

# RIP-RAP REVETMENT CONSTRUCTION DRAWING SET

DATE: 3.19.2020

# SOUTHPOINT OPEN SPACE PARK

ROOSEVELT ISLAND, NY 10044  
TAX LOT INFO  
BLOCK: 1373  
LOT: 1



## LOCATION MAP

### PROJECT CONTACTS

**OWNERS:**  
ROOSEVELT ISLAND OPERATING CORPORATION  
591 MAIN STREET  
ROOSEVELT ISLAND, NY 10044



**CIVIL ENGINEER, LANDSCAPE ARCHITECT & SURVEYOR:**  
LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING,  
LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C.  
21 PENN PLAZA,  
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NEW YORK, NY 10001  
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### INDEX OF DRAWINGS

LANGAN	DATE	LAST REVISED	
G-001.00	COVER SHEET	11.26.2018	03.19.2020
YT-100	PARTIAL TOPOGRAPHIC SURVEY	11.09.2018	-
G-002.00	CONSTRUCTION NOTES	11.26.2018	03.19.2020
G-003.00	TAX MAP INFORMATION	11.26.2018	03.19.2020
G-004.00	FLOOD ZONE INFORMATION	11.26.2018	03.19.2020
DM-100.00	DEMOLITION PLAN	11.26.2018	03.19.2020
C-100.00	SHORELINE PROTECTION PLAN	11.26.2018	03.19.2020
C-101.00	TYPICAL RIP-RAP REVETMENT SECTIONS	11.26.2018	03.19.2020
C-102.00	PART PLAN AND ELEVATION OF EXISTING CONCRETE AND GRANITE SEAWALL	11.26.2018	03.19.2020
C-103.00	SECTION AND DETAIL OF CONCRETE AND GRANITE SEAWALL	11.26.2018	03.19.2020
C-104.00	PART PLAN AND ELEVATION OF CONCRETE SEAWALL	11.26.2018	03.19.2020
C-105.00	SECTION AND DETAIL OF EXISTING AND PROPOSED CONCRETE SEAWALL	11.26.2018	03.19.2020
C-106.00	SITE DETAILS	11.26.2018	03.19.2020
C-200.00	SOIL EROSION & SEDIMENT CONTROL PLAN	11.26.2018	03.19.2020
C-201.00	SOIL EROSION & SEDIMENT CONTROL DETAILS	11.26.2018	03.19.2020
C-300.00	RAILING LAYOUT PLAN	11.26.2018	03.19.2020
C-301.00	RAILING DETAILS	11.26.2018	03.19.2020
C-302.00	CONCRETE POST & RAILING DETAIL	11.26.2018	03.19.2020
C-400.00	EARTHWORK PLAN	11.26.2018	03.19.2020
C-401.00	SHORELINE CUT AND FILL	11.26.2018	03.19.2020
L-100.00	LANDSCAPE PLAN	11.26.2018	03.19.2020
L-101.00	IRRIGATED AREA PLAN	11.26.2018	03.19.2020
L-110.00	LANDSCAPE NOTES & DETAILS	11.26.2018	03.19.2020
L-111.00	IRRIGATION DETAILS	11.26.2018	03.19.2020

### ASSOCIATED APPROVALS AND PERMITS:

AGENCY	PERMIT #	DATE
UNITED STATES ARMY CORPS OF ENGINEERS	NAN-2018-01616-ESW	12.26.2019
NEW YORK STATE - DEPARTMENT OF ENVIRONMENTAL CONSERVATION	2-6204-01651/00013	12.26.2019
NEW YORK STATE - DEPARTMENT OF STATE	F-2019-0593	07.15.2019
NEW YORK STATE - OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION	NO IMPACT	08.15.2013
NEW YORK STATE - STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)	GP-0-20-001	-
NEW YORK CITY - SMALL BUSINESS SERVICES	20193722	01.16.2020
NEW YORK CITY - DEPARTMENT OF PLANNING (WATERFRONT & OPEN SPACE DIVISION)	NO IMPACT	07.16.2019
NEW YORK CITY - METROPOLITAN TRANSPORTATION AUTHORITY	NO IMPACT	03.20.2019

\*CONTRACTOR IS TO ADHERE TO ALL PERMIT REQUIREMENTS AND CONDITIONS. CONTRACTOR IS TO SCHEDULE MEETINGS, OBTAIN CONSTRUCTION WORK PERMITS, AND NOTIFY AGENCIES AS REQUIRED.

WARNING:  
IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

Date	Description	No.
1/8/20	SUBMISSION TO SBS	4.
6/11/19	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.
3/19/20	ISSUED FOR BID	5.
	REVISIONS	

**LANGAN**  
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Project	Drawing Title	Project No.	Drawing No.
<b>SOUTHPOINT OPEN SPACE PARK RIP-RAP REVETMENT SBS # 20193722</b>	<b>COVER SHEET</b>	<b>100332702</b>	<b>G-001.00</b>
ROOSEVELT ISLAND	NEW YORK	Date	Drawn By
		11/26/2018	EJW/P
		Checked By	JF/CO

LANGAN PROJECT NO. 100332702

**SURVEY NOTES**

- THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:
    - SEAWALL RECONSTRUCTION SOUTHPOINT OPEN SPACE PARK", PARTIAL TOPOGRAPHIC SURVEY, PROJECT NO.100332701, DATE 5/29/2013, DRAWING NO. VTI00
    - HYDROGRAPHIC DATA SUPPLIED BY ROGERS SURVEYING, INC., JULY 6, 2018
    - THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NY LONG ISLAND STATE PLANE SYSTEM NAD83
  - ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88) BASED UPON GPS METHODS (SEE CONVERSION CHART)
  - PLANNING INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING AND LANDSCAPE ARCHITECTURE, D.P.C. DURING JULY 2018.
- SURVEY AND DIMENSIONAL CONTROL NOTES**
- CONTRACTOR IS RESPONSIBLE FOR ALL SURVEY LAYOUT OF THE WORK, INCLUDING COORDINATION OF PROJECT DIMENSIONAL CONTROL. CERTAIN ASPECTS OF HORIZONTAL AND VERTICAL CONTROL ARE NOT SHOWN HEREON, WHICH CONTROL SHALL BE ESTABLISHED BY THE CONTRACTOR'S NY STATE LICENSED SURVEYOR IN ORDER TO BUILD A STRUCTURAL, SOUND, FUNCTIONAL AND AESTHETIC SITE PROGRAM.
  - CONTRACTOR'S NY STATE LICENSED SURVEYOR SHALL PREPARE A DIMENSIONAL CONTROL PLAN THAT WILL EXTEND TO COVER ALL SITE AREAS WITHIN THE SCOPE OF WORK AWARD. THE CONTRACTOR MAY OBTAIN THE ELECTRONIC AUTOCAD FILES OF THE PROJECT PLAN AND PROFILE PLOTS FROM THE ENGINEER FOR THIS PURPOSE. HOWEVER, THE CONTRACTOR'S NY STATE LICENSED SURVEYOR MUST CERTIFY ON THE DRAWING THAT THE PLANNED SEAWALL LAYOUT FALLS WITHIN THE FOUNDATION OF THE EXISTING OR FORMER SEAWALL AND THAT THE TERMINUS POINTS OF THE SEAWALL LAYOUT MEET THE EXISTING ADJACENT SEAWALLS AS INTENDED BY THE PROJECT DESIGN.
  - IN GENERAL, THE DIMENSIONAL CONTROL PLAN SHALL CONSIST OF A SYSTEM OF COORDINATE GEOMETRY THAT CONNECTS ALL MAJOR LONGITUDINAL ELEMENTS, SUCH AS SEAWALL CORNERS, SEAWALL JOINTS, FOUNDATION STEPS, CONCRETE RAIL POSTS AND STEEL RAILING SUPPORTS. OTHER ELEMENTS, SUCH AS FOUNDATION WIDTH CHANGES, RIP-RAP LIMITS AND GRADES, FENCES, GATES AND MAINTENANCE PATHS, SHALL BE LOCATED BY MEANS OF PERPENDICULAR APPROVALS TO DEFINED STATIONS ALONG THE CENTERLINES.
  - THE CONTRACTOR SHALL SUBMIT, AND OBTAIN APPROVAL FOR, THE DIMENSIONAL CONTROL PLAN IN BOTH HARD COPY AND ELECTRONIC AUTOCAD FORM, TO THE ENGINEER AS A SHOP DRAWING.
  - THE DIMENSIONAL CONTROL PLAN SHALL SERVE TO DETERMINE THE CONTRACTORS FINAL LOCATION OF SEAWALL POUR LIMITS AT CONSTRUCTION JOINTS, TO BE DETERMINED IN COORDINATION WITH PLANNED LOCATIONS OF THE RAILING CONCRETE POSTS AND STEEL SUPPORTS.
  - UPON COMPLETION OF THE CONCRETE WORK, THE DIMENSIONAL CONTROL PLAN SHALL BE UPDATED AS AN AS-BUILT DIMENSIONAL PLAN, UPON WHICH THE CONTRACTOR SHALL BASE THE SHOP DRAWINGS, INCLUDING FULLY STATIONED LAYOUT PLANS, FOR THE CONCRETE POSTS AND RAILINGS. NO RAILINGS OR CONCRETE POSTS SHALL BE PLACED PENDING APPROVAL OF THE STEEL RAILING SHOP DRAWINGS.
  - IN THE VICINITY OF SEAWALL CONSTRUCTION JOINTS, THE PLACEMENT OF CONCRETE POSTS AND STEEL RAILING SUPPORTS SHALL MAINTAIN THE INDICATED MINIMUM SEPARATION DISTANCES FROM JOINTS IN ORDER TO PREVENT STRESS CRACKING TO THE CONCRETE AT THESE LOCATIONS. THE CONTRACTOR SHALL PLACE ADDITIONAL STEEL REBAR SHOULD THESE MINIMUM SEPARATION DISTANCES BE EXCEEDED.
  - SHOULD ANY ASPECT OF EITHER THE DIMENSIONAL CONTROL OR THE AS-BUILT SEAWALL CONCRETE WORK REQUIRE ADDITIONAL CAST LENGTHS OF RAILINGS WITH DIMENSIONS NOT SHOWN ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL INCUR ALL ASSOCIATED COSTS OF REMEDIAL WORK NECESSARY.
  - FIELD IDENTIFICATION AND CONFIRMATION OF SURVEY LAYOUT CONTROL, CONSIST WITH THE DRAWING INFORMATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. STATIONING SHOWN IS GENERALLY TO FACE OF WALL; DIMENSIONS ARE GENERALLY TO WALL CENTERLINE.
  - CONTRACTOR IS RESPONSIBLE FOR ALL ESTIMATES OF PROJECT MATERIAL QUANTITIES, TAKING BOTH NORMAL WASTAGE AND SITE FACTORS INTO CONSIDERATION. IMPORTED AND EXPORTED EARTHWORK QUANTITIES SHALL ACCOUNT FOR FLUFF FACTORS THAT DIFFERENTIATE BETWEEN TRUCKING AND COMPACTED IN-PLACE SOIL VOLUMES. RIP-RAP QUANTITIES SHALL ACCOUNT FOR INITIAL LOSSES DURING CONTRACT PERIOD, PENETRATION OF ROCKS INTO MUD-LINE, AND FOR A DEGREE OF EARLY SETTLEMENT DUE TO INCREASED LOAD. TREMIE CONCRETE QUANTITIES SHALL ACCOUNT FOR EXPECTED EXCESS NEEDED TO FILL UNDERLYING SUBGRADE VOIDS AND FOR DIFFICULT SITE CONDITIONS.
  - THE PROJECT AREA IS WITHIN FLOOD HAZARD ZONE "AE" ON THE 2007 FIRM AND THE 2013 PRELIMINARY FIRM. THE 2013 PRELIMINARY FIRM GOVERNS DESIGN. THE PROJECT IS DESIGNED TO COMPLY WITH APPENDIX G OF THE 2014 NYCBC.
    - FEMA BASE FLOOD ELEVATION: EL 11 NAVD88.

**DESIGN CODES, STANDARDS AND MANUALS**

- THE LATEST EDITIONS OF THE FOLLOWING CODES AND STANDARDS SHALL APPLY TO THE DESIGN, CONSTRUCTION AND QUALITY CONTROL OF WORK SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS:
  - NEW YORK CITY BUILDING CODE (NYCBC), 2014
  - BUILDING CODE OF THE STATE OF NEW YORK
  - NYS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
    - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES (ANSI/ASCE 7-05), AMERICAN SOCIETY OF CIVIL ENGINEERS
    - ACI MANUAL OF CONCRETE PRACTICE, 2010
  - MANUAL OF STANDARD PRACTICE, CONCRETE REINFORCING STEEL INSTITUTE
  - OCCUPATIONAL SAFETY AND HEALTH STANDARDS, (OSHA), 2016

**DESIGN LOADS CRITERIA FOR RIP-RAP REVETMENT, RETAINING WALLS AND RAILINGS**

- AT-REST LATERAL SOIL PRESSURE = 570 PSF.
- DEAD LOAD: PLAIN CONCRETE SEAWALL: 10.877 K/FT; REINFORCED CONCRETE SEAWALL: 3.525 K/FT
- LIVE LOAD:
  - DURING CONSTRUCTION VEHICULAR LOAD ON SEAWALL RETAINED SOILS:** ALLOWANCE IS MADE FOR ONE HEAVY VEHICLE, AASHTO HS-20 LOADING (EQUIVALENT SINGLE-AXLE LOAD OF 16 TONS OR 32 KIIPS), TO BACKFILL AND COMPACT THE EXCAVATIONS, AND TO POUR THE SEAWALL. HOWEVER, NEVERTHELESS, THE CONTRACTOR SHALL LIMIT ACCESS BY LOADED CONCRETE TRUCKS TO WITHIN 10 FEET FROM THE SEAWALLS. CONSTRUCTION BARRIERS SHOULD BE PLACED TO PREVENT INADVERTENT CONSTRUCTION TRAFFIC FROM APPROACHING CLOSER.
  - PEDESTRIAN UNIFORM LIVE LOAD:** UNIFORMLY DISTRIBUTED LOAD OF 100 PSF.
  - WIND LOADS: THE DESIGN WIND SPEED IS 100 MPH, EXPOSURE CATEGORY C
  - STORM (FLOOD AND WAVE) LOADS
    - THE DESIGN RETURN-PERIOD IS 100 YEARS.
    - DESIGN WAVE = 2.8 FT HIGH, 2.31 SECOND PERIOD
    - RISING SEA LEVELS IN THE NEW YORK HARBOR AREA: DESIGN IS MODELLED FOR AN ADDITIONAL 18 INCHES OF SEAWALL RETAINED HEIGHT.
  - EARTHQUAKE LOADS:
    - SEISMIC LOADS PER IBC/NEW YORK
    - SEISMIC USE GROUP: 1
    - SPECTRAL RESPONSE COEFFICIENTS:  $S_0 = 0.3650$   $S_1 = 0.0710$
    - SEISMIC SITE CLASS D (STIFF SOIL PROFILE)
    - SEISMIC SITE COEFFICIENTS:  $F_a = 1.51$ ;  $F_v = 2.40$
  - THE PROJECT AREA IS WITHIN FLOOD HAZARD ZONE "AE" ON THE 2007 FIRM AND THE 2013 PRELIMINARY FIRM. THE 2013 PRELIMINARY FIRM GOVERNS DESIGN. THE PROJECT IS DESIGNED IN ACCORDANCE WITH APPENDIX G OF THE 2014 NEW YORK CITY BUILDING CODE.
    - FEMA BASE FLOOD ELEVATION: EL 11 NAVD88.

**STRUCTURAL DESIGN CRITERIA FOR RIP-RAP REVETMENT, RETAINING WALLS AND RAILINGS**

- DESIGN FACTORS OF SAFETY
- | MODE                   | FACTOR OF SAFETY   |
|------------------------|--|
| SLIDING (WALLS)        | 1.5  |
| OVERTURNING (WALLS)    | 2.0 (IN ADDITION, ECCENTRICITY HELD WITHIN MIDDLE-THIRD) |
| PASSIVE EARTH PRESSURE | 1.5  |

**GEOTECHNICAL DESIGN CRITERIA FOR RIP-RAP REVETMENT, RETAINING WALLS AND RAILINGS**

- LATERAL EARTH PRESSURES
- | PARAMETERS                              | VALUE  |
|---|--|
| UNIT WEIGHT OF WATER                    | 62.4 PCF   |
| UNIT WEIGHT OF BACKFILL                 | 120 PCF  |
| INTERNAL FRICTION ANGLE OF THE BACKFILL | 30 DEGREES   |
| ACTIVE EARTH PRESSURE COEFFICIENT       | 0.33   |
| ACTIVE EQUIVALENT FLUID UNIT WEIGHT     | 40 PCF   |
| AT-REST EARTH PRESSURE COEFFICIENT      | 0.50   |
| AT-REST EQUIVALENT FLUID UNIT WEIGHT    | 60 PCF   |
| PASSIVE EARTH PRESSURE COEFFICIENT      | 3.0  |
| PASSIVE EQUIVALENT FLUID UNIT WEIGHT    | 360 PCF (WITH SAFETY FACTOR OF 2 FOR PASSIVE RESISTANCE)                 |
| BASE FRICTION COEFFICIENT               | 0.35 FOR CONCRETE ON SOIL/FILL<br>0.50 FOR CONCRETE ON ROCK OR ROCK FILL |
- MATERIAL REQUIREMENTS**
- CONCRETE
    - CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI CODE ACI 315 AND ACI 301.
    - SEAWALL CONCRETE SHALL COMPLY WITH ACI MARINE CONCRETE REQUIREMENTS AND NYSDOT CLASS HP CONCRETE REQUIREMENTS.
    - TREMIE CONCRETE SHALL COMPLY WITH ACI MARINE CONCRETE REQUIREMENTS AND NYSDOT CLASS G CONCRETE REQUIREMENTS.
    - CONCRETE SHALL HAVE AT LEAST 5,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
    - ALL AGGREGATE SHOULD CONFORM TO ASTM C33
    - CEMENT: ASTM C150, TYPE I
    - CONCRETE SHALL HAVE 6% AIR ENTRAINMENT IN ACCORDANCE WITH ACI.
    - IN ADDITION TO ADMIXTURE REQUIREMENTS REFERENCED BY THE ABOVE STANDARDS, SEAWALL CONCRETE SHALL HAVE SKINCRACK REDUCING ADMIXTURE, PROPORTIONED AS RECOMMENDED BY MANUFACTURER, TO CONTROL COLD-WEATHER CONTRACTION STRESS-CRACKING.
    - CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF ACI 207.1R-05 GUIDE TO MASS CONCRETE.

- STRUCTURAL STEEL
  - ALL STRUCTURAL STEEL ELEMENTS SHALL MEET THE REQUIREMENTS OF ASTM A36 STEEL, WITH A MINIMUM OF YIELD STRENGTH 36 KSI.
  - STEEL REBAR AND MESH SHOULD BE EPOXY-COATED AND CONFORM TO ASTM A775 GRADE 60.
  - ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS AND IN ACCORDANCE WITH THE CURRENT STRUCTURAL WELDING CODE AWS D11. ALL ELECTRODES SHALL BE E70XX.
  - NEW RAILING SHALL BE CARBON-STEEL, PREPARED WITH A NEAR-WHITE BLAST FINISH AND AN APPLIED THERMALLY SPRAYED METAL COATING (METALIZING), SEALED WITH A COMPATIBLE COAT AND PAINTED WITH URETHANE TOP-COAT. PROVIDE CERTIFICATIONS FROM THE MANUFACTURER RECOMMENDING CONDITIONS, PAINT COAT FOR THE PROJECT CONDITIONS, PAINT COLOR TO BE DETERMINED BY RIOC.
  - METAL JOINT COVER PLATES SHALL BE MARINE GRADE STAINLESS STEEL TYPE AISI-316.
  - HARDWARE SHALL BE MARINE GRADE STAINLESS STEEL TYPE AISI-316.

**GENERAL CONSTRUCTION NOTES**

- ALL WORK SPECIFIED HEREIN AND SHOWN ON THESE DRAWINGS SHALL BE CONDUCTED USING SAFE METHODS IN COMPLIANCE WITH THE PROJECT DOCUMENTS, OSHA GUIDELINES, NEW YORK CITY BUILDING CODE, INTERNATIONAL BUILDING CODE STATE OF NEW YORK EDITION, AND ANY OTHER LOCAL AND FEDERAL REGULATIONS IN CASE OF CONFLICT, THE MOST STRINGENT APPLIES.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROTECTING EXISTING STRUCTURES, SLOPES, WATERWAYS, UTILITIES AND STREETS SURROUNDING THE SITE.
- CONTRACTOR SHALL EXAMINE AND REVIEW GEOTECHNICAL ENGINEERING REPORT, SOIL MANAGEMENT PLAN (SMP) REPORT, STORMWATER POLLUTION CONTROL PLAN (SWPPP) REPORT, SITE-CIVIL DRAWINGS, STRUCTURAL DRAWINGS, EROSION/SEDIMENT CONTROL DRAWINGS AND REGULATORY PERMITS FOR THIS PROJECT. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE PROJECT WITH THESE CONTRACT DOCUMENTS. IN CASE OF DISCREPANCY, INFORM RIOC AND ENGINEER IMMEDIATELY TO SEEK DIRECTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, LABOR, MATERIALS AND TOOLS TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ALL MATERIALS SHALL MEET THE MINIMUM REQUIREMENTS GIVEN IN THE PROJECT DESIGN DOCUMENTS. ALL MATERIALS SHALL BE NEW AND ALL EQUIPMENT SHALL BE IN EXCELLENT OPERATING CONDITION.
- SHOP STAGING AND SITE PHASING SHOP DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL AT LEAST TWO WEEKS IN ADVANCE OF DUE DATE FOR MOBILIZATION. THESE SHOP DRAWINGS SHALL SHOW THE PLANNED PHASING OF THE WORK AND FACILITIES, THE PLANNED LOCATIONS FOR FENCES, GATES, MATERIAL STAGING INCLUDING FOR SALVAGE USE, AND FOR SITE MEASURES AND CONTROLS AS REQUIRED.
- SUBSURFACE CONDITIONS VARY AROUND THE SITE. THE OWNER DOES NOT PROVIDE WARRANTY ON THE INFORMATION GIVEN ON THE BORING LOGS. TEST-PIT LOGS AND GEOTECHNICAL REPORT REGARDING THE SUBSURFACE CONDITIONS. THE CONTRACTOR MAY PERFORM ADDITIONAL EXPLORATIONS (BORINGS, TEST PITS) AT HIS OWN EXPENSE TO OBTAIN ADDITIONAL SUBSURFACE INFORMATION. ALL EXPLORATIONS ARE SUBJECT TO APPROVAL BY THE OWNER. CLAIMS BASED ON VARYING SUBSURFACE CONDITIONS SHALL NOT BE ACCEPTED.
- CONTRACTOR SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS, MATERIAL CERTIFICATIONS, EQUIPMENT DATA AND INSTALLATION PROCEDURES, PROTECTIVE MEASURE PROCEDURES PRIOR TO START OF THE WORK FOR APPROVAL.
- CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS, LOCATION, DIMENSIONS, ELEVATIONS OF SEAWALLS, WALKWAYS, SLABS, UTILITIES, AND SURVEY BENCH MARKS AFFECTING THE CONSTRUCTION WORK. ANY DISCREPANCIES FROM INFORMATION INDICATED ON CONTRACT DRAWINGS SHALL BE DIRECTED TO THE ATTENTION OF ENGINEER/ARCHITECT.
- CONTRACTOR SHALL MAINTAIN THE PARK'S DRAINAGE PATTERNS SO THAT SURFACEWATER RUN-OFF DOES NOT POND, AND FOR THIS PURPOSE SHALL MAINTAIN, AND RE-WORK AS NECESSARY.
- CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS OF THE PARK, SHORE, ADJACENT STRUCTURES, PAVEMENTS, WALKWAYS, TREES AND VEGETATION TO THEIR ORIGINAL CONDITION. ACTUAL SCOPE OF SITE RESTORATION SHALL BE DETERMINED BY FACTORS INCLUDING CONTRACTOR'S MEANS-AND-METHODS OF STAING AND MATERIAL IMPORT OPERATIONS.
- SUBMIT CONSTRUCTION SEQUENCING AND STAGING PLANS TO THE DESIGN TEAM FOR REVIEW.
- OBTAIN ALL REQUIRED LOCAL AND STATE PERMITS AND APPROVALS PRIOR TO COMMENCING EARTHWORK.
- FLAG THE LIMITS OF WORK AND INSTALL CONSTRUCTION FENCE.
- INSTALL EROSION AND SEDIMENT CONTROLS FOR EACH WORK AREA PRIOR TO COMMENCEMENT OF WORK WITHIN THAT AREA. CONTROLS INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTION FENCE WITHIN CONSTRUCTION FENCE AND WIND SCREEN, SEWERAGE TREATMENT SEDIMENT BASIN, TURBIDITY CURTAIN, STABILIZED CONSTRUCTION ENTRANCES, INLET FILTER FABRIC PROTECTION, TEMPORARY EARTH DIKES, TEMPORARY SEDIMENT TRAPS, AND TEMPORARY STORM PIPING AND STRUCTURES FOR THE TRAPS AS SHOWN ON THE PLANS.
- EARTHWORK AND EROSION & SEDIMENT CONTROL PRACTICES MUST BE INSPECTED PER NYSDCE REQUIREMENTS. CONTRACTOR SHALL COMPLY WITH THE SOIL MANAGEMENT PLAN AS APPROVED BY NYSDCE FOR THE PROJECT.
- REMOVE SITE FEATURES AS NOTED ON DEMOLITION PLAN - DM-100.00. DISPOSE OF WASTE MATERIALS OFF-SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND PROJECT SPECIFICATIONS FOR CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.
- CLEAR AND GRUB SITE IN PHASES AS REQUIRED IMMEDIATELY PRIOR TO ROUGH GRADING OF AN AREA. AREAS WHERE ROUGH GRADING IS NOT IMMEDIATELY PROPOSED SHALL REMAIN UNDISTURBED.
- PROCEED WITH ENVIRONMENTAL REMEDIATION PER NYSDCE APPROVED REMEDIAL PLAN AND CONTRACT DOCUMENTS.
- REPLACE SEAWALL PER SHORELINE PROTECTION PLAN - C-100.00 ON BOTH SHORES. PROJECT PHASING IS TO BE COORDINATED WITH CONTRACTOR AND RIOC.
- COMPLETE FINAL GRADING OF AND INSTALL FINAL GROUND COVER IMPROVEMENTS (SIDEWALK, SEEDING, ETC.) OF ALL DISTURBED AREAS.
- EROSION AND SEDIMENT CONTROL DEVICES WITHIN EACH WORK AREA SHALL REMAIN OPERATIONAL UNTIL FINAL STABILIZATION OF THAT WORK AREA. "FINAL STABILIZATION" SHALL MEAN THAT ALL SOIL DISTURBANCE ACTIVITIES HAVE CEASED AND A UNIFORM, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF EIGHTY (80) PERCENT OVER THE ENTIRE PERVIOUS SURFACE HAS BEEN ESTABLISHED; OR OTHER EQUIVALENT STABILIZATION MEASURES, SUCH AS PERMANENT LANDSCAPE MATERIALS, ROCK RIP-RAP OR WASHED/CRUSHED STONE HAVE BEEN APPLIED ON ALL DISTURBED AREAS THAT ARE NOT COVERED BY PERMANENT STRUCTURES, CONCRETE OR PAVEMENT.
- ONCE DISTURBANCE ACTIVITIES ARE COMPLETE AND THE WORK AREA HAS BEEN STABILIZED, REMOVE THE SOIL EROSION AND SEDIMENT CONTROL DEVICES FOR THAT WORK AREA.

**DOCUMENT AND FIELD COORDINATION**

- CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL PROJECT DRAWINGS, CONDITIONS AND OTHER CONTRACT DOCUMENTS IN HIS PLANNING AND EXECUTION OF THE WORK.
- CONTRACTOR SHALL ASCERTAIN THAT ALL PERMITTING, REGULATORY AND TRADE APPROVALS HAVE BEEN SECURED FOR ALL ASPECTS OF THE WORK.
- CONTRACTOR SHALL BE DEEMED TO HAVE INSPECTED THE SITE PRIOR TO TAKING POSSESSION, AND TO HAVE ACCEPTED THE SITE AS IS, IN THE COURSE OF HIS INITIAL CONTRACTOR TO ADVISE THE OWNER OF ANY DISCREPANCY OR CONDITION THAT WOULD CAUSE ADDITIONAL WORK OR MODIFICATIONS TO THE WORK.
- BEFORE PROCEEDING WITH WORK, CONTRACTOR SHALL SUBMIT A WRITTEN CERTIFICATION IN AN ACCEPTABLE FORM, STATING THAT CAREFUL EXAMINATION HAS BEEN MADE OF THE SITE, EXISTING STRUCTURES, EXISTING ADJACENT STRUCTURES, RECORDS OF UTILITY LINES, TEST BORING RECORDS, SOIL SAMPLES, SUBSURFACE EXPLORATION REPORTS, THE DRAWINGS, AND ALL OTHER CONTRACT DOCUMENTS.
- CONTRACTOR SHALL TAKE ALL REQUIRED STEPS TO IMPLEMENT THE PROVISIONS OF THE PROJECT REGULATORY PERMITS BEFORE THE START OF WORK, AND SHALL MAINTAIN AND UPDATE THESE PROVISIONS AS THE WORK PROCEEDS.
- RUN AND STRIKE/ROCK FACADE PHOTOGRAPHY - PHOTOGRAPH THE RUN TO OBTAIN FULL COVERAGE OF THE EAST AND WEST FACADES AND YIELD SUFFICIENT CLARITY TO SEE THE TELL-TALES AND TO CAPTURE DETAIL OF MASONRY DEFECTS. SIMILAR PHOTOGRAPH STRICKER TO OBTAIN FULL COVERAGE OF THE EAST FACADE. THE PHOTOGRAPHS SHALL BE IDENTIFIED WITH DIRECTION, DATE, TIME AND INSPECTOR'S NAME.
- MONITORING OF ADJACENT STRUCTURES -
  - MONITORING OF EXISTING STRUCTURES SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATION SECTION 3109.3, THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND THE 2014 BUILDING NYC BUILDING CODE.

**STRUCTURAL AND EXCAVATION SUPPORT NOTES**

- CONTRACTOR SHALL NOTE THAT THE PROJECT CONSTRUCTION REQUIRES SIGNIFICANT EXCAVATIONS FOR SEAWALL DEMOLITION AND FOUNDATION CONSTRUCTION WORK.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL PROJECT DRAWINGS, SITE CONDITIONS AND OTHER CONTRACT DOCUMENTS IN HIS PLANNING AND EXECUTION OF THE WORK. REGARDLESS OF THE EXTENT, DEPTH AND SLOPE OF EXCAVATIONS SHOWN OR INFERRED FROM THE DRAWINGS, CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF PERFORMING THE WORK IN A SAFE AND EXPEDITIOUS MANNER, INCLUDING THE CONSTRUCTION APPROACH TO EXCAVATION AND FOUNDATIONS WORK.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURE TO PREVENT UNDERMINING OR DAMAGING ADJACENT STRUCTURES, WALLS, SEAWALLS, PAVEMENTS, FENCES, TREES, SIGNS, POLES, ETC.
- CONTRACTOR SHALL MAKE SHOP DRAWING SUBMITTALS SHOWING DESIGNED MEASURES (E.G. SHORING, BRACING OR UNDERPINNING) TO PREVENT UNDERMINING OR DAMAGING THE FOLLOWING STRUCTURES:
  - ADJACENT SEAWALL SEGMENTS AT NORTH END OF PROJECT, AND TO INCLUDE ADJACENT PAVEMENTS, FENCES, GATES, SIGNS, ETC.
  - ADJACENT FOUR FREEDOMS PARK (FFP) WALLS WITH SHALLOW FOUNDATIONS AT SOUTH END OF PROJECT, AND TO INCLUDE ADJACENT PAVEMENTS, BENCHES, TREES, ETC.
  - ADJACENT FOUR FREEDOMS PARK (FFP) TRAILERS, SECURITY POLES AND GUARDHOUSE, ALL WITH SHALLOW FOUNDATIONS, AT SOUTH END OF PROJECT, AND TO INCLUDE ADJACENT PAVEMENTS, BENCHES, FENCES, TREES, LIGHT POLE FIXTURES ETC.
  - THE DESIGN OF THESE SHORING, BRACING OR UNDERPINNING MEASURES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE UNDER THE DIRECT SUPERVISION OF, AND BEAR THE SIGNATURE AND SEAL OF, A LICENSED PROFESSIONAL ENGINEER OF THE STATE OF NEW YORK EXPERIENCED IN THE DESIGN OF SUCH WORK, WHO SHALL BE RETAINED BY THE CONTRACTOR AND SHALL BE RESPONSIBLE FOR CONSTRUCTION SUPERVISION OF THIS WORK.

**WILDLIFE NOTE**

IN THE EVENT THE CONTRACTOR ENCOUNTERS WILDLIFE AND/OR NESTS WITHIN THE LIMIT OF DISTURBANCE WHICH NEED TO BE REMOVED TO ALLOW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE AND FEDERAL AGENCIES. NESTS OR WILDLIFE SHALL NOT BE REMOVED UNTIL THE APPROPRIATE DIRECTION IS RECEIVED FROM THE AGENCIES. IT IS RECOMMENDED THE CONTRACTOR CONTACT THESE AGENCIES PRIOR TO CONSTRUCTION TO OBTAIN ANY PRELIMINARY GUIDANCE FOR REMOVAL. THE AGENCIES ARE:

**FEDERAL**

- U.S. FISH AND WILDLIFE SERVICE (BIRDS, WATERFOWL, TERRESTRIAL WILDLIFE, THEIR NESTS AND DENS) - LONG ISLAND FIELD OFFICE, 340 SMITH ROAD, SHIRLEY, NY 11967, PHONE (631) 286-0485. ALSO, OBTAIN A RESIDENT CANADA GOOSE NEST AND EGG DEPRESSION PERMIT.
- NOAA NATIONAL MARINE FISHERIES SERVICE (MARINE WILDLIFE, INCLUDING BUT NOT LIMITED TO SICR OR INJURED MARINE MAMMALS AND TURTLES) - (978)-281-9300 and (631)-369-9829 (STRANDING HOTLINE)

**STATE**

- NYSDCE WILDLIFE PROGRAM - PHONE: (718)-482-4922; EMAIL: R2.NATURALRESOURCES@DEC.NY.GOV

REVISIONS	REVISIONS
1/8/20	SUBMISSION TO SBS
6/11/19	SUBMISSION TO SBS
5/29/19	SUBMISSION TO SBS
2/20/19	SUBMISSION TO SBS
3/19/20	ISSUED FOR BID
5.	Date
	Description
	No.
	SIGNATURE
	LEONARD D. SAVINO
	DATE SIGNED
	PROFESSIONAL ENGINEER NY Lic. No. 090013-1

- SHOULD ANY OTHER SHORING, BRACING OR UNDERPINNING BE REQUIRED AS DEFINED BY THE NYC BUILDING CODE, PREPARATION OF DETAILS OF SHORING, BRACING OR UNDERPINNING, OR OTHER EXCAVATION SUPPORT SYSTEM, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR'S PROFESSIONAL ENGINEER SHALL BE SOLELY RESPONSIBLE FOR THE SPECIAL INSPECTIONS, INCLUDING BUILDING DEPARTMENT PLINGS IF ANY, ASSOCIATED WITH THE EXCAVATION SUPPORT, SHORING, BRACING OR UNDERPINNING ASPECTS OF THE WORK.
- WHERE INTERNAL BRACES ARE USED AS PART OF THE EXCAVATION SUPPORT SYSTEM, THE INTERNAL BRACES SHALL NOT BE REMOVED UNTIL BACKFILLING OPERATIONS HAVE BEEN COMPLETED TO SAFE ELEVATIONS.
- WHEN EXCAVATION SUPPORT SYSTEM IS REQUIRED TO WITHSTAND EARTH PRESSURES RESULTING FROM BACKFILL PLACEMENT, THE BACKFILL SHALL NOT BE PLACED UNTIL AFTER THE EXCAVATION SUPPORT SYSTEM HAS BEEN COMPLETELY INSTALLED.

**TRAFFIC CONTROL, FENCING AND GATE NOTES**

- THE PARK EXISTING 3FT HIGH CHAINLINK FENCE SHALL GENERALLY REMAIN UNDISTURBED. FENCE FABRIC SHALL BE REMOVED ONLY WHEN AND WHERE NEEDED AS PART OF THE CONTRACTOR'S MEANS-AND-METHODS, SUCH AS FOR ENVIRONMENTAL CAP PLACEMENT.
- AN 8FT HIGH TEMPORARY CONSTRUCTION CHAINLINK FENCE WITH GATES SHALL BE SET ADJACENT TO AND INSIDE THE EXISTING PARK FENCE-LINES. THE CONSTRUCTION FENCE SHALL BE OF A PORTABLE TYPE, WITH FABRIC SCREEN FOR DUST CONTROL AND SILT FENCE ATTACHMENT TO BASE FOR SEDIMENT CONTROL, REFER TO DM-100.00
- TO MAINTAIN A MINIMUM 15FT LANE FOR PARK TRAFFIC AT THE MAIN ENTRANCE, THE EXISTING PARK PICKET FENCE THERE SHALL BE TEMPORARILY RELOCATED, WITH CHAINLINK FENCE SET ADJACENT, INLAND TO THE PAVED ASPHALT ENTRANCE DRIVEWAY.
- ANY AND ALL CONSTRUCTION TRAFFIC ON THE PARK PAVED ROADS AND PATHS SHALL REQUIRE FLAGMAN SUPPORT TO ENSURE PEDESTRIAN SAFETY.
- THE CONTRACTOR SHALL SUBMIT A TRAFFIC PLAN TO RIOC WHICH WILL PROPOSE A MAXIMUM OF 3 CONSTRUCTION GATES EACH ON EAST AND WEST SHORES. THE TRAFFIC PLAN SHALL SHOW HOW PARK PEDESTRIAN, MAINTENANCE VEHICLE AND EMERGENCY ACCESS TRAFFIC SHALL BE SUSTAINED.
- THE EXISTING PARK ELECTRIC SUPPLY CONDUIT SHALL BE PRESERVED AND PROTECTED AT ALL TIMES. IN PARTICULAR, PLACE STEEL TRAFFIC PLATES OR TAKE OTHER EQUAL MEASURE TO PREVENT DAMAGE TO THE LINES ACROSS CONSTRUCTION GATE OPENINGS.
- THE EXISTING PARK WATER SUPPLY SYSTEMS SHALL BE PRESERVED AND PROTECTED AT ALL TIMES. IN PARTICULAR, PLACE STEEL TRAFFIC PLATES OR TAKE OTHER EQUAL MEASURE TO PREVENT DAMAGE TO THE LINES ACROSS CONSTRUCTION GATE OPENINGS.
- THE EXISTING PARK IRRIGATION SYSTEM SHALL BE PRESERVED AND PROTECTED AT ALL TIMES. IN PARTICULAR, PLACE STEEL TRAFFIC PLATES OR TAKE OTHER EQUAL MEASURE TO PREVENT DAMAGE TO THE LINES ACROSS CONSTRUCTION GATE OPENINGS.
- THE EXISTING PARK LIGHT-POLES AND SECURITY-POLES SHALL BE PRESERVED AND PROTECTED AT ALL TIMES.
- THE PARK EXISTING 8FT HIGH STEEL PICKET FENCES SHALL GENERALLY BE PRESERVED AND PROTECTED FROM DAMAGE AT ALL TIMES, WHERE NECESSARY FOR CONSTRUCTION PURPOSES, FENCE PANELS SHALL BE TEMPORARILY REMOVED. WHERE DAMAGED BY CONTRACTOR, REPLACE FENCE AND DEMOLITION PLAN - DM-100.00 AND SHORELINE PROTECTION PLAN - C-100.00 FOR REMOVAL AND PROPOSED LOCATION OF FENCE AND GATES.
- WHERE DISTURBANCE TO OR REGRADING OCCURS AT EXISTING FENCE POST FOOTINGS, THE CONTRACTOR SHALL REMOVE, EXCAVATE AND POUR NEW SLEEVED FOOTINGS TO THE FINAL DESIGN GRADE.
- WHERE NEW SLEEVED FOOTINGS ARE POURED IN REGRADED AREAS, THE PICKET FENCE TOP-LINE SHALL HAVE A PROFILE TO MATCH THE GRADE, WHERE STEPPING OF FENCE TOP-LINE IS REQUIRED TO BE NECESSARY, CONTRACTOR SHALL SUBMIT A STEP-FOOTING DETAIL, SHOWING A STEP NOT TO EXCEED 6 INCHES IN GRADE AND CONTINUOUS REINFORCEMENT. EXISTING FENCE PANELS MAY BE RE-USED; HOWEVER TO THE EXTENT NEEDED, THE CONTRACTOR SHALL MEASURE FOR AND FABRICATE NEW PICKET FENCE PANELS AS PART OF FENCE RECONSTRUCTION.
- WHERE DAMAGED, THE CONTRACTOR SHALL REPLACE THE PARK EXISTING FENCE AND GATES WITH NEW.
- IN ALL LOCATIONS WHERE PICKET FENCES MEET FINISHED SEAWALLS, THE CONTRACTOR SHALL MODIFY THE PICKET FENCE TO PROVIDE A NEW 8FT WIDE DOUBLE-SWING STYLE PICKET-STYLE GATE TO MEET THE SEAWALL RAILING WITH A MAXIMUM 4-INCH WIDE VERTICAL CURVE GAP.
- ADJACENT TO FOUR FREEDOMS PARK (FFP), WHERE EXISTING PICKET FENCES MEET FINISHED SEAWALLS IN ZONES WHERE RIP-RAP IS ELEVATED, THE CONTRACTOR SHALL SET A NEW 8FT HIGH CHAINLINK FENCE, WITH VINYL-COATED FABRIC COLOR BLACK, TO EXTEND FROM THE SEAWALL RAILING ACROSS THE RIP-RAP AND DOWN TO MEAN HIGH WATER LINE.
- CONTRACTOR SHALL NOTE THAT OPERATIONAL HOURS OF SOUTHPOINT PARK AND FOUR FREEDOMS PARK (FFP) ARE DIFFERENT, AND FURTHERMORE, PUBLIC VISITORS TO FFP CAN ONLY ACCESS VIA THE WEST SIDE OF SOUTHPOINT PARK. WHEN WORKING IN THE TWO AREAS WHERE FFP HAS VISITOR AND OPERATIONAL FACILITIES, CLOSE OFF FENCING, OR PROVIDE ADDITIONAL FENCING OR OTHER BARRIER MEASURES, SO THAT FFP IS FULLY SECURE AT ALL TIMES.

**STORMWATER POLLUTION CONTROL PLAN (SWPPP) REPORT**

- CONTRACTOR SHALL IMPLEMENT SOIL EROSION AND SEDIMENT CONTROL MEASURES FOR THE SITE IN ACCORDANCE WITH THE STORMWATER POLLUTION CONTROL PLAN (SWPPP) REPORT, INCLUDING THE WRITING THE MAINTENANCE RECORDS. THE SWPPP MEASURES HAVE GENERALLY BEEN DESIGNED USING THE GENERAL PRINCIPLES OF THE NEW YORK (NYSDCE) STANDARD AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. COMPLIANCE IS FURTHER DESCRIBED WITHIN THE CONTRACT DOCUMENTS.

**SOIL MANAGEMENT PLAN (SMP) & REPORT NOTES**

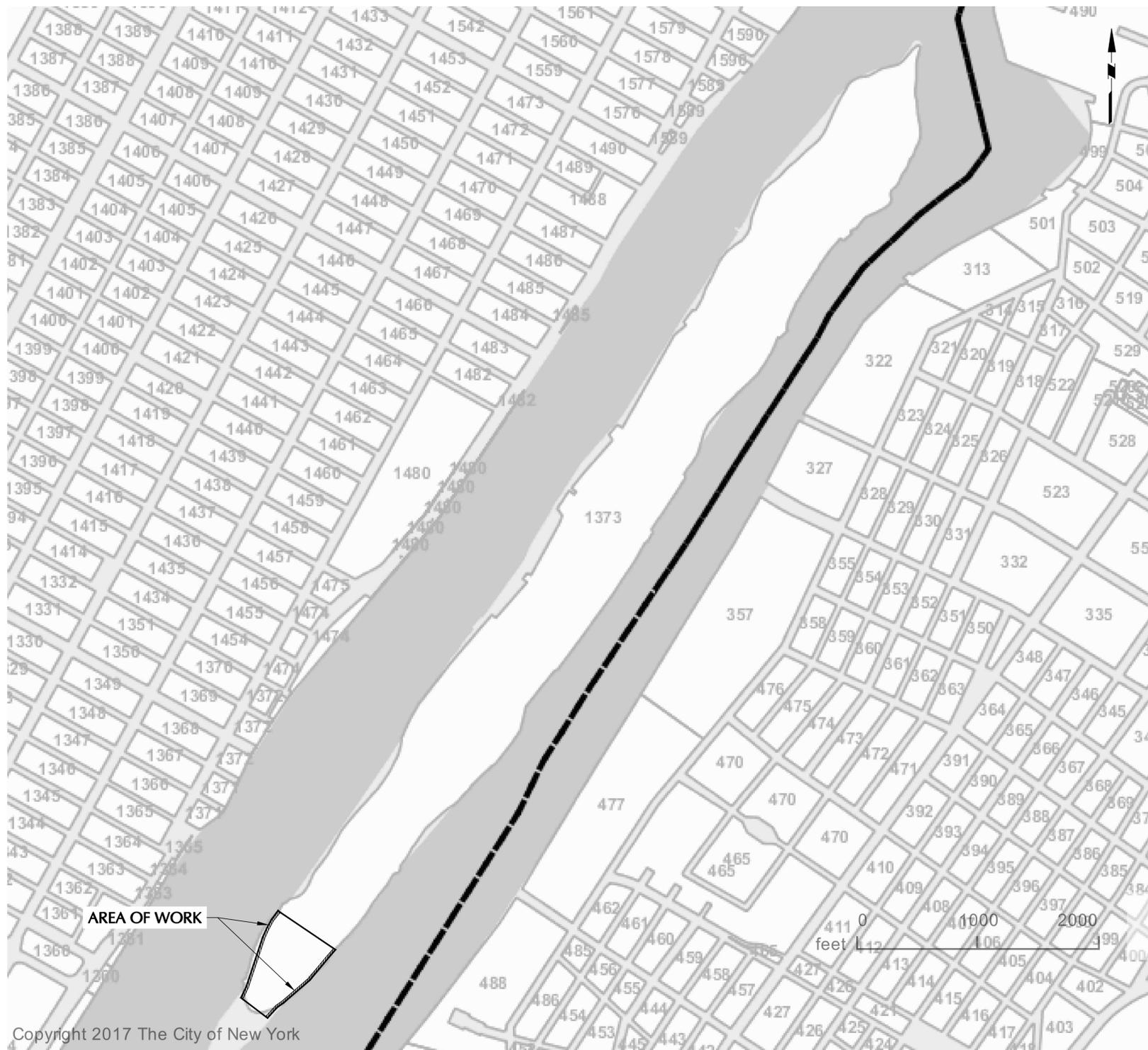
- CONTRACTOR SHALL IMPLEMENT SOIL HANDLING AND RELATED MANAGEMENT MEASURES FOR THE SITE IN ACCORDANCE WITH THE PROJECT SOIL MANAGEMENT PLAN (SMP) REPORT. COMPLIANCE IS FURTHER DESCRIBED WITHIN THE CONTRACT DOCUMENTS.
- A CAP OF COVER SOIL, CONSISTING OF IMPORTED ENVIRONMENTALLY CLEAN FILL SHALL BE PLACED AROUND THE SITE FROM THE SEAWALLS TO MEET THE LIMITS OF THE EXISTING CAP TO THE PARK. PERVIOUS AREAS OF THE RESTORED SITE SHALL BE SEEDED WITH A WILD-FLOWER MIX. GRAVEL MAINTENANCE PATHWAYS SHALL BE PROVIDED TO AND ALONG THE SEAWALLS.
- FOR ALL EARTHWORK AND EROSION/SEDIMENTATION CONTROL WORK, CONTRACTOR SHALL COMPLY WITH THE SOIL MANAGEMENT PLAN AS APPROVED BY NYSDCE FOR THE PROJECT.
- CONTRACTOR SHALL BE DEEMED TO HAVE VISITED THE SITE, OBSERVED AND ACCEPTED ALL CONDITIONS, BEFORE BIDDING AND STARTING WORK. CONTRACTOR SHALL COORDINATE ALL DRAWINGS, ALL SPECIFICATIONS, ALL PROJECT REGULATORY APPROVALS AND PERMITS, AND ALL RELATED PROJECT DOCUMENTS AS INDICATED IN THESE APPROVALS AND PERMITS.
- CONTRACTOR SHALL REVIEW THE SOIL MANAGEMENT PLAN FOR MORE SPECIFIC DIRECTION AND INTERPRETATION OF CONTRACT EARTHWORK-RELATED REQUIREMENTS THEREIN.
- AS PER THE SOIL MANAGEMENT PLAN, THE CONTRACTOR SHALL DELINEATE THE LOCALIZED SOIL HOT-SPOTS BY A PROGRAM OF FURTHER TEST-PIT AND ENVIRONMENTAL SAMPLING, UPON WHICH DELINEATION THESE HOT-SPOTS, BELIEVED TO TOTAL LESS THAN 200 CUBIC YARDS BY VOLUME, SHALL BE REMOVED AND DISPOSED OF OFF-SITE BY CONTRACTOR.
- THE FULL POTENTIAL SCOPE OF MATERIALS SALVAGE IS DESCRIBED IN THE SOIL MANAGEMENT PLAN.
- STOCKPILES OF EARTHWORK MATERIALS SALVAGE, OR IMPORTED FILL MATERIALS, SHALL BE PROTECTED BY THE CONTRACTOR FROM EROSION/SEDIMENTATION AND COMINGLING WITH OTHER SITE SOILS BY MEANS OF SECURED SILT FENCE BARRIERS.
- THE EXTENT AND LOCATION OF STONE MATERIALS SALVAGE FROM THE DEMOLISHED SEAWALLS SHALL BE COORDINATED BY THE CONTRACTOR WITH RIOC. STONE SHALL BE SECURELY PALLETED AND COVERED BY A TARPULIN.
- EARTHWORK OPERATIONS SHALL BE CONSISTENT WITH THE GOALS OF THE ENVIRONMENTAL CLEAN FILL COVER OR CAP TO THE SITE, AS DESCRIBED IN THE SOIL MANAGEMENT PLAN AND ON OTHER PROJECT DRAWINGS.
- CONTRACTOR SHALL COOPERATE WITH ANY NYSDCE INSPECTIONS OF EROSION/SEDIMENTATION CONTROL AND SOIL MANAGEMENT PLAN WORK.

**URBAN SOIL EROSION AND SEDIMENT CONTROL NOTES**

- COMPLY WITH THE CONSTRUCTION, MAINTENANCE, INSPECTION, CLEANING, AND REMEDIAL AND CLOSE-OUT MEASURES PER THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (S.W.P.P.P.).
- LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITH RESTABILIZATION OF DISTURBED AREAS SCHEDULED AS SOON AS PRACTICAL.
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES PRIOR TO START OF CONSTRUCTION AND DISTURBANCE OF SITE.
- NOTE THAT ALL LOCATIONS OF THE SOIL EROSION/SEDIMENT CONTROL MEASURES SHOWN ARE SCHEMATIC AND TYPICAL, AND ARE SHOWN FOR GUIDANCE PURPOSES ONLY. IN PARTICULAR, CONTROL OF CONSTRUCTION WATER SHALL BE DETERMINED SOLELY BY THE CONTRACTOR AS PART OF HIS MEANS AND METHODS.
- ALL DRAINAGE INLETS SHALL BE PROTECTED WITH FILTER FABRIC THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
- CONTRACTOR SHALL MAINTAIN SOIL EROSION AND SEDIMENT CONTROL DEVICES AND ACCESS ROADS THROUGHOUT THE COURSE OF CONSTRUCTION.
- TEMPORARY SEEDING SHALL BE APPLIED IN ACCORDANCE WITH THE S.W.P.P.P.
- THE CONTRACTOR IS RESPONSIBLE THAT ALL PAVED ROADWAYS ON AND OFF-SITE ARE KEPT FREE OF SITE GENERATED SEDIMENT AT ALL TIMES. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS.
- ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED ON A WEEKLY BASIS AND IMMEDIATELY AFTER EACH STORM.
- DISPOSAL OF COLLECTED SEDIMENT SHALL BE MADE TO AREAS DESIGNATED BY THE OWNER REPRESENTATIVE IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE S.W.P.P.P.
- CONTRACTOR SHALL RETAIN REGULAR MAINTENANCE REPORTS ON-SITE AS REQUIRED BY S.W.P.P.P.

**STONE SALVAGE**

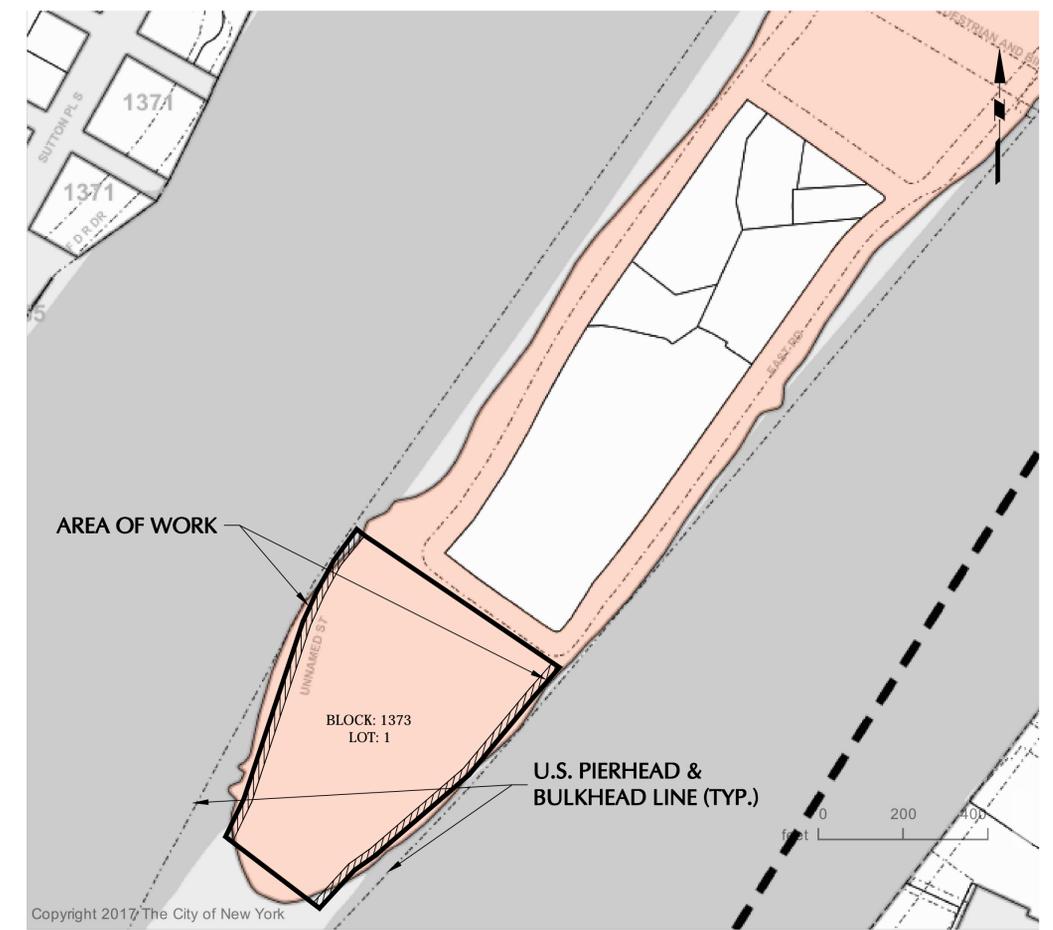
- CONTRACTOR SHALL SALVAGE STONE UNITS FROM SITE ACTIVITIES, FOR BOTH RE-USE AS PART OF THE PROJECT AND FOR RIOC'S LATER REUSE, AS DESCRIBED HEREIN. SITE PREPARATION SPECIFICATION 029000-3 AND SOIL MANAGEMENT PLAN.
- THE FOLLOWING TYPES AND QUANTITIES OF STONE SHALL BE SALVAGED FROM EXISTING SEAWALL DEMOLITION.
  - LARGE GRANITE BLOCK (AVERAGE 27" X 27" X 60" LONG)
    - APPROXIMATELY 200 CUBIC YARDS EXIST IN SEGMENTS OF THE EXISTING WEST-SHORE SEAWALL.
    - SMALL PORTION SHALL BE GREATER THAN 400 LBS AND LESS THAN 1,200 LBS ABOVE ELEVATION +5.0
    - THE REMAINDER SHALL BE SALVAGED AND STORED SECURELY ON-SITE AS DIRECTED, FOR RIOC'S LATER RE-USE.
  - HEMN FIELD-STONE/MEDIUM (AVERAGE 10" X 10" X 30" LONG TO 12" X 12" X 48" LONG SIZE)
    - APPROXIMATELY 350 CUBIC YARDS EXIST IN SEGMENTS OF THE EXISTING SEAWALLS.
    - THIS STONE SHALL USED FOR PROPOSED SALVAGED STONE WALLS AND LEFT OVER STONE TO BE STORED SECURELY ON-SITE AS DIRECTED FOR RIOC'S LATER RE-USE.
    - IN ADDITION, ANY STONE FOUND TO BEAR ENGRAVINGS OR INSCRIPTIONS SHALL BE BOUGHT TO RIOC'S ATTENTION FOR DIRECTIONS AS TO SALVAGE
  - OTHER TYPES OF STONE OR ROCK, AT THE CONTRACTOR'S OPTION, MAY BE SALVAGED AS FOLLOWS.
    - ROUGH FIELD-STONE/SMALL (AVERAGE DIAMETER 9" OR LARGER)
      - TO THE EXTENT THAT SMALLER CLASSES OF STONE MEET THE RIP-RAP GRADATION SPECIFICATIONS, AT THE CONTRACTOR'S OPTION, SUCH STONE MAY BE RE-USED FOR RIP-RAP MATERIAL.
      - APPROXIMATELY 300 CUBIC YARDS OF THESE SMALLER CLASSES OF STONE EXISTS WITHIN THE SEAWALLS; HOWEVER, PLEASE REFER TO PROJECT SOIL MANAGEMENT PLAN (SMP) REPORT FOR REGULATORY COMPLIANCE AS TO ON-SITE AND IN-WATER RE-USE PROVISIONS.
    - ALSO AT THE CONTRACTOR'S OPTION, STONE STONES IN MODEST QUANTITIES MAY EXIST WITHIN THE SOILS TO BE EXCAVATED THAT MAY BE SORTED FOR RE-USE AS RIP-RAP MATERIAL; HOWEVER, PLEASE REFER TO PROJECT SOIL MANAGEMENT PLAN (SMP) REPORT AND THE NYSDCE CONDITIONS OF APPROVAL THEREOF, FOR REGULATORY COMPLIANCE AS TO PREPARATION, ON-SITE AND IN-WATER RE-USE PROVISIONS.
- RIP-RAP REVETMENT**
  - RIP-RAP REVETMENT CONSISTS OF TWO LAYERS OF STONE.
    - RIP-RAP GRADATIONS SHALL BE GREATER THAN 1,200 LBS AND LESS THAN 2,000 LBS BELOW ELEVATION +5.0
    - RIP-RAP GRADATIONS SHALL BE GREATER THAN 400 LBS AND LESS THAN 1,200 LBS ABOVE ELEVATION +5.0
    - BEDDING LAYER: 18-INCH THICK LAYER OF 4 TO 6-INCH CLEAN CRUSHED STONE
    - THE BEDDING LAYER SHALL BE PLACED ON THE PREPARED BASE AS DESCRIBED BELOW, IN ACCORDANCE WITH THE DETAILS AND LIMITS SHOWN ON THE CONTRACT DRAWINGS.
    - THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND STABILIZING SLOPES DURING WORK.
    - BEDDING SHALL BE SPREAD UNIFORMLY ON THE FILTER FABRIC ON THE SLOPE AND GRADES AS INDICATED IN THE CONTRACT DRAWINGS AND IN SUCH A MANNER AS TO AVOID DAMAGE TO THE FILTER FABRIC.
    - RIP-RAP STONE SHALL BE MACHINE PLACED WITHIN SPECIFIED TOLERANCES, AS DESCRIBED BELOW AND TO THE LINES AND GRADES SHOWN ON THE CONTRACT DRAWINGS.
    - RIP-RAP STONE SHALL BE PLACED IN A MANNER THAT WILL PRODUCE A POORLY GRADED MASS OF ROCK WITH MINIMUM PRACTICABLE PERCENTAGE OF VOIDS.
    - THE FINISHED RIPRAP SHALL BE FREE FROM OBJECTIONABLE POCKETS OF SMALL STONES AND CLUSTERS OF LARGE STONES.
    - DURING PLACEMENT, NO STONE SHALL BE PLACED IN A MANNER THAT DAMAGES THE RIP-RAP, BEDDING LAYER, FILTER FABRIC, OR GEORGRID.
    - STONES REQUIRED TO BE PLACED OVER OR



ROOSEVELT ISLAND OVERALL TAX MAP

1" = 500'

SOURCE: [GTTPS://GIS.NYC.GOV/TAXMAP/MAP.HTM](https://gis.nyc.gov/taxmap/map.htm)



ROOSEVELT ISLAND ENLARGED TAX MAP

1" = 200'

SOURCE: [GTTPS://GIS.NYC.GOV/TAXMAP/MAP.HTM](https://gis.nyc.gov/taxmap/map.htm)

NOTES:

1. BASE PLAN TAKEN FROM 'NYC DIGITAL TAX MAP, <[GTTPS://GIS.NYC.GOV/TAXMAP/MAP.HTM](https://gis.nyc.gov/taxmap/map.htm)>.
2. PROJECT BOUNDARY INCLUDES TAX BLOCK 1373 AND IS WITHIN TAX LOT 1.
3. ALL WORK IS LOCATED WITHIN U.S. PIERHEAD & BULKHEAD LINE APPROVED BY SECRETARY OF WAR IN 1857 AND MODIFIED ON 7 NOVEMBER, 1917.

REVISIONS	REVISIONS
3/19/20	ISSUED FOR BID
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5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

SIGNATURE: LEONARD D. SAVINO  
 DATE SIGNED: PROFESSIONAL ENGINEER NY Lic. No. 090013-1



Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.  
 21 Penn Plaza, 360 West 31st Street, 8th Floor  
 New York, NY 10001

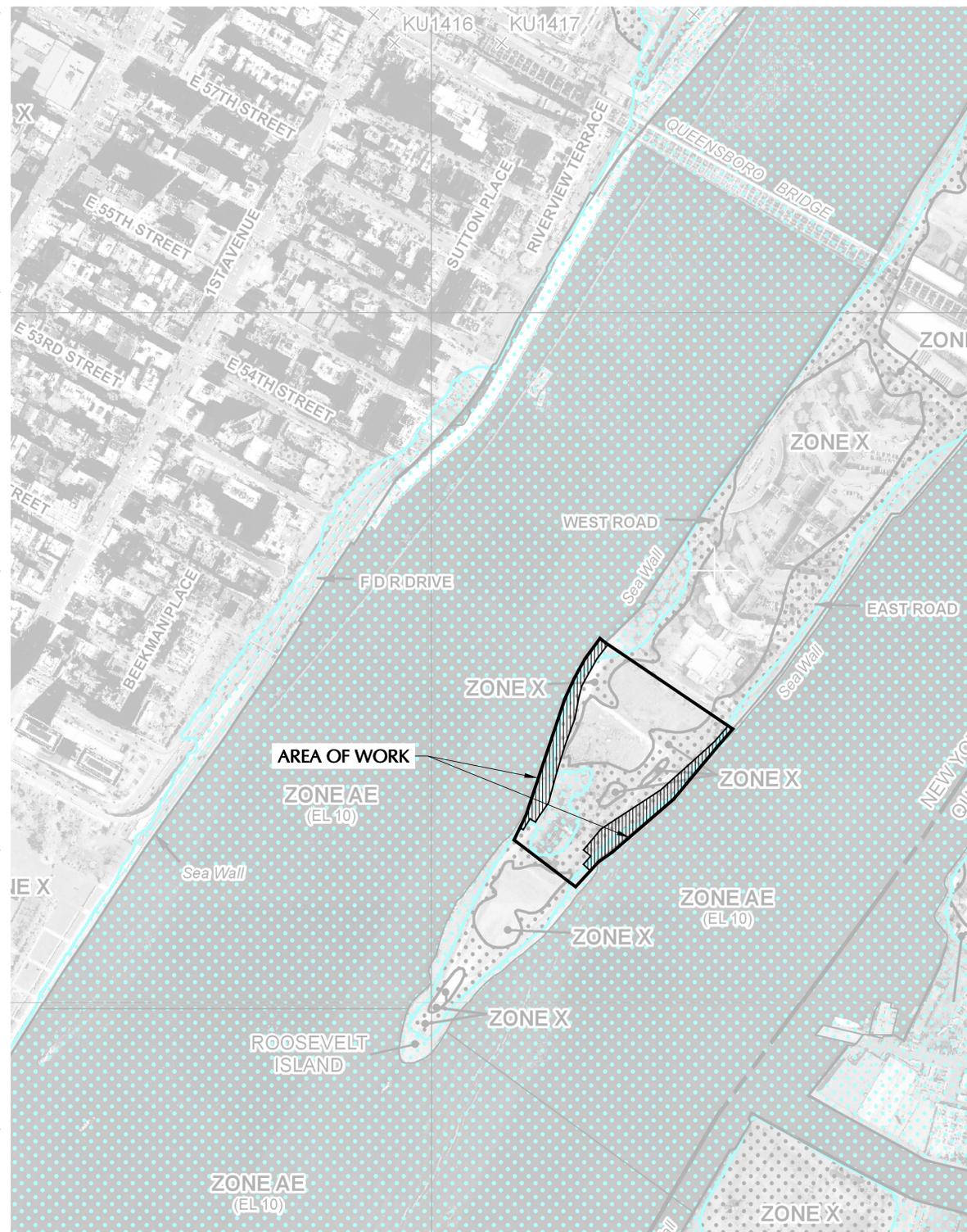
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project: SOUTHPOINT OPEN SPACE PARK  
 RIP-RAP REVETMENT  
 SBS # 20193722

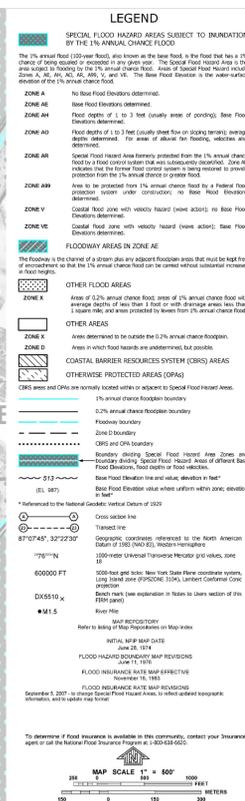
Drawing Title: TAX MAP INFORMATION

Project No.	100332702	Drawing No.	G-003.00
Date	11/26/2018		
Drawn By	EJVP		
Checked By	JF/CO		

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

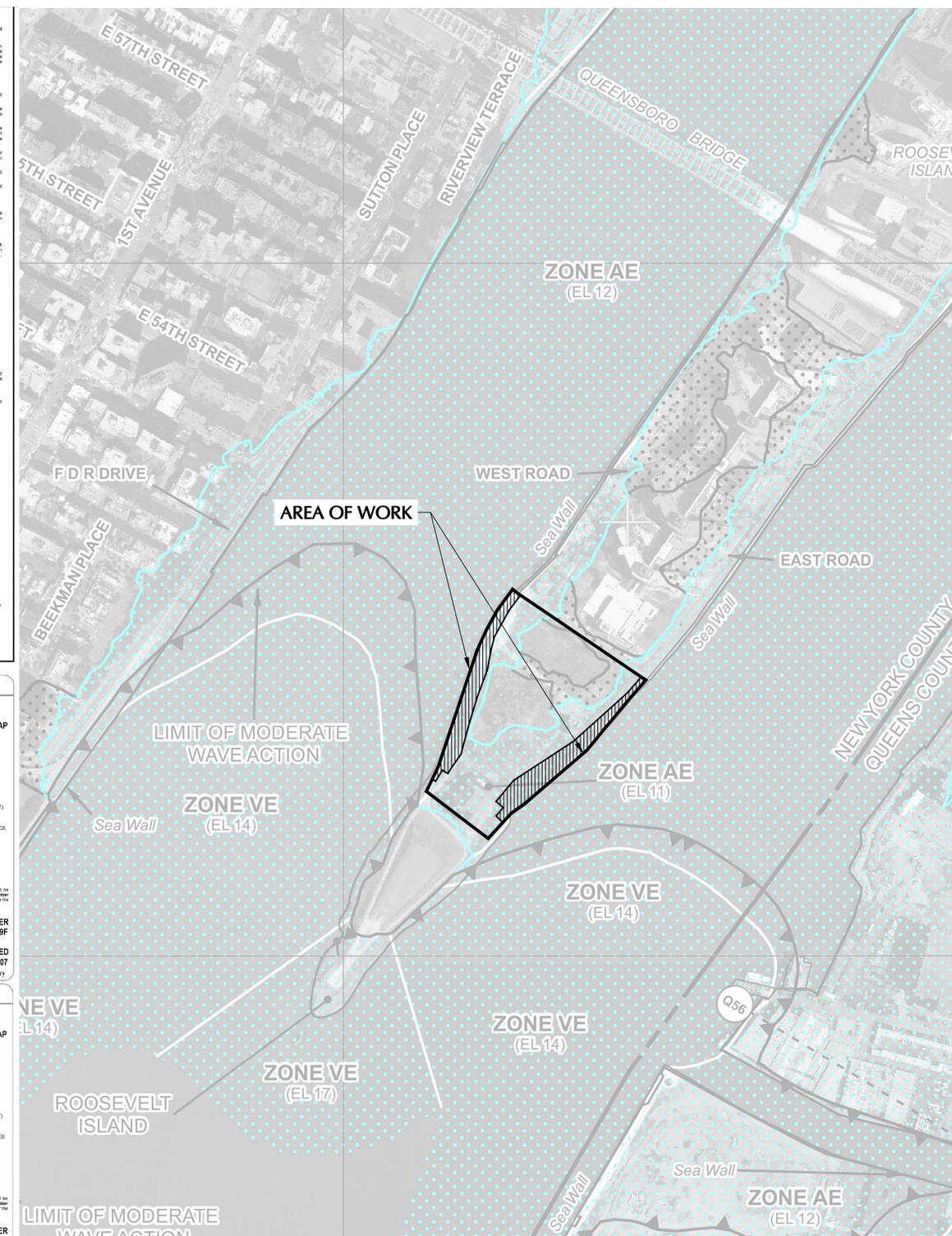


2007 FIRM PANEL NO. 3604970089F & 3604970202F

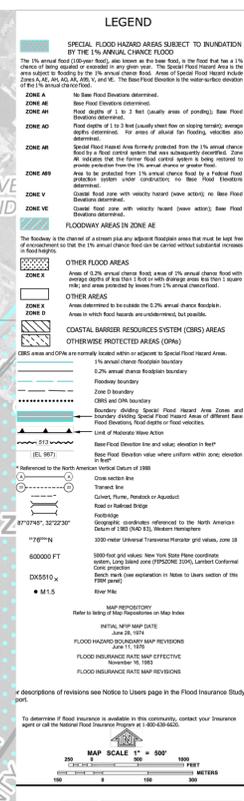


**PANEL 0089F**  
**FIRM FLOOD INSURANCE RATE MAP**  
 CITY OF NEW YORK, NEW YORK  
 BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES  
**PANEL 89 OF 457**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)  
 COMMUNITY NUMBER PANEL SUFFIX  
 NEW YORK CITY OF 36049 0089 F  
 MAP NUMBER 3604970089F  
 MAP REVISED SEPTEMBER 5, 2007  
 FEDERAL EMERGENCY MANAGEMENT AGENCY

**PANEL 0202F**  
**FIRM FLOOD INSURANCE RATE MAP**  
 CITY OF NEW YORK, NEW YORK  
 BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES  
**PANEL 202 OF 457**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)  
 COMMUNITY NUMBER PANEL SUFFIX  
 NEW YORK CITY OF 36049 0202 F  
 MAP NUMBER 3604970202F  
 MAP REVISED SEPTEMBER 5, 2007  
 FEDERAL EMERGENCY MANAGEMENT AGENCY



2013 PRELIMINARY FIRM PANEL NO. 3604970089G & 3604970202G



**PANEL 0089G**  
**FIRM FLOOD INSURANCE RATE MAP**  
 CITY OF NEW YORK, NEW YORK  
 BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES  
**PANEL 89 OF 457**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)  
 COMMUNITY NUMBER PANEL SUFFIX  
 NEW YORK CITY OF 36049 0089 G  
 MAP NUMBER 3604970089G  
 MAP REVISED PRELIMINARY DECEMBER 5, 2013  
 FEDERAL EMERGENCY MANAGEMENT AGENCY

**PANEL 0202G**  
**FIRM FLOOD INSURANCE RATE MAP**  
 CITY OF NEW YORK, NEW YORK  
 BRONX, RICHMOND, NEW YORK, QUEENS, AND KINGS COUNTIES  
**PANEL 202 OF 457**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)  
 COMMUNITY NUMBER PANEL SUFFIX  
 NEW YORK CITY OF 36049 0202 G  
 MAP NUMBER 3604970202G  
 MAP REVISED PRELIMINARY DECEMBER 5, 2013  
 FEDERAL EMERGENCY MANAGEMENT AGENCY

- NOTES
- AS PER THE NYC BUILDING CODE THE 2007 FIRM AND THE 2013 PRELIMINARY FIRM ARE SHOWN. SOURCE: FEMA.GOV
  - BASE MAP LEFT: FIRM FLOOD RATE INSURANCE MAPS FOR THE CITY OF NEW YORK, NEW YORK PANEL NOS. 3604970089F & 3604970202F. MAPS REVISED SEPTEMBER 5, 2007.
  - BASE MAP RIGHT: PRELIMINARY FIRM FLOOD RATE INSURANCE MAPS FOR THE CITY OF NEW YORK, NEW YORK PANEL NOS. 3604970089G & 3604970202G. MAPS REVISED DECEMBER 5, 2013.
  - CONTROLLING FLOOD HAZARD:
    - 2007 FIRM: 'ZONE AE' BFE 10 NGVD (8.9 NAVD88, 12.25 ROOSEVELT ISLAND DATUM).
    - 2013 FIRM: 'ZONE AE' BFE 11 NAVD88 (14.35 ROOSEVELT ISLAND DATUM).
    - THE 2013 PRELIMINARY FIRM GOVERNS FOR BOTH FLOOD HAZARD ZONE AND BASE FLOOD ELEVATION.
  - THE AREA OF WORK IS LOCATED IN SPECIAL FLOOD HAZARD AREA, ZONE AE, PER THE PRELIMINARY FIRM DATED DECEMBER 5, 2013.
  - THE HIGHEST RECORDED FLOOD ELEVATION RECORDED NEARBY DURING THE HURRICANE SANDY WAS 10.7 NAVD88. THIS ELEVATION IS REFERENCED FROM NEAREST STATION SITE NO. NYQE07528 IN QUEENS COUNTY, NY.
  - IN ACCORDANCE WITH APPENDIX G OF THE 2014 NYC BUILDING CODE THE ENTIRE STRUCTURE IS DESIGNED IN ACCORDANCE WITH ASCE 24, INCLUDING THAT THE FOUNDATION AND STRUCTURE IS DESIGNED TO RESIST FLOTATION, COLLAPSE AND LATERAL MOVEMENT DUE TO EFFECTS OF WIND AND FLOOD LOADS ACTING SIMULTANEOUSLY ON ALL COMPONENTS, AND OTHER LOAD REQUIREMENTS OF CHAPTER 16 OF THE NEW YORK CITY BUILDING CODE.

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Project  
**SOUTHPOINT OPEN SPACE PARK**  
**RIP-RAP REVETMENT**  
**SBS # 20193722**  
 ROOSEVELT ISLAND NEW YORK

Drawing Title  
**FLOOD ZONE INFORMATION**

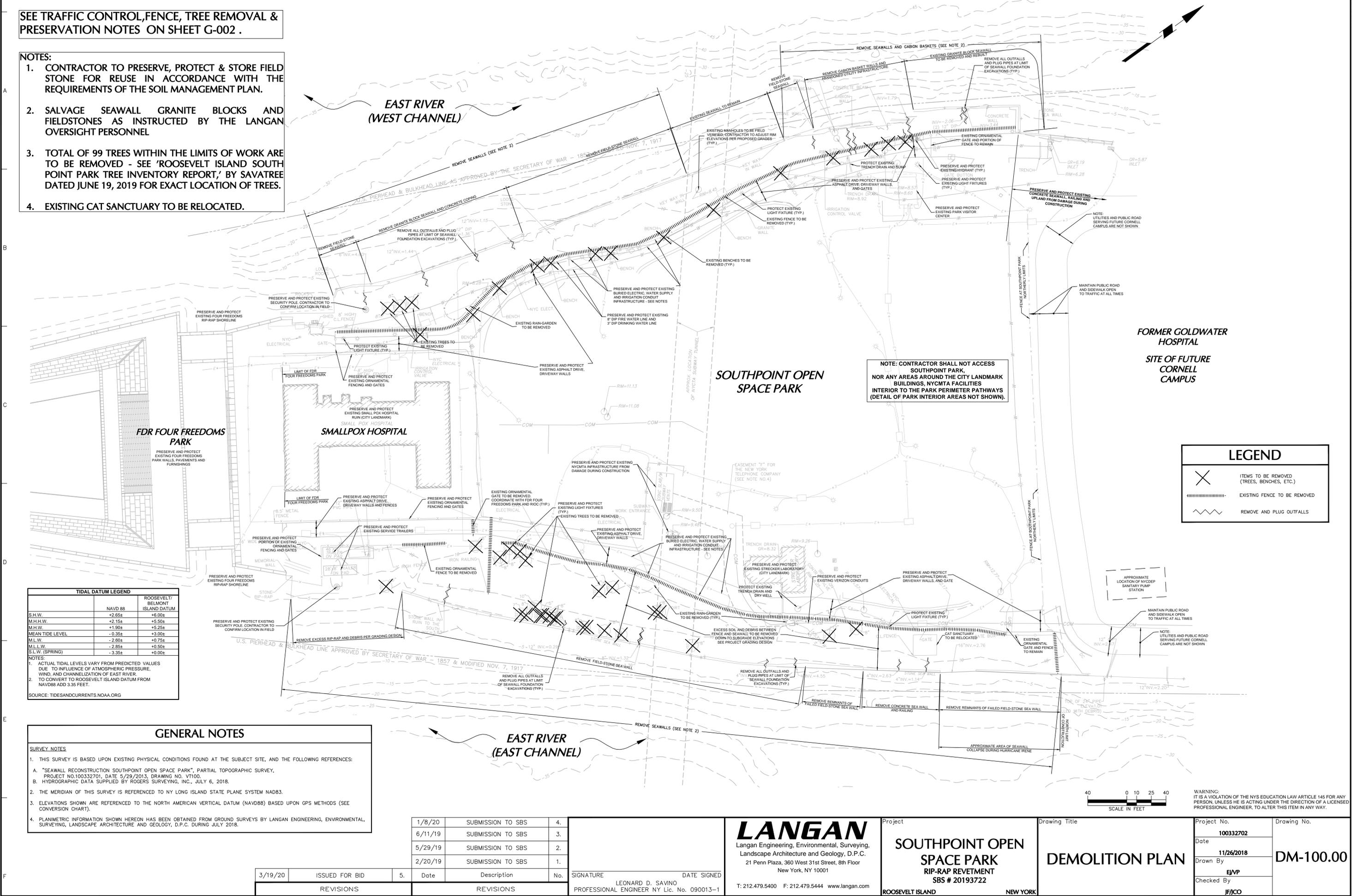
Project No. 100332702  
 Drawing No. G-004.00  
 Date 11/26/2018  
 Drawn By EJPV  
 Checked By JFC

WARNING:  
 IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.

PROJECT NO. 100332702

SEE TRAFFIC CONTROL, FENCE, TREE REMOVAL & PRESERVATION NOTES ON SHEET G-002.

- NOTES:**
1. CONTRACTOR TO PRESERVE, PROTECT & STORE FIELD STONE FOR REUSE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOIL MANAGEMENT PLAN.
  2. SALVAGE SEAWALL GRANITE BLOCKS AND FIELDSTONES AS INSTRUCTED BY THE LANGAN OVERSIGHT PERSONNEL
  3. TOTAL OF 99 TREES WITHIN THE LIMITS OF WORK ARE TO BE REMOVED - SEE 'ROOSEVELT ISLAND SOUTH POINT PARK TREE INVENTORY REPORT,' BY SAVATREE DATED JUNE 19, 2019 FOR EXACT LOCATION OF TREES.
  4. EXISTING CAT SANCTUARY TO BE RELOCATED.



NOTE: CONTRACTOR SHALL NOT ACCESS SOUTHPOINT PARK, NOR ANY AREAS AROUND THE CITY LANDMARK BUILDINGS, NYCTA FACILITIES INTERIOR TO THE PARK PERIMETER PATHWAYS (DETAIL OF PARK INTERIOR AREAS NOT SHOWN).

FORMER GOLDWATER HOSPITAL  
SITE OF FUTURE CORNELL CAMPUS

**LEGEND**

- X ITEMS TO BE REMOVED (TREES, BENCHES, ETC.)
- EXISTING FENCE TO BE REMOVED
- ~ ~ ~ REMOVE AND PLUG OUTFALLS

**TIDAL DATUM LEGEND**

	NAV D 88	ROOSEVELT/BELMONT ISLAND DATUM
S.H.W.	+2.05±	+6.00±
M.H.H.W.	+2.35±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.W.	-2.60±	+0.75±
S.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
1. ACTUAL TIDAL LEVELS VARY FROM PREDICTED VALUES DUE TO INFLUENCE OF ATMOSPHERIC PRESSURE, WIND, AND CHANNELIZATION OF EAST RIVER.  
2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
SOURCE: TIDESANDCURRENTS.NOAA.ORG

**GENERAL NOTES**

**SURVEY NOTES**

1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:  
A. "SEAWALL RECONSTRUCTION SOUTHPOINT OPEN SPACE PARK", PARTIAL TOPOGRAPHIC SURVEY, PROJECT NO.100332701, DATE 5/29/2013, DRAWING NO. VT100.  
B. HYDROGRAPHIC DATA SUPPLIED BY ROGERS SURVEYING, INC., JULY 6, 2018.
2. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NY LONG ISLAND STATE PLANE SYSTEM NAD83.
3. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAV D88) BASED UPON OPS METHODS (SEE CONVERSION CHART).
4. PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING JULY 2018.

REVISIONS	REVISIONS
3/19/20	ISSUED FOR BID

DATE	DESCRIPTION	NO.
1/8/20	SUBMISSION TO SBS	4.
6/11/19	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

SIGNATURE: LEONARD D. SAVINO DATE SIGNED: \_\_\_\_\_  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

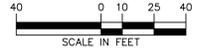
**LANGAN**  
Langan Engineering, Environmental, Surveying,  
Landscape Architecture and Geology, D.P.C.  
21 Penn Plaza, 360 West 31st Street, 8th Floor  
New York, NY 10001  
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project  
**SOUTHPOINT OPEN SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**DEMOLITION PLAN**

Project No. 100332702  
Date 11/26/2018  
Drawn By EJVP  
Checked By JF/CO  
Drawing No. DM-100.00

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PROJECT NO. 100332702

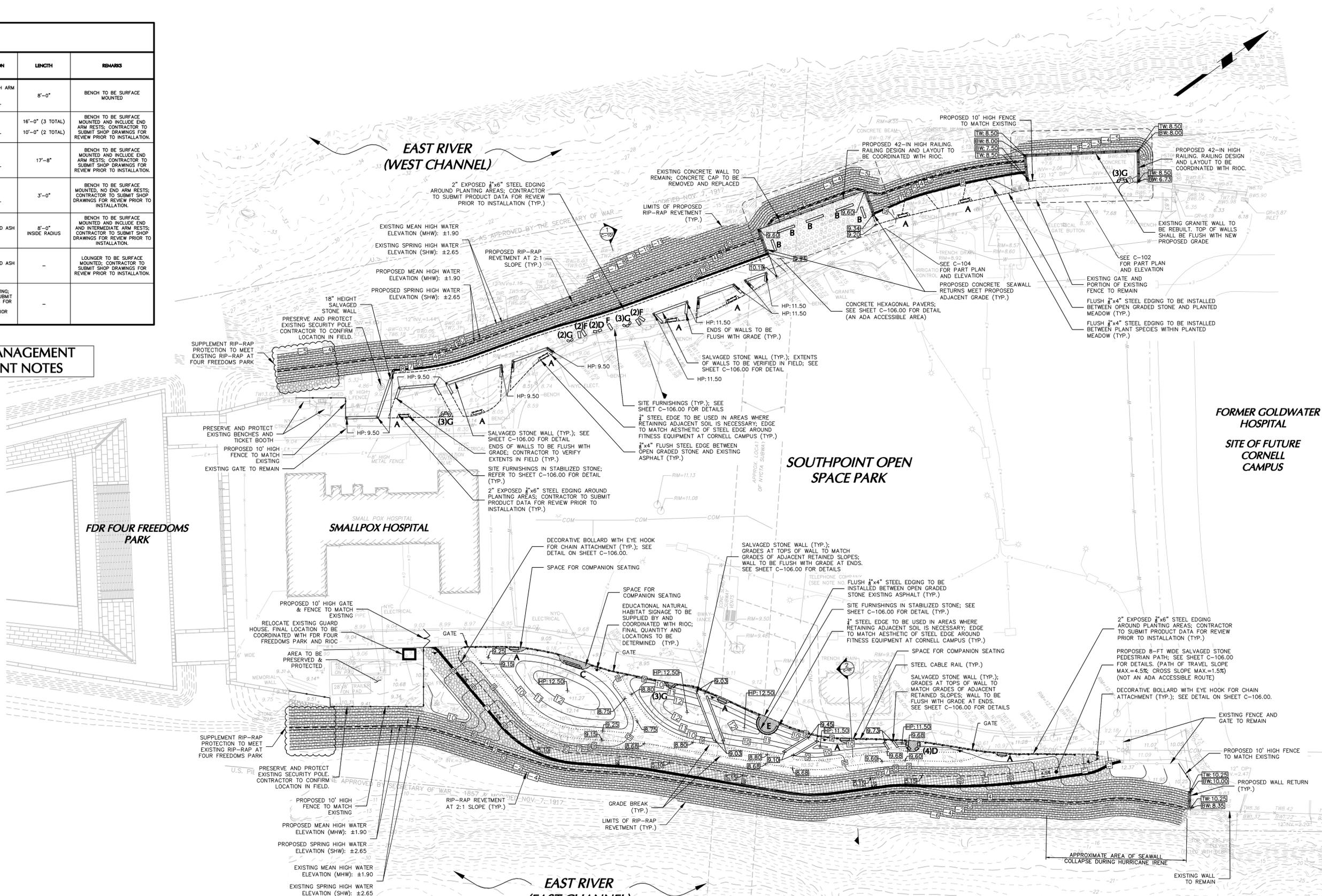
SITE FURNISHINGS SCHEDULE						
KEY	QTY.	FURNISHING MANUFACTURER	FURNISHING MODEL	FURNISHING DESCRIPTION	LENGTH	REMARKS
A	11	FAIRWEATHER SITE FURNISHINGS	MODEL T-2 BENCH	BACKED WOOD BENCH WITH ARM RESTS INCLUDED SEAT: DOUGLAS FIR FRAME: GALVANIZED STEEL	8'-0"	BENCH TO BE SURFACE MOUNTED
B	5	COLUMBIA CASCADE COMPANY	TIMBERFORM COLOSSUS MODEL NO. 2219-16	BACKLESS TIMBER SEAT SEAT: DOUGLAS FIR FRAME: GALVANIZED STEEL	16'-0" (3 TOTAL) 10'-0" (2 TOTAL)	BENCH TO BE SURFACE MOUNTED AND INCLUDE END ARM RESTS; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
C	1	LANDSCAPE FORMS	TRAPEZOID	BACKED TIMBER SEAT SEAT: YELLOW CEDAR FRAME: GALVANIZED STEEL	17'-8"	BENCH TO BE SURFACE MOUNTED AND INCLUDE END ARM RESTS; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
D	6	COLUMBIA CASCADE COMPANY	TIMBERFORM COLOSSUS MODEL NO. 2219-16	TIMBER SEAT WITH BACK SEAT: DOUGLAS FIR FRAME: GALVANIZED STEEL	3'-0"	BENCH TO BE SURFACE MOUNTED; NO END ARM RESTS; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
E	1	MAGLIN SITE FURNISHINGS	ODGEN COLLECTION	BACKED BENCH SEAT: THERMALLY MODIFIED ASH FRAMES: STEEL FRAME COLOR: SILVER 14	8'-0" INSIDE RADIUS	BENCH TO BE SURFACE MOUNTED AND INCLUDE END AND INTERMEDIATE ARM RESTS; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
F	5	MAGLIN SITE FURNISHINGS	720 CHAISE LOUNGE	LOUNGER SEAT: THERMALLY MODIFIED ASH FRAME: STEEL FRAME COLOR: SILVER 14	-	LOUNGER TO BE SURFACE MOUNTED; CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION.
G	14	EIS STUDIO	CAST STONE PEBBLE	CAST STONE PEBBLE SEATING; COLOR: CONTRACTOR TO SUBMIT PHYSICAL COLOR SAMPLES FOR REVIEW BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO PURCHASE	-	

REFER TO SHEET G-002 & SOIL MANAGEMENT PLAN TO SEE RIP-RAP REPLACEMENT NOTES

CUT AND FILL PARAMETERS	
<b>SOUTH POINT SPACE PARK RIP-RAP REVETMENT</b>	
Cut Fill parameters referenced to Overall Project	
Demolish and Stockpile existing Seawall Material = 1,000 CY	
Total Mass Grading Cut Volume = 10,000 CY	
Total Mass Grading Fill Volume = 1,000 CY	
Total Soil Removal Volume = 8,000 CY	
Total Rip-Rap Import = 4,300 CY (5,300 CY - 1,000 CY on-site material)	
Total Topsoil Import for Clean Cap = 3,100 CY	
<b>Cut Fill parameters referenced to below SHW</b>	
Total Cut Volume = 900 CY	
Total Fill Volume = 2,200 CY	
<b>Overall Net Fill Volume = 1,300 CY</b>	
Total Cut Area = 8,000 SF	
Total Fill Area = 20,000 SF	
<b>Overall Fill Area = 12,000 SF</b>	
<b>Cut Fill parameters referenced to below MHW</b>	
Total Cut Volume = 800 CY	
Total Fill Volume = 2,100 CY	
<b>Overall Net Fill Volume = 1,300 CY</b>	
Total Cut Area = 8,000 SF	
Total Fill Area = 19,900 SF	
<b>Overall Fill Area = 11,900 SF</b>	

TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.65±	+6.00±
M.H.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.W.	-2.00±	+0.75±
S.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
 1. ACTUAL TIDAL LEVELS VARY FROM PREDICTED VALUES DUE TO INFLUENCE OF ATMOSPHERIC PRESSURE, WIND, AND CHANNELIZATION OF EAST RIVER.  
 2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
 SOURCE: TIDESANDCURRENTS.NOAA.ORG



**GENERAL NOTES**

SURVEY NOTES	
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4. PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING JULY 2018.	

Date	Description	No.
03/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

SIGNATURE: LEONARD D. SAVINO  
 DATE SIGNED: \_\_\_\_\_  
 PROFESSIONAL ENGINEER NY Lic. No. 090013-1

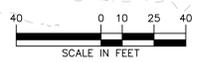
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Project  
**SOUTHPOINT OPEN SPACE PARK**  
**SHORELINE PROTECTION PLAN**  
 RIP-RAP REVETMENT  
 SBS # 20193722  
 ROOSEVELT ISLAND NEW YORK

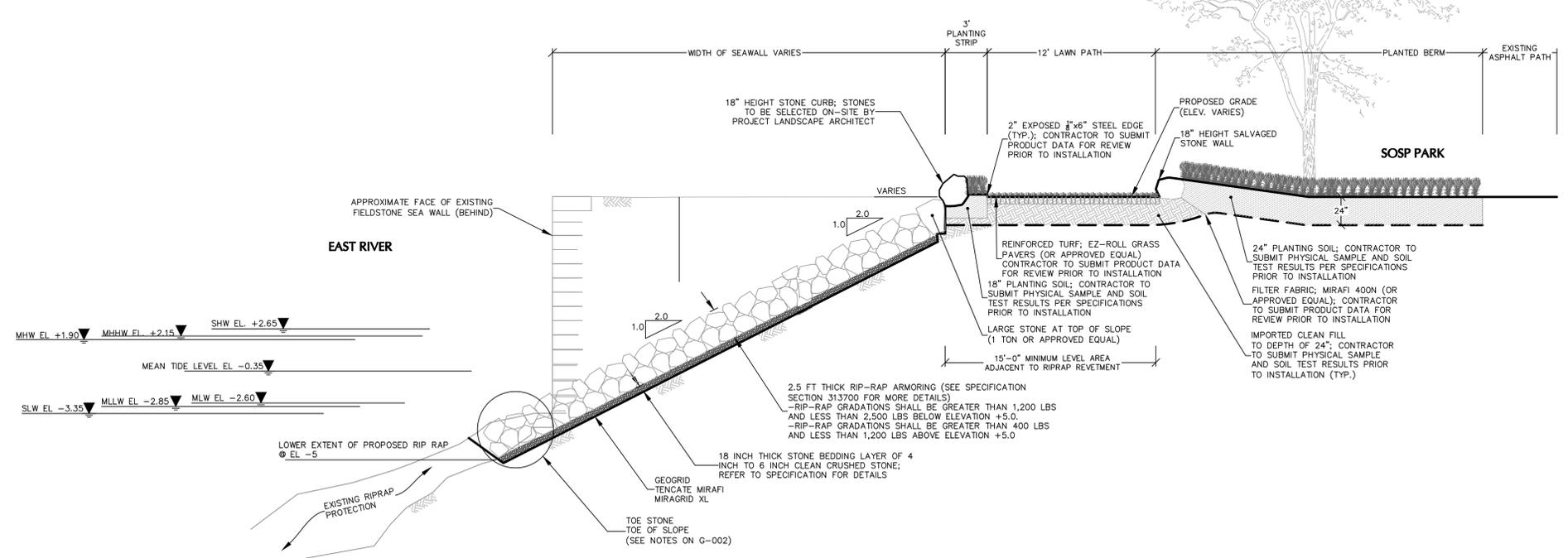
Drawing Title  
**SHORELINE PROTECTION PLAN**

Project No.	100332702	Drawing No.	C-100.00
Date	11/26/2018	Drawn By	EJW/P
Checked By	JF/CO		

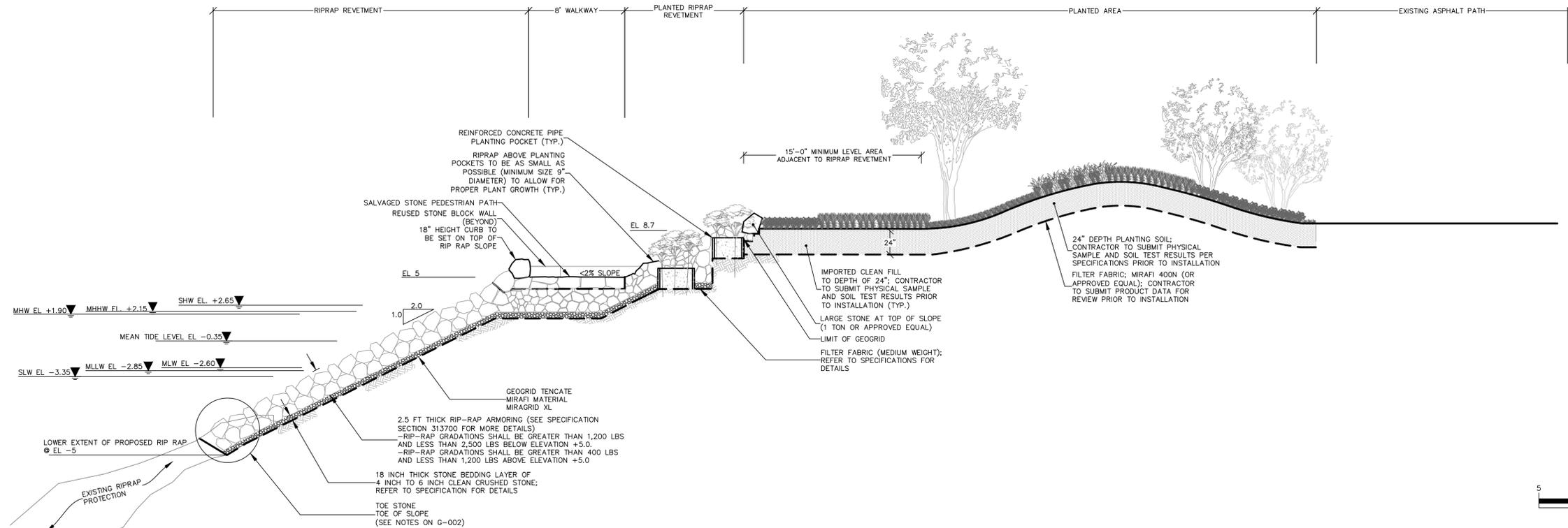
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PROJECT NO. 100332702



**1** TYPICAL RIP RAP REVETMENT SECTION AT WESTERN SHORELINE TYP.  
SCALE: 1"=5'



**2** TYPICAL RIP RAP REVETMENT SECTION AT EASTERN SHORELINE TYP.  
SCALE: 1"=5'

TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.65±	+6.00±
M.H.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.W.	-2.60±	+0.75±
M.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

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SOURCE: TIDESANDCURRENTS.NOAA.ORG

Date	Description	No.
3/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

SIGNATURE \_\_\_\_\_ DATE SIGNED \_\_\_\_\_  
LEONARD D. SAVINO  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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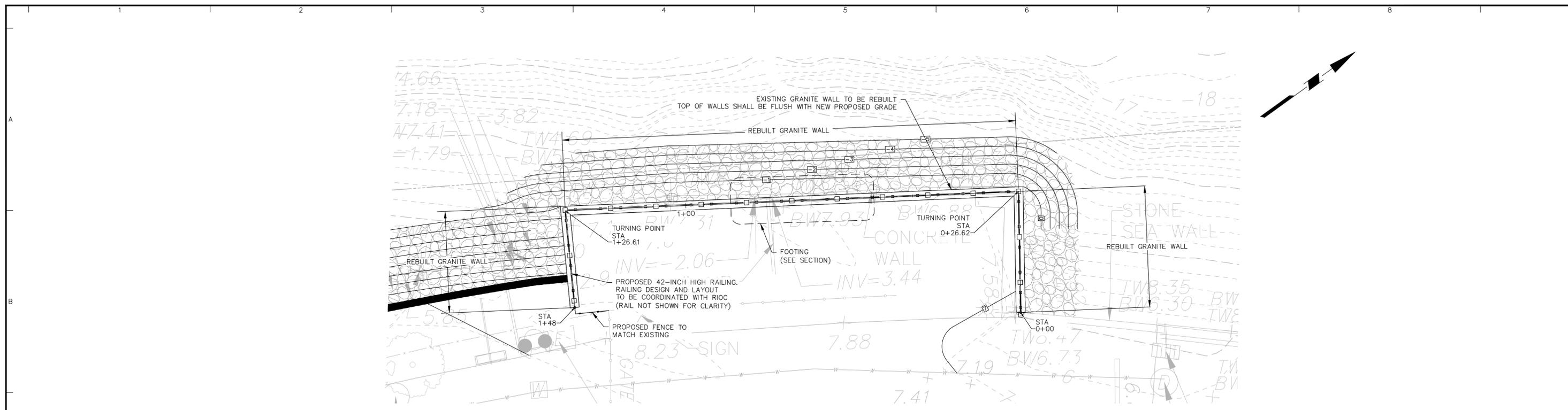
Project  
**SOUTHPOINT OPEN  
SPACE PARK  
RIP-RAP REVETMENT  
SBS # 20193722**  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**TYPICAL RIP RAP  
REVETMENT SECTIONS**

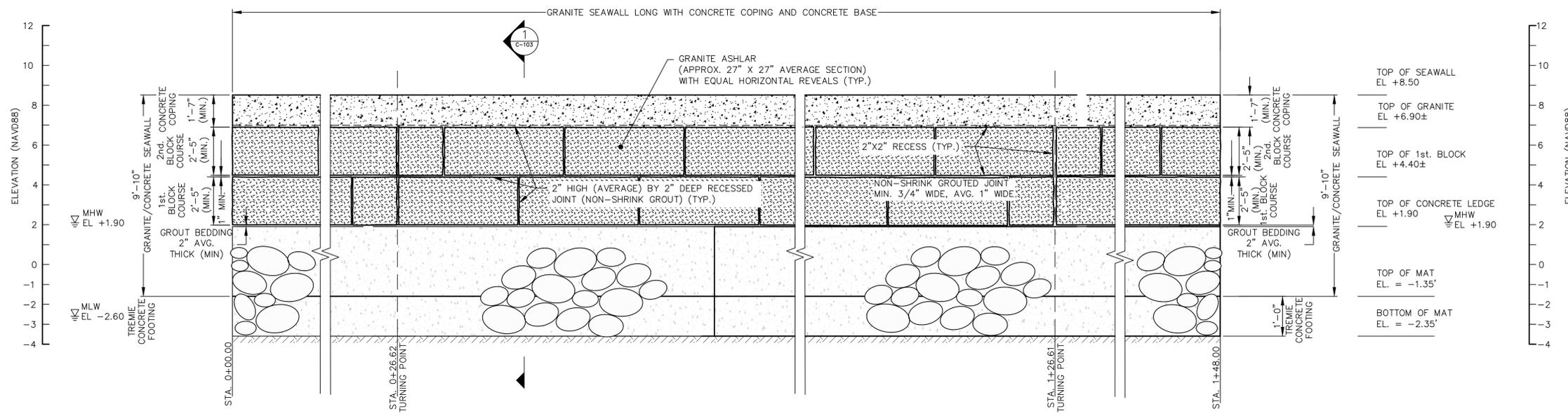
Project No.  
**100332702**  
Date  
**11/26/2018**  
Drawn By  
**EKO**  
Checked By  
**DS**  
Drawing No.  
**C-101.00**



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1 PART PLAN OF RETROFIT TO EXISTING WEST-SHORE CONCRETE AND GRANITE SEAWALL  
SCALE: 1"=10'



2 ELEVATION OF RETROFIT TO EXISTING WEST-SHORE CONCRETE AND GRANITE SEAWALL (3 SEGMENTS TOTAL)  
SCALE: 1"=3'

TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.65±	+6.00±
M.H.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.W.	-2.60±	+0.75±
M.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
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2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
SOURCE: TIDESANDCURRENTS.NOAA.ORG

Date	Description	No.
3/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

REVISIONS

SIGNATURE: LEONARD D. SAVINO  
DATE SIGNED: \_\_\_\_\_  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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Project  
**SOUTHPPOINT OPEN  
SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**PART PLAN AND ELEVATION  
OF EXISTING CONCRETE  
AND GRANITE SEAWALL**

Project No.  
**100332702**

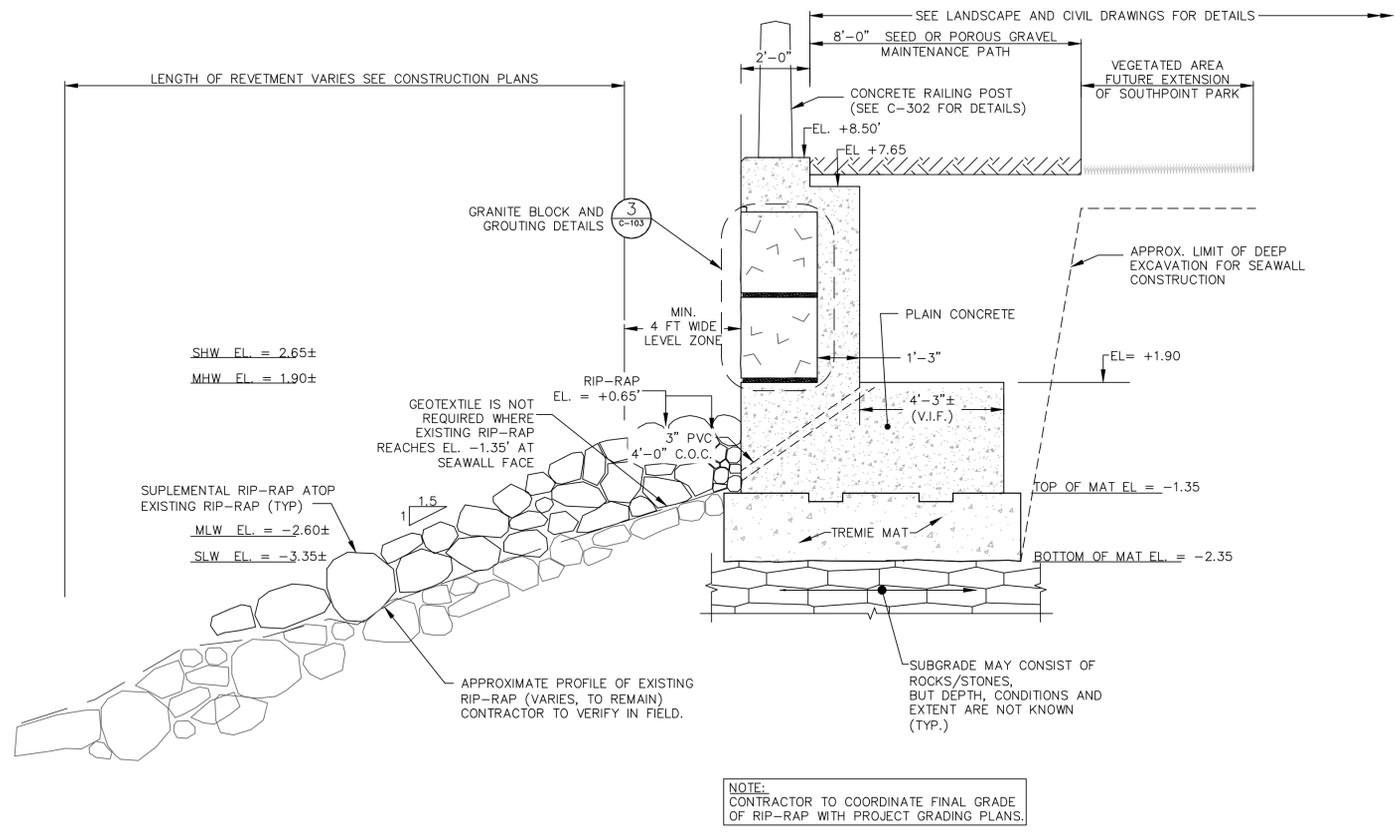
Date  
**11/26/2018**

Drawn By  
**ECF**

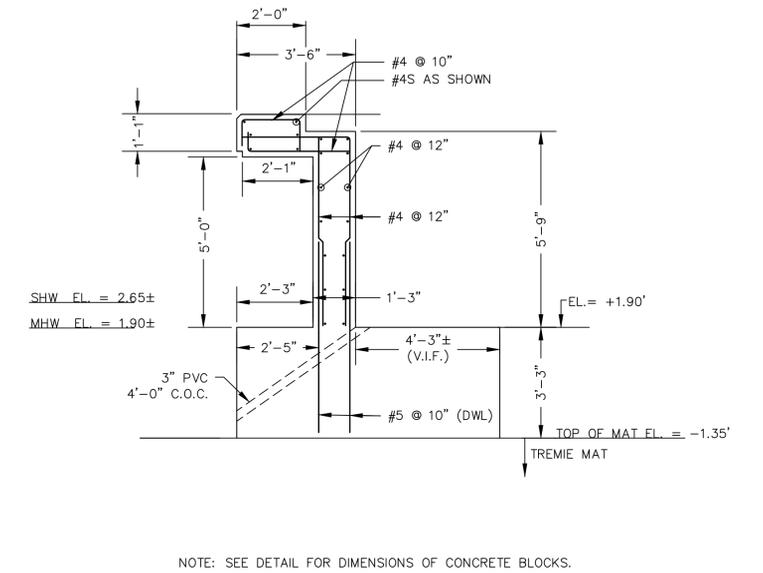
Checked By  
**DS**

Drawing No.  
**C-102.00**

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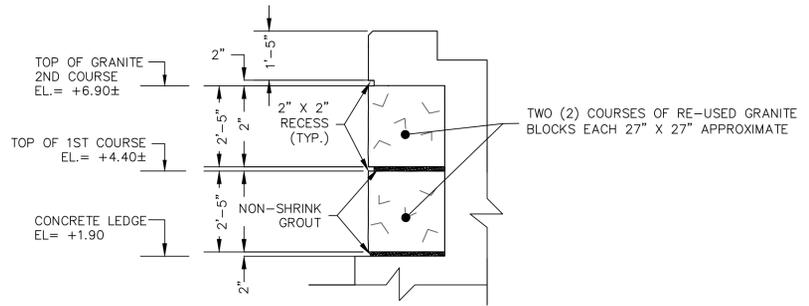


**1** TYPICAL SECTION OF WEST-SIDE CONCRETE BLOCK WALL  
SCALE: 1"=30'



**2** REINFORCEMENT DETAILS OF WEST-SIDE CONCRETE BLOCK WALL  
SCALE: 1"=30'

NOTE: REINFORCEMENTS AND CONCRETE BLOCKS NOT SHOWN FOR CLARITY. SEE DETAILS.



**3** TYPICAL SECTION OF GRANITE STONE GROUTING  
SCALE: 1"=30'

NOTE: REINFORCEMENTS AND ELEVATIONS NOT SHOWN FOR CLARITY

TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.85±	+6.00±
M.H.H.W.	+2.15±	+5.50±
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M.L.W.	-2.60±	+0.75±
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SOURCE: TIDESANDCURRENTS.NOAA.ORG

Date	Description	No.
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2/20/19	SUBMISSION TO SBS	1.

SIGNATURE: LEONARD D. SAVINO  
DATE SIGNED: PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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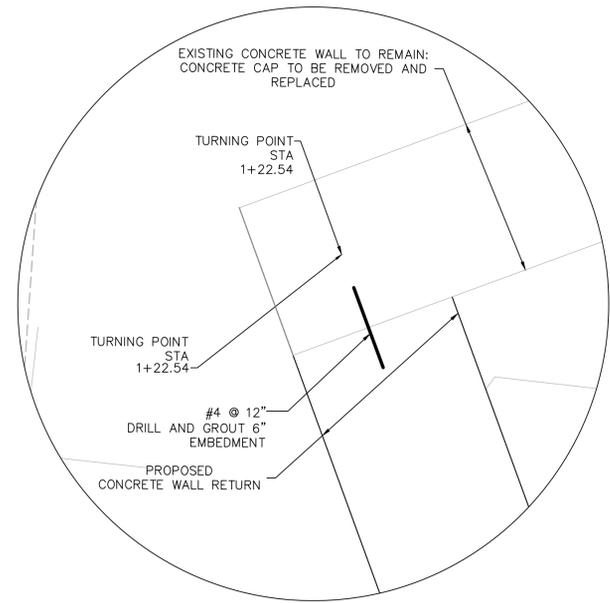
Project  
**SOUTHPOINT OPEN  
SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**SECTION AND DETAIL OF  
CONCRETE AND GRANITE  
SEAWALL**

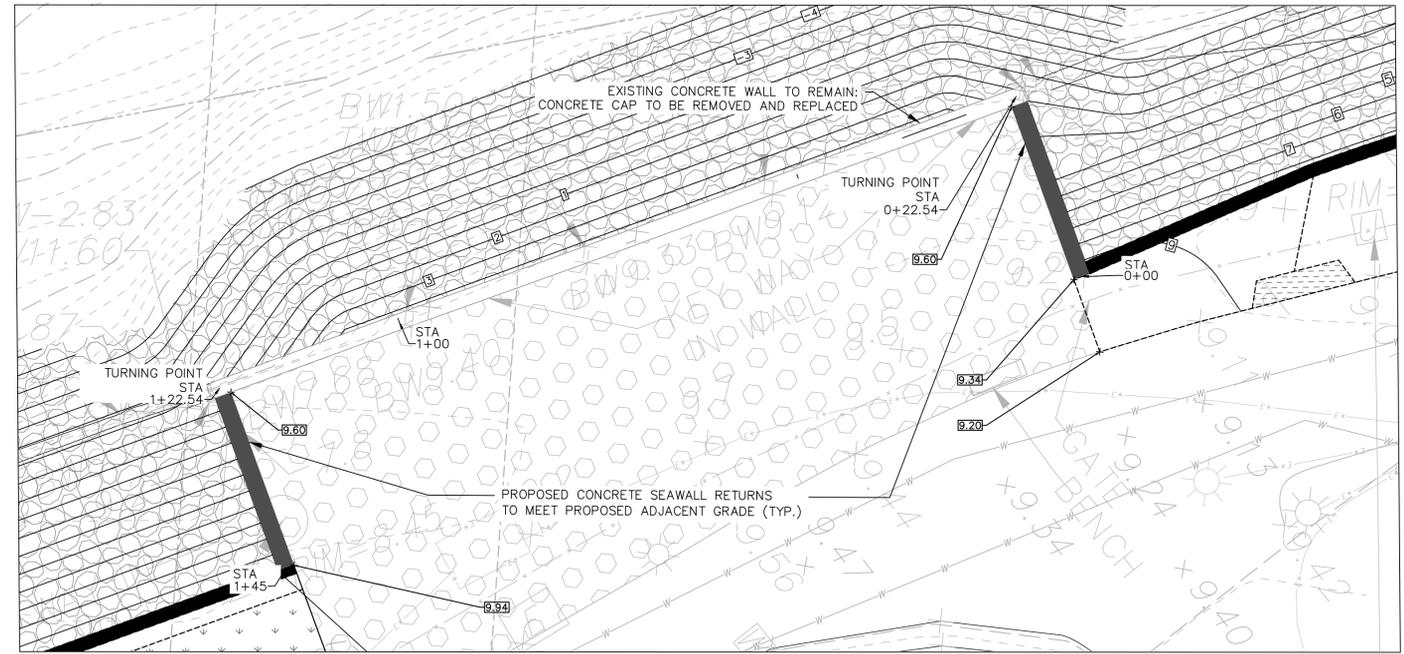
Project No.  
**100332702**  
Date  
**11/26/2018**  
Drawn By  
**EKO**  
Checked By  
**DS**  
Drawing No.  
**C-103.00**



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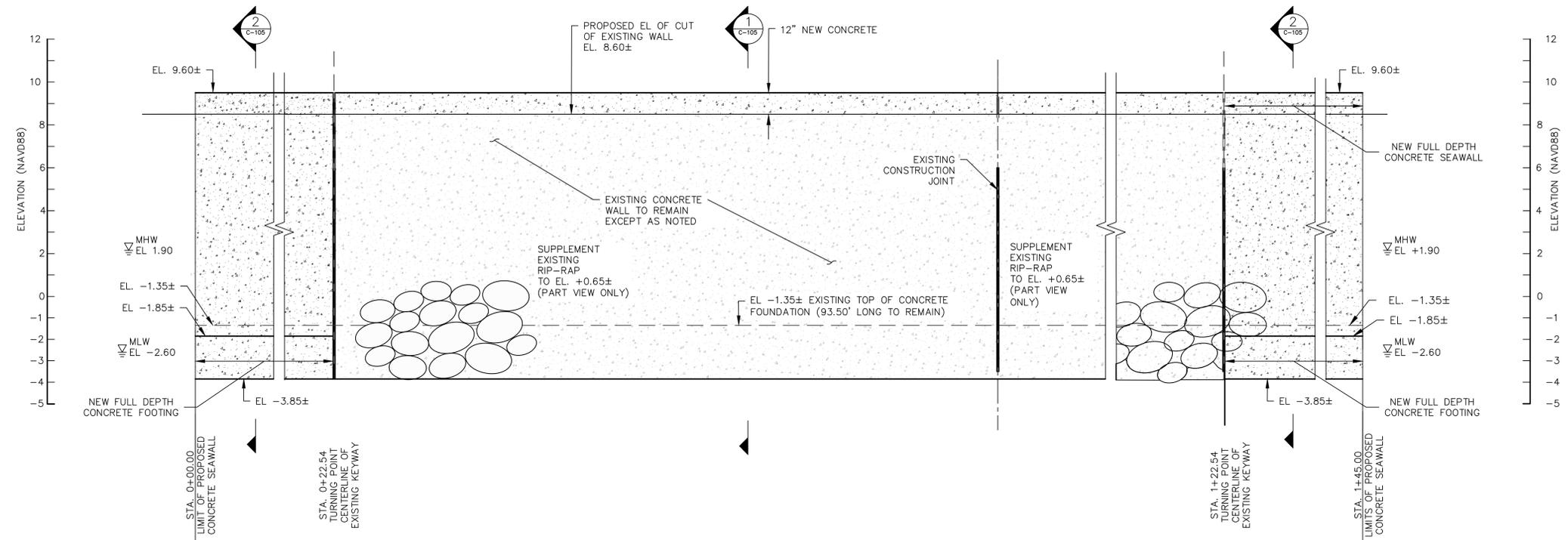


**A** PART DETAIL EMBEDMENT DETAIL  
SCALE: 1"=10'

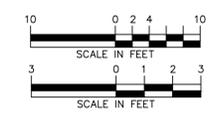


**1** PART PLAN OF SEAWALL  
SCALE: 1"=10'

NOTE: EMBEDMENT SHOWN IS TYPICAL FOR THE NORTH AND SOUTH SIDE OF THE WALL.



**2** ELEVATION OF RETROFIT TO EXISTING SEAWALL AND PROPOSED SEAWALLS  
SCALE: 1"=3'



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M.H.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
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REVISIONS

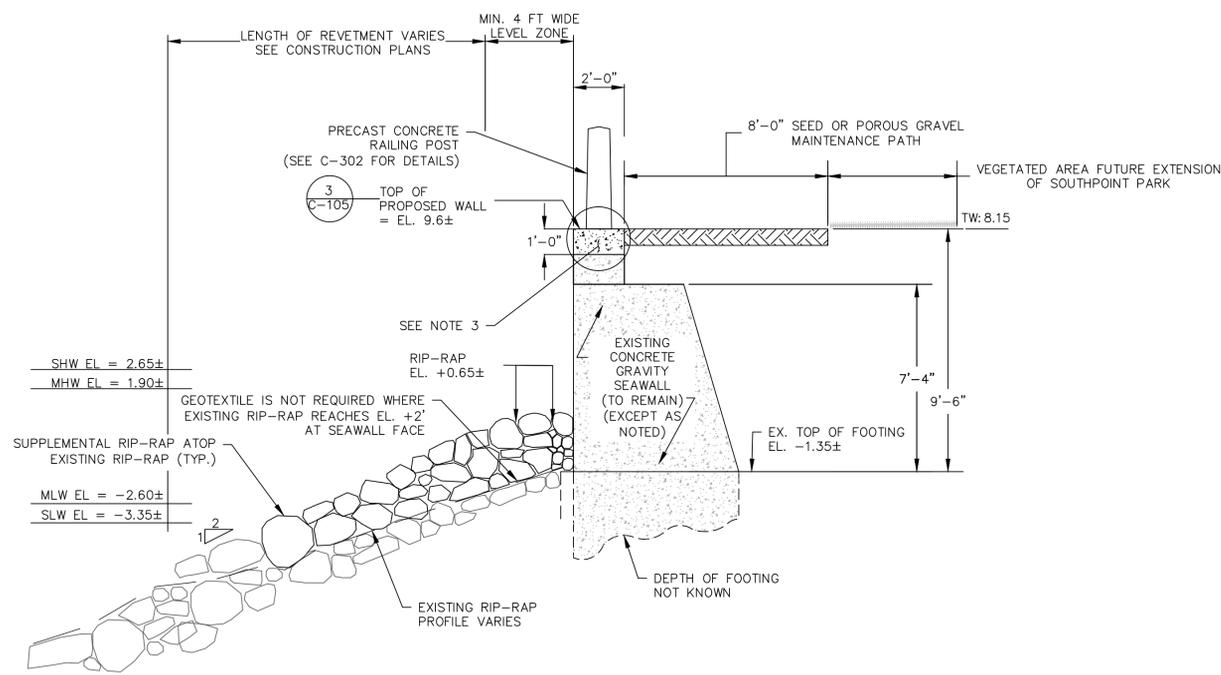
DATE: 3/19/2020  
SIGNATURE: LEONARD D. SAVINO  
DATE SIGNED: 3/19/2020  
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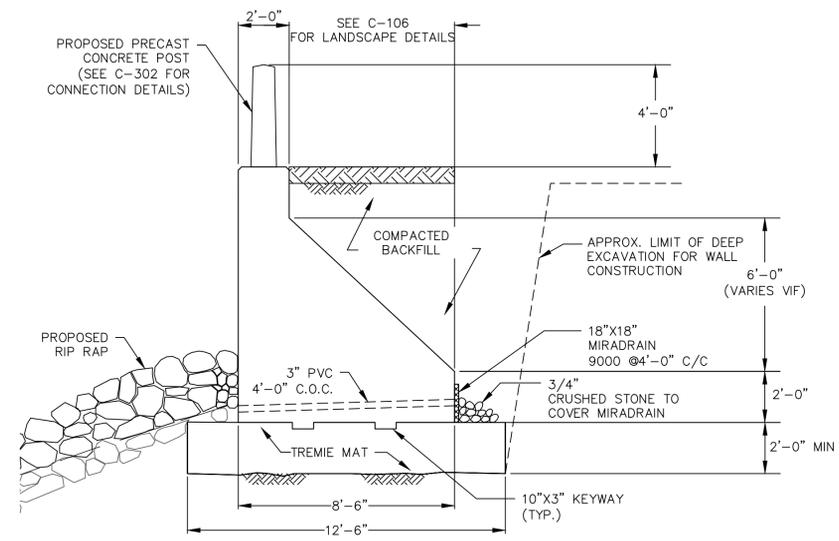
Project  
**SOUTHPPOINT OPEN  
SPACE PARK  
RIP-RAP REVETMENT  
SBS # 20193722**  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**PART PLAN AND  
ELEVATION OF  
CONCRETE SEAWALL**

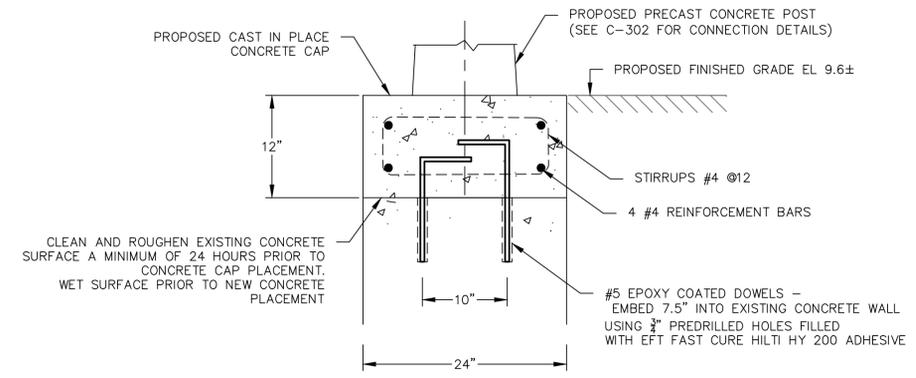
Project No. **100332702**  
Date **11/26/2018**  
Drawing No. **C-104.00**  
Drawn By **ECF**  
Checked By **DS**



**1** TYPICAL SECTION OF RETROFIT TO EXISTING WEST-SIDE CONCRETE SEAWALL  
SCALE: 1"=40'

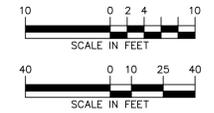


**2** TYPICAL SECTION OF PROPOSED CONCRETE SEAWALL RETURNS  
SCALE: 1"=40'



**3** TYPICAL DETAIL OF DOWEL CONNECTION BETWEEN PROPOSED CONCRETE CAP AND EXISTING CONCRETE SEAWALL  
SCALE: 1"=10'

- NOTES:**
- SEE DRAWING #PS-1 FOR RIP-RAP GRADATION AND PLACEMENT NOTES.
  - CONTRACTOR TO CAREFULLY COORDINATE FINAL GRADE OF RIP-RAP WITH PROJECT GRADING PLANS.
  - CONCRETE WALL TO BE SAW CUT TO SOLID CONCRETE. ELEVATION TO BE VERIFIED IN FIELD BY INSPECTOR. APPROXIMATE EXISTING TOP OF WALL EL 9.6. NEW CONCRETE CAP TO BE INSTALLED AS SHOWN IN DETAIL 3/C-105.



TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.85±	+6.00±
M.H.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.W.	-2.60±	+0.75±
M.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
1. ACTUAL TIDAL LEVELS VARY FROM PREDICTED VALUES DUE TO INFLUENCE OF ATMOSPHERIC PRESSURE, WIND, AND CHANNELIZATION OF EAST RIVER.  
2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
SOURCE: TIDESANDCURRENTS.NOAA.ORG

Date	Description	No.
3/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.

REVISIONS

DATE SIGNED  
LEONARD D. SAVINO  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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Project  
**SOUTHPPOINT OPEN  
SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND  
NEW YORK

Drawing Title  
**SECTION AND DETAIL OF  
EXISTING AND PROPOSED  
CONCRETE SEAWALL**

Project No.  
**100332702**

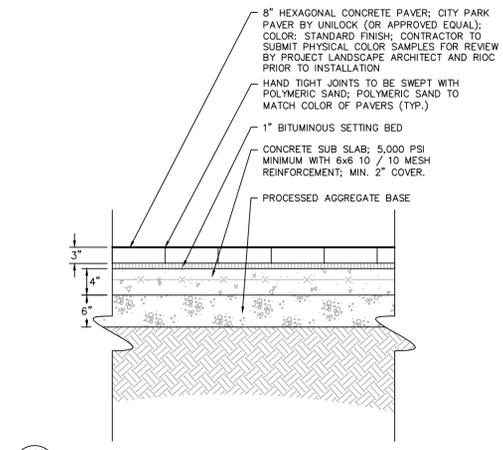
Date  
**11/26/2018**

Drawn By  
**EKO**

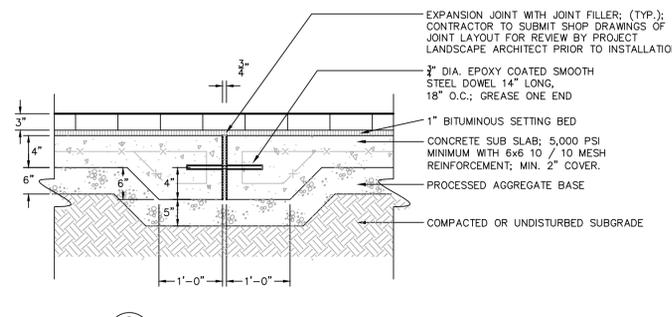
Checked By  
**DS**

Drawing No.  
**C-105.00**

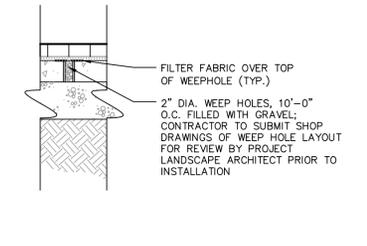
WARNING:  
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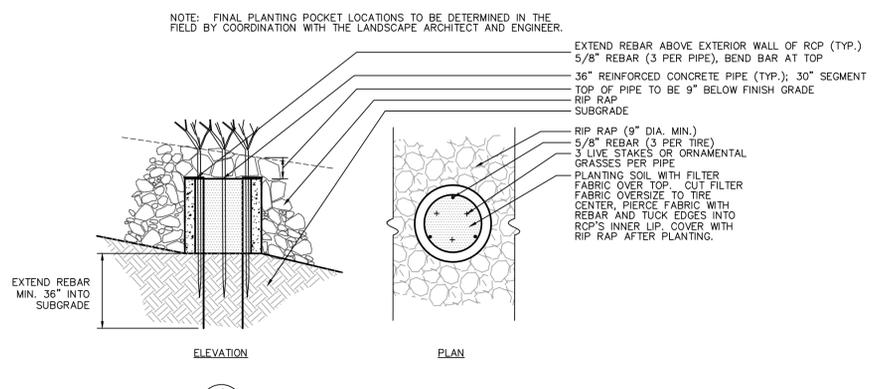
**1 CONCRETE PAVERS ON CONCRETE SUBSLAB**  
SCALE: 3/8"=1'-0"



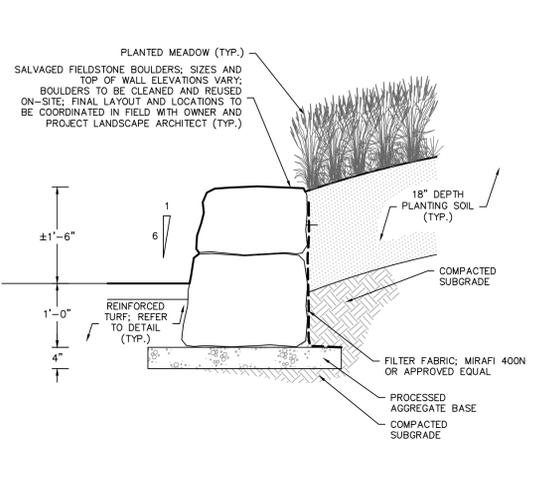
**2 CONCRETE SUBSLAB EXPANSION JOINT**  
SCALE: 3/8"=1'-0"



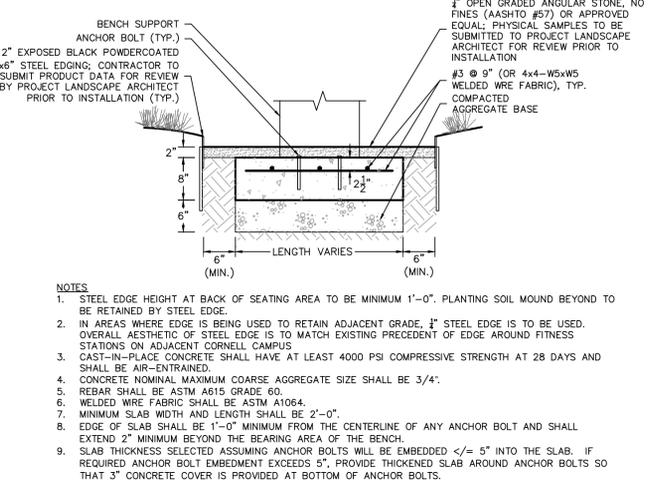
**3 CONCRETE SUBSLAB WEEPHOLE**  
SCALE: 3/8"=1'-0"



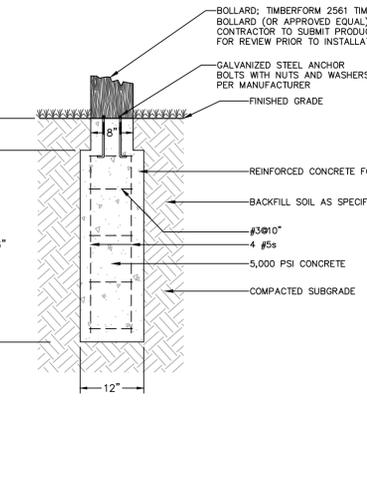
**4 REINFORCED CONCRETE PIPE PLANTING POCKETS**  
SCALE: N.T.S.



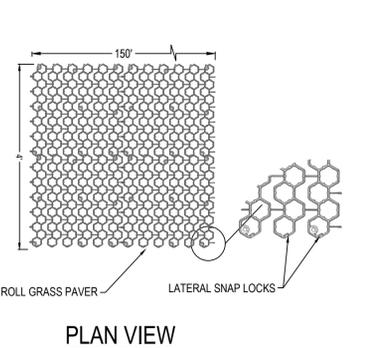
**5 SALVAGED STONE WALL**  
SCALE: 3/8"=1'-0"



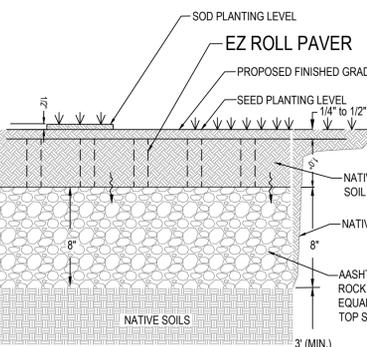
**6 BENCH FOOTING**  
SCALE: 3/8"=1'-0"



**7 DECORATIVE BOLLARD AND FOOTING**  
SCALE: 3/8"=1'-0"



**PLAN VIEW**



**SECTION**

**ENGINEERING PROPERTIES:**

- COMPRESSIVE STRENGTH OF EZ ROLL: EMPTY PAVERS: ULTIMATE LOAD = 53,683 LBS / 373 PSI  
FILLED PAVERS: ULTIMATE LOAD = 400,000 LBS
- TOP SOIL FILL:  
NDS RECOMMENDS NATIVE TOP SOIL FOR BACKFILL INSIDE THE PAVERS.
- EXTEND TOP SOIL INSIDE PAVER AN ADDITIONAL 1/4 TO 1/2 INCH ABOVE PAVER SURFACE AND MATCH SURROUNDING GRADE. PROPOSED FINISHED GRADE SLOPE PER PROJECT GRADING PLAN. PROTECT PAVER AREA UNTIL GRASS IS SUFFICIENTLY ESTABLISHED TO HANDLE TRAFFIC. PROVIDE 1" (MIN.) CLEARANCE BETWEEN ANY CONCRETE EDGE AND PAVER.
- GRASS PAVERS ARE TO BE USED FOR AREAS OF PEDESTRIAN USE, EROSION CONTROL, AND OCCASIONAL VEHICULAR TRAFFIC USE (E.G. OVERFLOW PARKING AND EMERGENCY/FIRE LANES).

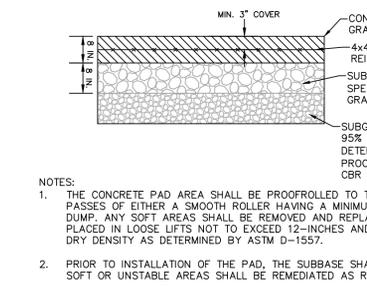
**AASHTO #57 BASE ROCK:**

- GRADATION OF AASHTO #57 COARSE BASE ROCK: 100% PASSING 1 1/2" SCREEN, 95-100% PASSING 1", 25-60% PASSING 3/4", AND 0-10% PASSING #20 SCREEN.  
OPTIONAL: ADD PULVERIZED NATIVE TOP SOIL EQUAL TO 15% OF TOTAL VOLUME. BLEND TO OBTAIN HOMOGENEOUS MIXTURE PRIOR TO PLACEMENT.
- THICKNESS OF AGGREGATE LAYER IS AS FOLLOWS: NO BASE REQUIRED FOR EROSION CONTROL AND PEDESTRIAN-ONLY LOADS (COMPACTION OF NATIVE SOIL RECOMMENDED FOR SLOPES UP TO 3%); 4 INCHES FOR LIGHT LOADS (GOLF CARTS); 6 INCHES FOR MEDIUM LOADS (CARS AND PICKUP TRUCKS); 8 INCHES FOR HEAVY LOADS (FIRE TRUCKS).
- COMPACT WITH ONE TO THREE PASSES OF 5-TON STEEL WHEEL ROLLER. SINCE IT IS DIFFICULT TO MEASURE DENSITY OF COARSE AGGREGATE, APPROACH OF REQUIRING A FIXED DENSITY IS NOT APPLICABLE.

**SUBGRADE NATIVE SOIL:**

- COMPACT SUBGRADE NATIVE SOILS TO 95% STANDARD PROCTOR DENSITY PER ASTM D696 FOR SOILS WITH CALIFORNIA BEARING RATIO >20% R VALUE >30, AASHTO A-1, A-2, AND A-3 SOILS.
- NDS RECOMMENDS THAT ENGINEER-OF-RECORD CONSIDER HIGHER LEVEL OF COMPACTION FOR CBR 5 TO 20%, R-VALUE 10 TO 30, AASHTO A-4 SOILS FOR HEAVY LOADS WHERE INFILTRATION INTO NATIVE SOILS IS NOT A REQUIREMENT.
- NDS RECOMMENDS THAT ENGINEER-OF-RECORD CONSULT WITH PROJECT GEOTECHNICAL ENGINEER FOR POTENTIAL SOIL MODIFICATION (E.G. LIME TREATMENT) AND COMPACTION LEVEL FOR CBR <5% AND R-VALUE <10, AASHTO A-5, A-6, AND A-7 SOILS.

**8 REINFORCED TURF**  
SCALE: N.T.S.

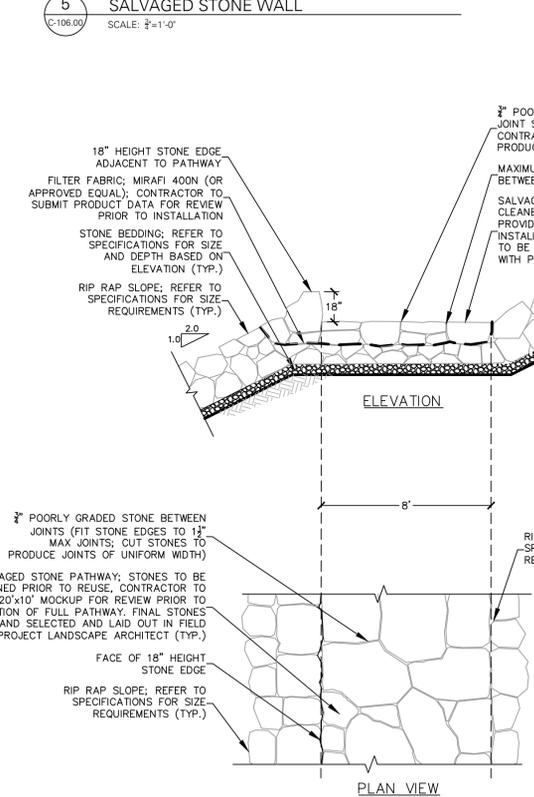


**NOTES:**

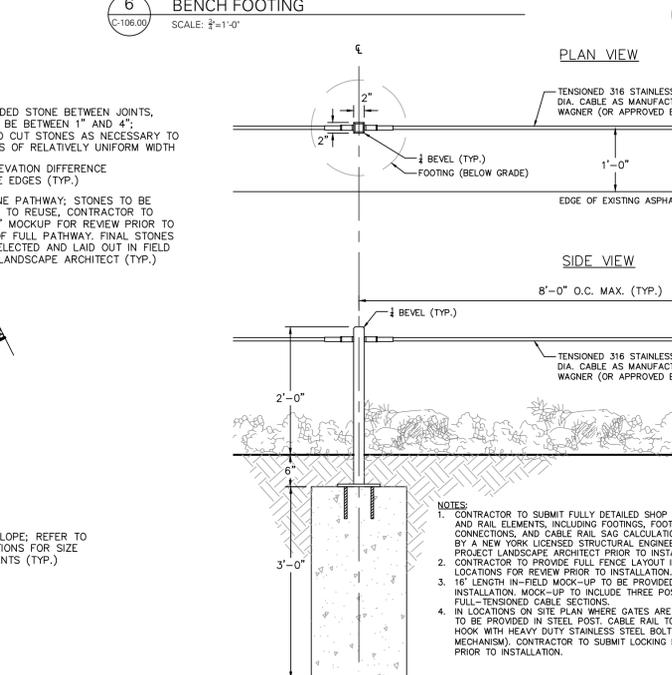
- THE CONCRETE PAD AREA SHALL BE PROOFROLLED TO THE GEOTECHNICAL ENGINEER'S SATISFACTION, WITH AT LEAST 4 PASSES OF EITHER A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 5-TONS OR A FULLY LOADED TANDEM DUMP. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE-DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.
- PRIOR TO INSTALLATION OF THE PAD, THE SUBBASE SHALL BE PROOF ROLLED TO THE GEOTECHNICAL ENGINEER'S SATISFACTION. SOFT OR UNSTABLE AREAS SHALL BE REMEDIATED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.

**SUBBASE GRADATION TABLE**

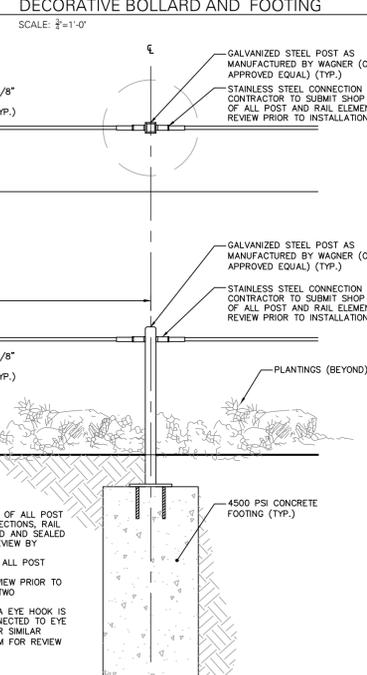
SIZE	PERCENTAGE PASSING BY WEIGHT
100	100
3/4"	85-90
7/8"	30-65
No. 40	5-40
No. 200	0-10



**9 SALVAGED STONE PEDESTRIAN PATH**  
SCALE: 3/8"=1'-0"



**10 STEEL CABLE RAIL**  
SCALE: N.T.S.



**11 GUARD BOOTH CONCRETE PAD**  
SCALE: N.T.S.

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REVISIONS	DATE	DESCRIPTION

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Project  
**SOUTHPOINT OPEN  
SPACE PARK  
RIP-RAP REVETMENT  
SBS # 20193722**  
ROOSEVELT ISLAND NEW YORK

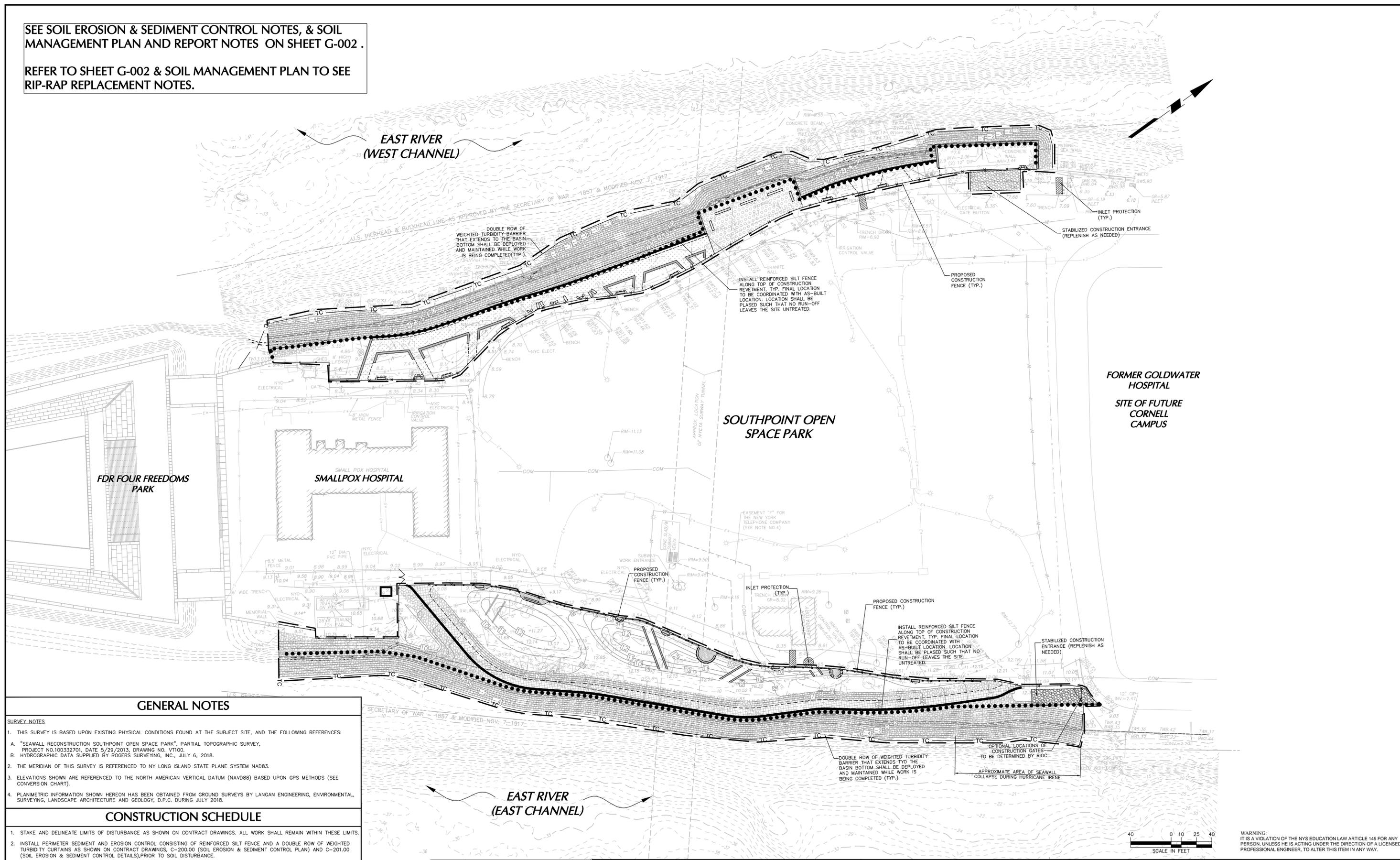
Drawing Title  
**SITE DETAILS**

Project No.	Drawing No.
100332702	C-106.00
Date	02/01/2019
Drawn By	JA
Checked By	MH

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SEE SOIL EROSION & SEDIMENT CONTROL NOTES, & SOIL MANAGEMENT PLAN AND REPORT NOTES ON SHEET G-002.

REFER TO SHEET G-002 & SOIL MANAGEMENT PLAN TO SEE RIP-RAP REPLACEMENT NOTES.



**GENERAL NOTES**

- SURVEY NOTES**
1. THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:
    - A. "SEAWALL RECONSTRUCTION SOUTHPOINT OPEN SPACE PARK", PARTIAL TOPOGRAPHIC SURVEY, PROJECT NO.100332701, DATE 5/29/2013, DRAWING NO. V1100.
    - B. HYDROGRAPHIC DATA SUPPLIED BY ROGERS SURVEYING, INC., JULY 6, 2018.
  2. THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NY LONG ISLAND STATE PLANE SYSTEM NAD83.
  3. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88) BASED UPON GPS METHODS (SEE CONVERSION CHART).
  4. PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING JULY 2018.

**CONSTRUCTION SCHEDULE**

1. STAKE AND DELINEATE LIMITS OF DISTURBANCE AS SHOWN ON CONTRACT DRAWINGS. ALL WORK SHALL REMAIN WITHIN THESE LIMITS.
2. INSTALL PERIMETER SEDIMENT AND EROSION CONTROL CONSISTING OF REINFORCED SILT FENCE AND A DOUBLE ROW OF WEIGHTED TURBIDITY CURTAINS AS SHOWN ON CONTRACT DRAWINGS, C-200.00 (SOIL EROSION & SEDIMENT CONTROL PLAN) AND C-201.00 (SOIL EROSION & SEDIMENT CONTROL DETAILS), PRIOR TO SOIL DISTURBANCE.
3. DEMOLISH EXISTING FAILING STONE AND MASONRY SEAWALLS AND WALLS AS SHOWN ON CONTRACT DRAWINGS, DM-100.00 (DEMOLITION PLAN).
4. CONSTRUCT NEW RIP RAP REVETMENT. PROVIDE AND MAINTAIN INTERIM STABILIZATION, AS APPROPRIATE, OR WHERE INDICATED ON THE CONSTRUCTION DOCUMENTS. INTERIM STABILIZATION, INCLUDING TEMPORARY SEEDING, SHALL BE PLACED WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE WITHIN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED.
5. FINAL-GRADE COMPLETED AREAS AND INSTALL PERMANENT LANDSCAPE STABILIZATION AS SHOWN ON CONTRACT DRAWING, L-100.00 (LANDSCAPE PLAN), L-101.00 (IRRIGATED AREA PLAN), L-110.00 (LANDSCAPE NOTES & DETAILS) AND L-111.00 (IRRIGATED DETAILS).
6. REMOVE EROSION AND SEDIMENTATION CONTROL MEASURES, FOLLOWING PERMANENT STABILIZATION.

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Date	Description	No.
REVISIONS		

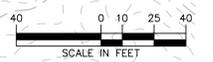
SIGNATURE \_\_\_\_\_ DATE SIGNED \_\_\_\_\_  
 LEONARD D. SAVINO  
 PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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Project  
**SOUTHPOINT OPEN SPACE PARK**  
**RIP-RAP REVETMENT**  
**SBS # 20193722**  
 ROOSEVELT ISLAND NEW YORK

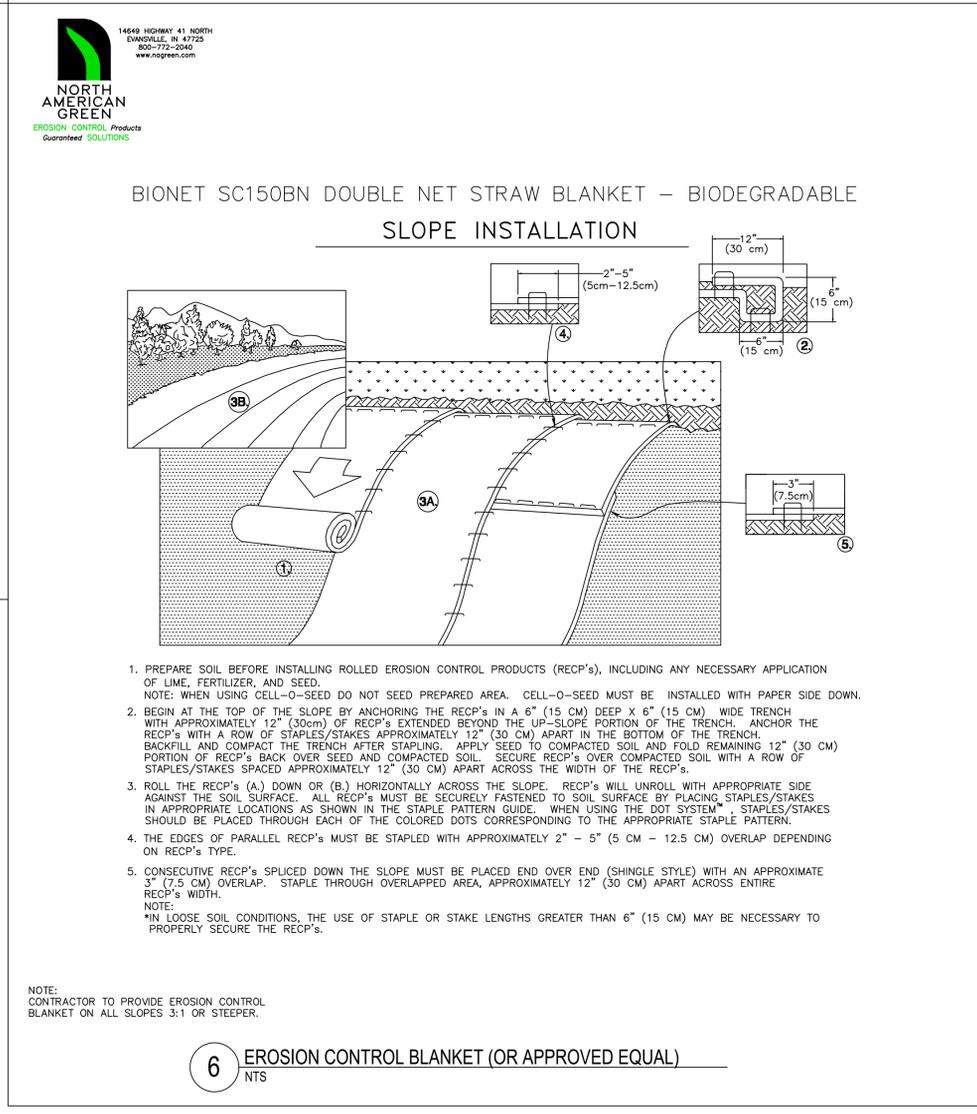
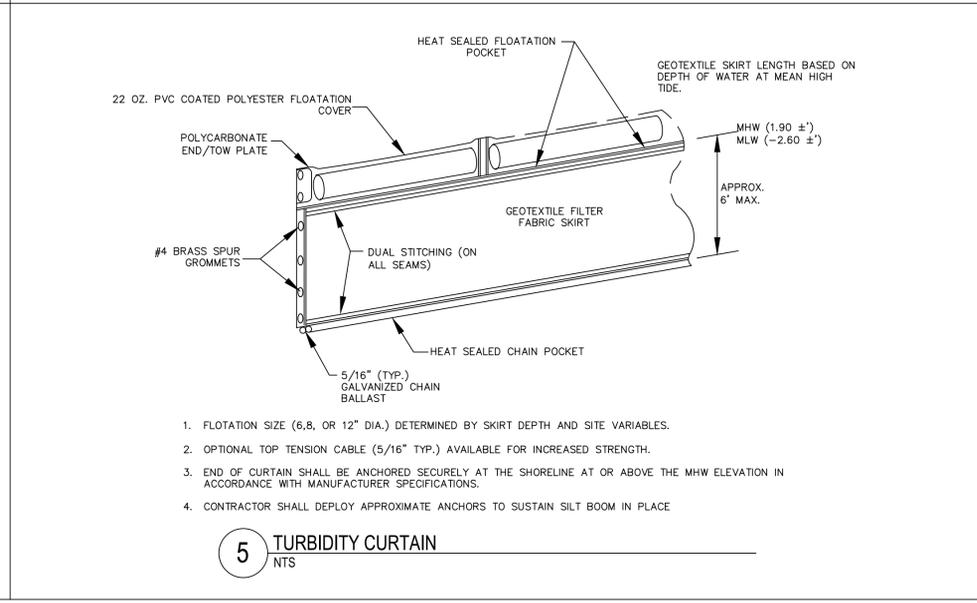
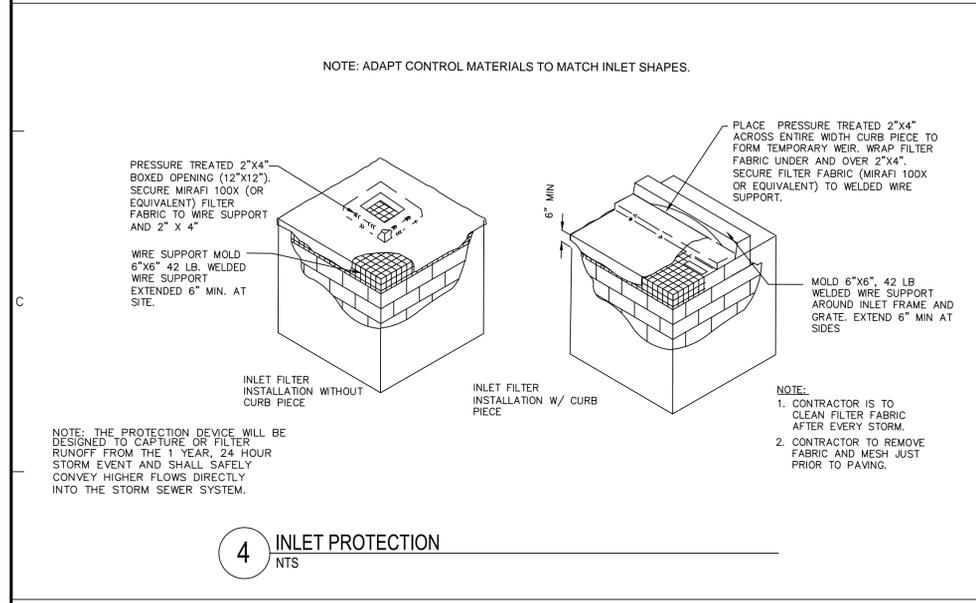
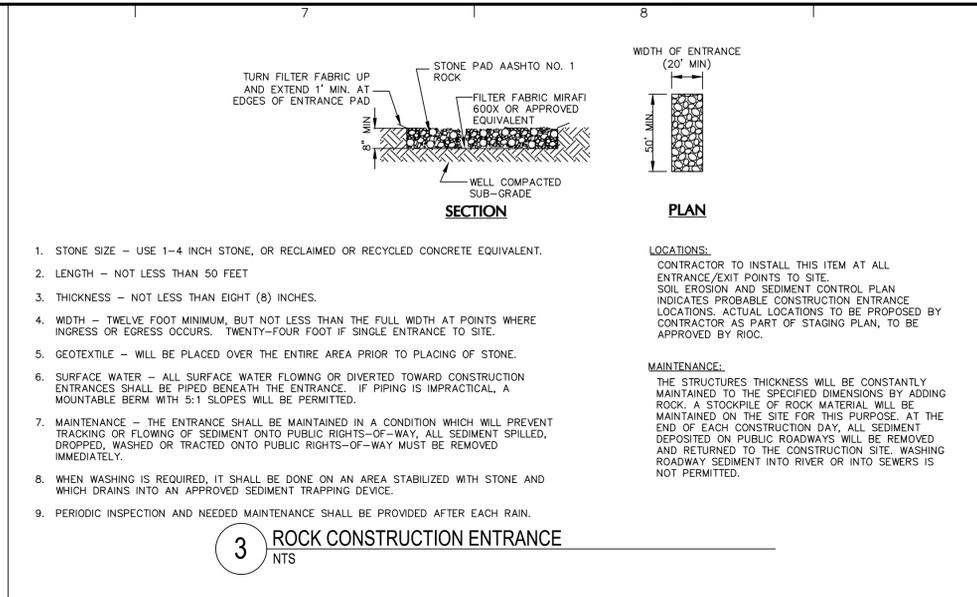
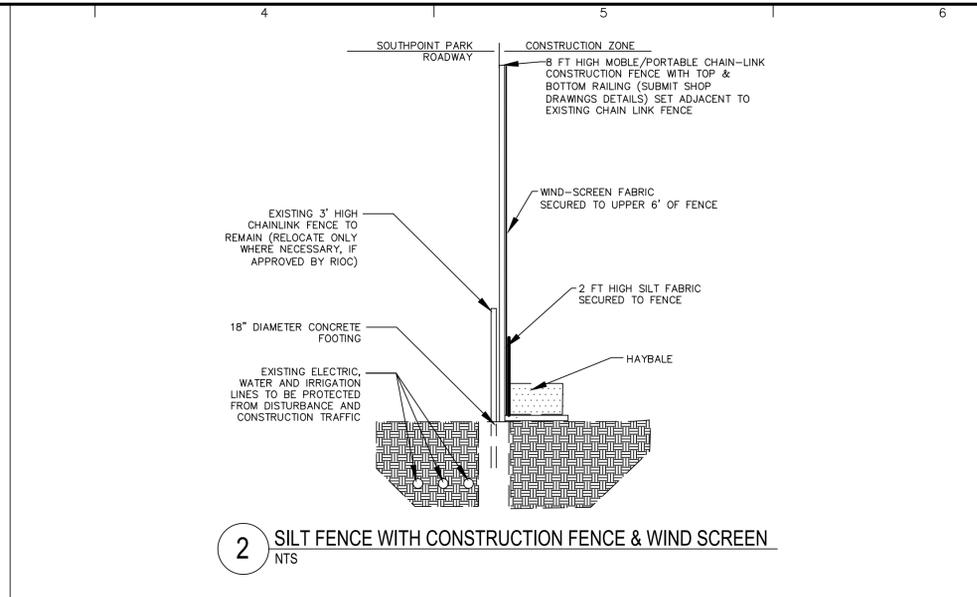
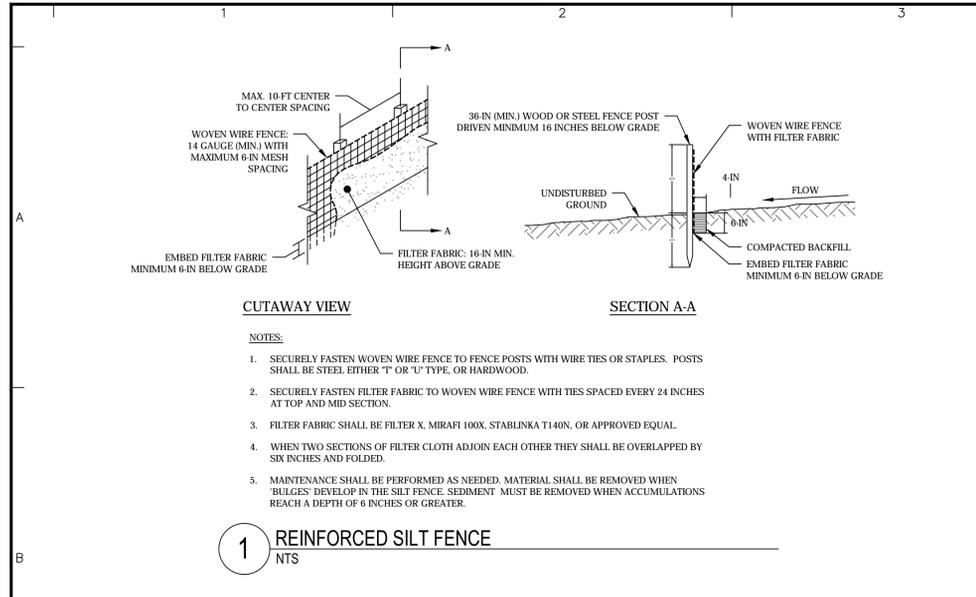
Drawing Title  
**SOIL EROSION & SEDIMENT CONTROL PLAN**

Project No. <b>100332702</b>	Drawing No. <b>C-200.00</b>
Date <b>11/26/2018</b>	
Drawn By <b>EA/WVP</b>	
Checked By <b>JF/CO</b>	



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PROJECT NO. 100332702 LANGAN



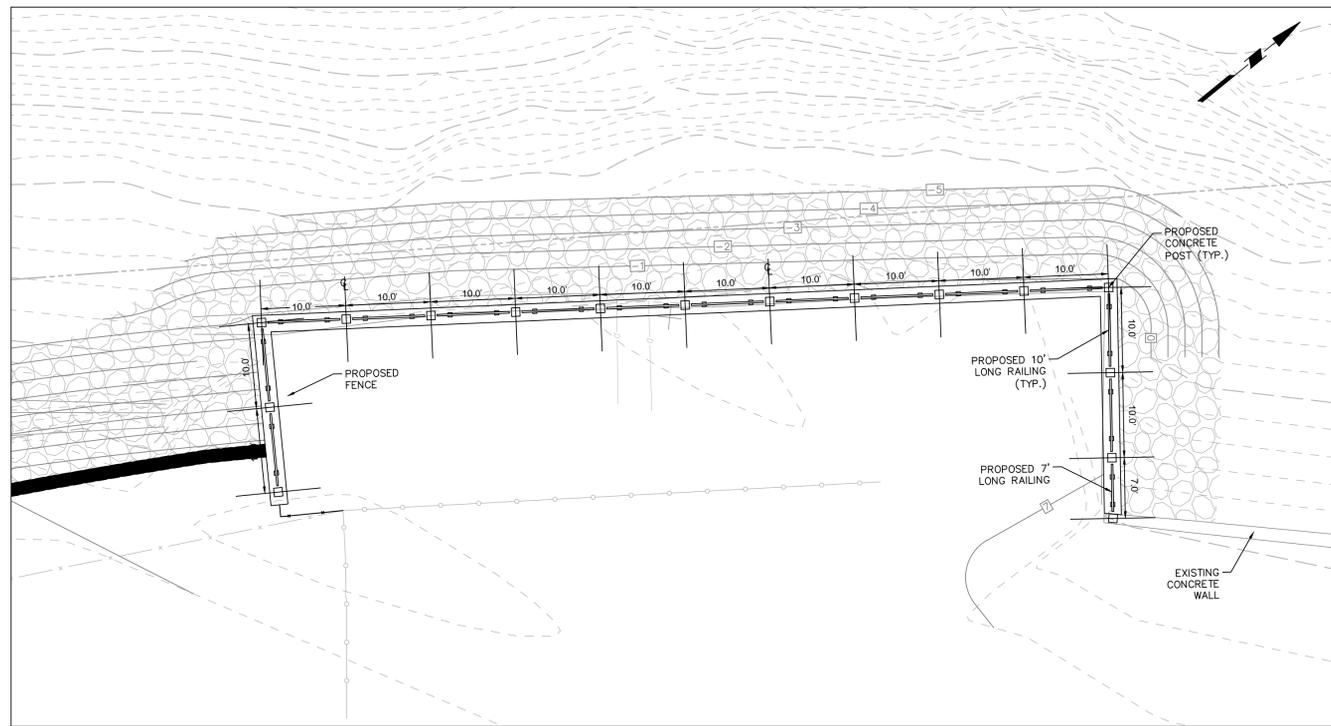
Date	Description	No.
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Date	Description	No.

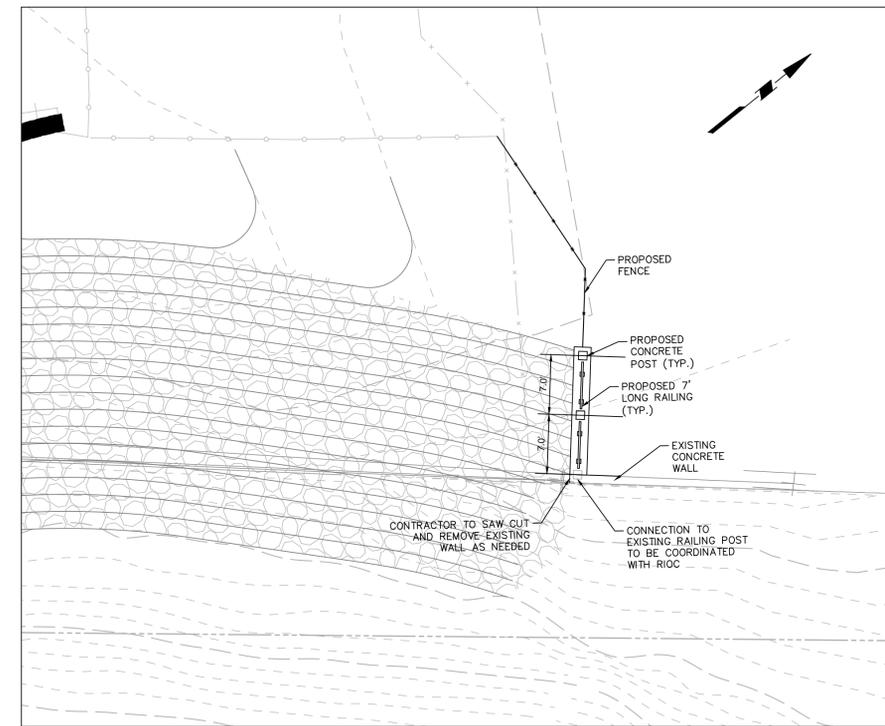
SIGNATURE	DATE SIGNED
LEONARD D. SAVINO	
PROFESSIONAL ENGINEER NY Lic. No. 090013-1	

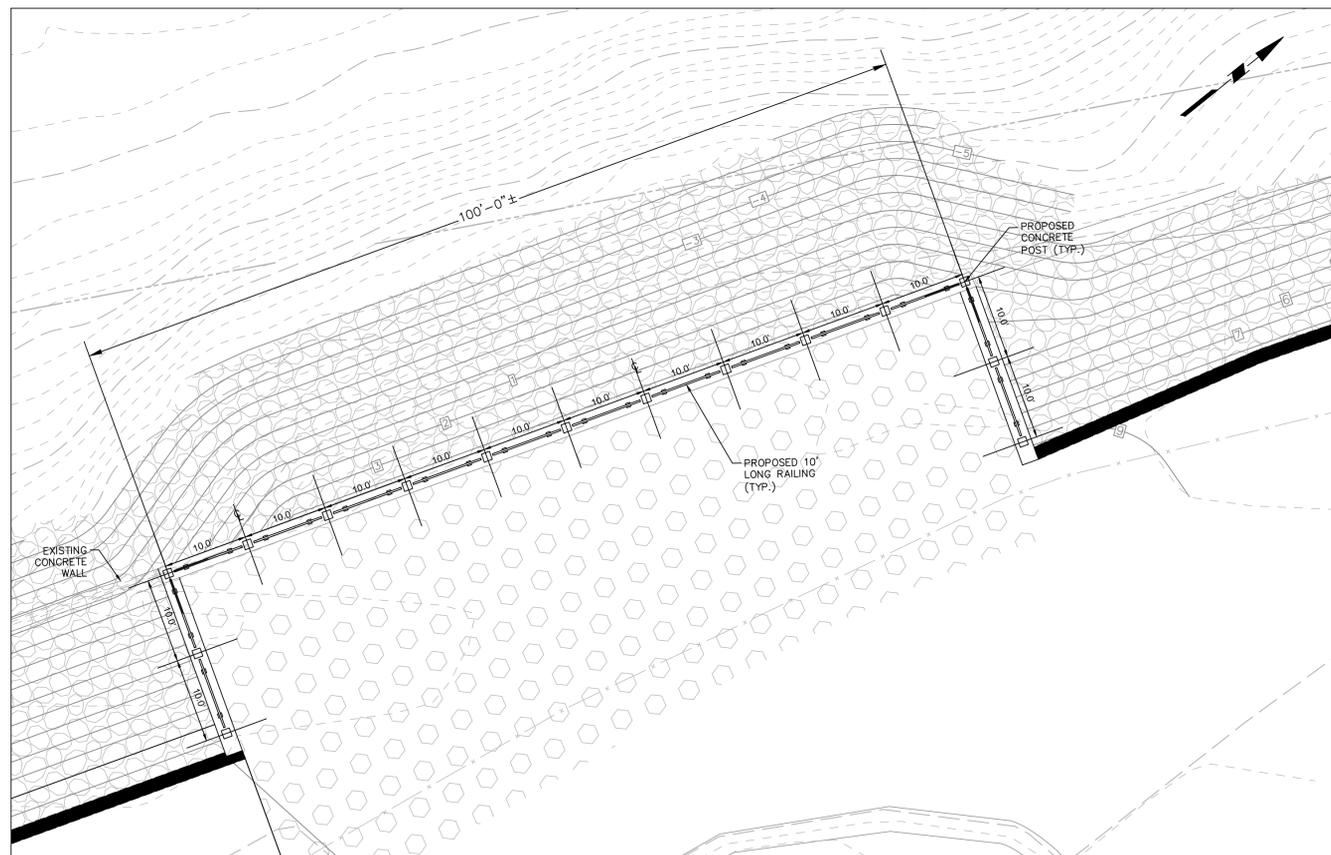
Project	Drawing Title	Project No.	Drawing No.
<b>LANGAN</b> Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com	<b>SOUTHPOINT OPEN SPACE PARK RIP-RAP REVETMENT SBS # 20193722</b>	100332702	C-201.00
ROOSEVELT ISLAND	NEW YORK	Date 11/26/2018	Drawn By EJW/P
		Checked By JF/CO	



WEST SHORE SEAWALL RAILING LAYOUT  
SCALE:1"=10'



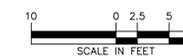
EAST SHORE WALL RETURN RAILING LAYOUT  
SCALE:1"=10'



WEST SHORE WALL RETURNS RAILING LAYOUT  
SCALE:1"=10'

**GENERAL NOTES:**

1. CONTRACTOR SHALL COORDINATE AND SUBMIT FOR APPROVAL THE QUALIFICATIONS AND EXPERIENCE OF THE RAILINGS FABRICATOR, THERMAL SPRAY METAL APPLICATOR AND PAINTER; SHOP DRAWINGS REFERENCING AS-BUILT CONDITIONS; MATERIAL CERTIFICATIONS; INSTALLATION METHODS AND PROTECTIVE MEASURES PRIOR TO START OF EACH PHASE OF THE WORK.
2. NEW RAILINGS SHALL BE CARBON STEEL, PREPARED WITH A NEAR-WHITE BLAST FINISH AND ENTIRE RAILING ASSEMBLY TO BE METALIZED WITH THERMALLY SPRAYED ALLOY WIRE COMPOSED OF 85% ZINC AND 15% ALUMINUM BY WEIGHT (NOTE THAT HOT-DIPPED GALVANIZING SHALL NOT BE AN ACCEPTABLE SUBSTITUTE).
3. METALIZED RAILING PANELS SHALL BE SEALED WITH A COMPATIBLE SEALER COAT AND FINISHED WITH A TOP-COAT USING ELECTROSTATICALLY APPLIED (POWDER-COATING) METHODS. PROVIDE CERTIFICATIONS FROM THE PAINTS MANUFACTURER RECOMMENDING EACH PAINT COAT FOR THE PROJECT CONDITIONS.
4. TOP-COAT SHALL MATCH THE COLOR, WHICH IS "YUMA GREEN" BY TIGER-DRYLAC, OF THE SEAWALL RAILINGS EXISTING TO THE NORTH OF THE PARK.
5. CONFIRM SEAWALL AS-BUILT CONDITIONS, DIMENSIONS, LOCATIONS OF ALL SEAWALL CONSTRUCTION JOINTS, AND PROVIDE SHOP DRAWINGS ACCORDINGLY. OBTAIN SHOP DRAWING APPROVAL BEFORE FABRICATING ANY RAILING ASSEMBLY.
6. THE CONTRACTOR, INCLUDING ITS RAILINGS FABRICATION AND COATINGS SHOP OPERATORS, SHALL BEAR ALL COSTS OF INVESTIGATION, RE-DESIGN AND RE-CONSTRUCTION IN THE EVENT OF DEFECTIVE WORK OR IN THE EVENT OF FAILURE TO CLOSELY FOLLOW THE CONTRACT DOCUMENTS IN PERFORMANCE OF THE WORK.



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REVISIONS		

SIGNATURE \_\_\_\_\_ DATE SIGNED \_\_\_\_\_  
LEONARD D. SAVINO  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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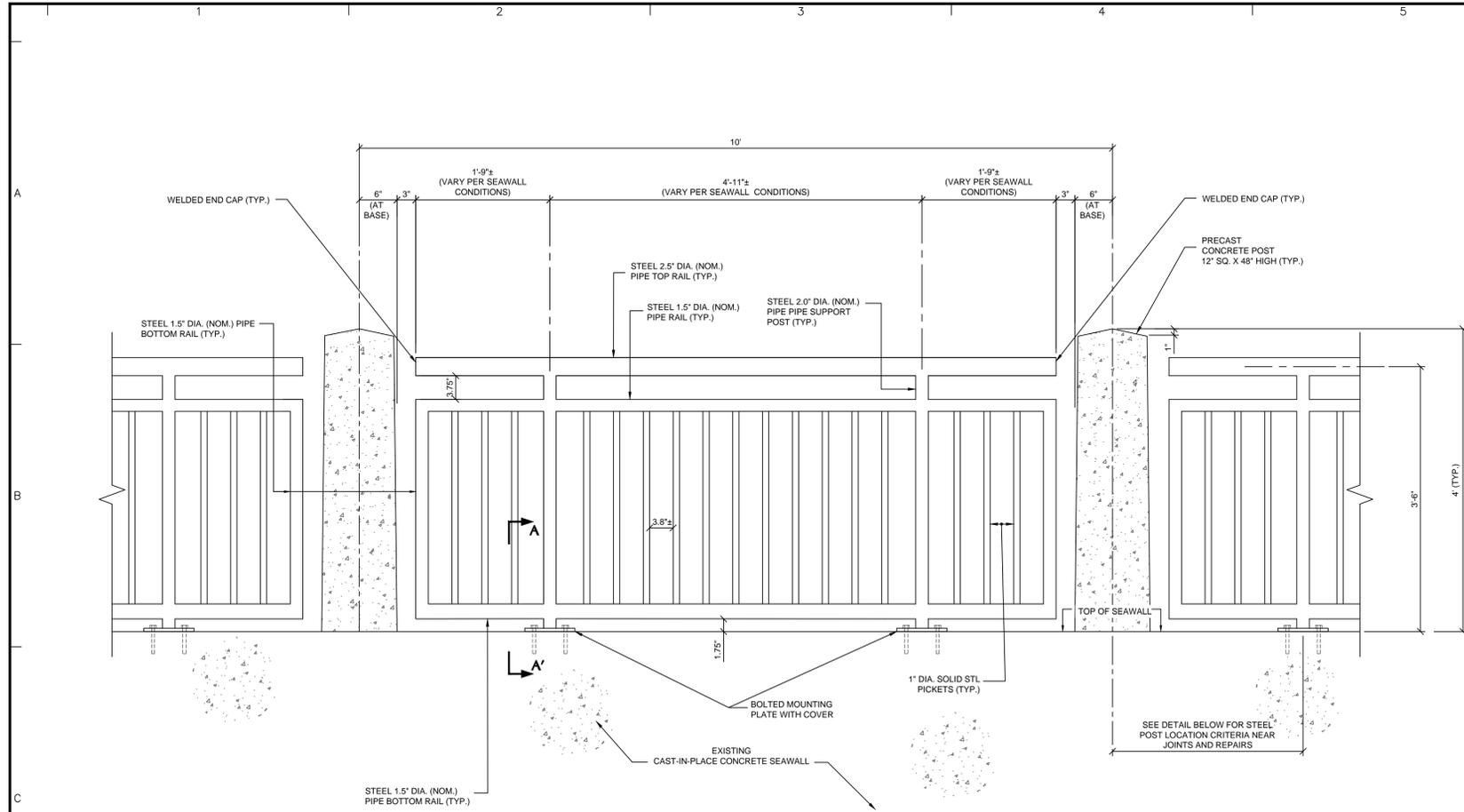
Project  
**SOUTHPPOINT OPEN  
SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**RAILING LAYOUT  
PLAN**

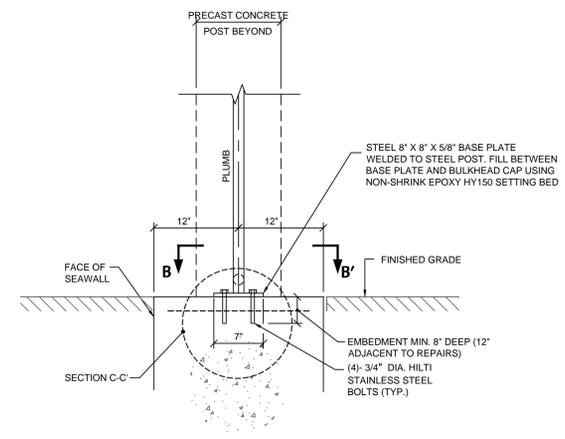
Project No. <b>100332702</b>	Drawing No. <b>C-300.00</b>
Date <b>11/26/2018</b>	
Drawn By <b>EAW/P</b>	
Checked By <b>JF/CO</b>	

**INSTALLATION NOTES:**

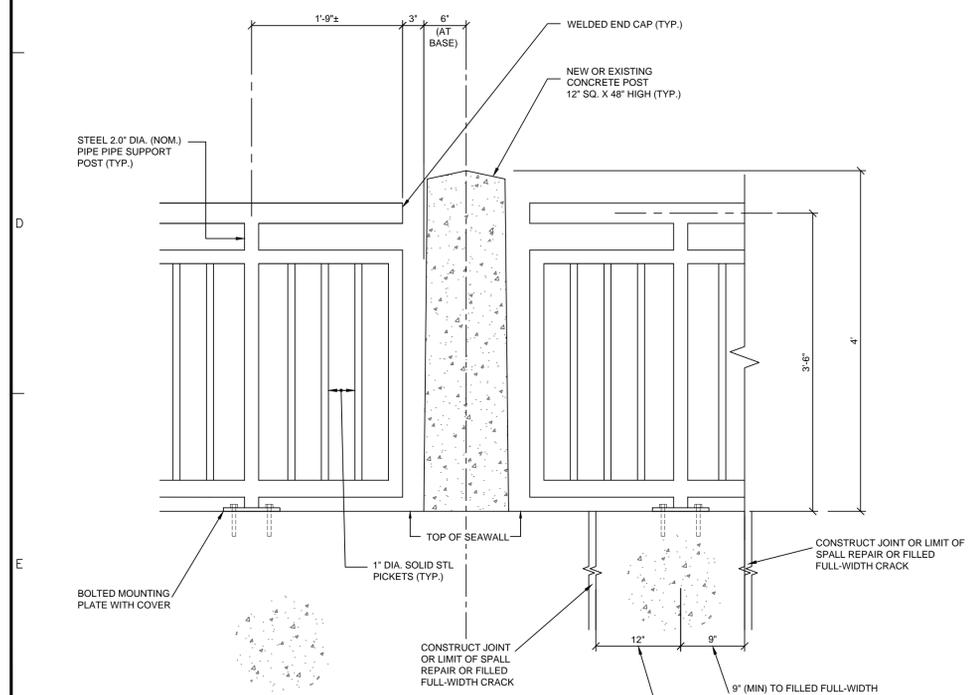
- A. THE CONTRACTOR SHALL BEAR ALL COSTS OF ANCHOR BOLTS, NUTS, WASHERS, GROUT PADS, FORMWORK AND FORMWORK PADS, REINFORCEMENT, LUBRICANTS, PRIMER, PAINT, AND OTHER HARDWARE AND FINISHES NECESSARY TO PERFORM A PROPER INSTALLATION OF THE PROJECT ELEMENTS SHOWN IN THE DRAWINGS.
- B. ALL HARDWARE SHALL BE MARINE GRADE STAINLESS STEEL TYPE AISI-316, COMPLIANT TO ASTM A193 (BOLTS), ASTM A194 (NUTS), AND ASTM A380 (PASSIVATION). TYPE 304 STAINLESS STEEL SHALL NOT BE ACCEPTABLE. USE HILTI-TYPE THREADED ANCHOR-BOLTS AND APPROVED EPOXY ADHESIVE FROM A MANUFACTURER'S CERTIFIED COMBINATION SYSTEM.
- C. PRE-DRILL HOLES FOR POSTS AND BOLTS AS SHOWN ON THE DRAWINGS. ADVANCE HOLES WITH CARE TO AVOID CRACKING OF CONCRETE. STOP AND ADVISE ENGINEER SHOULD ANY CRACK APPEAR.
- D. SECURE AND ANCHOR RAILING ASSEMBLIES USING EPOXY NON-SHRINK GROUT IN THE PRE-DRILLED HOLES.
- E. SET ALL RAILING ASSEMBLIES PLUMB AND TRUE, DESIGN FOR AND MAINTAIN REQUIRED MAXIMUM HORIZONTAL DISTANCES PER CODE, LESS THAN 4 INCHES, TO ADJACENT PRECAST CONCRETE POSTS.
- F. RAILINGS BASEPLATE SUPPORT BOLTS SHALL BE TIGHTENED BY THE TURN-OF-THE-NUT METHOD IN ACCORDANCE WITH AISI "SPECIFICATION FOR STRUCTURAL JOINTS" LATEST EDITION.



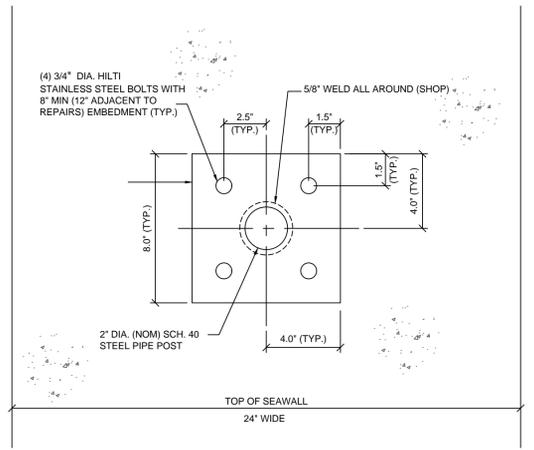
**1 ELEVATION OF 10' WIDE SEAWALL RAILING**  
SCALE: 1" = 1'-0"



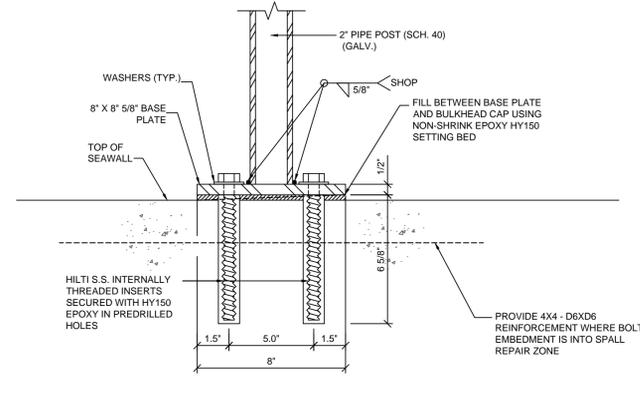
**2 SECTION A-A' DETAIL OF FLUSH-MOUNTED RAILING ATTACHMENT**  
SCALE: 1" = 1'-0"



**3 RAILING DESIGN CRITERIA FOR STEEL POSTS SET ADJACENT TO JOINT OR REPAIRS**  
SCALE: 1" = 1'-0"



**4 SECTION B-B' DETAIL OF COVER PLATE AT RAILING POST ATTACHMENT**  
SCALE: 3" = 1'-0"



**5 SECTION C-C' DETAIL OF MOUNTING PLATE FOR RAILING SUPPORT**  
SCALE: 3" = 1'-0"

- NOTES**
- THIS DETAIL SHOWS DIMENSIONAL DESIGN CRITERIA FOR STEEL POSTS SET ADJACENT TO JOINTS OR REPAIRS
  - ADJUST LOCATION OF STEEL POSTS WITHIN RAILING TO MEET CRITERIA SHOWN WHILE RETAINING SYMMETRY OF SEGMENT.

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Date	Description	No.
3/19/20	ISSUED FOR BID	4.
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2/20/19	SUBMISSION TO SBS	1.

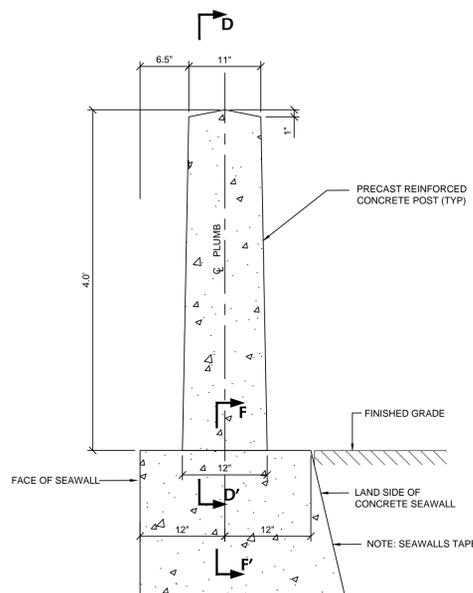
SIGNATURE \_\_\_\_\_ DATE SIGNED \_\_\_\_\_  
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PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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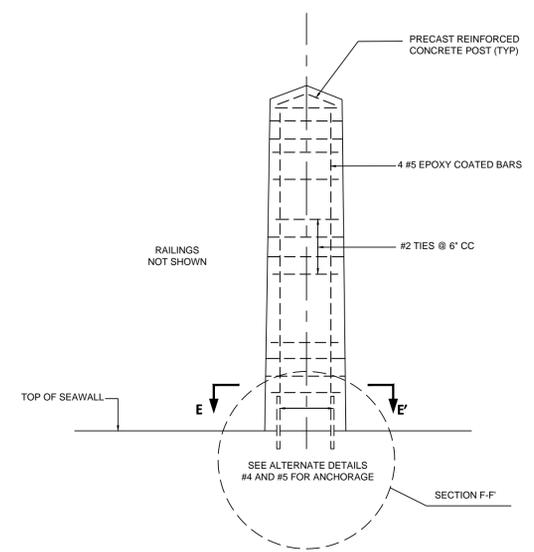
Project  
**SOUTHPOINT OPEN SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**RAILING DETAILS**

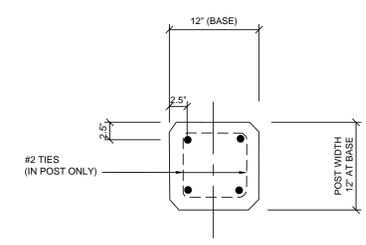
Project No. <b>100332702</b>	Drawing No. <b>C-301.00</b>
Date <b>11/26/2018</b>	
Drawn By <b>EJW/P</b>	
Checked By <b>JF/CO</b>	



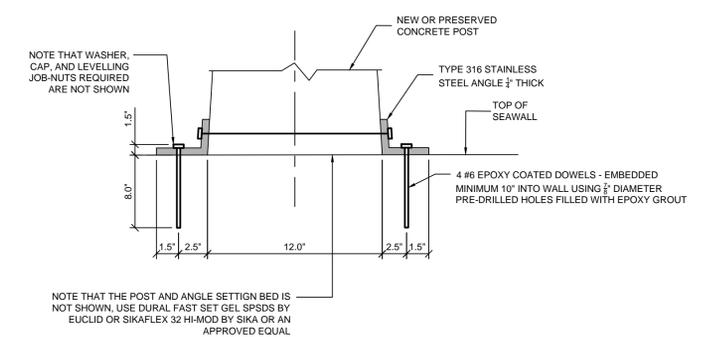
**1 NEW CONCRETE POST ELEVATION**  
SCALE: 1" = 1'-0"



**2 PRECAST CONCRETE POST SECTION D-D' SHOWING REINFORCEMENT**  
SCALE: 1" = 1'-0"



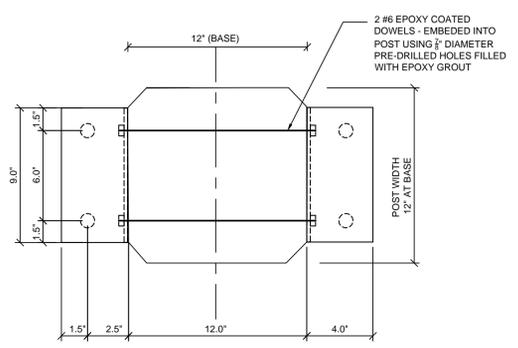
**3 SECTION E-E' DETAIL OF NEW POST REINFORCEMENT**  
SCALE: 1" = 1'-0"



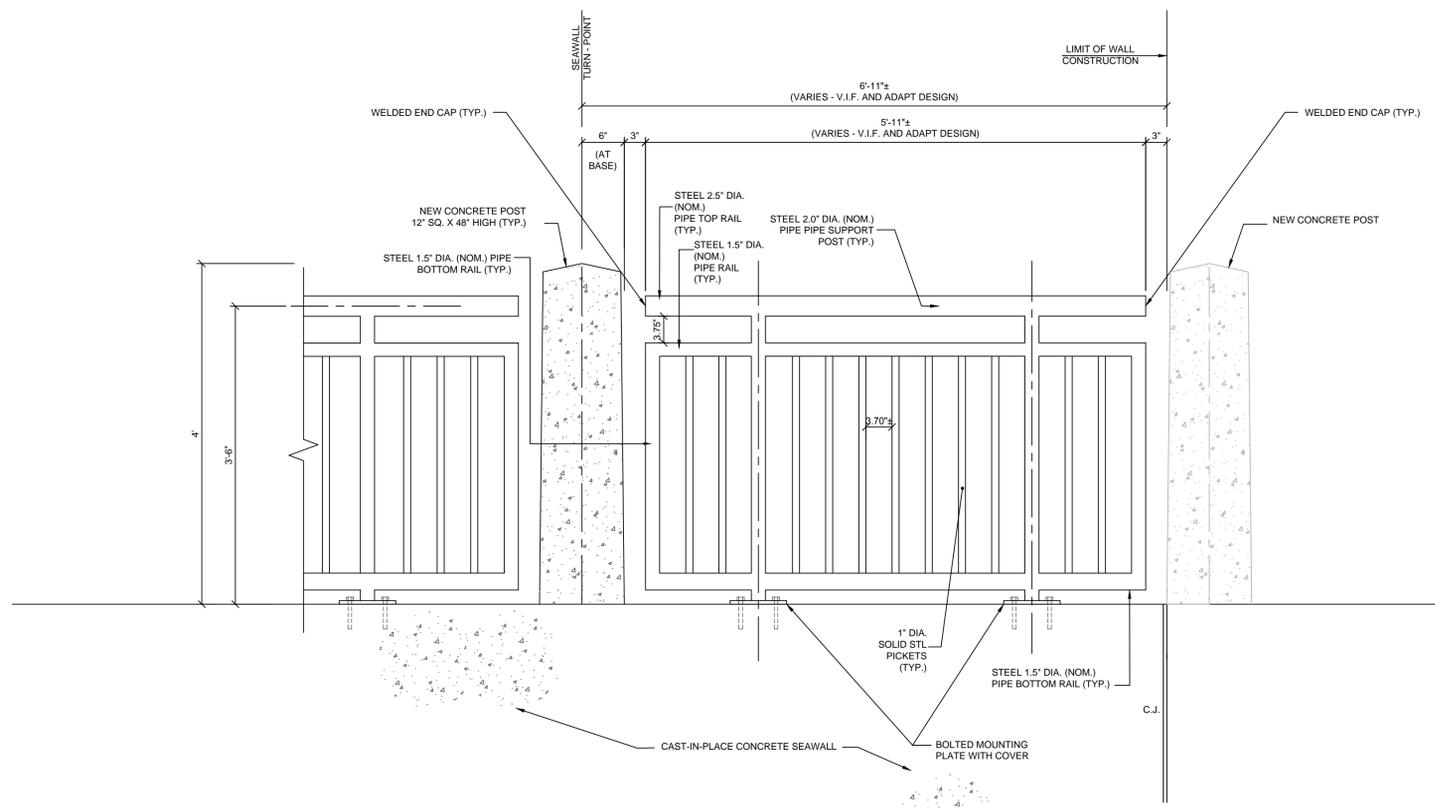
**4 ALTERNATIVE DETAIL SHOWING STAINLESS STEEL ANGLE SUPPORTS**  
SCALE: N.T.S.

**POST SETTING NOTES:**

- A. THE PRECAST MANUFACTURE OF NEW POSTS SHALL BE TO THE HIGHEST STANDARDS OF THE INDUSTRY. EACH BATCH OF POSTS SHALL BE EXAMINED BY THE PRECAST MANUFACTURER'S QUALIFIED SUPERVISOR, WHO SHALL PROVIDE A DELIVERY CERTIFICATE, TO BE FORWARDED TO RIOG, THAT THE POST MEETS THE PROJECT SPECIFICATIONS. POSTS SHOWING EVIDENCE OF FLAWS SHALL BE REMOVED OFF-ISLAND.
- B. THE CONTRACTOR AND ITS FABRICATOR SHALL BEAR ALL COSTS OF INVESTIGATION, RE-DESIGN AND RE-CONSTRUCTION IN THE EVENT OF DEFECTIVE WORK OR IN THE EVENT OF THE CONTRACTOR'S OR ITS FABRICATOR'S FAILURE TO CLOSELY FOLLOW THE CONTRACT DOCUMENTS IN PERFORMANCE OF THE WORK.
- C. THE CONTRACTOR SHALL BEAR ALL COSTS OF ANCHOR BOLTS, NUTS, WASHERS, GROUT PADS, FORMWORK AND FORMWORK PADS, REINFORCEMENT, LUBRICANTS, PRIMER, PAINT, AND OTHER HARDWARE AND FINISHES NECESSARY TO PERFORM A PROPER INSTALLATION OF THE PROJECT ELEMENTS SHOWN IN THE DRAWINGS.
- D. CONCRETE FOR POSTS
  - D.1. CONCRETE FOR POSTS SHALL BE NORMAL WEIGHT, AND THE USE OF SELF-CONSOLIDATING CONCRETE (SCC) IS ENCOURAGED.
  - D.2. MIX SHALL BE DESIGNED FOR THE FOLLOWING ACI 318 EXPOSURE CLASSES: FREEZING AND THAWING: F3; PERMEABILITY: P1; CORROSION PROTECTION: C2.
  - D.3. CONCRETE SHALL HAVE MAXIMUM 0.40 WATER-CEMENT RATIO.
  - D.4. PORTLAND CEMENT SHALL BE TYPE I OR TYPE III.
  - D.5. MINIMUM COMPRESSIVE STRENGTH SHALL BE 5,000 PSI AT 28 DAYS FOR C.I.P. POSTS AND 5,500 PSI FOR PRE-CAST POSTS.
  - D.6. AGGREGATES SHALL CONFORM TO ASTN C33 WITH A MAXIMUM SIZE OF 3/8 INCH.
- I. IN ADDITION TO THE ABOVE REQUIREMENTS, POST FINISH SHALL GENERALLY MATCH THE FINISH OF ADJACENT RAILINGS POSTS EXISTING TO THE NORTH OF THE PARK. SUBMIT SAMPLE SHOWING COMPLIANCE AND OBTAIN RIOG APPROVAL.
- J. CONTRACTOR SHALL AVOID SETTING OF NEW RAILINGS AND POSTS UNTIL THE SEAWALL CONCRETE HAS BEEN ALLOWED TO CURE FOR AT LEAST 28 DAYS.
- K. CONTRACTOR SHALL CHAMFER ALL EXPOSED CONCRETE CORNERS AT MINIMUM HALF-INCH BY HALF-INCH WITHIN THE FORMWORK.
- L. NEW CONCRETE POSTS SHALL BE FOUNDED USING TYPE 316 STAINLESS STEEL ANGLE SUPPORTS, AS PER THE DRAWING DETAILS. TYPE 304 STAINLESS STEEL SHALL NOT BE ACCEPTABLE.



**5 SECTION G-G' PLAN OF STAINLESS STEEL ANGLE SUPPORT**  
SCALE: N.T.S.



**6 ELEVATION OF ±7.0' WIDE SEAWALL RAILING**  
SCALE: 1" = 1'-0"

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SIGNATURE \_\_\_\_\_ DATE SIGNED \_\_\_\_\_  
LEONARD D. SAVINO  
PROFESSIONAL ENGINEER NY Lic. No. 090013-1

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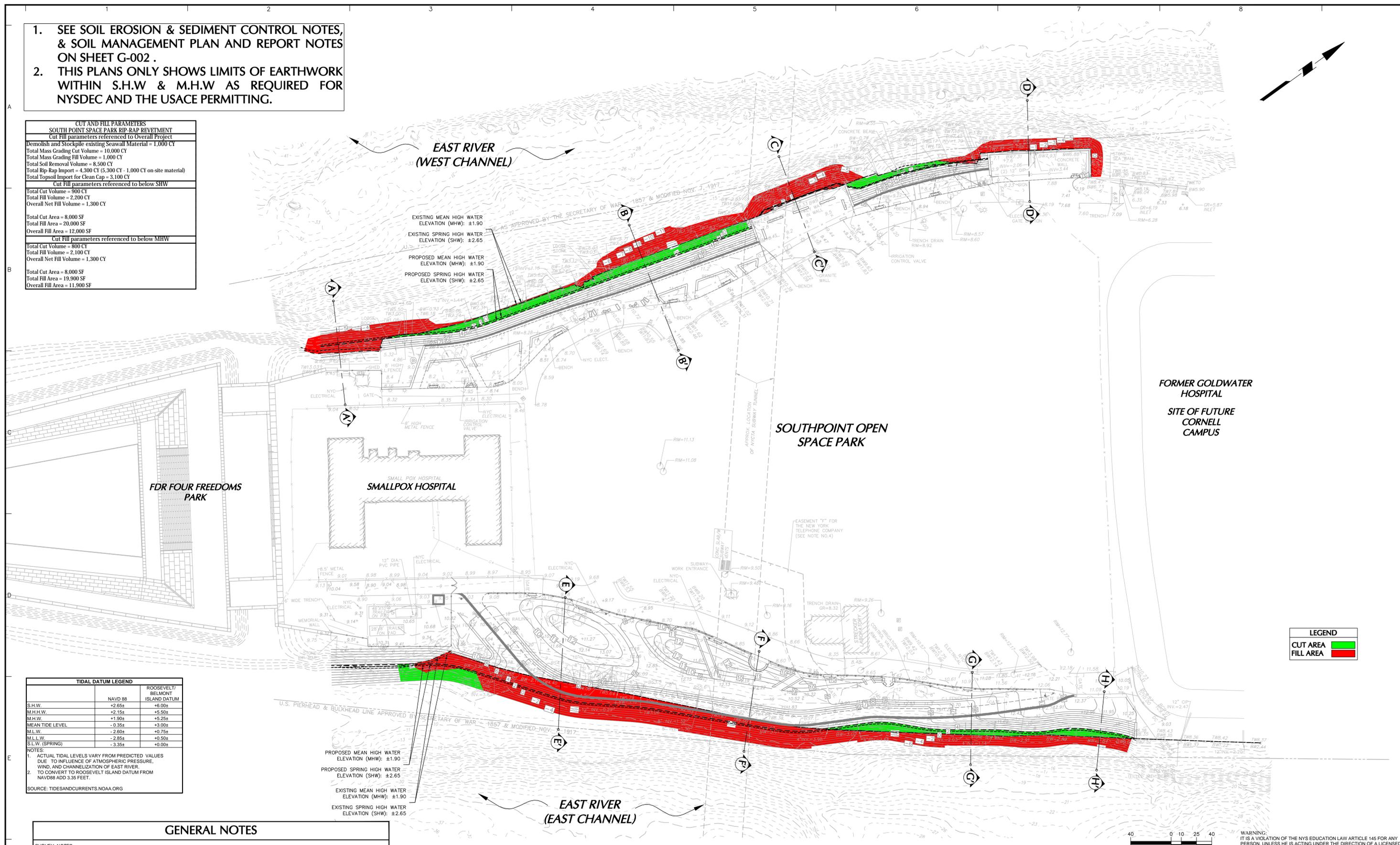
Project  
**SOUTHPPOINT OPEN SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**CONCRETE POST & RAILING DETAIL**

Project No. <b>100332702</b>	Drawing No. <b>C-302.00</b>
Date <b>11/26/2018</b>	
Drawn By <b>EJW/P</b>	
Checked By <b>JF/CO</b>	

- SEE SOIL EROSION & SEDIMENT CONTROL NOTES, & SOIL MANAGEMENT PLAN AND REPORT NOTES ON SHEET G-002 .
- THIS PLANS ONLY SHOWS LIMITS OF EARTHWORK WITHIN S.H.W & M.H.W AS REQUIRED FOR NYSDEC AND THE USACE PERMITTING.

CUT AND FILL PARAMETERS	
SOUTH POINT SPACE PARK RIP-RAP REVETMENT	
Cut/Fill parameters referenced to Overall Project	
Demolish and Stockpile existing Seawall Material = 1,000 CY	
Total Mass Grading Cut Volume = 10,000 CY	
Total Mass Grading Fill Volume = 1,000 CY	
Total Soil Removal Volume = 8,500 CY	
Total Rip-Rap Import = 4,300 CY (5,300 CY - 1,000 CY on-site material)	
Total Topsoil Import for Clean Cap = 3,100 CY	
Cut/Fill parameters referenced to below SHW	
Total Cut Volume = 900 CY	
Total Fill Volume = 2,200 CY	
Overall Net Fill Volume = 1,300 CY	
Cut/Fill parameters referenced to below MHW	
Total Cut Volume = 800 SF	
Total Fill Volume = 2,100 CY	
Overall Net Fill Volume = 1,300 CY	
Cut/Fill parameters referenced to below MHW	
Total Cut Volume = 800 SF	
Total Fill Area = 19,900 SF	
Overall Fill Area = 11,900 SF	



FDR FOUR FREEDOMS PARK

SMALLPOX HOSPITAL

SOUTHPOINT OPEN SPACE PARK

FORMER GOLDWATER HOSPITAL  
SITE OF FUTURE CORNELL CAMPUS

LEGEND	
CUT AREA	<span style="color: green;">█</span>
FILL AREA	<span style="color: red;">█</span>

TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/BELMONT ISLAND DATUM
S.H.W.	+2.65±	+6.00±
M.H.H.W.	+2.15±	+5.50±
M.L.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	-0.35±	+3.00±
M.L.L.W.	-2.60±	+0.75±
M.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
1. ACTUAL TIDAL LEVELS VARY FROM PREDICTED VALUES DUE TO INFLUENCE OF ATMOSPHERIC PRESSURE, WIND, AND CHANNELIZATION OF EAST RIVER.  
2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
SOURCE: TIDESANDCURRENTS.NOAA.ORG

**GENERAL NOTES**

- SURVEY NOTES**
- THIS SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS FOUND AT THE SUBJECT SITE, AND THE FOLLOWING REFERENCES:
    - "SEAWALL RECONSTRUCTION SOUTHPOINT OPEN SPACE PARK", PARTIAL TOPOGRAPHIC SURVEY, PROJECT NO.100332701, DATE 5/29/2013, DRAWING NO. VT100.
    - HYDROGRAPHIC DATA SUPPLIED BY ROGERS SURVEYING, INC., JULY 6, 2018.
  - THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NY LONG ISLAND STATE PLANE SYSTEM NAD83.
  - ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD88) BASED UPON GPS METHODS (SEE CONVERSION CHART).
  - PLANIMETRIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY LANGAN ENGINEERING, ENVIRONMENTAL, SURVEYING, LANDSCAPE ARCHITECTURE AND GEOLOGY, D.P.C. DURING JULY 2018.

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2/20/19	SUBMISSION TO SBS	1.

REVISIONS

SIGNATURE	LEONARD D. SAVINO	DATE SIGNED
PROFESSIONAL ENGINEER NY Lic. No. 090013-1		

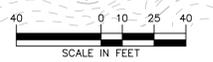
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Project  
**SOUTHPOINT OPEN SPACE PARK**  
RIP-RAP REVETMENT  
SBS # 20193722  
NEW YORK

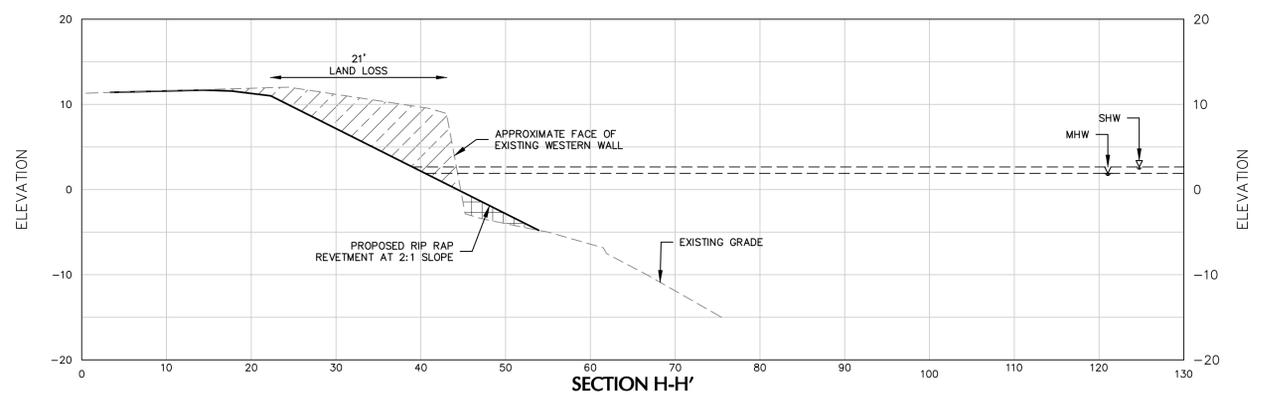
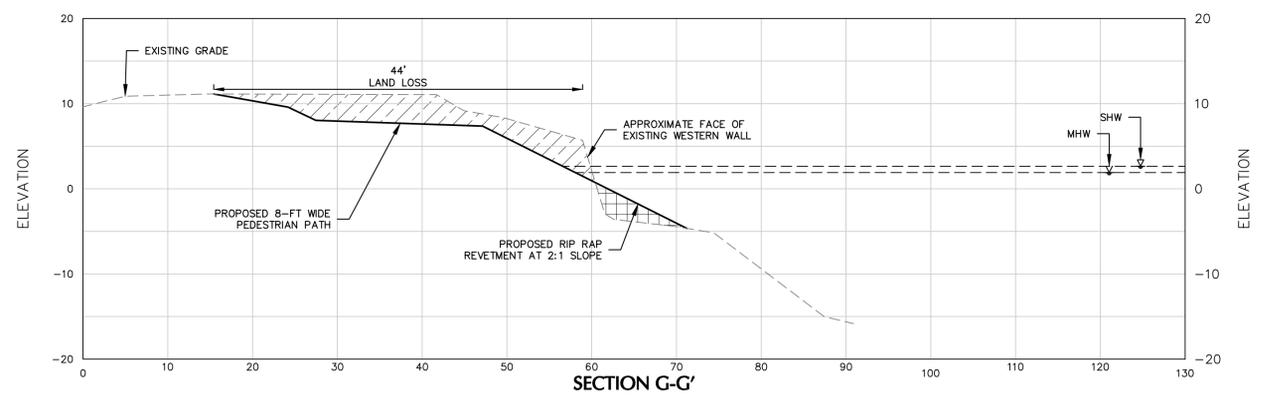
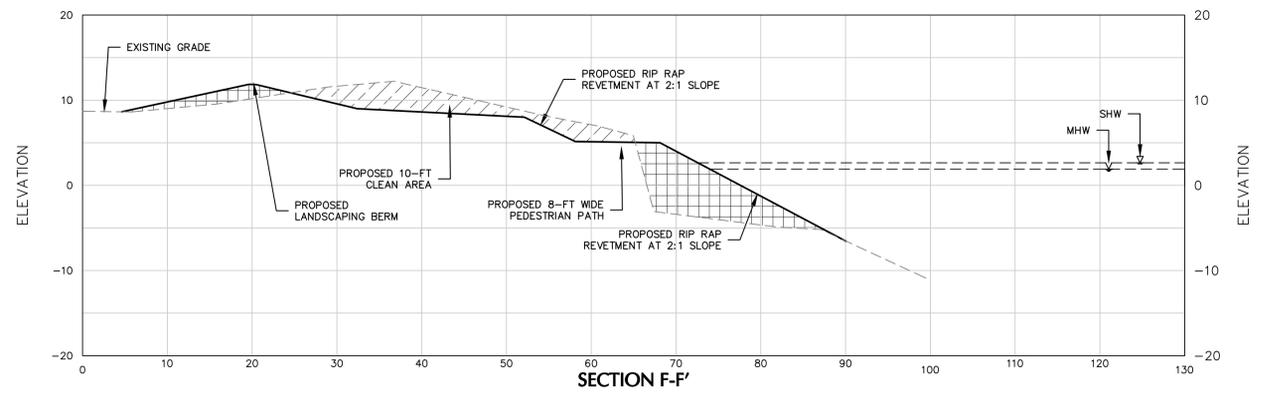
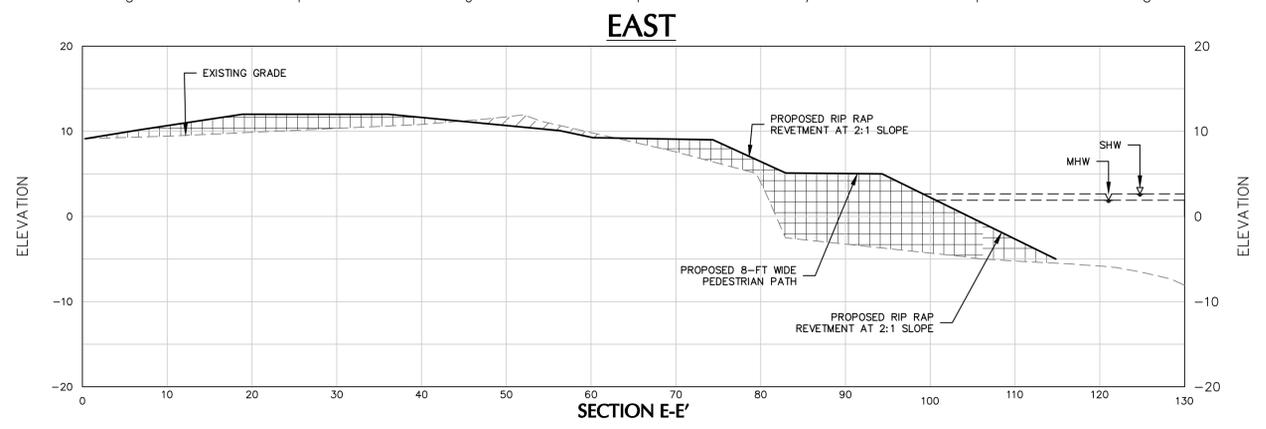
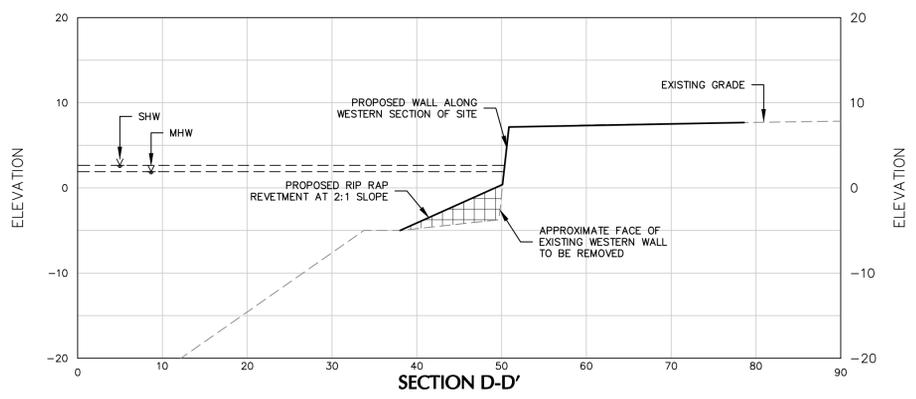
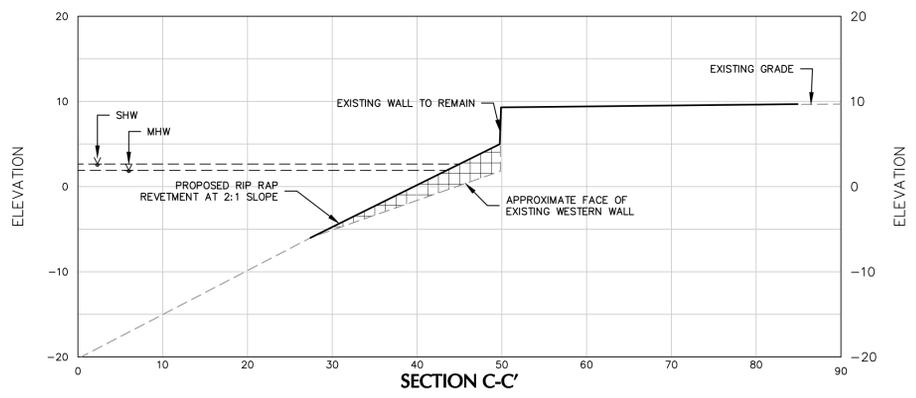
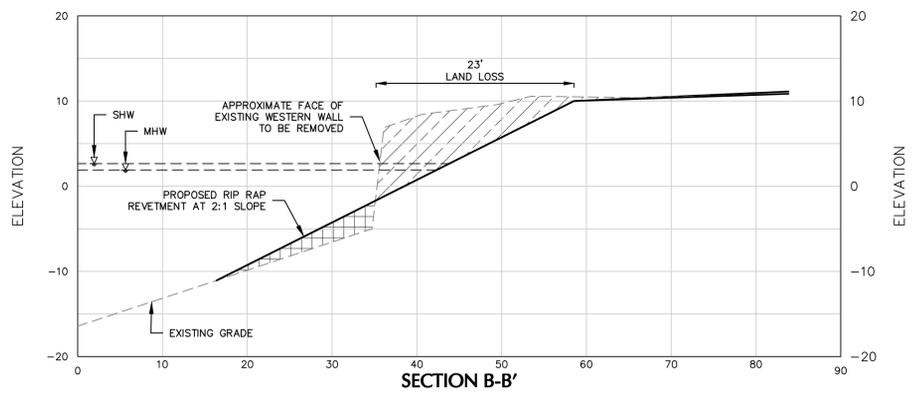
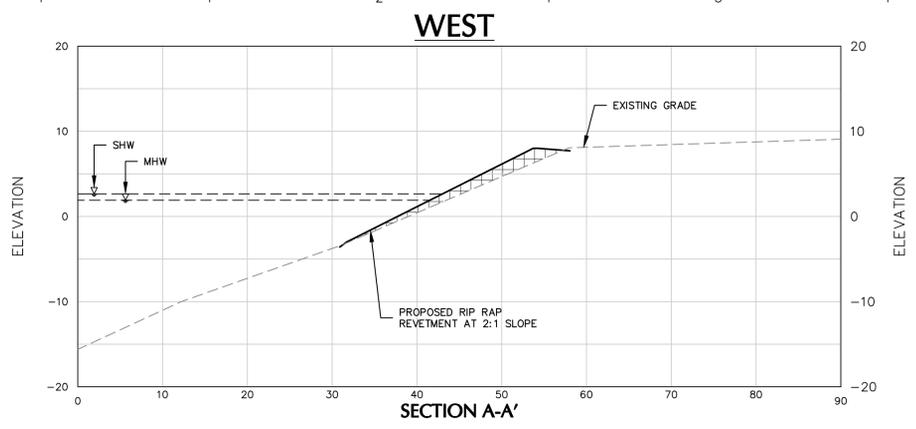
Drawing Title  
**EARTHWORK PLAN**

Project No.	100332702	Drawing No.	C-400.00
Date	11/26/2018	Drawn By	EJW/P
Checked By	JF/CO		

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PROJECT NO. 100332702 Langan



LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE
▨	AREA OF FILL
▩	AREA OF CUT



Date	Description	No.
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Project  
**SOUTHPPOINT OPEN  
 SPACE PARK**  
 RIP-RAP REVETMENT  
 SBS # 20193722  
 ROOSEVELT ISLAND NEW YORK

Drawing Title  
**SHORELINE CUT AND FILL**

Project No.	100332702	Drawing No.	C-401.00
Date	11/26/2018		
Drawn By	EKO		
Checked By	DS		

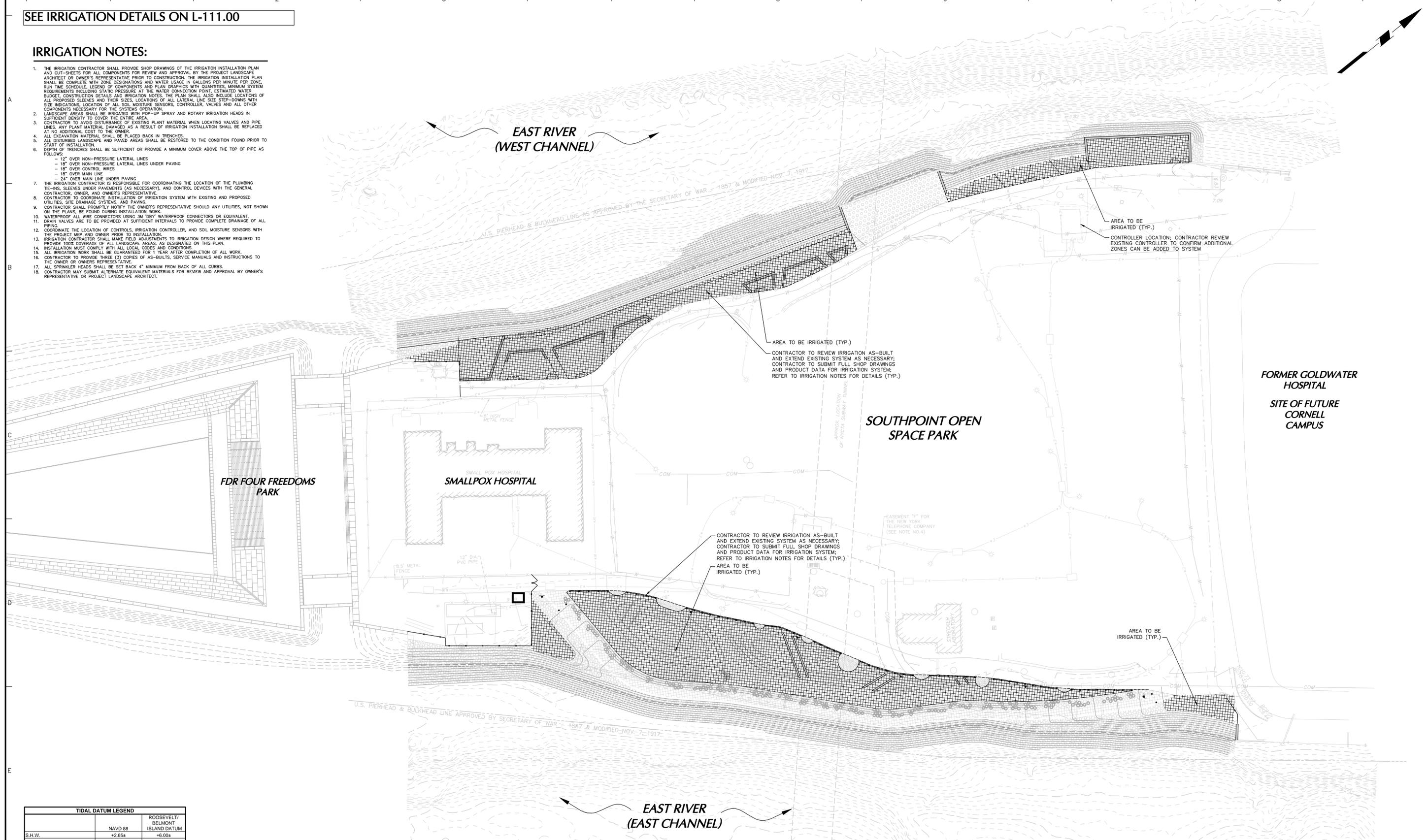
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SEE IRRIGATION DETAILS ON L-111.00

**IRRIGATION NOTES:**

1. THE IRRIGATION CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE IRRIGATION INSTALLATION PLAN AND CUT-SHEETS FOR ALL COMPONENTS FOR REVIEW AND APPROVAL BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. THE IRRIGATION INSTALLATION PLAN SHALL BE COMPLETE WITH ZONE DESIGNATIONS AND WATER USAGE IN GALLONS PER MINUTE PER ZONE, RUN TIME SCHEDULE, LEGEND OF COMPONENTS AND PLAN GRAPHICS WITH QUANTITIES, MINIMUM SYSTEM REQUIREMENTS INCLUDING STATIC PRESSURE AT THE WATER CONNECTION POINT, ESTIMATED WATER BUDGET, CONSTRUCTION DETAILS AND IRRIGATION NOTES. THE PLAN SHALL ALSO INCLUDE LOCATIONS OF ALL PROPOSED SLEEVES AND THEIR SIZES, LOCATIONS OF ALL LATERAL LINE SIZE STEP-DOWNS WITH SIZE INDICATIONS, LOCATION OF ALL SOIL MOISTURE SENSORS, CONTROLLER, VALVES AND ALL OTHER COMPONENTS NECESSARY FOR THE SYSTEMS OPERATION.
2. LANDSCAPE AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY AND ROTARY IRRIGATION HEADS IN SUFFICIENT DENSITY TO COVER THE ENTIRE AREA.
3. CONTRACTOR TO AVOID DISTURBANCE OF EXISTING PLANT MATERIAL WHEN LOCATING VALVES AND PIPE LINES. ANY PLANT MATERIAL DAMAGED AS A RESULT OF IRRIGATION INSTALLATION SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.
4. ALL EXCAVATION MATERIAL SHALL BE PLACED BACK IN TRENCHES.
5. ALL DISTURBED LANDSCAPE AND PAVED AREAS SHALL BE RESTORED TO THE CONDITION FOUND PRIOR TO START OF INSTALLATION.
6. DEPTH OF TRENCHES SHALL BE SUFFICIENT OR PROVIDE A MINIMUM COVER ABOVE THE TOP OF PIPE AS FOLLOWS:
  - 12" OVER NON-PRESSURE LATERAL LINES
  - 18" OVER NON-PRESSURE LATERAL LINES UNDER PAVING
  - 18" OVER CONTROL WIRES
  - 18" OVER MAIN LINE
  - 24" OVER MAIN LINE UNDER PAVING
7. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATION OF THE PLUMBING TIE-INS, SLEEVES UNDER PAVEMENTS (AS NECESSARY), AND CONTROL DEVICES WITH THE GENERAL CONTRACTOR, OWNER, AND OWNER'S REPRESENTATIVE.
8. CONTRACTOR TO COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING.
9. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING INSTALLATION WORK.
10. WATERPROOF ALL WIRE CONNECTORS USING 3M DRY WATERPROOF CONNECTORS OR EQUIVALENT.
11. DRAIN VALVES ARE TO BE PROVIDED AT SUFFICIENT INTERVALS TO PROVIDE COMPLETE DRAINAGE OF ALL PIPING.
12. COORDINATE THE LOCATION OF CONTROLS, IRRIGATION CONTROLLER, AND SOIL MOISTURE SENSORS WITH THE PROJECT MEP AND OWNER PRIOR TO INSTALLATION.
13. IRRIGATION CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO IRRIGATION DESIGN WHERE REQUIRED TO PROVIDE 100% COVERAGE OF ALL LANDSCAPE AREAS, AS DESIGNATED ON THIS PLAN.
14. INSTALLATION MUST COMPLY WITH ALL LOCAL CODES AND CONDITIONS.
15. ALL IRRIGATION WORK SHALL BE GUARANTEED FOR 1 YEAR AFTER COMPLETION OF ALL WORK.
16. CONTRACTOR TO PROVIDE THREE (3) COPIES OF AS-BUILTS, SERVICE MANUALS AND INSTRUCTIONS TO THE OWNER OR OWNER'S REPRESENTATIVE.
17. ALL SPRINKLER HEADS SHALL BE SET BACK 4" MINIMUM FROM BACK OF ALL CURBS.
18. CONTRACTOR MAY SUBMIT ALTERNATE EQUIVALENT MATERIALS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE OR PROJECT LANDSCAPE ARCHITECT.



TIDAL DATUM LEGEND		
	NAVD 88	ROOSEVELT/ BELMONT ISLAND DATUM
S.H.W.	+2.66±	+6.00±
M.H.W.	+2.15±	+5.50±
M.H.W.	+1.90±	+5.25±
MEAN TIDE LEVEL	+0.35±	+3.00±
M.L.W.	-2.60±	+0.75±
M.L.L.W.	-2.85±	+0.50±
S.L.W. (SPRING)	-3.35±	+0.00±

NOTES:  
 1. ACTUAL TIDAL LEVELS VARY FROM PREDICTED VALUES DUE TO INFLUENCE OF ATMOSPHERIC PRESSURE, WIND, AND CHANNELIZATION OF EAST RIVER.  
 2. TO CONVERT TO ROOSEVELT ISLAND DATUM FROM NAVD88 ADD 3.35 FEET.  
 SOURCE: TIDESANDCURRENTS.NOAA.ORG

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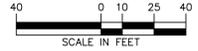
SIGNATURE MICHAEL SZURA, RLA  
 NEW YORK STATE  
 Lic. No. LA 001901-1

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Project  
**SOUTHPOINT OPEN SPACE PARK**  
 RIP-RAP REVETMENT  
 SBS # 20193722  
 ROOSEVELT ISLAND NEW YORK

Drawing Title  
**IRRIGATED AREA PLAN**

Project No. **100332702**  
 Date **11/26/2018**  
 Drawn By **JA**  
 Checked By **MH**  
 Drawing No. **L-101.00**



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PROJECT NO. 100332702 LANGAN

## GENERAL LANDSCAPE PLANTING NOTES

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
- NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE RULES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL MAINTAIN SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS' ORIGINAL GROWER BEFORE DIGGING. PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR, AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
- LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
- THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIAL AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURNISH PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE, AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- DELIVERY, STORAGE, AND HANDLING
  - PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DETERIORATION DURING DELIVERY, AND WHILE STORED AT SITE.
  - TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
  - ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL, AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
  - THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
- ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND AND UNEVEN SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF ONE YEAR FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
- THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
- AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
- MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
- ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
- FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
- PLANT MATERIALS SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
- ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 - JUNE 15 OR AUGUST 15 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

## LANDSCAPE MAINTENANCE NOTES

- MAINTENANCE OPERATIONS BEFORE APPROVAL:
  - PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
  - CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
  - CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
- MAINTENANCE DURING CONSTRUCTION:
  - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLED PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION. PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND WIRES SHALL BE TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
  - IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEEMED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
  - ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO REMAIN OR BE RELOCATED. THEY SHALL BE FURNISHED AND PLANTED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
  - PLANTS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
  - AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.
- LAWN MAINTENANCE:
  - BEGIN MAINTENANCE IMMEDIATELY AFTER EACH PORTION OF LAWN IS PLANTED AND CONTINUE FOR 8 WEEKS AFTER ALL LAWN PLANTING IS COMPLETED.
  - WATER TO KEEP SURFACE SOIL MOIST, REPAIR WASHED OUT AREAS BY FILLING WITH TOPSOIL, LIMING, FERTILIZING AND RE-SEEDING; MOW TO 2 1/2 - 3 INCHES AFTER GRASS REACHES 3 1/2 INCHES IN HEIGHT, AND MOW FREQUENTLY ENOUGH TO KEEP GRASS FROM EXCEEDING 3 1/2 INCHES. WEED BY LOCAL SPOT APPLICATION OF SELECTIVE HERBICIDE ONLY AFTER GRASS IS WELL-ESTABLISHED.

## SOD SPECIFICATIONS

- SOD IS TO BE 100% TURF-TYPE TALL FESCUE AS GROWN BY DELEA SOD (444 ELWOOD ROAD, EAST NORTHPORT, NY 11731) OR APPROVED EQUAL. SOD IS TO BE INDIGENOUS TO THE AREA AND BE FURNISHED BY A REPUTABLE GROWER WITH A MINIMUM 5 YEARS EXPERIENCE.
- PRIOR TO SODDING ALL AREAS ARE TO BE TOPSOILED, FINE GRADED, RAKED, WATERED LIGHTLY, AND FERTILIZED WITH A STARTER FERTILIZER.
- ALL STONES GREATER THAN 2" DIAMETER SHALL BE REMOVED.
- SOD TO BE INSTALLED PERPENDICULAR TO ALL SLOPED AREAS. SOD STRIPS TO BE LAYED OUT SO JOINTS ARE NOT CLOSER THAN ONE FOOT (1'-0") FROM EACH OTHER.
- SOD IS TO BE WATERED AT A RATE OF AT LEAST ONE AND A HALF INCHES (1 1/2") PER WEEK UNTIL ROOT MASS MERGES WITH SOIL. AFTER THIS HAS OCCURRED NORMAL WATERING OF AT LEAST ONE INCH (1") PER WEEK IS TO COMMENCE.
- ALL SOD AREAS ARE TO BE ROLLED IF ANY HEAVING OR DEPRESSIONS OCCUR.

## PLANTING SOIL SPECIFICATIONS

- PLANTING SOIL, ALTERNATELY MAY BE REFERRED TO AS TOPSOIL, SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, TWIGS, TRASH AND STONES OVER 1/2" DIA. IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.
- PLANTING SOIL:
 

REUSE SURFACE SOILS STOCKPILED ON SITE, VERIFYING COMPLIANCE WITH PLANTING SOIL AND TOPSOIL CRITERIA IN THIS SPECIFICATION THROUGH TESTING. CLEAN SURFACE SOIL OF ALL ROOTS, PLANTS, SOD, AND GRAVEL OVER 1" IN DIAMETER AND DELETERIOUS MATERIALS. ON-SITE SOILS ARE TO BE USED FOR PROPOSED PLANTING. THE CONTRACTOR SHALL DEMONSTRATE, THROUGH SOIL TESTING, THAT ON-SITE SOILS MEET THE SAME CRITERIA AS INDICATED IN NOTES PLANS AND SPECIFICATIONS.

SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN TOPSOIL AND PLANTING SOIL QUANTITIES ARE INSUFFICIENT. OBTAIN SOIL DISPLACED FROM NATURALLY WELL-DRAINED SITES WHERE TOPSOIL OCCURS AT LEAST 4" DEEP. DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS, MARSHES OR CONTAMINATED SITES.

CONTRACTOR SHALL TEST SOILS AND FURNISH SAMPLES UPON REQUEST. PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER, MATERIAL COMPOSITION, MANUFACTURER'S CERTIFIED ANALYSIS, AND THE WEIGHT OF THE MATERIAL. SOIL OR AMENDMENT MATERIALS SHALL BE STORED ON SITE TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND SHALL BE PROTECTED FROM INTRODUCTION OF CONTAMINANTS AND EROSION. AFTER MIXING, SOIL MATERIALS SHALL BE COVERED WITH A TARP/ULIN UNTIL TIME OF ACTUAL USE.

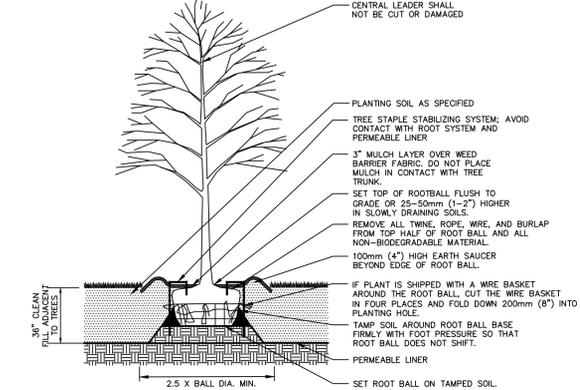
ALL PLANTING SOILS SHALL BE SUBMITTED FOR TESTING TO THE STATE COOPERATIVE EXTENSION SERVICE, OR APPROVED EQUAL, PRIOR TO DELIVERY TO THE SITE. CONTRACTOR SHALL FURNISH SOIL SAMPLES AND SOIL TEST RESULTS TO LANDSCAPE ARCHITECT OR OWNER AT A RATE OF ONE SAMPLE PER 500 CUBIC YARDS TO ENSURE CONSISTENCY ACROSS THE TOTAL VOLUME OF PLANTING SOIL REQUIRED. TEST RESULTS SHALL EVALUATE FOR ALL CRITERIA LISTED IN THIS SPECIFICATION. IF TESTING AGENCY DETERMINES THAT THE SOILS ARE DEFICIENT IN ANY MANNER AND MAY BE CORRECTED BY ADDING AMENDMENTS, THE CONTRACTOR SHALL FOLLOW STATED RECOMMENDATIONS FOR SOIL IMPROVEMENT AND FURNISH SUBMITTALS FOR ALL AMENDMENTS PRIOR TO DELIVERY OF SOIL TO THE PROJECT SITE.

  - THE FOLLOWING TESTING SHOULD BE PERFORMED AND RESULTS GIVEN TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE INSTALLATION:
    - PARTICLE SIZE ANALYSIS - LOAMY SAND: 60-75% SAND, 25-40% SILT, AND 5-15% CLAY.
    - FERTILITY ANALYSIS: PH (5.5-6.5), SOLUBLE SALTS (LESS THAN 2 MMH/CM), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND MAGNESIUM
    - ORGANIC MATTER CONTENT: 2.5-5% IN NATIVE SOILS; UP TO 10% IN AMENDED SOILS
    - TOXIC SUBSTANCE ANALYSIS
    - MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED
    - NOT MORE THAN 1% OF MATERIAL SHALL BE RETAINED BY A #4 SIEVE
  - SOIL AMENDMENT FOR PLANT MATERIAL:
 

IF SOIL ORGANIC CONTENT IS INADEQUATE, SOIL SHALL BE AMENDED WITH COMPOST OR ACCEPTABLE, WEED FREE, ORGANIC MATTER. ORGANIC AMENDMENT SHALL BE WELL COMPOSTED, PH RANGE OF 6-8, MOISTURE CONTENT 35-55% BY WEIGHT 100% PASSING THROUGH 1" SIEVE, SOLUBLE SALT CONTENT LESS THAN 0.5 MM H2O/CM, MEETING ALL APPLICABLE ENVIRONMENTAL CRITERIA FOR CLEAN FILL.

    - ORGANIC MATTER AS A SOIL AMENDMENT: LEAF MULD WITH 60-90% ORGANIC CONTENT BY WEIGHT, SHREDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YR. SHOULD BE FREE OF DEBRIS, STONES OVER 1/2", WOOD CHIPS OVER 1".
    - SOIL IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL AND TOPSOIL, SHOULD BE FRIABLE, WELL DRAINED, AND FREE OF DEBRIS INCLUDING STONES AND TRASH.
    - AMENDMENTS FOR BACK FILL IN TREE AND SHRUB PITS:
      - GROUND LIMESTONE (WITH A MIN. OF 88% OF CALCIUM AND MAGNESIUM CARBONATES) USED PENDING RESULTS OF SOIL ANALYSIS.
        - BRING PH LEVELS TO 5.5 MIN. TO 6.5 FOR NON-ERICACEOUS PLANTS
        - BRING PH LEVELS TO 4.5 MIN. TO 5.5 FOR ERICACEOUS PLANTS
      - TERRA-SHET "PLANT HEALTH CARE" 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN PLANTER BACKFILL MIXTURE WITH TREES AND SHRUBS.
      - MYCOR-RROOT SAVER BY "PLANT HEALTH CARE" 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN BACKFILL MIXTURE WITH TREES.
  - WHERE PLANTING AREAS ARE PROPOSED FOR FORMER PAVED OR GRAVEL AREAS, BEDS SHALL BE EXCAVATED TO A MINIMUM 30" DEPTH AND, AT A MINIMUM, BE BACKFILLED WITH BOTTOM LAYER OF SANDY LOAM (ORGANIC CONTENT LESS THAN 2%) OVER WHICH TOPSOIL AND PLANTING SOIL WILL BE PLACED AT DEPTHS INDICATED IN PLANS, DETAILS AND NOTES.
  - CLEAN SOIL FILL IN LANDSCAPE AREAS:
 

LANDSCAPE FILL MATERIAL, BELOW PLANTING SOILS, SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5 - 7.
  - SOIL PLACEMENT:
    - CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, TWELVE INCHES (12") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUNDCOVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS.
    - SCARIFY AND/OR TILL COMPACTED SUBSOILS TO A MINIMUM DEPTH OF 6 INCHES, THOROUGHLY MIX A 6 INCH DEPTH LAYER OF PLANTING SOIL INTO THE SUBSOIL. PRIOR TO PLACING PLANTING SOIL AT THE DEPTHS INDICATED ABOVE, PLANTING SOIL SHALL BE PLACED IN 12-18" LIFTS AND WATER THOROUGHLY BEFORE INSTALLING NEXT LIFT. REPEAT UNTIL DEPTHS AND FINISH GRADES HAVE BEEN ACHIEVED. NO SOILS SHALL BE PLACED IN A FROZEN OR MUDDY CONDITION.
    - PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS.
  - SOIL CONDITIONING:
    - ADJUST PH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER PH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY NOT BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 88% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE TOTAL 100% PASSING THE 10 MESH SIEVE, MINIMUM 90% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE.
    - ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
    - SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):
      - THOROUGHLY TILL ORGANIC MATTER (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC MATTER AMENDMENT.
      - MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR COPPUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
      - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

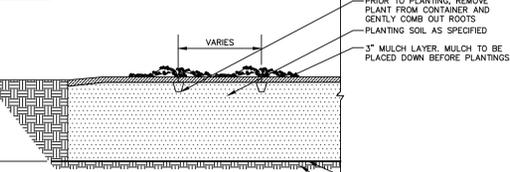


1 TREE PLANTING SCALE: N.T.S.

### PLAN



### SECTION



- NOTES:
- PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
  - REFER TO PLAN AND SCHEDULE FOR SPACING OF INDIVIDUAL PLANTS.
  - REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

2 PLUG/GROUND COVER PLANTING SCALE: N.T.S.

## LAWN WATERING SCHEDULE

- THE FOLLOWING WATERING SCHEDULE COVERS ROUGHLY 8 WEEKS TO ESTABLISH A HEALTHY STAND OF GRASS FROM SEED. THE CONTRACTOR SHALL BE OBLIGATED TO ENSURE A HEALTHY STAND OF GRASS AT THE END OF THE MAINTENANCE/BOND PERIOD. ANY BARE OR DEAD AREAS IN THE LAWN SHALL BE PREPARED, RESEEDED AND REESTABLISHED PRIOR TO THE END OF THE MAINTENANCE/BOND PERIOD AND TO THE SATISFACTION OF THE PROJECT LANDSCAPE ARCHITECT AND THE OWNER.
- IMPORTANT ASPECTS TO ATTAINING AND SUSTAINING A HEALTHY STAND OF GRASS ARE THE INSTALLATION OF TOPSOIL, SEED BED PREPARATION, ATTAINING OPTIMAL pH FOR THE INTENDED PLANT SPECIES, FERTILIZING, MULCH COVERING, AND SUFFICIENT WATERING PER THESE NOTES AND/OR PROJECT SPECIFICATIONS.
- SEEDING SHALL BE DONE DURING THE SEASONS SPECIFIED IN THE LAWN SEED MIX NOTES AND/OR PROJECT SPECIFICATIONS.
  - AFTER THE SEEDBED IS PREPARED, SEED IS INSTALLED, AND MULCH IS APPLIED, WATER LIGHTLY TO KEEP THE TOP 2 INCHES OF SOIL CONSISTENTLY MOIST, NOT SATURATED. AT NO TIME SHOULD WATER BE APPLIED TO THE POINT OF RUNOFF OR THE DISPLACEMENT OF SEED.
  - DEPENDING ON SOIL TEMPERATURES, IT MAY TAKE SEVERAL WEEKS FOR GERMINATION TO OCCUR. DIFFERENT SPECIES WITHIN THE MIX GERMINATE AT DIFFERENT TIMES AND THEREFORE CONTRACTOR SHOULD CONTINUE THE LIGHT WATERING, AS DESCRIBED ABOVE, UNTIL THERE IS AT LEAST 2 INCHES OF GROWTH THROUGHOUT.
  - AT THIS POINT, WATERING FREQUENCY MAY BE REDUCED TO EVERY 3 TO 5 DAYS. WATER SHALL BE APPLIED TO WET A 6 INCH MINIMUM SOIL DEPTH TO PROMOTE HEALTHY DEEP ROOTS.
  - BEGIN MOWING ONCE PER WEEK AFTER THE GRASS HAS REACHED 3 INCHES HEIGHT. MOW TO A HEIGHT OF NO LESS THAN 2-3 INCHES. AFTER 2 TO 3 WEEKS OF MOWING, CONTINUE TO WATER TO A 6 INCH MINIMUM SOIL DEPTH AS NECESSARY PER WEATHER CONDITIONS, AND SOIL MOISTURE SENSORS IF APPLICABLE.

3/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.
Date	Description	No.
REVISIONS		

SIGNATURE	MICHAEL SZURA, RLA NEW YORK STATE Lic. No. LA 001901-1	DATE SIGNED
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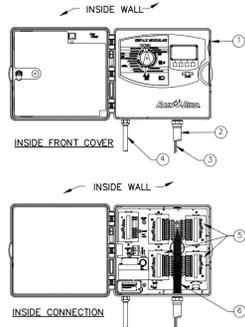
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Project  
**SOUTHPPOINT OPEN  
SPACE PARK  
RIP-RAP REVETMENT  
SBS # 20193722**  
NEW YORK

Drawing Title  
**LANDSCAPE NOTES  
& DETAILS**

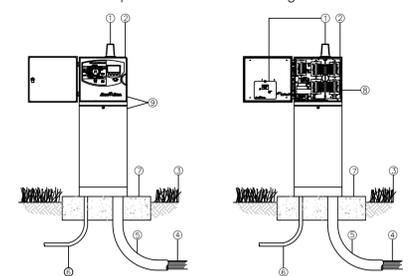
Project No. <b>100332702</b>	Drawing No. <b>L-110.00</b>
Date <b>11/26/2018</b>	
Drawn By <b>JA</b>	
Checked By <b>MH</b>	

WARNING:  
IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



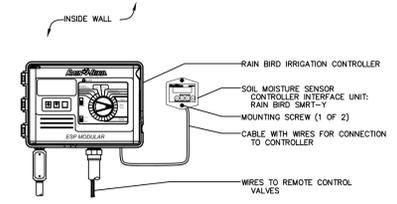
- 1 MODULAR HYBRID CONTROLLER RAIN BIRD ESP-LX MODULAR INSIDE WALL MOUNT.
- 1 1/2" PVC SCH 40 CONDUIT AND FITTINGS.
- WIRES TO REMOTE CONTROL VALVES.
- 1" PVC SCH 40 CONDUIT TO POWER SUPPLY.
- BASE MODEL IS 8 STATION, OPTIONAL MODULES FOR 32 STATION CONTROLLER AS SHOWN.
- WIRES TO REMOTE CONTROL VALVES.

1 MODULAR HYBRID CONTROLLER  
SCALE=NTS

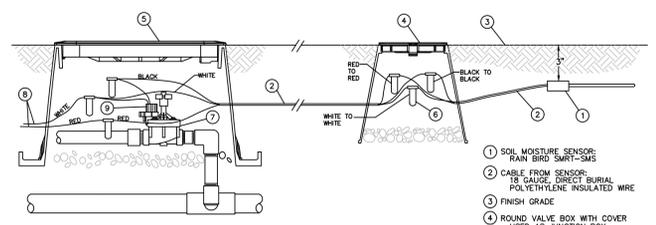


- 1 ET MANAGER CARTRIDGE
- 2 MODULAR HYBRID CONTROLLER WITH ET MANAGER CARTRIDGE: RAIN BIRD ESP-LX MODULAR PEDESTAL MOUNT
- 3 FINISH GRADE
- 4 WIRES TO REMOTE CONTROL VALVE
- 5 3-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL
- 6 1-INCH SCH 40 PVC CONDUIT, FITTINGS AND SWEEP ELL TO POWER SUPPLY
- 7 CONCRETE PAD: 6-INCH MINIMUM THICKNESS
- 8 BASE MODEL IS 8 STATION, OPTIONAL MODULES FOR 32 STATION CONTROLLER AS SHOWN
- 9 STAINLESS STEEL WEATHERPROOF PEDESTAL AND CABINET

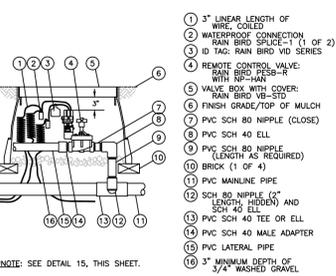
2 ESP-LX MODULAR PEDESTAL SYSTEM  
SCALE=NTS



3 SOIL MOISTURE SENSOR  
SCALE=NTS

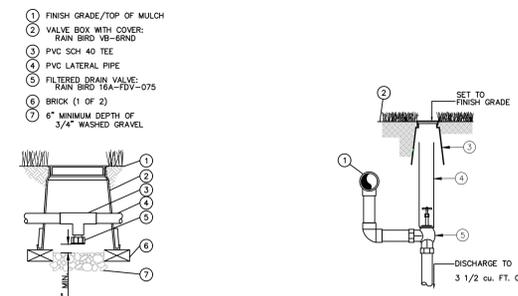


4 SOIL MOISTURE SENSOR VALVE CONNECTION  
SCALE=NTS

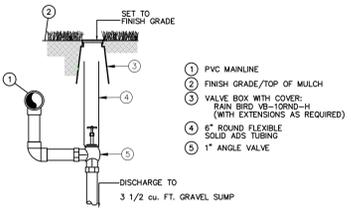


- 1 3" LINEAR LENGTH OF WIRE, COLOR IDENTIFIED
- 2 WATERPROOF CONNECTION RAIN BIRD SPLICE-1 (1 OF 2)
- 3 ID TAG: RAIN BIRD VID SERIES
- 4 REMOTE CONTROL VALVE: RAIN BIRD PESH-R WITH RP-HAN
- 5 VALVE BOX WITH COVER: RAIN BIRD VB-STD
- 6 FINISH GRADE/TOP OF MULCH
- 7 PVC SCH 80 NIPPLE (CLOSE)
- 8 PVC SCH 40 ELL
- 9 PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- 10 BRICK (1 OF 4)
- 11 PVC MAINLINE PIPE
- 12 SCH 80 NIPPLE (2" LENGTH AS REQUIRED) AND SCH 40 ELL
- 13 PVC SCH 40 TEE OR ELL
- 14 PVC SCH 40 MALE ADAPTER
- 15 PVC LATERAL PIPE
- 16 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

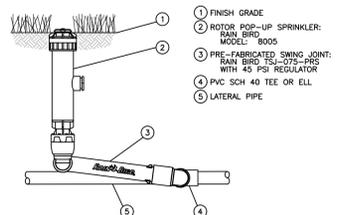
5 REMOTE CONTROL ZONE VALVE  
SCALE=NTS



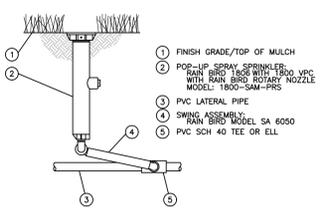
6 AUTOMATIC DRAIN VALVE  
SCALE=NTS



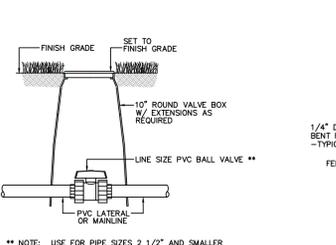
7 MANUAL DRAIN VALVE  
SCALE=NTS



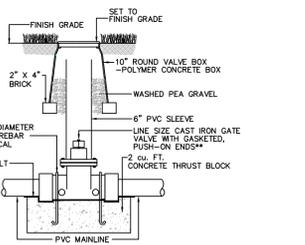
8 6" POP-UP ROTOR  
SCALE=NTS



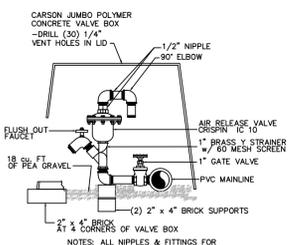
9 6" POP-UP SPRAY HEAD  
SCALE=NTS



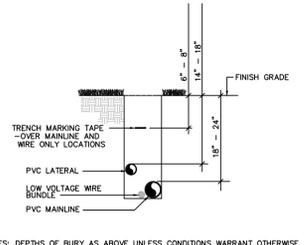
10 ISOLATION BALL VALVE  
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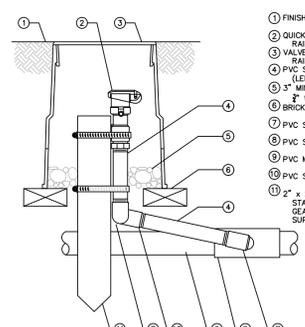
11 ISOLATION GATE VALVE  
SCALE=NTS



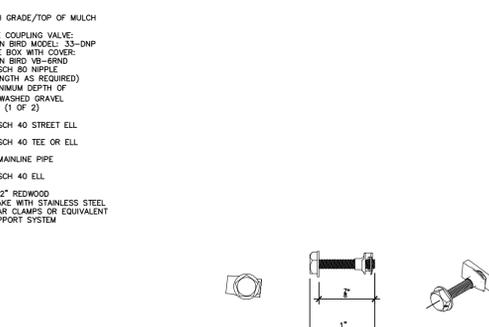
12 AIR RELEASE VALVE ASSEMBLY  
SCALE=NTS



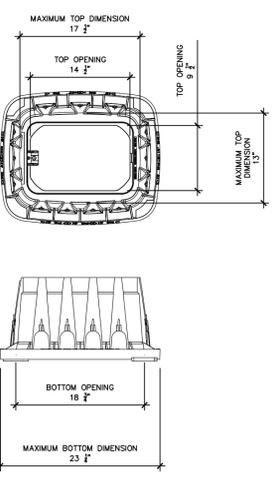
13 TRENCH DETAIL  
SCALE=NTS



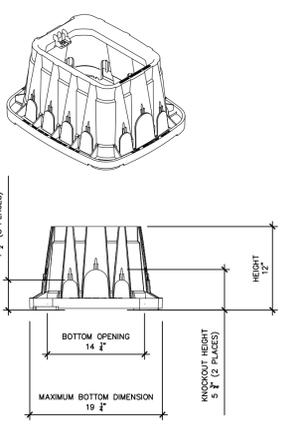
14 QUICK COUPLING VALVE  
SCALE=NTS



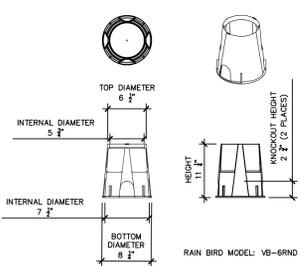
15 VALVE BOX LOCKING ASSEMBLY  
SCALE=NTS



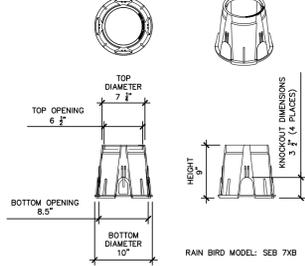
16 STANDARD VALVE BOX DIMENSIONS  
SCALE=NTS



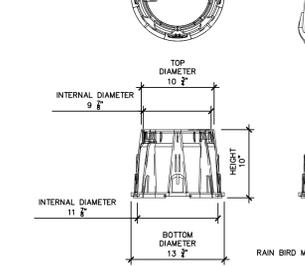
17 6" ROUND VALVE BOX  
SCALE=NTS



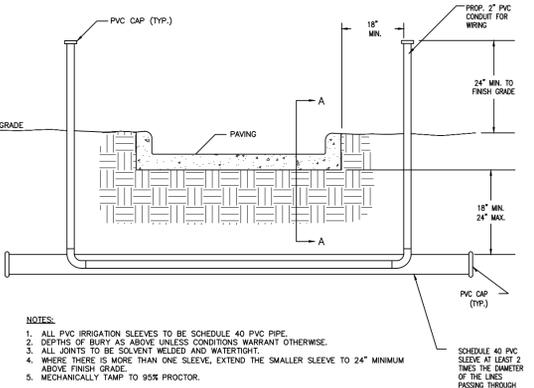
18 7" ROUND VALVE BOX  
SCALE=NTS



19 10" ROUND VALVE BOX  
SCALE=NTS



20 IRRIGATION SLEEVING DETAIL  
SCALE=NTS



1. ALL PVC IRRIGATION SLEEVES TO BE SCHEDULE 40 PVC PIPE.
2. DEPTHS OF BURY AS ABOVE UNLESS CONDITIONS WARRANT OTHERWISE.
3. ALL JOINTS TO BE SOLVENT WELDED AND WATER TIGHT.
4. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24" MINIMUM ABOVE FINISH GRADE.
5. MECHANICALLY TAMP TO 95% PROCTOR.

Date	Description	No.
3/19/20	ISSUED FOR BID	4.
1/8/20	SUBMISSION TO SBS	3.
5/29/19	SUBMISSION TO SBS	2.
2/20/19	SUBMISSION TO SBS	1.
REVISIONS		

SIGNATURE MICHAEL SZURA, RLA  
NEW YORK STATE  
Lic. No. LA 001901-1

DATE SIGNED

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Project  
**SOUTHPOINT OPEN  
SPACE PARK  
RIP-RAP REVETMENT  
SBS # 20193722**  
ROOSEVELT ISLAND NEW YORK

Drawing Title  
**IRRIGATION DETAILS**

Project No.  
**100332702**

Date  
**11/26/2018**

Drawn By  
**JA**

Checked By  
**MH**

Drawing No.  
**L-111.00**