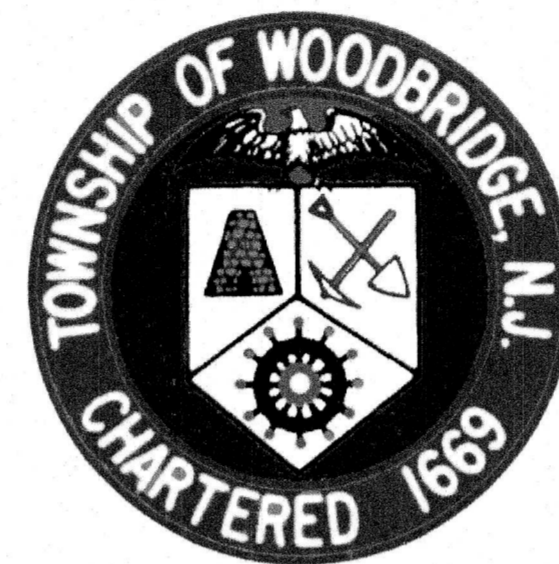
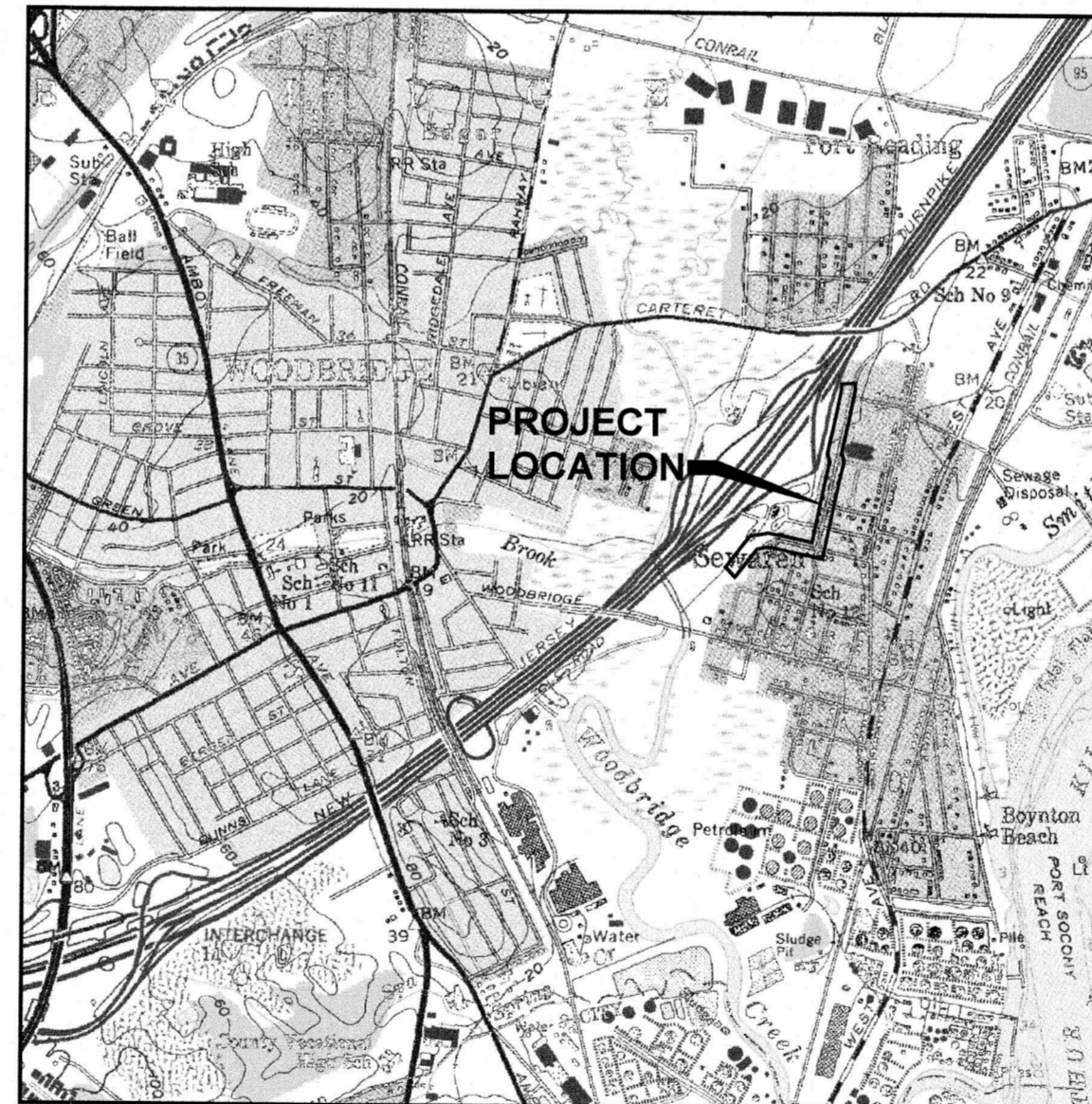


WOODBIDGE TOWNSHIP MIDDLESEX COUNTY, NJ DEPARTMENT OF PUBLIC WORKS - DIVISION OF ENGINEERING ODOR & CORROSION CONTROL PORT READING INTERCEPTOR



REBID

CONTRACT NO. 2014-011R JANUARY 2023



LOCATION MAP
1" = 2000'

SOURCE: USGS 7.5 MINUTE QUADRANGLE, PERTH AMBOY, NJ

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF 2019 AND ALL AMENDMENTS IN WOODBRIDGE TOWNSHIP FORMAT THERETO SHALL GOVERN.

THE HEADING OF THE ARTICLES CONTAINED HEREIN CONFORM TO THE NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, DATED 2019 AND ALL ADDENDA THERETO, WHICH IS TO BE USED IN THE EXECUTION OF THIS CONTRACT.

THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2019 AND "ELECTRICAL BUREAU STANDARD DETAILS" (2019) TO GOVERN, EXCEPT FOR THOSE DETAILS CONTAINED HEREIN.

TOTAL LINEAR FEET OF C.C.F.R.P.M.P. 3,407

PUBLIC UTILITIES

ONE CALL UNDERGROUND LOCATION SERVICE
PLAINFIELD, NJ 07063
1-800-272-1000

GAS
NUI ELIZABETHTOWN GAS
520 GREEN LANE, P.O. BOX 3175
UNION, NJ 07083
TEL: 908-862-8321

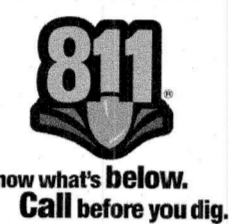
TELEPHONE/COMMUNICATIONS
VERIZON COMMUNICATIONS
999 WEST MAIN STREET
FREEHOLD, NJ 07728
TEL: 908-251-4889

ELECTRIC
PSE&G ELECTRICAL DIVISION
472 WESTON CANAL ROAD
SOMERSET, NJ 08873
TEL: 732-764-3243

CATV/COMMUNICATIONS
COMCAST
800 RAHWAY AVENUE
UNION, NJ 07083
TEL: 908-378-0256

SANITARY SEWER AND STORM SEWER
TOWNSHIP OF WOODBRIDGE
ONE MAIN STREET
WOODBIDGE, NJ 07095
TEL: 732-602-6047

WATER
MIDDLESEX WATER COMPANY
1500 RONSON ROAD
ISELIN, NJ 08330
TEL: 732-634-1500 EXT 1241



INDEX OF DRAWINGS

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G4	MISCELLANEOUS NOTES
G5	ESTIMATE & DISTRIBUTION OF QUANTITIES
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C2	PORT READING INTERCEPTOR PLAN STA. 10+00 - STA. 16+00
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C13	CONSTRUCTION DETAILS
C14	CONSTRUCTION DETAILS
C15	CONSTRUCTION DETAILS
C16	CONSTRUCTION DETAILS
C17-21	SOIL EROSION & SEDIMENT CONTROL PLANS
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S3	VORTEX MANHOLE PLAN, SECTIONS AND DETAILS
E1	ELECTRICAL NOTES, LEGEND, AND ABBREVIATIONS
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TC-01	PORT READING INTERCEPTOR - TRAFFIC CONTROL PLAN - STAGE 01 & 02
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REFERENCE DRAWINGS (ORIGINAL DESIGN DRAWINGS BY POST, BUCKLEY, SCHUH & JERNIGAN, INC., DATED JUNE 1987):

A	COVER SHEET
1	DRAWING INDEX AND SCHEDULE OF REVISIONS
2	GENERAL PLAN, LEGEND, AND GENERAL NOTES
3	STATIONS 0+00 TO 10+00 PLAN AND PROFILE
4	STATIONS 10+00 TO 20+00 PLAN AND PROFILE
5	STATIONS 20+00 TO 30+00 PLAN AND PROFILE
6	STATIONS 30+00 TO 40+22 PLAN AND PROFILE
7	STATIONS 0+00 TO 1+70 PLAN AND PROFILE
8	DROP CHAMBER - PLAN, SECTIONS, AND DETAILS
9	MISCELLANEOUS DETAILS
10	MISCELLANEOUS DETAILS

JOHN E. McCORMAC - MAYOR

TOWNSHIP COUNCIL

GREGG M. FICARRA
KYLE ANDERSON
SHARON MCAULIFFE
HOWIE BAUER
CORY SPILLAR
DIRBHADRA N. PATEL
DEBBIE MEEHAN
LIZBETH DEJESUS
BRIAN SMALL

COUNCIL PRESIDENT
COUNCIL VICE PRESIDENT
COUNCIL MEMBER
COUNCIL MEMBER
COUNCIL MEMBER
COUNCIL MEMBER
COUNCIL MEMBER
COUNCIL MEMBER
COUNCIL MEMBER

VITO CIMILLUCA
JOHN M. MITCH
JAMES P. NOLAN, ESQ.
GEORGE T. BREW
MICHAEL GELIN, P.E.

BUSINESS ADMINISTRATOR
MUNICIPAL CLERK
ATTORNEY
DIRECTOR OF PUBLIC WORKS
TOWNSHIP ENGINEER

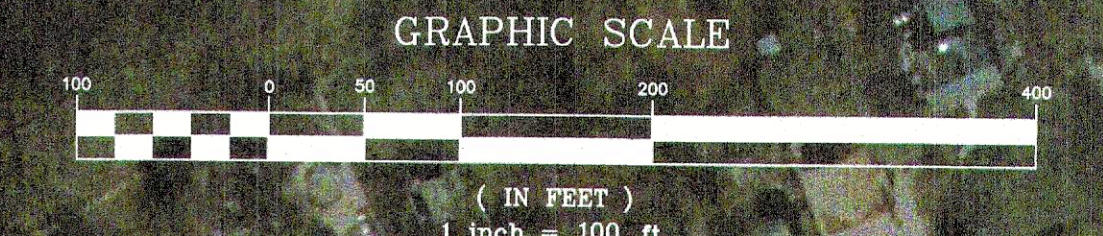
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMIT NUMBER: 1225-08-0007.2 LUP210001
TYPE OF APPROVABLES:

FWW GP2 UNDERGROUND UTILITY LINES
WFD - UPLAND INDIVIDUAL PERMIT

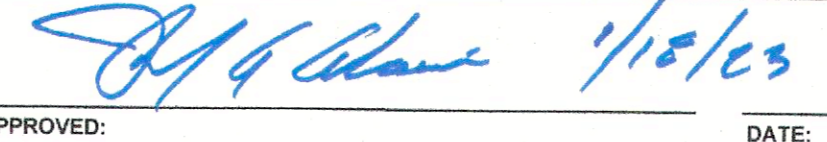
APPROVED: DATE: 1/15/23 Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR TITLE SHEET SCALE: AS NOTED	CLIENT: WOODBIDGE TOWNSHIP PROJECT LOCATION: WOODBIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY PROJECT NO.: B-0728-0024-000 CONTRACT NO.: 2014-011R	DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CHECKED BY: DEPT. HEAD:	SHEET G1 FILE NO.:
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File Name: K:\Projects\B0726024000\Drawings\Enr-002_KeyPlan.dwg
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 Plotted: 1/17/2023 4:03:44 PM by CROOKS



NOTE: NEW JERSEY STATE AERIAL PHOTOGRAPHY CAPTURED FEBRUARY 2012.


 APPROVED: _____ DATE: _____
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY


RICHARD A. ALAIMO
ENGINEERING COMPANY
 Consulting Engineers
 NJDCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL
PORT READING INTERCEPTOR

KEY PLAN
 SCALE: 1" = 100'

CLIENT: **WOODBRIDGE TOWNSHIP**
 PROJECT LOCATION: **WOODBRIDGE TOWNSHIP**
MIDDLESEX COUNTY
NEW JERSEY

DATE: **JAN 2023**
 DESIGNED BY:
 DRAWN BY: **CAF**
 CHECKED BY:
 DEPT. HEAD:
 PROJECT NO.: **B-0726-0024-000**
 CONTRACT NO.: **2014-011R**

REBID SHEET
G2
 FILE NO.:

LEGEND table with columns for EXISTING, PROPOSED, and ITEM OR FEATURE. Includes symbols for POOL, BUSH OR TREE, BRUSH/TREE LINE, UTILITY POLE, CHAIN LINK FENCE, DETECTABLE WARNINGS, STORM INLET, STORM SEWER*, SANITARY SEWER MANHOLE, SANITARY SEWER MAIN*, SANITARY SEWER INTERCEPTOR*, GAS MAIN OR SERVICE, GAS VALVE, TELEPHONE SERVICE, WATER MAIN, WATER HYDRANT, WATER VALVE, CONTOUR (5' INTERVAL), CONTOUR (1' INTERVAL), and SPOT GRADE.

SHEET C1 SUPPLEMENTAL LEGEND table with columns for EXISTING ITEM OR FEATURE and descriptions. Includes symbols for CONCRETE, EXISTING TREE & CALIPER SIZE, PROPERTY LINE, EASEMENT LINE, WETLANDS LINE, WETLANDS TRANSITION LINE, MEAN HIGH WATER LINE, NJ FLOOD HAZARD AREA DESIGN FLOOD, CLAIMED TIDELANDS, and SOIL BORING LOCATION & NUMBER.

ABBREVIATIONS table with columns for APPROXIMATE, LUMP SUM, and descriptions. Includes terms like APPROX., BITUMINOUS, BENCH MARK, BLOCK, CENTRIFUGALLY CAST, FIBERGLASS-REINFORCED, POLYMER MORTAR PIPE, CLOSED CIRCUIT TELEVISION, CAST IRON PIPE, CORRUGATED METAL PIPE, CONCRETE, DIAMETER, DUCTILE IRON PIPE, EAST, ELLIPTICAL CORRUGATED METAL PIPE, FIXED PRICE, GRATE, HOT-MIXED ASPHALT, HYDRANT, INVERT, IRON PIPE, LINEAR FEET, LS, MB, M.H., N, PVC, R.C.P., S, SAN., STA., S/W, S/W, TOP, TYP., UN, U.F., VCP, W, LUMP SUM, MAILBOX, MANHOLE, NORTH, POLYVINYL CHLORIDE, REINFORCED CONCRETE PIPE, SOUTH, SANITARY, STATION, SQUARE YARD, SIDEWALK, TERRA COTTA PIPE, TYPICAL, UNIT, UTILITY POLE, VITRIFIED CLAY PIPE, WEST.

- PAYMENT NOTES: 1. TRENCH/PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. 2. PAYMENT LENGTHS FOR PIPE ABANDONMENT, REPLACEMENT AND MICROTUNNELING BASED ON INSIDE WALLS OF MANHOLE STRUCTURES AS BEGINNING AND ENDING MEASUREMENT POINTS.

GENERAL NOTES:

- 1. THE TERM "OWNER" REFERS TO THE WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY. OR IT'S DESIGNATED REPRESENTATIVE.
2. THE TERM "ENGINEER" REFERS TO THE WOODBRIDGE TOWNSHIP'S AUTHORIZED REPRESENTATIVE.
3. THE TERM "CONTRACTOR" REFERS TO THE GENERAL CONTRACTOR SELECTED BY THE WOODBRIDGE TOWNSHIP TO EXECUTE THE PROJECT.
4. THE TERM "PROJECT" REFERS TO THE ODOR AND CORROSION CONTROL PROJECT, PORT READING INTERCEPTOR, MIDDLESEX COUNTY, NEW JERSEY.
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY INSURANCE AND BONDS AS REQUIRED BY THE OWNER AND AS SPECIFIED IN THE CONTRACT DOCUMENTS PRIOR TO EXECUTING THE WORK.
6. THE CONTRACTOR SHALL UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENT, SECURE AND PAY FOR THE REQUIRED CONSTRUCTION PERMIT(S), FEES, LICENSEES AND INSPECTION NECESSARY FOR THE EXECUTION OF THE WORK.
7. ALL DIMENSION INDICATED ON THE DRAWINGS ARE APPROXIMATE AND SUBJECT TO REVISIONS PER ACTUAL FIELD CONDITIONS, AND AT THE DISCRETION OF AND DIRECTED OR APPROVED BY THE OWNER. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY DIMENSIONS AND ELEVATIONS IN FIELD PRIOR TO STARTING WORK OR ORDERING MATERIALS.
8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IF EXISTING CONDITIONS SIGNIFICANTLY VARY FROM THAT WHICH ARE ON THE CONTRACT DOCUMENTS.
9. THE CONTRACTOR SHALL SUBMIT, FOR THE ENGINEERS APPROVAL, SHOP DRAWINGS OF ALL FABRICATED ITEMS PRIOR TO CONSTRUCTION OR FABRICATION.
10. THE CONTRACTOR SHALL INSPECT THE SITE AND MAKE ALL APPROPRIATE INQUIRIES TO DETERMINE ACTUAL SITE CONDITIONS PRIOR TO SUBMISSION OF BIDS, AND SHALL MAKE NO ADDITIONAL CLAIMS REGARDING SITE CONDITIONS THEREAFTER.
11. ALL WORK SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, CITY, AND COUNTY LAWS. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED IN THE PERFORMANCE OF WORK.
12. THE CONTRACTOR SHALL DETERMINE AND VERIFY THE ACTUAL LOCATION OF ANY AND ALL UTILITIES, PROCESS PIPING AND RELATED ITEMS PRIOR TO COMMENCEMENT OF WORK. ALL COST INCURRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. EXPANSION OF THE CONSTRUCTION SITE TO AREAS NOT DESIGNATED WITHIN THE LIMITS ON THESE PLANS WILL NOT BE PERMITTED UNLESS AUTHORIZED BY THE OWNER IN WRITING. THE CONTRACTOR WILL BE RESPONSIBLE TO SECURE THE CONSTRUCTION SITE IN ACCORDANCE WITH ALL APPLICABLE SAFETY STANDARDS.
14. THE CONTRACTOR SHALL REMOVE DAILY ALL DEBRIS AND EXCESS CONSTRUCTION MATERIALS TO THE SATISFACTION OF THE OWNER AND THE ENGINEER. THE SITE SHALL BE LEFT BROOM CLEANED AT THE END OF EACH WORKDAY.
15. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER AND THE ENGINEER AND ALL OTHER CONTRACTORS TO MINIMIZE INTERRUPTIONS TO NORMAL OWNER OPERATION.
16. THE CONTRACTOR SHALL SUBMIT A DETAILED WORK PLAN INCLUDING A SEQUENCE OF OPERATIONS PRIOR TO COMMENCING WORK AND THE WORK PLAN SHALL BE SUBJECT TO APPROVAL OF THE OWNER.
17. ITEMS SUSTAINING DAMAGE DURING CONSTRUCTION THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AND / OR REPLACED TO THE SATISFACTION AND APPROVAL OF THE OWNER AT THE CONTRACTORS EXPENSE.
18. THE OWNER RESERVES THE RIGHT TO REQUEST THAT MATERIAL BE TESTED BY AN APPROVED LABORATORY DURING THE COURSE OF THE PROJECT. THE CONTRACTOR SHALL BEAR THE EXPENSE OF THE TESTED MATERIALS NOT CONFORMING TO THE CONTRACT SPECIFICATIONS.
19. THE CONTRACTOR SHALL VERIFY AND / OR DETERMINE ANY AND ALL TOPOGRAPHIC DATA NECESSARY TO COMPLETE THE WORK. THE CONTRACTOR SHALL BEAR THE EXPENSE OF DATA ACQUISITION AND VERIFICATION.
20. THE CONTRACTOR SHALL FURNISH TO THE OWNER, THE COMPLETE REPRODUCIBLE SET OF "AS-BUILT DRAWINGS" IN THE FORMAT AS DEFINED IN THE CONTRACT SPECIFICATIONS BEFORE RELEASE OF FINAL PAYMENT. THE DRAWINGS SHALL BE CORRECTED TO SHOW WORK AS ACTUALLY BUILT, WITH PARTICULAR ATTENTION TO LOCATION OF PIPING, VALVES, MECHANICAL ITEMS AND SUCH OTHER DETAILS OF WORK AS THE OWNER MAY DIRECT. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE NECESSITY OF KEEPING ACCURATE RECORDS OF ALL CONCEALED WORK SO THAT AS-BUILT DRAWINGS WILL CONTAIN THIS INFORMATION IN CORRECT DETAIL AND LOCATION. "AS-BUILT SHALL BE CERTIFIED AS PER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
21. EACH CONTRACTOR SHALL FURNISH "OPERATION AND MAINTENANCE (O&M) MANUALS" FOR ALL SYSTEMS AND ITEMS OF EQUIPMENT INCLUDED IN EACH SECTION OF THE CONTRACT SPECIFICATIONS. PRELIMINARY COPIES OF THE MANUALS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE FINAL O&M MANUALS SHALL BE SUBMITTED TO THE ENGINEER WITHIN ONE MONTH AFTER FINAL APPROVAL OF ALL VENDOR SHOP DRAWINGS. SPECIFIC REQUIREMENTS FOR SUBMITTING OPERATION AND MAINTENANCE MANUALS AND CROSS REFERENCING DOCUMENT SHALL BE IN ACCORDANCE WITH THE SECTION 01 78 23 "OPERATION AND MAINTENANCE DATA" OF THE CONTRACT SPECIFICATIONS.
22. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE CONVENIENT, SAFE AND PROPER ACCESS TO FACILITIES FOR THE INSPECTION OF ALL PARTS OF THE WORK. NO WORK, EXCEPT SUCH SHOP WORK AS MAY BE SO PERMITTED, SHALL BE DONE EXCEPT WITH THE CONSENT OF THE OWNER OR A REPRESENTATIVE THEREOF.
23. ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO PRESERVE THE MATERIAL BELOW AND BEYOND THE LINES OF ALL EXCAVATION IN THE SOUNDTEST POSSIBLE CONDITION. ANY DAMAGE TO THE WORK DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE EXPENSE OF AND BY THE CONTRACTOR.
24. NO MATERIAL OF ANY KIND SHALL BE USED IN WORK UNTIL IT HAS BEEN INSPECTED AND ACCEPTED BY THE OWNER. ALL MATERIAL REJECTED SHALL BE IMMEDIATELY REMOVED FROM THE WORK SITE AND SHALL NOT AGAIN BE OFFERED FOR INSPECTION.
25. ANY MATERIALS OR WORKMANSHIP FOUND AT ANY TIME TO BE DEFECTIVE SHALL BE REMEDIATED AT ONCE, REGARDLESS OF PREVIOUS INSPECTION(S). THE INSPECTION AND OBSERVATION OF WORK BY THE ENGINEER IS INTENDED TO ASSIST THE CONTRACTOR IN APPLYING LABOR AND MATERIAL TO AND IN ACCORDANCE WITH THE SPECIFICATION. SUCH INSPECTION(S) SHALL NOT RELEASE THE CONTRACTOR FROM ANY CONTRACTUAL OBLIGATION(S).

- 26. PUBLIC SAFETY AND THE SAFETY OF THE PROPERTY IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL CONDUCT THE WORK IN A SAFE MANNER SO AS TO POSE NO DANGER OR HAZARDS TO PERSON(S) AND / OR TO PROPERTY(IES). WHERE NECESSARY, TEMPORARY SHIELDS OR OTHER PROTECTIVE DEVICES MUST BE UTILIZED TO SAFE GUARD THE PUBLIC INTEREST. THE CONTRACTOR SHALL ASSUME COMPLETE AND FULL RESPONSIBILITY AND EXPENSE OF ANY AND ALL SAFETY MEASURES. THE USE OF EXPLOSIVES IS STRICTLY PROHIBITED. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA AND NEW JERSEY STATE DEPARTMENT OF LABOR REQUIREMENTS.
27. THE OWNER'S NOTIFICATION TO THE CONTRACTOR TO PROCEED WITH THE WORK SHALL SUFFICE AS THE CONTRACTOR'S ACCEPTANCE OF TERMS SPECIFIED WHEREIN, AND SHALL BE INCORPORATED INTO ANY AND ALL AGREEMENTS BETWEEN OWNER AND THE CONTRACTOR.
28. THE CONTRACTOR SHALL HAVE A COMPETENT REPRESENTATIVE OR FOREMAN PRESENT AT THE SITE WHO SHALL FOLLOW, WITHOUT DELAY, ALL INSTRUCTIONS OF THE ENGINEER OR HIS / HER ASSISTANT(S) IN THE EXECUTION AND COMPLETION OF THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, AND SHALL HAVE FULL AUTHORITY TO SUPPLY LABOR AND MATERIAL IMMEDIATELY. THE CONTRACTOR SHALL ALSO HAVE A COMPETENT REPRESENTATIVE AVAILABLE TO RECEIVE TELEPHONE MESSAGES AND PROVIDE A REASONABLE REPLY AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS.
29. COMMUNICATION OF ALL WORK UNDER THIS CONTRACT SHALL BE MAINTAINED TO ENSURE THE QUALITY AND TIMELY COMPLETION OF THE WORK.
30. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY WITHOUT COMPROMISING THE QUALITY OF THE WORK.
31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS, AND OFF ALIGNMENTS ACCORDING TO ALL APPLICABLE CODES AND INDUSTRY STANDARDS FOR THE GOOD PRACTICE.
32. ALL ELECTRICAL INDICATIONS ON SITE CIVIL AND / OR MECHANICAL DRAWINGS ARE FOR LOCATION PURPOSES ONLY.
33. WHERE MANUFACTURERS' NAMES AND PRODUCT NUMBERS ARE INDICATED ON THE DRAWINGS, IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHING OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL OTHER PRODUCTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE PRODUCT DEEMED EQUAL.
34. SEE ADDITIONAL NOTES AND CALL OUTS THAT ARE APPLICABLE ON THE PERTINENT CONTRACT DRAWING(S).

BASELINE BASELINE COINCIDES WITH THE CENTER OF THE EXISTING SANITARY SEWER.

EXISTING UTILITIES NOT ALL EXISTING UTILITIES ARE SHOWN ON THIS PLAN. THE CONTRACTOR IS RESPONSIBLE FOR REQUESTING MARKOUTS FOR ALL EXISTING UTILITIES.

EXISTING GAS AND WATER MAINS THE CONTRACTOR IS ADVISED THAT THE EXISTING GAS AND WATER MAIN LOCATIONS INDICATED ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS AND DEPTHS WERE NOT AVAILABLE FROM THE UTILITY COMPANIES AT THE TIME THE PLANS WERE PREPARED. ACCORDINGLY, THE CONTRACTOR SHALL REQUEST A UTILITY MARKOUT FROM THE RESPECTIVE GAS AND WATER COMPANIES PRIOR TO COMMENCEMENT OF WORK.

CONTROL POINTS AND BENCHMARKS THE CONTRACTOR IS REQUIRED TO VERIFY BENCHMARK INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSFERRING CONTROL POINTS AND BENCHMARKS IF AND AS REQUIRED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING BENCHMARKS.

TREE REMOVAL THE CONTRACTOR IS DIRECTED TO VERIFY ALL NECESSARY TREE REMOVAL WITH THE ENGINEER PRIOR TO BEGINNING TREE REMOVAL WORK.

SPECIAL PROVISIONS THE CONTRACTOR IS SPECIFICALLY DIRECTED TO THE REQUIREMENTS CONTAINED IN THE SPECIAL PROVISIONS SECTION OF THE CONTRACT SPECIFICATIONS.

TEMPORARY BYPASS SYSTEM THE CONTRACTOR SHALL FURNISH AND INSTALL A TEMPORARY BYPASSING SYSTEM IN ORDER TO DIVERT THE FLOW AROUND THE WORK AREA AS REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WASTEWATER FLOW FOR THE DURATION OF THE PROJECT. THE TEMPORARY BYPASS SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL INCLUDE LOCATIONS OF TEMPORARY PIPING, MANHOLE CONNECTIONS, ADDITIONAL STRUCTURES AND BYPASS PUMPS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL DETAILS.

SANITARY SEWER SYSTEM CONSTRUCTION THE CONTRACTOR IS SPECIFICALLY DIRECTED TO ALL APPLICABLE SECTIONS OF THE SPECIFICATIONS FOR PROCEDURES AND REQUIREMENTS RELATING TO THE REMOVAL AND REPLACEMENT OF THE EXISTING SANITARY SEWER SYSTEM AND THE LOCATING AND CONNECTING OF EXISTING SERVICE LATERAL CONNECTIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON PIPE AND REQUIREMENTS FOR FITTINGS.

WATER MAIN CLEARANCES WHERE NEITHER A 10' HORIZONTAL SEPARATION FROM WATER MAIN TO SANITARY SEWER NOR A VERTICAL SEPARATION OF 18" BETWEEN BOTTOM OF WATER MAIN AND TOP OF SANITARY SEWER CAN BE MAINTAINED, CONTRACTOR SHALL ENCASE PROPOSED GRAVITY SANITARY SEWER IN CONCRETE AS SHOWN ON THE CONSTRUCTION DETAILS.

GENERAL NOTES FOR UTILITIES:

- 1. THE LOCATION AND ELEVATION OF ALL UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON THE AVAILABLE INFORMATION FURNISHED BY WOODBRIDGE TOWNSHIP.
2. THE CONTRACTOR SHALL OBTAIN UTILITY MARK OUTS IN THE WORK AREA IN ACCORDANCE WITH ALL LOCAL, COUNTY, AND STATE LAWS PRIOR TO EXECUTE THE WORK.
3. THE CONTRACTOR SHALL PROVIDE A QUALIFIED INDEPENDENT UTILITY MARK OUT SERVICE SUBCONTRACTOR TO LOCATE AND MARK OUT ALL UTILITIES WITHIN THE LIMITS OF THE WORK USING APPROPRIATE EQUIPMENT AND METHODS PRIOR TO EXECUTE THE WORK.
4. THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS OF ALL UNDERGROUND UTILITIES ENCOUNTERED WHILE CONSTRUCTING TEST PITS FOR USE IN THE PERFORMANCE OF WORK UNDER THIS CONTRACT. THESE AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
5. THE CONTRACTOR SHALL RESTORE ASPHALT PAVEMENT AFTER CONSTRUCTION AND UTILITY RELOCATION WORK IS PERFORMED.
6. WHERE CURBS OR WALKWAYS ARE TO BE REMOVED, ASPHALT SHALL BE SAW CUT OR REMOVED AT THE NEAREST JOINT.
7. NEW PAVING SHALL BE APPLIED ONLY WHERE EXISTING SURFACE TO BE COVERED IS DRY AND CLEAN AFTER PAVING IS COMPLETE. THE CONTRACTOR SHALL SEAL ALL THE JOINTS BETWEEN NEW AND EXISTING PAVING WITH LIQUID ASPHALT. ANY LOW SPOTS WHICH COLLECTS WATER AFTER PAVING SHALL BE SAW-CUT AND REPLACED SO THAT THE AREA PROPERLY DRAINS AT NO ADDITIONAL COST TO THE OWNER.
8. THE ENTIRE DRAINAGE SYSTEM IN THE VICINITY OF THE PROJECT AREA SHALL BE MAINTAINED AND KEPT IN OPERABLE CONDITION DURING THE CONSTRUCTION. THE EFFECTED SEGMENT OF THE DRAINAGE SYSTEM SHALL BE CLEANED AFTER THE COMPLETION OF THE CONSTRUCTION WORK BY THE CONTRACTOR.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING TEST PITS AND THE PROTECTION OF THE EXISTING UTILITIES. UTILITIES OFFSETS WILL BE APPROVED BY THE ENGINEER ONLY IN CASE WHERE IT DEEMED NECESSARY.
10. TEMPORARY POWER AND UTILITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
11. EXCAVATED MATERIAL SHALL BE HAULED OFFSITE. ANY SOIL TO BE STOCKPILED ON-SITE SHALL BE LOCATED IN THE DESIGNATED AREAS AS DEFINED BY THE OWNER (IF APPLICABLE) AND COVERED WITH PVC SHEETS OR TARP. SUCH PILES OF STOCKPILED SOIL SHALL NOT EXCEED SIX (6) FEET IN HEIGHT OR DIAMETER.
12. IF CONTRACTOR FINDS ANY DISCREPANCY IN / OR OMISSION FROM THESE DRAWINGS, OR IF CONTRACTOR SHOULD BE IN QUESTION AS TO THEIR MEANING AND /OR INTENT, THE CONTRACTOR SHALL SUBMIT REQUEST FOR CLARIFICATION IN WRITING.
13. THE CONTRACTOR SHALL PROMPTLY AND LEGALLY REMOVE ALL ACCUMULATED DEBRIS, GARBAGE, ETC. OUT OF THE WORK AREAS AS SOON AS POSSIBLE.
14. THE CONTRACTOR SHALL PROTECT ALL EXPOSED PORTIONS OF THE WORK AND SECURELY STORE ALL MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE KEEPING OF EQUIPMENTS AND MATERIALS.

GENERAL NOTES FOR WORK WITHIN THE NEW JERSEY TURNPIKE AUTHORITY (NJTA) ROW:

- 1. ALL CONSTRUCTION WITHIN NEW JERSEY TURNPIKE AUTHORITY (NJTA) PROPERTY SHALL BE IN ACCORDANCE WITH NJTA LICENSE TO CROSS (LTC NO. T882 NEW JERSEY TURNPIKE MILE POST 92.8 AS ATTACHED TO THE CONSTRUCTION SPECIFICATIONS.
2. ALL WORK PERFORMED WITHIN THE NJTA ROW SHALL BE IN COMPLIANCE WITH THE 2016 NJTA STANDARD SPECIFICATIONS. THE SPECIFICATIONS CAN BE FOUND ON THE NJTA WEB SITE: HTTP://WWW.NJTA.COM/DOING-BUSINESS/PROFESSIONAL-SERVICES/STANDARD-SPECIFICATIONS
3. TEMPORARY BYPASS LINES SHALL BE ROUTED ALONG MUNICIPAL AND COUNTY ROADS. NO BYPASS LINES SHALL BE INSTALLED WITHIN THE NJTA ROW.
4. CONTRACTOR SHALL NOT REMOVE ANY EXISTING TREES WITHIN THE NJTA ROW WITHOUT NJTA APPROVAL.
5. CONTRACTOR SHALL USE WOOD PALLETS OR OTHER MEANS TO AVOID DISTURBANCE TO THE NJTA ROW OUTSIDE THE DESIGNATED MAX. LIMITS OF DISTURBANCE FOR MICROTUNNELING LAUNCHING AND RECEIVING SHAFTS. CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DISTURBANCE WITHIN THE NJTA ROW.
6. IF DURING CONSTRUCTION FIELD CONDITIONS NECESSITATE ANY DEVIATION FROM THE APPROVED PIPELINE ALIGNMENT, THE REVISED ALIGNMENT MUST BE RESUBMITTED FOR NJTA APPROVAL.
7. ALL RIGHT-OF-WAY FENCES SHALL BE RESET OR REPLACED IN ACCORDANCE WITH NJTA STANDARD SPECIFICATIONS AND STANDARD DRAWINGS.
8. THE CONTRACTOR AGREES TO BEAR ALL COSTS AND EXPENSES ATTRIBUTABLE TO THE CONSTRUCTION, RECONSTRUCTION, MAINTENANCE, REPAIR AND OPERATION OF SAID FACILITIES INCLUDING BUT NOT LIMITED TO THE COST OF SAFEGUARDING THE PUBLIC AND TRAFFIC ON THE TURNPIKE AND THE COST OF OBTAINING ANY AND ALL PERMITS REQUIRED BY ANY REGULATORY AGENCY WITH JURISDICTION OVER WOODBRIDGE TOWNSHIP. THE CONTRACTOR AGREES TO BEAR ALL COSTS AND EXPENSES FOR THE RELOCATION, ALTERATION, MODIFICATION AND RECONSTRUCTION OF SAID FACILITIES MADE NECESSARY BY THE ENLARGEMENT, ALTERATION, MODIFICATION OR EXTENSION OF THE NEW JERSEY TURNPIKE. FURTHER, THE CONTRACTOR AGREES TO BEAR THE COST AND EXPENSE INCURRED BY THE NJTA FOR INSPECTION OF THE OPERATIONS CONDUCTED HEREUNDER AND THE NJTA SHALL HAVE THE RIGHT, IN ITS SOLE DISCRETION, TO DESIGNATE AS SUCH INSPECTORS, ANY ENGINEERS OR SPECIALIZED ENGINEERING FIRM DEEMED NECESSARY FOR THE PROTECTION OF ITS PROPERTY RIGHTS AND THE PUBLIC USING THE TURNPIKE.

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Project information and signature block including: APPROVED: Richard A. Alaimo, PROFESSIONAL ENGINEER, NEW JERSEY LICENSE NO. 13195; RICHARD A. ALAIMO ENGINEERING COMPANY; ODOR & CORROSION CONTROL PORT READING INTERCEPTOR; LEGENDS & MISCELLANEOUS NOTES; CLIENT: WOODBRIDGE TOWNSHIP; PROJECT LOCATION: WOODBRIDGE TOWNSHIP, MIDDLESEX COUNTY, NEW JERSEY; DATE: JAN 2023; SHEET: G3; FILE NO.:

ODOR CONTROL SYSTEM NOTES (REFER TO DRAWING M1):

- REFER TO DWGS. C1 AND C2 FOR YARD PIPING.
- REFER TO S SERIES DWGS. FOR STRUCTURAL PLANS, SECTIONS, AND DETAILS.
- HEAT TRACING AND INSULATION SHALL BE:
 - SIZED FOR FREEZE PROTECTION—MAINTAIN 40°F @ -10°F AMBIENT.
 - ABOVE AND BELOW GRADE INSULATION SHALL BE CELLULAR GLASS.
 - FREEZE PROTECTION OF PIPING INCLUDES HEAT TRACING, INSULATION, TEMPERATURE CONTROLLER, JACKET, SPLICE, AND REQUIRED ACCESSORIES.
 - REFER TO CONTRACT SPECIFICATIONS.
- ELECTRIC CONTROL PANEL TO BE LOCATED > 3'-0" FROM BIOTRICKLING FILTER VESSEL, BLOWER MOTOR, AND ODOR DUCTING.
- THE COMPLETE ODOR CONTROL SYSTEM SHALL BE PROVIDED BY THE ODOR CONTROL SYSTEM MANUFACTURER, INCLUDING BUT NOT LIMITED TO REACTOR TANK, CONTROL PANEL, WATER CONTROL PANEL, BLOWER, DIFFERENTIAL PRESSURE GAUGE, SILICONE TUBING, GAUGE ISOLATION VALVES.
- EXHAUST FAN TO HAVE INTEGRAL DRAIN.

SUPPLEMENTAL ODOR CONTROL SYSTEM NOTES (REFER TO DRAWING S2):

- SEE MECH & ELEC DWGS FOR MECHANICAL & EQUIPMENT DETAILS.
- CAST-IN-PLACE CONCRETE SHALL BE CLASS 'E' AS DEFINED IN SPECIFICATION SECTION 03 30 00.
- CONTRACTOR TO COORDINATE & VERIFY WITH EQUIPMENT MANUFACTURER FOR PAD SIZES, ANCHOR RODS INFORMATION (SIZE, LOCATIONS, EMBEDMENT LENGTH & PROJECTION LENGTH).
- CONTRACTOR SHALL SUBMIT DRAWINGS & CALCULATIONS, SIGNED & SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY FOR BIOFILTER AND BIOFILTER ANCHORAGE DESIGN.
- SEE CONCRETE GENERAL NOTES ON DRAWING S1 FOR ADDITIONAL REQUIREMENTS.

NOISE CONTROL NOTES:

- NOISE CAUSED BY CONSTRUCTION ACTIVITIES SHALL NOT EXCEED THE LEVELS PERMITTED BY APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS.
- ALL CONSTRUCTION EQUIPMENT POWERED BY AN INTERNAL COMBUSTION ENGINE SHALL BE EQUIPPED WITH PROPERLY MAINTAINED MUFFLER.
- AIR COMPRESSORS SHALL BE OPERATED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR PROPER NOISE ABATEMENT.
- AIR-POWERED EQUIPMENT SHALL BE FITTED WITH PNEUMATIC EXHAUST SILENCERS.
- STATIONARY EQUIPMENT POWERED BY AN INTERNAL COMBUSTION ENGINE SHALL NOT BE OPERATED WITHIN 150 FEET OF NOISE SENSITIVE SITES WITHOUT TEMPORARY NOISE BARRIERS PLACED BETWEEN THE EQUIPMENT AND THE NOISE SENSITIVE SITES. NOISE SENSITIVE SITES SHALL INCLUDE RESIDENTIAL BUILDINGS, MOTELS, HOTELS, SCHOOLS, HOSPITALS, NURSING HOMES, LIBRARIES, AND PUBLIC RECREATION AREAS. TEMPORARY NOISE BARRIERS SHALL BE CONSTRUCTED OF PLYWOOD OR TONGUE AND GROOVE BOARDS WITH A NOISE ABSORBENT TREATMENT ON THE INTERIOR SURFACE (FACING THE EQUIPMENT).
- UNLESS OTHERWISE PERMITTED, POWERED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED BEFORE 7:00 A.M. OR AFTER 6:00 P.M. WITHIN 150 FEET OF A NOISE SENSITIVE SITE. [NJAC 7:22-10.11(N)]
- NO DRIVING, PULLING, OR OTHER OPERATIONS ENTAILING THE USE OF VIBRATORY HAMMERS OR COMPACTORS SHALL BE PERMITTED OTHER THAN BETWEEN THE HOURS OF 8:00 A.M. AND 5:00 P.M. [NJAC 7:22-10.11(N)]
- THE NUMBER OF MACHINES IN OPERATION AT A GIVEN TIME SHALL BE LIMITED TO THE MINIMUM PRACTICABLE. [NJAC 7:22-10.11(N)]

WATER SERVICE NOTES:

- ALL NEW WATER MAIN PIPING SHALL BE CEMENT LINED DUCTILE IRON PIPE PRESSURE CLASS 350 WITH RESTRAINED JOINTS OR AS OTHERWISE DIRECTED BY MIDDLESEX WATER COMPANY. TESTING AND DISINFECTION OF NEW WATER MAIN(S) SHALL BE IN ACCORDANCE WITH MIDDLESEX WATER COMPANY STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH MIDDLESEX WATER COMPANY.
- WATER SERVICE SHALL BE MAINTAINED TO ALL STRUCTURES DURING CONSTRUCTION. DISRUPTION TO SERVICE TO ANY CUSTOMER SHALL BE NO LONGER THAN TWO (2) HOURS DURATION, LONGER DURATION SHALL REQUIRE THE APPROVAL OF THE MIDDLESEX WATER COMPANY.
- FINAL LOCATION OF WATER SERVICE REPLACEMENTS SHALL BE DETERMINED BY MIDDLESEX WATER COMPANY.
- WATER SERVICE REPLACEMENTS SHALL BE CONTINUOUS COPPER SERVICE LINE FROM CORP. STOP TO CURB STOP, WITHOUT EXCEPTION.

VORTEX MANHOLE STRUCTURAL NOTES (REFER TO DRAWING S3):

- SEE VORTEX MANHOLE PLAN FOR PIPE LOCATIONS. COMPONENTS SHOWN IN SECTION ARE SHOWN TO ILLUSTRATE INVERT ELEVATIONS APPROXIMATE LOCATION.
- TAKE & COORDINATE FIELD MEASUREMENTS/DIMENSIONS OF SANITARY PIPES INCLUDING OUTSIDE DIAMETERS, ANGULAR POSITION & PIPE INVERTS WITH VORTEX INSERT DIMENSIONS, SUBMIT PRECAST CONCRETE MANHOLE SHOP DRAWINGS TO ENGINEER.
- CUT OPENING FOR THE 10" PVC PIPE PENETRATION OF THE SIZE AS REQUIRED AND PROVIDE GRATING PENETRATION.
- A-LOK PREMIUM OR EQUAL BY A-LOK PRODUCTS. CAST SEWER PIPE PENETRATIONS INTO PRECAST MANHOLE DURING FABRICATION.
- ODOR CONTROL DRAIN PIPE PENETRATION MAY BE CORE DRILLED IN FIELD AT CONTRACTOR'S OPTION.
- FASTEN VORTEX INSERT AND INFLUENT PIPE TO PRECAST MANHOLE IAW MANUFACTURER'S INSTRUCTIONS. ALL FASTENERS AND CONNECTIONS SHALL BE STAINLESS STEEL. SUBMIT SHOP DRAWINGS TO ENGINEER.
- VORTEX LATERAL STABILITY STRAP ASSEMBLIES SHALL WRAP AROUND THE VORTEX FLOW INSERT A MINIMUM OF 135° AND SECURE IT TO THE PRECAST MANHOLE FROM INLET PIPE SIDE BACK TO THE INLET PIPE SIDE.
- THE VORTEX MANHOLE (AS INDICATED ON S3) WILL USE THE GRAVITY FLOW ENERGY FROM THE WASTEWATER AND CAUSE A SPIRAL FLOW DOWN THE VORTEX INSERT OF THE MANHOLE, HELPING TO PREVENT GASES FROM ESCAPING THE WASTEWATER. THE MANHOLE AND INSERT SHALL HAVE THE FOLLOWING DESIGN REQUIREMENTS:

DROP STRUCTURE INFORMATION

NEW OR EXISTING DROP STRUCTURE:	NEW	
MANHOLE DIAMETER:	10	FT.
GROUND ELEVATION:	8.45	FT.
MANHOLE FLOOR ELEVATION:	-15.78	FT.
INFLUENT LINE ELEVATION:	-6.25	FT.
EFFLUENT LINE ELEVATION:	-13.61	FT.
COMMENTS ON ANY UNIQUE DETAILS:	INCOMING 10" PVC PIPE (10V. ELEVATION 0.34"); FRP GRATING 8'-10' BELOW MANHOLE CEILING	

FLOW INFORMATION

GRAVITY, FORCEMAIN OR WET WELL:	GRAVITY	
TODAY'S AVERAGE FLOW - DRY WEATHER:	3.5	MGD
TODAY'S PEAK FLOW - DRY WEATHER:	5.5	MGD
TODAY'S PEAK FLOW - WET WEATHER:	13.3	MGD
BUILD-OUT PEAK FLOW - DRY WEATHER:	5.5	MGD
BUILD-OUT AVERAGE FLOW - DRY WEATHER:	3.5	MGD
BUILD-OUT PEAK FLOW - WET WEATHER:	15.93	MGD
EXPECTED SEWAGE VELOCITY:	0.77-2.41	FPS
EXPECTED BUILD-OUT TIME FRAME:	1.5	YEARS
PUMP RATE CAPACITY OF ALL PUMPS:	N/A	

INFLUENT LINE INFORMATION

INFLUENT LINE MATERIAL:	CCFRPMP	
INFLUENT LINE NOMINAL DIAMETER:	36	INCHES
INFLUENT LINE OUTER DIAMETER:	38.3	INCHES
INFLUENT LINE INNER DIAMETER:	34.3	INCHES
SLOPE OF INFLUENT LINE:	0.0042	FT/FT

SANITARY SEWER INTERCEPTOR ABANDONMENT NOTES:

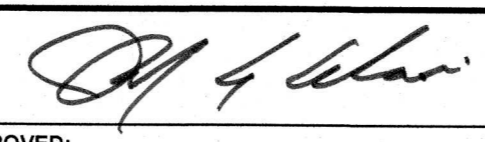

IN PLACE ABANDONMENT OF THE SANITARY SEWER INTERCEPTOR SHALL INCLUDE THE FOLLOWING:

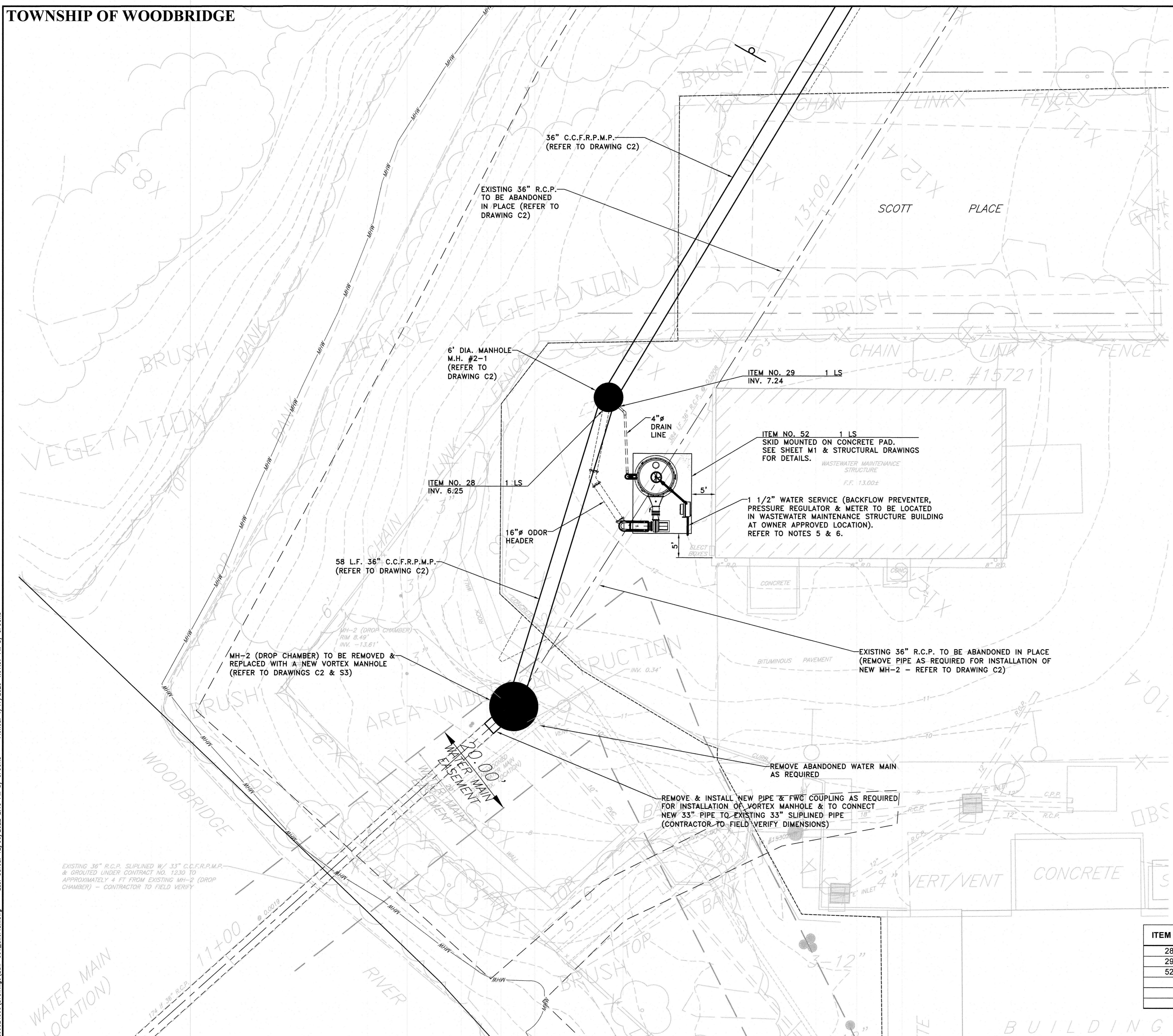
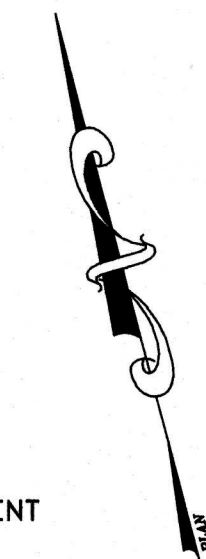
- THE BOTTOM SLAB OF THE MANHOLES SHALL BE BROKEN UP TO PREVENT THE ENTRAPMENT OF WATER.
- THE MANHOLES SHALL BE BROKEN DOWN TWO (2) FEET BELOW PROPOSED GRADE.
- THE MAINS AND MANHOLES SHALL BE FILLED WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM).
- THE ENDS OF EXISTING PIPES TO BE PERMANENTLY PLUGGED SHALL BE FILLED WITH CLASS D CONCRETE FOR THE FULL CROSS-SECTIONAL AREA OF THE PIPE. THE THICKNESS OF THE PIPE PLUG FOR PIPES UP TO 48" IN DIAMETER SHALL BE 1/3 THE NOMINAL DIAMETER OF THE PIPE BUT NOT LESS THAN 8".

SANITARY SEWER BYPASSING AND SHUTDOWN NOTES

- THE ROOSEVELT AVENUE PUMP STATION, LOCATED IN THE BOROUGH OF CARTERET, CAN ONLY BE SHUTDOWN IN TWENTY (20) TO THIRTY (30) MINUTE INCREMENTS MAXIMUM AFTER WHICH THE PUMPS MUST BE TURNED ON AND THE WET WELL MUST BE DRAWN DOWN DUE TO CONSTANT INCOMING FLOW TO THE PUMP STATION. ANY SHUTDOWN OF THE ROOSEVELT AVENUE PUMP STATION/ROOSEVELT AVENUE PUMP STATION FORCE MAIN MUST BE COORDINATED WITH THE BOROUGH OF CARTERET WITH THREE (3) WORKING DAYS NOTICE TO BE GIVEN TO THE BOROUGH OF CARTERET ENGINEER. NO SHUTDOWN CAN BE PERFORMED DURING RAIN EVENTS AND MUST BE PERFORMED ON A DRY WEATHER DAY OR DURING LOW-FLOW NIGHTTIME PERIODS. NIGHTTIME SHUTDOWNS WILL INCUR A COST TO THE CONTRACTOR AS DETERMINED BY THE BOROUGH OF CARTERET.
- ANY AND ALL BYPASSING OF THE MIDDLESEX COUNTY UTILITIES AUTHORITY (MCUA) METER CHAMBER WILL REQUIRE APPROVAL OF THE MCUA. THE METHOD OF METERING FLOW FROM THE BOROUGH OF CARTERET DURING MCUA METER CHAMBER BYPASSING SHALL BE REVIEWED AND APPROVED BY THE MCUA.
- ANY AND ALL COORDINATION FOR BYPASSING THE MCUA METER CHAMBER SHALL BE REVIEWED AND APPROVED BY THE MCUA, THE CONTRACTOR, THE ENGINEER, THE TOWNSHIP OF WOODBRIDGE, AND THE BOROUGH OF CARTERET.

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<p>APPROVED:  DATE: 1/18/23</p> <p>Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195</p>	<table border="1"> <tr> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	REVISIONS	DATE	BY													 <p>RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.</p>	<p>ODOR & CORROSION CONTROL PORT READING INTERCEPTOR</p> <hr/> <p>MISCELLANEOUS NOTES</p> <p>SCALE: N/A</p>	<p>CLIENT: WOODBRIDGE TOWNSHIP</p> <hr/> <p>PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY</p>	<p>DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: CAF DEPT. HEAD:</p>	<p>SHEET G4 FILE NO.:</p>
REVISIONS	DATE	BY																			
				<p>PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R</p>		<p>REBID</p>															



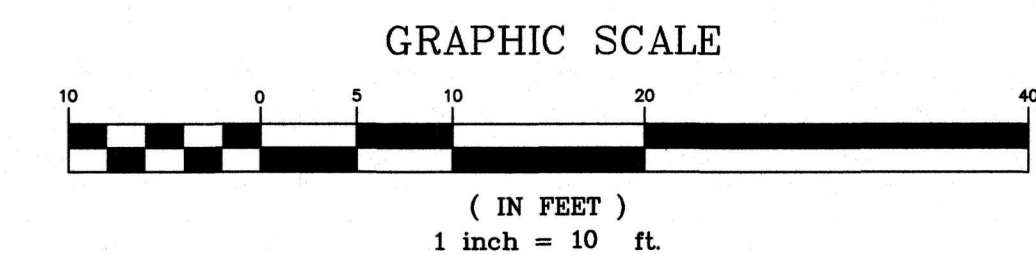
- NOTES:**
- EXISTING CONDITIONS, WITH THE EXCEPTION OF WETLAND LINES, EASEMENT LINES, MEAN HIGH WATER LINE, HIGH TIDE LINE & THE WASTEWATER MAINTENANCE STRUCTURE SITE, ARE BASED ON A SURVEY PERFORMED BY RICHARD A. ALAIMO ENGINEERING COMPANY FOR WOODBRIDGE TOWNSHIP FEBRUARY 2012. THE WASTEWATER MAINTENANCE STRUCTURE WAS NOT CONSTRUCTED AT THE TIME OF THE FIELD SURVEY. EXISTING CONDITIONS ARE DEPICTED SCREENED (FADED) FOR CLARITY. EXISTING CONDITIONS SHOULD BE FIELD VERIFIED.
 - WETLAND LINES, EASEMENT LINES, HIGH WATER LINE, HIGH TIDE LINE & THE WASTEWATER MAINTENANCE STRUCTURE SITE ARE TAKEN FROM A PLAN ENTITLED SITE PLAN - NEW MAINTENANCE BUILDING AND SITE UPGRADES PREPARED BY REMINGTON, VERNICK & VENA ENGINEERS LAST REVISED 12/17/09 AND DATED 04-09-10.
 - PROPERTY LINES ARE BASED ON TAX MAPS AND HAVE NOT BEEN FIELD VERIFIED.
 - HORIZONTAL AND VERTICAL DATUMS ARE ASSUMED.
 - SERVICE WATER: WITHIN THE WASTEWATER MAINTENANCE STRUCTURE, THE CONTRACTOR SHALL FURNISH AND INSTALL REQUIRED SERVICE WATER PIPING, FITTINGS, VALVES AND INSTRUMENTATION TO CONNECT THE PROPOSED TO THE EXISTING SERVICE WATER PIPING. SERVICE WATER INSTRUMENTATION SHALL INCLUDE A PRESSURE REGULATOR SIZED FOR 19 GPM @ 65 PSI W/PRESSURE INDICATOR, Y STRAINER, METER, ISOLATION BALL VALVES AND BACKFLOW PREVENTER. THE SERVICE WATER PIPING PLAN SHALL REQUIRE APPROVAL FROM THE ENGINEER.
 - EXTERIOR SERVICE WATER PIPING SHALL BE HEAT TRACED AND INSULATED TO 3'-6" BELOW GRADE. HEAT TRACE AND INSULATION SHALL BE:
 - SIZED FOR FREEZE PROTECTION-MAINTAIN 40°F @ -20°F AMBIENT.
 - ABOVE GRADE EXTERIOR INSULATION SHALL BE CLOSED CELL ELASTOMERIC INSULATION.
 - UNDERGROUND INSULATION SHALL BE CELLULAR GLASS.
 - FREEZE PROTECTION OF PIPING INCLUDES HEAT TRACING, INSULATION, TEMPERATURE CONTROLLER, JACKET, SPLICE, AND REQUIRED ACCESSORIES.
 - REFER TO CONTRACT SPECIFICATIONS.

LEGEND

CONCRETE	EXISTING ITEM OR FEATURE
10"	EXISTING TREE & CALIPER SIZE
---	PROPERTY LINE
---	EASEMENT LINE
---	WETLANDS LINE
---	WETLANDS TRANSITION LINE
MHW	MEAN HIGH WATER LINE

FLOOD HAZARD AREA & FLOOD HAZARD AREA DESIGN FLOOD:
 FLOOD HAZARD AREA (100-YEAR) AND FLOOD HAZARD AREA DESIGN FLOOD (100-YEAR + 25%) ARE ELEVATION 14.02 (NGVD 29) BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 34023C00676, PANEL 67 OF 286, STAMPED PRELIMINARY & CORRECTED COPY, DATED JANUARY 31, 2014 (NJDEP METHOD 2 FOR A TIDAL WATERWAY PER N.J.A.C. 7:13-3). DEDUCT 1.02' TO CONVERT FROM NGVD 29 TO NAVD 88.

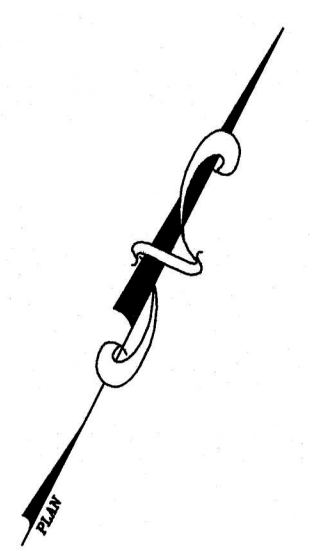
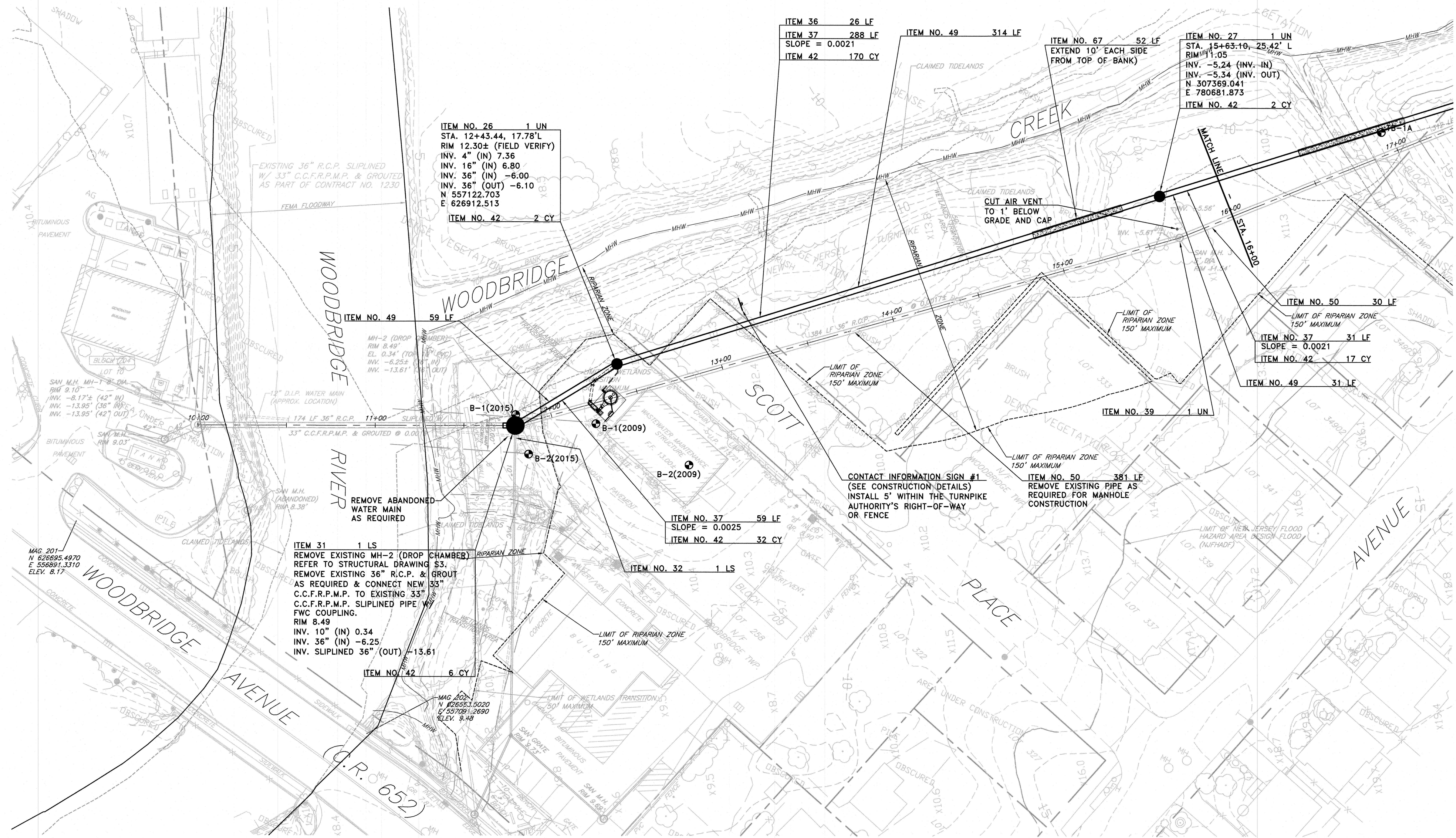
NOTE:
 ALL OR A PORTION OF THIS SITE LIES IN A FLOOD HAZARD AREA. CERTAIN ACTIVITIES IN FLOOD HAZARD AREAS ARE REGULATED BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SOME ACTIVITIES MAY BE PROHIBITED ON THIS SITE OR MAY FIRST REQUIRE A PERMIT. CONTACT THE DIVISION OF LAND USE REGULATION AT (609) 292-0060 FOR MORE INFORMATION PRIOR TO ANY CONSTRUCTION ONSITE.



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
28	Connection of 16" Odor Header from MH-2-1 to Odor Control System	1 LS	LS
29	Connection of 4" Drain Line from Odor Control System to MH 2-1	1 LS	LS
52	Biotrickling Filter System Odor Control System and Installation	1 LS	LS
Note: Refer to Drawing C2 for Sanitary Sewer Manhole and Pipe Items and Quantities			

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APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET C1
	DATE: 1/18/23		PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: B-0726-0024-000	
SCALE: 1" = 10'			CONTRACT NO.: 2014-011R	DEPT. HEAD:	REBID



UTILITY NOTE:
 1. EXISTING UTILITIES ARE DEPICTED SCHEMATICALLY ON THE PLAN (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).

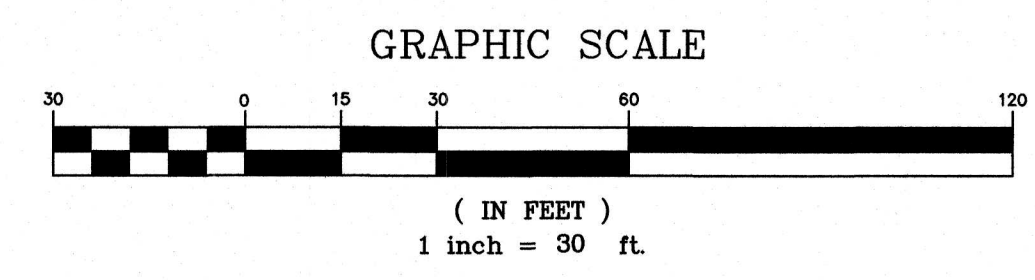
PIPING ABBREVIATIONS:
 C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-REINFORCED, POLYMER MORTAR PIPE
 R.C.P. REINFORCED CONCRETE PIPE

LEGEND	
	EXISTING ITEM OR FEATURE
	EXISTING TREE & CALIPER SIZE
	PROPERTY LINE
	EASEMENT LINE
	WETLANDS LINE
	WETLANDS TRANSITION LINE
	MEAN HIGH WATER LINE

FLOOD HAZARD AREA & FLOOD HAZARD AREA DESIGN FLOOD:
 FLOOD HAZARD AREA (100-YEAR) AND FLOOD HAZARD AREA DESIGN FLOOD (100-YEAR + 25%) ARE ELEVATION 14.02 (NGVD 29) BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 34023C0067G, PANEL 67 OF 286, STAMPED PRELIMINARY & CORRECTED COPY, DATED JANUARY 31, 2014 (NJDEP METHOD 2 FOR A TIDAL WATERWAY PER N.J.A.C. 7:13-3). DEDUCT 1.02' TO CONVERT FROM NGVD 29 TO NAVD 88.

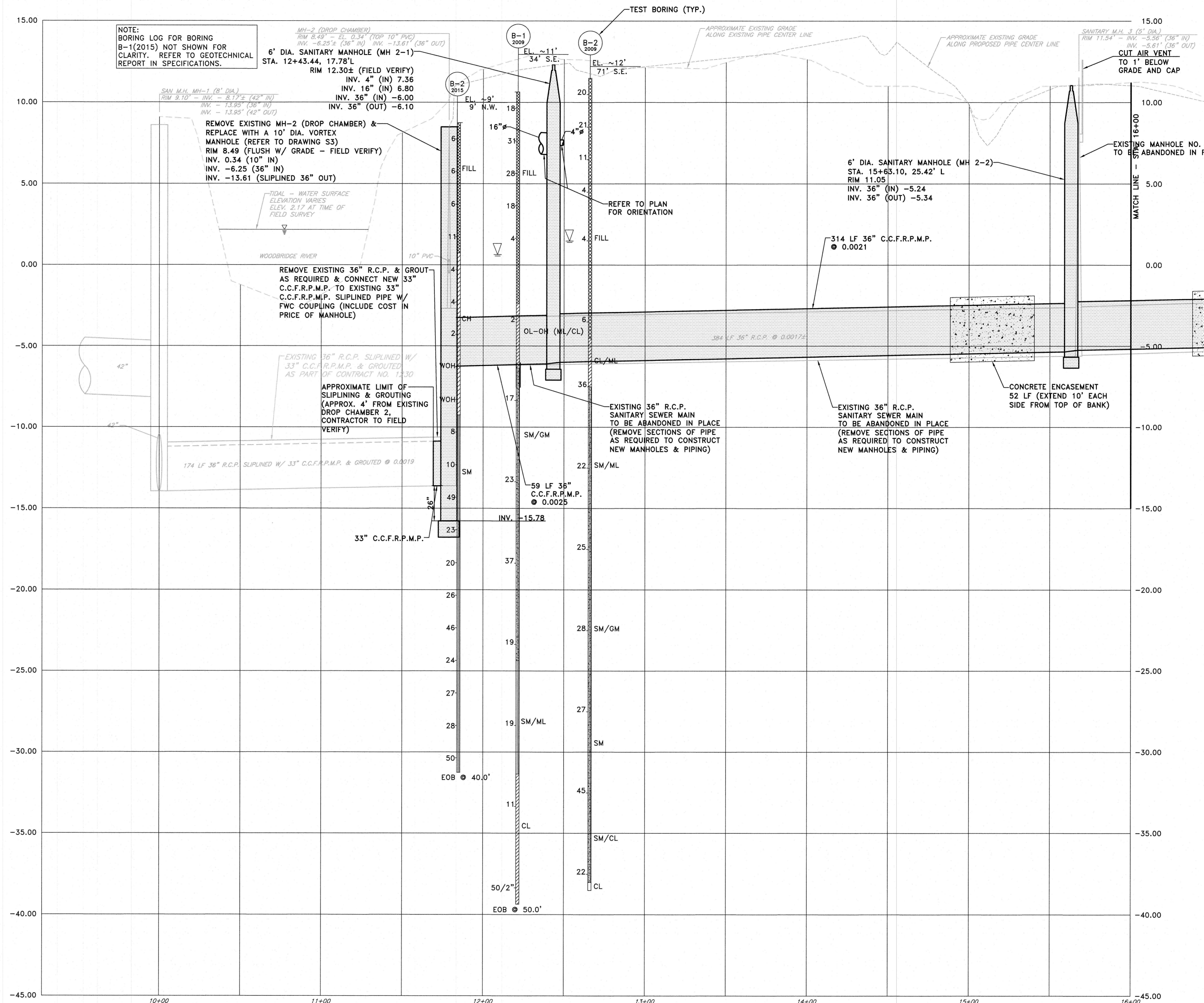
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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
26	New Manhole MH 2-1; 6' Diameter, 15' - 20' Depth	1 UN	UN
27	New Manhole MH 2-2; 6' Diameter, 15' - 20' Depth	1 UN	UN
31	Manhole MH-2; 10' Diameter Vortex Manhole	1 LS	LS
32	Adaptor/Coupling as Required for Local 10" PVC Sanitary Sewer Connection at MH-2	1 LS	LS
36	36" CCFRPP Piping - 10' - 15' Depth	26 LF	LF
37	36" CCFRPP Piping - 15' - 20' Depth	378 LF	LF
39	In-Place Abandonment of Sanitary Manhole MH-3	1 LS	LS
42	Stone Foundation (Bedding)	229 CY	CY
49	Pipe Testing	404 LF	LF
50	In-Place Abandonment of 36-inch RCP Pipe	411 LF	LF
67	Concrete Encasement of 36" CCFRPP	52 LF	LF



APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DATE: JAN 2023 DESIGNED BY: BA/CAF DRAWN BY: BA/CAF CHECKED BY: DEPT. HEAD:	SHEET C2 FILE NO.:
	DATE:		SCALE: 1" = 30' ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PLAN STA. 10+00 - STA. 16+00	REBID	

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NOTE:
BORING LOG FOR BORING
B-1(2015) NOT SHOWN FOR
CLARITY. REFER TO GEOTECHNICAL
REPORT IN SPECIFICATIONS.

REMOVE EXISTING MH-2 (DROP CHAMBER) &
REPLACE WITH A 10' DIA. VORTEX
MANHOLE (REFER TO DRAWING S3)
RIM 8.49 (FLUSH W/ GRADE - FIELD VERIFY)
INV. 0.34 (10" IN)
INV. -6.25 (36" IN)
INV. -13.61 (SLOPLINED 36" OUT)

REMOVE EXISTING 36" R.C.P. & GROUT
AS REQUIRED & CONNECT NEW 33"
C.C.F.R.P.M.P. TO EXISTING 33"
C.C.F.R.P.M.P. SLOPLINED PIPE W/
FWC COUPLING (INCLUDE COST IN
PRICE OF MANHOLE)

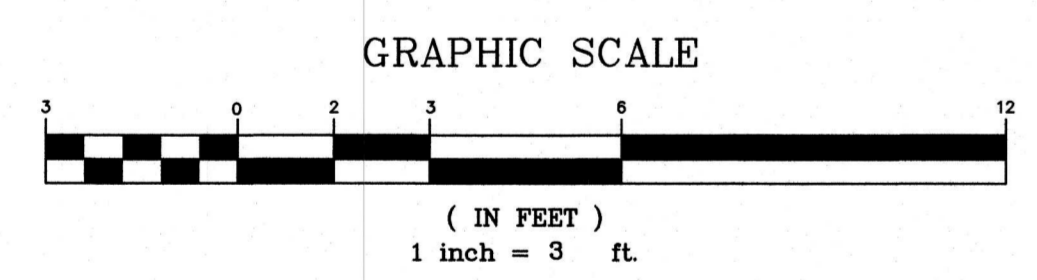
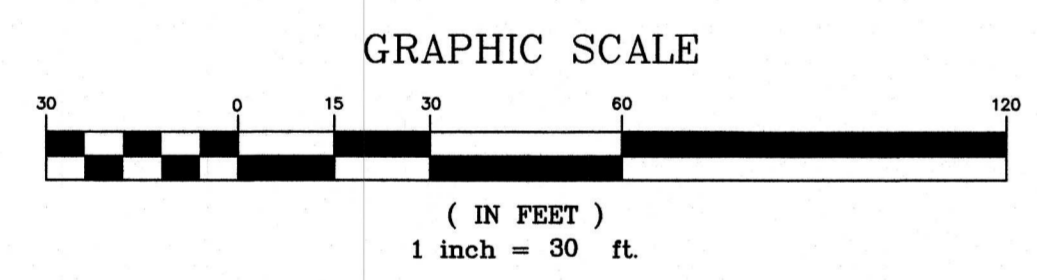
APPROXIMATE LIMIT OF
SLOPLINING & GROUTING
(APPROX. 4' FROM EXISTING
DROP CHAMBER 2,
CONTRACTOR TO FIELD
VERIFY)

REFER TO PLAN
FOR ORIENTATION

EXISTING 36" R.C.P.
SEWER MAIN
TO BE ABANDONED IN PLACE
(REMOVE SECTIONS OF PIPE
AS REQUIRED TO CONSTRUCT
NEW MANHOLES & PIPING)

EXISTING 36" R.C.P.
SEWER MAIN
TO BE ABANDONED IN PLACE
(REMOVE SECTIONS OF PIPE
AS REQUIRED TO CONSTRUCT
NEW MANHOLES & PIPING)

CONCRETE ENCASUREMENT
52 LF (EXTEND 10' EACH
SIDE FROM TOP OF BANK)



PIPING ABBREVIATIONS:
C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-
REINFORCED, POLYMER MORTAR PIPE
R.C.P. REINFORCED CONCRETE PIPE

CONSTRUCTION NOTE:
SEE DRAWING C2 FOR PAY ITEMS & QUANTITIES. ANY
WORK WITHOUT AN ASSOCIATED PAY ITEM SHALL BE
INCLUDED IN THE BID PRICE FOR RELATED PAY ITEMS.

APPROVED: *[Signature]* DATE: 1/18/23
Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

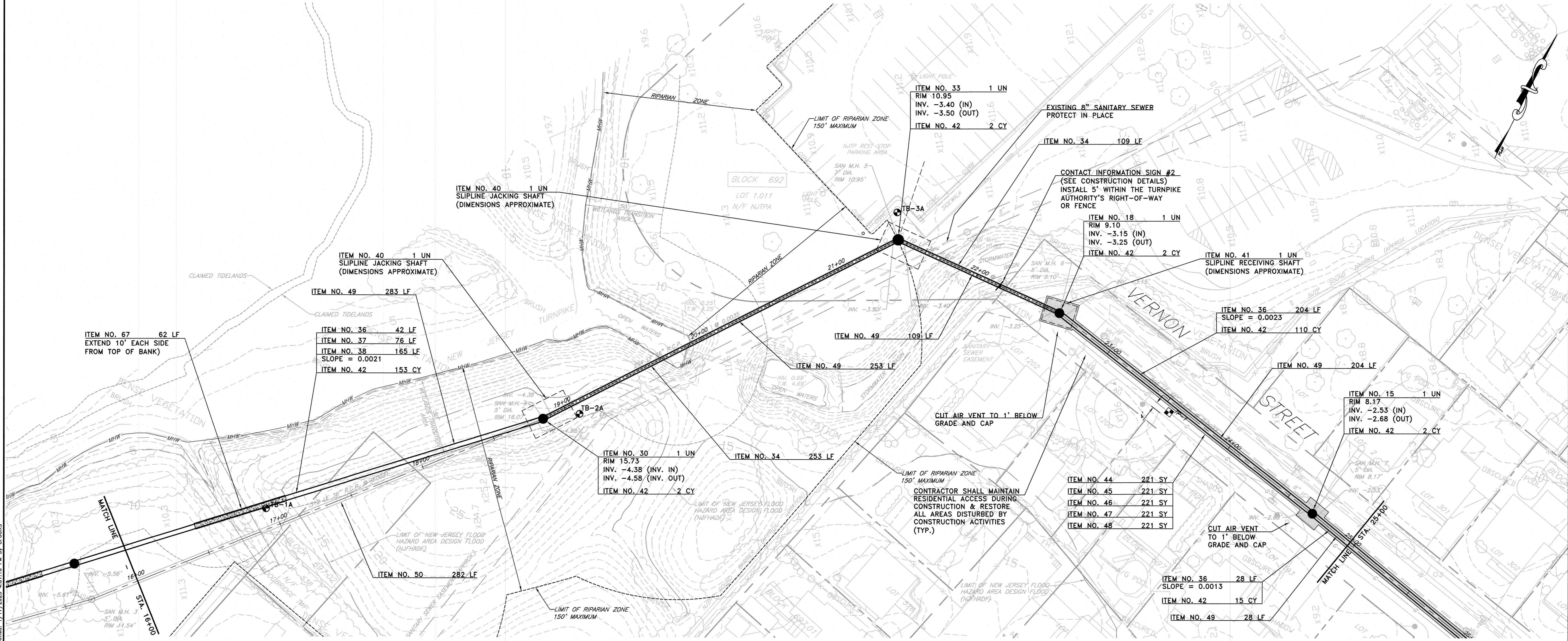
RICHARD A. ALAIMO
ENGINEERING COMPANY
Consulting Engineers
NJDCA 24GA27988800
200 HIGH STREET MOUNT HOLLY, N.J.
201 WILLOWBROOK BLVD. WAYNE, N.J.

**ODOR & CORROSION CONTROL PORT
READING INTERCEPTOR**
PORT READING INTERCEPTOR
PROFILE
STA. 10+00 - STA. 16+00
SCALE: H: 1" = 30' V: 1" = 3'

CLIENT: WOODBRIDGE TOWNSHIP
PROJECT LOCATION: WOODBRIDGE TOWNSHIP
MIDDLESEX COUNTY
NEW JERSEY
PROJECT NO.: B-0726-0024-000
CONTRACT NO.: 2014-011R

DATE: JAN 2023
DESIGNED BY: BA/CAF
DRAWN BY: BA/CAF
CHECKED BY:
DEPT. HEAD:
SHEET
C3
FILE NO.:

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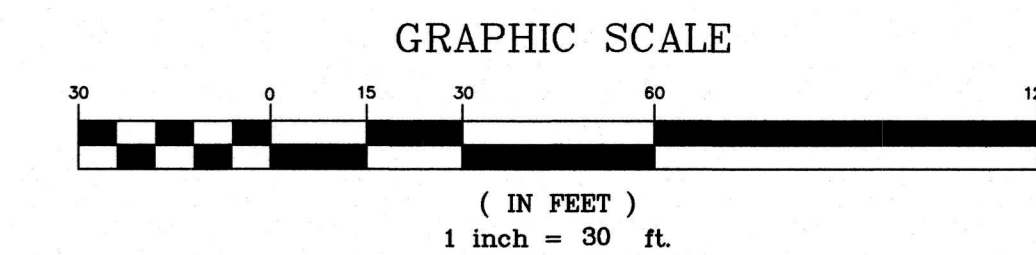
UTILITY NOTE:
 1. EXISTING UTILITIES ARE DEPICTED SCHEMATICALLY ON THE PLAN (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).

PIPING ABBREVIATIONS:
 C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-REINFORCED, POLYMER MORTAR PIPE
 R.C.P. REINFORCED CONCRETE PIPE

FLOOD HAZARD AREA & FLOOD HAZARD AREA DESIGN FLOOD:
 FLOOD HAZARD AREA (100-YEAR) AND FLOOD HAZARD AREA DESIGN FLOOD (100-YEAR + 25%) ARE ELEVATION 14.02 (NGVD 29) BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 34023C0067G, PANEL 67 OF 286, STAMPED PRELIMINARY & CORRECTED COPY, DATED JANUARY 31, 2014 (NJDEP METHOD 2 FOR A TIDAL WATERWAY PER N.J.A.C. 7:13-3). DEDUCT 1.02' TO CONVERT FROM NGVD 29 TO NAVD 88.

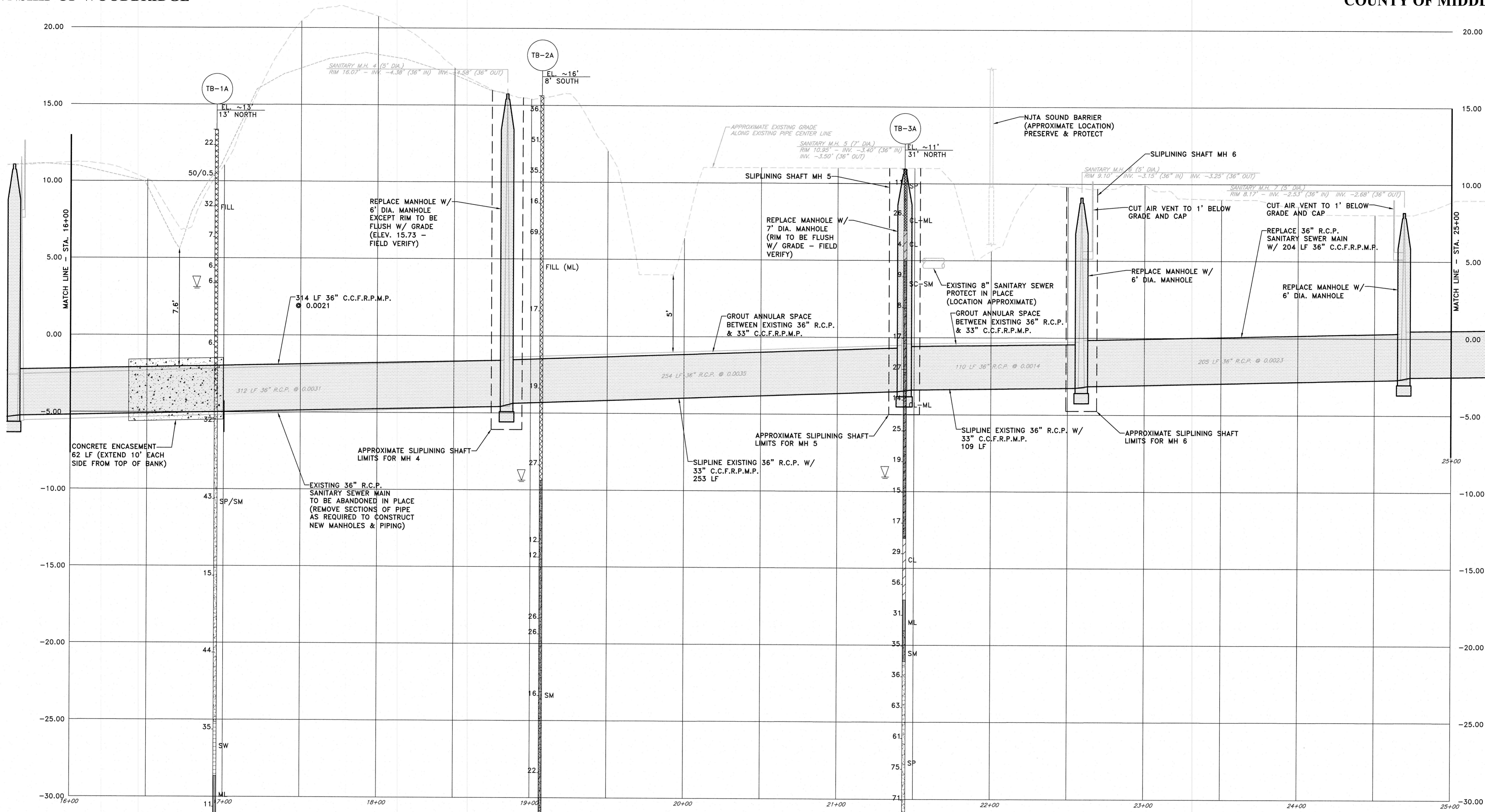
NOTE:
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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
15	Manhole Repl.: MH 7; 6' Diameter, 10' - 12' Depth	1 UN	UN
18	Manhole Repl.: MH 6; 6' Diameter, 12' - 15' Depth	1 UN	UN
30	Manhole Repl.: MH 4; 6' Diameter, 20' - 25' Depth	1 UN	UN
33	Manhole Repl.: MH 5; 7' Diameter, 12' - 15' Depth	1 UN	UN
34	33" CCFRPPM Piping - 5' - 15' Depth by Sliplining	362 LF	LF
36	36" CCFRPPM Piping - 10' - 15' Depth	274 LF	LF
37	36" CCFRPPM Piping - 15' - 20' Depth	76 LF	LF
38	36" CCFRPPM Piping - 20' - 25' Depth	165 LF	LF
40	Jacking Shafts	2 UN	UN
41	Receiving Shafts	1 UN	UN
42	Stone Foundation (Bedding)	286 CY	CY
44	Temporary Pavement (Municipal Roads), HMA 19M64, 2" Thick	221 SY	SY
45	Pavement Milling (Municipal Roads), 2" Deep	221 SY	SY
46	Dense Graded Aggregate (Municipal Roads), 3" Thick Min.	221 SY	SY
47	HMA 19M64 Base Course (Municipal Roads), 7" Thick	221 SY	SY
48	HMA 9.5M64 Surface Course (Municipal Roads), 2" Thick	221 SY	SY
49	Pipe Testing	877 LF	LF
50	In-Place Abandonment of 36-inch RCP Pipe	282 LF	LF
67	Concrete Encasement of 36" CCFRPPM	62 LF	LF



APPROVED: <i>[Signature]</i> DATE: 1/18/23 Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PLAN STA. 16+00 - STA. 25+00 SCALE: 1" = 30'	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: JAN 2023 DESIGNED BY: BA/CAF DRAWN BY: BA/CAF CHECKED BY: DEPT. HEAD:	SHEET C4 FILE NO.:
	PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R		REBID			

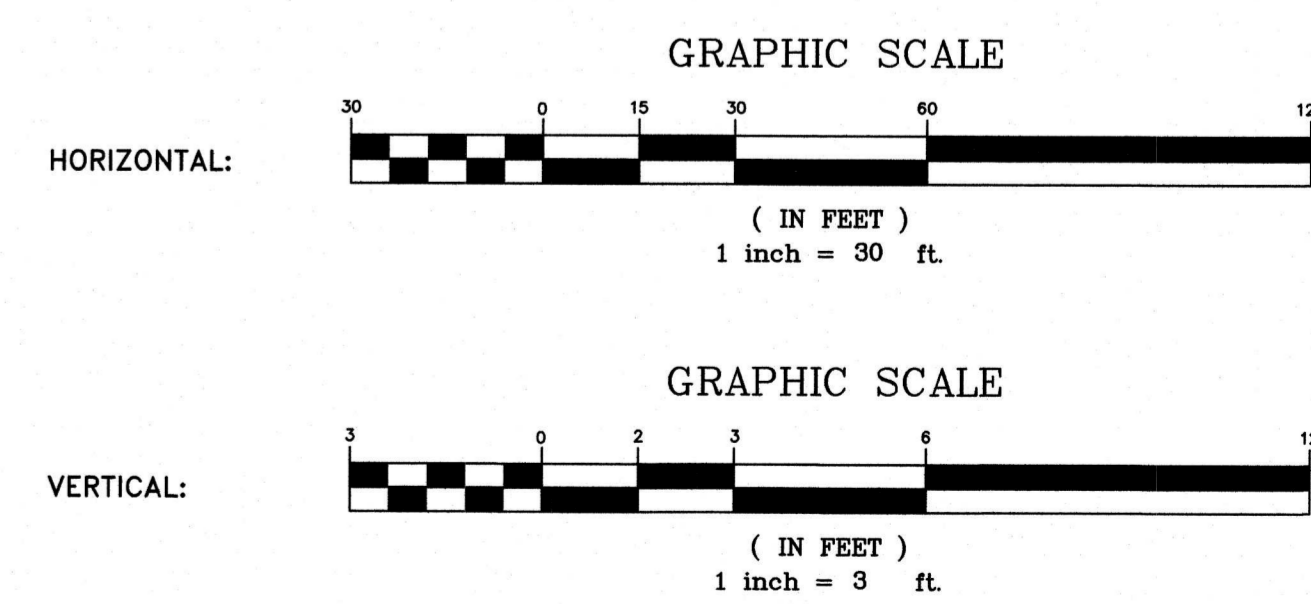
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PIPING ABBREVIATIONS:
 C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-
 REINFORCED, POLYMER MORTAR PIPE
 R.C.P. REINFORCED CONCRETE PIPE

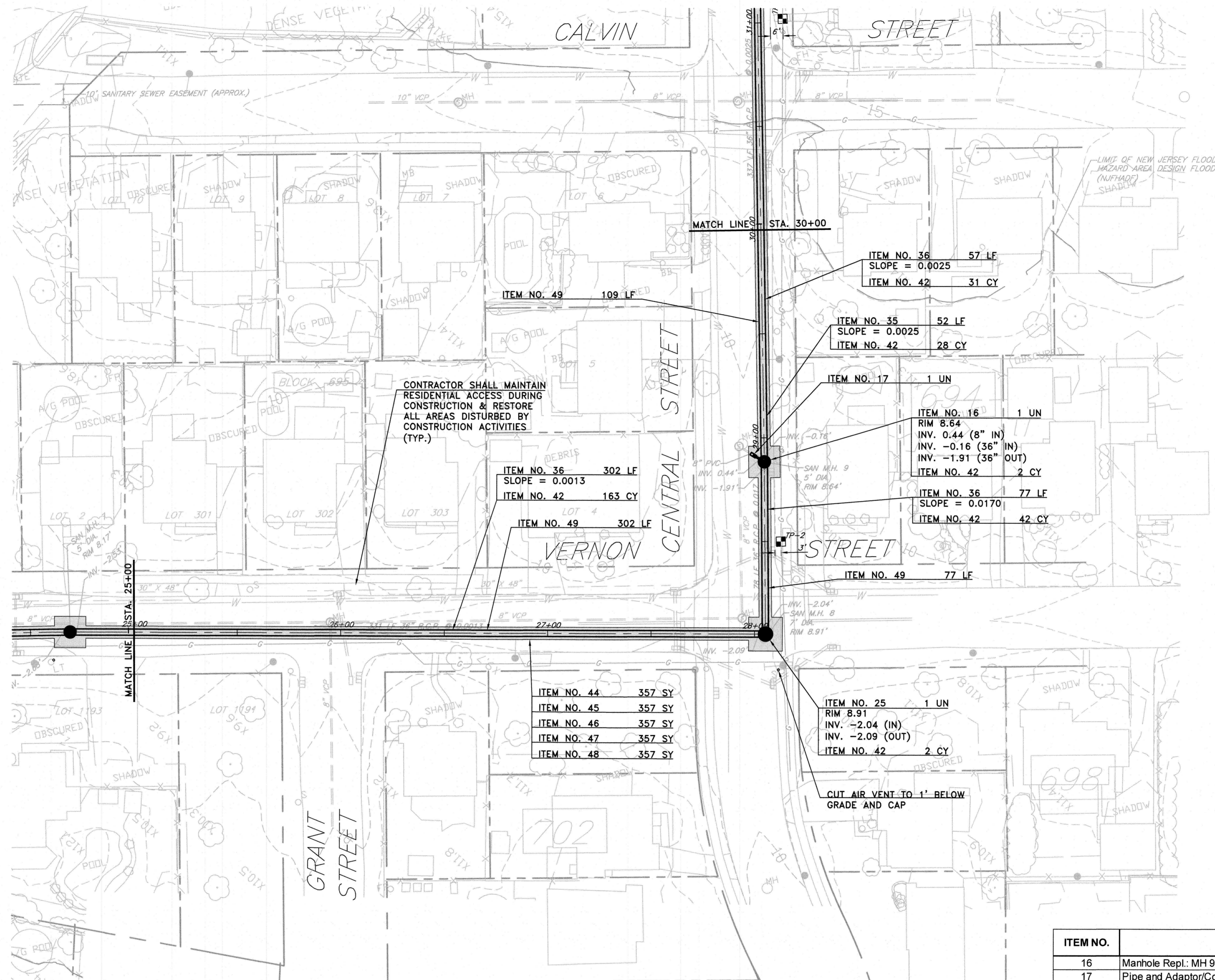
CONSTRUCTION NOTE:
 SEE DRAWING C4 FOR PAY ITEMS & QUANTITIES. ANY
 WORK WITHOUT AN ASSOCIATED PAY ITEM SHALL BE
 INCLUDED IN THE BID PRICE FOR RELATED PAY ITEMS.

REFER TO BORING LOGS IN SPECIFICATIONS FOR CONTINUATION



APPROVED: <i>Richard A. Alaimo</i> 1/18/23 DATE: _____ Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS _____ _____ _____	DATE _____ _____ _____	BY _____ _____ _____	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PROFILE STA. 16+00 - STA. 25+00 SCALE: H: 1" = 30' V: 1" = 3'	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: JAN 2023 DESIGNED BY: BA/CAF DRAWN BY: BA/CAF CHECKED BY:	PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DEPT. HEAD: _____	SHEET C5 FILE NO.:
	REBID									

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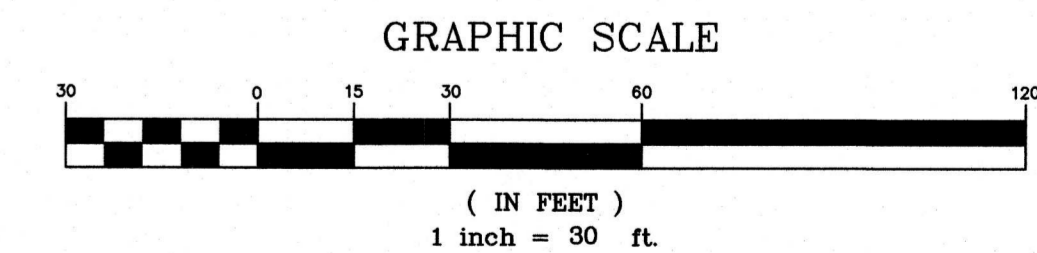
ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
16	Manhole Repl.: MH 9; 6' Diameter, 10' - 12' Depth	1 UN	UN
17	Pipe and Adaptor/Coupling as Required for Local Sanitary Sewer Connection at MH 9	1 LS	LS
25	Manhole Repl.: MH 8; 7' Diameter, 10' - 12' Depth	1 UN	UN
35	36" CCFRPP Piping - 5' - 10' Depth	52 LF	LF
36	36" CCFRPP Piping - 10' - 15' Depth	436 LF	LF
42	Stone Foundation (Bedding)	268 CY	CY
44	Temporary Pavement (Municipal Roads), HMA 19M64, 2" Thick	357 SY	SY
45	Pavement Milling (Municipal Roads), 2" Deep	357 SY	SY
46	Dense Graded Aggregate (Municipal Roads), 3" Thick Min.	357 SY	SY
47	HMA 19M64 Base Course (Municipal Roads), 7" Thick	357 SY	SY
48	HMA 9.5M64 Surface Course (Municipal Roads), 2" Thick	357 SY	SY
49	Pipe Testing	488 LF	LF

UTILITY NOTE:
1. EXISTING UTILITIES ARE DEPICTED SCHEMATICALLY ON THE PLAN (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).

PIPING ABBREVIATIONS:
C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-REINFORCED, POLYMER MORTAR PIPE
R.C.P. REINFORCED CONCRETE PIPE

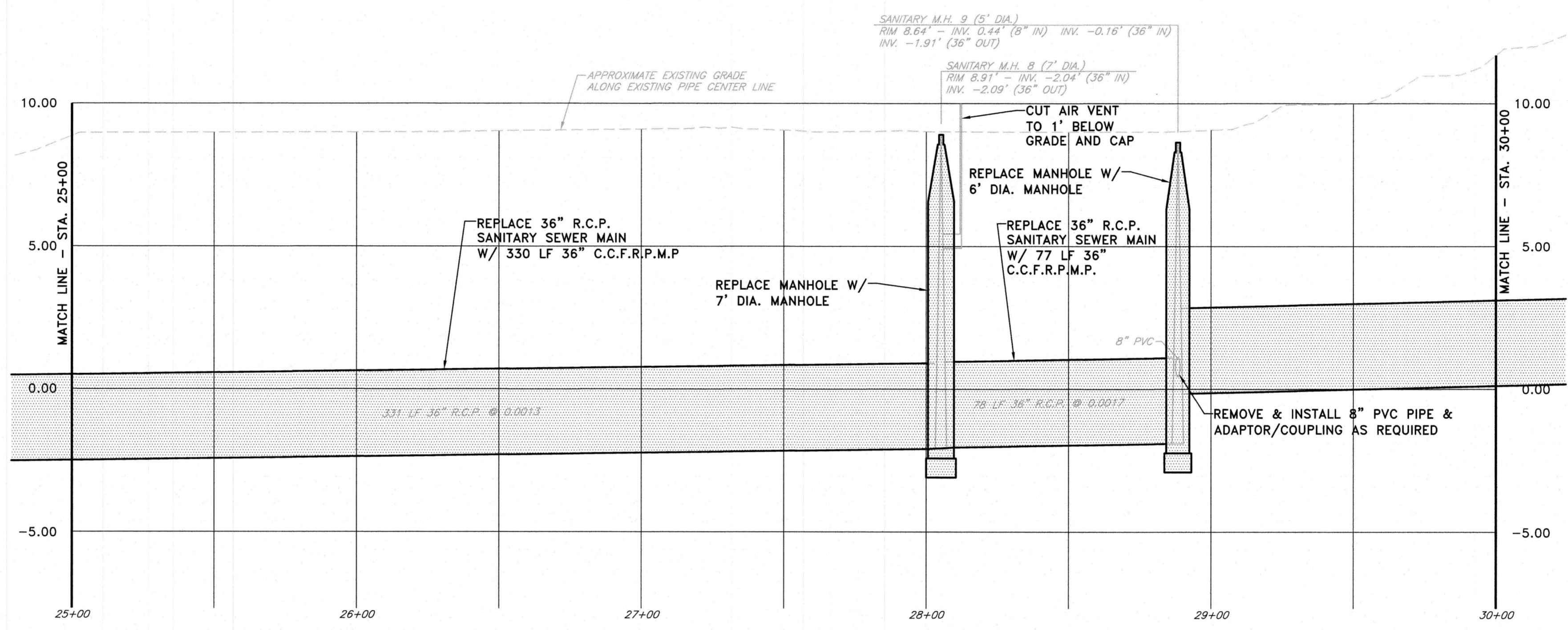
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NOTE:
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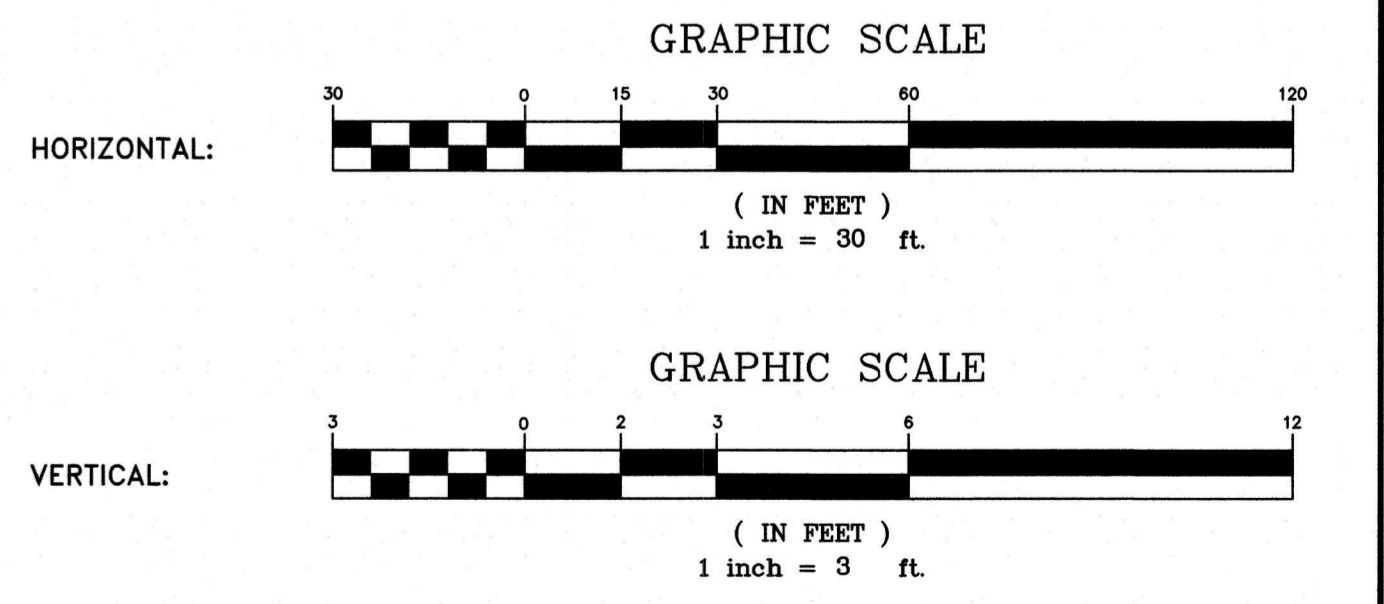
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 APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PLAN STA. 25+00 - STA. 30+00 SCALE: 1" = 30'	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: CAF DEPT. HEAD:	SHEET C6 FILE NO.:
	REBID					



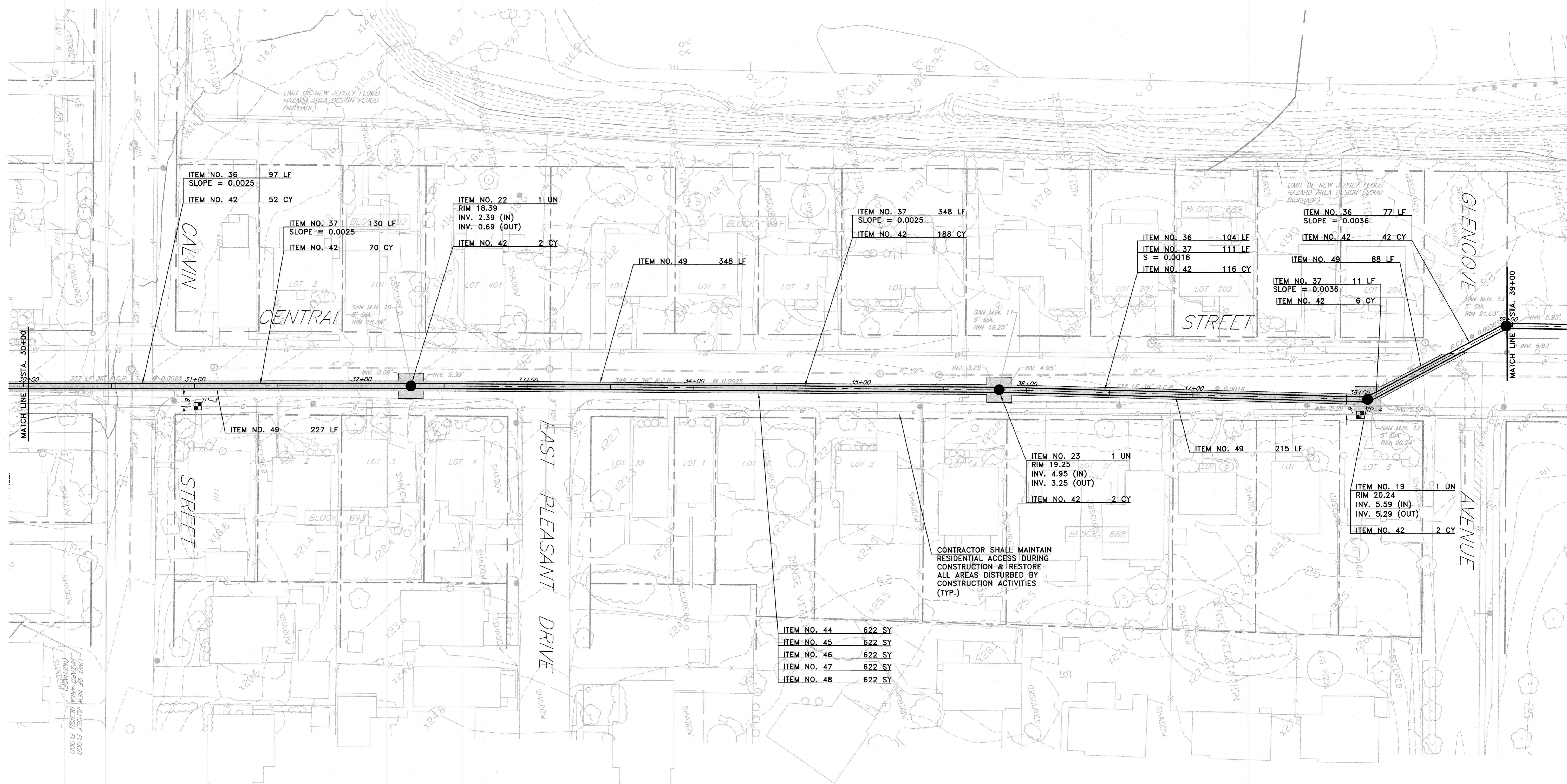
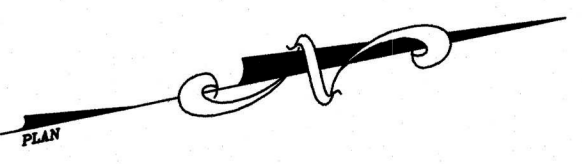
PIPING ABBREVIATIONS:
 C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-
 REINFORCED, POLYMER MORTAR PIPE
 R.C.P. REINFORCED CONCRETE PIPE

CONSTRUCTION NOTE:
 SEE DRAWING C6 FOR PAY ITEMS & QUANTITIES. ANY
 WORK WITHOUT AN ASSOCIATED PAY ITEM SHALL BE
 INCLUDED IN THE BID PRICE FOR RELATED PAY ITEMS.



<p>APPROVED: <i>[Signature]</i> 1/18/23</p> <p>Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195</p>	<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	DATE	BY																<p>RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.</p>	<p>ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PROFILE STA. 25+00 - STA. 30+00</p> <p>SCALE: H: 1" = 30' V: 1" = 3'</p>	<p>CLIENT: WOODBRIDGE TOWNSHIP</p> <p>PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY</p> <p>PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R</p>	<p>DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: CAF DEPT. HEAD:</p>	<p>REBID</p> <p>SHEET</p> <p>C7</p> <p>FILE NO.:</p>
REVISIONS	DATE	BY																						

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UTILITY NOTE:
 1. EXISTING UTILITIES ARE DEPICTED SCHEMATICALLY ON THE PLAN (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).

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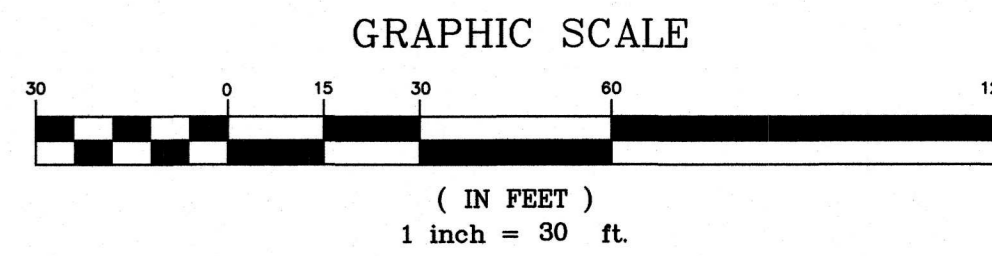
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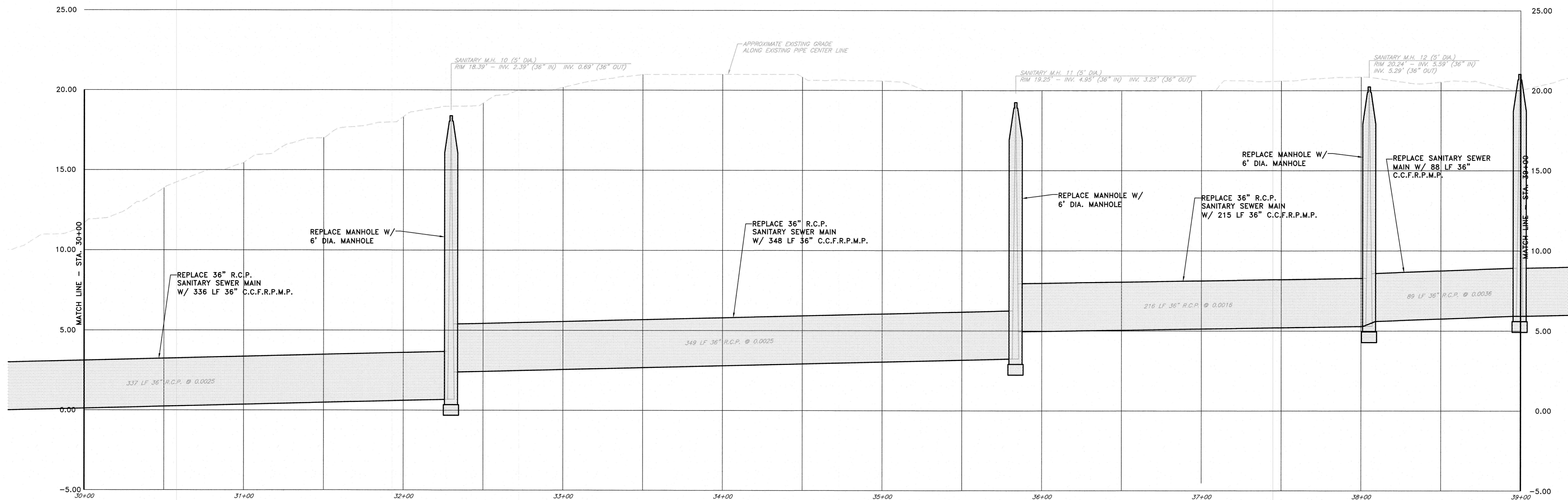
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- ITEM NO. 45 622 SY
- ITEM NO. 46 622 SY
- ITEM NO. 47 622 SY
- ITEM NO. 48 622 SY

CONTRACTOR SHALL MAINTAIN RESIDENTIAL ACCESS DURING CONSTRUCTION & RESTORE ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES (TYP.)

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
19	Manhole Repl: MH 12; 6' Diameter, 12' - 15' Depth	1 UN	UN
22	Manhole Repl: MH 10; 6' Diameter, 15' - 20' Depth	1 UN	UN
23	Manhole Repl: MH 11; 6' Diameter, 15' - 20' Depth	1 UN	UN
36	36" CCFRPP Piping - 10' - 15' Depth	278 LF	LF
37	36" CCFRPP Piping - 15' - 20' Depth	600 LF	LF
42	Stone Foundation (Bedding)	480 CY	CY
44	Temporary Pavement (Municipal Roads), HMA 19M64, 2" Thick	622 SY	SY
45	Pavement Milling (Municipal Roads), 2" Deep	622 SY	SY
46	Dense Graded Aggregate (Municipal Roads), 3" Thick Min.	622 SY	SY
47	HMA 19M64 Base Course (Municipal Roads), 7" Thick	622 SY	SY
48	HMA 9.5M64 Surface Course (Municipal Roads), 2" Thick	622 SY	SY
49	Pipe Testing	878 LF	LF



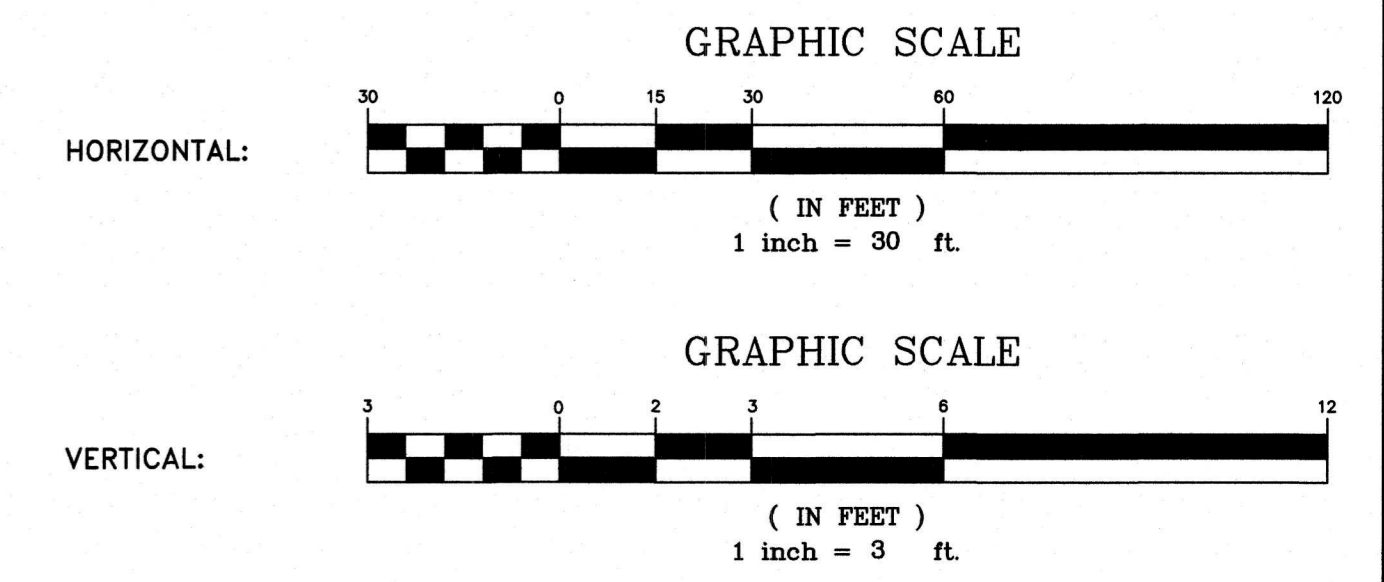
<p>APPROVED: <i>[Signature]</i> DATE: 1/18/23</p> <p>Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195</p>	<table border="1"> <tr><th>REVISIONS</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	REVISIONS	DATE	BY										<p>RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.</p>	<p>ODOR & CORROSION CONTROL PORT READING INTERCEPTOR</p> <p>PORT READING INTERCEPTOR PLAN STA. 30+00 - STA. 39+00</p> <p>SCALE: 1" = 30'</p>	<p>CLIENT: WOODBRIDGE TOWNSHIP</p> <p>PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY</p> <p>PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R</p> <p>DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: DEPT. HEAD: </p>	<p>REBID SHEET C8</p> <p>FILE NO.: </p>
REVISIONS	DATE	BY															



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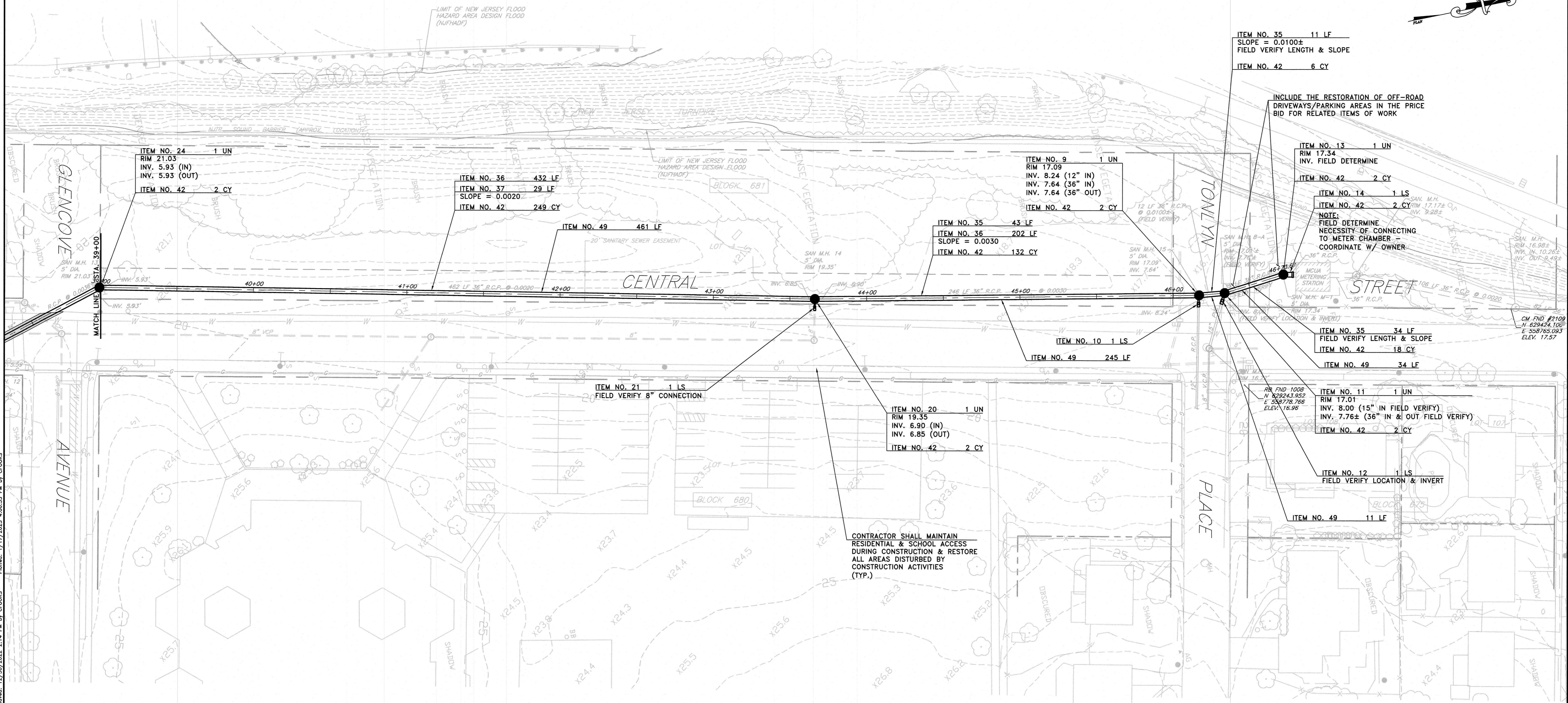
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CONSTRUCTION NOTE:
 SEE DRAWING C8 FOR PAY ITEMS & QUANTITIES. ANY
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APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	DATE: 1/18/23	REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	DATE	BY																			 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PROFILE STA. 30+00 - STA. 39+00 SCALE: H: 1" = 30' V: 1" = 3'	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: DEPT. HEAD:	SHEET C9 FILE NO.:
NO.	DATE	BY																										

REBID



ITEM NO. 35 11 LF
SLOPE = 0.0100±
FIELD VERIFY LENGTH & SLOPE

ITEM NO. 42 6 CY

INCLUDE THE RESTORATION OF OFF-ROAD DRIVEWAYS/PARKING AREAS IN THE PRICE BID FOR RELATED ITEMS OF WORK

ITEM NO. 13 1 UN
RIM 17.34
INV. FIELD DETERMINE

ITEM NO. 42 2 CY

ITEM NO. 14 1 LS
ITEM NO. 42 2 CY

NOTE:
FIELD DETERMINE NECESSITY OF CONNECTING TO METER CHAMBER - COORDINATE W/ OWNER

ITEM NO. 35 34 LF
FIELD VERIFY LENGTH & SLOPE

ITEM NO. 42 18 CY

ITEM NO. 49 34 LF

ITEM NO. 11 1 UN
RIM 17.01
INV. 8.00 (15" IN FIELD VERIFY)
INV. 7.76± (36" IN & OUT FIELD VERIFY)

ITEM NO. 42 2 CY

ITEM NO. 12 1 LS
FIELD VERIFY LOCATION & INVERT

ITEM NO. 49 11 LF

ITEM NO. 9 1 UN
RIM 17.09
INV. 8.24 (12" IN)
INV. 7.64 (36" IN)
INV. 7.64 (36" OUT)

ITEM NO. 42 2 CY

ITEM NO. 35 43 LF
ITEM NO. 36 202 LF
SLOPE = 0.0030

ITEM NO. 42 132 CY

ITEM NO. 10 1 LS
ITEM NO. 49 245 LF

ITEM NO. 36 432 LF
ITEM NO. 37 29 LF
SLOPE = 0.0020

ITEM NO. 42 249 CY

ITEM NO. 49 461 LF

ITEM NO. 24 1 UN
RIM 21.03
INV. 5.93 (IN)
INV. 5.93 (OUT)

ITEM NO. 42 2 CY

ITEM NO. 21 1 LS
FIELD VERIFY 8" CONNECTION

ITEM NO. 20 1 UN
RIM 19.35
INV. 6.90 (IN)
INV. 6.85 (OUT)

ITEM NO. 42 2 CY

CONTRACTOR SHALL MAINTAIN RESIDENTIAL & SCHOOL ACCESS DURING CONSTRUCTION & RESTORE ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES (TYP.)

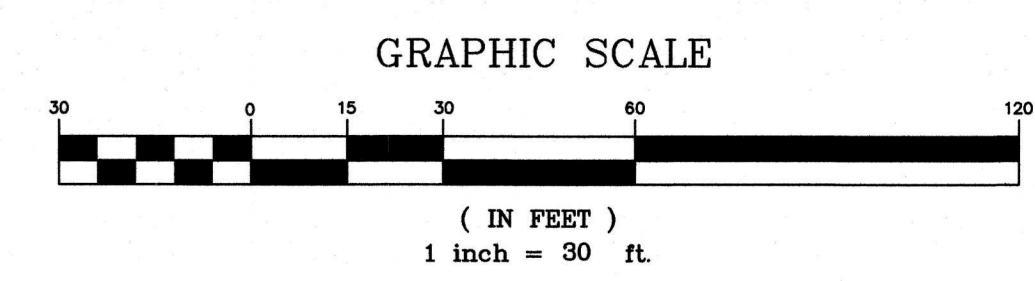
ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY	AS-BUILT QUANTITY
9	Manhole Repl.: MH 15; 6' Diameter, 8' - 10' Depth	1 UN	UN
10	Pipe and Adaptor/Coupling as Required for Local Sanitary Sewer Connection at MH 15	1 LS	LS
11	Manhole Repl.: MH 8-A; 6' Diameter, 8' - 10' Depth	1 UN	UN
12	Pipe and Adaptor/Coupling as Required for Local Sanitary Sewer Connection at MH 8-A	1 LS	LS
13	Manhole Repl.: MH M-1; 6' Diameter, 8' - 10' Depth	1 UN	UN
14	36" C.C.F.R.P.M.P. Pipe and Adaptor/Coupling as Required for Connection to Metering Chamber	1 LS	LS
20	Manhole Repl.: MH 14; 6' Diameter, 12' - 15' Depth	1 UN	UN
21	Pipe and Adaptor/Coupling as Required for Local Sanitary Sewer Connection at MH 14	1 LS	LS
24	Manhole Repl.: MH 13; 6' Diameter, 15' - 20' Depth	1 UN	UN
35	36" CCFRPPM Piping - 5' - 10' Depth	88 LF	LF
36	36" CCFRPPM Piping - 10' - 15' Depth	634 LF	LF
37	36" CCFRPPM Piping - 15' - 20' Depth	29 LF	LF
42	Stone Foundation (Bedding)	417 CY	CY
49	Pipe Testing	751 LF	LF

FLOOD HAZARD AREA & FLOOD HAZARD AREA DESIGN FLOOD:
FLOOD HAZARD AREA (100-YEAR) AND FLOOD HAZARD AREA DESIGN FLOOD (100-YEAR + 25%) ARE ELEVATION 14.02 (NGVD 29) BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 34023C0067G, PANEL 67 OF 286, STAMPED PRELIMINARY & CORRECTED COPY, DATED JANUARY 31, 2014 (NJDEP METHOD 2 FOR A TIDAL WATERWAY PER N.J.A.C. 7:13-3). DEDUCT 1.02' TO CONVERT FROM NGVD 29 TO NAVD 88.

NOTE:
ALL OR A PORTION OF THIS SITE LIES IN A FLOOD HAZARD AREA. CERTAIN ACTIVITIES IN FLOOD HAZARD AREAS ARE REGULATED BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SOME ACTIVITIES MAY BE PROHIBITED ON THIS SITE OR MAY FIRST REQUIRE A PERMIT. CONTACT THE DIVISION OF LAND USE REGULATION AT (609) 292-0060 FOR MORE INFORMATION PRIOR TO ANY CONSTRUCTION ONSITE.

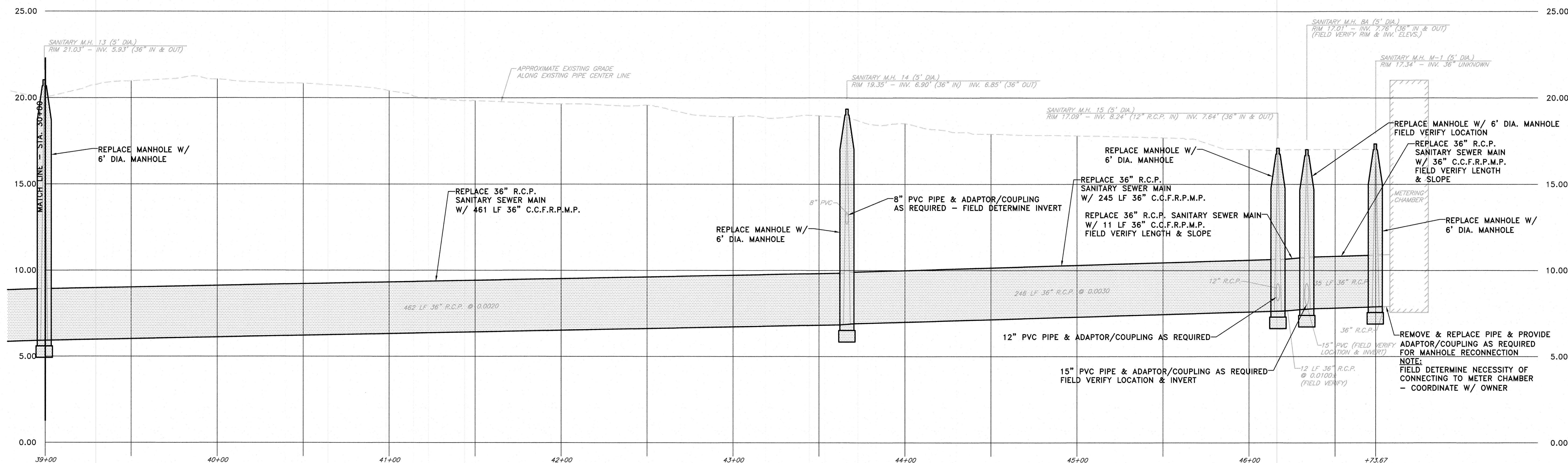
UTILITY NOTE:
1. EXISTING UTILITIES ARE DEPICTED SCHEMATICALLY ON THE PLAN (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).

PIPING ABBREVIATIONS:
C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-REINFORCED, POLYMER MORTAR PIPE
R.C.P. REINFORCED CONCRETE PIPE



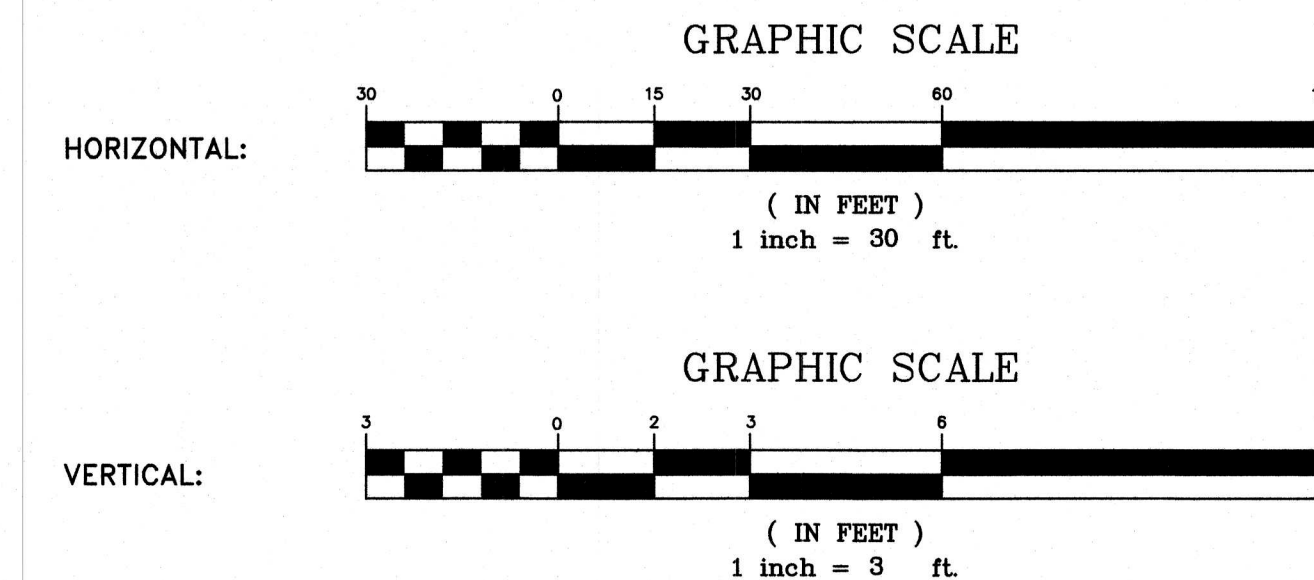
 APPROVED: Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR PLAN STA. 39+00 - STA. 46+24.18 SCALE: 1" = 30'	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET C10
	PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY			PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: DEPT. HEAD:	FILE NO.:

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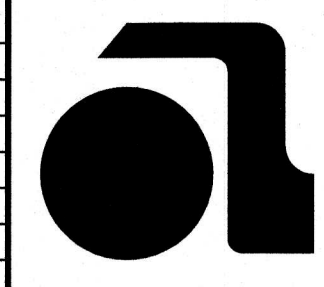
PIPING ABBREVIATIONS:
 C.C.F.R.P.M.P. CENTRIFUGALLY CAST, FIBERGLASS-
 REINFORCED, POLYMER MORTAR PIPE
 R.C.P. REINFORCED CONCRETE PIPE

CONSTRUCTION NOTE:
 SEE DRAWING C10 FOR PAY ITEMS & QUANTITIES. ANY
 WORK WITHOUT AN ASSOCIATED PAY ITEM SHALL BE
 INCLUDED IN THE BID PRICE FOR RELATED PAY ITEMS.



APPROVED: *[Signature]* 1/18/23
 DATE: _____
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



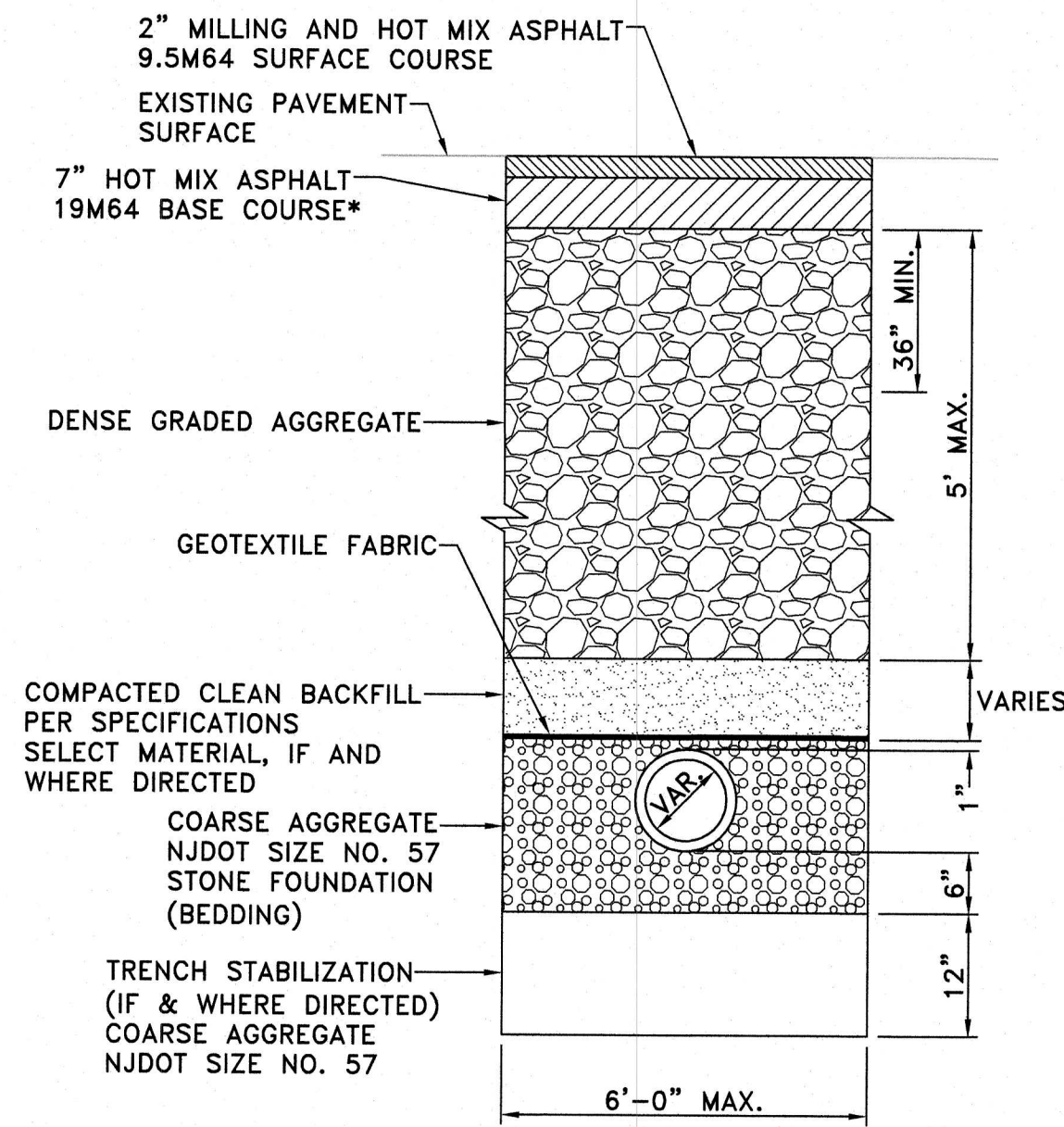
RICHARD A. ALAIMO
ENGINEERING COMPANY
 Consulting Engineers
 NJDCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT
READING INTERCEPTOR
PORT READING INTERCEPTOR
PROFILE
 STA. 39+00 - STA. 46+24.18
 SCALE: H: 1" = 30' V: 1" = 3'

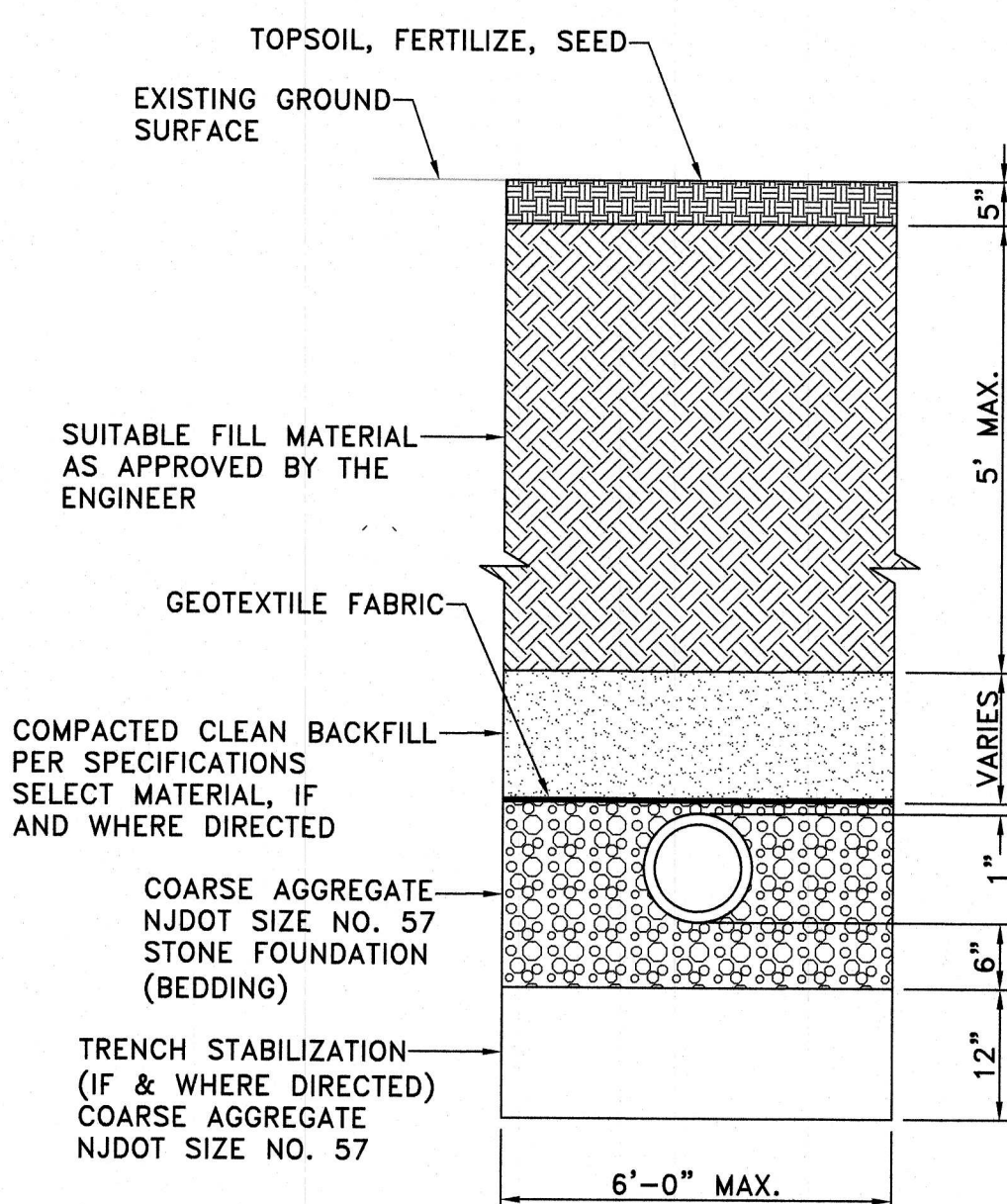
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 PROJECT LOCATION: **WOODBRIDGE TOWNSHIP**
 MIDDLESEX COUNTY
 NEW JERSEY
 PROJECT NO.: **B-0726-0024-000**
 CONTRACT NO.: **2014-011R**
 DATE: **JAN 2023**
 DESIGNED BY: **CAF**
 DRAWN BY: **CAF**
 CHECKED BY: _____
 DEPT. HEAD: _____

REBID
 SHEET
C11
 FILE NO.:

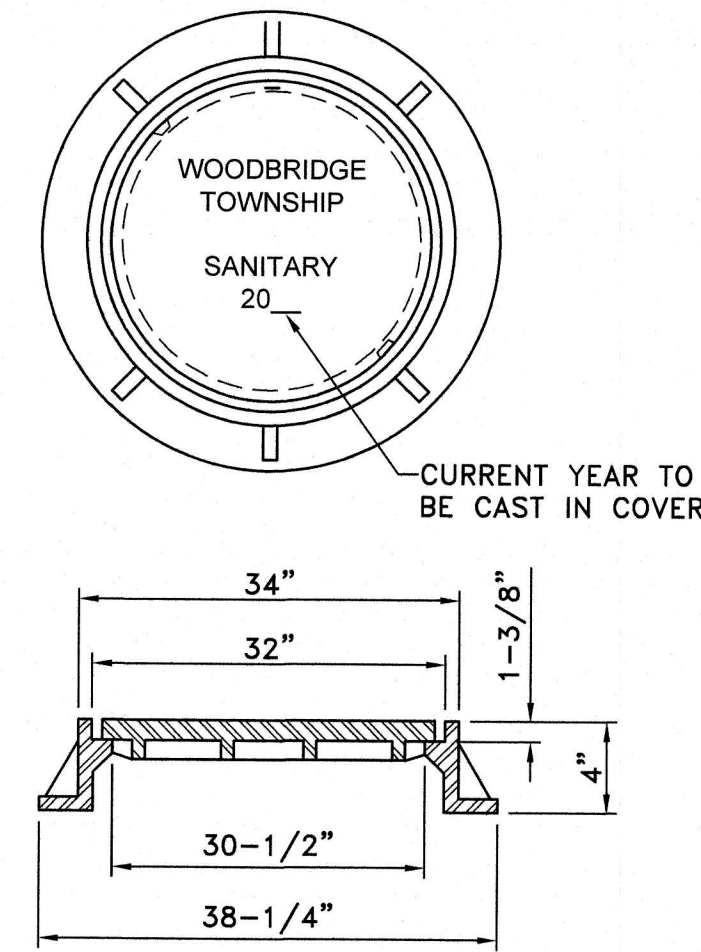
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ROADWAY TRENCH REPAIR

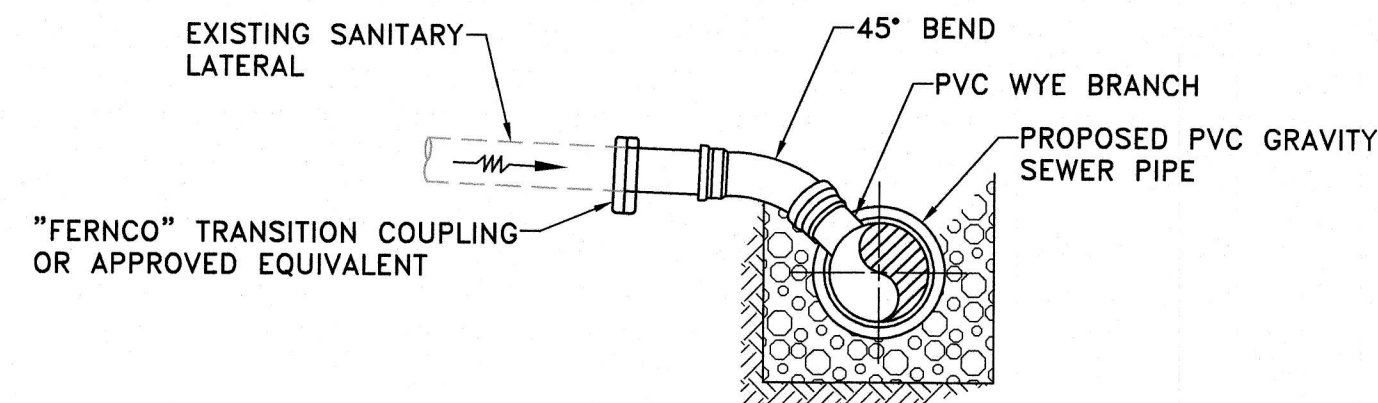


UNPAVED TRENCH REPAIR

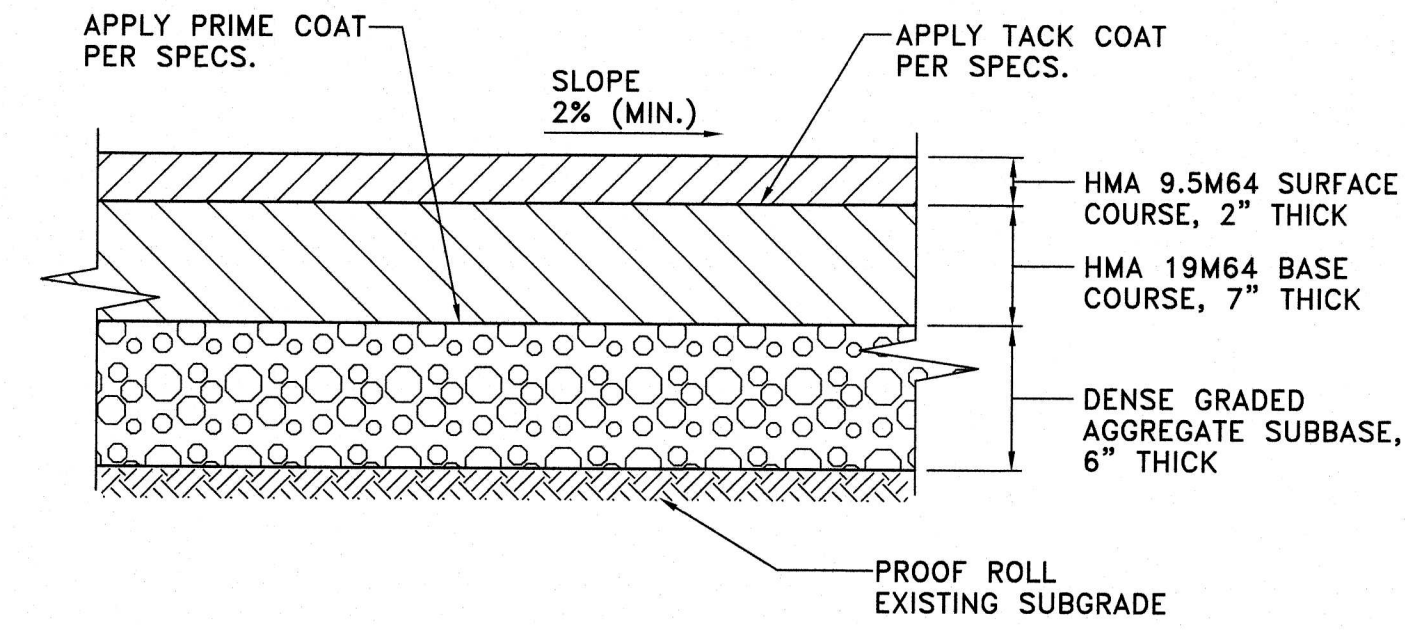


- NOTES:
1. THE MANHOLE COVER AND FRAME SHALL BE OF THE HEAVY DUTY HIGHWAY TYPE, WITH THE CIRCULAR FLARED TYPE FRAME AND ROUND FLANGE, CAMPBELL FOUNDRY CO. PATTERN NO. 1012D OR APPROVED EQUIVALENT.
 2. THE FOLLOWING MANHOLES LOCATED WITHIN THE FLOOD HAZARD AREA SHALL BE FLUSH WITH GRADE & SHALL HAVE WATERTIGHT FRAMES AND COVERS ("FLOW-SEAL" COVERS WITH NON-PENETRATING PICKHOLES AND NEOPRENE GASKETS):
2, 2-1, 2-2, 5, 6, 7, 8, 9

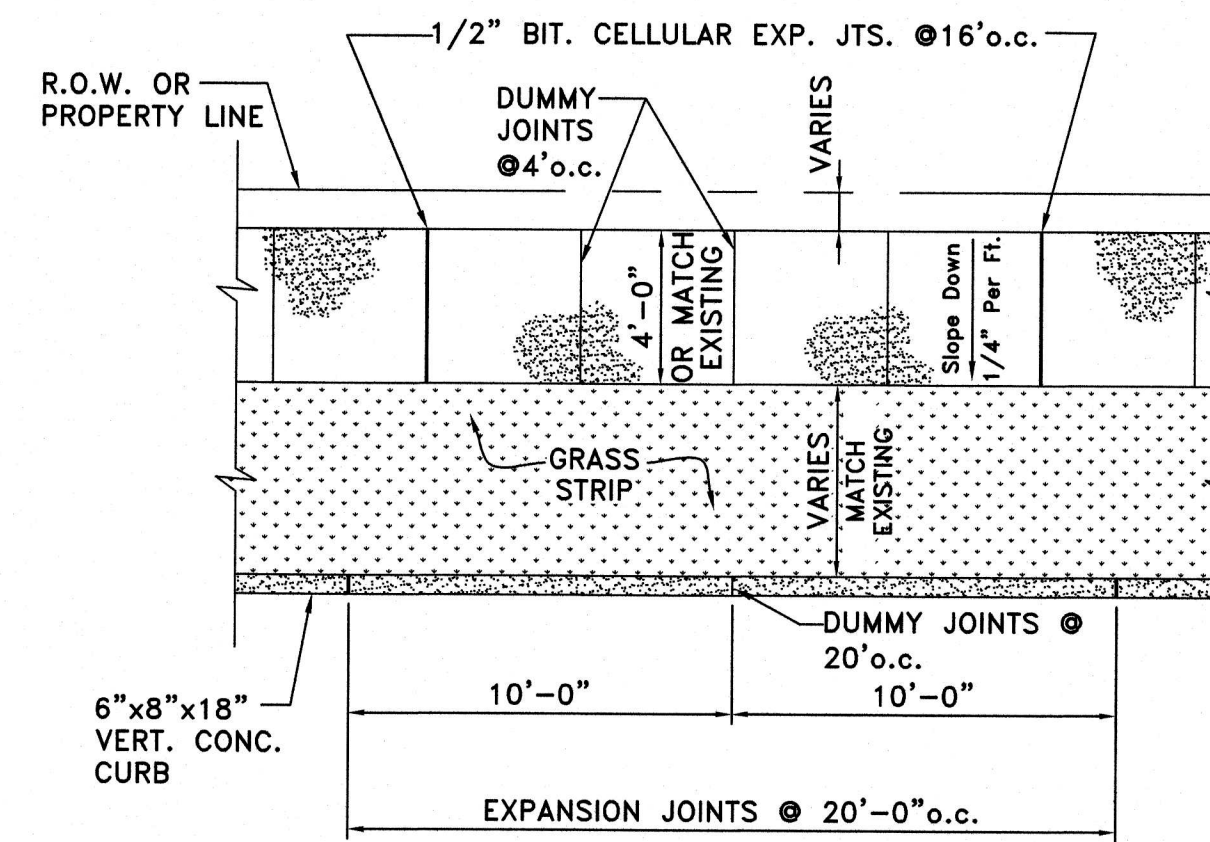
DETAIL 2 TYPICAL SANITARY SEWER MANHOLE FRAME AND COVER
SCALE: N.T.S.



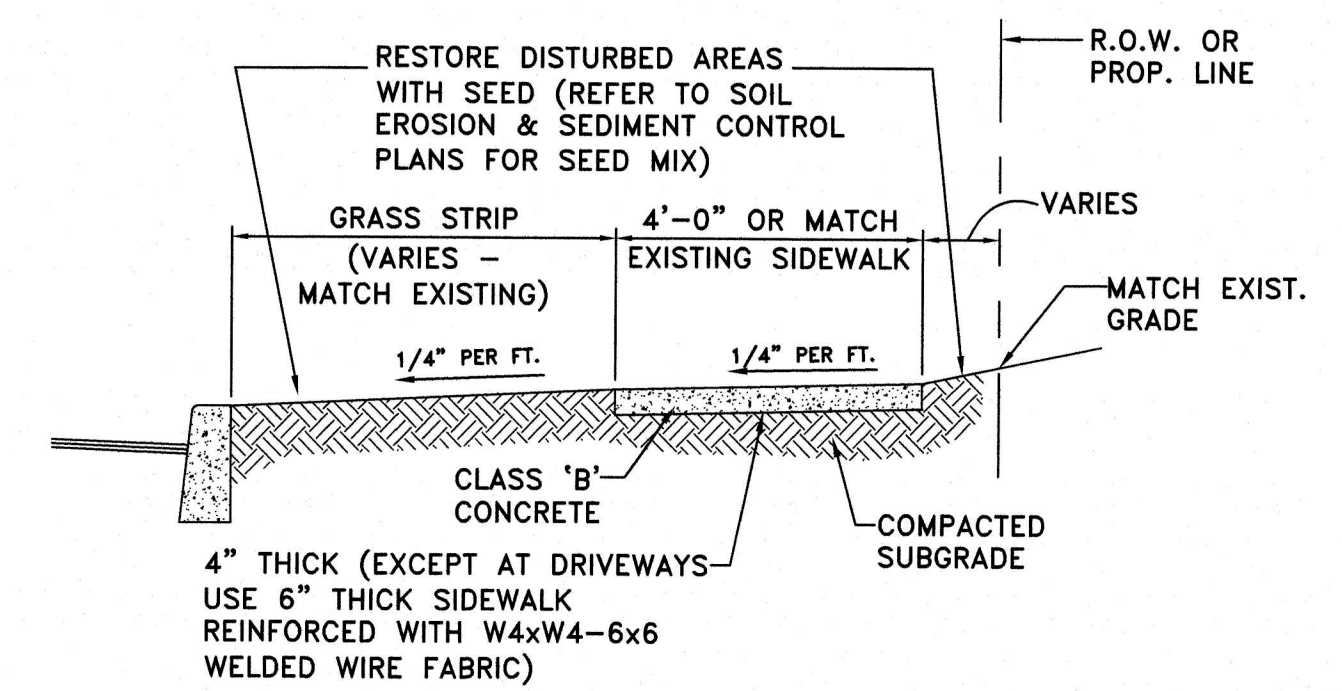
DETAIL 11 SANITARY SEWER LATERAL RECONNECTION
SCALE: N.T.S.



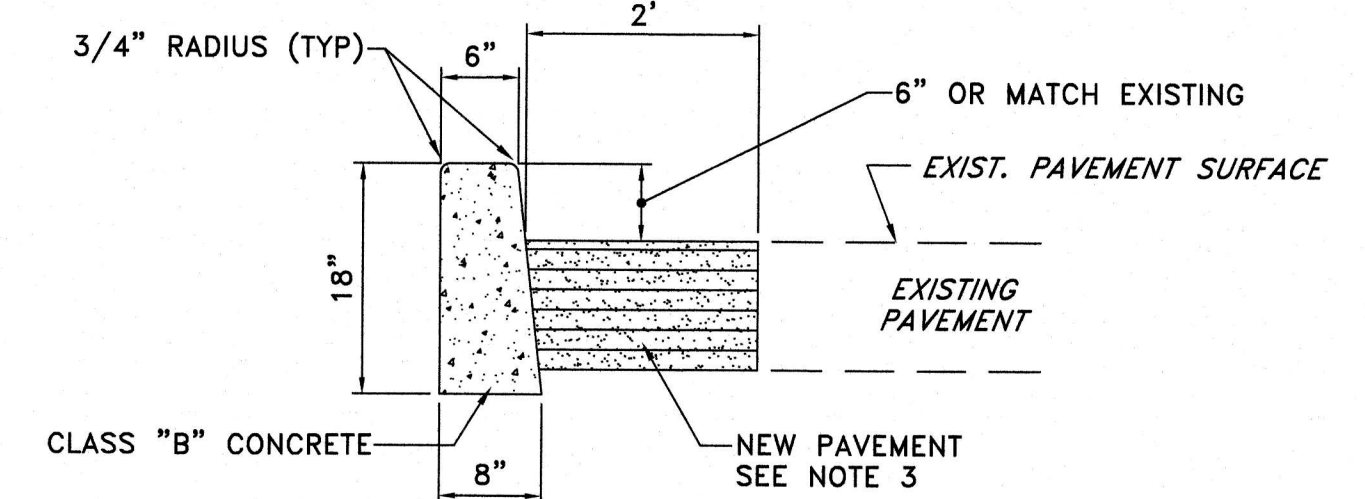
DETAIL 3 BITUMINOUS PAVEMENT RESTORATION
SCALE: N.T.S.



DETAIL 5 CONCRETE SIDEWALK PLAN (WITH VERTICAL CONCRETE CURB) RESTORATION
SCALE: N.T.S.



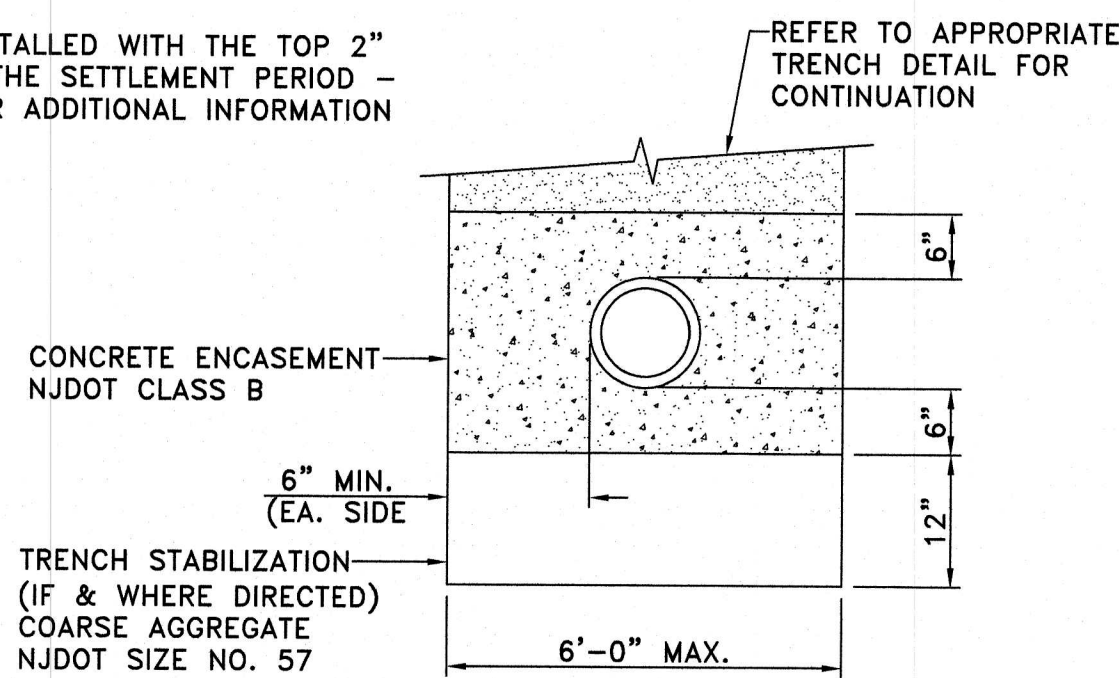
DETAIL 4 CONCRETE SIDEWALK SECTION RESTORATION
SCALE: N.T.S.



- NOTES:
1. EXPANSION JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20" APART AND FILLED WITH PREFORMED EXPANSION JOINT FILLER MATERIAL AS SPECIFIED AND RECESSED 1/4" FROM FACE AND TOP OF CURB. CONTROL JOINTS SHALL BE CUT MIDPOINT BETWEEN EXPANSION JOINTS. EXPANSION JOINTS AND CONTROL JOINTS TO BE INCLUDED IN PRICE BID FOR CURB.
 2. PAVEMENT RESTORATION SHALL BE THE SAME AS SHOWN ON DETAIL 3.

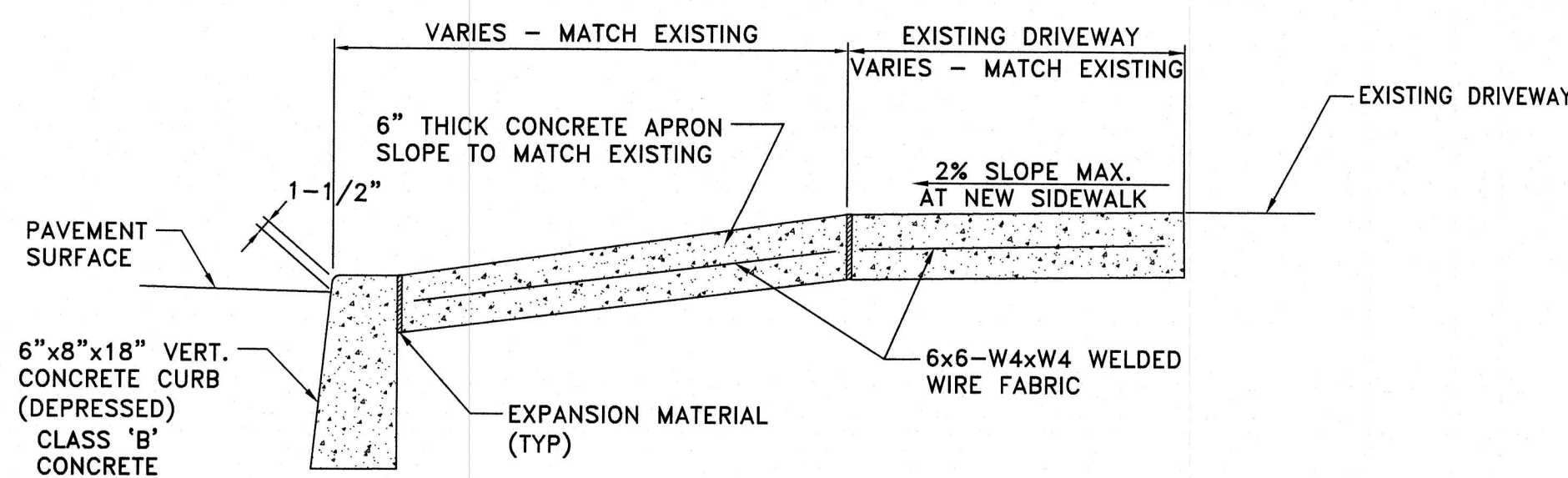
DETAIL 6 6"X8"X18" VERTICAL CONCRETE CURB RESTORATION
SCALE: N.T.S.

* INITIALLY, 9" SHALL BE INSTALLED WITH THE TOP 2" MILLED AND REPAVED AFTER THE SETTLEMENT PERIOD - REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION

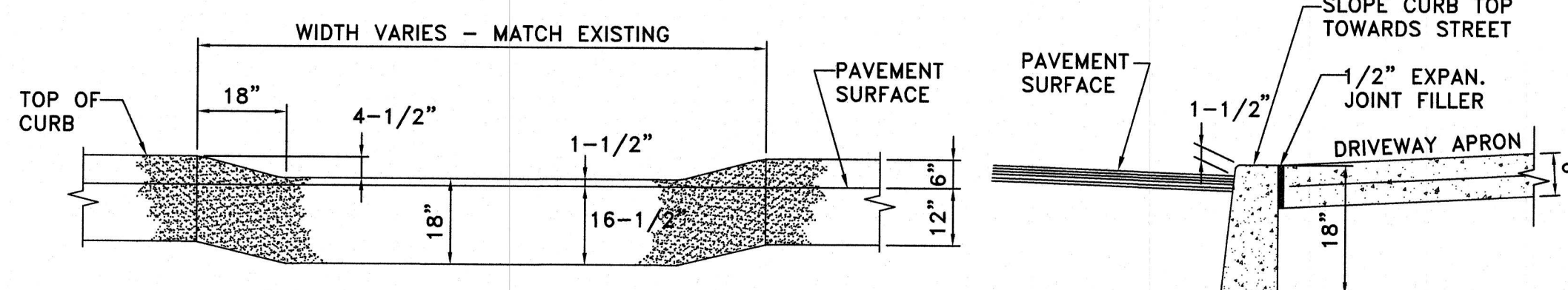


CONCRETE ENCASEMENT

DETAIL 1 TYPICAL BEDDING AND TRENCH DETAILS FOR 36" SANITARY SEWER MAIN
SCALE: N.T.S.



DETAIL 7 CONCRETE DRIVEWAY APRON RESTORATION
SCALE: N.T.S.

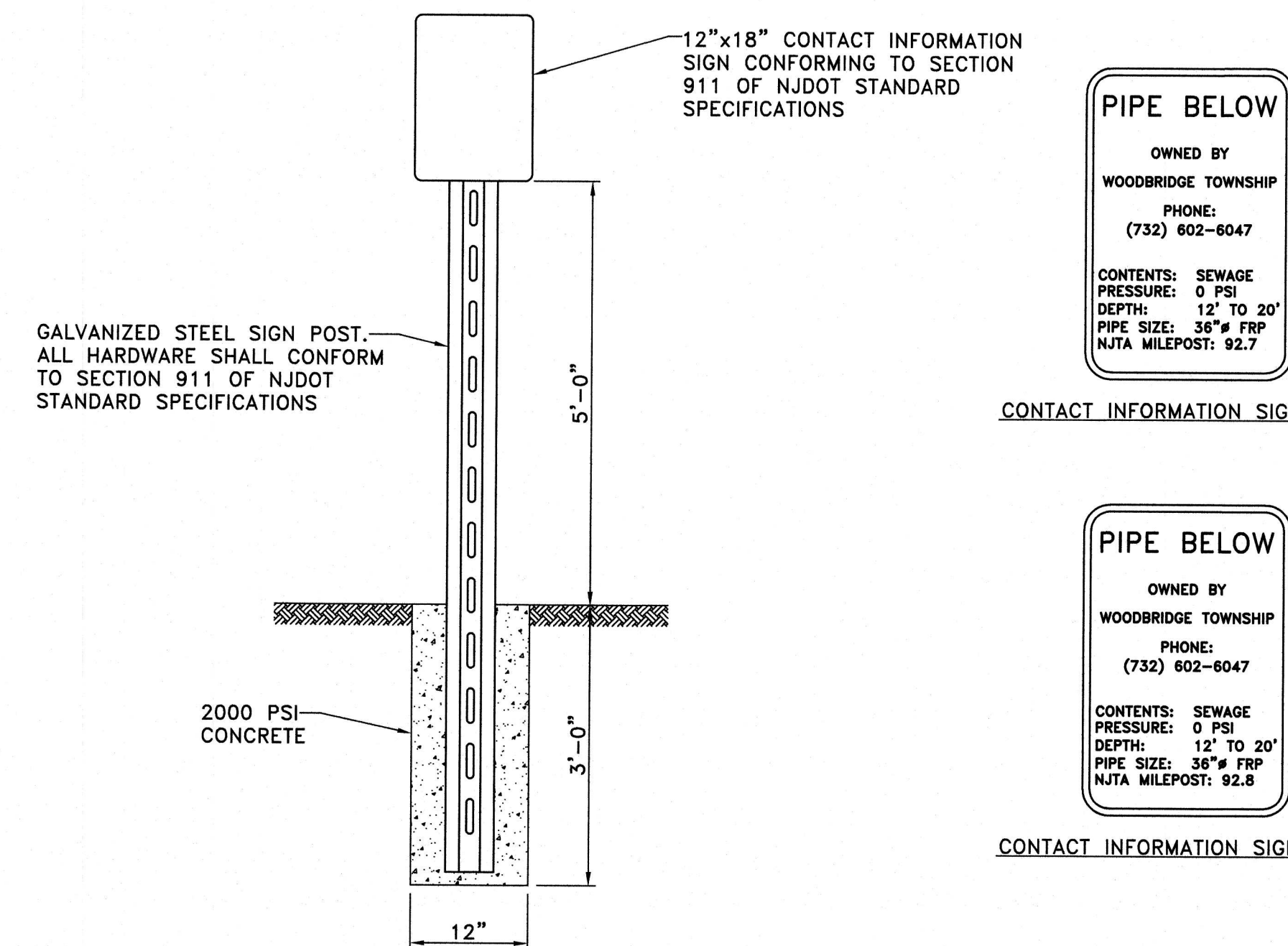


ELEVATION

SECTION

- NOTES:
1. NOT APPLICABLE AT CURB RAMPS.
 2. ALL CONCRETE TO BE CLASS "B".
 3. REFER TO CONCRETE DRIVEWAY APRON DETAIL FOR REINFORCEMENT.

DETAIL 8 DEPRESSED CURB AT DRIVEWAY RESTORATION
SCALE: N.T.S.



DETAIL 9 CONTACT INFORMATION SIGNS
SCALE: N.T.S.

APPROVED: *Richard A. Alaimo* DATE: 1/10/23

Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

RICHARD A. ALAIMO ENGINEERING COMPANY
Consulting Engineers
NJCA 24GA27988800
200 HIGH STREET MOUNT HOLLY, N.J.
201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR

CONSTRUCTION DETAILS

SCALE: AS NOTED

CLIENT: WOODBRIDGE TOWNSHIP

PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY

PROJECT NO.: B-0726-0024-000

CONTRACT NO.: 2014-011R

DATE: JAN 2023

DESIGNED BY: CAF

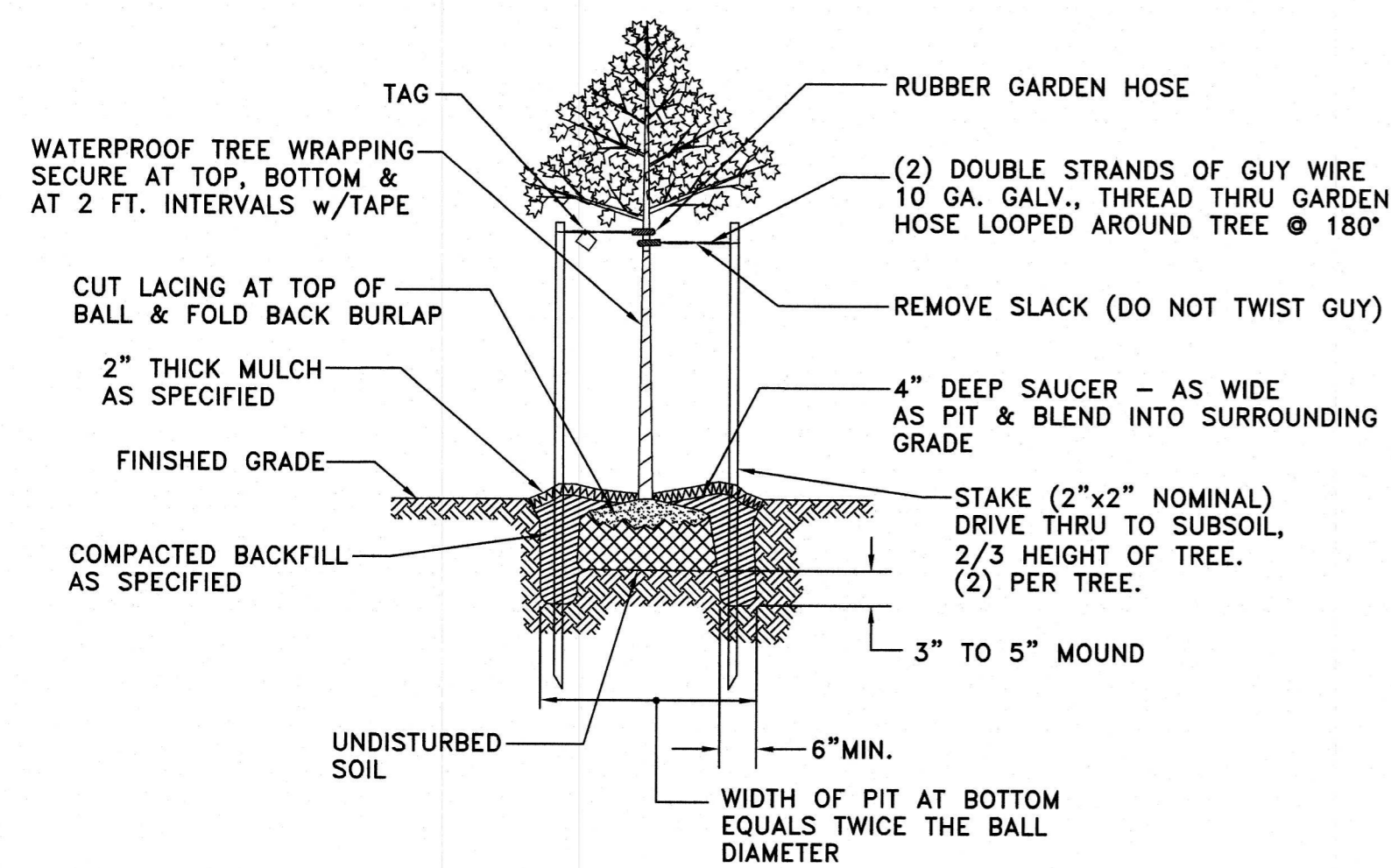
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CHECKED BY: CAF

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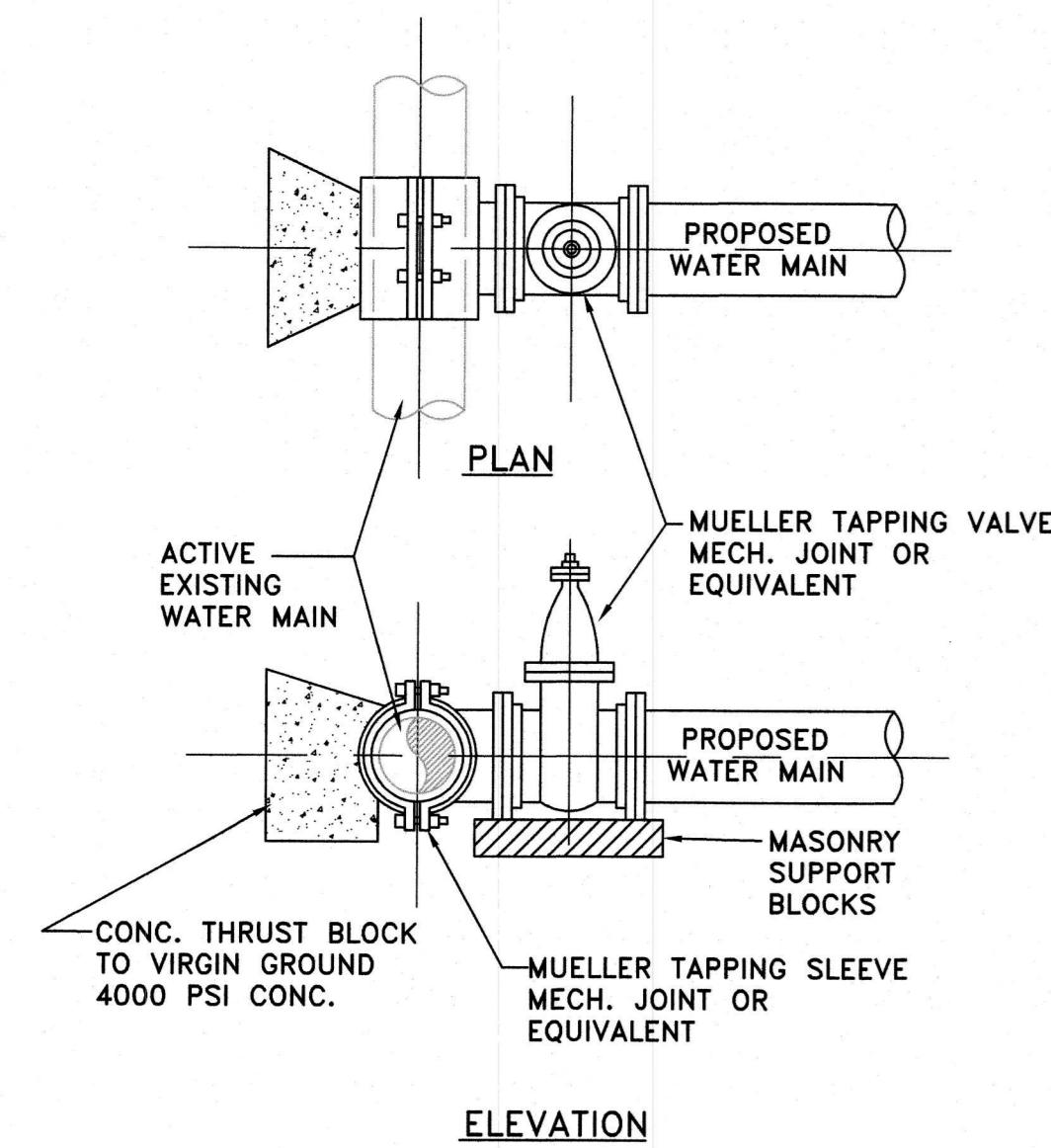
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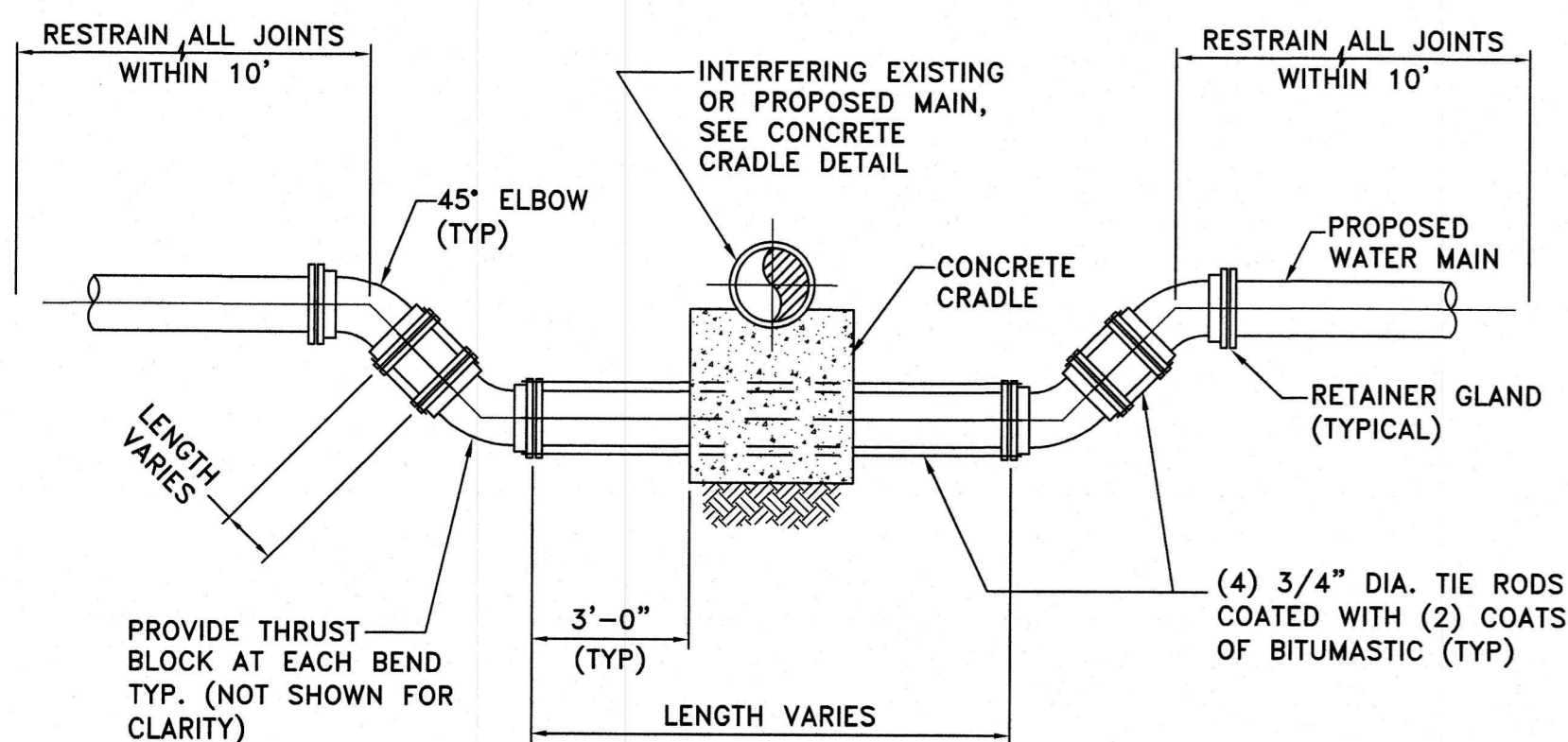


- NOTES:**
- GROUND LINE TO BE THE SAME AS EXISTED AT NURSERY.
 - ALL TREES SHALL BE TRUE TO GENUS, SPECIES AND VARIETY AND SHALL BE NURSERY GROWN STOCK.
 - EACH TREE SHALL BE WRAPPED WITH AN EXPANDABLE PAPER OR CLOTH TREATED TO LAST AT LEAST ONE (1) YEAR TO PREVENT SUN SCALD. THE WRAP SHALL EXTEND FROM THE GROUND LEVEL UP THE TRUNK TO THE FIRST BRANCHES. THE WRAP SHALL BE ATTACHED OR FASTENED TO EACH END WITH A MATERIAL THAT WILL PERMIT TREE GROWTH WITHOUT GIRDLING.
 - PLANT SINGLE TRUNK TREES PLUMB VERTICAL. CHECK FROM ALL ANGLES.
 - PRUNE BACK 1/4" ON-SITE.
 - IF FOLIAGE IS PRESENT, SPRAY WITH ANTI-DRYING AGENT ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

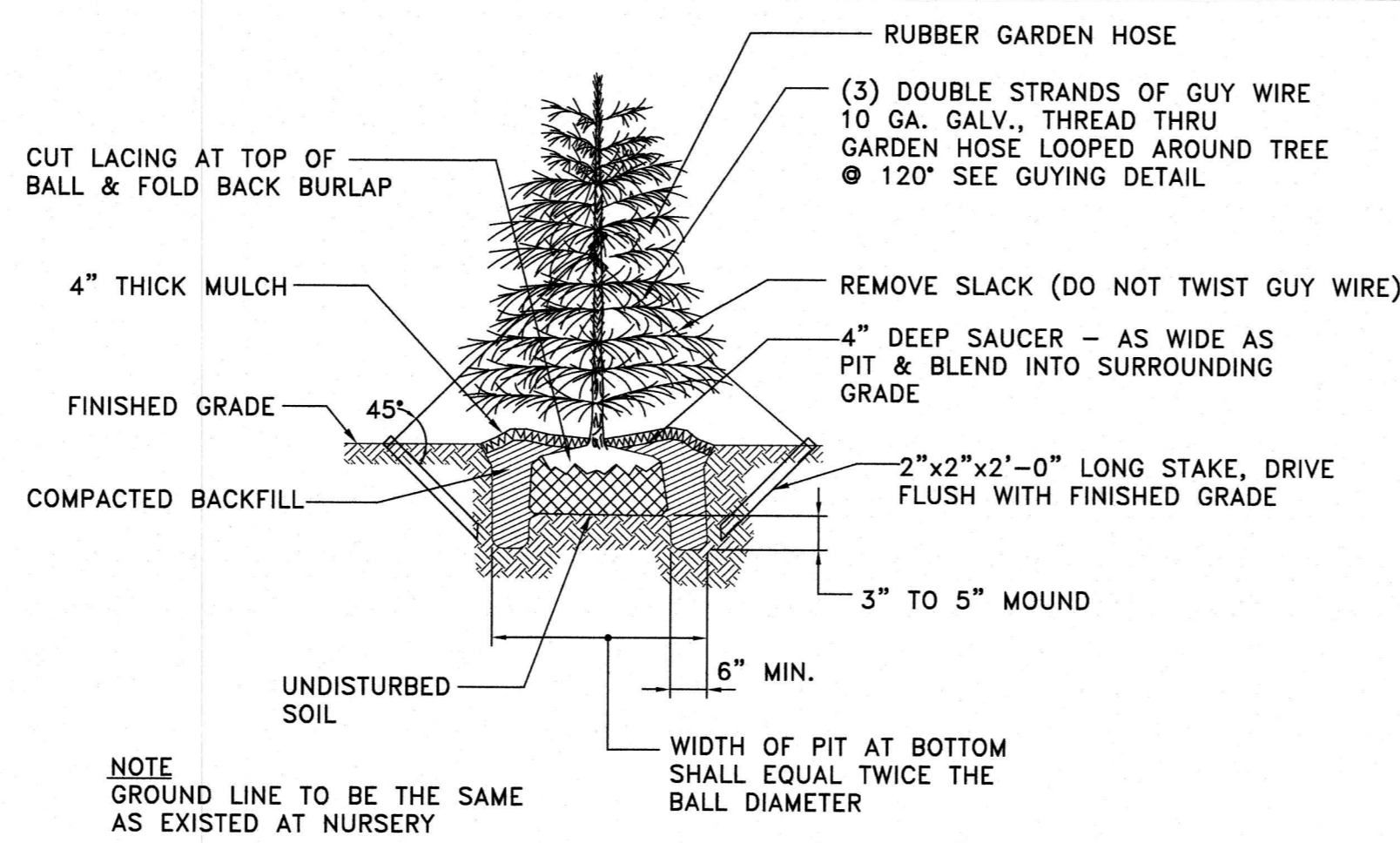
DETAIL 1 TYPICAL DECIDUOUS TREE PLANTING
SCALE: N.T.S.



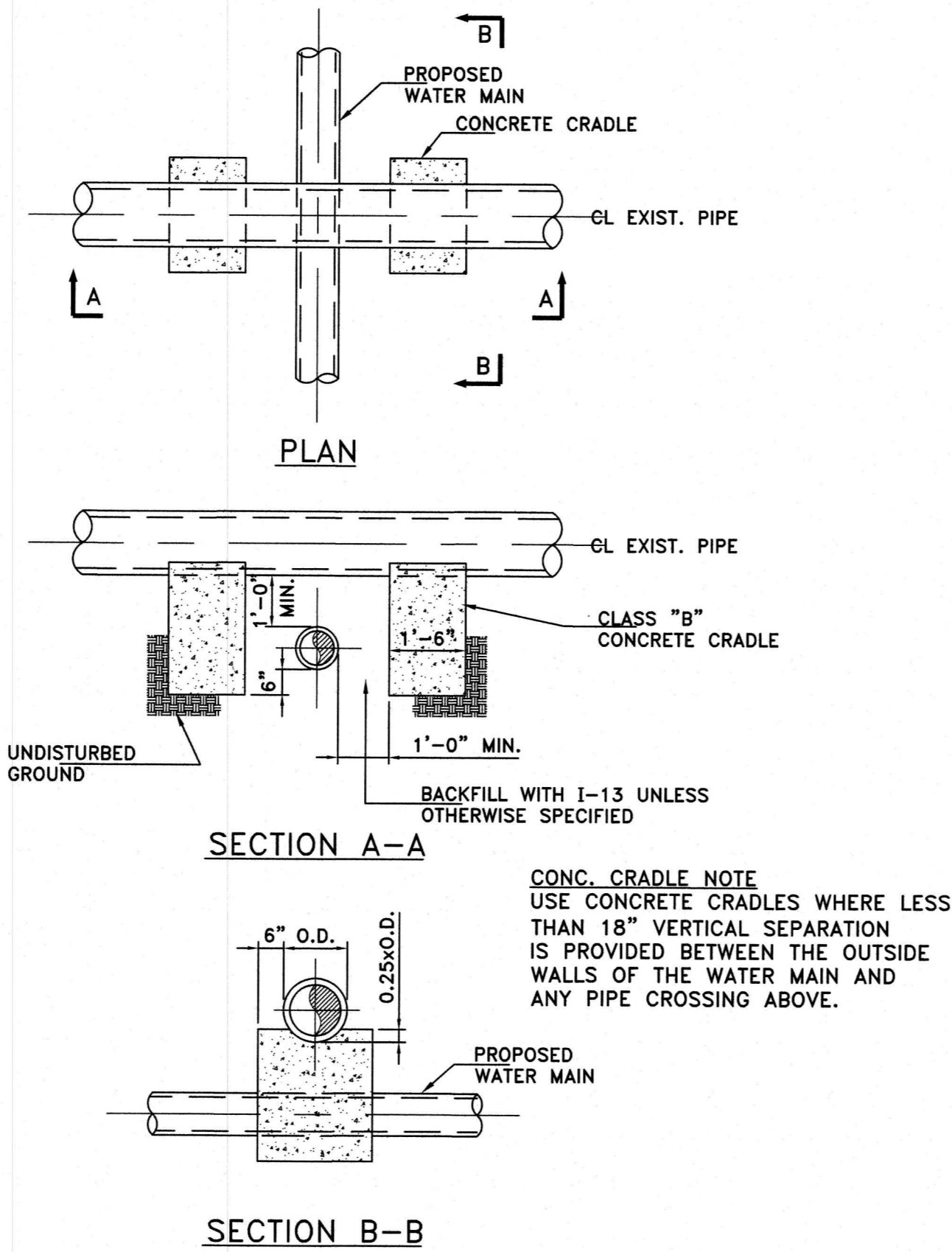
DETAIL 5 WET TAP
SCALE: N.T.S.



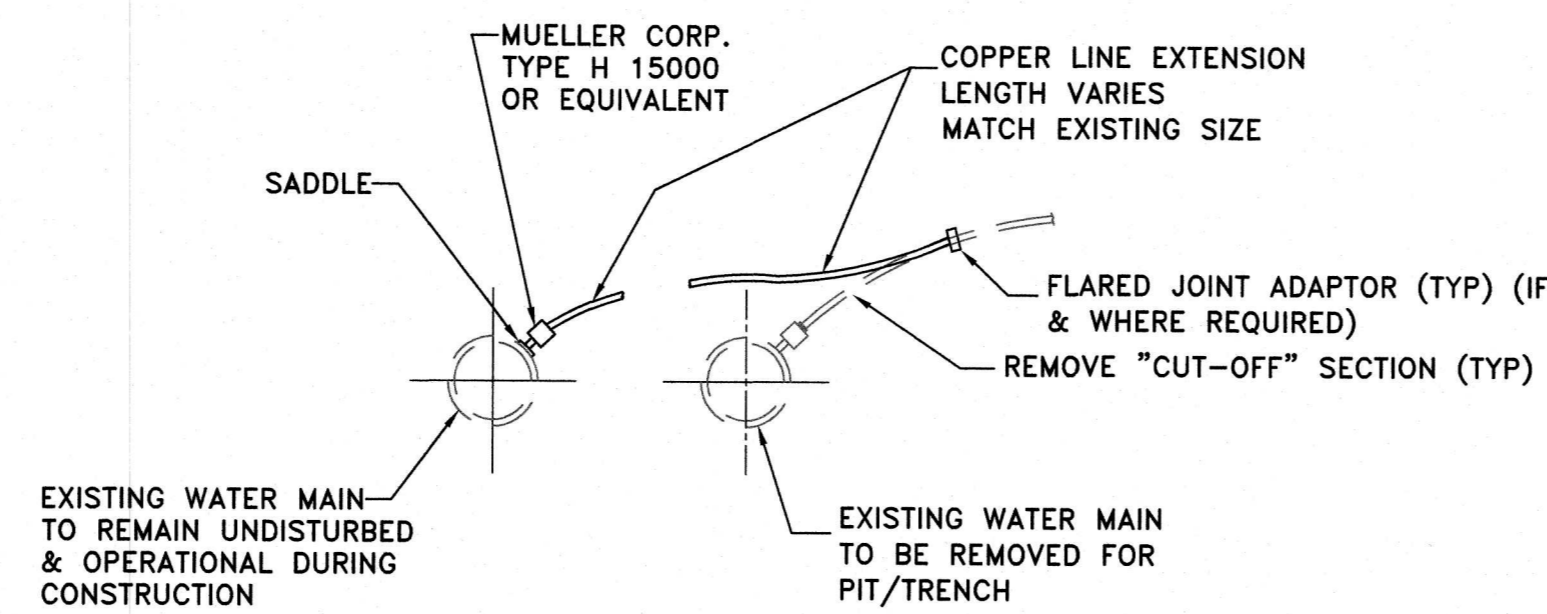
DETAIL 7 PIPE CROSSING AT POINTS OF INTERFERENCE
SCALE: N.T.S.



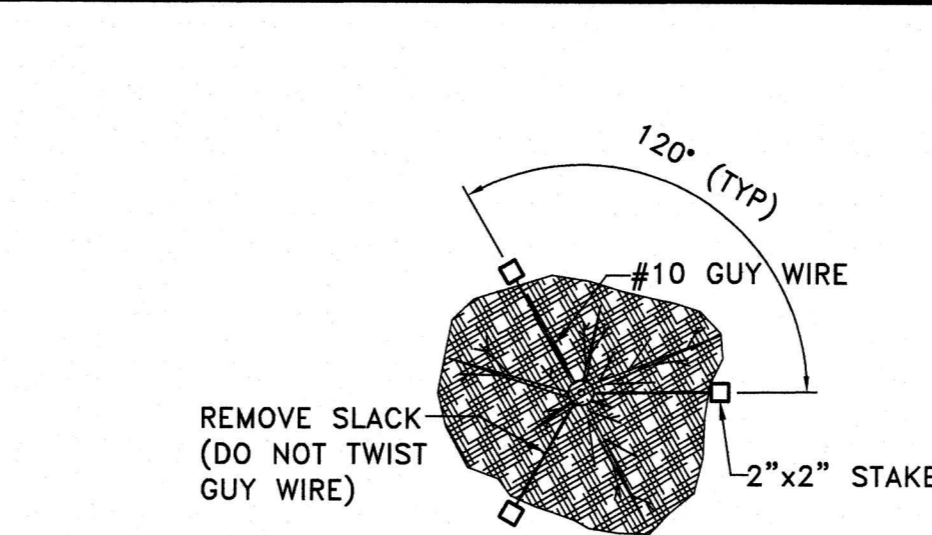
DETAIL 2 TYPICAL EVERGREEN TREE PLANTING DETAIL
SCALE: N.T.S.



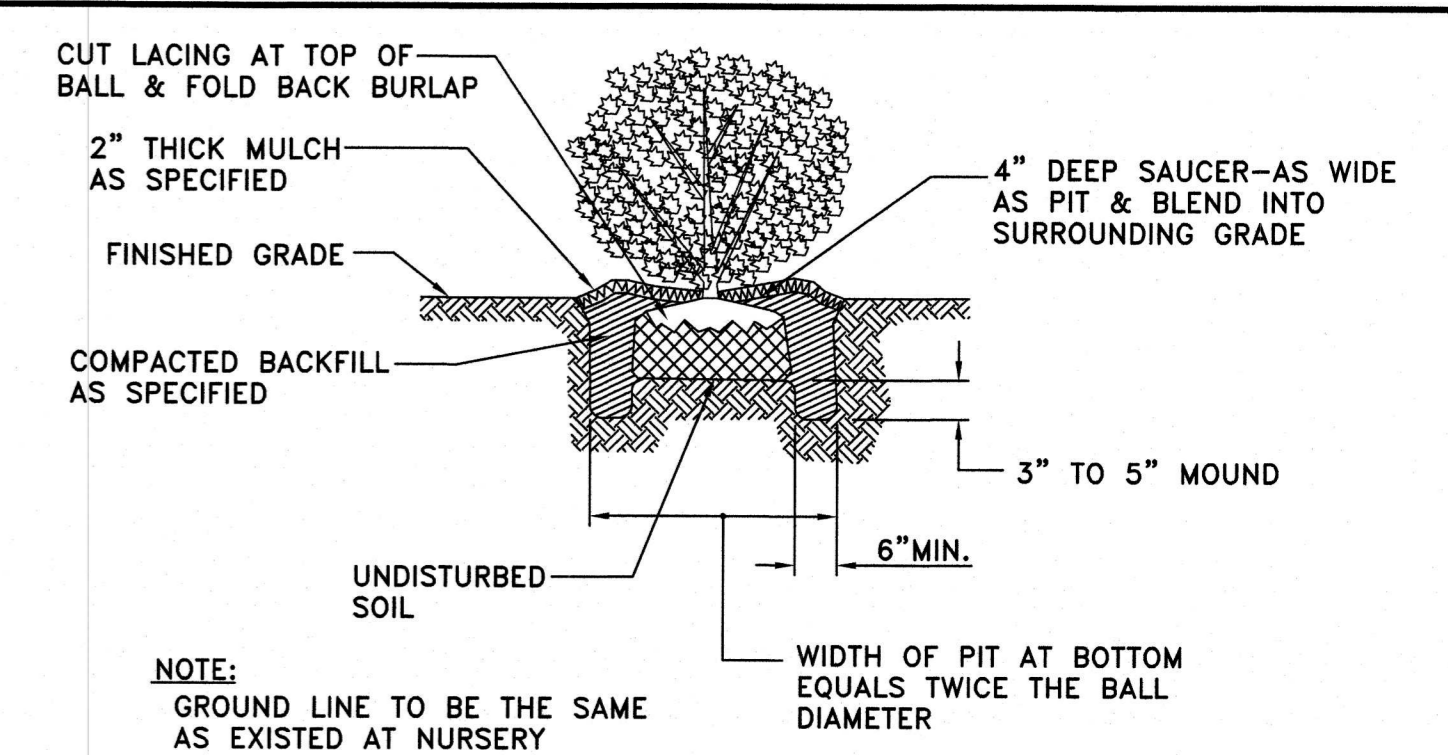
DETAIL 6 PIPE CROSSING SUPPORT CRADLE
SCALE: N.T.S.



DETAIL 10 WATER SERVICE RECONNECTION
SCALE: N.T.S.



DETAIL 3 TYPICAL EVERGREEN GUYING DETAIL
SCALE: N.T.S.



DETAIL 4 TYPICAL SHRUB PLANTING
SCALE: N.T.S.

PROCEDURE FOR CALCULATING REQUIRED AREA OF THRUST BLOCKS USING NOMOGRAPH

- LEGEND**
- H - HYDRAULIC HEAD/WATER PRESSURE, FT.
 - d - DIAMETER OF PIPE, IN.
 - Δ - PIPE BEND, DEGREE
 - T - TOTAL RADIAL THRUST, LBS.
 - P - SOIL BEARING PRESSURE, PSI
 - a - AREA OF THRUST BLOCK, SQ. FT. (LxW)

STEP No. 1
CONSTRUCT LINE FROM "DIAMETER OF PIPE" (d) TO "WATER PRESSURE/HYDRAULIC HEAD" (H) TO ESTABLISH POINT ON "INDEX LINE".

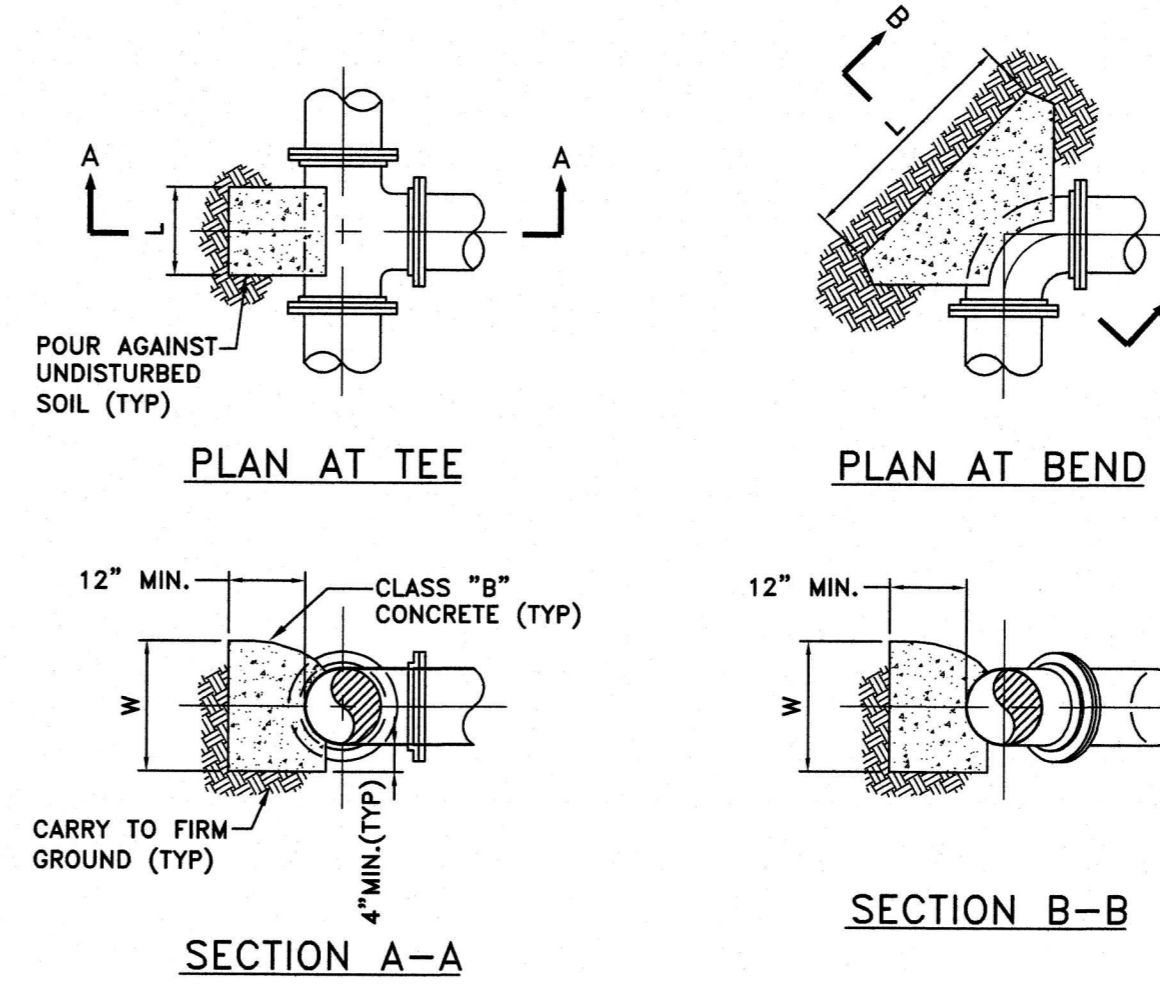
STEP No. 2
CONSTRUCT LINE FROM "PIPE BEND" (Δ) THROUGH ESTABLISHED POINT ON "INDEX LINE" TO INTERSECT "TOTAL RADIAL THRUST" (T) LINE.

STEP No. 3
CONSTRUCT LINE FROM POINT ON "TOTAL RADIAL THRUST" (T) LINE TO KNOWN POINT ON "SOIL BEARING PRESSURE" (P) LINE WHICH DETERMINES REQUIRED "AREA OF THRUST BLOCK" (a).

EXAMPLE: GIVEN (A) 16" DIAMETER PIPE - 90° ELBOW
(B) WATER PRESSURE 60 PSI
(C) SOIL BEARING PRESSURE 3000 PSI

- LINE d-H-INDEX POINT
- LINE Δ - INDEX POINT-T (16250 LBS)
- LINE T-P-a

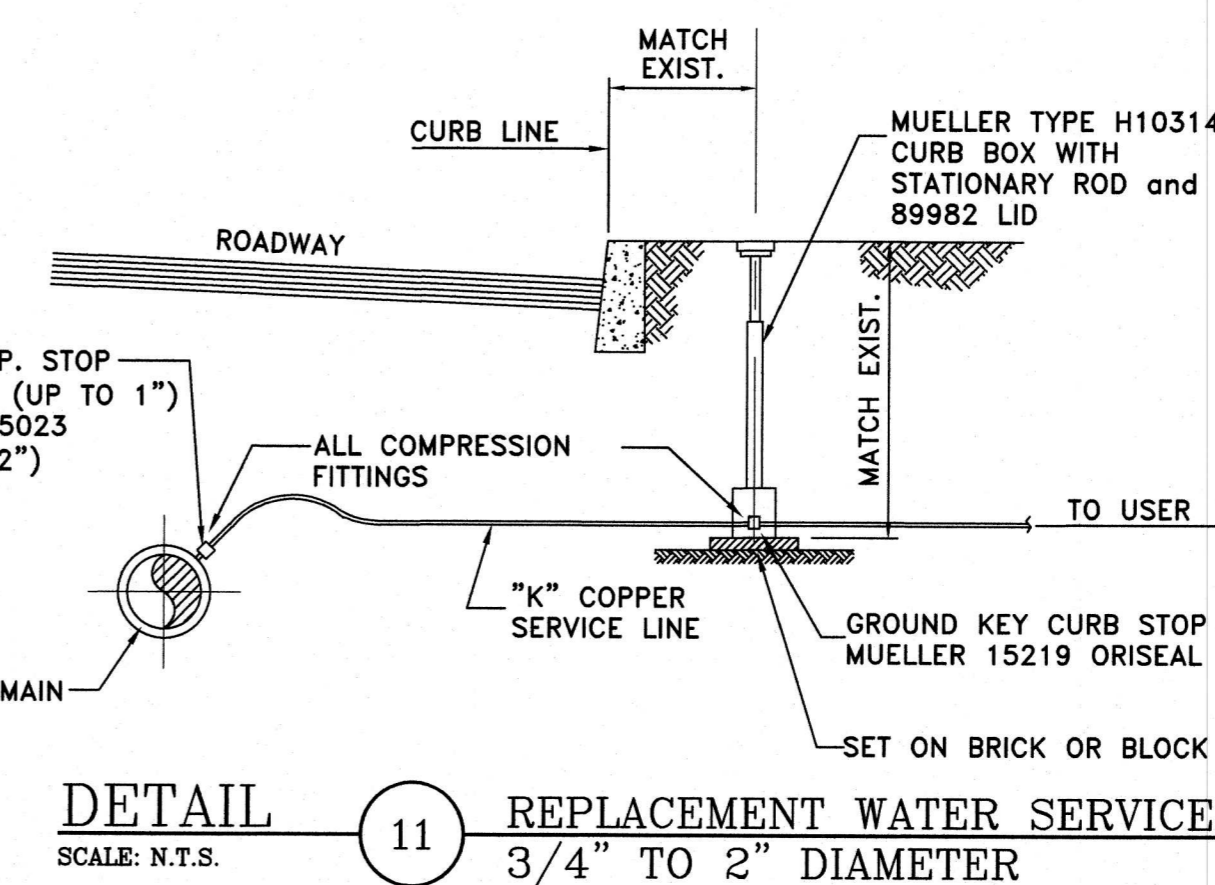
RESULT: REQUIRED THRUST BLOCK BEARING AREA = 5.5 S.F.



DETAIL 8 CONCRETE THRUST BLOCKS
SCALE: N.T.S.

DETAIL 9 NOMOGRAPH FOR BEARING AREA OF CONCRETE THRUST BLOCKS
SCALE: N.T.S.

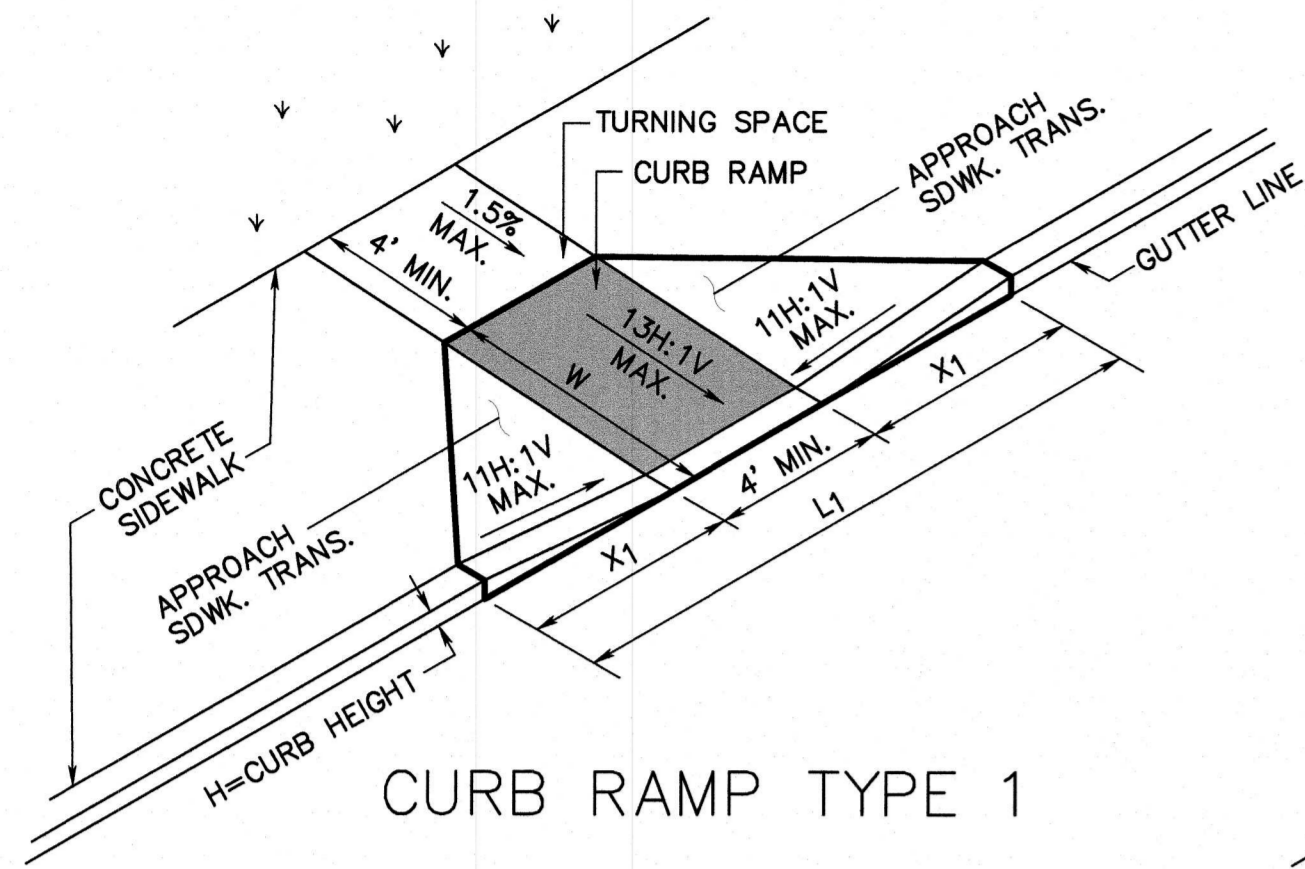
- WATER SERVICE NOTES:**
- ALL NEW WATER MAIN PIPING SHALL BE CEMENT LINED DUCTILE IRON PIPE PRESSURE CLASS 350 WITH RESTRAINED JOINTS OR AS OTHERWISE DIRECTED BY MIDDLESEX WATER COMPANY. TESTING AND DISINFECTION OF NEW WATER MAIN(S) SHALL BE IN ACCORDANCE WITH MIDDLESEX WATER COMPANY STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH MIDDLESEX WATER COMPANY.
 - WATER SERVICE SHALL BE MAINTAINED TO ALL STRUCTURES DURING CONSTRUCTION. DISRUPTION TO SERVICE TO ANY CUSTOMER SHALL BE NO LONGER THAN TWO (2) HOURS DURATION, LONGER DURATION SHALL REQUIRE THE APPROVAL OF THE MIDDLESEX WATER COMPANY.
 - FINAL LOCATION OF WATER SERVICE SHALL BE DETERMINED BY MIDDLESEX WATER COMPANY.
 - COPPER SERVICE LINE SHALL BE CONTINUOUS FROM CORP. STOP TO CURB STOP, WITHOUT EXCEPTION.



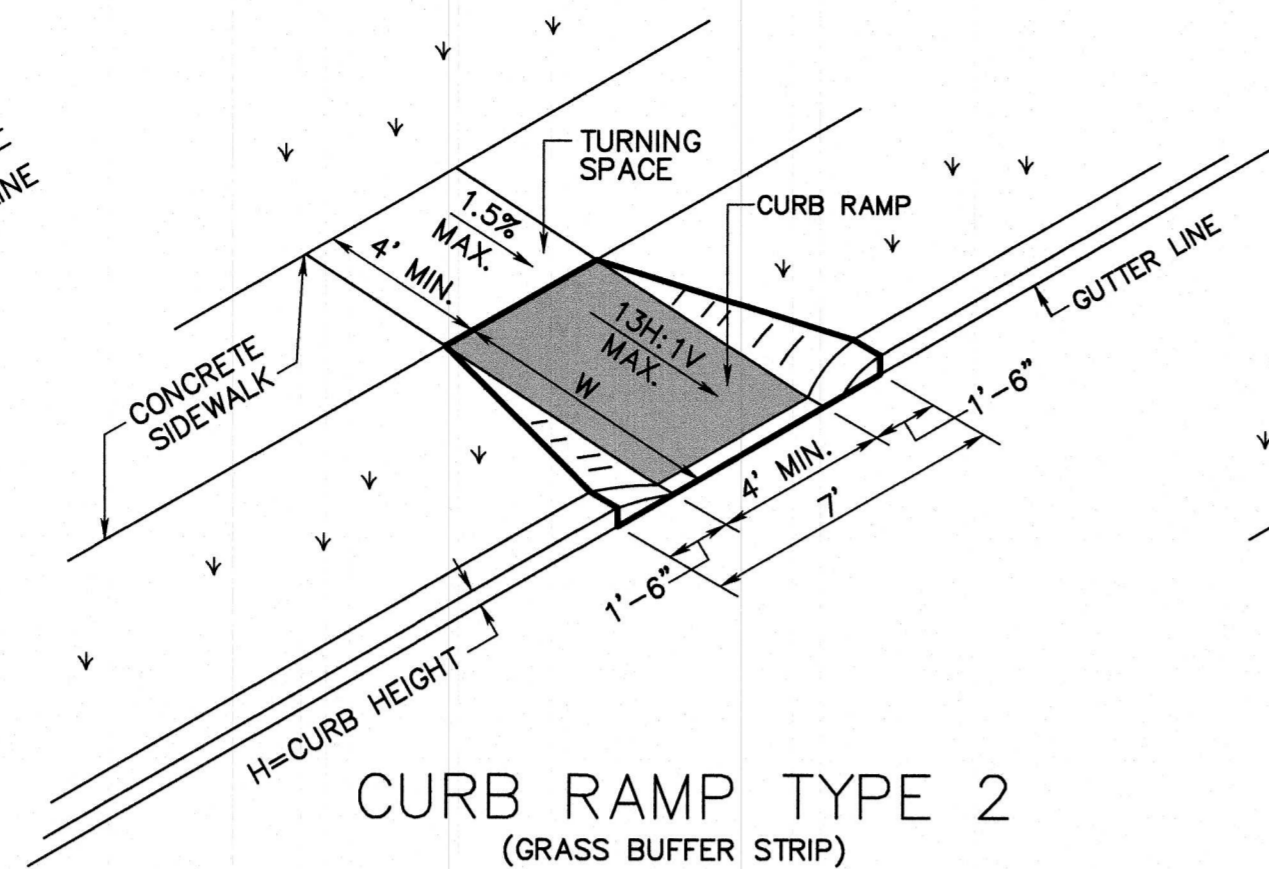
DETAIL 11 REPLACEMENT WATER SERVICE
SCALE: N.T.S.

<p>APPROVED: <i>Richard A. Alaimo</i> 1/18/23</p> <p>Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195</p>	<p>REVISIONS</p> <table border="1"> <tr><th>NO.</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	NO.	DATE	BY										<p>RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.</p>	<p>ODOR & CORROSION CONTROL PORT READING INTERCEPTOR</p> <p>CONSTRUCTION DETAILS</p> <p>SCALE: AS NOTED</p>	<p>CLIENT: WOODBRIDGE TOWNSHIP</p> <p>PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY</p>	<p>DATE: JAN 2023 DESIGNED BY: CAF DRAWN BY: CAF CHECKED BY: CAF DEPT. HEAD:</p>	<p>REBID SHEET C14 FILE NO.:</p>
	NO.	DATE	BY															
<p>DATE: _____</p>	<p>PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R</p>																	

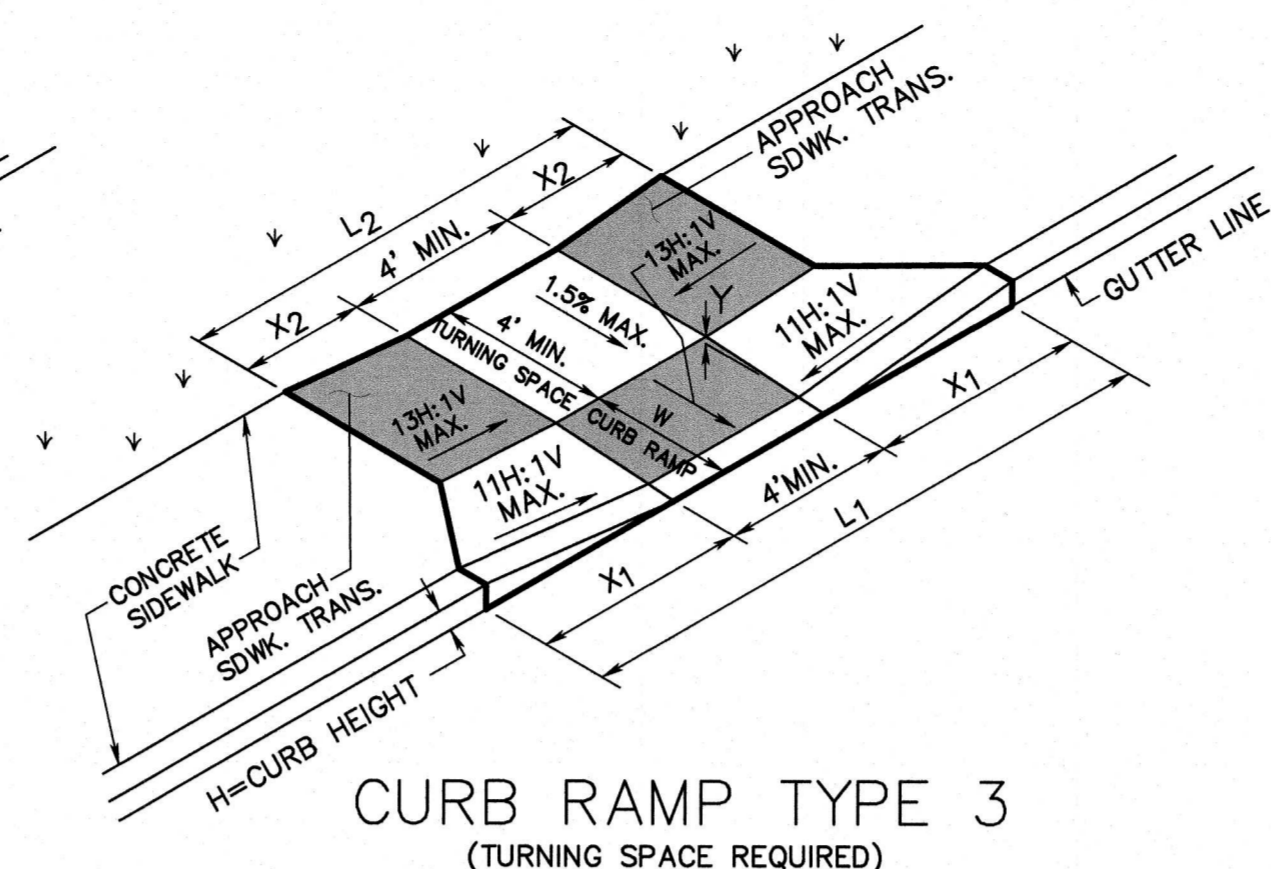
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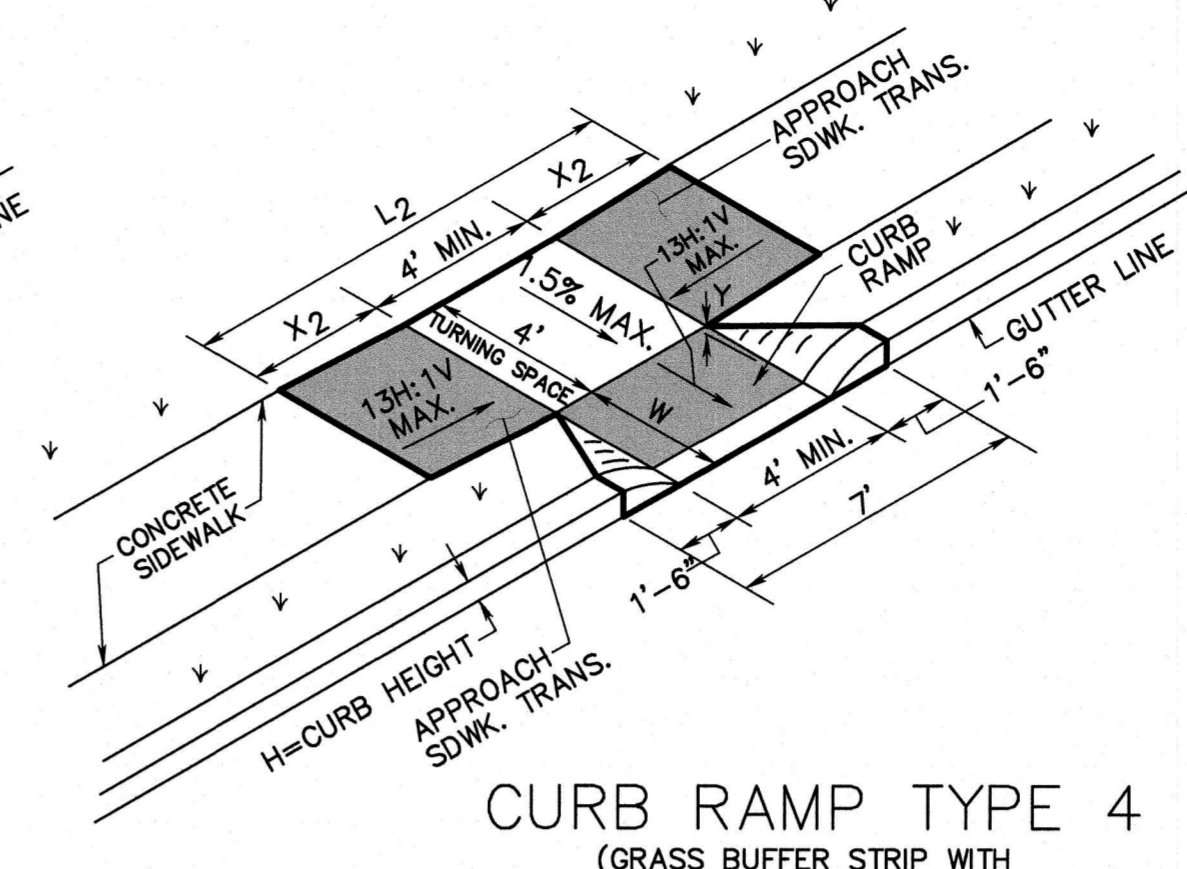
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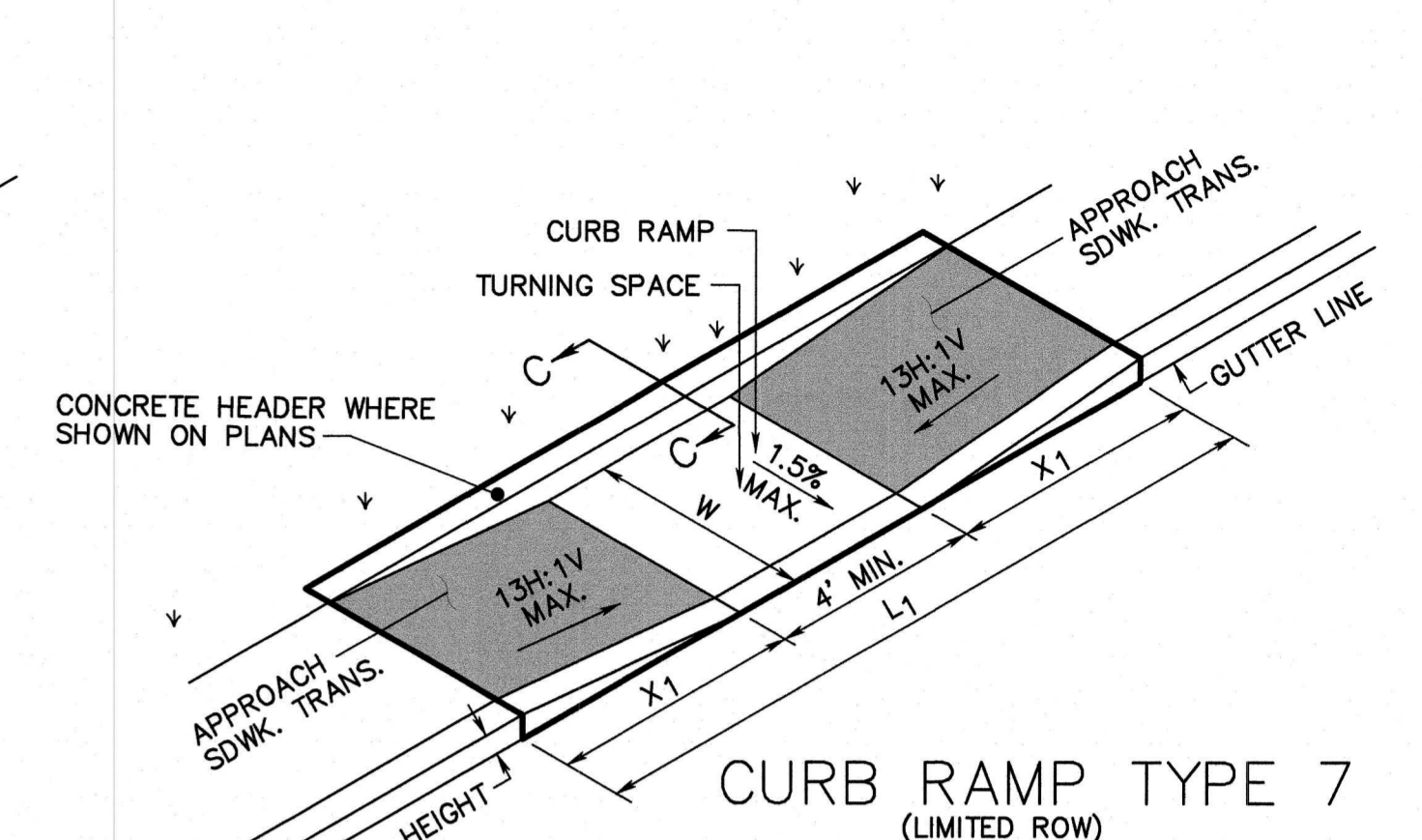
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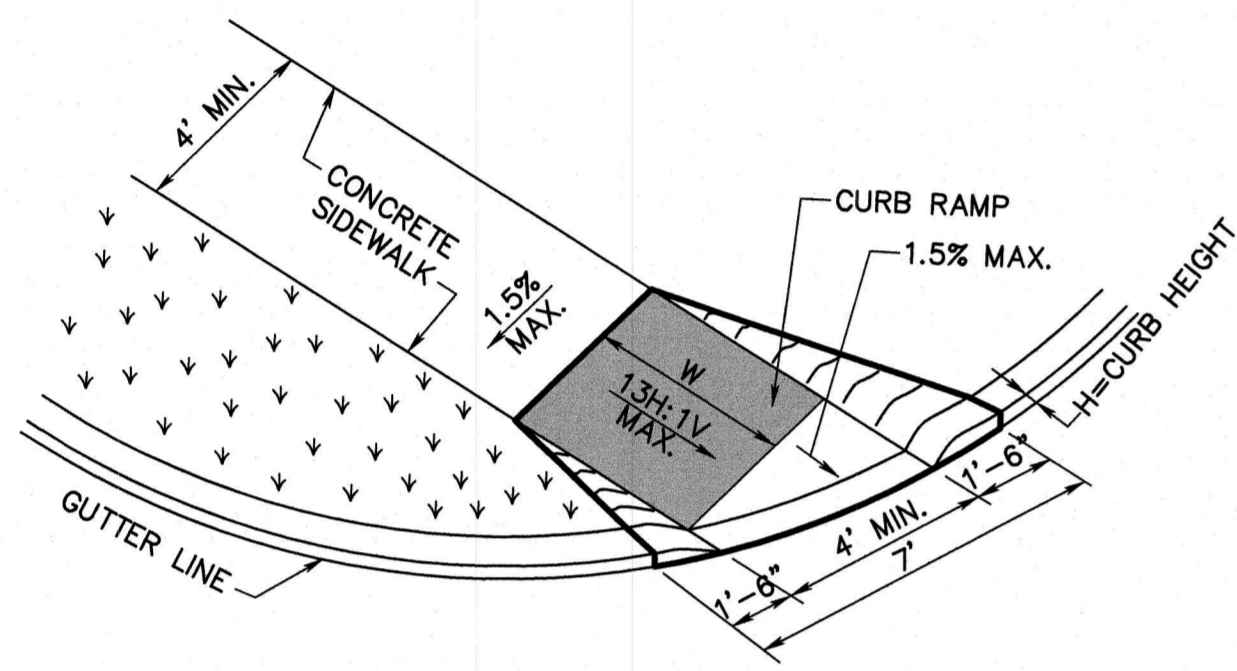
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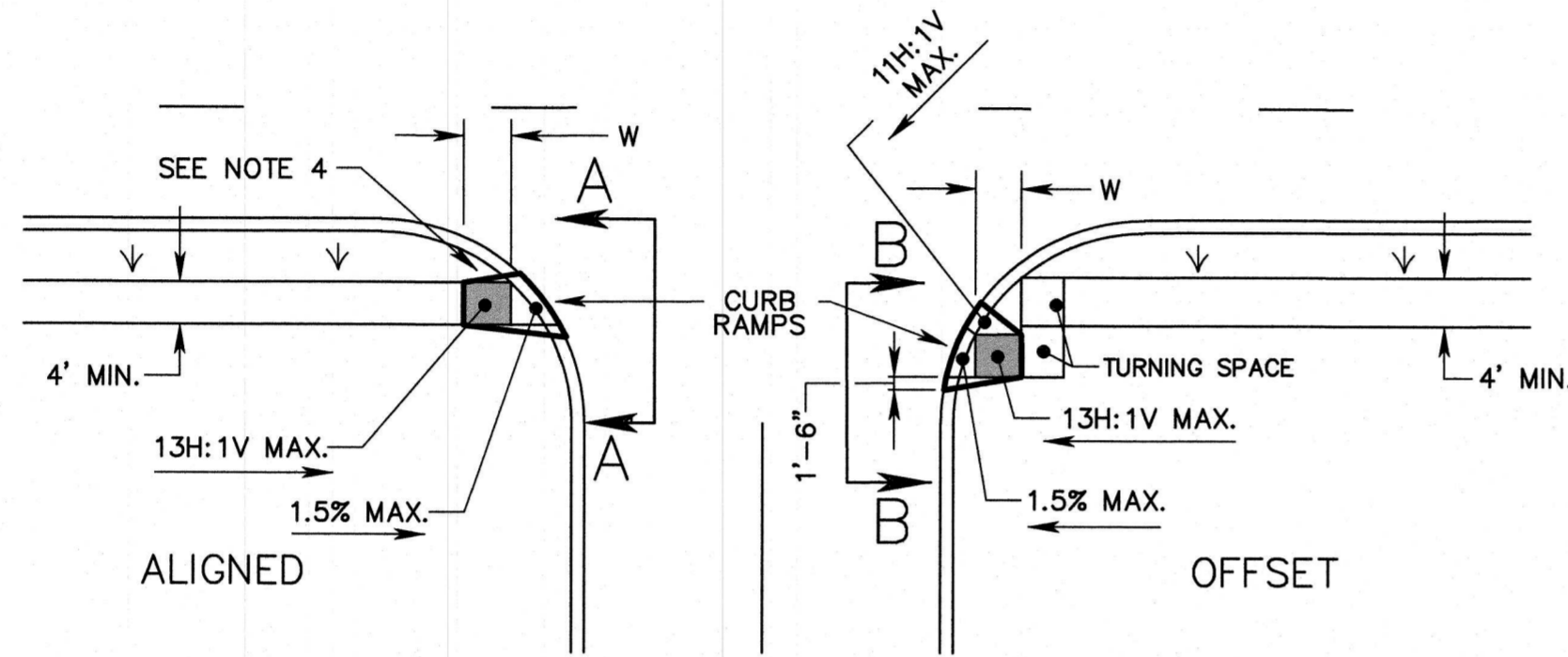
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(GRASS BUFFER STRIP WITH
TURNING SPACE REQUIRED)



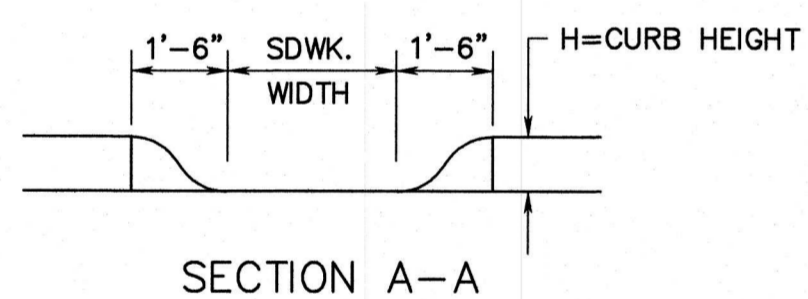
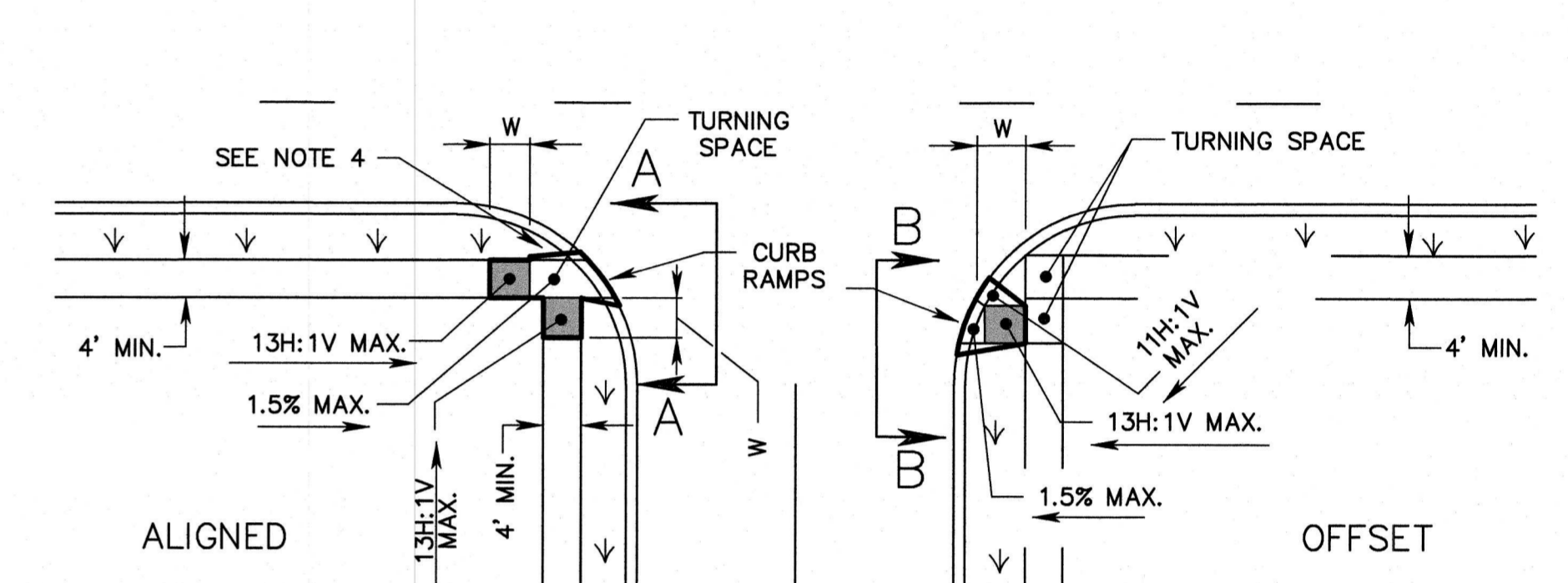
CURB RAMP TYPE 7
(LIMITED ROW)
(SEE NOTE 7)



CURB RAMP TYPE 5

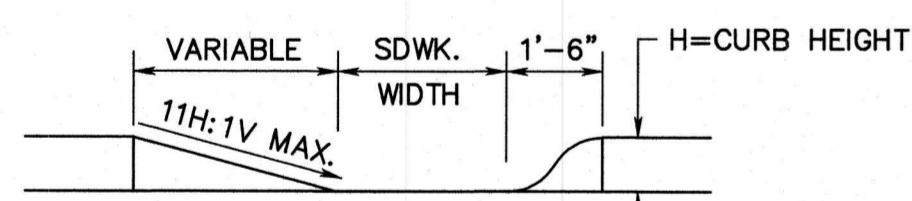


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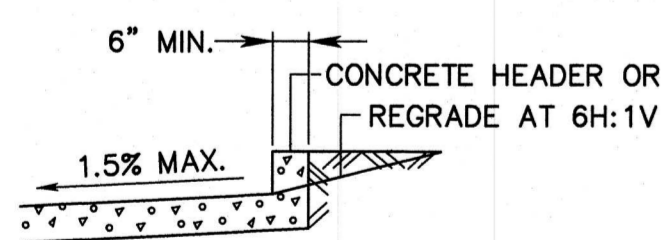


SECTION A-A

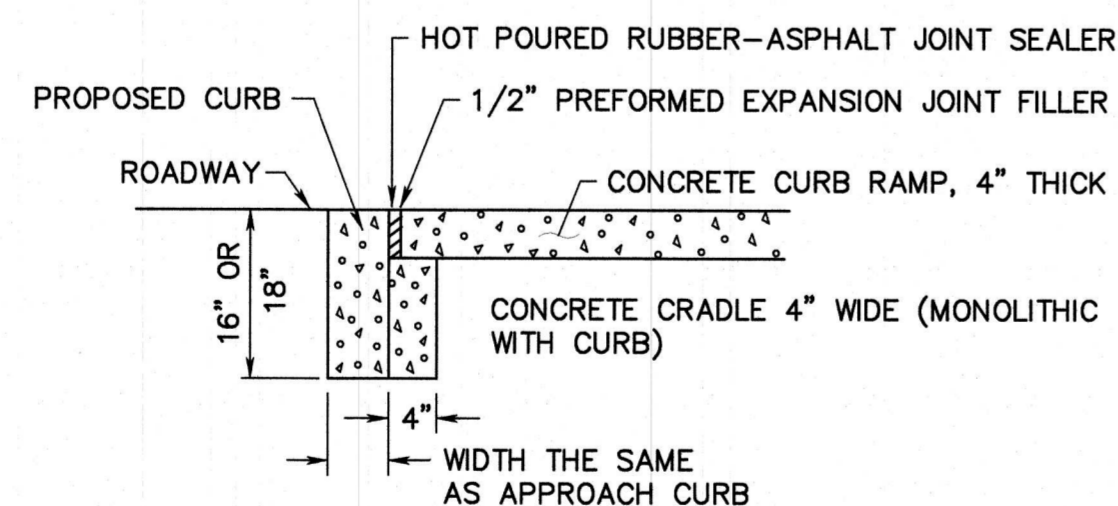
NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY
PAVEMENT (CURB RAMP TYPES 5 & 6).



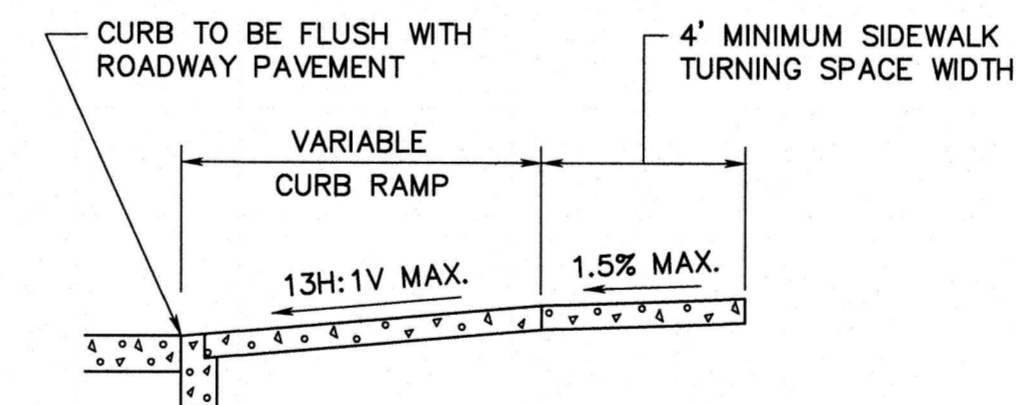
SECTION B-B



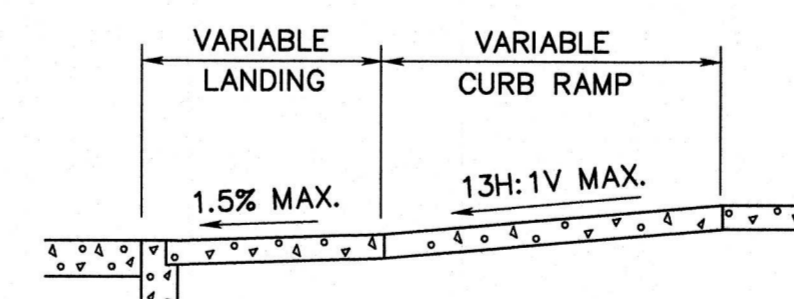
SECTION C-C



DROPPED CURB AND CRADLE



SECTION THROUGH CURB RAMPS 1 THROUGH 4



SECTION THROUGH CURB RAMPS 5 AND 6

NOTES:

- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
- L_1 , L_2 , W , X AND X_2 DIMENSIONS VARY DEPENDENT UPON SLOPES OF GUTTERLINE, EXISTING/PROPOSED SIDEWALK SLOPE AND DIMENSION BETWEEN CURB AND SIDEWALK.
- CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
- FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
- SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
- CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES INDICATES THE PAY LIMIT FOR VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
- WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, USE CURB RAMP TYPE 7, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
- CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED. SEE PLANS.
- THE DIMENSIONS OF THE RAMPS ARE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.
- THE 13H:1V MAX SLOPE IS THE RUNNING SLOPE FOR CURB RAMPS, BUT ONLY THE 13H:1V SLOPE MEASURED AS X^2 IS THE RUNNING SLOPE FOR TYPE 3 AND TYPE 4 CURB RAMPS. ENSURE THE RUNNING SLOPE OF CURB RAMPS DOES NOT REQUIRE ITS LENGTH TO EXCEED 15 FEET. THE RUNNING SLOPE MAY EXCEED THE 13H:1V MAX SLOPE SO AS NOT TO EXCEED THE 15 FEET MAXIMUM LENGTH.

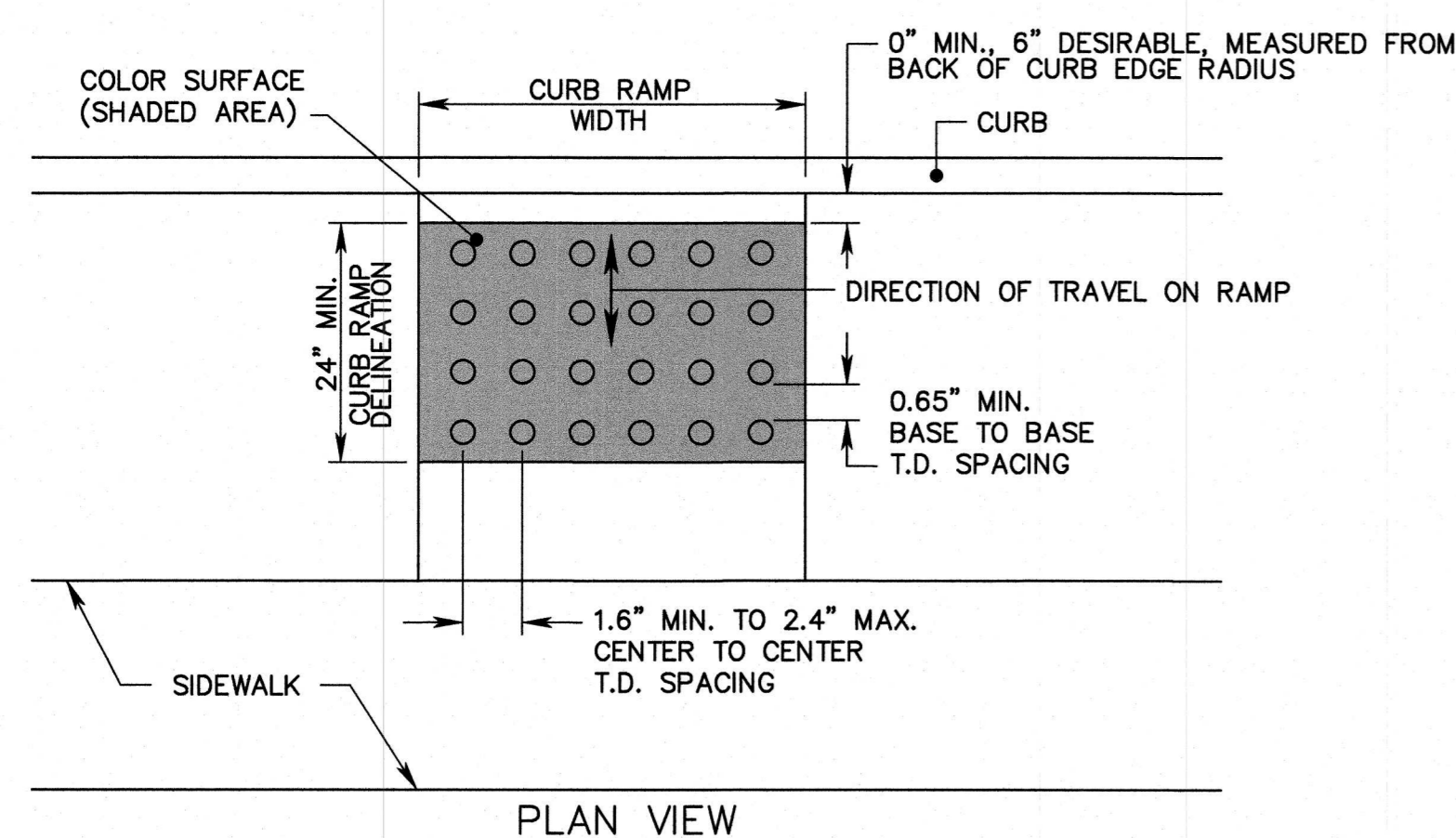
MODIFIED FROM N.J.D.O.T. STANDARD DETAIL
DRAWING CD-606-1 (SHEET 51 OF 146)

DETAIL 1 CURB RAMPS
SCALE: N.T.S.

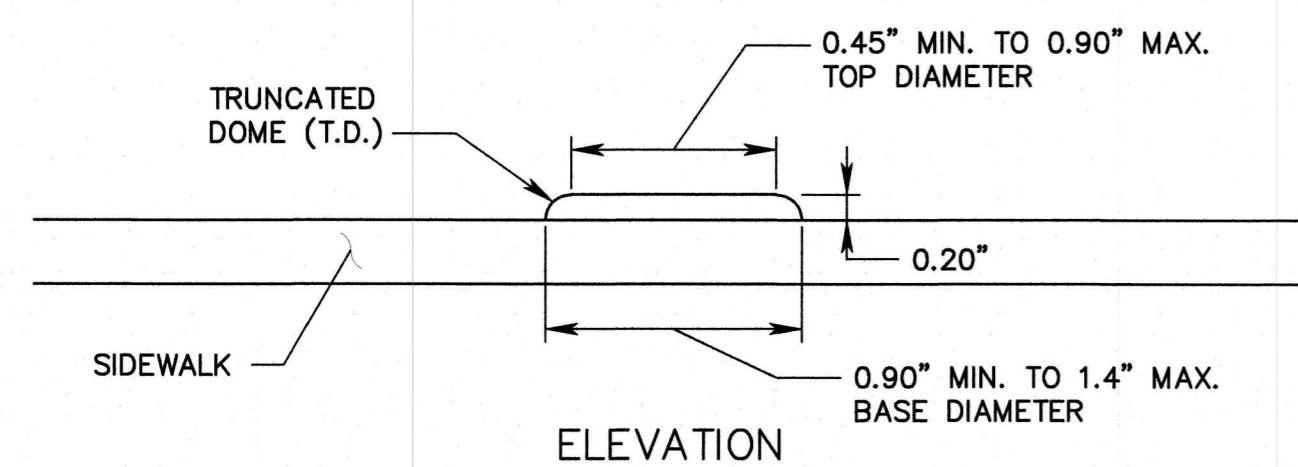
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APPROVED: <i>Richard A. Alaimo</i> 1/18/23 Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023 DESIGNED BY: CAF	SHEET C15
	SCALE: AS NOTED		CONSTRUCTION DETAILS	PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DRAWN BY: CAF CHECKED BY: DEPT. HEAD:

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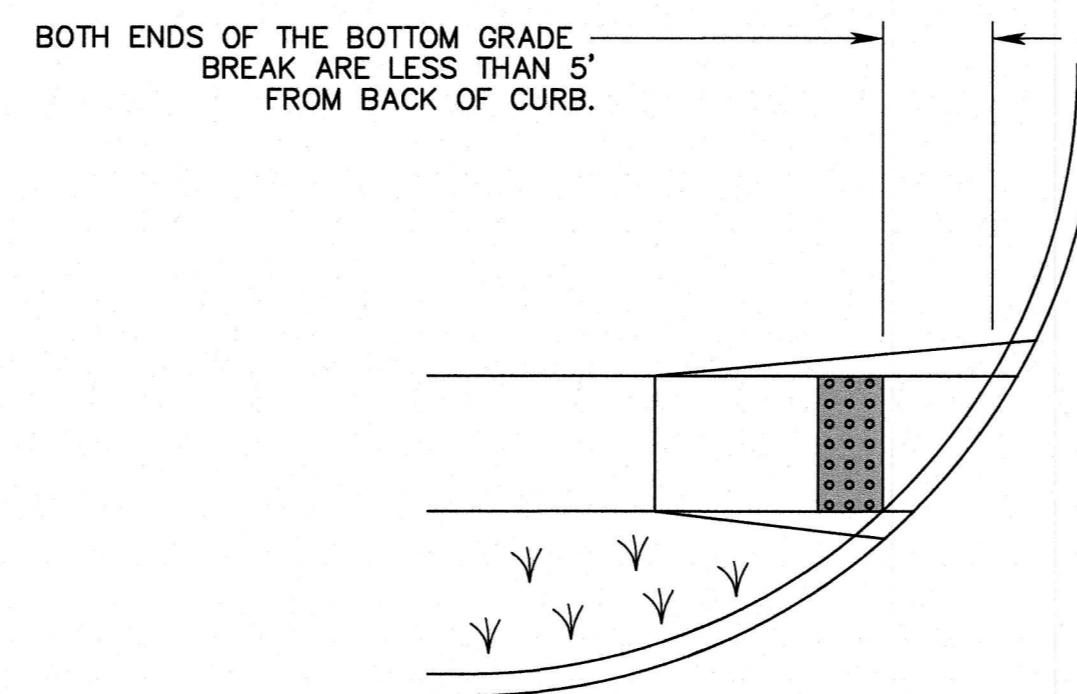


PLAN VIEW

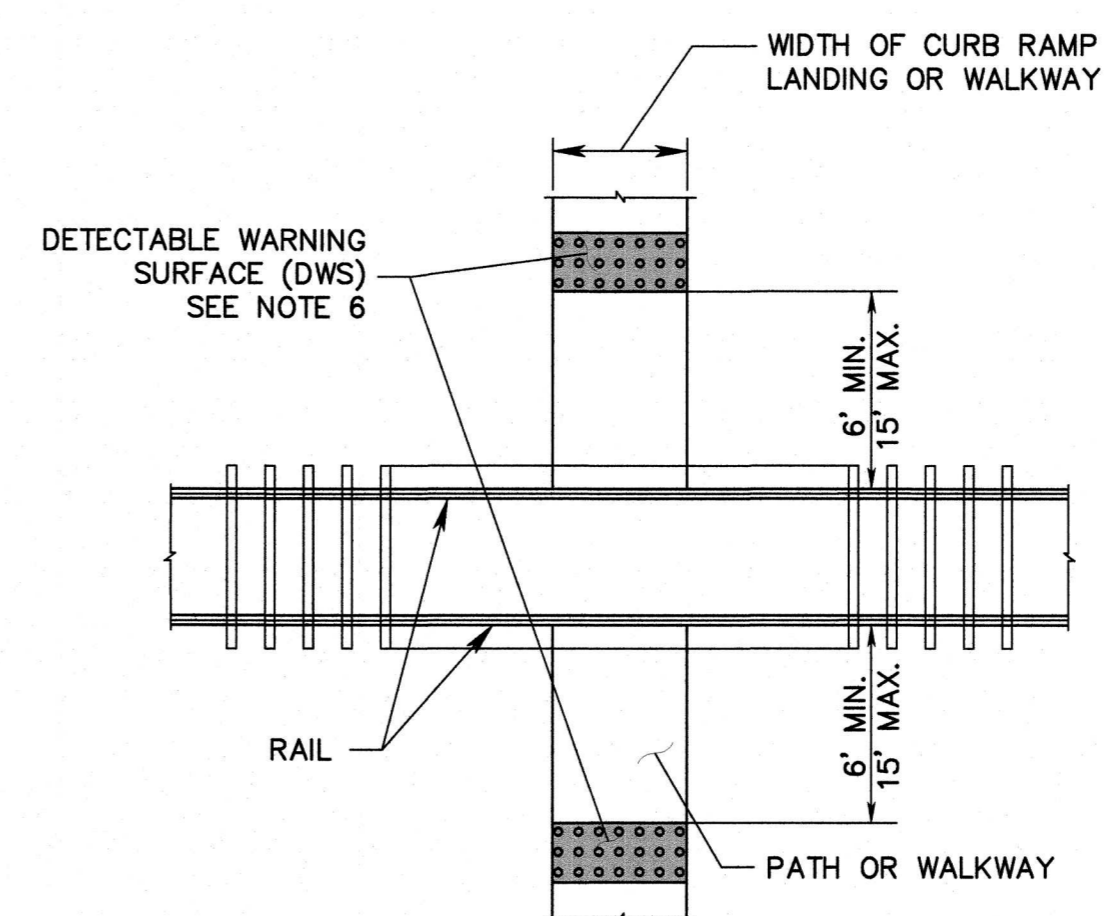


ELEVATION

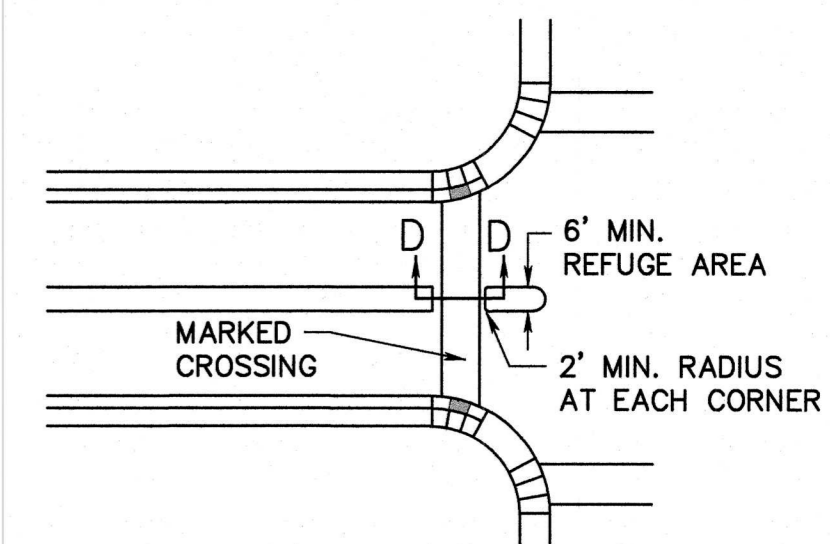
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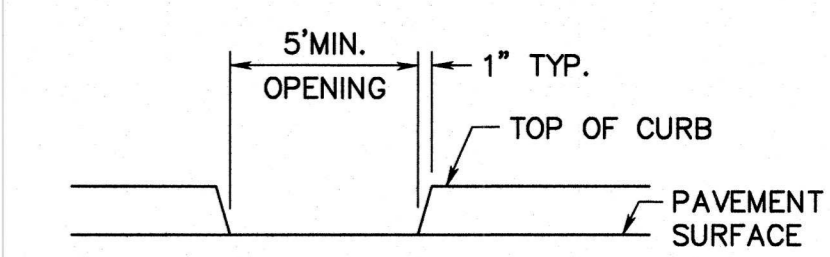
PEDESTRIAN RAILROAD CROSSING



PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS

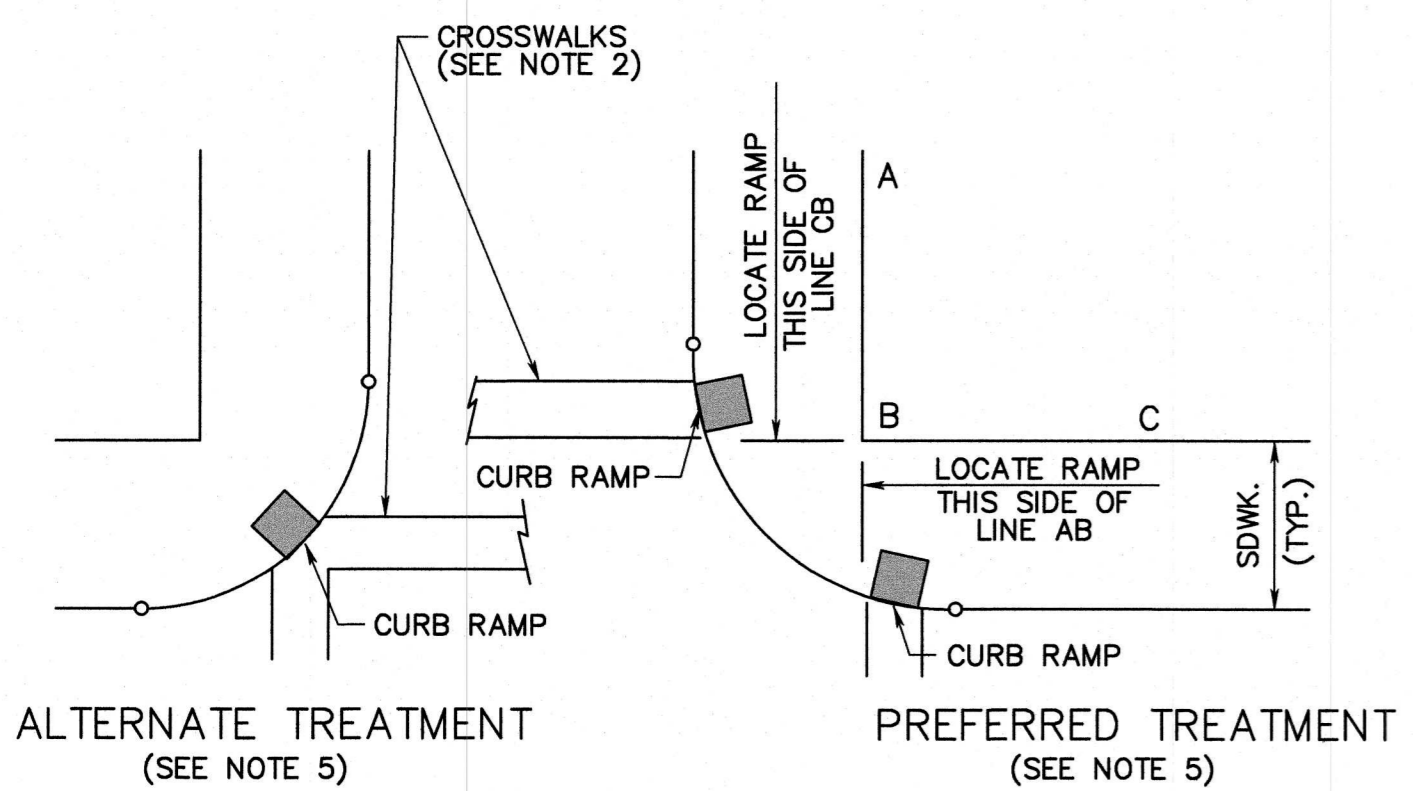


NOTE:
WHERE PRACTICAL, END LEFT TURN ISLAND OR DIVISIONAL ISLAND BEFORE CROSSWALK TO ELIMINATE CUT-THROUGH

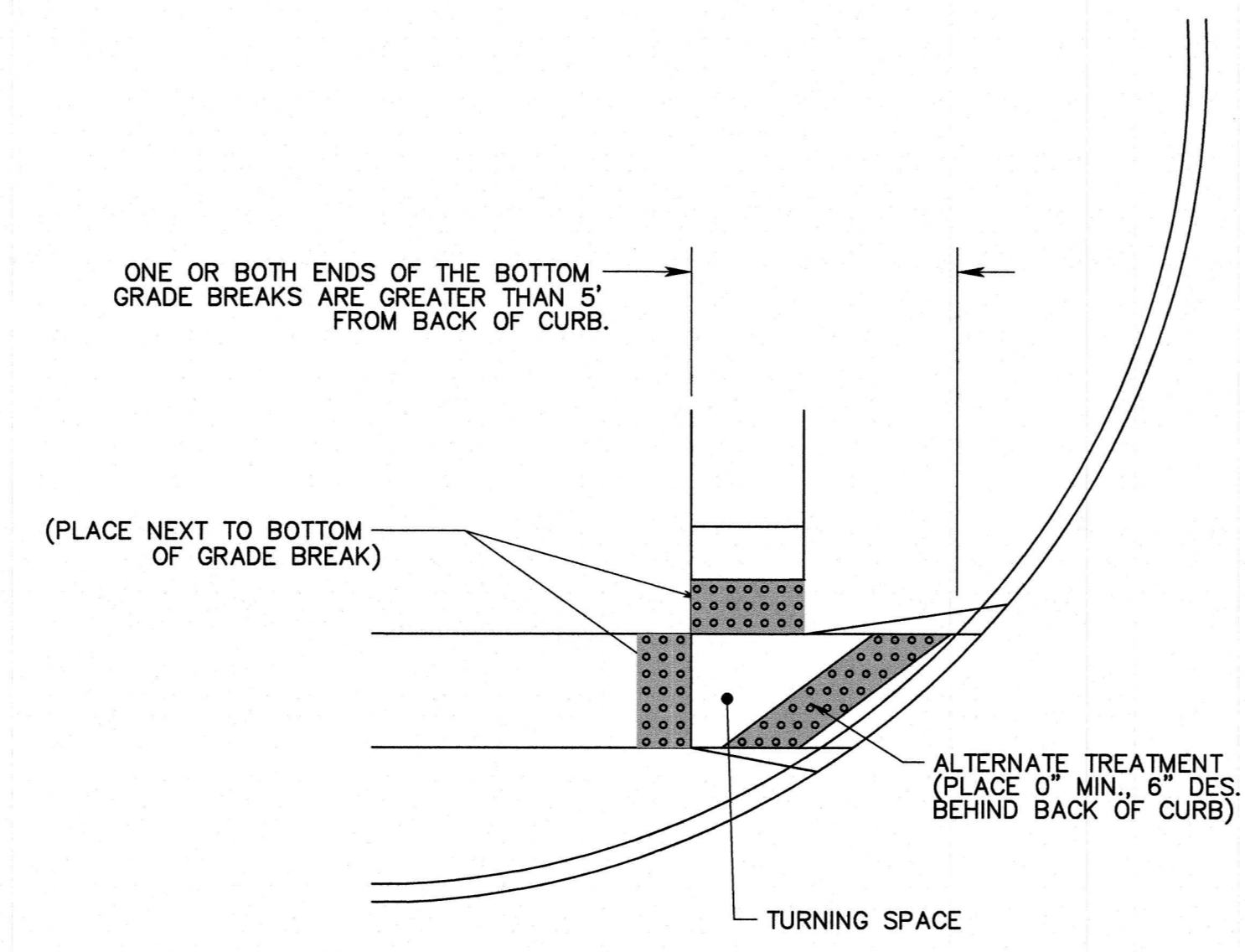


SECTION D-D

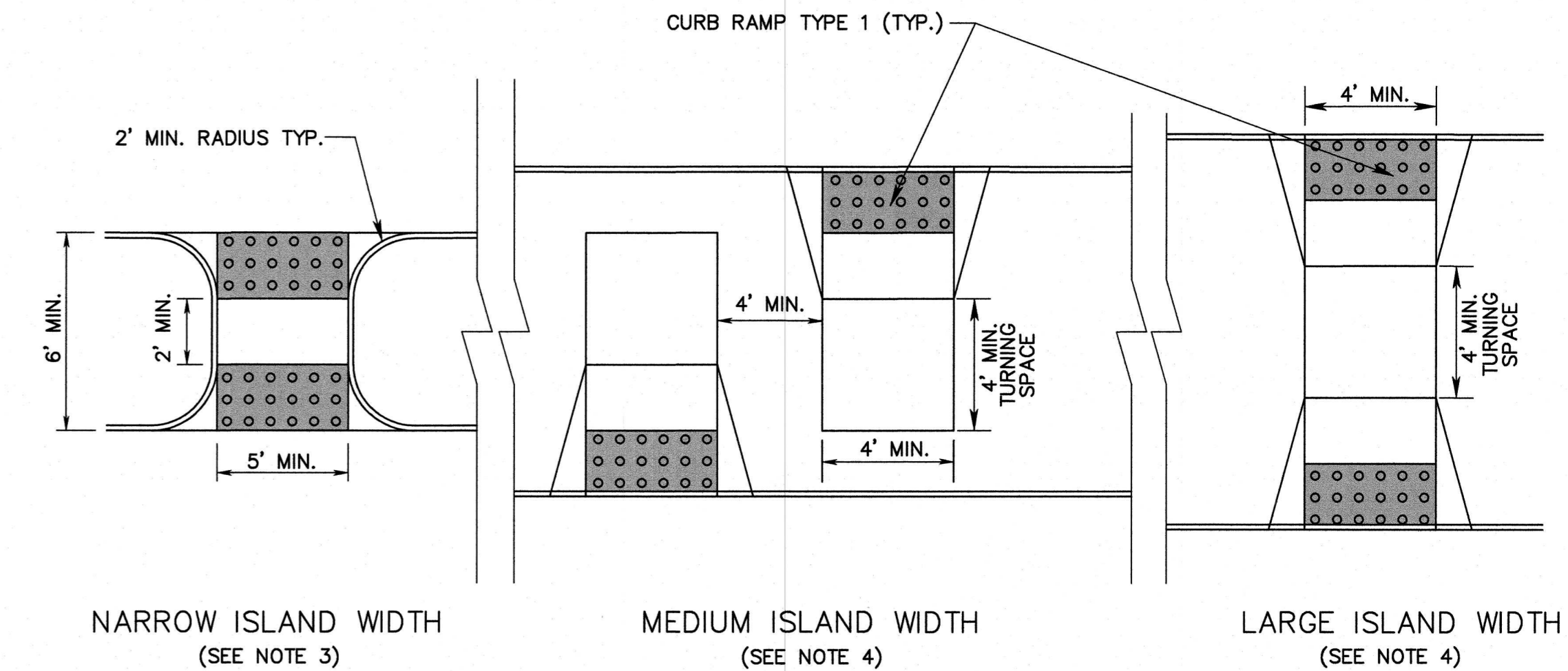
NOTE:
5\"/>



LOCATION OF CURB RAMP TYPES 1, 2, 3, 4 & 7 FOR CROSSING PARALLEL AND PERPENDICULAR TO HIGHWAY



PLACEMENT OF DETECTABLE WARNING SURFACE FOR CURB RAMP TYPE 5 AND 6



NARROW ISLAND WIDTH (SEE NOTE 3)

MEDIUM ISLAND WIDTH (SEE NOTE 4)

LARGE ISLAND WIDTH (SEE NOTE 4)

PEDESTRIAN REFUGE ISLAND

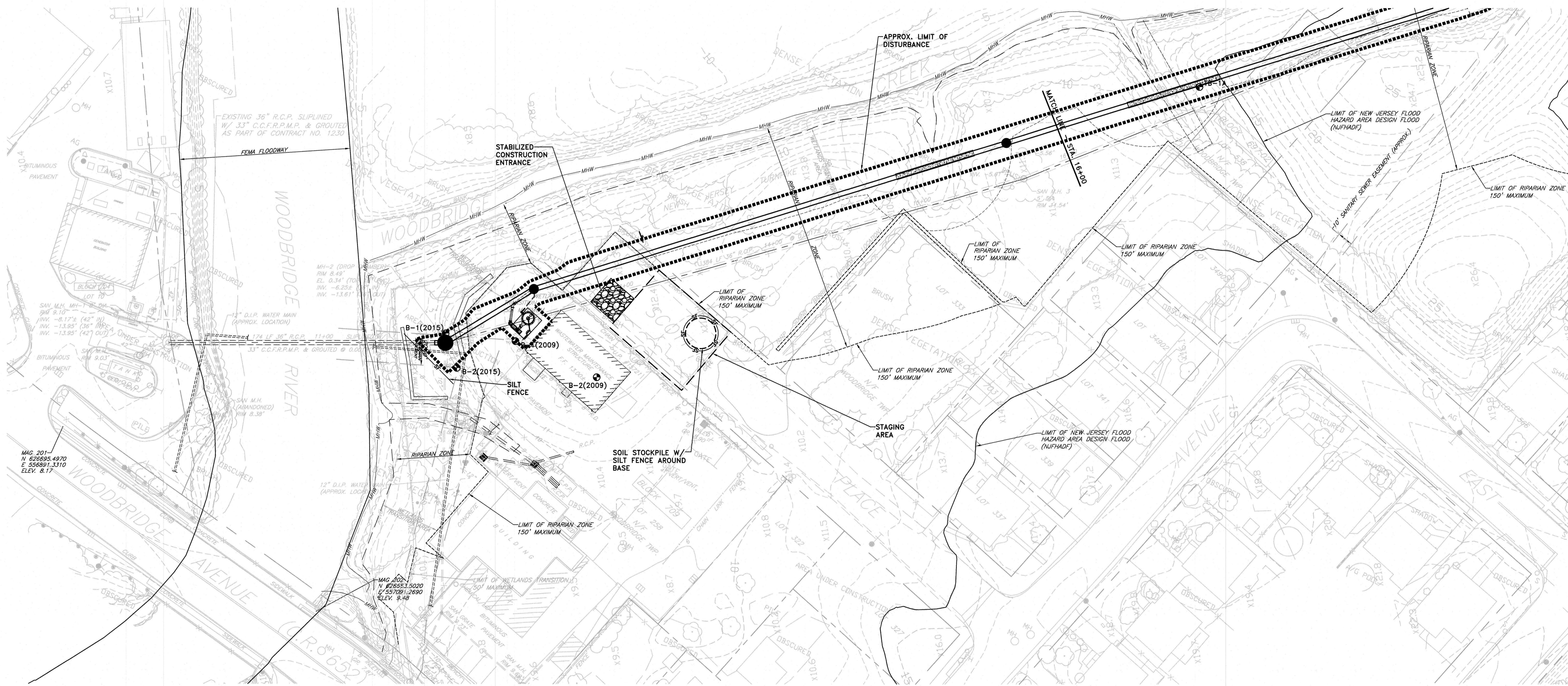
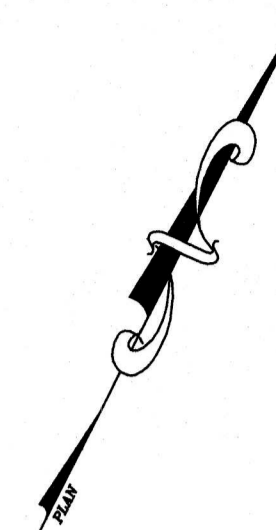
- NOTES:
- KEEP TURNING SPACE, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP CLEAR OF OBSTRUCTIONS THAT PROTRUDE ABOVE THE SIDEWALK.
 - CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
 - FOR NARROW ISLAND WIDTH, SEE PEDESTRIAN REFUGE ISLAND WALKWAY OPENING AT INTERSECTIONS DETAIL.
 - FOR MEDIUM AND LARGE ISLAND WIDTH, SEE CURB RAMP TYPE 1 ON SHEET 7.
 - CONSTRUCT CURB RAMP TYPES 1, 2, 3, 4 & 7 PERPENDICULAR TO CURBLINE, AS SHOWN.
 - IF A CURB RAMP IS REQUIRED, THE LOCATION OF THE DETECTABLE WARNING SURFACE MUST BE AT THE BOTTOM OF THE RAMP AND WITHIN THE REQUIRED DISTANCE FROM THE RAIL.

MODIFIED FROM N.J.D.O.T. STANDARD DETAIL DRAWING CD-606-1A (SHEET 51A OF 146)

DETAIL 1 CURB RAMPS & DETECTABLE WARNINGS
SCALE: N.T.S.

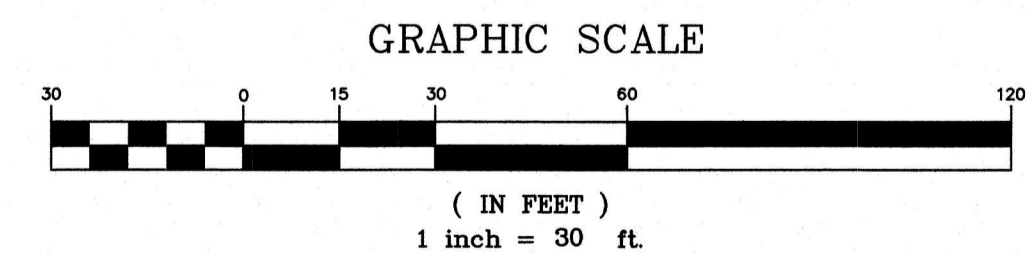
APPROVED: <i>Richard A. Alaimo</i> DATE: _____ Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET C16
			CONSTRUCTION DETAILS	PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DRAWN BY: CAF CHECKED BY: CAF DEPT. HEAD:

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TOTAL DISTURBANCE 0.9 ACRES

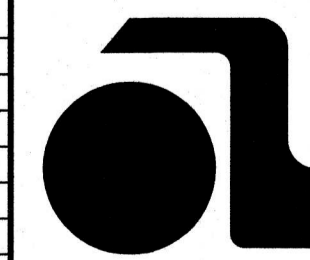


SOIL EROSION AND SEDIMENT CONTROL NOTES:

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APPROVED: *[Signature]* 1/18/23
 DATE: _____
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

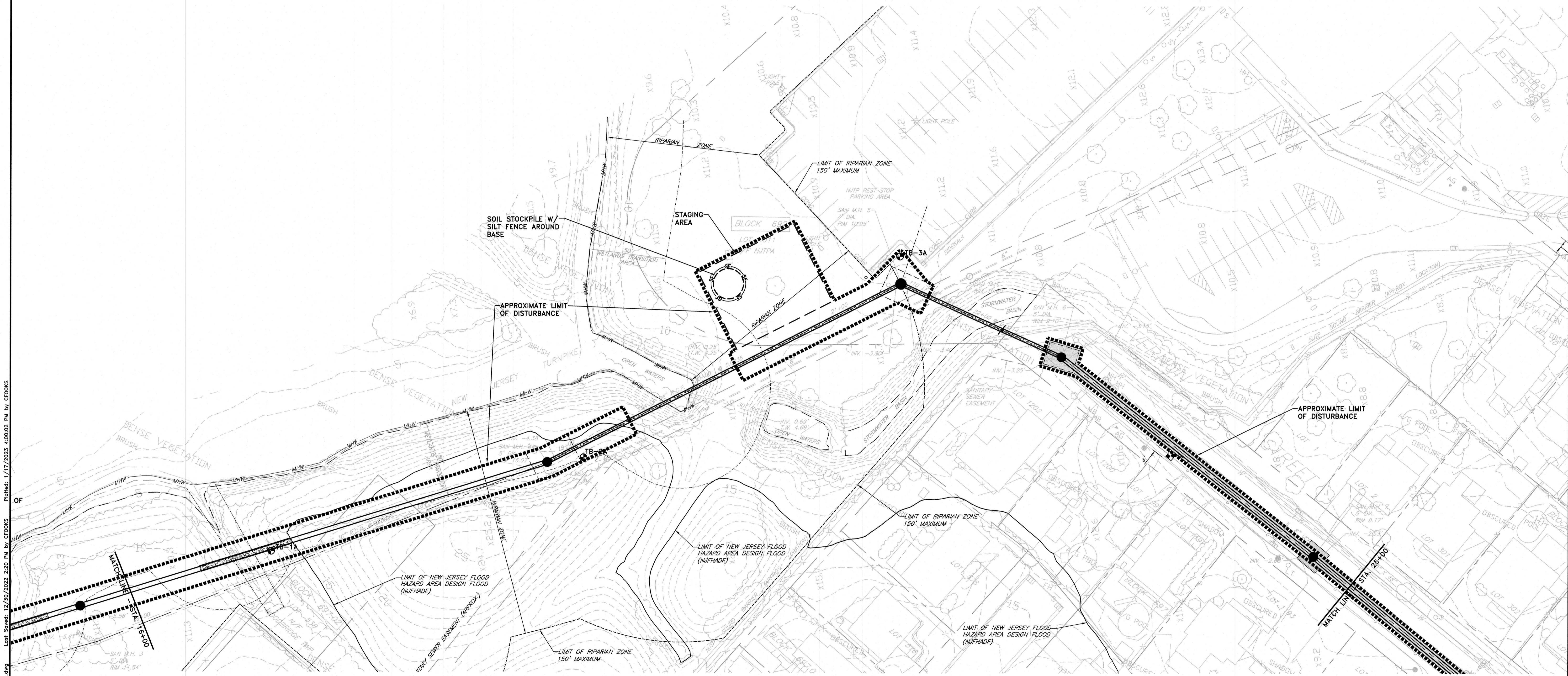
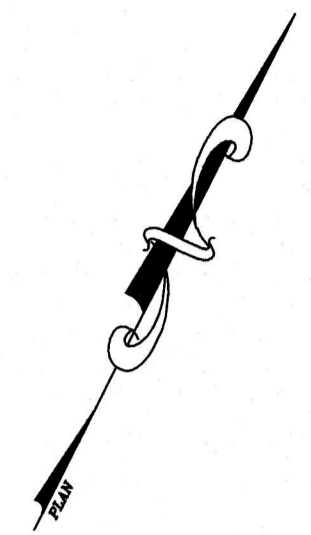


RICHARD A. ALAIMO
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 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL
PORT READING INTERCEPTOR
SOIL EROSION & SEDIMENT CONTROL
PLAN
STA. 10+00 - STA. 16+00
 SCALE: H: 1" = 30' V: 1" = 3'

CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET C17
PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	PROJECT NO.: B-0726-0024-000	FILE NO.:
	CONTRACT NO.: 2014-011R	
	DESIGNED BY: CAF	
	DRAWN BY: CAF	
	CHECKED BY:	
	DEPT. HEAD:	

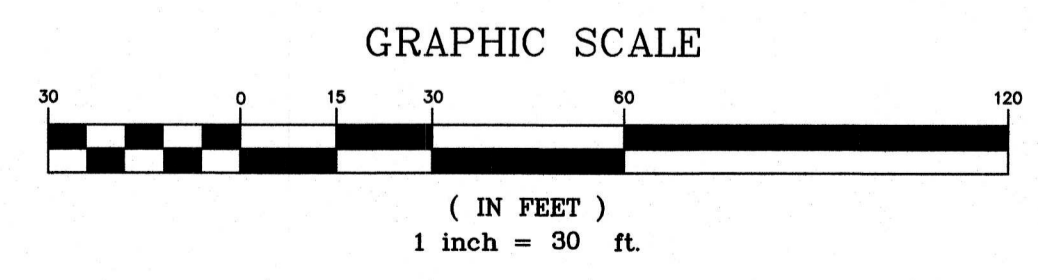
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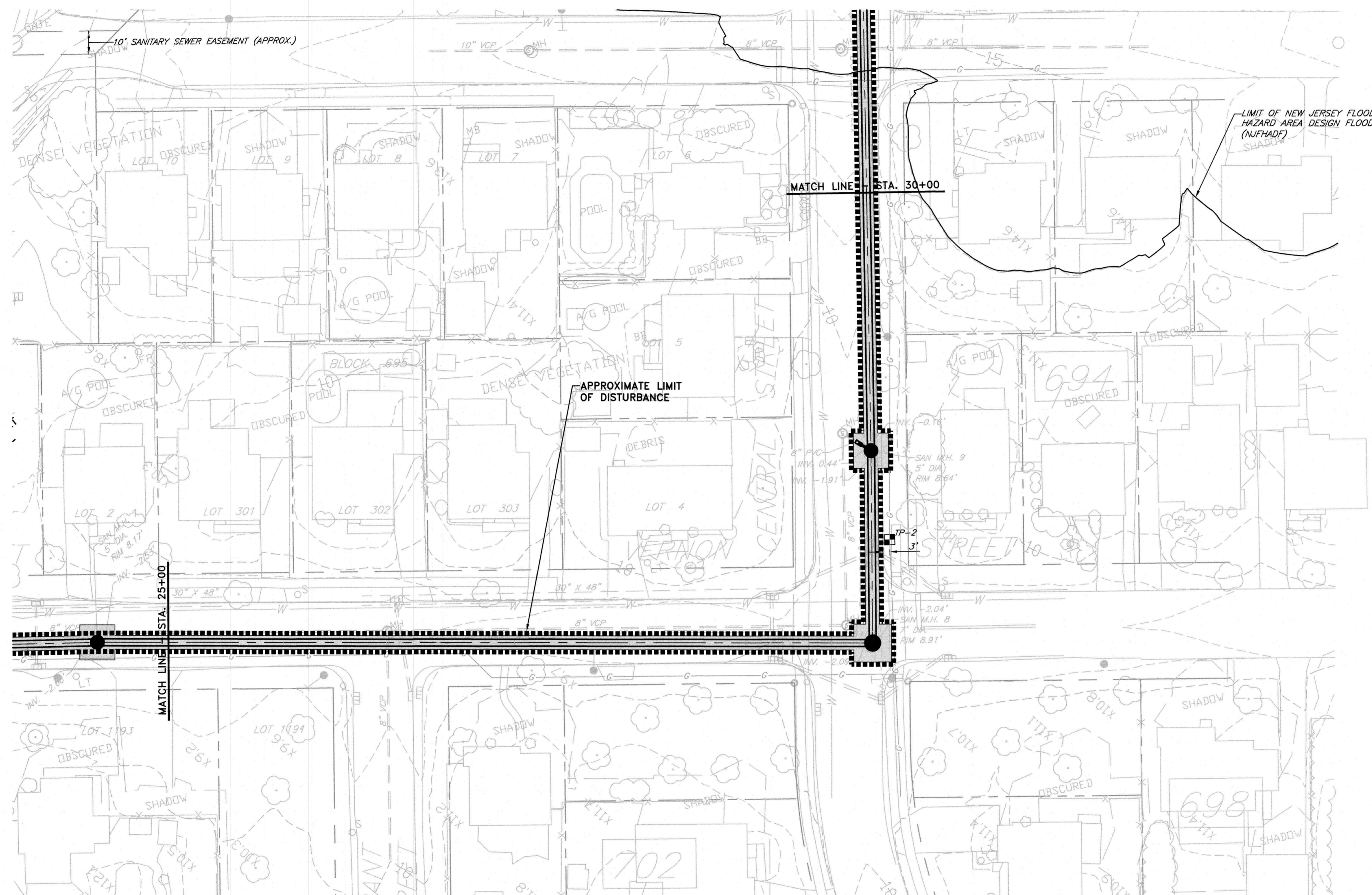
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APPROVED: <i>Richard A. Alaimo</i> Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET C18
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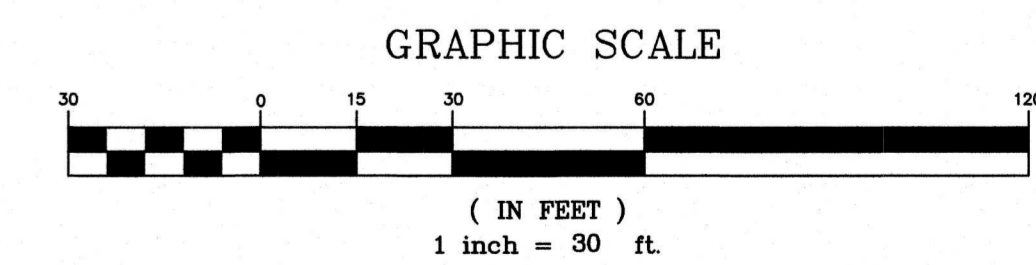
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APPROVED: *Richard A. Alaimo* 1/12/23
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

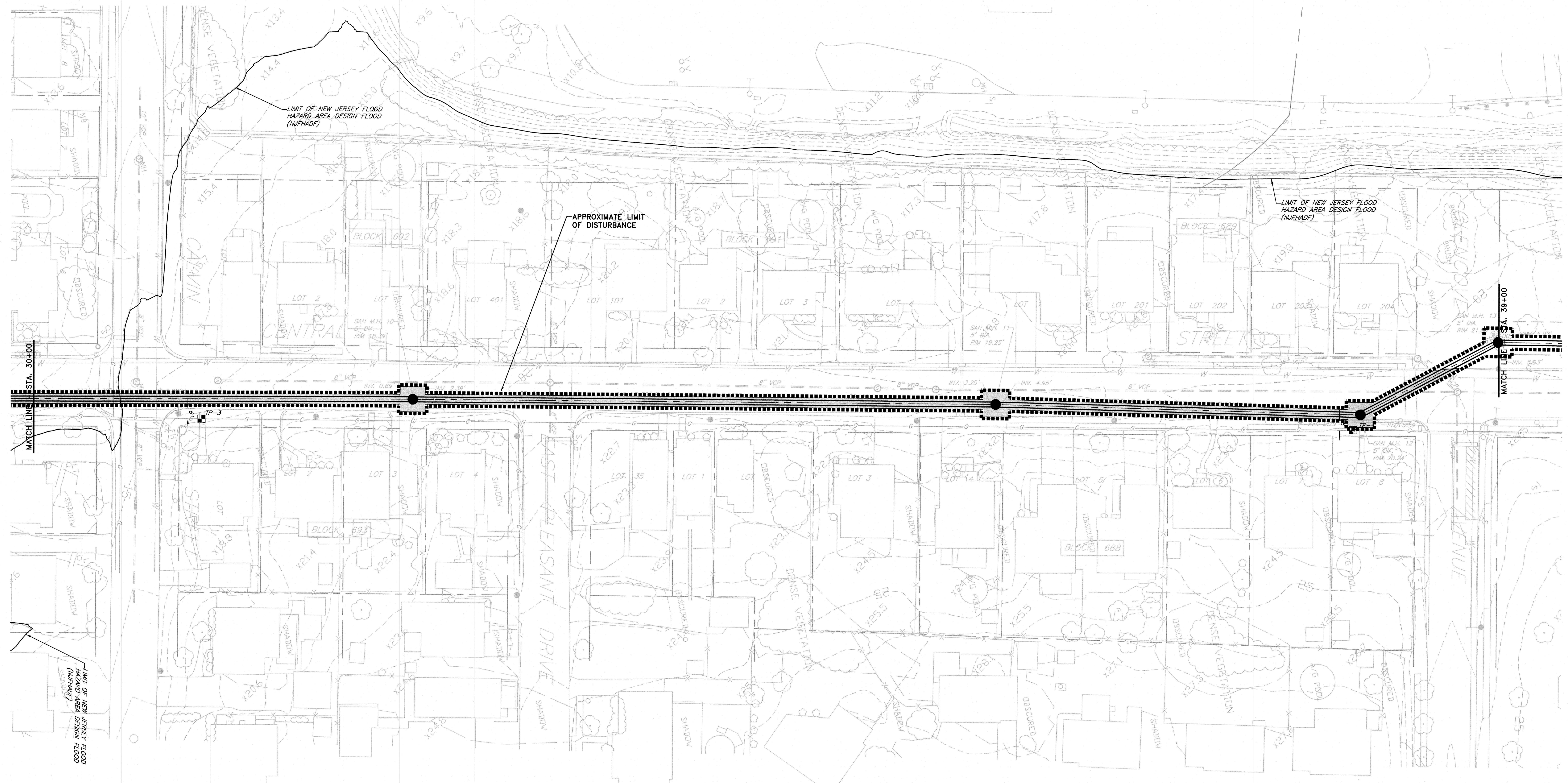
REVISIONS	DATE	BY

RICHARD A. ALAIMO
ENGINEERING COMPANY
 Consulting Engineers
 NJCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL
PORT READING INTERCEPTOR
SOIL EROSION & SEDIMENT CONTROL
PLAN
 STA. 25+00 - STA. 30+00
 SCALE: H: 1" = 30' V: 1" = 3'

CLIENT: **WOODBRIDGE TOWNSHIP**
 PROJECT LOCATION: **WOODBRIDGE TOWNSHIP**
MIDDLESEX COUNTY
NEW JERSEY
 PROJECT NO.: **B-0726-0024-000**
 CONTRACT NO.: **2014-011R**

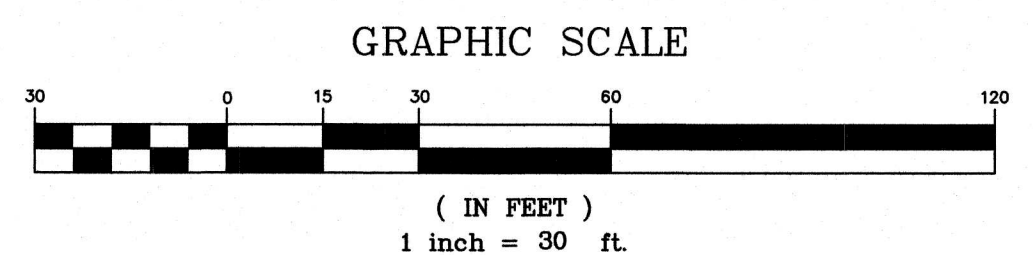
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 CHECKED BY: **CAF**
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 FILE NO.:



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APPROVED: *Richard A. Alaimo* 1/12/23
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

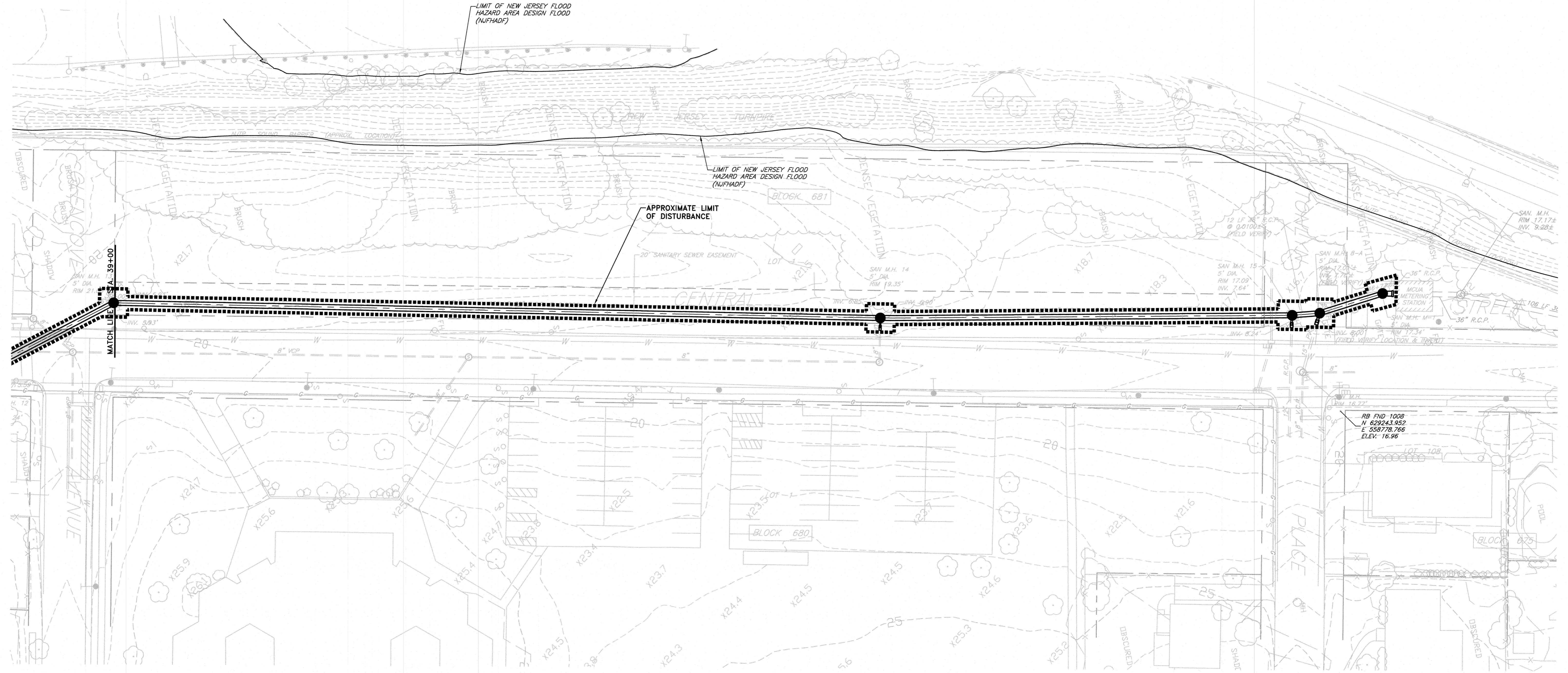
RICHARD A. ALAIMO
ENGINEERING COMPANY
 Consulting Engineers
 NJCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL
PORT READING INTERCEPTOR
SOIL EROSION & SEDIMENT CONTROL
PLAN
 STA. 30+00 - STA. 39+00
 SCALE: H: 1" = 30' V: 1" = 3'

CLIENT: **WOODBIDGE TOWNSHIP**
 PROJECT LOCATION: **WOODBIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY**
 PROJECT NO.: **B-0726-0024-000**
 CONTRACT NO.: **2014-011R**
 DATE: **JAN 2023**
 DESIGNED BY: **CAF**
 DRAWN BY: **CAF**
 CHECKED BY: **CAF**
 DEPT. HEAD:

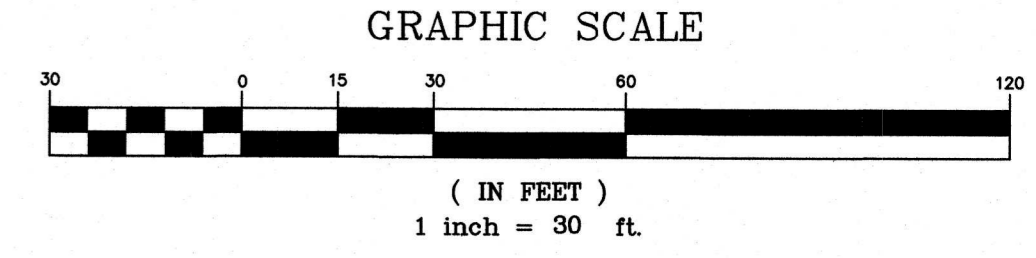
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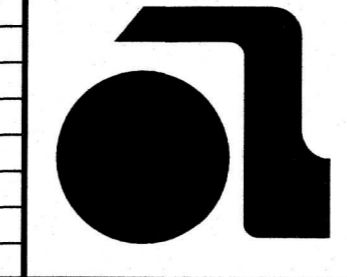
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APPROVED: *Richard A. Alaimo* 1/18/23
 DATE: _____
Richard A. Alaimo
 PROFESSIONAL ENGINEER
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REVISIONS	DATE	BY



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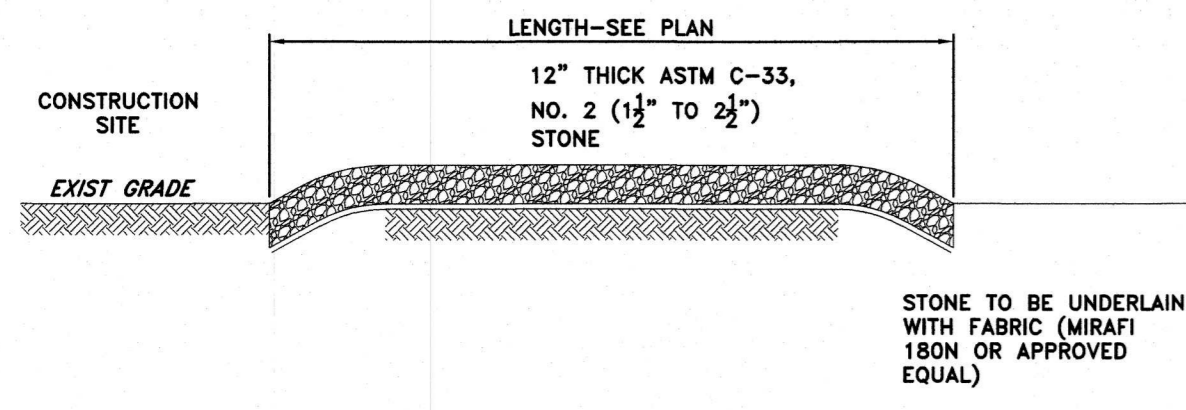
ODOR & CORROSION CONTROL
PORT READING INTERCEPTOR
SOIL EROSION & SEDIMENT CONTROL
PLAN
 STA. 39+00 - STA. 46+24.18
 SCALE: H: 1" = 30' V: 1" = 3'

CLIENT: **WOODBRIDGE TOWNSHIP**
 PROJECT LOCATION: **WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY**

DATE: **JAN 2023**
 DESIGNED BY: **CAF**
 DRAWN BY: **CAF**
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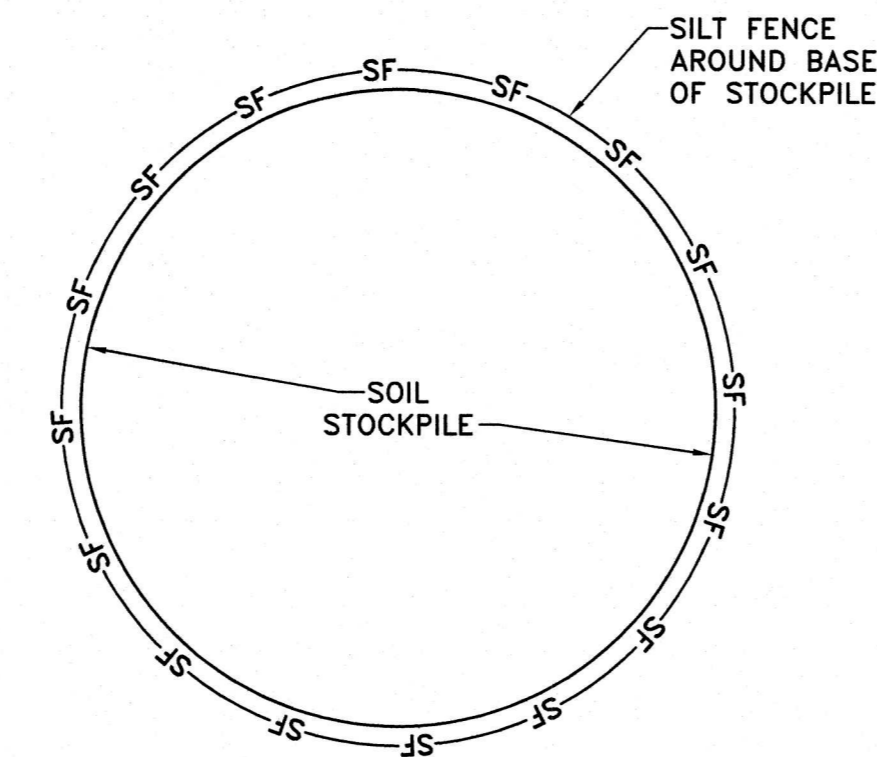
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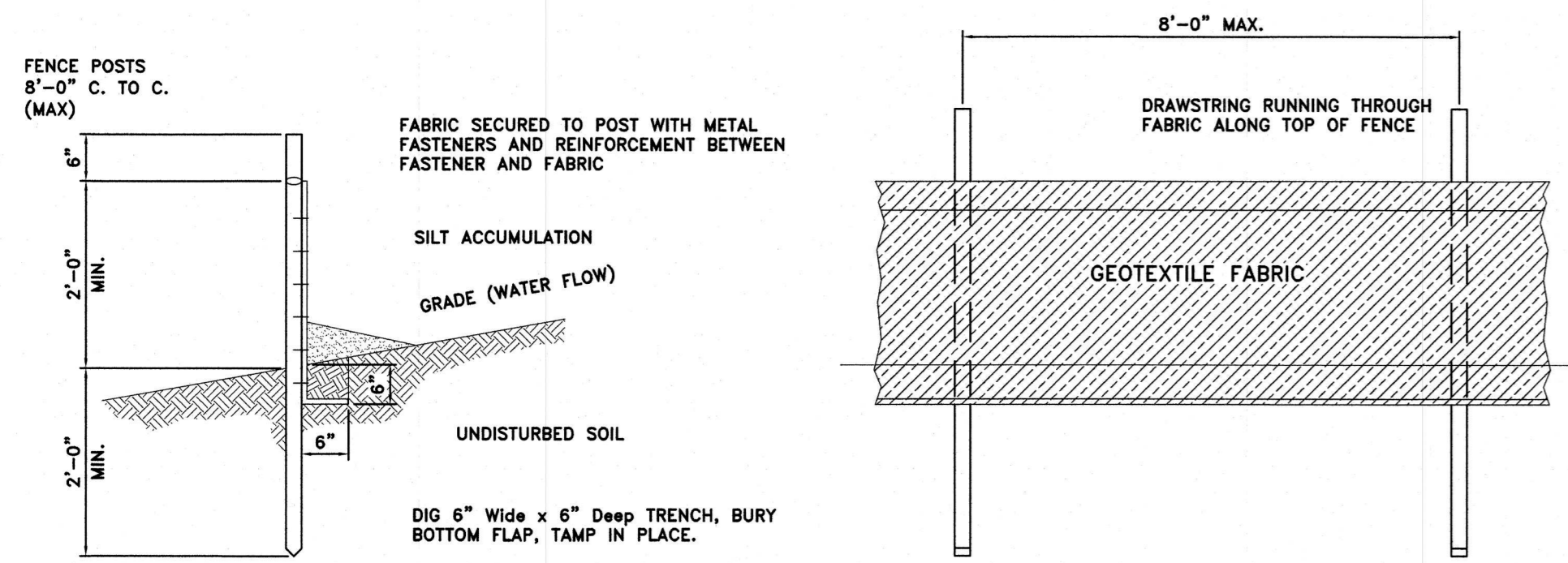


NOTES:
1. THE STONE CONSTRUCTION ENTRANCE SHALL BE WASHED DOWN OR REPLACED AS NECESSARY, AND AS DIRECTED BY THE SOIL EROSION INSPECTOR, TO PREVENT THE TRANSPORTATION OF SEDIMENT INTO THE SURROUNDING ROADWAYS.

DETAIL 1 STABILIZED CONSTRUCTION ENTRANCE
SCALE: N.T.S.



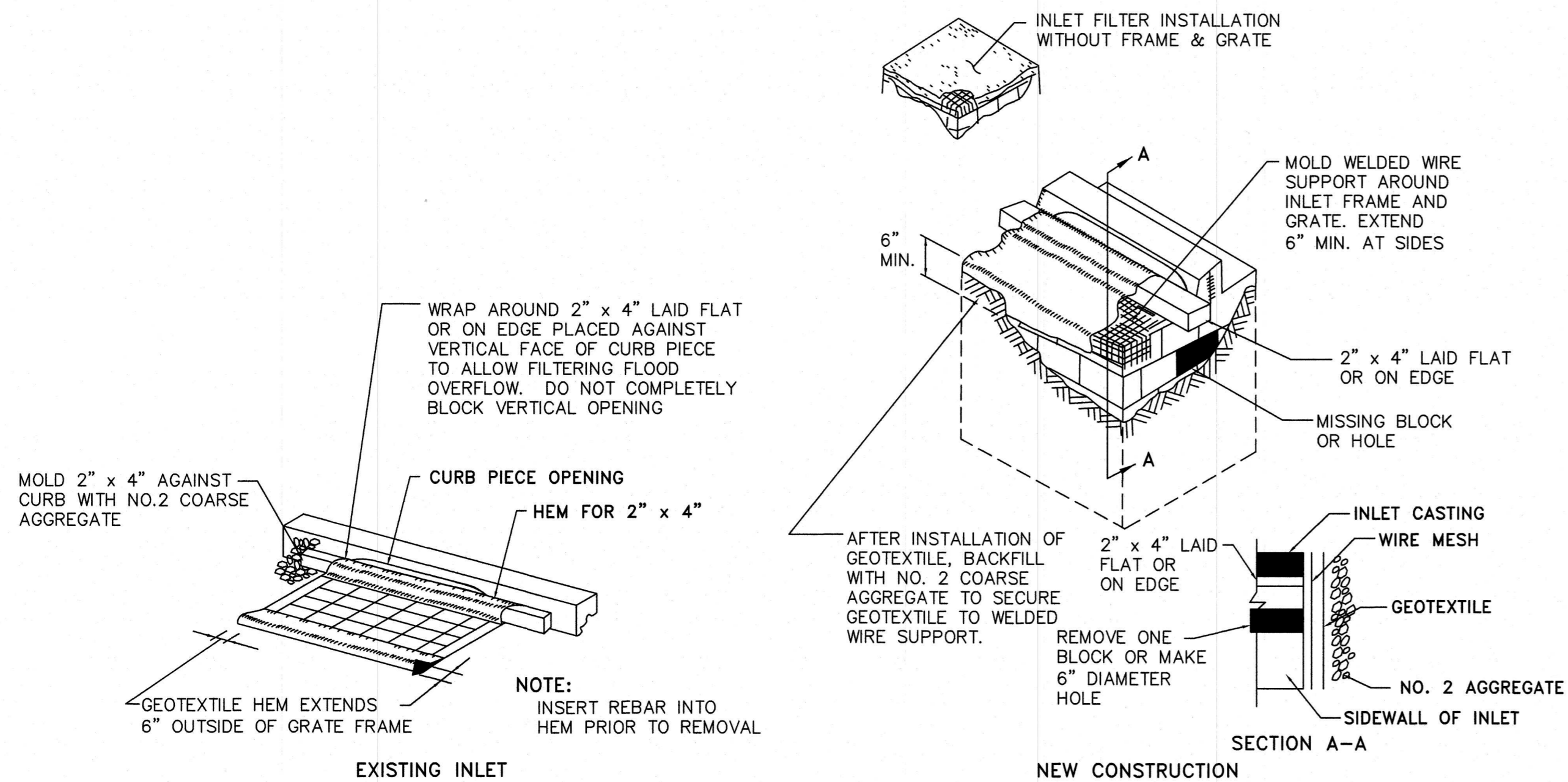
DETAIL 3 STOCKPILE DETAIL
SCALE: N.T.S.



REQUIREMENTS FOR SILT FENCE

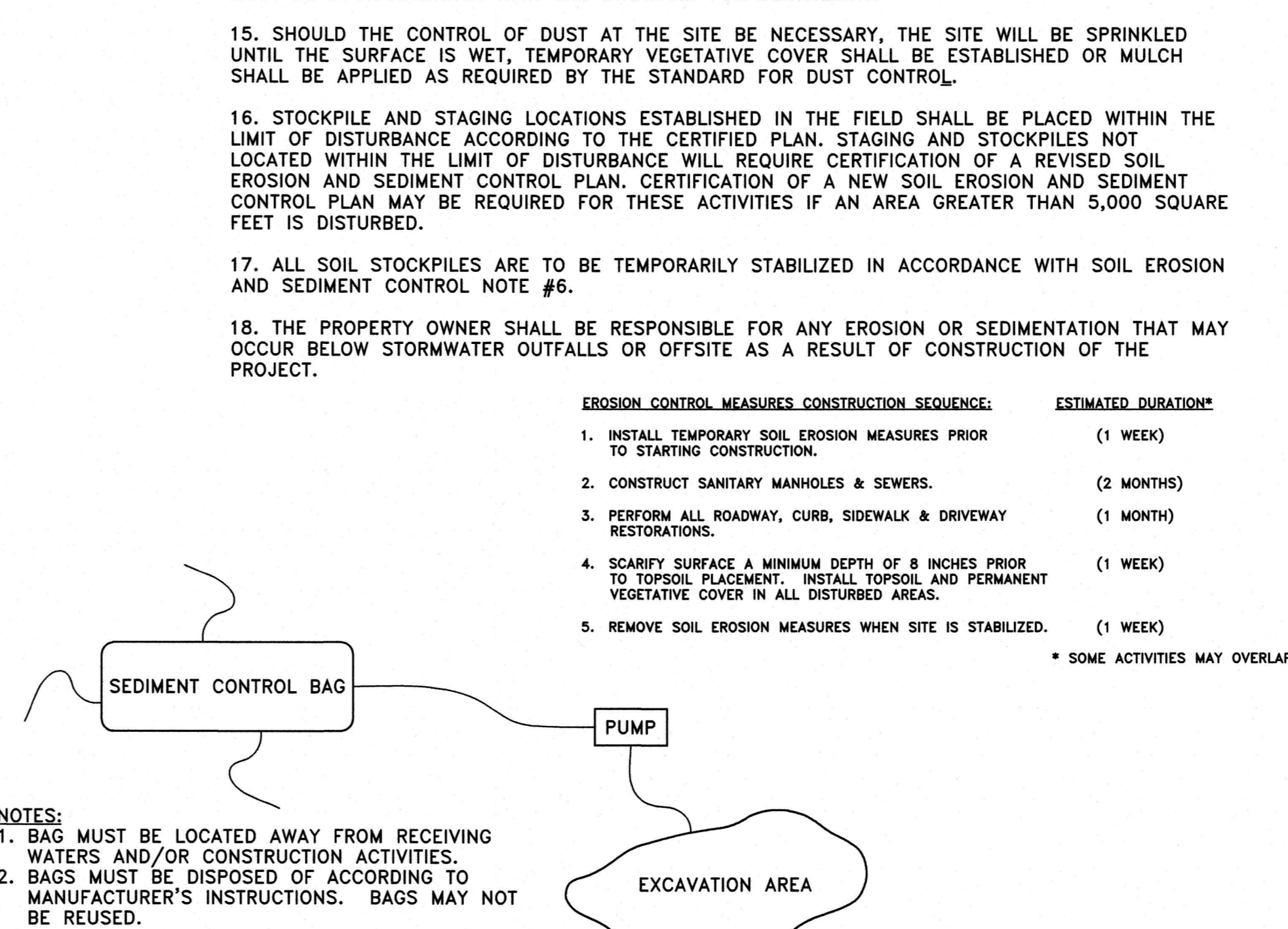
1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET 6 INCHES ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1 1/2 INCHES.
2. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
3. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENERS AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

DETAIL 2 SILT FENCE
SCALE: N.T.S.



DO NOT USE IF ROADWAY FLOODING WILL RESULT

DETAIL 4 INLET FILTER, TYPE 1
SCALE: N.T.S.



- NOTES:
1. BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS AND/OR CONSTRUCTION ACTIVITIES.
 2. BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS. BAGS MAY NOT BE REUSED.

DETAIL 5 SEDIMENT CONTROL BAG FOR DEWATERING
SCALE: N.T.S.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY (CONTACT INFORMATION BELOW).
2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
4. N.J.S.A. 4:24-39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.
5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN TEN (10) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2 1/2 TONS PER ACRE, ACCORDING TO STANDARD FOR STABILIZATION WITH MULCH ONLY.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.
7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.
8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.
9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.
10. PERMANENT VEGETATION IS TO BE SEED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.
11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A pH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A pH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.
13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.
15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET. TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.
16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.
17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.
18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

EROSION CONTROL MEASURES CONSTRUCTION SEQUENCE:	ESTIMATED DURATION*
1. INSTALL TEMPORARY SOIL EROSION MEASURES PRIOR TO STARTING CONSTRUCTION.	(1 WEEK)
2. CONSTRUCT SANITARY MANHOLES & SEWERS.	(2 MONTHS)
3. PERFORM ALL ROADWAY, CURB, SIDEWALK & DRIVEWAY RESTORATIONS.	(1 MONTH)
4. SCARIFY SURFACE A MINIMUM DEPTH OF 8 INCHES PRIOR TO TOPSOIL PLACEMENT. INSTALL TOPSOIL AND PERMANENT VEGETATIVE COVER IN ALL DISTURBED AREAS.	(1 WEEK)
5. REMOVE SOIL EROSION MEASURES WHEN SITE IS STABILIZED.	(1 WEEK)

* SOME ACTIVITIES MAY OVERLAP

SITE PREPARATION:

GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING.

SOILS HAVING A pH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE REMOVED TO A DEPTH OF 12" AND REPLACED WITH A SOIL HAVING A pH OF 5 OR MORE BEFORE INITIATING SEEDBED PREPARATION.

IMMEDIATELY PRIOR TO TOPSOIL APPLICATION (PERMANENT VEGETATION AREAS) AND SEEDING OR SODDING, THE SURFACE SHOULD BE SCARIFIED 8" MINIMUM TO DE-COMPACT THE SOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

INSTALL ALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES.

SEEDBED PREPARATION:

APPLY GROUND LIMESTONE AND FERTILIZER AT REQUIRED RATES. WORK LINE AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

TEMPORARY VEGETATIVE STABILIZATION

AREAS THAT ARE TEMPORARILY SEEDDED SHALL BE PROTECTED BY PERENNIAL RYE GRASS APPLIED AT THE RATE OF 2.3 POUNDS PER 1,000 SF (100 POUNDS PER ACRE).

PERMANENT VEGETATIVE STABILIZATION

HARD FESCUE	4.0 POUNDS PER 1,000 SF (175 POUNDS PER ACRE)
PERENNIAL RYEGRASS	1.0 POUNDS PER 1,000 SF (45 POUNDS PER ACRE)
KENTUCKY BLUEGRASS (BLEND)	1.0 POUNDS PER 1,000 SF (45 POUNDS PER ACRE)

AFTER SEEDING, FIRM THE SOIL WITH A CORRUGATED ROLLER TO ASSURE GOOD SEED CONTACT, TO RESTORE CAPILLARITY AND IMPROVE SEEDING EMERGENCE.

ACCEPTABLE PLANTING DATES ARE 3/1 THRU 10/15. IRRIGATION IS REQUIRED DURING THE TIME PERIOD 5/1 - 8/14.

FERTILIZER APPLICATION RATE (TEMPORARY SEEDING)

FERTILIZER FOR TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS COOPERATIVE EXTENSION OFFICES.

FERTILIZER SHALL BE APPLIED AT A RATE OF 11 POUNDS PER 1,000 SF (500 POUNDS PER ACRE) OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE.

FERTILIZER APPLICATION RATE (PERMANENT SEEDING)

FERTILIZER FOR PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS COOPERATIVE EXTENSION OFFICES.

FERTILIZER SHALL BE APPLIED AT A RATE OF 11 POUNDS PER 1,000 SF (500 POUNDS PER ACRE) 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 THE RATE OF APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.

LIMESTONE APPLICATION RATE (TEMPORARY SEEDING)

LIMESTONE FOR TEMPORARY SEEDING SHALL BE IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS COOPERATIVE EXTENSION OFFICES.

LIMESTONE SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE UNLESS SOIL TESTING INDICATES OTHERWISE.

LIMESTONE APPLICATION RATE (PERMANENT SEEDING)

LIMESTONE FOR PERMANENT SEEDING SHALL BE IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS COOPERATIVE EXTENSION OFFICES.

LIMESTONE SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE UNLESS SOIL TESTING INDICATES OTHERWISE.

MULCHING (TEMPORARY AND PERMANENT SEEDING)

STRAW OR HAY - UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, OR SALT HAY TO BE APPLIED AT THE RATE OF 1 1/2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH.

MULCH SHALL BE ANCHORED IMMEDIATELY AFTER PLACEMENT BY ONE OF THE FOLLOWING METHODS:

VEGETABLE BASED GELS
NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS.

HIGH POLYMER SYNTHETIC PLASTIC EMULSION
MISCELLANEOUSLY FORMULATED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

MULCH APPLICATION RATES 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.

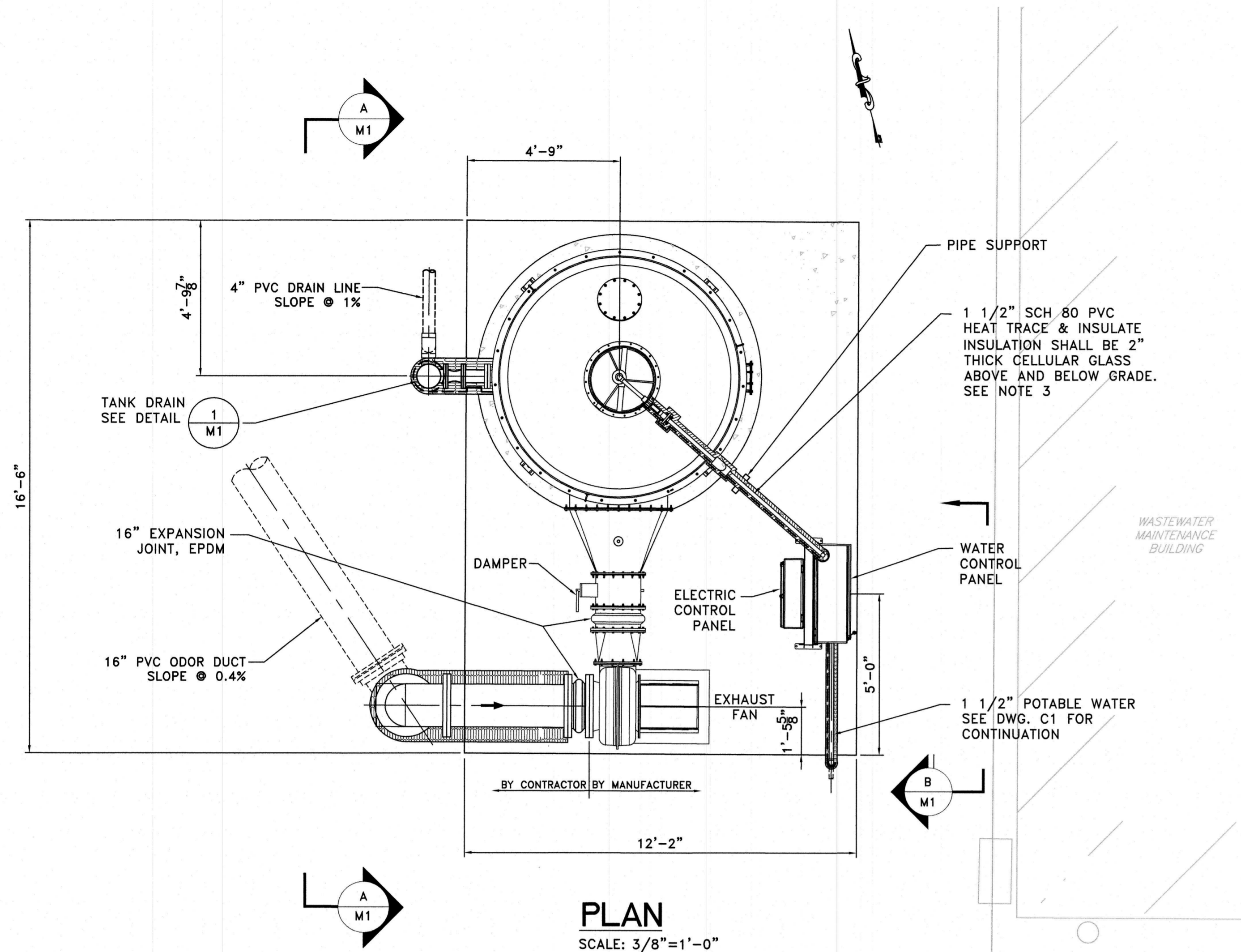
DUST CONTROL

DUST CONTROL SHALL BE IN ACCORDANCE WITH 4.10.1 OF THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY". THE FOLLOWING METHODS WILL BE USED FOR CONTROLLING DUST.

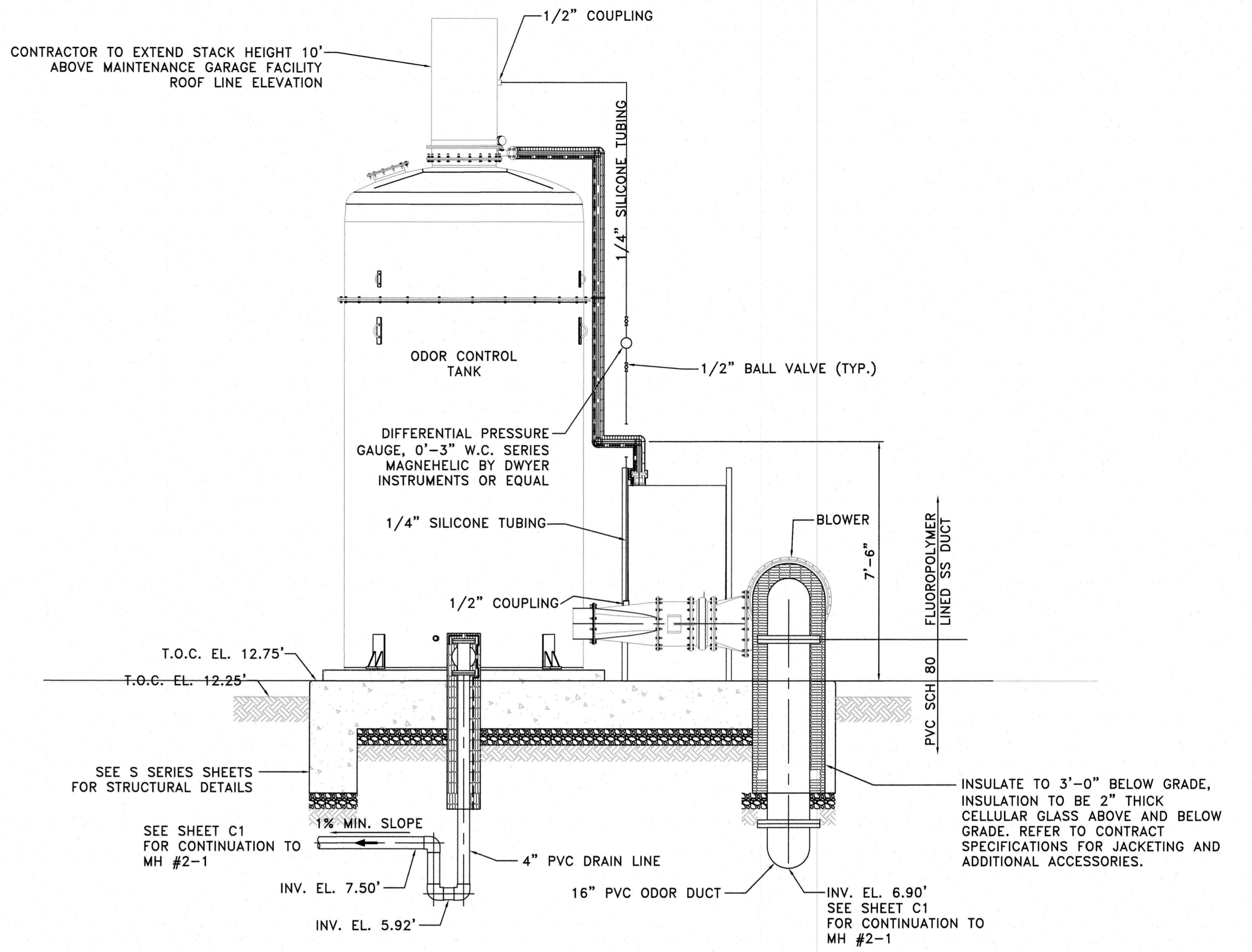
1. APPLICATION OF MULCH AND/OR VEGETATIVE COVER AS SPECIFIED IN SEEDING, LIMING, FERTILIZING, AND MULCHING SPECIFICATIONS.
2. TILLAGE TO ROUGHEN THE SURFACE AND BRING CLOUDS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. PROCEED FROM THE WINDWARD SIDE OF THE SITE WITH CHISEL TOOTH PLOWS, TWELVE INCH (12") APART, OR SPRING TOOTHED HARROWS.
3. SPRINKLE SITE UNTIL SURFACE IS WET. SPRINKLING SHOULD BE DONE THROUGHOUT THE CONSTRUCTION PERIOD AS REQUIRED TO CONTROL DUST.

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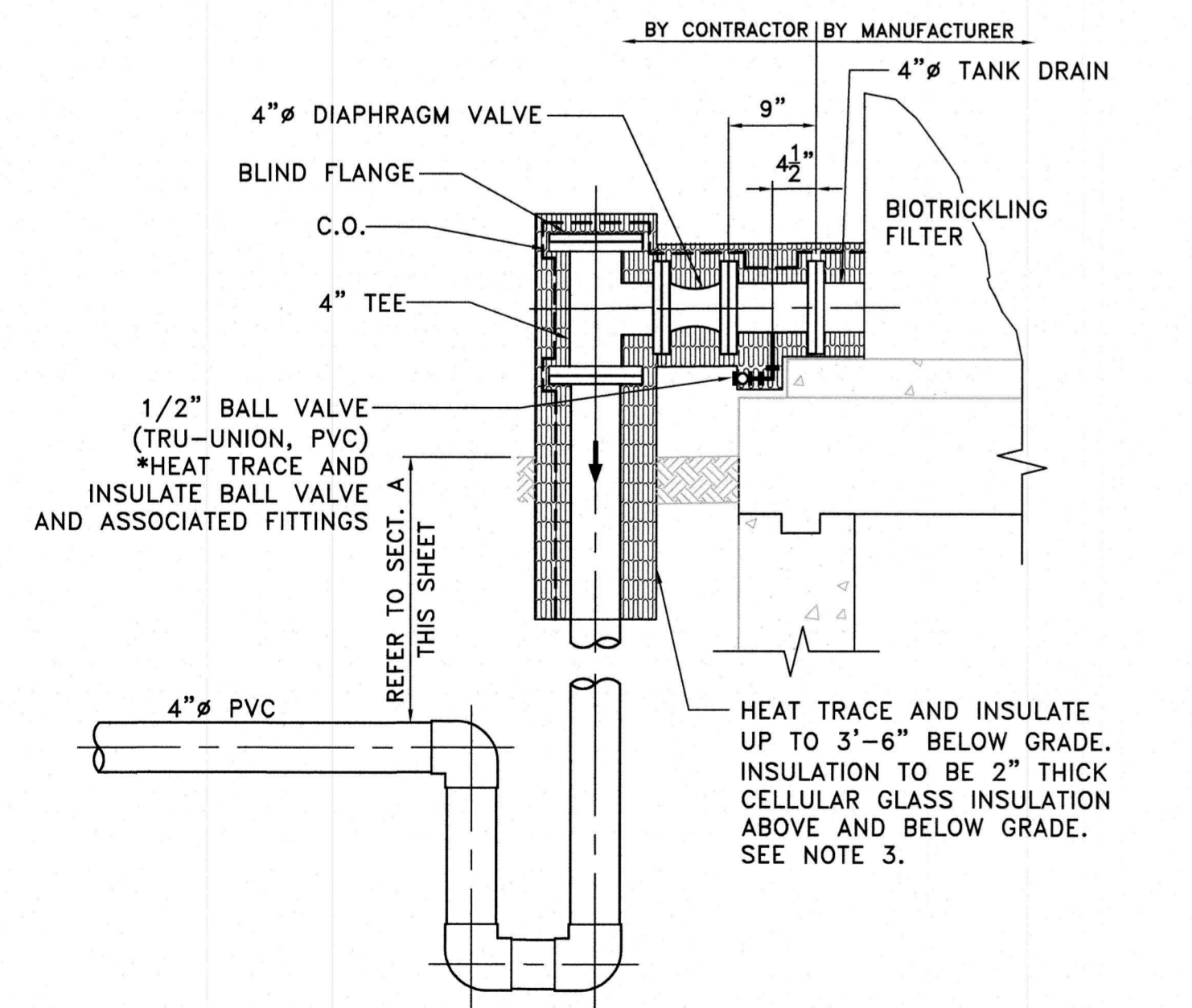
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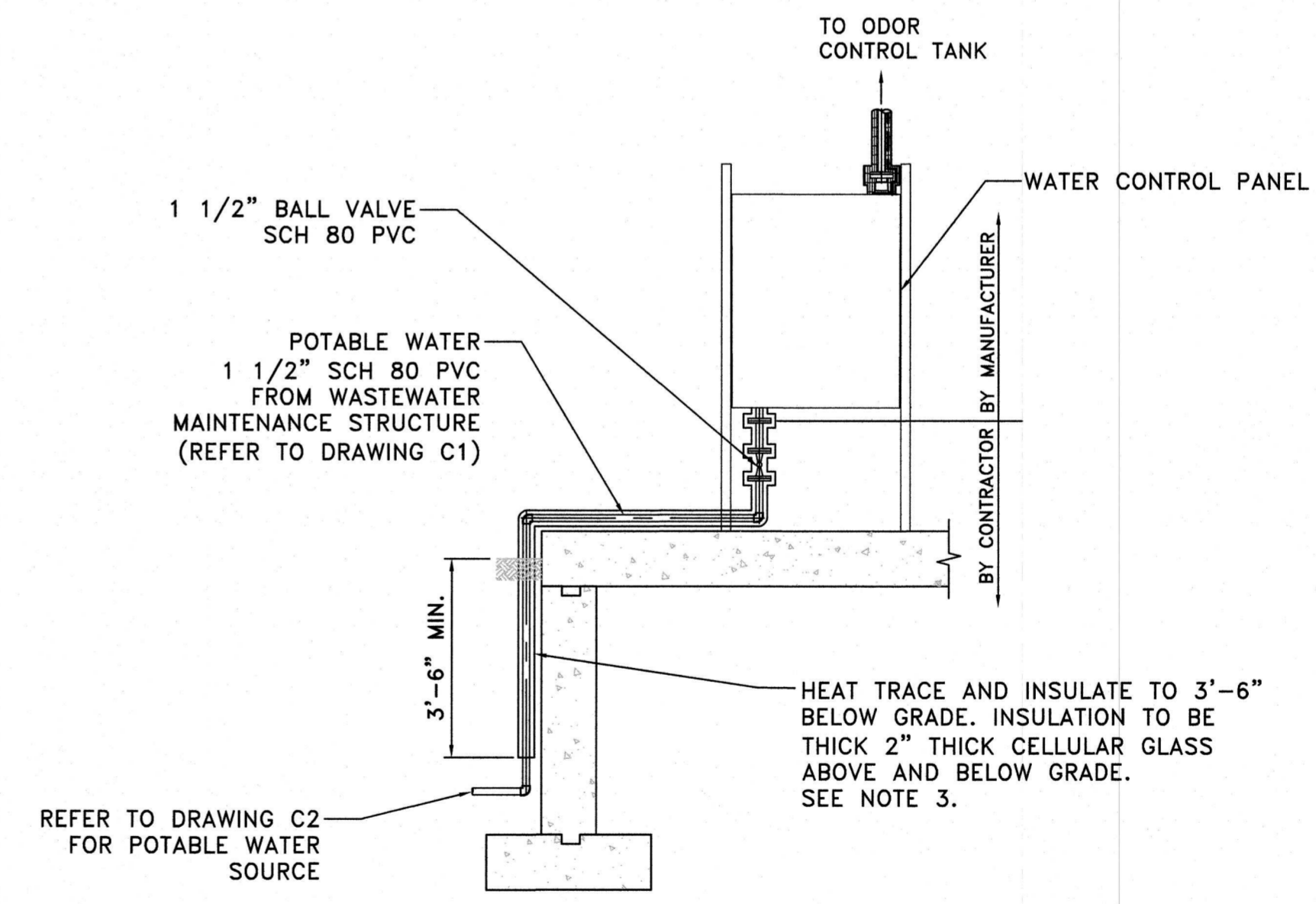
PLAN
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SECTION A
SCALE: 3/8"=1'-0"



DETAIL 1 BIOTRICKLING TANK DRAIN
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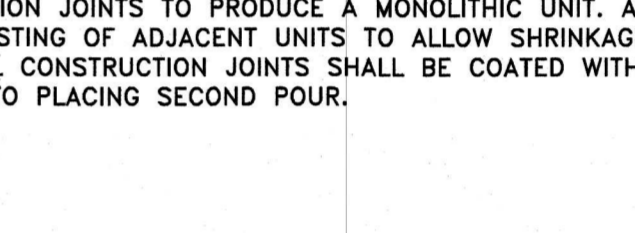
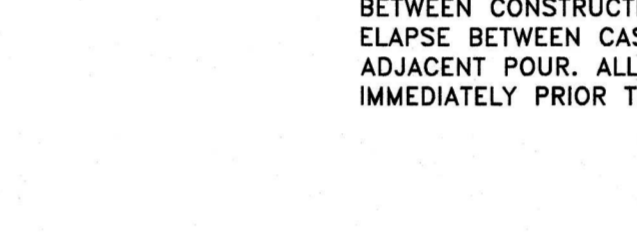
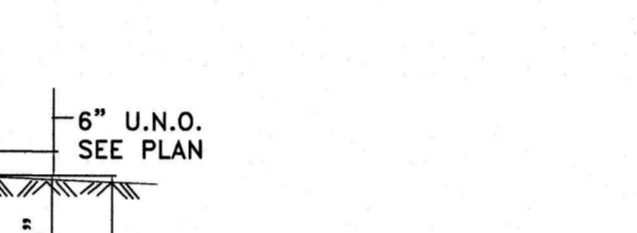
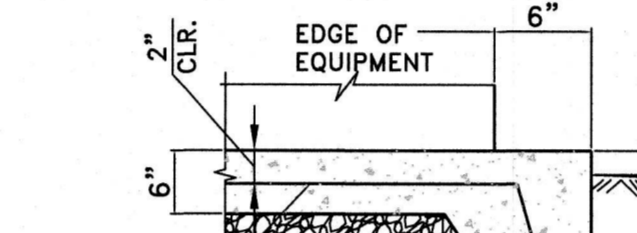
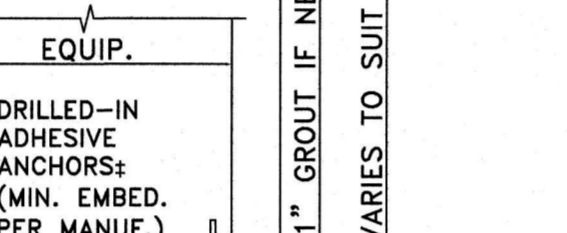
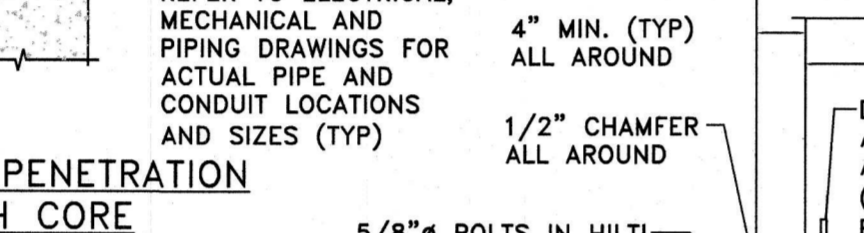
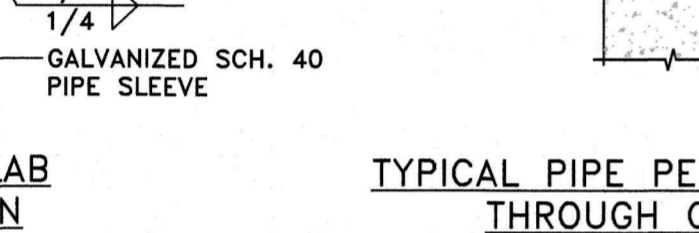
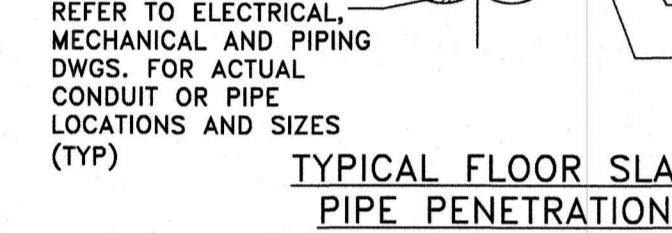
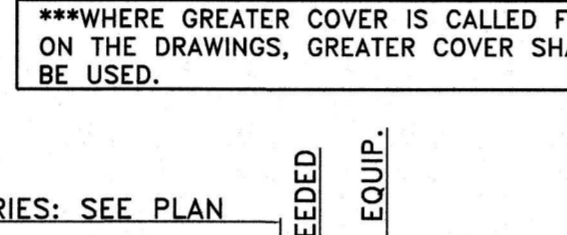
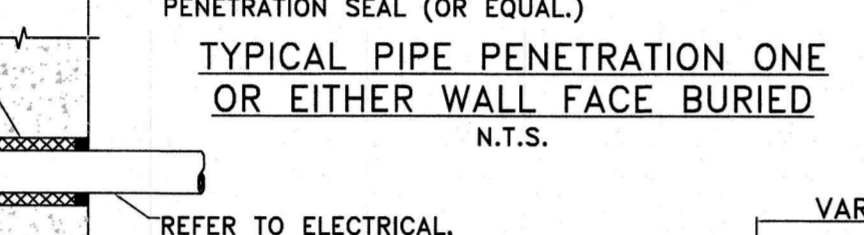
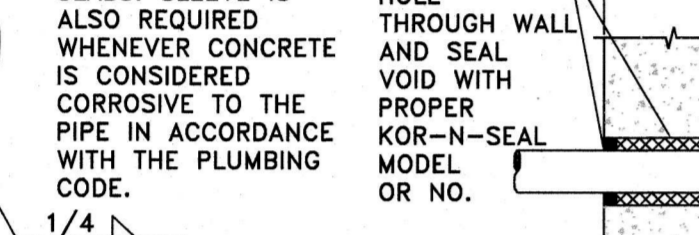
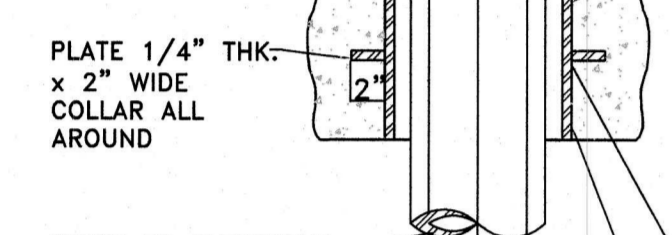
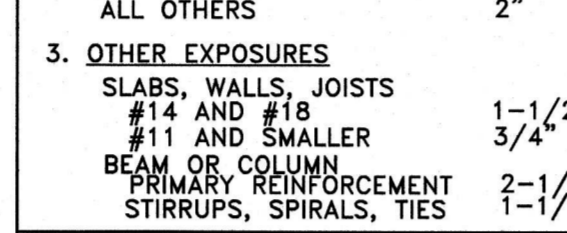
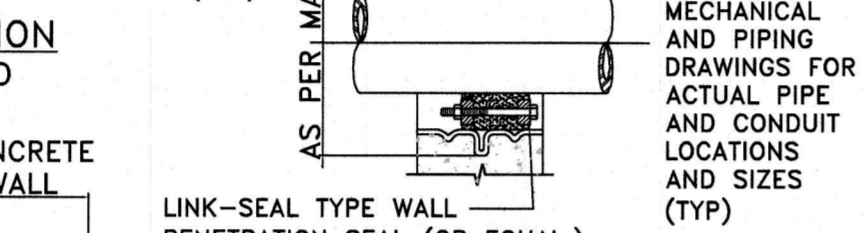
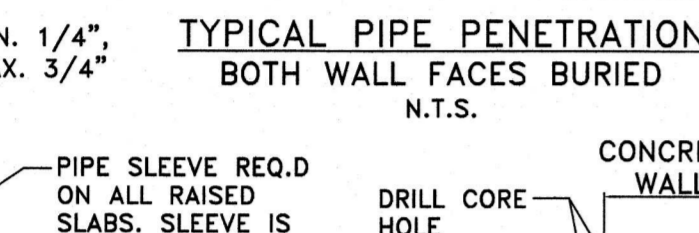
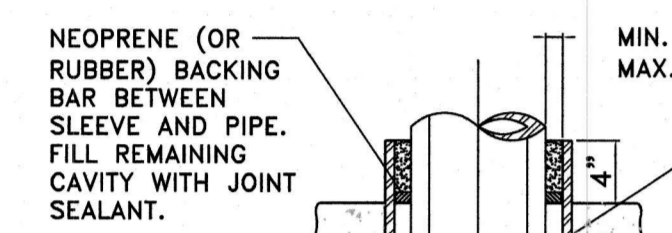
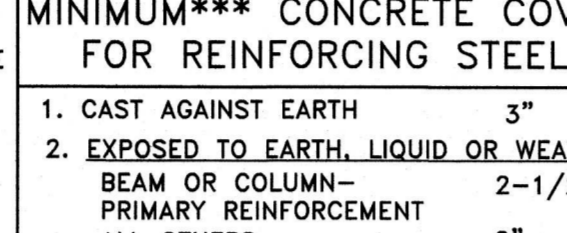
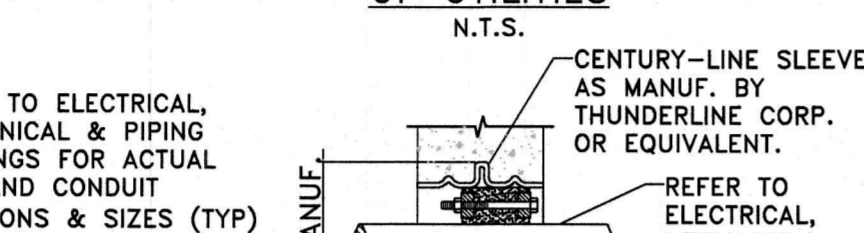
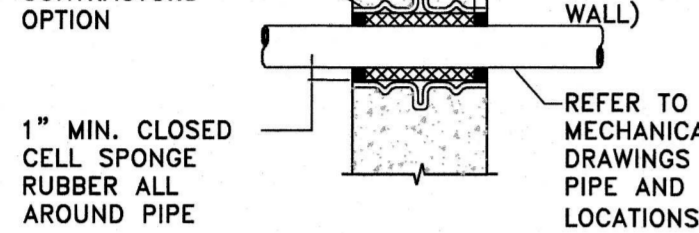
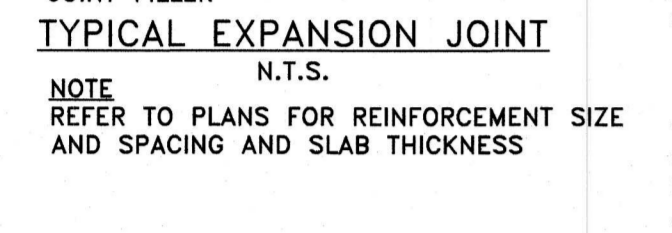
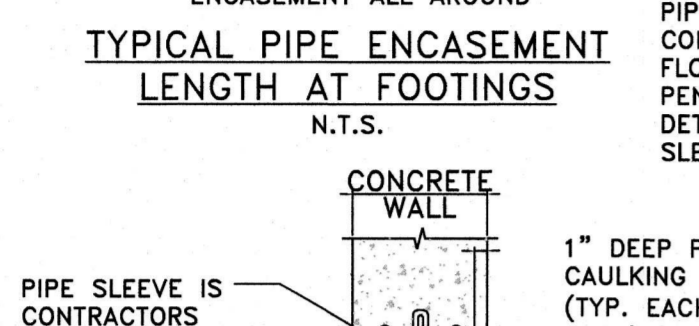
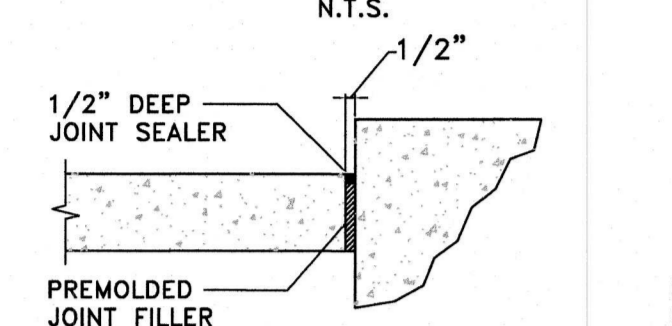
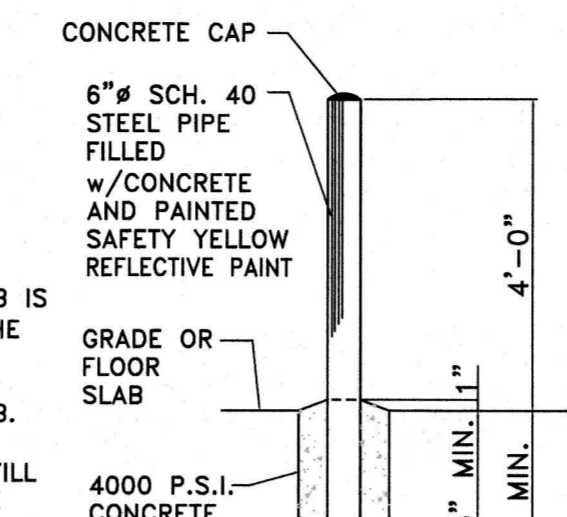
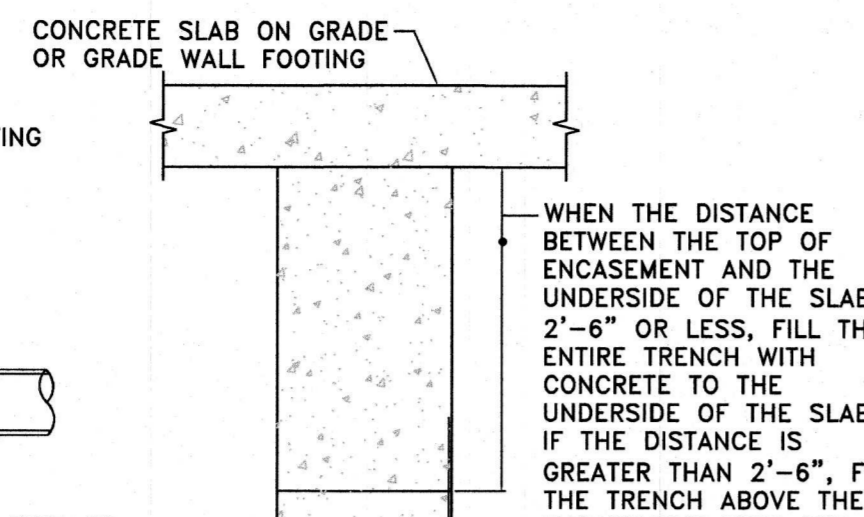
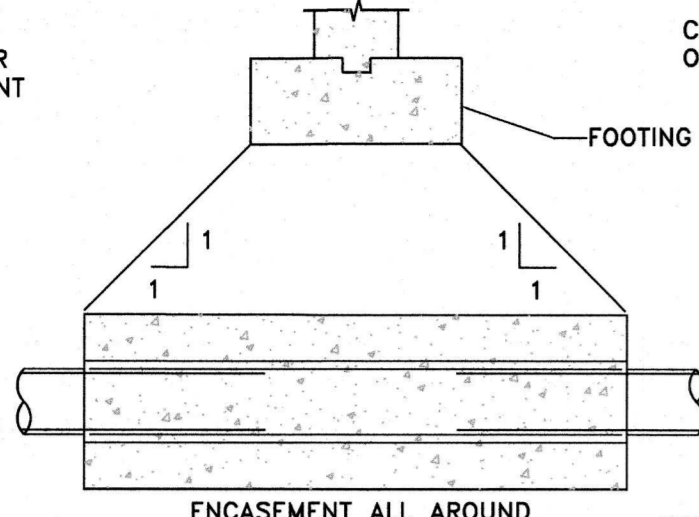
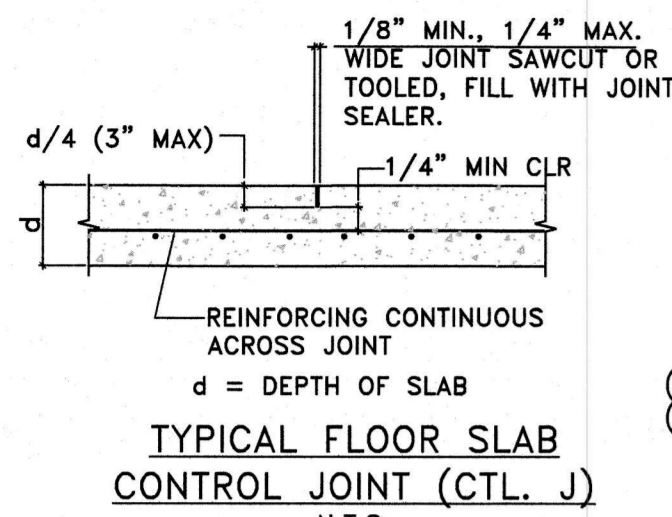


SECTION B
SCALE: 3/8"=1'-0"

- NOTES:**
- REFER TO DWG. C1 FOR YARD PIPING.
 - REFER TO S SERIES DWGS. FOR STRUCTURAL PLANS, SECTIONS, AND DETAILS.
 - HEAT TRACING AND INSULATION SHALL BE:
 - SIZED FOR FREEZE PROTECTION—MAINTAIN 40°F @ -10°F AMBIENT.
 - ABOVE AND BELOW GRADE INSULATION SHALL BE CELLULAR GLASS.
 - FREEZE PROTECTION OF PIPING INCLUDES HEAT TRACING, INSULATION, TEMPERATURE CONTROLLER, JACKET, SPLICE, AND REQUIRED ACCESSORIES.
 - REFER TO CONTRACT SPECIFICATIONS.
 - ELECTRIC CONTROL PANEL TO BE LOCATED > 3'-0" FROM BIOTRICKLING FILTER VESSEL, BLOWER MOTOR, AND ODOR DUCTING.
 - THE COMPLETE ODOR CONTROL SYSTEM SHALL BE PROVIDED BY THE ODOR CONTROL SYSTEM MANUFACTURER, INCLUDING BUT NOT LIMITED TO REACTOR TANK, CONTROL PANEL, WATER CONTROL PANEL, BLOWER, DIFFERENTIAL PRESSURE GAUGE, SILICONE TUBING, GAUGE ISOLATION VALVES.
 - EXHAUST FAN TO HAVE INTEGRAL DRAIN.

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APPROVED: <i>Richard A. Alaimo</i> 1/18/23 Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR	CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023 DESIGNED BY: LMG	SHEET M1
	PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY		PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R	DRAWN BY: HC CHECKED BY:	ODOR CONTROL SYSTEM PLAN AND SECTION	SCALE: AS SHOWN



MIN. TENSION DEVELOPMENT LENGTH** OF LAPPED SPLICES OF UNCOATED BARS (INCHES) FOR f'c=4000 PSI (CRSI 2008)

BAR SIZE	CLASS B (ACI 12.5.2)				MIN. LENGTH OF EMBEDMENT (l _{dh}) FOR END ANCHORAGE WITH STANDARD HOOKS (4000 PSI MIN.)
	TOP BAR*		ALL OTHERS		
	1	2	1	2	
#3	24	36	22	32	6
#4	32	48	29	43	7
#5	40	60	36	54	9
#6	48	72	43	64	10
#7	70	106	63	94	12
#8	80	121	72	107	14
#9	91	136	81	121	15
#10	102	153	91	136	17
#11	113	170	101	151	19

- NOTES:
- TABULATED VALUES ARE BASED ON A MINIMUM YIELD STRENGTH OF 60,000 PSI. LENGTHS ARE IN INCHES.
 - TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPICE LENGTHS ARE CALCULATED PER ACI 318-05, SECTIONS 12.2.2 AND 12.15, RESPECTIVELY.
 - TABULATED VALUES FOR BEAMS OR COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND CONCRETE COVER MEETING MINIMUM CODE REQUIREMENTS.
 - CASE 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL MEMBER, CONCRETE COVER, AND CENTER-TO-CENTER SPACING OF THE BARS ARE DEFINED AS:
 - BEAMS, COLUMNS CASE 1 CONCRETE COVER AT LEAST 1.0d_b AND C.-C. AT LEAST 2.0d_b
 - CASE 2 CONCRETE COVER LESS THAN 1.0d_b AND C.-C. AT LEAST 2.0d_b
 - ALL OTHERS CASE 1 CONCRETE COVER AT LEAST 1.0d_b AND C.-C. AT LEAST 3.0d_b
 - CASE 2 CONCRETE COVER LESS THAN 1.0d_b AND C.-C. AT LEAST 3.0d_b
 - LAP SPICE LENGTHS (MIN. 12") ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS B = 1.3d_b. WHEN DETERMINING THE LAP SPICE LENGTH, l_s IS CALCULATED WITHOUT THE 12-INCH MINIMUM OF ACI 12.2.1.
 - ACI 318 DOES NOT ALLOW TENSION SPLICES FOR #14 OR #18 BARS.
 - TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CASE BELOW THE BARS.
 - FOR GRADE 75 REINFORCING BARS, LENGTHS MUST BE MULTIPLIED BY 1.25
 - FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUE BY 1.33.

- MINIMUM*** CONCRETE COVER FOR REINFORCING STEEL
- CAST AGAINST EARTH 3"
 - EXPOSED TO EARTH, LIQUID OR WEATHER BEAM OR COLUMN- PRIMARY REINFORCEMENT 2-1/2"
 - ALL OTHERS 2"
 - OTHER EXPOSURES:
 - SLABS, WALLS, JOISTS #14 AND #18 1-1/2"
 - #11 AND SMALLER BEAM OR COLUMN- PRIMARY REINFORCEMENT 2-1/2"
 - STIRRUPS, SPIRALS, TIES 1-1/2"
- ***WHERE GREATER COVER IS CALLED FOR ON THE DRAWINGS, GREATER COVER SHALL BE USED.

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APPROVED: DATE: 1/10/23

Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS: _____ DATE: _____ BY: _____

RICHARD A. ALAIMO ENGINEERING COMPANY
Consulting Engineers
NJDC 24GA27988800
200 HIGH STREET MOUNT HOLLY, N.J.
201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR

CLIENT: WOODBRIDGE TOWNSHIP

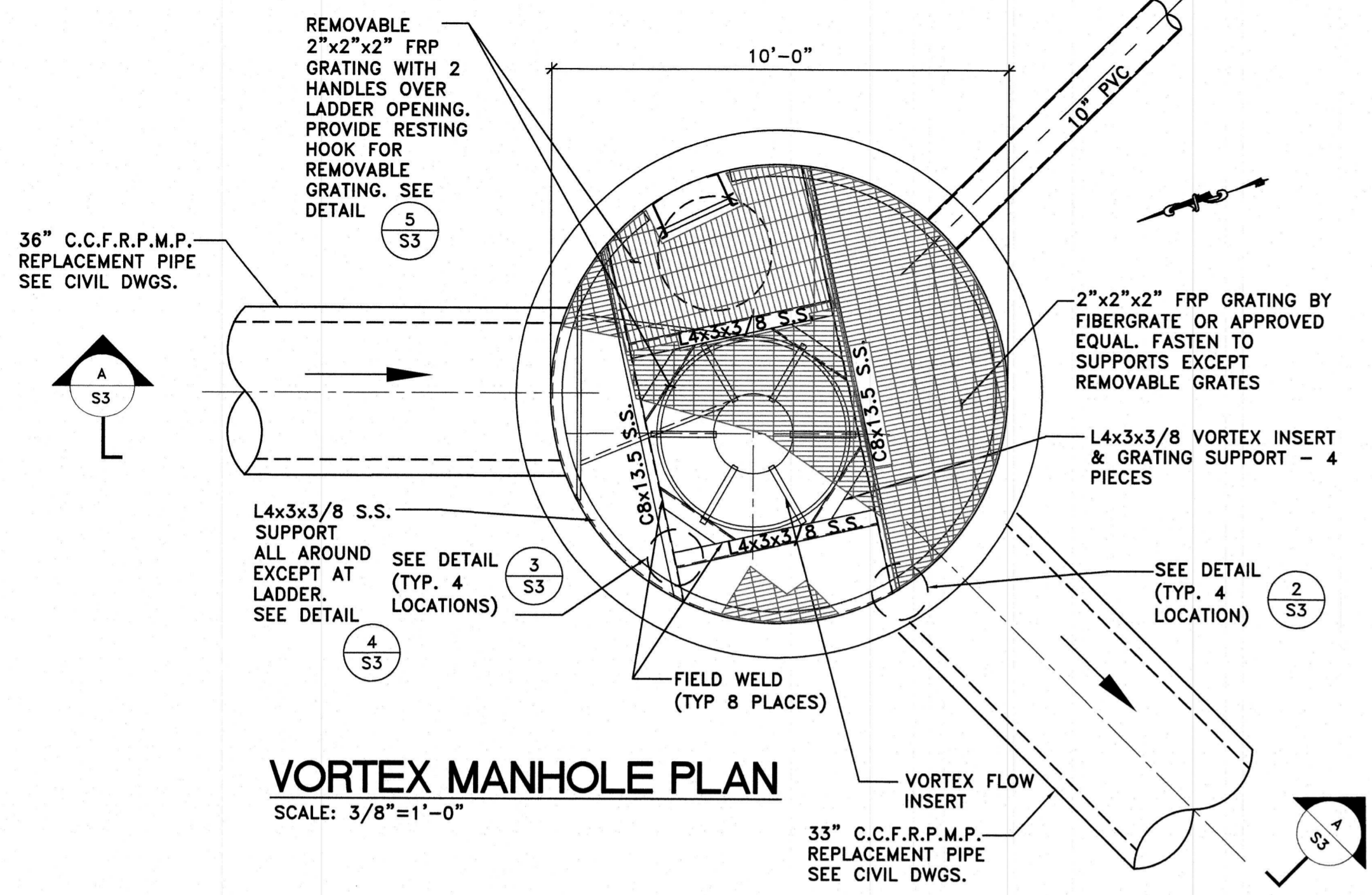
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PROJECT NO.: B-0726-0024-000
CONTRACT NO.: 2014-011R

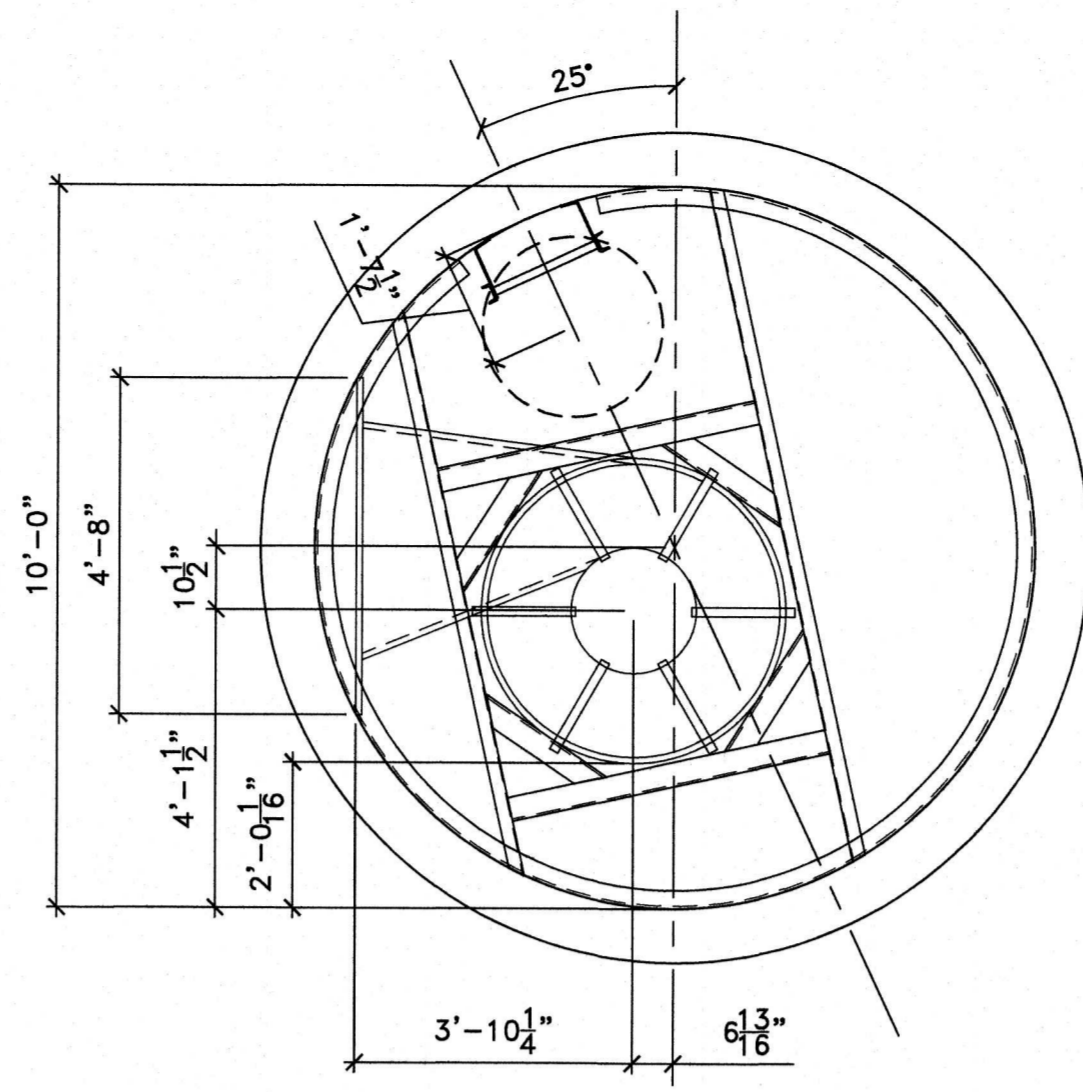
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CHECKED BY: _____
DEPT. HEAD: _____

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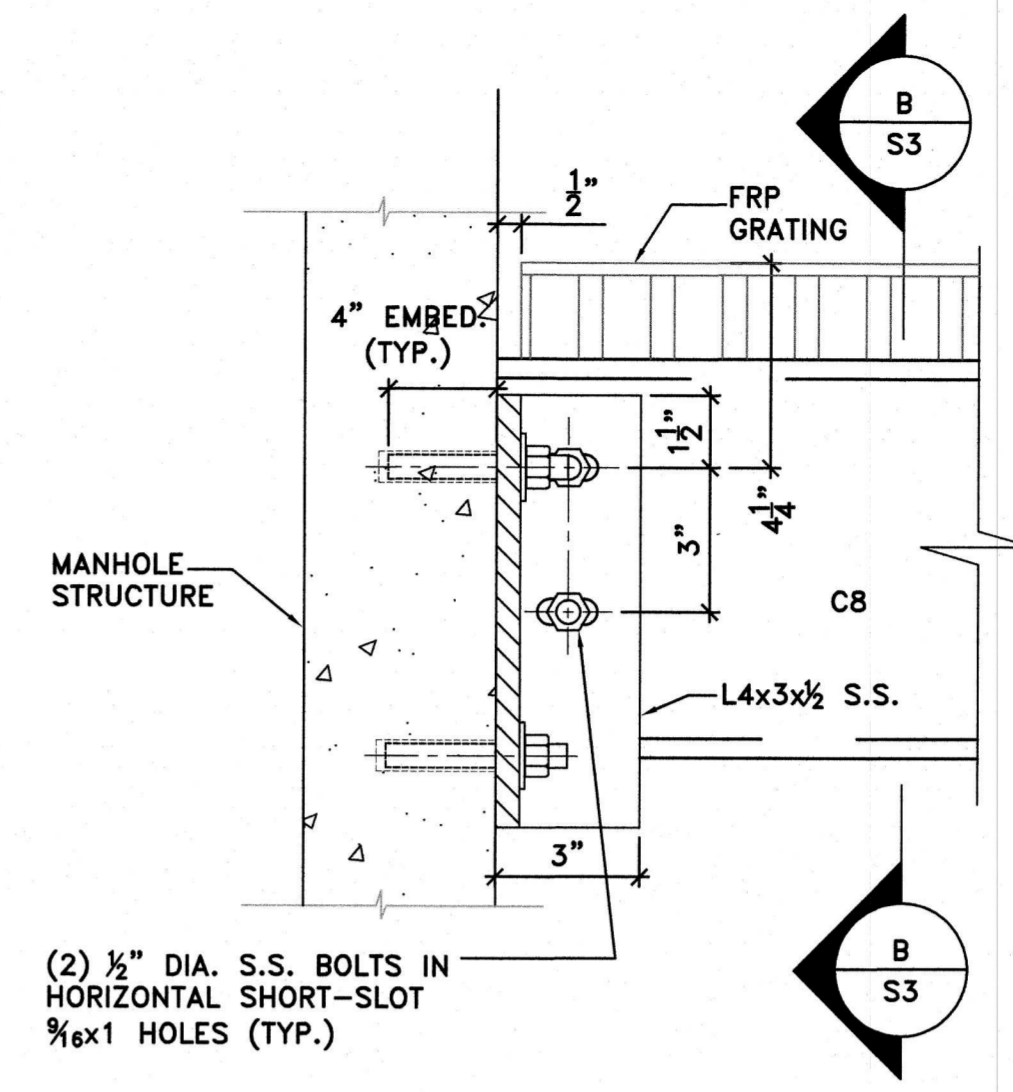
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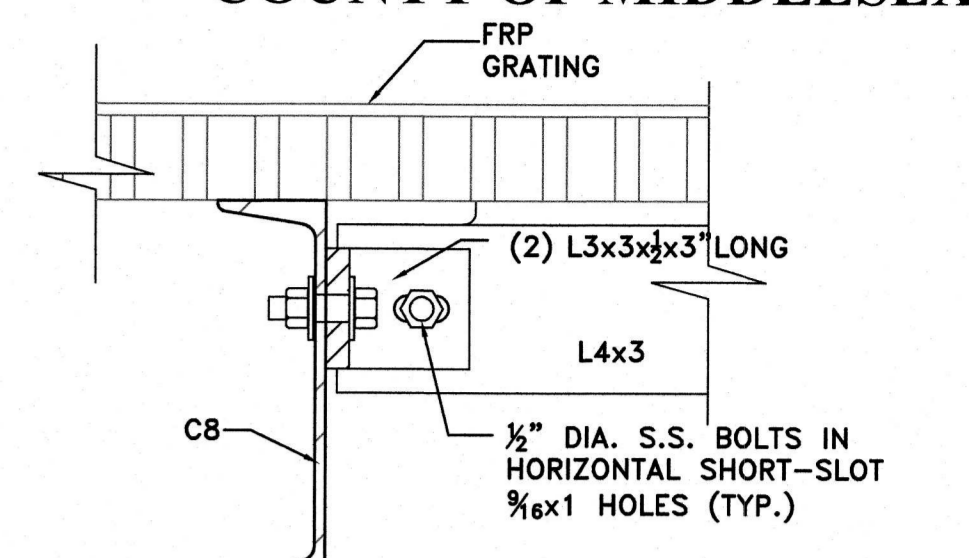
VORTEX MANHOLE PLAN
SCALE: 3/8"=1'-0"



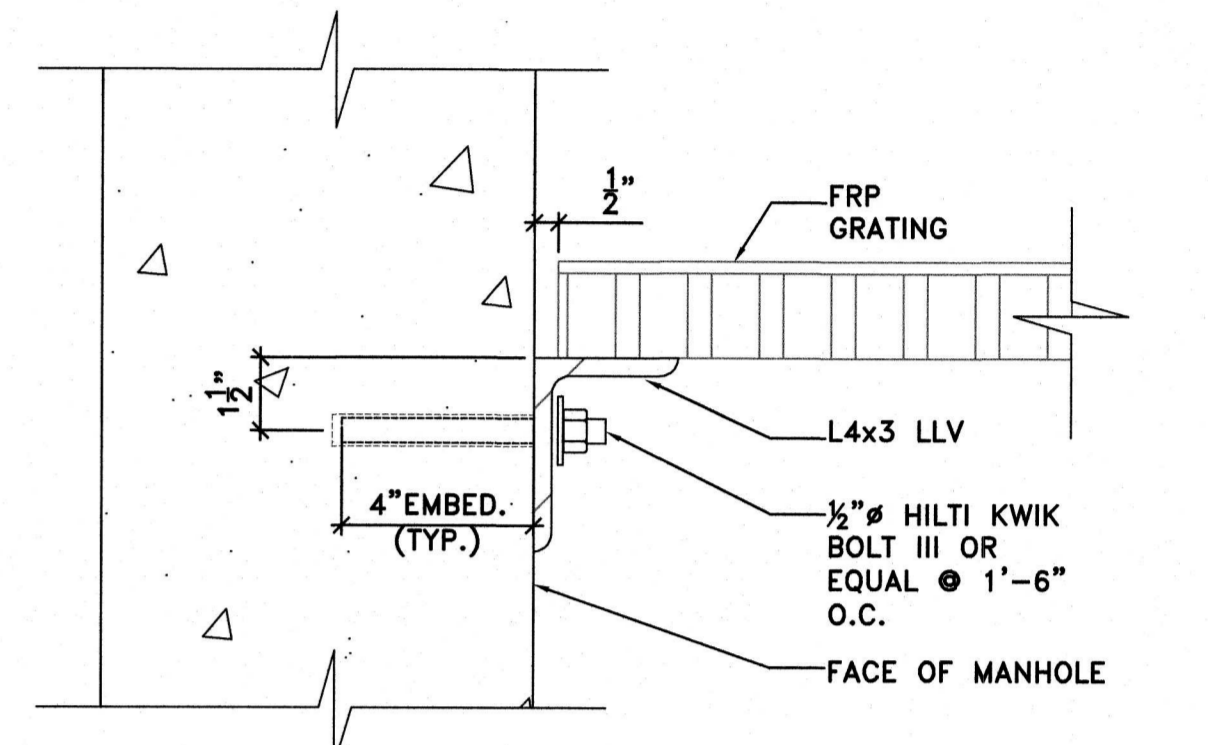
DIMENSION PLAN
SCALE: 3/8"=1'-0"



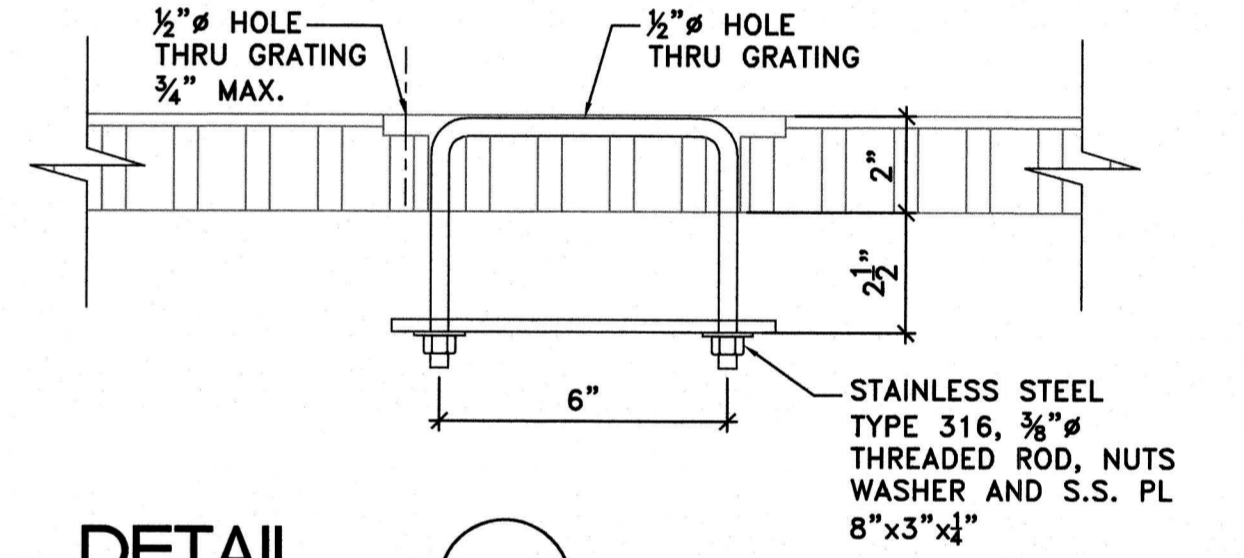
DETAIL 2 BEAM TO WALL CONNECTION
SCALE: 3"=1'-0"



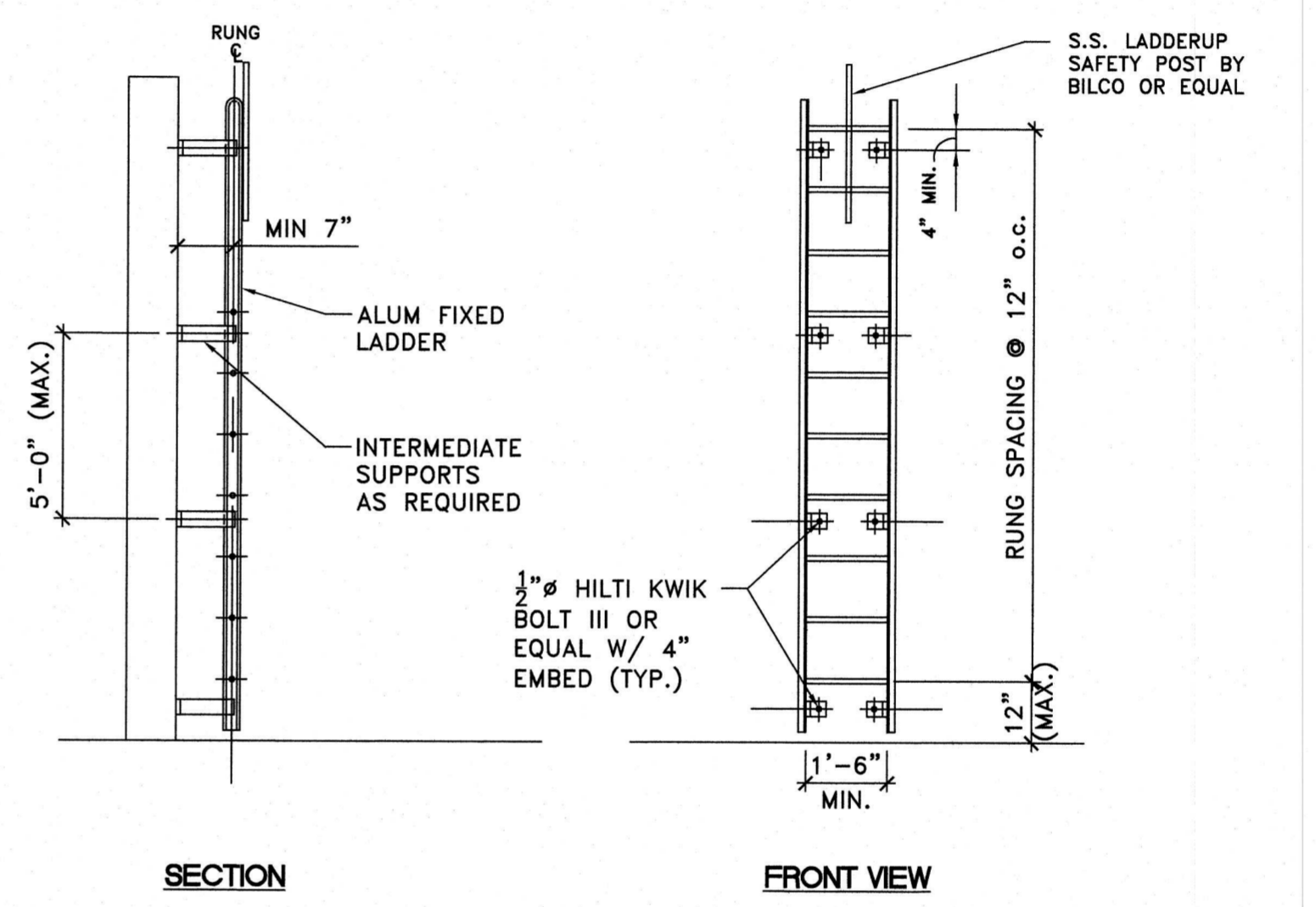
DETAIL 3
SCALE: 3"=1'-0"



DETAIL 4
SCALE: 3"=1'-0"

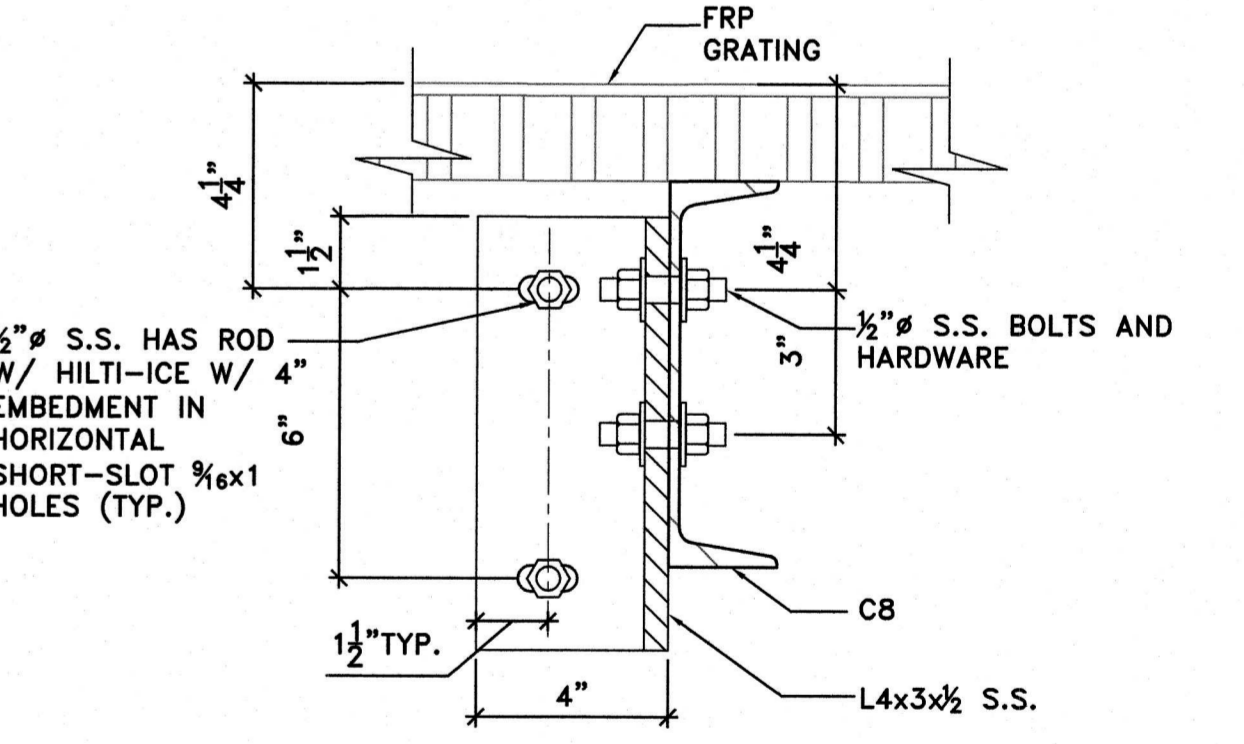


DETAIL 5
SCALE: 3"=1'-0"

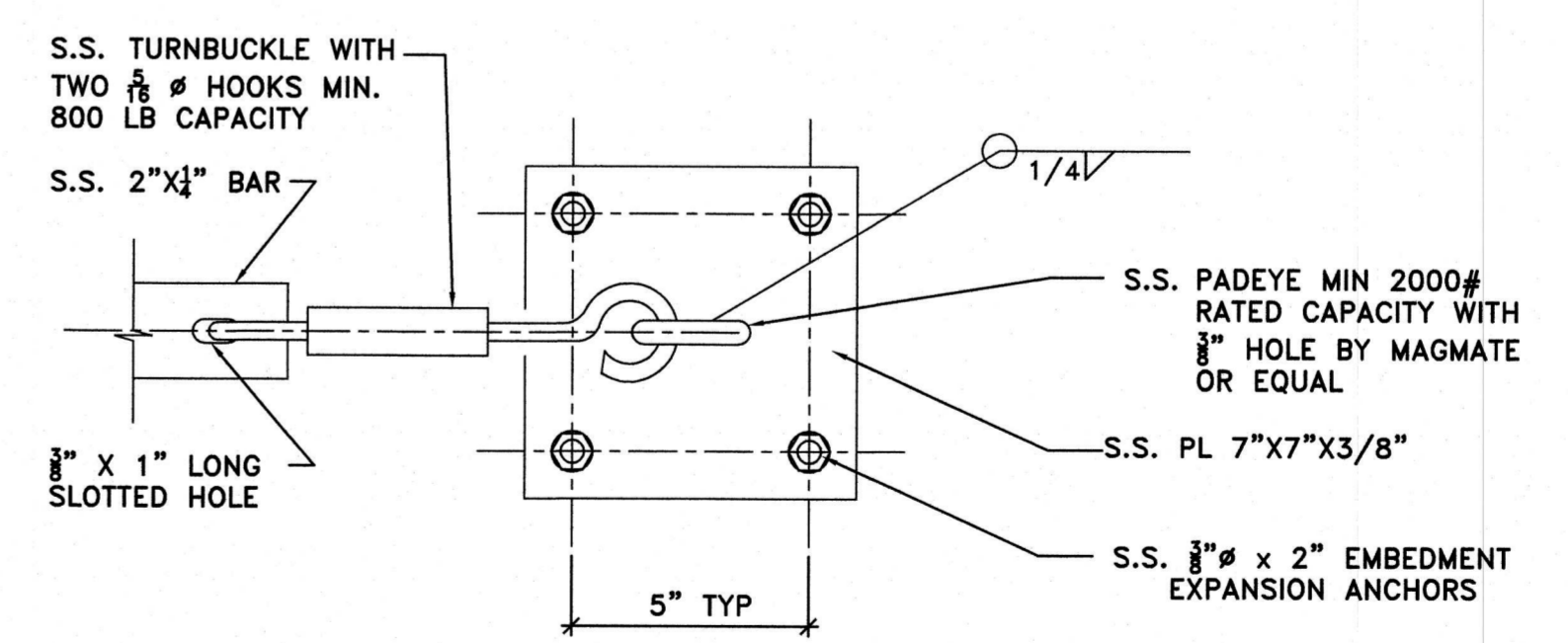


DETAIL 1 TYP. STAINLESS STEEL LADDER
SCALE: N.T.S.

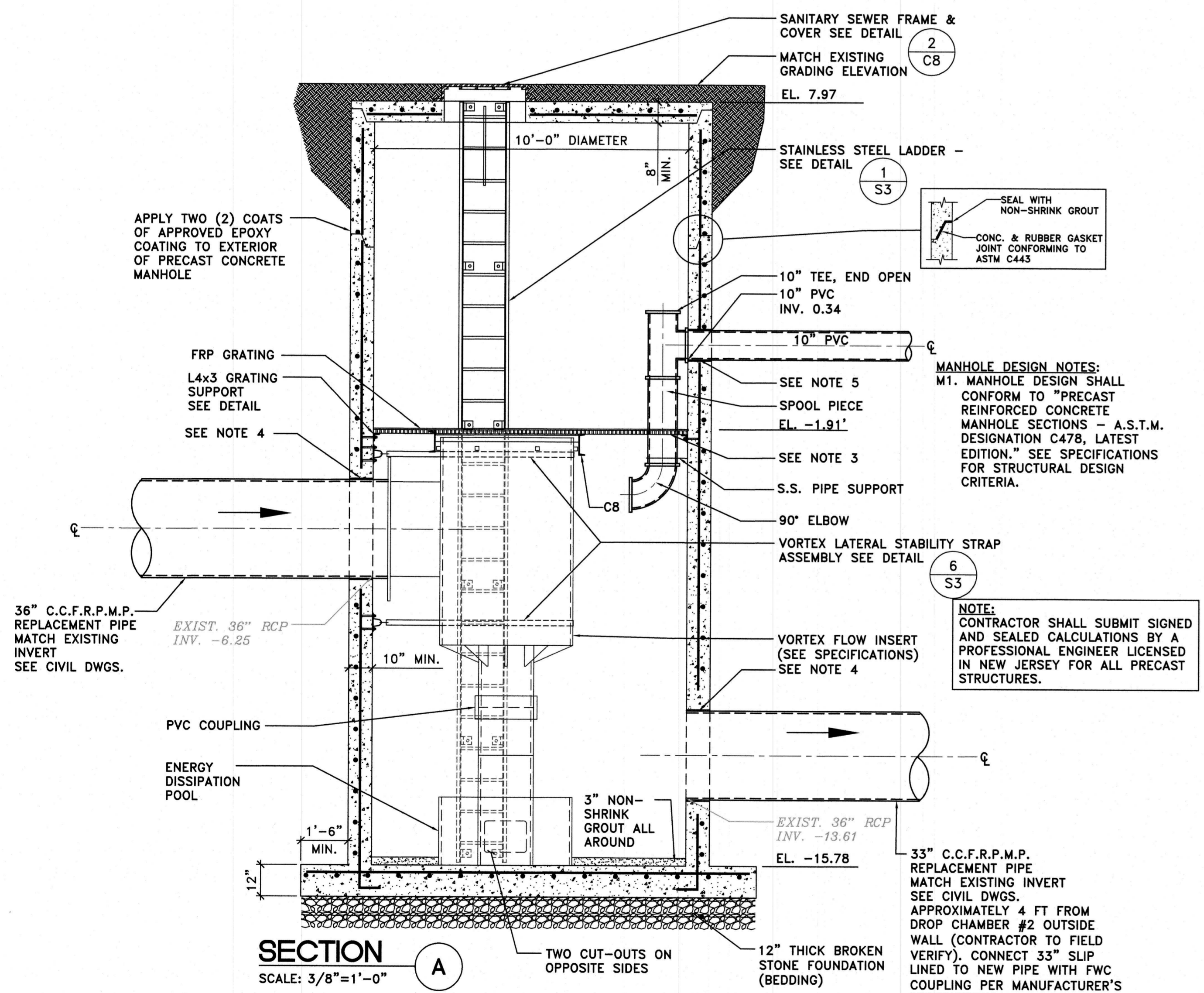
NOTE: LADDER AND COMPONENTS SHALL MEET THE REQUIREMENTS OF OSHA 1910.27



SECTION B
SCALE: 3"=1'-0"



DETAIL 6
SCALE: 3"=1'-0"



SECTION A
SCALE: 3/8"=1'-0"

- NOTES:**
- SEE VORTEX MANHOLE PLAN FOR PIPE LOCATIONS. COMPONENTS SHOWN IN SECTION ARE SHOWN TO ILLUSTRATE INVERT ELEVATIONS APPROXIMATE LOCATION.
 - TAKE & COORDINATE FIELD MEASUREMENTS/DIMENSIONS OF SANITARY PIPES INCLUDING OUTSIDE DIAMETERS, ANGULAR POSITION & PIPE INVERTS WITH VORTEX INSERT DIMENSIONS, SUBMIT PRECAST CONCRETE MANHOLE SHOP DRAWINGS TO ENGINEER.
 - CUT OPENING FOR THE 10" PVC PIPE PENETRATION OF THE SIZE AS REQUIRED AND PROVIDE GRATING PENETRATION.
 - A-LOK PREMIUM OR EQUAL BY A-LOK PRODUCTS. CAST SEWER PIPE PENETRATIONS INTO PRECAST MANHOLE DURING FABRICATION.
 - ODOR CONTROL DRAIN PIPE PENETRATION MAY BE CORE DRILLED IN FIELD AT CONTRACTOR'S OPTION.
 - FASTEN VORTEX INSERT AND INFLUENT PIPE TO PRECAST MANHOLE IAW MANUFACTURER'S INSTRUCTIONS. ALL FASTENERS AND CONNECTIONS SHALL BE STAINLESS STEEL. SUBMIT SHOP DRAWINGS TO ENGINEER.
 - VORTEX LATERAL STABILITY STRAP ASSEMBLY SHALL WRAP AROUND THE VORTEX FLOW INSERT A MINIMUM OF 135° AND SECURE IT TO THE PRECAST MANHOLE FROM INLET PIPE SIDE BACK TO THE INLET PIPE SIDE.

APPROVED: *Richard A. Alaimo* 1/10/23
DATE: _____
Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

RICHARD A. ALAIMO ENGINEERING COMPANY
Consulting Engineers
NJDC 24GA27988800
200 HIGH STREET MOUNT HOLLY, N.J.
201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR
VORTEX MANHOLE PLAN, SECTIONS AND DETAILS
SCALE: AS SHOWN

CLIENT: WOODBRIDGE TOWNSHIP	DATE: JAN 2023	SHEET: S3
PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DESIGNED BY: HMM	DRAWN BY: HMM
PROJECT NO.: B-0726-0024-000	CHECKED BY: HMM	FILE NO.:
CONTRACT NO.: 2014-011R	DEPT. HEAD:	

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GENERAL NOTES

- 1. ALL WORK SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER AND IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE UNIFORM CONSTRUCTION CODE - STATE OF NEW JERSEY; THE NATIONAL ELECTRICAL CODE (LATEST EDITION - INCLUDING AMENDMENTS THERETO); THE LATEST EDITION OF APPLICABLE NATIONAL FIRE PROTECTION ASSOCIATION CODES STANDARDS/RECOMMENDED PRACTICES AND MANUALS; ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL PROTECTION REQUIREMENTS/ORDINANCES/LAWS; ALL LOCAL, STATE, FEDERAL (OSHA) SAFETY REGULATIONS/ORDINANCES/LAWS; THE RULES AND REGULATIONS OF THE PUBLIC SERVICE ELECTRIC & GAS COMPANY; VERIZON COMMUNICATIONS, INC.; THE DEPARTMENT OF LABOR AND INDUSTRY - STATE OF NEW JERSEY; ALL OTHER LOCAL, STATE AND PUBLIC AUTHORITIES HAVING JURISDICTION AND ALL APPLICABLE SPECIFICATIONS.

CONDUIT NOTES

- 1. ALL CONDUIT SHALL BE RIGID ALUMINUM (RA) UNLESS NOTED OTHERWISE.
- 2. MINIMUM SIZE RACEWAY: 3/4" TRADE DIAMETER - EXPOSED (UNLESS NOTED OTHERWISE); 1" TRADE DIAMETER - UNDERGROUND (UNLESS NOTED OTHERWISE).
- 3. ALL CONDUIT IS SHOWN DIAGRAMMATICALLY UNLESS LOCATED BY DIMENSIONS, THE EXACT LOCATION OF CONDUIT SHALL BE DETERMINED BY CONTRACTOR. CONDUITS MAY NOT BE IN THE SAME ORDER IN WHICH THEY APPEAR ON THE DRAWINGS. THE CONTRACTOR SHALL ALSO DETERMINE THE METHOD OF SUPPORT IN THE ABSENCE OF DETAIL SPECIFICATIONS OR ENGINEER'S INSTRUCTIONS.

WIRING NOTES

- 1. ALL CONDUCTORS SHALL BE COPPER.
- 2. MINIMUM WIRE SIZE SHALL BE AS FOLLOWS: POWER AND LIGHTING #12 AWG; CONTROL #14 AWG (STRANDED); SIGNAL #18 AWG OR USE RECOMMENDATIONS OF EQUIPMENT SUPPLIER. ALL CONDUCTORS #10 AWG AND LARGER SHALL BE STRANDED COPPER.
- 3. ALL CONNECTIONS TO TERMINALS, LUGS, AND CONNECTORS SHALL BE TORQUE-TIGHTENED TO VALUE SPECIFIED BY EQUIPMENT MANUFACTURER USING ACCURATELY CALIBRATED TOOLS. IN ABSENCE OF MANUFACTURERS DATA, VALUES FROM ARTICLE 110, TABLES 1.2 THROUGH 1.5 IN NEC HANDBOOK SHALL BE UTILIZED.

GROUNDING NOTES

- 1. PROVIDE COMPLETE SYSTEM AND EQUIPMENT GROUNDING AS REQUIRED BY N.E.C., ARTICLE 250.
- 2. BOND MECHANICAL EQUIPMENT FRAMES.
- 3. BOND ENTIRE CONDUIT SYSTEM. A GROUND WIRE SIZED PER N.E.C. ART. 250 SHALL BE PROVIDED IN ALL RACEWAYS. TERMINATE EACH END ON A GROUNDING LUG.

ABBREVIATIONS

Table listing abbreviations for electrical symbols such as AMPERE (A), ABOVE FINISH FLOOR (A.F.F.), AMPER INTERRUPTING CURRENT (AIC), etc.

LEGEND - GENERAL

Light line indicate existing or beyond the scope of project; Dark line indicate new or within the scope of project; Existing text; Light/oblique text indicate existing or beyond the scope of project.

LEGEND - PLAN SYMBOLS

Legend for plan symbols including raceway types, conduits, pullboxes, junction boxes, panelboards, and various electrical components like switches and motors.

LEGEND - GROUNDING AND LIGHTNING PROTECTION PLAN SYMBOLS

Legend for grounding and lightning protection symbols including ground rods, connectors, lightning terminals, and ground cable runs.

LEGEND - SINGLELINE DIAGRAM SYMBOLS

Legend for singleline diagram symbols including automatic transfer switches, local control stations, overload coils, electrical enclosures, and various electrical devices.

LEGEND - WIRING DIAGRAM SYMBOLS

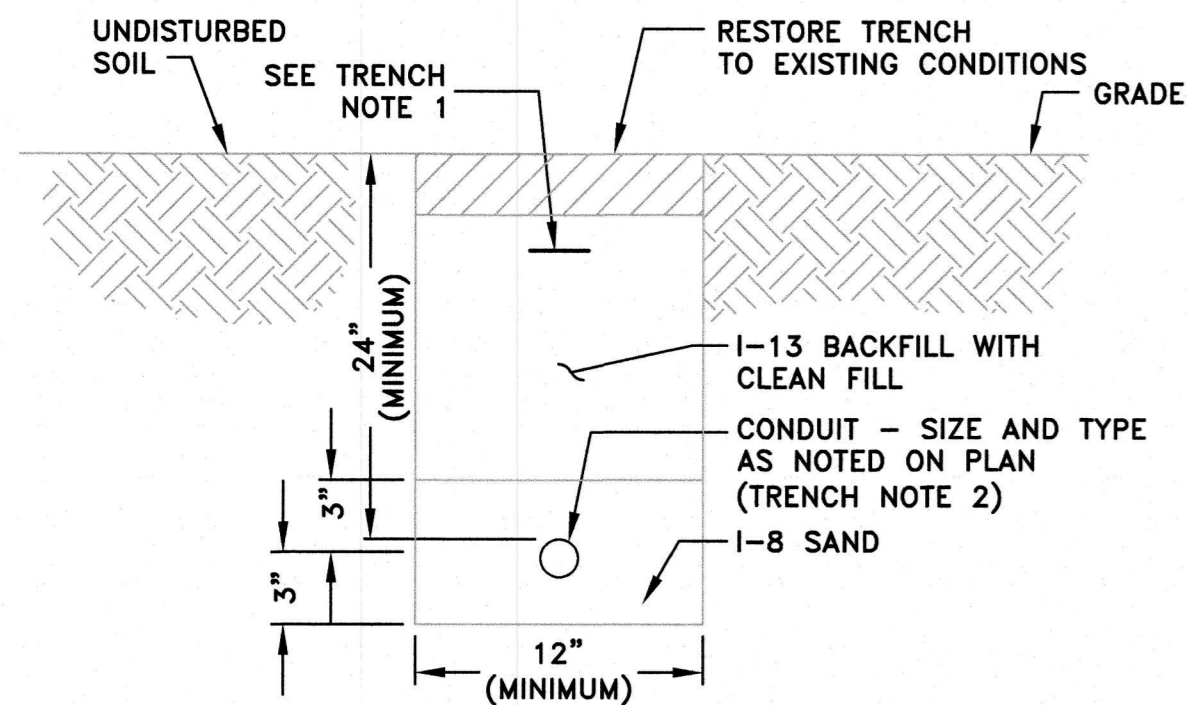
Legend for wiring diagram symbols including selector switches, limit switches, liquid level switches, flow switches, pressure switches, pushbutton switches, and relay contacts.

LEGEND - SINGLE LINE DIAGRAM SYMBOLS

Legend for single line diagram symbols including power buses, circuit breakers, circuit stabbs, disconnect switches, bus connection points, normally closed/open contacts, transformer control, current/potential transformers, local combination motor starters, local disconnect switches, local fused disconnect switches, fuses, fused disconnect switches, stand-by generators, motors, meters, and earth ground.

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Project information block including approval signature of Richard A. Alaimo, project name (ODOR & CORROSION CONTROL PORT READING INTERCEPTOR), client (WOODBRIDGE TOWNSHIP), date (JAN 2023), sheet number (E1), and contact information for Richard A. Alaimo Consulting Engineers.

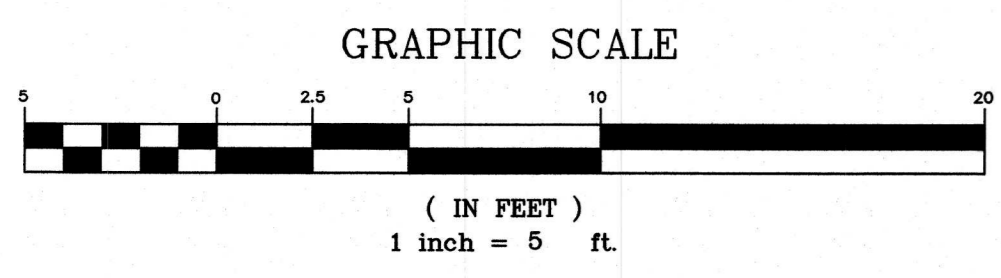
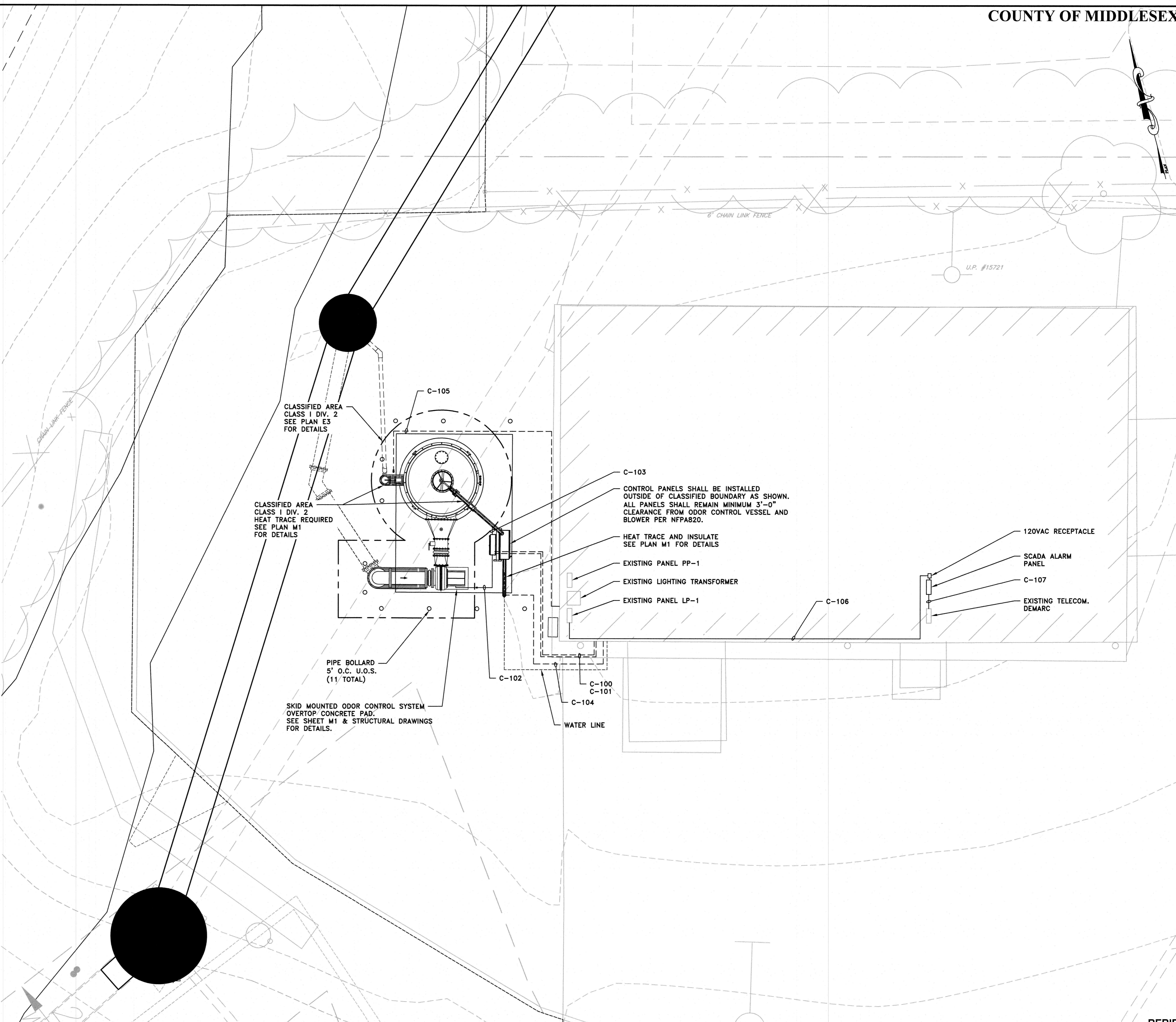


1. DETECTABLE UNDERGROUND TAPE: "CAUTION BURIED ELECTRICAL LINE BELOW", RED TAPE WITH BLACK LETTERS, 6" x 1000 FEET, BRADY LABELS OR EQUIVALENT. BURY 6" (MINIMUM) BELOW GRADE. BURY TAPE DIRECTLY OVER SINGLE CONDUIT OR CENTER OF MULTIPLE CONDUITS UNLESS QUANTITY OF CONDUITS IN TRENCH EXCEEDS (5) FIVE CONDUITS, IN WHICH CASE USE (2) TWO TAPES CENTERED ON OUTER-MOST CONDUITS.
2. MAINTAIN AT LEAST 7" SEPARATION BETWEEN ADJACENT CONDUITS IN TRENCH AND 12" SEPARATION FROM ANY UNDERGROUND SERVICE CONDUITS/PIPE.

TRENCH DETAIL (TYPICAL)
SCALE: N.T.S.

NOTES - GENERAL:

1. ALL ELECTRICAL WORK SHALL BE TO LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
2. ALL WORK SHALL BE PERFORMED BY A NEW JERSEY LICENSED ELECTRICAL CONTRACTOR.
3. CONTRACTOR SHALL INSTALL ALL NEW CONDUIT AND WIRING AS SHOWN.
4. CONTRACTOR SHALL INSTALL EXPLOSION PROOF FITTINGS AS SHOWN IN ACCORDANCE WITH NEC ARTICLES 500 AND 502 AND IN ACCORDANCE WITH NFPA 820.
5. SEE PLAN M01 FOR LIMITS OF HEAT TRACING AND INSULATING.
6. ELECTRICAL AND WATER CONTROL ENCLOSURE SHALL MAINTAIN A DISTANCE OF 3'-0" MINIMUM OUTSIDE OF REACTOR AND ASSOCIATED EQUIPMENT CLASSIFIED AREA.
7. ALL ENCLOSURES, REBAR AND EQUIPMENT SHALL BE GROUNDED AND BONDED PER NEC ARTICLE 250 AND PER MANUFACTURERS RECOMMENDATIONS.
8. CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER CONTRACTORS ON THE PROJECT. PRIOR TO ROUGHING-IN, CONTRACTOR SHALL REVIEW AND OBTAIN ACCURATE DATA/INFORMATION FROM APPROVED SHOP DRAWINGS OF OTHER TRADES INVOLVED.
9. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF CONDUITS, ROUTING, BOXES, CIRCUITS AND EQUIPMENT WITH REFERENCE TO THE DRAWINGS OF OTHER TRADES IN ORDER TO AVOID INTERFERENCE.
10. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND RECORD ALL CURRENT INSTALLATION AND TERMINATIONS PRIOR TO THE INSTALLATION OR REMOVAL OF ANY EQUIPMENT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF CONDUITS, ROUTING, BOXES, CIRCUITS AND EQUIPMENT ENSURE AS-BUILT CONDITIONS ARE CORRECT AS INDICATED ON PLANS PRIOR TO CONSTRUCTION.
11. ALL CONDUIT RUNS ARE DIAGRAMMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.
12. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS. ALL EQUIPMENT, STRUCTURES AND SUPPLEMENTAL GROUNDINGS FOR FOUNDATIONS SHALL BE FURNISHED AND INSTALLED PER THE NEC AND EQUIPMENT MANUFACTURER.
13. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.
14. CONTRACTOR SHALL COORDINATE AND SCHEDULE SHUTDOWNS AT SUITABLE TIMES TO THE OWNER. OWNER AND CONTRACTOR SHALL JOINTLY LOCK OUT AND TAG OUT BREAKERS AND SWITCHES DURING SHUTDOWN PERIODS.
15. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND RECORD ALL CURRENT INSTALLATION AND WIRE TERMINATIONS TO ITS SOURCE LOCATION PRIOR TO THE DEMOLITION OR REMOVAL OF ANY EQUIPMENT.
16. THE CONTRACTOR SHALL PERFORM A SITE VISIT PRIOR TO BIDDING TO REVIEW ALL WORK REQUIRED. ANY EXISTING CONDITION FOUND WHICH WILL AFFECT WORK TO BE COMPLETED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO BID DUE DATE. CLAIMS FOR EXTRA WORK WILL NOT BE ALLOWED FOR ANY WORK THAT MAY BE CAUSED BY EXISTING CONDITIONS, IN WHICH SHOULD HAVE BEEN FORESEEN SUBSEQUENT TO THE JOB SITE VISIT.



LEGEND:
 _____ EXISTING EQUIPMENT
 _____ NEW WORK

APPROVED: *[Signature]* 1/18/23
 DATE: _____
Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

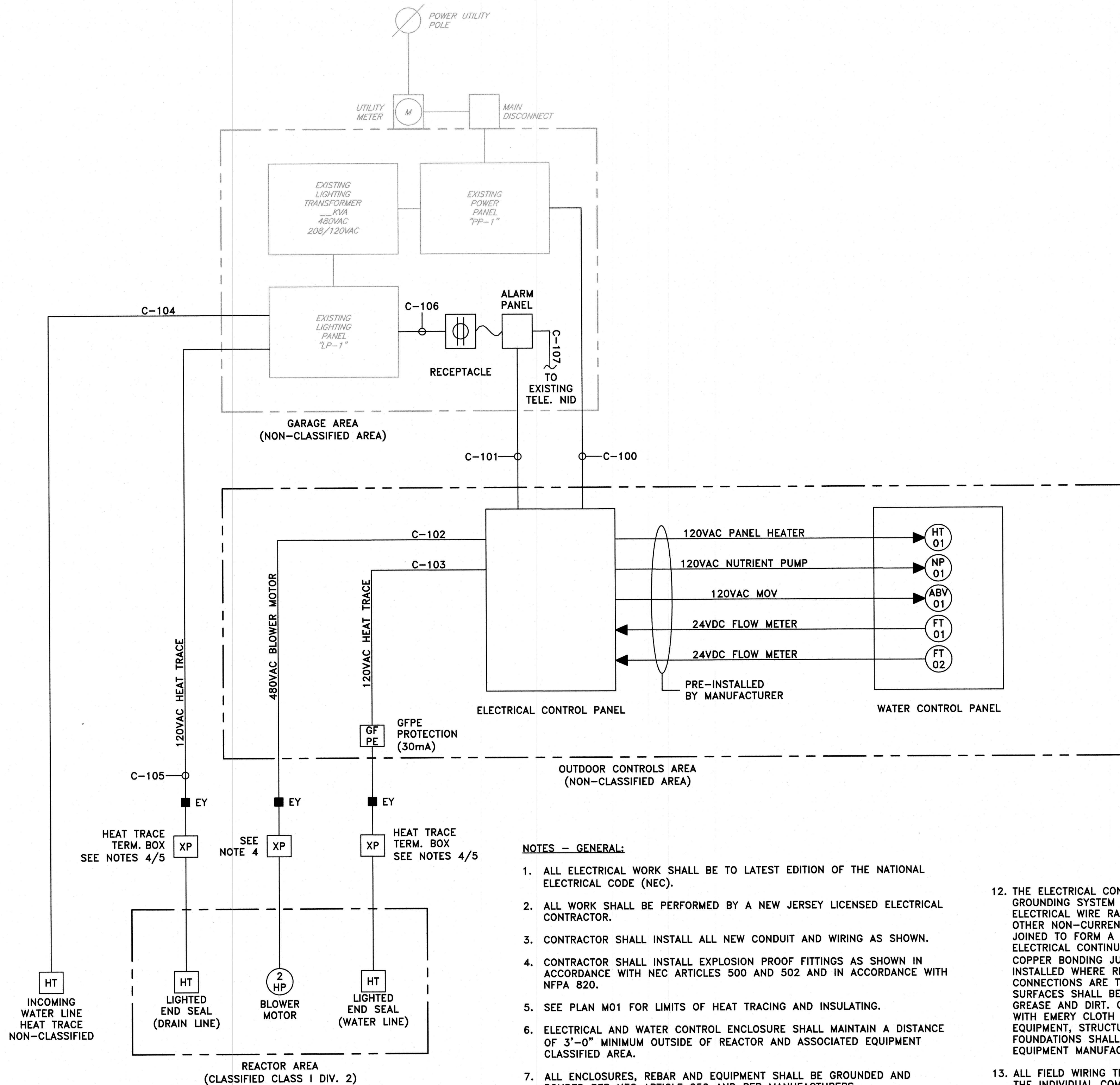
RICHARD A. ALAIMO
 ENGINEERING COMPANY
 Consulting Engineers
 NJDCA 24GA2988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL
 PORT READING INTERCEPTOR
ELECTRICAL SITE PLAN
 ODOR CONTROL SYSTEM
 SCALE: 1" = 5'

CLIENT: **WOODBIDGE TOWNSHIP**
 PROJECT LOCATION: **WOODBIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY**
 PROJECT NO.: **B-0726-0024-000**
 CONTRACT NO.: **2014-011R**

DATE: **JAN 2023**
 DESIGNED BY: **JRN**
 DRAWN BY: **JRN**
 CHECKED BY: _____
 DEPT. HEAD: _____
 SHEET **E2**
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NOTES - GENERAL:

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- ALL WORK SHALL BE PERFORMED BY A NEW JERSEY LICENSED ELECTRICAL CONTRACTOR.
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- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF CONDUITS, ROUTING, BOXES, CIRCUITS AND EQUIPMENT WITH REFERENCE TO THE DRAWINGS OF OTHER TRADES IN ORDER TO AVOID INTERFERENCE.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND RECORD ALL CURRENT INSTALLATION AND TERMINATIONS PRIOR TO THE INSTALLATION OR REMOVAL OF ANY EQUIPMENT. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION OF CONDUITS, ROUTING, BOXES, CIRCUITS AND EQUIPMENT TO ENSURE AS-BUILT CONDITIONS ARE CORRECT AS INDICATED ON PLANS PRIOR TO CONSTRUCTION.
- ALL CONDUIT RUNS ARE DIAGRAMMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.
- THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS. ALL EQUIPMENT, STRUCTURES AND SUPPLEMENTAL GROUNDINGS FOR FOUNDATIONS SHALL BE FURNISHED AND INSTALLED PER THE NEC AND EQUIPMENT MANUFACTURER.
- ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.
- CONTRACTOR SHALL COORDINATE AND SCHEDULE SHUTDOWNS AT SUITABLE TIMES TO THE OWNER. OWNER AND CONTRACTOR SHALL JOINTLY LOCK OUT AND TAG OUT BREAKERS AND SWITCHES DURING SHUTDOWN PERIODS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND RECORD ALL CURRENT INSTALLATION AND WIRE TERMINATIONS TO ITS SOURCE LOCATION PRIOR TO THE DEMOLITION OR REMOVAL OF ANY EQUIPMENT.
- THE CONTRACTOR SHALL PERFORM A SITE VISIT PRIOR TO BIDDING TO REVIEW ALL WORK REQUIRED. ANY EXISTING CONDITION FOUND WHICH WILL AFFECT WORK TO BE COMPLETED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO BID DUE DATE. CLAIMS FOR EXTRA WORK WILL NOT BE ALLOWED FOR ANY WORK THAT MAY BE CAUSED BY EXISTING CONDITIONS, IN WHICH SHOULD HAVE BEEN FORESEEN SUBSEQUENT TO THE JOB SITE VISIT.

LEGEND:
 EXISTING EQUIPMENT
 NEW WORK

CONDUIT						CABLE	
NUMBER	SIZE	TYPE	NEW/EXIST	FROM	TO	PHASE CONDUCTOR QUANTITY/SIZE	GROUND CONDUCTOR QUANTITY/SIZE
C-100	3/4"	PGRS	NEW	EXISTING POWER PANEL PP-1	ELECTRICAL C.P.	(3) #10 AWG/CU/XHHW	(1) #10 AWG/CU/XHHW
C-101	3/4"	PGRS	NEW	ALARM PANEL	ELECTRICAL C.P.	(8) #14 AWG/CU/XHHW	---
C-102	3/4"	PGRS	NEW	ELECTRICAL C.P.	BLOWER MOTOR	(3) #12 AWG/CU/XHHW	(1) #12 AWG/CU/XHHW
C-103	3/4"	PGRS	NEW	ELECTRICAL C.P.	HEAT TRACE	(2) #12 AWG/CU/XHHW	(1) #12 AWG/CU/XHHW
C-104	3/4"	PGRS	NEW	LIGHTING PANEL LP-1	HEAT TRACE	(2) #12 AWG/CU/XHHW	(1) #12 AWG/CU/XHHW
C-105	3/4"	PGRS	NEW	LIGHTING PANEL LP-1	HEAT TRACE	(2) #12 AWG/CU/XHHW	(1) #12 AWG/CU/XHHW
C-106	3/4"	EMT	NEW	LIGHTING PANEL LP-1	ALARM PANEL	(2) #14 AWG/CU/XHHW	(1) #14 AWG/CU/XHHW
C-107	3/4"	EMT	NEW	EXISTING NID BOX (DEMARC)	ALARM PANEL	(1) 6 PAIR TELEPHONE CABLE	---

PANEL DESIGNATION	POWER PANEL "PP-1"
SERVICE	480/277V, 3ø, 4 WIRE
MOUNTING SURFACE	SURFACE
MAINS	250A
FEED	
BUS MATERIAL	COPPER

GROUND BUS	COPPER
SHORT CIRCUIT RATING	18,000 AIC
ENCLOSURE TYPE	NEMA 1
LOCATION	GARAGE BUILDING
MAIN	250A CIRCUIT BREAKER
VENDOR	SQUARE-D NF430L2C

USE/DESCRIPTION	WIRE TYPE	WIRE SIZE	LOAD WATTS	BKR SIZE	CKT #	CKT #	BKR SIZE	LOAD WATTS	WIRE SIZE	WIRE TYPE	USE/DESCRIPTION
LIGHTING	-	-	-	20A	1	2	-	-	-	-	-
LIGHTING	-	-	-	20A	3	4	20A	-	-	-	CRANE HOIST
LIGHTING	-	-	-	20A	5	6	-	-	-	-	-
COMPRESSOR	-	-	-	25A	7	8	-	-	-	-	SPACE
					9	10	-	-	-	-	SPACE
					11	12	-	-	-	-	SPACE
					13	14	-	-	-	-	SPACE
					15	16	-	-	-	-	SPACE
					17	18	-	-	-	-	SPACE
					19	20	-	-	-	-	SPACE
					21	22	-	-	-	-	SPACE
					23	24	-	-	-	-	SPACE
					25	26	-	-	-	-	SPACE
* ODOR CONTROL SKID	XHHW	10	2000	20A	27	28	30A	-	-	-	LIGHTING TRANSFORMER (30KVA)
					29	30	-	-	-	-	SPACE

* CONTRACTOR SHALL FURNISH AND INSTALL NEW BREAKER AS REQUIRED.

PANEL DESIGNATION	LIGHTING PANEL "LP-1"
SERVICE	208/120V, 3ø, 4 WIRE
MOUNTING SURFACE	SURFACE
MAINS	100A
FEED	
BUS MATERIAL	COPPER

GROUND BUS	COPPER
SHORT CIRCUIT RATING	10,000 AIC
ENCLOSURE TYPE	NEMA 1
LOCATION	
MAIN	100A CIRCUIT BREAKER
VENDOR	SQUARE-D ND430L1C

USE/DESCRIPTION	WIRE TYPE	WIRE SIZE	LOAD WATTS	BKR SIZE	CKT #	CKT #	BKR SIZE	LOAD WATTS	WIRE SIZE	WIRE TYPE	USE/DESCRIPTION
WATER HEATER	-	-	-	20A	1	2	20A	-	-	-	BAY UNIT HEATER
					3	4	20A	-	-	-	GFCI OUTLETS
A/C UNIT	-	-	-	20A	5	6	20A	-	-	-	GFCI OUTLETS OUTSIDE
BATHROOM GFCI	-	-	-	20A	7	8	20A	-	-	-	DOOR UNIT OPENER
UNIT HEATER	-	-	-	20A	9	10	20A	-	-	-	DOOR UNIT OPENER
GFCI OUTLET	-	-	-	20A	11	12	20A	-	-	-	F/A OUTLET
W.P. GFCI	-	-	-	20A	13	14	20A	-	-	-	GFCI COUNTERTOP
GFCI OUTLETS	-	-	-	20A	15	16	20A	-	-	-	GFCI COUNTERTOP
OUTSIDE LIGHTS	-	-	-	20A	17	18	20A	-	-	-	GFCI OUTLET OUTSIDE
EXTERIOR HOT BOX HEATER	-	-	-	20A	19	20	20A	100	12	XHHW	ODOR CONTROL DRAIN HEAT TRACE
					21	22	15A	180	14	XHHW	ALARM CONTROL PANEL
					23	24	20A	100	12	XHHW	WATER LINE HEAT TRACE
					25	26	-	-	-	-	SPACE
					27	28	-	-	-	-	SPACE
					29	30	-	-	-	-	SPACE

* CONTRACTOR SHALL FURNISH AND INSTALL NEW BREAKERS AS REQUIRED.

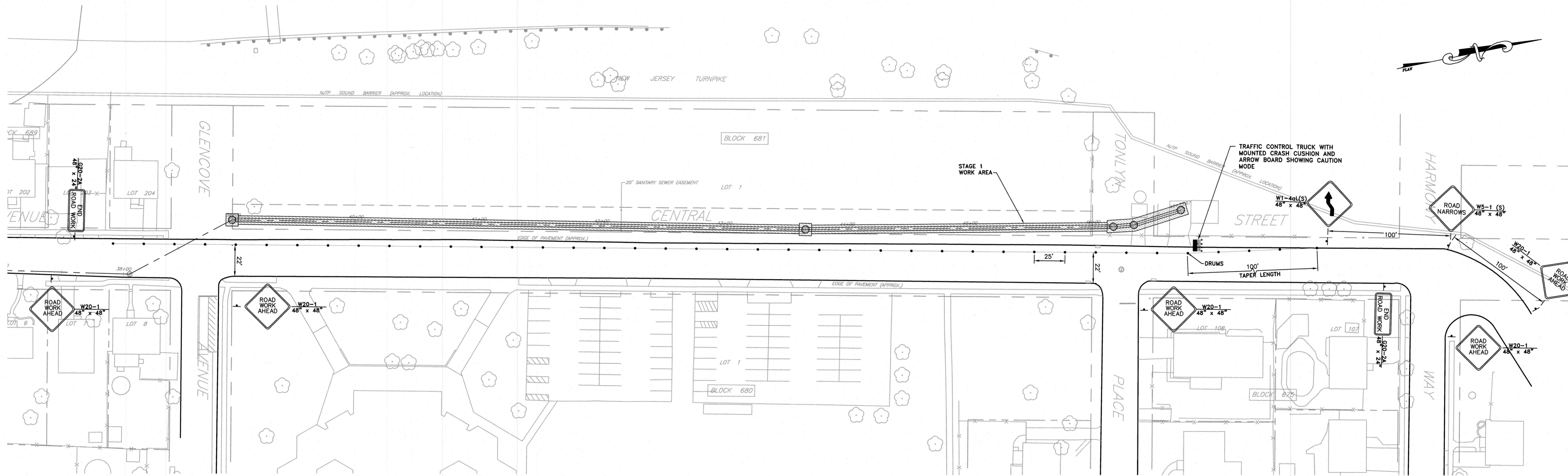
APPROVED: 1/18/23
 Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

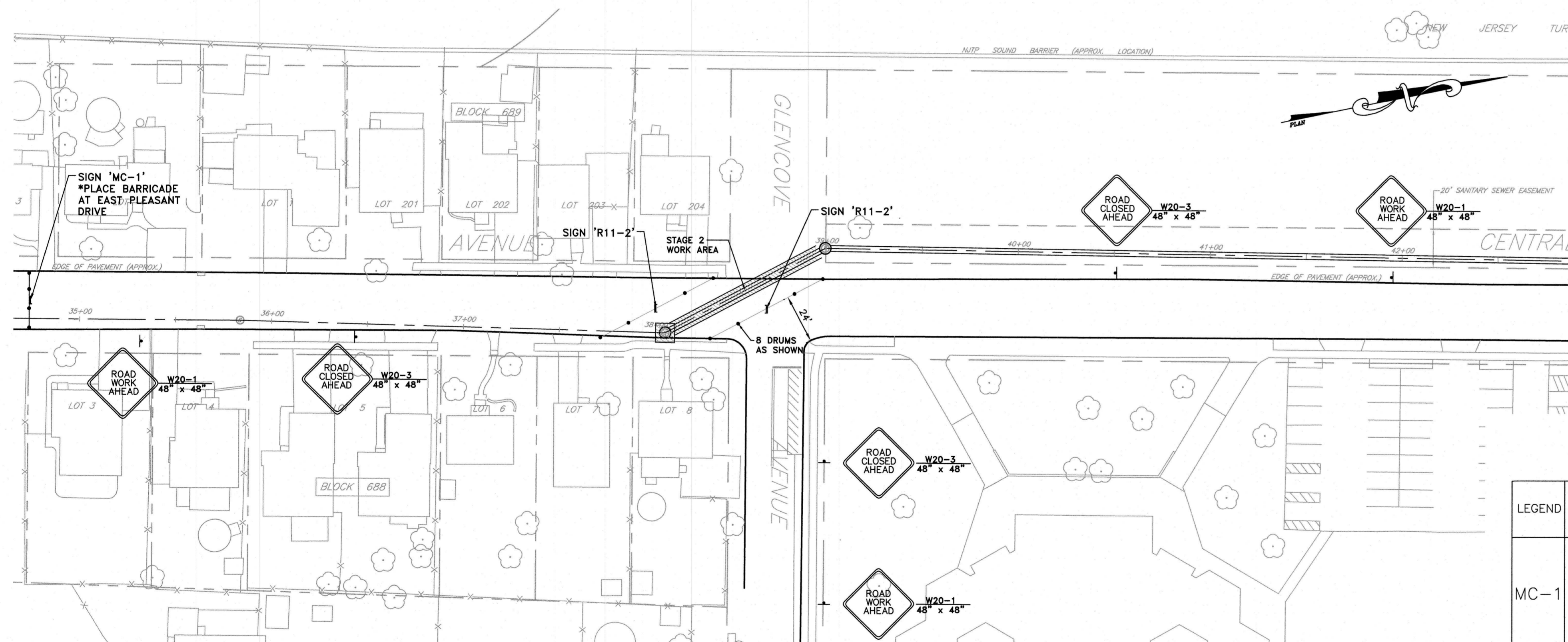
RICHARD A. ALAIMO ENGINEERING COMPANY
 Consulting Engineers
 NJDCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR
ELECTRICAL BLOCK DIAGRAMS AND SCHEDULES
 SCALE: NONE

CLIENT: WOODBRIDGE TOWNSHIP
 PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY
 PROJECT NO.: B-0726-0024-000
 CONTRACT NO.: 2014-011R
 DATE: JAN 2023
 DESIGNED BY: JRN
 DRAWN BY: JRN
 CHECKED BY: JRN
 DEPT. HEAD: JRN
 SHEET: E3
 FILE NO.:

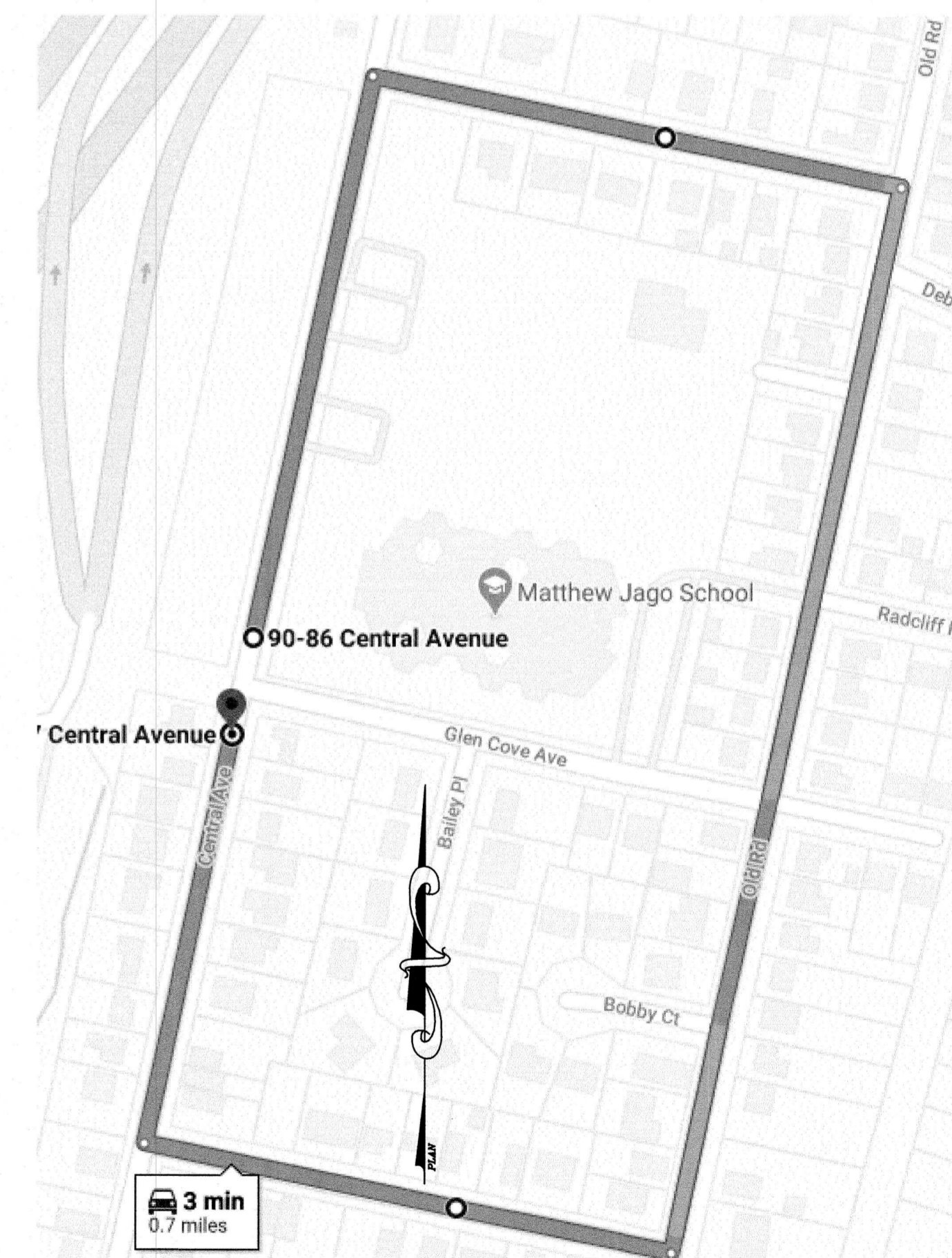


TRAFFIC CONTROL PLAN -- STAGE 1



TRAFFIC CONTROL PLAN -- STAGE 2
(ANTICIPATED CONSTRUCTION DURATION IS HALF DAY)

- DETOUR NOTES (USE CURRENT MUTCD):**
1. SETUP DETOUR DURING STAGE 1 FOR STAGE 2.
 2. USE FIGURE 6H-20. DETOUR FOR A CLOSED STREET (TA-20) IN MUTCD. SEE SHEET TC-03.
 3. USE ALTERNATIVE MAP THIS SHEET AS A GUIDE FOR STREETS TO BE UTILIZED.
 4. AFTER STAGE 2 IS COMPLETE SET UP STAGE 3 PER MUTCD, THEN REMOVE DETOUR.
 5. NO 24/7 ROAD CLOSURE WILL BE ALLOWED.
 6. ACCESS TO STREETS MUST BE PROVIDED FOR LOCAL TRAFFIC AS SHOWN WITHIN STAGES OF TRAFFIC CONTROL PLANS.



ALTERNATIVE DETOUR MAP STAGE 2

- NOTES:**
1. CURBS, SIDEWALKS, DRIVEWAYS, ETC. ARE LOCATED APPROXIMATELY. FIELD DETERMINE LOCATIONS.
 2. EXISTING UTILITIES ARE NOT DEPICTED ON THE PLAN FOR CLARITY. (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).
 3. USE CURRENT MUTCD AND NJDOT "STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 FOR ADDITIONAL TRAFFIC CONTROL GUIDANCE.
 4. FOR GENERAL NOTES SEE SHEET TC-03

SPECIAL SIGNS

LEGEND	SIGN	TYPE	SIZE
MC-1	HIGHLAND AVENUE WILL BE CLOSED ON OR ABOUT	6"C	72"x48"
	DATE PLATE	7"D	
	LOCAL TRAFFIC ONLY	7"D	
R11-2	ROAD CLOSED	BLACK ON ORANGE	60"x30"

APPROVED: *Richard A. Alaimo* DATE: 1/18/23

Richard A. Alaimo
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY

RICHARD A. ALAIMO ENGINEERING COMPANY
Consulting Engineers
NJDCA 24GA27988800
200 HIGH STREET MOUNT HOLLY, N.J.
201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR
PORT READING INTERCEPTOR TRAFFIC CONTROL PLAN STAGE 01 & 02
SCALE: N.T.S.

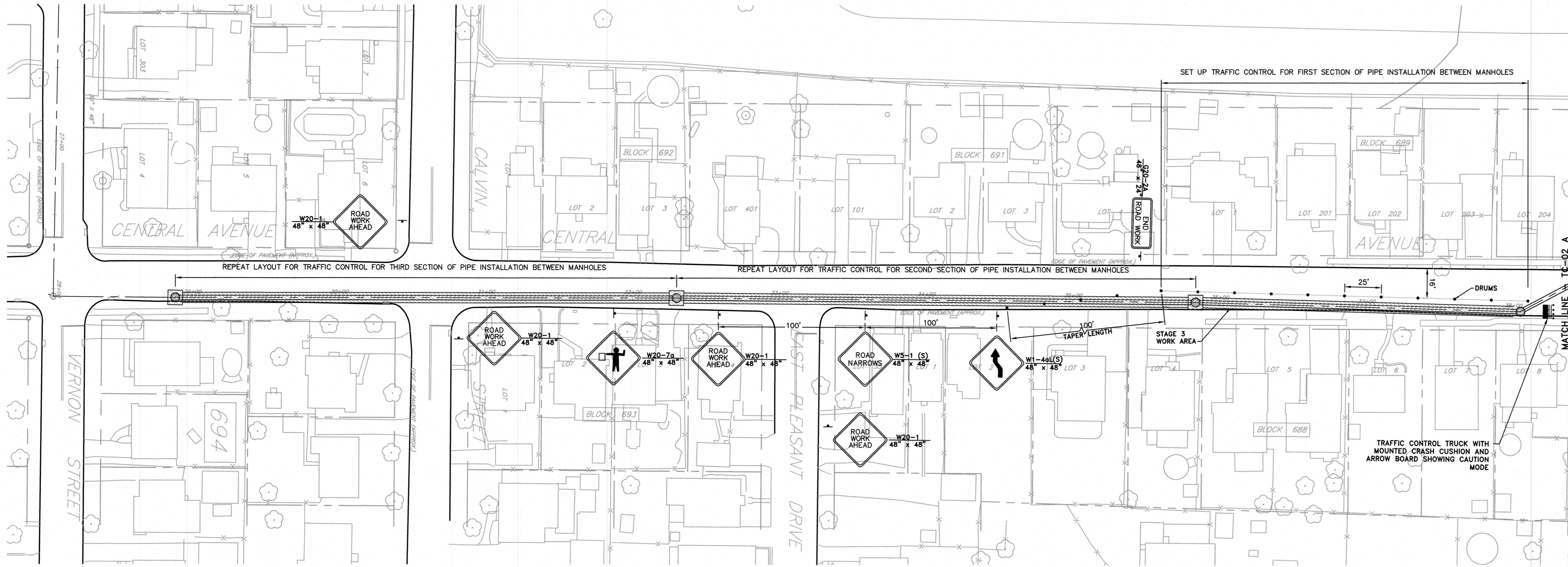
CLIENT: WOODBRIDGE TOWNSHIP

PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY

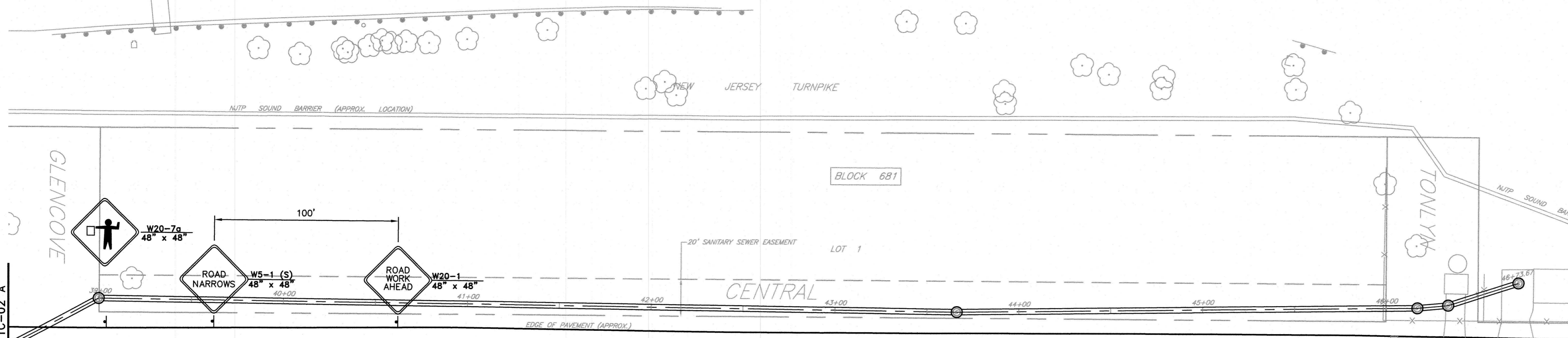
PROJECT NO.: B-0726-0024-000
CONTRACT NO.: 2014-011R

DATE: JAN 2023
DESIGNED BY: ECS
DRAWN BY: ECS
CHECKED BY:
DEPT. HEAD:
REBID

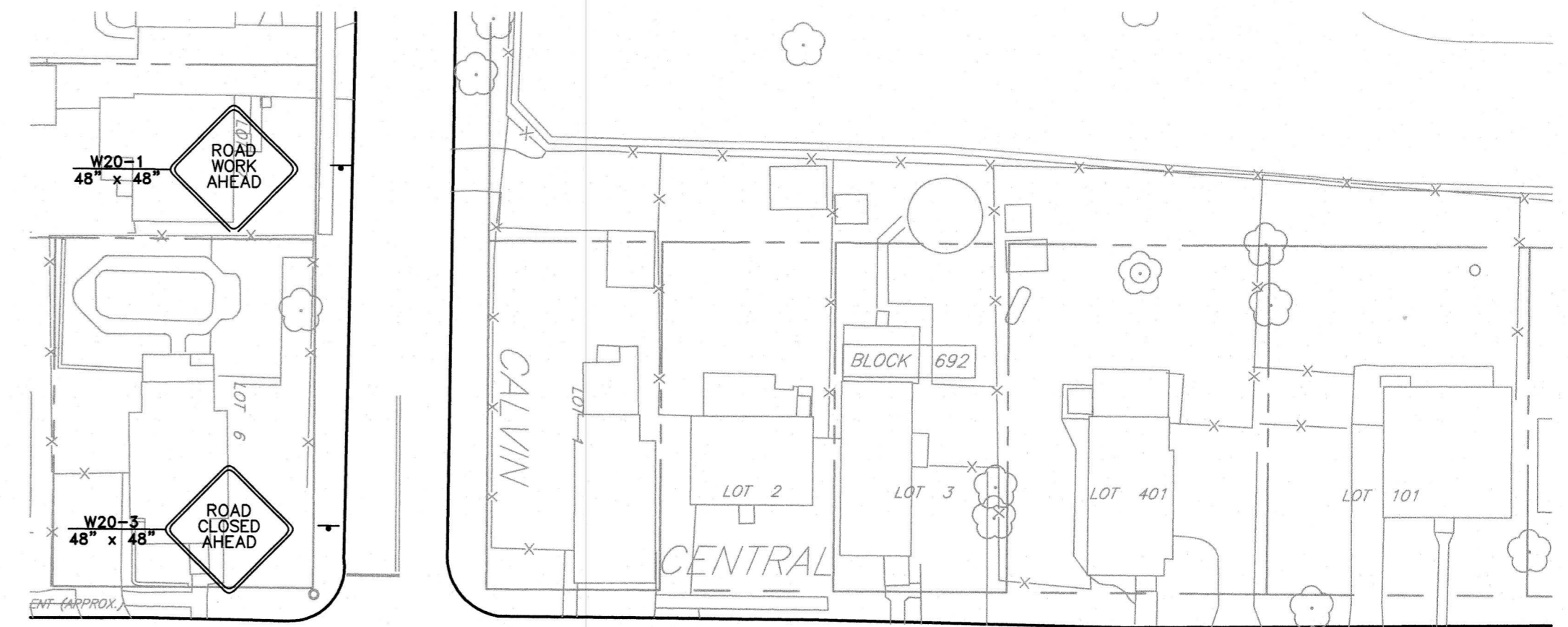
SHEET: **TC-01**
FILE NO.:



TRAFFIC CONTROL PLAN - STAGE 3



TRAFFIC CONTROL PLAN - STAGE 3



TRAFFIC CONTROL PLAN - STAGE 3
ADDITIONAL ROAD CLOSURE (WHEN NEEDED)

- NOTES:**
1. CURBS, SIDEWALKS, DRIVEWAYS, ETC. ARE LOCATED APPROXIMATELY. FIELD DETERMINE LOCATIONS.
 2. EXISTING UTILITIES ARE NOT DEPICTED ON THE PLAN FOR CLARITY. (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).
 3. USE CURRENT MUTCD AND NJDOT "STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 FOR ADDITIONAL TRAFFIC CONTROL GUIDANCE.
 4. FOR GENERAL NOTES SEE SHEET TC-03

APPROVED: *Richard A. Alaimo* 1/8/23
 Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



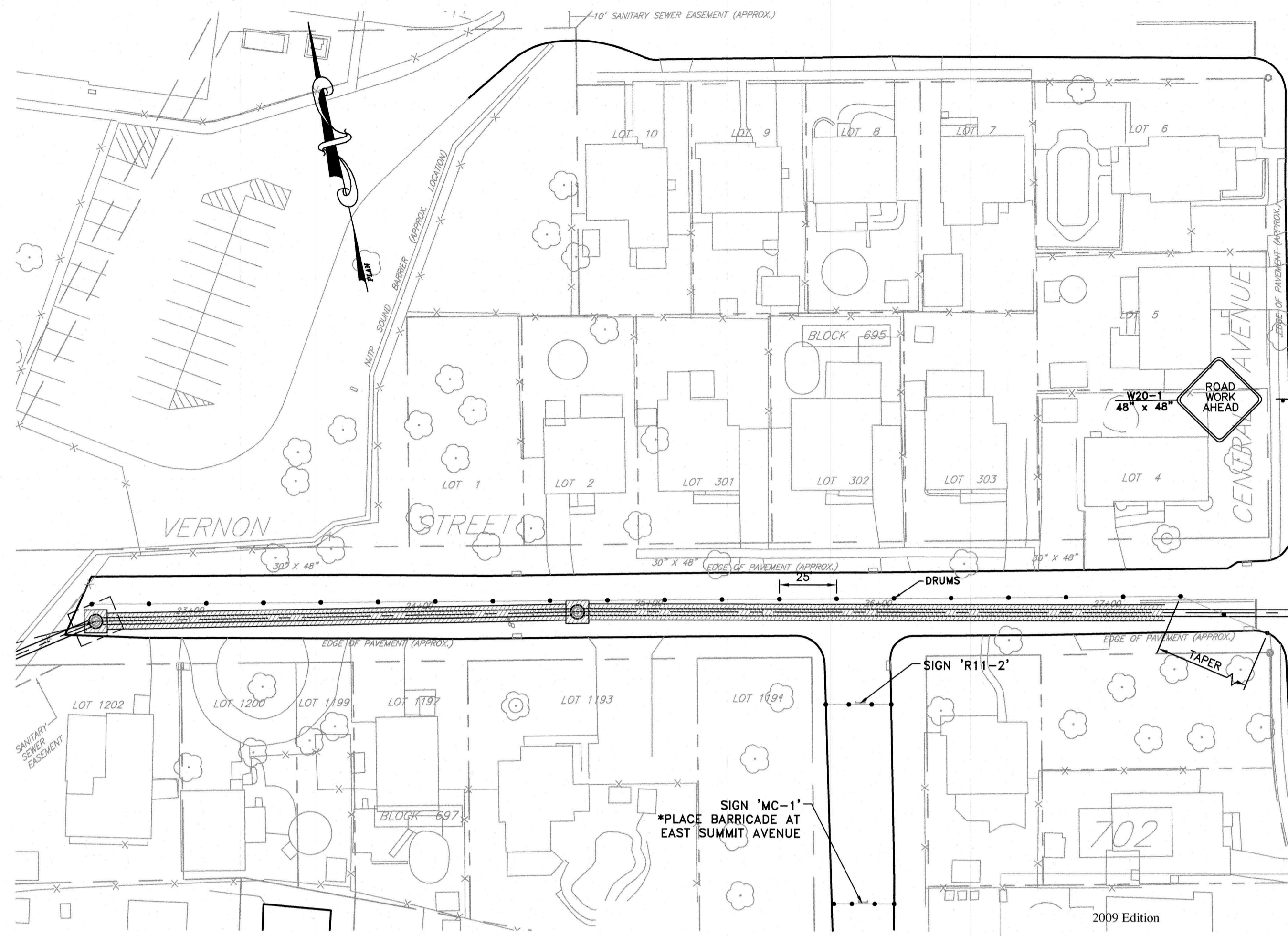
RICHARD A. ALAIMO ENGINEERING COMPANY
 Consulting Engineers
 NJDCA 24GA27988800
 200 HIGH STREET MOUNT HOLLY, N.J.
 201 WILLOWBROOK BLVD. WAYNE, N.J.

ODOR & CORROSION CONTROL PORT READING INTERCEPTOR
 PORT READING INTERCEPTOR
 TRAFFIC CONTROL PLAN
 STAGE 03
 SCALE: N.T.S.

CLIENT: WOODBRIDGE TOWNSHIP
 PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY
 PROJECT NO.: B-0726-0024-000
 CONTRACT NO.: 2014-011R

DATE: JAN 2023
 DESIGNED BY: ECS
 DRAWN BY: ECS
 CHECKED BY: []
 DEPT. HEAD: []
 SHEET: TC-02
 FILE NO.: []

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TRAFFIC CONTROL PLAN - STAGE 5

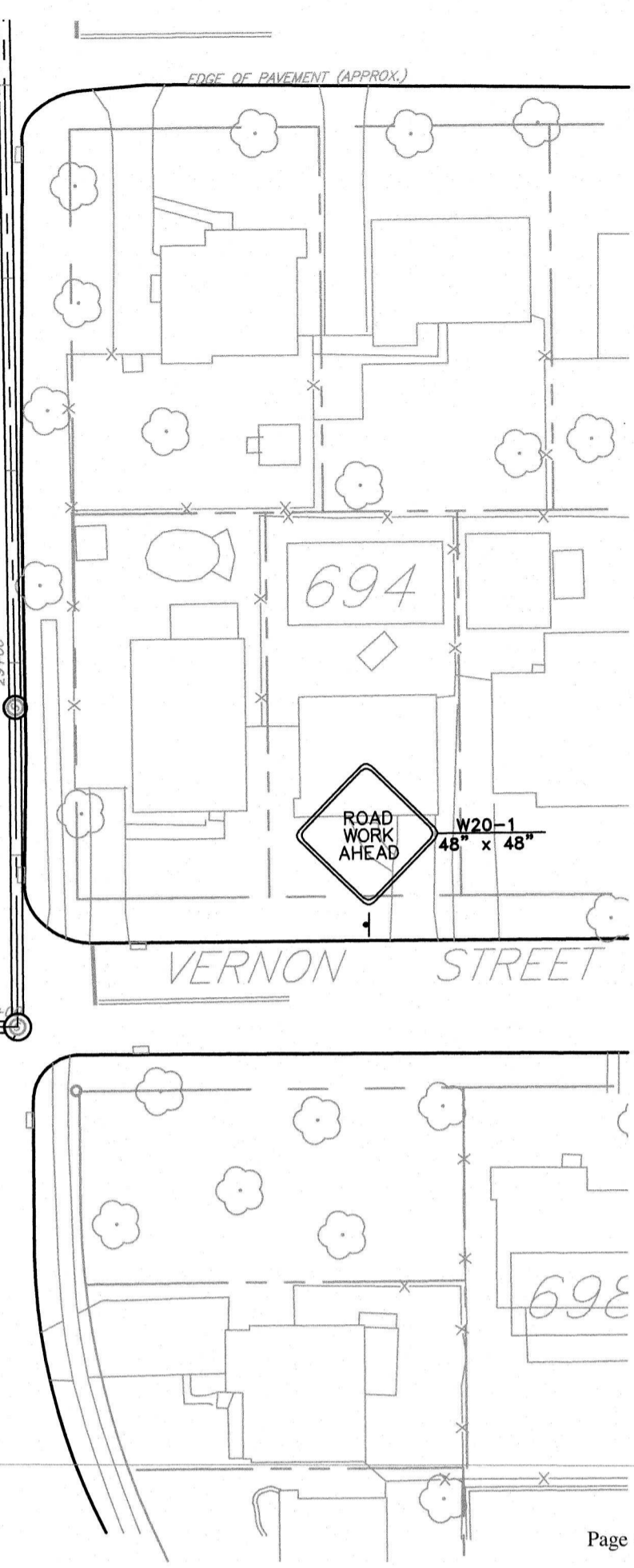
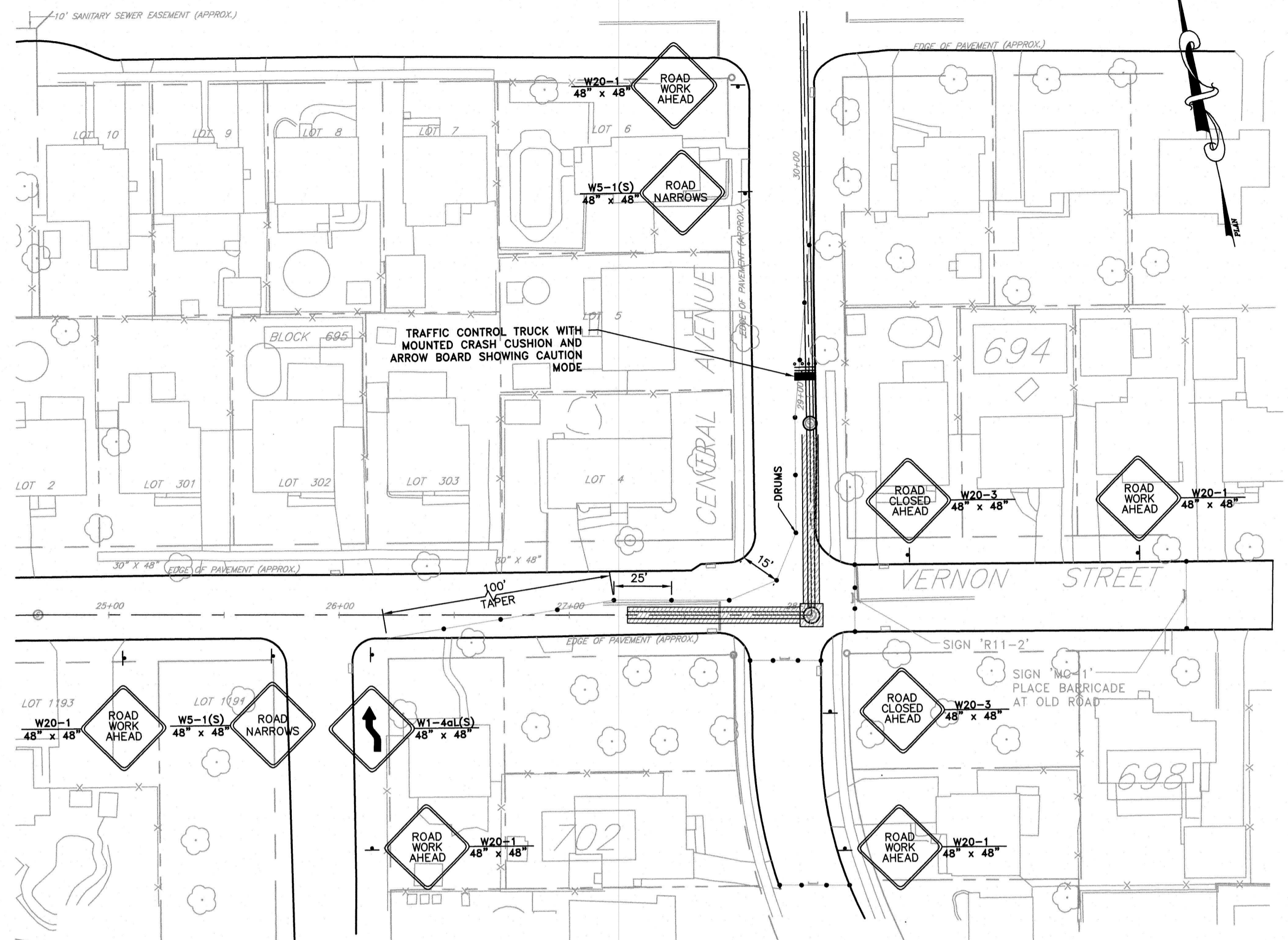


Figure 6H-20. Detour for a Closed Street (TA-20)

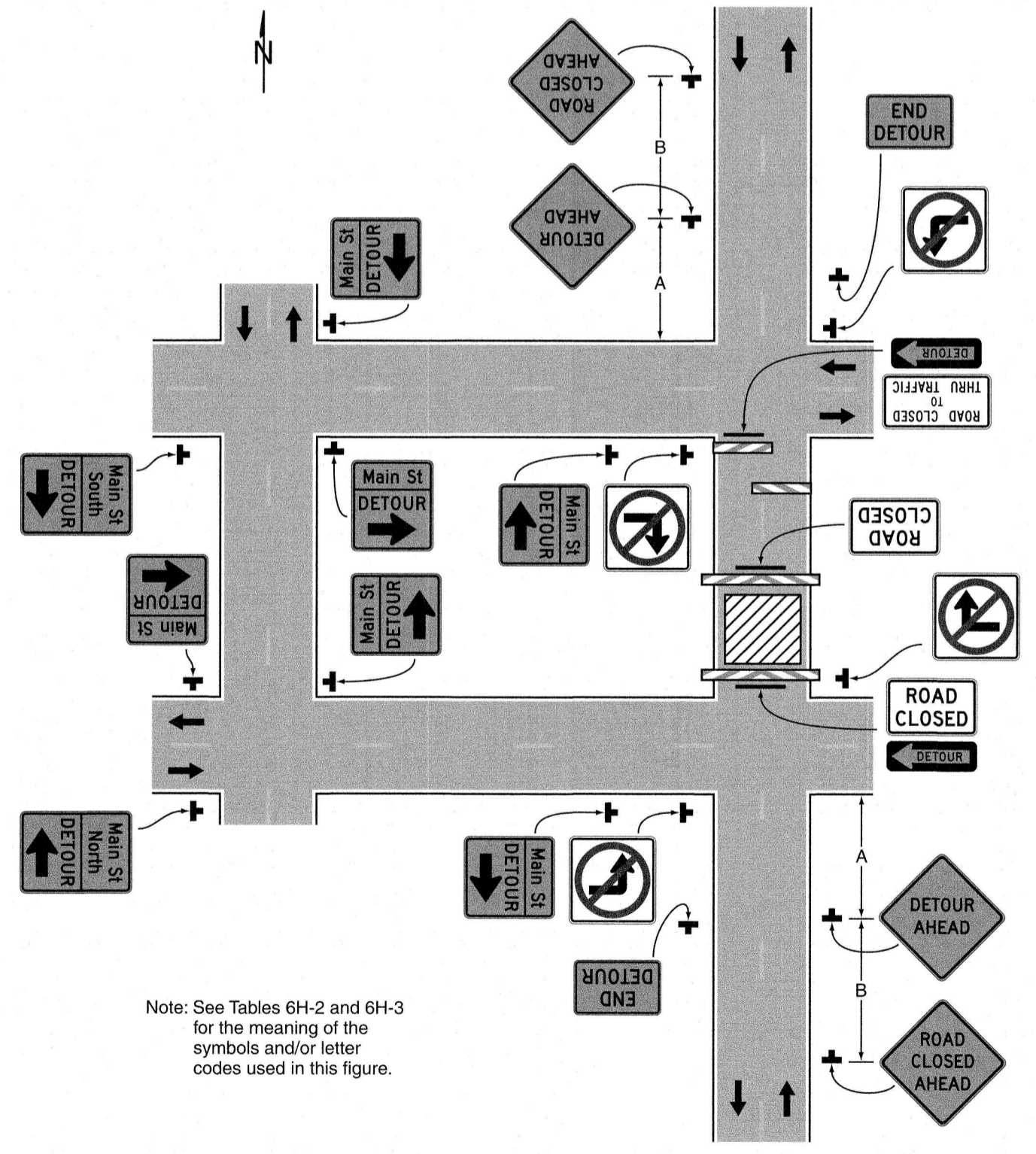


TRAFFIC CONTROL PLAN - STAGE 4
(ANTICIPATED CONSTRUCTION DURATION IS HALF DAY)

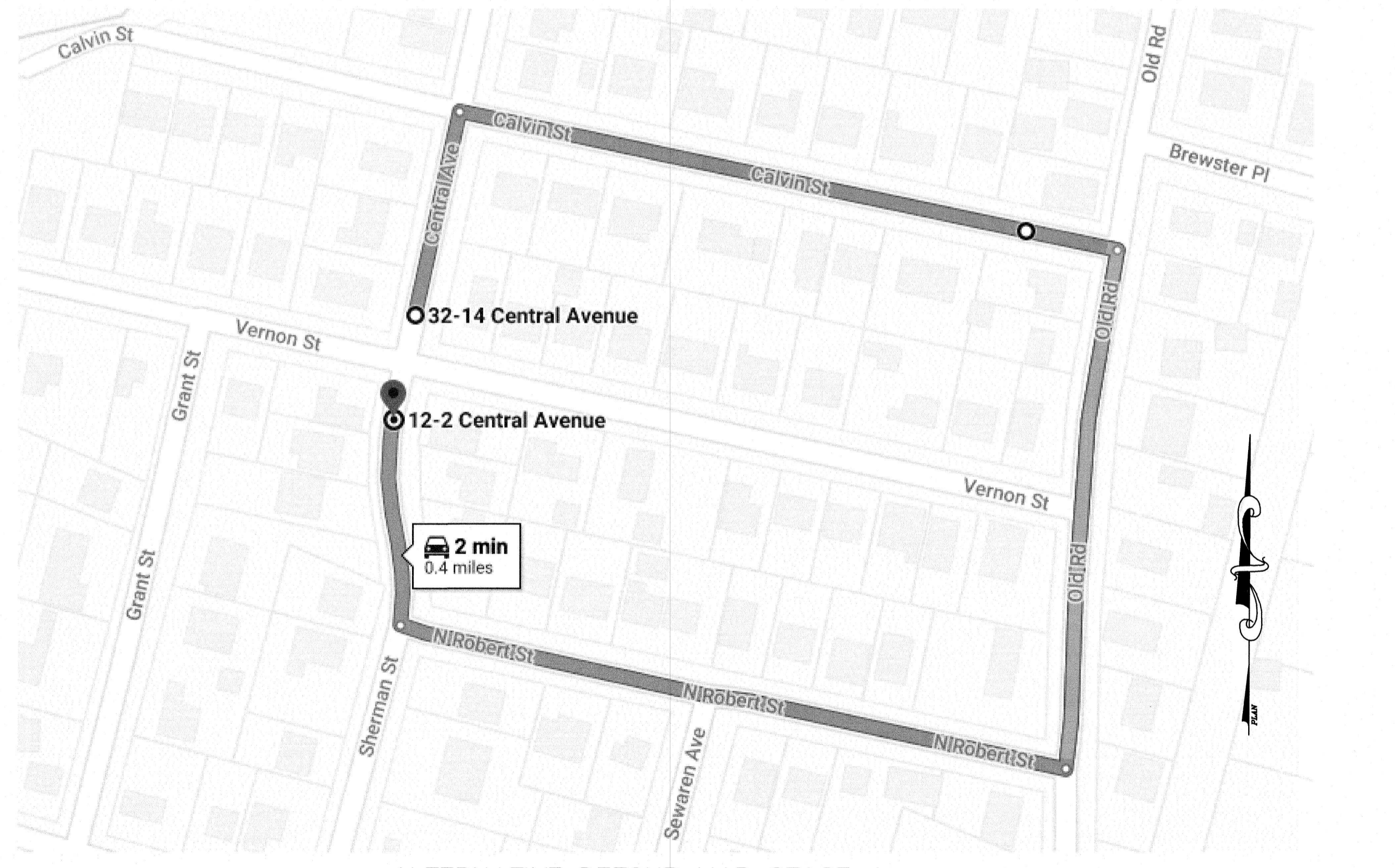
GENERAL NOTES:

- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE UTILITY LOCATION SERVICES BY CALLING 1-800-272-1000 AND WITH THEIR ASSISTANCE, SHALL VERIFY THE EXACT LOCATION, SIZE AND DIMENSION OF ALL BURIED UTILITIES. ALAIMO GROUP ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF UNDERGROUND UTILITIES.
- ADVISE IN WRITING ALL UTILITY COMPANIES TO PERFORM UTILITY RELOCATIONS.
- PRIOR TO ANY CONSTRUCTION STAGE, ALL REQUIRED TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
- ALL EXISTING SIGNS, PAVEMENT MARKINGS, SYMBOLS, AND PAVEMENT REFLECTORS/CASTINGS WHICH CONFLICT WITH THE PROPOSED STRIPING PLANS SHALL BE COVERED, REMOVED AND/OR RELOCATED.
- ALL EXCAVATED AREAS FOR PROPOSED UTILITIES SHALL BE BACKFILLED PURSUANT TO THE PROJECT SPECIFICATIONS AT THE END OF EACH WORK DAY.
- ALL SITE WORK SHALL COMPLY WITH O.S.H.A., A.D.A. AND NEW JERSEY BARRIER FREE REQUIREMENTS WHERE APPLICABLE.
- NO ADDITIONAL PAYMENT WILL BE MADE FOR MOVING OR RELOCATION OF TRAFFIC CONTROL DEVICES.
- CONTRACTOR IS TO SCHEDULE INSTALLATION OF UTILITIES IN ADVANCE OF CURBING AND PAVING CONSTRUCTION WHERE POSSIBLE. HOWEVER, WHERE THIS IS NOT POSSIBLE, CURBING SHALL BE LEFT OUT DURING CURB CONSTRUCTION AS NECESSARY TO PERMIT UTILITY CONSTRUCTION AT APPROPRIATE LOCATIONS. IN NO CASE, SHALL CURBING OR FINAL PAVEMENT BE CUT TO INSTALL UTILITY LINES.
- DURING ALL STAGES, LANE SHIFTING SHALL COMPLY WITH MUTCD TEMPORARY LANE SHIFTING AND LANE CLOSURE STANDARDS.
- CONTRACTOR MUST MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES DURING CONSTRUCTION.

- DETOUR NOTES (USE CURRENT MUTCD):
- SETUP DETOUR PRIOR TO STAGE 4.
 - USE FIGURE 6H-20. DETOUR FOR A CLOSED STREET (TA-20) IN MUTCD. THIS SHEET.
 - USE ALTERNATIVE MAP THIS SHEET AS A GUIDE FOR STREETS TO BE UTILIZED.
 - AFTER STAGE 4 IS COMPLETE, SET UP STAGE 5 PER MUTCD, THEN REMOVE DETOUR.
 - NO 24/7 ROAD CLOSURE WILL BE ALLOWED.
 - ACCESS TO STREETS MUST BE PROVIDED FOR LOCAL TRAFFIC AS SHOWN WITHIN STAGES OF TRAFFIC CONTROL PLANS.



Typical Application 20

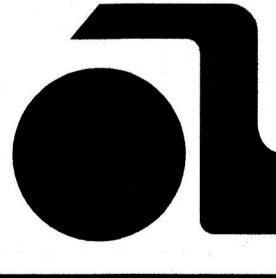


ALTERNATIVE DETOUR MAP STAGE 4

- NOTES:
- CURBS, SIDEWALKS, DRIVEWAYS, ETC. ARE LOCATED APPROXIMATELY. FIELD DETERMINE LOCATIONS.
 - EXISTING UTILITIES ARE NOT DEPICTED ON THE PLAN FOR CLARITY. (SEE GENERAL NOTES FOR UTILITIES ON DRAWING G3).
 - USE CURRENT MUTCD AND NJDOT "STANDARD ROADWAY CONSTRUCTION/TRAFFIC CONTROL/BRIDGE CONSTRUCTION DETAILS" BOOKLET DATED 2016 FOR ADDITIONAL TRAFFIC CONTROL GUIDANCE.

APPROVED: *Richard A. Alaimo* 1/12/23
 Richard A. Alaimo
 PROFESSIONAL ENGINEER
 NEW JERSEY LICENSE NO. 13195

REVISIONS	DATE	BY



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 201 WILLOWBROOK BLVD. WAYNE, N.J.

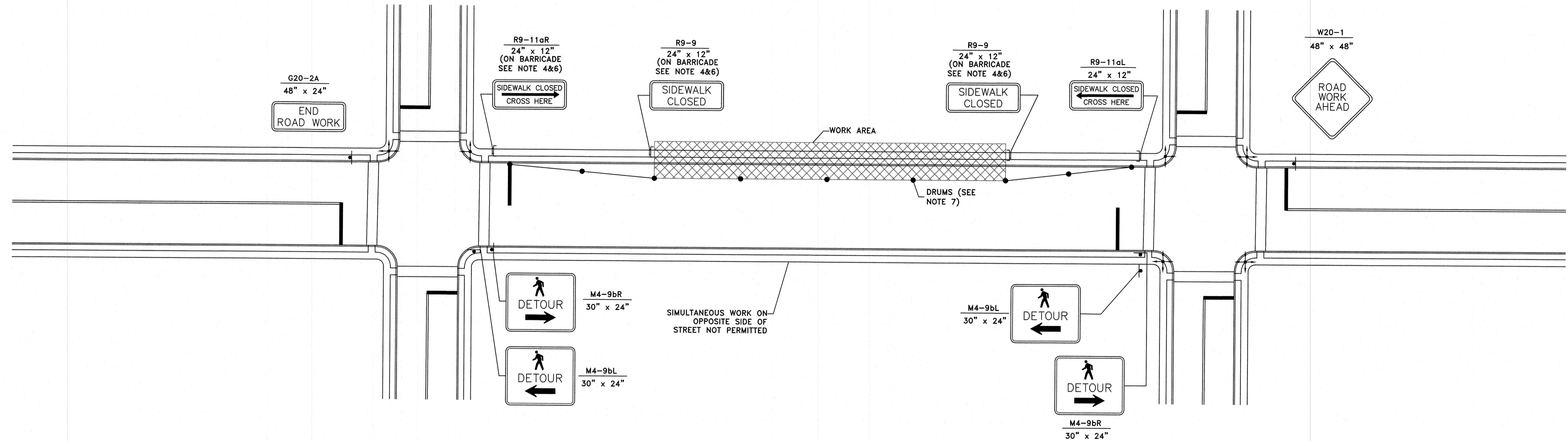
ODOR & CORROSION CONTROL PORT READING INTERCEPTOR
 PORT READING INTERCEPTOR
 TRAFFIC CONTROL PLAN
 STAGE 04 & 05
 SCALE: N.T.S.

CLIENT: WOODBRIDGE TOWNSHIP
 PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY
 PROJECT NO.: B-0726-0024-000
 CONTRACT NO.: 2014-011R

DATE: JAN 2023
 DESIGNED BY: ECS
 DRAWN BY: ECS
 CHECKED BY:
 SHEET: TC-03
 FILE NO.:

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TYPICAL MID-BLOCK SIDEWALK CLOSING
(PEDESTRIAN ACCESS ROUTE USING
OPPOSITE SIDEWALK)



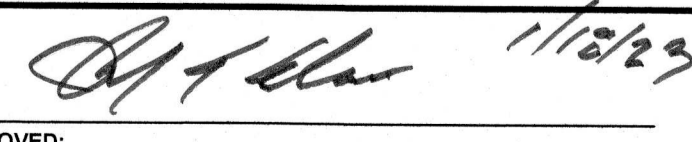
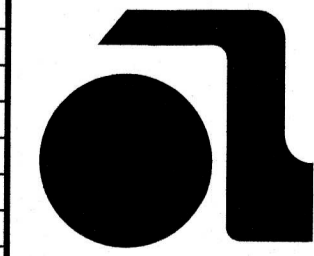
PEDESTRIAN DETOUR AROUND WORK AREA

NOTES:

- THIS DRAWING SHALL BE USED IN COMBINATION WITH THE TRAFFIC CONTROL PLANS MUTCD FIGURES AND NDOT TRAFFIC CONTROL PLANS WHEREVER APPLICABLE.
- PEDESTRIANS SHOULD NOT BE LED INTO CONFLICTS WITH VEHICLES MOVING THRU OR AROUND WORKSITE, EQUIPMENT AND OPERATIONS.
- A 5 FOOT MINIMUM WIDTH PEDESTRIAN PATH / ALTERNATE PEDESTRIAN PATH SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A 5 FOOT MIN. WIDTH CANNOT BE ACHIEVED, A MINIMUM WIDTH OF 36 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 IN X 60 IN) AT LEAST EVERY 175 FEET TO ALLOW INDIVIDUALS IN WHEELCHAIRS TO PASS.
- BLOCKED ROUTES, ALTERNATE CROSSINGS, AND SIGN AND SIGNAL INFORMATION SHOULD BE COMMUNICATED TO PEDESTRIANS WITH VISUAL DISABILITIES BY PROVIDING DEVICES SUCH AS AUDIBLE INFORMATION DEVICES, ACCESSIBLE PEDESTRIAN SIGNALS, OR BARRIERS AND CHANNELIZING DEVICES THAT ARE DETECTABLE TO THE PEDESTRIANS TRAVELING WITH THE AID OF LONG CANE OR WHO HAVE LOW VISION.
- TEMPORARY RAMPS SHALL HAVE A SLOPE OF 12:1 MAX. THE PEDESTRIAN PATH AND RAMP SHALL BE CONSTRUCTED OF HOT MIX ASPHALT OR OTHER MATERIAL THAT CAN PROVIDE SMOOTH, HARD SURFACE & WILL MAINTAIN 12:1 SLOPE. THE GEOMETRY AND ALIGNMENT OF THE FACILITY SHOULD MEET THE APPLICABLE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)".
- DETECTABLE BARRICADES SHALL EXTEND AT LEAST 36 INCHES ABOVE THE PATHWAY WITH THE BOTTOM OF THE BARRICADE NO MORE THAN 1 1/2 INCHES ABOVE THE PATHWAY, AND SHALL EXTEND THE FULL WIDTH OF THE CLOSURE.
- FOR RECOMMENDED TAPER LENGTHS AND SPACING OF DRUMS REFER TO TRAFFIC CONTROL PLANS AND CURRENT MUTCD.
- ALL TEMPORARY PEDESTRIAN ROUTES ESTABLISHED THROUGH OR AROUND WORK AREAS SHALL MAINTAIN THE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING FACILITY BEING DISRUPTED. THE CONTRACTOR SHALL PROVIDE TEMPORARY CURB RAMPS, RAMPS AND DETECTABLE WARNING DEVICES ON ALL TEMPORARY FACILITIES AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING PROPERTIES/DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.
- ALL REQUIRED CONSTRUCTION WITHIN A WORK AREA ON A SIDEWALK SECTION/BLOCK SHALL BE COMPLETED PRIOR TO REMOVING THE TRAFFIC CONTROL DEVICES EXCEPT FOR THE FINAL MILLING AND PAVING OPERATIONS WITHIN THE STREET.

LEGEND:

- SIGN
- DRUM
-] DETECTABLE BREAKAWAY BARRICADE WITHOUT SIGN
-] DETECTABLE BREAKAWAY BARRICADE WITH SIGN
- ⊕ DIRECTION OF PEDESTRIAN TRAFFIC

APPROVED:  1/12/23 Richard A. Alaimo PROFESSIONAL ENGINEER NEW JERSEY LICENSE NO. 13195	REVISIONS DATE BY	DATE BY	 RICHARD A. ALAIMO ENGINEERING COMPANY Consulting Engineers NJDCA 24GA27988800 200 HIGH STREET MOUNT HOLLY, N.J. 201 WILLOWBROOK BLVD. WAYNE, N.J.	ODOR & CORROSION CONTROL PORT READING INTERCEPTOR PORT READING INTERCEPTOR TRAFFIC CONTROL PLAN FOR PEDESTRIAN ACCESS SCALE: N.T.S.	CLIENT: WOODBRIDGE TOWNSHIP PROJECT LOCATION: WOODBRIDGE TOWNSHIP MIDDLESEX COUNTY NEW JERSEY	DATE: JAN 2023 DESIGNED BY: ECS DRAWN BY: ECS CHECKED BY: DEPT. HEAD:	SHEET TC-04 FILE NO.:
	PROJECT NO.: B-0726-0024-000 CONTRACT NO.: 2014-011R			REBID			

TOWNSHIP OF WOODBRIDGE

DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION OF PORT READING INTERCEPTOR AND APPURTENANT WORK

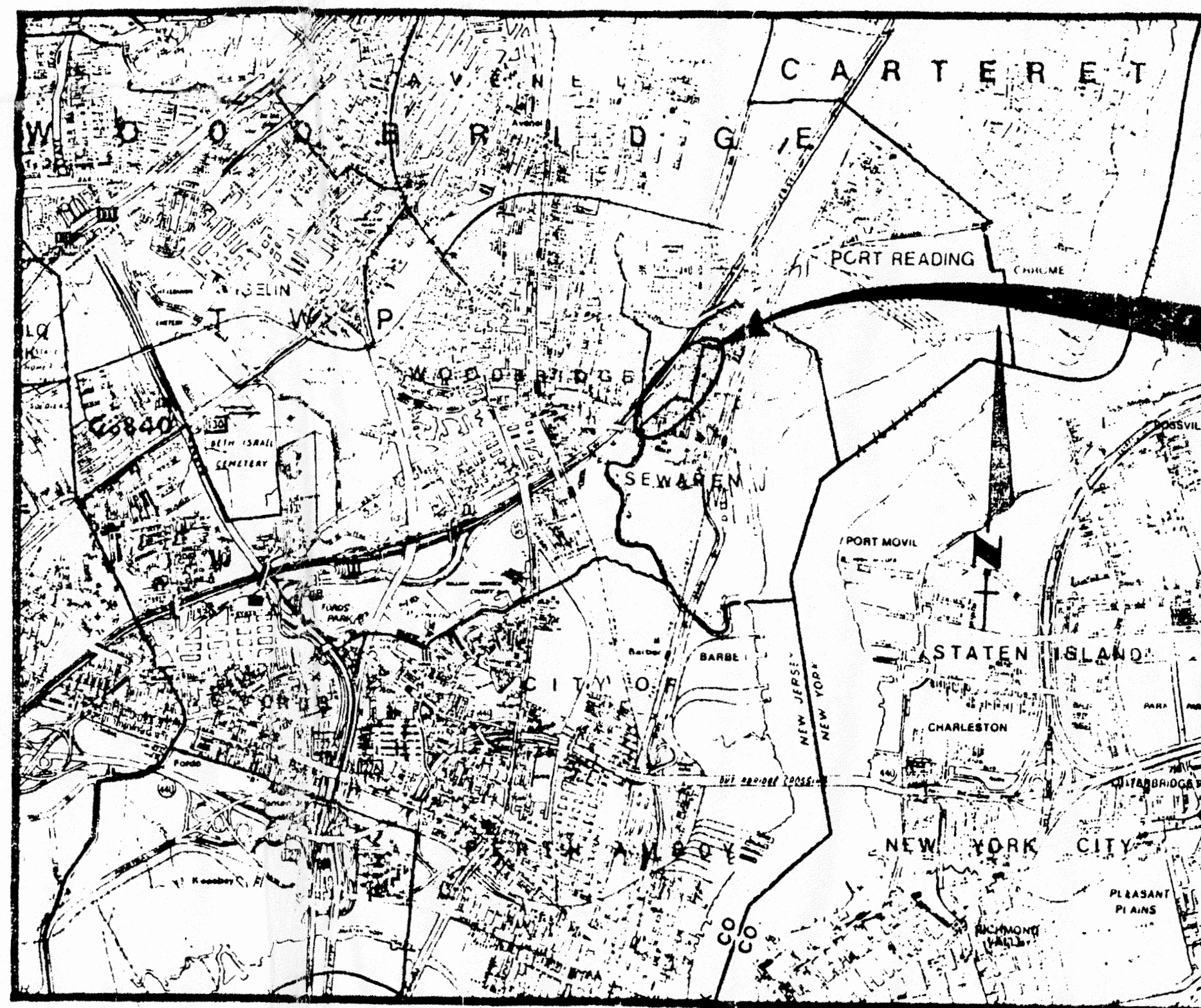
C-34-0433-05

CONTRACT 82-2

JUNE 1987

LOCATION MAP

TOWNSHIP OFFICIALS



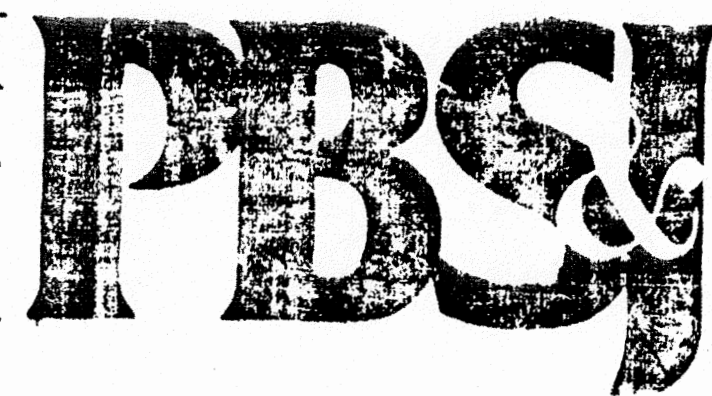
PROJECT SITE

SCALE: 1" = 4000'

PHILLIP M. CERRIA - Mayor
EDWARD M. MAHON - Business Administrator
DR. RALPH P. BARONE - Director of Public Works
JOHN J. PINOCI, P.E. - Municipal Engineer
JOSEPH V. VALENTI - Municipal Clerk

New Jersey State Department of Environmental Protection
Division of Water Resources
CONSTRUCTION GRANTS ADMINISTRATION ELEMENT
Project No. C340-433-05 Date DEC 18 1987
CONTRACT 82-2
Acceptable *Nicholas J. Borden*
Assistant Director
Recommended for Acceptance *[Signature]*
Section Chief

ATTENTION: This contract document has been found acceptable as per Federal and/or State Regulations under the Construction Grants Program. This acceptance does not include nor imply any other approval pursuant to local, regional or other State project review requirements.



POST, BUCKLEY, SCHUH & JERNIGAN, INC.

5 INDEPENDENCE WAY

PRINCETON, N.J. 08540

609/520-8888

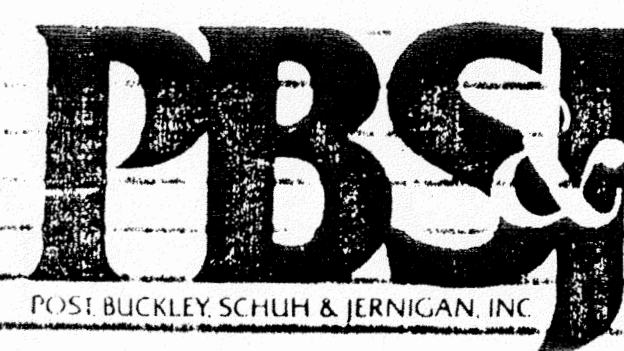
INDEX

SHEET NO.	TITLE
A	COVER SHEET
1	DRAWING INDEX AND SCHEDULE OF REVISIONS
1	GENERAL PLAN, LEGEND, AND GENERAL NOTES
2	STATIONS 0+00 TO 10+00 PLAN AND PROFILE
3	STATIONS 10+00 TO 20+00 PLAN AND PROFILE
4	STATIONS 20+00 TO 30+00 PLAN AND PROFILE
5	STATIONS 30+00 TO 40+22 PLAN AND PROFILE
6	STATIONS 0+00 TO 1+70 PLAN AND PROFILE
7	DROP CHAMBER - PLAN, SECTIONS, AND DETAILS
8	MISCELLANEOUS DETAILS
9	MISCELLANEOUS DETAILS
10	MISCELLANEOUS DETAILS

SCHEDULE OF REVISIONS

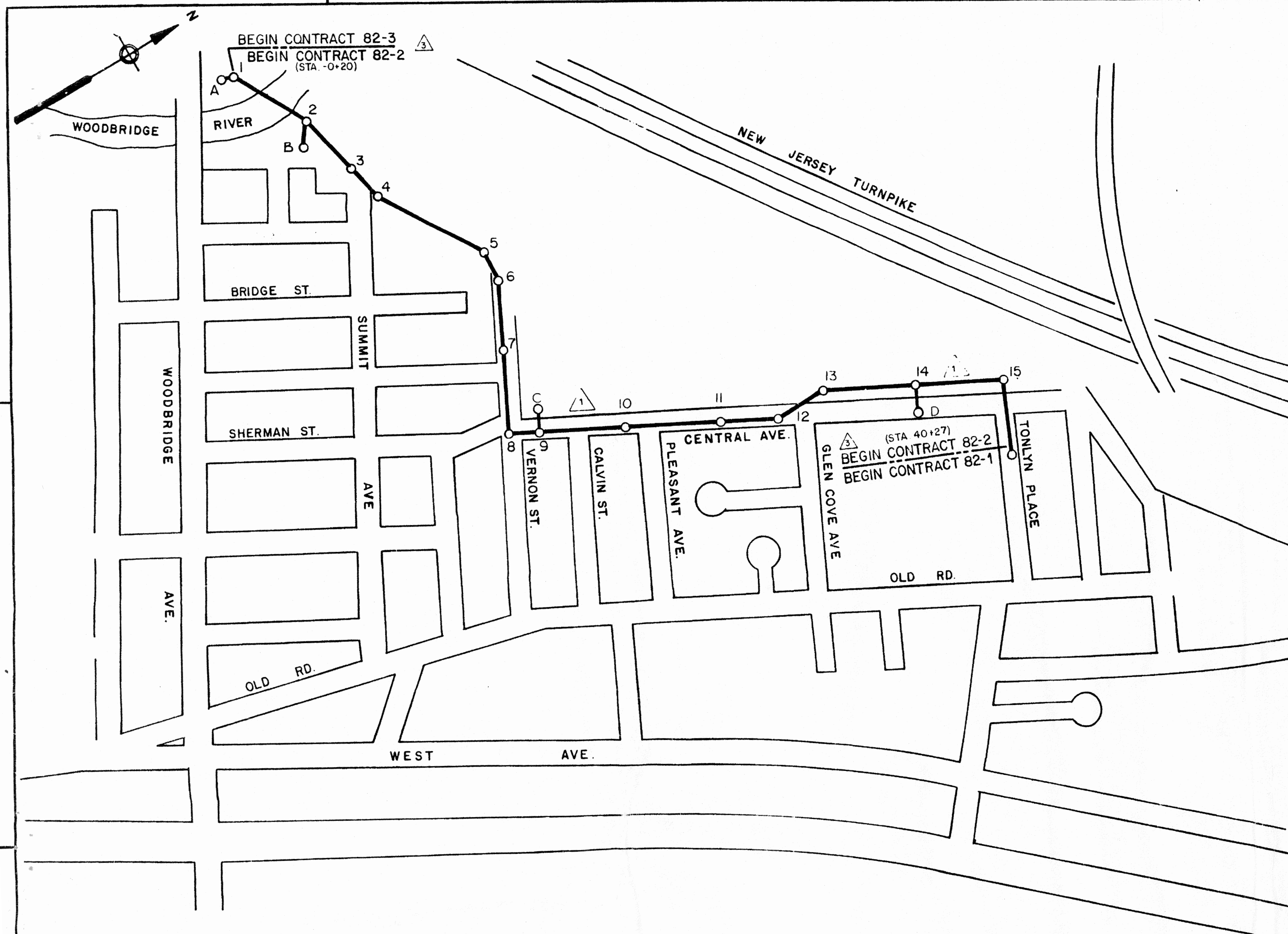
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1	RWZ		REVISIONS TO COVER SHEET, GENERAL PLAN, LEGEND, AND GENERAL NOTES.	1	RWZ		REVISIONS TO COVER SHEET, GENERAL PLAN, LEGEND, AND GENERAL NOTES.
2			ADDED STREAM PROTECTION NOTE.	2			ADDED STREAM PROTECTION NOTE.
3			REVISIONS TO STATIONS 0+00 TO 10+00 PLAN AND PROFILE.	3			REVISIONS TO STATIONS 0+00 TO 10+00 PLAN AND PROFILE.
4			REVISIONS TO STATIONS 10+00 TO 20+00 PLAN AND PROFILE.	4			REVISIONS TO STATIONS 10+00 TO 20+00 PLAN AND PROFILE.
5			REVISIONS TO STATIONS 20+00 TO 30+00 PLAN AND PROFILE.	5			REVISIONS TO STATIONS 20+00 TO 30+00 PLAN AND PROFILE.
6			REVISIONS TO STATIONS 30+00 TO 40+22 PLAN AND PROFILE.	6			REVISIONS TO STATIONS 30+00 TO 40+22 PLAN AND PROFILE.
7			REVISIONS TO STATIONS 0+00 TO 1+70 PLAN AND PROFILE.	7			REVISIONS TO STATIONS 0+00 TO 1+70 PLAN AND PROFILE.
8			DROP CHAMBER - PLAN, SECTIONS, AND DETAILS.	8			DROP CHAMBER - PLAN, SECTIONS, AND DETAILS.
9			MISCELLANEOUS DETAILS.	9			MISCELLANEOUS DETAILS.
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POST, BUCKLEY, SCHUH & JERNIGAN, INC.
 CONSULTING ENGINEERS & PLANNERS
 SCALE: AS SHOWN
 DATE: 6/19/87
 ANTHONY R. RICIGLIANO, N.J. P.E. No. 12907

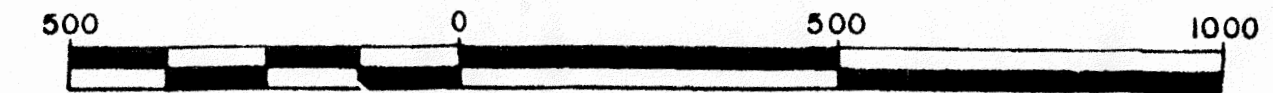


CLIENT	PROJECT	TASK	ORIGINAL REVISIONS	JOB NO.
TOWNSHIP OF WOODBRIDGE NEW JERSEY DEPARTMENT OF PUBLIC WORKS	CONSTRUCTION OF PORT READING INTERCEPTOR AND APPURTENANT WORK	DRAWING INDEX AND SCHEDULE OF REVISIONS	5-1-87 6 7 8 9 10 11 12	20-727-00 RWZ M.A.F. QC 82-2 A / SHEET

NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK



GENERAL PLAN



▲, △ SOIL EROSION AND SEDIMENT CONTROL PLAN

1. All soil erosion and sediment control practices shall be installed prior to any major soil disturbance. All control practices shall be maintained until permanent vegetation is established.
2. Any disturbed areas that will be left exposed for more than 14 days, and not subject to construction traffic, shall immediately receive a temporary seeding. This seeding prevents the establishment of a temporary cover. The disturbed areas will be mulched with straw, or equivalent material, at a rate of two (2) tons per acre, according to state standards.
3. Permanent vegetation to be sodded or seeded. All exposed areas within seven (7) days after final grading. Mulch to be used as necessary for protection until seeding is established.
4. All work to be done in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey.
5. A subbase course will be applied immediately following rough grading and installation of improvements in order to stabilize streets, roads, driveways and parking areas. In areas where no utilities are present, the subbase shall be installed within 15 days of the preliminary grading.
6. Immediately following initial disturbance or rough grading, all critical areas subject to erosion (i.e. steep slopes and roadway embankments) will receive a temporary seeding in combination with straw mulch or a suitable equivalent, at a rate of two (2) tons per acre, according to state standards.
7. Any steep slopes receiving pipeline installation will be backfilled and stabilized daily, as the installation proceeds (i.e. slopes greater than 3:1).
8. Traffic Control Standards require the installation of a 50' x 30' x 1.0' pad of 1 1/2" to 2" stone, at all construction driveways, immediately after initial site disturbance.
9. Acid soils shall be restored in accordance with the Standard for Permanent Vegetative Cover for Soil Stabilization - refer to Addendum to Specifications, Section IEG.8.C, Critical Impact Areas - Acidic Soil Conditions.
10. The Freehold Soil Conservation District shall be notified 72 hours in advance of any land disturbing activity.
11. At the time when the site preparation for permanent vegetative stabilization is going to be accomplished, any soil that will not provide a suitable environment to support adequate vegetative ground cover, shall be removed or treated in such a way that will permanently adjust the soil conditions and render it suitable for vegetative ground cover.
12. In the N.J.S.A. 4:14-19 (NJ SPS) requires that a Certificate of Occupancy be issued before the provisions of the certified plan for Soil Erosion and Sediment Control have been complied with for permanent measures, all site work for site plans and all work around individual lots in subdivisions, will have to be completed prior to the district issuing a report of compliance for the issuance of a Certificate of Occupancy by the Municipality.
13. Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
14. Any changes to the certified Soil Erosion and Sediment Control Plans will require the submission of revised Soil Erosion and Sediment Control Plans to the District for re-certification. The revised plans must meet all current State Soil Erosion and Sediment Control Standards.
15. All catch basins and storm sewer inlets shall be protected from siltation.

INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE
POST, BUCKLEY, SCHUH & JERNIGAN, INC.
 CONSULTING ENGINEERS & PLANNERS
 SCALE: AS NOTED
 DATE: 6/15/87
Anthony R. Ricigliano
ANTHONY R. RICIGLIANO, N.J.P.E. No. 12907

LEGEND

- R.C.P.— REINFORCED CONCRETE PIPE
- PROPOSED SEWER AND MANHOLE
- PROPOSED SEWER AND MANHOLE
- PROPOSED SEWER, MANHOLE AND BORING LOCATION
- S— SANITARY SEWER
- W— WATER MAIN
- G— GAS MAIN
- E— ELECTRIC CONDUIT
- T— TELEPHONE
- C.B. CATCH BASIN
- — — — — PROPERTY LINE
- x—x— FENCE
- — — — — ROAD CENTER LINE
- — — — — EXISTING CONTOUR LINE
- x54.6 GROUND ELEVATION
- — — — — EDGE OF WATER
- — — — — SWAMP AREA
- — — — — CONCRETE OR STONE WALL
- — — — — TREE
- — — — — BUSHES
- — — — — WOODED AREA
- UTILITY POLE
- BORING LOCATION
- D— DRAIN PIPE
- ST— STORM SEWER
- — — — — LIMITS OF WETLANDS

GENERAL NOTES:

1. Photogrammetric mapping furnished by Aerial Data Reduction Associates, Inc., Pennsauken, New Jersey.
2. Boring logs are found in back of Specifications.
3. All elevations are referred to in USGS Datum.
4. Manhole frames in easements shall be constructed 6" to 8" above finished grade unless otherwise directed.
5. Excavated soil material shall not be placed adjacent to rivers, streams, channels or impoundments in a manner that will cause it to be washed away by high water or runoff. The side slopes for spoil banks and borrow pits shall not be steeper than 3' horizontal on 1' vertical.
6. No debris, material or other obstruction caused by the construction operation shall be intentionally placed in stream corridors or surface waters.
7. Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, wetlands or surface waters is prohibited.
8. Pollutants such as chemicals, fuels, lubricants, bituminous materials, raw sewage and other harmful wastes shall not be discharged into or along side of rivers, streams, channels or impoundments.
9. The Contractor shall comply with applicable Federal, State and Local Regulations relating to the prevention and abatement of pollution.
10. The Contractor shall comply with construction and restoration procedures as outlined in Specification Sections IEG - Environmental Guidelines, 2P - Landscaping and 2AB - Erosion Control.
11. All construction areas where the natural ground cover has been disturbed by the Contractor's operations shall be restored as indicated in Specification Section 2P - Landscaping.
12. In areas where final restoration is expected to be completed within 7 days after the completion of construction, no temporary protective measures will be required.
If final restoration is expected to begin more than 7 days and be completed more than 30 days after the start of construction, seeding shall be required for temporary protection. Mulching may be applied when seasonal conditions are not suitable for growing temporary vegetative cover.
Mulch anchoring shall be done immediately after placement. Anchoring shall be accomplished using either mulch netting or peg and twine, installed in a manner consistent with the "Standards for Soil Erosion and Sediment Control in New Jersey".
13. Mulching shall be wheat or rye straw or grass hay uniformly applied at a rate of 2 tons per acre. Whenever "Seeding and Mulching" is specified, mulching shall be done within 5 days of seeding.
14. Rye shall be used for temporary seeding at a seeding rate of 2.4 lbs. per 1000 sq. ft.; also, temporary fertilization and liming shall be applied as per the "Standards for Soil Erosion and Sediment Control in New Jersey".
15. Permanent seeding mixtures and rates shall be as specified in Section 2P. Hydro-seeding will not be permitted.
16. The fertilizer used should be 10-20-10 or equivalent. Application rates for fertilizer, lime, and seed (seed mixture) should be based on soil tests by Contractor and recommendations of the Soil Conservation Service, or as specified in Section 2P - Landscaping.
17. Following backfill operations and prior to liming, pH tests shall be done on the top soil by the Contractor. The suggested amounts of ground limestone, to raise the pH of normal plow layer of different soil textural classes to approximately 6.5, are shown as follows:

pH Value of Soil	GROUND LIMESTONE - POUNDS/ACRE			
	Loamy Sand	Soil Textural Sand Loam	Class Loam	Silt Loam
6.1 - 6.3	500	1,000	2,000	2,000
5.7 - 6.0	1,000	2,000	3,000	4,000
5.3 - 5.6	2,000	3,500	5,000	6,000
4.9 - 5.2	3,000	5,000	7,000	8,000
4.5 - 4.8	4,000	6,000	9,000*	10,000*
4.1 - 4.4	5,000	7,000	11,000*	12,000*

*Apply 8,000 pounds per acre at seeding time and the remainder one year later.
18. Contractor is responsible for field verification of all existing ground elevations, utilities, locations and inverts.
19. Contractor is responsible for submitting a Soil Erosion and Sediment Control Plan to the Freehold Soil Conservation District for any off-site areas he obtains and uses in the progress of the work (i.e. storage, staging for Soil Erosion and Sediment Control in New Jersey) and for conforming to the "Standards for Soil Erosion and Sediment Control in New Jersey" at these sites.

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DRAWN BY
P. J. Latta
DEPT. CHECK
PROJ. CHECK
[Signature]

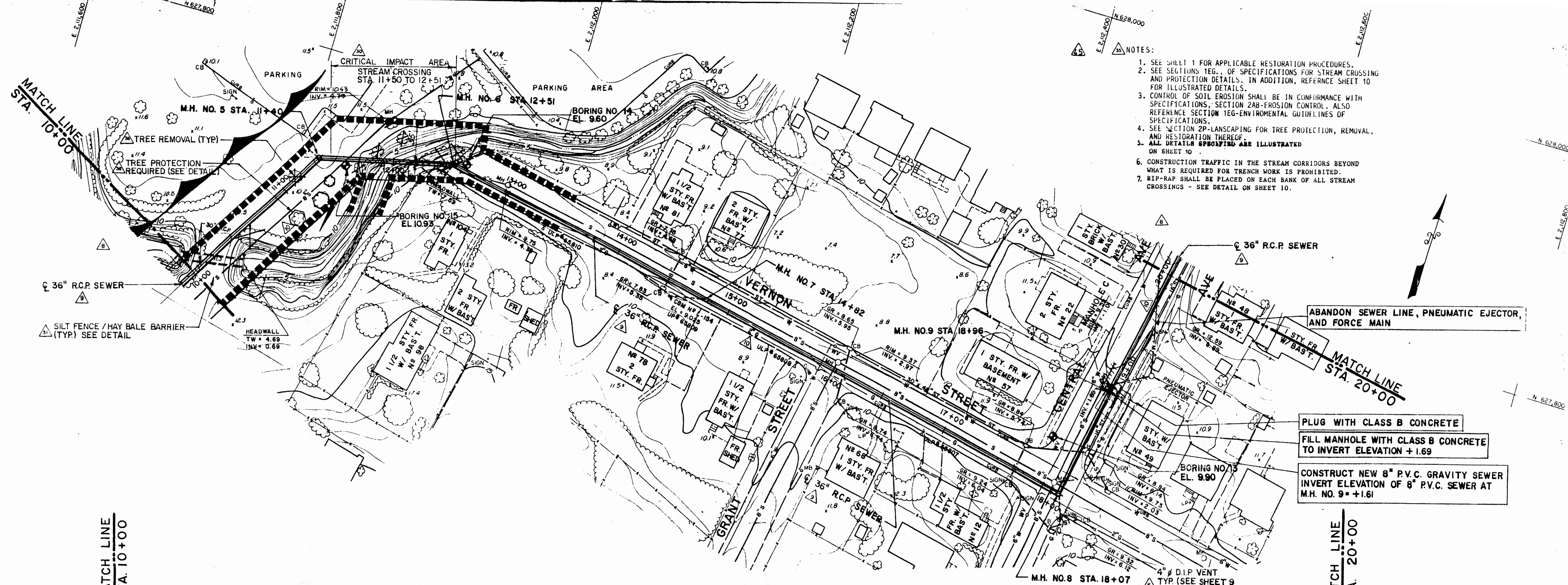
M&E METCALF & EDDY
SCALE:
ALLAN JACOBS PF
DATE: 8-4-82

TOWNSHIP OF WOODBRIDGE, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS
PORT READING INTERCEPTOR
C 34 0433

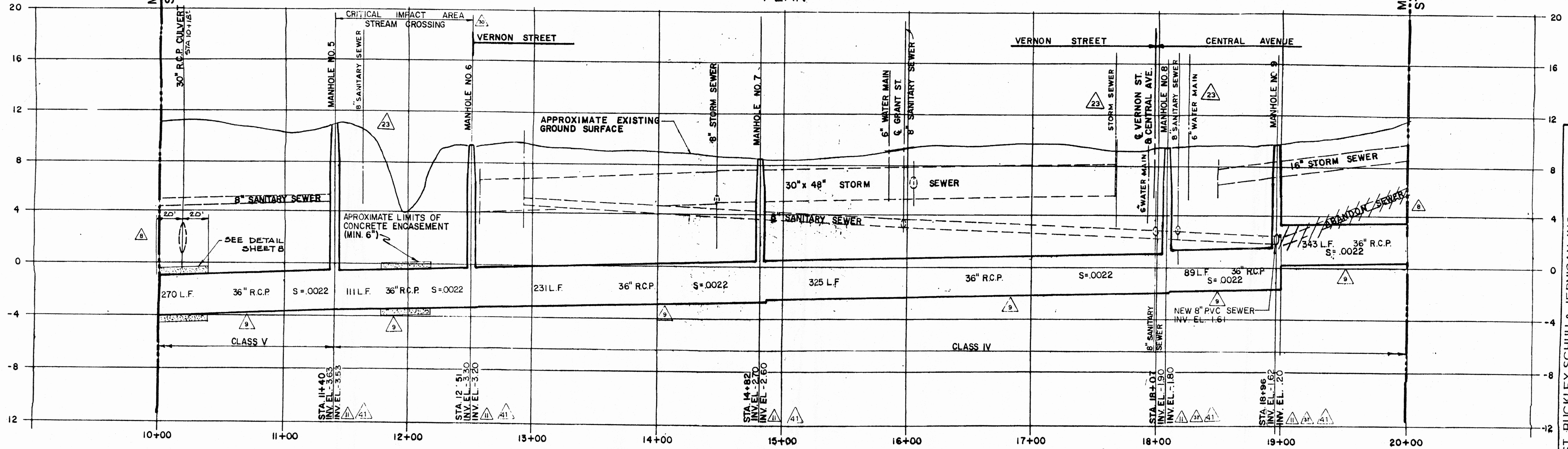
GENERAL PLAN, LEGEND AND GENERAL NOTES
STA 0+00 TO STA 40+20

JOB: 7227
FILE NO.: 80315
CONTRACT: 82-2
SHEET: 1

- NOTES:
- SEE SHEET 1 FOR APPLICABLE RESTORATION PROCEDURES.
 - SEE SECTIONS 1E.G., OF SPECIFICATIONS FOR STREAM CROSSING AND PROTECTION DETAILS. IN ADDITION, REFERENCE SHEET 10 FOR ILLUSTRATED DETAILS.
 - CONTROL OF SOIL EROSION SHALL BE IN CONFORMANCE WITH SPECIFICATIONS, SECTION 2A8-EROSION CONTROL. ALSO REFERENCE SECTION 1E6-ENVIRONMENTAL GUIDELINES OF SPECIFICATIONS.
 - SEE SECTION 2P-LANDSCAPING FOR TREE PROTECTION, REMOVAL, AND RESTORATION THEREOF.
 - ALL DETAILS SPECIFIED ARE ILLUSTRATED ON SHEET 10.
 - CONSTRUCTION TRAFFIC IN THE STREAM CORRIDORS BEYOND WHAT IS REQUIRED FOR TRENCH WORK IS PROHIBITED.
 - RIP-RAP SHALL BE PLACED ON EACH BANK OF ALL STREAM CROSSINGS - SEE DETAIL ON SHEET 10.



PLAN



PROFILE

SOIL EROSION AND SEDIMENT CONTROL PLAN △ INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

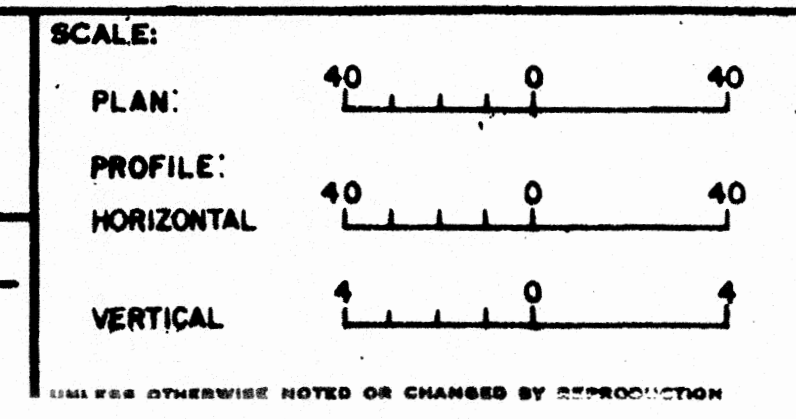
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P. Seta
R. Ditzel

DEPT. CHECK
J. Bunt

PROJ. CHECK
[Signature]

M&E METCALF & EDDY

T.G. BAXTER, P.E. DATE



TOWNSHIP OF WOODBRIDGE, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS
PORT READING INTERCEPTOR
C-34-0433
PLAN AND PROFILE
STA 10+00 TO STA 20+00

JOB 7227

FILE NO. 80307

CONTRACT 82

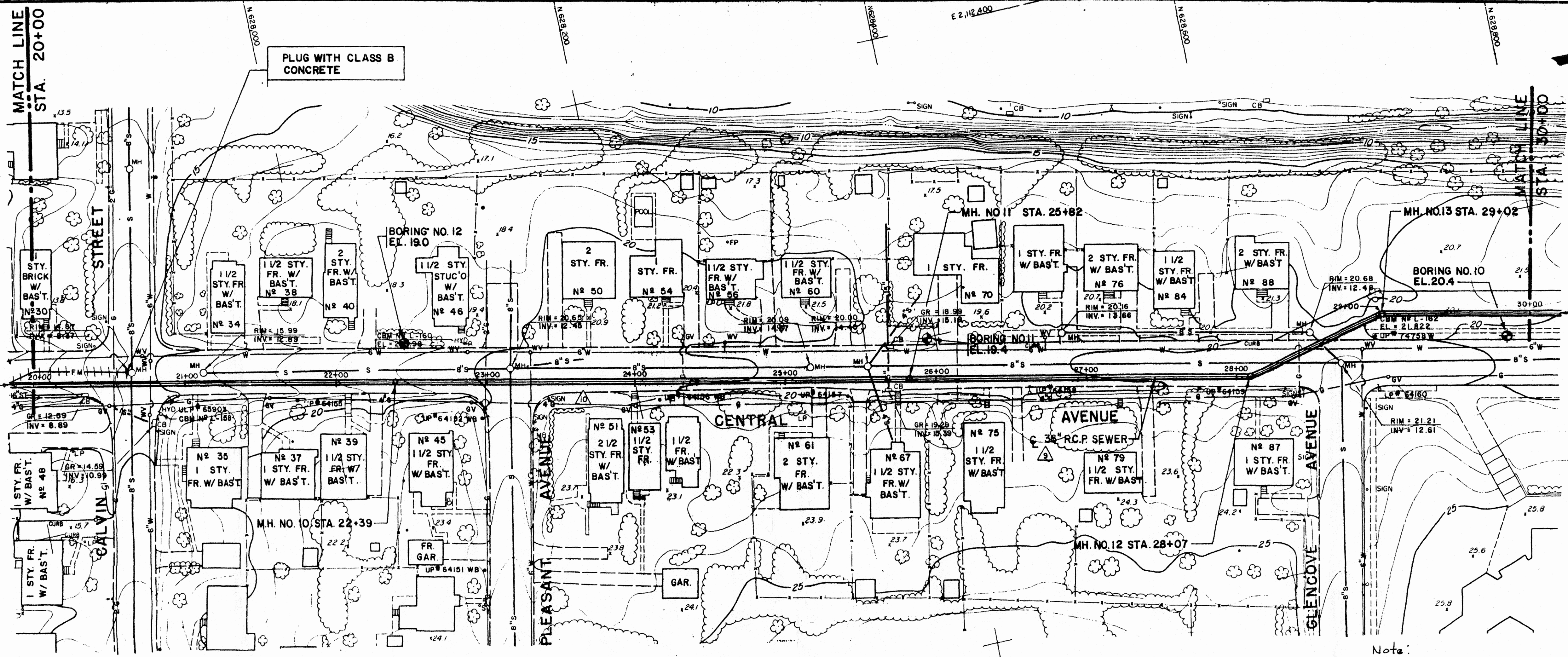
SHEET 3

SCALE: AS SHOWN
DATE: 6/15/87

Anthony R. Ricigiano
ANTHONY R. RICIGIANO N.T.P. No. 12907

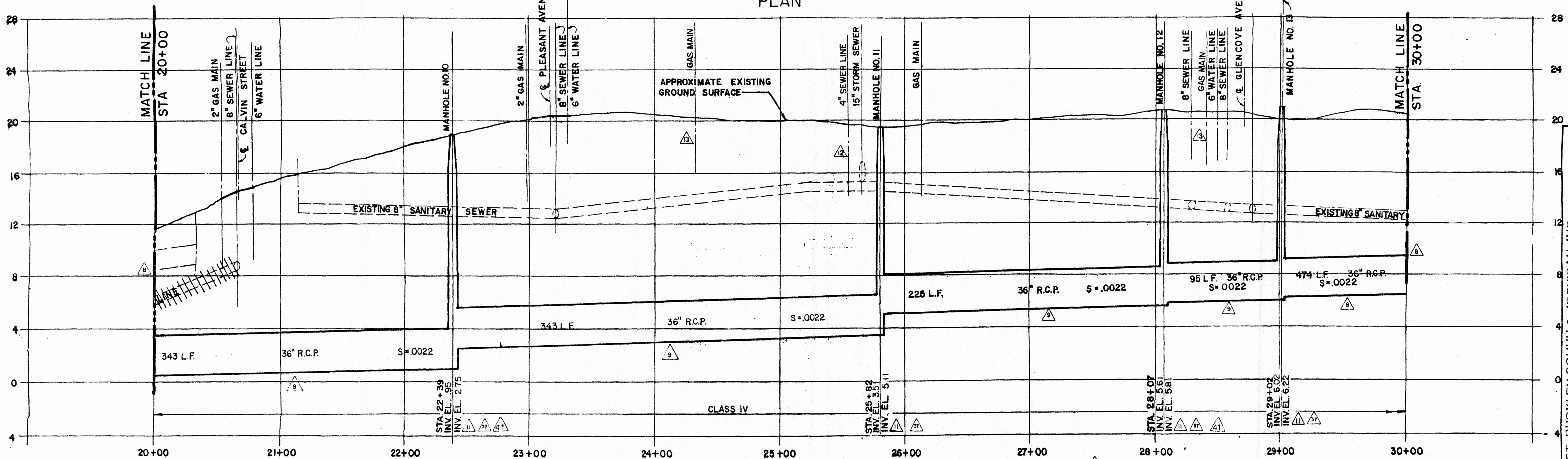
POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

PERMIT: 5608
1 P.S. WRF-54400020



Notes:
See sheet no. 1 for applicable restoration procedures.

PLAN



PROFILE

SOIL EROSION AND SEDIMENT CONTROL PLAN ▲ INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE

NO.	DATE	MADE BY	CHECKED BY	DESCRIPTION

DRAWN BY <i>A. Lata</i> <i>B. Diteel</i>
DEPT. CHECK <i>J. Sims</i>
PROJ. CHECK <i>[Signature]</i>

M&E METCALF & EDDY

Allan Jacobs
ALLAN JACOBS, P.E.

DATE: **8-9-82**

SCALE:

PLAN:

PROFILE:

HORIZONTAL:

VERTICAL:

TOWNSHIP OF WOODBRIDGE, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS
PORT READING INTERCEPTOR
C-34-0433
PLAN AND PROFILE

STA 20+00 TO STA 30+00

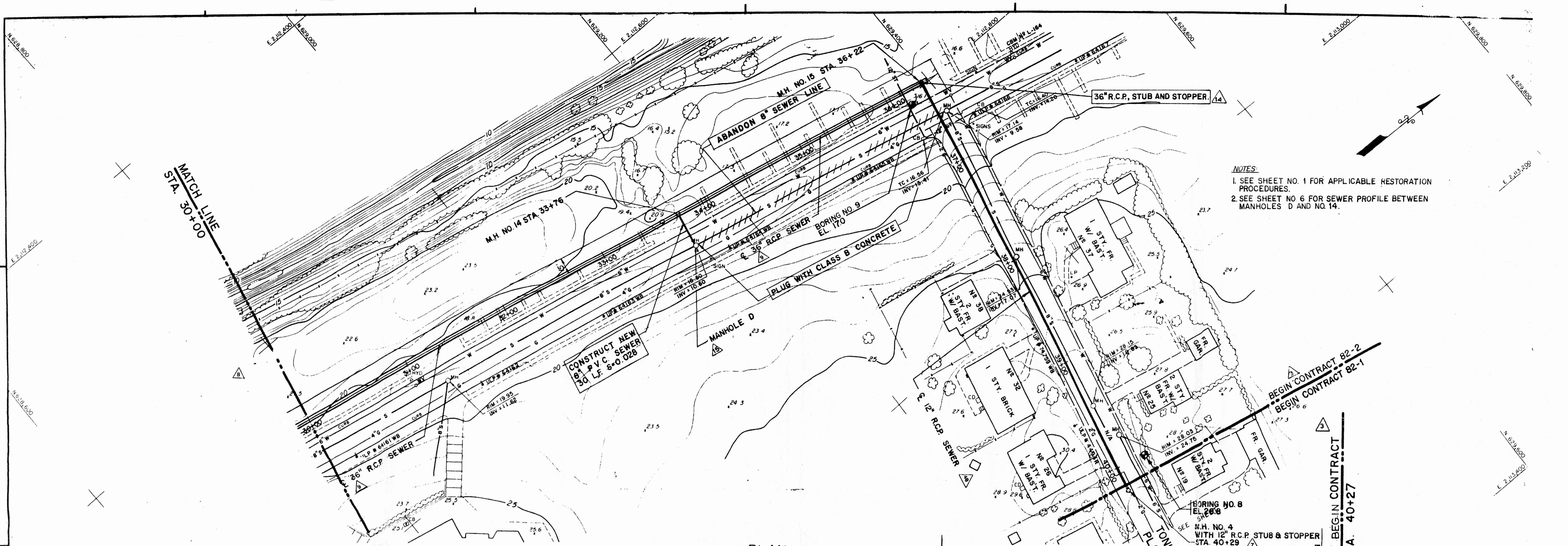
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FILE NO. 80300

CONTRACT 82-2

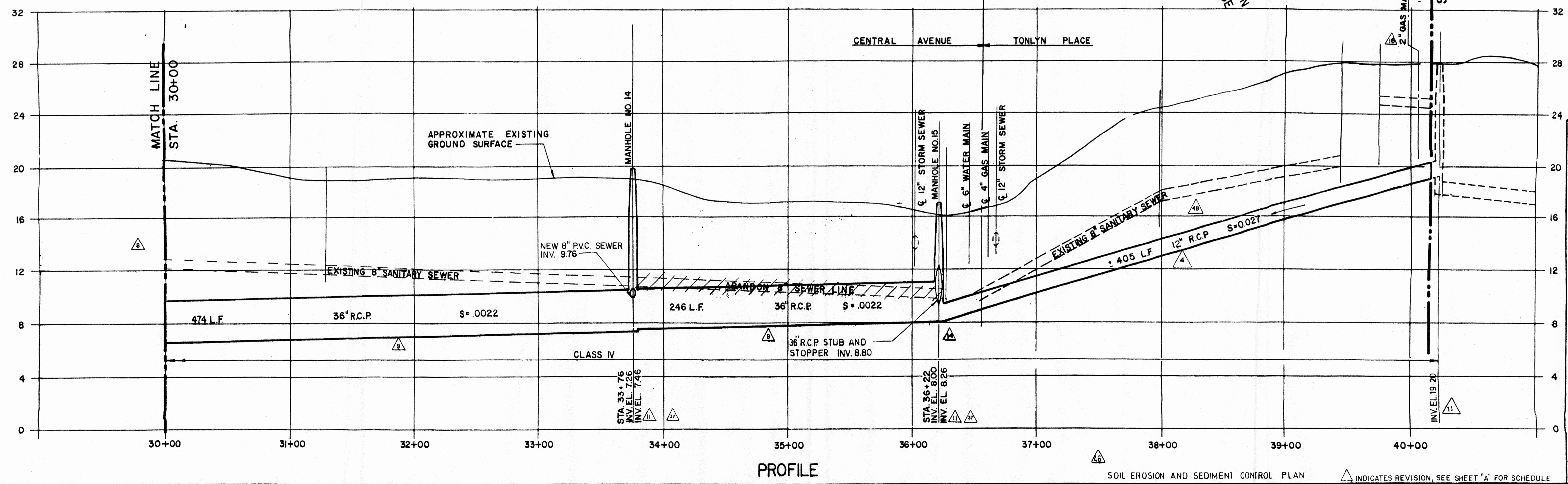
SHEET 4

POST, BUCKLEY, SCHUIH & JERNIGAN, INC.
 CONSULTING ENGINEERS & PLANNERS
 ANTHONY R. RICIGLIANO, N.J.P.E. No. 12907
 DATE: 6/15/87



- NOTES:**
1. SEE SHEET NO. 1 FOR APPLICABLE RESTORATION PROCEDURES.
 2. SEE SHEET NO. 6 FOR SEWER PROFILE BETWEEN MANHOLES D AND NO. 14.

PLAN



PROFILE

SOIL EROSION AND SEDIMENT CONTROL PLAN INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

DRAWN BY
R. Ditzel

DEPT. CHECK
J. [unclear]

PROJ. CHECK
[unclear]

M&E METCALF & EDDY

Allan Jacobs
ALLAN JACOBS, P.E.

DATE: **3-9-82**

SCALE:

PLAN: 40' 0' 40'

PROFILE: 40' 0' 40'

HORIZONTAL: 40' 0' 40'

VERTICAL: 4' 0' 4'

TOWNSHIP OF WOODBRIDGE, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS
PORT READING INTERCEPTOR
C-34-0433
PLAN AND PROFILE

PERMIT: 5608
LDS WBE 50400020

STA 30+00 TO 40+00

JOB 7227

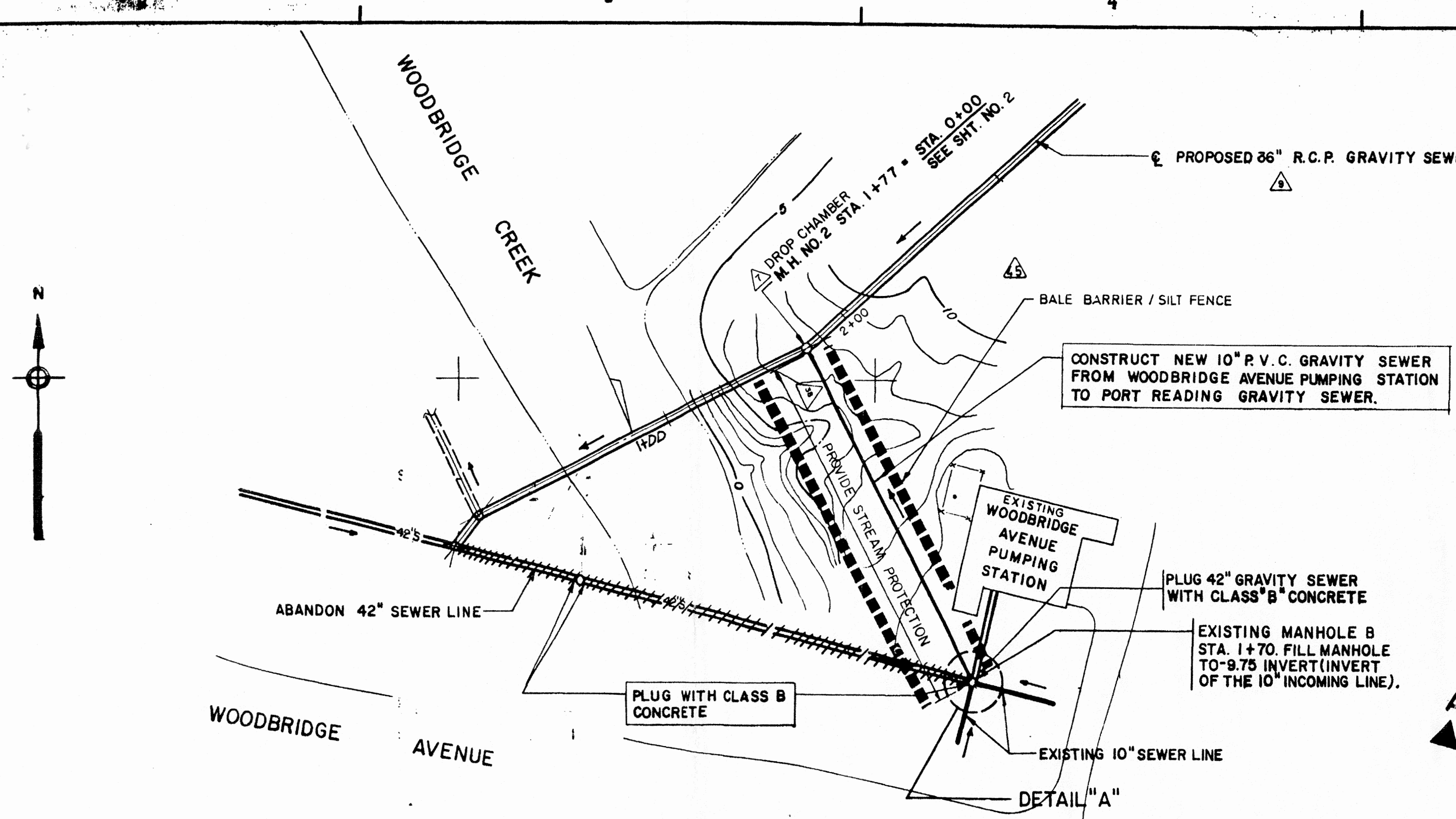
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DATE: 6/15/87

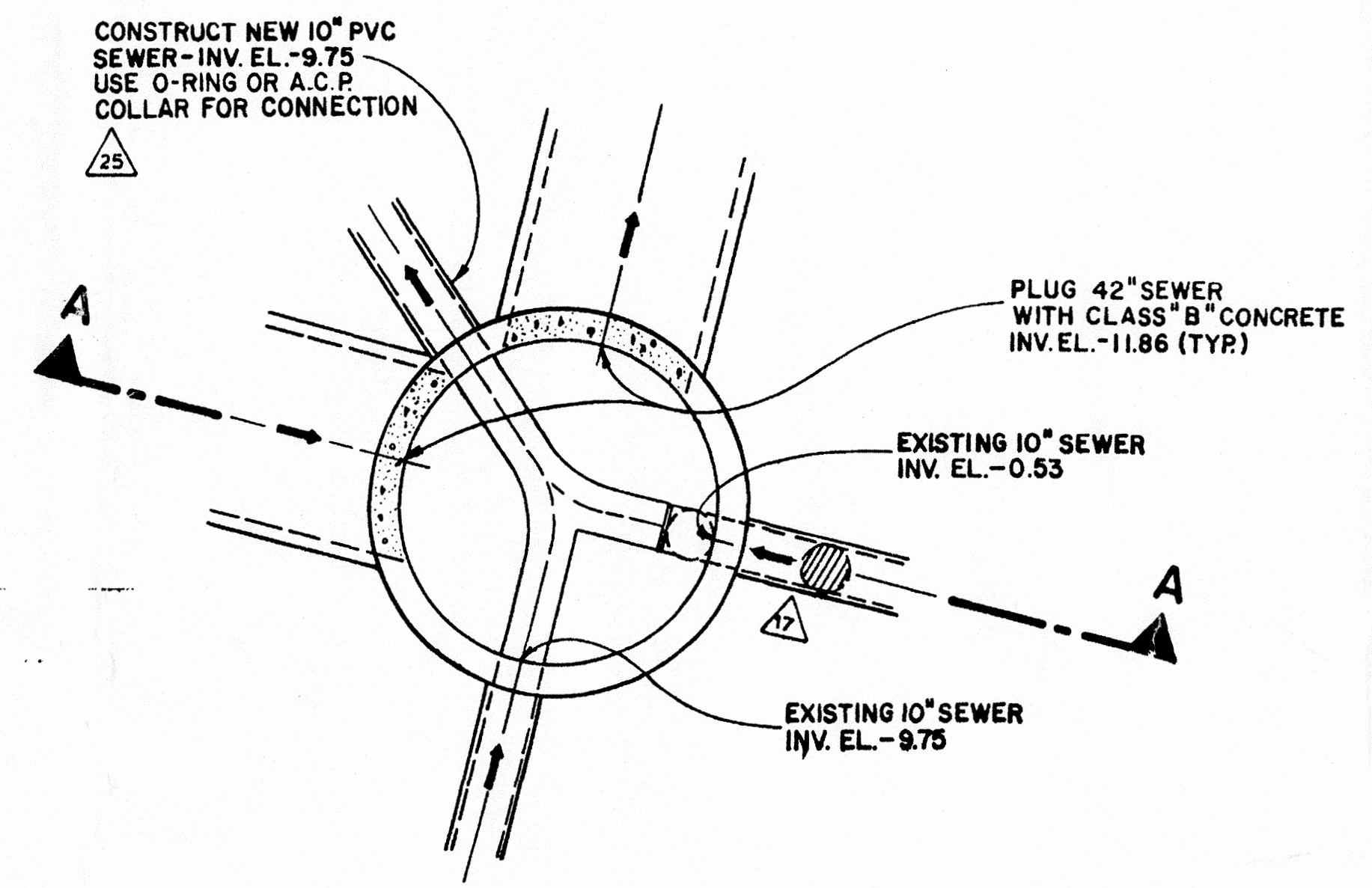
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POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

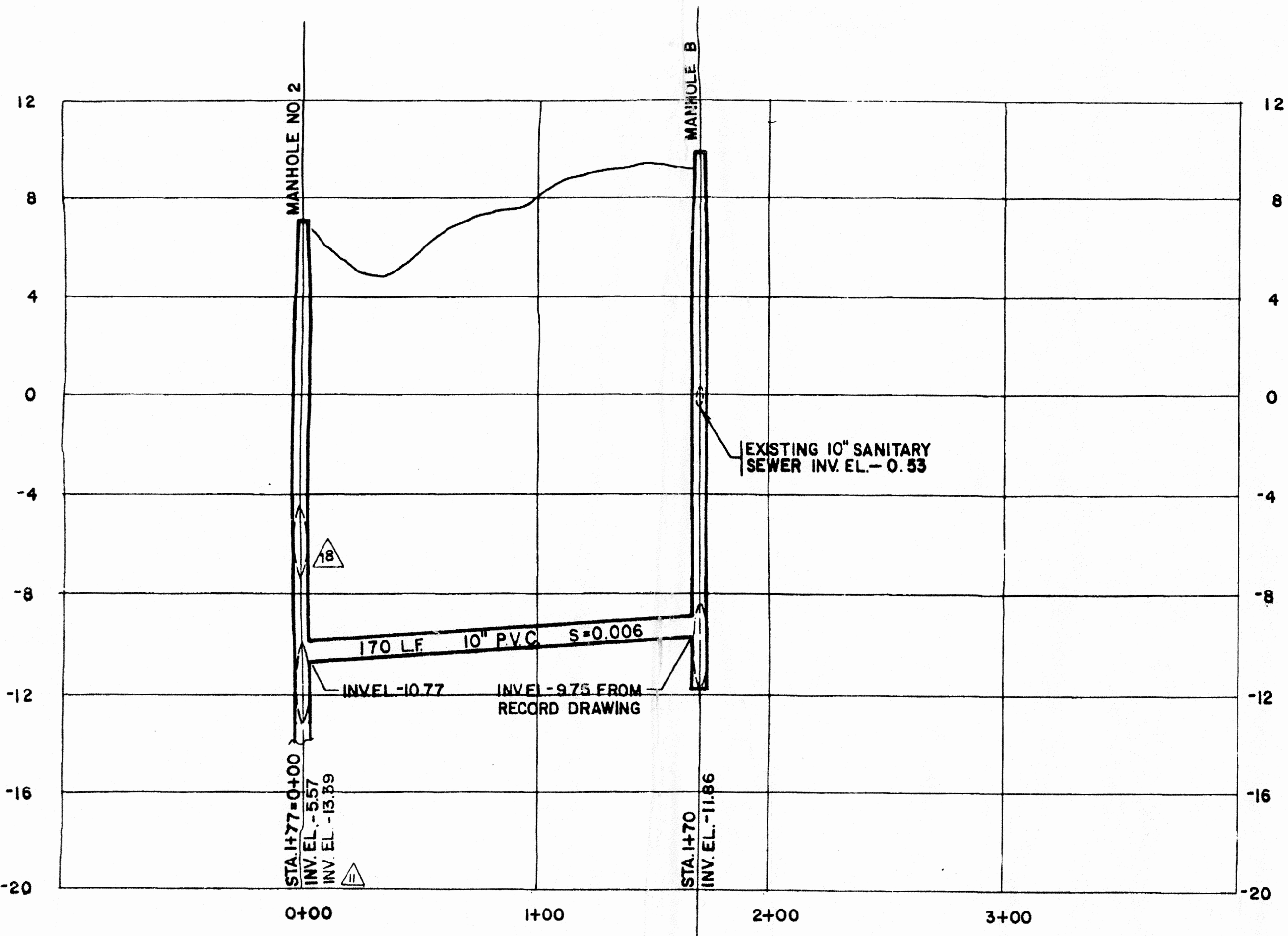


PLAN Δ 24

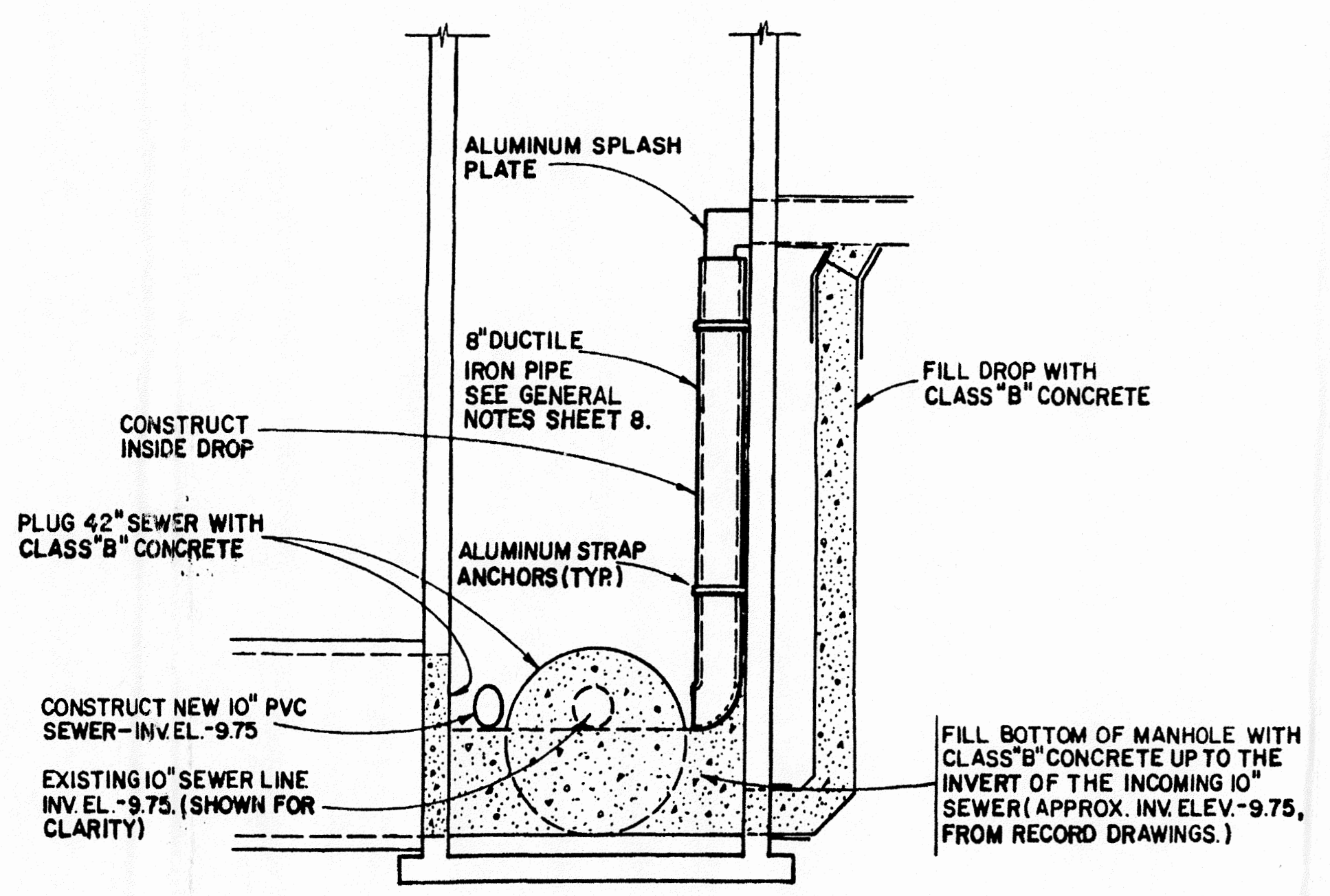
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 - SEE SPECIFICATIONS FOR STANDARD STREAM CROSSING AND STREAM PROTECTION DETAILS.



DETAIL "A" NTS

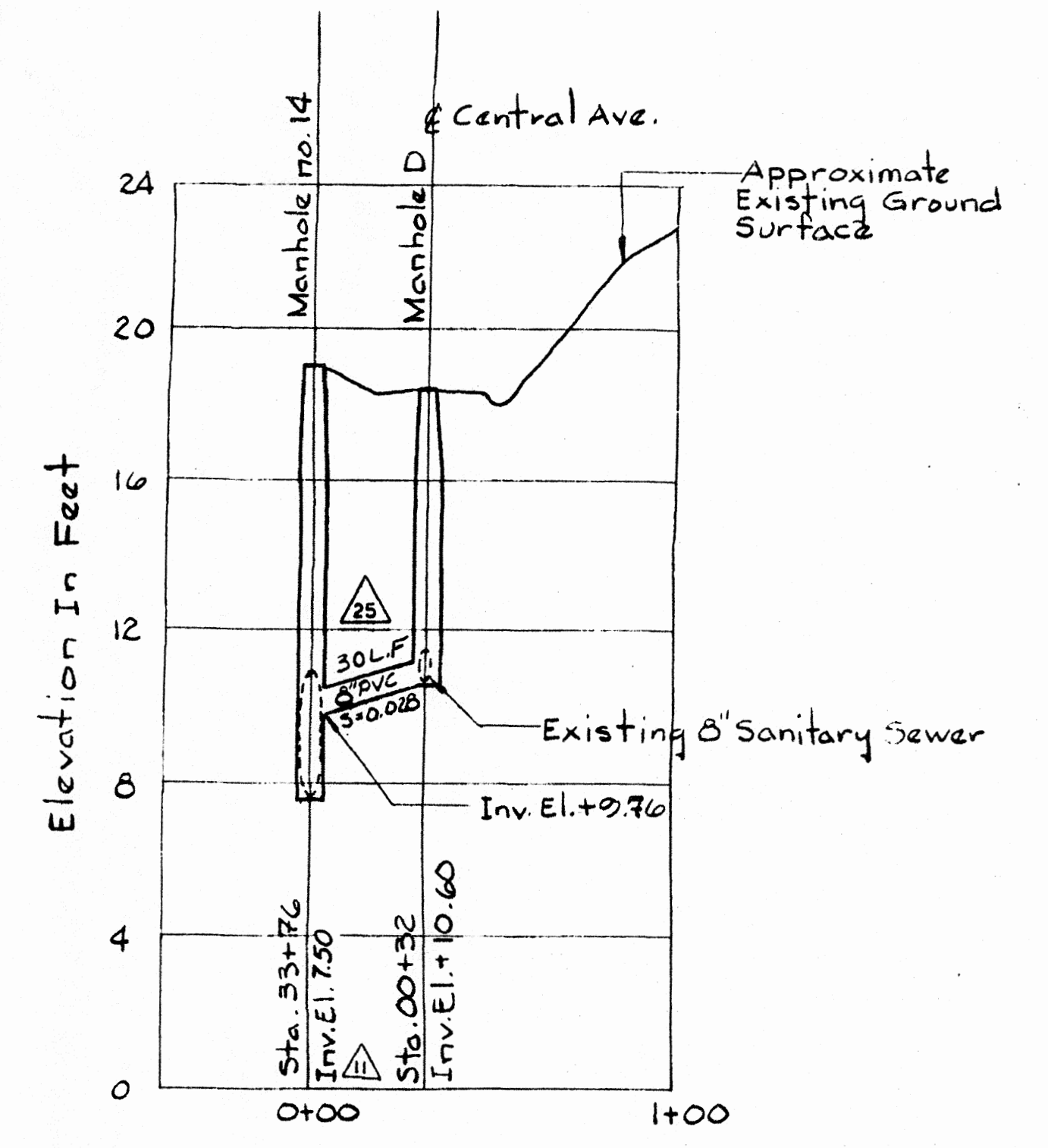


PROFILE



EXISTING MANHOLE B AT SITE OF THE EXISTING WOODBRIDGE AVE. P.S.

SECTION A-A NTS



PROFILE

INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

SCALE: AS SHOWN
DATE: 6/16/87

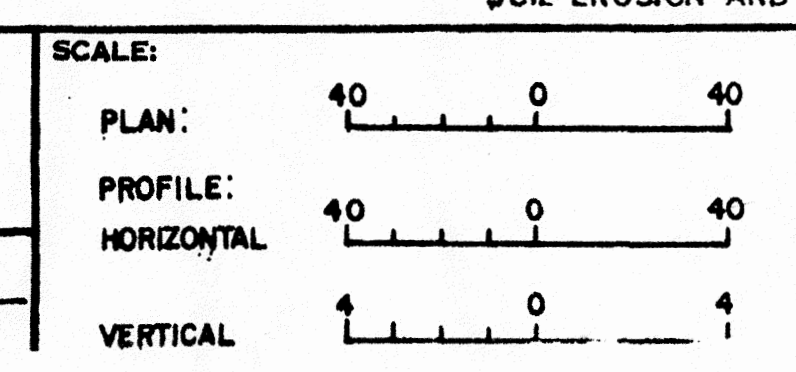
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DEPT. CHECK	<i>R. Diteel</i>
PROJ. CHECK	<i>J. Buco</i>

M&E METCALF & EDDY

ALLAN JACOBS DE

8-9-82 DATE



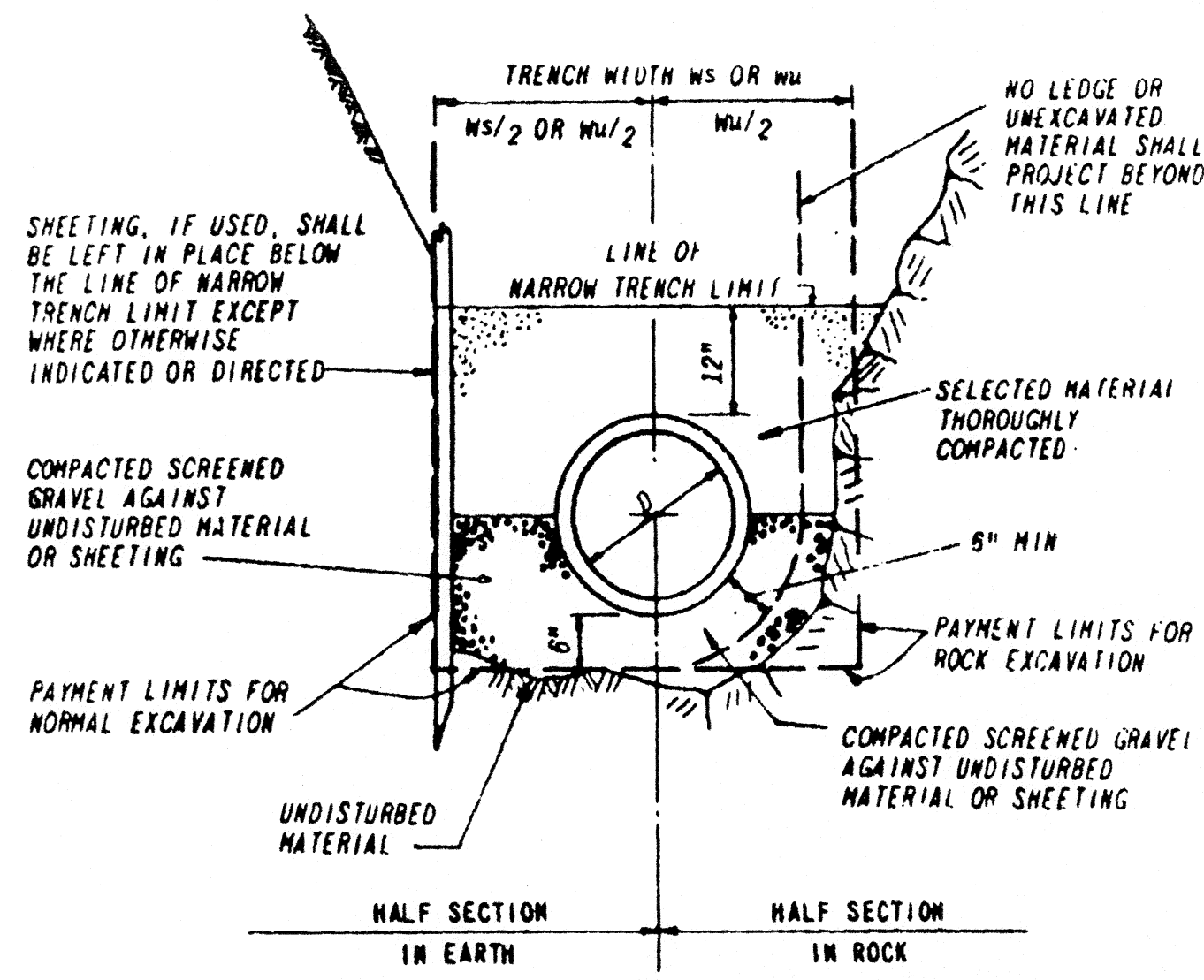
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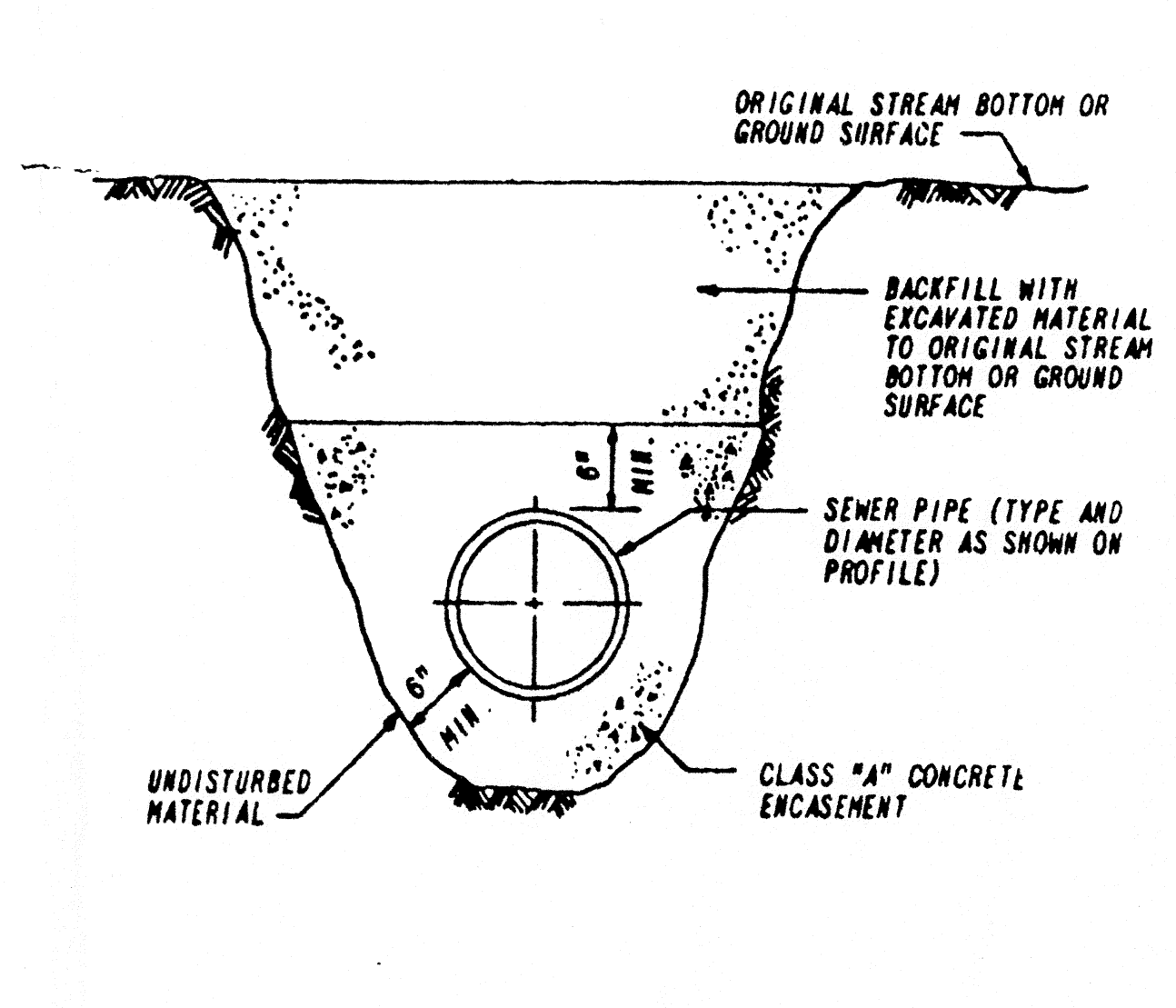
PLAN AND PROFILE

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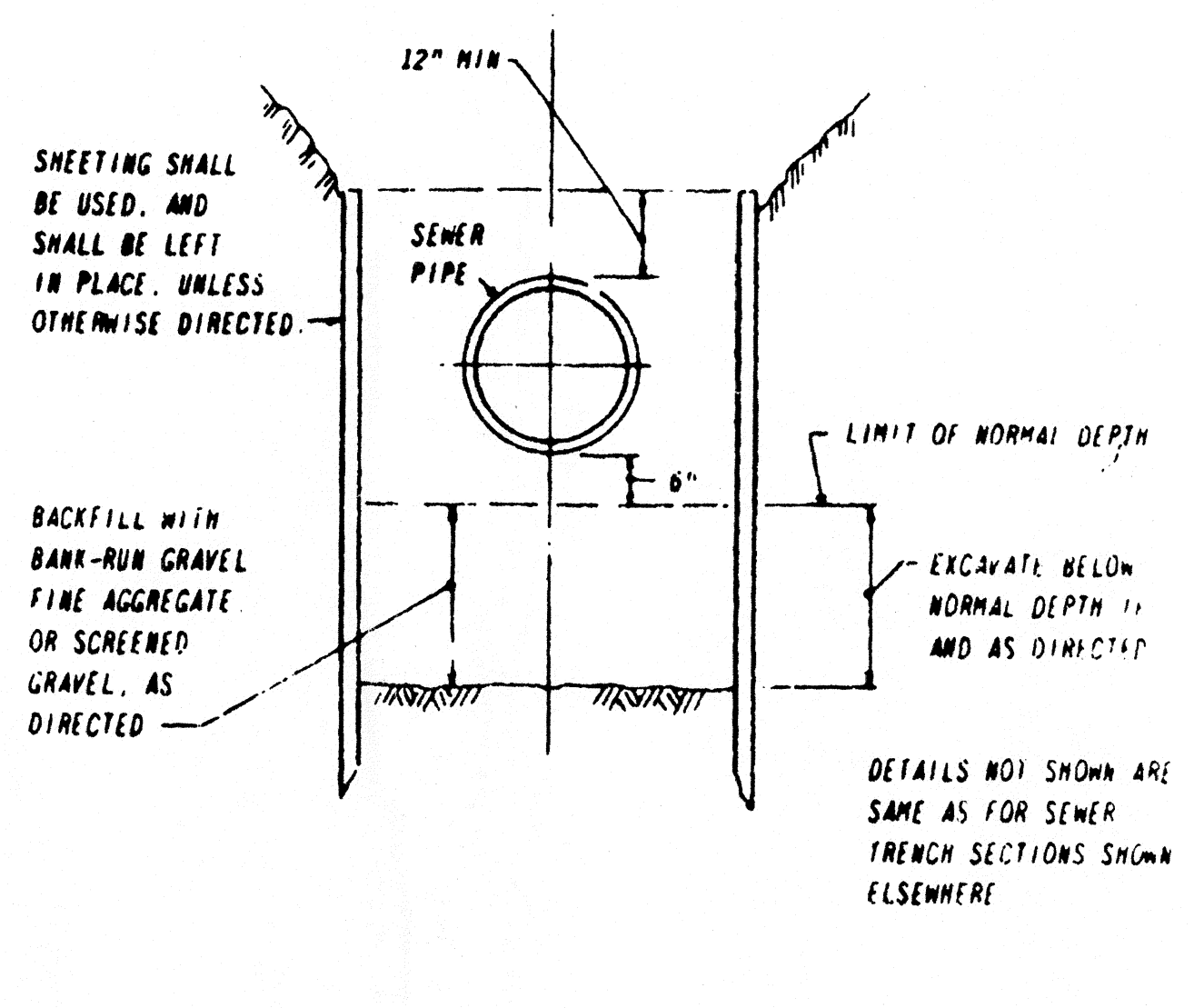
JOB	7227
FILE NO.	80310
CONTRACT	82-2
SHEET	6



FOR R.C. AND CONCRETE PRESSURE PIPE
SEWER AND FORCE MAIN
TRENCH SECTION



CONCRETE ENCASEMENT DETAIL



SEWER TRENCH SECTION

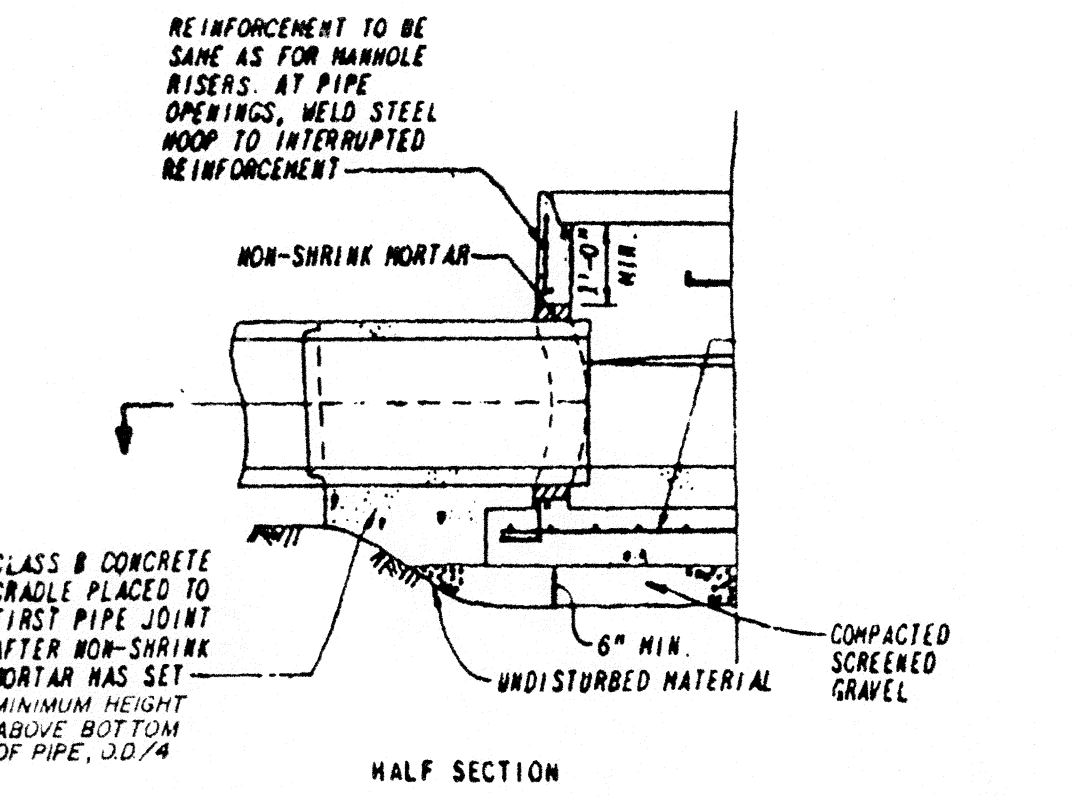
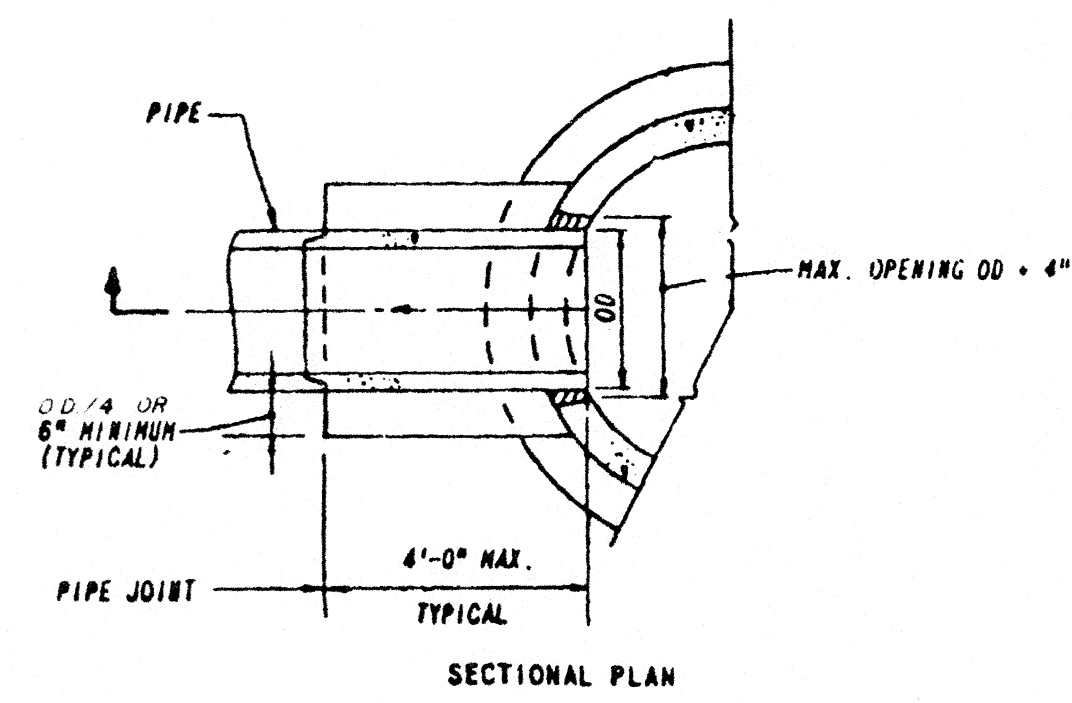
DIAMETER OF PIPE D	TRENCH WIDTH Wt OR Ww	
	UNSHEETED	SHEETED
12" AND SMALLER	3'-0"	4'-2"
15"	3'-2"	4'-4"
18"	3'-6"	4'-8"
21"	3'-10"	5'-0"
24"	4'-2"	5'-4"
27"	4'-6"	5'-8"
30"	4'-10"	6'-0"
36"	5'-6"	6'-8"
42"	6'-2"	7'-4"
48"	6'-10"	8'-0"
54"	7'-6"	8'-8"
60"	8'-2"	9'-4"
66"	8'-10"	10'-0"
72"	9'-6"	10'-8"
78"	10'-2"	11'-4"

GENERAL NOTES

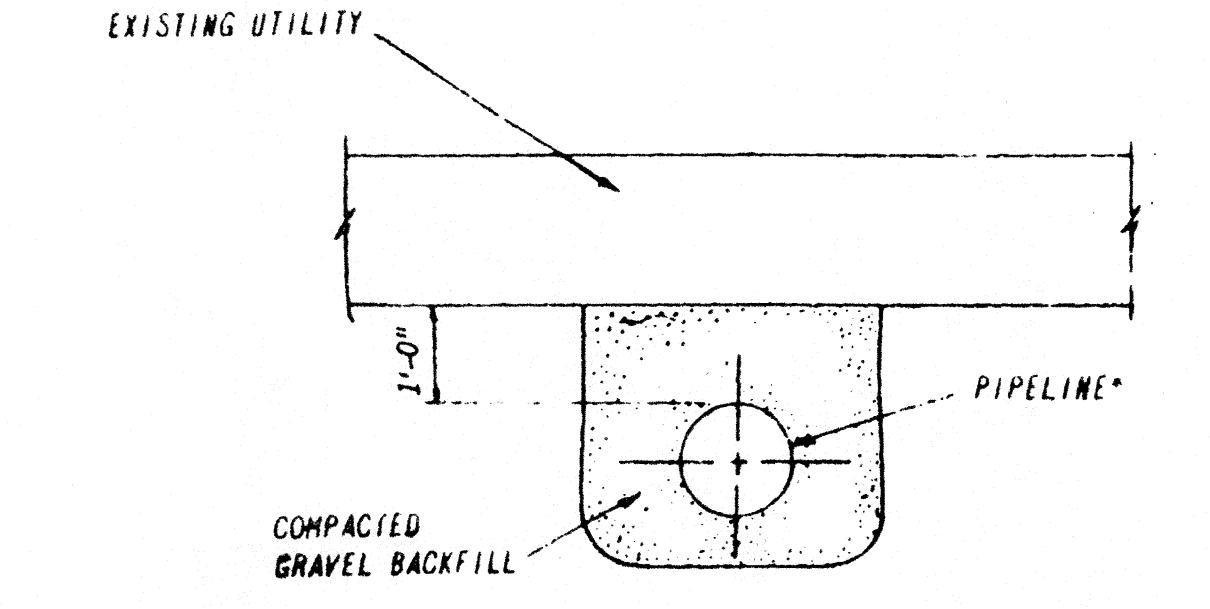
- SEWER TRENCHES MAY BE EXCAVATED WIDER THAN TRENCH WIDTH Wt ABOVE THE "LINE OF NARROW TRENCH LIMIT"
- BELOW THE "LINE OF NARROW TRENCH LIMIT" THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE TRENCH WIDTH Wt
- IF EXCAVATION AND BACKFILL BELOW NORMAL DEPTH IS REQUIRED, SHEETING MAY BE ORDERED.
- SHEETING, IF USED, IN ALL CASES SHALL BE LEFT IN PLACE BELOW A LINE 1'-0" ABOVE THE TOP OF THE SEWER PIPE, UNLESS OTHERWISE INDICATED OR DIRECTED
- ALL UNEXCAVATED ROCK WITHIN 3'-0" HORIZONTALLY OF THE ENDS OF BUILDING CONNECTIONS, BRANCHES, AND STUBS, AND DOWN TO A HORIZONTAL PLANE 6" BELOW THE BOTTOMS OF SUCH CONNECTIONS BRANCHES, AND STUBS SHALL BE SHATTERED - SEE SPECIFICATIONS
- ALL EXTERIOR SURFACES OF MANHOLE GRAD ADJUSTMENT COURSES SHALL BE COVERED WITH 1/4" TO 3/8" MASONRY CEMENT PLASTER
- ALL EXTERIOR SURFACES OF MANHOLES SHALL BE GIVEN TWO COATS OF BITUMINOUS WATERPROOFING
- PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL BE SET IN LINES OF STANDARD CAST-IN-PLACE CONCRETE BASE FOR SEWER PIPES. ALL JOINTS AND ANGLES SHALL BE AT ALL SPACINGS TO PIPES WHICH ARE TO COMPLY WITH THE REQUIREMENTS OF THE BASE. THE REQUIRED POSITIONS SHALL BE INDICATED ON THE BASES OF EACH OF THE MANHOLES. NO LATERAL MOVEMENT SHALL BE ALLOWED AS SPECIFIED
- CONCRETE ARCH SHALL BE PLACED IN SECTIONS NOT EXCEEDING 15, 16, AND 26 LIM. FT. RESPECTIVELY, FOR VITRIFIED-CLAY REINFORCED-CONCRETE, AND ASBESTOS-CEMENT PIPES WITH ENDS OF SECTIONS LOCATED AT PIPE JOINTS. SECTIONS OF ARCH SHALL BE SEPARATED FROM ADJACENT SECTIONS WITH 1/2" PREMOLDED JOINT FILLER. PIPE SURFACES TO BE IN CONTACT WITH THE ARCH SHALL BE THOROUGHLY CLEANED OF FOREIGN MATERIALS AND SATURATED WITH CLEAN WATER PRIOR TO THE PLACEMENT OF CONCRETE. LONGITUDINAL REINFORCEMENT WHEN REQUIRED SHALL NOT EXTEND THROUGH THE JOINT FILLER INTO ADJACENT SECTIONS
- FIELD CUTTING OF MANHOLES WILL NOT BE PERMITTED
- CONCRETE CHABLE TO BE INSTALLED UNDER ALL PIPES AT MANHOLES WHERE RESILIENT CONNECTORS ARE NOT USED
- INTERIOR OF D.I.P. AND FITTINGS TO HAVE A DOUBLE THICKNESS CEMENT LINING AND BITUMINOUS SEAL COAT IN ACCOR WITH ANS A21.4. EXTERIOR OF D.I.P. AND FITTINGS SHALL HAVE AN ASPHALTIC COATING AS PER ANS A21.51.

- NOTES:
- THE PIPE SHALL BE PROPERLY SECURED TO PREVENT DISPLACEMENT DURING THE POURING OF CONCRETE ENCASEMENT
 - LIMIT OF CONCRETE ENCASEMENT SHALL BE SHOWN ON THE SEWER PROFILE OR AS DIRECTED

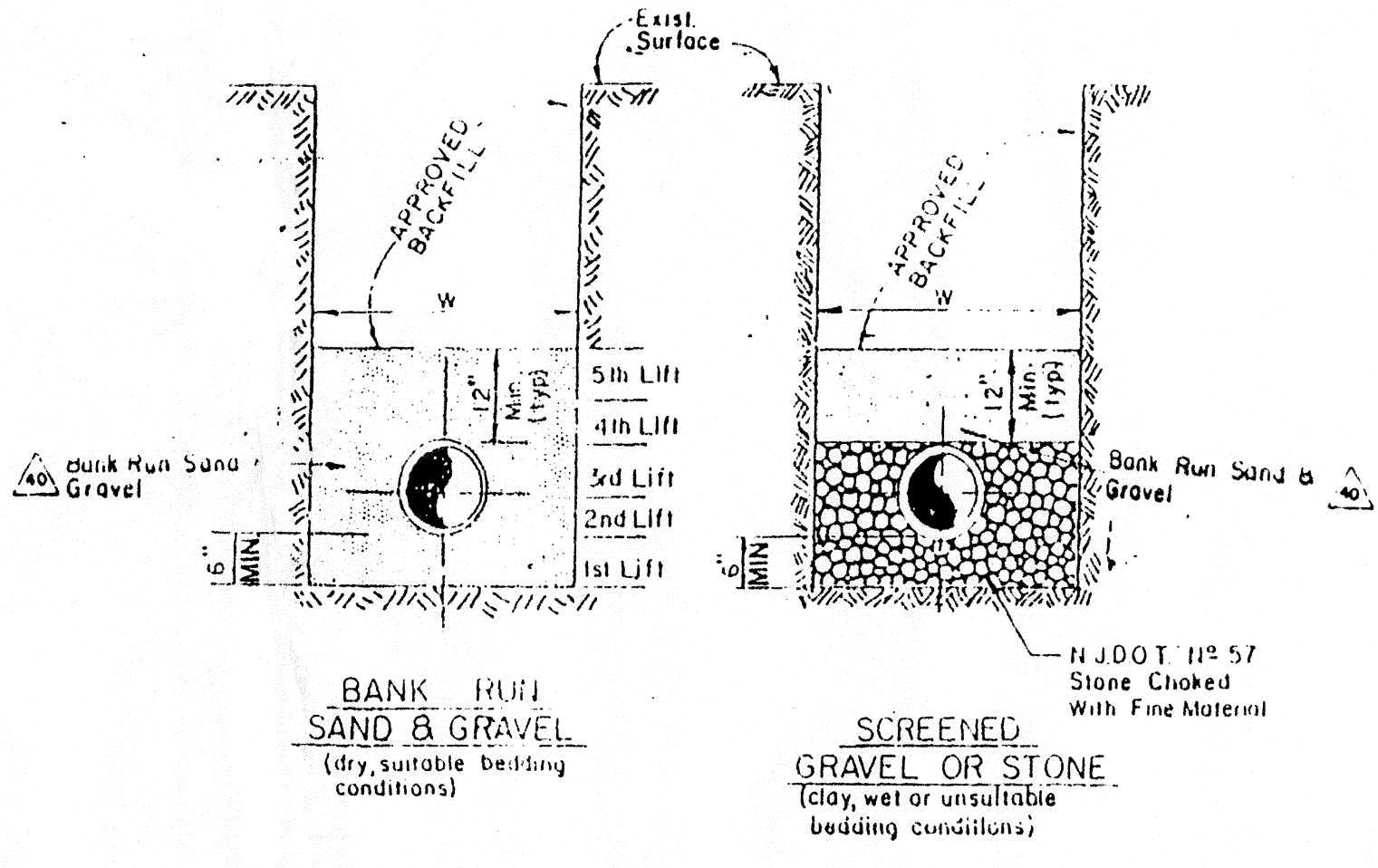
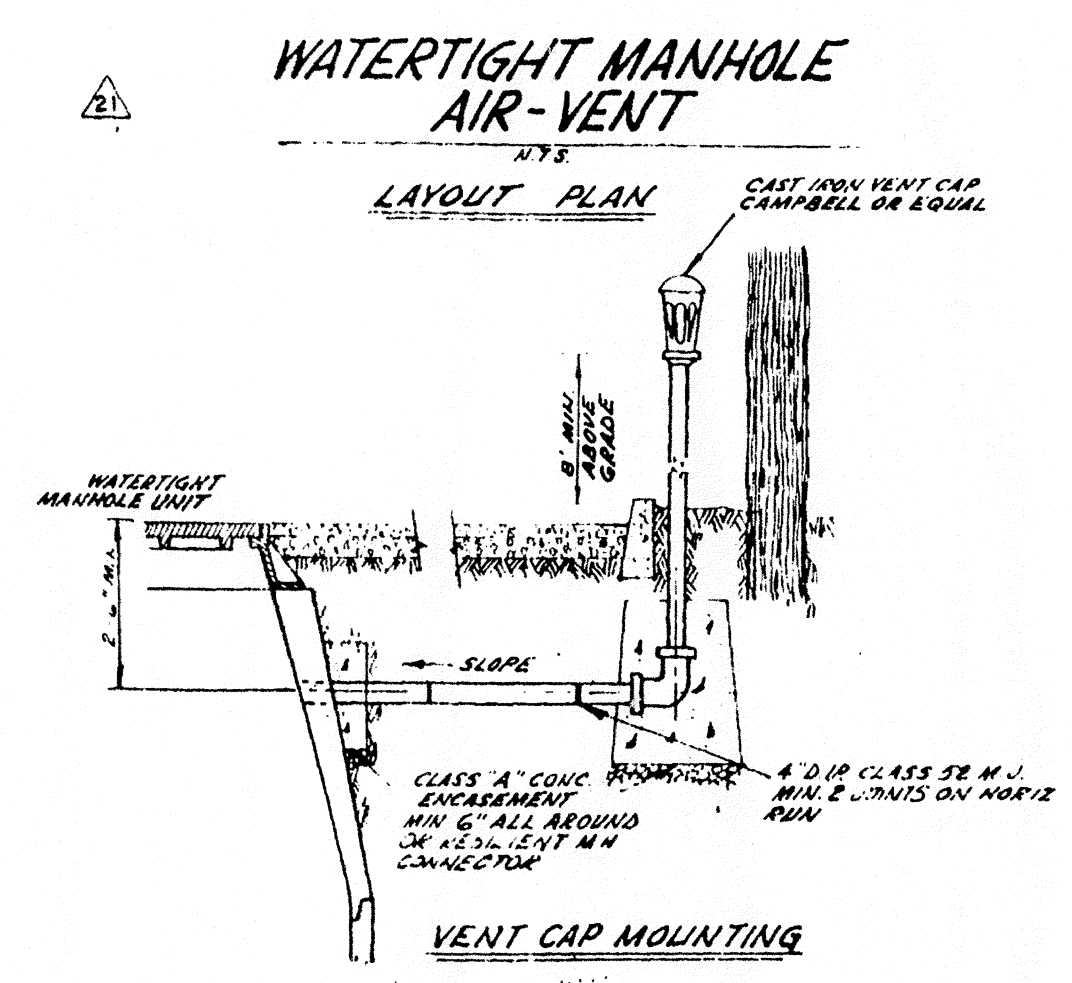
TO BE USED WHERE UNSUITABLE FOUNDATION MATERIAL EXISTS BELOW NORMAL DEPTH



PRECAST REINFORCED CONCRETE
MANHOLE PIPE GRADLE
(FOR R.C. PIPE)

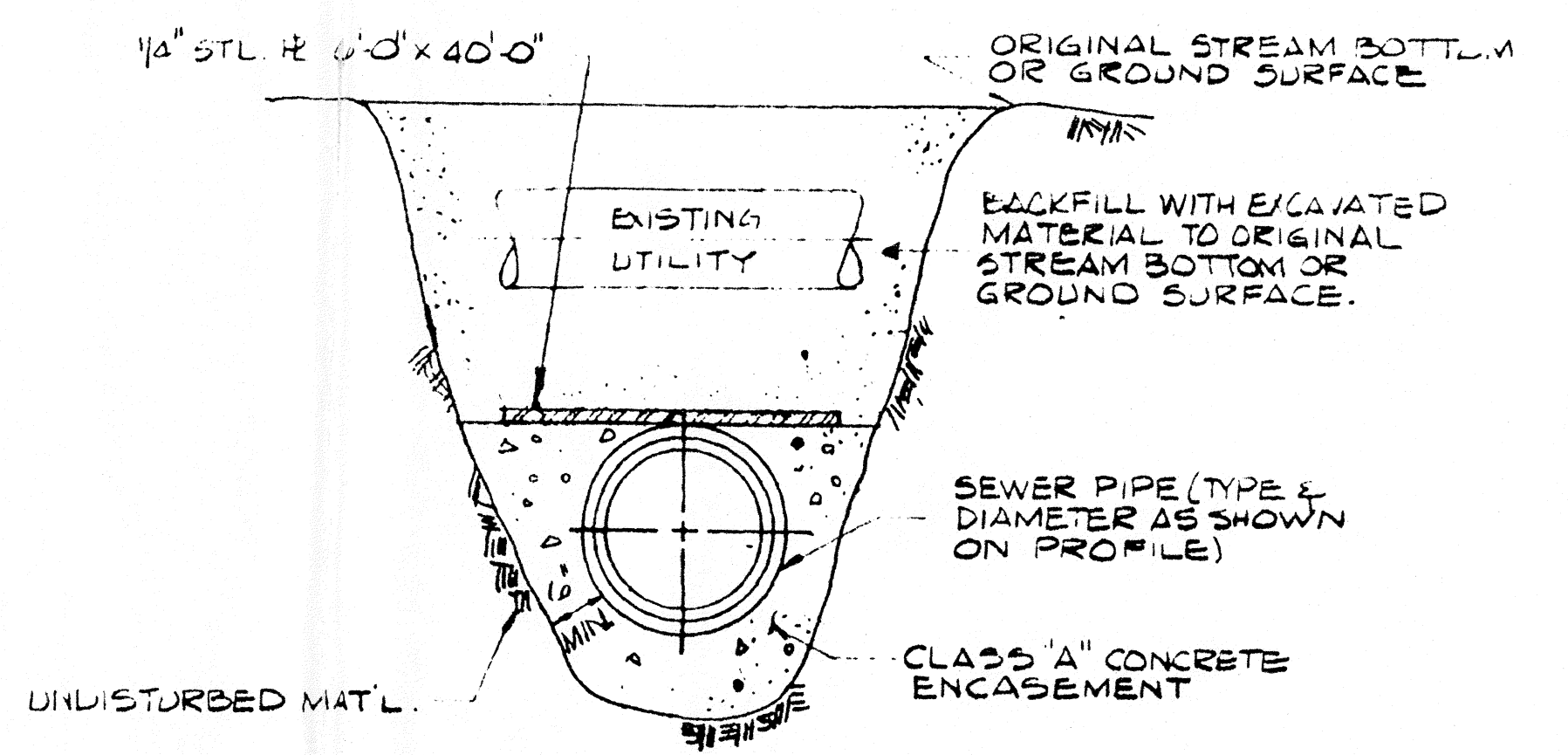


TYPICAL SECTION AT UTILITIES



STANDARD BEDDING DETAILS
(FOR SEWER PIPE)

- NOTES:
- Bank Run Sand & Gravel to be thoroughly compacted in 6" layers by approved tamping machine
 - Bank Run Sand & Gravel shall be compacted to 95% standard proctor density (typical)
 - Approved Backfill compacted as per specifications.
 - Stone Shall Conform to N.J.D.O.T. No. 57 Stone and Shall be Choked by the Addition of Fine Material in Order to Reduce Voids.



CONCRETE ENCASEMENT DETAIL
STA. 10+18±
NOT TO SCALE

INDICATES REVISION, SEE SHEET "A" FOR SCHEDULE

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

SCALE: AS NOTED
DATE: 6/16/87

Anthony R. Ricigliano
ANTHONY R. RICIGLIANO, N.J.P.E. No. 12907

M&E METCALF & EDDY

T.G. RAYTER DE DATE

TOWNSHIP OF WOODBRIDGE, NEW JERSEY
DEPARTMENT OF PUBLIC WORKS
PORT READING INTERCEPTOR
C-34-0433

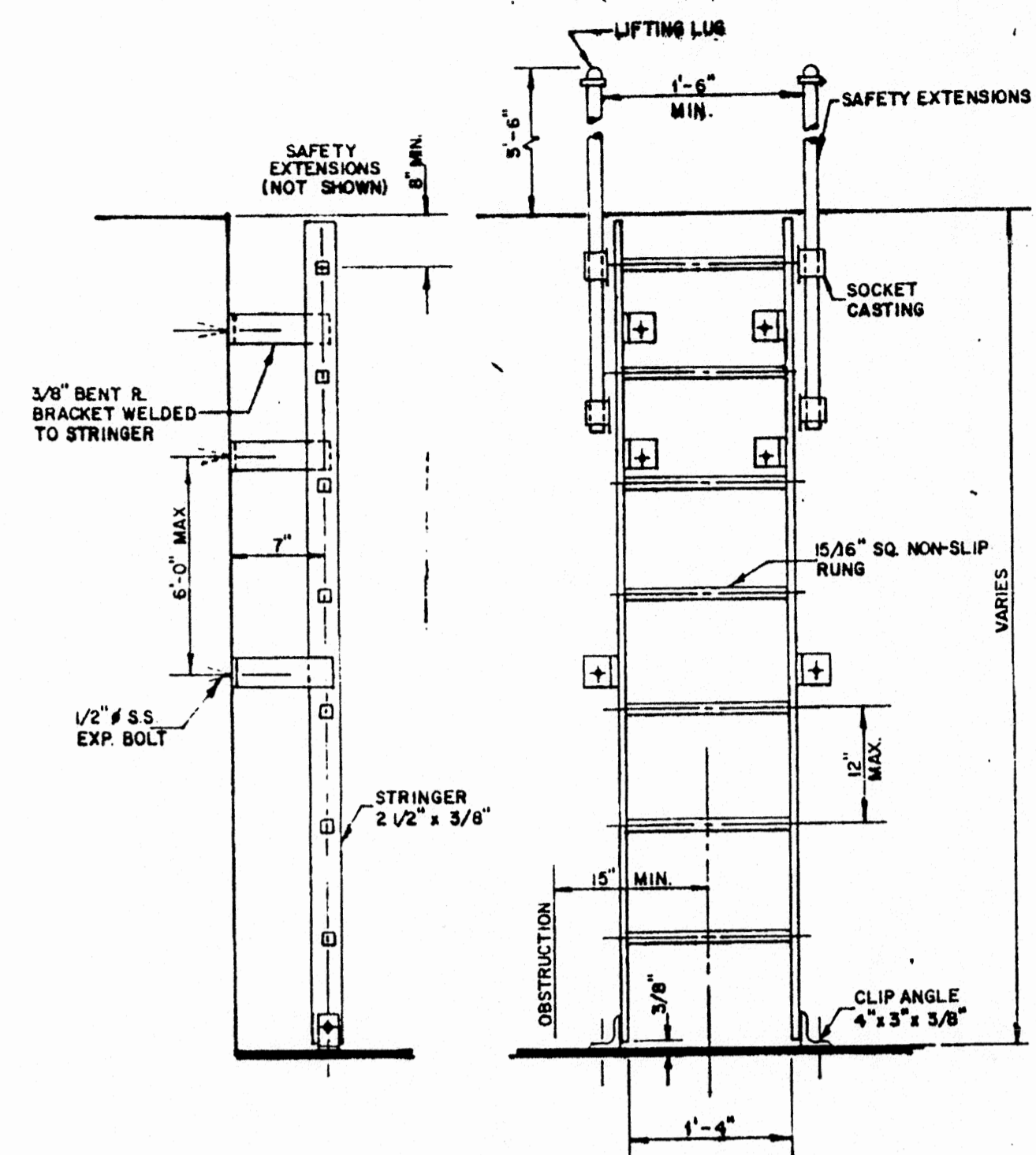
JOB 7227
FILE NO. 80312
CONTRACT 82-2
SHEET 8

MISCELLANEOUS DETAILS

DRAWN BY
E. Ditzel

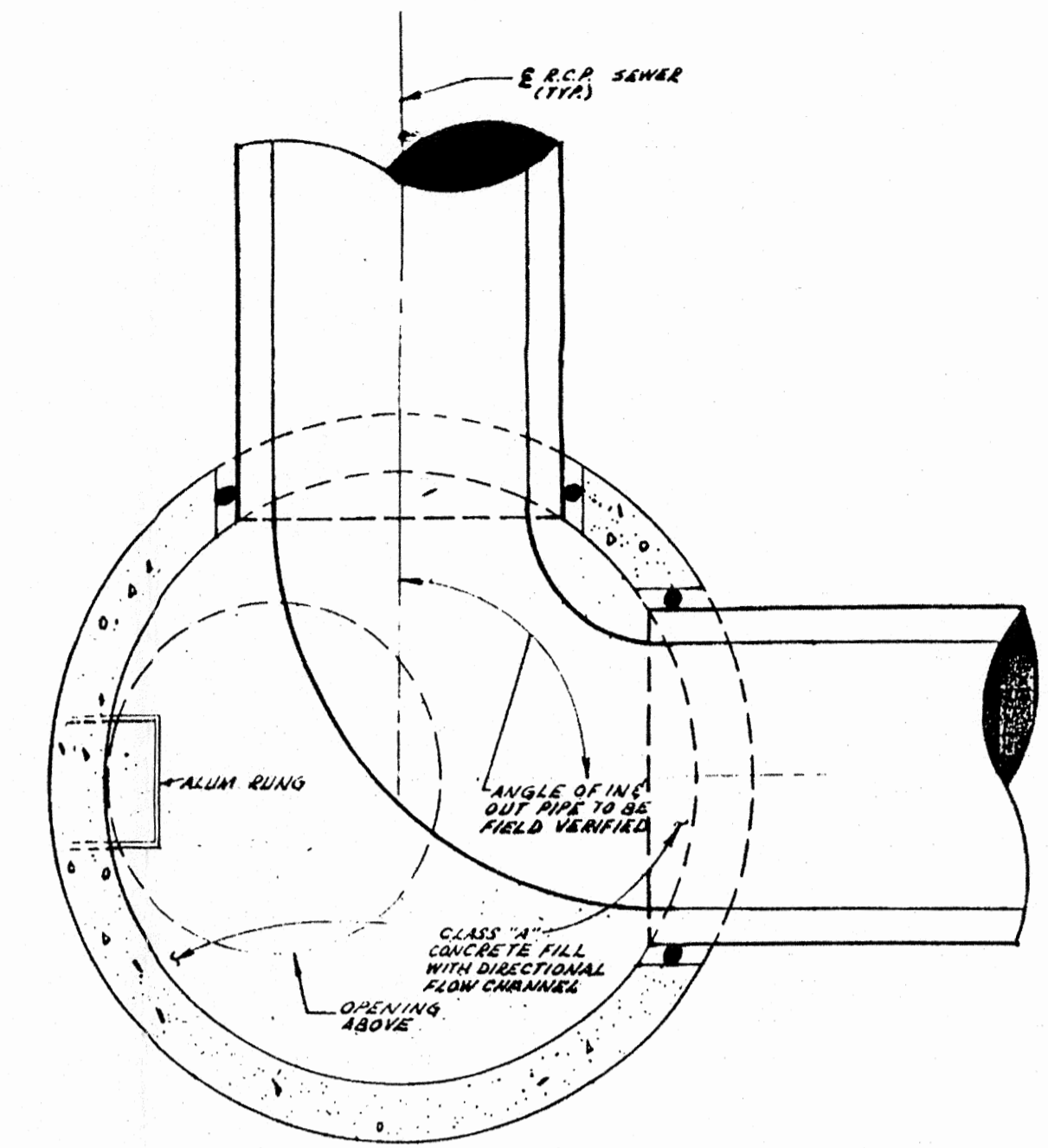
DEPT. CHECK
J. Smith

PROJ. CHECK
J. Smith



ALUMINUM LADDER DETAILS
NO SCALE

M.H. #	INSIDE DIAMETER	CASTING	VENT	REMARKS	
A	7'-0"	WATERTIGHT	LOCKING	YES	PRECAST SLAB W/ DOGHOUSE RISER & SAFETY PLATFORM
B	EXIST	"	"	"	"
1	AS SHOWN	"	YES	"	DROP CHAMBER
2	AS SHOWN	"	"	"	DROP CHAMBER
3	6'-0"	"	"	"	"
4	"	"	"	"	"
5	"	"	"	"	"
6	"	"	"	"	"
7	"	"	"	"	"
8	7'-0"	"	"	"	"
9	6'-0"	"	"	"	"
10	"	STANDARD	NO	"	"
11	"	"	"	"	"
12	"	"	"	"	"
13	"	LOCKING	"	"	"
14	"	"	"	"	"
15	"	"	"	"	"

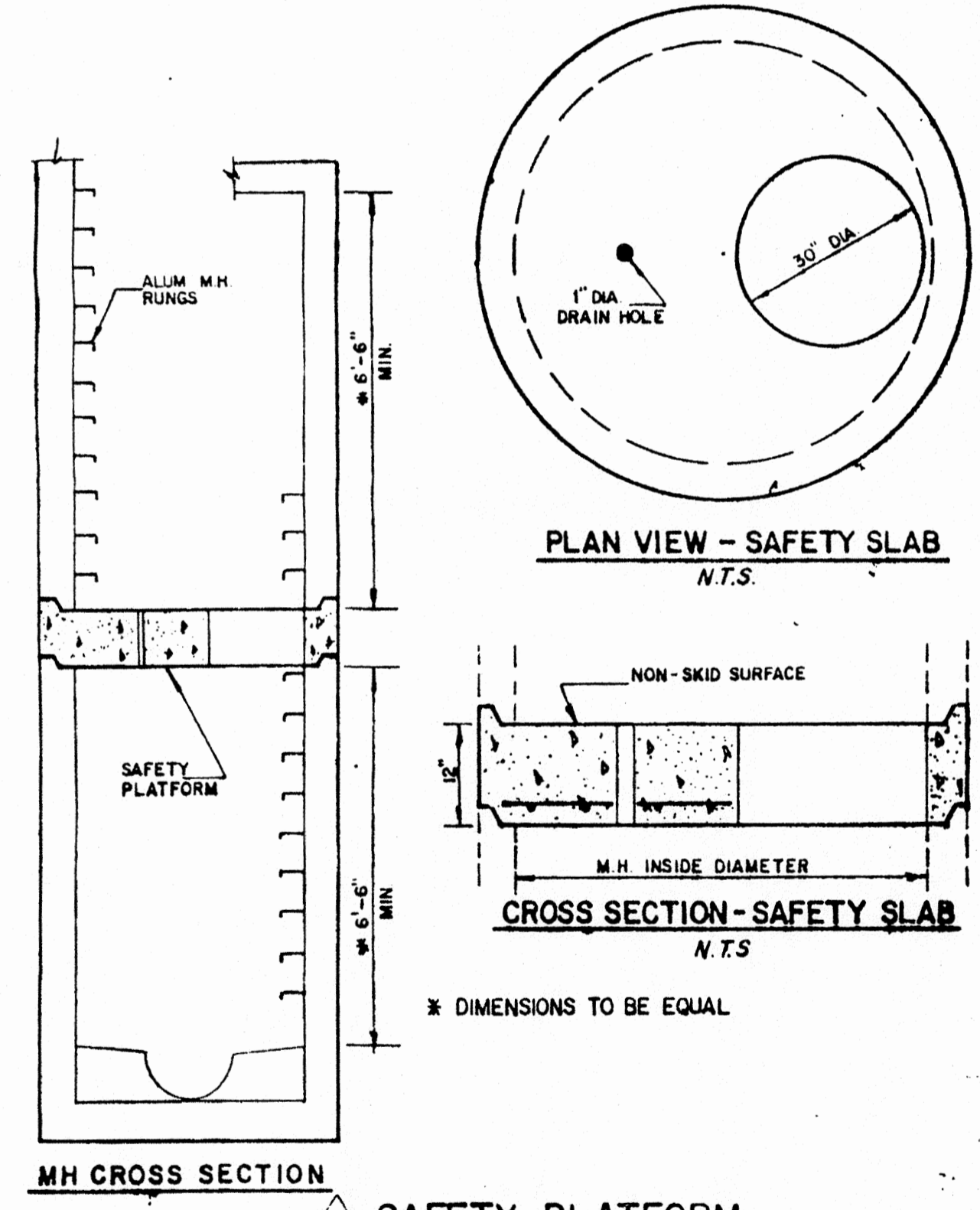


PLAN AT E OF PIPE DETAIL
N.T.S.

NOTE: ALL M.H. STEPS TO MEET OR EXCEED A.S.T.M. AND O.S.H.A. REQUIREMENTS.



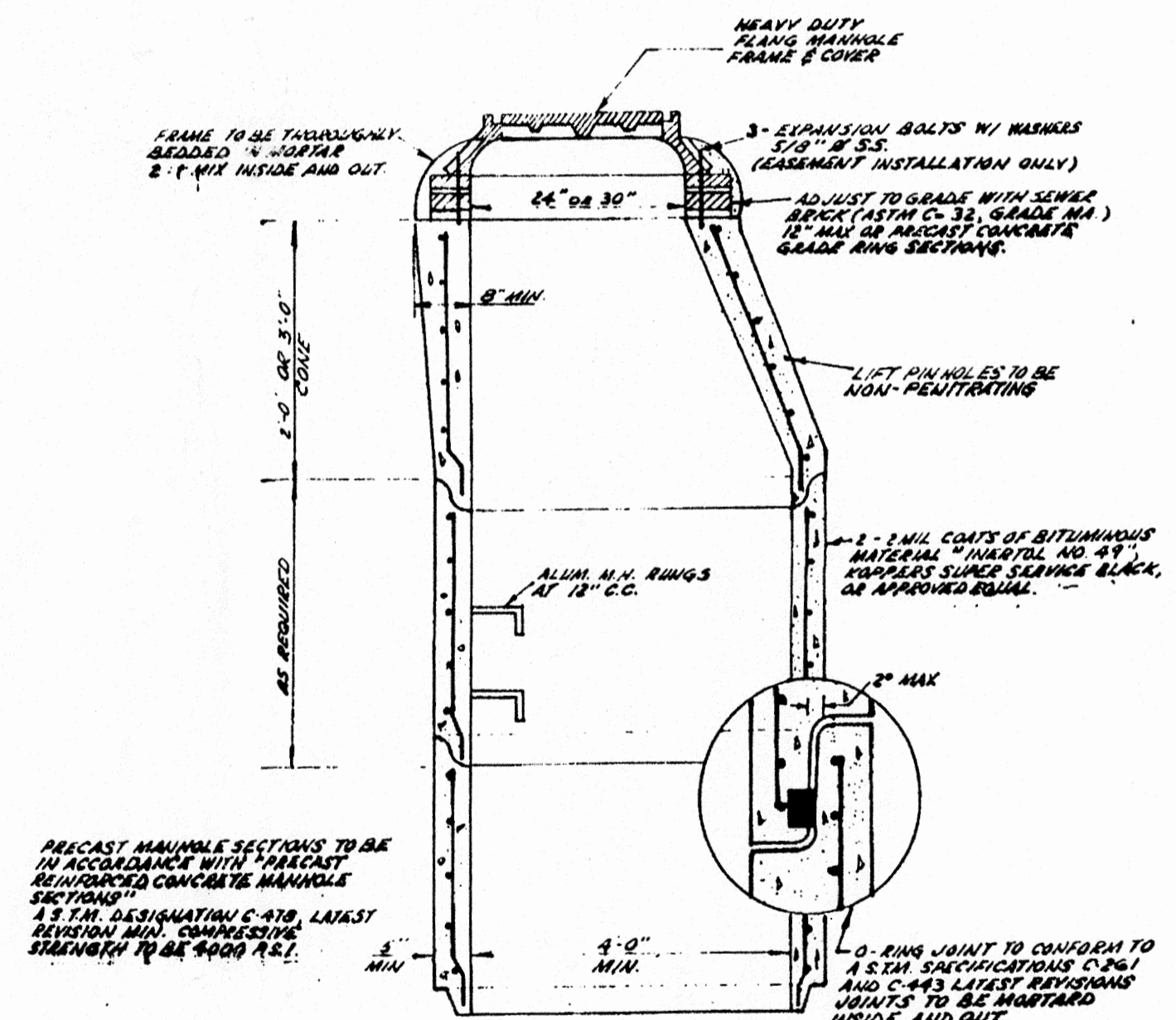
TYPICAL ALUMINUM STEP



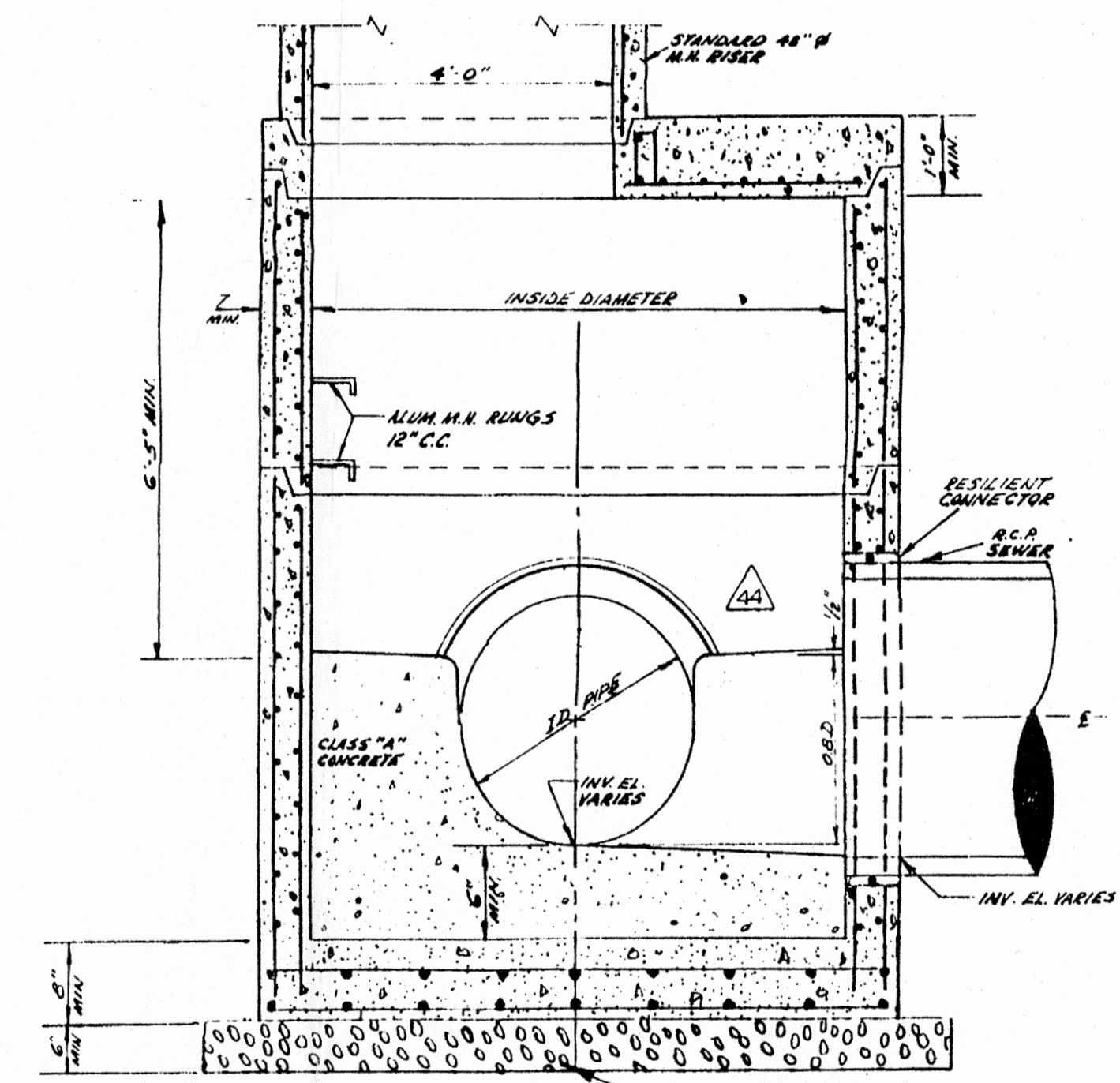
PLAN VIEW - SAFETY SLAB
N.T.S.

CROSS SECTION - SAFETY SLAB
N.T.S.

MH CROSS SECTION
SAFETY PLATFORM



PRE-CAST 48\"/>



PRE-CAST MANHOLE ELEVATION DETAIL
N.T.S.

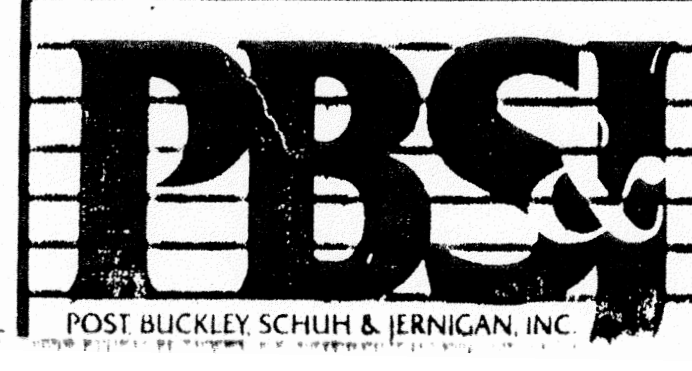
- NOTE:
- STANDARD MANHOLE FRAME & COVER SHALL BE CAMPBELL NO. 12324 OR EQUAL.
 - LOCKING MANHOLE FRAME & COVER SHALL BE CAMPBELL NO. 1400 OR EQUAL.
 - WATERTIGHT LOCKING MANHOLE FRAME & COVER SHALL BE CAMPBELL NO. 1539A OR EQUAL.
 - ALL MANHOLES WITH WATERTIGHT COVERS SHALL BE VENTED.
 - EXCEPT FOR WATERTIGHT, ALL CASTINGS SHALL BE PROVIDED WITH SIX (6) 3/4\"/>
 - ALL COVERS SHALL HAVE RAISED FACED LETTERS, READING "WOODBRIIDGE TOWNSHIP SANITARY 198\"/>
 - SAFETY PLATFORMS TO BE USED AT ALL MANHOLES WHERE RIM TO INVERT MEASURES GREATER THAN 30'-0\"/>

INDICATES REVISION, SEE SHEET A FOR SCHEDULE

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

SCALE: AS NOTED
DATE: 6/15/87

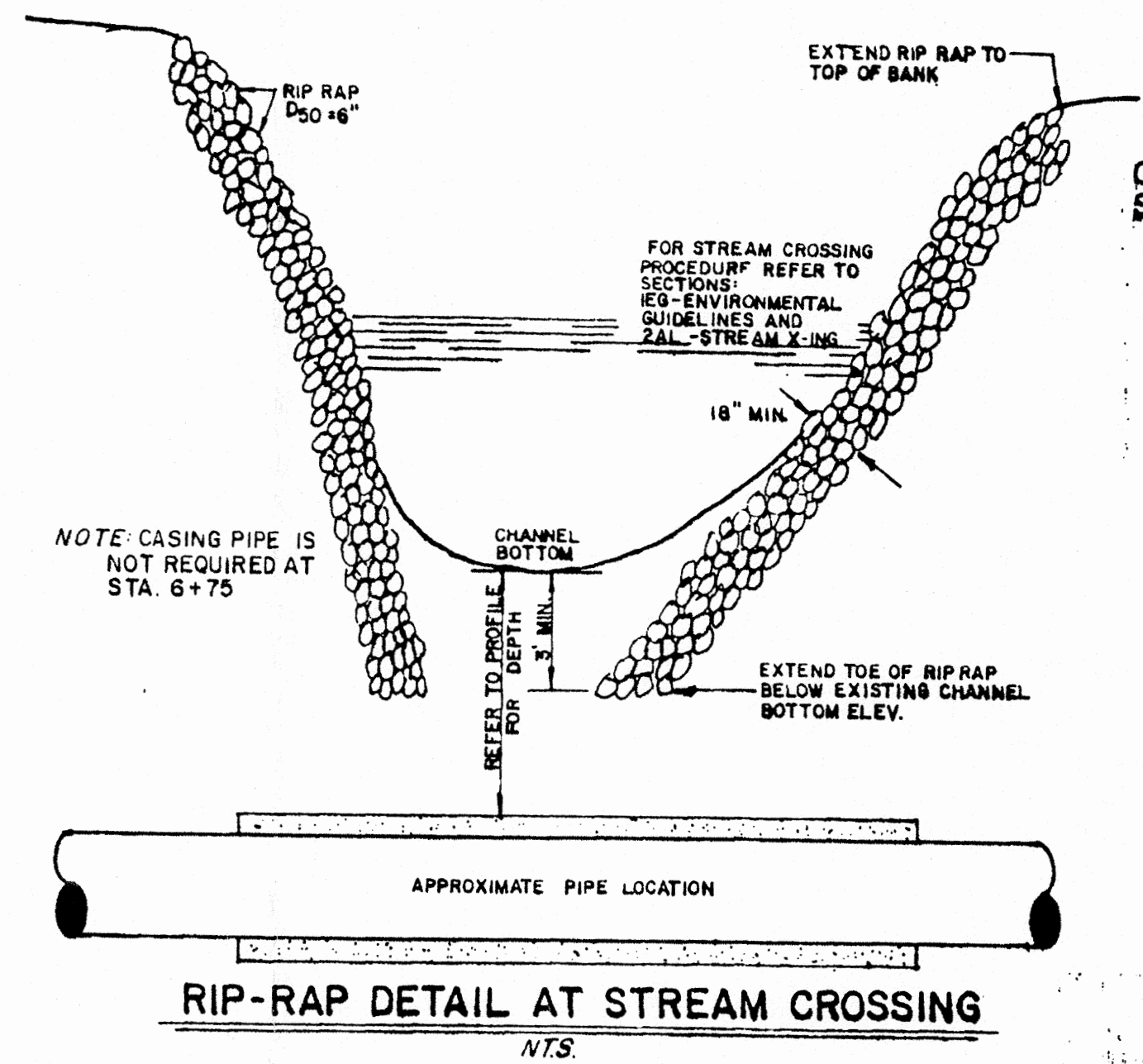
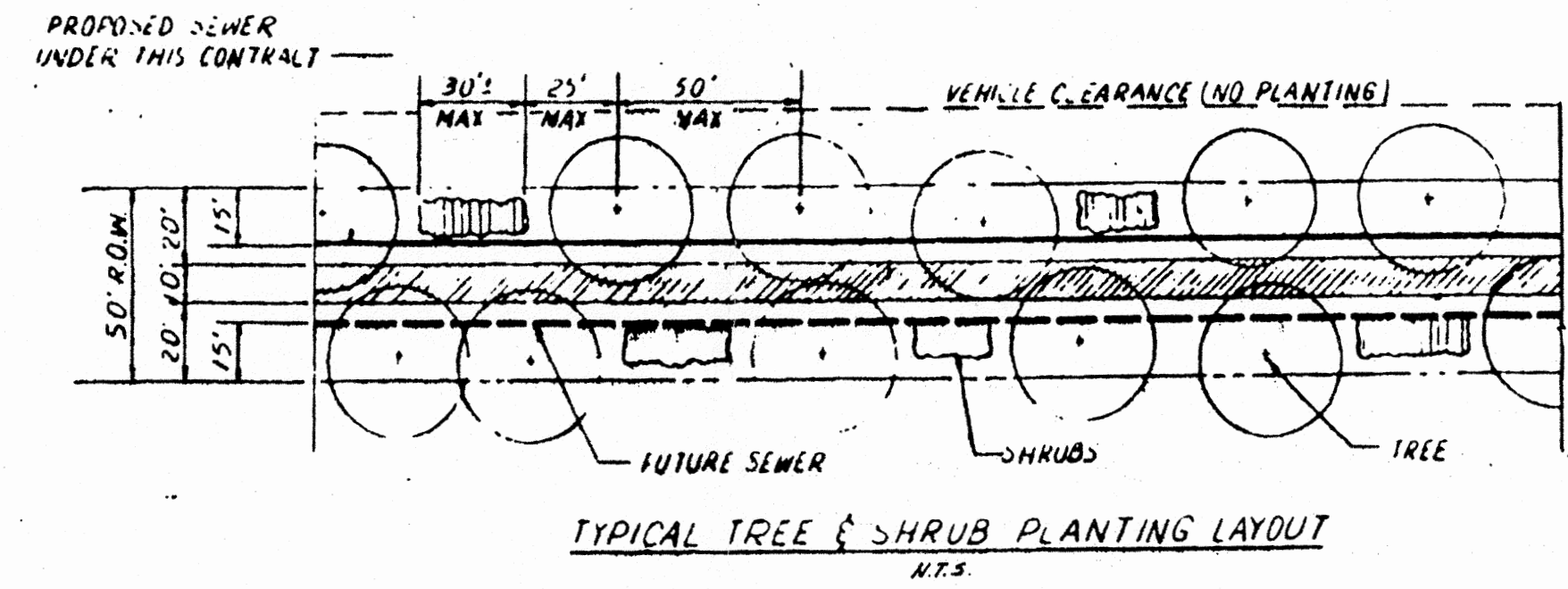
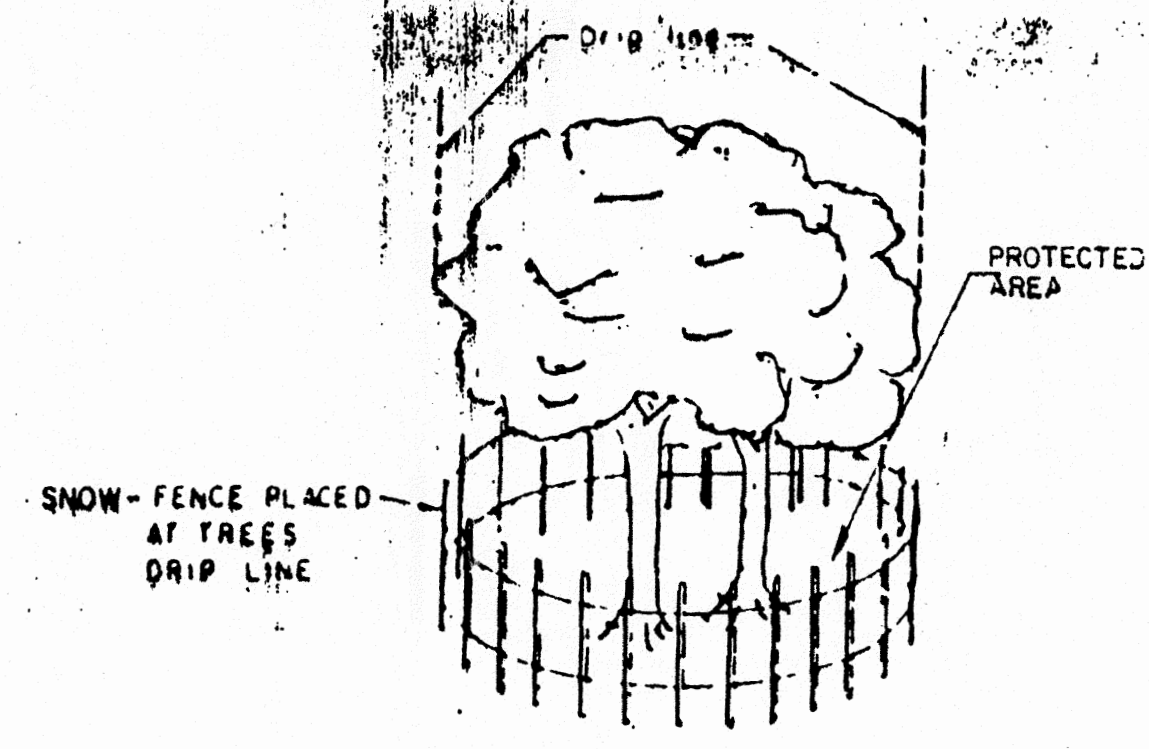
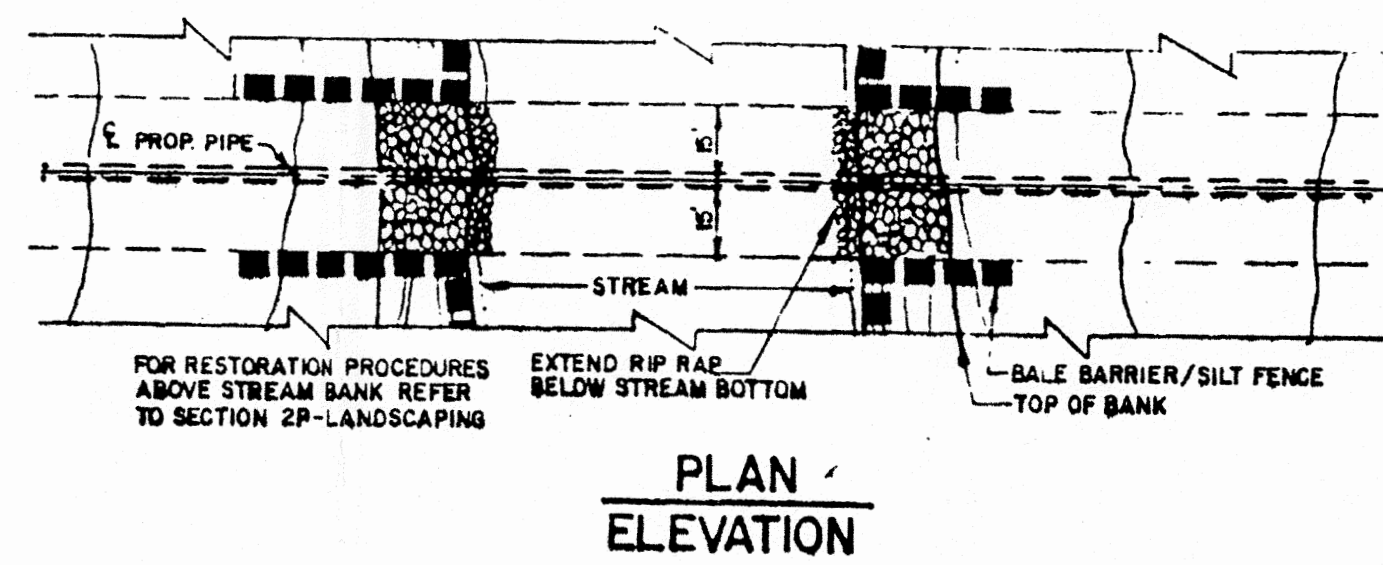
Anthony R. Ricigliano
ANTHONY R. RICIGLIANO, N.J.P.E. No. 12907



CLIENT	PROJECT	TASK
TOWNSHIP OF WOODBRIDGE NEW JERSEY DEPARTMENT OF PUBLIC WORKS	CONSTRUCTION OF PORT READING INTERCEPTOR AND ADJUTENANT WORK	MISCELLANEOUS DETAIL

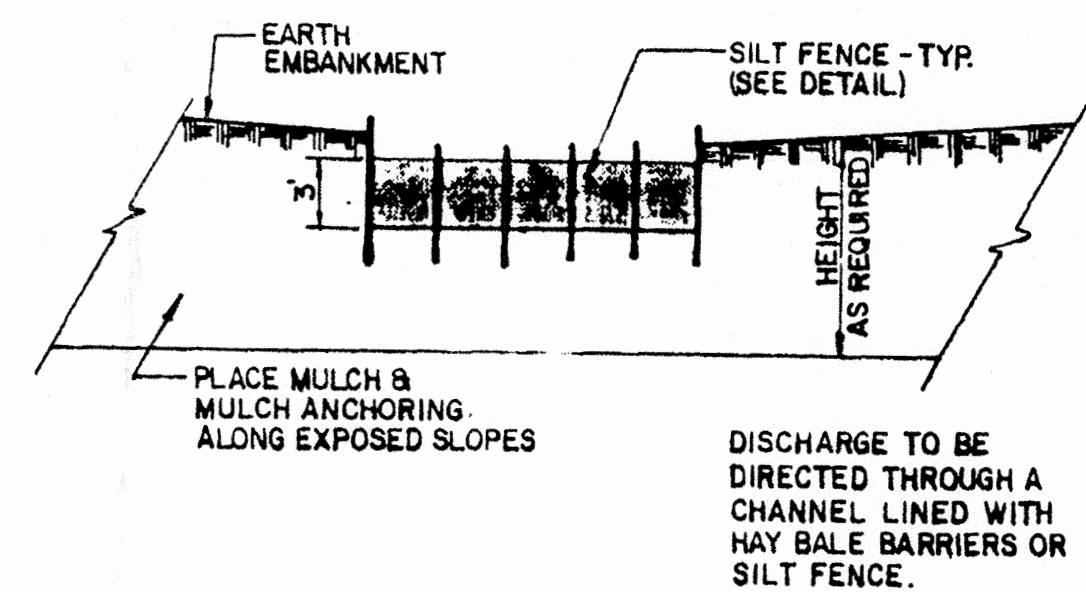
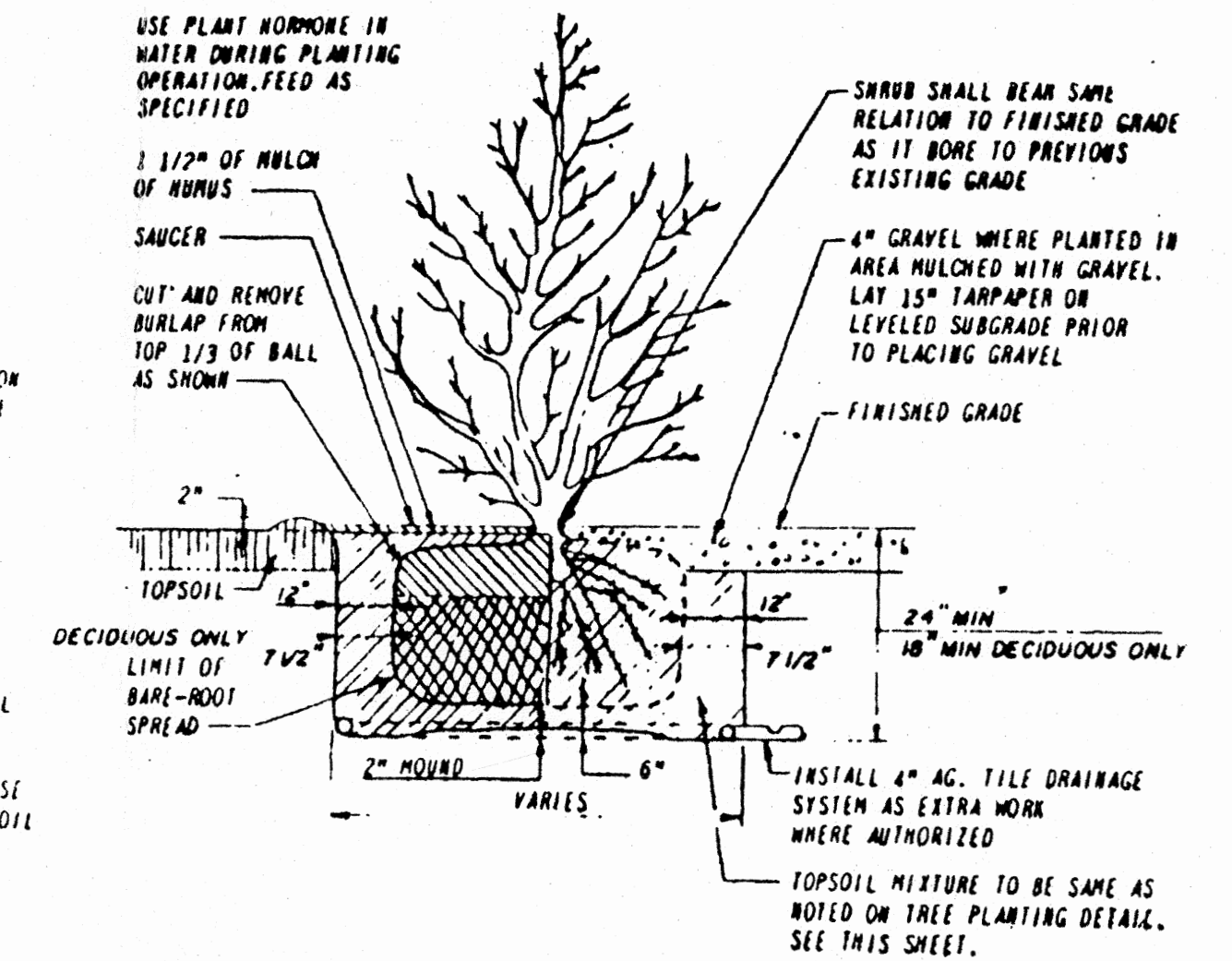
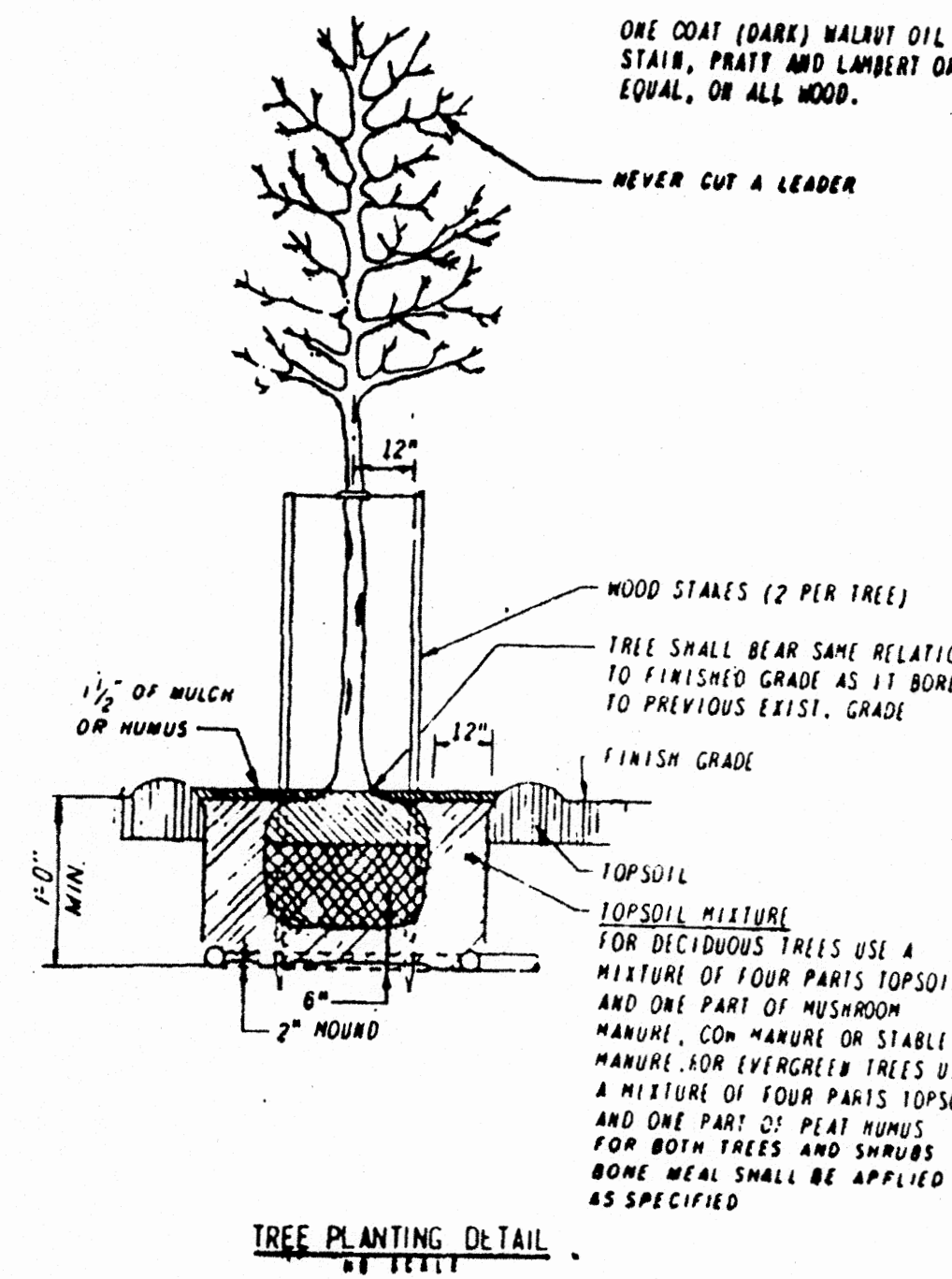
ORIGINAL	REVISIONS:	JOB NO.
5-1-87	6	20-72700
	7	DRAWN RWZ
	8	DESIGNED MAT
	9	CHECKED
	10	QC
	11	82-2
	12	

PERMIT: 5608
LDS WBE 50400020
NOT VALID FOR CONSTRUCTION

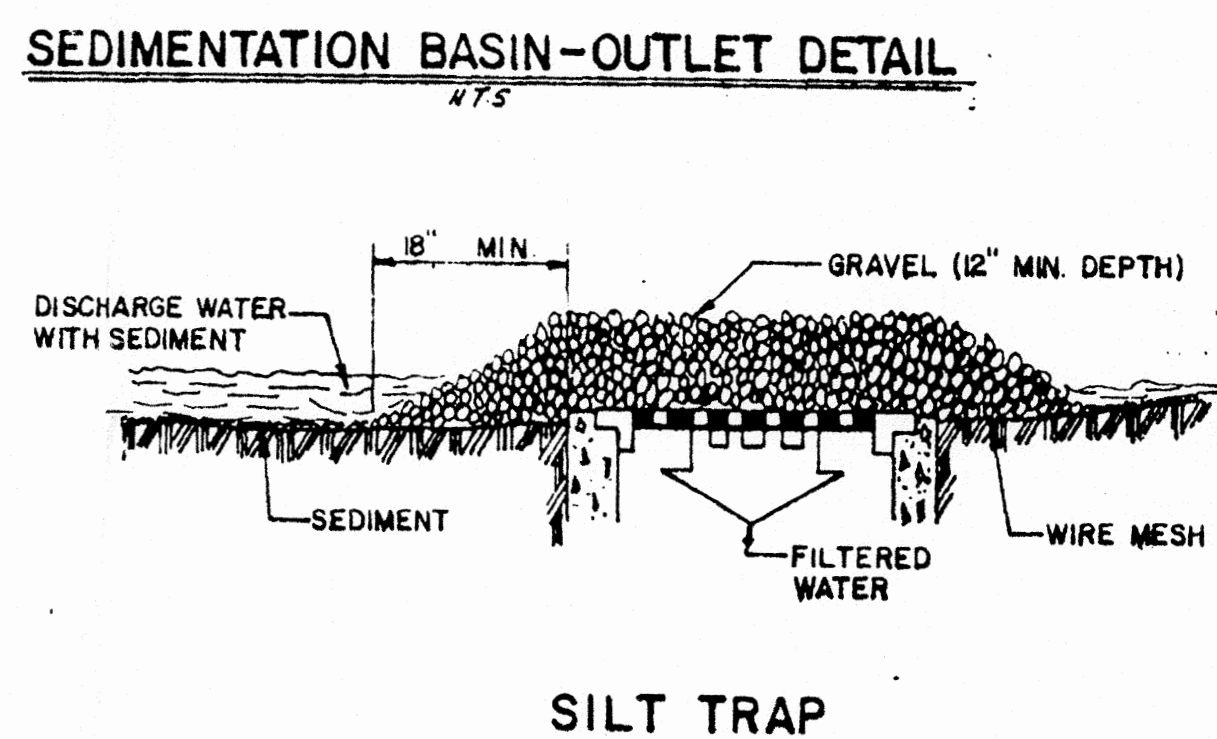
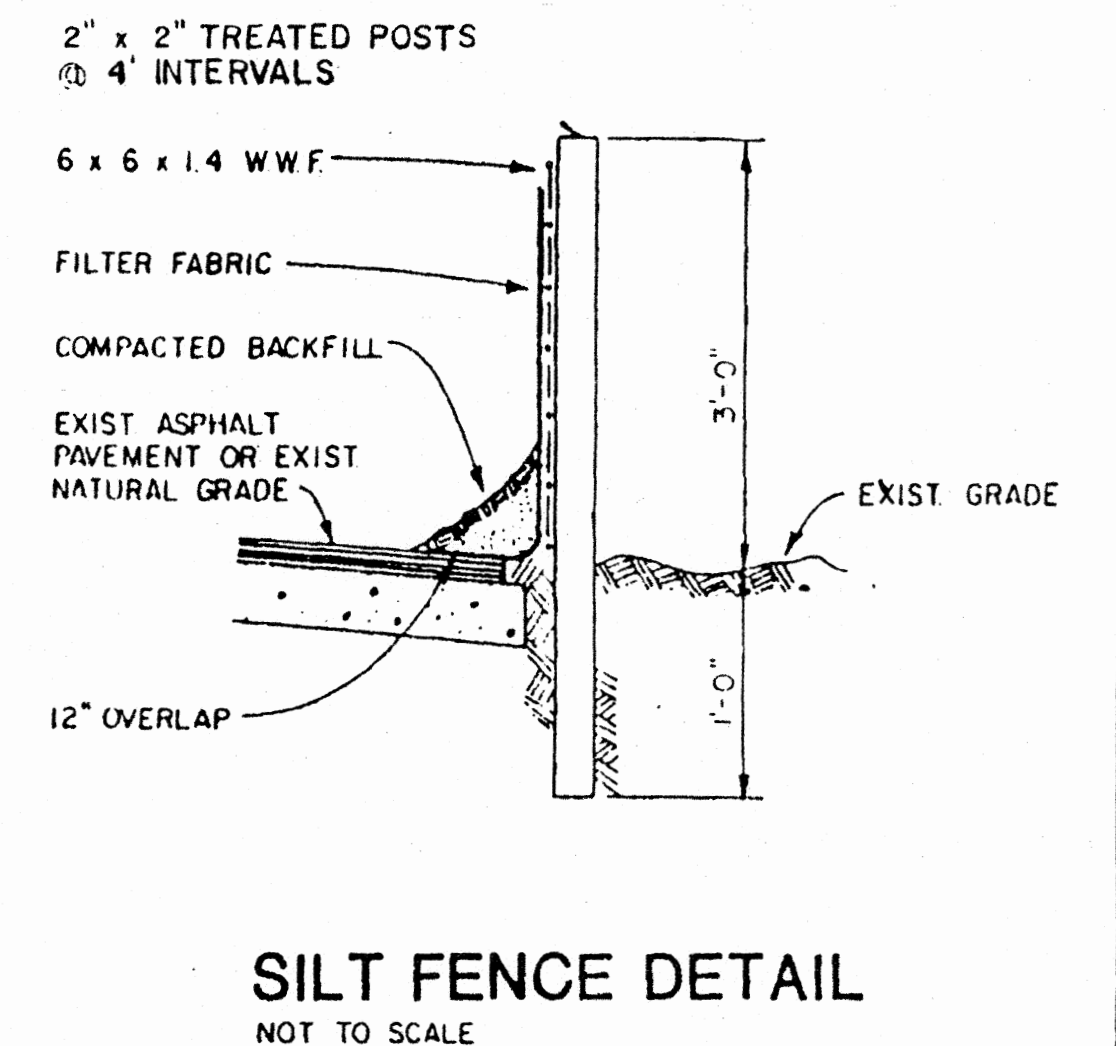
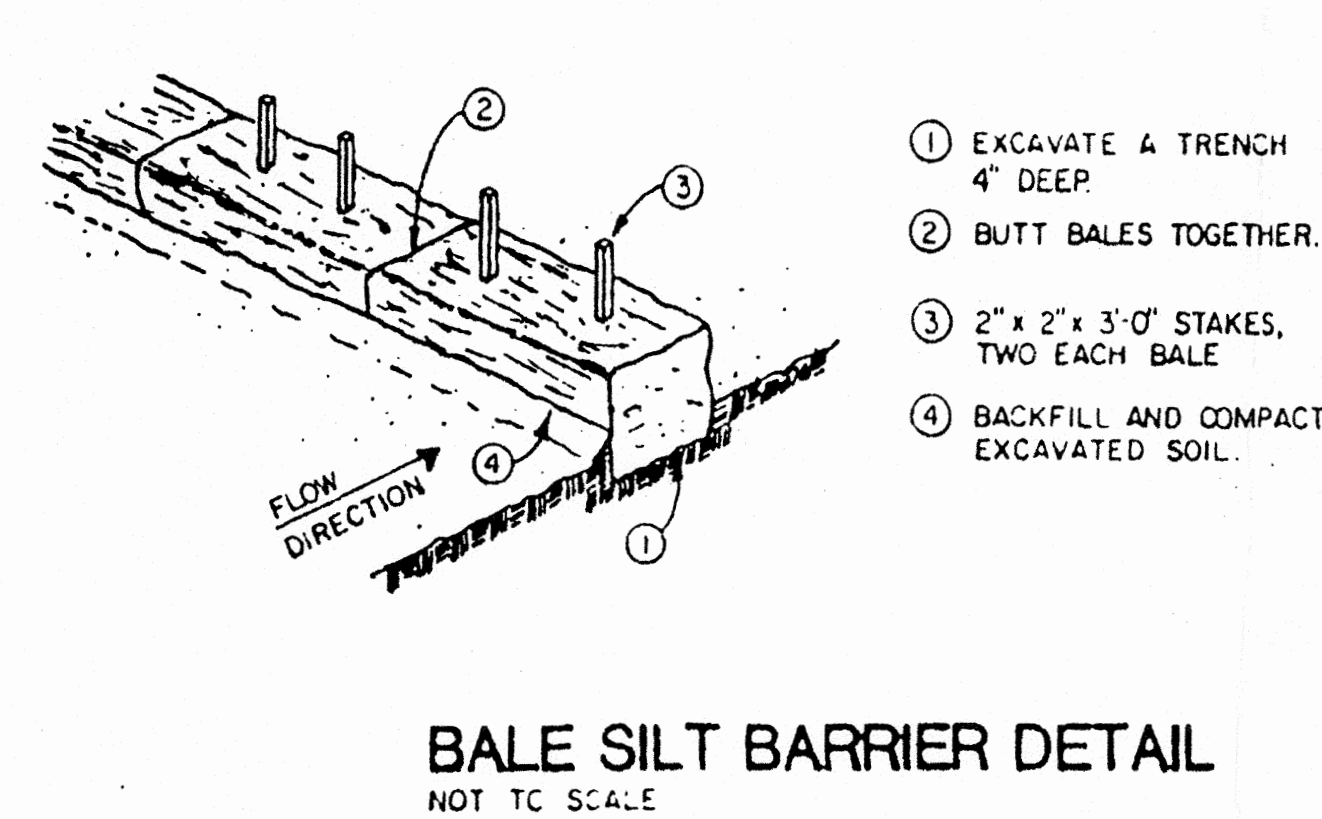
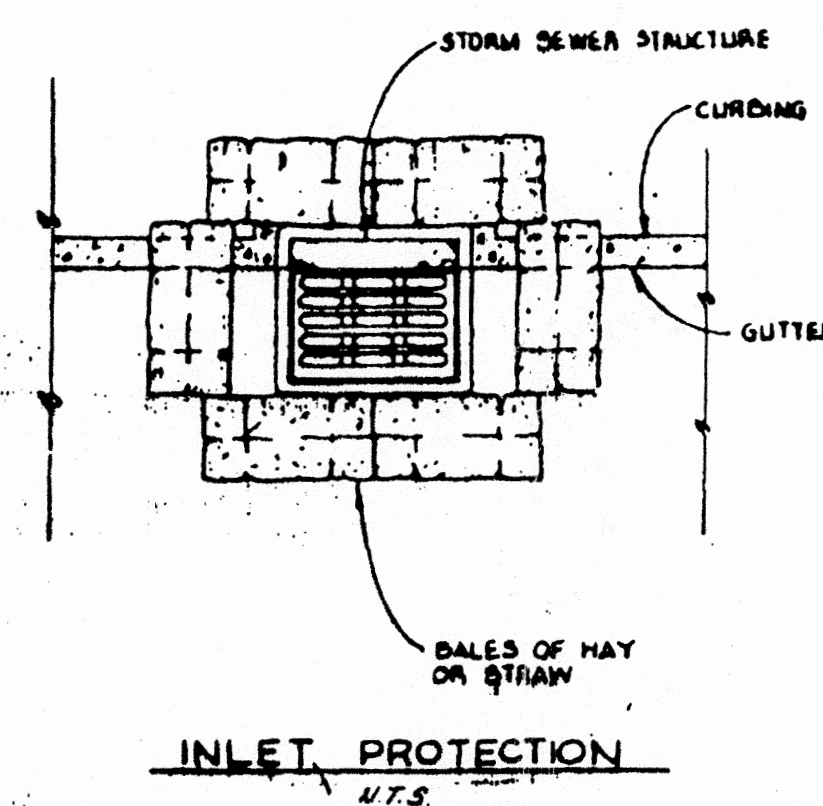


CRITICAL IMPACT SLOPES (THOSE EXCEEDING 15%) SHALL BE STABILIZED WITH JUTE THATCHING AS FOLLOWS:

- A. BURY TOP END OF JUTE STRIPS IN A TRENCH OF 4" MIN. DEPTH.
- B. TAMP TRENCH FULL OF SOIL. SECURE WITH STAPLES (#8 GAUGE WIRE) 10" O.C. 4" DOWN FROM TRENCH.
- C. OVERLAP-BURY UPPER END OF LOWER STRIP AS IN STEPS "A" & "B" OVERLAP TOP STRIP 4" AND STAPLE.
- D. EROSION STOP-LOCATE EVERY 10' OF SLOPE. FOLD OF JUTE BURIED IN SLIT TRENCH AND TAMPED, DOUBLE ROW OF STAPLES.



SOIL STABILIZATION - MATTING DETAILS
N.T.S.



SOIL EROSION AND SEDIMENT CONTROL PLAN

POST, BUCKLEY, SCHUH & JERNIGAN, INC.
CONSULTING ENGINEERS & PLANNERS

SCALE: AS NOTED
DATE: 8/17/87
ANTHONY R. RICIGLIANO, N.J. P.E. No. 12907



CLIENT
TOWNSHIP OF WOODBRIDGE
NEW JERSEY
DEPARTMENT OF PUBLIC WORKS

PROJECT
PORT READING INTERCEPTOR
AND APPURTENANT WORK

TASK
MISCELLANEOUS
DETAILS

ORIGINAL 8/17/87
REVISIONS:
1.
2.
3.
4.
5.

6.
7.
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12.

PERMIT: 5608
LDS WBE 50400020
NOT VALID FOR CONSTRUCTION UNLESS SIGNED IN THIS BLOCK

JOB NO. 2012700
DRAWN: R.W.Z.
DESIGNED: P.M.
CHECKED: M.A.T.
QC:
82-2
SHFF