

Pender County Planning and Community Development

Planning Division

805 S. Walker Street
PO Box 1519
Burgaw, NC 28425



Phone: 910-259-1202
Fax: 910-259-1295
www.pendercountync.gov

Application Information Major Site Development Plan

Case Number: SDP 2023-269

Application Type: Major Site Development Plan

Applicant & Owner: Dr. Sara Lewis, DVM

Location: Approximately 420 feet from the intersection of US HWY 17 and Whitebridge RD on the southbound side of 17

Property ID #(s): 3282-21-9177-0000

Description: Major Site Development Plan application for the development of a veterinarian facility/office.

Current Zoning: GB. General Business & IT, Industrial Transitional

Technical Review Committee Meeting: January 4th, 2023 at 9am

Board of County Commissioners/Planning Board Meeting: TBD

Application Materials

Application Package
Site Plan

APPLICATION PACKAGE

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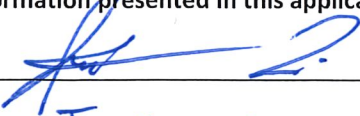
Major Site Development Plan Submission

Applications will be considered for the Technical Review Committee hearing and reviewed by Staff only when deemed complete. The application will be regarded as incomplete until the following items are received by the Planning and Community Development Staff.

1. **Pre-submittal Meeting**
Date of Meeting 11/13/23
2. **Signed Application**
3. **Payment**
\$250
4. **Paper Plan Sets**
Two (2) 24 x 36, Fifteen (15) 11 x 17
5. **Digital Submission**
For all documents submitted in paper copy, bring a digital copy with paper submission.
6. **Adjacent Property List**
A list of names and addresses, as obtained from the county tax listings and tax abstract, to the owners of all properties located within 500-feet of the perimeter of the project bounds.
7. **Adjacent Property Envelopes**
The applicant shall provide a set of business envelopes addressed to each of the owners of all properties located within 500-feet of the perimeter of the project bounds and accompanied with the amount of postage required for first class postage.
8. **Permits**
Include any permits issued on the project including but not limited to: environmental, traffic, utility, or site specific conditions.
9. **Site Plan Requirements**
A prepared site plan in accordance with the Unified Development Ordinance standards Section 6.3, Pender County Collector Street Plan, Pender County Transportation Plan, other approved State of Federal Transportation Improvement Plan, or any other adopted plan in Pender County.
(See Major Site Development Checklist)

I certify that all information presented in this application is accurate to the best of my knowledge.

Signature of Applicant

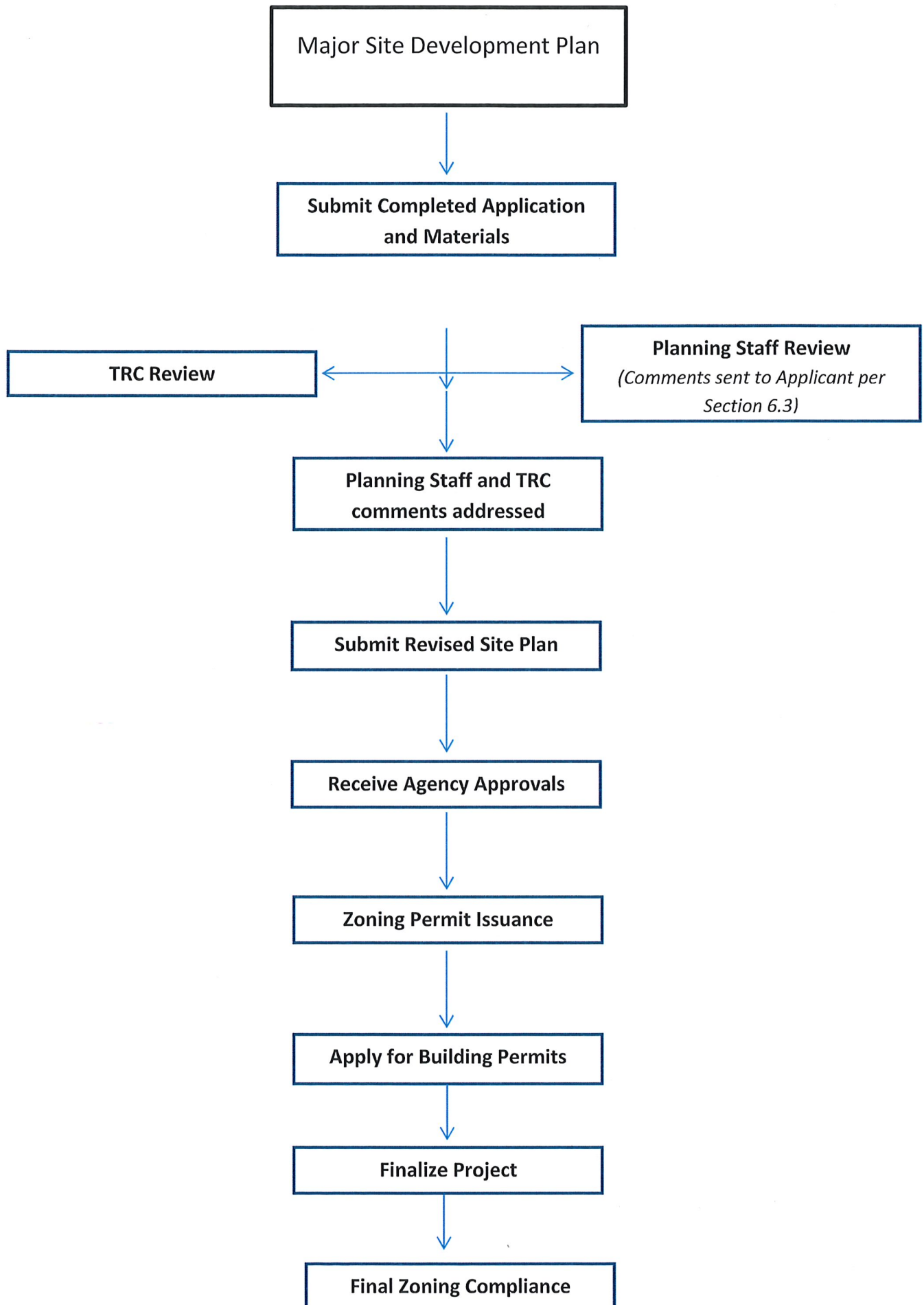


Jonathan Lewis

Date 11/29/23

Printed Name

Staff Initials: _____
Date: _____



Specific requirements can be found in Section 6.3 of the Pender County Unified Development Ordinance

Major Site Development Plan Specific Requirements

1. Major Site Development Application Submittal

- Site Plan (per Section 6.3)
 - Scale
 - North Arrow
 - All property information (zoning, setbacks, PIN #)
 - Adjacent property info (owner, zoning, use, PIN #)
 - References to any previously approved plans
 - Utility providers
 - All existing and proposed structures
 - Buffering (Section 8.2.6) & Landscaping (8.3)
 - Parking (Section 7.10)
 - Lighting
 - Cross Access Connections (Section 7.4.4)
 - AM/PM Peak Hour Trip Calculations (TIA required with 100 AM/PM trips or >1,000 trips per day)
 - Soil Erosion and Sedimentation Control Plan
 - Location of all environmental features
 - Stormwater management features
 - Proposed accesses, easements, streets, and sidewalks
- Permits received

2. TRC Meeting

- Site Plan Review
- Agency comments/requirements

3. Post-TRC Meeting

- Submit site plan with revisions
- Receive agency approvals
- Forward all agency approvals to Planning Staff.

4. Approval of Site Plan

- All TRC comments and agency requirements addressed
- Zoning approval allows for building permit process to begin
- Apply for building permits

5. Final Zoning

- Site Visit to check the following:
 - Landscaping
 - Buffering
 - Parking

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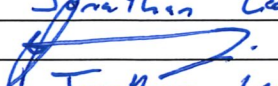
MAJOR AND MINOR SITE DEVELOPMENT APPLICATION

THIS SECTION FOR OFFICE USE			
Date:	Permit Number:	Permit Fee:	Invoice Number:
*Zoning Approval ONLY: YES / NO		Final Zoning Compliance Approved: YES / NO / N/A	
Type of Site Development Plan:	<input type="checkbox"/> Major	<input type="checkbox"/> Minor	
SECTION 1: GENERAL INFORMATION			
Applicant's Name:	Dr. Sara Lewis, DVM	Property Owner's Name:	SAME
Applicant's Address:	200 Krystal Pond Dr.	Property Owner's Address:	SAME
City, State, & Zip	Wilmington, NC 28411	City, State, & Zip	SAME
Phone Number:	910-336-9540	Phone Number:	SAME
Email Address:	saralewisdvm@gmail.com	Email Address:	SAME
Legal relationship of applicant to landowner:	Owner		
SECTION 2: PROJECT INFORMATION			
PIN (Property Id #):	3282-21-9177-0000	Total property acreage:	2.46
Zoning:	GB/IT	Acreage to be disturbed:	1.75
Water Provider:	PCU/Private Well	Wastewater Provider:	PCU
Directions to Site:	1.5 miles south from the intersection of Hwy 210 and US Hwy 17		
Lot Size: 2.46 ac		Sq Ft of Building: 5,380 sf	Building Height: 15 ft
Setbacks	Front: 25	Side: 10	Rear: 10
NAICS Code/Use:	541940/Veterinary Services		
Business Name:	Vet Cross Animal Urgent Care and Surgery		
Describe activities to be undertaken on project site:	Tree removal, clearing and grading for development of a single metal building, including driveway, parking, and stormwater management		
Ownership:	Number of Employees:	Number of Members:	Seating Capacity:
<input checked="" type="checkbox"/> Private <input type="checkbox"/> Public			

**If the applicant is not the owner of the property, a notarized letter from the property owner may be required*

**Zoning approval is for the use being proposed ONLY, other department approvals may be required i.e. Fire Marshal, Environmental Health, Permitting, etc...*

SECTION 4: ADDITIONAL COMMENTS

SECTION 5: SIGNATURES			
Applicant's Signature		Date:	11/29/23
Applicant's Name Printed	Jonathan Lewis	Date:	11/29/23
Owner's Signature		Date:	11/29/23
Owner's Name Printed	Jonathan Lewis	Date:	11/29/23
Planning Staff:		Date:	

SITE PLAN(S)

VET CROSS

ANIMAL URGENT CARE AND SURGERY

PARCEL: 3282-21-9177-0000
 PENDER COUNTY, NC
 TRC SUBMITTAL
 DECEMBER 01, 2023



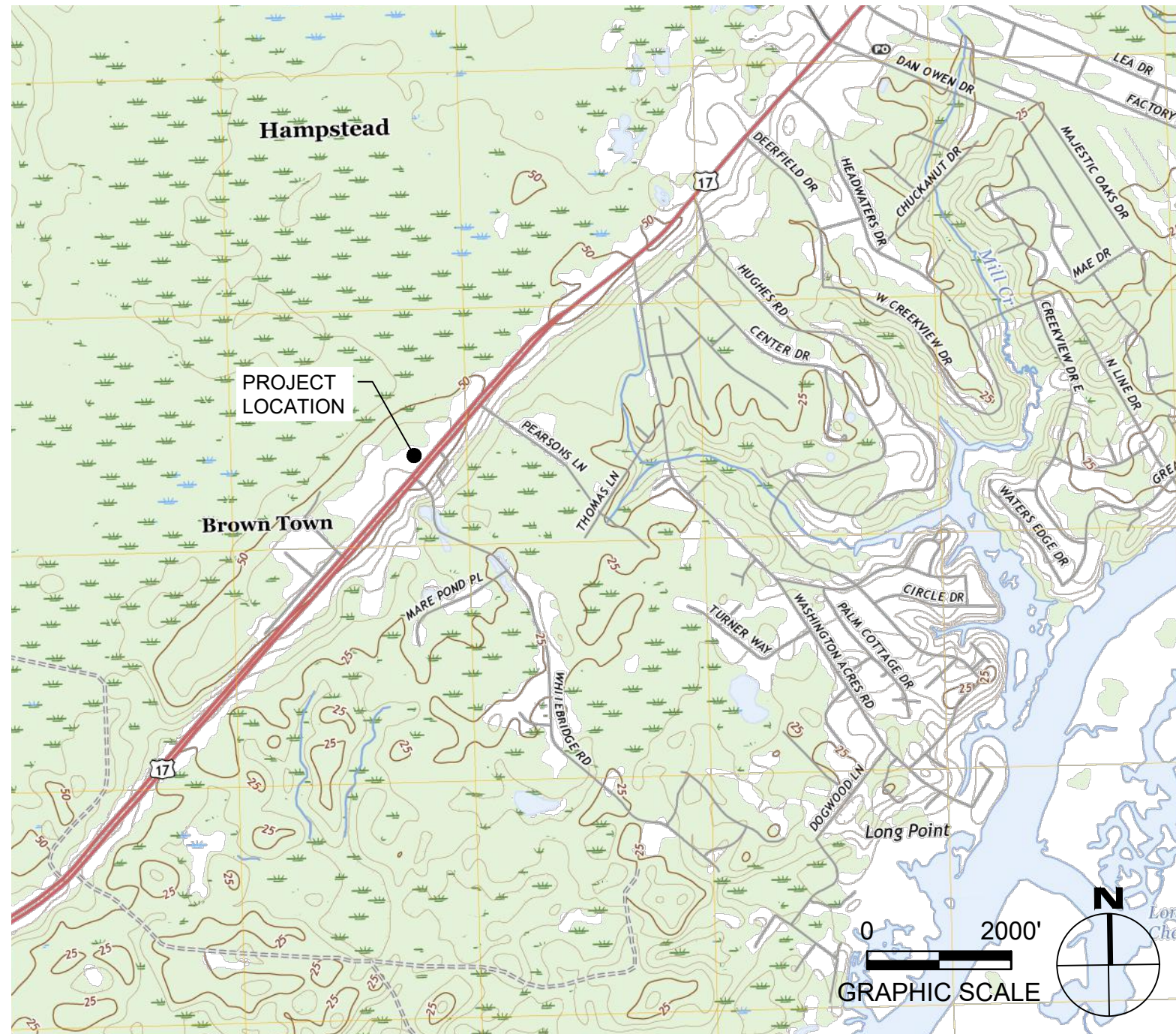
ENGINEER

Riverview
Engineering

4904 PARK AVENUE
 WILMINGTON, NC 28403
 (910) 398-2882
 nlauretta@rivervieweng.com

NC License No. P-1944

www.rivervieweng.com



1 LOCATION MAP
 SCALE: 1" = 2000'



2 VICINITY MAP
 SCALE: 1" = 500'

SHEET INDEX

SHEET NUMBER	TITLE
C-001	COVER SHEET
VX101	EXISTING CONDITIONS & DEMOLITION PLAN
CE101	SEDIMENT & EROSION CONTROL PLAN
CS101	SITE PLAN
CS102	DRIVEWAY PLAN
CG101	STORM DRAINAGE & GRADING PLAN
CU101	UTILITY PLAN
CE501	SEDIMENT & EROSION CONTROL DETAILS
CE502	SEDIMENT & EROSION CONTROL DETAILS
CE503	SEDIMENT & EROSION CONTROL DETAILS
CE504	SEDIMENT & EROSION CONTROL DETAILS
CS501	SITE DETAILS
CG501	STORM DRAINAGE & GRADING DETAILS
CG502	STORM DRAINAGE & GRADING DETAILS
CU501	UTILITY DETAILS
CU502	UTILITY DETAILS

PROJECT OWNER

DR. SARA LEWIS DVM
 MR. JOHN LEWIS
VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE
 DECEMBER 01, 2023

REVISIONS

NO.	DESCRIPTION

PRINCIPAL IN CHARGE

N. LAURETTA, PE, LEED AP

PROJECT MANAGER

NJL

DRAWN BY

NJL

PROJECT ADDRESS

HAMPSTEAD, NC

PROJECT NUMBER

1009.01

SHEET TITLE

COVER SHEET

SHEET NUMBER

C-001

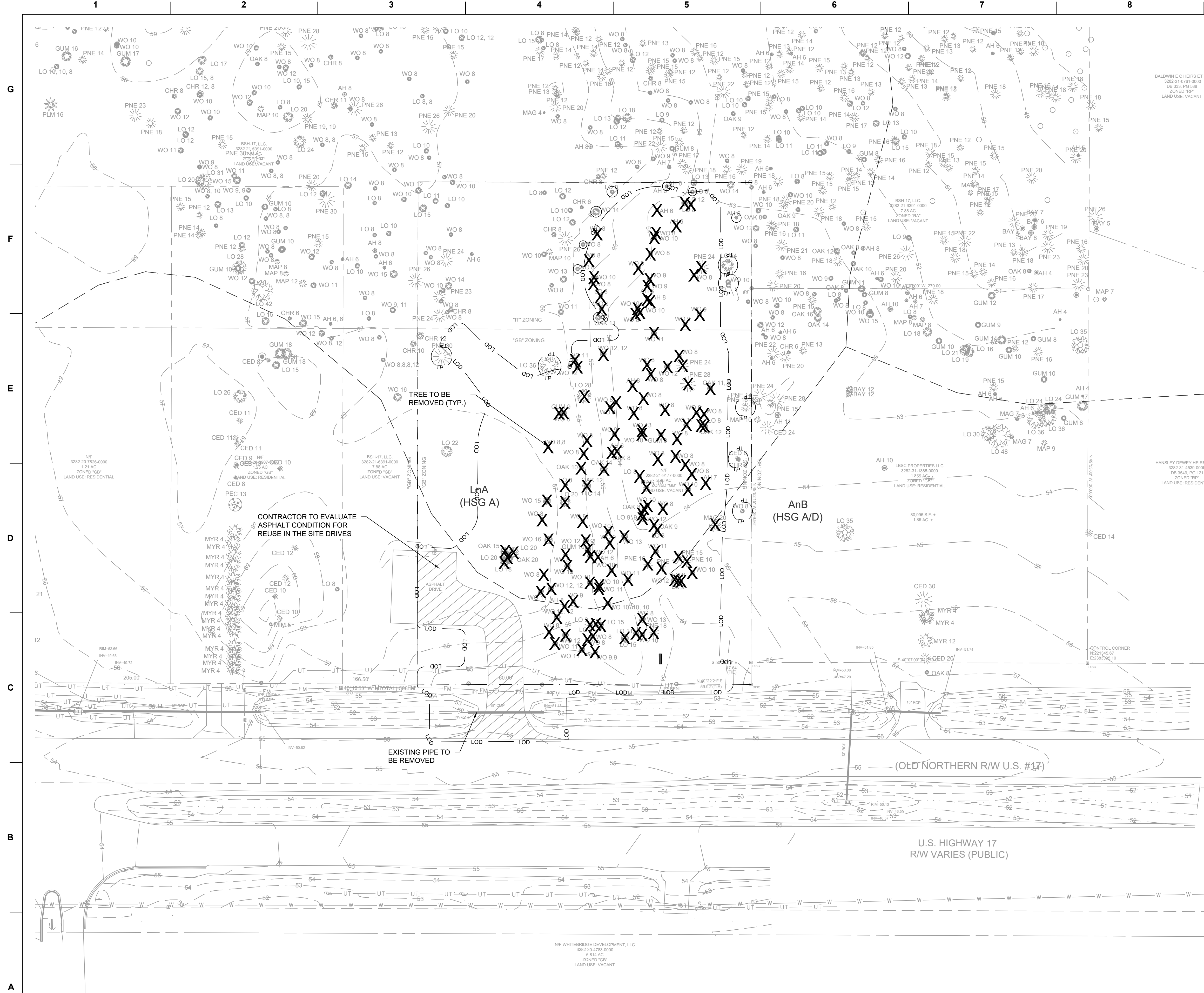
TREE REMOVAL

TREE TYPE	DBH (IN.)	MITIGATION (2" CAL.)	TREE TYPE	DBH (IN.)	MITIGATION (2" CAL.)	TREE TYPE	DBH (IN.)	MITIGATION (2" CAL.)	TREE TYPE	DBH (IN.)	MITIGATION (2" CAL.)	TREE TYPE	DBH (IN.)	MITIGATION (2" CAL.)
WATER OAK	9	2	OAK	20	2	WATER OAK	8	2	WATER OAK	8	2	PINE	24	0
WATER OAK	11	2	OAK	15	2	WATER OAK	10	2	WATER OAK	8	2	PINE	28	0
WATER OAK	8	2	WATER OAK	8	2	WATER OAK	8	2	WATER OAK	8	2	WATER OAK	9	2
WATER OAK	8	2	WATER OAK	12	2	LIVE OAK	8	2	WATER OAK	8	2	WATER OAK	9	2
WATER OAK	11	2	WATER OAK	8	2	LIVE OAK	9	2	WATER OAK	9	2	WATER OAK	10	2
WATER OAK	12	2	WATER OAK	16	2	LIVE OAK	20	2	WATER OAK	10	2	WATER OAK	10	2
WATER OAK	12	2	WATER OAK	12	2	LIVE OAK	8	2	WATER OAK	13	2	WATER OAK	8	2
WATER OAK	11	2	WATER OAK	8	2	OAK	9	2	WATER OAK	8	2	WATER OAK	9	2
WATER OAK	8	2	WATER OAK	15	2	OAK	8	2	WATER OAK	8	2	WATER OAK	8	2
AMERICAN HOLLY	8	2	PINE	18	0	OAK	12	2	WATER OAK	8	2	WATER OAK	10	2
LIVE OAK	8	2	GUM	10	0	OAK	10	2	WATER OAK	12	2	WATER OAK	8	2
LIVE OAK	9	2	WATER OAK	12	2	OAK	14	2	WATER OAK	11	2	WATER OAK	8	2
LIVE OAK	15	2	WATER OAK	11	2	OAK	8	2	WATER OAK	28	2	WATER OAK	8	2
LIVE OAK	11	2	WATER OAK	10	2	HICKORY	14	2	OAK	12	2	WATER OAK	9	2
LIVE OAK	15	2	WATER OAK	12	2	MAGNOLIA	10	0	OAK	11	2	WATER OAK	8	2
WATER OAK	10	2	WATER OAK	9	2	MAGNOLIA	20	2	LIVE OAK	8	2	WATER OAK	9	2
WATER OAK	13	2	WATER OAK	13	2	WATER OAK	10	2	WATER OAK	8	2	WATER OAK	10	2
WATER OAK	8	2	WATER OAK	10	2	WATER OAK	8	2	WATER OAK	8	2	WATER OAK	8	2
WATER OAK	10	2	PINE	16	0	WATER OAK	8	2	WATER OAK	8	2	WATER OAK	8	2
WATER OAK	9	2	PINE	15	0	WATER OAK	8	2	WATER OAK	8	2	PINE	24	0
WATER OAK	12	2	PINE	15	0	WATER OAK	8	2	WATER OAK	8	2	LIVE OAK	8	2
WATER OAK	10	2	PINE	16	0	WATER OAK	8	2	WATER OAK	12	2	LIVE OAK	12	2
WATER OAK	10	2	LIVE OAK	8	2	WATER OAK	11	2	WATER OAK	8	2	AMERICAN HOLLY	8	2
WATER OAK	11	2	LIVE OAK	9	2	AMERICAN HOLLY	7	2	WATER OAK	8	2	AMERICAN HOLLY	12	2
LIVE OAK	20	2	WATER OAK	10	2	AMERICAN HOLLY	6	2	WATER OAK	11	2			
LIVE OAK	18	2	WATER OAK	11	2	GUM	8	0	WATER OAK	12	2			
LIVE OAK	20	2	WATER OAK	12	2	GUM	9	0	AMERICAN HOLLY	8	2			

WHERE ANY SIGNIFICANT TREE SHOWN ON THE SIGNIFICANT TREE SURVEY IS PROPOSED TO BE REMOVED SUCH REMOVAL SHALL BE MITIGATED BY THE PLANTING ON SITE OF TWO (2) TREES OF THE SAME SPECIES WITH A MINIMUM CALIPER OF 2" OR GREATER.
240 (2" CALIPER) TREES SHALL BE PLANTED

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF PENDER COUNTY SPECIFICATIONS AND DETAILS.
- ALL SITE WORK, AT A MINIMUM, SHALL BE PERFORMED IN ACCORDANCE WITH THE 2024 NCDOT ROADWAY STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE NOTED OR DIRECTED. ROADS SHALL BE CONSTRUCTED TO NCDOT STANDARDS AND SPECIFICATIONS (LATEST EDITION).
- UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC 811 OR THE APPROPRIATE UTILITY COMPANIES PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ANY EXISTING ON SITE ITEMS AS SHOWN ON THE DEMO PLAN, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION.
- THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH CURRENT OSHA REGULATIONS.
- THE CONTRACTOR SHALL GRADE, SEED, AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
- ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND OWNER PRIOR TO INSTALLATION/CONSTRUCTION. THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FFE'S, AND FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE AND COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION.
- THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE. OFFSITE BORROW OR WASTE MAY BE REQUIRED.
- ALL PIPE INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING GRAVITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY. ALL CONCRETE PIPE SHALL BE REINFORCED CLASS III.
- NEW SIGNS REQUIRE ZONING COMPLIANCE AND BUILDING PERMITS PER UDO. A PERMIT IS REQUIRED FOR THE SITE IDENTIFICATION SIGN. SIGN SHALL MEET PENDER COUNTY STANDARDS.
- NO ADDITIONAL OUTDOOR LIGHTING IS PROPOSED. NEW LIGHTING REQUIRES ADDITIONAL PLANS AND PERMITS TO ENSURE COMPLIANCE WITH UDO.



LEGEND

- EDGE OF ASPHALT
- EDGE OF CONCRETE
- CENTERLINE
- PROPERTY RIGHT OF WAY
- PROPERTY EASEMENT
- PROPERTY LINE
- 55 — MAJOR CONTOUR
- 54 — MINOR CONTOUR
- UT — UT — UT — UNDERGROUND TELECOMMUNICATIONS LINE
- W — W — W — WATER LINE
- FM — FM — FM — FORCEMAIN
- LOD — LOD — LOD — STORMWATER LINE
- LOD — LOD — LOD — LIMITS OF DISTURBANCE
- TP — TP — TP — TREE PROTECTION FENCE
- ☼ TREE
- ☼ TO BE REMOVED
- ☼ X TREE TO BE REMOVED

- DEMOLITION NOTES**
1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
 2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
 3. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST GENERATED BY THE WORK, INCLUDING BUT NOT LIMITED TO DEMOLITION AND CONSTRUCTION ACTIVITIES, SITE VEHICULAR TRAFFIC AND RELATED OPERATIONS.
 4. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL EXISTING UTILITIES LOCATED PRIOR TO BEGINNING ANY DEMOLITION. CONTRACTOR SHALL CONTACT NC ONE CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED.
 5. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE AND ENGINEER IMMEDIATELY.
 6. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF DISCONNECTING AND ABANDONING ALL EXISTING UTILITIES WITH THE OWNER UNLESS OTHERWISE NOTED. ALL EXISTING UTILITIES AND ASSOCIATED PIPING, ETC. NOT IN USE ON THE SITE SHALL BE PROPERLY ABANDONED AND REMOVED AS REQUIRED. COORDINATE WITH THE OWNER.
 7. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING UTILITIES THAT REMAIN IN SERVICE DURING DEMOLITION.
 8. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZATION OF ALL DISTURBED AREAS AND SLOPES ON AND OFF SITE IN ACCORDANCE WITH THE EROSION CONTROL MEASURES SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHO IS RESPONSIBLE FOR PROVIDING THE PERMANENT STABILIZATION MEASURES AND THE TYPE OF PERMANENT MEASURES PRIOR TO BEGINNING DEMOLITION AND CONSTRUCTION. THE PERMANENT STABILIZATION MEASURES SHALL BE IN PLACE AND ACCEPTABLE TO THE OWNER'S REPRESENTATIVE AND ENGINEER PRIOR TO PROJECT CLOSEOUT.
 9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.
 10. WETLANDS DO NOT EXIST ON THIS PROJECT. WETLANDS WILL NOT BE DISTURBED DURING CONSTRUCTION OF THIS PROJECT.

- EXCAVATION, GRADING, AND BACKFILLING NOTES**
1. ANY UNDERCUTTING IN GOOD SOIL SHALL BE REPLACED AND THE REPLACEMENT MATERIAL SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE ASTM D 698 STANDARD PROCTOR TEST METHOD. IN THE EVENT THAT MATERIAL ENCOUNTERED AT PIPE GRADE, SUBGRADE OF PARKING OR ROADWAYS AND SUBGRADE OF BUILDING FOUNDATIONS IS FOUND TO BE SOFT, SPONGY, OR IN ANY OTHER WAY UNSUITABLE, THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER IMMEDIATELY. SUCH UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH AS SPECIFIED BY THE GEOTECHNICAL ENGINEER AND REPLACED WITH A MINIMUM OF SIX (6) INCHES OF STONE, OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
 2. BEFORE BACKFILLING IS COMMENCED OVER PIPES AND OTHER INSTALLATIONS, EARTH FILL SHALL BE SOLIDLY TAMPED AROUND AND ABOVE THE PIPE TO A DEPTH OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE. CARE SHALL BE TAKEN TO PREVENT ANY DISTURBANCE TO THE PIPE OR DAMAGE TO NEWLY MADE JOINTS. THE FILLING OF THE TRENCH SHALL BE CARRIED OUT SIMULTANEOUSLY ON BOTH SIDES OF THE PIPES IN SUCH A MANNER THAT INJURIOUS SIDE PRESSURES DO NOT OCCUR.
 3. THE MATERIAL FOR BACKFILLING SHALL BE FREE FROM ALL PERISHABLE AND OBJECTIONABLE MATERIALS. BEFORE PLACING ANY BACKFILL, ALL RUBBISH, FORM, BLOCKS, WIRES OR OTHER UNSUITABLE MATERIAL SHALL BE REMOVED FROM EXCAVATION. THE BACKFILLING OVER PIPES SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-FIVE (95) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST TO A DEPTH OF 12 INCHES BELOW FINISHED GRADE. THE LAST 12 INCHES OF BACKFILL SHALL BE PLACED IN LAYERS NOT OVER SIX (6) INCHES THICK AND COMPACTED TO A MINIMUM DENSITY OF NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR COMPACTION TEST.

ENGINEER

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 4904 PARK AVENUE
 WILMINGTON, NC 28403
 (910) 398-2882
 nlauretta@rivervieweng.com

NC License No. P-1944

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PROJECT OWNER

DR. SARA LEWIS DVM
 MR. JOHN LEWIS

VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE

DECEMBER 01, 2023

REVISIONS

NO.	DESCRIPTION

PRINCIPAL IN CHARGE
 N. LAURETTA, PE, LEED AP

PROJECT MANAGER
 NJL

DRAWN BY
 NJL

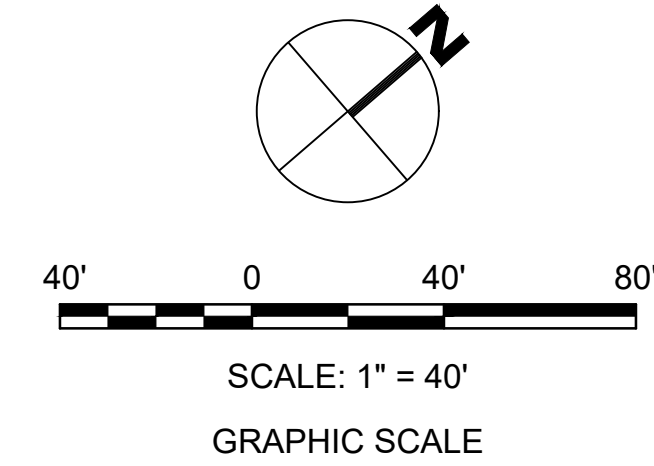
PROJECT ADDRESS
 HAMPSTEAD, NC

PROJECT NUMBER
 1009.01

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET NUMBER
VX101

1 EXISTING CONDITIONS & DEMOLITION PLAN
 SCALE: 1" = 40'





LEGEND

- LOD — LOD — LIMITS OF DISTURBANCE (LOD)
- TP — TP — TREE PROTECTION FENCE (TP)
- SF — SF — SILT FENCE (SF)
- → → DIVERSION DITCH (TDD)
- ▭ CONSTRUCTION ENTRANCE (CE)
- INLET PROTECTION (IP)
- - - - - PROPERTY LINE
- - - - - MAJOR CONTOUR
- - - - - MINOR CONTOUR
- ☼ TREE

- TREE PROTECTION NOTES**
- PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
 - NO LAND DISTURBANCE, INCLUDING TREE REMOVAL, IS TO OCCUR OUTSIDE THE PROJECT BOUNDARY SHOWN ON THE PLANS. UNLESS OTHERWISE NOTED, TREE PROTECTION FENCING IS SHOWN OUTSIDE OF PROJECT BOUNDARY FOR PROTECTION OF EXISTING TREES IN CLOSE PROXIMITY TO PROPOSED CONSTRUCTION.
 - PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT AND CONTRACTOR SHALL RECEIVE ADEQUATE INSTRUCTIONS ON TREE PROTECTION METHODS.
 - LAND CLEARING AND CONSTRUCTION CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION REQUIREMENTS AND METHODS.
 - NO EQUIPMENT IS ALLOWED ON THE SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING HAS BEEN INSTALLED AND APPROVED BY THE LANDSCAPE ARCHITECT.
 - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.

- EROSION CONTROL NOTES**
- TOTAL LAND DISTURBANCE AREA: 1.75 AC.
 - ANY GRADING BEYOND THE NUDEND LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
 - GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATED THE DISTURBANCE OF MORE THAN ONE ACRE WILL BE REQUIRED TO GET AN EROSION CONTROL PERMIT FROM NCEC.
 - GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING, AND A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
 - ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED.
 - SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
 - ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
 - IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEED, MULCHED, AND TACKED.
 - WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
 - ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

- CONSTRUCTION SEQUENCE:**
- OBTAIN ALL NECESSARY STATE AND LOCAL PERMIT APPROVALS.
 - PRIOR TO ANY CLEARING AND GRUBBING, INSTALL SILT FENCE, TREE PROTECTION FENCE AND GRAVEL CONSTRUCTION ENTRANCES.
 - COMMENCE CLEARING DOWN TO STUMPS WITHIN LIMITS OF CONSTRUCTION.
 - INSTALL ADDITIONAL TEMPORARY SEDIMENT TRAPS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS TO TREAT SEDIMENT LADEN WATER FROM ROADWAY MASS GRADING. TEMPORARY SKIMMER BASINS SHALL BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO A BASIN. THE CONTRACTOR SHALL FIELD ADJUST TEMPORARY DIVERSION DITCHES AS REQUIRED TO MAINTAIN THE DIVERSION TO THE BASINS.
 - INSTALL TEMPORARY SKIMMER BASIN PRIOR TO CONSTRUCTION OF ANY DIVERSION DITCHES THAT CONVEY WATER TO A BASIN.
 - COMMENCE GRUBBING AND MASS GRADING WITHIN LIMITS OF CONSTRUCTION.
 - INSTALL PUBLIC SEWER AND WATER, AND STORMWATER MANAGEMENT FACILITIES TO INCLUDE PIPING AND DRAINAGE SWALES.
 - REMOVE ACCUMULATED SEDIMENT FROM DITCHES AND SEDIMENT BASINS AS REQUIRED ON THE PLANS AND PERMIT.
 - COMPLETE ROADWAY, DRIVEWAY AND PARKING LOT CONSTRUCTION TO SUBGRADE.
 - INSTALL GRAVEL BASE IN ROADWAYS AND PARKING LOTS.
 - INSTALL FIRST LIFT OF BASE COURSE ASPHALT, AND THEN HOLD OFF ON THE FINAL ASPHALT COARSE UNTIL END OF CONSTRUCTION SEQUENCE.
 - REMOVE SILT FENCE INLET PROTECTION AND INSTALL STAGE TWO INLET PROTECTION.
 - COMMENCE BUILDING CONSTRUCTION.
 - THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN EROSION CONTROL MEASURES AND CLEAN TEMPORARY SEDIMENT TRAPS AND BASINS.
 - SEED AND STABILIZE ALL AREAS WITHIN FOURTEEN (14) DAYS OF EARTHWORK BEING LEFT UNDISTURBED FOR EXTENDED PERIODS OF TIME.
 - UPON COMPLETION OF CONSTRUCTION, PRIOR TO FINAL ASPHALT LIFT INSTALLATION, THE CONTRACTOR SHALL REQUEST FINAL INSPECTION FROM THE NCEC EROSION CONTROL INSPECTOR TO ALLOW REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES.

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PROJECT OWNER

**DR. SARA LEWIS DVM
 MR. JOHN LEWIS**

VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE
 DECEMBER 01, 2023

REVISIONS

NO.	DESCRIPTION

PRINCIPAL IN CHARGE
 N. LAURETTA, PE, LEED AP

PROJECT MANAGER
 NJL

DRAWN BY
 NJL

PROJECT ADDRESS
 HAMPSTEAD, NC

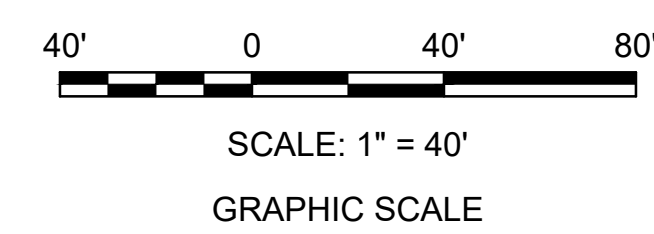
PROJECT NUMBER
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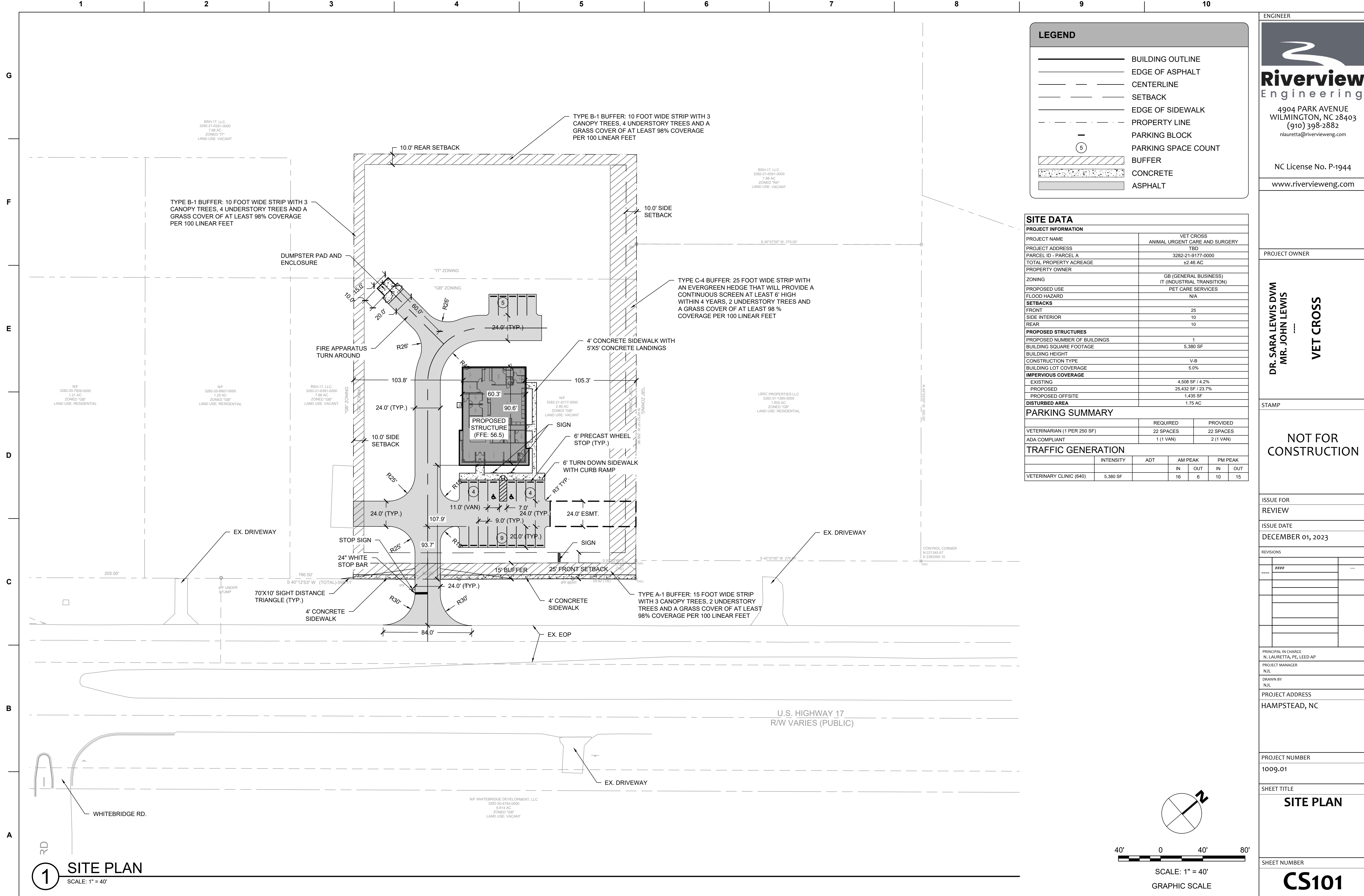
SHEET TITLE
SEDIMENT & EROSION CONTROL PLAN

SHEET NUMBER
CE101

TRC SUBMITTAL

1 SEDIMENT & EROSION CONTROL PLAN
 SCALE: 1" = 40'





LEGEND

- BUILDING OUTLINE
- EDGE OF ASPHALT
- CENTERLINE
- SETBACK
- EDGE OF SIDEWALK
- PROPERTY LINE
- PARKING BLOCK
- PARKING SPACE COUNT
- BUFFER
- CONCRETE
- ASPHALT

SITE DATA

PROJECT INFORMATION				
PROJECT NAME	VET CROSS			
PROJECT ADDRESS	ANIMAL URGENT CARE AND SURGERY			
PARCEL ID - PARCEL A	TBD			
TOTAL PROPERTY ACREAGE	3282-21-9177-0000			
PROPERTY OWNER	±2.46 AC			
ZONING	GB (GENERAL BUSINESS) IT (INDUSTRIAL TRANSITION)			
PROPOSED USE	PET CARE SERVICES			
FLOOD HAZARD	N/A			
SETBACKS				
FRONT	25			
SIDE INTERIOR	10			
REAR	10			
PROPOSED STRUCTURES				
PROPOSED NUMBER OF BUILDINGS	1			
BUILDING SQUARE FOOTAGE	5,380 SF			
BUILDING HEIGHT				
CONSTRUCTION TYPE	V-B			
BUILDING LOT COVERAGE	5.0%			
IMPERVIOUS COVERAGE				
EXISTING	4,508 SF / 4.2%			
PROPOSED	25,432 SF / 23.7%			
PROPOSED OFFSITE	1,435 SF			
DISTURBED AREA	1.75 AC			
PARKING SUMMARY				
VETERINARIAN (1 PER 250 SF)	REQUIRED	PROVIDED		
	22 SPACES	22 SPACES		
ADA COMPLIANT	1 (1 VAN)	2 (1 VAN)		
TRAFFIC GENERATION				
	INTENSITY	ADT	AM PEAK	PM PEAK
			IN	OUT
VETERINARY CLINIC (640)	5,380 SF		16	6
			10	15

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N. LAURETTA, PE, LEED AP

PROJECT MANAGER
NJL

DRAWN BY
NJL

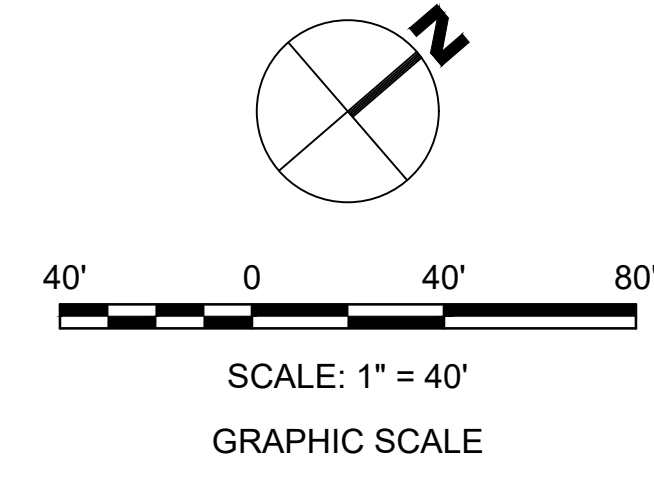
PROJECT ADDRESS
HAMPSTEAD, NC

PROJECT NUMBER
1009.01

SHEET TITLE
SITE PLAN

SHEET NUMBER
CS101

1 SITE PLAN
SCALE: 1" = 40'



NCDOT STANDARD DRAWINGS PART OF THIS SET BY REFERENCE

NCDOT DETAIL	DWG NO.
WORK ZONE ADVANCE WARNING SIGNS	1101.01
TEMPORARY LANE CLOSURES	1101.02
TRAFFIC CONTROL DESIGN TABLES	1101.11
PORTABLE WORK ZONE SIGNS	1110.02
PAVEMENT MARKINGS - LINE TYPES AND OFFSETS	1205.01
TEMPORARY SILT FENCE	1605.01
MATTING INSTALLATION	1631.01
COIR FIBER BAFFLE	1640.01

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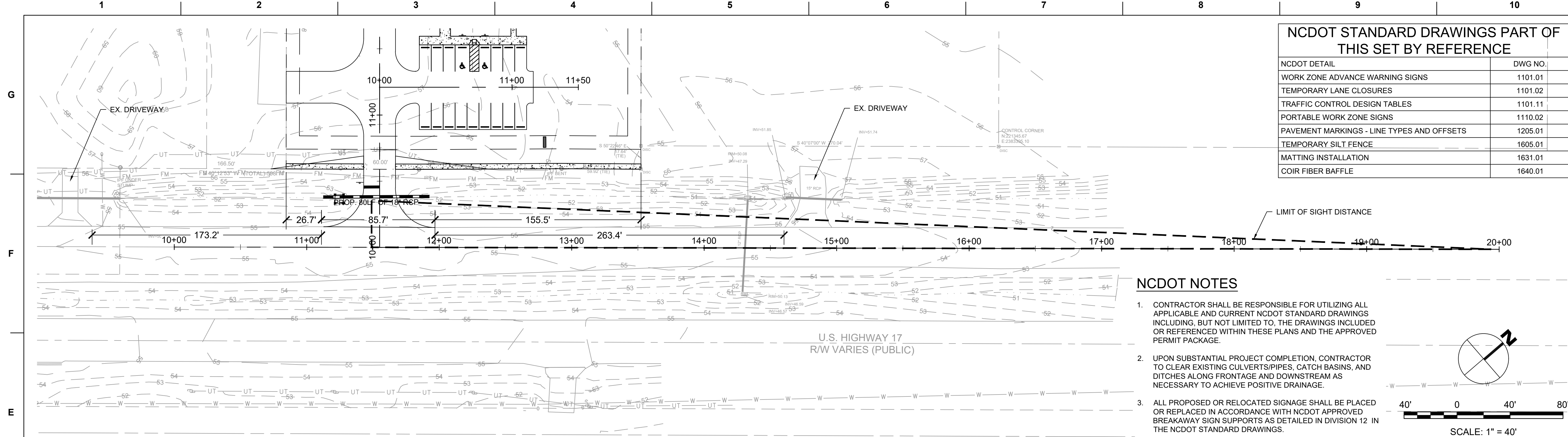
NO.	DESCRIPTION

PRINCIPAL IN CHARGE
N. LAURETTA, PE, LEED AP
PROJECT MANAGER
N.J.L.
DRAWN BY
N.J.L.
PROJECT ADDRESS
HAMPSTEAD, NC

PROJECT NUMBER
1009.01

SHEET TITLE
DRIVEWAY PLAN

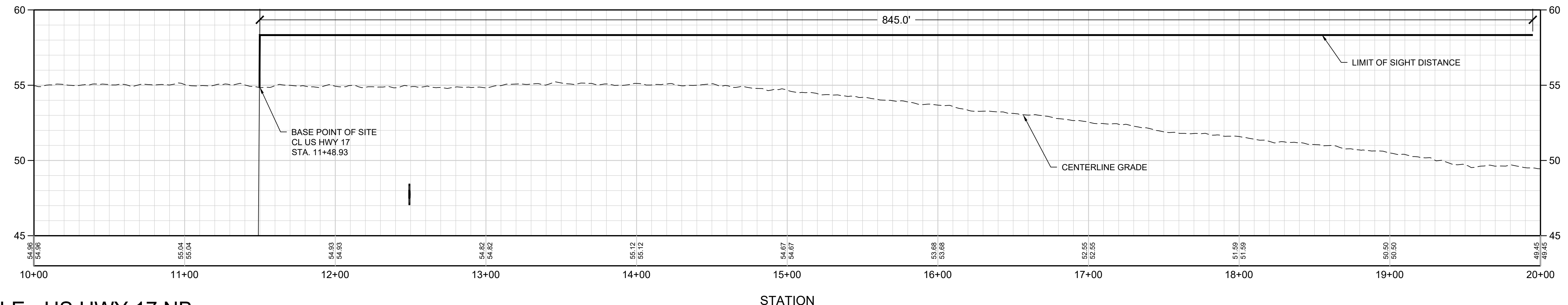
SHEET NUMBER
CS102



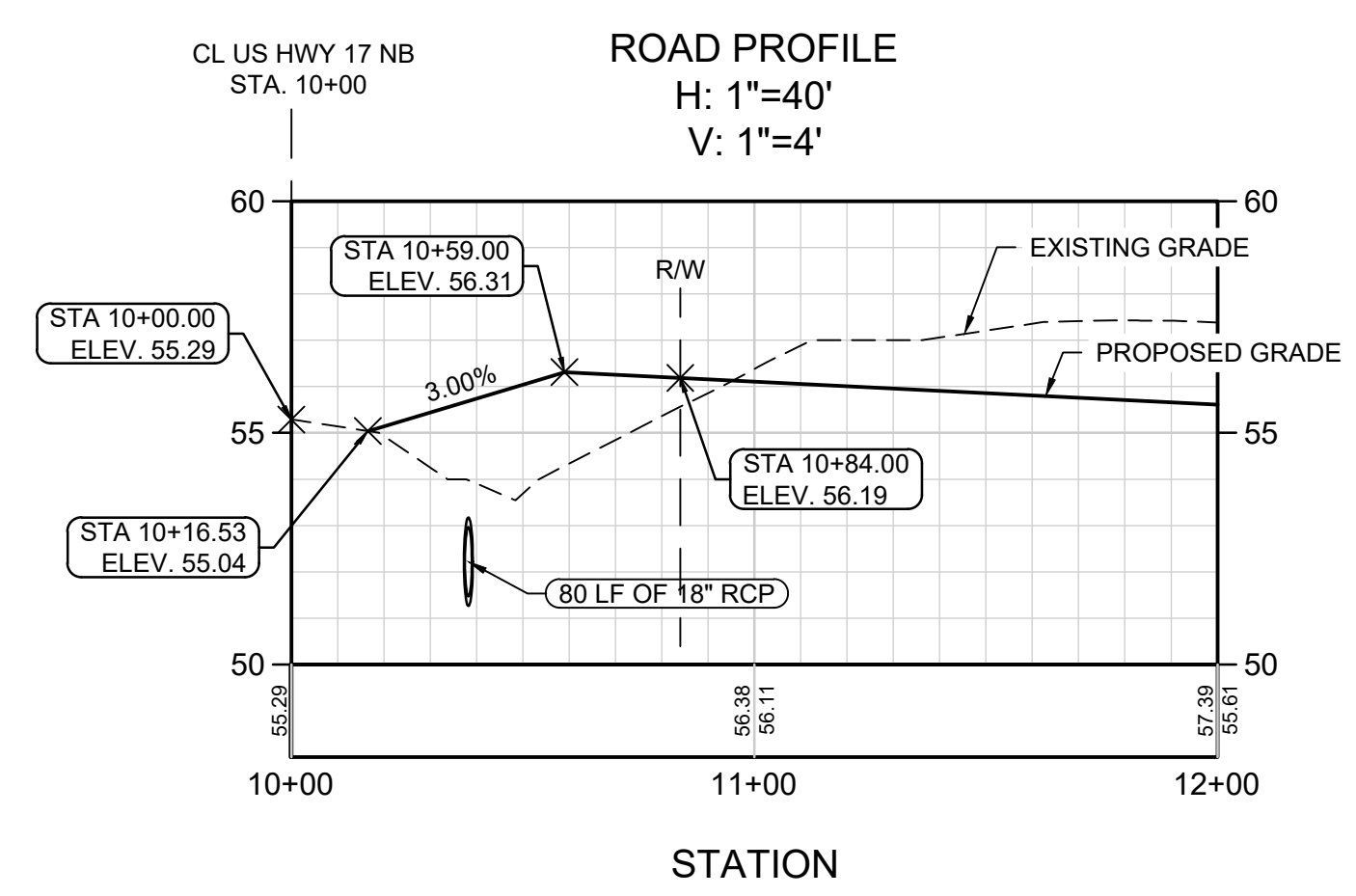
NCDOT NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR UTILIZING ALL APPLICABLE AND CURRENT NCDOT STANDARD DRAWINGS INCLUDING, BUT NOT LIMITED TO, THE DRAWINGS INCLUDED OR REFERENCED WITHIN THESE PLANS AND THE APPROVED PERMIT PACKAGE.
- UPON SUBSTANTIAL PROJECT COMPLETION, CONTRACTOR TO CLEAR EXISTING CULVERTS/PIPES, CATCH BASINS, AND DITCHES ALONG FRONTAGE AND DOWNSTREAM AS NECESSARY TO ACHIEVE POSITIVE DRAINAGE.
- ALL PROPOSED OR RELOCATED SIGNAGE SHALL BE PLACED OR REPLACED IN ACCORDANCE WITH NCDOT APPROVED BREAKAWAY SIGN SUPPORTS AS DETAILED IN DIVISION 12 IN THE NCDOT STANDARD DRAWINGS.
- CONTRACTOR TO SAWCUT EXISTING ASPHALT FOR SMOOTH JOINT NOT ALIGNED WITH WHEEL PATH.

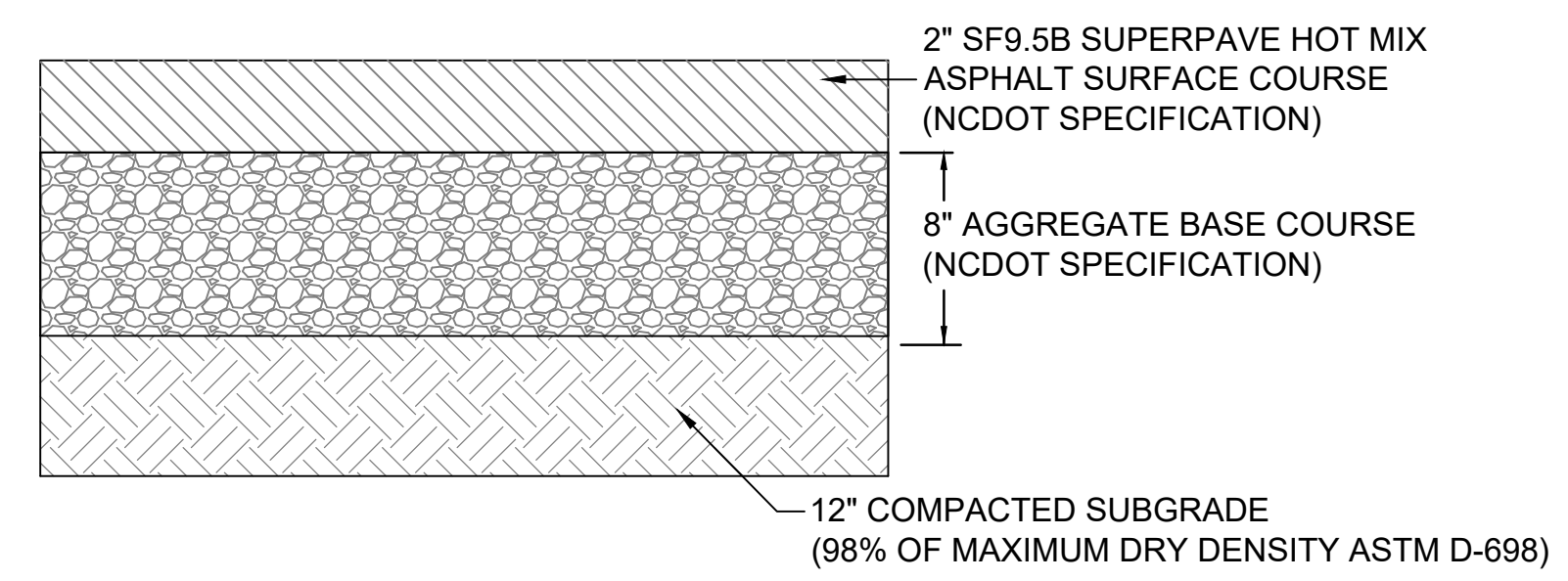
1 PLAN - CL US HWY 17 NB
SCALE: 1" = 40'



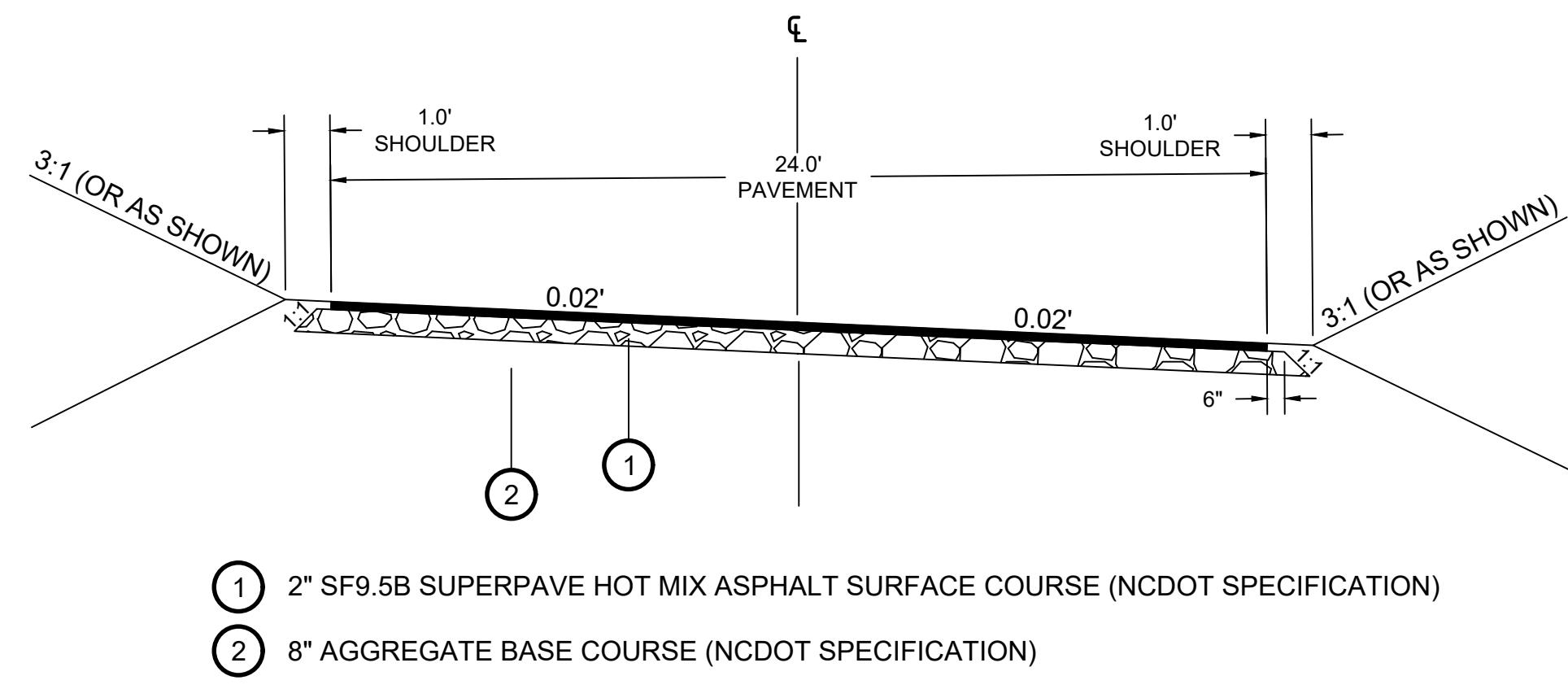
2 PROFILE - US HWY 17 NB
SCALE: HOR. 1" = 40', VERT. 1" = 4'



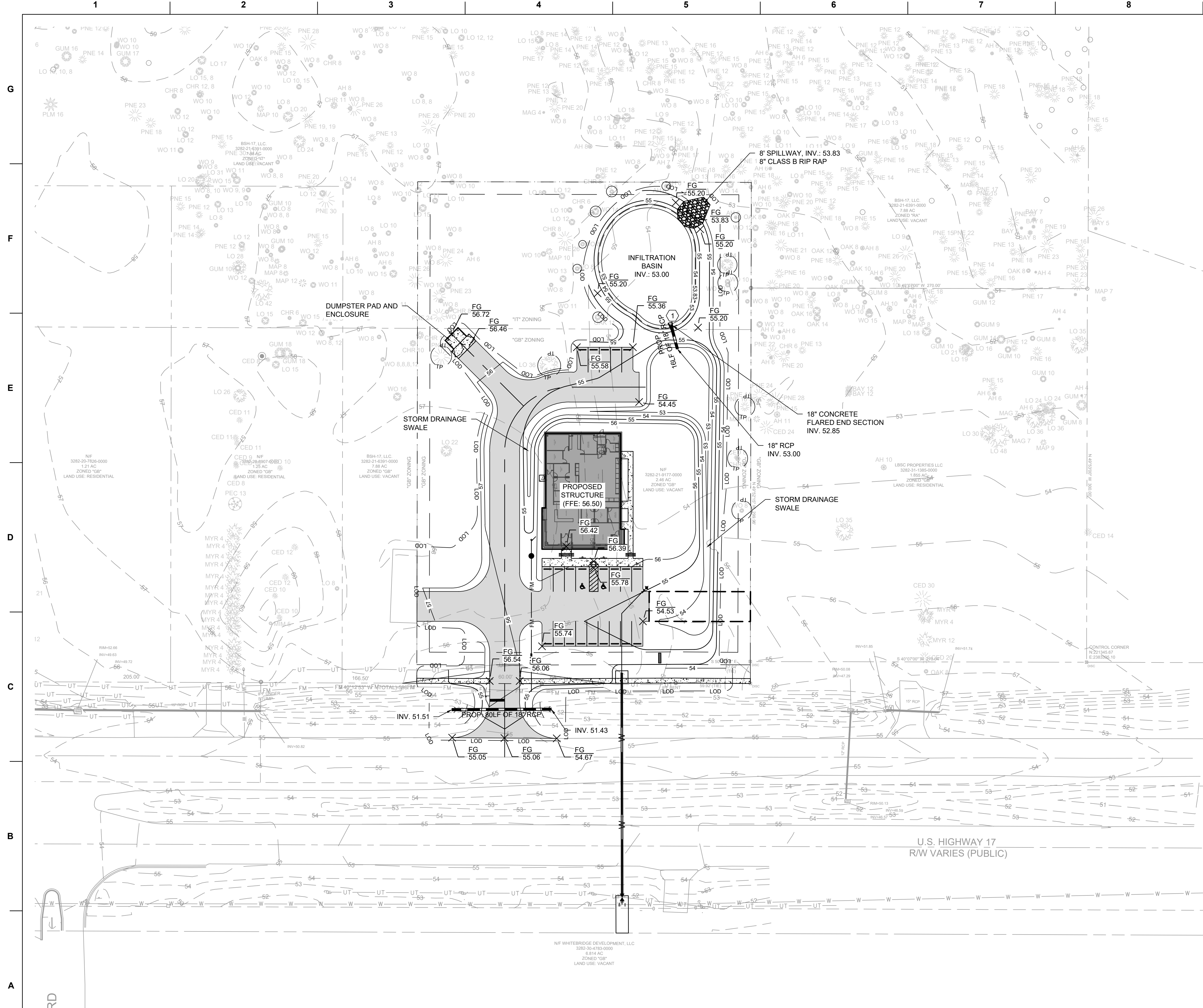
3 DRIVEWAY PROFILE DETAIL
SCALE: HOR. 1" = 40', VERT. 1" = 4'



4 NCDOT DRIVEWAY PAVEMENT SECTION
SCALE: NOT TO SCALE



5 DRIVEWAY SECTION - SUPERELEVATED
SCALE: NOT TO SCALE



LEGEND

- BUILDING OUTLINE
- EDGE OF ASPHALT
- CENTERLINE
- SETBACK
- EDGE OF SIDEWALK
- PROPERTY LINE
- CONCRETE
- ASPHALT
- EDGE OF ASPHALT
- CENTERLINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- STORMWATER LINE
- LIMITS OF DISTURBANCE
- TREE PROTECTION FENCE

- STORM DRAINAGE AND GRADING NOTES**
- IN ACCORDANCE WITH NC GENERAL STATUTES, NPDES REGULATIONS, AND NCDENR REQUIREMENTS, STORMWATER DISCHARGE OUTFALLS SHALL BE INSPECTED BY THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR AFTER EACH STORM EVENT OF 1/2 INCH OR GREATER, WITH ONE WEEKLY INSPECTION MINIMUM. NCDENR STANDARD INSPECTION REPORTS SHALL BE PREPARED AND SIGNED WITH COPIES PROVIDED TO THE OWNER, ARCHITECT, AND ENGINEER, BY THE CONTRACTOR.
 - INLET PROTECTION SHALL BE INSTALLED AROUND OUTFALL DEVICES SHALL BE CONSTRUCTED TO FINAL PROPOSED CONDITION UPON STABILIZATION OF CONTRIBUTING GROUND SURFACES AND REMOVAL OF SEDIMENT FROM STORM PIPES.
 - ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
 - UNLESS OTHERWISE NOTED, GRADES AND SPOT ELEVATIONS NOTED ON PLANS INDICATE FINISHED GRADE OR PAVEMENT SURFACE. ALL DIMENSIONS ARE MEASURED TO THE BACK OF CURB UNLESS OTHERWISE INDICATED.

- MATERIALS AND EASEMENT NOTES:**
- ALL STORM DRAINAGE PIPING TO BE RCP, UNLESS OTHERWISE NOTED
 - ALL STORM DRAINAGE PIPING CONVEYING DISCHARGE FROM THE PUBLIC RIGHT-OF-WAY SHALL BE CONTAINED WITHIN A PUBLIC DRAINAGE EASEMENT WHOSE WIDTH IS DETERMINED BY THE DEPTH OF BURY
 - POTABLE WATER SHALL BE PROVIDED BY PRIVATE WELL, FIRE PROTECTION WATER AND SANITARY SEWER UTILITIES ARE PUBLIC.

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PROJECT OWNER

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VET CROSS

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ISSUE DATE
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REVISIONS

NO.	DATE	DESCRIPTION

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PROJECT MANAGER
 NJL

DRAWN BY
 NJL

PROJECT ADDRESS
 HAMPSTEAD, NC

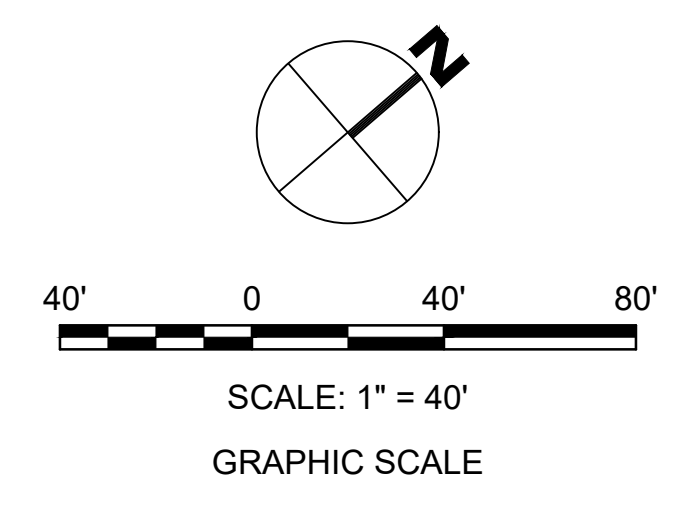
PROJECT NUMBER
 1009.01

SHEET TITLE
STORM DRAINAGE & GRADING PLAN

SHEET NUMBER
CG101

TRC SUBMITTAL

1 STORM DRAINAGE & GRADING PLAN
 SCALE: 1" = 40'



UTILITY NOTES

- SCHEDULE A PRECONSTRUCTION MEETING WITH PENDER COUNTY UTILITIES (PCU) 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
- WATER AND SANITARY SEWER UTILITY MAINS ARE PRIVATE BEYOND THE PUBLIC STREET RIGHT-OF-WAY.
- THIS PROJECT SHALL COMPLY WITH CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDEQ HAS ISSUED THE "FINAL APPROVAL".
- ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY PCU WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO PCU.
- WATER: 1.5" AND 2" PVC SERVICES SHALL BE CONSTRUCTED USING ASTM D2241, IPS, GASKETED PIPE, SDR 21. 4"-12" PVC MAINS AND SERVICES SHALL BE CONSTRUCTED USING AWWA C-900 PVC, CL235 (DR-18). REQUIREMENTS OF AWWA C900 ELASTOMERIC PUSH-ON JOINTS.
- SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2672. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3139.
- WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEERS CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDENR AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY NCDEQ.
- SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
- MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 380' (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
- UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
- MINIMUM OF 36" COVERAGE ABOVE ALL WATERMAINS.
- MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS
- A VARIANCE IS NOT ANTICIPATED FROM ANY NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ) REQUIREMENT.
- PLANS ARE IN COMPLIANCE WITH PCU TECHNICAL STANDARDS AND SPECIFICATIONS.

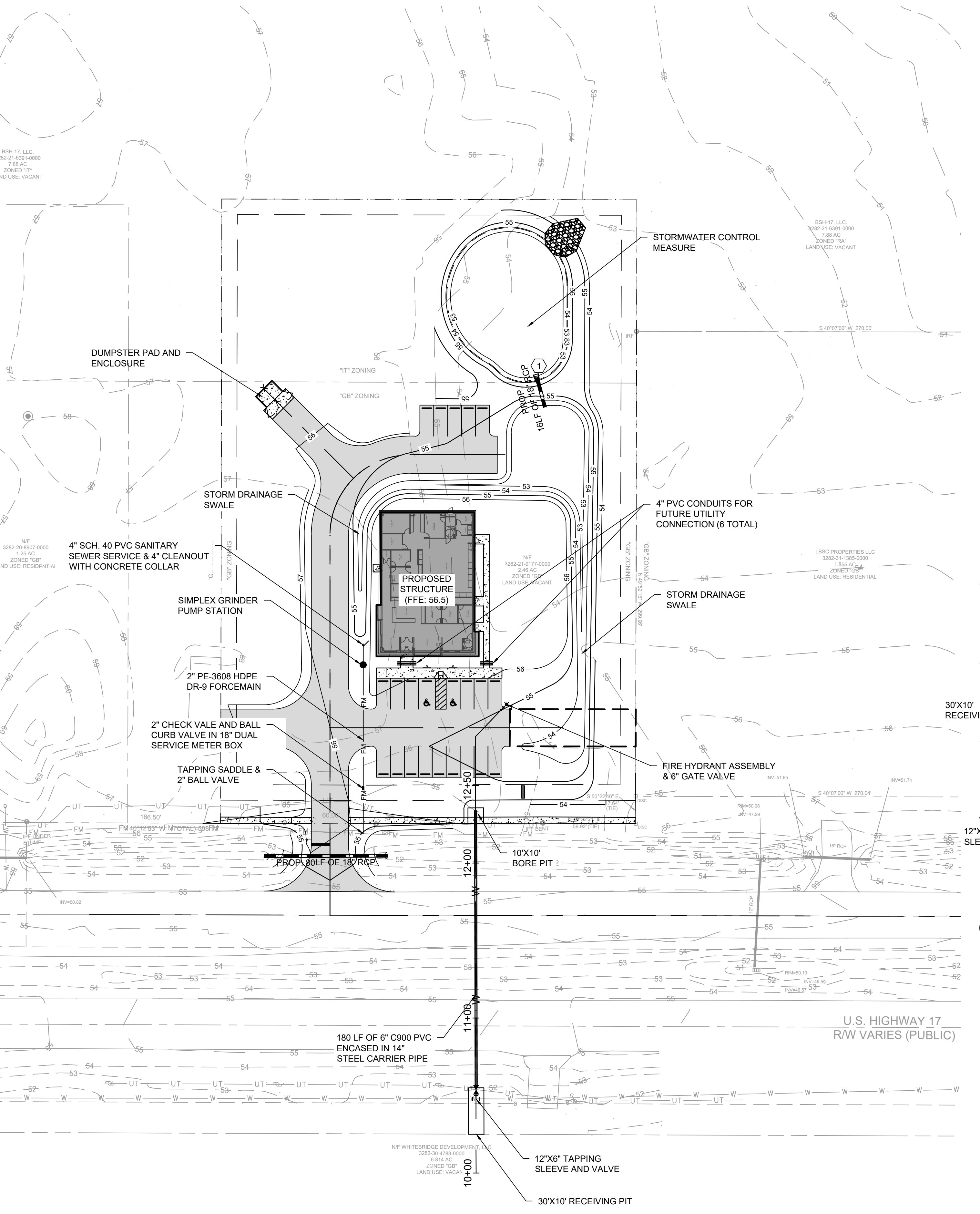
RELATION OF WATER MAINS TO SANITARY SEWERS:

- LATERAL SEPARATION OF SANITARY SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
 - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
 - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
- CROSSING A WATER MAIN OVER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 24 INCHES ABOVE THE TOP OF THE SEWER MAIN. UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- CROSSING A WATER MAIN UNDER A SEWER MAIN: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER MAIN BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.
- CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE HORIZONTAL, OR THE SEWER MAIN/WATER MAIN SHALL EITHER BE CONSTRUCTED OF DUCTILE IRON PIPE OR ENCASED IN EITHER CONCRETE OR DUCTILE IRON PIPE FOR AT LEAST 5 FEET ON EITHER SIDE OF THE CROSSING.

FIRE PROTECTION NOTES

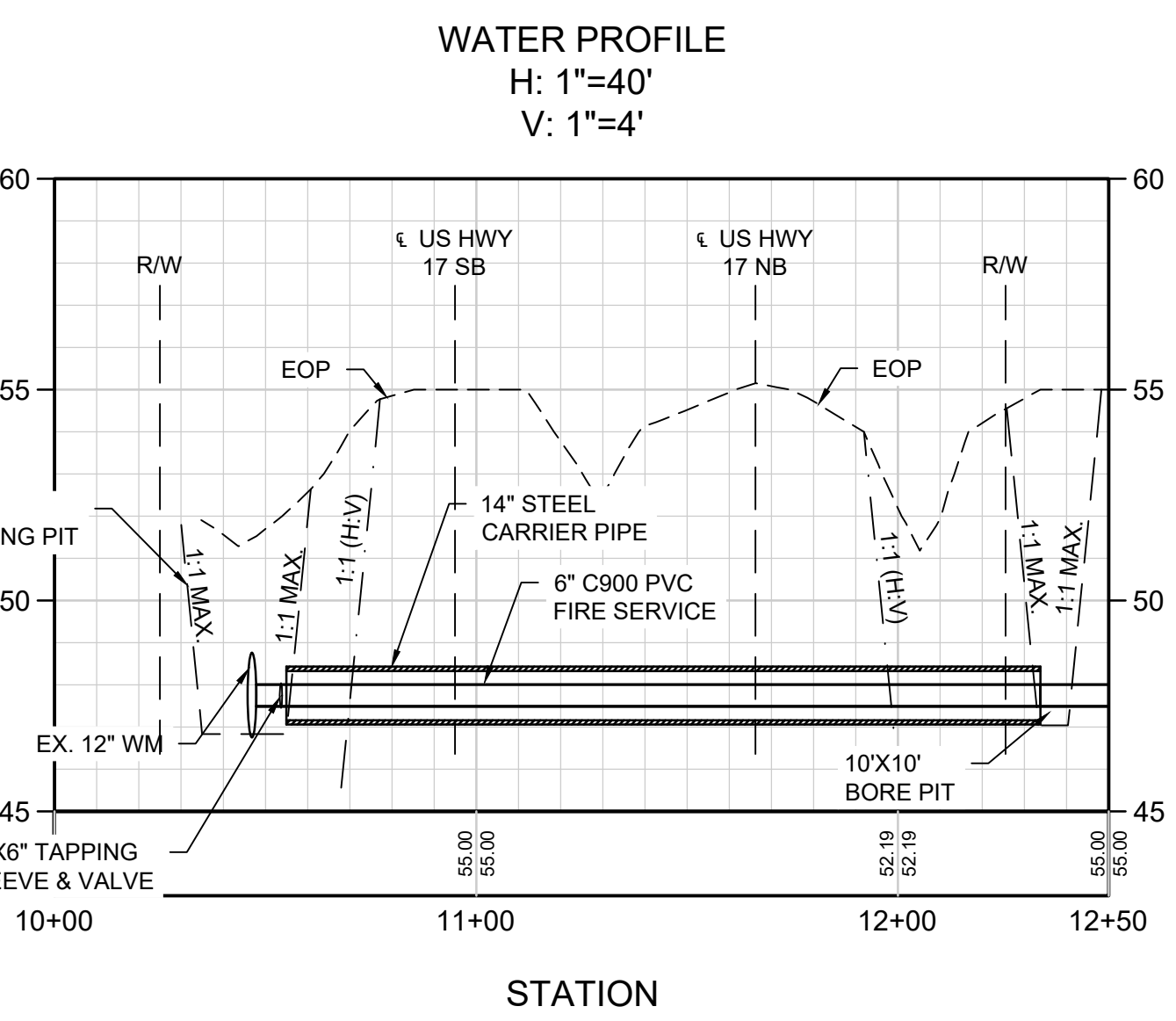
- HYDRANT MUST BE WITHIN 150' OF THE FDC.
- THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
- COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERRECTED ONSITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
- A MINIMUM OF 6' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES
- CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- ALL WEATHER ACCESS ROAD MUST BE MAINTAINED AROUND CONSTRUCTION SITE AT ALL TIMES.
- FIRE HYDRANTS ARE TO BE INSTALLED PER SPECIFICATIONS.

1 UTILITY PLAN
SCALE: 1" = 40'

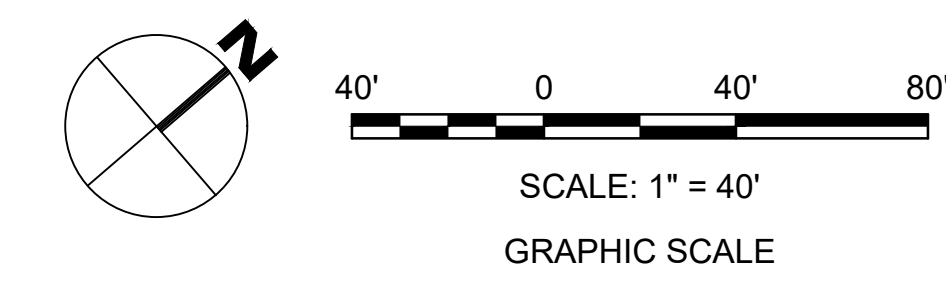


LEGEND

- BUILDING OUTLINE
- EDGE OF ASPHALT
- CENTERLINE
- SETBACK
- EDGE OF SIDEWALK
- PROPERTY LINE
- CONCRETE
- ASPHALT
- EDGE OF ASPHALT
- CENTERLINE
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- PROP. MAJOR CONTOUR
- PROP. MINOR CONTOUR
- STORMWATER LINE
- EX. UNDERGROUND TELECOMMUNICATIONS LINE
- EX. WATER LINE
- EX. FORCEMAIN
- PROP. WATER LINE
- PROP. FORCEMAIN
- PROP. FIRE HYDRANT
- PROP. PUMP STATION



2 FIRE SERVICE PROFILE
SCALE: 1" = 40'



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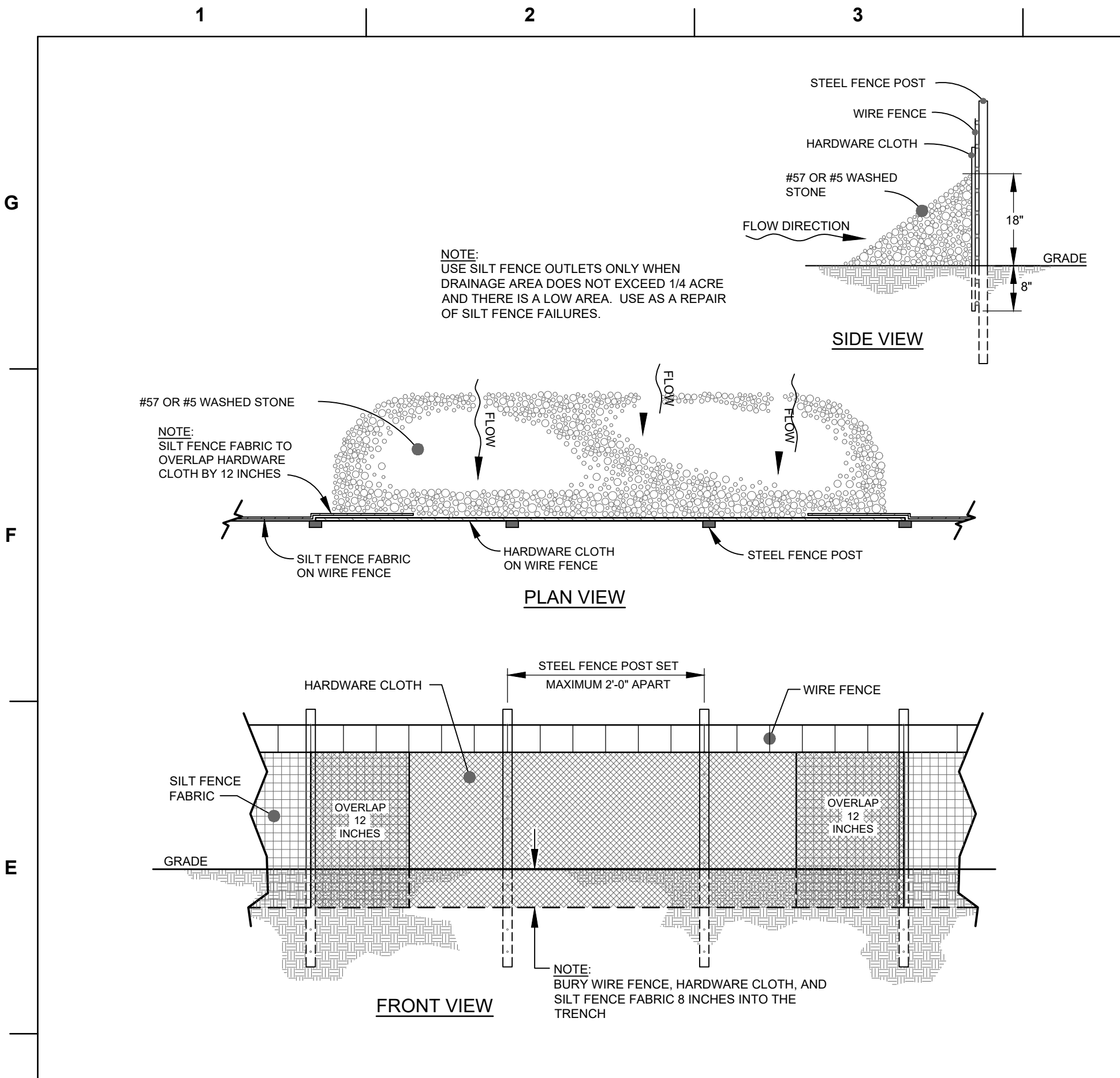
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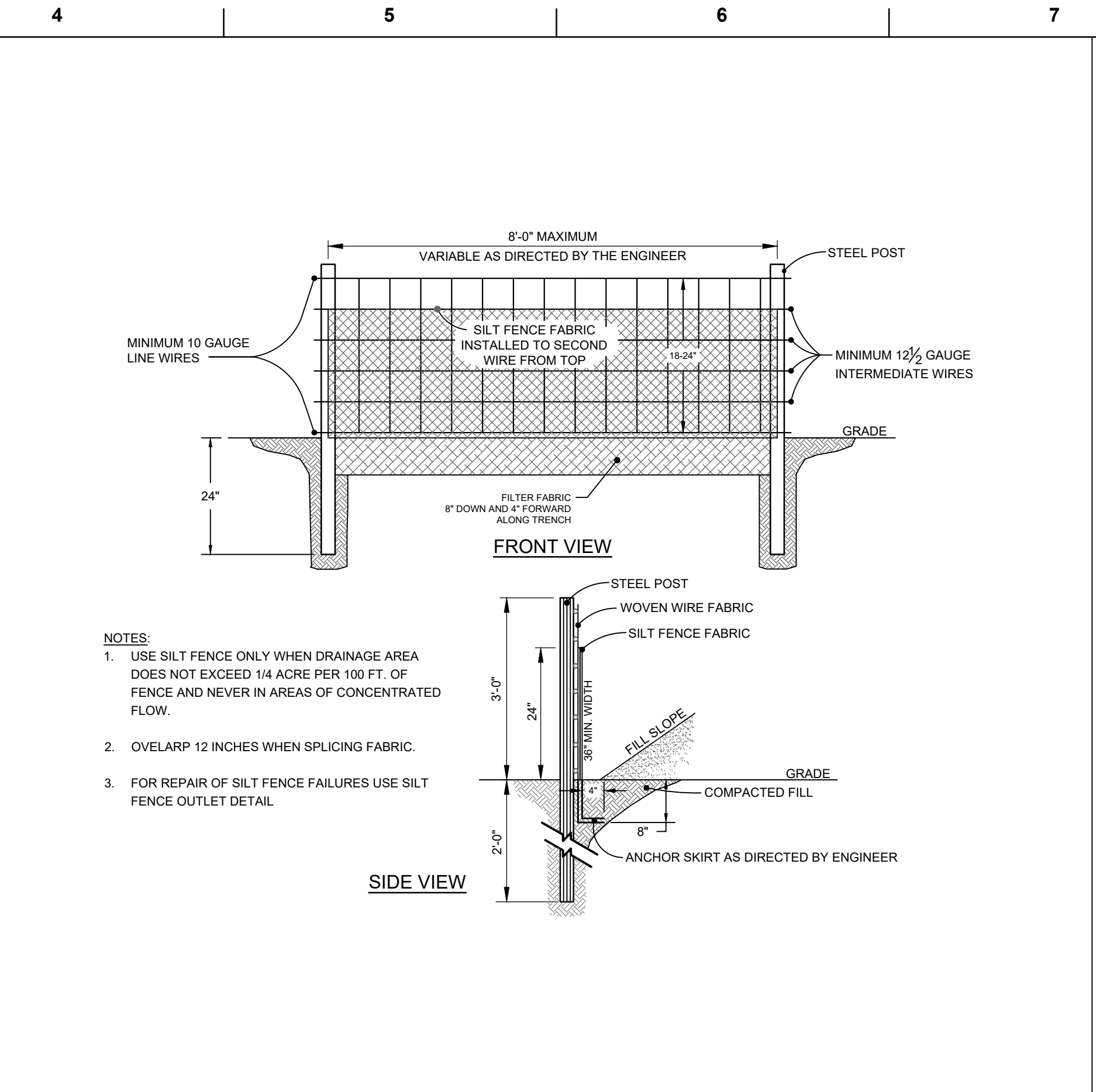
PRINCIPAL IN CHARGE: N. LAURETTA, PE, LEED AP
PROJECT MANAGER: NJL
DRAWN BY: NJL
PROJECT ADDRESS: HAMPSTEAD, NC

PROJECT NUMBER: 1009.01
SHEET TITLE: **UTILITY PLAN**
SHEET NUMBER: **CU101**

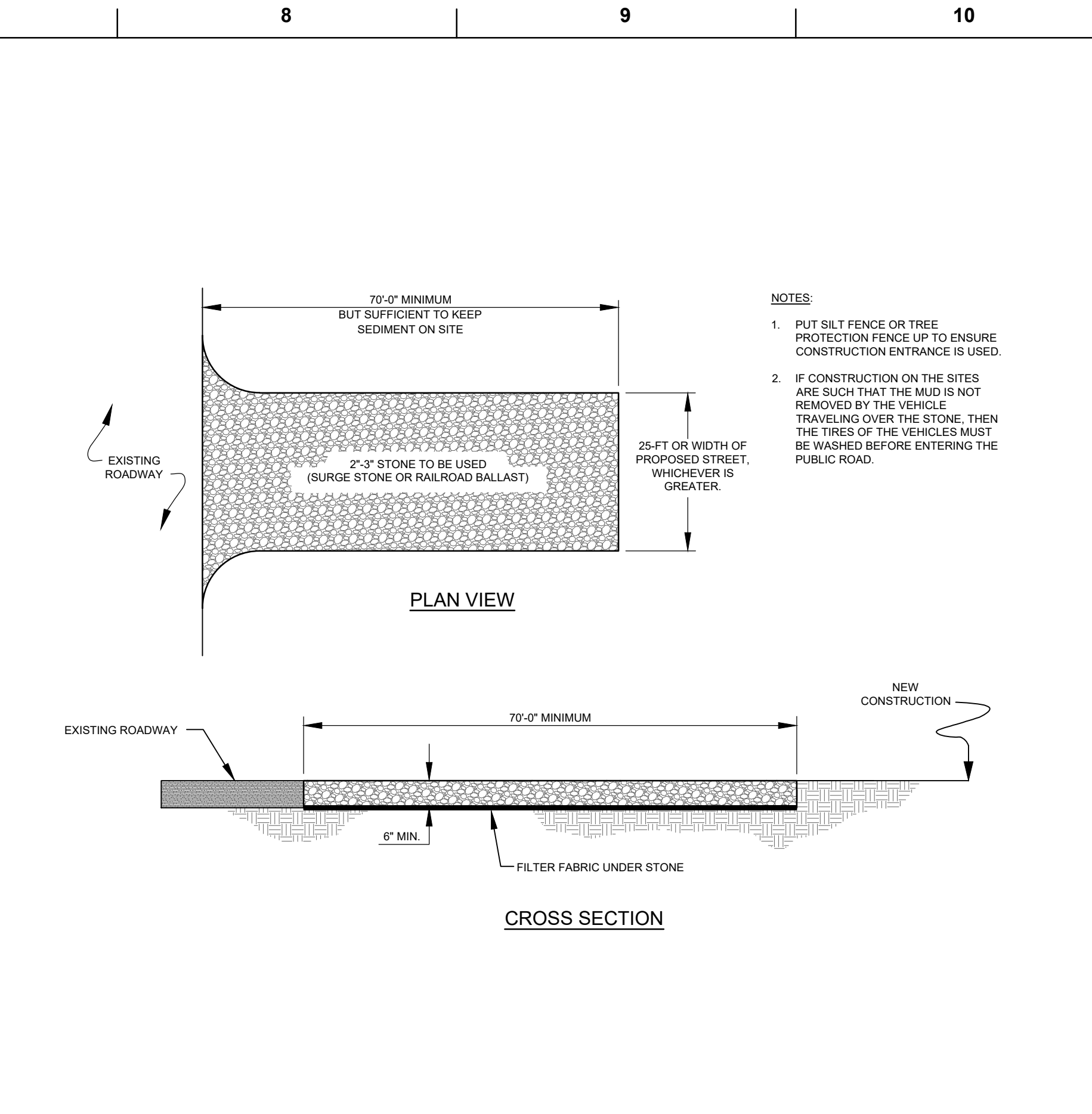
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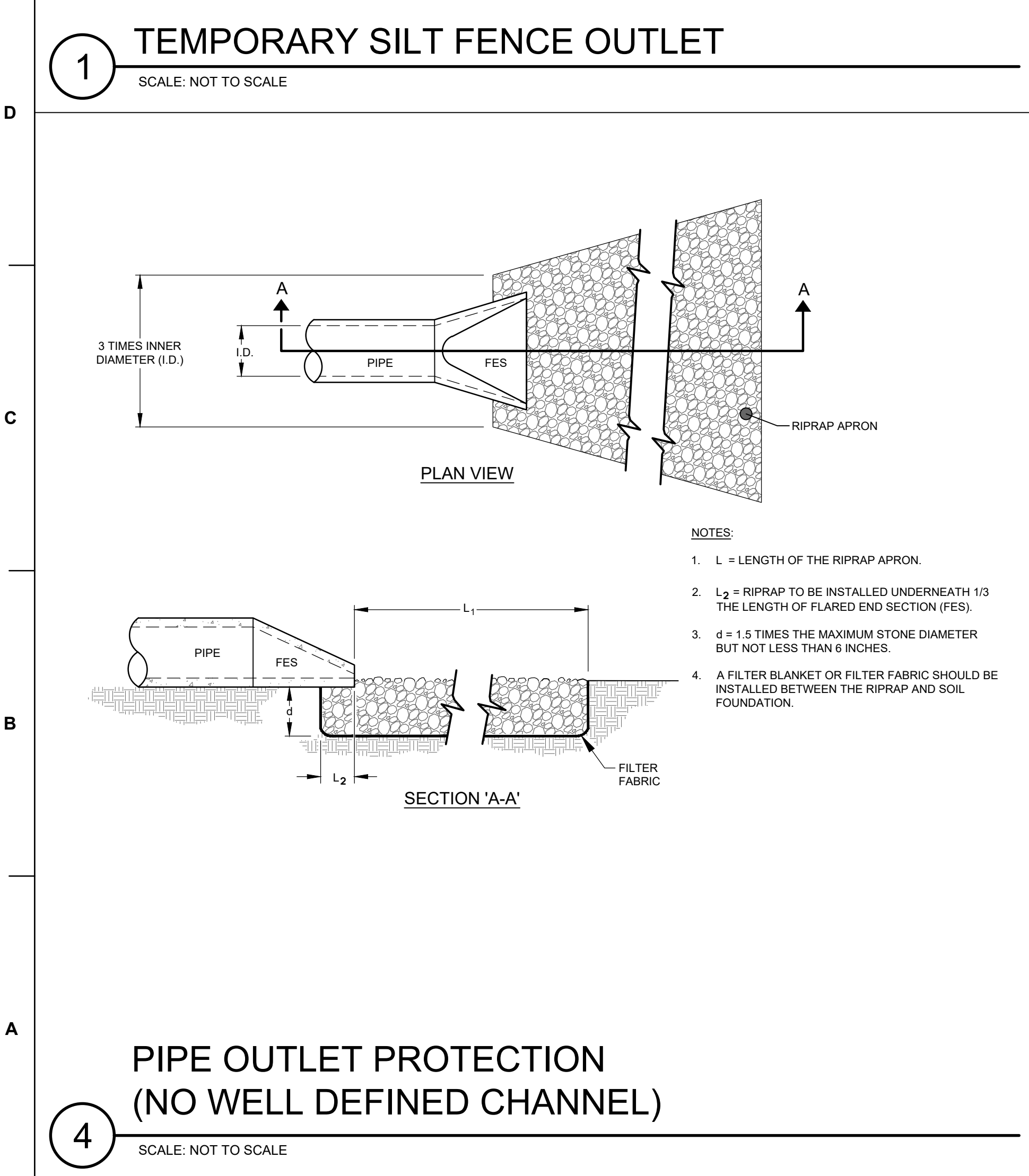
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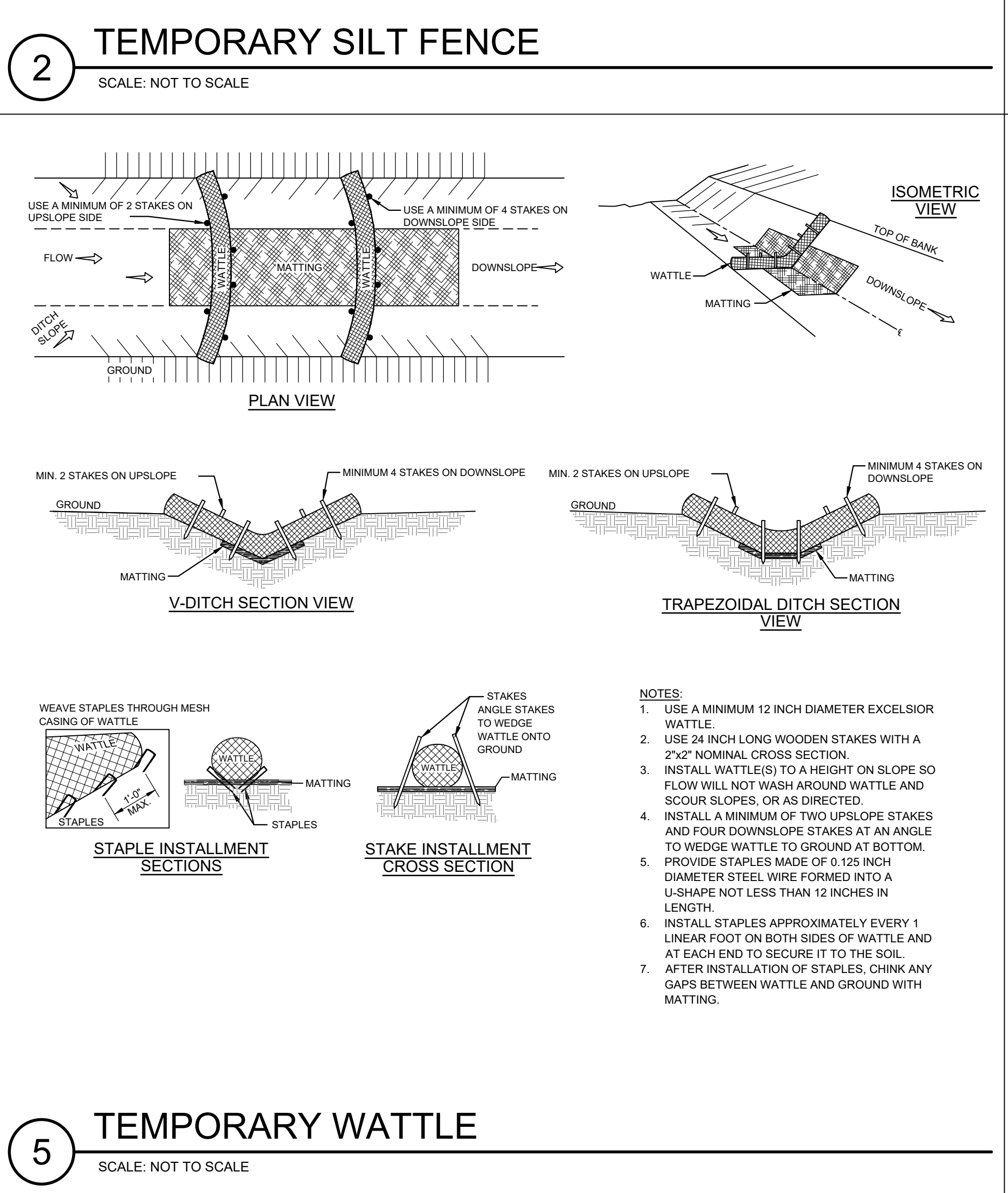
2 **TEMPORARY SILT FENCE**
SCALE: NOT TO SCALE



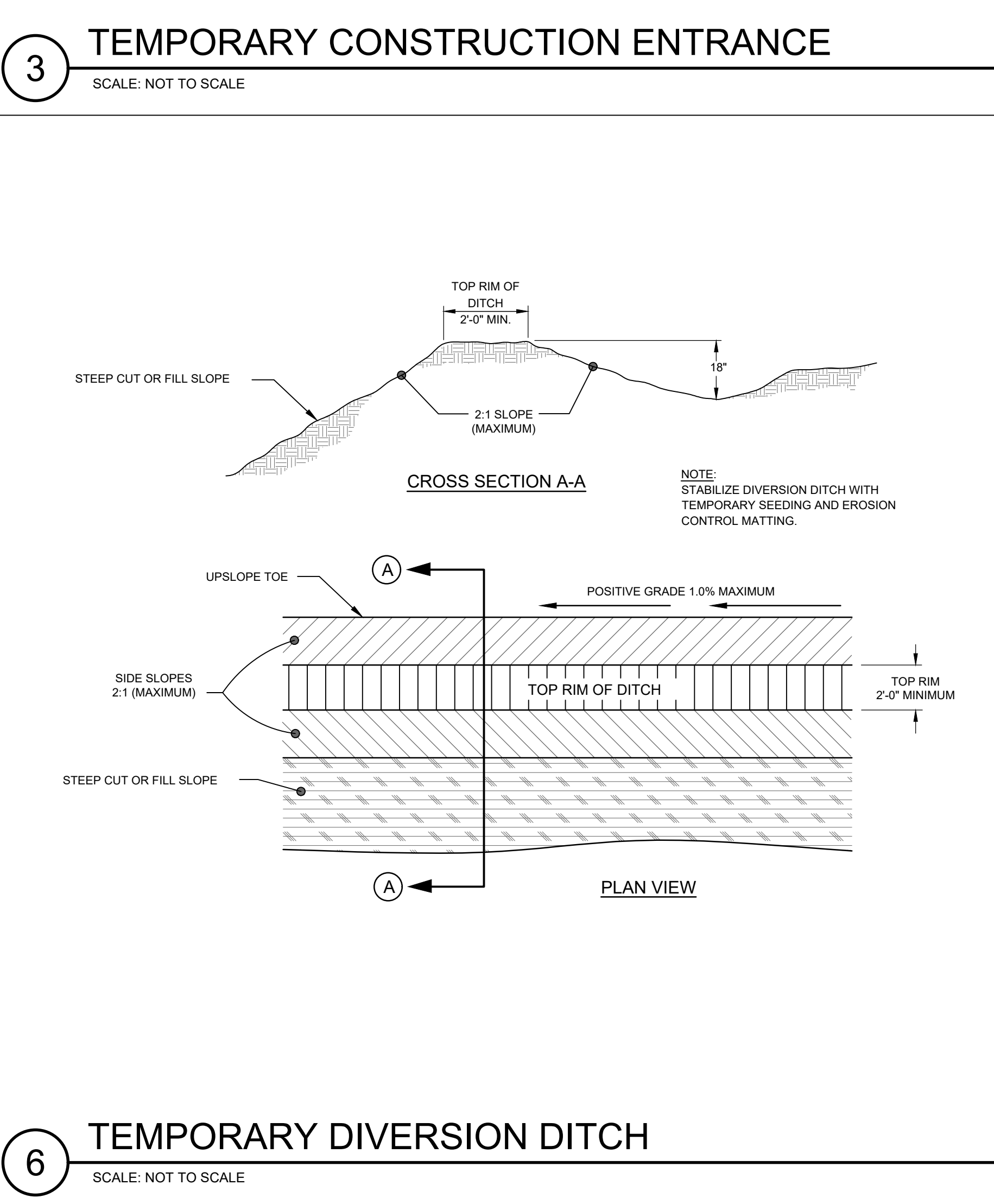
3 **TEMPORARY CONSTRUCTION ENTRANCE**
SCALE: NOT TO SCALE



4 **PIPE OUTLET PROTECTION (NO WELL DEFINED CHANNEL)**
SCALE: NOT TO SCALE

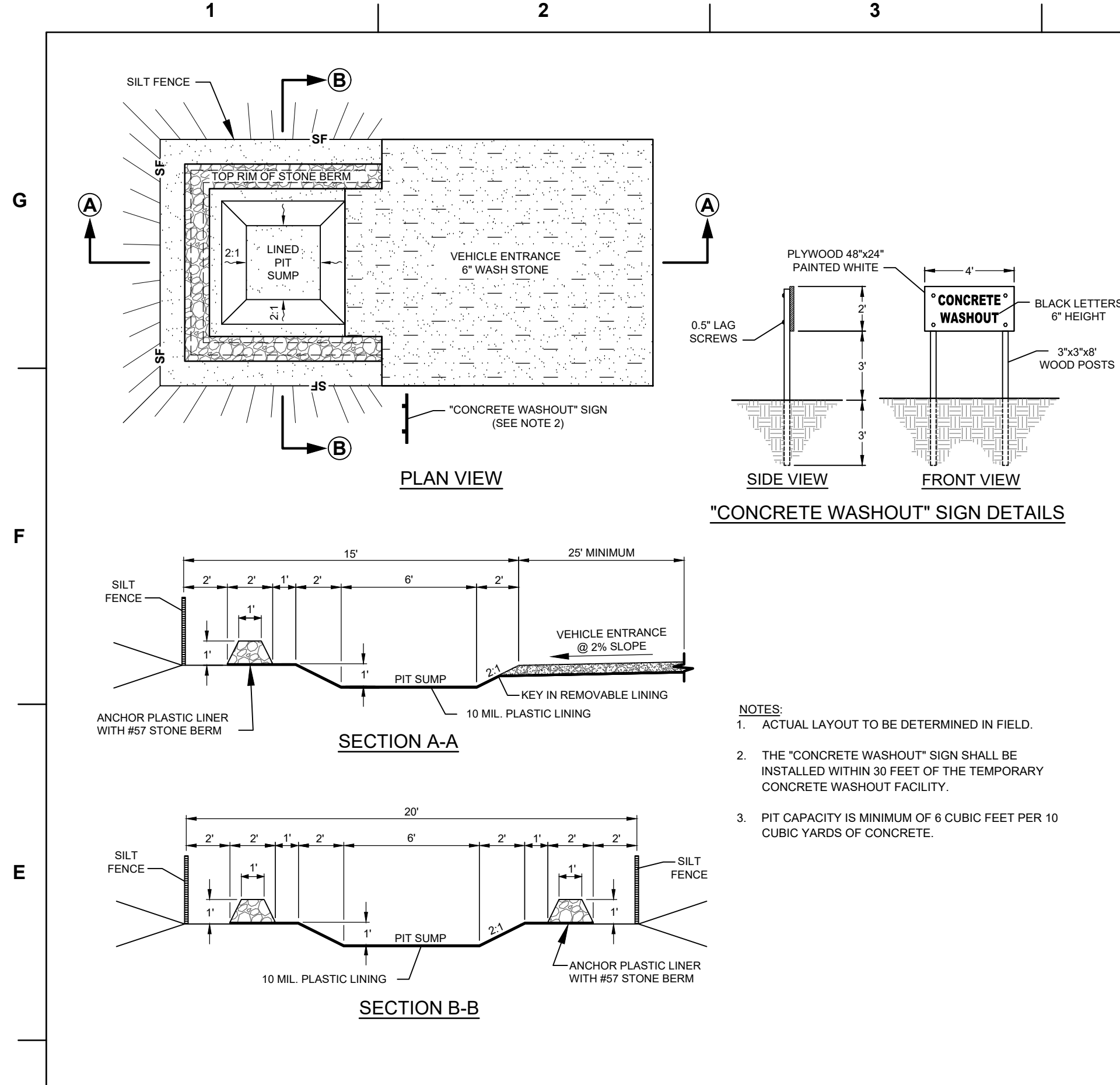


5 **TEMPORARY WATTLE**
SCALE: NOT TO SCALE



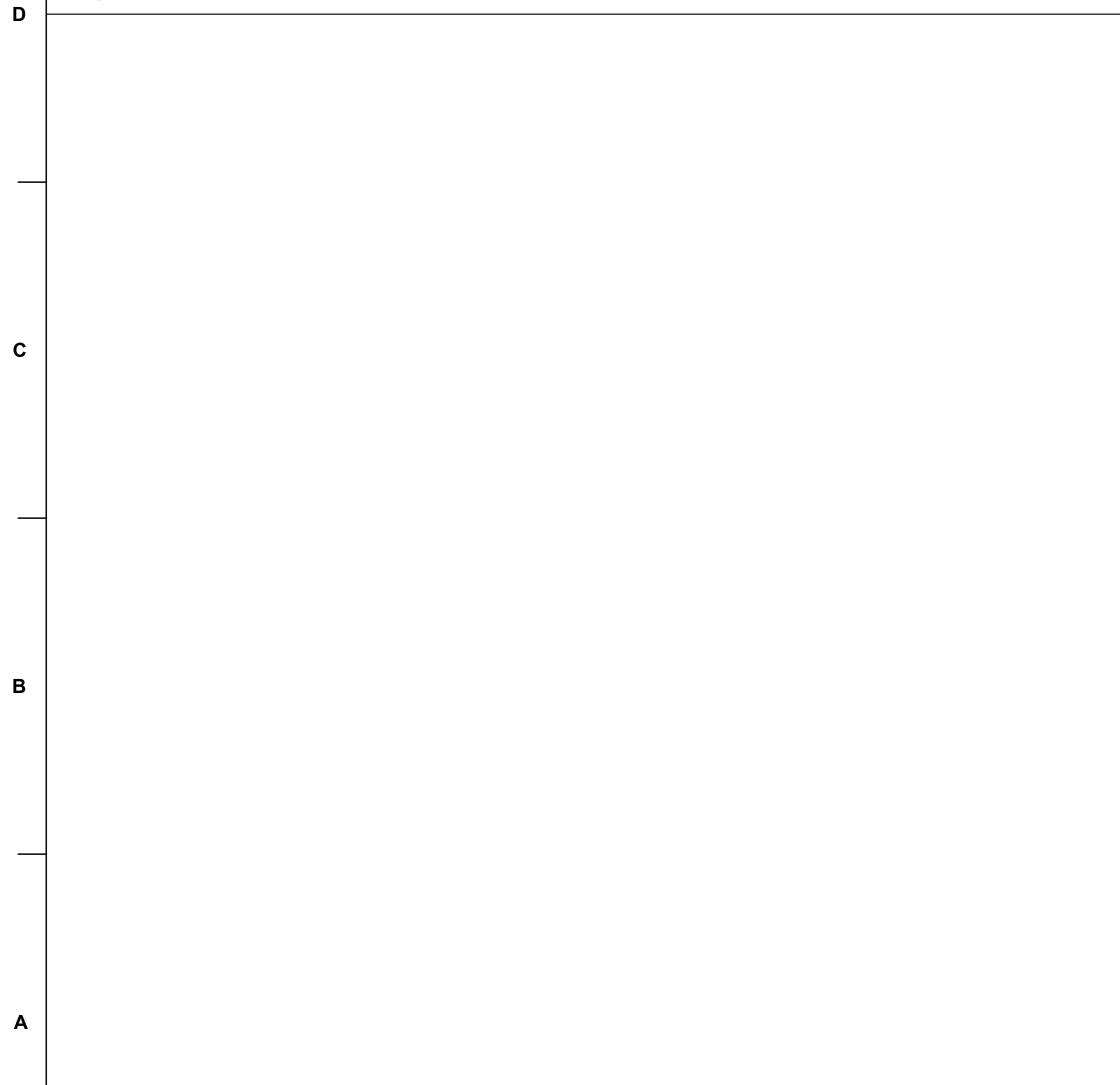
6 **TEMPORARY DIVERSION DITCH**
SCALE: NOT TO SCALE

 Riverview Engineering 4904 PARK AVENUE WILMINGTON, NC 28403 (910) 398-2882 rlauretta@rivervieweng.com							
NC License No. P-1944 www.rivervieweng.com							
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PROJECT NUMBER 1009.01							
SHEET TITLE SEDIMENT & EROSION CONTROL DETAILS							
SHEET NUMBER CE501							



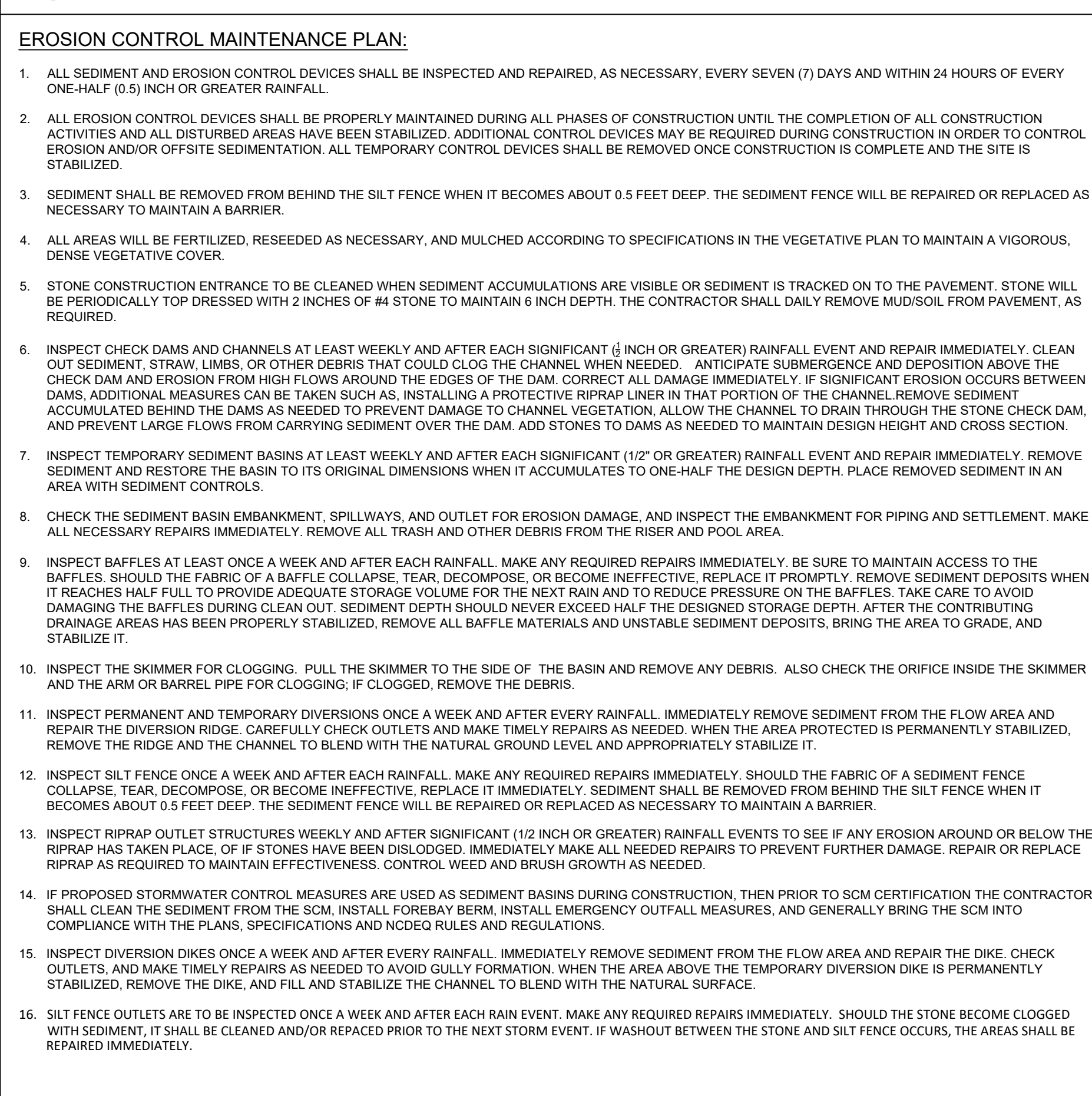
1 CONCRETE WASHOUT

SCALE: NOT TO SCALE



2 TREE PROTECTION FENCE

SCALE: NOT TO SCALE

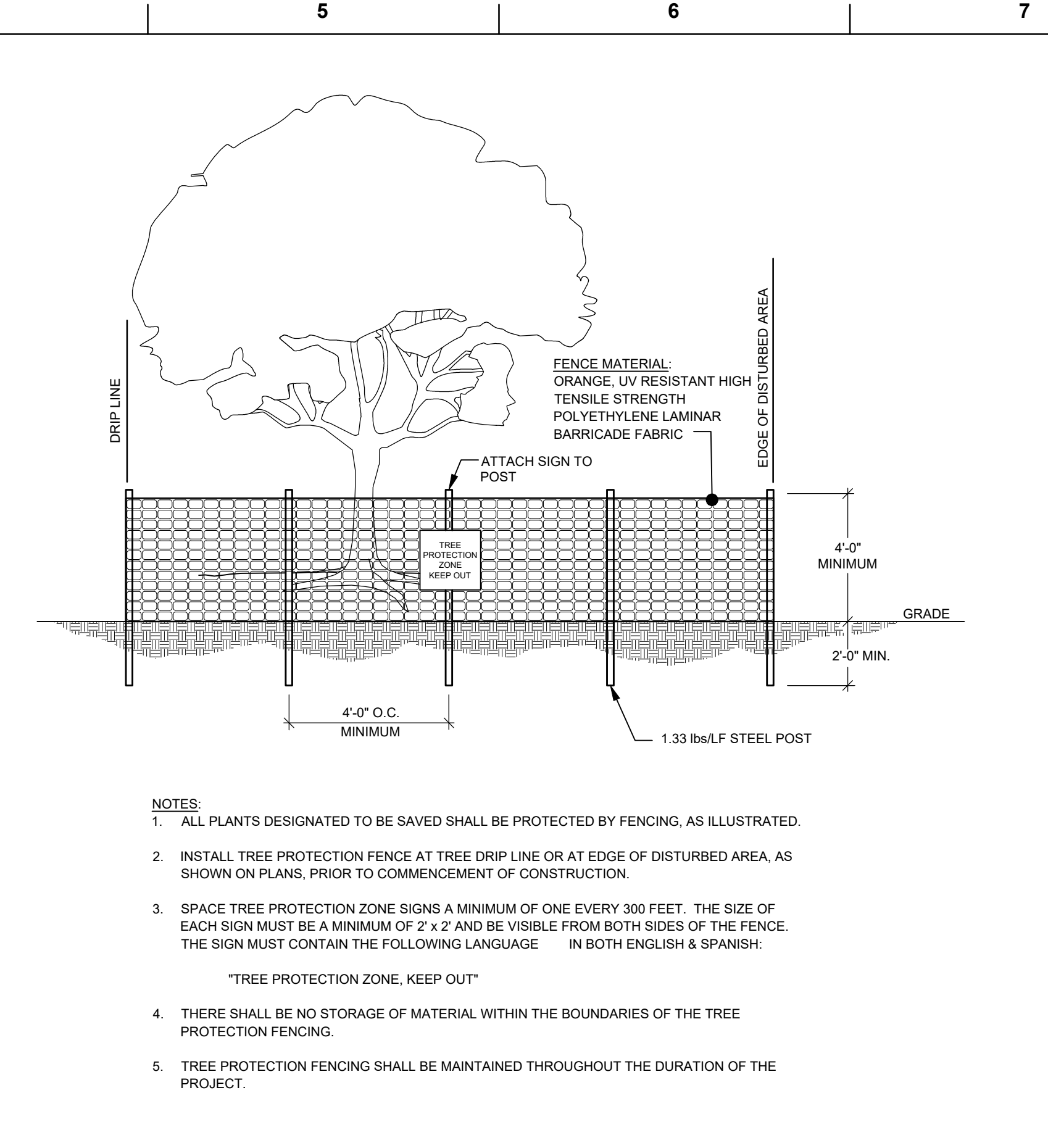


4 NOTES

SCALE: NOT TO SCALE

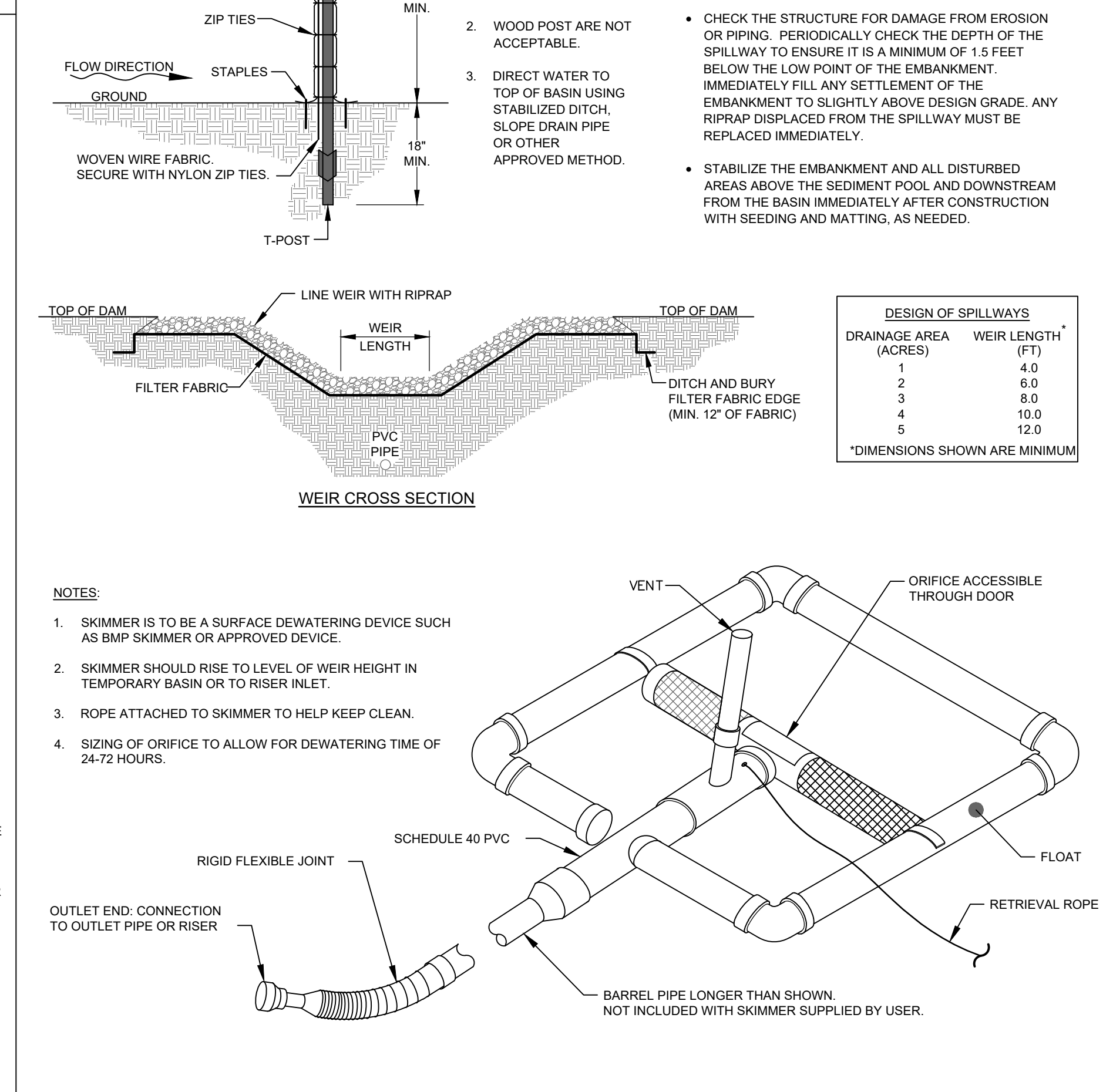
3 NOT USED

SCALE: NOT TO SCALE



5 TEMPORARY SKIMMER BASIN

SCALE: NOT TO SCALE



5 TEMPORARY SKIMMER BASIN

SCALE: NOT TO SCALE

ENGINEER

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**DR. SARA LEWIS DVM
 MR. JOHN LEWIS**

VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE
 DECEMBER 01, 2023

REVISIONS

PRINCIPAL IN CHARGE
 N. LAURETTA, PE, LEED AP

PROJECT MANAGER
 NJL

DRAWN BY
 NJL

PROJECT ADDRESS
 HAMPSTEAD, NC

PROJECT NUMBER
 1009.01

SHEET TITLE
SEDIMENT & EROSION CONTROL DETAILS

SHEET NUMBER
CE502

TRC SUBMITTAL

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide BASINing area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

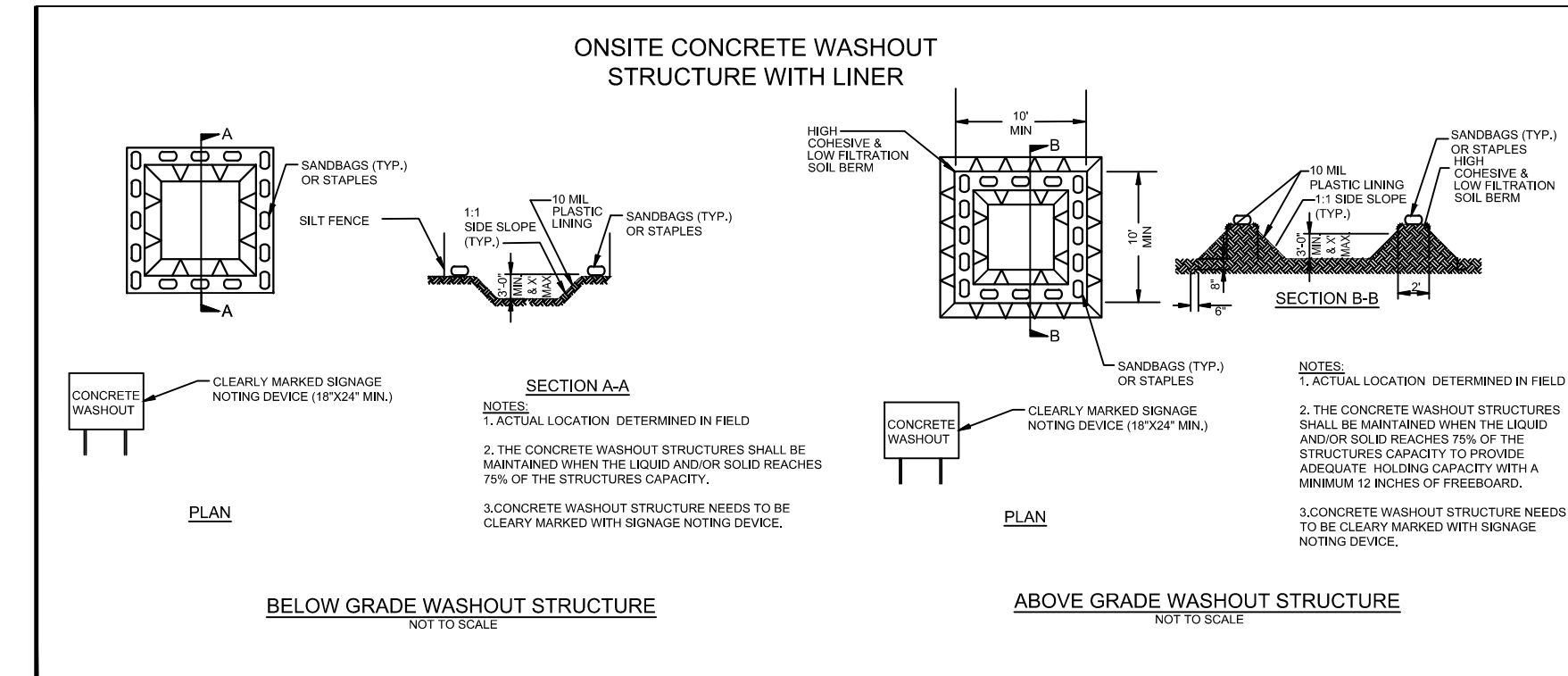
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

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NJL
DRAWN BY
NJL
PROJECT ADDRESS
HAMPSTEAD, NC

PROJECT NUMBER
1009.01

SHEET TITLE

SEDIMENT & EROSION CONTROL DETAILS

SHEET NUMBER

CE503

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Table with 3 columns: Inspect, Frequency (during normal business hours), Inspection records must include: (1) Rain gauge maintained in good working order, (2) E&SC Measures, (3) Stormwater discharge outfalls (SDOs), (4) Perimeter of site, (5) Streams or wetlands onsite or offsite, (6) Ground stabilization measures.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Table with 2 columns: Item to Document, Documentation Requirements. (a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan. (b) A phase of grading has been completed. (c) Ground cover is located and installed in accordance with the approved E&SC plan. (d) The maintenance and repair requirements for all E&SC measures have been performed. (e) Corrective actions have been taken to E&SC measures.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).
(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Table with 2 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements. (a) Visible sediment deposition in a stream or wetland. (b) Oil spills and release of hazardous substances per Item 1(b)-(c) above. (c) Anticipated bypasses [40 CFR 122.41(m)(3)]. (d) Unanticipated bypasses [40 CFR 122.41(m)(3)]. (e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)].

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

ENGINEER



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PROJECT OWNER

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VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE

DECEMBER 01, 2023

REVISIONS

Table with 2 columns: #, Description. Empty table for revisions.

PRINCIPAL IN CHARGE N. LAURETTA, PE, LEED AP PROJECT MANAGER NJL

DRAWN BY NJL

PROJECT ADDRESS HAMPSTEAD, NC

PROJECT NUMBER 1009.01

SHEET TITLE

SEDIMENT & EROSION CONTROL DETAILS

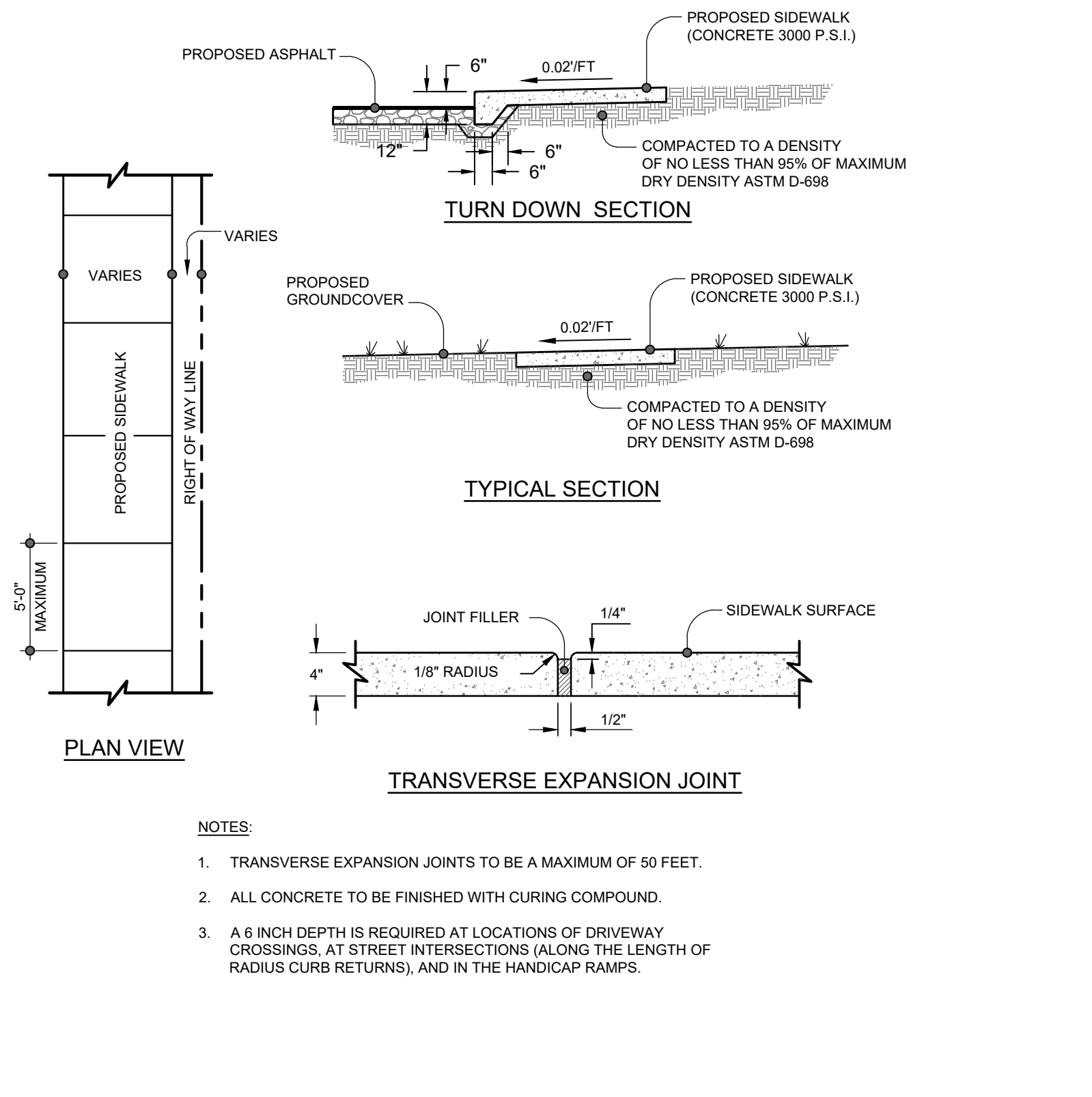
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CE504

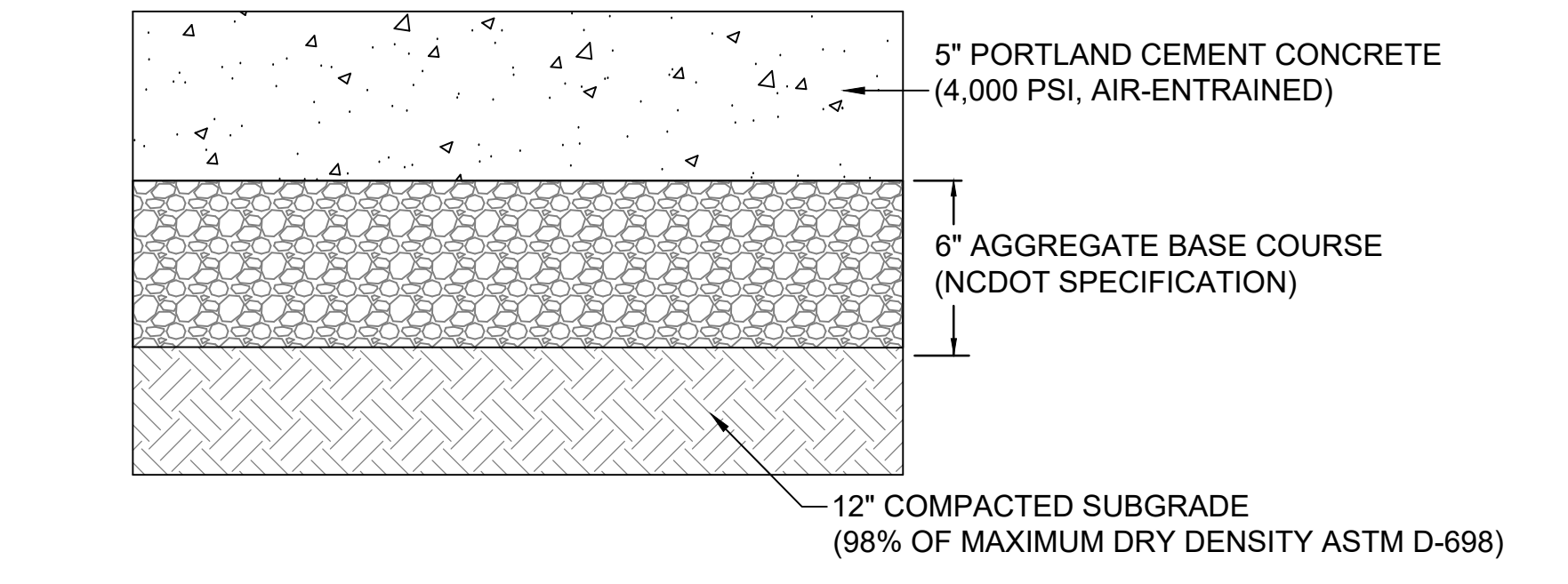
TRC SUBMITTAL

G
F
E
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A

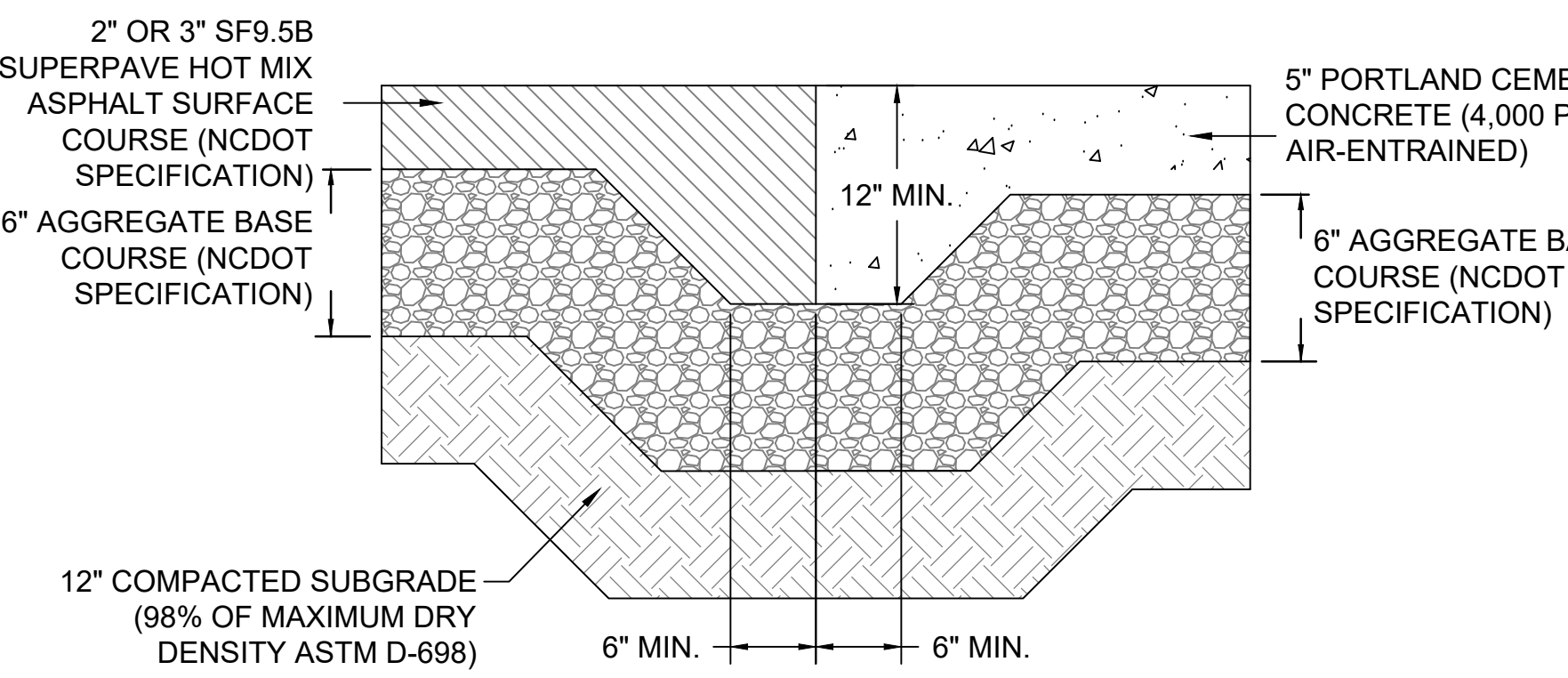
1 2 3 4 5 6 7 8 9 10



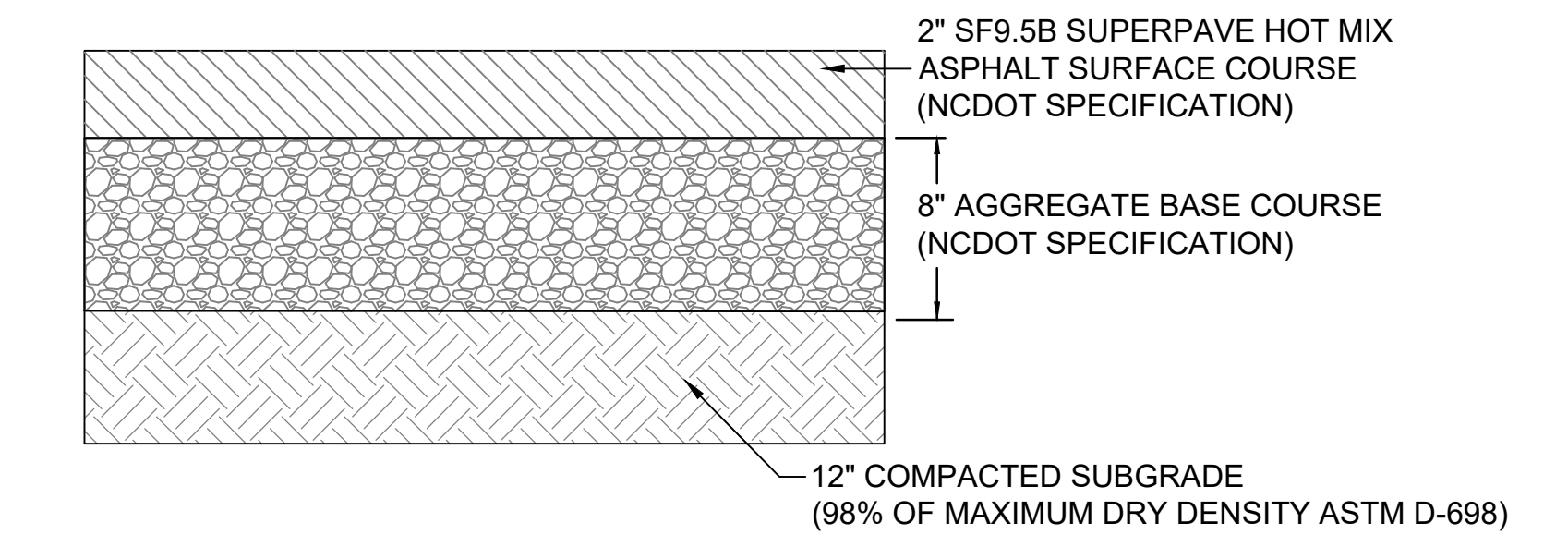
1 CONCRETE SIDEWALK
 SCALE: NOT TO SCALE



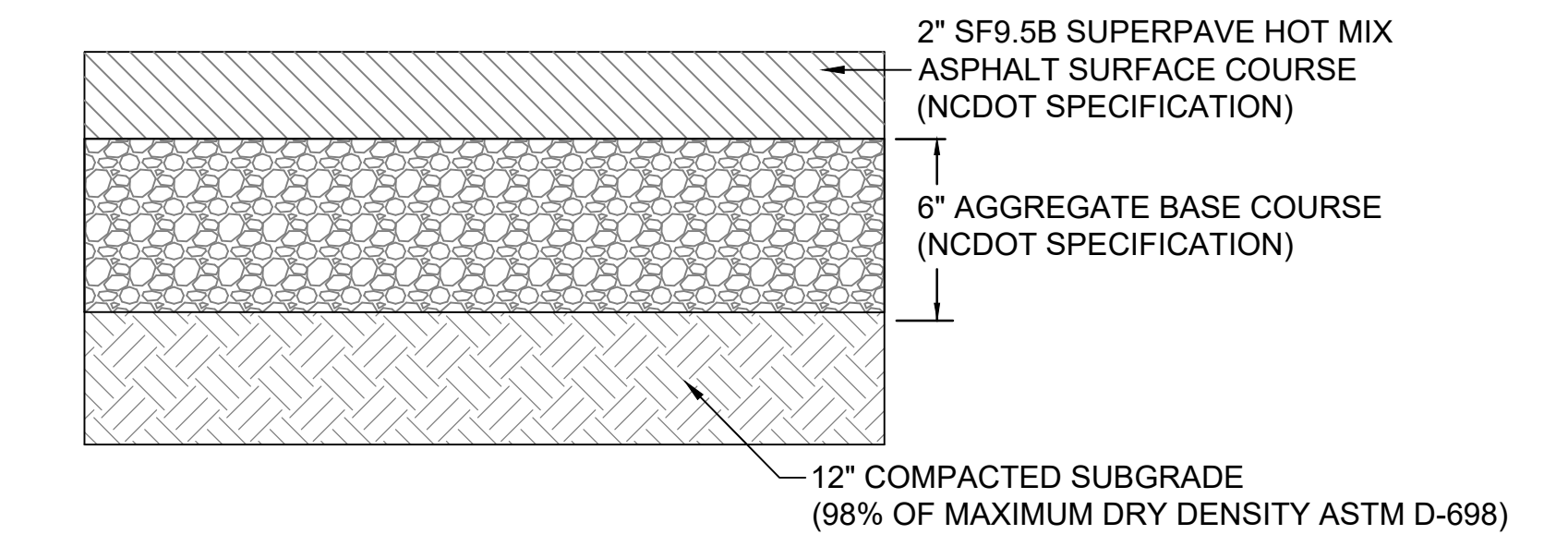
2 CONCRETE PAVEMENT SECTION (HEAVY DUTY)
 SCALE: NOT TO SCALE



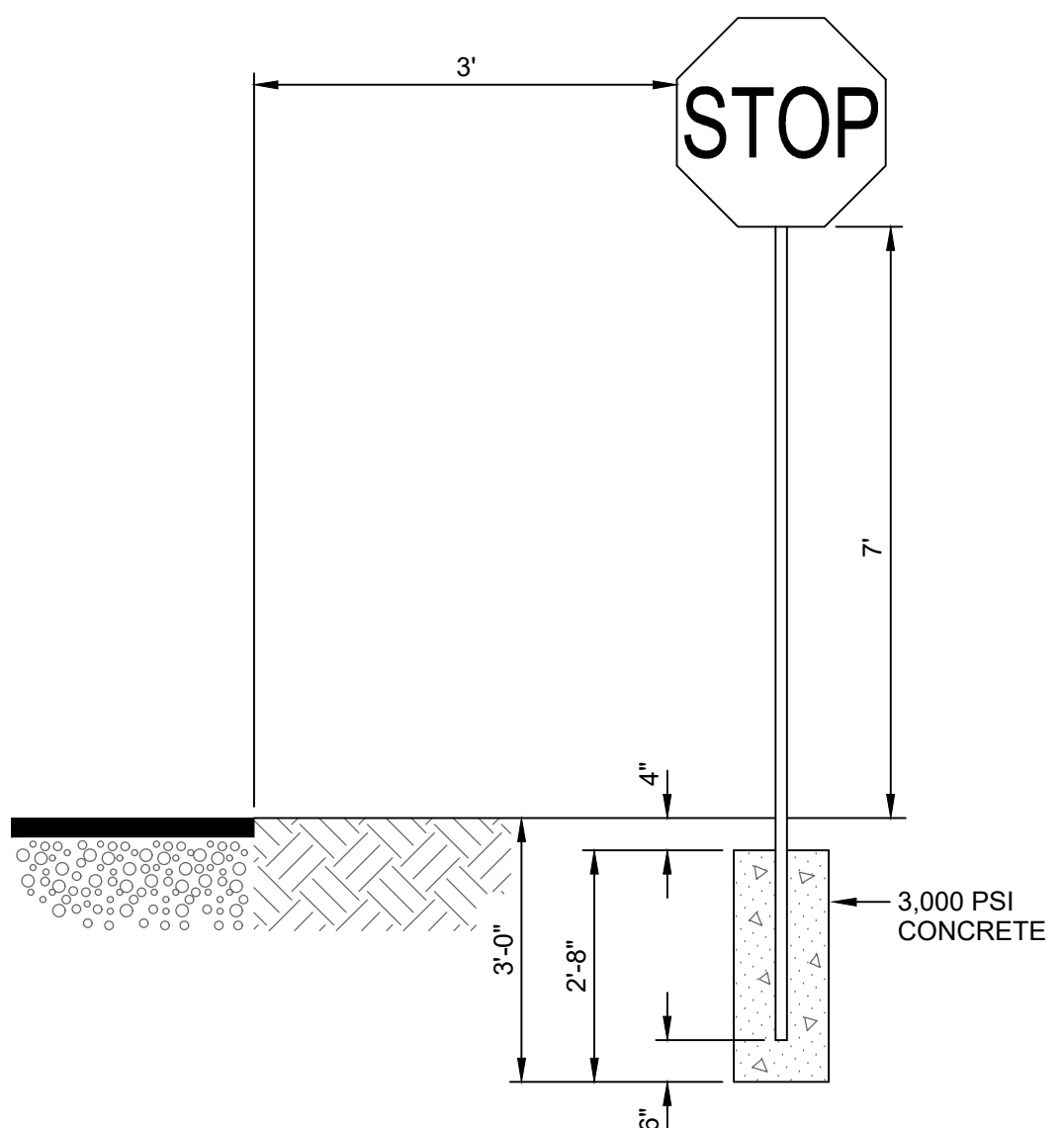
3 ASPHALT TO CONCRETE TRANSITION
 SCALE: NOT TO SCALE



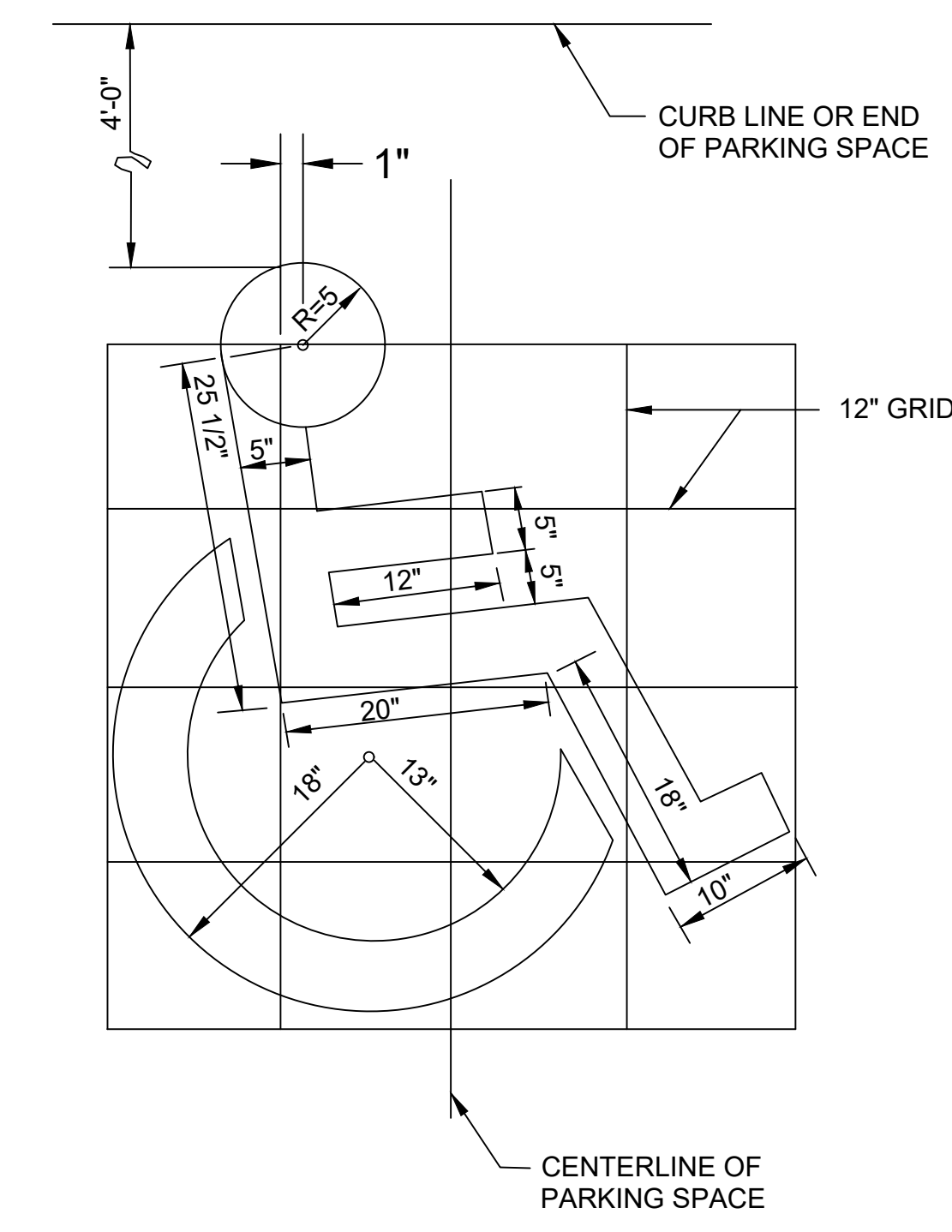
4 NCDOT DRIVEWAY PAVEMENT SECTION
 SCALE: NOT TO SCALE



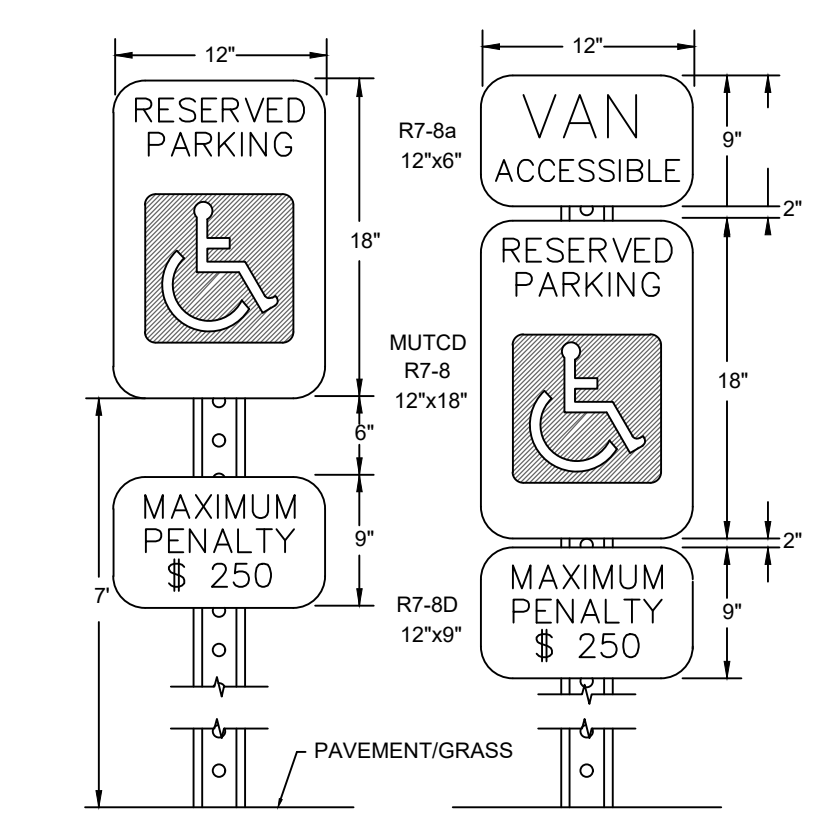
5 ASPHALT PAVEMENT SECTION (LIGHT DUTY)
 SCALE: NOT TO SCALE



6 SIGN INSTALLATION
 SCALE: NOT TO SCALE



7 ADA PARKING SYMBOL
 SCALE: NOT TO SCALE



8 ADA PARKING SYMBOL
 SCALE: NOT TO SCALE

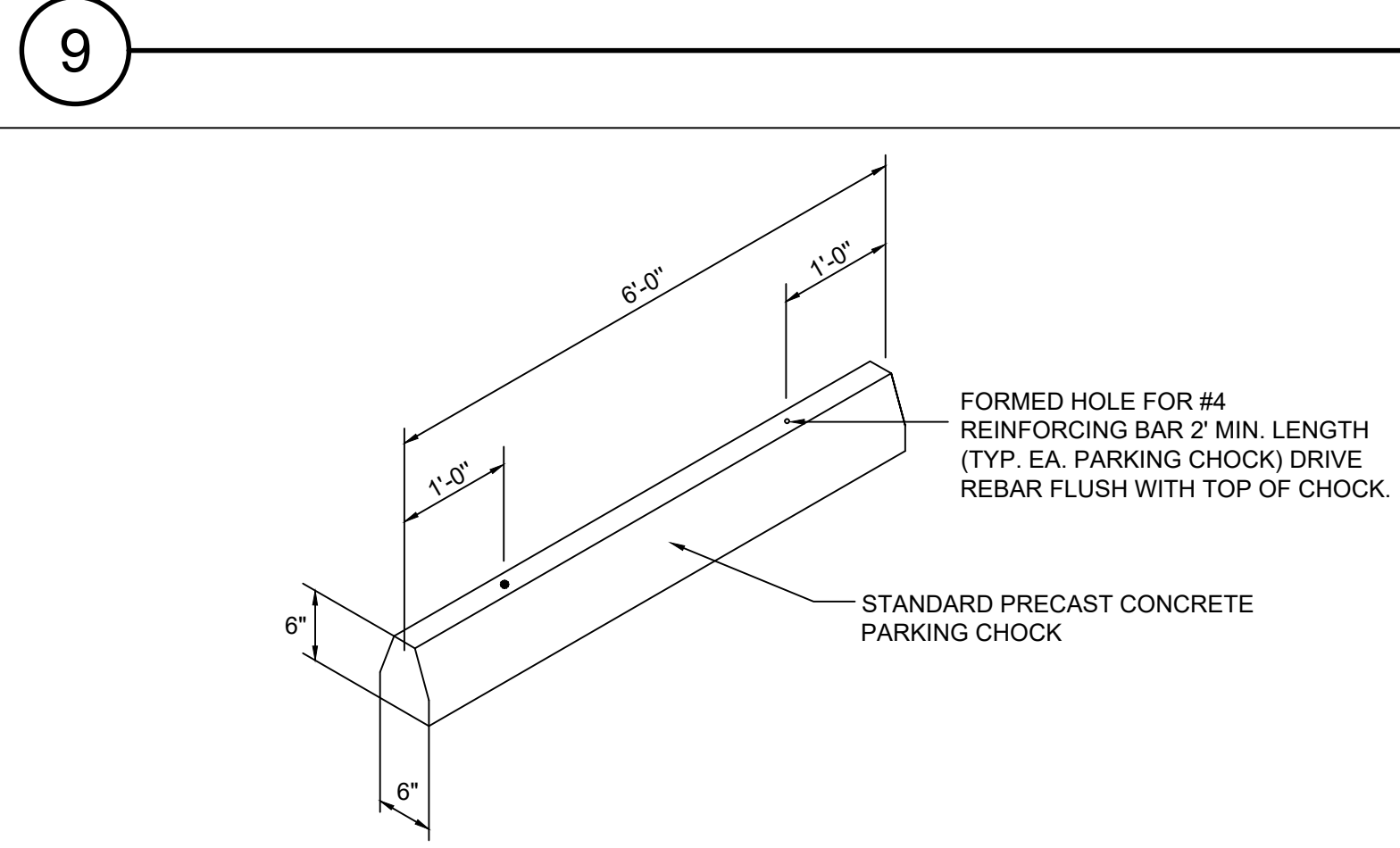
NOTES

THE SUBBASE SHOULD CLASSIFY AS SW, SP, SW-SM, OR SP-SM ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) WITH LESS THAN 10% PASSING THE NO. 200 SIEVE.

THE BASE COURSE SHOULD CLASSIFY AS GW, GP, GW-GM, OR GP-GM ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) WITH LESS THAN 2% FINES PASSING THE NO. 200 SIEVE.

THE FOLLOWING GRADATION CRITERIA IS RECOMMENDED FOR THE WEARING SURFACE MATERIAL:

SIEVE DESIGNATION	% PASSING
1 IN (25 MM)	100
3/8 IN (10 MM)	5 - 85
NO. 4 (5 MM)	35 - 65
NO. 10 (2 MM)	25 - 50
NO. 40 (0.4 MM)	15 - 30
NO. 200 (0.08 MM)	<15



10 PRECAST WHEEL STOP
 SCALE: NOT TO SCALE

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REVISIONS

NO.	DESCRIPTION

PRINCIPAL IN CHARGE
 N. LAURETTA, PE, LEED AP

PROJECT MANAGER
 NJL

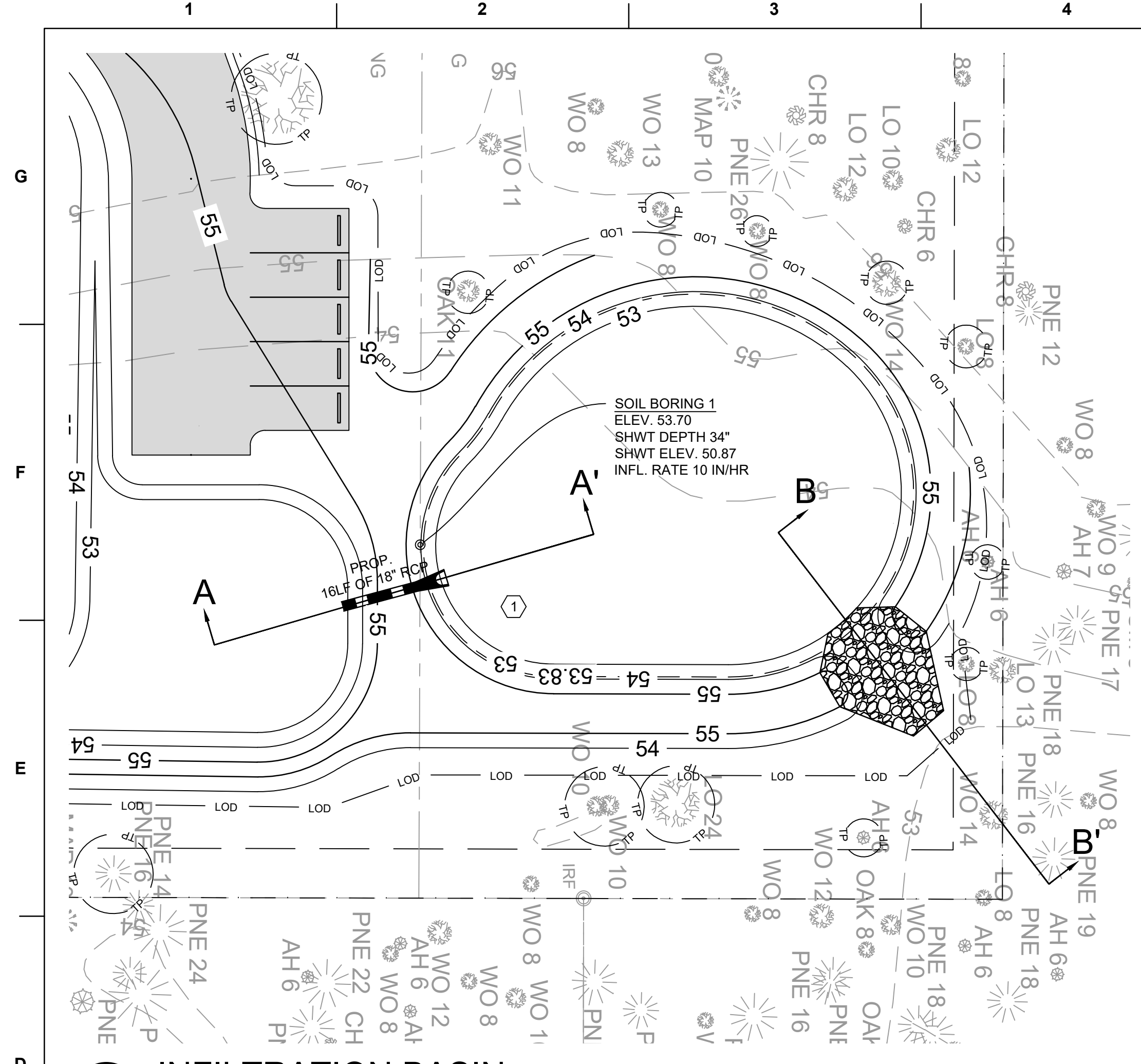
DRAWN BY
 NJL

PROJECT ADDRESS
 HAMPSTEAD, NC

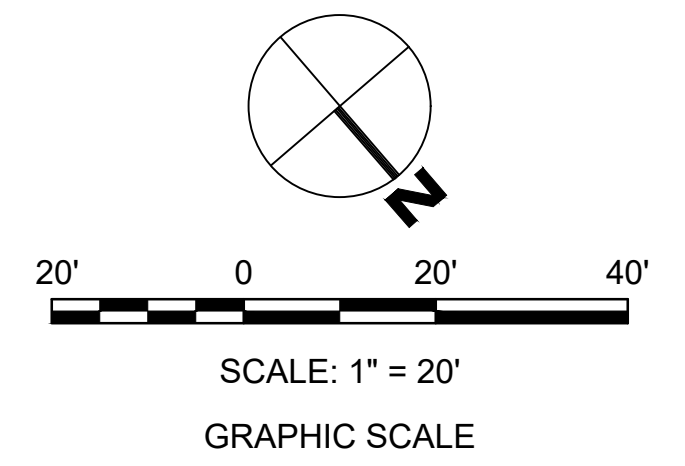
PROJECT NUMBER
 1009.01

SHEET TITLE
SITE DETAILS

SHEET NUMBER
CS501



1 INFILTRATION BASIN
SCALE: 1" = 20'



RAINFALL SUMMARY	
RETURN EVENT	RAINFALL DEPTH (IN.)
2-YEAR	4.64
10-YEAR	7.20
25-YEAR	9.04
50-YEAR	10.70
100-YEAR	12.50

PRE-DEVELOPMENT CURVE NUMBER (BASIN 1)				
COVER TYPE	AREA (AC)	%	CN	WTD. CN
WOODS - FAIR (A)	1.9	82	49	40.30
WOODS - FAIR (D)	0.41	18	84	14.91
TOTAL	2.31	82		55.21
				USE CN = 55

POST-DEVELOPMENT CURVE NUMBER (BASIN 1)				
COVER TYPE	AREA (AC)	%	CN	WTD. CN
WOODS - FAIR (A)	1.45	63	49	30.76
WOODS - FAIR (D)	0.17	7	84	6.18
IMPERVIOUS	0.69	30	98	29.27
TOTAL	2.31	100		66.21
				USE CN = 66

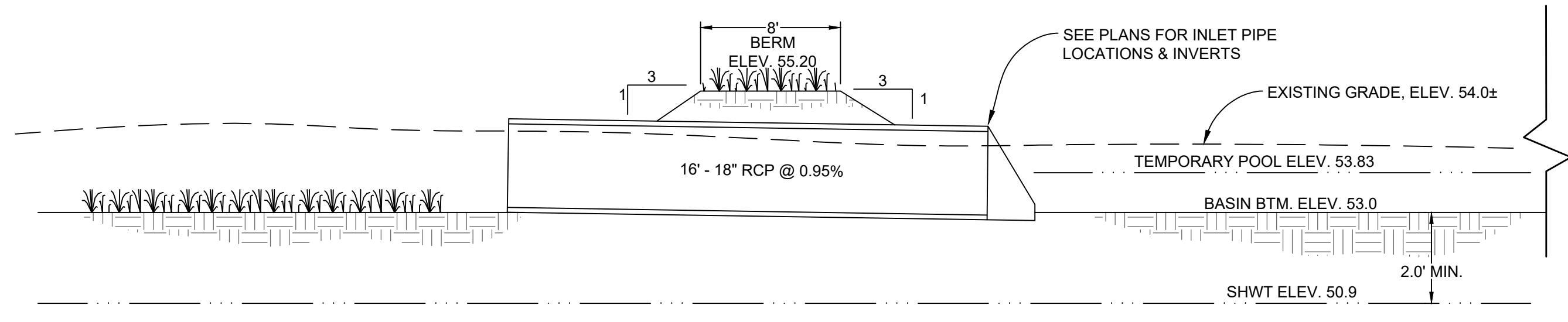
SITE DATA (BASIN 1)	
TOTAL DA	2.31 ACRE
ON-SITE DRAINAGE AREA	100,818 SF
OFF-SITE DRAINAGE AREA	0 SF
IMPERVIOUS	0.83 ACRE
ON-SITE	24,052 SF
ON-SITE (FUTURE)	12,000 SF
IMPERVIOUS COVER	35.8%

TREATMENT VOLUME	
RUNOFF COEFFICIENT, RV	0.372 IN/IN
REQUIRED 1.5" RUNOFF VOLUME	4,686 CF
PROVIDED TREATMENT VOLUME	4,792 CF

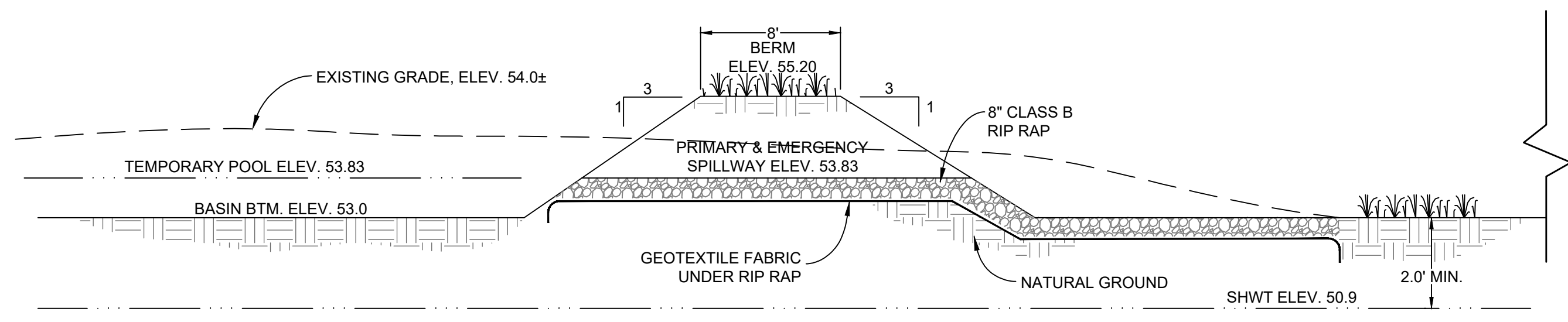
DRAWDOWN	
REPORTED SOIL PERMEABILITY	10.0 IN/HR
DRAWDOWN SOIL PERMEABILITY	5.0 IN/HR
INFILTRATION AREA	5,433 SF
DRAWDOWN INFILTRATION RATE	0.629 CFS
DRAWDOWN OF 1.5" TREATMENT VOLUME	0.086 DAYS

STAGE/STORAGE				
CONTOUR	CONTOUR AREA (SF)	INCREMENTAL VOLUME (CF)	CUMULATIVE VOLUME, S (CF)	
53.0	5,433	0	0	BOTTOM OF BASIN
53.5	5,842	2,819	2,819	
53.83	6,120	1,974	4,792	TEMPORARY POOL
54.0	6,265	1,053	5,845	
55.0	7,153	6,709	12,554	TOP OF BASIN

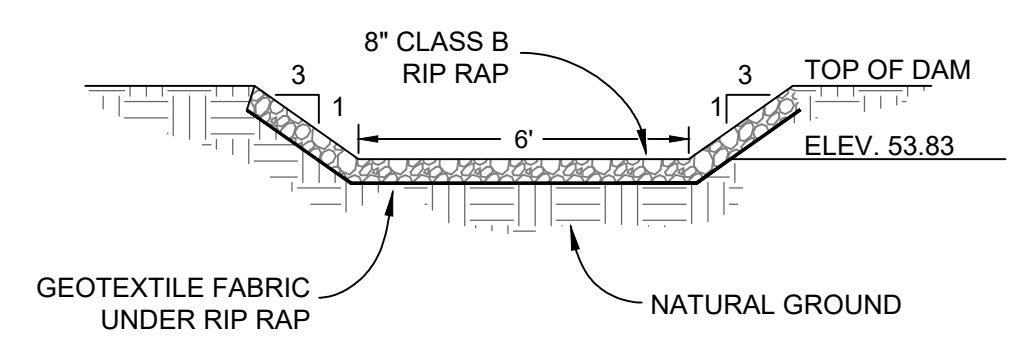
POA	ROUTING SUMMARY													
	2-YEAR				10-YEAR				25-YEAR				50-YEAR	100-YEAR
	PRE	POST	Δ (%)	WSE	PRE	POST	Δ (%)	WSE	PRE	POST	Δ (%)	WSE	WSE	WSE
DA-1	1.09	0.00	0	53.52	3.67	2.90	79	54.15	5.95	6.32	106	54.38	54.54	54.70



INFILTRATION BASIN SECTION (A-A')
NOT TO SCALE



INFILTRATION BASIN OUTLET STRUCTURE SECTION (B-B')
NOT TO SCALE



PRIMARY & EMERGENCY SPILLWAY
NOT TO SCALE

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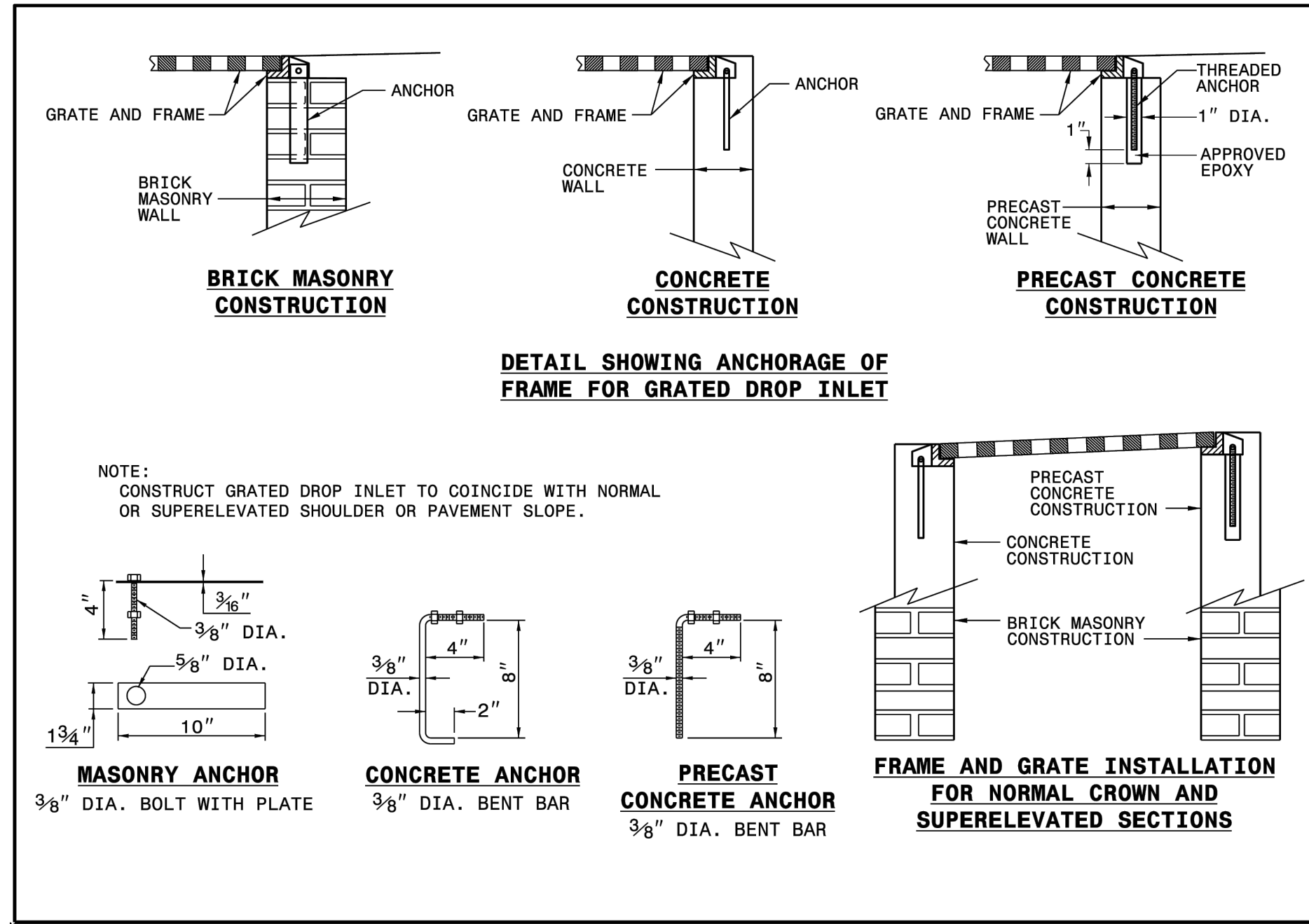
PROJECT NUMBER
1009.01

SHEET TITLE
STORM DRAINAGE & GRADING DETAILS

SHEET NUMBER
CG501

TRC SUBMITTAL

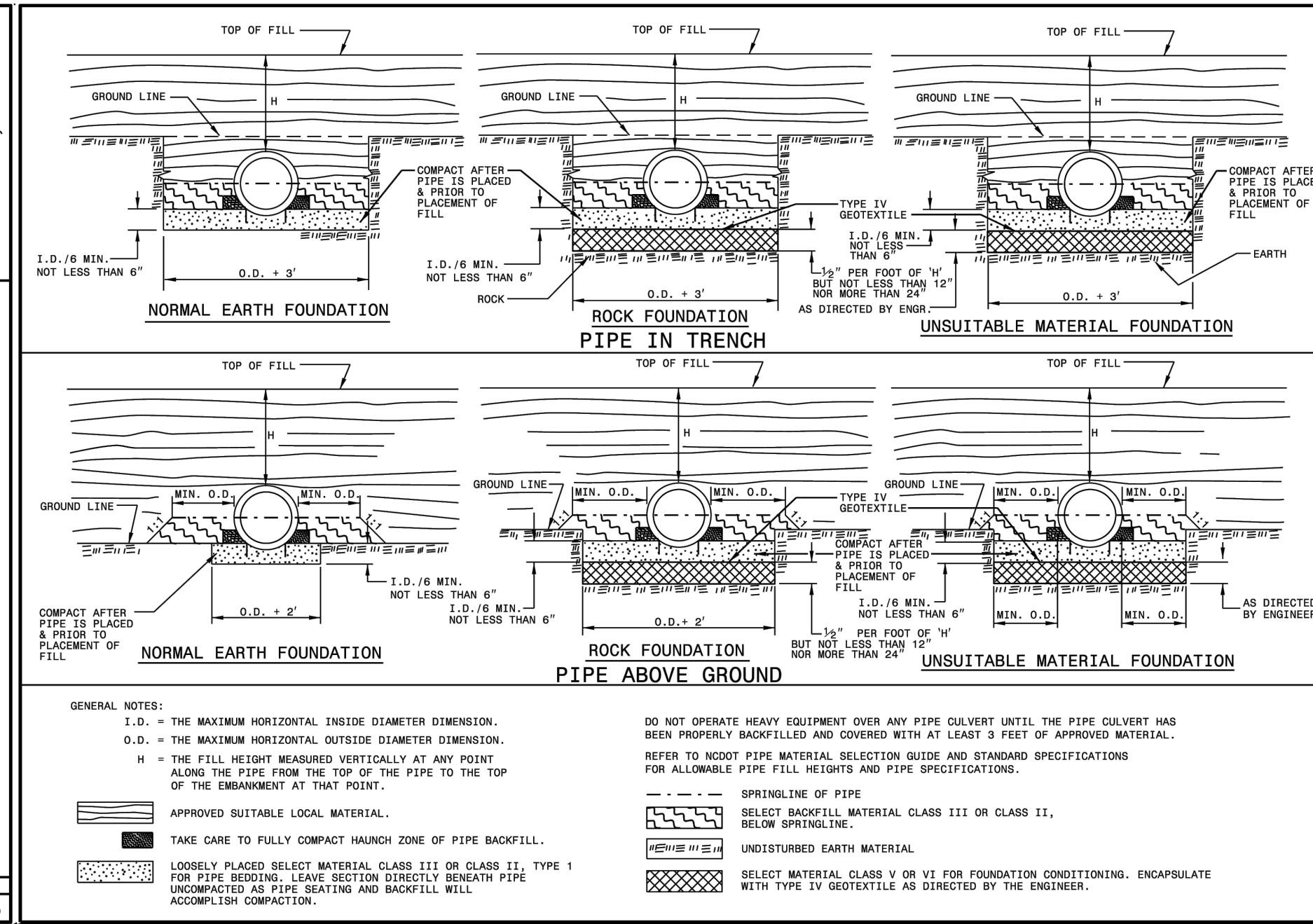
G
F
E
D
C
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A



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

ROADWAY STANDARD DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

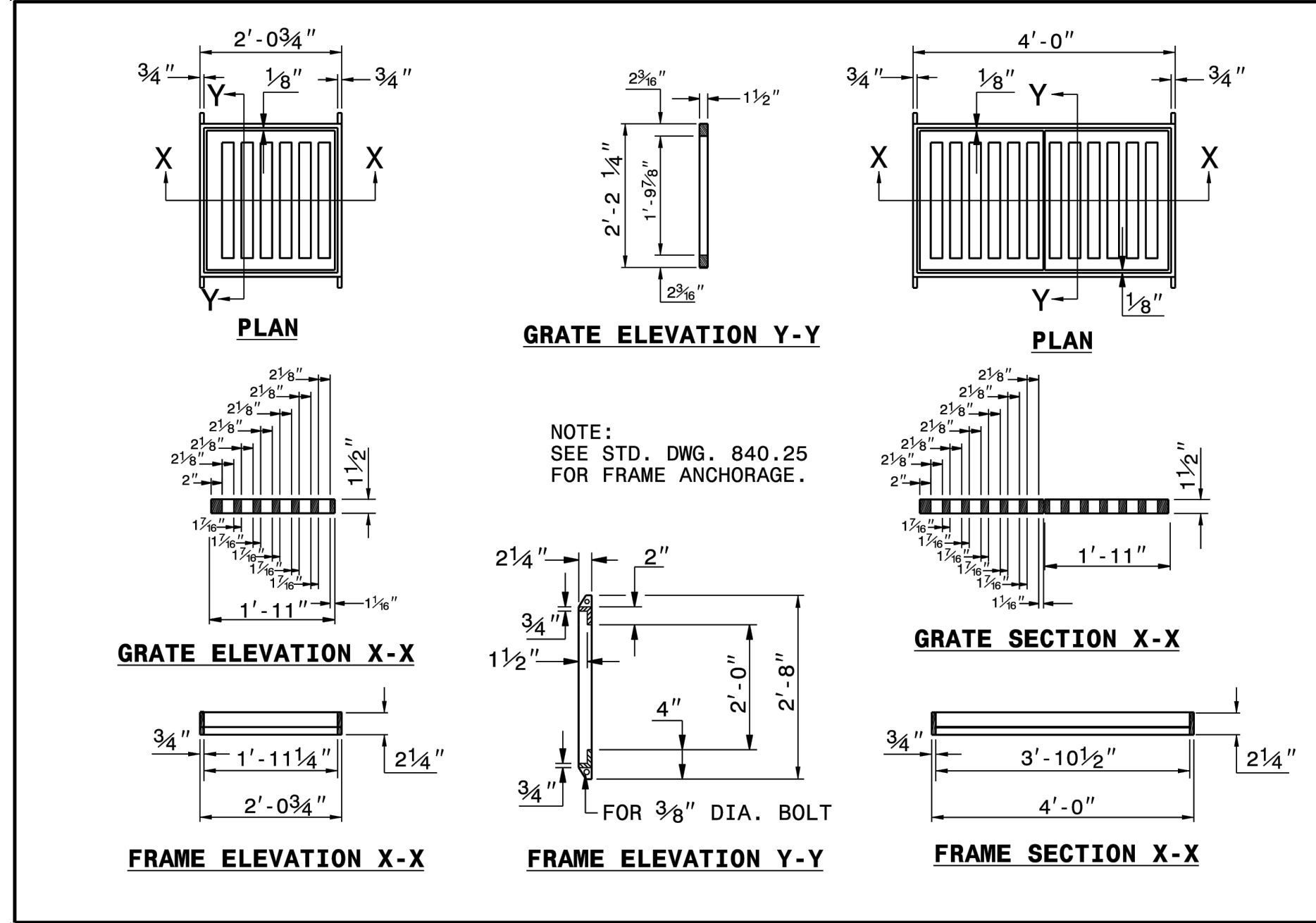
SHEET 1 OF 1
840.25



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

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

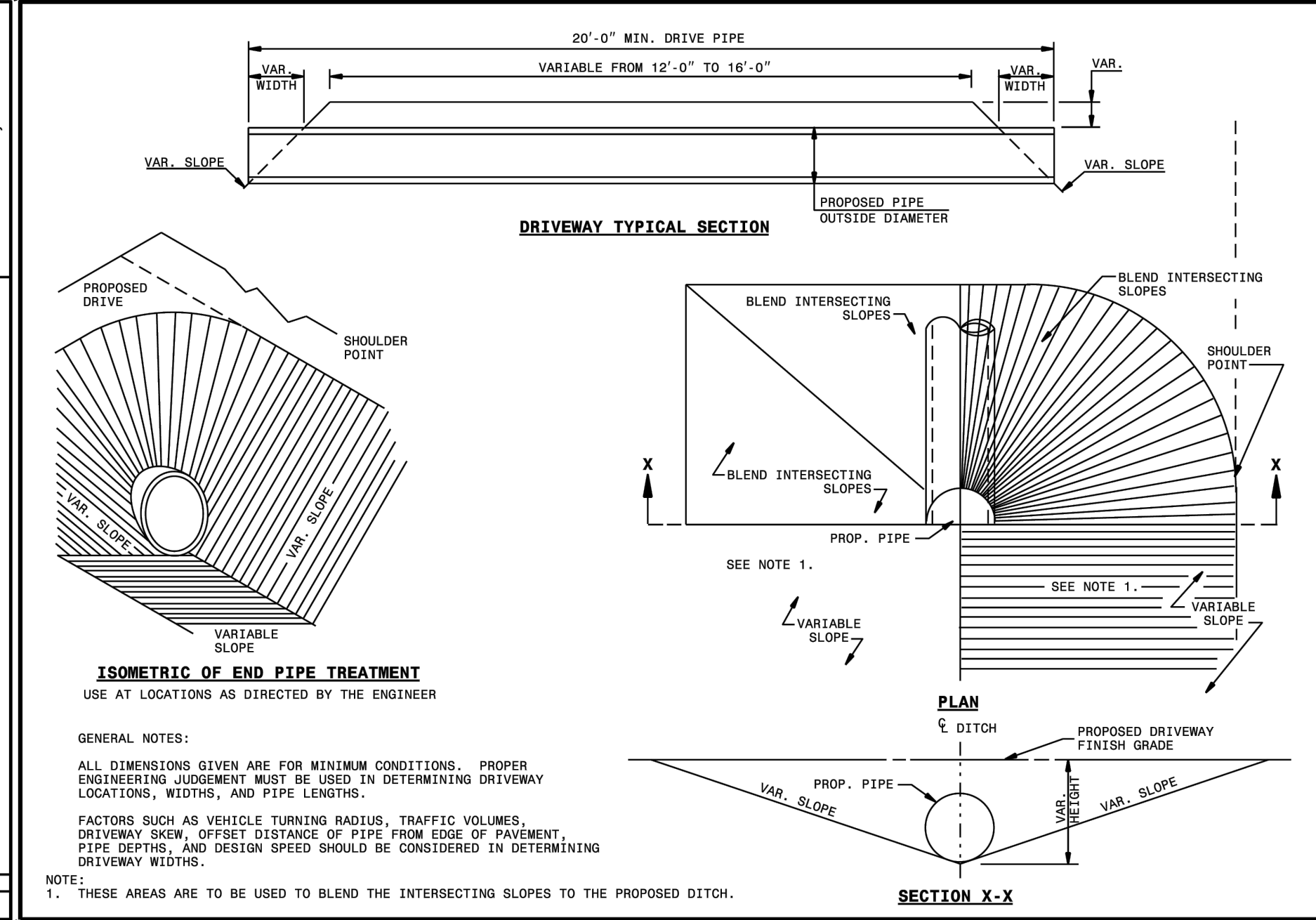
SHEET 2 OF 2
300.01



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

ROADWAY STANDARD DRAWING FOR
FRAMES AND NARROW SLOT FLAT GRATES

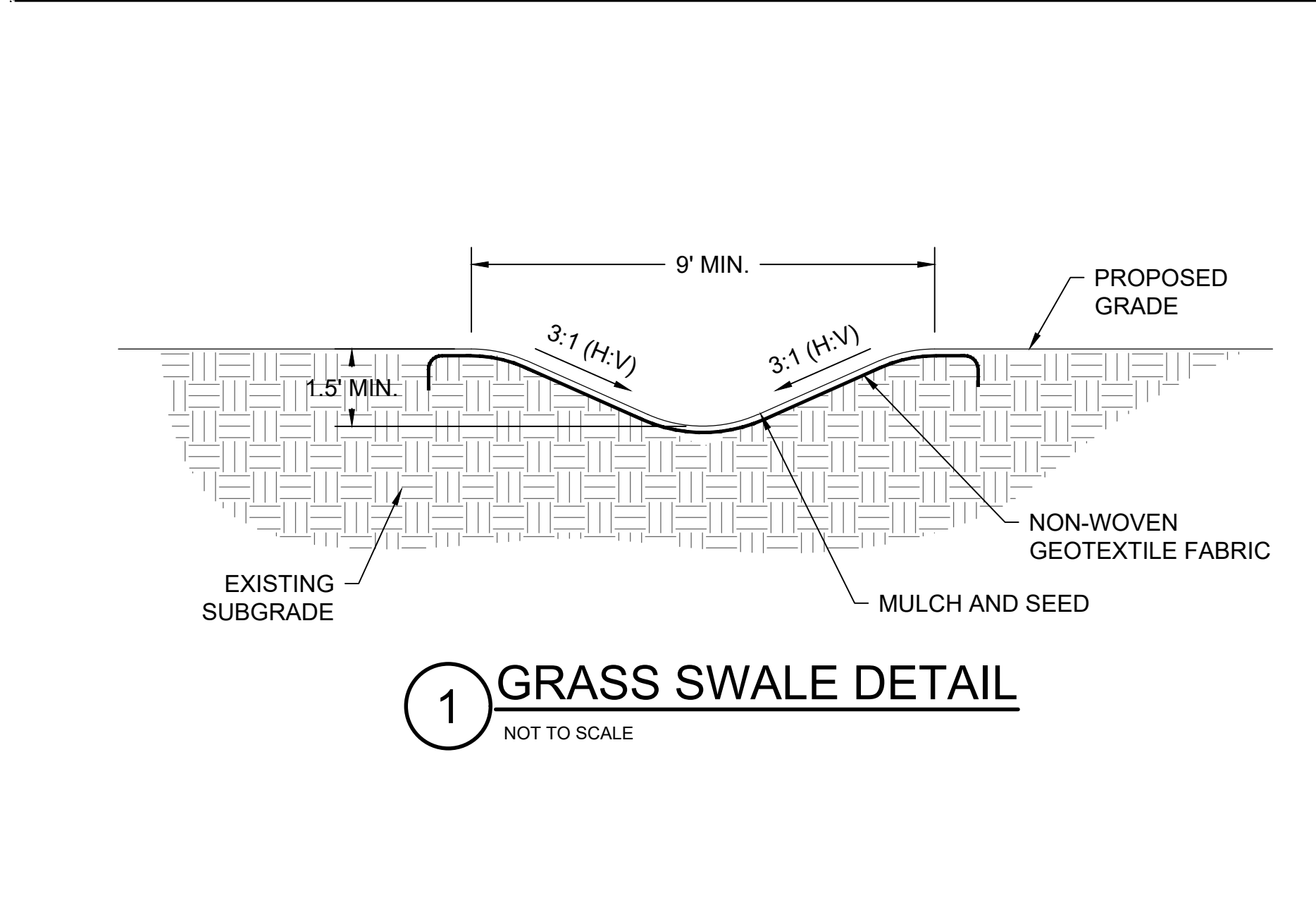
SHEET 1 OF 1
840.29



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

ROADWAY STANDARD DRAWING FOR
DRIVEWAY PIPE CONSTRUCTION
USING NO SPECIAL END SECTIONS

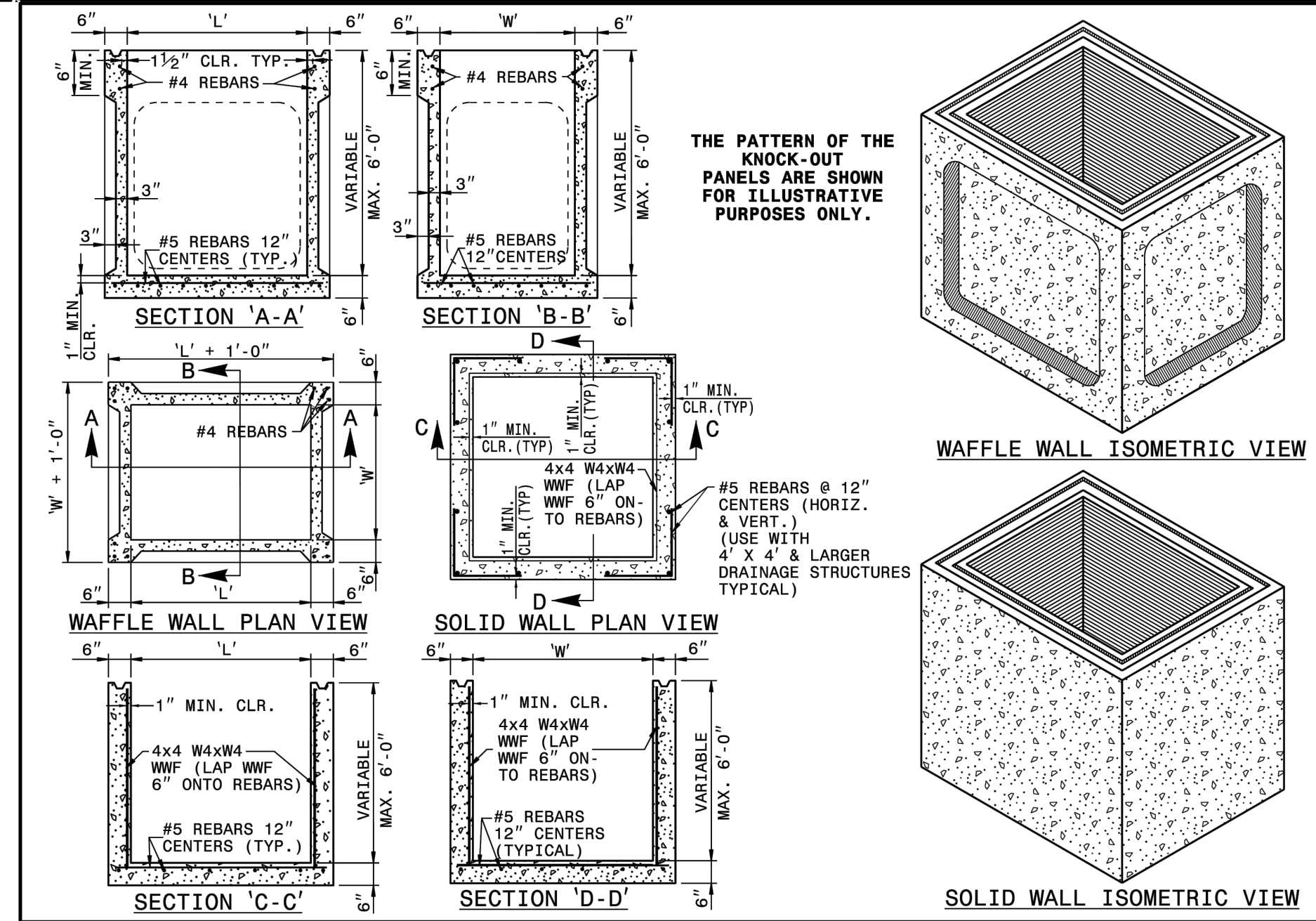
SHEET 1 OF 1
310.10



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

ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
(SOLID AND WAFFLE WALL)

SHEET 1 OF 2
840.45



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

ROADWAY STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
(SOLID AND WAFFLE WALL)

SHEET 2 OF 2
840.45

ENGINEER

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PROJECT OWNER

DR. SARA LEWIS DVM
MR. JOHN LEWIS
VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE
DECEMBER 01, 2023

REVISIONS	DATE	DESCRIPTION

PRINCIPAL IN CHARGE
N. LAURETTA, PE, LEED AP
PROJECT MANAGER
NJL
DRAWN BY
NJL

PROJECT ADDRESS
HAMPSTEAD, NC

PROJECT NUMBER
1009.01

SHEET TITLE
STORM DRAINAGE & GRADING DETAILS

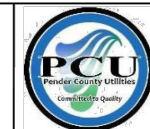
SHEET NUMBER
CG502

TRC SUBMITTAL

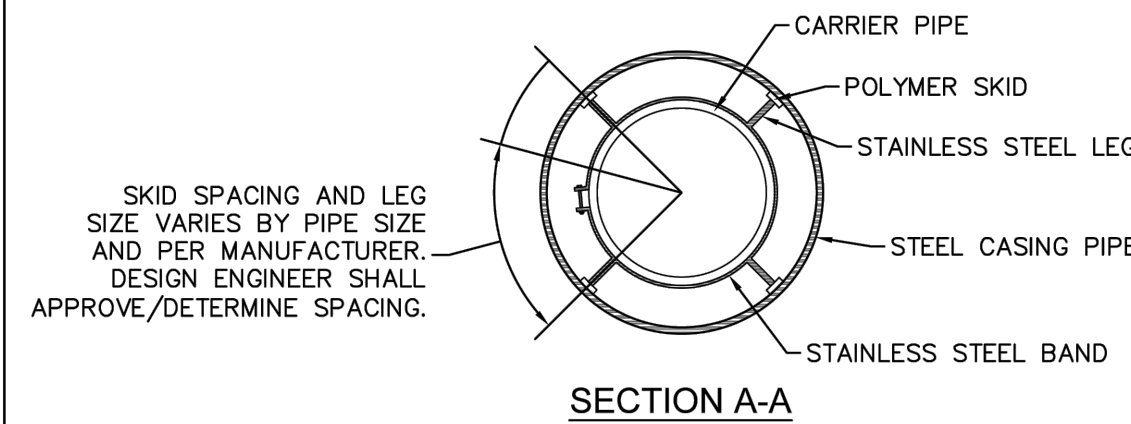
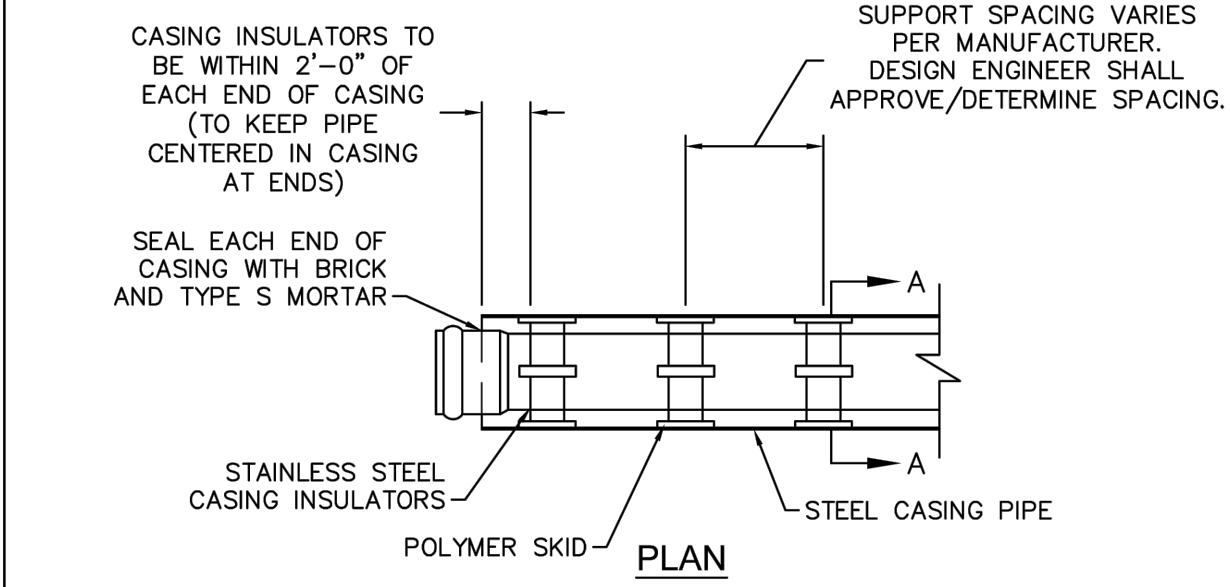
PCU STANDARD NOTES

- A PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE BEGINNING WORK. THE MEETING MUST BE SCHEDULED WITH PENDER COUNTY UTILITIES (PCU) AT LEAST ONE WEEK IN ADVANCE. ATTENDEES MUST INCLUDE PCU, THE UTILITY CONTRACTOR'S SUPERINTENDENT, THE SUPPLIER, AND THE CONSULTING ENGINEER.
- ALL MATERIALS USED SHALL CONFORM TO PENDER COUNTY UTILITIES REQUIREMENTS. NON-CONFORMING MATERIAL WILL NOT BE ACCEPTED FOR FINAL CERTIFICATION.
- ALL PIPE SHALL BE C900 CR18 PVC, UNLESS OTHERWISE NOTED (SEE PCU STANDARD DETAIL). PCU MUST APPROVE THE USE OF DIP IN THE FIELD BEFORE INSTALLATION. PIPE SHOULD NEVER BE UNDER THE ROADWAY, PARKING LOT, OR SIDEWALKS. PENDER COUNTY UTILITIES DOES NOT ALLOW SIZE-ON-SIZE TAPS.
- PCU STANDARD WATERLINE PIPE RESTRAINING METHOD IS MEGA LUGS. AT A MINIMUM ALL FITTINGS, VALVES, ETC. MUST BE RESTRAINED (SEE PCU STANDARD DETAIL).
- PCU MUST INSPECT CASING INSTALLATIONS PRIOR TO BACKFILL. PCU MUST WITNESS PRESSURE TESTS, AND WITHDRAWAL OF BACTERIOLOGICAL SMPAPLES. CONTACT PENDER COUNTY UTILITIES INSPECTOR TO SCHEDULE.
- CLOSE-OUT DOCUMENTS WHICH MUST BE RECEIVED PRIOR TO PCU SIGNING THE NCDEQ PWSS APPLICANT CERTIFICATION INCLUDE: BACTERIOLOGICAL TESTS, PRESSURE TESTS, DEED OF DEDICATION, AFFIDAVIT/RELEASE OF LIENS, WARRANT, AND RECORDS DRAWINGS (PDF & GIO REFERENCED CAD).
- AN 18-MONTH WARRANTY PERIOD APPLIES TO ALL WATERLINE CONSTRUCTION. THIS WARRANTY PERIOD DOES NOT BEGIN UNTIL FINAL APPROVAL OF THE SYSTEM HAS BEEN RECEIVED FROM NCDEQ PWSS.

PENDER COUNTY UTILITIES
605 E FREMONT STREET
PO BOX 995, BURGAW, NC 28425



STANDARD NOTES
PCU WATER SYSTEMS
VERSION #4 - OCTOBER 2023

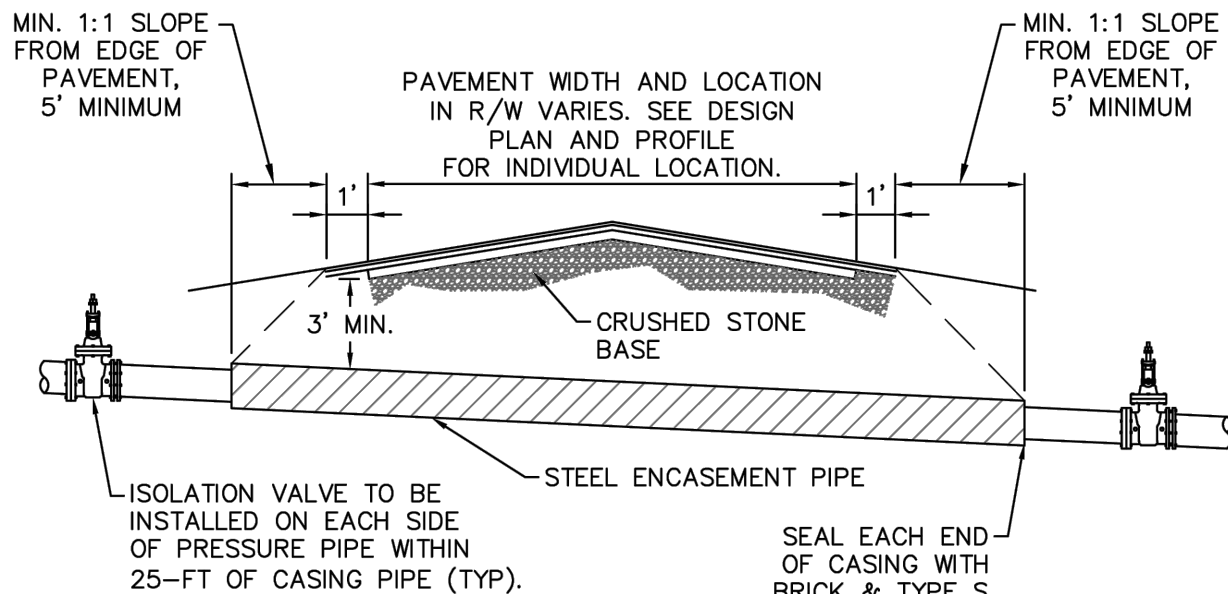


- NOTES:
- PIPE SUPPORTS TO BE PLACED TO PROVIDE PROPER SPACING, ALIGNMENT, AND GRADE AS SPECIFIED. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.
 - WHEN CARRIER PIPE REQUIRES FULL PIPE SECTIONS, AN OVER BELL RESTRAINT SYSTEM SHALL BE UTILIZED.

DETAIL: PIPE CASING SUPPORT DETAIL
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-8
SHEET NO: -

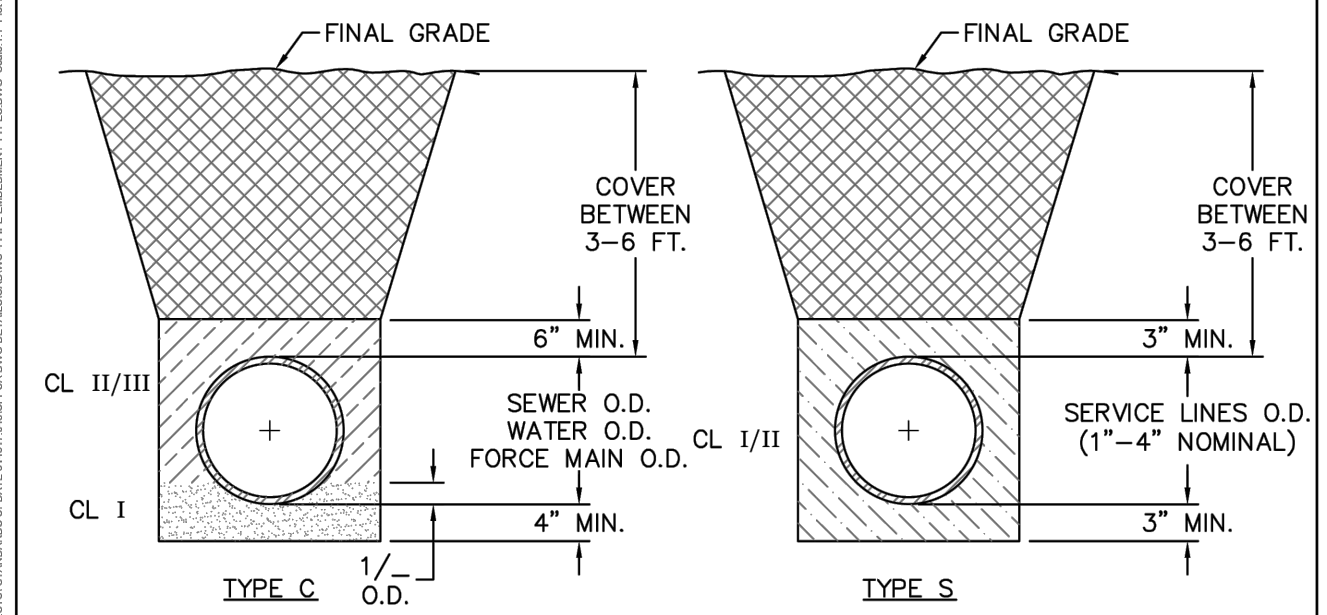
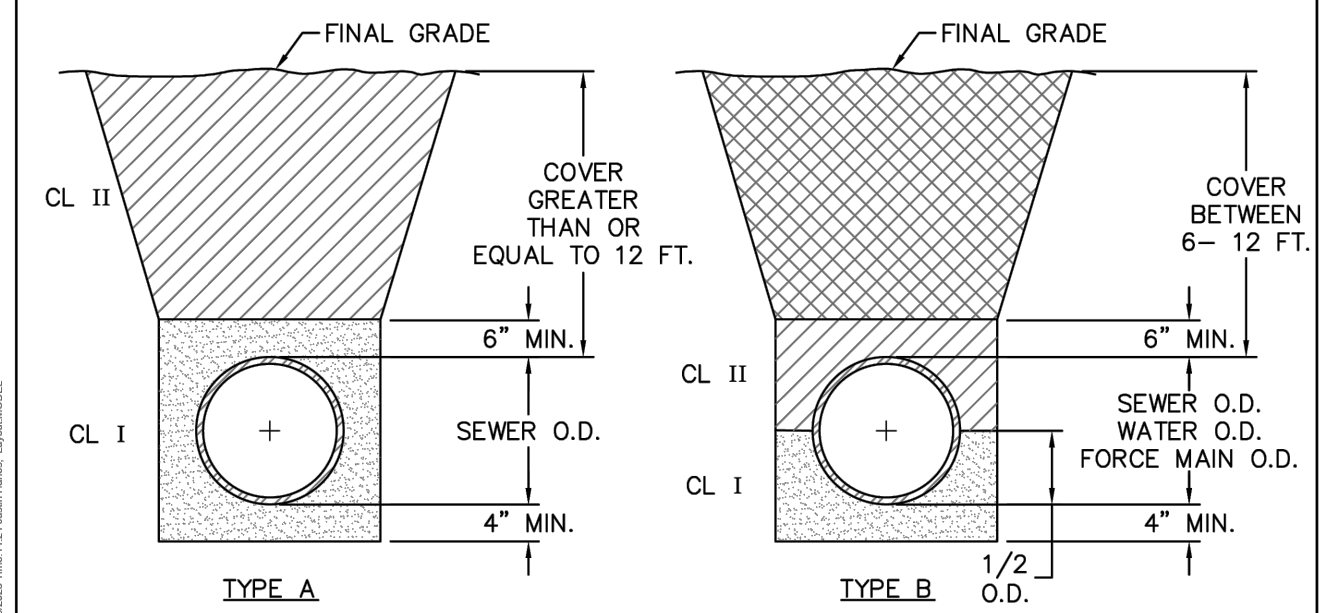


- NOTES:
- CASING WILL BE INSTALLED AT LINE AND GRADE SHOWN ON INDIVIDUAL PROFILE FOR EACH CROSSING. BORING/JACKING TO LINE AND GRADE IS REQUIRED.
 - TRACER WIRE SHALL BE TAPED AT 12' INTERVALS THROUGHOUT THE CASING.
 - PRESSURE AND NON-PRESSURE PIPING THROUGH CASING SHALL BE RESTRAINED JOINT.
 - SEE DETAIL WS-8 FOR PIPE CASING SUPPORT DETAILS.

DETAIL: TYPICAL BORING & JACKING DETAIL
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-7
SHEET NO: -

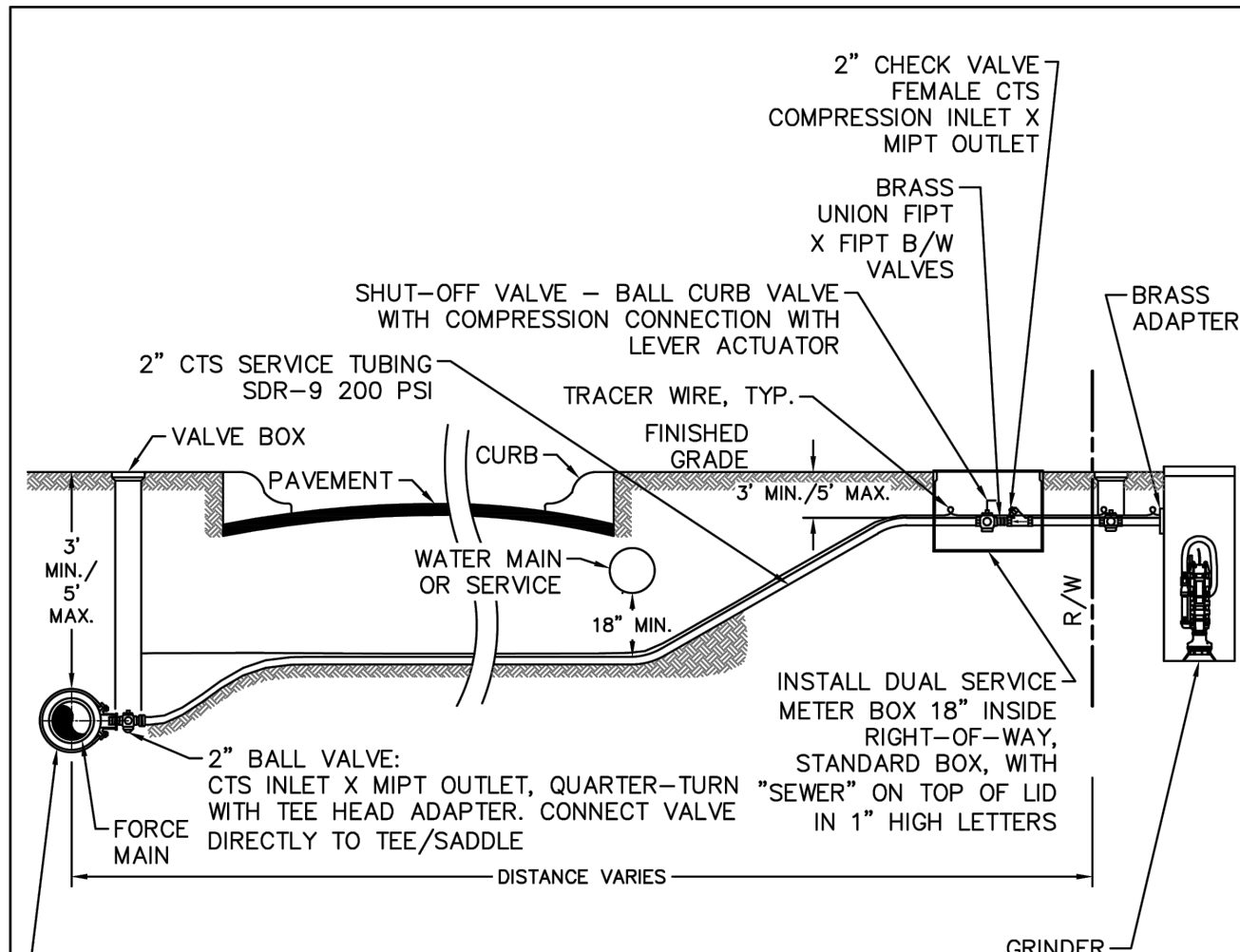


- COMPACTION NOTES:
- ALL ZONES: 95% STD EFFORT PER ASTM D698, EXCEPT AS STATED IN COMPACTION NOTE 2.
 - 12" SUBGRADE UNDER PAVEMENT: 98% STD EFFORT PER ASTM D698.
 - BEDDING REQUIREMENTS FOR SEWER FORCE MAINS AND WATER MAINS WITHIN TYPE A THROUGH TYPE S CONDITIONS, SHALL BE FOLLOWED IF IT HAS BEEN DETERMINED THAT UNSUITABLE SOILS EXIST WITHIN THE EXCAVATED TRENCH. OTHERWISE BEDDING FOR SEWER FORCE MAINS AND WATER MAINS MAY BE CLASS I OR CLASS II.

DETAIL: PIPE EMBEDMENT TYPES
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-4
SHEET NO: -



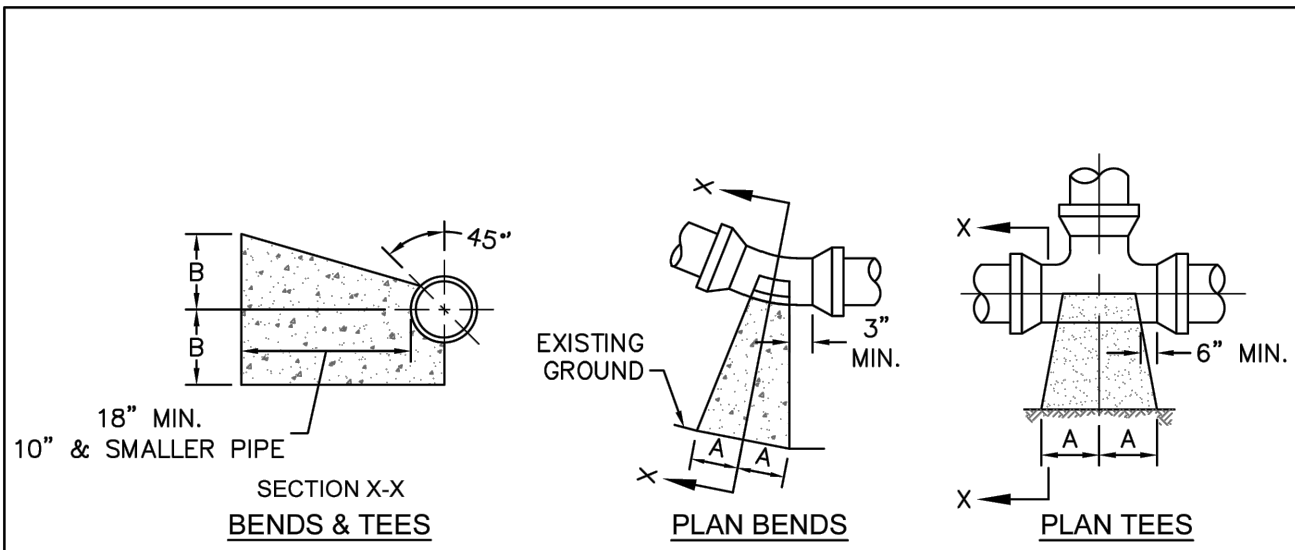
- TEE OR SADDLE:
USE TEE TO CONNECT TO 2" MAINS.
-2" MAINS TO BE POLY SDR 9 CTS (SAME AS LATERAL).
-TEE: CTS COMPRESSION ON BOTH RUNS X FIPT BRANCH.
FORD T441-777-AWT-NL BRASS TEE OR EQUAL.
USE SADDLE TO CONNECT TO MAINS LARGER THAN 2".

- NOTES:
- REFER TO CFPUA SPECIFICATIONS AND CFPUA MSM FOR PIPING MATERIAL AND SIZE REQUIREMENTS.
 - TRACER WIRE SHALL BE INSTALLED ON FORCE MAIN AND SERVICE LINE TO TANK.
 - THE HOMEOWNER IS RESPONSIBLE FOR THE GRAVITY CONNECTION FROM THE STRUCTURE TO THE GRINDER PUMP STATION AND FOR THE ELECTRICAL WIRING TO PROVIDE POWER TO THE PUMP PANEL.
 - SERVICES SHALL BE PERPENDICULAR FROM MAIN TO VALVE BOX.
 - SST INSERT STIFFENER SHALL BE USE ON ALL CTS COMPRESSION CONNECTIONS.

DETAIL: SHORT SIDE / LONG SIDE LOW PRESSURE SEWER CONNECTION
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: LP-3
SHEET NO: -



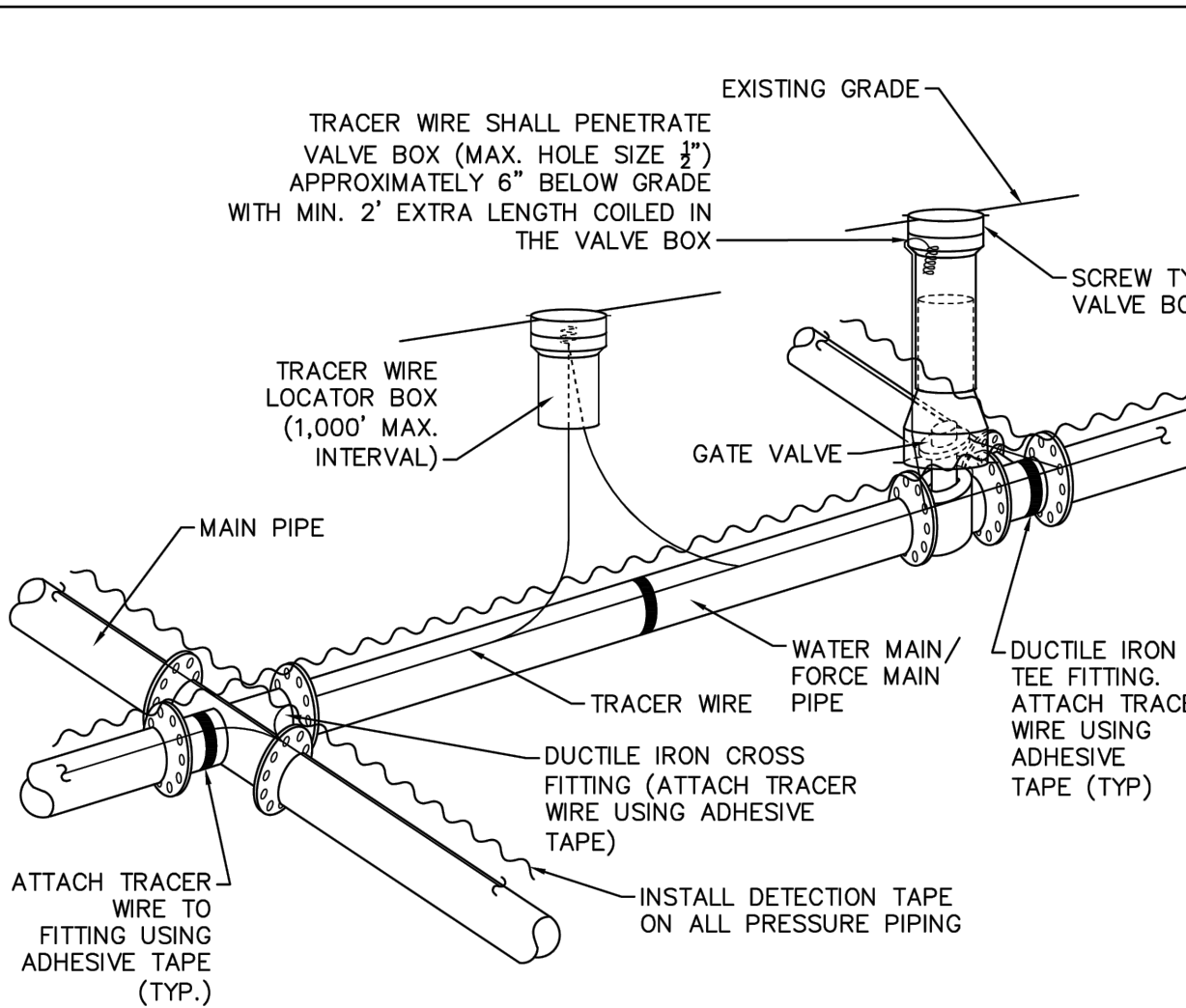
SIZE	90 BENDS		45 BENDS		22-1/2 BENDS		TEES/PLUGS		45 VERT. BENDS
	A	B	A	B	A	B	A	B	
3"	8"	6"	5"	6"	3"	7"	6"	8"	27"
4"	8"	9"	5"	8"	3"	11"	6"	9"	28"
6"	14"	11"	9"	9"	8"	8"	12"	9"	36"
8"	16"	16"	12"	12"	10"	13"	14"	13"	42"
10"	18"	22"	15"	14"	14"	16"	18"	15"	50"
12"	20"	28"	18"	17"	16"	16"	22"	18"	62"
14"	26"	29"	21"	19"	18"	18"	26"	20"	72"
16"	33"	29"	25"	21"	20"	21"	32"	21"	83"
18"	40"	30"	28"	24"	22"	23"	36"	24"	88"

- NOTES:
- THRUST BLOCKING IS NOT PERMITTED EXCEPT IN SPECIAL INSTALLATIONS WHERE DESIGNED BY ENGINEER AND APPROVED BY CFPUA.
 - ALLOW 7-DAY MINIMUM CONCRETE CURE TIME BEFORE FLOOR LOAD ON THRUST BLOCK.
 - BASED ON 150 PSI TEST PRESSURE AND 2,000 PSF SOIL BEARING CAPACITY.
 - ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
 - PIPE & FITTINGS TO BE WRAPPED IN 10 MIL PLASTIC PRIOR TO THRUST BLOCK BEING POURED.

DETAIL: THRUST BLOCK
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-13
SHEET NO: -

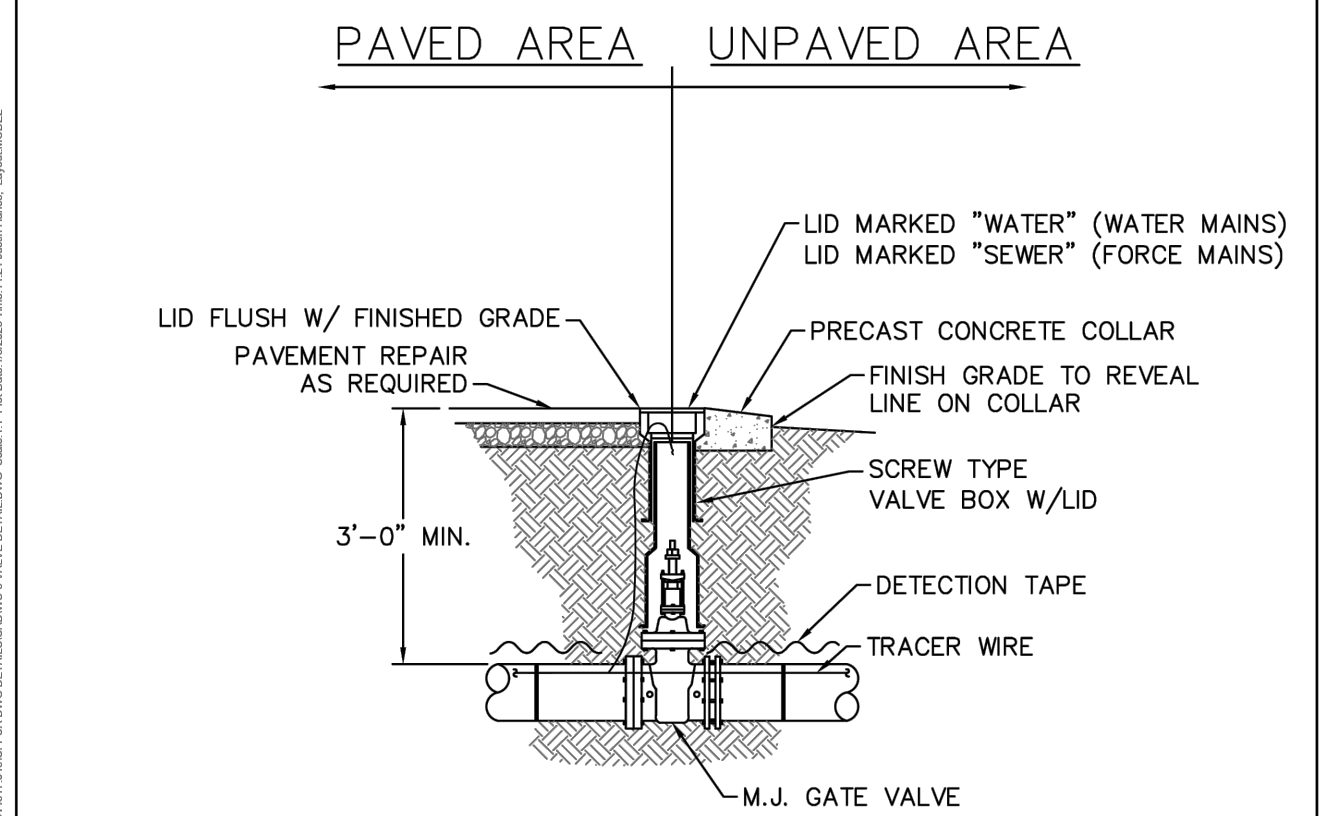


- NOTES:
- TRACER WIRE SHALL BE INSTALLED PER THE CFPUA MSM.
 - WIRE SHALL BE STRAPPED TO ALL PVC PIPING WITH ADHESIVE TAPE AT 12 FOOT INTERVALS.
 - SECURE WIRE TO ALL TEE AND CROSS FITTINGS WITH ADHESIVE TAPE.
 - ALL SPLICES IN THE WIRE SHALL BE MADE WITH 3M DBR DIRECT BURY SPLICE KITS.

DETAIL: TRACER WIRE DETAIL
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-6
SHEET NO: -



- NOTES:
- TRACER WIRE SHALL PENETRATE VALVE BOX THROUGH DRILLED HOLE APPROX. 6" BELOW GRADE WITH MINIMUM 2-FOOT EXTRA LENGTH COILED IN THE VALVE BOX. SEE WS-6.

DETAIL: VALVE DETAIL
SCALE: NOT TO SCALE
CFPUA DETAIL DATE: 01/01/2023

CAPE FEAR PUBLIC UTILITY AUTHORITY
235 GOVERNMENT CENTER DRIVE
WILMINGTON, NC 28403
OFFICE: (910)332-6560

DETAIL NO: WS-5
SHEET NO: -

ENGINEER

4904 PARK AVENUE
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(910) 398-2882
nlauretta@rivervieweng.com

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PROJECT OWNER

DR. SARA LEWIS DVM
MR. JOHN LEWIS
VET CROSS

STAMP

NOT FOR CONSTRUCTION

ISSUE FOR REVIEW

ISSUE DATE
DECEMBER 01, 2023

REVISIONS

NO.	DATE	DESCRIPTION
1	###	

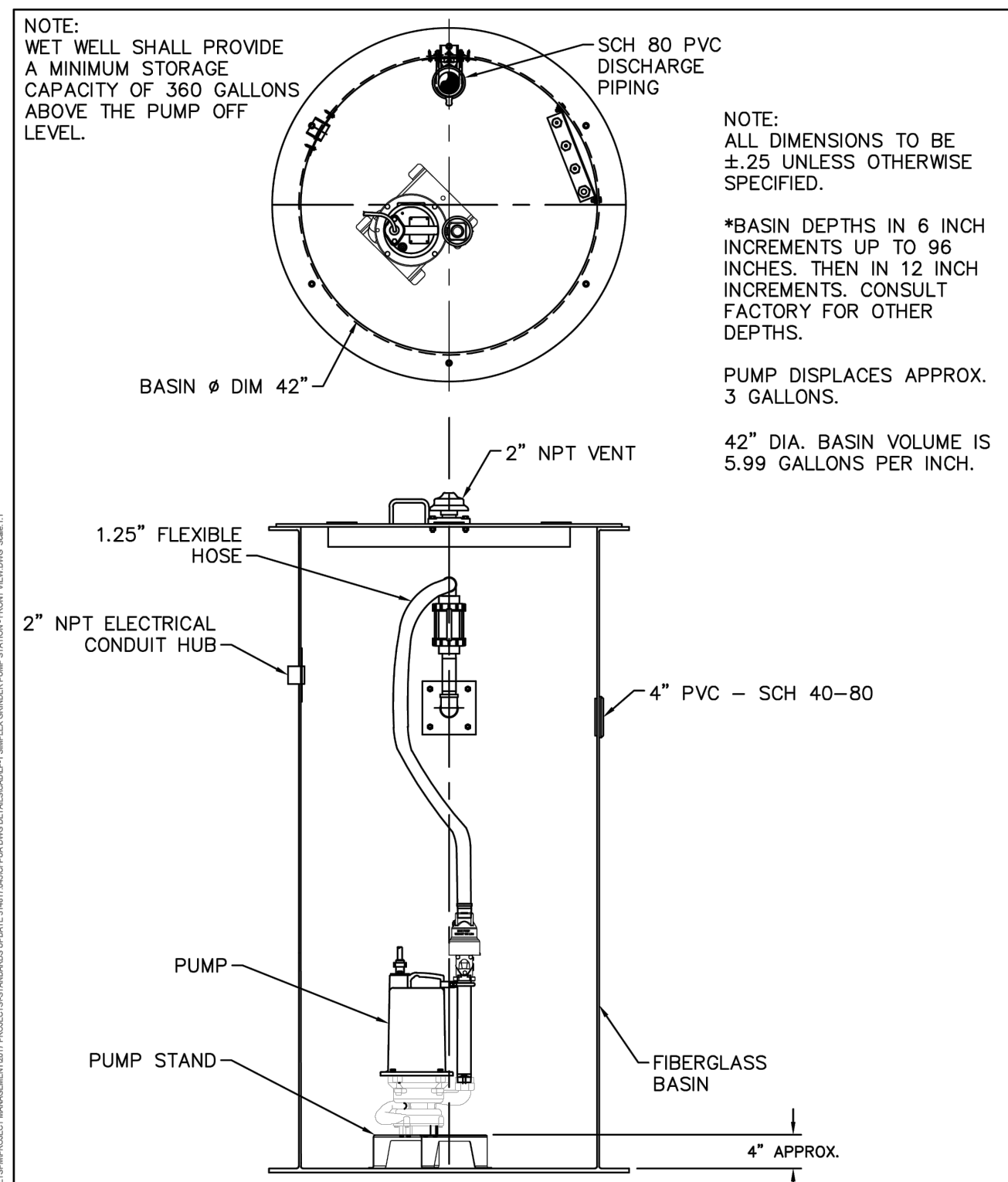
PRINCIPAL IN CHARGE
N. LAURETTA, PE, LEED AP
PROJECT MANAGER
N/JL
DRAWN BY
N/JL
PROJECT ADDRESS
HAMPSTEAD, NC

PROJECT NUMBER
1009-01

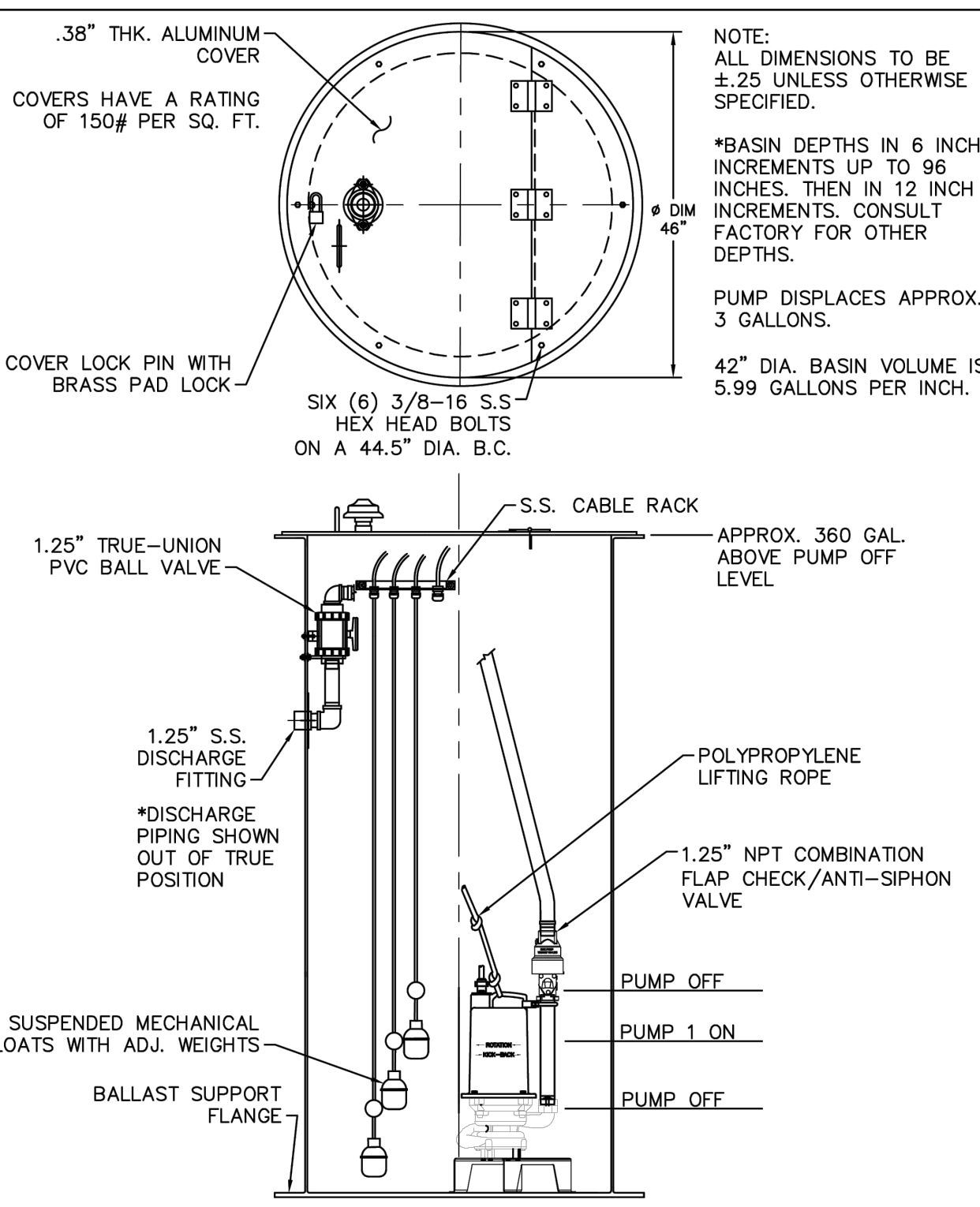
SHEET TITLE
UTILITY DETAILS

SHEET NUMBER

CU501



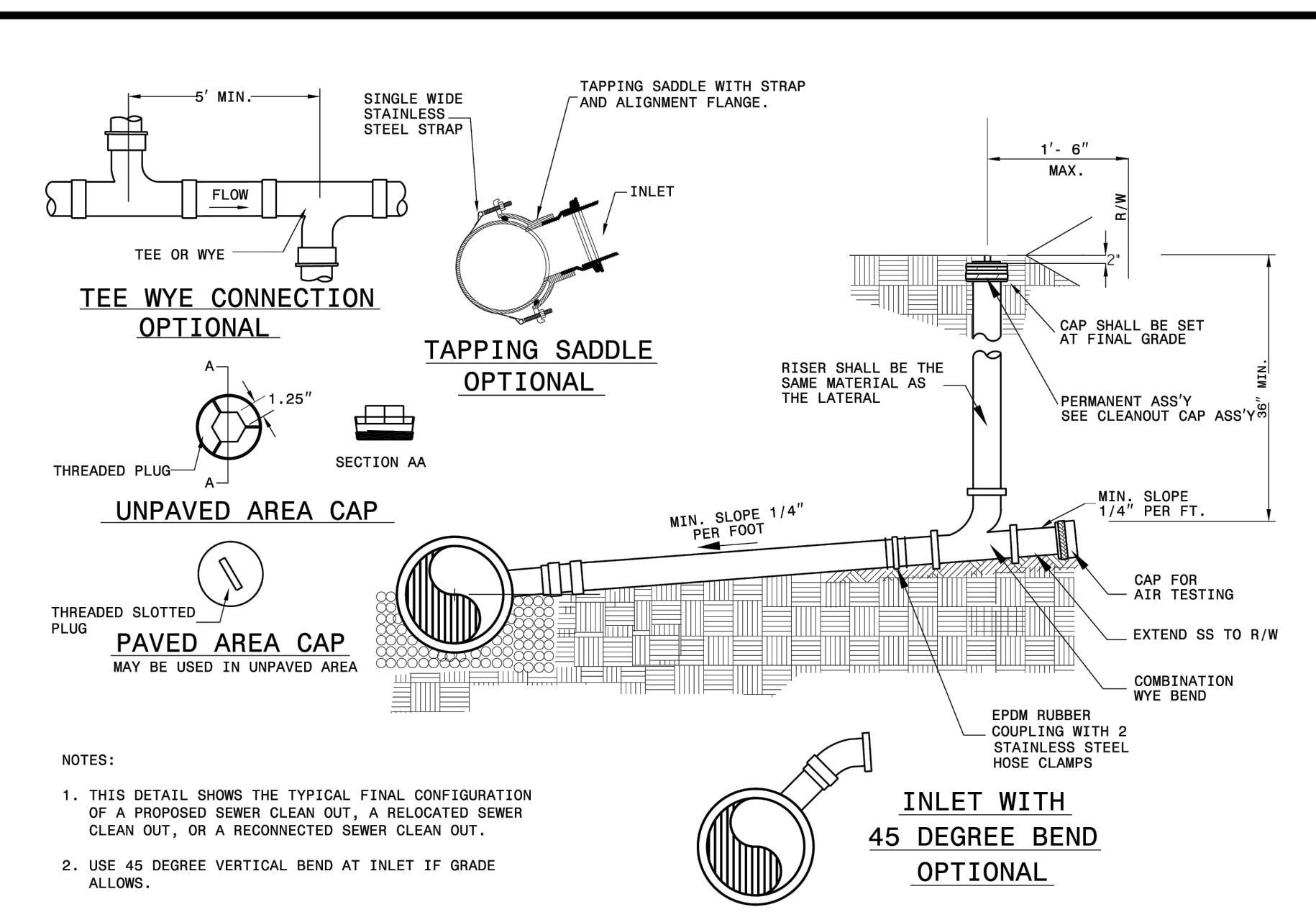
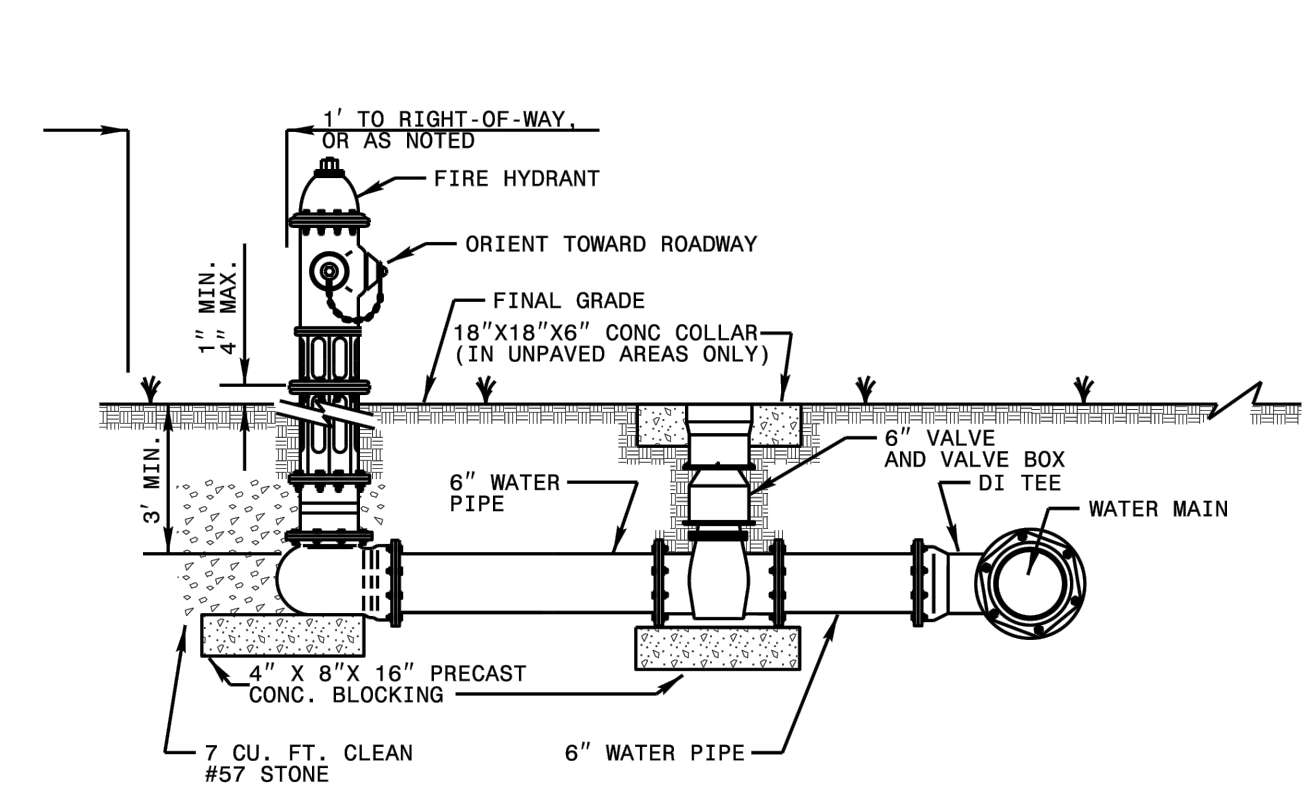
DETAIL: SIMPLEX GRINDER PUMP STATION FRONT VIEW	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910) 332-6560 Stewardship. Sustainability. Service.	DETAIL NO. LP-1
SCALE: NOT TO SCALE		CFPUA DETAIL DATE: 01/01/2023



DETAIL: SIMPLEX GRINDER PUMP STATION SIDE VIEW	CAPE FEAR PUBLIC UTILITY AUTHORITY 235 GOVERNMENT CENTER DRIVE WILMINGTON, NC 28403 OFFICE: (910) 332-6560 Stewardship. Sustainability. Service.	DETAIL NO. LP-2
SCALE: NOT TO SCALE		CFPUA DETAIL DATE: 01/01/2023

- FORCE MAIN NOTES**
1. MINIMIZE LOCALIZED HIGH SPOTS IN THE LINE BY PLACING THE FORCE MAIN ON A UNIFORM GRADE WHILE OBSERVING THE MINIMUM COVER DEPTHS AND SEPARATIONS NOTED.
 2. A MINIMUM 12" VERTICAL SEPARATION DISTANCE MUST BE MAINTAINED BETWEEN ALL FORCE MAIN SEWERS AND STORM SEWERS (MEASURED EDGE TO EDGE).
 3. A MINIMUM 18" VERTICAL SEPARATION DISTANCE MUST BE MAINTAINED BETWEEN ALL FORCE MAIN SEWERS AND WATER LINES (MEASURED EDGE TO EDGE).

- NOTES:**
1. THIS DETAIL SHOWS THE TYPICAL FINAL FIRE HYDRANT CONFIGURATION AFTER INSTALLATION OF A PROPOSED FIRE HYDRANT, RECONNECTION OF AN EXISTING FIRE HYDRANT, OR RELOCATION OF A FIRE HYDRANT.
 2. KEEP DRAIN PORTS FREE FROM OBSTRUCTION.
 3. RESTRAIN ALL PIPE JOINTS AND FITTINGS. ACCEPTABLE TYPES OF RESTRAINT INCLUDE RESTRAINING GLANDS, RESTRAINED PUSH-ON JOINTS, AND 3/4" BITUMINOUS COATED, ALL-THREAD RESTRAINING RODS. THRUST BLOCKS ARE NOT AN ACCEPTABLE TYPE OF RESTRAINT.
 4. FOR RELOCATED OR RECONNECTED FIRE HYDRANTS, VERIFY THE VALVE IS RESTRAINED TO THE MAIN. PROVIDE APPROPRIATE RESTRAINT.
 5. HYDRANT LOCATION APPLIES TO PROPOSED AND RELOCATED FIRE HYDRANTS.
 6. LOCATE FIRE HYDRANT WITH 3' HORIZONTAL CLEARANCE FROM ABOVE GROUND OBJECTS.
 7. PROVIDE A MINIMUM OF 3' COVER OVER ALL SECTIONS OF HORIZONTAL PIPE. USE FITTINGS AS NECESSARY.
 8. TAPPING SLEEVES MAY BE USED ON EXISTING MAINS IN LIEU OF DI TEES.
 9. LOCATE FIRE HYDRANT OUTSIDE OF THE VEHICLE RECOVERY AREA, ADJACENT TO THE R/W LINE, OR IN A PROTECTED AREA.



- NOTES:**
1. THIS DETAIL SHOWS THE TYPICAL FINAL CONFIGURATION OF A PROPOSED SEWER CLEAN OUT, A RELOCATED SEWER CLEAN OUT, OR A RECONNECTED SEWER CLEAN OUT.
 2. USE 45 DEGREE VERTICAL BEND AT INLET IF GRADE ALLOWS.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR FIRE HYDRANT
 SHEET 1 OF 1
1515.02
 ROADWAY STANDARD DRAWING FOR SEWER CLEAN OUT
 SHEET 1 OF 1
1520.01

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 MR. JOHN LEWIS
VET CROSS

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ISSUE FOR REVIEW
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REVISIONS

NO.	DESCRIPTION

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 N. LAURETTA, PE, LEED AP
 PROJECT MANAGER
 NJL
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 PROJECT ADDRESS
 HAMPSTEAD, NC

PROJECT NUMBER
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SHEET TITLE
UTILITY DETAILS

SHEET NUMBER
CU502