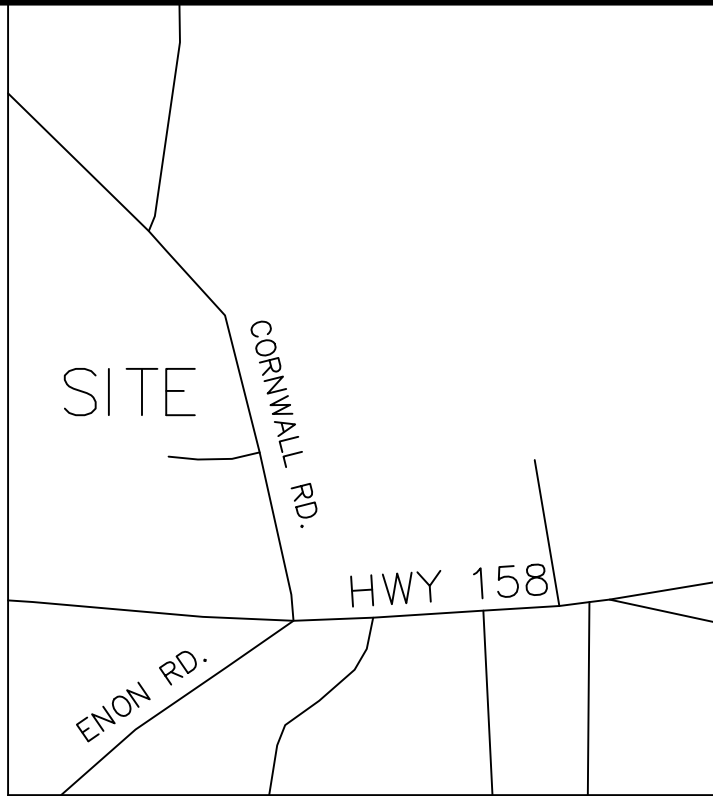
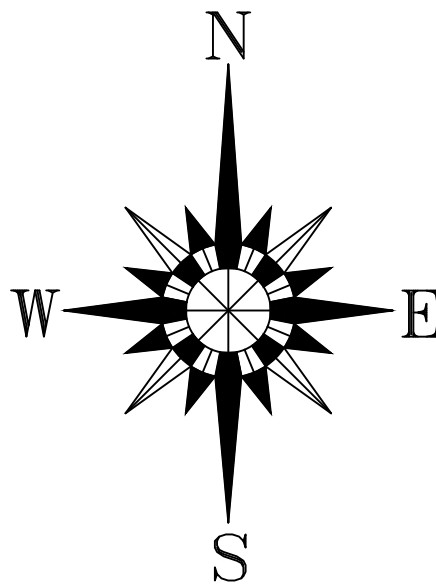


MODULAR BUILDING RELOCATION
FOR BRIDGE MAINTENANCE OFFICE
NCDOT HIGHWAY DIVISION
5679 CORNWALL ROAD, OXFORD, NC 27565

CIVIL ENGINEER
DANIEL J. MCGLAMERY, PE
DRYE-MCGLAMERY ENGINEERING, PLLC
821 WAKE FOREST RD
RALEIGH, NC 27604
PHONE: (704) 960-0180
daniel.mcglamery@dryeengineering.com



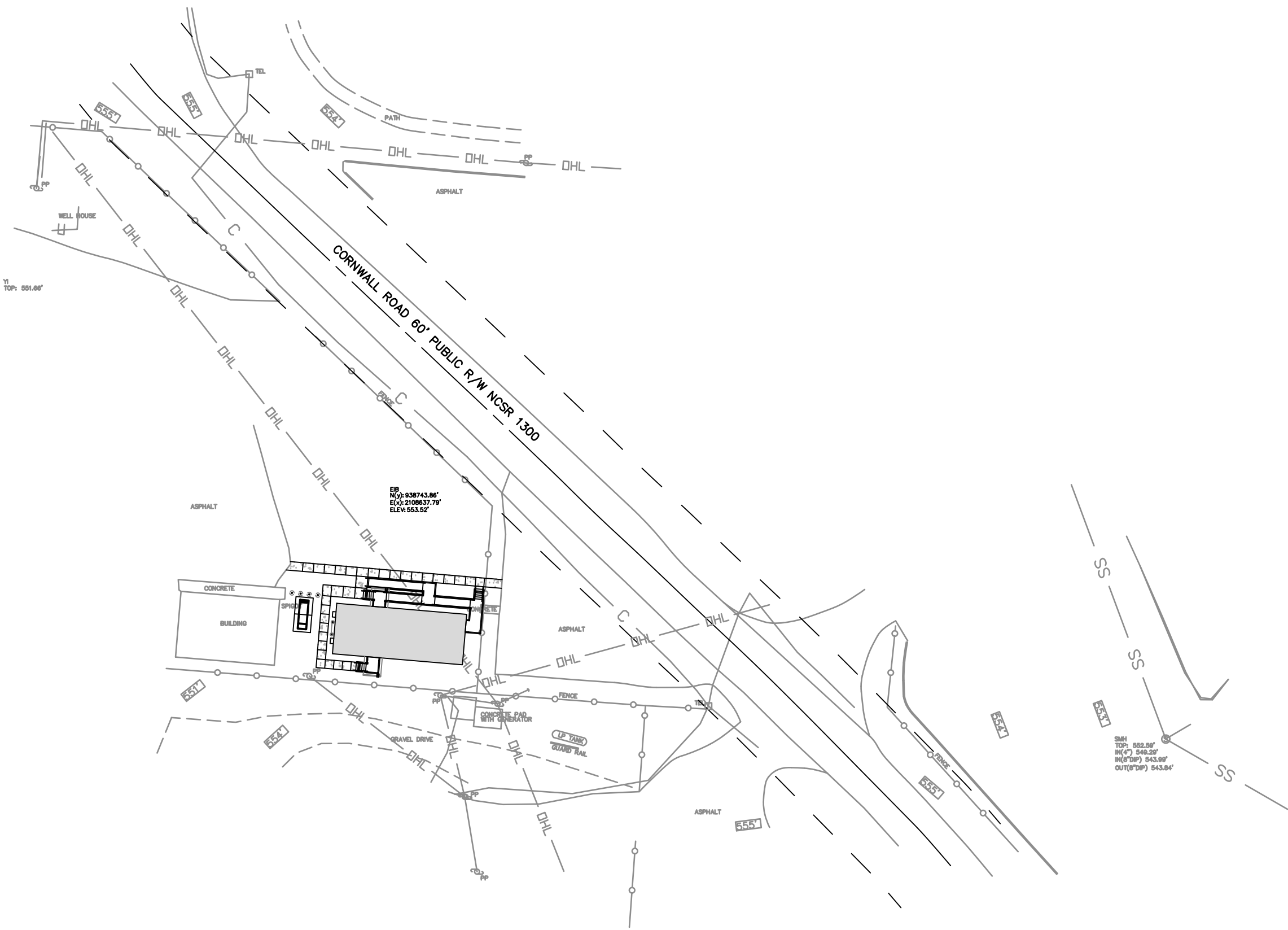
VICINITY MAP N.T.S.

SURVEY DISCLAIMER

SURVEY INFORMATION PREPARED BY L.
JORDAN PARKER (PLS L-4665) ON OCTOBER 7,
2022. CAWTHORNE, MOSS, & PANCIERA, PC,
333 S. WHITE STREET, WAKE FOREST, NC 27588



DRYE-MCGLAMERY
ENGINEERING, PLLC
NC FIRM LICENSE #P-1305
PO BOX 19558
RALEIGH, NORTH CAROLINA 27619
PHONE: (704) 960-0180

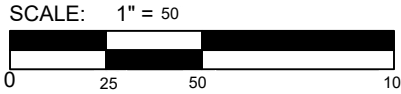


SITE DATA INFORMATION

PROJECT NAME: MODULAR BUILDING RELOCATION
FOR BRIDGE MAINTENANCE OFFICE
PROJECT ADDRESS: 5679 CORNWALL RD
OXFORD, NC 27565
PIN: 190300985088 (5650 CORNWALL RD)
SITE ACREAGE: 41.45 ACRES
ZONING DISTRICT: O-I (GRANVILLE COUNTY)

DRAWING LIST

- | | | |
|----|-------|-------------------------------------|
| 1 | C-0.0 | COVER SHEET |
| 2 | C-1.0 | EXISTING CONDITIONS PLAN |
| 3 | C-1.1 | DEMOLITION PLAN |
| 4 | C-2.0 | STAKING AND MATERIALS PLAN |
| 5 | C-3.0 | EROSION CONTROL PLAN |
| 6 | C-4.0 | GRADING AND DRAINAGE PLAN |
| 7 | C-5.0 | UTILITY PLAN |
| 8 | C-6.0 | SITE DETAILS |
| 9 | C-6.1 | EROSION CONTROL DETAILS |
| 10 | C-6.2 | TRAFFIC CONTROL DETAILS |
| 11 | C-6.3 | TRAFFIC CONTROL DETAILS |
| 12 | C-6.4 | PIPING DETAILS |
| 13 | C-6.5 | SEWER DETAILS |
| 14 | C-6.6 | SEWER DETAILS |
| 15 | S-0 | STRUCTURAL GENERAL NOTES |
| 16 | S-1 | DESIGN DATA AND SPECIAL INPSECTIONS |
| 17 | S-2 | MODULAR BUILDING FOUNDATION PLAN |
| 18 | S-3 | RAMP AND STAIR FOUNDATION PLAN |
| 19 | S-4 | STRUCTURAL SECTION AND DETAIL VIEWS |



COVER SHEET

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS

NO.	DATE

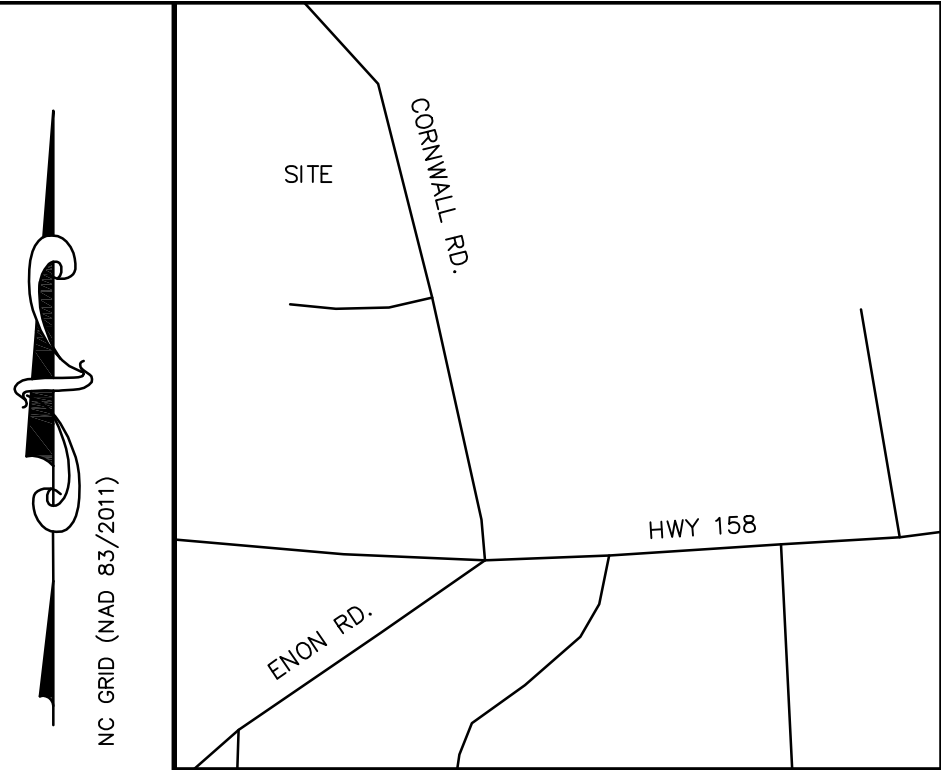
DATE ISSUED: 9/5/2023
DRAWN BY: DJM
CHECKED BY: HWD

SHEET NO.

C-0.0

I, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY PERFORMED UNDER MY SUPERVISION FROM REFERENCES AS NOTED HERE ON; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION SHOWN IN THE REFERENCES, THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS GREATER THAN 1:10000; THIS SURVEY IS NOT TO BE RECORDED WITHOUT THE WRITTEN CONSENT OF THE SURVEYOR.

DocuSigned by:
Larry Jordan Parker, Jr. 10/7/2022
A15DC1851006810
PROFESSIONAL LAND SURVEYOR LICENSE NUMBER L-4685



VICINITY MAP

NOTES:

- THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF RECORD PRIOR TO THE DATE OF THIS PLAT.
- UNDERGROUND UTILITIES HAVE BEEN MARKED OR LOCATED BY GC MAPPING.
- ALL BEARINGS AND DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS
- ALL ELEVATIONS ARE BASED ON NAVD 88
- ALL CONTOURS ARE AT 1' INTERVALS HIGHLIGHTED EVERY 5'.

LEGEND:

- EIP - EXISTING IRON PIPE
- EIB - EXISTING IRON BAR
- BEIP - BENT IRON PIPE
- BEIB - BENT IRON BAR
- CM - CONCRETE MONUMENT
- EPK - EXISTING PK NAIL
- SPK - SET PK NAIL
- NIP - NEW IRON PIPE SET
- R/W - RIGHT OF WAY
- CATV - CABLE TV BOX
- EB - ELECTRIC BOX
- TEL - TELEPHONE PEDESTAL
- RP - POWER POLE
- OHL - OVERHEAD LINE
- LP - LIGHT POLE
- WM - WATER METER
- WV - WATER VALVE
- CO - SEWER CLEAN-OUT
- CC - CONCRETE
- CB - CATCH BASIN
- MH - MANHOLE
- FH - FIRE HYDRANT

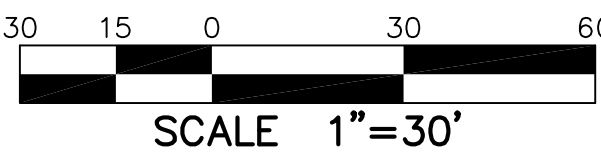
NOTES:

- AREA COMPUTED BY COORDINATE METHOD.
- THERE IS NO NC&S MONUMENT WITHIN 2000' OF THIS PROPERTY.

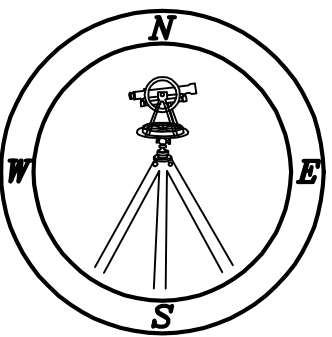
LINE TYPE LEGEND

	PROPERTY LINE - LINE SURVEYED
	RIGHT-OF-WAY
	ADJOINING LINE - LINE NOT SURVEYED
	OVERHEAD LINE
	BUILDING SETBACK
	EASEMENT
	BUFFER
	FLOOD HAZARD SOILS

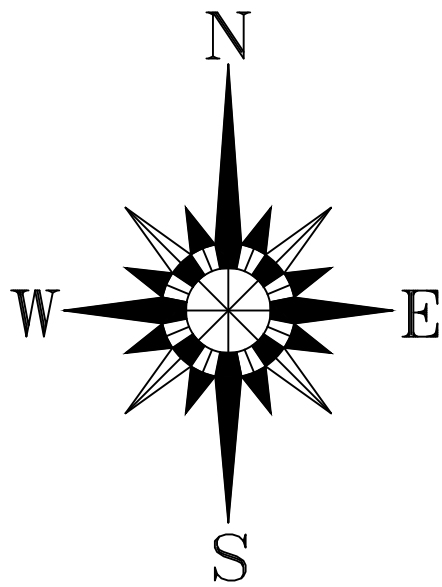
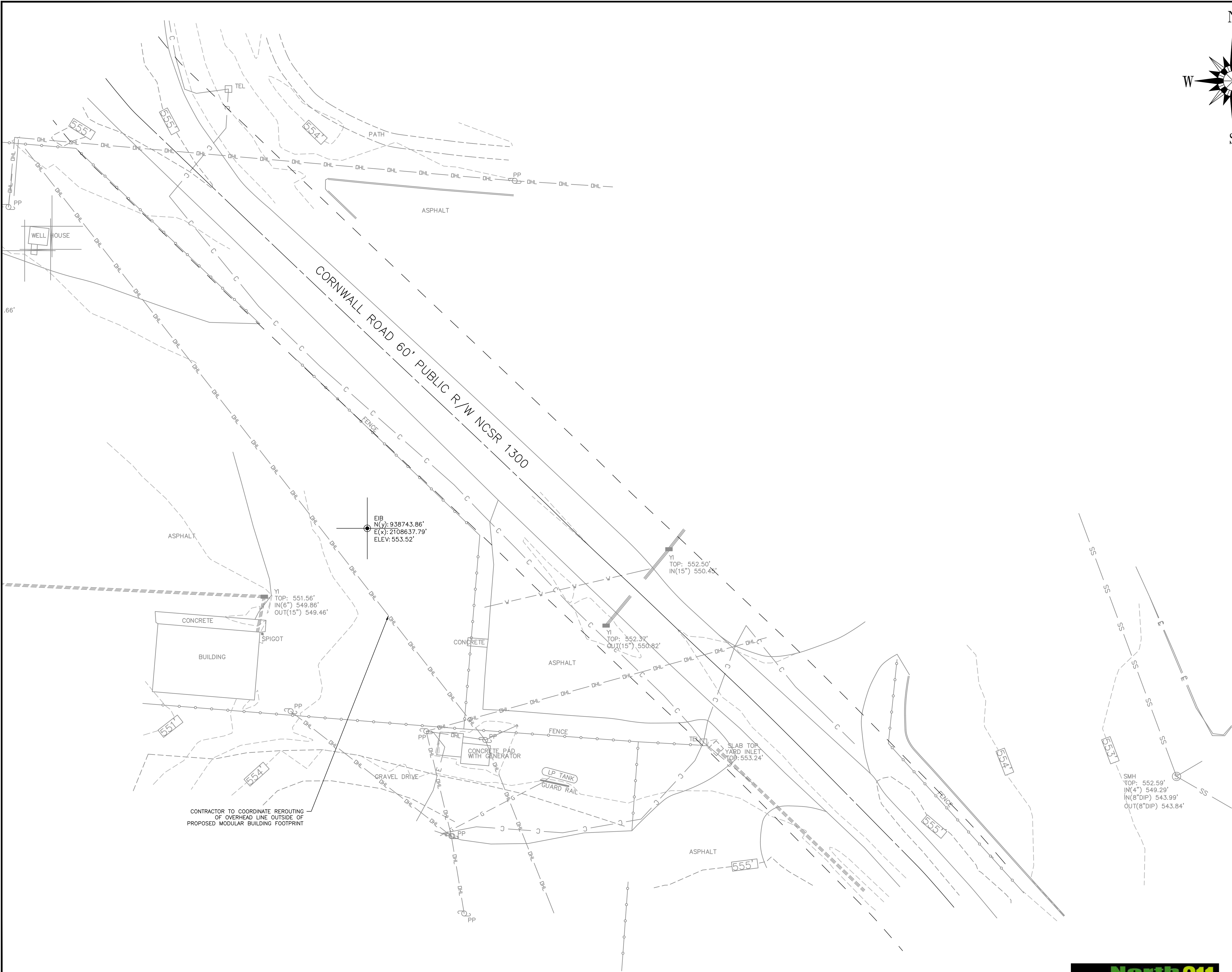
TOPOGRAPHIC SURVEY FOR
Drye-McGLamery Engineering
5650 CORNWALL ROAD
OWNER: STATE OF NORTH CAROLINA
CITY OF OXFORD
COUNTY, NORTH CAROLINA



OCTOBER 3, 2022
PIN # 1903-98-5088



PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148



VICINITY MAP N.T.S.

SURVEY DISCLAIMER

SURVEY INFORMATION PREPARED BY L. JORDAN PARKER (PLS L-4665) ON OCTOBER 7, 2022. CAWTHORNE, MOSS, & PANCIERA, PC, 333 S. WHITE STREET, WAKE FOREST, NC 27588



Drye-McGlavery Engineering, PLLC
NC FIRM LICENSE #P-1305
PO BOX 9558
RALEIGH, NORTH CAROLINA 27619
PHONE: (919) 960-0160



DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR IS TO OBTAIN ALL PERMITS.
2. EXISTING WELL AND SEPTIC SYSTEM ABANDONMENTS OR REMOVALS SHALL BE IN ACCORDANCE WITH GRANVILLE COUNTY STANDARDS
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH OWNER AND UTILITY COMPANY FOR DEMOLITION OR RELOCATION OF APPLICABLE UTILITIES, IE, GAS, CABLE, POWER, TELEPHONE, WATER, SEWER, DUCT BANK, ETC. CONTRACTOR IS ALSO RESPONSIBLE FOR SCHEDULING, SEQUENCING, AND PROVIDING TEMPORARY MEASURES OF SERVICE FOR ALL APPLICABLE UTILITIES. EXISTING UTILITIES SHALL PROVIDE CONTINUOUS SERVICE THROUGHOUT CONSTRUCTION.
4. CONTRACTOR SHALL BE RESPONSIBLE TO IMMEDIATELY FIX ANY ACTIVE UTILITIES DAMAGED DURING CONSTRUCTION AT CONTRACTOR'S EXPENSE. THE OWNER WILL PAY TO MOVE OR REPAIR ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION WHICH ARE NOT IDENTIFIED ON CONSTRUCTION DOCUMENTS OR SITE SURVEY.
5. ALL MATERIAL GENERATED BY THE DEMOLITION WILL BE HAULED FROM THE SITE AND DISPOSED OF PER LOCAL ORDINANCES.
6. SAW-CUT CONCRETE AND ASPHALT PAVEMENT, SIDEWALK OR CURB AND GUTTER BEFORE EXCAVATION WHERE CONSTRUCTION PLANS SHOW TIE-INS.
7. CORNWALL RD SHALL REMAIN OPEN AND UNOBSTRUCTED TO TRAFFIC AT ALL TIMES.
8. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL DURING CONSTRUCTION PER WORK AREA TRAFFIC CONTROL HANDBOOK STANDARDS. (W.A.T.C.H.)
9. CONTRACTOR SHALL COORDINATE ALL DEMOLITION OR INSTALLATION WORK ALONG CORNWALL RD WITH THE NCDOT.
10. REPAIR OR REPLACE ANY ADJACENT CONCRETE CURBING AND/OR SIDEWALK DAMAGED AS PART OF DEMOLITION PROCESS.

DEMOLITION PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS

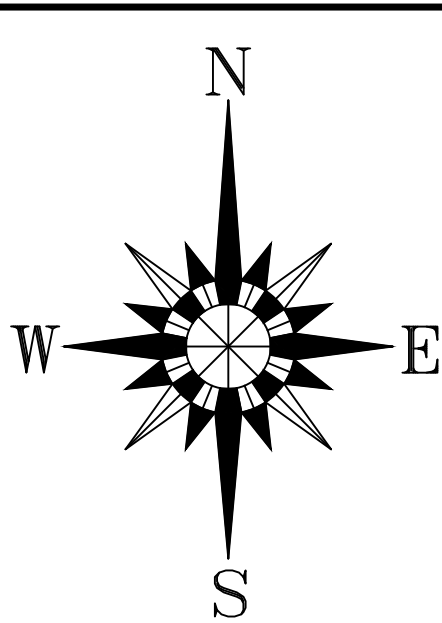
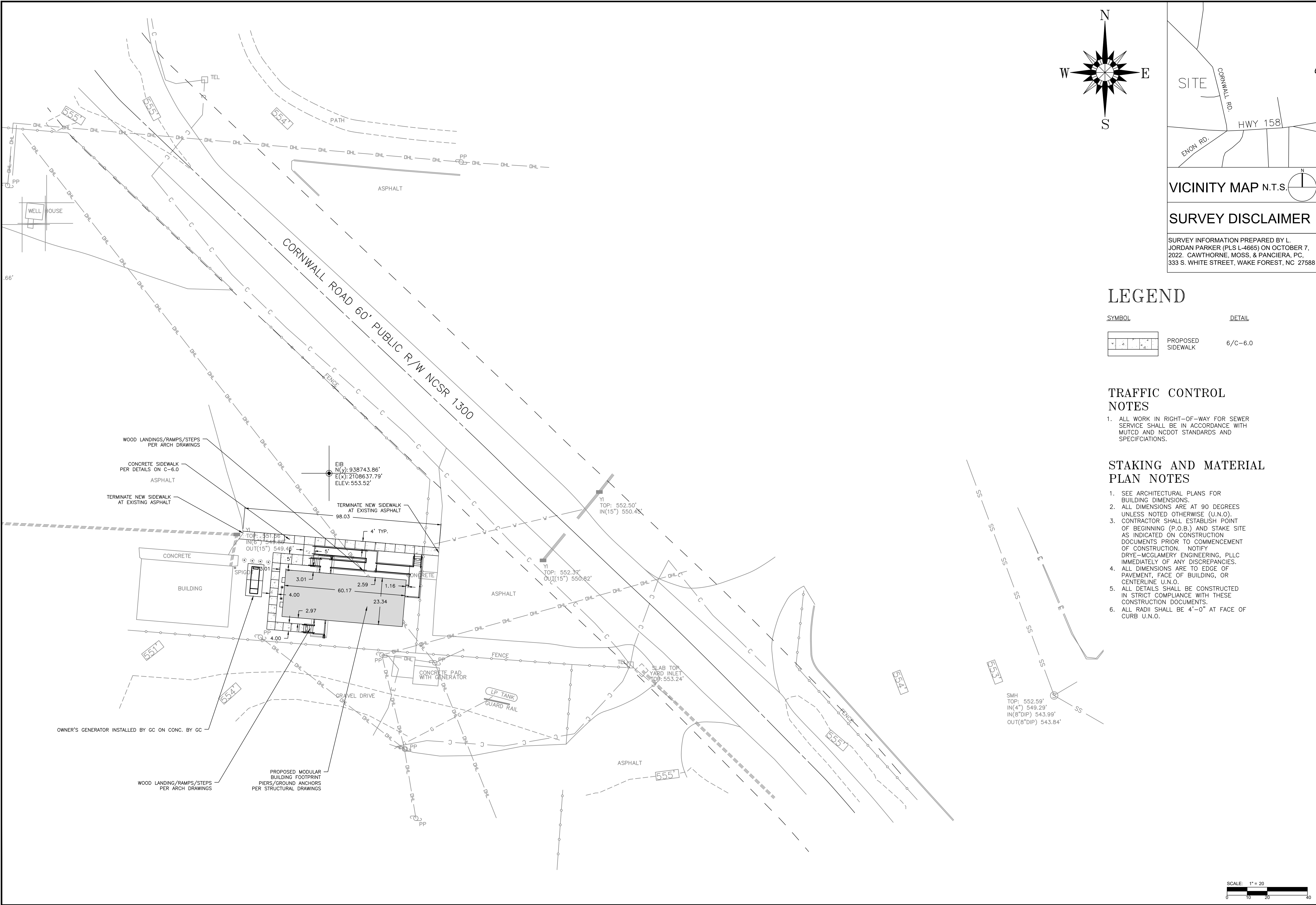
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DATE ISSUED: 9/5/2023
DRAWN BY: DJM
CHECKED BY: HWD

SHEET NO.

C-1.1





VICINITY MAP N.T.S.

SURVEY DISCLAIMER

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LEGEND

SYMBOL	DETAIL
	PROPOSED SIDEWALK 6/C-6.0

TRAFFIC CONTROL NOTES

- ALL WORK IN RIGHT-OF-WAY FOR SEWER SERVICE SHALL BE IN ACCORDANCE WITH MUTCD AND NCDOT STANDARDS AND SPECIFICATIONS.

STAKING AND MATERIAL PLAN NOTES

- SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
- ALL DIMENSIONS ARE AT 90 DEGREES UNLESS NOTED OTHERWISE (U.N.O.).
- CONTRACTOR SHALL ESTABLISH POINT OF BEGINNING (P.O.B.) AND STAKE SITE AS INDICATED ON CONSTRUCTION DOCUMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION. NOTIFY DRYE-MCGLAMERY ENGINEERING, PLLC IMMEDIATELY OF ANY DISCREPANCIES.
- ALL DIMENSIONS ARE TO EDGE OF PAVEMENT, FACE OF BUILDING, OR CENTERLINE U.N.O.
- ALL DETAILS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THESE CONSTRUCTION DOCUMENTS.
- ALL RADII SHALL BE 4'-0" AT FACE OF CURB U.N.O.



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RALEIGH, NORTH CAROLINA 27619
PHONE: 704/960-0160



STAKING AND MATERIALS PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

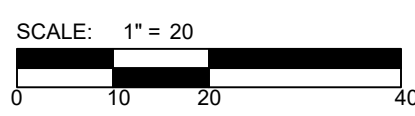
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1320-0008-3222

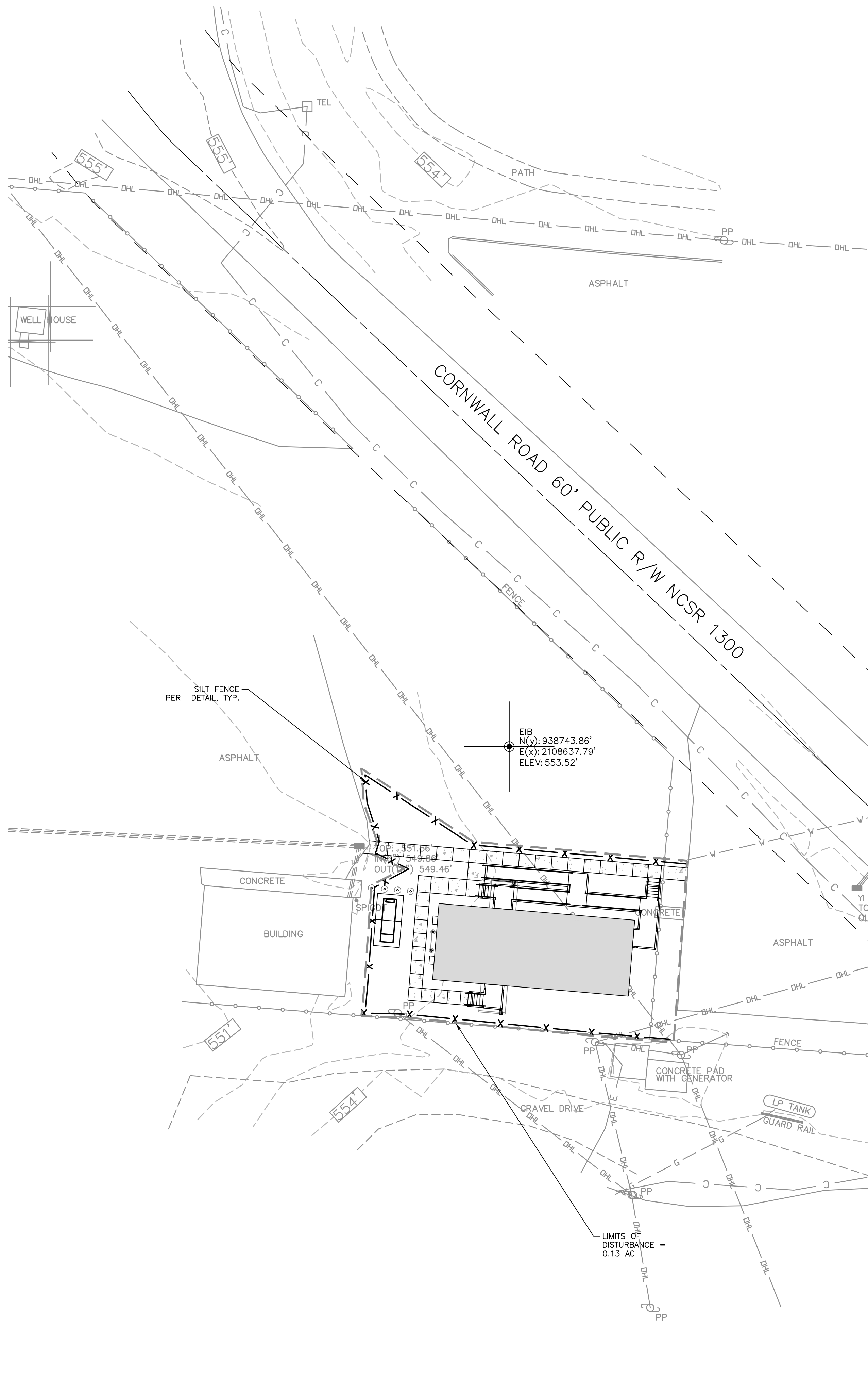
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DATE ISSUED: 9/5/2023
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CONSTRUCTION SEQUENCE

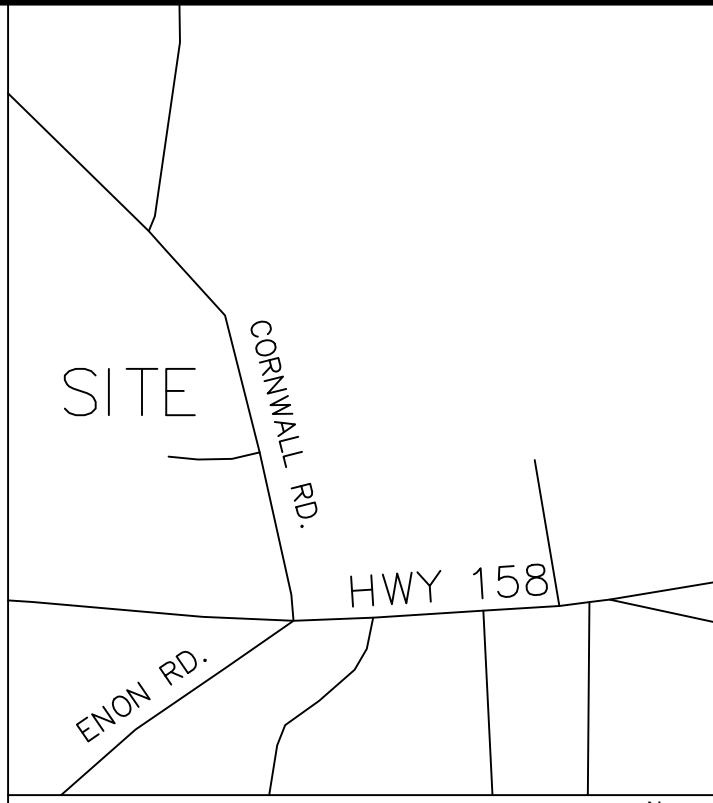
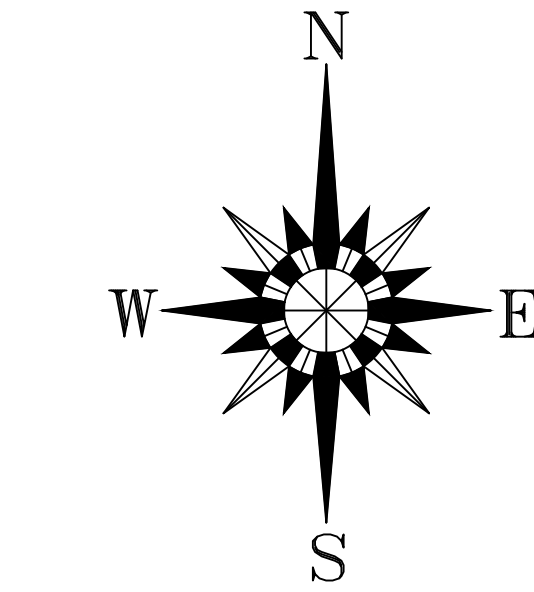
- STAGE 1 -- ROUGH GRADING
1. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES. LIMIT CLEARING AND LAND DISTURBING ACTIVITY TO ONLY THE AREA NECESSARY TO INSTALL THE PERMITTED MEASURES. INSTALL SILT FENCE AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
 2. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED, IF NEEDED, AT LEAST ONCE PER WEEK AND AFTER EVERY RAINFALL EVENT.
- STAGE 2 -- FINE GRADING
3. STABILIZATION IS REQUIRED WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING OR INACTIVITY ON PROJECT SITE.
 4. CONTROL MEASURES FROM STAGE 1 TO REMAIN UNTIL SITE IS BROUGHT TO GRADE AND STABILIZED. REMOVAL OF STAGE 1 DEVICES SHALL BE COORDINATED WITH EROSION CONTROL INSPECTOR. SILT FENCE SHALL BE MOVED TO COMPLETE SIDEWALK AND PLANTING STRIP INSTALLATION AS DIRECTED BY EROSION CONTROL INSPECTOR. CATCH BASIN INLET PROTECTION TO REMAIN UNTIL PROJECT COMPLETION.
 5. INSTALL INLET PROTECTION PRIOR TO GRADING NEAR ANY EXISTING STORM INLET.
 6. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE. MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
 7. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPT. OF AGRICULTURE, U.S. SOIL CONSERVATION SERVICE, CITY OF RALEIGH EROSION CONTROL ORDINANCE, AND THE CITY OF RALEIGH.
 8. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION.

SEEDBED PREPARATION NOTES

1. SURFACE WATER CONTROL MEASURES TO BE INSTALLED ACCORDING TO PLAN.
2. AREAS TO BE SEEDED SHALL BE RIPPED AND SPREAD WITH AVAILABLE TOPSOIL 3" DEEP TOTAL SEEDBED PREPARED DEPTH SHALL BE 4" TO 6" DEEP.
3. LOOSE ROCKS, ROOTS AND OTHER OBSTRUCTIONS SHALL BE REMOVED FROM THE SURFACE SO THAT THEY WILL NOT INTERFERE WITH ESTABLISHMENT AND MAINTENANCE OF VEGETATION. SURFACE FOR FINAL SEEDBED PREPARATION AT FINISHED GRADES SHOWN SHALL BE REASONABLY SMOOTH AND UNIFORM.
4. IF NO SOIL TEST IS TAKEN, FERTILIZER AND LIME TO BE ACCORDING TO SEEDING SPECIFICATIONS. IN ADDITION, PROVIDE 15 LBS/1000 S.F. OF SUPERPHOSPHATE.
5. IF SOIL TEST IS TAKEN, PROVIDE LIME AND FERTILIZER ACCORDING TO SOIL TEST REPORT.
6. LIME AND FERTILIZER SHALL BE APPLIED UNIFORMLY AND MIXED WITH THE SOIL DURING SEEDBED PREPARATION.
7. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS.
8. MULCH TO BE TACKED OR MECHANICALLY TIED DOWN WITHIN TWO DAYS AFTER MULCH IS SPREAD.
9. ALL SLOPES GREATER THAN 2.5:1 SHALL BE STABILIZED WITH JUTE MESH.

EROSION CONTROL NOTES

1. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
2. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
3. GRADING MORE THAN 0.5 ACRES WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
4. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN. ALL GRADED SLOPES MUST BE SEEDED AND MULCHED WITHIN 14 DAYS OR 30 CALENDAR DAYS, WHICHEVER IS SHORTER. REFER TO EROSION CONTROL ORDINANCE FOR ADDITIONAL REQUIREMENTS.
5. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.
6. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
7. ANY CONSTRUCTION OR USE WITHIN THE AREAS DELINEATED AS FLOODWAY DISTRICT FRINGE BOUNDARY LINE OR FLOODWAY DISTRICT ENCROACHMENT BOUNDARY LINE IS SUBJECT TO THE RESTRICTIONS IMPOSED BY THE FLOODWAY REGULATIONS.
8. NON-STANDARD ITEMS (I.E: PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE AN ENCROACHMENT AGREEMENT WITH OR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION.
9. THE TOTAL SITE ACREAGE IS 41.45 AC. THE TOTAL DENUDED AREA IS 0.17 AC.



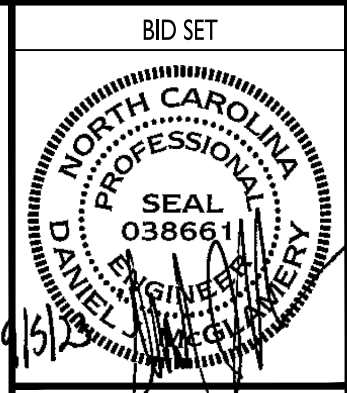
VICINITY MAP N.T.S.

SURVEY DISCLAIMER

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LEGEND

SYMBOL	DETAIL
	LIMITS OF DISTURBANCE -/-
	PROPOSED SILT FENCE -/-



DRYMcGLAMERY ENGINEERING, PLLC
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RALEIGH, NORTH CAROLINA 27619
PHONE: 704/960-0160

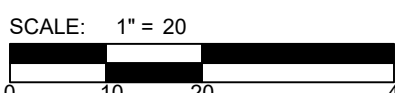


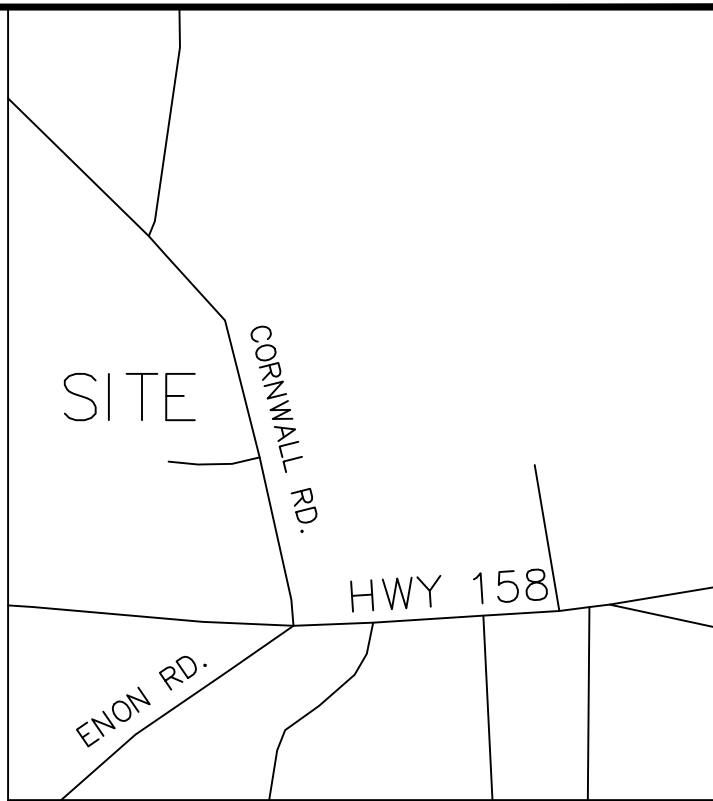
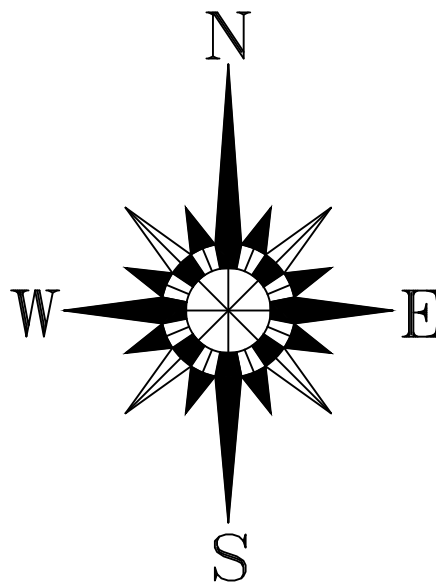
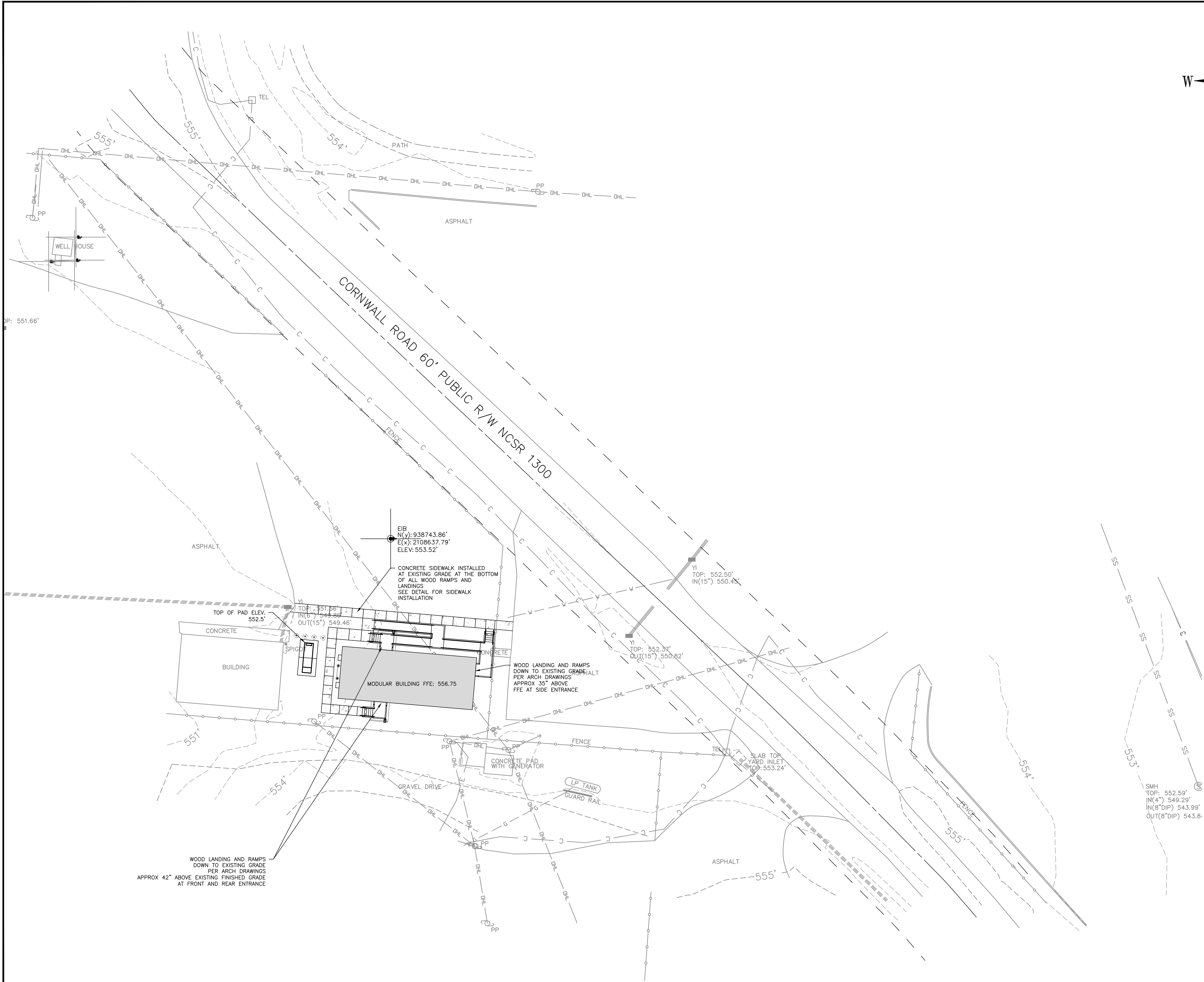
EROSION CONTROL PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION ID.# 22-24690-01A	
EQUIPMENT NUMBER: 1320-0008-3222	
REVISIONS	
NO.	DATE
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VICINITY MAP N.T.S.

SURVEY DISCLAIMER

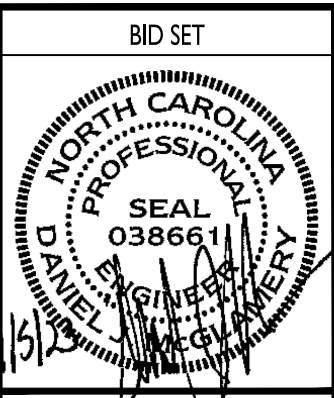
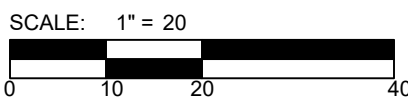
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LEGEND

SYMBOL	DETAIL
oXXX.XX	PROPOSED SPOT ELEV N/A
→	PROPOSED DRAINAGE ARROW 6/C-6.1

GRADING AND DRAINAGE PLAN NOTES

- SEE SITE PLAN FOR RELATED NOTES.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM AFFECTED OWNERS.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- CONTRACTOR SHALL VERIFY OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION.
- ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
- CONTRACTOR SHALL BLEND NEW EARTHWORK AND PAVEMENTS SMOOTHLY BACK INTO EXISTING GRADE.
- ALL WALL/PIER FOOTINGS SHALL BEAR ON UNDISTURBED SOIL WITH BEARING CAPACITY OF 2000 PSF OR GREATER. SEE STRUCTURAL DRAWINGS FOR DETAILS.
- ALL FILL SHALL BE PLACED IN 8" LIFTS AND COMPACTED. ALL FILL WITHIN THE LIMITS OF BUILDING AND PAVEMENT AREAS SHALL BE COMPACTED TO 100% STD. PROCTOR DENSITY WITHIN THE TOP 18" AND A MINIMUM OF 95% STANDARD PROCTOR DENSITY BELOW 24-INCH DEPTH. FILL WITHIN LANDSCAPED AREAS SHALL BE COMPACTED TO A MINIMUM 90% STD PROCTOR DENSITY. FOLLOW GEOTECHNICAL ENGINEER'S RECOMMENDATIONS FOR ALL EARTHWORK ACTIVITIES.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SUCH THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO EXISTING DRAINAGE INLETS, OR SHEET OVERLAND.
- ALL GRADED OR DISTURBED AREAS BEYOND THE LIMITS OF PAVING, SIDEWALKS, BUILDINGS, ETC. THAT ARE NOT OTHERWISE LANDSCAPED SHALL BE STABILIZED WITH NEW LAWN SEED. CONTRACTOR SHALL MAINTAIN SEEDED AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
- DRY-McGLAMERY ENGINEERING HAS NOT PERFORMED ANY GEOTECHNICAL EVALUATIONS OF THE SUBJECT PROPERTY AND HAS NOT MADE ANY DETERMINATIONS AS TO THE SUITABILITY OF THE SITE SOILS FOR FILL USES. ALL EARTHWORK SHALL BE COMPLETED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED GEOTECHNICAL ENGINEER WHO SHALL BE RETAINED BY THE OWNER.



DRY-McGLAMERY
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RALEIGH, NORTH CAROLINA 27619
PHONE: 704/960-0180



GRADING AND DRAINAGE PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
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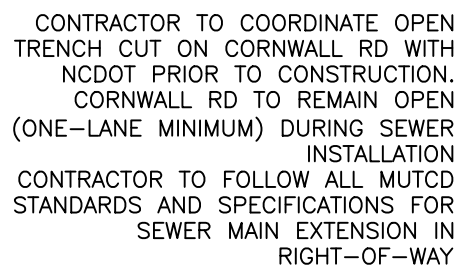
NO.	DATE

DATE ISSUED: 9/5/2023
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C-4.0

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH NCDOT DESIGN STANDARDS, DETAILS & SPECIFICATIONS.
2. 3.0" MINIMUM COVER IS REQUIRED ON ALL WATER MAINS AND SEWER LINES
3. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED 1' FROM ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
4. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
5. MAINTAIN A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION BETWEEN UTILITIES.
6. VERIFY ALL ILLUSTRATED UTILITY CROSSINGS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IF CONFLICTS ARE ENCOUNTERED.
7. CONTRACTOR SHALL OBTAIN UTILITY LOCATION OR ABANDONMENT WITH LOCALITY COORDINATES REQUIRED.
8. ALL METERED CONNECTIONS TO COUNTY POTABLE WATER SHALL HAVE A STATE-APPROVED BACKFLOW PREVENTION ASSEMBLY INSTALLED.
9. WATER AND SEWER SHALL BE AT LEAST 10 FEET Laterally FROM EXISTING OR PROPOSED SEWERS. WHERE LOCAL CONDITIONS PREVENT A SEPARATION OF AT LEAST 10 FEET, THE WATER MAIN MAY BE LAID CLOSER, PROVIDED THAT THE ELEVATION OF THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER WITH A HORIZONTAL SEPARATION OF AT LEAST THREE (3) FEET.
10. CONTRACTOR TO CONTACT COUNTY TO VERIFY IF A PLUMBING PERMIT ISSUED BY THE BUILDING INSPECTION DIVISION IS REQUIRED FOR ALL PLUMBING SYSTEMS, INCLUDING WATER AND SEWER CONNECTIONS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR HIS REPRESENTATIVE(S) TO LOCATE AND IDENTIFY ALL EXISTING AND PROPOSED UTILITIES AND TO CLEARLY IDENTIFY THEM ON THE APPROVED PLANS.



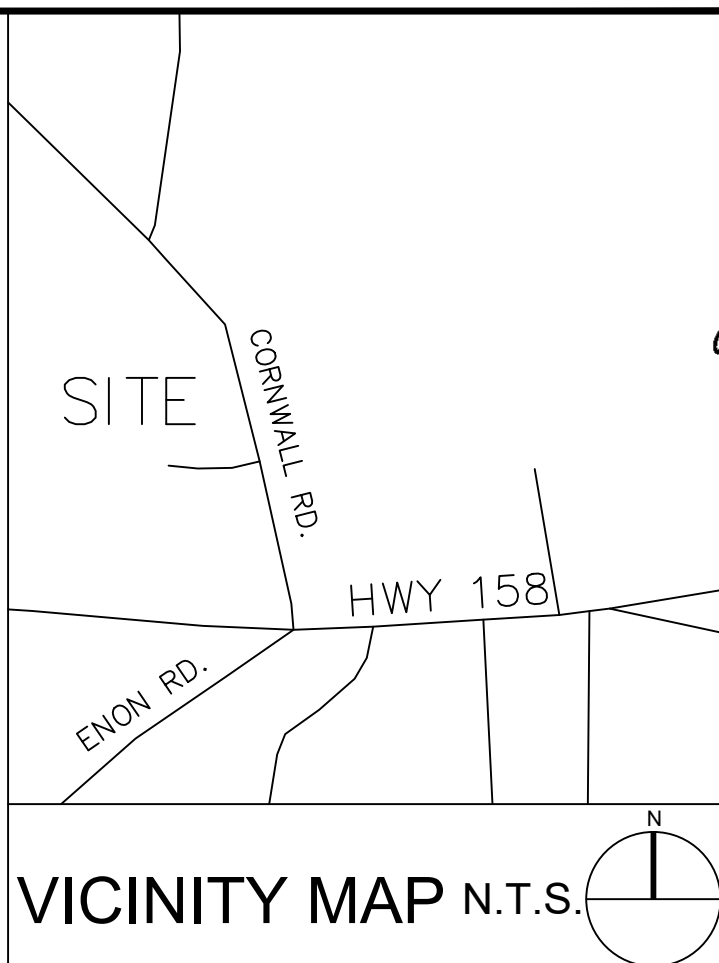
WATER DISTRIBUTION NOTES

1. CONTRACTOR TO LOCATE TIE-INS TO ALL BUILDING LOCATIONS BASED ON PLUMBING PLANS.
2. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTIONS, OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS STATE REQUIRED BACKFLOW PREVENTER. STATE CONSTRUCTION OFFICE IS AHJ FOR THIS PROJECT.

1. CONTRACTOR TO LOCATE TIE-INS TO ALL BUILDING LOCATIONS BASED ON PLUMBING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR INSTALLATION INCLUDING TAP FEES. (INCLUDING CAPITAL FACILITY FEES)

1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAG MEN, ETC. AS NECESSARY TO ENSURE THE SAFETY OF THE PUBLIC.
3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO STANDARDS OF THE NCDOT.
4. SHORING WILL BE ACCORDING TO OSHA TRENCHING STANDARDS PART 1926, SUBPART P, OR AS AMENDED.
5. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG CALL THE CONTACT ONE—CALL CENTER AT 1-800-632-4949.

1. ALL WORK IN RIGHT-OF-WAY FOR SANITARY SEWER SERVICE SHALL BE IN ACCORDANCE WITH NCDOT AND MUTCD STANDARDS AND SPECIFICATIONS.



SURVEY INFORMATION PREPARED BY L.
JORDAN PARKER (PLS L-4665) ON OCTOBER 7,
2022. CAWTHORNE, MOSS, & PANCIERA, PC,
333 S. WHITE STREET, WAKE FOREST, NC 27588



PO BOX 19558
RALEIGH, NORTH CAROLINA 27619
PHONE: 704/960-0180



**Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office**

5650 CORNWALL ROAD
OXFORD NORTH CAROLINA 27565

NO.	DATE
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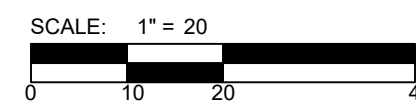
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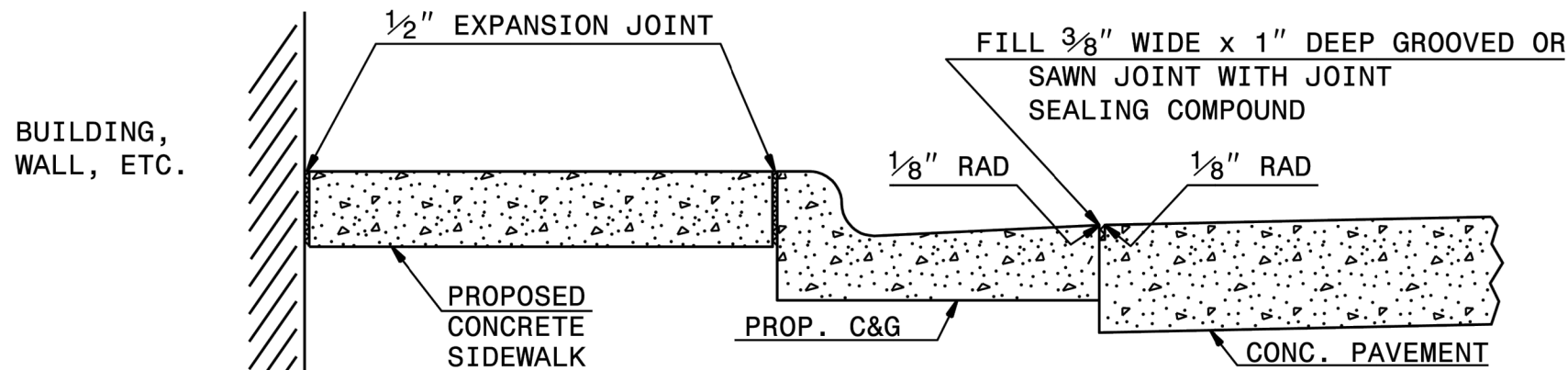
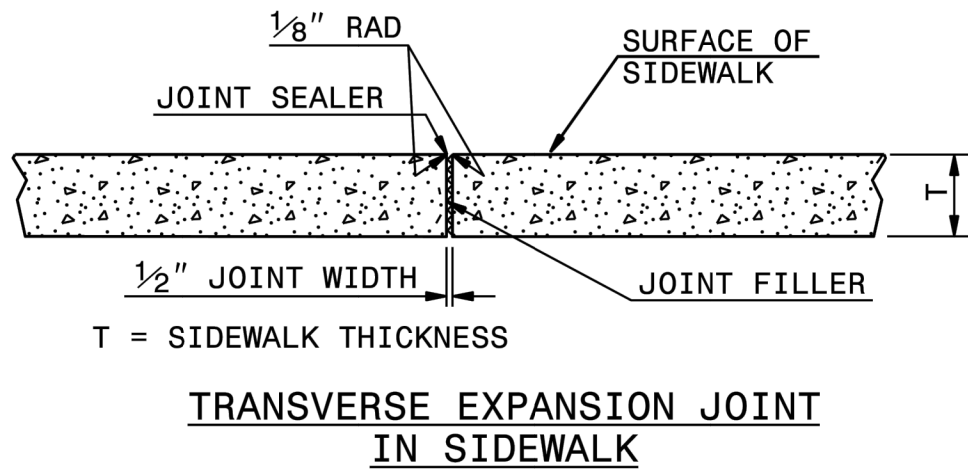


NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

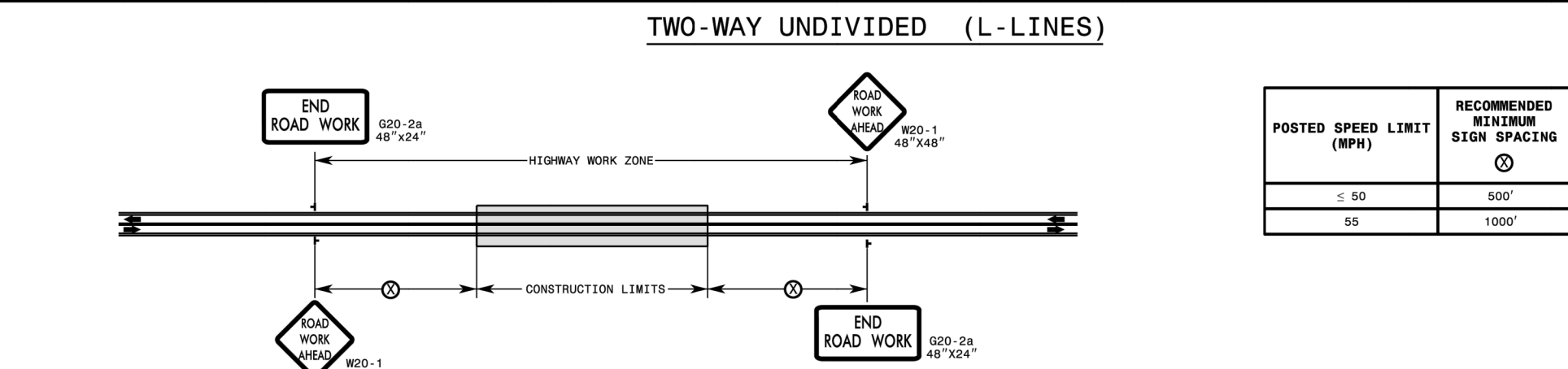
SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

1 CONCRETE SIDEWALK

N.T.S



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

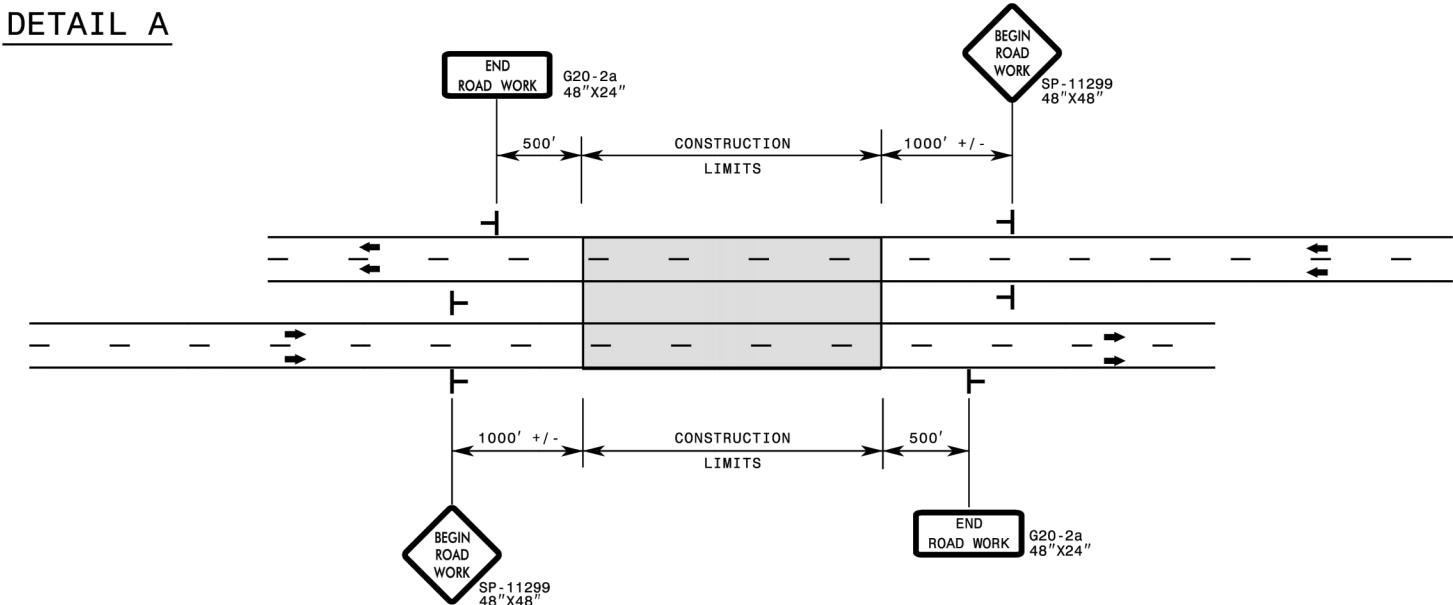
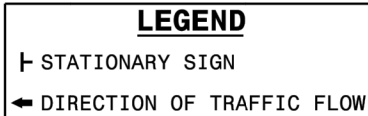
ROADWAY STANDARD DRAWING FOR
WORK ZONE ADVANCE WARNING SIGNS FOR
TWO-WAY UNDIVIDED FACILITIES

SHEET 3 OF 3
1101.01

3 WORK ZONE ADVANCE WARNING SIGNS TWO-WAY UNDIVIDED

N.T.S

- GENERAL NOTES**
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.
 - SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT LONGER THAN 3 CONSECUTIVE DAYS.
 - ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
 - ERECT SIGNS PER RSD 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATIONS FOR WORK ZONE SIGNS.
 - WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH RSD. 1110.01.
 - DO NOT BACK BRACE SIGN SUPPORTS.

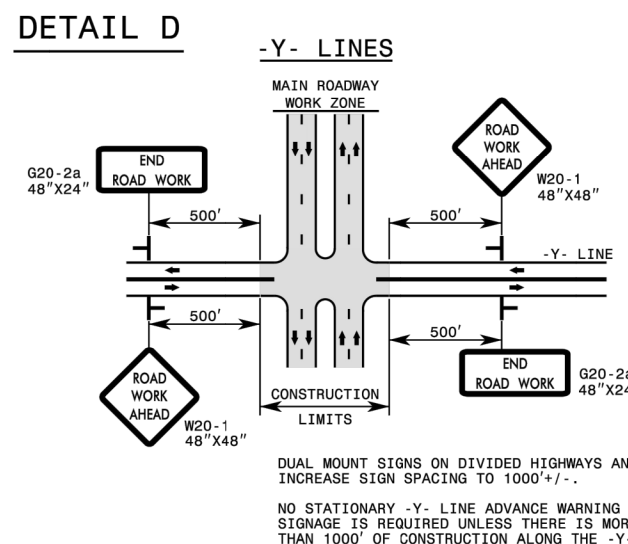
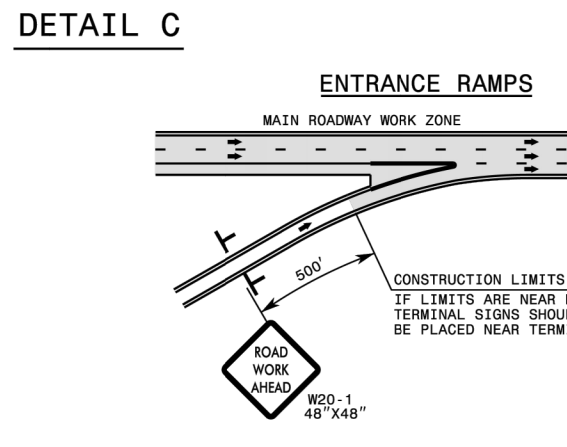
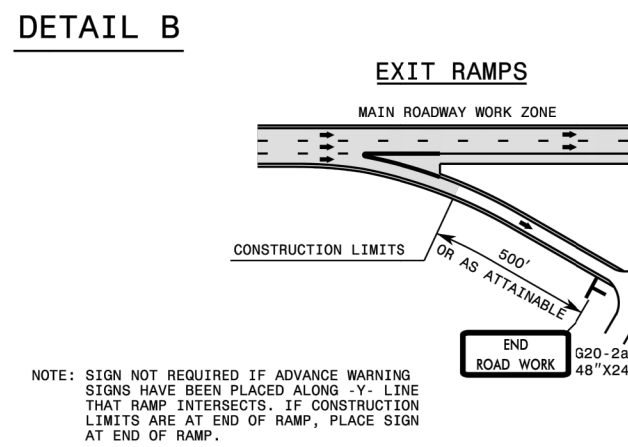


- GENERAL NOTES**
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK UNLESS COVERED.
 - SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT LONGER THAN 3 CONSECUTIVE DAYS.
 - ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
 - ERECT SIGNS PER RSD. 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATIONS FOR WORK ZONE SIGNS.
 - WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH RSD. 1110.01.
 - DO NOT BACK BRACE SIGN SUPPORTS.
 - TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.



2 WORK ZONE ADVANCE WARNING SIGNS < 55 MPH

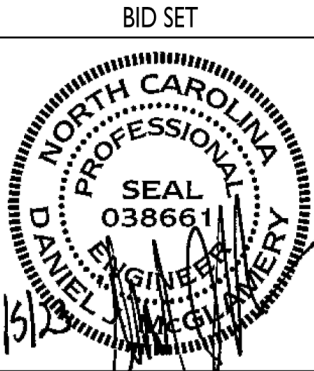
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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
WORK ZONE ADVANCE WARNING SIGNS FOR
FACILITIES < 55 MPH

SHEET 2 OF 3
1101.01



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SITE DETAILS

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

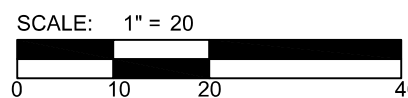
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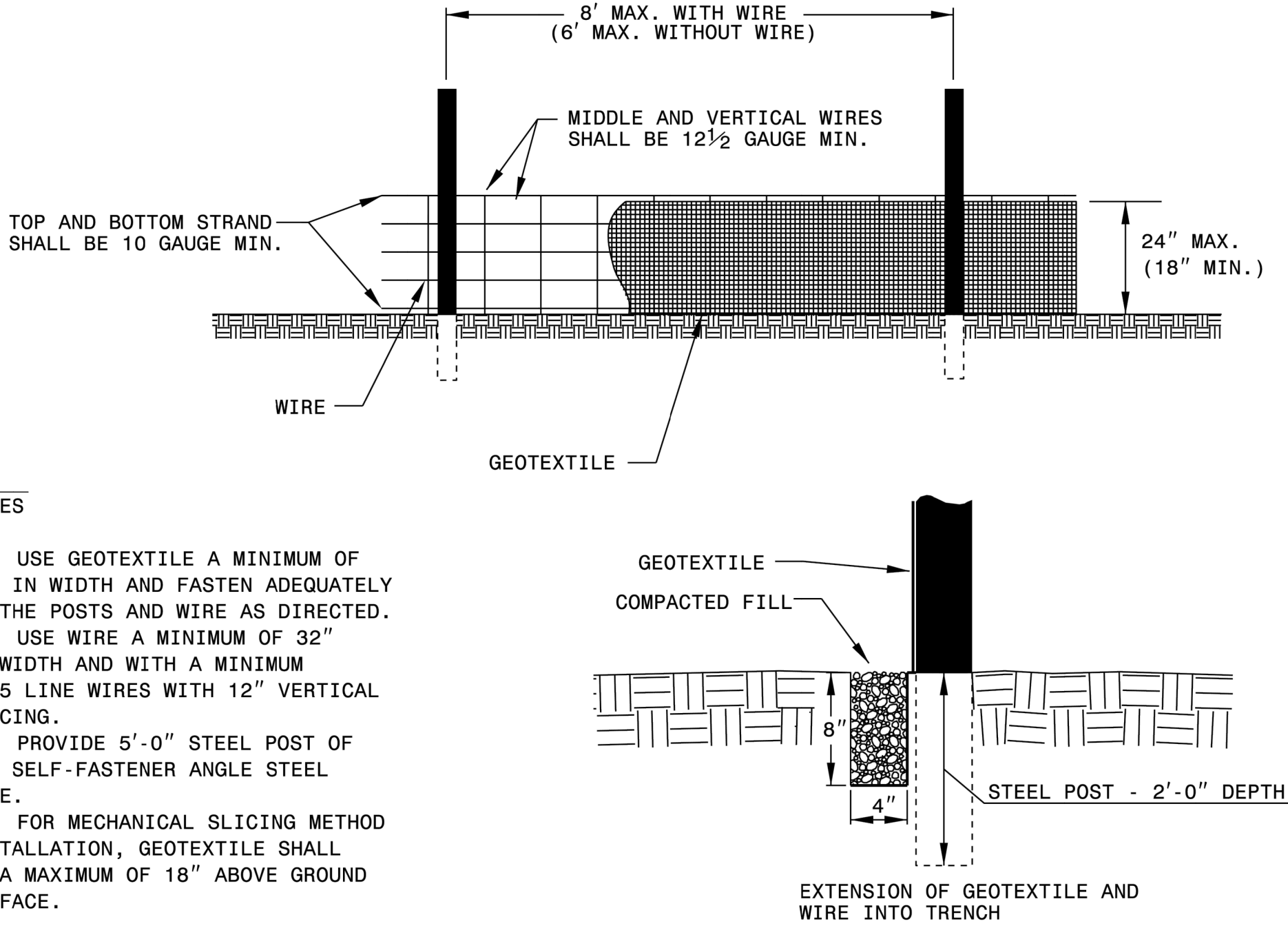
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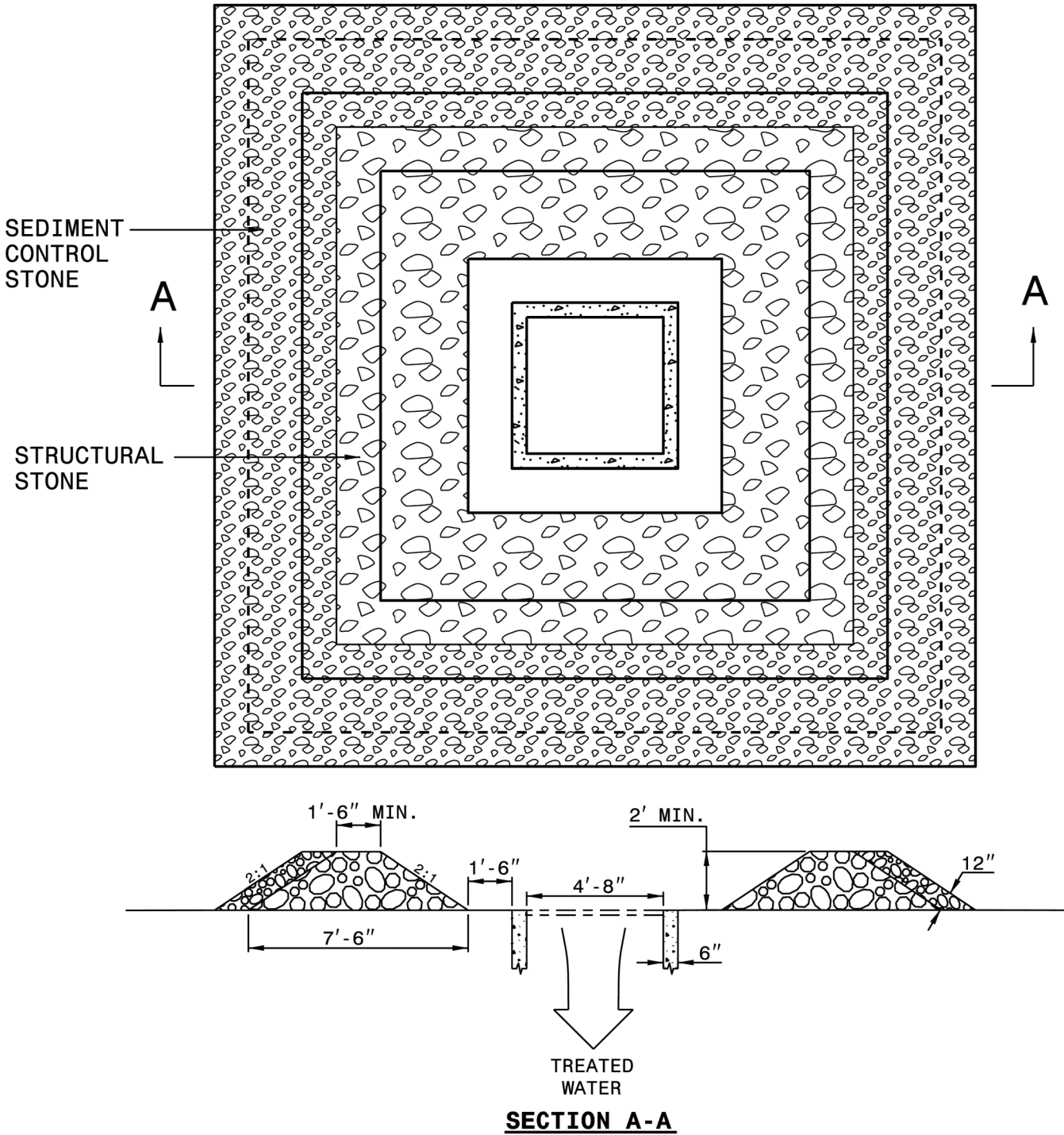
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TEMPORARY SILT FENCE

SHEET 1 OF 1
1605.01

1 TEMPORARY SILT FENCE

N.T.S



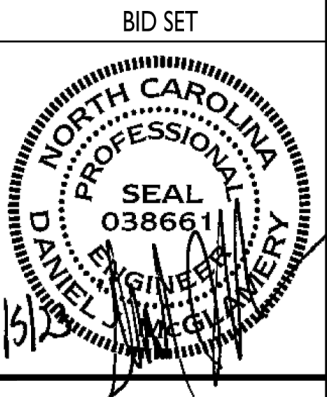
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE A

SHEET 1 OF 1
1632.01

2 ROCK INLET SEDIMENT TRAP TYPE A

N.T.S



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**EROSION CONTROL
DETAILS**

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

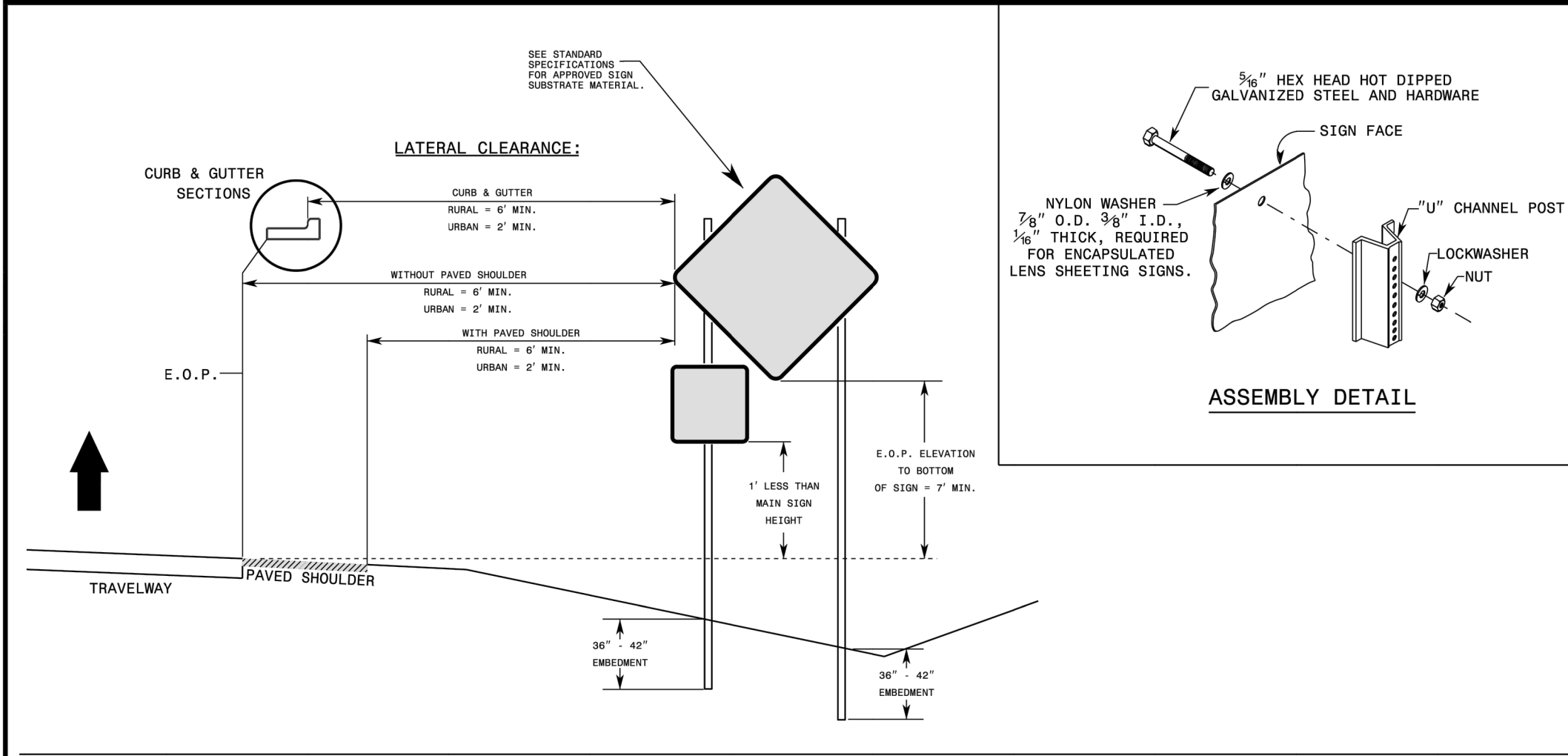
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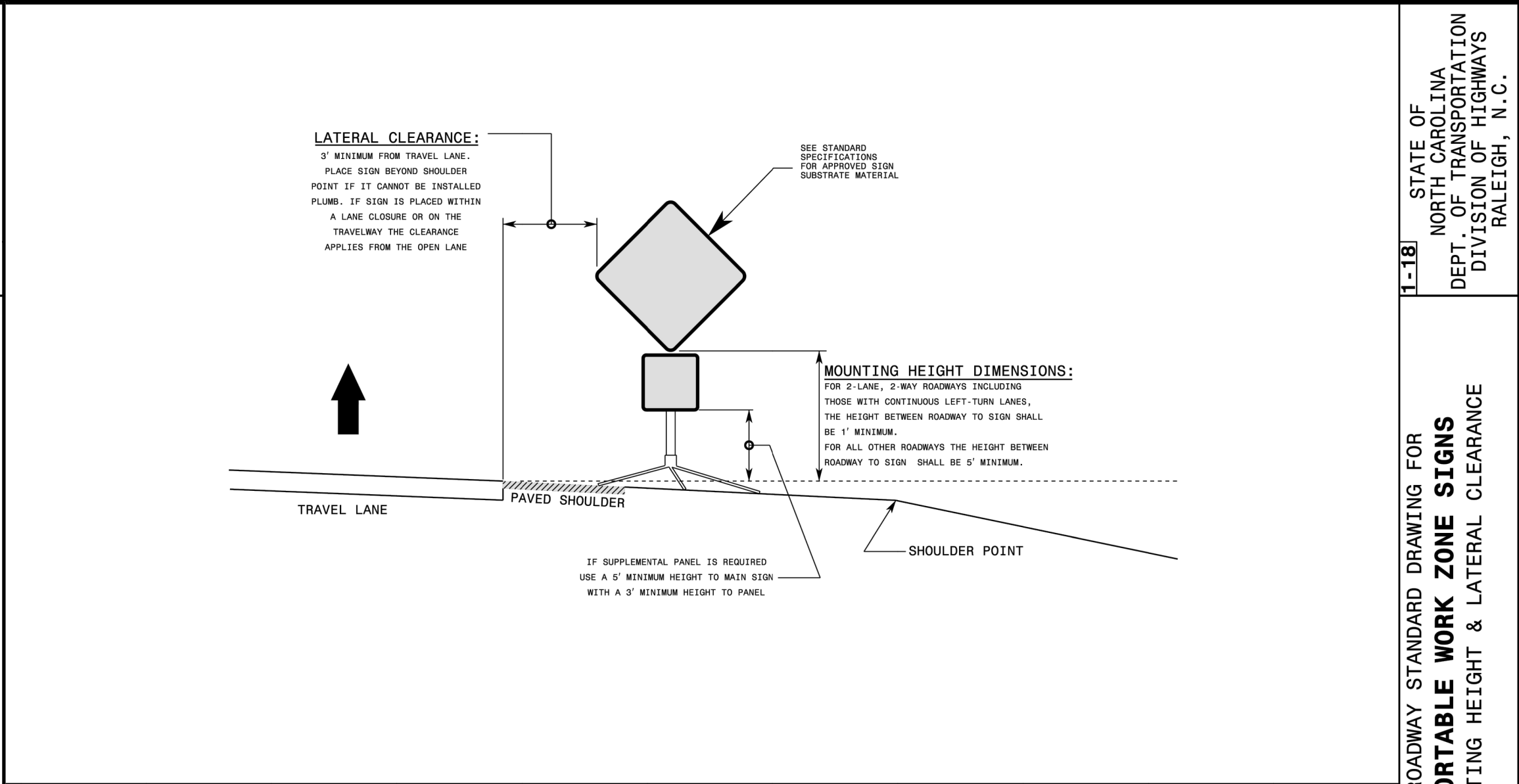
- GENERAL NOTES**
- 1- DIMENSIONS SHOWN ARE MINIMUM VALUES. WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS THAT DETRACT FROM THEIR VISIBILITY, MOUNT THE SIGNS AT AN APPROPRIATE HEIGHT SUCH THAT THEY ARE CLEARLY VISIBLE TO APPROACHING TRAFFIC.
 - 2- MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
 - 3- REFER TO STANDARD SPECIFICATION 1089-1 FOR WORK ZONE SIGNS.
 - 4- REFER TO STANDARD SPECIFICATION 1089-2 FOR WORK ZONE SIGN SUPPORTS.
 - 5- REFER TO RSD, 903.20 FOR WOOD POSTS.
 - 6- REFER TO STANDARD SPECIFICATION 903-1 FOR WOOD SUPPORTS.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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ROADWAY STANDARD DRAWING FOR
STATIONARY WORK ZONE SIGNS
MOUNTING HEIGHT & LATERAL CLEARANCE

SHEET 1 OF 3
1110.01



- GENERAL NOTES**
- 1- DIMENSIONS SHOWN ARE MINIMUM VALUES. MOUNT SIGNS SO THEY WILL BE CLEARLY VISIBLE TO APPROACHING TRAFFIC EVEN WHEN SIGNS ARE MOUNTED BEHIND TRAFFIC CONTROL DEVICES SUCH AS DRUMS, BARRIER, OR OTHER OBJECTS.
 - 2- ALL PORTABLE SIGNS AND STANDS MUST MEET OR EXCEED THE REQUIREMENTS OF NCHRP 350 FOR CATEGORY II DEVICES. USE PORTABLE WORK ZONE SIGNS AND STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER.
 - 3- ALL PORTABLE WORK ZONE SIGNS AND STANDS MUST BE LISTED ON THE DEPARTMENT'S APPROVED PRODUCTS LIST.

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RALEIGH, N.C.

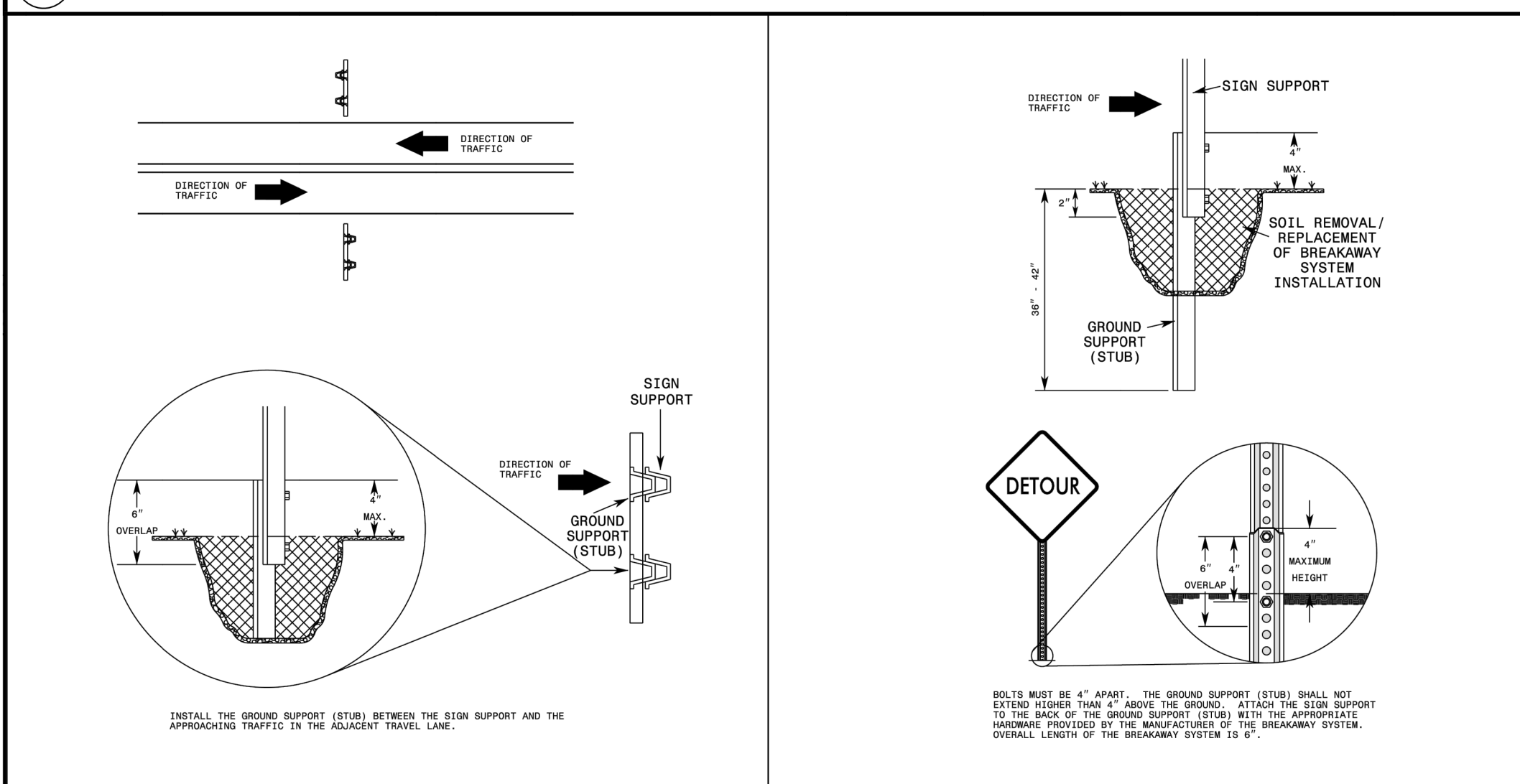
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ROADWAY STANDARD DRAWING FOR
PORTABLE WORK ZONE SIGNS
MOUNTING HEIGHT & LATERAL CLEARANCE

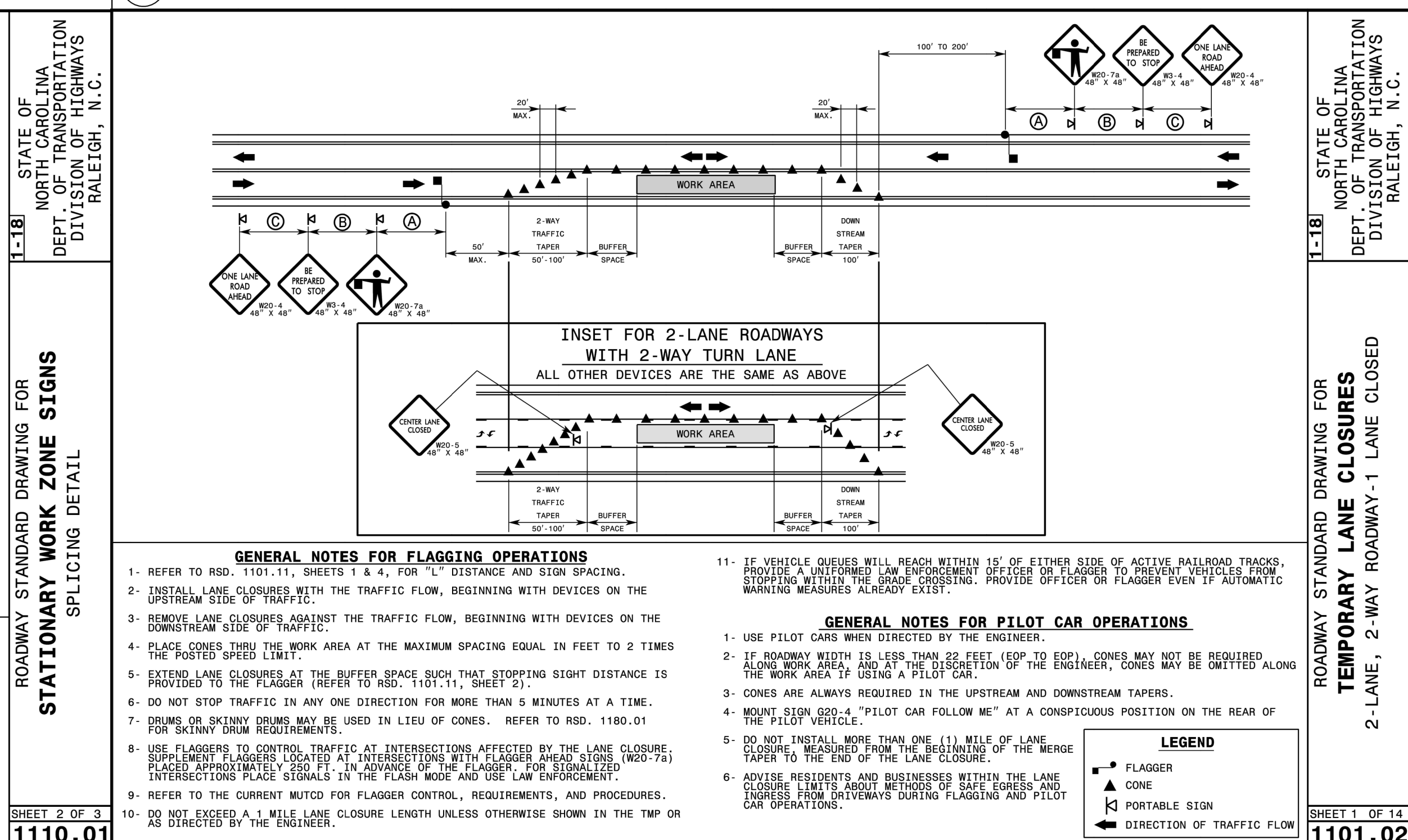
SHEET 1 OF 1
1110.02

1 STATIONARY WORK ZONE SIGNS

2 STATIONARY WORK ZONE SIGNS



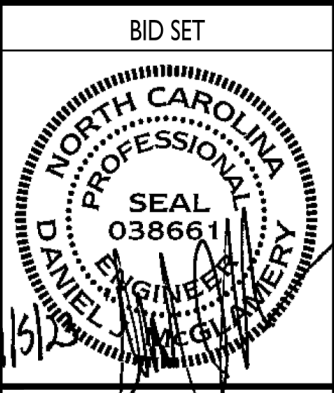
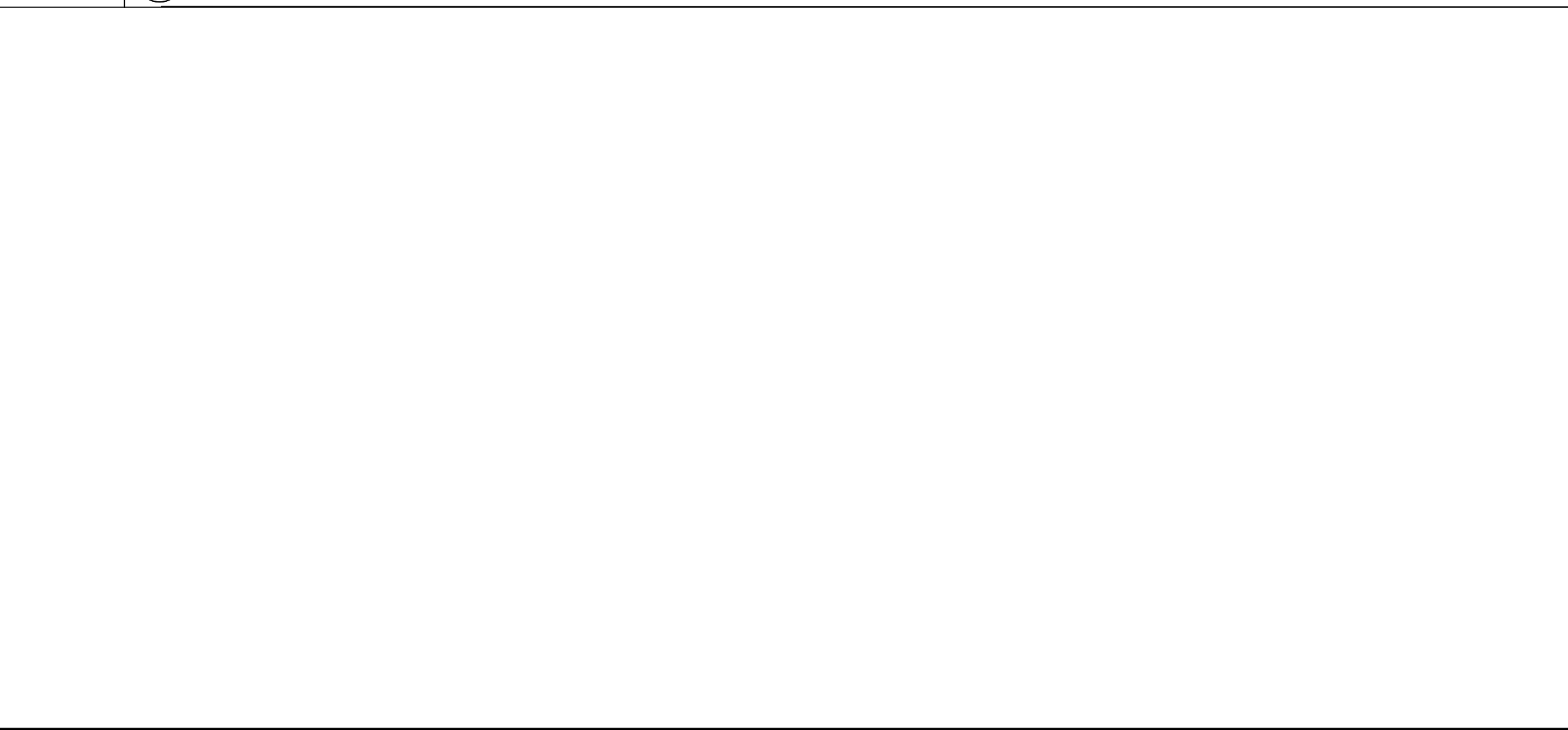
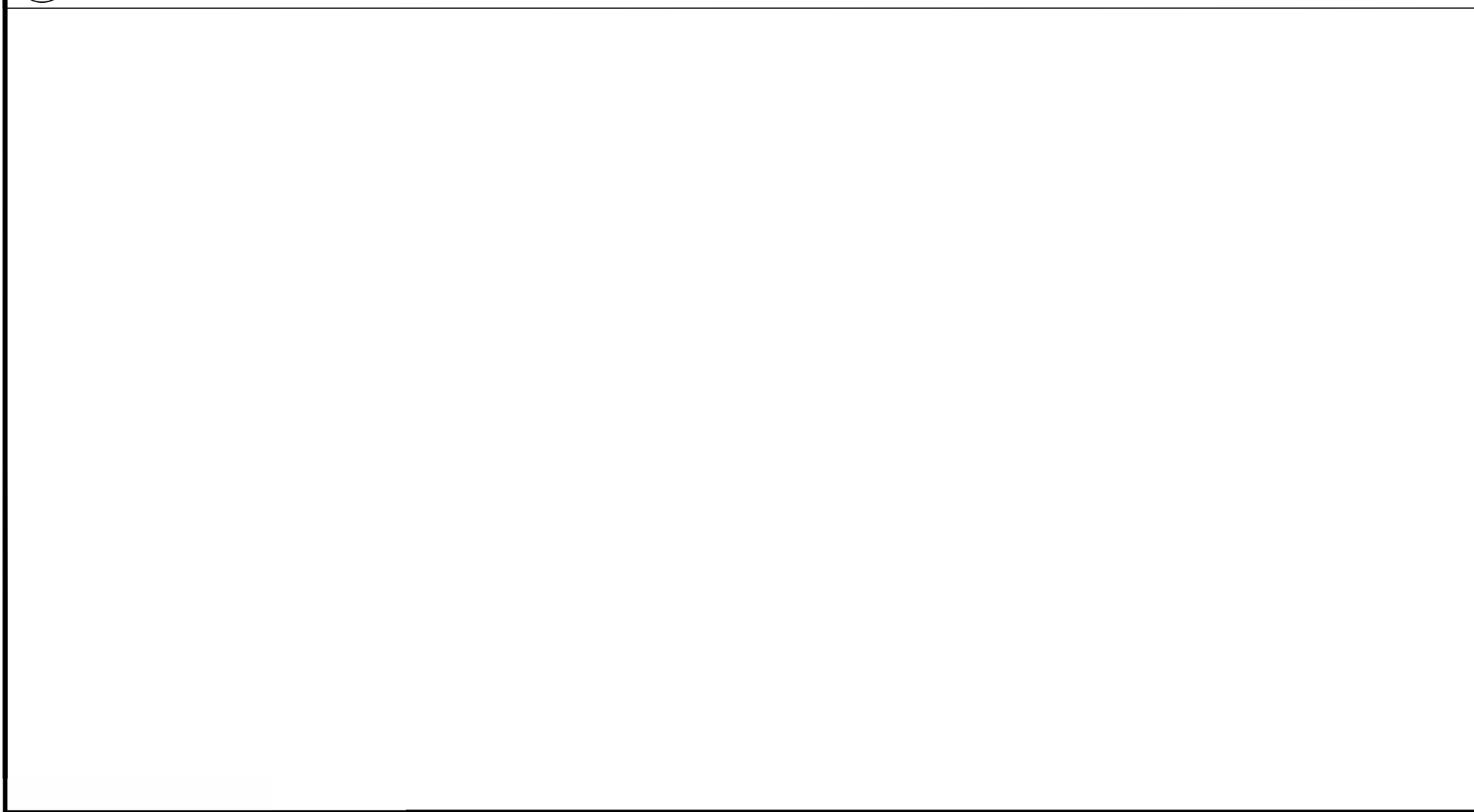
- GENERAL NOTES**
- 1- ALL TRAFFIC CONTROL DEVICES, INCLUDING BREAKAWAY SYSTEMS FOR GROUND MOUNTED SIGN SUPPORTS, COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL BE APPROVED BY THE DEPARTMENT.
 - 2- INSTALL THE BREAKAWAY SYSTEM TO FUNCTION PROPERLY IN ACCORDANCE WITH THE DIRECTION OF TRAFFIC ADJACENT TO THE SIGN.
 - 3- FOR PERFORATED SQUARE TUBING BREAKAWAY SYSTEMS, FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR ANCHOR EMBEDMENT DEPTHS AND POST ATTACHMENT REQUIREMENTS.
- 3 LB. U-CHANNEL SPLICING REQUIREMENTS**
- 1- WHEN SIGN IS REMOVED AT THE END OF PROJECT, REMOVE THE GROUND SUPPORT (STUB).
 - 2- WHEN SPLICING A U-CHANNEL SUPPORT, INSTALL THE GROUND SUPPORT (STUB) APPROXIMATELY 36" TO 42" INTO THE GROUND WHILE LEAVING NO MORE THAN 4" ABOVE THE EXISTING GROUND ELEVATION. REMOVE ENOUGH SOIL FROM AROUND THE GROUND SUPPORT (STUB) TO PERMIT ACCESS TO THE HOLES FOR THE BREAKAWAY SYSTEM. ONCE THE BREAKAWAY SYSTEM IS TIGHTENED, REPLACE THE SOIL AND TAMP.
 - 3- OVERALL LENGTH OF THE BREAKAWAY SYSTEM IS 6". BOLTS MUST BE 4" APART. ATTACH THE SIGN SUPPORT TO THE BACK OF THE GROUND SUPPORT (STUB) WITH THE APPROPRIATE HARDWARE SUPPLIED BY THE MANUFACTURER OF THE BREAKAWAY SYSTEM.
 - 4- INSTALL U-CHANNEL BREAKAWAY SYSTEMS SO THE GROUND SUPPORT (STUB) IS INSTALLED ON THE APPROACH SIDE OF TRAFFIC WHILE THE SIGN SUPPORT IS ATTACHED/SPLICED BEHIND THE GROUND SUPPORT (STUB).



- GENERAL NOTES FOR FLAGGING OPERATIONS**
- 1- REFER TO RSD, 1101.11, SHEETS 1 & 4, FOR "L" DISTANCE AND SIGN SPACING.
 - 2- INSTALL LANE CLOSURES WITH THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE UPSTREAM SIDE OF TRAFFIC.
 - 3- REMOVE LANE CLOSURES AGAINST THE TRAFFIC FLOW, BEGINNING WITH DEVICES ON THE DOWNSTREAM SIDE OF TRAFFIC.
 - 4- PLACE CONES THRU THE WORK AREA AT THE MAXIMUM SPACING EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
 - 5- EXTEND LANE CLOSURES AT THE BUFFER SPACE SUCH THAT STOPPING SIGHT DISTANCE IS PROVIDED TO THE FLAGGER (REFER TO RSD, 1101.11, SHEET 2).
 - 6- DO NOT STOP TRAFFIC IN ANY ONE DIRECTION FOR MORE THAN 5 MINUTES AT A TIME.
 - 7- DRUMS OR SKINNY DRUMS MAY BE USED IN LIEU OF CONES. REFER TO RSD, 1180.01 FOR SKINNY DRUM REQUIREMENTS.
 - 8- USE FLAGGERS TO CONTROL TRAFFIC AT INTERSECTIONS AFFECTED BY THE LANE CLOSURE. SUPPLEMENT FLAGGERS LOCATED AT INTERSECTIONS WITH FLAGGER AHEAD SIGNS (R20-7a) PLACED APPROXIMATELY 250 FT. IN ADVANCE OF THE FLAGGER. FOR SIGNALIZED INTERSECTIONS PLACE SIGNALS IN THE FLASH MODE AND USE LAW ENFORCEMENT.
 - 9- REFER TO THE CURRENT MUTCD FOR FLAGGER CONTROL, REQUIREMENTS, AND PROCEDURES.
 - 10- DO NOT EXCEED A 1 MILE LANE CLOSURE LENGTH UNLESS OTHERWISE SHOWN IN THE TMP OR AS DIRECTED BY THE ENGINEER.
- GENERAL NOTES FOR PILOT CAR OPERATIONS**
- 1- USE PILOT CAR WHEN DIRECTED BY THE ENGINEER.
 - 2- IF ROADWAY WIDTH IS LESS THAN 22 FEET (EOP TO EOP), CONES MAY NOT BE REQUIRED ALONG WORK AREA, AND AT THE DISCRETION OF THE ENGINEER, CONES MAY BE OMITTED ALONG THE WORK AREA IF USING A PILOT CAR.
 - 3- CONES ARE ALWAYS REQUIRED IN THE UPSTREAM AND DOWNSTREAM TAPERS.
 - 4- MOUNT SIGN R20-4 "PILOT CAR FOLLOW ME" AT A CONSPICUOUS POSITION ON THE REAR OF THE PILOT VEHICLE.
 - 5- DO NOT INSTALL MORE THAN ONE (1) MILE OF LANE CLOSURE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
 - 6- ADVISE RESIDENTS AND BUSINESSES WITHIN THE LANE CLOSURE LIMITS ABOUT METHODS OF SAFE EGRESS AND INGRESS FROM DRIVEWAYS DURING FLAGGING AND PILOT CAR OPERATIONS.

3 STATIONARY WORK ZONE SIGNS

4 TEMPORARY LANE CLOSURES



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TRAFFIC CONTROL DETAILS

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

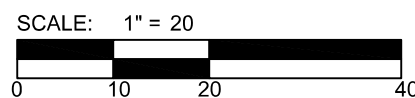
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1320-0008-3222

REVISIONS

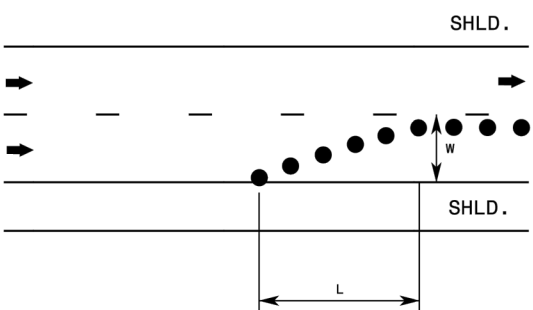
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EXAMPLE OF "L" & "W" DESIGNATIONS



TAPER LENGTH CRITERIA FOR CHANNELIZING DEVICES IN WORK ZONES

TYPES OF TAPERS	TAPER LENGTH
UPSTREAM TAPER L MINIMUM
MERGING TAPER 1/2 L MINIMUM
SHIFTING TAPER 3/4 L MINIMUM
SHOULDER TAPER 3/4 L MINIMUM
TWO-WAY TRAFFIC TAPER 60 - 100 FEET MAXIMUM
DOWNSTREAM TAPER 100 FEET MAXIMUM

DO NOT INTRODUCE A MERGING OR SHIFTING TAPER WITHIN A CURVE OF THE ROADWAY

QUICK REFERENCE - "L" DISTANCE TABLE

POSTED SPEED (MPH)	MINIMUM LONGITUDINAL DISTANCE "L" (FEET) (ROUNDED VALUES)											
	LATERAL WIDTH "W" (FEET)											
	1	2	3	4	5	6	7	8	9	10	11	12
20	10	15	20	30	35	40	50	55	60	70	75	80
25	15	25	35	45	55	65	75	85	95	105	115	125
30	15	30	45	60	75	90	105	120	135	150	165	180
35	25	45	65	85	105	125	145	165	185	205	225	245
40	30	55	80	110	135	160	190	215	240	270	295	320
45	45	90	135	180	225	270	315	360	405	450	495	540
50	50	100	150	200	250	300	350	400	450	500	550	600
55	55	110	165	220	275	330	385	440	495	550	605	660
60	60	120	180	240	300	360	420	480	540	600	660	720
65	65	130	195	260	325	390	455	520	585	650	715	780
70	70	140	210	280	350	420	490	560	630	700	770	840

GENERAL NOTES

1- TABLE FOR "L" DISTANCE IS BASED ON CHANNELIZATION TAPER FORMULA FROM THE MUTCD.
WHERE:

SPEED LIMIT

FORMULA

40 MPH OR LESS

$L_{min} = W \times S^2 \over 60$

45 MPH OR GREATER

$L_{min} = W \times S$

L = MINIMUM TAPER LENGTH IN FEET (LONGITUDINAL DISTANCE)
W = WIDTH OF OFFSET IN FEET (LATERAL DISTANCE)
S = POSTED SPEED LIMIT, OR OFF-PEAK 85 PERCENTILE SPEED IN MPH PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

2- "L" DISTANCE IS FOR APPLICATION WITH CHANNELIZING DEVICE AND PAVEMENT MARKING TAPERS AND TRANSITIONS. CHANNELIZING DEVICES INCLUDE DRUMS, CONES, TUBULAR MARKERS, BARRICADES, RAISED ASPHALT ISLANDS, AND VERTICAL PANELS.

1-18

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
DEVICE TAPER CRITERIA

SHEET 1 OF 4
1101.11

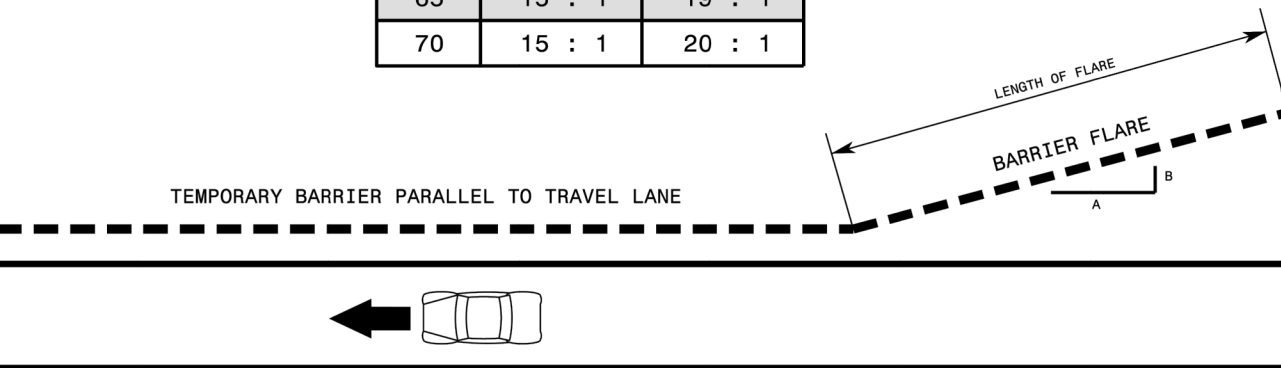
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TRAFFIC CONTROL DESIGN TABLES

N.T.S

TRAFFIC CONTROL DESIGN TABLES

POSTED SPEED LIMIT (MPH)	UNANCHORED (A:B)	ANCHORED (A:B)
≤ 30	7 : 1	8 : 1
35	8 : 1	9 : 1
40	8 : 1	10 : 1
45	10 : 1	12 : 1
50	11 : 1	14 : 1
55	12 : 1	16 : 1
60	14 : 1	18 : 1
65	15 : 1	19 : 1
70	15 : 1	20 : 1



GENERAL NOTES

1- REFER TO THE 2011 ROADSIDE DESIGN GUIDE OR THE LATEST EDITION.

2- A BARRIER IS CONSIDERED FLARED WHEN IT IS NOT PARALLEL TO THE EDGE OF THE TRAVELWAY.

1-18

STATE OF NORTH CAROLINA
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ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
TEMPORARY BARRIER FLARE RATES

SHEET 3 OF 4
1101.11

3

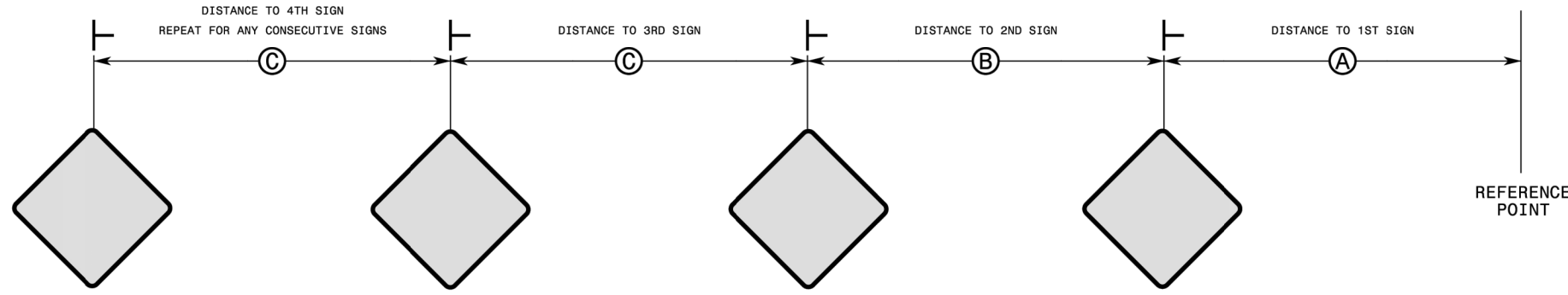
TRAFFIC CONTROL DESIGN TABLES

N.T.S

ADVANCE WARNING SIGN SPACING CHART

POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS (FEET)		
	A	B	C
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500
CONTROLLED ACCESS ROADS (≤ 55)	1000	1000	2700

STATIONARY OR PORTABLE SIGNS



GENERAL NOTES

1- REFER TO 2009 MUTCD OR THE LATEST EDITION.

2- USE THIS STANDARD DRAWING IN CONJUNCTION WITH OTHER TRAFFIC CONTROL ROADWAY STANDARD DRAWINGS WHERE SIGN SPACING DISTANCES A, B, C, ARE SPECIFIED.

3- APPLY THE ADVANCE WARNING SIGN SPACING CHART WHERE A SERIES OF 2 OR MORE SIGNS ARE USED. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE. FIELD ADJUST AS VARIOUS CONDITIONS OCCUR, SUCH AS LIMITED SIGHT DISTANCE, OBSTRUCTION INTERFERENCE, ETC.

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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
SPACING OF TEMPORARY SIGNS IN SERIES

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TRAFFIC CONTROL DESIGN TABLES

N.T.S

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
BUFFER SPACE & SIGHT DISTANCE

SHEET 2 OF 4
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
DEVICE TAPER CRITERIA

SHEET 1 OF 4
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TRAFFIC CONTROL DESIGN TABLES

N.T.S

TRAFFIC CONTROL DESIGN TABLES

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35	250	1280	120
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70	730	2480	470
75	820	2580	540
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1-18

STATE OF NORTH CAROLINA
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
BUFFER SPACE & SIGHT DISTANCE

SHEET 2 OF 4
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STATE OF NORTH CAROLINA
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
DEVICE TAPER CRITERIA

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TRAFFIC CONTROL DESIGN TABLES

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ROADWAY STANDARD DRAWING FOR
TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
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ROADWAY STANDARD DRAWING FOR
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TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
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TRAFFIC CONTROL DESIGN TABLES
"L" DISTANCE AND CHANNELIZING
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SHEET 1 OF 4
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TRAFFIC CONTROL DESIGN TABLES

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TRAFFIC CONTROL DESIGN TABLES

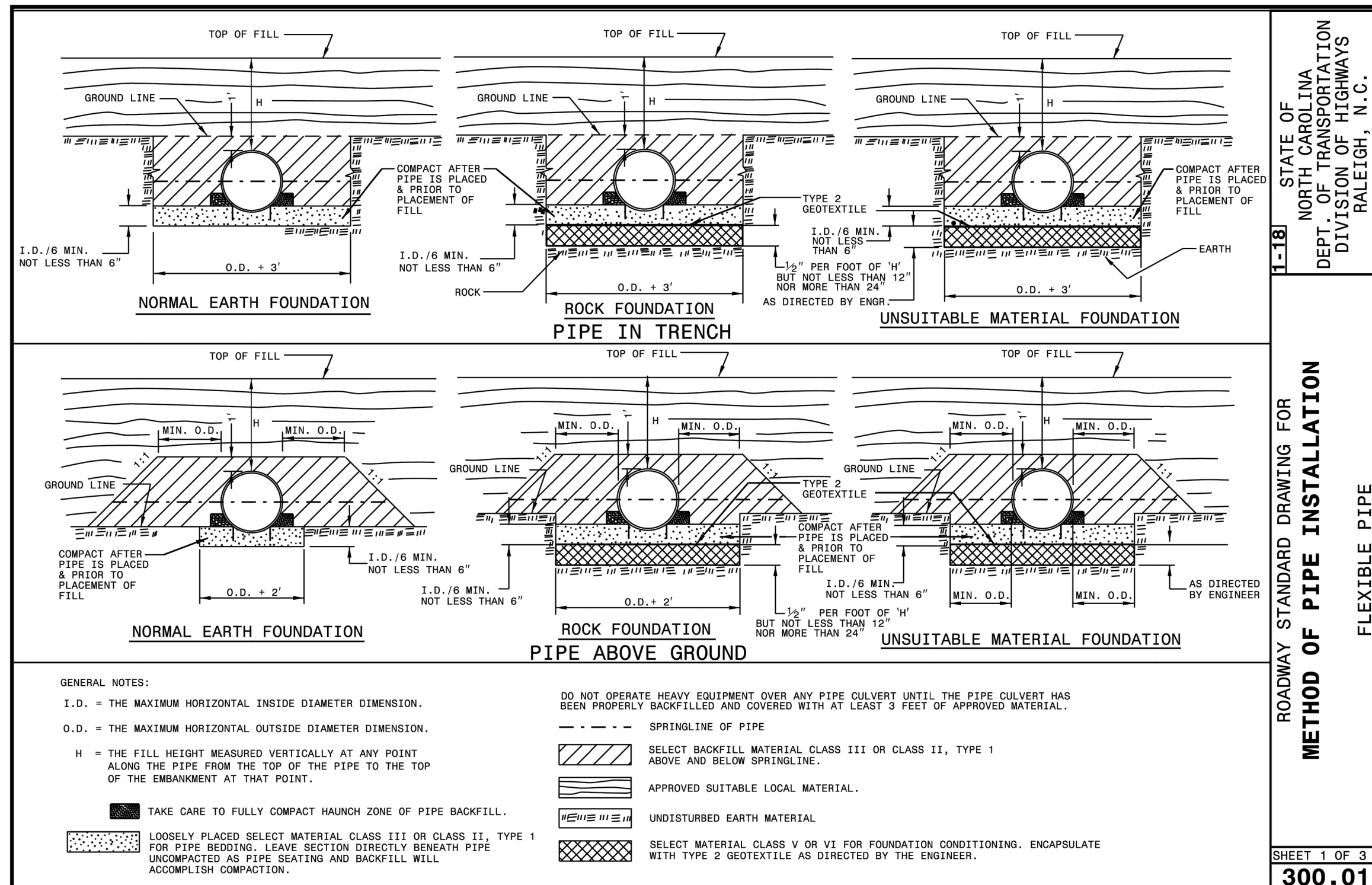
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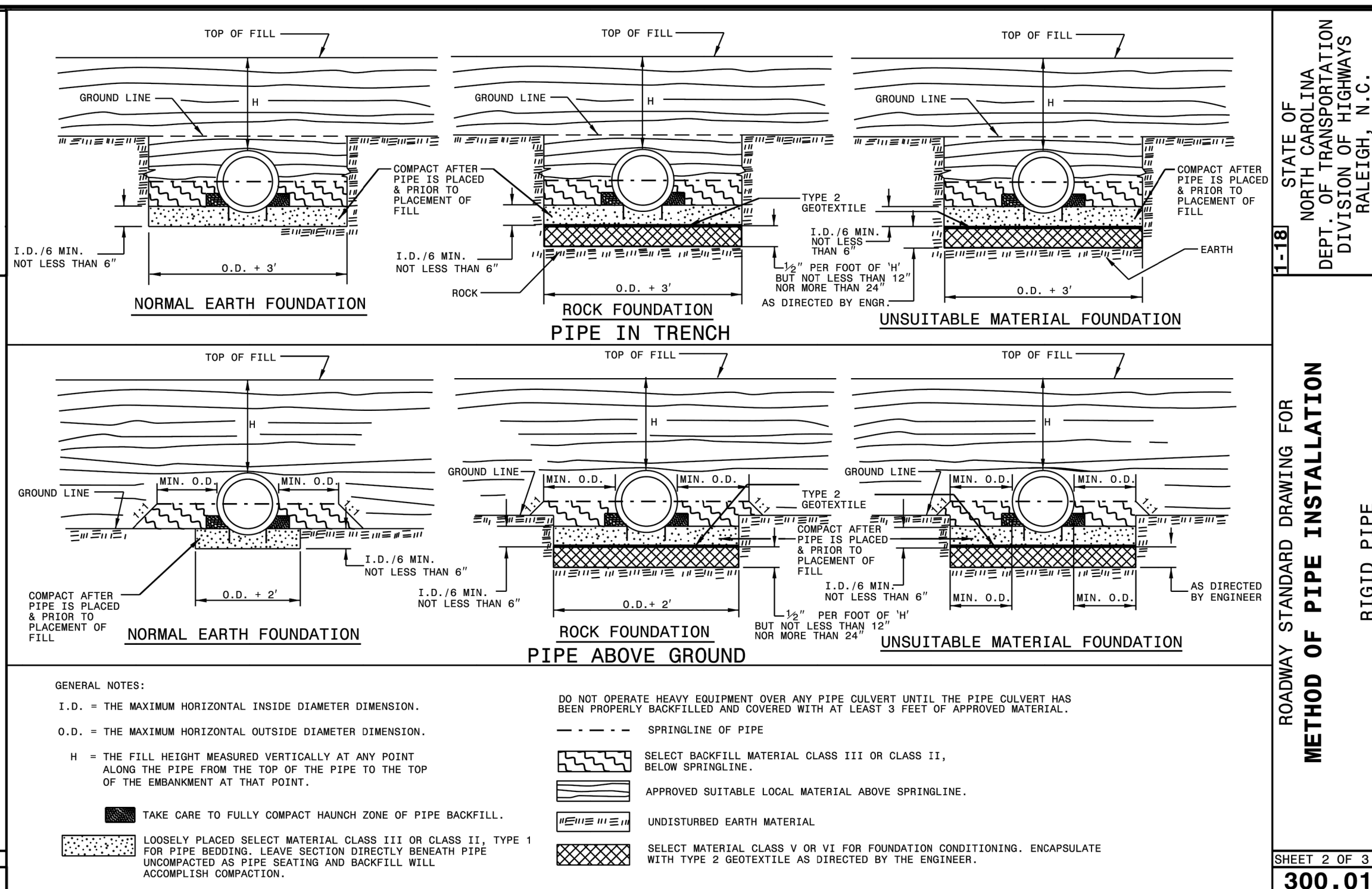
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① METHOD OF PIPE INSTALLATION (FLEXIBLE PIPE)

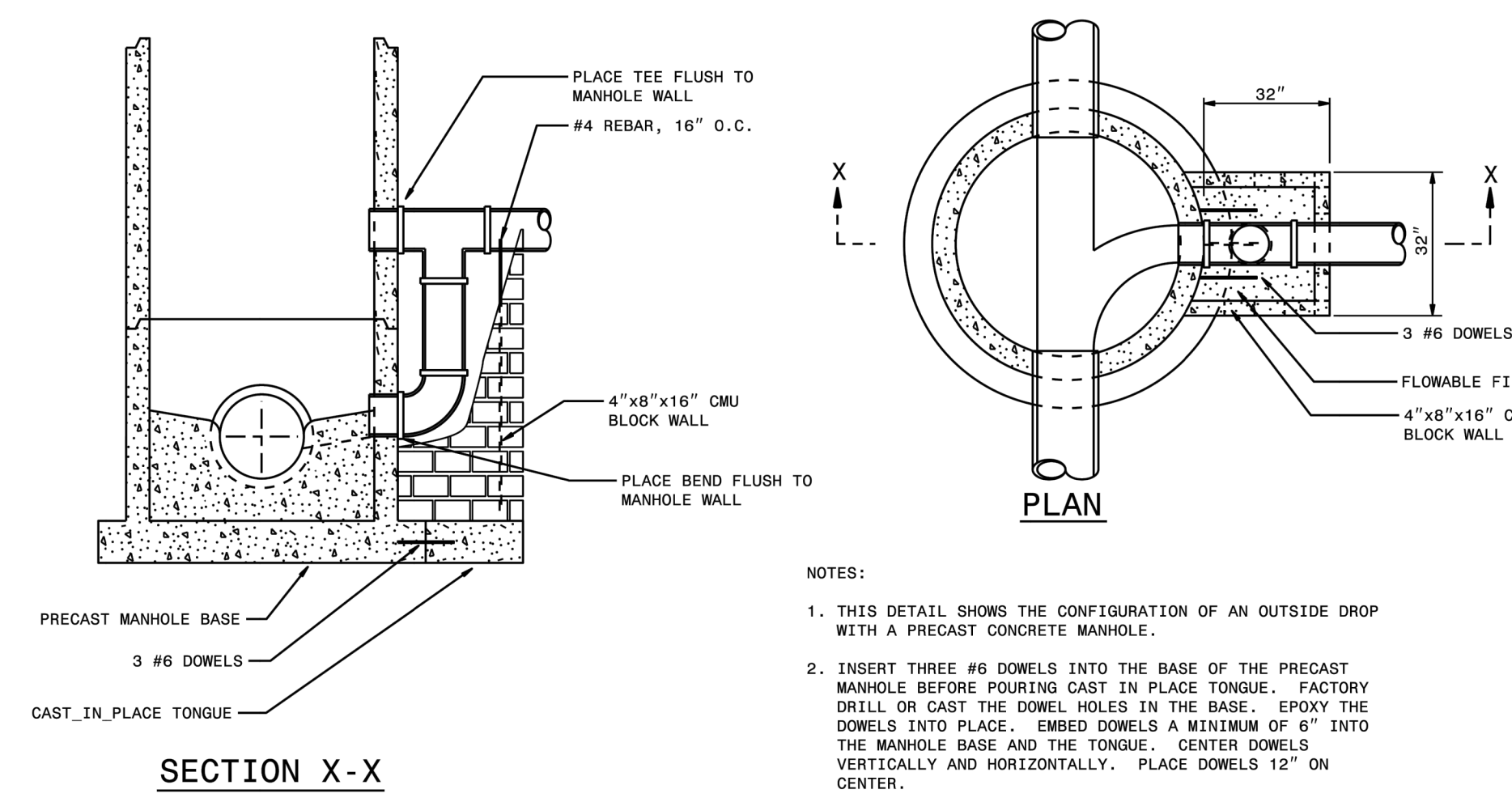
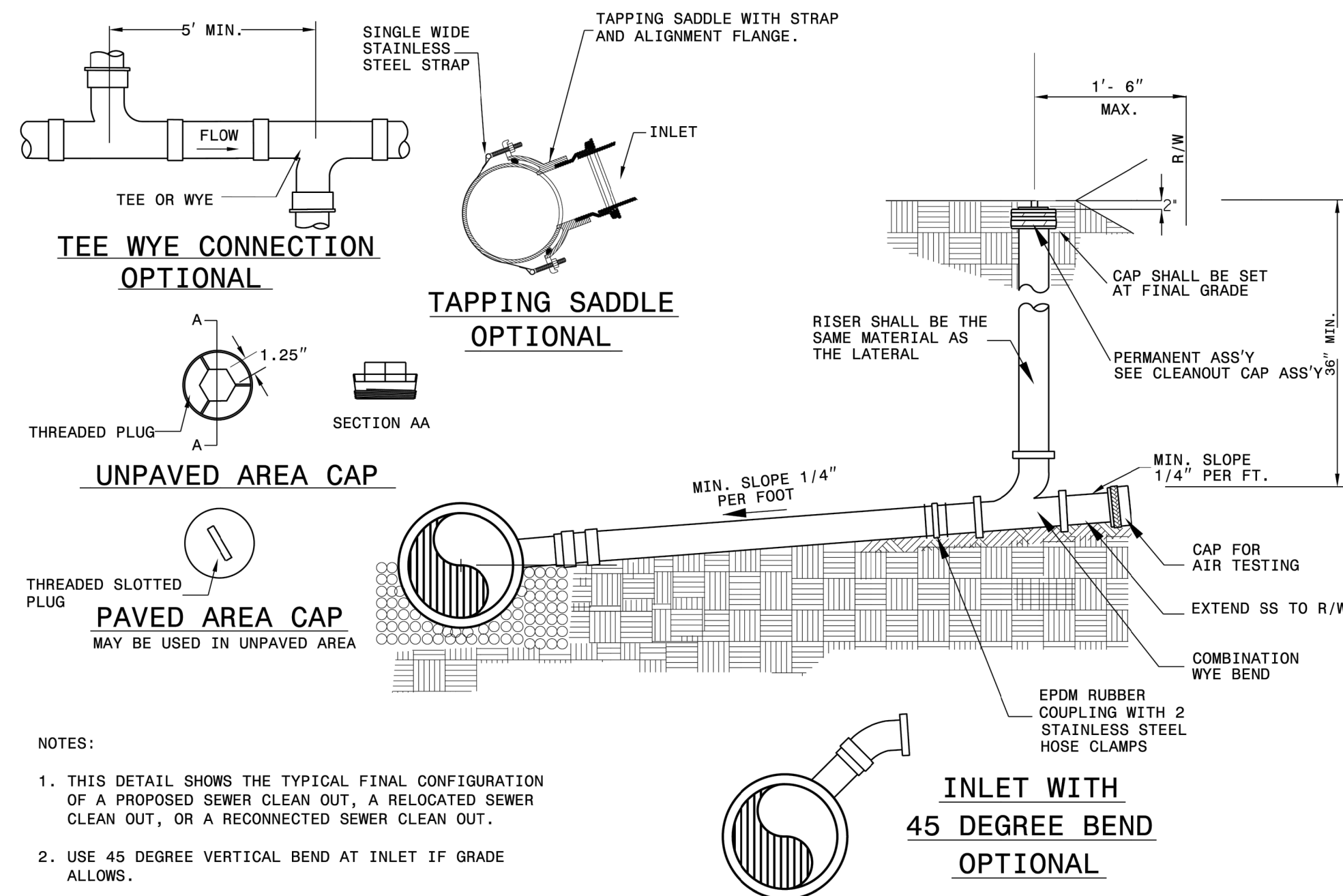
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② METHOD OF PIPE INSTALLATION (RIGID PIPE)

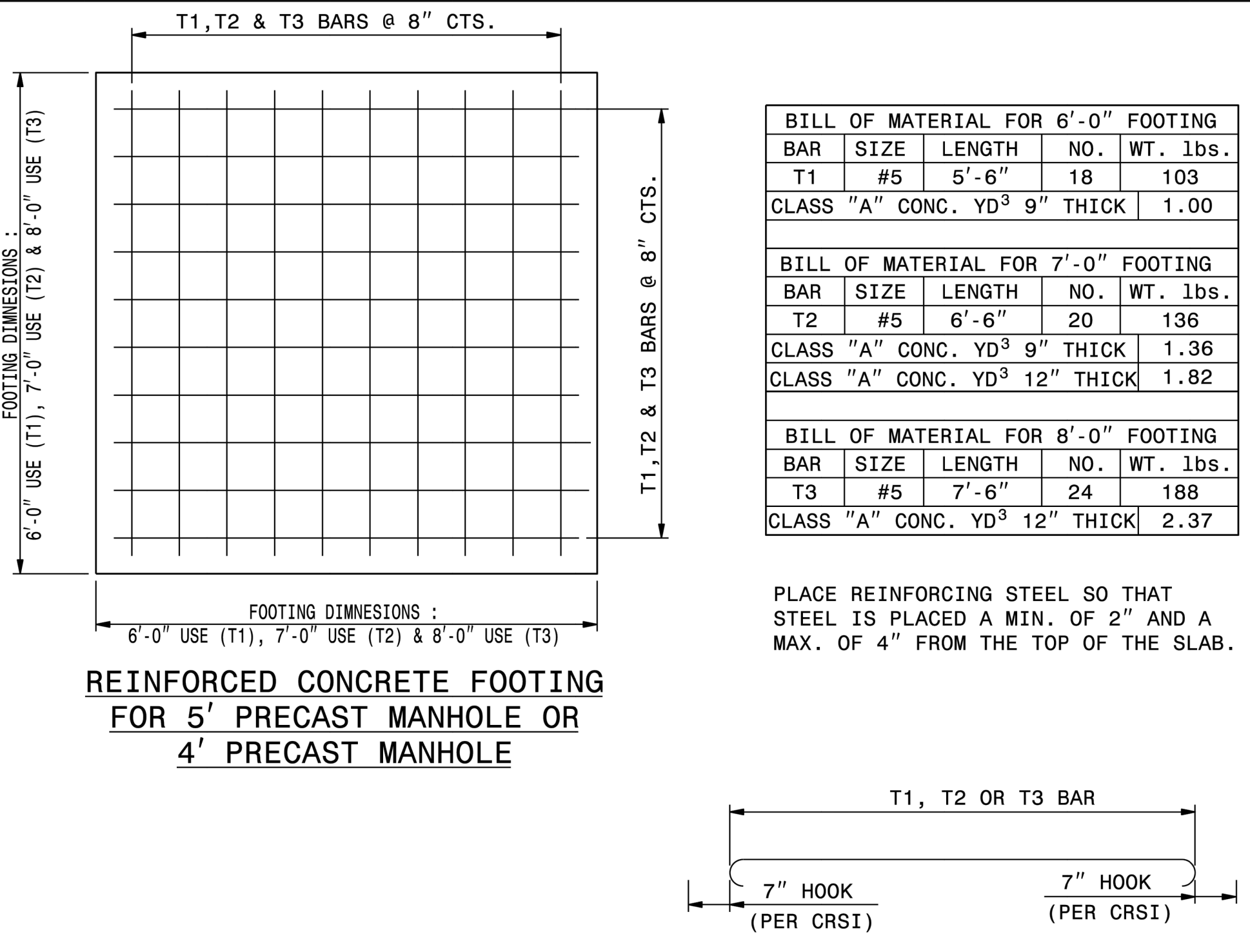
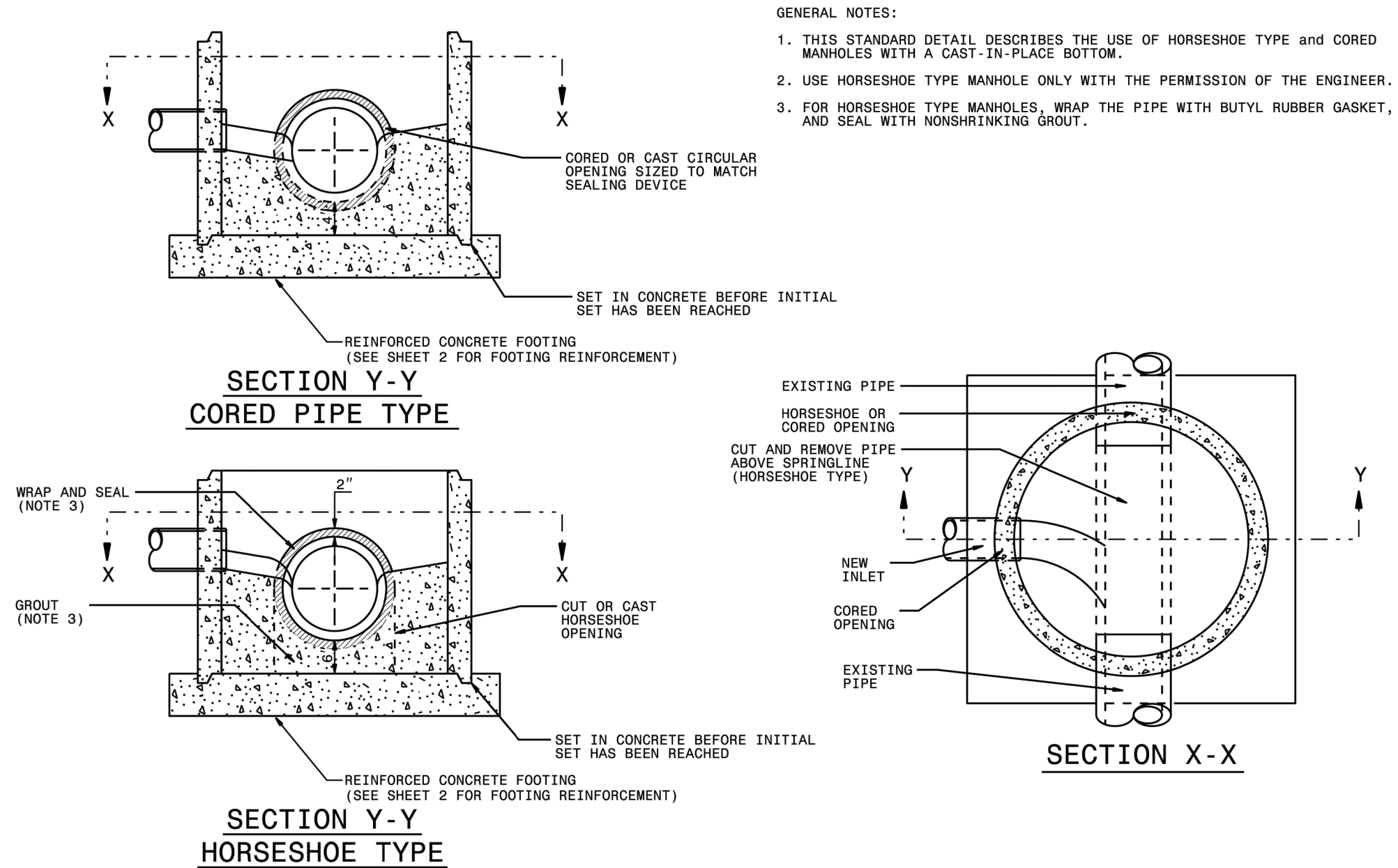
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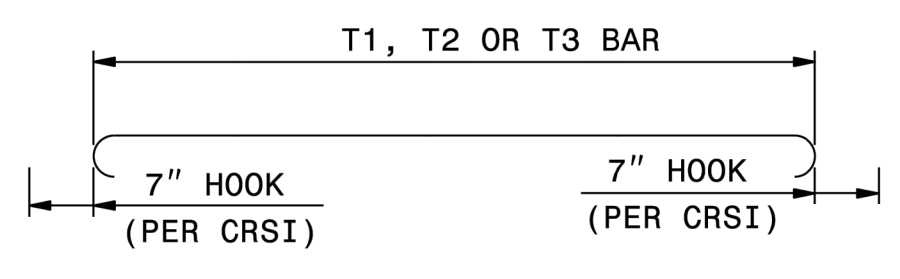
1 SEWER CLEAN OUT

N.T.S **② SANITARY SEWER MANHOLE OUTSIDE DROP**



3 SANITARY SEWER MANHOLE W/ CAST-IN-PLACE BTM

N.T.S	4	SANITARY SEWER MANHOLE W/ CAST-IN-PLACE BTM
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**DYE-MCGLAMERY
ENGINEERING, PLLC**
NC FIRM LICENSE #P-1305

P.O. BOX 19558
RALEIGH, NORTH CAROLINA 27616
PHONE: 704/960-0180



SEWER DETAILS

**Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office**
56650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

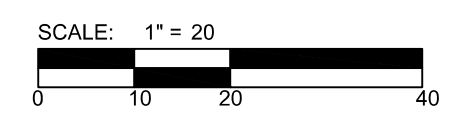
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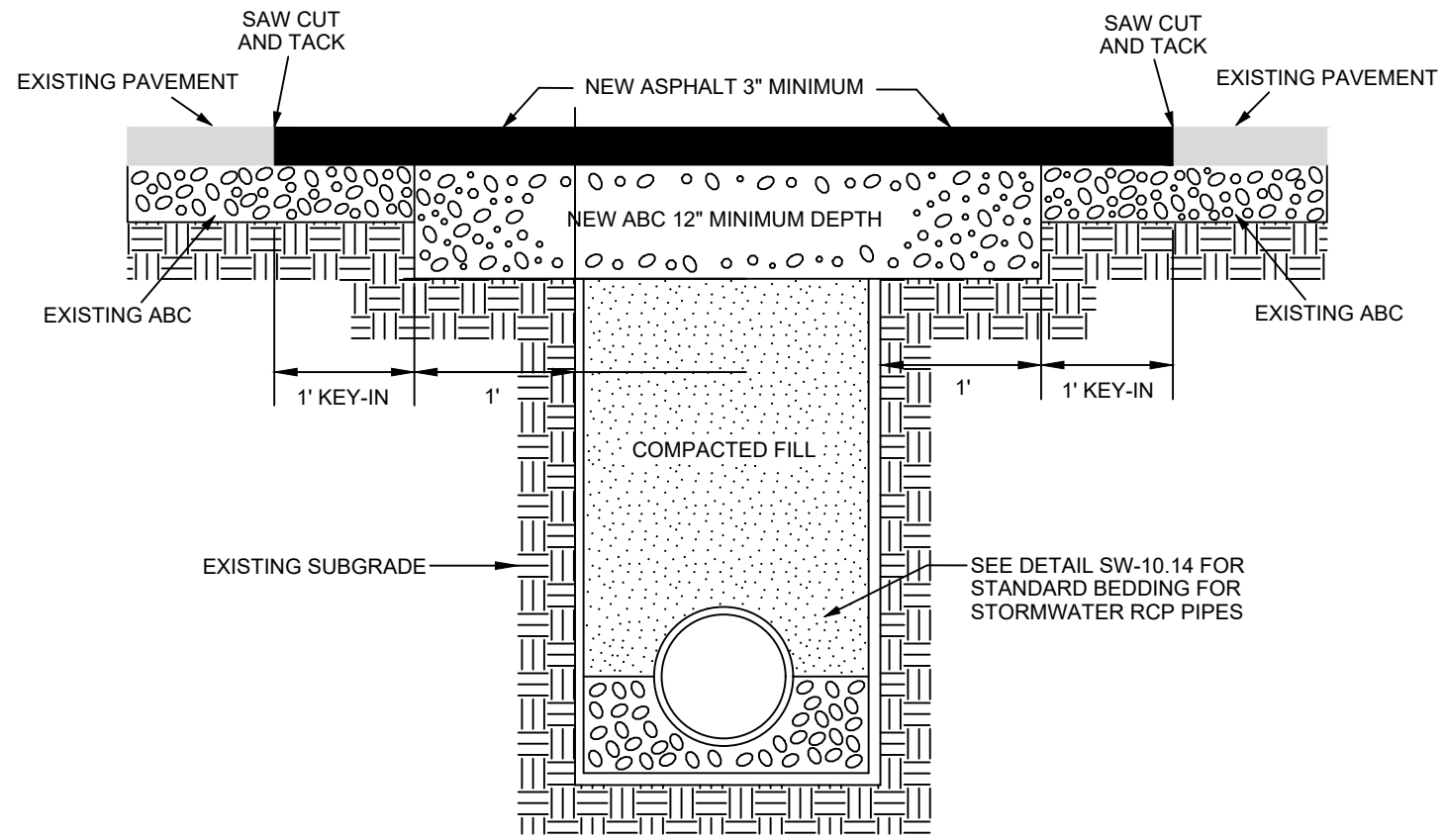
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DATE ISSUED: 9/5/2023
DRAWN BY: DJM
CHECKED BY: HWD

SHEET NO.

C-6.5



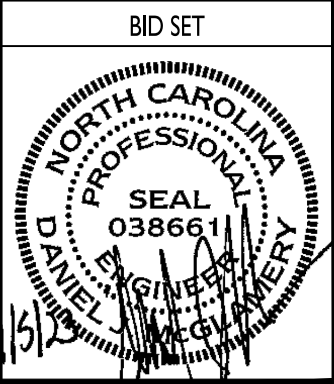
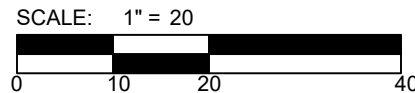


- NOTES:
1. THE PAVEMENT EDGE SHALL BE DEFINED BY A STRAIGHT EDGE FORMED BY A MACHINED SAW CUT.
 2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
 3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY TRANSPORTATION DIRECTOR OR DESIGNEE.
 4. THE ENTIRE THICKNESS/VERTICAL EDGE OF THE CUT SHALL BE TACKED.
 5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
 6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY AND ROLLED WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH, LEVEL PATCH.

1

ASPHALT PAVEMENT PATCH

N.T.S



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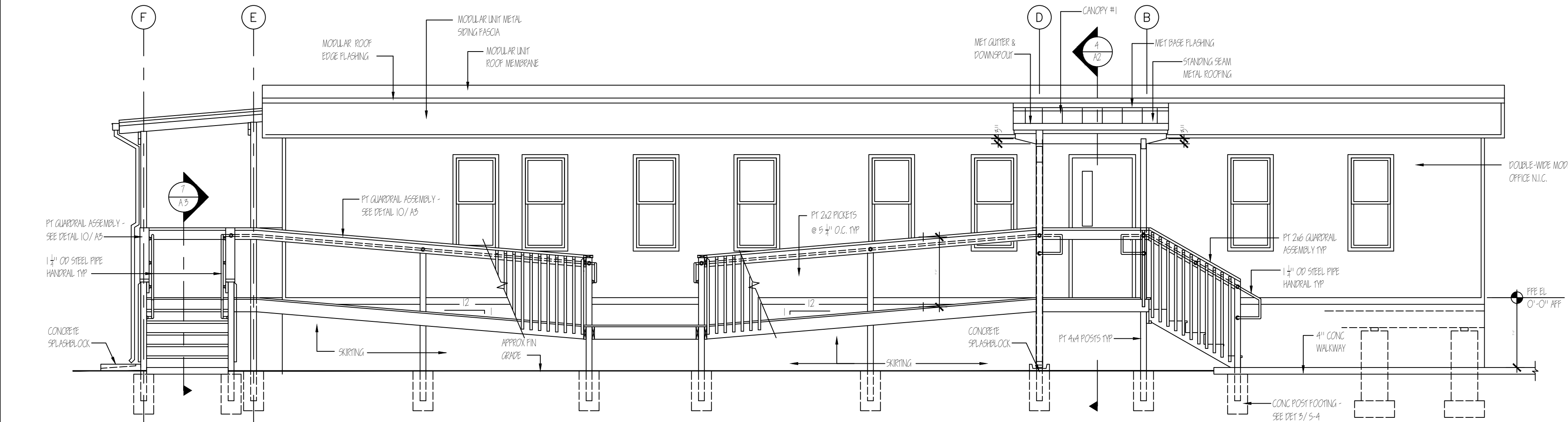


SEWER DETAILS

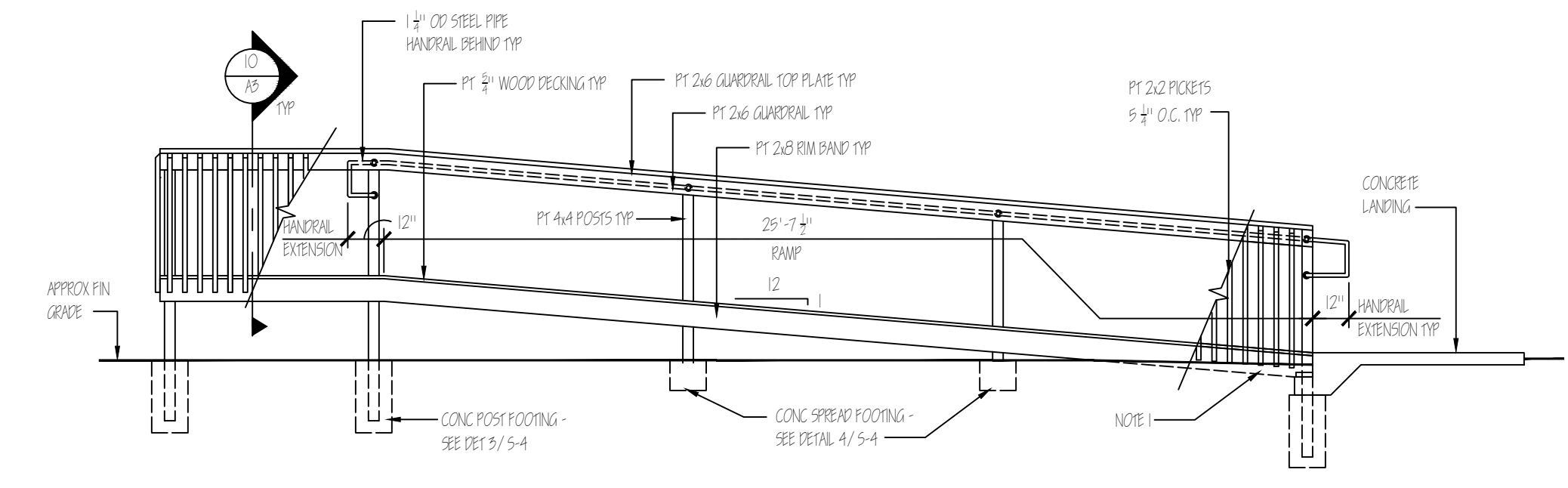
Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION ID.# 22-24690-01A	
EQUIPMENT NUMBER: 1320-0008-3222	
REVISIONS	
NO.	DATE
DATE ISSUED: 9/5/2023	
DRAWN BY: DJM	
CHECKED BY: HWD	
SHEET NO.	

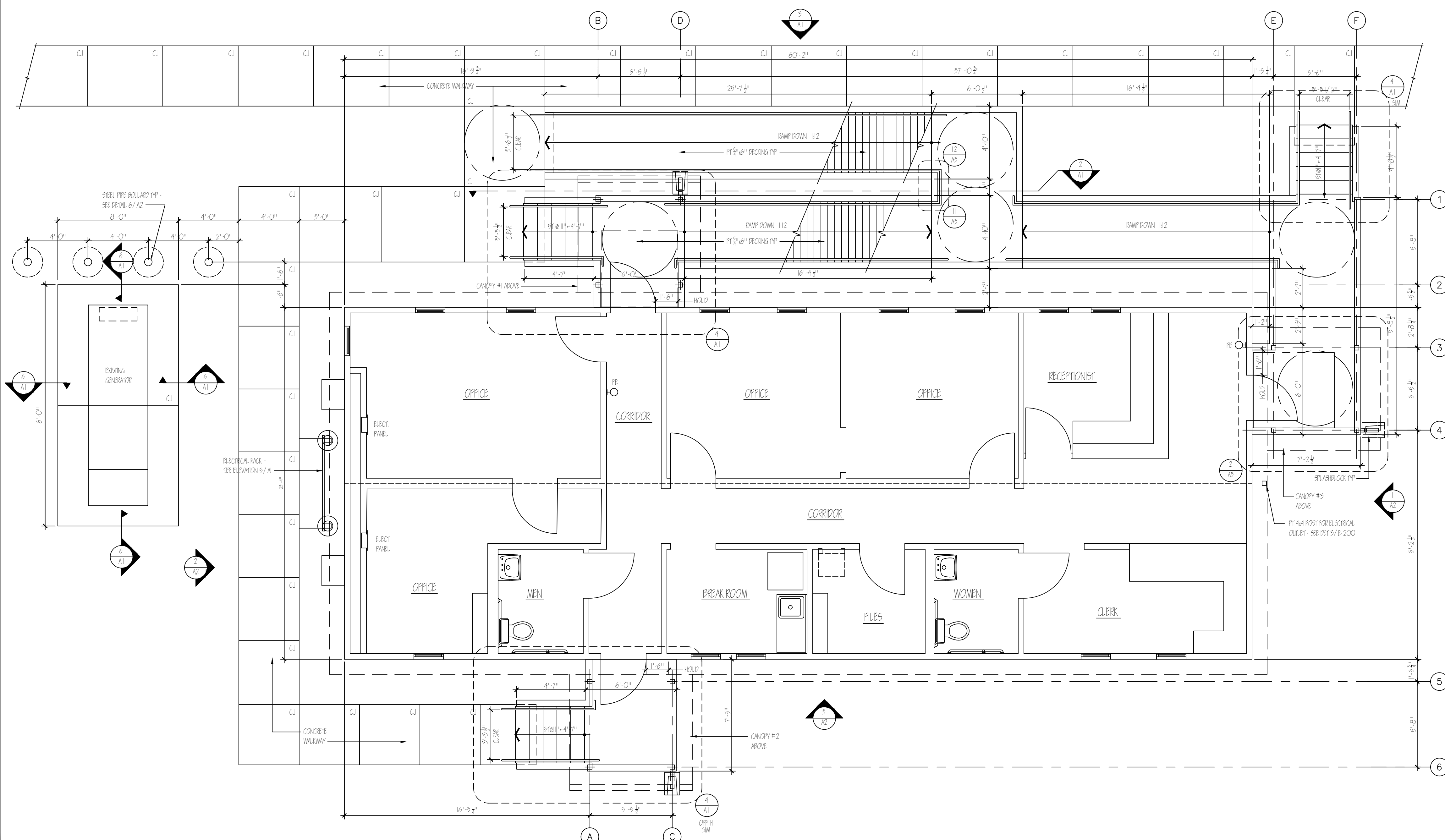
C-6.6



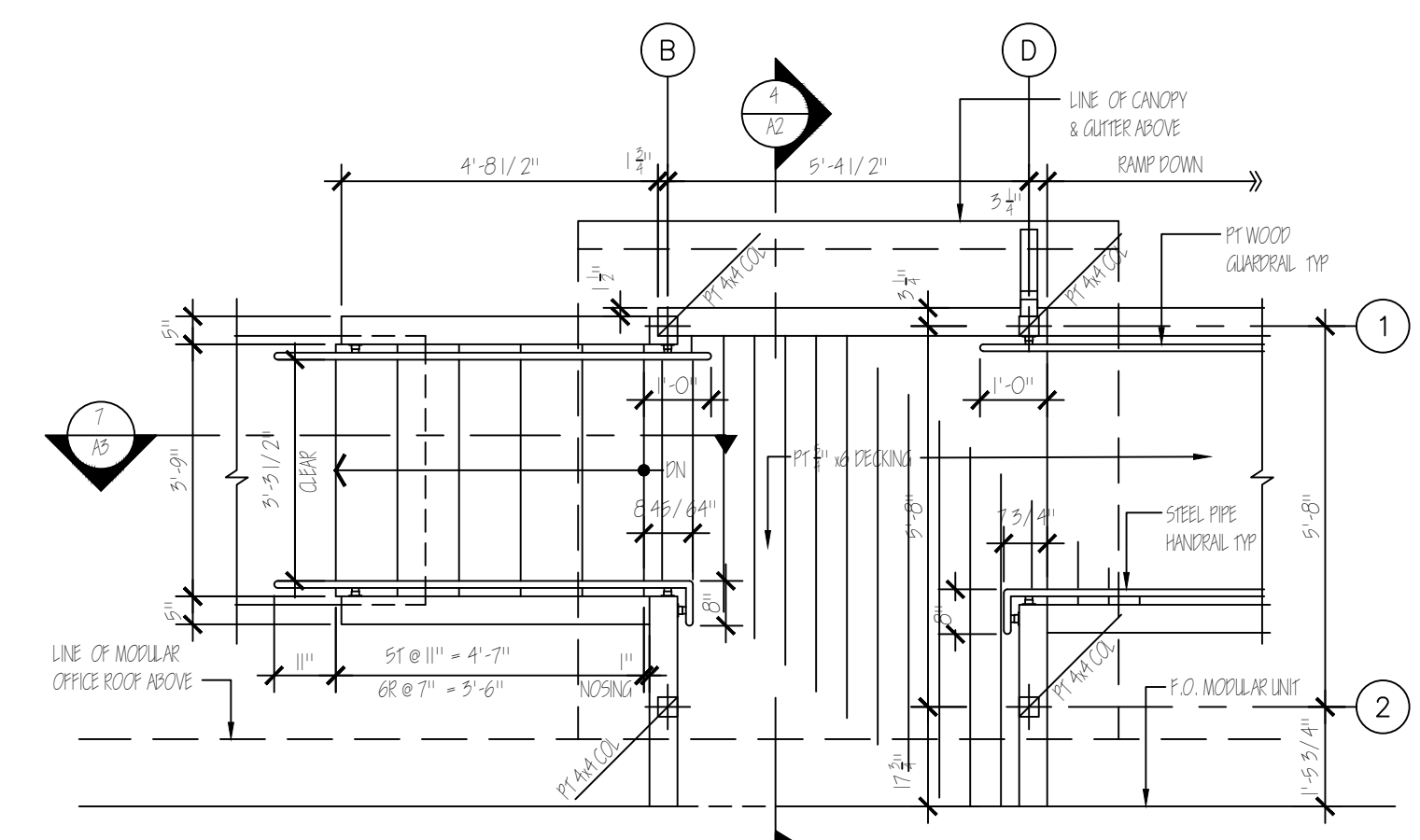
2 NORTH ELEVATION
SCALE: 3/8" = 1'-0"



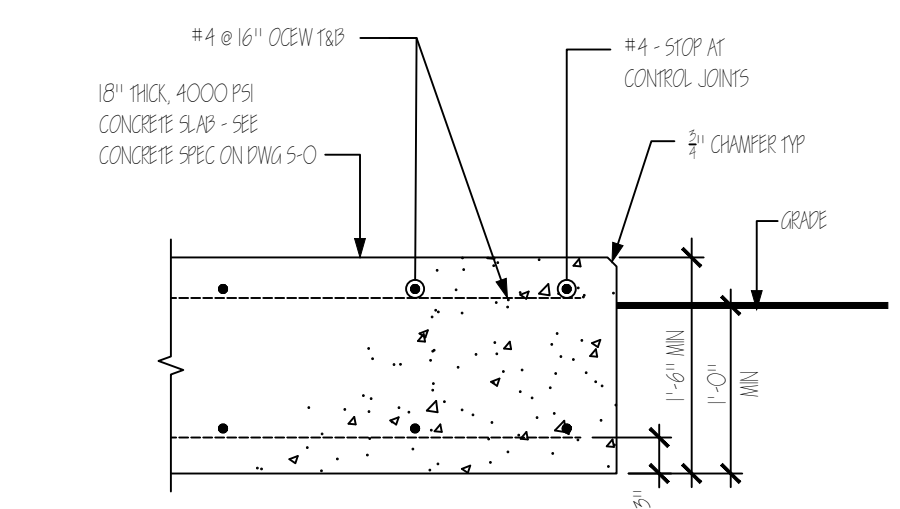
3 RAMP ELEVATION
SCALE: 3/8" = 1'-0"



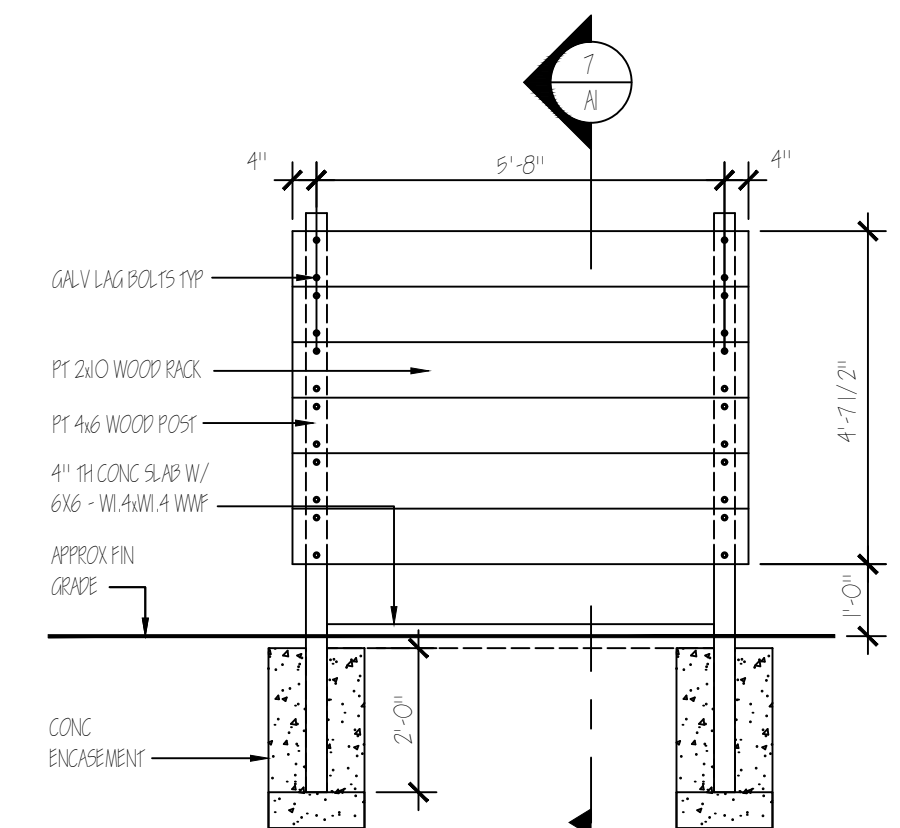
1 MODULAR OFFICE FLOOR PLAN
SCALE: 3/8" = 1'-0"



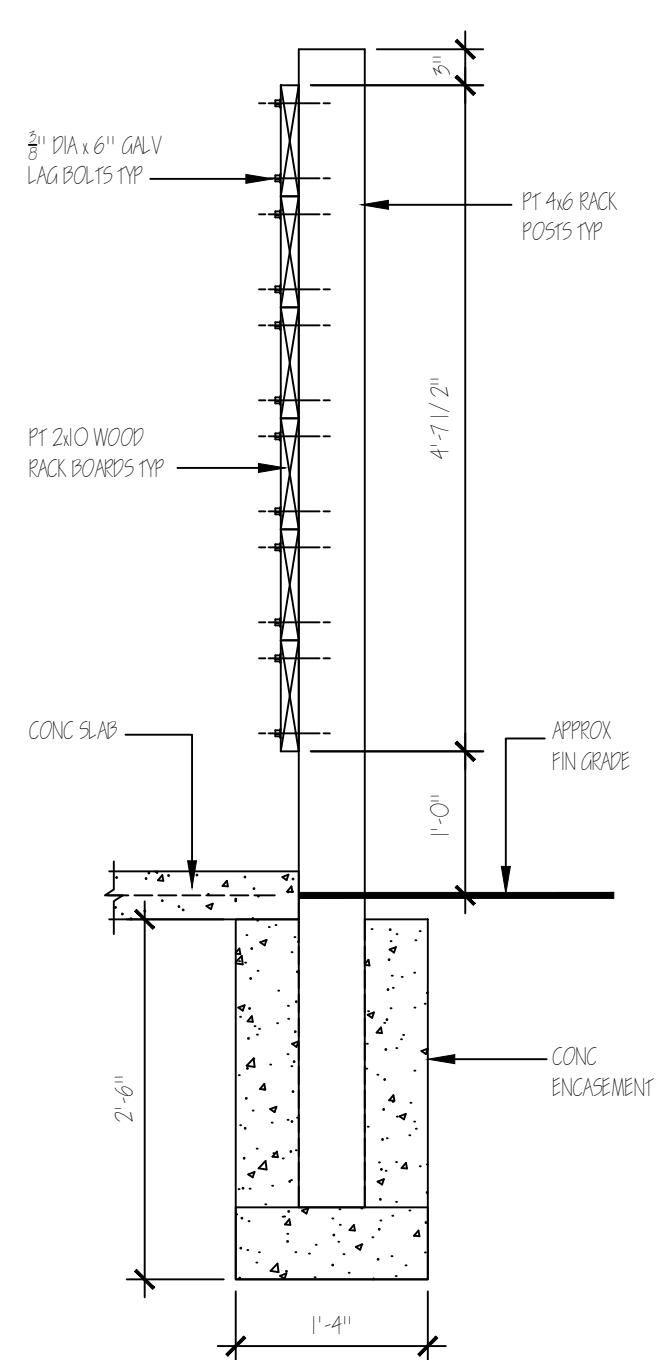
4 ENLARGED STAIR PLAN
SCALE: 3/8" = 1'-0"



6 GENERATOR SLAB
EDGE DETAIL
SCALE: 3/8" = 1'-0"



5 ELECTRICAL RACK ELEVATION
SCALE: 3/8" = 1'-0"



7 ELECTRICAL RACK
SECTION
SCALE: 3/8" = 1'-0"

GENERAL NOTES:
1. DIMENSIONAL LUMBER PLACED IN DIRECT CONTACT WITH EARTH SHALL BE COVERED WITH MINIMUM 2 COATS OF SANDING SEALER BEFORE BEING COVERED. SANDING SEALER SHALL EXTEND MINIMUM OF 3" ABOVE FINISH GRADE.

BID SET

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MODULAR OFFICE FLOOR PLAN;
ELEVATIONS & DETAILS

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID # 22-24690-01A

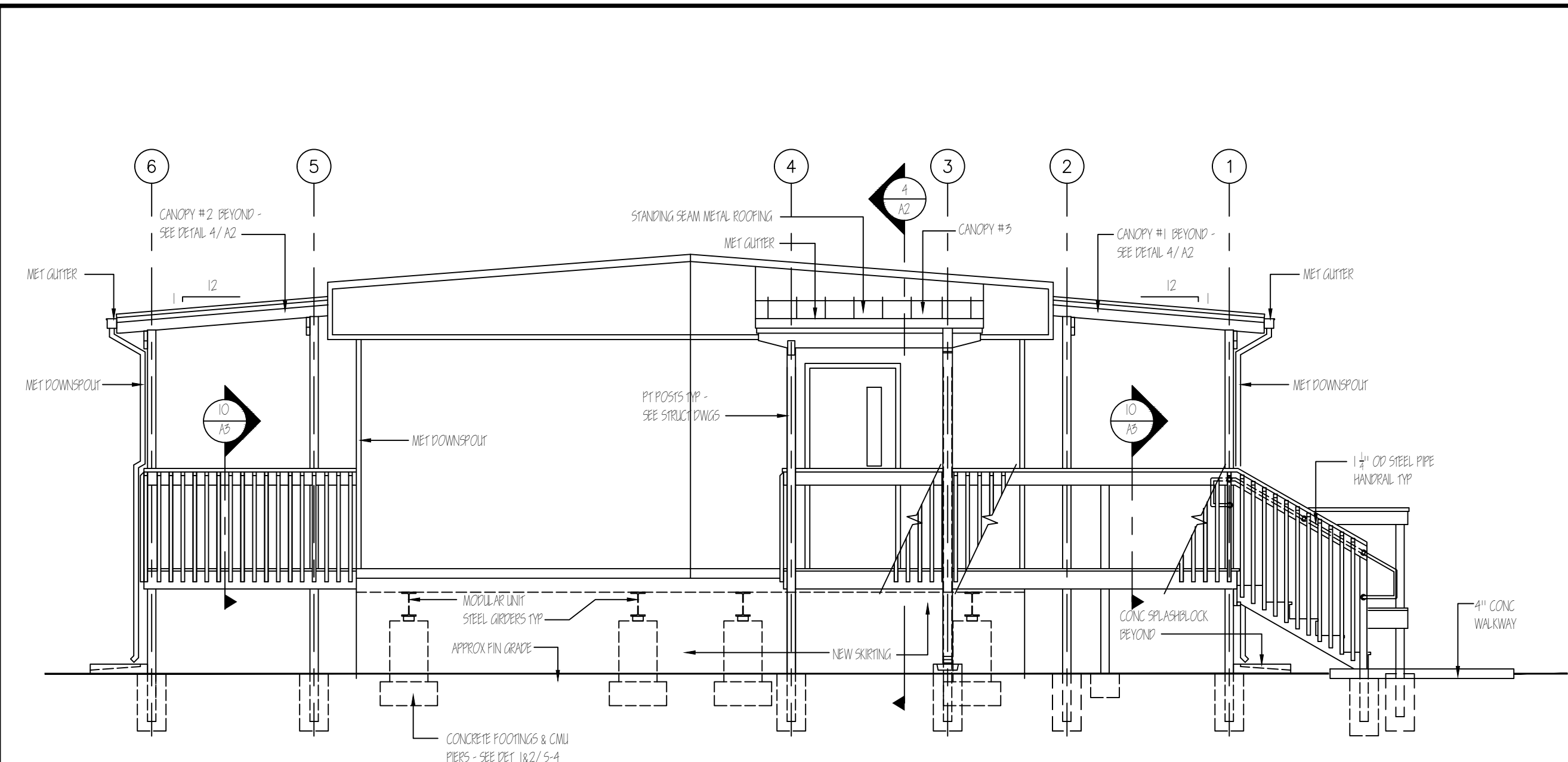
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1320-0008-3222

REVISIONS

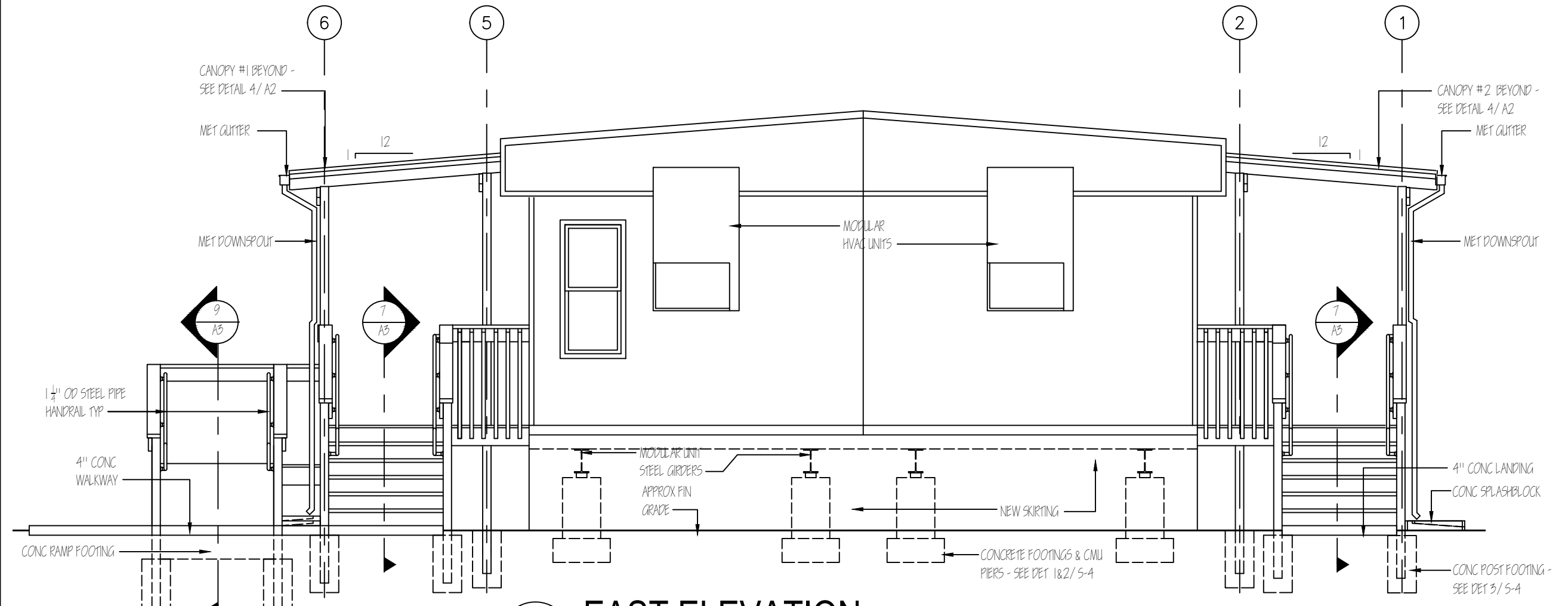
NO.	DATE

DATE ISSUED: 9/5/2023
DRAWN BY: MDG
CHECKED BY: MDG

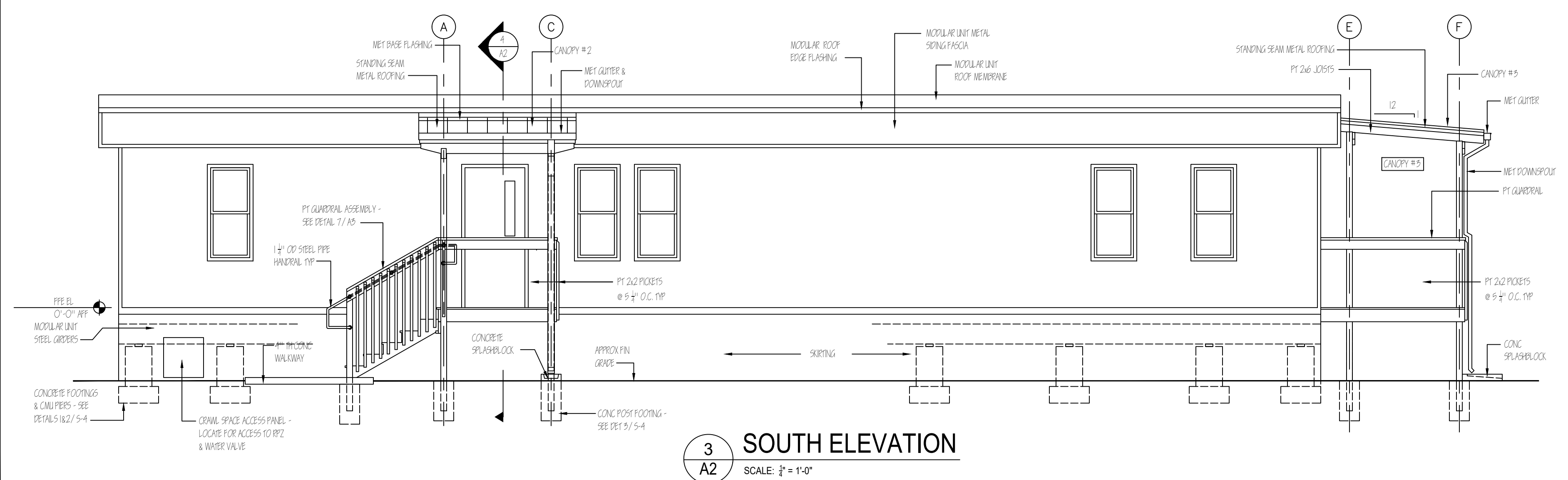
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A1



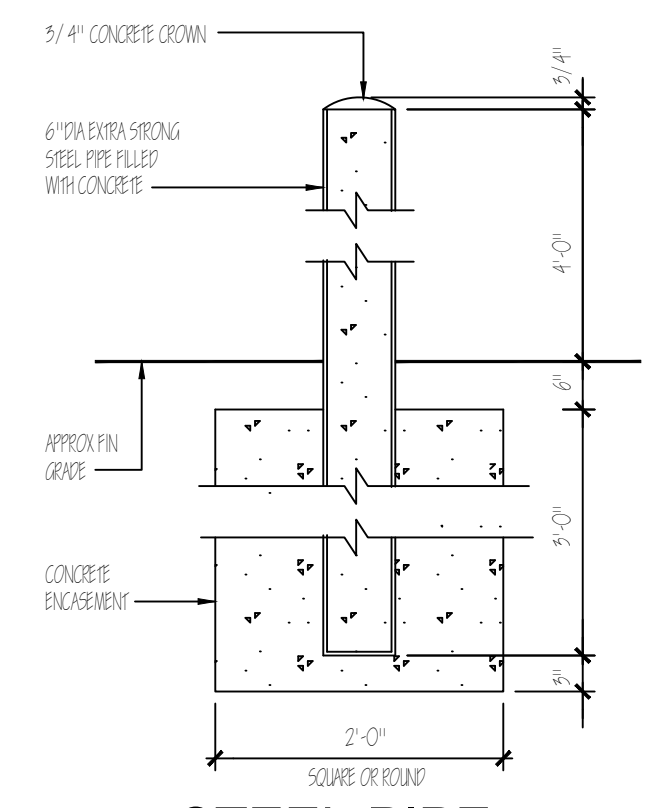
1 WEST ELEVATION
A2 SCALE: 1/2" = 1'-0"



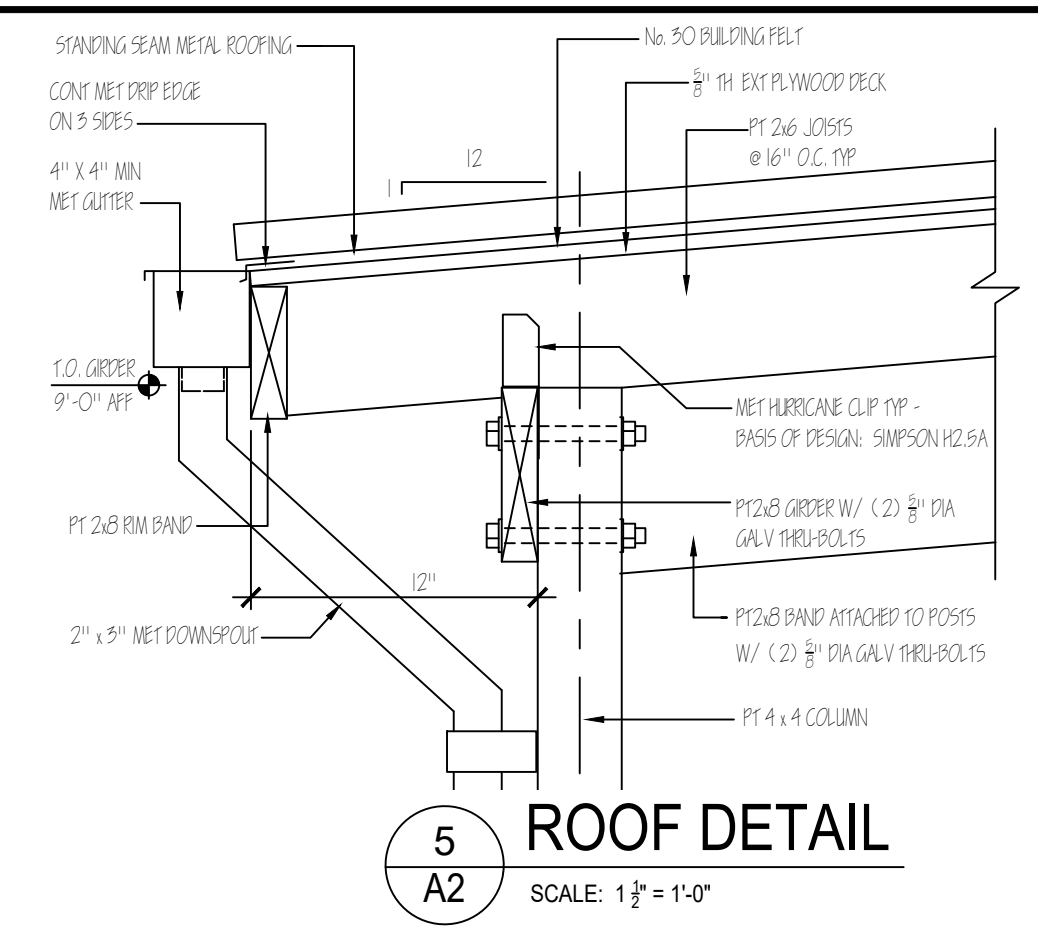
2 EAST ELEVATION
A2 SCALE: 1/2" = 1'-0"



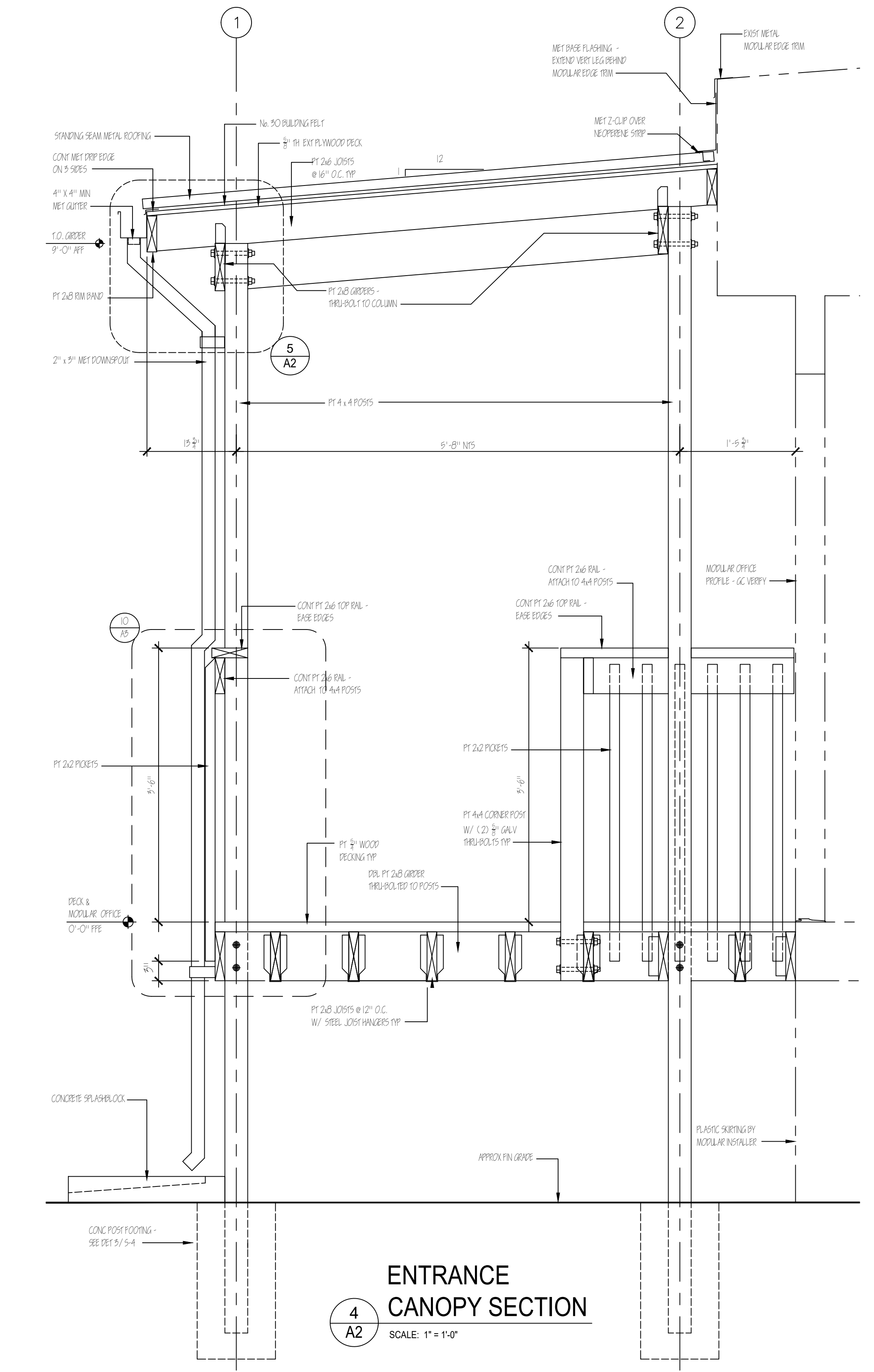
3 SOUTH ELEVATION
A2 SCALE: 1/2" = 1'-0"



6 STEEL PIPE BOLLARD DETAIL
A2 SCALE: 3/4" = 1'-0"



5 ROOF DETAIL
A2 SCALE: 1 1/2\"/>



4 ENTRANCE CANOPY SECTION
A2 SCALE: 1\"/>

BID SET

NC DOT FACILITIES DESIGN UNIT

ARCHITECT & ENGINEERS

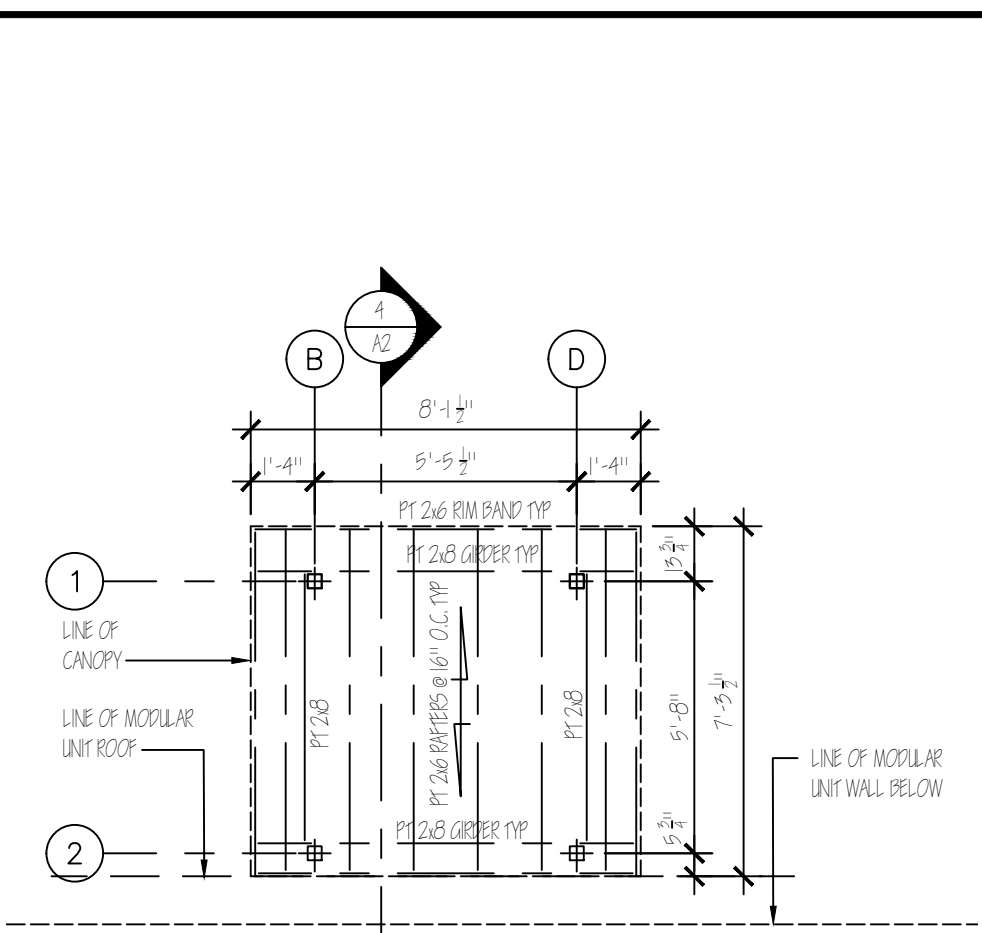
1 SOUTH WILMINGTON STREET
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MODULAR OFFICE ELEVATIONS & DETAILS

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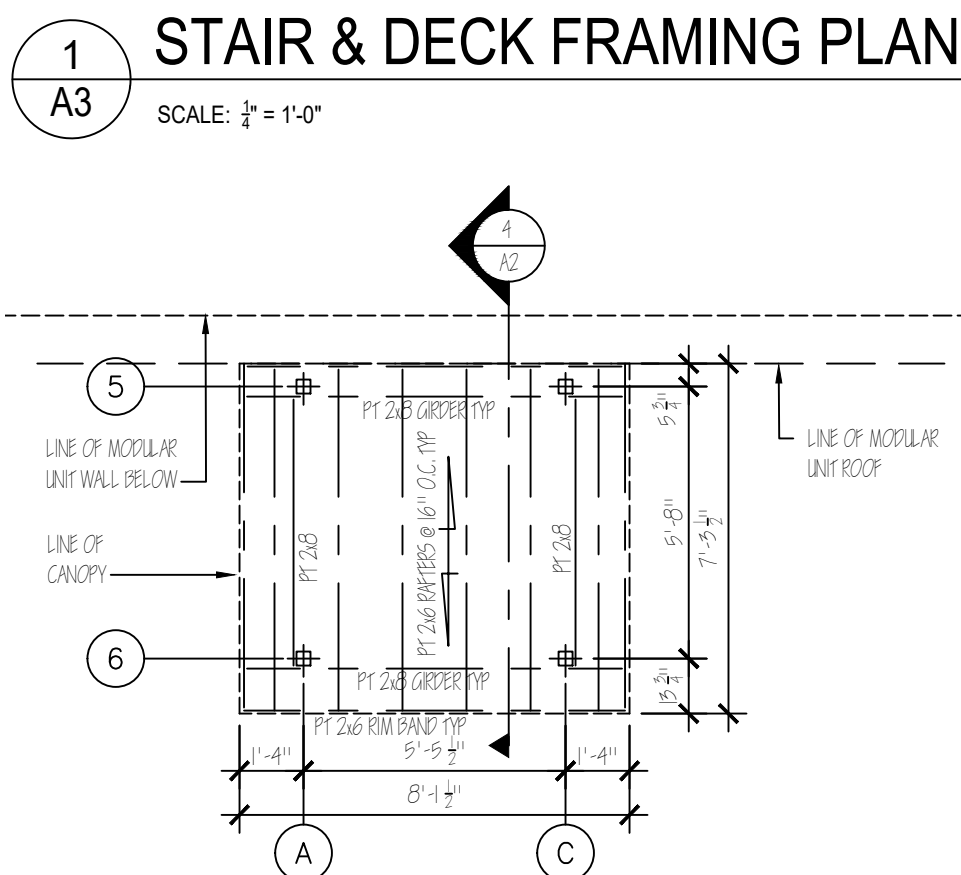
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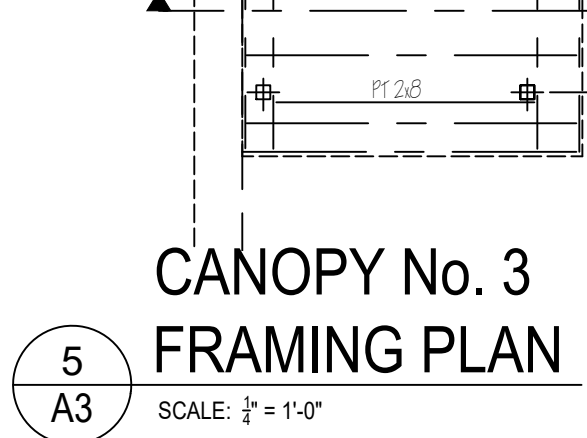
CANOPY No. 1
FRAMING PLAN

2
A3

SCALE: $\frac{1}{4}" = 1'-0"$



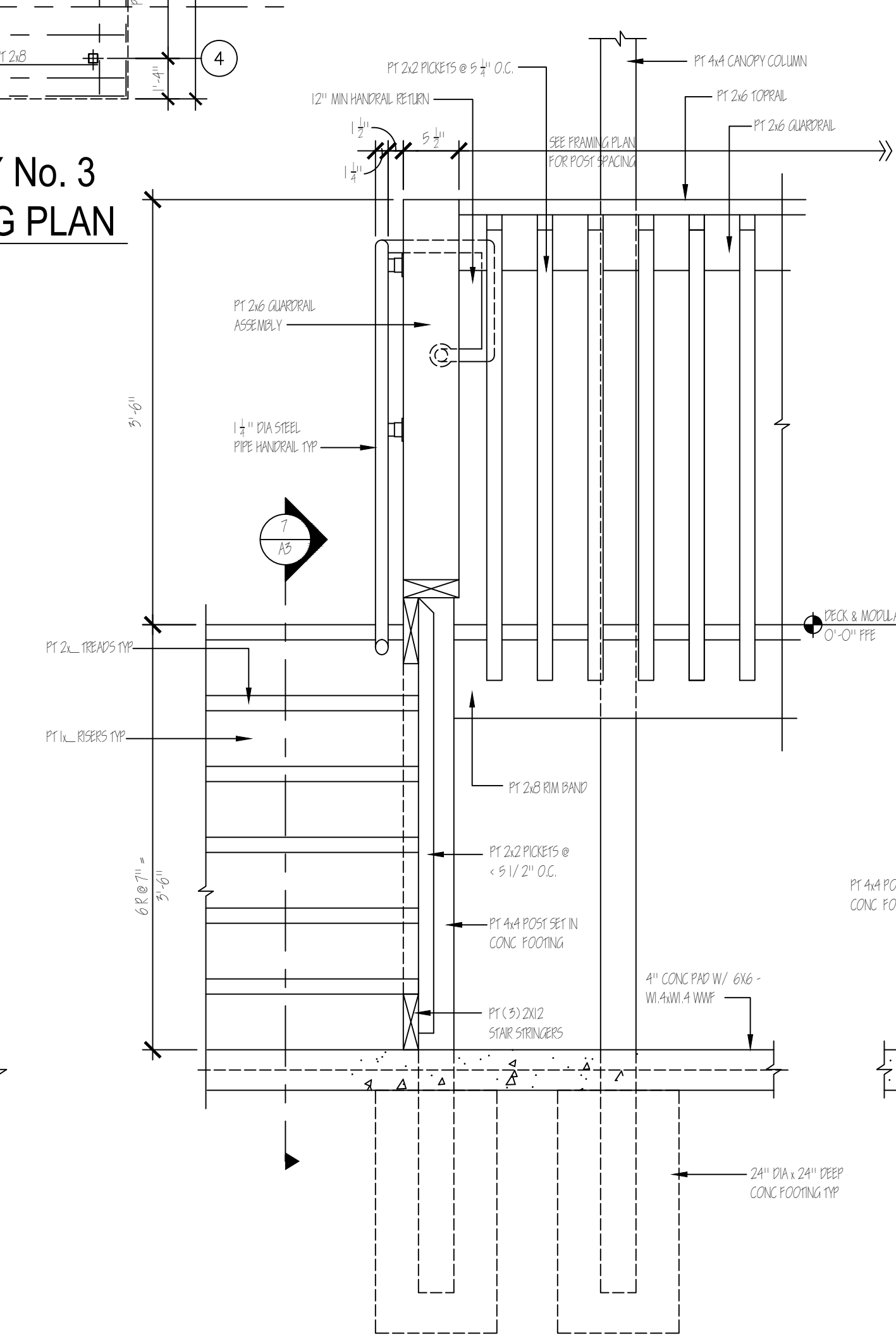
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A3 CANOPY No. 2 FRAMING PLAN
SCALE: $\frac{1}{4}" = 1'-0"$



CANOPY No. 3
FRAMING PLAN

5
A3

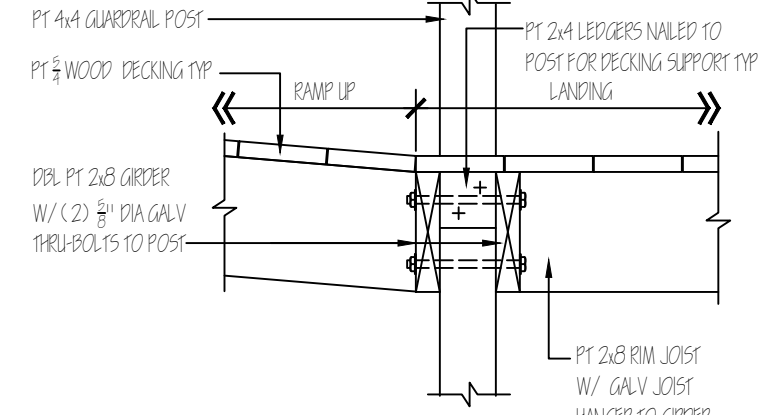
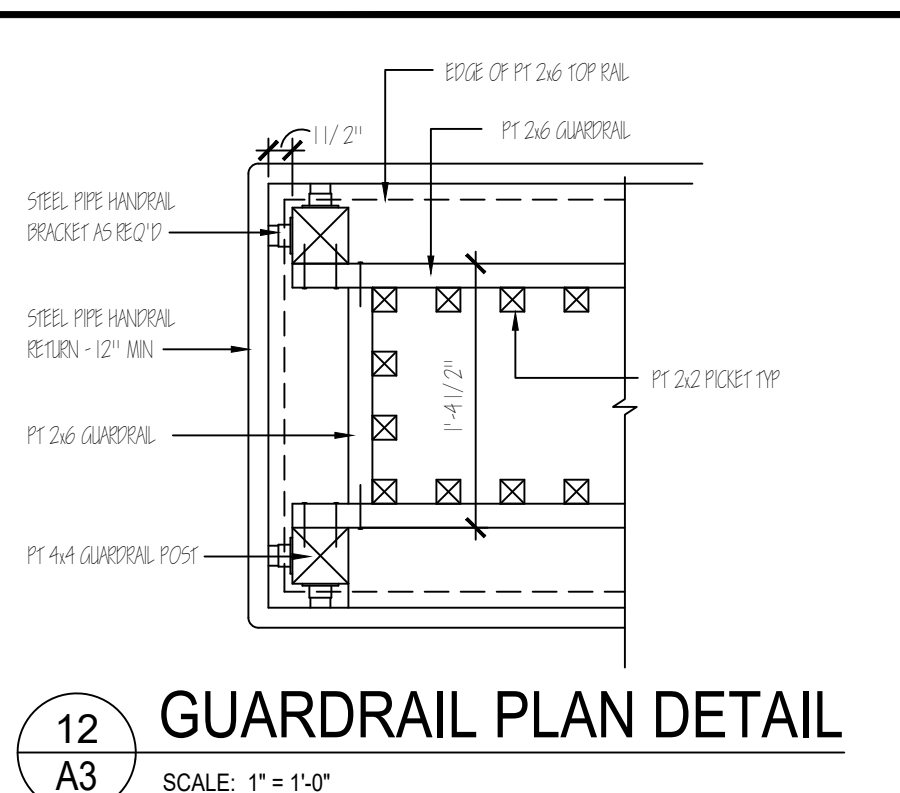
SCALE: $\frac{3}{4}" = 1'-0"$



8
A3

STAIR DETAIL

SCALE: 1" = 1'-0"

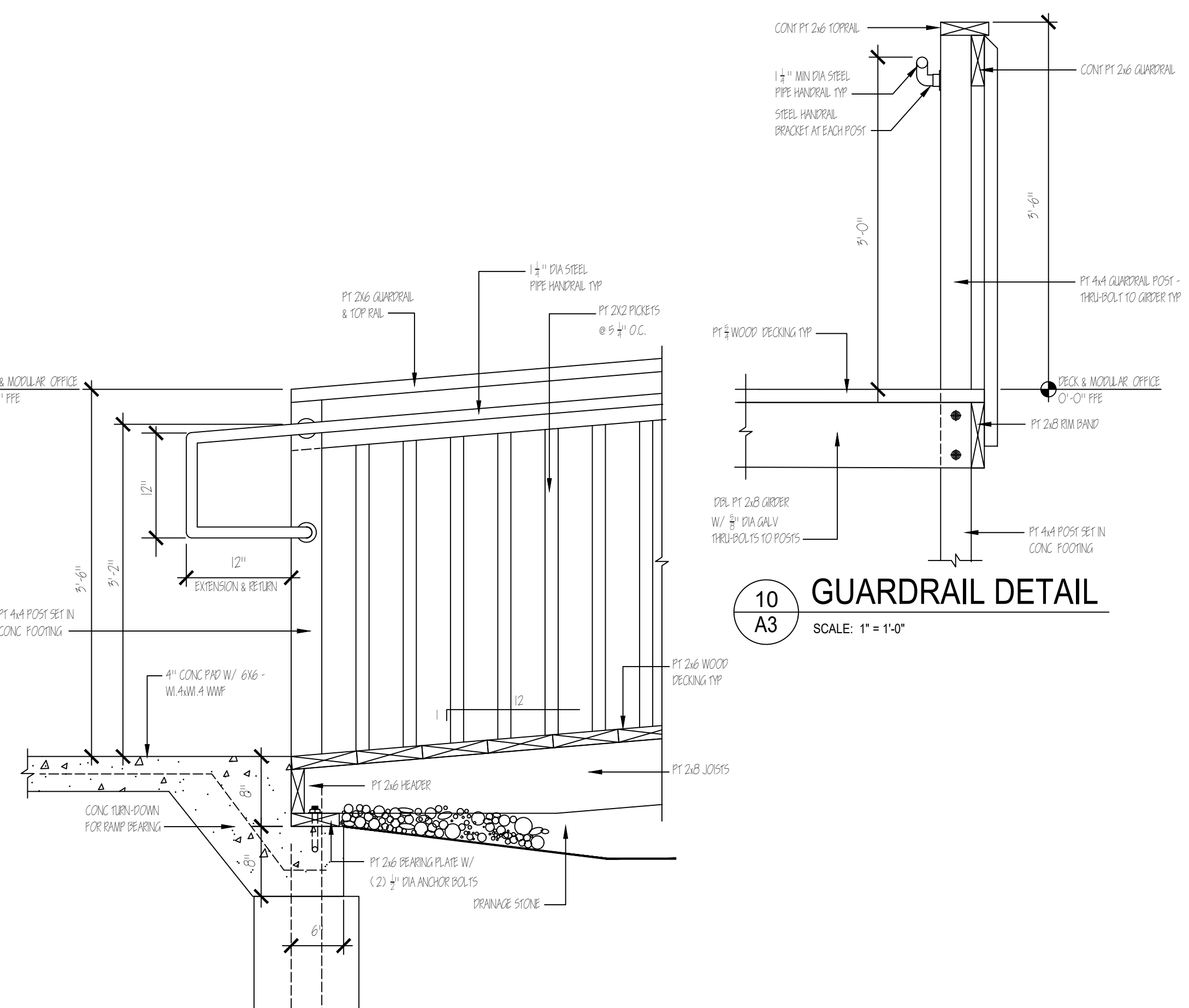


14
A3

RAMP DETAIL

SCALE: 1" = 1'-0"

1. COORDINATE STAIR RISE WITH SPOT ELEVATIONS AND GRADES SHOWN
DRAWINGS C-2.0 AND C-4.0.



9
A3

RAMP DETAIL

SCALE: 1" = 1'-0"

7
A3

STAIR & DECK DETAIL

SCALE: 1" = 1'-0"

ELECTRICAL SPECIFICATIONS

1. GENERAL CONDITIONS

- A. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL EQUIPMENT NECESSARY TO FULFILL APPLICABLE CODES, REGULATIONS, BUILDING STANDARDS AND THE BEST PRACTICES OF THE TRADE FOR INSTALLATION OF ELECTRICAL WORK.
- B. ALL ELECTRICAL WORK, MATERIALS AND EQUIPMENT SHALL CONFORM WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, UNDERWRITERS LABORATORIES BOARD OF UNDERWRITERS, CSHA, NEMA, NFPA, ALL STANDARDS AND ALL AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL REQUIRED PERMITS AND CERTIFICATES OF REQUIRED ORDINANCES, AND DELIVER THEM TO THE OWNER'S REPRESENTATIVE.
- C. UPON REVIEW OF THE DRAWINGS PRIOR TO SUBMITTING HIS PROPOSAL, THE ELECTRICAL CONTRACTOR SHALL INFORM THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES WITHIN THE DRAWINGS AND REQUEST CLARIFICATION CONCERNING THE DISCREPANCIES. LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS SHOULD SUCH PROCEDURE NOT BE FOLLOWED.
- D. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION. THE CONTRACTOR SHALL ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER RELATION TO THE WORK AND EQUIPMENT OF OTHERS.
- E. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT, OUTLET BOXES, POKE-THRU SERVICE FITTINGS REQUIRED TO FACILITATE THE INSTALLATION OF COMMUNICATION WIRING AND DEVICES.
- F. THE DRAWINGS INDICATE THE SIZE AND GENERAL LOCATION OF WORK. SCALED DIMENSIONS SHALL NOT BE USED. VERIFY SCALE WITH ARCHITECTURAL DRAWINGS. THE EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES, SWITCHES, RECEPTACLES, ETC. SHALL BE DETERMINED FROM THE ARCHITECT'S DRAWINGS.

2. SCOPE OF WORK

- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, TOOLS, SUPERVISION, ETC. REQUIRED TO INSTALL COMPLETE OPERATIONAL ELECTRICAL SYSTEMS AS DESCRIBED IN THESE PLANS AND SPECIFICATIONS. SUCH INSTALLATIONS INCLUDE, BUT ARE NOT SPECIFICALLY LIMITED TO THE FOLLOWING:
- A. INSTALLATION OF RACEWAY AND CIRCUIT WIRING.
- B. CUTTING, CHANNELLING, CORING AND CHASING REQUIRED TO ACCOMMODATE THE INSTALLATION OF ELECTRICAL WORK AND ROUGH PATCHING.
- C. INSTALLATION OF ELECTRICAL DISTRIBUTION EQUIPMENT.
- D. INSTALLATION OF CONDUIT, JUNCTION BOXES, PULL BOXES, ETC. REQUIRED FOR THE FOREMENTIONED EQUIPMENT.

3. PANEL BOARDS

- A. A TYPEWRITTEN DIRECTORY OF CIRCUITS SHALL BE INSTALLED INSIDE OF EACH PANELBOARD DOOR. THE LIST SHALL INCLUDE AS-BUILT CONDITIONS INCLUDING ALL TYPES OF DEVICES SERVED BY EACH CIRCUIT. EACH PANEL SHALL BE EXTERNALLY TAGGED WITH PERMANENT PHENOLIC PLATE INDICATING PANEL IDENTIFICATION AND VOLTAGE.
- B. PHASE LEGS OF PANELS SHALL BE BALANCED. ANY PANEL FOUND WITH UNBALANCED LOADS SHALL HAVE ITS CIRCUITS REARRANGED AS REQUIRED TO BALANCE PHASE LEGS.
- C. THE SHORT CIRCUIT RATING OF A PANEL SHALL APPLY TO ALL BRANCH DEVICES. SERIES CONNECTED SHORT CIRCUIT RATING OF BRANCH DEVICES WILL NOT BE ACCEPTED.

4. CIRCUIT BREAKERS AND FUSES

- A. CIRCUIT BREAKERS SHALL BE BOLT-IN TYPE. CIRCUIT BREAKERS SHALL BE OF THE SAME MANUFACTURER AND BE COMPATIBLE WITH THE PANELBOARD.
- B. CIRCUIT BREAKERS SHALL BE QUICK-MAKE, QUICK-BREAK COMPENSATED FOR AMBIENT TEMPERATURES AND SHALL HAVE A MINIMUM SHORT CIRCUIT RATING OF 10,000 AMPERES SYMMETRICAL OR HIGHER WHERE NOTED ON PANEL SCHEDULE.
- C. CIRCUIT BREAKERS SHALL BE OF THE "THERMAL-MAGNETIC" TYPE HAVING BIMETALLIC ELEMENT FOR TIME DELAY OVER LOAD PROTECTION AND MAGNETIC ELEMENT FOR SHORT CIRCUIT PROTECTION.
- D. CIRCUIT BREAKERS AND FUSES SHALL BE SIZED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EQUIPMENT BEING SERVED. VERIFY EQUIPMENT REQUIREMENTS AS NECESSARY PRIOR TO INSTALLATION OF BRANCH CIRCUIT OVERCURRENT PROTECTION.
- E. COORDINATE WITH ALL CONTRACTORS FOR THE ELECTRICAL REQUIREMENTS OF ALL EQUIPMENT TO BE INSTALLED. DO NOT RUN CONDUIT AND CONDUCTORS PRIOR TO THE CONFIRMATION OF THE

EQUIPMENT REQUIREMENTS.

5. DISCONNECT SWITCHES

- A. THE CONTRACTOR SHALL SUPPLY AND INSTALL DISCONNECT SWITCHES AS SHOWN ON THE PLANS, OR AS OTHERWISE REQUIRED BY CODE, WHETHER SHOWN ON PLANS OR NOT.
- B. ALL SWITCHES SHALL BE HEAVY DUTY QUICK-MAKE QUICK-BREAK TYPE, RATED AS REQUIRED. EACH SWITCH SHALL HAVE A SUFFICIENT NUMBER OF POLES TO INTERRUPT ALL UNGROUNDED CONDUCTORS. DISCONNECT SWITCHES SERVING MOTOR LOADS SHALL BE HORSEPOWER RATED.
- C. FUSES SHALL BE INSTALLED IN ALL FUSED SWITCHES, SIZED AS INDICATED ON PLANS.
- D. UNLESS OTHERWISE NOTED, INDOOR SWITCHES SHALL BE PROVIDED WITH NEMA 1 ENCLOSURES; OUTDOOR SWITCHES WITH NEMA 3R ENCLOSURES.

6. RACEWAYS

- A. WHERE CONDUIT IS USED, 3/4" MINIMUM CONDUIT SHALL BE PROVIDED.
- B. ALL CONDUITS TO BE SUPPORTED BY STANDOFFS. CONNECTION TO CEILING SUPPORTS SHALL NOT BE PERMITTED. ALL CONDUIT SHALL BE RUN CONCEALED.
- C. ALL CONDUITS INSTALLED OUTDOORS SHALL BE RIGID GALVANIZED WITH THREADED CONNECTIONS. ALL CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SLABS SHALL BE RIGID PVC WITH A SEPARATE GROUNDING CONDUCTOR AND CONCRETE ENCASUREMENT WHERE REQUIRED. WHERE UNDERGROUND RACEWAYS TURN UP TO EQUIPMENT, THE ELBOW REQUIRED AND THE STUB-UP OUT OF THE SLAB OR EARTH MUST BE RIGID STEEL FOR THE LAST TWO FEET MINIMUM.
- D. FLEXIBLE CONDUIT SHALL BE USED TO MAKE FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, RECESSED LIGHTING FIXTURES, EXPANSION JOINTS OR WHERE THE INSTALLATION OF RIGID CONDUIT IS IMPRACTICAL.
- E. INSTALL CONDUIT CONTINUOUS BETWEEN BOXES AND CABINETS WITH NO MORE THAN FOUR 90 DEGREE BENDS. SECURELY FASTEN IN PLACE WITH STRAPS, HANGERS, AND STEEL SUPPORTS AS REQUIRED.

7. WIRE AND CABLE

- A. FOR CONCEALED BRANCH CIRCUIT WIRING, TYPE EMT CONDUIT SHALL BE USED WHERE PERMITTED BY CODE. TYPE AC FLEXIBLE METAL CONDUIT AND ROMEX SHALL NOT BE USED.
- B. ALL CONDUCTORS SHALL BE SOFT ANNEALED 98% PURE INSULATED COPPER. ALL CONDUCTORS SHALL HAVE 600 VOLT RATED INSULATION AND RATED 90 DEGREE CELCIUS UNLESS OTHERWISE NOTED. SERVICE ENTRANCE CONDUCTORS SHALL BE TYPE USE-2, RHW-2 OR XHHW-2.
- C. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED, # 10 AND SMALLER SHALL BE SOLID.
- D. THE MINIMUM WIRE SIZE FOR BRANCH CIRCUITS SHALL BE #12 AWG. LAYOUT OF BRANCH CIRCUIT WIRING AND ARRANGEMENT OF HOME RUNS SHALL BE FOR MAXIMUM ECONOMY AND EFFICIENCY.

- E. THE SECONDARY SERVICE, FEEDERS AND BRANCH CIRCUITS SHALL BE COLOR CODED AS FOLLOWS:

PHASE	208/120V	480/277V
A	BLACK	BROWN
B	RED	ORANGE
C	BLUE	YELLOW
NEUTRAL	WHITE	NATURAL GRAY
GROUND	GREEN	GREEN

- F. TAG ALL FEEDERS IN ALL PULL BOXES AND IN ALL GUTTER SPACE AND WIREWAYS THROUGH WHICH THEY PASS.
- G. MAKE SPLICES IN FEEDER TAPS IN PANEL BOX GUTTERS WITH PRESSURE TYPE CONNECTORS.
- H. SPLICES IN CIRCUITS SHALL BE TWISTED AND MADE MECHANICALLY TIGHT. SECURE WITH SCOTCHLOCK OR PIGTAIL CONNECTORS. CRIMP TYPE CONNECTORS SHALL NOT BE USED.

8. WIRING DEVICES

- A. WIRING DEVICES SHALL BE OF THE SPECIFICATION GRADE, UNLESS OTHERWISE SPECIFIED. ALL DEVICES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. SWITCHES SHALL BE MANUFACTURED BY LEVITON OR APPROVED EQUAL.
- B. SINGLE POLE SWITCHES SHALL BE 120 VOLTS, RATED AT 20 AMPERES, QUIET OPERATION TYPE, COLOR OF SWITCH AND DEVICE PLATE AS DIRECTED BY ARCHITECT.
- C. THREE WAY SWITCHES SHALL BE 120 VOLT 20 AMPERES.

- D. SWITCH AND RECEPTACLE PLATES SHALL BE PLUMB AND SHALL FIT FLAT AGAINST WALL. FINISH AS DIRECTED BY ARCHITECT.

- E. ALL SWITCH AND RECEPTACLE MOUNTING HEIGHTS AND LOCATIONS SHALL BE TAKEN FROM ARCHITECTS DRAWINGS UNLESS OTHERWISE NOTED.

- F. MULTIPLE DEVICES AT A COMMON LOCATION SHALL BE INSTALLED IN A COMMON MULTIGANG DEVICE PLATE.
- G. STANDARD DUPLEX RECEPTACLES SHALL BE NEMA 5-20 R, BACK AND SIDE WIRED. OTHER DEVICES SHALL BE AS INDICATED ON THE DRAWINGS.

- H. ALL OUTDOOR RECEPTACLES SHALL BE WEATHERPROOF RATED WHEN THE ATTACHMENT PLUG IS INSERTED.

9. PULL BOXES, JUNCTION BOXES AND OUTLET BOXES

- A. PULL BOXES, JUNCTION BOXES AND OUTLET BOXES SHALL BE MANUFACTURED FROM GALVANIZED INDUSTRY STANDARD GAUGE SHEET STEEL.
- B. PROVIDE PULL BOXES AND JUNCTION BOXES IN RACEWAYS TO ASSURE THAT CABLES ARE NOT DAMAGED WHEN THEY ARE PULLED AND TO FULFILL MINIMUM CODE REQUIREMENTS.
- C. PULL BOXES AND JUNCTION BOXES SHALL BE SIZED SO THAT THE MINIMUM BENDING RADIUS CRITERIA SPECIFIED FOR THE WIRES AND CABLE ARE MAINTAINED.
- D. PROVIDE AND INSTALL ALL REQUIRED JUNCTION AND PULL BOXES REGARDLESS WHETHER INDICATED ON DRAWINGS OR NOT.

10. ELECTRICAL IDENTIFICATIONS

- A. FURNISH AND INSTALL ENGRAVED LAMINATED PHENOLIC NAMEPLATES FOR ALL SAFETY SWITCHES, PANELBOARDS, TRANSFORMERS, SWITCHBOARDS, MOTOR CONTROL CENTERS AND OTHER ELECTRICAL EQUIPMENT SUPPLIED FOR THE PROJECT, FOR SWITCHBOARDS AND SWITCHGEAR PROVIDE NAMEPLATES FOR EACH FEEDER AND/OR BRANCH CIRCUIT. IN OUTDOOR LOCATIONS, LABELS SHALL BE APPLIED USING TWO-PART EPOXY THAT IS WEATHERPROOF AND SUNLIGHT RESISTANT. LETTERS SHALL BE APPROXIMATELY 1/2-INCH HIGH EXCEPT WHERE RESULTANT NAMEPLATE SIZE EXCEEDS EQUIPMENT SIZE. NAMEPLATE LETTERING MAY BE ADJUSTED ACCORDINGLY WITH APPROVAL OF THE ENGINEER. NAMEPLATES SHALL REMAIN LEGIBLE, EMBOSSED, SELF-ADHESIVE PLASTIC TAPE IS NOT ACCEPTABLE FOR MARKING EQUIPMENT. NAMEPLATE MATERIAL COLORS SHALL B AS FOLLOWS:
- o. BLUE SURFACE WITH WHITE CORE FOR 120/208-VOLTS EQUIPMENT.
- b. BLACK SURFACE WITH WHITE CORE FOR 277/480-VOLTS EQUIPMENT.

11. GROUNDING

- A. ALL ELECTRICAL SYSTEMS SHALL BE GROUNDED AS REQUIRED BY THE NATIONAL ELECTRICAL CODE, THE LOCAL UTILITY COMPANY AND ALL OTHER LOCAL AUTHORITIES HAVING JURISDICTION. PERMANENTLY AND EFFECTIVELY GROUND ALL METALLIC CONDUITS, SUPPORTS, CABINETS, PANELBOARDS AND SYSTEM GROUNDING NEUTRAL.
- B. A SEPARATE GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL CONDUITS SIZED IN ACCORDANCE WITH THE EQUIPMENT GROUNDING CONDUCTOR TABLE NEC 250.122 OF THE NATIONAL ELECTRICAL CODE.
- C. GROUND CLAMPS SHALL BE LISTED SPECIFICALLY FOR GROUNDING, WHERE GROUNDING CONDUCTOR IS ENCLOSED IN CONDUIT, GROUND CLAMP SHALL GROUND BOTH CONDUCTOR AND CONDUIT.

12. TEMPORARY LIGHTING AND POWER

- A. FURNISH AND INSTALL WIRING FOR ADEQUATE TEMPORARY LIGHT AND POWER FOR THE PROJECT.
- B. MAINTAIN THE SYSTEM IN GOOD AND ADEQUATE WORKING CONDITIONS AT ALL TIMES.
- C. FURNISH AND INSTALL ALL LAMPS, BREAKERS, AND FUSING, AS IS NECESSARY.
- D. REPLACE BURNED OUT LAMPS, DEFECTIVE BREAKERS OR BLOWN FUSES.
- E. SYSTEM SHALL BE NOMINALLY 120/240 VOLT, 3 PHASE, 4 WIRE ADEQUATE FOR ALL CONSTRUCTION NEEDS.

13. SHOP DRAWINGS

- A. SUBMIT TO THE ARCHITECT FIVE (5) SETS OF SHOP DRAWINGS FOR THE FOLLOWING:
- f. OVER CURRENT PROTECTIVE DEVICES, CIRCUIT BREAKERS AND FUSES
- g. PANEL BOARDS
- h. WIRING DEVICES INCLUDING SWITCHES AND RECEPTACLES

GENERAL NOTES

1. WORKING CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT SHALL BE MAINTAINED DURING AND AFTER CONSTRUCTION; FULL WIDTH OF THE EQUIPMENT.
2. THE PROJECT SHALL USE GROUND-FAULT CIRCUIT INTERRUPTERS.
3. ALL 120 VOLT SINGLE PHASE, 15 AND 20 AMP RECEPTACLE OUTLETS ON CONSTRUCTION SITE, WHICH ARE NOT A PART OF THE PERMANENT WIRING OF THE BUILDING OR STRUCTURE AND WHICH ARE IN USE BY EMPLOYEES, SHALL HAVE APPROVED GROUND-FAULT CIRCUIT INTERRUPTERS FOR PERSONAL PROTECTION.
4. RECEPTACLES ON A TWO-WIRE, SINGLE-PHASE PORTABLE OR VEHICLE-MOUNTED GENERATOR RATED NOT MORE THAN 5KW, WHERE THE CIRCUIT CONDUCTORS OF THE GENERATOR ARE INSULATED FROM THE GENERATOR FRAME AND ALL OTHER GROUNDED SURFACES, NEED NOT BE PROTECTED WITH GROUND-FAULT CIRCUIT.
5. INTERRUPTERS OR AN ASSURED EQUIPMENT GROUNDING CONDUCTOR PROGRAM TO PROTECT EMPLOYEES AND IT SHALL ESTABLISH AND IMPLEMENT AN ASSURED EQUIPMENT GROUNDING CONDUCTOR PROGRAM FOR THE CONSTRUCTION SITES COVERING ALL CORD SETS, RECEPTACLES WHICH ARE NOT A PART OF THE PERMANENT WIRING OF THE BUILDING OR> STRUCTURE, AND EQUIPMENT CONNECTED BY CORD AND PLUG WHICH ARE AVAILABLE FOR USE ALL LABELING SHALL BE PERMANENT, DURABLE AND APPROVED BY THE CODE ENFORCEMENT OFFICIAL
6. ALL CORRIDOR, WALKWAY OR BREEZEWAY LIGHTING SHALL BE LISTED ADA COMPLIANT OR BE MOUNTED 80" AFF TO THE BOTTOM OF THE FIXTURE A NOTE NEEDS TO BE ADDED TO REFLECT THAT APPENDIX 5 FROM THE ENERGY CODE WILL BE REQUIRED AT END OF PROJECT PRIOR TO CERTIFICATE OF OCCUPANCY AND CERTIFIED BY THE ENGINEER
7. HEAT TAPE INSTALLATION SHALL CONFORM TO NEC 427.22 REQUIREMENTS.

14. SYSTEM SHUT DOWNS

- A. SHOULD IT BE NECESSARY TO SHUT DOWN ANY EXISTING ELECTRICAL SYSTEM, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND BUILDING MANAGEMENT, IN WRITING, AT LEAST 3 DAYS PRIOR TO THE REQUESTED DATE. ALL SHUT DOWN WORK SHALL BE DONE AFTER NORMAL BUILDING OPERATING HOURS, IF SO DIRECTED BY THE FOREMENTIONED PARTIES, AT NO ADDITIONAL COST.

15. JOB COMPLETION

- A. AT THE COMPLETION OF THE JOB, THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL WORK AREA, RESTORING ANY DAMAGED OR DEFACED SURFACES OF FIXTURES OR EQUIPMENT TO THEIR ORIGINAL CONDITION. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SYSTEMS UNLESS THE OWNER SPECIFICALLY REQUESTS THAT THEY BE LEFT IN PLACE.
- B. THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY TEST ALL NEW ELECTRICAL SYSTEMS, INCLUDING THOSE INSTALLED BY OTHERS AND WIRED BY ELECTRICAL CONTRACTOR. CORRECT ALL FAULTY CONDITIONS AT NO EXTRA COST. ALL PANELS SHALL BE BALANCED SO THAT THERE IS NO MORE THAN 10% DIFFERENCE IN PHASE CURRENTS UNDER NORMAL OPERATING CONDITIONS.MODIFY PANEL SCHEDULES AS REQUIRED.
- C. THE CONTRACTOR SHALL DEMONSTRATE TO THE OWNER THAT ALL ELECTRICAL DEVICES AND SYSTEMS ARE FULLY FUNCTIONAL, AND SHALL GIVE INSTRUCTIONS IN THEIR OPERATION AS REQUESTED.
- D. THE CONTRACTOR SHALL OBTAIN, AND GIVE TO THE OWNER, AN UNDERWRITER'S CERTIFICATE COVERING ALL NEW ELECTRICAL EQUIPMENT. THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES NOTED BY THE INSPECTOR, AT NO EXTRA COST, UNTIL SUCH CERTIFICATE IS RECEIVED.
- E. ALL WORK SHALL BE GUARANTEED TO BE FULLY OPERATIONAL AND FREE OF DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE.
- F. PROVIDE INITIAL START UP AND OWNER TRAINING. PROVIDE A LOAD TEST, START-UP AND OWNER TRAINING BY THE GENERATOR MANUFACTURER'S FACTORY TRAINED REPRESENTATIVE.
- G. ELECTRICAL CONTRACTOR SHALL BE PRESENT FOR SCO FINAL ACCEPTANCE INSPECTION.

16. SUBSTITUTIONS

- A. THE CONTRACTOR IS REQUIRED TO BID ON THIS PROJECT WITH THE UNDERSTANDING THAT ALL EQUIPMENT WILL BE PROVIDED AS SPECIFIED.
- B. ANY SUBSTITUTIONS FROM THE SPECIFIED ITEMS MUST BE INCLUDED WITH A NUMBER INDICATING THE SAVINGS OVER THE SPECIFIED ITEMS THAT THE OWNER WILL REALIZE.
- C. PROPOSED SUBSTITUTIONS SHALL BE PRESENTED TO THE ARCHITECT FOR CONSIDERATION PRIOR TO BID DATE PER REQUIREMENTS OF SPECIFICATION SECTION 016000.3.01. NO CONSIDERATION SHALL BE GIVEN TO SUBSTITUTION REQUESTS AFTER RECEIPT OF BIDS.

ELECTRICAL SYMBOLS



PANELBOARD, FLUSH MOUNTED



CONCEALED RACEWAY. INDICATES 2#12 AND 1#12 GROUND



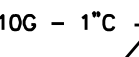
CONCEALED RACEWAY. INDICATES HOMERUN TO PANEL WITH 2#12 AND 1#12 GROUND.



CONCEALED RACEWAY. INDICATES 2#12, 1#12 NEUTRAL AND 1#12 GROUND IN 3/4"CONDUIT.



CONCEALED RACEWAY. INDICATES 2#12, 1#12 NEUTRAL AND 1#12 GROUND. 2#12, 1#12 NEUTRAL AND 1#12 GROUND. WILL CONTINUE UNTIL 3 WIRE BRANCH CIRCUIT CHANGES TO A 2 WIRE BRANCH CIRCUIT.



CONCEALED RACEWAY. ALL RACEWAYS WITH OTHER THAN #12 CONDUCTORS WILL HAVE WIRE AND CONDUIT SIZES DESIGNATED ON PLAN OR RISER DIAGRAMS.

RACEWAY NOTES:

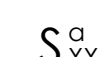
1. ALL RACEWAYS SHALL CONTAIN A SEPARATE GREEN EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH NEC 250-122.
2. IF NO HOME RUN OR CIRCUIT SYMBOL IS SHOWN, PROVIDE 2#12, 1#12G TO THE CIRCUIT NUMBER INDICATED ADJACENT TO FIXTURE OR OUTLET.



LIGHT FIXTURE



LIGHT FIXTURE TO ALWAYS BE ON



SINGLE POLE SWITCH ON NORMAL CIRCUIT; WALL-MOUNTED AT 48" AFF UNO; WHERE SHOWN, "Q" INDICATES LAMPS CONTROLLED BY SWITCH; WHERE SHOWN, "XX" INDICATES MODIFIER AS LISTED BELOW; SEE WIRING DEVICE SCHEDULE

MODIFIERS:

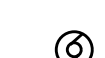
- 3 = 3-WAY SWITCH
4 = 4-WAY SWITCH
D = DIMMER SWITCH
WP = WEATHERPROOF COVER
T = TIMER SWITCH
O = OCCUPANCY SENSING
DO = DIMMER OCCUPANCY SENSOR
M = FLUSH MTD MANUAL MOTOR STARTER SWITCH WITHOUT OVERLOAD HEATERS



WALL MOUNTED OCCUPANCY SENSOR LIGHT SWITCH



CEILING MOUNTED OCCUPANCY SENSOR LIGHT SWITCH



MOTOR



MOTOR STARTER SEE FLOOR PLANS FOR SIZE



SIMPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W



SPECIAL PURPOSE RECEPTACLE AND OUTLET. REFER TO DRAWINGS FOR NEMA CONFIGURATION



30 AMP NON-FUSED DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED. REFER TO SCHEDULE.



30 AMP NON-FUSED, WEATHERPROOF DISCONNECT SWITCH. NUMBER OF POLES AND VOLTAGE PER CIRCUIT FED. REFER TO SCHEDULE.



FURNISHED DISCONNECT WITH EQUIPMENT



CEILING MTD OR ABOVE CEILING OUTLET BOX WITH BLANK COVER



FLUSH MTD DUPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W



FLUSH MTD ABOVE COUNTER DUPLEX RECEPTACLE AND OUTLET, 20A, 125V, 3W



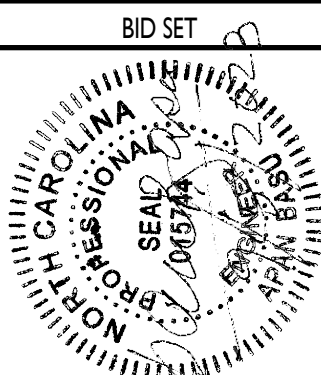
FLUSH MTD MANUAL MOTOR STARTER SWITCH WITH OVERLOAD HEATERS



COMBINATION TELE/DATA OUTLET



TV OUTLET



NCDOT FACILITIES DESIGN UNIT
ARCHITECT & ENGINEERS



ELECTRICAL SPECIFICATIONS AND ABBREVIATIONS

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS

NO.	DATE
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DATE ISSUED: 9/5/2023

DRAWN BY: CCM

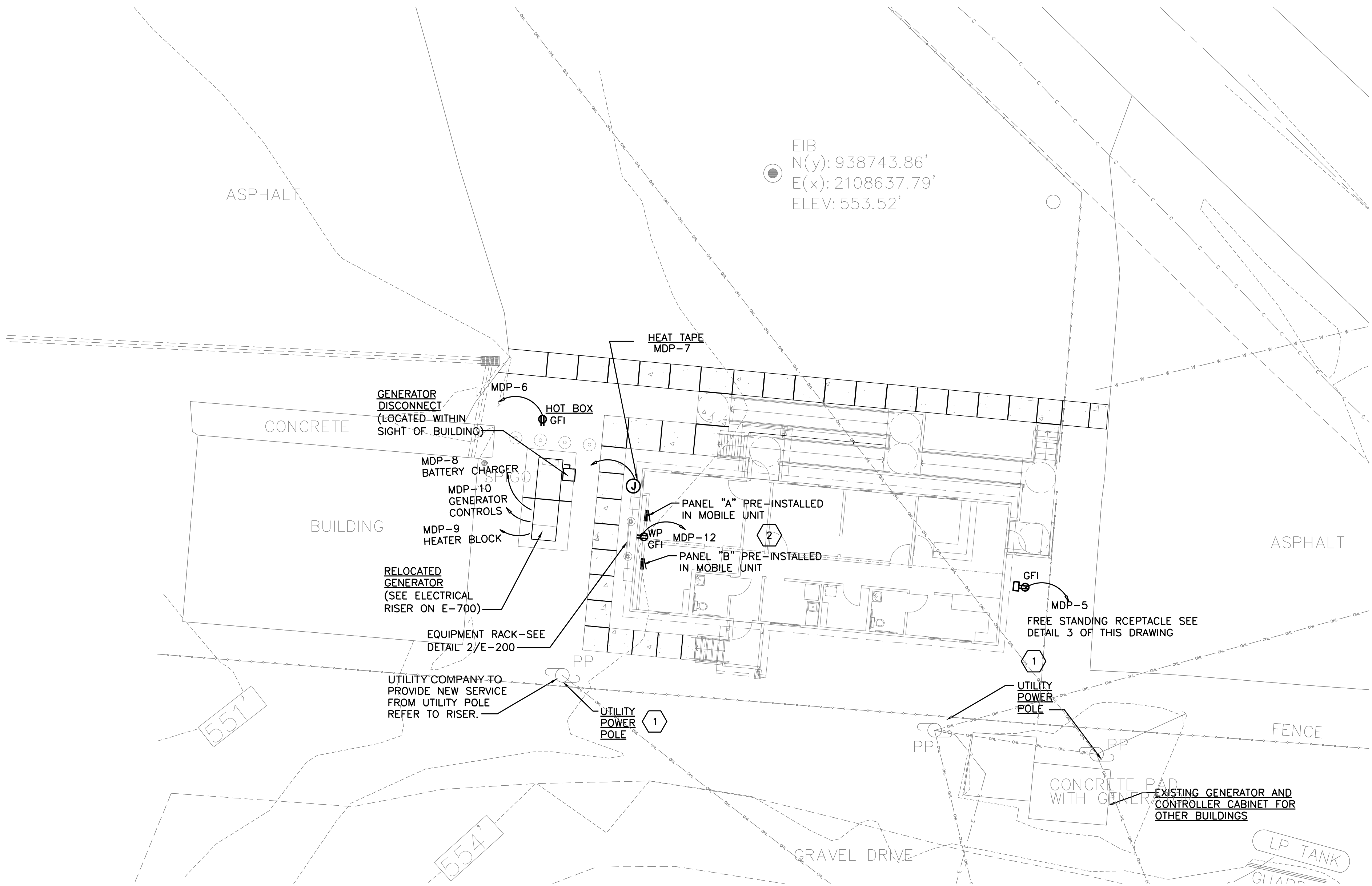
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E-001



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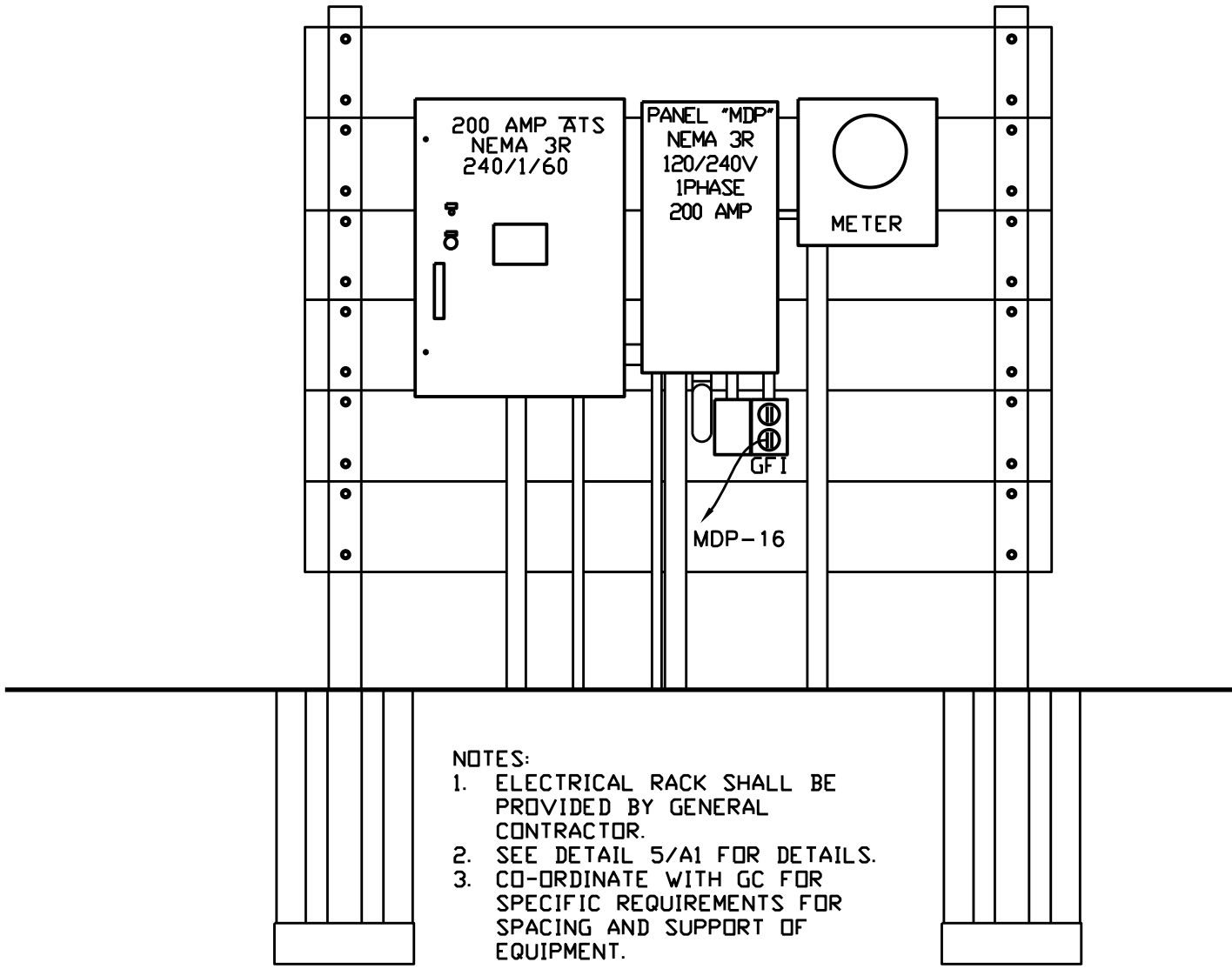
1 ELECTRICAL SITE PLAN
E-200/SCALE: 3/32" = 1'-0"

GENERAL NOTES:

- CONTRACTOR TO CO-ORDINATE LOCATION OF PLUMBING EQUIPMENT REQUIRING ELECTRICAL SERVICE PRIOR TO ROUGH-IN.

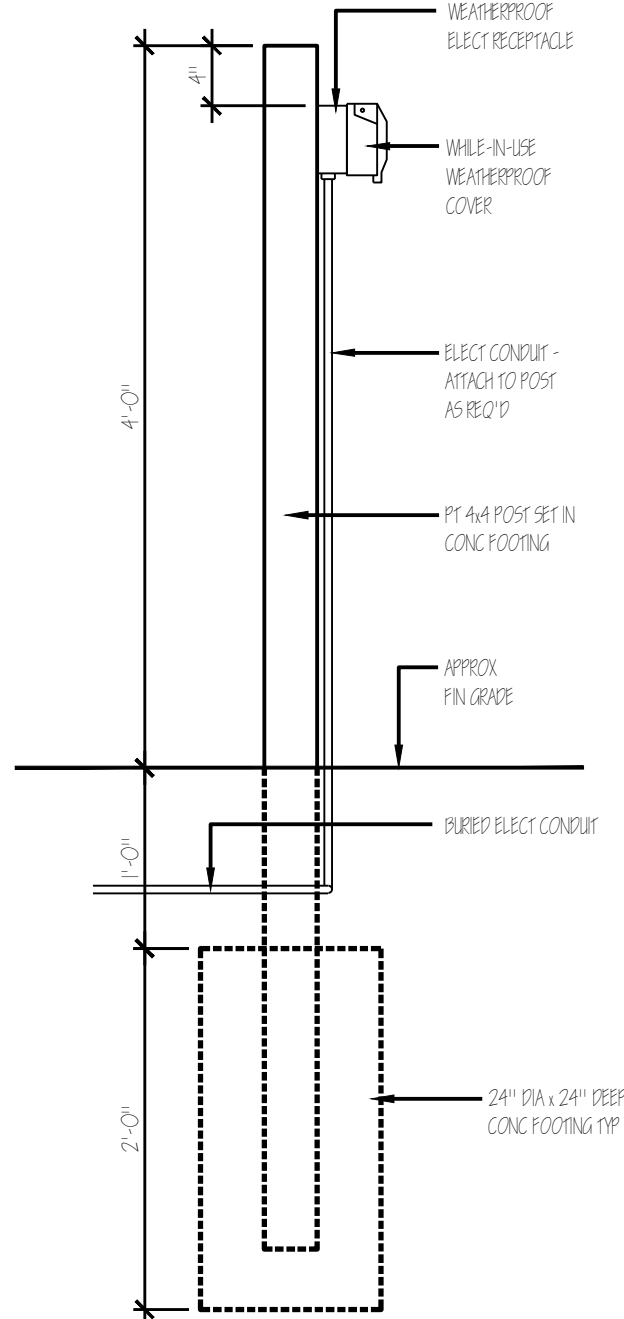
NOTES KEYED TO PLAN:

- RELOCATED POWER POLES BY DUKE ENERGY. COORDINATE WITH POWER COMPANY BEFORE NEW WORK IS STARTED.
- COORDINATE EXACT LOCATION OF PANELS.



- NOTES:
- ELECTRICAL RACK SHALL BE PROVIDED BY GENERAL CONTRACTOR.
 - SEE DETAIL 5/A1 FOR DETAILS.
 - CO-ORDINATE WITH GC FOR SPECIFIC REQUIREMENTS FOR SPACING AND SUPPORT OF EQUIPMENT.

2 EQUIPMENT RACK PLAN
E-200/NTS



3 FREESTANDING ELECTRICAL DEVICE DETAIL
E-200/NTS



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BID SET

NC DOT FACILITIES DESIGN UNIT
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FLOOR 200
PHONE: 919/771-4500 FAX: 919/715-0389

ELECTRICAL SITE PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

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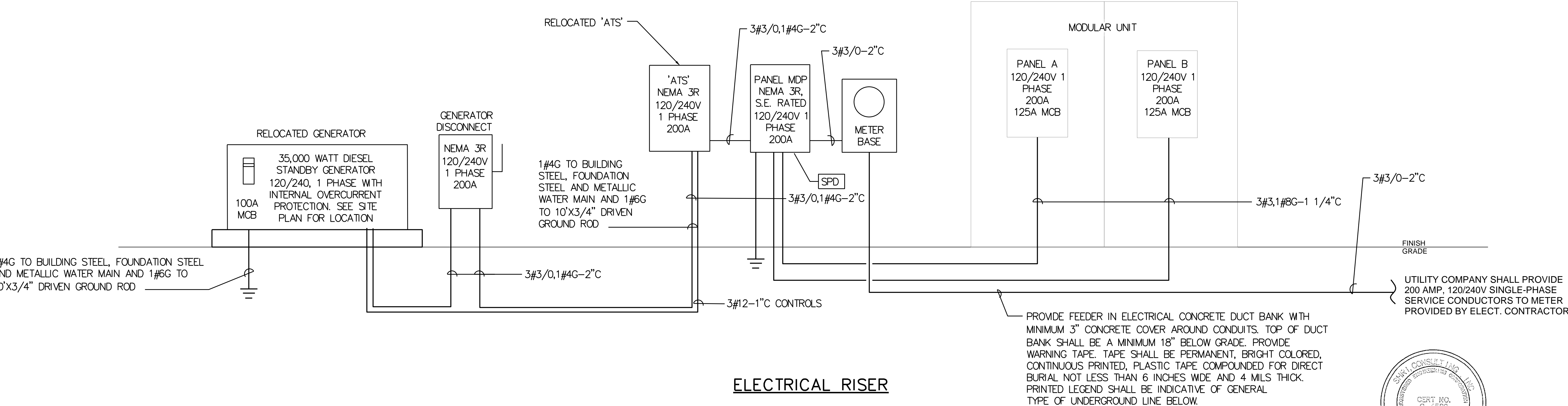
SHEET NO.
E-200

EXISTING ATS SCHEDULE:

1. THOMSON TECHNOLOGY MODEL# TSC 800, AUTOMATIC TRANSFER CONTROLLER, OPEN TRANSITION, 200 AMP, 120/240 VOLT, 1 PHASE WITH NEMA 3R SECURE ENCLOSURE WITH GFI PROTECTION. SERVICE ENTRY RATED WITH 200 MAIN OVERCURRENT PROTECTION.
2. TO BE TESTED AND INSTALLED BY ELECTRICAL CONTRACTOR, PROVIDED BY NCDOT

EXISTING GENERATOR SCHEDULE:

1. GENERAC MODEL 4377620100 STANDBY GENERATOR WITH (1) AUTOMATIC TRANSFER SWITCH. THE GENERATOR RUNS ON DIESEL FUEL WITH 72 HOUR MIN RUN CAPACITY. VERIFY UNIT HAS ALL PARTS AS REQUIRED FOR A COMPLETE OPERATING SYSTEM. THE DELIVERY VOLTAGE SHALL BE 120/240 VOLT, 1 PHASE. WITH 10 DUAL RATED BATTERY CHARGER, AUTOMATIC VOLTAGE REGULATOR, AUTOMATIC LOW OIL PRESSURE AND HIGH TEMPERATURE SHUTDOWN. THE AUTOMATIC TRANSFER SWITCH SHALL TRANSFER FROM THE UTILITY AUTOMATICALLY WITHIN 30 SECONDS. PROVIDE A SERVICE RATED DISCONNECTING MEANS WITH OVERCURRENT PROTECTION AT THE GENERATOR LOCATION. PROPERLY GROUND THE GENERATOR AND SERVICE EQUIPMENT PER NEC. PROVIDE INITIAL START UP AND OWNER TRAINING. PROVIDE A LOAD TEST, START-UP AND OWNER TRAINING BY THE GENERATOR MANUFACTURER'S FACTORY TRAINED REPRESENTATIVE.
2. PROVIDE A FULL TANK OF FUEL AT COMPLETION OF ALL REQUIRED TESTS.
3. TO BE TESTED AND INSTALLED BY ELECTRICAL CONTRACTOR, PROVIDED BY NCDOT
4. GENERATOR SET SHALL BE TESTED IN THE PRESENCE OF AND TO THE SATISFACTION OF THE STATE ELECTRICAL INSPECTOR AS PART OF THE FINAL INSPECTION AND CLOSE-OUT BY THE STATE CONSTRUCTION OFFICE.

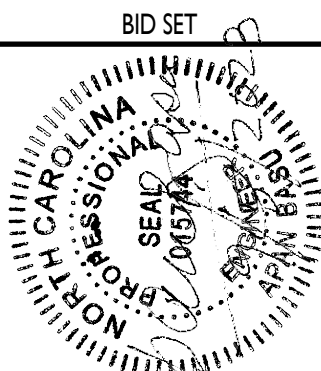


ELECTRICAL RISER

PANEL MDP											
VOLTAGE (L-N):		120				ENCLOSURE TYPE:		NEMA 3R			
VOLTAGE (L-L):		240				MOUNTING:		SURFACE			
PHASES, WIRES:		1 ϕ 3 W				AIC RATING (A):		10,000			
MINIMUM BUS CAPACITY (A):		200				NOTES:		S.E. RATED			
MAIN O.C. DEVICE (A):		MCB									
CKT NO	DESCRIPTION	TRIP AMPS	POLE	PHASE LOADS (VA)				POLE	TRIP AMPS	DESCRIPTION	CKT NO
				A	B						
1	PANEL A	100	2	7500	7500	7500	7500	2	100	PANEL B	2
3											4
5	OUTDOOR GFI RECEPTACLE	20	1	0	500	500	500	1	20	REC - HOT BOX	6
7	HEAT TAPE (GFPE BREAKER)	20	1			500	500	1	20	GENERATOR BATTERY CHARGER	8
9	BLOCK HEATER	20	1	1500	250			1	20	GENERATOR CONTROLS	10
11	SPARE	20	1			0	180	1	20	SPARE	12
13	SPARE			0	180			1	20	REC AT MDP	14
15	SPARE					0	0				16
17	SPARE			0	0						18
19	SPARE					0	0				20
21	SPARE			0	0						22
23	SPARE					0	0				24
25	SPARE			0	0						26
27	SPARE					0	0				28
29	SPARE			0	0						30
31						0	0				32
33				0	0						34
35						0	0				36
37				0	0						38
39						0	0	1	20		40
CONNECTED LOAD PHASE TOTALS (VA)											
				17430		16180		#			
CONNECTED LOAD (VA)				DEMAND FACTOR		DEMAND LOAD (VA)		DEMAND LOAD		33.6kVA	
COOLING AND HEATING				0		1.00		0.0		SPARE CAPACITY	
HEATING				0		1.00		0.0		14.4kVA	
LIGHTING				0		1.25		0.0		SPARE CAPACITY	
RECEPTACLES (0-10 KVA)				860		1.00		860.0		60.0AMPS	
RECEPTACLES (OVER 10 KVA)				0		0.50		0.0		30.0%	
EQUIPMENT				1500		1.00		1500.0			
MOTOR				0		1.00		0.0			
LARGEST MOTOR				0		1.25		0.0			
GENERAL				1250		1.00		1250.0			
SPECIAL				30000		1.00		30000.0			
TOTAL:				33610				33610			
LOAD (AMPS):				140				140			

PANELBOARDS

1. SERVICE EQUIPMENT (PER NEC 110.24(A)) AND NEW PANELS (PER NEC 408.6) MUST BE LABELED WITH THE AVAILABLE FAULT CURRENT AND THE DATE THE FAULT CURRENT CALCULATION WAS PERFORMED. THE ARC-FLASH HAZARD WARNING LABELS SHOULD BE INSTALLED WHERE REQUIRED BY NEC 110.16(A). PANEL MDP MUST BE PROVIDED WITH A LABEL THAT IDENTIFIES ITS SOURCE OF POWER PER NEC408.4(B).
2. PROVIDE SIGN PLACED AT THE SERVICE-ENTRANCE EQUIPMENT TO INDICATE THE TYPE AND LOCATION OF THE STANDBY GENERATOR THAT WILL SUPPLY THE BUILDING PER NEC 702.7(A). THE SIGN REQUIREMENT OF NEC 702.7(B)
3. PROVIDE SURGE PROTECTION TYPE 2 AT PANEL MDP.



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SCHEDULES & ELECTRICAL RISER

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS	
NO.	DATE

DATE ISSUED: 9/5/2023
DRAWN BY: CDM
CHECKED BY: AB

SHEET NO.

E-701



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PLUMBING GENERAL NOTES

- ALL WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR. CONTRACTOR SHALL INSTALL SYSTEMS, EQUIPMENT & COMPONENTS SHALL COMPLY WITH 2018 NC PLUMBING CODE AND IN ACCORDANCE WITH REQUIREMENTS SHOWN IN THESE PLANS. IF WHAT IS SHOWN ON THE PLAN EXCEEDS THE PLUMBING CODE REQUIREMENT THEN WORK SHALL COMPLY WITH WHAT IS SHOWN. ANY DEVIATION FROM THE DESIGN PLANS SHALL ONLY BE PERFORMED IF APPROVED BY THE OWNER REPRESENTATIVE OR DESIGN ENGINEER. ALL WORK SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF ALL APPLICABLE CODES AND STANDARDS.
- IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO INSURE THAT ITEMS TO BE FURNISHED UNDER PLUMBING CONTRACT WILL FIT THE SPACE AVAILABLE. PLUMBING CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR WATER, VENT, AND WASTE SYSTEM TESTS, PERAPPLICABLE CODE REQUIREMENTS. ALL HVAC AND EXHAUST SYSTEMS MUST BE RUNNING WHILE THESE WASTE/VENT TESTS ARE BEING PERFORMED. A CERTIFICATE WILL BE REQUIRED FROM THE PLUMBING CONTRACTOR CERTIFYING COMPLIANCE AND ACCEPTANCE OF THESE TESTS. DELETED
- THE SCHEDULED AND/OR SPECIFIED PLUMBING EQUIPMENT REPRESENT THE MINIMUM CRITERIA AND SHALL BE THE BASIS FOR THE CONTRACTOR'S BASE BID. IF THE SCHEDULED OR SPECIFIED FIXTURES OR EQUIPMENT DO NOT COMPLY WITH GOVERNING CODES OR REGULATIONS IN ALL RESPECTS, THE CONTRACTOR SHALL PROVIDE AN ALTERNATE BID FOR COMPLYING FIXTURES, EQUIPMENT, TRIM, OR FITTINGS. THE ABSENCE OF AN ALTERNATE BID SHALL BE CONSTRUED TO MEAN THAT THE CONTRACTOR'S BID INCLUDES ALL COSTS NECESSARY TO MEET ALL REGULATIONS & LATEST NC PLUMBING & ENERGY CODES.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR APPROVED FLOOR PLAN AND DIMENSIONS. DO NOT SCALE PLUMBING DRAWINGS.
- ANY DEVIATIONS FROM SPECIFIED PLUMBING FIXTURES AND LISTED IN FIXTURE SCHEDULE SHALL OBTAIN PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE.

EXISTING CONDITIONS

- EXISTING WASTE/VENT AND WATER SUPPLY LINES AND FIXTURES ARE SHOWN IN APPROXIMATE LOCATION. PLUMBING CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO DIGGING AND MAKE NECESSARY ADJUSTMENT AS REQUIRED.

COORDINATION

- IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO ENSURE THAT ITEMS TO BE FURNISHED UNDER PLUMBING CONTRACT WILL FIT IN THE SPACE AVAILABLE. PLUMBING CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

DWV PIPING

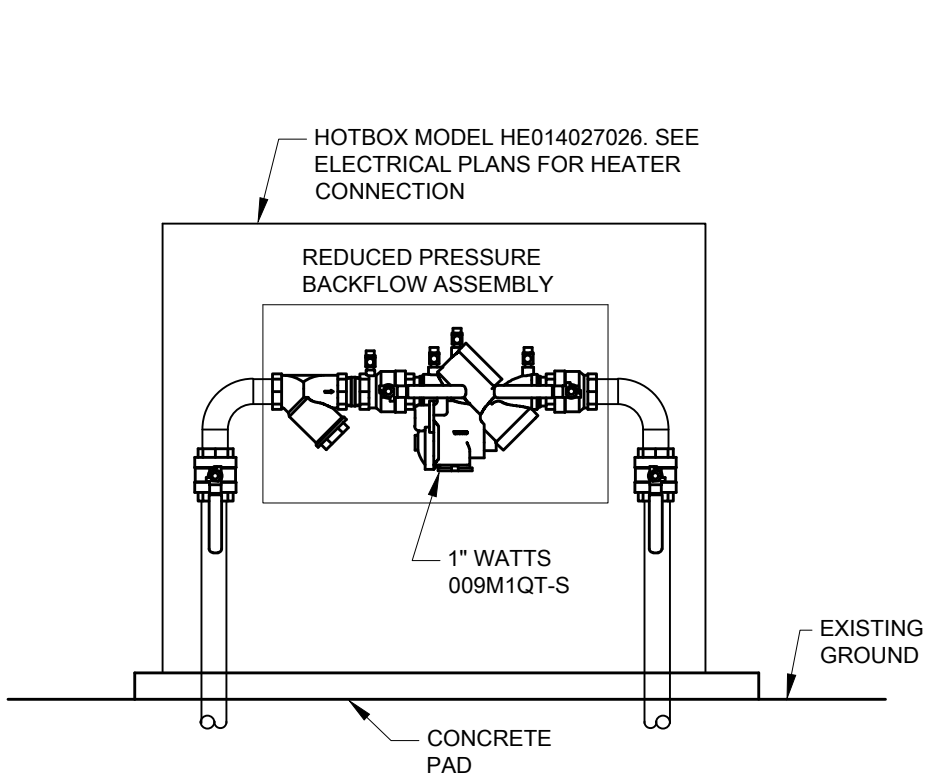
- ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC WITH SOCKET FITTINGS, EXCEPT BELOW ROADWAY. PIPING BELOW ROADWAY SHALL BE HUB AND SPIGOT CAST IRON MATERIAL WITH CAULKED JOINTS. TRANSITIONS SHALL BE MADE MINIMUM OF 3FT ON EACH SIDE OF ROADWAY.
- INSTALL TRACER WIRE CONFORMING NC PLUMBING CODE ALONG THE BURIED WASTE PIPE. TRACER WIRE SHALL NOT BE LESS THAN 14AWG. TRACER SHALL CONFORM TO ASTM B-1, B-3 AND B-8. TRACER WIRE SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATION.
- INSTALLATION UNDER THE ROADWAY SHALL CONFORM TO REQUIRMENTS OF NC DOT AND LOCAL REQUIREMENTS.
- CLEANOUTS LOCATED IN TRAFFIC-BEARING AREAS SHALL BE INSTALLED WITH A VEHICLE TRAFFIC BEARING BOX. THE BOX SHALL BE SET IN CONCRETE SLAB, EXTENDING AT LEAST 12" FROM THE PERIMETER OF THE CLEANOUT. THE SLAB SHALL BE NOT LESS THAN 8" THICK. THE CONCRETE SHALL BE NOT LESS THAN 2,500 PSI. ALL SANITARY WASTE PIPING SHALL BE ROUTED AT $\frac{1}{8}$ " PER FT SLOPE OR 1%.
- FIELD VERIFY EXISTING SANITARY MANHOLE INVERT PRIOR TO CONSTRUCTION TO CONFIRM DEPTH.

WATER PIPING

- ALL WATER PIPING SHALL BE TYPE "L", COPPER TUBING, JOINTS IN COPPER TUBING SHALL BE WITH SILVER SOLDER.
- ALL VALVES SHALL BE SAME SIZE AS PIPING SERVED (MIN.)

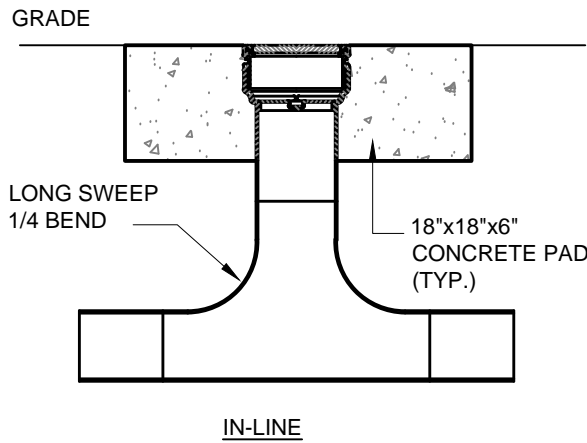
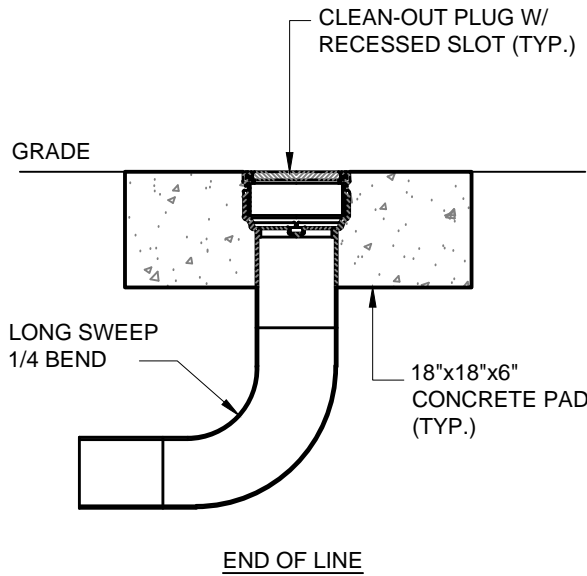
APPROVED MANUFACTURERS

- BACKFLOW PREVENTER
 - ZURN WILKINS
 - FABLO
- HEAT TAPE
 - RAYCHEM
 - THERMON
 - THERMO TECH INDUSTRIES.
- HOT BOX
 - HOTBOX
 - HUBBEL POWER SYSTEM
 - FABCO
 - ZURN



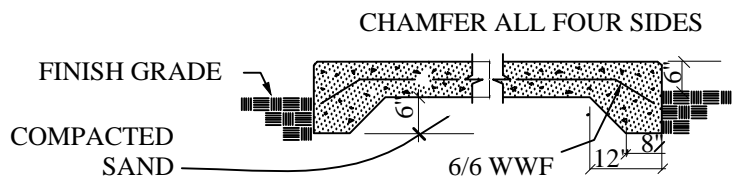
BACKFLOW PREVENTER DETAIL

SCALE: NTS



EXTERIOR CLEANOUT DETAIL

SCALE: NTS

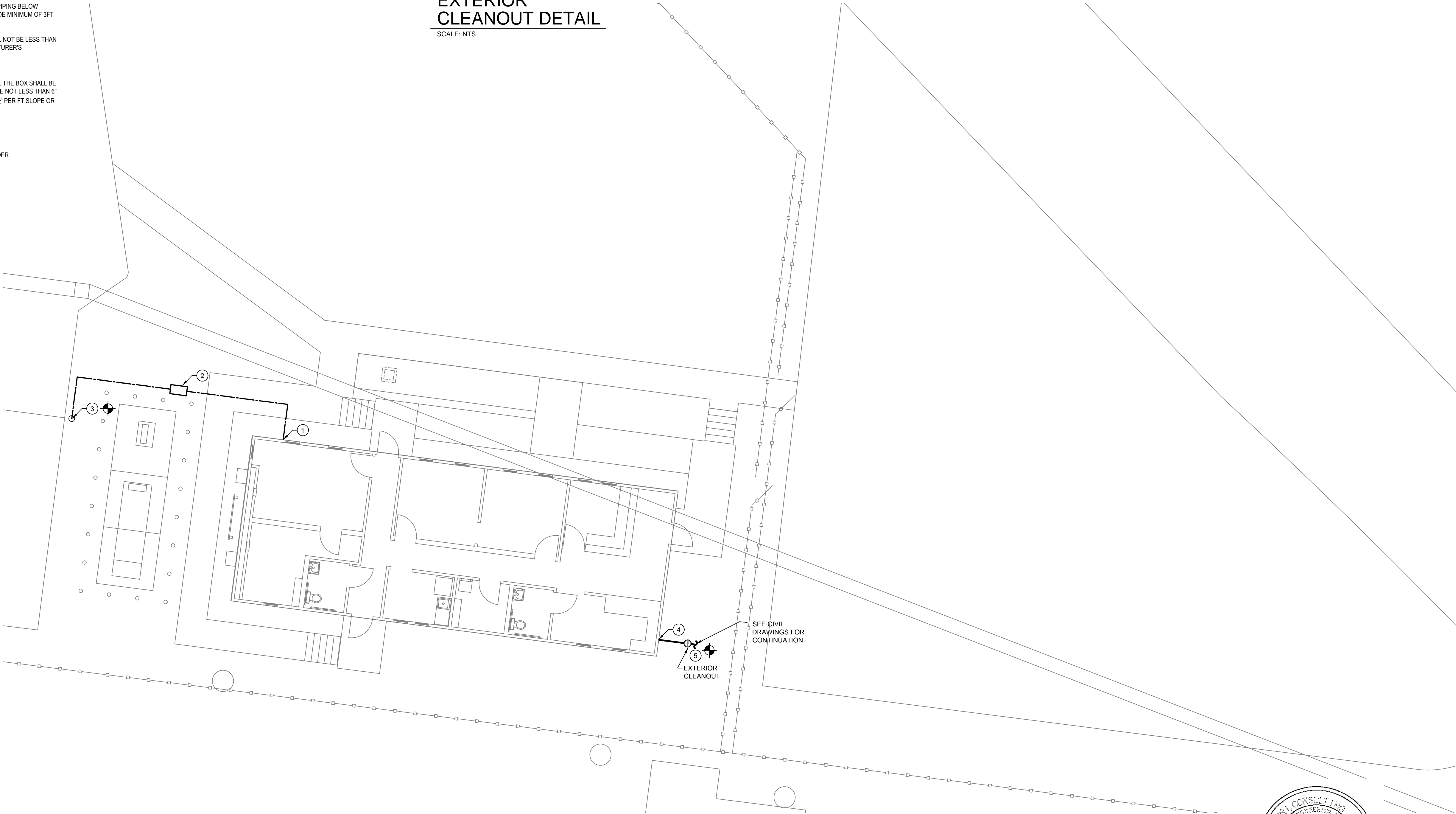


NOTES:

- COMPACT SOIL UNDER MOUNTING PAD TO 95% DENSITY. CONCRETE SHALL BE 3000 PSI CLASS. THE CONCRETE PAD SHALL BE MINIMUM 2" LARGER ON ALL FOUR SIDES.

CONCRETE PAD DETAIL

SCALE: NTS



PLUMBING PLAN

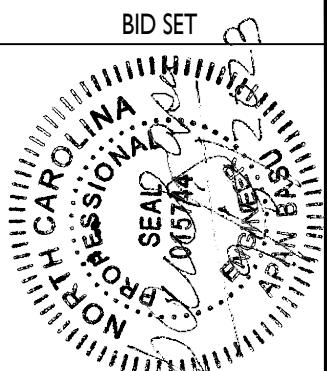
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- SEE THIS SHEET FOR ALL GENERAL NOTES.

CONSTRUCTION NOTES:

- CONNECT NEW 1" CW TO EXISTING WATER SERVICE IN CRAWL SPACE OF MODULAR UNIT. FIELD VERIFY EXACT LOCATION. PROVIDE SELF REGULATING HEAT TAPE ON THE ABOVE GROUND PIPING TO PROTECT FROM FREEZING.
- PROVIDE NEW 1" WATTS LF009QT-S IN ABOVE GROUND HEATED ENCLOSURE. HOT BOX MODEL HE014027026. CONTRACTOR SHALL PROVIDE CONCRETE PAD FROM ENCLOSURE TO BE MOUNTED ON. PATCH ALL PORTIONS OF AREA DISTURBED TO MATCH EXISTING CONDITIONS.
- CONNECT NEW 1" CW TO EXISTING UNDERGROUND 2" WATER LINE. PATCH ALL PORTIONS OF AREA DISTURBED TO MATCH EXISTING CONDITIONS.
- CONNECT NEW 4" W TO EXISTING BUILDING DRAIN. FIELD VERIFY EXACT LOCATION.
- EXTENSION OF THE THE 4" W TO STREET MAIN BY CIVIL.



NC DOT FACILITIES DESIGN UNIT
ARCHITECT & ENGINEERS



SITE PLAN, SPECIFICATIONS & DETAILS
PLUMBING

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5850 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27585

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS

NO. DATE

DATE ISSUED: 9/5/2023
DRAWN BY: CH
CHECKED BY: AB

SHEET NO.

P-101



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DESIGN DATA		
1.	ALL CONSTRUCTION SHALL COMPLY AS APPROPRIATE WITH THE FOLLOWING CODES AND/OR SPECIFICATIONS: NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND OTHER APPLICABLE CRITERIA, REFERENCE TO OTHER STANDARD SPECS. OR CODES SHALL MEAN THE LATEST VERSION.	
2.	DESIGN LOADS:	
A.	DEAD LOADS:	PER MODULAR BUILDING MANUF.
B.	LIVE LOADS:	PER MODULAR BUILDING MANUF.
C.	SNOW LOADS:	PER MODULAR BUILDING MANUF.
D.	WIND LOADS:	
	BASIC WIND SPEED (3-SEC GUST)	115 MPH
	EXPOSURE CATEGORY	C
	IMPORTANCE FACTOR, Iw =	1.00
	ENCLOSURE CLASSIFICATION	ENCLOSED
	DIRECTIONALITY FACTOR, kd =	0.85
	INTERNAL PRESSURE COEFFICIENT, GCpi =	±0.18
E.	SEISMIC LOAD:	
	SOIL SITE CLASS	D
	IMPORTANCE FACTOR, Ie =	1.00
	0.2 SECOND Ss	0.140g
	1.0 SECOND S1	0.070g
	0.2 SECOND Sds	0.149g
	1.0 SECOND Sd1	0.113g
	SEISMIC DESIGN CATEGORY	B
3.	FOUNDATION DESIGN DATA	
	ALLOWABLE SOIL BEARING PRESSURE	2,000 PSF



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PHONE: 744860180



DESIGN DATA

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

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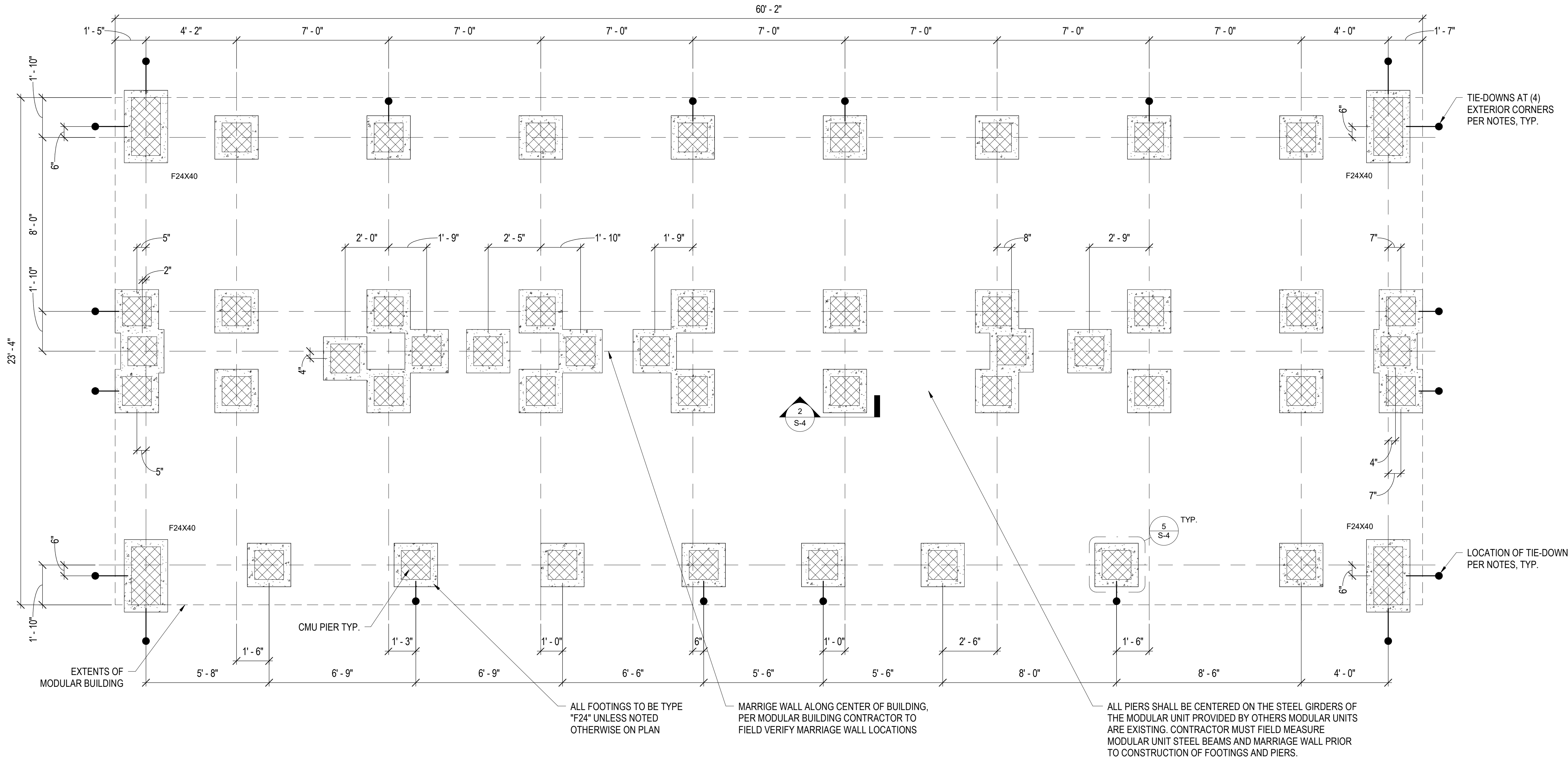
REVISIONS	
NO.	DATE

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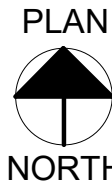
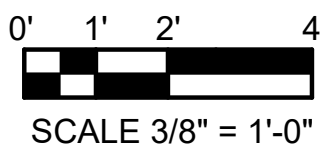


1 MODULAR BUILDING STRUCTURAL FOUNDATION PLAN
3/8" = 1'-0"

MODULAR BUILDING FOUNDATION PLAN NOTES

- ALL DIMENSIONS SHOWN ON PLAN ARE TO CMU PIER CENTERLINES, UNLESS OTHERWISE DIMENSIONED ON PLAN.
- PIER FOOTINGS SHALL BE CENTERED ON CMU PIER CENTERLINES, UNLESS OTHERWISE DIMENSIONED. SEE PLAN.
- REFER TO SITE DRAWINGS FOR ACTUAL FINISHED ELEVATIONS. REFERENCED FINISHED EXTERIOR GRADE ELEVATION WILL BE 0'-0".
- PROVIDE MIN. 4" OF WASH STONE (#57) BELOW ALL FOUNDATION ELEMENTS, TYP.
- TOP OF PIER FOOTINGS AND CONTINUOUS FOOTINGS TO BE -0'-8" BELOW FINISHED GRADE, PER CIVIL, TYP. U.N.O. BOTTOM OF ALL FOUNDATIONS TO BE MIN. -1'-6" BELOW FINISHED GRADE TO MAINTAIN 18" MINIMUM FROST DEPTH, TYP.
- "F24" FOR EXAMPLE DENOTES 2'-0"x2'-0"x10"THICK FOOTING. REFERENCE STRUCTURAL FOUNDATION SCHEDULE AND DETAILS FOR ADDITIONAL REQUIREMENTS.
- ALL DIMENSIONS SHOWN ARE TO CENTERLINE OF PIERS, TYP. UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO CONSTRUCTION, TYP.
- TIE-DOWN STRAPS TO BE 1-1/4" X 0.035" TYPE-1, FINISH B, GRADE ONE ZINC COATED STEEL STRAPPING CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT AS CONFORMING WITH ASTM D3953-91. TIE DOWN STRAPS AND CONNECTING HARDWARE TO HAVE 3150 LB. MINIMUM WORKING CAPACITY.
- GROUND ANCHORS SHALL HAVE 3150 LB. MINIMUM WORKING CAPACITY AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

Structural Foundations Schedule						
Type	Width	Length	Foundation Thickness	Count	Volume	Footing Reinforcement
F24	2' - 0"	2' - 0"	10"	45	5.50 CY	(3) #4 BARS EA. WAY IN BTM. OF FTG.
F24X40	2' - 0"	3' - 4"	10"	4	0.82 CY	(3) #4 BARS EA. WAY IN BTM. OF FTG.
Grand total: 49				49	6.32 CY	



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MODULAR BUILDING FOUNDATION PLAN

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE CONSTRUCTION
ID.# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

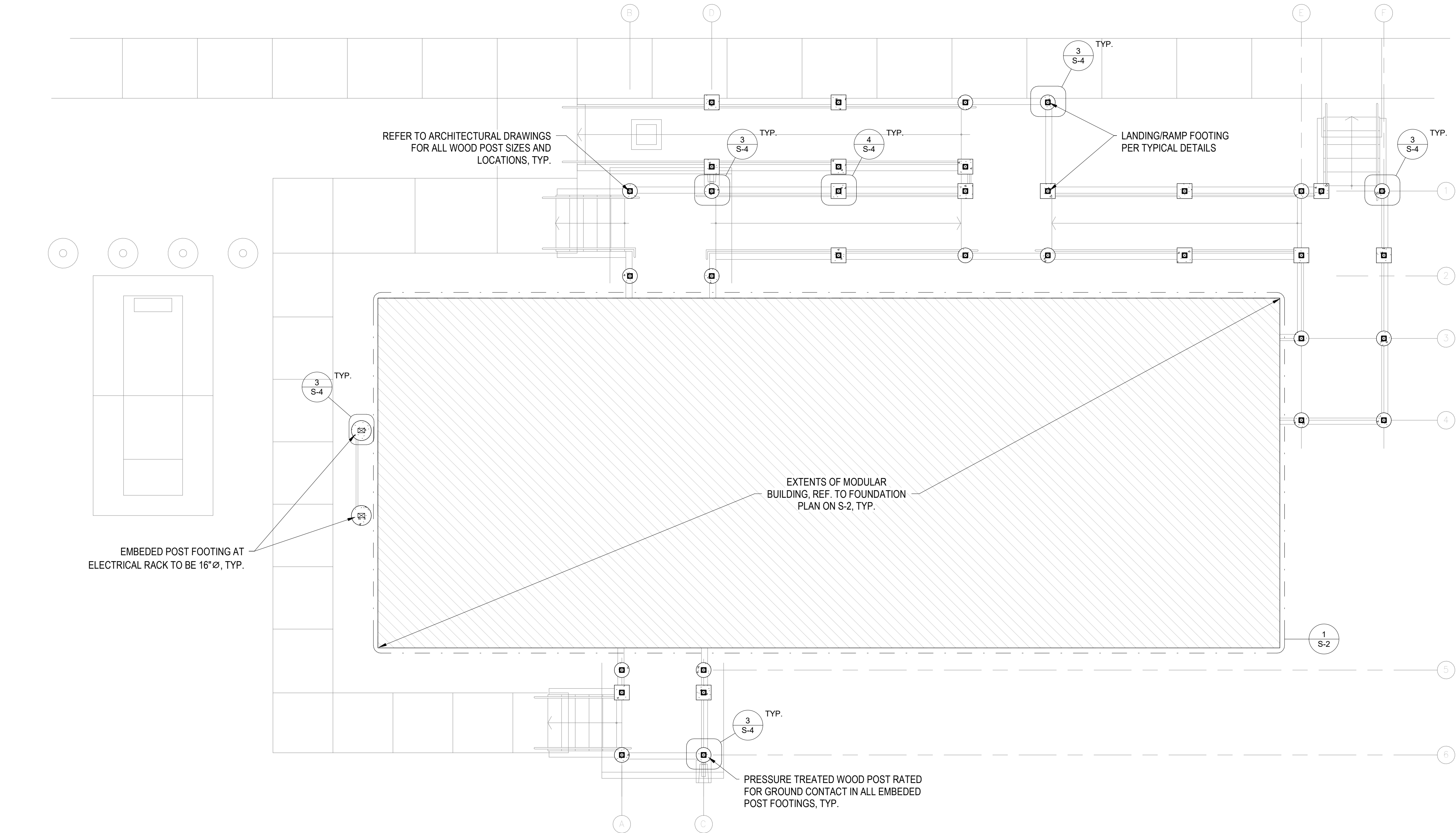
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SHEET NO.

S-2

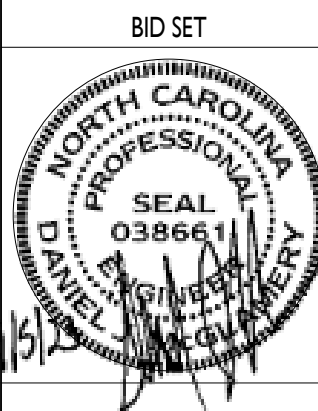
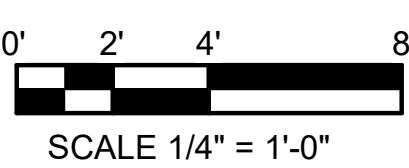
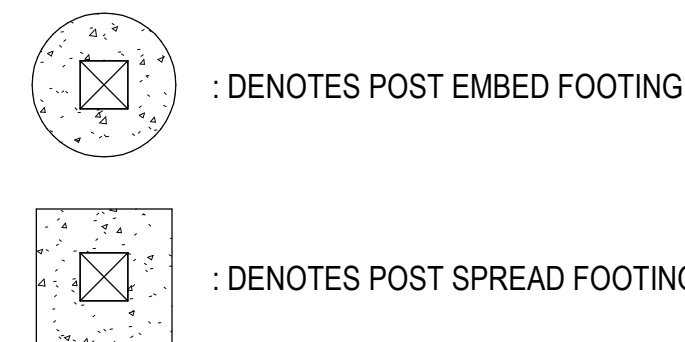


1 RAMP AND STAIR FOUNDATION PLAN
1/4" = 1'-0"

WOOD STAIR AND RAMP FOUNDATION PLAN NOTES

1. FOOTINGS SHALL BE CENTERED ON WOOD POST CENTERLINES UNLESS OTHERWISE DIMENSIONED. SEE PLAN.
2. REFER TO SITE DRAWINGS FOR ACTUAL FINISHED ELEVATIONS. REFERENCED FINISHED EXTERIOR GRADE ELEVATION WILL BE 0'-0".
3. PROVIDE MIN. 4" OF WASH STONE (#57) BELOW ALL FOUNDATION ELEMENTS, TYP.
4. ALL DIMENSIONS SHOWN ARE TO CENTERLINE OF POST, TYP. UNLESS NOTED OTHERWISE. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO CONSTRUCTION, TYP.
5. REFER TO DETAILS ON SHEET S-4 FOR ALL WOOD POST FOOTING REQUIREMENTS, TYP.
6. ALL POST TO BE SUPPORTED BY EMBED FOOTINGS, UNLESS NOTED OTHERWISE ON PLAN. IN LOCATIONS NOTED ON PLAN AS NON-EMBED FOOTINGS, POST MAY BE SUPPORTED BY SPREAD FOOTING. REF. TO PLAN FOR WOOD POST FOOTING TYPE BY LOCATION, TYP.
7. REFER TO ARCHITECTURAL DRAWINGS FOR WOOD POST LOCATIONS, TYP.

WOOD POST FOOTING KEY



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**RAMP AND STAIR
FOUNDATION PLAN**

Modular Office Relocation for
NCDOT Highway Division 5
Bridge Maintenance Office
5650 CORNWALL ROAD
OXFORD, NORTH CAROLINA 27565

STATE: CONSTRUCTION
ID# 22-24690-01A

EQUIPMENT NUMBER:
1320-0008-3222

REVISIONS

NO. DATE

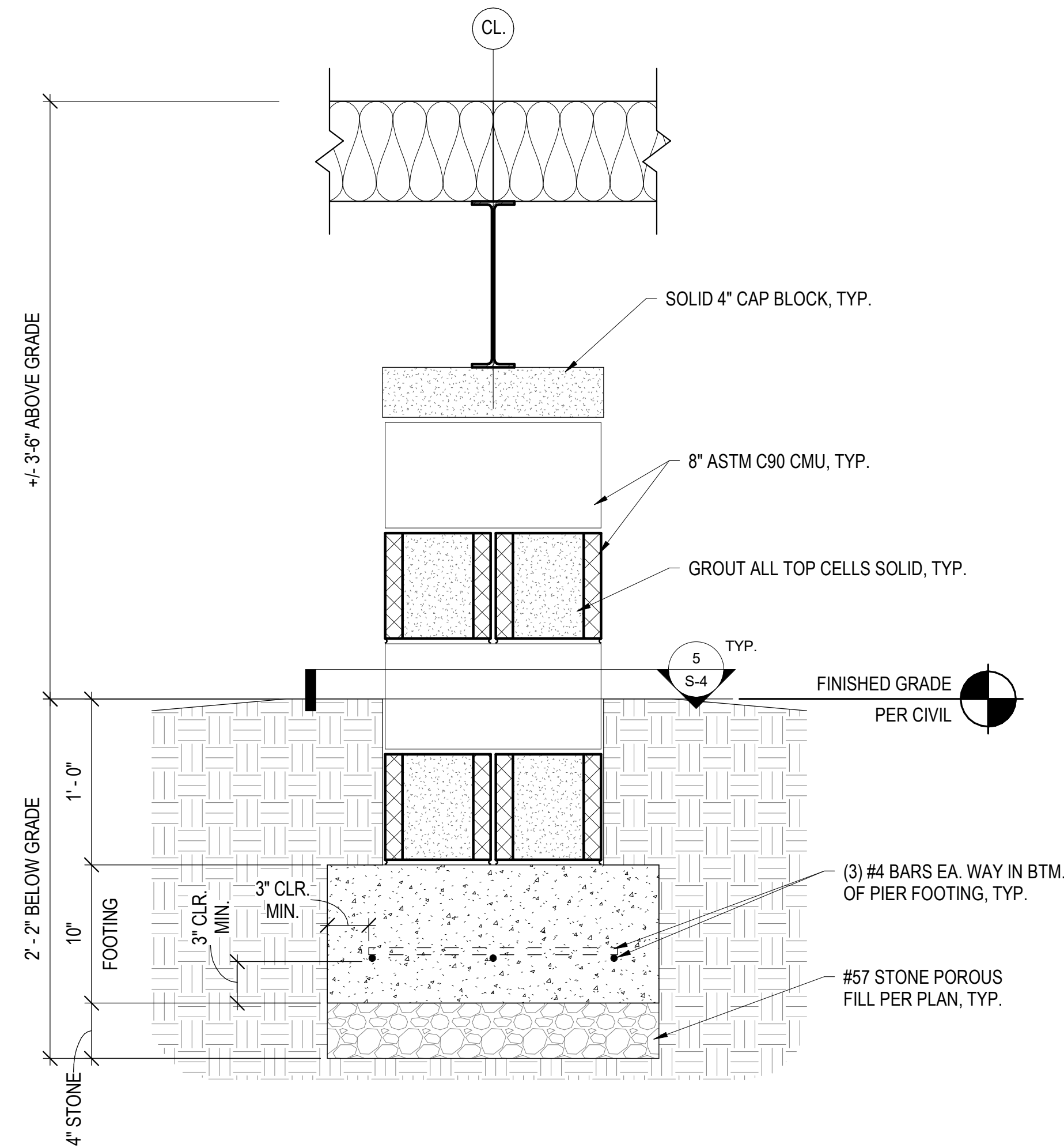
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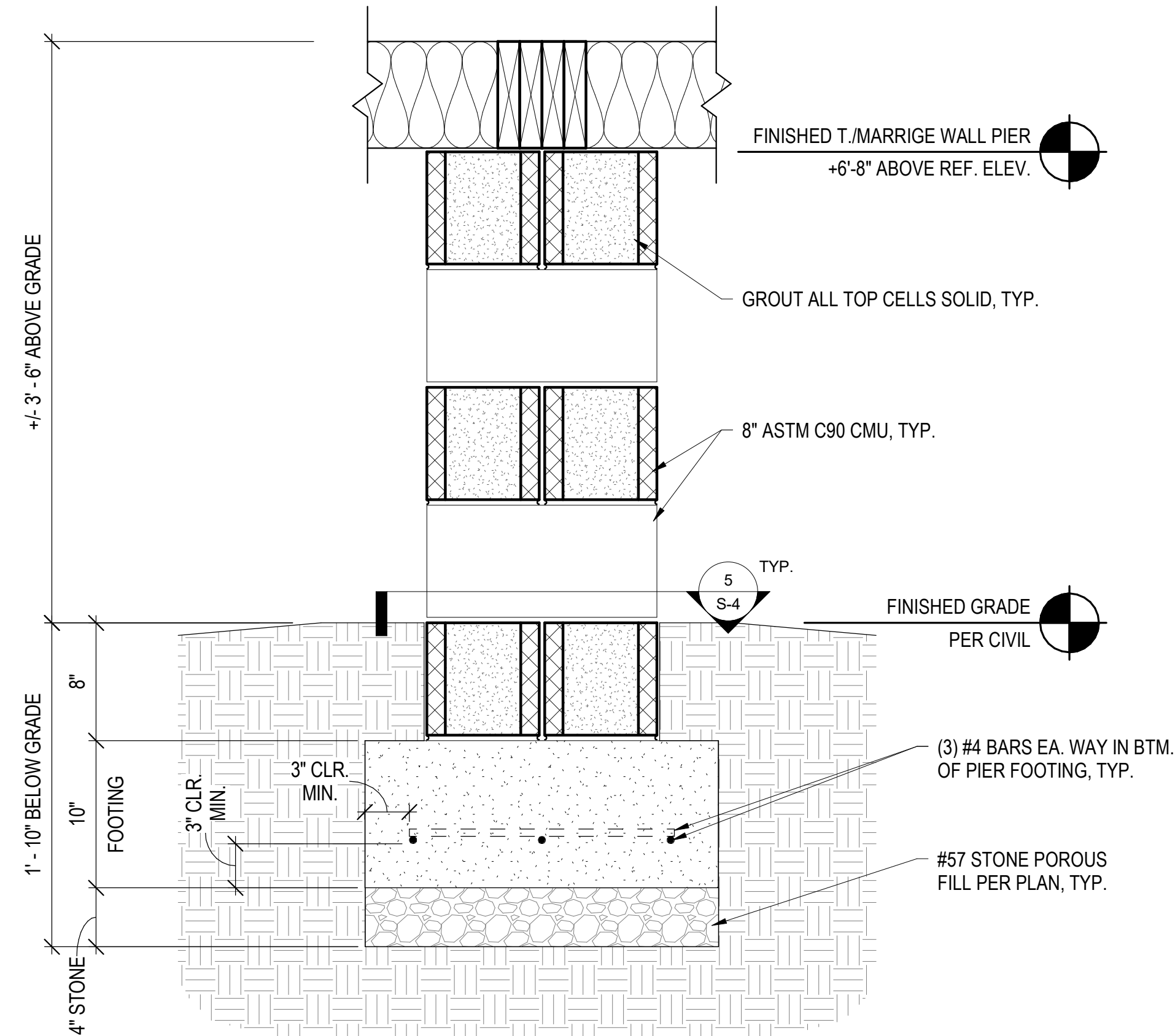
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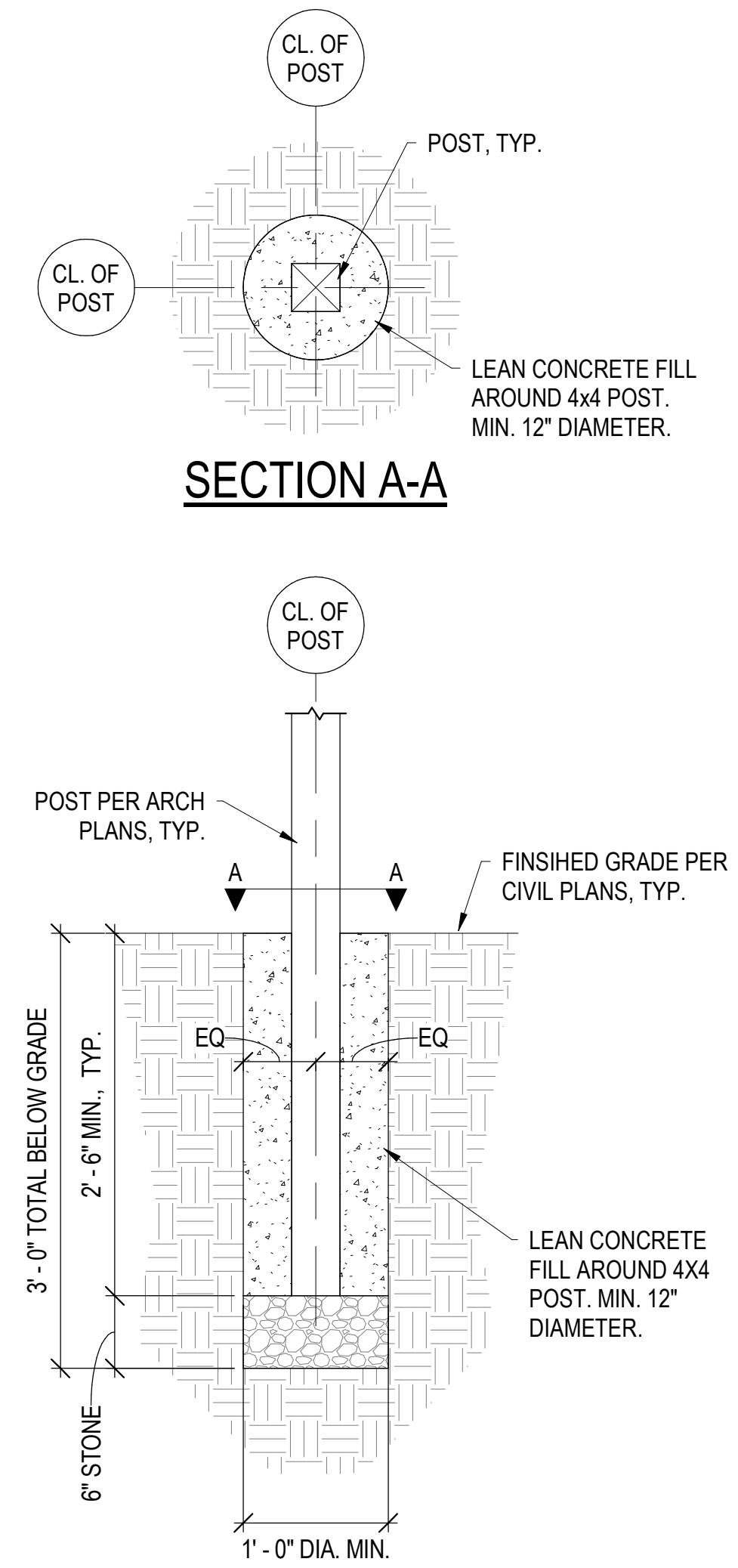
S-3



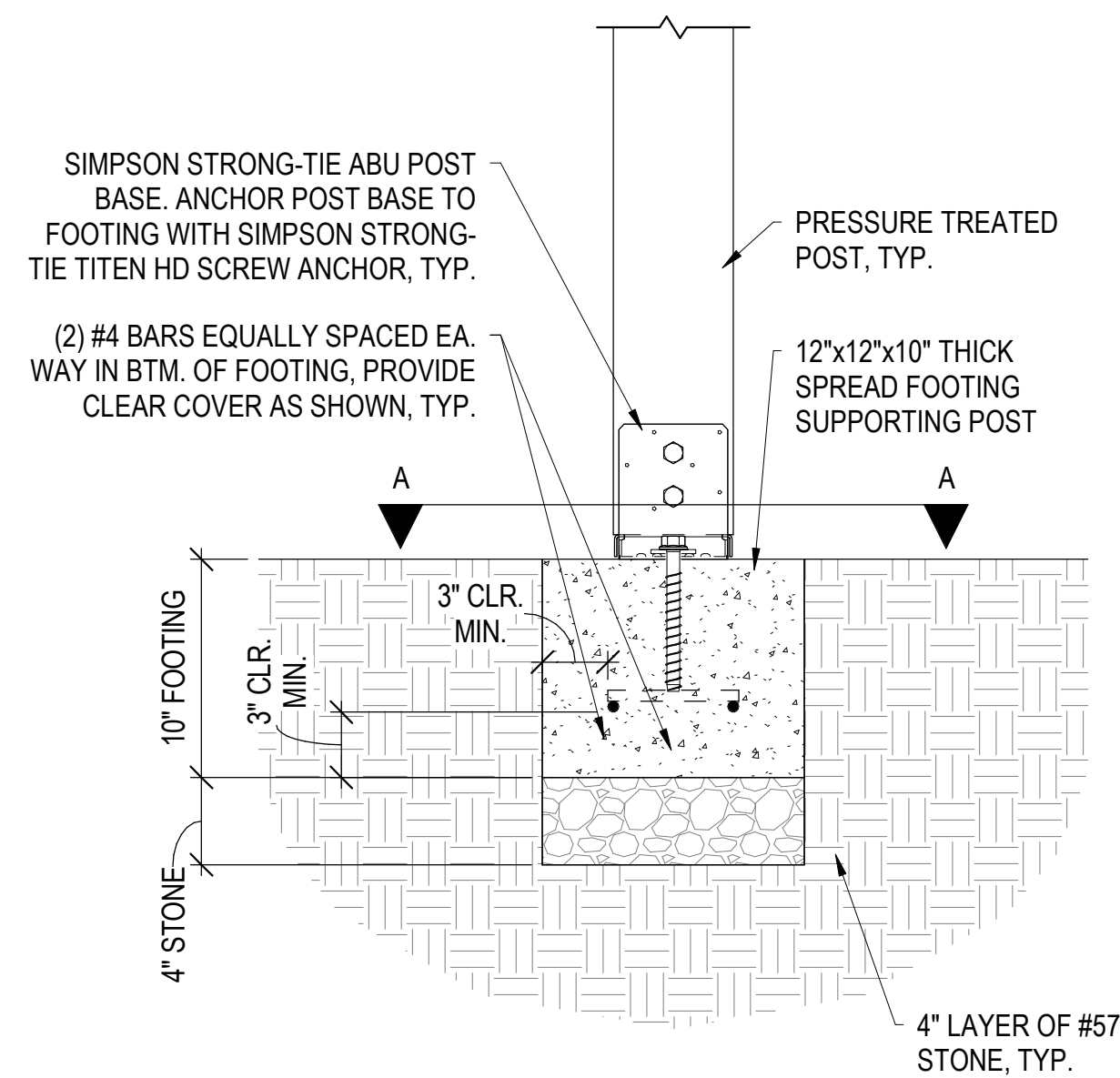
1 TYPICAL CMU PIER FOOTING SECTION AT STEEL BEAM



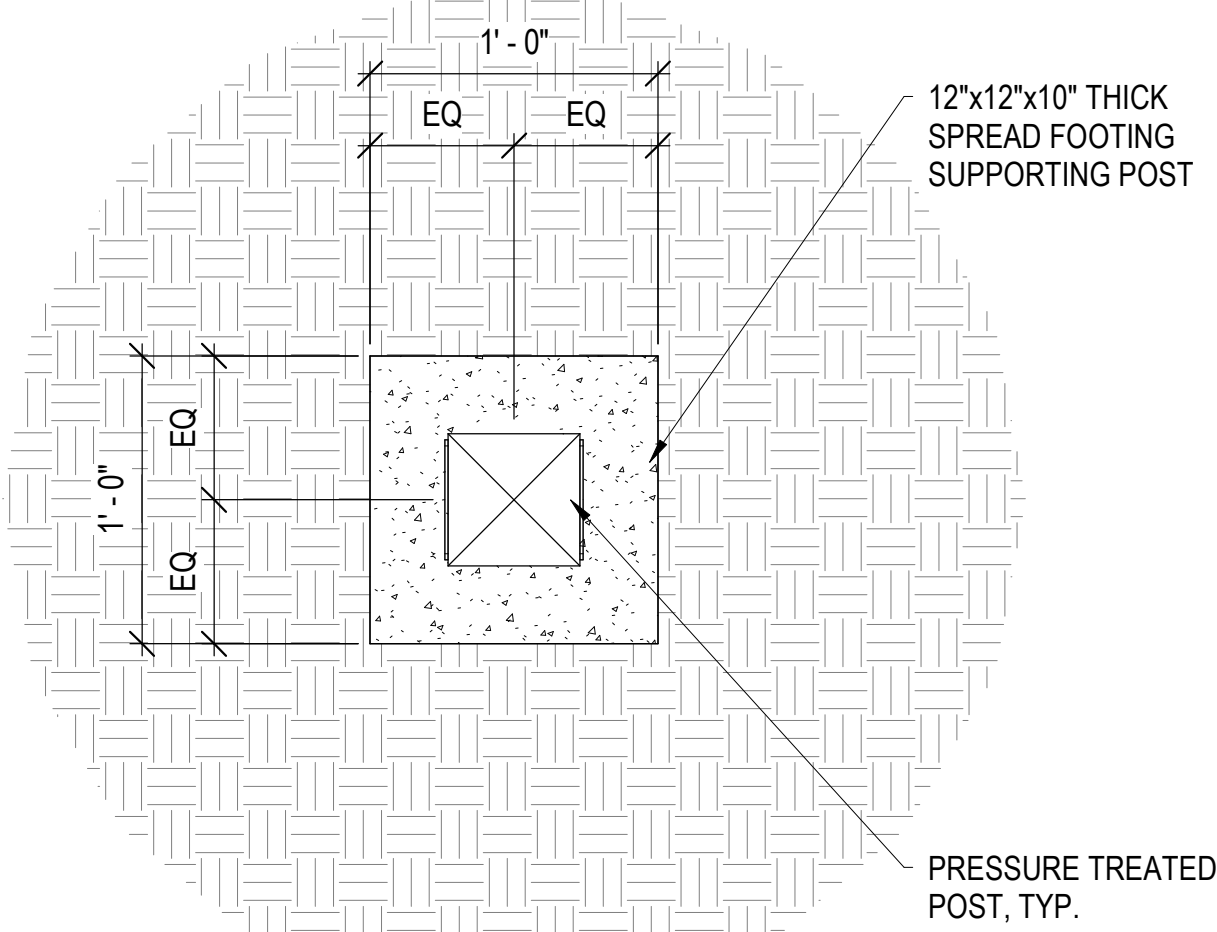
2 TYPICAL CMU PIER FOOTING SECTION AT MARRIGE WALL



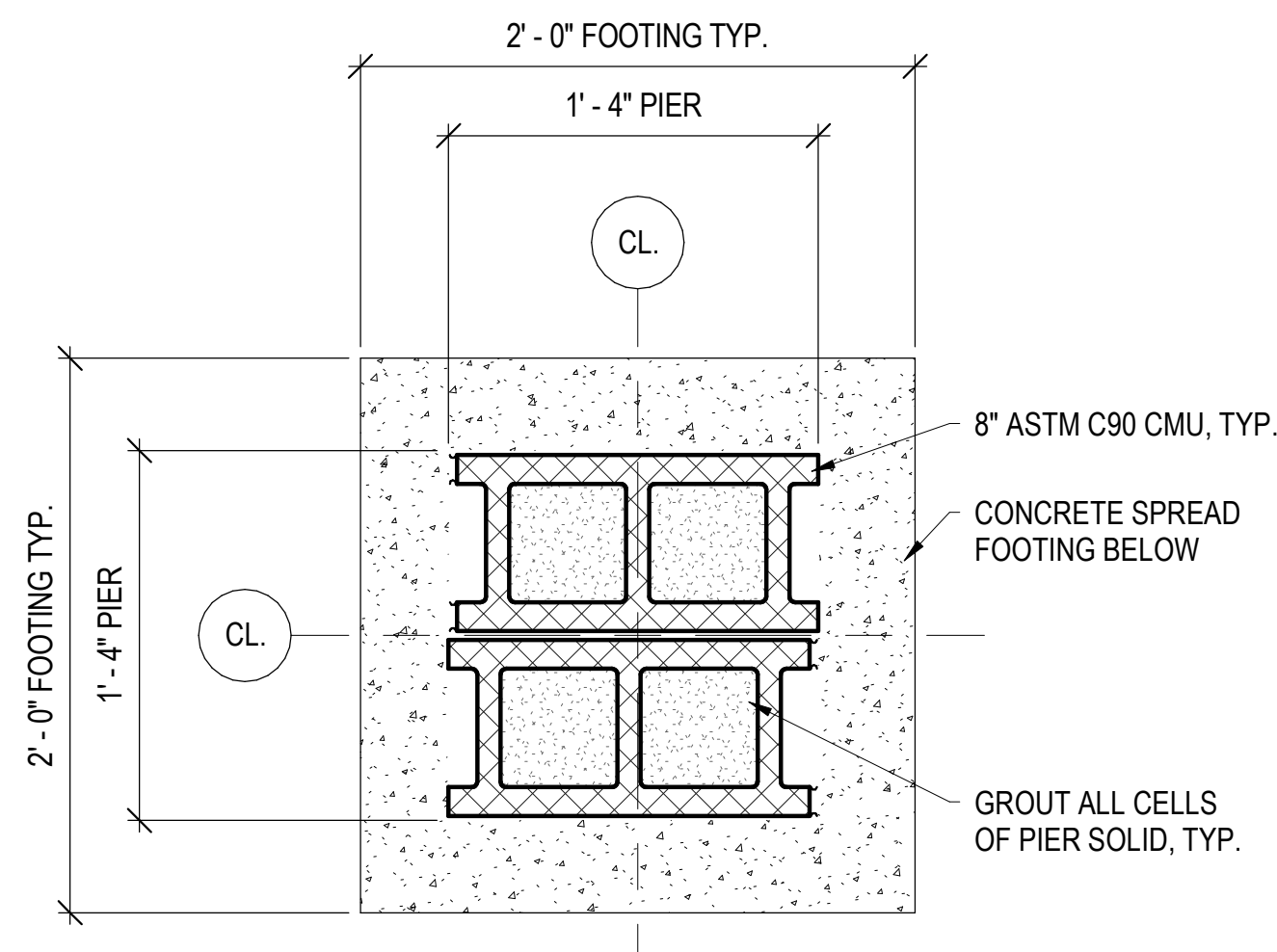
3 TYPICAL POST BASE DETAIL



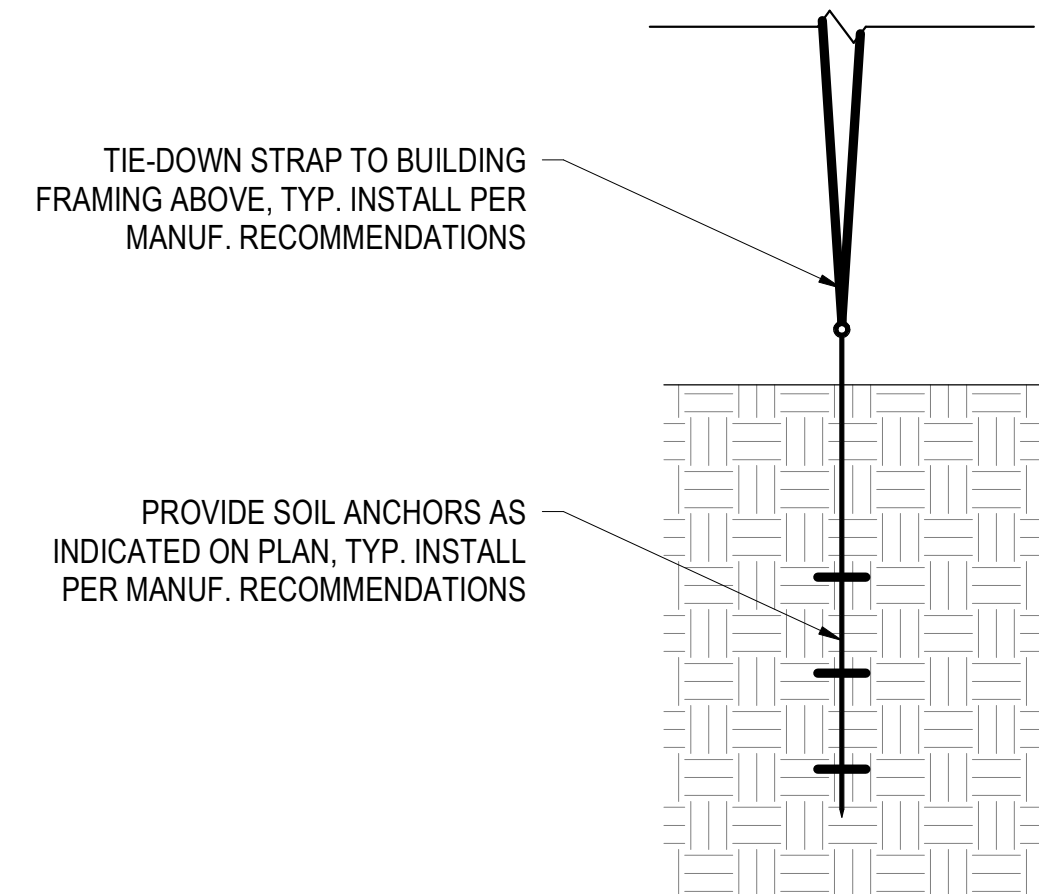
4 POST SPREAD FOOTING DETAIL



SECTION A-A



5 TYPICAL PIER FOOTING PLAN



6 TYPICAL GROUND ANCHORAGE DETAIL



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STRUCTURAL SECTION AND DETAIL VIEWS

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Bridge Maintenance Office
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