

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

Cottonwood Residential Application Information Master Development Plan

Case Number: MDP-2025-00085

Application Type: Master Development Plan

Applicant: Stroud Engineering, P.A., David L. Menius

Owners: Rocky Point Pender, LLC, Robert H. Jackson, Manager

Location: The property is located east of US Highway 117 and to the north of Old River Road at the corner of Highway 117 and Old River Road.

Property ID #(s): 3236-57-8672-0000

Description: 46 Single family homes across approximately 62 acres

Total Area of Project: Approximately 62.01 acres

Current Zoning: Residential Performance (RP)

Application Materials:

Application Package

Site Plan

APPLICATION

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RJACKSON.NC@GMAIL.COM

By- Right Master 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. ln **Signed Application**
2. ln **Payment**
Pending Invoice
Application fee and initial stormwater review fee invoices will be generated after application is received for online payment. **Do not provide check with application.** \$500 plus \$10 per acre for the first 100 acres, \$5 per acre thereafter (rounded to the nearest whole acre). MDP Stormwater Fee - \$200
3. ln **Paper Plan Sets**
One (1) 24 x 36, Two (2) 11 x 17
4. ln **Digital Submission**
For all documents submitted in paper copy, provide a digital copy. These may be emailed or uploaded to a share folder. *Physical media such as CD or USB drives will not be accepted.*
5. ln **List of Property Owners Within 500'**
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. Instructions to obtain a list of property owners within the 500' buffer are available on the Pender County website on the Planning and Community Development page.
6. ln **500' Buffer 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.
7. ln **Permits**
Include any permits issued on the project including but not limited to: environmental, traffic analysis, utility, or other site specific conditions.
8. ln **Site Plan Requirements**
A prepared site plan in accordance with the Unified Development Ordinance standards 6.1, 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.

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

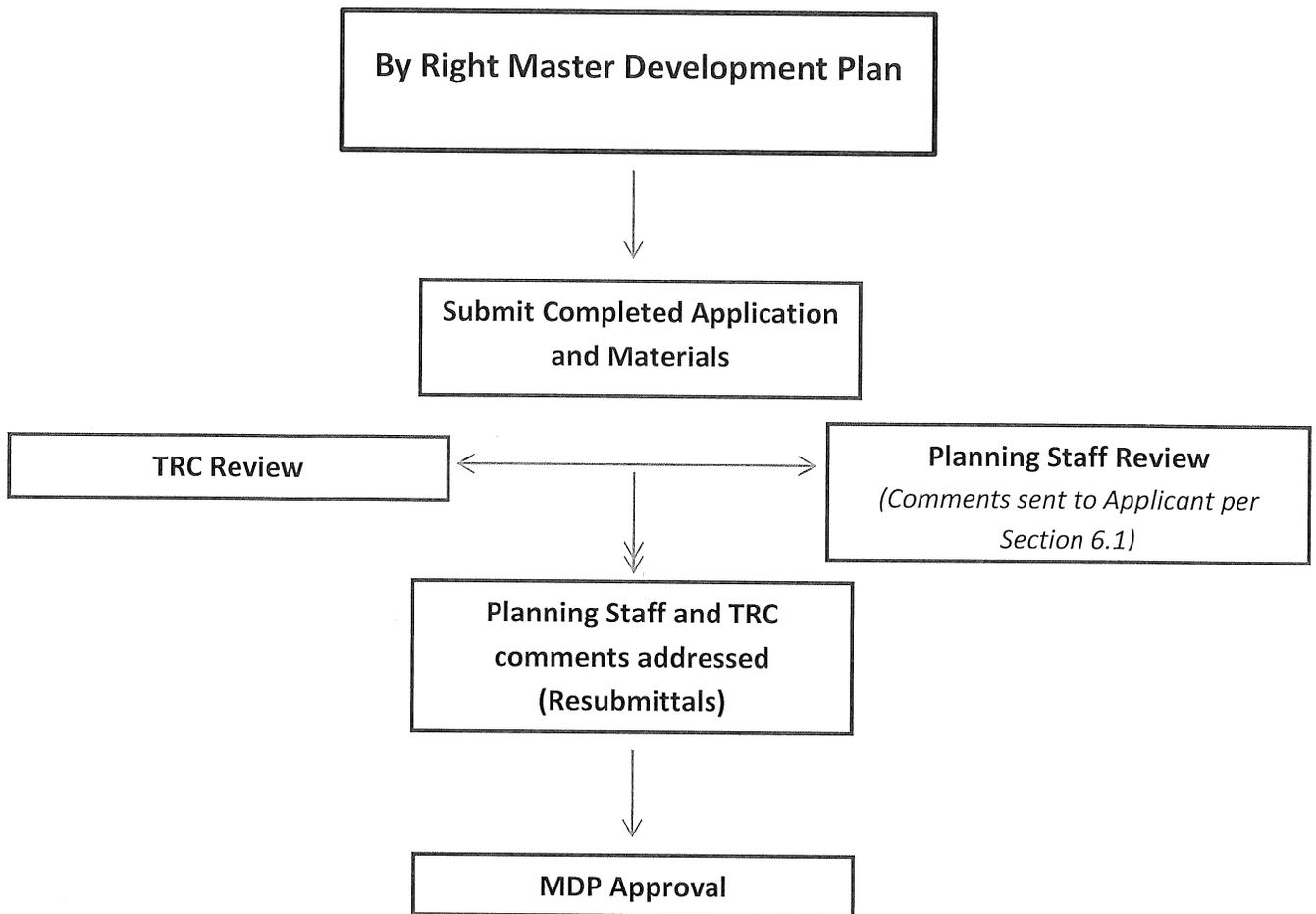
Signature of Applicant

David L. Menius

Date 7-25-2025

Printed Name

David L. Menius



Specific requirements can be found in Section 6.1 of the Pender County Unified Development Ordinance

Master Development Plan Specific Requirements

1. Project Narrative - Site plans shall contain a conceptual plan, showing the location and functional relationship between all proposed housing types and land uses, including the following information:

- A land use plan, showing the location, arrangement and approximate boundaries of all proposed land uses.
- The location and approximate boundaries of proposed housing types conceptually shown in accord and with other non-residential uses dimensional requirements.
- The proposed number of dwelling units of each type in each phase and in the total development accompanied by density calculation of the development.
- The location and approximate boundaries of existing environmental features as defined.
- The location of environmental protection land to be included in common open space.
- The approximate acreage in common open space, each use, housing type and in roads, streets or right-of-ways for each phase and the total development.
- Open space labeled Clearly with Acreages (per Section 7.6)
 - Open Space
 - Passive Open Space acreage
 - Active Open Space acreage
- The location and general configuration of recreational facilities, with a general statement of the types of recreational facilities to be provided if applicable.
- The location and extent of proposed buffers, with statements, profiles, cross sections or examples clearly specifying the screening to be provided if applicable.

2. Density

- Non-Residential Acreage
- Wetlands Acreage
- Passive Open space Acreage
- Active Open Space Acreage
- Right of Way Acreage
- Total Units
- Developable Land
- Net Density

3. Location Guidelines

- The approximate location of sewer and water mains, sewage disposal and water source with statements concerning the connection with and availability of existing facilities.
- Letter of intent if a private wastewater service provider will be utilized
- A conceptual plan for stormwater management with the location of stormwater facilities designed to serve more than one lot.
- The location and treatment proposed for all historical structures and sites recognized as significant by the County Commissioners or as identified on any historical landmarks survey for Pender County.
- Calculations describing all proposed bonus factors with the location of and specifications for bonus improvements, when proposed.
- Location and timing of construction for all amenities.
- Landscaping and Buffer requirements per Article 8

Specific requirements can be found in Section 6.1 of the Pender County Unified Development Ordinance

4. Lot Design (per Section 7.2)

- Access easements have not been included to meet any minimum lot area
- Lots shall be arranged to allow for the opening of future streets
- Lots that have double frontage on streets are prohibited except where it provides separation of residential development from traffic arteries. A buffer of at least 10 feet in width with no right of access abutting such traffic arteries shall be provided on these double frontage lots. - lots are near right angles or radial to street lines have been provided.
- Lot boundaries coincide with natural, existing and new drainage

5. Roadways

- The location and arrangement of street entrances, driveways and parking areas.
- The use of adjoining parcels and the location of adjoining streets and utilities.

6. Traffic - A Traffic Impact Analysis is required when the development generates 100 trips in the morning or evening peak hours or over 1,000 trips per day. The Traffic Impact Analysis must state the dates and times the counts were conducted.

- Estimated AM and PM Peak Hour Trips per the Institute of Transportation Engineers Trip Generation Manual.
- Estimated Average Daily Trips created by the development at build-out per the Institute of Transportation Engineers Trip Generation Manual.

7. Access (per Section 7.4)

- All lots shall have direct or indirect access to a public street, private street, or private access easement.
- Access must provide a reasonable means of ingress and egress for emergency vehicles as well as for all those likely to need or desire access to the property in its intended use.

8. Private streets - will be subject to requirements to construct public collector streets under any of the following conditions (per Section 7.5.3.C)

- Dimension of more than 5280 ft.,
- Any street in the subdivision has the potential to serve more than 200 residential or commercial units,
- Access to any lot or unit in the subdivision is more than 5280 ft. by a private street to a public street,
- Existing public streets have been dedicated or constructed to the property line of the subdivision,
- Access to adjacent properties will be hindered as a result of private streets being allowed in the subdivision.

9. Public and Private Street Design (per Section 7.5.1)

- Adjoining street systems
- Existing, planned and proposed streets, topographic, drainage and other natural features of the property
- Continuity in existing streets and proposed streets,
- Public roadways
- Both Public and Private streets designed must be constructed in compliance with the current NCDOT Subdivision Roads Minimum Construction Standards

Specific requirements can be found in Section 6.1 of the Pender County Unified Development Ordinance

10. Specific Standards

- Adequate right-of-way for collector streets
- Reasonable access provided to adjacent properties for development
- No spite strips
- Street intersections are directly aligned if possible.
- If not aligned not offset centerline to centerline by not less than 125 ft.
- intersect as nearly as possible at right angles
- Permanent dead end streets (cul-de-sacs) or temporary dead end (stub) streets are longer than 1,000 ft.
- Street name approval from the Pender County Addressing Coordinator.
- Sight triangles as required in the NCDOT

11. Adopted Plan Compliance

- Compliance with all adopted plans and Ordinances of Pender County
- Collector Roadways have been shown Per the Pender County Collector Street Plan

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MASTER DEVELOPMENT PLAN

Prior to submission of a preliminary master development plan for approval, the applicant shall request a pre-application review conference with the County staff.

1. The purpose of the pre-application conference shall be to discuss the proposal in relation to the requirements of the Land Use Plan and UDO and to obtain advice on the preparation of the master development plan.
2. At the pre-application conference, the applicant shall provide a land use plan describing the following:
 - a. The general location of the site.
 - b. The general location of proposed roads.
 - c. The general location of proposed uses, environmental areas, housing types or open space.
 - d. The uses on adjoining properties.
 - e. Utility requirements.

The purpose of the master development plan (MDP) is to promote orderly and planned development of property within Pender County. It is the purpose of the MDP to ensure that such development occurs in a manner that suits the characteristics of the land, is harmonious with adjoining property, is in substantial compliance with the goals and policies of the adopted Land Use Plan, and is in the best interest of the general public. The MDP shall be used to illustrate the characteristics of the property proposed for development and of surrounding properties.

**See Figures 2 and 3 at the end of Section 3.4, Pender County UDO for an illustrative process*

1. The MDP shall at least include all contiguous land under single or common ownership in the above zoning districts.
2. A preliminary MDP may be submitted with an application for a conditional rezoning but shall not be considered binding until approval of a final MDP.

Waivers to MDP – Residential Districts

The Administrator may waive the requirements of a MDP in the Residential Districts if the proposed development contains all of the following criteria:

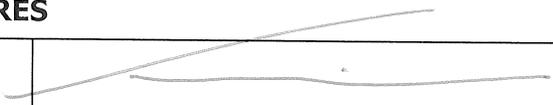
1. Contains ten (10) or less traditional detached single-family dwelling units;
2. Is not an integral portion of a property proposed or planned for future development or subdivision;
3. Is planned to be developed in a manner that is harmonious with surrounding properties and land uses; and
4. Does not substantially affect the purpose and intent of its zoning district and the intent of this article.

Waivers to MDP – Commercial and Industrial Districts

The Administrator may waive the requirement of a MDP in the Commercial and Industrial Districts if the proposed development contains all of the following criteria:

1. If the proposed subdivision or development is less than five (5) acres in size;
2. Includes no new streets, roads or rights-of-way, does not further extend any existing or dedicated street, road or rights-of-way and does not significantly change the layout of any existing or dedicated street, road or rights-of-way;
3. Is not an integral portion of a property proposed or planned for future development or subdivision;
4. That such development is limited to one individual parcel and one single use in accordance with Section 5.2.

APPLICATION FOR MASTER DEVELOPMENT PLAN

SECTION 1: APPLICANT INFORMATION			
Applicant's Name:	DAVID L. MENIUS, STROUD ENGINEERING, P.A.	Owner's Name:	ROBERT H. JACKSON, MANAGER, ROCKY POINT PENDER, LLC
Applicant's Address:	102-D CINEMA DRIVE	Owner's Address:	3900 BARRETT DRIVE, SUITE 101
City, State, & Zip	WILMINGTON, NC 28403	City, State, & Zip	RALEIGH, NC 27609
Phone Number:	910-815-0775	Phone Number:	919-676-8100 x21
Email Address:	LMENIUS@STROUDENGINEER.COM	Email Address:	RJACKSON.NC@GMAIL.COM
Legal relationship of applicant to landowner:			
SECTION 2: PROJECT INFORMATION			
Type of Master Development Plan	<input checked="" type="checkbox"/> Residential <i>RP, PD, RM MH District</i>	<input type="checkbox"/> Commercial <i>GB, OI, IT, GI District</i>	NAICS:
Property Identification Number (PIN):	3236-57-8672-0000	Total property acreage: <i>(rounded up to whole acre)</i>	63
Zoning Classification:	RP	Acreage to be disturbed:	44.4
Project Address :	OLD RIVER ROAD	Township:	ROCKY POINT
Description of Project Location:	THE PROJECT IS LOCATED ON THE NE CORNER OF THE NC 117, ASHTON ROAD, OLD RIVER ROAD INTERSECTION. IT IS PRESENTLY CLEARED AND VACANT. MOST RECENT USE WAS FARMLAND.	Water Provider:	PCU
		Sewer Provider:	N/A SEPTIC
Describe activities to be undertaken on project site:	IN THE SHORT TERM, THERE WILL BE GRADING, INSTALLATION OF ROADWAYS AND UTILITIES, AND HOME CONSTRUCTION. LONG TERM, THE SITE WILL BE OCCUPIED BY FOLKS LIVING IN HOUSES DOING REGULAR DAY TO DAY STUFF.	Road Type:	<input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Both
SECTION 3: SIGNATURES			
Applicant's Signature		Date:	7-25-2025
Applicant's Printed Name	DAVID L. MENIUS	Date:	7-25-2025
Owner's Signature		Date:	7-25-2025
Owner's Printed Name	ROBERT H. JACKSON, MANAGER, ROCKY POINT PENDER, LLC	Date:	7-25-2025

NARRATIVE

Project Narrative – Cottonwood Subdivision

The 62.01 acre project area is located along Old River Road (SR 1411) east of US 117 in an unincorporated portion of Pender County, NC. The site is zoned RP. The owner intends to subdivide the property into 46 lots to build single family homes. The proposed improvements are consistent with this zoning and adjacent land uses. The site is presently vacant. The site is cleared and has been historically farmed.

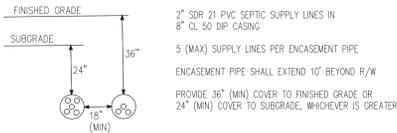
Access to the lots shall be by a single full movement driveway along Old River Road across from Maple Road (SR 1627). An NCDOT driveway permit will be obtained for this driveway.

Water service will be provided by an extension of Pender County water mains through the project.

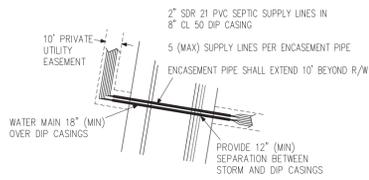
Stormwater from the majority of the property shall be conveyed towards existing drainage features at the rear of the lots via overland flow and open channels consistent with NCDEQ low density requirements. The overall built upon area shall be limited to 24%. A low density NCDEQ stormwater permit shall be obtained prior to the installation of impervious surfaces. A wet pond is proposed to treat runoff from pockets of high density and areas which cannot be effectively drained via open channels in accordance with low density requirements.

Erosion control shall be accomplished through the use of a gravel construction entrance and silt fence. Riprap aprons will be installed and left in place at all proposed pipe outlets. An NCDEQ erosion control permit shall be obtained prior to commencing with land disturbing activities onsite. Minimal grading is proposed so as to preserve native soils for septic systems. Silt fencing is proposed where grading occurs within 100' of adjoining property or drainage features. In other areas, a 100' wide undisturbed buffer between the limits of disturbance and adjoining property or drainage features is proposed.

SITE PLAN

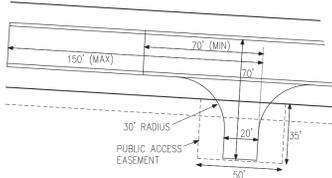


SEPTIC SUPPLY LINE ROAD CROSSING SECTION
NOT TO SCALE

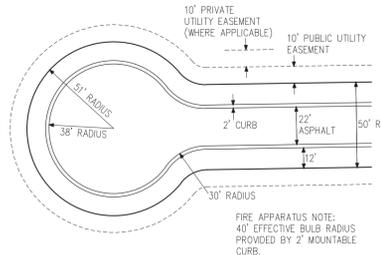


SEPTIC SUPPLY LINE ROAD CROSSING PLAN
1" = 50'

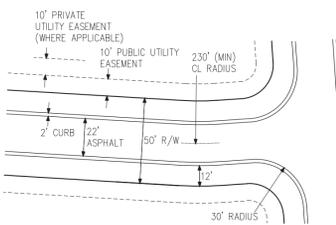
STREET NOTES
STREETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NCDOT STANDARDS AND DEDICATED AS PUBLIC.
ON STREET PARKING WILL NOT BE ALLOWED.



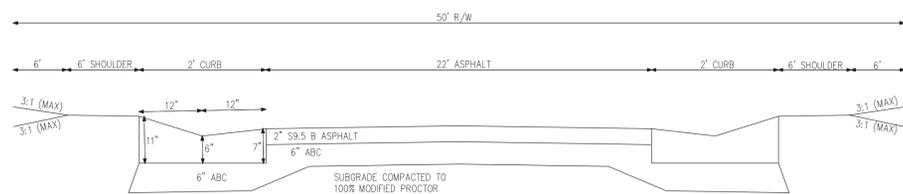
TEMPORARY SPUR DIMENSIONS
1" = 50'



TYPICAL CUL DE SAC DIMENSIONS
1" = 50'



TYPICAL LOCAL STREET DIMENSIONS
1" = 50'



CURBING AND PAVEMENT SECTION
NTS

LINDA FUTCH
DB 677 PG 156
3236-58-9811-0000

CLAYTON TILLOTSON
DB 4665 PG 436
3236-48-5317-0000

SAM RICHARDSON
TRACT 1A
DB 678 PG 208
MB 1 PG 72
3236-48-7130-0000

EVANDER MCLENDON
TRACT 2A
DB 424 PG 127
MB 1 PG 72
3236-47-8822-0000

MCLENDON FAMILY
CEMETERY
MAP 1/72 & 70/16
3236-57-1956-0000

ROCKY POINT PENDER, LLC
DB 4788 PG 499
MB 70 PG 16
3236-57-8672-0000

LINDA FUTCH
DB 677 PG 156
3236-58-9811-0000

LOT 7A
SALEM ACRES
MB 44 PG 104
3236-68-8210-0000

LOT 6B
SALEM ACRES
MB 44 PG 105
3236-68-8063-0000

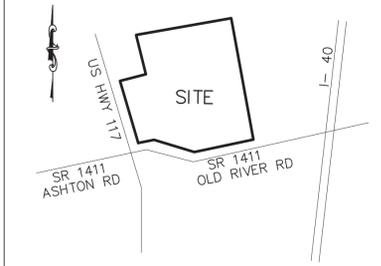
LOT 5B
SALEM ACRES
MB 44 PG 40
3236-67-9808-0000

LOT 4B
SALEM ACRES
MB 28 PG 130
3236-67-9744-0000

LOT 3B
SALEM ACRES
MB 44 PG 106
3236-67-9579-0000

LOT 2B
SALEM ACRES
MB 42 PG 41
3236-77-0415-0000

LOT 1A
SALEM ACRES
MB 28 PG 130
3236-77-0226-0000



VICINITY MAP

SITE DATA

PARCEL PIN	3236-57-8672-0000
MAP BOOK/PAGE	70/16
DEED BOOK/PAGE	4788/499
ZONING	RP
PROPERTY AREA	62.01 AC
RECEIVING STREAM	PIKE CREEK
CLASSIFICATION	C-SW
STREAM INDEX	18-74-46
RIVER BASIN	CAPE FEAR
LIMITS OF DISTURBANCE	44.4 AC
PROPOSED LOTS	52
PROPOSED DENSITY	0.84 UNITS/ACRE
MINIMUM LOT AREA	15,000 SF
MINIMUM LOT WIDTH	60'
MINIMUM CHORD	30'
FRONT SETBACK	30'
CORNER SETBACK	15'
SIDE SETBACK	10'
REAR SETBACK	25'
MAXIMUM BLDG HEIGHT	35'
REQUIRED OPEN SPACE	1.38 AC
OPEN SPACE PROVIDED	AC
REQUIRED ACTIVE SPACE	0.69 AC
ACTIVE SPACE PROVIDED	0.69 AC
PASSIVE SPACE PROVIDED	AC
AREA IN R/W	AC
AREA IN LOTS	AC
FUTURE DEVELOPMENT AREA	4.71 AC

VEHICLE TRIP GENERATION
THE ITE TRIP GENERATION MANUAL PROVIDES THE FOLLOWING ESTIMATES OF TRIPS:

SINGLE FAMILY HOMES (ITE CODE 210) W/ 46 DWELLING UNITS:
AM PEAK HOUR TRIPS: 35
PM PEAK HOUR TRIPS: 46
DAILY TRIPS: 438

A TRAFFIC IMPACT ANALYSIS IS NOT PROPOSED.
NOTE: A REVISED TRIP GENERATION FOR THE FUTURE DEVELOPMENT AREA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

UTILITY NOTES

SEWER FLOW: NA--ON-SITE SEPTIC DISPOSAL PROPOSED
WATER DEMAND: 400 GPD PER UNIT X 46 = 18,400 GPD
WATER PROVIDED BY EXTENSION OF PCU WATER MAINS.

SHEET INDEX

COVER	1
EX CONDITIONS	2
GRADING PLANS	3-9
UTILITY PLANS	10-14
DRIVEWAY PLAN	15
DETAILS	16-21

LEGEND

PROJECT BOUNDARY	---
EX WATER MAIN	---
EX FORCE MAIN	---
STORMDRAIN	---
EX CONTOURS	---
SILT FENCE	---
DISTURBED AREA	---



MASTER DEVELOPMENT PLAN AND

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
ROCKY POINT PENDER, LLC
3900 BARRETT DRIVE, SUITE 101
RALEIGH, NC 27609
(919) 676-8100 x21

STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO.C-0847

DATE: 7/3/2025
REVISIONS: PENDING per TRC
SCALE: 1" = 100'
SHEET: 1 OF 21
COVER/MASTER DEVELOPMENT PLAN

BUA

LOTS (46 @ 6,000)	276,000 SF
STREETS	85,830 SF
FUTURE	175,000 SF
RESERVE (POND)	30,000 SF
RESERVE (NON-POND)	71,625 SF
TOTAL BUA	648,255 SF
NET PROJECT AREA	2,701,061 SF
% OF NET PROJECT AREA	24.00 %

NOTE: A SW PLAN REVISION FOR THE FUTURE DEVELOPMENT AREA SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION



DAVID L. MENIUS, P.E.
DATE: 7/3/2025

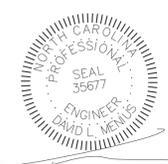
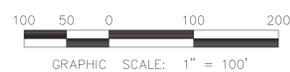
PRELIMINARY PLANS FOR:
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OWNER:
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STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 100'
SHEET: 2 OF 21
EX CONDITIONS
& DEMOLITION



DAVID L. LEWIS, P.E.
DATE: 7/3/2025

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
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STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 813-0775 LICENSE NO.C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 100'
SHEET: 3 OF 21
GRADING PLAN
COVER



DAVID L. MENIUS, P.E.
DATE: 7/3/2025

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
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102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 40'
SHEET: 4 OF 21
GRADING PLAN
INSET 1



DAVID L. MENUS, P.E.
DATE: 7/3/2025

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
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(919) 676-8100 x21

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102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 40'
SHEET: 5 OF 21
GRADING PLAN
INSET 2



FUTURE DEVELOPMENT

OPEN SPACE

OPEN SPACE

OLD RIVER ROAD
SR 1411



DAVID L. MENIUS, P.E.
DATE: 7/3/2025

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
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STROUD ENGINEERING, P.A.
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WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0847

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 40'
SHEET: 6 OF 21
GRADING PLAN
INSET 3



DAVID L. MENUS, P.E.
DATE: 7/3/2025
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 35677

PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

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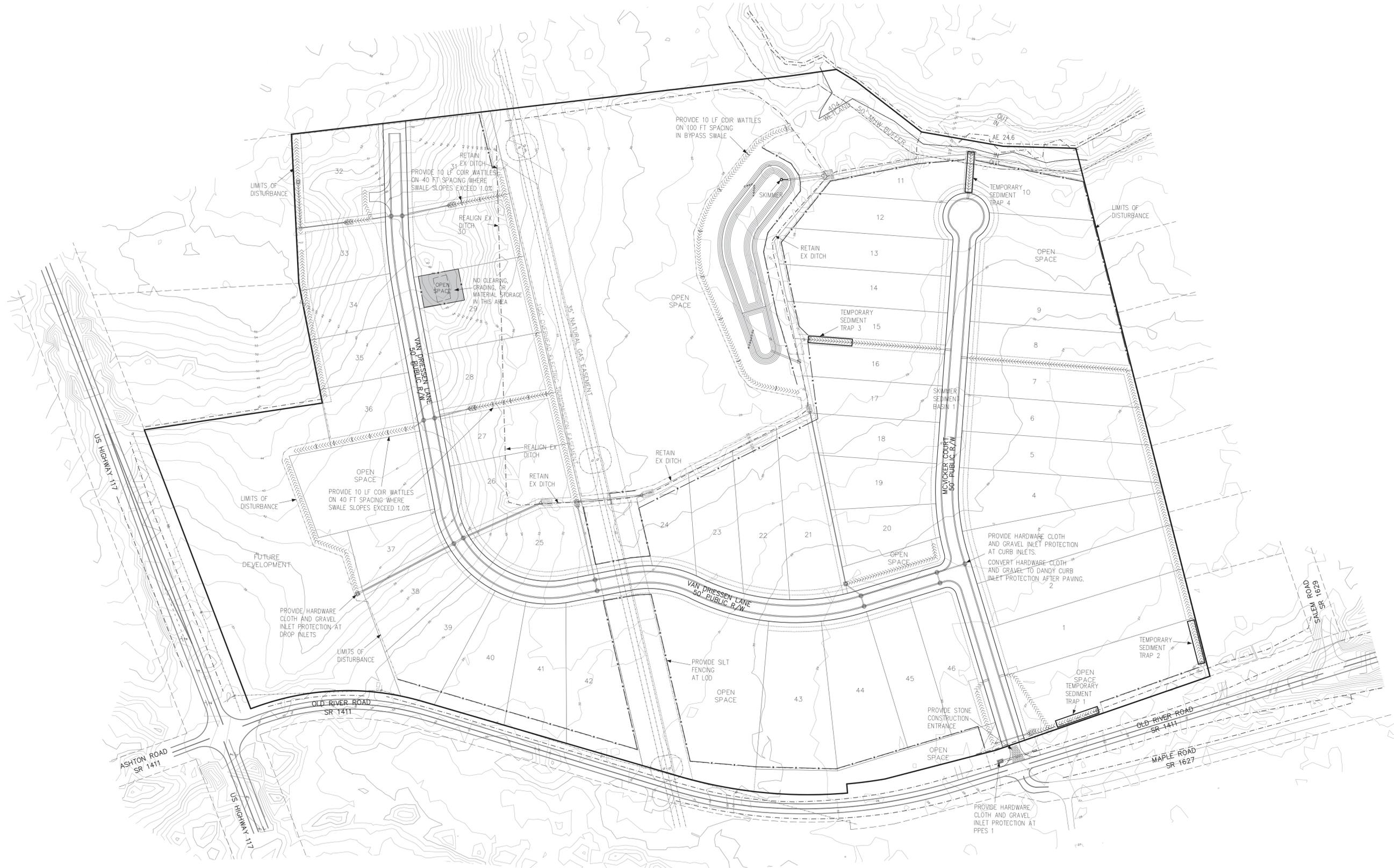
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WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: 1" = 40'
SHEET: 7 OF 21
GRADING PLAN
INSET 4

SITE DATA

PARCEL PIN ----- 3236-57-8672-0000
 MAP BOOK/PAGE ----- 70/16
 DEED BOOK/PAGE ----- 4788/499
 ZONING ----- RP
 PROPERTY AREA ----- 62.01 AC
 RECEIVING STREAM ----- PIKE CREEK
 CLASSIFICATION ----- C:SW
 STREAM INDEX ----- 18-74-46
 RIVER BASIN ----- CAPE FEAR
 LIMITS OF DISTURBANCE ----- 44.4 AC
 PROPOSED LOTS ----- 52
 PROPOSED DENSITY ----- 0.84 UNITS/ACRE
 MINIMUM LOT AREA ----- 15,000 SF
 MINIMUM LOT WIDTH ----- 80'
 MINIMUM CHORD ----- 30'
 FRONT SETBACK ----- 30'
 CORNER SETBACK ----- 15'
 SIDE SETBACK ----- 10'
 REAR SETBACK ----- 25'
 MAXIMUM BLDG HEIGHT ----- 35'
 REQUIRED OPEN SPACE ----- 1.38 AC
 OPEN SPACE PROVIDED ----- AC
 REQUIRED ACTIVE SPACE ----- 0.69 AC
 ACTIVE SPACE PROVIDED ----- 0.69 AC
 PASSIVE SPACE PROVIDED ----- AC
 AREA IN R/W ----- AC
 AREA IN LOTS ----- AC
 FUTURE DEVELOPMENT AREA ----- 4.71 AC



PRELIMINARY PLANS FOR: COTTONWOOD ROCKY POINT TOWNSHIP PENDER COUNTY, NC	OWNER: ROCKY POINT PENDER, LLC 3900 BARRETT DRIVE, SUITE 101 RALEIGH, NC 27609 (919) 676-8100 x21	STROND ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE NO. C-0847	DATE: 7/3/2025 REVISIONS: PENDING per TRC	SCALE: 1" = 100' SHEET: 8 OF 21 EROSION CONTROL
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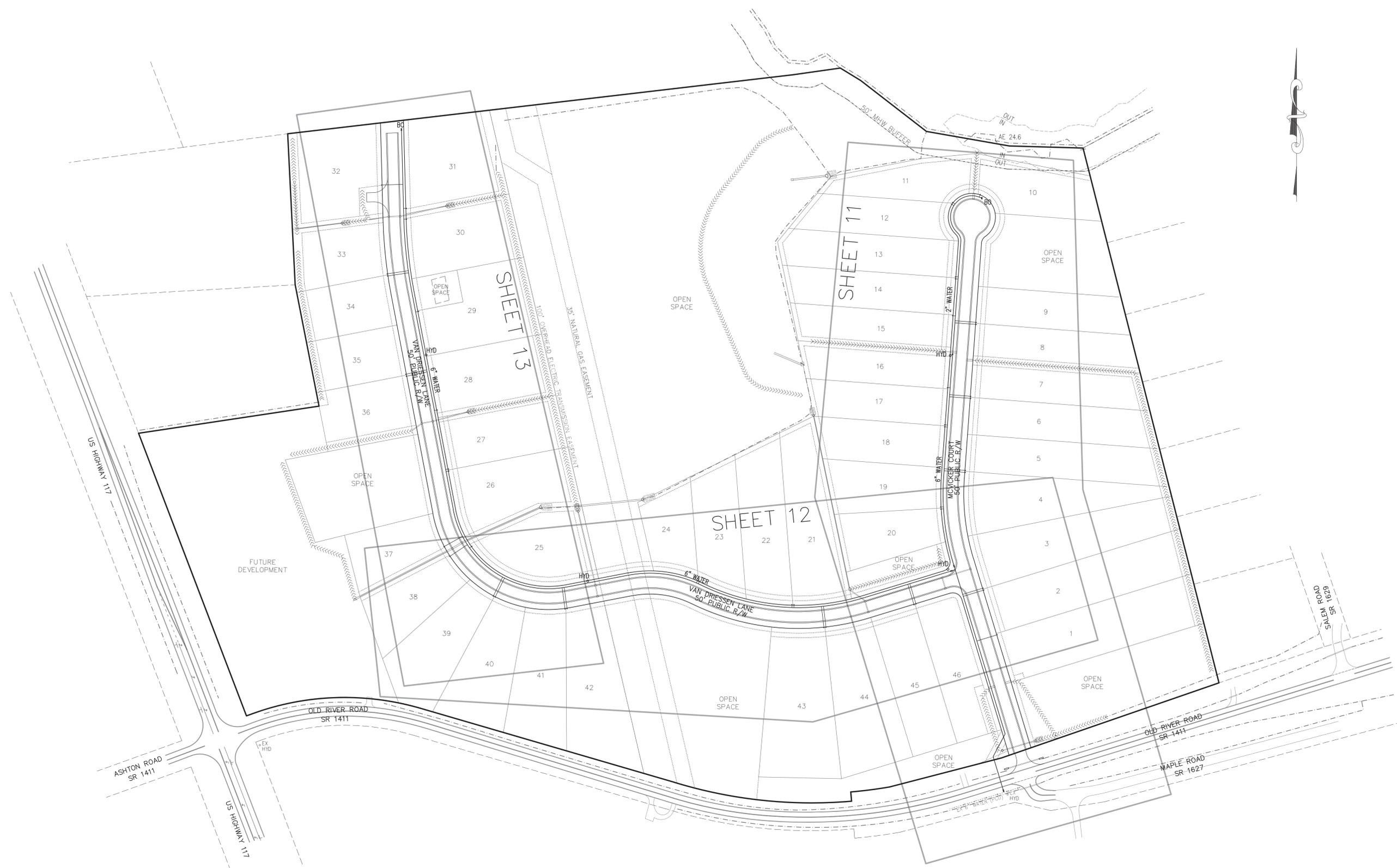
PRELIMINARY PLANS FOR:
COTTONWOOD
 ROCKY POINT TOWNSHIP
 PENDER COUNTY, NC

OWNER:
 ROCKY POINT PENDER, LLC
 3900 BARRETT DRIVE, SUITE 101
 RALEIGH, NC 27609
 (919) 676-8100 x21

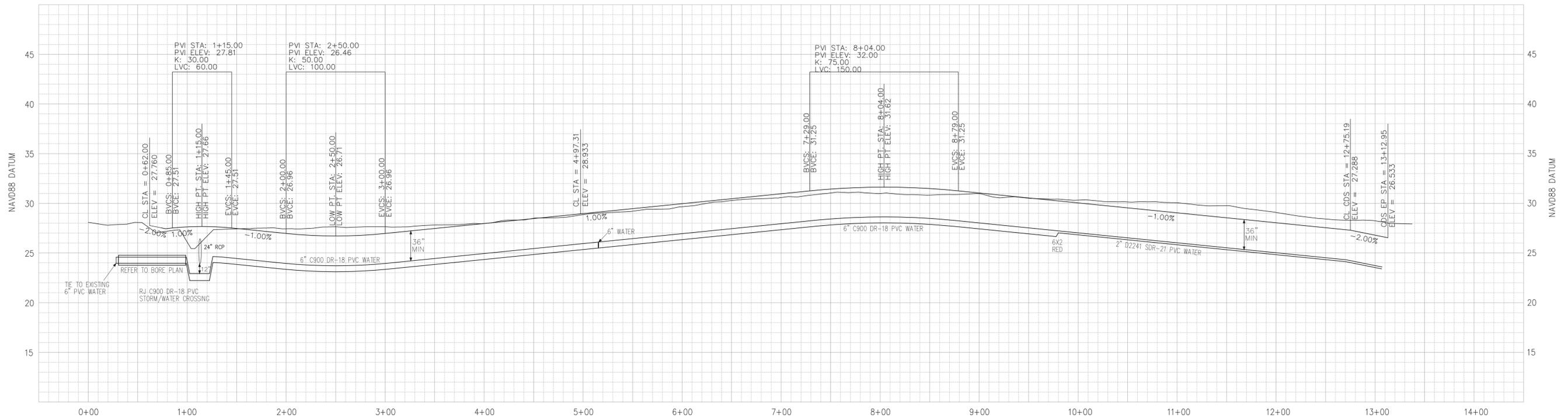
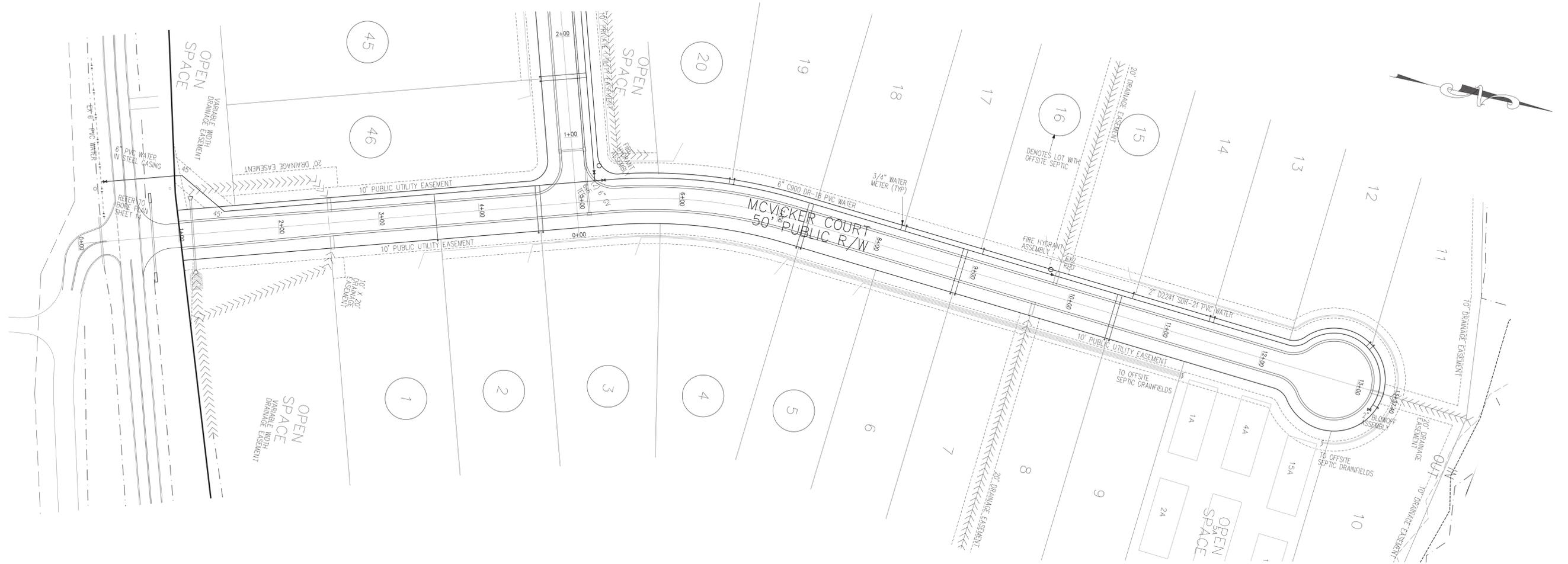
STROUD ENGINEERING, P.A.
 102-D CINEMA DRIVE
 WILMINGTON, NC 28403
 (910) 815-0775 LICENSE NO. C-0847

DATE: 7/3/2025
 REVISIONS:
 PENDING per TRC

SCALE: 1" = 100'
 SHEET: 9 OF 21
 DRAINAGE
 AREA MAP



PRELIMINARY PLANS FOR: COTTONWOOD ROCKY POINT TOWNSHIP PENDER COUNTY, NC	OWNER: ROCKY POINT PENDER, LLC 3900 BARRETT DRIVE, SUITE 101 RALEIGH, NC 27609 (919) 676-8100 x21	 STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 813-0775 LICENSE NO.C-0647	DATE: 7/3/2025 REVISIONS: PENDING per TRC	SCALE: 1" = 100' SHEET: 10 OF 21 ROADWAY AND UTILITY COVER



DAVID L. MENZIES, PE
DATE: 7/3/2025

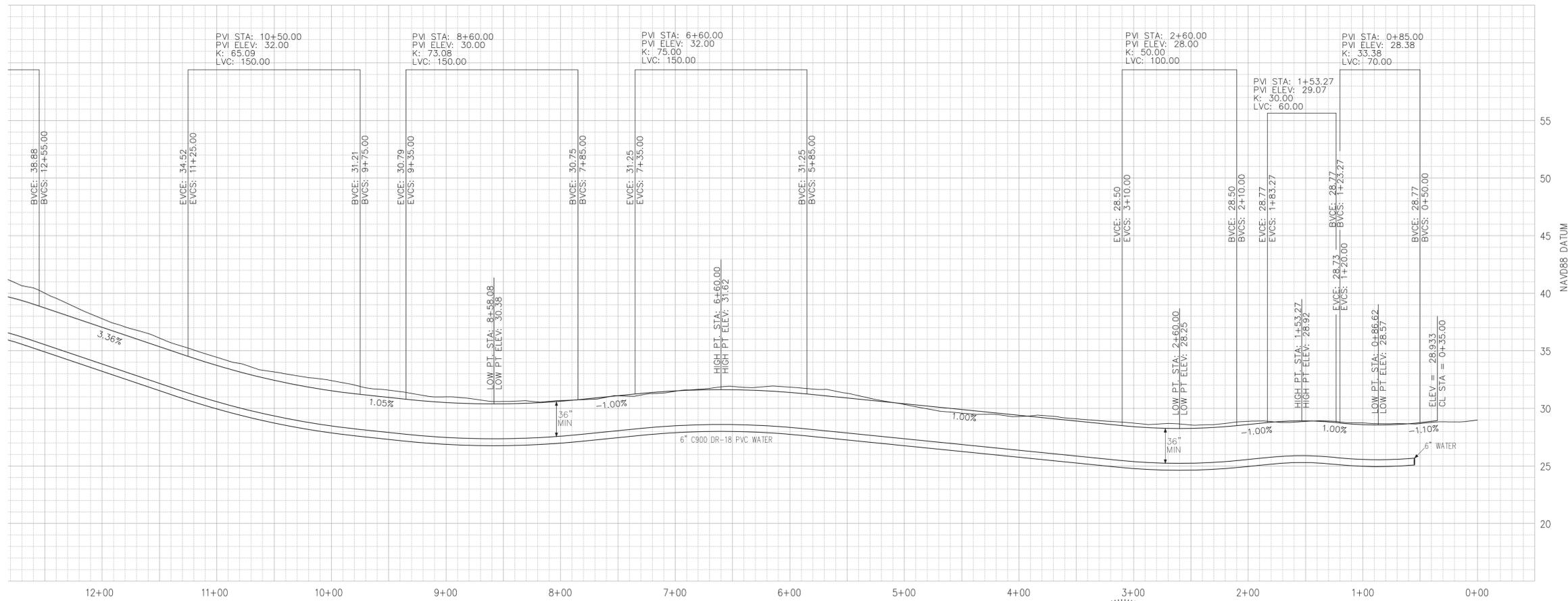
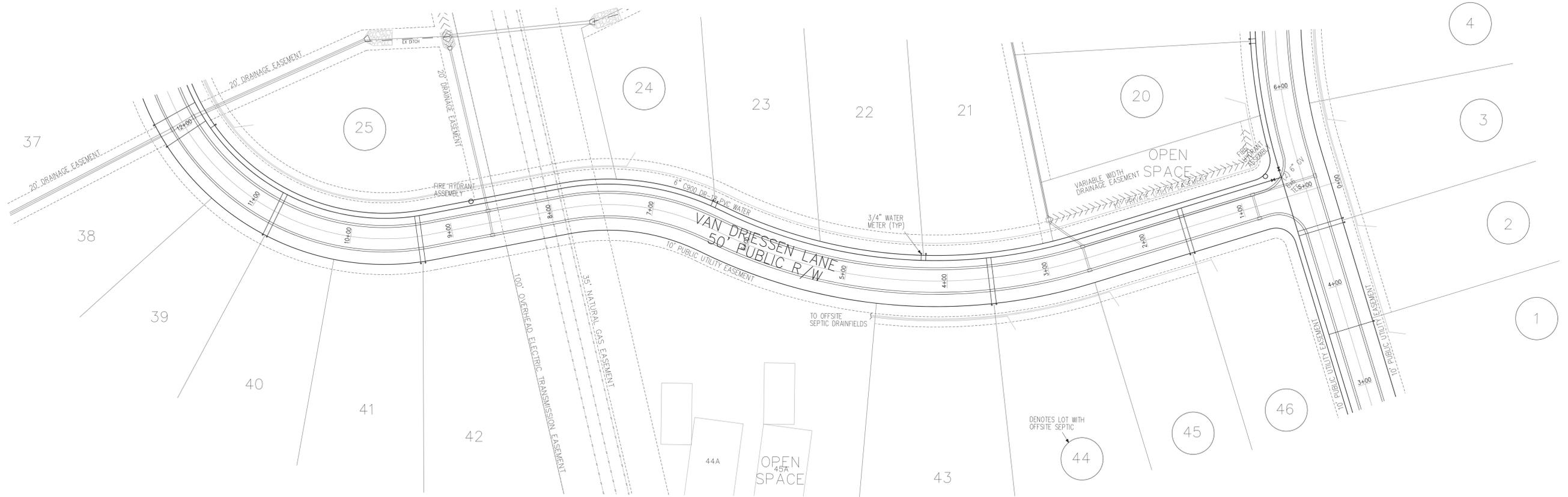
PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
ROCKY POINT PENDER, LLC
3900 BARRETT DRIVE, SUITE 101
RALEIGH, NC 27609
(919) 676-8100 x21

STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

SCALE: HOR: 1"=50'
VERT: 1"=5'
SHEET: 11 OF 21
ROADWAY AND
UTILITY PROFILE



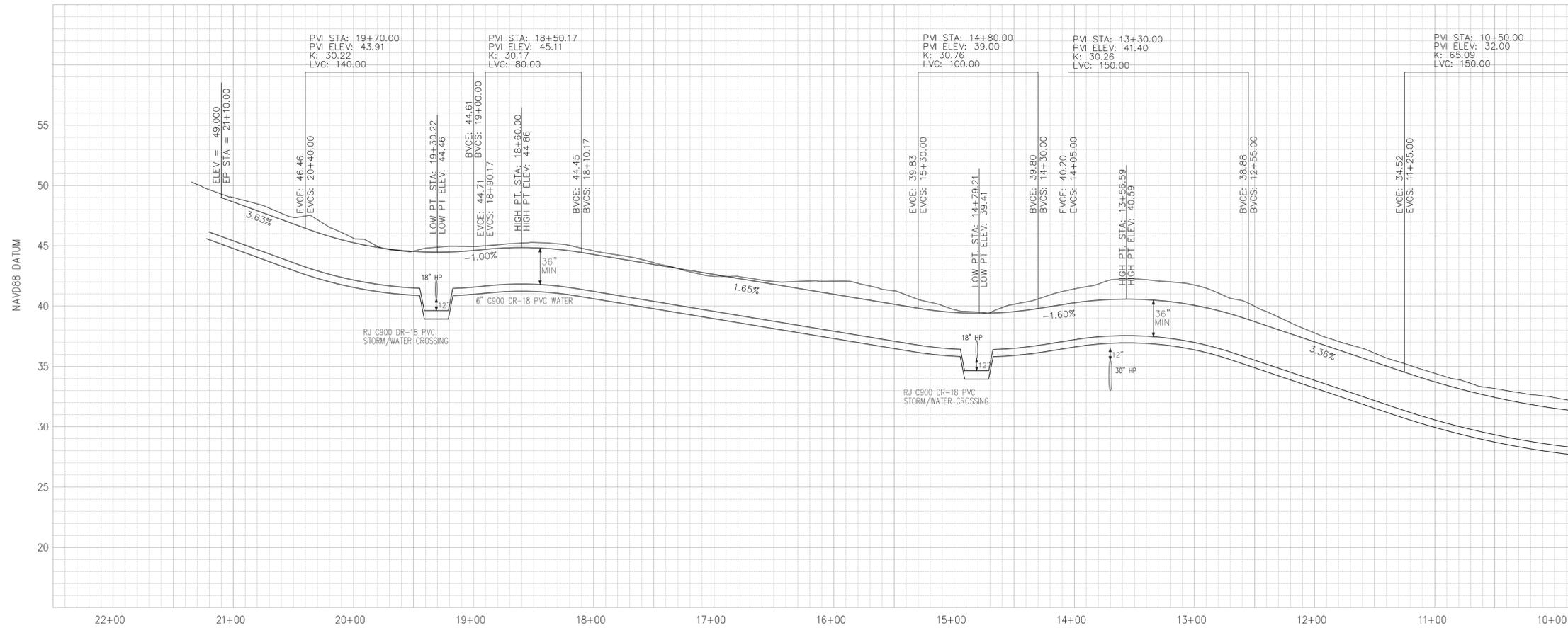
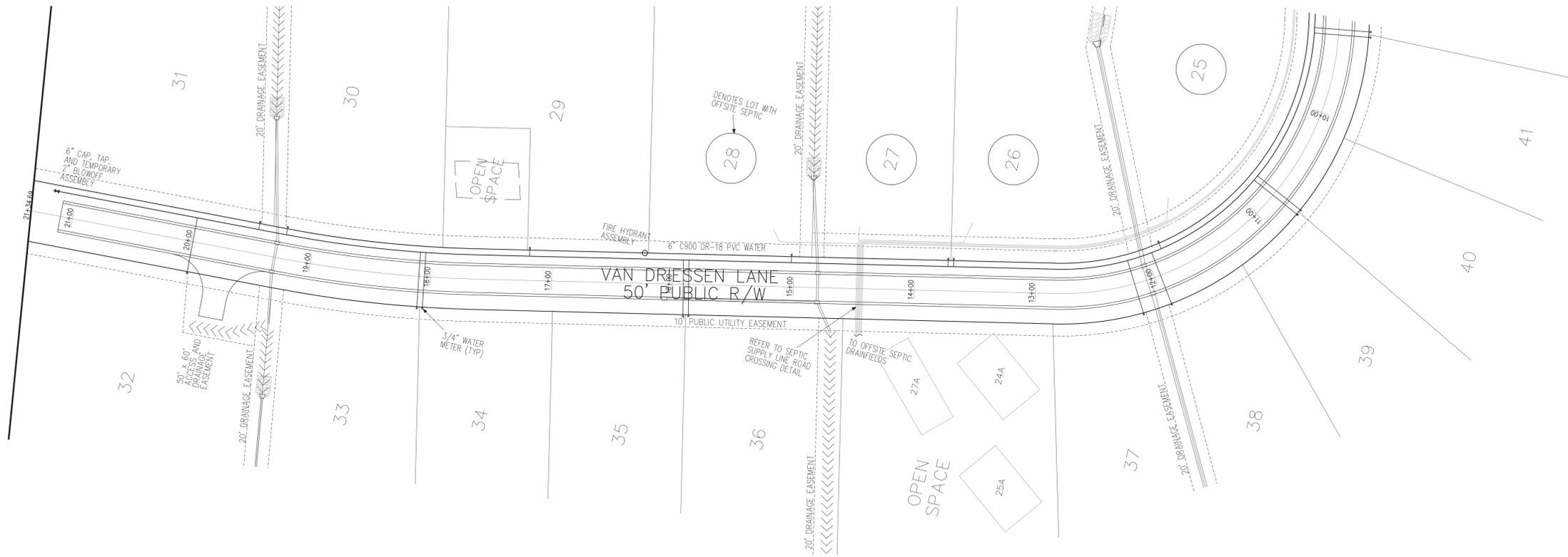
PRELIMINARY PLANS FOR:
COTTONWOOD
 ROCKY POINT TOWNSHIP
 PENDER COUNTY, NC

OWNER:
 ROCKY POINT PENDER, LLC
 3900 BARRETT DRIVE, SUITE 101
 RALEIGH, NC 27609
 (919) 676-8100 x21

STROUD ENGINEERING, P.A.
 102-D CINEMA DRIVE
 WILMINGTON, NC 28403
 (910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
 REVISIONS:
 PENDING per TRC

SCALE: HOR: 1"=50'
 VERT: 1"=5'
 SHEET: 12 OF 21
 ROADWAY AND
 UTILITY PROFILE



DATE: 7/3/2025

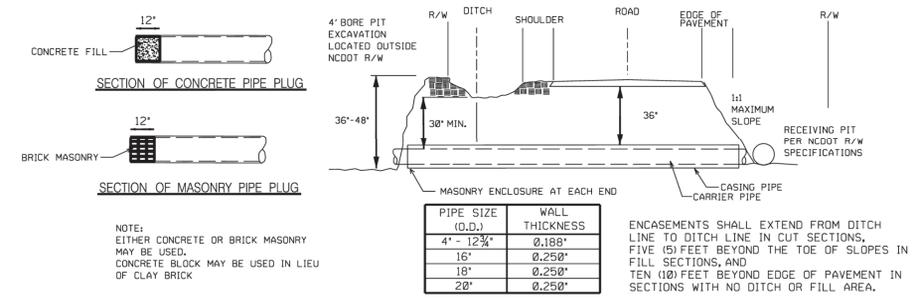
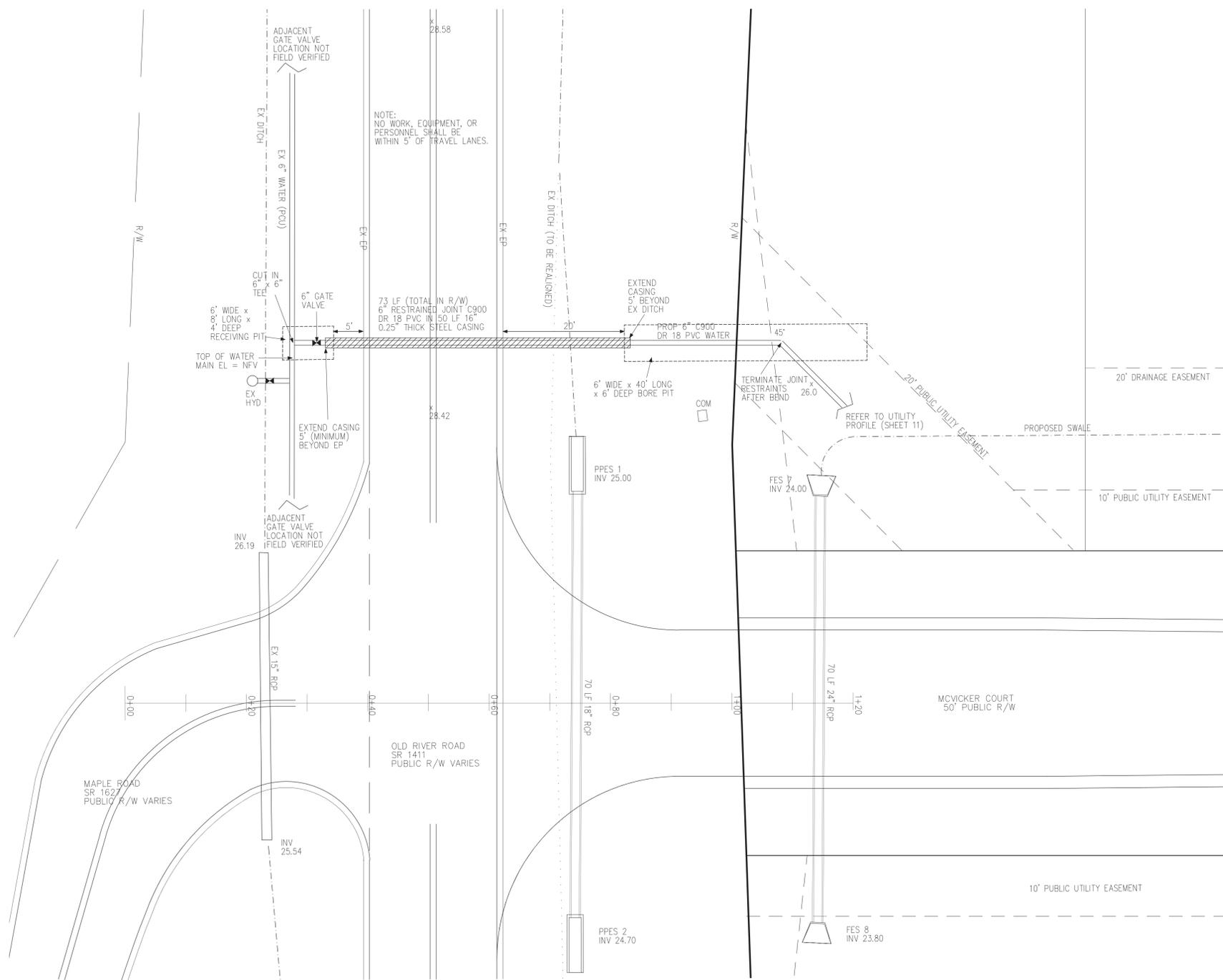
PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
ROCKY POINT PENDER, LLC
3900 BARRETT DRIVE, SUITE 101
RALEIGH, NC 27609
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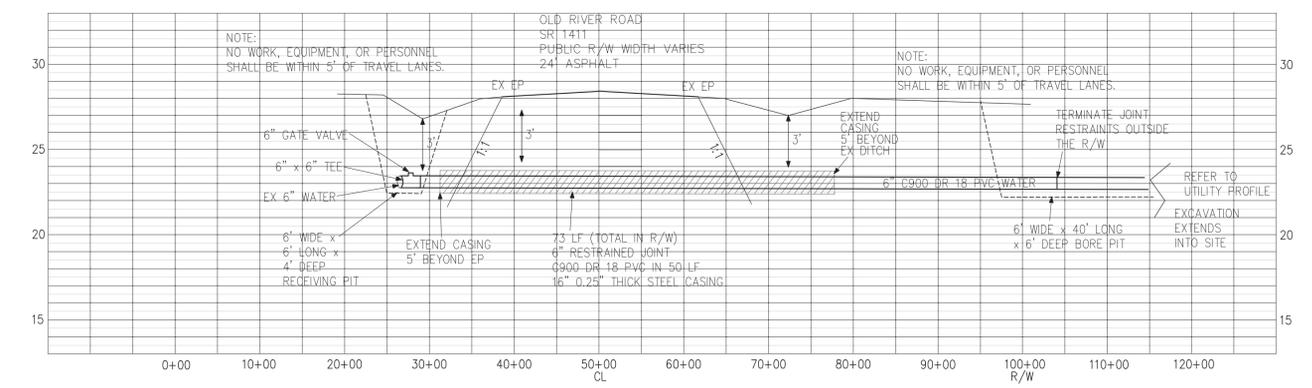
STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO. C-0647

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

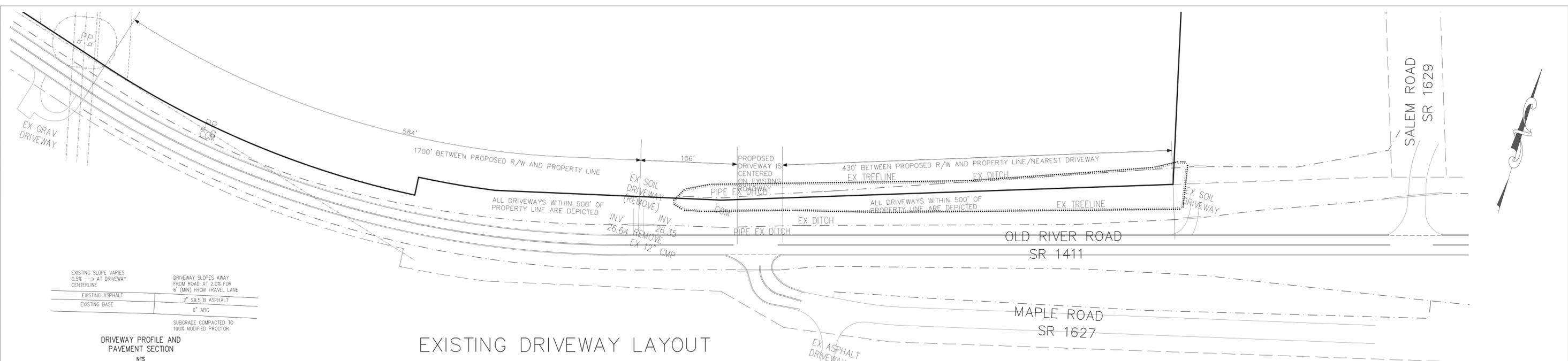
SCALE: HOR: 1"=50'
VERT: 1"=5'
SHEET: 13 OF 21
ROADWAY AND
UTILITY PROFILE



DETAIL FOR TYPICAL WATER LINE BORE UNDER STATE ROAD



PRELIMINARY PLANS FOR: COTTONWOOD ROCKY POINT TOWNSHIP PENDER COUNTY, NC	OWNER: ROCKY POINT PENDER, LLC 3900 BARRETT DRIVE, SUITE 101 RALEIGH, NC 27609 (919) 676-8100 x21	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE NO. C-0847	DATE: 7/3/2025 REVISIONS: PENDING per TRC	SCALE: AS NOTED SHEET: 14 OF 21 NCDOT BORE PLAN
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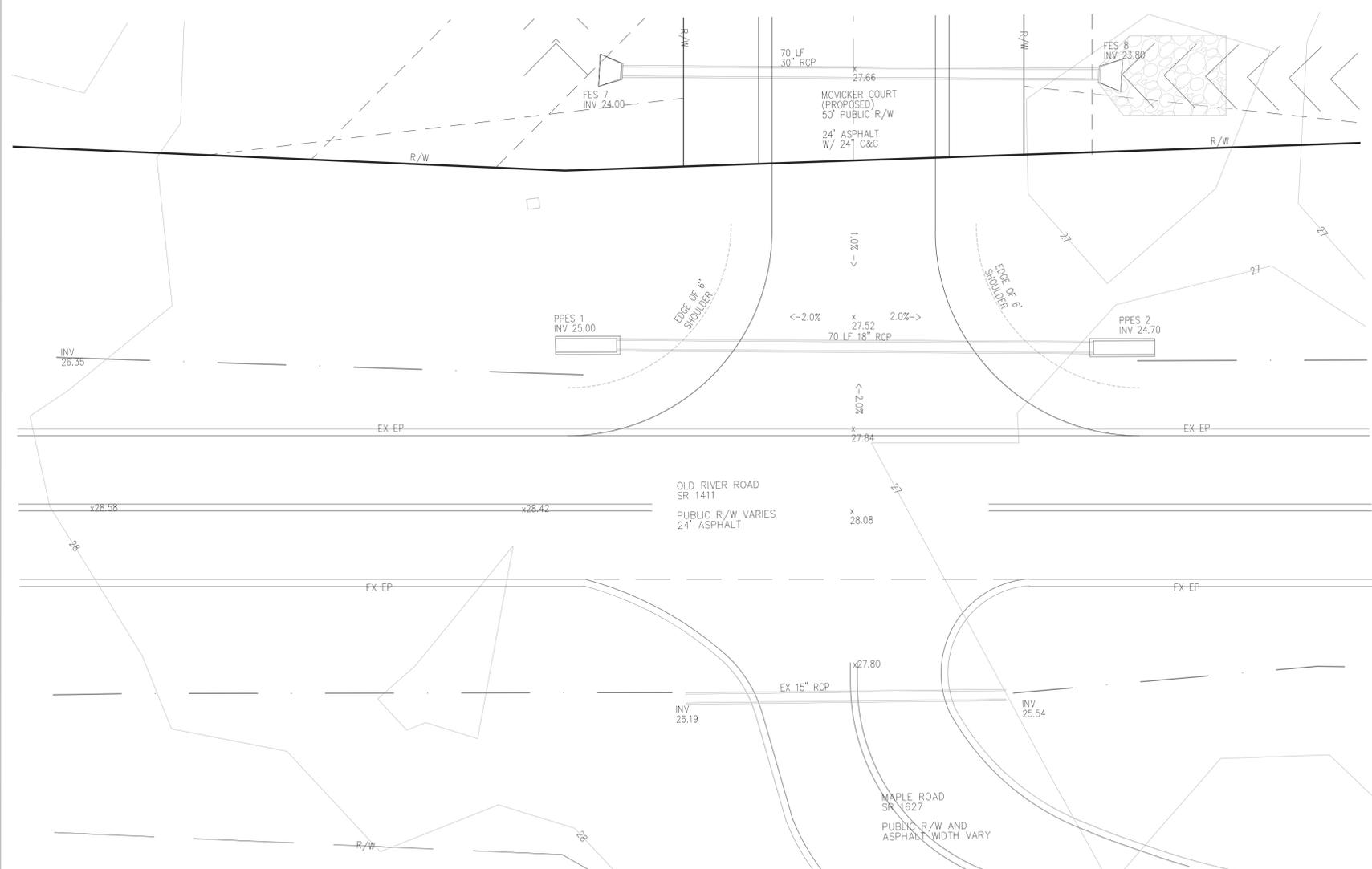
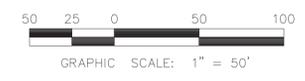
EXISTING SLOPE VARIES 0.5% ← → AT DRIVEWAY CENTERLINE

EXISTING ASPHALT	DRIVEWAY SLOPES AWAY FROM ROAD AT 2.0% FOR 6' (MIN) FROM TRAVEL LANE
EXISTING BASE	2" S 9.5 B ASPHALT
	6" ABC

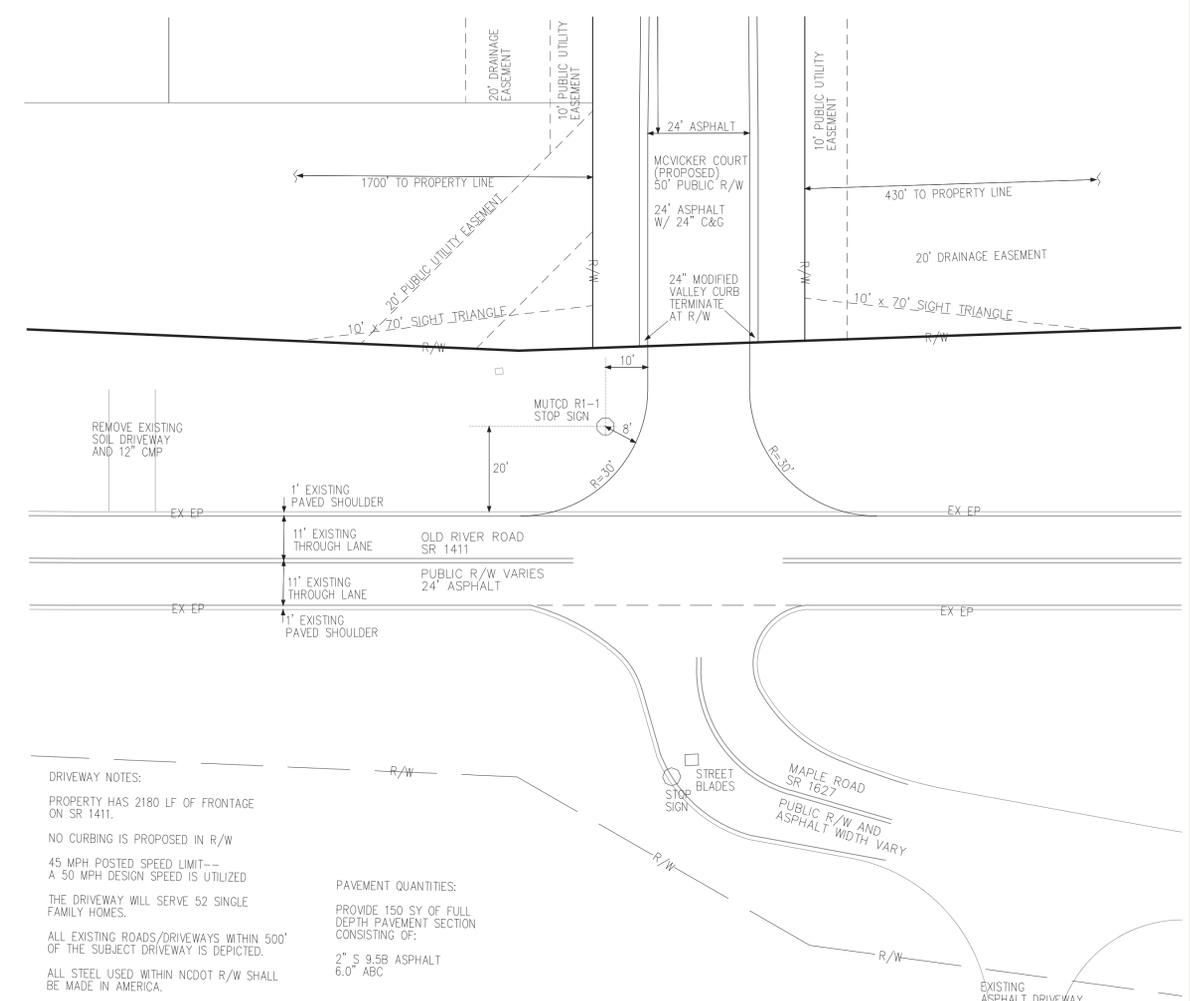
SUBGRADE COMPACTED TO 100% MODIFIED PROCTOR

DRIVEWAY PROFILE AND PAVEMENT SECTION
NTS

EXISTING DRIVEWAY LAYOUT



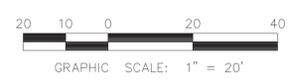
PROPOSED DRIVEWAY GRADING PLAN



DRIVEWAY NOTES:
 PROPERTY HAS 2180 LF OF FRONTAGE ON SR 1411.
 NO CURBING IS PROPOSED IN R/W
 45 MPH POSTED SPEED LIMIT-- A 50 MPH DESIGN SPEED IS UTILIZED
 THE DRIVEWAY WILL SERVE 52 SINGLE FAMILY HOMES.
 ALL EXISTING ROADS/DRIVEWAYS WITHIN 500' OF THE SUBJECT DRIVEWAY IS DEPICTED.
 ALL STEEL USED WITHIN NCDOT R/W SHALL BE MADE IN AMERICA.

PAVEMENT QUANTITIES:
 PROVIDE 150 SY OF FULL DEPTH PAVEMENT SECTION CONSISTING OF:
 2" S 9.5B ASPHALT
 6.0" ABC

PROPOSED DRIVEWAY LAYOUT



DAVID L. MENIS, P.E.
 DATE: 7/3/2025

PRELIMINARY PLANS FOR: COTTONWOOD ROCKY POINT TOWNSHIP PENDER COUNTY, NC	OWNER: ROCKY POINT PENDER, LLC 3900 BARRETT DRIVE, SUITE 101 RALEIGH, NC 27609 (919) 676-8100 x21	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE NO. C-0847	DATE: 7/3/2025 REVISIONS: PENDING per TRC	SCALE: AS NOTED SHEET: 15 OF 21 NCDOT DRIVEWAY PLAN
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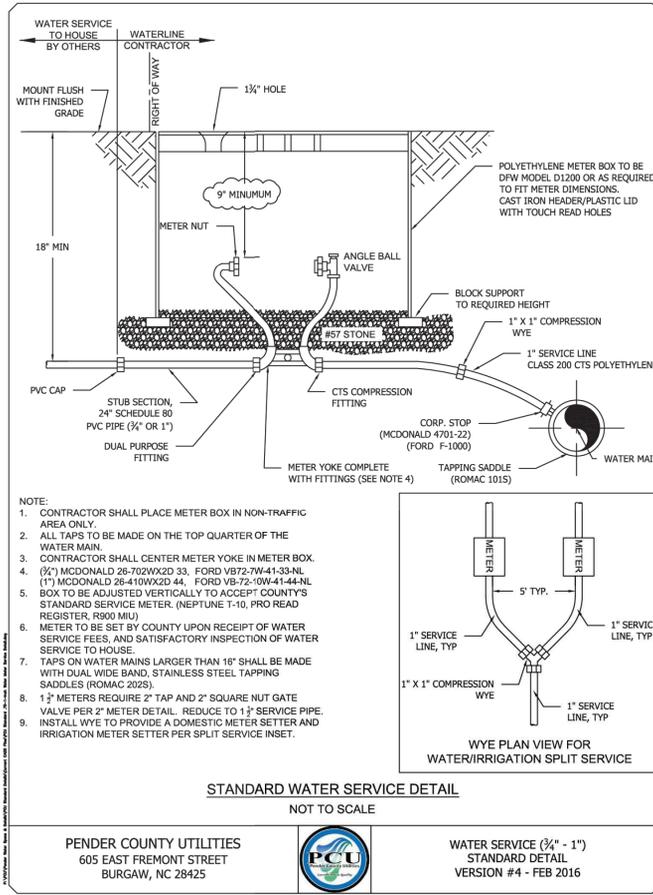
PCU STANDARD NOTES

1. 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.
2. ALL MATERIALS USED SHALL CONFORM TO PENDER COUNTY UTILITIES REQUIREMENTS. NON-CONFORMING MATERIAL WILL NOT BE ACCEPTED FOR FINAL CERTIFICATION.
3. 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.
4. PCU STANDARD WATERLINE PIPE RESTRAINING METHOD IS MEGA LUGS. AT A MINIMUM ALL FITTINGS, VALVES, ETC. MUST BE RESTRAINED (SEE PCU STANDARD DETAIL).
5. PCU MUST INSPECT CASING INSTALLATIONS PRIOR TO BACKFILL. PCU MUST WITNESS PRESSURE TESTS, AND WITHDRAWAL OF BACTERIOLOGICAL SMAPLES. CONTACT PENDER COUNTY UTILITIES INSPECTOR TO SCHEDULE.
6. 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, WARRANTY, AND RECORDS DRAWINGS (PDF & GIO REFERENCED CAD).
7. 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.

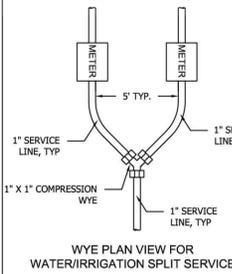
PENDER COUNTY UTILITIES
605 E FREMONT STREET
PO BOX 995, BURGAW, NC 28425



STANDARD NOTES
PCU WATER SYSTEMS
VERSION #4 - OCTOBER 2023



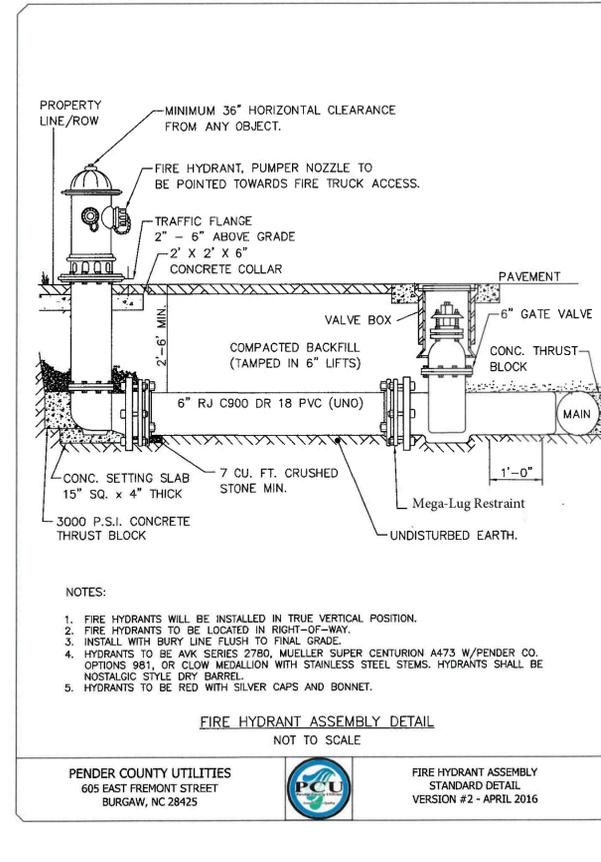
- NOTE:
1. CONTRACTOR SHALL PLACE METER BOX IN NON-TRAFFIC AREA ONLY.
 2. ALL TAPS TO BE MADE ON THE TOP QUARTER OF THE WATER MAIN.
 3. CONTRACTOR SHALL CENTER METER YOKE IN METER BOX.
 4. (2") MCDONALD 26-702W2D 33, FORD VB72-W4-1-33-NL (1") MCDONALD 26-410W2D 44, FORD VB72-W4-1-44-NL BOX TO BE ADJUSTED VERTICALLY TO ACCEPT COUNTY'S STANDARD SERVICE METER. (NEPTUNE T-10, PRO READ REGISTER, R800 MJU).
 5. METER TO BE SET BY COUNTY UPON RECEIPT OF WATER SERVICE FEES, AND SATISFACTORY INSPECTION OF WATER SERVICE TO HOUSE.
 6. TAPS ON WATER MAINS LARGER THAN 18" SHALL BE MADE WITH DUAL WIDE BAND, STAINLESS STEEL TAPPING SADDLES (ROMAC 2025).
 7. 1 1/2" METERS REQUIRE 2" TAP AND 2" SQUARE NUT GATE VALVE PER 2" METER DETAIL. REDUCE TO 1 1/2" SERVICE PIPE.
 8. INSTALL WYE TO PROVIDE A DOMESTIC METER SETTER AND IRRIGATION METER SETTER PER SPLIT SERVICE INSET.



PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425



WATER SERVICE (3/4" - 1")
STANDARD DETAIL
VERSION #4 - FEB 2016

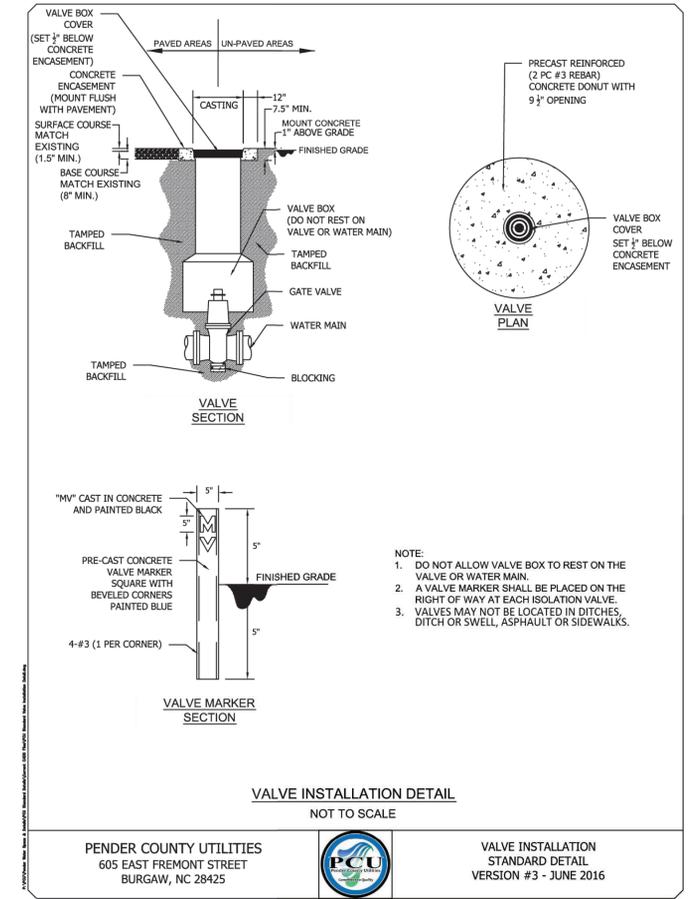


- NOTES:
1. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
 2. FIRE HYDRANTS TO BE LOCATED IN RIGHT-OF-WAY.
 3. INSTALL WITH BURY LINE FLUSH TO FINAL GRADE.
 4. HYDRANTS TO BE AVK SERIES 2780, MUELLER SUPER CENTURION A473 W/PENDER CO. OPTIONS 981, OR CLOW MEDALLION WITH STAINLESS STEEL STEMS. HYDRANTS SHALL BE NOSTALGIC STYLE DRY BARREL.
 5. HYDRANTS TO BE RED WITH SILVER CAPS AND BONNET.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425



FIRE HYDRANT ASSEMBLY
STANDARD DETAIL
VERSION #2 - APRIL 2016

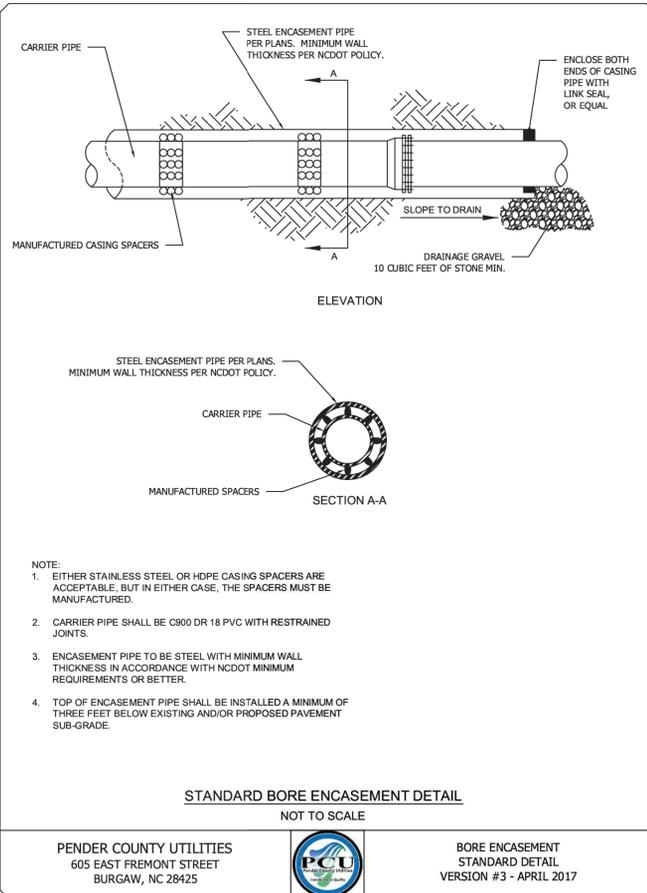


- NOTE:
1. DO NOT ALLOW VALVE BOX TO REST ON THE VALVE OR WATER MAIN.
 2. A VALVE MARKER SHALL BE PLACED ON THE RIGHT OF WAY AT EACH ISOLATION VALVE.
 3. VALVES MAY NOT BE LOCATED IN DITCHES, DITCH OR SWELL, ASPHALT OR SIDEWALKS.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425



VALVE INSTALLATION
STANDARD DETAIL
VERSION #3 - JUNE 2016



- NOTE:
1. EITHER STAINLESS STEEL OR HDPE CASING SPACERS ARE ACCEPTABLE, BUT IN EITHER CASE, THE SPACERS MUST BE MANUFACTURED.
 2. CARRIER PIPE SHALL BE C900 DR 18 PVC WITH RESTRAINED JOINTS.
 3. ENCASUREMENT PIPE TO BE STEEL WITH MINIMUM WALL THICKNESS IN ACCORDANCE WITH NCDOT MINIMUM REQUIREMENTS OR BETTER.
 4. TOP OF ENCASUREMENT PIPE SHALL BE INSTALLED A MINIMUM OF THREE FEET BELOW EXISTING AND/OR PROPOSED PAVEMENT SUB-GRADE.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425



BORE ENCASUREMENT
STANDARD DETAIL
VERSION #3 - APRIL 2017

Restrained Length in Feet Each Side of Fitting Joint

PIPE DIAMETER (INCHES)	D. I. P.				P. V. C.			
	90°	45°	22 1/2°	11 1/4°	90°	45°	22 1/2°	11 1/4°
3"	30'	18'	10'	8'	40'	20'	10'	8'
4"	35'	18'	10'	8'	55'	25'	15'	10'
6"	55'	25'	10'	8'	80'	35'	20'	10'
8"	85'	30'	15'	10'	80'	40'	20'	10'
10"	80'	35'	20'	10'	110'	50'	25'	15'
12"	85'	40'	20'	10'	130'	55'	30'	15'
16"	120'	50'	25'	15'	160'	70'	35'	20'
20"	150'	65'	30'	15'	200'	85'	40'	20'
24"	180'	70'	35'	20'	210'	90'	45'	25'
30"	190'	80'	40'	20'	250'	100'	50'	25'
36"	220'	85'	45'	25'	0	0	0	0
42"	240'	100'	50'	25'	0	0	0	0
48"	250'	120'	60'	30'	0	0	0	0

Restrained lengths for valves, dead ends and branches from tees shall be the same as for 90° (degree) bends

Restrained Length in Feet For Reducer

PIPE DIAMETER (INCHES)	3"	4"	6"	8"	10"	12"	16"	20"	24"	30"
3"	0	0	0	0	0	0	0	0	0	0
4"	40'	0	0	0	0	0	0	0	0	0
6"	50'	45'	0	0	0	0	0	0	0	0
8"	75'	70'	40'	0	0	0	0	0	0	0
10"	85'	80'	70'	40'	0	0	0	0	0	0
12"	120'	115'	100'	75'	40'	0	0	0	0	0
16"	160'	155'	140'	125'	100'	70'	0	0	0	0
20"	200'	195'	185'	170'	150'	130'	75'	0	0	0
24"	180'	155'	150'	140'	130'	120'	90'	50'	0	0
30"	195'	190'	185'	180'	170'	160'	120'	105'	70'	0
36"	225'	220'	215'	210'	205'	195'	180'	160'	125'	70'
42"	245'	240'	235'	230'	225'	220'	205'	180'	155'	105'
48"	255'	250'	245'	240'	235'	230'	215'	195'	175'	125'

Length of restrained joint for larger diameter pipe

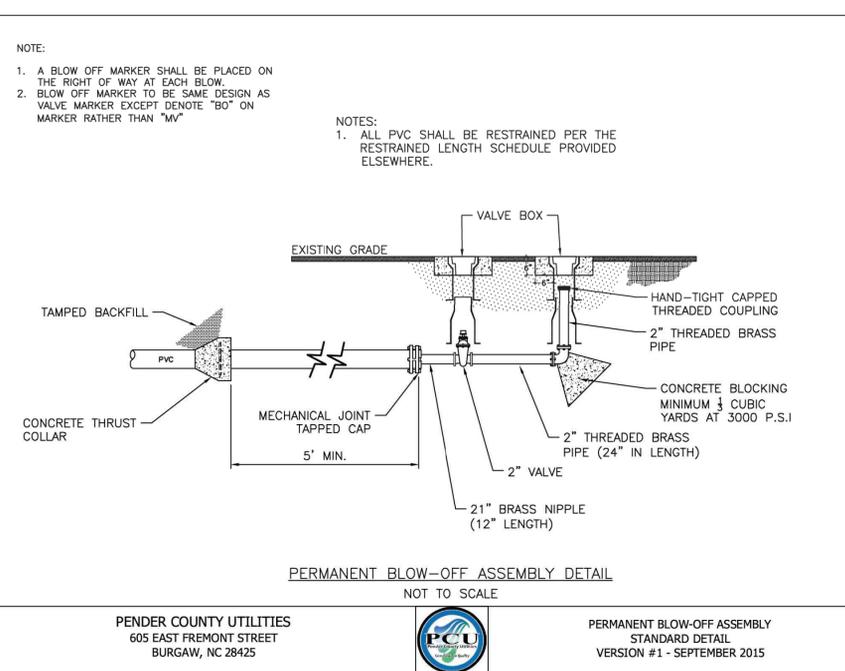
NOTES:

1. PENDER COUNTY STANDARD RESTRAINT METHOD IS MEGA LUGS, UNLESS SPECIFICALLY APPROVED BY PCU IN WRITING.
2. ALL FITTINGS AND JOINTS SHALL BE RESTRAINED JOINT.
3. "L" ABOVE IS GIVEN IN FEET FROM FITTING JOINT.

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



RESTRAINED JOINT TABLE
STANDARD DETAIL
VERSION #2 - OCTOBER 2023



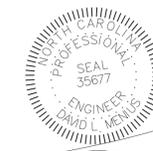
- NOTE:
1. A BLOW OFF MARKER SHALL BE PLACED ON THE RIGHT OF WAY AT EACH BLOW OFF.
 2. BLOW OFF MARKER TO BE SAME DESIGN AS VALVE MARKER EXCEPT DENOTE "BO" ON MARKER RATHER THAN "MV"

- NOTES:
1. ALL PVC SHALL BE RESTRAINED PER THE RESTRAINED LENGTH SCHEDULE PROVIDED ELSEWHERE.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425



PERMANENT BLOW-OFF ASSEMBLY
STANDARD DETAIL
VERSION #1 - SEPTEMBER 2015



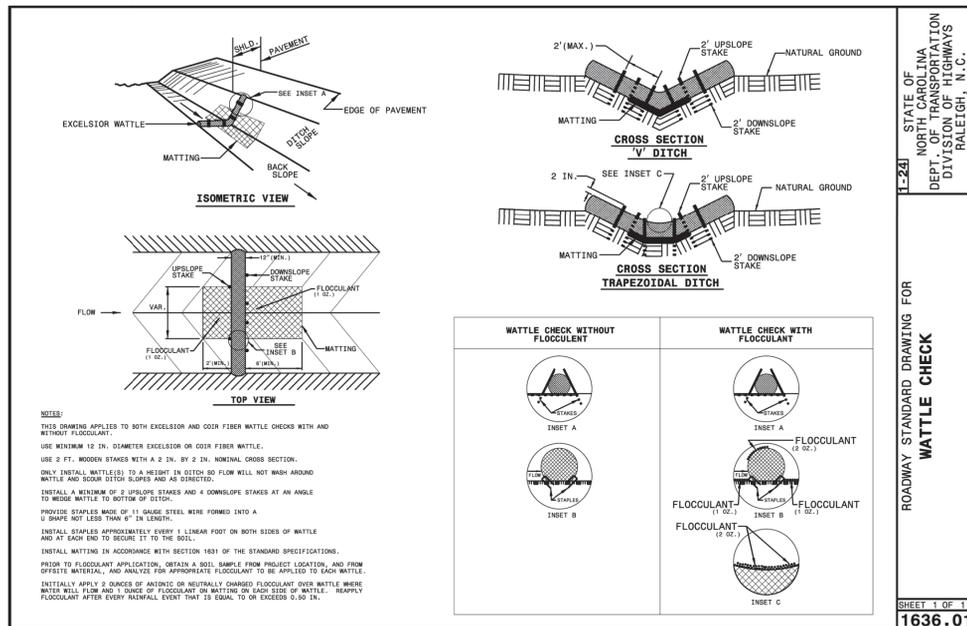
PRELIMINARY PLANS FOR:
COTTONWOOD
ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
ROCKY POINT PENDER, LLC
3900 BARRETT DRIVE, SUITE 101
RALEIGH, NC 27609
(919) 676-8100 x21

STROUD ENGINEERING, P.A.
102-D CINEMA DRIVE
WILMINGTON, NC 28403
(910) 815-0775 LICENSE NO.C-0847

DATE: 7/3/2025
REVISIONS:
PENDING per TRC

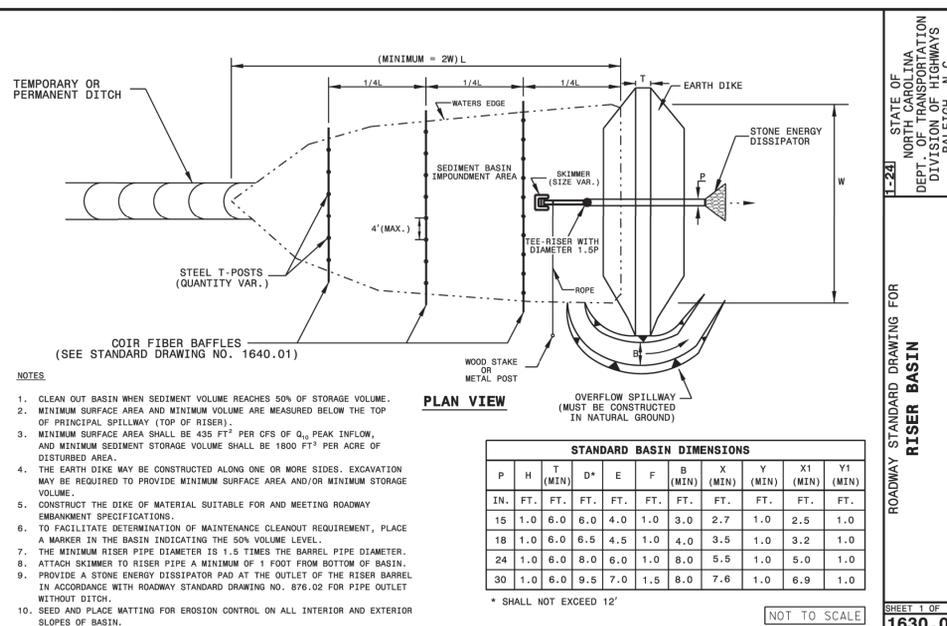
SCALE: AS NOTED
SHEET: 16 OF 21
UTILITY DETAILS



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR WATTLE CHECK

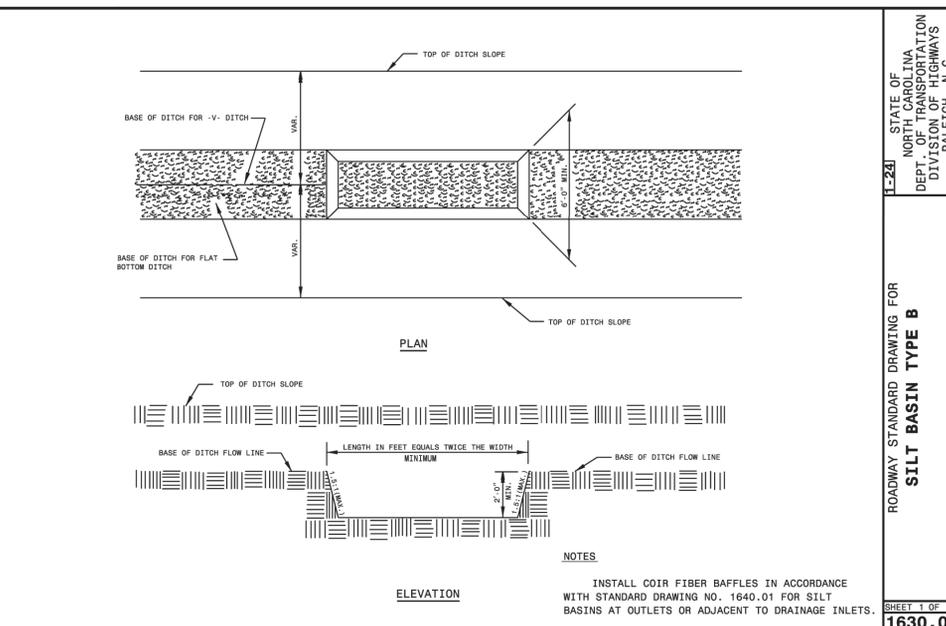
SHEET 1 OF 1 1636.01



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR RISER BASIN

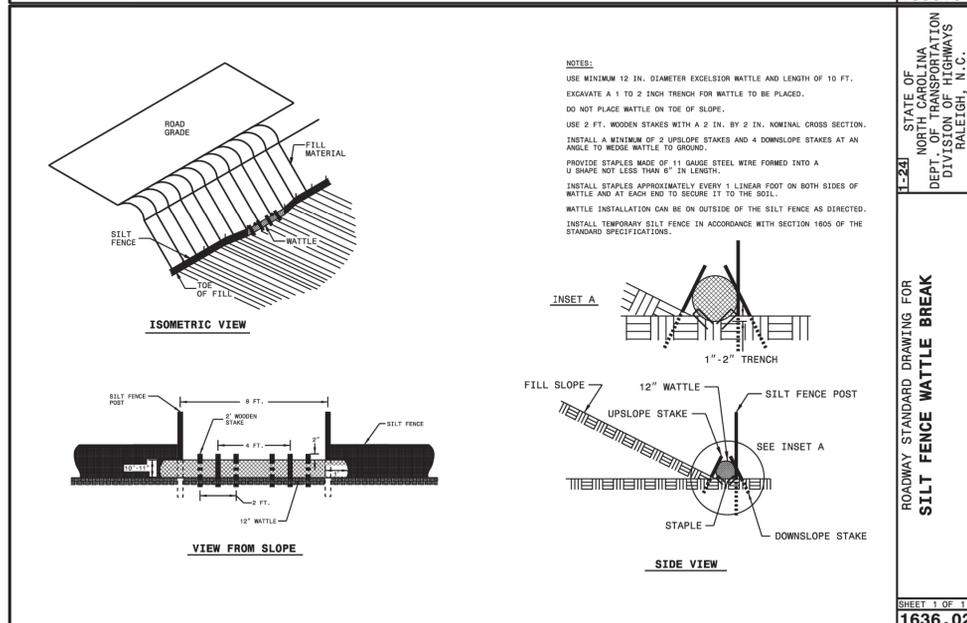
SHEET 1 OF 2 1630.01



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR SILT BASIN TYPE B

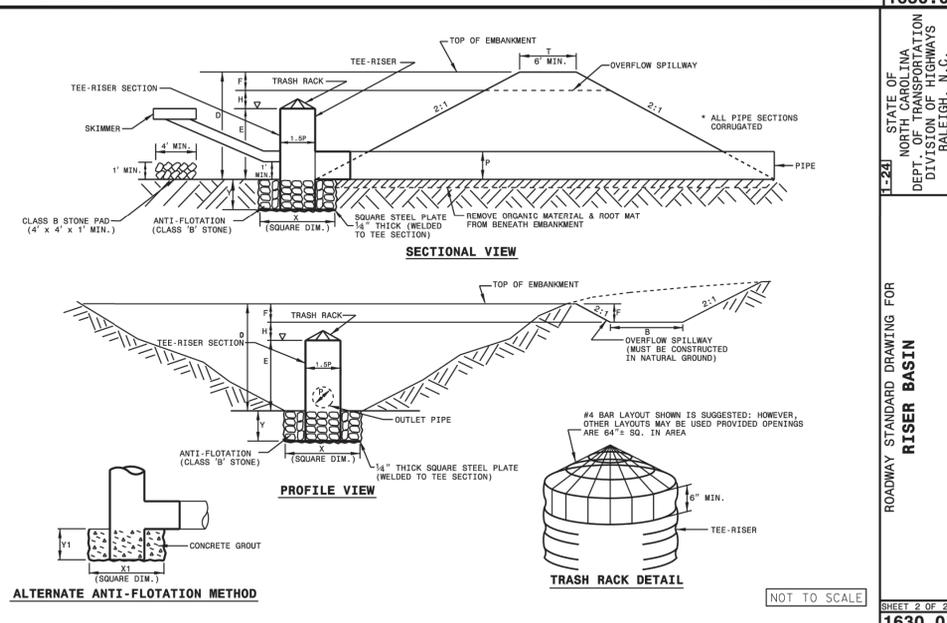
SHEET 1 OF 1 1630.02



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR SILT FENCE WATTLE BREAK

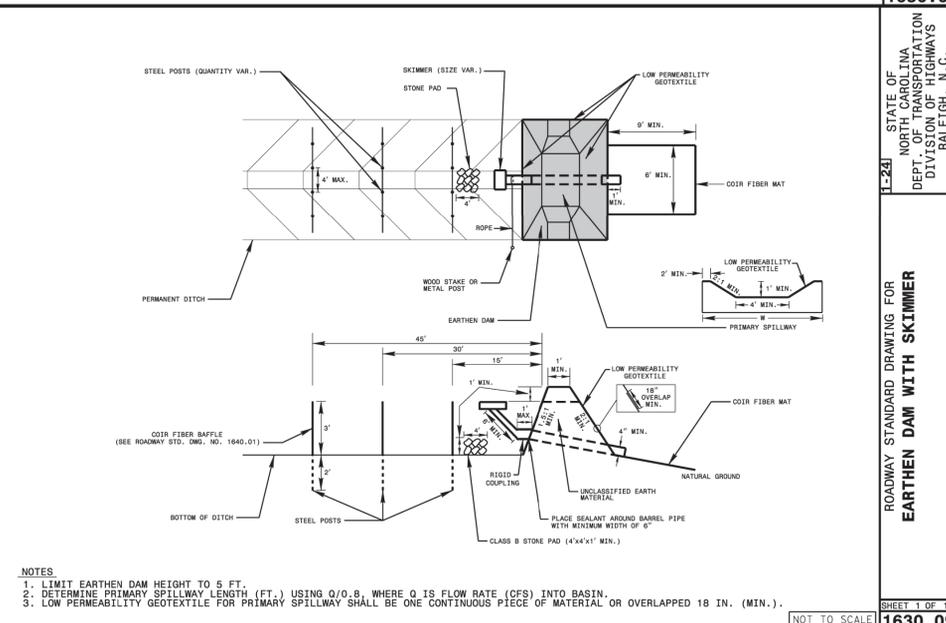
SHEET 1 OF 1 1636.02



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR RISER BASIN

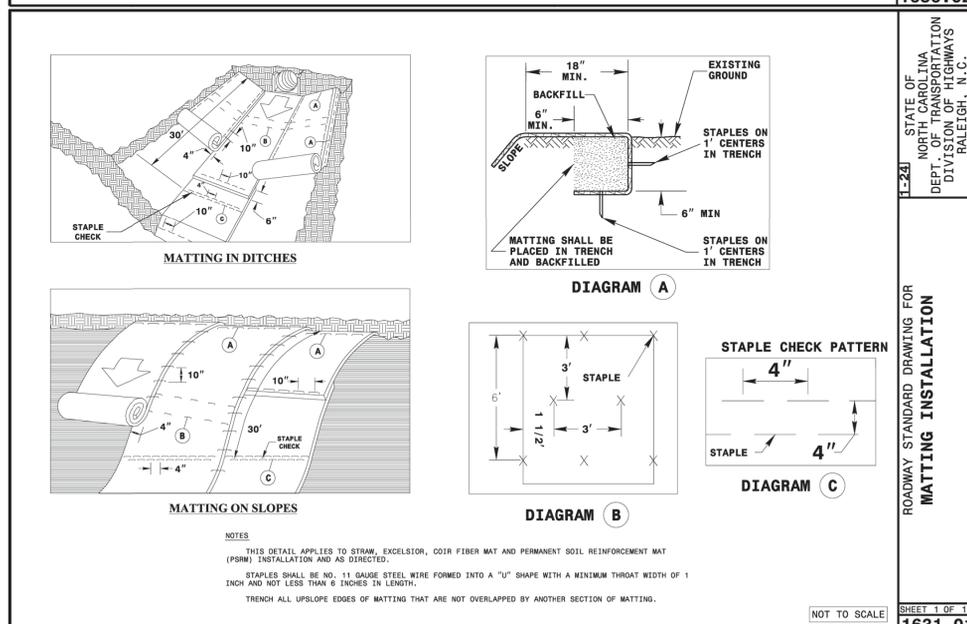
SHEET 2 OF 2 1630.01



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR EARTHEN DAM WITH SKIMMER

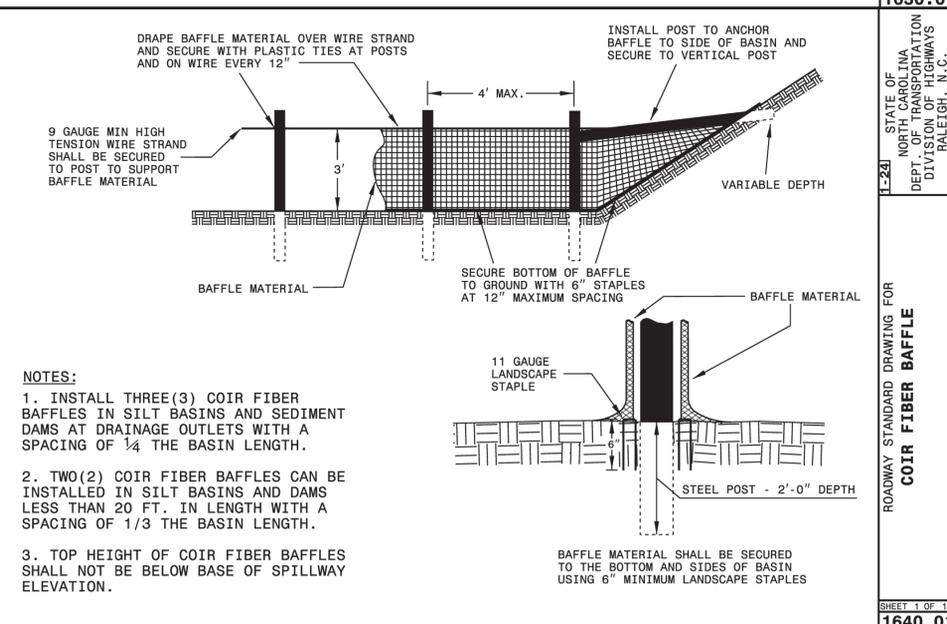
SHEET 1 OF 1 1630.09



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR MATTING INSTALLATION

SHEET 1 OF 1 1631.01



L-241 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR COIR FIBER BAFFLE

SHEET 1 OF 1 1640.01

PRELIMINARY PLANS FOR:

COTTONWOOD

ROCKY POINT TOWNSHIP
PENDER COUNTY, NC

OWNER:
ROCKY POINT PENDER, LLC
3900 BARRETT DRIVE, SUITE 101
RALEIGH, NC 27609
(919) 676-8100 x21

SEAL 35677
ENGINEER
DAVID L. MERRIS

DATE: 7/8/2025

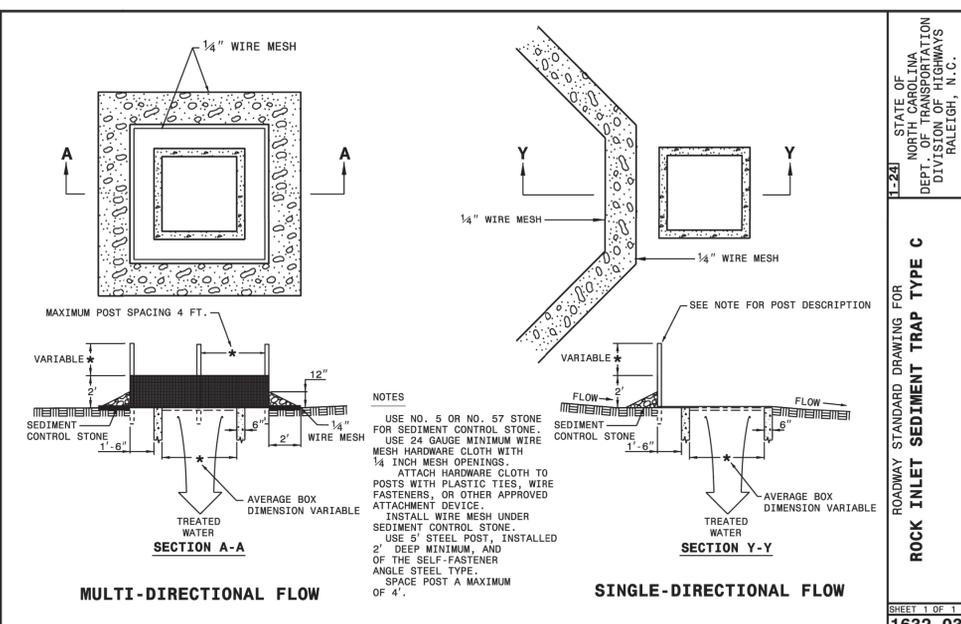
DATE: 7/3/2025

REVISIONS:
PENDING per TRC

SCALE: AS NOTED

SHEET: 19 OF 21

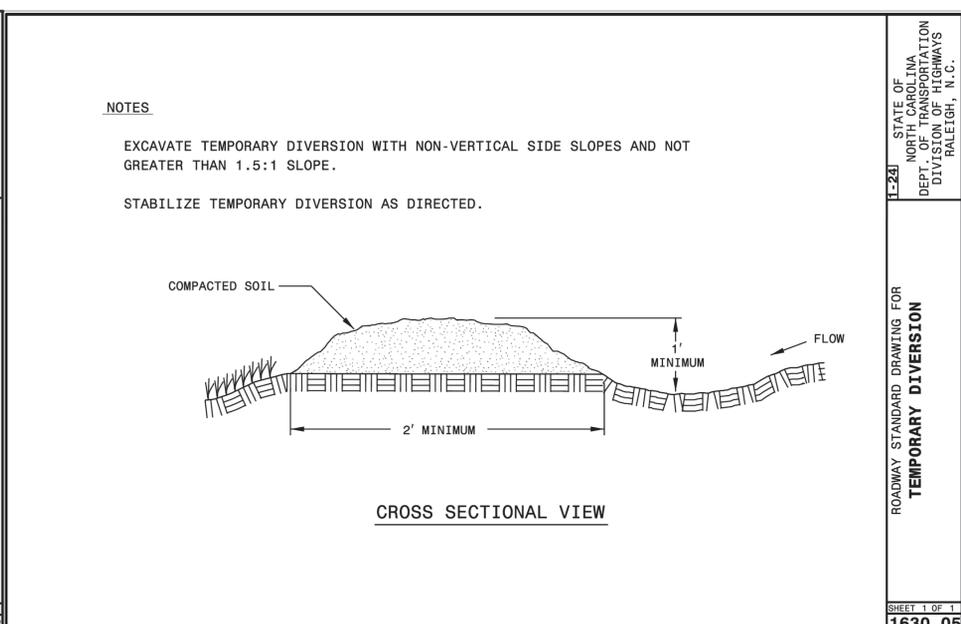
GRADING
DETAILS



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

ROADWAY STANDARD DRAWING FOR
ROCK INLET SEDIMENT TRAP TYPE C

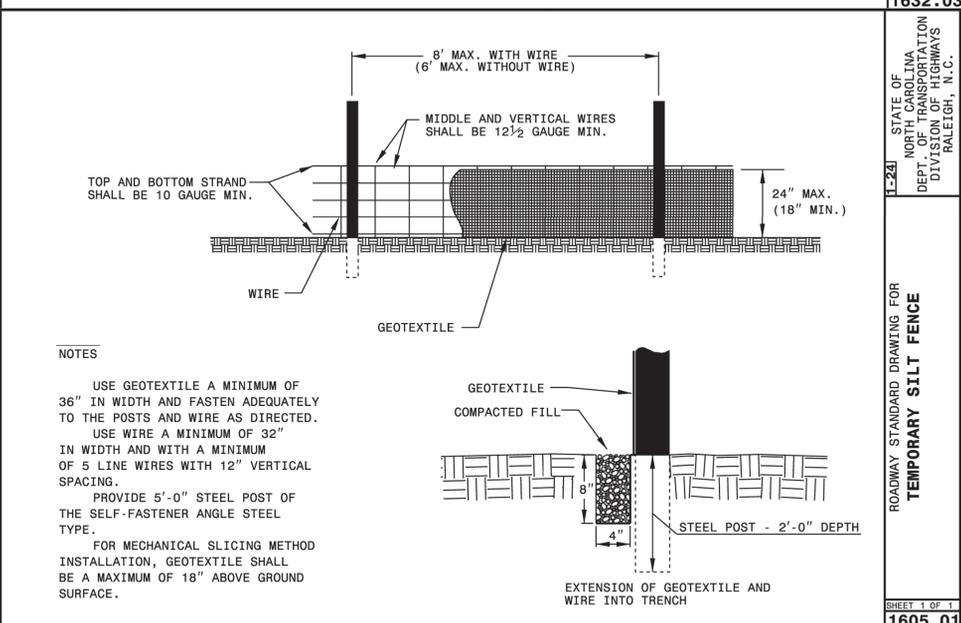
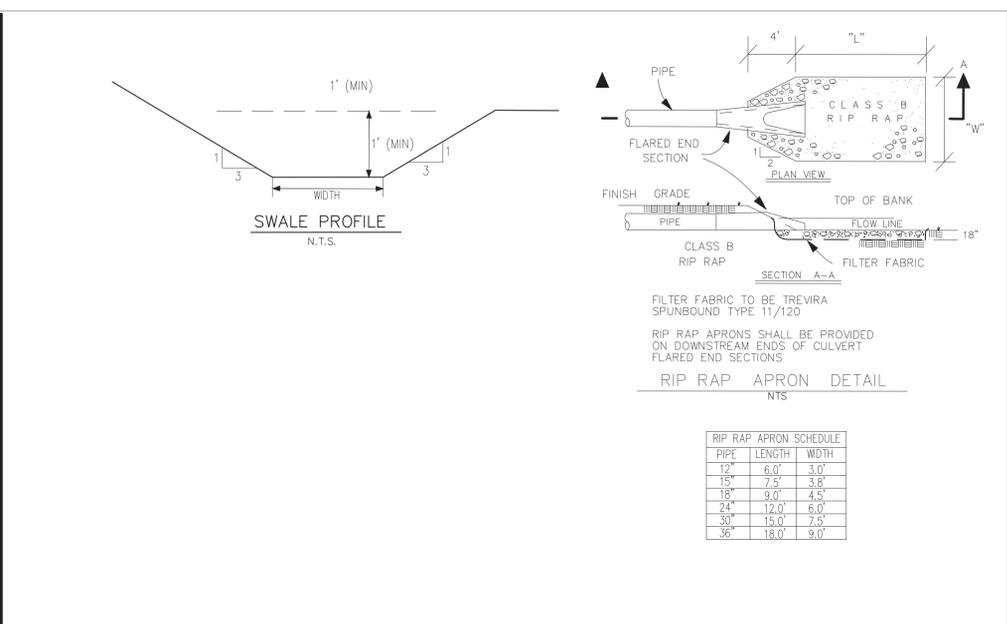
SHEET 1 OF 1
1632.03



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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TEMPORARY DIVERSION

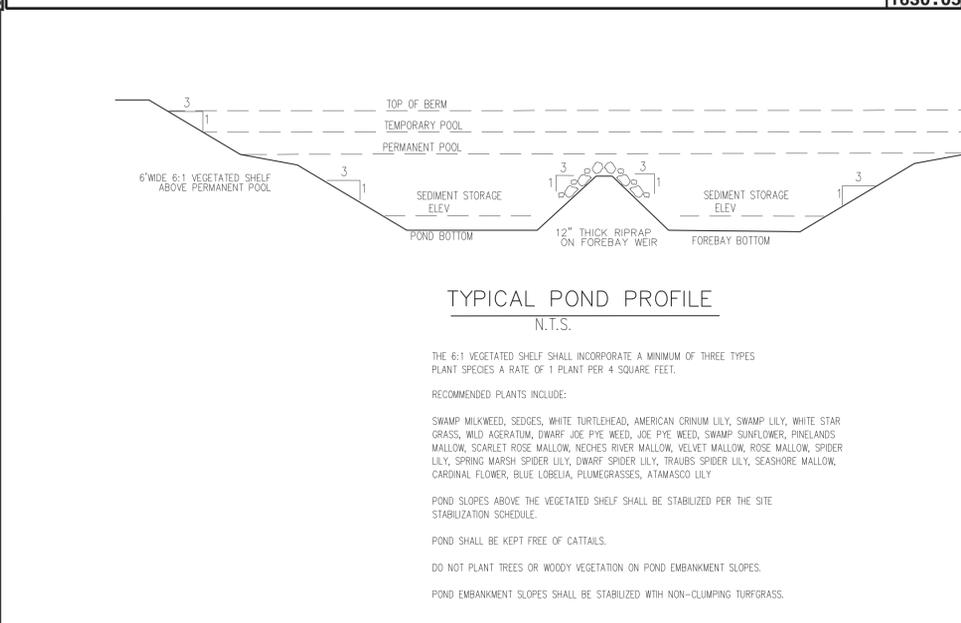
SHEET 1 OF 1
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TEMPORARY SILT FENCE

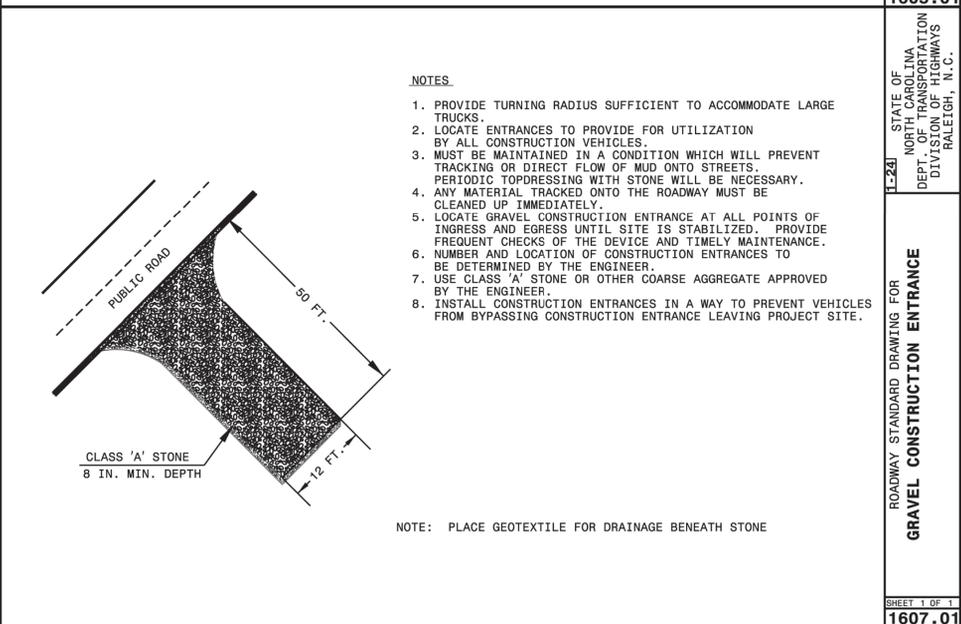
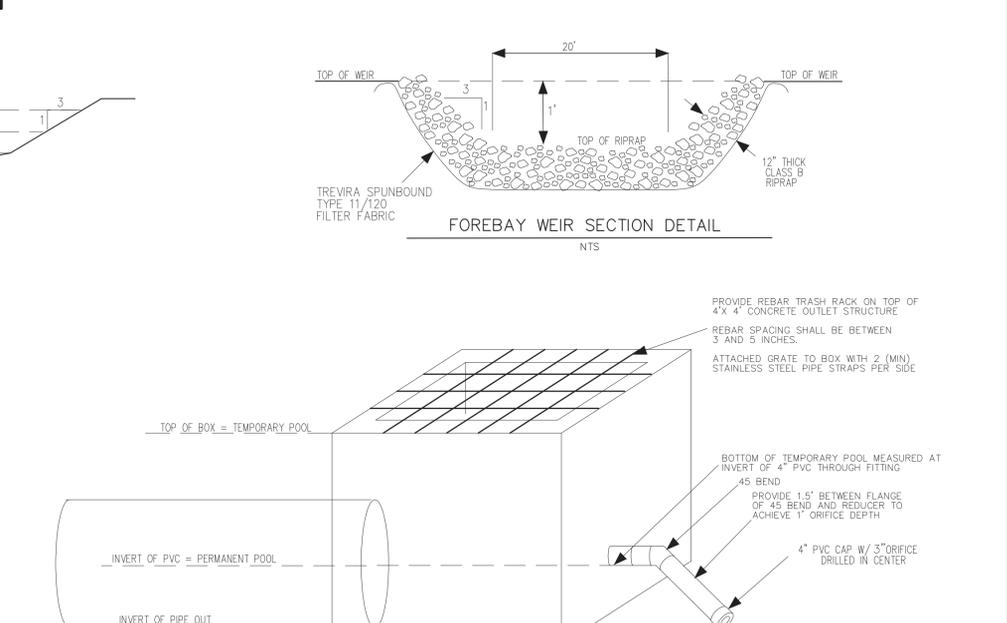
SHEET 1 OF 1
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TEMPORARY DIVERSION

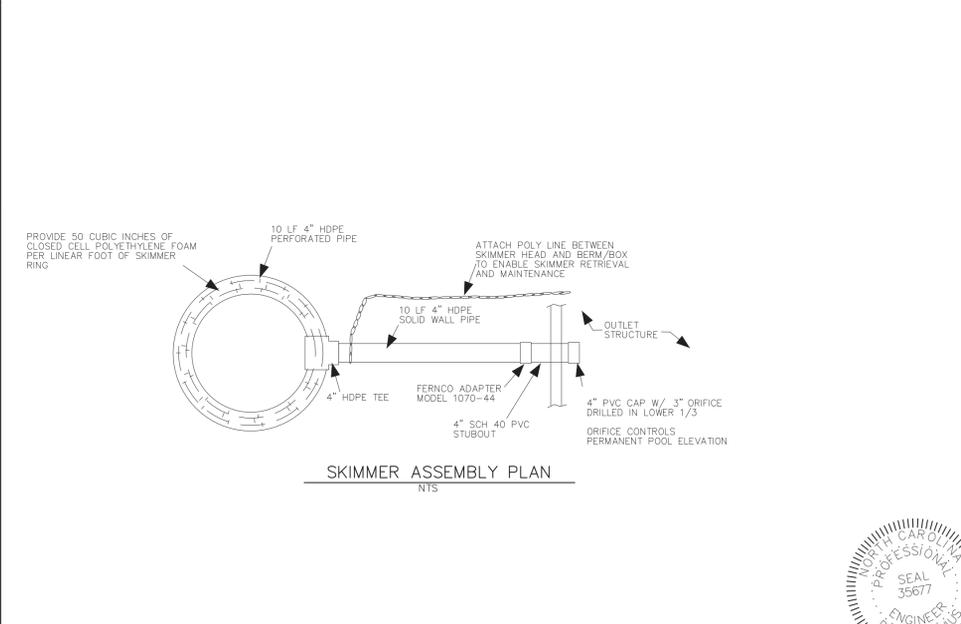
SHEET 1 OF 1
1630.05



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

ROADWAY STANDARD DRAWING FOR
GRAVEL CONSTRUCTION ENTRANCE

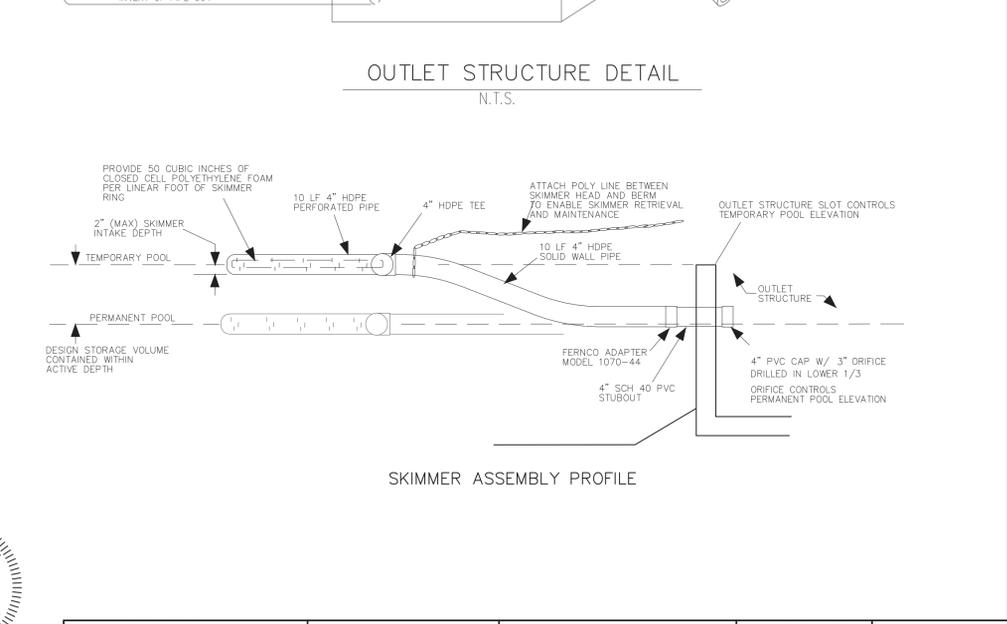
SHEET 1 OF 1
1607.01



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

ROADWAY STANDARD DRAWING FOR
TEMPORARY DIVERSION

SHEET 1 OF 1
1630.05



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 Roller 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 Roller 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 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 top of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access points 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.

EROSION & SEDIMENT CONTROL MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK AND WITHIN 24 HOURS OF EVERY HALF INCH RAINFALL.

2. ALL POINTS OF EGRESS WILL HAVE CONSTRUCTIONS ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2" OF #4 STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED, WASHED, OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS.

3. SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, BLOCK AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, ROCK PIPE INLET PROTECTION, AND GUTTERBUDDY INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE REMOVED FROM AROUND BEAVER DAMS, DANDY SACKS/SOCKS, AND GUTTERBUDDIES ONCE A WEEK AND AFTER EVERY RAIN EVENT. NOTE THAT THE GUTTERBUDDY IS REUSABLE AND SHOULD BE STORED OUT OF DIRECT SUNLIGHT BETWEEN JOBS.

4. DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE RESTABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.

5. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET (MAX) WITH THE USE OF EXTRA STRENGTH FABRIC WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET (MAX) WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE USED AT LOW POINTS IN THE SEDIMENT FENCE, THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER DRAINS AS DESIGNED, OR IS DAMAGED.

6. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAPS AND BASINS WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS OR WHEN THE ROCK IS DISLODGED. BAFFLES WILL BE REPAIRED OR REPLACED IF THEY COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE. THEY WILL BE REPLACED PROMPTLY. SEDIMENT WILL BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE FIRST BAFFLE. IN SKIMMER BASINS, FLOATING SKIMMERS WILL BE INSPECTED WEEKLY AND WILL BE KEPT CLEAN.

7. ALL SEEDED AREAS WILL BE FERTILIZED, RESEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. ALL SLOPES WILL BE STABILIZED WITHIN 21 CALENDAR DAYS. ALL OTHER AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS.

8. FLOCCULANTS WILL BE USED TO ADDRESS TURBIDITY ISSUES. THE PUMPS, TANKS, HOSES AND INJECTION SYSTEMS WILL BE CHECKED FOR PROBLEMS OR TURBID DISCHARGES DAILY.

9. REPAIR OR REPLACE SPLIT, TORN, UNRAVELING, OR SLUMPING WATTLES. REMOVE SEDIMENT FROM BEHIND WATTLES ONCE IT HAS ACCUMULATED TO ONE-HALF THE WATTLE DIAMETER.

COASTAL PLAIN SITE STABILIZATION SCHEDULE

- Fertilize and lime per recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.
- Incorporate lime/fertilizer 4-6 inches.
- Roughen steep slopes by tracked machinery.
- Select species based on season. Refer to tables.
- Broadcast seeds evenly and cover by raking or dragging a chain. Firm soil by rolling.
- Apply straw mulch at a rate 1-2 tons per acre. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool. Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

PERMANENT SEEDING TABLE 1

Seeding Dates	Recommended Planting	Rate (lb/ac)
Feb. 15 - Apr. 1	Tall Fescue Mixture	see table 2
Sep. 1 - Nov. 1	Hybrid Bermudagrass	see table 2
Apr. 1 - Aug. 1	Common Bermudagrass	see table 2
Apr. 1 - Jul. 15	Centipedegrass	see table 2
Mar. 1 - Jul. 1		

PERMANENT SEEDING TABLE 2a--LOW MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	80
	Pensacola Bahiagrass	50
	Kobe Lespedeza	40
Dry to well drained soils	Pensacola Bahiagrass	50
	Common Bermudagrass	30
	Kobe Lespedeza	10
	German Millet	10
Swales	Common Bermudagrass	40-80

PERMANENT SEEDING TABLE 2b--HIGH MAINTENANCE MIXTURES

Site Description	Recommended Planting	Rate (lb/ac)
Well to poorly drained soils	Tall Fescue Mixture	200
	Rye Grain	25
Dry to well drained soils	Hybrid Bermudagrass	50
Well drained sandy loam to sand, lawns.	Centipedegrass	10-20

Notes:
For seeding outside of recommended dates and/or for temporary stabilization, refer to temporary seeding table.

For highly erosive areas or as directed by an engineer, sod shall be provided.

TEMPORARY SEEDING TABLE

Seeding Dates	Recommended Planting	Rate (lb/ac)
Dec. 1 - Apr. 15	Kobe Lespedeza with Rye Grain	50 120
Apr. 15 - Aug. 15	German Millet	40
Aug. 15 - Dec. 1	Rye Grain	120

SOD INSTALLATION

- Fertilize and lime per recommendations of soil tests or apply 100 lb/1,000 sf ground agricultural limestone and 25 lb/1,000 sf fertilizer. In the fall, use 10-10-10. In the spring, use 5-10-10.
- Incorporate lime/fertilizer 4-6 inches.
- Rake or harrow to achieve a smooth final grade.
- Roll to achieve a smooth, firm surface on which to lay the sod.
- Lightly rake and irrigate top layer of soil just prior to installation.
- Lay sod in a staggered, brick-like pattern with the longest dimension perpendicular to the slope. Avoid gaps. Use a knife to fit irregular shapes.
- Roll sod lightly after installation to ensure good sod to soil contact.
- Irrigate initially to wet soil to a depth of 4". Keep soil moist for 2-3 weeks thereafter or until sod has taken root.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

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 or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those unattended days (are 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 ≥ 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 (SDCs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 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 indication 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 of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside-site limits, then a record of the following shall be made: 1. Action taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 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 ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream 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, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(f) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (disturbance of permanent E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground covers). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an 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	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.	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 or if 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:

- This General Permit as well as the Certificate of Coverage, after it is received.
- 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:

- Visible sediment deposition in a stream or wetland.
- 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).
- 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.
- Anticipated bypasses and unanticipated bypasses.
- 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 Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> 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 causes, 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	<ul style="list-style-type: none"> 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))	<ul style="list-style-type: none"> 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))	<ul style="list-style-type: none"> 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(h)(7))	<ul style="list-style-type: none"> 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(h)(6)). Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION 6, 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:

- 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.
- 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.
- 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.
- 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.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- 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

CONSTRUCTION SEQUENCE

- INSTALL INLET PROTECTION, SILT FENCE, AND STONE CONSTRUCTION ENTRANCES.
- CLEAR & GRADE
- INSTALL UNDERGROUND UTILITIES
- INSTALL PAVEMENT
- PROVIDE 100% VEGETATIVE COVER OF ALL DISTURBED SOILS.
- CLEAN SEDIMENT FROM PIPES AFTER STABILIZATION.



PRELIMINARY PLANS FOR: COTTONWOOD ROCKY POINT TOWNSHIP PENDER COUNTY, NC	OWNER: ROCKY POINT PENDER, LLC 3000 BARRETT DRIVE, SUITE 101 RALEIGH, NC 27609 (919) 676-8100 x21	STROUD ENGINEERING, P.A. 102-D CINEMA DRIVE WILMINGTON, NC 28403 (910) 815-0775 LICENSE NO.C-0647	DATE: 7/3/2025 REVISIONS: PENDING per TRC	SCALE: AS NOTED SHEET: 21 OF 21 GRADING DETAILS
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