

PRELIMINARY & FINAL MAJOR SITE PLAN

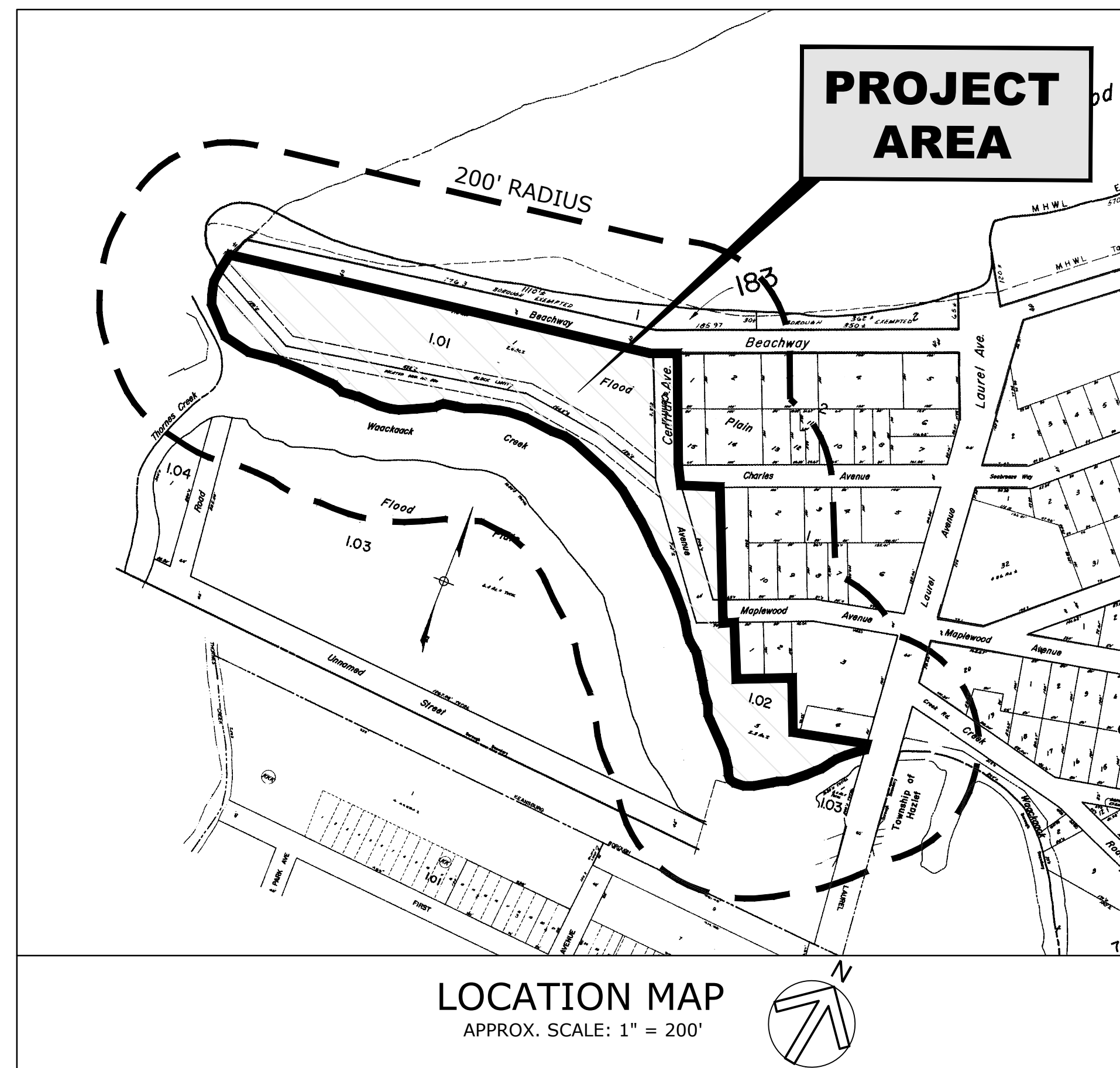
PREPARED FOR:

BAYSIDE COVE DEVELOPMENT

LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1,
 LOT 4 & 5 IN BLOCK 1.02
 BOROUGH OF KEANSBURG
 MONMOUTH COUNTY - NEW JERSEY
 TAX MAP SHEET 1, LAST REVISED MARCH 2023

BLOCK	LOT	ADDRESS	BLOCK	LOT	ADDRESS
1323	1-6.02	DARLINE MARK LLC 2 ANNAPOLIS DR HAZLET NJ 07730	1323	1-10	ALVEN THEODORE L. 97 MAPLEWOOD AVE KEANSBURG NJ 07734
1323	1.01-1	RMC LLC 7 LAUREL AVENUE KEANSBURG NJ 07734	1323	1-3	MOON LOGAN SCOTT & JOSSELYN 14 CHARLES AVE KEANSBURG NJ 07734
1323	1.02-3	KIB ENTERPRISES INC 33 LAUREL AVE KEANSBURG NJ 07734	1323	1-4	MORRO CHARLES P 12 CHARLES AVE KEANSBURG NJ 07734
1323	1.02-5	RMC LLC 7 LAUREL AVENUE KEANSBURG NJ 07734	1323	2-10	NIERADKA EVIN 1440 BAY AVENUE HIGHLANDS NJ 07732
1323	1.03-1	RMC LLC 7 LAUREL AVENUE KEANSBURG NJ 07734	1323	1.02-2	SIMONE PHILIP & ANNA 9 FIFTH STREET WEST KEANSBURG NJ 07734
1323	2-1.01	TRC REAL ESTATE PARTNERSHIP 7 LAUREL AVE KEANSBURG NJ 07734	1323	1-6.01	KEANSBURG PROPERTIES LLC PO BOX 7582 MONROE NJ 08831
1323	1-1	RMC LLC 7 LAUREL AVENUE KEANSBURG NJ 07734	1318	1-1	PS MARINE SERVICES LLC 7 LAUREL AVENUE KEANSBURG NJ 07734
1323	1-5	GELCO GENERAL SERVICES INC. F-4 AVON DRIVE EAST WINDSOR NJ 08520	1323	1.04-1	RMC LLC 7 LAUREL AVE KEANSBURG NJ 07734
1323	1-2.01	HARTSGROVE BRIAN RAMANSEN JOSEPH P 16 CHARLES AVE KEANSBURG NJ 07734	1323	69-20	YERUSHALMY TALMUDICAL ACADEMY 32 LAUREL AVE KEANSBURG NJ 07734
1323	1-2.02	RAZZANO FRANK F 24 CHARLES AVE KEANSBURG NJ 07734	1323	70-1	BOROUGH OF KEANSBURG 29 CHURCH ST KEANSBURG NJ 07734
1323	1.02-1	RMC LLC 39 CHARLES AVENUE KEANSBURG NJ 07734	1323	183-1	RMC LLC 7 LAUREL AVENUE KEANSBURG NJ 07734
1323	1-7	MIDWEST EQUITIES LLC 400 BLVD OF AMERICAS #304 LAKEWOOD NJ 08701	1350	249-1	INTERNATIONAL FLAVORS & FRAGRANCES BOX 8 %ACCS PAYABLE-001 HAZLET NJ 07730
1323	1-8	LOEBER KATHERINE ANN 87 MAPLEWOOD AVE. KEANSBURG NJ 07734	1323	1.02-4	BAYSIDE COVE MARINA LLC 35 LAUREL AVE KEANSBURG NJ 07734
1323	1-9	HESSLER PATRICIA METALS 89 MAPLEWOOD AVE. KEANSBURG NJ 07734	1318	1.02-7	LADITZKI STEVEN & NICHOLAS LADITZKI 320 VILLA PARKWAY SPRING LAKE NJ 07762
			1323	69-19	TORRES JULIO 44 CREEK ROAD KEANSBURG NJ 07734

200' PROPERTY OWNERS



PROJECT ATTORNEY:
 MAURICE J. MALONEY, ESQ.
 621 SHREWSBURY AVENUE,
 SHREWSBURY, NJ 07702
 732-758-0044

PROJECT SURVEYOR:
 YORKANIS & WHITE, INC.
 23 VILLAGE COURT
 HAZLET, N.J. 07730

GENERAL NOTES:

- PROPERTY BEING KNOWN AS LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1, LOTS 4 & 5 IN BLOCK 1.02, AS SHOWN ON SHEET 1 & 33 OF THE CURRENT OFFICIAL TAX MAP OF THE BOROUGH OF KEANSBURG (MAP 1, LAST REVISED MARCH 2023).
- PRELIMINARY & FINAL MAJOR SITE PLAN APPROVAL IS HEREBY REQUESTED FOR CONSTRUCTION OF TWELVE (12) RV PAD SITES. A GUARD HOUSE, OTHER IMPROVEMENTS TO THE EXISTING MARINA INCLUDING THE CONSTRUCTION OF PARKING AREAS, UTILITY INFRASTRUCTURE, LANDSCAPING IMPROVEMENTS, RETAINING WALLS, AND GRADING.
- THE SUBJECT PROPERTY IS LOCATED WITHIN THE CR ZONE.
- TOPOGRAPHICAL SURVEY INFORMATION SHOWN HEREON TAKEN FROM MAP ENTITLED: "BOUNDARY & TOPOGRAPHICAL SURVEY MAP OF PROPERTIES KNOWN AS LOT 1 IN BLOCK 1.01; LOT 1 IN BLOCK 1; LOTS 1 & 2 IN BLOCK 1.02 AND LOTS 4 & 5 IN BLOCK 1.02, BOROUGH OF KEANSBURG, MONMOUTH COUNTY - NEW JERSEY," PREPARED BY YORKANIS & WHITE, INC., SIGNED BY JOHN T. LUTS, PLS. DATED, MARCH 17, 2020. LAST REVISED 09/23/22
- PROPERTY OWNER & APPLICANT:
 RMC, LLC
 7 LAUREL AVENUE,
 KEANSBURG, N.J. 07734
- UTILITIES:
 WATER SERVICE: KEANSBURG WATER SERVICE
 SEWER SERVICE: BAYSHORE REGIONAL SEWER AUTHORITY
 TELEPHONE SERVICE: VERIZON
 ELECTRIC SERVICE: JERSEY CENTRAL POWER AND LIGHT CO.
 CABLE TELEVISION: COMCAST CABLEVISION OF MONMOUTH COUNTY, INC.
 GAS SERVICE: NEW JERSEY NATURAL GAS COMPANY

ZONING SUMMARY

DESCRIPTION	REQUIRED (CR ZONE)	PROPOSED
MINIMUM LOT AREA	40,000 SF (0.918 AC.)	210,788 S.F. (4.839 AC.)
MINIMUM LOT FRONTAGE	100 FT	49.54 FT (LAUREL AVENUE) 280 FT (CENTRAL AVENUE)
MARINA REQUIREMENTS: ORD. SECTION 22-7.9	REQUIRED (MARINA)	PROPOSED
PRINCIPAL/ACCESSORY STRUCTURE SETBACK		
STREET LINE	50 FT	7.8 FT
OTHER PROPERTY LINE	25 FT	>25 FT
BOAT STORAGE SETBACK		
STREET LINE	35 FT	1 FT
ANY PROPERTY LINE	20 FT	1 FT
LAUNCHING FACILITY SETBACK		
ANY PROPERTY LINE	20 FT	59.8 FT
MIN. UPLAND AREA	15,000 SF	210,788 SF
VARIANCE REQUIRED:		

CERTIFICATION:
 APPROVED AS A PRELIMINARY / FINAL PLAT OF A SITE PLAN BY THE
 BOROUGH OF KEANSBURG ON _____
 _____ CHAIRPERSON
 ATTEST:
 _____ SECRETARY _____ DATE

APPROVED AS A PRELIMINARY/FINAL MAJOR SITE PLAN BY THE
 BOROUGH OF KEANSBURG PLANNING BOARD ON _____
 _____ BOARD ENGINEER

INDEX OF SHEETS

TITLE SHEET	FILE	NO.	PLAN DATE
EXISTING CONDITIONS AND DEMOLITION PLAN	TS-1	1 OF 8	11/20/24
LAYOUT AND UTILITY PLAN	EX-1	2 OF 8	11/20/24
GRADING PLAN	LP-1	3 OF 8	11/20/24
LANDSCAPING PLAN	GP-1	4 OF 8	11/20/24
SOIL EROSION AND SEDIMENT CONTROL PLAN	LL-1	5 OF 8	11/20/24
SOIL EROSION CONTROL SPECIFICATIONS	SE-1	6 OF 8	11/20/24
CONSTRUCTION DETAILS	SECS-1	7 OF 8	11/20/24
	CD-1	8 OF 8	11/20/24

PARKING INFORMATION (RV PAD SITES & GRAVEL AREA):


PARKING PROVIDED:

RV PAD SITES:

- LARGE 25' X 40' PAD SITE (4):
 RV SPACES: 4 SPACES
 PASSENGER VEHICLE SPACES: 8 SPACES
- SMALL 25' X 30' PAD SITE (8):
 RV SPACES: 8 SPACES
 PASSENGER VEHICLE SPACES: 16 SPACES
- ADDITIONAL PARKING SPACES: 7 SPACES

TOTAL PARKING PROVIDED: 48 PARKING SPACES
 (INCLUDING 12 RV SPACES)

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BAYSIDE COVE DEVELOPMENT
 LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1,
 LOT 4 & 5 IN BLOCK 1.02
 BOROUGH OF KEANSBURG
 MONMOUTH COUNTY - NEW JERSEY
 TAX MAP SHEET 1, LAST REVISED MARCH 2023



Kennedy Consulting Engineers, LLC
 211 Maple Avenue
 Red Bank, New Jersey 07701
 732.212.9393 TEL • 732.212.9399 FAX

TITLE SHEET

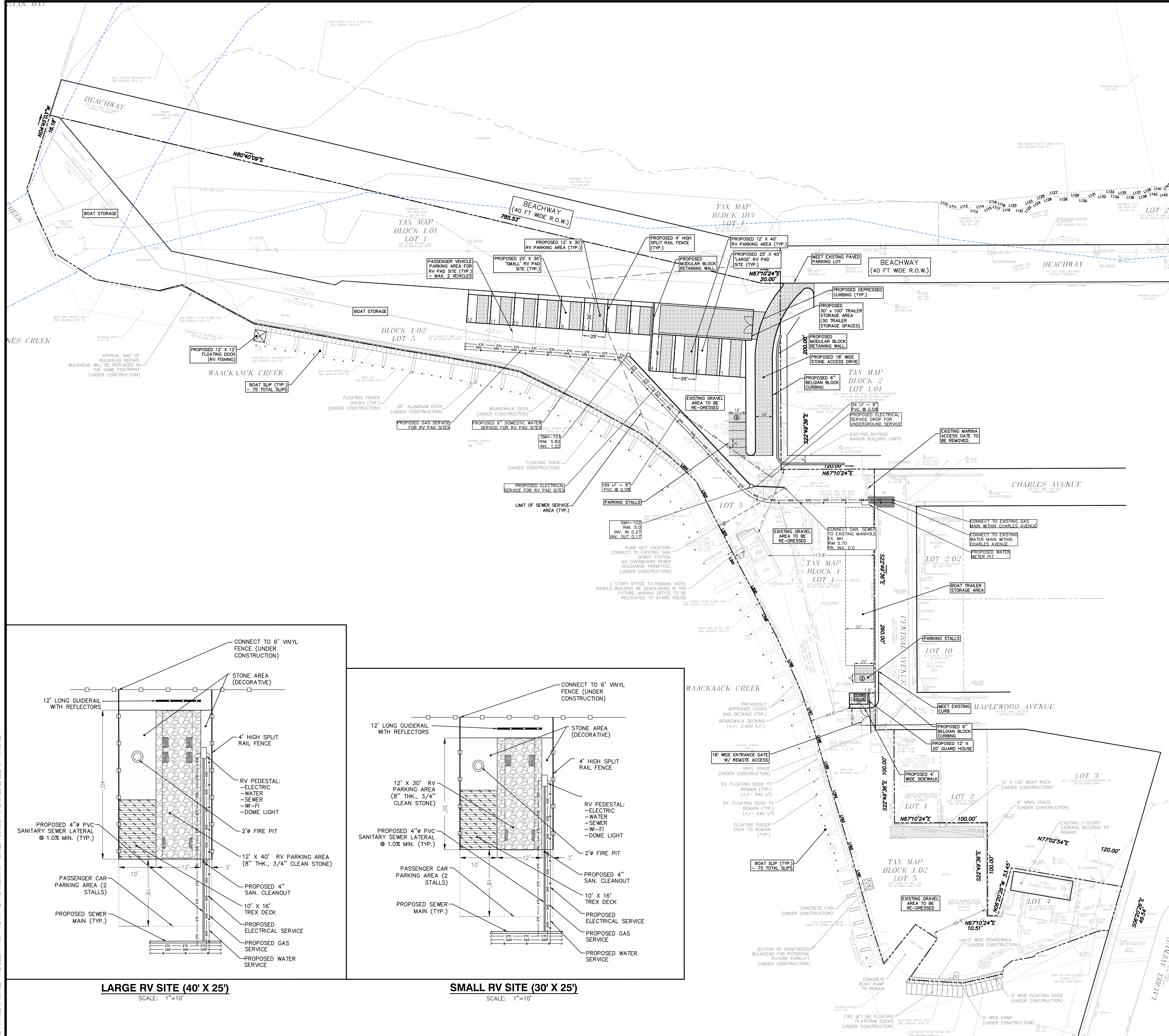
TS-1

FILE NAME: Base.DWG
 DRAWN BY: KTS/ARC
 DATE: 11/20/24

JAMES A. KENNEDY, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

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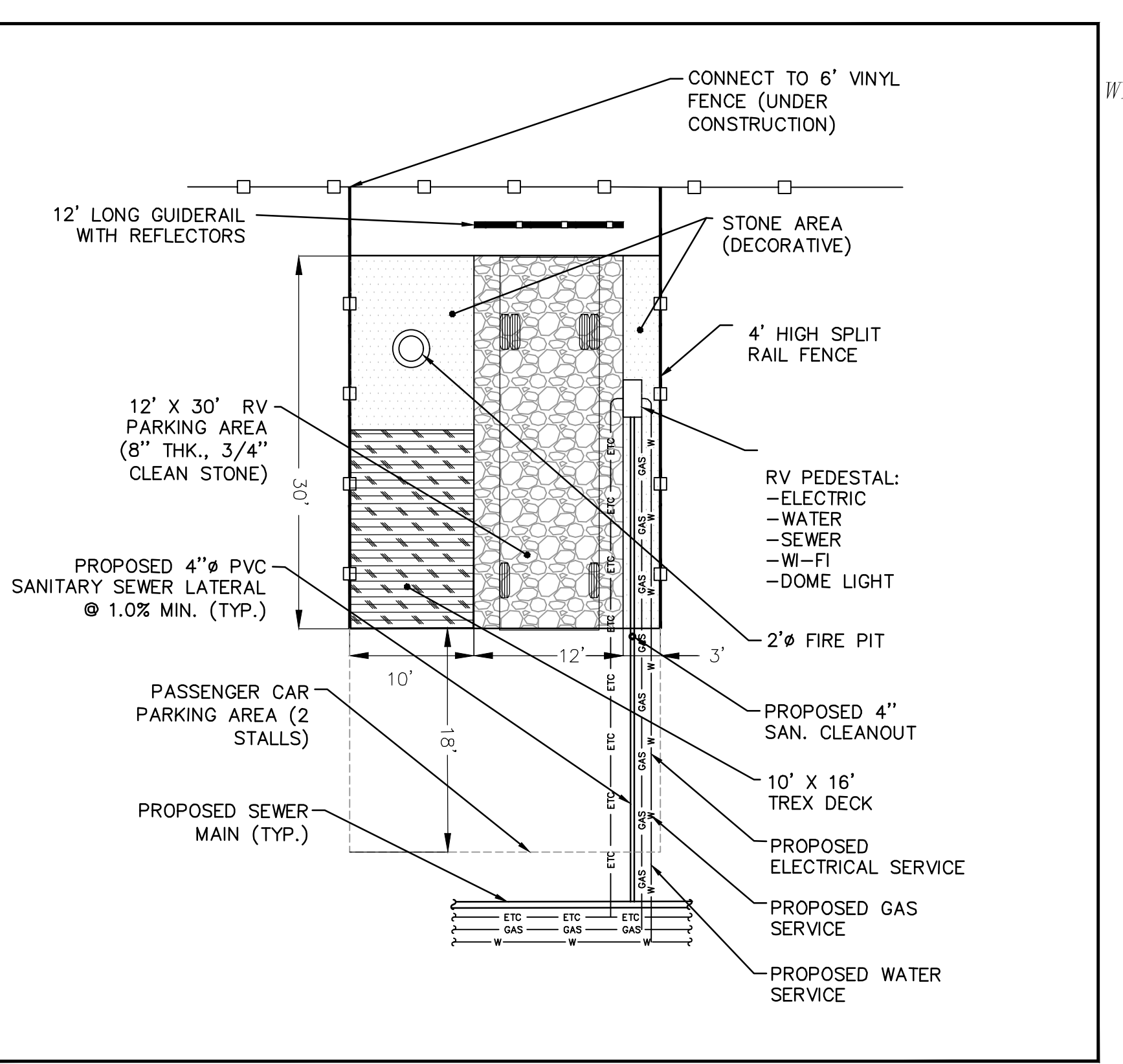
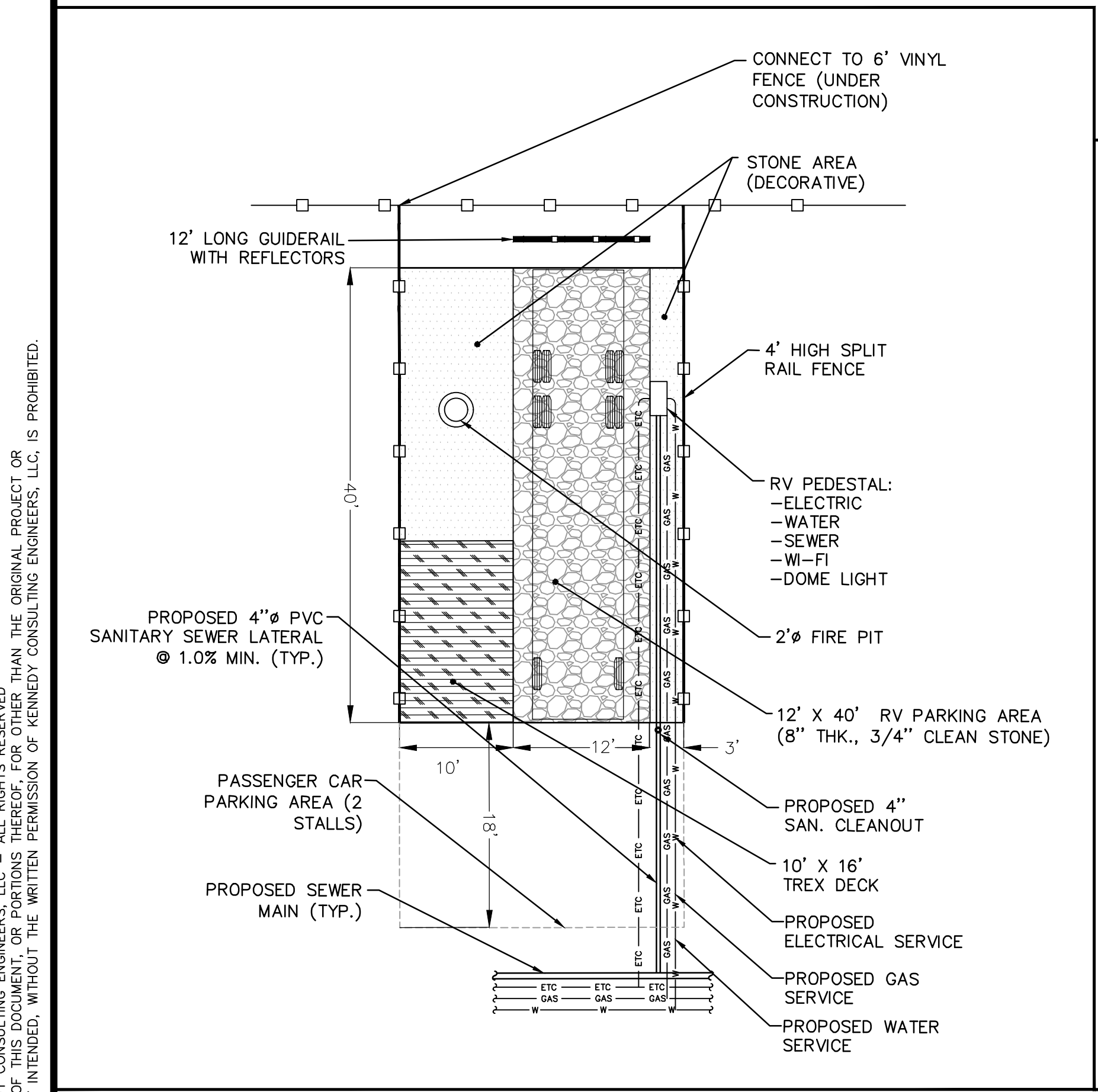
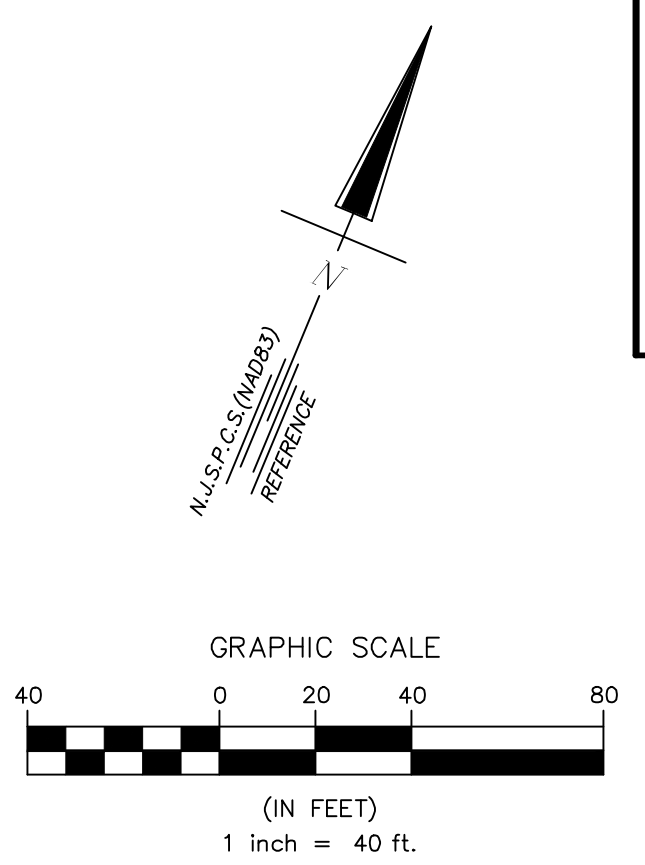
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- General Construction Notes**
- ALL WORK TO CONFORM WITH THE LATEST EDITION OF THE FOLLOWING: NJDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION; MONMOUTH COUNTY DESIGN STANDARDS; MUNICIPAL DESIGN STANDARDS; CURRENT MANUFACTURERS SPECIFICATIONS, STANDARDS, AND REQUIREMENTS; CURRENT PREVALING UTILITY COMPANY OR AUTHORITY SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.
 - ALL BARRIER FREE CONSTRUCTION TO BE IN ACCORDANCE WITH THE NJ UNIFORM CONSTRUCTION CODE, SUBCHAPTER 7: BARRIER FREE SUBCODE.
 - CONTRACTOR IS RESPONSIBLE FOR ALL WORKER SAFETY, TRAINING, AND SAFETY DEVICE USAGE FOR AND DURING THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THIS PLAN.
 - THE CONTRACTOR IS DESIGNATED AS THE RESPONSIBLE PARTY DURING CONSTRUCTION OF THE IMPROVEMENTS SHOWN HEREON. AS SUCH, CONTRACTOR WILL PROVIDE ADEQUATE SAFETY TRAINING, EQUIPMENT, AND OVERSIGHT.
 - CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS AND APPROVALS FOR CONSTRUCTION OF THE DEPICTED SITE IMPROVEMENTS.
 - ALL DISTURBED AREAS ON SITE TO BE STABILIZED IN ACCORDANCE WITH THE FREHOLD SOIL CONSERVATION DISTRICT STANDARDS.
 - ALL AREAS NOT COVERED BY IMPERVIOUS SURFACE SHALL BE SEEDED OR OTHERWISE STABILIZED IN ACCORDANCE WITH SOIL EROSION CONTROL SPECIFICATIONS.
 - THE NEW JERSEY ONE CALL SYSTEM SHOULD BE CONTACTED PRIOR TO EXCAVATION ON-SITE OR WITHIN 6.0 M. (800) 272-1000.
 - ALL UTILITY CONNECTIONS AND RELOCATIONS ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH EACH UTILITY COMPANY AND ARCHITECT TO PROVIDE THE MOST APPROPRIATE LOCATION FOR UTILITY CONNECTIONS AND/OR RELOCATIONS.
 - EXISTING SITE AND UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN COLLECTED FROM VARIOUS SOURCES AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS.
 - ALL TRAFFIC SIGNS AND STRIPING SHALL CONFORM WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - ALL WATER AND SEWER MAINS SHALL BE INSTALLED WITH A HORIZONTAL SEPARATION OF 10' OR A VERTICAL SEPARATION OF 18", OR BE ENCASED IN CONCRETE, 6" THICK, 10' ON EITHER SIDE OF CROSSINGS.
 - ALL WATER MAINS SHALL BE INSTALLED AT A DEPTH TO OBTAIN A MINIMUM OF FOUR (4) FEET OF COVER TO THE TOP OF THE PIPE.
 - ALL PROPOSED WATER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON, CLASS 52, AT THE SIZE INDICATED ON PLAN.
 - ANY DAMAGE TO EXISTING STRUCTURES AS A RESULT OF THIS DEVELOPMENT, SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR.
 - DURING R.O.W. WORK, TRAFFIC TO BE PROTECTED AND MAINTAINED IN ACCORDANCE WITH MUTCD PART VI.
 - CONTRACTOR TO MATCH EXISTING PAVEMENT SPECIFICATIONS FOR ALL PAVEMENT REPAIR TO EXISTING ROADWAYS.
 - CONCRETE SHALL BE "NOT" CLASS "B" UNLESS OTHERWISE STATED HEREON OR WITHIN THE CONSTRUCTION DETAILS.
 - ALL IMPROVEMENTS SHOWN HEREON TO BE REMOVED SHALL BE DISPOSED OF IN A MANNER NOT CONTRARY TO LOCAL OR STATE ORDINANCES.
 - CONTRACTOR TO NOTIFY THE UNDERSIGNED PROFESSIONAL IF FIELD CONDITIONS VARY FROM THAT WHICH IS SHOWN HEREON.
 - THIS PLAN SET HAS BEEN PREPARED FOR MUNICIPAL AND AGENCY APPROVALS. THIS PLAN NOT TO BE UTILIZED FOR CONSTRUCTION UNLESS MARKED "FOR CONSTRUCTION".
 - TOPOGRAPHICAL SURVEY INFORMATION SHOWN HEREON TAKEN FROM MAP ENTITLED: "BOUNDARY & TOPOGRAPHICAL SURVEY MAP OF PROPERTIES KNOWN AS LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1; LOTS 1 & 2 IN BLOCK 183 AND LOTS 4 & 5 IN BLOCK 1.02, BOROUGH OF KEANSBURG, MONMOUTH COUNTY - NEW JERSEY", PREPARED YORKKANS & WHITE, INC., SIGNED BY JOHN T. LUTS, PLS. DATED, MARCH 17, 2020. LAST REVISED 09/23/22.
 - ALL PROPOSED UTILITIES SHALL BE INSTALLED UNDERGROUND.

LEGEND

EXISTING	PROPOSED
CONTOUR	CONTOUR
LOT LINE	LOT LINE
DRAINAGE PIPE	DRAINAGE PIPE
FENCE	FENCE
STRUCTURE	STRUCTURE
BUILDING SETBACK LINE	BUILDING SETBACK LINE
CONCRETE CURB	CONCRETE CURB
SAN. SEWER MAIN PIPE	SAN. SEWER MAIN PIPE
SAN. SEWER LATERAL	SAN. SEWER LATERAL
SEWER MANHOLE	SEWER MANHOLE
DRAINAGE MANHOLE	DRAINAGE MANHOLE
CONC. SIDEWALK	CONC. SIDEWALK
DRAINAGE INLET	DRAINAGE INLET
SPOT GRADE	SPOT GRADE
ROADWAY REPAIR	ROADWAY REPAIR
DEPRESSED CURBING	DEPRESSED CURBING
LIGHT POLE	LIGHT POLE
WATER SUPPLY	WATER SUPPLY
GAS LINE	GAS LINE
ELECTRIC/TELEPHONE	ELECTRIC/TELEPHONE
CLEANOUT	CLEANOUT
WATER VALVE	WATER VALVE



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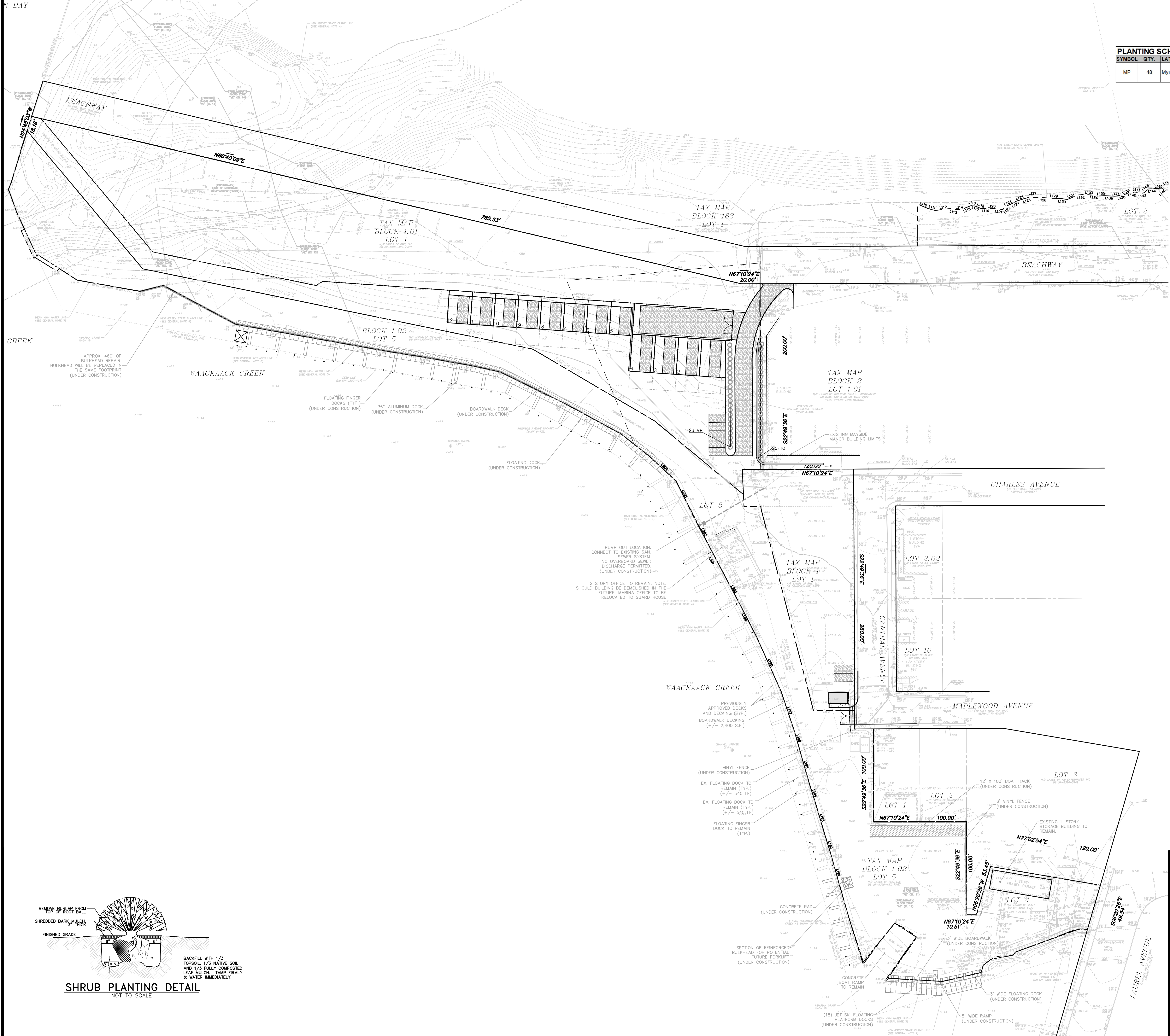
KCE
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Red Bank, New Jersey 07701
732.212.9393 TEL • 732.212.9399 FAX

LAYOUT AND UTILITY PLAN
LP-1

FILE NAME: Base.DWG
DRAWN BY: KTS/ARC
DATE: 11/20/24

JAMES A. KENNEDY, P.E.
NEW JERSEY PROFESSIONAL ENGINEER NO. 41275
DIGITAL SIGNATURE VALID FOR PDF ONLY

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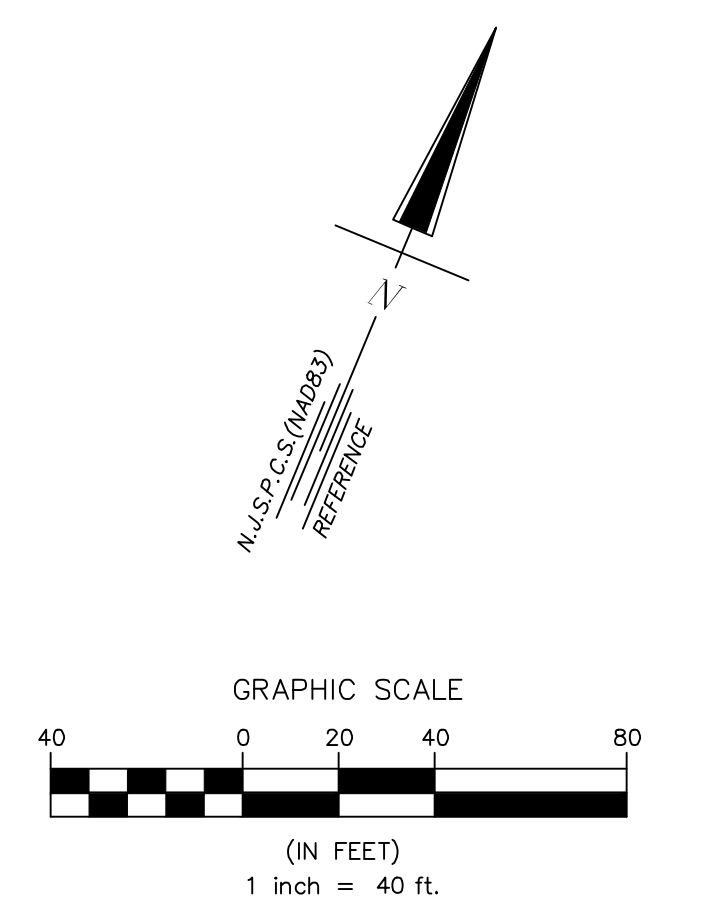


PLANTING SCHEDULE						
SYMBOL	QTY.	LATIN NAME	COMMON NAME	HT.	ROOT	COMMENTS
MP	48	Myrica pennsylvanica	Northern Bayberry	18'-24'	#3 Gal.	Full Plants, 5 O.C.

LANDSCAPE PLAN NOTES

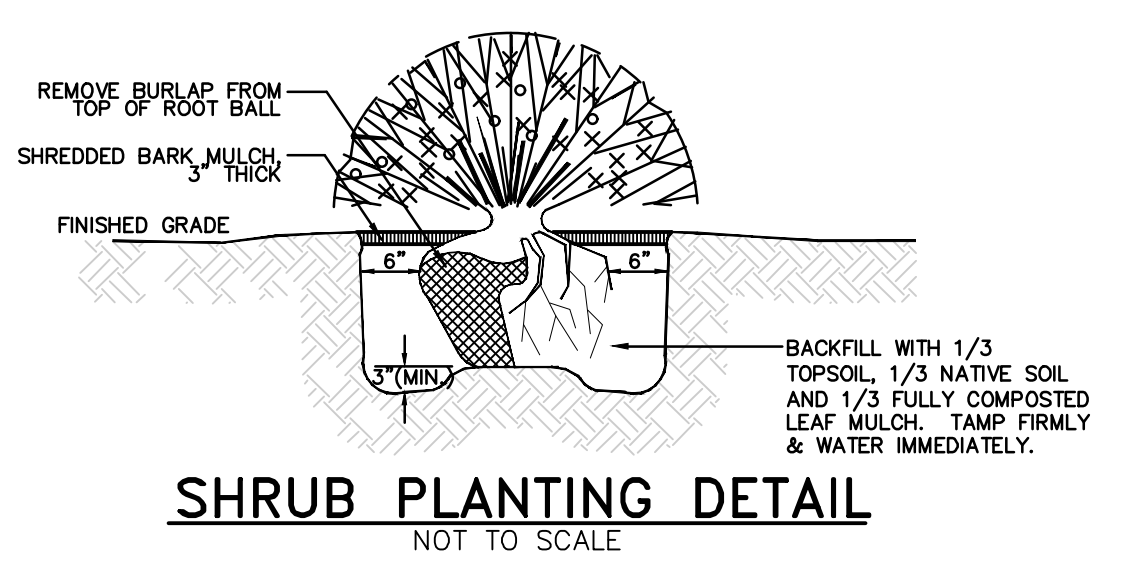
- GENERAL NOTES:
 - THIS PLAN TO BE USED ONLY FOR THE PURPOSES OF LANDSCAPING.
 - EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. NOTIFY THE UNDERSIGNED PROFESSIONAL IMMEDIATELY IN WRITING IN REFERENCE TO DISCREPANCIES OR LOCATION CONFLICTS.
 - IN THE EVENT THAT PLANT QUANTITY DISCREPANCIES OR MATERIAL OMISSIONS OCCUR IN THE PLANTING SCHEDULE, THE PLAN SHALL SUPERSEDE.
 - ALL PLANTING MATERIALS AND METHODS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE MUNICIPAL ORDINANCES OF THE BOROUGH OF KEANSBURG, AND THE AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. IN THE EVENT OF CONFLICT BETWEEN A.A. AND MUNICIPAL STANDARDS, THE MUNICIPAL REQUIREMENTS SHALL SUPERSEDE.
 - ALL LANDSCAPING SHALL BE PLANTED SO AS TO NOT INTERFERE WITH UTILITY LINES, SIGHT TRIANGLES, UNDERGROUND UTILITIES OR PUBLIC HIGHWAYS OR OTHER EXISTING OR PROPOSED STRUCTURES. ALL PLANT MATERIAL PROPOSED WITHIN THE SECURED SIGHT DISTANCES OR SIGHT TRIANGLES ARE SELECTED SO AS TO NOT EXCEED A MATURE HEIGHT GREATER THAN 30' ABOVE THE ELEVATION OF THE ADJACENT ROADWAY. STREET TREES AND SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESSES, OR WITHIN REQUIRED SIGHT DISTANCES OR SIGHT TRIANGLE CASEMENTS SHALL NOT BE BRANCHED ANY LOWER THAN 4'-0" ABOVE GRADE, AND MUST BE APPROPRIATELY PRUNED. NO WOODY PLANTS, EXCEPT GROUNDCOVERS, ARE TO HAVE THEIR CENTERS CLOSER THAN 36" TO THE BACK OF THE CURB.
 - LANDSCAPING SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE RELEASE OF THE PERFORMANCE BOND.
- PLANT MATERIAL:
 - NO PLANT SUBSTITUTION SHALL BE ALLOWED WITH REGARD TO SIZE, SPECIES, NAMED VARIETY OR CULTIVAR, WITHOUT PRIOR PERMISSION FROM THE BOARD ENGINEER. SUBSTITUTIONS AND FINAL LOCATION OF ALL PLANT MATERIAL IS TO BE APPROVED BY THE BOROUGH ENGINEER PRIOR TO ANY DEVIATION FROM THE APPROVED PLAN.
 - ALL PLANTS SHALL BE DUG, PACKED, TRANSPORTED AND HANDLED WITH THE UTMOST CARE TO ENSURE ADEQUATE PROTECTION FROM INJURY AND DESICCATION.
 - ALL PLANTS SHALL BE FREE FROM DISEASE AND INFESTATION, AND ALL LEGALLY REQUIRED AGRICULTURAL CERTIFICATIONS.
 - ALL PLANTS SHALL BE PRUNED TO ENHANCE VIGOR PRIOR TO, OR UPON INSTALLATION, WHILE RETAINING NATURAL GROWTH HABIT OF THE CENTRAL LEADER SHALL NOT BE CUT; PLANTS PLANTED IN THIS CONDITION SHALL NOT BE ACCEPTED, DAMAGED, BROKEN OR CONFLICTING BRANCHES SHALL BE PRUNED CLEANLY, FLUSH WITH THE MAIN TRUNK OR BRANCH.
 - ALL PLANTS SHALL BE NURSERY-GROWN AND TAGGED WITH A DURABLE LABEL INDICATING THE GENUS, SPECIES AND SPECIFIED VARIETY OR CULTIVAR.
- PLANTING:
 - SOIL MUST BE FROST-FREE, FRIABLE AND NOT MUDDY AT THE TIME OF PLANTING.
 - BACKFILL MATERIAL FOR PLANTING PITS SHALL BE COMPOSED OF 70% TOPSOIL, 20% FULLY COMPOSTED COW OR HORSE MANURE AND 10% PEAT MOSS. TOPSOIL SHALL BE SELECT MATERIAL WITH IN EXCESS OF 3% ORGANIC MATERIAL, SECTION 909.10, AND MAY BE FROM ON-SITE OR SELECT IMPORTED SOURCES. SOIL SHALL CONTAIN NO ADDED MARL, NOR ANY IMPORTED SOURCES.
 - PLANTS SHALL BE SET TO ULTIMATE FINISHED GRADE SO THAT THEY WILL BE LEFT IN THE RELATIONSHIP TO THE SURROUNDING GROUND AS THEY HAD, PRIOR TO BEING DUG. IF EVIDENCE OF SATURATED SOILS IS ENCOUNTERED DURING EXCAVATION OF THE PLANTING PITS, UPON DIRECTION BY THE BOROUGH ENGINEER, PLANTS SHALL BE SET SO THAT THEIR ROOT CROWNS ARE APPROXIMATELY THREE INCHES ABOVE THE FINAL GRADE. WITH TOPSOIL AND MULCH APPLIED TO AVOID EXCESSIVE DRYING AT THE SURFACE. UNDER NO CIRCUMSTANCES SHALL PLANTING AT RELATIVELY DRY LOCATIONS BE PERFORMED IN A WAUNDED MANNER.
 - THE CORD BINDING THE BALL OF ALL BALLED AND BURLAPPED (BBB) PLANTS SHALL BE CUT AND REMOVED, AND BURLAP ON THE UPPER 1/3 OF THE ROOT BALL SHALL BE REMOVED. PLANTS WITH SYNTHETIC NON-DEGRADABLE ROOT BALL WRAPS SHALL NOT BE ACCEPTABLE.
 - ALL PROPOSED TREES SHALL BE SET IN BEDS AS SHOWN OR MULCHED TO THE LIMIT OF THEIR PLANTING PITS. ALL PROPOSED SHRUBS SHALL BE SET IN CONTINUOUS, MASSES PLANTING BEDS, RATHER THAN ISOLATED INDIVIDUALS. ALL TREE AND SHRUB BEDS SHALL RECEIVE A 3" THICK APPLICATION OF HARDWOOD BARK MULCH.
- MAINTENANCE:
 - ALL PLANTINGS SHALL BE WATERED AS NECESSARY FOR SOUND HORTICULTURAL PRACTICE DURING THE FIRST GROWING SEASON, TO ENSURE THEIR PROPER ESTABLISHMENT.
 - IN GENERAL, SHRUBS ARE TO BE PLANTED AT INTERVALS WHICH WILL ALLOW THEM TO FULLY DEVELOP INTO CONTINUOUS MASSES OF THE INDIVIDUAL SPECIES. THEREFORE, NO PRUNING TO SHAPE OR SHEARING IS REQUIRED OR DESIRABLE, WHERE DEAD OR CONFLICTING BRANCHING DEVELOPS, IT SHOULD BE PRUNED OUT.
 - ALL GUY WIRES, PLANT STAKES AND THE LIKE SHALL BE REMOVED ONE YEAR AFTER INSTALLATION.
 - THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE PERFORMANCE BOND RELEASE.
 - ALL DEAD TREES AND LIMBS SHALL BE REMOVED AND DISPOSED OFF-SITE.
- SEED OR SOO BED PREPARATION:
 - ROUGH GRADING: REMOVE FROM THE SURFACE ALL STONES 1" OR LARGER, AS WELL AS WIRE, WOOD, ROOTS, CONCRETE, CLODS, LUMPS AND ANY OTHER UNSUITABLE MATERIAL.
 - FINE GRADING: A MINIMUM OF 3" OF SCREENED TOPSOIL SHALL BE SPREAD BY RAKE OR MECHANICALLY RAKED OVER ALL AREAS TO RECEIVE EITHER SEED OR SOO. THE SOIL SHOULD BE SMOOTH OF BUMPS, FREE OF UNSUITABLE OBJECTS AND GENERALLY GRADED TO PROVIDE FOR POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS.
 - BED INSPECTION: PRIOR TO SEEDING OR SOODING, THE BED SHALL BE INSPECTED FOR NEWLY CREATED RUTS OR EXTENSIVE TRAFFIC COMPACTION, AND THE AFFECTED AREAS REPAIRED ACCORDINGLY.
 - LIMING/FERTILIZING: APPLY PELLETED LIMESTONE AND FERTILIZER TO SOIL TEST RECOMMENDATIONS OR AS FOLLOWS:
 - LIME TO BE APPLIED AT THE RATE OF 600 LBS. PER ACRE, OR AS PER MANUFACTURER'S RECOMMENDATION.
 - STARTER FERTILIZER, SPECIFIED AS 10-20-10, IS TO BE APPLIED AT 500 LBS. PER ACRE.

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FENCE	FENCE
STRUCTURE	STRUCTURE
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CONCRETE CURB	CONCRETE CURB
SAN. SEWER MAIN PIPE	SAN. SEWER MAIN PIPE
SAN. SEWER LATERAL	SAN. SEWER LATERAL
SEWER MANHOLE	SEWER MANHOLE
DRAINAGE MANHOLE	DRAINAGE MANHOLE
CONC. SIDEWALK	CONC. SIDEWALK
DRAINAGE INLET	DRAINAGE INLET
SPOT GRADE	SPOT GRADE
ROADWAY REPAIR	ROADWAY REPAIR
DEPRESSED CURBING	DEPRESSED CURBING
LIGHT POLE	LIGHT POLE
WATER SUPPLY	WATER SUPPLY
GAS LINE	GAS LINE
ELECTRIC/TELEPHONE	ELECTRIC/TELEPHONE
CLEANOUT	CLEANOUT
WATER VALVE	WATER VALVE



Reference Notes

"BOUNDARY & TOPOGRAPHICAL SURVEY MAP OF PROPERTIES KNOWN AS LOT 1 IN BLOCK 1.01; LOT 1 IN BLOCK 1 AND LOTS 1 & 2 IN BLOCK 183, BOROUGH OF KEANSBURG, MONMOUTH COUNTY - NEW JERSEY," PREPARED YORKKINIS & WHITE, INC., SIGNED BY JOHN T. LUTS, PLS. DATED, MARCH 17, 2020. LAST REVISED 07/15/20



SHRUB PLANTING DETAIL
NOT TO SCALE

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BAYSIDE COVE DEVELOPMENT

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LANDSCAPING PLAN

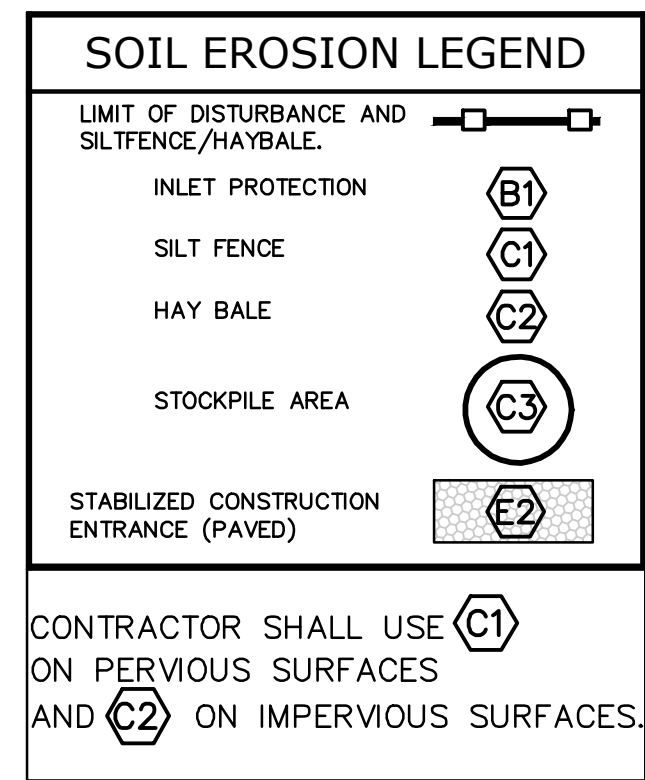
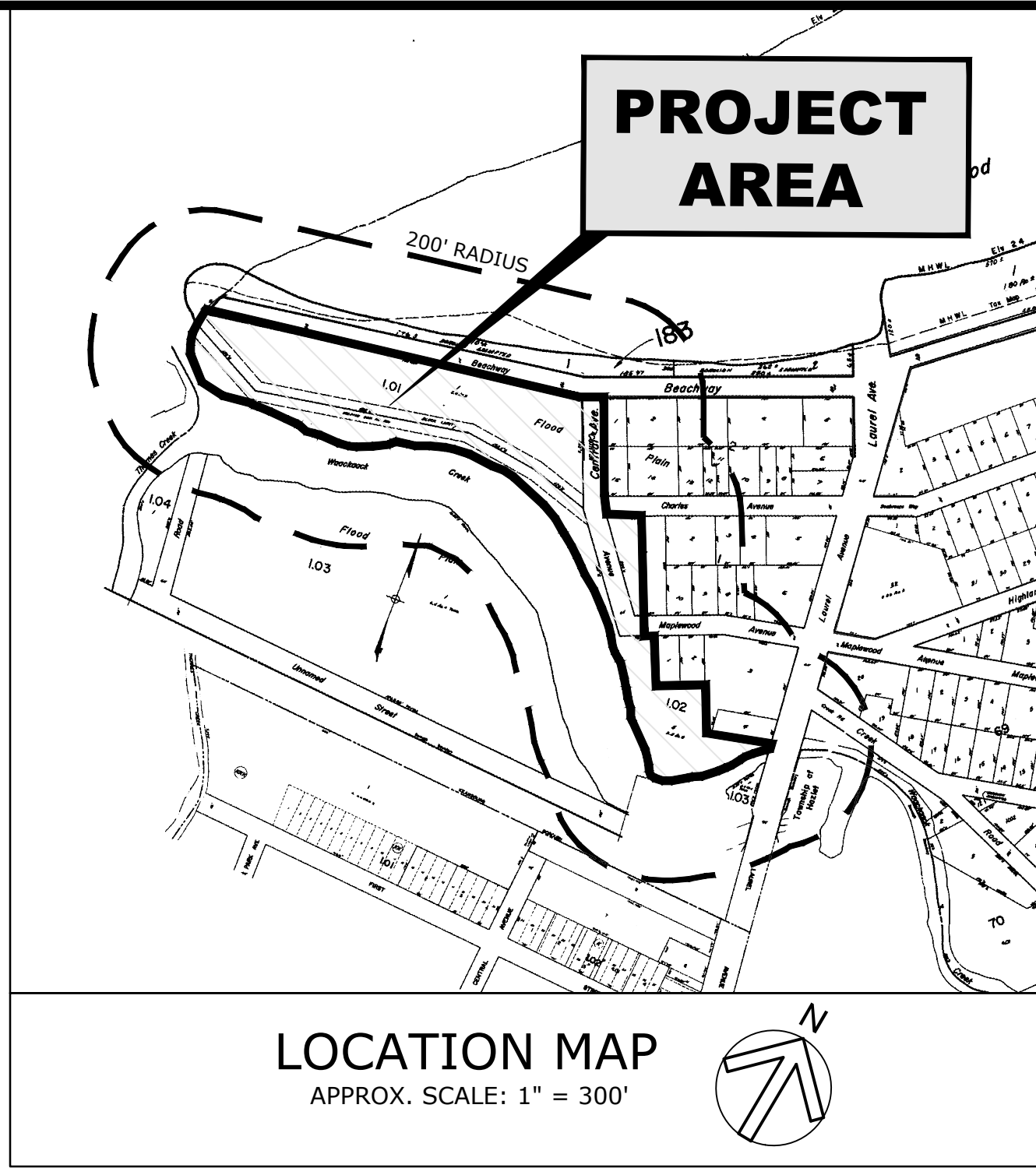
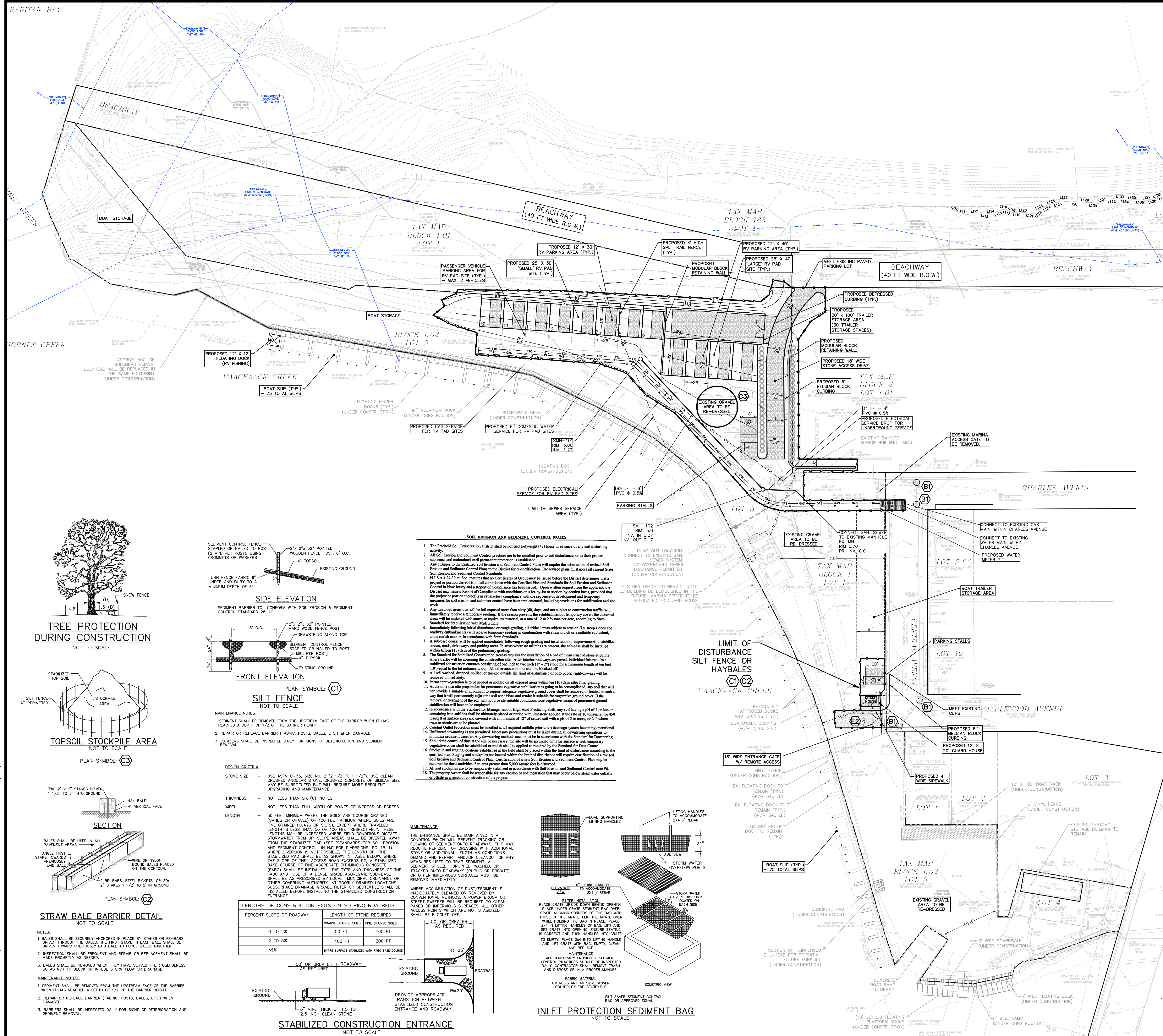
LL-1

FILE NAME: Base.DWG
DRAWN BY: KTS/ARC
DATE: 11/20/24

JAMES A. KENNEDY, P.E.
NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

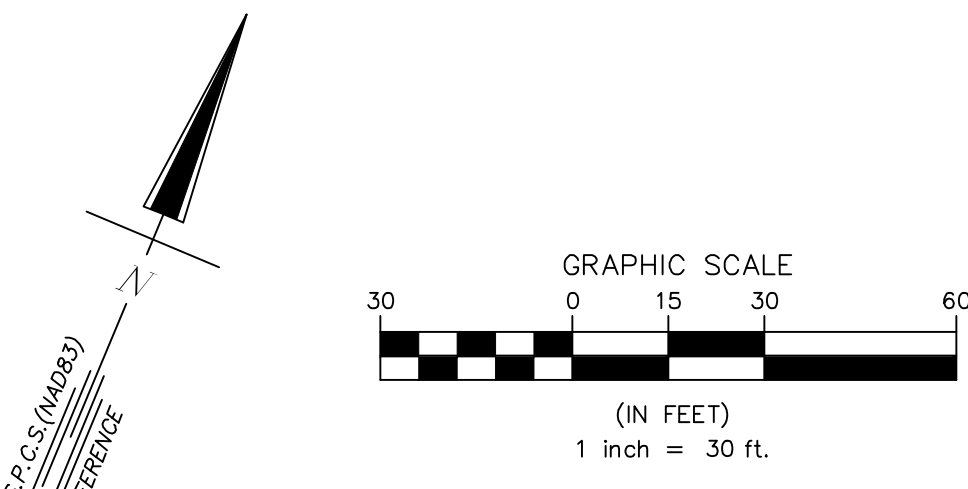
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TOTAL LIMIT OF DISTURBANCE = 1.167 AC. (50,816 SF)

Reference Notes
 BOUNDARY & TOPOGRAPHICAL SURVEY MAP OF PROPERTIES KNOWN AS LOT 1 IN BLOCK 1.01; LOT 1 IN BLOCK 1 AND LOTS 1 & 2 IN BLOCK 183, BOROUGH OF KEANSBURG, MONMOUTH COUNTY - NEW JERSEY, PREPARED YORKINIS & WHITE, INC., SIGNED BY JOHN T. LUTS, P.L.S. DATED, MARCH 17, 2020. LAST REVISED 07/15/20



PRELIMINARY & FINAL MAJOR SITE PLAN
BAYSIDE COVE DEVELOPMENT
 LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1, LOT 4 & 5 IN BLOCK 1.02
 BOROUGH OF KEANSBURG
 MONMOUTH COUNTY - NEW JERSEY
 TAX MAP SHEET 1, LAST REVISED MARCH 2023



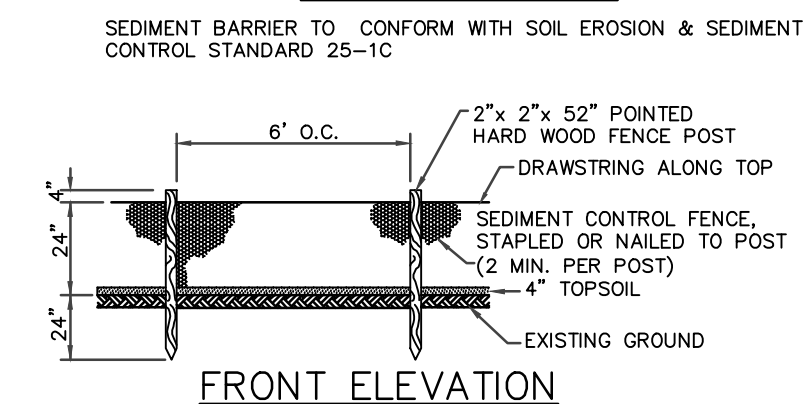
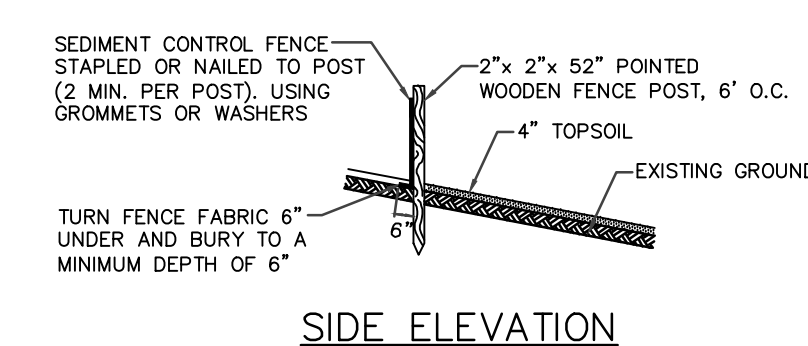
SOIL EROSION AND SEDIMENT CONTROL PLAN
SE-1

FILE NAME: Base.DWG
 DRAWN BY: KTS/ARC
 DATE: 11/20/24

JAMES A. KENNEDY, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER NO. 41275
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SOIL EROSION AND SEDIMENT CONTROL NOTES

- The Freehold Soil Conservation District shall be notified forty-eight (48) hours in advance of any soil disturbing activity.
- 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.
- Any change to the Certified Soil Erosion and Sediment Control Plan 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.
- N.J.S.A. 15:27-9.1 requires that 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. No new Jersey and a Report of Compliance has been issued. Upon written request from the applicant, the District may issue a Certificate of Occupancy 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 sediment and erosion control measures for soil erosion and sediment control have been implemented, including provisions for establishment and the work.
- Any disturbed areas that will be left exposed more than sixty (60) days, and not subject to construction traffic, will immediately receive a temporary seeding. If the season prevents the establishment of temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of 2 to 2.5 tons per acre, according to State Standard for Stabilization with Mulch Only.
- Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes and roadway embankments) will receive temporary seeding in combination with straw mulch or a suitable equivalent, and a silt mat, in accordance with State Standards.
- A silt-basement 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 silt-basement shall be installed within fifteen (15) days of the preliminary grading.
- The Standard for Stabilized Construction Areas requires the installation of a pad of clean crushed stone at points where traffic will be crossing the construction site. After exterior roadways are paved, individual lots require a stabilized construction entrance consisting of one inch to two inch (1" - 2") stone for a minimum length of no less than (15') equal to the lot entrance width. All other access points shall be blocked off.
- All soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public right-of-ways will be removed immediately.
- Permanent vegetation is to be seeded or sodded on all exposed areas within ten (10) days after final grading.
- At the time the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover shall be removed or treated in such a way that it will permanently adjust the soil conditions and render it suitable for vegetative ground cover. If the removal or treatment of the soil will not provide suitable conditions, non-vegetative means of permanent ground stabilization will have to be employed.
- 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 laboratory placed or buried with limestone applied at the rate of 10 tons/acre, or 450 bags (50 lbs per sack) and covered with a minimum of 12" of settled soil with a pH of 6.5 or more, or 2" where trees or shrubs are to be planted.
- Control Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational. Unfiltered discharges is not permitted. Necessary precautions must be taken during all dewatering operations to minimize sediment transfer. Any dewatering methods used must be in accordance with the Standard for Dewatering.
- Should the control of that at the site be necessary, the site will be stabilized until the surface is wet, temporary vegetative cover shall be established or mulch shall be applied as required by the Standard for that Control.
- Stockpiling and staging locations established in the field shall be placed within the limit of disturbance according to the certified plan. Staging and stockpiling are located within the limit of disturbance will require certified and approved Soil Erosion and Sediment Control Plan. Certification of a new Soil Erosion and Sediment Control Plan may be required for new activities if an area greater than 2,000 square feet is disturbed.
- All soil stockpiles are to be temporarily stabilized in accordance with Soil Erosion and Sediment Control note #6.
- The property owner shall be responsible for any erosion or sedimentation that may occur below stormwater outfalls or ditches as a result of construction of the project.

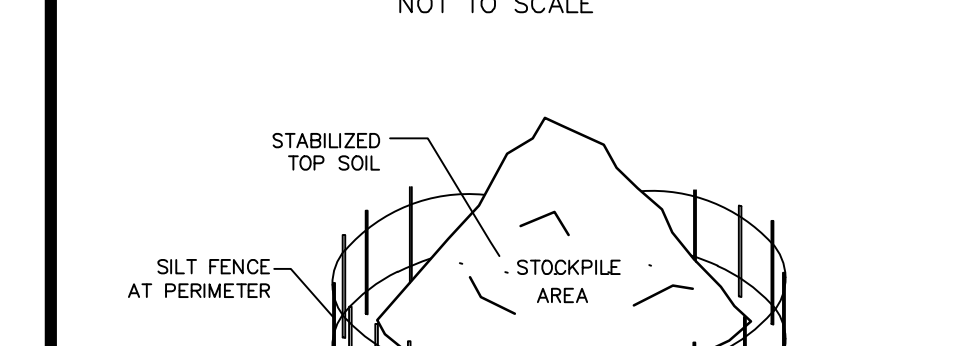
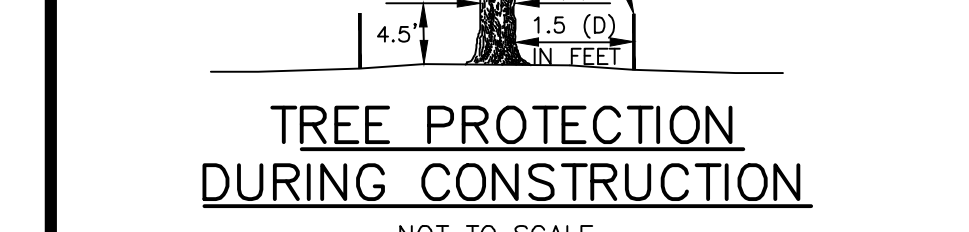
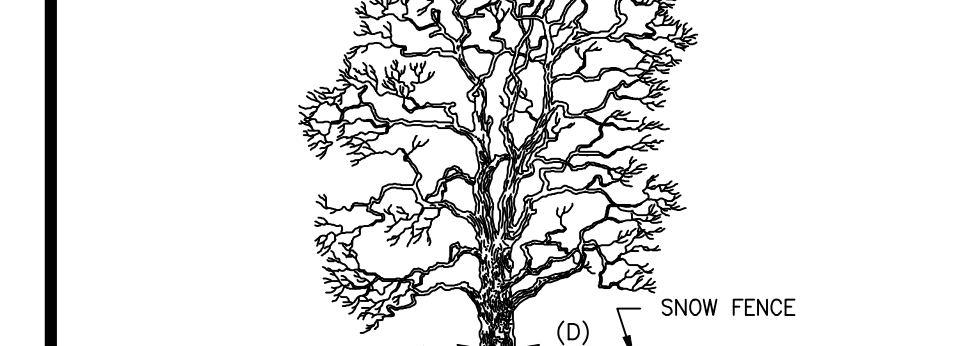
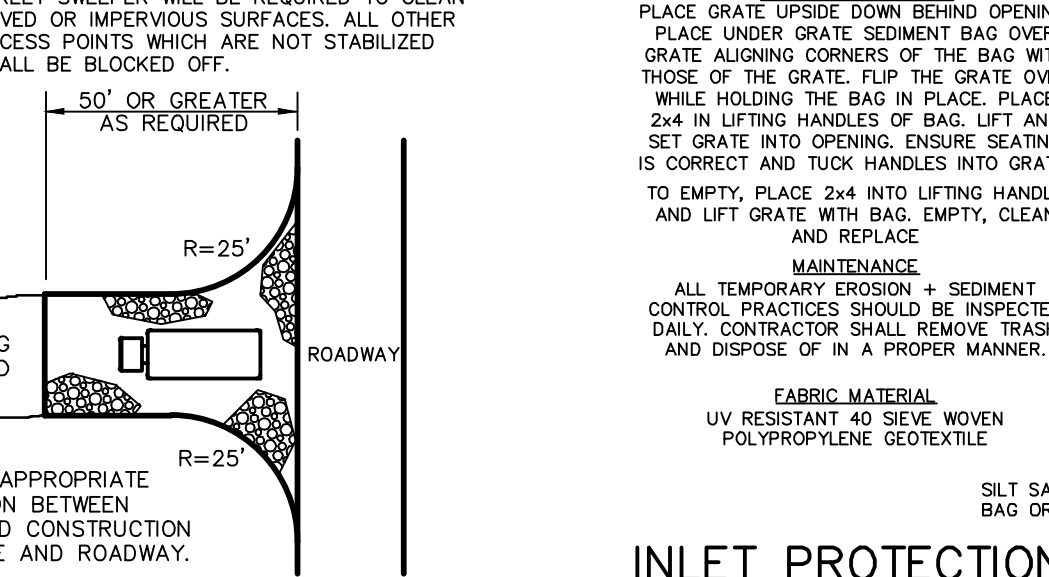
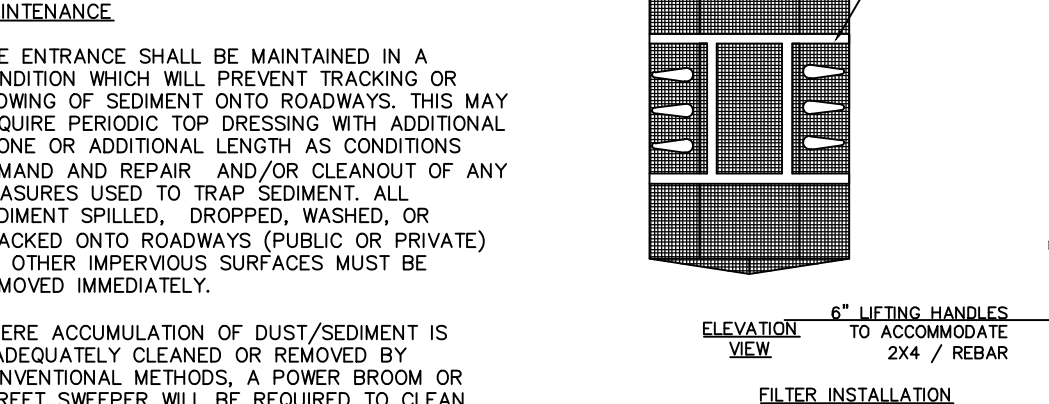
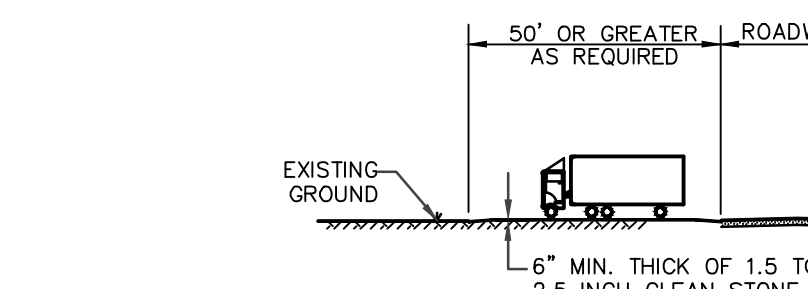


- MAINTENANCE NOTES:**
- SEDIMENT SHALL BE REMOVED FROM THE UPSTREAM FACE OF THE BARRIER WHEN IT HAS REACHED A DEPTH OF 1/2 OF THE BARRIER HEIGHT.
 - REPAIR OR REPLACE BARRIER (FABRIC, POSTS, BALES, ETC.) WHEN DAMAGED.
 - BARRIERS SHALL BE INSPECTED DAILY FOR SIGNS OF DETERIORATION AND SEDIMENT REMOVAL.

DESIGN CRITERIA

- STONE SIZE - USE ASTM C-33, SIZE No. 2 (1/2" TO 1 1/2"). USE CLEAN CRUSHED ANGULAR STONE. CRUSHED CONCRETE OF SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS.
- LENGTH - 50 FEET MINIMUM WHERE THE SOILS ARE COARSE GRAINED (SANDS OR GRAVELS) OR 100 FEET MINIMUM WHERE SOILS ARE FINE GRAINED (CLAYS OR SILTS), EXCEPT WHERE TRAVELED LENGTH IS LESS THAN 100 FEET. WHERE THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD (SEE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL" IN N.J. FOR DIVERSION). IF DIVERSION IS NOT POSSIBLE, THE LENGTH OF THE STABILIZED PAD SHALL BE AS SHOWN IN TABLE BELOW. WHERE THE SLOPE OF THE ACCESS ROAD EXCEEDS 5%, A STABILIZED BASE COURSE OF THE AGGREGATE BITUMINOUS CONCRETE (FABRIC) SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE FABRIC AND USE OF A DENSE GRADE AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL, MUNICIPAL ORDINANCE OR OTHER GOVERNING AUTHORITY. AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRATE, FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING THE STABILIZED CONSTRUCTION ENTRANCE.

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	LENGTH OF STONE REQUIRED
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
>5%	50' OR GREATER AS REQUIRED	200 FT



NOTES:

- BALES SHALL BE SECURELY ANCHORED IN PLACE BY STAKES OR RE-BARS DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD PREVIOUSLY LAD BALE TO FORCE BALES TOGETHER.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.

MAINTENANCE NOTES:

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

6" MIN. THICK OF 1.5 TO 2.5 INCH CLEAN STONE

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SOILS, SEED MIXTURES, AND DATES FOR PERMANENT SEEDINGS FOR SOIL STABILIZATION

SOIL AND SITES	SEED MIXTURE 1/ PERMANENT SEEDING	MINIMUM SEEDING RATES 2/ (POUNDS)		OPTIMUM SEEDING DATES BASED ON PLANT HARDNESS ZONE 3		
		PER 1000 SQ. FT.	PER 500 SQ. FT.	ZONE 5b ZONE 6a	ZONE 6b ZONE 6c	ZONE 7a ZONE 7b
A. EXCESSIVELY DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER 1000 SQ. FT.	PER 500 SQ. FT.	ZONE 5b ZONE 6a	ZONE 6b ZONE 6c	ZONE 7a ZONE 7b
	1. RESIDENTIAL & COMMERCIAL LOTS	265 20 5	53 10 1	3/15-5/31 ZONE 6a	3/1-4/30 ZONE 6b	2/1-4/30 ZONE 7a
	2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	265 20 5	53 10 1	3/15-5/31 ZONE 6a	3/1-4/30 ZONE 6b	2/1-4/30 ZONE 7a
B. WELL TO MODERATELY WELL DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER 1000 SQ. FT.	PER 500 SQ. FT.	ZONE 5b ZONE 6a	ZONE 6b ZONE 6c	ZONE 7a ZONE 7b
	1. RESIDENTIAL & COMMERCIAL LOTS	265 20 5	53 10 1	3/15-5/31 ZONE 6a	3/1-4/30 ZONE 6b	2/1-4/30 ZONE 7a
	2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	265 20 5	53 10 1	3/15-5/31 ZONE 6a	3/1-4/30 ZONE 6b	2/1-4/30 ZONE 7a
C. SOMEWHAT POORLY DRAINED	REFER TO SEED MIXES TABLE 4-2 & TABLE 4-3	PER 1000 SQ. FT.	PER 500 SQ. FT.	ZONE 5b ZONE 6a	ZONE 6b ZONE 6c	ZONE 7a ZONE 7b
	1. RESIDENTIAL & COMMERCIAL LOTS	80 130 3	20 33 1	8/15-10/15 ZONE 6a	8/15-10/15 ZONE 6b	8/15-10/30 ZONE 7a
	2. POND AND CHANNEL BANKS, DIKES, BERMS & DAMS	80 130 3	20 33 1	8/15-10/15 ZONE 6a	8/15-10/15 ZONE 6b	8/15-10/30 ZONE 7a

**RECOMMENDED
SEED MIXTURE
FOR INFILTRATION
BASIN (SIDES ONLY)**

**RECOMMENDED
SEED MIXTURE**

NOTES:

- SEEDING MIXTURES AND/OR RATES NOT LISTED ABOVE MAY BE USED IF RECOMMENDED BY THE LOCAL SOIL CONSERVATION DISTRICT, SOIL CONSERVATION SERVICE, RECOMMENDATIONS OF THE COUNTY ENGINEER, HUNTERDON, MONMOUTH, OCEAN, BURLINGTON, CAMDEN, GLOUSTER, ATLANTIC, CUMBERLAND AND CAPE MAY COUNTIES.
- GRASS SEED MIXTURES CHECKED BY THE CHIEF OF THE BUREAU OF SEED CERTIFICATION, NEW JERSEY DEPARTMENT OF AGRICULTURE, TRENTON, NEW JERSEY, WILL ASSURE THE PURCHASER THAT THE MIXTURE OBTAINED IS THE MIXTURE ORDERED.
- PLANT HARDNESS ZONE (SEE MAP, P. 4-15)
ZONE 5b - PORTIONS OF SUSSEX AND WARREN COUNTIES.
ZONE 6a - PORTIONS OF BERGEN, PASSAIC, MORRIS, SOMERSET AND HUNTERDON COUNTIES.
ZONE 6b - PORTIONS OF SUSSEX, PASSAIC, MORRIS, ESSEX, HUDSON, UNION, SOMERSET, MIDDLESEX, MERCER, HUNTERDON, MONMOUTH, OCEAN, BURLINGTON, CAMDEN, GLOUSTER, ATLANTIC, CUMBERLAND AND CAPE MAY COUNTIES.
ZONE 7a - INCLUDES PORTIONS OF CAMDEN, GLOUSTER, SALEM, CUMBERLAND, CAPE MAY, ATLANTIC, BURLINGTON, OCEAN AND MONMOUTH COUNTIES.
ZONE 7b - INCLUDES PORTIONS OF CAPE MAY, ATLANTIC, OCEAN AND MONMOUTH COUNTIES.

STANDARD FOR TOPSOILING:

A. TOPSOIL SHOULD BE FRIABLE, LOAMY, FREE OF DEBRIS, OBJECTIONABLE WEEDS AND STONES, AND CONTAIN NO TOXIC SUBSTANCE OR ADVERSE CHEMICAL PHYSICAL CONDITION THAT MAY BE HARMFUL TO PLANT GROWTH. SOLUBLE SALTS SHOULD NOT BE EXCESSIVE (CONDUCTIVITY LESS THAN 0.5 MILLIMHO PER CENTIMETER). MORE THAN 0.5 MILLIMHO MAY DESICCATE SEEDLINGS AND ADVERSELY IMPACT GROWTH. IMPORTED TOPSOIL SHALL HAVE A MINIMUM ORGANIC MATTER CONTACT OF 2.75 PERCENT. ORGANIC MATTER CONTENT MAY BE RAISED BY ADDITIVES.

B. TOPSOIL SUBSTITUTE IS A MATERIAL WHICH MAY BE BLENDED 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. SOIL TESTS SHALL BE PERFORMED TO DETERMINE THE COMPONENTS OF SAND, SILT, CLAY, ORGANIC MATTER, SOLUBLE SALTS AND PH LEVEL.

¹ FRIABLE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOIL TESTS.

² LOAMY MEANS TEXTURE GROUPS CONSISTING OF COARSE LOAMY SANDS, SANDY LOAM, FINE AND VERY FINE SANDY LOAM, LOAM, SILT LOAM, CLAY LOAM, SANDY CLAY LOAM AND SILTY CLAY LOAM TEXTURES AND HAVING LESS THAN 35% COARSE FRAGMENTS (PARTICLES LESS THAN 2MM IN SIZE) AS DEFINED IN THE GLOSSARY OF SOIL SCIENCE TERMS, 1996, SOIL SCIENCE SOCIETY OF AMERICA.

- 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 CONFIRMED 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. 4-11) OR TEMPORARY (PG. 7-1) VEGETATIVE COVER FOR SOIL STABILIZATION. WEEDS SHOULD NOT BE ALLOWED TO GROW ON STOCKPILES.
- 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. 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.

- 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, FIRMS IN PLACE IS REQUIRED. ALTERNATIVE DEPTHS MAY BE CONSIDERED WHERE SPECIAL REGULATORY AND/OR INDUSTRY DESIGN STANDARDS ARE APPROPRIATE SUCH AS ON GOLF COURSE, 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 REQUIREMENT 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.

PROPOSED CONSTRUCTION SEQUENCE

- FIRST WEEK OF CONSTRUCTION APPLY PROPER MEASURES FOR THE CONTROL OF SOIL EROSION AND SEDIMENT CONTROL.
 - TEMPORARY STABILIZATION OF AREAS INITIALLY DISTURBED. STABILIZATION TO BE ACCOMPLISHED BY USE OF TEMPORARY SEEDING AND/OR STRAW MULCHING OR EQUIVALENT MATERIAL AT A RATE OF TWO TONS PER ACRE, ACCORDING TO STATE STANDARDS WILL TAKE APPROXIMATELY TWO DAYS.
 - SITE DEMOLITION & EXCAVATION WILL TAKE APPROXIMATELY ONE WEEK.
 - ROUGH GRADING WILL TAKE APPROXIMATELY ONE WEEK.
 - INSTALLATION AND PROTECTION OF SANITARY SEWER CONNECTION, AND OTHER UTILITY CONNECTIONS WILL TAKE APPROXIMATELY ONE WEEK.
 - GRAVEL RE-DRESSING, CURBING, AND SIDEWALK CONSTRUCTION WILL TAKE APPROXIMATELY TWO TO THREE WEEKS.
 - BUILDING CONSTRUCTION WILL TAKE APPROXIMATELY ONE WEEK.
 - CONTINUOUS MAINTENANCE OF SOIL EROSION PROCEDURES.
 - INSTALLATION OF LANDSCAPING MATERIALS WILL TAKE APPROXIMATELY TWO DAYS.
 - REMOVAL OF SOIL EROSION AND SEDIMENT CONTROL DEVICES AFTER ESTABLISHED VEGETATIVE GROWTH HAS OCCURRED.
- TOTAL DURATION OF PROJECT EXPECTED TO BE 2 - 3 MONTHS.

**STANDARD FOR
TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION**

DEFINITION
ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION, OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE
TO TEMPORARILY STABILIZE THE SOIL AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACCOMPLISHED.

WATER QUALITY ENHANCEMENT
PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVER LAND MOVEMENT OF STORMY WATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE
ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

- SITE PREPARATION**

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, P. 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.).
- 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 RATE ESTABLISHED BY SOIL TESTING. 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, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.

C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RELOTTED AS ABOVE.

D. SOILS HIGH ON SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS PG. 1-1.
- SEEDING**

A. SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2.

**RECOMMENDED
SEED MIXTURE**

SPECIES	SEEDING RATES PER 1,000 SQ. FEET	OPTIMUM SEEDING DATE BASED ON PLANT HARDNESS ZONE 3/ DEPTH 2/ (INCHES)		
		ZONE 5b, 6a	ZONE 6b	ZONE 7a, 7b
PERENNIAL RYEGRASS	100	3/15 to 6/1	3/1 to 5/15	2/15 to 5/1
SPRING OATS	86	3/15 to 6/1	3/1 to 5/15	2/15 to 5/1
WINTER BARLEY	98	6/1 to 9/15	8/15 to 10/1	8/15 to 10/15
ANNUAL RYEGRASS	100	3/15 to 6/1	3/1 to 5/15	2/15 to 5/1
WINTER CERIAL RYE	112	2.8	6/1 to 11/1	8/1 to 12/15
WARM SEASON GRASSES				
PEARL MILLET	20	0.5	6/1 to 6/1	5/15 to 8/15
MILET (GERMAN OR HUNGARIAN)	30	0.7	6/1 to 6/1	5/15 to 8/15

- SEEDING RATE FOR WARM SEASON GRASS SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.
- MAY BE PLANTED THROUGH SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.
- PLANT HARDNESS ZONE (SEE FIG. 7.1)
ZONE 5b - PORTIONS OF SUSSEX AND WARREN COUNTIES.
ZONE 6a - PORTIONS OF SUSSEX, WARREN, PASSAIC, MORRIS, SOMERSET AND HUNTERDON COUNTIES.
ZONE 6b - PORTIONS OF BERGEN, PASSAIC, MORRIS, ESSEX, HUDSON, UNION, SOMERSET, MIDDLESEX, MERCER, HUNTERDON, MONMOUTH, OCEAN, BURLINGTON, CAMDEN, GLOUSTER, ATLANTIC, CUMBERLAND AND CAPE MAY COUNTIES.
ZONE 7a - INCLUDES PORTIONS OF CAMDEN, GLOUSTER, SALEM, CUMBERLAND, CAPE MAY, ATLANTIC, BURLINGTON, OCEAN AND MONMOUTH COUNTIES.
ZONE 7b - INCLUDES PORTIONS OF CAPE MAY, ATLANTIC, OCEAN AND MONMOUTH COUNTIES.
- TWICE THE DEPTH FOR SANDY SOILS

- CONVENTIONAL SEEDING**, APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DRILL OR CULTPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTPACKER SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RANKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
- HYDROSEEDING** IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION IV MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
- AFTER SEEDING**, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

IV. MULCHING
MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER RECOVERY ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

DUST CONTROL SPECIFICATIONS

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1000
LIQUID LIME	12:1	FINE SPRAY	250
POLYMER IN WATER	NONE	FINE SPRAY	250
POLYACRYLAMIDE (PAM) - SPRAY ON	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS MAY ALSO BE USED FOR POLYACRYLAMIDE (PAM) - DRY SPREAD	NONE	250
AGGREGATED SOY BEAN SOAP STEAK	NONE	COARSE SPRAY	1000

- NOTES:**
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED ONLY WHERE BLOWING STARTS BEFORE VEGETATION IS ESTABLISHED ON 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, BURIAL FENCES, GRADE 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.

**STANDARD FOR
PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION**

DEFINITION
ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG TERM PROTECTION.

PURPOSE
TO PERMANENTLY STABILIZE THE SOIL, ENSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT.

WATER QUALITY ENHANCEMENT
SLOWS THE OVER-LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE
ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

- SITE PREPARATION**

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.

B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOILING APPLICATION, THE SURFACE SHOULD 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 AN AVERAGE DEPTH OF 5 INCHES, MINIMUM OF 4 INCHES, FIRMS IN PLACE IS REQUIRED ON ALL SITE. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.

D. INSTALL NEEDED EROSION CONTROL PRACTICES AND FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.
- SEEDBED PREPARATION**

A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMS, 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://NAJES.RUTGERS.EDU/COUPLING). 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 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. HIGH ACID PRODUCING 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 PREPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.
- SEEDING**

A. SELECT A MIXTURE FROM TABLE 4-3 OR USE MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED MIXTURES MUST HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION UP TO 50% REDUCTION IN SEEDING RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2. WARM SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 80°F AND ABOVE. SEE TABLE 4-3, MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON MIXTURES SHALL BE THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 80°F. MANY GRASSES BECOME ACTIVE AT 60°F. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTPACKER SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 48 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RANKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT-FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING (ALSO SEE SECTION IV MULCHING). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

III. SEEDING

IV. MULCHING

- MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.
- A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH SHOULD BE APPLIED TO THE SURFACE. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.
- APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% (95% FOR TEMPORARY STABILIZATION) OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAY - SPREAD MULCH IN DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.
- ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS:

- 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 CROSS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
- MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.
- CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON STEEPER SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
- LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY OR STRAW MULCH.

- APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.
- USE ONE OF THE FOLLOWING:
 - ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN 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 IMPEDED GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.
 - SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION OF MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION TO THE EXCLUSION OF OTHER PRODUCTS.

B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER OR SPREADER. MULCH SHALL BE APPLIED TO THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 80-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS. SEEDED AREAS WHERE WOOD-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

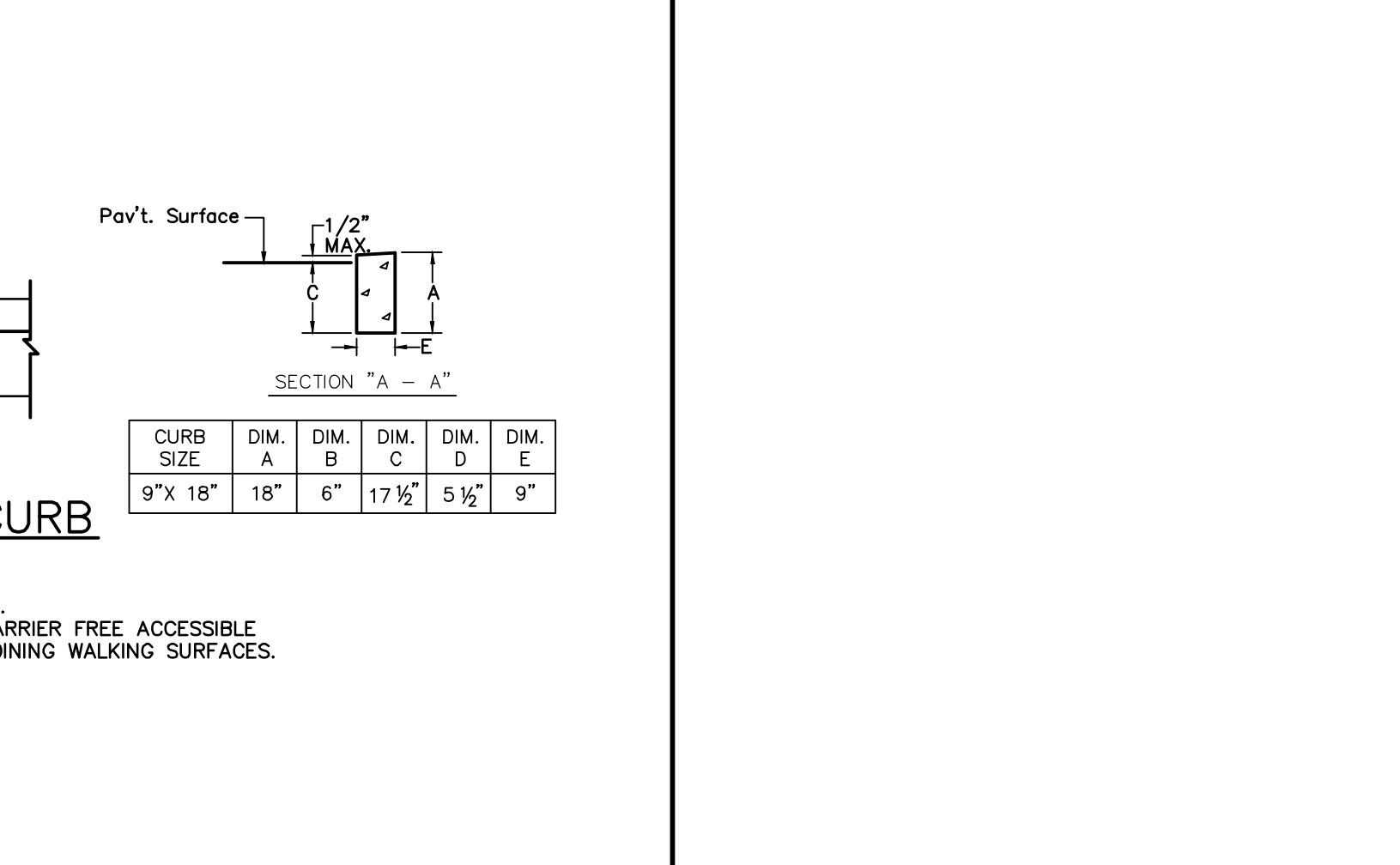
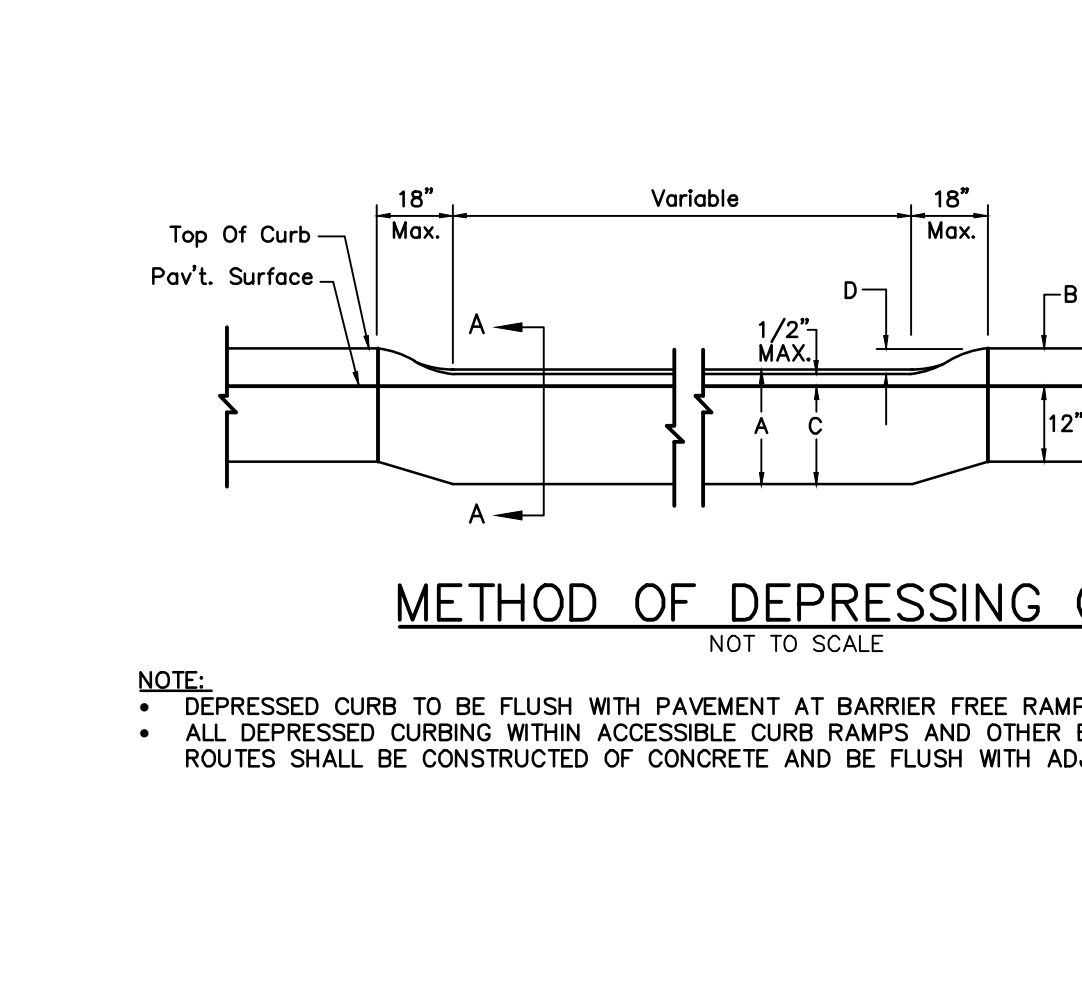
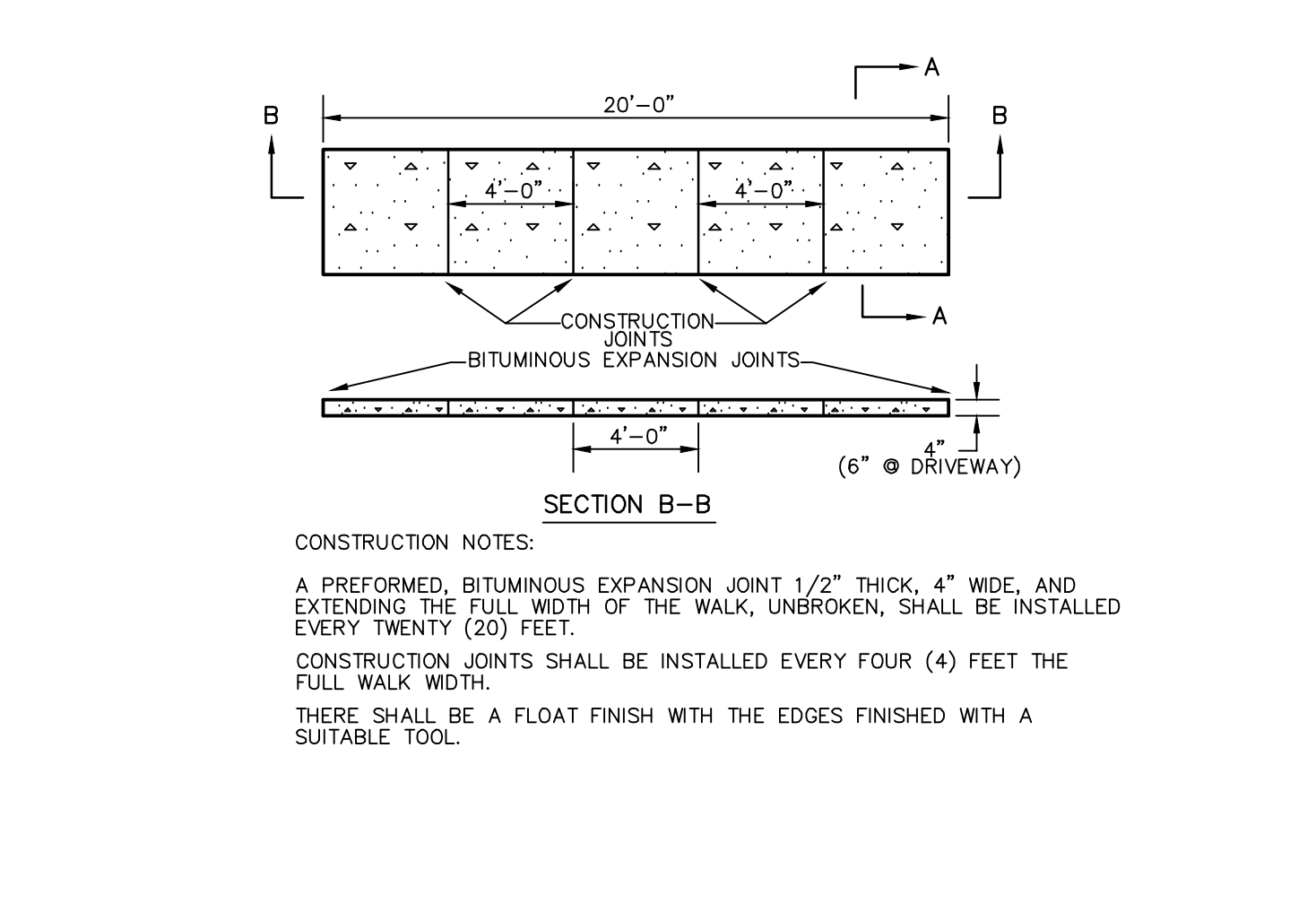
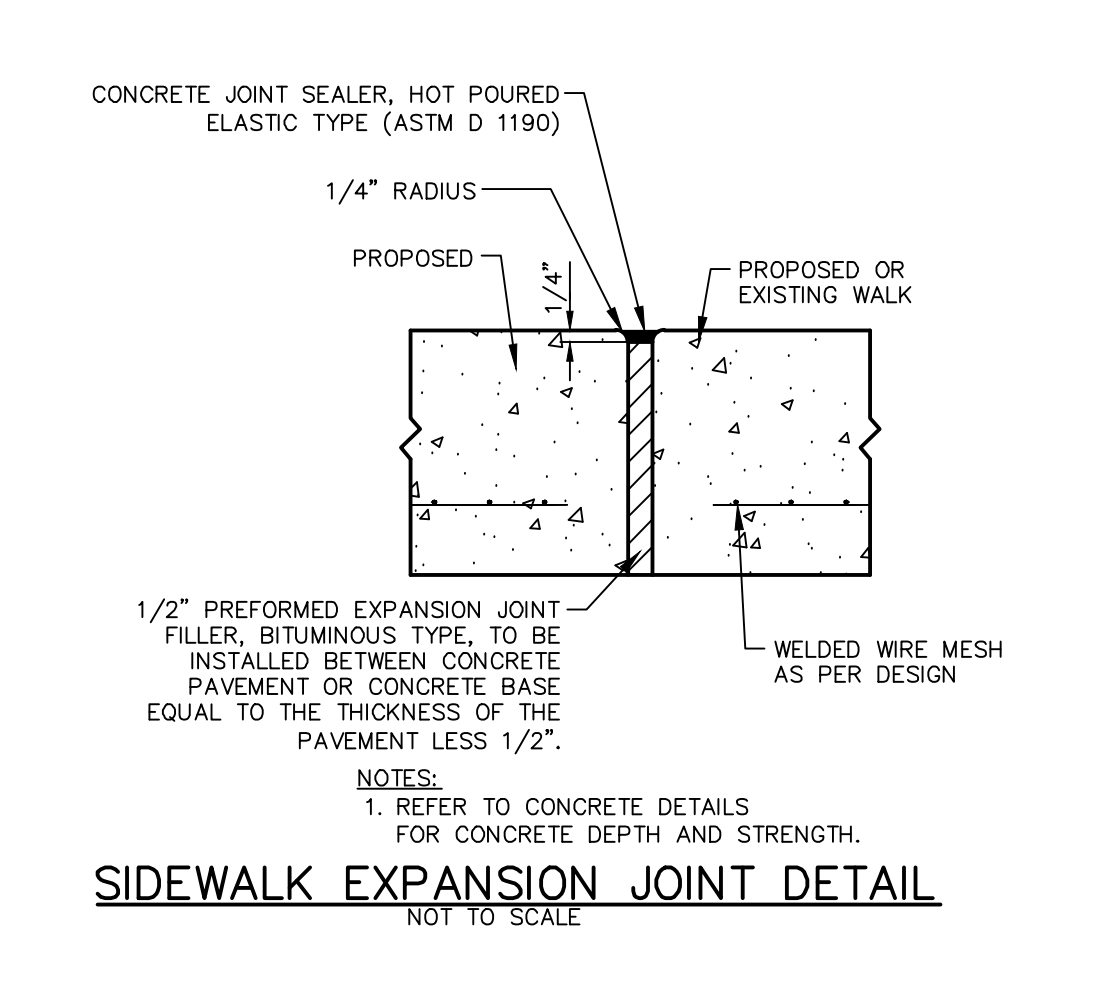
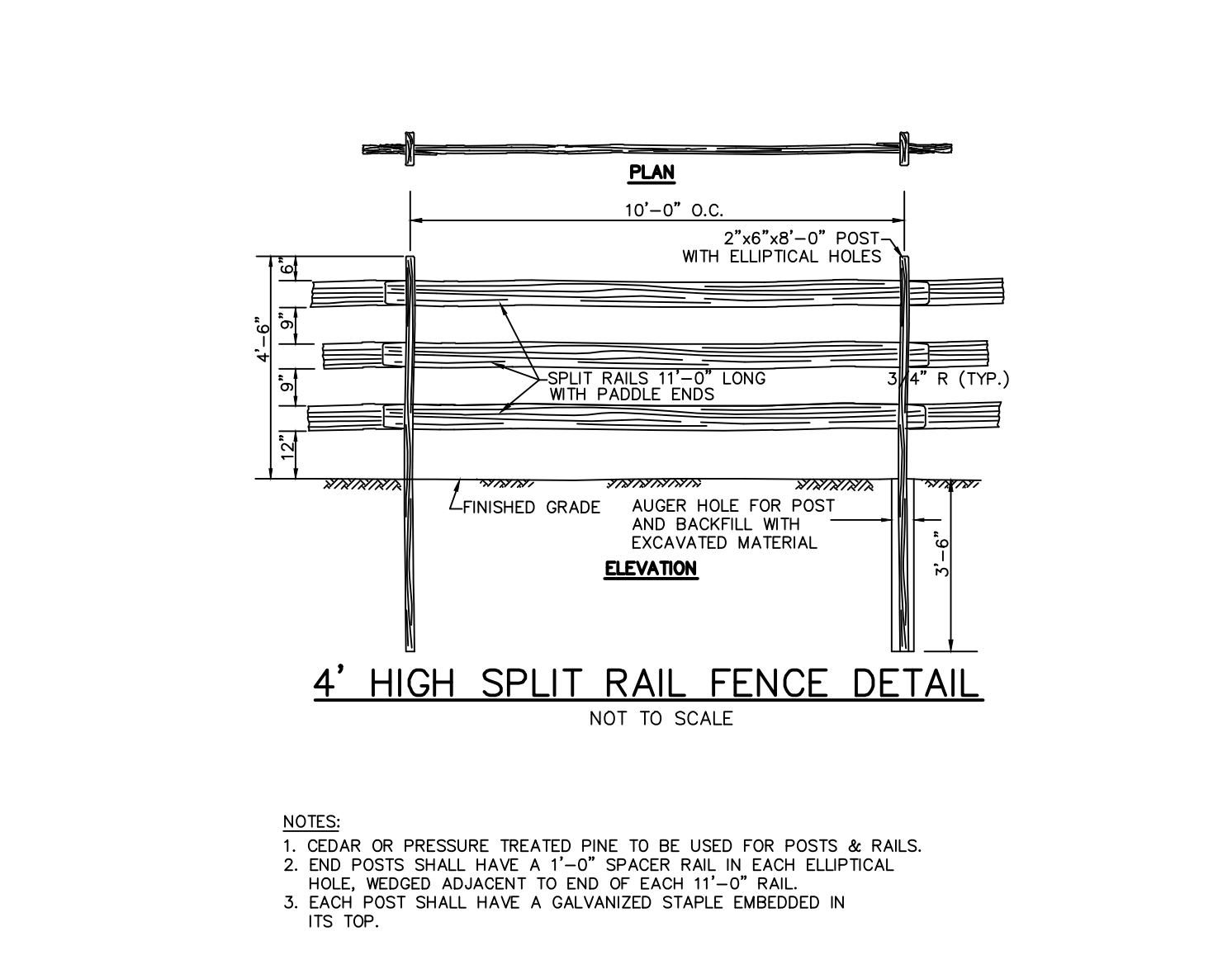
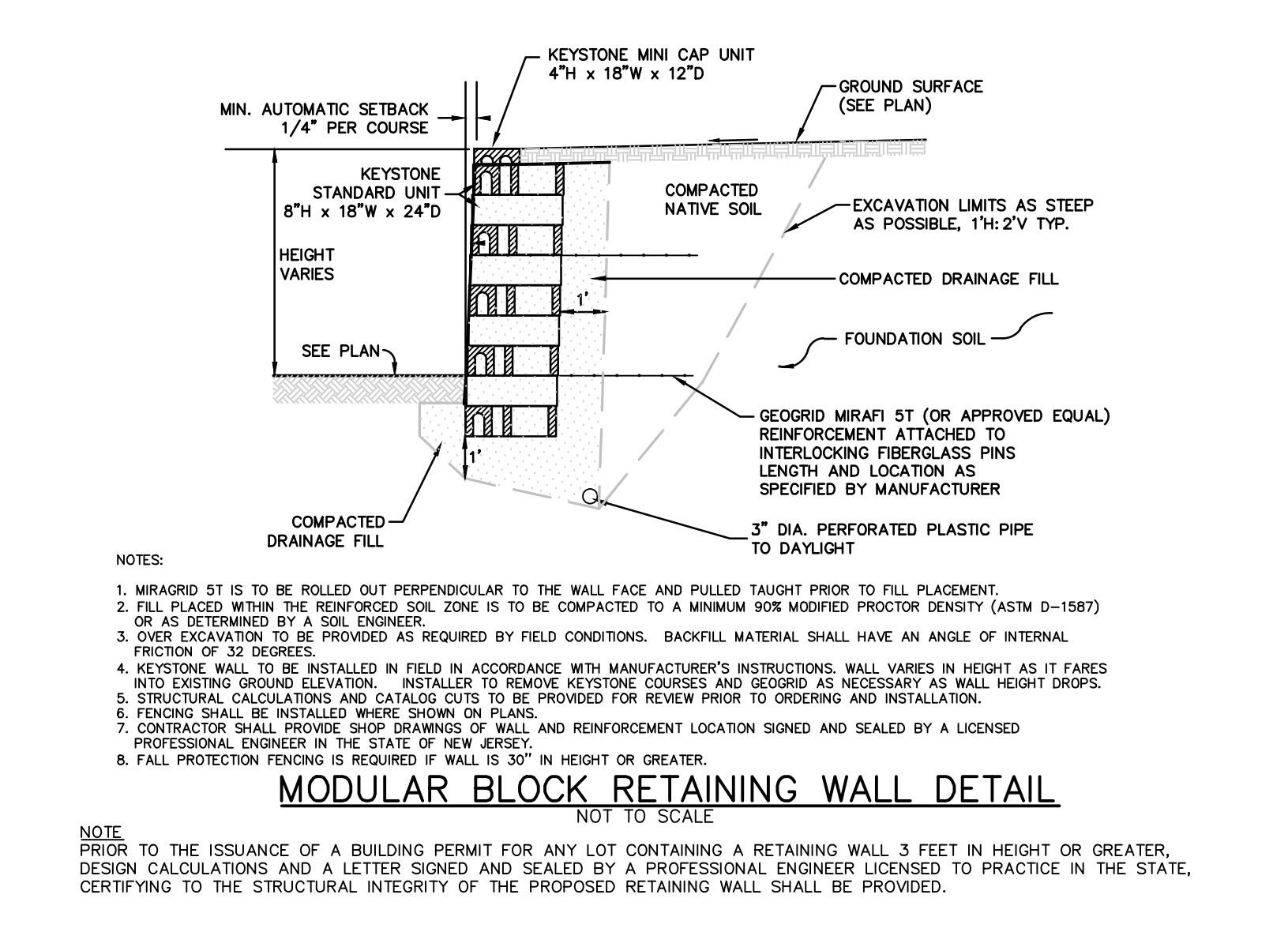
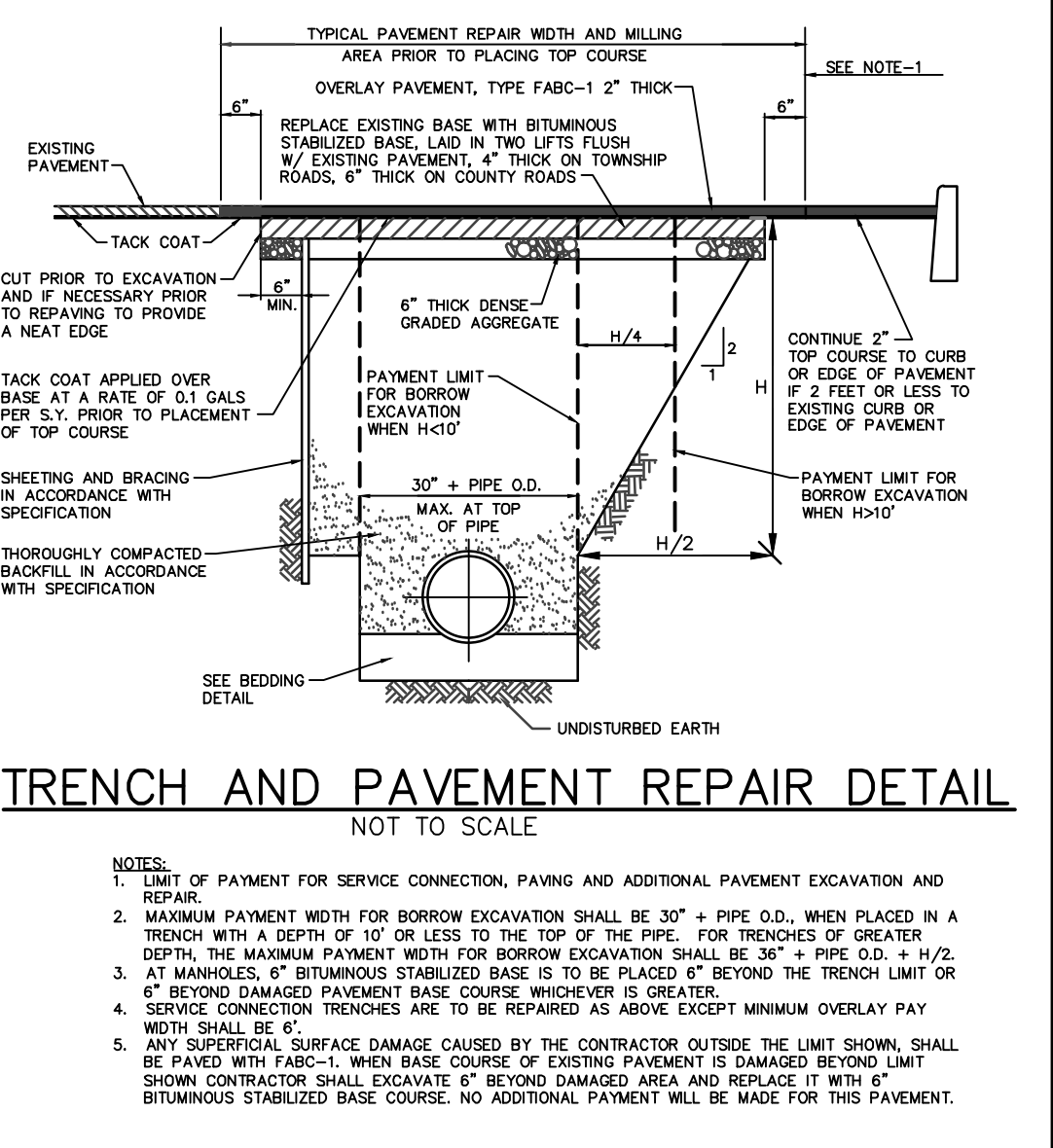
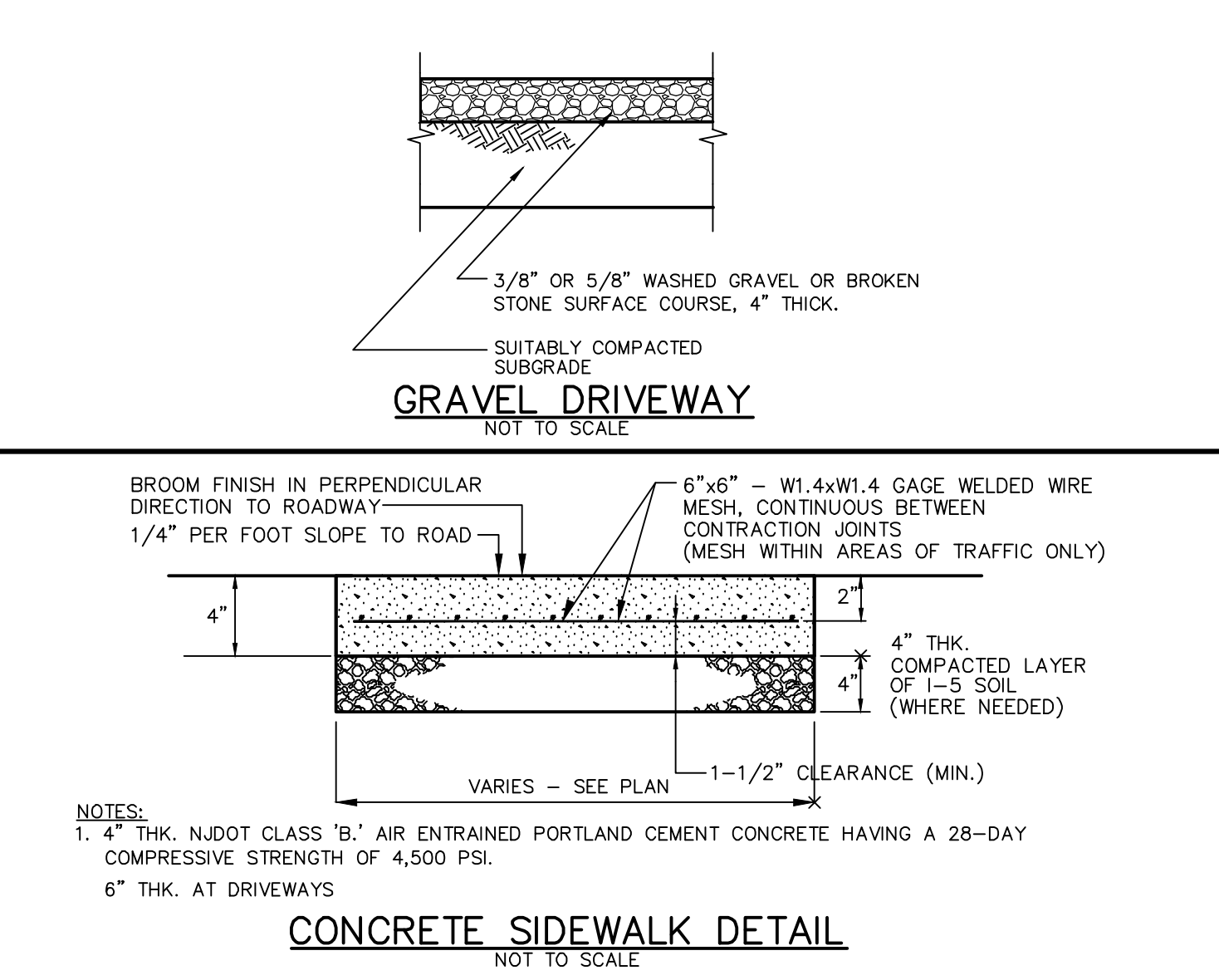
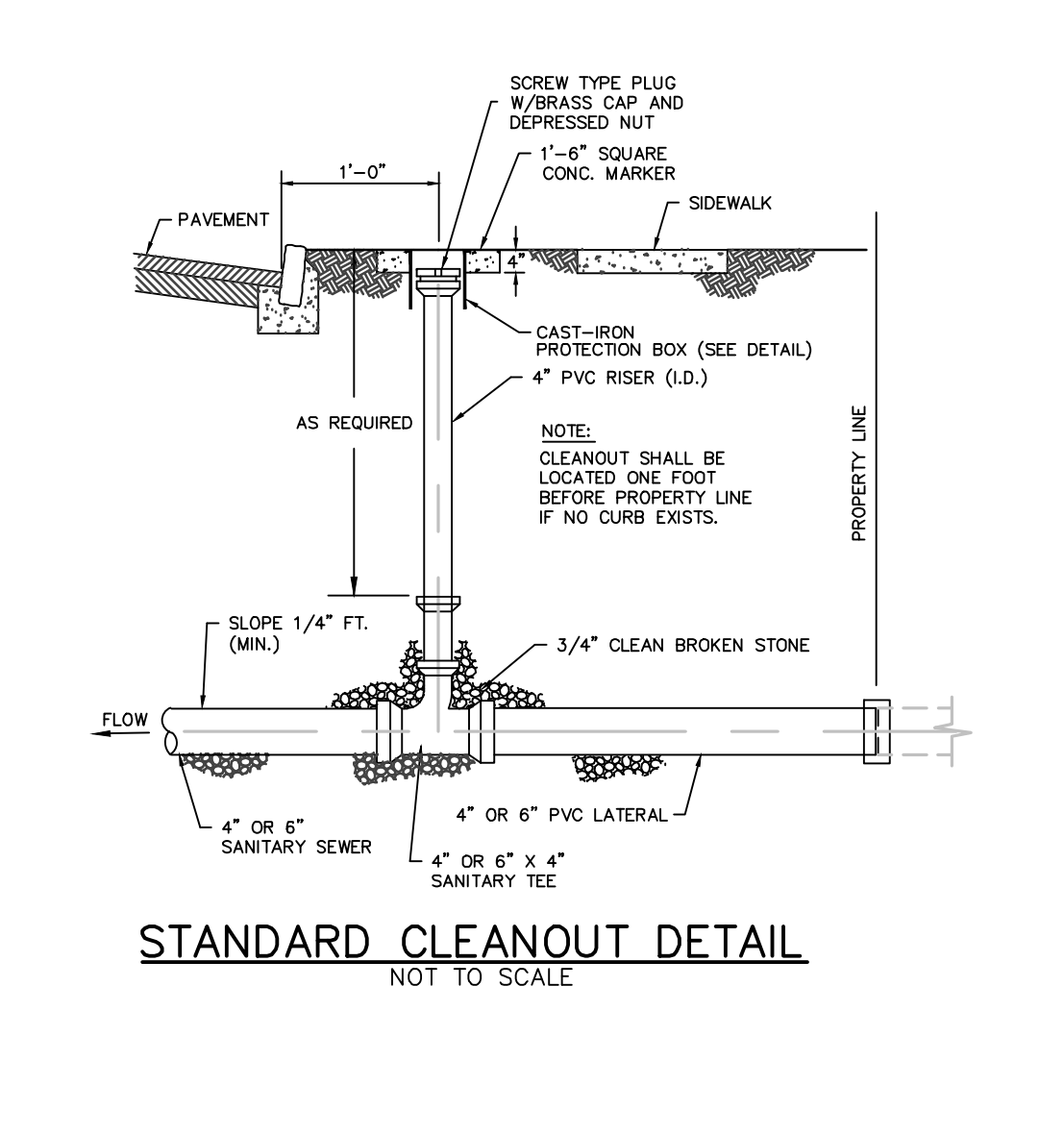
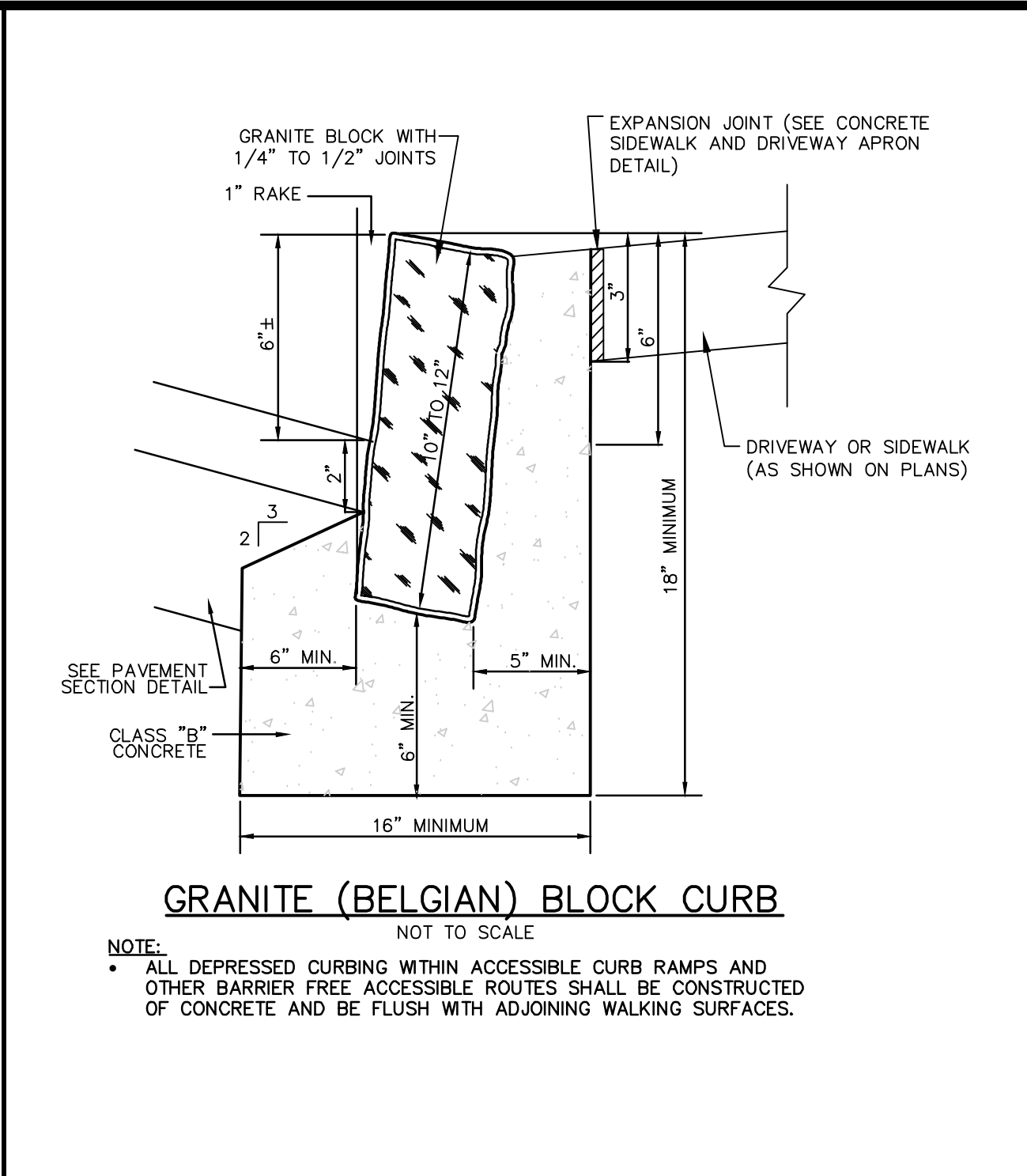
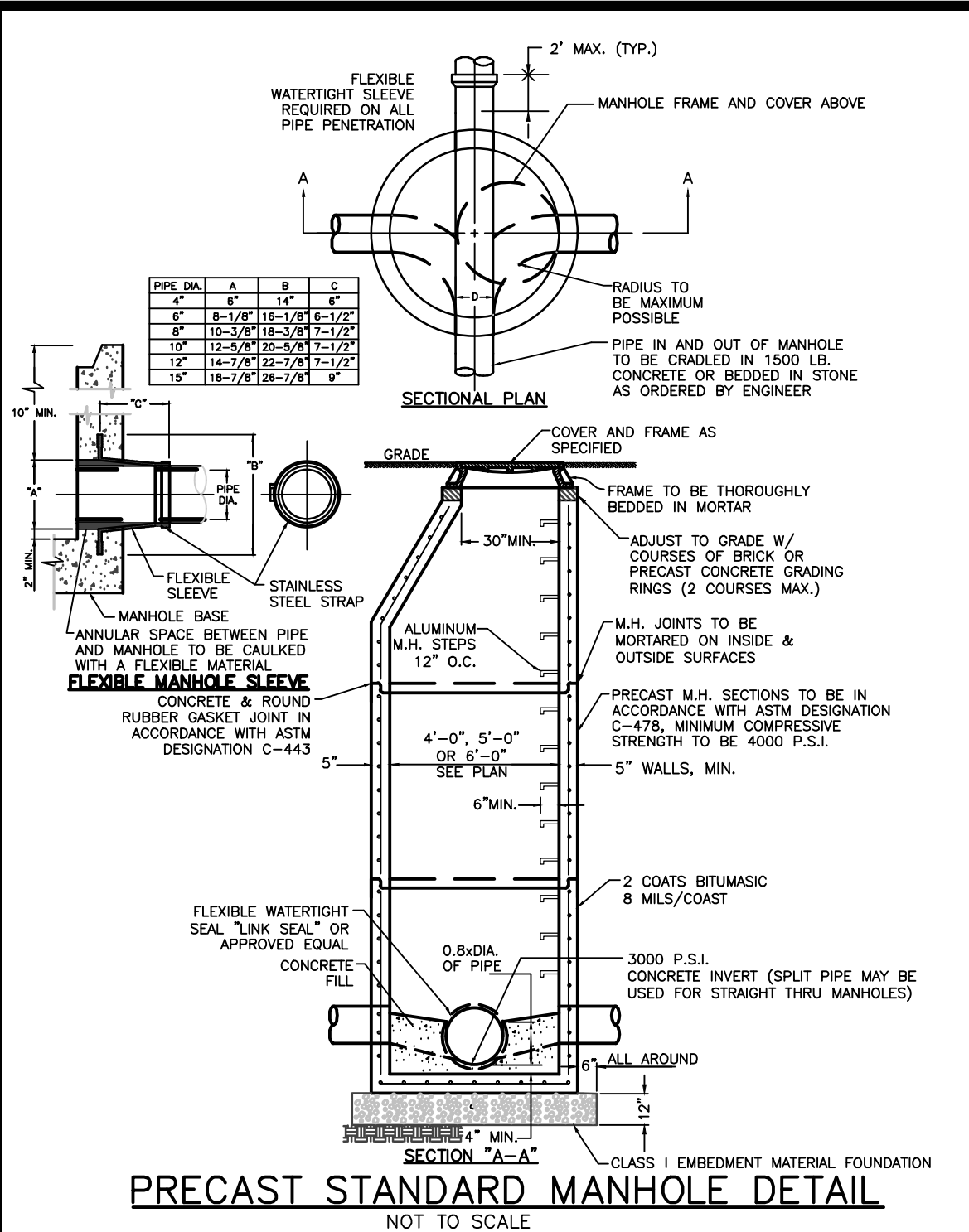
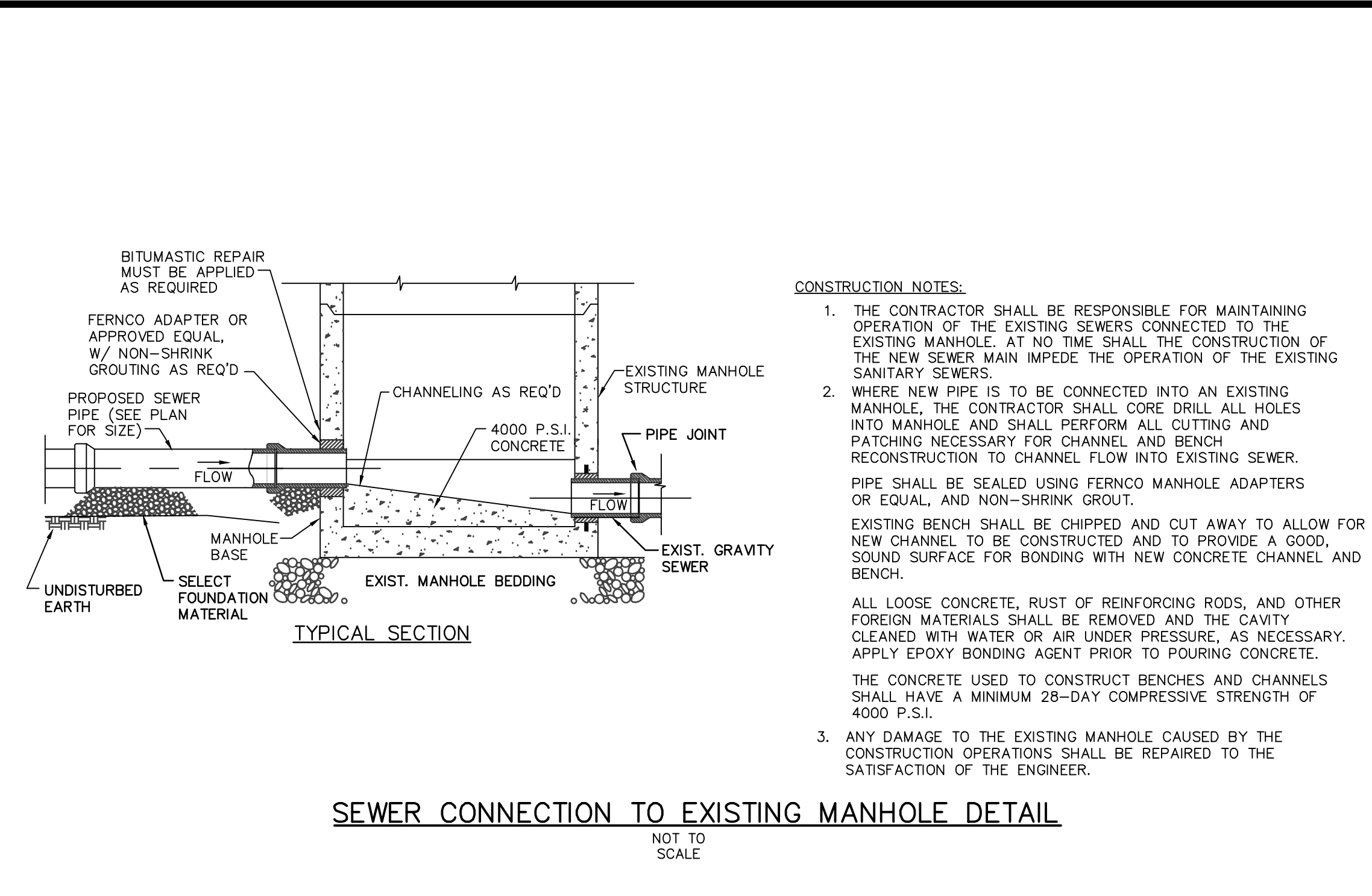
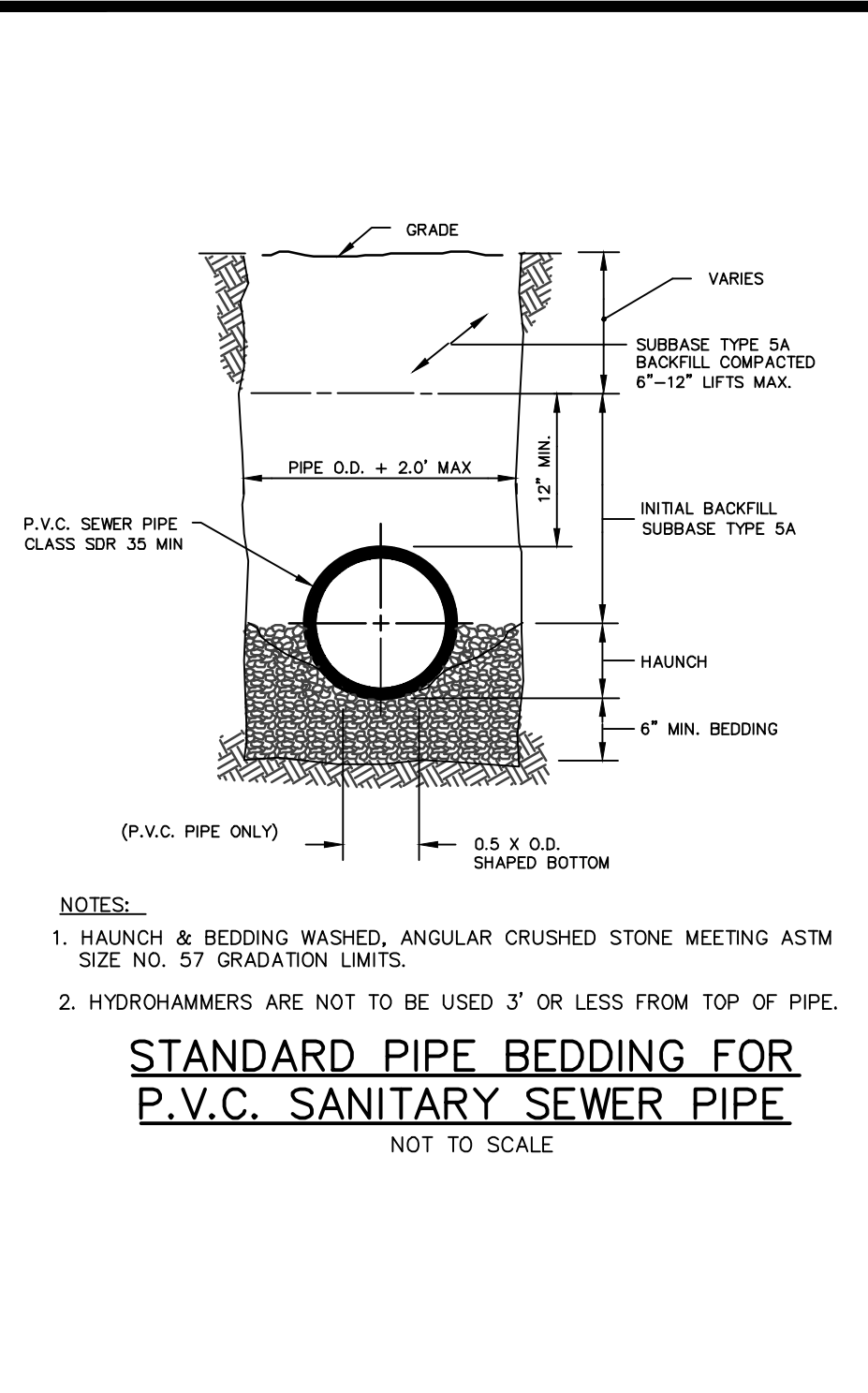
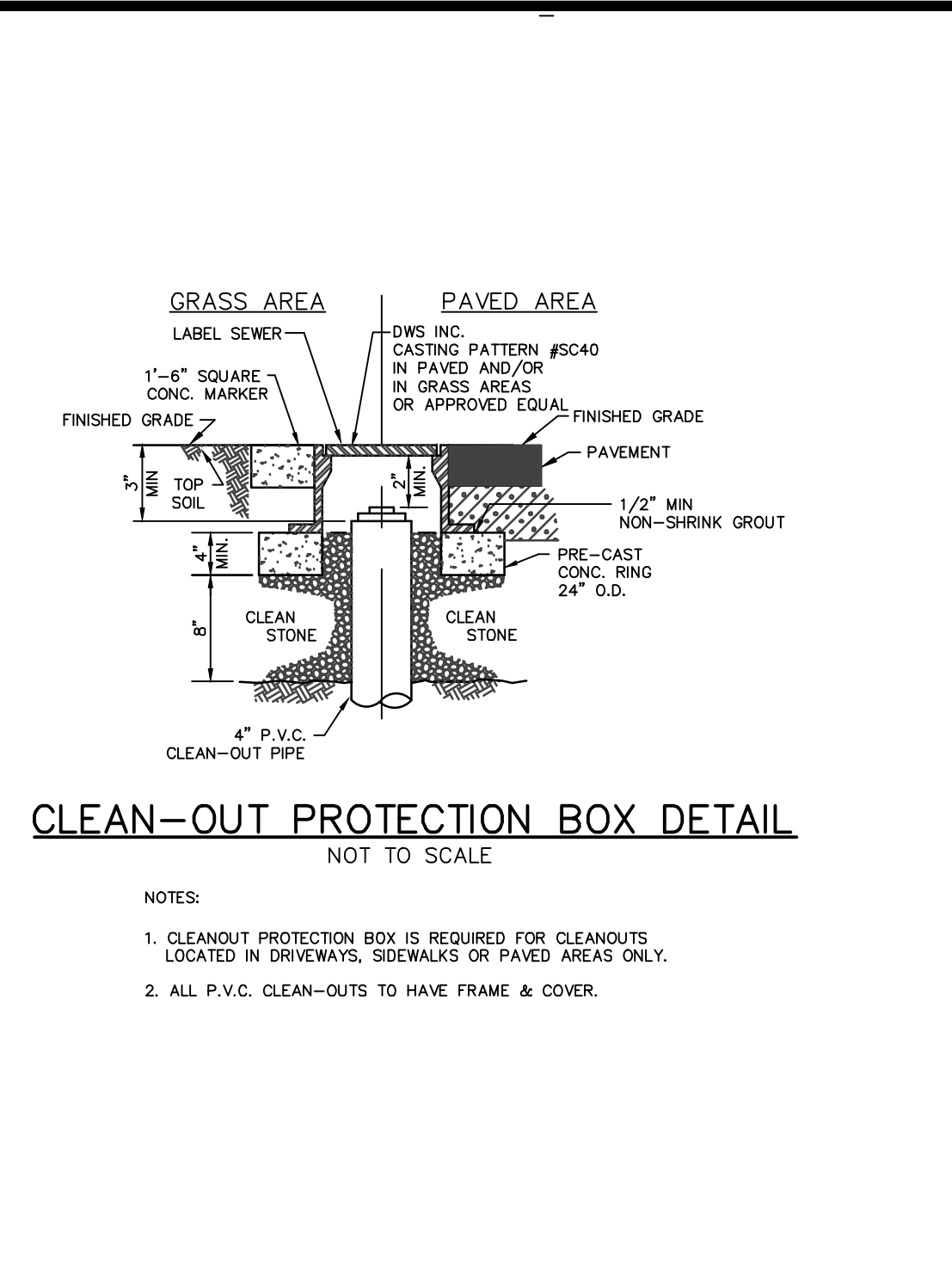
APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

- V. IRRIGATION (where feasible)
- IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

- VI. TOPDRESSING
- SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) IS PRESCRIBED IN SECTION IV-A - SEEDING PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.


VII. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCHING AND OTHER MANAGEMENT PRACTICES AND APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED



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PRELIMINARY & FINAL MAJOR SITE PLAN
BAYSIDE COVE DEVELOPMENT
 LOT 1 IN BLOCK 1.01, LOT 1 IN BLOCK 1,
 LOT 4 & 5 IN BLOCK 1.02
 BOROUGH OF KEANSBURG
 MONMOUTH COUNTY - NEW JERSEY
 TAX MAP SHEET 1, LAST REVISED MARCH 2023



Kennedy Consulting Engineers, LLC
 211 Maple Avenue
 Red Bank, New Jersey 07701
 732.212.9393 TEL • 732.212.9399 FAX

CONSTRUCTION
DETAILS
 CD-1

FILE NAME: Base.DWG	DRAWN BY: KTS/ARC
DATE: 11/20/24	

JAMES A. KENNEDY, P.E.
 NEW JERSEY PROFESSIONAL ENGINEER NO. 41275

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