

PANAMERICAN



August 14, 2017

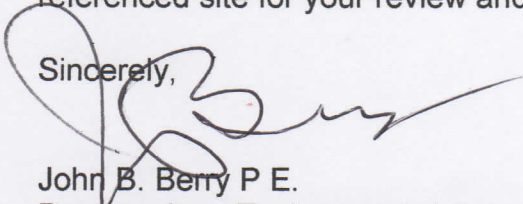
Mr Glenn May
NYSDEC
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, NY 14203-2915

Re: **Excavation Work Plan (EWP)** - NYSDEC BCP Project – 600 River Road Site,
Site # C932161

Dear Mr May:

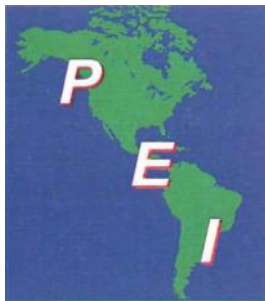
Please find attached the EWP (PDF copy) related to site re-development for the above referenced site for your review and approval.

Sincerely,



John B. Berry P E.
Panamerican Environmental, Inc.

Cc: Lou Visone
Tom Celik
Pete Gorton
Jason Brydges



**Panamerican
Environmental, Inc.**

2390 Clinton St.
Buffalo, NY 14227
Ph: (716) 821-1650
Fax: (716) 821-1607



**Brydges –
environment,
engineering,
energy**

**33 Washington
Highway
Amherst, NY
14226**

SMP EXCAVATION WORK PLAN

For

600 RIVER ROAD SITE

NYSDEC SITE # C932161

600 RIVER ROAD SITE

NORTH TONAWANDA, NEW YORK 14120

Prepared For:

**Rock One Development, LLC
10151 Main Street
Clarence, New York 14031**

Prepared by:

**Panamerican Environmental, Inc.
2390 Clinton Street
Buffalo, New York 14227
And**

**Brydges – environment, engineering, energy
33 Washington Highway
Amherst, NY 14226**

August 2017

SMP EXCAVATION WORK PLAN

For

600 RIVER ROAD SITE

**NYSDEC SITE # C932161
600 RIVER ROAD SITE
NORTH TONAWANDA, NEW YORK 14120**

Prepared for:

**Rock One Development, LLC
10151 Main Street
Clarence, New York 14031**

Prepared by:

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2390 Clinton Street
Buffalo, N.Y. 14227
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AUGUST 2017

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LIST OF DRAWINGS/PLANS

- Civil Site Development Phase 1 Construction Plans
- Phase 1 Construction SWPPP Disturbance Map

ATTACHEMENT

Off-site Materials Source Information

1.0 INTRODUCTION

This document presents details of the excavation work plan (EWP) required by the SMP for any activity that is anticipated to encounter remaining contamination at the 600 River Road site (C932161). Notification was sent to Mr. Brian Sadowski by email on August 4, 2017 that construction activity for the next phase of development at the site was anticipated to begin in approximately 15 days (August 21, 2017).

The site is located at 600 River Road, North Tonawanda, New York. Rock One Development, LLC (owner) entered into a Brownfield Cleanup Agreement with the NYSDEC to remediate the site under New York's Brownfield Cleanup Program (BCP).

The remediation action (RA) at the site included: the removal of the surface topsoil layer and stockpiling the material that meets Restricted Residential SCOs for future use as part of the soil cover; cover the site with two feet of clean fill (soil cap) from approved off-site sources; and placement of a geotextile liner between the site original grade and the soil cap. An as-built figure of the final cap is provided in the SMP and the civil plans for the new construction are attached to this EWP.

WORK TO BE PERFORMED

SITE IMPROVEMENTS INCLUDING PARKING LOTS, DRIVEWAYS & BUILDINGS

- Certified NYSDOT Stone will be imported from LaFarge Stone and/or New Enterprise Stone & Lime (see Section 11.0 for details) and placed, balanced, and compacted above the existing stone/clay cap throughout the project site to stabilized surfaces for asphalt paving, concrete sidewalk, and building pad areas. This does not include any work beneath the existing stone stabilized surfaces or delineation barrier. Building pads and parking lots had been previously prepped and stabilized as part of SWPPP maintenance.
- The building foundation excavation will not include any penetration into the delineation barrier. All excavated clean materials will be used as backfill, as necessary.

UTILITY IMPROVEMENTS INCLUDING STORM, SANITARY, AND WATER LINES

- Installation of the site's storm sewer system will consist of trenching into the existing two-foot clay cap, above the delineation barrier, placing storm sewer pipe and backfilling/compacting with stone. The excess clean clay cap materials will be placed and compacted as necessary on site.

- NYSDOT's Right of Way utility work will entail installing and tapping the waterline and sanitary sewer line across River Road adjacent to the project site and will not involve any work within the project site or its two-foot clay cap.
- The installation of the sanitary sewer and waterline on-site will include work beneath the clay cap and delineation barrier; it will be the only area on-site where the existing soils beneath the delineation barrier will be disturbed. For this work, the topsoil layer will be striped and stockpiled for re-spreading at the sewer & water line areas upon completion. The clean clay cap barrier will then be removed and material stockpiled alongside the utility trenches. Trenching will then proceed to the required grades and any excavated material from below the cap will be stockpiled separate from the clean cap material. The utilities will be installed and backfilled with soils excavated from below the delineation barrier level. The delineation barrier will be restored and a two-foot layer of clean clay/stone fill from stockpiled material will be placed over the delineation barrier to restore the cap. See Section 3 for screening of materials. An estimated 200 C.Y. of soil will be excavated beneath the delineation barrier.
- Any excess material from the excavation below the cap not used as utility backfill as noted above will be placed beneath the existing demarcation and cap layer outside any proposed building foundations or paved areas. The cap would be replaced and grade would be adjusted in this area.

The entire construction process will follow the project's health and safety plan as provided in Appendix G of the SMP as well as in compliance with this excavation work plan and 29 CFR 1910.120.

SCHEDULE

Construction Task	Start Date	Approximate Duration
1 -Initial Site Setup and Staging including Survey and Layout	08/09/2017	1 Week
2 -D.O.T. R.O.W. Sanitary Sewer and Waterline Work	08/14/2017	1 Month
3 -Installation of On-Site Storm Sewer, Sanitary Sewer, and Waterlines	08/21/2017	1 Month
4 -Building Foundation Construction	09/04/2017	2 Months
5 -Building Construction	10/02/2017	12 Months
6 -Asphalt Paving and Site Concrete	08/01/2018	1 Month
7 -Site Landscaping	09/01/2018	1 Month
8 -Phase 1 Completion	10/01/2018	-

2.0 REMAINING CONTAMINATION

Contaminants remaining below the two feet of clean soil cover include radioactive slag and soils impacted with heavy metals and SVOCs (primarily PAHs) that exceed restricted residential SCOs. The dose assessment modelling using the measured radiation levels of the slag material indicated that with two feet of soil fill (soil cap) placed over the entire, site radiation dosage levels above the two feet of fill from the subsurface slag material would more than meet NYSDEC DER 38 dosage guidance values. A geotextile demarcation layer was placed at the surface of the existing soils prior to placement of the two foot clean fill layer.

3.0 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (dust meter and gamma scintillation system) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially impacted material. Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

During installation of site infrastructure (i.e., water and sewer systems), construction activities will be surveyed as necessary for the presence of low activity naturally occurring radioactive material (NORM) using a gamma scintillation system (e.g. meter and detector) and a dose meter. If any NORM is encountered, then the following provisions will be instituted:

- If NORM waste above twice background levels requires removal from the subsurface, then it will be segregated on 10 mil polyethylene and isolated from all other material.
- If NORM waste does not require removal, then installation of the requisite infrastructure will continue as designed.
- In both circumstances, it will be ensured that no NORM enters any piping or other infrastructure appurtenances during construction.
- Once the piping systems are completed, all pathways for the NORM waste to enter the water or sewer systems will be discontinued.

Any NORM waste that is segregated during construction activities will be adequately packaged, transported and disposed at an out of State facility that is licensed to accept such material.

4.0 SOIL STAGING METHODS

Soil stockpiles will be encircled with a berm or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

5.0 MATERIALS EXCAVATION

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation of all material.

The owner of the property and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

If any impacted material needs to leave the site the Loaded vehicles will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

6.0 MATERIALS TRANSPORT OFF-SITE

If excavated materials need to be transported off-site the transport will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

7.0 MATERIALS DISPOSAL OFF-SITE

Any material excavated from below the cap that is required to be removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

8.0 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer. Any excess contaminated material excavated from below the cover system which cannot be returned to the excavation shall be properly disposed as described in Section 7 above.

9.0 FLUIDS MANAGEMENT

If any liquids are to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under the SPDES permit which is provided in Appendix I of the SMP.

10.0 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the RAWP and decision document. The existing cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete covered sidewalks and concrete building slabs. The demarcation layer, consisting of orange geotextile or equivalent material will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

11.0 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in the SMP prior to receipt at the site. Two inch run-a-crush (ROC) stone material will be imported from one or both of two sites and be used as described in the Work to be

Performed section of Section 1. The stone material to be used meets the SMP requirement of Rock or stone, consisting of virgin material from a permitted mine or quarry may be imported for use as backfill, without chemical testing provided it contains less than 10% by weight of material which would pass through a size 200 sieve.

The NYSDOT permitted facilities are as follows and a description of the material to be is attached to this EWP:

- LaFarge Plant – 400 Hinman Road, Lockport, NY 14094 – NYS Source Number 5-5R.
- New Enterprise Stone & Lime Co Inc. – 500 Como Park Blvd., Buffalo, NY 14227-NYS Source Number 5-3R-Wehrle Drive Plant.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

12.0 STORMWATER POLLUTION PREVENTION

A Stormwater Pollution Prevention Plan (SWPPP) exists for this site and is presented in the SMP Appendix I.

For Phase 1 construction, a SWPPP disturbance map is attached to this EWP.

13.0 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

600 RIVER ROAD

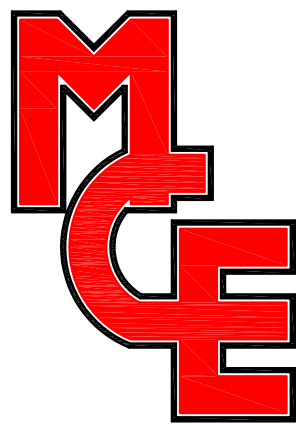
CITY OF NORTH TONAWANDA, NIAGARA COUNTY, NEW YORK



LOCATION MAP
N.T.S.

PROJECT LEGEND

EXISTING FEATURES	PROPOSED FEATURES
— — — — — PROPERTY BOUNDARY LINE	CB CATCH BASIN
— — — — — CENTERLINE	WV WATER VALVE
MB □ MAIL BOX	SA — SA — SANITARY SEWER LINE
▲ SIGN	ST — ST — STORM SEWER LINE
ELEC. M.H. □ ELEC. MANHOLE	W — WATER LINE
TELE. M.H. ○ TELEPHONE MANHOLE	— — — — — SIGN
DI □ DRAINAGE INLET & STORM LINE	TC 710.00 SPOT ELEVATION (TOP OF CURB/BOTTOM OF CURB)
○ SANITARY MANHOLE	*BC 709.50
W — WATER LINE	→ FLOW DIRECTION
Ø UTILITY POLE	□ INLET PROTECTION
WV □ WATER VALVE	— — — — — SILT SOCK
HYDRANT	TEMPORARY CONSTRUCTION ENTRANCE
— GAS — GAS LINE	
— OHW — OVERHEAD WIRES	



METZGER CIVIL ENGINEERING, PLLC

SCHEDULE OF DRAWINGS:

SHEET NO.	DRAWING NO.	DESCRIPTION
1	CS-1	COVER SHEET
2	SV-1	BOUNDARY AND TOPOGRAPHICAL SURVEY
3	RP-1	RECORD PLAN (EXISTING TOPOGRAPHY MAP)
4	SP-1	SITE PLAN
5	GD-1	DRAINAGE AND GRADING PLAN
6	SW-1	SANITARY AND WATER PLAN
7	ESC-1	EROSION AND SEDIMENT CONTROL PLAN
8	LP-1	LANDSCAPE PLAN
9	D-1	SITE & STORMWATER DETAILS
10	D-2	WATER & RPZ DETAILS
11	D-3	SANITARY DETAILS

OWNER:
ROCK ONE DEVELOPMENT LLC
10151 MAIN STREET
CLARENCE, NEW YORK 14031

ARCHITECT:
K2 ARCHITECTURE
164 LAFAYETTE AVENUE
BUFFALO, NEW YORK 14213
PHONE: (716) 908-1756
EMAIL: douglas@K2Architecture.com

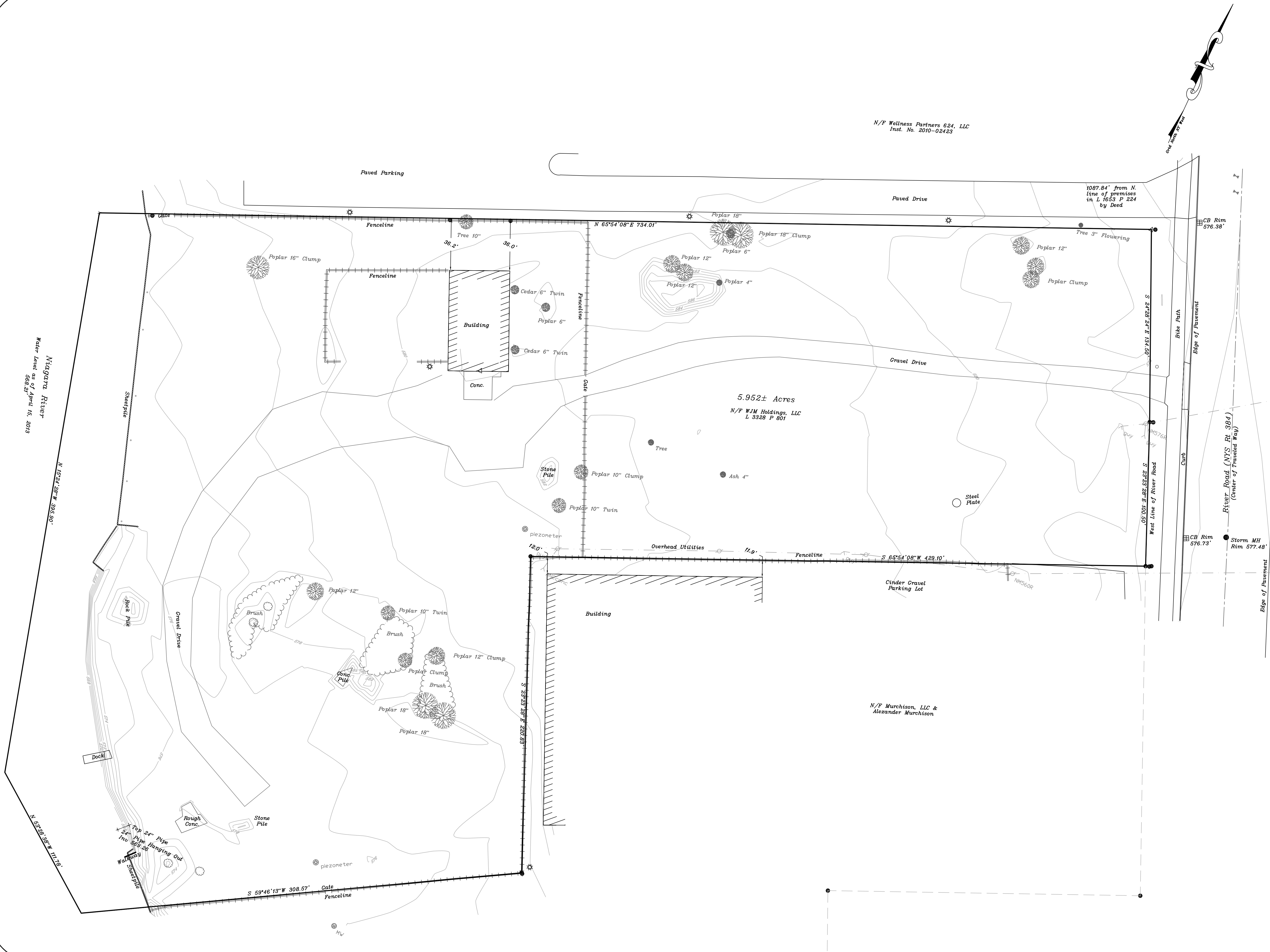
CIVIL ENGINEER:
METZGER CIVIL ENGINEERING, PLLC.
8245 SHERIDAN DRIVE
WILLIAMSVILLE, NEW YORK 14221
PHONE: (716) 633-2601
EMAIL: meteng@roadrunner.com

CITY OF NORTH TONAWANDA NOTES:
1) CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL CITY
CONSTRUCTION SPECIFICATIONS WHERE APPLICABLE AND/OR SUBJECT
TO THE LATEST REVISIONS BY THE CITY ENGINEER.

APPROVED BY THE CITY OF NORTH TONAWANDA PLANNING COMMISSION	
CHAIRMAN	DATE: _____
APPROVED BY THE NIAGARA COUNTY HEALTH DEPARTMENT	
	DATE: _____
APPROVED BY THE CITY OF NORTH TONAWANDA ENGINEER	
	DATE: _____

REVISIONS:	06-30-17
SCALE:	AS SHOWN
DATE:	JANUARY 22, 2016
JOB NO:	M-1314
DRAWING NO:	

CS-1



General Notes

Legend

- Found Pipe
- Found Rebar
- Railroad Spike
- Street Sign
- Water Valve
- Gas Valve
- Tall Light Pole
- Tree
- Sanitary Sewer Manho.
- Storm Manhole
- Catchbasin
- Fire Hydrant
- Guy Wire Anchor
- Utility Pole
- Steel Post
- Bollard

Notes:

This survey was prepared for Lou Visone.

This map of survey dated April 18, 2013, was prepared from an instrument survey, with field work completed on April 15, 2013.

This survey was prepared for the parties and purpose indicated hereon. Any extension of the use beyond the purpose agreed to, exceeds the scope of the engagement.

It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed surveyor, to alter an item in any way.

Only copies of this survey marked with an original signature and an original embossed or ink seal are the product of the land surveyor.

This plan NOT valid with an Affidavit of No Change.

This survey was prepared without the benefit of an up to date abstract of title and is subject to any state of facts revealed by an examination of such.

Lands on this survey are based on the references as indicated and a survey map prepared by Kenneth D. Witschi dated January 10, 2012.

Distance shown are deduced and measured, unless otherwise indicated.

Elevations are referenced to NAVD88 by GPS Observation.

Symbols are graphical representations and not to scale.

Only visible utility services and/or encumbrances were located and shown.

Remove not the ancient landmark, which thy fathers have set, Prov. 22:28
Cursed be he that removeth his neighbor's landmark, And the people shall say Amen. Deuteronomy 19:17

Survey by William J. Tucker, II PLS #50369
Clear Creek Land Surveying, L.L.C.
P.O. Box 435, Springville, N.Y. 14141
Phone 716-592-5800 Fax 716-592-5566

Project

13-012 Visone

Date

April 18, 2013

Scale

1"=30'

Firm Name and Address

Clear Creek Land Surveying, LLC
PO Box 435
Springville, NY 14141
ph. 716-592-5800
fax 716-592-5566

Project Name and Address

Lands Surveyed:
Boundary & Topographical
Survey of #600 River Road

Part of Lot 75 Mile Reserve
City of North Tonawanda
Niagara County
State of New York

GRAPHIC SCALE

30

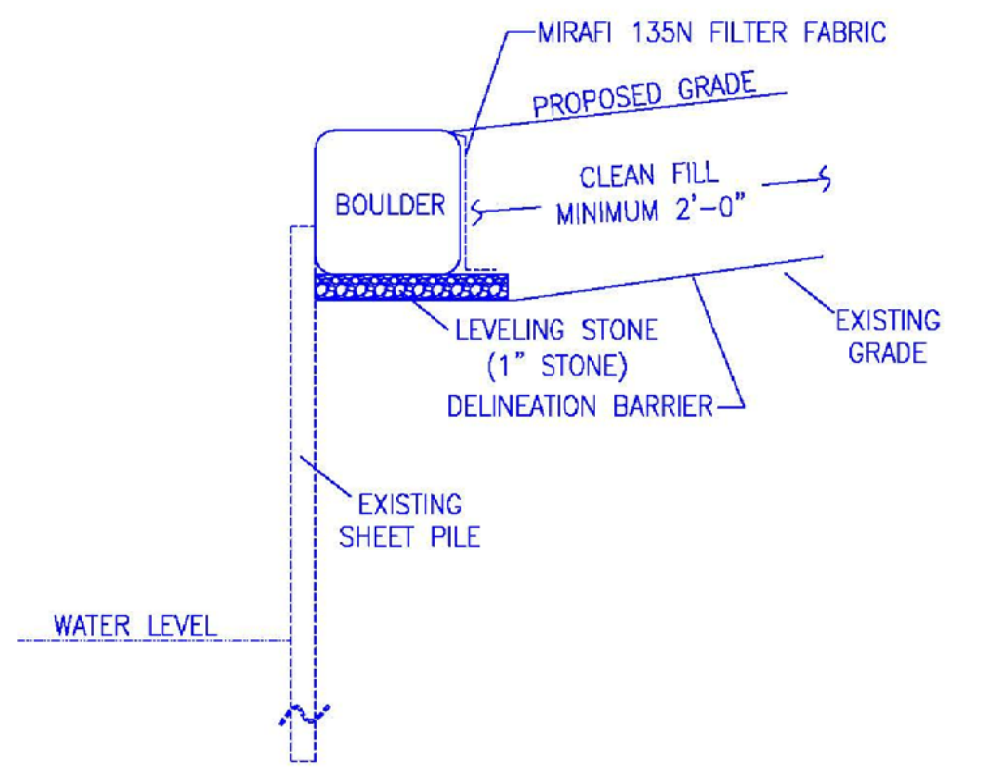
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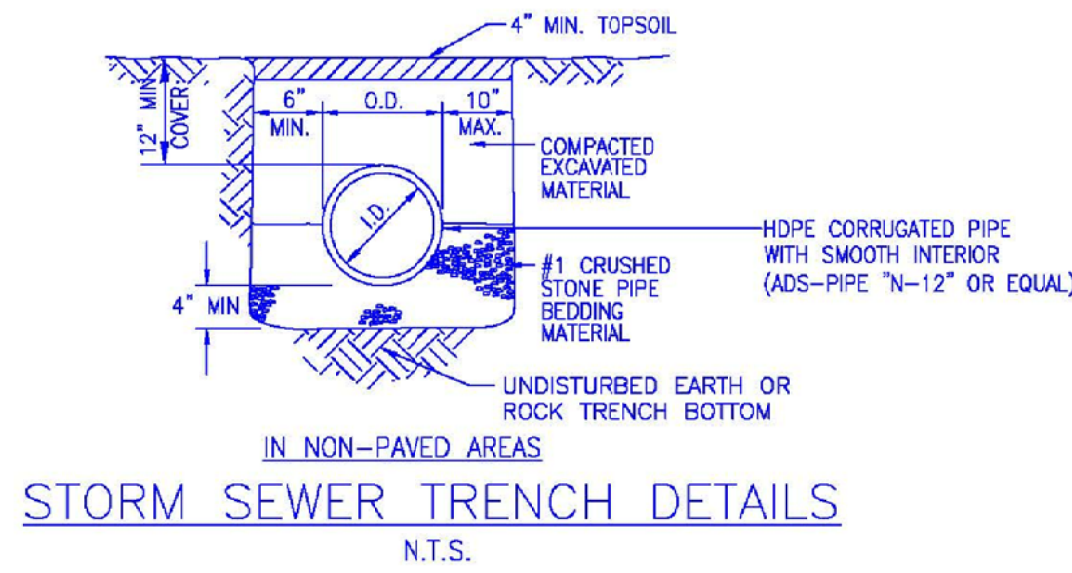
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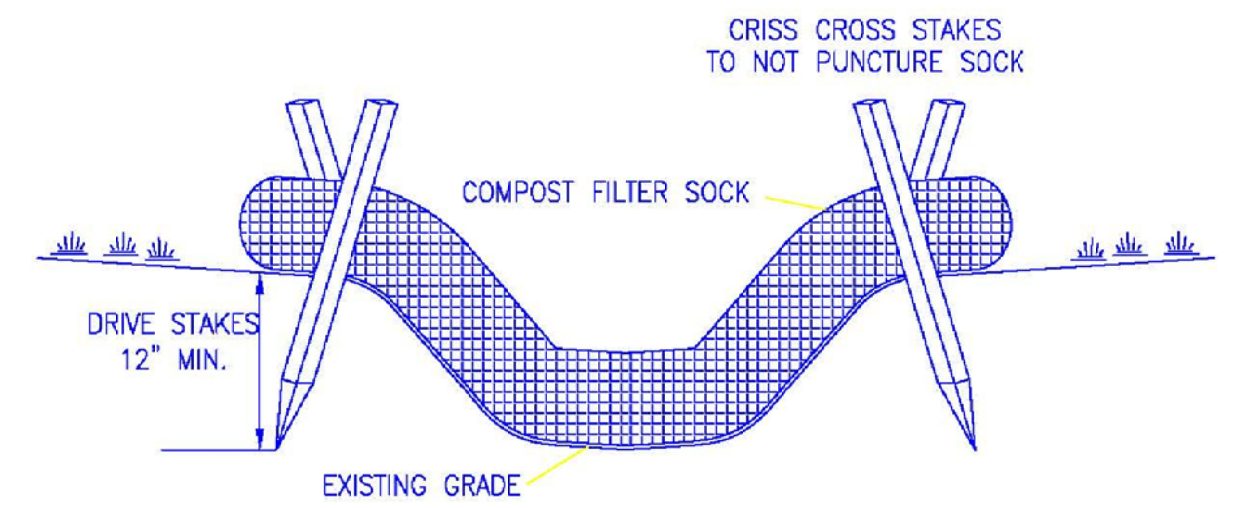
1 inch = 30 ft.



BOULDERS ALONG EXISTING SHEETPILE WALL
N.T.S.



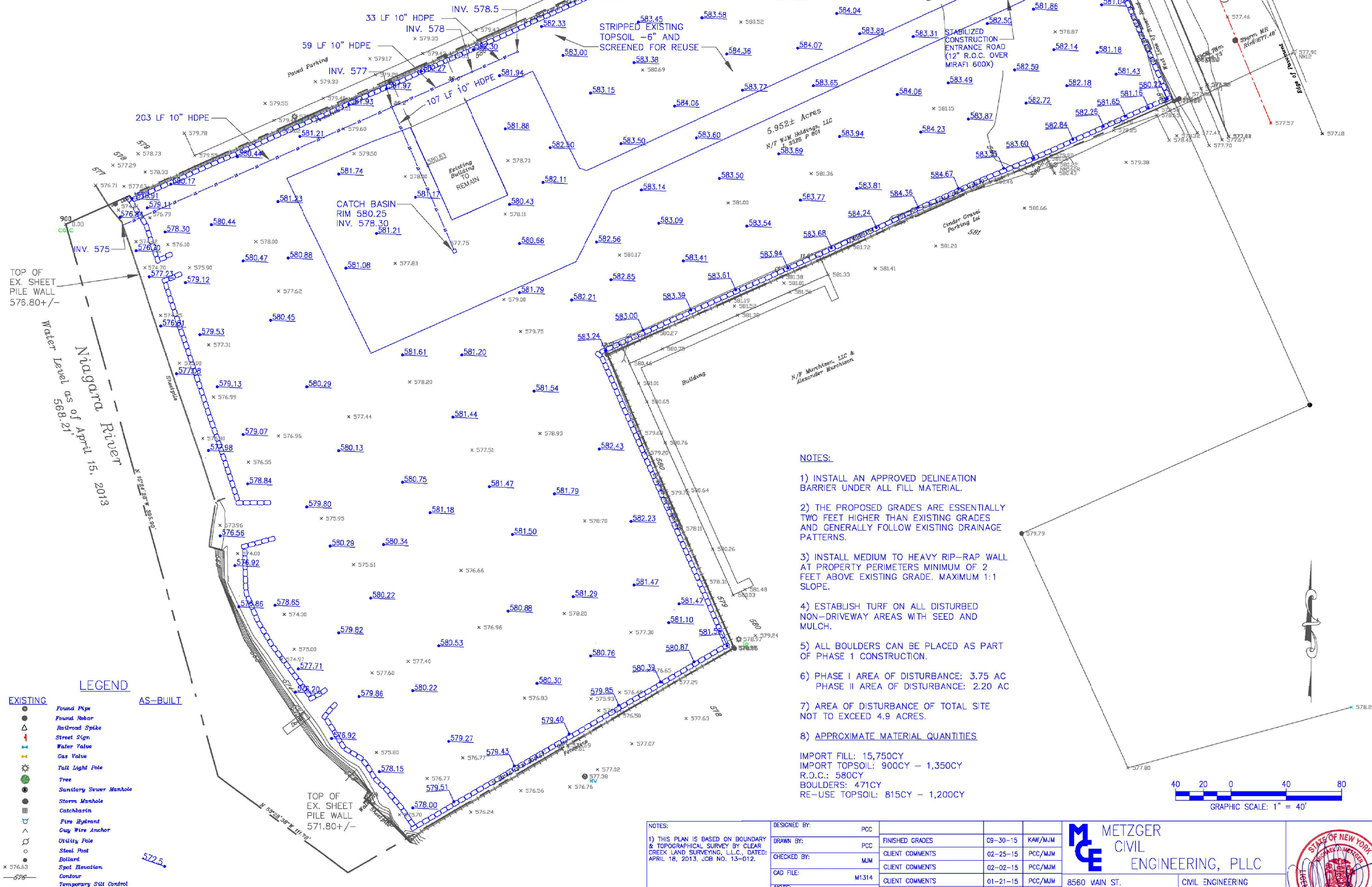
STORM SEWER TRENCH DETAILS
N.T.S.



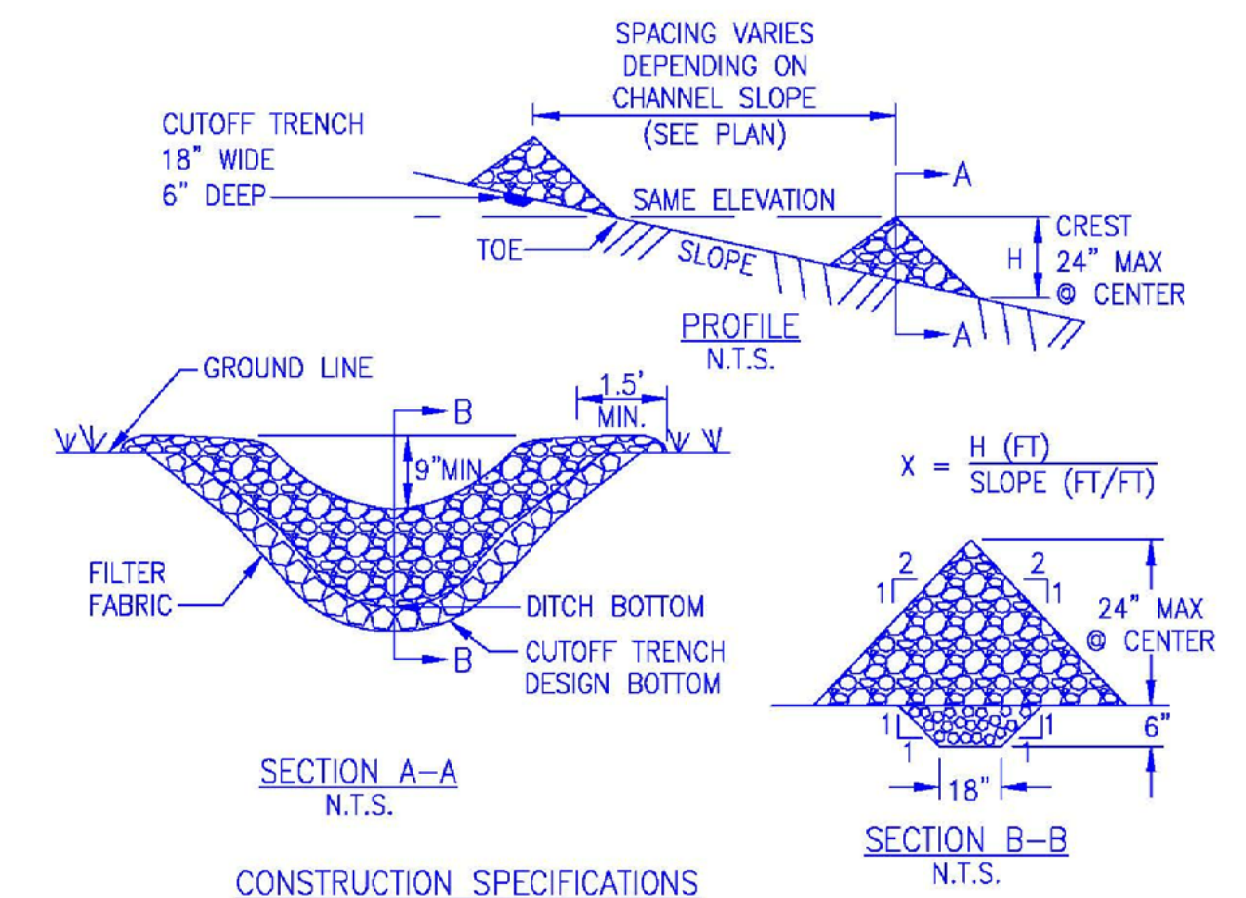
NOTES:
1. 8"Ø MINIMUM COMPOST FILTER SOCK MUST CONFORM TO USACOE PWTE 200-1-62 (FILTREXX SILTSOXX OR APPROVED EQUAL).

MINIMUM SOCK SPACING		
SLOPE %	8 INCH SOCK	12 INCH SOCK
0-2%	300'	375'
2-5%	200'	250'
5-10%	100'	125'

COMPOST FILTER SOCK
N.T.S.



- NOTES:
- 1) INSTALL AN APPROVED DELINEATION BARRIER UNDER ALL FILL MATERIAL.
 - 2) THE PROPOSED GRADES ARE ESSENTIALLY TWO FEET HIGHER THAN EXISTING GRADES AND GENERALLY FOLLOW EXISTING DRAINAGE PATTERNS.
 - 3) INSTALL MEDIUM TO HEAVY RIP-RAP WALL AT PROPERTY PERIMETERS MINIMUM OF 2 FEET ABOVE EXISTING GRADE. MAXIMUM 1:1 SLOPE.
 - 4) ESTABLISH TURF ON ALL DISTURBED NON-DRIVEWAY AREAS WITH SEED AND MULCH.
 - 5) ALL BOULDERS CAN BE PLACED AS PART OF PHASE 1 CONSTRUCTION.
 - 6) PHASE I AREA OF DISTURBANCE: 3.75 AC
PHASE II AREA OF DISTURBANCE: 2.20 AC
 - 7) AREA OF DISTURBANCE OF TOTAL SITE NOT TO EXCEED 4.9 ACRES.
 - 8) APPROXIMATE MATERIAL QUANTITIES
IMPORT FILL: 15,750CY
IMPORT TOPSOIL: 900CY - 1,350CY
R.O.C.: 580CY
BOULDERS: 471CY
RE-USE TOPSOIL: 815CY - 1,200CY



- CONSTRUCTION SPECIFICATIONS
- 1) STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
 - 2) SET SPACING OF CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
 - 3) EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
 - 4) PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
 - 5) ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

TEMPORARY STONE CHECK DAM
N.T.S.

- LEGEND
- EXISTING
- Found Pipe
 - Found Rebar
 - Railroad Spike
 - Street Sign
 - Water Valve
 - Gas Valve
 - Tall Light Pole
 - Tree
 - Sanitary Sewer Manhole
 - Storm Manhole
 - Catchbasin
 - Fire Hydrant
 - City River Anchor
 - Utility Pole
 - Steel Post
 - Bollard
 - Spot Elevation
 - Outdoor
 - Temporary Site Control
- AS-BUILT

NOTES:
1) THIS PLAN IS BASED ON BOUNDARY & TOPOGRAPHICAL SURVEY BY CLEAR CREEK LAND SURVEYING, L.L.C., DATED: APRIL 18, 2013, JOB NO. 13-012.

DESIGNED BY: PCC
DRAWN BY: PCC
CHECKED BY: M/M
GAD FILE: M1314

NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 2209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW

FINISHED GRADES: 09-30-15
CLIENT COMMENTS: 02-25-15
CLIENT COMMENTS: 02-02-15
CLIENT COMMENTS: 01-21-15
CLIENT COMMENTS: 12-12-14
CLIENT COMMENTS: 9-3-14
DATE: BY/CHECK

8560 VAIN ST.
WILLIAMSVILLE, NY 14221
PH: 716-633-2601
FAX: 716-633-2704

CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING



600 RIVER ROAD
TWO FOOT (2') CLEAN FILL CAP
CITY OF NORTH TONAWANDA, NIAGARA COUNTY, NEW YORK

RECORD PLAN

SCALE: AS NOTED
DATE: FEBRUARY 25, 2015
JOB NO: M-1314
DRAWING NO:

RP-1



\\sdr\proj\proj\1314 600 RIVER ROAD\DWG\Site & Eng\ 6/29/2017 11:42:03 AM

LEGEND

- EXISTING CONTOUR ELEVATION
- PROPOSED CONTOUR ELEVATION
- FLOW DIRECTION

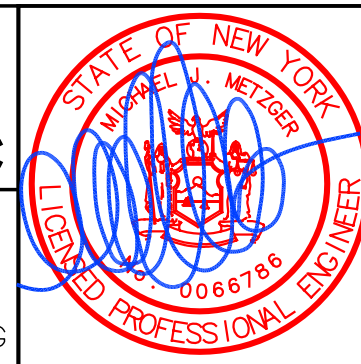
NOTES

- BOUNDARY INFORMATION PROVIDED BY CLEAR CREEK LAND SURVEYING LLC SURVEY DATED APRIL 18, 2013.
- THIS IS NOT A PROPERTY SURVEY.

© 2017 Metzger Civil Engineering

Designed By:	JCM	DUMPSTER & GRADING	06/30/17	JCM/ARH
Drawn By:	JCM	GRADING REVISIONS	06/16/17	JCM/ARH
Checked By:	MJM	CLUBHOUSE REVISIONS	03/21/17	JCM/ARH
Cad File:	M-1314	FIRE DEPARTMENT COMMENTS	03/09/17	JCM/ARH
NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW				
		FIRE LANE	02/15/17	JCM/ARH
		BLDG RELOCATION & POOL	01/12/17	JCM/ARH
		BUILDING RELOCATION	05/25/16	JCM/ARH
		REVISIONS	DATE	BY

ME METZGER CIVIL ENGINEERING, PLLC	8245 SHERIDAN DRIVE WILLIAMSVILLE, NY 14221 PH: 716-633-2601 FAX: 716-633-2704	CIVIL ENGINEERING LAND PLANNING SITE DESIGN MUNICIPAL ENGINEERING



600 RIVER ROAD
CITY OF NORTH TONAWANDA
NIAGARA COUNTY, NEW YORK

GRADING AND DRAINAGE PLAN

GD-1

SCALE: 1" = 30'
DATE: JANUARY 22, 2016
JOB NO: M-1314
SHEET NO:

GENERAL NOTES:

THE LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. OTHER UNDERGROUND UTILITIES NOT SHOWN MAY BE ENCOUNTERED. THE CONTRACTOR SHALL PERFORM TEST PITS TO VERIFY THE LOCATION AND ELEVATION OF UTILITIES AT INTERCONNECTIONS AND CROSSINGS AS SHOWN, DIRECTED OR REQUIRED. THE CONTRACTOR SHALL EXCAVATE IN ADVANCE OF THE PIPE LAYING OPERATION AND EXPOSE ALL EXISTING UNDERGROUND UTILITIES TO PREVENT DAMAGE DURING CONSTRUCTION AND TO DETERMINE REQUIRED CHANGES IN GRADE NECESSARY TO AVOID CONFLICTS.

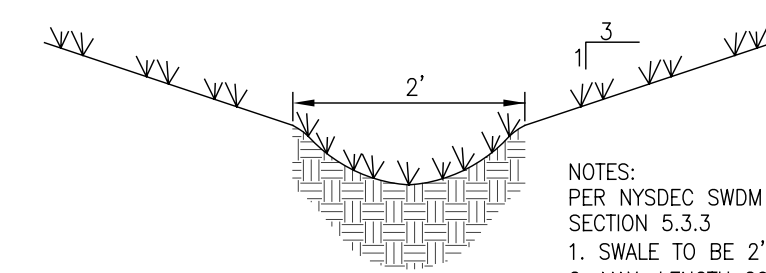
CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS FROM N.Y.S.D.O.T. TO PERFORM WORK WITHIN THE RIVER ROAD RIGHT-OF-WAY.

PROVIDE MAINTENANCE AND PROTECTION OF TRAFFIC IN ACCORDANCE WITH THE N.Y.S.D.O.T. STANDARDS AND THE NYSDOT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

PROPER AUTHORIZATION MUST BE OBTAINED PRIOR TO PERFORMING ANY WORK ON ADJACENT PROPERTIES.

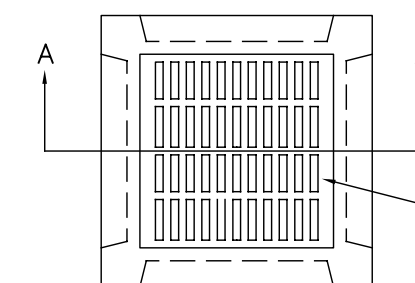
COORDINATE WITH PROJECT STRUCTURAL ENGINEER FOR PINNING CONCRETE SIDEWALKS TO FOUNDATION AT ALL DOORS.

SAND FILTRATION AREAS MAY BE USED DURING WINTER MONTHS FOR SNOW STORAGE.

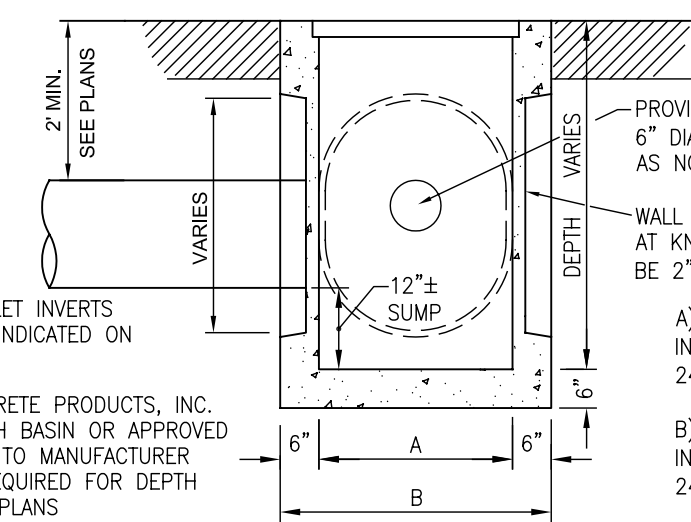


VEGETATIVE SWALE
N.T.S.

- NOTES:
PER NYSDEC SWDM
SECTION 5.3.3
1. SWALE TO BE 2' WIDE
2. MAX. LENGTH 2000'
3. 3:1 SIDESLOPES (WHERE POSSIBLE)
4. SLOPE SWALE - PER PLAN

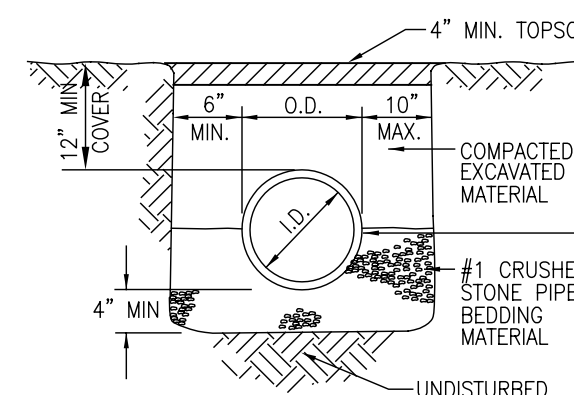


TOP VIEW

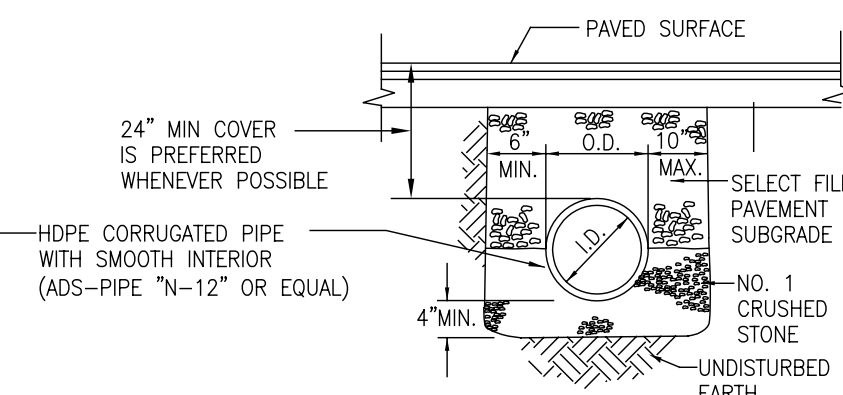


SECTION A-A

PRECAST CONCRETE CATCH BASIN
N.T.S.



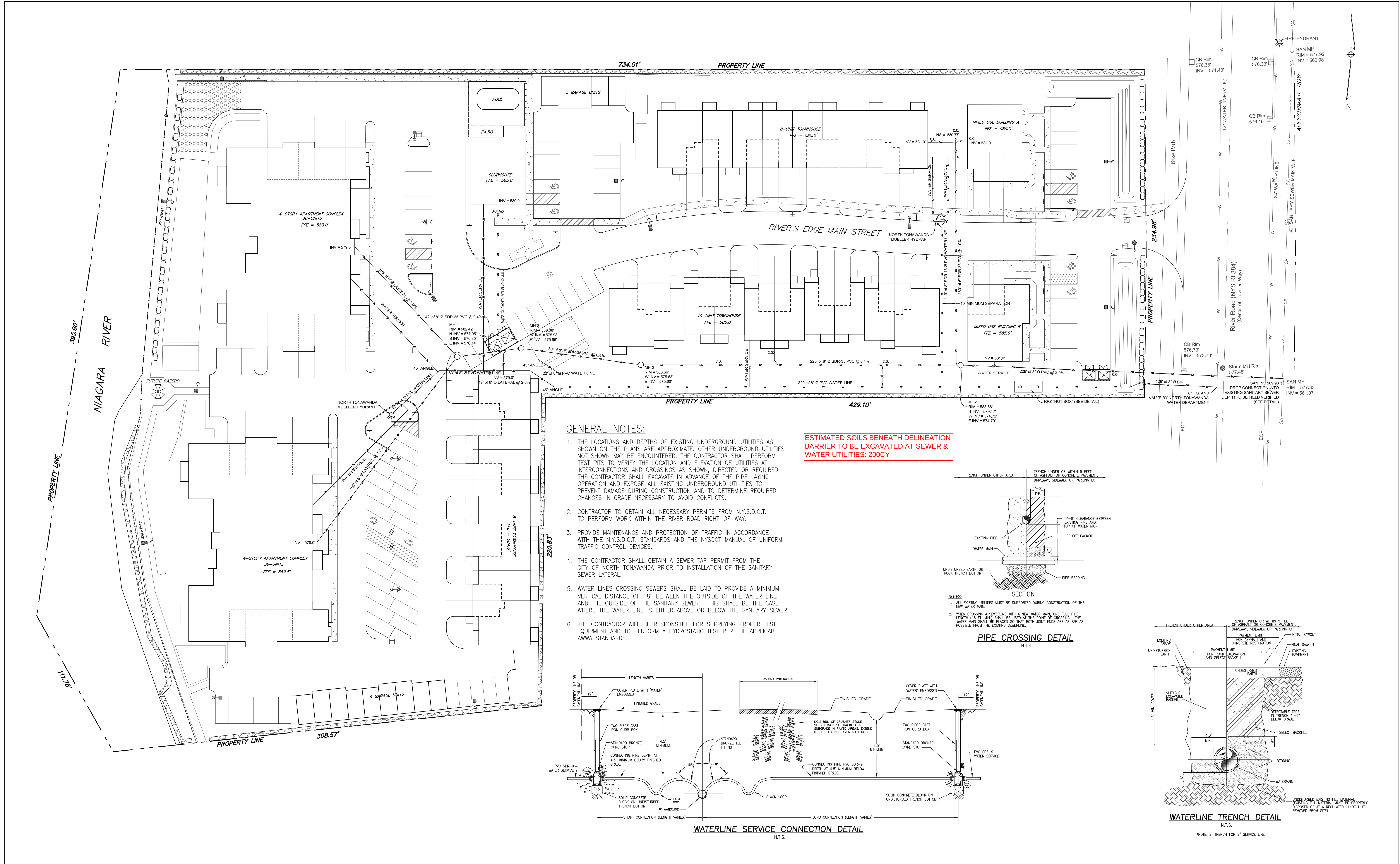
IN NON-PAVED AREAS



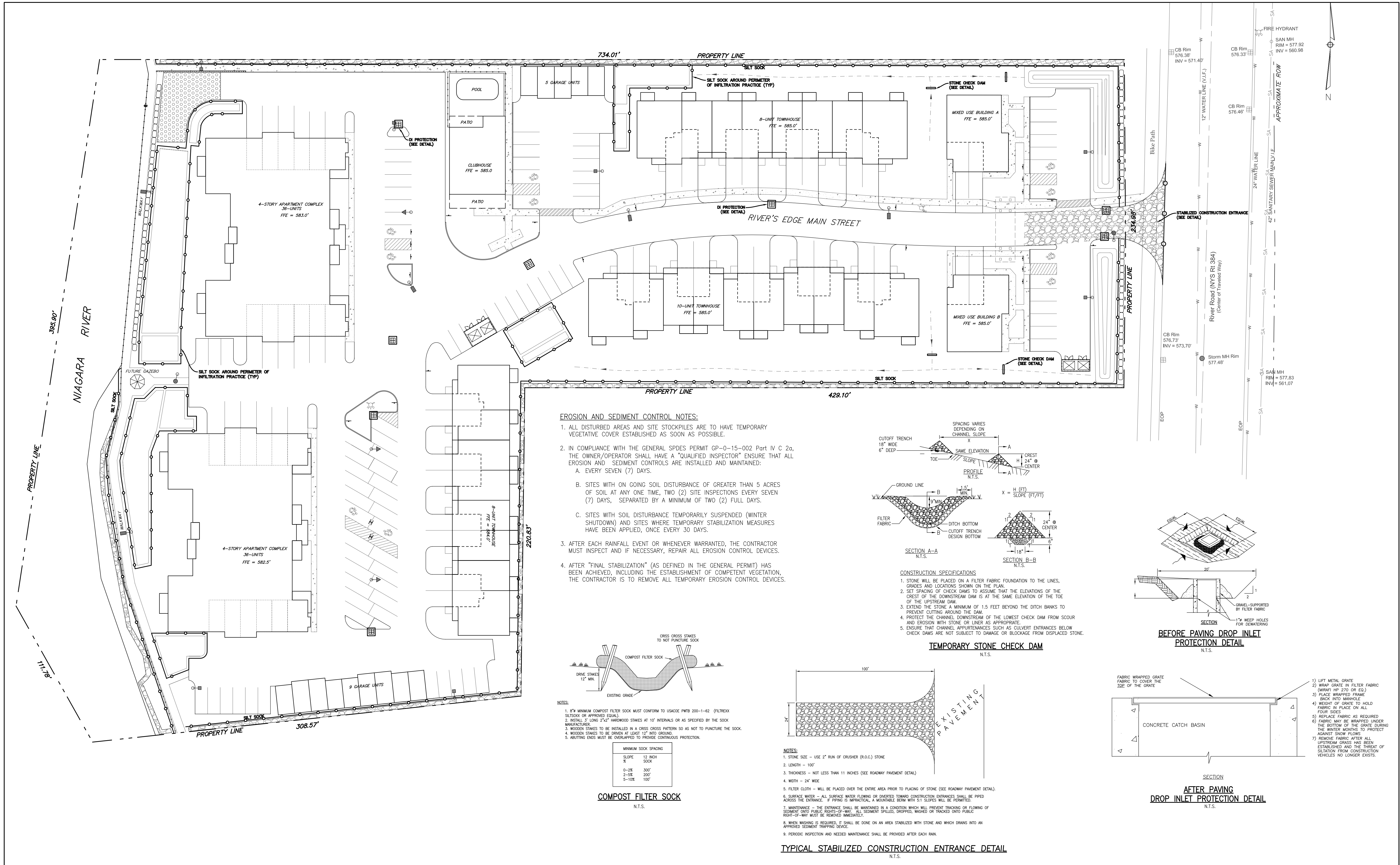
IN AREAS TO BE PAVED

STORM SEWER TRENCH DETAILS
N.T.S.

\\sdc\proj\proj\1314 600 RIVER ROAD\DWG\Site & Prop_6/29/2017 14:26:38 PH



\\sds\m\p\c\m\1314 600 RIVER ROAD\DWG\Site & Prop_6/29/2017 2:03:14 PM



NOTES

- BOUNDARY INFORMATION PROVIDED BY CLEAR CREEK LAND SURVEYING LLC SURVEY DATED APRIL 18, 2013.
- THIS IS NOT A PROPERTY SURVEY.

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Designed By:

JCM

Drawn By:

JCM

Checked By:

MJM

Cad File:

M-1314

NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW

DUMPSTER & GRADING

06/30/17 JCM/ARH

GRADING REVISIONS

06/16/17 JCM/ARH

CLUBHOUSE REVISIONS

03/21/17 JCM/ARH

FIRE DEPARTMENT COMMENTS

03/09/17 JCM/ARH

FIRE LANE

02/15/17 JCM/ARH

BLDG RELOCATION & POOL

01/12/17 JCM/ARH

BUILDING RELOCATION

05/25/16 JCM/ARH

REVISIONS

DATE BY

8245 SHERIDAN DRIVE

WILLIAMSVILLE, NY 14221

PH: 716-633-2601

FAX: 716-633-2704

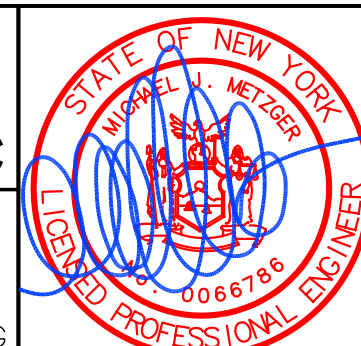
CIVIL ENGINEERING

LAND PLANNING

SITE DESIGN

MUNICIPAL ENGINEERING

ME METZGER CIVIL ENGINEERING, PLLC



600 RIVER ROAD

CITY OF NORTH TONAWANDA

NIAGARA COUNTY, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN

ESC-1

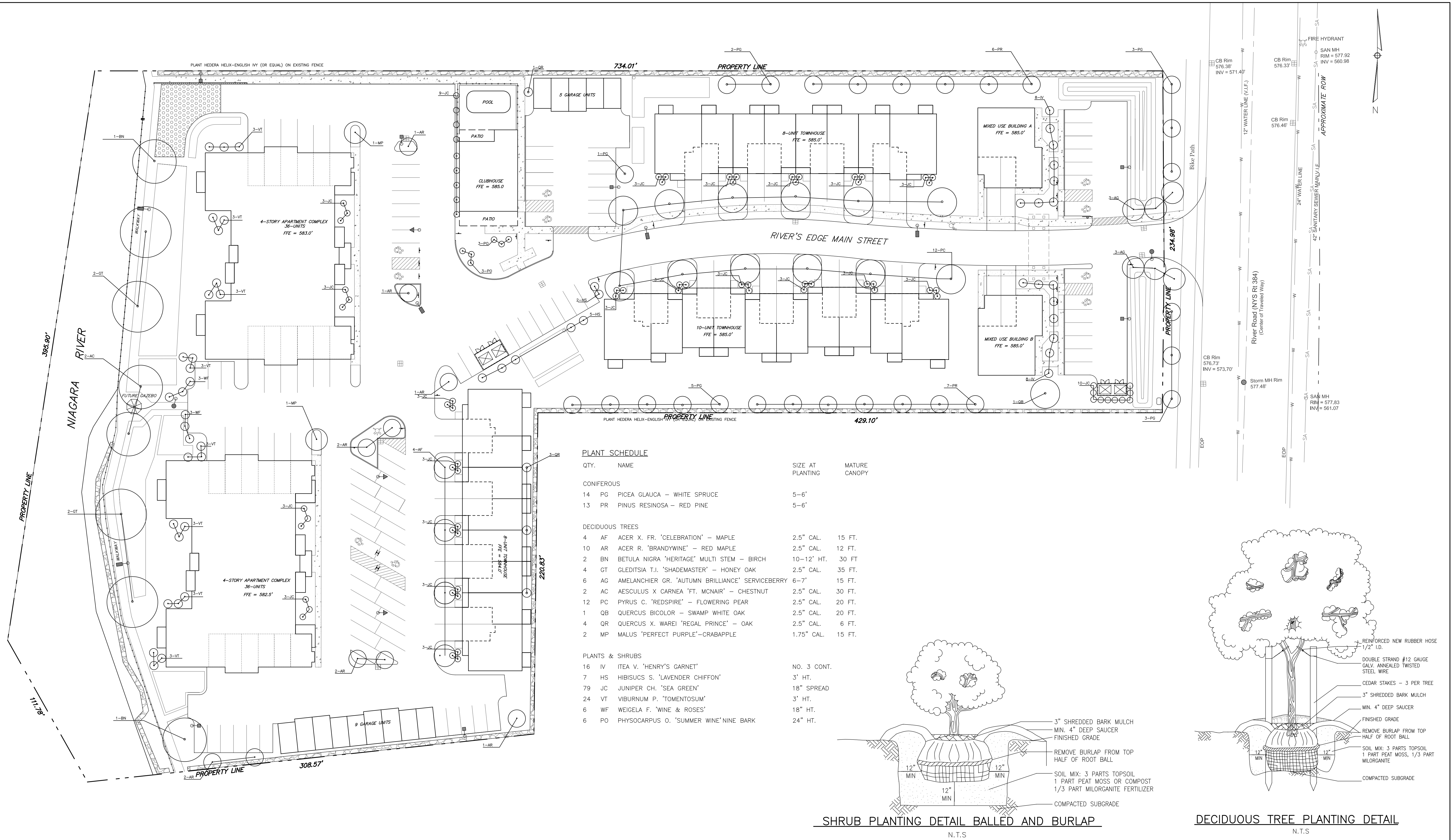
SCALE: 1" = 30'

DATE: JANUARY 22, 2016

JOB NO: M-1314

SHEET NO:

\\sds\metzger\1314 600 RIVER ROAD\DWG\Site & Land\ 6/29/2017 2:18:25 PM



NOTES

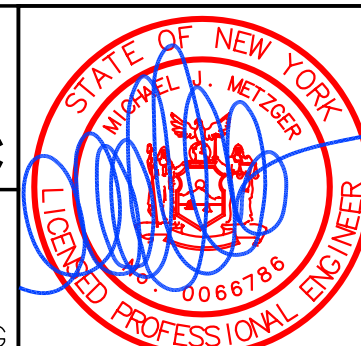
- 1) BOUNDARY INFORMATION PROVIDED BY BOUNDARY SURVEY COMPLETED BY CLEAR CREEK LAND SURVEYING LLC DATED APRIL 18, 2013.
- 2) THIS IS NOT A PROPERTY SURVEY.

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Drawn By: JCM
Checked By: MJM
Cad File: M-1314
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DUMPSTER & GRADING 06/30/17 JCM/ARH
GRADING REVISIONS 06/16/17 JCM/ARH
CLUBHOUSE REVISIONS 03/21/17 JCM/ARH
FIRE DEPARTMENT COMMENTS 03/09/17 JCM/ARH
FIRE LANE 02/15/17 JCM/ARH
BUILDING RELOCATION 05/25/16 JCM/ARH
COND'L APPROVAL COMMENTS 03/10/16 JCM/ARH
REVISIONS DATE BY

MC METZGER CIVIL ENGINEERING, PLLC
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FAX: 716-633-2704
CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING



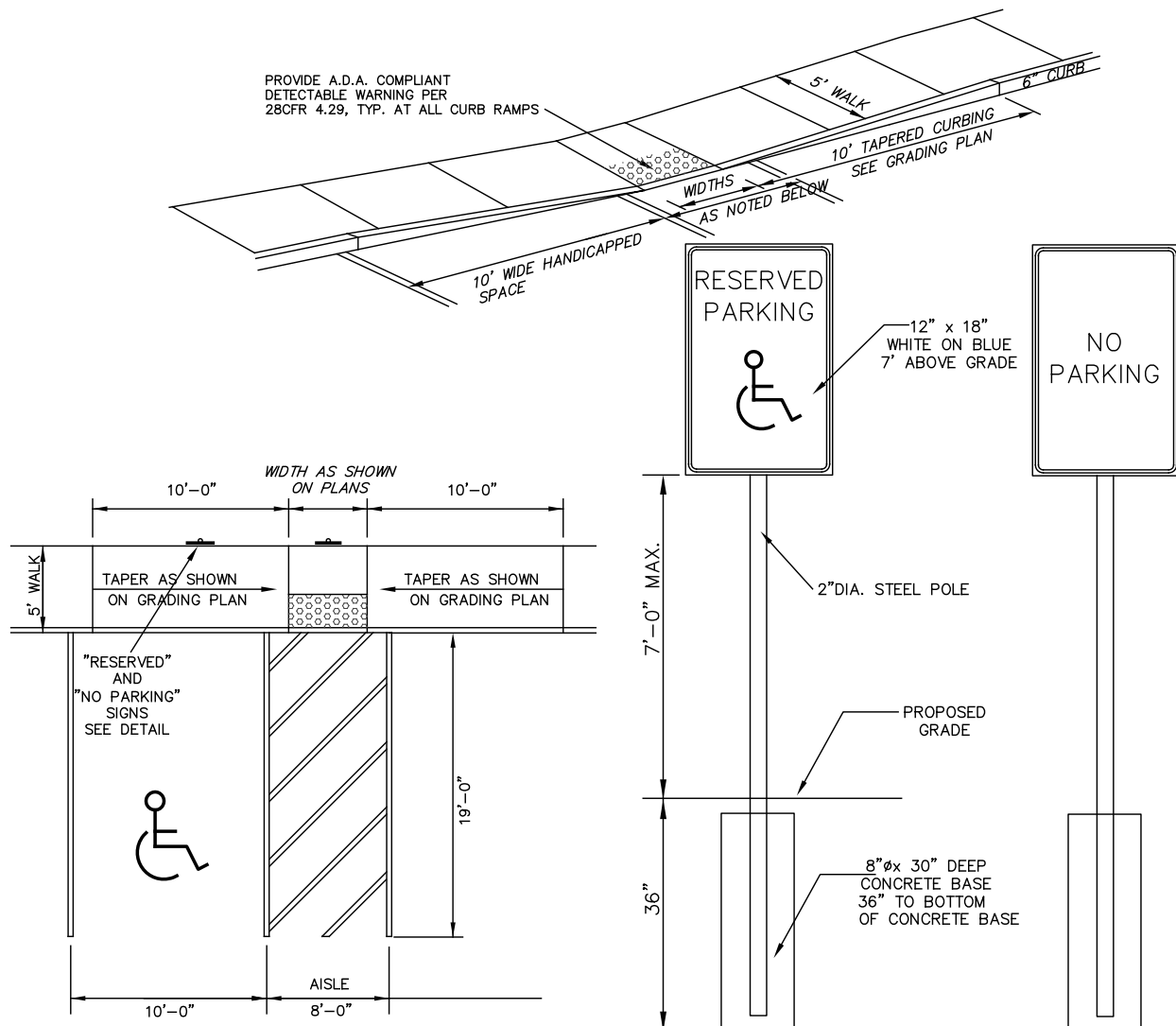
600 RIVER ROAD

CITY OF NORTH TONAWANDA
NIAGARA COUNTY, NEW YORK

LANDSCAPE PLAN

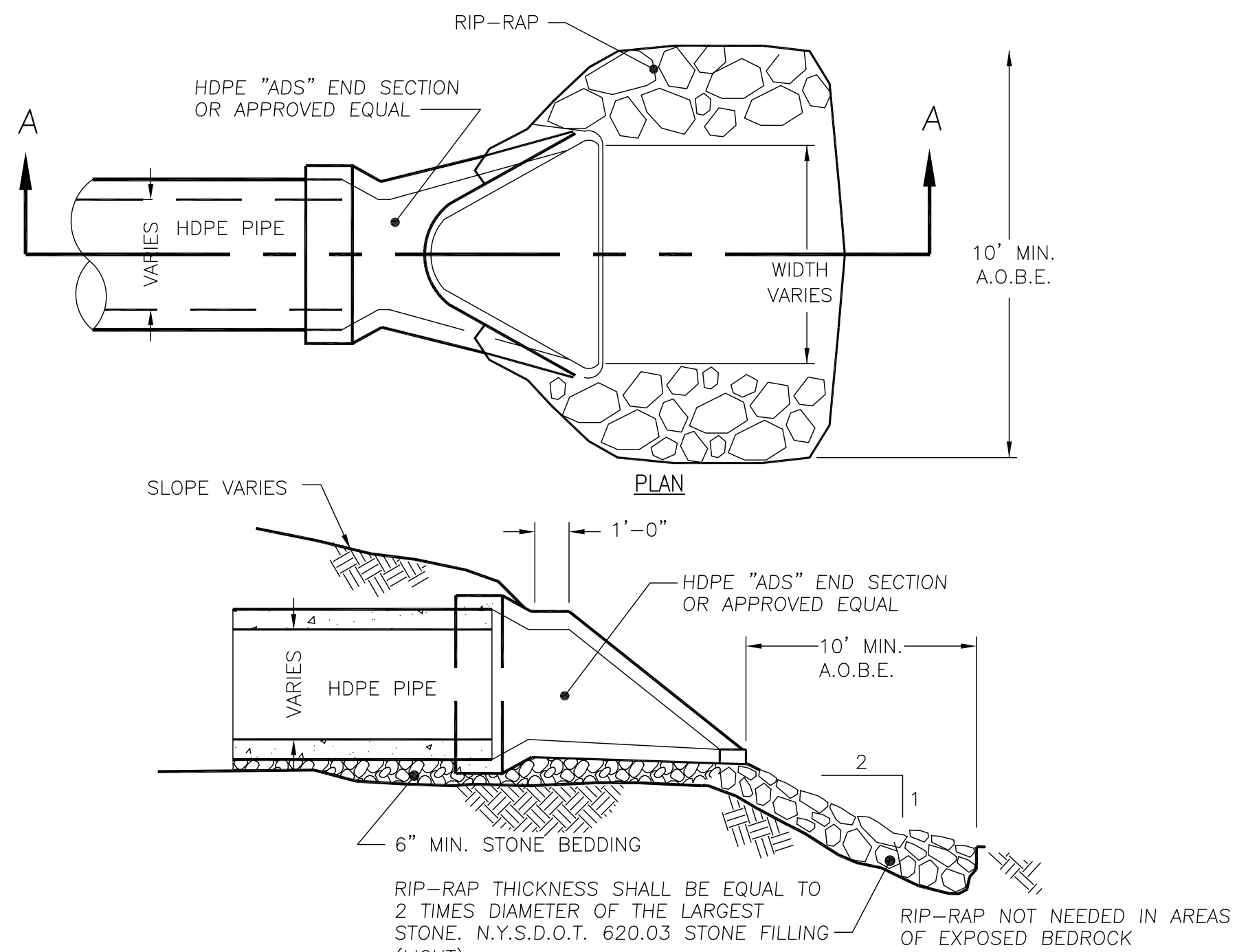
SCALE: 1" = 30'
DATE: JANUARY 22, 2016
JOB NO: M-1314
SHEET NO:

LP-1



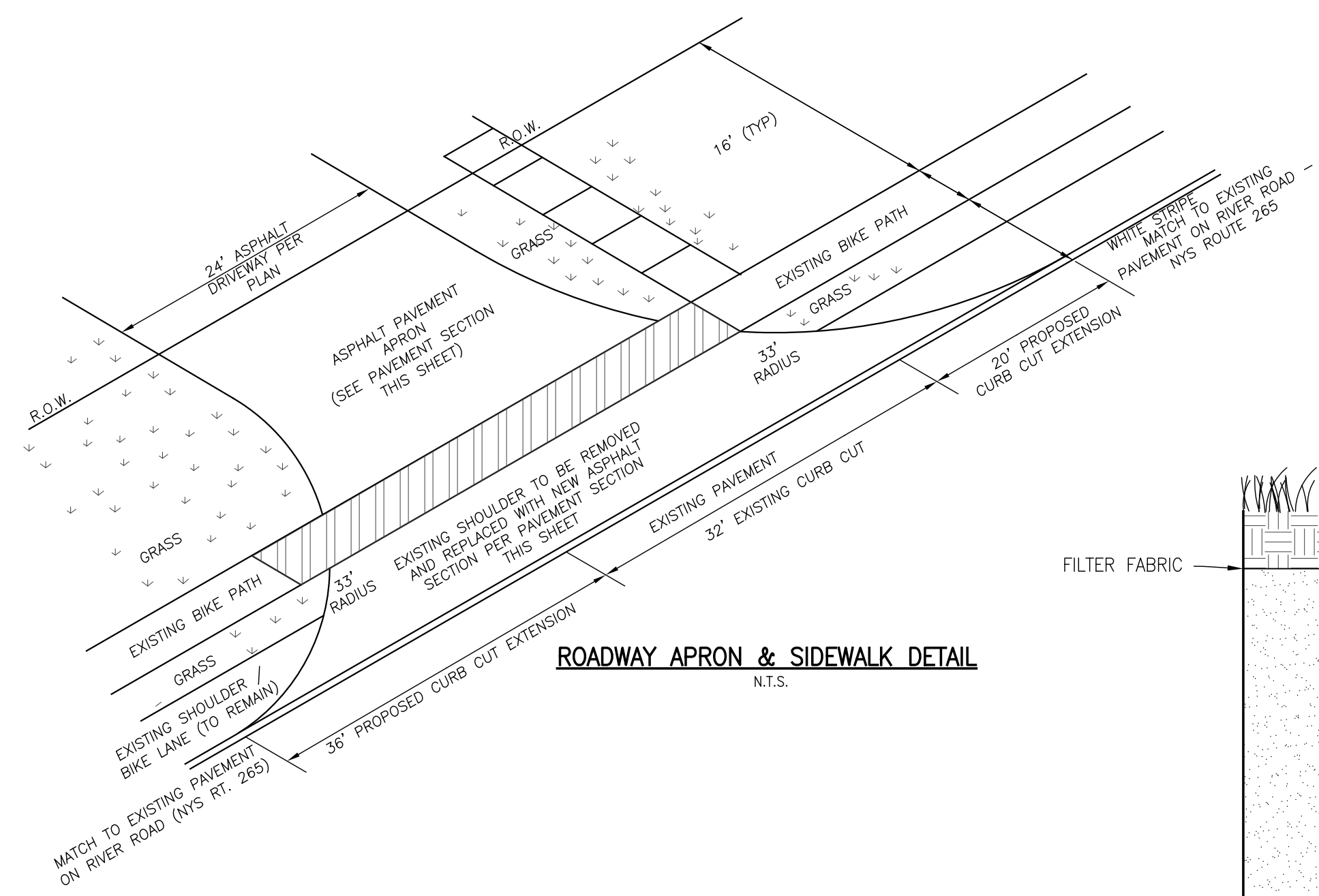
HANDICAP RAMP, PARKING STALL AND SIGNS

N.T.S.



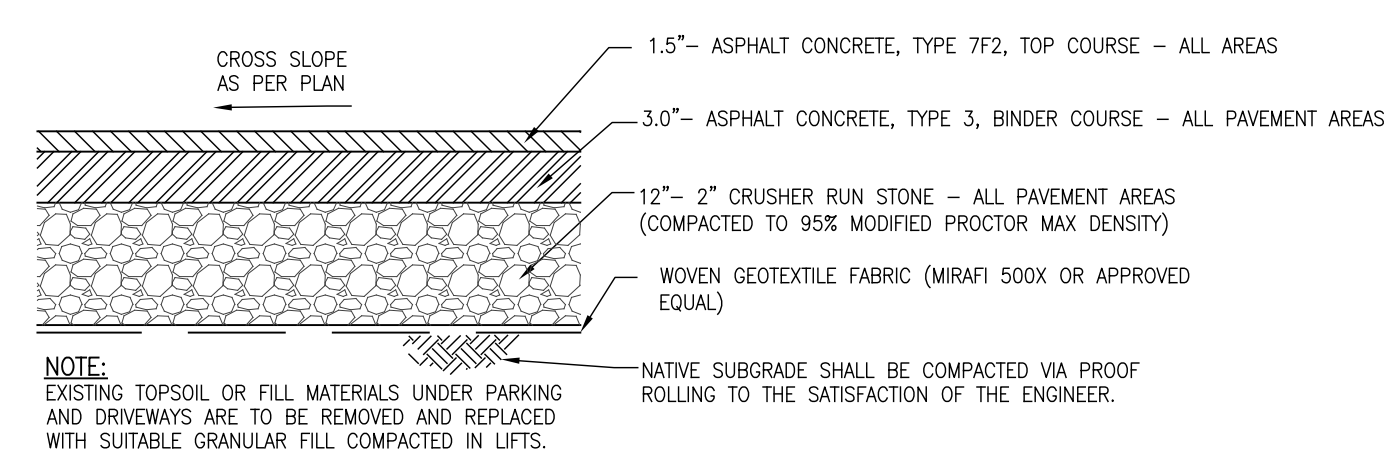
END SECTION WITH RIP-RAP DETAIL

N.T.S.



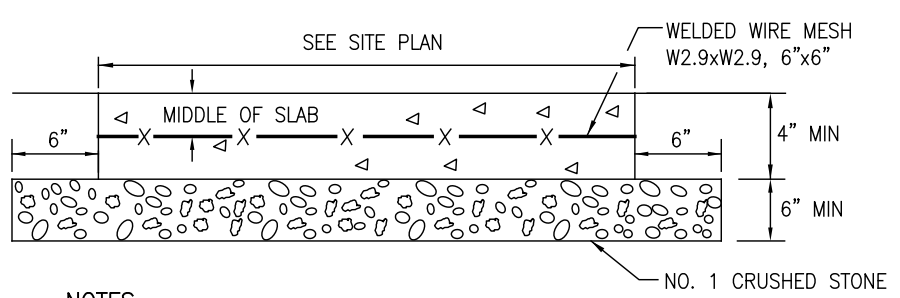
ROADWAY APRON & SIDEWALK DETAIL

N.T.S.



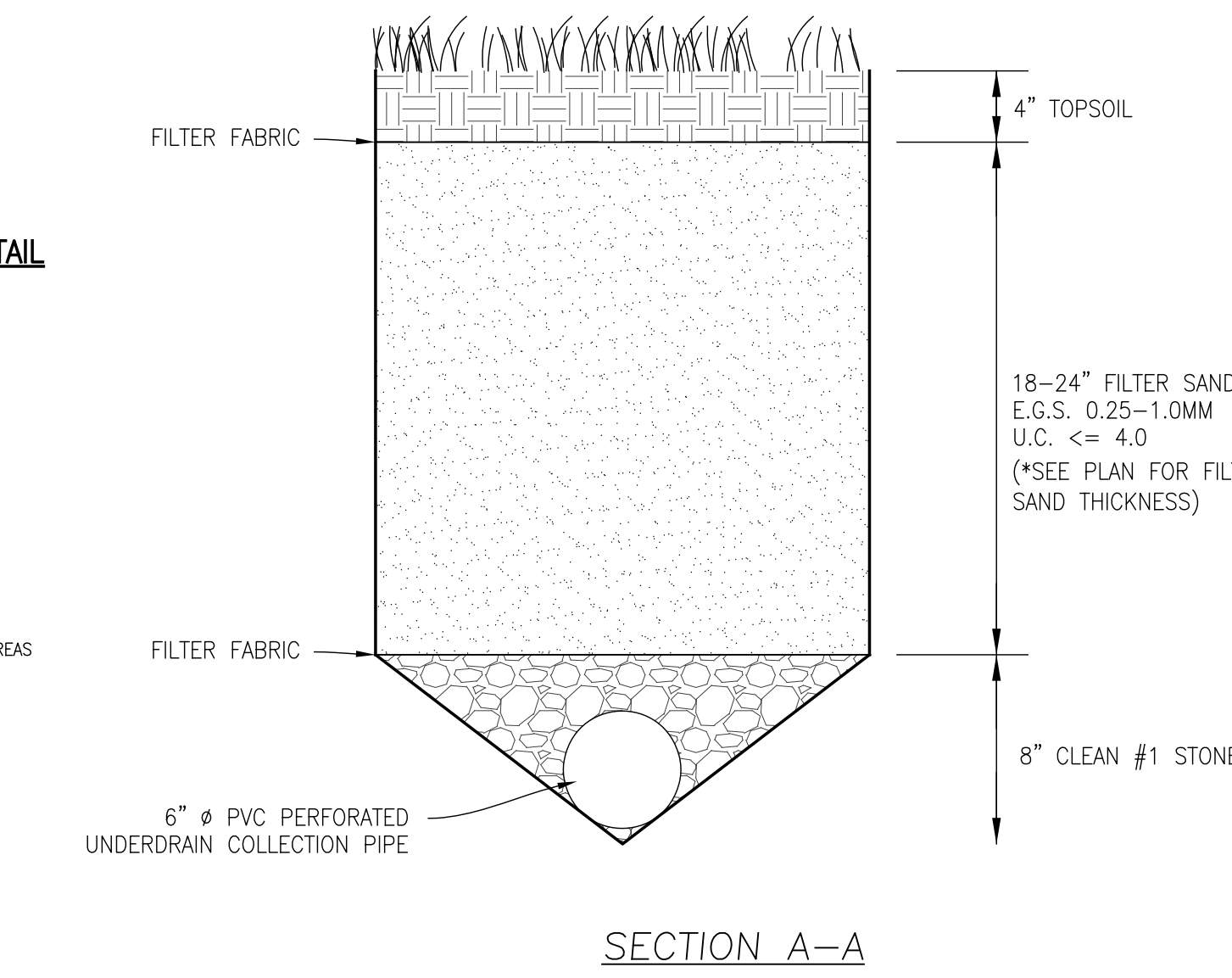
STANDARD ASPHALT PAVING SECTION

N.T.S.



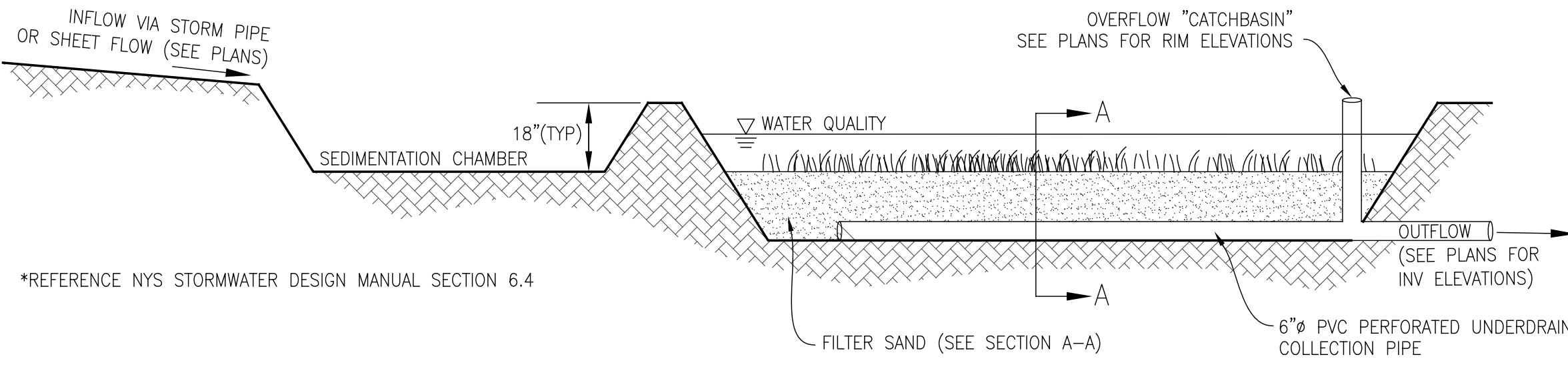
SIDEWALK DETAIL

N.T.S.



SECTION A-A

N.T.S.



UNDERGROUND INFILTRATION DETAIL

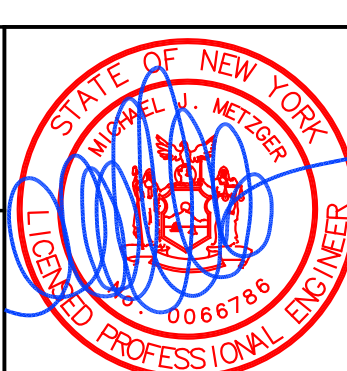
PROFILE

NOTES

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Designed By:	JCM			
Drawn By:	JCM			
Checked By:	MJM			
Cad File:	M-1314			
NOTE: UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING IS A VIOLATION OF SECTION 7209, PROVISION 2 OF THE NEW YORK STATE EDUCATION LAW				
DUMPSTER & GRADING	06/30/17	JCM/ARH		
GRADING REVISIONS	06/16/17	JCM/ARH		
LANE CLOSURE DETAIL	01/12/17	JCM/ARH		
BUILDING RELOCATION	05/25/16	JCM/ARH		
COND'L APPROVAL COMMENTS	03/10/16	JCM/ARH		
REVISIONS	DATE	BY/CK		

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CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING



600 RIVER ROAD
CITY OF NORTH TONAWANDA
NIAGARA COUNTY, NEW YORK
SITE & STORMWATER DETAILS
SCALE: AS SHOWN
DATE: FEBRUARY 26, 2016
JOB NO: M-1314
SHEET NO: D-1

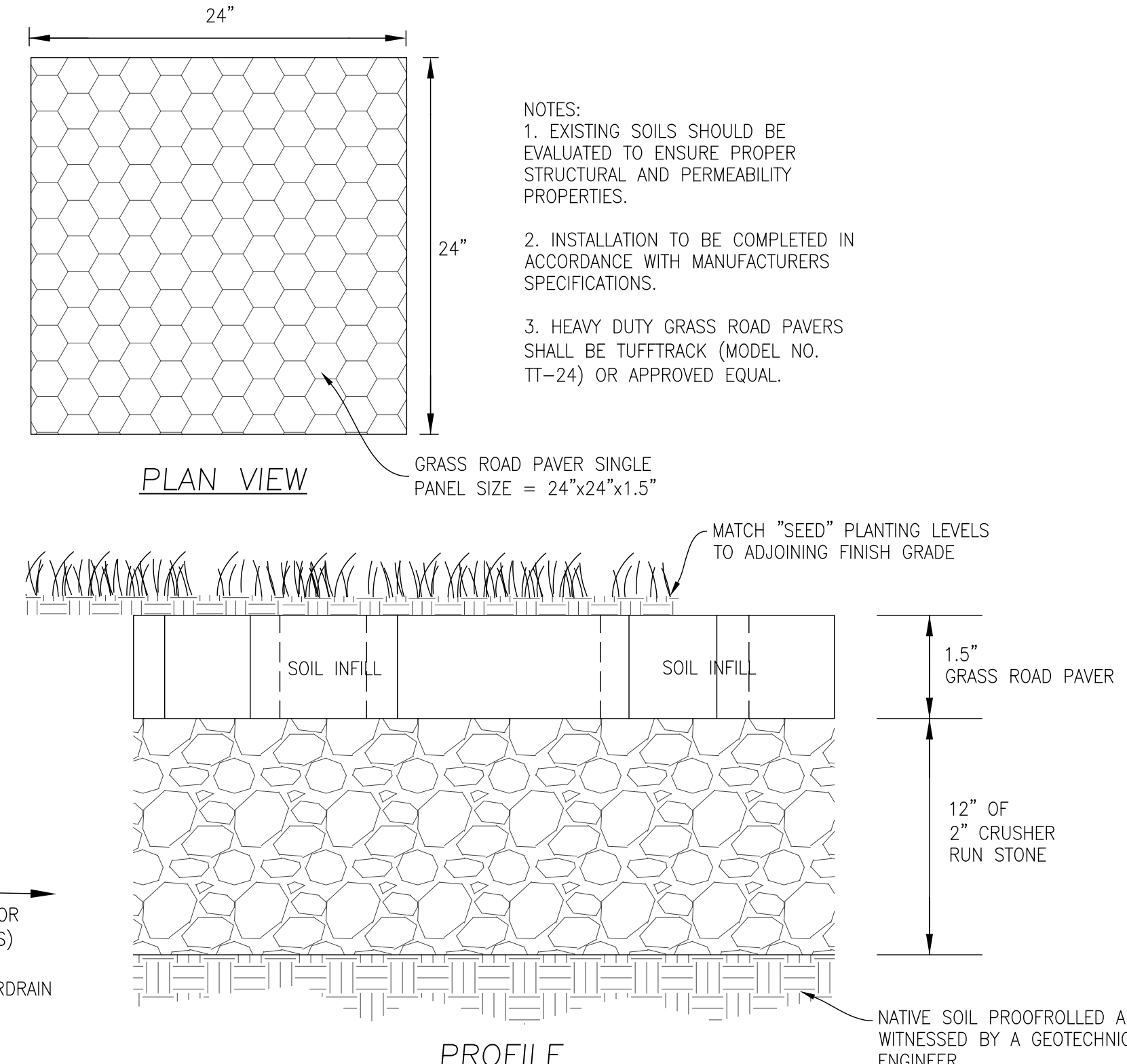
LIGHTING SCHEDULE

SYMBOL	QTY	LUMINAIRE LABEL	LUMINAIRE WATTS	TOTAL WATTS
	5	NXT-24S-450mA-2ES	35	175
	7	NXT-24S-450mA-4AH	35	245
	3	NXT-24S-450mA-5SM	35	105
	2	NXT-24S-450mA-3LB	35	70

LIGHT FIXTURE:
ELEMENT SERIES NXT-24S LED OR EQUAL
(EQUIPPED WITH ADJUSTABLE LIGHTING SHIELD
TO CONTROL SPREAD AND DIRECTION SO AS
NOT TO CREATE ANY NUISANCE TO ADJACENT
PROPERTIES)

LIGHTING DETAILS

N.T.S.

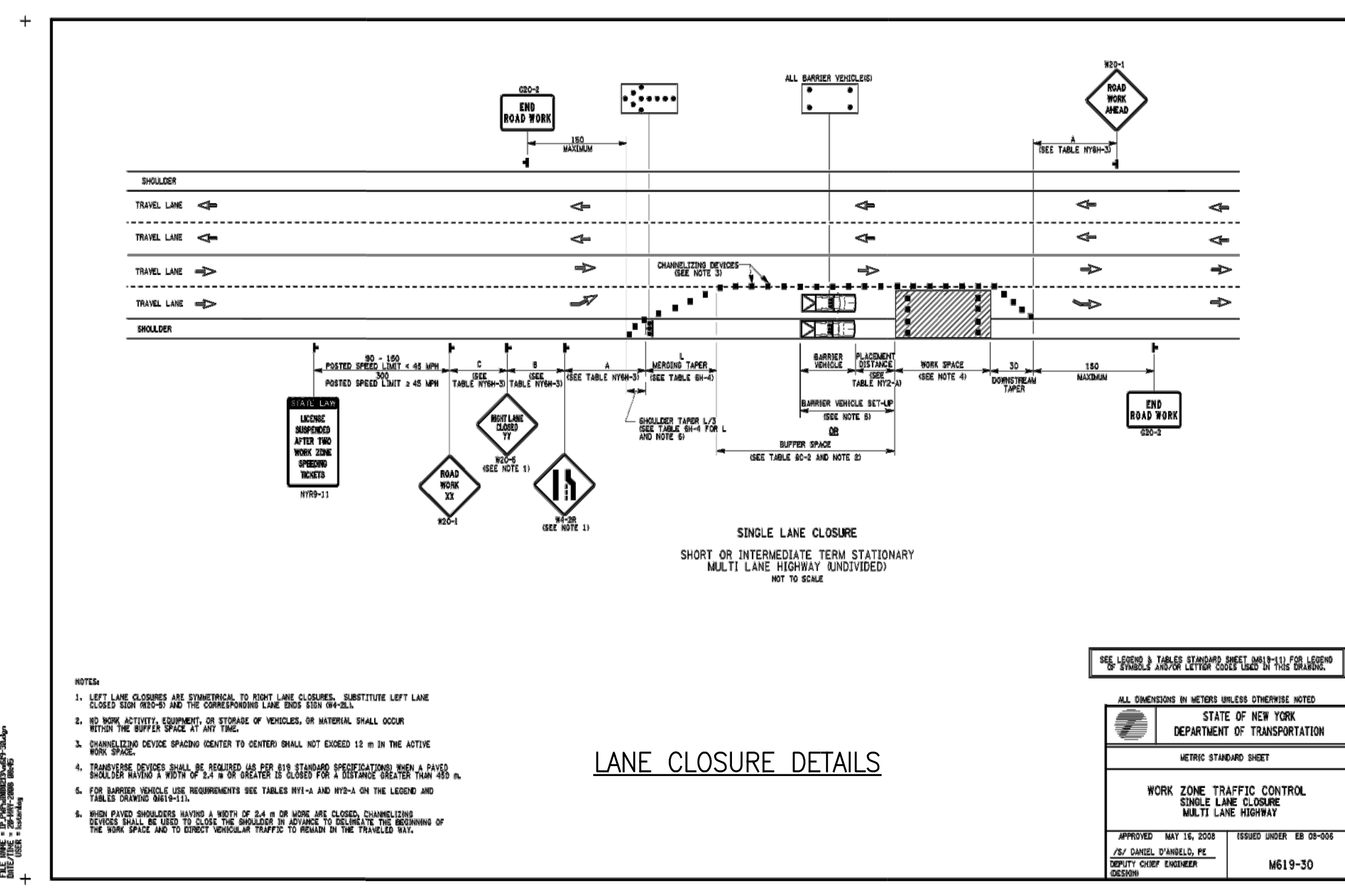


PLAN VIEW

PROFILE

HEAVY DUTY GRASS ROAD PAVER DETAIL

N.T.S.



LANE CLOSURE DETAILS

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
METRIC STANDARD SHEET
WORK ZONE TRAFFIC CONTROL
SINGLE LANE CLOSURE
MULTI LANE HIGHWAY
APPROVED: MAY 14, 2008
FOR: CHIEF ENGINEER, NY
DEPUTY CHIEF ENGINEER
DESIGNED: M619-30

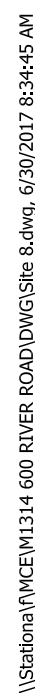


Diagram illustrating the dimensions and components of a trench excavation:

- TOPSOIL (MIN.)**: Indicated at the top of the excavation.
- TRENCH PAYWIDTH (I.D. + 24")**: The width of the trench.
- BACKFILL WITH MATERIAL EXCAVATED FROM TRENCH**: The material used to fill the trench.
- PAY DEPTH FOR PIPE**: The depth of the trench for the pipe.
- TOP OF PIPE ZONE**: The upper boundary of the pipe zone.
- 12"**: The distance from the top of the pipe zone to the center of the pipe.
- O.D.**: Outside Diameter of the pipe.
- 12"**: The distance from the center of the pipe to the trench wall.
- INV. LINE**: Invert Line, indicating the bottom of the pipe.
- 1 2/3 I.D. (6" MIN.) (12" MAX.)**: The diameter of the pipe, labeled as ϕ 12".

- A. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- B. TRENCHING OPERATIONS SHALL INCLUDE ALL NECESSARY DEWATERING.
- C. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS.
- D. AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHEETED TRENCH AREAS.

PIPE BEDDING MATERIAL (NYSDOT LATEST EDITION)

NOTE: SLAG SHALL NOT BE ALLOWED FOR MATERIALS (1)

6" TOPSOIL (MIN.)

NOTCH EARTH TO ACCOMMODATE RISER

PAY LIMIT FOR LATERALS

APPROX. EXIST. GRADE ON LINE

1'-0" MAX.

2"x4" WOOD MARKER EXTENDED TO 1'-0" BELOW GRADE

TEMP. CAP

TRENCH LINE

CAP

WHEN ON PERMANENT EASEMENT AND DEEPER THEN 8'-0", ONLY RISER PIPE & CAP IS REQUIRED

PAY LIMIT FOR RISER

45° BENDS

45° BEND

45° WYE

1

NOTES:

- THE BID PRICE FOR WYE BRANCHES SHALL INCLUDE THE COST OF CAP, 45° BENDS, STONE BEDDING AS REQUIRED BY SPEC'S AND NECESSARY PIPE NEEDED TO SEAL THE CONNECTION.
- TRENCH DETAILS ARE ONLY SHOWING FOR PURPOSES OF MATERIAL PLACEMENT AND PAY LIMITS.
- AN OSHA APPROVED MOVABLE PROTECTIVE TRENCH SHIELD SHALL BE USED IN ALL UNSHIELD TRENCH AREAS.
- IF 3600 PRESSURE PIPE IS USED A FERNOCO COUPLING SHALL BE USED FOR THE TRANSITION BACK TO SD15 PIPE.

1 NO. 1 CRUSHED STONE WITH A GRADATION CONFORMING WITH NYSDOT SECTION 703-02. THE CRUSHED STONE SHALL BE WELL GRADED WITH NO PARTICLES LARGER THAN ONE INCH AND HAVING A MAXIMUM GRADATION MEETING THE LIMITS DESCRIBED IN THE SPECIFICATIONS. THE BEDDING SHALL BE COMPACTED IN 6" LIFTS WITH EQUIPMENT ACCEPTABLE TO THE PIPE MANUFACTURER. NO SLAG WILL BE ALLOWED.

THE JOINT BETWEEN THE MANHOLE FRAME AND THE EXTENSION RING TO BE MADE WITH AN APPROVED COMPOUND SUCH AS DENTIT NO.10, DURALASE 3101, PIONEER 301 OR EQUAL.

ADJUST TO GRADE WITH APPROVED PRE-CAST EXTENSION RINGS.

1. THE JOINT BETWEEN THE CONE SECTION AND THE EXTENSION RINGS SHALL BE MORTARED IN PLACE.

2. THE INDIVIDUAL RINGS SHALL NOT EXCEED 6" IN THICKNESS. THE TOTAL NUMBER PLACED SHALL BE LIMITED TO 3 AND A MINIMUM OF 12" IN HEIGHT.

3. THE ENTIRE OUTSIDE SURFACE FROM THE FRAME CASTING TO THE CONE SECTION SHALL BE COATED WITH AN APPROVED COATING MATERIAL, SUCH AS "PRECO-PATCH", "ROCK MOUNT", "WATER PLUG", OR APPROVED EQUAL.

ASTM C478 (LATEST DATE) REINFORCED CONCRETE (4000 PSI) TONGUE AND GROOVE SECTIONS WITH ROUND NEOPRENE GASKETS OR TYLOX SUPERSEAL.

SEWER PIPE SHALL NOT BE CLOSER THAN 6" TO MANHOLE JOINT SURFACES FOR BASE AND BARREL SECTIONS.

WATERTIGHT MANHOLE BOOT SEAL (PSX/DIRECT DRIVE OR APPROVED EQUAL) OR LINK-SEAL CONSISTING OF SOLID SYNTHETIC RUBBER LINKS CONNECTED WITH HEAVY ELONGATED WASHERS, BOLTS AND NUTS, AS MANUFACTURED BY THE TUNDELER CORP. OR WAYNE, MICHIGAN OR APPROVED EQUAL.

AFTER INSTALLATION, THE LINK SEAL ASSEMBLIES AT THE WALL PENETRATIONS OF THE MANHOLE SHALL BE COATED WITH "PRECO-PATCH" OR APPROVED EQUAL.

TOP OF ROCK

FOR ROCK EXCAVATION

FOR ROCK EXCAVATION

INVERT OF PIPE

4000 P.S.I. CONCRETE FILL

#4 6" (12" DEPTH OR LESS)

#5 5" (12" DEPTH OR MORE)

EARTHILL (INCLUDE IN MANHOLE BID ITEM)

GRADE

PROPOSED CAP

FIRST MANHOLE STEP SHALL BE 6" FROM THE TOP OF THE CONE.

4" Ø SLOD P.V.C. DRAIN PIPE (INCLUDED IN MANHOLE BID ITEM)

FOR 7" RING JOINTS, ASPHALTIC JOINT COMPOUND (60-100MM) SHALL BE BUTTERED ON SPOUTS AND BELLS PRIOR TO ASSEMBLING THE MANHOLE SECTIONS.

6" RING JOINT, TYLOX SUPERSEAL, OR TYLOX

2" TAPER

AFTER THE BARREL SECTIONS ARE ASSEMBLED, THE EXCESS JOINT COMPOUND SHALL BE TROWELED OFF THE INSIDE AND OUTSIDE FACES. THE INSIDE FACE OF THE JOINT SHALL THEN BE TROWELED WITH "PRECO-PATCH" OR APPROVED EQUAL. THE SPOUTS WITH DENTIT NO.10, DURALASE 3101, PIONEER 301 OR APPROVED EQUAL.

THE CHANNEL WIDTHS OF ALL BENCH TROUGHS SHALL BE EQUAL TO THE DIAMETER OF THE PIPE.

PAYLIMTS FOR SELECT MATERIAL AND ROCK EXCAVATION AT MANHOLES WHERE REQUIRED

6" BELOW LOWEST INVERT (EMBED MIN. 12" INTO CLEAN #1 STONE)

6" CLASS 1, NO. 1 STONE COMPACTED TO THE PROPER ELEVATION, REQUIRED UNDER ALL MANHOLE BASES.

SECTION B-B

[illegible]

TABLE				
PIPE SIZE	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	WEIGHT OF COVER
8" THRU 18"	24"	22 1/4"	35"(MAX.)	150 LB. ± 5%
OVER 18"	32"	30"	46"(MAX.)	200 LB. ± 5%

1. MATERIAL ASTM A448 CLASS 30B CAST IRON.
2. UNIT MUST WITHSTAND H-20 WHEEL LOADING.
3. ALL DIMENSIONS ARE TO BE CONSIDERED MINIMUM WITH THE EXCEPTION OF THE COVER, WHICH MUST CONFORM EXACTLY TO MAINTAIN INTERCHANGEABILITY WITHIN THE COUNTY.
4. COATING NOT REQUIRED.
5. FRAMES AND COVERS SHALL HAVE MACHINED BEARING SURFACES.
6. LOCKING DEVICE MUST BE SITUATED TO ALLOW EASY REMOVAL OF COVER.
7. NO LETTERING OTHER THAN SANITARY WILL BE ALLOWED ON THE EXPOSED



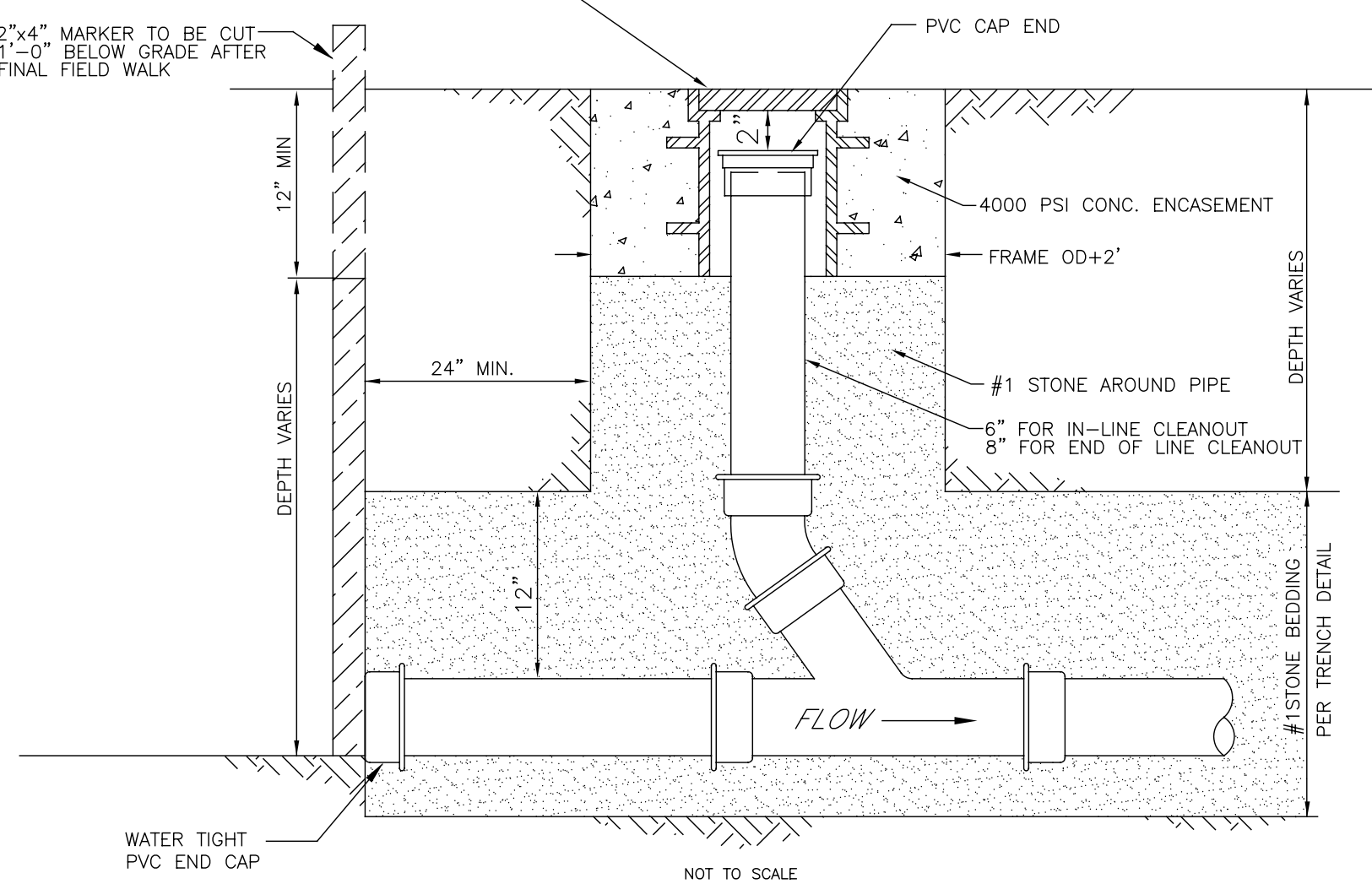
Diagram showing the cam being rotated to lock the cover. The text "SURFACE OF THE CO" is partially visible at the top right, and "ROTATE CAM TO LOCK COVER" is written below the diagram.

LOCKING DEVICE IF REQUIRED

FINISHED FLOOR 7
 BACKFILL W/ EXCAVATED MATERIAL
 VENT
 6" (MIN.)
 BRASS THREADED PLUG CAP WITH RECESSED NUT SET IN CAST IRON CLEAN OUT BODY FERRULE TYPE
 6" CAST IRON OR PVC-SDR 35 RISER WITH MUSHROOM VENT
 SEE CLEAN OUT DETAIL FOR SERVICE CONNECTION
 BACKFILL W/ EXCAVATED MATERIAL
 6" PVC RISER PIPE EVERY 100' (MAX) AND EVERY CHANGE IN ALIGNMENT
 12" SLEEVE
 6" CAST IRON OR PVC-SDR 35
 CAULDER COUPLING
 45° ELBOW
 PVC WYE FITTING
 NO. 1 CRUSHED STONE OR NO. 1 CRUSHED GRAVEL, 4" UNDER & 6" OVER PIPE.
 CLAY DAM
 2'-0" (MIN.)
 R.O.W. OR PERMANENT EASEMENT LINE
 EXISTING GRADE
 6" CAST IRON RUNNING TRAP WITH HUB VENT OR PVC-SDR 35 P-TRAP (TRAP MAY ALSO BE INSIDE THE BUILDING)
 13' LENGTHS OF 6" DIA. PVC (SDR-35) Ø 1/2" MINIMUM UNDISTURBED SUBGRADE
 MAIN LINE SANITARY SEWER

10. NO DISSECTION MUST BE PROVIDED FOR ANY DISSECTION OF THE BODY. REQUIRE 24 HR. ADVANCE NOTICE FOR DISSECTION OF THE BODY.	4. VENTS AND CLEANSLOTS MUST BE INSTALLED IN THE DIRECTION OF THE SIDEWALK OR DRIVEWAY AREA.	10. CLEAN OUT MEASUREMENTS SHALL BE TAKEN AT THE CENTERLINE OF THE MAIN SEWER FOR NEARSIDE LATERALS AND FROM THE C-C CLEAN OUT FOR THE OPPOSITE SIDE. A CLEAN OUT MAY BE REQUIRED FOR ANY ADJACENT CHANGES IN LATERAL DIRECTION.	11. ANY EXCAVATION TO BE LEFT OPEN MUST BE PROTECTED WITH STEEL OR CONCRETE IN FENCING, OR WHERE NOT FENCED, MUST BE SURROUNDED BY SAFETY FLARES.
2. ALL WORK MUST BE INSPECTED BY A COUNTY INSPECTOR.	5. EJECTOR PUMPS AND/OR ELECTRIC PUMP SHALL BE PROVIDED AND THE FOLLOWING SHALL BE REQUIRED:	11. IF A CLEAN OUT IS REQUIRED AT A POINT, BEYOND THE MAIN SEWER, BEHIND THE PAVEMENT LOTS OR ON THE OPPOSITE SIDE OF PAVEMENT.	12. IF A CLEAN OUT IS REQUIRED AT A POINT, BEYOND THE MAIN SEWER, BEHIND THE PAVEMENT LOTS OR ON THE OPPOSITE SIDE OF PAVEMENT.
3. PPE MATERIAL SHALL BE MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST ASTM SPECIFICATION.	6. CONCRETE ENCASEMENT IF REQUIRED SHALL BE 12" MIN. THICK AND 4'-0" DEEP UNLESS OTHERWISE SPECIFIED.	12. IF A CLEAN OUT IS REQUIRED AT A POINT, BEYOND THE MAIN SEWER, BEHIND THE PAVEMENT LOTS OR ON THE OPPOSITE SIDE OF PAVEMENT.	13. ALL EXCAVATIONS OR CONNECTION SHALL BE MADE UNTIL BUILDING SOLE IS EXPOSED AND BASEMENT FLOOR IS FOUNDED.
4. ALL WORK SHALL BE COMPLETED BY THE END OF THE DAY. HEAVY CATERPILLAR BOM MUST MEETING THE REQUIREMENTS OF ASTM A542.	7. MIN. DEPTH OF COVER > 0'-0"	13. ANY SENDER LAID THROUGH OR OVER THE EXISTING TANK MUST BE CAST IN PLACE. EXISTING TANK MUST BE FILLED WITH BANK RUN GRAVEL.	

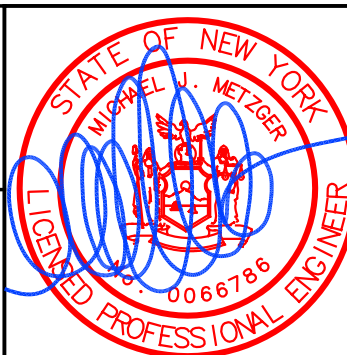
EXTERIOR CLEANOUT @ GRADE
J.R. SMITH #4251-U W/ VANDAL-
PROOF SCREWS OR APPROVED EQUAL
COVER TO BE INSCRIBED "SANITARY"



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NOTE: UNAUTHORIZED ALTERATION
OR ADDITION TO THIS DRAWING IS
A VIOLATION OF SECTION 7209,
PROVISION 2 OF THE NEW YORK
STATE EDUCATION LAW

 METZGER CIVIL ENGINEERING, PLLC	
8245 SHERIDAN DRIVE WILLIAMSVILLE, NY 14221 PH: 716-633-2601 FAX: 716-633-2704	CIVIL ENGINEERING LAND PLANNING SITE DESIGN MUNICIPAL ENGINEERING



SANITARY SEWER DETAILS

SCALE:	AS SHOWN
DATE:	SEPTEMBER 28, 2016
JOB NO:	M-1314
SHEET NO:	

STABILIZED WITH STONE

STABILIZED WITH GRASS

PHASE I CONSTRUCTION

AREAS OF DISTURBANCE:



TOTAL AREAS OF DISTURBANCE FOR PHASE I CONSTRUCTION:
BUILDING FOOTERS: 6,375 SF
STORM SEWER: 4,000 SF
WATER & SANITARY SEWER: 13,800 SF
GRAND TOTAL AREAS OF DISTURBANCE = 24,175 = 0.55 ACRES

FUTURE CONSTRUCTION

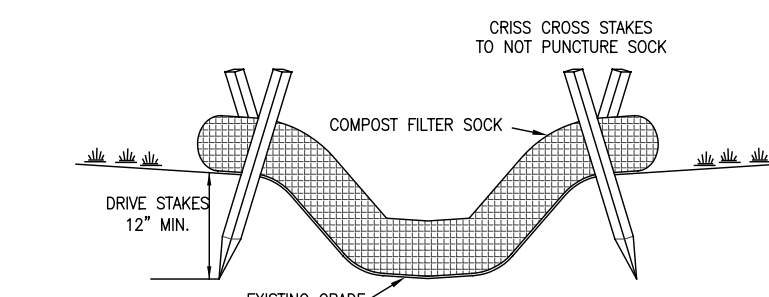
FUTURE CONSTRUCTION

FUTURE CONSTRUCTION

STABILIZATION WILL BE RE-ESTABLISHED AS WORK PROCEEDS

EROSION AND SEDIMENT CONTROL NOTES:

- ALL DISTURBED AREAS AND SITE STOCKPILES ARE TO HAVE TEMPORARY VEGETATIVE COVER ESTABLISHED AS SOON AS POSSIBLE.
- IN COMPLIANCE WITH THE GENERAL SPDES PERMIT GP-0-15-002 Part IV C 2a, THE OWNER/OPERATOR SHALL HAVE A "QUALIFIED INSPECTOR" ENSURE THAT ALL EROSION AND SEDIMENT CONTROLS ARE INSTALLED AND MAINTAINED:
 - EVERY SEVEN (7) DAYS.
 - SITES WITH ON GOING SOIL DISTURBANCE OF GREATER THAN 5 ACRES OF SOIL AT ANY ONE TIME, TWO (2) SITE INSPECTIONS EVERY SEVEN (7) DAYS, SEPARATED BY A MINIMUM OF TWO (2) FULL DAYS.
 - SITES WITH SOIL DISTURBANCE TEMPORARILY SUSPENDED (WINTER SHUTDOWN) AND SITES WHERE TEMPORARY STABILIZATION MEASURES HAVE BEEN APPLIED, ONCE EVERY 30 DAYS.
- AFTER EACH RAINFALL EVENT OR WHENEVER WARRANTED, THE CONTRACTOR MUST INSPECT AND IF NECESSARY, REPAIR ALL EROSION CONTROL DEVICES.
- AFTER "FINAL STABILIZATION" (AS DEFINED IN THE GENERAL PERMIT) HAS BEEN ACHIEVED, INCLUDING THE ESTABLISHMENT OF COMPETENT VEGETATION, THE CONTRACTOR IS TO REMOVE ALL TEMPORARY EROSION CONTROL DEVICES.



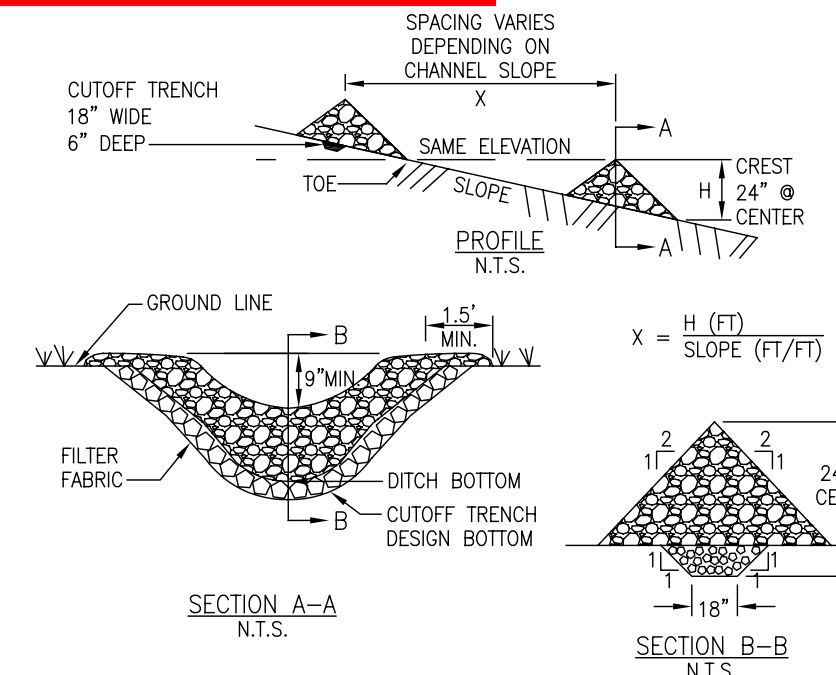
NOTES:

- 8" MINIMUM COMPOST FILTER SOCK MUST CONFORM TO USACE PMTB 200-1-62 (FILTREX SLSOCK OR APPROVED EQ.).
- INSTALL 3" LONG 2"x2" HARDWOOD STAKES AT 10' INTERVALS OR AS SPECIFIED BY THE SOCK MANUFACTURER.
- WOODEN STAKES TO BE INSTALLED IN A CROSS CROSS PATTERN SO AS NOT TO PUNCTURE THE SOCK.
- WOODEN STAKES TO BE DRIVEN AT LEAST 12" INTO GROUND.
- ADJUTING ENDS MUST BE OVERLAPPED TO PROVIDE CONTINUOUS PROTECTION.

MINIMUM SOCK SPACING	
SLOPE %	12 INCH SOCK
0-2%	300'
2-5%	200'
5-10%	100'

COMPOST FILTER SOCK

N.T.S.

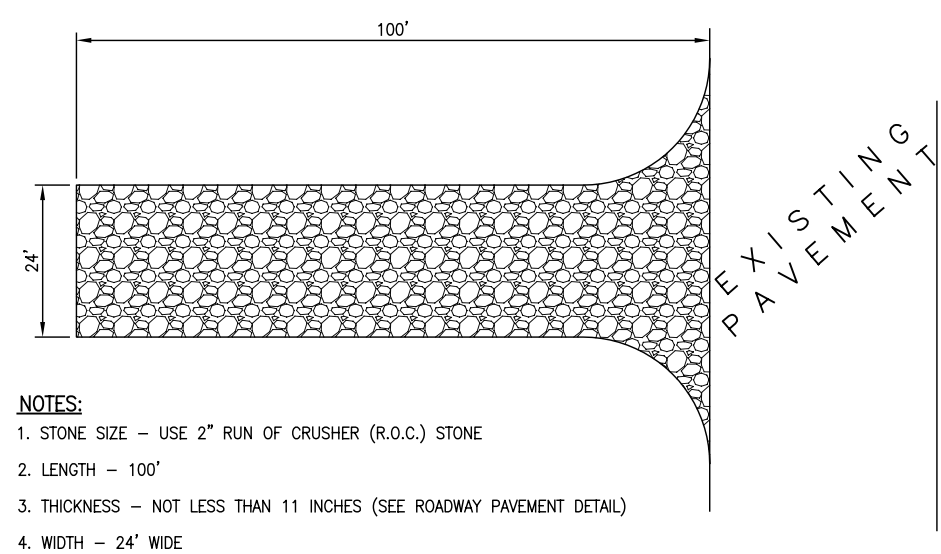


CONSTRUCTION SPECIFICATIONS

- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN ON THE PLAN.
- SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
- ENSURE THAT CHANNEL APPEARANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

TEMPORARY STONE CHECK DAM

N.T.S.

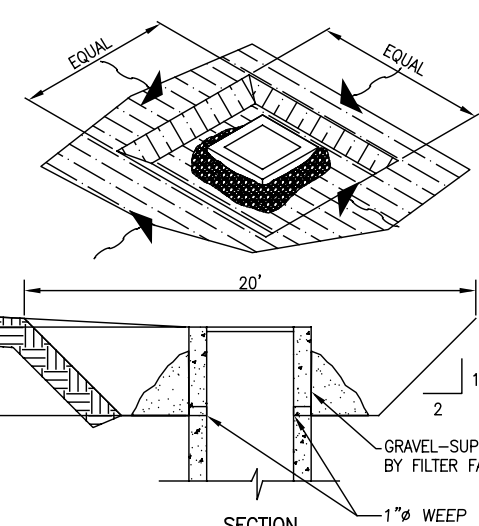


NOTES:

- STONE SIZE - USE 2" RUN OF CRUSHER (R.O.C.) STONE
- LENGTH - 100'
- THICKNESS - NOT LESS THAN 11 INCHES (SEE ROADWAY PAVEMENT DETAIL)
- WIDTH - 24" WIDE
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE (SEE ROADWAY PAVEMENT DETAIL).
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

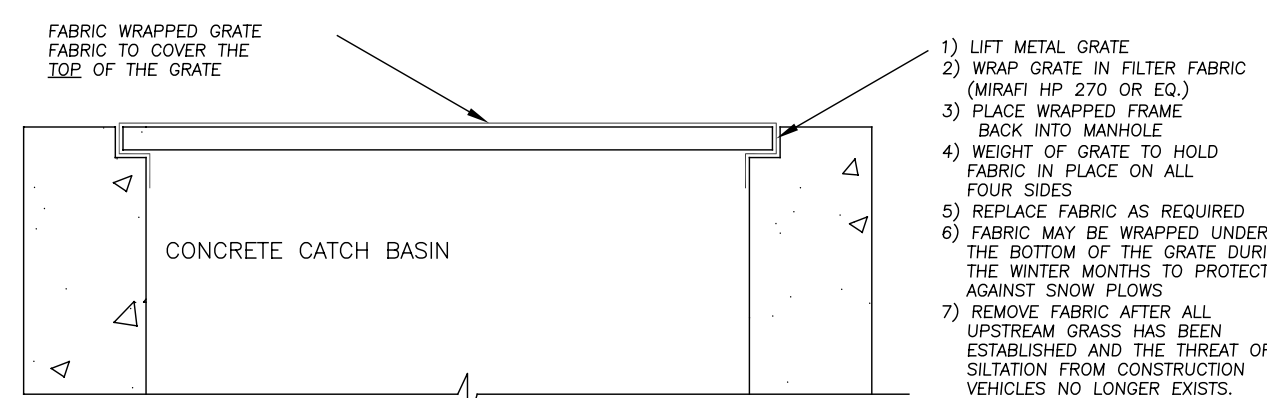
TYPICAL STABILIZED CONSTRUCTION ENTRANCE DETAIL

N.T.S.



BEFORE PAVING DROP INLET PROTECTION DETAIL

N.T.S.



AFTER PAVING DROP INLET PROTECTION DETAIL

N.T.S.

PHASE I CONSTRUCTION SWPPP DISTURBANCE MAP

600 RIVER ROAD
CITY OF NORTH TONAWANDA
NIAGARA COUNTY, NEW YORK

EROSION AND SEDIMENT CONTROL PLAN

ESC-1

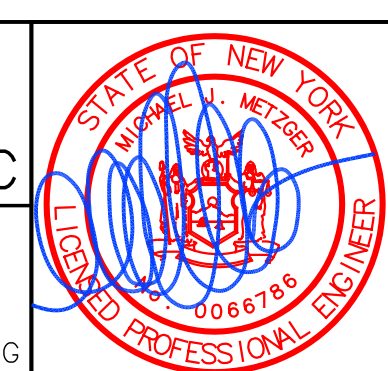
NOTES

- BOUNDARY INFORMATION PROVIDED BY CLEAR CREEK LAND SURVEYING LLC SURVEY DATED APRIL 18, 2013.
- THIS IS NOT A PROPERTY SURVEY.

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Designed By:	JCM	DUMPSTER & GRADING	06/30/17	JCM/ARH
Drawn By:	JCM	GRADING REVISIONS	06/16/17	JCM/ARH
Checked By:	MJM	CLUBHOUSE REVISIONS	03/21/17	JCM/ARH
Code File:	M-1314	FIRE DEPARTMENT COMMENTS	03/09/17	JCM/ARH
		FIRE LANE	02/15/17	JCM/ARH
		BLDG RELOCATION & POOL	01/12/17	JCM/ARH
		BUILDING RELOCATION	05/25/16	JCM/ARH
		REVISIONS	DATE	BY

ME METZGER CIVIL ENGINEERING, PLLC
8245 SHERIDAN DRIVE
WILLIAMSVILLE, NY 14221
PH: 716-633-2601
FAX: 716-633-2704
CIVIL ENGINEERING
LAND PLANNING
SITE DESIGN
MUNICIPAL ENGINEERING



SCALE: 1" = 30'
DATE: JANUARY 22, 2016
JOB NO: M-1314
SHEET NO:



Daniel Thomas
400 Hinman Rd.
Lockport, NY 14094
716-260-6017 (cell)
716-433-4930 (fax)

8/9/17

Visone

Att:
Re: 600 River Road
Email:

To whom it may concern:

This is to certify that the material being supplied to the above project conforms to the outlined NYSDOT requirements for Section 703-02 Coarse Aggregate. Below is a gradation for 2" ROC NYSDOT Select Granular Fill item 203-07

Location: Lockport
Material Type: 2" ROC

Source No. 5-5R
Test No. 17AR31

Sieve Size	Weight	% Ret	% Pass	Spec
2"	0.0	0.0	100.0	100
1 1/2"	506.1	4.2	95.8	
1"	1337.6	11.1	84.7	
3/4"	807.4	6.7	78.0	
1/2"	2120.8	17.6	60.4	
1/4"	2144.9	17.8	42.6	
1/8"	1470.1	12.2	30.4	
#20	1759.3	14.6	15.8	
#40	349.5	2.9	12.9	0-70
#80	421.8	3.5	9.4	
#200	216.9	1.8	7.6	0-15
pan	915.8	7.6		
Total	12050.0			

Sincerely,

Daniel Thomas
Quality Control
Lafarge A&C

CONSTRUCTION MATERIALS / NORTHERN DIVISION
PO Box 510 ~ 400 Hinman Road, Lockport, New York 14094
Office: (716) 439-1300 Fax: (716) 439-9447



Daniel Thomas
400 Hinman Rd.
Lockport, NY 14094
716-260-6017 (cell)
716-433-4930 (fax)

8/9/17

Visone

Att:
Re: 600 River Road
Email:

To whom it may concern:

This is to certify that the material being supplied to the above project conforms to the outlined NYSDOT requirements for Section 703-02 Coarse Aggregate. Below is a gradation for Clear #2 Stone

Location: Lockport
Material Type: #2 Stone

Source #: 5-5R
Test No. 17AR31

Sieve Size	Weight	% Ret	% Pass	Spec
1 1/2"	0.0	0.0	100.0	100
1"	59.0	5.7	94.3	90-100
3/4"	311.7	30.1	64.2	
5/8"	294.1	28.4	35.8	
1/2"	275.5	26.6	9.2	0-15
3/8"	78.7	7.6	1.6	
1/4"	3.1	0.3	1.3	
pan	13.5	1.3		
Total	1035.7			

Sincerely,

Daniel Thomas
Quality Control
Lafarge AC&A



Daniel Thomas
400 Hinman Rd.
Lockport, NY 14094
716-260-6017 (cell)
716-433-4930 (fax)

8/9/17

Visone

Re: 600 River Road
Email:

To whom it may concern:

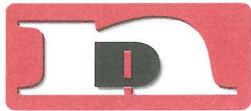
This is to certify that the material being supplied to the above project conforms to the outlined NYSDOT requirements for Section 703-02 Coarse Aggregate. Below is a gradation for NYSDOT Clear #1's

Location: Lockport Source No. 5-5R
Material Type: NYSDOT #1 Stone Test No. 17AR31

Sieve Size	Weight	% Ret	% Pass	Spec
1"	0.0	0.0	100.0	100
3/4"	0.0	0.0	100.0	
1/2"	280.3	3.2	96.8	90-100
3/8"	3739.8	42.7	54.1	
1/4"	3879.9	44.3	9.8	0-15
#4	648.1	7.4	2.4	
#8	113.9	1.3	1.1	
pan	96.3	1.1		
Total	8758.3			

Sincerely,

Daniel Thomas
Quality Control
Lafarge AC&A



New Enterprise Stone & Lime Co., Inc.

500 Como Park Boulevard • Buffalo, New York 14227 • Office: 716-826-7310
Fax: 716-826-1342

August 9, 2017

Mr. Tom Celik
VisoneCo. Site Development LLC
10151 Main Street
Clarence, NY 14031

Re: 600 River Road

Dear Tom:

We certify the aggregates we supply on the subject project meet the New York State Department of Transportation Specification and Gradations as follows:

Item #304.12 // -2" Crusher Run		
<u>Sieve Size</u>	<u>Percent Passing</u>	<u>Specifications</u>
2"	100	100
1/4"	33	25-60
No. 40	8	5-40
No. 200	4	0-10

Item #703.0201 // #1 Crushed Stone		
<u>Sieve Size</u>	<u>Percent Passing</u>	<u>Specifications</u>
1"	100	100
1/2"	94	90-100
1/4"	8	0-15

Item #623.12 // #2 Crushed Stone		
<u>Sieve Size</u>	<u>Percent Passing</u>	<u>Specifications</u>
1 1/2"	100	100
1"	94	90-100
1/2"	8	0-15

Our New York State Source Number at the Wehrle Drive plant is 5-3R.

We trust this meets with your approval.

Very truly yours,

Bob Warrington
Account Representative

CR: DJ