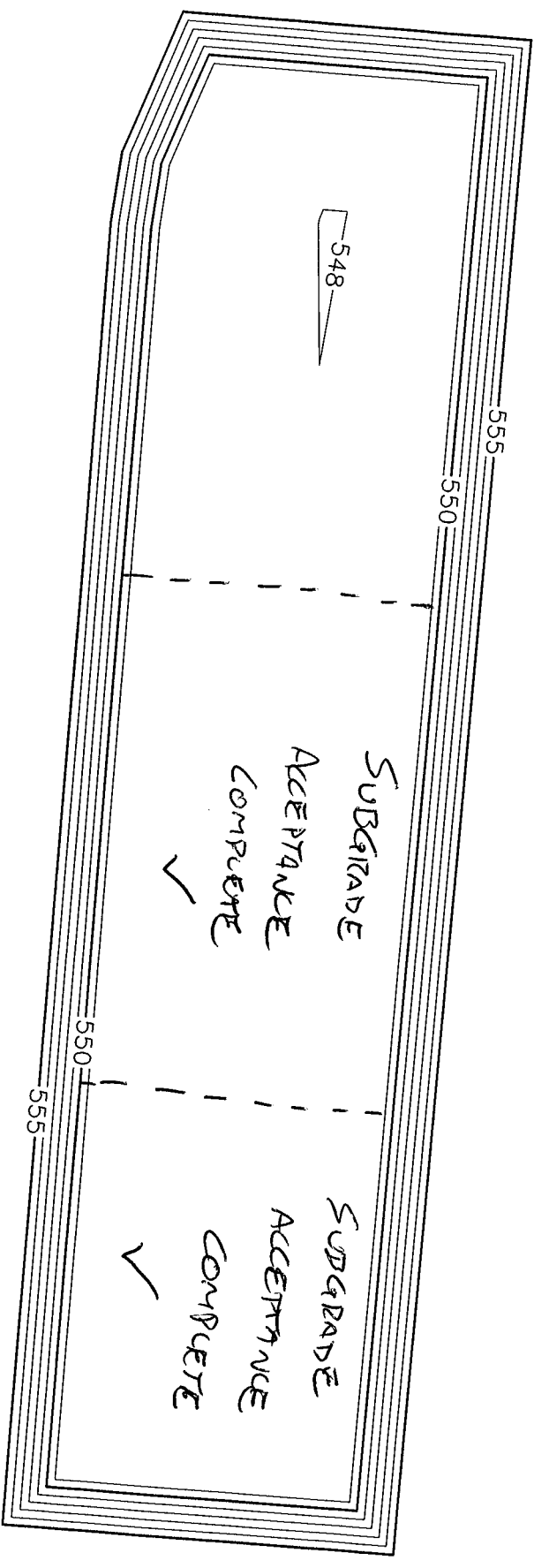
FIGURE  
3

SUBGRADE ACCEPTANCE CERTIFICATION

I HEREBY CERTIFY THAT I HAVE INSPECTED THE LIVEIT SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS LIVEIT SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.  
 I ALSO CERTIFY THAT THE SURFACE COVERED BY THE LIVEIT IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL.  
 THE LIVEIT SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL

CONTRACTOR: Math Hunsb - CITY Hill VERBAH PETERWARD - CHEWANG CONSTRUCTION OBSERVER: SAM DAGLER

DATE: 9/5/19 ACCEPTANCE DATE: 9-5-19



**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2820 GRAND ISLAND BLVD., GRAND ISLAND, NEW YORK, 14072  
 (716) 773-6892 (716) 773-6893 FAX

LOCKWOOD HILLS LLC		SETTLING POND SUBGRADE ACCEPTANCE		FIGURE 3
SCALE: 1" = 60'	REVISION # 0	SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		
August 2019	TOWN OF TORREY	YATES COUNTY	NEW YORK	

# **Panel Placement Reports**





Daily Panel Placement Report

Construction Observer: DAVID LEMOX

SETTLING POND

Date: 2/19/19  
 Previous Sheet Cumulative Area: NA

Material Placed: ATARFIL 60 mil Textured

Panel Number	Roll Number	Panel Length	Panel Width	Panel Area	Cumulative Area	Comments
P1	#030	27.7'	19.2'	531.8	531.8	
P2	#030	27.7'	19.2'	531.8	1063.6	
P3	#030	27.7'	19.2'	531.8	1595.4	
P4	#030	27.7'	19.2'	531.8	2127.2	
P5	#030	27.7'	19.2'	531.8	2659	
P6	#030	25.8'	16.7'	430.86	3089.86	TRIANGLE
P7	#036	27.7'	16.7'	462.59	3552.45	TRIANGLE
P8	#030	29.7'	9.6'	182.6	3735.05	TRIANGLE
P9	#030	9.1'	9.6'	43.7	3778.75	TRIANGLE
P10	#1030	147.2'	19.2'	2835.8	6614.55	
P11	#030	88.7'	19.2'	1703.0	8317.55	
P12	#022	68.0'	19.2'	1305.6	9623.15	
P13	#022	160.7'	19.2'	3085.4	12708.55	
P14	#022	160.7'	19.2'	3085.4	15793.95	
P15	#022	99.8'	19.2'	1916.2*	17710.15	
P16	#036	58.3'	19.2'	1119.4	18829.55	
P17	#036	27.8'	19.2'	533.76	19363.31	TRIANGLE
P18	#036	159'	19.2'	3052.8	22416.11	
P19	#036	51.7'	19.2'	992.6	23408.71	
P20	#039	106.4'	19.2'	2042.9	25451.61	
P21	#030	157.9'	19.2'	3031.7	28482.81	
P22	#039	157.9'	19.2'	3031.7	31514.51	33,789.8



**Daily Panel Placement Report**

Construction Observer: SAM DAIGLER

Date: 9/5/19  
 Previous Sheet Cumulative Area: 41,553.9 42,886.8 SF

SETTLING POND

Material Placed: ATARFIL 60 mil Textured

Panel Number	Roll Number	Panel Length	Panel Width	Panel Area	Cumulative Area	Comments
P27	027	79'	19.2'	1516.8	43070.7	
P28	027	82'	19.2'	1574.4	44645.1	
P29	027	157'	19.2'	3014.4	47659.5	
P30	027	158'	19.2'	3033.6	50693.1	
P31	027	100'	19.2'	1920	52613.1	
P32	028	59'	19.2'	1132.8	53745.9	
P33	028	159'	19.2'	3052.8	56798.7	
P34	028	157'	19.2'	3014.4	59813.1	
P35	028	42'	19.2'	806.4	60619.5	
P36	094	117'	19.2'	2246.4	62865.9	
P37	094	158'	19.2'	3033.6	65899.5	
P38	094	158'	19.2'	3033.6	68933.1	
P39	094	61'	19.2'	1171.2	70104.3	
P40	031	99'	19.2'	1900.8	72005.1	
P41	031	157'	19.2'	3014.4	75019.5	
P42	031	158'	19.2'	3033.6	78053.1	
P43	031	80'	19.2'	1536.0	79589.1	
P44	033	80'	19.2'	1536.0	81125.1	
P45	033	30'	19.2'	576.0	81701.1	
P47	033	27'	19.2'	510.4	82211.5	TRIANGLE
P48	033	57' 34"	19.2'	1094.4	83305.9	81,760.3
P49	033	56'	19.2'	1075.2	84381.1	82,613.1
P50	033	54'	19.2'	1036.8	85417.9	83,688.3
					86,058 SF	
					85425.4	
					85,166.7	



# **Trial Weld Reports**



**HDPE Geomembrane Trial Weld Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

I have observed the set-up, maintenance and adjustment process, as well as the settings/conditions of the welding equipment. I certify that the welding technicians have properly maintained and set-up the welding equipment prior to seaming operations.

Test Requirements:  
 Peel Fusion 91 ppi  
 Peel Ext 78 ppi  
 Shear 120 ppi

Date: 9/14/19  
 Construction Observer: DAVID LENOX  
 Weather/Wind Speed/ Ambient Air Temp: SUNNY / 71°F

QA Observer: Paul Jany

Sample ID Number	Peel (lbs.)	Locus of Break	Shear (lbs.)	Locus of Break	Pass/Fail (P/F)	Comments
Operator - LS	114/115	SE1	140	SE1	P	SMOOTH / SMOOTH - FUSION WELD
Machine - # 32	119/121	SE1	141	SE1	P	
Time - 1:00pm	120/120	SE1	143	SE1	P	
Temp - 460	110/116	SE1	141	SE1	P	
Pressure Setting -	110/117	SE1	140	SE1	P	
Speed/Pre-Heat - 450 <del>4845</del>						
Operator - LS	130/136	SE1	131	SE1	P	
Machine - # 32	133/138	SE1	121	SE1	P	
Time - 1:05 pm	131/133	SE1	129	SE1	P	
Temp - 460	117/110	SE1	130	SE1	P	
Pressure Setting -	93/116	SE1	150	SE1	P	
Speed/Pre-Heat - 400 <del>7415</del>						
Operator - VS	117/120	SE1	125	SE1	P	SMOOTH / SMOOTH - FUSION WELD
Machine - # 43	116/121	SE1	129	SE1	P	
Time - 1:30pm	116/120	SE1	130	SE1	P	
Temp - 460	123/123	SE1	123	SE1	P	
Pressure Setting -	120/124	SE1	128	SE1	P	
Speed/Pre-Heat - 500 <del>4415</del>						
Operator - VS	126/132	SE1	132	SE1	P	
Machine - # 43	131/110	SE1	135	SE1	P	
Time - 1:30pm	128/120	SE1	137	SE1	P	
Temp - 460	128/122	SE1	135	SE1	P	
Pressure Setting -	105/123	SE1	137	SE1	P	
Speed/Pre-Heat - 400 <del>7415</del>						





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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING

2620 Grand Island Boulevard, Grand Island NY 14072

PH: (716) 773-6872 / Fax: (716) 773-6873 www.daiglerengineering.com

**HDPE Geomembrane Trial Weld Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Date: 9/11/19

Construction Observer: DAVID LENOX

Test Requirements:  
 Peel Fusion 91 psi  
 Peel Ext 78 psi

I have observed the set-up, maintenance and adjustment process, as well as the settings/conditions of the welding equipment. I certify that the welding technicians have properly maintained and set-up the welding equipment prior to seaming operations.

Weather/Wind Speed/ Ambient Air Temp. SUNNY / 70°F

Peel Ext 78 psi  
 Shear 120 psi

QA Observer: David Lenox

Sample ID Number	Peel (lbs.)	Locus of Break	Shear (lbs.)	Locus of Break	Pass/Fail (P/F)	Comments
Operator: <u>LS</u>	<u>126/107</u>	<u>SE-1</u>	<u>132</u>	<u>SE-1</u>	<u>P</u>	<u>Fusion weld smooth/TEXTURED</u>
Machine: <u>#32</u>	<u>130/120</u>	<u>SE-1</u>	<u>128</u>	<u>SE-1</u>	<u>P</u>	
Time: <u>2:00</u>	<u>122/104</u>	<u>SE-1</u>	<u>130</u>	<u>SE-1</u>	<u>P</u>	
Temp: <u>46.0</u>	<u>119/105</u>	<u>SE-2</u>	<u>130</u>	<u>SE-1</u>	<u>P</u>	
Pressure Setting: <u>ST</u>	<u>112/102</u>	<u>SE-1</u>	<u>133</u>	<u>SE-1</u>	<u>P</u>	
Speed/Pre-Heat: <u>400 TAPS</u>						
Operator: <u>CRS</u>	<u>150</u>	<u>SE 3</u>	<u>142</u>	<u>SE 1</u>	<u>P</u>	<u>EXTENSION WELD TEXTURED/TEXTURED</u>
Machine: <u>X-1</u>	<u>140</u>	<u>SE 3</u>	<u>145</u>	<u>SE 3</u>	<u>P</u>	
Time: <u>2:36</u>	<u>153</u>	<u>SE 3</u>	<u>143</u>	<u>SE 1</u>	<u>P</u>	
Temp: <u>52.5</u>	<u>136</u>	<u>SE 3</u>	<u>144</u>	<u>SE 3</u>	<u>P</u>	
Pressure Setting: <u>TT</u>	<u>139</u>	<u>SE 3</u>	<u>143</u>	<u>SE 1</u>	<u>P</u>	
Speed/Pre-Heat: <u>500</u>						
Operator: _____						
Machine: _____						
Time: _____						
Temp: _____						
Pressure Setting: _____						
Speed/Pre-Heat: _____						
Operator: _____						
Machine: _____						
Time: _____						
Temp: _____						
Pressure Setting: _____						
Speed/Pre-Heat: _____						

**HDPE Geomembrane Trial Weld Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

I have observed the set-up, maintenance and adjustment process, as well as the settings/conditions of the welding equipment. I certify that the welding technicians have properly maintained and set-up the welding equipment prior to seaming operations.

Test Requirements:  
 Peel Fusion 91 ppi  
 Peel Ext 78 ppi  
 Shear 120 ppi

Date: 9-5-19

Construction Observer: Sam D.

QA Observer: 

Weather/Wind Speed/ Ambient Air Temp. Sunny/0-Smth/55<sup>out</sup>

Sample ID Number	Peel (lbs.)	Locus of Break	Shear (lbs.)	Locus of Break	Pass/Fail (PIF)	Comments
Operator - LS	122	SE-1	165	SIP	PASS	FUSION 140 (SE-1)
Machine - 32	106	SE-1	166	SIP	PASS	117 (SE-1)
Time - 7:45am	124	SE-1	165	SIP	PASS	SMOOTH/SMOOTH 139 (SE-1)
Temp - 46.0	111	SE-1	165	SIP	PASS	
Pressure Setting -	140	SE-1	159	SIP	PASS	
Special Pre-Heat - 400 8 <sup>1/2</sup>	114	SE-1				
Operator - LS	139	SE-1	164	SIP	PASS	FUSION 124 (SE-1)
Machine - 32	137	SE-1	165	SIP	PASS	TEXTURED 128 (SE-1)
Time - 7:55	151	SE-1	171	SIP	PASS	SMOOTH/TEXTURED 145 (SE-1)
Temp - 46.0	128	SE-1	166	SIP	PASS	
Pressure Setting -	130	SE-1	161	SIP	PASS	
Special Pre-Heat - 400 7 <sup>1/2</sup>	130	SE-1				
Operator - LS	110	SE-1	149	SIP	PASS	FUSION 146 (SE-1)
Machine - 32	129	SE-1	152	SIP	PASS	122 (SE-1)
Time - 8:05	141	SE-1	149	SIP	PASS	SMOOTH/TEX 120 (SE-1)
Temp - 46.0	115	SE-1	151	SIP	PASS	144 (SE-1)
Pressure Setting -	103	SE-1	153	SIP	PASS	
Special Pre-Heat - 400 7 <sup>1/2</sup>	128	SE-1				
Operator - VS	116	SE-1	151	SIP	PASS	FUSION 124 (SE-1)
Machine - 43	112	SE-1	144	SIP	PASS	109 (SE-1)
Time - 8:10	115	SE-1	151	SIP	PASS	SMOOTH/SMOOTH 109 (SE-1)
Temp - 46.0	144	SE-1	153	SIP	PASS	111 (SE-1)
Pressure Setting -	121	SE-1	150	SIP	PASS	
Special Pre-Heat - 400 8 <sup>1/2</sup>	121	SE-1				

**HDPE Geomembrane Trial Weld Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Date: 9/5/19

Test Requirements:  
 Peel Fusion 91 psi  
 Peel Ext 78 psi

Construction Observer: SAM DAIGLER

Peel Ext 78 psi

I have observed the set-up, maintenance and adjustment process, as well as the settings/conditions of the welding equipment. I certify that the welding technicians have properly maintained and set-up the welding equipment prior to seaming operations.

Weather/Wind Speed Ambient Air Temp. SWNW 0-5 mph /

Shear 120 psi

QA Observer: 

Sample ID Number	Peel (lbs)	Locus of Break	Shear (lbs)	Locus of Break	Pass/Fail (P/F)	Comments
Operator - V5	130	SE-1	165	SIP	P	FUSION TEXTURED SMOOTH
Machine - 43	130	SE-1	163	SIP	P	
Time - 8:18am	142	SE-1	162	SIP	P	
Temp - 46.0	121	SE-1	161	SIP	P	
Pressure Setting -	124	SE-1	163	SP	P	
Speed/Pre-Heat - 400 78/15						
Operator - LPS	132	SE-3	155	SIP	P	EXTRUSION WELD
Machine - 1	122	SE-3	152	SIP	P	
Time - 8:25am	145	SE-3	156	SIP	P	
Temp - 50.0	139	SE-3	155	SIP	P	
Pressure Setting -	130	SE-3	152	SIP	P	
Speed/Pre-Heat - 525						
Operator - LPS	125	SE-3	132	SIP	P	EXTRUSION WELD
Machine - 1	125	SE-3	129	SIP	P	
Time - 12:17	131	SE-3	134	SIP	P	
Temp - 50.0	171	SE-3	135	SIP	P	
Pressure Setting -	130	SE-3	130	SIP	P	
Speed/Pre-Heat - 525						
Operator - V5	115	SE-3	128	SIP	P	EXTRUSION WELD
Machine - 2	120	SE-3	130	SIP	P	
Time - 12:30	118	SE-3	125	SIP	P	
Temp - 50.0	114	SE-3	127	SIP	P	
Pressure Setting -	122	SE-3	126	SIP	P	
Speed/Pre-Heat - 500						

# **Seaming and Non-Destructive Testing Reports**



**Daily Seaming & Non-Destructive Seam Test Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Initial Air Pressure: 30 psi (min) to 35 psi (max)  
 Allowable Pressure Drop: 2 psi  
 Test Duration: 5 minutes

Construction Observer: DAVID LENOX

Date: 9/14/19

Setting Pond:  Leachate Storage and Transfer Area:

Previous sheets total seam length: 0

Material: ATARFIL 60 mil Textured HDPE

Weather: SWAMPY, WINDY, 71°F

Panels Adjacent Seam Number	Welder/ Machine ID	Seam Type EX/ FIS	Start Time	Finish Time	Seam Length	Tested By	Seam Testing				Vacuum Box Tested	Destructive Sample No. and Location/Comments	
							Pressure Start	Pressure End	Pressure Drop	Time Start			Time Finish
P8/P5	LS 32	FUS	2:00	2:08	27.7'	VP	30	29	1	2:08	2:13	P	
P5/P4	LS 32	FUS	2:10		27.7'	VP	30	30	0	2:17	2:27	P	
P4/P3	LS 32	FUS	2:18		27.7'	VP	30	30	0	2:24	2:30	P	
P3/P2	LS 32	FUS	2:25		27.7'	VP	30	30	0	2:33	2:38	P	
P2/P1	LS 32	FUS	2:42		27.7'	VP	30	29	1	2:58	2:55	P	
P5/P10	LS 32	FUS	3:00		19.2'	VP	30	30	0	3:07	3:12	P	
P4/P10	LS 32	FUS			19.2'	VP	30	30	0	3:14	3:19	P	
P3/P10	LS 32	FUS			19.2'	VP	30	30	0	3:18	3:23	P	
P2/P10	LS 32	FUS			19.2'	VP	30	29	1	3:21	3:26	P	
P1/P10	LS 32	FUS			19.2'	VP	30	30	0	3:27	3:32	P	
P1/P7	LS 32	FUS	3:20		27.7'	VP	30	30	0	3:31	3:36	P	
P7/P6	LS 32	FUS	3:30	3:34	25.8'	VP	30	30	0	3:40	3:45	P	
P6/P10	LS 32	FUS	3:36		24.3'	VP	30	30	0	3:45	3:50	P	
P12/P11	VS w-43	FUS	2:14		19.2'	VP	30	30	0	2:38	2:43	P	
P13/P12	VS w-43	FUS	2:50		68'	VP	30	30	0	3:11	3:16	P	
P13/P11	VS w-43	FUS			88.7'	VP	30	30	0	3:30	3:35	P	
P9/P8	LS 32	FUS	1:53		6.1'	VP	30	30	0	2:02	2:07	P	
P8/P9A	LS 32	FUS	3:48		24.7'	VP	30	30	0	4:04	4:09	P	
P9/P9A	LS 32	FUS			9.1'	VP	30	30	0	4:00	4:05	P	
P10/P9A	LS 32	FUS	4:00		27.8'	VP	30	28	2	4:07	4:12	P	



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2620 Grand Island Blvd. Grand Island NY 14072

Ph: (716) 773-6872 / Fax: (716) 773-6873 www.daiglerengineering.com

Daily Seaming & Non-Destructive Seam Test Report

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Initial Air Pressure: 30 psi (min) to 35 psi (max)

Construction Observer: DAVID CENOVY

Date: 9/19/19

Allowable Pressure Drop: 2 psi

Material: ATARFIL 60 mil Textured HDPE

Settling Pond: X Leachate Storage and Transfer Area:

Weather: SUNNY/WINDY/71°F

Previous sheets total seam length: 555.9'

Parcel Adjacent Seam Number	Welder/ Machine ID	Seam Type Ekt/ Fus	Start Time	Finish Time	Seam Length	Tested By	Air Testing				Pass/ Fail	Vacuum Box Tested	Destructive Sample No. and Location/Comments	
							Pressure Start	Pressure End	Pressure Drop	Time Start				Time Finish
P12/P10	VS W-48	FUS	2:21		68'	VP	30	30	0	2:34	2:41	P		
P10/P11	VS W-48	FUS	↓		86.71'	VP	30	30	0	2:43	2:52	P		
P13/P14	VS W-48	FUS	3:15		160.71'	VP	30	30	0	4:16	4:21	P		
P14/P16	VS W-48	FUS	3:30		58.3'	VP	30	30	0	4:17	4:22	P		
P15/P14	VS W-48	FUS	↓		99.8'	VP	30	30	0	4:30	4:35	P		
P16/P16	VS W-48	FUS	3:45		19.21'	VP	30	30	0	4:30	4:35	P		
P11/P12	VS W-48	FUS	2:14		19.21'	VP	30	30	0	2:38	2:43	P		
P11/P16	VS W-48	FUS	4:17		58.3'	VP	30	30	0	4:46	4:51	P		
P15/P17	VS W-48	FUS	↓		99.8'	VP	30	30	0	4:46	4:51	P		
P17/P18	VS W-48	FUS	4:05		15.9'	VP	30	30	0	4:56	5:00	P		
P16/P19	VS W-48	FUS	4:40		51.7'	VP	30	30	0	4:58	5:03	P		
P20/P19	VS W-48	FUS	4:33		19.21'	VP	30	29	1	5:09	5:14	P		
P18/P20	VS W-48	FUS	↓		106.4'	VP	30	30	0	5:09	5:14	P		
P21/P19	VS W-48	FUS	4:45		51.7'	VP	30	30	0	5:18	5:23	P		
P20/P21	VS W-48	FUS	↓		106.4'	VP	30	30	0	5:18	5:23	P		
P21/P22	VS W-48	FUS	5:06		157.9'	VP	30	30	0	5:34	5:39	P		
P23/P22	VS W-48	FUS	5:20		63.0'	VP	30	29	1	5:36	5:41	P		
P24/P23	VS W-48	FUS	5:14		19.21'	VP	30	30	0	5:48	5:53	P		
P24/P22	VS W-48	FUS	↓		95.2'	VP	30	30	0	5:46	5:51	P		
P23/P25	VS W-48	FUS	5:35		63.0'	VP	30	30	0	5:55	6:00	P		

DS-2 (10' south of P20/P19)





**Daily Seaming & Non-Destructive Seam Test Report**

Project Name: Lockwood Hills Setting Pond Sediment Removal and Improvements Construction

Initial Air Pressure: 30 psi (min) to 35 psi (max)

Construction Observer: **SAM DAKLER**

Date: **9-5-19**

Allowable Pressure Drop: 2psi  
 Test Duration: 5 minutes

Material: ATARFIL 60 mil Textured HDPE

Setting Pond: **X** Leachate Storage and Transfer Area:

Weather: **SUNNY**

Previous sheets total seam length: **2,3174**

DESTRUCTS

Panel Adjacent Seam Number	Welder/ Machine ID	Seam Type Ext/ Fus	Start Time	Finish Time	Seam Length	Seam Testing						Destructive Sample No. and Location/Comments		
						Tested By	Pressure Start	Pressure End	Pressure Drop	Time Start	Time Finish		Pass/Fail	Vacuum Box Tested
28/27	LS 32	FUS	8:07	8:07	20'	VP	30	29	1	8:13	8:18	PASS	-	
28/26	LS 32	FUS			32'	VP	30	30	0	8:37	8:42	PASS		SOUTH EDGE → 32' N. (MID PAILED BETWEEN R-26 AND R-25)
<del>28/27</del>	<del>LS 32</del>	<del>FUS</del>	<del></del>	<del></del>	<del>9'</del>	<del>VP</del>	<del>30</del>	<del>30</del>	<del>0</del>	<del>8:47</del>	<del>8:53</del>	<del>PASS</del>		
29/30	VS 43	FUS	8:30	8:50	157'	VP	30	30	0	9:27	9:32	PASS		RETESTED @ 9:25 am
27/29	LS 32	FUS	8:45	8:56	76'	VP	30	26	4	9:16	9:21	FAIL		CAPPED - W/R-26 AND R-25 - BURROWS
28/26	LS 32	FUS			81'									
28/29	LS 32	FUS	8:57	9:08	80'	VP	30	30	0	9:16	9:21	P		
26/27	LS 32	FUS			76' (35')	VP	30	30	0	9:06	9:11	P		SOUTH → NORTH
26/27	LS 32	FUS			76' (34')	VP	30	28	2	9:07	9:12	P		NORTH → SOUTH (EDGES)
26/31	LS 32	FUS	9:25		98'	VP	30	30	0	9:36	10:01	P		
30/32	LS 32	FUS	9:16		58'	VP	30	30	0	9:34	9:39	P		
32/33	VS 43	FUS	4:05	9:15	58'	VP	30	30	0	9:46	9:51	P		
31/33	VS 43	FUS	9:15		99'	VP	30	25	5	9:46	9:51	PF		60' (SOUTH → NORTH) DUE TO BURNDOUT
31/32	VS 43	FUS	9:00		20'	VP	30	30	0	9:38	9:43	P		
27/29					-	VP	30	30	0	9:25	9:30	P		READJUSTED NEEDLE
33/34	VS 43	FUS	9:35		157'	VP	30	30	0	10:04	10:09	P		
34/35	LS 32	FUS	9:45		117'	VP	30	30	0	10:09	10:14	P		
31/33	LS 32	FUS			-	VP	30	30	0	9:54	9:59	P		RE TEST OF 60' S → N (ADJUSTED NEEDLE)
21/33	LS 32	FUS			-	VP	30	30	0	10:00	10:05	P		32' (NORTH → SOUTH) BURNDOUT

**Daily Seaming & Non-Destructive Seam Test Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Initial Air Pressure: 30 psi (min) to 35 psi (max)  
 Allowable Pressure Drop: 2 psi  
 Test Duration: 5 minutes

Date: 9-5-19

Construction Observer: SAM DAIGLER

Material: ATARFIL 60 mil Textured HDPE

Settling Pond:  Leachate Storage and Transfer Area:

Weather: SUNNY

Previous sheets total seam length: 3512

Panels Adjacent Seam Number	Welder/ Machine ID	Seam Type Ext/ Fus	Start Time	Finish Time	Seam Length	Tested By	Seam Testing				Vacuum Box Tested	Destructive Sample No. and Location/Comments	
							Pressure Start	Pressure End	Air Pressure Drop	Time Start			Time Finish
35/36	V3 43	FUS	1000	1011	20'	VP	30	30	0	1023	1028	P	
34/36	L3 32	FUS	1000	1011	40'	VP	30	30	0	1015	1020	7455	
36/37	V3 32	FUS	1011	1017	40'	VP	30	30	0	1024	1029	P	
35/37	L3 32	FUS	1017	1017	18' 117	VP	30	30	0	1036	1041	P	
37/38	V3 43	FUS	1000	1033	150'	VP	30	30	0	1037	1042	P	150' DS-4 (66' SOUTH OF NORTH EDGE)
34/41	V3 43	FUS	1033	1037	61'	VP	30	30	0	1102	1108	P	
39/38	L3 32	FUS	1037	1042	61'	VP	30	30	0	1056	1101	P	
40/41	V3 43	FUS	1042	1045	96'	VP	30	30	0	1110	1115	P	
40/38	L3 32	FUS	1045	1045	96'	VP	30	30	0	1113	1118	P	
40/39	V3 43	FUS	1025	1025	20'	VP	30	30	0	1048	1053	P	
41/42	V3 43	FUS	1025	1025	155'	VP	30	30	0	1124	1129	P	
43/44	L3 32	FUS	1116	1116	20'	VP	30	28	2	1128	1140	P	
42/43	L3 32	FUS	1105	1105	77'	VP	30	29	1	1134	1139	P	DS-7 (6' FROM EAST EDGE)
42/44	L3 32	FUS	1120	1120	78'	VP	30	30	0	1125	1130	P	DS-5 (27' SOUTH OF 43/44)
45/47	V3 43	FUS	1125	1125	28'	VP	30	30	0	1144	1149	P	
47/48	V3 43	FUS	1130	1130	29'	VP	30	29	1	1144	1149	P	
44/48	V3 43	FUS	1140	1140	36'	VP	30	29	1	1154	1159	P	
49/45	V3 43	FUS	1144	1144	50'	VP	30	30	0	1154	1159	P	
49/50	L3 32	FUS	1136	1136	50'	VP	30	30	0	1246	1251	P	
50/51	V3 32	FUS	1143	1143	54'	VP	30	30	0	1233	1238	P	
45/49	L3 32	FUS	1209	1209	20'	VP	30	30	0	1237	1242	P	

**Daily Seaming & Non-Destructive Seam Test Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Initial Air Pressure: 30 psi (min) to 35 psi (max)

Construction Observer: **SAM DAIGLER**

Date: **9-5-19**

Allowable Pressure Drop: 2 psi

Test Duration: 5 minutes

Material: ATAREL 60 mil Textured HDPE

Setting Pond:  Leachate Storage and Transfer Area:

Weather: **SNOWY**

Previous sheets total seam length: **4773'**

Panel/Adjacent Seam Number	Welder/ Machine ID	Seam Type Ext./ Fus	Start Time	Finish Time	Seam Length	Tasted By	Seam Testing						Pass/Fail	Vacuum Box Tested	Destructive Sample No. and Location/Comments
							Pressure Start	Pressure End	Pressure Drop	Time Start	Time Finish				
51/52	LS 32	FUS	1153		<del>220'</del> 55'	VP	30	30	0	1302	1307	P			
52/53	VS 43	FUS	1150		52'	VP	30	30	0	1308	1313	P		DS-6 (27' WEST OF EAST EDGE)	
53/56	VS 43	FUS	1200		40'	VP	30	30	0	1324	1329	P			
45/44	LS 32	FUS	1209		29'	VP	30	29	1	12:34	12:42	P			
44/44	LS 32	FUS	1217		20'	VP	30	30	0	12:37	12:42	P			
44/30	LS 32	FUS	1221		20'	VP	30	30	0	12:46	12:51	P			
44/51	LS 32	FUS	1223		12'	VP	30	30	0	12:53	12:58	P			
43/52	LS 32	FUS	1225		20'	VP	30	30	0	1308	1313	P			
43/53	LS 32	FUS	1228		13'	VP	30	30	0	1316	1321	P			
43/54	LS 32	FUS	1230		39'	VP	30	30	0	1317	1322	P			
43/51	LS 32	FUS	1224		8'	VP	30	29	1	1302	1307	P			
56/57	VS 43	FUS	1211		8'	VP	-	-	-	-	-	P	PASS	PW SHORT SEAM - V.T.	
55/56	VS 43	FUS	1220		20'	VP	30	30	0	1331	1336	P			
54/56	VS 43	FUS	1225		14'	VP	30	30	0	1331	1336	P			
53/54	VS 43	FUS	1228		11'	VP	30	30	0	1335	1330	P			
55/54	VS 43	FUS	1206		23'	VP	30	30	0	1337	1342	P			
55/51	VS 43	FUS			3'	PW	-	-	-	-	-	P	PASS	SHORT SEAM - V.T.	
<del>55/54</del>															

5,186'

5043 TOTAL  
5160

# **Repair Reports**



**Daily Repair Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Construction Observer: SAM DAIGLER Date: 9-4-19 AND 9/5/19

BEAD CLUSTER ON R-4 VTOIF  
 " " R-13 VTOIF

Material: ATARFIL 60 mil Textured HDPE

Weather: SUNNY

Settling Pond  Leachate Storage and Transfer Area \_\_\_\_\_

Total feet of seam from Previous Sheet: \_\_\_\_\_

Repair Number	Size of Repair	Welded By	Machine Number	Seam Type Ext / Fus	Panels and Location	Tested By	Test Date	V-Box Pass / Fail
R-1	3.25' x 2'	LPS	1	EXT	1, 7, 6, 10	PW	9/5/19	PASS
R-2	1.75' x 1.00'	LPS	1	EXT	1, 2, 10	PW	9/5/19	PASS
R-3	HDPE DRAIN	LPS	1	EXT	RZ	PW	9/5/19	PASS
R-4	HDPE DRAIN	LPS	1	EXT	2' x 2' HDPE OUTLET STRUCTURE	PW	9/5/19	PASS
R-5	1' x 2.25'	LPS	1	EXT	RZ	PW	9/5/19	PASS
R-6	1.25' x 1.5'	LPS	1	EXT	2/3/10	PW	9/5/19	PASS
R-7	1.25' x 2'	LPS	1	EXT	3/4/10	PW	9/5/19	PASS
R-8	2' x 4'	LPS	1	EXT	4/5/10	PW	9/5/19	PASS
R-9	1.5' x 2'	LPS	1	EXT	9A/8/5/10	PW	9/5/19	PASS
R-10	2' x 2'	LPS	1	EXT	MID OF P9A, 14' FROM NORTH EDGE	PW	9/5/19	PASS
R-11	1.25' x 1.25'	LPS	1	EXT	P9/P9A/P9	PW	9/5/19	PASS
R-12	1.25' x 1.25'	LPS	1	EXT	10, 11, 12	PW	9/5/19	PASS
R-13	1.25' x 1.25'	LPS	1	EXT	11, 12, 13	PW	9/5/19	PASS
R-14	1' x 1'	LPS	1	EXT	P11 35' FROM 11/12 - SOUTH	PW	9/5/19	PASS
R-15	1' x 1'	LPS	1	EXT	P13 25' FROM 11/12 - SOUTH	PW	9/5/19	PASS
R-16	1' x 1.5'	LPS	1	EXT	P13 25' FROM 11/12 - SOUTH	PW	9/5/19	PASS
R-17	1' x 1.25'	LPS	1	EXT	P14 60' FROM SOUTH EDGE	PW	9/5/19	PASS
R-18	1.75' x 2'	LPS	1	EXT	14/15/16	PW	9/5/19	PASS
R-19	1.5' x 2'	LPS	1	EXT	15/16/17	PW	9/5/19	PASS
R-20	1.5' x 1.5'	LPS	1	EXT	18/19/20	PW	9/5/19	PASS
R-21	1.5' x 5.0'	LPS	1	EXT	19/20/21	PW	9/5/19	PASS
R-22				EXT	DS-2 10' SOUTH of P20/P-21	PW	9/5/19	PASS

DS-3 117.3

**Daily Repair Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Construction Observer: SAM DAIGLER

Date: 9/5/14

Material: ATARFIL 60 mil Textured HDPE

Weather: SUNNY

Setting Pond  Leachate Storage and Transfer Area \_\_\_\_\_

Total feet of seam from Previous Sheet: \_\_\_\_\_

Repair Number	Size of Repair	Welded By	Machine Number	Seam Type	Ext. / Fus	Panel and Location	Tested By	Test Date	V-Box Pass / Fail
R-22	1.75' x 2'	LP3	1	EXT		22/23/24 $\downarrow$	PW	9/5/14	PASS
R-23	1.75' x 1.5'	LP3	1	EXT		23/24/25 $\downarrow$ (RETESTED)	PW	9/5/14	FAIL
R-24	2' x 4.5'	LP3	1	EXT		DS-3 (FAILED, WAIT TO V-BOX) 53.6' SOUTH			
R-25	2.5' x 2.3'	LP3	1	EXT		37' FROM 28/29 ON P28	PW	9/5/14	PASS
R-26	3' x 2.1'	LP3	1	EXT		26/27/28 $\downarrow$ (P28 MADONITY)	PW	9/5/14	PASS
R-27	2.25' x 2.5'	LP3	1	EXT		27/28/29 $\downarrow$	PW	9/5/14	PASS
R-28	1.75' x 3'	LP3	1	EXT		40' FROM NORTH EDGE ON P26/27	PW	9/5/14	PASS
R-54	1.25' x 1.25'	LP3	1	EXT		P10 21' SOUTH OF P-12/11	PW	9/5/14	PASS
R-29	1.5' x 1.5'	LP3	1	EXT		27/29 3' SOUTH OF NORTH EDGE	PW	9/5/14	PASS
R-30	2.5' x 2.25'	LP3	1	EXT		30/31/32 $\downarrow$	PW	9/5/14	PASS
R-31	2.5' x 2'	LP3	1	EXT		31/32/33 $\downarrow$	PW	9/5/14	PASS
R-32	1.75' x 2.1'	LP3	1	EXT		33/31 38' FROM NORTH EDGE (FAILED AND RETEST/REWELD)	PW	9/5/14	PASS
R-33	2.25' x 2.75'	LP3	1	EXT		34/35/36 $\downarrow$	PW	9/5/14	PASS
R-34	2.25' x 2.25'	LP3	1	EXT		35/36/37 $\downarrow$	PW	9/5/14	PASS
R-35	2.25' x 5'	LP3	1	EXT		DS-4 60' SOUTH OF NORTH EDGE OF P37/P38	PW	9/5/14	PASS
R-36	2.5' x 2.5'	LP3	1	EXT		38/39/40 $\downarrow$	PW	9/5/14	PASS
R-37	2' x 2.5'	LP3	1	EXT		39/40/41 $\downarrow$	PW	9/5/14	PASS
R-39	2' x 2.25'	LP3	1	EXT		42/43/44 $\downarrow$	PW	9/5/14	PASS
R-38	2' x 5'	LP3	1	EXT		DS-5 23' SOUTH OF P43/P44	PW	9/5/14	PASS
R-40	5' x 2'	LP3	1	EXT		DS-7 P49/P43	PW	9/5/14	PASS
R-41	1.75' x 2'	LP3	2	EXT		57/56/55	PW	9/5/14	PASS

VS

**Daily Repair Report**

Project Name: Lockwood Hills Settling Pond Sediment Removal and Improvements Construction

Construction Observer: SDD

Date: 9/5/19

Material: ATARFIL 60 mil Textured HDPE

Weather: SUNNY

Settling Pond  Leachate Storage and Transfer Area \_\_\_\_\_

Total feet of seam from Previous Sheet: \_\_\_\_\_

Repair Number	Size of Repair	Welded By	Machine Number	Seam Type Ext / Fus	Panels and Location	Tested By	Test Date	V-Box Pass / Fail
R-42	1.5' x 1'	<del>VS</del>	XZ	EXT	59/55/56	PW	9/5/19	PASS
R-43	3' x 1.5'	<del>VS</del>	XZ	EXT	53/54/56	PW	9/5/19	PASS
R-44	8" x 2'	<del>VS</del>	XZ	EXT	43/54/53	PW	9/5/19	PASS
R-45	2' x 2'	<del>VS</del>	XZ	EXT	43/52/53	PW	9/5/19	PASS
R-46	2' x 5'	LP3	1	EXT	DS-6 <del>WEST</del> EAST	PW	9/5/19	PASS
R-47	1.5' x 1.5'	LP3	1	EXT	43/51/52	PW	9/5/19	PASS
R-48	1.5' x 1.5'	LP3	1	EXT	43/44/51	PW	9/5/19	PASS
R-49	1.95' x 2'	LP3	1	EXT	44/50/51	PW	9/5/19	PASS
R-50	2' x 2.5'	LP3	1	EXT	44/49/50	PW	9/5/19	PASS
R-51	8.5' x 3'	<del>VS</del>	XZ	EXT	PIPE INLET BOOT (VS)	PW	9/5/19	PASS
R-52	2.5' x 4.5'	LP3	1	EXT	45/47/48/49	PW	9/5/19	PASS
R-53	2' x 2.25'	LP3	1	EXT	44/45/49	PW	9/5/19	PASS
R-23					REPAIRED LEAK	PW	9/5/19	PASS
R-54		VS	XZ	EXT				
R-55	2' x 24.5'	VS	Z	EXT	DS-3 / DS-3A	PW	9/5/19	PASS
R-56	2' x 8'	VS	Z	EXT	Z' x 8' DS-3B	PW	9/5/19	PASS





# **Destructive Seam Test Reports**





**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/5/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	DS#2	<b>Lab ID No.:</b>	19-701
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	75 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.989	106	107.2	SE1
	3	0.989	102	103.1	SE1
	5	0.987	107	108.4	SE1
	7	0.989	103	104.1	SE1
	9	0.989	103	104.2	SE1
			<b>104.2</b>	<b>105.4</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.988	128	129.8	SE1	15.975	1598
	4	0.987	129	130.8	SE1	15.922	1592
	6	0.988	129	130.7	SE1	15.924	1592
	8	0.988	130	132.0	SE1	15.964	1596
	10	0.988	131	132.2	SE1	17.109	1711
		<b>Average</b>	<b>129.5</b>	<b>131.1</b>			

<b>Rupture Mode Selection</b>	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**



**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/5/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	<b>DS#3</b>	<b>Lab ID No.</b>	19-702
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	75 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.988	112	113.4	SE1
	3	0.988	110	111.4	SE1
	5	0.987	109	110.5	SE1
	7	0.988	121	122.5	SE1
	9	0.988	115	116.4	SE1
			<b>113.4</b>	<b>114.8</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.987	121	122.6	BRK	15.84	1584
	4	0.987	129	130.6	SE1	16.639	1664
	6	0.988	116	117.5	BRK	15.21	1521
	8	0.989	128	130.0	SE1	16.943	1694
	10	0.988	127	128.9	SE1	16.833	1683
		<b>Average</b>	<b>124.3</b>	<b>125.9</b>			

Rupture Mode Selection	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

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**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	DS#3A	<b>Lab ID No.:</b>	19-713
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

Weld No.	Specimen No	Specimen Width	Maximum Load, lbs	Max. Tension Value, lb/in	Rupture Mode Selection
Weld a	1	0.989	106	107.2	SE1
	3	0.990	108	109.1	SE1
	5	0.988	112	113.4	SE1
	7	0.989	104	105.2	SE1
	9	0.985	117	118.8	SE1
			<b>109.4</b>	<b>110.7</b>	

**Shear Testing**

Weld No.	Specimen No	Specimen Width	Maximum Load, lbs	Max. Tension Value, lb/in	Rupture Mode Selection	Extension @ Test End, in	Shear % Elongation
Weld a,b	2	0.991	130	130.7	SE1	6.425	643
	4	0.989	131	132.2	SE1	5.993	599
	6	0.988	129	130.5	SE1	6.718	672
	8	0.989	131	132.7	SE1	6.56	656
	10	0.991	131	132.4	SE1	8.866	887
		<b>Average</b>	<b>130.3</b>	<b>131.7</b>			

Rupture Mode Selection	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**



**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	<b>DS#3B</b>	<b>Lab ID No.</b>	19-714
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.986	97	98.4	SE1
	3	0.992	101	101.9	SE1
	5	0.991	98	98.9	SE1
	7	0.991	98	98.9	SE1
	9	0.987	97	98.3	SE1
			<b>98.2</b>	<b>99.3</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.990	131	132.3	SE1	16.591	1659
	4	0.990	130	130.9	SE1	6.277	628
	6	0.989	132	133.0	SE1	7.001	700
	8	0.988	131	133.2	SE1	17.715	1772
	10	0.988	130	131.2	SE1	10.718	1072
		<b>Average</b>	<b>130.6</b>	<b>132.1</b>			

Rupture Mode Selection	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

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**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	<b>DS#4</b>	<b>Lab ID No.</b>	19-709
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.988	99	100.3	SE1
	3	0.992	107	107.9	SE1
	5	0.989	105	106.2	SE1
	7	0.986	105	106.5	SE1
	9	0.991	99	99.9	SE1
			<b>103.0</b>	<b>104.1</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.992	121	122.0	BRK	14.64	1464
	4	0.990	124	125.3	SE1	12.329	1233
	6	0.989	123	124.8	SE1	12.356	1236
	8	0.988	121	122.8	SE1	12.059	1206
	10	0.992	122	123.0	BRK	13.79	1379
		<b>Average</b>	<b>122.4</b>	<b>123.6</b>			

Rupture Mode Selection	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
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**East Aurora, NY 14052**  
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**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	<b>DS#5</b>	<b>Lab ID No.</b>	19-710
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.986	114	115.6	SE1
	3	0.992	104	104.9	SE1
	5	0.990	112	113.2	SE1
	7	0.989	100	101.2	SE1
	9	0.990	100	101.1	SE1
			<b>106.0</b>	<b>107.2</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.989	125	126.0	SE1	16.408	1641
	4	0.993	124	124.7	SE1	11.76	1176
	6	0.992	126	127.1	BRK	18.713	1871
	8	0.984	126	128.1	SE1	18.615	1862
	10	0.990	129	129.9	SE1	18.855	1886
		<b>Average</b>	<b>125.8</b>	<b>127.2</b>			

<b>Rupture Mode Selection</b>	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**



**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	<b>DS#6</b>	<b>Lab ID No.</b>	19-711
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.982	113	115.1	SE1
	3	0.989	112	113.3	SE1
	5	0.990	105	106.1	SE1
	7	0.990	105	106.1	SE1
	9	0.988	109	110.3	SE1
			<b>108.8</b>	<b>110.2</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.990	125	126.0	SE1	18.004	1800
	4	0.991	128	128.8	SE1	18.634	1863
	6	0.991	128	129.1	SE1	18.804	1880
	8	0.988	123	124.6	SE1	13.407	1341
	10	0.991	125	126.5	SE1	12.039	1204
		<b>Average</b>	<b>125.7</b>	<b>127.0</b>			

<b>Rupture Mode Selection</b>	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**



**Peel/Shear Testing-ASTM D6392  
Sample Report**

<b>Project:</b>	Daigler Engineering, Lockwood Hills	<b>Date:</b>	9/9/2019
<b>Project No.:</b>	19-042	<b>Tested By:</b>	EBS
<b>Sample No.:</b>	DS#7	<b>Lab ID No.:</b>	19-712
<b>Weld Type:</b>	Dbl Fusion	<b>Cross Head Speed, in/min:</b>	2
<b>Temperature:</b>	72 deg F	<b>Liner:</b>	ATARFIL 60 mil text.

**Peel Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>
Weld a	1	0.990	118	119.2	SE1
	3	0.993	116	116.8	SE1
	5	0.994	113	113.7	SE1
	7	0.995	122	122.7	SE1
	9	0.995	118	118.6	SE1
			<b>117.4</b>	<b>118.2</b>	

**Shear Testing**

<b>Weld No.</b>	<b>Specimen No</b>	<b>Specimen Width</b>	<b>Maximum Load, lbs</b>	<b>Max. Tension Value, lb/in</b>	<b>Rupture Mode Selection</b>	<b>Extension @ Test End, in</b>	<b>Shear % Elongation</b>
Weld a,b	2	0.993	126	127.2	BRK	14.335	1434
	4	0.990	126	127.3	SE1	11.58	1158
	6	0.995	127	127.5	BRK	15.364	1536
	8	0.990	126	127.0	SE1	14.104	1410
	10	0.996	126	126.5	SE1	11.739	1174
		<b>Average</b>	<b>126.2</b>	<b>127.1</b>			

Rupture Mode Selection	
Key:	
AD	Adhesion Failure
BRK	Break in sheeting (top or bottom sheet)
SE1	Break in outer seam edge in the top or bottom sheet. There is no visible weld separation (adhesion failure).
SE2	Break at inner seam edge through both sheets.
AD-__%	Break in first seam after some adhesion failure(top or bottom sheet) with the % of separation.
SIP	Separation in the plane of the sheet (top or bottom)

**3rd Rock, LLC**  
**580 Olean Road**  
**East Aurora, NY 14052**  
**(716)655-4933**  
**(716)655-8638 (fax)**

# **Appendix S**

## **Settling Pond Cushion Geotextile Construction Documentation**



# **Subgrade Acceptance Form**

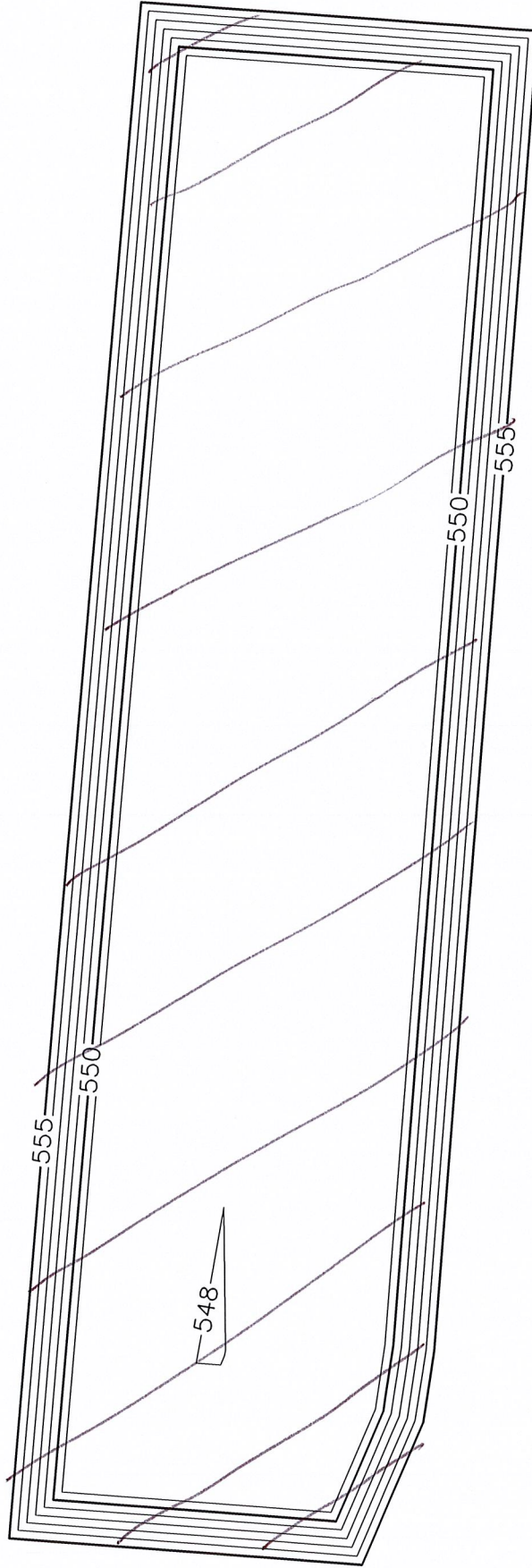


SUBGRADE ACCEPTANCE CERTIFICATION

I HEREBY CERTIFY THAT I HAVE INSPECTED THE TYPE C & T SUBGRADE IN THE AREA OUTLINED ON THIS FORM, AND FIND THE CONDITION OF THIS TYPE C & T SUBGRADE TO BE ACCEPTABLE AT THE TIME OF ITS PLACEMENT.  
 I ALSO CERTIFY THAT THE SURFACE COVERED BY THE TYPE C & T IS FREE OF EXCESS MOISTURE, AND SUBSTANTIALLY CLEARED OF LOOSE SOIL, SHARP OBJECTS, STONES, STICKS, OR ANY MATERIALS THAT MAY CONTRIBUTE TO PUNCTURES, SHEARING, RUPTURING OR TEARING OF THE MATERIAL.  
 THE TYPE C & T SUBGRADE HAS A SMOOTH, FINISHED SURFACE, FREE FROM POCKETS, HOLES, RUTS, AND DISCONTINUITIES THAT WILL CAUSE BRIDGING OF THE MATERIAL



CONTRACTOR: <b>CHENANGO - PETE WARD QUALITY ASSURANCE</b>	CONSTRUCTION OBSERVER: <b>SAM DAIGLER</b>
DATE: <b>9/5/19</b>	DATE: <b>9-<del>8</del>-19</b> <b>5</b>



LOCKWOOD HILLS LLC

SCALE: 1" = 60' REVISION # 0

August 2019

TOWN OF TORREY YATES COUNTY NEW YORK

SETTLING POND SUBGRADE ACCEPTANCE  
 SETTling POND SEDIMENT REMOVAL AND IMPROVEMENTS

FIGURE 3



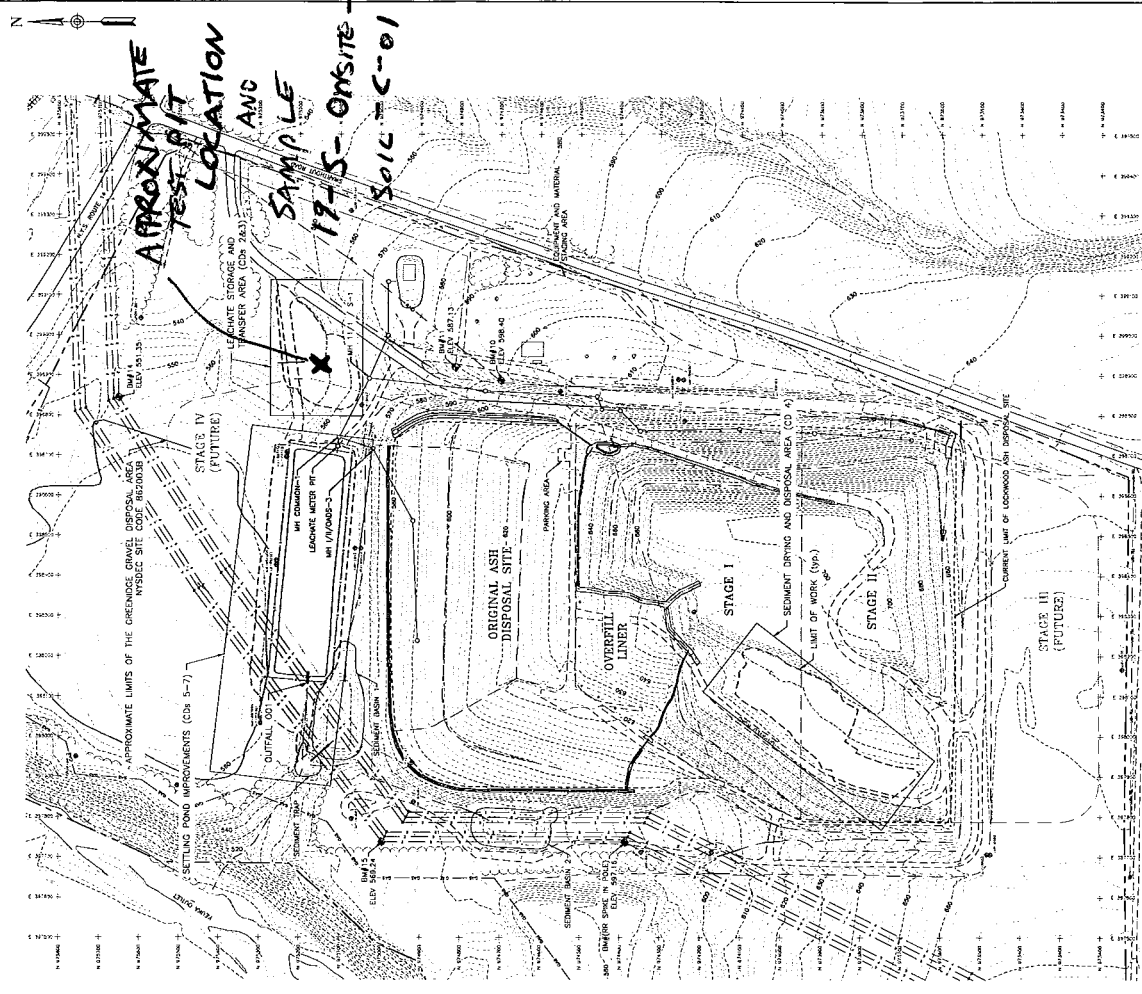


# **Appendix T**

## **Daily Activity Maps**



CONSTRUCTION OBSERVERS: DAVID LENCX  
 JAKE VOROBAYCHIK DATE: 5/28/19



- LEGEND:**
- 550 --- GROUND SURFACE 1' CONTOUR
  - 550 --- GROUND SURFACE 2' CONTOUR
  - ==== PAVED ROAD
  - UNPAVED ROAD
  - FENCE
  - LIMIT OF EXISTING WASTE
  - PERMITTED LIMIT OF WASTE
  - PROPERTY BOUNDARY
  - GROUNDWATER MONITORING WELL
  - OVERHEAD POWER LINES AND POLES
  - LEACHATE SEWER AND MANHOLE
  - NATURAL GAS LINE
  - DRAINAGE CHANNEL
  - ROCK-LINED CHANNEL
  - CULVERT
  - GROUNDWATER DRAIN
  - SURVEY BENCHMARK

- NOTES:**
1. THE TOPOGRAPHY AND PLANNINGS SHOWN ON THE DRAWING HAVE BEEN COMPILED BY KUCERA INTERNATIONAL, INC. USING PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHS DATED FEBRUARY 4, 2010 AND 11/13/17, 11/24/17, AND 12/21/17. SURVEY FROM WILSON ASSOCIATES
  2. VERTICAL CONTROL IS THE GREENGLIDE STATION PLANT DATUM. HORIZONTAL CONTROL IS REFERENCED TO THE NEW YORK STATE GRID M.D. 83.
  3. THE CONTRACTOR SHALL FIELD VERIFY THE ASSUMED CONDITIONS AND REPORT FINDINGS TO THE ENGINEER.
  4. EFFORTS SHALL BE MADE BY THE CONTRACTOR AND CONSTRUCTION STAFF TO MAINTAIN THE PROPOSED MATERIALS SHALL BE CONDUCTED REGULARLY.
  5. SEE CD-9 FOR GENERAL PROJECT NOTES

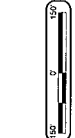
- VERTICAL CONTROL POINT DESCRIPTIONS:**
- BW#10 RAILROAD SPIKE, WEST SIDE OF POLE NYSEG #35828, ELEV. 598.40
  - BW#11 TOP OF BRASS CAP IN 6" SQUARE CONCRETE MONUMENT PROPERTY CORNER, NORTHWEST CORNER OF LOCKWOOD RESERVE, ELEV. 587.13
  - BW#12 TOP OF SOUTH WINDOW OF SEDIMENTATION POND OUTLET, ELEV. 598.04
  - BW#14 RAILROAD SPIKE, EAST SIDE OF POLE MOST SOUTHERLY OF 5 POLES, ELEV. 551.25
  - BW#15 RAILROAD SPIKE, EAST SIDE OF POLE NYSEG #234 EASTERLY OF THREE POLES, ELEV. 589.74
  - BW#16 RAILROAD SPIKE, EAST SIDE OF POLE NYSEG #897167, EASTERLY OF THREE POLES, ELEV. 598.76

CONTRACTOR: M.J. LINDEN, CONTRACTOR, 1000 ROUTE 92, SUITE 100, NEWARK, NJ 07102  
 ENGINEER: DAUGLER ENGINEERING, P.C., 1000 ROUTE 92, SUITE 100, NEWARK, NJ 07102

NO.	REVISION	BY	DATE

**DAUGLER ENGINEERING, P.C.**  
 STATE OF NEW YORK  
 REGISTERED PROFESSIONAL ENGINEER  
 LICENSE NO. 13077  
 DATE: March 2016

JAMES A. DAUGLER, P.E.  
 NYSEG NO. 8248

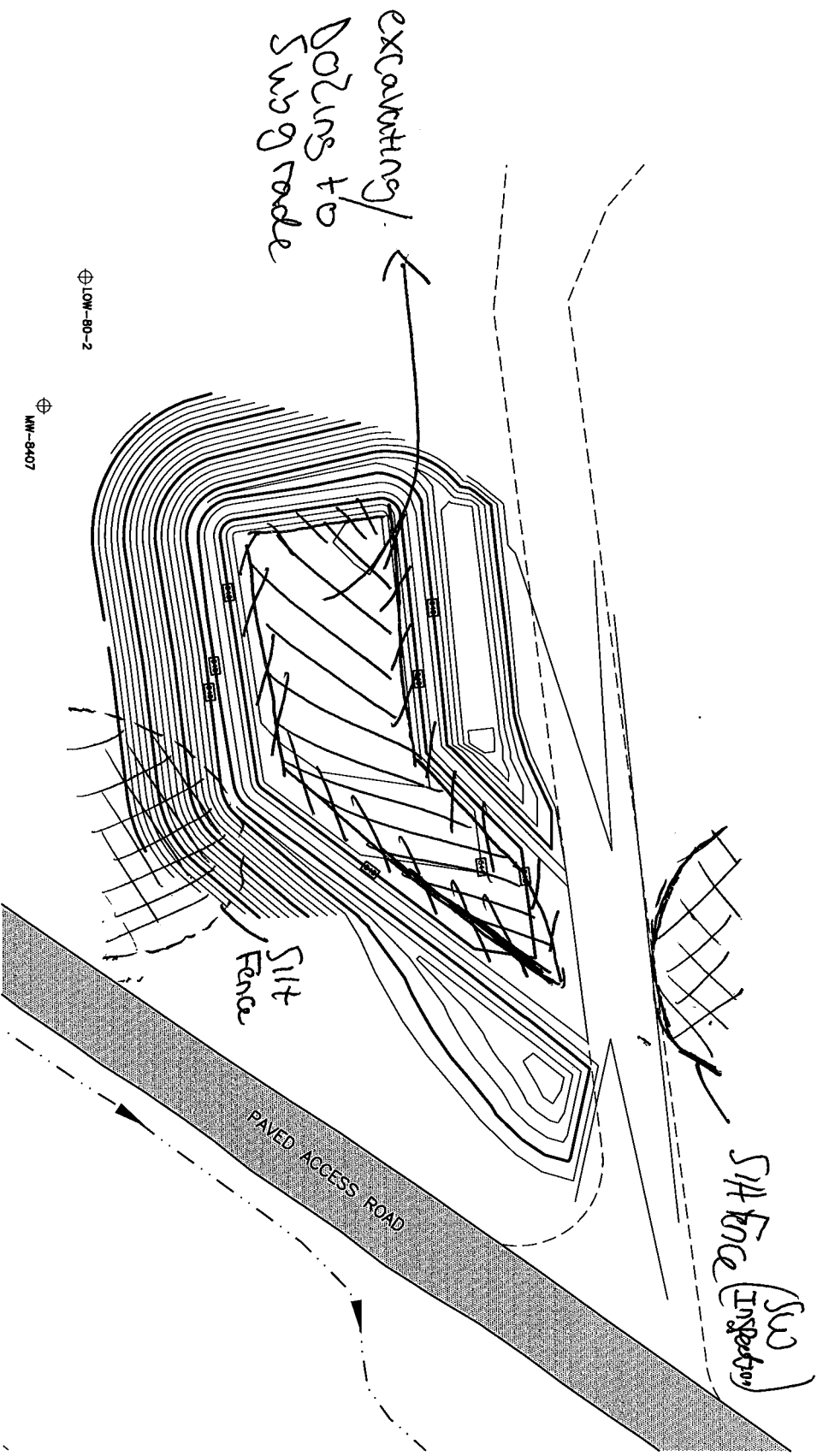


**CD-1**

PREPARED FOR: LOCKWOOD HILLS LLC  
 DESIGNED BY: [ ] DRAWN BY: [ ] CHECKED BY: [ ]  
 DATE: [ ]

**SITE PLAN**  
 SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS  
 TOWN OF TORREY  
 WATERS COUNTY  
 STATE OF NEW YORK

CONSTRUCTION OBSERVER: <i>Jake Vorobeychik</i>	SIGNATURE: <i>Jak Vorobeychik</i>
DATE: <i>7/17/2019</i>	



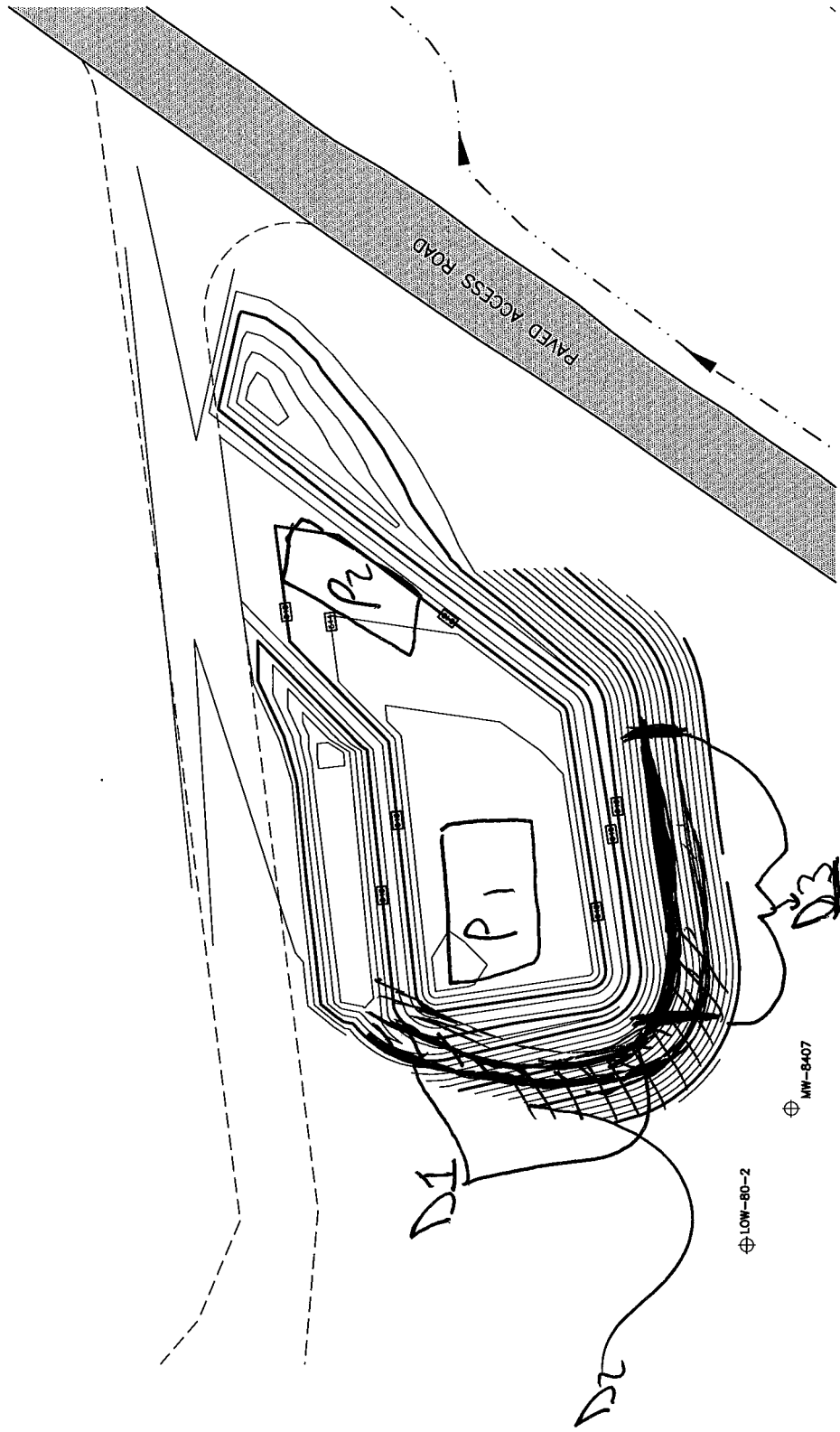
**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	CQA/COC PLAN	
July 2019		TOWN OF TORREY	YATES COUNTY
			NEW YORK

*1 of 1*

CONSTRUCTION OBSERVER: *Tate Vorobeychik* SIGNATURE: *John Vorobeychik*

DATE: *7/2/19*



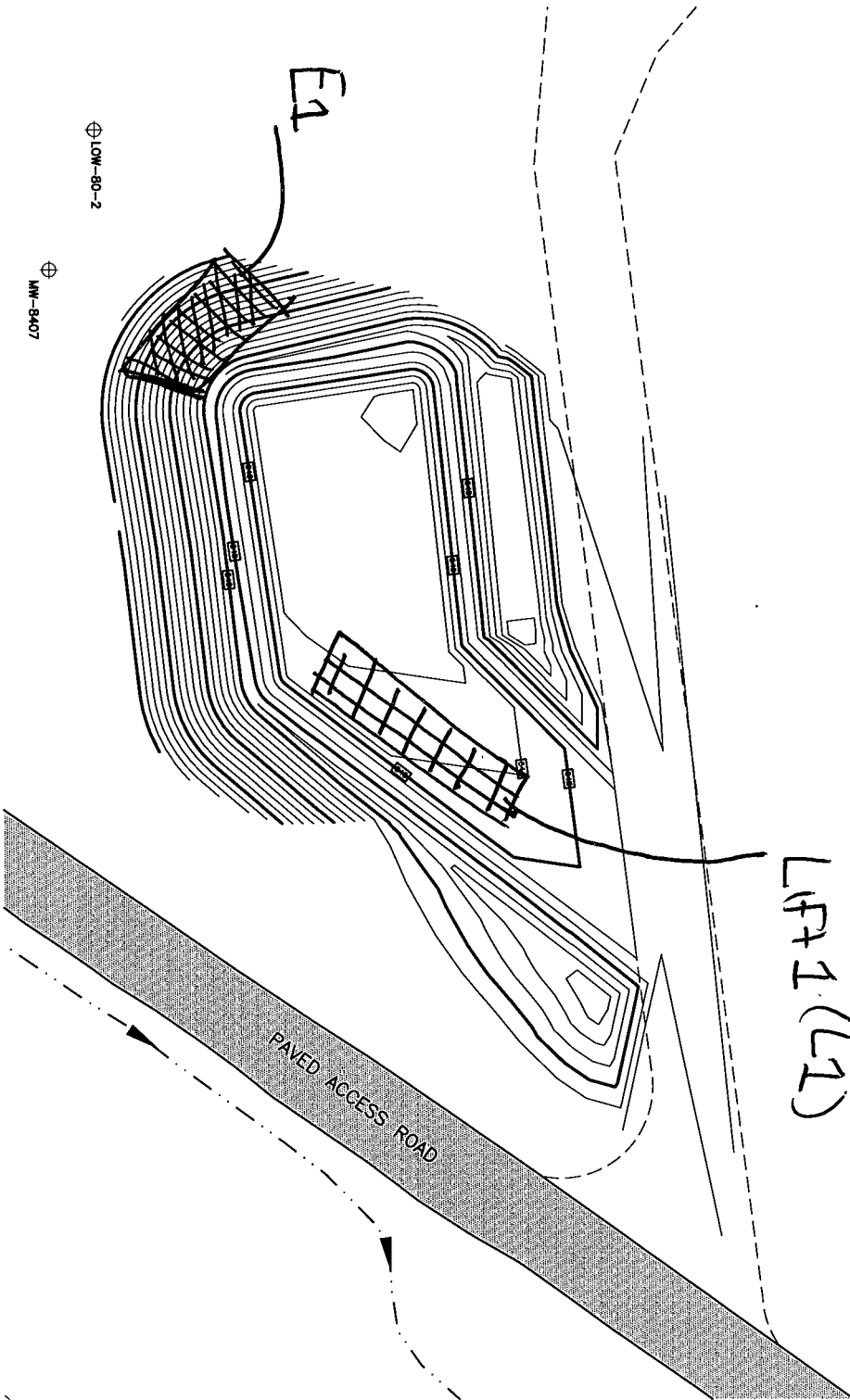
**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK, 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 REVISION # 0  
 July 2019

LSTA DAILY FIELD MAP  
 CQA/CQC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

1 of 5

CONSTRUCTION OBSERVER:	<i>Sale Voro by CWL/C</i>	SIGNATURE:	<i>[Signature]</i>
DATE:	<i>7/2/19</i>		



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

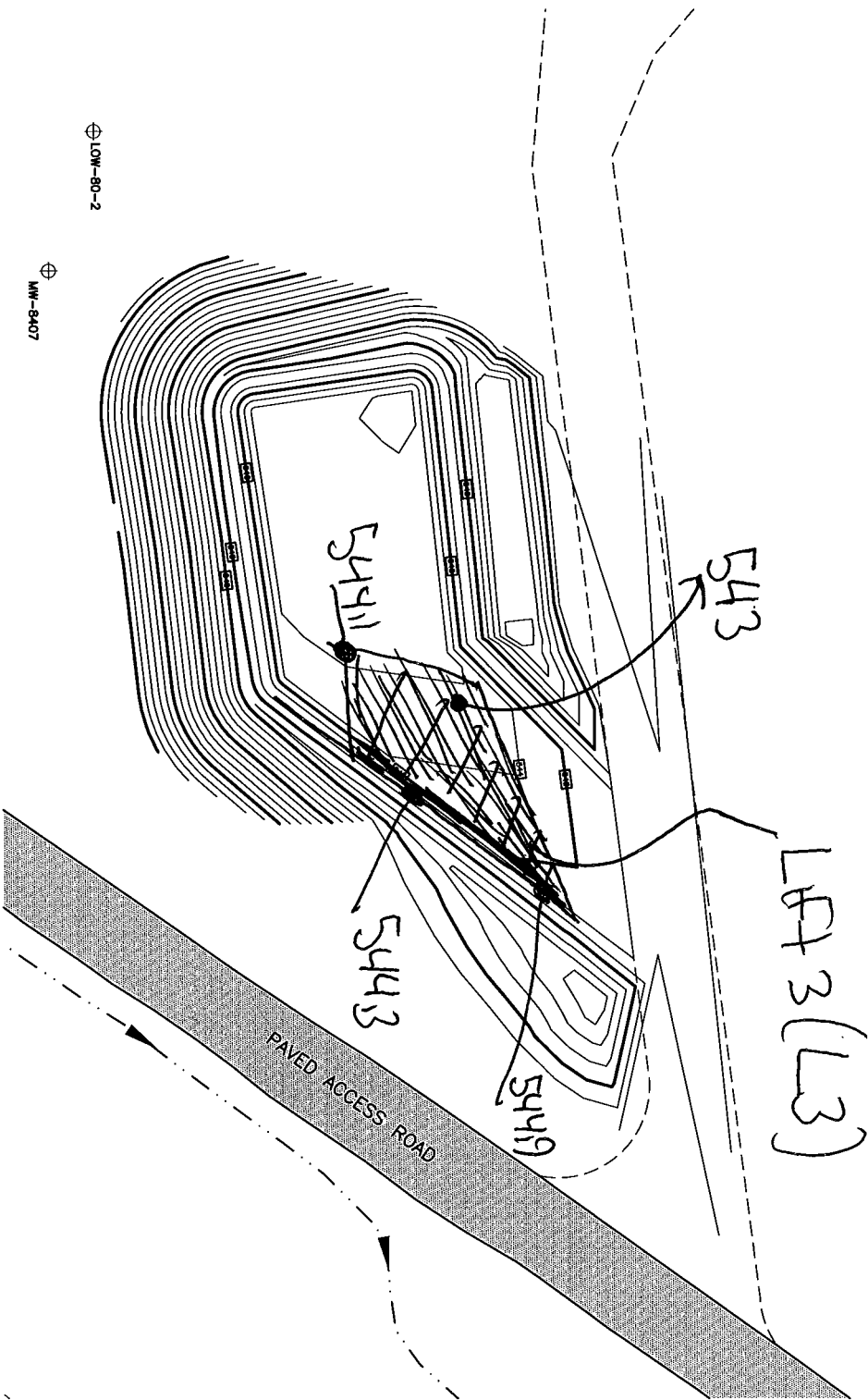
LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	COADCOC PLAN	NEW YORK
July 2019		YATES COUNTY	
		TOWN OF TORREY	

*2 of 5*





CONSTRUCTION OBSERVER:	<i>Jake Vorobeychik</i>	SIGNATURE:	<i>Jake Vorobeychik</i>
DATE:	<i>7/2/19</i>		



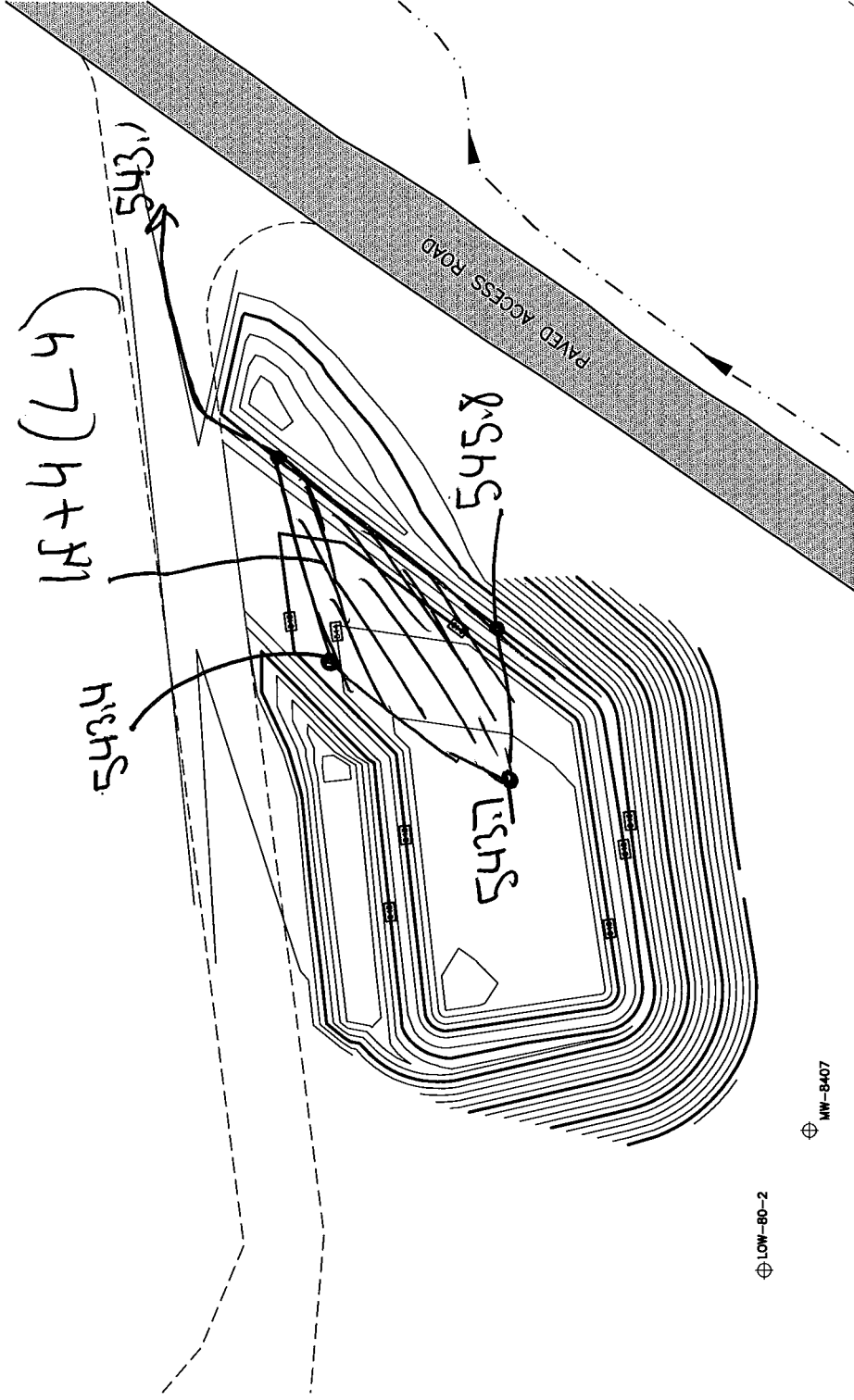
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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE:	1"=50'	REVISION #	0
July 2019		TOWN OF TORREY	YATES COUNTY
		NEW YORK	

*4 of 5*

CONSTRUCTION OBSERVER: *Salek Vorobeychik* SIGNATURE: *John Vorobeychik*

DATE: *7/2/19*



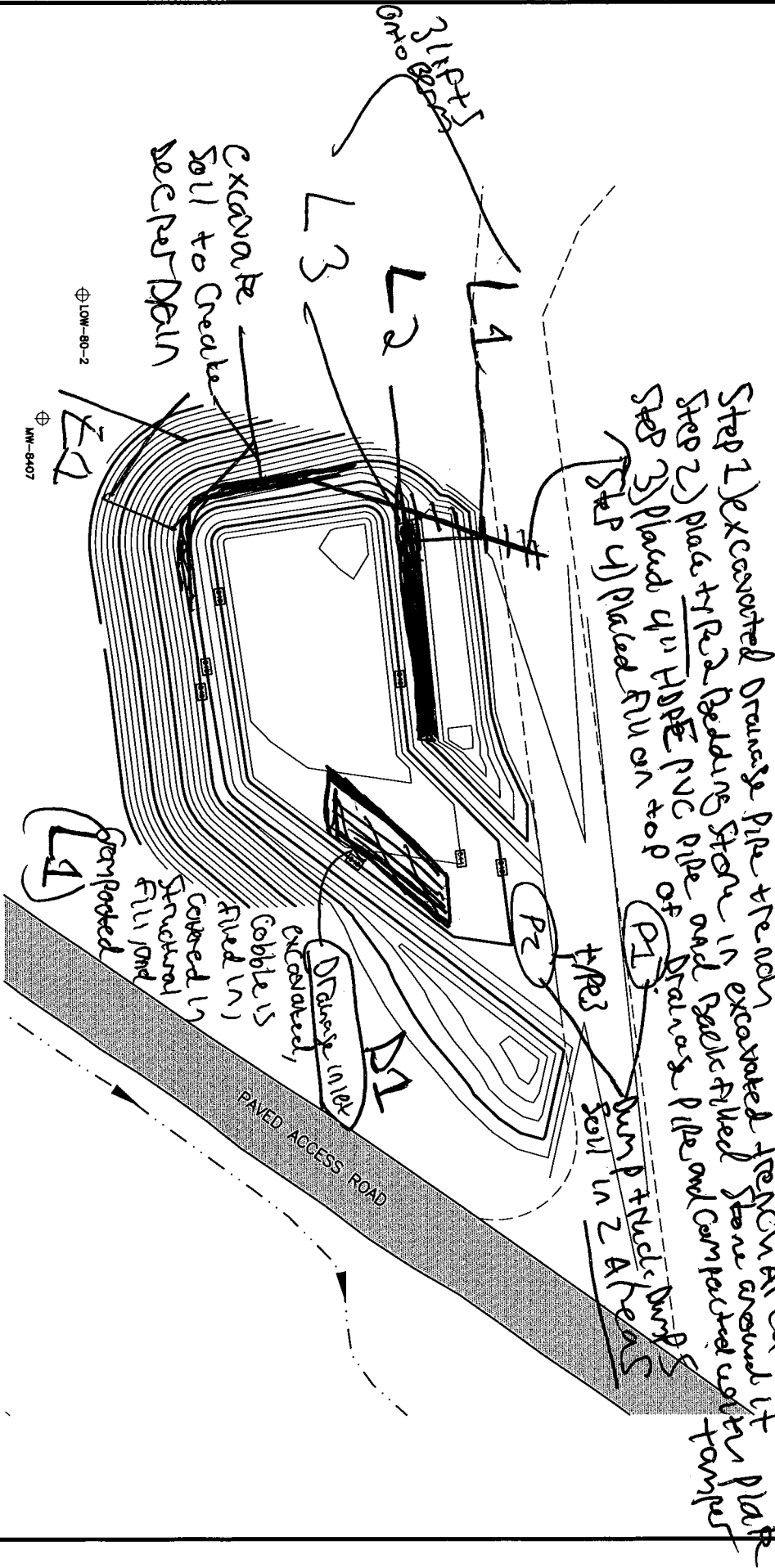
**DAIGLER ENGINEERING, P.C.**  
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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-8872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 July 2019  
 REVISION # 0

LSTA DAILY FIELD MAP  
 COA/CQC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

5 of 5

CONSTRUCTION OBSERVER:	<i>Talca Verochowski</i>	SIGNATURE:	<i>John Verwey</i>
DATE:	7/5/19		



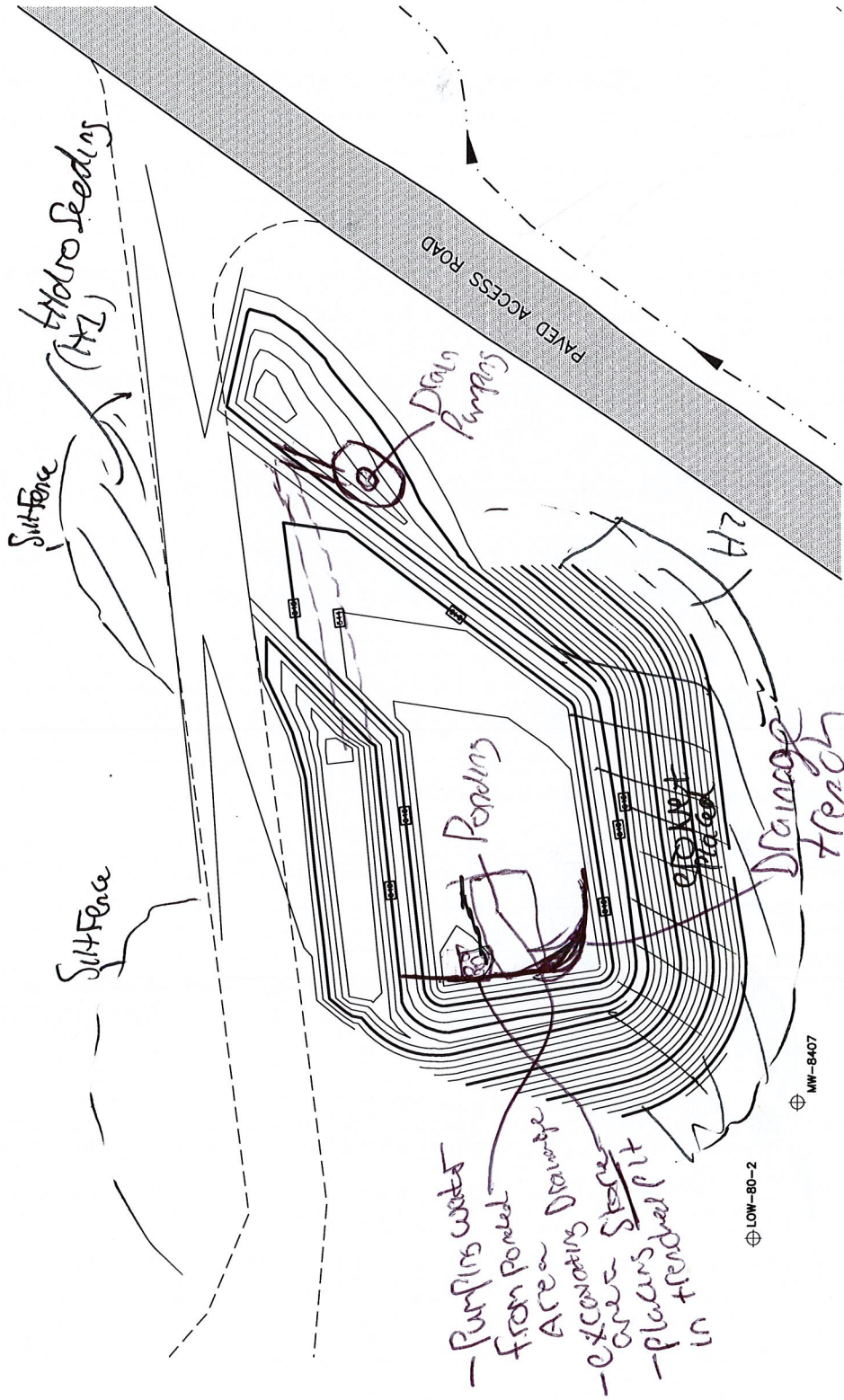
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LOCKWOOD HILLS LLC	SCALE: 1"=50'	REVISION # 0
	July 2019	

LSTA DAILY FIELD MAP	TOWN OF TORREY	YATES COUNTY	NEW YORK
COA/COC PLAN			

1 of 3

CONSTRUCTION OBSERVER: <i>Yevgeniy Vorobeychik</i>	SIGNATURE: <i>John Toobehall</i>
DATE: <i>7/15/19</i>	



LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	CQA/CQC PLAN	
July 2019		TOWN OF TORREY	YATES COUNTY
			NEW YORK

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4" PIPES EXPOSED  
HERE

TEMPORARY ELEC  
DEWATERING PUMP

\* TEMP ELZ PUMP DISCHARGE  
TO POINT 1 ON APPROXIMATE  
WAVE TO POINT 2 AT  
8:00 am

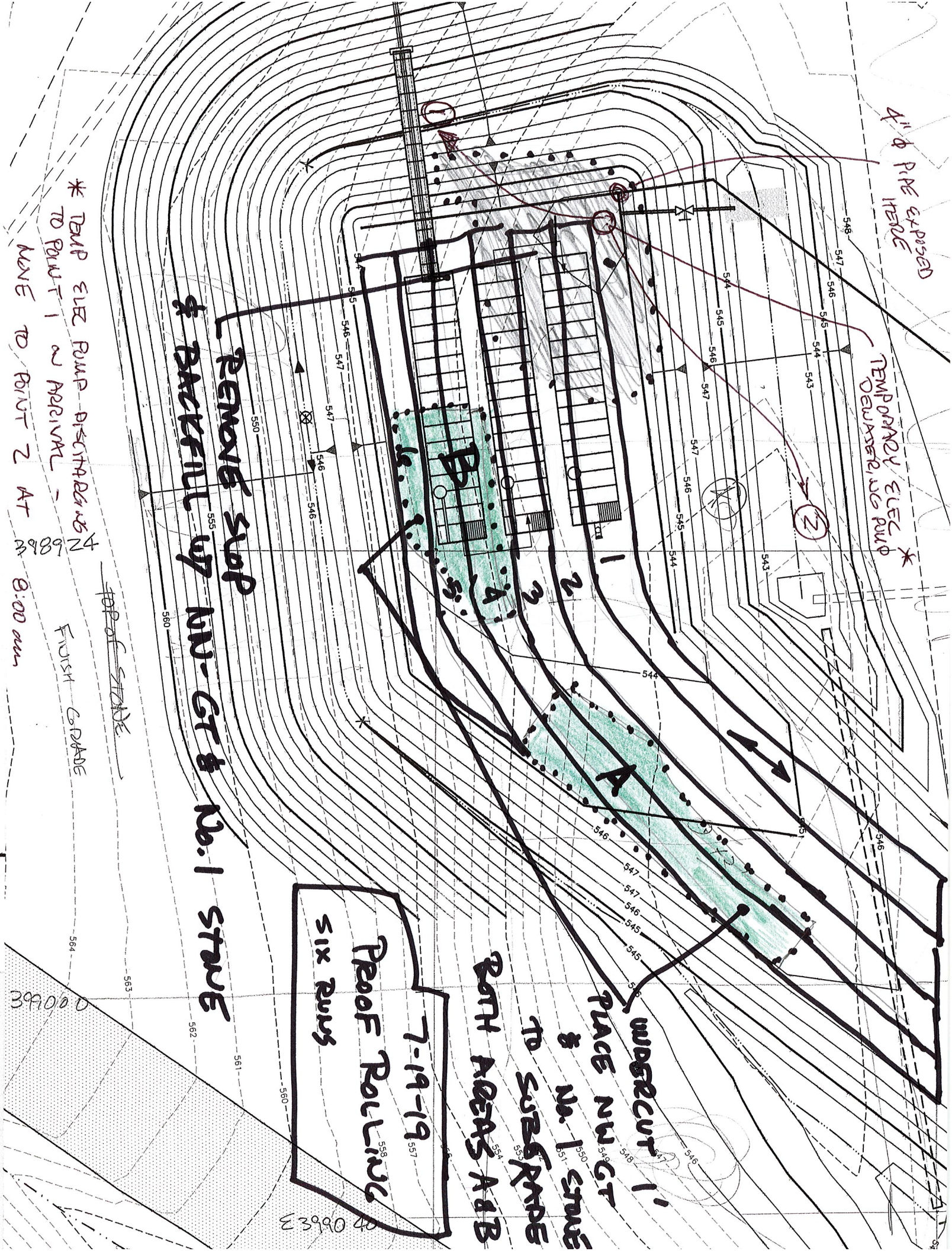
TOP OF STAKE  
FINISH GRADE

REMOVE SLOP  
& BACKFILL UP NW-GT & No. 1 STAKE

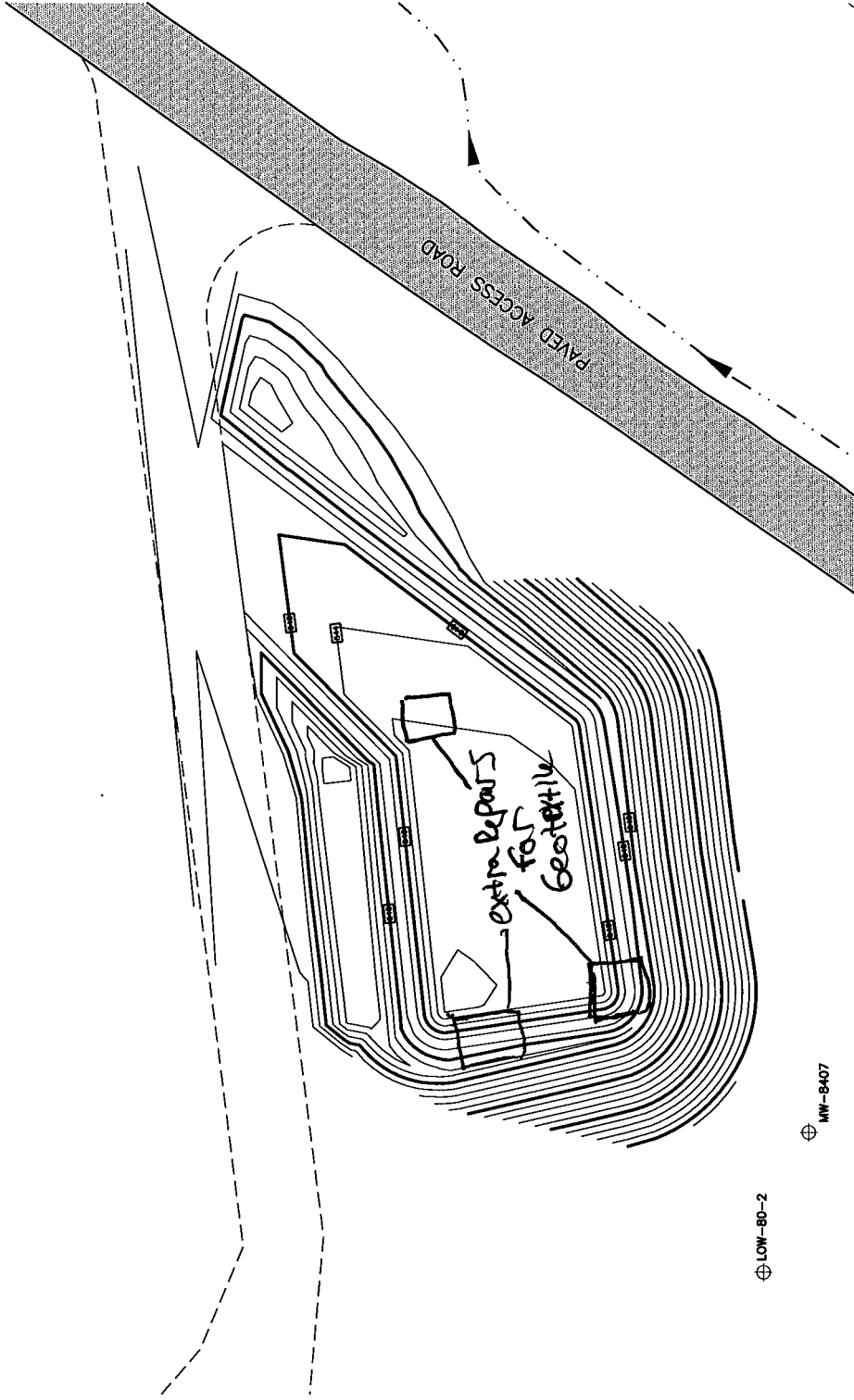
PROOF ROLLING  
7-19-19  
BOTH AREAS A & B  
TO SUBGRADE  
PLACE NW-GT  
& No. 1 STAKE  
UNDERCUT 1'  
TO SUBGRADE

399000

399000



CONSTRUCTION OBSERVER: <i>Yevgeniy Vondaryovniks</i>	SIGNATURE: <i>John Braboychik</i>
DATE: <i>7/24/19</i>	



⊕ MW-8407

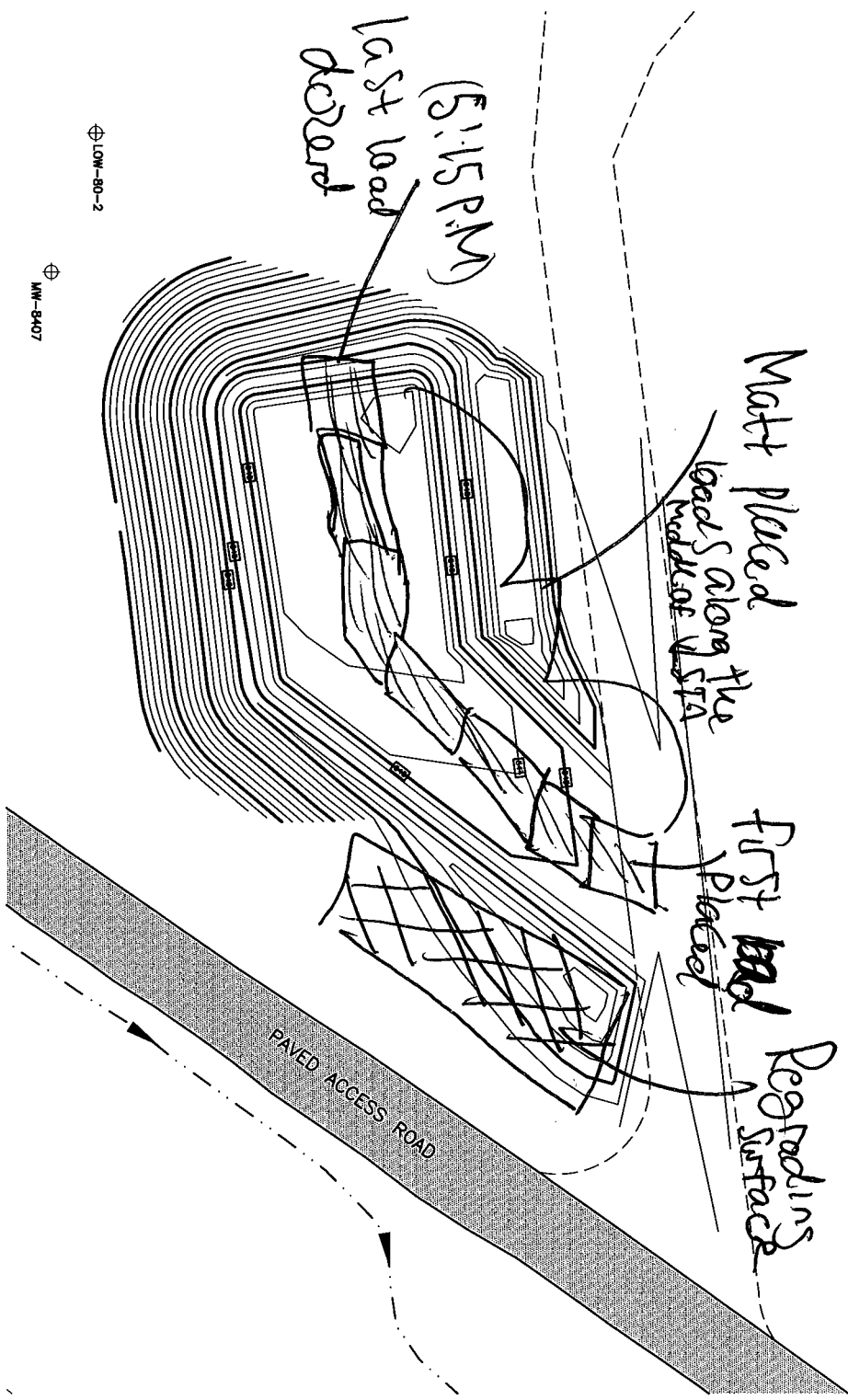
⊕ LOW-80-2

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 (716) 773-6872

LOCKWOOD HILLS LLC	REVISION # 0
SCALE: 1"=50'	July 2019

LSTA DAILY FIELD MAP		NEW YORK
COA/CQC PLAN		YATES COUNTY
TOWN OF TORREY		

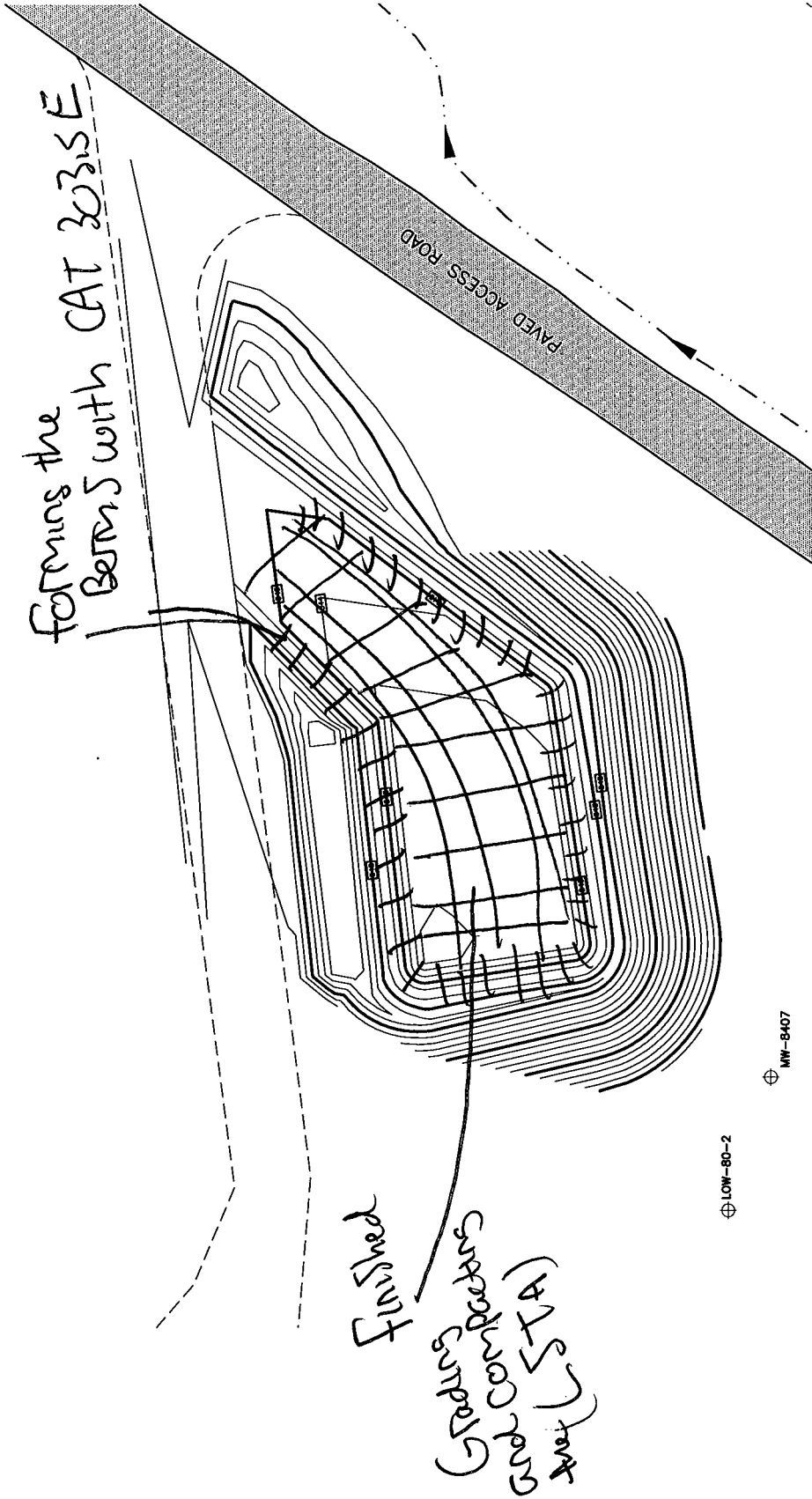
CONSTRUCTION OBSERVER:	Yelgeniy Vorobeychik	
DATE:	7/25/19	
SIGNATURE:	<i>[Signature]</i>	



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE:	1"=50'	REVISION # 0	COA/CQC PLAN
July 2019		TOWN OF TORREY	YATES COUNTY
		NEW YORK	

CONSTRUCTION OBSERVER: <i>Ye Vagisay Voredey Chik</i>	SIGNATURE: <i>John Voredey Chik</i>
DATE: <i>7/26/19</i>	



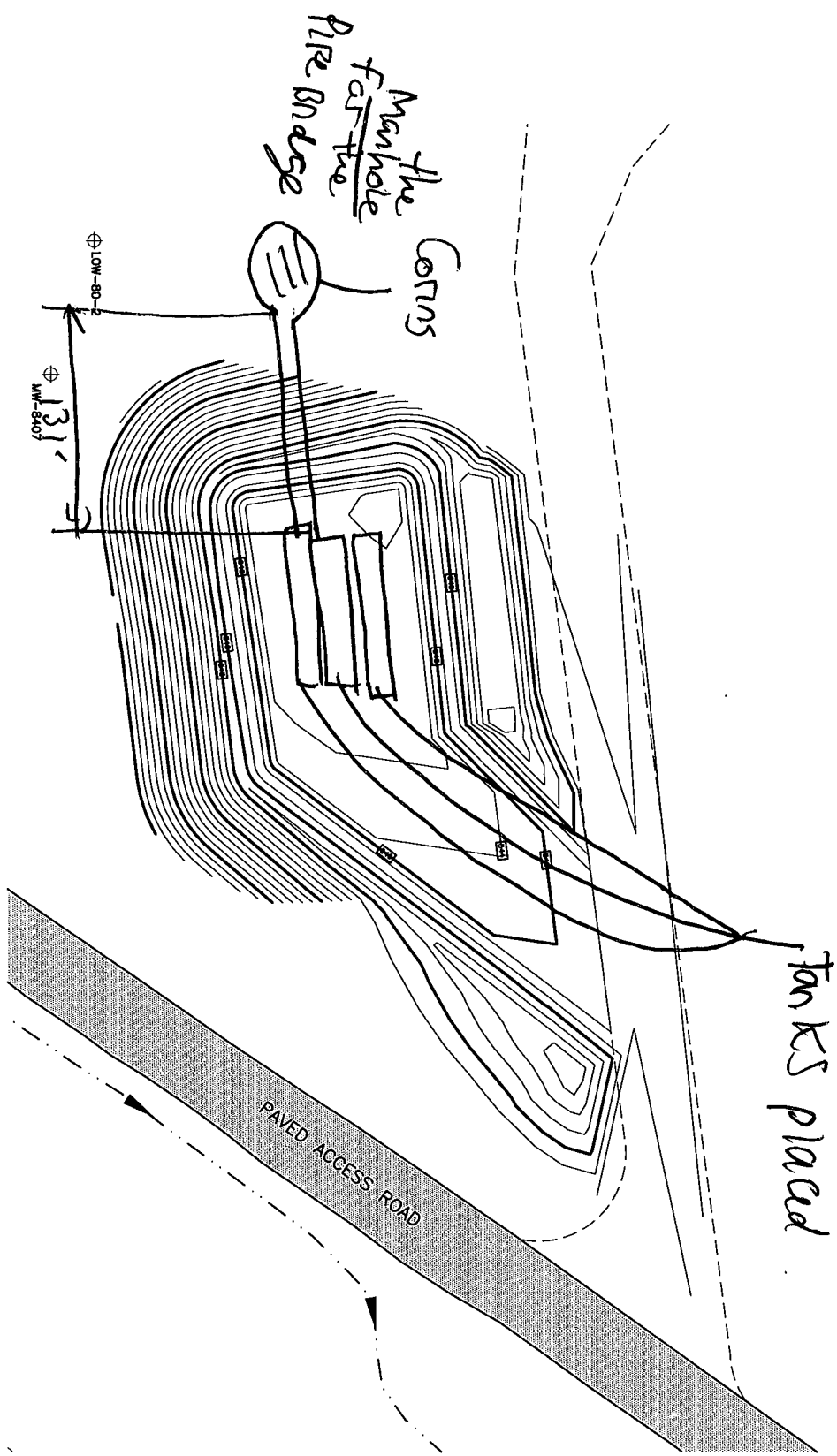
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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC  
 SCALE: 1"=50'  
 REVISION # 0  
 July 2019

LSTA DAILY FIELD MAP  
 COAC/QC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK



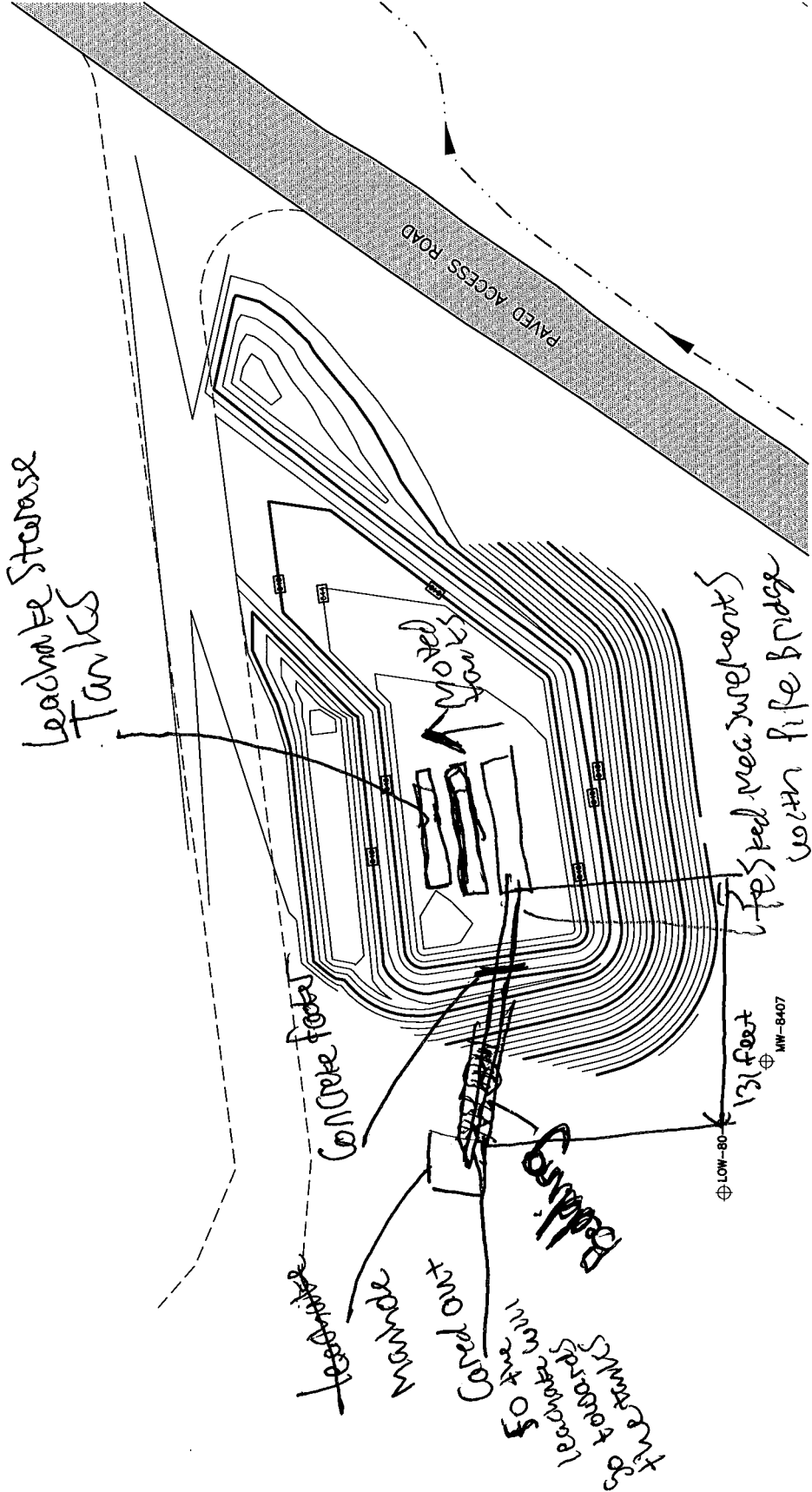
CONSTRUCTION OBSERVER:	<i>Yorgani Vorobetschik</i>	SIGNATURE:	<i>[Signature]</i>
DATE:	<i>7/29/19</i>		



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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE:	1"=50'	REVISION #	0
TOWN OF TORREY		YATES COUNTY	
NEW YORK			

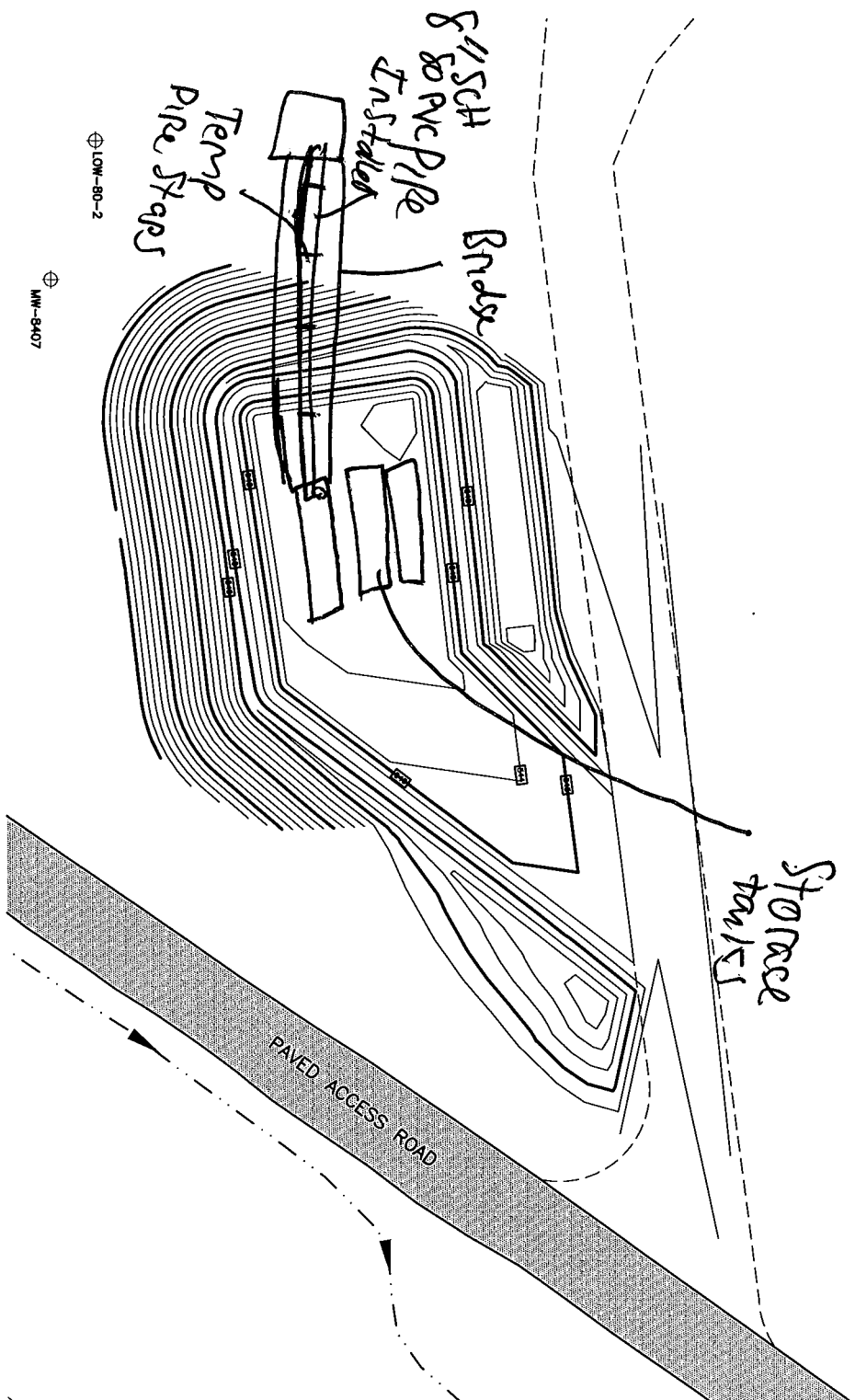
CONSTRUCTION OBSERVER: <i>Yevgeniy Vorobeychik</i>	SIGNATURE: <i>John W. Behegosh</i>
DATE: <i>7/30/19</i>	



LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	COA/CQC PLAN	
July 2019		TOWN OF TORREY	YATES COUNTY
			NEW YORK

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 (716) 773-6872 FAX

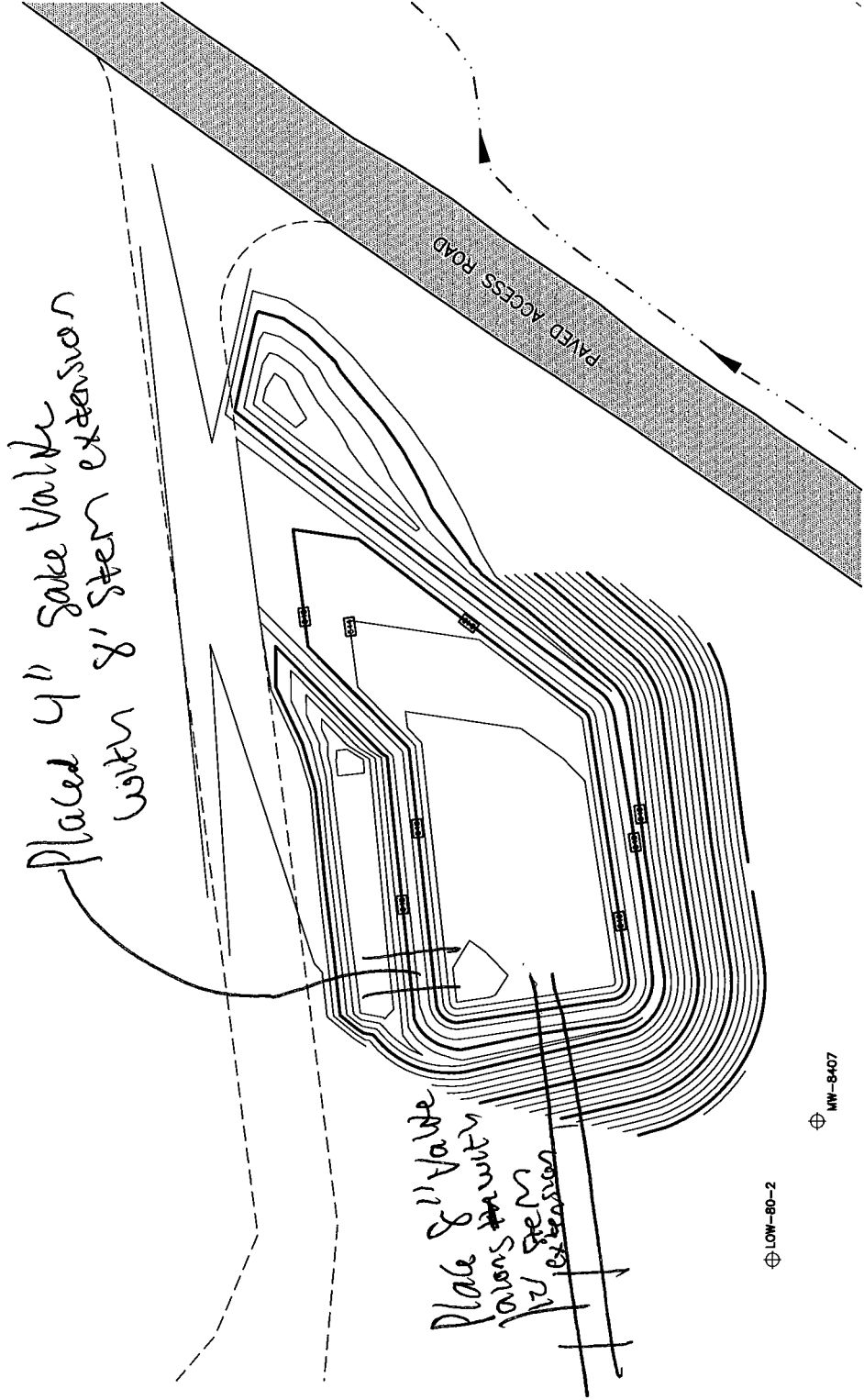
CONSTRUCTION OBSERVER: <i>Yvesgnity Voreberniks</i>	SIGNATURE: <i>Paul Voreberniks</i>
DATE: <i>7/31/19</i>	



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2820 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	LSTA DAILY FIELD MAP	
SCALE: 1"=50'	REVISION # 0	COADCOC PLAN
July 2019	TOWN OF TOREY	YATES COUNTY
		NEW YORK

CONSTRUCTION OBSERVER: <i>Yevgeniy Vorobeychuk</i>	SIGNATURE: <i>John Corbett</i>
DATE: <i>8/11/19</i>	



⊕ MW-8407

⊕ LOW-80-2

**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC

SCALE: 1"=50' REVISION # 0

July 2019

LSTA DAILY FIELD MAP

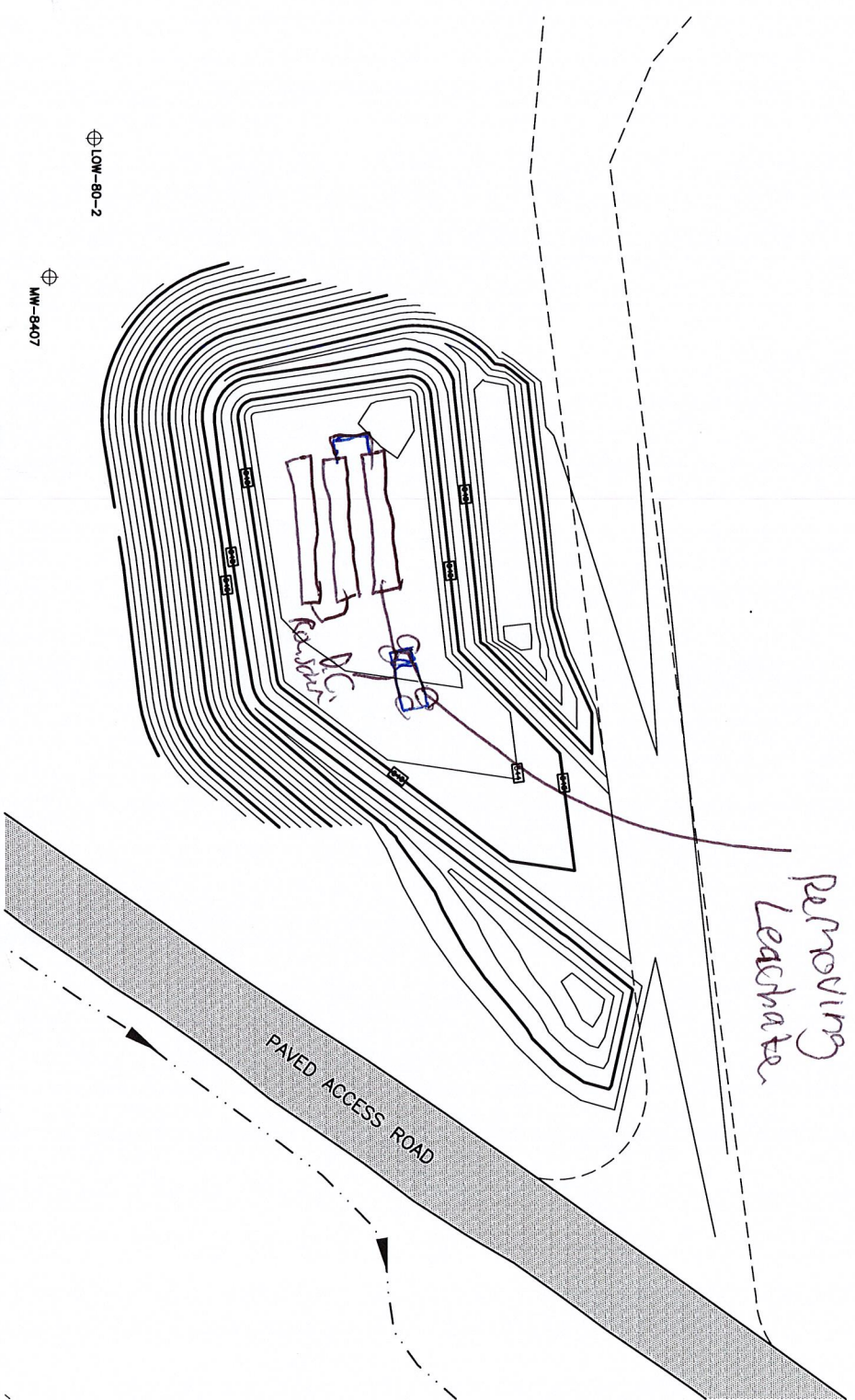
COA/CQC PLAN

TOWN OF TORREY

YATES COUNTY

NEW YORK

CONSTRUCTION OBSERVER:	<i>Joseph V. Vondra</i>	SIGNATURE:	<i>John Vondra</i>
DATE:	<i>8/5/19</i>		



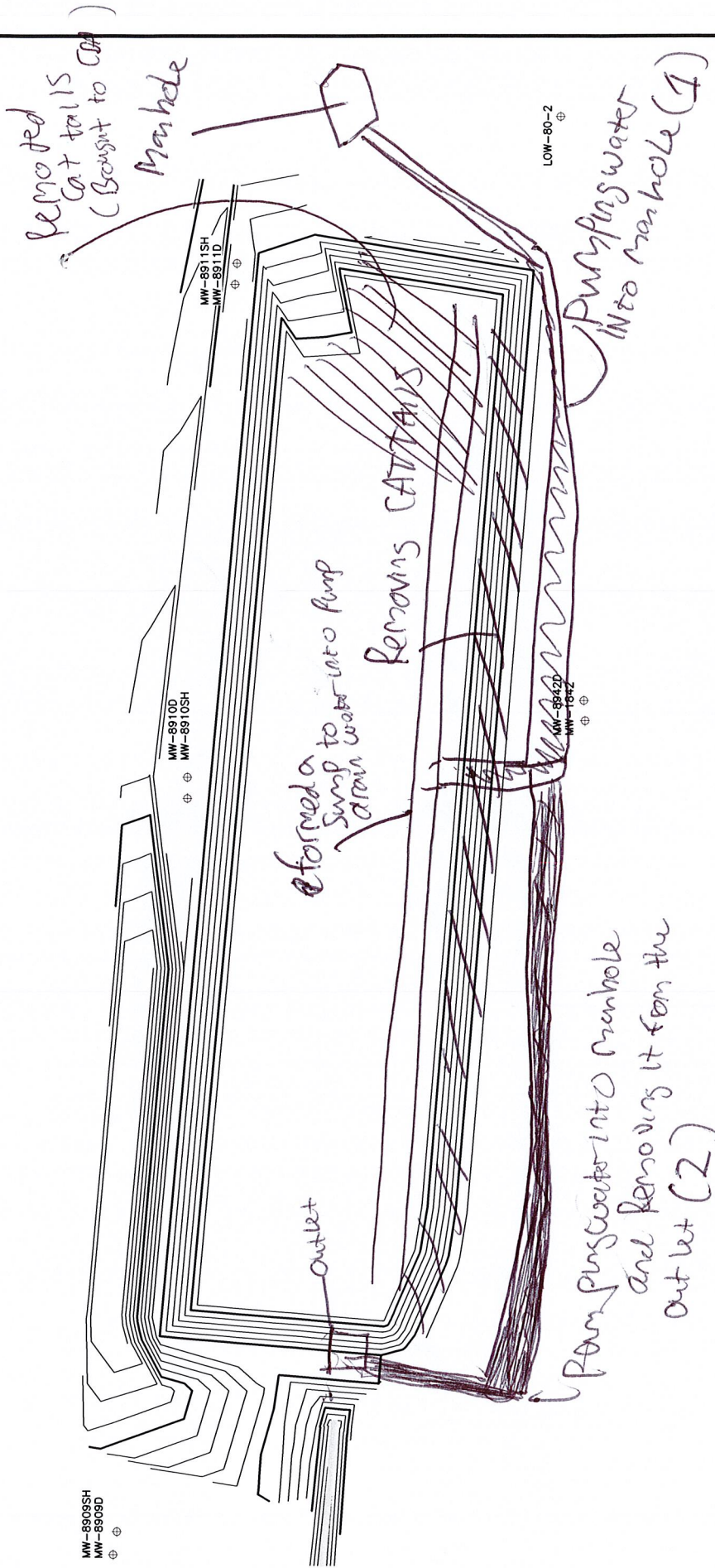
**DAIGLER ENGINEERING, P.C.**  
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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC		LSTA DAILY FIELD MAP	
SCALE:	1"=50'	REVISION #	0
JULY 2019		TOWN OF TORREY	YATES COUNTY
		NEW YORK	

CONSTRUCTION OBSERVER: *Yevgeniy Vorobeychik*

SIGNATURE: *John Vorobeychik*

DATE: *8/8/19*



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 (716) 773-6872

LOCKWOOD HILLS LLC

SCALE: 1"=80' REVISION # 0

April 2019

SETTLING POND DAILY FIELD MAP

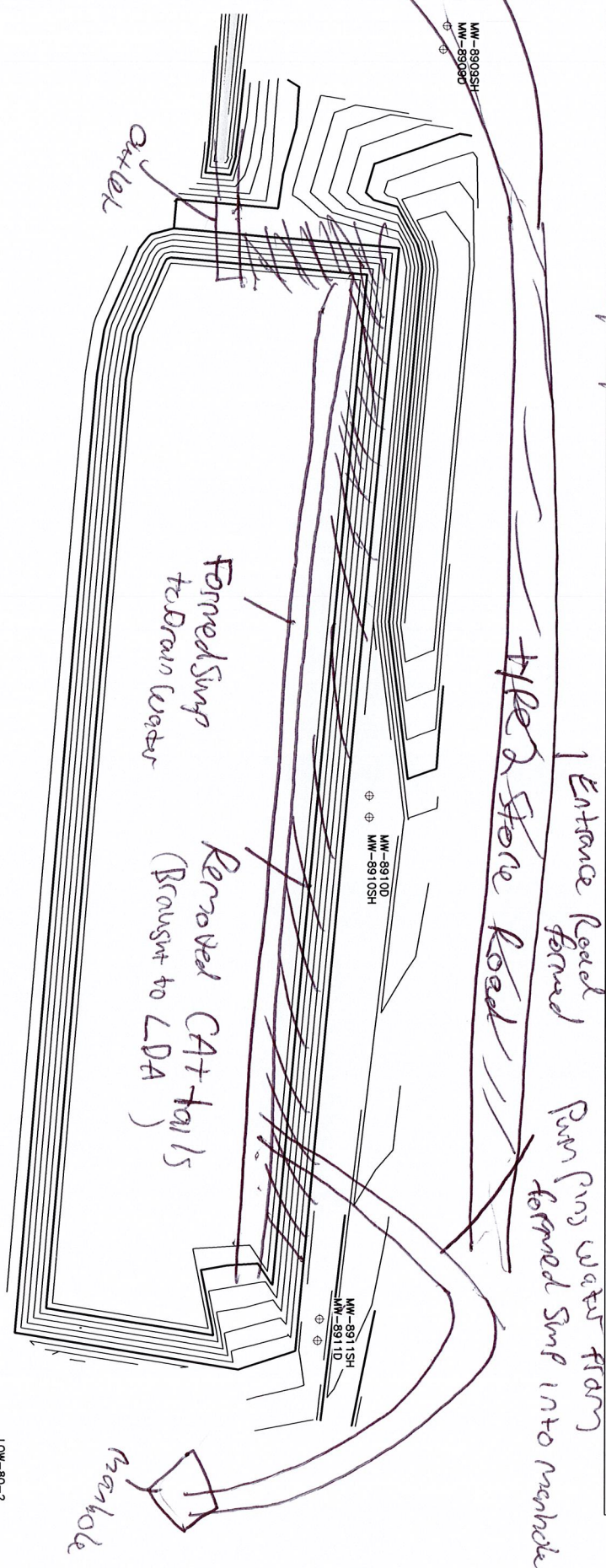
CQA/CQC PLAN

TOWN OF TORREY

YATES COUNTY

NEW YORK

CONSTRUCTION OBSERVER:	Yegorin Vorobeychik	SIGNATURE:	<i>[Signature]</i>
DATE:	8/9/19		



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 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		SETTLING POND DAILY FIELD MAP	
SCALE:	1"=80'	REVISION #	0
TOWN OF TORREY		YATES COUNTY	
April 2019		NEW YORK	
CQA/CQC PLAN			

CONSTRUCTION OBSERVER: *Je Virginia Gregory Chalk*

SIGNATURE: *John Gregory Chalk*

DATE: *8/12/19* 8/12/19

*Handwritten scribbles*

MW-8909SH  
MW-8909D

MW-8910D  
MW-8910SH

MW-8911SH  
MW-8911D

MW-8942D  
MW-1842

LOW-80-2



(Not Remaining)  
Forms  
Sump for  
water drainage

Excavating Slope

Excavating Cat tanks  
from South towards to  
middle

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(716) 773-6872

LOCKWOOD HILLS LLC  
SCALE: 1"=80'  
REVISION # 0

SETTLING POND DAILY FIELD MAP  
CQA/CQC PLAN

April 2019

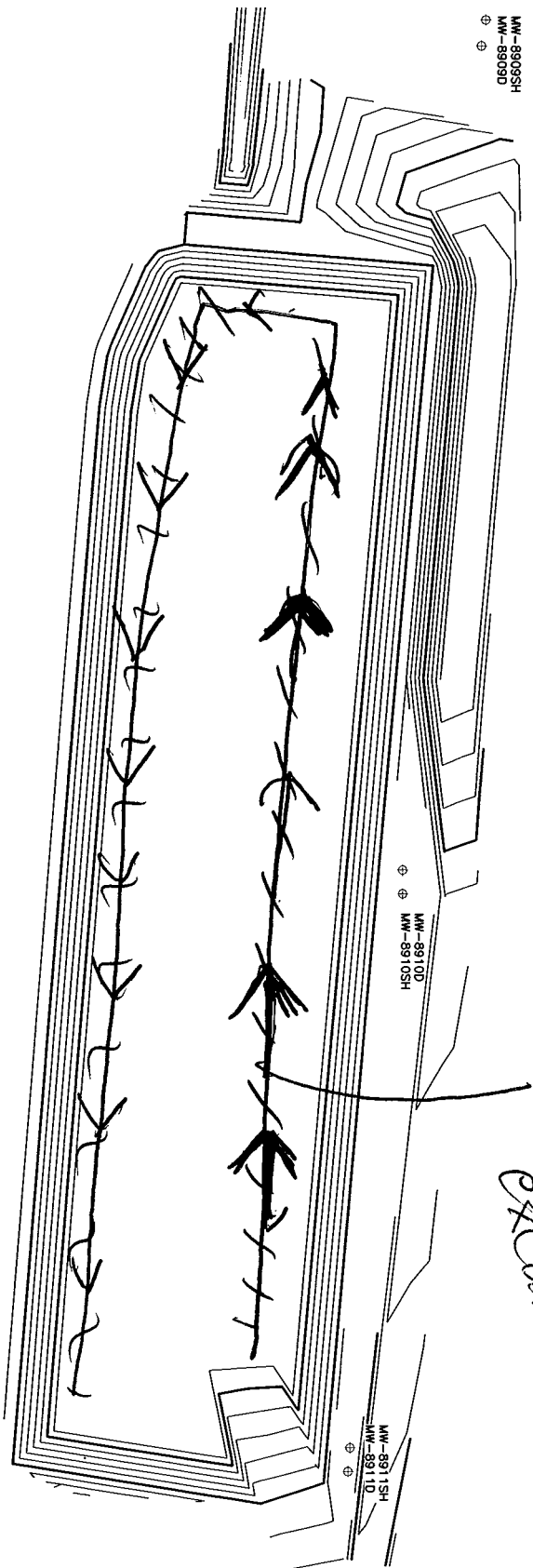
TOWN OF TORREY

YATES COUNTY

NEW YORK



CONSTRUCTION OBSERVER: <i>Yannis Stachyris</i>	SIGNATURE: <i>Yannis Stachyris</i>
DATE: <i>8/13/19</i>	



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 2620 GRAND ISLAND BLVD., GRAND ISLAND, NEW YORK 14072  
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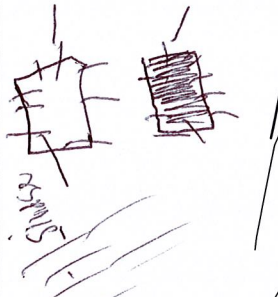
LOCKWOOD HILLS LLC		SETTLING POND DAILY FIELD MAP	
SCALE: 1"=80'	REVISION # 0	TOWN OF TORREY	YATES COUNTY
April 2019		COA/COC PLAN	
		NEW YORK	

CONSTRUCTION OBSERVER: Ted Geier - brookville

DATE: 8/24/19

SIGNATURE: *Ted Geier*

SOFT EXCAVATED  
CAT  
CAT  
CAT  
CAT  
CAT



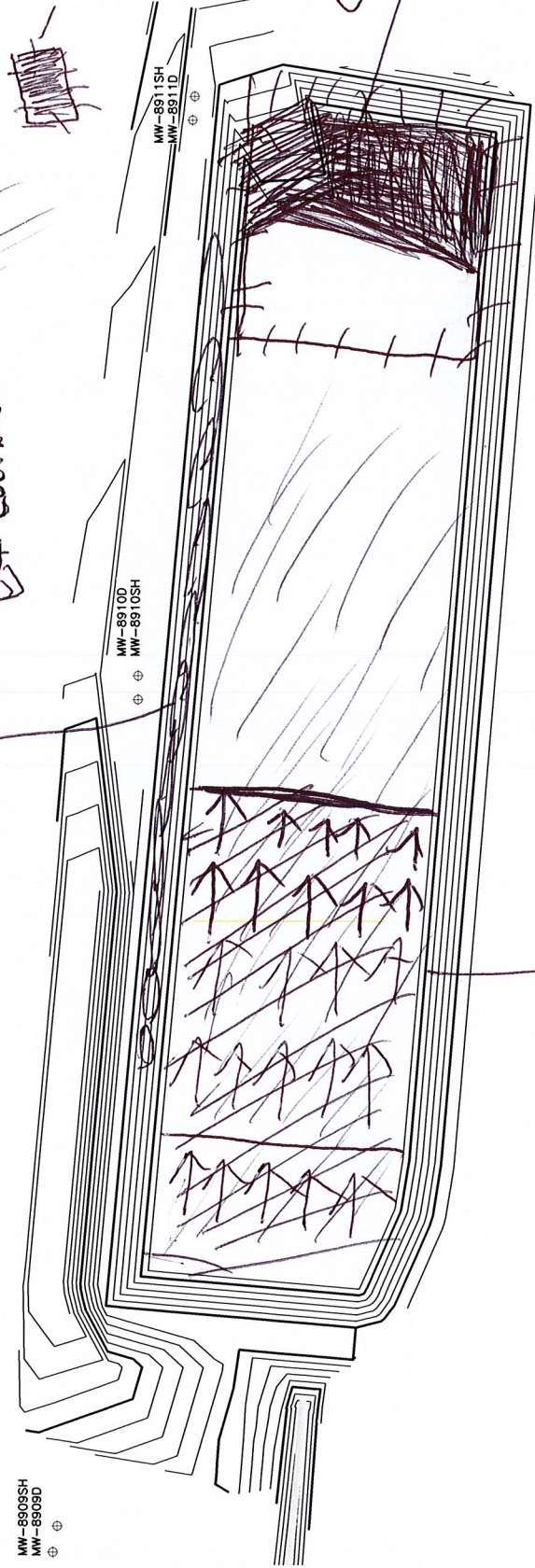
STAINING sediment  
EXCAVATED

MW-8910D  
MW-8910SH

MW-8911SH  
MW-8911D

MW-8942D  
MW-1842

LOW-80-2



Mott Dozes  
Sludge towards  
the East



LOCKWOOD HILLS LLC

SCALE: 1"=80' REVISION # 0

April 2019

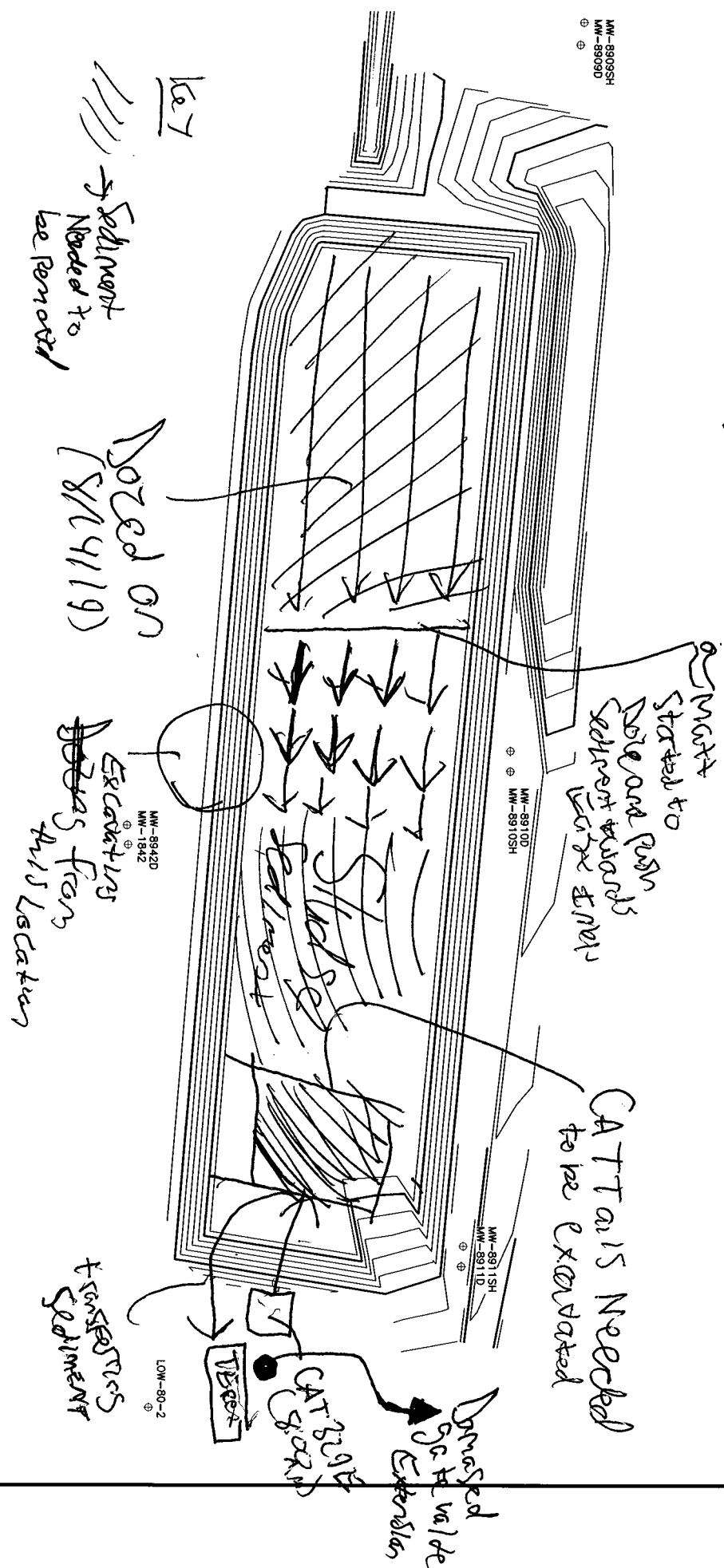
SETTLING POND DAILY FIELD MAP

CQA/COC PLAN

YATES COUNTY

NEW YORK

CONSTRUCTION OBSERVER:	Yevgeniy Verobeychik	SIGNATURE:	<i>[Signature]</i>
DATE:	8/15/19		



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LOCKWOOD HILLS LLC	SETTLING POND DAILY FIELD MAP	
SCALE: 1"=80'	REVISION # 0	CQA/COC PLAN
April 2019	TOWN OF TORREY	YATES COUNTY
		NEW YORK

CONSTRUCTION OBSERVER: Yevgeniy Vardychchik

SIGNATURE: *John P. ...*

DATE: 8/16/19

MW-8909SH  
MW-8909D

MW-8910D  
MW-8910SH

MW-8911SH  
MW-8911D

MW-8942D  
MW-1842

LOW-80-2



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 (716) 773-6872

LOCKWOOD HILLS LLC

SCALE: 1"=80' REVISION # 0

April 2019

SETTLING POND DAILY FIELD MAP

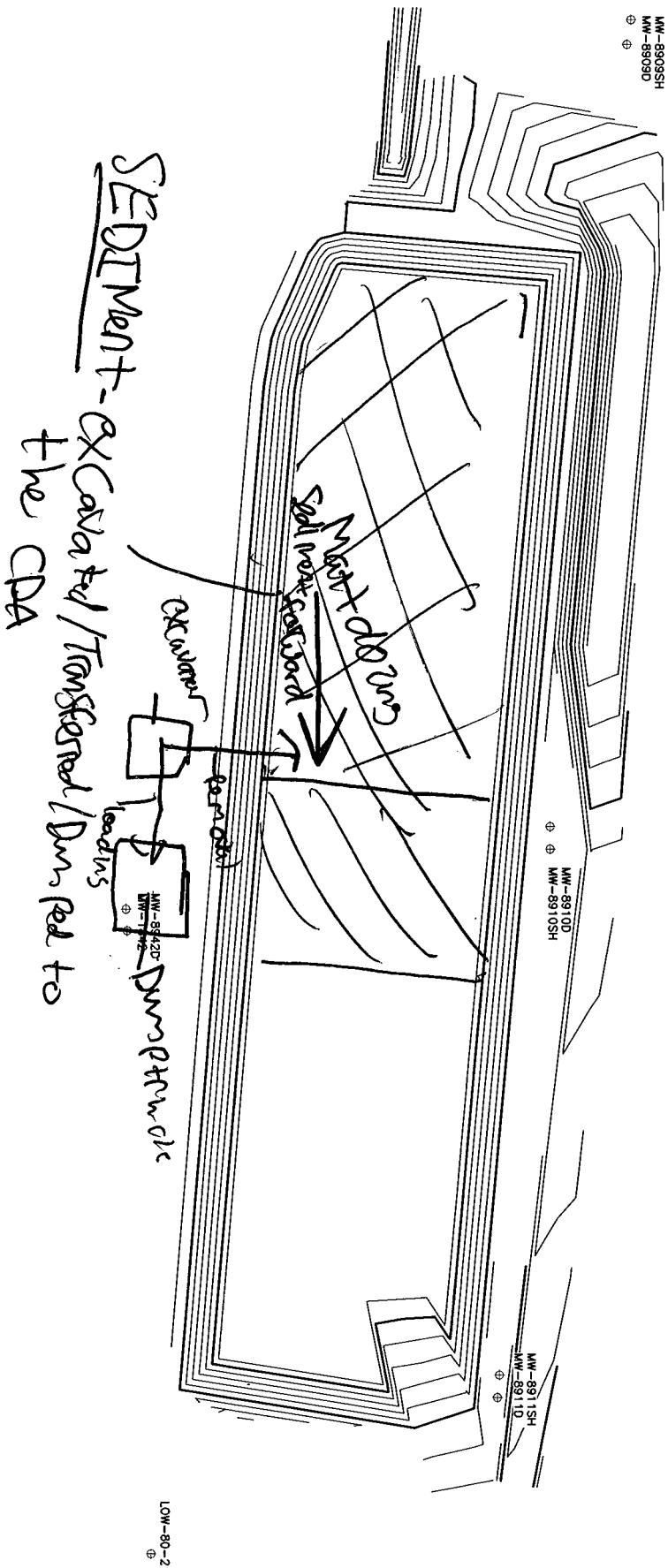
CQA/CQC PLAN

TOWN OF TORREY

YATES COUNTY

NEW YORK

CONSTRUCTION OBSERVER:	<i>Yatesis Vorebschik</i>	SIGNATURE:	<i>John Vorebschik</i>
DATE:	<i>8/19/19</i>		



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LOCKWOOD HILLS LLC		SETTLING POND DAILY FIELD MAP	
SCALE: 1"=80'	REVISION # 0	CQA/COC PLAN	
April 2019		TOWN OF TORREY	YATES COUNTY
			NEW YORK

CONSTRUCTION OBSERVER: Yevgeniy Voro by CLK

DATE: 8/20/19

SIGNATURE:

*John W. Bradley*

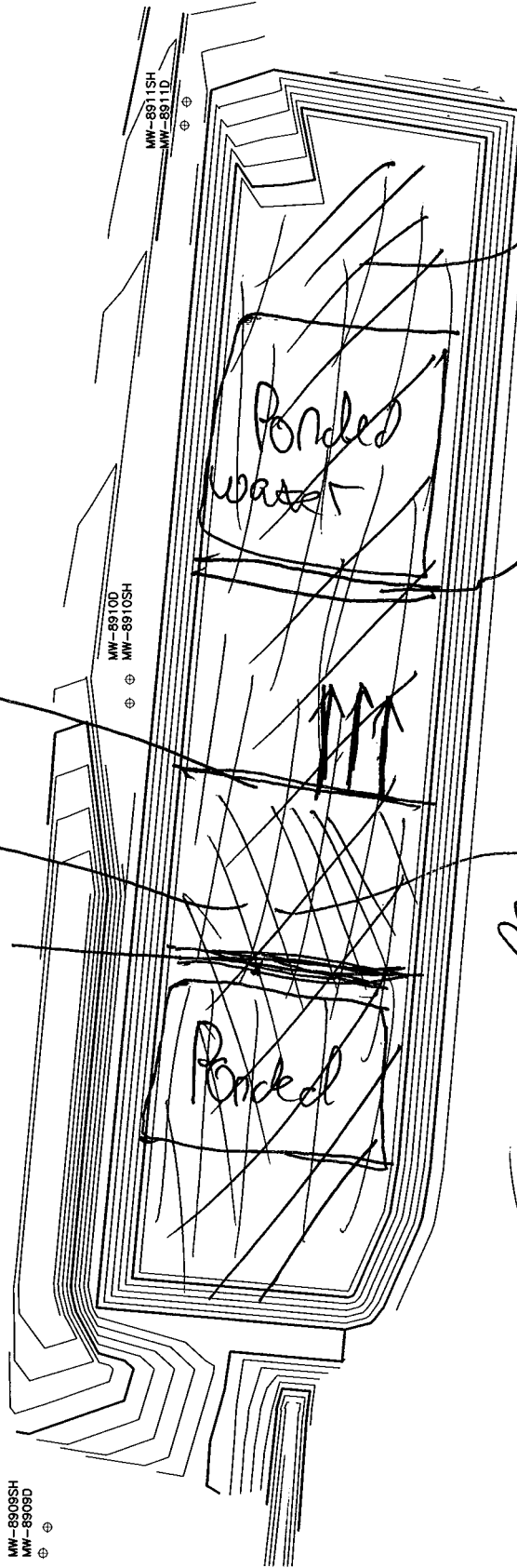
at: BERM  
Doing the Ediment Pond to design Grace

MW-8905SH  
MW-8905D

MW-8910D  
MW-8910SH

MW-8911SH  
MW-8911D

LOW-80-2



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(716) 773-6872

LOCKWOOD HILLS LLC

SCALE: 1"=80' REVISION # 0

April 2019

SETTLING POND DAILY FIELD MAP

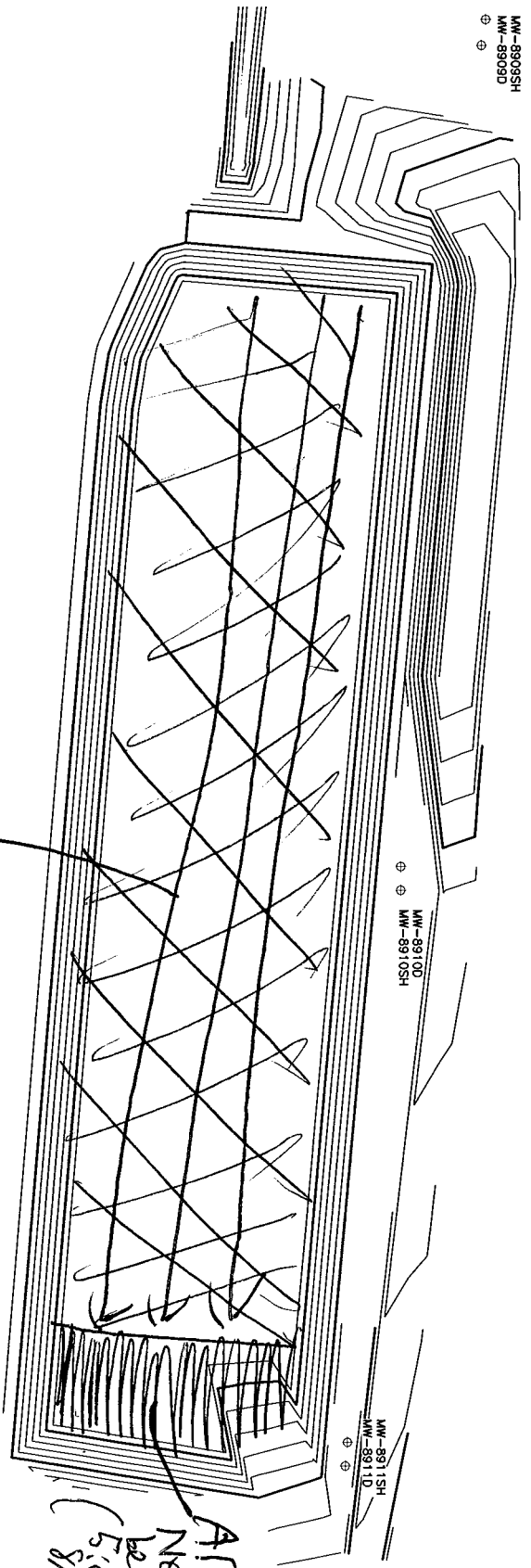
CQA/CQC PLAN

TOWN OF TORREY

YATES COUNTY

NEW YORK

CONSTRUCTION OBSERVER:	<i>Yergerin Vardoschik</i>	SIGNATURE:	<i>Paul Vardoschik</i>
DATE:	<i>5/21/19</i>		



*SEDIMENT REMOVED / TRANSFERRED AND DAMPED TO THE CDA*

*AREA STILL NEEDS TO BE EXCAVATED (5,000 SQM) (SEE STATION 10)*

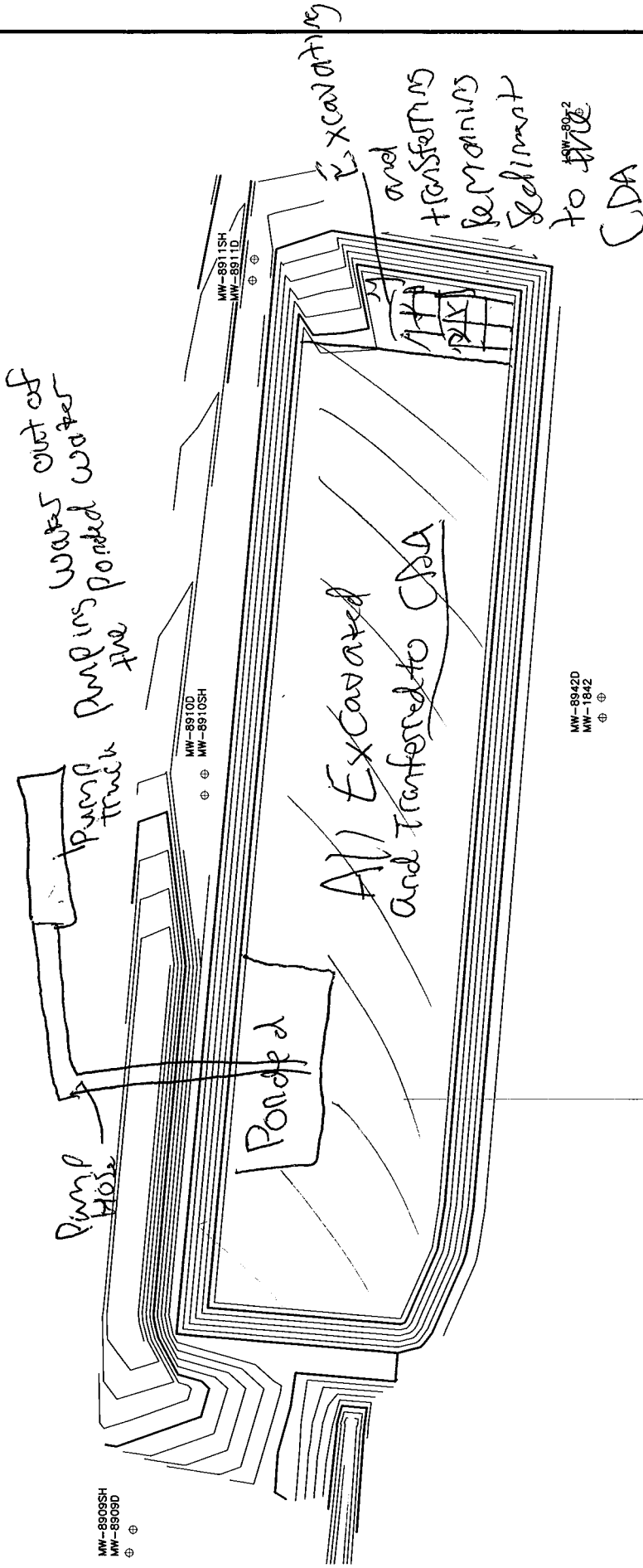
**DAIGLER ENGINEERING, P.C.**  
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LOCKWOOD HILLS LLC	SETTLING POND DAILY FIELD MAP	
SCALE: 1"=80'	REVISION # 0	CQA/CQC PLAN
April 2019	TOWN OF TORREY	YATES COUNTY
		NEW YORK

CONSTRUCTION OBSERVER: Yegeriny Brokey/Dink

SIGNATURE: *John P. Brokey*

DATE: 8/22/19



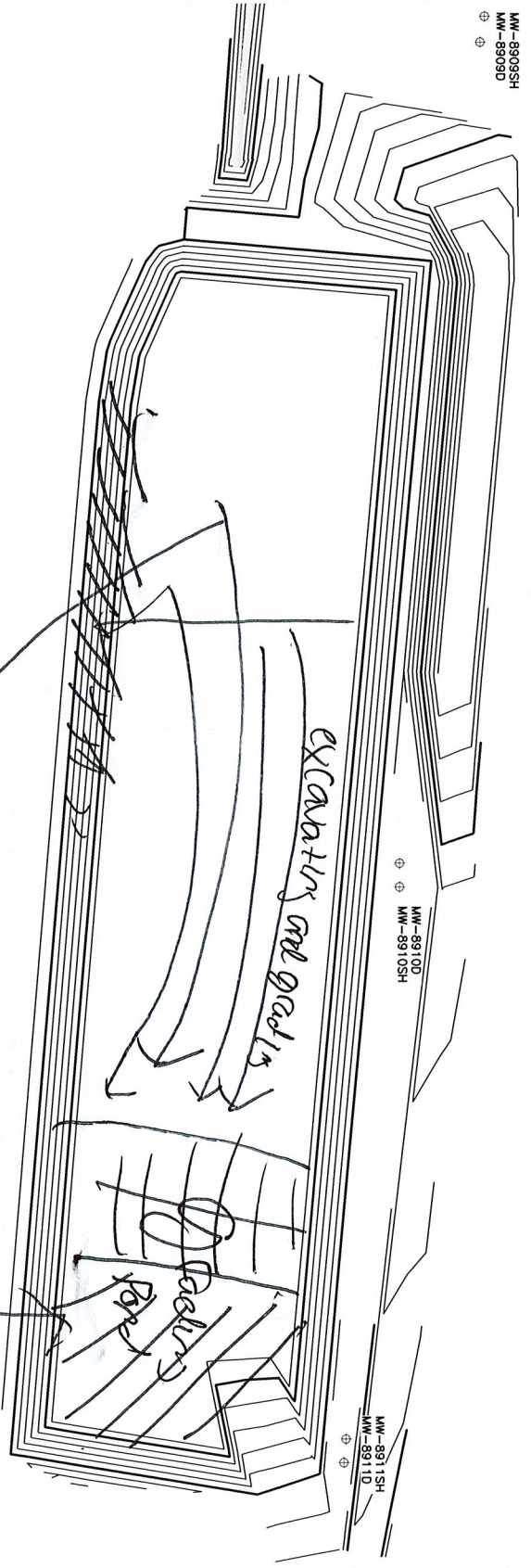
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LOCKWOOD HILLS LLC  
 SCALE: 1"=80'  
 REVISION # 0  
 April 2019

SETTLING POND DAILY FIELD MAP  
 COA/CQC PLAN  
 TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK



CONSTRUCTION OBSERVER:	Yevgeniy Vorobeychik	SIGNATURE:	<i>Yevgeniy Vorobeychik</i>
DATE:	8/26/2019		



excavating ~~top~~ soil from south side to use for the grading of the Settlement Pond

excavating and grading

grading pond

At 2 P.M. (8:00 AM) 2, 1' lifts to grade the settlement pond

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LOCKWOOD HILLS LLC		SETTING POND DAILY FIELD MAP	
SCALE:	1"=80'	REVISION #	0
April 2019		TOWN OF TOREY	YATES COUNTY
		CQA/CQC PLAN	
		NEW YORK	

CONSTRUCTION OBSERVER: *Yevgeniy Borobovnik*

SIGNATURE: *John Crubenshik*

DATE: *8/28/19*

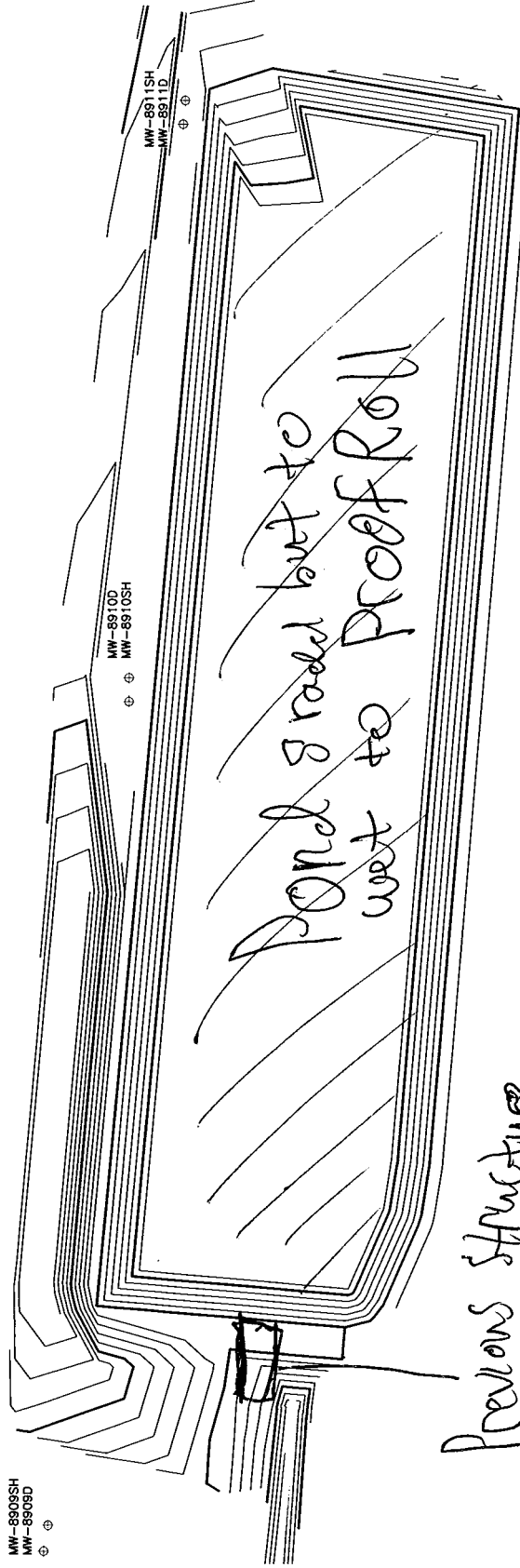
MW-8909SH  
MW-8909D  
⊕ ⊕

MW-8910D  
MW-8910SH  
⊕ ⊕

MW-8911SH  
MW-8911D  
⊕ ⊕

MW-8942D  
MW-1842  
⊕ ⊕

LOW-80-2  
⊕



*Pond graded but to wet to Proof Roll*

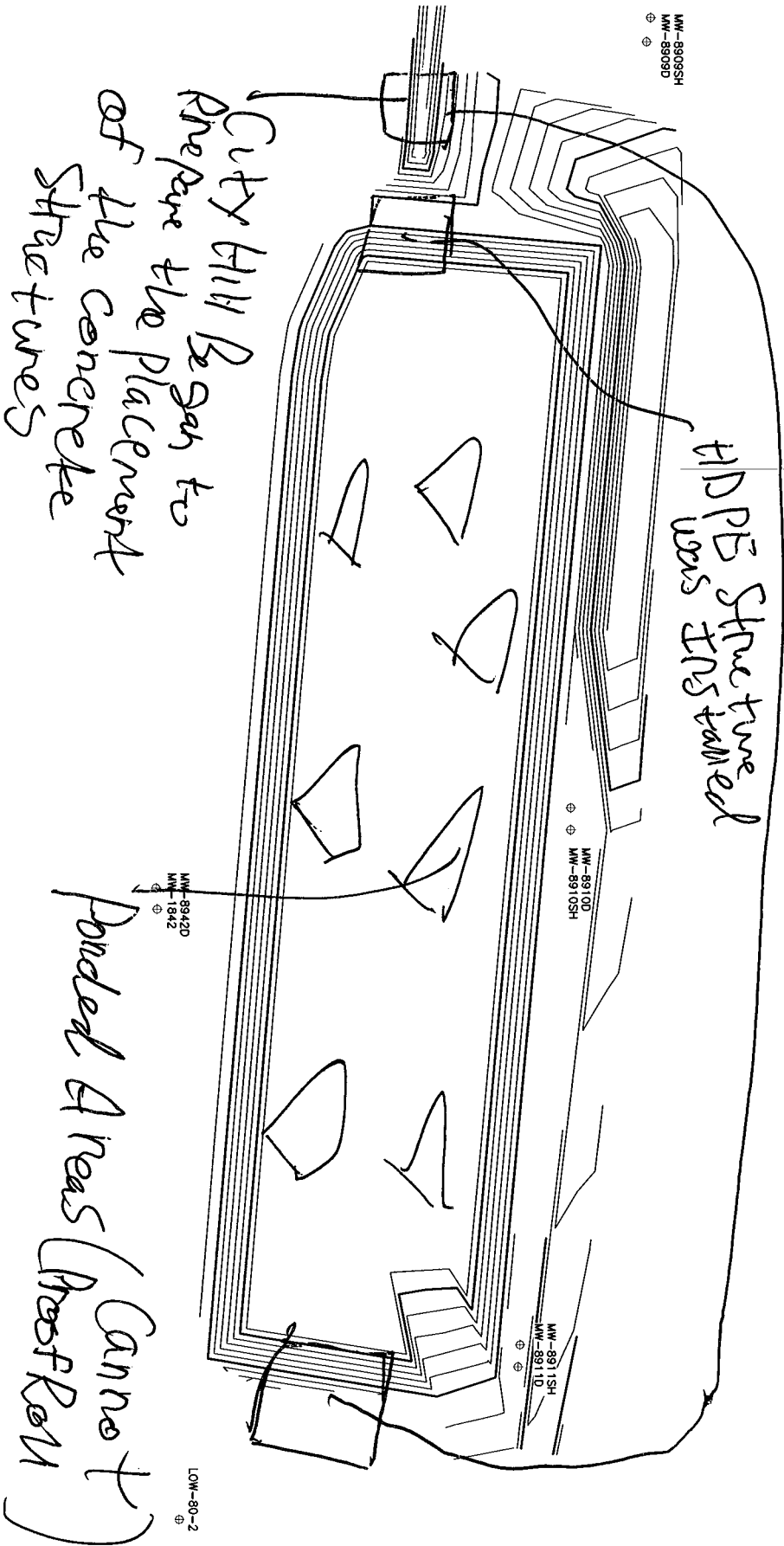
*Previous structure removed, Stone bedding placed as well as the HOPES structures have been placed in position*

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LOCKWOOD HILLS LLC  
SCALE: 1"=80'  
REVISION # 0  
April 2019

SETTLING POND DAILY FIELD MAP  
CQA/CQC PLAN  
TOWN OF TORREY  
YATES COUNTY  
NEW YORK

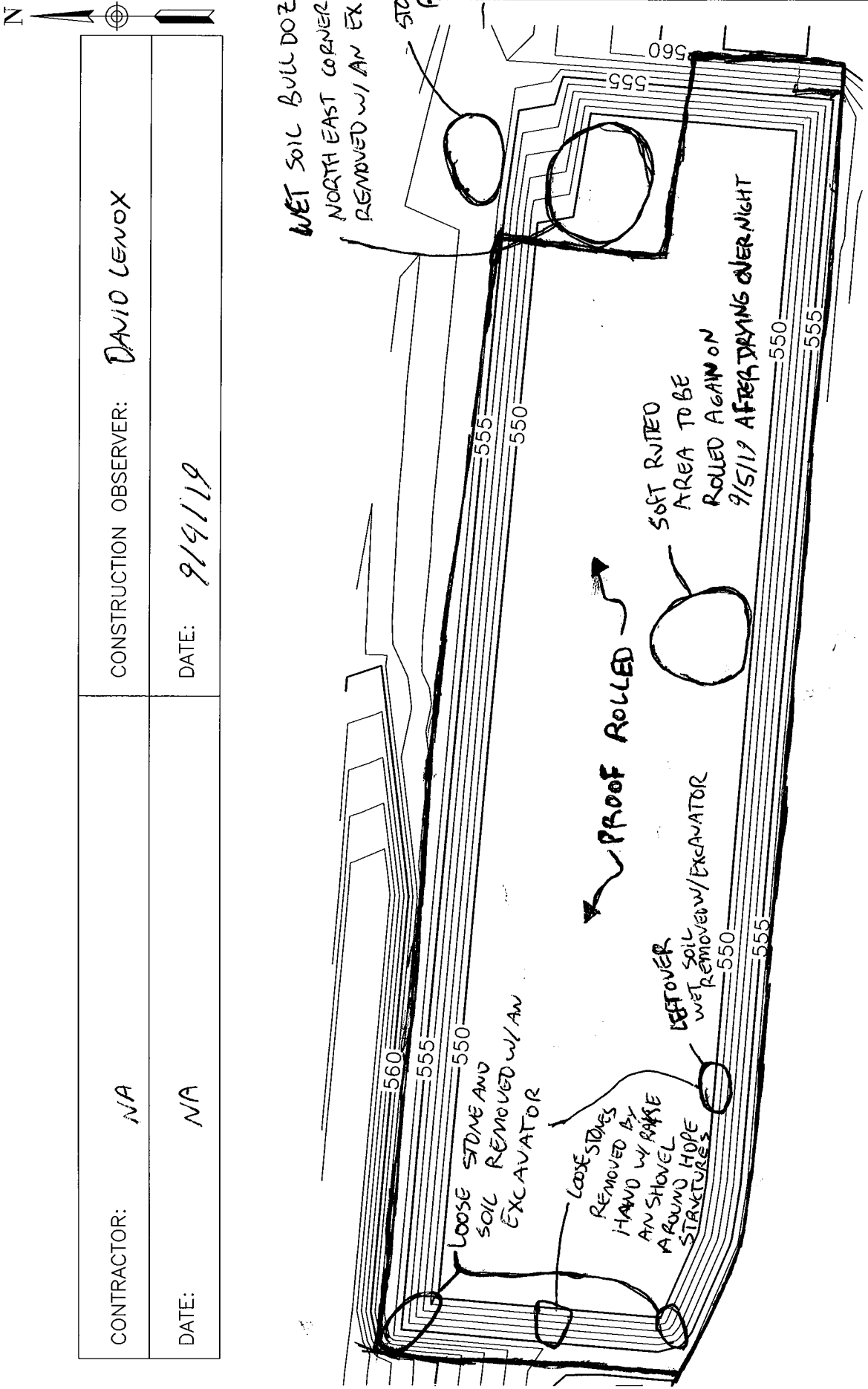
CONSTRUCTION OBSERVER:	Yevgeniy Vashchuk	SIGNATURE:	<i>Yevgeniy Vashchuk</i>
DATE:	8/30/19		



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2630 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
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LOCKWOOD HILLS LLC	SETTLING POND DAILY FIELD MAP	
SCALE: 1"=80'	REVISION # 0	CQA/CQC PLAN
April 2019	TOWN OF TORREY	YATES COUNTY
		NEW YORK

CONTRACTOR:	NA	CONSTRUCTION OBSERVER:	DAVID LENOX
DATE:	NA	DATE:	9/9/19



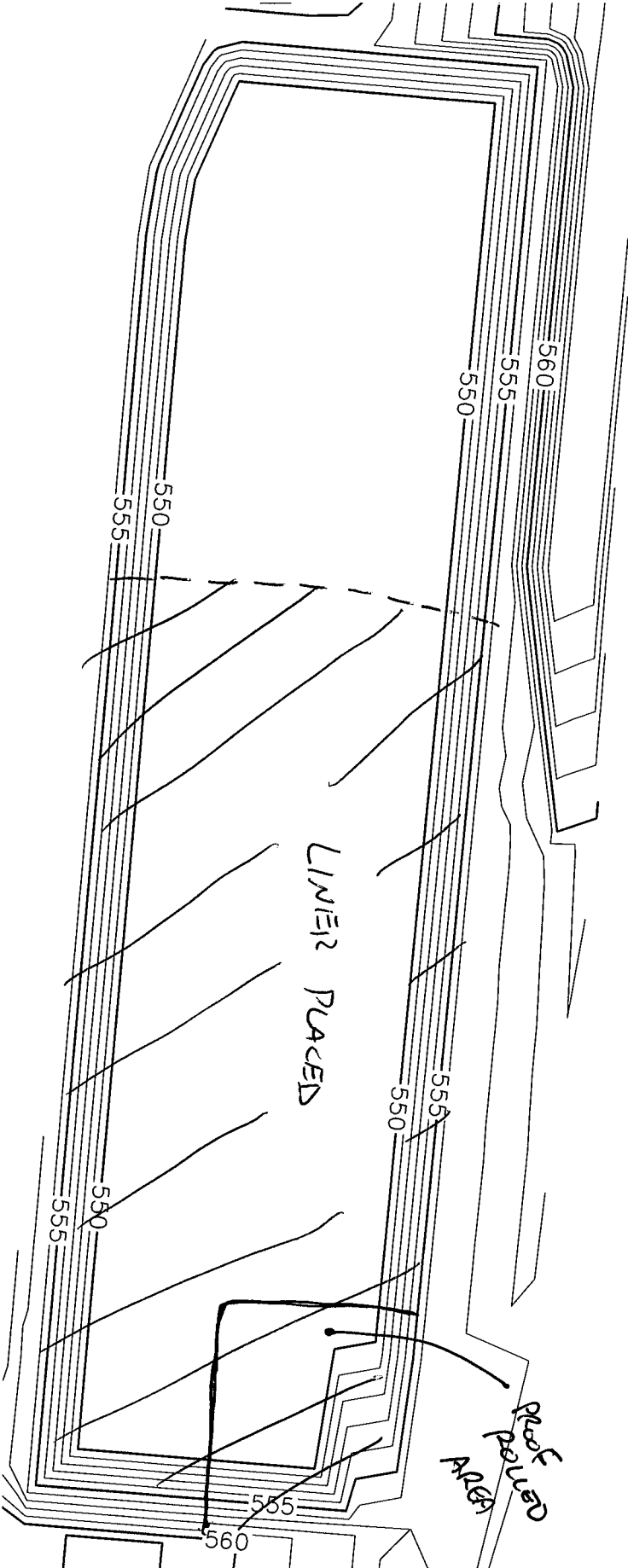
**DAIGLER ENGINEERING, P.C.**  
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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	
SCALE: 1" = 60'	REVISION # 0
August 2019	

SETTLING POND FIELD MAP		TOWN OF TORREY, YATES COUNTY, NEW YORK	
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS			

FIGURE 4

CONTRACTOR:	N/A	CONSTRUCTION OBSERVER:	SAM DAIGLER
DATE:	N/A	DATE:	9-5-19



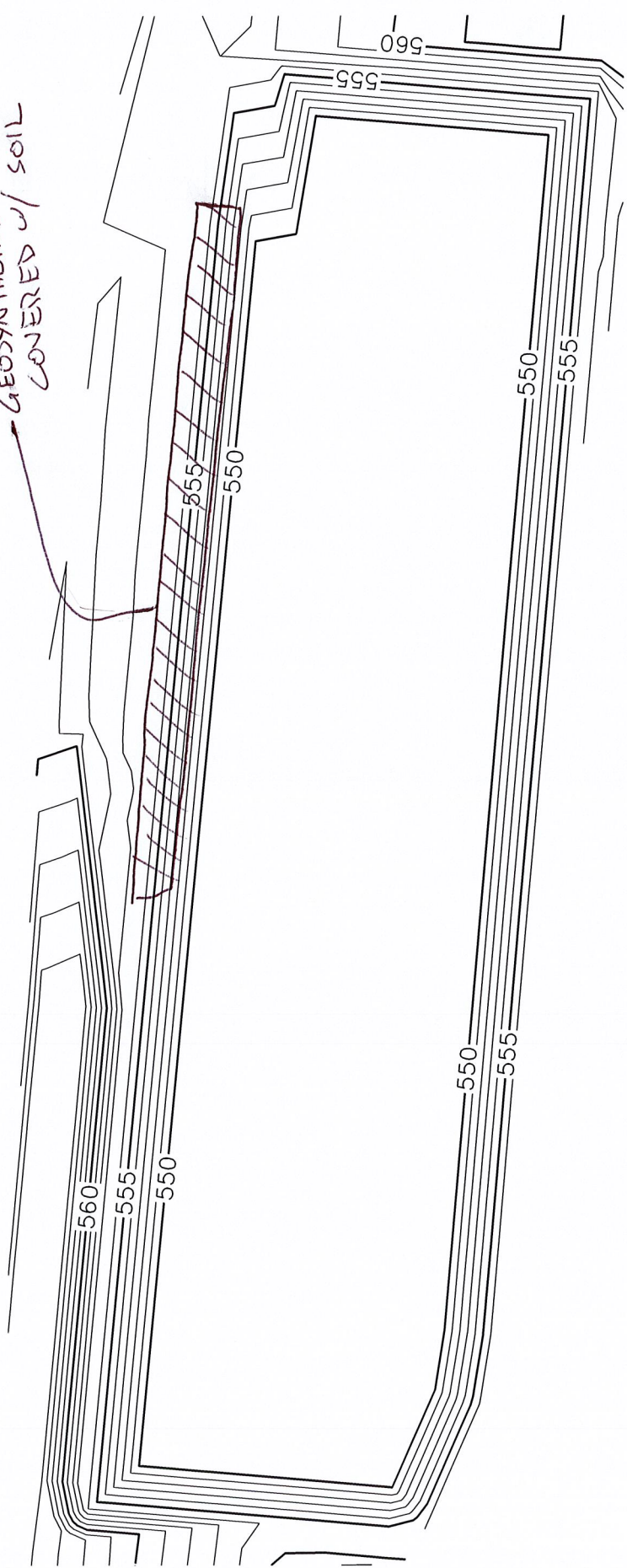
**DAIGLER ENGINEERING, P.C.**  
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 2630 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-8872

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE: 1" = 60'	REVISION # 0	SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		
August 2019		TOWN OF TORREY	YATES COUNTY	NEW YORK



CONTRACTOR:	NA	CONSTRUCTION OBSERVER:	SAM DAIGLER
DATE:	NA	DATE:	9/6/19

GEOSYNTHETICS EDGE COVERED w/ SOIL



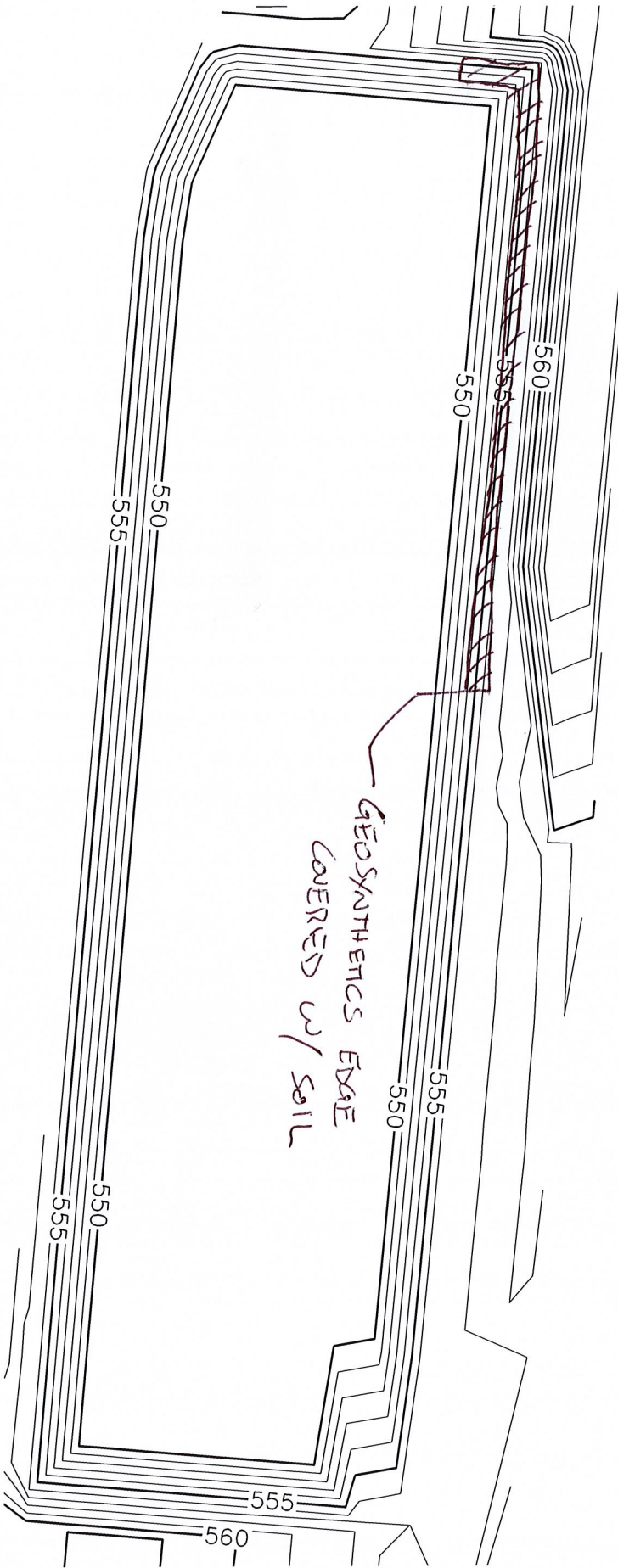
**DAIGLER ENGINEERING, P.C.**  
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 (716) 773-6872

LOCKWOOD HILLS LLC	
SCALE: 1" = 60'	REVISION # 0
August 2019	

SETTLING POND FIELD MAP		YATES COUNTY		NEW YORK
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		TOWN OF TORREY		

FIGURE 4

CONTRACTOR:	NA	CONSTRUCTION OBSERVER:	SAM DAIGLER
DATE:	NA	DATE:	9/7/19

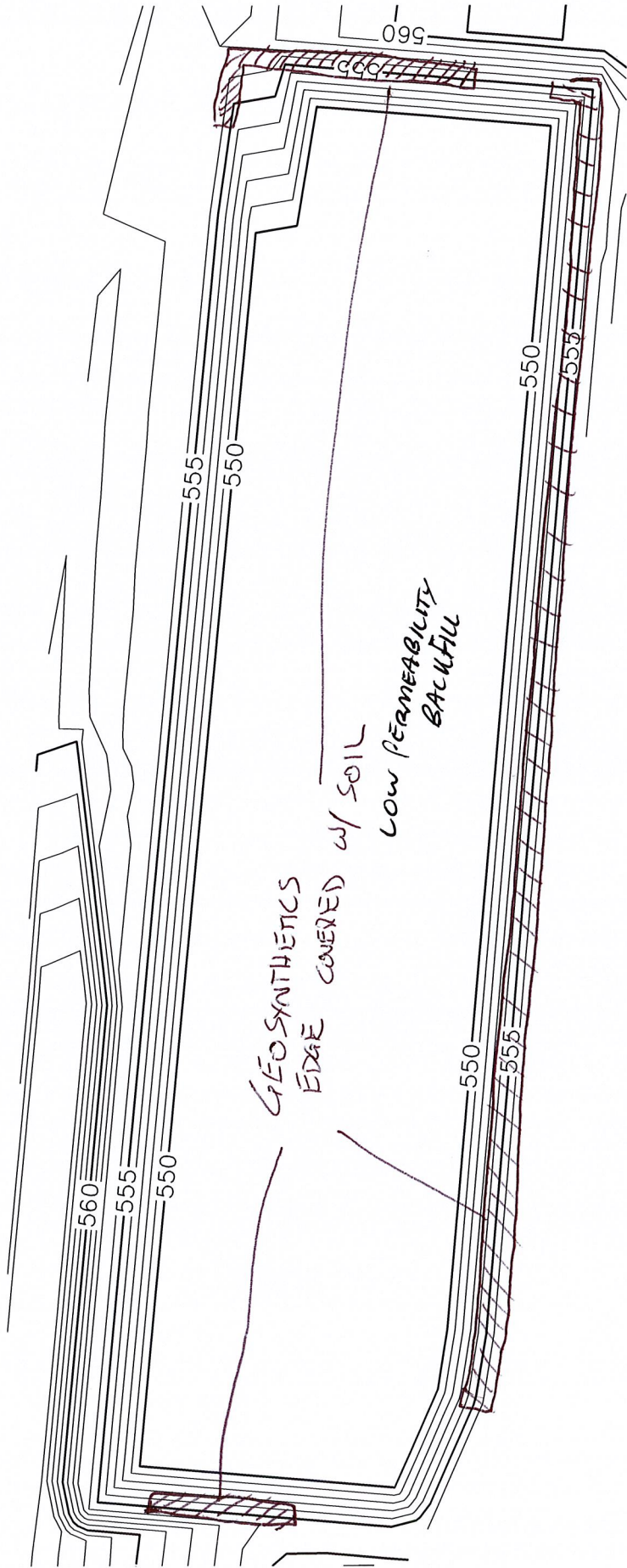


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 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6892 (716) 773-6873 FAX

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE: 1" = 60'	REVISION # 0	SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		
August 2019		TOWN OF TORREY	YATES COUNTY	NEW YORK



CONTRACTOR:	NA	CONSTRUCTION OBSERVER:	SAM DAIGLER
DATE:	NA	DATE:	9/9/19



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

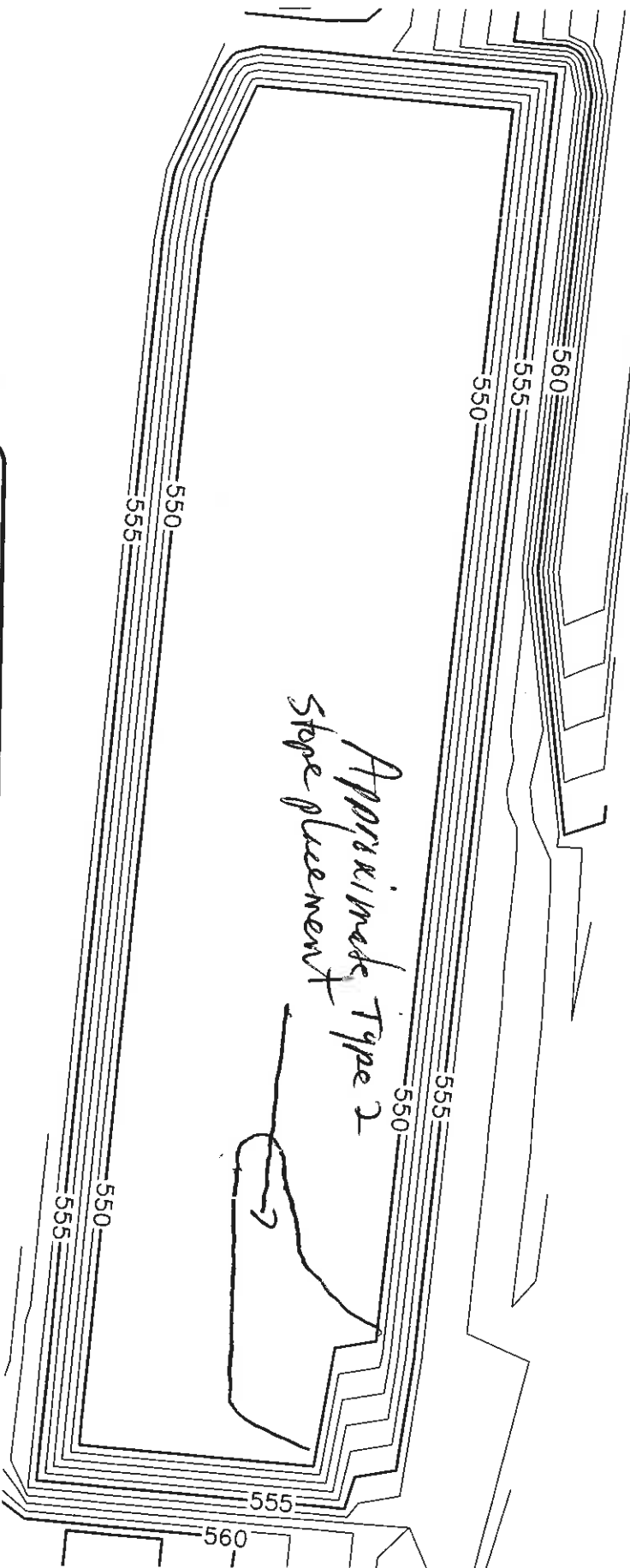
LOCKWOOD HILLS LLC	REVISION # 0
SCALE: 1" = 60'	August 2019

SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS	YATES COUNTY	NEW YORK
SETTLING POND FIELD MAP	TOWN OF TORREY	

**FIGURE 4**



CONTRACTOR:	<i>City Hill Construction</i>	CONSTRUCTION OBSERVER:	<i>Michael Beavers</i>
DATE:	<i>9/16/19</i>	DATE:	<i>9/10/19</i>

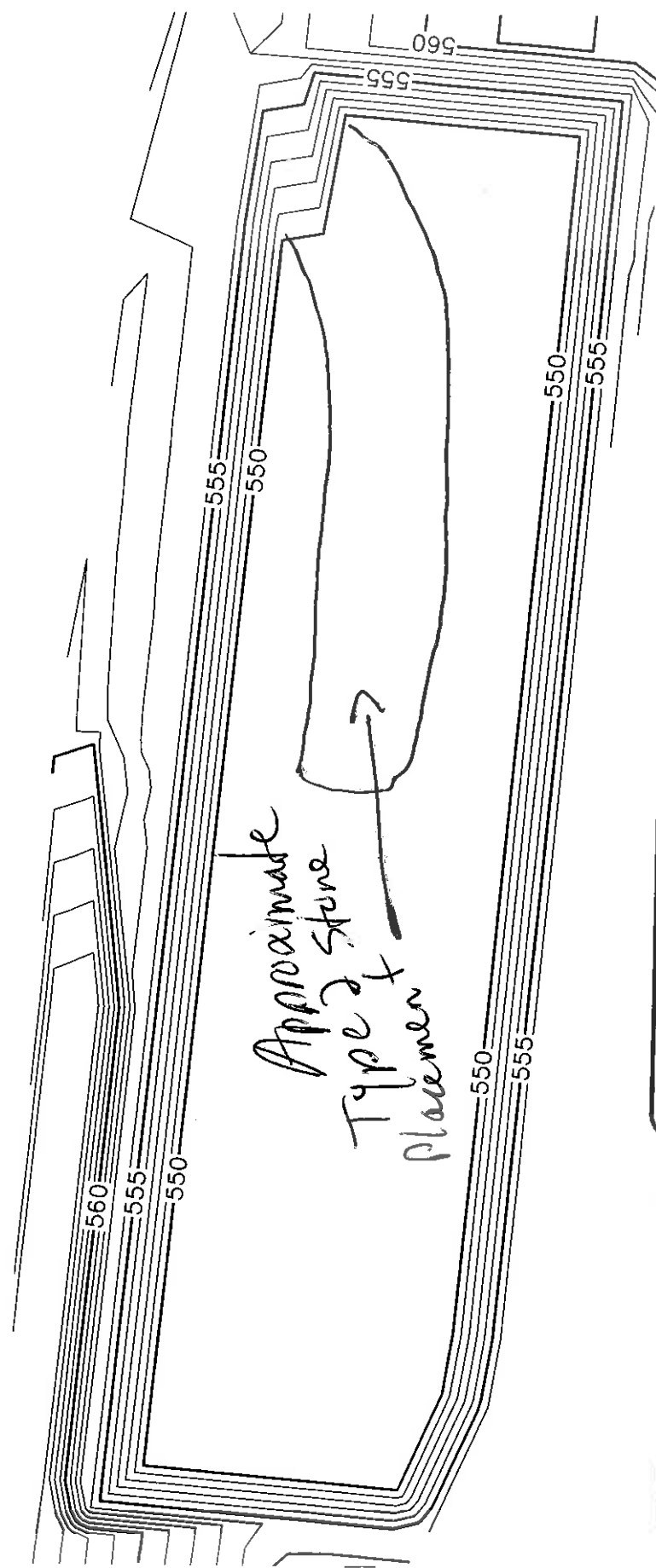


**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2600 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-8972 (716) 773-8973 FAX

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE: 1" = 80'	REVISION # 0	SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		
August 2019		TOWN OF TORREY	YATES COUNTY	NEW YORK



CONTRACTOR: <i>City Hill Construction</i>	CONSTRUCTION OBSERVER: <i>Michael Kovacs</i>
DATE: <i>9/11/19</i>	DATE: <i>9/11/19</i>
	STB Services



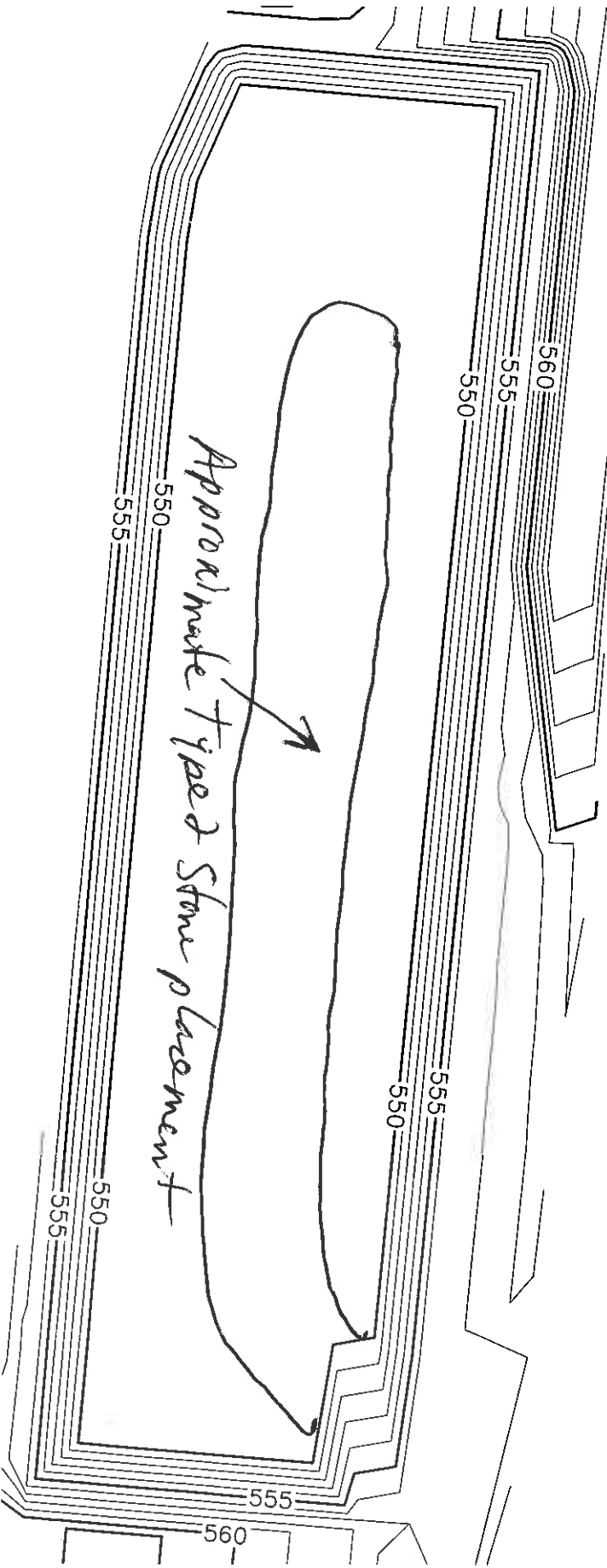
**DAIGLER ENGINEERING, P.C.**  
 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2800 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC	REVISION # 0
SCALE: 1" = 60'	August 2019

SETTLING POND FIELD MAP	TOWN OF TORREY	YATES COUNTY	NEW YORK
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS			

FIGURE  
4

CONTRACTOR:	<i>City Hill Construction</i>	CONSTRUCTION OBSERVER:	<i>Michael Leverages</i>
DATE:	<i>9/12/19</i>	DATE:	<i>9/12/19</i>

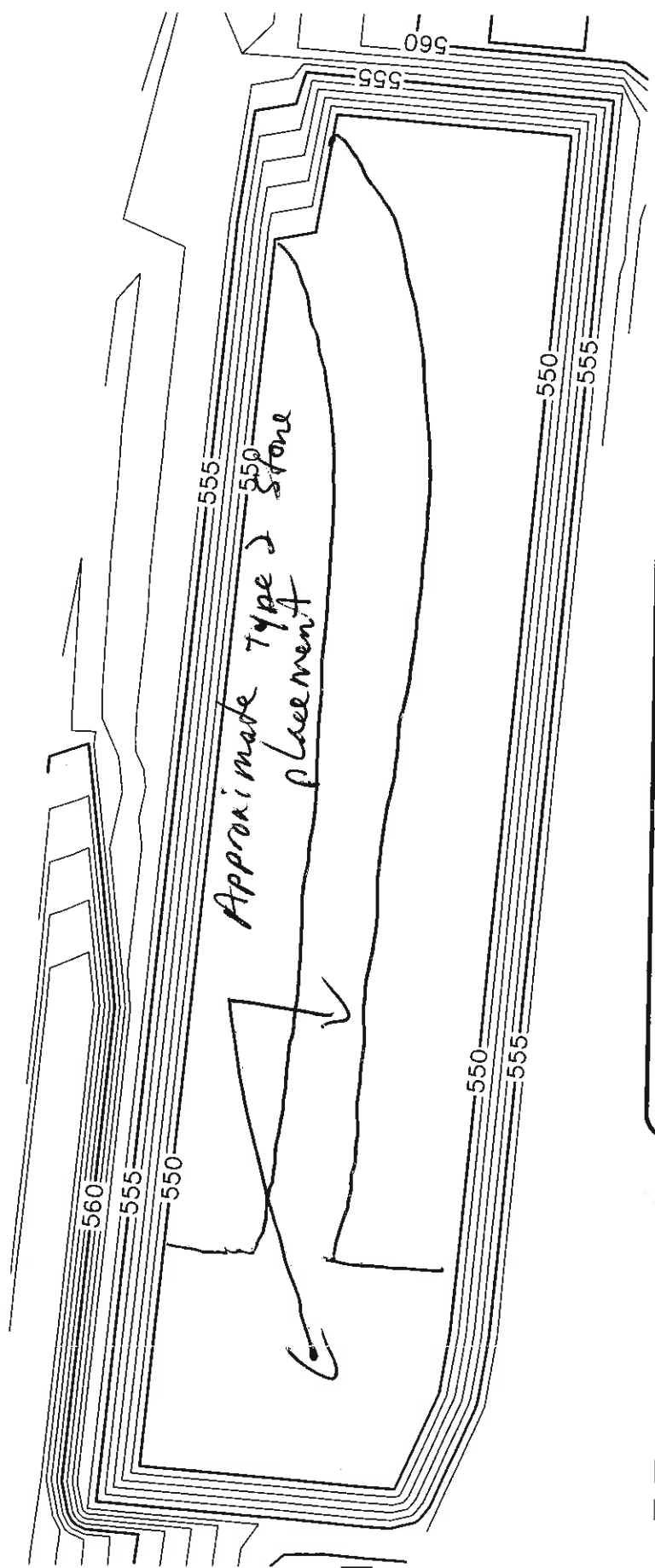


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 CIVIL & GEOTECHNICAL/ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE:	1" = 60'	REVISION #	0	
August 2019		TOWN OF TORREY		YATES COUNTY
				NEW YORK



CONTRACTOR: <i>City Hill Construction</i>	CONSTRUCTION OBSERVER: <i>Michael Covas</i>
DATE: <i>9/13/19</i>	DATE: <i>9/13/19</i>



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872

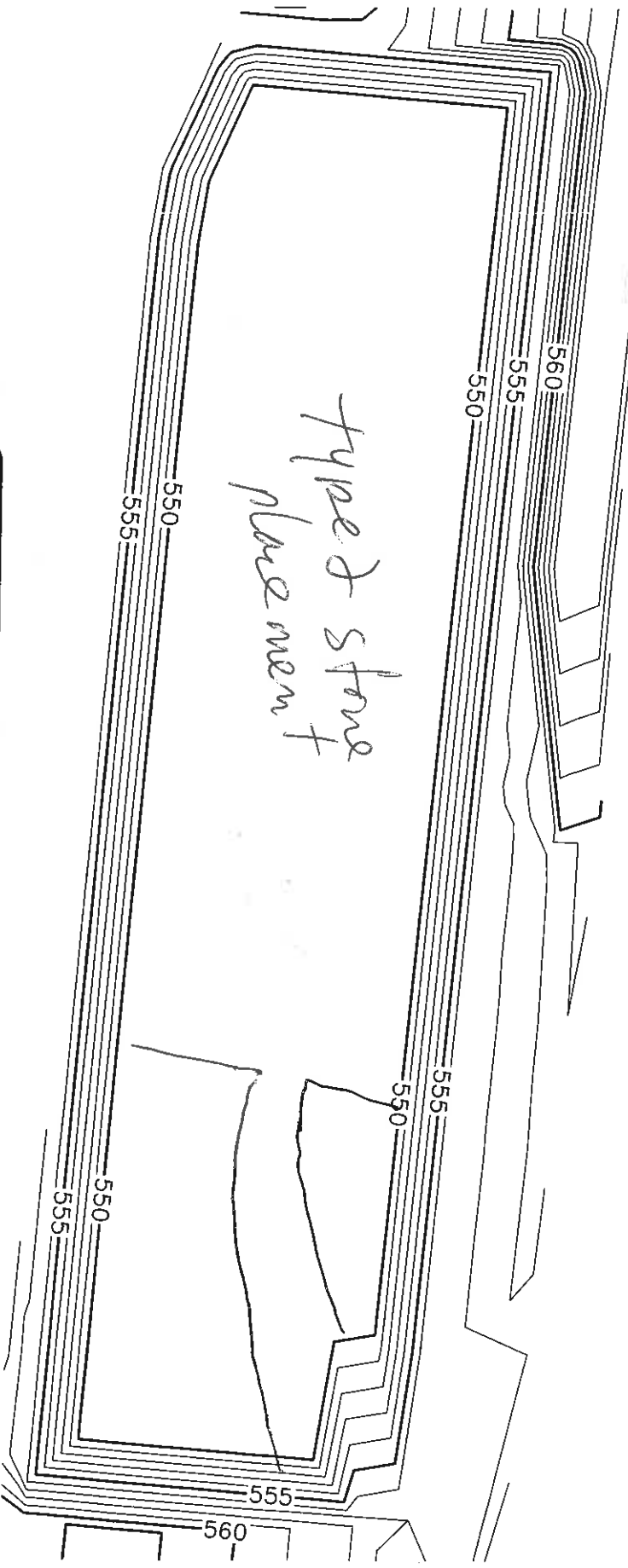
LOCKWOOD HILLS LLC  
 SCALE: 1" = 60'  
 August 2019  
 REVISION # 0

SETTLING POND FIELD MAP  
 SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS

TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

FIGURE  
 4

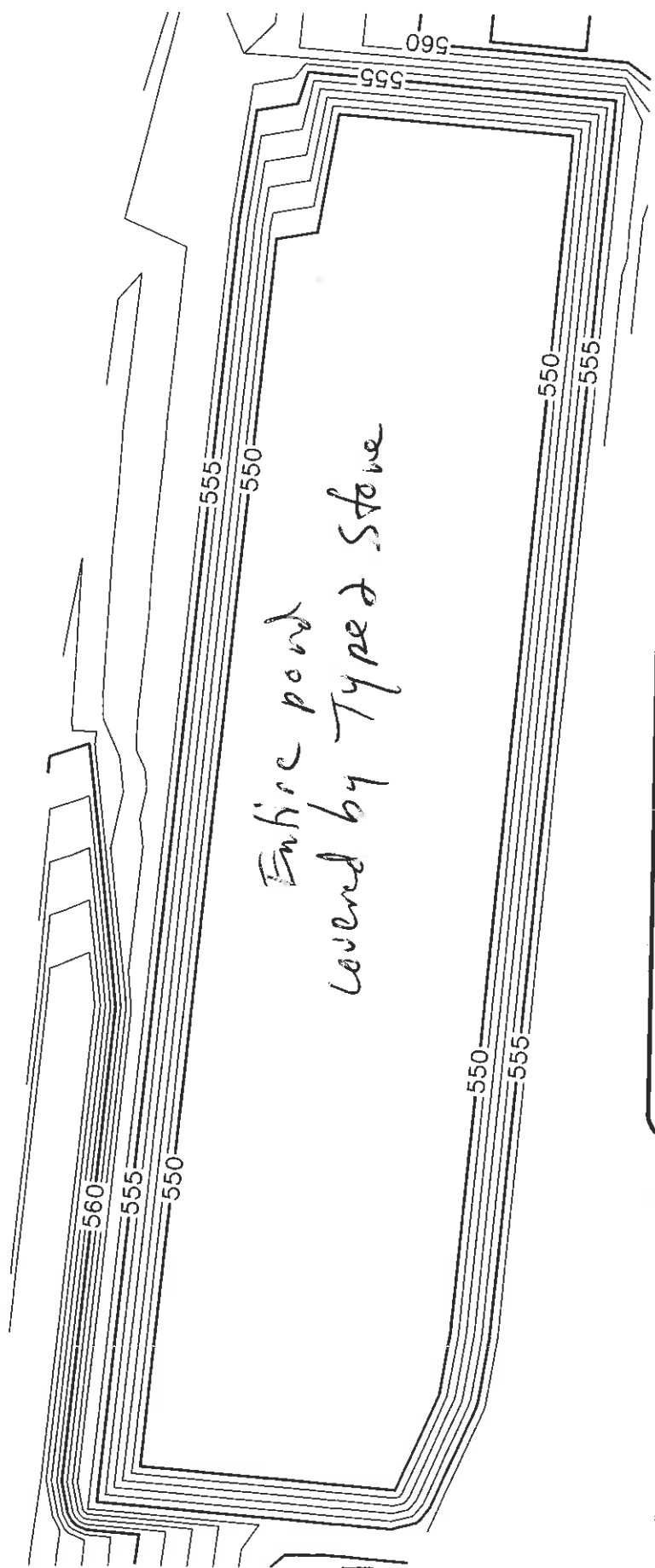
CONTRACTOR:	<i>City Hill Construction</i>	CONSTRUCTION OBSERVER:	<i>Michael Kovacs</i>
DATE:	<i>9/14/19</i>	DATE:	<i>9/14/19</i>



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 2620 GRAND ISLAND BLVD., GRAND ISLAND, NEW YORK, 14072  
 (716) 773-8872

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE:	1" = 60'	REVISION #	0	
August 2019		TOWN OF TORREY		YATES COUNTY
		SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		NEW YORK

CONTRACTOR: <i>City Hill Construction</i>	CONSTRUCTION OBSERVER: <i>Michael Kovacs</i>
DATE: <i>9/16/19</i>	DATE: <i>9/16/19</i>
	STB Services



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 CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
 2600 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
 (716) 773-6872 (716) 773-6873 FAX

LOCKWOOD HILLS LLC  
 SCALE: 1" = 60'  
 August 2019  
 REVISION # 0

SETTLING POND FIELD MAP  
 SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS

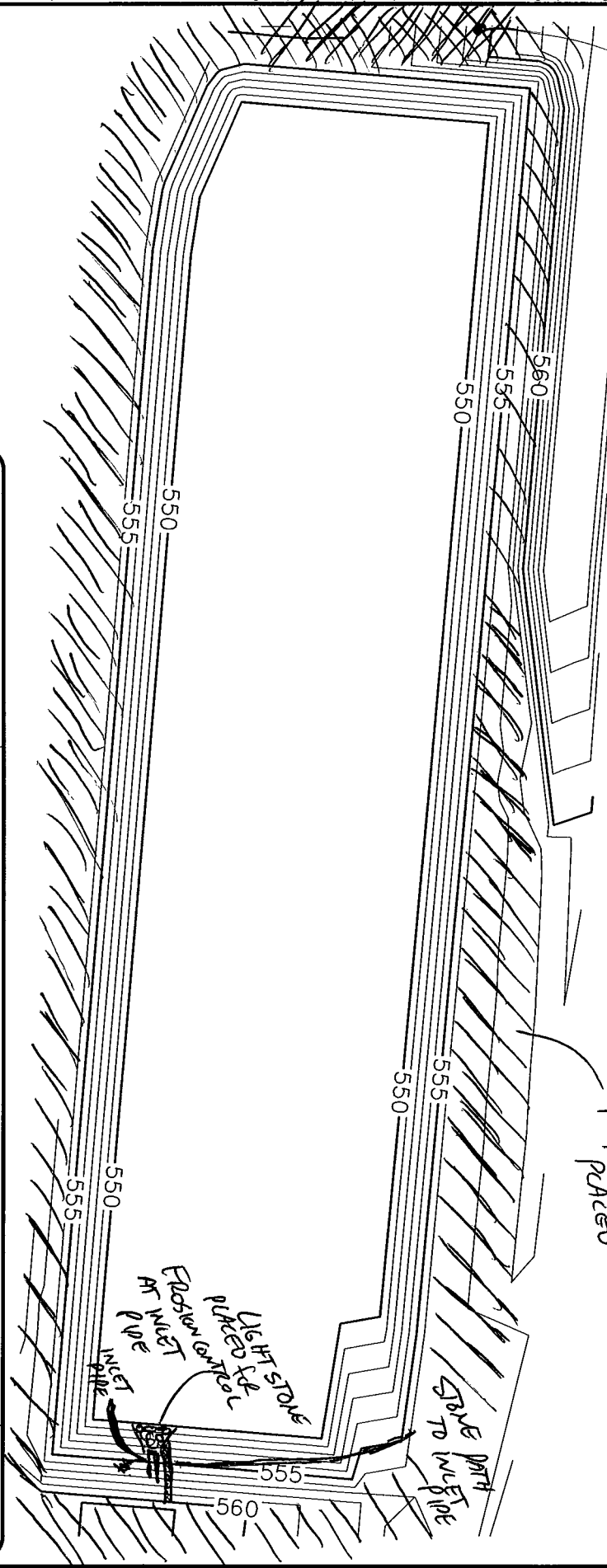
TOWN OF TORREY  
 YATES COUNTY  
 NEW YORK

FIGURE  
 4

CONTRACTOR:	NA	CONSTRUCTION OBSERVER:	DAVID CERNOX
DATE:	NA	DATE:	9/18/19

HYDRO SEEDING  
AND MULCHING  
BEGINNING

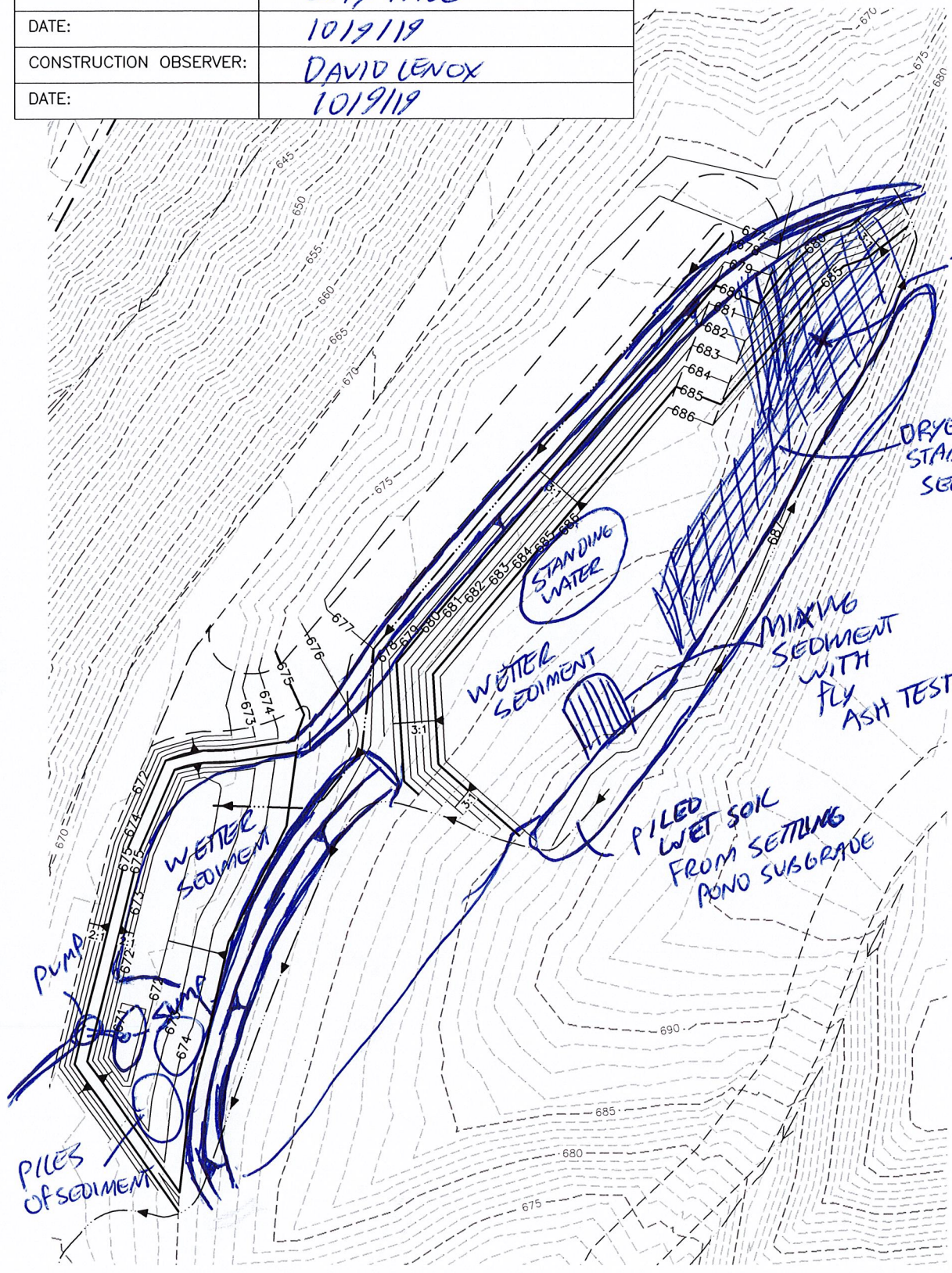
TOP SOIL  
PLACED



**DAIGLER ENGINEERING, P.C.**  
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2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
(716) 773-6872

LOCKWOOD HILLS LLC		SETTLING POND FIELD MAP		FIGURE 4
SCALE:	1" = 80'	REVISION #	0	
TOWN OF TORREY		YATES COUNTY		NEW YORK
August 2019		SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS		

CONTRACTOR:	CITY HILL
DATE:	10/19/19
CONSTRUCTION OBSERVER:	DAVID LENOX
DATE:	10/19/19



Q:\Lockwood Hills LLC\31-1518 Consent Order Eng Report 2.1\acad\Construction Drawings\CD-4 SEDIMENT DISPOSAL AREA.dwg 8/26/2019 10:59 AM

**CONFINED DISPOSAL AREA FIELD MAP**  
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS

LOCKWOOD HILLS LLC

TOWN OF TORREY

YATES COUNTY

NEW YORK

FIGURE  
5

August 2019

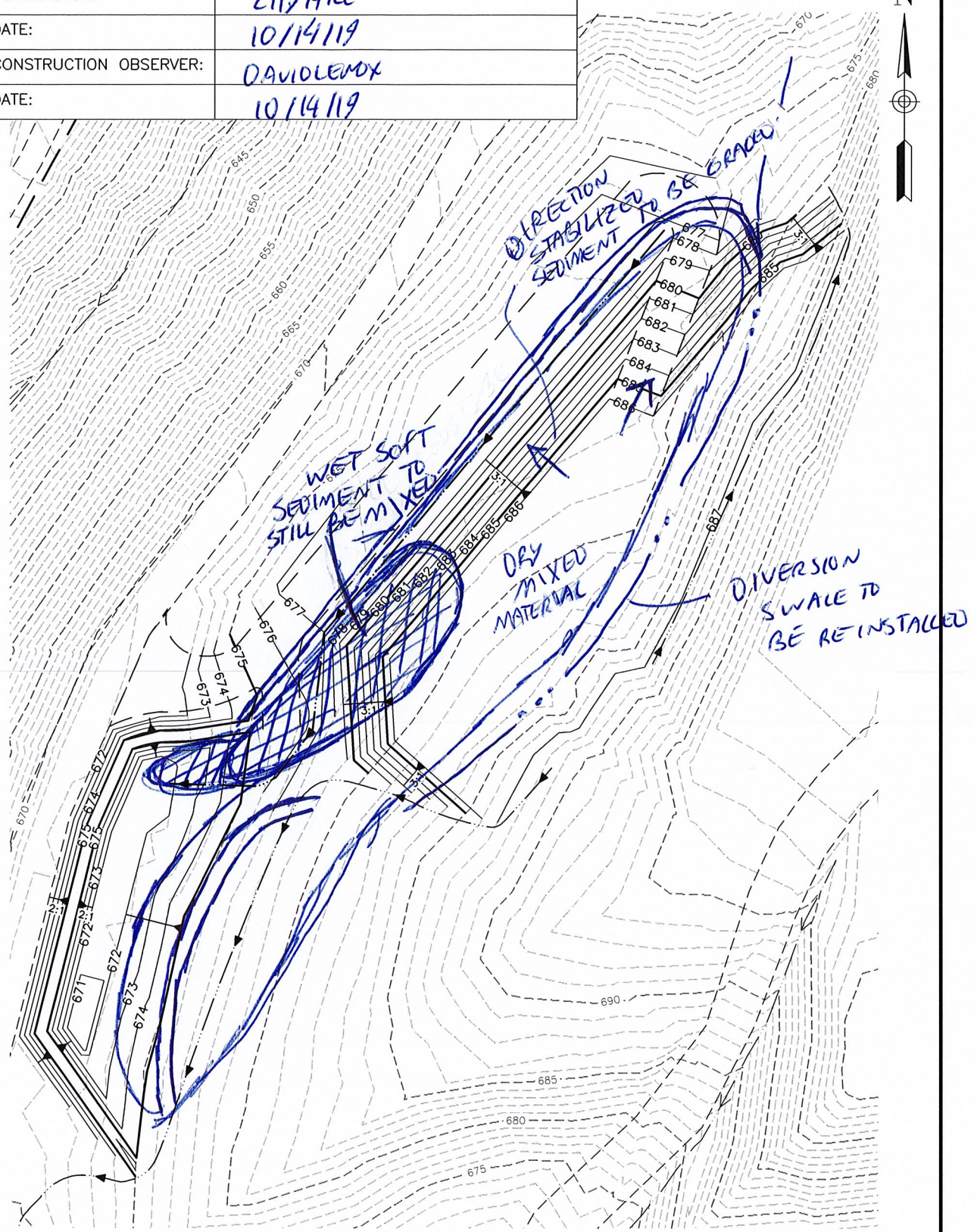
SCALE: 1" = 60'

REVISION # 0

**DAIGLER ENGINEERING, P.C.**  
CIVIL & GEO-ENVIRONMENTAL ENGINEERING  
2620 GRAND ISLAND BLVD. GRAND ISLAND, NEW YORK 14072  
(716) 773-6872 (716) 773-6873 FAX



CONTRACTOR:	CITY HILL
DATE:	10/14/19
CONSTRUCTION OBSERVER:	DAVID LEMOX
DATE:	10/14/19



Q:\Lockwood Hills LLC\31-1518 Consent Order Eng Report 2.1\acad\Construction Drawings\CD-4 SEDIMENT DISPOSAL AREA.dwg 8/26/2019 10:59 AM

<b>CONFINED DISPOSAL AREA FIELD MAP</b>			<b>FIGURE</b>
SETTLING POND SEDIMENT REMOVAL AND IMPROVEMENTS			
LOCKWOOD HILLS LLC			<b>5</b>
TOWN OF TORREY	YATES COUNTY	NEW YORK	
August 2019	SCALE: 1" = 60'	REVISION # 0	

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# **Appendix U**

## **Daily Construction Observation Reports**



**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/1/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 9:00 A.M	<b>DEPART TIME:</b> 5:15
<b>WEATHER CONDITIONS:</b> Partly Cloudy, Lite Breeze, Warm	
<b>TEMPERATURE:</b>	9:00, 73°F AM 5:15, 69°F PM
<b>SITE CONDITIONS:</b>	

<b>PERSONNEL AND EQUIPMENT:</b> Jim Daigler, Chris Gill, Ryan Stell
Dozer - CAT RST0093
Excavator - CAT 32E
Off Road Dump truck - Detex TA30, Tri-Axle Dump truck
Smooth Drum Compactor - CAT C556

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
- STORMWATER INSPECTION
- Geomembrane on 6/28/19: Roll #'s: D3V119025Q
D4V119030Q, D4V119031Q, D3V119027Q
D4V119039Q, D4V119033Q, D3V119023Q
D4V119036Q, D4V120094Q, D3V119029Q
D4V119034Q, D3V119028Q, D3V119022Q

<b>CONSTRUCTION ACTIVITIES:</b>
- EXCAVATING OF THE IN-SITU SOIL BY EXCAVATOR
SOIL IS PUT INTO TRI-AXLE DUMP TRUCK AND BROUGHT
TO SPECIFIED DUMPING AREAS
- DOZER - CAT RST0093 PUSHING SOIL TO GET TO
SUB GRADE

<b>OBSERVER:</b> Jake Vorobeychik	<b>SIGNATURE:</b> Jake Vorobeychik	<b>DATE:</b> 7/1/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/7/19</b>
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(9:00AM) - Arrived at Site
(9:00 AM - 10:30 AM) - First inspected the site visually to check for the progress of construction of the LSTA
10:30 AM - While inspecting the site, drawings were observed by Inspector and Contractor to see if the progress of construction is meeting the requirements of the CQA/CQC
11:15 AM - Went over Record Drawing with Jim and RYAN STELL
11:40! Observed the Limit of excavation using the Rover to see how far until subgrade
12:00! Went over Design of excavation with Jim and RYAN
12:00! Construction was still the excavating to the subgrade
12:30! Discussed with Ryan, Chris, and Jim the issues with payment
1:00 PM! Went to the top of the Landfill with Jim to observe the Spoils. There was ~ 70 Spoilpiles.
1:20 - Checked stormwater prevention at Leachate Storage Site and at the Stabilized Construction entrance
2:20! Did a visual/mental walk to see how many steps it takes me to get to top to be able to do better visual inspections
2:40 - Used Marking Spray to Mark potential Structural Fill
3:15 - Went over the Construction Drawings with Jim again
4:30 - Did one last check on the construction site
5:00 - Left the site

<b>OBSERVER:</b> Jake Vorobeychik	<b>SIGNATURE:</b> <i>Jake Vorobeychik</i>	<b>DATE:</b> 7/7/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/2/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:15 PM
<b>WEATHER CONDITIONS:</b> Cloudy	
<b>TEMPERATURE:</b> 7:00, 66°F AM	5:15, 61°F PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b> Jim Daigler, Daigler Engineering
excavator - CAT 308E Chris Gill, Lockwood
DOZER - CAT R5T0093 (Matt Hunt, John Thomas, Micah Lepp)
excavator - CAT 329E (Ryan Steff, Matt)
City Hill

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
STORMWATER INSPECTION

<b>CONSTRUCTION ACTIVITIES:</b>
- Excavator (CAT 308E) - Cutting out Drainage Path along the Inlet for Groundwater and excavating the Inlet for Drainage Pond
- DOZER (CAT R5T0093) - Cutting down Slope, filling in <del>Subgrade</del>

<b>OBSERVER:</b> Jake Vorobeychik	<b>SIGNATURE:</b> Jake Vorobeychik	<b>DATE:</b> 7/2/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/2/19</b>
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-7:00 AM: Arrived on Site
-7:15 AM: Observed Site Conditions and prepared Paperwork
-7:25 AM: observed that Site Conditions are mostly dry, but ponded in certain area labeled on the diagram (P1, P2)
7:30 AM: excavator cutting trench to make path for the ground water drain (labeled (D1))
7:50 AM: finished excavating drain path
8:00 AM: Matt Hunt starting Dozing Soil on Steeper Slope Side (D2)
9:00 AM: Visual inspection of the current progress of the construction for the first grade of back fill
9:15 AM: Minimum density of 90% is check for first lift, by visual inspection, the soil is saturated, but Jim Daigler say it is okay to be used as the first grade because 2' below subgrade was excavated and thus is not sufficient to compact
9:30: Discussed with Jim, Matt, and Ryan Drainage Design and Structural Fill
9:58: First Lift of Structural Fill is Compacted (L1)
10:00: excavator excavating trench for additional drainage (D3)
10:18: INSPECTION the construction of the Structural Lift
11:10: Lacked and compacted Structural Fill, <del>for</del> and cleared the Matt and John Thomas they are able to do the second lift
11:13: Scarified the compacted ground for 2nd lift
11:15: Soil is excavated from slope so dozer can push Structural fill on top of the 1st lift of Structural Fill (E1)

<b>OBSERVER:</b> Jake Vorobeychik	<b>SIGNATURE:</b> Jake Vorobeychik	<b>DATE:</b> 7/2/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/2/19</b>
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-12:20 PM: Checked Heights of each corner where the Structural Fill was placed for the Second Lift (L2)

-12:25: Scarified Second lift to begin 3<sup>rd</sup> Lift (L3)

~~-12:30~~

-12:25: 3<sup>rd</sup> lift for Structural fill and Compaction using Smooth Drum Compactor

-1:08 - ~~approved~~ and checked the height of third Lift (L3)

-2:00 - Inspected third lift with TIM

-2:05: went over the necessary steps with Matt Hunt to excavate the side of the subgrade between BERM

-2:05: Tim Daigler went off to do a Daily Stormwater inspection

-2:15: Marked where the outside of the BERM, where the dozer will need to cut into + compact the fourth lift (L4)

3:00: Inspected 4<sup>th</sup> Lift (L4)

3:30: Had a conversation regarding the layering of Structural Fill

- Soil is unacceptable, ~~1st~~ 1<sup>st</sup> Lift (- Rutting greater than 1"), Fill will not be accepted (Proof Roll will not be approved)

- 4<sup>th</sup> lift was not approved and will need to be cut and Regraded to pass the Proof Roll

- 4:00 PM: Pushing Soil into floor of Leachate Storage and transfer Area in order to set the ground base and compacted enough for A Proof Roll INSPECTION

- 4:40 PM: excavated, lifting and compacting Subgrade Soil

- 5:00 PM - Left the site after final visual inspection

<b>OBSERVER:</b> Jake Vorobeychik	<b>SIGNATURE:</b> John Vorobeychik	<b>DATE:</b> 7/2/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7-3-19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 6:55 am	<b>DEPART TIME:</b> 3:00 pm
<b>WEATHER CONDITIONS:</b> cloudy, calm, 7	
<b>TEMPERATURE:</b> ~ 70°F	7:00 AM + 85°F 3:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>
CAT 329E EXCAVATOR /OP
CAT D6K2 DOZER LCP /OP
2 TRI-AXLE DUMP TRUCKS to 1 afternoon
CAT BH-1 Lubex Fired backhoe
CAT 308E EXCAVATOR
SMOOTH DRUM COMPACTOR

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
8:15am SKAPS LADS NRVES 221011s GT, 4611s GCD
GEOTEXTILE 360'x180' GE116-15 57326.20, 57326.3,
57326.22, 56326.15, 57326.10, 57326.13, 57326.16, 57326.9,
57326.4, 57326.19, 57326.21, 57326.14, 57326.2, 57326.6
_____, 57326.18, 57326.5, 57326.7, 57326.17, 57326.1,
57326.12, 57326.8 (see continuation sheet for GCD)

<b>CONSTRUCTION ACTIVITIES:</b> EXCAVATING UNSUITABLE MATERIAL
BELOW SUBGRADE - LOADING OUT TO TOP OF LANDFILL
~ 10:30 began baling soil from south bank cut to
place 1 <sup>st</sup> lift as shown in field map as subgrade backfill
proof rolling this lift - fails - too much settling
~ 11:45 begin excavating south bank w/ dozer/excavator

<b>OBSERVER:</b> Van Daigler	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7-3-19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7-3-19</b>
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SKAPS TN 220-2-6 All <del>00877</del>
008975 101
...0003, ...0004, ... 0002, .... 0001
13 rolls of ATARFIL TGM on-site
3 rolls welding rod 5mm black
HILB 1901041
" 1901098
" 1901048

Cont. from pg 1

✓ excavator baling over to keep stockpile for future loading out

- starting new stockpile for usable sand/gravel resource ~~to site~~ from the south bank. Laborers placing silt fence

- Spoke w/ MATT - moisture density tests on 1<sup>st</sup> lift "within acceptable range" but proof rolling fails - most likely due to high piezo heads - plan is to cut to subgrade to reduce groundwater heads

<b>OBSERVER:</b> Van Daigler	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7-3-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/5/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b> Clear, Sunny	
<b>TEMPERATURE:</b> 75°F 7:00 AM	68°F 5:00 PM
<b>SITE CONDITIONS:</b> DRY	

City Hill	<b>PERSONNEL AND EQUIPMENT:</b> Ryan Hawkins, Ryan Stell, Micah, Matt Hunt	City Hill
	John Thomas, Dee Jay, Chris Gill (Lockwood), Chris Best	
	-excavator - CAT 329E	
	-Smooth Compact (on Roller) - CAT C556	
	-Dozer: CAT R5100293	
-Plate tamper (TORO)		

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Nuclear Density testing - Troxler

<b>CONSTRUCTION ACTIVITIES:</b>
-excavating (CAT 329E) Berm to Subgrade levels
-excavate other side of Culvert 6" on the North End
-Dump truck - Dumped type 3 Stone onto construction site (D1)
+ Dumped Sandy Gravel for the structural fill of the Berm
- CAT 303.5E putting type 2 Stone in Drainage trench where pipe is placed

<b>OBSERVER:</b> Tala Vorobeychik	<b>SIGNATURE:</b> Tala Vorobeychik	<b>DATE:</b> 7/5/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 7/5/19
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1:20! Drainage pipe is being covered with fill after it ~~the~~ was inspected by me to see if it was built with the correct ~~per~~ specifications

2:25 PM! The Common Trench Backfill where the ground water drainage pipe was placed is being compacted with a plate tamper.

3:00 PM! Drainage inlet area was covered with cobbles and backfill was placed on top and compacted (7 lift)

3:13! Drainage pipe being filled with common trench backfill with CAT 303.5 E

3:15 - CAT RST 00293 doing the 3rd lift on the berm

3:37! Drainage pipe was ~~back~~ filled and graded (~~finish~~ ~~finished~~)

3:40! Construction of ground water pipe was completed

3:40! Drainage pipe covered while CAT 308E excavates trench for ground water on ~~the~~ steep side of slope (E1) to drain to the ground water drain

-4:00! Drainage inlet area is being filled with backfill

-4:00! Jim Daigler conducting the Nuclear Density test to test for the density in the berm after each lift (Total of three)

-Discussed with Jim and Matt the final lift for the berm

5:00! Left the construction site

OBSERVER: Jake Vorseby/djk	SIGNATURE: John Vorseby	DATE: 7/5/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 7/5/19
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7:00 AM! Arrived on site / went over the plan of action for Day  
 7:45 AM! Inspected site conditions and gathered all inspection forms  
 8:15 AM! Uicah! Saw the Inlet was not designed properly and a solution will need to be made.  
 8:20! A solution for the inlet would be to dig another 6" deep  
 9:25! CAT 308E excavating on other side of the road to be able to place the drainage pipe for the groundwater  
 9:26! CAT 329E and CAT RST00293 are excavating and doing the berm to subgrade levels as well as excavating to path of the drain  
 10:10 AM! Dump truck dumped type 3 stone pile onto site  
 10:30 AM! Dozer - CAT RST00293 is doing up the berm to reach subgrade limits / measured thickness of berm  
 11:15 AM! CAT 309E excavating soil that had been bulldozed by a CAT RST00293 to be removed and placed into a pile  
 11:15 AM! CAT 303.5E placing type 2 stone bedding in drainage pipe trench.  
 11:30! CAT 308E excavating drainage inlet area (DI)  
 12:00! Laying down cobble in drainage inlet area on east side  
 12:15! type 2 stone is bedded and a 4" pipe drain is placed in the drainage groundwater drain, pipe is hatched around type 2 stone  
 12:30! Structural fill dumped, dozed and compacted onto berm (L1)  
 1:00 PM! type 2 stone hatched above 4" HDPE pipe  
 1:15 PM! Dump truck dumping structural fill onto berm (L2)

OBSERVER: Jake Vorobeychik	SIGNATURE: <i>Jake Vorobeychik</i>	DATE: 7/5/19
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### DAILY OBSERVATION REPORT

<b>PROJECT:</b> <u>SETTLING POND SEDIMENT REMOVAL + IMPROVEMENT</u>	<b>DATE:</b> <u>7-8-19</u>
<b>OWNER:</b> <u>LOCKWOOD HILLS</u>	

<b>ARRIVE TIME:</b> <u>8:00am</u>	<b>DEPART TIME:</b> <u>6:45 AM</u>
<b>WEATHER CONDITIONS:</b> <u>SUNNY</u>	
<b>TEMPERATURE:</b>	<u>~70°F - 8:00am AM</u> <u>~75° - 6:00pm PM</u>
<b>SITE CONDITIONS:</b> <u>MOSTLY WET</u>	

<b>PERSONNEL AND EQUIPMENT:</b>	
<u>SAM D.</u>	<u>CAT 303 SE MINI-EXC.</u>
<u>JAKE V.</u>	<u>CAT 329E EXC.</u>
<u>D.E. COA BEPS</u>	<u>CAT D6R EXC.</u>
<u>MATT, JT, MICAH</u>	<u>TEREX TA700 OFFROAD TRUCK</u>
<u>CHRIS - LOCKWOOD/GREENIDGE</u>	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
<u>M/D TESTS, PROOF-ROLLING MATERIAL BELOW SUBGRADE</u>

<b>CONSTRUCTION ACTIVITIES:</b>
<u>LSTA EXCAVATION, BERM + SWALE CONSTRUCTION</u>

<b>OBSERVER:</b> <u>SAM DAIGLER</u>	<b>SIGNATURE:</b> 	<b>DATE:</b> <u>7-8-19</u>
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**DAILY OBSERVATION REPORT (SUPPLEMENTAL SHEET)**

PROJECT: <u>SETTLING POND SEDIMENT REMOVAL + IMPROVEMENTS</u>	DATE: <u>7-8-19</u>
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8:00am - ARRIVED ON-SITE. JAKE V. PERFORMING ~~STORM~~ WATER INSPECTION  
 CITY HILL PUMPING NORTH END OF LSTA EXCAVATION, USING 303E TO INSTALL PERIMETER TRENCH

9:00am - CITY HILL USING CAT 329E TO EXCAVATE NORTH ~~END~~ DRAINAGE CHANNEL AREA.

9:30am - CITY HILL USING CAT 329E TO SCRAPE OUT TOP LAYER OF WET SOIL IN LSTA EXCAVATED AREA. PUSHING LAYER OF WET SOIL TO WEST END OF LSTA EXCAVATED AREA.

9:50am - CITY HILL MOVING PUMP TO WEST END, PUMPING OUT WATER

10:15am - CITY HILL SNAKING OUT ~~2"~~<sup>4"</sup> GW DRAIN DUE TO CLOGGING WITH SEDIMENT - SNAKE NOT LONG ENOUGH, CITY-HILL GETTING SETTING/HYDROSEEDER EQUIPMENT.

10:30am - CITYHILL LOADING OUT THE SCRAPED UP TOP LAYER OF WET SOIL AT LSTA

11:00am - CITYHILL USING HYDROSEEDER w/ WATER W ATTEMPT TO FILL OUT ~~2"~~<sup>4"</sup> GW DRAIN

11:45am - SCARIFYING LSTA TO DRY PLACING PIPE EXCAVATING GW DRAIN TRENCH / BACKFILLING w/ STONITE

12:15pm - CITY HILL BEGINNING TO FINISH BERM, PLACING S.F., COMPACTING, M/D TESTS

3:30pm - RYAN SMOOTH-DRUMMING BOTTOM - RUTTING/PUMPING

4:00pm - MATT TRIMMING UP BERM TO 3' WIDE IN DG

OBSERVER: <u>SAM DAIGLER</u>	SIGNATURE: 	DATE: <u>7-8-19</u>
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*[Handwritten scribble]*

LIMIT OF EXCAVATION CUTS  
 012 0954





# DAIGLER ENGINEERING, P.C.

CIVIL & GEO-ENVIRONMENTAL ENGINEERING

2620 Grand Island Blvd. Grand Island NY 14072

Ph (716) 773-6872/ Fax (716)773-6873 www.daiglerengineering.com

## DAILY OBSERVATION REPORT

<b>PROJECT:</b> SETTLING POND SEDIMENT REMOVAL & IMPROVEMENTS	<b>DATE:</b> 7-9-19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:06 AM	<b>DEPART TIME:</b> 5:25 PM
<b>WEATHER CONDITIONS:</b> SUNNY	
<b>TEMPERATURE:</b> 65°F - 7:06 AM	91°F - 4:30 PM
<b>SITE CONDITIONS:</b> SOME WET AREAS - MOSTLY DRY	

<b>PERSONNEL AND EQUIPMENT:</b>	
SAM DAIGLER - QA OBSERVER	CAT D6K BULLDOZER
	CAT SMATH DRUM
HARRY } CITY HILL	CAT 305SE MINI-EXC.
J.T. }	CAT 309E EXCAVATOR
MATT }	TEREX OFFROAD TRUCK
RYAN }	
MICAH }	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
12" <sup>ADD</sup> <del>CONCRETE</del> PIPE,

<b>CONSTRUCTION ACTIVITIES:</b>
SWALE INSTALLATION
TRENCH EXCAVATION, PIPE PLACEMENT & BURIAL

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-9-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7-10-19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00am	<b>DEPART TIME:</b> 5:00pm
<b>WEATHER CONDITIONS:</b> SUNNY/SOME CLOUDS/LOW WIND	
<b>TEMPERATURE:</b> 85° - 11:30 AM	89° 1:13 PM
<b>SITE CONDITIONS:</b> SOME WET AREAS - MOSTLY DRY	

<b>PERSONNEL AND EQUIPMENT:</b>	
SAM DAIGLER, DAVE LENOX	CAT SMOOTH DRUM
	CAT 329E EXC.
MATT	CAT MINI EXC.
RYAN	CAT D6 DOZER
4 OPERATOR/CATDOZERS	CAT BACKHOE
	CITY HILL

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
M/D TESTING
PROOF-BOLING
BIP-BAP AND STONE DELIVERED TO SITE BY CITY HILL

<b>CONSTRUCTION ACTIVITIES:</b>
<del>REMOVING/REPLACING MATERIAL (SOIL) AT LSTA</del>
BERM CONSTRUCTION
REMOVING/REPLACING MATERIAL AT SW/SE CORNERS OF LSTA
(ABOVE BERM)
NORTH CHANNEL CONSTRUCTION

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-10-19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7-10-19</b>
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7:45am - CITY HILL REMOVING SOIL FROM SOUTH <sup>WEST SOUTH</sup> EAST & EAST CORNER OF LSTA ABOVE PERIMETER SWALE

8:10am - CITY HILL ~~BEARING~~ CLEANING UP SOUTHERN BERM EDGES W/ D6 DOZER

8:30am - CITY HILL USING D6 TO PUSH OUT UNSUITABLE MATERIAL FROM LSTA BOTTOM IN PREP FOR PLACING TEXTILE AND STONE DRAIN

9:30am - CITY HILL PLACING 2" LAYER OF SOIL ON NORTH BERM, SMOOTH DRUMMING SOUTH & NORTH BERM

10:00am - MICAH (CA) OBTAINING DATA POINTS ON EXCAVATED AREAS

11:00am - CITY HILL EXCAVATING & GRADING NORTH DRAINAGE CHANNEL

12:00pm - DAVE L. AND RYAN S. ON-SITE, OBSERVING PROOF-ROLLING AND DETERMINING AREAS TO BE REMOVED & REPLACED, CITY HILL FILLING IN SE EXCAVATED CORNER W/ RIP-RAP.

12:45pm - M/D TESTING COMPACTED LIFT ON SOUTHWEST BERM

1:00pm - CITY HILL PLACING TOPSOIL IN NORTH DRAINAGE CHANNEL

2:45pm - CITY HILL PLACING RIPRAP IN SW EXCAVATED CORNER

4:35pm - CITY HILL INSTALLING BERM/DIVERSION AT TOP OF LSTA SLOPE IN PREP FOR RAIN

2350  
634

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-10-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/15/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 8:15 A.M	<b>DEPART TIME:</b> 11:30 P.M
<b>WEATHER CONDITIONS:</b> Clear / Sunny	
<b>TEMPERATURE:</b>	69°F 8:15 AM      75°F 11:30 AM/PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hunt, Ryan Stell, Harry, JT
CAT C556 - Smooth Drum Compactor
CAT 303.5E - excavator
CAT R5T00203 - Bull Dozer
CAT 329E - excavator
TEREX - Dumptruck

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Stormwater Inspection

<b>CONSTRUCTION ACTIVITIES:</b>
- Pumping water out of Groundwater Drain (G1)
- Hydro Seeding Areas where Piles are and open Soil
Excavating and filling Stone LN Leachate Storage and Transfer Area
On South West Side <sup>Constructing</sup>
- Excavating / DOZING / <del>Transferring</del> Soil At Sediment Drying and Disposal Area (SD1)

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> <i>John Vorobeychik</i>	<b>DATE:</b> 7/15/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 7/15/19
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8:15 AM: Arrived on Site
8:20 AM: Talked with Matt Hunt, and asked <del>was</del> what the plan for the day is
8:25 AM: Inspected Site Conditions in Leachate Storage and Transfer Area (Some Areas were ponded (P1))
8:45 AM: Began to Conduct a Stormwater Inspection around Areas where Erosion and Sediment Control Have been Implemented
9:30 A.M: Areas that <del>has been</del> that needed mulching and HydroSealing has been Completed (H1 + H2)
11:00 A.M: Matt Hunt excavating Drainage Pit for Groundwater in LSTA using a CAT 303, 5 E while Pumping water out of the ponded area (P1)
11:15 A.M: Finished Stormwater Inspection <sup>constructing</sup>
11:25 A.M: Excavating, DOZING, and <del>transporting</del> Soil at Sediment Drying and Disposal Area on top of Landfill
11:30 AM: Finished Inspection and Left the Site

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> John Vorobeychik	<b>DATE:</b> 7/15/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7-19-19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:05 am	<b>DEPART TIME:</b> 10:15 am
<b>WEATHER CONDITIONS:</b> warm - light breeze, clear	
<b>TEMPERATURE:</b>	85°F @ 8:30 AM <span style="float: right;">PM</span>
<b>SITE CONDITIONS:</b> dry - limited gw seepage @ LSTA	

<b>PERSONNEL AND EQUIPMENT:</b>
CAT C556 Smooth Drum Compactor 26,700 lbs
Ryan Stell
Matt Hunt
Labors
CHRIS Gill temporarily to ~ 8:00 +/-

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
PROOF ROLL CONTAINMENT AREA SOIL SURFACE
- ROUGH GRADE ONLY - RAMP AREAS REPORTED TO BE WITHIN ABOUT SIX TO FOUR INCHES below grade for GM - WESTERN / DEEPER AREAS ONE OR TWO & 1/2 foot below grade - slopes require fine grading

<b>CONSTRUCTION ACTIVITIES:</b>
NONE WHILE AT SITE
CONCRETE FOOTER FOR PIPE BRIDGE PLAZED yesterday - Labors patching surface

<b>OBSERVER:</b> Jim Daigler	<b>SIGNATURE:</b> James Daigler	<b>DATE:</b> 7-19-19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7-19-19</b>
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8:37am begin proof rolling w/ CAT COMPACTOR USING SIX RUNS ACROSS FLOOR MOVING TWO PASSES PER RUN
MAJORITY OF EXPOSED SURFACE IS SUFFICIENTLY HARD - TWO <del>SOME</del> SOFT AREAS MARKED OUT IN ORANGE PAINT AS SHOWN IN SITE FIGURE /PHOTOS
9:15am SPOKE W/ RYAN & MATT - ASKED THAT EASTERN SOFT AREAS TO BE UNDERCUT 1-FOOT & BACKFILLED TO SUBGRADE SURFACE W/ NO. 1 STONE PLACED ON A NON-WOVEN GEOTEXTILE
WESTERN AREA - REMOVE LOOSE/WET SLOP - PLACE GEOTEXTILE & NO. 1 STONE TO SUBGRADE
ALSO NOTED TO RYAN/MATT: NEED TO FINE GRADE SUBGRADE SURFACE " " PREPARE SURFACE FOR GCD PLACEMENT
9:30-10:00 - OBSERVE SEDIMENT DRYING/ DISPOSAL -

<b>OBSERVER:</b> Jim Daigler	<b>SIGNATURE:</b> Jim Daigler	<b>DATE:</b> 7-19-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7-22-2019
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 12:00pm	<b>DEPART TIME:</b> 2:55pm
<b>WEATHER CONDITIONS:</b> CLOUDY, LIGHT RAIN - 12:15pm	
<b>TEMPERATURE:</b> ~ 64°F - 2:07pm AM	PM
<b>SITE CONDITIONS:</b> WET	

**PERSONNEL AND EQUIPMENT:**

SAM DAIGLER - CGA BER

MATT (CITY HILL)  
WILSON SURVEYOR

CHENANGO

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

STORM WATER INSPECTION

SURVEYING LSTA

**CONSTRUCTION ACTIVITIES:**

NONE

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-22-2019
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7-23-2019
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 6:15 AM	<b>DEPART TIME:</b> 6:25 PM
<b>WEATHER CONDITIONS:</b> PARTLY CLOUDY	
<b>TEMPERATURE:</b>	~67°F - 6:30 AM ~ 70°F - 6:20 PM
<b>SITE CONDITIONS:</b> WET - DRYING OUT	

<b>PERSONNEL AND EQUIPMENT:</b>
SAM D → CCA OBS. JAKE V
MATT - CITY HILL    RYAN - CITY HILL
CHRIS - GREEN
CHENANGO - NKC (SUPERV.) / 5 LABORERS

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
DS #1
V-BOXING
AIR TESTING
PROOF ROLLING

<b>CONSTRUCTION ACTIVITIES:</b>
GEO-SYNTHETIC PLACEMENT

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-23-19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7-23-19</b>
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6:15am - ARRIVED ON-SITE, OBSERVED RYAN PROOFROLL IN 48" DRUM. PASSED PROOFROLL
7:15am - CHENANGO SETTING UP TO BEGIN PLACING GEOCOMPOSITE
8:45am - CHENANGO PLACING GEOCOMPOSITE
10:30am - CHENANGO FINISHED PLACING GCD. CLEANING OFF DEBRIS AND FINISHING SEWING, WRAPPING ENDS WITH GEOTEXTILE
12:00pm - CHENANGO TAKES LUNCH
12:50pm - TRIAL WELD ON MACHINE WSZ (PASS)
1:15pm - CHENANGO PLACING LINER
1:30pm - WELDING OF LINER BEGINS, PLACING CONTINUES
3:00pm - ALL LINER PANELS HAVE BEEN PLACED, CHENANGO CONTINUES WELDING.
3:15pm - AIR-TESTING OF SEAMS BEGINS
3:25pm - SSD MARKED OUT DS#1 ON R/P7 20' FROM SOUTH EDGE
<del>3:40pm - TRIAL WELD ON EXTRUDER GCD #X-10</del>
4:15pm - CHENANGO PREPARING REPAIRS, LESTERING ON PATCHES, PREPARING BOOT FOR NW DRAW
4:30pm - TRIAL WELD ON EXTRUSION GCD #X-27 (PASS)
5:15pm - REPAIRS BEGIN TO BE EXTRUDED
6:15pm REPAIRS FINISHED + V-BOND

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 7-23-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/24/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 2:30 P.M
<b>WEATHER CONDITIONS:</b> Sunny, Clear	
<b>TEMPERATURE:</b> 62°F 7:00 AM	77°F 2:30 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	CAT 329E - Excavator
5 Laborers	Bobcat T190, Leister, Wedgewelder DEMTECH
Nick	3 Chenango
Chris Gill	Greenidge
Matt Hunt	Coty Hill

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
- Layering of the Geotextile above the Geomembrane
- Seaming the Geotextile with Wedgewelder
- Filling Sand Bags

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> John Dabyshev	<b>DATE:</b> 7/24/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/24/19</b>
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7:00 A.M. : Arrived on Site / Prepared Paper Work
7:10 A.M. : Inspected the Site Conditions
7:15 A.M. : Chenango Crew Filling Sand Bags
8:00 - A Nick From Chenango <del>there</del> is waiting until 8:30 for the Surveyer to arrive to survey the field LSTA
8:30: Chenango crew started layering the Geotextile from the East
8:35: Marked the Areas where the Surveyer will need to survey using Marking paint on top the Geotextile so it can be layered
9:30 - Workers Wedge welding the Seams of the Geotextile together, along with the Leister to patch up the open Seams
- Note - Any Damages a 3' patch would be placed
10:15: Chenango crew Finished Seaming the Geotextile
10:20: Inspected all Seams to ensure quality and make sure there are no damages
- Note: few repair patches were necessary
11:10: Called Jim to see when lab test's were for the type 2 Stone were going to be done,
<del>Jim said about 2:00 p.m</del>
11:30 - Surveyer arrived and began to survey the LSTA
12:00 - When I found out the time the Lab test were going to be completed, City Hill's Ryan Stell said they won't be placing the type 2 Stone until tomorrow

<b>OBSERVER:</b> Yevgeniy Varchevchik	<b>SIGNATURE:</b> 	<b>DATE:</b> 7/24/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/25/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:15 PM
<b>WEATHER CONDITIONS:</b> Clear, Sunny	
<b>TEMPERATURE:</b> 62°F 7:00 AM	5 78°F 5:15 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hunt + 2 Dump truck Drivers @ City Hill Construction
Bull Dozer - CAT RST00293
Excavator - CAT 329E
Bull Dozer - CAT B42

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Ensured the Stone placed was The <sup>TYPE</sup> <del>Number</del> 2 Stone
Ensured the underlying liners were not
Damaged by the loading of the stone and
pouring of the stone on the headgate
Storage and Transfer Area (LSTA)

<b>CONSTRUCTION ACTIVITIES:</b>
Dumping Type 2 Stone with a 21 ton truck
On East Entrance of the (LSTA)
Removing Sand Bags to fill the Berm on the
North East

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> Yevgeniy Vorobeychik	<b>DATE:</b> 7/25/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/25/19</b>
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7:00 - Arrived on Site / Prepared Paperwork
7:15 - Inspected the Site Conditions
7:30 - Dump truck arrives with 22 ton load of type 2 Stone
7:35 - Dump truck Dumped type 2 Stone on East Side of LSTA
7:40: Matt is using the CAT 3 H.I. Dozer to <del>bring</del> <sup>Remove</sup> Sand BASSY to the upper South West Side from LSTA and Bring
8:00: Stone that was Dumped looked Silty and to fine of particles
8:05: Talked with Jim after he sent Him pictures and he thought the type 2 Stone had to many fines to meet the Specifications
8:15: Informed Matt that Jim thinks the Soil is not the Right Grade Specs, and waiting on Confirmation from Dave to see whether or not Matt can proceed the layering of the type 2 Stone
8:15: Also Informed Matt to try to Remove any large Stones that get into the Loads
10:00+ While we wait for the Confirmation from Dave, Matt excavates / Dozes the SE Slope on the East where the ground de-watering Sump is located
11:00: Resolved Issue with type 2 Stone and were able to proceed with the layering of the type 2 Stone on the LSTA

<b>OBSERVER:</b> Yevgeniy Vardanyants	<b>SIGNATURE:</b> Dale Brubaker	<b>DATE:</b> 7/25/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 7/25/19
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11:15: Second Load was placed onto the LSTA from the East Side Entrance
11:25: While Matt waits for the loads of type 2 Stone, He Dozes the Soil excavated from the pile across the Street on the NE Side (P1) and Re-grading the Surface on the SE Slope of the LSTA near the Ground De-watering Sump
11:30 to 2:30 P.M - Each time a load Comes in, Matt dozes it from the East towards the West and Regrades the SE Slope
3:45: Matt pumps water from Ground de-watering Sump
3:50: Matt Still Dozing the type 2 Stone onto the LSTA
4:45: Last Load of the day dropped off - Total Loads for day dropped off 12 loads from 21 Ton truck 6 Loads from 10 Ton truck
4:50: Finished dozing the last load. / Compact
5:15: Left the Site For the day

OBSERVER: Yevgeniy Vorobeychik	SIGNATURE: John Vorobeychik	DATE: 7/25/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/26/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:15 P.M
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	65°F 7:00 AM      79°F 5:15 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hunt, Dump truck drivers, TY
CAT RST00293 - Dozer
CAT 329E - Excavator
CAT 303.5 E - excavator
Stone Rhino - Small Drum Compactor

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Ensured no damage to the liner as Type 2 Stone is formed 2' above the liner

<b>CONSTRUCTION ACTIVITIES:</b>
- Dump trucks dropping off loads of type 2 Stone throughout the day
- Matt does the bottom of LSTA
- TY uses CAT 303.5 to form the top of the berms from the NE berm around to the SE berm

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> John Vorobeychik	<b>DATE:</b> 7/26/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 7/26/19</b>
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7:00AM - Arrived on Site / Prepared paper work
7:15 - Inspected conditions of the Site
7:30 - First load of the day dropped off
7:50 - Matt doing the Load of type 2 Stone dropped off throughout the LSTA, as well as bringing ty
Soil so he can form the Berm with the CAT 303.5E.
9:00 - Ty started to form the NE Berm
10:00: Matt does the LSTA Area Bottom area while ty form the Berm on the North
12:00 - As ty forms the Berm, I use a laser TOPCON measuring tool to ensure that that layers of the type 2 Stone is 12"
2:00PM - Matt and Ty covered most of the LSTA with the type 2 Stone
2:45: finished Grading the LSTA / Inspected the height of the type 2 Stone throughout the LSTA to ensure 12"
3:50: Ty uses Stone Rhino to compact the LSTA
5:00: ty finished compacting the LSTA (create storage and transfer area)
5:15: Before leaving site, made sure Matt covered up the 9" pipe in the LSTA so it will not build up with soil

<b>OBSERVER:</b> Yelgeny Vorobeychik	<b>SIGNATURE:</b> John Vorobeychik	<b>DATE:</b> 7/26/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/29/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:15 PM
<b>WEATHER CONDITIONS:</b> Clear, Sunny	
<b>TEMPERATURE:</b>	71°F 7:00 AM   84°F 5:15 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	JT, Mat T. Hunt
Core Drill	3 Men from Baker Rental

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Inswing tanks were properly set up
Storm water inspection

<b>CONSTRUCTION ACTIVITIES:</b>
Coring Leachate Drainage pipe 12"
Leachate storage tanks arrived on site and placed in the storage area

<b>OBSERVER:</b> Yevgeniy Verdyayev/dmk	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7/29/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 7/29/19
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7:00 AM - Arrived on site / Prepared Paper Work
7:15 - Inspected site conditions
7:40 - Matt arrived with JT to core out the
Leachate Drainage pipe to be drilled
towards the Leachate Storage and transfer Area
9:30! Men from Baker Corp arrival with the
tanks
9:35! Began placing tanks
10:00! Finished placing <del>the</del> tanks
10:05! Matt and JT preparing to core through
the leachate Drainage tank
11:00! Checked Discharge at outlet of Sediment Pond
11:45! problem with alarm and no battery (called Dave)
12:00! resolved issue, the leachate meter solar panel will
be used to power the alarm for the leachate Storage tanks
12:15! person from Baker Corp showed up with
the 4" Manifold Pipes for the tanks and were installed
in accordance to the drawings
1:00! Ongoing Coring of Manhole for leachate
pipe
2:00! Started Storm Water inspection
3:00! finished
3:30 - finished Storm Water Inspection
4:00! Matt and JT still trying to core out
the hole for the pipe bridge in the manhole

OBSERVER: Joseph V. Vukobratovic	SIGNATURE: John Vukobratovic	DATE: 7/29/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/30/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	70°F 7:00 AM   87°F 5:00 PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b> Matt + Hunt, JT
Excavator 329E
CAT 342 - Bull Dozer

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
* Gathered Soil for Pnc - test 5 foot paint filter and moisture content tests

<b>CONSTRUCTION ACTIVITIES:</b>
- Assembling pipe Bridge
- Welding pipe Bridge Rib Roof deck
- Coring 12" manhole at hole at Manhole
- Setting Gablan down at East Side ground dewatering Sump, Excavator measuring Bridge, manholes tanks + Bridge

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7/30/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b>
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7:00 A.M - Arrived on site / Prepared paperwork for day  
 7:30 A.M - Bridge Arrived from UNICRAFT  
 8:00 A.M - Matt and JT started to set up Bridge  
 8:30 AM - talked to Dave and Matt about W10 x 19 Beam  
 8:45 A.M - City Hill will have to supply the W10 x 19 Beam  
 9:00 - 9:30 - Assembled Bridge  
~~9:30 - 10:00~~ - 10:00 - Waited for welder while Matt and JT were coming out the 12" hole for the Pipe Bridge  
 11:00 - Finished coming out the 12" hole from the Marshide  
 11:15 - Matt started to fill in Stone for the Bedding of the pipe before the pipe Bridge  
 11:35 - Cuts the Rib Roof core deck to appropriate measurements 36" wide by 36" long  
 11:40 - Communicated with Jim and Dave about the specifications of the pipe bridge, I took measurements of the JOISTS and emailed them to Dave Knox and Jim Daigler to review.  
 12:00 - Drilling holes for the puddle weld for the Bridge Deck Roof  
 1:00 - JT and Matt laying down Gabion Stone in East Side SE Slope Near Groundwater Pump  
 1:10 - Jay Grinding part off the areas where he drilled the holes on the core Bridge Deck Roof for the puddle welds  
 2:00 - Finished welding the core deck to pipe bridge

<b>OBSERVER:</b> Yeager, Nicholas	<b>SIGNATURE:</b> 	<b>DATE:</b> 7/30/11
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 7/30/19
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2:15: tested pipe for measurement on the tank and the concrete footing ~~to~~ lifting using CAT 3295

2:30: Figured out the tanks were to far South and ~~the~~ had to be moved towards the North End of the LSTA

3:00: Moved tanks in further North position

3:10: Realigned pipe Bridge for measurement

3:30: talked to Dave to figure out how high the ~~to~~ I-Beams need to be since the tank was measured to be 7' to low, therefore the I-Beam needs to have new measurements

4:00: Jay is measuring the dimensions for the I-Beam we will be fabricating and designing

4:30: Jay finished will be getting at W12 x 19 I-Beam

5:00: gathered samples from sediment panel to run ~~test~~ practice tests

5:05 - left site

OBSERVER: J. V. Serrano, V. K. K. K.	SIGNATURE: <i>[Signature]</i>	DATE: 7/30/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 7/31/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:15 PM
<b>WEATHER CONDITIONS:</b> Wet, Sunny, Clear	
<b>TEMPERATURE:</b> 70	70°F 7:00 AM 84°F 5:15 PM PM
<b>SITE CONDITIONS:</b> Wet, muddy, (LSTA in good shape)	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hunt, JT, Jay
CAT 329E - Excavator
CAT-BH2 - Bull Dozer

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
testing loss-tune content and point filter
equipment by conducting tests with wet and
dry sediment and soil

<b>CONSTRUCTION ACTIVITIES:</b>
- Welding the bridge to the footing on the
Pipe Bridge
- measuring the pipe bridge connection to the
tanks

<b>OBSERVER:</b> Yessmy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7/31/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 7/31/19
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7:00AM - Arrived At Site / prepared paperwork  
~~8:00 AM - pipe bridge was~~  
~~7:30 AM~~  
 7:45AM - W12x19 I-beam was being welded by Jay  
 8:00 - I-beam attached to pipe bridge and set onto the tank  
 8:15 - Inspected the length of the overlap and was not 1'  
 8:25 - told Matt to move the I-beam tanks 6" to <sup>for change to</sup> be an 12" overlap for over the tanks for the I-beam  
 8:45 - Re-measured the I-beam and measured it to be a 12" overlap  
 9:00: Jay welding the pipe bridge to the footing  
 9:30 - Jay finished the weld and I inspected the welds to be more than 3" each and therefore met specifications  
 9:35: Matt excavated trench for the 8" pipe SCH 80 PVC for the pipe bridge  
~~10:00~~ 11:00: putting stone bedding for 8" pipe SCH 80 PVC for the pipe bridge  
 12:30: laying down the pipes and attaching them from the bar hole on west side  
 12:45: installed Reducer and attached it to the tank

<b>OBSERVER:</b> Yezeniy Vorobekhilk	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 7/31/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 7/31/19
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1:00: DEC came to take some photos of free Area, talked with him and informed him of plans

1:30: had issue with the length of the pipe and ~~they need~~ Matt cut a 3' 8" PVC to adjust for the length.

2:00: Matt went to get temporary straps

2:05: Went to do test inspections for free moisture content and paint filter test

3:20: finished conducting test, all equipment is present

3:30: Inspected the <sup>Elasto MATIC</sup> Bearing pads on the West side on the footing, East side bearing pads will not be placed until temp pipe straps are placed

3:45: Check the flow of leachate into the pond with Chris Gil, verified doing bucket test

4:00: Matt finished strapping temporary pipe straps

4:15: Connected Miraflex to the 2 ends of pipes on West side near footing

4:15: Went to do moisture content test on dry sediment

5:15: left site after doing tests and talking with Matt

<b>OBSERVER:</b> Jesse'six stone jhik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 7/31/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/1/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b> Sunny, Clear	
<b>TEMPERATURE:</b>	64°F 7:00 AM      79°F 5:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	Matt Hunt, JT, Jay
CAT 329E - Excavator	
CAT 341 - Backhoe	
CAT 303.5E - Excavator	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
- Installing and assembling gate valve at manhole
- Back filling the 8" pipe for the pipe bridge
Installing 4" gate valve with 8' extension

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/7/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/11/19
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7:00 A.M - Arrived at Site / Prepared paperwork  
 7:20: - went to talk to Matt to see the plan for the day  
 7:30: Matt and JT are assembling the 8" ASAHI valve at the moment  
 8:00: Baker Corp arrived and installed the alarm  
 8:30: Installed Gate Valve Near manhole  
 9:00: Baker sent Jeff from Baker Corp in used for installing and left, and had message for the equipment  
 9:30: Placing light stone over the pipe and placing soil back over using CAT 379E and JT  
 Banging stone over using CAT 379E  
 11:00: Placed elastic bearing pad under W12x19 I-beam on the east side of the tank by lifting bridge an inch  
 11:10: Matt back filling 18" of light stone over rest of pipe near footing after placing the elastic bearing pad  
 12:00: JT placing light stone over <sup>SINCE PIPE</sup>  
 12:30 - finished back filling the 8" pipe bridge  
 1:00: Started to excavate and assemble the 4" drainage gate valve pipe  
 2:41: excavated and dug out the location of the gate valve extension

OBSERVER: Yerzely Vardanyan	SIGNATURE: John Vardanyan	DATE: 8/11/19
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### DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/5/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 P.M	<b>DEPART TIME:</b>
<b>WEATHER CONDITIONS:</b> Sunny, Clear	
<b>TEMPERATURE:</b>	80°F 1:00 AM 3:30 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	Chris Gull

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Storm Water Inspection
paint filter
Moisture Content test by direct heating

<b>CONSTRUCTION ACTIVITIES:</b>
Emptying out the Leachate Storage tanks

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/5/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	DATE: 8/5/19
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1:00 PM: Arrived at site / Inspected site conditions
1:25: talked with Chris about upcoming plans for the Sediment Removal
1:45: Conducted Sample for a paint filter and Direct <del>front</del> Heating Moisture Content test
2:40: Began Stormwater Inspections
2:00: when Arrived Man from D.C Roush was removing Leadhate from storage tanks
3:00: Checked out falls on the West side of Sediment Pond
3:30: left site

OBSERVER:	SIGNATURE:	DATE:
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/8/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b> Sunny, Partly cloudy, (Rain at 1:35 PM)	
<b>TEMPERATURE:</b>	69°F 7:00 AM      75°F 5:00 PM
<b>SITE CONDITIONS:</b> Wet	

<b>PERSONNEL AND EQUIPMENT:</b>	CAT 329 E - Excavator
Matt Hunt	TEREX DUMP TRUCK
Harold	
Chris Gill	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
INSPECTING the dredging of the sediment pond to see whether the sediment goes to the CDA or LDA

<b>CONSTRUCTION ACTIVITIES:</b>
Excavating weeds from the sediment pond
Pumping water from sediment pond into the tanks leachate storage tanks and the DC Rancher liquid waste truck

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 8/8/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/8/19
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7:00AM: Arrived on site / prepared paperwork  
 7:30' - Matt left to get the dump truck  
 7:45' - talked to Matt about the plans for the day  
 8:15' excavating weeds from the sediment pond to pump the water to the manhole into the tanks  
 10:00: connected ~~pipe to the~~ the pipe hose to the manhole and pumped water from the southwest of the ~~street~~ sediment pond  
 10:40' decided to have to house to the outlet by connecting the + increasing the length of the pipe hose  
 11:00: D.C. Rancher truck pumping water from tanks along with the sediment pond and dumping it at Greenidge water treatment plant.  
 11:00' Excavating the west side of the sediment pond and bringing the sediment to the Confined Disposal Area (CDA)  
 11:15' Matt asked me to take a look at the sediment to see if it was adequate for the LDA, but it had the sediment had ~~free free free~~ liquid visible  
 1:15 - 5:00: Dredging ~~was~~ the East side inlet of the sediment pond  
 - All soil dredged will go to the CDA because of free liquid present  
 5:00 p.m.: Left site

OBSERVER: Teresa Vordobey	SIGNATURE: John Vordobey	DATE: 8/8/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/9/19
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7:00AM - Arrived on site / Prepared Paperwork
7:25: - talked to Matt about the plans for fluids
7:40: Excavating the North End of the pond's <del>top</del> CAT tails and other growth to excavate a Swamp in <del>the</del> the pond to create a drainage <del>to each</del> path to the pump, pumping in to the manhole (MH-common-1)
10:55 - ASKED PAT to Bring ME to the CDA/LDA and I took a sample from the pile and did a part filter and moisture content test
12:00 - finished part filter test and MC test and the part filter test passed as well as the MC test as the soil was at 25.97% moisture water content
12:00: D.C Rancher employee emptying out the tanks throughout the morning
12:15: City Hill Dump trucks Dumping Soil to make Road way on North End of sediment pond
12:20: Matt Bull Does Road Entrance Road on North End of the pond as each load is Dropped off
12:30-3:00 - Constructing Entrance Road on the North Side of the Sediment pond
3:00: Left site after talking with Matt to see the plan for rest of the day

<b>OBSERVER:</b> yevgeniy vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/9/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/12/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b> Partly Cloudy	
<b>TEMPERATURE:</b>	64°F 7:00 AM 76°F 5:00 PM
<b>SITE CONDITIONS:</b> Moist, mostly dry	

<b>PERSONNEL AND EQUIPMENT:</b>
Chris Gill
Matt Hunt, Ryan Stell, JT, Harry
David Lenox
CAT 320E - Excavator
CAT - Dump Truck

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Stormwater Inspection
Paint Filter test
Moisture Content test

<b>CONSTRUCTION ACTIVITIES:</b>
- Pumping water from North Side of Sediment Pond
- Excavating slope of S South Slope of Sediment Pond and loading it on to Dump truck and bring it to the LDA after I conducted test for moisture
- excavating EAST EMBANKMENT

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> Yevgeniy Vorobeychik	<b>DATE:</b> 8/12/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/12/19
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7:00: Arrived on site / Prepared paperwork
7:36: talked with Matt to see plans for the day
8:00: Inspected the site conditions at the sediment pond and the soil to be excavated
8:30: Went to the LDA to take a sample for the paint filter and moisture content test
10:35: finished the paint filter and MC test
10:45: Saw Dave Spore to David, Ryan, and Chris about the circumstances of the design of the sediment pond
11:00: 11:15: finished storm water inspection
11:30: Dave left site after I gave him Baily Reports from last week
12:00: Matt and Harry Excavating the CAT tails on the EAST of the sediment pond, while JT brings the excavated sediment to the Certified Disposal Area
<del>Note: No paint filter test needed since free liquid is present</del>
<del>3:00: Matt Hunt doing the LDA by spreading the</del>
3:00: Matt Hunt doing the unloaded soil at the LDA
3:20: Harry Excavating East Side Inlet of the sediment pond
5:00: Left site

<b>OBSERVER:</b> Vegany [Signature]	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/12/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

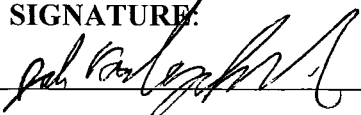
<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/13/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 2:00 PM
<b>WEATHER CONDITIONS:</b> Cloudy, wet	
<b>TEMPERATURE:</b> 65°F 7:00 AM	73°F 2:00 PM
<b>SITE CONDITIONS:</b> <del>dry</del> wet	

<b>PERSONNEL AND EQUIPMENT:</b> Harry, Chris Gill
CAT329E-Excavator

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Paint filter test

<b>CONSTRUCTION ACTIVITIES:</b>
Excavating for Drainage Sump around the settling pond

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> 	<b>DATE:</b> 8/13/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/14/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	65°F 7:00 AM      74°F 5:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b> Jt, PAT, HARRY, Matt Hunt
CHRIS GILL
CAT - R5T00293 - Dozer
CAT - 329E - Excavator
TEREX - Dump truck

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Paint Filter test

<b>CONSTRUCTION ACTIVITIES:</b>
<del>Excavation</del>
- Excavating the top Sludge layer from the east Inlet of the pond
- Moving Sludge with CAT R5T00293 from West to East of Sediment Pond

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 8/14/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/19/19
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7:00: Arrived on site / prepared paperwork  
 7:15 - Inspected site conditions  
 - saw matt and JT were installing the  
 Pipe Straps  
 8:00: Matt Excavating Sediment from the East Side of the pond including the Sediment left drying along the North Slope  
 11:30: Mike Surveying the Sediment Pond for the Elevations of the Existing Pond Bottom.  
 12:40: Mike finished Surveying / Matt excavating Sediment Pond on the South East Area of  
 1:00: HARRY Excavating the East Side CAT tails from the Sediment Pond / ATT Brings to the CDA  
 2:30: Matt Started to DOZE using the CAT 293 to move the Sediment in the Sediment pond from the west towards the east side  
 3:00  
 5:00 - Left site after Matt and HARRY stopped transferring the Sediment and Matt finished about moving about Half the Sediment towards the West

<b>OBSERVER:</b> [Signature]	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/14/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/15/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b> Sunny, clear	
<b>TEMPERATURE:</b> 65-70°F 7:00 AM	69°F 5:00 PM
<b>SITE CONDITIONS:</b> Wet, moist	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hart, JT, JAY, PAT Chris Bill
CAT 329E
CAT RST 00 293
CAT 176 - Dump truck
CAT 303.5 E - Excavator

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
paint filter
moisture content test

<b>CONSTRUCTION ACTIVITIES:</b>
- Dosing Sediment from west of Sediment pond towards the East
- Excavating Sediment from the East of Cattails and transferring to the CDA

<b>OBSERVER:</b> Yevgen, Vorobechik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/15/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/15/19
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7:00 - Arrived on site / Prepared paper work  
~~8:00 -~~  
 7:30 - Inspected the site conditions  
 8:00: Harry excavated Cat tails from East Inlet of Sediment Pond while JT transfers the Sediment to the Confined Disposal Area  
 8:15: Matt started to ~~dig~~ the Sediment towards the East from where he left of yesterday  
 8:30: City Hill Brings in An Extra Dump truck for the excavated loads from the pond (mostly Cat tails)  
 9:30: City Hill Employee Ran over the stem Extension for the Gate valve on the East Side of the Sediment Pond.  
 - Had Matt excavate using CAT 303.5E to excavate and remove the Extension  
 - Checked for Damages/ Informed Dave LENOX  
 - No Damages Visible to the pipe and the Leachate leading to the tanks  
 10:45: Went to the top of the landfill where the Confined Disposal Area is to take a sample from the removed Sediment from the East side (Cat tails of the Sediment pond)  
 11:35 - performed a Paint Filter test and a moisture content test  
 12:45 - finished Performing tests  
 Paint Filter test - Failed - Free liquid  
 Moisture Content test - Failed - 88% Water content

<b>OBSERVER:</b> Yergeri Vardasovsk	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/15/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/15/19
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1:00: Inspected the Damaged Gate slide Extension more thoroughly to assure there is no damage

1:30: Continued Dozing and Excavating of the Pond

- Excavating the Sludge Dozed towards the east

3:00: Went to the top of land fill because driver was stuck and wanted to see if any assistance was needed as well as to obtain a sample of the sediment that was transferred three days ago to the original CDA to test the moisture content of the sediment

4:15: finished conducting TESTS: moisture content = 62%

4:45: Inspected conditions of the sediment Pond Excavation / Dozing

5:00: Left Site

OBSERVER: yevgeniy vorobeychik	SIGNATURE: Jak Vorobeychik	DATE: 8/15/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/16/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b> Partly cloudy	
<b>TEMPERATURE:</b> 70°F 7:30 AM	75°F 5:00 PM
<b>SITE CONDITIONS:</b> Mostly dry	

<b>PERSONNEL AND EQUIPMENT:</b>	Harry Jay, JT, Matt
CAT 329 E - Excavator	
Cat 175 - Dump truck - JT	
<del>TEREX</del>	
TEREX	
CAT 175 - DV	
CAT R44 - Loader	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Inspecting the Excavation of the Sediment Pond

<b>CONSTRUCTION ACTIVITIES:</b>
- Excavating the Sediment Pond and transferring it to the Confined Disposal Area
- Matt

<b>OBSERVER:</b> Yevgeniy N. Kobayashi	<b>SIGNATURE:</b> John R. [Signature]	<b>DATE:</b> 8/16/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/16/19
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7:00 A.M. - Arrived on site I prepared PARD Work  
 7:25: Inspected site conditions  
 8:00: Excavating Sediment pond / Transferring to the CDA Confined Drying Area  
 8:15: Checked the CDA / Matt was Dozing the Sediment to confine it better on top because it started to spread towards the berm to confine the sediment  
 11:00: Approximately 20 Loads have been transferred  
 11:15: DEC Came to the site and Jared Green was showing them the current site activity as well as the  
 1:00: prefabricated 12" x 2" and 4' x 8' structures were dropped off and unloaded on the west side of the STA on top the slope near the construction entrance  
 2:30: measuring the dimensions of the prefabricated structures  
 2:00: E. Matt continuing Dozing the Sediment at the CDA, while Harry loads the Sediment from the pond while JT transfers it the Sediment to the CDA  
 4:00: Installing the replacement extension valve for the Gate valve that was Damaged  
 5:00: Left the site

OBSERVER: Yaroslav Vorobyev	SIGNATURE: [Signature]	DATE: 8/16/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/19/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00 P.M
<b>WEATHER CONDITIONS:</b> Cloudy	
<b>TEMPERATURE:</b>	72°F 7:00 AM 77°F 5:00 PM
<b>SITE CONDITIONS:</b> wet	

<b>PERSONNEL AND EQUIPMENT:</b> Matt Hunt, JT, Harry, PAI
CAT 320E - Exc Chris Gill
CAT RHY - Loader
CAT 175 - DT

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Paint filter test
Moisture content test
Stormwater in Spectroon

<b>CONSTRUCTION ACTIVITIES:</b>
Excavating / transferring sediment from the sediment pond to the confined disposal area

<b>OBSERVER:</b> Yevgeniy Vardavak	<b>SIGNATURE:</b> John [Signature]	<b>DATE:</b> 8/19/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/19/19
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7:00 A.M - Arrived on site / prepared paper work
8:00 - Inspected site conditions
8:15 - Excavating / transferring load to the CDA
10:30 - Went to inspect the CDA / Grabbed a sample of sediment to test for moisture content
- PAINT FILTER TEST - Failed
- Moisture content test - 88.88% water content X
12:00 - finished
12:30 - finished conducting test
1:00 - further inspection of current site conditions
- proceeding with excavating / transferring sediment to the CDA
2:00 - Conducted stormwater inspection
3:00 - finished stormwater inspection
3:00 - 5:00 P.M - On-going Excavation / transfers / dumping sediment from the sediment pond to the CDA
5:00 P.M - Left site

<b>OBSERVER:</b> 	<b>SIGNATURE:</b> 	<b>DATE:</b> 8/19/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/20/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 5:00
<b>WEATHER CONDITIONS:</b> CLEAR, SUNNY	
<b>TEMPERATURE:</b> 62°F 7:00 AM	84°F 5:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>
CAT-470E - Loader/DOZER
CAT-329E - EXCAVATOR
CAT-175 - DUMP TRUCK
CAT R5T00793 - DOZER
Matt Hunt, JT, Harry, PAT, Ryan Stell, Chris Gill
Jared Green

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Paint filter + Moisture Content TEST with the DRYING Sediment

<b>CONSTRUCTION ACTIVITIES:</b>
Excavating / Transferring Sediment from the pond as Matt does the Sediment from the West towards the east
-Pumping water from the Sediment pond into the Leachate storage tanks

<b>OBSERVER:</b> Yerges / Brodyville	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 8/20/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/20/19
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7:00 A.M - Arrived on Site / Prepared paper work  
 8:00 - Inspected the site conditions  
 8:15 - Excavating / Transferring and dumping sediment from the sediment pond as Matt does the sediment from the ~~East~~ towards the West towards the East Inlet of the sediment pond  
 2:00 P.M. Have most of the Top sediment removed, but still have sediment to remove  
 7:30 - 5:00 P.M - Pumping water from pond into the Leachate storage tanks in the LSTA  
 2:15 - went to top of the Landfill to the CDA to inspect and take a sample of the ~~type of~~ most dry sediment  
 3:00 - Pump truck, pumping water from the CDA's constructed de-watering sumps  
 2:30 - 5:00 - Excavating the remaining sediment from the sediment pond as Matt uses the CAT R5TC0293 to properly grade the sediment pond to the designed elevations  
 2:50 - performed the Paint Filter + Moisture content test using the drying sediment from the CDA  
 4:15 - finished performing test  
 PAINT+filter - Pass - No Free liquid  
 MS test - 40% water content  
 5:00 - left site

<b>OBSERVER:</b> Kerby Dink	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 8/20/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/30/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 2:00 P.M.	<b>DEPART TIME:</b> 5:00 P.M.
<b>WEATHER CONDITIONS:</b> Sunny	
<b>TEMPERATURE:</b> 76°F	74°F 5:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	Mat + Hunt, Chris Gill, Harry, JT
CAT 329 E - Excavator	
FER	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
Concrete Structures for Arrived on Site and Cut/Hill Began to excavate the Area where they are placing it

<b>OBSERVER:</b> Yevgeniy Vordachuk	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/30/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/30/19
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2:00 P.M - Arrived on Site / Prepared paperwork  
 2:15! Checked the installed HDPE structure  
 2:15! When I inspected the site conditions, the sediment pond ~~was~~ had to many ponded areas to be able to pass project Rdms  
 3:30! Concrete structures at pond on the site  
 3:45! Harry excavating area where the concrete structures are going to be  
 4:50! |  
 4:45! finished observing and left the site

OBSERVER: Yevgeniy Vardanyan	SIGNATURE: [Signature]	DATE: 8/30/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/28/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 12:00	<b>DEPART TIME:</b> 1:00
<b>WEATHER CONDITIONS:</b> Very Cloudy, Raining	
<b>TEMPERATURE:</b>	64°F 11:59 AM 67°F 1:00 PM
<b>SITE CONDITIONS:</b> Wet, Muddy	

<b>PERSONNEL AND EQUIPMENT:</b>	Matt Hart, Harry, JT, Chris Gill
	CAT 303SE - Excavator
	CAT R5700293 - Power

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
NONE

<b>CONSTRUCTION ACTIVITIES:</b>
Installing the HDPE Structures at the out let of the sediment pond
Harry Using Cat 303SE to excavate bench for the installation of the Geo liners

<b>OBSERVER:</b> Yegheniy Verobeychik	<b>SIGNATURE:</b> <i>Yegheniy Verobeychik</i>	<b>DATE:</b> 8/28/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/28/19
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12:00 P.M - Arrived on the site  
 12:05 - gathered paper work / Inspected site condition  
 12:30 - Rain was too much to proof roll the graded sediment pond  
 - City Hall has placed type 2 Bedding Stone on the west side of the pond outlet and on top of the bedding the HDPE structures were placed  
 1:00 - left site after checking the CDA to make sure the ponded areas do not need to be pumped out -  
 - water was little, so no pumping necessary  
 1:00 Matt Hunt plans to attach the 8" pipes to the HDPE structures  
 1:00 - left site

<b>OBSERVER:</b> 	<b>SIGNATURE:</b> 	<b>DATE:</b> 8/28/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/26/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 12:30	<b>DEPART TIME:</b> 2:00 P.M
<b>WEATHER CONDITIONS:</b> Sunny, Clear	
<b>TEMPERATURE:</b>	72°F 12:30 P.M. 72°F 2:00 P.M.
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>
Matt Hurty Hartly
CAT 329 E - Excavator
Rhino - Compactor
CAT 303.5 E - Excavator
CAT RST00293 - Dozer

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Stormwater Inspection

<b>CONSTRUCTION ACTIVITIES:</b>
Grading the sediment pond to the specific to the design on the construction drawings

<b>OBSERVER:</b> Ye Vgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/26/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/22/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 4:00 P.M
<b>WEATHER CONDITIONS:</b> Cloudy	
<b>TEMPERATURE:</b> 69°F	7:00 AM 73°F 406 PM
<b>SITE CONDITIONS:</b> moist, damp	

**PERSONNEL AND EQUIPMENT:**

CAT 329 E - Matt Hunt, Harry JT
TEREX
CAT RST00293

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Pant filter
Moisture content

**CONSTRUCTION ACTIVITIES:**

Excavating / Digging / Transferring the remains of the sediment pond

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/22/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/22/19
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7:00 A.M - Arrived on Site / prepared paperwork
8:00 - <del>Inspected</del> Inspected Site Conditions
8:00 - Excavating <del>using</del> CAT 329E Sediment from the
Sediment pond using CAT 329E while Matt Dole
using the CAT RST00293 to push the sediment
towards the <del>East</del> North East corner to
Harry can load it onto the TEREX for an JT
to transfer <del>it</del> the the CA the sediment
to the Confined Disposal Area (CDA)
11:15: Began to conduct and prepare for testing
the moisture content of the drying sediment
- PAINT FILTER - Failed (Free, liquid)
- MC - 76% WC - too much,
1:00 - on going transferring / excavation of the
sediment pond on the East side
12:30 A.M - Bill from D.C Rancher pumping water
from ponded Area in the Sediment pond.
3:30 - finished dredging and transferring sediment
to the CDA
4:00 : left Site

OBSERVER: Yevgeniy Vorobeychik	SIGNATURE: <i>[Signature]</i>	DATE: 8/22/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/21/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	66°F 7:00 AM      80°F 5:00 PM
<b>SITE CONDITIONS:</b>	

**PERSONNEL AND EQUIPMENT:**

CAT 320E - Harry
CAT R570003 - Matt Hunt
TeRex - JT

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**


**CONSTRUCTION ACTIVITIES:**

Excavating/transferring/unloading sediment from the sediment pond to the CDA

<b>OBSERVER:</b> Vigory Vardachik	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 8/21/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/21/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	66°F 7:00 AM      80°F 5:00 PM
<b>SITE CONDITIONS:</b>	

<b>PERSONNEL AND EQUIPMENT:</b>
CAT 322E - Harry
CAT R5T00003 - Matt Hunt
TeRex - JT

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
Excavating/transferring/unloading sediment from the sediment pond to the CDA

<b>OBSERVER:</b> Vigony Vardachik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/21/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/22/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 A.M	<b>DEPART TIME:</b> 4:00 P.M
<b>WEATHER CONDITIONS:</b> Cloudy	
<b>TEMPERATURE:</b> 69°F	7:00 AM 73°F 406 PM
<b>SITE CONDITIONS:</b> moist, damp	

**PERSONNEL AND EQUIPMENT:**

CAT 329 E - Matt Hunt, Harry JT  
 TEREX  
 CAT R500293

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Paint filter  
 Moisture content

**CONSTRUCTION ACTIVITIES:**

Excavating / Dredging / Transferring the remains of  
 the sediment pond

<b>OBSERVER:</b> Yevgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/22/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/22/19
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7:00 A.M - Arrived on Site / prepared paperwork
8:00 - <del>Inspected</del> Inspected Site Conditions
8:00 - Excavating <del>using</del> CAT 329E Sediment from the
Sediment pond using CAT 329E while Matt Dole
using the CAT RST00293 to push the sediment
towards the <del>East</del> North East corner to
Harry can load it onto the TEREX for an JT
to transfer <del>it</del> the the CA the sediment
to the Confined Disposal Area (CDA)
11:15: Began to conduct and prepare for testing
the moisture content of the drying sediment
- PAINT FILTER - Failed (Free, liquid)
- MC - 76% WC - too much,
1:00 - on going transferring / excavation of the
sediment pond on the East side
12:30 A.M - Bill from D.C Rancher pumping water
from ponded Area in the Sediment pond.
3:30 - finished dredging and transferring sediment
to the CDA
4:00 : left site

OBSERVER: Yevgeniy Vorobeychik	SIGNATURE: <i>[Signature]</i>	DATE: 8/22/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/26/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 12:30	<b>DEPART TIME:</b> 2:00 P.M
<b>WEATHER CONDITIONS:</b> Sunny, Clear	
<b>TEMPERATURE:</b>	72°F 12:30 AM 78°F 2:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>
Matt Hunt, Hartly
CAT 329 E - Excavator
Rhino - Compactor
CAT 303.5 E - Excavator
CAT RST00293 - Dozer

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
Stormwater Inspection

<b>CONSTRUCTION ACTIVITIES:</b>
Grading the sediment pond to the specific to the design on the construction drawings

<b>OBSERVER:</b> Ye Vgeniy Vorobeychik	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/26/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/28/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 12:00	<b>DEPART TIME:</b> 1:00
<b>WEATHER CONDITIONS:</b> Very Cloudy, Raining	
<b>TEMPERATURE:</b>	64°F 11:59 AM 67°F 1:00 PM
<b>SITE CONDITIONS:</b> Wet, Muddy	

<b>PERSONNEL AND EQUIPMENT:</b>	Matt Hart, Harry, JT, Chris Gill
CAT 303SE - Excavator	
CAT RST00293 - Power	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
NONE

<b>CONSTRUCTION ACTIVITIES:</b>
Installing the HDPE Structures at the out let of the sediment pond
Harry Using Cat 303SE to excavate Berch for the installation of the Geo liners

<b>OBSERVER:</b> Yegheniy Verobychik	<b>SIGNATURE:</b> <i>Yegheniy Verobychik</i>	<b>DATE:</b> 8/28/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 8/28/19
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12:00 P.M - Arrived on the site  
 12:05 - gathered paper work / Inspected site condition  
 12:30 - Rain was too much to proof roll the graded sediment pond  
 - City Hall has placed type 2 Bedding Stone on the west side of the pond outlet and on top of the bedding the HDPE structures were placed  
 1:00 - left site after checking the CDA to make sure the ponded areas do not need to be pumped out -  
 - water was little, so no pumping necessary  
 1:00 Matt Hunt plans to attach the 8" pipes to the HDPE structures  
 1:00 - left site

<b>OBSERVER:</b> Veronica Verobek-Ohlke	<b>SIGNATURE:</b> jal Verobek-Ohlke	<b>DATE:</b> 8/28/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 8/30/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 2:00 P.M.	<b>DEPART TIME:</b> 5:00 P.M.
<b>WEATHER CONDITIONS:</b> Sunny	
<b>TEMPERATURE:</b> 76°F	74°F 5:00 PM
<b>SITE CONDITIONS:</b> Dry	

<b>PERSONNEL AND EQUIPMENT:</b>	Mat + Hunt, Chris Gill, Harry, JT
CAT 329 E - Excavator	
FER	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
Concrete Structures for Arrived on Site and Cut/Hill Began to excavate the Area where they are placing it

<b>OBSERVER:</b> Yevgeniy Vordachuk	<b>SIGNATURE:</b> [Signature]	<b>DATE:</b> 8/30/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 8/30/19
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2:00 P.M - Arrived on Site / Prepared paperwork  
 2:15! Checked the installed HDPE structure  
 2:15! When I inspected the site conditions, the sediment pond ~~was~~ had to many ponded areas to be able to pass project Rdms  
 3:30! Concrete structures at pond on the site  
 3:45! Harry excavating area where the concrete structures are going to be  
 4:50! |  
 4:45! finished observing and left the site

OBSERVER: Yevgeniy Vardanyan	SIGNATURE: [Signature]	DATE: 8/30/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/19/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 10:30 AM	<b>DEPART TIME:</b> 6:45 PM
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	65° F AM 71° F PM
<b>SITE CONDITIONS:</b> SUNNY DRY, WINDY AND DUSTY	

<b>PERSONNEL AND EQUIPMENT:</b>	
CITY HILL	CHEVANGO
- EXCAVATOR	- SKID STEER
- BULL DOZER	- PETE WARD - QUALITY CONTROL
- 2 SMOOTH DRUM ROLLERS	- 2 WELDERS - FUSION 1 WELDER - EXTRUSION
- HAUL TRUCK	- TECHNICIANS

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
SUBGRADE PREPARATION FOR GEOMEMBRANE INSTALLATION IN SETTLING POND
REMOVAL OF WET SOFT MATERIAL FROM SETTLING POND FLOOR
GEOMEMBRANE INSTALLATION WITHIN SETTLING POND

<b>OBSERVER:</b> DAVID LEMOX	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/19/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 9/4/19
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- 10:30 AM ARRIVED AT GREENIDGE GENERATION AND PARTICIPATED IN ~~WEEKLY~~ ROUTINE CONSTRUCTION MEETING.

- 11:00 AM INSPECTED SUBGRADE CONDITIONS IN THE WESTERN AREA OF THE SETTLING POND AND WENT OVER AREAS TO BE ADDRESSED W/ RYAN STELL AND JARED MILLER. THE AREA WAS PROOF ROLLED WITH 2<sup>ND</sup> <sup>SMOOTH DRUM</sup> ROLLERS - ONE STATIC AND ONE VIBRATING. LOOSE SOIL AND STONES WERE REMOVED FROM THE SOUTHEAST AND NORTHEAST SETTLING POND CORNERS. LOOSE SOIL AND STONES WERE RAKED AND REMOVED W/ A SHOVEL AROUND THE OUTLET HOPE STRUCTURES.

- 1:00 PM SETTLING POND SUBGRADE APPROVED FOR GEOMEMBRANE INSTALLATION AND CHENANGO BEGINS PREPARING TRIAL WELDS AND DEPLOYING MATERIAL. CITY HILL CONTINUES TO PREPARE THE EASTERN HALF OF THE SETTLING POND FOR GEOMEMBRANE INSTALLATION THROUGH PUSHING LOOSE, SOFT WET MATERIAL TO THE NORTH EAST CORNER AND REMOVING WITH AN EXCAVATOR AND HAUL TRUCK. THE AREA WAS THEN ROLLED WITH A SMOOTH DRUM ROLLER.

- 6:30 PM CHENANGO FINISHES FOR THE DAY, WHILE CITY HILL CONTINUED TO REMOVE MATERIAL FROM THE NORTH EAST CORNER.

- 6:45 PM LEFT SITE

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/4/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 9-5-14
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7:05am - CHENANGO SETTING UP, TO FINISH YESTERDAYS REPAIRS AND <del>START V-BOXING</del>
CITY HILL ROLLING SUBGRADE TO REMOVE STONES, LOOSE MATERIAL
7:15am - CHENANGO PREPING TRIAL WELDS
7:30 am - CH. PLACING LINER
7:40am - TRIAL WELDS
8:40am - PROOF ROLLING EASTERN PORTION OF POND. CH. PLACING LINER, SEAMING, EXTRUDING REPAIRS, AIR TESTS
12:00pm - CH. TAKES LUNCH, WELDERS STAY OUT
12:30pm - FINISHING AIR TESTS REPAIRS
V-BOXING
2:15pm - PLACING TYPE C GEOTEXTILE
5:15pm - V-BOXING COMPLETE
6:20pm - FINISHED PLACING GT FOR THE DAY WRAPPING UP.

OBSERVER: SAM DAIGLER	SIGNATURE: 	DATE: 9-5-14
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11.25

**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/6/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 6:40 AM	<b>DEPART TIME:</b> 5:00 PM
<b>WEATHER CONDITIONS:</b> Foggy - AM, CLEARED TO SUNNY SKIES	
<b>TEMPERATURE:</b>	~56° - 6:45 AM      ~70° - 4:02 PM      PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b>
SAM DAIGLER - COCA OTBS
CITY HILL - JT. (AM) (2+ LABORS 1+ OPERATOR PM)
CHEWANAKO, SUPERVISOR, QC + 3 LABORS

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
SPARK TESTING ON INLET DUCT (11:00AM, PASSED)
STORMWATER INSPECTION

<b>CONSTRUCTION ACTIVITIES:</b>
GEOTEXTILE PLACEMENT (16.02) OVER POND LINER
WELDING TEXTILE W/ WEDGE #33
EXCAVATING FOR POND OUTLET STRUCTURE (CONCRETE)
PLACING CONCRETE STRUCTURE
PLACING CLAY ALONG GEOSYNTHETIC EDGE LOW PERMEABILITY BACKFILL

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/6/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9-7-19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:05 AM	<b>DEPART TIME:</b> 12:35 PM
<b>WEATHER CONDITIONS:</b> CLEAR SKIES	
<b>TEMPERATURE:</b>	61° - 7:05 AM AM      69° - 12:00 PM PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b>	
SAM DAIGLER - COA OBS	CAT 7152L EXC.
	CAT BACKHOE
CITY HILL - 4 LABORERS/OPERATORS (LEFT @ 12:00 PM)	

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
COVERING LOWER EDGES w/ CLAY PLUG - LOW PERMEABILITY BACKFILL
INSTALLING GATE VALVE ON OUTLET STRUCTURE (INCOMPLETE)

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 9-7-19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9-9-14
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:07 AM	<b>DEPART TIME:</b> 3:55 AM
<b>WEATHER CONDITIONS:</b> Foggy / PARTLY CLOUDY - AM	
<b>TEMPERATURE:</b> ~51° - 5:11 AM	AM <del>71°</del> 2:29 PM
<b>SITE CONDITIONS:</b> SOME WET AREAS, MOSTLY DRY	

<b>PERSONNEL AND EQUIPMENT:</b>
SAM DAIGLER - CQA OIBS CAT 3152L EXL.
J.T. - CITY HILL OPERATOR / LABORER

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
COVERING GEOSYNTHETIC EDGE w/ CLAY PLUG (POND) LOW PERMEABILITY BACKFILL

<b>OBSERVER:</b> SAM DAIGLER	<b>SIGNATURE:</b> 	<b>DATE:</b> 9-9-14
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/10/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:30 PM
<b>WEATHER CONDITIONS:</b> Sunny moderate winds	
<b>TEMPERATURE:</b>	60°F AM 83°F PM
<b>SITE CONDITIONS:</b> Dry and stable	

**PERSONNEL AND EQUIPMENT:**

City Hill Construction - Bulldozer, backhoe, vibrating steel roller, excavator, and dump trucks  
 STB Services - cell phone with camera, personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone placement  
 No test samples/materials needed to be sampled

**CONSTRUCTION ACTIVITIES:**

City Hill Construction worked on setting up west side outlet vault, and started to place Type 2 stone at the settling pond on top of geotextile at the northeast corner working inward

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/10/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 9/10/19
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Technician from STB Services, Inc. observed contractors from City Hill Construction place Type 2 stone on top of the 16-02 non woven geotextile within the bottom of the Settling Pond. Contractors first began at the northeast corner of the settling Pond where they built up a temporary entrance ramp made of the Type 2 stone for access. Contractors then throughout the day spread the Type 2 stone further south and west of the Northeast corner ramp. The total depth of the Type 2 stone was approximately 2 feet but will be cut down to proper grade at a later time. During placement of the Type 2 stone an approx. depth of 1ft. was maintained over the geotextile between the geotextile and the bulldozer. No portion of any heavy equipment (bulldozer) and dump trucks were in direct contact with the geotextile. In addition, contractors were careful not to damage any geotextile during placement of the Type 2 stone within the Settling pond.

Technician also observed contractors setting up the west side outlet vault with placement of connecting outlet pipes to the vault.

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 9/10/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/11/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00	<b>DEPART TIME:</b> 5:30
<b>WEATHER CONDITIONS:</b> Sunny	
<b>TEMPERATURE:</b> 65°F AM	85°F PM
<b>SITE CONDITIONS:</b> Slightly wet but relatively stable	

**PERSONNEL AND EQUIPMENT:**

City Hill Construction - Bulldozer, backhoe, vibrating steel roller, dump trucks  
 STB Services - cellphone with camera, personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone placement

**CONSTRUCTION ACTIVITIES:**

Contractors started to construct concrete steps within the eastside 4x4 pond inlet vault and step Aerator. Work will continue on this. Contractors continued placing Type 2 stone at the center of settling Pond

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b> <i>Michael Kovacs</i>	<b>DATE:</b> 9/11/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

**PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL  
 AND IMPROVMENTS**

**DATE:** 9/11/19

Technician from STB Services, LLC observed contractors from City Hill Construction continue from yesterday 9/10/19 placing additional Type 2 Stone on top of the 16-02 non woven geotextile within the bottom of the Settling Pond. Contractors continue to place the Type 2 stone within the center of the pond that continued from the northeast entrance ramp as they are building up a temporary access for heavy equipment. Contractors were continuing throughout the day spreading the Type 2 stone further westward with a total approximate depth of several feet in thickness, which will be later cut down to proper grade. During Type 2 stone placement, an approximate depth of several feet was maintained over the geotextile between the geotextile and the bulldozers and dump trucks. Contractors were careful not to damage any geotextile during Type 2 stone placement as no heavy equipment was in contact with the geotextile.

Technician also observed contractors starting to work on constructing the east side step Aerator and 4x4 pond inlet vault.

<b>OBSERVER:</b> Michael Kwacs	<b>SIGNATURE:</b> <i>[Signature]</i>	<b>DATE:</b> 9/11/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/12/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 5:30 PM
<b>WEATHER CONDITIONS:</b> Cloudy, scattered showers	
<b>TEMPERATURE:</b> 58°F	AM 65 PM
<b>SITE CONDITIONS:</b> Stable, slightly muddy	

**PERSONNEL AND EQUIPMENT:**

City Hill Construction - Bulldozer, backhoe, excavator, vibrating steel roller, and dump trucks  
 STB Services - cellphone with camera, personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone placement

**CONSTRUCTION ACTIVITIES:**

Contractors continued to place Type 2 stone at the bottom of the Settling Pond on top of the geotextile continuing work from yesterday 9/11/19

<b>OBSERVER:</b> Michael Luvace	<b>SIGNATURE:</b> <i>Michael Luvace</i>	<b>DATE:</b> 9/12/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 9/12/19
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Technicians from STB Services observed contractors from City Hill Construction continue from yesterday 9/11/19 placing additional Type 2 stone on top of the 16-gz nonwoven geotextile within the bottom of the Settling Pond. Contractors placed the Type 2 stone within the center of the pond starting east to west. Contractors continued to spread the Type 2 stone westward within the pond with several feet thickness of the material between the geotextile and the bulldozer, and dump trucks. The Type 2 stone will be cut down to proper grade at a later time once enough material is brought into the pond. During Type 2 stone placement, no geotextile was damaged and several feet of the material was constantly maintained between the geotextile and all heavy equipment. Work will continue on Friday 9/13/19.

OBSERVER: Michael Kovacs	SIGNATURE: <i>[Signature]</i>	DATE: 9/12/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/13/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b>
<b>WEATHER CONDITIONS:</b> Sunny, moderate winds	
<b>TEMPERATURE:</b> 53°F	AM 5:30 PM
<b>SITE CONDITIONS:</b> Dry and stable	

**PERSONNEL AND EQUIPMENT:**


City Hill Construction - Bulldozer, backhoe, excavator, vibrating steel roller, and dump trucks  
 STB Services - Cell phone with camera, personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone placement

**CONSTRUCTION ACTIVITIES:**

Contractors continued to place Type 2 Stone at the bottom of the Settling Pond

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/13/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 9/13/19
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Technician from STB Services observed contractors from City Hill Construction continue from yesterday 9/12/19 placing additional Type 2 Stone on top of the 66-02 non woven geotextile within the bottom of the Settling Pond. Contractors placed the Type 2 Stone within the bottom of the pond and then worked on the far west end. There was several feet thick of Type 2 stone maintained between the geo-textile and the heavy equipment. The stone was then cut down to the proper grade with the use of a bulldozer starting at the west end of the pond. During Type 2 stone placement, no geotextile was damaged and several feet of type 2 stone was constantly maintained between the heavy equipment and the geotextile. Work will continue tomorrow as per Contractors

<b>OBSERVER:</b> Michael Levaes	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/13/19
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2620 Grand Island Blvd. Grand Island NY 14072

Ph (716) 773-6872/ Fax (716)773-6873 www.daiglerengineering.com

### DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/14/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 8:00 AM	<b>DEPART TIME:</b> 3:30 PM
<b>WEATHER CONDITIONS:</b> Sunny, moderate winds	
<b>TEMPERATURE:</b> 60°F AM	74°F PM
<b>SITE CONDITIONS:</b> Stable with slightly dry conditions	

**PERSONNEL AND EQUIPMENT:**

City Hill Construction - Bulldozer, vibrating steel roller, and dump trucks  
 JJB Services - cell phone with camera  
 personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone placement

**CONSTRUCTION ACTIVITIES:**

Contractors continued to place Type 2 stone at the bottom of the Settling Pond

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b>	<b>DATE:</b> 9/14/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

**PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL  
 AND IMPROVMENTS**

**DATE:** 9/14/19

Technician from STB Services observed contractors from City Hill Construction continue from yesterday 9/13/19 placing additional Type 2 stone on top of the #0-22 iron woven geotextile within the bottom of the settling pond. Contractors placed the Type 2 Stone within the bottom of the settling and then worked from the west side, the center and parts of the east side. There was several feet thick of the Type 2 stone maintained between the geotextile and the heavy equipment. The stone was then cut down to the proper grade with the use of a bulldozer starting at the west and center of the pond. Contractors also used a vibrating steel roller to start compacting the Type 2 Stone starting at the west side gradually working eastward. During Type 2 stone placement, no geotextile was damaged and several constantly maintained between the heavy equipment and the geotextile. Work will continue on Monday 9/16/19 as per contractors with pond's east side

<b>OBSERVER:</b> Michael Kovacs	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/14/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/16/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 7:00 AM	<b>DEPART TIME:</b> 4:30 PM
<b>WEATHER CONDITIONS:</b> Sunny, calm winds	
<b>TEMPERATURE:</b> 60°F AM	71°F PM
<b>SITE CONDITIONS:</b> Stable and slightly dry	

**PERSONNEL AND EQUIPMENT:**

City Hill Construction - Bulldozer, backhoe, vibrating steel rollers, and dump trucks  
 STB Services - cellphone with camera and personal vehicle

**INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:**

Observation of Type 2 stone

**CONSTRUCTION ACTIVITIES:**

Contractors continued to place Type 2 stone at the bottom of the settling pond

<b>OBSERVER:</b> Michael Levaes	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/16/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	DATE: 9/16/19
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Technician from STB Service, observed contractors from City Hill Construction continue from Saturday 9/14/19 placing additional Type 2 stone on top of the 16-02 non woven geotextile within the bottom of the settling pond. Contractors placed the Type 2 stone within the bottom of the settling pond starting at east side and continuing until pond was completely covered by the stone. There was several feet thick of Type 2 stone constantly maintained between the geotextile and heavy equipment. The stone was then cut down to proper grade with the use of a bulldozer. Contractors then used a vibrating steel roller to compact the Type 2 stone after placement. No geotextile was damaged during Type 2 stone placement and no heavy equipment was in contact with the geotextile. At the end of the day, the bottom of the settling pond with the geotextile was entirely covered by the Type 2 stone.

OBSERVER: Michael Kovacs	SIGNATURE: <i>[Signature]</i>	DATE: 9/16/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 9/18/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 10:30AM	<b>DEPART TIME:</b> 2:00 PM
<b>WEATHER CONDITIONS:</b> SUNNY, CLEAR	
<b>TEMPERATURE:</b>	70°F AM 75°F PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b>
CITY HILL - MATT, EXCAVATOR, HYDROSEEDER, BULL DOZER
DC RAUSCHER - VACUUM TANK TRUCK

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
STORM WATER INSPECTION

<b>CONSTRUCTION ACTIVITIES:</b>
TOP SOIL PLACEMENT AND HYDRO SEEDING + MULCHING
LIGHT STONE FILL AT SETTLING POND INLET

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/18/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE: 9/18/19</b>
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10:30 - ARRIVED AT GREENIDGE GENERATION AND PARTICIPATED IN ROUTINE CONSTRUCTION MEETING.

11:15 - OBSERVED CONDITIONS OF THE CONFINED DISPOSAL AREA. SEDIMENT IS DRYING WITH CRACKS + CRUST DEVELOPING ON THE SEDIMENT SURFACE. ONE AREA OF STANDING WATER OBSERVED AT THE HIGH END. THE LOW SUMP AREA OF THE CONFINED DISPOSAL AREA WAS DRY. MATT ATTEMPTED TO ACCESS THE SEDIMENT W/ A BULLDOZER TO DETERMINE ITS STABILITY. THE BULLDOZER BEGAN SINKING, WALKING OVER THE SEDIMENT ALSO CAUSED SINKING. SEDIMENT WILL ~~BE~~ CONTINUE TO DRY AND BE OBSERVED AGAIN AT A LATER TIME.

12:30 - CONDUCTED STORMWATER INSPECTION, ALERTED RYAN STEEL AND MATT OF DAMAGED SILT FENCE NORTH OF THE LEACHATE TRANSFER AND STORAGE AREA. CITY HILL HAS BEEN PLACING TOP SOIL AND SEEDING AND MULCHING WITH A HYDROSEEDER. OBSERVED THE LIGHT STONE FILL PLACED IN THE SETTLING POND OUTLET CHANNEL, AND THE STAINLESS STEEL V-NOTCH WIERS INSTALLED IN THE 4 FOOT SQUARE PRE-CAST INLET STRUCTURE. LIGHT STONE FILL ALSO PLACED AT SETTLING POND INLET FOR EROSION CONTROL, ALONG W/ PATH TO INLET CONSISTING OF CRUSHED NO. 2 STONE. DISCUSSED PLACING STONE AROUND THE HOPE DISCHARGE STRUCTURES FOR EROSION CONTROL AND TO ACT AS A DIFFUSER. ~~WE~~ WASHED ROUND NO. 2 STONE TO BE PLACED AROUND THE PERIMETER OF THE HOPE STRUCTURES.

2:00 - LEFT SITE

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> 	<b>DATE:</b> 9/18/19
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**DAILY CONSTRUCTION INSPECTION REPORT**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	<b>DATE:</b> 10/9/19
<b>OWNER: LOCKWOOD HILLS LLC</b>	

<b>ARRIVE TIME:</b> 10:30 AM	<b>DEPART TIME:</b> 1:30 PM
<b>WEATHER CONDITIONS:</b> SUNNY, CLEAR COOL	
<b>TEMPERATURE:</b>	50°F AM 63°F PM
<b>SITE CONDITIONS:</b> MOIST - DRYING	

<b>PERSONNEL AND EQUIPMENT:</b>
CITY HILL - EXCAVATOR + OPERATOR
RYAN STELL, JAKE SPINA
NYSDEC
YASMIN GUEVARA
JONATHAN TAMARGO

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
EVALUATED DRYING SEDIMENT WITHIN THE CONFINED DISPOSAL AREA

<b>CONSTRUCTION ACTIVITIES:</b>
NA

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> <i>Paul Seung</i>	<b>DATE:</b> 10/9/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
(SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	DATE: 10/9/19
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10430 - VISITED SITE AND RODE WITH RYAN STELL AND JAKE SPINA OF CITY HILL TO THE CONFINED DISPOSAL AREA. WALKED ON DRYING SEDIMENT MOST AREAS COULD SUPPORT WEIGHT OF A PERSON. JAKE SPINA SUNK INTO THE SEDIMENT TO HIS KNEES, IN A SOFTER AREA. DRYER AND MOST STABLE SEDIMENT WAS OBSERVED IN THE NORTH EASTERN AREA OF THE CONFINED DISPOSAL AREA. THIS SEDIMENT COULD SUPPORT THE WEIGHT OF AN EXCAVATOR. ONE TEST PIT WAS DUG IN THE DRYER SEDIMENT, THE SEDIMENT WAS STABLE THROUGH 17'S FULL DEPTH IN THIS AREA, DEPTH OF SEDIMENT WAS APPROXIMATELY 3 FEET. SEDIMENT TO THE WEST AND SOUTH WAS NOT AS STABLE, FREE LIQUID COULD BE SEEN IN THE CRACKS OF THE DRYING SEDIMENT. EXCAVATOR MOVED TO THE SOUTHWEST TOWARDS THE CENTRAL AREA OF THE CONFINED DISPOSAL AREA, PLAN IS TO SEE IF FLY ASH CAN BE EXCAVATED ~~THROUGH THE~~ <sup>UNDERNEATH</sup> THE SEDIMENT AND MIXED WITH THE SEDIMENT TO CREATE A SURFACE STABLE ENOUGH FOR AN EXCAVATOR OR BULL DOZER TO TRAVEL ON WITHOUT SINKING AND BECOMING STUCK. THE TEST AREA WAS NEAR WHERE THE EXCAVATOR HAD TO EXCAVATE ITSELF OUT EARLIER IN THE MORNING. THE EXCAVATING AND MIXING OCCURED ABOUT 20' INTO THE CONFINED DISPOSAL AREA AND APPEARED TO SUCCESSFULLY STABILIZE THE WETTER SEDIMENT. CITY HILL TO UTILIZE ANOTHER EXCAVATOR WITH WIDER TIRES FOR THE REST OF THE WEEK AND EXCAVATE AND MIX THE WETTER SEDIMENT WITH FLY ASH UNDERNEATH TO A CONSISTANCY THAT WILL ALLOW CONSTRUCTION EQUIPMENT TO TRAVERSE IT. ONCE MIXING IS COMPLETE THE SEDIMENT WILL BE INSPECTED BEFORE COVERING W/ INTERMEDIATE COVER AND TOPSOIL

OBSERVER: DAVID LENOX	SIGNATURE: <i>Paul Loxley</i>	DATE: 10/9/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 10/19/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 2:30 PM	<b>DEPART TIME:</b> 3:30 PM
<b>WEATHER CONDITIONS:</b> CLOUDY	
<b>TEMPERATURE:</b>	AM 53° F PM
<b>SITE CONDITIONS:</b> DRY	

<b>PERSONNEL AND EQUIPMENT:</b>
RYAN STELL AND TWO OPERATORS FOR CITY HILL
- 1 BULL DOZER AND 1 EXCAVATOR
- CHRIS GILL

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>
NA

<b>CONSTRUCTION ACTIVITIES:</b>
NA

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> <i>David Lenox</i>	<b>DATE:</b> 10/19/19
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**DAILY CONSTRUCTION INSPECTION REPORT  
 (SUPPLEMENTAL SHEET)**

<b>PROJECT: LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS</b>	DATE: 10/19/19
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2:30PM - ARRIVED ON SITE AND MET WITH CHRIS GILL, DROVE TO THE CONFINED DISPOSAL AREA TO EVALUATE THE STABILIZED SEDIMENT BEFORE COVER SOIL PLACEMENT BEGAN IN PREPARATION FOR RAIN ON WEDNESDAY. AT THE CONFINED DISPOSAL SITE APPROXIMATELY 80% OF THE SEDIMENT HAD BEEN MIXED WITH EXCAVATED FLY ASH BENEATH THE SEDIMENT AND SOIL THAT HAD BEEN SCRAPED FROM THE BASE OF THE SETTLING POND AND PILED AT THE EASTERN PERIMETER OF THE CONFINED DISPOSAL AREA. WET SOFT SEDIMENT REMAINED IN THE WESTERN CENTRAL PORTION OF THE CONFINED DISPOSAL AREA. CITY HILL TO BRING IN MORE SOIL TO MIX AND PLACE A ROAD TO THE WEST CENTRAL AREA OF THE CONFINED DISPOSAL AREA TO COMPLETE THE SEDIMENT STABILIZATION, SIX INCHES OF INTERMEDIATE COVER AND THREE INCHES OF TOP SOIL WILL BE PLACED OVER THE STABILIZED SEDIMENT. THE STABILIZED SEDIMENT HAD A HARD FIRM TEXTURE, EQUIPMENT TRACK MARKS WERE VISIBLE OVER TOP OF THE ENTIRE STABILIZED AREA. DISCUSSED GRADING W/ RYAN STELL. THE STABILIZED SEDIMENT IS TO BE GRADED TO THE WEST AND NORTH FOLLOWING THE DIRECTION OF THE SLOPE. A DIVERSION SWALE SHALL BE REINSTALLED AT THE TOE OF SLOPE EAST OF THE CONFINED DISPOSAL AREA.

3:30 - LEFT SITE

OBSERVER: DAVID LENOX	SIGNATURE: <i>Paul Stell</i>	DATE: 10/19/19
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## DAILY CONSTRUCTION INSPECTION REPORT

<b>PROJECT:</b> LOCKWOOD HILLS SETTLING POND REMOVAL AND IMPROVMENTS	<b>DATE:</b> 10/30/19
<b>OWNER:</b> LOCKWOOD HILLS LLC	

<b>ARRIVE TIME:</b> 11:15 AM	<b>DEPART TIME:</b> 4:00 PM
<b>WEATHER CONDITIONS:</b>	
<b>TEMPERATURE:</b>	60°F AM 62°F PM
<b>SITE CONDITIONS:</b> CLOUDY, CALM, DRY	

<b>PERSONNEL AND EQUIPMENT:</b>
EXCAVATOR, SKID STEER, HYDRO SEEDER - CITY HILL
DIRENZO FENCING - ONE PICKUP TRUCK AND TRAILER

<b>INSPECTIONS/TESTS/SAMPLES/MATERIALS RECEIVED:</b>

<b>CONSTRUCTION ACTIVITIES:</b>
PLACING INTERMEDIATE COVER AND TOP SOIL IN THE CONFINED DISPOSAL AREA AND HYDRO SEEDING
INSTALLING PERIMETER FENCE AROUND SETTLING POND

<b>OBSERVER:</b> DAVID LENOX	<b>SIGNATURE:</b> <i>Paul Seal</i>	<b>DATE:</b> 10/30/19
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