SEASTREAK FERRY TERMINAL REPAVING PROJECT

FOR

HIGHLANDS LANDING CORPORATION

MAJOR SITE PLAN

BLOCK 100 , LOT 27

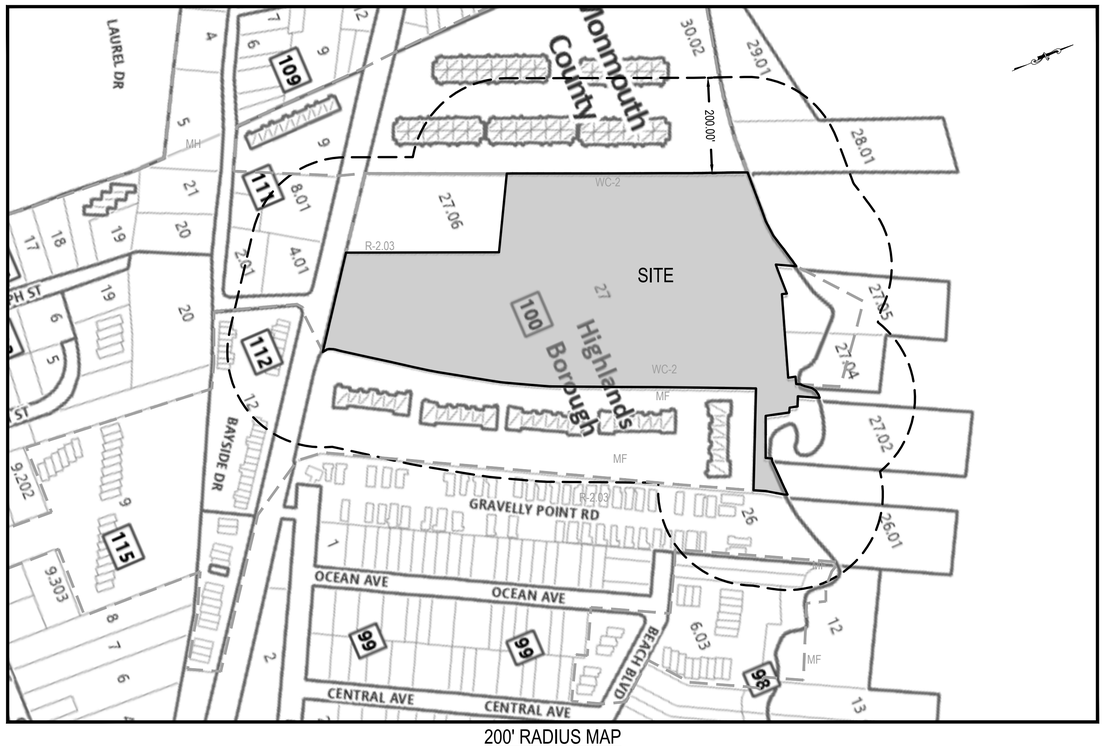
326 SHORE DRIVE, BOROUGH OF HIGHLANDS

MONMOUTH COUNTY, NEW JERSEY; TAX MAP # 19

LOCATION MAP

SCALE: 1" = 250'

SOURCE: NJ GEO WEB



200' RADIUS MAP

SCALE: 1" = 150'

SOURCE: TAX MAP SHEET # 19

BOROUGH OF HIGHLANDS, MONMOUTH COUNTY, NJ

CIVIL DRAWING LIST

DWG. NO.	DRAWING TITLE	SCALE	LAST REV.
1	COVER SHEET	AS SHOWN	05/27/26
2	GENERAL NOTES	AS SHOWN	05/27/26
3	DEMOLITION PLAN	1" = 40'	05/27/26
4	SITE PLAN	1" = 40'	05/27/26
5	GRADING, DRAINAGE & UTILITY PLAN	1" = 40'	05/27/26
6	SOIL EROSION AND SEDIMENT CONTROL PLAN	1" = 40'	05/27/26
7	SOIL EROSION AND SEDIMENT CONTROL NOTES	AS SHOWN	05/27/26
8	SOIL EROSION AND SEDIMENT CONTROL DETAILS	AS SHOWN	05/27/26
9	LANDSCAPE PLAN	1" = 40'	05/27/26
10	LANDSCAPE NOTES AND DETAILS	AS SHOWN	05/27/26
11	LIGHTING PLAN	1" = 40'	05/27/26
12	LIGHTING NOTES AND DETAILS	AS SHOWN	05/27/26
13	DETAIL PLAN	AS SHOWN	05/27/26
1 OF 1	BOUNDARY AND TOPOGRAPHIC SURVEY	1" = 40'	06/25/24

OWNER AND APPLICANT:

OWNER: HIGHLANDS LANDING CORPORATION
2 FIRST AVENUE
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT: JACK BEVINS
2 FIRST AVENUE
ATLANTIC HIGHLANDS, NJ 07716

MUNICIPAL APPROVAL BLOCK

I HEREBY CERTIFY THAT I HAVE CAREFULLY EXAMINED THESE PLANS AND FIND IT CONFORMS WITH ALL MUNICIPAL ORDINANCES AND REQUIREMENTS APPLICABLE THERETO:

_____ _____
DATE BOROUGH ENGINEER

APPROVED BY THE PLANNING BOARD OF BOROUGH OF HIGHLANDS, MONMOUTH COUNTY, NEW JERSEY THIS _____ DAY OF _____, _____

_____ _____
DATE CHAIRMAN

_____ _____
DATE SECRETARY

Najarian Associates
Professional Engineers, Land Surveyors & Planners - Scientists
One Industrial Way West, Eatontown, New Jersey 07724
(732) 389-0220 - Facsimile No. (732) 389-8546
Certificate of Authorization Certificate # 24GA27993300

BRAD M. THOMPSON, P.E.
NJ PROFESSIONAL ENGINEER, LIC. No. 48975

REVISIONS

NO.	DATE	DESCRIPTION
1	2025-05-27	REVISED PER FSCD REVIEW
2	2025-06-26	REVISED LOTS PER NJDEP COMMENT
3	2026-03-27	REVISED PER FSCD REVIEW
4	2026-05-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-06-05	REVISED PER TOWNSHIP COMMENT

COVER
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Cover Sheet.dwg
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE AS SHOWN
SHEET NO. C-01
OF 13

OWNER AND APPLICANT

OWNER: HIGHLANDS LANDING CORPORATION
2 FIRST AVE.
ATLANTIC HIGHLANDS, NJ 07716

APPLICANT: JACK BEVINS
2 FIRST AVE.
ATLANTIC HIGHLANDS, NJ 07716

REQUIRED ADDITIONAL APPROVALS

JURISDICTIONAL AGENCY	PERMIT NUMBER	PERMIT STATUS
1. MUNICIPAL PLANNING BOARD	0000-0000	PENDING
2. MUNICIPAL SOIL MOVEMENT PERMIT	0000-0000	PENDING
3. SOIL CONSERVATION DISTRICT	2025-0334	APPROVED
4. NJDEP CAFRA INDIVIDUAL PERMIT	1317-02-0007.1 LUP250001	APPROVED

REFERENCES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON WAS OBTAINED FROM A PLAN ENTITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, HIGHLANDS LANDING CORPORATION, BLOCK 100 LOT 27, TAX MAP SHEET NO. 19 BOROUGH OF HIGHLANDS, MONMOUTH COUNTY, NEW JERSEY, PREPARED FOR SEASTREAK LLC," PREPARED BY NAJARIAN ASSOCIATES, DATED 06/25/2024.
2. HORIZONTAL DATUM BASED ON NEW JERSEY STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM (NAD83).
3. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM (NAVD88).

UTILITY PURVEYORS

MUNICIPAL MUA

HIGHLANDS MUNICIPAL COURT
151 NAVESINK AVE.
HIGHLANDS, NJ, 07732

MUNICIPAL WATER DEPARTMENT

NJ AMERICAN WATER - COASTAL NORTH
1 WATER STREET
CAMDEN, NJ, 08102

NATURAL GAS PURVEYOR

NJNG
1415 WYCKOFF ROAD
WALL, NJ, 07719

ELECTRIC PURVEYOR

JCP&L
300 MADISON AVE.
PO BOX 1911
MORRISTOWN, NJ, 07960

USE OF PLANS NOTES

1. UNLESS THESE DRAWINGS ARE SPECIFICALLY DESIGNATED AS "CONSTRUCTION ISSUE," THESE DRAWINGS OR THE IMPROVEMENTS DEPICTED HEREON SHALL NOT BE USED FOR CONSTRUCTION. CONTRACTORS MUST NOTIFY THE ENGINEER OF RECORD TO OBTAIN CONSTRUCTION DOCUMENTS.
2. ALL DIMENSIONS MUST BE VERIFIED BY THE CONTRACTOR. NOTIFY THE ENGINEER OF RECORD OF ANY CONFLICTS, ERRORS, AMBIGUITIES, OR DISCREPANCIES IN THE DRAWINGS OR SPECIFICATIONS BEFORE STARTING CONSTRUCTION.
3. ALL DIMENSIONS SHALL BE AS NOTED IN WORDS OR NUMBERS ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS TO DETERMINE DIMENSIONS.
4. THESE DRAWINGS CONTAIN DATA INTENDED SPECIFICALLY FOR THE NOTED PROJECT AND CLIENT. THEY ARE NOT INTENDED FOR USE ON EXTENSIONS OF THIS PROJECT OF FOR REUSE ON ANY OTHER PROJECT.
5. THE COPYING AND/OR MODIFICATION OF THIS DOCUMENT OR ANY OTHER PORTION THEREOF WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER OF RECORD IS PROHIBITED.
6. INFORMATION FOR DESIGN LAYOUT IS CONTAINED SOLELY IN THE WRITTEN DIMENSIONS, BEARINGS, AND ANGLES CONTAINED ON THE DRAWINGS.
7. THE DIMENSIONAL INFORMATION IS NOT WARRANTED NOR SHOULD IT BE CONSIDERED AS COMPLETE FOR EVERY ASPECT OF THE LAYOUT. THE STANDARD OF CARE REQUIRES THAT A LICENSED SURVEYOR CHECK THE DIMENSIONAL DATA CONSISTENCY AND MAKE SURVEY CALCULATIONS WHICH ARE CUSTOMARY FOR CONSTRUCTION LAYOUT.
8. THE GRAPHICAL INFORMATION CONTAINED IN ELECTRONIC FILES IS INTENDED AS DRAWING DATA ONLY, IT IS NOT INTENDED TO SERVE AS SURVEY LAYOUT DATA.
9. ALL SITE UTILITIES TO BE INSTALLED BY THE SITE CONTRACTOR TO A POINT FIVE FEET FROM THE STRUCTURE IN ACCORDANCE WITH INDUSTRY STANDARDS UNLESS SPECIFICALLY SHOWN OTHERWISE. SITE CONTRACTOR TO COORDINATE WITH BUILDING TRADES CONTRACTOR TO ENSURE COORDINATION OF UTILITY CONNECTION LOCATIONS. REPORT ANY DISCREPANCIES TO THE ENGINEER OF RECORD.
10. ALL DIMENSIONAL INFORMATION SHOWN HEREON INDICATING BUILDINGS IS BASED UPON FACE OF BUILDING. ALL ROADWAY DIMENSIONS ARE TO INSIDE FACE OF CURBING.

DEMOLITION NOTES

1. THE CONTRACTOR MUST PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
2. THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION ONLY REGARDING ITEMS TO BE DEMOLISHED OR REMOVED FROM THE SITE. THE CONTRACTOR MUST ALSO REVIEW THE OTHER CONSTRUCTION DOCUMENTS AND INCLUDE IN DEMOLITION ACTIVITIES ALL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW IMPROVEMENTS.
3. PRIOR TO THE START OF ANY DEMOLITION THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND KEEPING A COPY OF ALL PERMITS ON SITE FOR REVIEW BY THE ENGINEER OR RECORD OR ANY OTHER JURISDICTIONAL AGENCY REPRESENTATIVE THROUGHOUT THE DURATION OF THE PROJECT AND DEMOLITION WORK.
4. THE CONTRACTOR MUST NOTIFY THE OFFICE OF THE MUNICIPAL ENGINEER AND THE LOCAL SOIL CONSERVATION DISTRICT 72 HOURS PRIOR TO THE START OF DEMOLITION OR THE CONSTRUCTION OF ANY IMPROVEMENTS UNDER ITS JURISDICTION.
5. ALL SOIL EROSION CONTROL MEASURES AND DRAINAGE STRUCTURES MUST BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION ACTIVITIES OR SITE DISTURBANCE.
6. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE NEW JERSEY 811 ONE CALL SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE.
7. THE CONTRACTOR MUST PROTECT AND MAINTAIN ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING DEMOLISHED OR REMOVED DURING DEMOLITION.
8. THE CONTRACTOR MUST BACKFILL ALL EXCAVATIONS RESULTING FROM THE DEMOLITION OF ON SITE FEATURES. BACKFILL MUST BE PERFORMED WITH APPROVED BACKFILL MATERIALS, AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT PROPOSED IMPROVEMENTS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR ON SITE GEOTECHNICAL ENGINEER. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION TO PREVENT WATER FROM ENTERING THE EXCAVATION AND POTENTIALLY CHANGING THE MOISTURE CONTENT OF THE UNDERLYING SOILS. GRADING OF BACKFILL AREAS MUST BE DONE IN A WAY TO PROMOTE POSITIVE DRAINAGE.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, AND OTHER APPROPRIATE SAFETY ITEMS NEEDED TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ALL DEMOLITION MATERIAL IN A MANNER SATISFACTORY TO THE MUNICIPAL ENGINEER. BURYING OF DEMOLITION MATERIALS WILL NOT BE PERMITTED IN ANY CASE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
12. THE CONTRACTOR MUST MAINTAIN AND PROVIDE A RECORD SET OF PLANS SHOWING THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DURING THE DEMOLITION PROCESS. THE RECORD DOCUMENT MUST BE PREPARED IN A LEGIBLE FORMAT AND PROVIDED TO THE OWNER AND ENGINEER OR RECORD UPON COMPLETION OF THE WORK.

GENERAL NOTES

1. THE OFFICE OF THE MUNICIPAL ENGINEER AND THE LOCAL SOIL CONSERVATION DISTRICT MUST BE NOTIFIED 72 HOURS PRIOR TO THE START OF CONSTRUCTION OF ANY IMPROVEMENTS UNDER ITS JURISDICTION.
2. THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO THE ENGINEER OF RECORD PRIOR TO THE DATE ON THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY NOTIFY THE ENGINEER OF RECORD IN WRITING IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OF THE EXISTING SITE FEATURES TO REMAIN.
3. THE CONTRACTOR MUST NOT SCALE OFF THE DRAWINGS. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, ORDERING OF PARTS AND MATERIALS AND STARTING SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
4. THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL OTHER NOTES CONTAINED ON THESE PLANS, AS WELL AS ANY ADDITIONAL INFORMATION CONTAINED IN SPECIFICATIONS OR REPORTS THAT ARE PART OF THE DESIGN DOCUMENTS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLAN SHEETS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DESIGN DOCUMENTS PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION AND TO CONFIRM WITH THE ENGINEER OF RECORD THAT THE LATEST EDITION OF THE DOCUMENTS ARE BEING USED FOR CONSTRUCTION.
5. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS, AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE CONSTRUCTION DOCUMENTS. IN THE CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS OR RECOMMENDATIONS CONTAINED WITHIN EITHER THESE PLANS OR THE GEOTECHNICAL REPORT MUST TAKE PRECEDENCE. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY CONFLICTS BETWEEN THE GEOTECHNICAL REPORT AND THESE PLANS PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED FOR THE PROJECT, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF THE MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS THAT HAVE JURISDICTION OVER THE PROJECT.
6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR ORDERING OF MATERIALS IS TO BEGIN UNTIL THE CONTRACTOR HAS CONFIRMED THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
7. THE CONTRACTOR MUST PROVIDE SUCH TEMPORARY DRAINAGE, SOIL EROSION, AND DUST CONTROL MEASURES AS MAY BE DIRECTED BY THE MUNICIPAL ENGINEER OR OTHER JURISDICTIONAL AGENCIES TO SATISFY ENVIRONMENTAL CONCERNS RELATED TO CONSTRUCTION.
8. ALL ENVIRONMENTAL WORK TO BE PERFORMED ONSITE MUST BE DONE IN ACCORDANCE WITH NJDEP REGULATIONS AND CONDITIONS SPECIFIED IN ALL ENVIRONMENTAL PERMITS.
9. ALL SOIL EROSION CONTROL MEASURES AND DRAINAGE STRUCTURES MUST BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION.
10. PRIOR TO ANY SITE DISTURBANCE, ALL WETLANDS TRANSITION AREA LIMITS SHALL BE CLEARLY IDENTIFIED IN THE FIELD WITH ORANGE SNOW FENCING BY MIRAFI OR APPROVED EQUAL. SILT FENCE MUST BE LOCATED THREE FEET UPSTREAM OF SNOW FENCING AND DOWNSTREAM OF CLEARING LIMITS. THE CONTRACTOR MUST VERIFY THAT ALL PERMITS REQUIRED BY LOCAL, COUNTY, STATE, FEDERAL, OR OTHER AGENCIES HAVING JURISDICTION ARE IN HAND AND VALID PRIOR TO COMMENCING WORK.
11. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WITH CONSTRUCTION ACTIVITY OF ONE ACRE OR MORE. THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE, ALONG WITH THE OTHER REQUIREMENTS OF A SWPPP.
12. THE CONTRACTOR MUST REPAIR OR REPLACE, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THESE PLAN OR NOT. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING BUILDINGS, SITE FEATURES, OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH THE REPAIRS. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE THE DAMAGED PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST PROMPTLY DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
13. THE INSTALLATION OF UTILITIES MUST BE COORDINATED WITH BUILDING IMPROVEMENTS TO TO ASSURE THE WELL-BEING OF LIFE AND PROPERTY DURING CONSTRUCTION. WATER SERVICE IS A CRITICAL NEED AND MUST BE SCHEDULED ACCORDINGLY. WATER SUPPLY AND HYDRANT CONNECTIONS ARE TO BE ESTABLISHED AS A PRIORITY DURING INITIAL SITE DEVELOPMENT TO ASSURE ADEQUATE WATER FOR FIRE PROTECTION DURING ALL PHASES OF CONSTRUCTION.
14. SIGHT TRIANGLE EASEMENTS ARE SUBJECT TO GRADING, PLANTING AND CONSTRUCTION AS DESCRIBED IN THE MUNICIPAL LAND USE ORDINANCE. SIGHT TRIANGLE EASEMENTS SHALL BE SUBJECT TO THE REQUIREMENTS ESTABLISHED IN THE LAND USE DEVELOPMENT AND REGULATIONS OF THE MUNICIPALITY.
15. IT IS NOT THE INTENT OF THESE PLANS TO PROVIDE REINFORCING STEEL AND CONCRETE DESIGNS FOR ANY PRE-CAST OR POURED IN PLACE CONCRETE STRUCTURES, OTHER THAN THE REINFORCING STEEL AND CONCRETE DESIGNS SPECIFICALLY NOTED ON THESE PLANS. ANY REINFORCING STEEL AND CONCRETE DESIGN MUST BE SUPPLIED BY THE PRE-CASTING MANUFACTURER OR A REPUTABLE STRUCTURAL ENGINEER CONTRACTED BY THE CONTRACTOR.
16. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
17. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.
18. THE CONTRACTOR MUST INSTALL ALL STRUCTURES AND MATERIALS IN STRICT COMPLIANCE WITH THE MANUFACTURER'S STANDARDS AND SPECIFICATIONS. IF THE CONTRACTOR FAILS TO DO SO, THEY AGREE TO BEAR ALL COSTS ASSOCIATED WITH THE REPAIRS OR SOLUTIONS REQUIRED TO REMEDY ANY ISSUES THAT ARISE DURING OR AFTER CONSTRUCTION.
19. ALL CONSTRUCTION SHOWN HEREON MUST CONFORM TO RSIS, MUNICIPAL, AND COUNTY STANDARDS, CONSTRUCTION DETAILS, AND SPECIFICATIONS APPLICABLE TO THE DEVELOPMENT AS WELL AS THE NJDOT ROADWAY STANDARDS, UNLESS SPECIFICALLY NOTED OTHERWISE HEREIN. IN CASE OF CONFLICT, THE MORE RESTRICTIVE SHALL GOVERN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD OF ANY CONFLICTS PRIOR TO CONSTRUCTION.
20. THESE SITE PLAN DOCUMENTS ARE INTENDED TO SHOW THE SITE RELATED IMPROVEMENTS TO WITHIN FIVE FEET OF PROPOSE STRUCTURES. THE GENERAL CONTRACTOR MUST COORDINATE WITH ALL TRADES, THE ARCHITECT, AND ALL UTILITY COMPANIES, CONNECTIONS BETWEEN THE BUILDING AND SITE IMPROVEMENTS, AND NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
21. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
22. ALL ROADWAYS ARE TO BE PASSABLE FOR EMERGENCY VEHICLES DURING CONSTRUCTION. ANY ROADWAY CLOSURE OR RELOCATION MUST BE COORDINATED BY THE CONTRACTOR WITH THE LOCAL FIRE DEPARTMENT TO ENSURE ADEQUATE FIRE PROTECTION FOR ALL AREAS AT ALL TIMES. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING WARNING SIGNS, BARRICADES, AND ANY AND ALL SAFETY MEASURES AS MAY BE REQUIRED BY LOCAL CODES, OSHA, AND THE MUTCD.
23. AS INDICATED IN THE MUTCD, SUFFICIENT CONSTRUCTION WARNING SIGNS ARE TO BE PROVIDED AND MAINTAINED BY CONTRACTOR(S) PERFORMING CONSTRUCTION WORK WITHIN ACTIVE ROADWAYS. SAID SIGNS ARE TO BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED AND APPROVED BY THE APPROPRIATE MUNICIPAL PERSONNEL. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL CONSTRUCTION SIGNS AT THE END OF THE PROJECT.
24. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY.
25. UNLESS SPECIFICALLY SHOWN HEREIN, THE ENGINEER OF RECORD HAS NOT CONDUCTED INVESTIGATION OR PROVIDED DATA ON THE NATURE OF, OR STRUCTURAL SUITABILITY OF ANY SUBSURFACE MATERIALS. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD OF ANY UNUSUAL SOIL OR ROCK CONDITIONS ENCOUNTERED. ENGINEER OF RECORD IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, AROUND, OR UNDER THE PROPERTY.
26. IN AREAS WHERE FILL FROM THE SITE IS TO BE REUSED, THE FILL SHOULD BE TESTED TO ENSURE FILL MATERIAL IS CERTIFIED "CLEAN" IN ACCORDANCE WITH THE CURRENT NJDEP STANDARDS TO THE SATISFACTION OF THE MUNICIPAL ENGINEER'S OFFICE. BURIED TOPSOIL OR ORGANIC MATERIAL MUST BE REMOVED PRIOR TO FILL OPERATIONS TO ENSURE LONG TERM STABILITY.
27. ALL STUMPS AND OTHER TREE PARTS, LITTER, BRUSH, WEEDS, EXCESS OR SCRAP MATERIALS, OR OTHER DEBRIS SHALL BE REMOVED FROM THE SITE.
28. THE EARTHWORK OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER TO ENSURE ADEQUATE COMPACTION WHILE MAINTAINING, TO THE EXTENT REASONABLE, THE EXISTING HYDROLOGIC SOIL CONDITIONS OF THE SITE.
29. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER THE CONTRACTOR.
30. THE CONTRACTOR IS RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ALL DEMOLITION MATERIAL. MATERIAL ACCUMULATED BY CLEARING, GRUBBING AND EXCAVATION SHALL BE DISPOSED OF BY THE DEVELOPER IN A MANNER SATISFACTORY TO THE MUNICIPAL ENGINEER, EXCEPT THAT MATERIALS SUITABLE FOR EMBANKMENT SHALL BE USED FOR THAT PURPOSE, IF NEEDED. BURYING OF ABOVE CITED MATERIALS WILL NOT BE PERMITTED IN ANY CASE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
31. THE LIMIT OF CLEARING SHALL BE STAKED IN THE FIELD PRIOR TO ANY DISTURBANCE.
32. ALL WEATHERED CONCRETE FOR CONSTRUCTION MUST BE AT LEAST 4500 PSI.
33. SEPARATE CONSTRUCTION PERMITS WILL BE REQUIRED FOR ALL WALLS IN EXCESS OF FOUR FEET IN HEIGHT.
34. ALL WORK WITHIN THE COUNTY ROAD RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE COUNTY STANDARDS.

SITE PLAN NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST REFER TO THE GENERAL NOTES AND FULLY COMPLY WITH THEM AS WELL AS ANY PLAN SPECIFIC NOTES.
2. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST INSTALL THE NECESSARY SOIL EROSION CONTROL MEASURES AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH THE APPLICABLE SOIL CONSERVATION DISTRICT'S GUIDELINES.
3. ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), ALONG WITH ANY LOCAL MUNICIPAL STANDARDS.
4. THE LOCATIONS OF PROPOSED UTILITY POLES; UTILITY BOXES; OR ELECTRIC, TELECOM, OR NATURAL GAS UTILITIES; AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING AND COORDINATING PROPOSED UTILITY LOCATIONS WITH THE APPROPRIATE UTILITY PURVEYOR. THE CONTRACTOR MUST COORDINATE THE LOCATION OR RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE RIGHT-OF-WAY.
5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE
6. STAKE OUT OF LOCATIONS OF DRAINAGE OR SANITARY SEWER STRUCTURES, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS, UNLESS NOTED CLEARLY OTHERWISE.
7. ALL WEATHERED CONCRETE MUST BE AIR ENTRAINED AND INCLUDE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
8. THE CONTRACTOR MUST REPAIR OR REPLACE, AT THE CONTRACTOR'S SOLE COST AND EXPENSE, ALL SIDEWALKS, CURBS, AND PAVEMENT DAMAGED BY CONSTRUCTION ACTIVITIES WHETHER SPECIFIED ON THIS PLAN OR NOT.

ADA NOTES

1. CONTRACTORS MUST ADHERE TO THE AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES AND THE CURRENT STATE ARCHITECTURAL ACCESS BOARD STANDARDS AND REGULATIONS FOR BARRIER FREE ACCESS FOR ALL ADA FEATURES AND ROUTES SHOWN ON THESE PLANS. ADA FEATURES OFTEN REQUIRE A HIGHER LEVEL OF PRECISION TO MEET THE STRICT GUIDELINES. FINISHED SURFACES OF THE ADA FEATURES AND SITE FEATURES ALONG THE ADA ROUTE FROM PARKING SPACES OR PUBLIC TRANSPORTATION STOPS OR RIGHTS-OF-WAY PEDESTRIAN ACCESS TO POINTS OF ACCESSIBLE BUILDING INGRESS AND EGRESS, MUST COMPLY WITH THE ADA AND ARCHITECTURAL BOARD GUIDELINES AND REQUIREMENTS. THE ADA GUIDELINES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING PARAMETERS:
2. ADA PARKING SPACE AND PARKING AISLE SLOPES MUST NOT EXCEED A 1:50 (2%) SLOPE IN ANY DIRECTION
3. CURB RAMP SLOPES MUST NOT EXCEED A 1:12 (8.3%) SLOPE FOR A MAXIMUM DISTANCE OF SIX FEET
4. LANDINGS (MINIMUM OF FOUR FEET BY FOUR FEET IN SIZE) MUST BE PROVIDED AT THE TOPS AND BOTTOMS OF CURB RAMPS WITH SLOPES THAT MUST NOT EXCEED A 1:50 (2%) SLOPE IN ANY DIRECTION
5. WHERE A CHANGE IN PATH DIRECTION OCCURS, LANDINGS MUST BE FIVE FEET BY FIVE FEET MINIMUM WITH SLOPES THAT MUST NOT EXCEED A 1:50 (2%) SLOPE IN ANY DIRECTION
6. THE ADA PATH OF TRAVEL FROM THE POINT OF ADA ARRIVAL TO THE ADA BUILDING ENTRANCE MUST PROVIDE A 36 INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANDS OR RAILINGS CANNOT REDUCE THIS MINIMUM WIDTH). THE SLOPE ALONG THE ADA PATH OF TRAVEL MUST BE NO GREATER THAN 1:20 (5%) IN THE DIRECTION OF TRAVEL, AND MUST NOT EXCEED A 1:50 (2%) CROSS SLOPE. A MAXIMUM SLOPE OF 1:12 (8.3%) FOR A MAXIMUM RISE OF 30 INCHES CAN BE PROVIDED WHERE NECESSARY AS LONG AS THE RAMP INCLUDES ADA HAND RAILS AND LANDINGS ON EACH END THAT MEET THE LANDING MINIMUMS OUTLINED HEREIN.
7. ADA LANDINGS MUST HAVE POSITIVE DRAINAGE AND BE CONSTRUCTED TO PREVENT THE GATHERING OF WATER IN THE LANDING OR ALONG THE ADA PATH OF TRAVEL.
8. ADA BUILDING ENTRANCE DOORWAYS MUST HAVE A LANDING IMMEDIATELY ADJACENT TO THEM AT THE EXTERIOR OF THE BUILDING OR STRUCTURE THAT MUST BE FIVE FEET BY FIVE FEET MINIMUM WITH SLOPES THAT MUST NOT EXCEED A 1:50 (2%) SLOPE IN ANY DIRECTION.
9. WHEN EXISTING ADA SITE FEATURES ARE BEING RECONSTRUCTED OR MODIFIED THE CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS SHOWN ON THESE PLANS. NOTE THAT TABLE 405.2 OF THE ADA GUIDELINES ALLOWS FOR STEEPER RAMP SLOPES IN VERY RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES OR FIELD CONDITIONS THAT ARE DIFFERENT IN ANY WAY FROM WHAT IS SHOWN ON THESE PLANS, IN WRITING, BEFORE STARTING CONSTRUCTION.
10. THE CONTRACTOR MUST VERIFY THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY SLOPES ARE OBSERVED THAT DO NOT CONFORM TO THE ADA GUIDELINES, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD PRIOR TO POURING CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND REPLACE ANY FINISHED SURFACES OF ADA FEATURES AND SITE FEATURES ALONG THE ADA ROUTE THAT ARE NOT CONSTRUCTED IN STRICT CONFORMANCE WITH THE ADA GUIDELINES.

GRADING AND EARTHWORK NOTES

1. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THE GRADING AND DRAINAGE PLANS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF NEW JERSEY, PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. SHOULD ANY OF THE SPECIFICATIONS OR RECOMMENDATIONS CONFLICT WITH THE GRADING PLAN OR SITE DETAILS, THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.
2. THE CONTRACTOR IS REQUIRED TO SECURE ALL REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO THE CONTRACTOR STARTING ANY WORK.
3. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION TO CONFIRM NO MAJOR CHANGES SINCE THE DATE OF THE SURVEY REFERENCED AS PART OF THIS PLAN SET. IF DISCREPANCIES BETWEEN THE PLANS AND SITE CONDITIONS EXIST, THEN THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD IN WRITING.
4. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITHIN THE IN-SITU SUBGRADE WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT TO THE REQUIRED COMPACTION. A COMPACTION REPORT MUST BE PREPARED VERIFYING THAT ALL FILLED AREAS, SUBGRADE AREAS WITHIN BUILDING FOOTPRINTS, AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND THESE PLANS. MOISTURE CONTENT OF THE SUBGRADE AT THE TIME OF PLACEMENT MUST BE SUBMITTED IN THE COMPACTION REPORT.
5. SUBBASE AGGREGATE OR MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER, OR OWNER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND REPLACED WITH APPROVED SUBBASE MATERIAL AND COMPACTED AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
6. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE LATEST EDITION OF THE NJDOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION .
7. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY DISCREPANCIES OR CONFLICTS BETWEEN THE GRADING PLAN AND ANY OTHER PLAN SHEET WITHIN THE PLAN SET. GENERALLY, THE INFORMATION ON THE GRADING PLAN WILL SUPERCEDE THE OTHER SHEETS IN THE PLAN SET.
8. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO PRODUCE TO THE PROPOSED GRADING DESIGN, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS TO THE PROPOSED GRADES SHOWN HEREON.
9. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY SIX INCHES ABOVE THE FINISHED PAVEMENT GRADE UNLESS OTHERWISE NOTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE ENGINEER OF RECORD APPROVES FINAL CURBING CUT SHEETS PRIOR TO INSTALLING CURBING.
10. THE CONTRACTOR MUST CONFIRM AND ENSURE THAT, AS CONSTRUCTED, IMPROVEMENTS CREATE THE FOLLOWING MINIMUM SLOPES (EXCEPT WHERE ADA REQUIREMENTS LIMIT THEM): 1.0% ON ALL CONCRETE SURFACES, 1.0% ON ASPHALT SURFACES, 2% IN GRASS OR LANDSCAPE AREAS AREAS AND 0.75% SLOPE AGAINST ALL CURBS TO PROVIDE POSITIVE DRAINAGE.
11. WHERE RETAINING WALLS (WHETHER OR NOT THEY MEET THE JURISDICTIONAL DEFINITION) ARE IDENTIFIED ON THE PLANS, BOTH TOP AND BOTTOM OF WALL ELEVATIONS REPRESENT THE PROPOSED FINISHED GRADE AT THE FACE OF WALL AND DO NOT REPRESENT THE ELEVATION OF THE PROPOSED WALL (INCLUDING THE CAP UNIT OR FOOTING). WALL FOOTINGS/FOUNDATION ELEVATIONS WHICH ARE NOT IDENTIFIED HEREIN AND ARE TO BE DETERMINED BY THE CONTRACTOR, MUST BE DETERMINED AND SET BASED UPON FINAL STRUCTURAL DESIGN PREPARED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY. THE CONTRACTOR MUST ENSURE THAT THE STRUCTURAL DESIGN FOR ALL WALLS SHOWN HEREON ARE APPROVED BY THE MUNICIPALITY PRIOR TO THE START OF CONSTRUCTION.
12. THE CONTRACTOR MUST ENSURE THAT FENCING, GUIDERAIL, UTILITIES, AND OTHER SITE AMENITIES IN THE VICINITY OF THE RETAINING WALL(S), PROPOSED SCHEMATICALLY ON THESE PLANS, ARE MATERIALLY CONSIDERED AND INCORPORATED INTO THE RETAINING WALL DESIGN BY THE STRUCTURAL ENGINEER.
13. THE CONTRACTOR MUST ENSURE THAT THERE ARE NO UTILITIES INSTALLED ON THE PASSIVE SIDE OF THE RETAINING WALL. NO EXCAVATION MAY BE PERFORMED ON THE PASSIVE SIDE OF THE RETAINING WALL WITHOUT APPROPRIATELY AND SAFELY SUPPORTING THE WALL IN ACCORDANCE WITH THE STANDARD OF CARE AND ALL APPLICABLE RULES, REGULATIONS, CODES, ORDINANCES, LAWS AND STATUTES.
14. A FOUR FOOT TALL FENCE MUST BE PROVIDED ON ALL RETAINING WALLS IN EXCESS OF THIRTY INCHES IN HEIGHT FOR FALL PROTECTION.

DRAINAGE SYSTEM NOTES

1. ALL RCP DRAINAGE PIPING SHALL BE CLASS III CIRCULAR REINFORCED CONCRETE PIPE WITH SILT/SOIL TIGHT JOINTS OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON THE PLANS. ALL DIP DRAINAGE PIPING SHALL BE CLASS 52 CIRCULAR DUCTILE IRON PIPE OR APPROVED EQUAL. ALL HDPE DRAINAGE PIPING SHALL BE ADS N-12 HIGH-DENSITY POLYETHYLENE PIPE WITH SOIL TIGHT GASKETS, OR APPROVED EQUAL.
2. WHEN PERFORATED PIPE IS SPECIFIED ON THE PLANS, IT MUST CONFORM TO AASHTO M252 FOR PIPES 4" TO 10" AND TO AASHTO M294 FOR PIPES 12" TO 60" AND TYPE S (SMOOTH INTERIOR WITH ANGULAR CORRUGATIONS) WITH GASKET FOR SILT/SOIL TIGHT JOINT.
3. PIPE FOR ROOF DRAIN CONNECTIONS MUST BE PVC SDR 26 OR PVC SCHEDULE 40 UNLESS INDICATED OTHERWISE.
4. ALL DRAINAGE PIPE CROSSINGS WITHIN 18 INCHES OR LESS OF A SANITARY SEWER MAIN OR LATERAL MUST HAVE A CONCRETE ENCASEMENT PER THE NJDEP REQUIREMENTS. IF THE DRAINAGE PIPE CROSSES ABOVE THE SANITARY PIPE, APPROPRIATE STRUCTURAL SUPPORT MUST BE PROVIDED TO PREVENT THE LOAD OF THE DRAINAGE PIPE AND WATER FROM EXCEEDING THE LOADING CAPACITY OF THE SANITARY PIPE
5. UNLESS OTHERWISE NOTED, THE ROOF DRAINS FROM BUILDING ROOFS MUST DIRECTLY CONNECT TO THE ON-SITE DRAINAGE SYSTEM.
6. UNLESS OTHERWISE NOTED, ALL DRAINAGE STRUCTURES MUST BE PRECAST CONCRETE WITH A MINIMUM OF H-25 LOAD RATING. ALL DRAINAGE FRAMES, INLET GRATES, AND MANHOLE COVERS MUST BE UNPAINTED AND UNCOATED HEAVY DUTY H-20 LOADING CAST IRON.
7. PRECAST CONCRETE MANUFACTURERS MUST CALCULATE THE THE LOAD FOR EACH DRAINAGE STRUCTURE TO CONFIRM THE MINIMUM LOAD RATING CAN BE MET CONSIDERING THE OPENINGS REQUIRED FOR THE PIPE CONNECTIONS. ANY CONFLICTS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD IMMEDIATELY.
8. UNLESS OTHERWISE NOTED OR INFERRED BY INVERT ELEVATIONS, PIPE CROWN ELEVATIONS MUST BE MATCHED IN ALL DRAINAGE MANHOLES AND INLETS.
9. ALL DRAINAGE STRUCTURES MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NJDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
10. ALL DRAINAGE INLETS AND MANHOLES SHALL BE SET ON A SIX INCH BED OF 3/4 INCH CLEAN CRUSHED STONE.
11. UNLESS OTHERWISE NOTED, ALL DRAINAGE INLET SHALL BE FITTED WITH ADA COMPLIANT BICYCLE SAFE GRATES.
12. TYPE 'N' ECO HEAD GRATES SHALL BE USED ON ALL TYPE 'B' DRAINAGE INLETS
13. REFER TO THE STORMWATER OPERATIONS AND MAINTENANCE MANUAL FOR MAINTENANCE OF ALL STORMWATER BASIN AND BMP STRUCTURES ON THE SITE.
14. UNLESS OTHERWISE NOTED, A MINIMUM OF TWO FEET OF CLEAR SEPARATION MUST BE PROVIDED BETWEEN PARALLEL DRAINAGE PIPES.
15. ALL DRAINAGE STRUCTURES MUST BE MAINTAINED AND CLEANED OF DEBRIS ON A REGULAR BASIS DURING CONSTRUCTION.
16. ALL DRAINAGE STRUCTURES MUST BE MAINTAINED IN ACCORDANCE WITH THE OPERATIONS AND MAINTENANCE MANUAL AFTER CONSTRUCTION.

UTILITY NOTES

1. THE LOCATIONS OF ALL EXISTING AND PROPOSED NATURAL GAS, TELECOM, ELECTRIC, AND WATER SERVICES ARE APPROXIMATE AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THE LOCATIONS OF ALL UTILITIES MEET APPROPRIATE SPACE REQUIREMENTS WHEN REVIEWING THE EXISTING SITE CONDITIONS. THE CONTRACTOR MUST COORDINATE WITH THE LOCAL UTILITY COMPANIES PRIOR TO STARTING CONSTRUCTION TO AVOID INTERFERENCE OR CONFLICTS. THE LOCATIONS OF NATURAL GAS, TELECOM, AND ELECTRIC LINES WILL BE DETERMINED BY THE UTILITY PURVEYOR PROVIDING SERVICE. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, CONFLICTS, AND OMISSIONS IN WRITING, TO THE ENGINEER OF RECORD.
2. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE NEW JERSEY 811 ONE CALL SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
3. STREETS, SIDEWALKS, DRIVEWAYS, CURBS, AND OTHER FINISHED SURFACES DISTURBED BY THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN HEREON MUST BE RESTORED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, COUNTY, THE NJDOT, AND THE SOIL CONSERVATION DISTRICT.
4. THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED CROSSINGS OF EXISTING UNDERGROUND UTILITIES BY USING A TEST PIT TO CONFIRM THE EXACT DEPTH PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY PART OF THE PROPOSED UTILITY SYSTEM.
5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR MUST VERIFY ROOF DRAIN LOCATIONS AND SIZES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF RECORD OF ANY CONFLICTS BETWEEN ELEVATIONS OR SIZES.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS, DOOR ACCESS, AND EXTERIOR GRADING IMMEDIATELY AROUND THE BUILDING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR COORDINATING THE UTILITY SERVICE CONNECTIONS TO PUBLIC UTILITY INFRASTRUCTURE PRIOR TO MAKING ANY CONNECTIONS. WHERE A CONFLICT EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, PRIOR TO CONSTRUCTION.
8. THE LAYOUT OF COMMON UTILITY TRENCHES AND CONNECTIONS TO BUILDINGS MUST BE VERIFIED BY THE RESPECTIVE UTILITY COMPANY PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL COMMON UTILITY TRENCH INSPECTION WITH THE APPROPRIATE UTILITY COMPANIES PRIOR TO BACKFILLING THE TRENCH.
9. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST COMPLY WITH APPLICABLE REQUIREMENTS AND SPECIFICATIONS. ENGINEER OF RECORD IS NOT RESPONSIBLE FOR DESIGN OF TRENCH BACKFILL OR FOR COMPACTION REQUIREMENTS.
10. DURING THE INSTALLATION OF UTILITIES, THE CONTRACTOR MUST MAINTAIN A THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE FROM THE INFORMATION CONTAINED WITHIN THESE PLANS. THE RECORD MUST BE KEPT ON A CLEAN COPY OF THE APPROPRIATE PLANS, WHICH THE CONTRACTOR MUST PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF THE WORK.
11. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY, OR NJDOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY HAVING JURISDICTION OVER THE UTILITY WORK.
12. FINAL LOCATIONS OF PROPOSED UTILITY POLES TO BE RELOCATED TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY. UTILITY POLE LOCATIONS DEPICTED ON THESE PLANS ARE SCHEMATIC ONLY.
13. STREET LIGHTS ARE TO BE INSTALLED IN COORDINATION WITH THE UTILITY COMPANY AND MUNICIPAL STANDARDS. SPACING AND FIXTURE MANUFACTURER AND MODEL TO BE AS SPECIFIED BY THE MUNICIPAL STANDARDS.
14. THE TOPS OF EXISTING MANHOLES, INLETS, CLEANOUTS, AND VALVES MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS.
15. SANITARY SEWER MAINS MUST BE SEPARATED FROM ALL WATER MAINS BY A MINIMUM OF TEN FEET HORIZONTALLY. IF SUCH HORIZONTAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE NJDEP. WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF CLASS 53 DUCTILE IRON PIPE AND APPROPRIATELY LINED, USING MECHANICAL OR SLIP-ON WATERTIGHT JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE.
16. WHEN THESE PLANS INVOLVE MULTIPLE BUILDINGS, SOME OF WHICH MAY BE BUILT AT A LATER DATE, THE CONTRACTOR MUST EXTEND ALL LINES, INCLUDING BUT NOT LIMITED TO STORM, SANITARY, UTILITIES, AND IRRIGATION LINES, TO A POINT AT LEAST FIVE (5) FEET BEYOND THE PAVED AREAS FOR WHICH THE CONTRACTOR IS RESPONSIBLE. THE CONTRACTOR MUST CAP ENDS AS APPROPRIATE, MARK LOCATIONS WITH A 2X4 STAKE, AND MUST NOTE THE LOCATION OF ALL OF THE ABOVE ON A CLEAN COPY OF THE PLANS AS PART OF THE RECORD DOCUMENTS
17. STORM AND SANITARY PIPE LENGTHS INDICATED ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
18. THE CONTRACTOR MUST NOTIFY, IN WRITING, THE MUNICIPAL ENGINEER AND ENGINEER OF RECORD AT LEAST 72 HOURS PRIOR TO INSTALLATION OF SANITARY SEWER UTILITIES. FAILURE TO HAVE SANITARY SEWER INSTALLATION AND TESTING OBSERVED BY THE DESIGNATED ENGINEER MAY REQUIRE RE-EXCAVATION OF SANITARY SEWER UTILITIES AND RE-TESTING, WHICH WILL BE DONE AT THE CONTRACTOR'S SOLE COST AND EXPENSE.
19. NATURAL GAS METERS MUST BE PROTECTED BY BOLLARDS AND FENCES IF INSTALLED WITHIN THE EXTERIOR OF THE BUILDING AS REQUIRED BY THE JURISDICTIONAL NATURAL GAS PURVEYOR.

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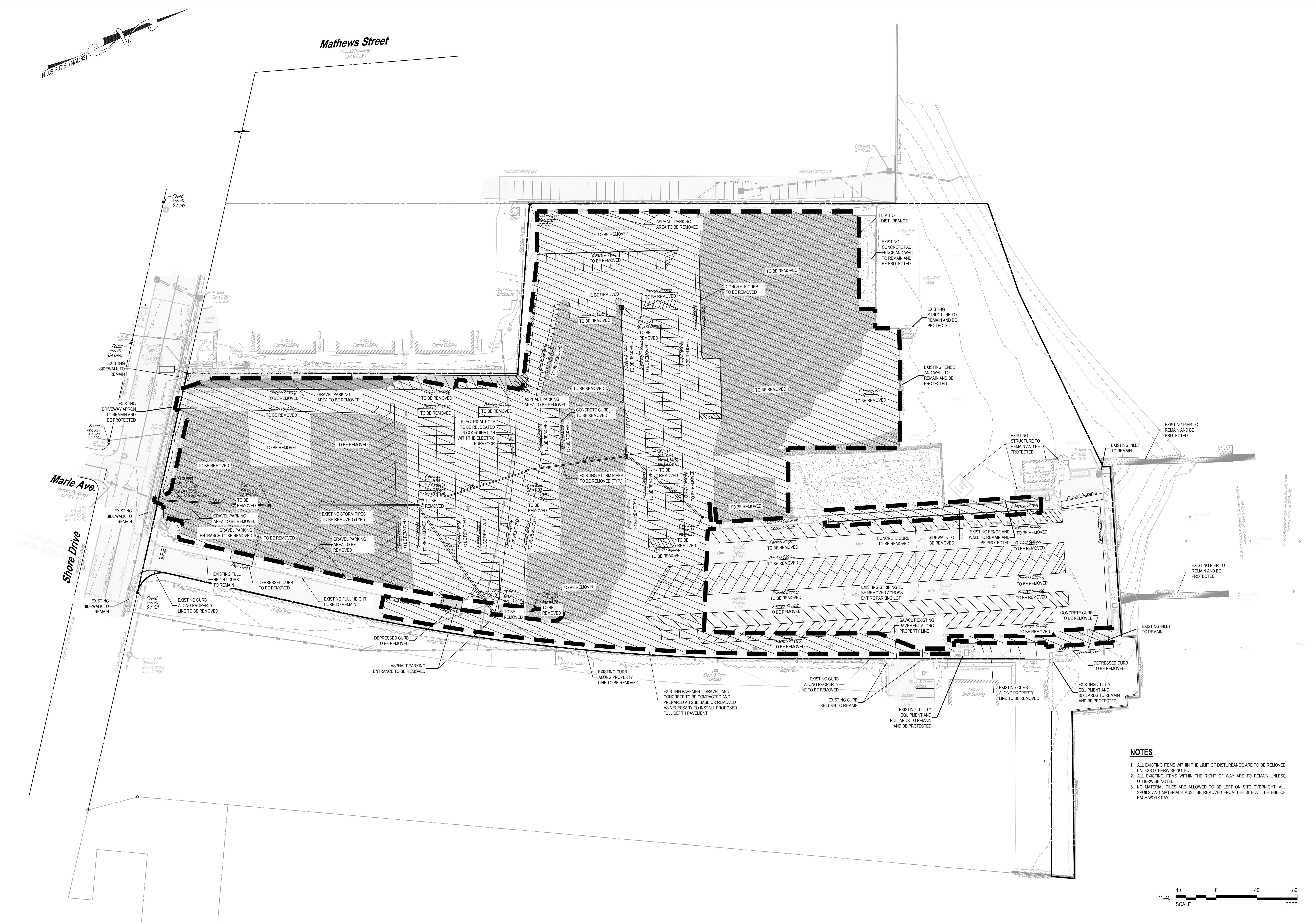
REVISIONS

NO.	DATE	DESCRIPTION
1	2025-05-27	REVISED PER FSCD REVIEW
2	2025-05-29	REVISED LOTS PER NJDEP COMMENT
3	2025-07-09	REVISED PER FSCD REVIEW
4	2026-05-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-06-05	REVISED PER TOWNSHIP COMMENT

GENERAL NOTES
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407	
FILE NAME 8407-Cover Sheet.dwg	
DRAWN ERI	REVIEWED BMT
DATE 04/22/25	SCALE AS SHOWN
SHEET NO. C-02 OF 13	



NOTES

1. ALL EXISTING ITEMS WITHIN THE LIMIT OF DISTURBANCE ARE TO BE REMOVED UNLESS OTHERWISE NOTED.
2. ALL EXISTING ITEMS WITHIN THE RIGHT OF WAY ARE TO REMAIN UNLESS OTHERWISE NOTED
3. NO MATERIAL PILES ARE ALLOWED TO BE LEFT ON SITE OVERNIGHT. ALL SPOILS AND MATERIALS MUST BE REMOVED FROM THE SITE AT THE END OF EACH WORK DAY.

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DEMOLITION PLAN

SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407	
FILE NAME 8407-Demolition Plan.dwg	
DRAWN ERI	REVIEWED BMT
DATE 04/22/25	SCALE 1"=40'
SHEET NO. C-03	
OF 13	

ZONING INFORMATION

ZONE: WC-2 WATERFRONT COMMERCIAL DISTRICT

PARAMETER	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	N/A	333,717 SF	333,717 SF
MINIMUM LOT FRONTAGE	100 FT	201.78 FT	201.78 FT
MINIMUM LOT DEPTH	150 FT	870.61 FT	870.61 FT
MINIMUM FRONT YARD SETBACK	20 FT	828.9 FT	828.9 FT
MINIMUM SIDE YARD SETBACK	10 FT	173.3 FT	173.3 FT
MINIMUM REAR YARD SETBACK	N/A	41.3 FT	41.3 FT
MAXIMUM BUILDING HEIGHTS	36 FT	< 36 FT	< 36 FT
MAXIMUM LOT COVERAGE	70%	83.68%	83.10% (E)
MAXIMUM BUILDING COVEREAGE	25%	0.20%	0.20%
FLOOR AREA RATIO	0.6000	0.0020	0.0020
PARKING			
REQUIRED PARKING SPACES	* 1,863 SPACES	*957 SPACES	734 SPACES (E)
REQUIRED ADA PARKING SPACES	** 15 SPACES	12 SPACES	17 SPACES
REQUIRED VAN ADA PARKING SPACES	*** 3 SPACES	0 SPACES	3 SPACES
MAXIMUM COMPACT PARKING SPACES	**** 147 SPACES	0 SPACES	113 SPACES
MINIMUM FRONT YARD SETBACK	10 FT	2.05 FT	10 FT
MINIMUM SIDE YARD SETBACK	5 FT	5.44 FT	5.98 FT

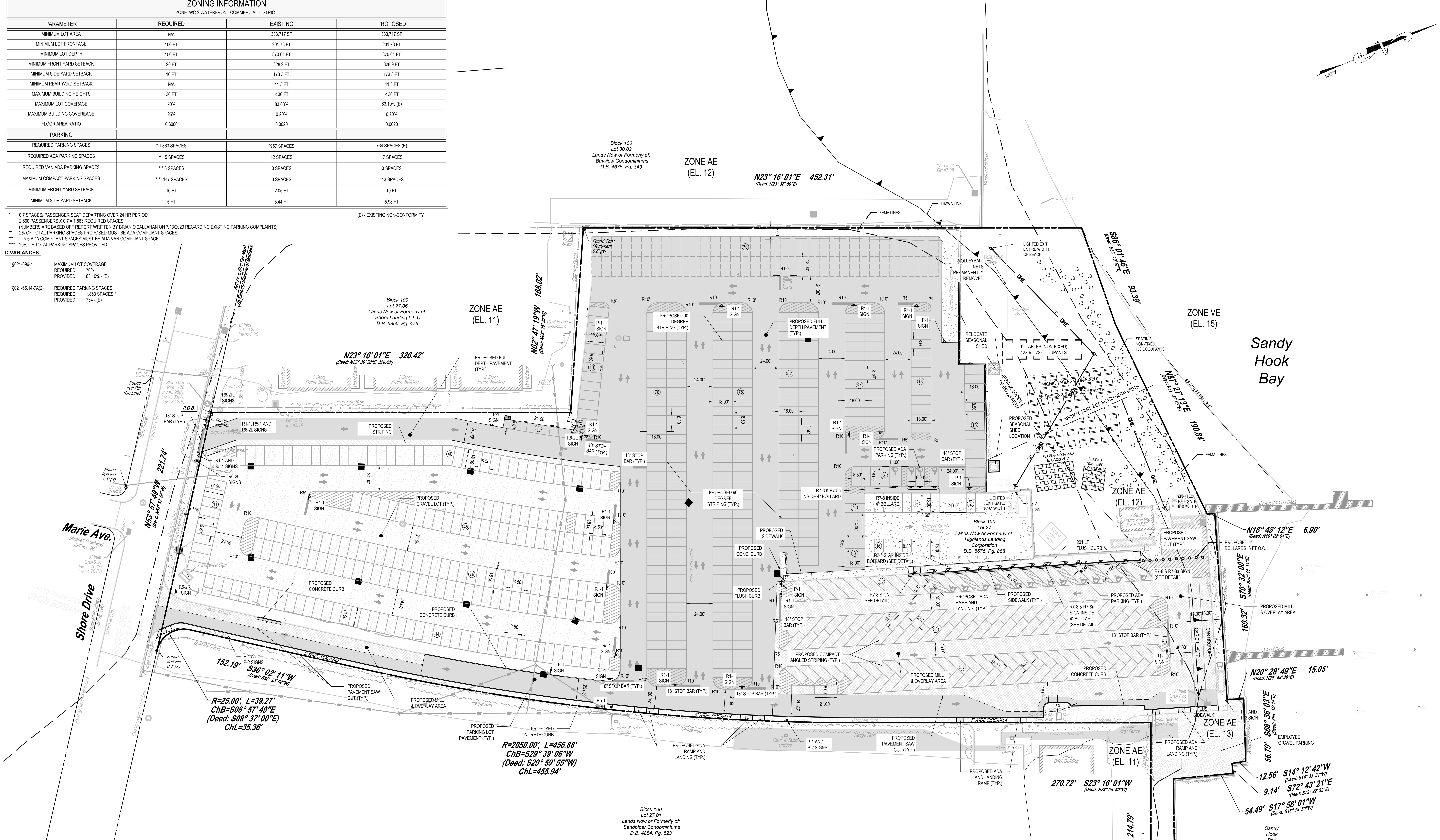
* 0.7 SPACES/ PASSENGER SEAT DEPARTING OVER 24 HR PERIOD
2,660 PASSENGERS X 0.7 = 1,863 REQUIRED SPACES
(NUMBERS ARE BASED OFF REPORT WRITTEN BY BRIAN O'CALLAHAN ON 7/13/2023 REGARDING EXISTING PARKING COMPLAINTS)
** 2% OF TOTAL PARKING SPACES PROPOSED MUST BE ADA COMPLIANT SPACES
*** 1 IN 6 ADA COMPLIANT SPACES MUST BE ADA VAN COMPLIANT SPACE
**** 20% OF TOTAL PARKING SPACES PROVIDED

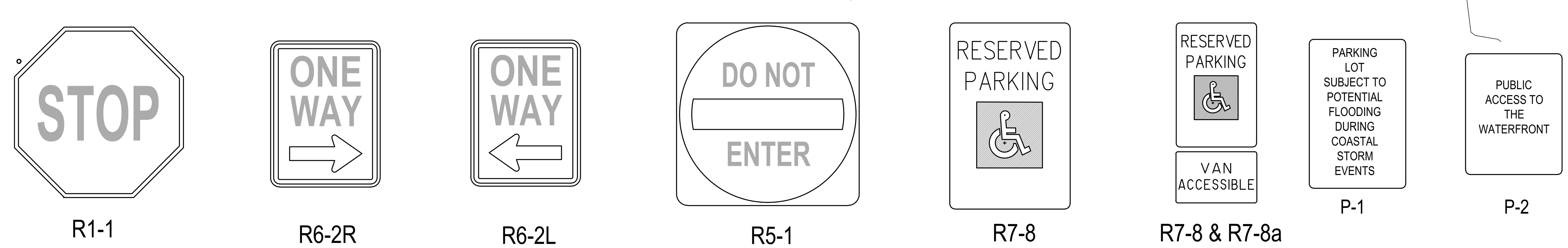
(E) - EXISTING NON-CONFORMITY

C VARIANCES:

§021-096-4 MAXIMUM LOT COVERAGE
REQUIRED: 70%
PROVIDED: 83.10% - (E)

§021-65.14-7A(2) REQUIRED PARKING SPACES
REQUIRED: 1,863 SPACES *
PROVIDED: 734 - (E)





Najarian Associates Est. 1979
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Certificate of Authorization Certificate # 24GA27993300

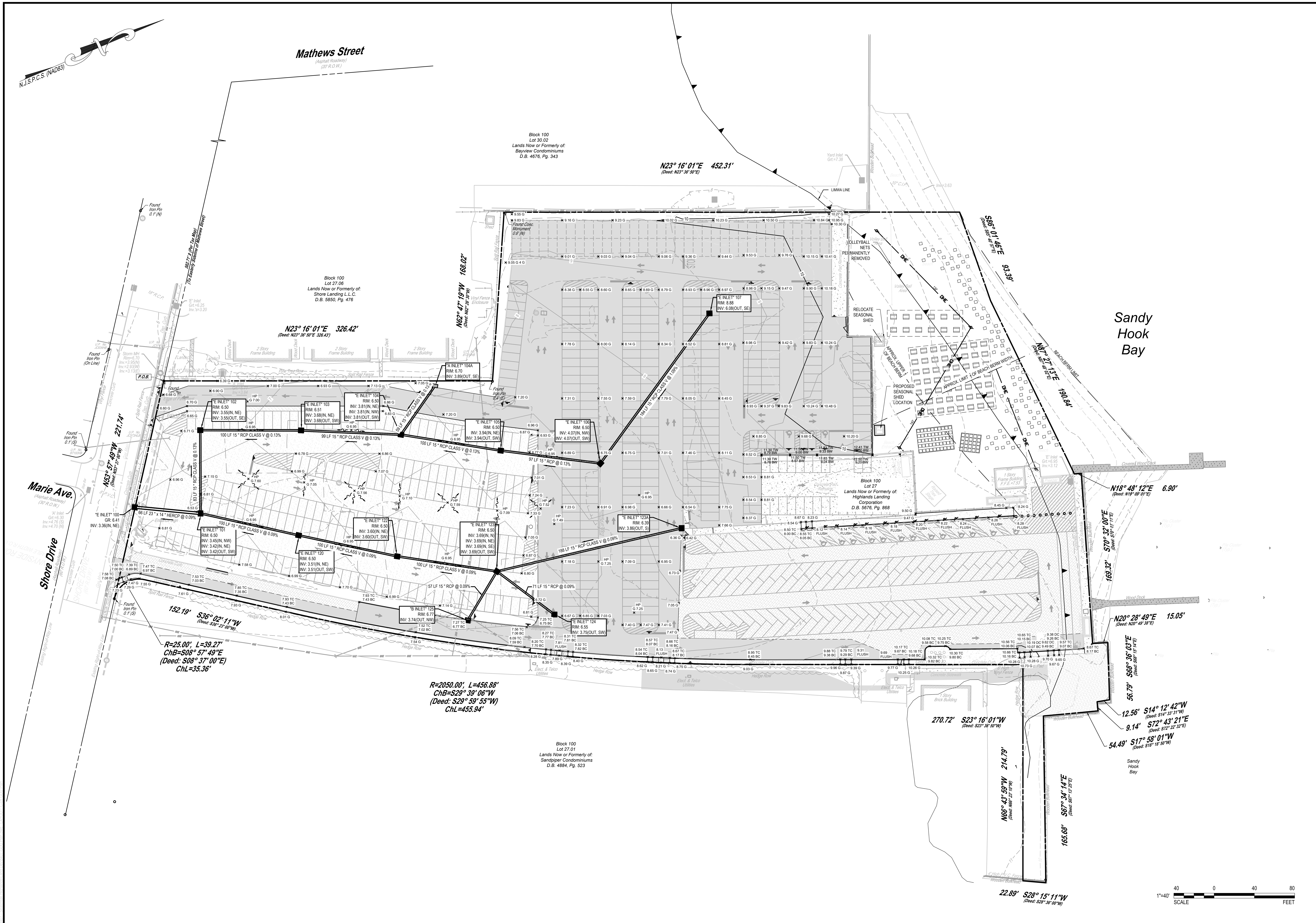
BRAD M. THOMPSON, P.E.
NJ PROFESSIONAL ENGINEER Lic. No. 49075

REVISIONS

NO.	DATE	DESCRIPTION
1	2025-05-27	REVISED PER FSCD REVIEW
2	2025-05-29	REVISED LOTS PER NJDEP COMMENT
3	2025-07-09	REVISED PER FSCD REVIEW
4	2026-05-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-06-05	REVISED PER TOWNSHIP COMMENT

SITE PLAN
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Site Plan.dwg
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE 1"=40'
SHEET NO. C-04


N.J.S.P.C.S. (NAD83)
Mathews Street
Block 100
Lot 30.02
Lands Now or Formerly of:
Bayview Condominiums
D.B. 4676, Pg. 343
N23° 16' 01"E 452.31'
Block 100
Lot 27.06
Lands Now or Formerly of:
Shore Landing L.L.C.
D.B. 5850, Pg. 476
N23° 16' 01"E 326.42'
N62° 47' 19"W 168.02'
N53° 57' 49"W 221.74'
Marie Ave.
Shore Drive
Sandy Hook Bay
S86° 01' 46"E 93.39'
N87° 27' 13"E 190.84'
Block 100
Lot 27
Lands Now or Formerly of:
Highlands Landing
Corporation
D.B. 5676, Pg. 868
N18° 48' 12"E 6.90'
S70° 32' 00"E 169.32'
N20° 28' 49"E 15.05'
S68° 36' 03"E 56.79'
S14° 12' 42"W 12.56'
S72° 43' 21"E 9.14'
S17° 58' 01"W 54.49'
S23° 16' 01"W 270.72'
N66° 43' 59"W 214.79'
S67° 34' 14"E 165.68'
S28° 15' 11"W 22.89'
152.19' S36° 02' 11"W
R=25.00', L=39.27'
ChB=S08° 57' 49"E
(Deed: S08° 37' 00"E)
ChL=35.36'
R=2050.00', L=456.88'
ChB=S29° 39' 06"W
(Deed: S29° 59' 55"W)
ChL=455.94'
Block 100
Lot 27.01
Lands Now or Formerly of:
Sandpiper Condominiums
D.B. 4884, Pg. 523
RELOCATE SEASONAL SHED
PROPOSED SEASONAL SHED LOCATION
VOLLEYBALL NETS PERMANENTLY REMOVED
"E INLET" 100
GR: 6.41
INV: 3.36(N, NE)
"E INLET" 101
RIM: 6.50
INV: 3.45(N, NW)
INV: 3.42(N, NE)
INV: 3.42(OUT, SW)
"E INLET" 102
RIM: 6.50
INV: 3.55(N, NE)
INV: 3.55(OUT, SE)
"E INLET" 103
RIM: 6.51
INV: 3.68(N, NE)
INV: 3.68(OUT, SW)
"E INLET" 104
RIM: 6.50
INV: 3.81(N, NE)
INV: 3.81(N, NW)
INV: 3.81(OUT, SW)
"A INLET" 104A
RIM: 6.70
INV: 3.89(OUT, SE)
"E INLET" 105
RIM: 6.50
INV: 3.94(N, NE)
INV: 3.94(OUT, SW)
"E INLET" 106
RIM: 6.50
INV: 4.07(N, NW)
INV: 4.07(OUT, SW)
"E INLET" 107
RIM: 8.88
INV: 6.08(OUT, SE)
"E INLET" 120
RIM: 6.50
INV: 3.51(N, NE)
INV: 3.51(OUT, SW)
"E INLET" 121
RIM: 6.50
INV: 3.69(N, NE)
INV: 3.69(N, SE)
INV: 3.69(OUT, SW)
"E INLET" 122
RIM: 6.50
INV: 3.60(N, NE)
INV: 3.60(OUT, SW)
"E INLET" 123A
RIM: 6.39
INV: 3.86(OUT, S)
"E INLET" 124
RIM: 6.55
INV: 3.75(OUT, SW)
"B INLET" 125
RIM: 6.77
INV: 3.74(OUT, NW)
1"=40'
SCALE
FEET

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GRADING, DRAINAGE & UTILITY PLAN

SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407	
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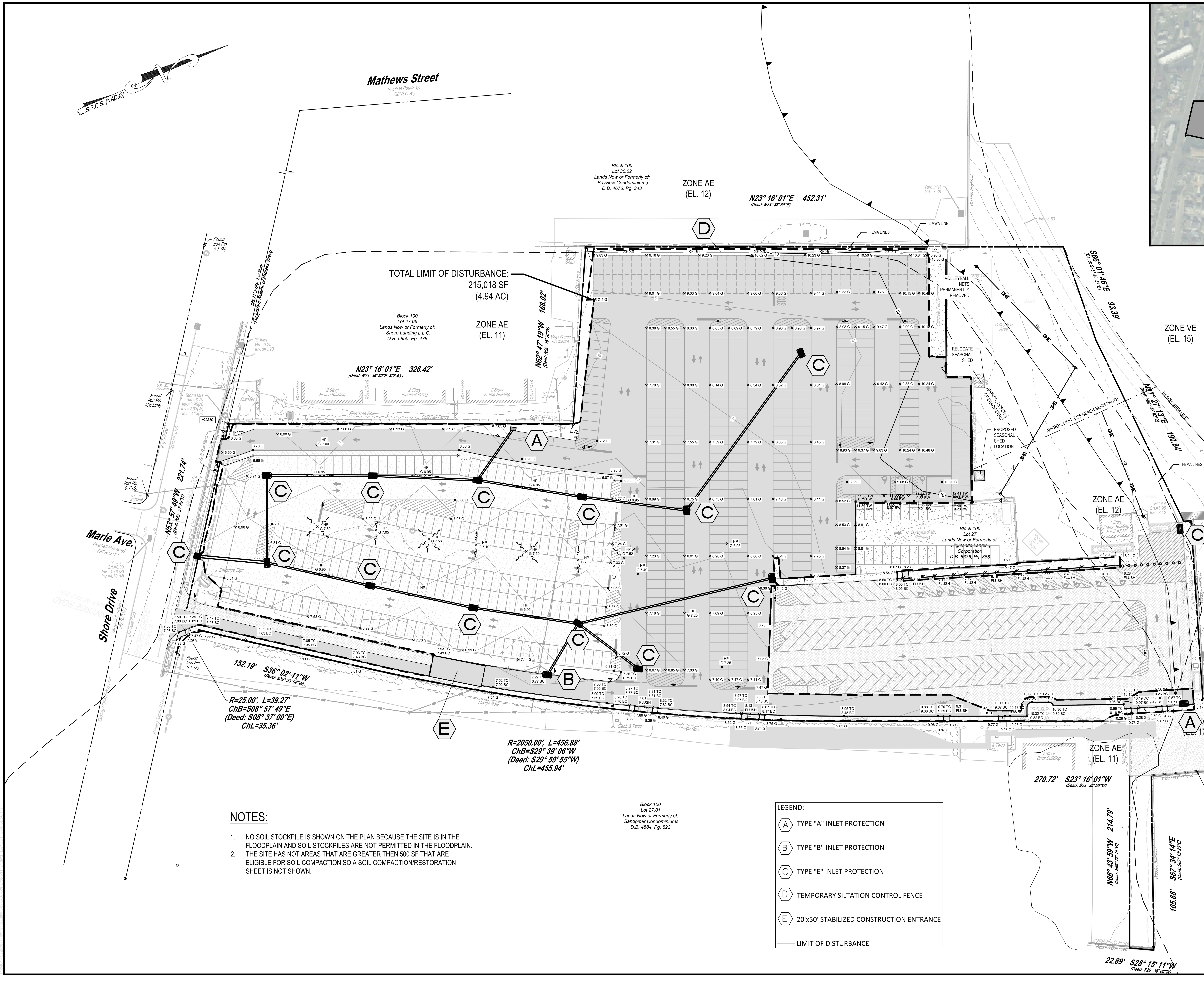
SHEET NO. C-05	



NOTES:

1. NO SOIL STOCKPILE IS SHOWN ON THE PLAN BECAUSE THE SITE IS IN THE FLOODPLAIN AND SOIL STOCKPILES ARE NOT PERMITTED IN THE FLOODPLAIN.
2. THE SITE HAS NOT AREAS THAT ARE GREATER THEN 500 SF THAT ARE ELIGIBLE FOR SOIL COMPACTION SO A SOIL COMPACTION/RESTORATION SHEET IS NOT SHOWN.

LEGEND:

- (A) TYPE "A" INLET PROTECTION
- (B) TYPE "B" INLET PROTECTION
- (C) TYPE "E" INLET PROTECTION
- (D) TEMPORARY SILTATION CONTROL FENCE
- (E) 20'x50' STABILIZED CONSTRUCTION ENTRANCE
- —— LIMIT OF DISTURBANCE

LOCATION MAP
SCALE: 1" = 250'
SOURCE: NJ GEO WEB

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SOIL EROSION AND SEDIMENT CONTROL PLAN

SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO.	8407
FILE NAME	8407-Soil Erosion Plan.dwg
DRAWN: ERI	REVIEWED: BMT
DATE: 04/22/25	SCALE: 1"=40'
SHEET NO.	C-06
OF 13	

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH "STANDARDS FOR LAND GRADING, PG. 19-1."
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
   C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION

   A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING INDICATES OTHERWISE. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
   B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED IN ACCORDANCE WITH THE ABOVE.
   D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO "STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1."

3. SEEDING

   A. TEMPORARY SEEDING SHALL BE PREPARED IN ACCORDANCE WITH "TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION" STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY DATED JULY 2013.
   B. TEMPORARY SEEDING SHALL CONSIST OF SPRING OATS APPLIED AT A RATE OF 86LBS PER ACRE OF PERENNIAL RYEGRASS APPLIED AT A RATE OF 100LBS PER ACRE. TEMPORARY SEEDING SHALL BE MULCHED AND MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING. OPTIMUM SEEDING DATES ARE MARCH 1 TO MAY 15 AND AUGUST 15 TO OCTOBER 1.
   C. FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER SHALL BE 10-20-10 APPLIED AT A RATE OF 500 LBS PER ACRE WITH 50% WATER INSOLUBLE NITROGEN, OR AS DETERMINED BY SOIL TEST. LIMESTONE RATES SHALL BE DETERMINED THROUGH SOIL TESTING.

PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

1. PERMANENT SEEDING SHALL BE PROVIDED IN ACCORDANCE WITH "PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION" STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY DATED JULY 2013.

2. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
   B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
   C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
   D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS

3. SEEDBED PREPARATION
   A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/). FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
   B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   C. HIGH ACID PRODUCING SOIL. SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING
   A. PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURES OR APPROVED EQUALS:
      HARD FESCUE AT A RATE OF 175 LB/ACRE
      PERENNIAL RYEGRASS AT A RATE OF 45 LB/ACRE
      KENTUCKY BLUEGRASS BLEND AT A RATE OF 45LB/ACRE
   B. PERMANENT SEEDING TO BE APPLIED BY RAKING OR DRILLING INTO THE SOILS AT THE RATE ABOVE.
   C. IF SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MUCH.
   D. OPTIMAL SEEDING DATES ARE BETWEEN AUGUST 15 AND OCTOBER 15. ACCEPTABLE SEEDING DATES ARE BETWEEN MARCH 1 AND APRIL 30 AND MAY 1 AND AUGUST 14.
   E. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED MIXTURE FOR SEEDING AREA AND MOWED ONCE.

4. MULCH
   A. MULCH REQUIRED ON ALL SEEDING.
   B. MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL.
   C. MULCH WILL BE SPREAD AT RATES OF 70 TO 90 LBS PER 100 SQ. FT. DURING THE GROWING SEASON AND 90 TO 115 LBS PER 1000 SQ. FT. DURING THE OUT OF GROWING SEASON AND ANCHORED WITH MULCHED ANCHORING TOOL OR LIQUID MULCH BINDER AND SHALL BE PROVIDED ON ALL SEEDING.

MANAGEMENT OF HIGH ACID-PRODUCING SOILS

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID-PRODUCING SOILS ARE ENCOUNTERED.
2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOILS.
3. STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.
4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.
5. HIGH ACID-PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:
   a. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OR 5 OR MORE.
   b. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.
6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.
7. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.
8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

STANDARD FOR LAND GRADING

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE WHERE GRADING TO PLANNED ELEVATIONS IS PRACTICAL AND IT IS DETERMINED THAT GRADING IS NEEDED. GRADING THAT INVOLVES THE DISTURBANCE OF VEGETATION OVER LARGE AREAS SHALL BE AVOIDED. IT MAY BE NECESSARY TO PROVIDE FOR TEMPORARY STABILIZATION OF LARGE AREAS.

WATER QUALITY ENHANCEMENT

PROPER GRADING OF DISTURBED SITES WILL PROTECT AGAINST SOIL LOSS FROM EROSION, ENHANCE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER AND HELP TO PROPERLY MANAGE STORMWATER RUNOFF ALL OF WHICH WILL REDUCE OFF SITE DISCHARGE OF POLLUTANTS.

PLANNING CRITERIA

THE GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE TOPOGRAPHIC SURVEYS AND INVESTIGATIONS. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILL AND FINISH ELEVATION OF THE SURFACES TO BE GRADED. THE PLAN SHOULD ALSO INCLUDE AUXILIARY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOPE STABILIZATION, EROSION CONTROL AND DRAINAGE. FACILITIES SUCH AS WATERWAYS, DITCHES, DIVERSIONS, GRADE STABILIZATION STRUCTURES, RETAINING WALLS AND SUBSURFACE DRAINS SHOULD BE INCLUDED WHERE NECESSARY.

EROSION CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARD CONTAINED HEREIN.

THE DEVELOPMENT AND ESTABLISHMENT OF THE PLAN SHALL INCLUDE THE FOLLOWING:

1. THE CUT FACE OF EARTH EXCAVATIONS AND FILLS SHALL BE NO STEEPER THAN THE SAFE ANGLE OF REPOSE FOR THE MATERIALS ENCOUNTERED AND FLAT ENOUGH FOR PROPER MAINTENANCE.
2. THE PERMANENTLY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR OTHERWISE PROTECTED FROM EROSION.
3. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
4. SUBSURFACE DRAINAGE IS TO BE PROVIDED IN AREAS HAVING A HIGH WATER TABLE, TO INTERCEPT SEEPAGE THAT WOULD ADVERSELY AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS OR CREATE UNDESIRABLE WETNESS. SEE STANDARD FOR SUBSURFACE DRAINAGE, PG. 32-1.
5. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
6. FILL SHALL NOT BE PLACED ADJACENT TO THE BANK OF A STREAM OR CHANNEL, UNLESS PROVISIONS ARE MADE TO PROTECT THE HYDRAULIC, BIOLOGICAL, AESTHETIC AND OTHER ENVIRONMENTAL FUNCTIONS OF THE STREAM.

SOIL MANAGEMENT AND PREPARATION

SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

THIS SECTION OF THIS STANDARD ADDRESSES THE POTENTIAL FOR EXCESSIVE SOIL COMPACTION IN LIGHT OF THE INTENDED LAND USE, TESTING FOR EXCESSIVE SOIL COMPACTION WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED AND MITIGATION OF EXCESSIVE SOIL COMPACTION WHEN APPROPRIATE.

DUE TO USE OR SETTING, CERTAIN DISTURBED AREAS WILL NOT REQUIRE COMPACTION REMEDIATION INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

1. WITHIN 20 FEET OF BUILDING FOUNDATIONS WITH BASEMENTS, 12 FEET FROM SLAB OR CRAWL SPACE CONSTRUCTION.
2. WHERE SOILS OR GRAVEL SURFACES WILL BE REQUIRED TO SUPPORT POST-CONSTRUCTION VEHICULAR TRAFFIC LOADS SUCH AS ROADS, PARKING LOTS AND DRIVEWAYS (INCLUDING GRAVEL SURFACES), BICYCLE PATHS OR PEDESTRIAN WALKWAYS (SIDEWALKS ETC)
3. AIRPORTS, RAILWAYS OR OTHER TRANSPORTATION FACILITIES
4. AREAS REQUIRING INDUSTRY OR GOVERNMENT SPECIFIED SOIL DESIGNS, INCLUDING GOLF COURSES, LANDFILLS, WETLAND RESTORATION, SEPTIC DISPOSAL FIELDS, WET/LINED PONDS, ETC.
5. AREAS GOVERNED OR REGULATED BY OTHER LOCAL, STATE OR FEDERAL REGULATIONS WHICH DICTATE SOIL CONDITIONS
6. BROWNFIELDS (CAPPED USES), URBAN REDEVELOPMENT AREAS, , IN-FILL AREAS, , RECYCLING YARDS, JUNK YARDS, QUARRIES AND
7. SLOPES DETERMINED TO BE INAPPROPRIATE FOR SAFE OPERATION OF EQUIPMENT
8. PORTIONS OF A SITE WHERE NO HEAVY EQUIPMENT TRAVEL OR OTHER DISTURBANCE HAS TAKEN PLACE
9. AREAS RECEIVING TEMPORARY VEGETATIVE STABILIZATION IN ACCORDANCE WITH THE STANDARD.
10. WHERE THE AREA AVAILABLE FOR REMEDIATION PRACTICES IS 500 SQUARE FEET OR LESS IN SIZE.
11. LOCATIONS CONTAINING SHALLOW (CLOSE TO THE SURFACE) BEDROCK CONDITIONS.

AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION SHALL BE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.

SOIL COMPACTION REMEDIATION OR TESTING TO PROVE REMEDIATION IS NOT NECESSARY WILL BE REQUIRED IN AREAS WHERE PERMANENT VEGETATION IS TO BE ESTABLISHED THAT ARE NOT OTHERWISE EXEMPTED ABOVE. TESTING METHOD SHALL BE SELECTED, AND SOIL COMPACTION TESTING SHALL BE PERFORMED BY, THE CONTRACTOR OR OTHER PROJECT OWNER'S REPRESENTATIVE (E.G. ENGINEER). A MINIMUM OF TWO (2) TESTS SHALL BE PERFORMED FOR PROJECTS WITH AN OVERALL LIMIT OF DISTURBANCE OF UP TO ONE (1) ACRE AND AT A RATE OF TWO (2) TESTS PER ACRE OF THE OVERALL LIMIT OF DISTURBANCE FOR LARGER AREAS WHICH SHALL BE EVENLY DISTRIBUTED OVER THE AREA OF DISTURBANCE SUBJECT TO TESTING. TESTS SHALL BE PERFORMED IN AREAS REPRESENTATIVE OF THE CONSTRUCTION ACTIVITY PREVAILING IN THE AREA. IN THE EVENT THIS TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE TESTING METHOD, THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM COMPACTION MITIGATION OVER THE ENTIRE DISTURBED AREA (EXCLUDING EXEMPT AREAS) OR TO PERFORM ADDITIONAL TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

SOIL TEST METHOD OPTIONS

1. PROBING WIRE TEST METHOD

   THIS TEST SHALL BE CONDUCTED WITH A FIRM WIRE (15-1/2 GAUGE STEEL WIRE - E.G. SURVEY MARKER FLAG, STRAIGHT WIRE STOCK, ETC.), 18 TO 21 INCHES IN LENGTH, WITH 6" INCHES FROM ONE END VISIBLY MARKED ON THE WIRE. CONDUCT WIRE FLAG TEST BY HOLDING THE WIRE FLAG NEAR THE FLAG END AND PUSH IT VERTICALLY INTO THE SOIL AT SEVERAL DIFFERENT LOCATIONS IN THE FIELD TO THE LESSER OF A 6 INCH DEPTH OR THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. RECORD THE DEPTH AT WHICH IT BENDS DUE TO RESISTANCE IN THE SOIL. THE WIRE SHOULD PENETRATE WITHOUT BENDING OR DEFORMING AT LEAST 6" INTO THE GROUND BY HAND, WITHOUT THE USE OF TOOLS. IF PENETRATION FAILS AND AN OBSTRUCTION IS SUSPECTED (ROCKS, ROOT, DEBRIS, ETC.) THE TEST CAN BE REPEATED IN THE SAME GENERAL AREA. IF THE TEST IS SUCCESSFUL THE SOIL IS NOT EXCESSIVELY COMPACTED. IF THE WIRE IS DIFFICULT TO INSERT (WIRE BENDS OR DEFORMS PRIOR TO REACHING 6 INCHES IN DEPTH) THE SOIL MAY BE EXCESSIVELY COMPACTED AND COMPACTION MITIGATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNER'S DISCRETION.

2. HANDHELD SOIL PENETROMETER TEST METHOD

   THIS TEST SHALL BE CONDUCTED BASED ON THE STANDARD OPERATION PROCEDURE (SOP) #RCE2010-001, PREPARED BY THE RUTGERS COOPERATIVE EXTENSION, IMPLEMENTED JUNE 1, 2010, LAST REVISED FEBRUARY 28, 2011. A RESULT OF LESS THAN OR EQUAL TO 300 PSI SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN 300 PSI THE SOIL MAY BE EXCESSIVELY COMPACTED AND COMPACTION MITIGATION OR FURTHER TESTING VIA METHOD 3 OR 4 BELOW IS REQUIRED, THE CHOICE OF WHICH IS AT THE CONTRACTOR/OWNER'S DISCRETION.

3. TUBE BULK DENSITY TEST METHOD

   THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER UTILIZING ONLY UNDISTURBED SAMPLES (RECONSTITUTION OF THE SAMPLE NOT PERMITTED) COLLECTED UTILIZING THE PROCEDURE FOR SOIL BULK DENSITY TESTS AS DESCRIBED IN THE USDA NRCS SOIL QUALITY TEST KIT GUIDE, SECTION 1-4, JULY 2001. WHEN THE TEXTURE OF THE SOIL TO BE TESTED IS A SAND OR LOAMY SAND AND LACK OF SOIL COHESION OR THE PRESENCE OF LARGE AMOUNTS OF COARSE FRAGMENTS, ROOTS OR WORM CHANNELS PREVENT THE TAKING OF UNDISTURBED SAMPLES, THIS TEST SHALL NOT BE USED.

   WHERE THE RESULTS OF REPLICATE TESTS DIFFER BY MORE THAN TEN PERCENT (10%), THE SAMPLES SHALL BE EXAMINED FOR THE FOLLOWING DEFECTS:

   i. CRACKS, WORM CHANNELS, LARGE ROOT CHANNELS OR POOR SOIL TUBE CONTACT WITHIN THE SAMPLES;
   ii. LARGE PIECES OF GRAVEL, ROOTS OR OTHER FOREIGN OBJECTS
   iii. SMEARING OR COMPACTION OF THE UPPER OR LOWER SURFACE OF THE SAMPLES

   IF ANY OF THE DEFECTS DESCRIBED IN 3 (I-III) ABOVE ARE FOUND, THE DEFECTIVE CORE(S) SHALL BE DISCARDED AND THE TEST REPEATED USING A NEW REPLICATE SAMPLE FOR EACH DEFECTIVE REPLICATE SAMPLE. THE BULK DENSITY (DEFINED AS THE WEIGHT OF DRY SOIL PER VOLUME) RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19-1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION MITIGATION IS REQUIRED.

4. NUCLEAR DENSITY TEST METHOD

   THIS TEST SHALL BE CERTIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER AND CONDUCTED BY A NUCLEAR GAUGE CERTIFIED INSPECTOR PURSUANT TO ASTM D6938 . THE BULK DENSITY MEASUREMENT RESULTS SHALL BE COMPARED WITH THE MAXIMUM DRY BULK DENSITIES IN TABLE 19-1. A RESULT OF LESS THAN OR EQUAL TO THE APPLICABLE MAXIMUM BULK DENSITY SHALL BE CONSIDERED PASSING. IF THE RESULT IS GREATER THAN THE MAXIMUM BULK DENSITY THE SOIL SHALL BE CONSIDERED EXCESSIVELY COMPACTED AND COMPACTION MITIGATION IS REQUIRED.

SOIL TYPE/TEXTURE	M
COARSE, MEDIUM AND FINE SANDS AND LOAMY SANDS	1.80
VERY FINE SAND AND LOAMY VERY FINE SAND	1.77
SANDY LOAM	1.75
LOAM, SANDY CLAY LOAM	1.70
CLAY LOAM	1.65
SANDY CLAY	1.60
SILT, SILT LOAM	1.55
SILTY CLAY LOAM	1.50
SILTY CLAY	1.45
CLAY	1.40

5. ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT AY BE ALLOWED SUBJECT TO DISTRICT APPROVAL

PROCEDURES FOR SOIL COMPACTION MITIGATION

IF SUBGRADE SOILS ARE DETERMINED TO BE EXCESSIVELY COMPACTED BY TESTING, AS IDENTIFIED ABOVE, PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.) OR IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER.

INSTALLATION REQUIREMENTS

TIMBER, LOGS, BRUSH, RUBBISH, ROCKS, STUMPS AND VEGETATIVE MATTER WHICH WILL INTERFERE WITH THE GRADING OPERATION OR AFFECT THE PLANNED STABILITY OR FILL AREAS SHALL BE REMOVED AND DISPOSED OF ACCORDING TO THE PLAN.

TOPSOIL IS TO STRIPPED AND STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISH GRADING OF ALL EXPOSED AREAS REQUIRING TOPSOIL. SEE STANDARD FOR TOPSOILING, PG 8-1.

FILL MATERIAL IS TO BE FREE OF BRUSH, RUBBISH, TIMBER, LOGS, VEGETATIVE MATTER AND STUMPS IN AMOUNTS THAT WILL BE DETRIMENTAL TO CONSTRUCTING STABLE FILLS.

ALL STRUCTURAL FILLS SHALL BE COMPACTED AS DETERMINED BY STRUCTURAL ENGINEERING REQUIREMENTS FOR THEIR INTENDED PURPOSE AND AS REQUIRED TO REDUCE SLIPPING, EROSION OR EXCESSIVE SATURATION.

ALL DISTURBED AREAS SHALL BE LEFT WITH A NEAT AND FINISHED APPEARANCE AND SHALL BE PROTECTED FROM EROSION. SEE STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, PG 4-1.

TREES TO BE RETAINED SHALL BE PROTECTED IF NECESSARY IN ACCORDANCE WITH THE STANDARD FOR TREE PROTECTION DURING CONSTRUCTION, PG. 9-1.

STANDARD FOR DUST CONTROL

CONDITION WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

WATER QUALITY ENHANCEMENT

SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL MATERIAL WHICH IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED USE OF THIS STANDARD WILL HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SITES AND SUBSEQUENT BLOWING AND DEPOSITION INTO LOCAL SURFACE WATER RESOURCES.

PLANNING CRITERIA

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES - SEE STANDARD OF STABILIZATION WITH MULCHES ONLY, PG. 5-1

VEGETATIVE COVER - SEE STANDARD FOR: TEMPORARY VEGETATIVE COVER, PG. 7-1, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION PG. 4-1 AND PERMANENT STABILIZATION WITH SOD, PG. 6-1

SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

DUST CONTROL MATERIALS

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) - SPRAY ON POLYACRYLAMIDE (PAM) - DRY SPREAD	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD, P. 26-1		
ACIDULATED SOY BEAM SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.

STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

STABILIZATION WITH MULCH ONLY

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
2. PROTECTIVE MATERIALS
   A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
   B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
   C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
   D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
   E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.
   F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.
3. MULCH ANCHORING - SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.
   A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
   B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
   C. CRIMPER MULCH ANCHORING COULTER TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.
   D. LIQUID MULCH-BINDERS
      1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTSOF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
      2. USE ONE OF THE FOLLOWING:
         a) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.
         b) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 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 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 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 BE 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/ACRES (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 OF 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 LOCATION 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.

LENGTHS OF CONSTRUCTION EXISTS ON SLOPING ROADBEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOIL	FINE GRAINED SOIL
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
>5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX 1-2'	

SEQUENCE OF CONSTRUCTION

1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1 DAY)
2. INSTALL PERIMETER SILT FENCE (2 DAY)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE WHEREVER CONSTRUCTION TRAFFIC TRAVELS FROM UNSTABILIZED AREA TO A PAVED ROAD (1 DAY)
4. STRIP AND STOCKPILE TOPSOIL AND STABILIZE (1 WEEK)
5. BEGIN ROUGH GRADING (1 WEEK)
6. INSTALL PROPOSED BASIN DEWATERING SYSTEM (3 DAYS)
7. BEGIN FOUNDATIONS, WATER, SANITARY & STORM SEWER SYSTEM AND CURBING (5 WEEKS)
8. ESTABLISH CURBSIDE SEDIMENT BARRIERS AFTER CURBS AND UTILITIES ARE INSTALLED (5 DAYS)
9. BEGIN FINE GRADING, BUILDING CONSTRUCTION AND ROADWAY PAVING (10 WEEKS)
10. FINISH FINE GRADING, BUILDING CONSTRUCTION AND SODDING (5 WEEKS)
11. REMOVE THE SEDIMENT AROUND STONE FILTERS AND HAY BALES (4 DAYS)
12. PERFORM SOIL RESTORATION MEASURES PRIOR TO TOPSOILING FOR PERMANENT STABILIZATION (5 DAYS)
13. CLEAN REMAINING SOIL EROSION CONTROL MEASURES AFTER STABILIZATION AND REMOVE SILT FENCES (5 DAYS)
14. REMOVE SOIL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION FENCING WHEN ALL UPSTREAM AREAS ARE STABILIZED (5 DAYS)

STANDARD FOR TOPSOILING

1. MATERIALS
   A. TOPSOIL SHOULD BE FRIABLE1, LOAMY2, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL OR PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHOS PER CENTIMETER. MORE THAN 0.5 MILLIMHOS MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH). IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTENT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.
   B. TOPSOIL SUBSTITUTE IS A SOIL MATERIAL WHICH MAY HAVE BEEN AMENDED WITH SAND, SILT, CLAY, ORGANIC MATTER, FERTILIZER OR LIME AND HAS THE APPEARANCE OF TOPSOIL. TOPSOIL SUBSTITUTES MAY BE UTILIZED ON SITES WITH INSUFFICIENT TOPSOIL FOR ESTABLISHING PERMANENT VEGETATION. ALL TOPSOIL SUBSTITUTE MATERIALS SHALL MEET THE REQUIREMENTS OF TOPSOIL NOTED ABOVE. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.
2. STRIPPING AND STOCKPILING
   A. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
   B. STRIPPING SHALL BE CONFINED TO THE IMMEDIATE CONSTRUCTION AREA.
   C. WHERE FEASIBLE, LIME MAY BE APPLIED BEFORE STRIPPING AT A RATE DETERMINED BY SOIL TESTS TO BRING THE SOIL PH TO APPROXIMATELY 6.5.
   D. A 4-6 INCH STRIPPING DEPTH IS COMMON, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL.
   E. STOCKPILES OF TOPSOIL SHOULD BE SITUATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE.
   F. STOCKPILES SHOULD BE VEGETATED IN ACCORDANCE WITH STANDARDS PREVIOUSLY DESCRIBED HEREIN; SEE STANDARDS FOR PERMANENT (PG. 4-1) OR TEMPORARY (PG.7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.
3. SITE PREPARATION
   A. GRADE AT THE ONSET OF THE OPTIMAL SEEDING PERIOD SO AS TO MINIMIZE THE DURATION AND AREA OF EXPOSURE OF DISTURBED SOIL TO EROSION. IMMEDIATELY PROCEED TO ESTABLISH VEGETATIVE COVER IN ACCORDANCE WITH THE SPECIFIED SEED MIXTURE. TIME IS OF THE ESSENCE
   B. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING, AND MAINTENANCE. SEE THE STANDARD FOR LAND GRADING, PG. 19-1.
   C. AS GUIDANCE FOR IDEAL CONDITIONS, SUBSOIL SHOULD BE TESTED FOR LIME REQUIREMENT. LIMESTONE, IF NEEDED, SHOULD BE APPLIED TO BRING SOIL TO A PH OF APPROXIMATELY 6.5 AND INCORPORATED INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES.
   D. PRIOR TO TOPSOILING, THE SUBSOIL SHALL BE IN COMPLIANCE WITH THE STANDARD FOR LAND GRADING, PG. 19-1.
   E. EMPLOY NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENTATION BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
4. APPLYING TOPSOIL
   A. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE; I.E., LESS THAN FIELD CAPACITY (SEE GLOSSARY).
   B. A UNIFORM APPLICATION TO AN AVERAGE DEPTH OF 5.0 INCHES, MINIMUM OF 4 INCHES, FIRMED IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSES, SPORTS FIELDS, LANDFILL CAPPING, ETC.. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE, IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOIL (PG. 1-1).
   C. PURSUANT TO THE REQUIREMENTS IN SECTION 7 OF THE STANDARD FOR PERMANENT VEGETATIVE STABILIZATION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT PERMANENT VEGETATIVE COVER BECOMES ESTABLISHED ON AT LEAST 80% OF THE SOILS TO BE STABILIZED WITH VEGETATION. FAILURE TO ACHIEVE THE MINIMUM COVERAGE MAY REQUIRE ADDITIONAL WORK TO BE PERFORMED BY THE CONTRACTOR TO INCLUDE SOME OR ALL OF THE FOLLOWING: SUPPLEMENTAL SEEDING, RE-APPLICATION OF LIME AND FERTILIZERS, AND/OR THE ADDITION OF ORGANIC MATTER (I.E. COMPOST) AS A TOP DRESSING. SUCH ADDITIONAL MEASURES SHALL BE BASED ON SOIL TESTS SUCH AS THOSE OFFERED BY RUTGERS COOPERATIVE EXTENSION SERVICE OR OTHER APPROVED LABORATORY FACILITIES QUALIFIED TO TEST SOIL SAMPLES FOR AGRONOMIC PROPERTIES.

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REVISIONS

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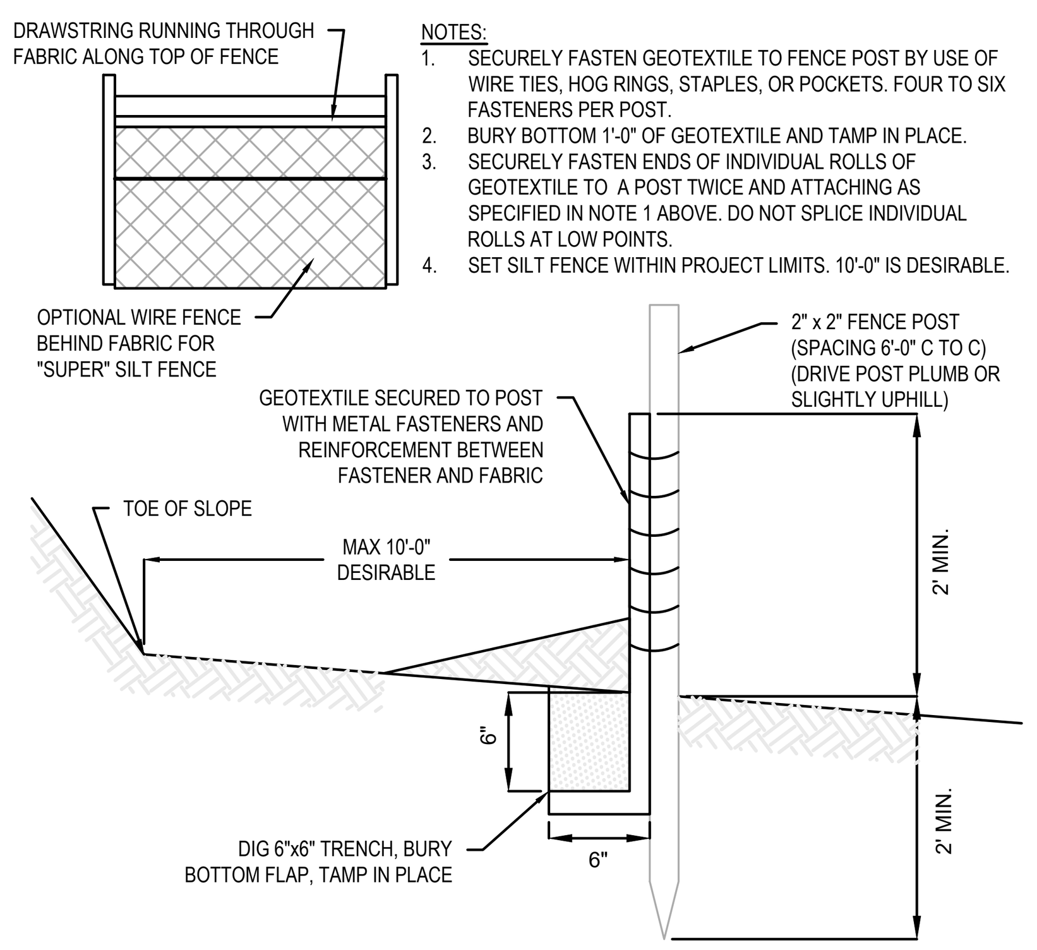
SOIL EROSION AND SEDIMENT CONTROL NOTES
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Soil Erosion Plan.dwg
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE AS SHOWN
SHEET NO. C-07
OF 13

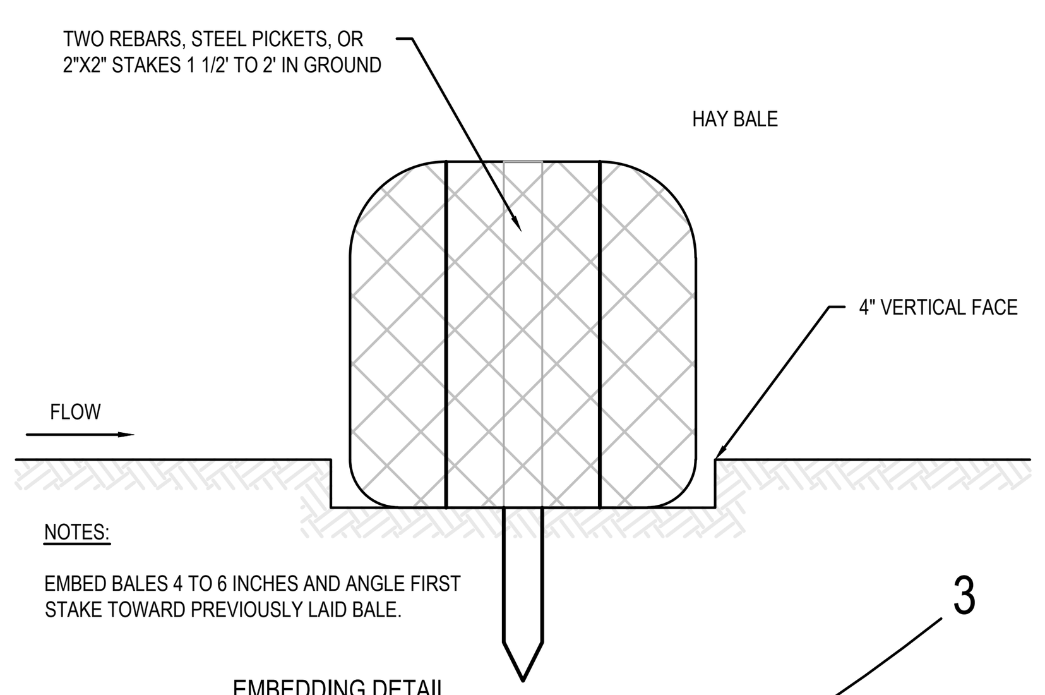


NOTES:

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 TWICE AND ATTACHING AS SPECIFIED IN NOTE 1 ABOVE. DO NOT SPLICE INDIVIDUAL ROLLS AT LOW POINTS.
4. SET SILT FENCE WITHIN PROJECT LIMITS. 10'-0" IS DESIRABLE.

STANDARD SILT FENCE DETAIL

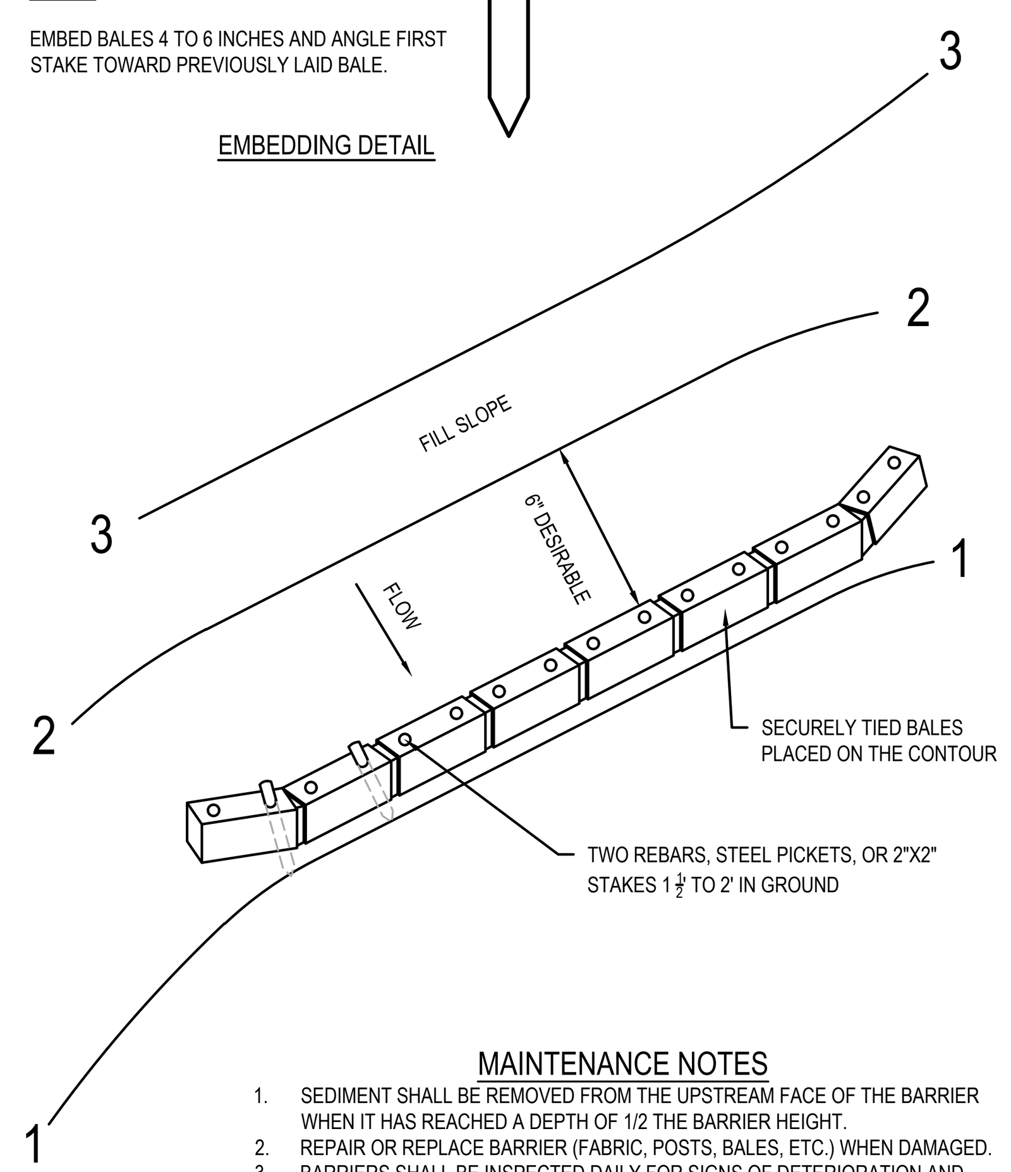
NOT TO SCALE



NOTES:

EMBED BALES 4 TO 6 INCHES AND ANGLE FIRST STAKE TOWARD PREVIOUSLY LAID BALE.

EMBEDDING DETAIL

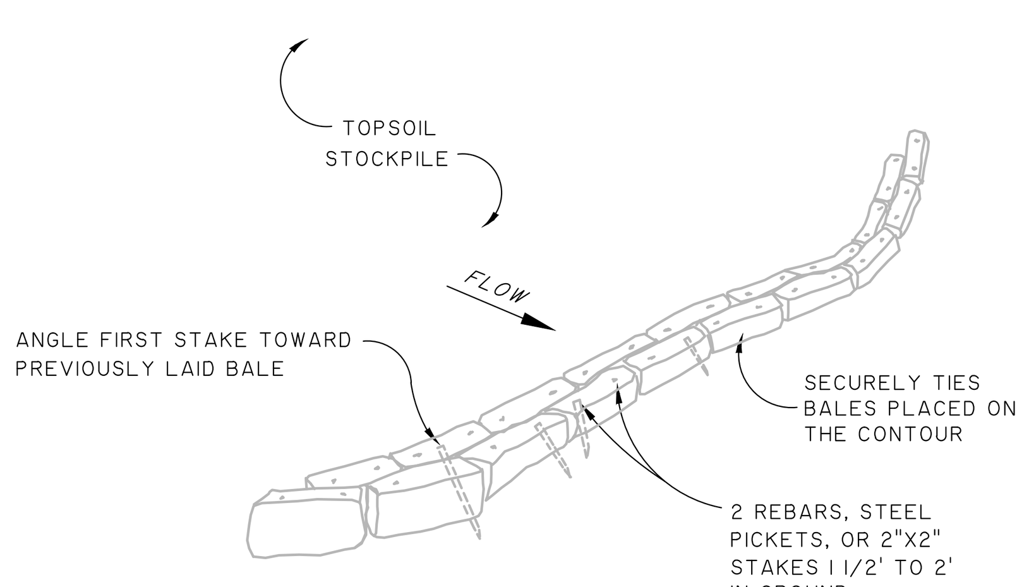


MAINTENANCE NOTES

1. SEDIMENT SHALL BE REMOVED FROM THE UPSTREAM FACE OF THE BARRIER WHEN IT HAS REACHED A DEPTH OF 1/2 THE BARRIER HEIGHT.
2. REPAIR OR REPLACE BARRIER (FABRIC, POSTS, BALES, ETC.) WHEN DAMAGED.
3. BARRIERS SHALL BE INSPECTED DAILY FOR SIGNS OF DETERIORATION AND SEDIMENT REMOVAL.

SEDIMENT BARRIER DETAIL

NOT TO SCALE



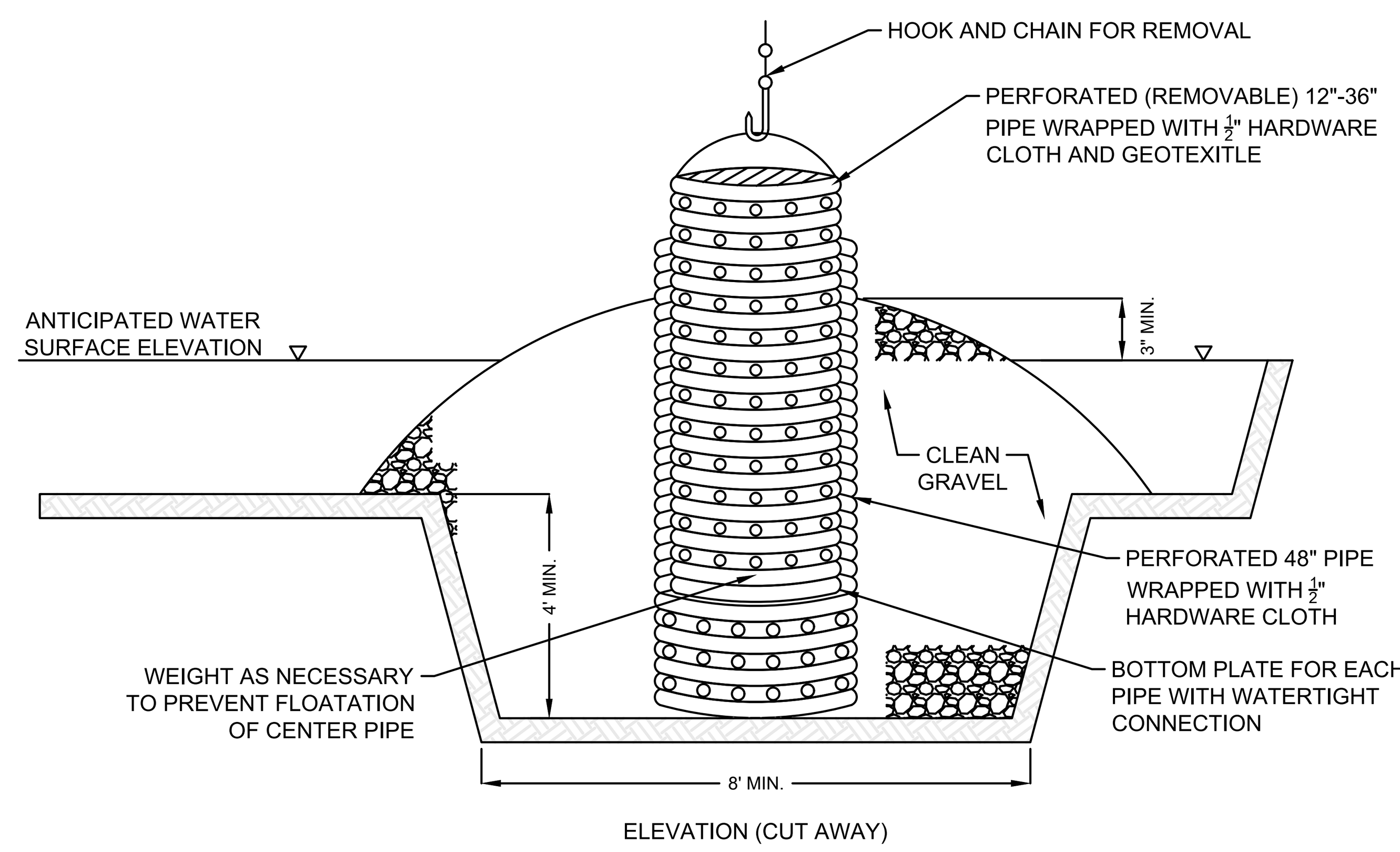
NOTES:

1. BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. 2 ROWS OF BALES SHALL BE USED. EACH ROW SHALL BE STAGGERED AS SHOWN.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. EACH BALE SHALL BE IN FIRM CONTACT WITH THE GROUND OVER ITS ENTIRE LENGTH.

PLACEMENT & ANCHORING DETAIL

HAY BALE SEDIMENT BARRIERS

N.T.S.



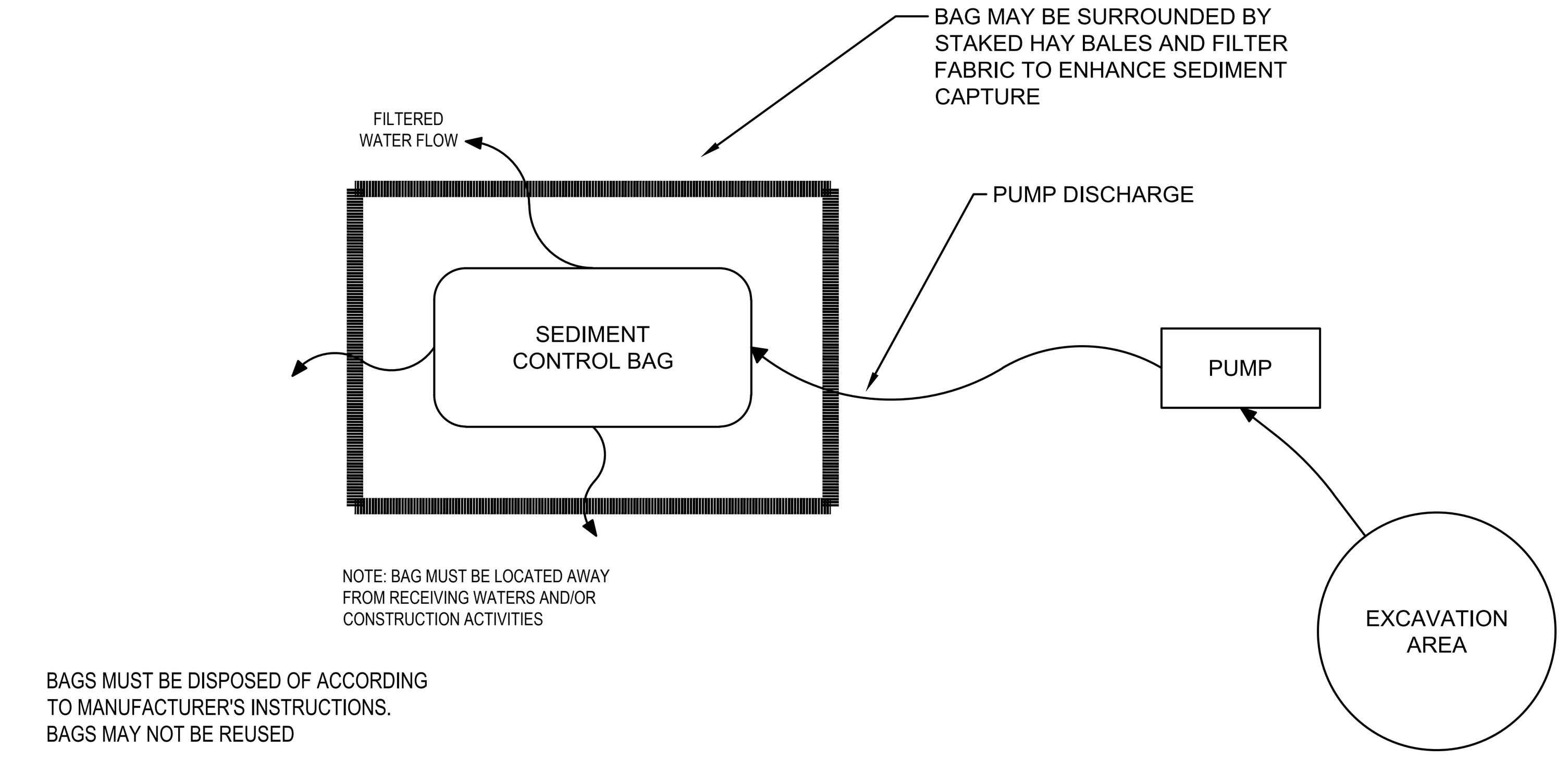
ELEVATION (CUT AWAY)

INSTALLATION SPECIFICATIONS:

1. THE OUTER PIPE SHOULD BE 48" DIAMETER OR SHALL, IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE 1/2"X6" SLITS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.
4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN.

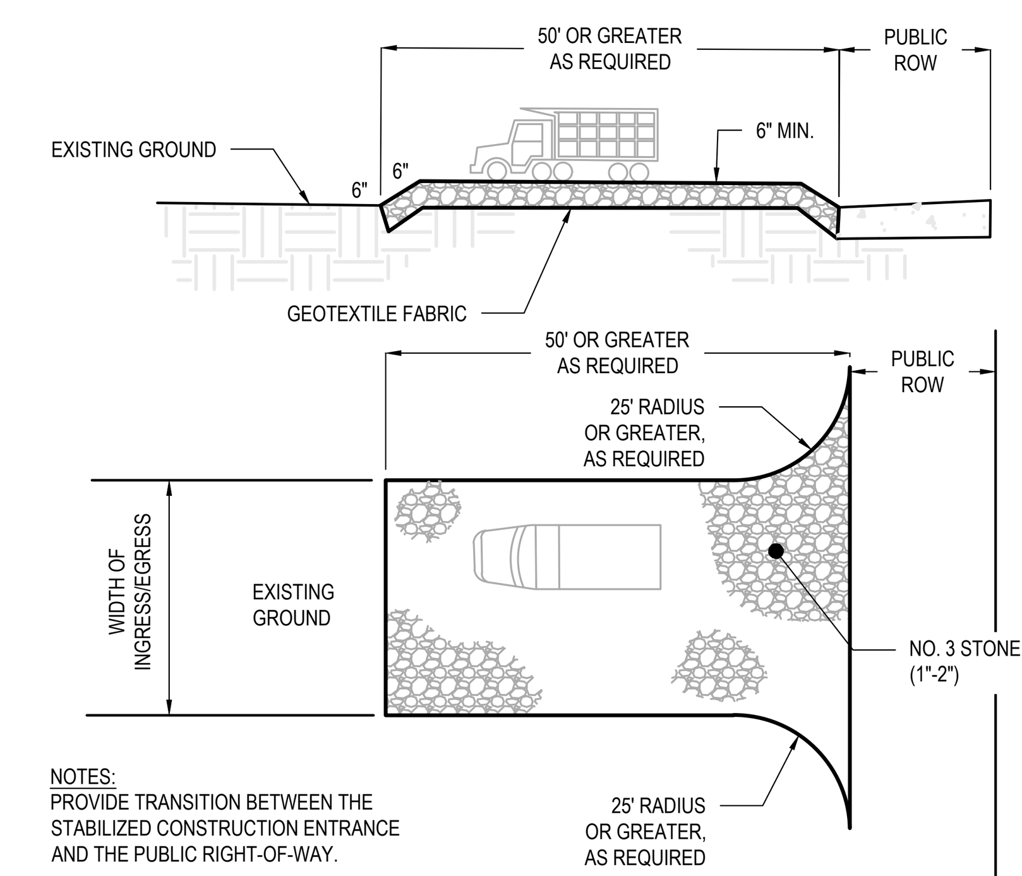
STANDARD DEWATERING PUMP DETAIL

N.T.S.



BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. BAGS MAY NOT BE REUSED

STANDARD SEDIMENT CONTROL BAG FOR DEWATERING DETAIL



NOTES:

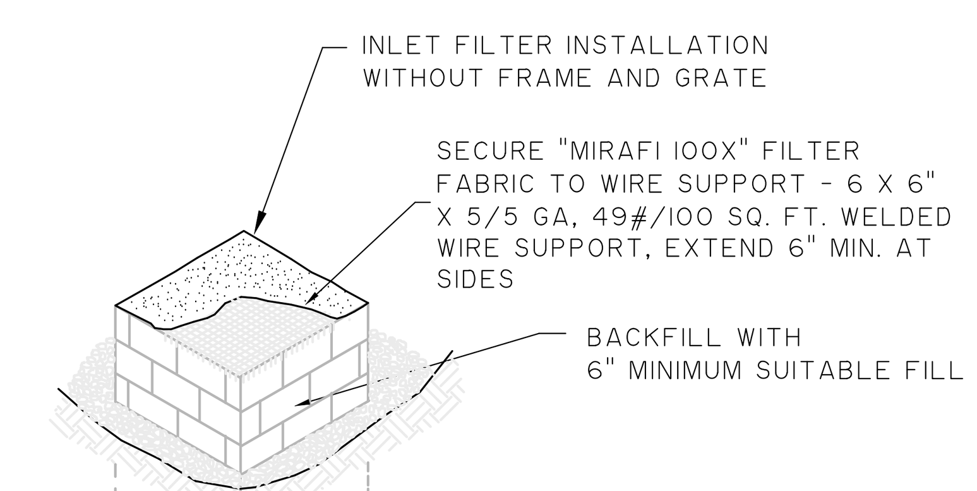
PROVIDE TRANSITION BETWEEN THE STABILIZED CONSTRUCTION ENTRANCE AND THE PUBLIC RIGHT-OF-WAY.

PROFILE AND PLAN VIEW

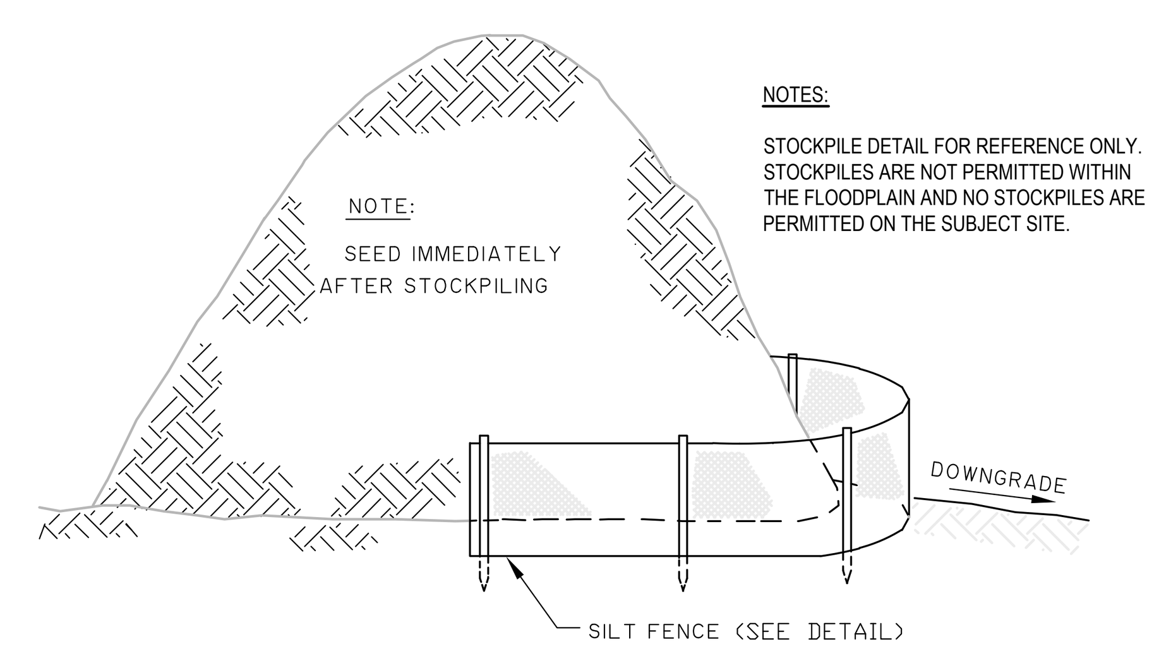
STABILIZED CONSTRUCTION DRIVEWAY

NOT TO SCALE

LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS		
PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX 1-2'	



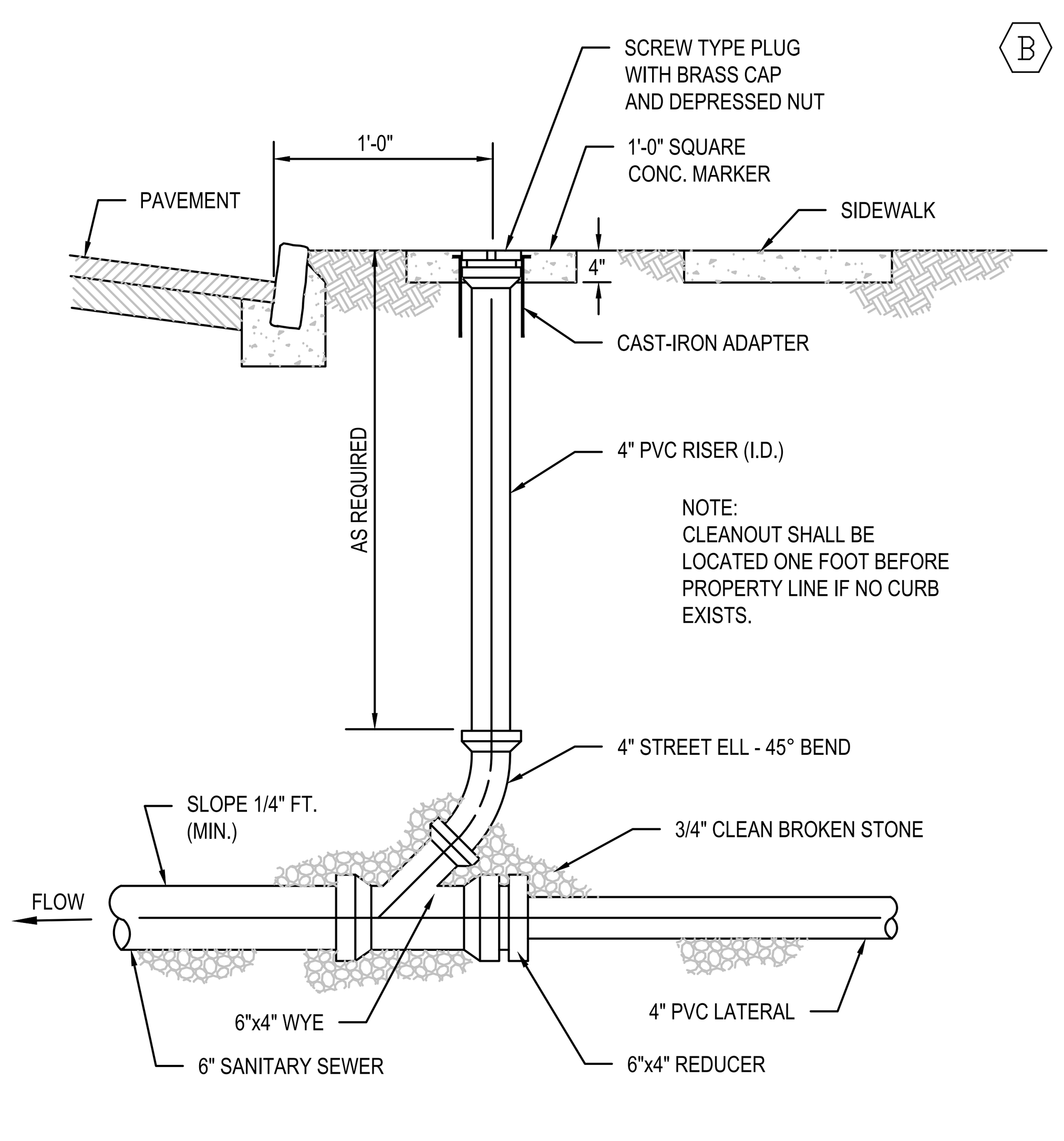
B TYPE "E" INLET PROTECTION



NOTES:

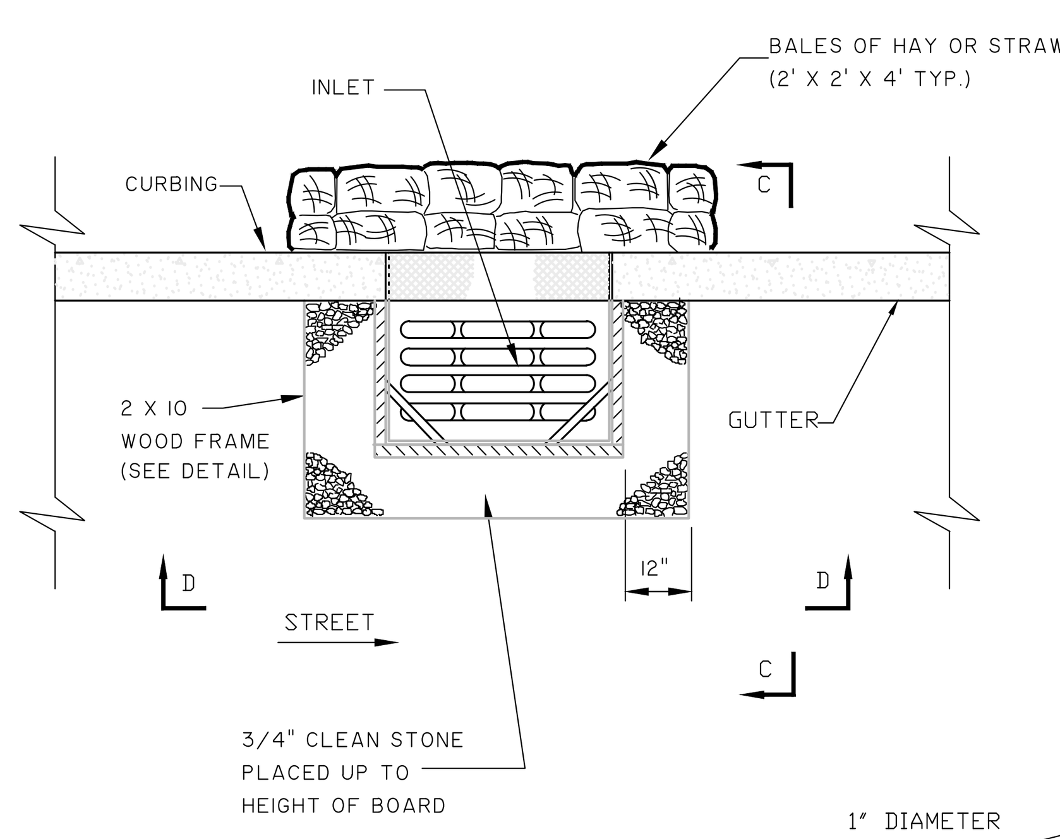
STOCKPILE DETAIL FOR REFERENCE ONLY. STOCKPILES ARE NOT PERMITTED WITHIN THE FLOODPLAIN AND NO STOCKPILES ARE PERMITTED ON THE SUBJECT SITE.

TYPICAL TOPSOIL STOCKPILE



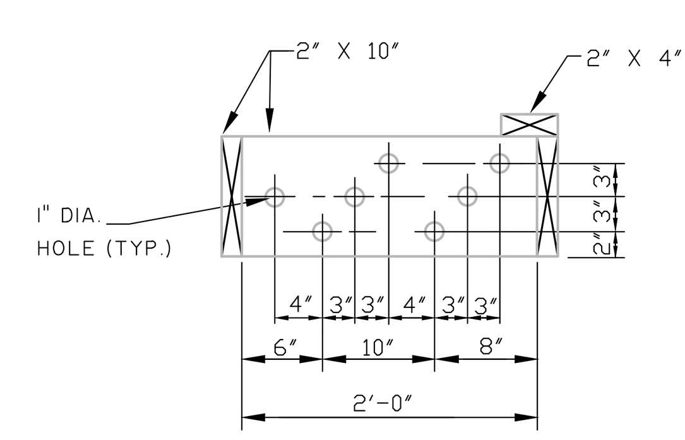
STANDARD CLEANOUT DETAIL

NOT TO SCALE

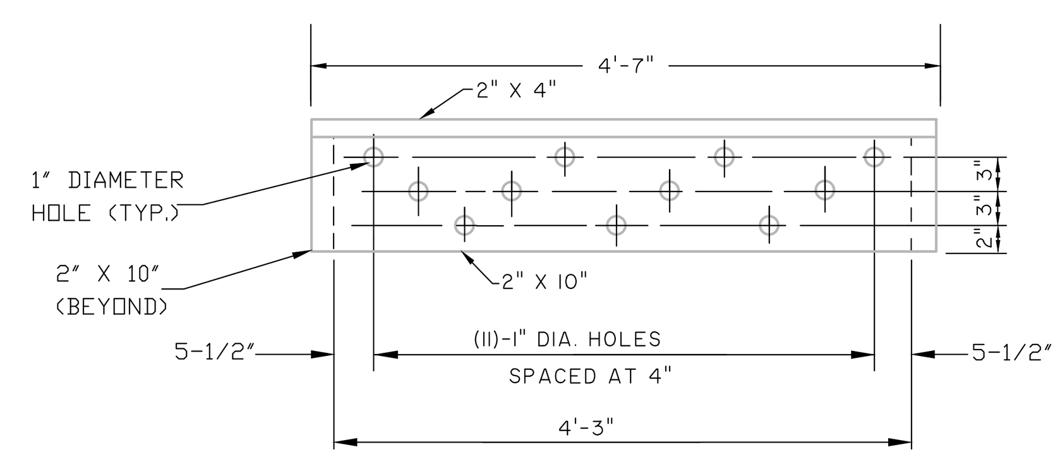


TYPE "B" INLET PROTECTION

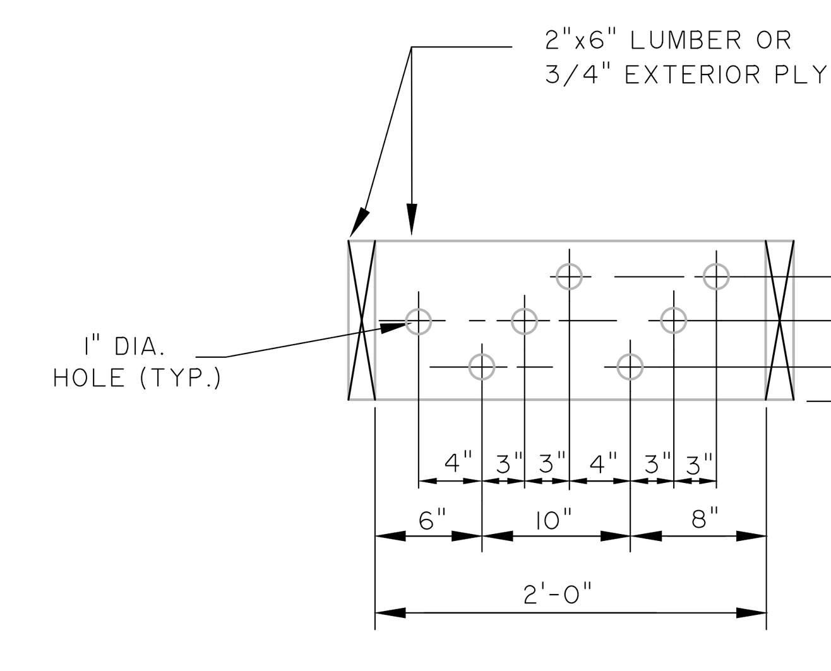
(USING WOOD FRAME)



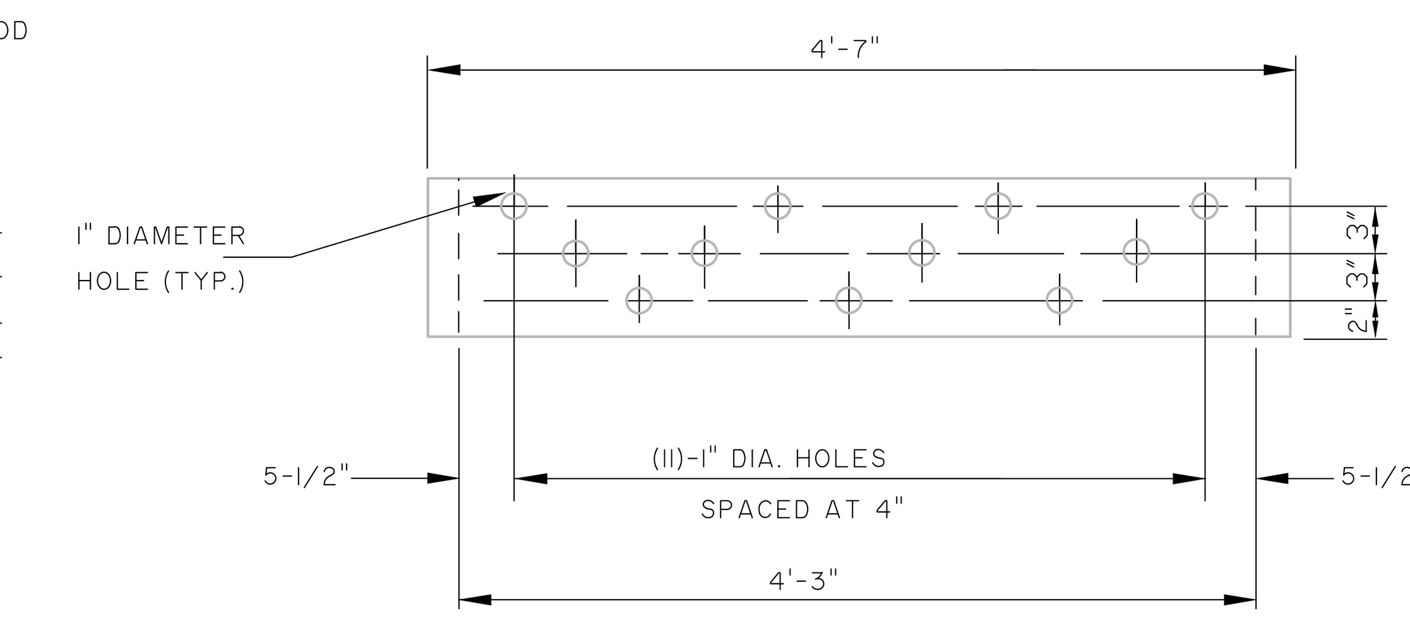
VIEW C-C



VIEW D-D

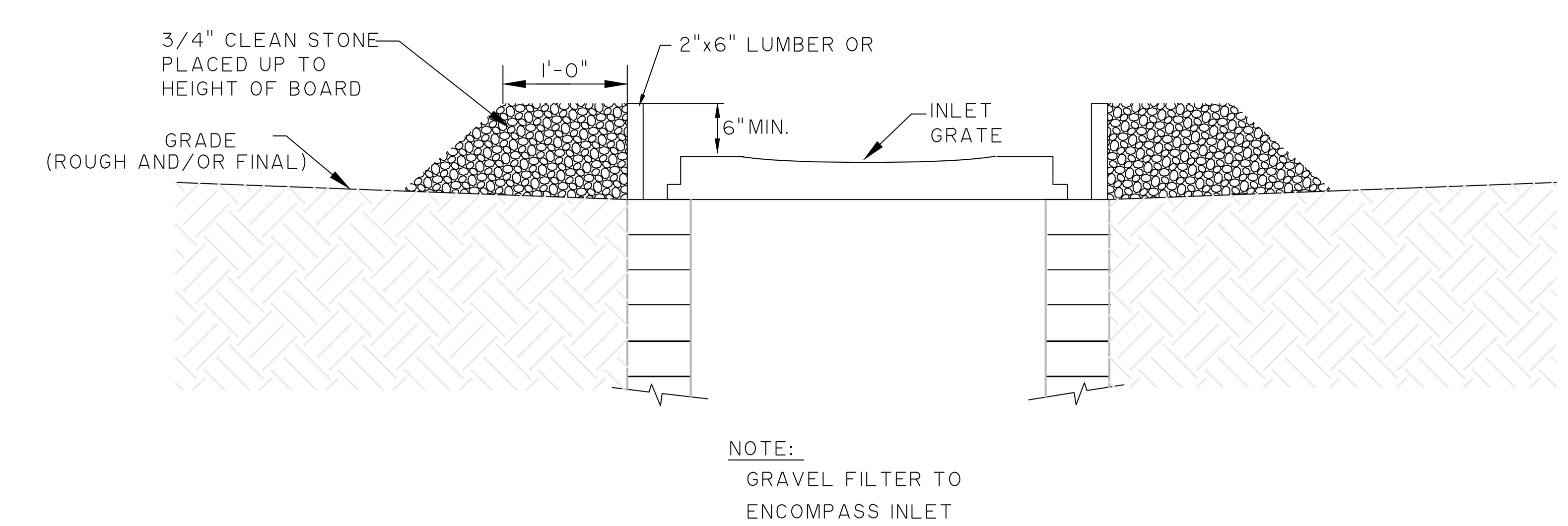


VIEW C-C



VIEW D-D

WOOD FRAME



NOTE:

GRAVEL FILTER TO ENCOMPASS INLET

TYPE "A" OR "E" INLET PROTECTION

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SOIL EROSION AND SEDIMENT CONTROL DETAILS

SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

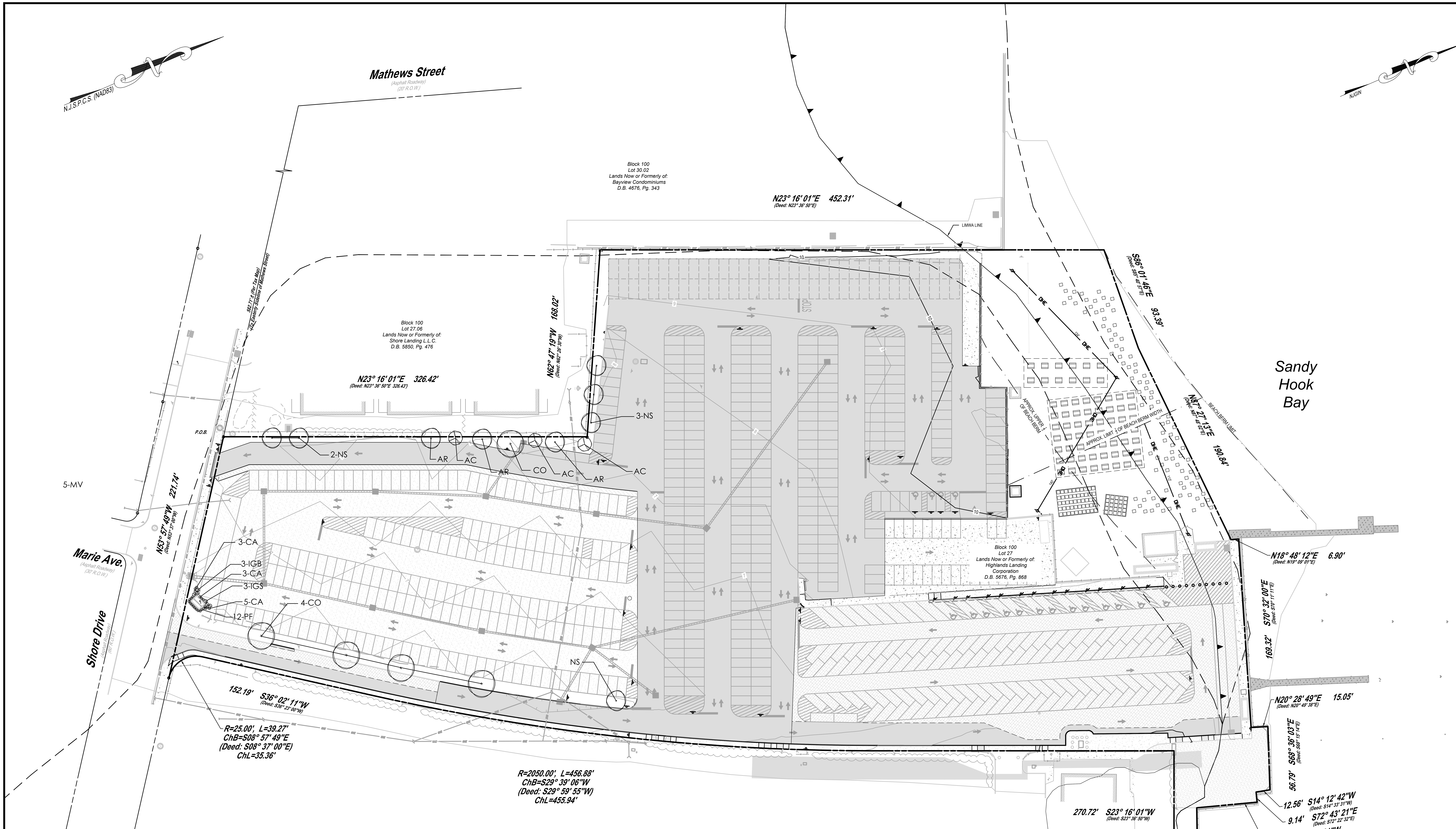
JOB NO. 8407

FILE NAME 8407-Soil Erosion Plan.dwg

DRAWN ERI | REVIEWED BMT

DATE 04/22/25 | SCALE AS SHOWN

SHEET NO. C-08



Block 100
Lot 27.01
Lands Now or Formerly of:
Sandpiper Condominiums
D.B. 4884, Pg. 523

N66° 43' 59"W 214.79'

S67° 34' 14"E 165.68'

22.89' S28° 15' 11"W

Sandy Hook Bay

1"=40'
40 0 40 80
SCALE FEET

GENERAL LANDSCAPE NOTES

1. PLANS SHALL BE USED FOR LANDSCAPE & LIGHTING PURPOSES ONLY. SEE ARCHITECTURAL, SURVEY AND ENGINEERING DRAWINGS BY OTHERS FOR ALL OTHER EXISTING AND PROPOSED SITE AND BUILDING INFORMATION INCLUDING, BUT NOT LIMITED TO: UTILITY LOCATIONS, SIGNAGE LOCATIONS, EASEMENTS, GRADING & DRAINAGE INFORMATION, WINDOW AND DOORWAY LOCATIONS. QUERCUS DESIGN STUDIO, LLC IS NOT RESPONSIBLE FOR THE ACCURACY OF THE ENGINEERING, SURVEY OR ARCHITECTURAL INFORMATION CONTAINED HEREIN.

2. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.

3. IF ANY DISCREPANCIES OCCUR BETWEEN THE PLANT QUANTITIES SHOWN ON THE PLAN AND THE PLANT LIST, THE PLAN SHALL GOVERN.

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LANDSCAPE PLAN
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Landscaping Plan.dwg
DRAWN ERI
REVIEWED BMT
DATE 04/22/25
SCALE 1"=40'
SHEET NO. C-09

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
Deciduous Trees					
AR	3	Acer rubrum 'Bowhall'	Bowhall Red Maple	2" - 2.5" cal.	B&B, Straight Central Leader
CO	5	Celtis occidentalis	Hackberry	2" - 2.5" cal.	B&B, Straight Central Leader
NS	6	Nyssa Sylvatica	Black Gum	2" - 2.5" cal.	B&B, Straight Central Leader
Ornamental Trees					
AC	3	Amelanchier canadensis	Serviceberry	10'-12' Ht.	B&B, multi-stemmed
Shrubs					
IGS	3	Ilex glabra 'Squeeze Box'	Squeeze Box Inkberry Holly	24"-36" Ht.	#3 Can
IGB	3	Ilex glabra 'Gem Box'	Gem Box Inkberry Holly	18"-24" Ht.	#2 Can
PF	12	Potentilla fruiticosa 'Goldfinger'	Goldfinger Bush Cinquefoil	18"-24" Ht.	#2 Can
Perennials & Ornamental Grasses					
CA	11	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	18' - 24" Ht.	#2 Can

TREES SHALL ONLY BE PRUNED TO CORRECT STRUCTURAL ISSUES OR TO REMOVE DEAD BRANCHING.

1. PRIOR TO PLANTING, VERIFY THE TOP ELEVATION OF THE TRUE ROOT BALL BY UNRAVELING THE BURLAP TO EXPOSE THE TRUNK ROOT FLARE. IF THE ROOT FLARE IS NOT VISIBLE, REMOVE ANY ALIEN SOILS FROM THE TOP OF THE ROOTBALL UNTIL THE ROOT FLARE IS EXPOSED.

2. AT THIS TIME, ANY GIRDLING OR CIRCLING ROOTS SHOULD BE REMOVED. EXCESSIVE GIRDLING OR CIRCLING ROOTS WILL CAUSE THE TREE TO BE REJECTED.

3. IF TOO MUCH SOIL IS REMOVED IN THE FIELD TO EXPOSE THE ROOT FLARE, THE ROOT BALL IS EFFECTIVELY UNDERSIZED AND WILL BE REJECTED.

48" RIGID TREE BARK PROTECTORS SHALL BE INSTALLED AROUND THE TRUNKS OF CANOPY AND UNDERSTORY TREES FOR DEER PROTECTION – SUCH AS 'PLASTIC MESH TREE GUARD BG48 BY AM LEONARD HORTICULTURAL SUPPLY OR APPROVED EQUAL

TREE DIAPER PLANT PROTECTION MAT BY ZYNNOVATION LLC OR APPROVED EQUAL. MATS TO BE SIZED, INSTALLED AND RECHARGED PER MANUFACTURER'S RECOMMENDATION. PLACE MATS ON TOP OF SOIL AND BELOW MULCH.

MESH PANEL TREE GUARD BY A.M. LEONARD OR APPROVED EQUAL. SECURE EACH GUARD TO A 5' STAKE. GUARDS TO BE 48" TALL, 15 " DIAMETER HDPE CONSTRUCTION..

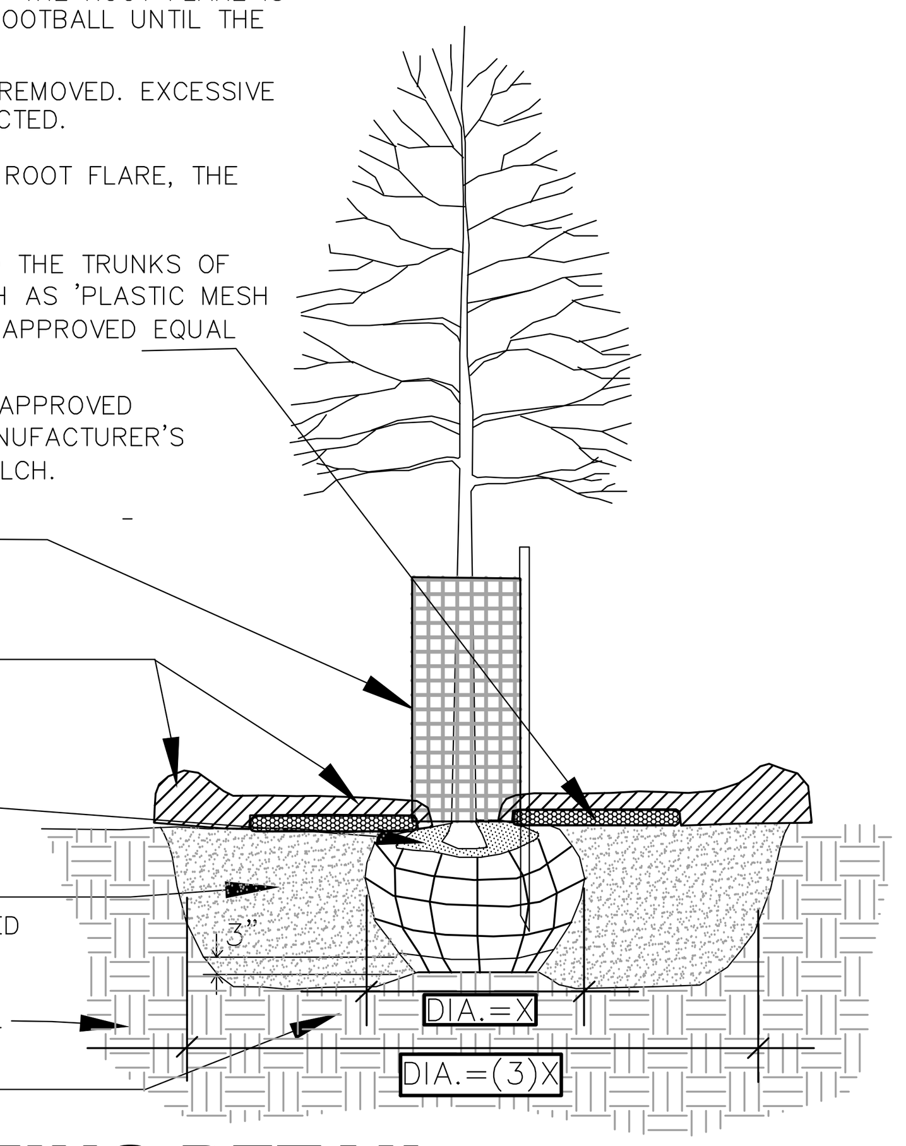
4" SHREDDED HARDWOOD MULCH, UNIFORMLY SPREAD, FORMING A 4" HIGH SAUCER AROUND PERIMETER. KEEP MULCH 4" FROM BASE OF TREE TRUNK. MULCH SHALL NOT BE CONTACT WITH TRUNK FLARE.

REMOVE BURLAP, WIRE BASKETS AND ROPE FROM TOP 1/3 OF ROOT BALL

BACKFILL MIXTURE TO BE SPECIFIED BASED ON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT. BACKFILL SHALL BE WATERED 12" AT A TIME WHILE PLANTING

STAKES TO EXTEND 18" BELOW TREE PIT INTO UNDISTURBED SOIL

NO SUBSURFACE DISTURBANCE



DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

REMOVE BURLAP FROM TO 1/3 OF BALL OR FOR CONTAINER PLANTS, REMOVE POTS AND SLICE BALLS 1" DEEP PER COMMON NURSERY PRACTICE

3" OF SHREDDED BARK MULCH OVER ENTIRE BED WITH 4" SAUCER AROUND PERIMETER OF SHRUB

BACKFILL MIXTURE TO BE SPECIFIED BASED ON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT. BACKFILL SHALL SHALL BE WATERED 12" AT A TIME WHILE PLANTING

COMPACTED BACKFILL OR UNDISTURBED SOIL

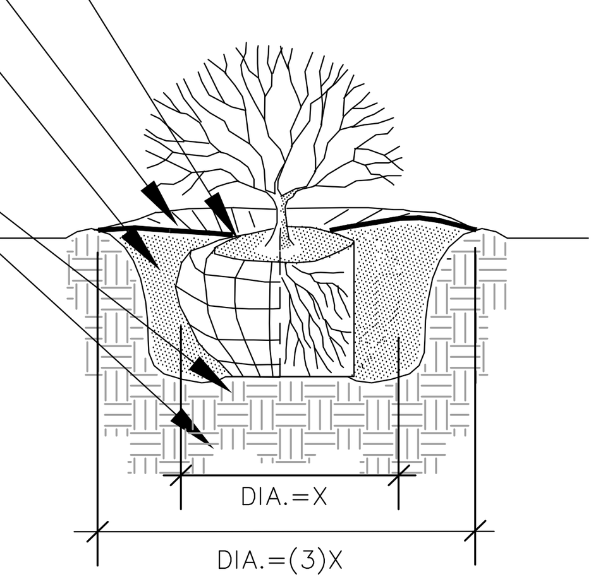
NO SUBSURFACE DISTURBANCE

SHRUB SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE IN THE NURSERY

DO NOT PRUNE EVERGREENS EXCEPT TO REMOVE DEAD OR DAMAGED BRANCHES

FOR DECIDUOUS SHRUBS, THIN BRANCHES AND FOLIAGE BY 1/3 RETAINING NORMAL PLANT SHAPE

PLANTING PIT DIAMETER SHALL BE 3 TIMES DIAMETER OF ROOTBALL



SHRUB PLANTING DETAIL

NOT TO SCALE

GUY TREES 8' AND OVER AS SPECIFIED
STAKE ALL EVERGREEN TREES UNDER 8'

TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE IN THE NURSERY

PRUNE ONLY TO REMOVE DEAD OR DAMAGED BRANCHES, LEADER OF TREES SHALL NEVER BE CUT

ARBOR TIE 1/2" CHAINLOCK TREE TIES OR APPROVED EQUAL

THREE (2) 3" O.D. CEDAR STAKES OR GUYS 1/2 OR 2/3 UP TREE DRIVE STAKES AT SLIGHT ANGLE INTO UNDISTURBED SOIL. STAKING SHOULD BE DONE TO ALLOW TREE TO MOVE 1" IN ANY DIRECTION. STAKES TO BE REMOVED AFTER 1 YEAR

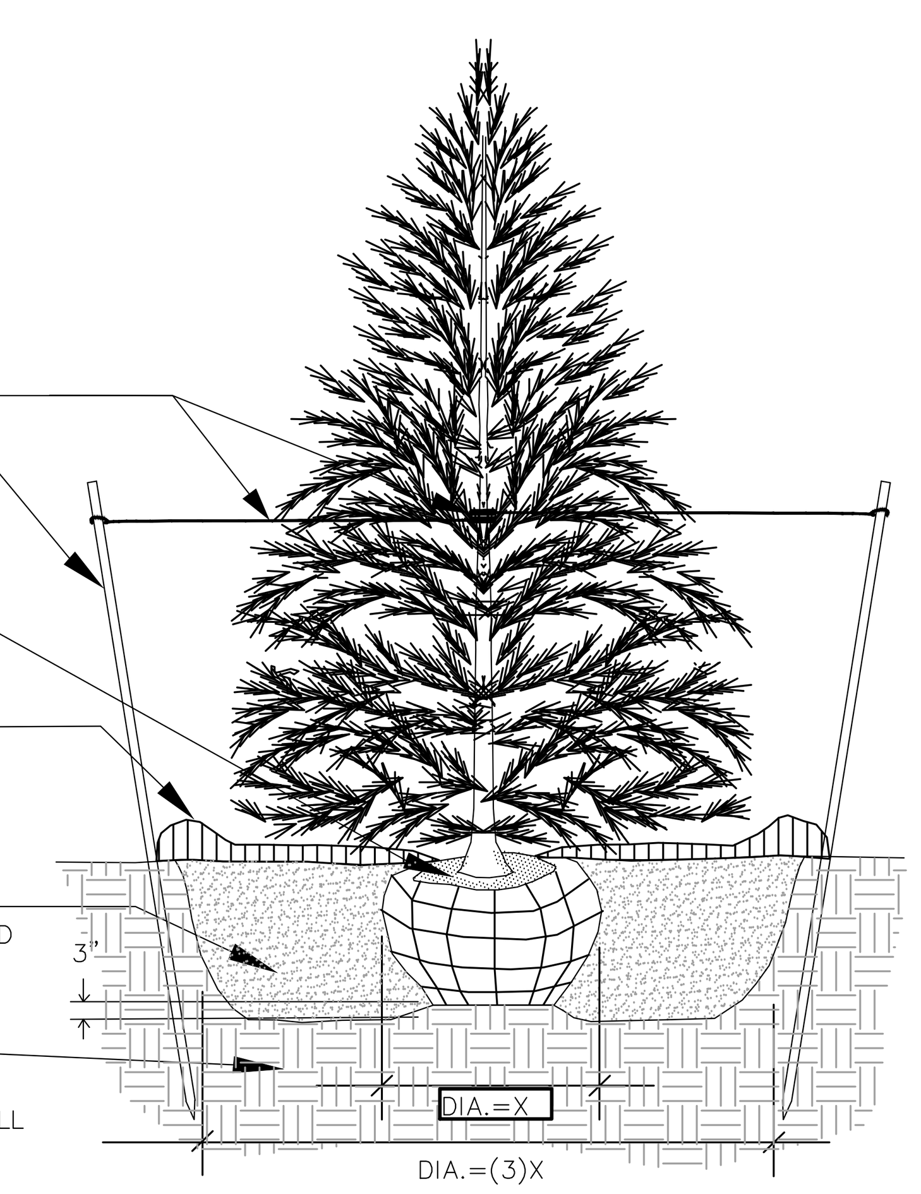
REMOVE BURLAP, WIRE BASKET AND ROPE FROM TOP 1/3 OF ROOT BALL

4" SHREDDED HARDWOOD MULCH, UNIFORMLY SPREAD, FORMING A 4" HIGH SAUCER AROUND PERIMETER. KEEP MULCH 4" FROM BASE OF TREE TRUNK. MULCH SHALL NOT BE IN CONTACT WITH TRUNK FLARE.

BACKFILL MIXTURE TO BE SPECIFIED BASED ON SOIL TEST AND CULTURAL REQUIREMENTS OF PLANT. BACKFILL SHALL BE WATERED 12" AT A TIME WHILE PLANTING

NO SUBSURFACE DISTURBANCE

PLANTING PIT DIAMETER SHALL BE 3 TIMES DIAMETER OF ROOTBALL



EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

TREE PROTECTION FENCING SHALL BE INSTALLED ALONG THE DRIPLINE OF THE TREE CANOPY OR A MINIMUM OF 12 FEET FROM THE TREE TRUNKS WHICHEVER IS THE GREATER DISTANCE

PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED THROUGHOUT CONSTRUCTION

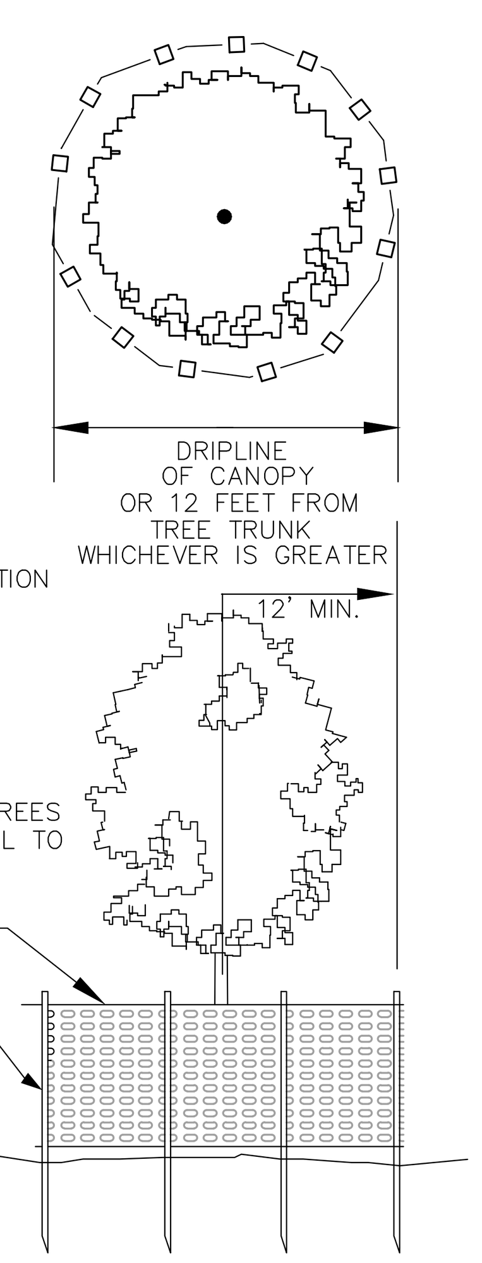
NO CONSTRUCTION ACTIVITY, STOCKPILING OF SOIL, STORAGE OF DEBRIS, MATERIALS OR EQUIPMENT IS PERMITTED WITHIN THE PROTECTIVE FENCING

ALL PROTECTIVE FENCING SHALL BE REMOVED AFTER CONSTUCTION IS COMPLETE.

AT THE COMPLETION OF CONSTRUCTION, ANY DAMAGED TREES SHALL BE TARGET PRUNED BY A QUALIFIED PROFESSIONAL TO REMOVE DEAD OR BROKEN LIMBS

4' HIGH ORANGE VINYL SNOW FENCE

6' HIGH POSTS DRIVEN INTO GROUND EVERY 6'–0" O.C. AND AT ALL CHANGES OF DIRECTION



TREE PROTECTION DETAIL

NOT TO SCALE

PLANTING NOTES

1. THE LANDSCAPE PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING LOCATION OF ALL UTILITIES AND IRRIGATION ON SITE PRIOR TO CONSTRUCTION.
3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL–DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF ROOT BALLS SHALL BE IN CONFORMANCE WITH THE MOST RECENT ANSI 760 "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. THE OWNER AND/OR LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
5. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARD TO SIZE, SPECIES AND VARIETY WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT OR TOWNSHIP OFFICIALS. DOCUMENTED PROOF OF PLANT MATERIAL UNAVAILABILITY MUST BE PROVIDED.
6. NO SHADE TREE, STREET TREE, ORNAMENTAL FLOWERING TREE OR EVERGREEN TREE SHALL BE PLANTED CLOSER THAN 7 FEET FROM ANY SIDEWALK, DRIVEWAY, CURB OR UTILITY LOCATION UNLESS SPECIFICALLY DIMENSIONED ON THE LANDSCAPE PLAN.
7. ALL STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7 FT ABOVE GRADE. ALL SHRUBS LOCATED WITHIN SIGHT TRIANGLE EASEMENTS SHALL NOT EXCEED A MATURE HEIGHT OF 30 INCHES ABOVE THE ELEVATION OF THE ADJACENT CURB. ALL STREET TREES WITHIN SIGHT TRIANGLE EASEMENTS SHALL BE PRUNED TO NOT BRANCH BELOW 8 FEET ABOVE GRADE.
8. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
9. ALL PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, WRAPPED AND PLANTED IN CONFORMANCE WITH THE PLANTING DETAILS. TREE SUPPORT SYSTEMS SHALL BE ATTACHED TO THE TREE AT A HEIGHT OF TWO–THIRDS THE HEIGHT OF THE TREE AND SHOULD BE LOCATED SO AS NOT TO SPLIT THE TRUNKS OF MULTI–STEMMED TREES. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE.
10. TREE SUPPORT SYSTEMS DIRECTLY CONTACTING THE TREE TRUNK SHALL BE ARBOR TIE BY DEEPROOT OR APPROVED EQUAL. THE SUPPORTS SHOULD ALLOW THE TREE TRUNK TO MOVE AT LEAST ONE INCH IN ANY DIRECTION SO THAT A PROPER TRUNK FLARE MAY FORM. ALL TREE SUPPORT SYSTEMS SHALL BE REMOVED WITHIN ONE YEAR OF INSTALLATION FROM TREES THAT DO NOT REQUIRE OBVIOUS STRAIGHTENING.
11. CUT AND REMOVE TWINE, BURLAP AND WIRE BASKET FROM TOP ONE–THIRD OF ROOT BALL. ANY SYNTHETIC ROPE OR FABRIC SHALL BE REMOVED COMPLETELY FROM THE PLANTING PIT AND DISPOSED OF PROPERLY.
12. BIODEGRADABLE TREE WRAP SHALL BE USED DURING DELIVERY AND INSTALLATION AND REMOVED AFTER FIRST GROWING SEASON. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY.
13. FERTILIZER SHALL NOT BE USED DURING THE FIRST YEAR AFTER INSTALLATION.
14. INSOFAR AS IT IS PRACTICAL, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT AND WATER STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN 3 DAYS AFTER DELIVERY.
15. IT IS ADVISABLE TO PRUNE APPROXIMATELY $\frac{1}{3}$ OF THE GROWTH OF TREES 2 INCH CALIPER AND OVER BY THE REMOVAL OF SUPERFLUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER OF THE TREES SHALL NEVER BE CUT. LONG SIDE BRANCHES SHOULD BE SHORTENED. DEAD BRANCHES SHOULD PRUNED BACK TO NATURAL TARGETS. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. PRUNING SHALL BE DONE IN ACCORDANCE TO STANDARD HORTICULTURAL PRACTICE TO PRESERVE THE NATURAL CHARACTER OF THE PLANT.
16. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL MIXTURE TO BE SPECIFIED BASED ON SOIL TEST AND CULTURAL REQUIREMENT OF THE PLANT. BACKFILL SHALL BE WATERED 12 INCHES AT A TIME DURING PLANTING.
17. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO EXISTING GRADE IN THE NURSERY.
18. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS. WATER SHALL BE FREE OF IMPURITIES INJURIOUS TO PLANT MATERIAL.
19. MULCH FOR PLANTING BEDS SHALL BE DOUBLE SHREDDED HARDWOOD BARK MULCH UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SHALL HAVE NO LEAVES, YOUNG GREEN GROWTH, BRANCHES, TWIGS GREATER THAN $\frac{1}{2}$ INCH DIAMETER, WEEDS, SHAVINGS OR FOREIGN MATERIAL SUCH AS STONES, ETC. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS WITH A COMPACTED DEPTH OF 3 INCHES. NO MULCH SHALL BE PLACED IN CONTACT WITH PLANT STEMS OR TREE TRUNKS.
20. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED BY A PLANT OF SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE CONTRACTOR. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
21. ALL PLANTING DEBRIS (WIRE, TWINE, CONTAINERS, BACKFILL ETC) SHALL BE REMOVED FROM THE SITE AFTER PLANTING IS COMPLETE. PROPERTY IS TO BE LEFT IN A NEAT AND ORDERLY CONDITION DURING AND AFTER INSTALLATION.
22. TREE PROTECTION FENCING TO BE INSTALLED ACCORDING TO DETAILS PRIOR TO ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITY. FENCING SHALL BE MAINTAINED UNTIL ALL CONSTRUCTION IS COMPLETE. SEE DETAIL FOR ADDITIONAL REQUIREMENTS.
23. EXISTING TREES TO REMAIN ON SITE TO BE SELECTIVELY THINNED AND PRUNED TO REMOVE DEAD AND/OR DISEASED LIMBS AFTER INSTALLATION OF TREE PROTECTION FENCING. ANY PRUNING SHALL BE DONE BY A PROFESSIONAL FORESTER, ARBORIST OR CERTIFIED TREE EXPERT.
24. ALL OPEN AREAS OF THE SITE THAT ARE NOT PAVED, PLANTED OR MULCHED AS PART OF A PLANTING BED SHALL BE TURFED SO AS TO ESTABLISH PERMANENT COVER.

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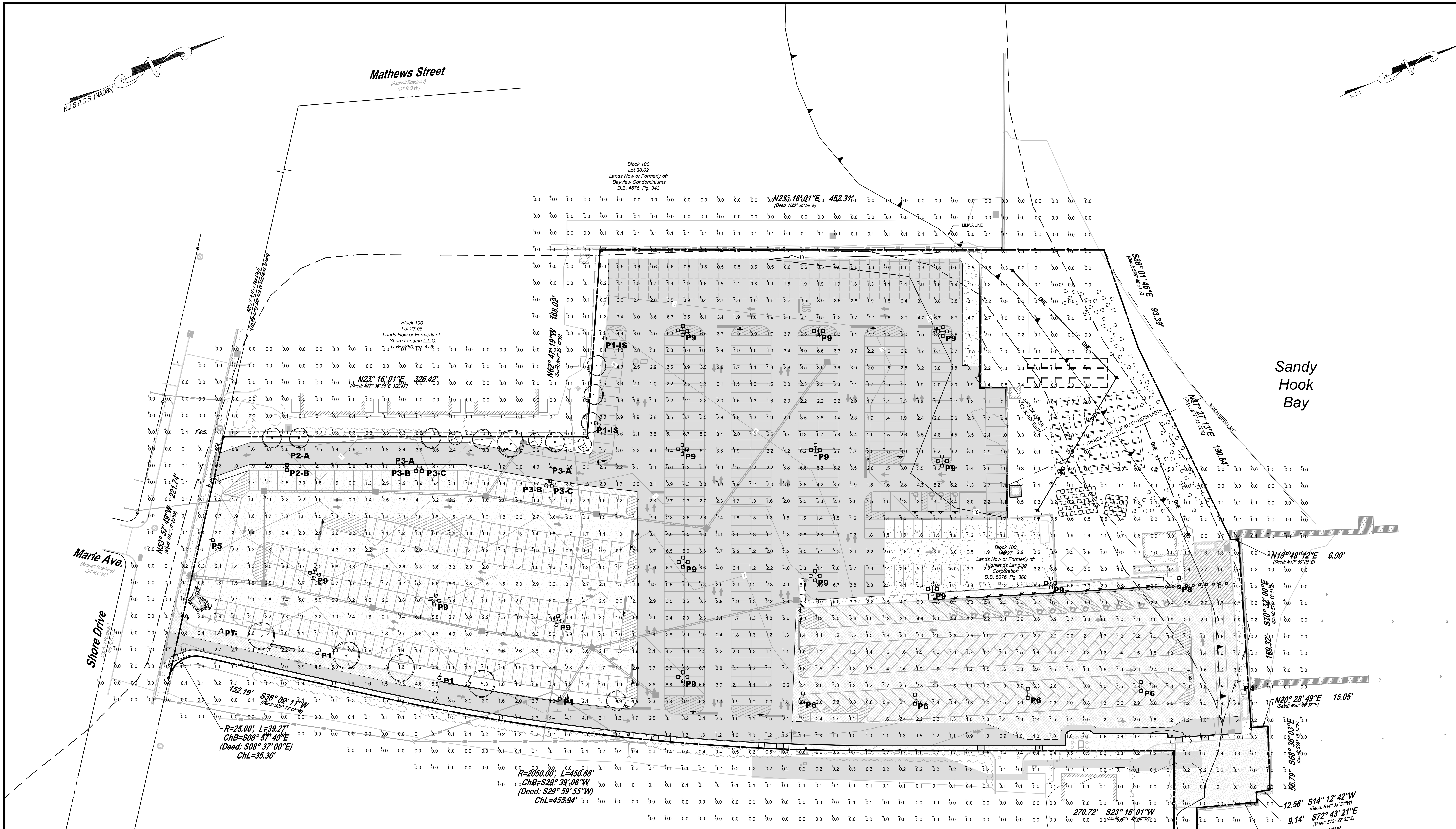
BRAD M. THOMPSON, P.E.
NJ PROFESSIONAL ENGINEER Lic. No. 49075

REVISIONS

NO.	DATE	DESCRIPTION
1	2025-05-27	REVISED PER FSCD REVIEW
2	2025-05-29	REVISED LOTS PER NJDEP COMMENT
3	2025-07-09	REVISED PER FSCD REVIEW
4	2026-05-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-06-05	REVISED PER TOWNSHIP COMMENT

LANDSCAPE NOTES AND DETAILS
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Landscaping Plan.dwg
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE AS SHOWN
SHEET NO. C-10



GENERAL LANDSCAPE NOTES

1. PLANS SHALL BE USED FOR LANDSCAPE & LIGHTING PURPOSES ONLY. SEE ARCHITECTURAL, SURVEY AND ENGINEERING DRAWINGS BY OTHERS FOR ALL OTHER EXISTING AND PROPOSED SITE AND BUILDING INFORMATION INCLUDING, BUT NOT LIMITED TO: UTILITY LOCATIONS, SIGNAGE LOCATIONS, EASEMENTS, GRADING & DRAINAGE INFORMATION, WINDOW AND DOORWAY LOCATIONS. QUERCUS DESIGN STUDIO, LLC IS NOT RESPONSIBLE FOR THE ACCURACY OF THE ENGINEERING, SURVEY OR ARCHITECTURAL INFORMATION CONTAINED HEREIN.

2. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.

3. IF ANY DISCREPANCIES OCCUR BETWEEN THE PLANT QUANTITIES SHOWN ON THE PLAN AND THE PLANT LIST, THE PLAN SHALL GOVERN.

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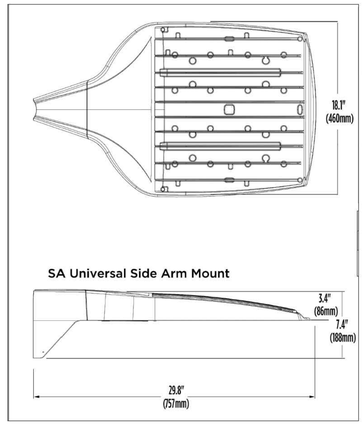
LIGHTING PLAN
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

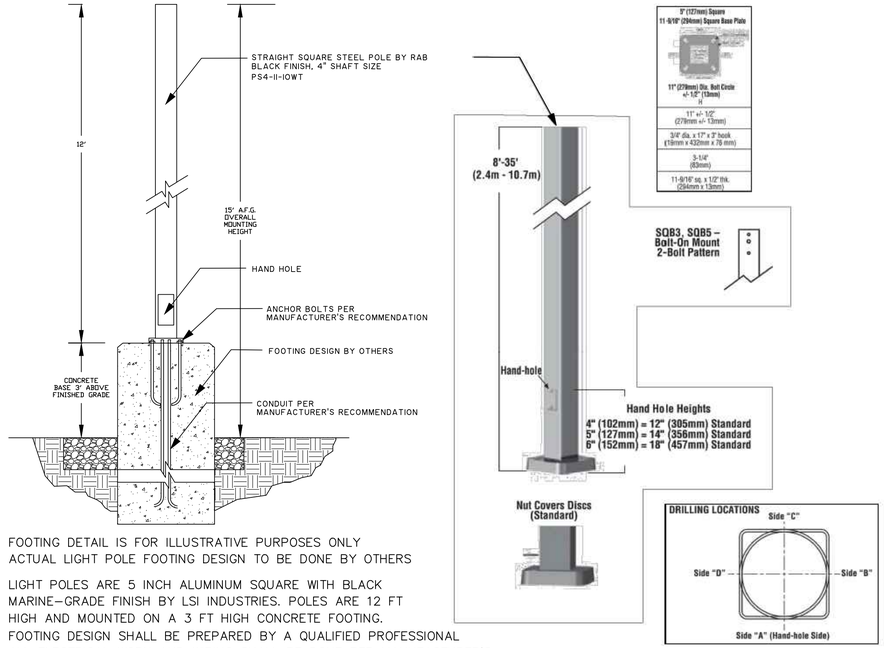
JOB NO.	FILE NAME	DRAWN	REVIEWED	DATE	SCALE	SHEET NO.
8407	8407-Lighting Plan.dwg	ERI	BMT	04/22/25	1"=40'	C-11



LIGHT FIXTURES ARE V-LOCITY MEDIUM (VALM) OUTDOOR LED AREA LIGHTS BY LSI INDUSTRIES, INC. FIXTURES TO BE BLACK MARINE-GRADE FINISH. SIDE ARM MOUNT. SEE LUMINAIRE SCHEDULE ON THIS SHEET FOR MOUNTING ARRANGEMENTS, LUMENS, DISTRIBUTION TYPES, COLOR TEMPS AND MANUFACTURER'S ORDERING INFORMATION. LIGHTING WILL BE CONTROLLED VIA A TIMING DEVICE. SEE LIGHTING NOTES ON THIS SHEET FOR HOURS OF OPERATION. FIXTURES TO BE MOUNTED 15' A.F.G NO SUBSTITUTIONS WITHOUT WRITTEN CONSENT FROM OWNER.

LIGHT FIXTURE DETAIL

NOT TO SCALE



FOOTING DETAIL IS FOR ILLUSTRATIVE PURPOSES ONLY
ACTUAL LIGHT POLE FOOTING DESIGN TO BE DONE BY OTHERS

LIGHT POLES ARE 5 INCH ALUMINUM SQUARE WITH BLACK MARINE-GRADE FINISH BY LSI INDUSTRIES. POLES ARE 12 FT HIGH AND MOUNTED ON A 3 FT HIGH CONCRETE FOOTING. FOOTING DESIGN SHALL BE PREPARED BY A QUALIFIED PROFESSIONAL ALL ELECTRICAL WORK AND WIRING SHALL BE DONE PER MANUFACTURER'S RECOMMENDATIONS. SEE LUMINAIRE SCHEDULE ON THIS SHEET FOR ORDERING INFORMATION. NO SUBSTITUTIONS WITHOUT WRITTEN CONSENT FROM OWNER.

LIGHT POLE DETAIL

NOT TO SCALE

LIGHTING NOTES

SITE LIGHTING CONTROLS SEQUENCE OF OPERATION IN COMPLIANCE WITH ASHRAE 90.1-2019

- EACH SITE FIXTURE TO BE EQUIPPED WITH NX CONTROLS, WHICH IS A WIRELESS BLUETOOTH MESH CONTROL SYSTEM.
- CONTROL SYSTEM IS TO BE ACCESSIBLE VIA iOS APP FOR PROGRAMMING. NO EXTERNAL GATEWAY OR COMPONENTS REQUIRING INTERNET PERMITTED.
- EACH SITE FIXTURE TO HAVE AN INTEGRAL PHOTO SENSOR AND BUILT-IN TIME KEEPER TO ALLOW FOR THE SCHEDULING OF DIMMING EVENTS BASED ON TIME OF DAY.
- ALL SITE LIGHTS TO TURN ON A HALF HOUR BEFORE DUSK AND OFF A HALF HOUR AFTER DAWN.
- LIGHTS TO REMAIN FULL BRIGHTNESS UNIT 12 A.M., AT WHICH TIME THE LIGHTS WILL DIM TO 50% OUTPUT UNTIL DAWN.

CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING LOT	Illuminance	Fc	2.55	6.8	0.5	5.10	13.60

LUMINAIRE SCHEDULE

DIVERSIFIED GRP LUMINAIRE SCHEDULE

Qty	Type	Arrangement	Symbol	Manufacturer	Light Fixture Spec	CCT	Lum. Lumens	LLF	Lum. Watts	Arr. Watts	Pole/Bracket Spec	Mounting AFG (FT)
3	P1	Single		LSI INDUSTRIES	VALM-12L-2-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	10147	0.900	71	71	5SQB5-A125-12'-S-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
2	P1-IS	Single		LSI INDUSTRIES	VALM-12L-2-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8-IS w/ NXOFM2-1R1D-UNV	3000K	7387	0.900	71	71	5SQB5-A125-12'-S-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
1	P2-A	Single		LSI INDUSTRIES	VALM-12L-2-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8-IS w/ NXOFM2-1R1D-UNV	3000K	7387	0.900	71	71	5SQB5-A125-12'-D180-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
1	P2-B	Single		LSI INDUSTRIES	VALM-12L-3W-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8-IS w/ NXOFM2-1R1D-UNV	3000K	9180	0.900	71	71	*MOUNTED ON TYPE P2-A POLE	15
2	P3-A	Single		LSI INDUSTRIES	VALM-12L-2-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8-IS w/ NXOFM2-1R1D-UNV	3000K	7387	0.900	71	71	5SQB5-A125-12'-T90-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
2	P3-B	Single		LSI INDUSTRIES	VALM-12L-4W-L-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	8442	0.900	71	71	*MOUNTED ON TYPE P3-A POLE	15
2	P3-C	Single		LSI INDUSTRIES	VALM-12L-4W-R-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	8442	0.900	71	71	*MOUNTED ON TYPE P3-A POLE	15
1	P4	Single		LSI INDUSTRIES	VALM-12L-3W-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	9180	0.900	71	71	5SQB5-A125-12'-S-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
1	P5	Single		LSI INDUSTRIES	VALM-12L-4W-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	8442	0.900	71	71	5SQB5-A125-12'-S-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
4	P6	Back-Back		LSI INDUSTRIES	VALM-12L-4W-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	8442	0.900	71	142	5SQB5-A125-12'-D180-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
1	P7	Single		LSI INDUSTRIES	VALM-12L-5M-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	10385	0.900	71	71	5SQB5-A125-12'-S-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
1	P8	Back-Back		LSI INDUSTRIES	VALM-12L-5QW-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	10460	0.900	71	142	5SQB5-A125-12'-D180-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15
14	P9	4 @ 90 Degrees		LSI INDUSTRIES	VALM-12L-5QW-30K8-FINISH(MARINE GRADE)-SA-CR7P-MS8 w/ NXOFM2-1R1D-UNV	3000K	10460	0.900	71	284	5SQB5-A125-12'-Q90-FINISH(MARINE GRADE)-GA (MOUNTED ON 3' CONCRETE BASE)	15

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2	2025-06-26	REVISED LOTS PER NJDEP COMMENT
3	2026-04-07	REVISED PER SCDC REVIEW
4	2026-05-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-06-05	REVISED PER TOWNSHIP COMMENT

LIGHTING NOTES AND DETAILS
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
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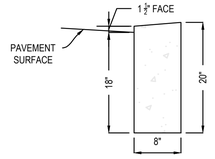
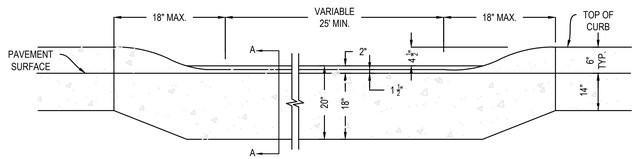
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE AS SHOWN
SHEET NO. C-12
OF 13

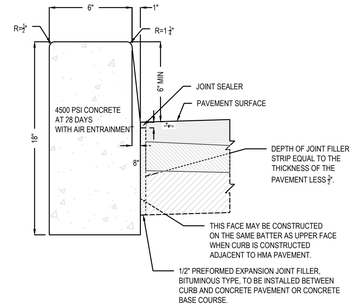


SECTION A-A



DEPRESSED CURB AT DRIVEWAYS

NOT TO SCALE

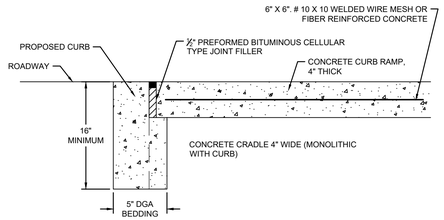


DETAIL - CONCRETE VERTICAL CURB

NOTES:

1. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20' APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" FROM THE FRONT FACE AND TOP OF CURB.
2. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.

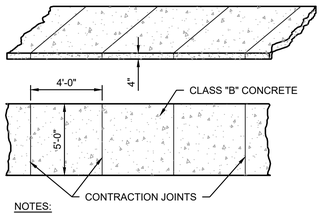
NOT TO SCALE



NOTES:

1. TRANSVERSE EXPANSION JOINTS, 1/2" WIDE, SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 15' AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). LONGITUDINAL JOINTS, 1/2" WIDE, SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS, AND SHALL BE FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER (AASHTO M33). THE TOP OF ALL JOINT FILLER SHALL BE TRIMMED 1/2" BELOW THE TOP OF THE SIDEWALK AND FILLED WITH JOINT SEALER (SIKAFLEX-1A), OR AN APPROVED EQUAL.
2. IN LIEU OF DENSE GRADED (DGA), RECYCLED CONCRETE AGGREGATE (RCA) IS ACCEPTABLE. ALL RCA MUST MEET NJDOT SPECIFICATIONS AND BE CERTIFIED BY AN NJDOT APPROVED PLANT OF ORIGIN. ALL RCA SHIPMENTS MUST BE FREE OF FOREIGN MATERIALS AND CONTAMINANTS.

CONCRETE CRADLE CURB DETAILS FOR ADA RAMPS

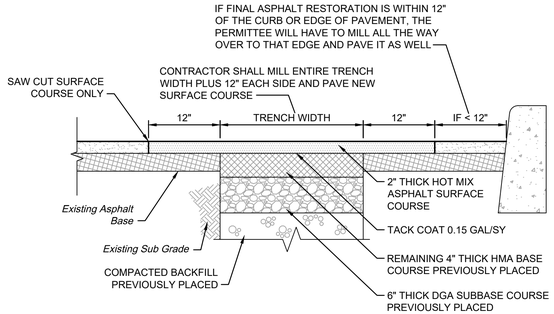


NOTES:

1. PREFORMED BITUMINOUS EXPANSION JOINTS, 1/2" THICK SHALL BE INSTALLED EVERY 20 FEET. CONTRACTION JOINTS SHALL BE INSTALLED EVERY 4 FEET.
2. CONCRETE SHALL BE CLASS "B" PORTLAND CEMENT HAVING A 28-DAY STRENGTH OF 4,000 PSI.
3. HANDICAP RAMPS SHALL HAVE A LIGHT BROOM FINISH WITH THE STRIATIONS PERPENDICULAR TO TRAFFIC.

CONCRETE WALK

NOT TO SCALE

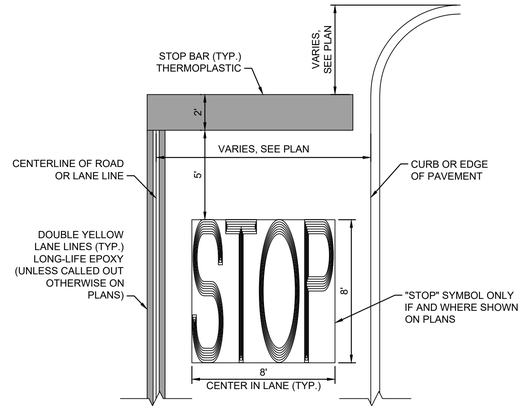


NOTE:

1. ALL MATERIALS SHALL CONFORM TO THE LATEST NJDOT STANDARDS AND SPECIFICATIONS.

FINAL ASPHALT SURFACE RESTORATION

NOT TO SCALE

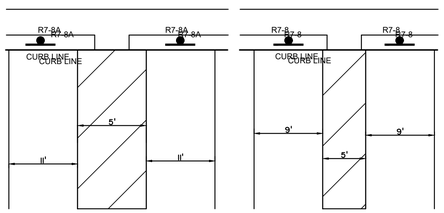


PAVEMENT MARKINGS

NOT TO SCALE

NOTE:

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
2. USE TYPICAL DIMENSIONS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
4. ALL PAVEMENT MARKING WORDS ON THE PAVEMENT SHALL BE 8' HIGH AND FIT WITHIN THE LANE. EXACT WIDTH TO BE DETERMINED BASED ON NUMBER OF LETTERS.

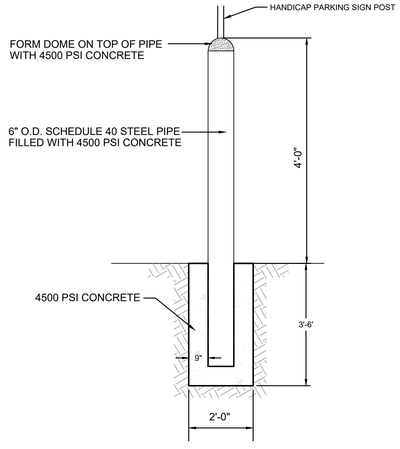


VAN ACCESSIBLE

ACCESSIBLE

PARKING SPACE DIMENSIONS

R7-8



BOLLARD DETAIL

FOR HANDICAP PARKING SIGN
N.T.S.

NOTES

1. INSTALL 6" SCHEDULE 40 STEEL PIPE BOLLARD
2. PAINT BOLLARD WITH 1 COAT OF PRIMER AND (2) COATS OF SAFETY YELLOW PER SPECS.
3. SIGN POST SHALL BE INSERTED IN BOLLARD AND BACKFILLED WITH CONCRETE

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NJ PROFESSIONAL ENGINEER, Lic. No. 40975

REVISIONS

NO.	DATE	DESCRIPTION
1	2025-05-27	REVISED PER FSCD REVIEW
2	2025-06-26	REVISED LOTS PER NJDEP COMMENT
3	2026-04-09	REVISED PER FSCD REVIEW
4	2026-04-27	REVISED PER TOWNSHIP AND PUBLIC COMMENT
5	2026-04-05	REVISED PER TOWNSHIP COMMENT

DETAIL PLAN
SEASTREAK FERRY TERMINAL REPAVING PROJECT
FOR HIGHLANDS LANDING CORPORATION
MAJOR SITE PLAN
BLOCK 100, LOT 27
326 SHORE DRIVE, BOROUGH OF HIGHLANDS
MONMOUTH COUNTY, NEW JERSEY, TAX MAP # 19

JOB NO. 8407
FILE NAME 8407-Detail Plan.dwg
DRAWN ERI | REVIEWED BMT
DATE 04/22/25 | SCALE AS SHOWN
SHEET NO. C-13
OF 13