

PLOT TIME: 2014-10-16 15:33:41.41

PROJECT PATH: V:\Operations\09111004\_MARSHES\4\_Deliverables\Drawings\60%\_Design\Plot



# PERMIT PLANS NOT FOR CONSTRUCTION

PLANTING ZONES					
PLANTING ZONE	PLANTING ELEVATION RANGE	HATCHING	WEST	EAST	TOTAL
OPEN WATER/MUDFLAT	< 1.5 FEET		0.3 AC	2.8 AC	3.1 AC
LOW MARSH	1.5 FEET - 2.5 FEET		0.6 AC	5.2 AC	6.8 AC
HIGH MARSH	2.5 FEET - 3.5 FEET		3.4 AC	8.0 AC	11.4 AC
SCRUB SHRUB	3.5 FEET - 5.0 FEET		1.9 AC	1.6 AC	3.5 AC
UPLAND SLOPE/UPLAND SLOPE WARM NATIVE SEED MIX	> 5.0 FEET		0.7 AC	0.3 AC	1.0 AC
		TOTAL	6.9 AC	17.9 AC	24.8 AC

**NOTES**

1. VERTICAL DATUM IN NAVD88.
2. HORIZONTAL DATUM IN NAD83.

NAN-2013-00259-EHA

THE LOUIS BERGER & ASSOC. PC  
48 WALL STREET  
16TH FLOOR  
NEW YORK, NY 10005

DONALD B. STEVENS  
N.Y. PROFESSIONAL ENGINEER  
N.Y. P.E. LIC. NO. 091394  
CERTIFICATE OF AUTHORIZATION  
24GA27933700

**NYCEDC** NEW YORK CITY ECONOMIC DEVELOPMENT CORP.

SAW MILL CREEK PILOT WETLAND MITIGATION BANK  
STATEN ISLAND, NEW YORK

**PLANTING PLAN -EAST-**

DRAWN BY: MH	APPROVALS			PROJECT NO.	2001984
CHECKED BY: SA	APPROVED BY:	TITLE	DATE	SHEET	15 OF 21
SCALE: AS SHOWN				DWG. NO.	
DATE: NOVEMBER 2013					

NO.	DATE	REVISION

PLANTING TABLE: TIDAL WETLANDS

Planting Zone/Elevation	Area (acres)	Species Name - % of Area (Common Name)	Height	Root	Spacing	Units	Quantity
Low Marsh Elevation 1.5 - 2.5	5.8	<i>Spartina alterniflora</i> - 100% (Smooth Cordgrass)	6 IN Minimum	2 IN x 2 IN Minimum Plug	2 FT. O.C.	Each	63,162
High Marsh Elevation 2.5 - 3.5	11.4	<i>Distichlis spicata</i> - 35% (Spike Grass)	6 IN Minimum	2 IN x 2 IN Minimum Plug	2 FT. O.C.	Each	43,451
		<i>Spartina patens</i> - 35% (Saltmeadow Cordgrass)				Each	43,451
		<i>Spartina alterniflora</i> - 10% (Smooth Cordgrass)				Each	12,415
		<i>Juncus gerardii</i> - 20% (Black Grass)				Each	24,829
Scrub Shrub Elevation 3.5 - 5.0	3.5	<i>Iva frutescens</i> - 50% (High Tide Bush)	24 IN - 30 IN Minimum	Container No. 2	5 FT. O.C.	Each	3,049
		<i>Baccharis halimifolia</i> - 50% (Sea Myrtle)				Each	3,049
Upland Slope Shrub Elevation 5.0 and above	1.0	<i>Baccharis halimifolia</i> - 20% (Sea Myrtle)	24 IN - 30 IN Minimum	Container No. 2	5 FT. O.C.	Each	348
		<i>Myrica pensylvanica</i> - 20% (Bayberry)				Each	348
		<i>Rosa carolina</i> - 15% (Pasture Rose)				Each	261
		<i>Rhus copallinum</i> - 15% (Shining Sumac)				Each	261
		<i>Prunus maritima</i> - 10% (Beach Plum)				Each	174
		<i>Sambucus canadensis</i> - 20% (Common Elderberry)				Each	348
Upland Slope Warm Native Seed Mix Elevation 5.0 and above	1.0	<i>Panicum virgatum</i> (Switchgrass) - 3 lbs PLS/ac	N/A	Seed	25 LBS of PLS/AC	Lbs	3.0
		<i>Sorghastrum nutans</i> (Indian Grass) - 3 lbs PLS/ac				Lbs	3.0
		<i>Schizachyrium scoparium</i> (Little Bluestem) - 3 lbs PLS/ac				Lbs	3.0
		<i>Symphoricarpos naevae-angliae</i> (New England Aster) - 0.5 lbs PLS/ac				Lbs	0.5
		<i>Solidago sempervirens</i> (Seaside Goldenrod) - 0.5 lbs PLS/ac				Lbs	0.5
		<i>Hordeum jubatum</i> (Oats) - 15 lbs PLS/ac				Lbs	15.0

NOTES:

- OPEN WATER/MUDFLAT AREA FOR THE WEST EQUALS 0.3 ACRES AND FOR THE EAST EQUALS 2.8 ACRES. NO PLANTING WILL OCCUR IN THESE AREAS.

PLANTING NOTES

GENERAL

- THE CONTRACTOR SHALL SUBMIT COPIES OF THE PLANT MATERIAL ORDERS TO THE ENGINEER AT LEAST THREE MONTHS PRIOR TO THE PROPOSED PLANTING DATE.
- ALL PROPOSED CHANGES TO THE PLANTING PLAN SHALL BE MADE IN WRITING TO THE ENGINEER AT LEAST THREE MONTHS PRIOR TO ALL PLANTING. ALL PROPOSED CHANGES MUST BE APPROVED IN WRITING.
- ALL PLANT STOCK WILL BE INSPECTED ON-SITE PRIOR TO INSTALLATION. PLANTING STOCK NOT MEETING SPECIFICATIONS WILL NOT BE PLANTED AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- ALL SHRUBS PLANT MATERIAL SHALL BE INOCULATED WITH MYCORRHIZAE FUNGI EITHER AT THE NURSERY OR ON-SITE AT THE TIME OF PLANTING. THE METHOD OF INOCULATION SHALL BE APPROVED IN ADVANCE BY THE ENGINEER.
- THE HANDLING AND CARE OF ALL PLANT MATERIAL SHALL FOLLOW APPROPRIATE PROCEDURES TO PROTECT STEMS AND ROOT SYSTEMS FROM EXPOSURE TO FREEZING TEMPERATURES, EXCESSIVE HEAT, AND DESICCATION DUE TO SUN AND WIND. PLANT MATERIAL THAT IS NOT PROTECTED FROM THESE CONDITIONS SHALL BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- ALL PLANT MATERIAL SHALL BE INSTALLED WITHIN 48 HOURS OF DELIVERY TO THE SITE. PLANT MATERIAL NOT INSTALLED WITHIN THIS TIME FRAME MAY BE REJECTED BY THE ENGINEER AND SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

PLANTING NOTES, CONTINUED

EMERGENT PLANTINGS - PLUGS : LOW MARSH AND HIGH MARSH

- NO AREA SHALL BE PLANTED UNTIL IT HAS BEEN CLEARED OF PHRAGMITES WRACK AND OTHER DEBRIS, PROTECTED BY HERBIVORY FENCING POSTS AND FENCING, AND APPROVED BY THE ENGINEER. IMMEDIATELY AFTER PLANTING A 50' X 50' GRID, INSTALL MYLAR TAPE AND TWINE.
- LOW MARSH AND HIGH MARSH PLANTING WINDOW IS FROM APRIL 1 TO JUNE 15.
- THE PLUGS SHALL BE PLANTED IN THE SOIL NO MORE THAN ONE INCH (1") DEEPER THAN GROWN IN THE NURSERY AND TO A DEPTH THAT WILL ENSURE THAT THE TOP OF THE ROOTSTOCK MASS LIES NO MORE THAN ONE INCH (1") BELOW THE SOIL SURFACE.
- PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE (18-6-12 ANALYSIS) AT THE RATE OF THIRTY (30) GRAMS PER PLANT. THE PLANTS SHALL THEN BE PLACED AT THE APPROPRIATE DEPTH WITH THE ROOT SYSTEM ORIENTED DOWNWARD. WHILE THE PLANT IS IN THIS POSITION, THE SOIL PROFILE OR SECTION SHALL BE FULLY AND FIRMLY CLOSED. IF A SOIL DEPRESSION IS FORMED ABOVE OR IMMEDIATELY ADJACENT TO THE PLANTING LOCATION, ENOUGH SOIL SHALL BE SLOUGHED FROM THE SURROUNDING AREA AND FIRMLY TAMPED INTO THE DEPRESSION TO LEAVE THE PLANTING AREA AT THE SAME ELEVATION AS THE SURROUNDING SOIL OR SLIGHTLY HIGHER.
- JUNCUS GERARDII SHALL BE PLANTED IN THE HIGHER ELEVATION RANGE OF THE HIGH MARSH (EL. 3 TO 3.5) AND SPARTINA ALTERNIFLORA SHALL BE PLANTED IN THE LOWER RANGE (EL. 2.5 TO 3.0). ALL OTHER HIGH MARSH SPECIES WILL BE PLANTED THROUGHOUT THE ENTIRE HIGH MARSH (EL. 2.5 TO 3.5).

SALT TOLERANT SCRUB SHRUB PLANTINGS

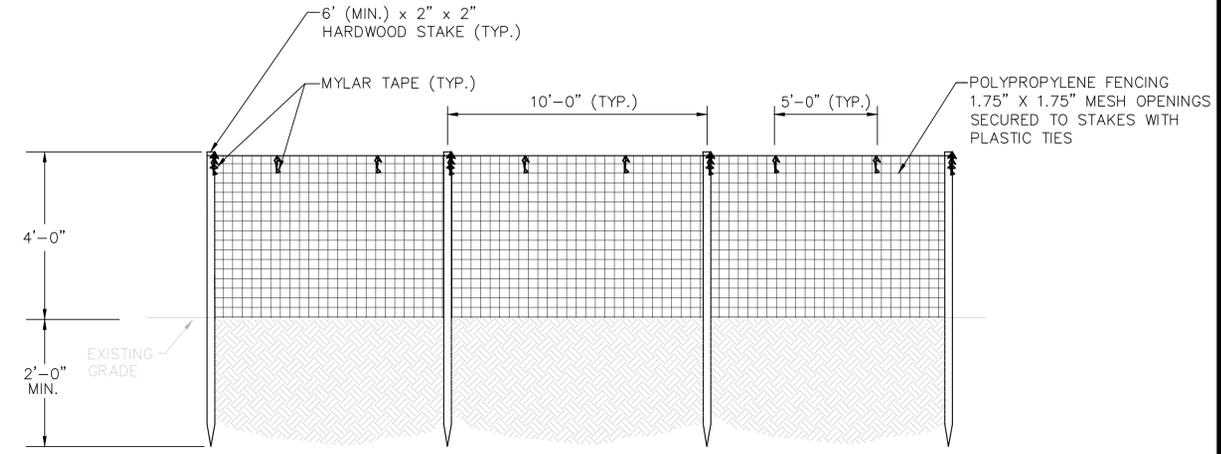
- THE SCRUB SHRUB AREAS SHALL BE PLANTED AT A COMBINED DENSITY OF 1,750 TO 1,760 SHRUBS PER ACRE AND SPACED AT 5-FOOT ON CENTER. THE PLANTING WINDOW IS MARCH 15 TO MAY 15.
- ALL SHRUBS SHALL CONFORM TO THE MATERIAL SPECIFICATION REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (1986 OR LATER EDITION). THE BACCHARIS SHALL CONFORM TO TYPE 4 STOCK, TWO- TO THREE-FOOT (2'-3') TALL, MINIMUM OF TWO CANES.
- PLANT PITS SHALL BE DUG APPROXIMATELY FOUR INCHES (4") WIDER THAN THE STOCK SIZE. PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING HOLE, A 20-GRAM FERTILIZER TABLET (20-10-5 ANALYSIS) SHALL BE PLACED IN THE BOTTOM OF THE PLANTING HOLE. BACKFILL SOIL MATERIALS SHALL BE THE SAME AS EXCAVATED FOR THE PLANTING PITS.

SHRUB PLANTING: UPLAND SLOPE

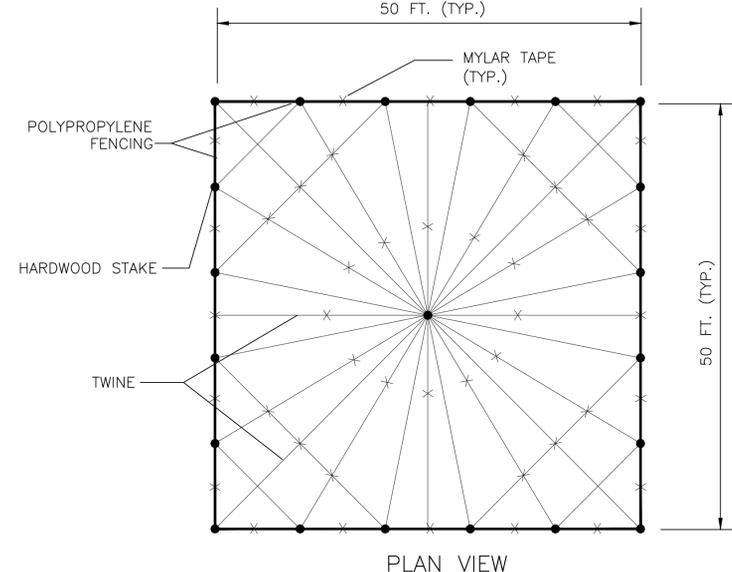
- THE UPLAND SLOPE SHALL BE PLANTED WITH SHRUBS. THE PLANTING PERIOD IS FROM MARCH 15 TO MAY 15. PLANTING SHALL ONLY OCCUR WHEN THE SOLUBLE SALT LEVEL OF THE SOIL MEASURES LESS THAN 1.0 MMHOS/CM.
- ALL SHRUBS SHALL CONFORM TO THE MATERIAL SPECIFICATION REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (1986 OR LATER EDITION). THE BACCHARIS SHALL CONFORM TO TYPE 4 STOCK, TWO- TO THREE-FOOT (2'-3') TALL, MINIMUM OF TWO CANES.
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SEEDING: UPLAND SLOPE

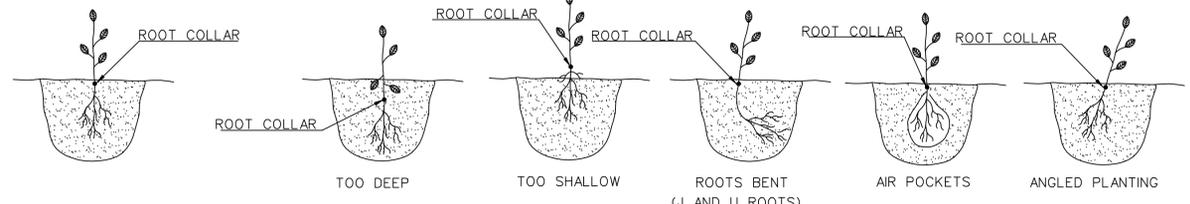
- THE WARM SEASON SEEDING MIXTURE SHALL BE AS SHOWN IN THE PLANTING TABLE, IN POUNDS OF PURE LIVE SEED PER ACRE
- WARM SEASON SEEDING SHALL OCCUR AFTER MARCH 15 AND BEFORE JUNE 1.
- NO EARLIER THAN ONE-WEEK PRIOR TO THE SEEDING, THE SEEDED AREA SHALL BE DISKED TO A MINIMUM DEPTH OF SIX INCHES (6") AND FIRMED TO FORM A GOOD SEED BED. IF DIRECTED BY THE ENGINEER, DISKING MAY BE OMITTED IN FAVOR OF A SHALLOW HARROW OPERATION PRIOR TO THE PLACEMENT OF THE SEED.
- NITROGEN FERTILIZER SHALL NOT BE APPLIED AT THE TIME OF THE SEEDING.
- SEED MAY BE BROADCAST OR DRILL SEEDED. IF BROADCAST SEEDING IS USED, THE SEEDED AREA SHALL BE DRAGGED WITH A CHAIN OR TINE HARROW AND FIRMED THE SAME DAY AS SEEDED TO ENSURE GOOD SOIL TO SEED CONTACT IS ESTABLISHED. THE SEED MIX SHALL BE MULCHED AT THE RATE OF 4,000 POUNDS OF STRAW MULCH PER ACRE. THE MULCH SHALL BE BOUND IN PLACE WITH AN APPROVED BINDER.



NOTE:  
MAX. 50'x50' GRID, TYPICAL. GRID MAY VARY, BASED ON SITE CONTOURS AND WATERWAY LOCATIONS.

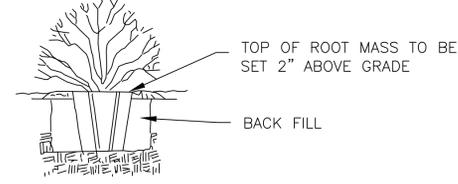


HERBIVORY FENCING, TYPICAL  
N.T.S



PROPER PLANTING  
N.T.S.

UNACCEPTABLE PLANTING  
N.T.S.



- NOTES
- REMOVE PLANT BY CUTTING OR INVERTING CONTAINER
  - USE A KNIFE OR SHARP BLADE TO MAKE (4 OR 5) 1" CUTS THE LENGTH OF THE ROOT BALL

CONTAINERIZED SHRUB PLANTING  
N.T.S

NO.	DATE	REVISION
	10/14	REVISED MARSH PLANT SPACING

THE LOUIS BERGER & ASSOC. PC  
48 WALL STREET  
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PERMIT PLANS NOT FOR CONSTRUCTION

NEW YORK CITY  
NYCEDC ECONOMIC DEVELOPMENT CORP.

SAW MILL CREEK PILOT WETLAND MITIGATION BANK  
STATEN ISLAND, NEW YORK

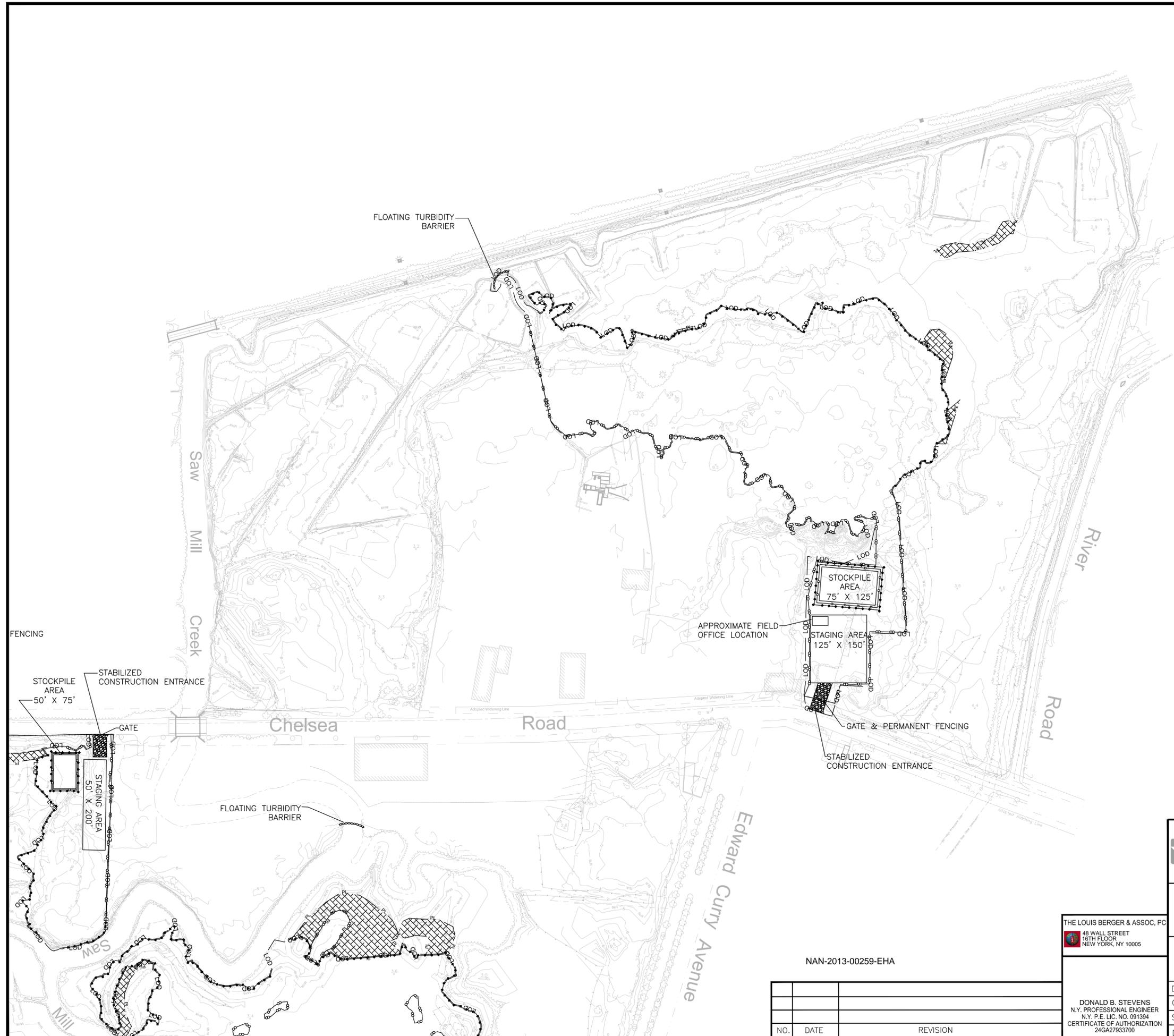
PLANTING -NOTES & DETAILS-

DRAWN BY: MH	APPROVALS			PROJECT NO. 2001984
CHECKED BY: SA	APPROVED BY:	TITLE	DATE	SHEET 16 OF 21
SCALE: AS SHOWN				DWG. NO.
DATE: NOVEMBER 2013				

PLOT TIME: 2014-10-16 15:34:19.19 PROJECT PATH: V:\Operations\091100A\_MARSHES\4\_Deliverables\Drawings\60%\_Design\Plot

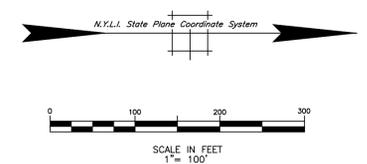
PLOT TIME: 2014-10-16 15:35:15.15

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**NOTES**

1. VERTICAL DATUM IN NAVD88.
2. HORIZONTAL DATUM IN NAD83.
3. ONLY ACCESS BY FOOT IS ALLOWED IN AREAS BEYOND LIMIT OF DISTURBANCE AND WITHIN THE PLANTING LIMIT ZONES.



# PERMIT PLANS NOT FOR CONSTRUCTION

<b>NEW YORK CITY ECONOMIC DEVELOPMENT CORP.</b>			
<b>SAW MILL CREEK PILOT WETLAND MITIGATION BANK STATEN ISLAND, NEW YORK</b>			
<b>SOIL EROSION AND SEDIMENT CONTROL -WEST-</b>			
DRAWN BY: MH CHECKED BY: SA SCALE: AS SHOWN DATE: NOVEMBER 2013	<b>APPROVALS</b> APPROVED BY: _____ TITLE: _____ DATE: _____		PROJECT NO. 2001984 SHEET 17 OF 21 DWG. NO.

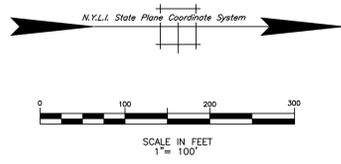
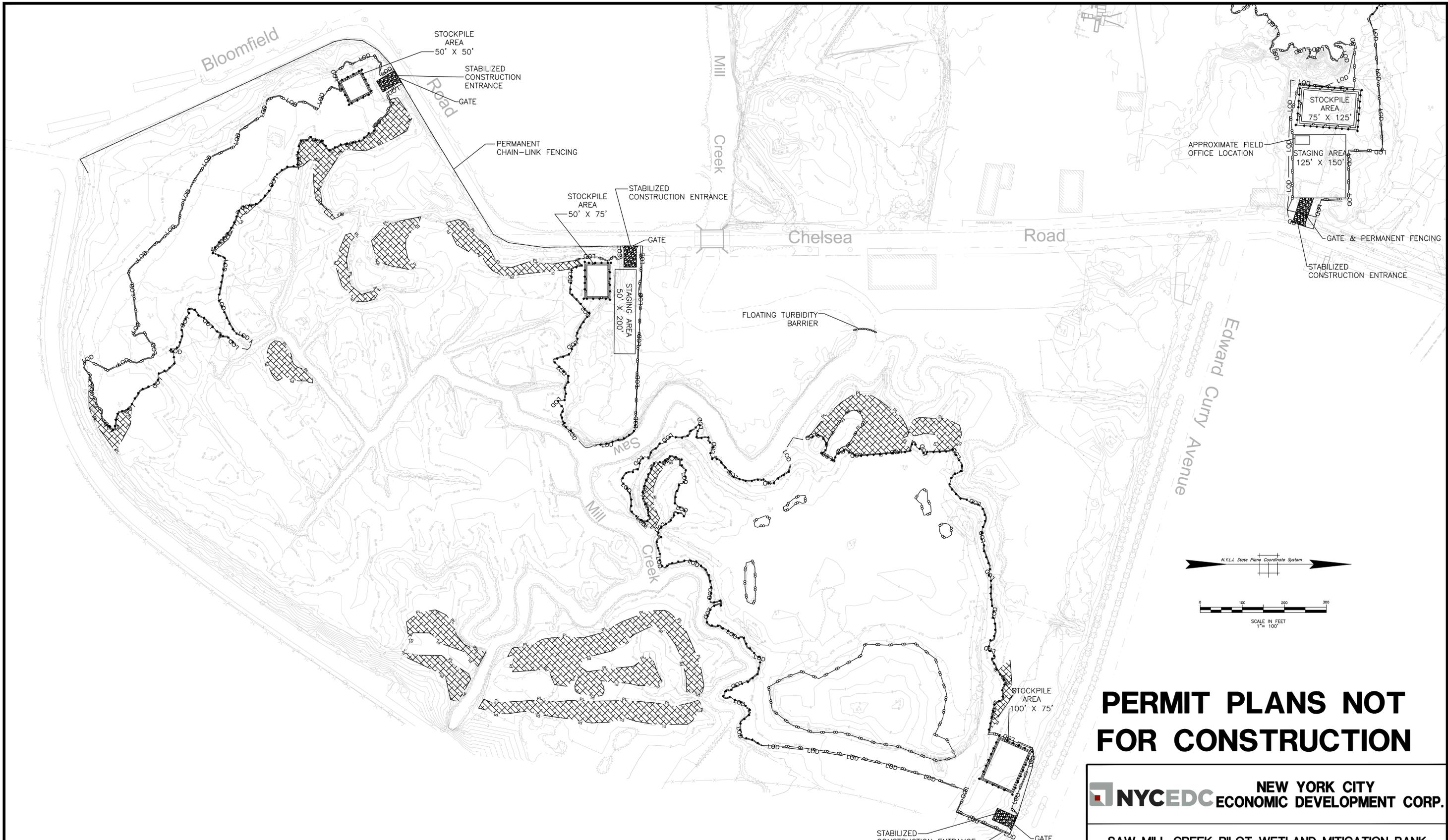
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NAN-2013-00259-EHA

NO.	DATE	REVISION

PLOT TIME: 2014-10-16 15:35:36.36

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# PERMIT PLANS NOT FOR CONSTRUCTION

<b>NEW YORK CITY ECONOMIC DEVELOPMENT CORP.</b>			
<b>SAW MILL CREEK PILOT WETLAND MITIGATION BANK STATEN ISLAND, NEW YORK</b>			
<b>SOIL EROSION AND SEDIMENT CONTROL -EAST-</b>			
DRAWN BY: MH CHECKED BY: SA SCALE: AS SHOWN DATE: NOVEMBER 2013	<b>APPROVALS</b> APPROVED BY: _____ TITLE: _____ DATE: _____		PROJECT NO. 2001984 SHEET 18 OF 21 DWG. NO.

**NOTES**

1. VERTICAL DATUM IN NAVD88.
2. HORIZONTAL DATUM IN NAD83.
3. ONLY ACCESS BY FOOT IS ALLOWED IN AREAS BEYOND LIMIT OF DISTURBANCE AND WITHIN THE PLANTING LIMIT ZONES.

NAN-2013-00259-EHA

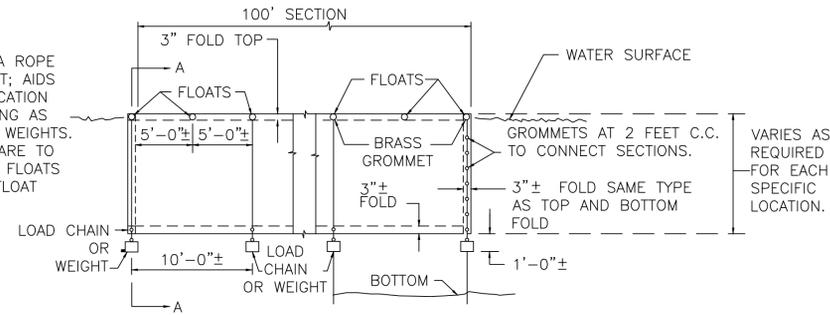
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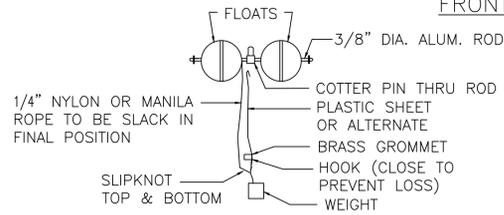
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PLOT TIME: 2014-10-16 15:36:03.03

NOTE:  
1/4" NYLON OR MANILA ROPE FORMS REINFORCEMENT; AIDS IN REMOVAL OR RELOCATION OF BARRIER BY SERVING AS A PICK-UP LINE FOR WEIGHTS. ROPES AND WEIGHTS ARE TO BE ATTACHED TO END FLOATS AND EVERY SECOND FLOAT BETWEEN END FLOATS.



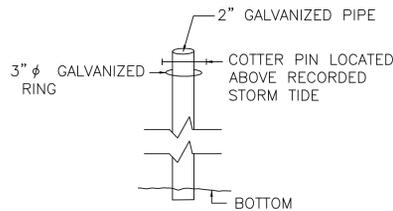
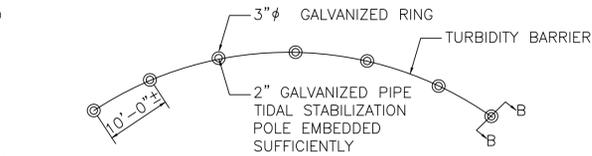
FRONT VIEW



SECTION A-A

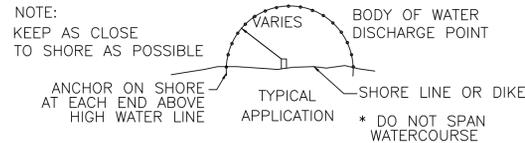


SIDE VIEW FOLDING DETAIL



SECTION B-B

FLOATING TURBIDITY BARRIER, TYPE 2  
N.T.S.



NOTES:

1. INSTALL TURBIDITY BARRIER TO PREVENT DRIFTING OF SILT CAUSED BY DISCHARGE OF STORM SEWERS, DEWATERING BASINS, CONSTRUCTION, DREDGING OR FILLING OPERATIONS, OR OTHER ACTIVITIES THAT COULD CAUSE TURBIDITY.
2. EXACT PLACEMENT OF TURBIDITY BARRIER SHALL BE SO AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER THE CONDITIONS PRESENT ON A PARTICULAR PROJECT.
3. THE DETAILS SHOWN ON THIS SHEET ARE SUGGESTED METHODS ONLY. ALTERNATE SOLUTION AND USAGE OF MATERIALS MAY BE USED AS APPROVED.
4. USE APPROPRIATE NAVIGATIONAL WARNING LIGHTS WHEN USED NEXT TO NAVIGATIONAL CHANNEL.

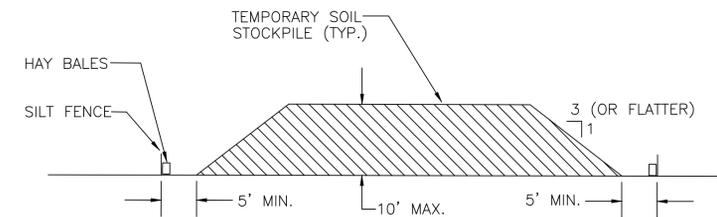
SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL (SESC) PRACTICES WILL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREAS ABOVE ELEVATION 2.42 FT (MEAN HIGH WATER) LEFT EXPOSED FOR MORE THAN 30 DAYS THAT ARE NOT SUBJECT TO CONSTRUCTION TRAFFIC WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THESE AREAS WILL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL AT A RATE OF 2 TONS PER ACRE, ACCORDING TO NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
3. PERMANENT VEGETATION WILL BE ESTABLISHED ON ALL EXPOSED AREAS WITHIN 10 DAYS AFTER FINAL GRADING.
4. UNFILTERED DEWATERING IS NOT PERMITTED. TAKE ALL NECESSARY PRECAUTIONS DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED WILL BE IN ACCORDANCE WITH STATE STANDARDS.
5. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED WITH FRESHWATER UNTIL THE SURFACE IS WET, IN ACCORDANCE WITH THE STATE STANDARDS FOR EROSION CONTROL.
6. ALL SOIL WASHED, DROPPED, SPILLED OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAYS WILL BE REMOVED IMMEDIATELY.
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.
8. STOCKPILE LOCATIONS DETERMINED IN THE FIELD WILL BE PLACED WITHIN THE PROJECT SITE LIMITS IN ACCORDANCE WITH THE NYSDEC SPDES PERMIT.

CONSTRUCTION SEQUENCE:

1. MOBILIZE TO THE SITE.
2. INSTALL ALL SITE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND TREE PROTECTION.
3. PERFORM INVASIVE SPECIES CONTROL.
4. ESTABLISH VEHICULAR/PEDESTRIAN TRAFFIC CONTROL MEASURES.
5. LOCATE AND MARK ALL UNDERGROUND UTILITIES WITHIN AREAS OF EXCAVATION.
6. SET UP AND INSTALL TEMPORARY WATER DIVERSION MEASURES (INCLUDING DEWATERING CONTROLS AND MEASURES).
7. CLEAR PROPOSED WORK AREA AND REMOVE AND DISPOSE OF ALL DEBRIS ON SITE.
8. EXCAVATE AND GRADE SITE TO SUB-GRADE ELEVATIONS.
9. REPLANT SUB-GRADE ELEVATIONS ACCORDING TO PLANTING PLAN.
10. RESTORE ALL DISTURBED AREAS TO MATCH EXISTING CONDITIONS AND CLEANUP SITE.
11. DEMOBILIZE.

NOTE: THIS IS A GENERAL CONSTRUCTION SEQUENCE ONLY; THE CONTRACTOR SHALL PROVIDE A DETAILED CONSTRUCTION SEQUENCE PRIOR TO THE START OF CONSTRUCTION.



SOIL STOCKPILE DETAIL  
N.T.S.

(IF AND WHERE REQUIRED)

# PERMIT PLANS NOT FOR CONSTRUCTION

**NYCEDC** NEW YORK CITY ECONOMIC DEVELOPMENT CORP.

SAW MILL CREEK PILOT WETLAND MITIGATION BANK  
STATEN ISLAND, NEW YORK

SOIL EROSION AND SEDIMENT CONTROL  
-NOTES AND DETAILS-

THE LOUIS BERGER & ASSOC, PC  
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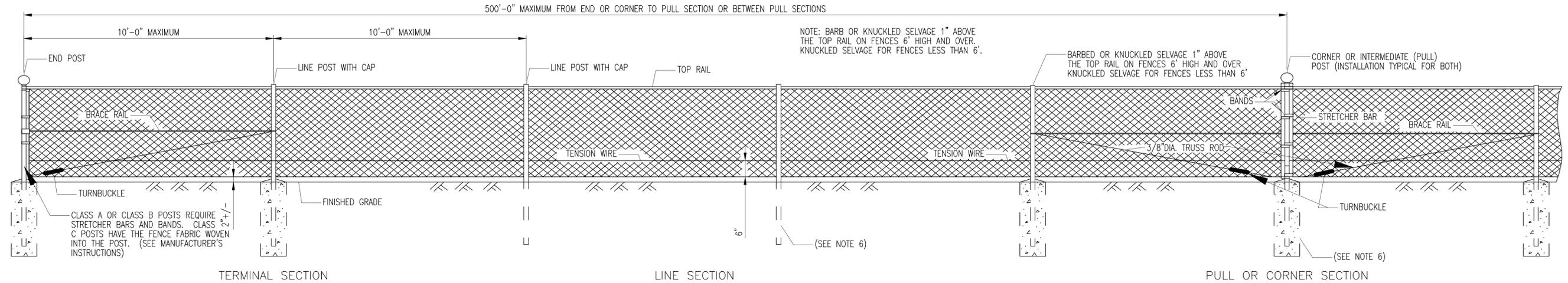
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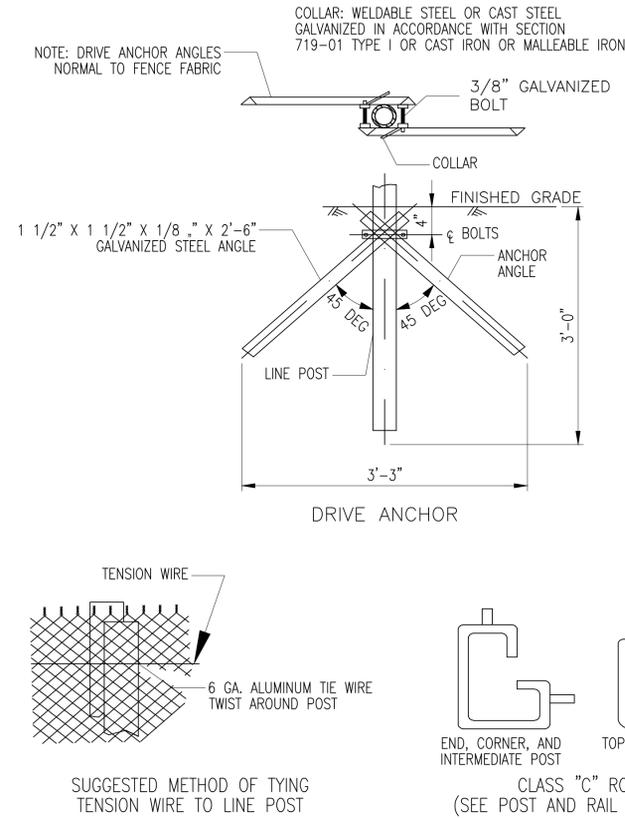
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PLOT TIME: 2014-10-16 15:36:35.35



USE	SECTION	STEEL				ALUMINUM			
		NPS DESIGNATOR	ROLLFORMED AND H POSTS	O.D.	WEIGHT LBS/FT	NPS DESIGNATOR	ROLLFORMED AND H POSTS	O.D.	WEIGHT LBS/FT
END, CORNER AND INTERMEDIATE POSTS FOR FENCES 6' AND UNDER	CLASS A SCHEDULE 40 PIPE	2		2 3/8"	3.65	2		2 3/8"	1.26
	CLASS B STEEL TUBING	2		2 3/8"	3.12				
	CLASS C ROLLFORMED		3 1/2" X 3 1/2"		5.10				
END, CORNER AND INTERMEDIATE POSTS FOR FENCES OVER 6'	CLASS A SCHEDULE 40 PIPE	2 1/2		2 7/8"	5.79	2 1/2		2 7/8"	2.00
	CLASS B STEEL TUBING	2 1/2		2 7/8"	4.64				
	CLASS C ROLLFORMED		3 1/2" X 3 1/2"		5.10				
BRACE RAILS FOR FENCES UNDER 6'	CLASS A SCHEDULE 40 PIPE					1 1/4		1 11/16"	0.79
	CLASS B STEEL TUBING	1 1/4		1 11/16"	1.84				
	CLASS C ROLLFORMED		1 5/8" X 1 1/4"		1.35				
BRACE RAILS FOR FENCES 6' AND OVER	CLASS A SCHEDULE 40 PIPE	1 1/4		1 11/16"	2.27	1 1/4		1 11/16"	0.79
	CLASS B STEEL TUBING	1 1/4		1 11/16"	1.84				
	CLASS C ROLLFORMED		1 5/8" X 1 1/4"		1.35				
TOP RAIL	CLASS A SCHEDULE 40 PIPE	1 1/4		1 11/16"	2.27	1 1/4		1 11/16"	0.79
	CLASS B STEEL TUBING	1 1/4		1 11/16"	1.84				
	CLASS C ROLLFORMED		1 5/8" X 1 1/4"		1.35				
LINE POSTS FOR FENCES 6' AND UNDER	CLASS A SCHEDULE 40 PIPE	1 1/2		1 7/8"	2.72	1 1/4		1 7/8"	0.94
	CLASS B STEEL TUBING	1 1/2		1 7/8"	2.28				
	CLASS C ROLLFORMED		1 7/8" X 1 5/8"		2.40				
	H POSTS		2 1/4" X 1 3/4"		3.43	1 7/8" X 1 9/16"			0.90
LINE POSTS FOR FENCES GREATER THAN 6' AND EQUAL TO OR LESS THAN 8'	CLASS A SCHEDULE 40 PIPE	2		2 3/8"	3.65	2		2 3/8"	1.26
	CLASS B STEEL TUBING	2		2 3/8"	3.12				
	CLASS C ROLLFORMED		1 7/8" X 1 5/8"		2.40				
	H POSTS		2 1/4" X 1 3/4"		3.43	1 7/8" X 1 9/16"			0.90
LINE POSTS FOR FENCES GREATER THAN 8' AND EQUAL TO OR LESS THAN 10'	CLASS A SCHEDULE 40 PIPE	2		2 3/8"	3.65	2		2 3/8"	1.26
	CLASS B STEEL TUBING	2		2 3/8"	3.12				
	CLASS C ROLLFORMED		2 1/4" X 1 3/4"		2.78				
	H POSTS		2 1/4" X 1 3/4"		3.43	2 1/4" X 2"			1.22
LINE POSTS FOR FENCES OVER 10'	CLASS A SCHEDULE 40 PIPE	2 1/2		2 7/8"	5.79	2 1/2		2 7/8"	2.00
	CLASS B STEEL TUBING	2 1/2		2 7/8"	4.64				
	H POSTS		2 1/4" X 1 3/4"		3.43	2 1/4" X 2"			1.22



- NOTES:
- POSTS, INCLUDING ENCASUREMENT, SHALL BE SET INSIDE THE R.O.W. LINE SO THAT FENCING PLACED ON THE R.O.W. SIDE OF POSTS WILL BE AS NEARLY ON THE R.O.W. LINE AS POSSIBLE. WHEN DIRECTED BY THE ENGINEER, THE FABRIC SHALL BE PLACED ON THE OPPOSITE SIDE OF THE POSTS SO THAT THE FABRIC CAN BE PULLED TIGHT AGAINST THE POST.
  - POSTS IN ROCK - WHERE SUBSTANTIAL ROCK IS ENCOUNTERED A HOLE 1" LARGER IN DIAMETER THAN THE POST, AND OF 12" MIN. DEPTH FOR LINE POSTS, AND 18" MIN. DEPTH FOR ALL OTHER POSTS SHALL BE MADE. AFTER INSERTING THE POSTS, THE HOLES SHALL BE BACKFILLED WITH A HANDMIXED 1:2 MORTAR CONSISTING OF ONE PART PORTLAND CEMENT TWO PARTS FINE AGGREGATE MIXED TO A PLASTIC CONSISTENCY SHOWING NO SIGNS OF FREE WATER. THE HAND MIXING AND CONSOLIDATION OF THE MORTAR SHALL BE PERFORMED IN A MANNER APPROVED BY THE ENGINEER.
  - CORNER POSTS SHALL BE USED AT SHARP BREAKS IN VERTICAL GRADE, AND CHANGES IN HORIZONTAL ALIGNMENT OF 15 DEGREES AND OVER. PULL POSTS SHALL BE USED EVERY 500' ON STRAIGHT RUNS OF CHAINLINK FENCE OR AS DIRECTED BY THE ENGINEER.
  - THE CONTRACTOR SHALL SUBMIT THE DETAILS FOR THE CHAIN LINK FENCE IT PLANS TO ERECT TO THE ENGINEER. NO FENCE SHALL BE ERECTED PRIOR TO THE APPROVAL OF THE VARIOUS DETAILS.
  - STEEL PIPES AND SHAPES SHALL WEIGH AT LEAST 95% OF THE WEIGHT SPECIFIED ON THIS SHEET. THEY MAY EXCEED THE SPECIFIED WEIGHT.
  - THE CONTRACTOR SHALL HAVE THE OPTION OF SETTING THE LINE POSTS IN 10" DIA. BY 3' DEEP CONCRETE BASES WITH THE POSTS EMBEDDED 2'-5" OR USING METHODS OF DRIVING AND ANCHORING SPECIFIED BY THE MANUFACTURER EXCEPT THAT THE LINE POSTS WITH TRUSS RODS ATTACHED AND ALL END, CORNER AND INTERMEDIATE POSTS SHALL BE SET IN CONCRETE BASES. THE CONCRETE BASES SHALL BE A MINIMUM OF 10" DIA. BY 3' DEEP WITH THE POST EMBEDDED 2'-6" FOR FENCES 6' HIGH OR LESS AND 12"DIA. BY 3'-6" DEEP WITH THE POST EMBEDDED 3' FOR FENCES OVER 6' HIGH. FOR GATE POSTS SEE THE CURRENT STANDARD SHEET TITLED "GATES AND CHAINLINK FENCE ADJACENT TO GATES".
  - CHAINLINK FENCE WITH TOP RAIL SHALL NOT BE USED WITHIN 29'-6" OF TRAVELED WAY.

\* DO NOT USE 3 1/2" X 3 1/2" ROLLFORMED POST ON FENCES OVER 8'

ACCESSORY	STEEL	ALUMINUM
FABRIC TIES FOR TOP AND BRACE	6 GA. ALUMINUM WIRE AT 24" C.C. MAX.	3/16" DIA. ALUMINUM WIRE AT 24" C.C. MAX.
FABRIC TIES FOR LINE POSTS	6 GA. ALUMINUM WIRE AT 14" C.C. MAX.	3/16" DIA. ALUMINUM WIRE AT 14" MAX. OR 1/2" X .06" CLIPS AT 14" MAX.
FABRIC TIES FOR TENSION WIRE	11 GA. ALUMINUM WIRE AT 12" O.C.	3/16" DIA. ALUMINUM WIRE AT 12"
BOTTOM TENSION WIRE	7 GA. GALVANIZED STEEL	3/16" DIA. ALUMINUM WIRE

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**NEW YORK CITY ECONOMIC DEVELOPMENT CORP.**

**SAW MILL CREEK PILOT WETLAND MITIGATION BANK STATEN ISLAND, NEW YORK**

**SOIL EROSION AND SEDIMENT CONTROL -NOTES AND DETAILS-**

DRAWN BY: MH	APPROVALS			PROJECT NO. 2001984
CHECKED BY: SA	APPROVED BY:	TITLE	DATE	SHEET 20 OF 21
SCALE:				DWG. NO.
DATE: NOVEMBER 2013				

THE LOUIS BERGER & ASSOC. PC  
48 WALL STREET  
16TH FLOOR  
NEW YORK, NY 10005

DONALD B. STEVENS  
N.Y. PROFESSIONAL ENGINEER  
N.Y. P.E. LIC. NO. 091394  
CERTIFICATE OF AUTHORIZATION  
24GA27933700

NAN-2013-00259-EHA

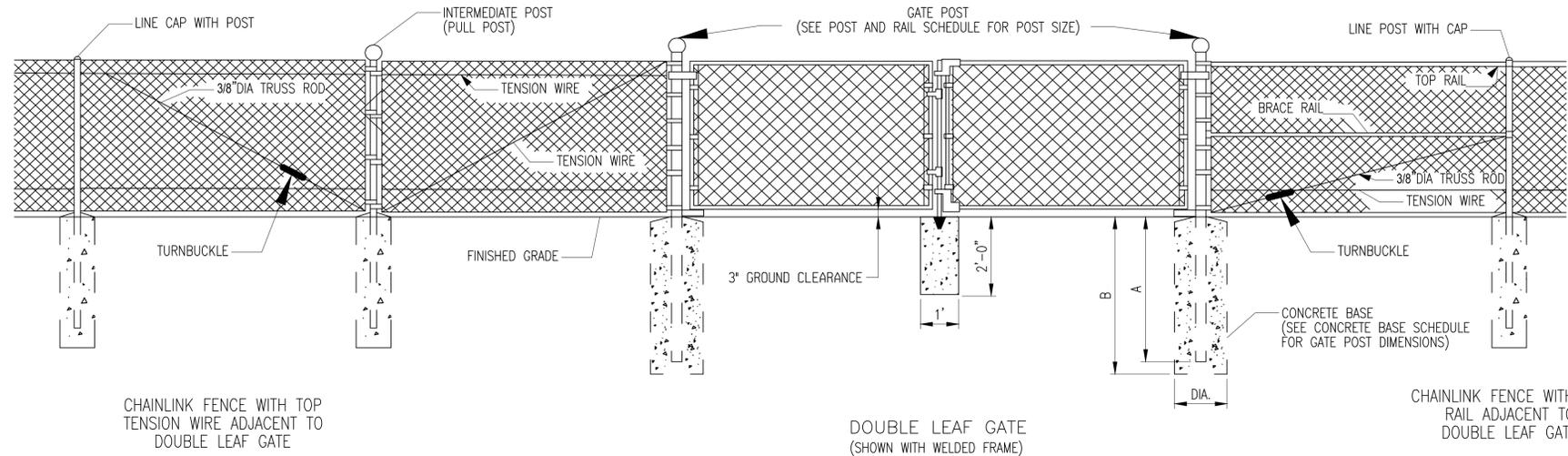
NO.	DATE	REVISION

PROJECT PATH: V:\Operations\09111004\_MARSHES\4\_Deliverables\Drawings\60%\_Design\Plot

PLOT TIME: 2014-10-16 15:36:56.56

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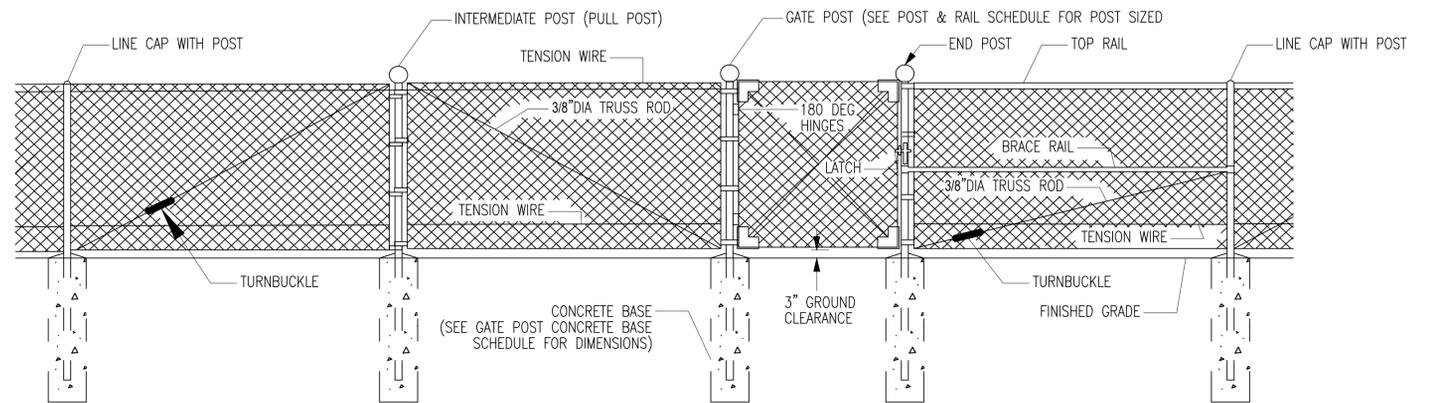
- GATES POSTS IN ROCK, WHERE SUBSTANTIAL ROCK IS ENCOUNTERED A HOLE 1" LARGER THAN THE GATE POST AND A MINIMUM DEPTH OF 1'-6" FOR SINGLE LEAF GATES UP TO 12' SPAN AND DOUBLE LEAF GATES UP TO 36' SPAN, AND 2' IN DEPTH FOR DOUBLE LEAF GATES 40' SPAN TO 44' SPAN SHALL BE MADE. AFTER INSERTING THE POSTS, THE HOLES SHALL BE BACKFILLED WITH A HANDMIXED 1:2 MORTAR CONSISTING OF ONE PART PORTLAND CEMENT AND TWO PARTS FINE AGGREGATE MIXED TO A PLASTIC CONSISTENCY SHOWING NO SIGN OF FREE WATER. THE HANDMIXING AND CONSOLIDATION OF THE MORTAR SHALL BE PERFORMED IN A MANNER APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL SUBMIT THE DETAILS FOR GATES AND CHAINLINK FENCE ADJACENT TO THEM TO THE ENGINEER. NO FENCE OR GATES SHALL BE ERECTED PRIOR TO THE APPROVAL OF THE VARIOUS DETAILS.
- STEEL PIPES AND SHAPES SHALL WEIGH AT LEAST 95% OF THE WEIGHT SPECIFIED ON THIS SHEET. THEY MAY EXCEED THE SPECIFIED WEIGHT.



GATE POST CONCRETE BASE SCHEDULE			
USE	DIA.	A	B
GATE POST FOR SINGLE LEAF GATES UP TO 12' SPAN	14"	3'-0"	3'-6"
GATE POST FOR DOUBLE LEAF GATES UP TO 24' SPAN	14"	3'-0"	3'-6"
GATE POST FOR DOUBLE LEAF GATES 28' - 36' SPAN	24"	3'-0"	3'-6"
GATES POSTS FOR DOUBLE LEAF GATES 40' - 44'	24"	3'-6"	3'-8"

(SEE NOTE 1)

\*FROM ANSI - H35.2(M)



POST AND RAIL SCHEDULE								
USE	SECTION	STEEL				ALUMINUM		
		NPS DESIGNATOR	ROLLFORMED	O.D. SIZE	WEIGHT LBS/FT	NPS DESIGNATOR	O.D. NOM.	WEIGHT LBS/FT
GATE POSTS FOR SINGLE LEAF GATES LESS THAN 6' SPAN	SCHEDULE 40 PIPE	2 1/2		2 7/8"	5.79			
	CLASS B, STEEL	2 1/2		2 7/8"	4.64	3 1/2	4"	3.15
	ROLLFORMED		3 1/2 X 3 1/2		5.10			
GATE POSTS FOR SINGLE LEAF GATES LESS THAN 6' - 12' SPAN	SCHEDULE 40 PIPE	3 1/2		4"	9.11	3 1/2	4"	3.15
	ROLLFORMED		3 1/2 X 3 1/2		5.10			
GATE POSTS FOR DOUBLE LEAF GATES, 10' - 24' SPAN	SCHEDULE 40 PIPE	3 1/2		4"	9.11	3 1/2	4"	3.15
	ROLLFORMED		3 1/2 X 3 1/2		5.10			
GATES POSTS FOR DOUBLE LEAF GATES, 28' - 36' SPAN	SCHEDULE 40 PIPE	6		6 5/8"	18.97	6	6 5/8"	6.56
GATE POSTS FOR DOUBLE LEAF GATES, 40' - 44' SPAN	SCHEDULE 40 PIPE	8		8 5/8"	28.55	8	8 5/8"	9.88
GATE FRAME FOR GATES 8' IN WIDTH OR LESS	SCHEDULE 40 PIPE	1 1/2		1 7/8"	2.72	1 1/2	1 7/8"	0.94
GATE FRAME FOR GATES GREATER THAN 8' IN WIDTH	SCHEDULE 40 PIPE	2		2 3/8"	3.65	2	2 3/8"	1.264

CHAINLINK FENCE WITH TOP TENSION WIRE ADJACENT TO SINGLE LEAF GATE

SINGLE LEAF GATE (SHOWN WITH CORNER FITTINGS)

CHAINLINK FENCE WITH TOP RAIL ADJACENT TO SINGLE LEAF GATE

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SAW MILL CREEK PILOT WETLAND MITIGATION BANK  
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PROJECT PATH: V:\Operations\0911004\_MARSHES\4\_Deliverables\Drawings\60%\_Design\Plot