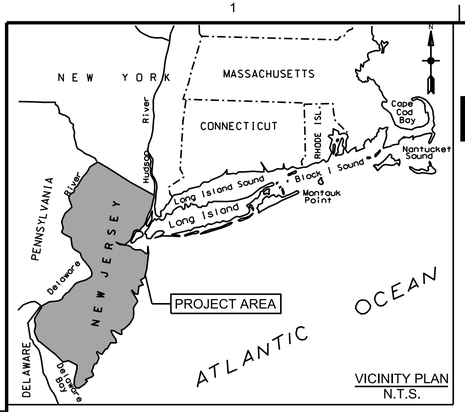



# HURRICANE & STORM DAMAGE REDUCTION
# RARITAN BAY & SANDY HOOK BAY
# PHASE II, CONTRACT 4

## PORT MONMOUTH, NEW JERSEY

100% SUBMISSION




DATUM NOTES:

1. THE HORIZONTAL CONTROL IS BASED ON SURFACE COORDINATES APPLIED TO THE NEW JERSEY MERCATOR SYSTEM (NAD 1983) UNLESS OTHERWISE SPECIFIED.

2. ELEVATIONS SHOWN ON THE DRAWINGS ARE IN FEET AND REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE RELATIONSHIP BETWEEN NAVD88 AND THE TIDAL DATUM IS SHOWN IN THE TABLE BELOW. TIDAL INFORMATION AT PORT MONMOUTH IS BASED ON INFORMATION COMPILED AND PUBLISHED BY NOAA 1987.

| WATER LEVEL | NAVD88 (FT) |
|---|---|
| MEAN HIGHER WATER LEVEL (MHHW) | 2.55 |
| MEAN HIGH WATER (MHW) | 2.21 |
| MEAN TIDE LEVEL (MTL) | -0.23 |
| MEAN LOW WATER (MLW) | -2.47 |
| MEAN LOWER LOW WATER (MLLW) | -2.65 |

| DATUM | ELEVATION DIFFERENCE (FT) |
|---|---|
| NAVD88 | + 1.04 |
| NGVD29 | 0.00 |

SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDEXED ON THIS SHEET

APPROVAL RECOMMENDED BY:

John M. Wong, P.E.
CHIEF, CIVIL ENGINEERING DESIGN SECTION — DATE

APPROVAL RECOMMENDED BY:

Encer R. Shaffer, P.E.
CHIEF, DESIGN BRANCH — DATE

APPROVED BY:

Michael Rovi, P.E.
CHIEF, ENGINEERING DIVISION — DATE

This project was designed by the U.S. Army Corps of Engineers. The initials or signatures and registration designations of individuals appear on these project documents, within the scope of their employment as required by ER 1110-1-8152.

US Army Corps of Engineers®
New York District

| MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|
| MARK | DESCRIPTION | DATE | APPR. |

DESIGNED BY: NS | DRWN BY: NS | CKD BY: KW | SUBMITTED BY: | DATE: | SOLICITATION NO.: | CONTRACT NO.: | PLOT SCALE: N.T.S. SIZE: ANSI D | ISSUE DATE: | FILE NUMBER: | FILE NAME: G-001.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

COVER SHEET

SHEET IDENTIFICATION
G-001
SHEET 1 OF 148

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DESIGNED BY: NS
DRN BY: NS
SUBMITTED BY: NS
CKD BY: KW
PLOT SCALE: NTS
SIZE: ANSI D
DATE:
SOLICITATION NO.:
CONTRACT NO.:
ISSUE DATE:
FILE NUMBER:
FILE NAME: G-002.dgn

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

DRAWING INDEX

SHEET IDENTIFICATION
G-002
SHEET 2 OF 148

| NEW NSRS BENCHMARK MONUMENTATION | | | | | | |
|---|---|---|---|---|---|---|
| NO. | STAMP NAME | NORTHING | EASTING | STATION | DESIGN ELEVATION | FLOOD PROTECTION TYPE |
| 1 | NAN-PM4-1 | 579726.5 | 603856.5 | 10+00 | 13.0 | FLOODWALL |
| 2 | NAN-PM4-2 | 579547.4 | 604320.4 | 15+00 | 13.0 | FLOODWALL |
| 3 | NAN-PM4-3 | 579873.7 | 604688.6 | 20+00 | 13.0 | FLOODWALL |
| 4 | NAN-PM4-4 | 580935.5 | 604540.8 | 32+10 | 13.0 | FLOODWALL |
| 5 | NAN-PM4-5 | 518416.9 | 604835.8 | 39+50 | 13.5 | LEVEE |
| 6 | NAN-PM4-6 | 582048.6 | 604814.6 | 47+35 | 13.5 | LEVEE |

NSRS Benchmark Notes:

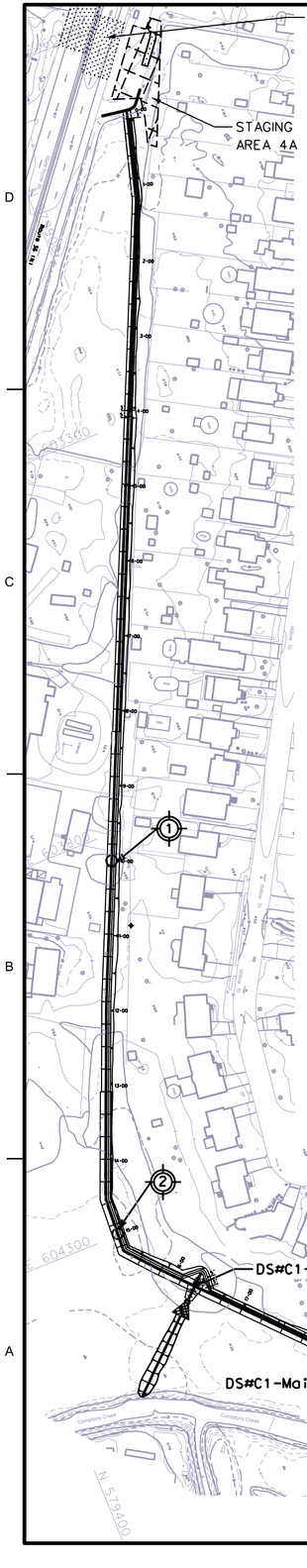
1. Design elevations do not reflect as-built or future elevations. The Contractor shall verify the coordinates and elevations for establishing the NSRS benchmarks. The true elevations shall also be recorded on the final As-Builts.

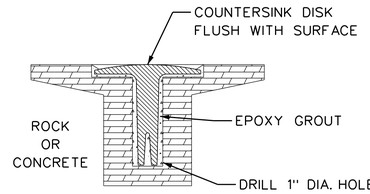
2. The vertical control benchmarks shall be be referenced according to the guidelines established in ER 1110-2-8160 (Policies for Referencing Project Elevation Grades to Nationwide Vertical Datums) and in EM 1110-2-6056 (Standards and Procedures for Referencing Project Elevation Grades to Nationwide Vertical Datums).

3. The Contractor shall establish the appropriate physical permanent survey monumentation in accordance with EM 1110-1-1002 (Survey Markers and Monumentation), in coordination with the New York District Datum Coordinator (DDC), and with approval from the Contracting Officer (COR).

4. Bare rods, nails (PK, 60d, etc.), railroad spikes, wooden hubs, and so forth shall not be considered permanent monuments under any circumstances.

5. Permanent monuments shall be stable and self-identifying, and shall incorporate the properties based on local site conditions per EM 1110-1-1002.

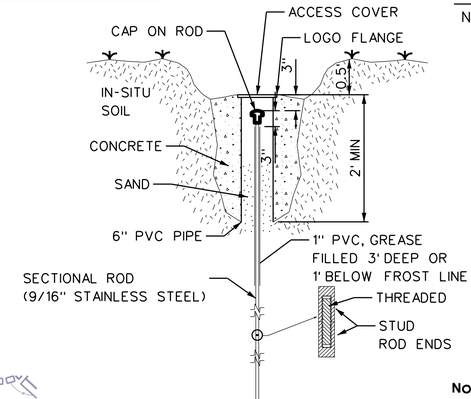



NOTES:

1. USE FOR VERTICAL, HORIZONTAL AND BOUNDARY CONTROL.
2. DISK IN ROCK OR PRECAST CONCRETE.

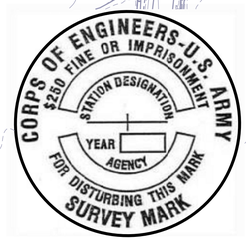
TYPE C MONUMENT
NTS




NOTES:
1. DEEP ROD - STAINLESS STEEL WITH SLEEVE.
2. USE FOR VERTICAL AND HORIZONTAL CONTROL.

TYPE B MONUMENT
NTS

| SITE CONTROL POINTS | | | | |
|---|---|---|---|---|
| POINT • | NORTHING | EASTING | ELEVATION | REMARK |
| 10101 | 585,052.84 | 602,098.31 | 13.44 | BRONZE DISK |
| 10102 | 585,522.72 | 602,330.2 | 17.29 | BRONZE DISK |
| 10115 | 582,099.62 | 609,163.72 | 14.63 | BRONZE DISK |
| 10116 | 582,439.67 | 608,867.07 | 11.72 | BRONZE DISK |




TYPICAL USACE LOGO ON BENCHMARK
Not to Scale

0 100' 200'

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New York District

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NEW YORK DISTRICT
NEW YORK, NY

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| DESIGNED BY: NS | DRN BY: NS | CKD BY: KW | SUBMITTED BY: NS |
| DATE: | SOLICITATION NO.: | CONTRACT NO.: | |
| PLOT SCALE: 1=1'-0" | ISSUE DATE: | FILE NUMBER: | |
| PLOT STYLE: ANSI D | FILE NAME: G-003.dgn | | |

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II; CONTRACT 4
PORT MONMOUTH, NJ

GENERAL PLAN/
NSPS BENCHMARKS

SHEET IDENTIFICATION
G-003
SHEET 3 OF 148

# GENERAL TRAFFIC NOTES:

1. ADVANCE WARNING SIGNS DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED, AT DIRECTION OF THE DEPARTMENT, TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY.

2. THE APPROXIMATE LOCATIONS OF THE ILLUMINATED FLASHING ARROW BOARDS ARE SHOWN ON THE TRAFFIC CONTROL PLANS. THESE LOCATIONS MAY BE MODIFIED AS APPROVED BY RE TO ADJUST FOR VISIBILITY DUE TO HORIZONTAL OR VERTICAL CURVATURE OF THE ROADWAY OR TO POSITION AT A SAFER LOCATION. ILLUMINATED FLASHING ARROW BOARDS ARE TO BE USED FOR TEMPORARY LANE CLOSINGS AND AT LOCATIONS SHOWN ON THE TRAFFIC CONTROL PLANS.

3. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.

4. RAMPS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-IF SIGN (ROAD WORK AHEAD) AS A MINIMUM.

5. ALL EXISTING ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED OR RELOCATED AS DIRECTED BY THE COR.

6. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON EITHER THE EXISTING, TEMPORARY,OR PROPOSED TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.

7. MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES - PART VI "STANDARDS AND GUIDES FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY, AND INCIDENT MANAGEMENT OPERATIONS", UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS.

8. CONSTRUCTION SIGN W99-2 (GIVE US A BRAKE) SHALL BE LOCATED 200 FEET IN ADVANCE OF PROJECT LIMITS.

9. A W1-6 (ARROW) SIGN MOUNTED ON A BREAKAWAY BARRICADE AND CENTERED ON THE CLOSED WIDTH SHALL BE LOCATED 100 FEET BEYOND EACH INTERSECTION OR MAIN ACCESS POINT WITHIN THE AREA OF A LANE OR SHOULDER CLOSURE.

10. CONSTRUCTION SIGNS R11-4 (ROAD CLOSED TO THRU TRAFFIC) SHALL BE PLACED AT THE INTERSECTING STREETS WHICH ARE CLOSED TO TRAFFIC BECAUSE OF CONSTRUCTION.

11. CONSTRUCTION SIGNS W8-9A (SYMBOL FOR UNEVEN PAVEMENT) AND W8-14A (GROOVED PAVEMENT) SHALL BE USED WHEN SUCH PAVEMENT CONDITIONS EXIST. THE PLACEMENT OF THESE SIGNS SHALL BE AS DIRECTED BY THE COR.

12. MOVING WORK AREAS IN A LANE CLOSURE REQUIRE A TRAILER MOUNTED ILLUMINATED FLASHING ARROW TO REMAIN AT THE END OF THE TAPER, THE TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION THAT SHALL MOVE WITH THE WORK AREAS TO KEEP A 70 FEET MIN. AND 150 FEET MAX. BUFFER IN ADVANCE OF EACH WORK AREA.

13. THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE SAFE ACCESS OF CONSTRUCTION VEHICLES THROUGHOUT THE WORK SITE WHERE SPACE CONSTRAINTS PREVENT THE USE OF LANE CLOSURES. THE PLAN SHALL BE SUBMITTED TO THE COR IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

14. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON AT LEAST 6H : 1V SLOPE BEFORE THE END OF EACH WORK DAY. OTHER EXCAVATED AREA WITHIN THE CLEAR ZONE SHALL BE BACKFILLED.

15. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN CROSSING LOCATIONS AND TYPE AS DIRECTED BY THE COR.

16. BITUMINOUS CONCRETE PLACED DURING THE VARIOUS CONSTRUCTION STAGES SHALL BE TRANSITIONED ON A MINIMUM 20H : 1V SLOPE TO MEET THE ADJACENT EXISTING GRADE AT THE LONGITUDINAL AND TRANSVERSE LIMITS OF THE STAGE CONSTRUCTION AREAS UNLESS OTHERWISE NOTED ON THE STAGE CONSTRUCTION PLANS.

17. THE PLACEMENT AND OR RELOCATION OF PRECAST CONCRETE CURB, CONSTRUCTION BARRIER SHALL BE DONE DURING APPROVED OFF-PEAK HOURS WHEN TRAFFIC MAY BE REDUCED TO ONE LANE IN EACH DIRECTION.

18. CONSTRUCTION ZONE SPEED LIMIT WILL BE DETERMINED BY THE TRAFFIC SIGNAL & SAFETY ENGINEERING, REGIONAL TRAFFIC ENGINEER - WORK ZONE, AT THE TIME OF OR DURING CONSTRUCTION, AS REQUESTED BY THE COR.

19. THE SPEED LIMIT, R2-1 (BLACK ON WHITE) WITH ADDED WORK ZONE PLATE (BLACK ON ORANGE) SIGNS SHALL BE LOCATED THROUGH WORK AREAS AS DIRECTED BY THE TRAFFIC SIGNAL AND SAFETY ENGINEERING REGIONAL TRAFFIC ENGINEER - WORK ZONE.

20. THE REDUCED SPEED AHEAD SIGN, W3-5(S) (BLACK ON ORANGE) SHALL BE LOCATED IN ADVANCE OF SPEED LIMIT R2-1 SIGNS WHICH REDUCE THE NORMAL POSTED SPEED LIMIT THROUGH THE CONSTRUCTION ZONE.

21. TRAFFIC FINES DOUBLED IN WORK AREA R(NJ)5-17(S), 4 FEET BY 2.5 FEET SIGN SHALL BE LOCATED 500 FEET AFTER THE FIRST ADVANCE WARNING SIGN, (W20 SERIES) AT EACH WORK AREA LOCATED WITHIN URBAN AREAS. THIS SIGN SHALL ALSO BE USED ON PROJECTS REQUIRING MOVING OPERATIONS IN WHICH CASE THE SIGN SHALL BE MOUNTED ON A SLOW MOVING CONSTRUCTION VEHICLE.

22. THE FINAL HMA SURFACE PAVEMENT SHALL NOT BE CONSTRUCTED UNTIL THE FINAL STAGE OF THE PROJECT UNLESS OTHERWISE DIRECTED BY THE RE OR INDICATED ON THE PLANS. MANHOLES AND INLETS SHALL BE SET TO FINISHED GRADE AND TEMPORARY PAVEMENT RAMPS ARE TO BE CONSTRUCTED AROUND THEM WITH A MINIMUM 20H : 1V SLOPE IN ALL DIRECTIONS USING HOT MIX ASPHALT PAVEMENT. THIS TEMPORARY MATERIAL WILL BE REMOVED IMMEDIATELY PRIOR TO PLACING THE SURFACE COURSE.

23. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.

24. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE COR.

25. TRAFFIC IMPACT NOTICES AND CHANGES

A. TERMS:
WHEN THE FOLLOWING TERMS ARE USED, THE INTENT AND MEANING SHALL BE AS FOLLOWS:
i. IMPACTS TO NORMAL TRAFFIC FLOW - WORK THAT REQUIRES A PORTION OF THE PAVED ROADWAY BEING BLOCKED OR CLOSED WITH SAFETY DEVICES OR VEHICLES, INCLUDING, BUT NOT LIMITED TO, FULL OR PARTIAL LANE CLOSURES, FULL OR PARTIAL RAMP CLOSURES, SHOULDER CLOSURES, MOVING OPERATIONS SUCH AS TRAFFIC STRIPING OR SWEEPING, LANE SHIFTS, OR ALTERNATING TRAFFIC. THIS APPLIES EVEN WHEN DETOURS ARE PROVIDED.

ii. TEMPORARY LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH IS ROUTINELY SET UP AND REMOVED ON A DAILY BASIS.

iii. PERMANENT LANE CLOSURES - WORK DESCRIBED UNDER "IMPACTS TO NORMAL TRAFFIC FLOW" WHICH REMAINS IN PLACE CONTINUOUSLY FOR 24 HOURS OR MORE.

B. ADVANCE NOTICES:
FOR THE INITIAL START OF WORK THAT REQUIRES "IMPACTS TO NORMAL TRAFFIC FLOW", THE CONTRACTOR SHALL NOTIFY THE RE IN WRITING, ON THE ADVANCE FORM TO-103 PROVIDED BY THE DEPARTMENT, OF THE PROPOSED DATE. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, BEFORE THE PROPOSED DATE. START OF WORK THAT IMPACTS NORMAL TRAFFIC FLOW WILL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE COR, THE PROPOSED DATE SEVEN (AND/OR FOURTEEN) CALENDAR DAYS BEFORE STARTING THE ESTABLISHMENT OF THE TRAFFIC CONTROL MEASURES FOR THE TRAFFIC IMPACT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COR IF THE PROPOSED ESTABLISHMENT CAN NOT BE COMPLETED ON THE PROPOSED DATE.

FOR A "PERMANENT LANE CLOSURE", THE CONTRACTOR SHALL NOTIFY THE COR IN WRITING, ON ADVANCE FORM TO-103, OF THE PROPOSED DATE A NEW TRAFFIC PATTERN WILL BE ESTABLISHED. THE NOTICE SHALL BE SUBMITTED AT LEAST TWENTY-EIGHT CALENDAR DAYS, BUT NOT MORE THAN SIXTY CALENDAR DAYS, IN ADVANCE OF THE PROPOSED DATE. START OF A NEW TRAFFIC PATTERN WILL NOT BE PERMITTED PRIOR TO THE DATE STATED IN THE NOTICE. THE CONTRACTOR SHALL CONFIRM, IN WRITING TO THE COR, THE PROPOSED DATE OF THE NEW TRAFFIC PATTERN SEVEN (AND/OR FOURTEEN) DAYS BEFORE STARTING TRAFFIC CONTROL MEASURES FOR THE ESTABLISHMENT OF THE NEW PATTERN. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE COR IF THE PROPOSED ESTABLISHMENT CAN NOT BE COMPLETED ON THE PROPOSED DATE.

STARTING THE ESTABLISHMENT OF A NEW PERMANENT TRAFFIC PATTERN SHALL BEGIN NO EARLIER THAN 11:00 PM FRIDAY AND SHALL BE COMPLETED AND READY FOR OPERATIONS BY 6:00 PM THE FOLLOWING SUNDAY. THE ESTABLISHMENT SHALL BE COMPLETED IN ACCORDANCE WITH THE LANE CLOSURE HOURS SPECIFIED IN THE CONTRACT.

ADVANCE NOTICES SENT PRIOR TO THE PRE-CONSTRUCTION MEETING SHALL BE ADDRESSED TO THE CONTACT PERSON AS SPECIFIED IN SUBSECTION 101.04 OF THE SPECIAL PROVISIONS.

C. PROGRESS NOTICES
ALL "IMPACTS TO NORMAL TRAFFIC FLOW" SCHEDULED FOR THE SEVEN DAY PERIOD STARTING ON THE FOLLOWING MONDAY SHALL BE SUBMITTED TO THE COR BY 9:00AM OF EACH FRIDAY ON WEEKLY FORM TO-100 PROVIDED BY THE DEPARTMENT.

EACH DAY OF THE "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE COR BY 9:00 AM ON THE IMMEDIATELY PRECEDING FRIDAY ON THE DAILY FORM TO-101 PROVIDED BY THE DEPARTMENT.

D. CHANGES TO THE SCHEDULED CLOSURES:
REQUEST FOR A CHANGE TO THE TRAFFIC CONTROL REQUIREMENTS IN THE CONTRACT DOCUMENTS SHALL BE SUBMITTED IN WRITING TO THE COR AS FOLLOWS: CHANGES TO THE SCHEDULED HOURS FOR "TEMPORARY LANE CLOSURES" SHALL BE SUBMITTED TO THE COR AT LEAST EIGHT CALENDAR DAYS IN ADVANCE OF WHEN THE CHANGE IS PROPOSED TO START.

OTHER PROPOSED CHANGES TO "TEMPORARY LANE CLOSURES" AND ALL CHANGES TO "PERMANENT LANE CLOSURES" SHALL BE SUBMITTED TO THE COR AS SPECIFIED.

26. ALL TRAFFIC SAFETY SERVICES SHALL BE USED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL.

27. AVOIDANCE MANEUVER IS FOR A SPEED, PATH, AND/OR DIRECTION CHANGE PRIOR TO THE BEGINNING OF CHANNELIZING TAPERS.

28. RURAL AND URBAN ROAD DESIGNATIONS ARE AS DEFINED IN THE NJDOT STATE HIGHWAY STRAIGHT LINE DIAGRAMS.

29. DESIRABLE VALUES SHALL BE PROVIDED WHEREVER POSSIBLE. IF IT IS NOT FEASIBLE OR PRACTICAL TO PROVIDE DESIRABLE VALUES BECAUSE OF HORIZONTAL OR VERTICAL CURVATURE OR IF RELOCATION OF THE TAPER IS NOT POSSIBLE, THEN MINIMUM VALUES CAN BE APPLIED. WHEN MINIMUM VALUES ARE USED, SPECIAL ATTENTION SHOULD BE GIVEN TO THE USE OF SUITABLE TRAFFIC CONTROL DEVICES FOR PROVIDING ADVANCED WARNING OF THE CONDITIONS THAT ARE LIKELY TO BE ENCOUNTERED.

30. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.

## LEGEND

- BREAKAWAY BARRICADES
- BREAKAWAY BARRICADES WITH SIGN
- CONSTRUCTION SIGNS
- DRUMS
- CONE
- PRECAST CONCRETE CURB CONSTRUCTION BARRIER (TYPE SPECIFIED)
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DIRECTOR, FLAGGER
- TRAILER MOUNTED MOUNTED ARROW BOARD SHOWING CAUTION MODE
- ILLUMINATED FLASHING ARROW MOUNTED ON TOWING VEHICLE SHOWING ARROW PATTERN (Left, Right, Both) — LEFT RIGHT BOTH
- TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING CAUTION MODE
- TRAFFIC CONTROL TRUCK WITH MOUNTED CRASH CUSHION AND ARROW BOARD SHOWING ARROW PATTERN (Left, Right, Both) — LEFT RIGHT BOTH
- TEMPORARY CRASH CUSHION, INERTIAL BARRIER SYSTEM
- TEMPORARY CRASH CUSHION, (all other approved)
- BUFFER ZONE
- WORK AREA
- PAINT STRIPING TRUCK OR OTHER OPERATING VEHICLE

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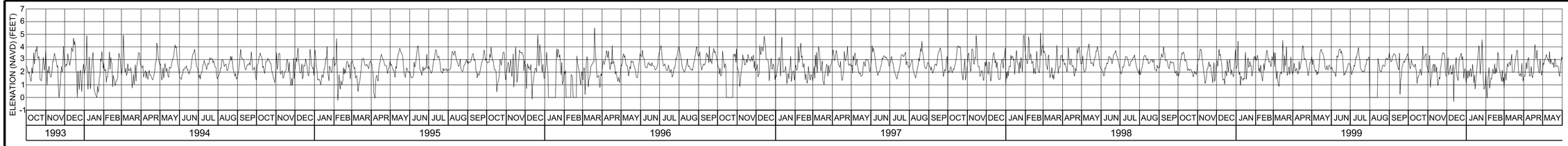
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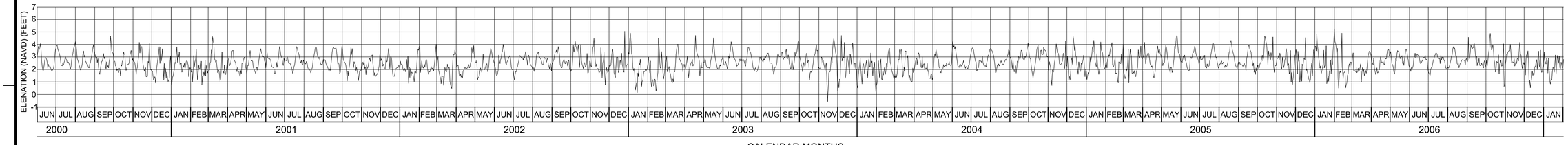
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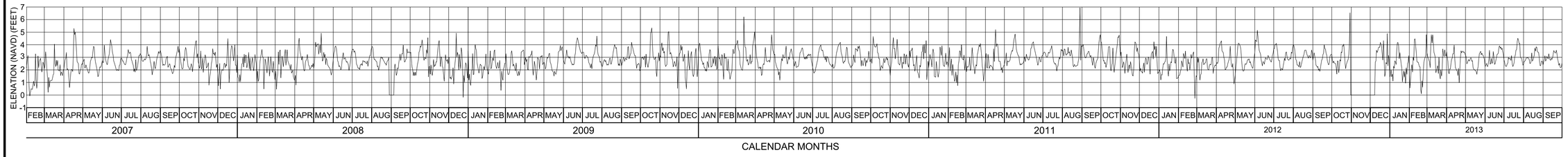
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

TRAFFIC SAFETY NOTES

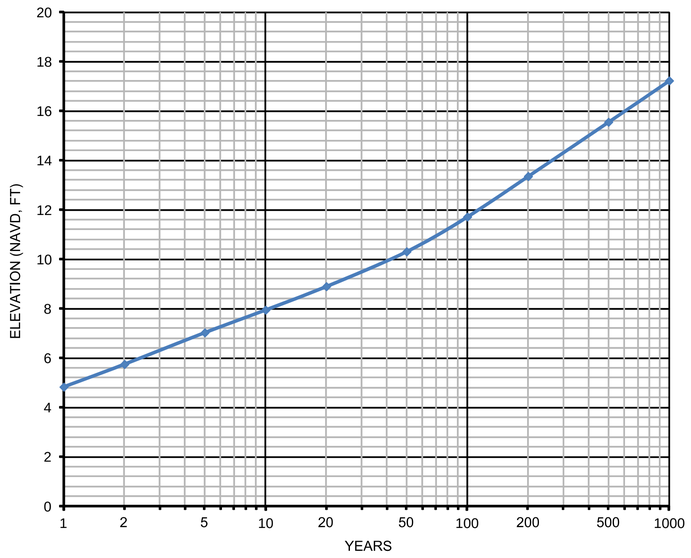
SHEET IDENTIFICATION
G-004
SHEET 4 OF 148




## STAGE HYDROGRAPH




ELEVATION-RETURN PERIOD CURVE

| SANDY HOOK, NEW JERSEY | MONTHLY RAINFALL (INCHES) | | | MONTHLY TEMPERATURE (DEG. F) | | |
|---|---|---|---|---|---|---|
| | MAXIMUM | MINIMUM | MEAN | MAXIMUM | MINIMUM | MEAN |
| JAN | 9.74 | 0.57 | 3.50 | 65 | -3 | 32.5 |
| FEB | 5.24 | 0.92 | 2.86 | 70 | 0 | 33.9 |
| MAR | 8.43 | 1.10 | 3.90 | 74 | 2 | 41.0 |
| APR | 9.02 | 1.38 | 3.85 | 87 | 18 | 50.5 |
| MAY | 11.04 | 0.92 | 4.02 | 90 | 33 | 60.6 |
| JUN | 9.06 | 0.94 | 4.40 | 96 | 47 | 70.5 |
| JUL | 8.74 | 1.19 | 4.91 | 100 | 50 | 75.4 |
| AUG | 8.43 | 0.26 | 4.19 | 98 | 51 | 75.3 |
| SEP | 8.32 | 1.33 | 3.84 | 95 | 40 | 68.7 |
| OCT | 6.91 | 0.61 | 4.00 | 88 | 30 | 57.2 |
| NOV | 9.38 | 0.30 | 3.46 | 78 | 20 | 47.8 |
| DEC | 7.63 | 0.77 | 3.70 | 68 | 8 | 37.9 |

HYDROLOGIC NOTES:

1. DATA INCLUDED ON THIS SHEET IS FOR INFORMATION ONLY FOR THE CONTRACTOR. THE GOVERNMENT IS NOT RESPONSIBLE FOR THE ACCURACY OR INTERPRETATION.
2. THE STAGE HYDROGRAPH REPRESENTS MAXIMUM DAILY TIDE ELEVATION. THIS HYDROGRAPH HAS BEEN PREPARED FROM DATA PUBLISHED FOR THE RECORDS OF NOAA TIDE GAGE NO. 8531680: SANDY HOOK, NEW JERSEY FOR THE TWENTY-YEAR PERIOD BETWEEN OCTOBER 1993 AND SEPTEMBER 2013.
3. BREAKS IN THE STAGE HYDROGRAPH REPRESENTS MISSING DATA FOR THE GAGE STATIONS. DATA GAP FROM END OF OCTOBER TO EARLY DECEMBER 2012 WAS DUE TO GAGE FAILURE DURING HURRICANE SANDY.
4. ELEVATIONS SHOWN ON THIS SHEET ARE IN FEET AND RELATIVE TO VERTICAL DATUM NAVD, 1988.
5. THE MEAN MONTHLY PRECIPITATION DATA SHOWN ARE FROM THE MONTHLY NORMAL RECORDS OF THE STATION: SANDY HOOK, NEW JERSEY FOR THE PERIOD 1981 - 2010. THE MAXIMUM AND MINIMUM PRECIPITATION REPRESENTS THE HIGHEST AND THE LOWEST MONTHLY VALUES FROM THE 1971 - 2000 MONTHLY NORMALS.
6. THE MEAN MONTHLY TEMPERATURE DATA SHOWN ARE FROM THE MONTHLY NORMAL RECORDS OF THE STATION: SANDY HOOK, NEW JERSEY FOR THE PERIOD 1981 - 2010. THE MAXIMUM AND MINIMUM TEMPERATURE REPRESENTS THE HIGHEST AND THE LOWEST DAILY VALUES DERIVED FROM STATIONS AVAILABLE DIGITAL RECORDS FROM 1969 - 2001.
7. THE ELEVATION FREQUENCY CURVE HAS BEEN REPRODUCED FROM INFORMATION INCLUDED IN A REPORT TITLED NORTH ATLANTIC COAST COMPREHENSIVE STUDY (NACCS) COASTAL STORM MODEL SIMULATIONS: WAVES AND WATER LEVELS, DATED JANUARY 2015, ERDC/CHL TR-XX-DRAFT.

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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

HYDROLOGIC DATA SHEET

SHEET IDENTIFICATION
G-101
SHEET 5 OF 148

# UTILITY NOTES:

1. EXISTING UTILITY INFORMATION SHOWN HEREON IS SHOWN BASED ON SURVEY INFORMATION, THE USACE DOES NOT GUARANTEE ITS ACCURACY AND/OR COMPLETENESS. THE CONTRACTOR SHALL CALL 'NJ ONE CALL' (800-272-1000) TWO WEEKS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO THE START OF EXCAVATION AND NOTIFY THE COR OF ANY DISCREPANCIES.

2. ALL DESIGN AND CONSTRUCTION OF THE SANITARY SEWERS SHALL BE MADE IN ACCORDANCE WITH THE PROVISIONS OF THE TOWNSHIP OF MIDDLETOWN SEWERAGE AUTHORITY'S (TOMSA) RULES AND REGULATIONS FOR SEWERAGE DISPOSAL SYSTEMS IN RESIDENTIAL • NON-RESIDENTIAL DEVELOPMENTS IN THE TOWNSHIP OF MIDDLETOWN'S LATEST EDITION AND THE AUTHORITY STANDARD CONSTRUCTION DETAILS.

3. THE SANITARY SEWER SYSTEM SHALL BE TESTED IN ACCORDANCE WITH TOMSA RULES AND REGULATIONS, AND WITNESSED AND APPROVED BY THE TOMSA ENGINEER PRIOR TO ACCEPTANCE.

4. SANITARY SEWER WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION TREATMENT WORKS APPROVAL PERMIT(TWA). PERMIT TO BE DISPLAYED AT THE CONSTRUCTION SITE AT ALL TIMES.

5. THE CONTRACTOR SHALL NOTIFY THE COR AND TOMSA IMMEDIATELY OF ANY FIELD CONDITIONS ENCOUNTERED THAT DIFFER FROM THE CONTRACT PLANS.

6. THE CONTRACTOR MUST COMPLY WITH ALL THE STATE AND FEDERAL CONFINED SPACE RULES.

7. IF NECESSARY, THE EXISTING MANHOLES SHALL BE CORE-DRILLED FOR NEW SEWER CONNECTIONS (NO JACK HAMMERING PERMITTED).

8. PRIOR TO COMMENCEMENT OF THE WORK, THE CONTRACTOR SHALL SUBMIT TO THE COR AND TOMSA, FOR WRITTEN APPROVAL, A DETAILED OVERALL WORK SCHEDULE DETAILING THE CONTRACTORS SANITARY SEWER WORK PLAN.

9. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SANITARY SEWER FLOWS AT ALL TIMES DURING CONSTRUCTION. BY-PASS INSTALLATIONS SHALL BE PROVIDED AND BE MAINTAINED AT ALL TIMES TO ASSURE UNINTERRUPTED AND ADEQUATE FLOW OF SANITARY SEWERS AFFECTED BY CONSTRUCTION. BY-PASS PUMPING SHALL BE IN ACCORDANCE WITH THE TOMSA SPECIFICATION 'BY-PASS PUMPING • MAINTENANCE OF SEWER SERVICE''. THE ANTICIPATED FLOW AMOUNTS FOR THE PUMPS ARE AS FOLOWS:

| | | |
|---|---|---|
| A. | WILLOW/RT 36 - | 2.5 cfs |
| B. | CAMPBELL AVE. - | 5.0 cfs |
| C. | BROADWAY - | 20 cfs |

10. IN GENERAL, THE VERTICAL SEPARATION AT A CROSSING OF SEWER AND WATER SHALL BE AT LEAST 18" WITH WATER ON TOP. WHERE THIS IS NOT POSSIBLE, THE SEWER SHALL BE ENCASED IN CONCRETE FOR A DISTANCE OF AT LEAST 10' ON EITHER SIDE OF THE CROSSING AND IN CONFORMANCE WITH THE CONCRETE ENCASEMENT DETAIL. WHEN THE PROPOSED SEWER RUNS PARALLEL TO THE EXISTING WATER MAIN AND IT IS WITHIN 10' HORIZONTALLY AND 18' VERTICALLY OF THE SEWER, THE SEWER SHALL BE ENCASED IN CONCRETE OR THE WATER MAIN SHALL BE RELOCATED TO THE SATISFACTION OF THE COR AND TOMSA.

11. MANHOLE PROPOSED RIM ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL CONFIRM AND ADJUST ELEVATIONS AS NECESSARY TO MATCH FINAL GRADES.

12. ALL SANITARY SEWERS SHALL BE DUCTILE IRON, CLASS 56 PUSH-ON, GASKETED JOINT (WITH CERAMIC EPOXY LINING) PIPE.

13. PIPE LENGTHS SHOWN ARE MEASURED FROM MANHOLE CENTERS.

14. WHEN CONCRETE CRADLE/ENCASEMENT IS TO BE CONSTRUCTED, THE PIPE MUST BE SUPPORTED BY SOLID CONCRETE BLOCKS THAT SHALL FORM AN INTEGRAL PART OF THE CONCRETE CRADLE/ENCASEMENT. CONCRETE SHALL BE CLASS 40, AND SHALL BE MIXED AND PLACED IN ONE POUR. FORMS SHALL BE INSTALLED TO FULL HEIGHT PRIOR TO CONCRETE POUR. THE TRENCH SHALL BE DE-WATERED PRIOR TO ANY CONCRETE POUR.

15. THE CONTRACTOR SHALL NOTIFY THE COR AND TOMSA AT LEAST ONE WEEK PRIOR TO THE START OF SANITARY SEWER CONSTRUCTION.

16. PRIOR TO ACCEPTANCE, AS-BUILT PLANS, BOTH IN AUTOCADD 2007 FORMAT (OR A VERSION COMPATIBLE WITH AUTOCAD2015LT) AND PAPER FORMATS, SIGNED AND SEALED BY A NEW JERSEY LICENSED LAND SURVEYOR OR ENGINEER, FOR THE SANITARY SEWER SYSTEM SHALL BE SUBMITTED TO THE COR AND TOMSA, FOR REVIEW AND APPROVAL.

17. CONTRACTOR IS RESPONSIBLE FOR THE FEES AND OBTAINING ANY REQUIRED ROAD OPENING PERMITS FROM THE TOWNSHIP OF MIDDLETOWN AND MONMOUTH COUNTY. THE CONTRACTOR IS RESPONSIBLE FOR ANY BONDS REQUIRED FOR THE PERMITS (IF APPLICABLE).

18. TV INSPECTION WORK SHALL BE PERFORMED WHEN CONSTRUCTION IS FULLY COMPLETE. THE TV INSPECTIONS SHALL BE WITNESSED BY A REPRESENTATIVE FROM THE COR AND TOMSA. THE TV CAMERA AND RELATED EQUIPMENT SHALL PRODUCE A HIGH-QUALITY IMAGE OF THE SEWER PIPE. TWO COPIES EACH OF THE VIDEO AND REPORT SHALL BE SUBMITTED TO THE TOMSA AND THE COR. A COMPLETE HYDRAULIC CLEANING OF ALL SEWER PIPES AND MANHOLES SHALL BE REQUIRED, AND DONE PRIOR TO THE TV INSPECTION.

19. ALL CONFLICTING TRAFFIC CONTROL DEVICES SHALL BE REMOVED AND/OR RELOCATED.

20. PRIOR TO ACCEPTANCE, ALL SANITARY SEWER FACILITIES SHALL BE TESTED IN ACCORDANCE WITH THE SPECIFICATIONS, AND WITNESSES AND APPROVED BY THE COR AND TOMSA.

21. TOMSA HAS INDICATED THAT THE EXISTING PIPE MAY BE ASBESTOS CEMENT PIPE (ACP). IT IS THE CONTRACTORS RESPONSIBILITY FOR THE SAFE REMOVAL OF THE AC PIPE, THE DISPOSAL OF THE AC PIPE, AND ALL SAFETY REQUIREMENTS FOR DEALING WITH ACP.

22. EXISTING PIPES AND MANHOLES TO BE REPLACED/RE-ROUTED SHALL BE REMOVED ENTIRELY, AND NOT ABANDONED IN PLACE.

## UTILITIES

| | |
|---|---|
| WATER | NEW JERSEY AMERICAN WATER<br>BOB DAMOCI, SUPERINTENDANT FIELD OPERATIONS<br>661 SHREWSBURY AVE<br>SHREWSBURY, NJ 07702<br>PHONE: 732-933-5933 |
| GAS | NEW JERSEY NATURAL GAS<br>MARC PANACCIONE<br>1415 WYCKOFF ROAD<br>P.O. BOX 1468<br>WALL, NJ 07719<br>PHONE: 732-919-8140 |
| SEWER | TOWNSHIP OF MIDDLETOWN SEWERAGE AUTHORITY<br>BRIAN RISCHMAN, P.E.<br>P.O. BOX 205<br>100 BEVERLY WAY<br>BELFORD, NJ 07718<br>PHONE: 732-495-1010<br>FAX: 732-495-4565<br>BRISCHMAN@TOMSANJ.COM |
| TELEPHONE | VERIZON COMMUNICATIONS - NJ<br>CENTRALIZED ENGINEERING SERVICES<br>6000 HADLEY RD.<br>SOUTH PLAINFIELD, NJ 07080 |
| ELECTRIC | JCP&L ENGINEERING SERVICE<br>ONE RIVER CENTRE BLD. •3, THIRD FL.<br>331 NEWMAN SPRINGS ROAD<br>RED BANK, NJ 07701 |
| CABLE | COMCAST CABLE COMMUNICATIONS<br>LAWRENCE FARY/ CONSTRUCTION COORDINATOR<br>MONMOUTH COUNTY SYSTEM/ BRICK SYSTEM<br>751 BRICK BLVD<br>BRICK, NJ 08723<br>PHONE: 732-380-7145 |

# GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.

2. HORIZONTAL CONTROL DATUM IS IN NAD 83 AND VERTICAL CONTROL IS IN NAVD 1988.

3. ALL DIMENSIONS AND DETAILS SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN FIELD AND NOTIFY THE CONTRACTING OFFICER OF ANY DISCREPANCIES.

4. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY SAFEGUARDS TO PROTECT PUBLIC SAFETY AND ADJOINING PROPERTIES. THE CONTRACTOR SHALL COVER/PROTECT EXCAVATED AREA AT THE END OF EACH WORK DAY TO PREVENT ACCIDENTAL FALL.

5. ALL PROJECT SIGNS AND BARRICADES SHALL BE FURNISHED BY THE CONTRACTOR AND PLACED BY SAME AT LOCATIONS SHOWN ON PLANS OR AS DESIGNATED BY THE CONTRACTING OFFICER.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL THE FEDERAL, STATE, COUNTY ANDMUNICIPAL LAWS, ORDINANCES AND REGULATIONS.

7. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND PROTECT WORK FROM DAMAGE BY WATER DURING ALL STAGES OF CONSTRUCTION. NO SEPARATE PAYMENT WILL BE MADE FOR PROVIDING AND MAINTAINING EQUIPMENT AND METHODS TO KEEP EXCAVATIONS DEWATERED.

8. THE CONTRACTOR SHALL FURNISH, PLACE AND MAINTAIN SHEETING, BRACING, SHORING AND OTHER SUPPORTS REQUIRED BY THE WORK. COSTS THEREOF ARE TO BE INCLUDED IN THE BID.

9. ALL EQUIPMENT OR MATERIALS HAULED TO OR FROM THE PROJECT SITE SHALL BE BY THE ROUTES DESIGNATED OR APPROVED BY THE CONTRACTING OFFICER.

10. THE PROJECT BASELINE SHALL BE USED TO LAYOUT THE ALIGNMENT.

11. THE CONTRACTOR SHALL GRADE ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION ON THE FLOOD SIDE FOR POSITIVE DRAINAGE.

12. THE CONTRACTOR SHALL REPLACE ALL CURB AND SIDEWALK DISTURBED DURING CONSTRUCTION.

# SEQUENCE OF CONSTRUCTION:

1. APPLY FOR PERMIT AND OBTAIN CERTIFICATION FROM FREEHOLD SOIL CONSERVATION DISTRICT FOR SOIL EROSION & SEDIMENT CONTROL PLAN.

2. PROVIDE THE SOIL CONSERVATION DISTRICT WITH ADVANCE WRITTEN NOTICE OF SOIL DISTURBANCE.

3. MOBILIZE ALL SITE RELATED EQUIPMENT AND FACILITIES NEEDED.

4. INSTALL SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING SILT FENCE, TURBIDITY BARRIER, CATCH BASIN FILTERS AND THE GRAVEL CONSTRUCTION ENTRANCES.

5. PERFORM CLEARING AND GRUBBING.

6. STAKE THE FLOOD WALL CENTERLINE WITH NEEDED OFFSETS.

7. INSTALL SANITARY BY-PASS PUMPING MEASURES.

8. CONSTRUCT PROPOSED FLOOD PROTECTION FEATURES: SHEET PILE DRIVING, SHEET PILE SPLICING, LEVEE, FLOOD WALL, CLOSURE GATES INTERIOR DRAINAGE AND CLOSURE GATES. THE ACTIVITIES ASSOCIATED SHALL INCLUDE PILE DRIVING, EXCAVATION FOR FOUNDATION, BACKFILL, GRADE BACKFILL TO EITHER BUILT SWALE OR SIDE SLOPES TO MEET EXISTING GRADES, STORMWATER PIPES AND MANHOLES, UTILITY RELOCATIONS AND MORE.

9. INSTALL NEW SANITARY SEWERS AS SHEET PILE HAS BEEN INSTALLED IN EACH AREA.

10. PERFORM SITE GRADING AND PROVIDE TEMPORARY AND PERMANENT SOIL STABILIZATION MEASURES TO INCLUDE SEEDING AND FOREST PLANTING.

11. AFTER COMPLETION OF THE WORK AND AS APPROVED BY THE COR, REMOVE SEDIMENT CONTROL FEATURES.

12. DEMOBILIZE AFTER FINAL APPROVAL.

13. ESTIMATED PROJECT DURATION IS 549 CALENDAR DAYS.

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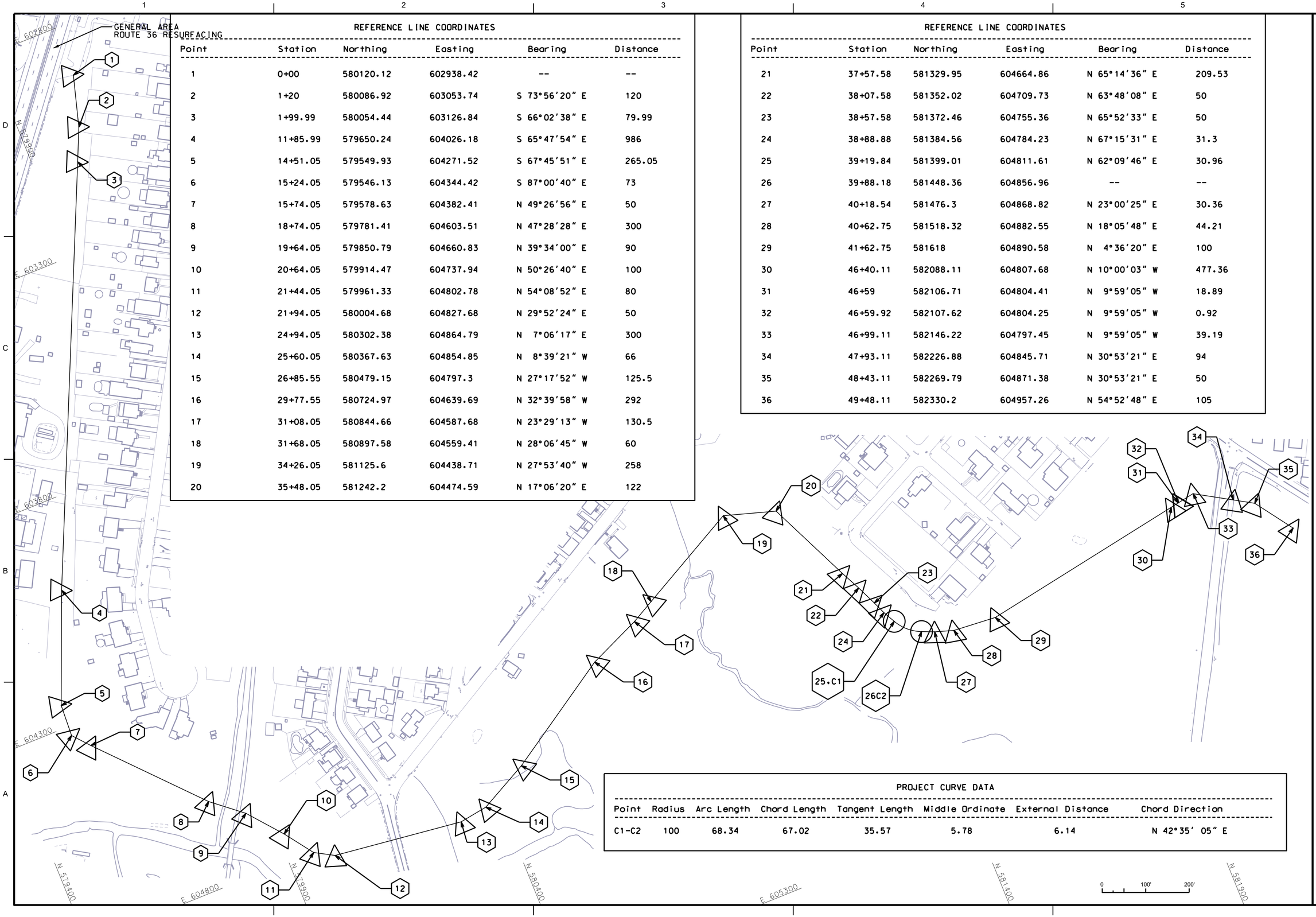
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

GENERAL / SEWER NOTES

SHEET IDENTIFICATION
G-102
SHEET 6 OF 148

GENERAL AREA
ROUTE 36 RESURFACING




REFERENCE LINE COORDINATES

| Point | Station | Northing | Easting | Bearing | Distance |
|---|---|---|---|---|---|
| 1 | 0+00 | 580120.12 | 602938.42 | -- | -- |
| 2 | 1+20 | 580086.92 | 603053.74 | S 73°56'20" E | 120 |
| 3 | 1+99.99 | 580054.44 | 603126.84 | S 66°02'38" E | 79.99 |
| 4 | 11+85.99 | 579650.24 | 604026.18 | S 65°47'54" E | 986 |
| 5 | 14+51.05 | 579549.93 | 604271.52 | S 67°45'51" E | 265.05 |
| 6 | 15+24.05 | 579546.13 | 604344.42 | S 87°00'40" E | 73 |
| 7 | 15+74.05 | 579578.63 | 604382.41 | N 49°26'56" E | 50 |
| 8 | 18+74.05 | 579781.41 | 604603.51 | N 47°28'28" E | 300 |
| 9 | 19+64.05 | 579850.79 | 604660.83 | N 39°34'00" E | 90 |
| 10 | 20+64.05 | 579914.47 | 604737.94 | N 50°26'40" E | 100 |
| 11 | 21+44.05 | 579961.33 | 604802.78 | N 54°08'52" E | 80 |
| 12 | 21+94.05 | 580004.68 | 604827.68 | N 29°52'24" E | 50 |
| 13 | 24+94.05 | 580302.38 | 604864.79 | N 7°06'17" E | 300 |
| 14 | 25+60.05 | 580367.63 | 604854.85 | N 8°39'21" W | 66 |
| 15 | 26+85.55 | 580479.15 | 604797.3 | N 27°17'52" W | 125.5 |
| 16 | 29+77.55 | 580724.97 | 604639.69 | N 32°39'58" W | 292 |
| 17 | 31+08.05 | 580844.66 | 604587.68 | N 23°29'13" W | 130.5 |
| 18 | 31+68.05 | 580897.58 | 604559.41 | N 28°06'45" W | 60 |
| 19 | 34+26.05 | 581125.6 | 604438.71 | N 27°53'40" W | 258 |
| 20 | 35+48.05 | 581242.2 | 604474.59 | N 17°06'20" E | 122 |

REFERENCE LINE COORDINATES

| Point | Station | Northing | Easting | Bearing | Distance |
|---|---|---|---|---|---|
| 21 | 37+57.58 | 581329.95 | 604664.86 | N 65°14'36" E | 209.53 |
| 22 | 38+07.58 | 581352.02 | 604709.73 | N 63°48'08" E | 50 |
| 23 | 38+57.58 | 581372.46 | 604755.36 | N 65°52'33" E | 50 |
| 24 | 38+88.88 | 581384.56 | 604784.23 | N 67°15'31" E | 31.3 |
| 25 | 39+19.84 | 581399.01 | 604811.61 | N 62°09'46" E | 30.96 |
| 26 | 39+88.18 | 581448.36 | 604856.96 | -- | -- |
| 27 | 40+18.54 | 581476.3 | 604868.82 | N 23°00'25" E | 30.36 |
| 28 | 40+62.75 | 581518.32 | 604882.55 | N 18°05'48" E | 44.21 |
| 29 | 41+62.75 | 581618 | 604890.58 | N 4°36'20" E | 100 |
| 30 | 46+40.11 | 582088.11 | 604807.68 | N 10°00'03" W | 477.36 |
| 31 | 46+59 | 582106.71 | 604804.41 | N 9°59'05" W | 18.89 |
| 32 | 46+59.92 | 582107.62 | 604804.25 | N 9°59'05" W | 0.92 |
| 33 | 46+99.11 | 582146.22 | 604797.45 | N 9°59'05" W | 39.19 |
| 34 | 47+93.11 | 582226.88 | 604845.71 | N 30°53'21" E | 94 |
| 35 | 48+43.11 | 582269.79 | 604871.38 | N 30°53'21" E | 50 |
| 36 | 49+48.11 | 582330.2 | 604957.26 | N 54°52'48" E | 105 |

PROJECT CURVE DATA

| Point | Radius | Arc Length | Chord Length | Tangent Length | Middle Ordinate | External Distance | Chord Direction |
|---|---|---|---|---|---|---|---|
| C1-C2 | 100 | 68.34 | 67.02 | 35.57 | 5.78 | 6.14 | N 42°35' 05" E |

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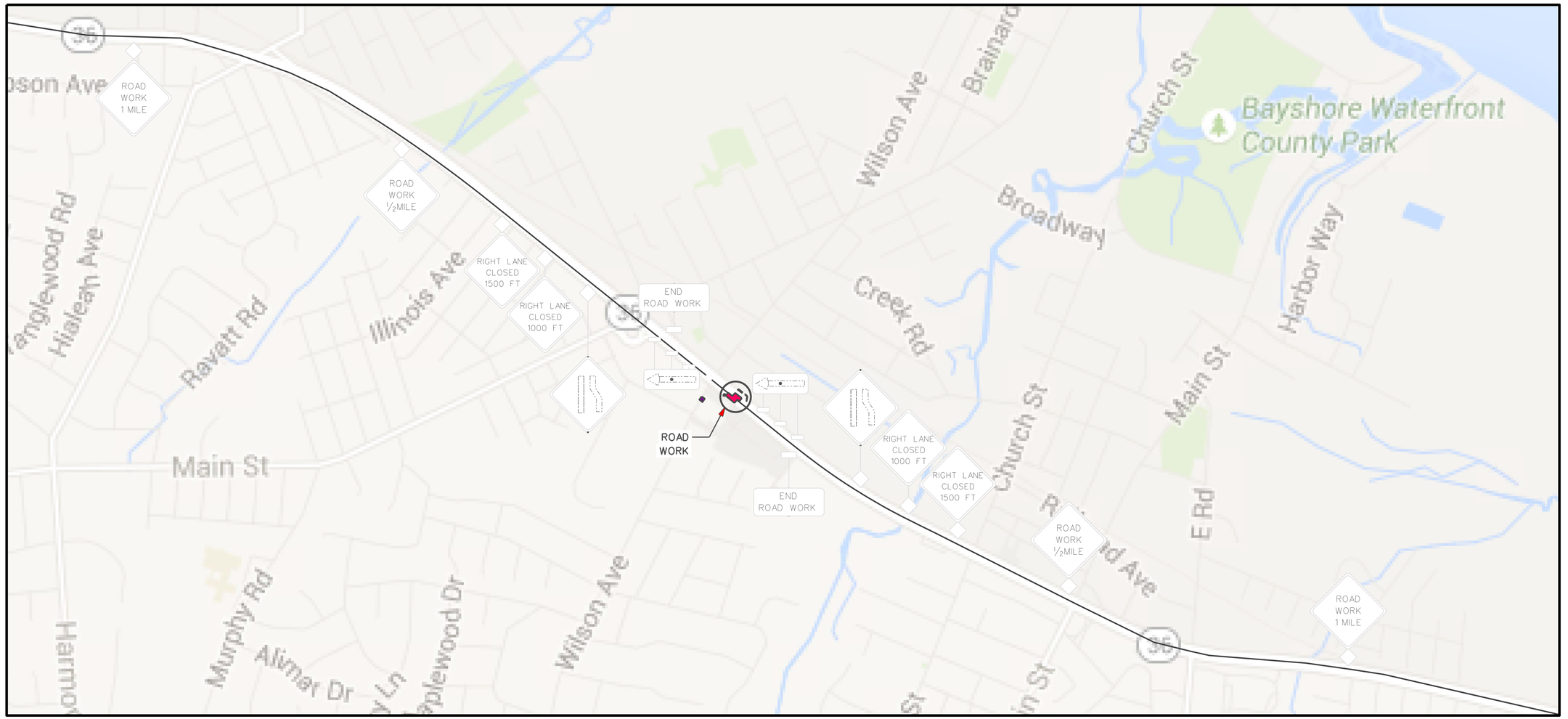
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NEW YORK DISTRICT
NEW YORK, NY

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| SUBMITTED BY: NS | | CONTRACT NO.: | |
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| PLOT SIZE: ANSI D | FILE NAME: G-103.dgn | | |

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 1 4
PORT MONMOUTH, NJ

# ALIGNMENT PLAN AND CONSTRUCTION LIMITS

SHEET IDENTIFICATION
G-103
SHEET 7 OF 148




## MPT NOTES:

1. THE STAGES OF CONSTRUCTION SHALL SERVE AS A SUGGESTED GUIDE FOR THE SAFE DIVERSION OF TRAFFIC DURING THE EXECUTION OF THIS CONTRACT. HOWEVER, THE CONTRACTOR MAY IMPROVE OR MODIFY THE MPT PLAN TO MEET CONSTRUCTION NEEDS BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. THE CONTRACTING OFFICER SHALL BE PROVIDED AT LEAST 48 HOURS IN ADVANCE OF ANY CHANGE TO THE SUGGESTED STAGES OF CONSTRUCTION AND MPT PLAN.

2. THE CONTRACTOR IS TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE MPT DRAWINGS, MUTCD STANDARDS, APPLICABLE NJDOT STATE STANDARDS, AND AS DIRECTED BY THE CONTRACTING OFFICER.

3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES, APPROACHES, AND TEMPORARY ROADS WITHIN THE CONTRACTOR'S WORKING LIMITS AT ALL TIMES.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND EROSION AND SEDIMENT CONTROL PROTECTION DURING ALL PHASES OF CONSTRUCTION.

5. THE CONTRACTOR SHALL PROVIDED, INSTALL, MAINTAIN, AND REMOVE ALL SIGNS AND SIGN SUPPORTS REQUIRED FOR TRAFFIC CONTROL AND PROTECTION.

6. WHERE REQUIRED, THE TRAFFIC SIGNS SHALL BE RELOCATED FOR EACH STAGE OF CONSTRUCTION.

## CONSTRUCTION STAGE I NOTES:

1. DURING STAGE I, THE CONTRACTOR SHALL PROCEED WITH THE MILLING AND RESURFACING WORK ALONG THE RIGHT HAND (OUTER) LANES AND SHOULDERS OF NJ STATE ROUTE 36 FACING NORTH AND FACING SOUTH, & CURB REMOVAL AND REPLACEMENT ON NJ STATE ROUTE 36. THE LEFT HAND (INNER) LANES OF NJ STATE ROUTE 36 FACING NORTH AND FACING SOUTH SHALL REMAIN OPEN FOR TRAFFIC FLOW.

2. ALL TRAFFIC SIGNS FOR THE WORK AREA SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION OR MAINTENANCE OPERATIONS.

3. CONTRACTOR SHALL VERIFY ALL DETOUR ROUTES, AND SHALL PROVIDE THE CONTRACTING OFFICER THE PROPOSED DETOUR ROUTES THAT WILL BE SUBJECT TO NJDOT'S AND THE TOWN OF PORT MONMOUTH'S APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.

4. THE CONTRACTOR SHALL VERIFY THE EXISTING ROADWAY CONDITIONS, INCLUDING THE EXISTING STRIPING AND THE ENTIRE RIGHT-OF-WAY WIDTH. THE CONTRACTOR SHALL SUBMIT A STRIPING PLAN TO THE CONTRACTING OFFICER THAT WILL BE SUBJECT TO APPROVAL FROM NJDOT. ALL EXISTING AND PROPOSED STRIPING ON THE DRAWINGS PREPARED BY THE CONTRACTOR ARE TO BE EXACTLY AS THEY EXIST IN THE FIELD.

5. REFER TO SHEET G-105 FOR LAYOUT DETAILS AT THE INTERSECTION.

500 250 0 500 1000FT
SCALE: 1"=500 FEET

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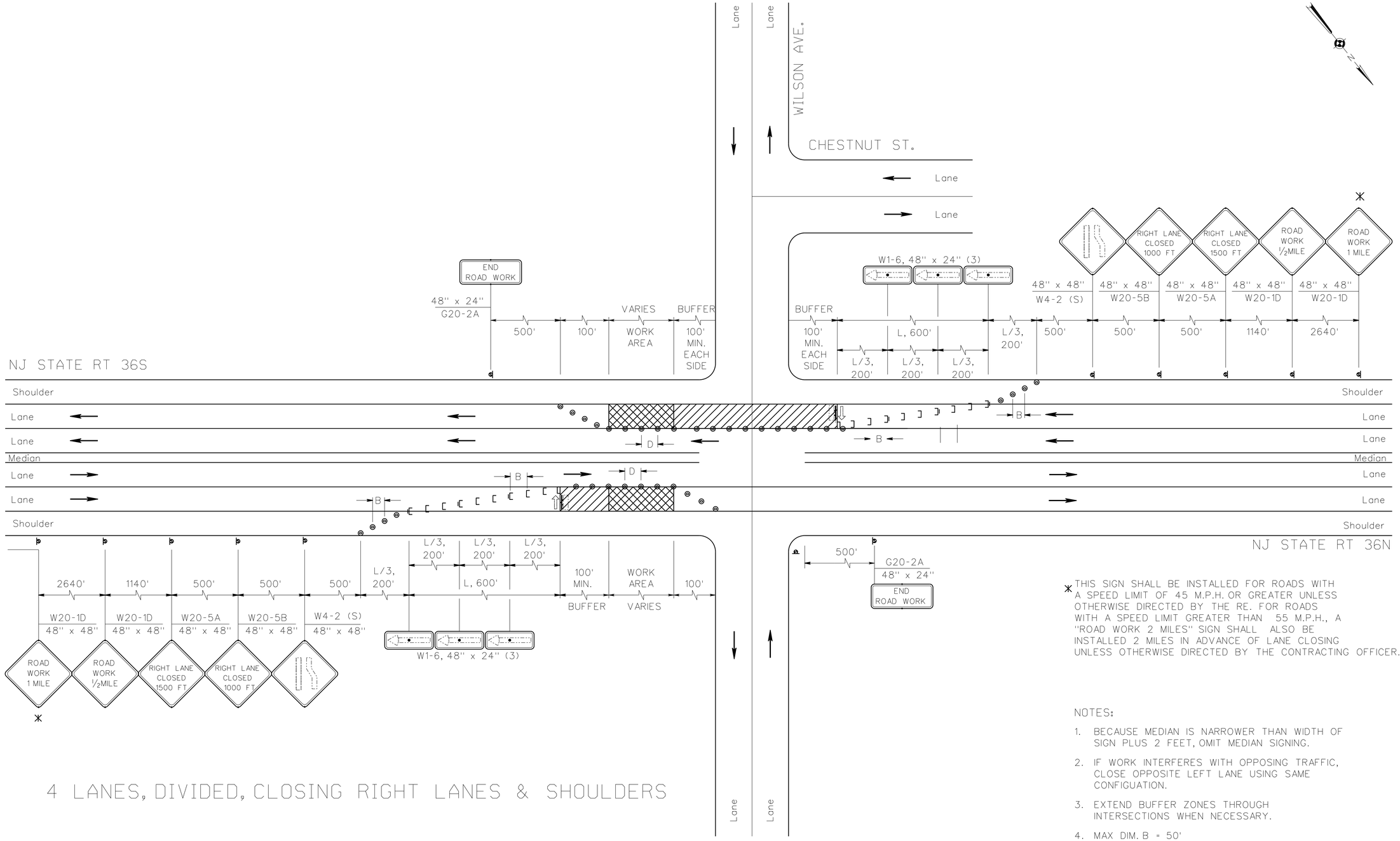
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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

# NJ STATE ROUTE 36 MPT GENERAL PLAN STAGE I

SHEET IDENTIFICATION
G-104
SHEET 8 OF 148




* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE. FOR ROADS WITH A SPEED LIMIT GREATER THAN 55 M.P.H., A "ROAD WORK 2 MILES" SIGN SHALL ALSO BE INSTALLED 2 MILES IN ADVANCE OF LANE CLOSING UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.

NOTES:

1. BECAUSE MEDIAN IS NARROWER THAN WIDTH OF SIGN PLUS 2 FEET, OMIT MEDIAN SIGNING.
2. IF WORK INTERFERES WITH OPPOSING TRAFFIC, CLOSE OPPOSITE LEFT LANE USING SAME CONFIGUATION.
3. EXTEND BUFFER ZONES THROUGH INTERSECTIONS WHEN NECESSARY.
4. MAX DIM. B = 50'
   MAX DIM. D = 100'

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New York District

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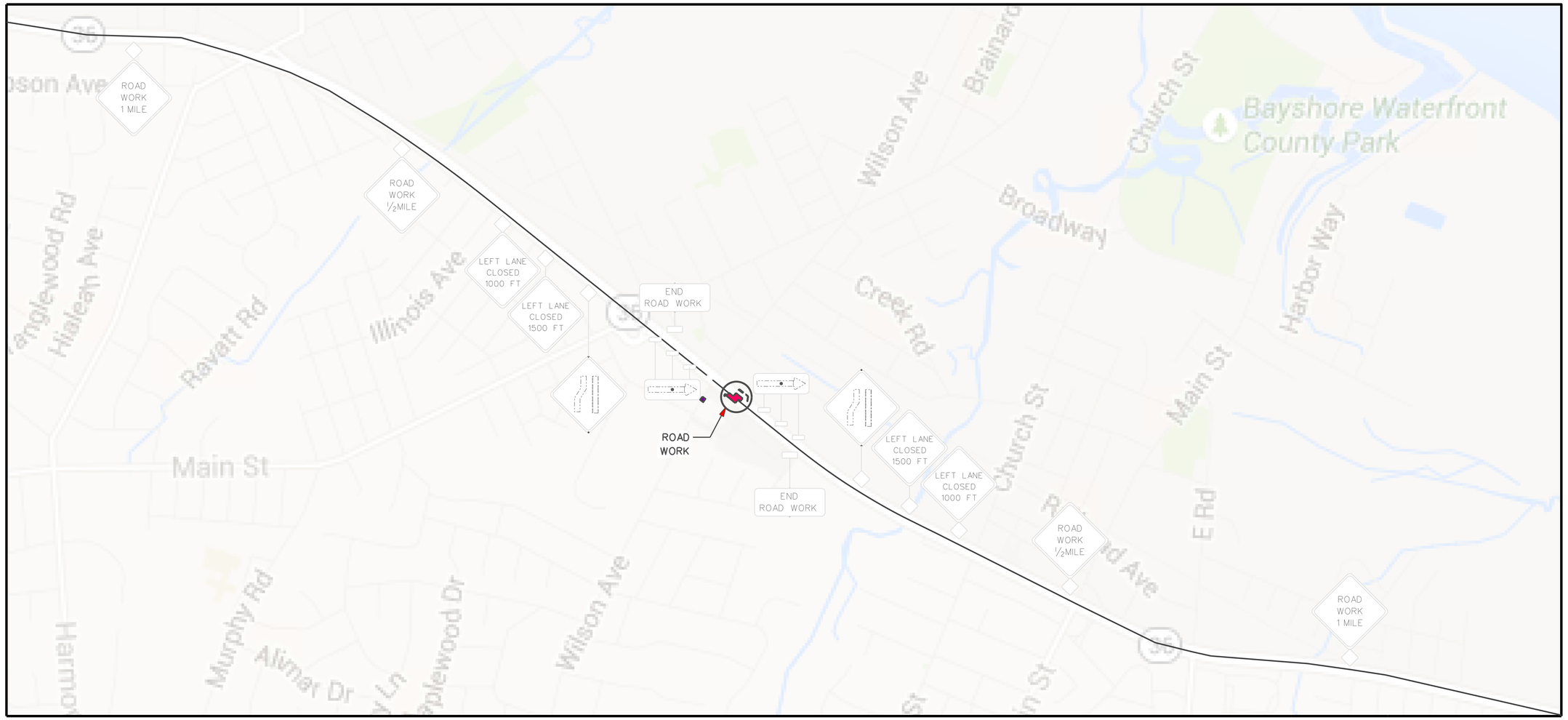
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NEW YORK DISTRICT
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

NJ STATE ROUTE 36
MPT PLAN
STAGE I

SHEET IDENTIFICATION
G-105
SHEET 9 OF 148




## MPT NOTES:

1. THE STAGES OF CONSTRUCTION SHALL SERVE AS A SUGGESTED GUIDE FOR THE SAFE DIVERSION OF TRAFFIC DURING THE EXECUTION OF THIS CONTRACT. HOWEVER, THE CONTRACTOR MAY IMPROVE OR MODIFY THE MPT PLAN TO MEET CONSTRUCTION NEEDS BUT NOT AT THE EXPENSE OF PUBLIC SAFETY OR CONVENIENCE. THE CONTRACTING OFFICER SHALL BE PROVIDED AT LEAST 48 HOURS IN ADVANCE OF ANY CHANGE TO THE SUGGESTED STAGES OF CONSTRUCTION AND MPT PLAN.

2. THE CONTRACTOR IS TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE MPT DRAWINGS, MUTCD STANDARDS, APPLICABLE NJDOT STATE STANDARDS, AND AS DIRECTED BY THE CONTRACTING OFFICER.

3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES, APPROACHES, AND TEMPORARY ROADS WITHIN THE CONTRACTOR'S WORKING LIMITS AT ALL TIMES.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND EROSION CONTROL PROTECTION DURING ALL PHASES OF CONSTRUCTION.

5. THE CONTRACTOR SHALL PROVIDE, INSTALL, MAINTAIN, AND REMOVE ALL SIGNS AND SIGN SUPPORTS REQUIRED FOR TRAFFIC CONTROL AND PROTECTION.

6. WHERE REQUIRED, THE TRAFFIC SIGNS SHALL BE RELOCATED FOR EACH STAGE OF CONSTRUCTION.

## CONSTRUCTION STAGE II NOTES:

1. DURING STAGE II, THE CONTRACTOR SHALL PROCEED WITH THE MILLING AND RESURFACING WORK ALONG THE LEFT HAND (INNER) LANES OF NJ STATE ROUTE 36 FACING NORTH AND FACING SOUTH. THE RIGHT HAND (OUTER) LANES OF NJ STATE ROUTE 36 FACING NORTH AND FACING SOUTH SHALL REMAIN OPEN FOR TRAFFIC FLOW.

2. ALL TRAFFIC SIGNS FOR THE WORK AREA SHALL BE IN PLACE PRIOR TO THE START OF CONSTRUCTION OR MAINTENANCE OPERATIONS.

3. CONTRACTOR SHALL VERIFY ALL DETOUR ROUTES, AND SHALL PROVIDE THE CONTRACTING OFFICER THE PROPOSED DETOUR ROUTES THAT WILL BE SUBJECT TO NJDOT'S AND THE TOWN OF PORT MONMOUTH'S APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.

4. THE CONTRACTOR SHALL VERIFY THE EXISTING ROADWAY CONDITIONS, INCLUDING THE EXISTING STRIPING AND THE ENTIRE RIGHT-OF-WAY WIDTH. THE CONTRACTOR SHALL SUBMIT A STRIPING PLAN TO THE CONTRACTING OFFICER THAT WILL BE SUBJECT TO APPROVAL FROM NJDOT. ALL EXISTING AND PROPOSED STRIPING ON THE DRAWINGS PREPARED BY THE CONTRACTOR ARE TO BE EXACTLY AS THEY EXIST IN THE FIELD.

5. REFER TO SHEET G-107 FOR LAYOUT DETAILS AT THE INTERSECTION.

500 250 0 500 1000FT
SCALE: 1"=500 FEET

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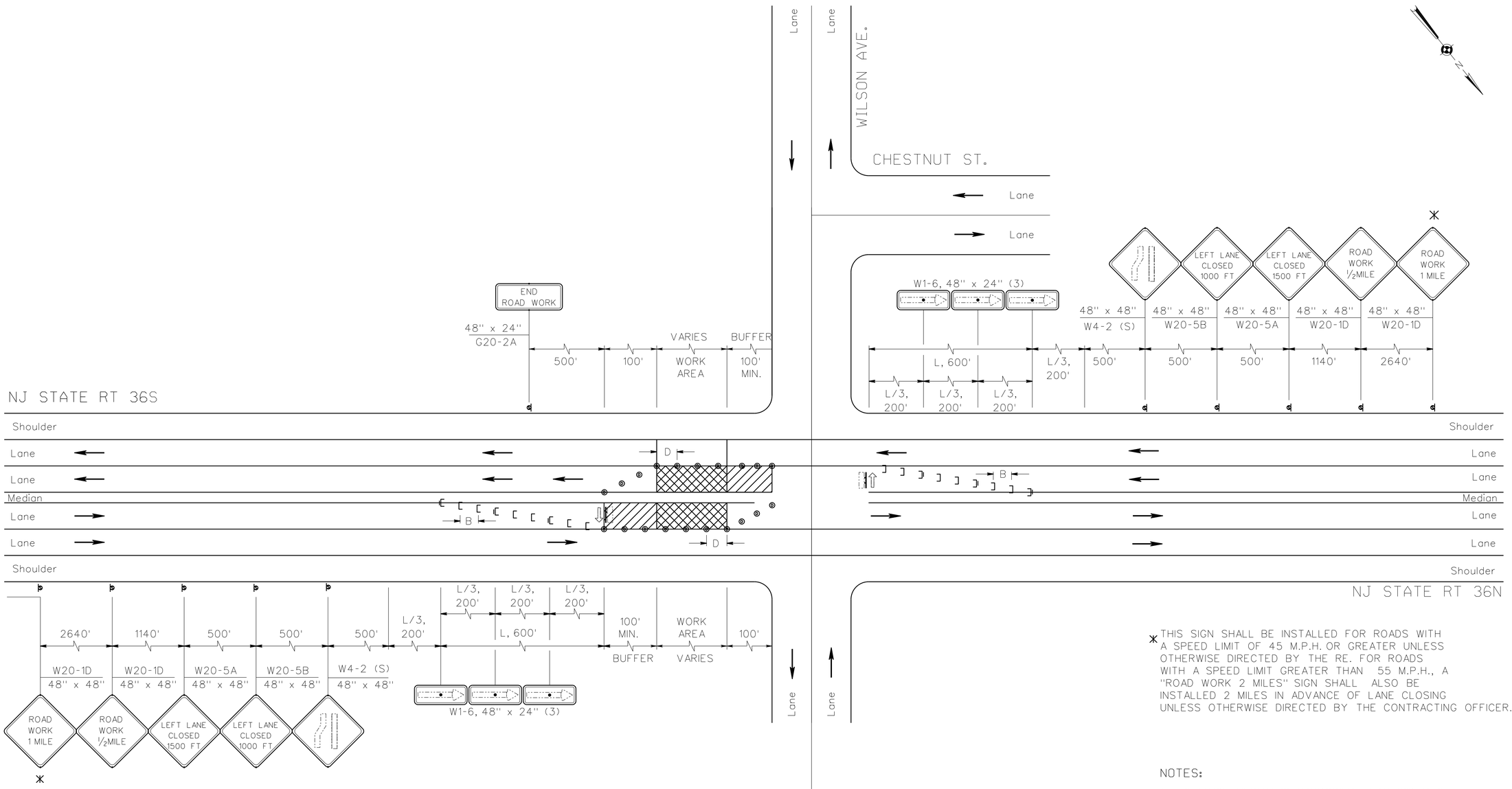
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

# NJ STATE ROUTE 36 MPT GENERAL PLAN STAGE II

SHEET IDENTIFICATION
G-106
SHEET 10 OF 148




## 4 LANES, DIVIDED, CLOSING LEFT LANES & SHOULDERS

* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE. FOR ROADS WITH A SPEED LIMIT GREATER THAN 55 M.P.H., A "ROAD WORK 2 MILES" SIGN SHALL ALSO BE INSTALLED 2 MILES IN ADVANCE OF LANE CLOSING UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.

NOTES:

1. BECAUSE MEDIAN IS NARROWER THAN WIDTH OF SIGN PLUS 2 FEET, OMIT MEDIAN SIGNING.
2. IF WORK INTERFERES WITH OPPOSING TRAFFIC, CLOSE OPPOSITE LEFT LANE USING SAME CONFIGUATION.
3. EXTEND BUFFER ZONES THROUGH INTERSECTIONS WHEN NECESSARY.
4. MAX DIM. B = 50'
   MAX DIM. D = 100'

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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

NJ STATE ROUTE 36
MPT PLAN
STAGE II

SHEET IDENTIFICATION
G-107
SHEET 11 OF 148

NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

3. ALL SOIL AND EROSION CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PRIOR TO ANY MAJOR CONSTRUCTION DISTURBANCES, OR IN THEIR PROPER SEQUENCE, UNTIL PERMANENT PROTECTION IS ESTABLISHED.

ESTABLISH ACCESS ROAD

SILT FENCE

TURBIDITY BARRIER

E 602800
N 579900
E 603300
E 603800
E 604300
N 579400
E 604800
N 579900
N 580400
E 605300
N 581400
N 581900

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+48

0 100' 200'


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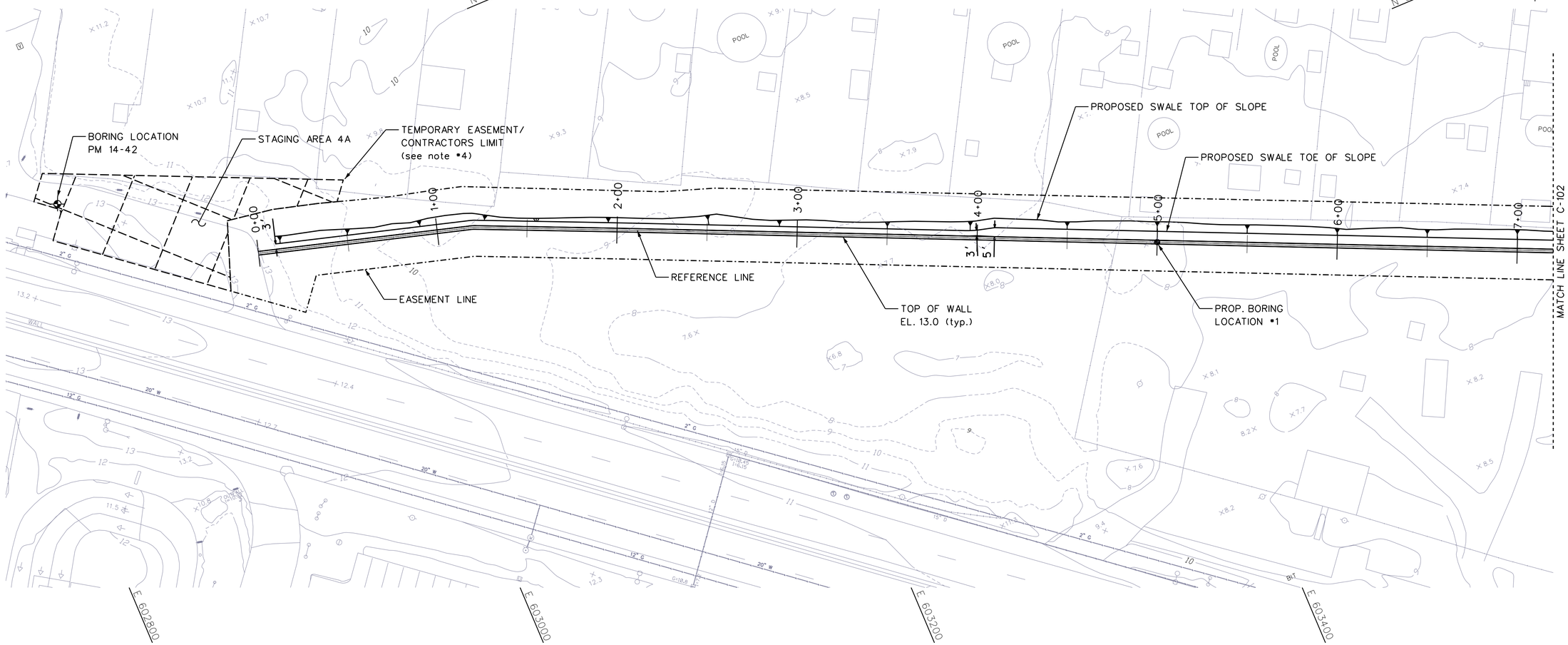
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NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

# SOIL + EROSION CONTROL PLAN

SHEET IDENTIFICATION
G-108
SHEET 12 OF 148

# STA 0+00 TO STA 7+20




NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.

2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.

3. REFERENCE LINE, AS SHOWN, IS APPROXIMATE. CONTRACTOR SHALL HAVE THEIR SURVEYOR CONFIRM THE EXACT LOCATION OF THE REFERENCE LINE. THE EASEMENT LINE (ON THE PROTECTED SIDE) SHALL BE SET ON THE REAR PROPERTY LINES FOR THE RESIDENTIAL PROPERTIES FRONTING ON WILLOW STREET, THEREBY, KEEPING THE WORKING AREA OUTSIDE OF THE RESIDENTIAL LOTS. THE EASEMENT LINE SHALL BE SET 15FT FROM TOP OF SWALE. THE EASEMENT LINE ON THE UNPROTECTED SIDE, SHALL BE SET 15FT FROM THE FLOODWALL (UNPROTECTED SIDE FACE). REFER TO DETAIL *4 ON C-507.

4. THE CONTRACTOR SHALL USE MIDDLETOWN COMMUTER LOT *6 (BLOCK *265, LOT *60.01) AS A STAGING AREA (4A), WITHIN THE LIMITS AS INDICATED.

5. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA AND 31 00 00 FOR PROPOSED BORING INFORMATION.

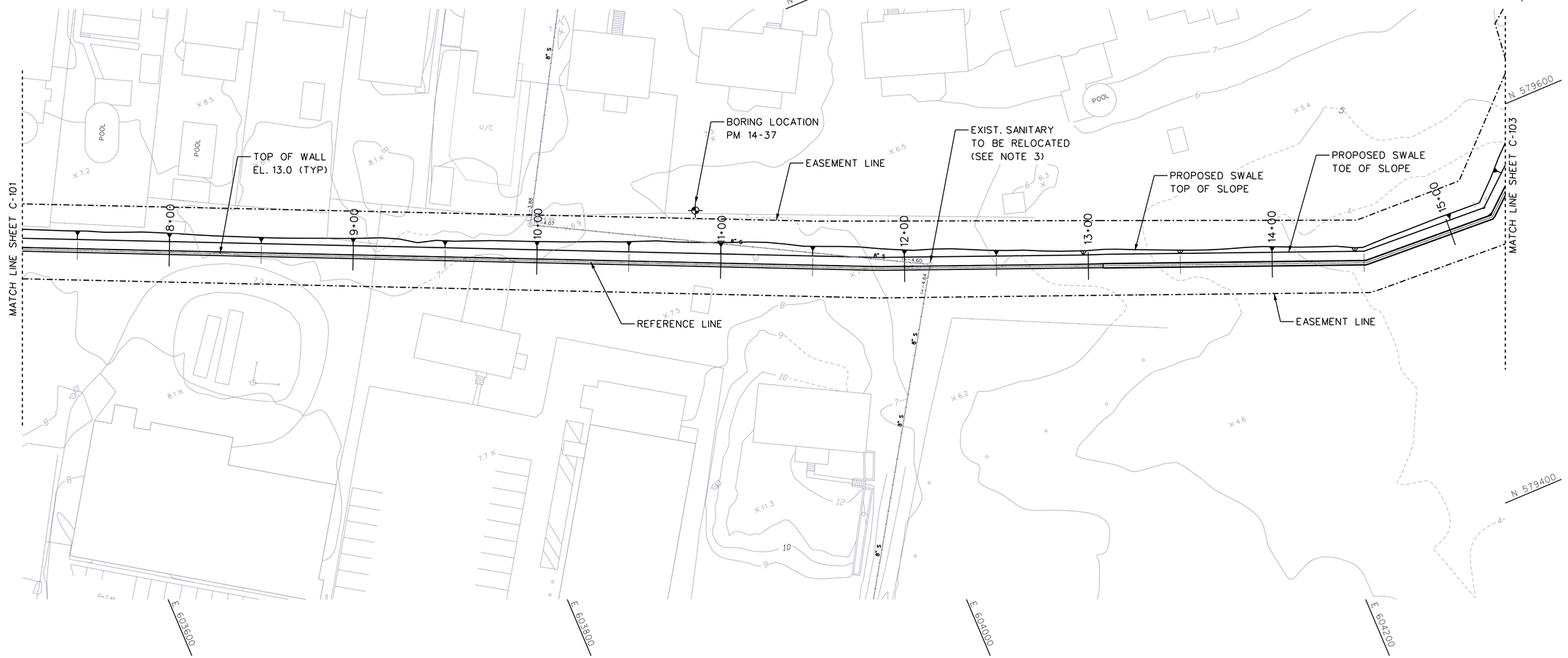
0 30' 60'

SCALE:1"= 30'

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# STA 7+20 TO STA 15+30




NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.

2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.

3. REFER TO SHEET C-108 FOR PLAN AND PROFILE OF 8" SANITARY SEWER TO BE REPLACED AND RELOCATED.

4. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA.

0 30' 60'

SCALE:1"= 30'

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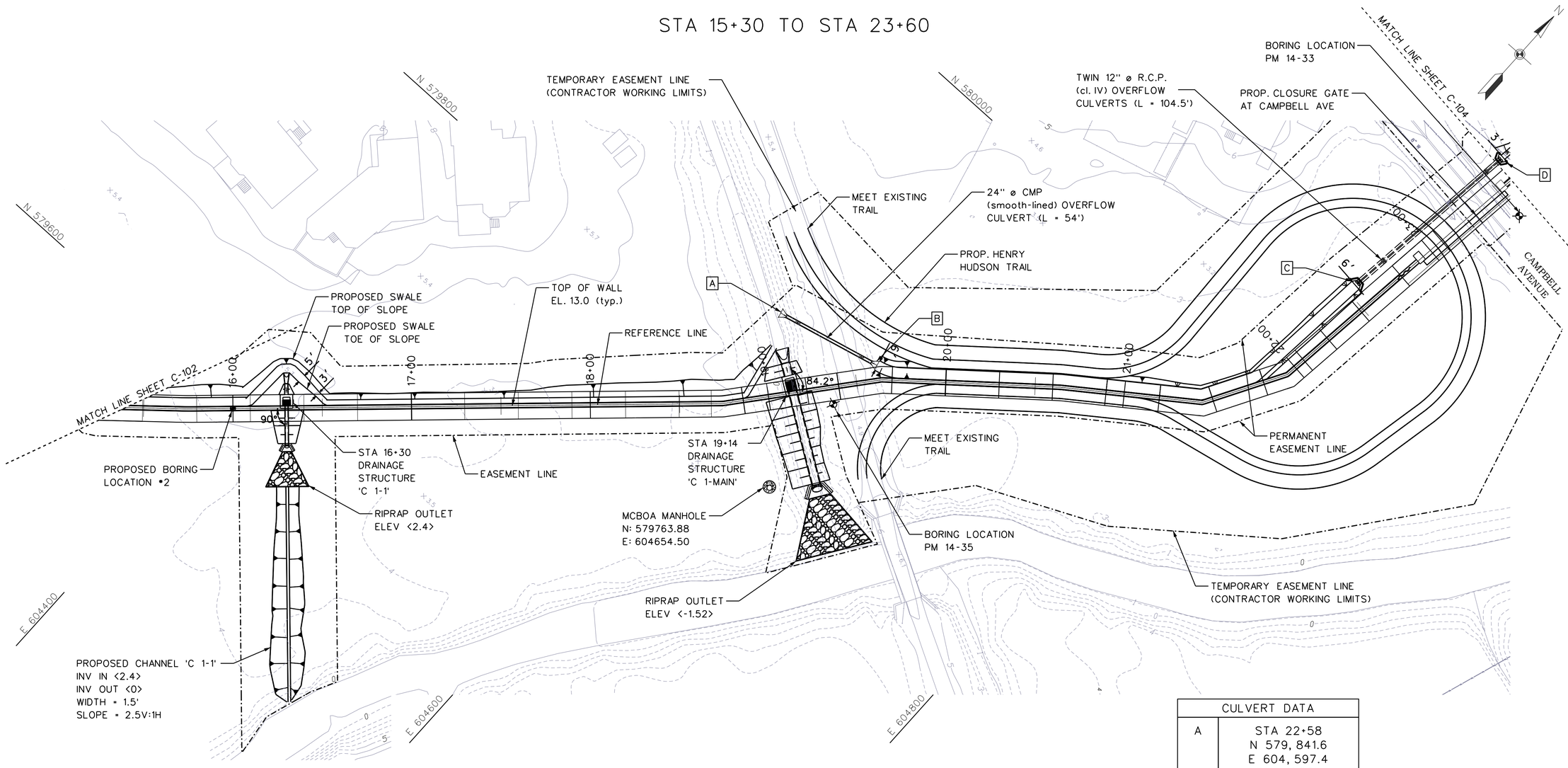
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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE PLAN
STA 7+20 TO STA 15+30

SHEET IDENTIFICATION
C-102
SHEET 14 OF 148

# STA 15+30 TO STA 23+60




| CULVERT DATA | |
|---|---|
| A | STA 22+58<br>N 579, 841.6<br>E 604, 597.4<br>INV <1.00> |
| B | STA 23+62<br>N 579854.2<br>E 604650.0<br>INV <1.40> |
| C | STA 22+58<br>N 580,070.8<br>E 604,824.2<br>INV <1.70> |
| D | STA 23+62<br>N 580,174.5<br>E 604,837.1<br>INV <1.70> |

NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.
2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.
3. SEE SHEET S-511 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 1-1'.
4. SEE SHEET S-512 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 1-MAIN'.
5. SEE SHEET S-106 FOR CAMPBELL FLOOD GATE FOUNDATION PLAN AND SCHEMATIC, AND SHEET S-302 FOR SECTIONS.
6. SEE SHEET C-107 FOR MORE DETAILS ON PROPOSED HENRY HUDSON TRAIL.
7. SEE SHEET C-515 FOR RIPRAP OUTLET DIMENSIONS.
8. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA AND 31 00 00 FOR PROPOSED BORING INFORMATION.

0 30' 60'

SCALE:1"= 30'

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New York District

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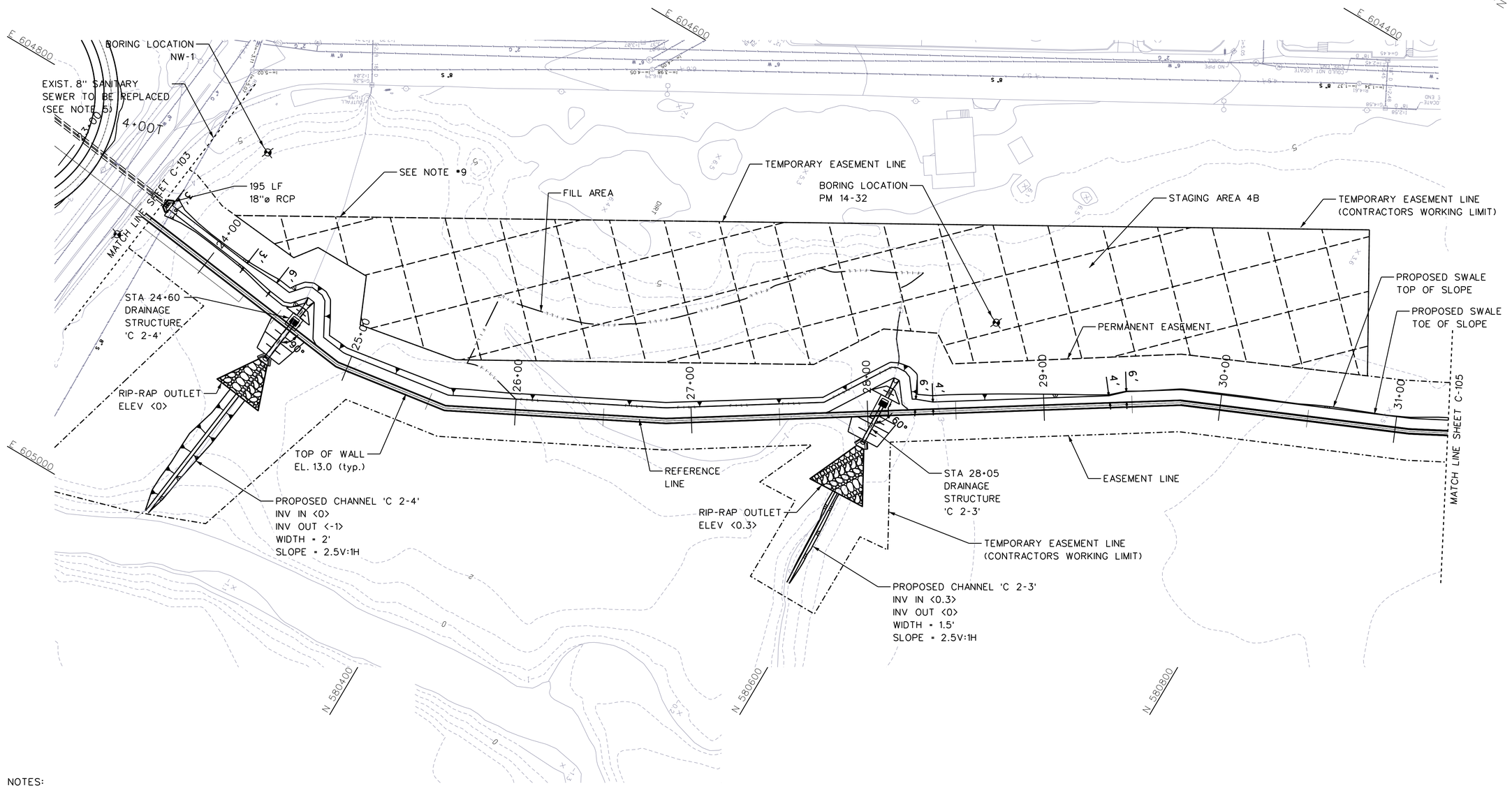
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

SITE PLAN
STA 15+30 TO STA 23+60

SHEET IDENTIFICATION
C-103
SHEET 15 OF 148

# STA 23+60 TO STA 31+30




NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.

2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.

3. SEE SHEET S-513 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 2-4'.

4. SEE SHEET S-514 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 2-3'.

5. REFER TO SHEET C-109 FOR PLAN AND PROFILE OF 8" SANITARY SEWER TO BE REPLACED, AND GAS & WATER TO BE REPLACED WITHIN CAMPBELL AVENUE.

6. SEE SHEET C-515 FOR RIPRAP OUTLET DIMENSIONS.

7. THE LIMITS FOR STAGING AREA 4B ARE APPROXIMATE. STAGING AREA SHALL BE CONTAINED WITHIN LAND OWENED BY THE COUNTY/STATE, AND THEY WILL FINIALIZE THOSE LIMITS.

8. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA.

9. ALL EXISTING DRAINAGE SWALES ON THE PROTECTED SIDE ARE TO REMAIN. SWALES THAT ARE WITHIN THE STAGING AREAS SHALL BE PIPED, OR THAT AREA SHALL REMAIN IN ITS NATURAL CONDITION. E•SC MEASURES SHALL BE PROVIDED, AS NECESSARY. IF THE SWALE IS PIPE, IT WILL BE RETURNED TO ITS NATURAL CONDITION AS THE END OF CONSTRUCTION.

0 30' 60'

SCALE:1"= 30'

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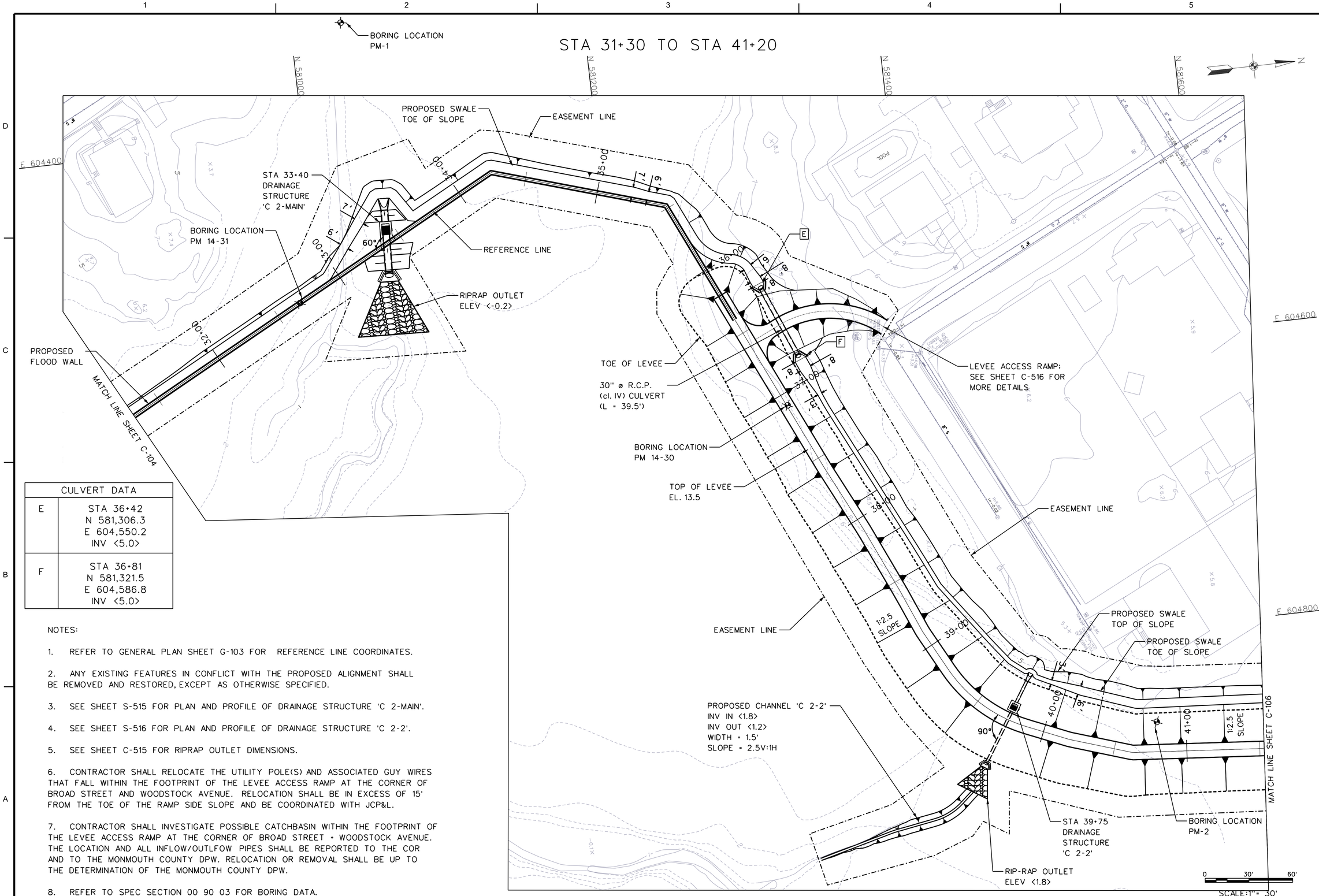
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U.S. ARMY CORPS OF ENGINEERS NEW YORK DISTRICT NEW YORK, NY | NS | NS | N.T.S.

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE PLAN
STA 23+60 TO STA 31+30

SHEET IDENTIFICATION
C-104
SHEET 16 OF 148

# STA 31+30 TO STA 41+20




| CULVERT DATA | |
|---|---|
| E | STA 36+42<br>N 581,306.3<br>E 604,550.2<br>INV <5.0> |
| F | STA 36+81<br>N 581,321.5<br>E 604,586.8<br>INV <5.0> |

NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.

2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.

3. SEE SHEET S-515 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 2-MAIN'.

4. SEE SHEET S-516 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 2-2'.

5. SEE SHEET C-515 FOR RIPRAP OUTLET DIMENSIONS.

6. CONTRACTOR SHALL RELOCATE THE UTILITY POLE(S) AND ASSOCIATED GUY WIRES THAT FALL WITHIN THE FOOTPRINT OF THE LEVEE ACCESS RAMP AT THE CORNER OF BROAD STREET AND WOODSTOCK AVENUE. RELOCATION SHALL BE IN EXCESS OF 15' FROM THE TOE OF THE RAMP SIDE SLOPE AND BE COORDINATED WITH JCP&L.

7. CONTRACTOR SHALL INVESTIGATE POSSIBLE CATCHBASIN WITHIN THE FOOTPRINT OF THE LEVEE ACCESS RAMP AT THE CORNER OF BROAD STREET + WOODSTOCK AVENUE. THE LOCATION AND ALL INFLOW/OUTLFOW PIPES SHALL BE REPORTED TO THE COR AND TO THE MONMOUTH COUNTY DPW. RELOCATION OR REMOVAL SHALL BE UP TO THE DETERMINATION OF THE MONMOUTH COUNTY DPW.

8. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA.

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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE PLAN
STA 31+30 TO STA 41+20

SHEET IDENTIFICATION
C-105
SHEET 17 OF 148

# STA 41+20 TO STA 49+47

LEVEE ACCESS RAMP; SEE SHEET C-516 FOR MORE DETAILS

EASEMENT LINE

30" ø R.C.P. (cl. IV) CULVERTS (L = 40')

STA 47+25 DRAINAGE STRUCTURE 'C 2-1'

12" ø R.C.P. (cl. IV) OVERFLOW CULVERTS (L = 40')

EXIST. 30" SANITARY SEWER TO BE REPLACED (SEE NOTE 5)

TOE OF LEVEE

TOP OF LEVEE EL. 13.5

PROPOSED SWALE TOP OF SLOPE

PROPOSED SWALE TOE OF SLOPE

1:2.5 SLOPE

END OF PROPOSED WALL IN CONTRACT 4 @ STA 48+49

BORING LOCATION PM 14-29

RIPRAP OUTLET ELEV <1.1>

BORING LOCATION PM-3

PROPOSED CLOSURE GATE AT BROADWAY

BORING LOCATION PM 14-28

MATCH LINE SHEET C-105

REFERENCE LINE

PROPOSED CHANNEL 'C 2-1'
INV IN <1.1>
INV OUT <1.0>
WIDTH = 2.5' TO VARIES
SLOPE = 2.5V:1H

EXIST. DITCH TO BE FILLED AND GRADED TOWARDS NEW CHANNEL

END OF CONTRACT 4

MAIN STREET

BRAINARD AVENUE

POOL

E 604800

E 605000

N 581600

N 581800

N 582000

N 582200

0 30' 60'

SCALE:1"= 30'

| CULVERT DATA | | | |
|---|---|---|---|
| G | STA 46+29<br>N 582,072.5<br>E 604,776.6<br>INV <1.90> | I | STA 47+53<br>N 582,207.3<br>E 604,803.0<br>INV <3.50> |
| H | STA 46+92<br>N 582,134.5<br>E 604,765.6<br>INV <1.80> | J | STA 47+93<br>N 582,242.1<br>E 604,823.2<br>INV <3.50> |

NOTES:

1. REFER TO GENERAL PLAN SHEET G-103 FOR REFERENCE LINE COORDINATES.
2. ANY EXISTING FEATURES IN CONFLICT WITH THE PROPOSED ALIGNMENT SHALL BE REMOVED AND RESTORED, EXCEPT AS OTHERWISE SPECIFIED.
3. SEE SHEET S-517 FOR PLAN AND PROFILE OF DRAINAGE STRUCTURE 'C 2-1'.
4. SEE SHEET S-107 FOR BROADWAY FLOOD GATE FOUNDATION PLAN AND SCHEMATIC, AND SHEET S-303 FOR SECTIONS.
5. REFER TO SHEET C-110 FOR PLAN AND PROFILE OF 30" SANITARY SEWER TO BE REPLACED, AND FOR GAS MAIN TO BE REPLACED/RELOCATED WITHIN BROADWAY.
6. REFER TO SHEET C-515 FOR RIPRAP OUTLET DIMENSIONS.
7. REFER TO SPEC SECTION 00 90 03 FOR BORING DATA.

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NEW YORK DISTRICT
NEW YORK, NY

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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

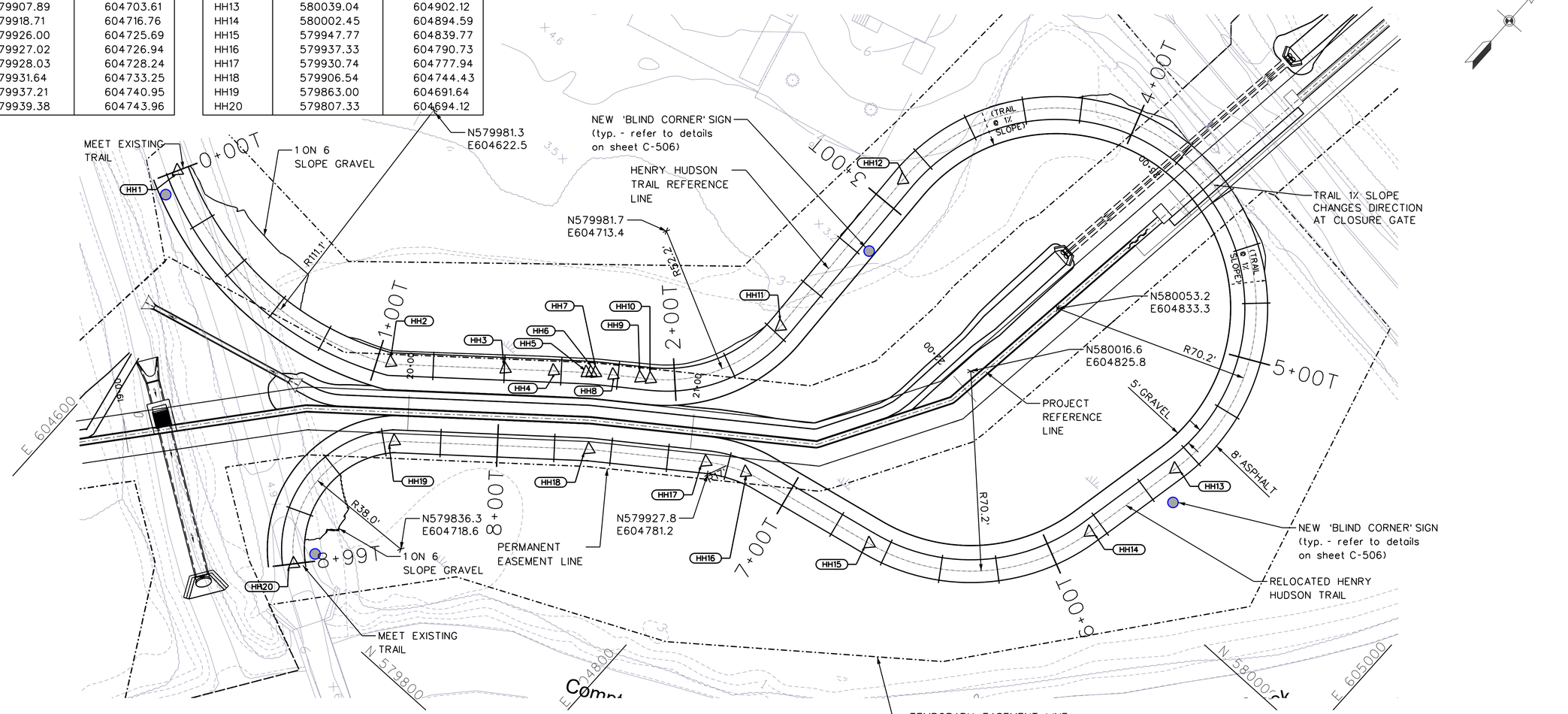
SITE PLAN
STA 41+20 TO STA 49+47

SHEET IDENTIFICATION
C-106
SHEET 18 OF 148

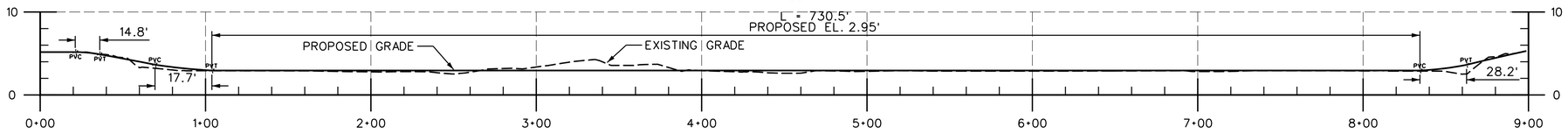
| POINT | NORTHING | EASTING |
|---|---|---|
| HH1 | 579882.69 | 604571.45 |
| HH2 | 579881.94 | 604672.20 |
| HH3 | 579907.89 | 604703.61 |
| HH4 | 579918.71 | 604716.76 |
| HH5 | 579926.00 | 604725.69 |
| HH6 | 579927.02 | 604726.94 |
| HH7 | 579928.03 | 604728.24 |
| HH8 | 579931.64 | 604733.25 |
| HH9 | 579937.21 | 604740.95 |
| HH10 | 579939.38 | 604743.96 |

| POINT | NORTHING | EASTING |
|---|---|---|
| HH11 | 579983.63 | 604765.57 |
| HH12 | 580050.64 | 604763.13 |
| HH13 | 580039.04 | 604902.12 |
| HH14 | 580002.45 | 604894.59 |
| HH15 | 579947.77 | 604839.77 |
| HH16 | 579937.33 | 604790.73 |
| HH17 | 579930.74 | 604777.94 |
| HH18 | 579906.54 | 604744.43 |
| HH19 | 579863.00 | 604691.64 |
| HH20 | 579807.33 | 604694.12 |

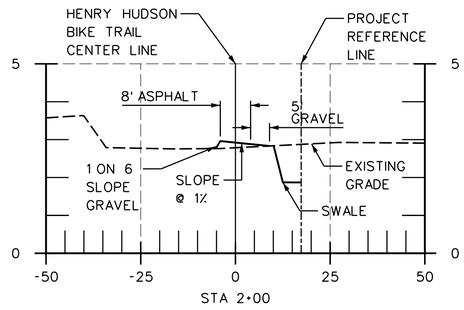
# PROPOSED HENRY HUDSON TRAIL

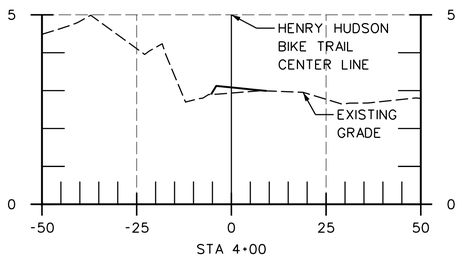


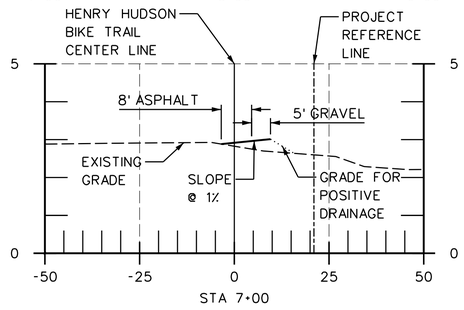

PLAN VIEW
1" = 20'




PROFILE
H: 1" = 40'




CROSS SECTIONS
H: 1" = 20'

SCALE:1"=40'

SCALE:1"=20'

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SIZE:

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE PLAN
HENRY HUDSON TRAIL

SHEET IDENTIFICATION
C-107
SHEET 19 OF 148

WILLOW STREET
INV(-3.46)
INV(-0.83)
INV(-3.70) RIM(5.77)

Block *265 Lot *34
Block *265 Lot *35
Block *265 Lot *33
Block *265 Lot *32
Block *265 Lot *31.08
Block *265 Lot *65
Block *265 Lot *66
Block *265 Lot *67
Block *265 Lot *68

POOL

EXISTING 8" SANIT. SEWER 181.7' @ 0.099%

PROP. MH *1
RIM <7.00>
INV <-3.87>
INV <-3.97>

Approx. Location of Property Line (to be confirmed)

PROP. 8" D.I.P. (cl. 56) SANITARY SEWER L = 214.9' @ 0.245%

PROP. MH *2
RIM <6.50>
INV <-4.50>

STA 12+11.6
INV <-4.55>

FLOODWALL

PROP. 8" DIP (cl. 56) SANITARY SEWER L = 30.2' @ 0.245%

NEW MH *3 w/ WATER-TIGHT COVER
RIM <6.50>
INV <-4.57>
INV (-4.67)

EXISTING 8" SANIT. SEWER 323.7' @ 0.223%

STA 9+00
STA 10+00
STA 11+00
STA 12+00
STA 13+00

A
B

STATE ROUTE 36
RIM(6.28)
INV(-5.36)
INV(-5.44)

## PLAN VIEW
SCALE: 1" = 20'

| | | | |
|---|---|---|---|
| A | EXISTING MANHOLE TO BE REMOVED<br>RIM (6.99)<br>INV (-3.88) n/s<br>INV (-4.07) w/s | 1 | PROPOSED MANHOLE<br>N 579,746.2<br>E 603,861.0 |
| B | EXISTING MANHOLE TO BE REMOVED<br>RIM (8.19)<br>INV (-4.60) e/s<br>INV (-4.64) s/s | 2 | PROPOSED MANHOLE<br>N 579,746.2<br>E 604,057.1 |
| | | 3 | PROPOSED MANHOLE<br>N 579,630.4<br>E 604,045.7 |

REFER TO UTILITY NOTES ON G-102.

STA 2+34 - FLOODWALL
TOP ELV. <13.0>

RIM<7.0>
RIM<6.5>
RIM<6.5>
EXISTING GRADE

ELV 5.0

PROP. 8" D.I.P. (cl. 56) SANITARY SEWER L = 214.9' @ 0.245% CONCRETE ENCASEMENT

EXISTING MANHOLE TO BE REMOVED

tw 2.0

PROP. 8" D.I.P. (cl. 56) SANITARY SEWER L = 30.2' @ 0.245% CONCRETE ENCASEMENT

ELV 0.0

bw -0.5

EXISTING 8" SANIT. SEWER

STA 2+14.9
PROP. 4' DIAM. PRECAST MH *2
INV<-4.50>

12" STEEL SLEEVE

EXISTING 8" SANIT. SEWER

STA 0+00
PROP. 4' DIAM. PRECAST MH *1
INV(-3.87)
INV<-3.97>

STA 2+45.1
PROP. 4' DIAM. PRECAST MH *3
INV<-4.57>
INV(-4.67)

ELV -5.0
ELV -6.0

## PROFILE
SCALE:
H: 1" = 20'
V: 1" = 2'

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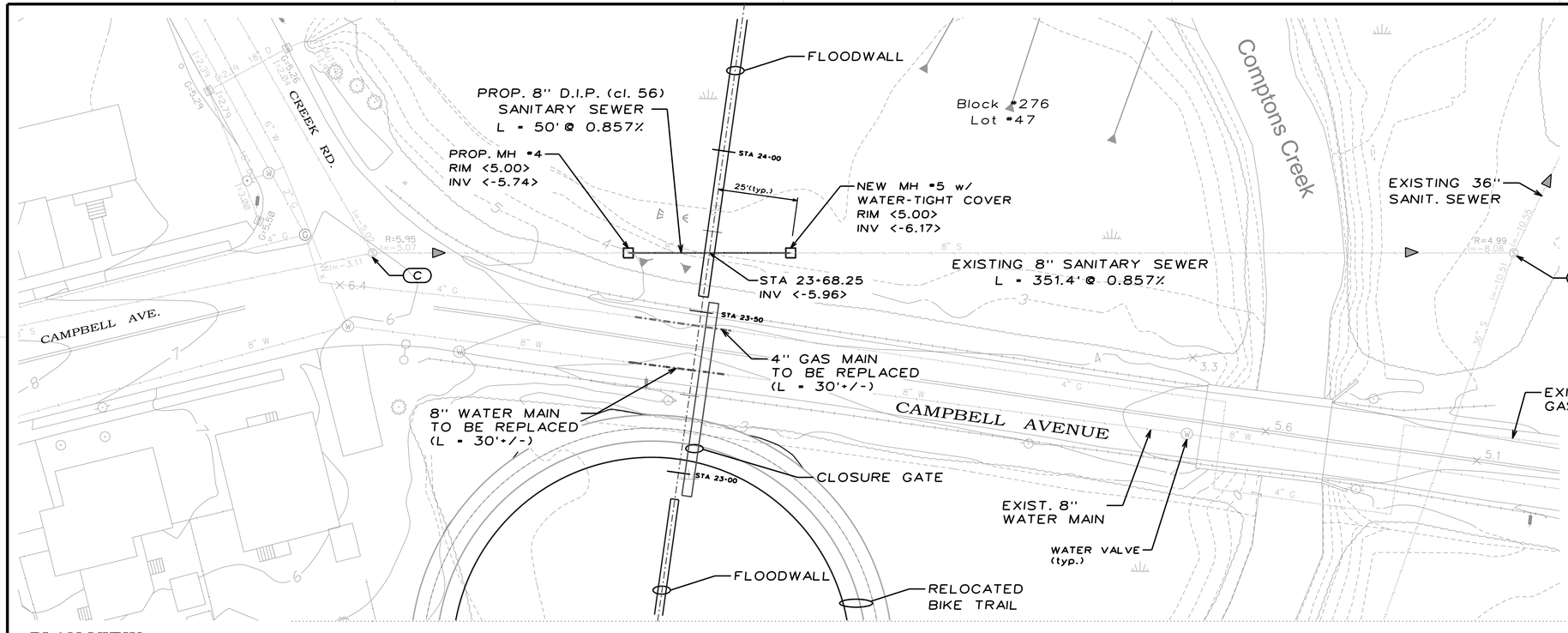
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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

# SANITARY CROSSING #1
# WILLOW ST & STATE ROUTE #36

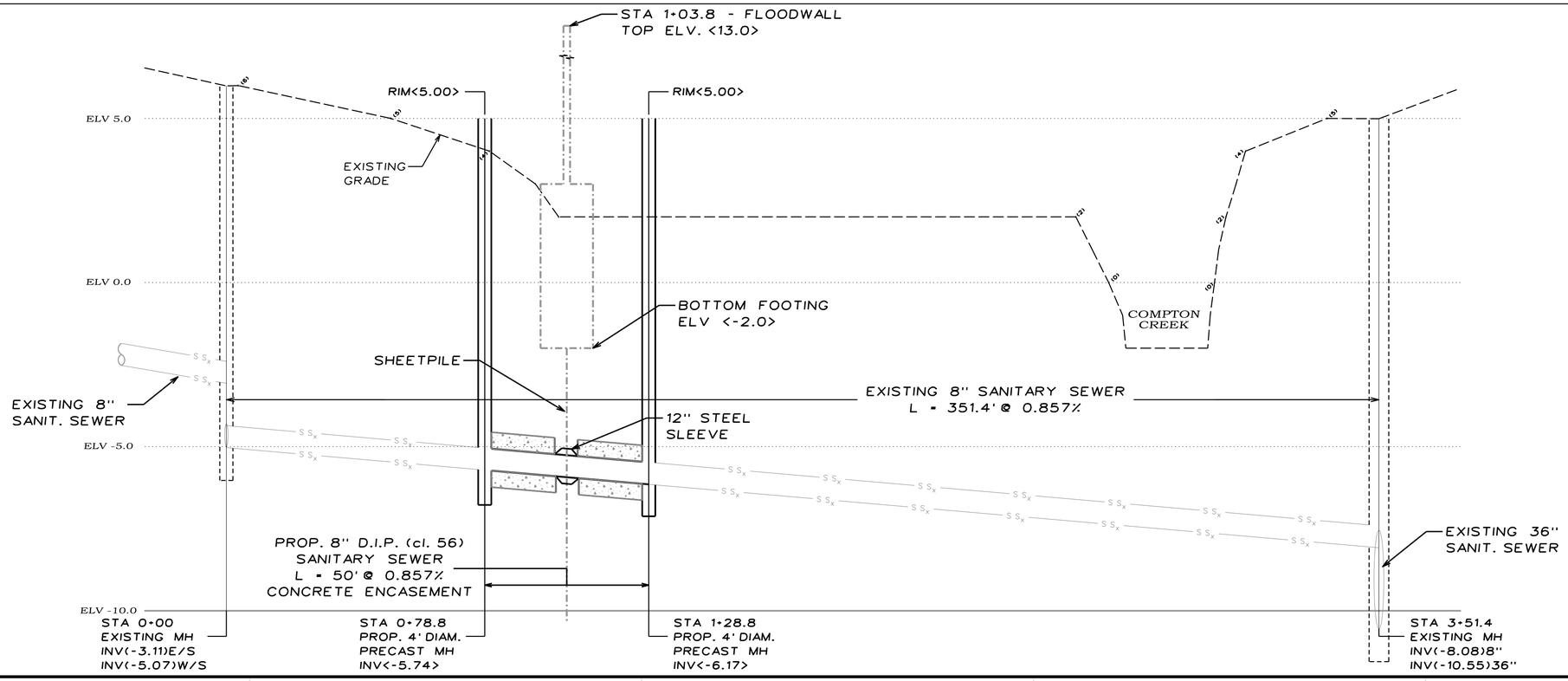
SHEET IDENTIFICATION
C-108
SHEET 20 OF 148




| | |
|---|---|
| C | EXISTING MANHOLE<br>TO BE REMAIN<br>RIM (5.95)<br>INV (-3.11) w/s<br>INV (-5.07) e/s |
| D | EXISTING MANHOLE<br>TO BE REMAIN<br>RIM (4.99)<br>INV (-8.08) w/s<br>INV (-10.55) n/s |
| 4 | PROPOSED MANHOLE<br><br>N 580,177.2<br>E 604,824.2 |
| 5 | PROPOSED MANHOLE<br><br>N 580,178.0<br>E 604,874.2 |

NOTES:
1. REFER TO UTILITY NOTES ON G-102.
2. GAS CROSSES AT THE CLOSURE GATE WITHIN CAMPBELL AVE. AT STA 23+37, WITH AN INVERT ELEVATION OF -6.0. REFER TO SHEET S-311.
3. WATER CROSSES AT THE CLOSURE GATE WITHIN CAMPBELL AVE AT STA 23+20, WITH AN INVERT ELEV. OF -6.0. REFER TO SHEET S-311.

PLAN VIEW
SCALE: 1" = 20'




PROFILE
SCALE:
H: 1" = 20'
V: 1" = 2'

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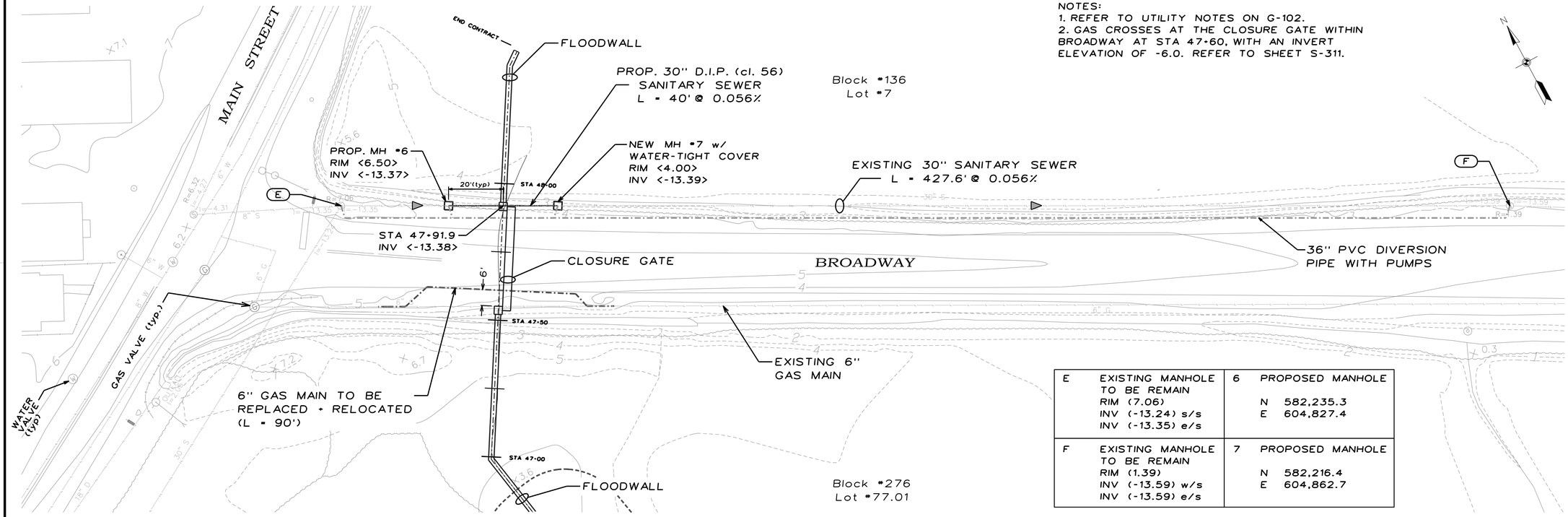
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HURRICANE & STORM DAMAGE REDUCTION
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PHASE II, CONTRACT 4
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# SANITARY CROSSING #2
# CAMPBELL AVENUE

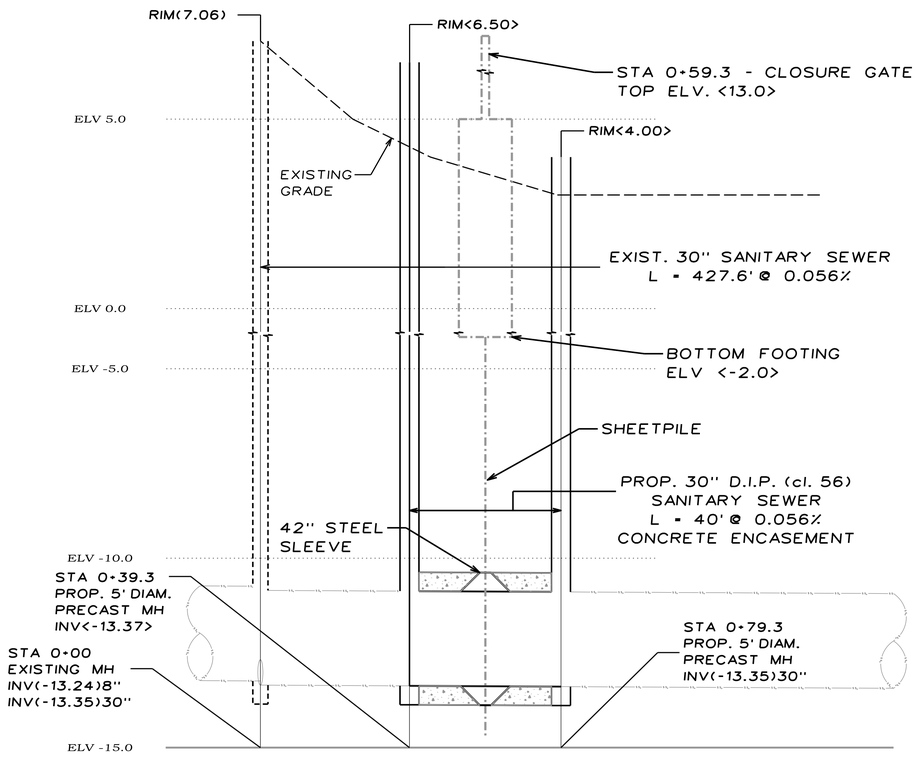
SHEET IDENTIFICATION
C-109
SHEET 21 OF 148

NOTES:
1. REFER TO UTILITY NOTES ON G-102.
2. GAS CROSSES AT THE CLOSURE GATE WITHIN BROADWAY AT STA 47-60, WITH AN INVERT ELEVATION OF -6.0. REFER TO SHEET S-311.




| | | | |
|---|---|---|---|
| E | EXISTING MANHOLE TO BE REMAIN<br>RIM (7.06)<br>INV (-13.24) s/s<br>INV (-13.35) e/s | 6 | PROPOSED MANHOLE<br>N 582,235.3<br>E 604,827.4 |
| F | EXISTING MANHOLE TO BE REMAIN<br>RIM (1.39)<br>INV (-13.59) w/s<br>INV (-13.59) e/s | 7 | PROPOSED MANHOLE<br>N 582,216.4<br>E 604,862.7 |

PLAN VIEW
SCALE: 1" = 20'




PROFILE
SCALE:
H: 1" = 20'
V: 1" = 2'

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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SANITARY CROSSING #3
BROADWAY

SHEET IDENTIFICATION
C-110
SHEET 22 OF 148

REFER TO SHEET C-208 FOR ROADWAY SHOULDER PROFILES.

Start Replace Curb

Grade to Elev. 13

45'

7.8'

2'

25'

44'

Grade to Elev. 13

End Replace Curb

Floodwall

Wilson Ave.

Existing Jersey Barrier

Begin Paving

End Paving

Grade Shoulder to Existing

Route 36 (N)

Route 36 (S)

FILL AREA

10'min.

TRANSITION AREA (see note #4)

TEMP. EASEMENT/ WORKING LIMITS

#203 WILSON AVENUE

EXIST. TREE TO BE REMOVED (typ.)




FIGURE #1
#203 WILSON AVENUE

NOTES:
1. THE FRONT YARD OF #203 WILSON AVENUE SHALL BE RE-GRADED AND RAISED TO A MIN. OF ELEVATION 13.0. THE AREA SHALL BE STRIPPED OF 4" AND RAISED WITH LEVEE EMBANKMENT MATERIAL, TOPPED WITH 4" OF TOP SOIL AND SEEDED. THE EXISTING SITE ELEVATIONS SHALL BE CONFIRMED BY A LICENSED NJ SURVEYOR PRIOR TO WORK, AND WORK SHALL BE LIMITED TO WITHIN THE PROPERTY LINES OF #203 WILSON AVENUE.
2. CONTRACTOR SHALL REMOVE THE THREE TREES NOTED & SHALL COORDINATE WITH HOMEOWNER PRIOR TO REMOVAL.
3. CONTRACTOR SHALL REMOVE FENCE DEBRIS & CONCRETE DEBRIS ALONG THE WOOD FENCE, WHICH IS TO REMAIN. DEBRIS REMOVAL IS ONLY WITHIN THE PROPERTY LIMITS OF #203 WILSON AVENUE.
4. TRANSITION AREA TO BE ADJUSTED AS NECESSARY IN ORDER TO MATCH INTO EXISTING GRADE AT A SLOPE NO GREATER THAN 3.0%

Existing Curb
Existing Curb Drop
Existing Pavement Edge
Proposed Vertical Elev (see Sheet C-208)

Plan View NJ State Route 36 Repaving

0 25' 50'

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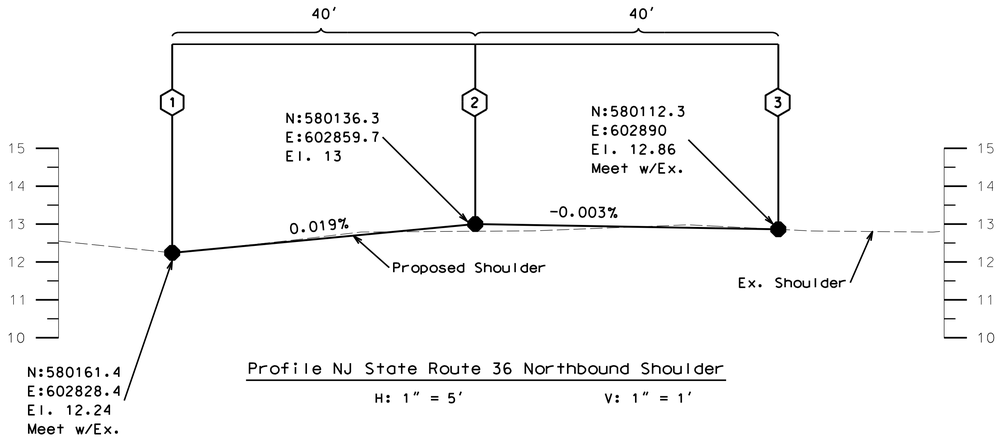
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HURRICANE & STORM DAMAGE REDUCTION
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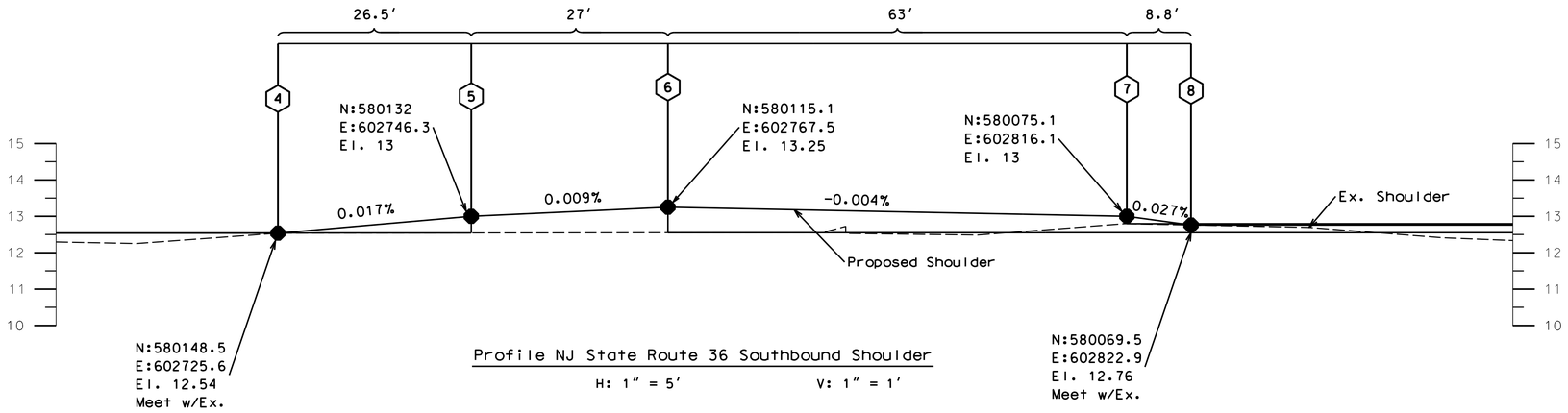
NJ STATE ROUTE 36
RESURFACING

SHEET IDENTIFICATION
C-111
SHEET 23 OF 148




Profile NJ State Route 36 Northbound Shoulder

H: 1" = 5'  V: 1" = 1'




Profile NJ State Route 36 Southbound Shoulder

H: 1" = 5'  V: 1" = 1'

Notes:
1. All shoulder edges to meet with existing surface.

0  10'  20'

SCALE: 1"= 10'

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| MARK | DESCRIPTION | DATE | APPR. |
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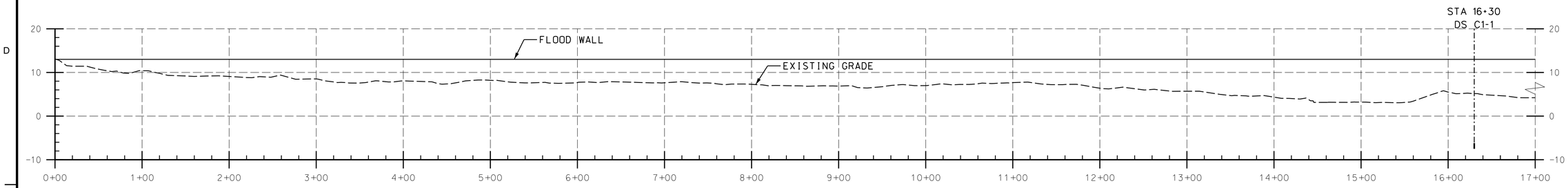
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

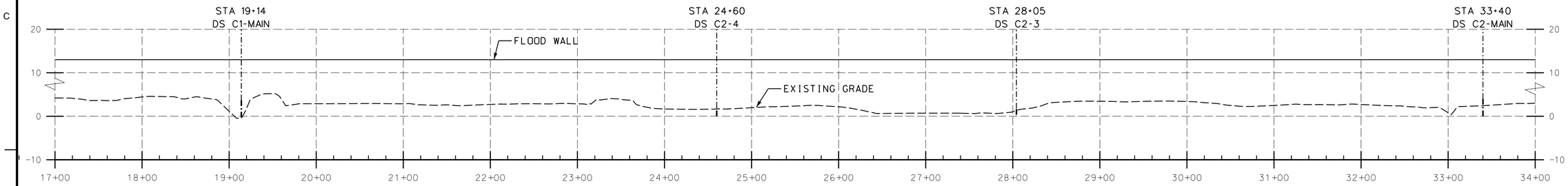
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 1 & 4
PORT MONMOUTH, NJ

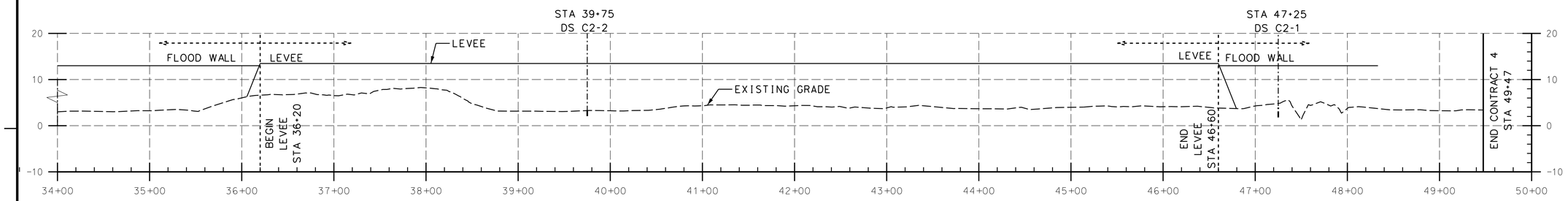
NJ STATE ROUTE 36
SHOULDER PROFILE

SHEET IDENTIFICATION
C-201
SHEET 24 OF 148

# SITE PROFILE




NOTE:

1. REFER TO STRUCTURAL SHEETS FOR DETAILS ON LEVEE TO FLOODWALL TRANSITIONS.

0 60' 120'

SCALE:1"=60'

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| MARK | DESCRIPTION | DATE | APPR. |
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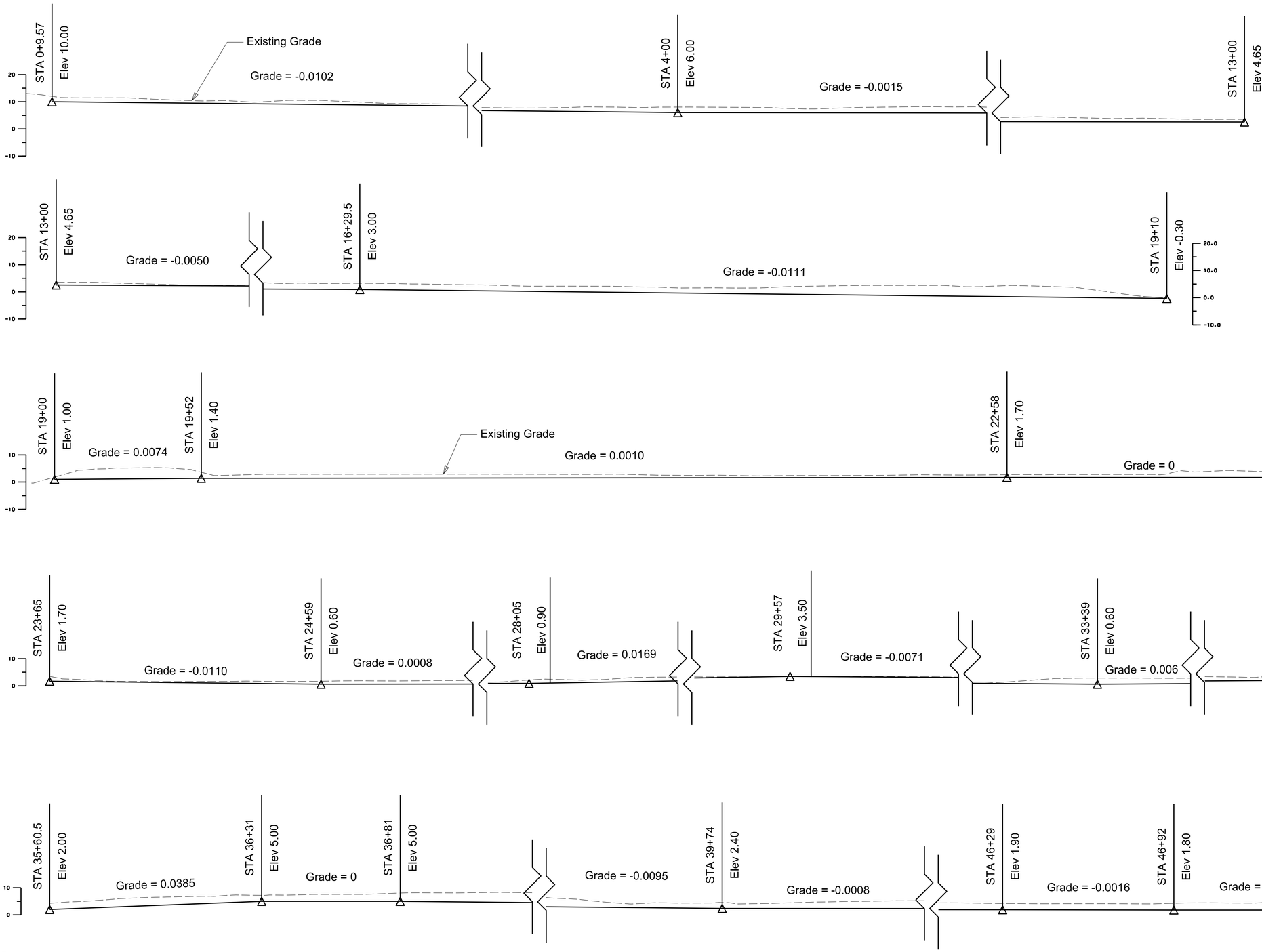
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U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE PROFILE

SHEET IDENTIFICATION
C-202
SHEET 25 OF 148




NOTE:

1. ALL STATIONING IS APPROXIMATE.

NTS

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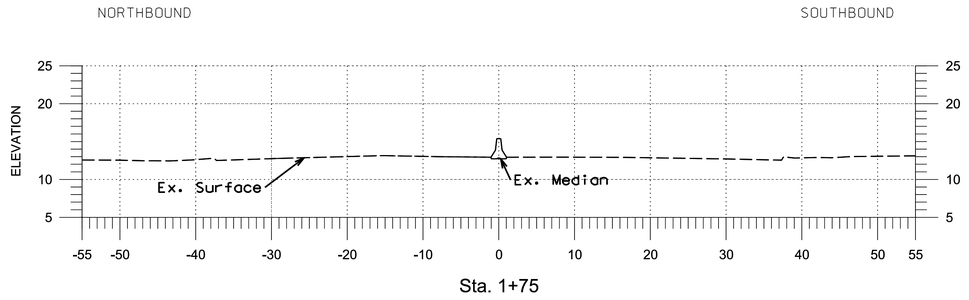
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U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

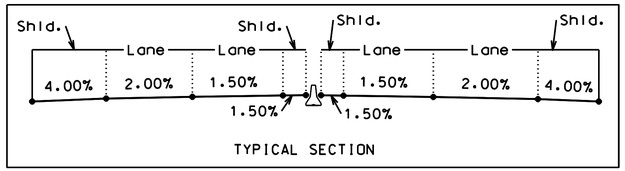
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

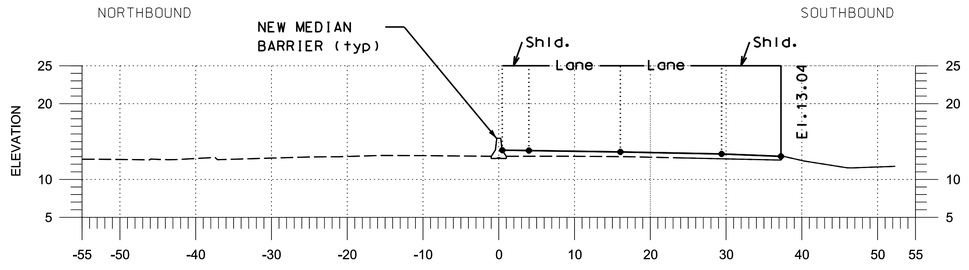
# SWALE PROFILE

SHEET IDENTIFICATION
C-203
SHEET 26 OF 148

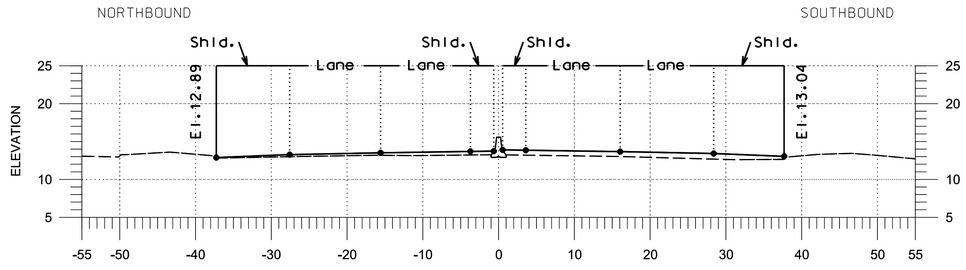



Sta. 1+75

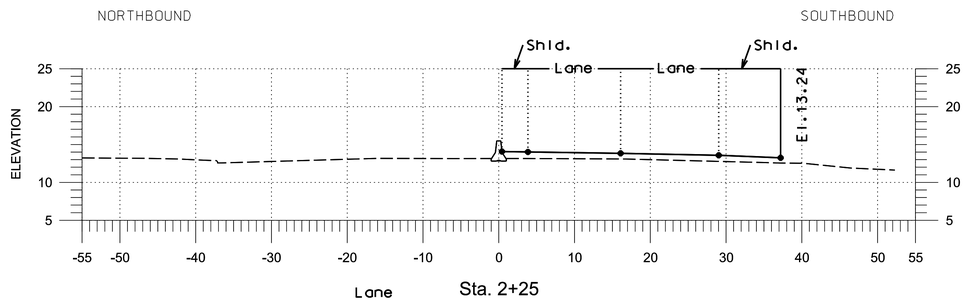


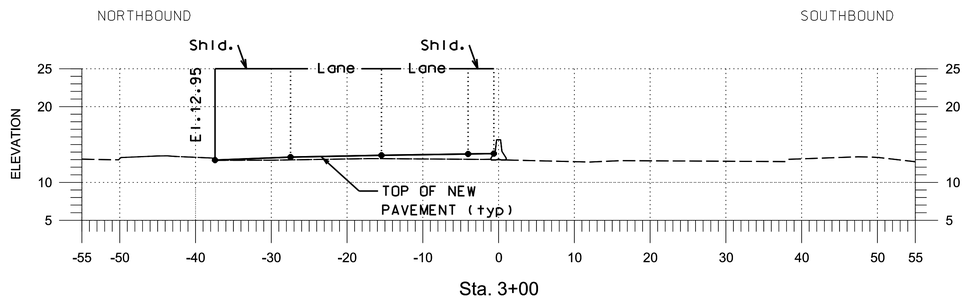

Sta. 2+00



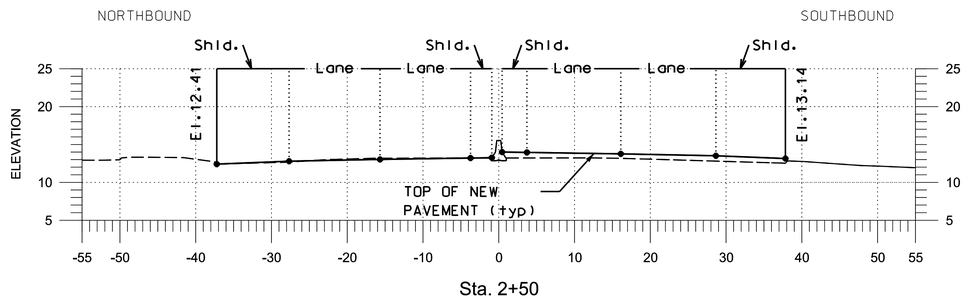

Sta. 2+75



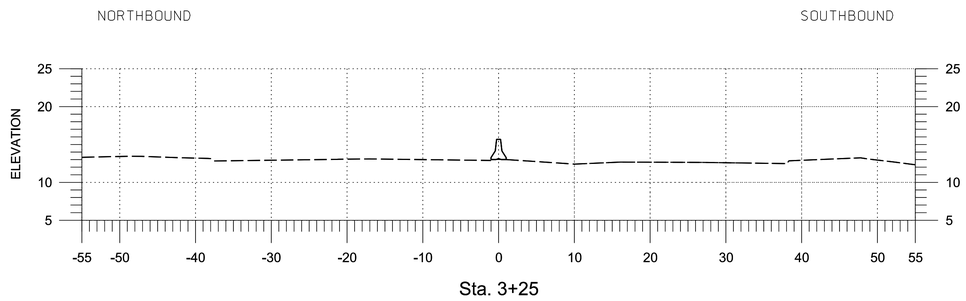

Lane Sta. 2+25




Sta. 3+00




Sta. 2+50




Sta. 3+25

Notes:
1. All shoulder edges to meet with existing surface.
2. Refer to Sheet C-505 for details on the median barrier design.

0 10' 20'

SCALE: 1"= 10'

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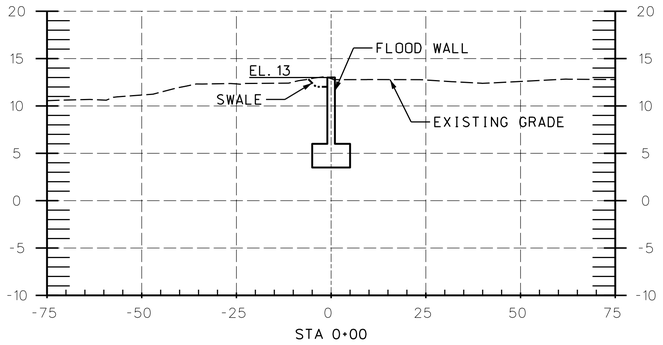
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PLOT SCALE: As Noted
SIZE: ANSI D
DATE:
SOLICITATION NO.:
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ISSUE DATE:
FILE NUMBER:
FILE NAME: C-301.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

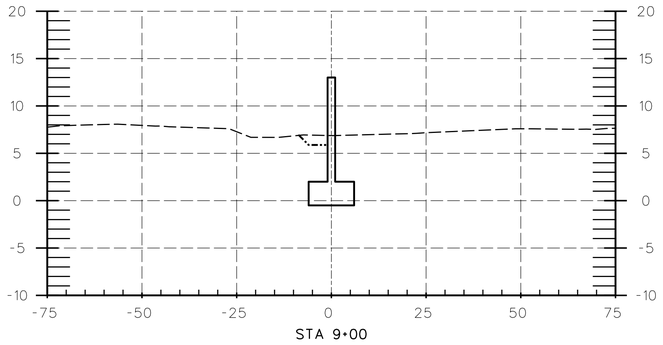
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

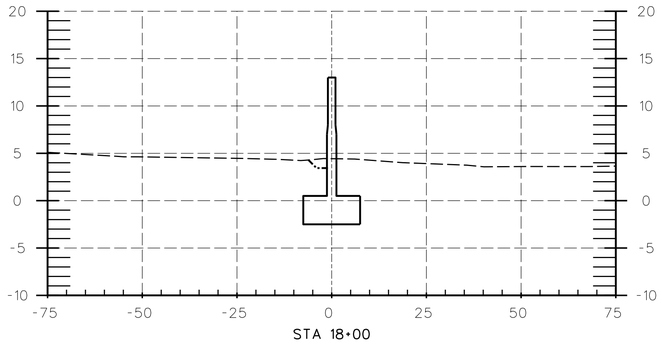
NJ STATE ROUTE 36
CROSS-SECTIONS

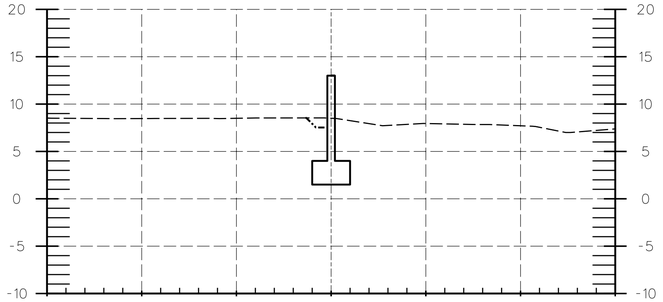
SHEET IDENTIFICATION
C-301
SHEET 39 OF 141

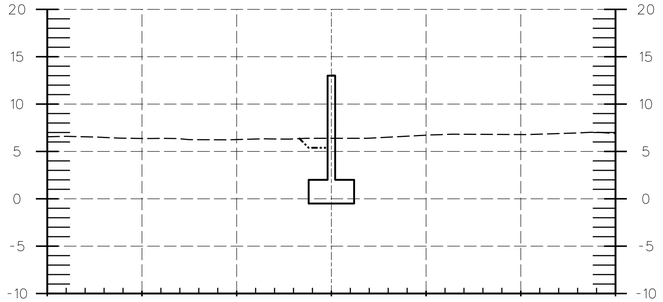


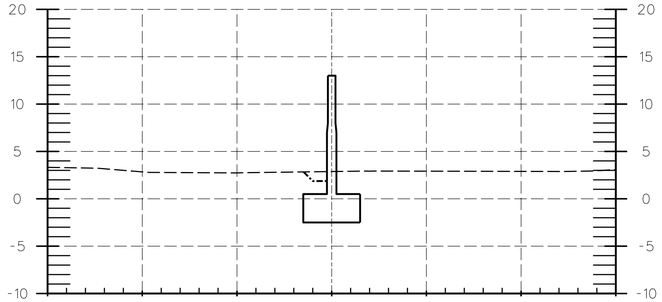
STA 0+00

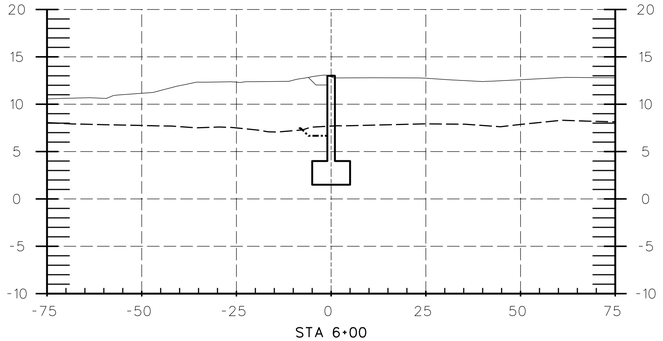

STA 9+00

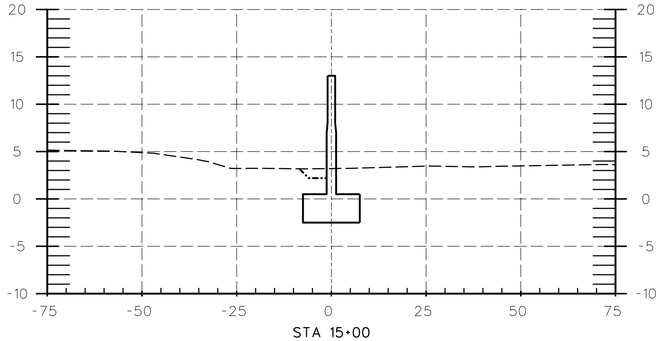

STA 18+00

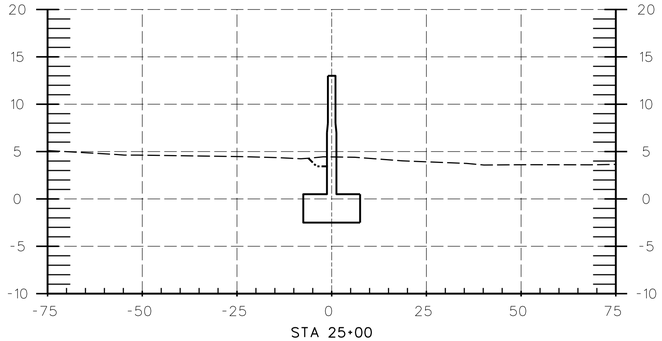

STA 3+00


STA 12+00


STA 21+00

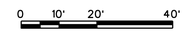

STA 6+00


STA 15+00


STA 25+00



V:SCALE: 1"= 2.5'



H: SCALE:1"=20'

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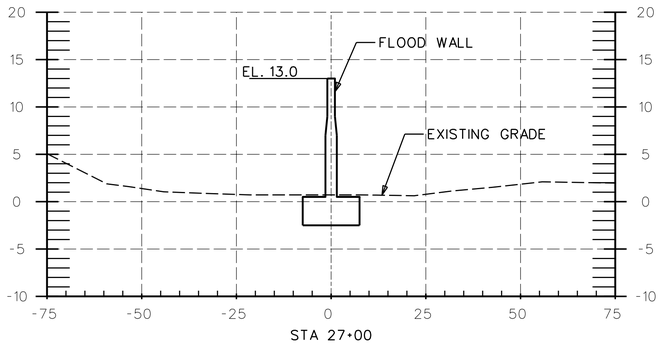
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

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CKD BY: KW
SUBMITTED BY: NS
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CONTRACT NO.:
ISSUE DATE:
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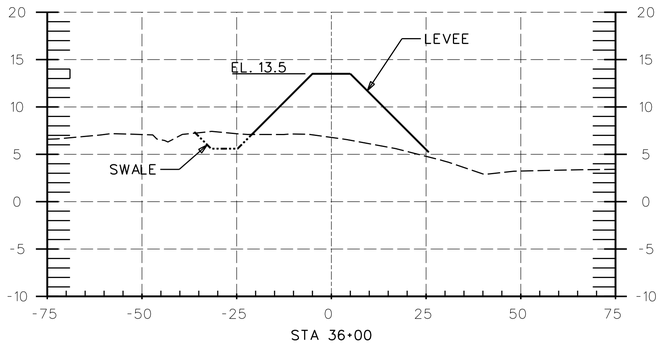
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

# SITE CROSS SECTIONS

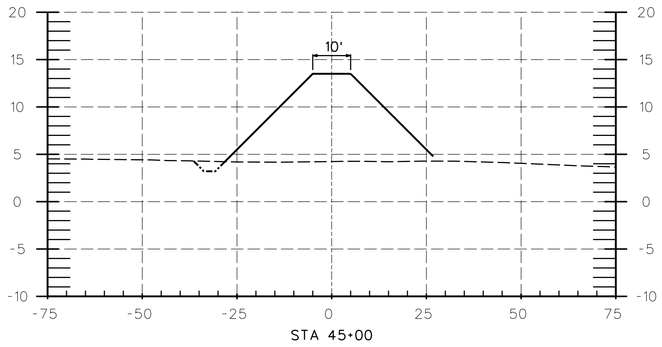
SHEET IDENTIFICATION
C-302
SHEET 28 OF 148



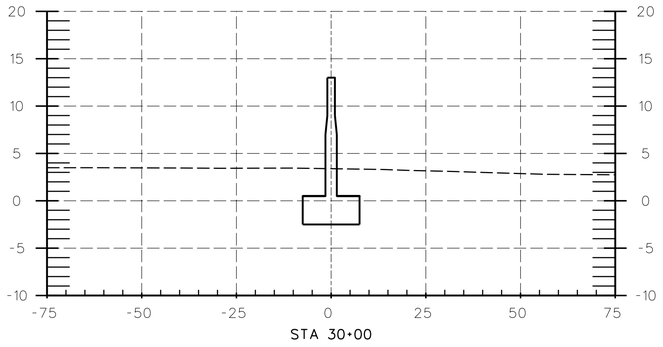

STA 27+00



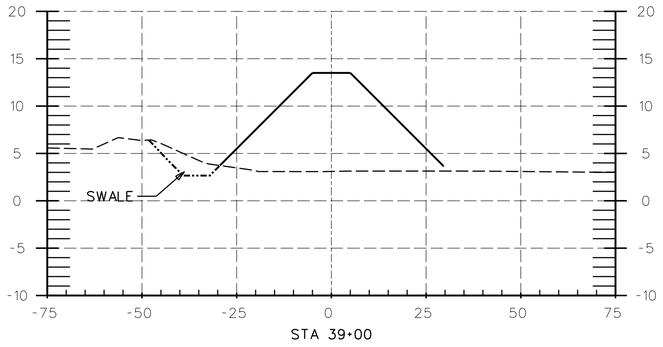

STA 36+00



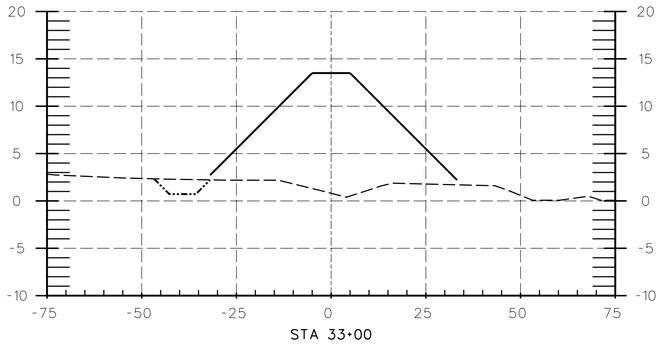

STA 45+00



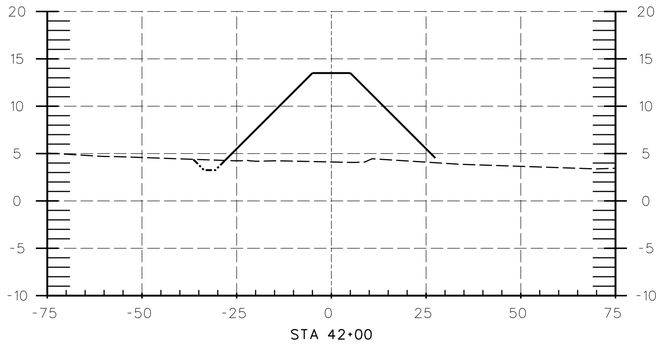
STA 30+00




STA 39+00



STA 33+00



STA 42+00

NOTE:

1. WALL SHOWN FOR INFORMATION ONLY, REFER TO STRUCTURAL DRAWINGS FOR MORE DETAILS ON FLOOD WALL.

0 10' 20'

V:SCALE: 1"= 2.5'

0 10' 20' 40'

H: SCALE:1"=20'

US Army Corps of Engineers®
New York District

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| MARK | DESCRIPTION | DATE | APPR. |

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U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE CROSS SECTIONS

SHEET IDENTIFICATION
C-303
SHEET 29 OF 148

# EROSION AND SEDIMENTATION CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

4. N.J.S.A 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.

5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.

6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.

7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"-2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.

9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.

10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.

11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A pH OF 4 OR LESS, OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A pH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.

13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.

15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.

16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.

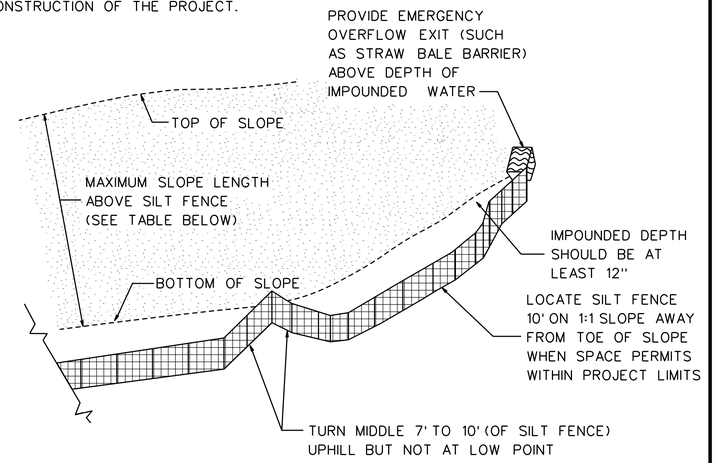
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE *6.

18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

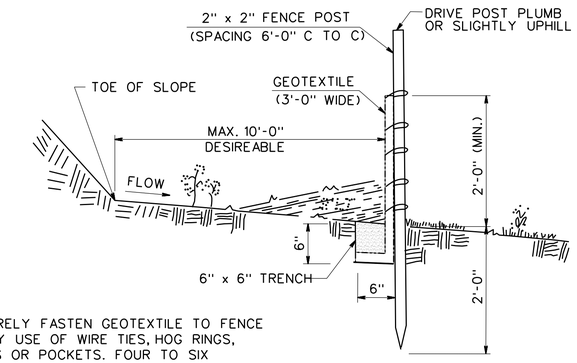
CRITERIA FOR SILT FENCE PLACEMENT

| LAND SLOPE (PERCENT) | MAXIMUM SLOPE LENGTH ABOVE FENCE (FEET) |
|---|---|
| <2 | 100 |
| 2 TO 5 | 75 |
| 5 TO 10 | 50 |
| 10 TO 20 | 25 |
| >20 * | 15 |

* IN AREAS WHERE THE SLOPE IS GREATER THAN 20%, A FLAT AREA LENGTH OF 10 FEET BETWEEN THE TOE OF THE SLOPE AND THE FENCE SHOULD BE PROVIDED.

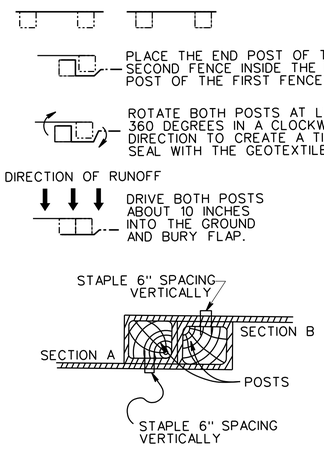



1 SILT FENCE ON A STEEP OR LONG GRADE
NTS




NOTES:
1. SECURELY FASTEN GEOTEXTILE TO FENCE POST BY USE OF WIRE TIES, HOG RINGS, STAPLES OR POCKETS. FOUR TO SIX FASTENERS PER POST.
2. BURY BOTTOM 1'-0" OF GEOTEXTILE AND TAMP IN PLACE.
3. SECURELY FASTEN ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE TO A POST BY WRAPPING EACH END OF THE GEOTEXTILE AROUND THE POST TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. SPLICING OF INDIVIDUAL ROLLS SHALL NOT OCCUR AT LOW POINTS.
4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIREABLE.

2 SILT FENCE
NTS



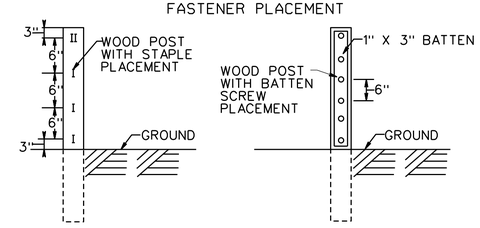

3 ATTACHING TWO SILT FENCES
NTS

FASTENERS FOR WOOD POSTS

| | GAUGE | CROWN | LEGS | STAPLES/POST |
|---|---|---|---|---|
| WIRE STAPLES | 17 MIN. | ¾" WIDE | ½" LONG | 5 MIN. |
| | LENGTH | PHILLIPS HEADS | SCREW/POST | |
| SCREWS | 2 " | 2" | 6 MIN. | |

SOURCE: GA SWCC

FASTENER PLACEMENT




4 SILT FENCE FASTENER REQUIREMENTS
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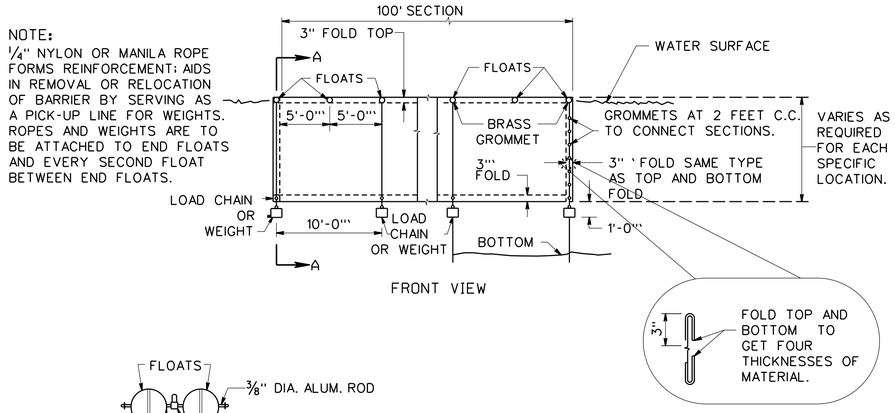
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT SCALE: N.T.S.
PLOT SIZE: ANSI D
ISSUE DATE:
FILE NAME: C-501.dgn

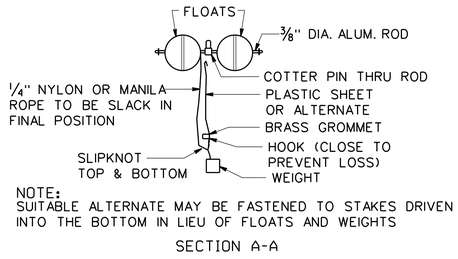
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

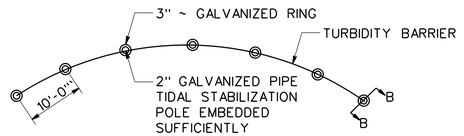
SOIL EROSION AND SEDIMENT CONTROL DETAILS

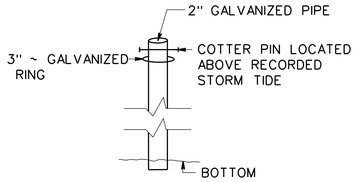
SHEET IDENTIFICATION
C-501
SHEET 31 OF 148

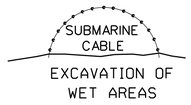


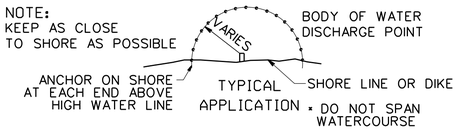




NOTE:
TYPE 1, 2, OR 3 TURBIDITY BARRIER TO FIT EXISTING CONDITION AS APPROVED BY THE COR




FLOATING TURBIDITY BARRIER NOTES:
1. INSTALL TURBIDITY BARRIER TO PREVENT DRIFTING OF SILT CAUSED BY DISCHARGE OF STORM SEWERS, DEWATERING BASINS, CONSTRUCTION, DREDGING OR FILLING OPERATIONS, OR OTHER ACTIVITIES THAT COULD CAUSE TURBIDITY.

2. EXACT PLACEMENT OF TURBIDITY BARRIER SHALL BE SO AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER THE CONDITIONS PRESENT ON A PARTICULAR PROJECT.

3. THE DETAILS SHOWN ON THIS SHEET ARE SUGGESTED METHODS ONLY. ALTERNATE SOLUTION AND USAGE OF MATERIALS MAY BE USED AS APPROVED.

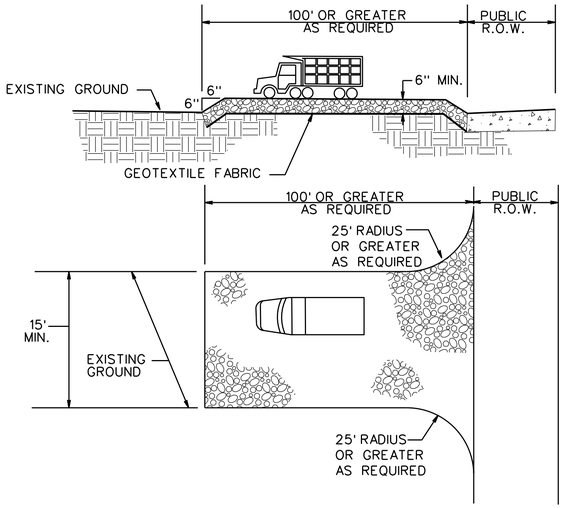
4. USE APPROPRIATE NAVIGATIONAL WARNING LIGHTS WHEN USED NEXT TO NAVIGATIONAL CHANNEL.

5. TYPE 1 IS FOR PONDS, SHALLOW LAKES, SMALL STREAMS AND MARSHES WITH CURRENT VELOCITIES LESS THAN 1 FT./SEC AND SHELTERED FROM WINDS.

6. TYPE 2 IS FOR LAKES, STREAMS, INTERCOASTAL & TIDAL AREAS WITH CURRENT VELOCITIES UP TO 5 FT./SEC.

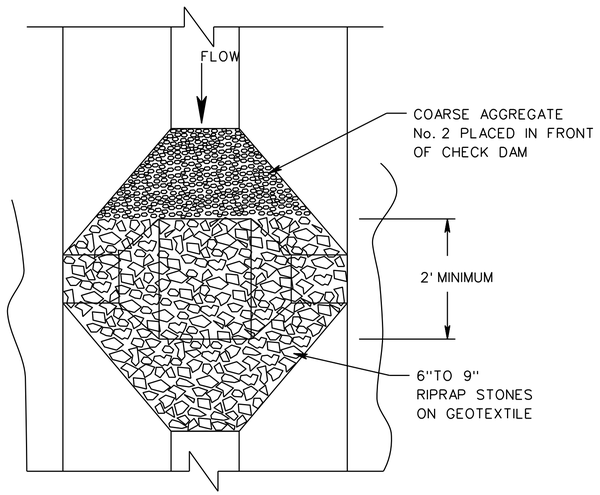
7. TYPE 3 IS FOR LAKES, STREAMS, INTERCOASTAL AND TIDAL AREAS WITH CONSIDERABLE CURRENT VELOCITIES UP TO 5FT./SEC., TIDAL ACTION AND SUBJECT TO WIND AND WAVES.

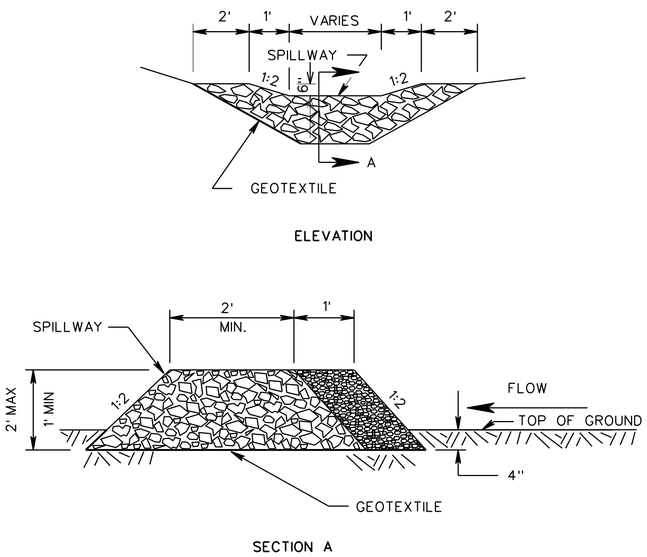
## 1 FLOATING TURBIDITY BARRIER
NTS




NOTE:
PROVIDE TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ENTRANCE AND THE PUBLIC RIGHT OF WAY.

## 2 STABILIZED CONSTRUCTION DRIVEWAY
NTS




## 2 TEMPORARY STONE CHECK DAM
NTS

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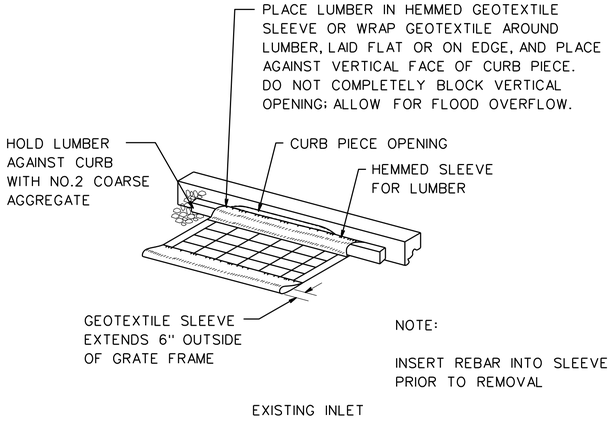
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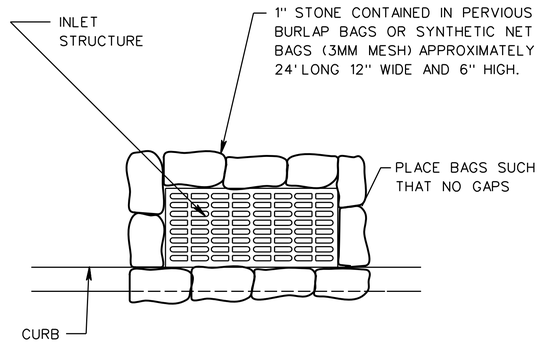
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SOIL EROSION AND SEDIMENT CONTROL
DETAILS CONTINUED

SHEET IDENTIFICATION
C-502
SHEET 32 OF 148

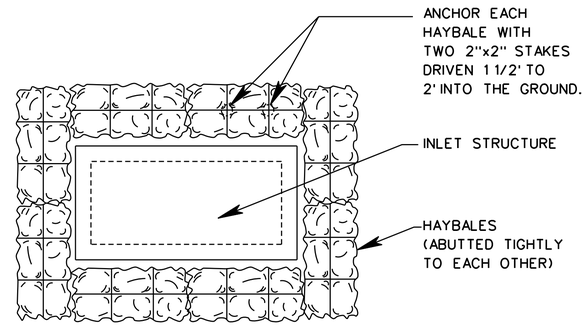



1 INLET FILTERS, TYPE 1
NTS




NOTE:
WHERE INLET PROTECTION MAY INTERFERE WITH TRAFFIC, A COMMERCIALLY AVAILABLE CATCH BASIN INSERT SHALL BE USED. SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER.

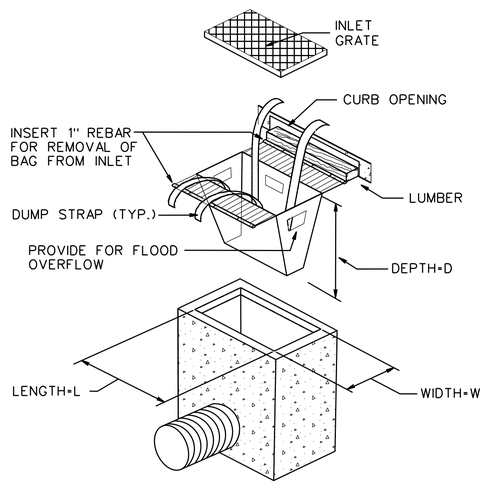
2 INLET PROTECTION STONE BARRIER BAGS
NTS



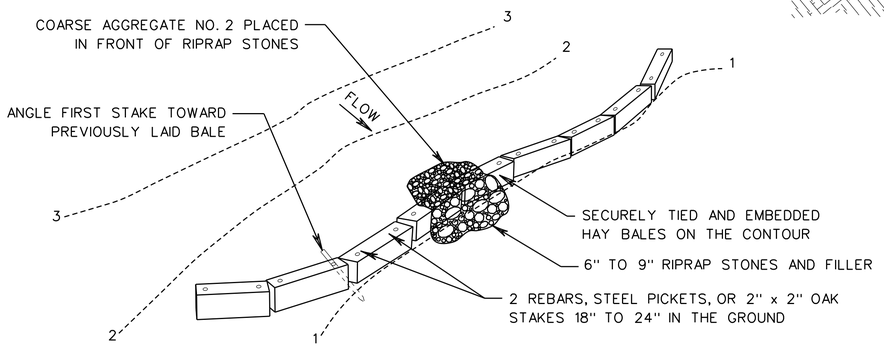

NOTE:
WHERE STAKING IS NOT PRACTICAL, HAY BALES SHALL BE TIED TOGETHER TO PREVENT MOVEMENT.

3 INLET PROTECTION, HAYBALE BARRIER
NTS

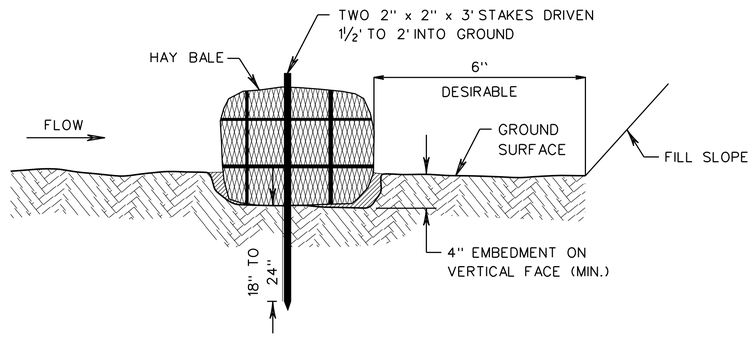



4 INLET FILTERS, TYPE 2
NTS




PLACEMENT AND ANCHORING DETAIL




EMBEDDING DETAIL

NOTES:

1. HAY BALES SHALL BE INSTALLED SO WATER CANNOT BYPASS THE ENDS OF THE BARRIER.

2. INSPECTION SHALL BE FREQUENT, AFTER EVERY STORM AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.

3. HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.

4. HAY BALES SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE INSTRUCTED BY THE CONTRACTING OFFICER.

5 HAY BALES SEDIMENT BARRIERS
NTS

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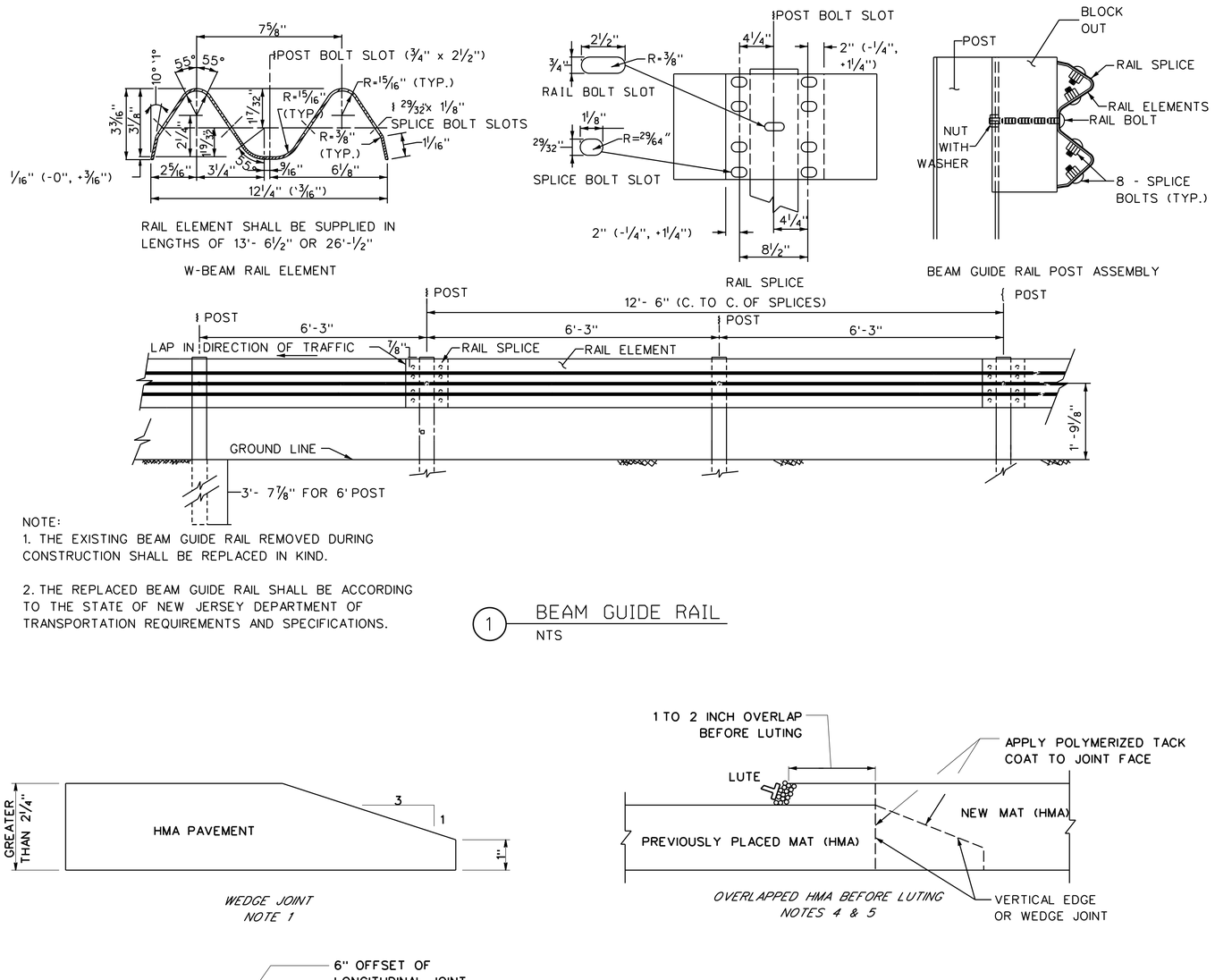
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

SOIL EROSION AND SEDIMENT CONTROL
DETAILS CONTINUED

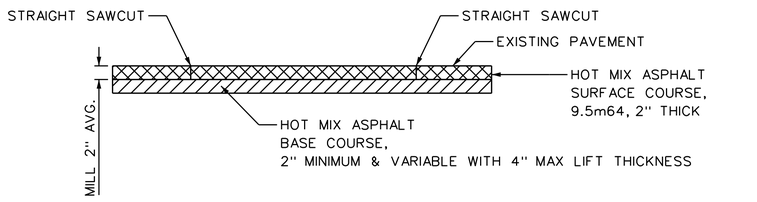
SHEET IDENTIFICATION
C-503
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NOTE:
1. THE EXISTING BEAM GUIDE RAIL REMOVED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.

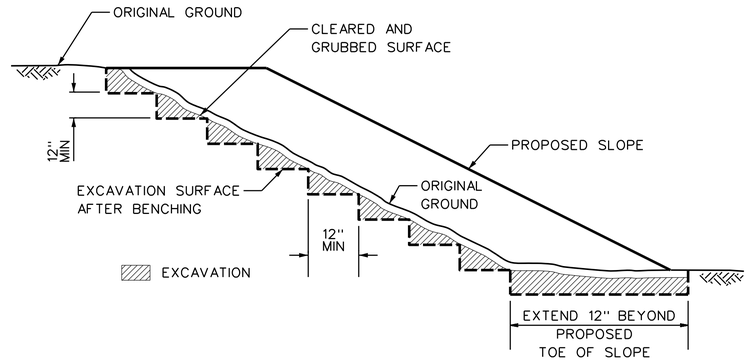
2. THE REPLACED BEAM GUIDE RAIL SHALL BE ACCORDING TO THE STATE OF NEW JERSEY DEPARTMENT OF TRANSPORTATION REQUIREMENTS AND SPECIFICATIONS.

## 1 BEAM GUIDE RAIL
NTS




NOTE:
1. EACH 4" LIFT FOR BASE COURSE SHALL HAVE SUFFICIENT TIME ALLOWED TO COOL BELOW 140°F BEFORE PLACING THE SUBSEQUENT LIFT

## 2 TYPICAL PAVEMENT SECTION
NTS



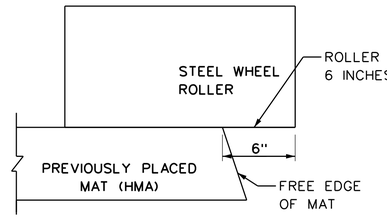

## 3 BENCHING FOR LEVEE AND STREAMBANK
NTS




*WEDGE JOINT*
*NOTE 1*




*OVERLAPPED HMA BEFORE LUTING*
*NOTES 4 & 5*




*ROLLER PLACEMENT FOR COMPACTING ALONG THE UNCONFINED VERTICAL EDGE*
*NOTE 6*

HMA PAVEMENT NOTES:

1. WHEN HMA LIFT THICKNESS IS GREATER THEN 2¼ INCHES AND WHEN TRAFFIC IS TO BE MAINTAINED, CONSTRUCT A WEDGE JOINT.

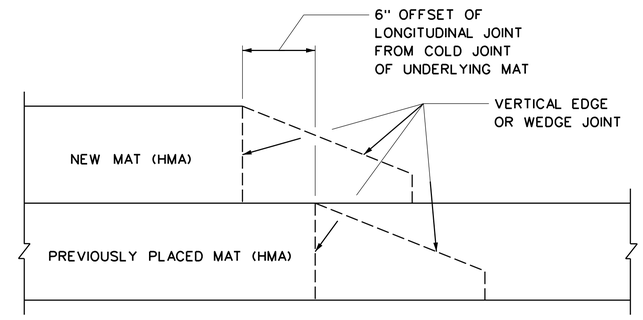
2. ENSURE THAT THE JOINT IN THE HMA SURFACE COURSE IS OFFSET FROM THE LANE LINES BY 6". IN THE CENTERLINE OF A ROADWAY, ENSURE THAT THE JOINT FALLS BETWEEN THE DOUBLE YELLOW TRAFFIC STRIPE.

3. ENSURE THE LUTE OPERATOR MANUALLY BUMPS THE EDGE TO OBTAIN A TRUE VERTICAL AND DENSE UNCONFINED EDGE.

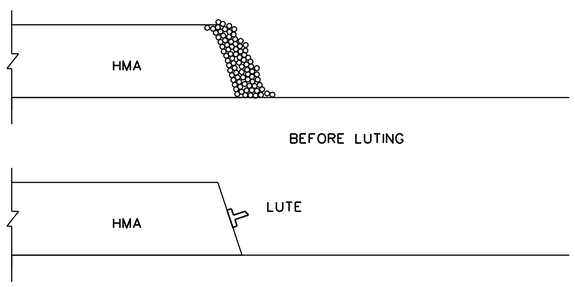
4. ENSURE THAT THE OVERLAPPED HMA MATERIAL AT THE JOINT IS TIGHTLY CROWDED (BUMPED) OVER THE JOINT ONTO THE NEWLY PLACED LANE LEAVING A SMALL MOUND OF MIX HUMPED UP FOR THE ROLLERS TO COMPACT.

5. FOR THE WEDGE JOINT, ENSURE THAT COARSE AGGREGATE PARTICLES ARE KEPT AWAY FROM THE POINT WHERE THE WEDGE MEETS THE SURFACE OF THE PREVIOUSLY PLACED LANE.

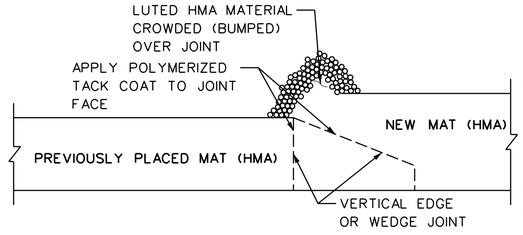
6. TO PREVENT LATERAL DISPLACEMENT OF THE UNCONFINED EDGE, ENSURE THAT THE EDGE OF THE ROLLER WHEEL EXTENDS OVER THE FREE EDGE OF THE HMA MAT BY AT LEAST 6 INCHES.




*OFFSET OF JOINTS*
*NOTE 2*




*COMPACTION OF UNCONFINED VERTICAL EDGE*
*NOTE 3*




*HMA AFTER LUTING*
*NOTE 4*

## 3 HMA PAVEMENT
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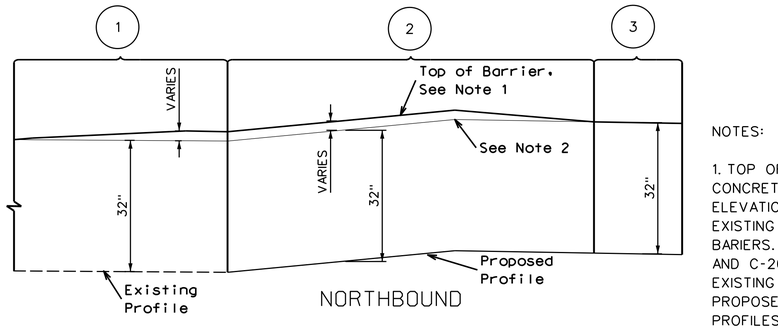
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FILE NAME: C-504a.dgn

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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE DETAILS

SHEET IDENTIFICATION
C-504
SHEET 34 OF 148

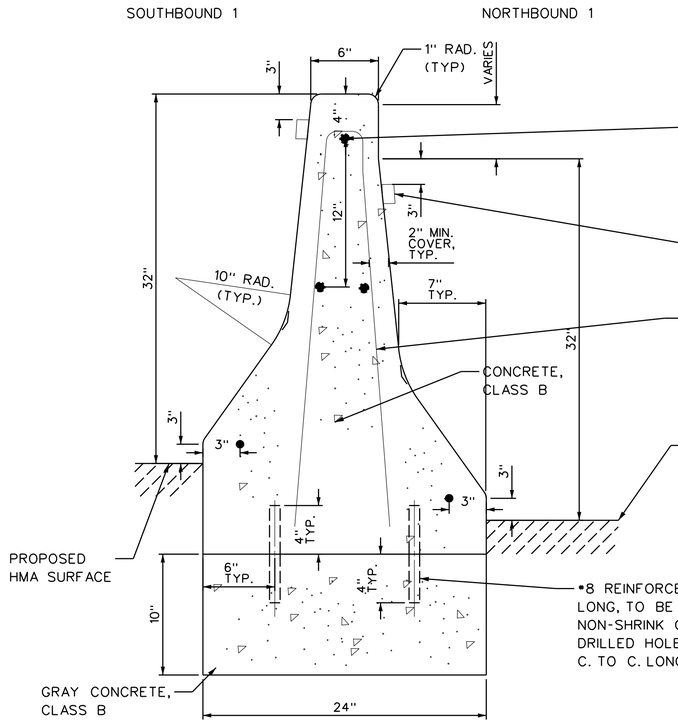



NOTES:

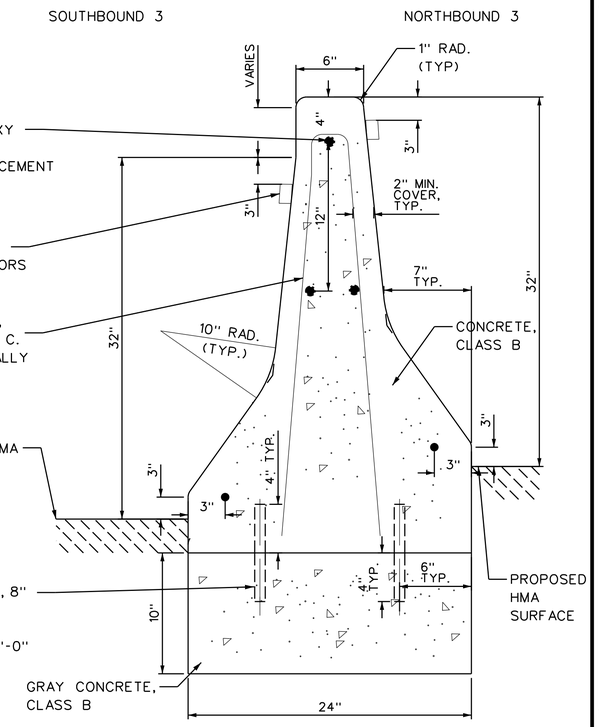
1. TOP OF CONCRETE BARRIER ELEVATIONS MEET EXISTING CONCRETE BARIERS. SEE C-111 AND C-208 FOR EXISTING AND PROPOSED ROAD PROFILES.

2. BEGINNING OF CONCRETE TAPER ELEVATION MATCHES PROPOSED ROAD PROFILE SLOPE.

1 CONCRETE BARRIER, ELEVATION PROFILE
NTS




2 CONCRETE BARRIER, SECTION 1
NTS




3 CONCRETE BARRIER, SECTION 3
NTS

CONCRETE BARRIER NOTES:

1. WHERE BARRIER CURB, DOWELLED, IS TO BE CONSTRUCTED ON EXISTING CONCRETE PAVEMENT OR EXISTING CONCRETE BASE COURSE:
TRANSVERSE JOINTS SHALL BE INSTALLED IN THE CURBS AT AND DIRECTLY OVER TRANSVERSE JOINTS IN THE PAVEMENT. DEFINITE CRACKS THROUGH THE PAVEMENT SHALL ALSO BE TREATED AS JOINTS. ADDITIONAL JOINTS SHALL ALSO BE CONSTRUCTED IN THE CURB SO SPACED AS TO MAKE EQUAL SECTIONS NOT OVER 15'-0" IN LENGTH.

THE TRANSVERSE JOINTS SHALL BE FILLED WITH PREFORMED BITUMINOUS- IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213 SPECIFICATION, RECESSED 1/4" IN FROM FACES AND TOP OF CURB. THE COST OF THE TRANSVERSE EXPANSION JOINTS IN THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BARRIER CURB. THE THICKNESS OF THE TRANSVERSE EXPANSION JOINT FILLER SHALL BE AS FOLLOWS:

1/2" FOR IMMEDIATE JOINTS AND JOINTS OVER DEFINITE CRACKS.
1/2" OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS 50 FEET OR LESS.
1" OVER PAVEMENT JOINTS WHERE SLAB LENGTH IS MORE THAN 50 FEET.

VARIABLE IN MULTIPLES OF 1/2" BUT NOT LESS THAN THE EXISTING WIDTH OF THE TRANSVERSE JOINTS IN BRIDGES AND JOINTS BETWEEN THE APPROACH SLABS AND BRIDGES.

THE THICKNESS OF 1 INCH OR MORE, LAYERS OF 1/2" MATERIAL MAY BE GLUED OR OTHERWISE FASTENED TOGETHER BY A MEANS SATISFACTORY TO THE COR WHERE THE REQUIRED JOINT OPENING EXCEEDS 1 INCH, THE CONTRACTOR MAY CONSTRUCT OPEN JOINTS.

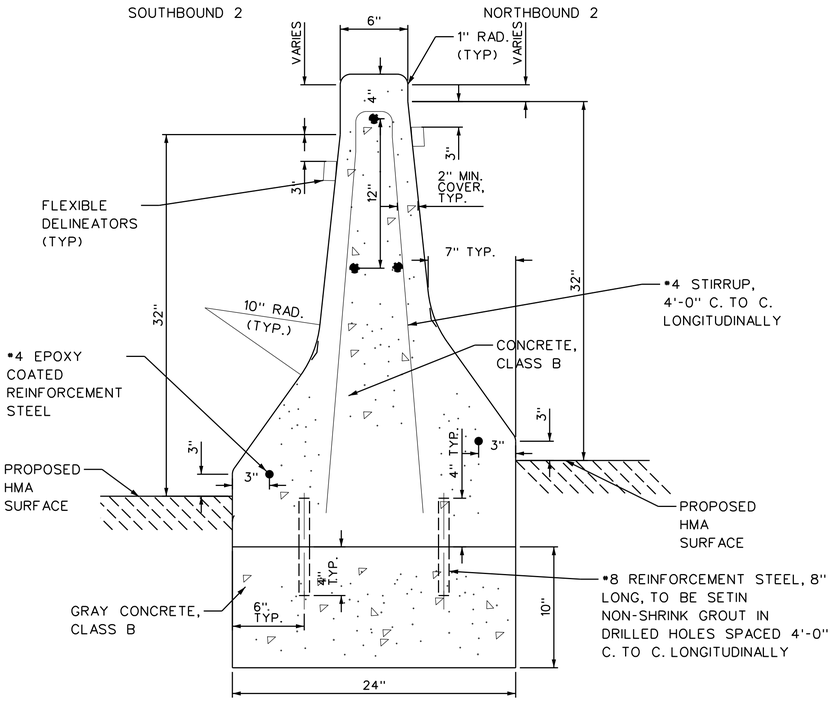
THE SURFACE OF THE EXISTING CONCRETE PAVEMENT OR CONCRETE BASE COURSE SHALL BE CLEANED IN ACCORDANCE WITH THE NJDOT SPECIFICATIONS PRIOR TO THE CONSTRUCTION OF THE CURB THEREON.

WHERE DOWELLED CURB IS TO BE CONSTRUCTED ACROSS A LONGITUDINAL JOINT IN THE EXISTING CONCRETE OR BASE COURSE. THE DOWELS IN THE SHORTER PORTION OF THE CURB PANEL SHALL BE OMITTED AND THE CURB IN THIS PORTION OF THE PANEL SHALL BE CONSTRUCTED WITH 45• SMOOTH ROLL ROOFING BETWEEN IT AND THE EXISTING PAVEMENT.

2. WHERE BARRIER CURB IS TO BE CONSTRUCTED ON PROPOSED CONCRETE BASE:
TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE BASE 20'-0" APART AND IN THE BARRIER CURB DIRECTLY OVER JOINTS IN THE BASE. THE JOINTS SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213 SPECIFICATION, RECESSED 1/4" IN FROM FACES AND TOP OF CURB. THE COST OF THE TRANSVERSE EXPANSION JOINTS IN THE BASE AND IN THE CURB SHALL BE INCLUDED IN THE UNIT PRICE FOR THE BARRIER CURB.

3. GENERAL:
THE FINISHED SURFACE OF THE BARRIER CURB SHALL BE SMOOTH, DENSE UNPITTED AND FREE FROM AIR BUBBLE POCKETS, DEPRESSIONS, AND HONEYCOMBS. IF THE COR DEEMS IT NECESSARY, THE CURB SHALL BE GIVEN A WOOD FLOAT FINISH RUBBED WITH A MIXTURE OF CEMENT, SAND, AND WATER TO OBTAIN THE ABOVE-MENTIONED FINISHED SURFACE.

4. DELINEATORS:
FLEXIBLE DELINEATORS, BARRIER CURB MOUNTED SHALL BE INSTALLED ON ALL BARRIER CURBS.




4 CONCRETE BARRIER, SECTION 2
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ISSUE DATE:
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SIZE: ANSI D
FILE NUMBER:
FILE NAME: C-505.dgn

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NEW YORK DISTRICT
NEW YORK, NY

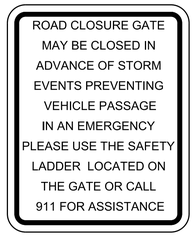
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE DETAILS

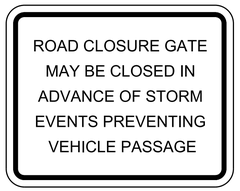
SHEET IDENTIFICATION
C-505
SHEET 47 OF 141




W1-1 (18"X18")



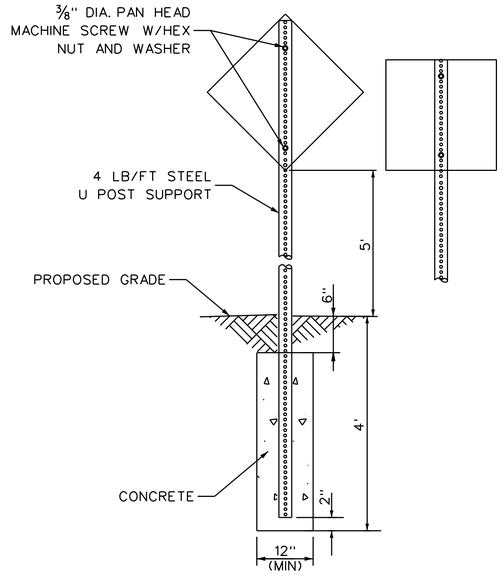

EM-3 (30"X24")




EM-5 (24"X30")

NOTE: REFER TO GENERAL NOTES 9 AND 13.

1 CUSTOM SITE SIGNS
NTS




2 SIGN PANEL ATTACHMENT
NTS

GENERAL NOTES:

1. DIMENSIONS, COLORS, AND DETAILS OF VARIOUS SIZE SIGNS TO FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGNS PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

2. ALL SIGNS SHALL BE ASTM D 4956 TYPE III SHEETING.

3. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

4. THE SIGNS SHALL BE INSTALLED WITHIN THE ROAD RIGHT OF WAY. HEIGHTS, LONGITUDINAL AND LATERAL LOCATIONS OF THE SIGNS SHALL FOLLOW STANDARDS IN THE CURRENT "STANDARD HIGHWAY SIGNS PUBLICATION" AND THE CURRENT "MANUAL ON UNIFORM TRAFFIC FOR ROAD AND BRIDGE CONSTRUCTION.

5. THE FLASHING LED LIGHTS SHALL EITHER BE TWO ROUND LIGHTS MOUNTED AS SHOWN, OR IT SHALL BE LIGHTS MOUNTED ON THE WARNING SIGN BORDER AS APPROVED EQUAL.

6. THE FLASHING WARNING SIGN SHALL BE AS MANUFACTURED BY TRAFFIC AND PARKING CONTROL CO. INC. (TAPCO) OR AS APPROVED EQUAL.

7. OPERATION OF THE FLASHING LIGHT SHALL BE MANUAL WITH A SWITCH. THE SWITCH SHALL BE PROTECTED BY A COVERED LOCKED BOX.

8. THE FLASHING WARNING SIGN SHALL BE LOCATED IN A NON-SHADY LOCATION WITH THE SOLAR PANEL FACING SOUTH, MOUNTED A MINIMUM OF 14' ABOVE GRADE.

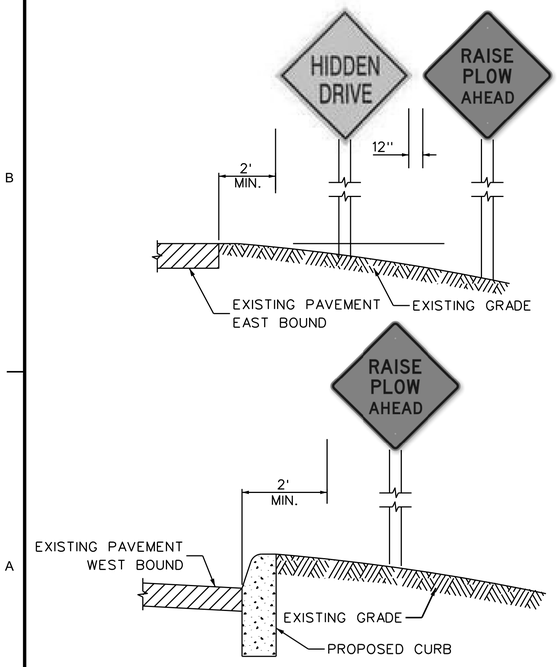
9. SIGNS IN DETAIL 1 SHALL BE CUSTOMIZED TO INCLUDE THE MESSAGE AS SHOWN. THE SIGN NUMBERS ARE FOR INFORMATION ONLY. LOCATION OF THE EM-3 SIGNAGE SHALL BE DETERMINED BY THE COR ON SITE.

10. PER MANUFACTURER'S RECOMMENDATIONS, ENGAGE ALL THREADS ON THE PEDESTAL POLE BASE AND PIPE UNLESS THE PIPE IS FULLY SEATED INTO BASE. IN HIGH WINDS, USE A POLE AND BASE COLLAR ASSEMBLY TO ADD STRENGTH AND PREVENT LOOSENING ON CONNECTION.

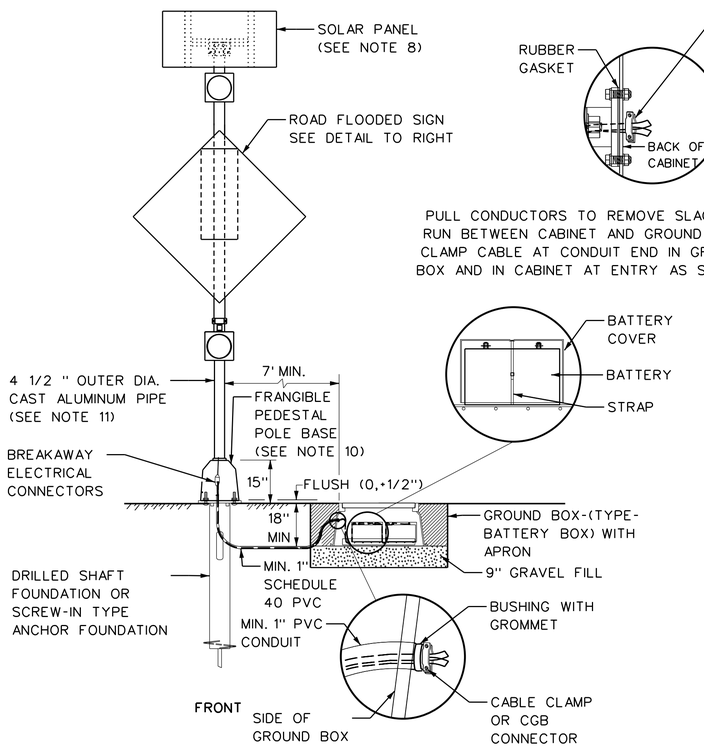
11. POLE SHAFT SHALL BE ONE PIECE, SCHEDULE 40 ALUMINUM PIPE, ASTM B429 OR B221 (ALLOY 6061-T6 ONLY). ALUMINUM CONDUIT WILL NOT DEVELOP THE NECESSARY STRENGTH AND WILL NOT BE ALLOWED.

12. INSTALL THE BATTERIES IN A BATTERY BOX. PLACE THE BATTERIES ON A 3/16" THICK PLASTIC SHEET AND CONNECT TOGETHER. PLACE A PLASTIC COVER (BATTERY BELL JAR) OVER THE TOP OF EACH BATTERY AND SECURE THE BATTERY BELL JAR TO THE BATTERY WITH A STRAP. WIRE BATTERIES ACCORDING TO MANUFACTURERS RECOMMENDATIONS. PROVIDE THE NUMBER OF BATTERIES AS REQUIRED BY THE MANUFACTURER.

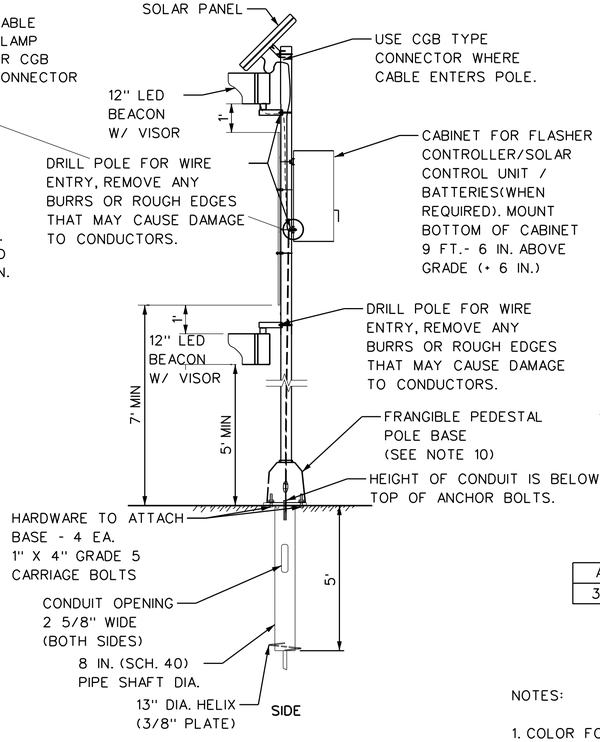
13. 'BLIND CORNER BIKES SLOW DOWN' SIGN SHALL BE PLACED LESS THAN 2FT LATERALLY FROM THE PATH EDGE AND SHALL BE MOUNTED 4FT VERTICALLY FROM EXISTING GRADE. THE SIGN SHALL BE RETROREFLECTIVE AND SHALL BE INSTALLED AT LEAST 50FT IN ADVANCE OF THE BEGINNING OF THE CHANGE OF ALIGNMENT.

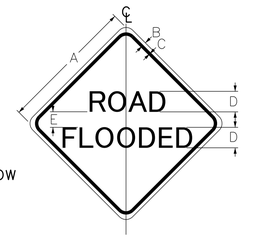



3 LATERAL LOCATION OF SIGNS
NTS




4 FLASHING WARNING SIGN
NTS




| A | B | C | D | E |
|---|---|---|---|---|
| 36 | 0.625 | 0.875 | 6C | 3 |

SIGN DETAIL

NOTES:

1. COLOR FOR LEGEND AND BORDER IS BLACK.
2. COLOR FOR BACKGROUND IS YELLOW (RETROREFLECTIVE).
3. UNITS FOR TABLE IS INCHES.

US Army Corps of Engineers®
New York District

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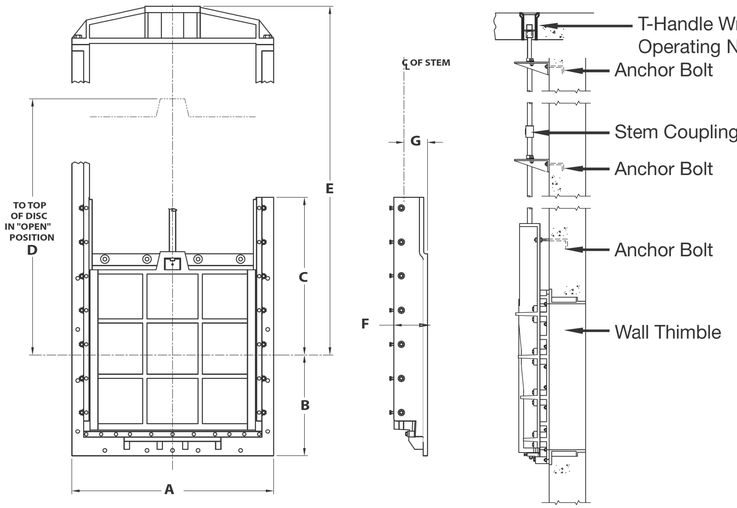
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DESIGNED BY: NS
DWN BY: NS
SUBMITTED BY: NS
CKD BY: KW
PLOT SCALE: AS NOTED
FILE NAME: C-506.dgn
DATE:
SOLICITATION NO.:
CONTRACT NO.:
ISSUE DATE:
FILE NUMBER:

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

SITE DETAILS

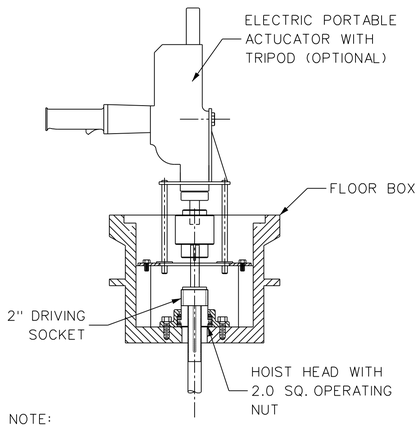
SHEET IDENTIFICATION
C-506
SHEET 36 OF 148




NOTES:

1. THE DETAIL PROVIDED IS FOR INFORMATION USE ONLY. DIMENSIONS SHALL VARY AS PER THE APPROVED MANUFACTURER.
2. INSTALLATION WITH ALL THE REQUIRED CLEARANCE AND SEATING POSITION SHALL BE ACCORDING TO THE APPROVED MANUFACTURER.
3. GATES SHALL BE CAST IRON SLUICE GATE, AS MANUFACTURED BY RODNEY HUNT OR AS APPROVED EQUAL.
4. THE NUT SHALL BE OPERATED MANUALLY BY 'T' WRENCH AND BY AN ELECTRIC PORTABLE ACTUATOR AS MANUFACTURED BY RODNEY HUNT OR AS APPROVED EQUAL. THE CONTRACTOR SHALL PROVIDE THE ELECTRIC PORTABLE ACTUATOR.

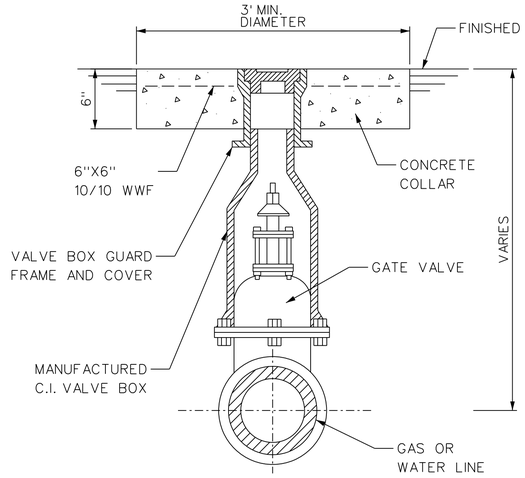
## 1 SLUICE GATE
NTS




NOTE:

1. WORD "SEWER" AS NEEDED INTO CENTER OF CAST IRON VALVE BOX GUARD COVER.

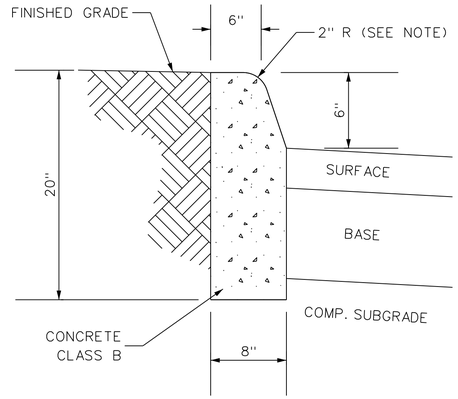
PORTABLE ACTUATOR ASSEMBLY




NOTE:

1. WORD "WATER" AS NEEDED INTO CENTER OF CAST IRON VALVE BOX GUARD COVER, AS MANUFACTURED BY CAMPBELL FOUNDRY, PATTERN # 4157, CODE: 48-5170 OR AS APPROVED EQUAL.

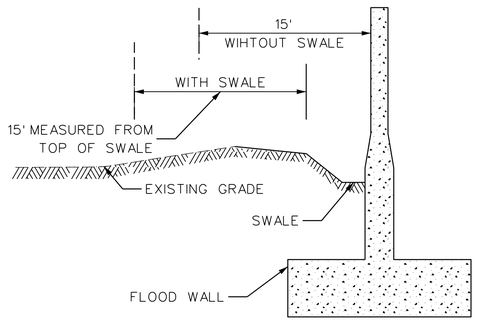
## 2 VALVE BOX
NTS



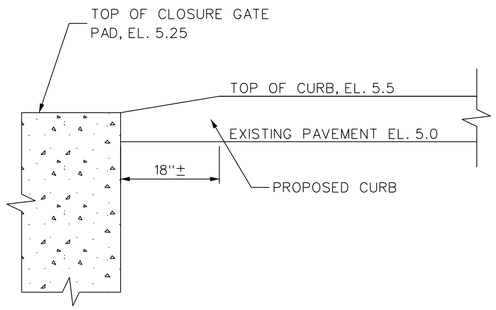

NOTE:

1. THE CURB SHALL BE CONSTRUCTED ACCORDING TO THE MONMOUTH COUNTY DESIGN STANDARDS AND NEW JERSEY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

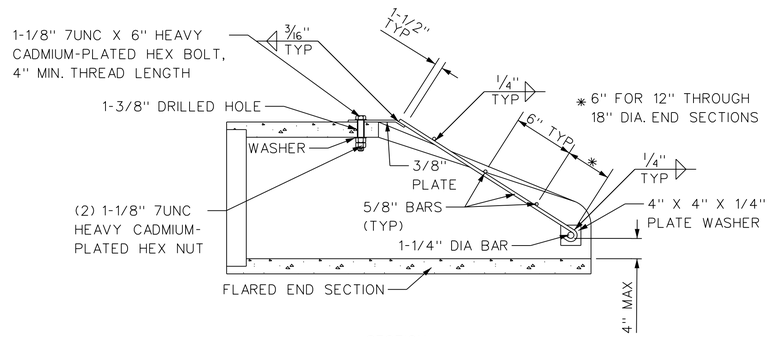
## 3 CONCRETE CURB
NTS



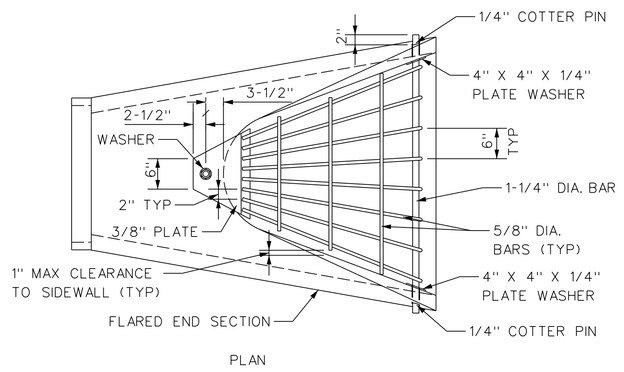

## 4 VEGETATION FREE ZONE
NTS




## 5 CURB TRANSITION
NTS

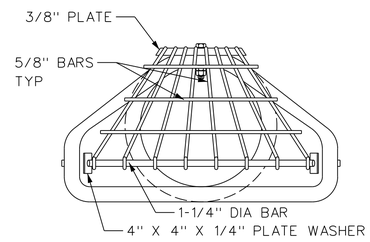



SECTION




PLAN

## 6 FLARED END SECTION
NTS




ELEVATION

NOTES:

1. TACK WELD WASHER TO PLATE AND BOLT TO WASHER. TACK WELD NUT TO BOLT ON UNDERSIDE.

2. ALL STEEL BARS AND PLATES SHALL BE GALVANIZED WITH 2.0 OUNCES OF ZINC PER SQUARE FOOT.

3. ALL 5/8" DIAMETER STEEL BARS SHALL BE WELDED TOGETHER. EACH 5/8" STEEL BAR SHALL ALSO BE WELDED TO THE 3/8" STEEL PLATE AND 1-1/4" STEEL BAR AS SHOWN.

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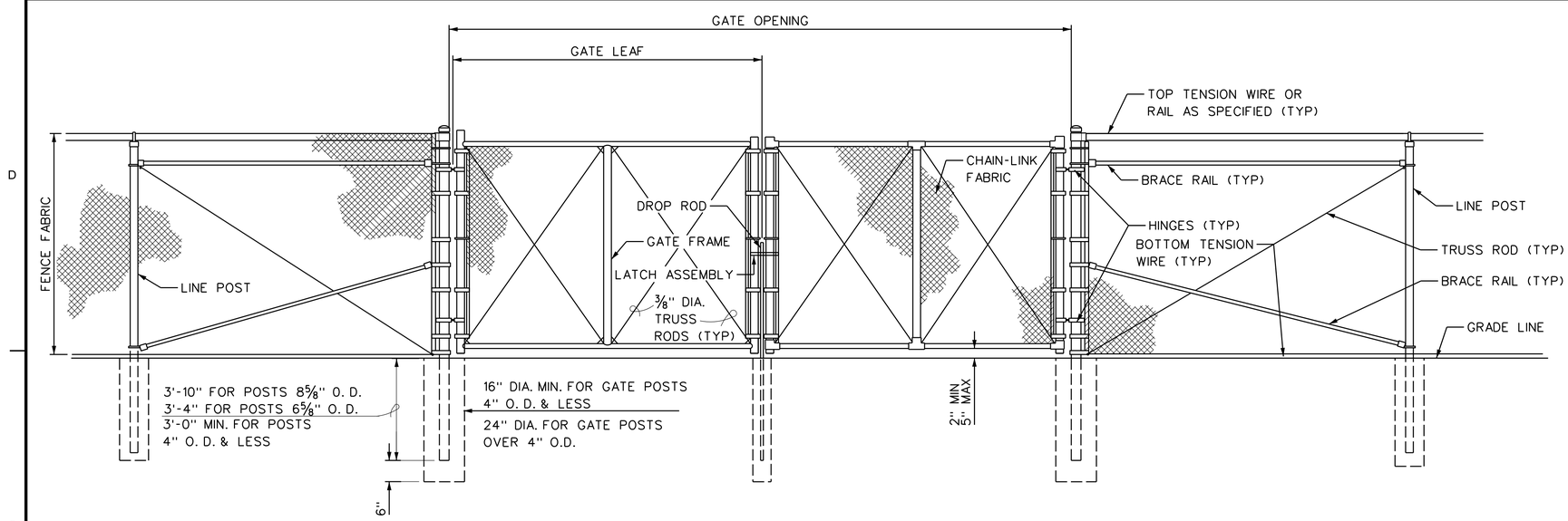
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FILE NUMBER:
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PLOT SIZE: ANSI D
ISSUE DATE:
FILE NAME: C-507.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE DETAILS

SHEET IDENTIFICATION
C-507
SHEET 37 OF 148




1 DOUBLE SWING GATE (TYPE FE-5 FENCE)
NTS

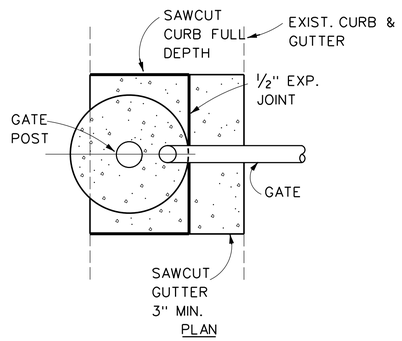
NOTES:

1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPE OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.

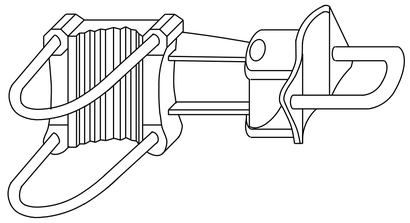
2. SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY AND GATE KEEPERS EXCEPT AS NOTED.

3. ALL GATE FRAMES SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM F900 1.90" NOMINAL (ROUND) OR 2.00" NOMINAL (SQUARE). GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR SHALL BE ASSEMBLED USING HEAVY FITTINGS. AT CONTRACTOR'S OPTION A WELDED HORIZONTAL BRACE MAY BE USED IN LIEU OF TRUSS RODS TO BRACE ALL-WELDED GATE FRAMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RIGID CONSTRUCTION OF ALL GATES SUPPLIED.

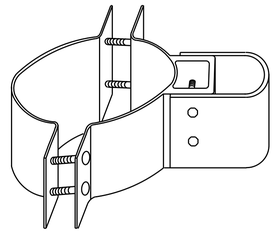
| GATE POST SCHEDULE | |
|---|---|
| GATE LEAF WIDTH (NOMINAL) | OUTSIDE DIMENSION (NOMINAL) |
| 6' OR LESS | 2.875" OD<br>2.5" SQ |



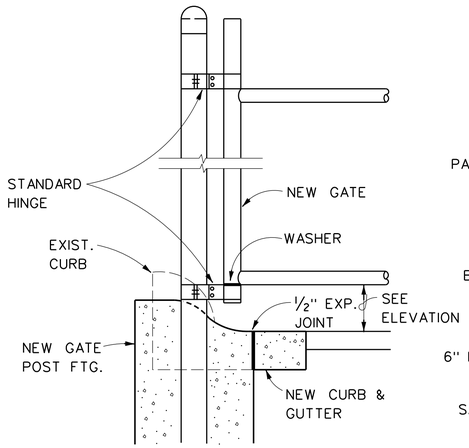

PLAN



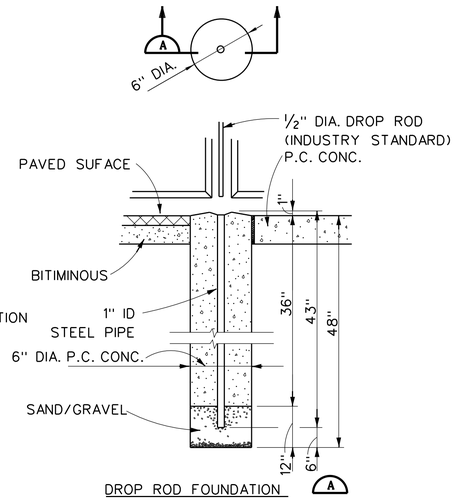
OFFSET HINGE



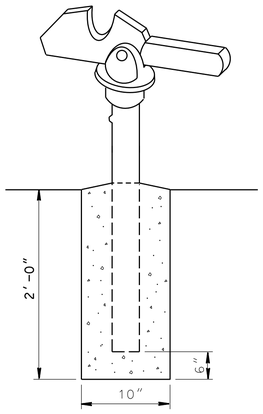
STANDARD HINGE



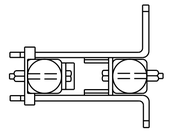

2 GATE POST SECTION AT CURB AND GUTTER
NTS

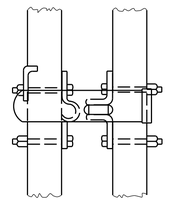



DROP ROD FOUNDATION

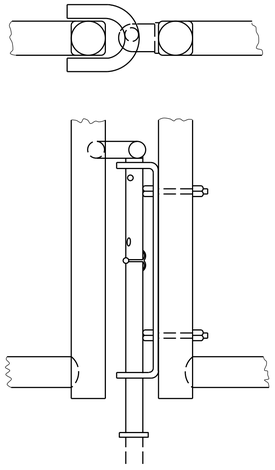



GATE KEEPER
(TO HOLD GATE OPEN)





LATCH ASSEMBLY



DROP ROD ASSEMBLY

2 SWING GATE DETAILS
NTS

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. |
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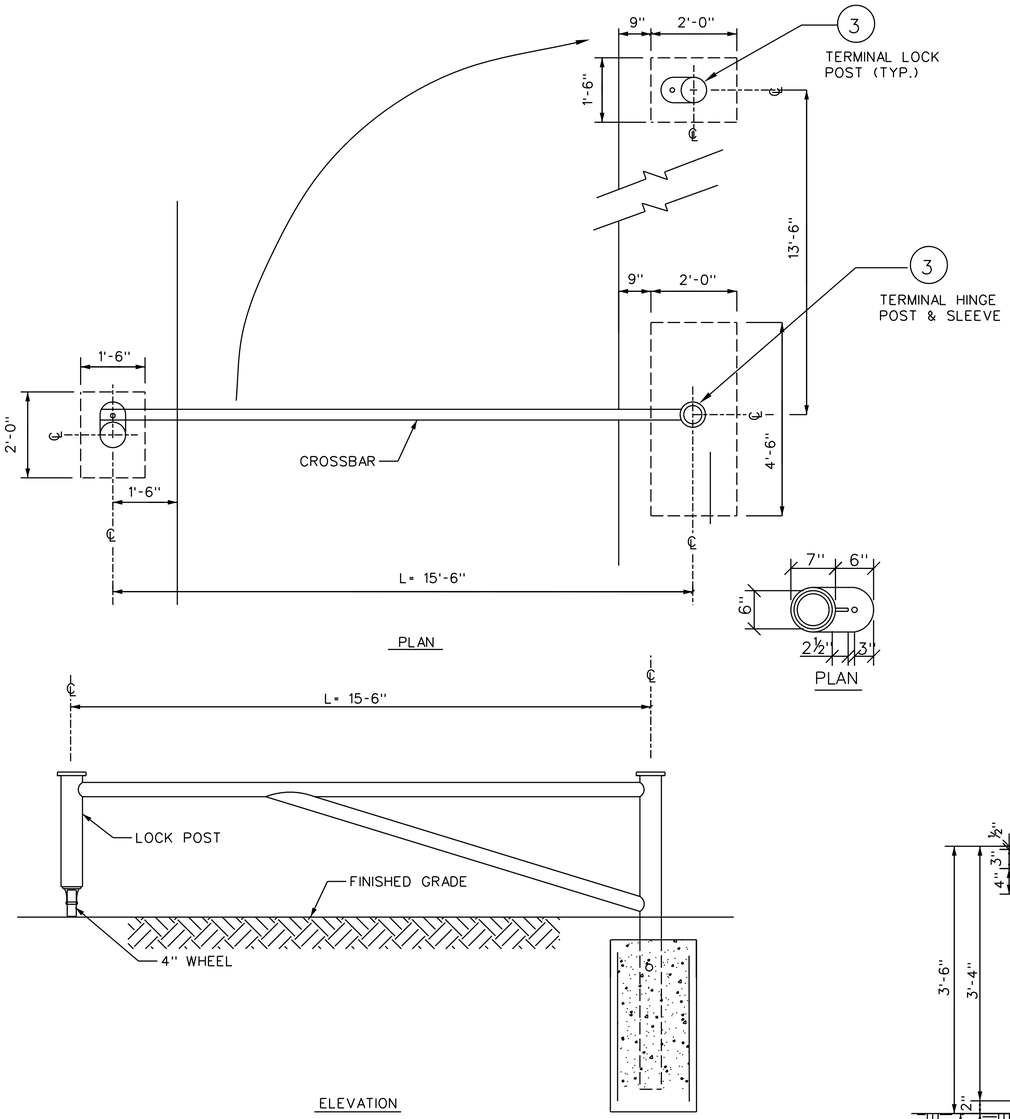
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CONTRACT NO.:
PLOT SCALE: NTS
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ISSUE DATE:
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U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SITE DETAILS

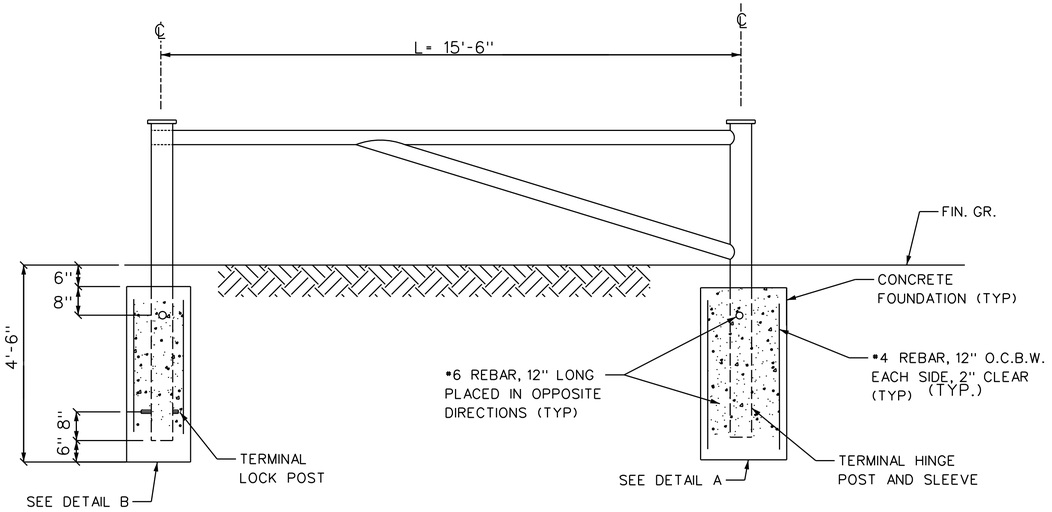
SHEET IDENTIFICATION
C-508
SHEET 38 OF 148




PLAN




PLAN



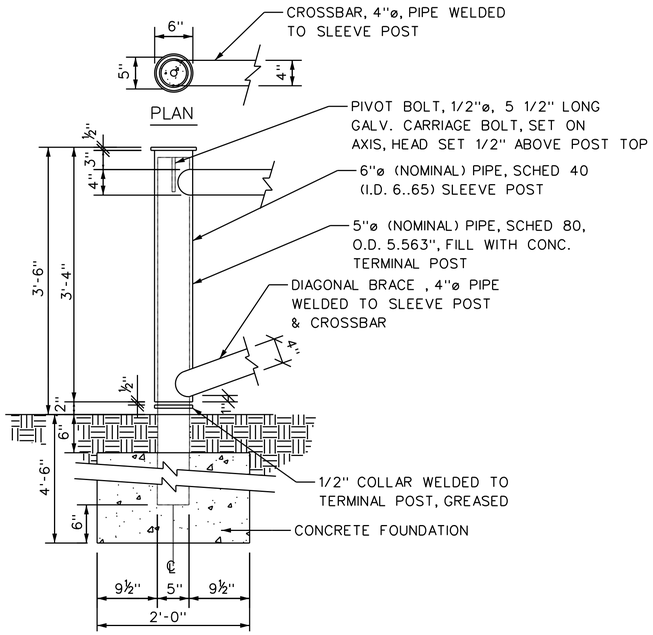

ELEVATION

NOTES

1. BACKFILL & COMPACT SOIL AROUND FOOTINGS BEFORE INSTALLING GATE.

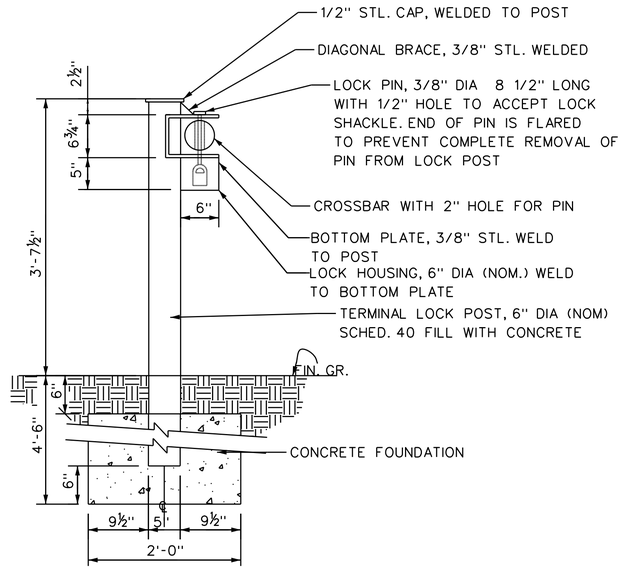



ELEVATION




PLAN

ELEVATION
DETAIL A




ELEVATION
DETAIL B

## 1 SINGLE LEAF GATE

NTS

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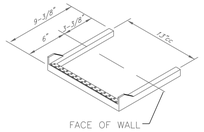
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SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
PLOT SCALE:
PLOT SIZE: ANSI D
ISSUE DATE:
FILE NAME: C-509.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
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PORT MONMOUTH, NJ

SITE DETAILS

SHEET IDENTIFICATION
C-509
SHEET 39 OF 148

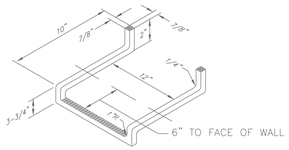



TYPE P-14938-SQ FOR PRECAST MANHOLE SECTIONS
TYPE P-14938 FOR REPLACEMENT OR INSTALLATION IN EXISTING MANHOLES

NOTES:

1. POLYPROPYLENE MANHOLE STEPS W/ STEEL OR ALUMINUM CORE AS MANUFACTURED BY LANE INTERNATIONAL INC. Or OR APPROVED EQUAL.

POLYPROPYLENE MH. STEPS

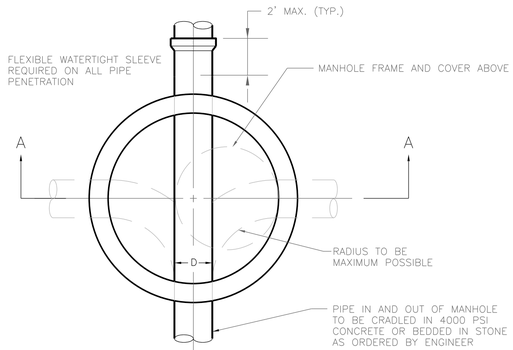



NOTES:

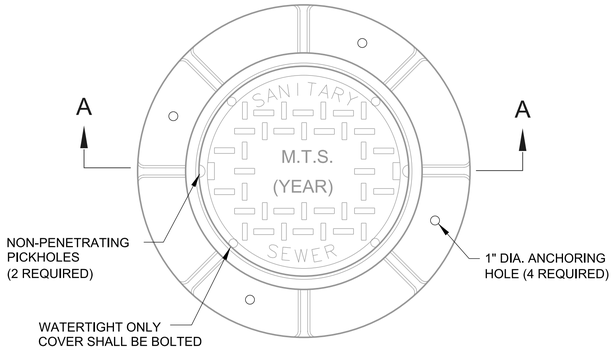
1. ALUMINUM MANHOLE STEPS SHALL BE EXTRUDED 6061-T6 ALUMINUM ALLOY OR APPROVED EQUAL.
2. PORTION EMBEDDED IN MASONRY TO BE COATED WITH ZINC CHROMATE, BITUMINOUS PAINT OR APPROVED EQUAL.

ALUMINUM MH. STEPS

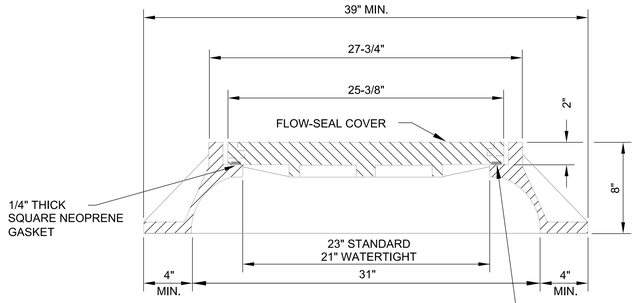
## M.H. STEPS




## SECTIONAL PLAN




## PLAN




## SECTION A-A

NOTES:

1. STANDARD MANHOLE FRAME AND COVER SHALL BE PATTERN NO. 1202B W/ FLOW-SEAL COVER AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO., OR APPROVED EQUAL.

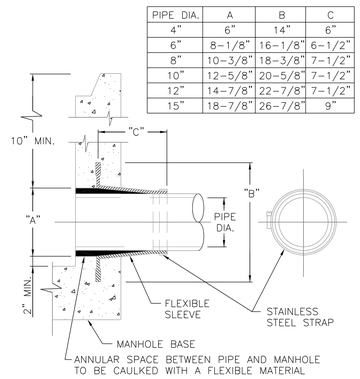
   WATERTIGHT MANHOLE FRAME & COVER SHALL BE PATTERN 1202B- MODIFIED AS MANUFACTURED BY THE CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.

2. MANHOLE FRAMES AND COVERS TO BE HEAVY DUTY, CONFORMING TO A.S.T.M. SPECIFICATION A-48 CLASS 30-B WITHOUT SHOP COAT OF ASPHALTIC PITCH, AND SHALL BE DESIGNED FOR AASHTO HS20-44 HIGHWAY LOADING.

3. IN EASEMENTS AND REMOTE AREAS, WATERTIGHT COVERS AND FRAMES MUST BE PROVIDED.

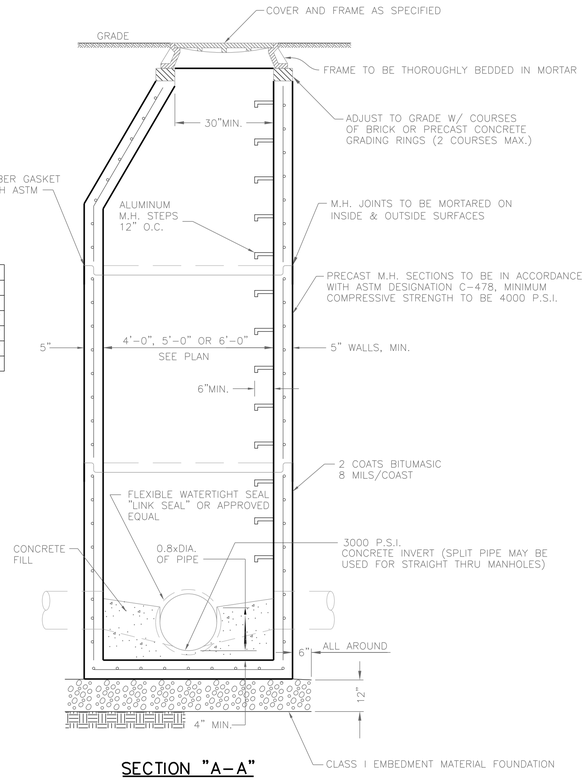
## STANDARD OR WATERTIGHT SANITARY MANHOLE FRAME & COVER

N.T.S.




| PIPE DIA. | A | B | C |
|---|---|---|---|
| 4" | 6" | 14" | 6" |
| 6" | 8-1/8" | 16-1/8" | 6-1/2" |
| 8" | 10-3/8" | 18-3/8" | 7-1/2" |
| 10" | 12-5/8" | 20-5/8" | 7-1/2" |
| 12" | 14-7/8" | 22-7/8" | 7-1/2" |
| 15" | 18-7/8" | 26-7/8" | 9" |

## FLEXIBLE MANHOLE SLEEVE




SECTION "A-A"

## PRECAST STANDARD MANHOLE DETAIL

N.T.S.

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New York District

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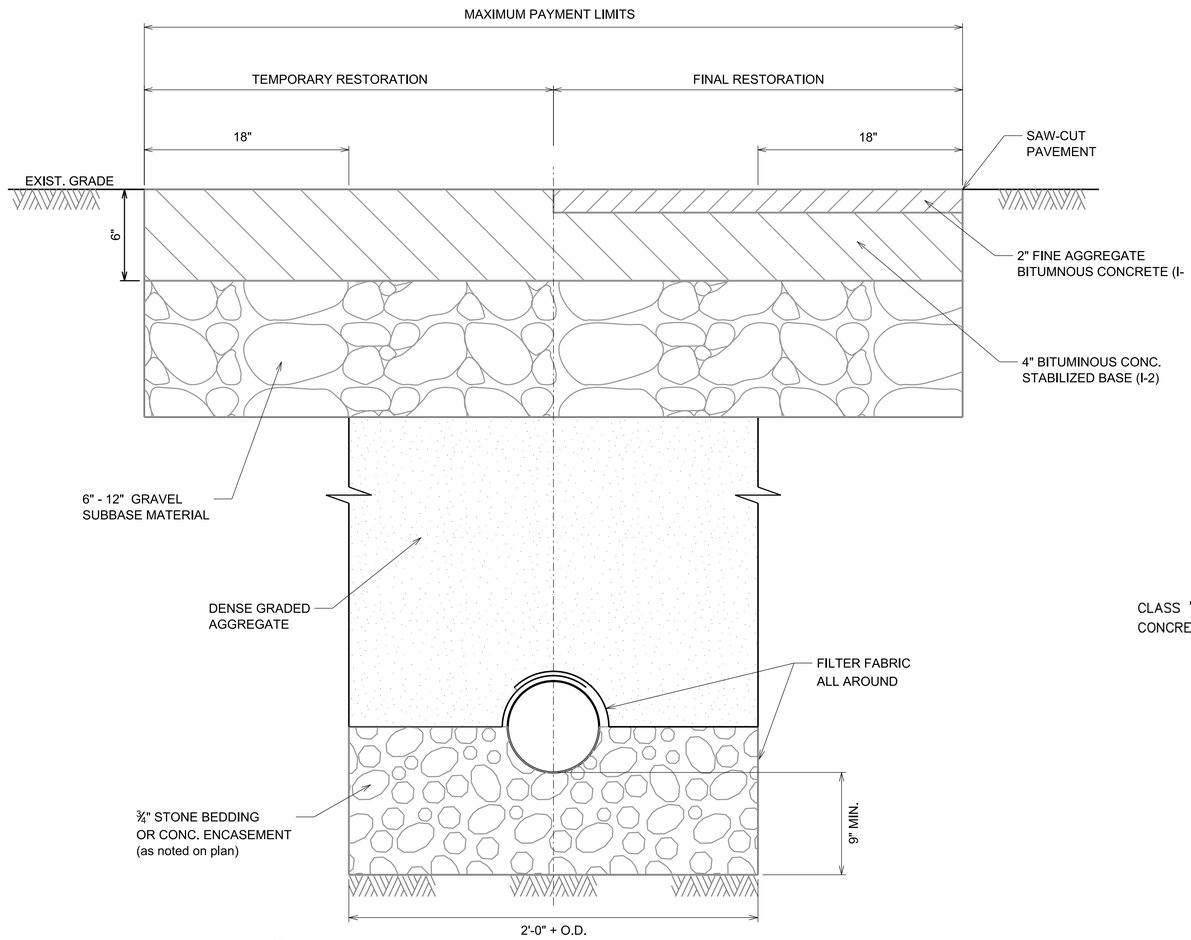
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

DESIGNED BY: | DWN BY: | CKD BY: | SUBMITTED BY:
DATE: | SOLICITATION NO.: | CONTRACT NO.: | FILE NUMBER:
PLOT SCALE: | ISSUE DATE: | SIZE: | FILE NAME:

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SANITARY SEWER
DETAILS - SHEET #1

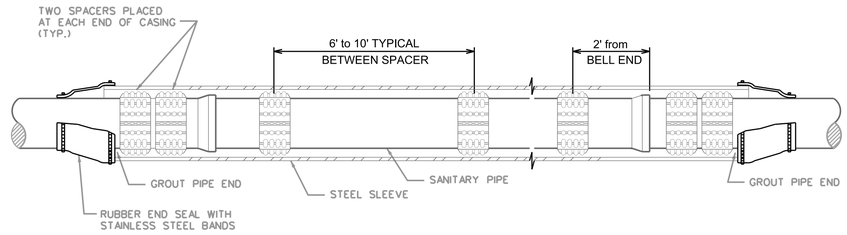
SHEET IDENTIFICATION
C-510
SHEET 40 OF 148




NOTES:
1. ALL TRENCHES IN EXISTING PAVEMENT SHALL BE SAW CUT.
2. ALL TRENCHES IN ROADWAY SHALL BE TEMPORARILY PAVED AT THE END OF EACH WORK DAY UNLESS OTHERWISE APPROVED BY TOMSA.
3. ALL TRENCHES SHALL BE RESTORED IN ACCORDANCE WITH MONMOUTH COUNTY DESIGN STANDARDS.
4. BACKFILL MATERIALS TO BE PLACED IN 12" MAX. LIFTS. SUITABLE EXCAVATED MATERIAL OR SELECT FILL MAY BE SUBSTITUTED FOR BACKFILL MATERIAL, AS APPROVED BY THE COR.
5. IN UNPAVED AREAS, CONTRACTOR SHALL RESTORE THE TRENCH WITH 4" TOPSOIL, SEED, FERTILIZER AND STRAW MULCH.
6. ALL DISTURBED TRAFFIC/PAVEMENT MARKINGS SHALL BE REPLACED IN KIND.
7. THE CONTRACTOR SHALL COMPLY WITH OSHA STANDARDS FOR EXCAVATIONS. WHERE NECESSARY, EXCAVATION SHALL BE SHEETED AND BRACED, IN COMPLIANCE WITH NJ CONSTRUCTION AND SAFETY CODES AND OSHA REQUIREMENTS.
8. PIPE BEDDING IS ¾" STONE UNLESS OTHERWISE NOTED ON PROFILES.

## PIPE BEDDING DETAIL

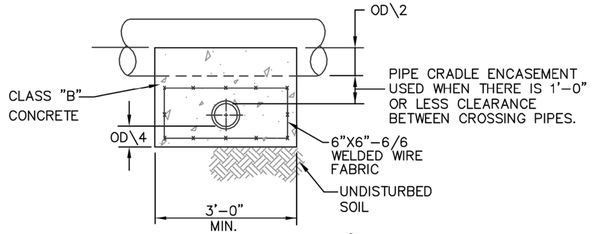
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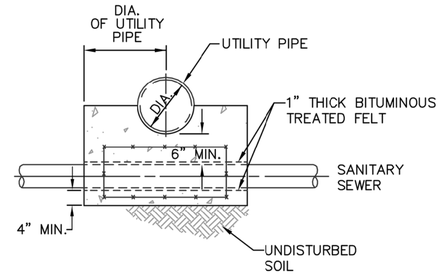


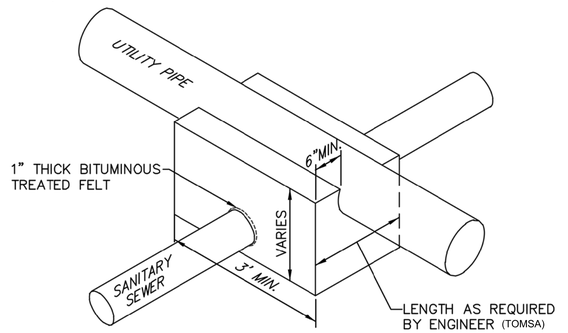

NOTES:
1. SPACERS SHALL BE HIGH DENSITY POLYETHYLENE RACI CASING SPACERS OR EQUAL AS APPROVED BY THE CONTRACTING OFFICER.
2. GROUTING AT THE PIPE ENDS METHODS BETWEEN THE STEEL CASING AND CARRIER PIPE SHALL BE AS REQUIRED AND APPROVED BY THE PIPE AND INSULATOR SPACER MANUFACTURERS.
3. FOR STEEL SLEEVE LENGTHS THAT ARE LESS THAN 15', THE CONTRACTOR SHALL NOT INSTALL A PIPE JOINT WITHIN THE SLEEVE SECTION.

## STEEL SLEEVE DETAIL

N.T.S.




## CONCRETE ENCASEMENT DETAIL FOR UTILITY CROSSINGS

N.T.S.

US Army Corps of Engineers®
New York District

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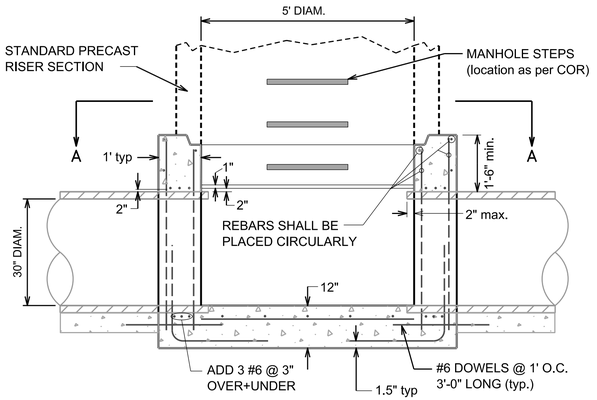
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DWN BY: | CKD BY: | SOLICITATION NO.:
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PLOT SCALE: ISSUE DATE: | FILE NUMBER:
SIZE: | FILE NAME:

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NEW YORK DISTRICT
NEW YORK, NY

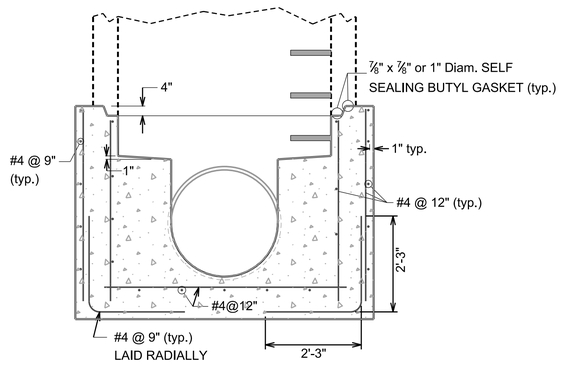
HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

SANITARY SEWER
DETAILS - SHEET #2

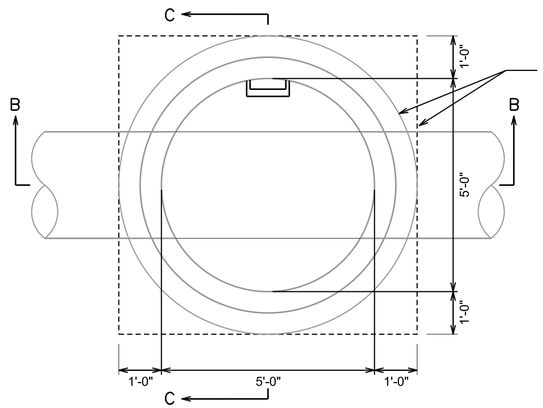
SHEET IDENTIFICATION
C-511
SHEET 41 OF 148




SECTION B-B




SECTION C-C



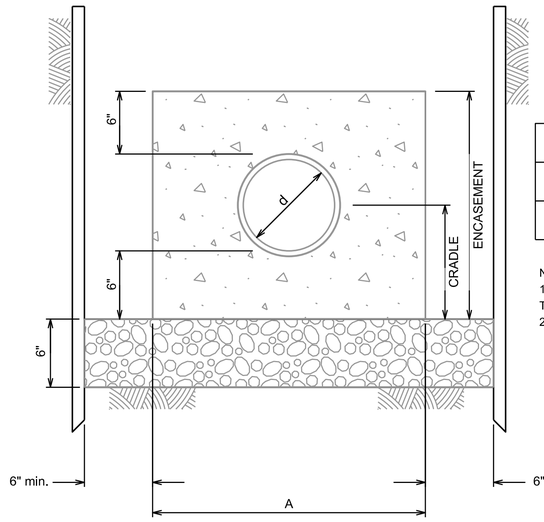

SECTION A-A

NOTE: CONTRACTOR SHALL HAVE OPTION TO POUR-IN-PLACE EITHER A SQUARE OR CIRCULAR OUTER WALL FOR THE BASE SECTION.

NOTES:
1. CONTRACTOR HAS OPTION TO UTILIZE 'DOG-HOUSE' TYPE MANHOLE. SHOP DRAWINGS TO BE SUBMITTED TO USACE FOR APPROVAL.
2. CONCRETE SHALL BE CLASS 40.
3. STEEL REINFORCEMENT SHALL BE GRADE 60.
4. INVERT SHELVES SHALL HAVE ½" PER FOOT PITCH TOWARDS THE SEWER.
5. CONTRACTOR TO USE STELL FORMS TO MAKE THE JOINT BETWEEN BASE SECTION AND RISER.

# PRECAST MANHOLE DETAIL (POURED-IN-PLACE)

N.T.S.




| d | A |
|---|---|
| 8" | 1'-6" |
| 30" | 4'-1" |

NOTES:
1. CONCRETE CRADLE/ENCASEMENT TO BE POURED MONOLITHICALLY.
2. CONCRETE SHALL BE CLASS 40.

# SANITARY SEWER ENCASEMENT DETAIL

N.T.S.

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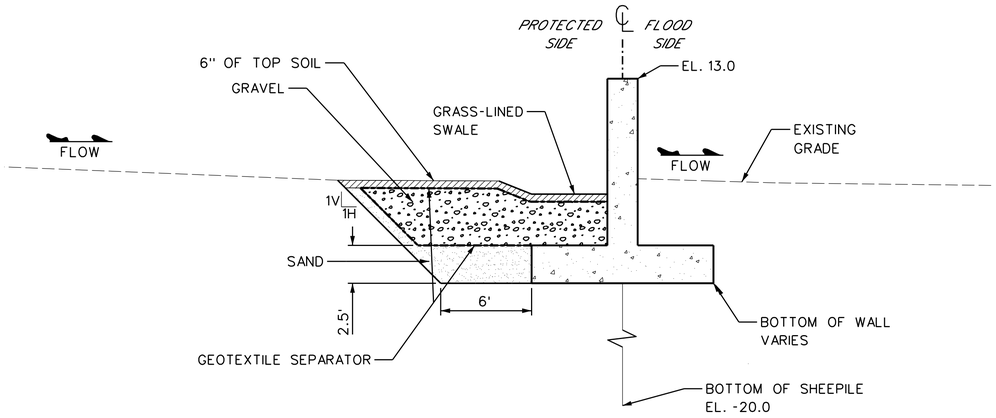
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DATE: | SOLICITATION NO.: | CONTRACT NO.: | FILE NUMBER:

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

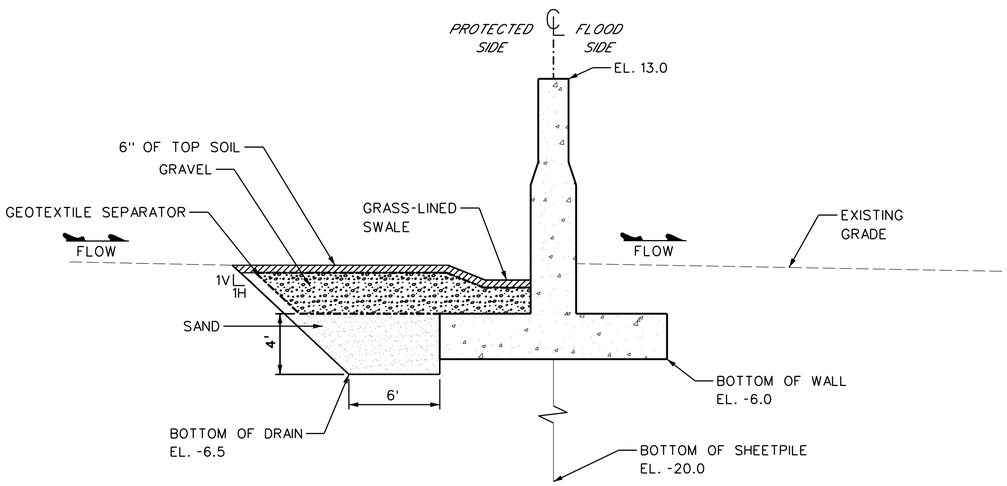
SANITARY SEWER
DETAILS - SHEET #3

SHEET IDENTIFICATION
C-512
SHEET 42 OF 148



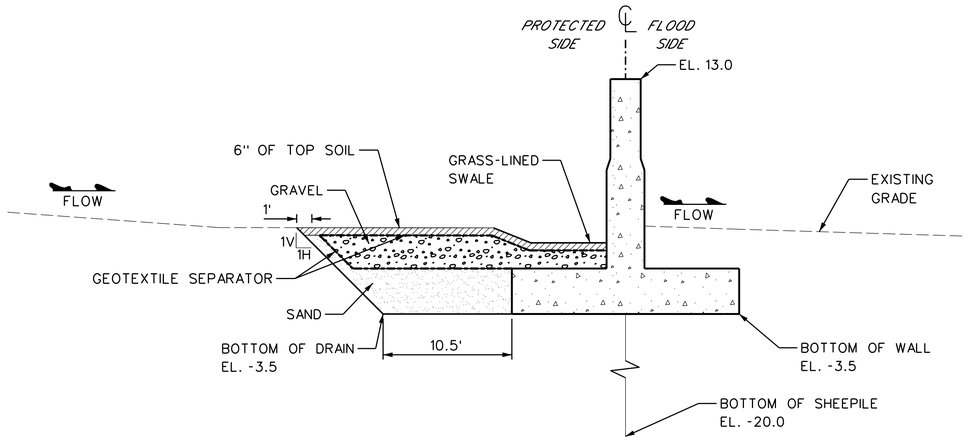

T-WALL STA 0+00 TO 14+20

1" = 5'



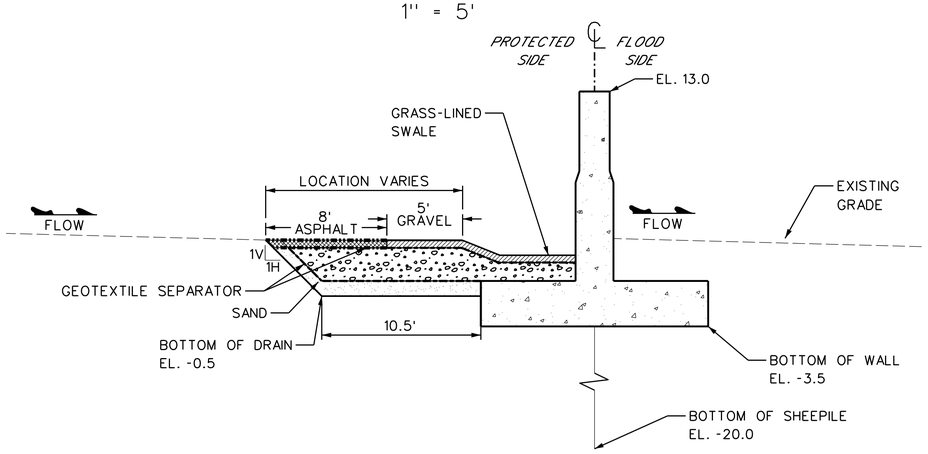

T-WALL STA 23+62 TO 36+42

1" = 5'



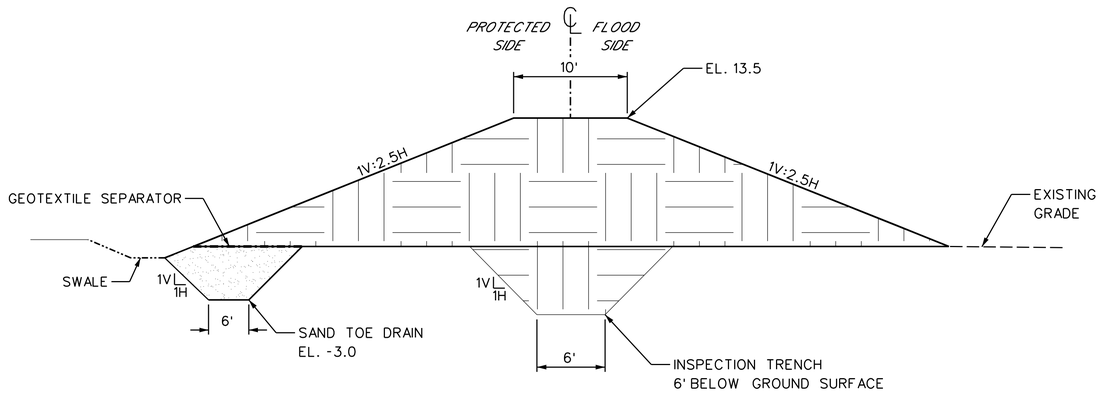

T-WALL STA 14+20 TO 22+58

1" = 5'




T-WALL @ HENRY HUDSON TRAIL
BETWEEN STA 19+90 TO STA 20+90

1" = 5'




LEVEE STA 36+81 TO STA 46+29

1" = 5'

NOTES:
1. SEE SHEET S-503 FOR T-WALL DETAILS.
2. SECTIONS SHOWN ARE TYPICAL FOR AREA BETWEEN NOTED STATIONS.
3. FOR GRAVEL SIZE, REFER TO SPEC SECTION 31 23 00.00 20, PARAGRAPH 2.1.5.
4. SWALE SHOWN ON DETAILS IS FOR INFORMATION ONLY, REFER TO SHEET C-203 FOR THE SWALE PROFILE.
5. SEE GEOTECHNICAL SPECIFICATIONS FOR MORE INFORMATION ON LEVEE MATERIAL, SAND TOE DRAIN, ETC.

0 5' 10'

SCALE:1"=5'

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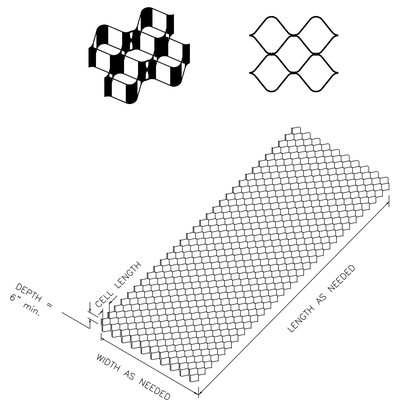
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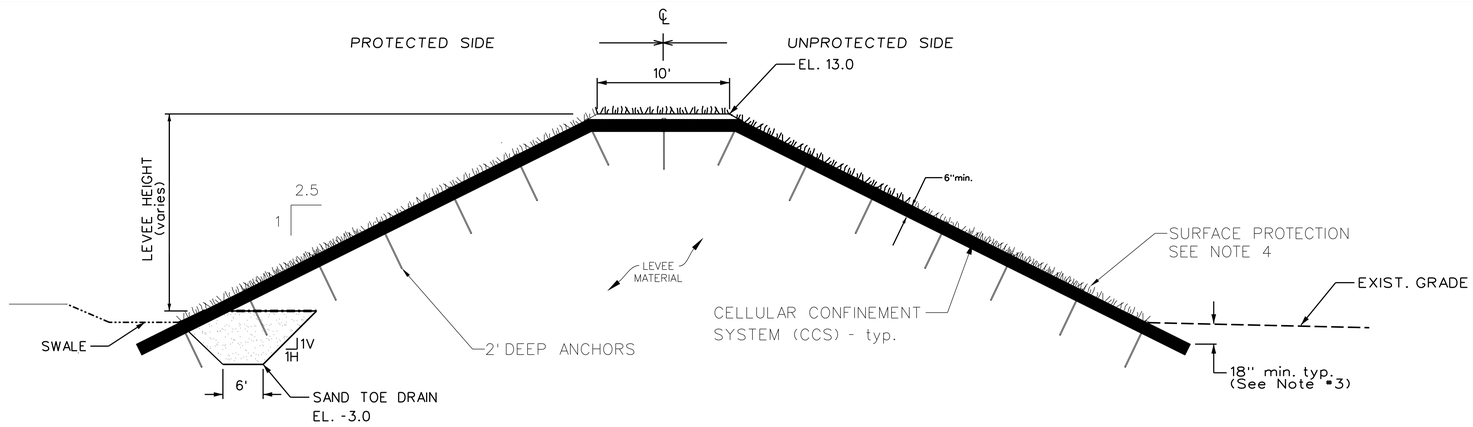
HURRICANE & STORM DAMAGE REDUCTION
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PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

TOE DRAIN DETAILS

SHEET IDENTIFICATION
C-513
SHEET 43 OF 148



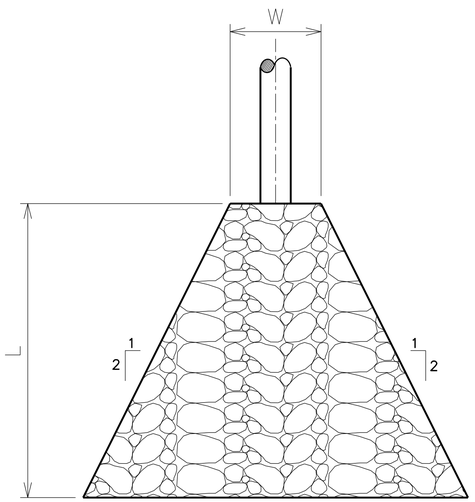

ISOMETRIC VIEW
CELLULAR CONFINEMENT SYSTEM




## CELLULAR CONFINEMENT SYSTEM ALL LEVEE SECTIONS

1 N.T.S.

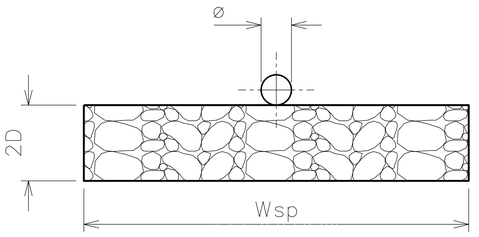
NOTES:
1. THE CELLULAR CONFINEMENT SYSTEM (CCS) SHALL BE PLACED OVER THE SURFACE OF THE LEVEE ON BOTH SIDES AND TOP.
2. THE CCS SHALL BE CONNECTED TO EACH ADJOINING SECTION, AS PER MANUFACTURERS RECOMMENDATIONS.
3. THE CCS SHALL BE KEYED-IN (BURIED) 18" min. ON BOTH SIDES OF THE LEVEE.
4. INFILL THE CCS WITH TOP SOIL AND SEED.
5. ANCHOR SPACING AND DEPTH TO BE AS PER MANUFACTURERS RECOMMENDATIONS.
6. THE CONTRACTOR SHALL PROVIDE AN EROSION CONTROL BLANKET (ECB) OVER THE CCS. THE ECB SHALL BE SIZED FOR THE HYDRAULIC CONDITIONS OF THE SITE IN ORDER TO PREVENT WASH-OUT PRIOR TO ESTABLISHING FULL GRASS COVER OVER THE ENTIRE LEVEE TOP AND SIDE SLOPES.
7. REFER TO SHEET C-513 FOR TOE DRAIN DETAILS, S-503 FOR WALL DETAILS AND C-xxx FOR SWALE DETAILS.




PLAN

| RIP RAP DIMENSIONS | C1-1 | C1-MAIN | C2-4 | C2-3 | C2-MAIN | C2-2 | C2-1 |
|---|---|---|---|---|---|---|---|
| PIPE DIAMETER (ø) | 18" | 48" | 24" | 18" | 48" | 18" | 30" |
| LENGTH (L) | 19.5 | 31.7 | 23.4 | 29.1 | 36.4 | 18.4 | 28.5 |
| TOP WIDTH (W) | 4.8 | 12 | 6 | 4.5 | 12 | 4.5 | 7.5 |
| BOTTOM WIDTH (Wsp) | 24.0 | 43.7 | 29.4 | 33.6 | 48.4 | 22.6 | 36.0 |
| DEPTH of RIP RAP ($2D_{50}$) | 2.4 | 2.4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| SIZE OF RIPRAP ($D_{50}$) | 1.2 | 1.2 | 1.75 | 1.75 | 1.75 | 1.75 | 1.75 |

NOTES:
1. PIPE DIAMETER DIMENSIONS ARE IN INCHES.
2. RIP RAP DIMENSIONS ARE IN FEET.
3. THE $D_{50}$ IS THE MINIMUM AVERAGE SIZE OF THE STONE.




ELEVATION

## RIP-RAP DETAIL @ DRAINAGE STRUCTURE OUTLETS

2 N.T.S.

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SUBMITTED BY: | CONTRACT NO.:
PLOT SCALE: | ISSUE DATE: | FILE NUMBER:
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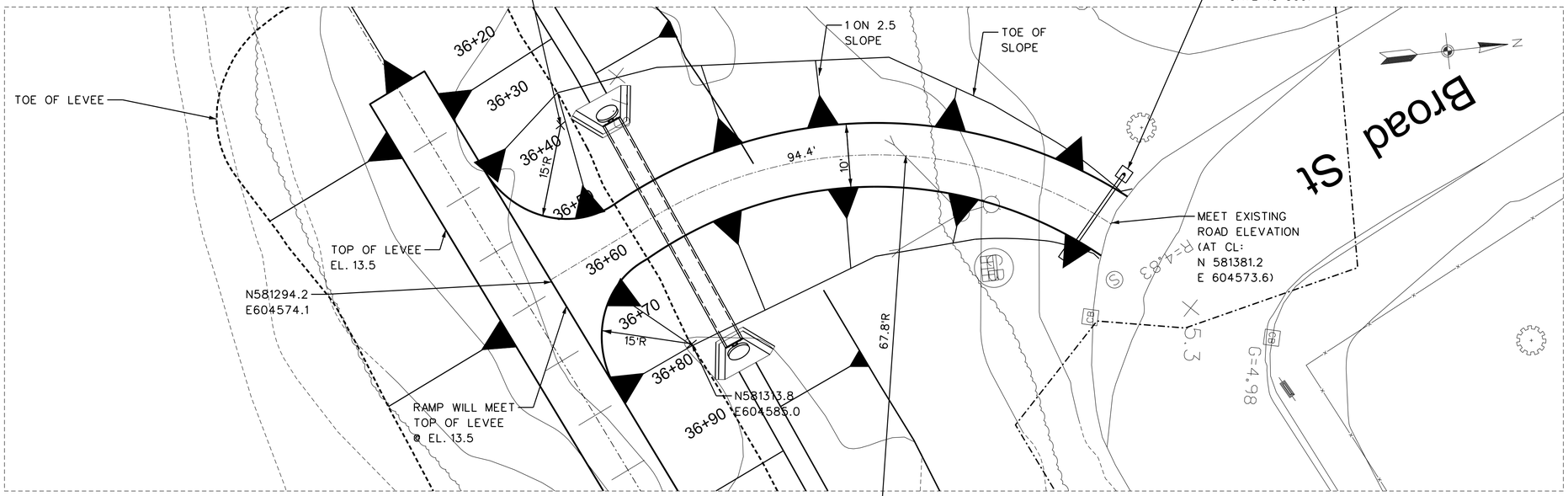
U.S. ARMY CORPS OF ENGINEERS
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NEW YORK, NY

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PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

WAVE OVERTOPPING, WAVE RUNUP + EROSION PROTECTION

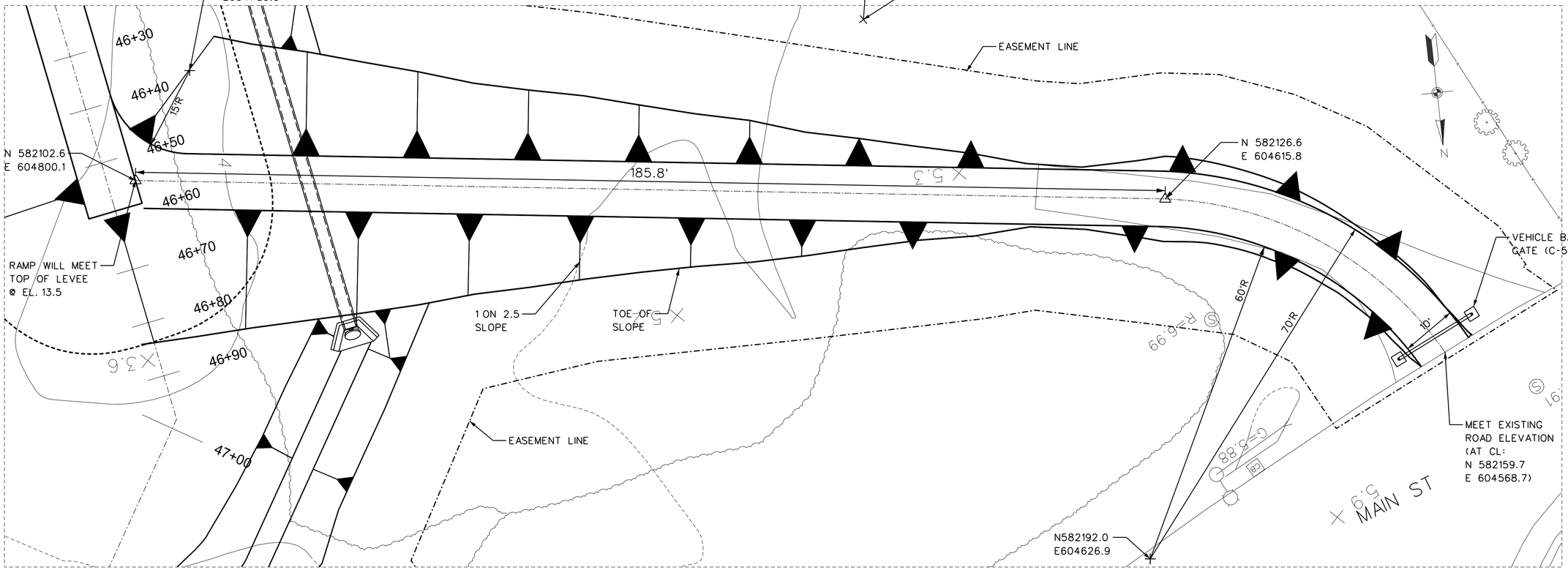
SHEET IDENTIFICATION
C-514
SHEET 44 OF 148

## SOUTH LEVEE ACCESS RAMP
1" = 20'




0 10' 20' 40'
SCALE:1"=20'

## NORTH LEVEE ACCESS RAMP
1" = 20'




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New York District

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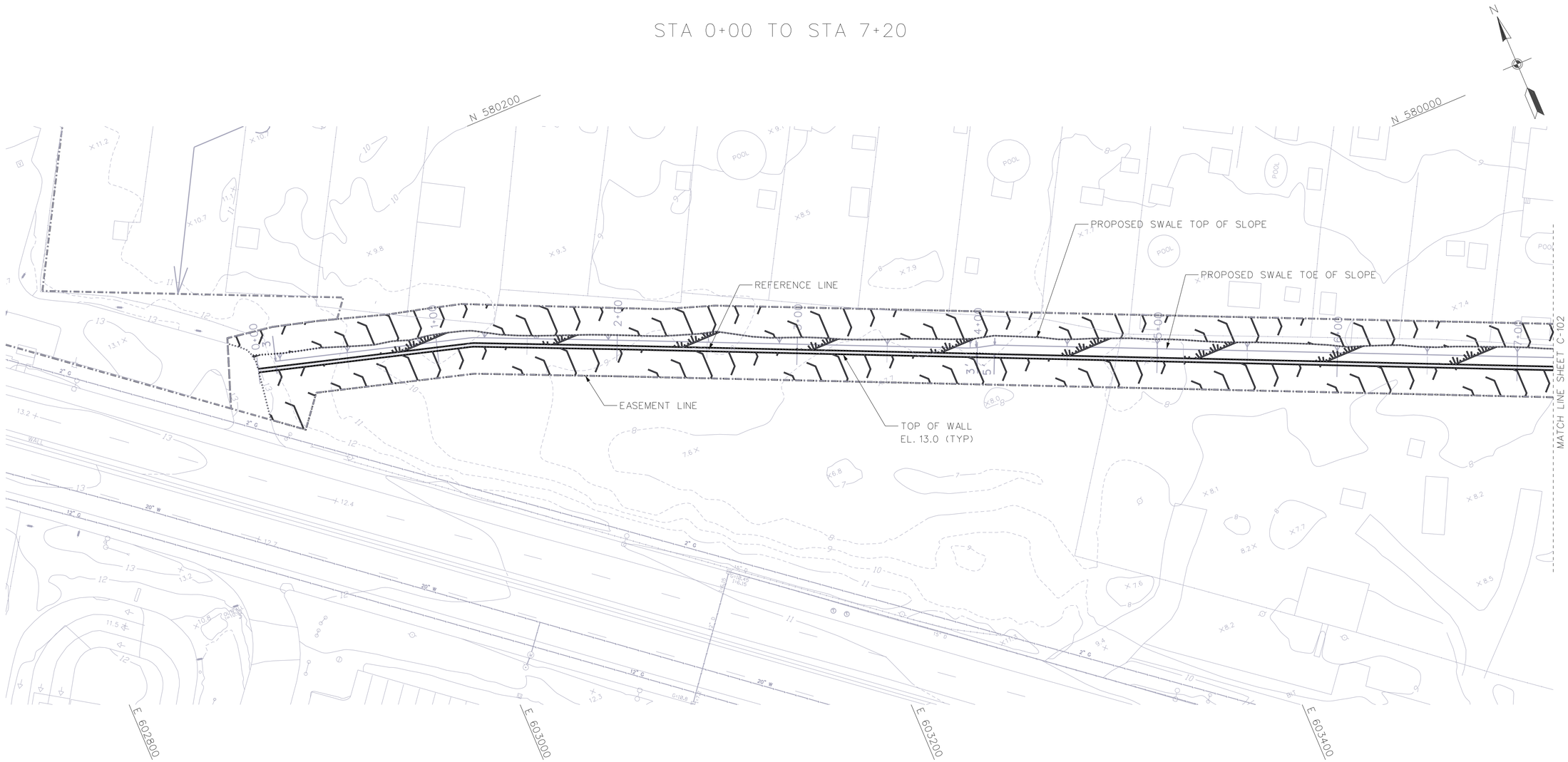
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NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

# LEVEE ACCESS RAMP DETAILS

SHEET IDENTIFICATION
C-516
SHEET 46 OF 148

# STA 0+00 TO STA 7+20




NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

3. ALL SOIL AND EROSION CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PRIOR TO ANY MAJOR CONSTRUCTION DISTURBANCES, OR IN THEIR PROPER SEQUENCE, UNTIL PERMANENT PROTECTION IS ESTABLISHED.

PLANTING LEGEND

TURF GRASS

NATIVE GRASS

0 30' 60'

SCALE:1"= 30'

**US Army Corps of Engineers**
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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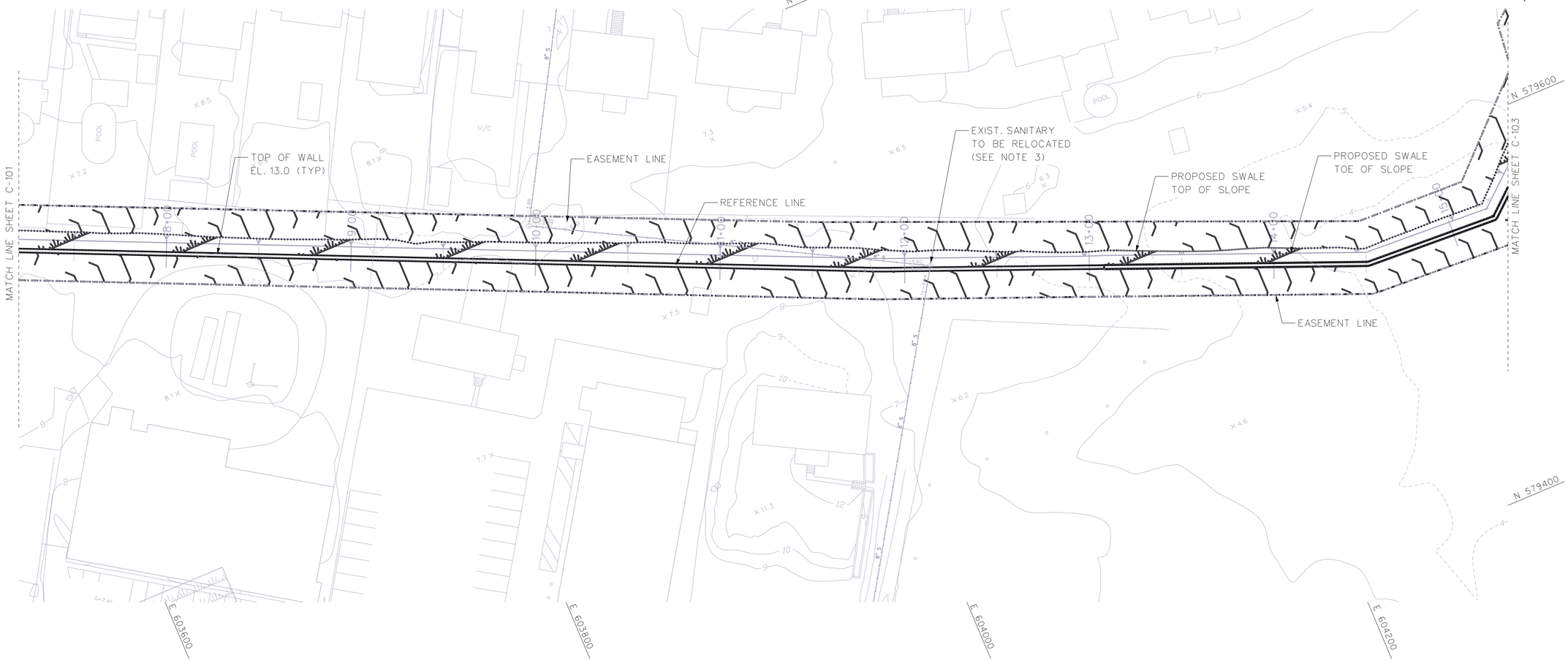
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| PLOT SCALE: | ISSUE DATE: | FILE NUMBER: | |
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 0+00 TO STA 7+20

SHEET IDENTIFICATION
L-101
SHEET 47 OF 148

# STA 7+20 TO STA 15+30




PLANTING LEGEND

TURF GRASS

NATIVE GRASS

NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

3. ALL SOIL AND EROSION CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PRIOR TO ANY MAJOR CONSTRUCTION DISTURBANCES, OR IN THEIR PROPER SEQUENCE, UNTIL PERMANENT PROTECTION IS ESTABLISHED.

0 30' 60'

SCALE:1"= 30'

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New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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SUBMITTED BY: NS
PLOT SCALE: N.T.S.
SIZE: ANSI D
DATE:
CKD BY: KW
ISSUE DATE:
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER:
FILE NAME: L-102.dgn

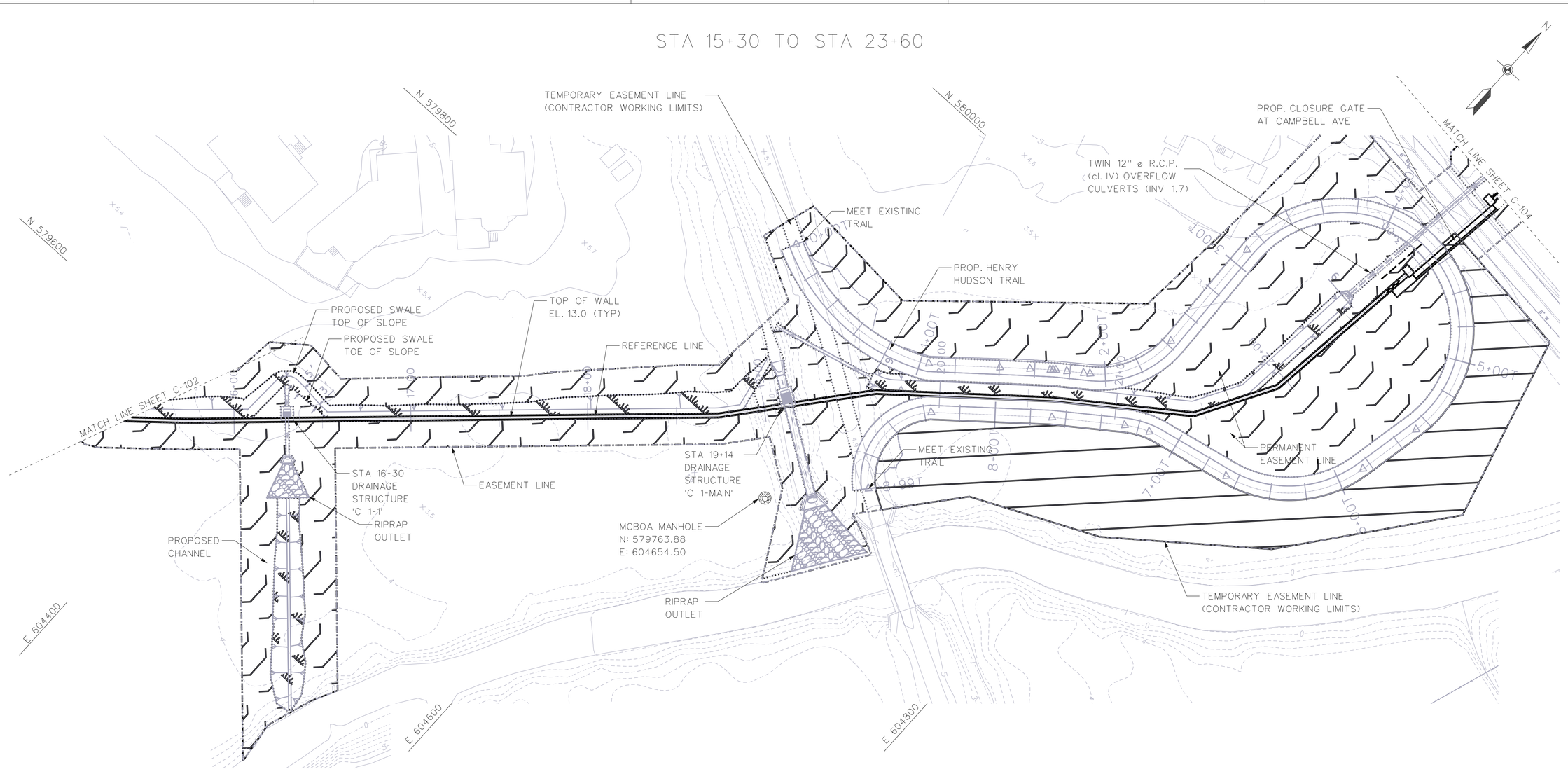
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 7+20 TO STA 15+30

SHEET IDENTIFICATION
L-102
SHEET 48 OF 148

# STA 15+30 TO STA 23+60




NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

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PLANTING LEGEND

TURF GRASS

NATIVE GRASS

HIGH MARSH

0 30' 60'

SCALE:1"= 30'

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CONTRACT NO.:
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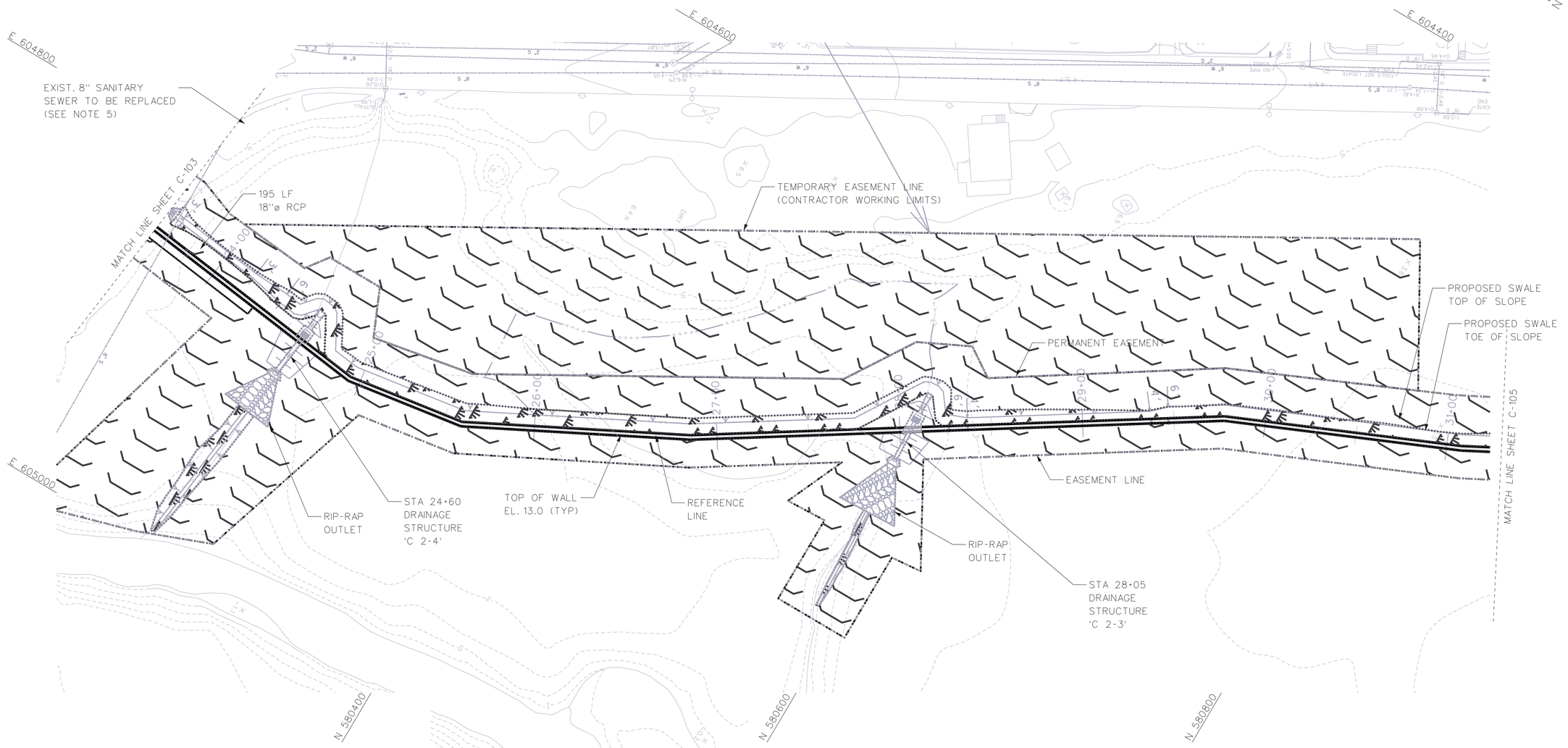
U.S. ARMY CORPS OF ENGINEERS
NEW YORK DISTRICT
NEW YORK, NY

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 15+30 TO STA 23+60

SHEET IDENTIFICATION
L-103
SHEET 49 OF 148

# STA 23+60 TO STA 31+30




NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

3. ALL SOIL AND EROSION CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PRIOR TO ANY MAJOR CONSTRUCTION DISTURBANCES, OR IN THEIR PROPER SEQUENCE, UNTIL PERMANENT PROTECTION IS ESTABLISHED.

PLANTING LEGEND

TURF GRASS

NATIVE GRASS

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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PLOT SCALE: N.T.S. | ISSUE DATE: | FILE NUMBER:
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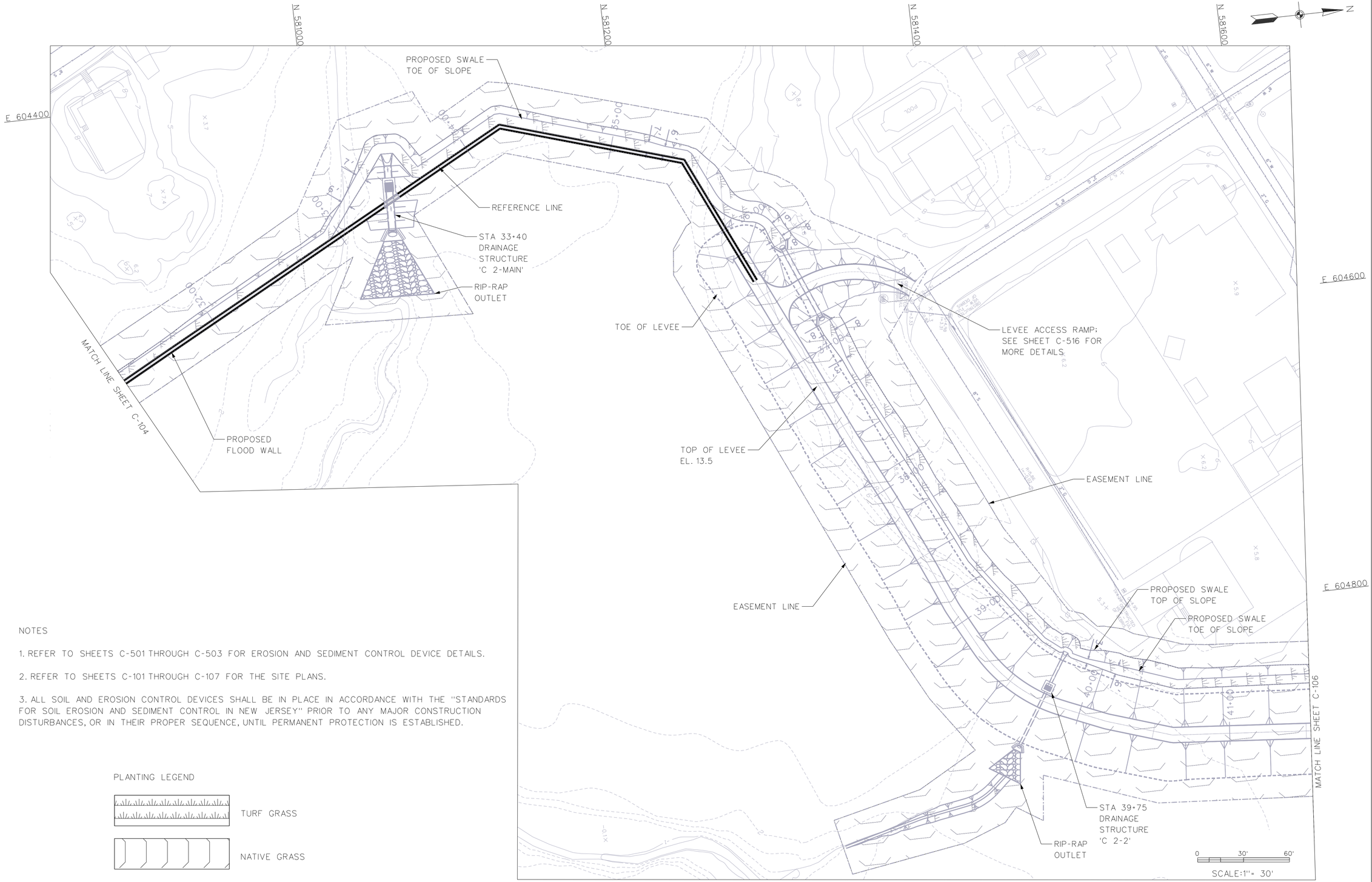
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NEW YORK DISTRICT
NEW YORK, NY
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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 23+60 TO STA 31+30

SHEET IDENTIFICATION
L-104
SHEET 50 OF 148

# STA 31+30 TO STA 41+20




NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

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PLANTING LEGEND

TURF GRASS

NATIVE GRASS

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NEW YORK, NY

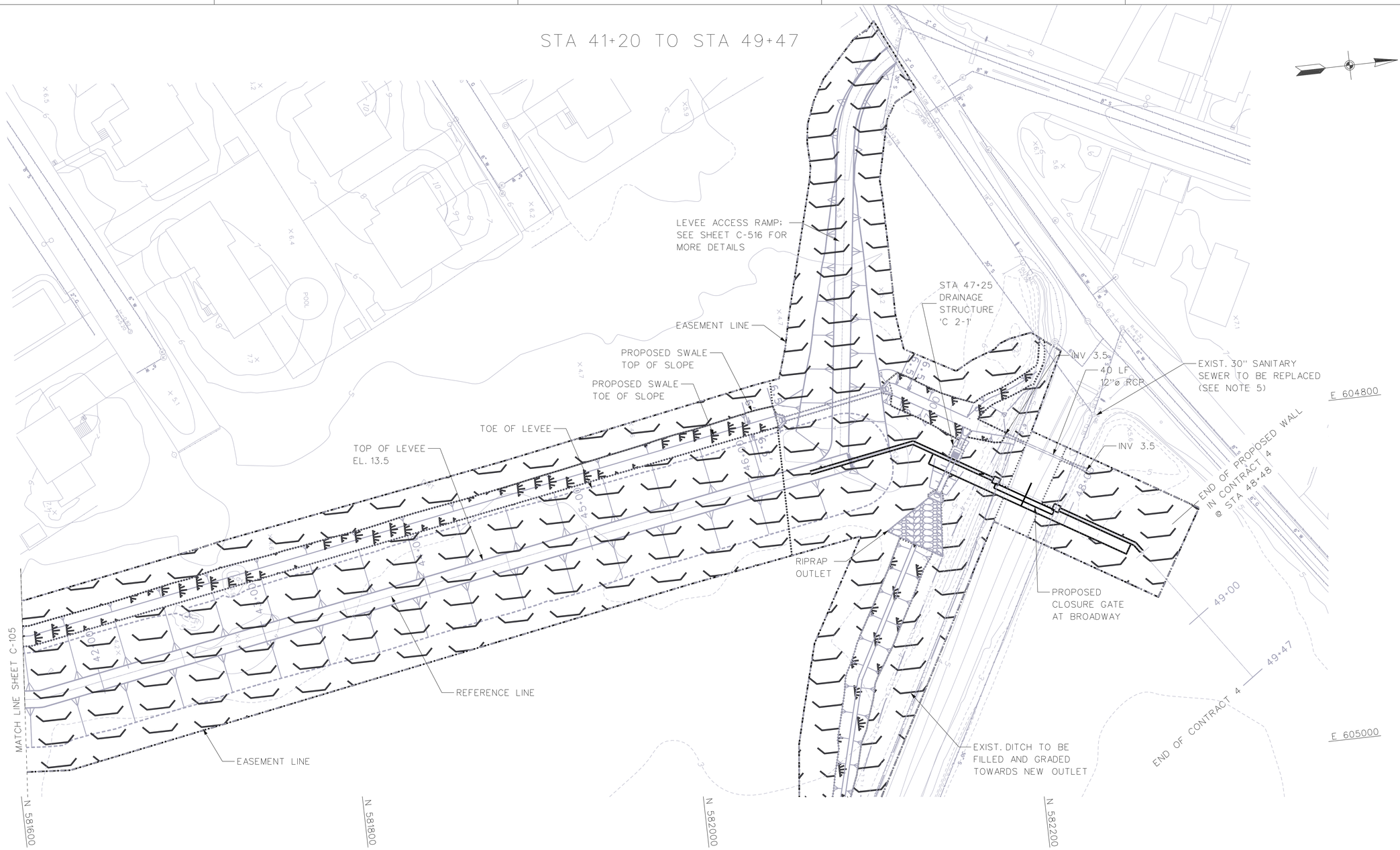
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| FILE NAME: L-105.dgn | | | |

HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE II, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 31+30 TO STA 41+20

SHEET IDENTIFICATION
L-105
SHEET 51 OF 148

# STA 41+20 TO STA 49+47




NOTES

1. REFER TO SHEETS C-501 THROUGH C-503 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS.

2. REFER TO SHEETS C-101 THROUGH C-107 FOR THE SITE PLANS.

3. ALL SOIL AND EROSION CONTROL DEVICES SHALL BE IN PLACE IN ACCORDANCE WITH THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" PRIOR TO ANY MAJOR CONSTRUCTION DISTURBANCES, OR IN THEIR PROPER SEQUENCE, UNTIL PERMANENT PROTECTION IS ESTABLISHED.

PLANTING LEGEND

TURF GRASS

NATIVE GRASS

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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NEW YORK DISTRICT
NEW YORK, NY

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HURRICANE & STORM DAMAGE REDUCTION
RARITAN BAY & SANDY HOOK BAY
PHASE III, CONTRACT 4
PORT MONMOUTH, NJ

LANDSCAPING PLAN
STA 41+20 TO STA 49+47

SHEET IDENTIFICATION
L-106
SHEET 52 OF 148

Notes:

HORIZONTAL COORDINATES refer to the New Jersey Mercator System (NAD-83 (2011) (2010.00 Epoch). Survey Feet.

ELEVATIONS refer to the NAVD88 Datum.

AERIAL PHOTOGRAPHY provided by Geomaps International, Inc. was used to create photogrammetric maps and then developed into a series of 30 scale topographic and utility maps by Gayron de Bruin Land Surveying and Engineering, PC.

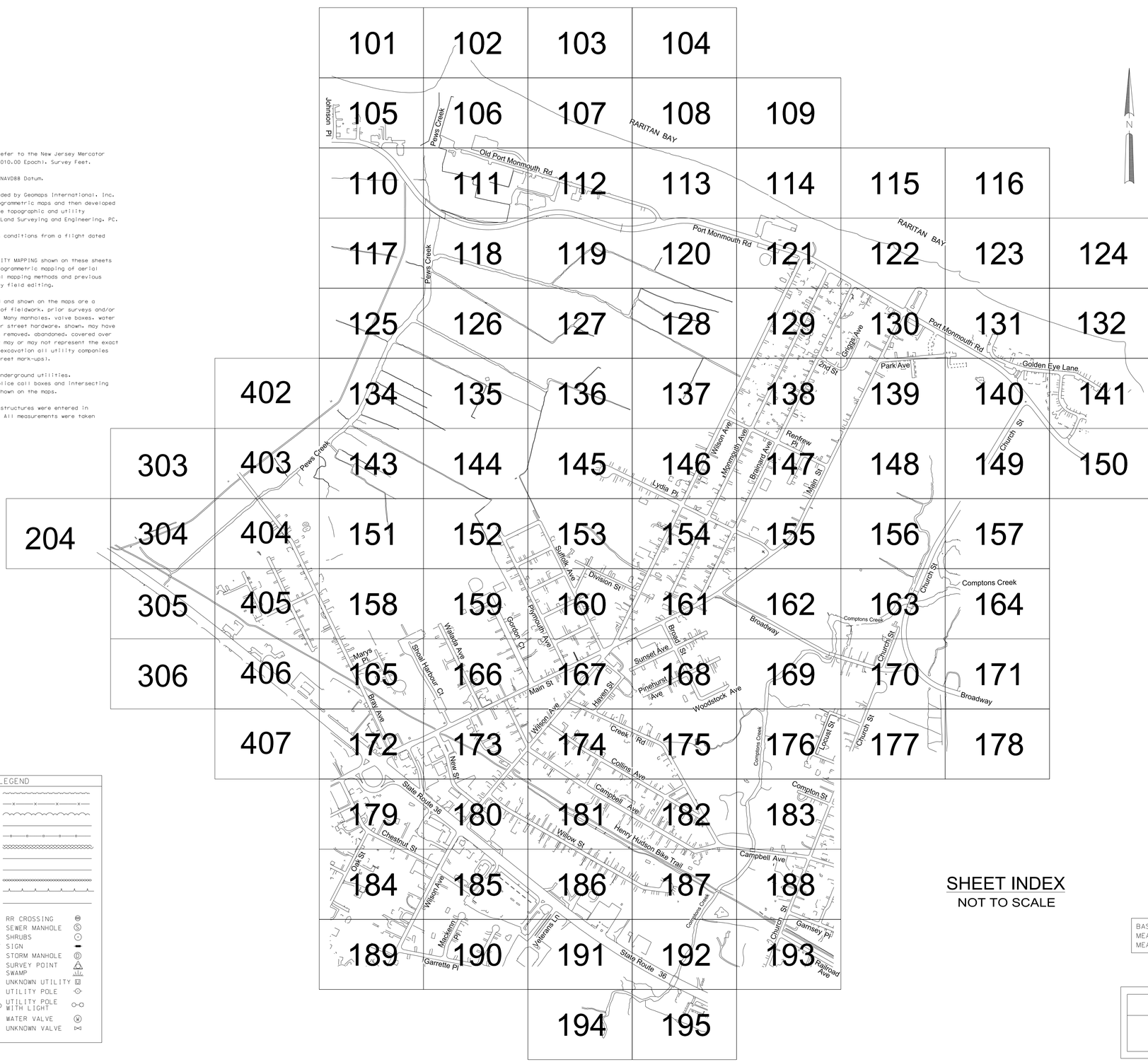
BASEMAPPING represents conditions from a flight dated January 17, 2014.

THE TOPOGRAPHIC AND UTILITY MAPPING shown on these sheets is a combination of photogrammetric mapping of aerial photography, conventional mapping methods and previous surveys, all confirmed by field editing.

THE UTILITIES identified and shown on the maps are a result of a combination of fieldwork, prior surveys and/or acquired utility plans. Many manholes, valve boxes, water shut-off boxes and other street hardware, shown, may have been recently installed, removed, abandoned, covered over or not accessible. They may or may not represent the exact locations. (Before any excavation all utility companies must be contacted for street mark-ups).

Telephone and cable TV underground utilities, along with fireboxes, police call boxes and intersecting traffic lights are not shown on the maps.

No drainage or sanitary structures were entered in the field by surveyors. All measurements were taken from ground surface.




LEGEND

| | | | |
|---|---|---|---|
| BRUSH LINE | | RR CROSSING | |
| FENCES | | SEWER MANHOLE | |
| FOREST LINE | | SHRUBS | |
| GAS | | SIGN | |
| GUIDE RAILS | | STORM MANHOLE | |
| HEDGE LINE | | SURVEY POINT | |
| SANITARY SEWER | | SWAMP | |
| STORM DRAINAGE | | UNKNOWN UTILITY | |
| STONE WALLS | | UTILITY POLE | |
| RETAINING WALLS | | UTILITY POLE WITH LIGHT | |
| WATER | | WATER VALVE | |
| BUOY | | UNKNOWN VALVE | |
| CATCH BASIN | | | |
| CONIFEROUS | | | |
| DECIDUOUS | | | |
| FIRE HYD. | | | |
| FLOOD MARK | | | |
| GAS VALVE | | | |
| LIGHT POLES | | | |
| MAILBOX | | | |
| MANHOLE | | | |
| OH SIGN | | | |
| P METER | | | |
| POST | | | |

## SHEET INDEX
NOT TO SCALE

BASED ON TIDAL BENCHMARK KV0735, LOCATED AT WAACKAACK, RARITAN BAY, NJ:
MEAN LOW WATER = ELEVATION −2.52
MEAN HIGH WATER = ELEVATION 2.11

| LOCAL CONTROL DATA |
|---|
| BENCHMARK: PROJECT CONTROL POINT 10115 |
| ELEVATION: 14.54 |

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GBA@AOL.COM

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|---|---|
| DESIGNED BY: | DATE: 09 OCTOBER 2014 |
| DWN BY: | CKD BY: |
| SUBMITTED BY: | SOLICITATION NO.: W912DS-13-B-0025 |
| | CONTRACT NO.: |
| PLOT SCALE: 1"=30' | ISSUE DATE: |
| SIZE: | FILE NAME: |
| | FILE NUMBER: |

RARITAN BAY AND SANDY HOOK BAY AT PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE REDUCTION PROJECT

GENERAL NOTES AND LEGEND

SHEET IDENTIFICATION
G-002*
SHEET 2 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-153

MATCH TO SHEET V-160

MATCH TO SHEET V-162

MATCH TO SHEET V-168

Wilson Ave

Division St

Monmouth Ave

Brainard Ave

Main St

Broadway

Main St

Broad St

Sunset Ave

POOL

GRASS

N 582,450

N 582,300

N 582,150

N 582,000

E 604,050

E 604,200

E 604,350

E 604,500

E 604,650

E 604,800

E 604,950

E 605,100

E 605,250

E 605,400

E 605,550

E 605,700

E 605,850

E 606,000

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers
New York District

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| DESIGNED BY: | |
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| SUBMITTED BY: | |
| PLOT SCALE: 1"=30' | ISSUE DATE: |
| SIZE: | FILE NAME: |

DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
FILE NUMBER:

RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-161
SHEET 63 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\961148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-155

MATCH TO SHEET V-161

MATCH TO SHEET V-163

MATCH TO SHEET V-169

N 582,450
N 582,300
N 582,150
N 582,000

E 604,850
E 605,100
E 605,250
E 605,400
E 605,550
E 605,700

Main St

Broadway

Comptons Creek

0 30' 60'
SCALE: 1" = 30'

US Army Corps of Engineers
New York District

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CKD BY:
SUBMITTED BY:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1
PLOT MODE: 1
ISSUE DATE:
FILE NUMBER:
SIZE:
FILE NAME:

RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-162
SHEET 64 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:#61484Survey#CAD#V-SP.dgn

1 2 3 4 5

D C B A

MATCH TO SHEET V-156

MATCH TO SHEET V-162

MATCH TO SHEET V-164

MATCH TO SHEET V-170

N 582,450 N 582,300 N 582,150 N 582,000

E 606,850 E 606,000 E 606,150 E 606,300 E 606,450 E 606,600

Comptons Creek

Church St

BIT

CONC

BRIDGE

N

0 30' 60'
SCALE:1"= 30'

Submitted by: tbunch
Plot Date: 10/9/2014
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New York District

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ISSUE DATE:
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SIZE:
FILE NAME:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-163
SHEET 65 OF 108

MATCH TO SHEET V-161

MATCH TO SHEET V-167

MATCH TO SHEET V-169

MATCH TO SHEET V-175

E 604,050 E 604,200 E 604,350 E 604,500 E 604,650 E 604,800

N 581,850 N 581,700 N 581,550 N 581,400

Sunset Ave

Broad St

Pinehurst Ave

Woodstock Ave

PARKING

POOL

OBSTRUCTED VIEW OF DEBRIS

0 30' 60'
SCALE:1" = 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | APPR. MARK | DESCRIPTION | DATE | APPR. |
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SUBMITTED BY:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
FILE NUMBER:
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ISSUE DATE:
SIZE:
FILE NAME:

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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-168
SHEET 70 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-162

MATCH TO SHEET V-168

MATCH TO SHEET V-170

MATCH TO SHEET V-176

Broadway

Comptons Creek

Bridge over Creek

E 604,950 E 605,100 E 605,250 E 605,400 E 605,550 E 605,700

N 581,850 N 581,700 N 581,550 N 581,400

0 30' 60'
SCALE:1" = 30'

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New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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DESIGNED BY:
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CKD BY:
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DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE:
PLOT MODE:
ISSUE DATE:
FILE NUMBER:
SIZE:
FILE NAME:

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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-169
SHEET 71 OF 108

Submitted by: tbunch
Plot Date: 10/9/2014
P:\61488\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-163

MATCH TO SHEET V-169

MATCH TO SHEET V-171

MATCH TO SHEET V-177

Church St

Broadway

Broadway

Church St

Broadway

POOL

POOL

N 581,850

N 581,700

N 581,550

N 581,400

E 606,300

E 606,450

E 606,600

SCALE:1" = 30'

0 30' 60'

Submitted by: tbunch
Plot Date: 10/9/2014
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US Army Corps of Engineers
New York District

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PLOT SCALE: 1=30'
PLOT DATE:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
ISSUE DATE:
FILE NUMBER:
SIZE:
FILE NAME:

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RARITAN BAY AND SANDY HOOK BAY AT
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HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-170
SHEET 72 OF 108

MATCH TO SHEET V-167

Wilson Ave

Creek Rd

Haven St

Collins Ave

Wilson Ave

Campbell Ave

Marcia Ave

POOL

MATCH TO SHEET V-173

MATCH TO SHEET V-175

MATCH TO SHEET V-181

N 581,250

N 581,100

N 580,950

N 580,800

E 603,300

E 603,450

E 603,600

E 603,750

E 603,900

0 30' 60'
SCALE:1" = 30'

US Army Corps of Engineers
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HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-174
SHEET 76 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-168

E 604,050 E 604,200 E 604,350 E 604,500 E 604,650 E 604,800

N 581,250 N 581,100 N 580,950 N 580,800

Creek Rd

POOL

MATCH TO SHEET V-174

MATCH TO SHEET V-176

MATCH TO SHEET V-182

0 30' 60'
SCALE:1"= 30'

Plot Date: 10/9/2014

Submitted by: tbunch
P:\61148\Survey\CAD\V-SP.dgn



US Army Corps of Engineers
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| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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| DWN BY: | CKD BY: |
| SUBMITTED BY: | |
| PLOT SCALE: 1"=30' | ISSUE DATE: |
| SIZE: | FILE NAME: |

DATE: 09 OCTOBER 2014
SOLICITATION NO.:
W912DS-13-B-0025
CONTRACT NO.:
FILE NUMBER:

RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-175
SHEET 77 OF 108

MATCH TO SHEET V-169

MATCH TO SHEET V-175

MATCH TO SHEET V-177

MATCH TO SHEET V-183

Comptons Creek

Comptons Creek

Cedar St

Locust St

Cherry St

N 581,250

N 581,100

N 580,950

N 580,800

E 604,950

E 605,100

E 605,250

E 605,400

E 605,550

E 605,700

POOL

CONC

BIT

DIRT

FOUNDATION

U/C

0 30' 60'

SCALE: 1" = 30'

N

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|
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DESIGNED BY:
DWN BY:
CKD BY:
SUBMITTED BY:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1" = 30'
ISSUE DATE:
FILE NUMBER:
SIZE:
FILE NAME:

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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-176
SHEET 78 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\6148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-172

Main St

Chestnut St

Poplar St

Oak St

State Route 36 Ramp

State Route 36 Ramp

State Route 36

State Route 36 Exit Ramp

N 580,650

N 580,500

N 580,350

N 580,200

E 601,050

E 601,100

E 601,150

E 601,200

E 601,250

E 601,300

E 601,350

E 601,400

E 601,450

E 601,500

E 601,550

E 601,600

E 601,650

E 601,700

E 601,750

E 601,800

E 601,850

E 601,900

E 601,950

E 602,000

E 602,050

E 602,100

E 602,150

E 602,200

E 602,250

E 602,300

MATCH TO SHEET V-180

MATCH TO SHEET V-184

0 30' 60'
SCALE:1"= 30'

N

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | APPR. MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|
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DESIGNED BY:
DWN BY:
CKD BY:
SUBMITTED BY:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1
ISSUE DATE:
FILE NUMBER:
SIZE:
FILE NAME:

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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-179
SHEET 61 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\61484Survey\CADD\V-SP.dgn

MATCH TO SHEET V-173

MATCH TO SHEET V-179

MATCH TO SHEET V-181

MATCH TO SHEET V-185

Henry Hudson Bike Trail

Wilson Ave

New St

Willow St

State Route 36

Wilson Ave

State Route 36

PARKING

SHOPPING

PARKING

PARKING

PHARMACY

POOL

POOL

POOL

WALL

BIT

N 580,650

N 580,500

N 580,350

N 580,200

E 602,400

E 602,550

E 602,700

E 602,850

E 603,000

E 603,150

E 603,300

E 603,450

E 603,600

0 30' 60'

SCALE:1" = 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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| DESIGNED BY: | | DATE: 09 OCTOBER 2014 | |
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| SUBMITTED BY: | | CONTRACT NO.: | |
| PLOT SCALE: | ISSUE DATE: | FILE NUMBER: | |
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-180
SHEET 82 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\961148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-174

MATCH TO SHEET V-180

MATCH TO SHEET V-182

MATCH TO SHEET V-186

Marcia Ave

Campbell Ave

Henry Hudson Bike Trail

Willow St

Henry Hudson Bike Trail

N 580,650

N 580,500

N 580,350

N 580,200

E 603,300

E 603,450

E 603,600

E 603,750

E 603,900

POOL

ASPHALT

0 30' 60'
SCALE: 1" = 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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| DWN BY: | CKD BY: |
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| | CONTRACT NO.: |
| PLOT SCALE: 1=30' | ISSUE DATE: |
| SIZE: | FILE NUMBER: |
| | FILE NAME: |

RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-181
SHEET 83 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\6148#Survey\CAD\V-SP.dgn

MATCH TO SHEET V-175

MATCH TO SHEET V-181

MATCH TO SHEET V-183

MATCH TO SHEET V-187

Collins Ave

Susan Ave

Creek Rd

Campbell Ave

Henry Hudson Bike Trail

N 580,650

N 580,500

N 580,350

N 580,200

E 604,050

E 604,200

E 604,350

E 604,500

E 604,650

E 604,800

POOL

DIRT

U/C

0 30' 60'

SCALE:1" = 30'

Submitted by: tbunch
P:\6148\Survey\CAD\V-SP.dgn

Plot Date: 10/9/2014

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. MARK | DESCRIPTION | DATE | APPR. |
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DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
FILE NUMBER:

DESIGNED BY:
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-182
SHEET 84 OF 108

MATCH TO SHEET V-176

MATCH TO SHEET V-182

MATCH TO SHEET V-188

Comptons Creek

Compton St

Church St

Campbell Ave

POOL

N 580,650

N 580,500

N 580,350

N 580,200

E 604,900

E 605,000

E 605,100

E 605,200

E 605,300

E 605,400

E 605,500

E 605,600

E 605,700

W.E.L. 2.3

0 15 30 60

SCALE:1" = 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | APPR. MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|

DESIGNED BY:
DWN BY:
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DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1" = 30'
ISSUE DATE:
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RARITAN BAY AND SANDY HOOK BAY AT
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HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-183
SHEET 85 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\6148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-179

MATCH TO SHEET V-185

MATCH TO SHEET V-189

Walnut St

Oak St

Chestnut St

Wilson Ave

N 580,050

N 579,900

N 579,750

N 579,600

E 601,500

E 601,550

E 601,600

E 601,650

E 601,700

E 601,750

E 601,800

E 601,850

E 601,900

E 601,950

E 602,000

E 602,050

E 602,100

E 602,150

E 602,200

E 602,250

POOL

CATCH BASIN INACCESSIBLE

SCALE:1" = 30'

0 30' 60'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | APPR. MARK | DESCRIPTION | DATE | APPR. |
|---|---|---|---|---|---|---|---|

DATE: 09 OCTOBER 2014

| DESIGNED BY: | | SOLICITATION NO.: W912DS-13-B-0025 |
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| PLOT SCALE: 1" = 30' | ISSUE DATE: | FILE NUMBER: |
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-184
SHEET 86 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\61484\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-180

MATCH TO SHEET V-184

MATCH TO SHEET V-190

MATCH TO SHEET V-186

Chestnut St

Wilson Ave

State Route 36

POOL

WOODED

PARKING

SHOPPING CENTER

CONC

N 580,050

N 579,900

N 579,750

N 579,600

E 602,400

E 602,550

E 602,700

E 602,850

E 603,000

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers
New York District

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| SUBMITTED BY: | | FILE NUMBER: | |
| PLOT SCALE: 1 = 30' | ISSUE DATE: | | |
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RARITAN BAY AND SANDY HOOK BAY AT
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HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-185
SHEET 87 OF 108

Plot Date: 10/9/2014

Submitted by: tbunch
P:\6148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-181

MATCH TO SHEET V-185

MATCH TO SHEET V-187

MATCH TO SHEET V-191

Willow St

Willow St

State Route 36

Veterans Ln

N 580,050

N 579,900

N 579,750

N 579,600

E 603,000

E 603,150

E 603,300

E 603,450

E 603,600

E 603,750

E 603,900

POOL

STORAGE

DEBRIS

CONC

BIT

WALL

U/C

N

0 30' 60'
SCALE:1"= 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | MARK | DESCRIPTION | DATE | APPR. |
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DESIGNED BY:
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SUBMITTED BY:
DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1"=30'
ISSUE DATE:
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-186
SHEET 88 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-182

Campbell Ave

Henry Hudson Bike Trail

Willow St

Comptons Creek

BRIDGE OVER CREEK

MATCH TO SHEET V-186

MATCH TO SHEET V-188

MATCH TO SHEET V-192

N 580,050

N 579,900

N 579,750

N 579,600

E 604,050

E 604,200

E 604,350

E 604,500

E 604,650

E 604,800

POOL

ASPHALT

W.EL. 2.7

0 30' 60'

SCALE:1" = 30'

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. | APPR. MARK | DESCRIPTION | DATE | APPR. |
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DESIGNED BY:
DWN BY:
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SOLICITATION NO.: W912DS-13-B-0025
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-187
SHEET 89 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-183

MATCH TO SHEET V-187

MATCH TO SHEET V-193

Campbell Ave

Campbell Ave

Comptons Creek

Henry Hudson Bike Trail

Church St

Garnsey Pl

Park Pl

POOL

ASPHALT

N 580,050

N 579,900

N 579,750

N 579,600

E 604,950

E 605,000

E 605,050

E 605,100

E 605,150

E 605,400

E 605,450

E 605,500

E 605,550

E 605,700

0 30' 60'
SCALE: 1" = 30'

N

US Army Corps of Engineers
New York District

| MARK | DESCRIPTION | DATE | APPR. MARK | DESCRIPTION | DATE | APPR. |
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DESIGNED BY:
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DATE: 09 OCTOBER 2014
SOLICITATION NO.: W912DS-13-B-0025
CONTRACT NO.:
PLOT SCALE: 1:30
ISSUE DATE:
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RARITAN BAY AND SANDY HOOK BAY AT
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HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-188
SHEET 90 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
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CONTRACT NO.:
FILE NUMBER:

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CKD BY:
SUBMITTED BY:
PLOT SCALE: 30
ISSUE DATE:
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FILE NAME:

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PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-191
SHEET 93 OF 108

Plot Date: 10/9/2014
Submitted by: tbunch
P:\06\48\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-187

MATCH TO SHEET V-191

MATCH TO SHEET V-193

MATCH TO SHEET V-195

Comptons Creek

Comptons Creek

State Route 36

STOCK PILE

STOCK PILE

STORAGE

DIRT

DENSE VEGETATION

DENSE VEGETATION

WALL

E 604,050

E 604,200

E 604,350

E 604,500

E 604,650

E 604,800

N 579,450

N 579,300

N 579,150

N 579,000

0 30' 60'

SCALE:1" = 30'

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DESIGNED BY:
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CKD BY:
SUBMITTED BY:
PLOT SCALE: 1=30'
PLOT DATE: 10/9/2014
FILE NAME:
SIZE:

DATE: 09 OCTOBER 2014
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CONTRACT NO.:
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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-192
SHEET 94 OF 108

Submitted by: tbunch
Plot Date: 10/9/2014
P:\961488\Survey\CAD\V-SP.dgn

MATCH TO SHEET V-188

MATCH TO SHEET V-192

Henry Hudson Bike Trail

Church St

Garnsey Pl

Railroad Ave

POOL

ASPHALT

N 579,450

N 579,300

N 579,150

N 579,000

E 604,950

E 605,100

E 605,250

E 605,400

E 605,550

E 605,700

0 30' 60'
SCALE:1"= 30'

Plot Date: 10/9/2014

Submitted by: tbunch
P:\96148\Survey\CAD\V-SP.dgn

US Army Corps of Engineers
New York District

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| DESIGNED BY: | | DATE: 09 OCTOBER 2014 | |
| DWN BY: | CKD BY: | SOLICITATION NO.: W912DS-13-B-0025 | |
| SUBMITTED BY: | | CONTRACT NO.: | |
| PLOT SCALE: 1=30' | ISSUE DATE: | FILE NUMBER: | |
| SIZE: | FILE NAME: | | |

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RARITAN BAY AND SANDY HOOK BAY AT
PORT MONMOUTH, NJ
HURRICANE AND STORM DAMAGE
REDUCTION PROJECT

# TOPOGRAPHIC/UTILITY SURVEY

SHEET IDENTIFICATION
V-193
SHEET 95 OF 108