

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

Hoffman Office Building Application Information Major Site Development Plan

Case Number: SDP 2025-449

Application Type: Major Site Development

Applicant: Brian Keefer

Owners: Banam Properties, LLC

Location: On the south side of Canter Crest Rd adjacent to the intersection of US HWY 17 and Canter Crest Rd.

Property ID #(s): 3293-43-4636-0000

Description: Development application for the construction of a 2,978 square foot office building.

Total Area of Project: 2.65 ac

Current Zoning: GB, General Business

Technical Review Committee Meeting: 02/06/2025

Application Materials

Application Package
Site Plan

APPLICATION

Pender County Planning and Community Development

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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. | <u>N/A</u> | Pre-submittal Meeting
Date of Meeting _____ |
| 2. | <u>✓</u> | Signed Application |
| 3. | <u>✓</u> | Payment
\$250 (Online payment preferred, invoice generated upon receipt of application) |
| 4. | <u>✓</u> | Paper Plan Sets
Two (2) 24 x 36, Four (4) 11 x 17 |
| 5. | <u>✓</u> | Digital Submission
For all documents submitted in paper copy, provide a digital version. These may be emailed or uploaded to a share folder. Physical media such as CD or USB drives will not be accepted. |
| 6. | <u>✓</u> | Adjacent Property List
A numbered list of names and addresses, as obtained from the county tax listings and tax abstract, including the applicant, the owner, and owners of all properties located within 500-feet of the perimeter of the project bounds as obtained from the county tax listings and tax abstract. |
| 7. | <u>✓</u> | Adjacent Property Envelopes
The applicant shall provide a set of business envelopes addressed to the applicant, the owner, and each of the owners of all properties located within 500-feet of the perimeter of the project bounds and accompanied with first class postage adhered. Do not include return address or company branding on envelopes. |
| 8. | <u>N/A</u> | Permits
Include any permits issued on the project including but not limited to: environmental, traffic, utility, or site specific conditions. |
| 9. | <u>✓</u> | 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 Brian S. Keifer
Printed Name BRIAN S. KEIFER

Date 1-3-25

Staff Initials:	
Date:	

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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:	Brian Keefer	Property Owner's Name:	Banam Properties LLC
Applicant's Address:	239 Howards Lane	Property Owner's Address:	239 Howards Lane
City, State, & Zip	Hampstead NC 28443	City, State, & Zip	Hampstead NC 28443
Phone Number:	1-803-741-8133	Phone Number:	1-803-741-8133
Email Address:	brian.keefe@hoffman-hoffman.com	Email Address:	brian.keefe@hoffman-hoffman.com
Legal relationship of applicant to landowner:	Self applicant.		
SECTION 2: PROJECT INFORMATION			
PIN (Property Id #):	3293-43-4636-0000	Total property acreage:	2.65 AC
Zoning:	GB	Acreage to be disturbed:	12,557.3 SF
Water Provider:	Pender County Utilities	Wastewater Provider:	Pluris
Directions to Site:	Corner of Canter Crest and Hwy 17 S, Hampstead, NC	Township:	Hampstead
		Road Type: Public	Public/Private/Both
Lot Size: 2.65 AC	Sq Ft of Building: 2978 SF	Building Height: 20'-1"	
Setbacks	Front: 15'	Side: 10'	Rear: 10'
NAICS Code/Use:	8139 - Business, Professional, Labor, Political, and Similar Organization		
Business Name:	Hoffman & Hoffman, Inc.		
Describe activities to be undertaken on project site:	Office space for Sales Engineers and Support Staff		
Ownership:	Number of Employees:	Number of Members:	Seating Capacity: 10
<input checked="" type="checkbox"/> Private <input type="checkbox"/> Public	4	N/A	

**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...*

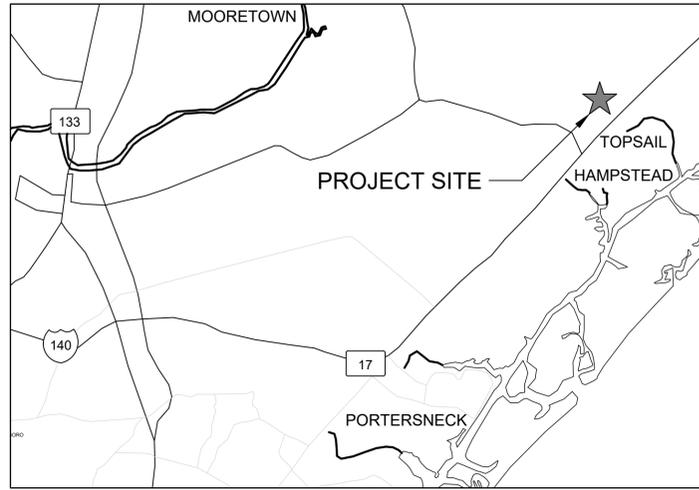
SECTION 4: ADDITIONAL COMMENTS		
Project is considered low density development. Existing lot size is 2.65 acres, proposed impervious is 0.29 acres. Project total impervious is 11%, limits of disturbance is 12,557.3 SF.		
Project parking consists of 14 spaces (16 spaces required) and 1 ADA space.		
SECTION 5: SIGNATURES		
Applicant's Signature	<i>Brian S. Keefer</i>	Date: 1-3-21
Applicant's Name Printed	BRIAN S. KEEFER	Date: 1-3-25
Owner's Signature	<i>Banana Properties LLC, Brian S. Keefer</i>	Date: 1-3-25
Owner's Name Printed	BRIAN S. KEEFER, BANANA PROPERTIES LLC	Date: 1-3-25
Planning Staff:		Date:

SITE PLAN

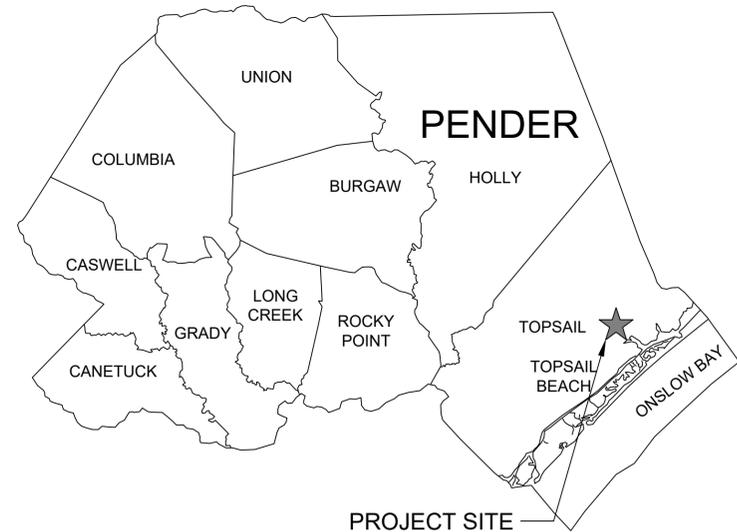
COUNTY OF PENDER, NORTH CAROLINA

CANTER CREST COMMERCIAL SITE DEVELOPMENT PLANS

CONSTRUCTION DOCUMENTS



VICINITY MAP
1"=10,000'



APPROVED BY PENDER COUNTY UNIFIED DEVELOPMENT
ORDINANCE ADMINISTRATOR

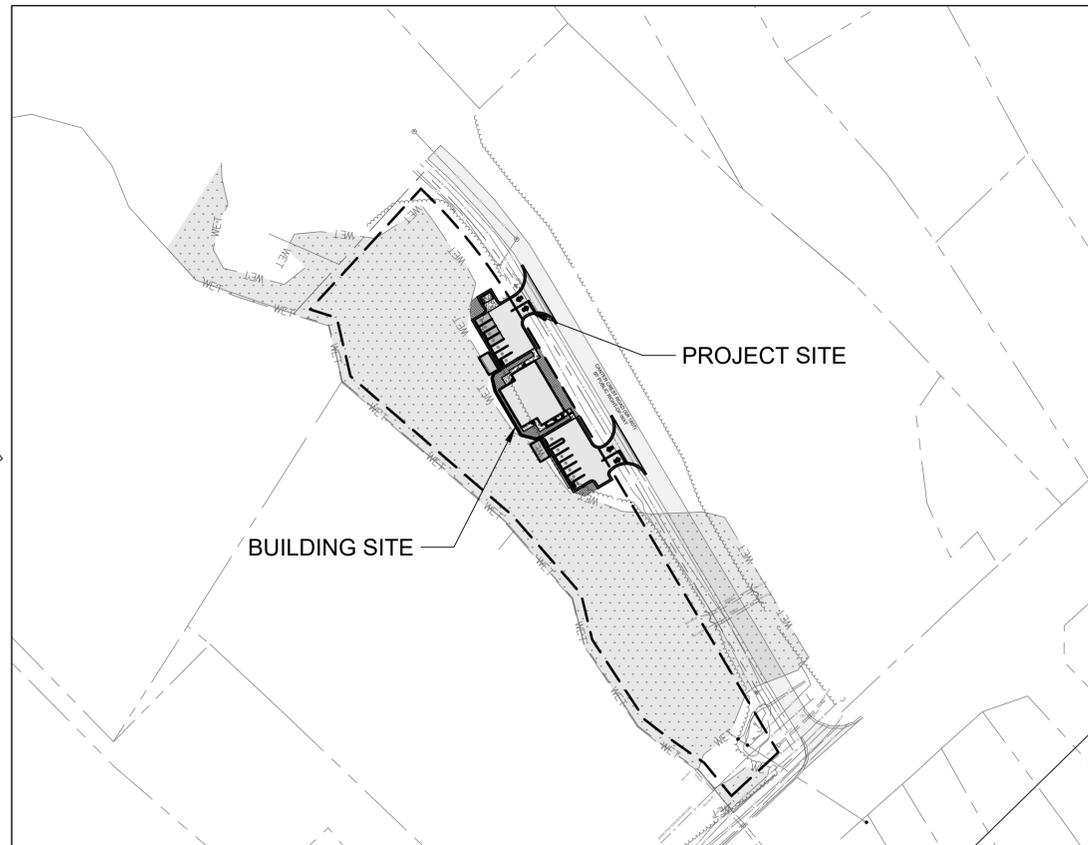
ADMINISTRATOR PRINTED NAME: _____
 ADMINISTRATOR SIGNATURE: _____
 APPROVAL DATE: _____

SITE PLAN VALID FOR TWO (2) YEARS FROM APPROVAL DATE



INDEX OF SHEETS

C-001	COVER
CX100	EXISTING CONDITIONS
CS100	OVERVIEW
CS200	PROPOSED
CG100	GRADING
CE100	EROSION AND SEDIMENT CONTROL
CU101	STORM AND UTILITY PLAN
C-501	DETAILS
C-502	DETAILS
C-503	DETAILS
C-504	DETAILS



SITE
1"=100'

SITE DATA	
PROJECT INFORMATION	
PROJECT ADDRESS	CANTER CREST COMMERCIAL SITE 16291 US HWY 17 HAMPSTEAD, NC
TOTAL PROPERTY ACREAGE	2.65 AC
PROPERTY OWNER	BRIAN KEIFER
ZONING	GB (GENERAL BUSINESS)
PROPOSED USE	GB (GENERAL BUSINESS)
SETBACKS	
FRONT	15 FT BUFFER TYPE-A
SIDE INTERIOR	10 FT BUFFER TYPE-B
REAR	10 FT BUFFER TYPE-B
PROPOSED STRUCTURES	
PROPOSED NUMBER OF BUILDINGS	1 COMMERCIAL
BUILDING SQUARE FOOTAGE	2978 SQ. FT.
BUILDING HEIGHT	N/A
CONSTRUCTION TYPE	N/A
BUILDING COVERAGE	2978 SQ. FT.
IMPERVIOUS COVERAGE	
EXISTING	0 SQ. FT.
PROPOSED	12557.3 SQ. FT.
SITE DATA	
PARKING	REQUIRED: 10 SPACES PROVIDED: 16 SPACES
ADA COMPLIANT	1 ADA
PEAK TRIP HOURS	1 ADA
AM/PM PEAK TRIP CALCULATIONS (TIA REQUIRED WITH 100 AM/PM OR > 1,000 TRIPS PER DAY)	

UTILITY PROVIDERS	
PENDER COUNTY PLANNING DEPARTMENT TAYLOR DAVIS 805 S. WALKER ST. BURGAW, NC 28425 (910) 259-1734	NCDOT KIRSTEN L. SPIRAKIS, PE DISTRICT ENGINEER DIVISION 3 / DISTRICT 1 (910) 467-0500
PENDER COUNTY FIRE MARSHALL 805 RIDGEWOOD AVE. BURGAW, NC 28425 (910)259-1210	WATER PENDER COUNTY UTILITIES KATIE LEUBNER (910)663-3776 605 E. FREMONT ST. BURGAW, NC 28425
EROSION CONTROL DIVISION OF ENERGY, MINERAL AND LAND RESOURCES - LAND QUALITY NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DAN SAMS DAN.SAMS@DEQ.NC.GOV 127 CARDINAL DRIVE EXT. WILMINGTON, NC 28405 (910)796-7326	SEWER DIVISION OF ENERGY, MINERAL AND LAND RESOURCES - POST CONSTRUCTION STORMWATER PROGRAM NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY CHRISTINE HALL, PE 127 CARDINAL DRIVE EXT. WILMINGTON, NC 28405 (910)796-7339

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION METHODS FOR 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.

NICHOLS
ENGINEERING, PLLC

NC PE License #: 045493
http://nicholsengrpllc.com/
910-617-7893
NCBELS Firm License Number: P-2006

NO.	REVISION	DATE

CANTER CREST
PENDER COUNTY, NORTH CAROLINA
COVER
DESIGN PLANS

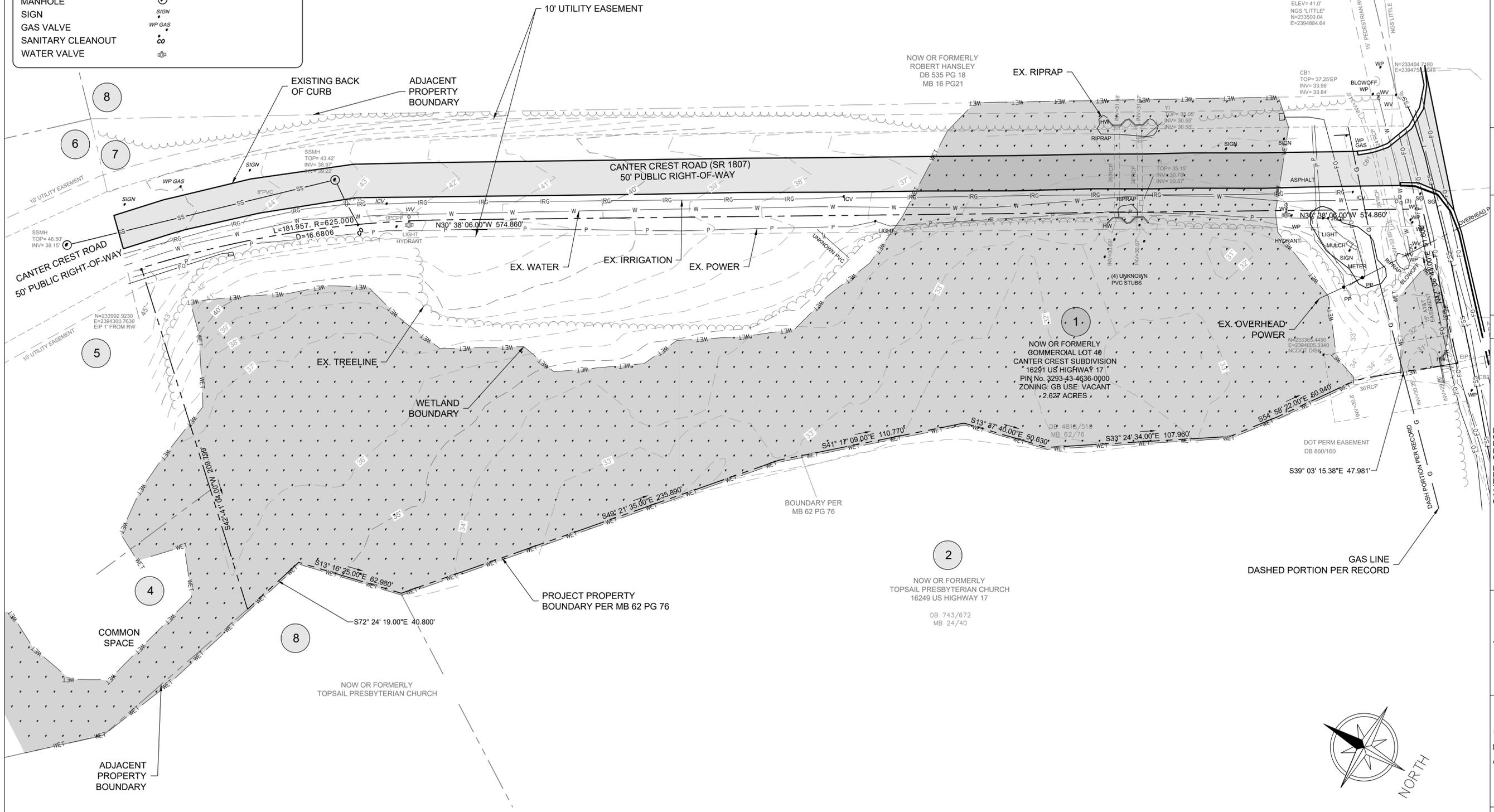


DATE: 3/16/2024
 SCALE:
 DRAWN: JAT
 CHECKED: ZN
 PROJECT NO.:

SHEET:
C-100

LEGEND	
CONTOURS MAJOR	---
CONTOURS MINOR	---
PROJECT BOUNDARY	---
ADJACENT PARCEL	---
TREELINE	~ ~ ~
WATER	W
IRRIGATION	IRG
POWER	P
WETLAND	WET
MANHOLE	⊙
SIGN	⊙
GAS VALVE	⊙
SANITARY CLEANOUT	⊙
WATER VALVE	⊙

ADJACENT PARCEL DATA						
REF NUMBER	PIN	ACRES	DEED REF	PLAT REF	ZONE	USE
1	3293-43-4636-0000	2.63	4818/510	00620076	GB	N/A
2	3293-43-3426-0000	4.15	743/672	00250040	N/A	N/A
3	3293-33-9744-0000	4.66	-1/2668	00250040	OI	N/A
4	3293-44-0001-0000	1.03	4675/1573	00620076	RP	N/A
5	3293-43-2907-0000	0.38	4812/447	00620076	RP	N/A
6	3293-44-3026-0000	0.05	4638/2440	00620026	RP	N/A
7	3293-43-5744-0000	0.32	4675/1573	00620076	RP	N/A
8	3293-43-6817-0000	3.28	535/18	00160021	RP	N/A



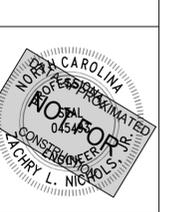
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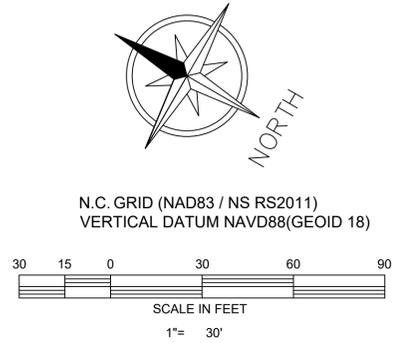
EXISTING CONDITIONS
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CANTER CREST
PENDER COUNTY, NORTH CAROLINA



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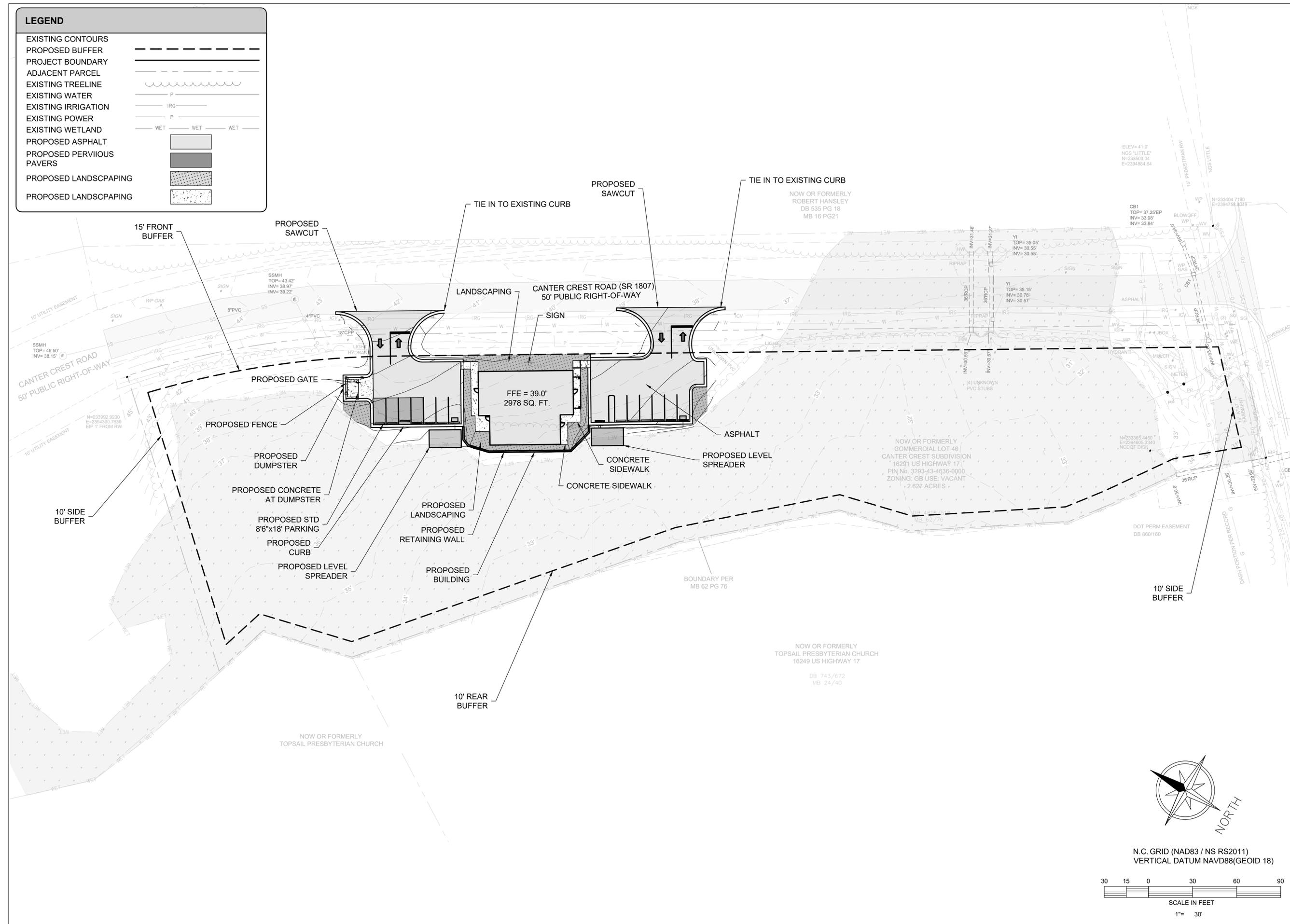
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CX100



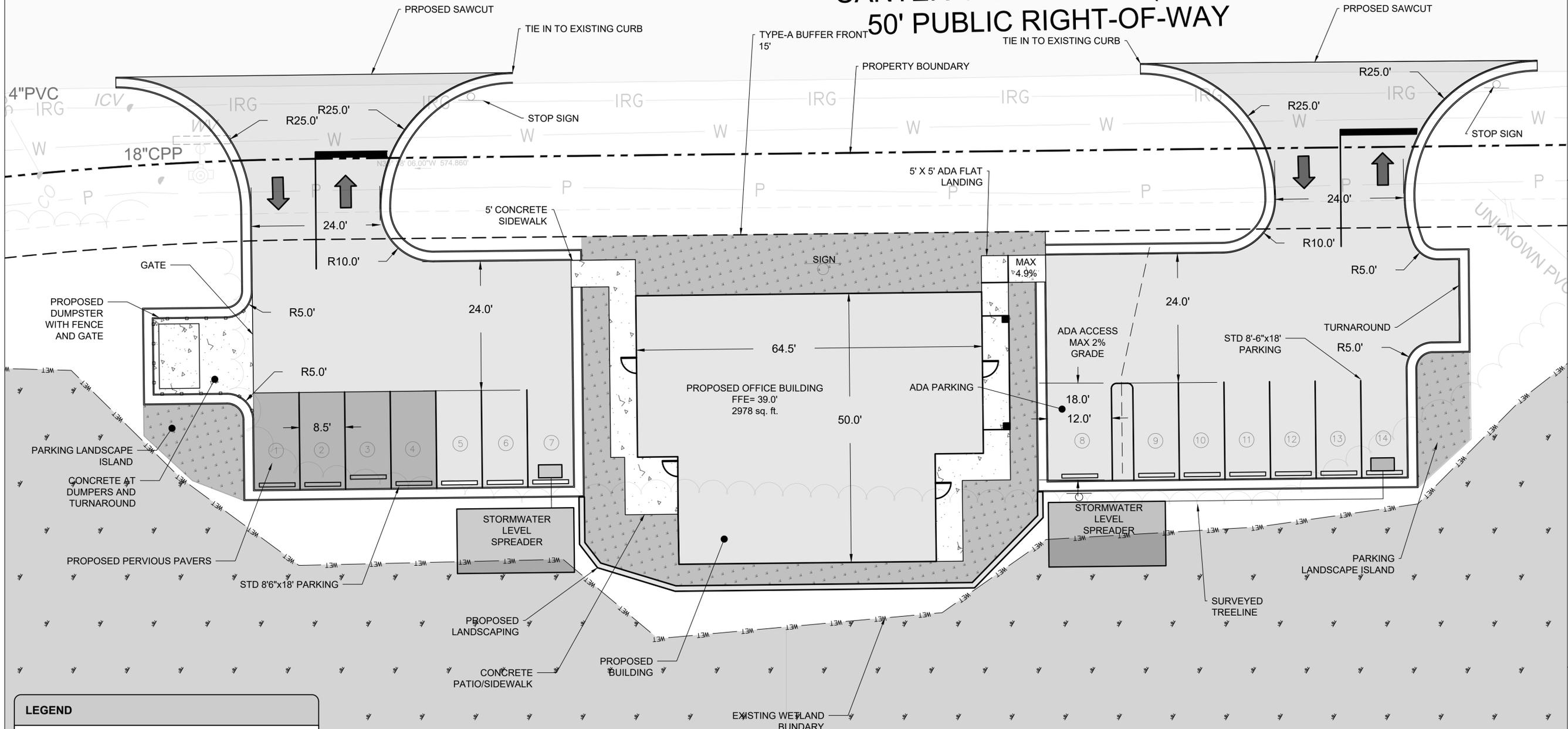
N.C. GRID (NAD83 / NS RS2011)
VERTICAL DATUM NAVD88(GEOID 18)

LEGEND

- EXISTING CONTOURS
- PROPOSED BUFFER
- PROJECT BOUNDARY
- ADJACENT PARCEL
- EXISTING TREELINE
- EXISTING WATER
- EXISTING IRRIGATION
- EXISTING POWER
- EXISTING WETLAND
- PROPOSED ASPHALT
- PROPOSED PERVIOUS PAVERS
- PROPOSED LANDSCAPING
- PROPOSED LANDSCAPING

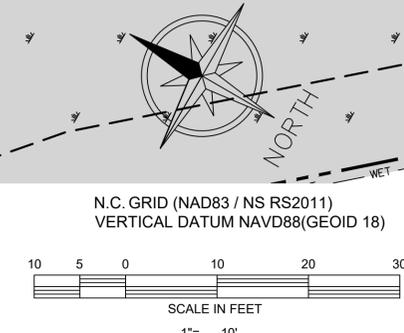


CANTER CREST ROAD (SR 1807) 50' PUBLIC RIGHT-OF-WAY



LEGEND	
EXISTING CONTOURS	---
PROPOSED BUFFER	---
PROJECT BOUNDARY	---
ADJACENT PARCEL	---
EXISTING TREELINE	~
EXISTING WATER	P
EXISTING IRRIGATION	IRG
EXISTING POWER	P
EXISTING WETLAND	WET
PROPOSED ASPHALT	■
PROPOSED PERVIOUS PAVERS	■
PROPOSED LANDSCAPING	■
PROPOSED SIDEWALK	■

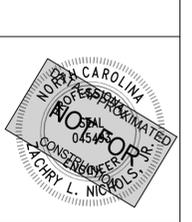
SITE DATA		
PROJECT INFORMATION		
PROJECT ADDRESS	CANTER CREST COMMERCIAL SITE 16291 US HWY 17 HAMPSTEAD, NC	
PARCEL ID	3293-43-4636-0000	
TOTAL PROPERTY ACREAGE	2.65 AC	
PROPERTY OWNER	BRIAN KEIFER	
ZONING	GB (GENERAL BUSINESS)	
PROPOSED USE	GB (GENERAL BUSINESS)	
SETBACKS		
FRONT	15 FT BUFFER TYPE-A	
SIDE INTERIOR	10 FT BUFFER TYPE-B	
REAR	10 FT BUFFER TYPE-B	
PROPOSED STRUCTURES		
PROPOSED NUMBER OF BUILDINGS	1 COMMERCIAL	
BUILDING SQUARE FOOTAGE	2978 SQ. FT.	
BUILDING HEIGHT	--	
CONSTRUCTION TYPE	--	
BUILDING COVERAGE	--	
IMPERVIOUS COVERAGE		
EXISTING	0 SQ. FT.	
PROPOSED	12557.3 SQ. FT.	
PROPOSED OFFSITE	--	
DISTURBED AREA	--	
SITE DATA		
PARKING	REQUIRED 10 SPACES	PROVIDED 16 SPACES
ADA COMPLIANT	REQUIRED 1 ADA	PROVIDED 1 ADA



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 910-617-7893
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CANTER CREST
 PENDER COUNTY, NORTH CAROLINA
PROPOSED
 DESIGN PLANS



DATE: 3/16/2024
 SCALE:
 DRAWN: JAT
 CHECKED: ZN
 PROJECT NO.:

SHEET:
CS200

CANTER CREST ROAD (SR 1807) 50' PUBLIC RIGHT-OF-WAY

**FFE = 39.0'
2978 SQ. FT.**

GRADING 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, FROM 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.

LEGEND

CONTOURS MAJOR	---
CONTOURS MINOR	----
PROJECT BOUNDARY	=====
ADJACENT PARCEL	-----
TREELINE	~~~~~
WATER	— P —
IRRIGATION	— IRG —
POWER	— P —
WETLAND	— WET —



N.C. GRID (NAD83 / NS RS2011)
VERTICAL DATUM NAVD88(GEOID 18)



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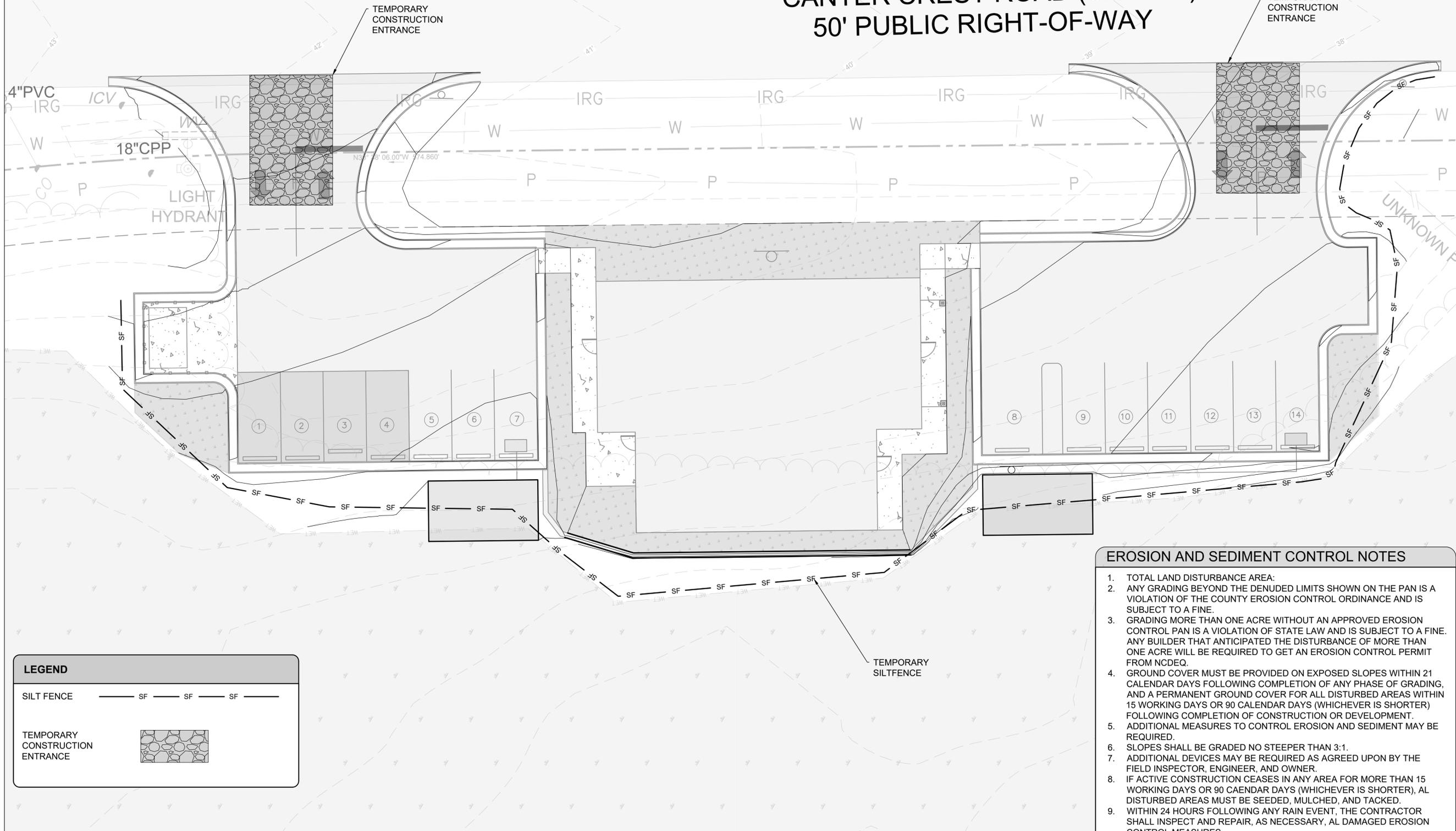
CANTER CREST
PENDER COUNTY, NORTH CAROLINA
GRADING
DESIGN PLANS



DATE: 3/16/2024
SCALE:
DRAWN: JAT
CHECKED: ZN
PROJECT NO.:

SHEET:
CG100

CANTER CREST ROAD (SR 1807) 50' PUBLIC RIGHT-OF-WAY



LEGEND

SILT FENCE ——— SF ——— SF ——— SF ———

TEMPORARY CONSTRUCTION ENTRANCE

- EROSION AND SEDIMENT CONTROL NOTES**

 1. TOTAL LAND DISTURBANCE AREA.
 2. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
 3. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PAN 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 NCDEQ.
 4. 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.
 5. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED.
 6. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
 7. ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
 8. 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 SEEDED, MULCHED, AND TACKED.
 9. WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
 10. ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

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CANTER CREST
PENDER COUNTY, NORTH CAROLINA

ESC

DESIGN PLANS

DATE: 3/16/2024

SCALE:

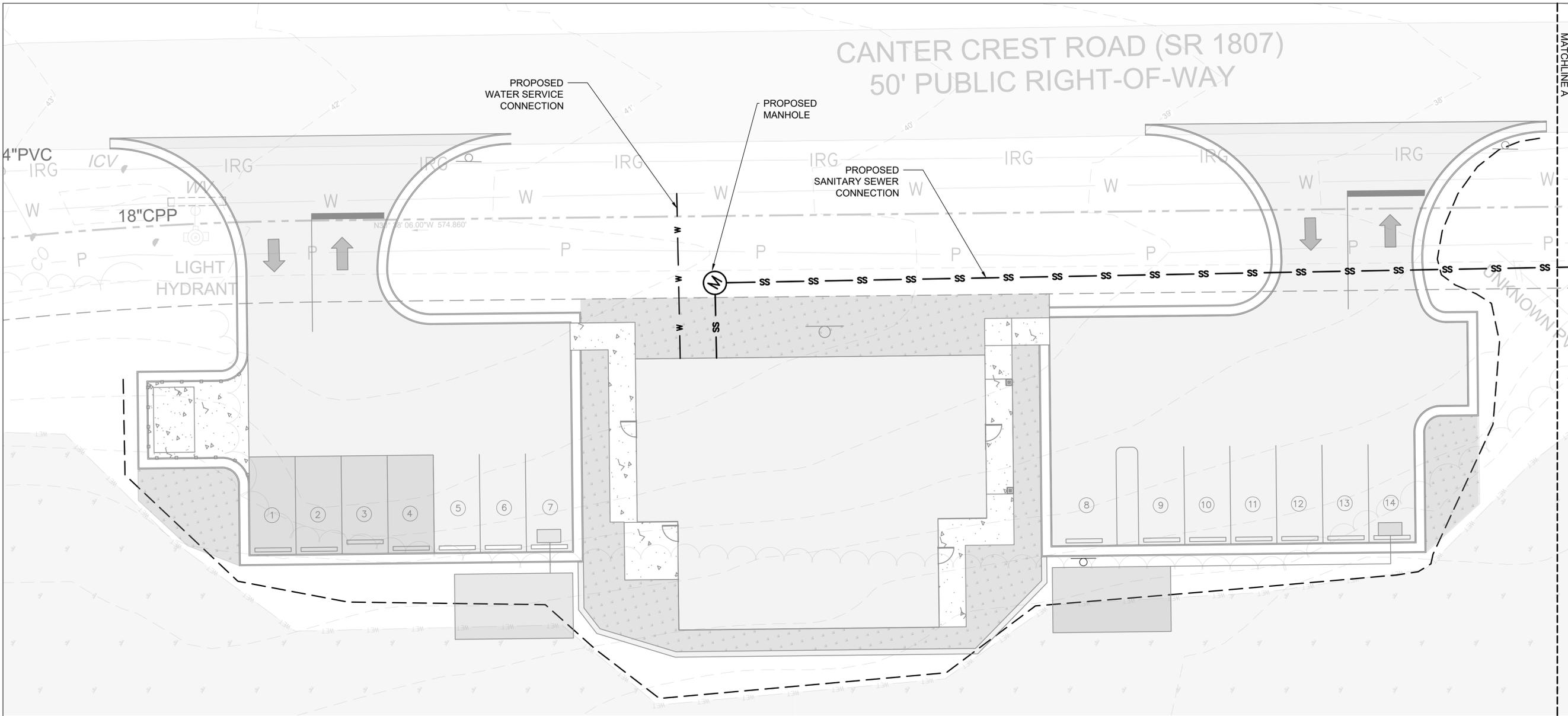
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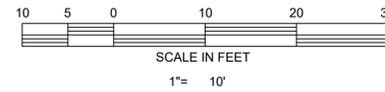
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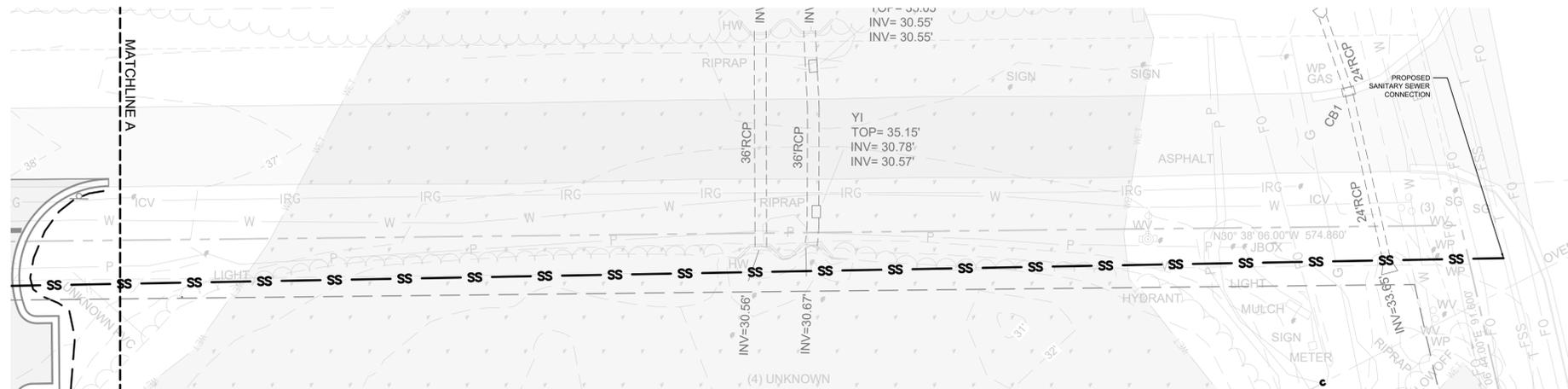
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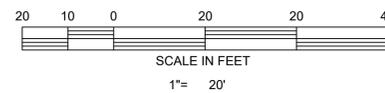
SEWER AND WATER
CONNECTION PLAN VIEW



N.C. GRID (NAD83 / NS RS2011)
VERTICAL DATUM NAVD88(GEOID 18)



SEWER CONNECTION PLAN VIEW



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MATCHLINE A

NO.	REVISION	DATE

CANTER CREST
PENDER COUNTY, NORTH CAROLINA

STORM AND UTILITY PLAN

DESIGN PLANS

DATE: 3/16/2024

SCALE:

DRAWN: JAT

CHECKED: ZN

PROJECT NO.:

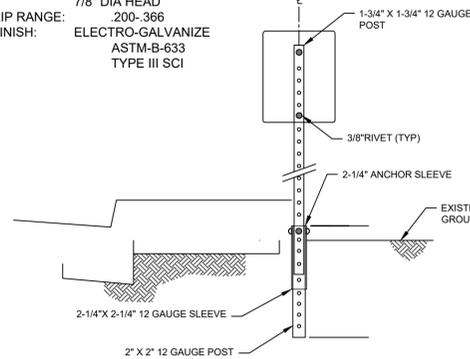
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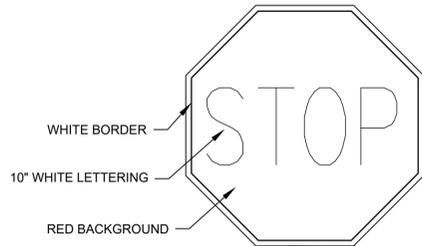
NOTES:

- STRUCTURAL STEEL TUBING USED FOR POST & SLEEVES MUST BE GALVANIZED 12 GAUGE COLD ROLLED STEEL OF THE NOMINAL DIMENSIONS SHOWN HEREON AND MEET THE REQUIREMENTS OF ASTM A446 GRADE A.
- GALVANIZING MUST BE PER ASTM A525. POSTS & SLEEVES MUST HAVE 7/16" DIA. HOLES SPACED 1" OC ±1/8" AND MUST HAVE NO MORE VARIATION IN STRAIGHTNESS THAN 1/6" IN 3'. POSTS MUST BE SQUARE WITHIN ±0.014", HAVE TWIST NO GREATER THAN 0.062" IN 3' AND HAVE CORNER RADII OF 5/32" ±1/64".
- THE SIGNS MUST BE MOUNTED ON POSTS IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS DIVISION 900. ALL FASTENING HARDWARE IS TO BE PROVIDED BY THE CONTRACTOR.
- MAXIMUM SIGN SIZE 5.2 SQ. FT.
- RIVET SPECIFICATION:

DIMENSION: 3/8" DIA SHANK
7/8" DIA HEAD
GRIP RANGE: .200-.366
FINISH: ELECTRO-GALVANIZE
ASTM-B-633
TYPE III SCI



**BREAK-AWAY SIGN POST
DETAIL**

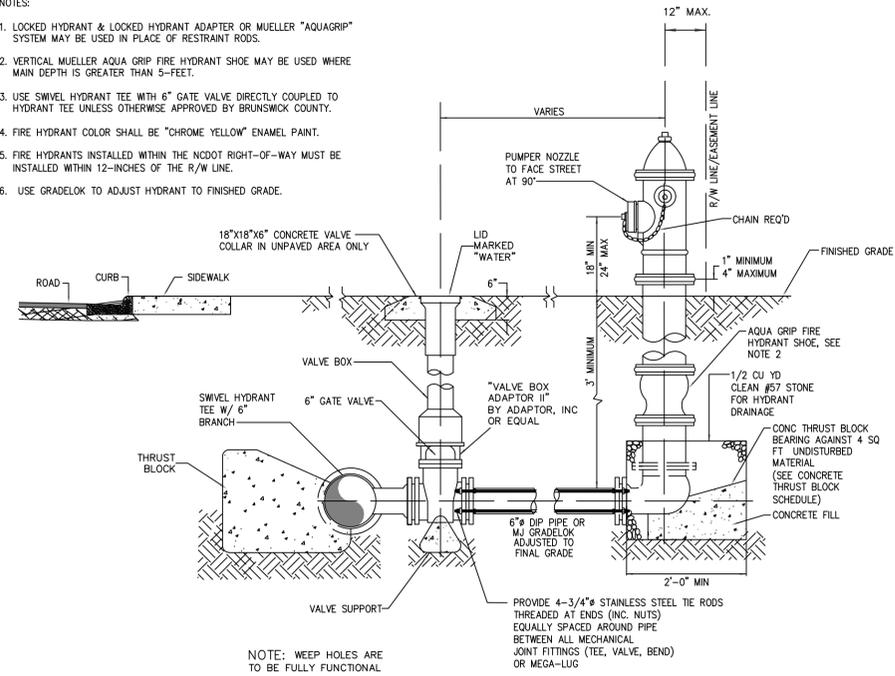


NOTE:
MOUNT SIGN ON BREAK-AWAY SIGN POST. SEE
DETAIL A1, THIS SHEET.

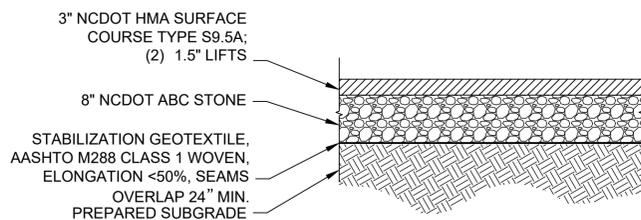
STOP SIGN DETAIL

NOTES:

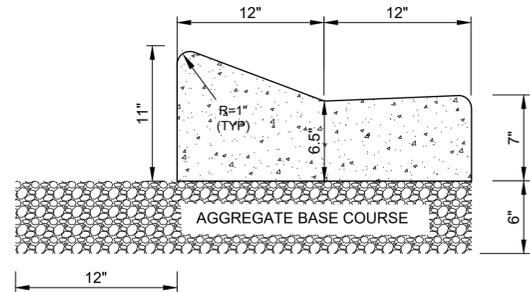
- LOCKED HYDRANT & LOCKED HYDRANT ADAPTER OR MUELLER "AQUAGRIP" SYSTEM MAY BE USED IN PLACE OF RESTRAINT RODS.
- VERTICAL MUELLER AQUA GRIP FIRE HYDRANT SHOE MAY BE USED WHERE MAIN DEPTH IS GREATER THAN 5-FEET.
- USE SWIVEL HYDRANT TEE WITH 6" GATE VALVE DIRECTLY COUPLED TO HYDRANT TEE UNLESS OTHERWISE APPROVED BY BRUNSWICK COUNTY.
- FIRE HYDRANT COLOR SHALL BE "CHROME YELLOW" ENAMEL PAINT.
- FIRE HYDRANTS INSTALLED WITHIN THE NCDOT RIGHT-OF-WAY MUST BE INSTALLED WITHIN 12-INCHES OF THE R/W LINE.
- USE GRADELOK TO ADJUST HYDRANT TO FINISHED GRADE.



**FIRE HYDRANT ON
MAINS 12" AND SMALLER
DETAIL W-1**



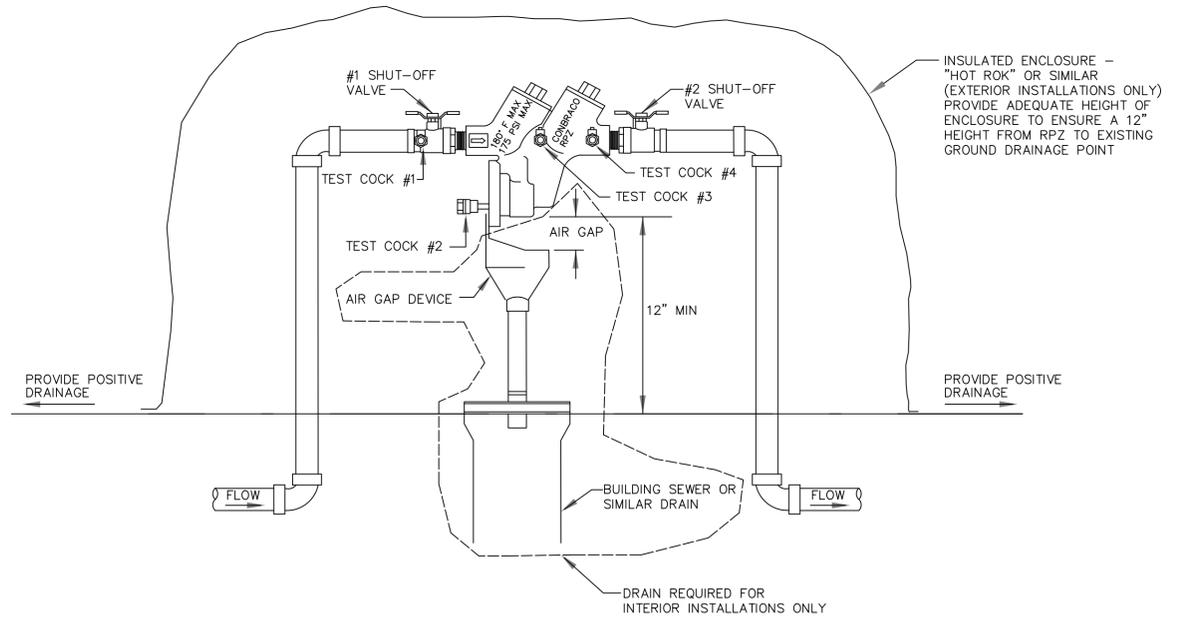
ASPHALT SECTION DETAIL



NOTES:

- EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
- 50' MAX EXPANSION JOINT SPACING, 10' MAX CONTRACTION JOINT SPACING
- MINIMUM INSTALLATION LENGTH IS 5 FT.
- CONCRETE TO BE 3000 PSI MIN
- VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

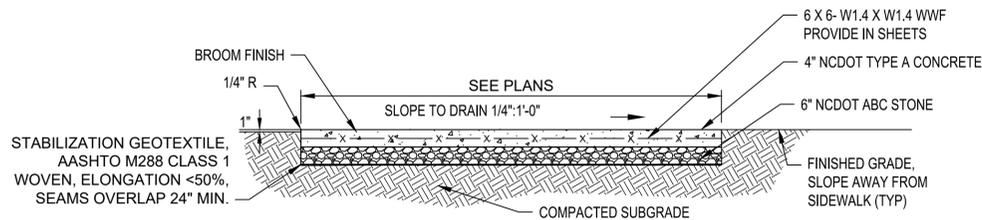
VALLEY CURB



NOTES:

- THE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED IN AN ACCESSIBLE LOCATION TO FACILITATE PERIODIC FIELD TESTING AND MAINTENANCE.
- THE LOCATION SELECTED SHOULD HAVE ADEQUATE DRAINAGE FOR RELIEF VALVE DISCHARGE. DRAINAGE MAY BE PIPED AWAY, PROVIDING AN APPROVED AIR GAP DEVICE IS USED. THE DEVICE SHALL NOT BE PLACED WHERE IT MAY BECOME SUBMERGED IN STANDING WATER.
- INSTALL THE DEVICE IN A HORIZONTAL POSITION WITH ADEQUATE CLEARANCE FROM WALLS AND/OR OBSTRUCTIONS, FOR TESTING AND MAINTENANCE. A 12" TO 30" CLEARANCE BETWEEN THE LOWER MOST PORTION OF THE DEVICE AND FLOOD GRADE OR FLOOR SHALL BE PROVIDED.
- A 1/2" STRAINER MAY BE INSTALLED JUST UPSTREAM OF THE BACKFLOW PREVENTION ASSEMBLY TO ELIMINATE ANY DEBRIS FROM ENTERING THE DEVICE AND FOULING THE CHECK AND/OR RELIEF VALVE.
- NO UNDERGROUND INSTALLATIONS ALLOWED.

**STANDARD BACKFLOW PREVENTION DEVICE
DETAIL W-8**



GROOVE JOINT

EXPANSION JOINT

- PROVIDE A GROOVE JOINT 1" DEEP IN CONCRETE SIDEWALK AT 5' INTERVALS.
- PROVIDE A 1/2" EXPANSION JOINT WITH FILLER AT 50' INTERVALS AND AT ALL LOCATIONS WHERE THE SIDE JOINS A RIGID STRUCTURE (i.e., EXISTING SIDEWALK, CURB, BUILDING, UTILITY STRUCTURES, ETC.)

SIDEWALK DETAIL

**NICHOLS
ENGINEERING, PLLC**

NC PE License #: 045493
http://nicholsengrpllc.com/
910-617-7893
NCBELS Firm License Number: P-2006

CANTER CREST
PENDER COUNTY, NORTH CAROLINA

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**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.

**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.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend on holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "Zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(3) Stormwater discharge outfalls(SDOs)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours.	If visible Sedimentation is found outside site limits, then record of the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2) Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

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.

Item to Document	Document 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.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

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.

Occurrence	Reporting Timeframe (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	Within 24 hours, an oral or electronic notification. Within 7 Calendar Days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	Within 24 Hours, an oral or electronic notification Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	Within 24 Hours, an oral or electronic notification Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. [40 CFR 122.41(l)(6). Division staff may waive the requirement for a written report on a case-by-case basis.



NCG01- SELF INSPECTION, RECORDKEEPING AND REPORTING

NOT TO SCALE

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PENDER COUNTY, NORTH CAROLINA
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C-502

NO.	REVISION	DATE

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 feet 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 ponding area for containment of treated Stormwater before discharging off-site.
- 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.

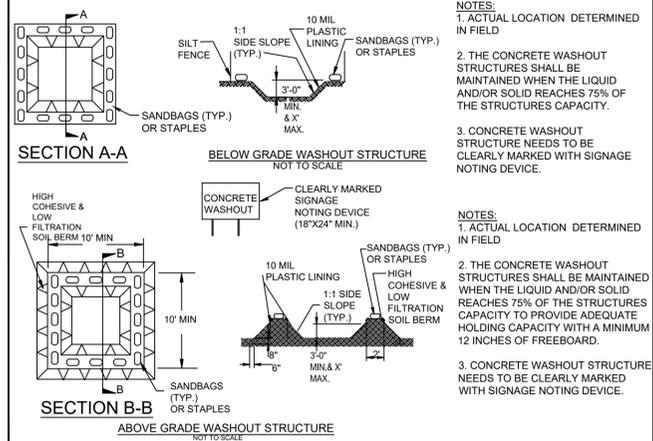
EARTHEN STOCKPILE MANAGEMENT

- 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.

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.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



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.



NCG-01 GROUND COVER & MATERIALS HANDLING

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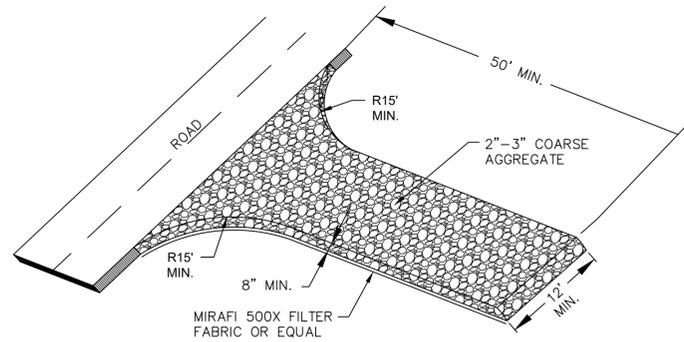
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NOTE: CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCE TO MAINTAIN EXISTING DRAINAGE FLOWS.

CONSTRUCTION SPECIFICATIONS:

- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCE TO MAINTAIN EXISTING DRAINAGE FLOWS.
- PROVIDE DRAINAGE TO CARRY WATER TO SUITABLE OUTLET.

MAINTENANCE REQUIREMENTS:

MAINTAIN MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

TEMPORARY CONSTRUCTION ENTRANCE

Permanent Seeding		
Seeding Mixture	Rate of Application (lb/acre)	Planting Dates
Common Bermudagrass (Hulled)	50	March 1 – July 31
Common Bermudagrass (Unhulled)	70	August 1 – February 28
Temporary Seeding		
Seeding Mixture	Rate of Application (lb/acre)	Planting Dates
Rye (Grain)	120	January 1 – March 31
Kobe Lespedeza	50	
Hulled Bermudagrass	50	April 1 – August 15
Rye (Grain)	120	August 16 – December 31

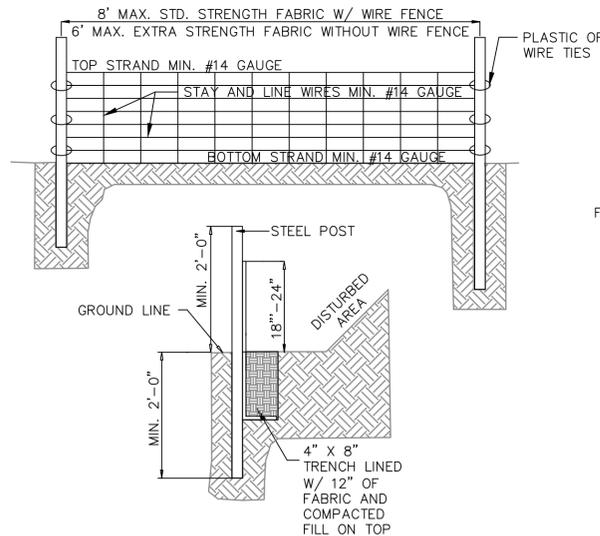
TEMPORARY AND PERMANENT SEEDING OPERATIONS

FERTILIZER: FERTILIZER SHALL BE APPLIED AT THE RATE OF 1000 LB/ACRE OF A 10-10-10 COMMERCIAL FERTILIZER. FERTILIZER SHALL BE APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION T-901 SEEDING OF THE PROJECT SPECIFICATIONS.

LIME: LIME SHALL BE APPLIED AT THE RATE OF 5,000 LBS/ACRE. LIME SHALL BE APPLIED IN ACCORDANCE WITH SECTION T-901 SEEDING OF THE PROJECT SPECIFICATIONS.

MULCH: MULCH MAY CONSIST OF HAY, STRAW, OR MANUFACTURED MULCH. MULCH SHALL BE EVENLY APPLIED AT THE RATE OF 2 TO 3 TONS PER ACRE TO PROVIDE A LOOSE DEPTH OF 1 1/2"-3". MANUFACTURED MULCH SHALL BE APPLIED AT THE RATE AS RECOMMENDED BY THE MANUFACTURER. MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION T-908 – MULCHING OF THE SPECIFICATIONS.

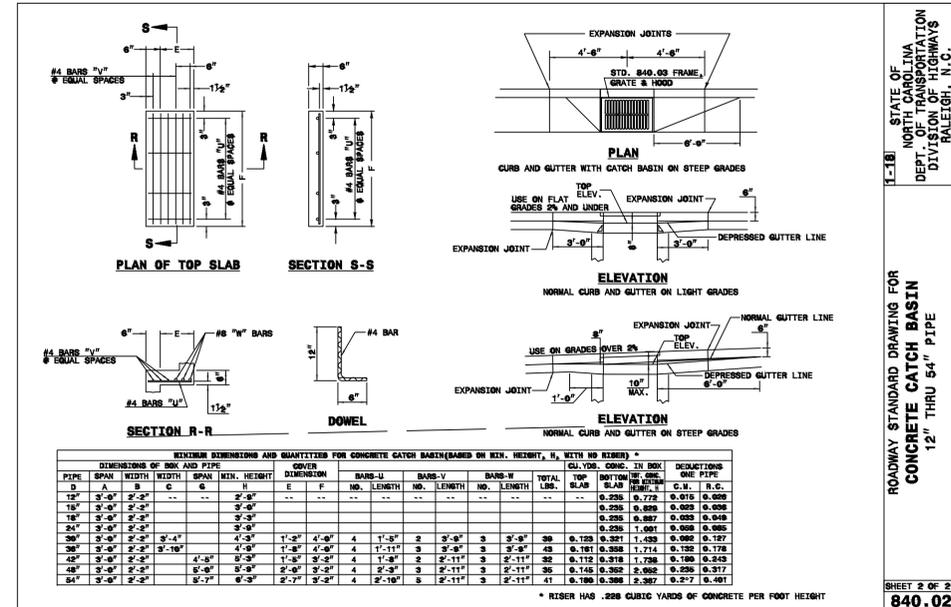
CONTRACTOR MAINTENANCE OF SEEDED AREAS: THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH A GOOD STAND OF GRASS OF UNIFORM COLOR AND DENSITY TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL WATER THE SEEDED AREAS AS REQUIRED FOR SEED GERMINATION AND AS REQUIRED TO MAINTAIN AREAS OF ESTABLISHED GRASS. THE CONTRACTOR SHALL MOW GRASS AREAS AND CONTROL THE PRESENCE OF INVASIVE SPECIES AS REQUIRED. CONTRACTOR WILL BE REQUIRED TO RESEED AND MULCH ALL AREAS WHERE SEEDING EMERGENCE IS POOR. ALL AREAS OF EROSION SHALL BE REPAIRED AND RESEEDED AS SOON AS POSSIBLE. CONTRACTOR SHALL PROTECT SEEDED AREAS FROM TRAFFIC AS MUCH AS POSSIBLE.



SILT FENCE NOTES:

- WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
 - SYNTHETIC FILTER FABRIC SHALL BE OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
 - SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS FOR INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.
- CONTRACTOR MAINTENANCE REQUIREMENTS:**
- INSPECT SILT FENCE AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
 - SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
 - REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING OR DAMAGING THE FENCE DURING CLEANOUT.
 - REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

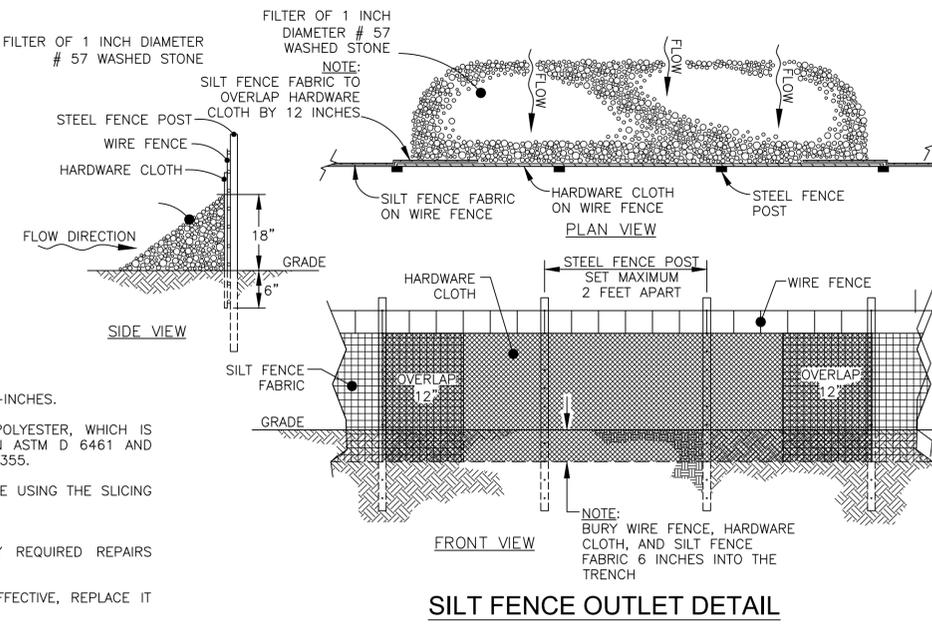
TEMPORARY SILT FENCE



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

ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
12" THRU 54" PIPE

SHEET 2 OF 2
840.02



SILT FENCE OUTLET DETAIL

NICHOLS ENGINEERING, PLLC

CANTER CREST
PENDER COUNTY, NORTH CAROLINA

DETAILS

DESIGN PLANS

DATE: 3/16/2024
SCALE:
DRAWN: JAT
CHECKED: ZN
PROJECT NO.:
SHEET:

C-504

910-617-7893
NCBELS Firm License Number: P-2006
NC PE License #: 045493
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