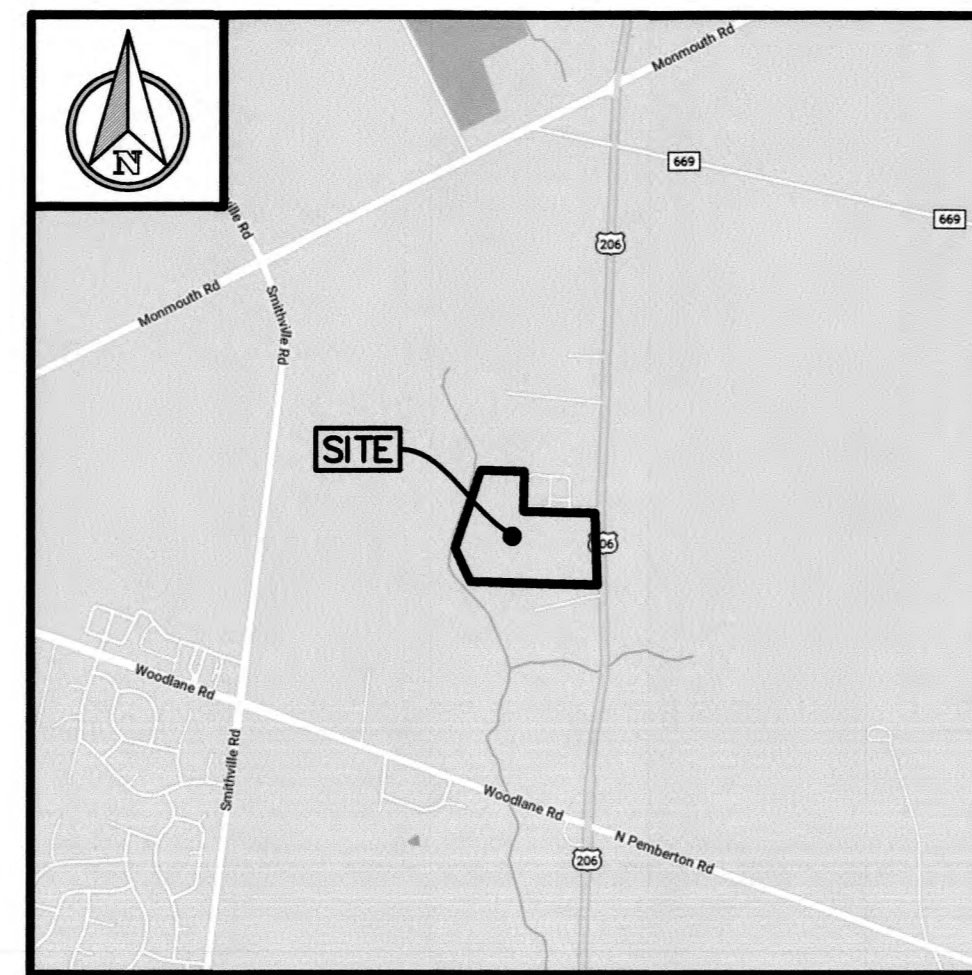


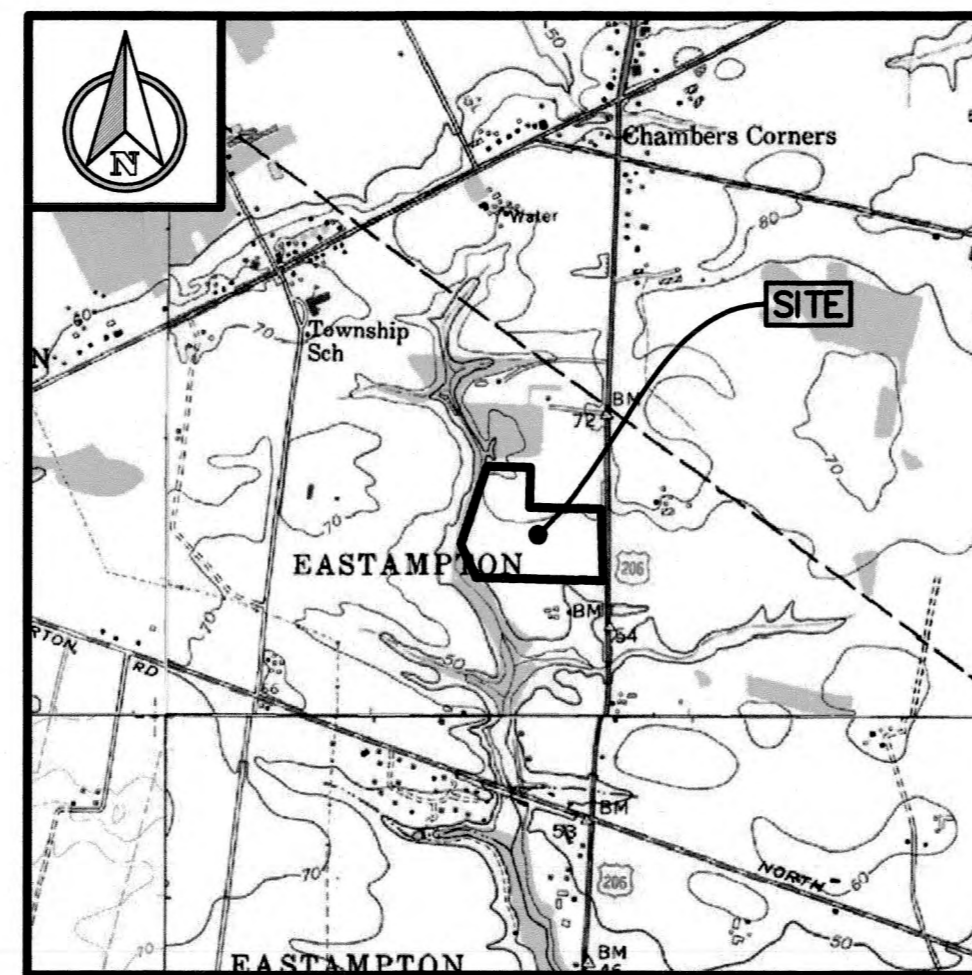
PRELIMINARY/FINAL SITE PLAN for

ROCKEFELLER GROUP LOGISTICS AT EASTAMPTON

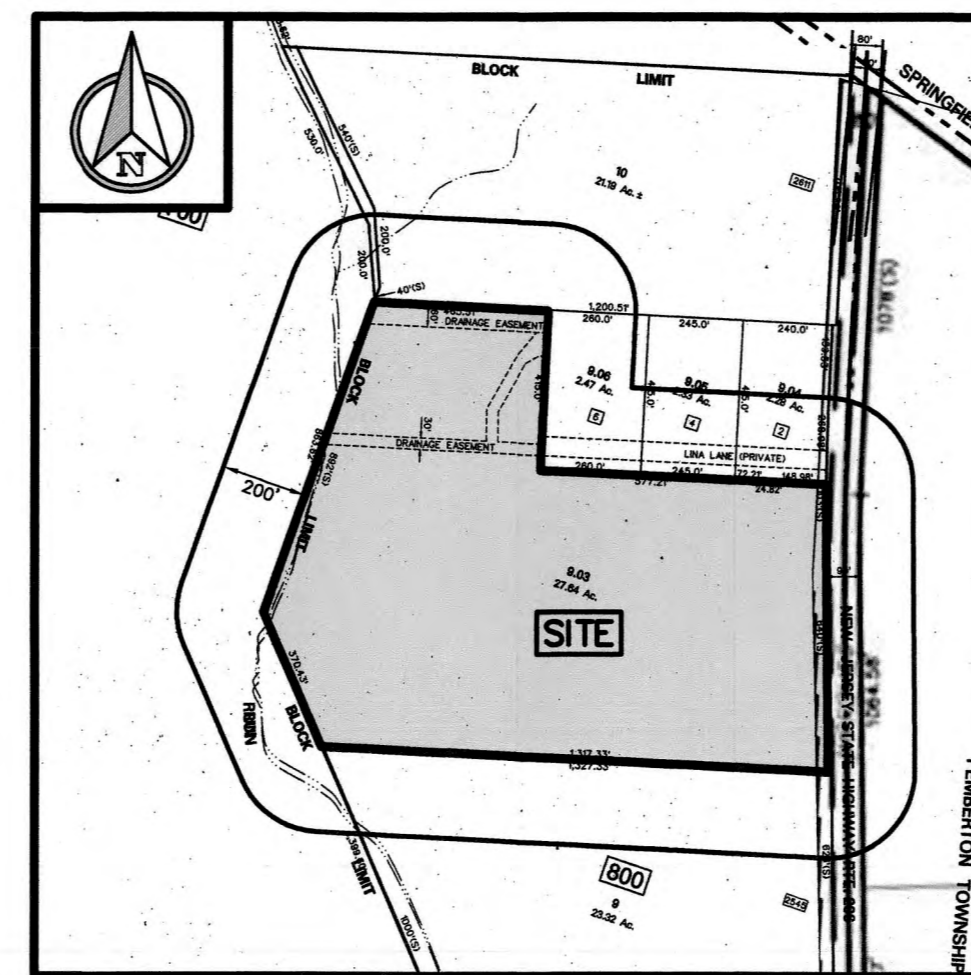
EASTAMPTON TOWNSHIP
BURLINGTON COUNTY, NEW JERSEY
BLOCK 800, LOT 9.03



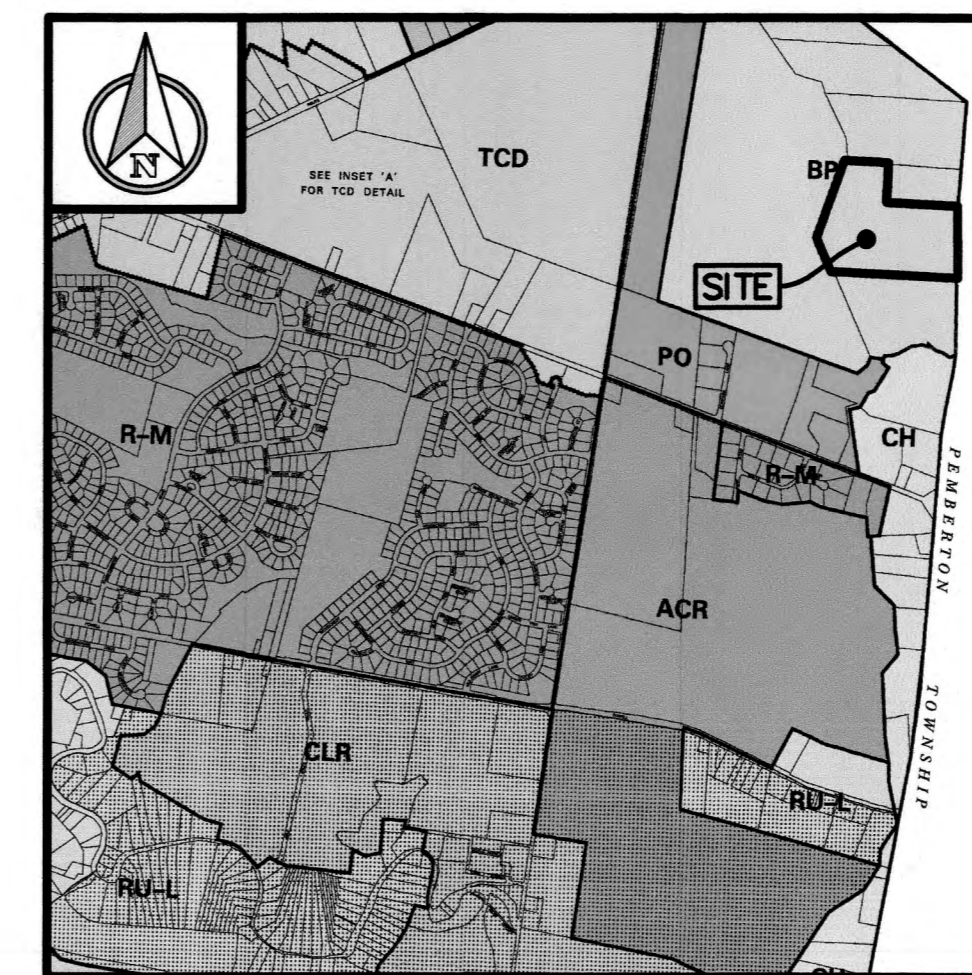
ROAD MAP
1"=2,000'



U.S.G.S. MAP
1"=2,000'



TAX MAP
1"=500'



ZONE MAP
1"=1,000'

200' OWNERS LIST

EASTAMPTON		TOWNSHIP OF PEMBERTON			
BLOCK	LOT	NAME & ADDRESS	BLOCK	LOT	NAME & ADDRESS
700	9	US Home Corporation 2465 Koser Road Hamilton, NJ 08690	779	1	206 Associates Box 401 Columbus, NJ 08022
800	9	Gromark FS, LLC 308 N E Frost Street Milford, DE 19963	779	2	Howard, Sheryl, Eliz, Michael Mattson Box 20 Mt. Holly, NJ 08060
800	9.04, 9.05	Epicore Networks USA, Inc. 4 Lina Lane Eastampton, NJ 08060			PSE&G Management/ Corp. Prop. 80 Park Plaza T&D Newark, NJ 07102
800	9.06	Hollow Tree, LLC 6 Lina Lane Eastampton, NJ 08060			Department of Transportation Box 600 Trenton, NJ 08625-0600
800	10	J & L Retail Lot LLC 242 S. Groffdale Road Goodsville, PA 17529			The Pinelands Commission Box 559 New Lion, NJ 08064
		New Jersey Department of Transportation 1035 Parkway Avenue CN 600 Trenton, NJ 08625			
		Verizon - New Jersey Administrative Offices 540 Broad Street Newark, NJ 07101			
		Mt. Holly Sewerage Authority 37 Washington Street P.O. Box 486 Mt. Holly, NJ 08060			
		Public Service Electric & Gas Company Manager - Corporate Properties 80 Park Plaza, T&D Newark, NJ 07102			
		Garden State Cable Company Administrative Offices 1250 Berlin Road Cherry Hill, NJ 08034			
		New Jersey American Water Company, Inc. Donna Short, GIS Supervisor 1025 Laurel Oak Road Verdees, NJ 08043			

SHEET INDEX

SHEET #	DWG. #	TITLE
SHEET 1	CV-1	COVER SHEET
SHEET 2	EC-1	EXISTING CONDITIONS PLAN
SHEET 3	OP-1	OVERALL PLAN
SHEET 4	GE-1	GEOMETRY PLAN
SHEET 5	GR-1	GRADING & UTILITY PLAN
SHEET 6	UP-1	UTILITY PROFILE (1)
SHEET 7	UP-2	UTILITY PROFILE (2)
SHEET 8	UP-3	UTILITY PROFILE (3)
SHEET 9	NPP-1	NUDEP PERMITTING PLAN
SHEET 10	LI-1	LIGHTING PLAN
SHEET 11	LA-1	LANDSCAPE PLAN
SHEET 12	SE-1	SOIL EROSION & SEDIMENT CONTROL PLAN
SHEET 13	SED-1	SOIL EROSION & SEDIMENT CONTROL DETAILS (1)
SHEET 14	SED-2	SOIL EROSION & SEDIMENT CONTROL DETAILS (2)
SHEET 15	DE-1	CONSTRUCTION DETAILS (1)
SHEET 16	DE-2	CONSTRUCTION DETAILS (2)
SHEET 17	DE-3	CONSTRUCTION DETAILS (3)
SHEET 18	DE-4	CONSTRUCTION DETAILS (4)
SHEET 19	DE-5	CONSTRUCTION DETAIL (5)
SHEET 20	DE-6	CONSTRUCTION DETAILS (6)

OWNER/APPLICANT

ROCKEFELLER GROUP DEVELOPMENT CORPORATION
1271 AVENUE OF AMERICAS
NEW YORK, NY 10020

APPROVED BY	
CHAIRMAN	DATE
SECRETARY	DATE
ENGINEER	DATE

I HEREBY CERTIFY THAT I AM OWNER
OF RECORD ON THE SITE HEREIN DEPICTED AND THAT I
CONCUR WITH THE PLAN

OWNER _____ DATE _____

PROJECT NUMBER 2020.014

ROCKEFELLER
GROUP LOGISTICS
AT EASTAMPTON

THIS DRAWING IS FOR
PERMIT PURPOSES ONLY
NOT FOR CONSTRUCTION UNTIL THIS BOX
HAS BEEN CHECKED AND DATED

CHKD BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES
NOTIFICATION BY EXCAVATORS,
DESIGNERS, OR ANY PERSON
PREPARING TO DISTURB THE EARTH'S
SURFACE ANYWHERE IN THE STATE.



ROCKEFELLER
GROUP LOGISTICS
AT EASTAMPTON

EASTAMPTON TOWNSHIP
BURLINGTON COUNTY
NEW JERSEY

BLOCK 800, LOT 9.03
TAX MAP SHEET 6
27.6 ACRES

COVER SHEET

DRAWN BY: _____ HC
DESIGNED BY: _____ HC
APPROVED BY: _____ ST

THIS WORK PREPARED UNDER MY
MARCELO'S SUPERVISION

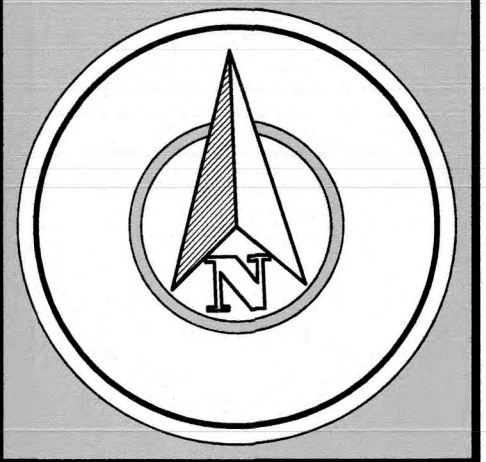
Scott H. Turner
SCOTT H. TURNER
PROFESSIONAL ENGINEER
NJPE# 42811

PROJECT NUMBER	2020.014	CV-1
DATE OF ISSUE	JANUARY 12, 2021	
REVISED THROUGH	APRIL 22, 2021	1



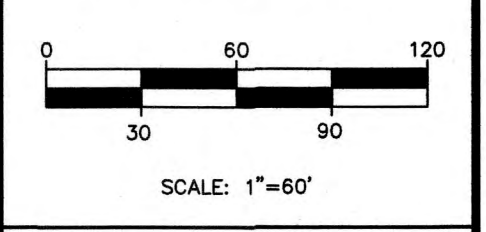
GENERAL NOTES

1. NSPCS (NAD-83) DATUM VERIFIED BY PROFESSIONAL SURVEYOR.
2. ALL CONSTRUCTION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE TOWNSHIPS, COUNTY, STATE AND/OR ANY OTHER GOVERNING BODIES STANDARDS.
3. THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION (1-800-272-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE. ANY CROSSINGS LESS THAN ONE FOOT CLEAR TO BE SUPPORTED WITH A SADDLE (CONCRETE OR SAND AS NOTED).
4. DESIGN AND INSTALLATION OF ELECTRIC, GAS, TELEPHONE AND CABLE TV TO BE PROVIDED BY RESPECTIVE UTILITY COMPANIES.
5. ALL DRAINAGE TO BE REINFORCED CONCRETE PIPE CLASS III - WALL B UNLESS OTHERWISE NOTED. ALL SANITARY PIPES TO BE SDR-35 PVC PIPE UNLESS OTHERWISE NOTED. ALL WATERLINES TO BE CLASS 52 CEMENT-LINED DUCTILE IRON PIPE UNLESS OTHERWISE NOTED.
6. WATERLINE AND SANITARY SEWER TO BE A MINIMUM OF TEN (10) FEET APART HORIZONTALLY AND EIGHTEEN (18) INCHES VERTICALLY UNLESS OTHERWISE NOTED.
7. WATERLINES TO HAVE A MINIMUM OF FOUR (4) FEET COVER.
8. CONSTRUCTION MATERIALS AND METHODS NOT OTHERWISE SPECIFIED OR SHOWN HEREIN SHALL CONFORM TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (THE LATEST EDITION AND AMENDMENTS).
9. FOR SPECIFIC BUILDING DETAILS SEE ARCHITECTURAL DRAWINGS.
10. SITE GRADING AND UTILITY WORK ARE TO BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO EXISTING VEGETATION AND TREES. ALL AREAS NOT AFFECTED BY CONSTRUCTION ARE TO REMAIN NATURAL AND UNDISTURBED.
11. ALL EXISTING OR PROJECT GENERATED DEBRIS IS TO BE REMOVED AND PROPERLY DISPOSED ACCORDING TO ALL APPLICABLE REGULATIONS.
12. TOPSOIL THAT HAS BEEN REMOVED FOR THE GRADING OF THE SITE SHALL NOT BE USED AS SOIL. THE TOPSOIL SHALL BE REDISTRIBUTED ON GREEN AREAS SO AS TO PROVIDE A MINIMUM OF AT LEAST SIX (6) INCHES OF COVER ON THOSE AREAS.
13. SIDE SLOPES TO BE GRADED AT A MAXIMUM OF 3:1.
14. COMPACTION IN FILL AREAS BENEATH ALL PROPOSED UTILITIES AND STRUCTURES SHOULD MEET ALL MANUFACTURES AND TOWNSHIP REQUIREMENTS AND BE EQUAL TO THE MINIMUM 95% MODIFIED PROCTOR DENSITY.
15. NO ON-SITE SOIL TESTING HAS BEEN PERFORMED ON THIS PROJECT BY THE DESIGN ENGINEER. IT SHALL BE THE OWNER AND/OR CONTRACTORS RESPONSIBILITY TO CONDUCT SOIL TESTING TO CONFIRM APPLICABILITY OF PROPOSED IMPROVEMENTS AND CONSTRUCTION TECHNIQUES WITH RESPECT TO SUBSURFACE SOIL AND GROUNDWATER CONDITIONS.
16. ADEQUACY OF WATER SUPPLY SYSTEM FOR FIRE PROTECTION HAS NOT BEEN CONFIRMED WITH RESPECTIVE WATER SUPPLIER OR INSURANCE COMPANY. WATER SUPPLY SYSTEM TO BE REVIEWED AND APPROVED BY THE ARCHITECT AND WATER COMPANY PRIOR TO CONSTRUCTION OR ORDERING.
17. THE APPLICANT SHALL BE RESPONSIBLE FOR THE INSTALLATION OF STREET LIGHTING FACILITIES AS DESIGNED AND INSTALLED BY RESPECTIVE COMPANY, AS APPROVED BY THE PLANNING BOARD, AND IN ACCORDANCE WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS. STREET LIGHTING SHALL BE APPROPRIATELY SHIELDED TO AVOID GLARE INTO NEARBY HOMES. LIGHTING PLANS TO BE SUBMITTED TO BOROUGH FOR APPROVAL.
18. SANITARY SEWER DESIGN (N.J.A.C. 7:14A-23.6(b)(44))
SEWERS CONVEYING SANITARY FLOW, COMBINED SANITARY AND STORM WATER FLOW, OR INDUSTRIAL FLOW SHALL BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST TEN (10) FEET HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST EIGHTEEN (18) INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE DEPARTMENT.
WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER SHALL BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST TEN (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. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER SHALL BE PROVIDED. THE DEPARTMENT MAY ALSO REQUIRE ADDITIONAL STRUCTURAL SUPPORT FOR STORM SEWERS OVER SEWER LINES.



HORIZONTAL DATUM : NSPCS (NAD-83)

GRAPHIC SCALE



261 Cleveland Avenue
Highland Park, NJ 08904
menloeng.com | 732-846-8585 | 732-846-9439
Certificate of Authorization: 24042951900

REVISIONS

1) ADOPT SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

KEY:

- TREE TO BE REMOVED
- EXISTING TREE
- WOODED AREA TO REMAIN

GCLI ZONE

BP ZONE

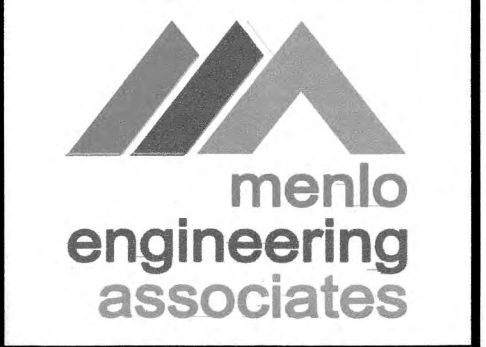
BLOCK 800 LOT 9.03
1,204,120 SQ. FT.
27.64 ACRES

U.S. HIGHWAY ROUTE 206
90' R.O.W. (PUBLIC ROAD)

- REFERENCES:**
- 1) BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON EXTRACTED FROM A MAP ENTITLED, "ALTA/NSPCS LAND TITLE SURVEY FOR ROCKEFELLER GROUP DEVELOPMENT CORPORATION, BLOCK 800, LOT 9.03, TOWNSHIP OF EASTAMPTON BURLINGTON COUNTY, NJ." PREPARED BY CONTROL LAYOUTS INC, HIGHLAND PARK, NJ., DATED JUNE 12, 2020 AND REVISED THROUGH MARCH 28, 2021.
 - 2) THE WETLAND LINE AND FLOOD HAZARD LINE SHOWN ALONG THE WESTERN BOUNDARY ARE EXTRACTED FROM A PLAN ENTITLED "PRELIMINARY MAJOR SUBDIVISION AND PRELIMINARY SITE PLAN FOR LENNAR AT RANCOCA'S CREEK, PROPOSED ACTIVE ADULT DEVELOPMENT, OVERALL GRADING PLAN, TOWNSHIP OF EASTAMPTON, BURLINGTON COUNTY, NEW JERSEY" PREPARED BY BOWMAN CONSULTING GROUP, LTD, FREEHOLD NEW JERSEY LAST REVISED JULY 12, 2017.
 - 3) US ROUTE 206 PAVEMENT AND STRIPING NORTH OF LINA LANE EXTRACTED FROM GOOGLE EARTH AERIAL IMAGERY, 2020.



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



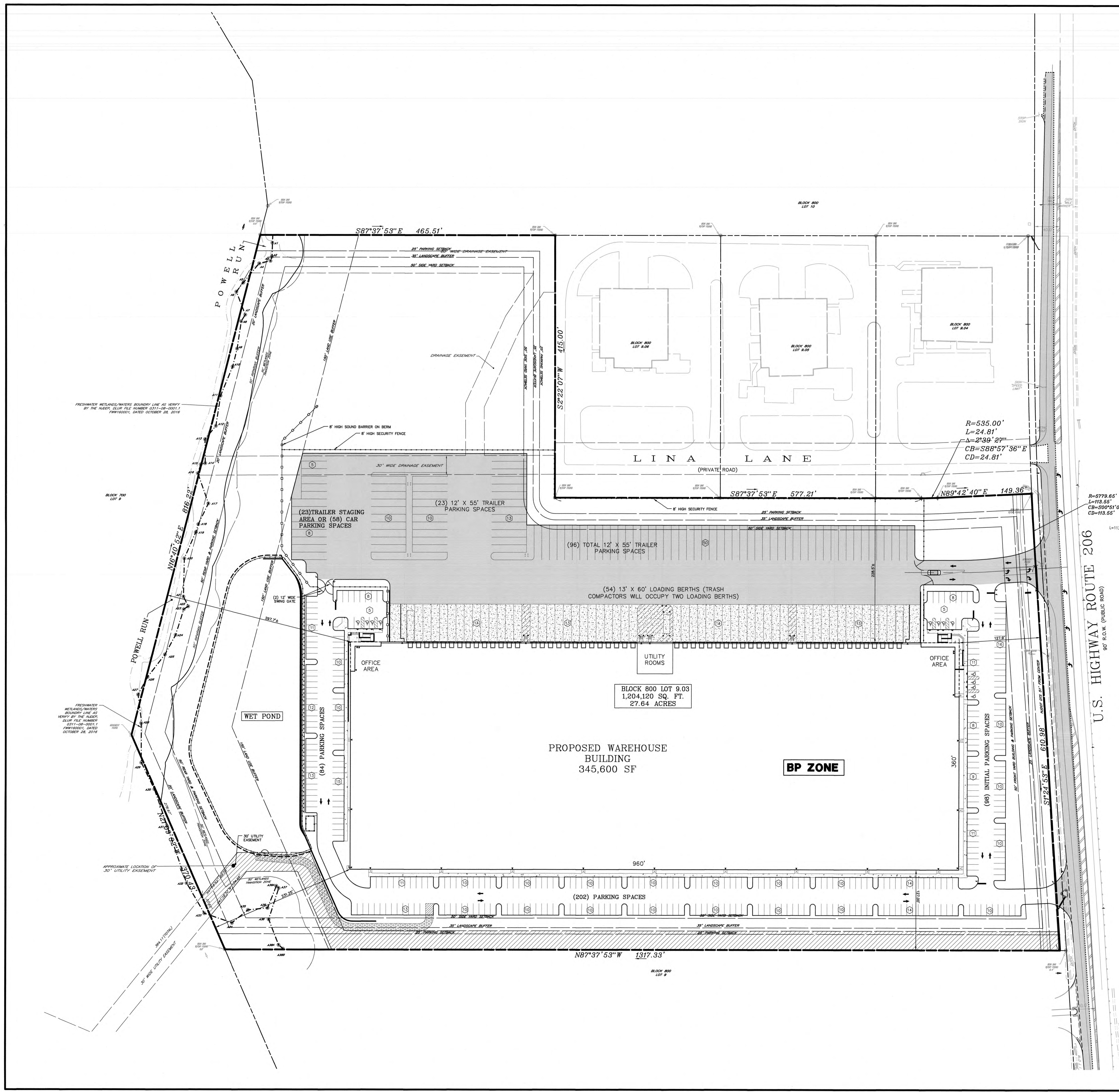
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON
BURLINGTON COUNTY
NEW JERSEY

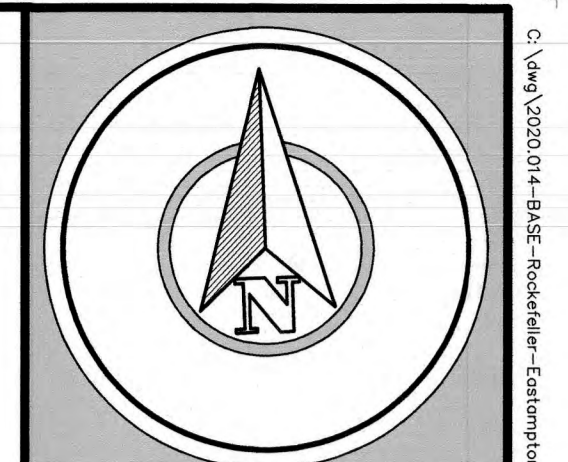
BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.6 ACRES

EXISTING CONDITIONS PLAN

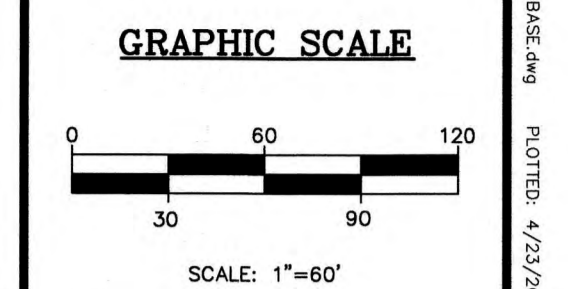
DRAWN BY	HC
DESIGNED BY	HC
APPROVED BY	ST
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...	
SCOTT H. TURNER PROFESSIONAL ENGINEER N.J.P.E.# 43811	
PROJECT NUMBER	2020.014 EC-1
DATE OF ISSUE	JANUARY 12, 2021
REVISION	2 APRIL 22, 2021



BP ZONE DATA				
BP BUSINESS PARK ZONE				
PROPOSED USE:	WAREHOUSING WITH ACCESSORY USES, OFFICE, TRUCK, TRAILER PARKING—PERMITTED	REQUIRED	PROPOSED	CONDITION
SECTION 540.27(E)	OUTDOOR STORAGE (TRAILERS)	NOT PERMITTED	NONE PROPOSED	COMPLIES
BLANK STANDARDS				
SECTION 540.27(A)(1)	MINIMUM TRACT SIZE	20 ACRES	27.64 ACRES (1,204,120 SF)	COMPLIES
SECTION 540.27(A)(2)	MINIMUM LOT FRONTAGE	500 FT.	705.33 FT.	COMPLIES
SECTION 540.27(A)(3)(a)	MINIMUM FRONT YARD	50 FT.	127.9 FT.	COMPLIES
SECTION 540.27(A)(3)(b)	MINIMUM SIDE YARD	50 FT.(EACH)	228.5 FT./127 FT.	COMPLIES
SECTION 540.27(A)(3)(c)	MINIMUM REAR YARD	50 FT.	231 FT.	COMPLIES
SECTION 540.27(A)(4)	MAXIMUM LOT COVERAGE - BUILDINGS	50% (802,054 SF)	28.7% (345,600 SF)	COMPLIES
SECTION 540.27(A)(5)	MAXIMUM LOT COVERAGE - ALL IMPERVIOUS	65% (782,670 SF)	57.5% (692,481 SF)	COMPLIES
SECTION 540.27(A)(6)	MAXIMUM BUILDING HEIGHT	50 FT.	50 FT.	COMPLIES
SECTION 540.27(A)(7)	MINIMUM DISTANCE BETWEEN BUILDINGS	50 FT.	N/A	N/A
OFF STREET PARKING / LOADING REQUIREMENTS				
SECTION 540.27(A)(8)	MINIMUM PARKING SETBACK—FRONT	50 FT. — ROUTE 206	50 FT. — ROUTE 206	COMPLIES
SECTION 540.27(A)(9)	MINIMUM PARKING SETBACK—REAR (SEE RESIDENTIAL BUFFER BELOW)	50 FT. — REAR PL.	150.5 FT. — REAR PL.	COMPLIES
SECTION 540.27(A)(10)	MINIMUM PARKING SETBACK — SIDE (SEE LANDSCAPE BUFFER BELOW)	25 FT. — EXCEPT WAREHOUSE CROSS EBMT PERMITTED	55.0 FT.—SIDE/SOUTH CROSS EBMT PERMITTED	COMPLIES
SECTION 540.57(F)	MAXIMUM 2 DRIVEWAYS PER 200 FT. FRONT.	2 PER 200 FT. FRONT.	2 DRIVEWAYS/705.33'	COMPLIES
SECTION 540.58	REQUIRED NO. OF PARKING SPACES (INDUSTRIAL USE) — 1.33 SPACES / 1000 SF		(384) INSTALLED + (58) ALTERNATE PARKING	VARIANCE
	432 SPACES REQUIRED		442 SPACES PROVIDED	
	PARKING SPACE SIZE		9 FT. X 18 FT.	COMPLIES
	PARKING AISLE — 90' PARKING		24 FT.	COMPLIES
SECTION 540.24(C)(2)	OFF STREET PARKING LANDSCAPE REQUIRED	1 TREE/EVERY 10 SF	1 TREE /10 SPACES	COMPLIES
SECTION 540.59.A	LOADING BERTHS — ONE BERTH/20,000 SF	17 BERTHS	54 BERTHS	COMPLIES
SECTION 540.59.A	LOADING BERTH SIZE	12 FT. X 35 FT.	13 FT. X 60 FT.	COMPLIES
SECTION 540.59.E	LOADING NEXT TO RESIDENTIAL BUFFERED PER SECTION 540.54		PROVIDED	COMPLIES
LANDSCAPE / BUFFER REQUIREMENTS / SIGNAGE				
SECTION 540.12(A)(1)	RESIDENTIAL LANDSCAPE BUFFER	3 X'S HT. OF BUILDING	150 FT.	COMPLIES
SECTION 540.15.A	PRESERVATION OF NATURAL FEATURES — STREAM CORRIDOR (LOCAL) BUFFER	50 FT. TO STREAM BED	GREATER THAN 50 FT.	COMPLIES
SECTION 540.27(A)(11)	STREET TREES ALONG FRONTAGE BEHIND R.O.W.	1 EVERY 50 L.F.	15 TREE/705 L.F. (1 EVERY 47 L.F.)	COMPLIES
SECTION 540.27(A)(12)	FRONT YARD LANDSCAPE PLANTED — TO INCLUDE BINE AND PEDESTRIAN PATHWAY	25 FT. MINIMUM DEPTH	25 FT. PLANTED	COMPLIES
SECTION 540.27(A)(13)	SIDE AND REAR YARD LANDSCAPE BUFFER	SIDE 25 FT. OR 5% LOT WIDTH OR 50 FT. MAX. REAR 35 FT. MINIMUM	43.5 FT. NORTHSIDE (PLANTING WIDTH VARIES 5-15') 150 FT. REAR/WEST	COMPLIES
SECTION 540.27(A)(14)	LANDSCAPE BUFFER TO RESIDENTIAL PLANTED	RESIDENTIAL—50 FT. USE FT. PLANTED TO CONCEAL USE IN 80'	30 FT. PLANTED/ EXISTING VEGETATION REMAINS	COMPLIES
SECTION 540.37(D)	OFF STREET PARKING LOT SHADE TREES	1 TREE/10 PKG. SP.	45 TREES/440 SP.	COMPLIES
SECTION 540.53(E)(4)	FREESTANDING SIGN MAXIMUM HEIGHT	8 FT. MAXIMUM HEIGHT	6 FT. HEIGHT	COMPLIES
SECTION 540.53(E)(5)	FREESTANDING SIGN MAXIMUM DISPLAY AREA	50 S.F. DISPLAY AREA	48 S.F. DISPLAY AREA	COMPLIES
SECTION 540.53(E)(6)	FENCES FOR INDUSTRIAL USES	8 FT. HT. MAXIMUM	8 FT. HEIGHT SOLID WOOD FENCE	COMPLIES



HORIZONTAL DATUM : NAD83 (NAD-83)



menlo engineering associates
 Civil Engineering Consultants
 Landscape Architects
 Professional Planners
 261 Cleveland Avenue
 Highland Park, NJ 08904
 menloeng.com | 732-846-8585 | 732-846-9439
 Certificate of Authorization: 24023795900

REVISIONS	
1) TOWNSHIP COMMENTS	02/12/21
2) NADOT SUBMISSION	03/23/21
3) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.
 CHD BY: _____ DATE: _____

STOP CALL BEFORE YOU DIG
 THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON
 BURLINGTON COUNTY
 NEW JERSEY

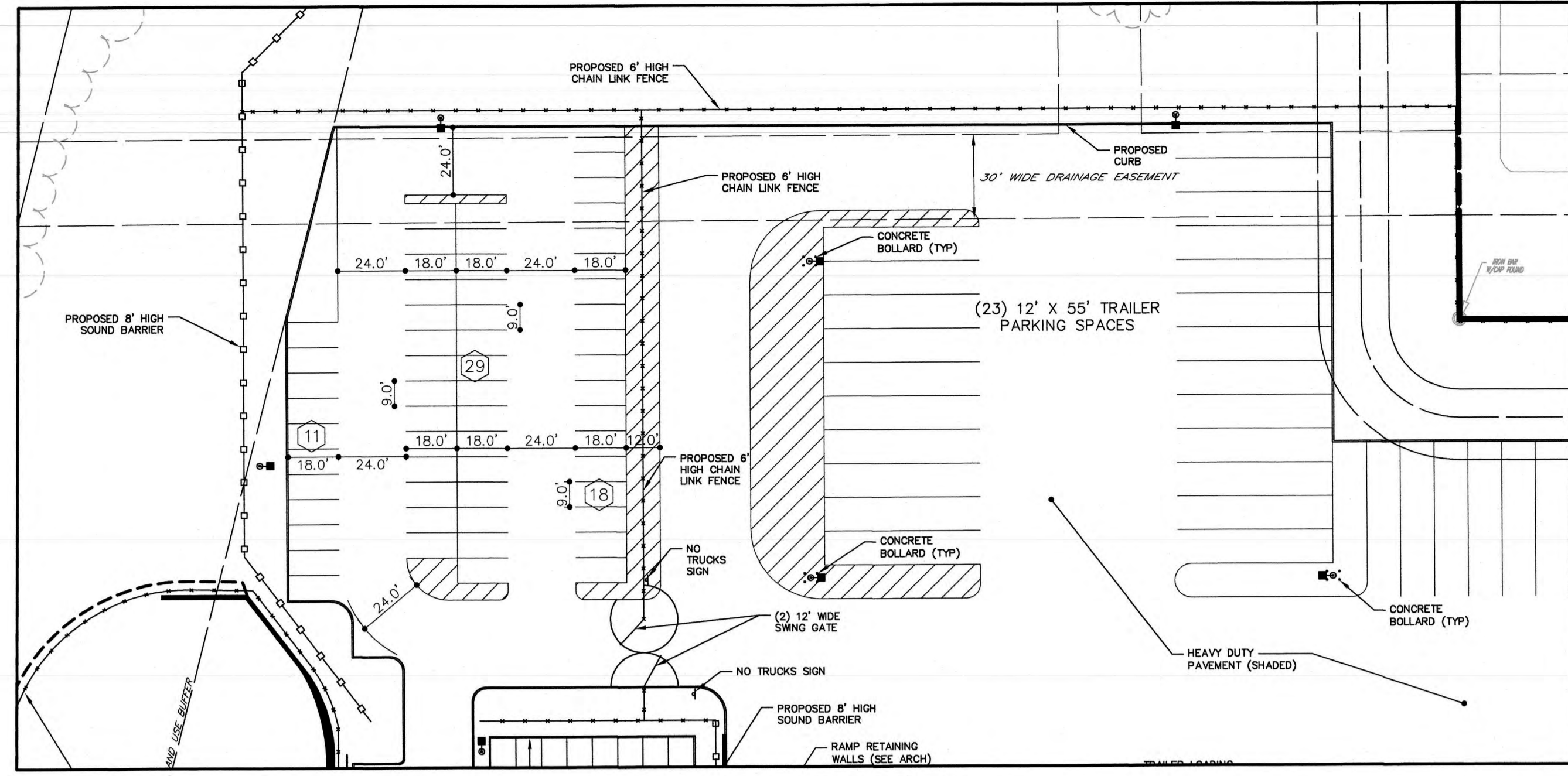
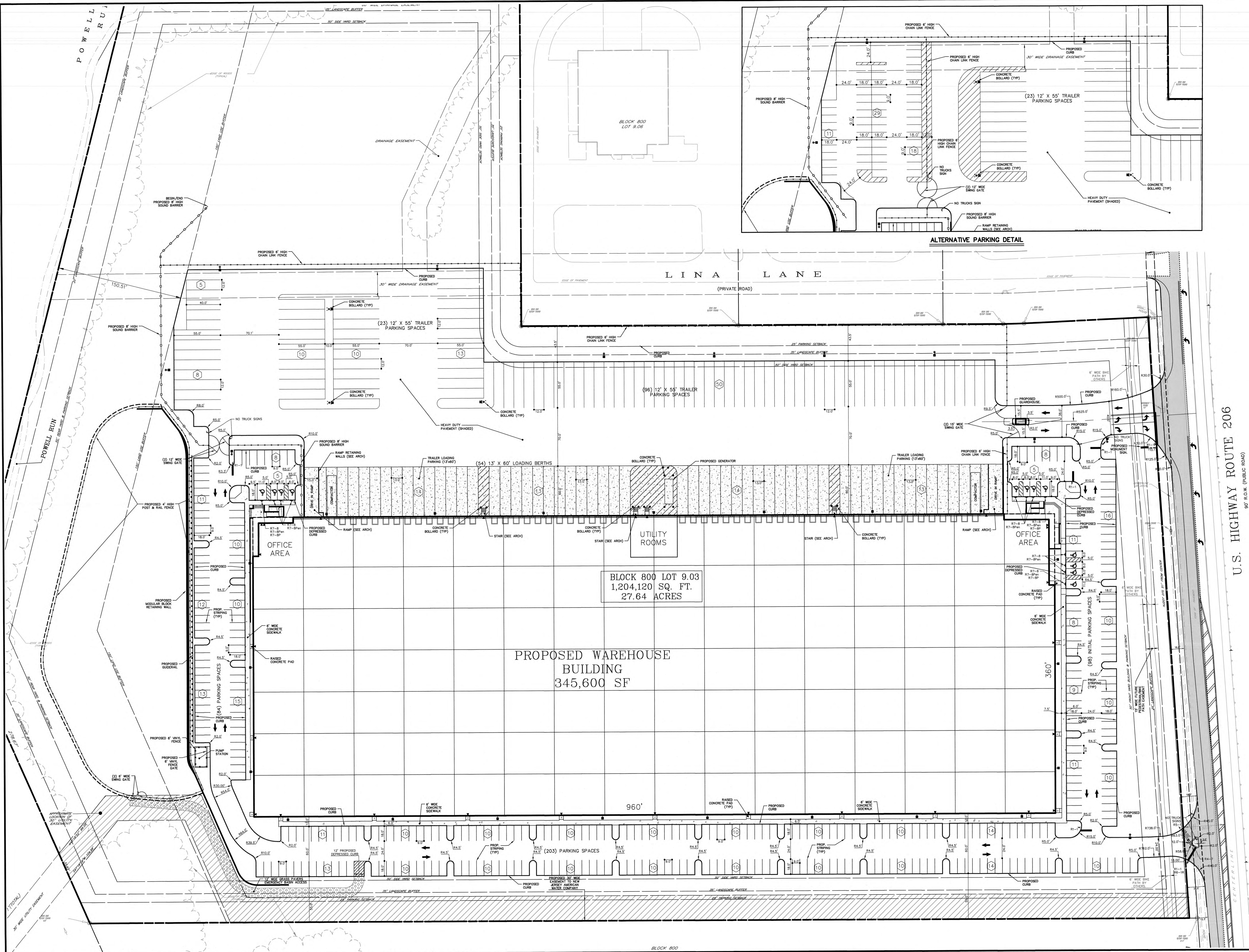
BLOCK 800, LOT 9.03
 TAX MAP SHEET 8
 27.8 ACRES

OVERALL PLAN

DRAWN BY: _____ HC
 DESIGNED BY: _____ HC
 APPROVED BY: _____ ST

THIS WORK PREPARED UNDER MY INDIVIDUAL SUPERVISION.
SCOTT H. TURNER
 PROFESSIONAL ENGINEER
 NJP.E. 43811

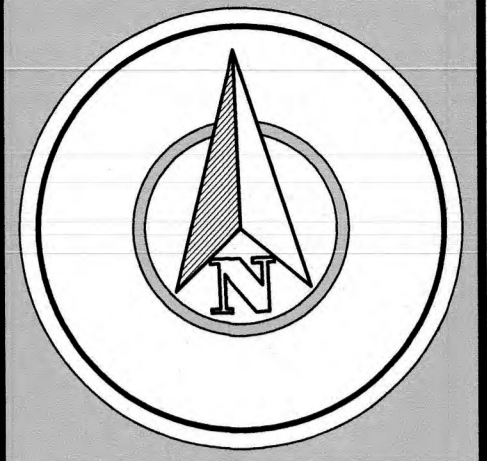
PROJECT NUMBER	DATE OF ISSUE	REVISION	DATE	DESCRIPTION
2020.014	JANUARY 12, 2021	OP-1		
	APRIL 22, 2021			



ALTERNATIVE PARKING DETAIL

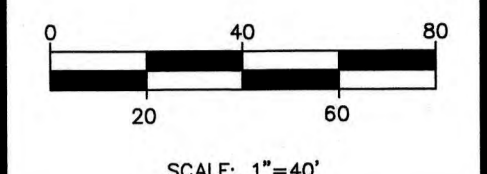
BLOCK 800 LOT 9.03
1,204,120 SQ. FT.
27.64 ACRES

PROPOSED WAREHOUSE
BUILDING
345,600 SF

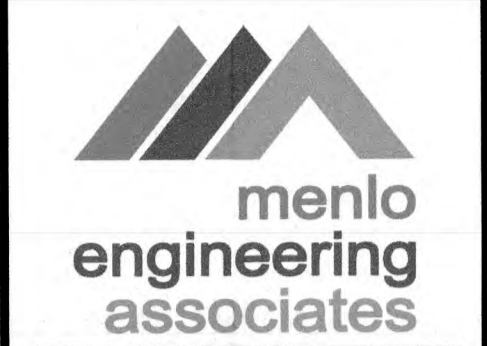


HORIZONTAL DATUM: NAD83

GRAPHIC SCALE



SCALE: 1"=40'



menlo engineering associates

Civil Engineering Consultants
Landscape Architects
Professional Planners

261 Cleveland Avenue
Highland Park, NJ 08904

menloeng.com

732-846-8585 732-846-9439

Certificate of Authorization: 2402791900

REVISIONS

1. TOWNSHIP COMMENTS	03/12/21
2. NJDOT SUBMISSION	03/29/21
3. TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

CHKD BY: DATE:



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



menlo engineering associates
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON
BURLINGTON COUNTY
NEW JERSEY

BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.8 ACRES

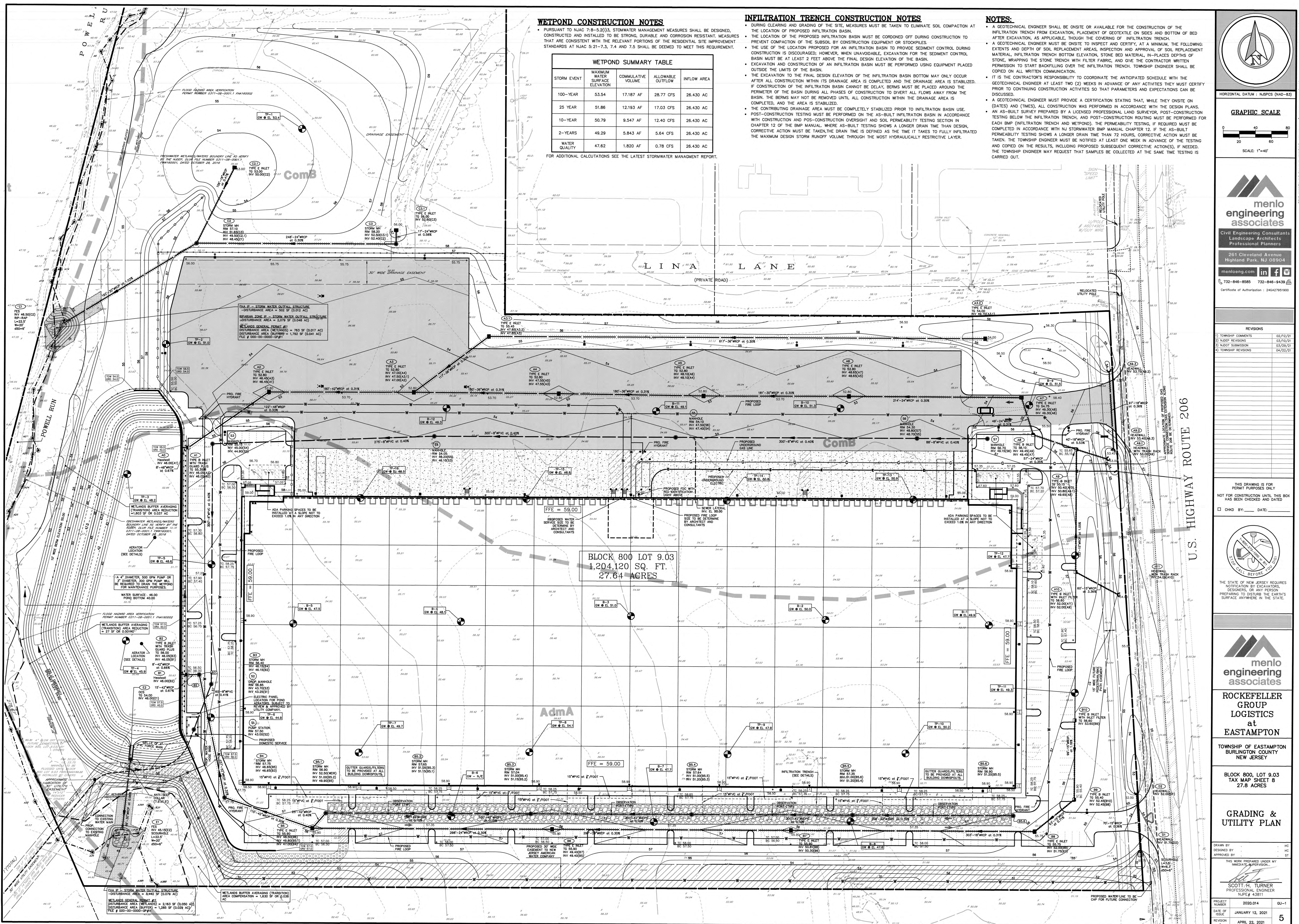
GEOMETRY PLAN

DRAWN BY: HS
DESIGNED BY: HC
APPROVED BY: ST

THIS WORK PREPARED UNDER MY HANDS AND SEAL AS A PROFESSIONAL ENGINEER.

SCOTT H. TURNER
PROFESSIONAL ENGINEER
N.J.E.C. 43511

PROJECT NUMBER	2020.014	GU-1
DATE OF ISSUE	JANUARY 12, 2021	
REVISION	APRIL 22, 2021	4



WETPOND CONSTRUCTION NOTES

PURSUANT TO NJAC 7:8-5.2(3), STORMWATER MANAGEMENT MEASURES SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED TO BE STRONG, DURABLE AND CORROSION RESISTANT. MEASURES THAT ARE CONSISTENT WITH THE RELEVANT PORTIONS OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS AT NJAC 5:21-7.3, 7.4 AND 7.5 SHALL BE DEEMED TO MEET THIS REQUIREMENT.

WETPOND SUMMARY TABLE				
STORM EVENT	MAXIMUM WATER SURFACE ELEVATION	CUMULATIVE VOLUME	ALLOWABLE OUTFLOW	INFLOW AREA
100-YEAR	53.54	17,187 AF	28.77 CFS	26,430 AC
25 YEAR	51.86	12,193 AF	17.03 CFS	26,430 AC
10-YEAR	50.79	9,547 AF	12.40 CFS	26,430 AC
2-YEARS	49.29	5,843 AF	5.64 CFS	26,430 AC
WATER QUALITY	47.62	1,820 AF	0.78 CFS	26,430 AC

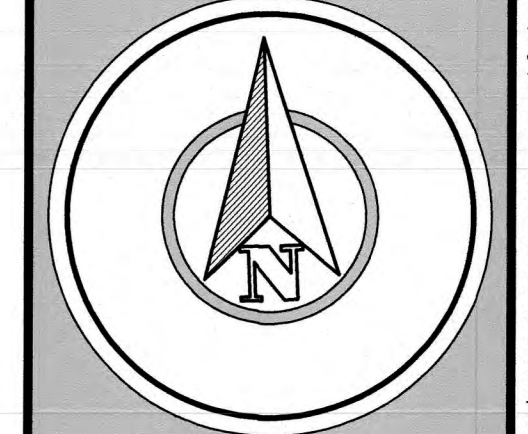
FOR ADDITIONAL CALCULATIONS SEE THE LATEST STORMWATER MANAGEMENT REPORT.

INFILTRATION TRENCH CONSTRUCTION NOTES

DURING CLEARING AND GRADING OF THE SITE, MEASURES MUST BE TAKEN TO ELIMINATE SOIL COMPACTION AT THE LOCATION OF PROPOSED INFILTRATION BASIN.
 THE LOCATION OF PROPOSED INFILTRATION BASIN MUST BE CORRODED OFF DURING CONSTRUCTION TO PREVENT COMPACTION OF THE SUBSOIL BY CONSTRUCTION EQUIPMENT OR STOCKPILES.
 THE USE OF THE LOCATION PROPOSED FOR AN INFILTRATION BASIN TO PROVIDE SEDIMENT CONTROL DURING CONSTRUCTION IS DISCOURAGED. HOWEVER, WHEN UNAVOIDABLE, EXCAVATION FOR THE SEDIMENT CONTROL BASIN MUST BE AT LEAST 2 FEET ABOVE THE FINAL DESIGN ELEVATION OF THE BASIN.
 EXCAVATION AND CONSTRUCTION OF AN INFILTRATION BASIN MUST BE PERFORMED USING EQUIPMENT PLACED OUTSIDE THE LIMITS OF THE BASIN.
 THE EXCAVATION TO THE FINAL DESIGN ELEVATION OF THE INFILTRATION BASIN BOTTOM MAY ONLY OCCUR AFTER ALL CONSTRUCTION WITHIN ITS DRAINAGE AREA IS COMPLETED AND THE DRAINAGE AREA IS STABILIZED. IF CONSTRUCTION OF THE INFILTRATION BASIN CANNOT BE DELAYED, BERMS MUST BE PLACED AROUND THE PERIMETER OF THE BASIN DURING ALL PHASES OF CONSTRUCTION TO DIVERT ALL FLOWS AWAY FROM THE BASIN. THE BERMS MAY NOT BE REMOVED UNTIL ALL CONSTRUCTION WITHIN THE DRAINAGE AREA IS COMPLETED, AND THE AREA IS STABILIZED.
 THE CONTRIBUTING DRAINAGE AREA MUST BE COMPLETELY STABILIZED PRIOR TO INFILTRATION BASIN USE.
 POST-CONSTRUCTION TESTING MUST BE PERFORMED ON THE AS-BUILT INFILTRATION BASIN IN ACCORDANCE WITH CONSTRUCTION AND POST-CONSTRUCTION OVERSIGHT AND SOIL PERMEABILITY TESTING SECTION IN CHAPTER 12 OF THE BMP MANUAL. WHERE AS-BUILT TESTING SHOWS A LONGER DRAIN TIME THAN DESIGN, CORRECTIVE ACTION MUST BE TAKEN. THE DRAIN TIME IS DEFINED AS THE TIME IT TAKES TO FULLY INFILTRATED THE MAXIMUM DESIGN STORM RUNOFF VOLUME THROUGH THE MOST HYDRAULICALLY RESTRICTIVE LAYER.

NOTES:

A GEOTECHNICAL ENGINEER SHALL BE ONSITE OR AVAILABLE FOR THE CONSTRUCTION OF THE INFILTRATION TRENCH FROM EXCAVATION, PLACEMENT OF GEOTEXTILE ON SIDES AND BOTTOM OF BED AFTER EXCAVATION, AS APPLICABLE, THROUGH THE COVERING OF INFILTRATION TRENCH.
 A GEOTECHNICAL ENGINEER MUST BE ONSITE TO INSPECT AND CERTIFY, AT A MINIMUM, THE FOLLOWING: EXTENTS AND DEPTH OF SOIL REPLACEMENT AREAS, INSPECTION AND APPROVAL OF SOIL REPLACEMENT MATERIAL, INFILTRATION TRENCH BOTTOM ELEVATION, STONE BED MATERIAL, IN-PLACES DEPTHS OF STONE, WRAPPING THE STONE TRENCH WITH FILTER FABRIC, AND GIVE THE CONTRACTOR WRITTEN PERMISSION TO START BACKFILLING OVER THE INFILTRATION TRENCH. TOWNSHIP ENGINEER SHALL BE COPIED ON ALL WRITTEN COMMUNICATION.
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE ANTICIPATED SCHEDULE WITH THE GEOTECHNICAL ENGINEER AT LEAST TWO (2) WEEKS IN ADVANCE OF ANY ACTIVITIES THEY MUST CERTIFY PRIOR TO CONTINUING CONSTRUCTION ACTIVITIES SO THAT PARAMETERS AND EXPECTATIONS CAN BE DISCUSSED.
 A GEOTECHNICAL ENGINEER MUST PROVIDE A CERTIFICATION STATING THAT, WHILE THEY ONSITE ON (DATES) AND (TIMES), ALL CONSTRUCTION WAS PERFORMED IN ACCORDANCE WITH THE DESIGN PLANS.
 AN AS-BUILT SURVEY PREPARED BY A LICENSED PROFESSIONAL LAND SURVEYOR, POST-CONSTRUCTION TESTING BELOW THE INFILTRATION TRENCH, AND POST-CONSTRUCTION TESTING MUST BE PERFORMED FOR EACH BMP (INFILTRATION TRENCH AND WETPOND). THE PERMEABILITY TESTING, IF REQUIRED MUST BE COMPLETED IN ACCORDANCE WITH NJ STORMWATER BMP MANUAL CHAPTER 12. IF THE AS-BUILT PERMEABILITY TESTING SHOWS A LONGER DRAIN TIME THAN 72 HOURS, CORRECTIVE ACTION MUST BE TAKEN. THE TOWNSHIP ENGINEER MUST BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE OF THE TESTING AND COPIED ON THE RESULTS, INCLUDING PROPOSED SUBSEQUENT CORRECTIVE ACTION(S), IF NEEDED. THE TOWNSHIP ENGINEER MAY REQUEST THAT SAMPLES BE COLLECTED AT THE SAME TIME TESTING IS CARRIED OUT.



HORIZONTAL DATUM: NAD83 (NAD-83)
GRAPHIC SCALE
 0 20 40 60 80
 SCALE: 1"=40'

menlo engineering associates
 Civil Engineering Consultants
 Landscape Architects
 Professional Planners
 261 Cleveland Avenue
 Highland Park, NJ 08904
 menloeng.com | in | f | t
 732-846-8585 732-846-8439
 Certificate of Authorization: 24627951900

REVISIONS

1) TOWNSHIP COMMENTS	02/13/21
2) NJDEP REVISIONS	03/10/21
3) NJDOT SUBMISSION	03/29/21
4) TOWNSHIP REVISIONS	04/22/21

REVISIONS

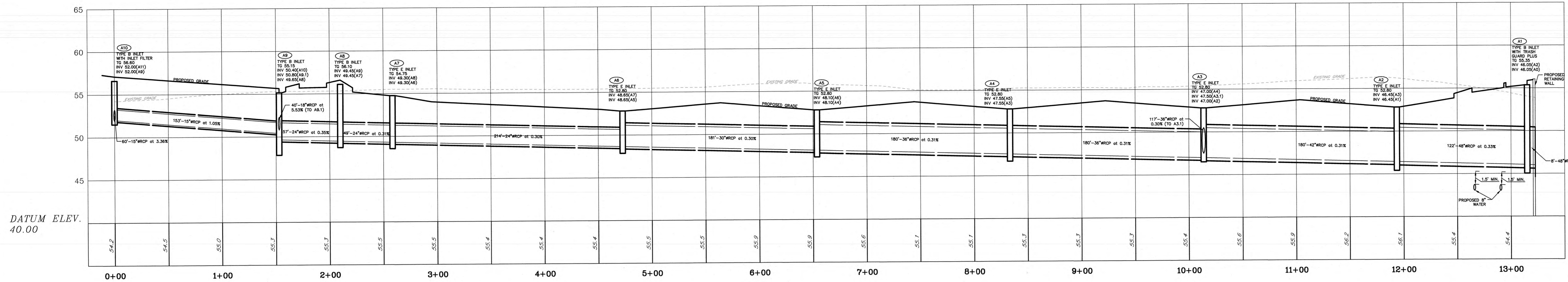
1) TOWNSHIP COMMENTS	02/13/21
2) NJDEP REVISIONS	03/10/21
3) NJDOT SUBMISSION	03/29/21
4) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY
 NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED
 CHKD BY: _____ DATE: _____
 THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

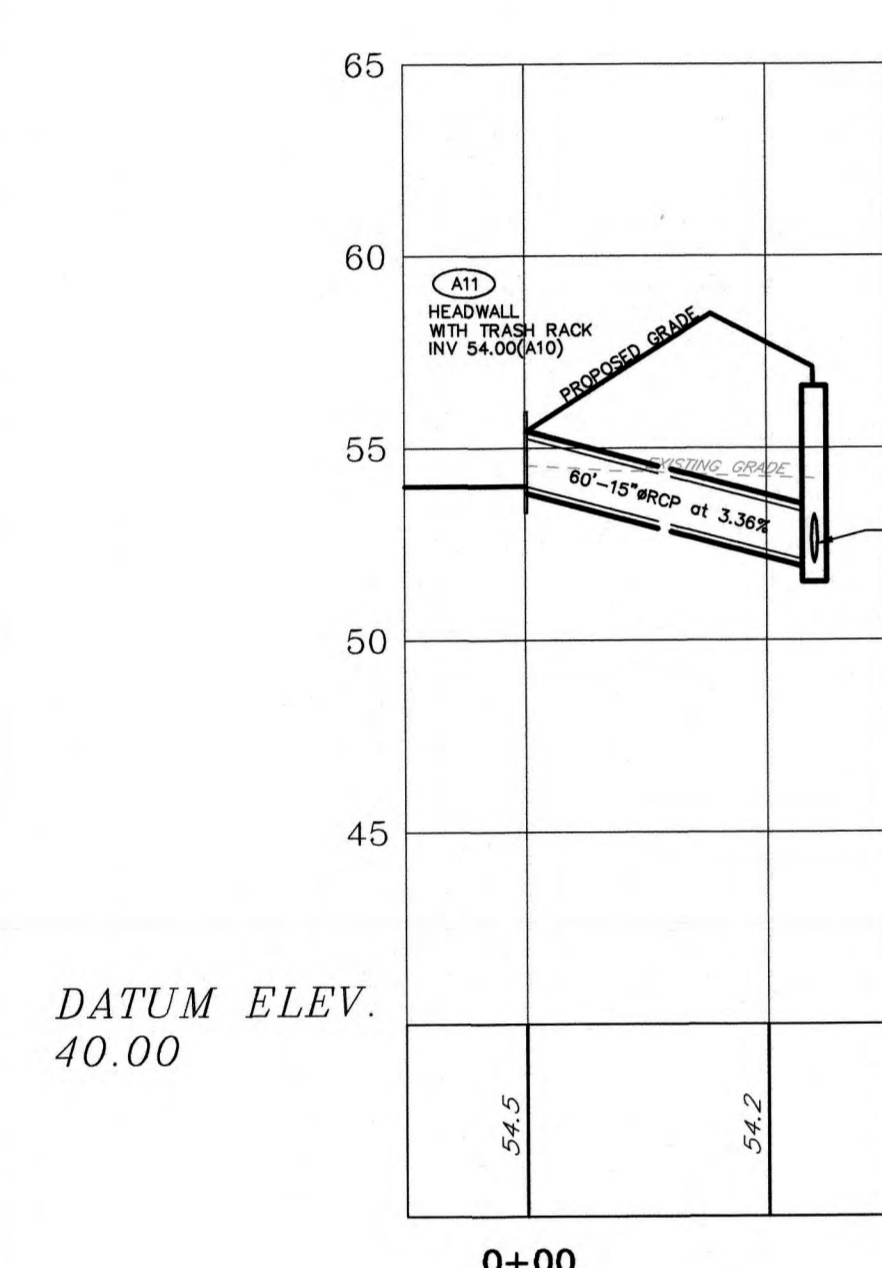
menlo engineering associates
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON
 TOWNSHIP OF EASTAMPTON
 BURLINGTON COUNTY
 NEW JERSEY

BLOCK 800, LOT 9.03
 TAX MAP SHEET 8
 27.8 ACRES

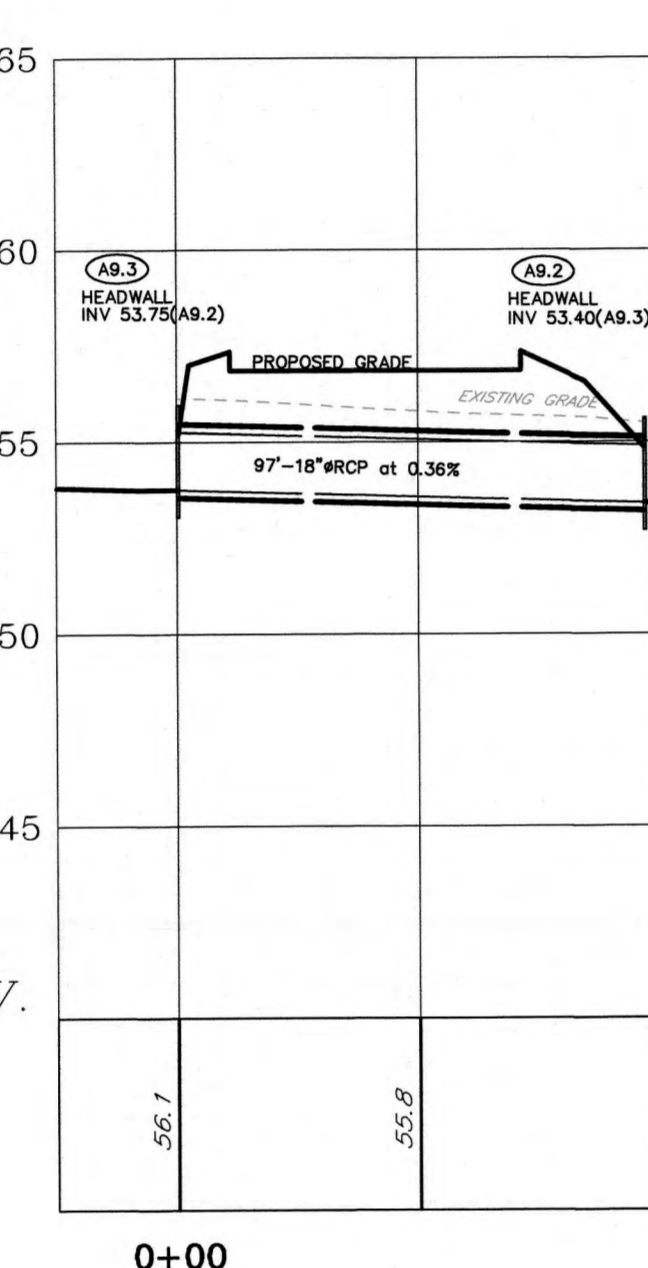
GRADING & UTILITY PLAN
 DRAWN BY: _____ HC
 DESIGNED BY: _____ HC
 APPROVED BY: _____ ST
 THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION
 SCOTT H. TURNER
 PROFESSIONAL ENGINEER
 N.J.E.C. # 43811
 PROJECT NUMBER: 2020.014 GU-1
 DATE OF ISSUE: JANUARY 12, 2021
 REVISION 4: APRIL 22, 2021



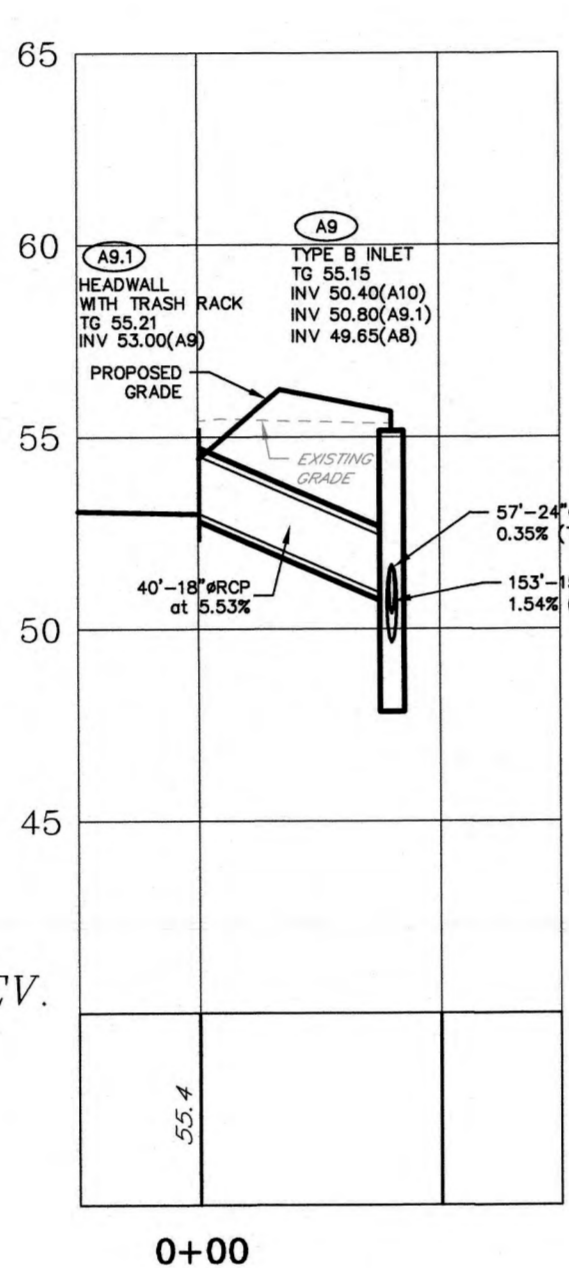
A1 TO A10 PROFILE
 H: 1"=40'
 V: 1"= 5'



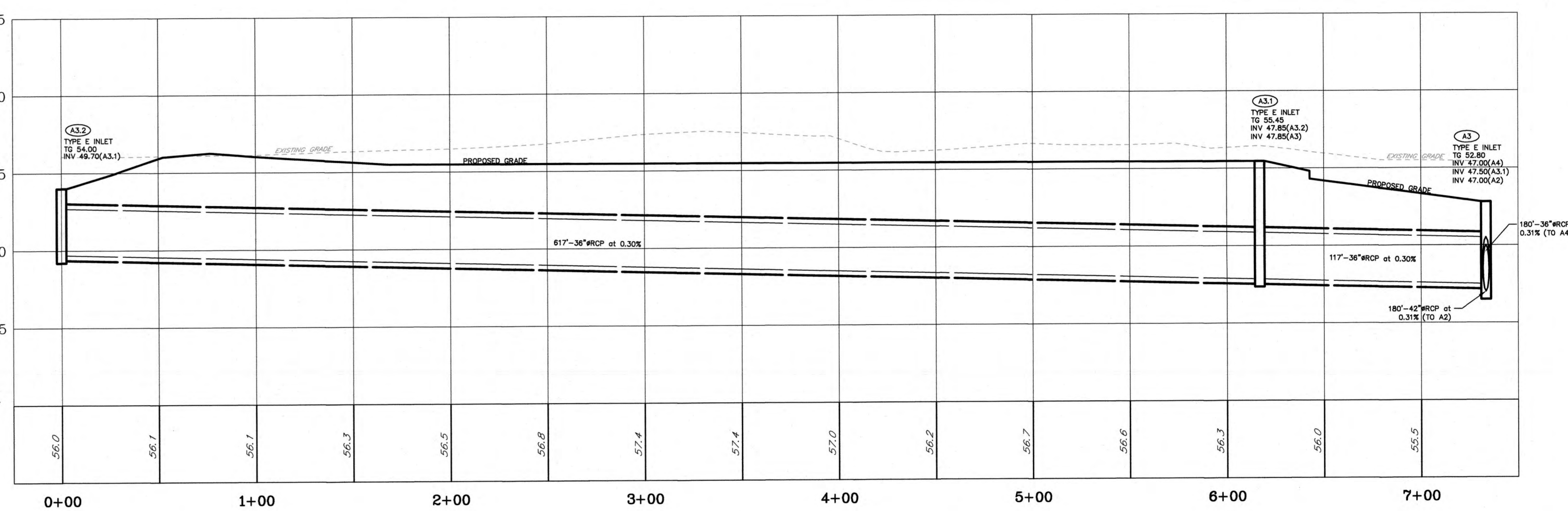
A11 TO A10 PROFILE
 H: 1"=40'
 V: 1"= 5'



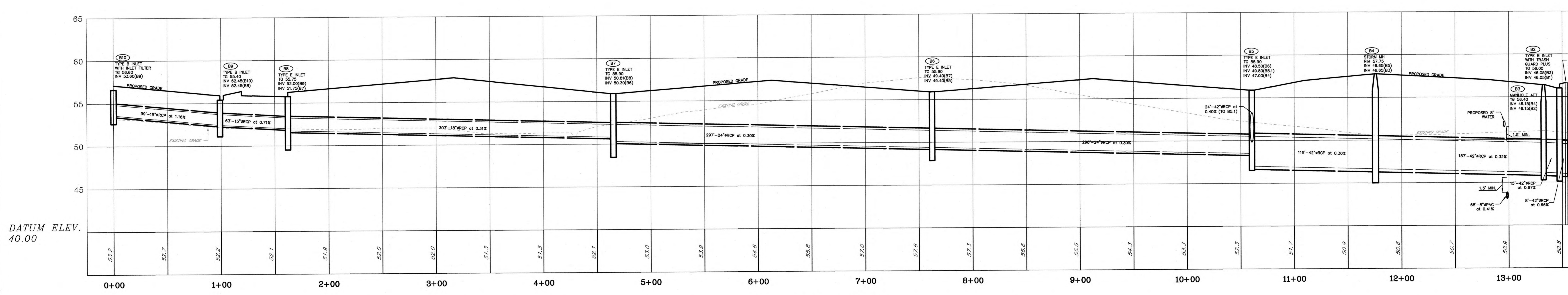
A9.3 TO A9.2 PROFILE
 H: 1"=40'
 V: 1"= 5'



A9.1 TO A9 PROFILE
 H: 1"=40'
 V: 1"= 5'



A3.2 TO A3 PROFILE
 H: 1"=40'
 V: 1"= 5'



B10 TO B1 PROFILE
 H: 1"=40'
 V: 1"= 5'

NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL SUBSURFACE UTILITIES THROUGH THE NEW JERSEY ONE-CALL SYSTEM (1-800-272-1000 OR 811).
- HORIZONTAL AND VERTICAL SCALES SHALL BE AS NOTED ON INDIVIDUAL PROFILES.

GRAPHIC SCALE
 H: 1"=40'
 V: 1"= 5'

menlo engineering associates
 Civil Engineering Consultants
 Landscape Architects
 Professional Planners
 261 Cleveland Avenue
 Highland Park, NJ 08904
 732-846-8585 732-846-9439
 Certificate of Authorization: 242A2791900

REVISIONS

1) NLDOT SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.
 CHKD BY: _____ DATE: _____

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates

ROCKEFELLER GROUP LOGISTICS at EASTAMPTON
 TOWNSHIP OF EASTAMPTON
 BURLINGTON COUNTY
 NEW JERSEY

BLOCK 800, LOT 9.03
 TAX MAP SHEET B
 27.8 ACRES

UTILITY PROFILES (1)

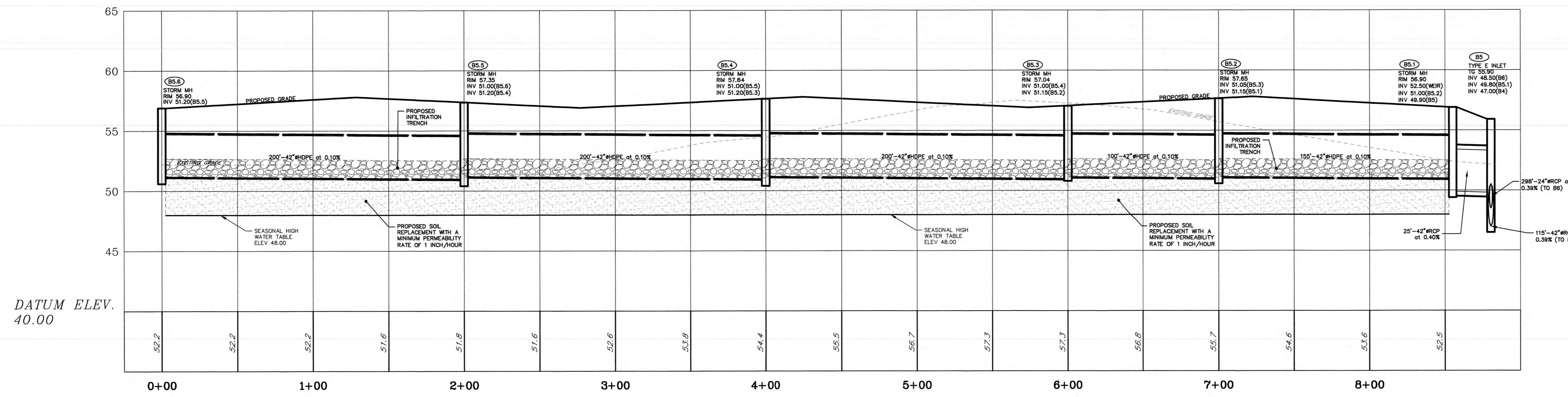
DRAWN BY: _____ HC
 DESIGNED BY: _____ HD
 APPROVED BY: _____ ST

THIS WORK PREPARED UNDER NY REG. NO. _____

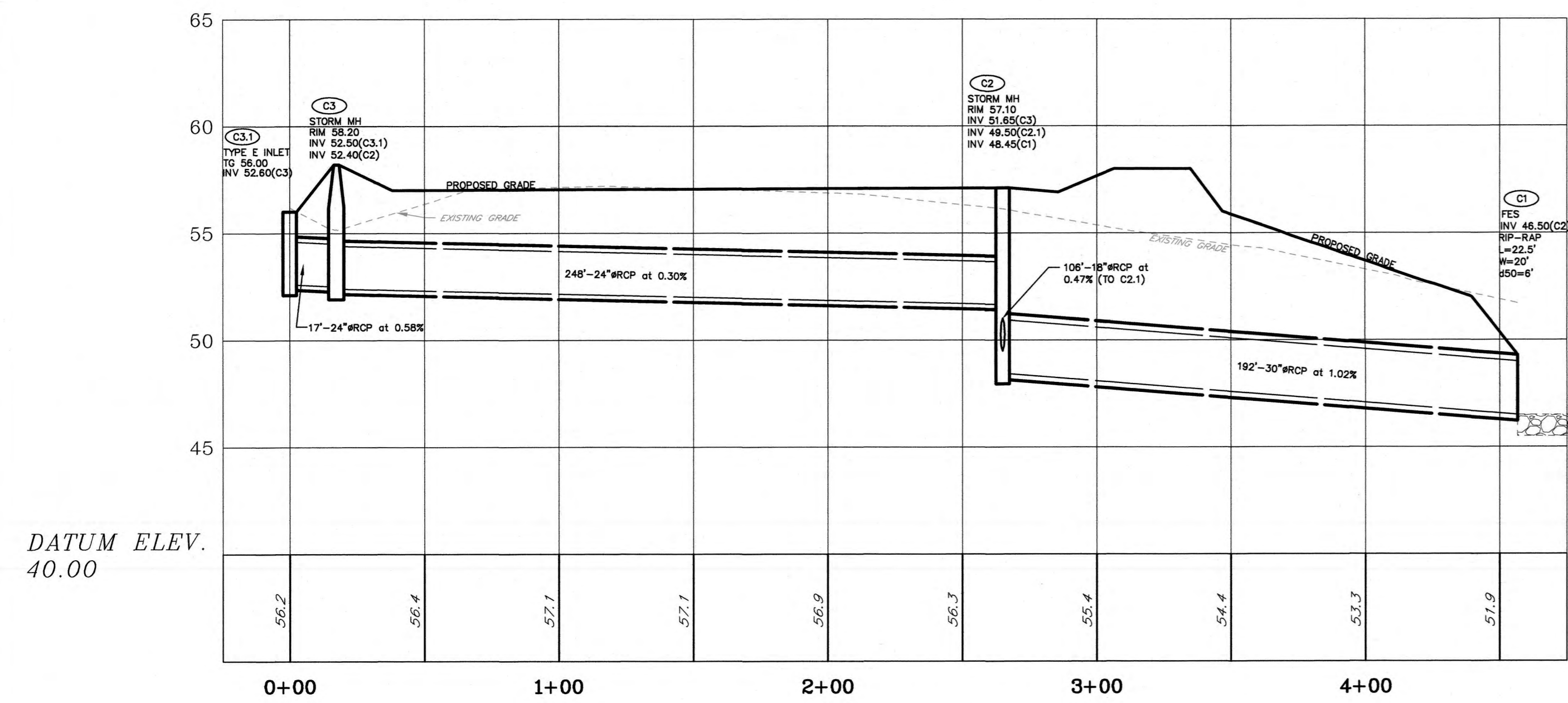
SCOTT H. TURNER
 PROFESSIONAL ENGINEER
 N.J.P.E. # 3511

PROJECT NUMBER: 2020.014 UP-1
 DATE OF ISSUE: JANUARY 12, 2021
 REVISION: 2 APRIL 22, 2021

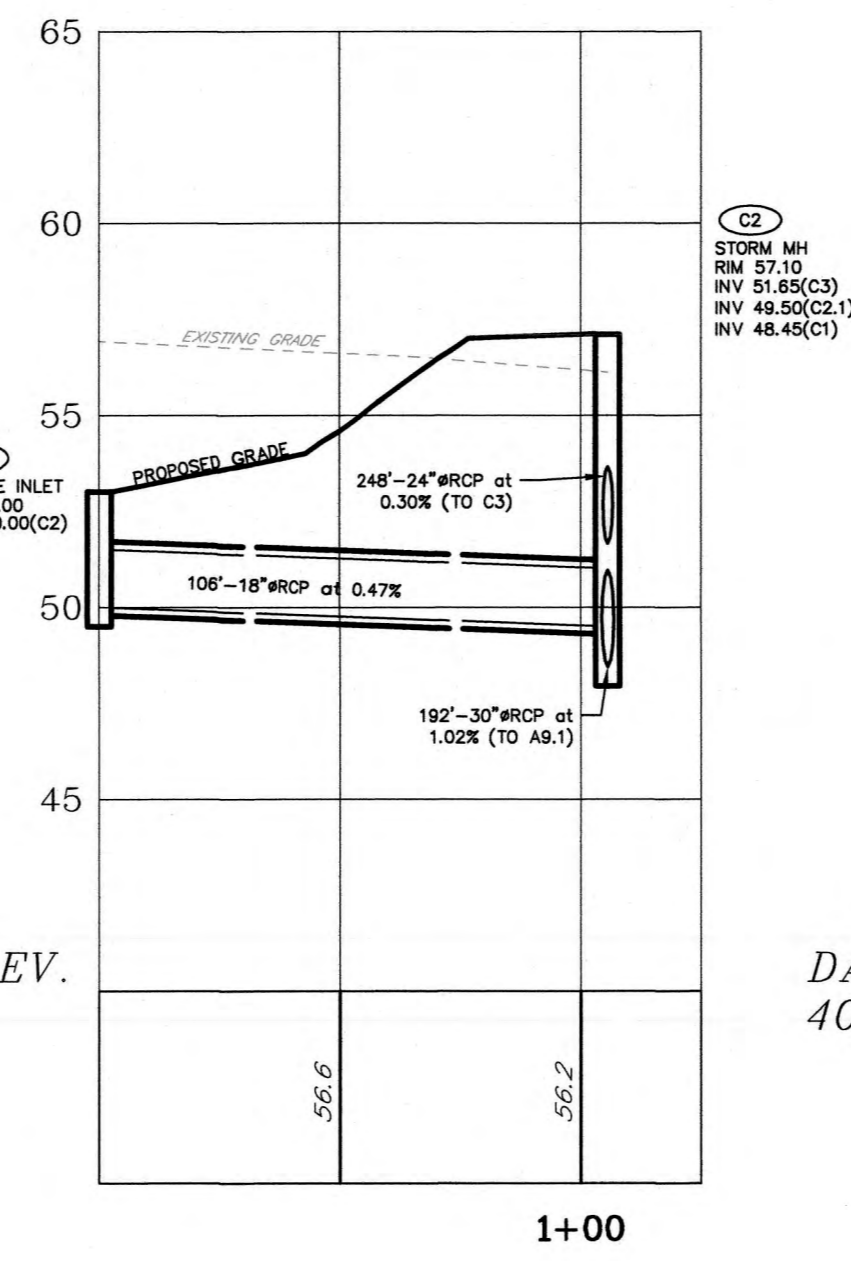
6



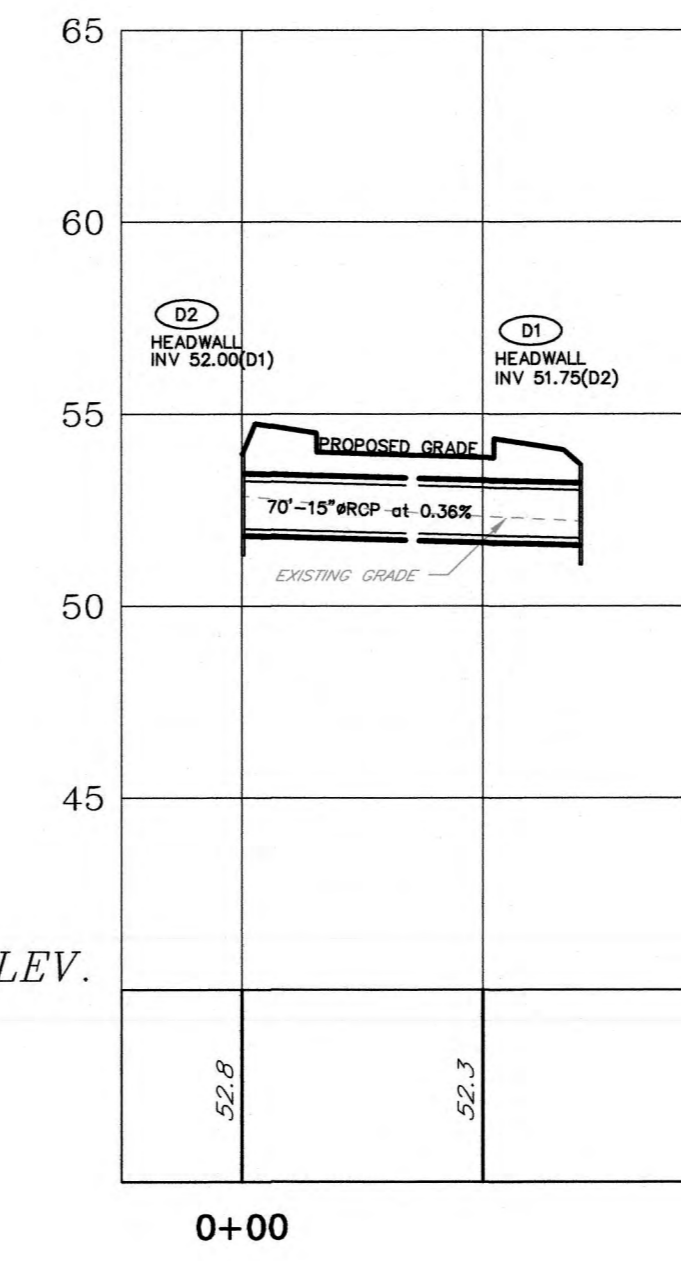
B5.2 TO B5 PROFILE
H: 1" = 40'
V: 1" = 5'



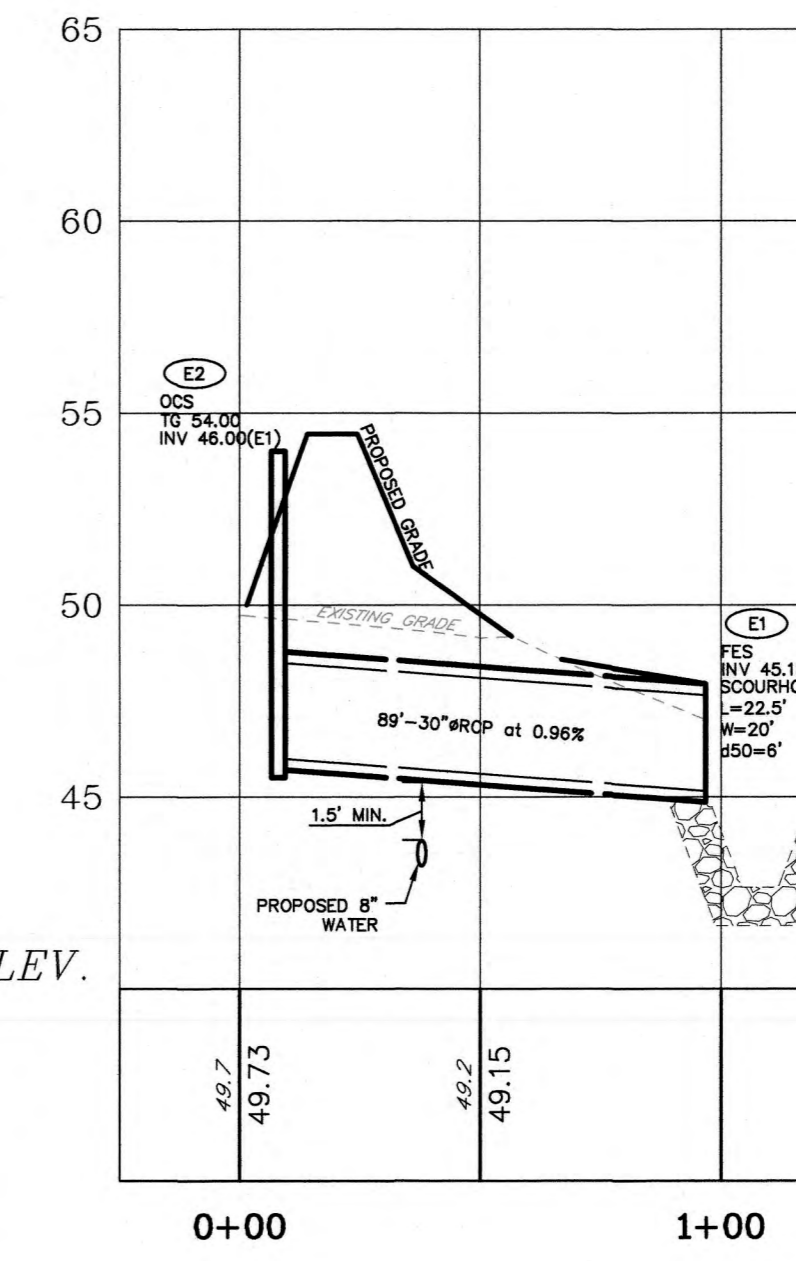
C3.1 TO C1 PROFILE
H: 1" = 40'
V: 1" = 5'



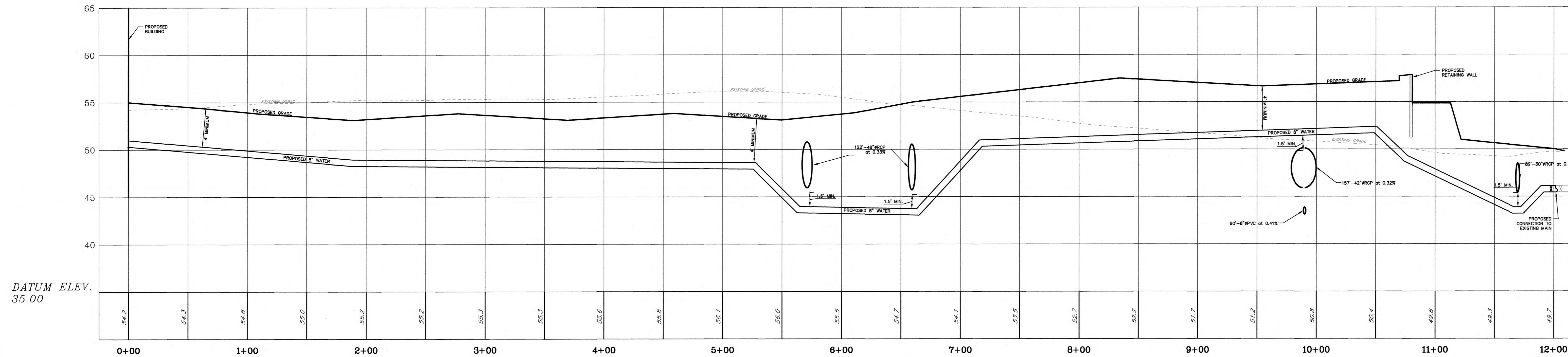
C2.1 TO C2 PROFILE
H: 1" = 40'
V: 1" = 5'



D2 TO D1 PROFILE
H: 1" = 40'
V: 1" = 5'



E2 TO E1 PROFILE
H: 1" = 40'
V: 1" = 5'



WATER SERVICE PROFILE
H: 1" = 40'
V: 1" = 5'

NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL SUBSURFACE UTILITIES THROUGH THE NEW JERSEY ONE-CALL SYSTEM (1-800-272-1000 OR 811).
- HORIZONTAL AND VERTICAL SCALES SHALL BE AS NOTED ON INDIVIDUAL PROFILES.

GRAPHIC SCALE

H: 1" = 40'
V: 1" = 5'

menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners
261 Cleveland Avenue
Highland Park, NJ 08904
732-846-8585 732-846-9439
Certificate of Authorization: 24027951900

REVISIONS

1) N.A.O.T. SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

CHD BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates

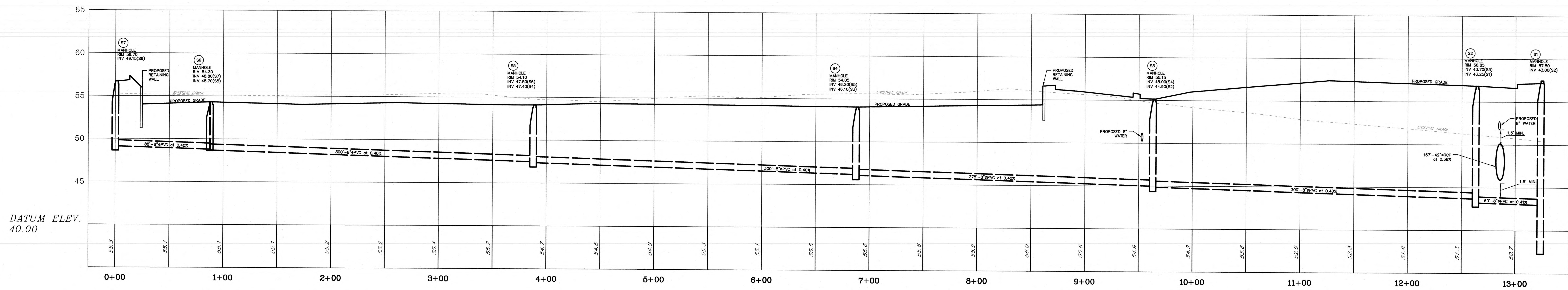
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON
BURLINGTON COUNTY
NEW JERSEY

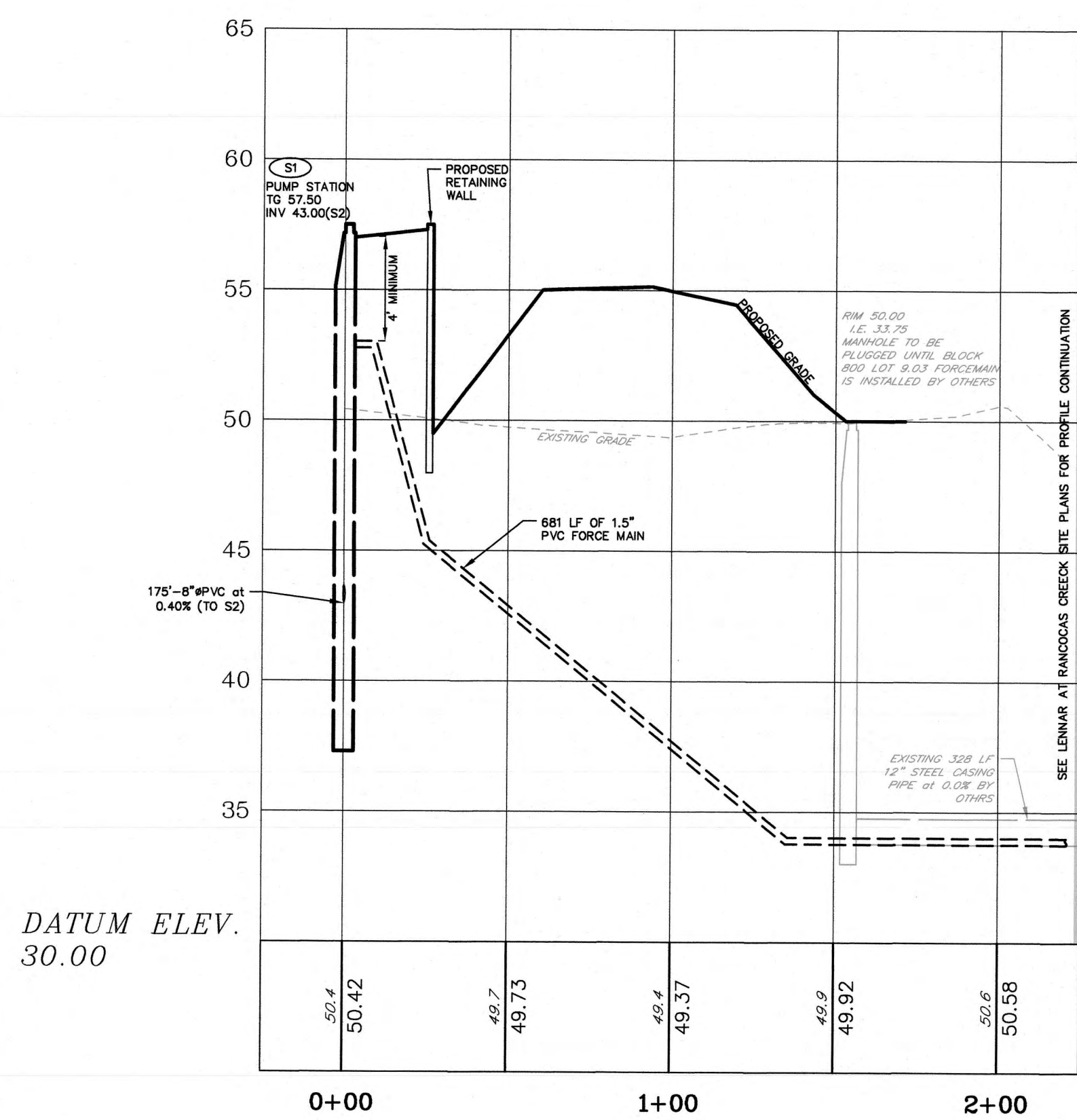
BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.8 ACRES

UTILITY PROFILES (2)

DRAWN BY	HC
DESIGNED BY	HC
APPROVED BY	ST
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION...	
SCOTT H. TURNER PROFESSIONAL ENGINEER N.J.E.# 43811	
PROJECT NUMBER	2020.014 UP-2
DATE OF ISSUE	JANUARY 12, 2021
REVISION	APRIL 22, 2021



S7 TO S1 PROFILE
 H: 1" = 40'
 V: 1" = 5'

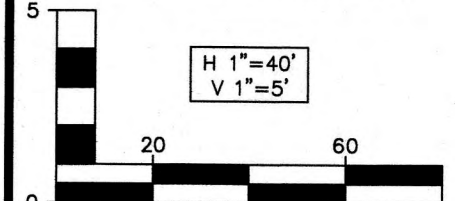


FORCE MAIN PROFILE
 H: 1" = 40'
 V: 1" = 5'

NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL VERIFY ACTUAL LOCATIONS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL SUBSURFACE UTILITIES THROUGH THE NEW JERSEY ONE-CALL SYSTEM (1-800-272-1000 OR 811).
- HORIZONTAL AND VERTICAL SCALES SHALL BE AS NOTED ON INDIVIDUAL PROFILES.

GRAPHIC SCALE



Civil Engineering Consultants
 Landscape Architects
 Professional Planners

261 Cleveland Avenue
 Highland Park, NJ 08904

menloeng.com | LinkedIn | Facebook | Instagram

732-846-8585 | 732-846-9439

Certificate of Authorization: 245A27951900

REVISIONS

1) NADOT SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

CHWD BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON BURLINGTON COUNTY NEW JERSEY

BLOCK 800, LOT 9.03 TAX MAP SHEET 8 27.8 ACRES

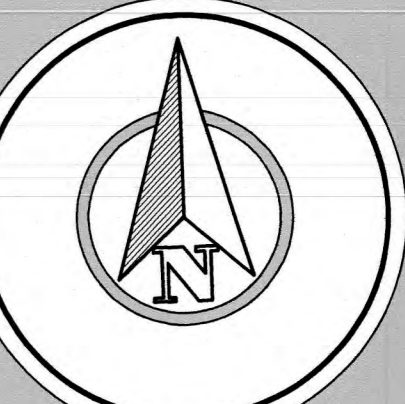
UTILITY PROFILES (3)

DRAWN BY: HC
 DESIGNED BY: HC
 APPROVED BY: ST

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION.

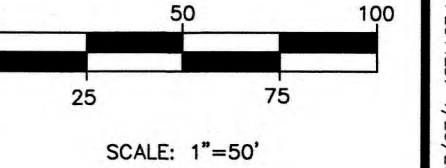
SCOTT H. TURNER
 PROFESSIONAL ENGINEER
 N.J.P.E.# 43811

PROJECT NUMBER	2020.014	UP-3
DATE OF ISSUE	JANUARY 12, 2021	
REVISION	2	APRIL 22, 2021



HORIZONTAL DATUM : NAD83 (NAD-83)

GRAPHIC SCALE



menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners

261 Cleveland Avenue
Highland Park, NJ 08904

menloeng.com | LinkedIn | Facebook | Twitter

732-646-8585 732-646-9439

Certificate of Authorization : 24C2795900

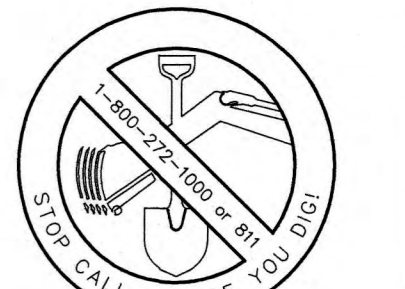
REVISIONS

1) NJDEP REVISIONS 03/10/21

2) TOWNSHIP REVISIONS 04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

CHD BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



ROCKEFELLER GROUP LOGISTICS at EASTAMPTON

TOWNSHIP OF EASTAMPTON BURLINGTON COUNTY NEW JERSEY

BLOCK 800, LOT 9.03 TAX MAP SHEET 8 27.8 ACRES

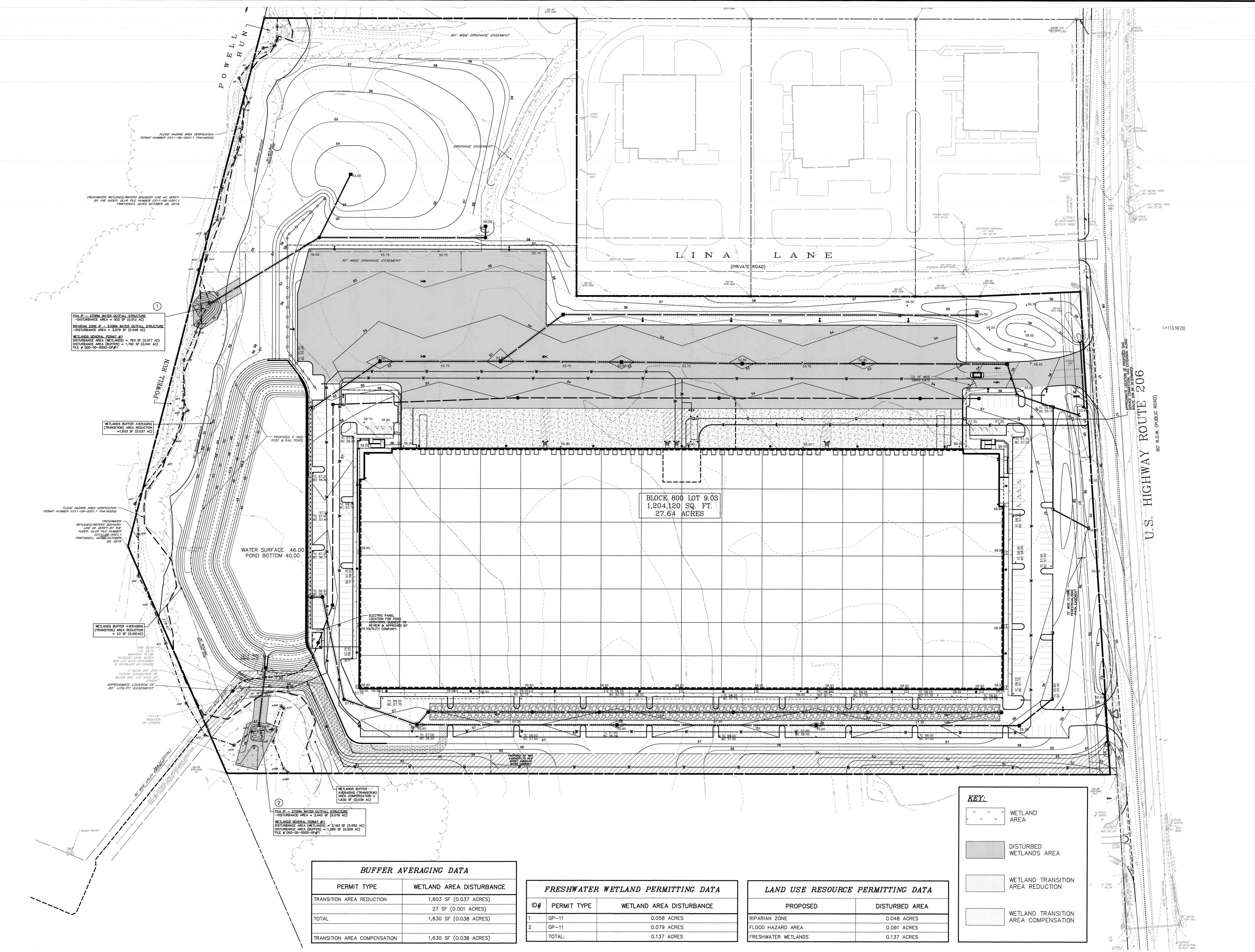
NJDEP PERMITTING PLAN

DRAWN BY: HC
DESIGNED BY: HC
APPROVED BY: ST

THIS WORK PREPARED UNDER MY INDIVIDUAL SUPERVISION

SCOTT H. TURNER PROFESSIONAL ENGINEER NJ#12127

PROJECT NUMBER: 2020.014 NPP-1
DATE OF ISSUE: JANUARY 12, 2021
REVISION: APRIL 22, 2021



1
FHA IP - STORM WATER OUTFALL STRUCTURE
-DISTURBANCE AREA = 562 SF (0.012 AC)
SEPARAL ZONE IP - STORM WATER OUTFALL STRUCTURE
-DISTURBANCE AREA = 2,079 SF (0.048 AC)
WETLANDS GENERAL PERMIT #11
DISTURBANCE AREA (WETLANDS) = 783 SF (0.017 AC)
DISTURBANCE AREA (BUFFER) = 1,792 SF (0.041 AC)
FILE # 003-00-0000-0711

WETLANDS BUFFER AVERAGING
(TRANSITION) AREA REDUCTION
= 1,603 SF (0.037 AC)

FLOOD HAZARD AREA VERIFICATION
PERMIT NUMBER 0311-08-0001.1 PMA160002
RECOMMEND WETLANDS/WATERS BOUNDARY LINE AS SHOWN BY THE
INDEX, CLIP FILE NUMBER 0311-08-0001.1
PMA160001, DATED OCTOBER 26, 2016

WETLANDS BUFFER AVERAGING
(TRANSITION) AREA REDUCTION
= 27 SF (0.000 AC)

14.5" RADIUS
BY OTHERS

30' WIDE UTILITY EASEMENT

WATER SURFACE 46.00
POND BOTTOM 40.00

2
FHA IP - STORM WATER OUTFALL STRUCTURE
-DISTURBANCE AREA = 3,442 SF (0.079 AC)
WETLANDS GENERAL PERMIT #11
DISTURBANCE AREA (WETLANDS) = 2,183 SF (0.050 AC)
DISTURBANCE AREA (BUFFER) = 1,288 SF (0.029 AC)
FILE # 003-00-0000-0711

BUFFER AVERAGING DATA	
PERMIT TYPE	WETLAND AREA DISTURBANCE
TRANSITION AREA REDUCTION	1,603 SF (0.037 ACRES)
	27 SF (0.001 ACRES)
TOTAL	1,630 SF (0.038 ACRES)
TRANSITION AREA COMPENSATION	1,630 SF (0.038 ACRES)

FRESHWATER WETLAND PERMITTING DATA		
ID#	PERMIT TYPE	WETLAND AREA DISTURBANCE
1	GP-11	0.058 ACRES
2	GP-11	0.079 ACRES
TOTAL:		0.137 ACRES

LAND USE RESOURCE PERMITTING DATA	
PROPOSED	DISTURBED AREA
RIPARIAN ZONE	0.048 ACRES
FLOOD HAZARD AREA	0.091 ACRES
FRESHWATER WETLANDS	0.137 ACRES

KEY:

- WETLAND AREA
- DISTURBED WETLANDS AREA
- WETLAND TRANSITION AREA REDUCTION
- WETLAND TRANSITION AREA COMPENSATION

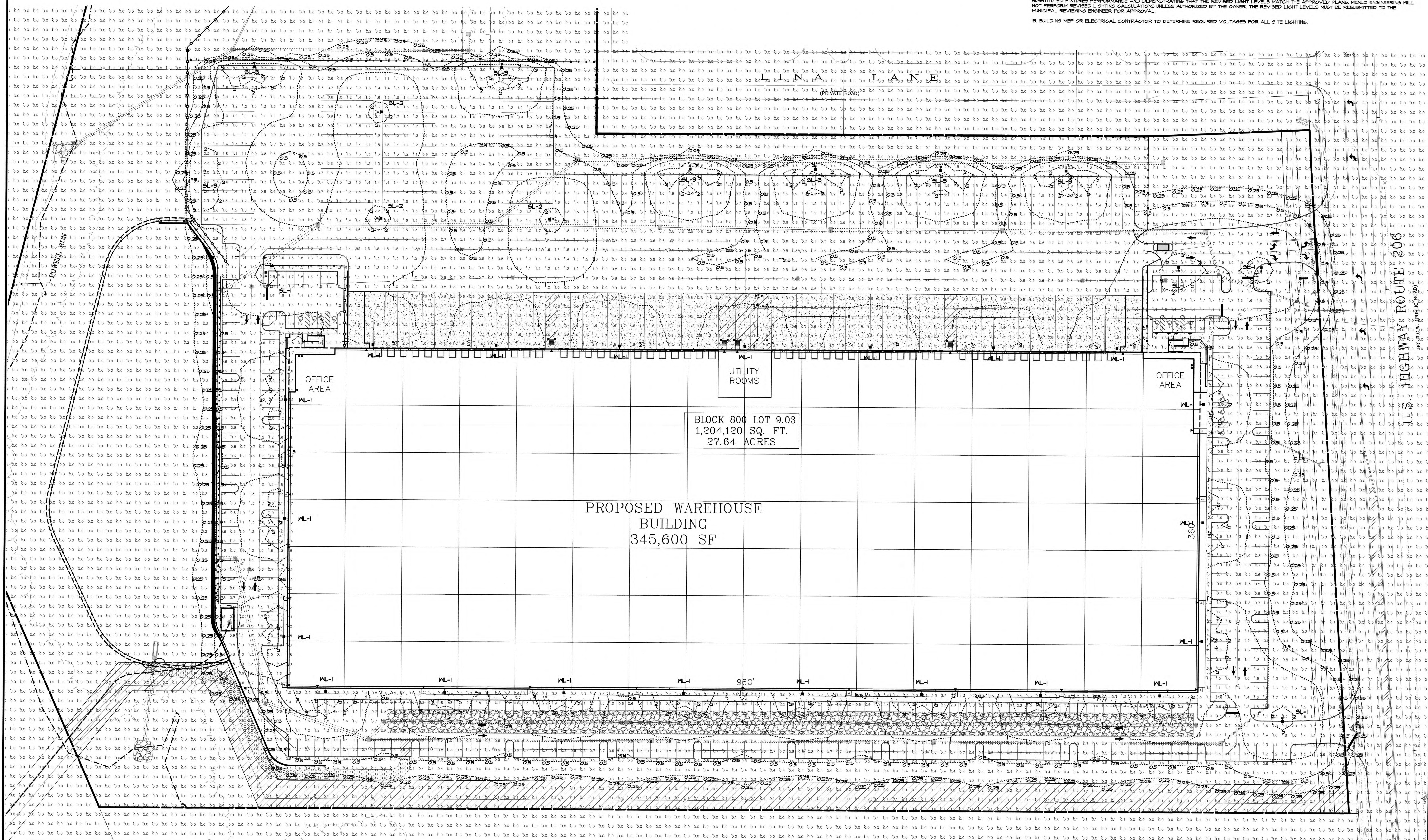
LIGHTING SCHEDULE

LABEL	QUANTITY	TYPE OF MOUNT	WATTAGE / COLOR / DRIVER	MOUNTING HEIGHT	POLE HEIGHT	DISTRIBUTION	CATALOG NUMBER	POLE CATALOG NUMBER
ML-1	21	WALL MOUNT	171 WATTS LED / 3200 K / 800mA	25.0"	N/A	TYPE TAFT IV H55	COOPER LIGHTING SOLUTIONS MCGRAW-HILLSON SL50N-S44-B-TB0...-TAFT...-BK (OR APPROVED EQUAL)	N/A
SL-1	4	SINGLE SQUARE POLE	171 WATTS LED / 3200 K / 800mA	25.0**	22.5'	TYPE 5WG	COOPER LIGHTING SOLUTIONS MCGRAW-HILLSON SL50N-S44-B-TB0...-5WG...-BK (OR APPROVED EQUAL)	COOPER LIGHTING SOLUTIONS 555-5-A-25-5-Y...-1...- (OR APPROVED EQUAL)
SL-2	5	SINGLE SQUARE POLE	171 WATTS LED / 3200 K / 800mA	25.0**	21.0'	TYPE 5WG	COOPER LIGHTING SOLUTIONS MCGRAW-HILLSON SL50N-S44-B-TB0...-5WG...-BK (OR APPROVED EQUAL)	COOPER LIGHTING SOLUTIONS 555-5-A-25-5-Y...-1...- (OR APPROVED EQUAL)
SL-3	7	SINGLE SQUARE POLE	171 WATTS LED / 3200 K / 800mA	25.0**	21.0'	TYPE TAFT IV H55	COOPER LIGHTING SOLUTIONS MCGRAW-HILLSON SL50N-S44-B-TB0...-TAFT...-BK (OR APPROVED EQUAL)	COOPER LIGHTING SOLUTIONS 555-5-A-25-5-Y...-1...- (OR APPROVED EQUAL)

* ABOVE FINISHED FLOOR ELEVATION
 ** ABOVE PAVEMENT GRADE
 (CONTACT MANUFACTURER FOR EXACT LIGHT FIXTURE AND POLE SPECIFICATIONS)

LIGHTING NOTES:

- A CONCRETE FOOTING BELOW FINISHED GRADE, SHALL BE INSTALLED FOR EACH FIXTURE. SIZE AND DEPTH TO BE DESIGNED BY STRUCTURAL ENGINEER.
- A MINIMUM OF (0.5) FOOTCANDLES, WITH AN AVERAGE OF (1.0) FOOTCANDLES AND AN AVERAGE TO MINIMUM UNIFORMITY RATIO OF 2.4:1 ARE PROVIDED WITHIN PARKING AREAS AND ACCESS AISLES. A MINIMUM OF (0.5) FOOTCANDLES, WITH AN AVERAGE OF (1.0) FOOTCANDLES AND AN AVERAGE TO MINIMUM UNIFORMITY RATIO OF 5.4:1 ARE PROVIDED WITHIN LOADING AND TRAILER STORAGE AREA.
- PARKING AREA POLES TO BE STEEL, NON-TAPERED, SQUARE TO MATCH FIXTURE.
- LIGHT FIXTURES AND POLES TO BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS.
- PARKING AREA LIGHTING CONTROLS SHALL BE PHOTOCELL ACTIVATED AND THEIR DEACTIVATED DURING HOURS OF OPERATION.
- LIGHT STANDARDS LOCATED IN PLANTING AREAS AND TURF AREAS SHALL BE A MINIMUM OF 30' OFF PAVEMENT CURB FACE. FOOTINGS WITHIN PARKING AREAS SHALL BE 30" ABOVE ADJACENT GRADE. FOOTINGS WITHIN LOADING AND TRAILER STORAGE AREAS SHALL BE 48" ABOVE ADJACENT PAVEMENT GRADE. ALL FOUNDATIONS SHALL BE CYLINDRICAL. POLE HEIGHTS SHALL BE ADJUSTED FOR APPROPRIATE FOUNDATIONS USED WHILE MAINTAINING LUMINAIRE MOUNTING HEIGHT.
- ALL CIRCUIT DIAGRAMS AND ELECTRICAL PLANS FOR EXTERIOR LIGHTING TO SERVICE PANEL SHALL BE DESIGNED BY INTERIOR LIGHTING CONTRACTOR/ENGINEER.
- INSTALLATION OF ALL SITE LIGHTING ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES, AND LAWS.
- THIS PLAN WAS PRODUCED USING LIGHTING ANALYSIS AGI PROGRAM WITH THE APPROPRIATE PHOTOMETRIC FILES SUPPLIED BY COOPER LIGHTING SOLUTIONS OF PEACHTREE CITY, GA.
- THE CONTRACTOR SHALL FIELD VERIFY EXISTING OVERHEAD WIRES FOR CLEARANCE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT/ENGINEER FOR ANY CONFLICTS PRIOR TO ORDERING LIGHTING EQUIPMENT.
- THE CONTRACT DRAWINGS INDICATE THE APPROXIMATE LOCATION OF EXISTING SUBSURFACE UTILITIES IN THE VICINITY OF THE PROJECT AND ARE NOT GUARANTEED FOR ACCURACY AND/OR COMPLETENESS. CONTRACTOR TO VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION (1-800-272-1000). ANY CONFLICTS WITH PROPOSED CONSTRUCTION ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND LANDSCAPE ARCHITECT. ALL EXISTING UTILITIES THAT ARE TO BE RELOCATED OR ALTERED IN ANY MANNER SHALL BE DONE IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANIES STANDARDS. ALL EXISTING UTILITIES EXPOSED DURING CONSTRUCTION ARE TO BE SUPPORTED UNTIL BACKFILL IS IN PLACE.
- ANY LIGHT FIXTURE SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE ACCOMPANIED BY A POINT BY POINT CALCULATION VERIFYING THE SUBSTITUTED FIXTURES PERFORMANCE AND DEMONSTRATING THAT THE REVISED LIGHT LEVELS MATCH THE APPROVED PLANS. MENLO ENGINEERS WILL NOT PERFORM REVISED LIGHTING CALCULATIONS UNLESS AUTHORIZED BY THE OWNER. THE REVISED LIGHT LEVELS MUST BE RESUBMITTED TO THE MUNICIPAL REVIEWING ENGINEER FOR APPROVAL.
- BUILDING MEP OR ELECTRICAL CONTRACTOR TO DETERMINE REQUIRED VOLTAGES FOR ALL SITE LIGHTING.



menlo engineering associates
 Civil Engineering Consultants
 Landscape Architects
 Professional Planners
 261 Cleveland Avenue
 Highland Park, NJ 08904
 menloeng.com | in | f | t
 732-846-8585 732-846-9439
 Certificate of Authorization: 24627951900

REVISIONS

NO.	DESCRIPTION	DATE
1	TOWNSHIP COMMENTS	02/12/21
2	NOT SUBMISSION	03/29/21
3	TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY.
 NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.
 CHKD BY: _____ DATE: _____

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates
ROCKEFELLER GROUP LOGISTICS at EASTAMPTON
 TOWNSHIP OF EASTAMPTON
 BURLINGTON COUNTY
 NEW JERSEY
 BLOCK 800, LOT 9.03
 TAX MAP SHEET 8
 27.8 ACRES

LIGHTING PLAN

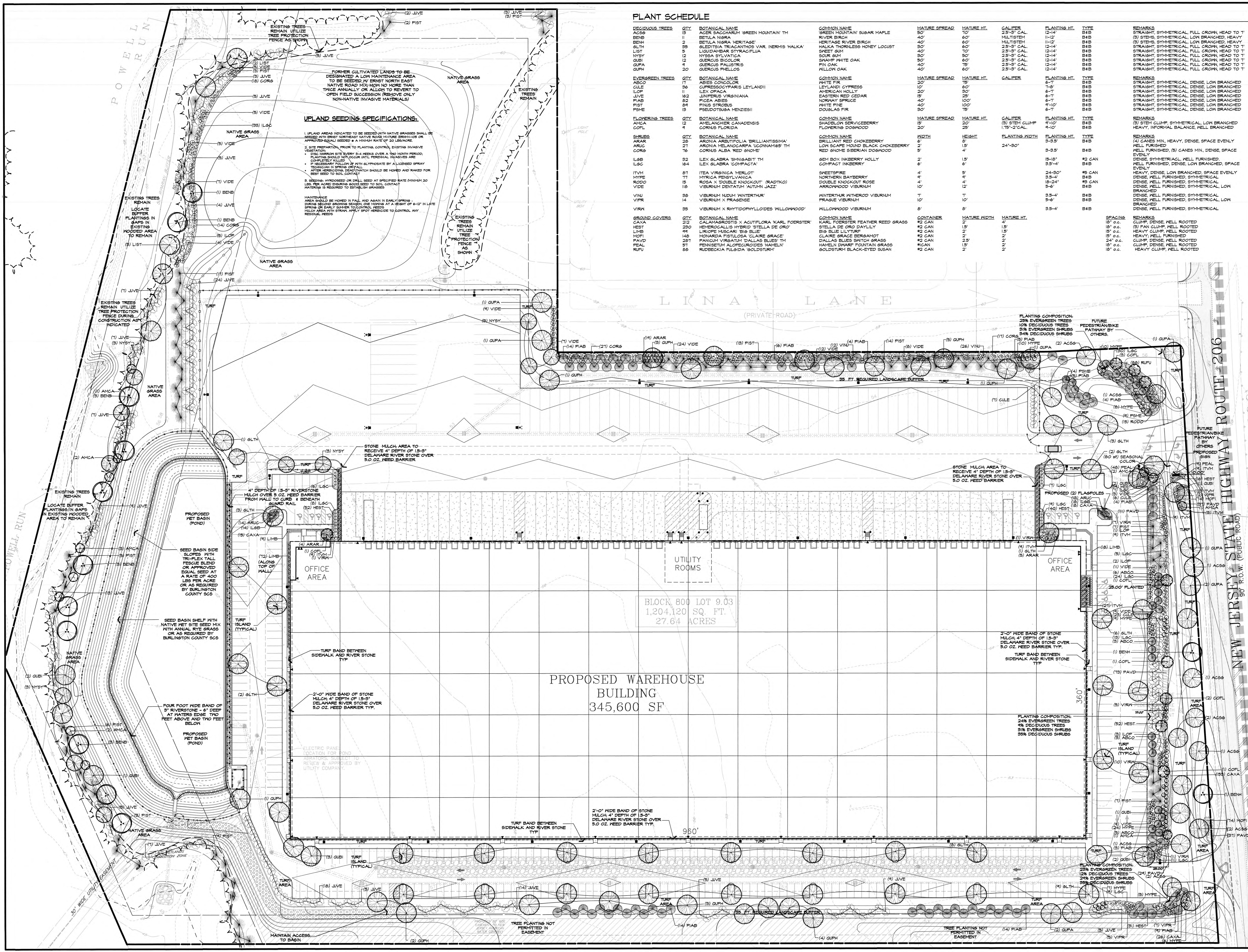
DRAWN BY: JT
 DESIGNED BY: JT
 CHECKED BY: KMG

THIS WORK PREPARED UNDER MY UNDISBURSED SUPERVISION

KENNETH R. GRISWOOD
 LANDSCAPE ARCHITECT NJ
 LICENSE #AS000071

PROJECT NUMBER: 2020.014 U-1
 DATE OF ISSUE: JANUARY 12, 2021
 REVISION: APRIL 22, 2021

10



PLANT SCHEDULE

QUANTITY	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE	REMARKS
13	ACER SACCHARIN 'GREEN MOUNTAIN' TM	GREEN MOUNTAIN SUGAR MAPLE	30'	70'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
11	BETULA NIGRA	RIVER BIRCH	40'	60'	MULTISTEM	11-12'	B4B	(3) STEMS, SYMMETRICAL, LOW BRANCHED, HEAVY
2	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	40'	60'	MULTISTEM	11-12'	B4B	(3) STEMS, SYMMETRICAL, LOW BRANCHED, HEAVY
35	GLEHETIA TRIACANTHOS VAR. 'INERMIS' HALLKA'	HALLKA THORNLESS HONEY LOCUST	40'	60'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	30'	50'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
12	QUERCUS BICOLOR	SHAMP WHITE OAK	30'	60'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
4	QUERCUS PALMSTRIS	PIN OAK	40'	70'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
4	QUERCUS PHELLOS	WILLOW OAK	40'	60'	2 3/4" CAL.	12-14'	B4B	STRAIGHT, SYMMETRICAL, FULL CROWN, HEAD TO T
17	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE	REMARKS
11	ABIES CONCOLOR	WHITE FIR	20'	70'	1 1/2"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
1	CUPRESSOCYPRIS LEYLANDII	LEYLANDI CYPRESS	10'	60'	1"	7-8'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
11	ILEX OPACA	AMERICAN HOLLY	20'	30'	1 1/2"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
36	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	10'	25'	1"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
82	PICEA ABIES	NORWAY SPRUCE	40'	100'	1 1/2"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
84	PINUS STROBUS	WHITE PINE	40'	100'	1 1/2"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
15	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	30'	70'	1 1/2"	6-7'	B4B	STRAIGHT, SYMMETRICAL, DENSE, LOW BRANCHED
12	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE	REMARKS
1	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	15'	25'	1 1/2" CAL.	4-10'	B4B	(3) STEMS, SYMMETRICAL, LOW BRANCHED
4	CORNUS FLORIDA	FLOWERING DOGWOOD	25'	25'	1 1/2" CAL.	4-10'	B4B	HEAVY, INFORML BALANCE, WELL BRANCHED
29	BOTANICAL NAME	COMMON NAME	MATURE SPREAD	MATURE HT.	CALIPER	PLANTING HT.	TYPE	REMARKS
29	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	BRIGHT RED CHOKEBERRY	6'	6'	1"	3-3.5'	B4B	(4) CANES MIN, HEAVY, DENSE, SPACE EVENLY
27	ARONIA MELANOCARPA 'CONCANNES' TM	LOW SCAPE HOOD BLACK CHOKEBERRY	6'	6'	1"	3-3.5'	B4B	WELL FURNISHED, DENSE, LOW BRANCHED, SPACE
76	CORNUS ALBA 'RED SIGNE'	RED GLOVE SIBERIAN DOGWOOD	5'	4'	1"	3-3.5'	B4B	WELL FURNISHED, (5) CANES MIN, DENSE, SPACE
52	ILEX GLABRA 'SMINIGABITI' TM	SEM BOX INKBERRY HOLLY	2'	1.5'	1"	1.5-1.8'	#2 CAN	DENSE, SYMMETRICAL, WELL FURNISHED, SPACE
164	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	6'	6'	1"	3.5-4'	B4B	WELL FURNISHED, DENSE, LOW BRANCHED, SPACE
87	ITEA VIRGINICA 'MERLOT'	SWEETSPIRE	4'	5'	1"	2.4-3.0'	#5 CAN	DENSE, WELL FURNISHED, SYMMETRICAL, SPACE
11	HYDRIC PENNSYLVANICA	NORTHERN BAYBERRY	4'	5'	1"	3.5-4'	B4B	DENSE, WELL FURNISHED, SYMMETRICAL, SPACE
18	ROSA 'DOUBLE KNOCKOUT' (RADTKO)	DOUBLE KNOCKOUT ROSE	4'	4'	1"	1.8-2.4'	#5 CAN	DENSE, WELL FURNISHED, SYMMETRICAL, LOW
77	VIBURNUM DENTATUM 'AUTUMN JAZZ'	AKRONWOOD VIBURNUM	10'	12'	1"	5-6'	B4B	DENSE, WELL FURNISHED, SYMMETRICAL, LOW
30	VIBURNUM NUDUM 'WINTERHUR'	WINTERHUR WITHERED VIBURNUM	10'	10'	1"	3.5-4'	B4B	DENSE, WELL FURNISHED, SYMMETRICAL, LOW
14	VIBURNUM X PRAGENSE	PRAGUE VIBURNUM	10'	10'	1"	5-6'	B4B	DENSE, WELL FURNISHED, SYMMETRICAL, LOW
35	VIBURNUM X RHYTIDOPHYLLOIDES 'WILLOWOOD'	WILLOWOOD VIBURNUM	8'	8'	1"	3.5-4'	B4B	DENSE, WELL FURNISHED, SYMMETRICAL
212	BOTANICAL NAME	COMMON NAME	CONTAINER	MATURE WIDTH	MATURE HT.	SPACING	REMARKS	
230	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#2 CAN	2'	1.5'	18" o.c.	CLUMP, DENSE, WELL ROOTED	
49	HEBERGALLIS 'HYBRID' STELLA DE ORO	STELLA DE ORO DAYLILY	#2 CAN	1.5'	1.5'	18" o.c.	(3) PAN CLUMP, WELL ROOTED	
148	LIRIOPE MACRARI 'BIG BLUE'	BIG BLUE LILYTURF	#2 CAN	2'	1.5'	18" o.c.	HEAVY, WELL FURNISHED	
281	MONARDA PESTILOSA 'CLARE GRACE'	CLARE GRACE BERGAMOT	#2 CAN	2'	2.5'	18" o.c.	CLUMP, DENSE, WELL ROOTED	
287	PANICUM VIRGATUM 'DALLAS BLUES' TM	DALLAS BLUES SWITCH GRASS	#2 CAN	1.5'	1.5'	18" o.c.	CLUMP, DENSE, WELL ROOTED	
281	PENSETEM ALOPECUROIDES 'HAMELI'	HAMELI DWARF SPITACH GRASS	#2 CAN	1.5'	1.5'	18" o.c.	CLUMP, DENSE, WELL ROOTED	
89	RUPESKIA FLUIDA 'GOLDSTURM'	GOLDSTURM BLACK-EYED SUSAN	#2 CAN	2'	2'	18" o.c.	HEAVY CLUMP, WELL ROOTED	

HORIZONTAL DATUM: -

GRAPHIC SCALE

0 20 40 60

SCALE: 1"=40'

menlo engineering associates

Civil Engineering Consultants
Landscape Architects
Professional Planners

261 Cleveland Avenue
Highland Park, NJ 08904

menloeng.com | in | f | t

732-846-8585 | 732-846-9439

Certificate of Authorization: 24027819100

REVISIONS	DATE
1) NDOT SUBMISSION	03/29/21
2) TOWNSHIP COMMENTS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNLESS THIS BOX HAS BEEN CHECKED AND DATED.

CHD BY: _____ DATE: _____

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates

ROCKEFELLER EASTAMPTON WAREHOUSE

TOWNSHIP OF EASTAMPTON
BURLINGTON COUNTY
NEW JERSEY

BLOCK 800, LOT 9.03
TAX MAP SHEET -
27.8 ACRES

LANDSCAPE PLAN (1)

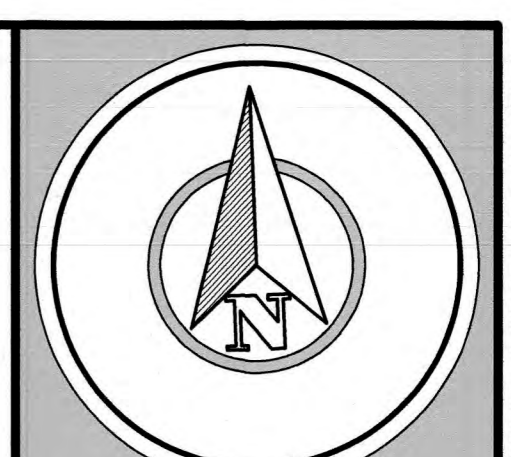
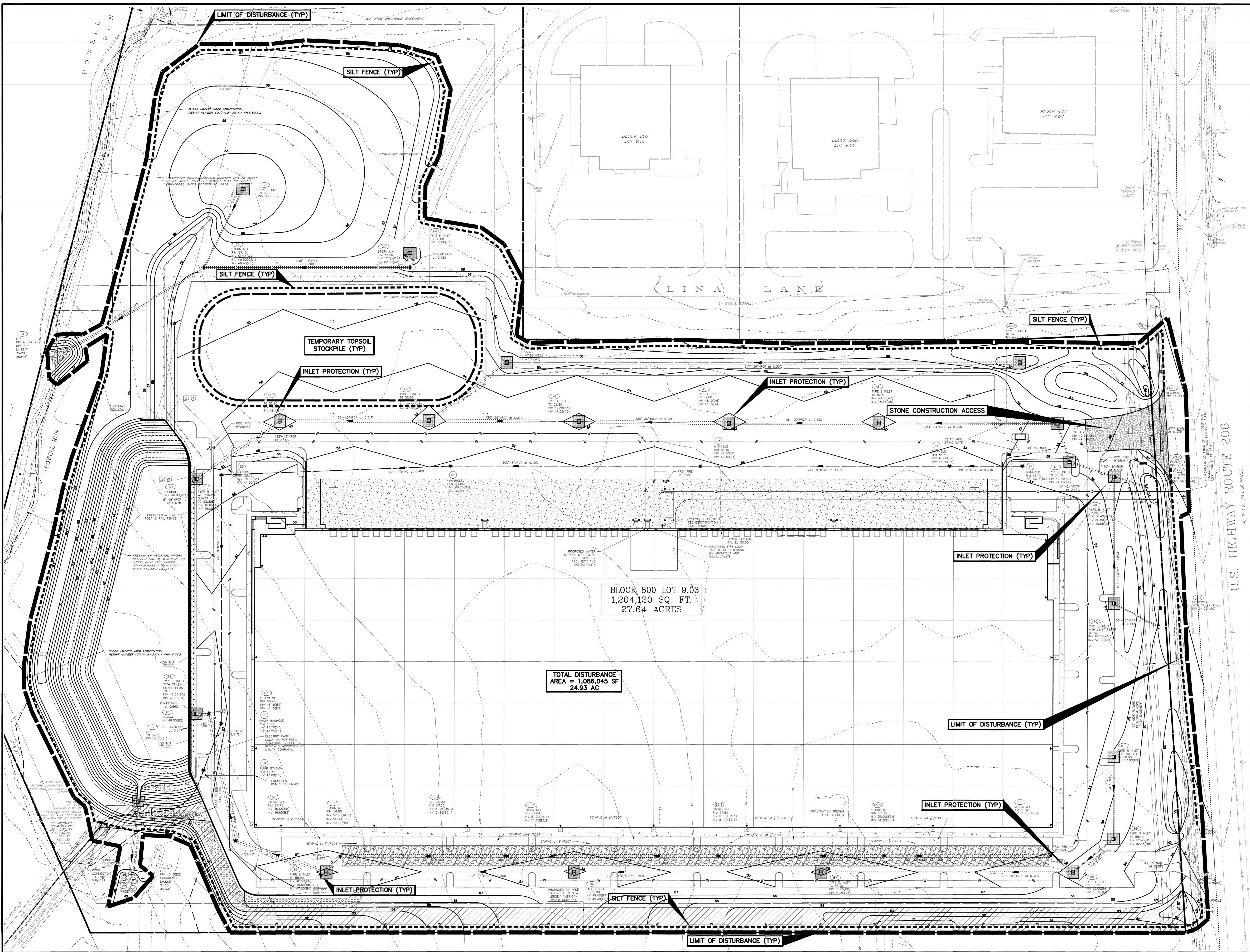
DRAWN BY: _____ 803
DESIGNED BY: _____ 803
REVISIONS: _____ 803

THIS WORK PREPARED UNDER M.E. CONTRACT AGREEMENT

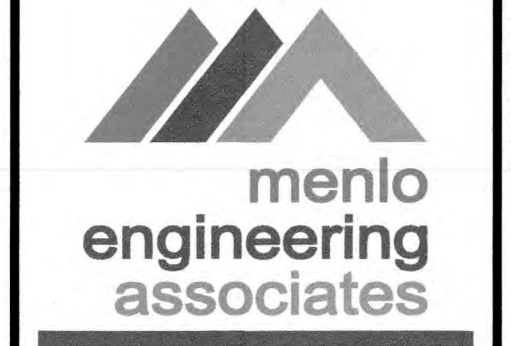
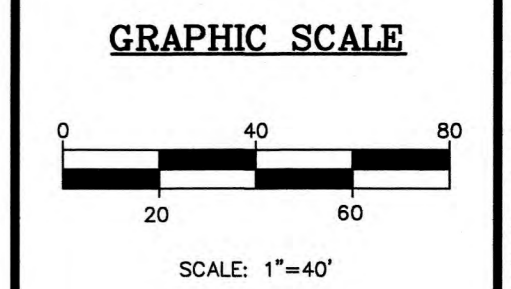
KENNETH R. GRISEWOOD
LANDSCAPE ARCHITECT NJ
LICENSE #AS000071

PROJECT NUMBER: 2020.014 LA-1
DATE OF ISSUE: FEBRUARY 2, 2021
REVISION: APRIL 22, 2021

11



HORIZONTAL DATUM : NAD83 (NAD-83)



menlo
engineering
associates
Civil Engineering Consultants
Landscape Architects
Professional Planners
261 Cleveland Avenue
Highland Park, NJ 08904
menloeng.com
732-846-8585 732-846-9439
Certificate of Authorization : 240A27951900

REVISIONS	
1) TOWNSHIP COMMENTS	02/12/21
2) NDOT SUBMISSION	03/29/21
3) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY.
NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

CHKD BY: _____ DATE: _____



THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.



ROCKEFELLER
GROUP
LOGISTICS
at
EASTAMPTON

TOWNSHIP OF EASTAMPTON
BURLINGTON COUNTY
NEW JERSEY

BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.8 ACRES

SOIL EROSION
& SEDIMENT
CONTROL PLAN

DRAWN BY: HC
DESIGNED BY: HC
APPROVED BY: ST
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION
SCOTT J. TURNER
PROFESSIONAL ENGINEER
N.J.E.# 43811

PROJECT NUMBER	DATE	REVISION	DESCRIPTION
2020.014	2020.014	SE-1	
	JANUARY 12, 2021		
	APRIL 22, 2021		

WET TOLERANT SEEDING SPECIFICATION

SEEDBED PREPARATION: FERTILIZER (10-10-10) 500 LB/AC LIMESTONE 6,000 LB/AC

FOR UNMAINTAINED AREAS

SEEDING DATES: ZONE 56a (3/15-5/31), ZONE 6b (3/1-4/30), ZONE 7a (2/1-4/30) (IF DISTURBANCE IS OUTSIDE OF PLANTING DATES THEN SEED AREA WITH TEMPORARY SEEDING MIX. THE TARGET AREA MUST THEN BE RESEED WITH REQUIRED MIX WITH THE REQUIRED PLANTING DATES)

Table with 2 columns: SCS SEED MIX # and seed types (DEERTONGUE, REDTOP, MID RYE, SWITCHGRASS) with corresponding rates in LB/AC.

FOR MAINTAINED AREAS

(POOD AND CHANNEL BANKS, BERMS AND DAMS)

SEEDING DATES: (OPTIMAL) ZONE 56,6a (8/1-10/1); ZONE 6b (8/15-10/15); ZONE 7a,7b (8/15-10/30) (SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

Table with 2 columns: SCS SEED MIX #7 and seed types (STRONG CREEPING RED FESCUE, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS, OR REDTOP, W/ WHITE CLOVER) with corresponding rates in LB/AC.

FOR MAINTAINED AREAS (DETENTION BASINS AND SWALES)

SEEDING DATES: (OPTIMAL) ZONE 56,6a (8/1-10/1); ZONE 6b (8/15-10/15); ZONE 7a,7b (8/15-10/30) (SEE TABLE 4-2 OF THE SCS STANDARDS FOR ADDITIONAL PLANTING DATES)

Table with 2 columns: SCS SEED MIX #14 and seed types (TURF-TYPE TALL FESCUE, 3 CULTIVAR BLEND, KENTUCKY BLUEGRASS, PERENNIAL RYEGRASS) with corresponding rates in LB/AC.

MULCHING

UNRITTED SALT HAY OR APPROVED EQUAL 1 1/2 TO 2 TONS/AC

MULCH ANCHORING

HYDROMULCH OR APPROVED EQUAL (USE RATES AS RECOMMENDED BY MANUFACTURER)

NOTES:

- 1) FOR ADDITIONAL REQUIREMENTS REFER TO THE SCS STANDARD FOR PERMANENT VEGETATIVE COVER.
2) THE FERTILIZER AND LIMESTONE RATES REPRESENT THE UNTESTED SCS REQUIRED RATES. FINAL RATES SUBJECT TO SOIL FERTILITY, pH ANALYSIS AND LAB RECOMMENDATIONS.
3) ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATED COVER (OF THE SEEDED SPECIES) AND MOVED ONCE.

STANDARD FOR TOPSOILING

DEFINITION

TOPSOILING ENTAILS THE DISTRIBUTION OF SUITABLE QUALITY SOIL ON AREAS TO BE VEGETATED.

PURPOSE

TO IMPROVE THE SOIL MEDIUM FOR PLANT ESTABLISHMENT AND MAINTENANCE.

WATER QUALITY ENHANCEMENT

GROWTH AND ESTABLISHMENT OF A VIGOROUS VEGETATIVE COVER IS FACILITATED BY TOPSOIL. PREVENTING SOIL LOSS BY WIND AND RAIN OFFSITE AND INTO STREAMS AND OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

TOPSOIL SHALL BE USED WHERE SOILS ARE TO BE DISTURBED AND WILL BE REVEGETATED.

METHODS AND MATERIALS

1. MATERIALS

A. TOPSOIL SHOULD BE FRAGILE*, LOAMY*, 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 EXCEED CONCENTRATION LESS THAN 0.5 MILLIMOLS PER CENTIMETER, MORE THAN 0.5 MILLIMOLS MAY BE ADDED TO SOILS WITH LOW 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 EXPOSURE 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.

3. 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.

4. 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 SOILS 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.

* FRAGILE MEANS EASILY CRUMBLES IN THE FINGERS, AS DEFINED IN MOST SOILS TEXTS.
* 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.

STANDARD FOR TEMPORARY VEGETATIVE COVER

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 SUBSOIL SHOULD BE SOILED TO 6" TO 12" WHERE THERE HAS BEEN NO DISKING. SOILS WITH GRADES SHALL BE AMENDED WITH LIME 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 AT THE RATE OF 500 POUNDS PER ACRE (OR 100 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST 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 RETILLED IN ACCORDANCE WITH THE ABOVE.

D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4.0 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1.

3. SEEDING

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

B. CONVENTIONAL SEEDING: APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CUTLIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CUTLIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.

C. 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. STAKES MAY 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 FORCED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MEANS 80% VEGETATED COVER (OF THE SEED SPECIES) AND MOVED ONCE.

D. AFTER SEEDING, FIRING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND MINIMIZED WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING

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

A. STRAW OR HAY, UNRITTED SMALL GRASS STRAW, HAY FREE OF SEEDS, 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 OR OTHER MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING PERMANENT VEGETATION. MULCH SHOULD BE 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.

B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CUTLIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CUTLIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING 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 SEEDLING 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 4-MULCHING BELOW). 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.

E. 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 SOIL EROSION SHALL BE DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

F. STRAW OR HAY, UNRITTED SMALL GRASS 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 OR OTHER MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FIRE TUFF OR LAWNS MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

G. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH. (a) 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.

(b) USE ONE OF THE FOLLOWING: (1) 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 PHYTOLOGIC EFFECT OR IMPROVE 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.

(2) 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 OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

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

I. 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 SEEDING AREA AND WATERED, FORM A MULCH MAY PELLETIZED MULCH WITH SEED. 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.

(2) 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 OF THESE PRODUCTS 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, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED TO A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN 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 SEEDING AREA AND WATERED, FORM A MULCH MAY PELLETIZED MULCH WITH SEED. 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.

(2) 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 OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

D. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED TO A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

E. 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 SEEDING AREA AND WATERED, FORM A MULCH MAY PELLETIZED MULCH WITH SEED. 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.

(2) 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 AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

NOTE: THIS DESIGNATION OF MOVED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED.

STANDARD FOR PERMANENT VEGETATIVE COVER

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. 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 AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH LOCAL MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

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

2. 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 100 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 SOILS HAVING A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE BEFORE INITIATING SEEDBED PREPARATION. (SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS).

3. SEEDING

A. SELECT A MIXTURE FROM TABLE 4-2 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL 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 RESEED.

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 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% VEGETATED COVER (OF THE SEED SPECIES) AND MOVED ONCE.

3. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 85°F. MANY GRASSES BECOME ACTIVE AT 55°F. SEE TABLE 4-2, 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 CUTLIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CUTLIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING 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 SEEDLING 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 4-MULCHING BELOW). 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.

4. 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 SOIL EROSION SHALL BE DETERMINED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

A. STRAW OR HAY, UNRITTED SMALL GRASS 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 OR OTHER MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FIRE TUFF OR LAWNS MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

APPLICATION - SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT AT LEAST 85% OF THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FOOT SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS PER 1,000 SQUARE FOOT 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.

1. 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.

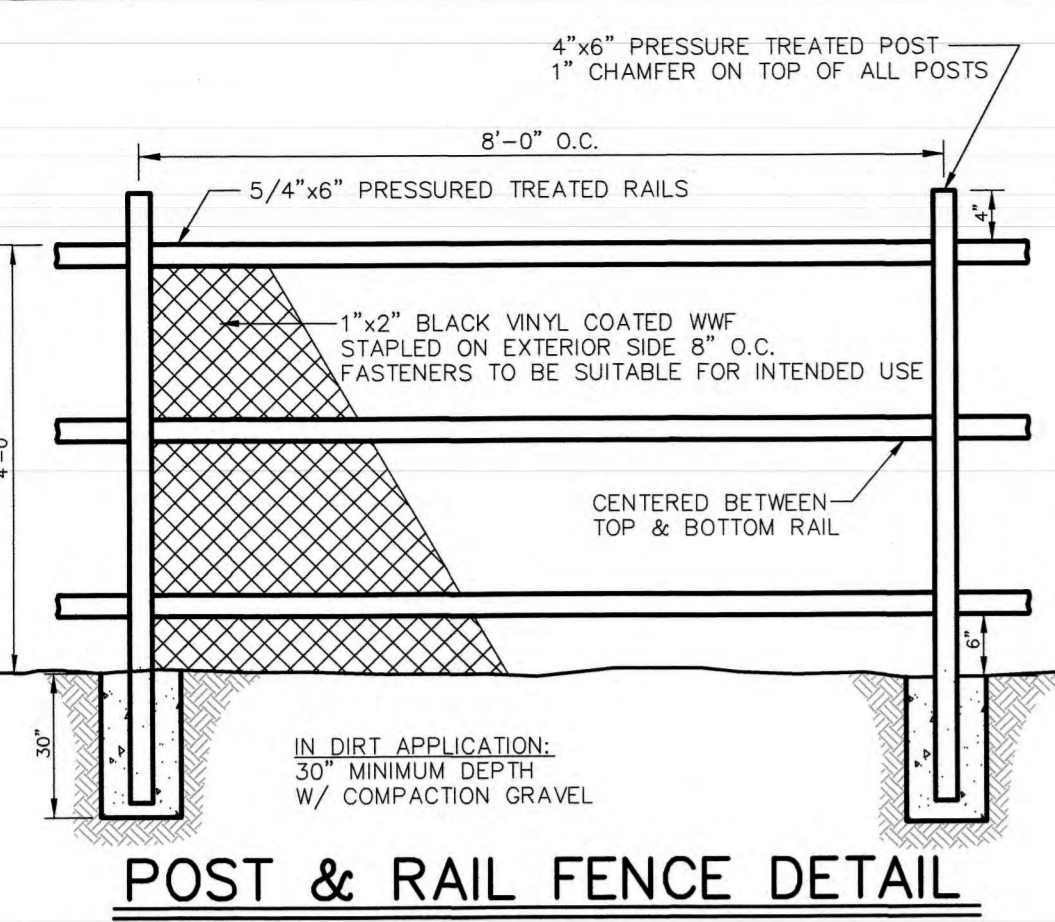
2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOVED.

3. CRIMPER (MULCH ANCHORING COLLIER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST BE GREAT ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

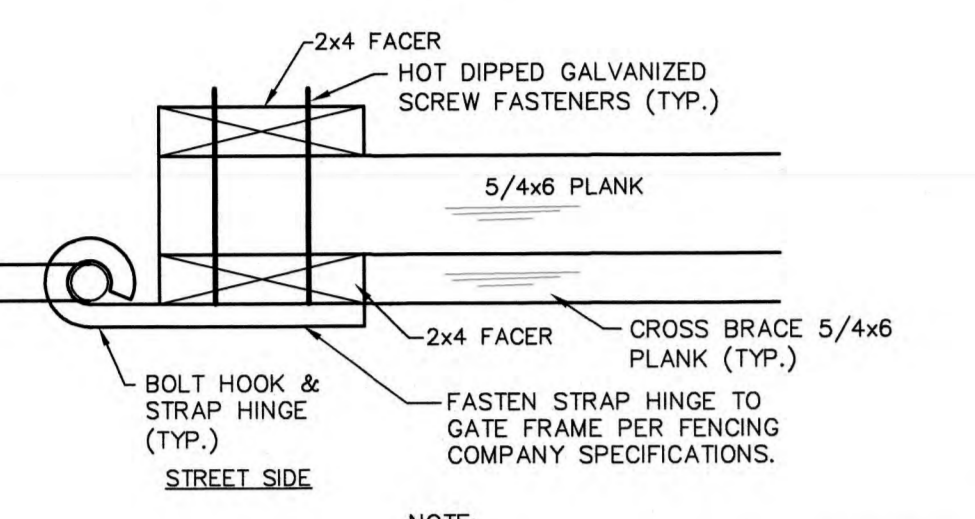
4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH. (a) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

(b) USE ONE OF THE FOLLOWING: (1) 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 PHYTOLOGIC EFFECT OR IMPROVE 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.

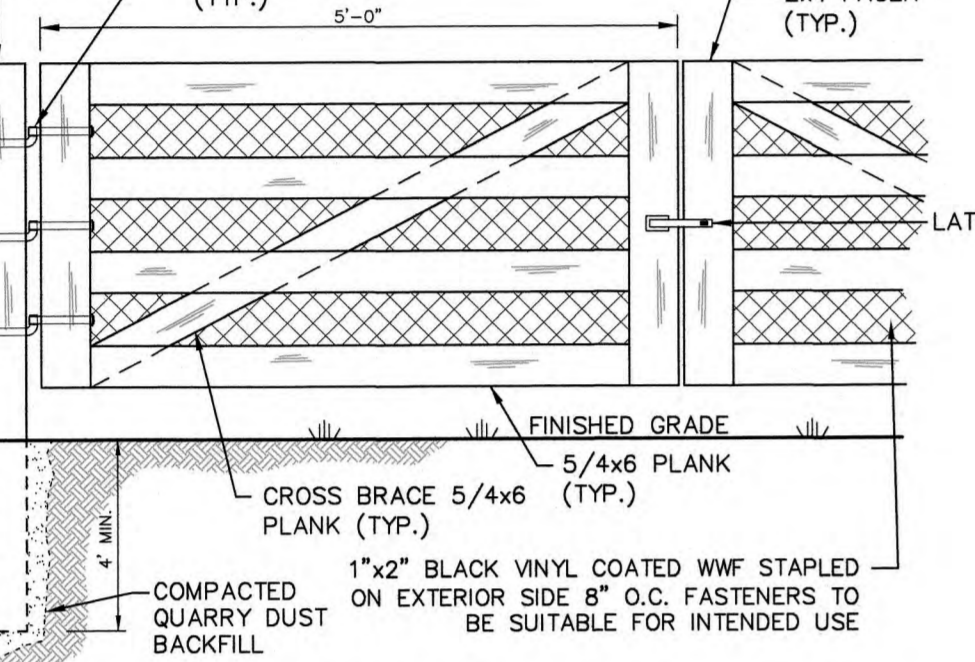
(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.</



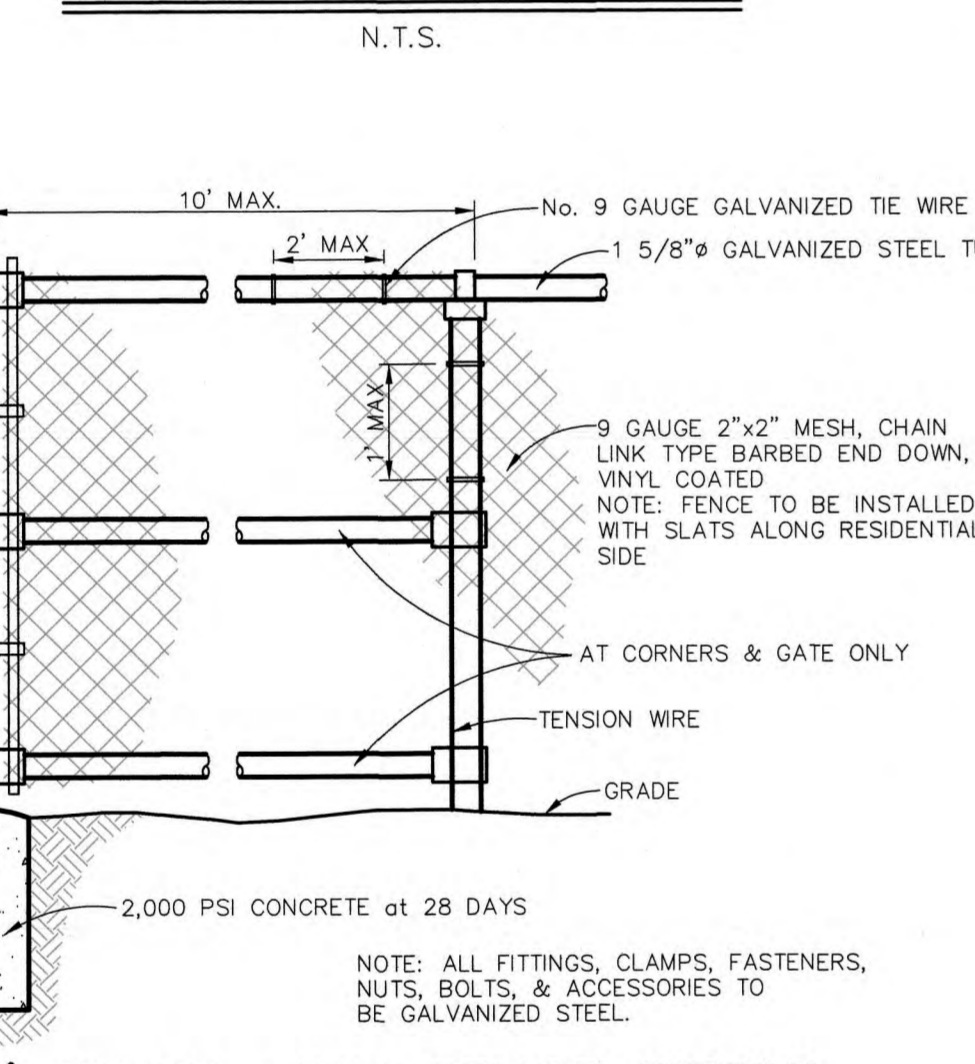
POST & RAIL FENCE DETAIL
N.T.S.



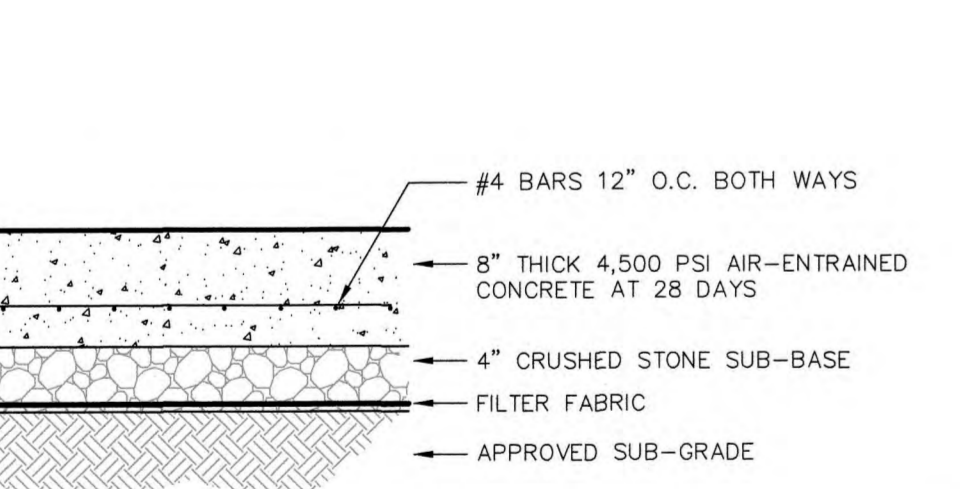
GATE DETAIL FOR POST AND RAIL FENCE
N.T.S.



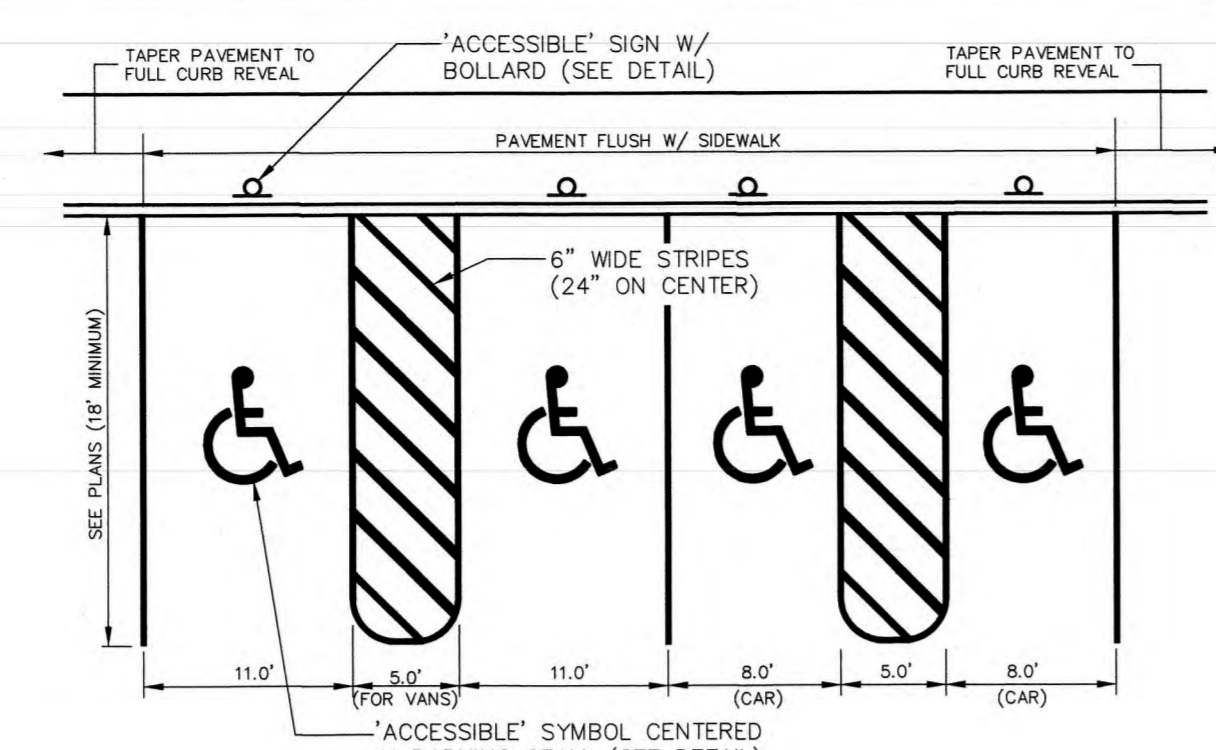
6' CHAIN LINK FENCE DETAIL
N.T.S.



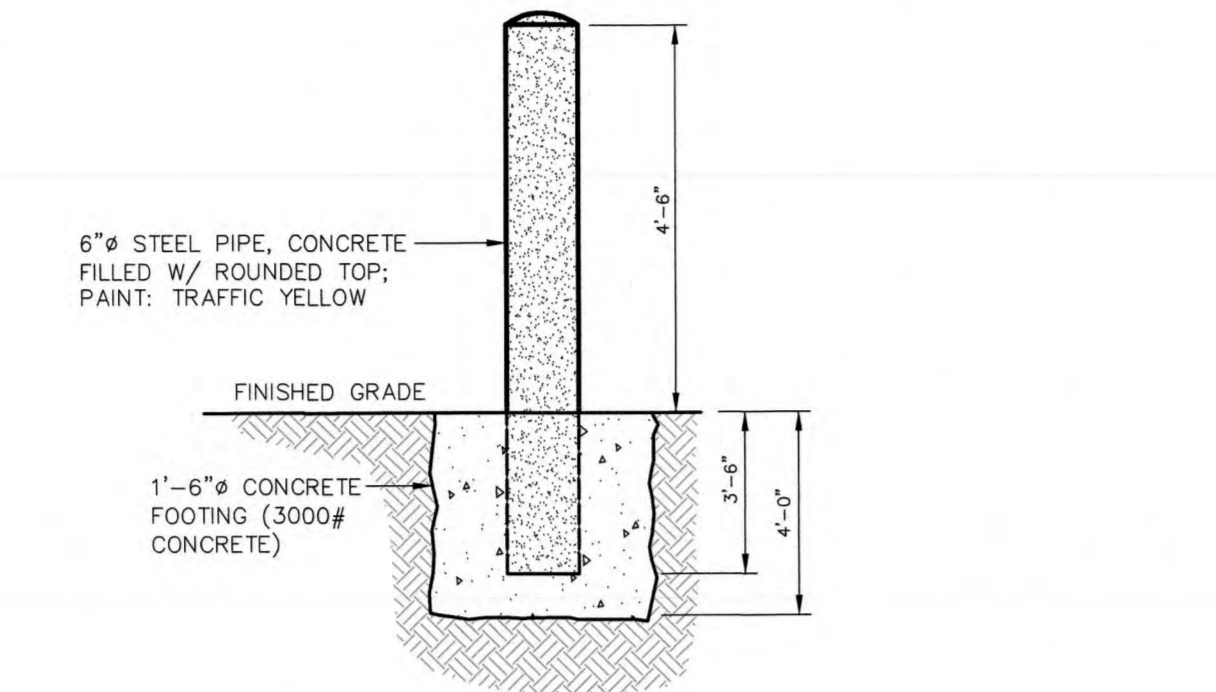
CONCRETE SLAB DETAIL
N.T.S.



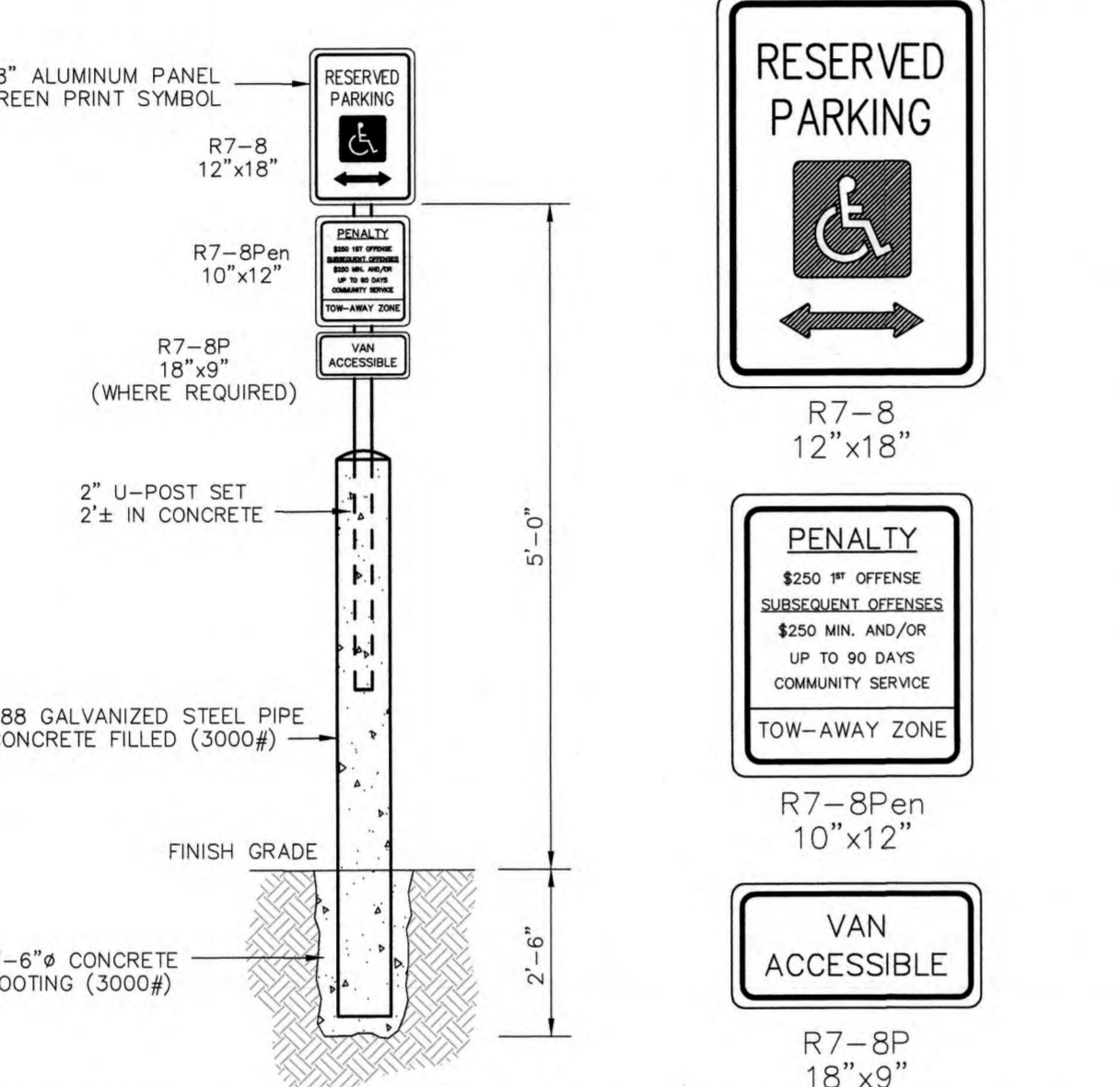
EXTERIOR STAIR PLAN-1
N.T.S.



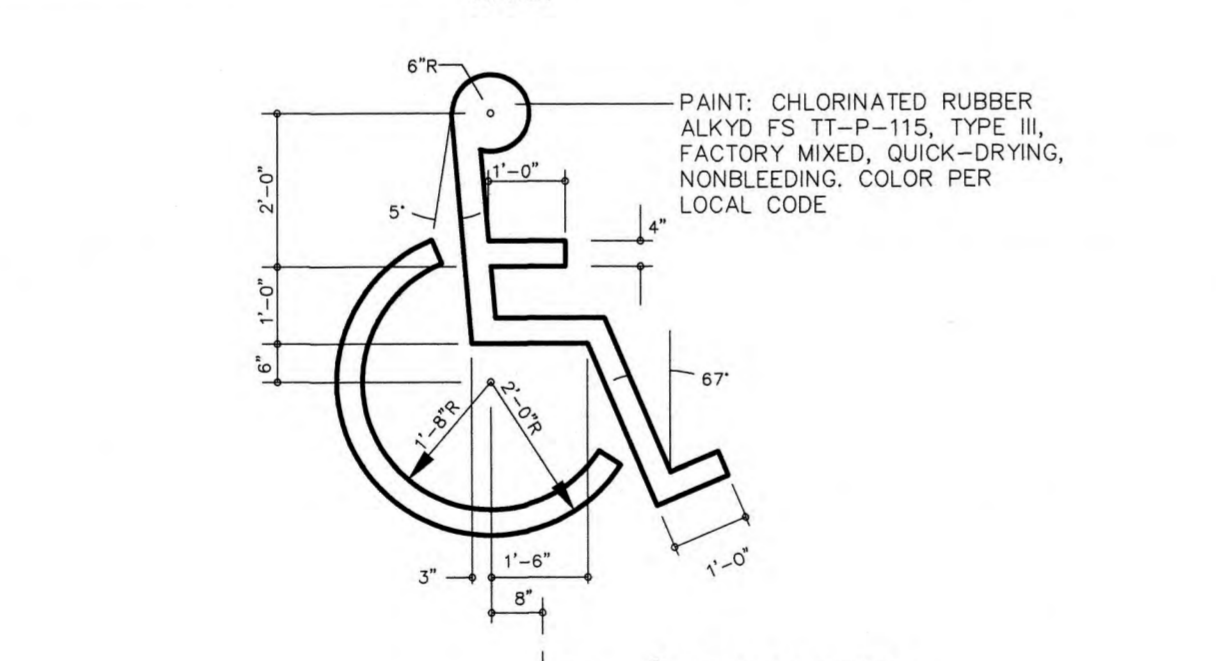
(ABUTTING CURB / VAN & CAR SPACES) ADA PARKING STALL STRIPING
N.T.S.



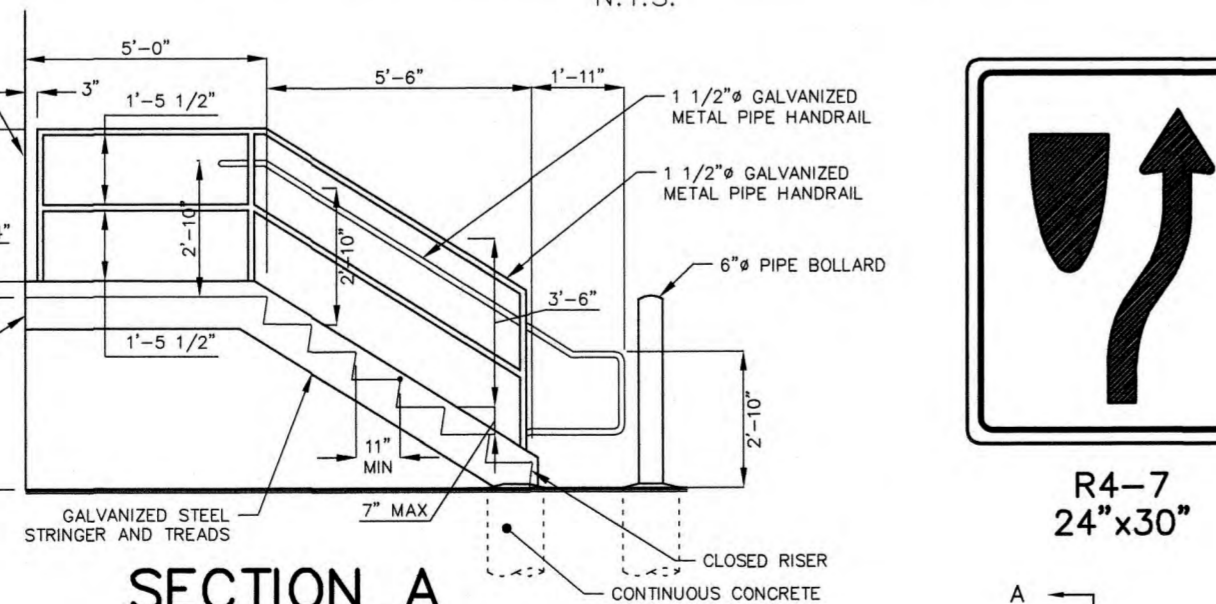
PIPE BOLLARD
N.T.S.



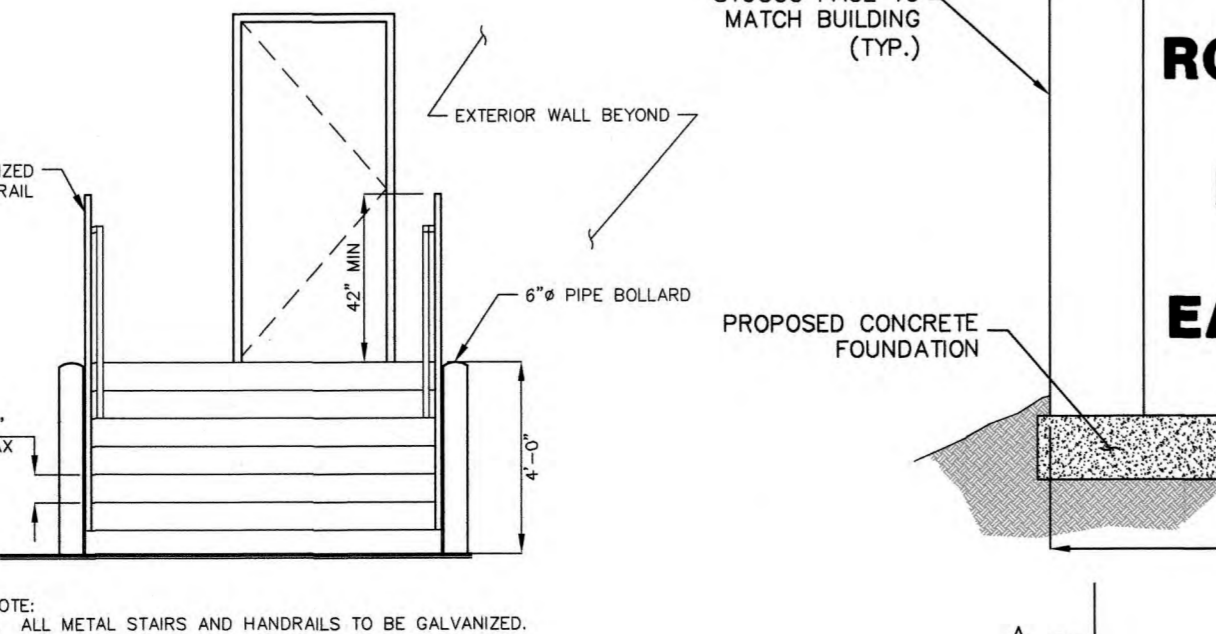
ACCESSIBLE SIGN DETAIL W/BOLLARD
N.T.S.



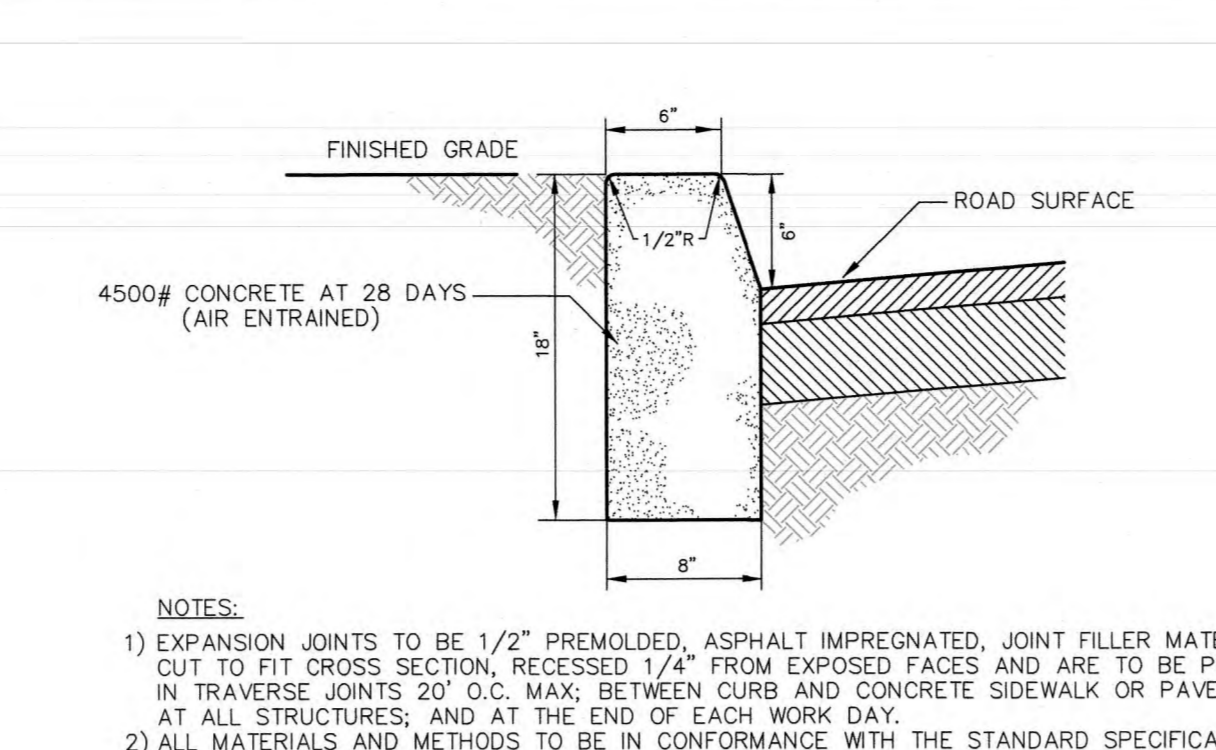
ACCESSIBLE PARKING DETAIL
N.T.S.



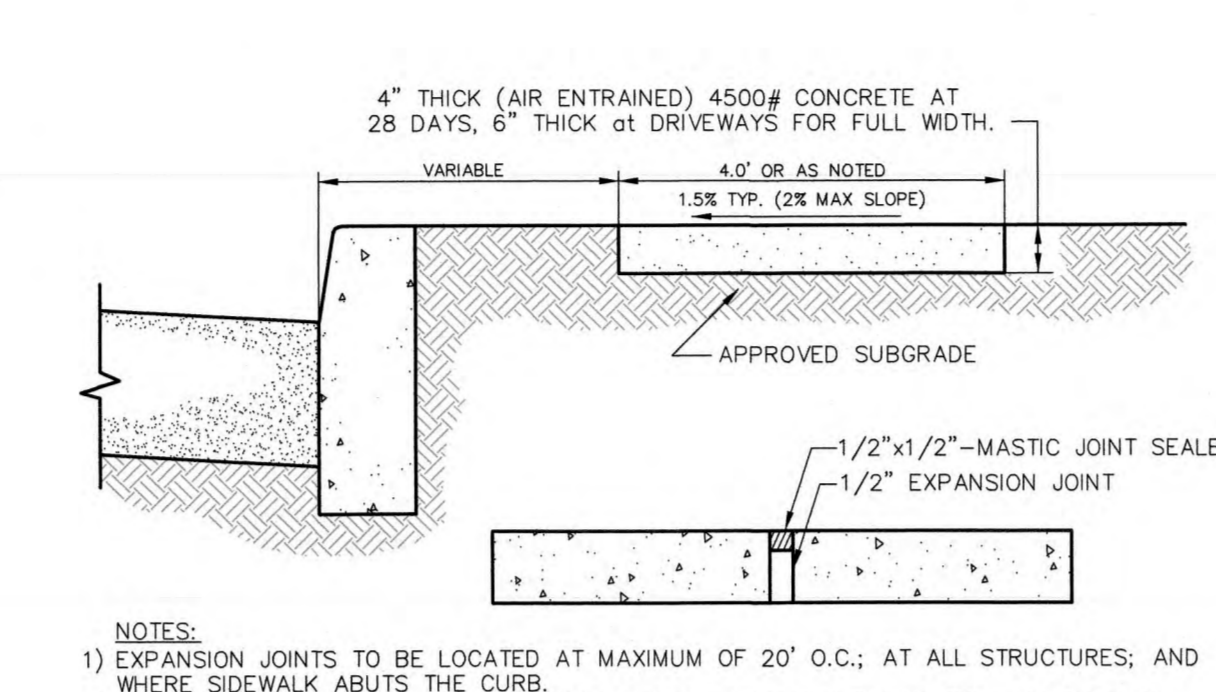
SECTION A
N.T.S.



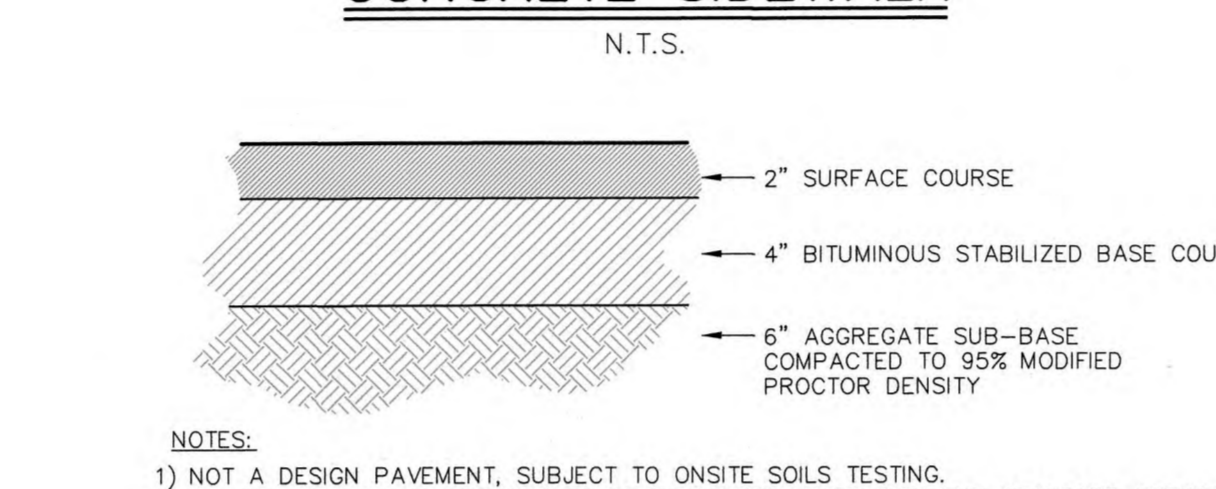
SECTION B
N.T.S.



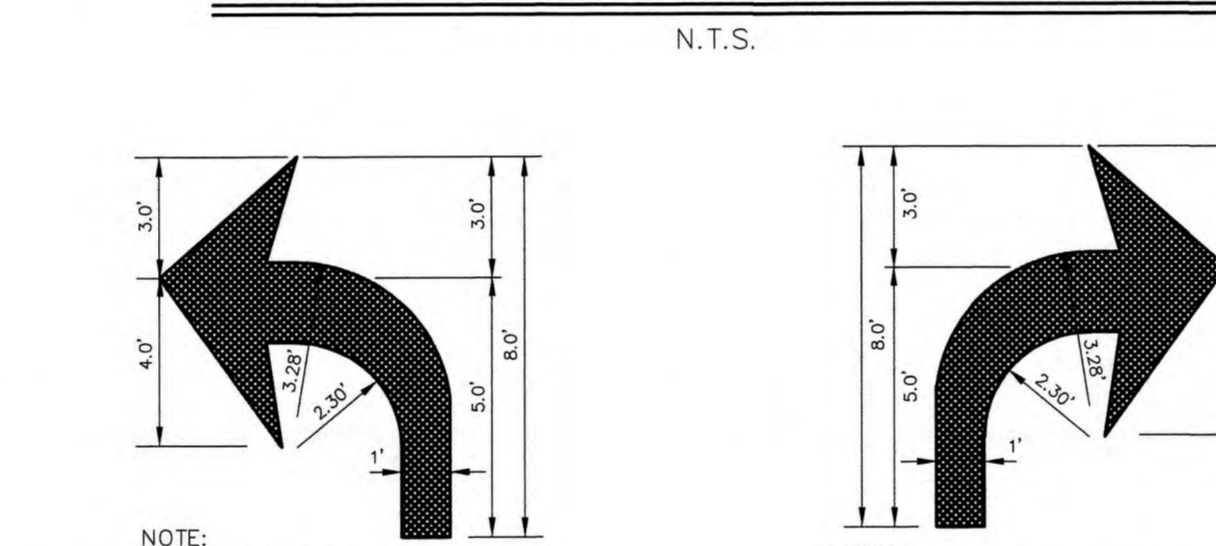
(8" WIDE / 6" REVEAL) STANDARD CONCRETE CURB (18")
N.T.S.



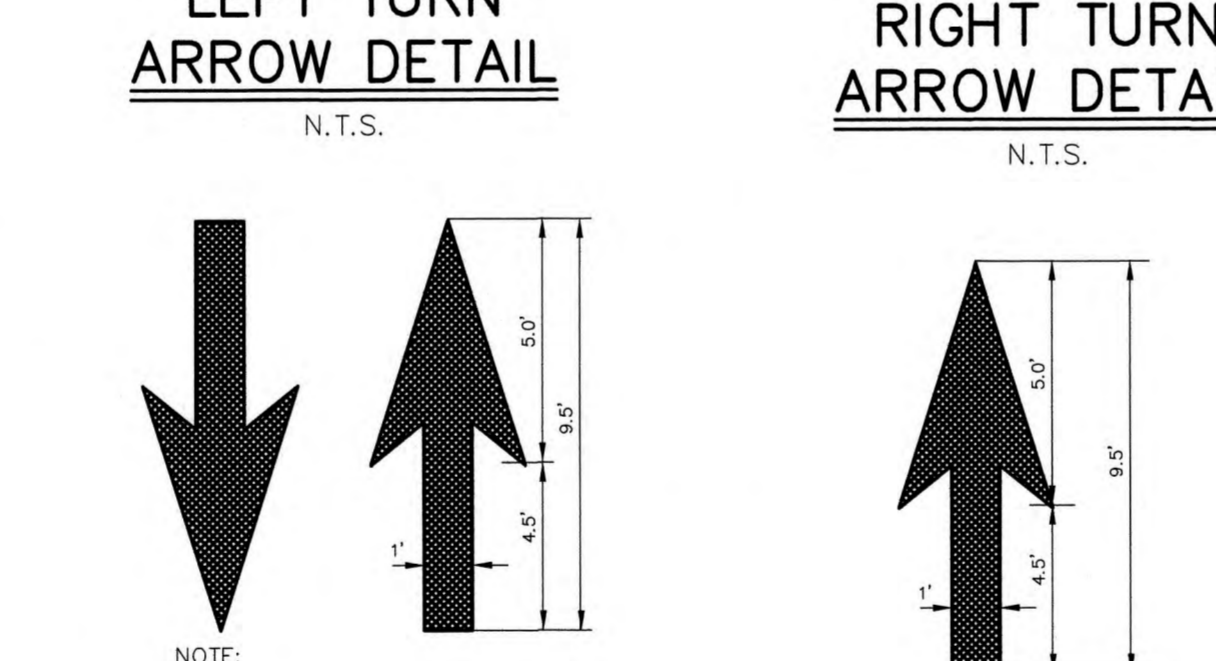
CONCRETE SIDEWALK
N.T.S.



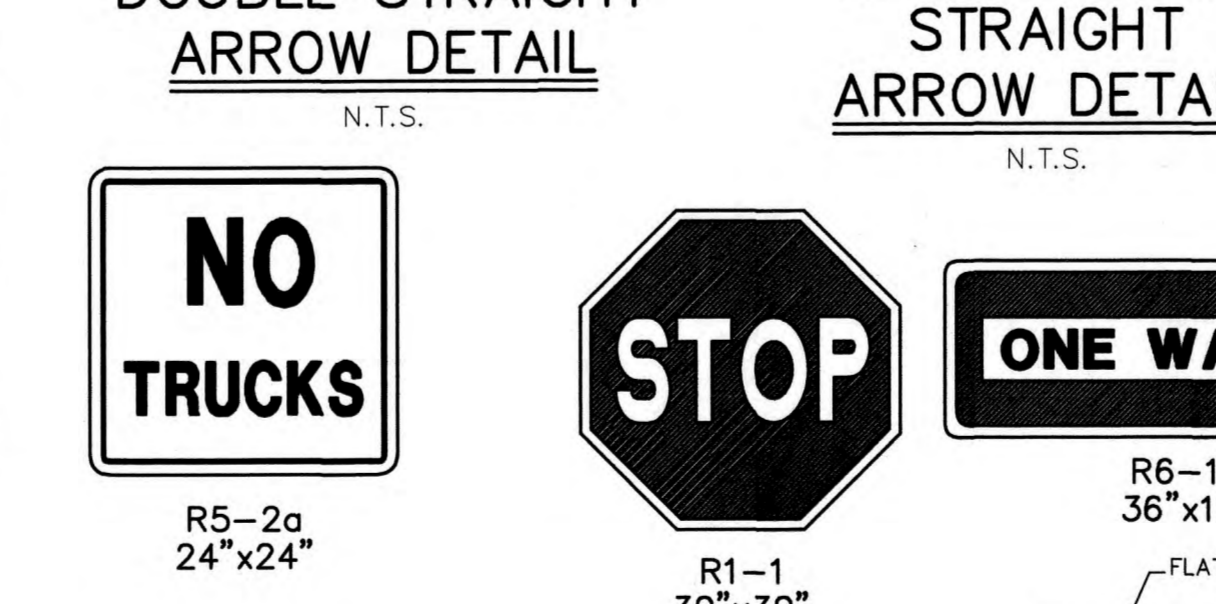
(3 LAYER) HEAVY DUTY PAVEMENT SECTION
N.T.S.



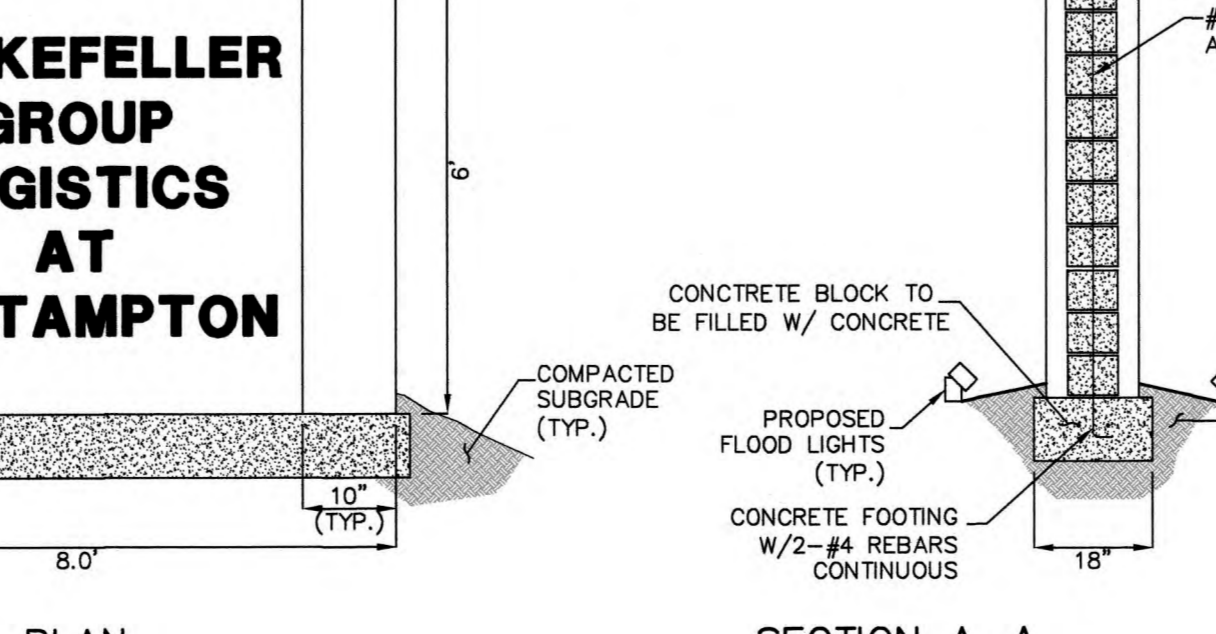
LEFT TURN ARROW DETAIL
N.T.S.



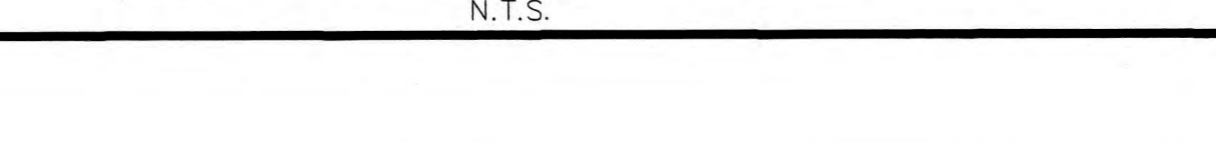
RIGHT TURN ARROW DETAIL
N.T.S.



DOUBLE STRAIGHT ARROW DETAIL
N.T.S.



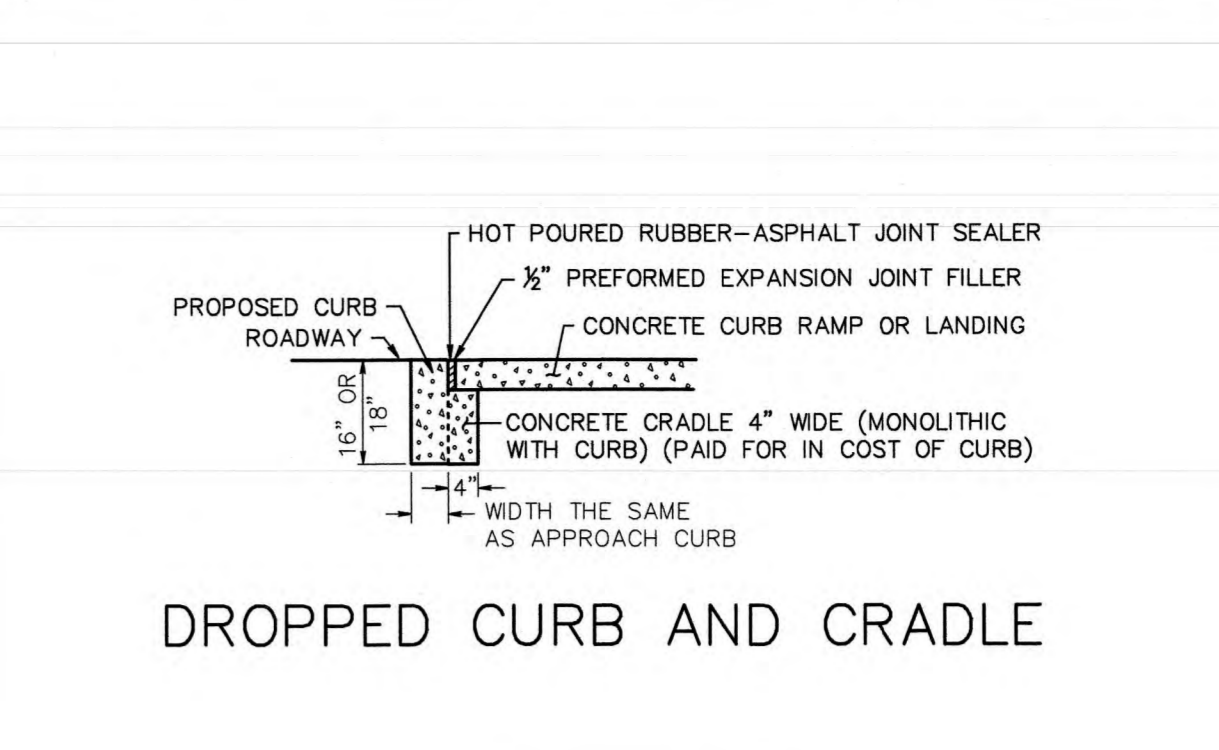
STRAIGHT ARROW DETAIL
N.T.S.



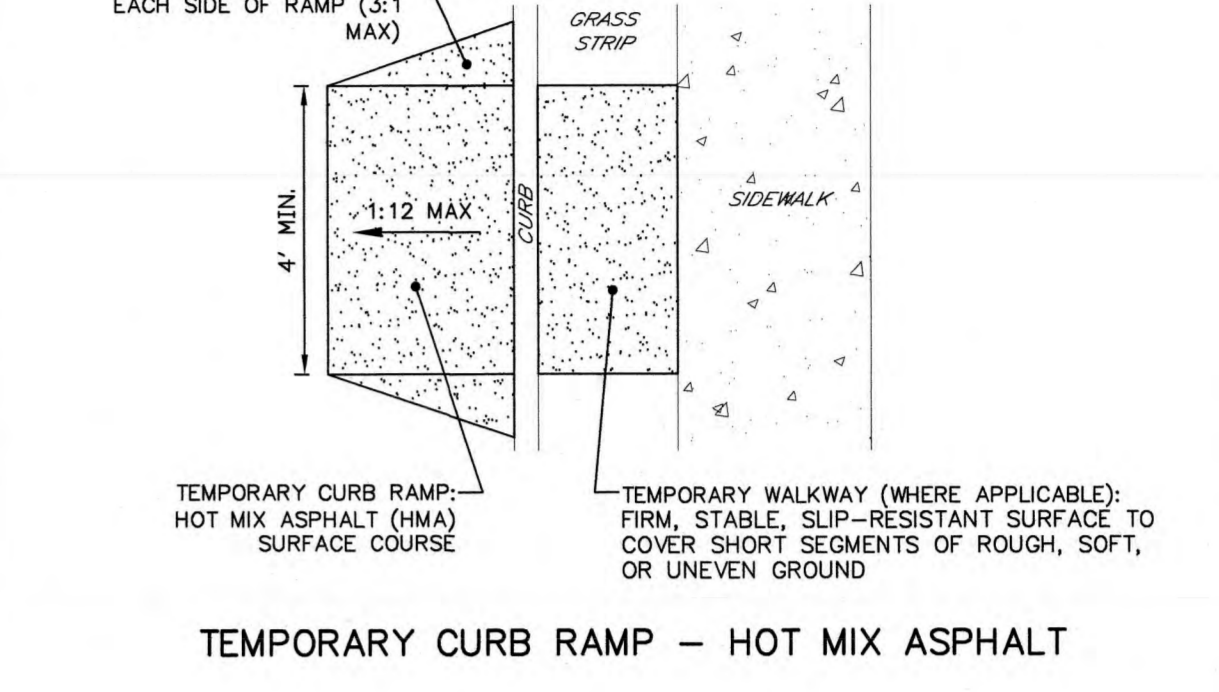
MONUMENT SIGN DETAIL
N.T.S.

GENERAL ADA NOTES

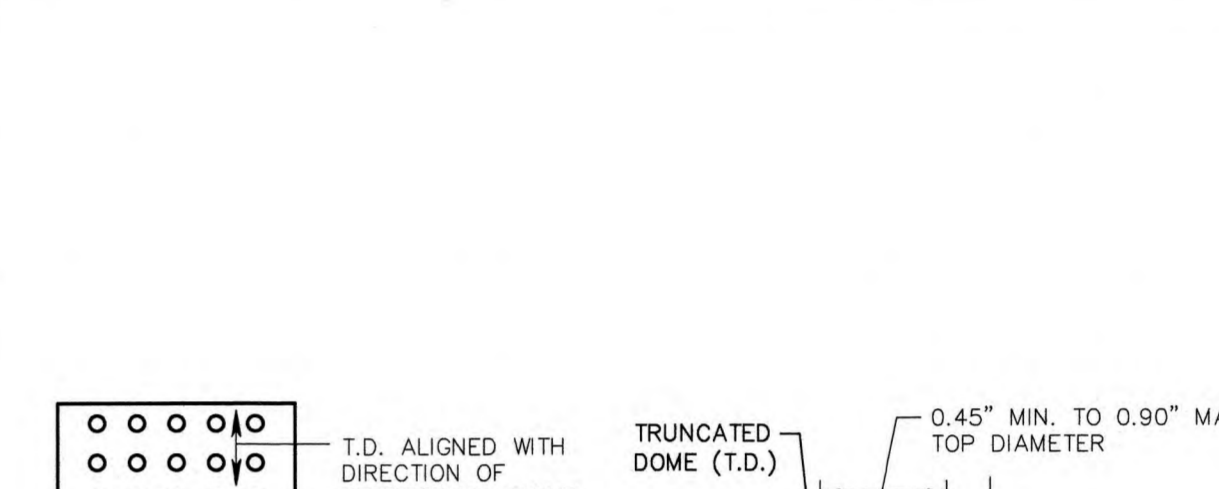
- PEDESTRIAN CURBS
 - PEDESTRIAN CURBS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES WHICH CANNOT BE ACCOMMODATED BY FLARES OR GRADING.
- CROSSWALKS
 - FOR CURB RAMPS THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (INCLUDING FLARES) TO BE FULLY INSIDE OF MARKED CROSSWALK LINES.
 - SHOULD BE PLACED AT A MINIMUM DISTANCE OF 4'-0" FROM STOP AND YIELD LINES.
 - FOR UN-SIGNALIZED AREAS, CROSSWALKS SHOULD BE PLACED A MINIMUM DISTANCE OF 20'-0" AWAY FROM ON ROAD PARKING ZONES. FOR SIGNALIZED AREAS, CROSSWALKS SHOULD BE PLACED A MINIMUM DISTANCE OF 30'-0" FROM ON ROAD PARKING ZONES.
 - PEDESTRIAN CROSSWALKS ARE 6'-0" MINIMUM MEASURED FROM INSIDE THE PAINTED EDGE TO INSIDE PAINTED EDGE AND THE INSIDE LINES MUST BE OUTSIDE THE PROTECTED CURB LINES.
 - AVOID USING THE PARALLEL LINE CROSSWALK DESIGN. INSTEAD USE THE LONGITUDINAL, LADDER-STEEPLE LINES AT 6'-0" LONG AND 1'-2" WIDE WITH A SPACING OF 1'-2" APART. SPACING SHOULD BE DESIGNED SO THE PAINTED AREAS AVOID THE WHEEL PATHS.
- CURB RAMPS
 - CONSTRUCT CURB RAMPS WITH A MINIMUM 4'-0" X 4'-0" CLEAR SPACE BEFORE THE CURB FACE, WITHIN THE WIDTH OF THE CROSSWALK.
 - SLOPES THAT EXCEED 8.00% OR CONTRACT DOCUMENTS AS APPLICABLE, WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
 - PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMP.
 - TO AVOID CHASING GRADE INDEFINITELY WHEN TRAVERSING THE HEIGHT OF CURB, RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
 - FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE.
 - FOR NEW CONSTRUCTION, ATTEMPT TO KEEP THE CROSS SLOPE AS FLAT AS POSSIBLE. DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESSIBLE ROUTE (MEASURED PERPENDICULAR TO THE DIRECTION OF TRAVEL).
 - CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
 - CURB RAMP WIDTH IS 4'-0" MINIMUM.
 - AVOID CURB RAMP DESIGNS WHERE THE WIDTH OF THE CROSSWALK WILL NEED TO BE GREATER THAN 10'-0" WIDE.
 - ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE).
 - THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11.00% (THE SLOPE OF THE GUTTER OR ROAD AT THE FOOT OF A CURB RAMP, LANDING OR BLENDED TRANSITION IS NOT TO EXCEED 8.00% AND IT IS NOT NECESSARY TO HAVE THE LENGTH GREATER THAN 15'-0").
 - WHEN TWO CROSSWALKS LEAD TO A SINGLE CURB RAMP, THE MAXIMUM RUNNING SLOPE IS 5% WITH A MAXIMUM 2% CROSS SLOPE. THESE TYPES OF RAMPS REQUIRE THE ENGINEERING DEPARTMENT'S APPROVAL AS THEY ARE NOT PREFERRED.
- DEPRESSED CURBS
 - CONSTRUCT TOP OF PLAIN CEMENT CONCRETE DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
 - CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT FLOODING. FOR LEVEL LANDINGS, ADJUST SLOPE TO PROVIDE POSITIVE DRAINAGE.
 - THE VERTICAL ALIGNMENT OF A CURB RAMP, EXCLUDING FLARES, SHALL BE PLANNED. GRADE BREAKS SHALL BE FLUSH AND PERPENDICULAR TO THE DIRECTION OF THE RAMP. RAMP TRANSITIONS BETWEEN WALKS, GUTTERS, LANDINGS, OR STREETS SHALL BE FLUSH AND FREE OF ABSTRACT VERTICAL CHANGES (A MAXIMUM OF 1/4" MAXIMUM).
 - WHEN TWO CROSSWALKS LEAD TO A SINGLE CURB RAMP, THE DEPRESSED CURB MUST EXTEND FROM THE OUTER MOST EDGE OF EACH CROSSWALK.
- DETECTABLE WARNING SURFACES
 - NO SEPARATION BETWEEN DETECTABLE WARNING SURFACES FOR MEDIANS LESS THAN 4'-0" BETWEEN BACK OF CURBS.
 - PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM (IN THE DIRECTION OF PEDESTRIAN TRAVEL) ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE. PROVIDE DWS THAT CONTRAST VISUALLY WITH ADJACENT ROADWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP.
 - ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB WHEN APPROPRIATE.
 - DETECTABLE WARNING SURFACES SHALL BE SAFETY RED COLOR, EXCEPT IF THE MUNICIPALITIES HAVE ESTABLISHED AN ALTERNATE COLOR SCHEME.
 - FOR TWO CROSSWALKS LEADING TO A SINGLE CURB RAMP, THE DETECTABLE WARNING SURFACE MUST BE PLACED ALONG THE ENTIRE DEPRESSED CURB AND THE DOMES MUST BE PLACED IN SUCH A WAY THAT THE DIRECTION OF TRAVEL IS ORIENTED INTO THE CROSSWALK.
- DRIVEWAYS
 - 5.00% MAXIMUM SLOPE FOR THE DRIVEWAY APPROX.
 - 1 1/2" MAXIMUM VERTICAL CHANGE IN HEIGHT BETWEEN THE ROAD SURFACE AND THE DEPRESSED CURB AT THE DRIVEWAY APPROX.
- JOINTS
 - PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE CURB RAMP ADJOINS ANY ROAD PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
- LANDINGS (AKA TURNING SPACES)
 - LANDING AREA BETWEEN DETECTABLE WALKWAY TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS, UNLESS AN EXCEPTION IS GRANTED.
 - DO NOT EXCEED 2.00% SLOPE IN ALL DIRECTIONS.
 - LANDING AREA SHOULD BE 4'-0" X 4'-0" MINIMUM CLEAR SPACE. IF THE TURNING SPACE IS CONSTRAINED ON 2 OR MORE SIDES, IT MUST BE 4'-6" WITH THE 5' LENGTH ALONG THE UNCONSTRAINED SIDE. FOR TWO CROSSWALKS LEADING TO A SINGLE CURB, THE LANDING AREA MUST HAVE A MINIMUM OF A 5'-0" DEPTH (INCLUDING THE DETECTABLE WARNING SURFACE) ALONG THE DEPRESSED CURB/ROADWAY TRANSITION.
 - ENGINEERING DEPARTMENT APPROVAL IS REQUIRED IF LANDING FOR TURNING MANEUVER IS NOT ON THE SIDEWALK, I.E. IF THE LANDING AREA "CLEAR SPACE" IS IN THE ROADWAY.
 - 4" LANDINGS ARE REQUIRED AT EVERY ACCESSIBLE PEDESTRIAN SIGNAL/PUSHBUTTON LOCATION.
- NON-WALK SURFACES
 - NON-WALK AREA IS AN OBSTRUCTION OR GRASS/NON-PAVED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
- PEDESTRIAN PUSHBUTTONS
 - THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES, WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
 - NEW CONSTRUCTION MUST COMPLY WITH RECOMMENDED LOCATIONS FOR ALTERATION PROJECTS LOCATE PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE (SEE 2009 MUTCD FIG 4E-3).
 - ADJACENT TO A LANDING SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS A NON-SLIP WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 - WITHIN 5'-0" OF THE CROSSWALK EXTENDED.
 - BETWEEN 1'-6" AND 10'-0" OF THE EDGE OF CURB, SHOULDER OR PAVEMENT.
 - PARALLEL TO THE CROSSWALK TO BE USED.
 - MOUNT PEDESTRIAN PUSHBUTTON 42" ABOVE THE SIDEWALK OR FINISHED GRADE TO THE CENTER OF THE PUSHBUTTON AND 10" MAXIMUM LATERALLY FROM LANDING.
- SIDE FLARES
 - ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 6" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 6'-0" FOR A 12:1 SLOPE).
 - SIDE FLARES TO EXCEED MAXIMUM SLOPE WHERE THE PEDESTRIAN PATH CROSSES THE CURB RAMP.
 - SIDE FLARES MUST BE PARALLEL TO THE CURB LINE.
 - CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
 - GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 3:1 (1:3) MAXIMUM. DO NOT INSTALL CHECK WALLS THAT INTERSECT THE PEDESTRIAN ACCESS ROUTE.
 - SIDE FLARE WIDTH IS TYPICALLY 24" AND A MINIMUM OF 12".
- TRAVEL LANES
 - THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGE OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
- MOODY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS OR MORE THAN THE STANDARD 6" HEIGHT.
- CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
- PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMED WITHIN THE SAME INTERSECTION.
- ALL HANDICAP RAMPS CONSTRUCTED IN THIS CONTRACT SHALL MEET ACCESSIBILITY REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
- THE CONTRACTOR IS REQUIRED TO CONTACT THE TRAFFIC ENGINEERING DEPARTMENT ABOUT THE CONSTRUCTION OF ALL HANDICAP CURB RAMPS AT SIGNALIZED INTERSECTIONS AND VERIFY THE STRIPING PLAN IS IN ACCORDANCE WITH THE MOST RECENT NO PASSING ZONE PLAN.
- GRADE BREAKS
 - GRADE BREAKS AT THE TOP AND BOTTOM OF THE CURB RAMP SHALL BE PERPENDICULAR TO THE DIRECTION OF THE RAMP.
 - GRADE BREAKS ARE NOT PERMITTED ON THE SURFACE OF RAMP RUNS OR LANDINGS AREAS.
 - SURFACE SLOPES THAT MEET AT THE GRADE BREAKS SHALL BE FLUSH.
- FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE.
- ALL VERTICAL SURFACE DISCONTINUITIES SHALL NOT EXCEED 1/4" IN HEIGHT. ANY VERTICAL SURFACE DISCONTINUITY BETWEEN 1/4" AND 1/2" SHALL BE BEVELED AT A SLOPE NO GREATER THAN 50% ACROSS THE ENTIRE DISCONTINUITY.
- HORIZONTAL OPENINGS IN GRATES AND JOINTS SHALL NOT EXCEED 1/2" IN DIAMETER AND THE GRATES SHALL BE PLACED SO THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL.



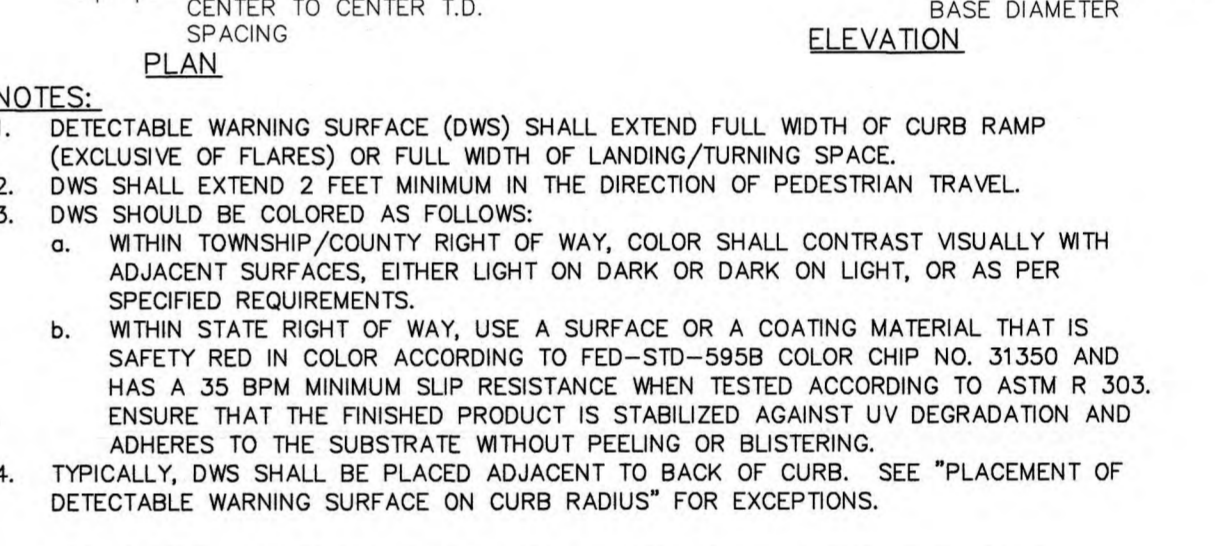
DROPPED CURB AND CRADLE
N.T.S.



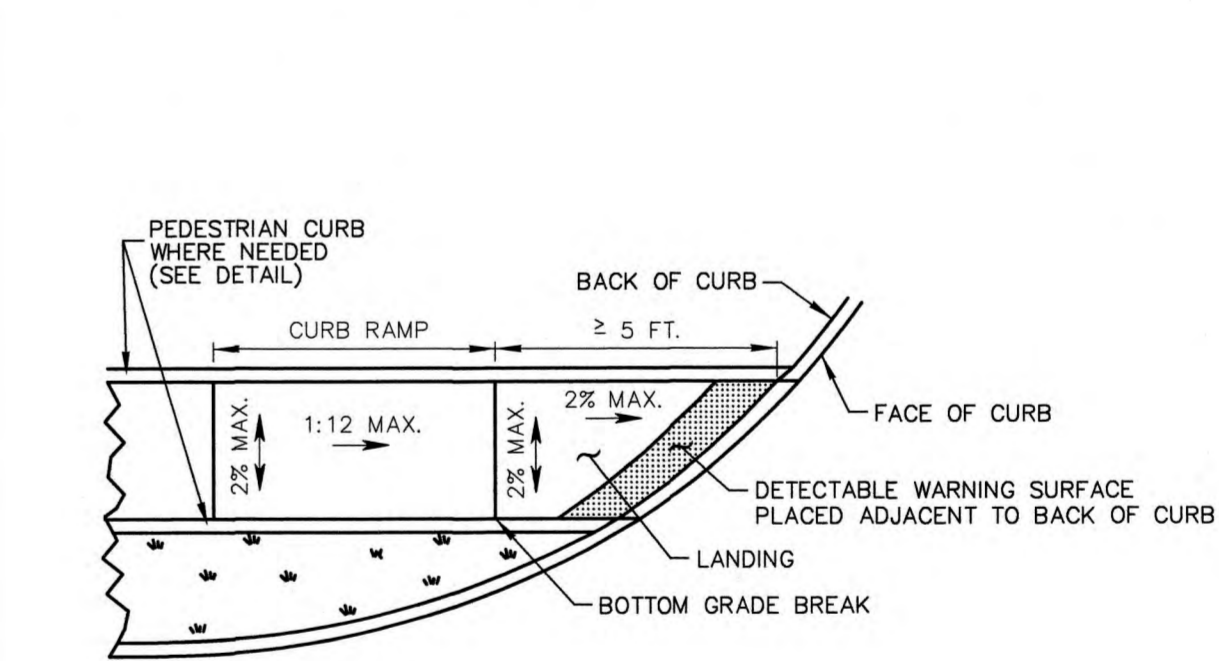
TEMPORARY CURB RAMP - HOT MIX ASPHALT
N.T.S.



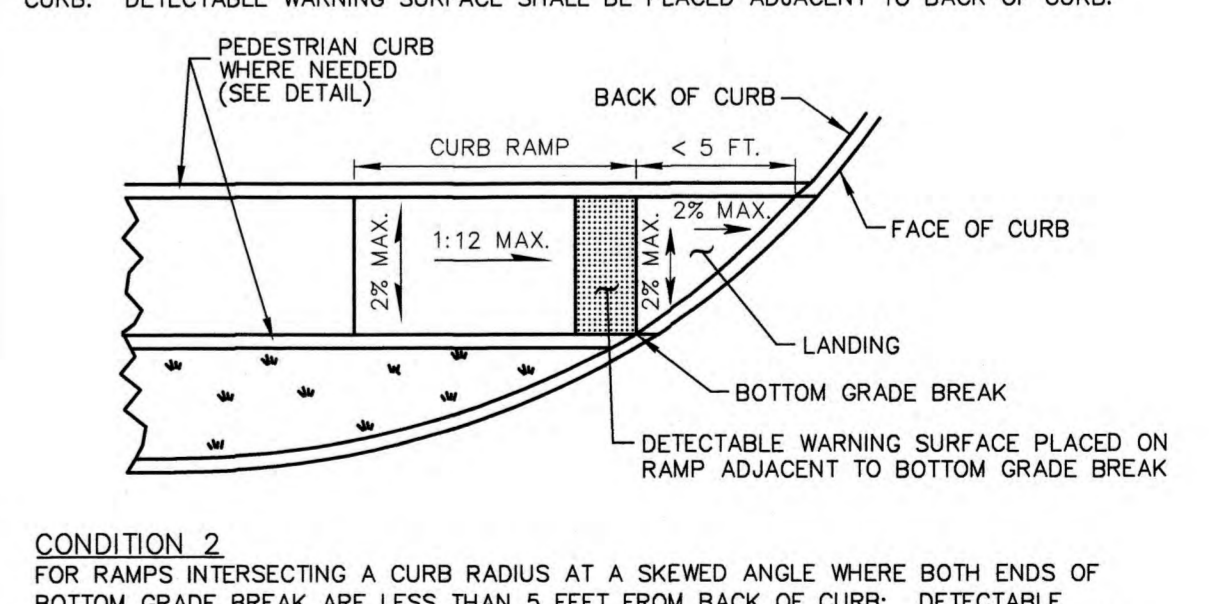
DETECTABLE WARNING SURFACE
N.T.S.



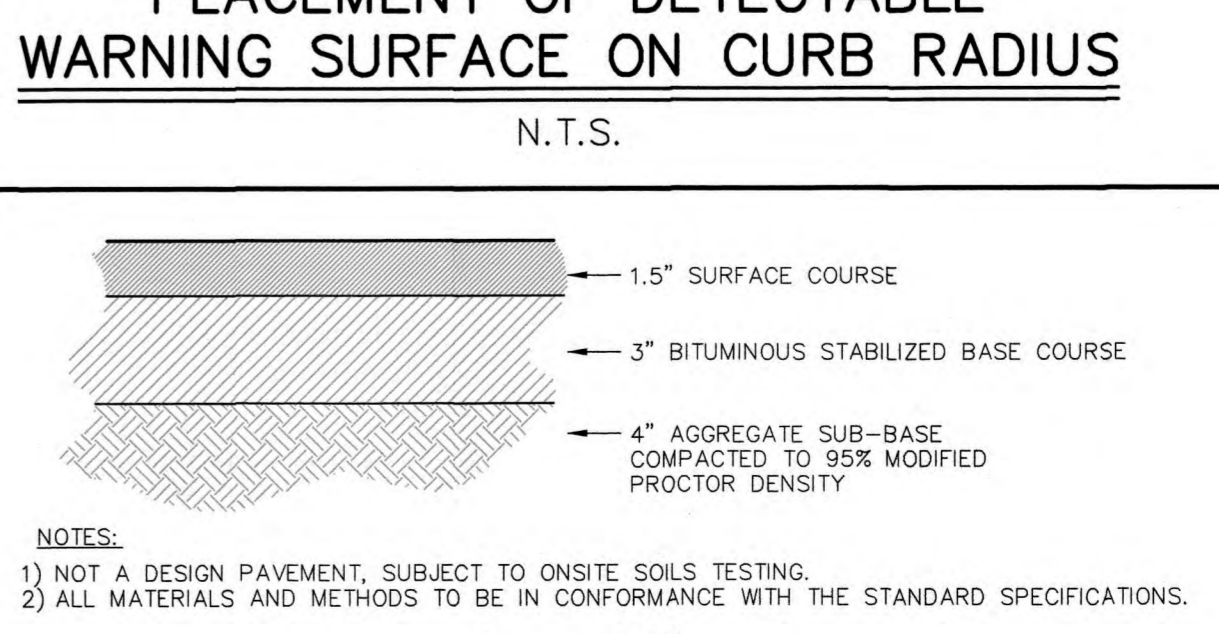
TRUNCATED DOME
N.T.S.



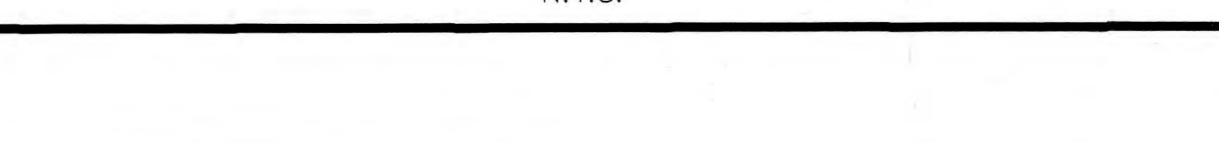
PEDESTRIAN CURB
N.T.S.



PEDESTRIAN CURB
N.T.S.



HEAVY DUTY CONCRETE DETAIL
N.T.S.



PAVEMENT SECTION
N.T.S.

CONSTRUCTION DETAIL NOTES

- ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL CONSTRUCTION DETAILS SHALL BE SUPERSEDED BY APPLICABLE MUNICIPAL ORDINANCES AND DETAILS UNLESS OTHERWISE NOTED. STRUCTURAL ELEMENTS PROVIDED FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
- SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS. DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTION OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
- RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
- ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners
261 Cleveland Avenue
Highland Park, NJ 08904
732-846-8585 732-846-9439
menloeng.com

REVISIONS

1) RUDOT SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY
NOT FOR CONSTRUCTION. USE THIS BOX HAS BEEN CHECKED AND DATED
CHKO BY: DATE:

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

menlo engineering associates

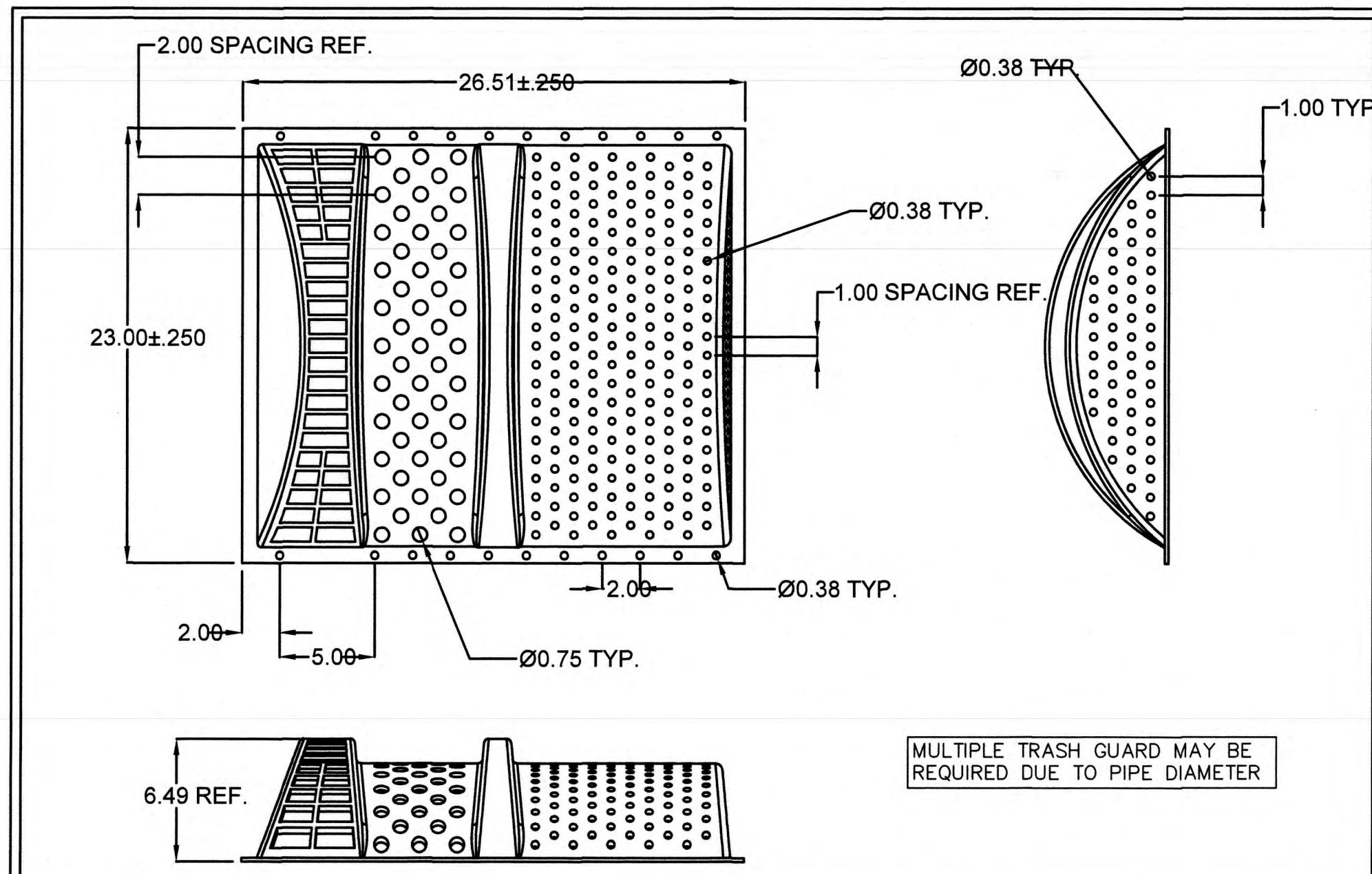
ROCKEFELLER GROUP LOGISTICS AT EASTAMPTON

EASTAMPTON TOWNSHIP BURLINGTON COUNTY NEW JERSEY
BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.6 ACRES

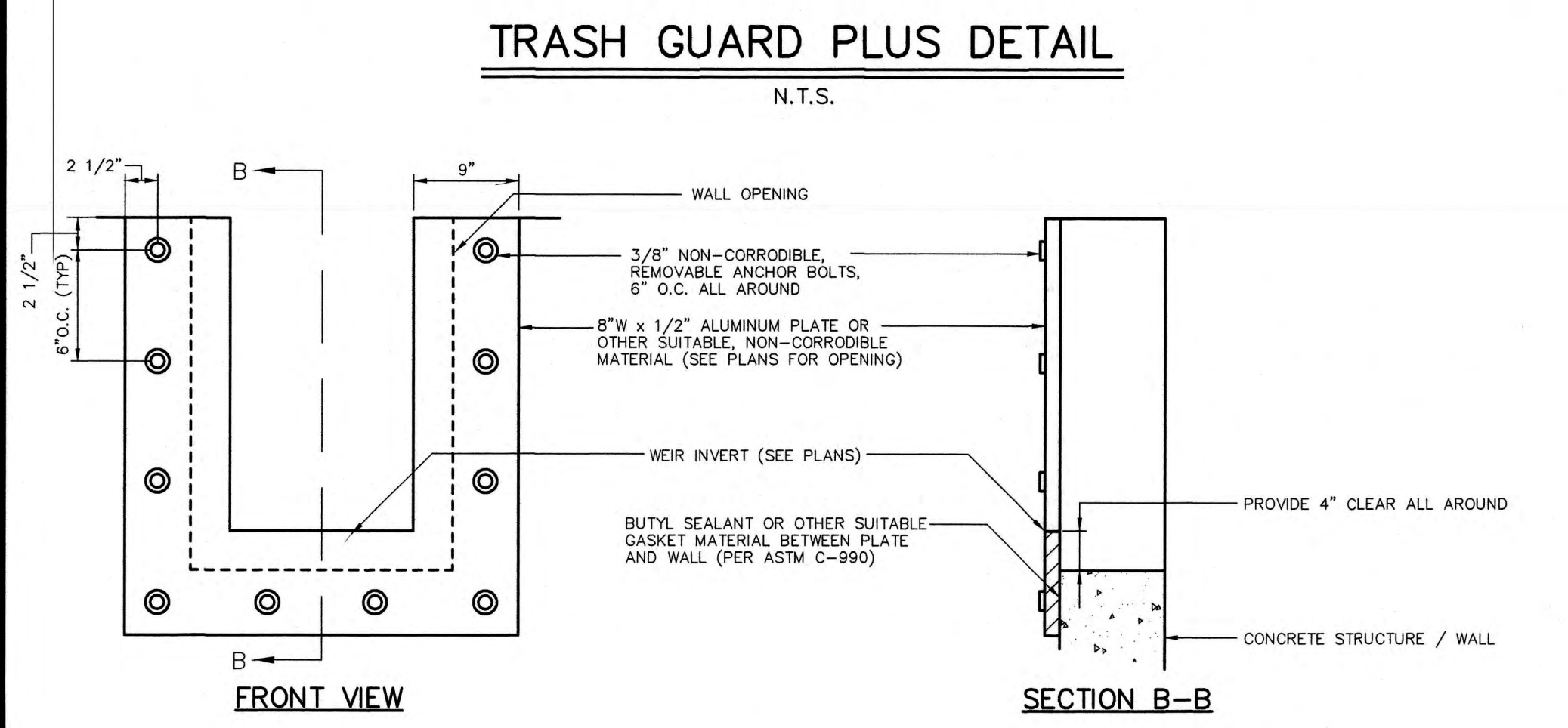
CONSTRUCTION DETAILS (1)

DRAWN BY: HC
DESIGNED BY: HC
APPROVED BY: ST
THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION
SCOTT H. TURNER
PROFESSIONAL ENGINEER
NJPE# 43811

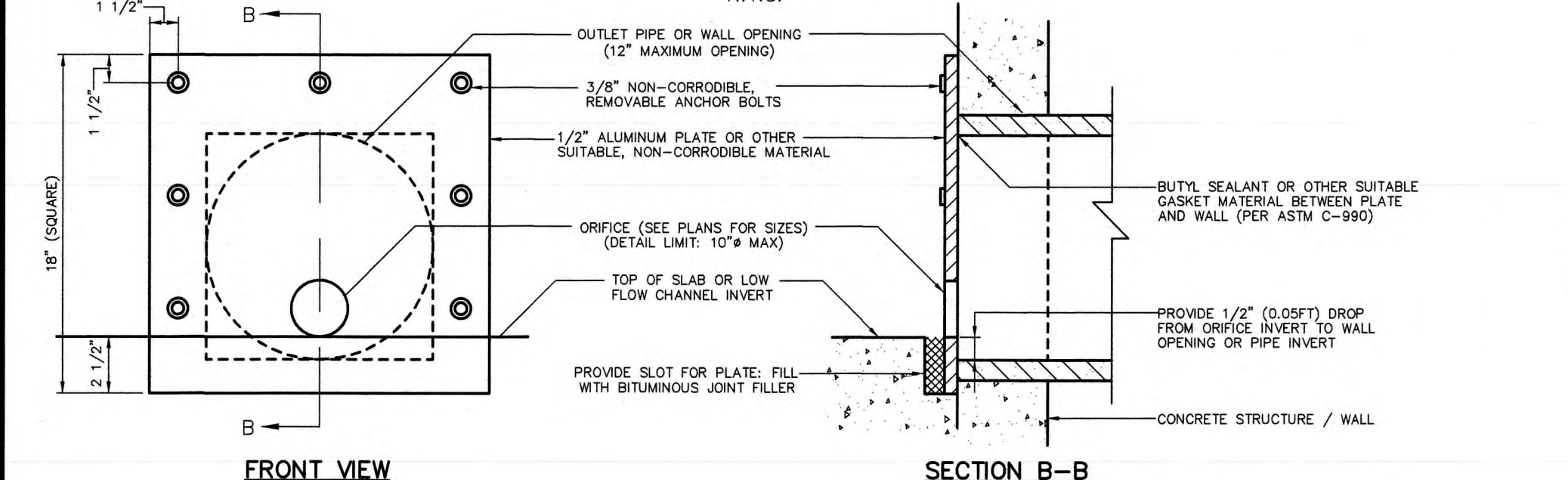
PROJECT NUMBER	2020.014	DE-1
DATE OF ISSUE	JANUARY 12, 2021	HC
REVISION	APRIL 22, 2021	15



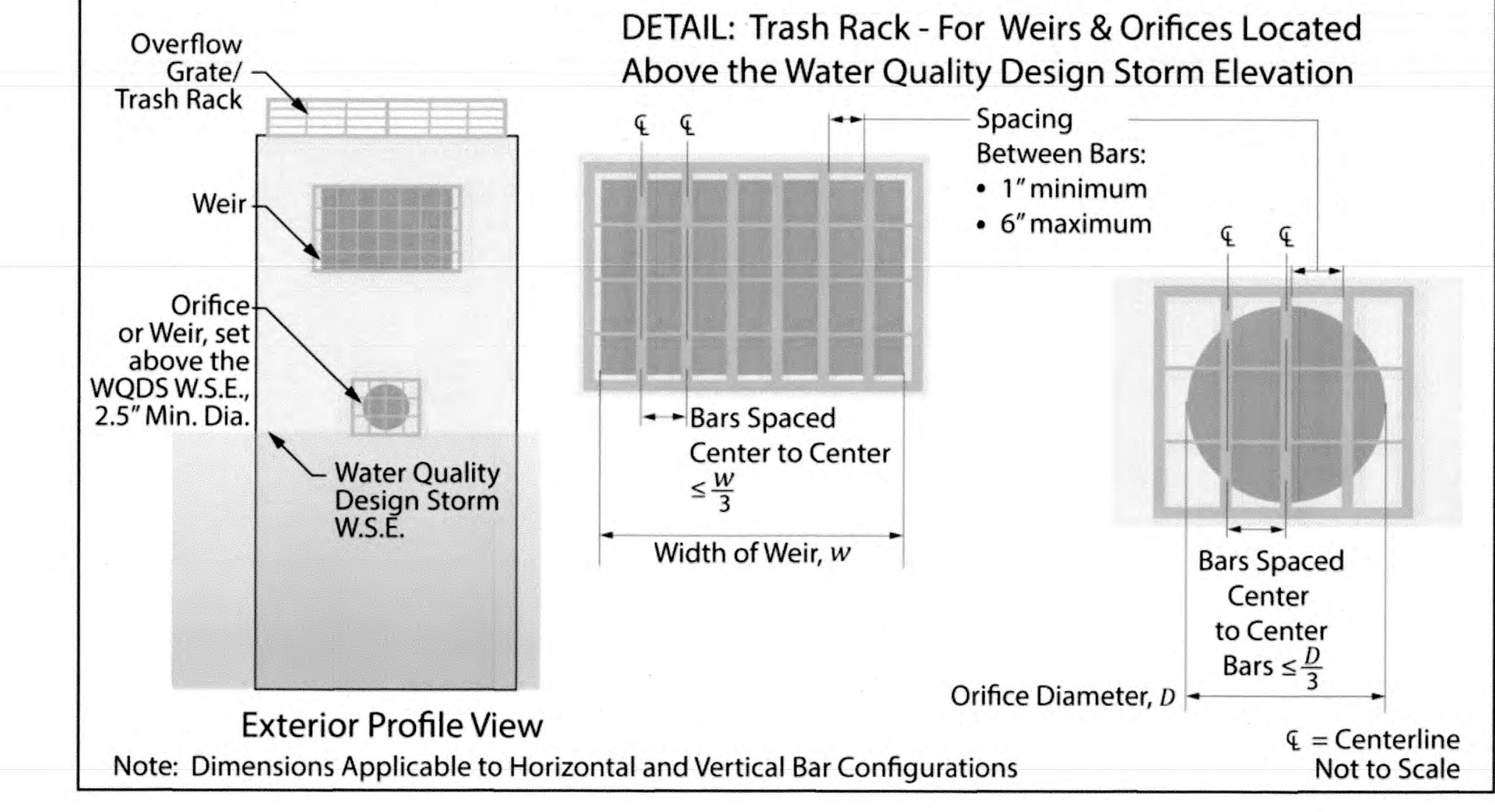
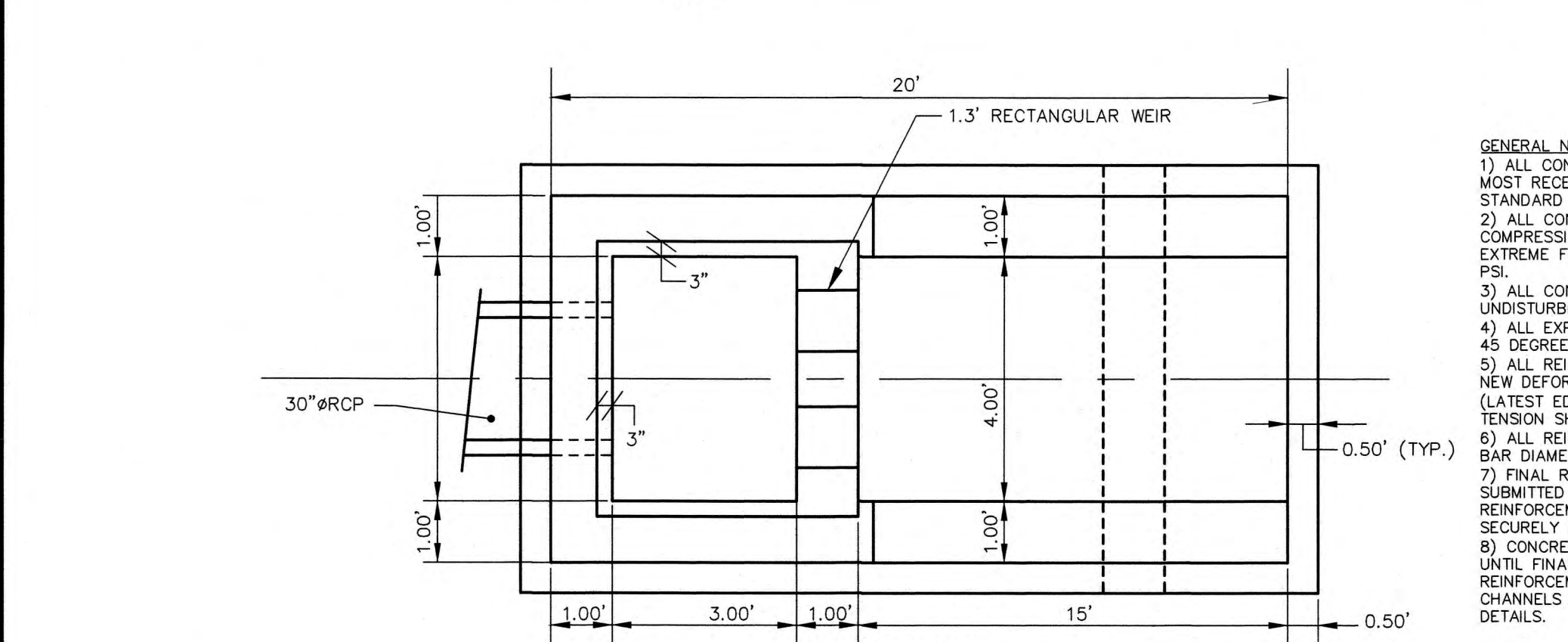
TRASHGUARD PLUS 23" TGRD23X24
N.T.S.



WEIR PLATE DETAIL
N.T.S.



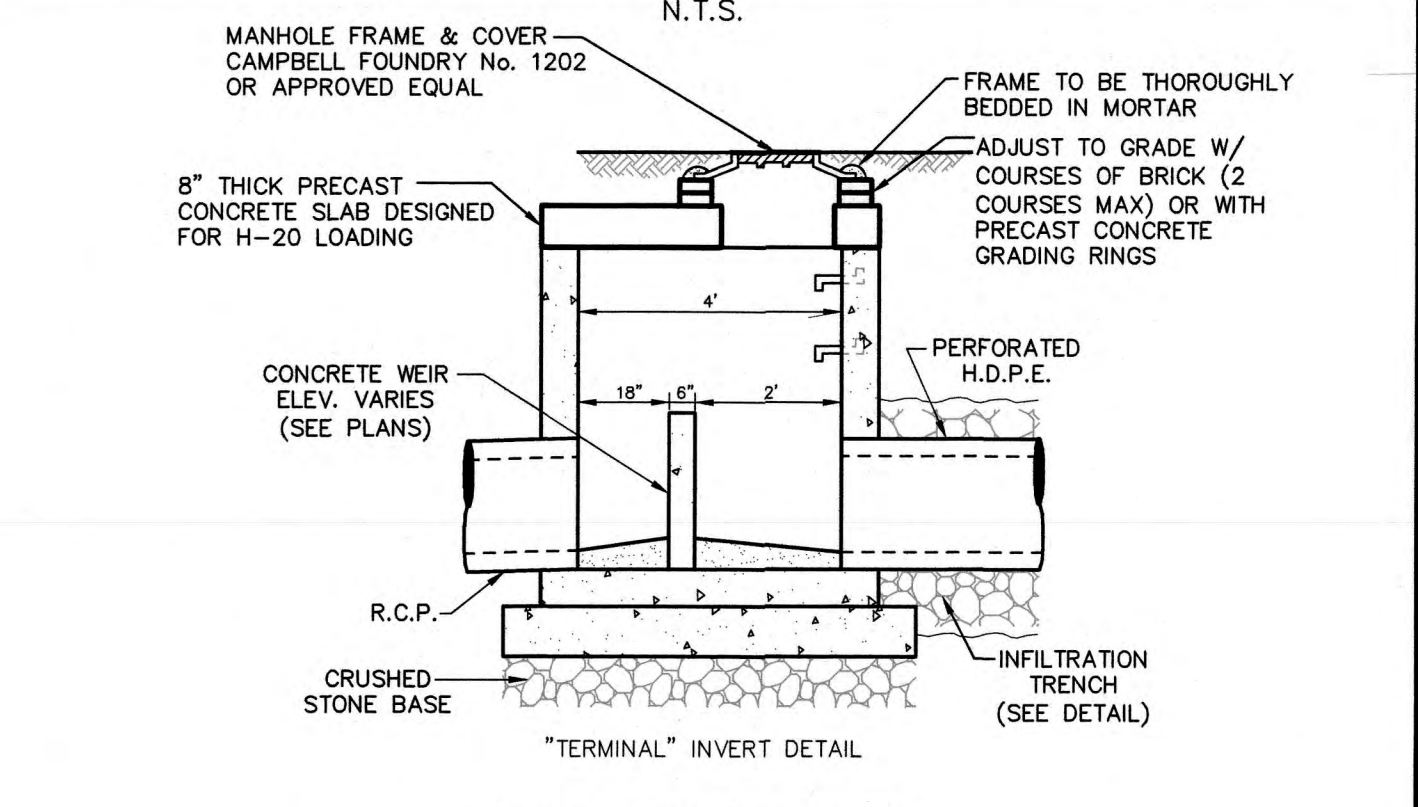
ORIFICE PLATE DETAIL
N.T.S.



TRASH FOR ORIFICE AND WEIR DETAIL
N.T.S.

- NOTES:**
- PARALLEL BARS SPACED AT 1-INCH INTERVALS, UP TO THE ELEVATION OF THE WEIRS.
 - MAXIMUM BAR SPACING: 1 INCH, FOR ELEVATION IN EXCESS OF THE WEIRS.
 - MAXIMUM BAR SPACING: $\frac{1}{2}$ THE DIAMETER OF THE ORIFICE OR $\frac{1}{3}$ THE WIDTH OF WEIR, WITH A MAXIMUM SPACING OF 6 INCHES, FOR ELEVATIONS IN EXCESS OF THE WEIRS.
 - MAXIMUM AVERAGE VELOCITY OF FLOW THROUGH CLEAN RACK: 2.5 FEET/SECOND, UNDER FULL RANGE OF STAGE AND DISCHARGE, COMPUTED ON THE BASIS OF THE NET AREA OF OPENING THROUGH RACK.
 - CONSTRUCTED OF RIGID, DURABLE AND CORROSION-RESISTANT MATERIALS.
 - DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOAD OF 300 LBS./SF.
 - THE OVERFLOW GRATE MUST BE SECURED TO THE OUTLET STRUCTURE BUT REMOVABLE FOR EMERGENCIES AND MAINTENANCE.
 - THE OVERFLOW GRATE SPACING MUST BE NO GREATER THAN 2 INCHES ACROSS THE SMALLEST DIMENSION.
 - THE OVERFLOW GRATE MUST BE CONSTRUCTED OF RIGID, DURABLE AND CORROSION RESISTANT MATERIAL AND DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOAD OF 300 LBS./SF.

RAISED SITE LIGHT POLE FOUNDATION DETAIL (IN GRASSED AREAS)
N.T.S.



FLEXSTORM CATCH-IT FILTERS FOR TEMPORARY INLET PROTECTION
STRUCTURE SELECTION AND SPECIFICATION DRAWING

NOTES:

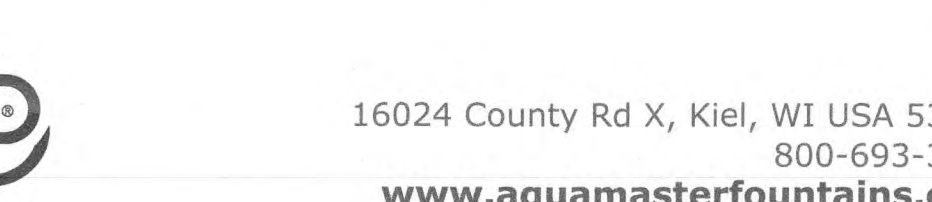
- ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
- UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL OR DETAILS, DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
- FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:

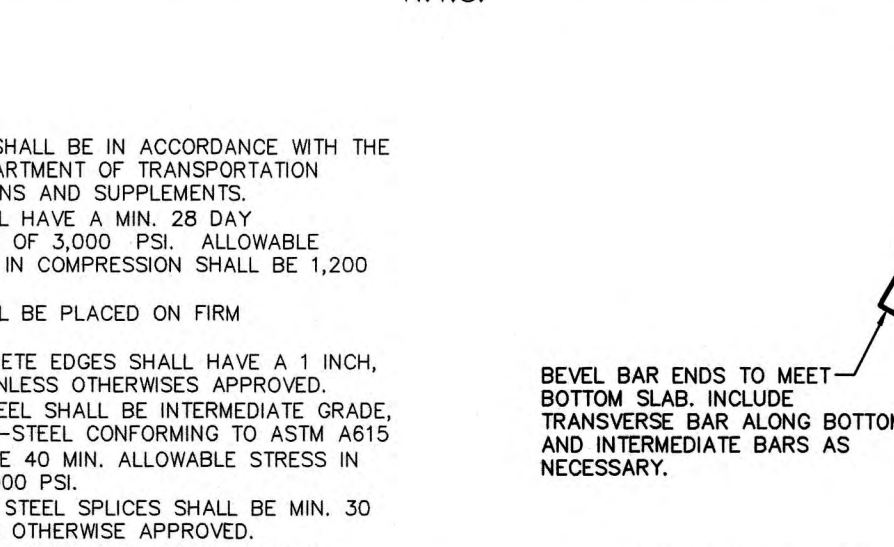
- REMOVE GRATE
- DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
- REPLACE GRATE

INLET FILTER DETAIL
N.T.S.

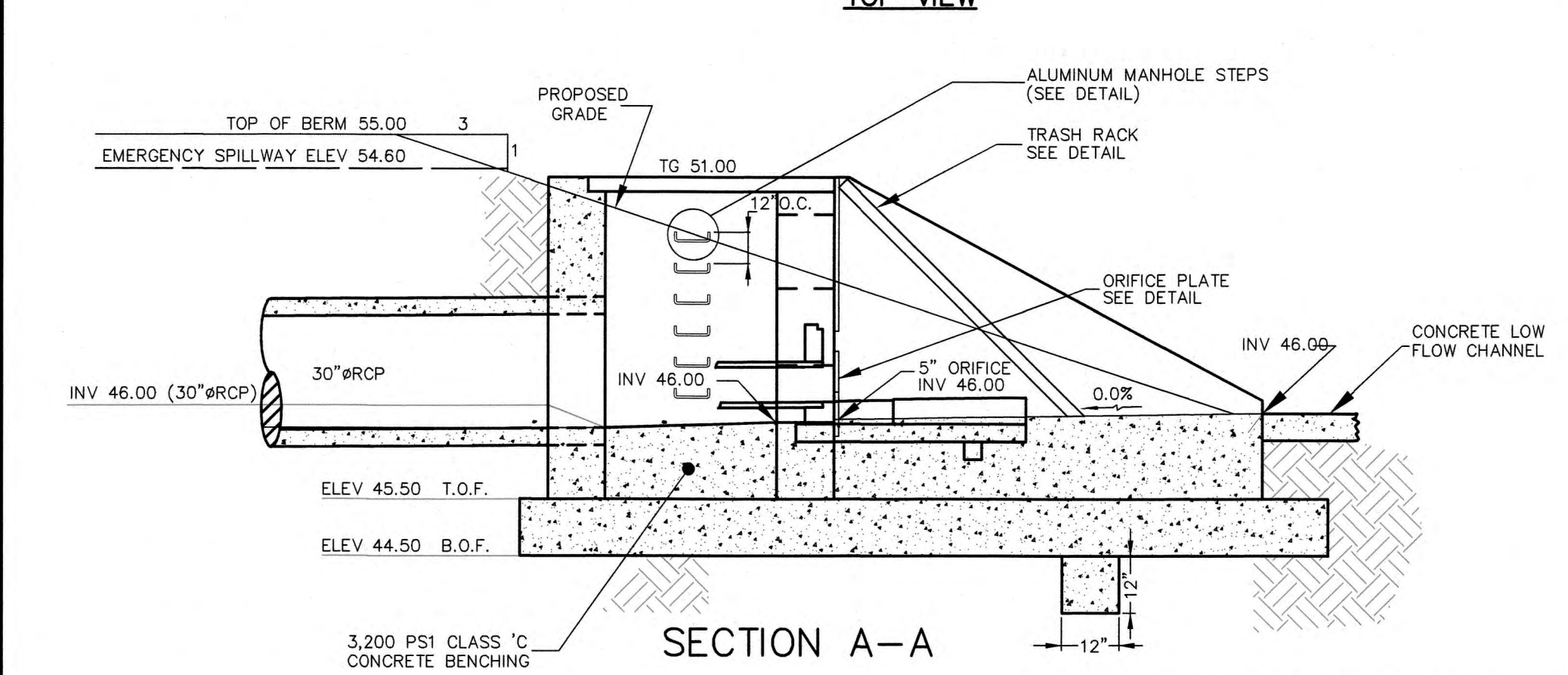
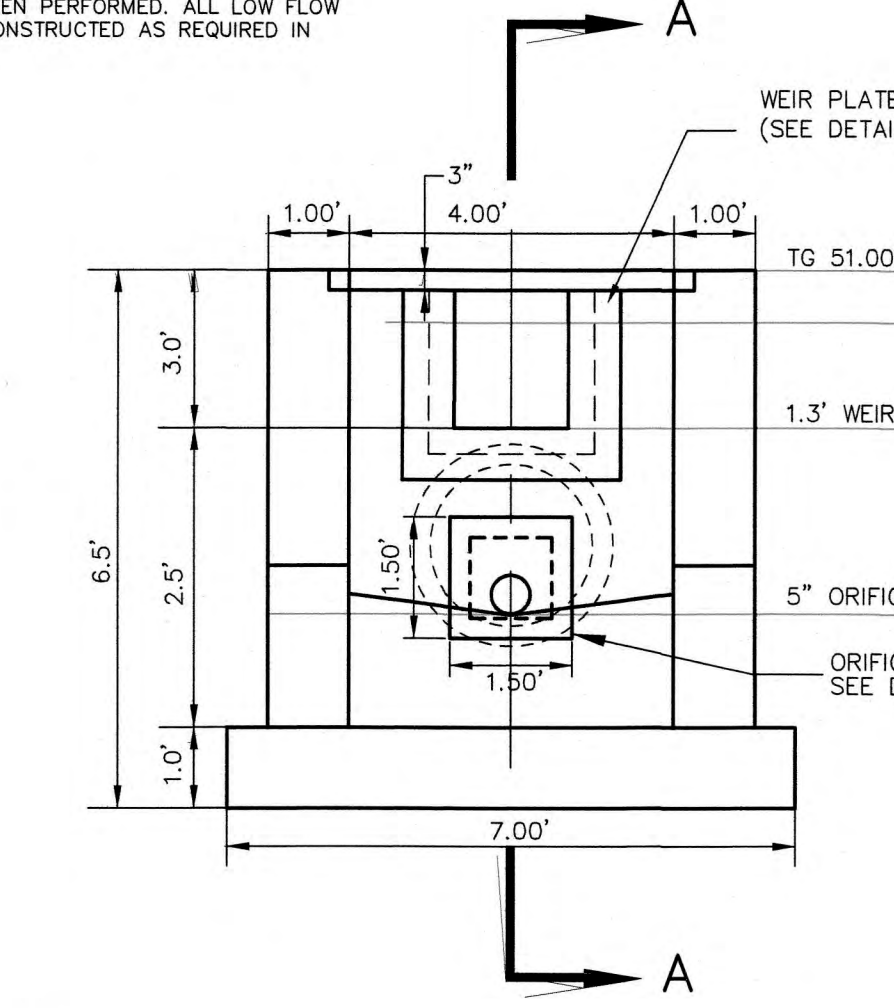
INFILTRATION TRENCH MANHOLE WITH WEIR
N.T.S.



TRASH RACK FOR HEADWALL
N.T.S.



TRASH RACK FOR HEADWALL
N.T.S.



Aqua Master FOUNTAINS AND AERATORS
MASTER THE POWER AND BEAUTY OF WATER

16024 County Rd X, Kiel, WI USA 53042
800-693-3144
www.aquamasterfountains.com

MASTERS SERIES VALHALLA
STRAIGHTENED FLOW PATTERN (SFP)

MODEL	1	2	3	4	5	6	7	8
HTF 1000	10	12	16	18	20	26		
HTF 1500	2.14	8.20	16.20	12.20	14.22	14.22		
HTF 2000	2.12	4.22	4.40	5.40	7.40	5.40		
HTF 2500	1120.19	1200.20	1240.19	1280.19	1320.19	1360.19	1400.19	1440.19
HTF 3000	1200.20	1240.19	1280.19	1320.19	1360.19	1400.19	1440.19	1480.19
HTF 3500	1240.19	1280.19	1320.19	1360.19	1400.19	1440.19	1480.19	1520.19
HTF 4000	1280.19	1320.19	1360.19	1400.19	1440.19	1480.19	1520.19	1560.19
HTF 4500	1320.19	1360.19	1400.19	1440.19	1480.19	1520.19	1560.19	1600.19
HTF 5000	1360.19	1400.19	1440.19	1480.19	1520.19	1560.19	1600.19	1640.19
HTF 5500	1400.19	1440.19	1480.19	1520.19	1560.19	1600.19	1640.19	1680.19
HTF 6000	1440.19	1480.19	1520.19	1560.19	1600.19	1640.19	1680.19	1720.19
HTF 6500	1480.19	1520.19	1560.19	1600.19	1640.19	1680.19	1720.19	1760.19
HTF 7000	1520.19	1560.19	1600.19	1640.19	1680.19	1720.19	1760.19	1800.19
HTF 7500	1560.19	1600.19	1640.19	1680.19	1720.19	1760.19	1800.19	1840.19
HTF 8000	1600.19	1640.19	1680.19	1720.19	1760.19	1800.19	1840.19	1880.19
HTF 8500	1640.19	1680.19	1720.19	1760.19	1800.19	1840.19	1880.19	1920.19
HTF 9000	1680.19	1720.19	1760.19	1800.19	1840.19	1880.19	1920.19	1960.19
HTF 9500	1720.19	1760.19	1800.19	1840.19	1880.19	1920.19	1960.19	2000.19
HTF 10000	1760.19	1800.19	1840.19	1880.19	1920.19	1960.19	2000.19	2040.19

MASTERS SERIES DESIGN TYPES

1-5 HP Masters Series Vertical Design
(Min. Operating Depth - 3ft.)

- Interchangeable nozzles
- Low profile float design with recessed pockets for LED & RGBW Lighting
- Stainless steel intake screen
- Patented, high-efficiency molded composite impeller system
- Exclusive custom-designed oil-cooled energy efficient motors with stainless steel motor housing and top plate

1-5 HP Masters Series Horizontal Design
(Min. Operating Depth - 16in.)

- AquaLock Connector (ALC) electrical quick disconnect
- Exclusive underwater cable disconnect
- Individual high density polyethylene floats are in-water adjustable
- Rugged stainless steel compact cart design
- Adjustable Night Glow LED or RGBW Lighting
- Oversized floatation type ties for ease of launching

7.5-10 HP Masters Series Horizontal Design
(Min. Operating Depth - 4ft.)

Aqua Master FOUNTAINS AND AERATORS
MASTER THE POWER AND BEAUTY OF WATER

16024 County Rd X, Kiel, WI USA 53042
800-693-3144
www.aquamasterfountains.com

MASTERS SERIES INSTALLATION

ANCHORING
Control Panel, Conduit, Anchor, Anchor Line

MOORING
Control Panel, Conduit, Mooring Line, Stake

CONTROL PANEL COMPONENTS

- Outdoor rated, lockable enclosure constructed of galvanized steel powder coated gray
- Standard enclosure size 16" x 16" x 6" for 1-5HP and 24" x 20" x 6" for 7.5-10HP (1PH)
- 30" x 24" x 8" for 7.5-10HP (3PH)
- Overcurrent protection
- Ground fault protection
- Motor contactor and overload
- Capacitors (single phase only)
- Digital timers with battery backup
- LED lighting circuit included in all control panels
- Custom Control Panels for multiple units and options available

AERATOR AQUA MASTER SERIES VALHALLA
N.T.S.

CONSTRUCTION DETAIL NOTES

- ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL CONSTRUCTION DETAILS SHALL BE SUPERCEDED BY APPLICABLE MUNICIPAL, COUNTY OR STATE DETAILS UNLESS OTHERWISE NOTED. STRUCTURAL DETAILS SHALL BE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. SHOP DRAWINGS SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER FOR ALL WALLS AND STRUCTURAL ELEMENTS PRIOR TO CONSTRUCTION.
- SHOP DRAWINGS SHALL BE PROVIDED FOR ALL PRECAST STRUCTURES PRIOR TO THE ORDERING OF MATERIALS.
- DETAILS ASSUME APPROPRIATE LOAD BEARING CAPACITY AND COMPACTON OF SOILS. ACTUAL FIELD CONDITIONS SHALL BE CONFIRMED BY ON-SITE GEOTECHNICAL ENGINEER.
- RESIDENTIAL DEVELOPMENTS SHALL CONFORM TO DETAILS WITHIN THE CURRENT EDITION OF THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (R.S.I.S.).
- ALL CONSTRUCTION DETAILS ARE NOT TO SCALE (N.T.S.) UNLESS OTHERWISE NOTED.

menlo engineering associates
Civil Engineering Consultants
Landscape Architects
Professional Planners

261 Cleveland Avenue
Highland Park, NJ 08904
menloeng.com | [in](https://www.linkedin.com/company/menlo-engineering-associates) | [f](https://www.facebook.com/menloengineering) | [ig](https://www.instagram.com/menloengineering)

732-846-8565 | 732-846-9439
Certificate of Authorization: 24242791920

REVISIONS

1) NGD1 SUBMISSION	03/29/21
2) TOWNSHIP REVISIONS	04/22/21

THIS DRAWING IS FOR PERMIT PURPOSES ONLY. NOT FOR CONSTRUCTION UNTIL THIS BOX HAS BEEN CHECKED AND DATED.

□ OK'D BY: _____ DATE: _____

menlo engineering associates

THE STATE OF NEW JERSEY REQUIRES NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE.

ROCKEFELLER GROUP LOGISTICS AT EASTAMPTON

EASTAMPTON TOWNSHIP
BURLINGTON COUNTY
NEW JERSEY

BLOCK 800, LOT 9.03
TAX MAP SHEET 8
27.6 ACRES

CONSTRUCTION DETAILS (3)

DRAWN BY: _____ HC
DESIGNED BY: _____ HC
APPROVED BY: _____ ST

THIS WORK PREPARED UNDER MY IMMEDIATE SUPERVISION.

SCOTT H. TURNER
PROFESSIONAL ENGINEER
NJPE # 43811

PROJECT NUMBER: 2020.014 DE-3
DATE OF ISSUE: JANUARY 12, 2021
REVISION 2: APRIL 22, 2021

