

Addendum No.1

Maider Road Waterfront ERP Site Remediation

Addendum No. 1 Issued: 03/26/2021

The purpose of this addendum is to respond to questions following the Pre-Bid Walkover on 03/17/2021, as well as to amend certain bid documents.

Q: What is the maximum size of concrete that can be placed back into the excavation?

A: The concrete should be broken down into approximate one square foot pieces and consolidated in a manner that restricts or limits future subsidence.

Q: Do you have the diameter of pipe (Asbestos) to be removed?

Q: What size is the asbestos pipe?

A: The piping ranges in size from two to eight inches.

Q: Do you have the approximate depth of the pipe to be removed?

A: The attached tables and figures indicate the size, locations, and depths of the piping.

Q: Do you provide details for the subgrade and pad requirements?

A: The requirement to provide a concrete pad for the sheds has been removed from the contract. The contractor shall provide a 6" thick level and compacted base of runner crush.

Q: Can you please confirm that the in water removals have been removed from the project scope?

Q: Can you please clarify what is required to be removed at the dock. At the bid walk it was stated that the removal of in water structures will not be required and no in water work will be done. Please see the attached photo and confirm that this is the pipe and clarify the extent of work. Will the section of pipe extending over the water/dock remain in place after being cut and capped or will that have to be removed?

Q: In the bid walk it was stated that the pier are not being removed in the canal – is this still true?

A: In-water removals have been removed from the project. However, the piping extending from the river bank to the dock shall be cleaned and removed for proper disposal or recycling.

Q: Have the tank contents been sampled and or characterized?

A: No. The Contractor shall performed all required waste characterization testing. For the sake of cost estimating, the Contractor may assume the liquids to be non-hazardous.

Q: Is the restoration of the residential properties included in this item (Non-Wetland Restoration)?

A: Yes.

Q: Can you provide the location of the non-wetland seeding areas on the contract drawings?

A: The vegetated areas within the project limits that are damaged during construction or become bare surfaces resulting from construction shall be restored with non-wetland seeding consistent with the plans and specifications. The precise extent cannot be determined at this time. An estimated area is provided in the Bid Sheet.

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Q: Has a NYS DOL variance been requested for this scope (Asbestos Piping)?

A: No. The Contractor shall determine if a variance is required, obtain if necessary, and pay for all applicable fees.

Q: Should the contractor be including the costs for a variance in this line item (Item 22)?

A: Yes.

Q: The documents reference that OCP and Builders risk insurance. Will both be required? The builders risk is generally not required with straight excavation jobs such as this?

A: The Contractor must obtain insurances are indicated in the specifications.

Q: Please confirm that the petroleum soil excavations need to remain open until confirmatory samples are received.

A: Yes, that would be the ideal situation.

Q: What would the expedited TAT on the petroleum soil excavations confirmatory sampled be?

A: C&S will collect all confirmatory soil samples and coordinate with the Contractor to provided expedited samples results to accommodate expediency of the work.

Q: We have to maintain a dry hole while we wait for confirmation sampling being completed by C&S?

A: It is expected that excavations can be allowed to fill in with groundwater while lab data is pending.

Q: Barrier fence says typical, does not detail. 4' construction fence or 6' steel? Does the entire site need to be enclosed initially?

Q: Will orange construction fence be sufficient for proposed construction fencing around the site?

A: Orange construction fence will be sufficient and will be required to restrict access to the site and active work areas and open excavations.

Q: What size are the new monitoring wells?

A: They are 2" diameter casings. Estimated depth is 15 feet.

Q: Is there as specification on the type of backfill to be used for items 32 and 33 on the bid sheet?

Q: Backfill will be approved if it meets the DER10 testing. No other specs are required for backfill?

A: The type(s) of backfill is up to the Contractor. As detailed in 028335, it must meet DER-10 imported fill criteria and the surface of the fill must be able to support local vegetation. Wetland backfill is described in 333333.33.

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Q: Is compaction testing required?

Q: Compaction testing the backfill is not required?

A: No. However, excavation backfill must be compacted by the weight of the equipment.

Q: What is the final disposition of the haul road? Can the aggregate (if used) be reused on site? Would disposal be a pay item? If timber matts are used would the collection of decon water be a pay item?

A: If aggregate is used for a haul road, it can be left in place. If timber matts are used, they will need to be removed and the Contractor should include water disposal costs under bid item 6.

Q: Because off-site disposal will be a substantial cost to the project with no opportunity to incorporate M/WBE businesses, we respectfully request that the amount of disposal costs be removed from the total project M/WBE percentage goal? Therefore, the M/WBE goals will only apply to job costs that present an opportunity to procure M/WBE businesses and not include disposal sums.

A: M/WBE is a goal and we recognize that there are limitations.

Q: Can you provide an estimated flow rate (gpm) for treatment of groundwater?

A: No. The Contractor is required to design and provide a system that can treat groundwater to accommodate conditions during construction.

Q: There is nothing in the specs for stabilization/solidification of any wet soils. Will the contingency be used to pay for this in the event it is needed?

A: This is not expected to be required and is not part of the contract documents. If required and approved by the Engineer, the contingency could be utilized.

Q: Please provide all bidders with a definition of what is to be carried for Line Item 16. This line item description is very ambiguous and will be determined differently by each bidder without a defined scope. It also seems that Line Item 16 is a duplicate for the Town of Clay with Line Item 1, as Line Item 1 is an allowance to cover any undefined items not covered.

A: Bid item 16 was removed.

Q: Would it possible to receive the Bid Form in Excel format in order to provide a more legible submittal?

A: No.

Q: Please provide guidance on where these forms are located in the bid specifications, we are unable to locate them. According to Article 2 – Attachments to This Bid, these are required with the submittal.

A: The forms referenced in C-410 Section 2.01 G, H, I, do not apply.

Q: Can the units for items 28, 29, 32, 33, 35, 36, and 37 be changed to tons?

A: Cubic yards were converted to tons for these bid items. A conversion factor of CY x 1.5 was applied in each instance.

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Q: Will the office trailer require power and Wifi?

A: An office trailer may be permitted based on the bid amount. The need for power and Wi-Fi is at the discretion of the Contractor, as needed to perform your work.

Q: Can all wood not being removed from site be chipped and left onsite?

A: Specification 311000 Section 3.4C reads as follows: tree trunks, branches, logs, trimmings, and debris may be disposed of offsite in accordance with applicable regulations or these materials may be chipped / mulched and scattered onsite as directed by the Owner's Representative.

Q: We are removing the leach field (300LF) what is the residence doing in regard to toilet use while the leach field is not connected?

A: The Contractor should plan to provide a port-a-potty, if needed. The costs (if any) can be provided in bid item 43.

Q: C&S is responsible for access agreement for offsite work?

A: Yes.

The following are wetland specific questions.

Q: What is the preferred container size/height for the tree and shrub stock?

A: For shrub stock the preferred size and height would be 16" height/spread, container /pot grown. For the tree stock the preferred size and height would be 1 1/4" caliper.

Q: There appears to be a discrepancy between the quantity of tree and shrubs to be installed in the on-site wetland restoration area listed on the Bid Form Item #39 and the table/quantities call out on Drawing C-106. Which would be correct?

A: 29 trees/shrubs will be installed onsite and one offsite. The attached Sheet C-105 and the Bid Sheet are in agreement.

Q: Item #39 on the Bid Form call for 1 tree/shrub to be installed off-site. What are the specifications for this planting? (ie, species, size, etc)

A: The tree will be a Silver Maple (Acer saccharinum) and the preferred size would be 1 1/4" caliper.

Q: For the Non-Wetland Restoration – on-site (Bid Form Item #40), would all disturbed areas on-site receive the seed mixture referred to in Section 310101-3 2.3 D, a switchgrass mix, and at the listed rate of 20lbs/ac? Or would turf grass also be installed in some areas at the different rate listed in the same section but page 4, part 3.5 C, 8lbs/1,000 sq ft. If turf grass is to be used, what is the specified turf mix?

A: All disturbed onsite areas will receive the switchgrass mix and will be applied at the listed rate of 20lbs/ac. Turf grass will not be used for on-site disturbed areas. The 8lbs/1,000 sq. ft. application rate has been removed from the section. Please utilize the application rate in the table in the specification. A Kentucky blue grass based seed mixture has been added to the specification to applied on the offsite residential properties.

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Q: What seed is to be used for the Non-Wetland Restoration – off-site (Bid Form Item #41)?

A: Off-site non-wetland restoration areas will be planted with the switchgrass mixture. Off-site residential properties will be planted with the blue grass mixture.

Q: For the Wetland Restoration (Bid Form Item #42), on drawing C-106, is there a specific seed mix and/species list for the mix to be installed in “wetland seeding areas?”

A: Attached are the up to date Wetland Restoration Plan Sheets. On sheet C-106 there are 3 wetland seeds mixes listed and only one of the seed mixes needs to be installed in the wetland restoration areas.

Q: There is a slight discrepancy on wetland areas to be impacted (shown on Drawing C-105) vs areas to be restored (shown on Drawing C-106), 1.43 ac compared to 1.33 ac, respectively. The square yardage listed on the Bid Form Item #42 (Wetland Restoration – on-site), also slightly differs at 1.30 acres. Which would be the correct amount?

A: Attached are the up to date Wetland Restoration Plan Sheets. The table on sheet C-104 indicating 1.31 acres is the correct amount of wetland restoration-on-site. The Bid Sheet lists 6,340 square yards, which is 1.31 acres.

Q: In Wetland Specification 610-2.10, it is stated that all seeded areas and plantings shall be watered until final acceptance. What will be considered final acceptance?

A: Final acceptance will be determined by the Engineer during and after construction.

Q: In Wetland Specification 610-3.03, Turf Establishment is discussed. Where is turf expected to be installed?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.03, there is a statement on Rolled Erosion Control products. Where on the project site is REC expected to be needed and what are the specifications for this product?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.04, where can we find mulch Types I-V and/or would hydromulch be considered appropriate for mulching the seeded areas?

A: Hydromulch is appropriate for the mulching of seeded areas.

Q: In Wetlands Specification 610-3.04, it is stated that the wildflower areas will need to be watered for the duration of the contract. What is the expected duration of the contract, or what is the duration of the maintenance period for the seeded wetland areas?

A: The duration of maintenance period for the seeded wetland areas is when the seed mix starts to show signs of growth throughout the majority (minimum 75%) of the seeded wetland areas.

Q: In Wetland Specification 610-3.05, there are specs on sod installation. Where is sod expected to be installed on the project?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.06, there is a discussion of incorporating mycorrhizal fungi where/when shown in the contract documents. Is there another mention of this application

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in the contract documents? Is it required for this job and if so, where should these applications happen?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.06, there are statement made in terms of fertilizing trees. Are existing trees on-site to be fertilized?

A: Existing trees on-site do not need to be fertilized.

Q: In Wetland Specification 610-3.09, there are statements concerning Weed Control Landscape Fabric and that is should be placed where shown in the contract documents. There does not appear to be mention of landscape fabric in the drawings or elsewhere. Is it to be installed on this project?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.10, there are specifications pertaining to irrigation of the plantings. It states that watering shall be done in accordance with previous sections, however duration is unclear based on the language. What is the expected period for watering/maintenance of these areas? (ie 1 year following substantial completion of plant installation, 1 growing season, 6 months, etc) Where can we obtain water in close proximity to the work site?

A: The watering/maintenance of these areas is one growing season. The Erie Canal may be a possible location to obtain water. There is also public water along Maider Road.

Q: In Wetland Specification 610-3.11, it states that weed removal shall be done in accordance with the contract documents, however there does not appear to be a mention of post-installation weed control elsewhere in the documents. What species of weeds are to be controlled and for what duration past installation of seed and woody plant material?

A: This has been removed from the Wetland Specification.

Q: In Wetland Specification 610-3.13, where will "mowing limit markers" be installed, and how many markers are expected to be needed?

Q: Mowing markers listed on page 611-01, did not see quantity or location...

A: This is not required and the detail in the specification has been removed.

Q: Is there a warranty period for the planted material? If so, what are the survival/cover requirements and for what length of time?

A: Attached are the up to date Wetland Restoration Plan Sheets. On sheet C-106 in these plans there is a discussion of warranty period for the planted material along with survival cover requirements and length of time.

Q: Have the wetland boundaries been approved by the USACE with a JD?

A: The wetland boundaries will be approved once the permit has been issued.

Q: Can this project self-authorize under a Nationwide Permit or will we need to write up a PCN for this work? (The example they have is NWP 38)?

A: A PCN has already been applied for and the USACE will issue a permit under NWP #38.

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Q: Will you accept substitutions for tree / shrub species if we can't find those specific species?

A: Yes we will accept substitutions for tree/shrub species but they must be approved by the Engineer.

Q: How much of the site is going to require sod? (This may be in the RFP, or drawings, but I'm not seeing it)?

A: No sod will be required for this project.

Q: If wetland restoration monitoring during construction and post construction wetland monitoring will be required, would you like us to include that in this proposal or a separate one?

A: Wetland restoration monitoring during and post construction will not be required. The planting and seeding within the wetland restoration areas will be monitored by the Engineer. Post construction wetland monitoring is specified on wetland restoration plan sheet C-106.

The specifications and contract documents have been changed as follows, and the amended documents are attached:

- Drawings:
 - C-101 was modified to reflect the relocation of two residential sheds and updates to work along the river.
 - C-104 was modified to remove the stabilized construction entrance and installation of a turbidity curtain in the river.
 - C-500 was modified to remove the turbidity curtain detail and stabilized construction entrance detail.
 - The updated Wetland Restoration Plans (C-104 to C-106) are provided.
- C-410 – Bid Sheet:
 - Item 5 was removed.
 - Item 14 was amended to remove river dock pier removal.
 - Item 15 was amended to include the relocation of two sheds and the installation of a 6" stone base in lieu of concrete.
 - Items 28 and 29 were modified from cubic yards to tons for units of measure. The conversion factor is listed.
- Specification C-410, Bid Form was amended to remove Section 2.01, G, H, I.
- Specification 012200 was amended to reflect Bid Sheet changes.
- Specification 024119 was amended to reflect that selective demolition work along the river is limited to the removal of the piping.
- Specification 310101 was amended to specify residential lawn grass requirements.
- Specification 333333.33, detail 611-01 was removed and numerous requirements have been omitted and shown as strikethroughs.

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Piping Information

A link to the video surveys is below:

<https://cscos-my.sharepoint.com/:f/p/wrandall/Ett5dErn08lHhsMj6ufw7HgBsr7WPcfGSNMTrkFLl4lI4Q?e=qXZWnX>

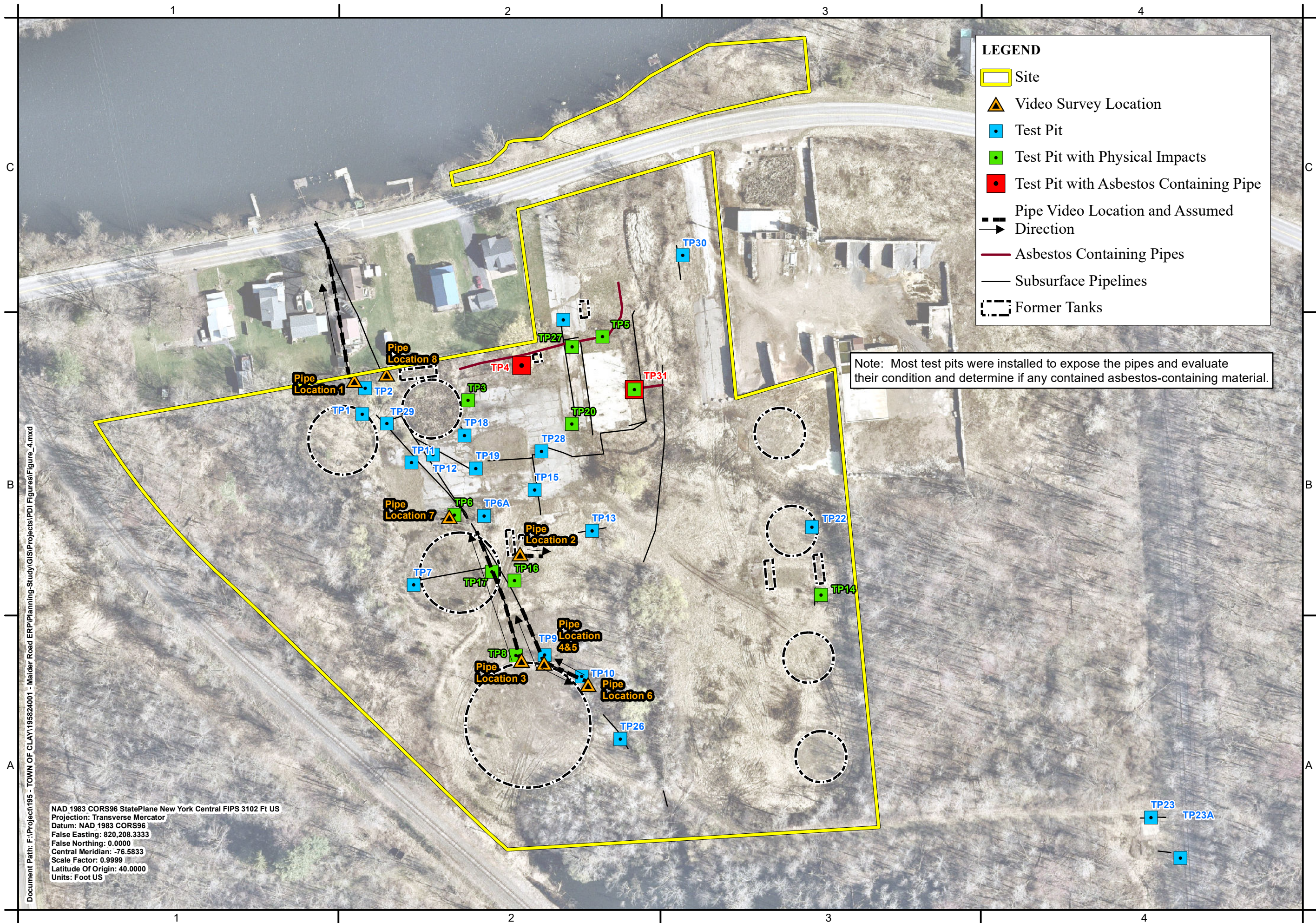
3.5 Test Pitting Soil Sampling Results

At each test pit location, soils were screened for physical evidence of impacts, such as staining and odors. The types and sizes of buried piping were also documented. The following table summarizes the observations and denotes sample locations.

Test Pit Number	Pipe Size (inches)	Pipe Construction	Condition	Soil Staining?	Petroleum Odors?	Soil Sample Collected?
1	None					
2	2	Black steel	Intact			
3	2, 2, 3	Black steel	Intact		Yes	
4	4	Black steel	Intact			
5	2 x 2	Black steel	Intact	Yes	Yes	Yes
6	None			Yes	Yes	Yes
7	4	Clay				
8	2, 4	Black pipe	Intact	Yes	Yes	Yes
9	2	Black pipe	Intact			Yes
10	8	Black pipe	Intact			Yes
11	2	Black steel	Intact			
12	8	Black steel	Intact			
13	2 x 2	Black steel Copper	Intact			
14	UST	Steel	Damaged	Yes	Yes	
15	1, 2, 3	Black steel	Intact			
16	8	Black steel	Intact	Yes		Yes
17	2, 8	Black steel	Intact	Yes	Yes	Yes
18	8	Black Steel	Intact			
19	2	Black steel	Intact			
20	18	Unknown	Broken	Yes	Yes	Yes
22	None					
23	12	Black steel	Intact			
23a	12 x 2	Metal	Intact			
24	None					
26	1	Black steel	Intact			
27	None			Yes	Yes	
28	2	Black steel	Intact			
29	3	Black steel	Intact			
30	1	Conduit	Intact			
31	6	Black fibrous	**	Yes	Yes	Yes

Note: Approximate 28' x 6' UST identified at TP-14. Tank is filled with water, with a sheen on its surface.

As shown above, nine soil samples were collected from nine separate test pits. The samples were analyzed for CP-51 fuel oil list plus MTBE. Some piping was tested for



Document Path: F:\Project\195 - TOWN OF CLAY\195824001 - Mader Road ERP\Planning-Study\GIS\Projects\PD\Figures\Figure_4.mxd

NAD 1983 CORS96 StatePlane New York Central FIPS 3102 Ft US
Projection: Transverse Mercator
Datum: NAD 1983 CORS96
False Easting: 820,208.3333
False Northing: 0.0000
Central Meridian: -76.5833
Scale Factor: 0.9999
Latitude Of Origin: 40.0000
Units: Foot US

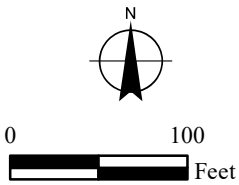
LEGEND

- Site
- Video Survey Location
- Test Pit
- Test Pit with Physical Impacts
- Test Pit with Asbestos Containing Pipe
- Pipe Video Location and Assumed Direction
- Asbestos Containing Pipes
- Subsurface Pipelines
- Former Tanks

Note: Most test pits were installed to expose the pipes and evaluate their condition and determine if any contained asbestos-containing material.



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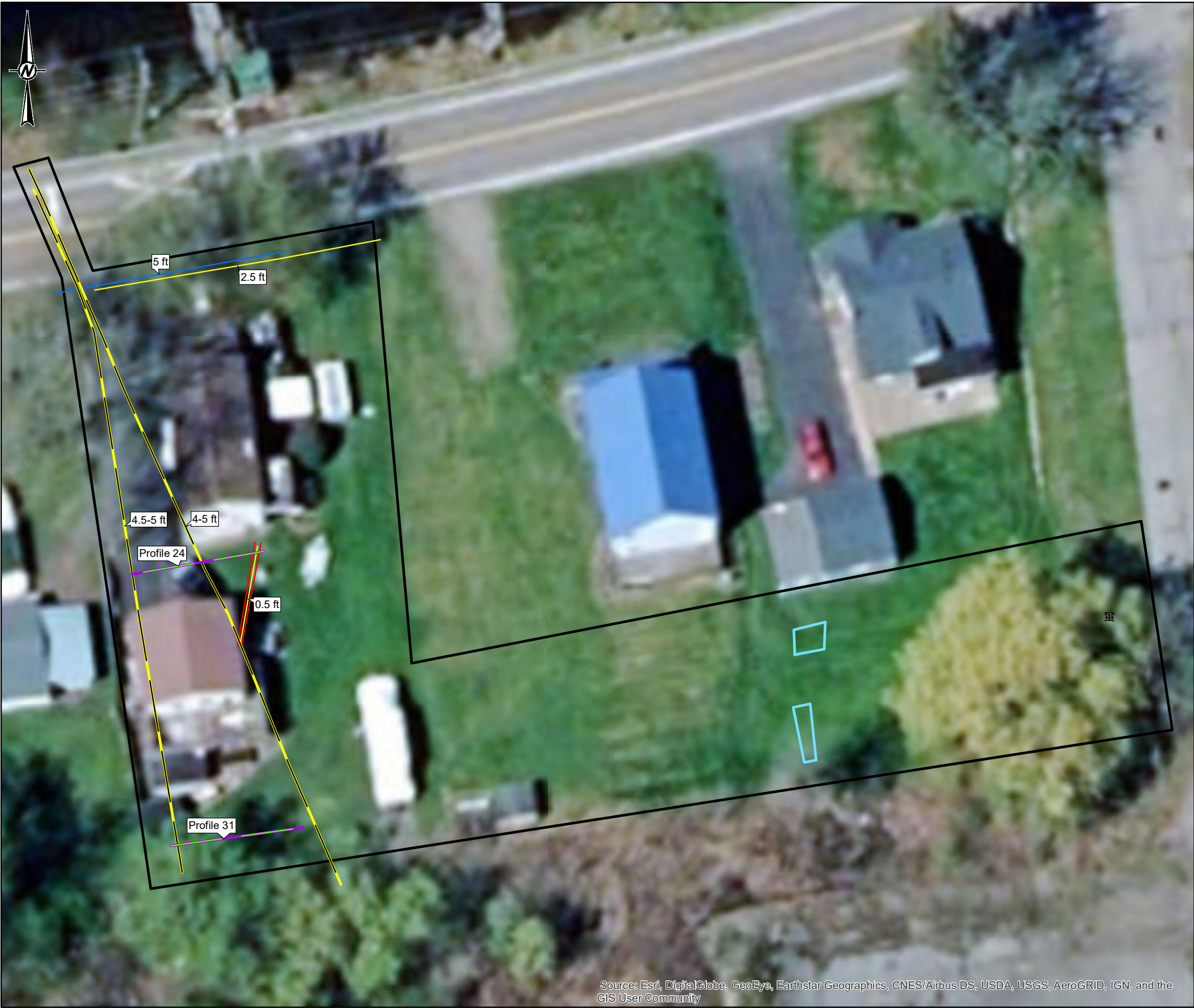
Mader Road Waterfront Site
Environmental Restoration Project
NYSDEC Site No. B00015
Clay, Onondaga County, New York

PROJECT NO:	195824001
DATE:	September 2020
SCALE:	AS SHOWN
DRAWN BY:	
DESIGNED BY:	
CHECKED BY:	

Test Pit &
Video Survey
Locations

Figure 4

PATH: C:\Users\BKing\Smith\Golder\Assest\2014\1671_C and S Clay_Geophysics_NY - Project Files\GIS Technical Work\GIS\2014\1671_C and S Clay_Aerial.mxd PRINTED ON: 2020/07/16 AT: 1:30:18 PM



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

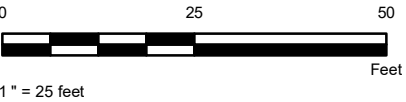
Site Features

- Area of Interest (AOI) - Note 2
- Grate

Geophysical Interpretation

- AOC
- Product
- Gas
- Water
- Power
- GPR Profile

FOR DESIGN AND ENGINEERING PURPOSES ONLY



NOTE(S)
1. UTILITY CALLOUTS INDICATE DEPTH OF FEATURE
2. AREA OF INTEREST DEFINED IN CHANGE ORDER-01

REFERENCE(S)
COORDINATE SYSTEM: NAD 1983 2011 STATEPLANE NEW YORK CENTRAL FIPS 3102 FT US

CLIENT
C&S COMPANIES
499 COL. EILEEN COLLINS BOULEVARD
SYRACUSE, NEW YORK, 13212

PROJECT
GEOPHYSICAL UTILITY MAPPING SURVEY AT THE NYSDEC
SITE ID B00015 SITE LOCATED AT
3410 MAIDER ROAD, CLAY, NEW YORK

TITLE
CHANGE ORDER-01 GEOPHYSICAL SUBSURFACE UTILITY
INVESTIGATION SURVEY RESULTS

CONSULTANT	YYYY-MM-DD	2020/07/16
	DESIGNED	BKS
	PREPARED	BKS
	REVIEWED	MDS
	APPROVED	PTM



PROJECT NO. 20141671
PHASE 004
REV. 0001

FIGURE 2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

Addendum No.1
Maiden Road Waterfront ERP Site Remediation

Updated Drawings



CONTRACT DRAWINGS
FOR THE CONSTRUCTION OF

MAIDER ROAD WATERFRONT SITE

ENVIRONMENTAL RESTORATION PROJECT

3414 MAIDER ROAD, TOWN OF CLAY, NY

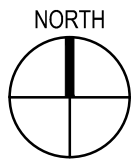
C&S PROJECT: 195.824.001



PROJECT
LOCATION



LOCATION MAP



DRAWING LIST	
SHEET NO.	SHEET NAME
G-001	TITLE SHEET
CIVIL	
C-001	GENERAL NOTES AND LEGEND
C-100	EXISTING CONDITIONS PLAN
C-101	DEMOLITION AND REMOVAL PLAN
C-102	ARSENIC CONTAMINATED SOIL REMEDIATION PLAN
C-103	PETROLEUM CONTAMINATED SOIL REMEDIATION PLAN
C-104	EROSION AND SEDIMENT CONTROL PLAN
C-105	WETLAND IMPACTS PLAN
C-106	WETLAND RESTORATION PLAN
C-500	DETAILS
C-501	DETAILS

FEBRUARY 2021

100%
SUBMISSION

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF
THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ARE IN
COMPLIANCE WITH THE NEW YORK STATE ENERGY
CONSERVATION CONSTRUCTION CODE AND THE BUILDING
CODE OF NEW YORK STATE

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED
UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK
STATE EDUCATION LAW

B

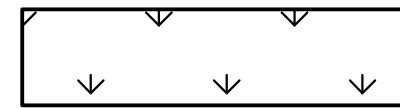
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3. NO ATTEMPT HAS BEEN MADE TO SHOW ALL EXISTING UTILITIES AND THE LOCATION OF THOSE SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE TRUE LOCATION BEFORE COMMENCING WORK.
2. CONTRACTOR SHALL NOTIFY DIG SAFELY NEW YORK AT LEAST 72 HOURS PRIOR TO START OF WORK.
3. IN THE EVENT THAT THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES, THEY SHALL IMMEDIATELY NOTIFY THE OWNER AND THE AFFECTED UTILITIES REPRESENTATIVE OF SUCH DAMAGE. ANY DAMAGE SHALL PROMPTLY AND SATISFACTORILY BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
4. CONTRACTOR TO ABANDON, CUT AND CAP ALL EXISTING UTILITIES SERVICING THE STRUCTURES MARKED FOR DEMOLITION. CONTRACTOR TO COORDINATE UTILITY DISCONNECTIONS WITH THE UTILITIES REPRESENTATIVE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES ENCOUNTERED IN THIS WORK. WHERE NECESSARY, THE CONTRACTOR SHALL PROVIDE TIMBER, PLANK OR OTHER APPROVED MATERIALS AND SECURELY BRACE AND PROTECT THESE UTILITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THE CONTRACT.
6. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORTS, BRACING AND OTHER DEVICES AS MAY BE REQUIRED OR AS DIRECTED BY THE ENGINEER TO PROTECT THE SAFETY OF THE ADJACENT STRUCTURES, ROADWAY AND UTILITIES. ALL COSTS SHALL BE INCLUDED IN VARIOUS ITEMS IN THE CONTRACT.
7. CONTRACTOR SHALL SAWCUT EXISTING PAVEMENT PRIOR TO PAVEMENT REMOVAL.
8. UNLESS OTHERWISE STATED IN THE WETLAND MITIGATION PLAN, CONTRACTOR SHALL TOPSOIL (4" MIN.), SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS.
9. IT WILL BE THE CONTRACTORS OBLIGATION AND RESPONSIBILITY TO USE METHODS AND EQUIPMENT WHICH WILL ENSURE THE SATISFACTORY COMPLETION OF THE REQUIRED WORK WITHIN THE CONTRACT TIME ALLOWED.
10. THE CONTRACTOR MUST BE ACQUAINTED WITH THE DRAINAGE CHARACTERISTICS OF THE AREA SO THAT THEY WILL PROGRESS THEIR WORK EFFICIENTLY WITH FULLKNOWLEDGE OF THE POTENTIAL DRAINAGE PROBLEMS.
11. ALL EXISTING DRAINAGE SYSTEMS, INCLUDING DITCHES AND CULVERTS, WITHIN THE CONTRACT LIMITS SHALL BE CLEANED AND KEPT CLEAN AND FREE FLOWING FOR THE DURATION OF THE CONTRACT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR VARIOUS ITEMS IN THIS CONTRACT.
12. THE CONTRACTOR SHALL BE REQUIRED TO PROTECT THEIR WORKERS AT ALL TIMES IN CONFORMANCE WITH APPLICABLE OSHA REGULATIONS.
13. THE CONTRACTOR'S STAGING AREA SHALL BE COORDINATED WITH THE OWNER PRIOR TO THE START OF WORK.
14. ALL ACM PIPING SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH SECTION 028213.

C1	GENERAL NOTES
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SCALE: N.T.S.

EXISTING FEATURES

C&S DELINEATED WETLAND
BOUNDARY

PARCEL BOUNDARY

TREELINE

—————BOB————— BOTTOM OF BANK

————— *TOB* ————— TOP OF BANK

 OHW OVERHEAD WIRE

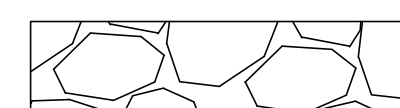
_____EP_____ EDGE OF PAVEMENT

EXISTING MAJOR
CONTOUR

EXISTING
CONTOUR

_____ ONK _____ LINE

PROPOSED FEATURES

STABILIZED CONSTRUCTION
ENTRANCEPETROLEUM REMEDIATION
AREA

ARSENIC REMEDIATION AREA

_____ X _____ CONSTRUCTION FENCE

----- SILT FENCE

CLEARING AND GRUBBING LIMITS

UTILITY TO BE CLEANED

UTILITY TO BE CLEANED AND FILLED WITH CONTROLLED
LOW-STRENGTH MATERIAL (CLSM)

ASBESTOS CONTAINING MATERIAL (ACM) PIPING TO BE REMOVED

UTILITY TO BE REMOVED

CONCRETE AND ASPHALT REMOVAL LIMITS



C&S
COMPANIES[®]

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TOWN OF CLAY, NEW YORK**

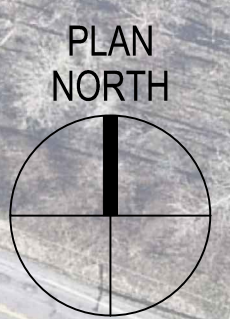
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DESIGNED BY:	-	
CHECKED BY:	-	

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GENERAL NOTES AND LEGEND

C-001

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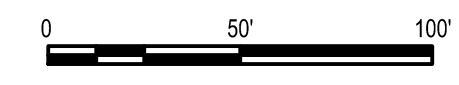
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**EXISTING
CONDITIONS
PLAN**

C-100

A1 EXISTING CONDITIONS PLAN
SCALE: 1" = 50'-0"



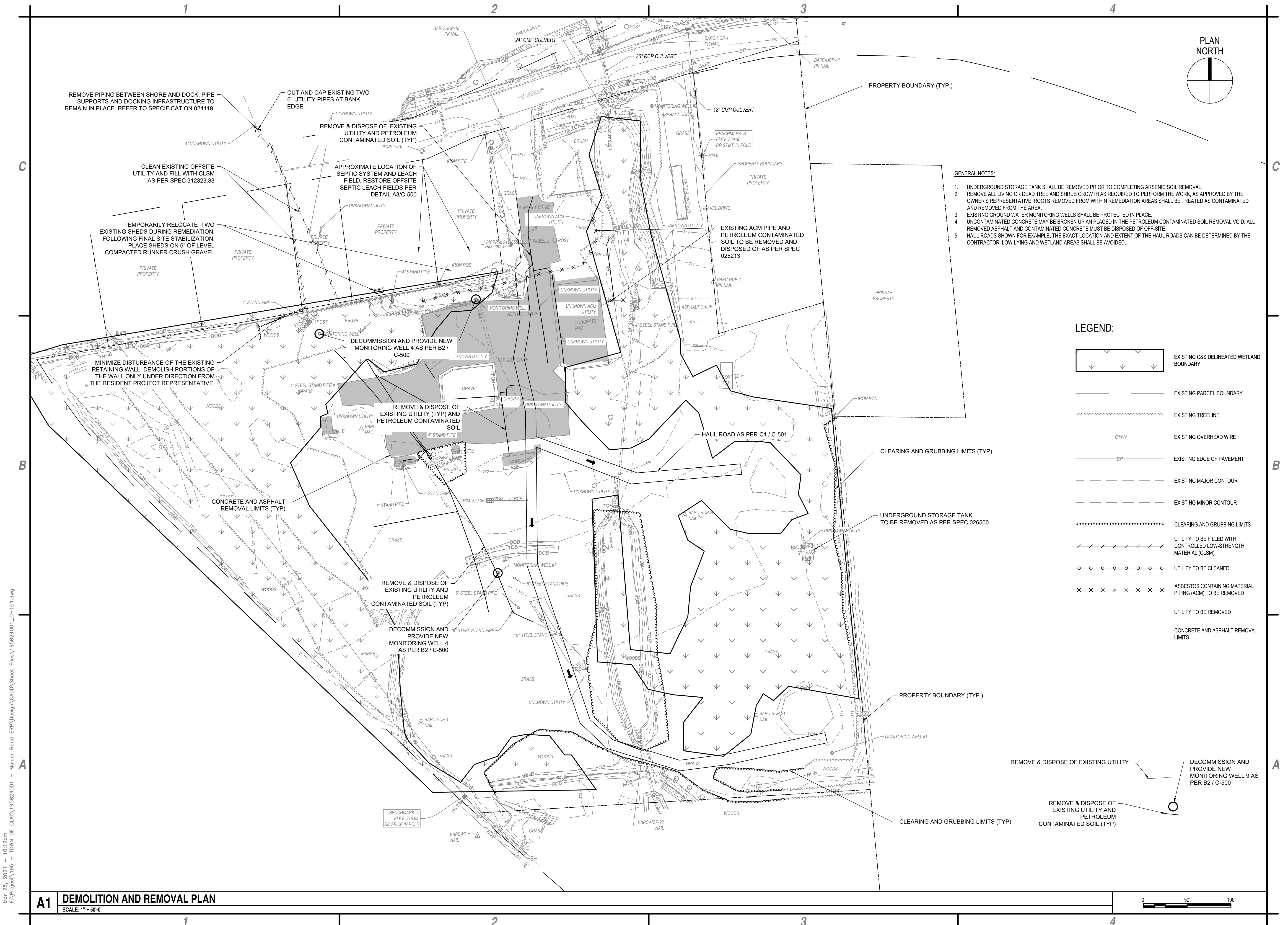


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DEMOLITION AND REMOVAL PLAN

C-101

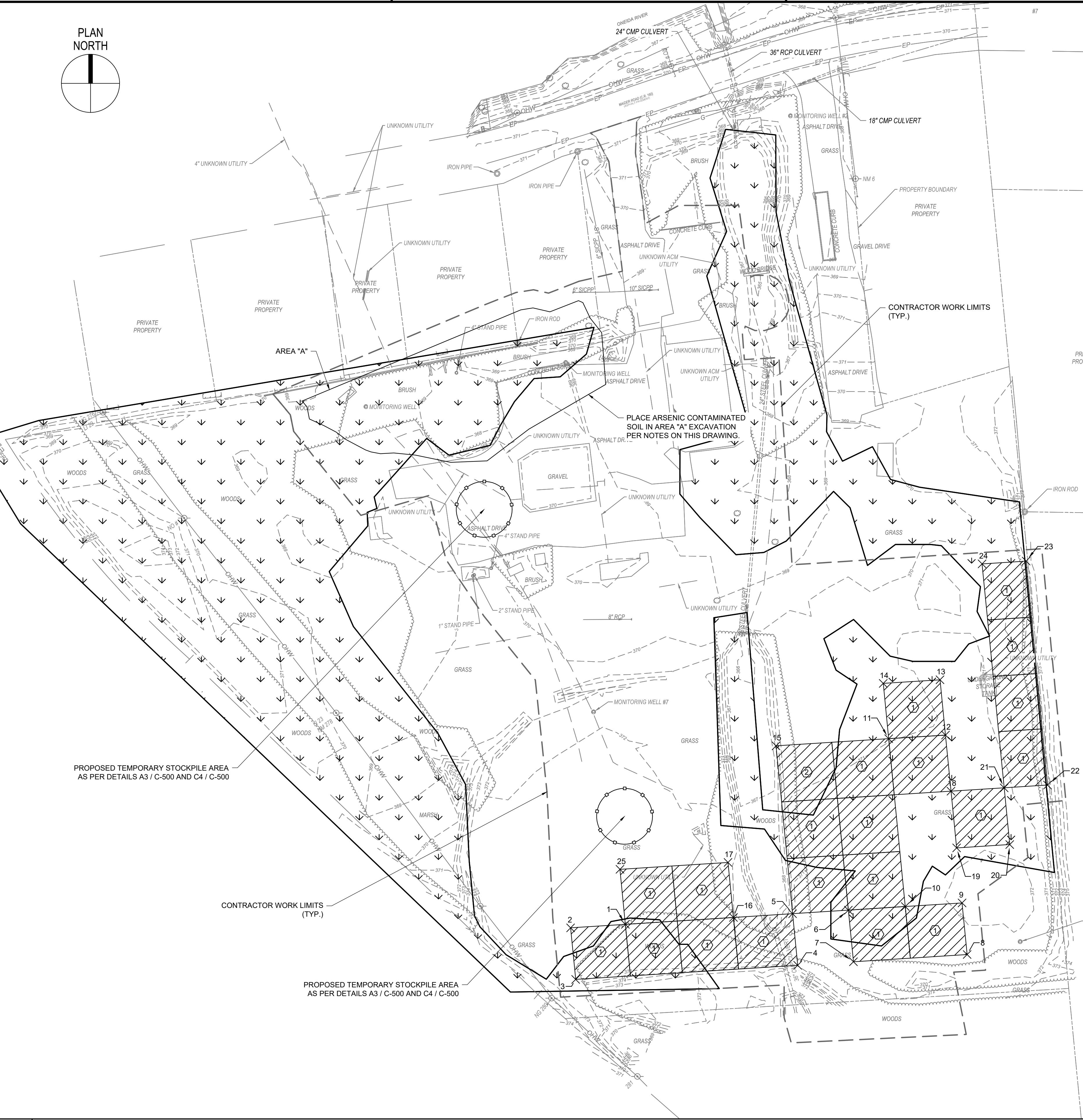


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A1

PETROLEUM CONTAMINATED SOIL REMEDIATION PLAN

SCALE: 1" = 50'-0"



ARSENIC CONTAMINATED SOIL REMOVAL QUANTITIES

AREA TITLE	TOTAL AREA (SF)	VOLUME (CY)	VOLUME TO BE DISPOSED OF OFF-SITE (CY)	VOLUME TO BE RELOCATED AND CAPPED ON-SITE (CY)
1	46,909	869	0	869
2	2,524	94	0	94
TOTAL	49,433	963	0	963

GENERAL NOTES:

- 1: CONTAMINATED ARSENIC SOIL IS SOIL WHERE THE ARSENIC CONCENTRATION EXCEEDS THE RESIDENTIAL-RESTRICTED SOIL CLEANUP OBJECTIVE OF 16 PARTS PER MILLION.
- 2: CONTAMINATED ARSENIC SOIL SHALL BE RELOCATED WITHIN AREA "A" ONSITE, SHOWN ON SHEET C-103 FOLLOWING REMOVAL OF THE PETROLEUM CONTAMINATED SOIL FROM AREA A.
- 3: ARSENIC CONTAMINATED SOIL SHALL BE PLACED AT LEAST 2 FEET BELOW FINAL GRADE IN AREA A ONSITE AND AT LEAST 10 FEET FROM THE PROPERTY LINE. PLACE TENCATE / MIRAFI 1160N APPROVED GEOTEXTILE STABILIZATION / SEPERATION FABRIC OR APPROVED EQUAL TO SERVE AS DEMARCATION BARRIER OVER THE ENTIRE VOLUME / AREA OF ARSENIC CONTAMINATED SOIL. RESTORE TO GRADE WITH AT LEAST TWO FEET OF COVER, MEETING RESIDENTIAL RESTRICTED SCOS THE SURFACE OF THE ARSENIC CONTAMINATED SOIL SHALL BE SURVEYED TO DOCUMENT AT LEAST TWO FEET OF COVERAGE.
- 4: ALL ARSENIC REMEDIATION AREAS SHALL BE RESTORED TO EXISTING GRADE AS PER SPEC 310000 AND 310101.
- 5: UNDERGROUND STORAGE TANK SHALL BE REMOVED PRIOR TO COMPLETING ARSENIC SOIL REMOVAL.
- 6: REMOVE ALL LIVING OR DEAD TREE AND SHRUB GROWTH AS REQUIRED TO PERFORM THE WORK, AS APPROVED BY THE OWNER'S REPRESENTATIVE. ROOTS REMOVED FROM WITHIN REMEDIATION AREAS SHALL BE TREATED AS CONTAMINATED AND REMOVED FROM THE AREA.
- 7: RESTORE WETLANDS PER SHEET C-105 AND SPEC 333333.33.
- 8: EXISTING GROUND WATER MONITORING WELLS SHALL BE PROTECTED IN PLACE.
- 9: MAKE ALL EFFORTS TO RELOCATE ALL OF THE ARSENIC IMPACTED SOIL WITHIN AREA A ONSITE. IF THE VOLUME OF ARSENIC CONTAMINATED SOIL EXCEEDS THE AVAILABLE VOLUME IN AREA A ONSITE, THEN DISPOSE OF THE EXCESS SOIL PROPERLY OFFSITE.

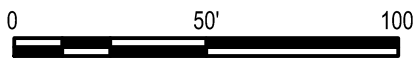
KEYED NOTES:

- PRIV PROP
- ① REMOVE CONTAMINATED SOIL TO A DEPTH OF 6"
 - ② REMOVE CONTAMINATED SOIL TO A DEPTH OF 12"

LEGEND:

	EXISTING C&S DELINEATED WETLAND BOUNDARY
	EXISTING PARCEL BOUNDARY
	EXISTING TREELINE
	EXISTING OVERHEAD WIRE
	EXISTING EDGE OF PAVEMENT
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	ARSENIC REMEDIATION AREA

Point Table			Point Table		
Point #	Northing	Easting	Point #	Northing	Easting
9	1165927.1399	902790.0529	16	1165914.1250	902585.4082
1	1165907.9730	902488.6703	17	1165963.3681	902580.5480
2	1165904.8545	902439.6331	18	1166027.1490	902780.1821
3	1165858.6671	902444.1918	19	1165976.3828	902785.1927
4	1165871.3060	902642.9285	20	1165979.4081	902832.7628
5	1165917.4934	902638.3698	21	1166030.1743	902827.7520
6	1165920.6680	902688.2910	22	1166032.6440	902866.5863
7	1165874.4809	902692.8496	23	1166233.1053	902847.4204
8	1165880.9526	902794.6115	24	1166230.5964	902807.9709
10	1165923.9075	902739.2266	25	1165957.2159	902483.8101
11	1166074.1558	902724.3973			
12	1166077.3879	902775.2236			
13	1166126.8739	902770.3394			
14	1166123.6415	902719.5131			
15	1166067.7414	902623.5406			



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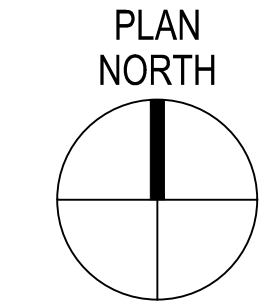
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ARSENIC
CONTAMINATED
SOIL
REMEDATION
PLAN

C-102

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PLACE DEMARCATION BARRIER OVER ENTIRE FOOTPRINT OF ARSENIC CONTAMINATED SOIL PLACED IN AREA "A". RESTORE TO GRADE WITH AT LEAST TWO FEET OF DER-10 CLEAN COVER

APPROXIMATE LOCATION OF SEPTIC SYSTEM AND LEACH FIELD. RESTORE OFFSITE SEPTIC LEACH FIELDS PER DETAIL A3/C-500

TEMPORARY STOCKPILE AREA AS PER DETAILS A3 / C-500 AND C4 / C-500

TEMPORARY STOCKPILE AREA AS PER DETAILS A3 / C-500 AND C4 / C-500

PETROLEUM CONTAMINATED SOIL REMOVAL QUANTITIES

AREA TITLE	AREA (SF)	VOLUME (CY)	VOLUME TO BE DISPOSED OF OFF-SITE (CY)
A ONSITE	19,357	2,731	2,731
A OFFSITE	3,514	872	872
B	1,909	353	353
C	11,788	2,288	2,288
D	819	303	303
E ONSITE	1,844	341	341
E OFFSITE	2,237	414	414
F	2,336	432	432
MISC.	2,125	360	360
PIPING (LINEAR FEET)	175	162	162
TOTAL	45,931	8,256	8,256

GENERAL NOTES:

- VOLUME CALCULATIONS PRESENTED IN THE TABLE ABOVE ARE BASED ON OBSERVATIONS FROM TEST PITS AND SOIL BORINGS COMPLETED TO DATE. ACTUAL VOLUMES MAY VARY DEPENDING UPON DISCOVERED SITE CONDITIONS.
- CONTAMINATED ARSENIC SOIL REMOVED AS DETAILED ON SHEET C-101 SHALL BE RELOCATED WITHIN AREA "A-ONSITE" FOLLOWING REMOVAL OF THE PETROLEUM CONTAMINATED SOIL.
- ALL PETROLEUM REMEDIATION AREAS SHALL BE RESTORED TO EXISTING GRADE AS PER SPEC 310000 AND 310101.
- ALL EXISTING MONITORING WELLS SHALL BE PROTECTED IN PLACE. IF MONITORING WELL FALLS WITHIN LIMITS OF EXCAVATION, WELL SHALL BE REMOVED IN ACCORDANCE WITH NYSDEC'S POLICY DOCUMENT CP-43, GROUNDWATER MONITORING WELL DECOMMISSIONING POLICY, DATED NOVEMBER 2009, AND REPLACED AS A PART OF THIS PROJECT. SEE REFERENCE DOCUMENTS FOR CP-43.
- REMOVE ALL LIVING OR DEAD TREE AND SHRUB GROWTH AS REQUIRED TO PERFORM THE WORK, AS APPROVED BY THE OWNER'S REPRESENTATIVE. ROOTS REMOVED FROM WITHIN REMEDIATION AREAS SHALL BE TREATED AS CONTAMINATED AND REMOVED FROM THAT AREA.
- "MISC" AREAS LISTED IN THE TABLE ARE ISOLATED AREAS OF PETROLEUM IMPACTED SOIL, SHOWN AS SHADED CIRCLES.
- BASED ON SITE OBSERVATIONS IT IS ESTIMATED THAT PETROLEUM CONTAMINATED SOIL WILL BE DISCOVERED ALONG 25% OF THE LENGTH OF THE PIPELINES.
- REMOVAL AND DISPOSAL OF MARKED UTILITIES INCLUDES LATERALS / CONNECTIONS.
- RESTORE WETLANDS PER SHEET C-105 AND SPEC 333333.33

KEYED NOTES:

- ① REMOVE CONTAMINATED SOIL TO DEPTH SHOWN ON COLOR SCALE INDICATED ON THIS PLAN. FINAL DEPTH TO BE DETERMINED IN FIELD BY ON-SITE REPRESENTATIVE. THE RANGE PROVIDED IS BASED ON THE BEST AVAILABLE DATA.

LEGEND:

	DEPTH OF 2'		EXISTING C&S DELINEATED WETLANDS
	DEPTH OF 3'		EXISTING PARCEL BOUNDARY
	DEPTH OF 5'		EXISTING TREELINE
	DEPTH OF 7'		EXISTING OVERHEAD WIRE
	DEPTH OF 10'		EXISTING EDGE OF PAVEMENT
	DEPTH OF 12'		EXISTING MAJOR CONTOUR
	DEPTH OF 14'		EXISTING MINOR CONTOUR
	DEPTH OF 14'		PROPOSED PETROLEUM REMEDIATION AREA

A1 ARSENIC CONTAMINATED SOIL REMEDIATION PLAN

SCALE: 1" = 50'-0"

0 50' 100'



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PETROLEUM
CONTAMINATED
SOIL
REMEDATION
PLAN

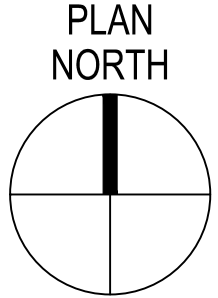
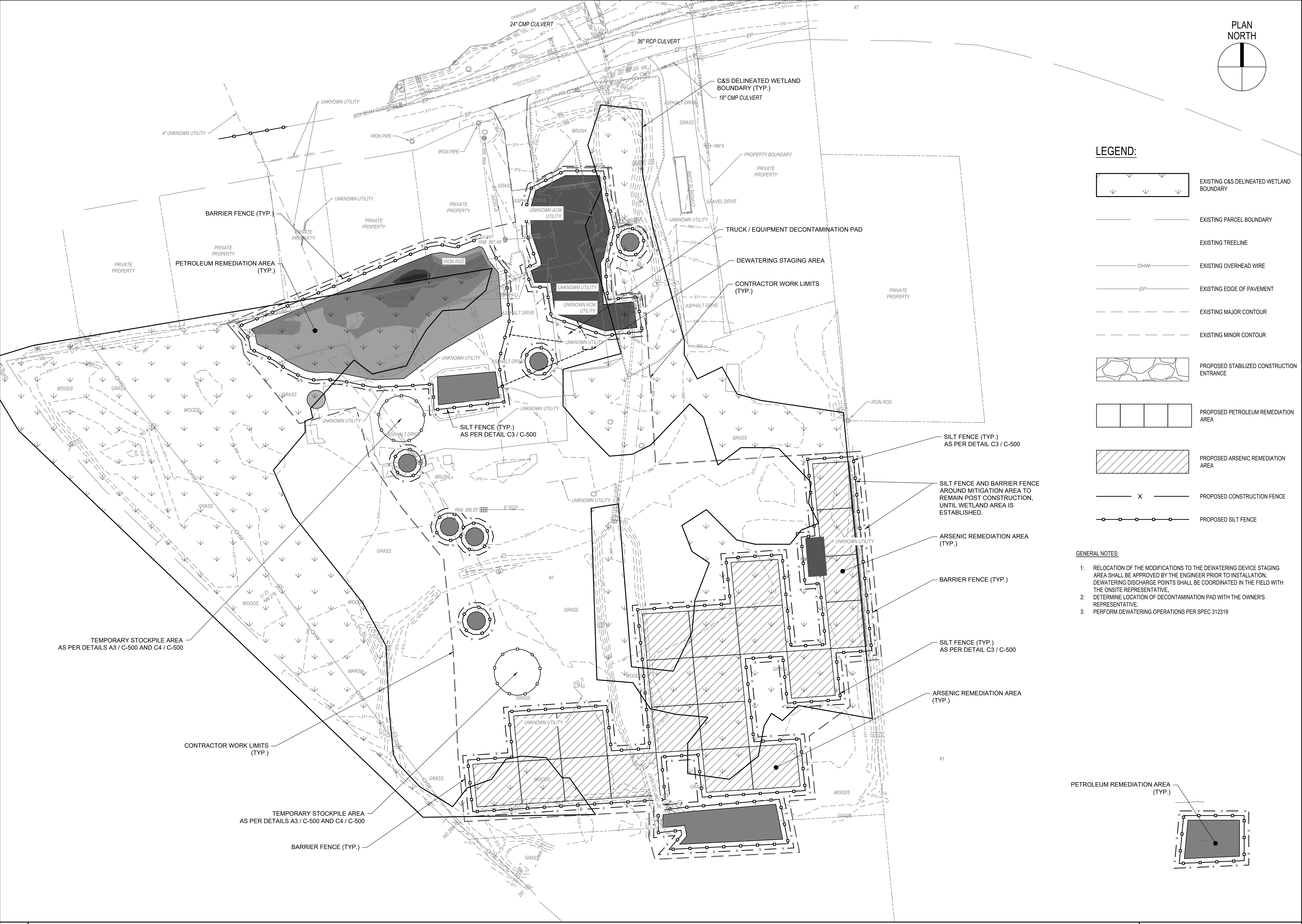
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A1

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 50'-0"

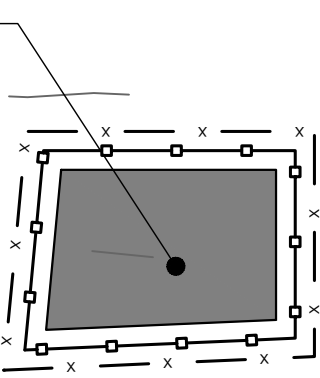


LEGEND:

- EXISTING C&S DELINEATED WETLAND BOUNDARY
- EXISTING PARCEL BOUNDARY
- EXISTING TREELINE
- EXISTING OVERHEAD WIRE
- EXISTING EDGE OF PAVEMENT
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PETROLEUM REMEDIATION AREA
- PROPOSED ARSENIC REMEDIATION AREA
- PROPOSED CONSTRUCTION FENCE
- PROPOSED SILT FENCE

GENERAL NOTES:

- RELOCATION OF THE MODIFICATIONS TO THE DEWATERING DEVICE STAGING AREA SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. DEWATERING DISCHARGE POINTS SHALL BE COORDINATED IN THE FIELD WITH THE ONSITE REPRESENTATIVE.
- DETERMINE LOCATION OF DECONTAMINATION PAD WITH THE OWNER'S REPRESENTATIVE.
- PERFORM DEWATERING OPERATIONS PER SPEC 312319



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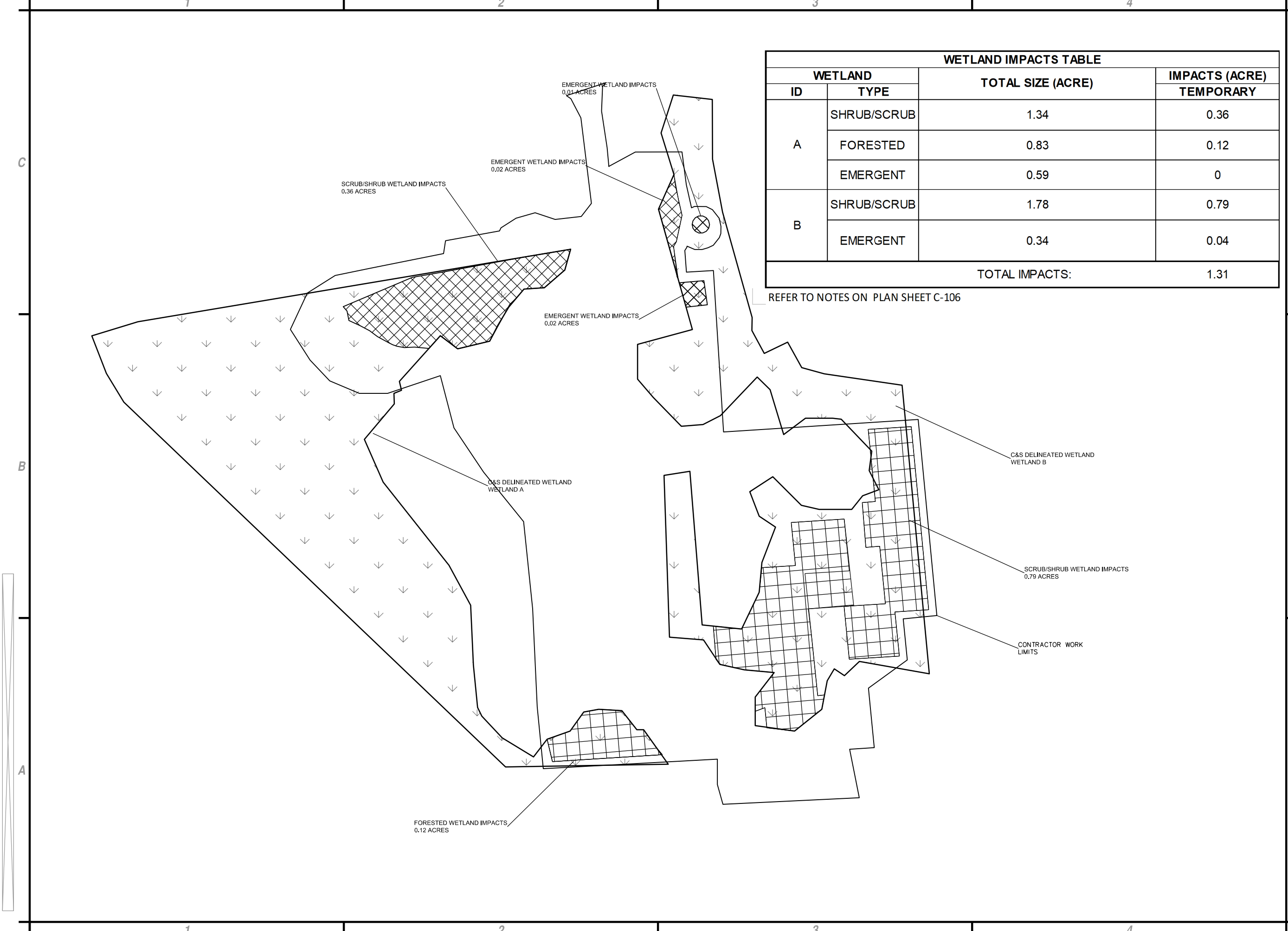


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EROSION AND SEDIMENT CONTROL PLAN

C-104



WETLAND IMPACTS TABLE			
WETLAND		TOTAL SIZE (ACRE)	IMPACTS (ACRE)
ID	TYPE		TEMPORARY
A	SHRUB/SCRUB	1.34	0.36
	FORESTED	0.83	0.12
	EMERGENT	0.59	0
B	SHRUB/SCRUB	1.78	0.79
	EMERGENT	0.34	0.04
TOTAL IMPACTS:			1.31

REFER TO NOTES ON PLAN SHEET C-106



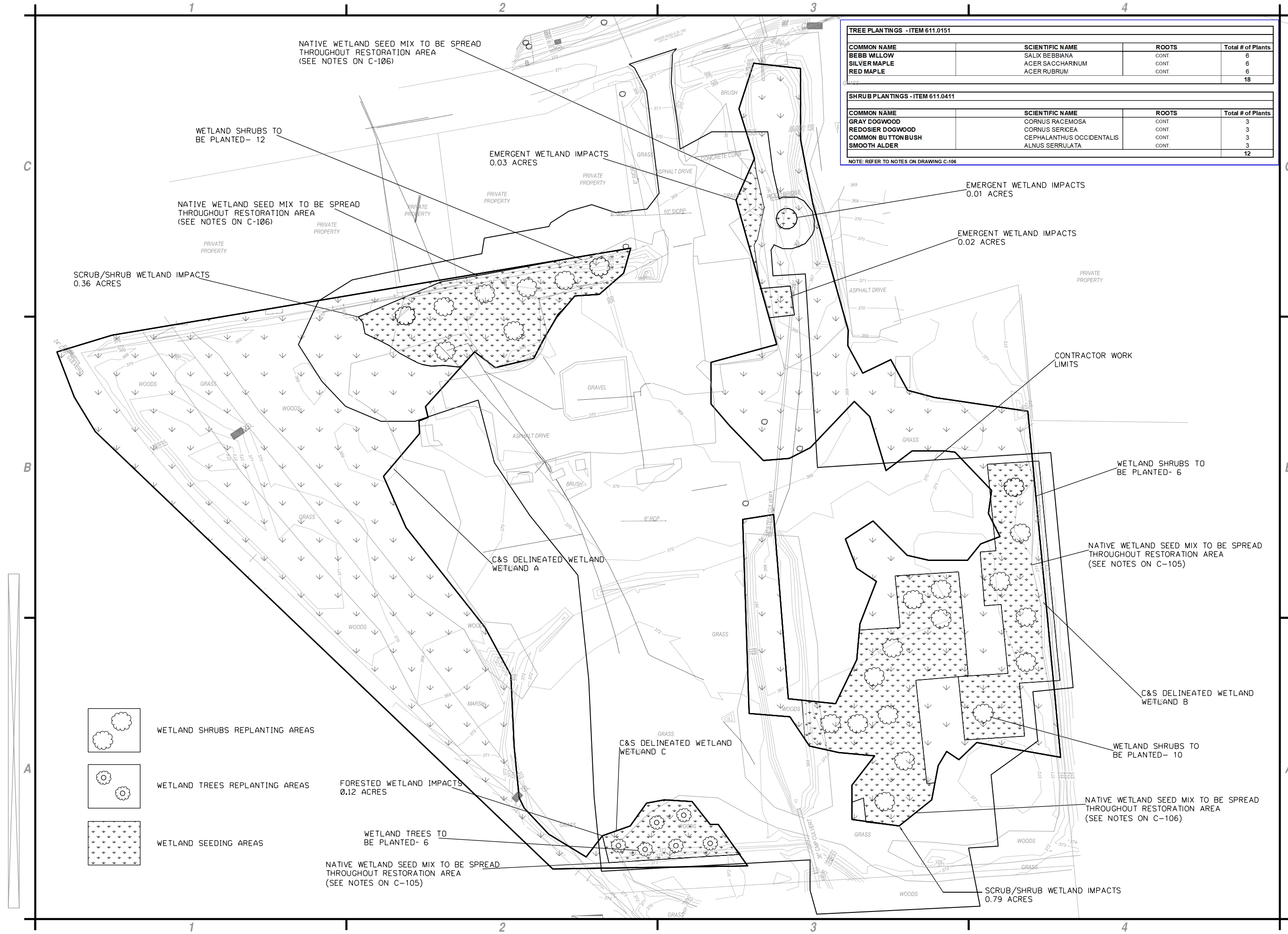
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WETLAND
IMPACT
PLAN



TREE PLANTINGS - ITEM 611.0151			
COMMON NAME	SCIENTIFIC NAME	ROOTS	Total # of Plants
BEBB WILLOW	SALIX BEBBIANA	CONT.	6
SILVER MAPLE	ACER SACCHARNUM	CONT.	6
RED MAPLE	ACER RUBRUM	CONT.	6
			18

SHRUB PLANTINGS - ITEM 611.0411			
COMMON NAME	SCIENTIFIC NAME	ROOTS	Total # of Plants
GRAY DOGWOOD	CORNUS RACEMOSA	CONT.	3
REDOSIER DOGWOOD	CORNUS SERICEA	CONT.	3
COMMON BUTTONBUSH	CEPHALANTHUS OCCIDENTALIS	CONT.	3
SMOOTH ALDER	ALNUS SERRULATA	CONT.	3
			12

NOTE: REFER TO NOTES ON DRAWING C-106



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WETLAND
RESTORATION
PLAN

C-105

NOTES:

EXCAVATION IN WETLAND AREAS:

- 1. CONTAMINATED AREAS THOROUGHOUT THE DELINEATED WETLANDS WILL BE EXCAVATED TO VARIOUS DEPTHS RANGING IN DEPTH OF 10 TO 12 FEET. THE CONTAMINATED EXCAVATED MATERIAL WILL BE EITHER REMOVED FROM SITE OR BURIED TO A DEPTHS AS DIRECTED BY THE ONSITE REPRESENTATIVE. CLEAN TOPSOIL WILL BE PLACED IN EXCAVATED AREAS TO RESTORE THE AREAS TO PREVIOUS EXCAVATED ELEVATIONS.
- 2. THE EXCAVATION AND FILL PROCESS WILL BE MONITORED BY AN ENVIRONMENTAL SCIENTIST FROM C&S ENGINEERS.
- 3. WETLAND IMPACTS SHALL BE MINIMIZED TO THE EXTENT PRACTICAL AND SHALL BE EQUAL TO OR LESS THAN THE IMPACTS QUANITIFIED HEREIN.
- 4. STORMWATER CONTROLS TO PROTECT WETLANDS SHALL BE ESTABLISHED PRIOR TO WORK WITHIN OR ADJACENT TO WETLANDS.
- 5. CONSTRUCTION FENCE SHALL BE ERECTED TO CLEARLY DEMARCAT E THE EXTENT OF ACCEPTABLE IMPACTS.
- 6. UNLESS DIRECTED BY THE OWNER'S REPRESENTATIVE, THE CONTRACTOR SHALL NOT BE REINBURSED FOR RESTORATION ACTIVITIES REQUIRED TO MITIGATE WETLAND DISTURBANCE OUTSIDE OF THE IMPACT AREAS SHOWN ON C-104.

WETLAND PLANTINGS:

- 1. THE LISTED SHRUBS AND TREES WILL BE PLANTED THROUGHOUT AS SHOWN ON PLAN SHEET C-105.
- 2. TREES AND SHRUBS PLANTED WITHIN THE WETLAND IMPACT AREAS SHALL EXHIBIT A 75% SURVIVORSHIP RATE FOLLOWING THE FIRST GROWING SEASON AFTER THEY ARE PLANTED, IF THE SURVIVORSHIP OF THE TREES AND/OR SHRUBS FALLS BELOW THE PERCENTAGE, THE SHRUBS WILL BE REPLACED TO BRING THE PERCENTAGE ABOVE THE MINIMUM SURVIVORSHIP.
- 3. THE TOTAL PLANT COVER WITHIN THE WETLAND IMPACT AREAS BY THE END OF THE FIRST GROWING SEASON SHOULD BE:
 - 80% AREAL COVER OF HYDROPHYTIC VEGETATION, WITH NO MORE THAN 50% OF ONE SPECIES.
 - AT LEAST 50% OF THE DOMINANT SPECIES WITH A WETLAND INDICATOR STATUS OF FACW OR WETTER, INCLUDING AT LEAST ONE SPECIES WITH A WETLAND INDICATOR STATUS OF OBL.
- 4. THE PLANTING AND SEED PROCESS WILL BE MONITORED BY AN ENVIRONMENTAL SCIENTIST FROM C&S ENGINEERS.

INVASIVE SPECIES CONTROL:

- 1. ANY EXCAVATED MATERIAL THAT CONTAINS THE FOLLOWING LISTED SPECIES THE EXCAVATED MATERIAL WILL BE DISPOSED OF AT AN APPROVED LANDFILL OR BURIED AT LEAST 6 FEET DEEP ONSITE. THE FOLLOWING INVASIVE SPECIES ARE:
 - BUCKTHORN (RHAMNUS SPP)
 - PURPLE LOOSESTRIPE (LYTHRUM SALICARIA)
 - COMMON REED (PHRAGMITES AUSTRALIS)
 - NARROW-LEAVED CATTAIL (TYPHA ANGUSTIFOLIA)
 - HYBRID CATTAIL (TYPHA X GLAUCA)
- 2. TOPSOIL THAT WILL BE USED ONSITE WILL NOT CONTAIN ANY OF THE ABOVE LISTED INVASIVE SPECIES. THE SOURCE OF THE TOPSOIL WILL BE SCREENED BY A C&S ENVIRONMENTAL SCIENTIST FOR THE PRESENCE OF THE LISTED INVASIVE SPECIES.

WETLAND SEED MIXES:

- ONE OF THE FOLLOWING MIXES WILL BE SPREAD THROUGHOUT THE WETLAND MITIGATION AREA. THE SEED MIX WILL BE SPREAD BASED ON THE MANUFACTER'S RECOMMENDATIONS.
- 1. SOUTHERN TIER CONSULTING:
NORTHEAST WETLAND SHRUB/HERB MIX
COD: STCMX-10
1 POUND WILL COVER 21,780 SQ. FT. @ 5 SEEDS PER SQ. FT.
 - 2. ERNST SEEDS:
WILDLIFE FOOD & SHELTER MIX
ITEM NUMBER: ERNMX-138
PRODUCT CATEGORIES:
WET MEADOWS & WETLANDS
HEIGHT: 0.7 - 16.0 FT
SEEDING RATE: 20 LB PER ACRE, OR 1/2 LB PER 1,000 SQ FT
 - 3. NEW ENGLAND WETLAND PLANTS, INC:
NEW ENGLAND WETMIX (WETLAND SEED MIX)
APPLICATION RATE: 1 LB./2500 SQ. FT.
18 LBS./ACRE



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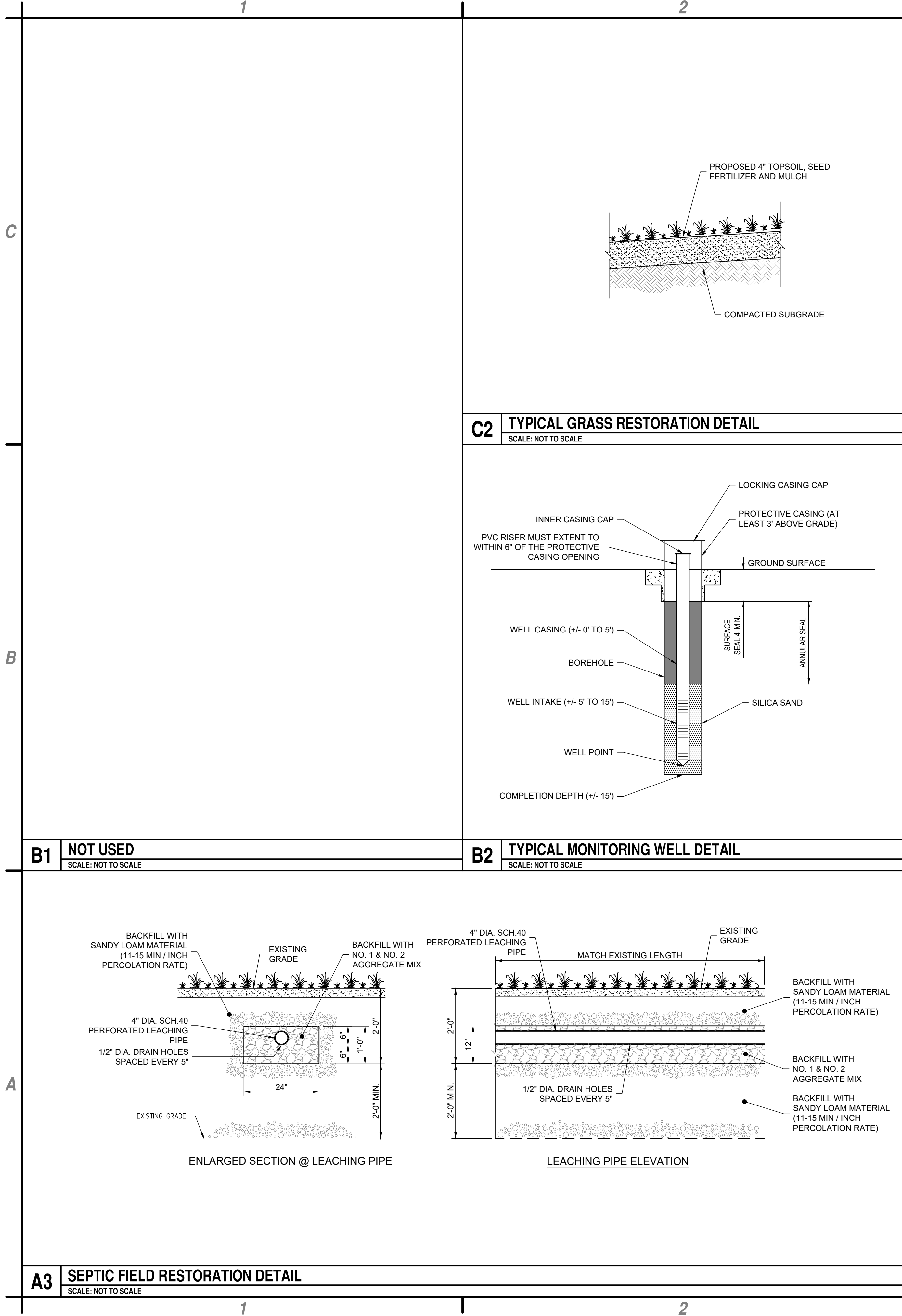


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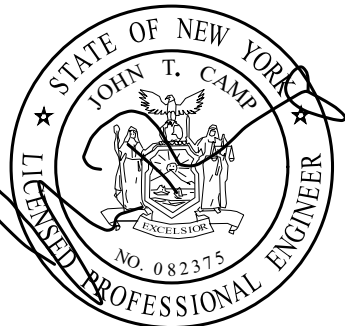
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WETLAND
RESTORATION
NOTES

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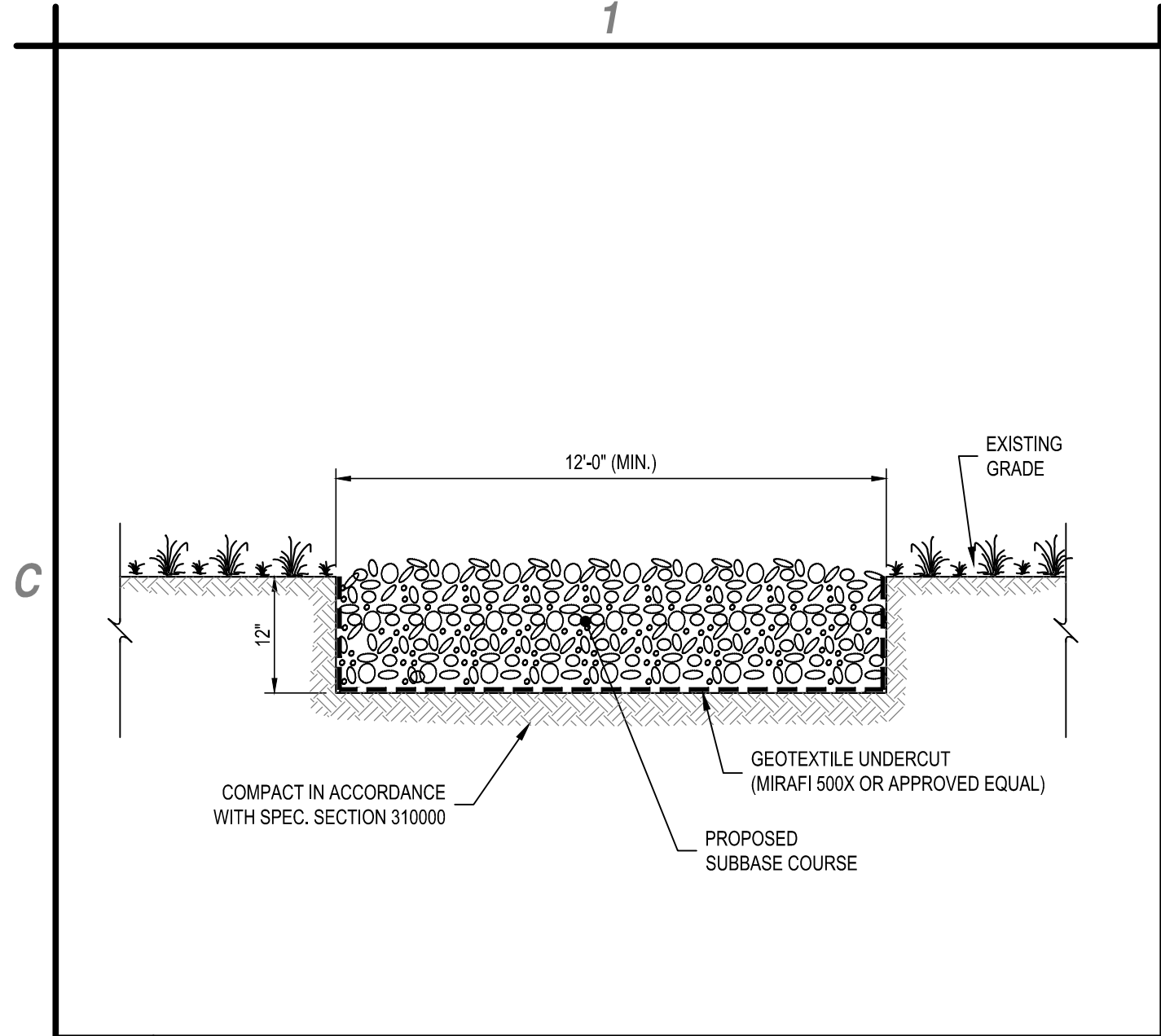
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DETAILS

C-500

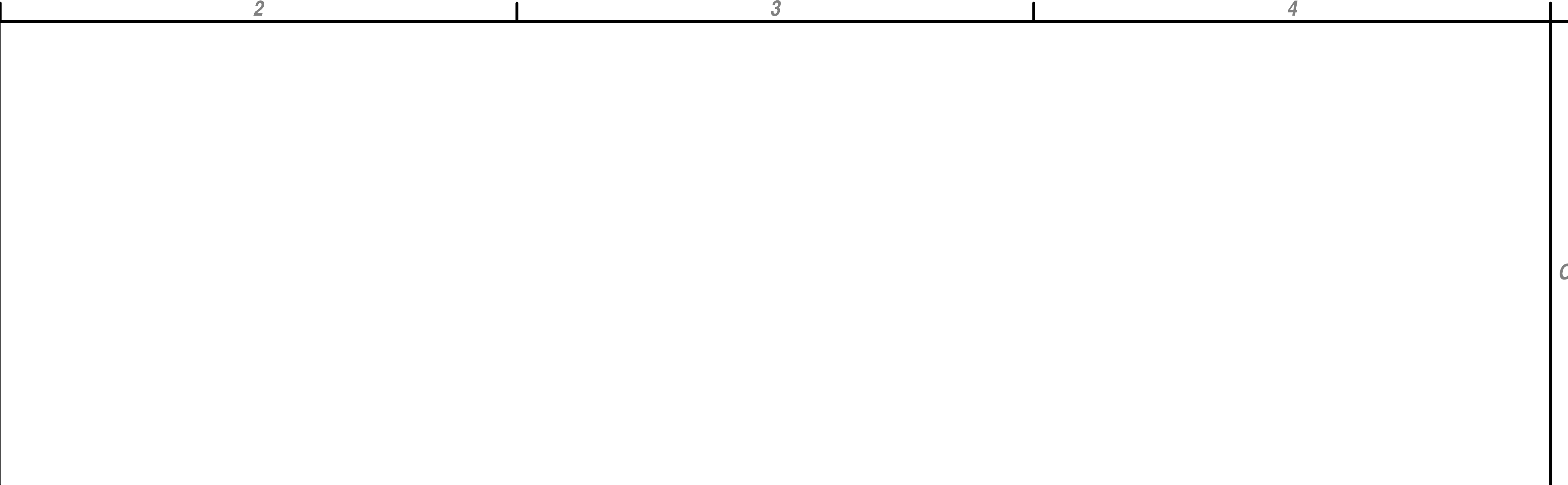
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F:\Project\195 - TOWN OF CLAY\195824001 - Maider Road ERP\Design\CADD\Sheet Files\195824001_C-501.dwg



C1 HAUL ROAD DETAIL
SCALE: NOT TO SCALE

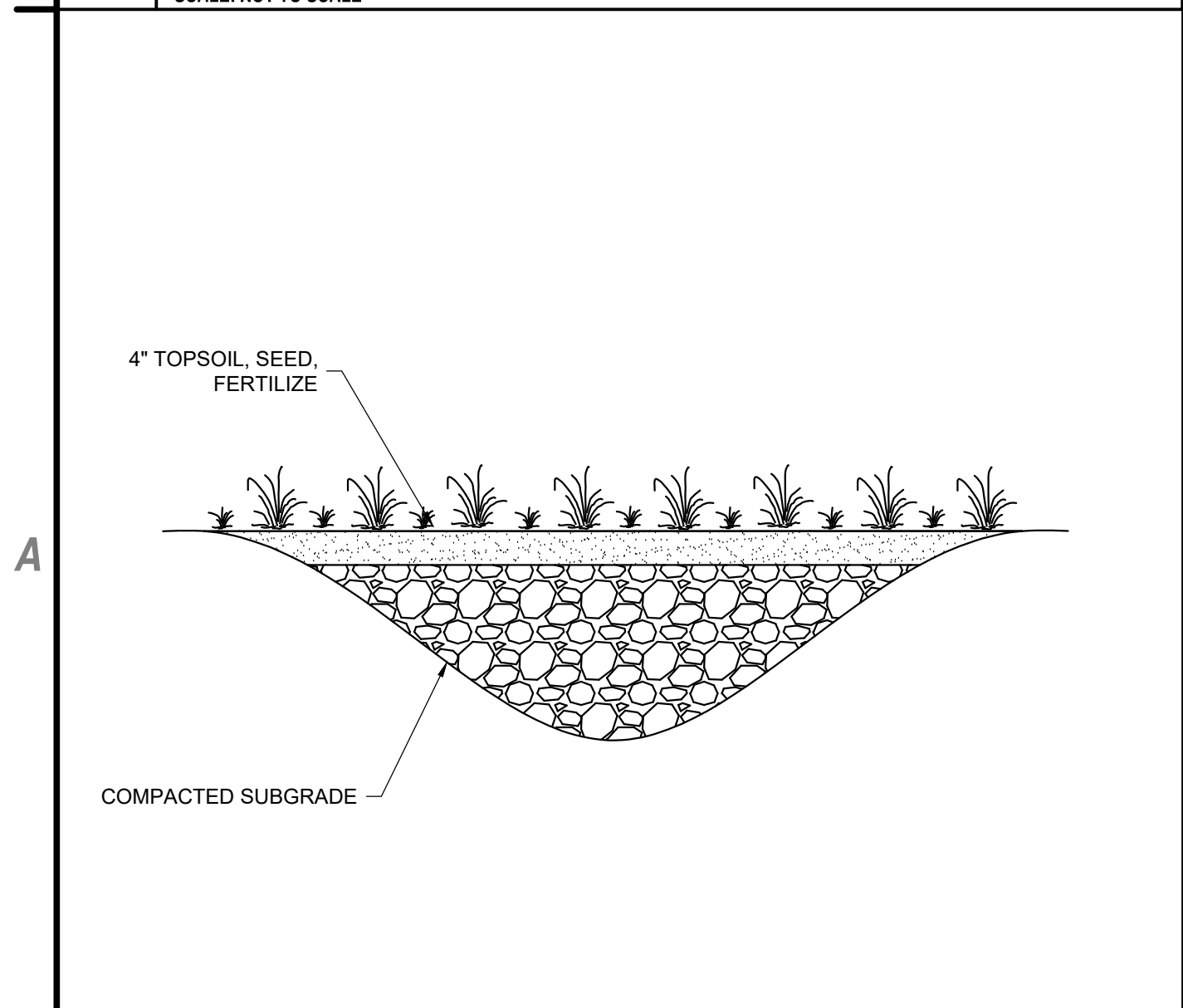
- NOTES:**
- OFFSITE SOIL MUST MEET UNRESTRICTED USE SCOs
 - ONSITE SOIL MUST MEET RESIDENTIAL RESTRICTED SCOs
 - CLEAN CRUSHED CONCRETE MAY BE USED FROM ONSITE BACKFILL

B1 NOTES
SCALE: NOT TO SCALE

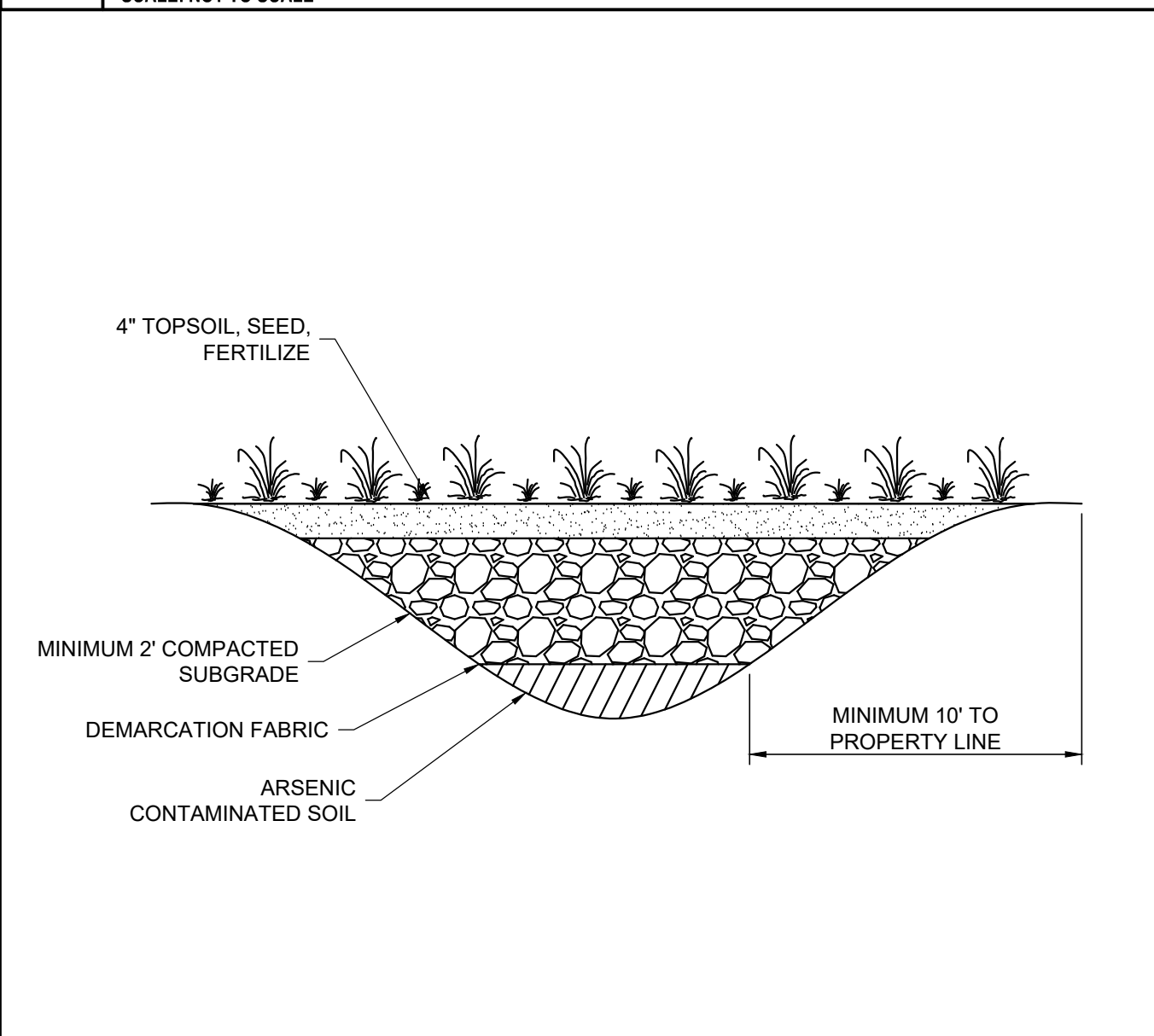


B2 TYPICAL WORK AREA M&PT PLAN DETAIL
SCALE: NOT TO SCALE

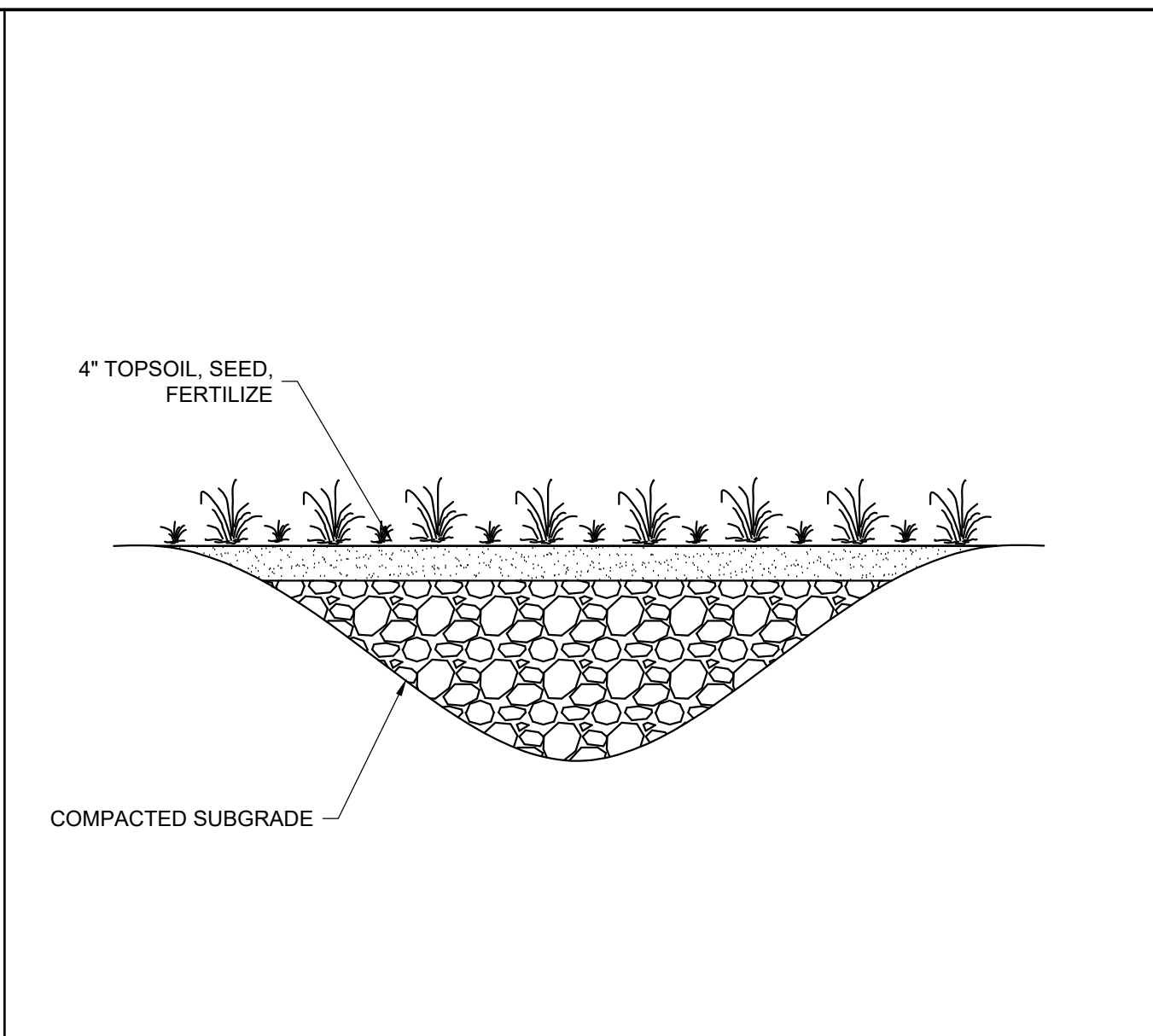
- NOTES:**
- NOTE THE PRESENCE OF, AND TO STAY CLEAR OF, EXISTING OVERHEAD ELECTRICAL LINES SITUATED ABOVE THE GUIDERAIL ON THE NORTH SIDE OF MAIDER RD.
 - CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYMENT OF COUNTY PERMIT.
 - CHANNELIZING DEVICE SPACING (CENTER TO CENTER) SHALL NOT EXCEED 30' IN THE ACTIVE WORK SPACE.
 - THE END ROAD WORK SIGN (G20-2) SHALL BE PLACED A MAXIMUM OF 500' PAST THE END OF THE WORK SPACE.
 - WHERE DIRECTED BY THE ENGINEER, A BUFFER SPACE SHALL BE PROVIDED IN ORDER TO LOCATE THE ONE LANE, TWO-WAY TRAFFIC TAPER PRIOR TO ANY HORIZONTAL OR VERTICAL CURVE, IN ORDER TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGERS AND/OR A QUEUE OF STOPPED VEHICLES.
 - THE FLAG TREE SHALL BE LOCATED ON THE SHOULDER, AT APPROXIMATELY 1/2 THE DISTANCE BETWEEN THE FLAGGER SIGN (W20-7A) AND THE FLAGGER.
 - FLAGGER SIGN (W20-7A) AND ONE LANE ROAD AHEAD SIGN (W20-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING.
 - CENTERLINE CHANNELIZING DEVICES ARE OPTIONAL AND MAY BE ELIMINATED WHERE SPACE CONSTRAINTS EXIST.



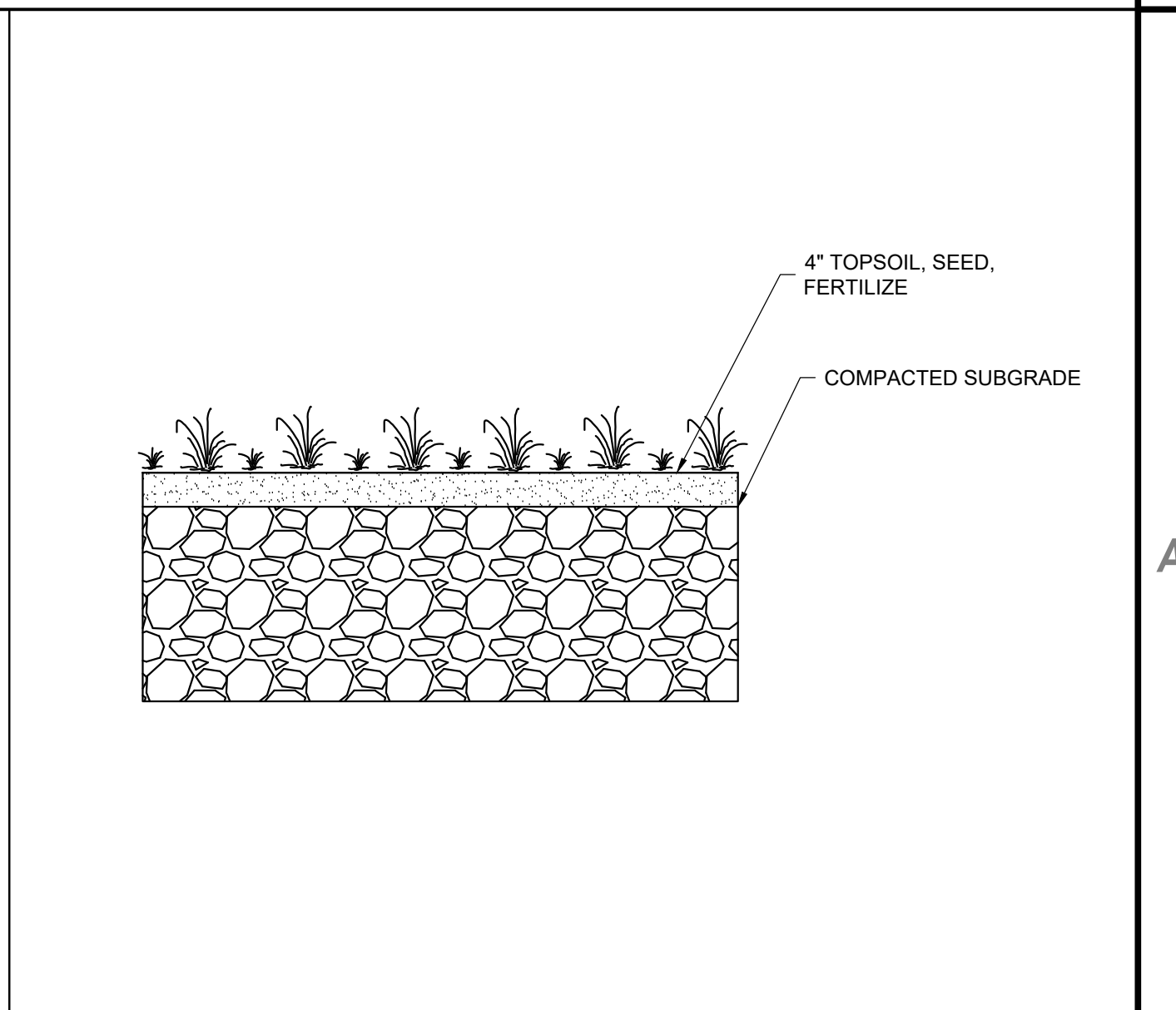
A1 OFFSITE EXCAVATION BACKFILL DETAIL
SCALE: NOT TO SCALE



A2 ONSITE CONSOLIDATION AREA BACKFILL DETAL
SCALE: NOT TO SCALE



A3 ONSITE PETROLEUM AREAS BACKFILL DETAIL
SCALE: NOT TO SCALE



A4 ARSENIC BACKFILL GRID AREA BACKFILL DETAIL
SCALE: NOT TO SCALE



C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com



MAIDER ROAD WATERFRONT SITE
3414 MAIDER ROAD
TOWN OF CLAY, NEW YORK

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: 195.824.001		
DATE: DECEMBER, 2020		
DRAWN BY: E. AVERSA		
DESIGNED BY: E. AVERSA		
CHECKED BY: -		
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW		

DETAILS

C-501

Addendum No.1
Maider Road Waterfront ERP Site Remediation

Updated Bid Sheet

BID SHEET
Maider Road Waterfront Site Environmental Restoration Project Clay, Onondaga County Site No. B00015

Item Number	Bid Item (Section)	On Site or <i>Off-site</i>	Quantity	Unit	Cost/Unit	Total	Includes
1	Contingency Allowance (012100)	On Site	1	LS	\$100,000	\$100,000	-----
2	Alternate #1 Field Office (015000)	On Site	1	LS	\$_____	\$_____	All
3	Mobilization & Demobilization	On Site	1	LS	\$_____	\$_____	All
4	Health & Safety Plan	On Site	1	LS	\$_____	\$_____	Applies to the entire project / contract
5	Stabilized Construction Entrance (C-104)	On-Site	1	LS			All
6	Decontamination Pad (015000)	On Site	1	LS	\$_____	\$_____	Include management / treatment of contaminated water.
7	UST Removal (026500)	On Site	1	LS	\$_____	\$_____	Characterize, empty, remove, clean, transport, & dispose. Liquid transport and disposal covered under Item #44.
8	Water Pollution and Erosion Control (312710)	On Site	1	LS	\$_____	\$_____	Labor, materials, install, inspect, maintain, & remove erosion and sediment controls.
9	Water Pollution and Erosion Control (312710)	<i>Off-Site</i>	1	LS	\$_____	\$_____	Labor, materials, install, inspect, maintain, & remove erosion and sediment controls.
10	Tree Clearing and Grubbing (311000)	On Site	1	LS	\$_____	\$_____	All
11	Tree Clearing and Grubbing (311000)	<i>Off-Site</i>	1	LS	\$_____	\$_____	All
12	Survey (028335, 312319)	On Site	1	LS	\$_____	\$_____	All
13	Maintenance and Protection of Traffic (C-501)	<i>Off-Site</i>	1	LS	\$_____	\$_____	All
14	River Infrastructure Removal (024119, C-101)	<i>Off-Site</i>	1	LS	\$_____	\$_____	River bank piping cleaning, cut & cap. Piping liquid disposal covered under Item #45.
15	Shed Relocation and Re-Installation (C-101)	<i>Off-Site</i>	1	LS	\$_____	\$_____	Two approximate 10'x10' sheds. Provide 6" of level compacted runner crush gravel base.
16	Anything Else Not Listed	On-Site	1	LS			Anything else not included above.
Lump Sum Subtotal (On Site)						\$_____	
Lump Sum Subtotal (<i>Off-Site</i>)						\$_____	
Lump Sum Subtotal						\$_____	

Item Number	Bid Item (Section)	On Site or Off-site	Quantity	Unit	Cost/Unit	Total	Includes
17	Monitoring Well Decommissioning	On Site	3	EA	\$_____ / EA	\$_____	All
18	Monitoring Well Installation	On Site	3	EA	\$_____ / EA	\$_____	All
19	Monitoring Well Decommissioning	Off-Site	1	EA	\$_____ / EA	\$_____	All
20	Monitoring Well Installation	Off-Site	1	EA	\$_____ / EA	\$_____	All
21	Flowable Fill (312323.33)	Off-Site	3	CY	\$_____ / CY	\$_____	Filling of closed-in-place buried piping from Site to river
22	Asbestos-Containing Material (ACM) Pipe Abatement (028213)	On Site	286	LF	\$_____ / LF	\$_____	Notify, abate, record, transport, & dispose.
23	Selective Demolition and Consolidation (017419, 024119)	On Site	150	Yard	\$_____ / Yard	\$_____	Consolidation of clean concrete into onsite excavations.
24	Selective Demolition and Disposal (017419, 024119)	On Site	1,200	Ton	\$_____ / Ton	\$_____	Offsite disposal of excess / contaminated concrete and all asphalt.
25	Non-ACM Underground Piping Removals (024119)	On Site	1,600	LF	\$_____ / LF	\$_____	Remove, clean, transport & scrap/recycle. Liquid transport and disposal covered under Item 44.
26	Non-ACM Underground Piping Removals (024119)	Off-Site	50	LF	\$_____ / LF	\$_____	Remove, clean, transport & scrap/recycle. Liquid transport and disposal covered under Item 45.
27	Arsenic-Contaminated Soil Consolidation (028335, 310000)	On Site	963	CY	\$_____ / CY	\$_____	Excavate, handle, consolidate, backfill, & compact.
28	Petroleum-Contaminated Soil & Stumps Disposal (028335, 310000)	On Site	10,455	Ton	\$_____ / Ton	\$_____	Excavate, handle, transport, & dispose. Based on CY to ton conversion factor of 1.5.
29	Petroleum-Contaminated Soil & Stumps Disposal (028335, 310000)	Off-Site	1,929	Ton	\$_____ / Ton	\$_____	Excavate, handle, transport, & dispose. Based on CY to ton conversion factor of 1.5..
30	Petroleum-Contaminated Soil Disposal Sampling / Testing (028335)	On Site	25	Each	\$_____ / EA	\$_____	Sample collection and testing. Assumes 1 sample per 500 tons.
31	Petroleum-Contaminated Soil Disposal Sampling / Testing (028335)	Off-Site	5	Each	\$_____ / EA	\$_____	Sample collection and testing. Assumes 1 sample per 500 tons.
32	Imported Backfill (028335, 310000, 310101)	On Site	14,013	Ton	\$_____ / Ton	\$_____	Testing, transport, handle, backfill, compact, & grade. Volume is an estimate. May change based on ability to consolidate clean concrete. Based on CY to ton conversion factor of 1.5..
33	Imported Backfill (028335, 310000, 310101)	Off-Site	2,577	Ton	\$_____ / Ton	\$_____	Testing, transport, handle, backfill, compact, & grade. Based on CY to ton conversion factor of 1.5.
34	Demarcation Barrier	On Site	2,545	SY	\$_____ / SY	\$_____	Material and labor
35	Non-Wetland Topsoil (310101)	On Site	600	Ton	\$_____ / Ton	\$_____	Transport, handle, backfill topsoil material. Based on CY to ton conversion factor of 1.5.
36	Non-Wetland Topsoil (310101)	Off-Site	113	Ton	\$_____ / Ton	\$_____	Transport, handle, backfill topsoil material. Based on CY to ton conversion factor of 1.5.
37	Wetland Topsoil (333333.33)	On Site	1,058	Ton	\$_____ / Ton	\$_____	Transport, handle, backfill topsoil material. Based on CY to ton conversion factor of 1.5.

Item Number	Bid Item (Section)	On Site or Off-site	Quantity	Unit	Cost/Unit	Total	Includes
38	Trees and Shrubs (333333.33)	On Site	29	EA	\$_____ / EA	\$_____	All
39	Trees and Shrubs (333333.33)	Off-Site	1	EA	\$_____ / EA	\$_____	All
40	Non-Wetland Restoration (310101)	On Site	3,340	SY	\$_____ / SY	\$_____	Seed, mulch, & maintain.
41	Non-Wetland Restoration (310101)	Off-Site	820	SY	\$_____ / SY	\$_____	Seed, mulch, & maintain.
42	Wetland Restoration (333333.33)	On Site	6,340	SY	\$_____ / SY	\$_____	Plantings and replacements in accordance with Wetland Restoration Plan
43	Leachfield Restoration	Off-Site	Assume 300 LF	LF	\$_____ / LF	\$_____	All
44	Transport and Disposal of Piping Liquids and UST Liquids (026500, 024119)	On Site	6,500	Gallons	\$_____ / Gal	\$_____	Assume 6,000 gallons in UST and 500 gallons in piping
45	Transport and Disposal of Piping Liquids (024119)	Off-Site	500	Gallons	\$_____ / Gal	\$_____	Assume 500 gallons in piping
46	Temporary Haul Road (C-101)	On Site	750	LF	\$_____ / LF	\$_____	All
47	Base Bid - De-Watering Contaminated Water - Offsite Discharge (028335, 310000, 312319)	On Site	Assume 60	Days	\$_____ / Day	\$_____	Day mean 8-12 hours
48	Alternate #2 De-Watering Contaminated Water - Onsite Discharge (028335, 310000, 312319)	On Site	Assume 60	Days	\$_____ / Day	\$_____	Day mean 8-12 hours
49	Base Bid - De-Watering Contaminated Water - Offsite Discharge (028335, 310000, 312319)	Off-Site	Assume 5	Days	\$_____ / Day	\$_____	Day mean 8-12 hours
50	Alternate #2 - De-Watering Contaminated Water - Onsite Discharge (028335, 310000, 312319)	Off-Site	Assume 5	Days	\$_____ / Day	\$_____	Day mean 8-12 hours
51	Alternate #3 Removal and disposal of ACM Contaminated Soil (028213)	On-Site	Assume 22	Tons	\$_____ / Ton	\$_____	If encountered during pipe removals. Include cost of variance.
Unit Price Subtotal (On Site)						\$_____	
Unit Price Subtotal (Off-Site)						\$_____	
Unit Price Subtotal						\$_____	
Total Bid Price (On Site)						\$_____	
Total Bid Price (Off-Site)						\$_____	
Total Bid Price						\$_____	

Key:

LS Lump Sum
 CY Cubic Yard
 LF Linear Feet
 Gal Gallon
 EA Each
 SY Square Yard

Item Number	Bid Item (Section)	On Site or Off-site	Quantity	Unit	Cost/Unit	Total	Includes
BID SHEET							
Maider Road Waterfront Site Environmental Restoration Project Clay, Onondaga County Site No. B00015							
Name of Firm:							
Name of Contact Person:							
Mailing Address:							
Telephone:				Email:			
Print / Type Name:							
Authorized Signature:							
Title:							

Addendum No.1
Maiden Road Waterfront ERP Site Remediation

Updated Specifications

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

- 1.01 This Bid is submitted to: Town of Clay, 4401 Route 31, Clay, NY 13041.
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

- 2.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
 - E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
 - F. Required Bidder Qualification Statement with supporting data; and
 - ~~G. [List other documents and edit above as pertinent].~~
 - ~~G. If Bid amount exceeds \$10,000, signed Compliance Statement (RD 400-6). Refer to specific equal opportunity requirements set forth in the Supplementary Conditions of the Construction Contract (EJCDC C-800);~~
 - ~~H. If Bid amount exceeds \$25,000, signed Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions (AD 1048);~~
 - ~~I. If Bid amount exceeds \$100,000, signed RD Instruction 1940-Q Exhibit A-1, Certification for Contracts, Grants, and Loans.~~

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

- 3.01 *Lump Sum Bids - SEE ATTACHED BID SHEET*
- 3.02 *Unit Price Bids - SEE ATTACHED BID SHEET*

3.03 *Total Bid Price (Lump Sum and Unit Prices) - SEE ATTACHED BID SHEET*

ARTICLE 4—BASIS OF BID—COST PLUS FEE

Deleted

ARTICLE 5—PRICE PLUS TIME BID

Deleted

ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 ~~Bidder agrees that the Work will be substantially complete on or before [Bidder inserts date], and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before [Bidder inserts date].~~

Deleted

6.03 ~~Bidder agrees that the Work will be substantially complete within [Bidder inserts number] calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within [Bidder inserts number] calendar days after the date when the Contract Times commence to run.~~

Deleted

6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda: **[Add rows as needed. Bidder is to complete table.]**

Addendum Number	Addendum Date

--	--

ARTICLE 8—BIDDER’S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder’s Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work, **including all American Iron and Steel requirements.**
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder’s (Contractor’s) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
 - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
 - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
 - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
 - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.
5. As required by GML, Article 5-A, section 103-d:
 - a. "By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:
 - (1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - (2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

(3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition."

6. As required by GML, Article 5-A, Section 103-g regarding the Iran Divestment Act:
 - a. "By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not on the list created pursuant to paragraph (b) of subdivision 3 of section 165-a of the state finance law."

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

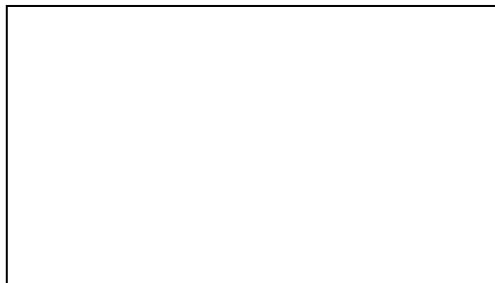
Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

Corporate Seal:



SECTION 012200 - UNIT AND LUMP SUM PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit and lump sum prices.
- B. Related Requirements:
 - 1. Section 012100 "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

- A. Unit price is an amount incorporated into the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased
- B. Lump sum price is a set fee for a given work element or task.

1.3 PROCEDURES

- A. Prices include all necessary material, plus cost for delivery, installation, insurance, overhead, and profit.
- B. Measurement and Payment: See Part 3.1 Schedule of Prices for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in that Part.
- C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- D. List of Lump Sum Prices: A schedule of lump sum prices is included in Part 3.2. Specification Sections referenced in the schedule contain requirements for materials described under item.
- E. List of Unit Prices: A schedule of unit prices is included in Part 3.3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.
- F. For lump sum items that require on-going maintenance (e.g., erosion controls and decontamination pad), the payment provisions are as follows:
 - 1. Erosion Controls: Payment for approximately 50% of the item's bid amount upon installation; 30% for maintenance with a maximum of 10% of the item's bid amount monthly; and approximately 20% of the item's bid amount upon removal of the controls,

or completion of the work associated with that item and/or upon substantial completion for items that are required throughout construction.

2. Decontamination Pad: Payment for approximately 20% of the item's bid amount upon installation; 30% for maintenance with a maximum of 10% of the item's bid amount monthly; and approximately 50% of the item's bid amount upon removal of the controls, or completion of the work associated with that item and/or upon substantial completion for items that are required throughout construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF PRICES

- A. For all unit price items, quantities will be based on limits/quantities as shown on the plans or as directed by the Engineer.
- B. For all items, work must be done in accordance with the site's Health and Safety Plan, Community Air Monitoring Plan, and with necessary controls in place, including but not limited to erosion controls, and perimeter/security controls.

3.2 LUMP SUM ITEMS:

- A. Lump Sum Price No. 1 – Contingency Allowance:
 1. Description: Pre-determined value added to the contract to cover unforeseen work and tasks.
 2. Unit of Measurement: Lump Sum.
- B. Lump Sum Price No. 2 – Alternate #1 Field Office:
 1. Description: Provision of field office.
 2. Unit of Measurement: Lump Sum.
- C. Lump Sum Price No. 3 – Mobilization & Demobilization:
 1. Description: Mobilization and demobilization of staff, equipment, and vehicles for the entire project.
 2. Unit of Measurement: Lump Sum.
- D. Lump Sum Price No. 4 – Health & Safety Plan:
 1. Description: Preparation of the site-specific Health and Safety Plan, as defined in numerous technical specifications.
 2. Unit of Measurement: Lump Sum.

E. ~~Lump Sum Price No. 5 – Stabilized Construction Entrance:~~

- ~~1. Description: Construction, maintenance and removal of construction entrance shown on C-104.~~
- ~~2. Unit of Measurement: Lump Sum.~~

F. Lump Sum Price No. 6 – Decontamination Pad:

1. Description: Construction, maintenance, and water disposal for decontamination pad as described in Section 015000.
2. Unit of Measurement: Lump Sum.

G. Lump Sum Price No. 7 – UST Removal:

1. Description: Closure by removal of a 6,000-gallon UST as described in Section 026500. Liquid disposal covered under Item #44.
2. Unit of Measurement: Lump Sum.

H. Lump Sum Price No. 8 – Water Pollution and Erosion Control:

1. Description: Onsite installation, maintenance, and inspection of erosion controls as described in Section 312710.
2. Unit of Measurement: Lump Sum.

I. Lump Sum Price No. 9 – Water Pollution and Erosion Control:

1. Description: Offsite installation, maintenance, and inspection of erosion controls as described in Section 312710.
2. Unit of Measurement: Lump Sum.

J. Lump Sum Price No. 10 – Tree Clearing and Grubbing:

1. Description: Onsite tree clearing and grubbing as described in Section 311000.
2. Unit of Measurement: Lump Sum.

K. Lump Sum Price No. 11 – Tree Clearing and Grubbing:

1. Description: Offsite tree clearing and grubbing as described in Section 311000.
2. Unit of Measurement: Lump Sum.

L. Lump Sum Price No. 12 – Survey:

1. Description: Survey to document existing conditions and site changes as described in Sections 028335 and 312319.
2. Unit of Measurement: Lump Sum.

M. Lump Sum Price No. 13 – Maintenance and Protection of Traffic:

1. Description: Ingress and egress to the Site consistent with local requirements and C-501.
2. Unit of Measurement: Lump Sum.

N. Lump Sum Price No. 14 – River Infrastructure Removal:

1. Description: River bank pipe cleaning, cutting, and capping as described in Section 024119. Liquid disposal covered under Item #45.
2. Unit of Measurement: Lump Sum.

O. Lump Sum Price No. 15 – Shed Relocation and Concrete Pad Installation:

1. Description: Relocate two residence's sheds to perform work and reinstall on new concrete pads as shown on C-101.
2. Unit of Measurement: Lump Sum.

~~P. Lump Sum Price No. 16 – Anything Else Not Listed:~~

- ~~1. Description: If needed, provide a cost for required items not provided in the Bid Sheet.~~
- ~~2. Unit of Measurement: Lump Sum~~

3.3. UNIT PRICE ITEMS

A. Unit Price No. 17 - Monitoring Well Decommissioning:

1. Description: Onsite Monitoring Well Decommissioning according to the Contract Drawings.
2. Unit of Measurement: Each.

B. Unit Price No. 18 - Monitoring Well Installation:

1. Description: Onsite Monitoring Well Installation according to the Contract Drawings.
2. Unit of Measurement: Each.

C. Unit Price No. 19 - Monitoring Well Decommissioning:

1. Description: Offsite Monitoring Well Decommissioning according to the Contract Drawings.
2. Unit of Measurement: Each.

D. Unit Price No. 20 - Monitoring Well Installation:

1. Description: Offsite Monitoring Well Installation according to the Contract Drawings
2. Unit of Measurement: Each.

E. Unit Price No. 21 - Flowable Fill:

1. Description: Filling closed-in-place piping with flowable fill according to Section 312323.33.
2. Unit of Measurement: Cubic yards.

F. Unit Price No. 22 - Asbestos-Containing Material (ACM) Pipe Abatement:

1. Description: Onsite Asbestos-Containing Material (ACM) pipe abatement according to Section 028213.
2. Unit of Measurement: Linear foot.

- G. Unit Price No. 23 – Selective Demolition and Consolidation:
1. Description: Consolidation of clean concrete into onsite excavations according to Sections 017419 and 024119.
 2. Unit of Measurement: Yards.
- H. Unit Price No. 24 – Selective Demolition and Disposal:
1. Description: Offsite disposal of excess concrete and all asphalt according to Sections 017419 and 024119.
 2. Unit of Measurement: Tons.
- I. Unit Price No. 25 - Non-ACM Underground Piping Removals:
1. Description: Onsite Non-ACM Underground Piping Removals according to Section 024119.
 2. Unit of Measurement: Linear feet.
- J. Unit Price No. 26 - Non-ACM Underground Piping Removals:
1. Description: Offsite Non-ACM Underground Piping Removals according to Section 024119.
 2. Unit of Measurement: Linear feet.
- K. Unit Price No. 27 - Arsenic-Contaminated Soil Consolidation:
1. Description: Onsite Arsenic-Contaminated Soil Consolidation according to Sections 028335 and 310000.
 2. Unit of Measurement: Cubic yard.
- L. Unit Price No. 28 - Petroleum-Contaminated Soil & Stumps Disposal:
1. Description: Removal of Petroleum-Contaminated Soil & Stumps from onsite and disposal according to Sections 028335 and 310000.
 2. Unit of Measurement: Ton
- M. Unit Price No. 29 - Petroleum-Contaminated Soil & Stumps Disposal:
1. Description: Removal of Petroleum-Contaminated Soil & Stumps from offsite and disposal according to Sections 028335 and 310000.
 2. Unit of Measurement: Ton.
- N. Unit Price No. 30 - Petroleum-Contaminated Soil Disposal Sampling / Testing:
1. Description: Testing of Petroleum-Contaminated Soil from Onsite Locations according to Section 028335.
 2. Unit of Measurement: Each.
- O. Unit Price No. 31 - Petroleum-Contaminated Soil Disposal Sampling / Testing:
1. Description: Testing of Petroleum-Contaminated Soil from Offsite Locations according to Section 028335.
 2. Unit of Measurement: Each.

- P. Unit Price No. 32 - Imported Backfill:
1. Description: Imported Backfill placed Onsite according to Sections 028335, 310000, and 310101.
 2. Unit of Measurement: Cubic yard.
- Q. Unit Price No. 33 - Imported Backfill:
1. Description: Imported Backfill placed Offsite according to Sections 028335, 310000, and 310101.
 2. Unit of Measurement: Cubic yard.
- R. Unit Price No. 34 - Demarcation Barrier:
1. Description: Installation of Demarcation Barrier according to Section Contract Drawings.
 2. Unit of Measurement: Square yard.
- S. Unit Price No. 35 - Non-Wetland Topsoil:
1. Description: Non-Wetland Topsoil placed onsite according to Section 310101.
 2. Unit of Measurement: Cubic yard.
- T. Unit Price No. 36 - Non-Wetland Topsoil:
1. Description: Non-Wetland Topsoil placed offsite according to Section 310101.
 2. Unit of Measurement: Cubic yard.
- U. Unit Price No. 37 – Wetland Topsoil:
1. Description: Wetland Topsoil placed onsite according to Section 333333.33.
 2. Unit of Measurement: Cubic yard.
- V. Unit Price No. 38 – Trees and Shrubs:
1. Description: Trees and Shrubs placed onsite according to Section 333333.33.
 2. Unit of Measurement: Each.
- W. Unit Price No. 39 - Trees and Shrubs:
1. Description: Trees and Shrubs placed offsite according to Section 333333.33.
 2. Unit of Measurement: Each.
- X. Unit Price No. 40 - Non-Wetland Restoration:
1. Description: Non-Wetland Restoration Onsite according to Section 310101.
 2. Unit of Measurement: Square yards.
- Y. Unit Price No. 41 - Non-Wetland Restoration:
1. Description: Non-Wetland Restoration Offsite according to Section 310101.
 2. Unit of Measurement: Square yard.

Z. Unit Price No. 42 - Wetland Restoration:

1. Description: Onsite Wetland Restoration according to Section 333333.33.
2. Unit of Measurement: Square yard.

AA. Unit Price No. 43 - Leachfield Restoration:

1. Description: Offsite Leachfield Restoration according to Contract Drawings.
2. Unit of Measurement: Linear feet.

BB. Unit Price No. 44 – Transport and Disposal of Piping Liquids and UST Liquids

1. Description: Transporting and disposal of liquids from cleaning of piping and the UST located onsite.
2. Unit of Measurement: Gallons

CC. Unit Price No. 45 – Transport and Disposal of Piping Liquids

1. Description: Transporting and disposal of liquids from cleaning of piping located offsite.
2. Unit of Measurement: Gallons

DD. Unit Price No. 46 - Temporary Haul Road:

1. Description: Construction of Temporary Haul Road Onsite as shown on C-101.
2. Unit of Measurement: Linear feet.

EE. Unit Price No. 47 – Base Bid - De-watering Contaminated Water – Offsite Discharge:

1. Description: Handling, monitoring, testing, transporting, disposing, and removal of excavation water pumped from onsite locations, to be discharged offsite per OCDWEP requirements and Section 028335.
2. Unit of Measurement: Per Day

FF. Unit Price No. 48 – Alternate #2 - De-watering Contaminated Water – Onsite Discharge:

1. Description: Handling, monitoring, testing, transporting, disposing, and removal of excavation water pumped from onsite locations, to be discharged onsite per NYSDEC requirements and Section 028335.
2. Unit of Measurement: Per Day

GG. Unit Price No. 49 – Base Bid - De-watering Contaminated Water – Offsite Discharge:

1. Description: Handling, monitoring, testing, transporting, disposing, and removal of excavation water pumped from offsite locations, to be discharged offsite per OCDWEP requirements and Section 028335.
2. Unit of Measurement: Per Day

HH. Unit Price No. 50 – Alternate #2 - De-watering Contaminated Water – Onsite Discharge:

1. Description: Handling, monitoring, testing, transporting, disposing, and removal of excavation water pumped from offsite locations, to be discharged onsite per NYSDEC requirements and Section 028335.
2. Unit of Measurement: Per Day

- II. Unit Price No. 51 - Alternate #2 Removal and Disposal of ACM Contaminated Soil
 - 1. Description: Handling, transporting, and disposal of ACM contaminated soil, if encountered
 - 2. Unit of Measurement: Per Ton

END OF SECTION 012200

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes demolition and removal of selected site elements:
 - 1. Asphalt pavement,
 - 2. Concrete slabs,
 - 3. Concrete barrier wall (only as necessary to complete remedial excavation),
 - 4. Buried piping,
 - 5. River bank infrastructure (piping), and
 - 6. Monitoring wells that are within excavation limits and require removal to perform the work.

1.2 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.
 - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.3 PREINSTALLATION MEETINGS

- A. Pre-demolition Conference: Conduct conference at Project site.

1.4 INFORMATIONAL SUBMITTALS

- A. A site-specific Health and Safety Plan (HASP) must be prepared and implemented for the project. The Contractor must provide a competent health and safety professional to fully assess the site and the work and prepare a site-specific HASP, which will be maintained on-site and adhered to for the duration of the work. The Contractor's on-site workers must each hold training certification under OSHA Hazwoper Health and Safety regulations from 29 CFR 1910.120, appropriate to the level of work the individual is performing or managing on site. The HASP must address regulations for confined space entry (29 CFR 1910.146), applicable portions of 29 CFR 1926, exposure to contaminated materials, safety around excavations and construction equipment, and any other health and safety precautions required to perform the work. The HASP shall identify personal protective equipment (PPE), decontamination procedures, and exclusion/transition/decontamination zones, as well as an ambient air monitoring plan for

particulates within the workers breathing zone that includes action levels and mitigation procedures for excessive particulate levels. The Owner's Representative will review and comment on the HASP but will neither approve nor disapprove it. However, it must be provided to the Engineer and NYSDEC prior to mobilization.

1.5 CLOSEOUT SUBMITTALS

- A. Inventory of items that have been removed and salvaged.

1.6 QUALITY ASSURANCE

- A. Not used.

1.7 FIELD CONDITIONS

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: Scope of Work includes abatement of asbestos-containing materials, petroleum-contaminated soil, and arsenic-contaminated soil.
- D. Piping may contain petroleum product residuals.
- E. The river bank and bed are the property of the NYS Canal Corporation. Submit required work permit to perform work on their property. Do not disturb the river bed or banks with equipment.
- F. The Community Air Monitoring Plan (CAMP), outlined in the Remedial Design Work Plan (RDWP) as provided in the Referenced Documents, shall be implemented for all intrusive / invasive work where there is a potential to disturb contaminated materials. The potential for disturbing contaminated materials is expected for all intrusive / invasive work at the Site. The Contractor shall implement means and methods, and corrective action measures, as necessary to provide a measure of protection from volatile organic compounds (VOCs), particulates (i.e., dust), and odors for the community, consistent with the CAMP. The Engineer shall provide full time observation and monitoring to determine the effectiveness of the implementation of the CAMP.

1.8 WARRANTY

- A. Not used.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing NYSDEC, EPA, or NYSDOL notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

3.2 PREPARATION FOR BURIED PIPING

- A. Collect, contain, transport, and properly dispose of any petroleum product residuals and any other liquids found inside piping.
- B. Clean piping as necessary for proper disposal.

3.3 PREPARATION FOR CLOSED-IN-PLACE RIVER PIPING

- A. Prior to filling, the piping shall be cleaned. Prior to cleaning, the Contractor shall communicate the approach to the Owner's Representative
- B. All necessary precautions shall be implemented by the Contractor to ensure that cleaning activities do not contaminate the Site or the river.
- C. The cleaning methods employed shall remove an adequate quantity / volume of liquids and sediment to facilitate the proper installation and curing of the flowable fill.
- D. Prior to filling, the Owner's Representative shall inspect the piping to ensure that the piping is adequately cleaned. The Contractor may be required to perform a camera inspection demonstrate its cleanliness.
- E. Collect, contain, transport, and properly dispose of any petroleum product residuals and any other liquids found inside piping.

3.4 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off utilities with utility companies.

3.5 PROTECTION

- A. Refer to Section 015000 – Temporary Facilities and Controls.

3.6 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Do not use cutting torches until work area is cleared of flammable and combustible vapors and materials.
 - 2. Maintain fire watch during and for at least 2 hours after flame-cutting operations.
 - 3. Comply with requirements in Section 017419 – Construction Waste Management and Disposal.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

3.7 CONSOLIDATION, DISPOSAL, AND CLEANING

- A. Consolidate or remove and dispose of selective demolition materials as schedule below:
 - 1. Non-asbestos-containing piping: Remove from Project site and scrap, recycle, or dispose of according to Section 017419 - Construction Waste Management and Disposal.
 - 2. Dispose offsite all misc. asphalt and stained or otherwise contaminated concrete required to be removed to perform the Work.
 - a. Miscellaneous uncontaminated concrete may be consolidated in the voids created by the onsite petroleum-contaminated soils removals. The extent of consolidated materials shall be provided on the site survey.
 - 3. Do not allow demolished materials to accumulate on-site.
 - 4. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials onsite.

- C. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

SECTION 310101 - SITE RESTORATION

PART 1 GENERAL

1.1 SCOPE

- A. This specification applies to non-wetland areas. Refer to Specification 333333.33 for restoration within wetlands.

1.2 QUALITY ASSURANCE

- A. Provide prepackaged seed readily available to the public with quality and purity equal to product of O.M. Scotts and Son, Marysville, OH 43041. On-the-job or made-to-order mixes will not be accepted.

1.3 DELIVERY STORAGE AND HANDLING

- A. Deliver fertilizer in manufacturer's standard size bags or cartons showing weight, analysis, and the name of the manufacturer. Store as approved by Owner's Representative.
- B. Store all seed at the site in a cool dry place as approved by the Owner's Representative. Replace any seed damaged during storage.

1.4 SCHEDULING

- A. Time For Seeding: Optimum period to sow permanent grass seed is generally between April 1st and May 15th or between August 15th and October 1st. Schedule application for when weather conditions permit or as Directed.
 - 1. Provide temporary seed and mulch when final grading is complete while waiting for optimal seeding period.
 - 2. Provide temporary seed and mulch for temporary cover on disturbed ground not to be worked on for more than 7 days.
 - 3. Provide temporary seed and mulch on disturbed earth prior to temporary shutdown of construction.

1.5 SAFETY

A site-specific Health and Safety Plan (HASP) must be prepared and implemented for the project. The Contractor must provide a competent health and safety professional to fully assess the site and the work and prepare a site-specific HASP, which will be maintained on-site and adhered to for the duration of the work. The Contractor's on-site workers must each hold training certification under OSHA Hazwoper Health and Safety regulations from

29 CFR 1910.120, appropriate to the level of work the individual is performing or managing on site. The HASP must address regulations for confined space entry (29 CFR 1910.146), applicable portions of 29 CFR 1926, exposure to contaminated materials, safety around excavations and construction equipment, and any other health and safety precautions required to perform the work. The HASP shall identify personal protective equipment (PPE), decontamination procedures, and exclusion/transition/decontamination zones, as well as an ambient air monitoring plan for particulates within the workers breathing zone that includes action levels and mitigation procedures for excessive particulate levels. The Owner's Representative will review and comment on the HASP but will neither approve nor disapprove it. However, it must be provided to the Engineer and NYSDEC prior to mobilization.

PART 2 PRODUCTS

2.1 TOPSOIL

A. Source:

1. Imported topsoil must be tested by the Contractor and approved by the Owner's Representative before being brought on site. Testing requirements and acceptance criteria are the same as specified for backfill per 028335.
2. Topsoil stripped from the Site shall not be reused.

B. Provide topsoil conforming to the following:

1. Original loam topsoil, well drained homogeneous texture and of uniform grade, without the admixture of subsoil material and entirely free of dense material, hardpan, sod, or any other objectionable foreign material.
2. Containing not less than 4 percent nor more than 20 percent organic matter in that portion of a sample passing a 1/4 inch sieve when determined by the wet combustion method on a sample dried at 105 degrees C.
3. Containing a pH value within the range of 4.5 to 7 on that portion of the sample that passes a 1/4 inch sieve.
4. Containing the following gradations:

SIEVE DESIGNATION	PERCENT PASSING
1 inch	100
1/4 inch	97 - 100
No. 200	20 - 65 (of the 1/4 inch sieve)

2.2 FERTILIZER

- A. Fertilizer: Mixed commercial fertilizers shall contain total nitrogen, available phosphoric acid and soluble potash in the ratio of 10-6-4 (50% N/UF). 50% of total nitrogen shall be derived from ureaform furnishing a minimum of 3.5% water insoluble nitrogen (3.5% WIN). The balance of the nitrogen shall be present as methylene urea, water-soluble urea, nitrate and ammoniacal compounds.
- B. Other fertilizers meeting DOT Specification Section 713-03 Fertilizer can be used.
- C. If the project is within an enhanced phosphorus removal watershed, the phosphate content must not exceed 0.67%.

2.3 SEED

- A. Furnish fresh, clean, new-crop seed mixed in the proportions specified for species and variety, and conforming to Federal and State Standards.
- B. Acceptable material in a seed mixture other than pure live seed consists of nonviable seed, chaff, hulls, live seed of crop plants and inert matter. The percentage of weed seed shall not exceed 0.1 percent by weight.
- C. All seed will be rejected if the label indicates any noxious weed seeds.
- D. For non-lawn areas, provide seed mixture equal to NYS DEC Permanent Construction Area Planting Mixture #2, comprised of the following:

SEED MIXTURE			
<u>Seed Mixture</u>	<u>Variety*</u>	<u>Rate in lbs. / acre (PLS)</u>	<u>Rate in lbs. / 1,000 ft²</u>
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.50

*Variety may be altered depending on availability of seed from manufacturer.

- E. For residential lawns, used seed of grass species, with not less than 95% germination, not less than 85% pure seed, and not more than 0.5% weed seed:
 1. 50% Kentucky blue grass
 2. 30% creeping red fescue
 3. 10% annual ryegrass
 4. 10% perennial rye grass

Apply at rate of three to four pounds per 1,000 square feet.

2.4 MULCH

- A. Dry Application, Straw: Stalks of oats, wheat, rye or other approved crops that are free of noxious weed seeds. Weight shall be based on a 15 percent moisture content. Hay shall not be used.

PART 3 EXECUTION

3.1 GRADING

- A. Rough Grading: Trim and grade lawn areas within the Contract Limit to a level of 4 inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.
- B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:
 - 1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.

3.2 SPREADING TOPSOIL

- A. Perform topsoil spreading operations only during dry weather.
- B. To insure a proper bond with the topsoil, harrow or otherwise loosen the subgrade to a depth of 3 inches before spreading topsoil.
- C. Spread topsoil directly upon prepared subgrade to a minimum depth measuring 4 inches after natural settlement in areas to be seeded. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material. Finished surfaces shall conform to the contour lines and elevations indicated on the drawings or fixed by the Owner's Representative.

3.3 PREPARATION FOR SEEDING

- A. Seed Bed: Scarify soil to a depth of 2 inches in compacted areas. Smooth out unsightly variations, bumps, ridges, and depressions that will hold water. Remove stones, litter, or other objectionable material.

3.4 FERTILIZING

- A. Apply fertilizer evenly at the rate of 40 pounds per 1000 sq ft.

3.5 SEEDING

- A. Assume all risks when seed is sowed before approval of seed analysis.
- B. Do not seed when the wind velocity exceeds 5 miles per hour.
- ~~D. Application Rate: 8 pounds per 1000 sq ft.~~
- D. Dry Application: Sow seed evenly by hand or seed spreader on dry or moderately dry soil.

3.6 MULCHING

- A. Dry Application: Within 3 days after seeding, cover the seeded areas with a uniform blanket of straw mulch at the rate of 50 pounds per 1000 sq ft of seeded area.

3.7 LAWN ESTABLISHMENT

- A. Maintain the grass at heights between 3 inches and 3-1/2 inches on a weekly basis until the Final Acceptance of the Work.
- B. Water and protect all seeded areas until final acceptance of the lawn.

3.8 FINAL ACCEPTANCE

- A. Final acceptance of seeded areas will be granted when a uniform stand of acceptable grass is obtained, with a minimum of 95 percent coverage. Portions of the seeded areas may be accepted at various times at the discretion of the Owner's Representative.
- B. Unacceptable seeded areas, dry application: Reseed as specified and fertilized at one-half the specified rate.
- E. Once accepted, the Owner will assume all maintenance responsibilities.

3.9 AIR MONITORING

The Community Air Monitoring Plan (CAMP), outlined in the Remedial Design Work Plan (RDWP) as provided in the Referenced Documents, shall be implemented for all intrusive / invasive work where there is a potential to disturb contaminated materials. The potential for disturbing contaminated materials is expected for all intrusive / invasive work at the Site. The Contractor shall implement means and methods, and corrective action measures, as necessary to provide a measure of protection from volatile organic compounds (VOCs), particulates (i.e., dust), and odors for the community, consistent

with the CAMP. The Engineer shall provide full time observation and monitoring to determine the effectiveness of the implementation of the CAMP.

END OF SECTION

SECTION 333333.33 – WETLAND SPECIFICATIONS

SECTION 713 - LANDSCAPE DEVELOPMENT MATERIALS**713-01 TOPSOIL**

SCOPE. This specification covers the material requirements for topsoil for use in turf establishment, wildflower seeding, sodding, and planting. Imported soil must comply with 028335 with respect to testing prior to import. On-site or off-site soils that are contaminated cannot be used and on-site contaminated soil cannot be reused onsite.

MATERIAL REQUIREMENTS. Topsoil may be naturally occurring or may be manufactured. If naturally occurring topsoil exists on the site it shall be the surface layer of soil at a depth specified in the contract documents or approved by the engineer.

For manufactured topsoil the contractor shall thoroughly mix the organic portion with the granular portion under dry conditions.

Topsoil shall be free from refuse, material toxic or otherwise deleterious to plant growth, subsoil, sod clumps, seeds or other viable propagules of invasive plants, woody vegetation and stumps, roots, brush, refuse, stones, clay lumps, or similar objects. Construction and demolition debris as classified under 6 NYCRR Part 360, other than uncontaminated land clearing debris, shall not be used to manufacture or amend topsoil. Sod and herbaceous growth such as grass and non-invasive weeds need not be removed but shall be thoroughly broken up and mixed with the soil during handling or manufacturing operations.

A. Manufactured or Offsite Materials.

1. Topsoil – Roadside

- The pH of the material shall be between 5.5 and 7.6.
- The organic content shall be not less than 3% or more than 8%

Gradation:	
Sieve Size	Percent Passing by Weight
2 inch	100
1 inch	85 to 100
1/4 inch	65 to 100
No. 200	20 to 65
2 Micron	0 to 20

2. Topsoil - Lawn

- The pH of the material shall be between 5.5 and 7.6.
- The organic content shall be not less than 6% or more than 12%

Gradation:	
Sieve Size	Percent Passing by Weight
1 inch	100
No. 10	90 to 100
No. 40	45 to 80

No. 200	25 to 70
2 Micron	5 to 35

3. Topsoil - Special Planting Mix

- The pH of the material shall be between 5.5 and 7.0.
- The organic content shall be not less than 10% or more than 15%,

Gradation:	
Sieve Size	Percent Passing by Weight
2 inch	100
1 inch	85 to 100
1/4 inch	65 to 100
No. 200	20 to 40
2 Micron	5 to 35

4. Topsoil - Acidic

- The pH of the material shall be between 4.8 and 6.0.
- The organic content shall be not less than 6% or more than 15%.

Gradation:	
Sieve Size	Percent Passing by Weight
1 inch	100
No. 10	90 to 100
No. 40	25 to 70
No. 200	5 to 10
2 Micron	5 to 35

C. Topsoil- Wetland

1. Topsoil - On-Site Wetland Materials. Existing wetland soil stripped and reclaimed from existing impacted delineated wetlands sites from within the contract limits and to the depth specified in the contract documents. This wetland soil shall meet the Sampling & Testing requirements as specified below.

2. Topsoil - Offsite or Manufactured Wetland Materials. These materials shall meet the following requirements:

- The pH of the material shall be between 5.0 and 7.0.
- The organic content shall be not less than 15% or more than 20% dry weight basis and be comprised of leaf or well rotted manure compost

Granular material shall be naturally occurring mineral soil and the following gradation:

Gradation:	
Sieve Size	Percent Passing by Weight
No. 16	100
No. 40	85 to 100
No. 60	40 to 100
No. 200	5 to 10

STOCKPILING, SAMPLING & TESTING.

Topsoil-Reuse of On-Site Materials and Topsoil- On-Site Wetland Materials: Topsoil acquired from sites that are designated in the contract documents are subject to requirements for stockpiling, sampling, and testing.

Topsoil Types Roadside, Lawns & Special Planting Mix, Acidic, and Topsoil - Manufactured or Offsite Wetland Materials are subject to the requirements for stockpiling, sampling and testing.

Stockpiling. The details for stockpiling methods and requirements are shown on the Contract Plans.

Sampling. The details for sampling methods and requirements are in Section 310101- Site Restoration

TESTING.

Topsoil Testing. All other material tests required by this section, will be performed by the Contractor, in conformance with the procedures contained in the appropriate NYSDEC publications or test methods.

Stockpiles meeting all requirements for pH, organic and gradation may be accepted and used. Stockpiles that when tested fail to meet requirements for pH or organic may be amended in place. A stockpile that fails to meet gradation requirements may not be accepted. The Contractor shall provide a plan for amending pH and/or organic to the Engineer certified by a nationally recognized entity which provides soils laboratory services. Once the Engineer accepts the plan and certification the Contractor may amend the stockpile. ~~Re-testing of the stockpile is not required prior to placing the topsoil materials.~~

BASIS OF ACCEPTANCE. Topsoil-Reuse of On-Site Materials and Topsoil- On-Site Wetland Materials will be accepted on the basis of the stockpile meeting all the requirements or the stockpile material meeting all gradation requirements and a plan and certification approved by Engineer for amending pH and organic requirements.

Topsoil - Roadside, Topsoil – Lawns, Topsoil - Special Planting Mix, Topsoil - Acidic, and Topsoil - Manufactured or Offsite Wetland Materials will be accepted on the basis of the stockpile meeting all the requirements or the stockpile material meeting all gradation requirements and a plan and certification approved by Engineer for amending pH and organic requirements.

713-02 LIMESTONE

SCOPE. This specification covers the material requirements for limestone.

MATERIAL REQUIREMENTS. Limestone shall be ground limestone having a minimum total neutralizing value of 88% calcium carbonate equivalence. A minimum of 90% shall pass the No. 20 sieve and a minimum of 60% shall pass the No. 100 sieve.

PACKAGING. Packaged agricultural limestone packed in the manufacturer's standard containers shall weigh not over 100 lbs each, with the name of the material, net weight of contents and the manufacturer's name and guaranteed analysis appearing on each container.

BULK DELIVERY. Bulk delivery of limestone shall be accompanied by a certificate providing the names, weight and analysis as specified herein for packaged material.

BASIS OF ACCEPTANCE. Limestone will be accepted on the basis of the manufacturer's label or certificate and visual inspection for compliance with the material requirements.

713-03 FERTILIZER

SCOPE. This specification covers the material requirements for fertilizers.

MATERIAL REQUIREMENTS. Fertilizers may be either fluid or dry formulations of commercial carriers of available plant nutrients. Fertilizers may also be provided in standardized packets designed to control the release of their contents over a specified period of time.

The following mixed commercial fertilizers shall contain total nitrogen, phosphoric acid and soluble potash in the ratios stated:

Type A. 2-1-1 or 3-1-1 (approximate analysis). Minimum of 50% water insoluble nitrogen and with a salt index of less than 50.

610-2.08 Mulch for Planting. Tree, shrub and seeds will be mulched based on manufactures recommendations.

610-2.10 Watering Vegetation. Water and protect all seeded and tree and shrub plantings until final acceptance.

610-3 CONSTRUCTION DETAILS

610-3.01 Topsoil.

A. General. The subsoil within the areas to be covered by topsoil shall be graded so that the completed work after the topsoil is placed shall conform to the specified lines and grades. The Contractor shall scarify or till the surface of the subsoil to a depth of 6 inches before the topsoil is placed to permit bonding the topsoil with the subsoil. Tillage by disking, harrowing, raking or other approved methods shall be accomplished in such a manner that depressions and ridges formed by tillage shall be parallel to the contours.

Topsoil in an unworkable condition due to excessive moisture, frost, or other conditions shall not be placed until its consistency is workable for spreading. Topsoil shall be placed on the designated area and spread to the depth specified in the contract documents or a minimum of 4 inches for turf areas and 3 inches for sod areas.

The finished surface shall be maintained for subsequent contract work such as seeding, sodding, mulching or planting.

The sites of all stockpiles shall be graded and maintained for subsequent contract work. Surplus topsoil will become the property of the Contractor. Roots and top growth of non-native weeds or invasive species that emerge from topsoil stockpiles or after placement of the topsoil shall be eradicated and disposed of in accordance with §610-3.11 *Weed Removal* immediately upon emergence. ~~Weed removal, treatment and disposal of invasive species will be paid for separately.~~

B. Topsoil – Reuse On-Site Materials. Topsoil stripping shall be completed prior to starting the general excavation in an area. The Contractor shall take reasonable care that the topsoil is not contaminated during the stripping and other handling operations.

Topsoil identified for reuse that has a known, established population of invasive species shall be treated to eliminate the presence of invasive species per §610-3.11 *Weed Removal*. The invasive species material shall be disposed appropriately and then the resulting topsoil may be used within the limits. ~~Treatment and disposal of invasive species will be paid for separately.~~

C. Topsoil – Roadside, Lawn, Special Planting Mix and Acidic. The Contractor shall place topsoil only from approved stockpiles.

D. Topsoil – On-Site Wetland and Wetland Off-Site or Manufactured. The Contractor shall not use topsoil wetlands materials which exhibit the presence of invasive species. Care shall be taken not to impact wetland areas remaining.

On-site wetland topsoil stripping shall be completed prior to starting the general excavation in an area. After stripping, on-site wetland topsoil shall be placed within 24 hours or stored within the contract limits at a location approved by the Engineer.

610-3.02 Preparation of Subsoil for Turf Establishment. Prior to establishment of turf in areas that are not to receive topsoil or other permanent erosion control measures, the Contractor shall remove all loose stones and other objects over 2 inches in size to a 4 inch depth. The Contractor shall mix compost with subsoil in accordance with §610-3.07 B. *Turf Establishment With No Topsoil/ On Subsoil* within the areas to be seeded and grade the surface so that the completed work shall conform to the specified finished lines and grades. Compost will be paid for separately.

~~**610-3.03 Turf Establishment.** The Contractor shall coordinate establishment of turf with other site and construction activities.~~

~~The Contractor shall clean all equipment involved in turf establishment to remove plants, seeds and propagules prior to commencement of work. Any work to clean equipment shall be at no additional cost to the Owner.~~

~~The Contractor shall apply the seed mix at one and one half to two times the manufacturer's recommended rate. Any method of sowing that does not injure the seeds and achieves even coverage in the process of spreading will be acceptable.~~

~~The Contractor shall perform the initial watering and shall spread straw uniformly in a continuous blanket to hide the soil from view or mulch Types I—V as specified in the contract documents. Rolled Erosion Control products shall be installed according to manufacturer's recommendations and paid for separately. Mulch anchorage shall be applied.~~

~~The Contractor shall water, mow, and weed the turf establishment areas for the duration of the contract or until turf areas are accepted. Watering, mowing, and weeding to care for the turf will be paid for separately. Any work required to correct initial seeding (installation) shall be done at no additional cost to the Owner.~~

~~**A. Turf Establishment – Roadside.** Areas will be accepted when:~~

- ~~• free from thin or bare ground greater than one foot in diameter;~~

- at least 80 percent of the ground surface is covered with established specified permanent turf grass species;
- they have had one mowing cycle in accordance with §610-3.12 unless conditions prevent mowing, in which case turf grass shall be an average minimum height of 5 inches; and
- they exhibit healthy green color.

B. Turf Establishment—Lawns. Areas will be accepted when:

- free from thin or bare spots greater than six inches in diameter;
- at least 90 percent of the ground surface is covered with established specified permanent turf grass species;
- they have had one mowing cycle in accordance with §610-3.12 unless conditions prevent mowing, in which case turf grass shall be an average minimum height of 3 inches; and
- they exhibit healthy green color.

610-3.04 Wildflower Seeding. The Contractor shall clean all equipment involved in wildflower seeding to remove plants, seeds and propagules prior to commencement of work at no additional cost to the Owner.

The Contractor shall install wildflower seeding materials in accordance with the contract documents. Any method of sowing that does not injure the seeds and provides soil contact in the process of spreading will be acceptable. The Contractor shall apply the seed mix at twice the seed supplier's recommended rate.

The Contractor shall perform the initial watering and spread straw or mulch Types I – V as specified in the contract documents, uniformly at a rate consistent with seed supplier recommendations. Mulch anchorage is required unless otherwise specified in the contract documents. Wildflower seeding areas will be accepted after the seeding operation is complete. Any work required to correct initial seeding (installation) shall be done at no additional cost to the Owner.

The Contractor shall water the wildflower seeding areas for the duration of the contract. ~~Watering to care for the wildflower seeding areas will be paid for separately.~~

610-3.05 Sod. The Contractor shall generally place sod during the seasons identified in Table 610-1 ~~Sodding Seasons~~. The Contractor may request extension of seasons, provided the other conditions are met.

TABLE 610-1 SODDING SEASONS		
Geographic locations	Spring	Fall
R1 Essex, Warren (north of towns of Bolton & Warrensburg), R2 Hamilton, Herkimer (towns of Ohio and Webb) R7 Lewis, St. Lawrence, Franklin, Clinton, Jefferson (east of Rte 81)	4/15-6/30	8/15-10/15
R1—Greene, Rensselaer, Schenectady, Saratoga, Washington, Albany, Warren (towns of Bolton & Warrensburg & south) R2—Montgomery, Fulton, Oneida, Madison, Herkimer (south of town of Ohio) R3,6,9—All counties R7—Jefferson (west of Route 81)	4/1-6/15	8/15-10/31

R4, 5 & 8 All counties	4/1 5/31	8/15 10/31
R10, 11 All counties	3/1 4/30	8/21 11/15

~~The subgrade of areas to be sodded shall be excavated and firmed to a sufficient depth below the finished grade of the sod to accommodate the tamped or rolled thickness of topsoil and sod. No frozen sod shall be placed nor shall sod be placed on frozen ground surface.~~

~~The Contractor shall exercise care to retain the soil existing on the roots of the sod during transporting, handling and transplanting operations.~~

~~Sod shall be placed on a minimum of 3 inches of moist topsoil. The topsoil will be paid for separately.~~

~~The finished sod soil surface shall be flush with surface of the adjacent soil and adjacent structures. It shall meet the finished grades as shown in the contract documents. Sod will be accepted when:~~

- ~~• It has been in place a minimum of 60 days after installation,~~
- ~~• It is 95 percent covered with permanent grass species,~~
- ~~• It has had one mowing cycle in accordance with §610-3.12 Mowing,~~
- ~~• It exhibits healthy green color,~~
- ~~• It is free from thin, bare or brown spots greater than 6 inches in diameter, and~~
- ~~• It is firmly rooted in the soil.~~

~~Sod not meeting the standards for acceptance, shall be re-sodded until a satisfactory turf has been established, at no additional expense to the Owner.~~

~~The Contractor shall water, mow and weed the sodded areas as necessary until contract final acceptance. These items will be paid for separately.~~

610-3.06 Soil Amendments. The Contractor shall place, apply or incorporate fertilizer, limestone, mycorrhizal fungi, sulfur and/or moisture retention additive where shown in the contract documents.

~~When mycorrhizal fungi are specified, application rates for turf shall ensure an even distribution of 100,000 propagules minimum per acre for drill seeding and 1,000,000 propagules minimum per acre for hydroseeding. Application rates for planting and Tree Root Zone Treatment, as well as any other aspects of distributing and/or incorporating mycorrhizal fungi, shall be in accordance with the manufacturer's recommendations.~~

All other amendments shall be mixed with topsoil prior to placing, spread evenly over the surface of turf, wildflower or sod areas, applied within shrub saucers or applied over the plant beds as appropriate, at the rates recommended by the manufacturer or as specified in the contract documents. The method of application shall ensure an even distribution. When hydraulic application is used, the minimum rate of water application shall be in accordance with manufacturer's recommendation.

Trees shall be fertilized using Method No. 1, No. 2 or No. 3 in accordance with the contract documents.

A. Method No. 1. Holes shall be made in the earth about 18 inches deep and 18 inches apart, and located in the outer two-thirds (as measured on the radius) of the circular area lying under the limits of the tree branches. The holes shall be made with a crowbar, soil auger, pneumatic equipment or other approved tools and care shall be taken to avoid injury to the

roots. Fertilizer shall be applied at the rate specified; placing equal amounts of fertilizer in the lower 12 inches of each hole.

B. Method No. 2. Fertilizer shall be applied to soil's surface hydraulically at the rate specified with sufficient water to saturate the soil for the area and depth of the tree roots without creating air pockets.

C. Method No. 3. Fertilizer rate and method of application shall be as specified in the contract documents.

610-3.07 Compost.

A. Existing Soil: The Contractor shall spread 2 inches of Compost Type A or E within the limits shown in the contract documents and tilled into existing soil to a total depth of six inches.

B. Turf Establishment With No Topsoil/ On Subsoil. The Contractor shall spread 2 inches of Compost Type A, D or E within the limits shown in the contract documents and tilled into subsoil to a minimum depth of four inches.

C. Turf Establishment With Topsoil. The Contractor shall mix Compost Type A, D or E with topsoil as specified in the contract documents.

D. Plant Pits or Beds: Compost Type A, D or E shall be applied at a ratio of 1 part compost to 5 parts existing soil.

610-3.08 Mulch for Planting. The Contractor shall apply mulch consisting of wood chips, pine nuggets or shredded bark to the surface of the beds and tree pit areas in accordance with the contract documents. The Contractor shall apply mulch to a uniform depth of 3 inches over the shrub bed and tree pit areas and 2 inches over groundcover beds. The mulch shall be distributed so as to create a smooth, level cover over the exposed soil. Mulch shall not cover plants or be in contact with tree root flare, tree trunks, and plant stems.

~~**610-3.09 Permeable Weed Control Landscape Fabric.** Areas where landscape fabric is to be installed shall be smooth, firm, stable and free of rocks, clods, foliage, roots, trash, debris or other material that will prevent the matting from lying in direct contact with the soil surface.~~

~~The landscape fabric shall be placed where shown in the contract documents and as required by the manufacturer.~~

610-3.10 Watering Vegetation. The Contractor shall provide water without damage to plants, mulch, stakes, plant saucers, sod or other areas to be watered. Damage resulting from watering operations shall be repaired at no additional cost to the Owner.

Watering shall be applied in accordance with §610-3.03 *Turf Establishment*, §610-3.04 *Wildflower Seeding*, §610-3.05 *Sod* or §611-3.01 *General*. Watering for existing vegetation shall be as specified in the contract documents.

Watering shall be applied at the following rates:

A. Turf, Wildflowers, Sod, Planting Beds. In the absence of 1 inch of rainfall within 5 consecutive calendar days the Contractor shall water all turf, wildflowers, sod and planting beds once a week to a depth of 1 inch.

B. Trees and Planting Pits. Between April 1st and November 15th, in the absence of 1 inch of rainfall within 5 consecutive calendar days, the Contractor shall apply water to trees and planting pits once per week, except during July and August, when water shall be applied twice per week, with a minimum of 2 days between applications. Soil saucers or portable drip irrigation systems shall be filled once per watering.

~~**610-3.11 Weed Removal.** The Contractor shall perform weed removal in accordance with the contract documents. The Contractor shall remove and dispose of weeds including roots prior to flowering and seed formation by manual, chemical or mechanical means. Any method of weed removal that leaves live roots in the soil will not be permitted. An appropriately licensed applicator is required for chemical weed control methods. The Contractor shall ensure the preservation of desirable vegetation. Treatment and removal of invasive species will be paid for separately.~~

610-3.12 Mowing. The schedule may be modified to accommodate prevailing or forecast weather conditions. The Contractor shall be responsible, prior to each mowing, for the removal and disposal of any debris and litter which has accumulated since the last mowing. Care shall be taken to avoid damage to existing plant materials.

A. Roadside. The Contractor shall mow all turf establishment areas to a height of 5 inches whenever growth reaches 8 inches for the duration of the contract. Clippings shall be left in place.

B. Lawns. The Contractor shall mow all turf establishment areas to a height of 3 inches after initial growth reaches 5 inches, and then mowed to a height of 3 inches whenever a 5 inch height is reached thereafter for the duration of the contract. Clippings shall be mulched in place.

C. Sod. The Contractor shall mow all sodded areas to a height of 3 inches after initial growth reaches 5 inches, and then mowed to a height of 3 inches whenever a 5 inch height is reached thereafter for the duration of the contract. Clippings shall be mulched in place.

~~**610-3.13 Mowing Limits Markers.** The Contractor shall install mowing limit markers plumb to a depth in accordance with the manufacturer's instruction.~~

610-4 METHOD OF MEASUREMENT

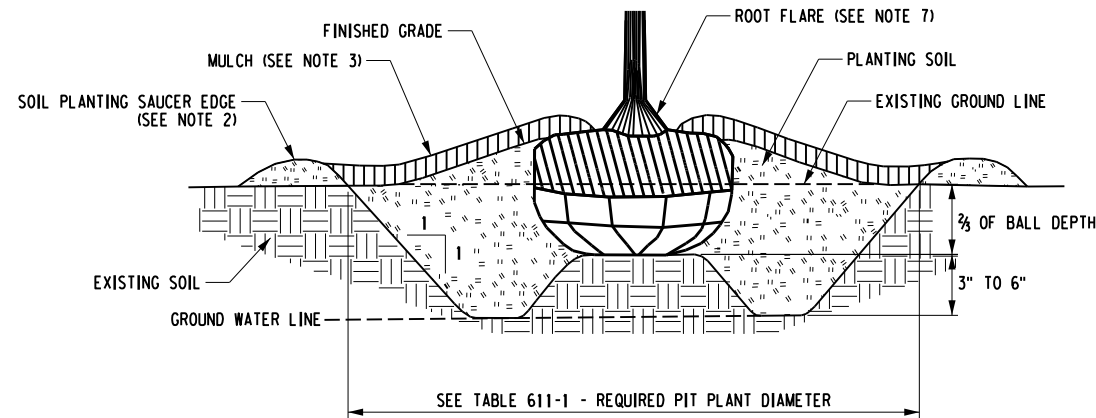
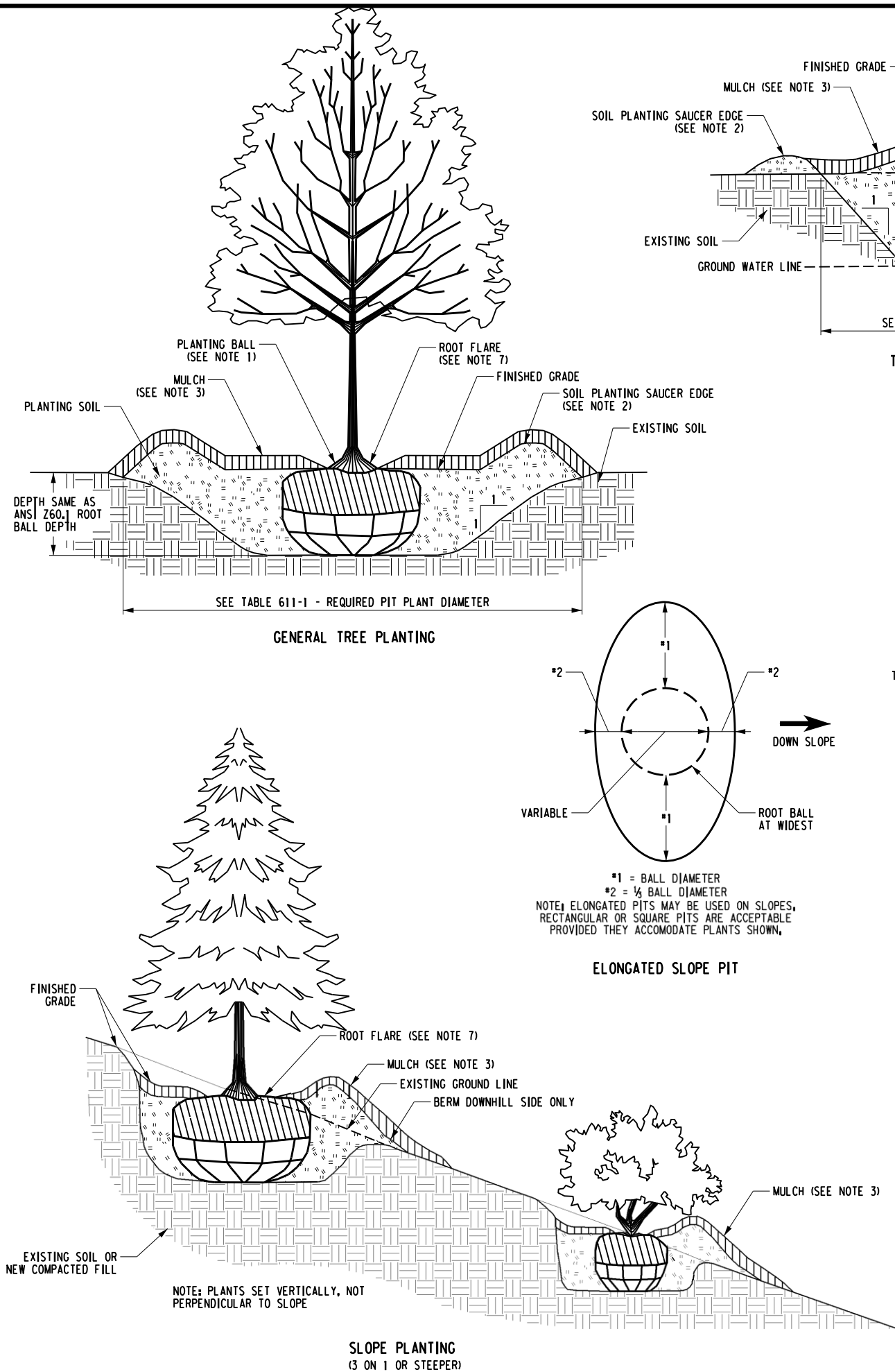
The methods of measurement (e.g. yard, ton, square foot, etc.) and the basis for payment (e.g. unit price, lump sum) are defined in 012200 and the Bid Sheet.

SECTION 611 - PLANTING, TRANSPLANTING AND POST PLANTING CARE

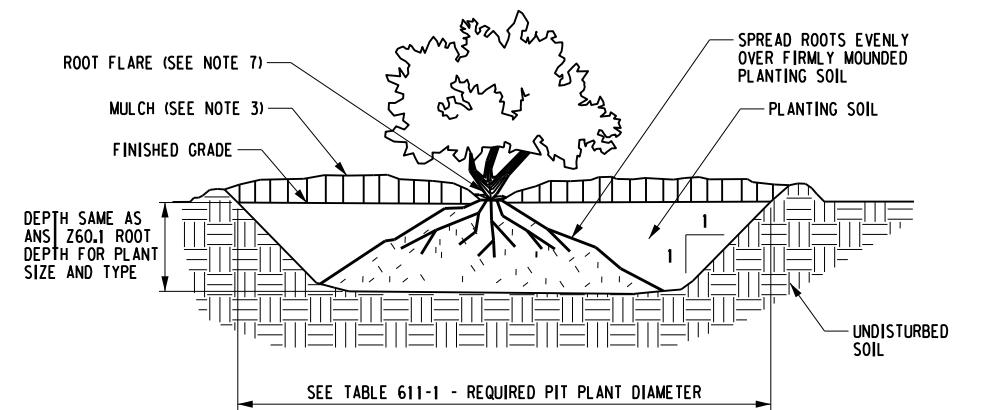
611-1 DESCRIPTION.

611-1.01 General. Vacant

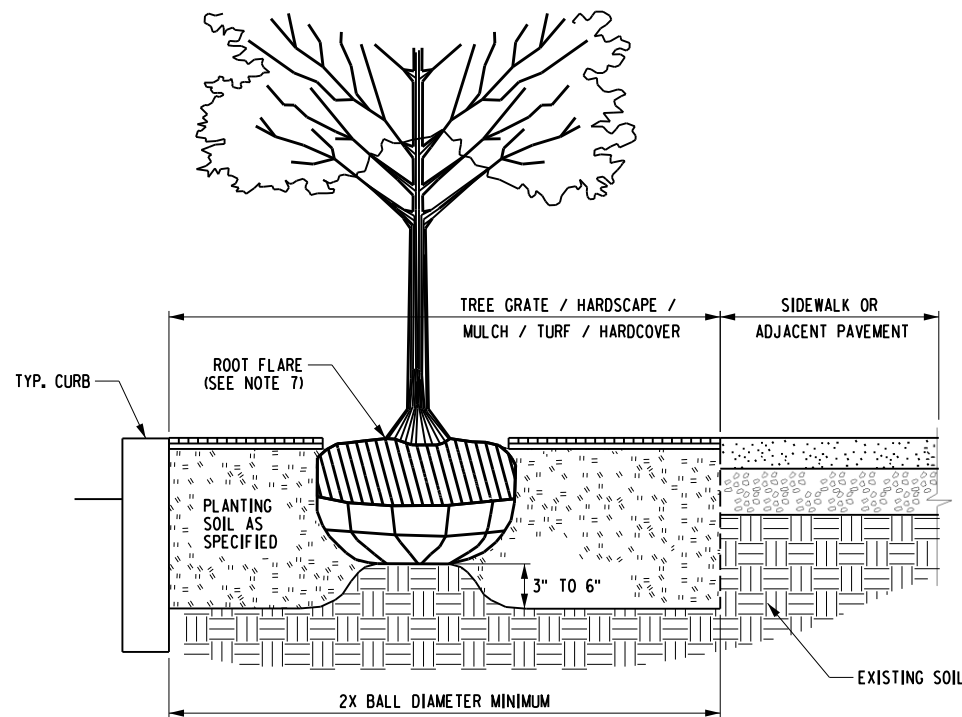
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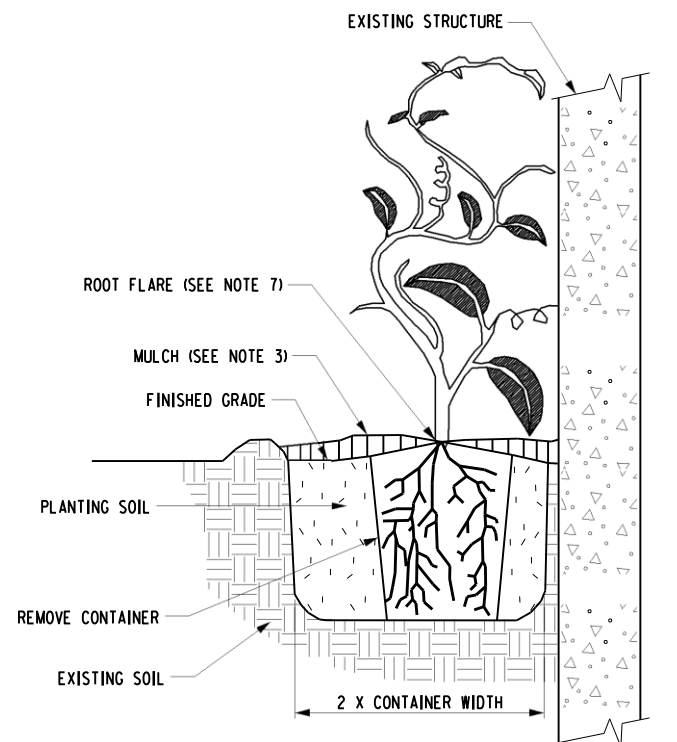
TREE PLANTING IN HEAVY - CLAY SOILS



BARE ROOT SHRUB PLANTING



PLANTING NEXT TO PAVEMENT OR CURB



VINE PLANTING

TABLE 611-1 - REQUIRED PLANT PIT DIAMETER	
ROOT SPREAD / ROOT BALL DIAMETER	PLANT PIT DIAMETER
UNDER 2'-0"	3X THE ROOT SPREAD OR ROOT BALL DIAMETER
FROM 2'-0" TO 4'-0"	2.5X THE ROOT SPREAD OR ROOT BALL DIAMETER
OVER 4'-0"	2X THE ROOT SPREAD OR ROOT BALL DIAMETER

NOTES:

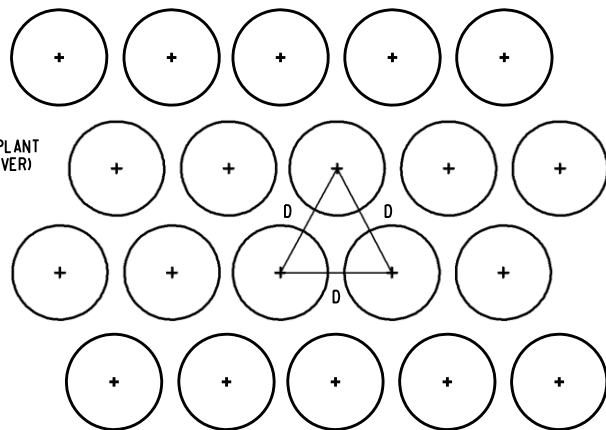
1. PLANTING BALL - ON B&B MATERIAL, BURLAP AND WIRE BASKET OR OTHER CONTAINER SHALL BE REMOVED FROM THE UPPER HALF OF THE ROOT BALL AND DISPOSED OF.
2. HEIGHT OF PLANTING SAUCER SHALL BE 3".
3. MULCH SHALL BE A MAXIMUM OF 3" DEEP AND TAPERED DOWN TO LEAVE THE ROOT FLARE EXPOSED, WHEN PLANTING ON SLOPES, DOWNHILL SIDE MUST BE STABILIZED APPROPRIATELY OR SEEDING ON DOWNHILL SIDE MAY BE SPECIFIED.
4. MATERIALS FOR PROTECTION OF PLANTS SHALL BE A COMMERCIALY AVAILABLE PRODUCT OR SYSTEM FOR SUPPORTING OF TREES.
5. ALL TAGS, LABELS, ETC. SHALL BE REMOVED FROM THE PLANTS.
6. THIS DETAIL SHOWS ONE ABOVE GROUND TREE SUPPORT METHOD, ANY OTHER METHOD MUST USE COMMERCIALY AVAILABLE PRODUCTS INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.
7. THE ROOT FLARE SHALL BE VISIBLE AND LEVEL WITH SURROUNDING SOIL.

ERRATA 1 EFF. 01/09/2014
ISSUED WITH EB 13-042
EFFECTIVE DATE: 09/06/2012

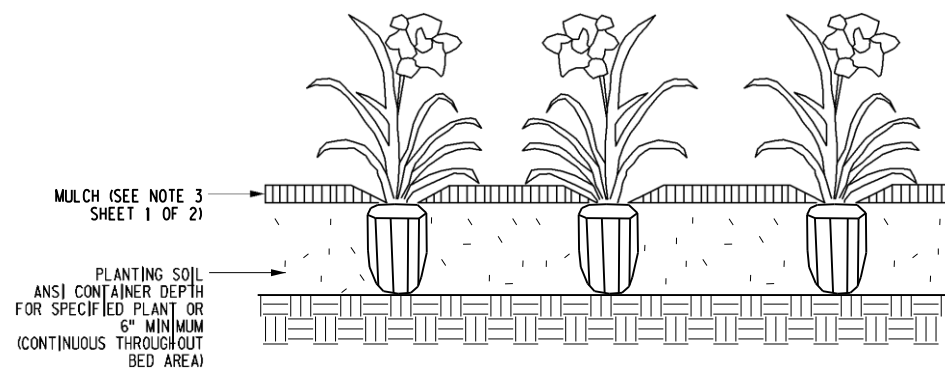
-DRAWING NOT TO SCALE-

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION	
U.S. CUSTOMARY STANDARD SHEET	
LANDSCAPE PLANTING DETAILS (SHEET 1 OF 2)	
APPROVED: OCTOBER 23, 2013 SHELAH LADUC R.L.A. PRINCIPAL LANDSCAPE ARCHITECT OFFICE OF ENVIRONMENT	ISSUED UNDER EB 12-011 611-01

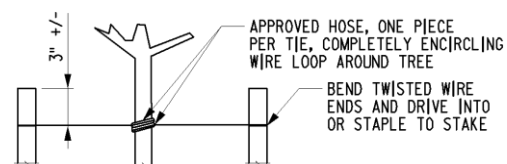
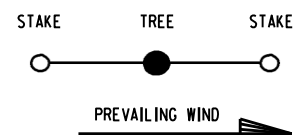
NOTE:
D = DIMENSION OF SPECIFIED PLANT
SPACING (SHRUB OR GROUND COVER)



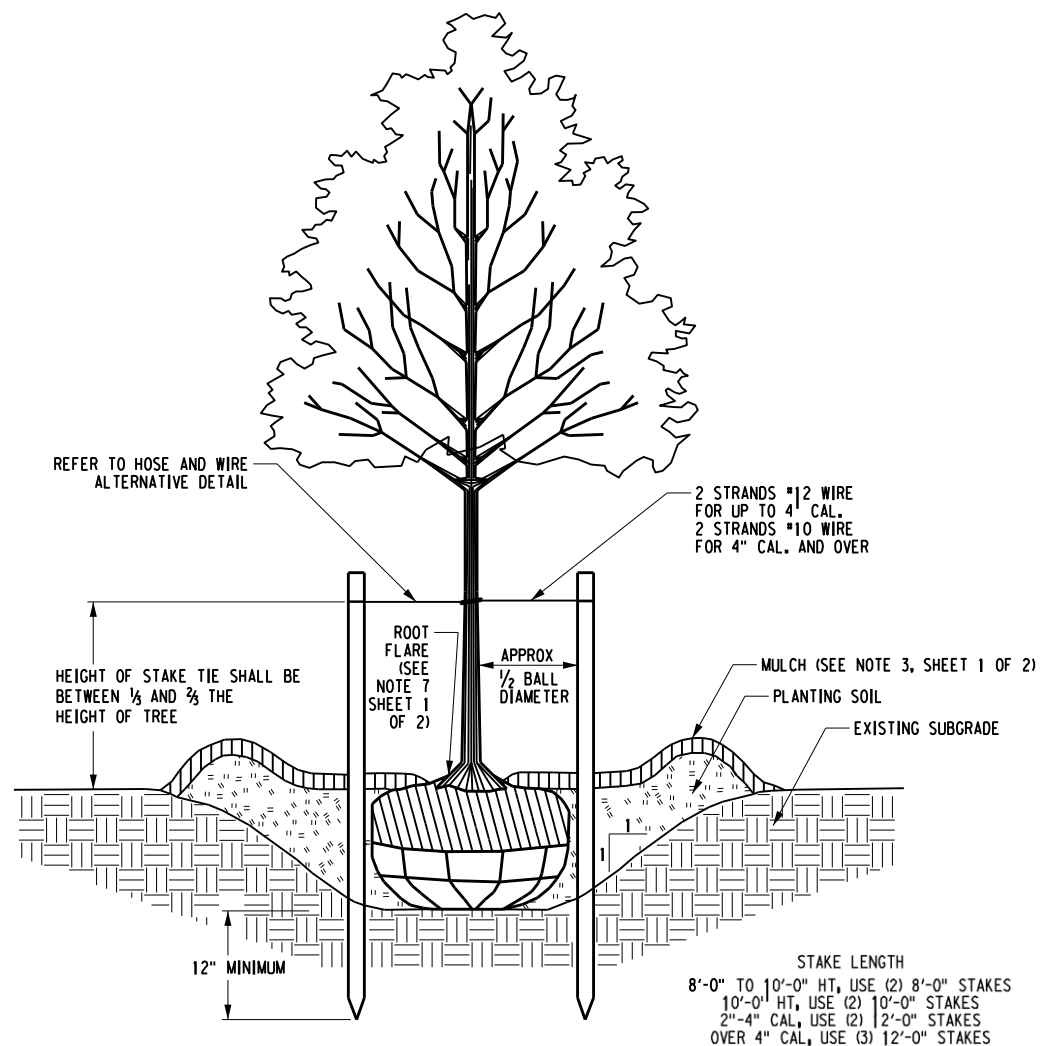
TYPICAL BED PLANT SPACING



BED PLANTING



HOSE AND WIRE ALTERNATIVE



TREE SUPPORT (WHEN SPECIFIED)
(SEE NOTE 6, SHEET 1 OF 2)

-DRAWING NOT TO SCALE-



STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY STANDARD SHEET

LANDSCAPE PLANTING DETAILS
(SHEET 2 OF 2)

APPROVED MAY 29, 2012
SHELAH LADUC R.L.A.

PRINCIPLE LANDSCAPE ARCHITECT
OFFICE OF ENVIRONMENT

ISSUED UNDER EB 12-011

611-01

EFFECTIVE DATE: 09/06/2012