

COASTAL ENGINEERING 2406 Princess Anne Road Virginia Beach, VA 23456 Phone (757) 563-9027 Facsimile(757) 563-9028

PROJECT NAME:

MOYOCK FITNESS BUILDING

104 Lark Drive Moyock, NC

REVISIONS:	DATE:
CLIENT REVIEW	10 /23 / 25

DRAWING NAME:

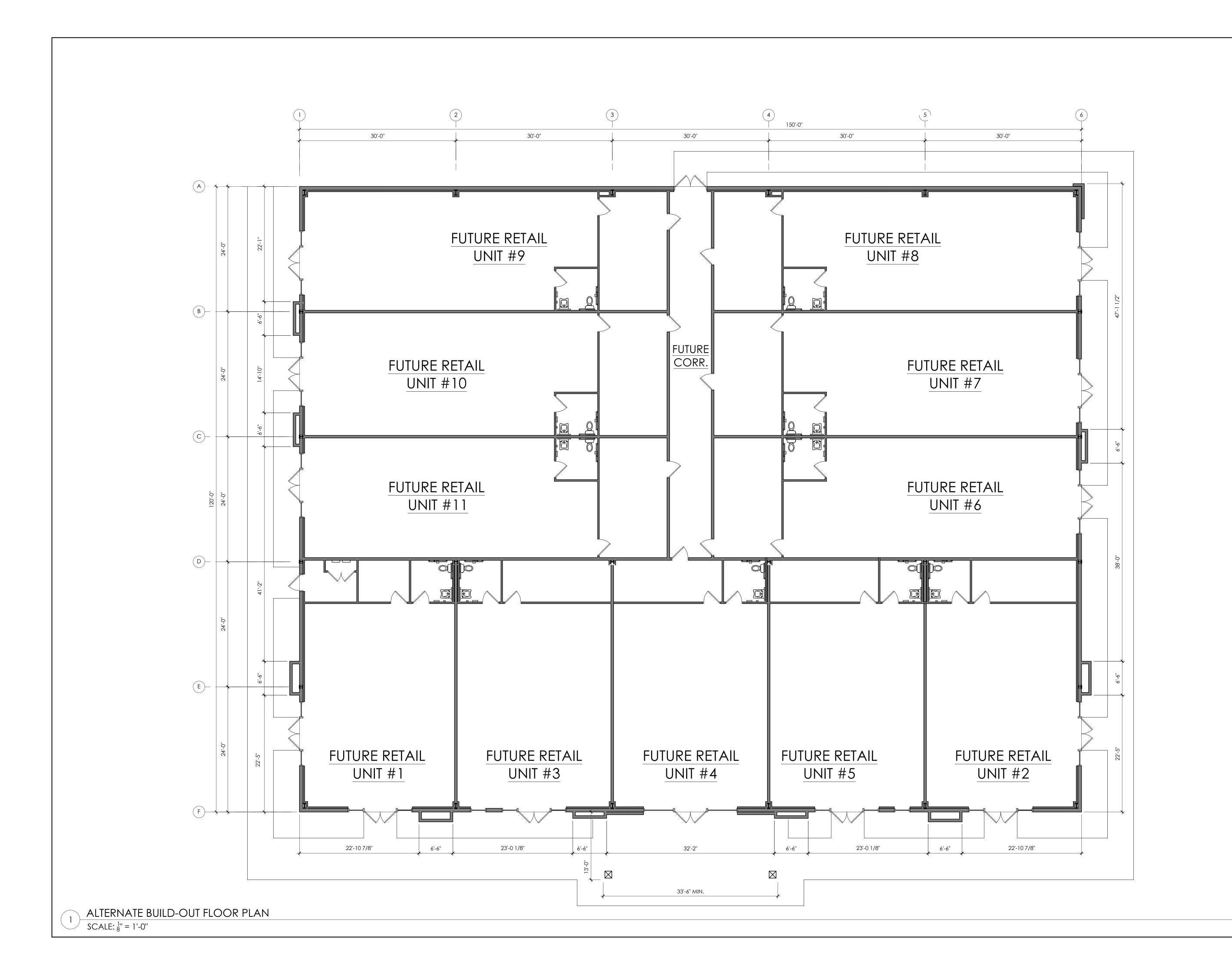
BUILDING PLAN

PRELIMINARY DRAWINGS NOT FOR CONSTRUCTION:

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PME ENGINEER.

ER:

COASTAL

ENGINEERING
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Suite 200
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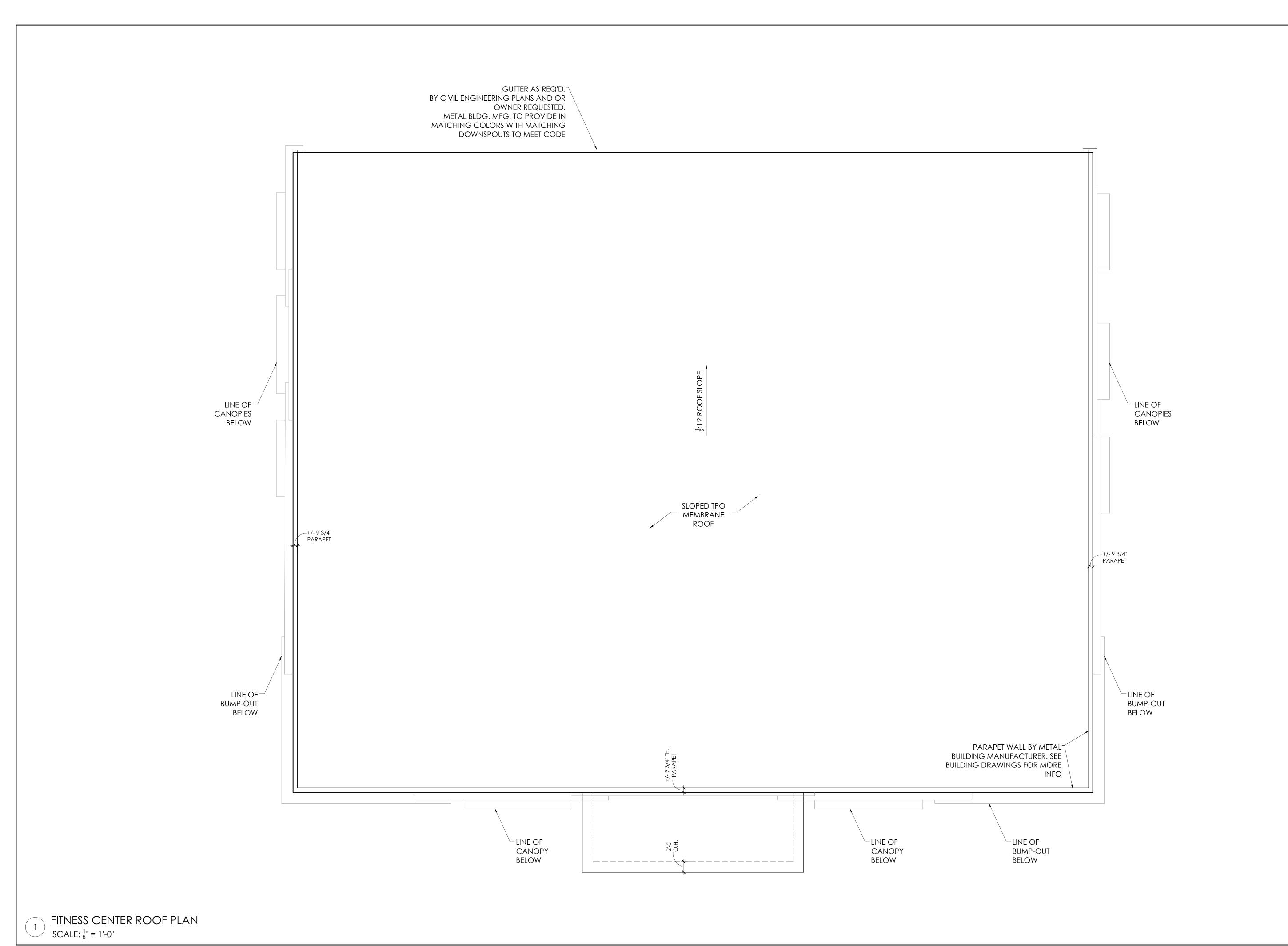
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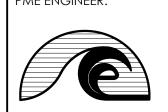
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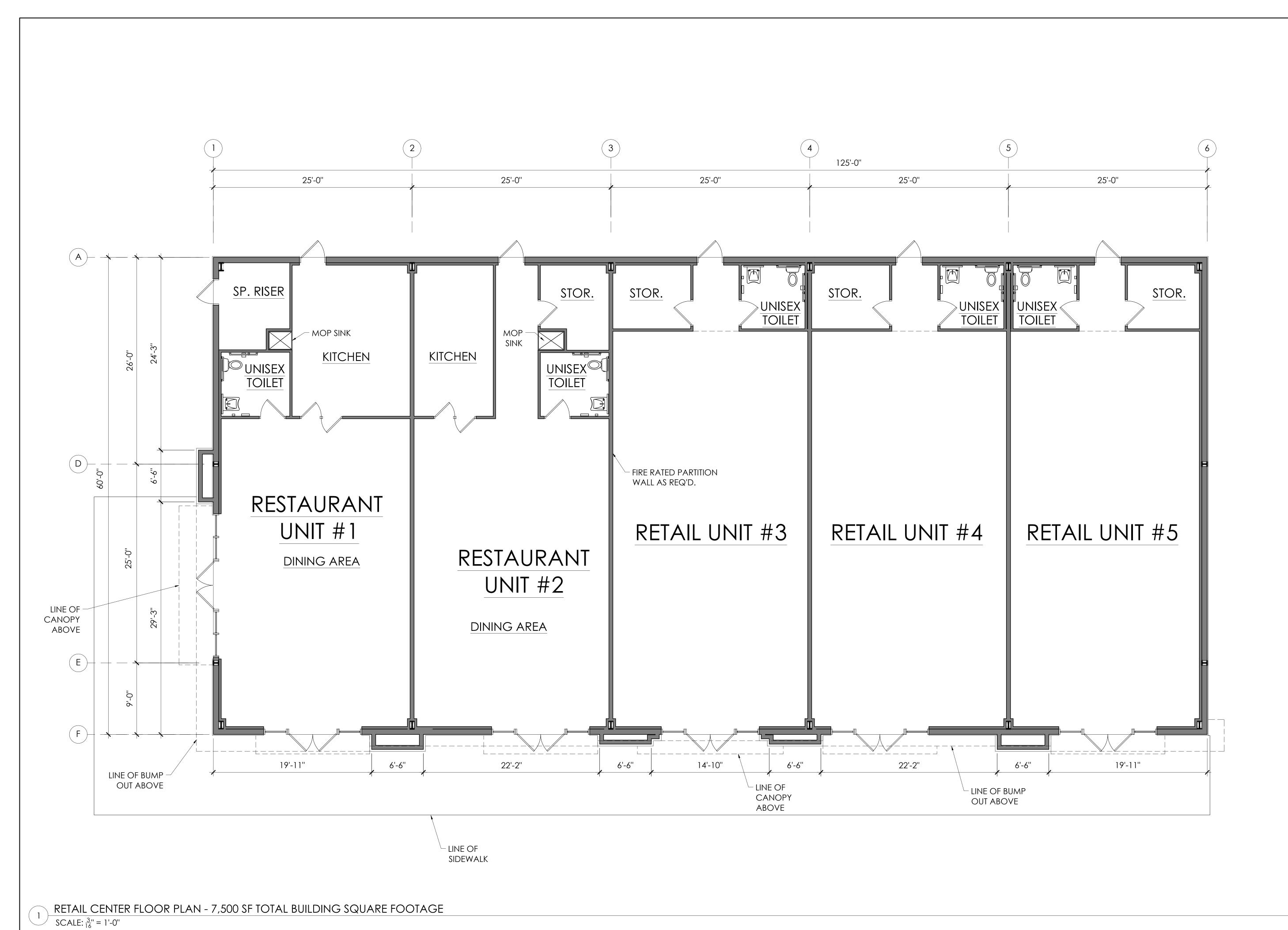
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PROJECT NAME:

MOYOCK RETAIL **CENTER**

104 Lark Drive Moyock, NC

- 1		
	REVISIONS:	DATE:
	CLIENT REVIEW	3 / 17 / 25
	CLIENT REVIEW	3 / 21 / 25
	CLIENT REVIEW	3 / 31 / 25
	ENGINEERING	4 / 11 / 25
	CLIENT REVIEW	4 / 28 / 25
	CLIENT REVIEW	5 / 14 / 25
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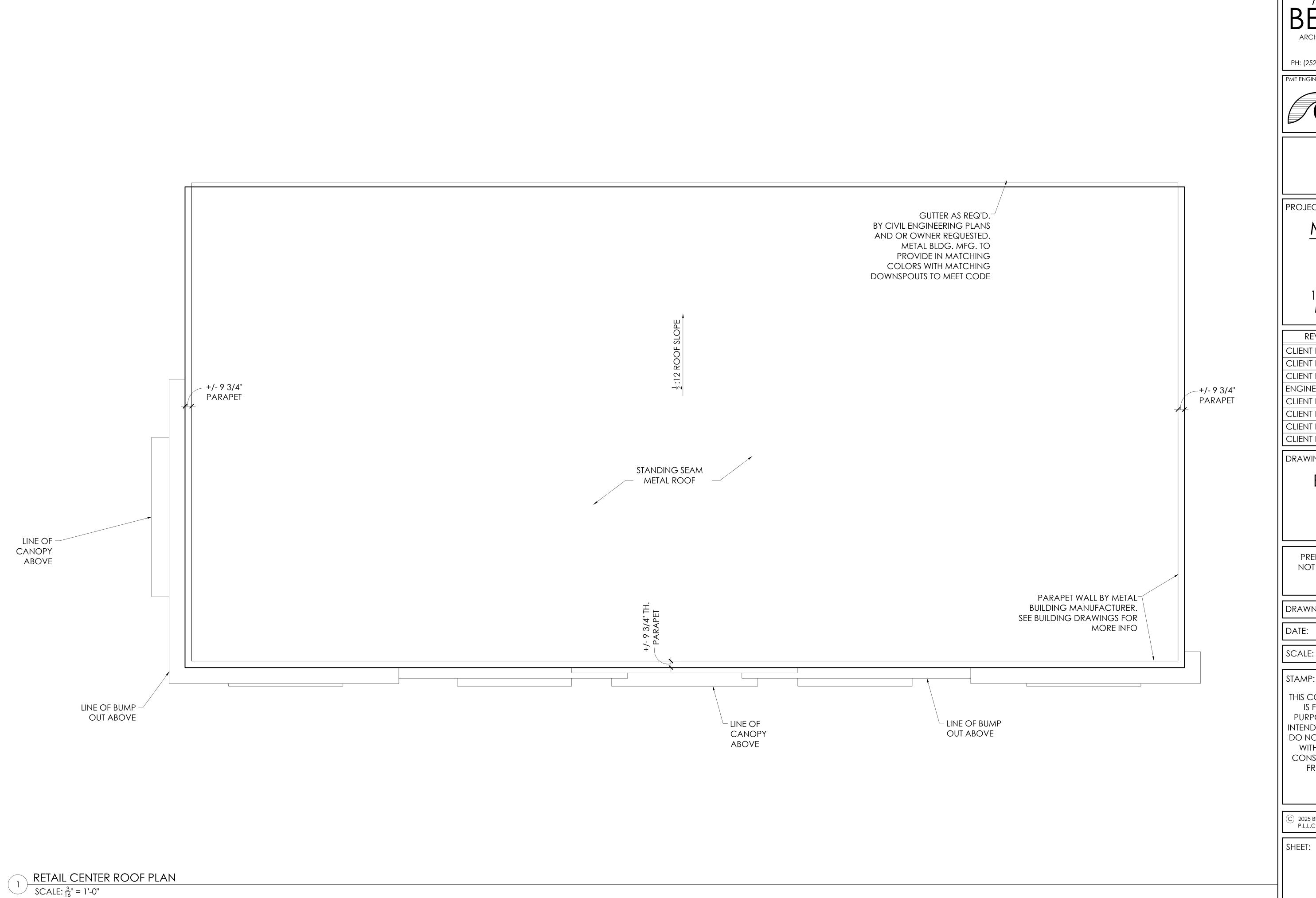
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2406 Princess Anne Road Suite 200 Virginia Beach, VA 23456 Phone (757) 563-9027 Facsimile(757) 563-9028

PROJECT NAME:

MOYOCK RETAIL CENTER

104 Lark Drive Moyock, NC

- 1		
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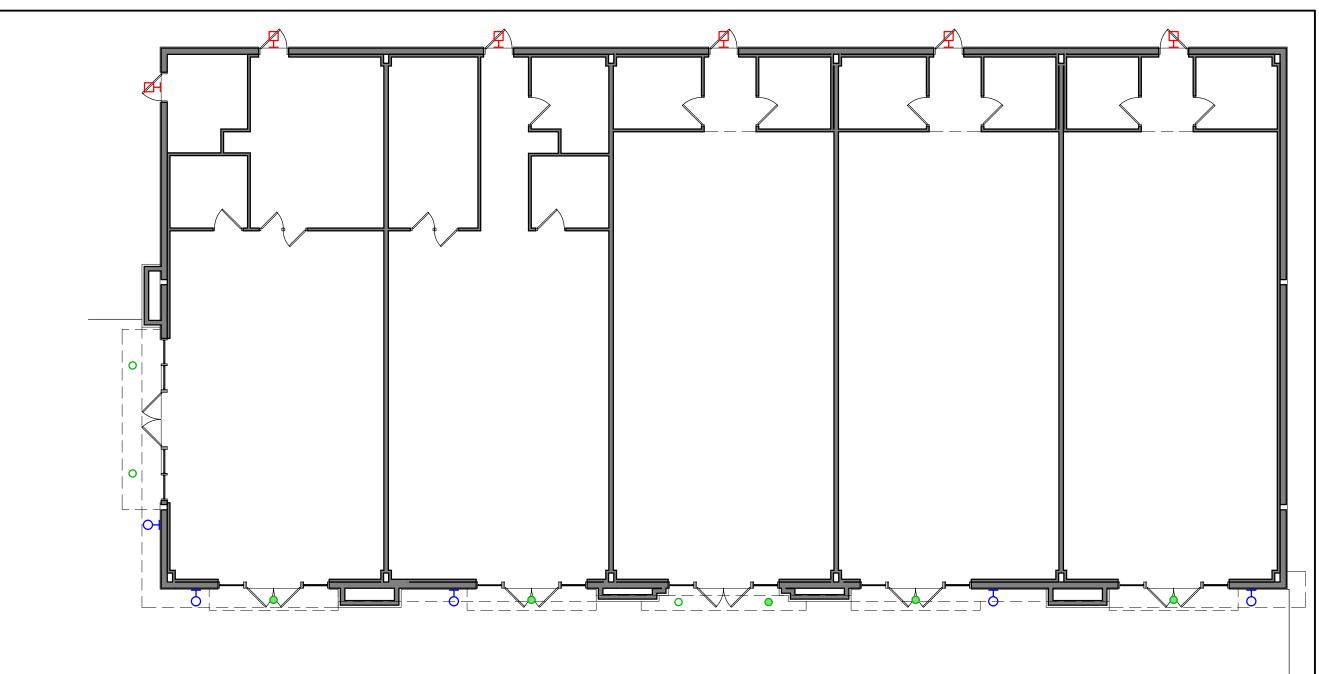
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2 RETAIL CENTER LIGHTING PLAN SCALE: $\frac{3}{32}$ " = 1'-0"

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PME ENGINEER:



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SHEET:



FIXTURE "A": LED DOWN LIGHT, SLIM PROFILE, WET RATED

FIXTURE "AE": LED DOWN LIGHT, SLIM PROFILE, WET RATED, EMERGENCY BATTERY

FIXTURE "B": 4K LUMEN LED WALLPACK, IP66 RATED, W/ EMERGENCY BATTERY BACKUP AS REQ'D, WPX1 LED OR APPROVED EQUIVALENT

FIXTURE "C": DECORATIVE WALL SCONCE BASED ON MODERN FORMS MIDNIGHT

FITNESS CENTER LIGHTING PLAN SCALE: $\frac{3}{32}$ " = 1'-0"

3 LIGHTING PLAN LEGEND
NOT TO SCALE



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EXTERIOR ELEVATIONS

PRELIMINARY DRAWINGS NOT FOR CONSTRUCTION:

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SCALE:

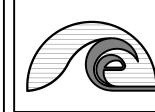
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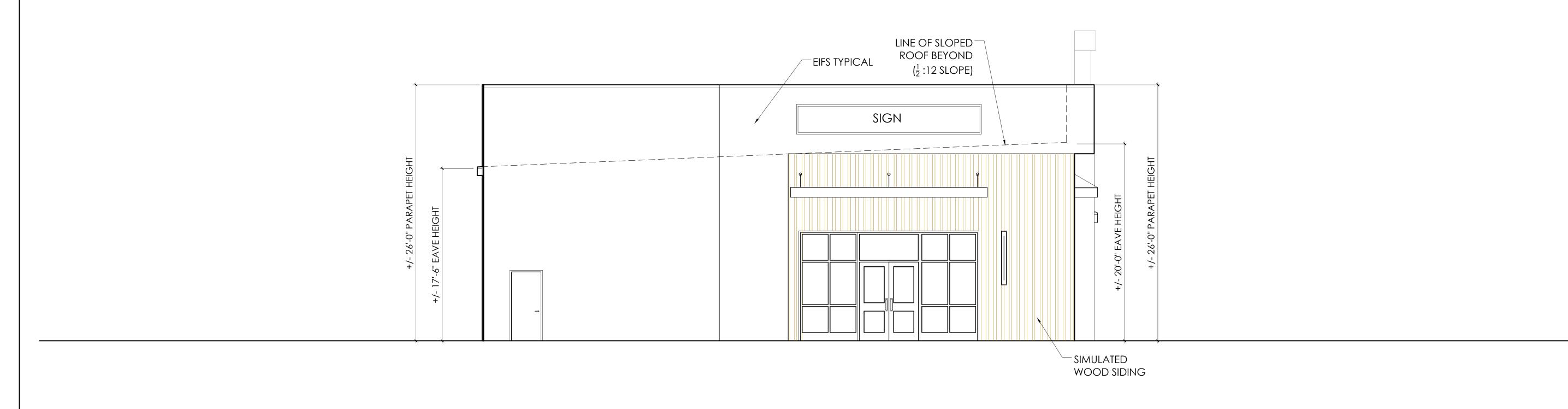
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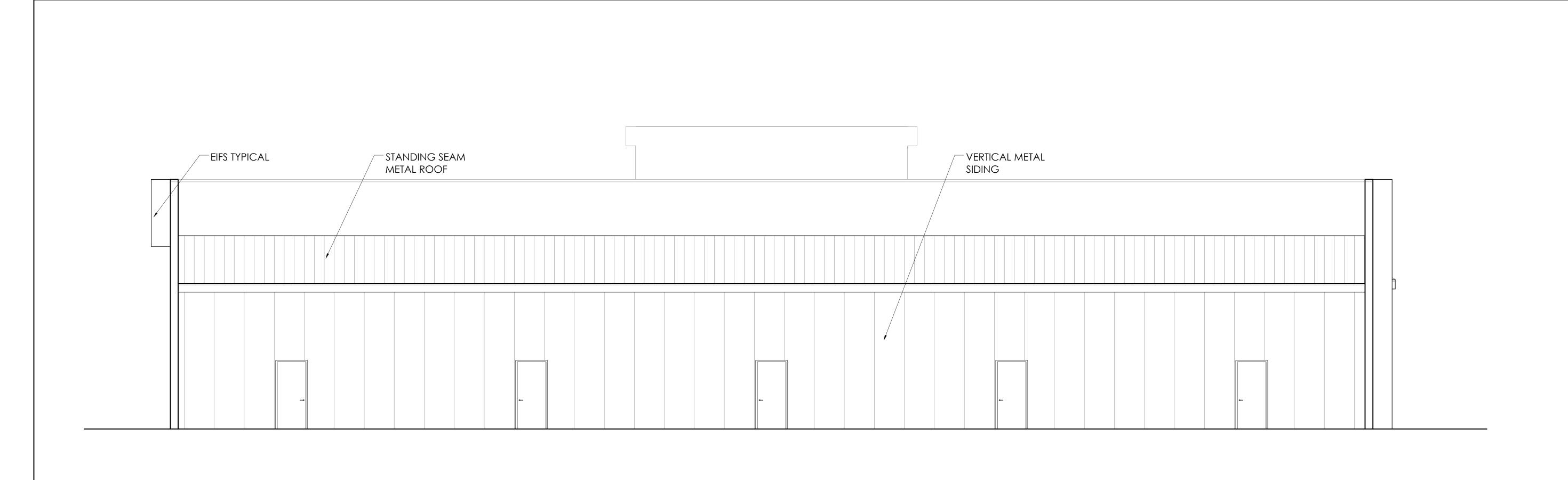
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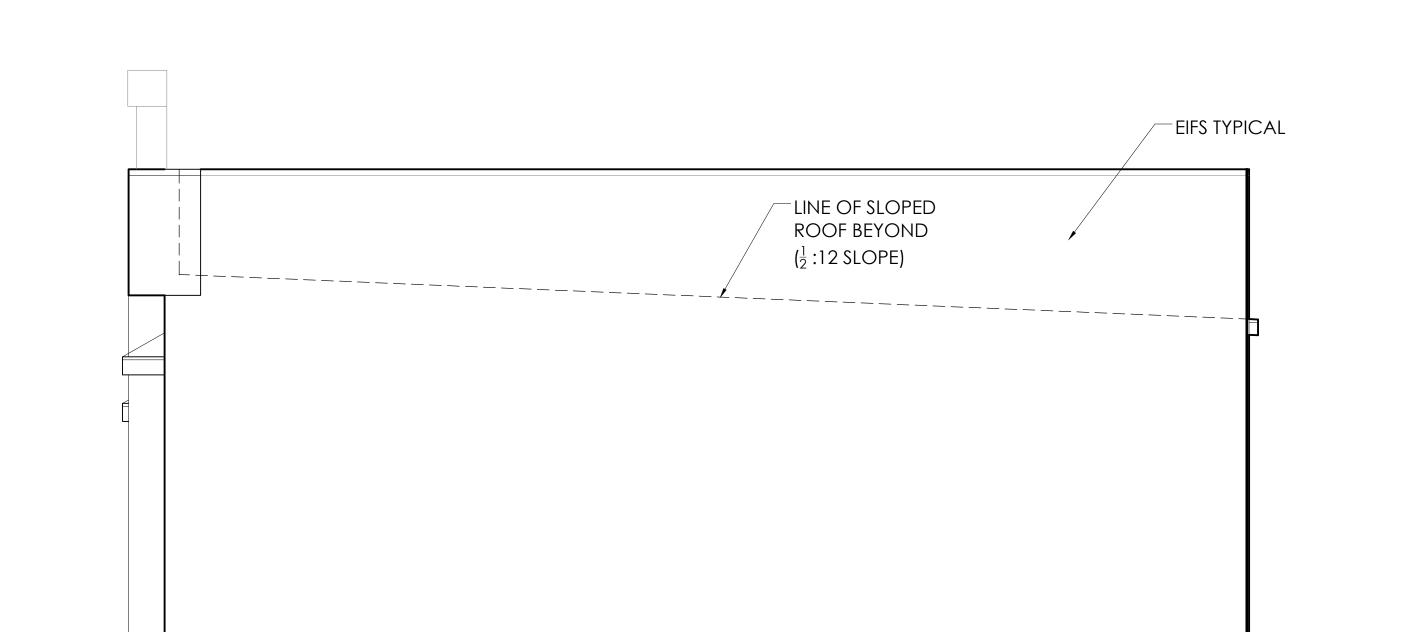
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2 EXTERIOR ELEVATION
SCALE: $\frac{3}{16}$ " = 1'-0"



EXTERIOR ELEVATION



EXTERIOR ELEVATION

SCALE: $\frac{3}{16}$ " = 1'-0"

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SHEET:







VICINITY MAP NOT TO SCALE

CONSTRUCTION DRAWINGS FOR

MOYOCK COMMONS COMMERCIAL COMPLEX

MOYOCK TOWNSHIP CURRITUCK COUNTY NORTH CAROLINA

GENERAL NOTES:

1. PROJECT NAME: MOYOCK COMMONS COMMERCIAL COMPLEX

- 2. OWNER/APPLICANT: 104 LARK, LLC 134 MOYOCK LANDING DR. MOYOCK, NC 27958
- PARCEL ID#: 0015-000-075I-0000 PRIMARY ADDRESS: 104 LARK DRIVE, MOYOCK, NC 27958

RECORDED REFERENCES: DB. 1572, PG. 412; PC. G, SL. 5

- SUBJECT PROPERTY IS LOCATED IN F.I.R.M. ZONE "X". REFERENCE F.I.R.M. PANEL # 3721803100 K, EFFECTIVE DATE DECEMBER 21, 2018. USE OF LAND WITHIN A FLOODWAY OR FLOOD PLAIN IS SUBSTANTIALLY RESTRICTED BY CHAPTER 7 OF THE CURRITUCK COUNTY UNIFIED DEVELOPMENT ORDINANCE.
- A MIXED USE COMMERCIAL DEVELOPMENT THAT MAY INCLUDE A COMBINATION OF A FITNESS CENTER, RETAIL SALES, EATING ESTABLISHMENTS AND OFFICES. INDIVIDUAL TENANT USES ARE SUBJECT TO CHANGE BASED ON MARKET DEMAND. PARKING AND WASTEWATER CALCULATIONS BELOW ARE PERFORMED TO ILLUSTRATE VARYING SCENARIOS. SOME RESTRICTIONS MAY APPLY IN ACCORDANCE WITH COUNTY ORDINANCES, NC BUILDING CODE AND FIRE PROTECTION [PROPERTY IS LESS THAN 4 ACRES, THEREFORE, THE USE IS NOT DEFINED A "SHOPPING CENTER."]

6. PARKING: REQUIRED:

SCENARIO - FITNESS CENTER, RESTAURANT, RETAIL SALES & OFFICE				_	SCENARIO - RE	STAURANT & R	ETAIL SALES	
Use	Rate	Floor Area (sf)	Spaces		Use	Rate	Floor Area (sf)	Spaces
Eating Establishment - Indoor	1 space /150 sf	2,555	17.03		Eating Establishment - Indoor	1 space /150 sf	5,253	35.02
Eating Establishment - Outdoor	1 space /150 sf	600	4.00		Eating Establishment - Outdoor	1 space /150 sf	600	4.00
Specialty Eating Establishment	1 space / 200 sf	1,305	6.53		Specialty Eating Establishment	1 space /200 sf	1,305	6.53
Fitness Center	1 space /300 sf	11,915	39.72		Retail Sales	1 space /300 sf	16,209	54.03
Retail Sales	1 space /300 sf	5,187	17.29				Total	99.58
Office Space	1 space /300 sf	1,394	4.65				•	
		Total	89.21	1				

- * FLOOR AREAS ARE TO INTERIOR WALLS AND EXCLUDE BATHROOMS AND MECHANICAL ROOMS
- (103) SPACES, INCLUDING (5) A.D.A. SPACES. WIDTH DIMENSIONS VERY, SEE PLAN
- 7. LOT COVERAGE (BUA): TOTAL PARCEL AREA: 121,339 SF (2.79 AC.)
- PROPOSED IMPERVIOUS SURFACES: BUILDINGS UNDER ROOF: 27,210 SF
- PARKING: 45,613 SF SIDEWALKS: 5.544 SF
- CONCRETE PADS: TOTAL=78,812 SF (64.95%) ALLOWANCE:
- CURRITUCK COUNTY: 78,870 SF (65%) 97,071 SF (80%) NCDEQ PERMIT:
- 8. TOTAL PROPOSED DISTURBED AREA: 2.86 AC.
- WASTEWATER COLLECTION SHALL BE INSTALLED IN ACCORDANCE WITH CURRITUCK COUNTY STANDARDS AND THESE PLANS. WASTEWATER TREATMENT TO BE PROVIDED BY CURRITUCK COUNTY SEWER AUTHORITY.
- REQUIRED ALLOCATION:

Use	Rate	Seat/Emply	Floor Area (sf)	Capacity (GPD)
Eating Establishment - Indoor	40 GPD/Seat	100		4,000
Eating Establishment - Outdoor	40 GPD/Seat	20		800
Specialty Eating Establishment	20 GPD/Seat	20		400
Fitness Center	50 GPD/100 sf		13,500	6,750
Retail Sales	100 GPD/1000 sf		6,000	600
Office Space	25 GPD/Emply	4		100
			Total	12,650

SCENARIO - RESTAURANT & RETAIL SALES								
Use	Rate	Seat	Floor Area (sf)	Capacity (GPD)				
Eating Establishment - Indoor	40 GPD/Seat	241		9,640				
Eating Establishment - Outdoor	40 GPD/Seat	20		800				
Specialty Eating Establishment	20 GPD/Seat	20		400				
Retail Sales	100 GPD/1000 sf		18,000	1,800				
			Total	12,640				
			'					

- *FLOOR AREAS ARE TO EXTERIOR WALLS
- WASTEWATER FROM FOOD HANDLING FACILITIES SHALL BE PLUMED TO A PROPERLY SIZED EXTERIOR GREASE INTERCEPTOR. SEE UTILITY PLAN AND DETAILS. WASTEWATER FROM SANITARY FACILITIES SHALL NOT BE INTRODUCED INTO ANY GREASE INTERCEPTOR AND SHALL BE PLUMBED DIRECTLY TO THE DEVELOPMENT'S COLLECTION SYSTEM
- 9. UTILITIES: WATER SERVICE TO BE PROVIDED BY CURRITUCK COUNTY MAINLAND WATER SYSTEM.
- DESIGN AND INSTALLATION OF FRANCHISE UTILITIES SHALL BE COORDINATED DIRECTLY WITH THE RESPECTIVE UTILITY COMPANY. ALL UTILITIES ARE TO BE INSTALLED UNDERGROUND.
- 10. MAXIMUM BUILDING HEIGHT IS 35'
- 11. ALL SIGNAGE SHALL COMPLY WITH COUNTY STANDARDS AS PRESCRIBED UNDER 5.12 OF THE U.D.O. A SEPARATE SIGNAGE PLAN MAY BE REQUIRED FOR APPROVAL PRIOR TO INSTALLATION.
- 12. EXISTING SITE CONDITIONS ARE BASED ON A COMBINATION OF THE FOLLOWING:
- FIELD SURVEY DATA OBTAINED BY BISSELL PROFESSIONAL GROUP 2024 AERIAL IMAGERY OBTAINED FROM NCONEMAP.COM
- ELEVATIONS ARE REFERENCED TO NAVD 1988 VERTICAL DATUM

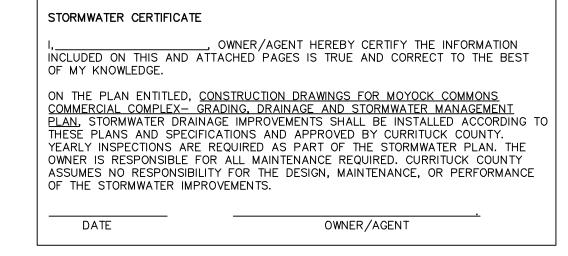
THE FOLLOWING PERMITS ARE REQUIRED PRIOR TO PROJECT CONSTRUCTION:

PERMIT	AGENCY	REFERENCE NUMBER	DATE OF ISSUANCE
SEDIMENTATION AND EROSION CONTROL PERMIT	N.C.D.E.Q. — DIVISION OF LAND RESOURCES		
STORMWATER MANAGEMENT PERMIT	N.C.D.E.Q - DIVISION OF LAND RESOURCES	SW7980425	10/30/1998
WASTEWATER EXTENSION PERMIT	N.C.D.E.Q DIVISION OF WATER RESOURCES		
MAJOR SITE PLAN APPROVAL	CURRITUCK COUNTY PLANNING STAFF		

Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET, DEVELOPMENT NOTES & SITE LOCATION
2	EXISTING SITE CONDITIONS & FEATURES MAP
3	SITE DEVELOPMENT OVERVIEW
4	GRADING, DRAINAGE & STORMWATER MANAGEMENT
5	EROSION & SEDIMENT CONTROL PLAN
6	WASTEWATER COLLECTION & WATER SERVICE PLAN
7	WASTEWATER COLLECTION PROFILES & TABLES
8	LANDSCAPING, BUFFERING & EXTERIOR LIGHTING PLAN
9	PAVEMENT, SIDEWALK & GRADING TYP. CONSTRUCTION DETAILS
10	DRAINAGE & BACKFLOW TYP. CONSTRUCTION DETAILS
11	EROSION CONTROL NOTES & TYP. CONSTRUCTION DETAILS
12	NCG01 SELF-INSPECTION, RECORDKEEPING & REPORTING
13	NCG01 GROUND STABILIZATION AND MATERIALS HANDLING
14	WASTEWATER COLLECTION TYP. CONSTRUCTION DETAILS
15	WASTEWATER COLLECTION TYP. CONSTRUCTION DETAILS

FINAL DRAWING NOT RELEASED FOR CONSTRUCTION



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Call before you di

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Ī	scw <u>√</u>	SET CONCRETE MONUMENT
	ECM⊡	EXISTING CONCRETE MONUMENT
	SIR 🔘	SET IRON ROD
	EIR 🔾	EXISTING IRON ROD
	EIP 🔿	EXISTING IRON PIPE
	CP ()	CALCULATED POINT
	M.B.L.	MAXIMUM BUILDING LIMIT
	N.T.S.	NOT TO SCALE
	P.C.	PLAT CABINET
	D.B.	DEED BOOK
	SL	SLIDE
	SF	SQUARE FEET
l	AC	ACRES

	LEGEND - ROADWAY CENTERLINE
	RIGHT-OF-WAY
	PROPERTY BOUNDARY
	- ADJOINING PROPERTY LINE
	- EXISTING DITCH CENTERLINE
	- LAISTING DITCH TOP OF BANK
⇒	_ PROPOSED SWALE W/ FLOW ARROW
· · · · ⇒ · · ·	PROPOSED SWALE HIGH POINT
	EXISTING DITCH TO BE FILLED
——— FEMA——— FEMA———	FEMA BOUNDARY LINE
	- EXISTING GRADE CONTOUR
6-	- PROPOSED GRADE CONTOUR
X 0.00	EXISTING SPOT GRADE
•0.00	PROPOSED SPOT GRADE
	EXISTING CULVERT
	PROPOSED CULVERT
D	PROPOSED DRAINAGE STRUCTURE
—— EWL ——— EWL ——	- EXISTING WATER LINE
WL WL	PROPOSED WATER LINE (SIZE AS NOTED)
>	PROPOSED FIRE HYDRANT ASSEMBLY
	PROPOSED WATER SERVICE
\bowtie	PROPOSED VALVE
	PROPOSED SEWER COLLECTION MAIN
<u>S</u>	PROPOSED SEWER MANHOLE
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED SILT FENCE
	PROPOSED INLET PROTECTION
	PROPOSED STABILIZED CONSTRUCTION ENTRANCE
	PROPOSED TEMPORARY CHECK DAM

SOILS LEGEND		
— — — SOILS LINE		
Ro	ROANOKE FINE SANDY LOAM	

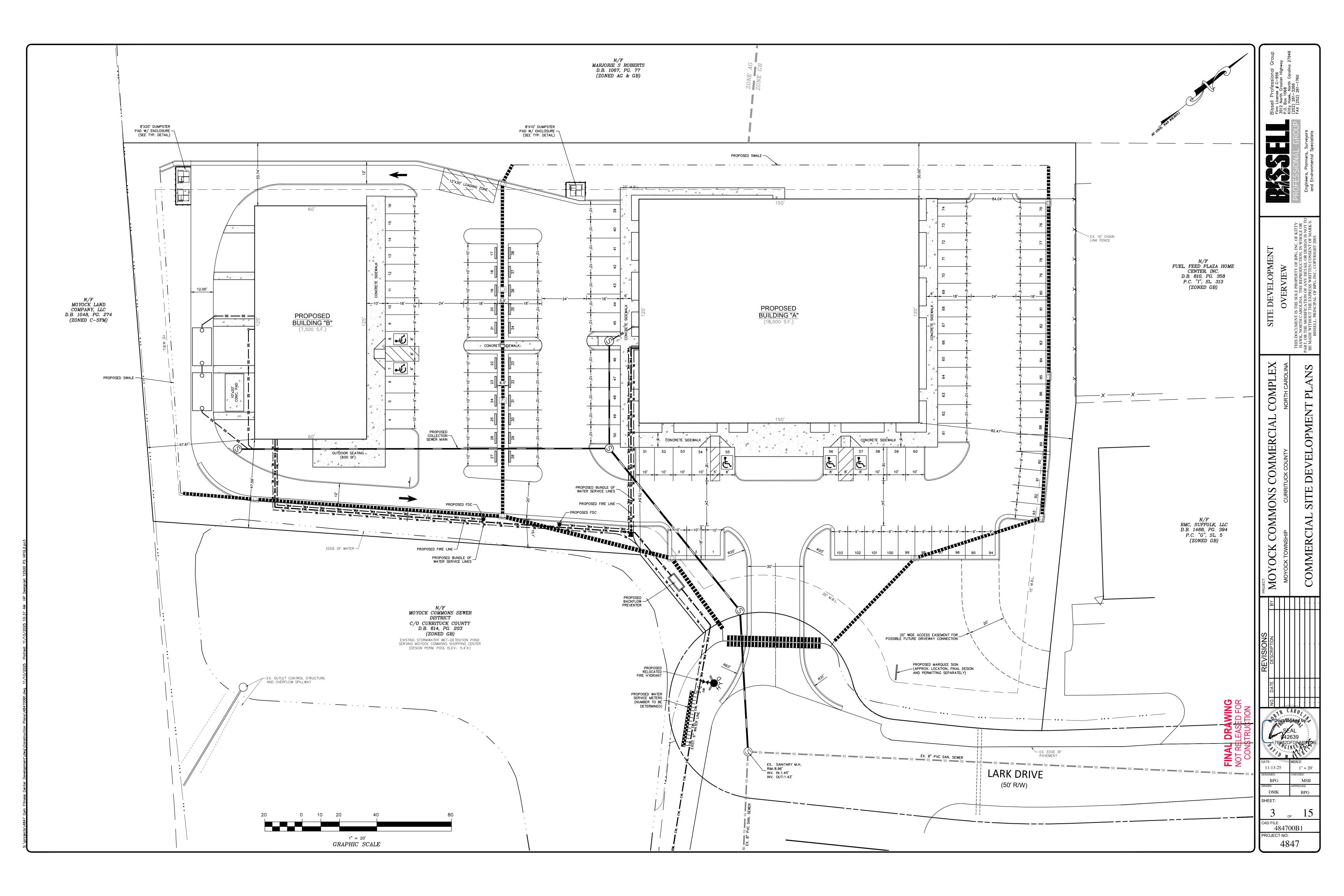
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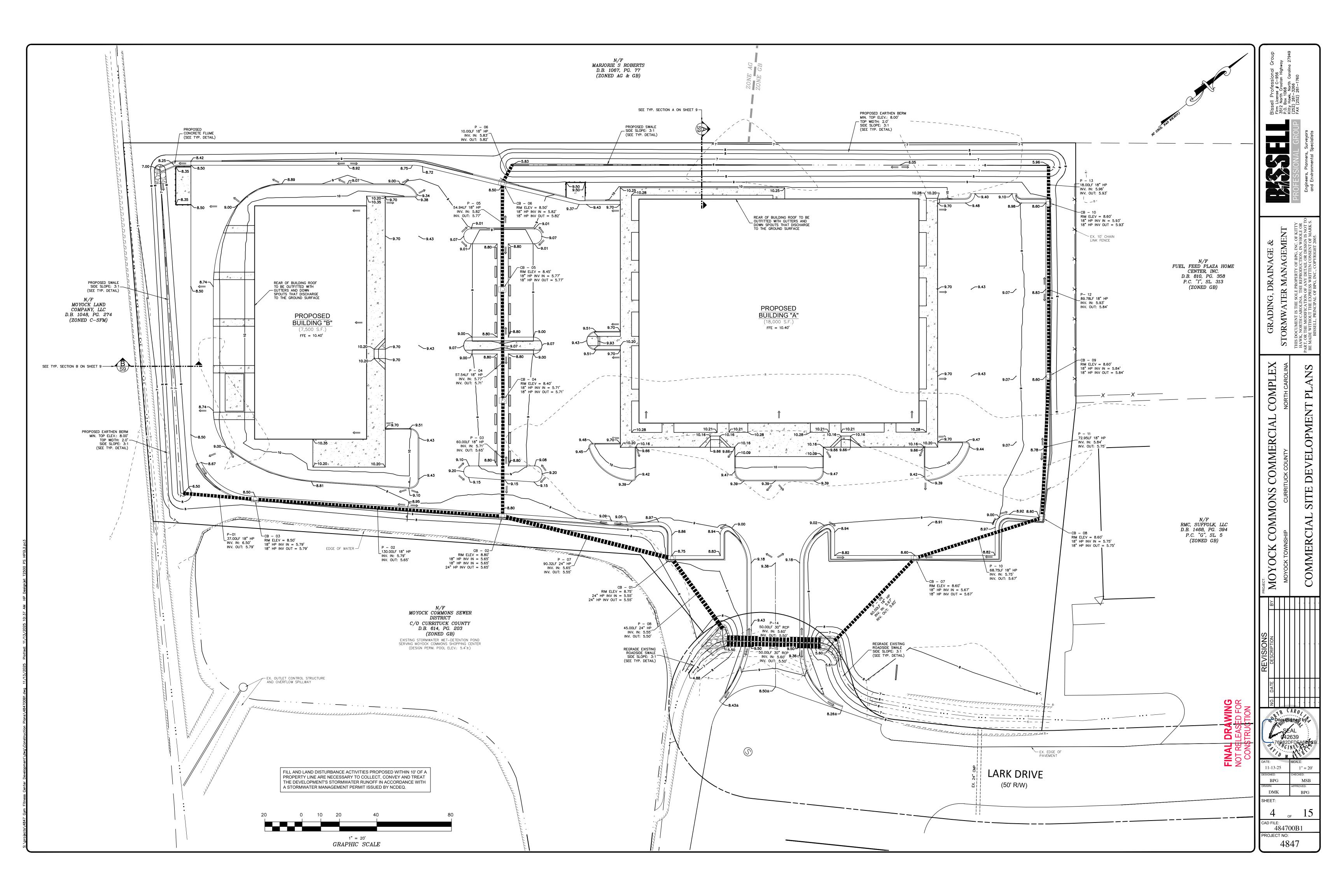
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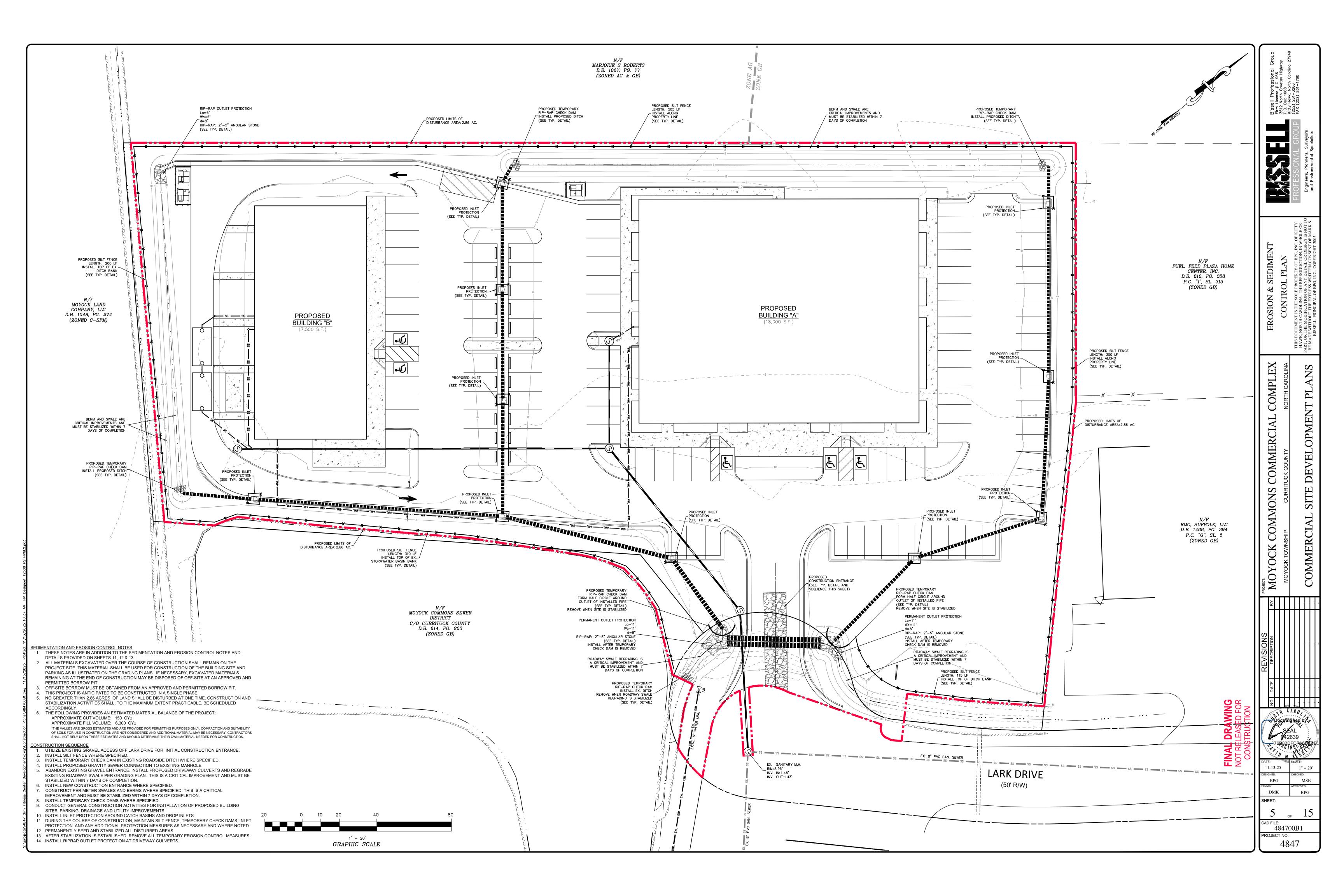
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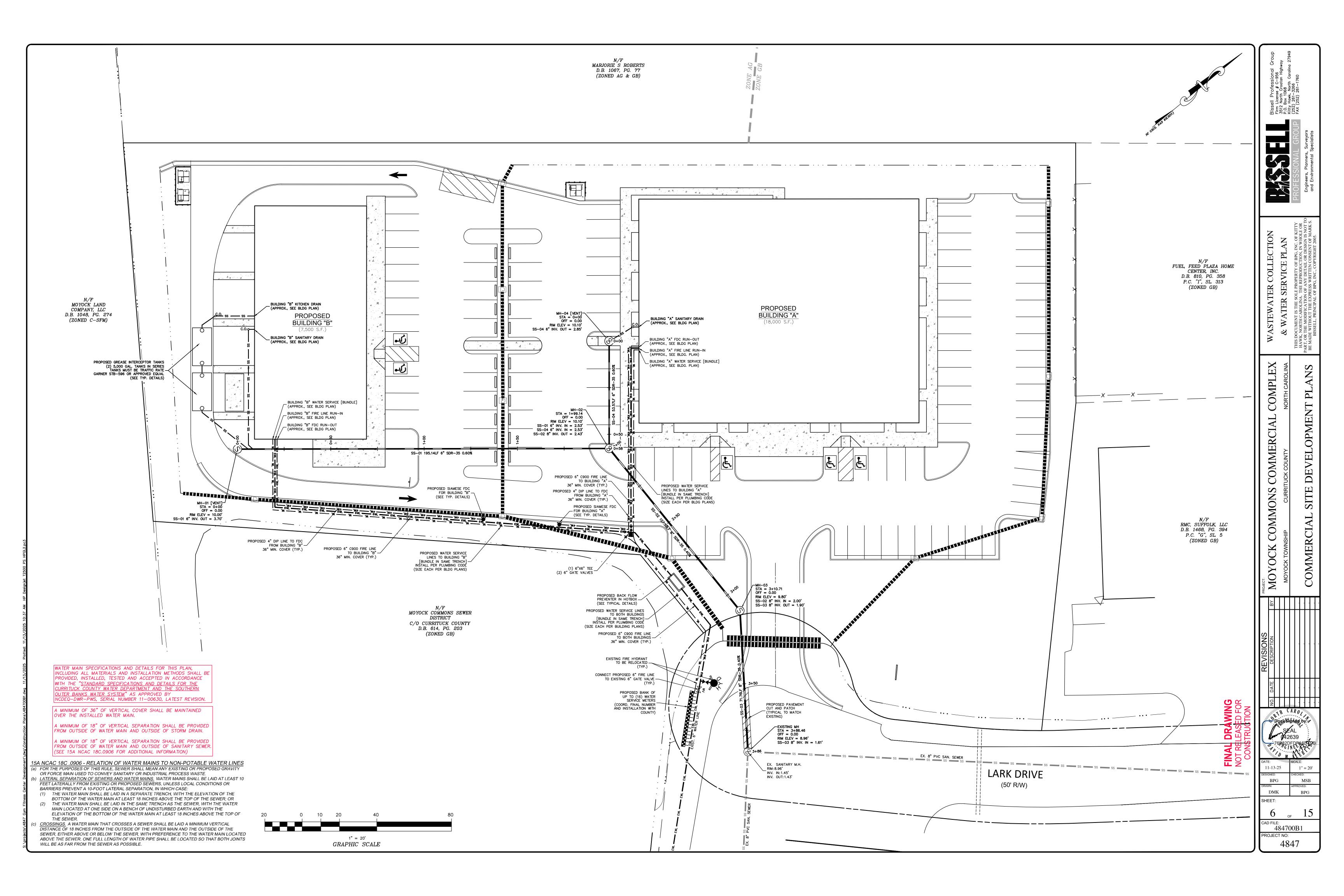
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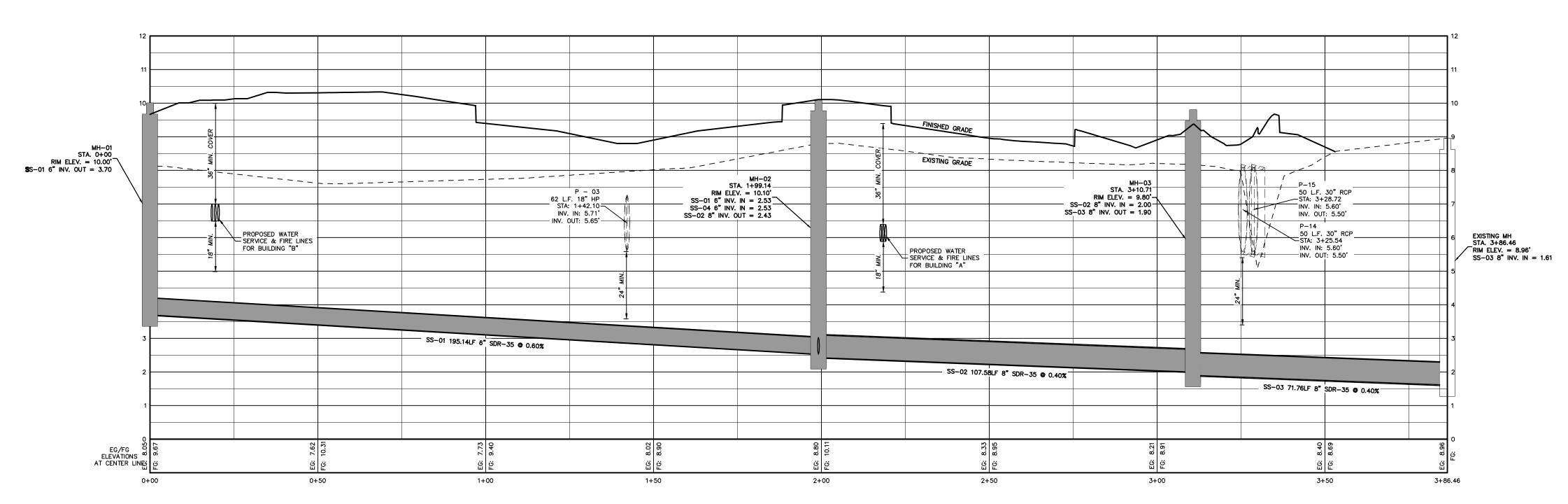


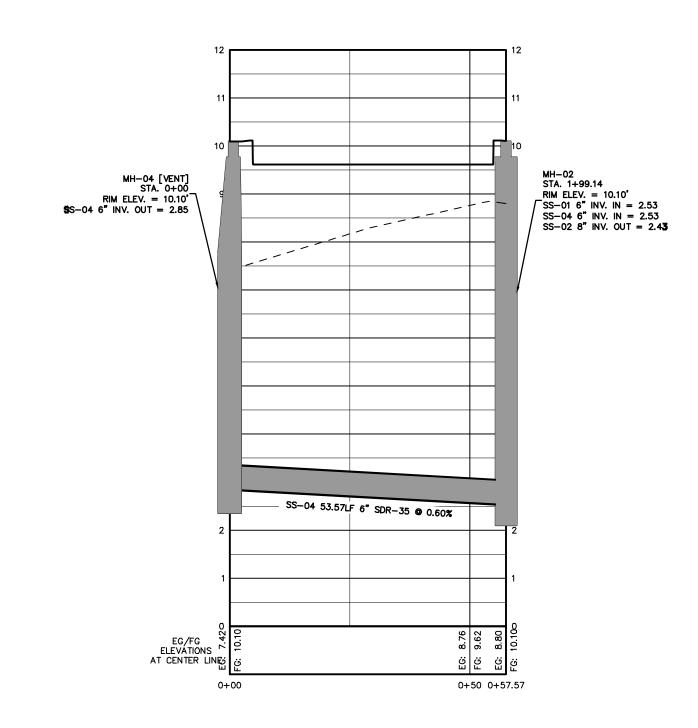












SANITARY SEWER STRUCTURE TABLE				
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT	
EXISTING MH	RIM ELEV.: 8.96' SUMP ELEV.:1.61' HEIGHT: 7.35'	SS-03, 8" INV IN:1.61		
MH-01	RIM ELEV.: 10.00' SUMP ELEV.:3.70' HEIGHT: 6.30'		SS-01, 6" INV OUT:3.70	
MH-02	RIM ELEV.: 10.10' SUMP ELEV.:2.43' HEIGHT: 7.67'	SS-01, 6" INV IN:2.53 SS-04, 6" INV IN:2.53	SS-02, 8" INV OUT:2.43	
MH-03	RIM ELEV.: 9.80' SUMP ELEV.:1.90' HEIGHT: 7.90'	SS-02, 8" INV IN:2.00	SS-03, 8" INV OUT:1.90	
MH-04	RIM ELEV.: 10.10' SUMP ELEV.:2.85' HEIGHT: 7.25'		SS-04, 6" INV OUT:2.85	

SA	SANITARY SEWER PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE	MATERIAL
SS-01	6"	195.14	0.60%	SDR-35
SS-02	8"	107.58'	0.40%	SDR-35
SS-03	8"	71.76'	0.40%	SDR-35
SS-04	6"	53.57	0.60%	SDR-35



FINAL DRAWING NOT RELEASED FOR CONSTRUCTION	D

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-13-25	1" = 20'
NED:	CHECKED:
BPG	MSB
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OMK	BPG
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WASTEWATER COLLECTION

PROFILES & TABLES

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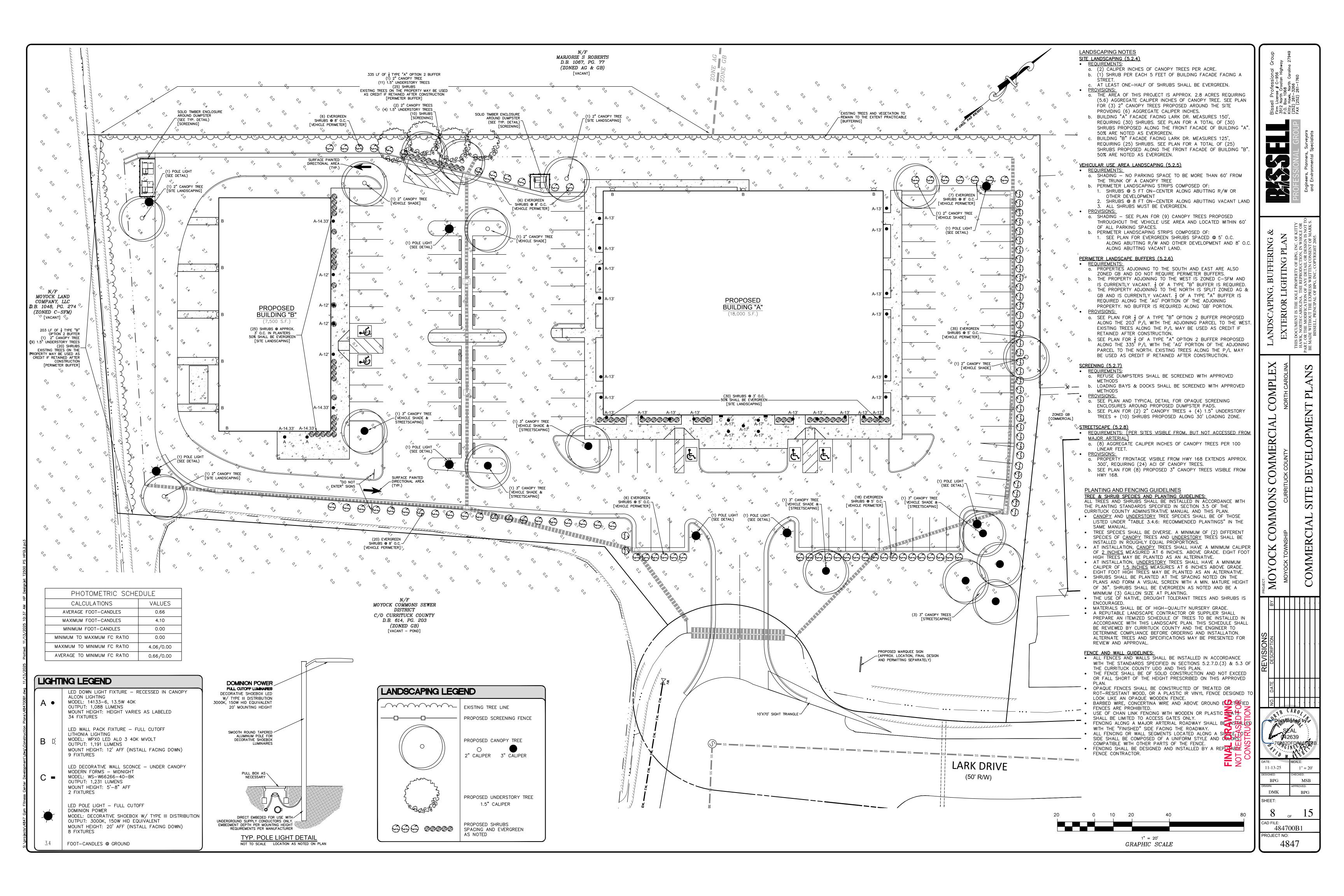
MOYOCK COMMONS COMMERCIAL COMPLEX

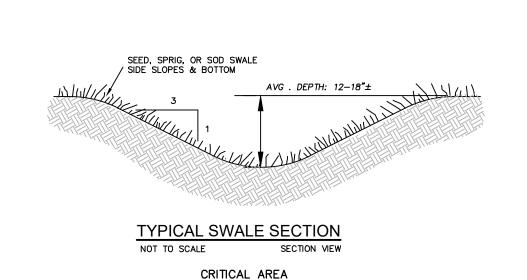
VELOPMENT

SITE

HEET:		
7	OF	15
AD FILE:		
48	4700]	B1
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1" = 20' GRAPHIC SCALE



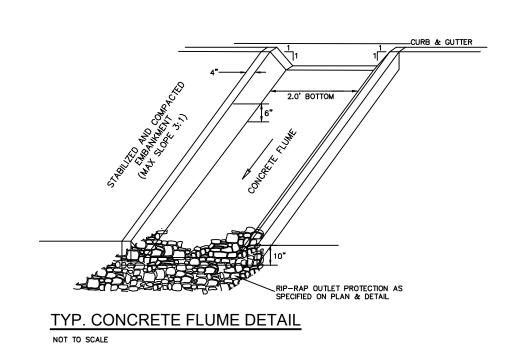


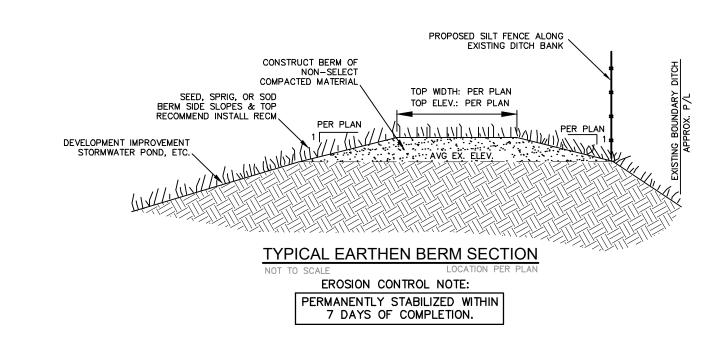
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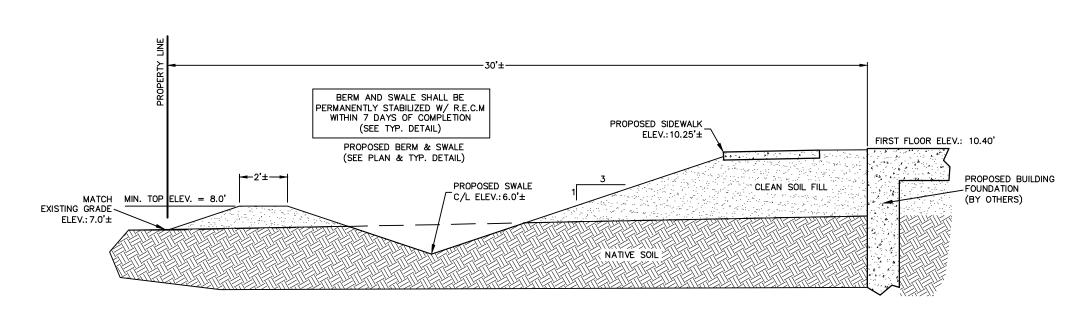
IMPROVEMENT SHALL BE

STABILIZED WITHIN 7 DAYS

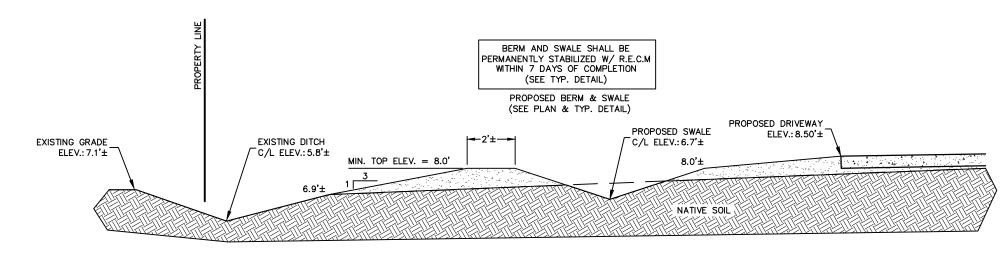
OF COMPLETION.





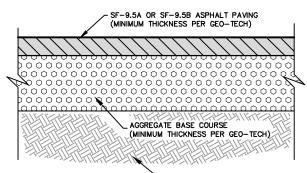


TYPICAL SECTION - A
NOT TO SCALE



TYPICAL SECTION - B

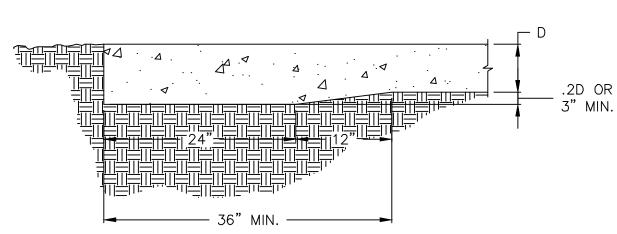
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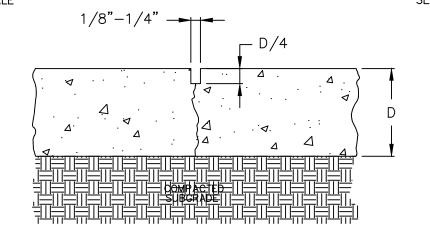
TYPICAL ASPHALT PAVEMENT SECTION

NOTE:

NOT TO SCALE
PAVING SHALL CONSIST OF FINE GRADING THE SPECIFIED PARKING &
DRIVE AREAS AND INSTALLING SF-9.5A OR SF-9.5B ASPHALT CONCRETE
SURFACE COURSE OVER AN AGGREGATE BASE COURSE. THE SOIL
SUBGRADE BENEATH PAVEMENTS SHALL BE COMPACTED TO AT LEAST 95%
OF ASTM D 698 PRIOR TO ANY PLACEMENT OF SUBBASE FILL OR
AGGREGATE BASE COURSE. ALL SITE PREPARATION AND THE DESIGN AND
CONSTRUCTION OF ALL FOUNDATIONS, GROUND SLABS, AND PAVEMENTS
SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS PROVIDED BY A
GEOTECHNICAL ENGINEER.



CONVENTIONAL CONCRETE THICKENED EDGE DETAIL NOT TO SCALE SECTION VIEW



CONVENTIONAL CONCRETE CONTROL JOINT DETAIL NOT TO SCALE NOTES: SECTION VIEW

NOTES:
MINIMUM PAVEMENT THICKNESS (D) = 6" W/6x6-W2.9 x W2.9 WWF
REINFORCEMENT, PLACE 2" BELOW TOP OF SLAB
UNDOWELED TRANSVERSE CONTRACTION OR LONGITUDINAL JOINT, SAWED OR
PRE-MOLDED. DO NOT DOWEL PAVEMENTS LESS THAN 7" THICK.

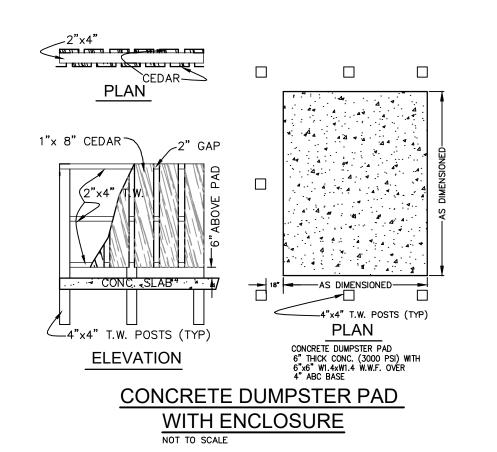
CONVENTIONAL CONCRETE SPECIFICATIONS:

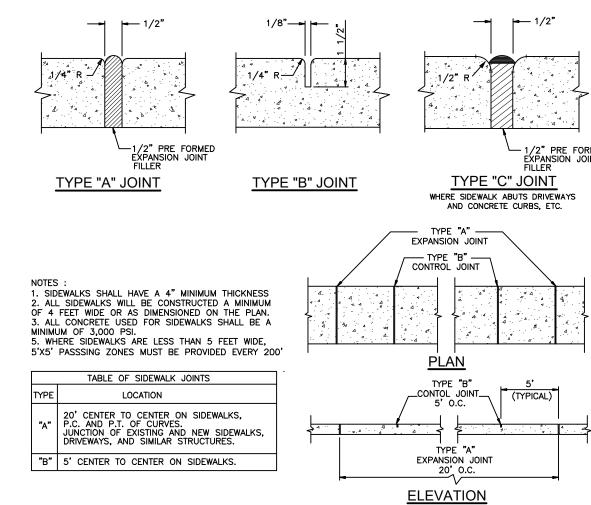
1. USE ACI CERTIFIED FLATWORK FINISHER

- USE ACI CERTIFIED FLATWORK FINISHER
 USE ACI 330R-01 GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS
 USE ACI 330.1-94 STANDARD SPECIFICATION FOR PLAIN CONCRETE PARKING LOTS
 ALL CONCRETE USED IN PARKING LOT, UNLESS OTHERWISE INDICATED, SHALL HAVE A COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS.
- 5. IF SUBGRADE SOILS ARE FOUND BY THE CONTRACTOR TO BE UNSUITABLE, TESTING AND PREPARATION RECOMMENDATIONS BY A GEOTECHNICAL ENGINEER MUST BE PROVIDED PRIOR TO CONCRETE PLACEMENT.
 6. IMPORTED SOIL USE FOR BACK FILL SHOULD BE FREE OF HEAVY CLAY, SILTS, STONES,
- PLANT
 ROOT OR OTHER FOREIGN MATERIAL GREATER THAN 1½" IN DIAMETER IN ORDER TO
 ACHIEVE
 ADEQUATE COMPACTION APOUND ANY FIVED OR JECT IN ORDINAL ALTERNATE WILL BE TO
- ACHIEVE
 ADEQUATE COMPACTION AROUND ANY FIXED OBJECT IN GROUND. ALTERNATE WILL BE TO USE FLOWABLE FILL.

 7. KEEP ALL JOINTS CONTINUOUS WITH A MAXIMUM JOINT SPACING OF 10 FT.

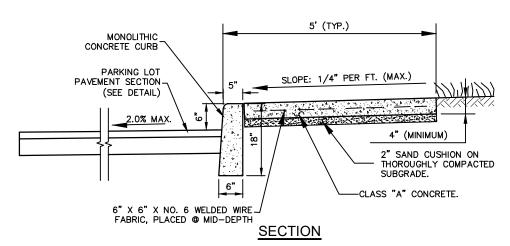
 8. CONTROL JOINTS SHALL BE FORMED OR SAWED WITHIN 12 HOURS FROM TIME OF
- PLACEMENT;
 A. SIDEWALK—SPACING SHALL BE SAME AS WIDTH OF PAVEMENT AND LESS THAN 5 FEET IN LENGTH
 B. PAVEMENT—MAXIMUM SPACING SHALL BE 2.5 TIMES THICKNESS IN UNIT OF FEET AND LESS THAN 15 FEET IN LENGTH (E.G. T=4 INCH SPACING AT 10'x10')
- 9. CURE CONCRETE IMMEDIATELY AFTER FINISHING OPERATION IS COMPLETED BY USING ONE OF THE FOLLOWING METHODS: WATER, PIGMENTED WATER—BASED CURING COMPOUND OR VISQUEEN AND BURLAP



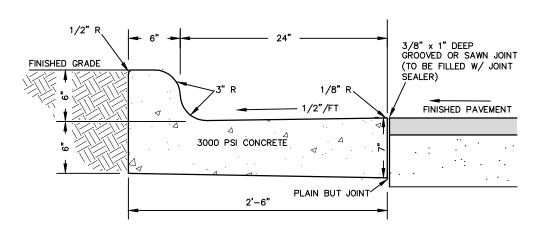


TYPICAL CONCRETE SIDEWALK DETAIL

NOT TO SCALE



PARKING LOT & SIDEWALK DETAIL



CURB & GUTTER COLLECTION SECTION

NOT TO SCALE

NCDOT STD 846.01

GENERAL CURB & GUTTER NOTES:

1. PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.

2. JOINT SPACING MAY BE ALTERED IF REQUIRED BY ENGINEER.

- CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
 CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1-1/2" DEEP.
 FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"X6" MEDIAN CURB,
- FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"X6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
 SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

FINAL DRAWING
NOT RELEASED FOR
CONSTRUCTION

	DATE	
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ONSTRUCTION	76B82	ARO Sheet by: AL 2639 DEDITACON
2	DATE: 11-13-25	ISCALE: NTS
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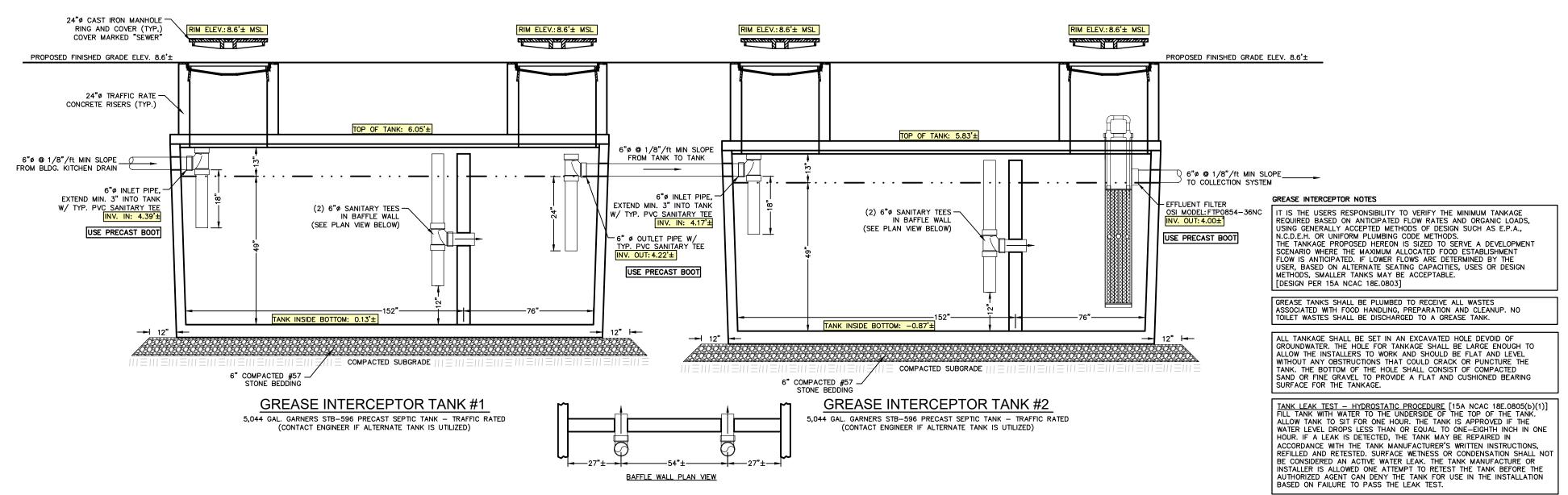
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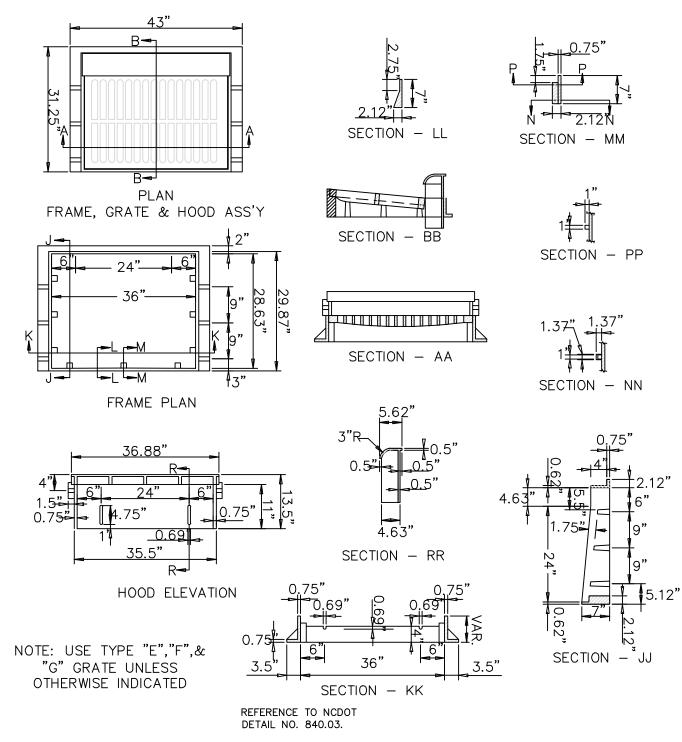
PAVEMENT, SIDEWALK & GRADING

COMPLEX

MMERCIAL (

COMMONS

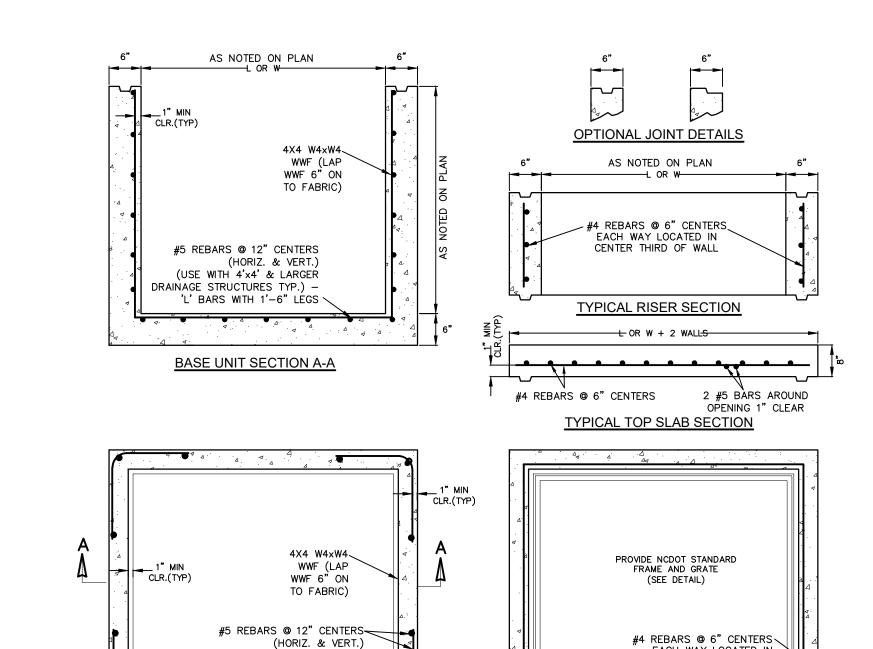




EXPANSION

JOINT

CATCH BASIN FRAME, GRATE & HOOD DETAIL



IN ACCORDANCE WITH NCDOT'S CONCRETE CATCH BASIN STANDARD DETAIL 840.02,

1. ALL PIPE CONNECTIONS SHALL BE MADE FLUSH WITH THE VERTICAL INSIDE WALL OF THE STRUCTURE.

2. ALL STRUCTURE INVERTS SHALL BE MADE FLUSH WITH THE INVERT OF THE LOWEST CONNECTED PIPE. SUMPS SHALL BE FILLED WITH CONCRETE AS NECESSARY TO ACHIEVE THIS REQUIREMENT.

PRECAST DRAINAGE STRUCTURE GENERAL NOTES

(USE WITH 4'x4' & LARGER

'L' BARS WITH 1'-6" LÉGS

DRAINAGE STRUCTURES TYP.) -

PLAN VIEW OF BASE UNIT

- 1. DESIGN SHALL CONFORM TO LATEST NCDOT 840.46 SPECIFICATIONS FOR "TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE".
- . CONCRETE COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 4,000PSI.
- USE ASTM A615 GRADE 60 REINFORCING STEEL. USE ASTM A185 WELDED WIRE FABRIC WWF.
- 4. LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB TO 15' PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704
- 6. ORIENT STRUCTURES SO THAT CORNERS WILL NOT BE CUT OR MODIFIED UNLESS ALLOWED BY DETAIL 7. PRECAST ALL ELEMENTS TO MEET ASTM C913
- 8. FRAME AND GRADE HEIGHT MAY BE ADJUSTED IN ACCORDANCE WITH STANDARD 840.25
- 9. PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS 12" ON CENTERS PER 840.66
- 10. WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR IF THE SAME MIN. AREA OF STEEL IS PROVIDED. 11. SEAL JOINTS WITH AN APPROVED SEALANT (SECTION 840 OF NCDOT STANDARD SPECIFICATIONS)
- 12. LIMIT MAXIMUM STRUCTURE SIZES INSIDE CLEAR DIMENSIONS TO 6'-" X 6'-0" 13. THE OUTSIDE PIPE DIAMETER PLUS 2" IS MINIMUM STRUCTURE SIZE OR THE OPENING REQUIRED FOR FRAME AND GRATE,
- WHICHEVER IS GREATER.
- 14. ANY DEVIATIONS FROM THE APPROVED PLAN & SPECIFICATIONS SHALL BE APPROVED BY THE ENGINEER PRIOR TO

STANDARD TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE NOT TO SCALE

EACH WAY LOCATED IN

CENTER THIRD OF WALL

PLAN VIEW OF RISER UNIT

11-13-25 BPG

BACKFLOW

DRAINAGE &

COMPLEX

MERCIAL

COMMONS

DMK SHEET:

484700B1 PROJECT NO:

AREA CALCULATION NOTE

134 MOYOCK LANDING DE MOYOCK, NC 27958 3. PROJECT DESCRIPTION: MIXED USE COMMERCIAL SHOPPING CENTER 4. NEAREST RECEIVING STREAM: MOYOCK RUN - INDEX NUMBER: 30-1-2-2-1

5. STREAM CLASSIFICATION: C; Sw - PASQUOTANK RIVER BASIN

6. PROJECT AREA TABULATION: TOTAL PARCEL AREA: 2.86 AC TOTAL PROPOSED DISTURBED AREA

All areas have been calculated utilizing properties within the Autocad software MATERIAL BALANCE NOTE All excavated material occurring during the course of construction will remain on-site

for parking and building construction. Borrow material is anticipated and must be obtained from a permitted borrow pit. See SCHEDULE OF LAND DISTURBING ACTIVITIES provided on Sheet 05 of this set for an estimated cut fill material balance for the project.

WETLAND NOTE The property contains no known 404 jurisdictional wetlands.

STABILIZATION NOTE The angle of graded slopes and fills shall be no greater than the angle that can be retained by vegetative cover or other adequate erosion control devices or structures In any event, all disturbed areas left exposed will, WITHIN 14 CALENDAR DAYS OF COMPLETION of any phase of grading, be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain

Additionally, certain critical areas as identified on the plan, such as, but not limited to, perimeter dikes, swales, slopes steeper than 3:1, and areas located within High Quailty Water Zones, must be temporarily or permanetly stabilized WITHIN 7 CALENDAR <u>DAYS OF COMPLETION</u> of any phase of grading in these areas.

STRAW MULCHING:
1. FOR AREAS OF SITE WITH LESS THAN 30% SLOPE;

2-3 BALES OF STRAW EQUALS 2-INCHES OF

STRAW MULCH OVER 1000 SQARE FEET

2.MULCH SHALL BE WEED FREE STRAW.

A permanent ground cover for all disturbed areas must be provided WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (whichever is shorter) following completion of construction or development

CONSTRUCTION SEQUENCE SCHEDULE

Runoff Control-

and outlet protection

Land Clearing & Grading—

Surface Stabilization-

Building Construction-

AREA STRIPPED AND THEN

BONDED FIBER MATRICES OR

STABILZED, USING EITHER

Buildings, utilities, paving.

Landscaping & Final Stabilization-

Topsoiling, trees & shrubs, permanent

seeding, mulching, sodding, rip rap

mulching, sodding, rip rap.

Site preparation— cutting, filling &

grading, sediment traps, barriers,

SCHEDULE CONSIDERATION CONSTRUCTION ACTIVITY First land-disturbing activity-Stabilize Construction Access— Construction entrance, construction routes, equipment bare areas immediately with gravel & temporary vegetation as construction parking areas takes place.

Install principal basins after construction Sediment Traps & Barriers site is accessed. Install additional traps Basin traps, sediment fences, & outlet and barriers as needed during grading. protection

Install key practices after principal sediments traps and before land grading. Diversions, perimeter dikes, water bars, Install additional runoff-control

conveyance measures during grading. Where necessary, stabilize stream banks Runoff Conveyance Systemas early as possible. Install principal Stabiles stream banks, storm drains, channels, Inlet & outlet protection, slope runoff conveyance system with runoff—control measures. Install remainder

of system after grading. Begin major clearing and grading after principal & key runoff-control measures area installed. Clear borrow & disposal areas as needed. Install additional control diversions, drains, surface roughening measures as grading progresses. Mark

trees & buffer areas for preservation. Apply temporary or permanent stabilization measures immediately on all Temporary & permanent seeding, disturbed areas where work is delayed or

> Install necessary erosion & sedimentation control practices as work takes place.

Stabilize all open areas, including borrow & spoil areas. Remove & stabilize all temporary control measures.

LAND GRADING CONSTRUCTION SPECIFICATIONS 1. Construct & maintain all erosion & sedimentation control practices & measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing

4. Clear & grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of fill.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems. 7. Do not incorporate frozen material or soft, mucky, or highly compressible

8. Do not place fill on a frozen foundation, due to possible subsidence and slippage. 9. Keep diversions and other water conveyance measures free of sediment during all

10. Handle seeps or springs encountered during construction in accordance with approved methods.

11. Following completion of any phase of grading, provide a groundcover (temporary or permanent) on all exposed slopes within 14 calendar days, or 7 calendar days in critical areas identified on the plan; and, a permanent groundcover for all disturbed areas within 15 working days or 90 calendar days (whichever is shorter) following completion of construction or development.

12. Provide adequate protection from erosion for all topsoil stockpiles, borrow areas, and spoil areas.

MAINTENANCE Periodically check all graded areas & the supporting erosion & sedimentation control practices, especially after heavy rainfalls. Promptly remove all sediment from diversions and other water-disposal practices. If washouts or breaks occur, repair them immediately. Prompt maintenance of small-eroded areas before they become significant gullies is an essential part of an effective erosion & sedimentation

The purpose of permanent seeding is to reduce erosion and decrease sediment yield from disturbed areas, and to permanently stabilize such areas in a manner that is economical, adapts to site conditions, and allows selection of the most appropriate plant materials. These areas must be seeded or planted within 15 working days or 90 calendar days after final

grade is reached, unless temporary stabilization is applied. PERMANENT SEEDING SPECIFICATIONS Seeding Recommendations for Summer SEEDING DATES — April to July SEEDING MIXTURE

10/1,000 sf (sprigs) Common bermudagrass 1-2 lb/1,000 sf (seed)SOD (See Sodding Notes) Seeding Recommendations for Early Fall through Early Spring

SEEDING DATES — August to March (early fall and spring recommended) Kentucky 31 Tall Fescue 6 lb/1,000 sf (broadcast seed)

1. Sprig or sod. Moisture is essential during initial establishment. Sod must be kept watered for 2—3weeks, but can be planted earlier or later than sprigs.

It is highly recommended that soils be tested and amended as found necessary. If a sois are not tested follow these recommendations: Apply 3,000 lb/acre of ground agricultural limestone and 500 lb/acre of 10-10-10 starter fertilizer, or 50 lb/acre nitrogen from turf-type slow-release fertilizer. Add 25-50 lb/acre nitrogen at 2-3 week intervals through midsummer.

Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand. (Not recommended for Tall Fescue)

Furrows should be 4-6 inches deep and 2 feet apart. Place sprigs about 2 ft. apart in a row with one end at or above ground level.

Broadcast at rates shown above, and press sprigs into the top 1/2-2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.

Do not mulch Bermuda Grass. For Tall Fesuce seed, apply 4,000-lb/acre straw. 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.

Maintenance-

TEMPORARY STOCKPILE OF

STRIPPED: OVERBURDEN AND

SUITABLE MATERIALS

TYPICAL STOCKPILE SECTION

STOCKPILES HAVING 2:1 SIDE SLOPES ARE CONSIDERED CRITICAL AREAS. SEE STABILIZATION NOTES FOR TEMPORARY AND PERMANENT STABILIZATION REQUIREMENTS. LEVEL GRADE AREA AND STABILIZE AT COMPLETION

Water as needed. Mow bermuda to 3/4 to 1-inch height and tall fescue to 2.5 - 3.5 inch height. Topdress bermuda with 40 lb/acre nitrogen in April, 50 Ib in May, 50 lb in June, 50 lb in July, and 25 lb in August. Top dress tall fescue in mid September,again in November and February with turf—grade 3-1-2 or 4-1-2 ratio turf-grade fertilizer. Fertilize with 1 lb of actual nitrogen per 1,000 sf. Do not fertilze tall fescue between Mid March and Early

TEMPORARY SEEDING

Species

The purpose of temporary seeding is to temporarily stabilize denuded areas that will not be brought to final grade or permanently seeded for a period of more than 14 calendar days, or 7 days in critical areas indentified on the

TEMPORARY SEEDING SPECIFICATIONS Seeding Recommendations for Late Winter & Early Spring

SEEDING DATES- December 1 to April 15 SEEDING MIXTURE Rate (lb/acre)

Winter Rye (grain) 120 (Annual Ryegrass shall not be used) Annual Lespedeza *Omit Annual Lespedeza when duration of temporary cover is not to extend

Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Apply 4,000-lb/acre straw. 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.

Maintenance-Refertilize if growth is not fully adequate. Reseed, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Summer SEEDING DATES- April 15 to August 15

SEEDING MIXTURE

German Millet

Soil Amendments-Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Apply 4,000—lb/acre straw. 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, fertilize and mulch immediately following erosion or other damage.

Seeding Recommendations for Fall SEEDING DATES— August 15 to December 30 SEEDING MIXTURE

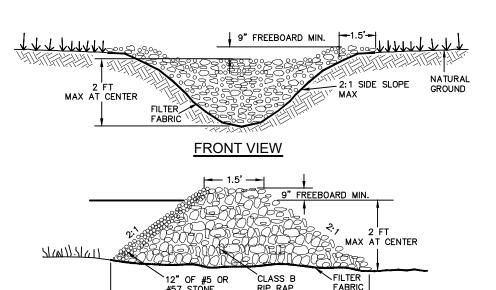
Rate (lb/acre)

Winter Rye (grain)

Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Apply 4,000—lb/acre straw. 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.

Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 Id/acre Kobe Lespedeza in late February or Early March.



SECTION VIEW TEMPORARY STONE CHECK DAM CONSTRUCTION

The purpose of permanent seeding is to prevent erosion and damage from sediment and runoff by stabilizing the soil surface with permanent vegetation for the purpose of: —the provision of immediate vegetative cover in critical areas —to stabilize disturbed areas with a suitable plant material that cannot be

established by seed. —to stabilize drainage ways & channels and other areas of concentrated flow where flow velocities will not exceed that specified grass lining.

SODDING SPECIFICATIONS

Sod Quality -Sod should be machine cut at a uniform depth of 1/2-2 inches —Sod should not have been cut in excessively wet or dry weather. -Sections of sod should be standard size as determined by the supplier, uniform, and untorn. -Sections of sod should be strong enough to support their own weight and retain their size and shape when lifted by one end.

-Harvest, delivery, and installation of sod should take place within a period

Soil Amendments-

Apply lime and fertilizer according to soil tests or apply 2 tons/acre of pulverized agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer in the fall, or 5-10-10 in spring.

Prior to laying sod, clear the soil surface of trash, debris, roots, branches, stones, and clods larger than 2 inches in diameter. Fill or level low spots in order to avoid standing water. Rake or harrow the site to achieve a smooth and level final grade. Complete soil preparation by rolling or cultipacking to firm soil.

of 36 hours.

Sod Installation— 1. Moistening the sod after it is unrolled helps maintain viability. Store in shade during installation. 2. Rake the soil surface to break the crust just before laying sod. During the summer, lightly irrigate the soil, immediately before laying sod to cool the soil and reduce root burning & dieback. 3. Do not sod on grave, frozen soils, or soils that have been treated recently with sterilants or herbicides 4. Lay the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other. Stagger strips in a brick-like pattern. Be sure that the sod is not stretched or overlapped and

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that all joints are butted tightly to prevent voids. Use a knife or sharp spade to trim and fit irregular shaped areas. 5. Install strips of sod with their longest dimension perpindicular to the slope. On slopes of 3:1 or greater, or wherever erosion may be a problem, secure sod with pegs or staples. 6. As sodding of clearly defined areas is completed, roll sod to provide good

contact between roots and soil. '. After rolling, irrigate until the soil is wet 4 inches below the sod. 8. Keep sodded areas moist to a depth of 4 inches until the grass takes root. This can be determined by tugging on the sod. 9. Mowing should not be attempted until the sod is firmly rooted, usually

Sodded Waterways 1. Prepare soil as described above. 2. Lay sod strips perpindicular to the direction of flow, with the lateral joints staggered in a brick—like pattern. Butt edges tightly together.

After the first week, water as necessary to maintain adequate moisture in the root zone & prevent dormancy of the sod.

Do not remove more than one—third of the shoot in any one mowing. Grass height should be maintained between 2-3 inches unless otherwise specified.

After first growing season, established sod requires fertilization, and may also

PORARY STONE CHECK DAM CONSTRUCTION SPECIFICATIONS:

 CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSAL OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATER! TO THE DESIGNATED DISPOSAL AREA. 2. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION

require lime. Follow soil test recommendations.

3. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL 4. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHEC

5. ALL CUT AND FILL SLOPES SHOULD BE 2:1 OR FLATTER. 6. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION. . MATERIAL USED IN THE STONE SECTION SHOULD BE A WELL-GRADED MIXTURE OF STONE WITH A 450 SIZE OF 9 INCHES(CLASS B EROSION CONTROL STONE IS RECOMMENDED) AND A MAXIMUM STONE SIZE OF 14 INCHES. THE STONE MAY BE MACHINE PLACED AND THE SMALLER STONES WORKED INTO THE VOIDS OF THE LARGER STONES. THE STONE SHOULD BE HARD, ANGULAR, AND HIGHLY WEATHER—RESISTANT.

8. STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION. 9. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACES STONES.

MAINTENANCE OF TEMPORARY STONE CHECK DAMS: INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS WHEN NEEDED. REMOVE SEDIMENT ACCUMULATION BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

TEMPERATURE RANGE OF 0 TO 120°F.

THE GROUND SURFACE.

USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF

ASTM D 6461, FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY

POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE

NHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6

CONSTRUCT THE SEDIMENT BARRIER OF STANDARD OR EXTRA

STRENGTH SYNTHETIC FILTER FABRIC, ENSURE THAT THE HEIGHT

. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN

JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FT MINIMUM OVERLAP TO

. SYNTHETIC FILTER FABRIC SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH MIN. 50 LB. TENSILE STRENGTH WIRE OR ZIP TIES AT TOP, MID-SECTION AND BOTTOM. FABRIC

HEIGHT SHALL BE BETWEEN 18" MIN. TO 24" MAX. ABOVE GROUND LEVEL ON THE UPSLOPE SIDE OF THE POSTS. EXTRA

STRENGTH FILTER FABRIC W/6' POST SPACING SHALL BE

MECHANICALLY COMPACTED SOIL PLACED OVER THE FILTER

IMMEDIATELY. SHOUD THE FABRIC COLLAPSE, TEAR, DECOMPOSED OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

. 12 INCHES OF FILTER FABRIC SHALL BE BURIED IN AN EXCAVATED TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER, BACKFILL TRENCH WITH

FABRIC. DO NOT ATTACH FILTER FABRIC TO TREES. 6. SILT FENCE SHALL BE INSPECTED AT LEAST ONCE A WEEK &

AFTER EACH RAINFALL EVENT. MAKE ANY REPAIRS

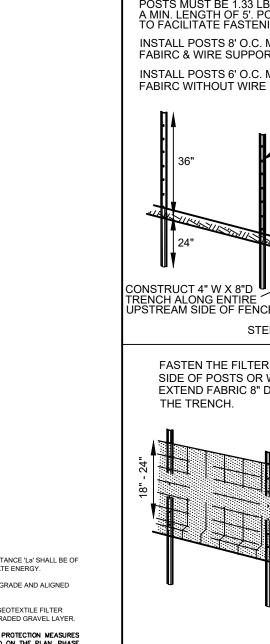
REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE

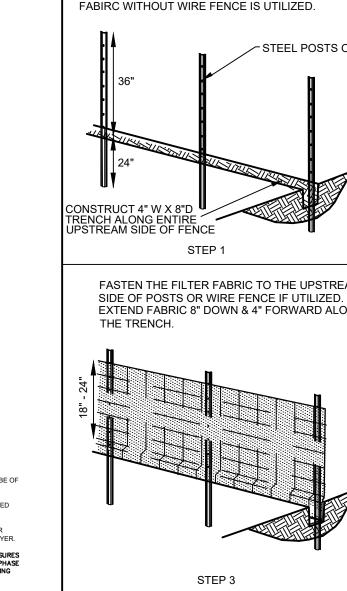
ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO

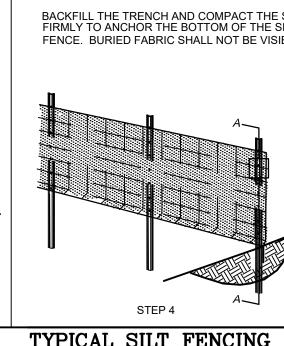
SECURELY FASTENED DIRECTLY TO POSTS.

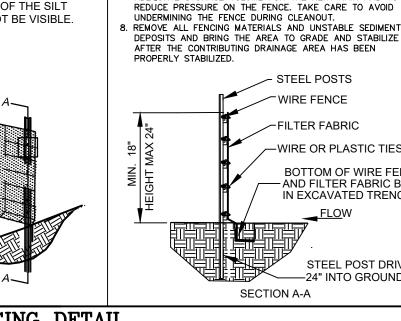
THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE

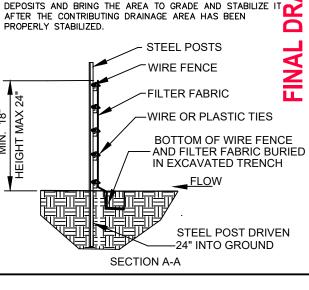
MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A





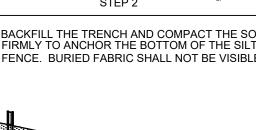


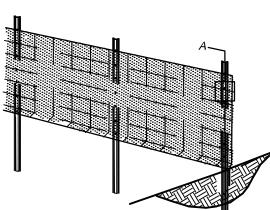




NOT TO SCALE LOCATION AS NOTED ON PLAN

POSTS MUST BE 1.33 LB/LINEAR FT. STEEL WITH A MIN. LENGTH OF 5'. POST SHALL HAVE PROJECTIONS TO FACILITATE FASTENING OF FILTER FABRIC. WHEN STANDARD STRENGTH FILTER FABRIC IS UTILIZED WIRE FENCING MUST ALSO BE INSTALLED ON UPSTREAM SIDE OF POSTS. EXTNED MAX. 24" ABOVE EXISTING GRADE TO INSTALL POSTS 8' O.C. MAX WHEN STANDARD BOTTOM OF TRENCH. FABIRC & WIRE SUPPORT FENCE ARE UTILIZED. INSTALL POSTS 6' O.C. MAX WHEN EXTRA STRENGTH MIN. 14 GA. WIRE FENCING MAX. 6" X 6" SPACING STEP 2 BACKFILL THE TRENCH AND COMPACT THE SOIL FASTEN THE FILTER FABRIC TO THE UPSTREAM FIRMLY TO ANCHOR THE BOTTOM OF THE SILT FENCE. BURIED FABRIC SHALL NOT BE VISIBLE. EXTEND FABRIC 8" DOWN & 4" FORWARD ALONG





TYPICAL SILT FENCING DETAIL

ALONG OVERLAR AT 2.0'± PINNING PATTERNS ARE A GUIDE. ADDITIONAL SHALL BE PROVIDED IF NECESSARY IN A 12" DEEP TRENCH

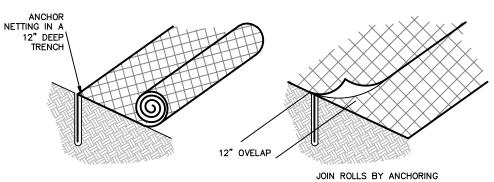
TO PROVIDE TEMPORARY SOIL STABILIZATION BY PLANTING GRASSES

LAND DISTURBANCE & STABILIZATION DETAIL

14 CALENDAR DAYS, OR 7 DAYS IN INDENTIFIED CRITICAL AREAS,

WHERE PERMANENT COVER IS NOT NECESSARY OR APPROPRIATE.

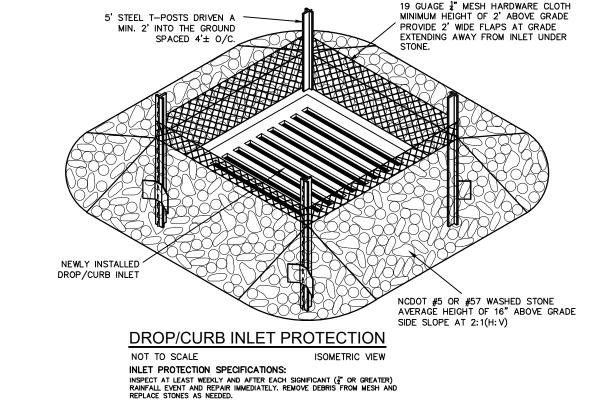
AND LEGUMES TO AREAS THAT WOULD REMAIN BARE FOR MORE THAN

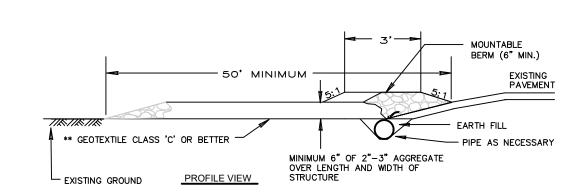


be lined with a protective covering to minimize erosion and protect seed until permanent vegetation is established.

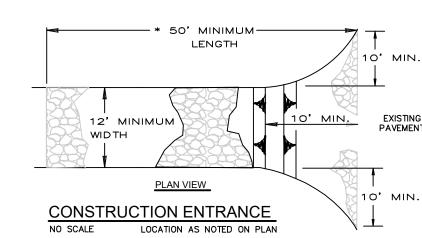
long term environmental impacts. Mulching with straw or other organic materials can be utilized only when it will anchored which may be difficult in some environments. An example is straw

mulch with jute netting stapled or pinned in place.





REMOVE ONCE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.



CONSTRUCTION ENTRANCE SPECIFICATIONS 1. Length — minimum of 50' (*30' for single residence lot).

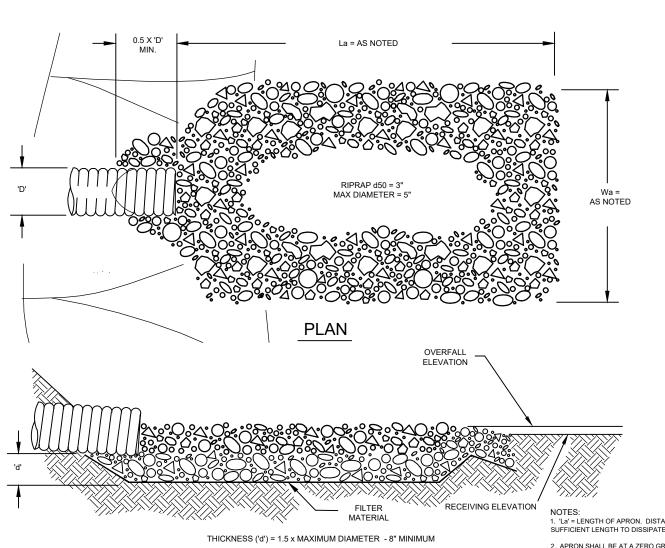
2. Width — 12' minimum, should be flared at the existing road to provide a turning 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing

4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

stone. **The plan approval authority may not require single family residences to use

5. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location — A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



SECTION RIP-RAP PIPE OUTLET PROTECTIOI

'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY 2. APRON SHALL BE AT A ZERO GRADE AND ALIGNED 3. FILTER MATERIAL SHALL BE GEOTEXTILE FILTER 4. INSTALL PIPE INLET/OUTLET PROTECTION MEASURES AT THOSE LOCATIONS INDICATED ON THE PLAN. PHASE INSTALLATIONS AS REQUIRED PER PROJECT PHASING

ROLLED LINER CONNECTION DETAIL ROLLED EROSION CONTROL MATTING DETAIL

ROLLED EROSION CONTROL MATTING (R.E.C.M.) SPECIFICATIONS: 1. All areas identified on these plans as requiring an erosion control matting shall

Covering shall be composed of a bio or photo degradable material to minimize not impede the establishment of permanent vegetation. Mulches must be properly

4. Pre-manufactured rolled erosion control products (RECP) are highly recommended for this application. RECP's shall be installed according to manufacturer specifications for channel linings. An example is a woven straw or wooden fiber

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 gaufe maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend of holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un attended days (and 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	 Identification of the measures inspected, Date and time of the inspection, Name of the person performing the inspection, Indication of whether the measures were operating properly, Description of maintenance needs for the measure, 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	 Identification of the discharge outfalls inspected, Date and time of the inspection, Name of the person performing the inspection, Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, Indication of visible sediment leaving the site, 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: Actions taken to clean up or stabilize the sediment that has left the site limits, Description, evidence, and date of corrective actions taken, and 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)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	 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). 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:

- (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 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 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 Timeframes (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 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	 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(I)(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 reoccurrence of the noncompliance. [40 CFR 122.41(I)(6). Division staff may waive the requirement for a written report on a case-by-case basis. 	



NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

Dissell Froiessional Group Firm License # C–956 3512 North Croatan Highway P.O. Box 1068 Kitty Hawk, North Carolina 27949 (252) 261–3266 FAX (252) 261–1760

SOFESSIONAL GROUP Engineers, Planners, Surveyors and Environmental Specialists

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484700B1 PROJECT NO: 4847

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				
Si	te Area Description	Stabilize within this many calendar days after ceasing land disturbance	Time frame 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 round 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:

Permanent Stabilization
 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 NCDWR List of Approved PAMS/Flocculants.
- 2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NCDWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging
- 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
- 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

- 1. Never bury or burn waste. Place litter and debris in approved waste containers.
- 2. 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.
- 5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- 6. Anchor all lightweight items in waste containers during times of high winds.
- 7. 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

- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- 2. 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.
- 5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

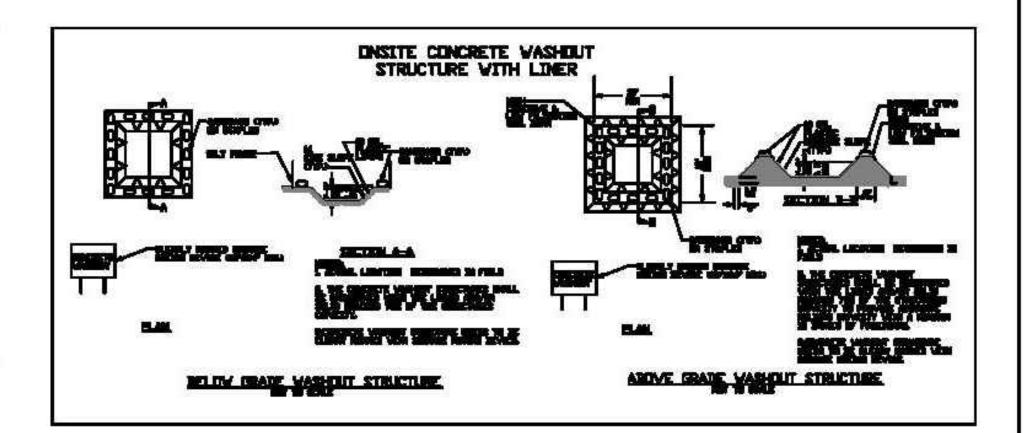
PORTABLE TOILETS

- 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.
- 2. 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
- 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 time frames 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.
- 2. 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.
- 10. 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 on site.

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.

FINAL

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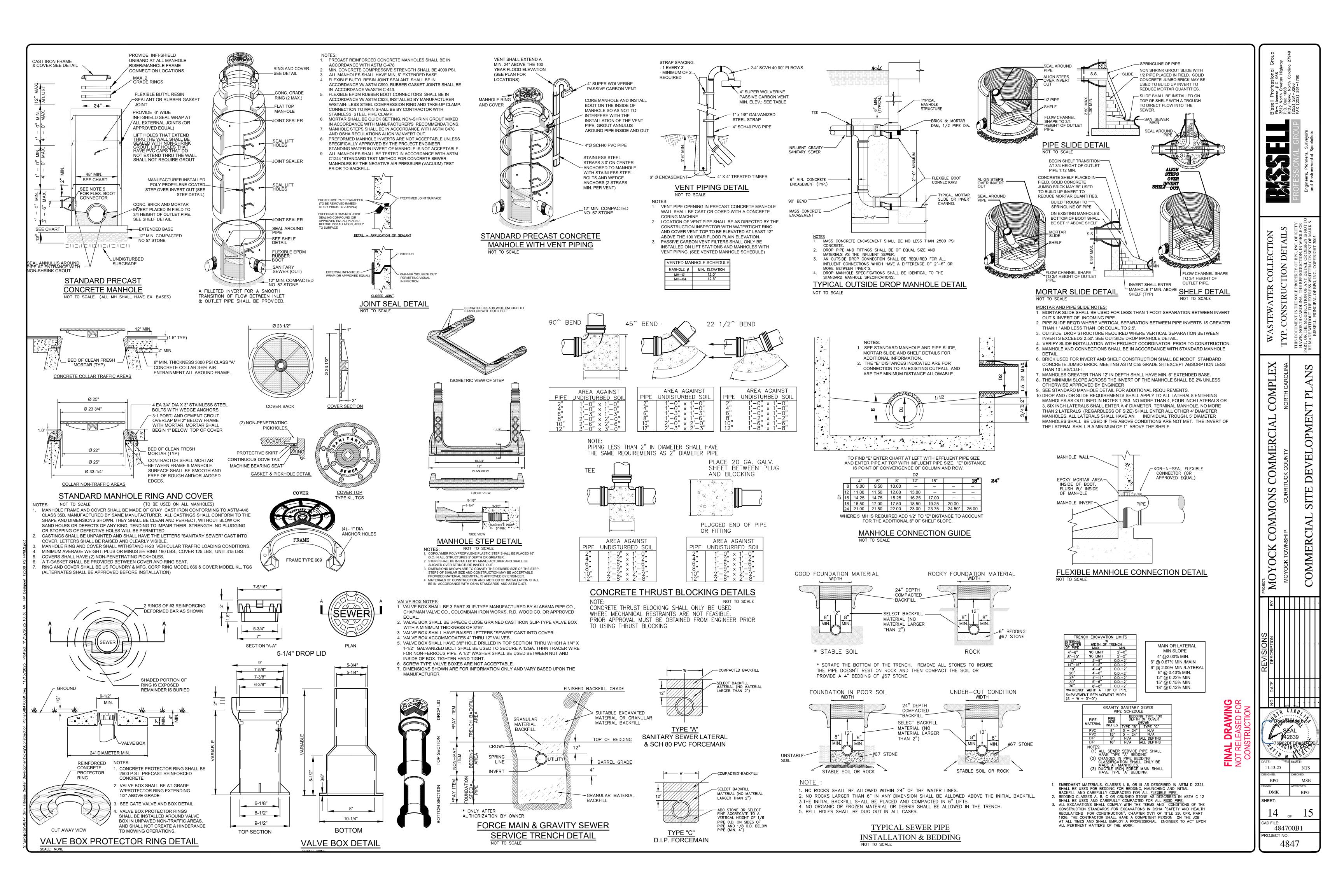
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2. CONTRACTOR IS CHARGED WITH PERFORMING SITE INVESTIGATIONS TO ASCERTAIN EXISTING SITE CONDITIONS PHOTOGRAPHIC DOCUMENTATION OF PRE-EXISTING CONSTRUCTION CONDITIONS WILL BE CONDUCTED BY THE ENGINEER FOR DETERMINATION OF COMPLIANCE WITH CONDITIONS NOTED HEREON

GENERAL NOTES

- ACCESS TO SITES SHALL BE BY PUBLIC RIGHT-OF-WAYS AND UTILITY EASEMENTS. OTHER ACCESS LOCATIONS REQUIRED SHALL BE SECURED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER. SUPPLEMENTAL EROSION CONTROL MEASURES SHALL BE REQUIRED TO INCLUDE CONSTRUCTION ENTRANCES, SILT FENCING, RESTORATION, ETC. ADDITIONAL MEASURES SHALL BE INCLUDED AS PART OF A SUPPLEMENTAL EROSION CONTROL PLAN PREPARED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE THE CONSTRUCTION STAGING AREA AT HIS EXPENSE.
- 3. THE CONTRACTOR IS EXPECTED AND REQUIRED TO COOPERATE WITH THE PROPERTY OWNERS AFFECTED BY THE WORK, MAIL ADJOINING PROPERTY OWNER LETTERS TO EFFECTED PROPERTY OWNERS NOTIFYING THEM THAT WORK WILL BE OCCURRING WITHIN THE AREAS ADJOINING THEIR PROPERTIES. THIS LETTER SHALL GIVE PROPERTY OWNERS A MINIMUM OF 14 DAYS WRITTEN NOTICE PRIOR TO COMMENCEMENT OF CONSTRUCTION FOR REMOVAL OF ANY PERSONAL ITEMS FROM THE RIGHT- OF-WAY. THE LETTER OUTLINES THE EXTENT OF THE WORK TO BE PERFORMED TO INCLUDE DRIVEWAY DISRUPTIONS.
- 4. CONTRACTOR SHALL MAINTAIN A NEAT AND CLEAN JOB-SITE TO INCLUDE STAGING/STORAGE AREAS AS FOLLOWS:
 - PERFORM DUST CONTROL BY WATERING DAILY OR AS DIRECTED BY THE ENGINEER AND/OR CURRITUCK COUNTY. - SWEEP STREETS A MINIMUM OF ONCE WEEKLY (FRIDAY) OR AS DIRECTED BY THE ENGINEER AND/OR CURRITUCK COUNTY. - BLADE, LEVEL AND RE-COMPACT ALL EXPOSED TRENCHES WEEKLY (OR AS DIRECTED BY THE ENGINEER) TO PRODUCE A SMOOTH "RIDE".
 - MATERIALS. - REMOVE EXCESS EQUIPMENT, MATERIALS, TOOLS, ETC. NOT NEEDED. -ANY DRIVEWAY REMOVALS MUST HAVE A TEMPORARY SURFACE INSTALLED WITHIN THE SAME DAY AS REMOVAL. APPROVED SURFACES MAY CONSIST OF EITHER ABC OR MILLINGS.
- THE WORK WITHIN RIGHT OF WAY AREAS MUST BE KEPT IN AN ORDERLY AND NEAT FASHION. NO MATERIAL (SOILS, GRAVEL OR OTHER PROJECT FILL) CAN BE PLACED DIRECTLY ON ANY STREET SURFACE WITHOUT MATTING BEING PUT DOWN FIRST. ANY DAMAGE TO ANY ROAD SURFACE FROM CONSTRUCTION ACTIVITIES MUST BE REPAIRED AT OWNERS EXPENSE

- PERFORM DAILY CLEAN-UP OF ALL DIRT, DEBRIS AND SCRAP

- EXCESS SUITABLE SOIL EXCAVATED DURING CONSTRUCTION SHALL BE STOCKPILED FOR USE ON THE PROJECT OR DISPOSED OF OFF-SITE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOT BE ALLOWED TO STOCKPILE MATERIALS OR EXCESS MATERIALS IN THE STREET RIGHT-OF-WAYS AT ANY TIME. THE CONTRACTOR SHALL PROVIDE A SUFFICIENT AND SUITABLE STOCKPILE AREA AND LOCATION AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL PROVIDE MEASURES DURING CONSTRUCTION TO SECURE THE SITE AND EXCAVATION FROM THE GENERAL PUBLIC AND COMPLY WITH ALL OSHA REGULATIONS. JOB SITE SAFETY IS THE EXCLUSIVE AND SOLE RESPONSIBILITY OF THE CONTRACTOR. OPEN EXCAVATION LEFT UNATTENDED OR OVER NIGHT IS NOT ACCEPTABLE AND SHALL BE FILLED IMMEDIATELY.
- CONTRACTOR SHALL REPAIR OR REPLACE DRIVES DISTURBED BY CONSTRUCTION TO EXISTING OR BETTER CONDITIONS. NO SEPARATE PAYMENT UNLESS OTHERWISE INDICATED.
- CONTRACTOR SHALL PROVIDE TEMPORARY FENCING WHERE FENCES ARE REMOVED FOR CONSTRUCTION. CONTRACTOR SHALL COORDINATE FENCE REMOVAL OR REINSTALLATION WITH INDIVIDUAL PROPERTY OWNERS PRIOR TO REMOVAL. CONTRACTOR SHALL REINSTALL ALL SHEDS, FENCES, ETC. TO AS GOOD OR BETTER THAN EXISTING CONDITIONS UNLESS OTHERWISE INDICATED. (NO SEPARATE PAYMENT).
- 9. CONTRACTOR SHALL REPLACE ALL DISTURBED MAILBOXES, SIGNS, ETC. DISTURBED DURING CONSTRUCTION WITHIN 24 HOURS OF DISTURBANCE. PERMANENT ROAD SIGNAGE DISTURBED SHALL BE REPLACED IMMEDIATELY AND IF NECESSARY ROADWAY SIGNS SHALL BE TEMPORARILY INSTALLED IN A LOCATION CONSISTENT WITH THE NCMUTCD TO PROVIDE CONTINUOUS TRAFFIC AWARENESS OF ROADWAY CONDITIONS. (NO SEPARATE PAYMENT)
- 10. CONTRACTOR SHALL PROVIDE SECURITY FENCING, SECURITY GUARD, AND ANY AND ALL OTHER MEASURES CONTRACTOR DEEMS NECESSARY TO PROTECT EQUIPMENT AND MATERIALS STORED ON THE PROJECT. (NO SEPARATE PAYMENT).
- 11. WHERE CONTRACTOR CEASES WORK OPERATIONS FOR A 72 HOUR PERIOD OR LONGER SUCH AS HOLIDAYS FTC. THE FOLLOWING SHALL BE ACCOMPLISHED PRIOR TO THE WORK STOPPAGE.
 - A. CONTRACTOR SHALL STORE ALL EQUIPMENT IN THE CONTRACTOR STAGING AREA OR OFF SITE.
 - B. THE CONTRACTOR SHALL SWEEP ALL STREETS, PERFORM GENERAL CLEANUP AND SHALL PERFORM MAINTENANCE ON ALL EXPOSED PATCHES
- 12. CONTRACTOR SHALL SCHEDULE WORK AND MATERIAL DELIVERIES SO THAT STORED MATERIAL QUANTITIES ON THE JOB SITE SHALL BE MINIMIZED.
- 13. CONTRACTOR SHALL STORE ALL MATERIALS IN THE CONTRACTOR STAGING AREA 72 HOURS PRIOR TO INCORPORATING INTO THE WORK TO REDUCE OBSTRUCTIONS TO TRAFFIC AND INCONVENIENCE TO RESIDENTS. WHERE UTILITIES ARE BEING CONSTRUCTED IN EASEMENTS OUT OF TRAFFIC AREAS CONTRACTOR MAY STORE MATERIALS AHEAD OF CONSTRUCTION FOR A DISTANCE NOT GREATER THAN 1800 FEET UNLESS APPROVED OTHERWISE BY THE ENGINEER.
- 14. CLEARING AND GRUBBING SHALL BE RESTRICTED TO PERMANENT EASEMENTS ONLY. CONTRACTOR SHALL LIMIT TREE/BUSH CLEARING IN THE TEMPORARY EASEMENTS, BETWEEN HOUSES AND ALONG PROPERTY LINES TO ONLY ABSOLUTELY NECESSARY FOR CONSTRUCTION.

15A NCAC 18C .0906 - RELATION OF WATER MAINS TO

- JON-POTABLE WATER LINES (a) FOR THE PURPOSES OF THIS RULE, SEWER SHALL MEAN ANY EXISTING OR PROPOSED GRAVITY OR FORCE MAIN USED TO CONVEY SANITARY OR INDUSTRIAL PROCESS WASTE
- b) LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10-FOOT LATERAL SEPARATION, IN WHICH CASE:
- (1) THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH. WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER: OR (2) THE WATER MAIN SHALL BE LAID IN THE SAME TRENCH AS THE SEWER,
- WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE
- CROSSINGS. A WATER MAIN THAT CROSSES A SEWER SHALL BE LAID A MINIMUM VERTICAL DISTANCE OF 18 INCHES FROM THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER, EITHER ABOVE OR BELOW THE SEWER. WITH PREFERENCE TO THE WATER MAIN LOCATED ABOVE THE SEWER. ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE

CONSTRUCTION SEQUENCE NOTES

- PRIOR TO COMMENCEMENT OF ANY WORK WITHIN EASEMENTS OR RIGHTS-OF-WAYS THE CONTRACTOR IS REQUIRED TO NOTIFY CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH GS 87-102. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. NO SEPARATE PAYMENT. EXISTING UTILITIES SHOWN ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED (I.E. TELEPHONE, GAS, CABLE, ETC.).
- THE CONTRACTOR SHALL DIG UP EACH UTILITY WHICH MAY CONFLICT WITH CONSTRUCTION 14 DAYS IN ADVANCE TO VERIFY LOCATIONS (HORIZONTALLY AND 20. EXCEPT AS REQUIRED FOR USE OF A LASER LEVEL, EXPOSED END OF ALL PIPE VERTICALLY) TO ALLOW THE ENGINEER AN OPPORTUNITY TO ADJUST THE DESIGN TO AVOID CONFLICTS (NO SEPARATE PAYMENT).
- ALL SANITARY SEWER & WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE NCDENR-DWQ & NCDENR-PWS. STORM DRAINAGE, STREET CONSTRUCTION AND PAVING SHALL BE IN ACCORDANCE WITH THE N.C.D.O.T.
- UTILITY SERVICES TO INDIVIDUAL PROPERTIES ARE NOT SHOWN IN THE PROFILES FOR SIMPLICITY OF THE DRAWINGS. SERVICES MAY INCLUDE WATER LATERALS, TELEPHONE, ELECTRIC, CABLE, GAS, ETC.
- CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES AND SIGNS AND/OR UTILITIES IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS 22. COMPLETION: BEFORE CONNECTING TO AN ACTIVE SYSTEM, THE LEAKAGE DURING THE UTILITY MAIN INSTALLATION AND STREET CONSTRUCTION. (NO SEPARATE PAYMENT).
- CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR UTILITY CROSSINGS AND REPAIR DAMAGES DUE TO CONSTRUCTION TO THE SATISFACTION OF THE UTILITY INVOLVED AT NO ADDITIONAL EXPENSE TO THE OWNER. UNDERGROUND ELECTRICAL CROSSINGS SHALL BE CROSSED IN ACCORDANCE WITH THE NEC AND TECHNICAL SPECIFICATION SECTION UNDERGROUND ELECTRICAL
- WHERE DEEMED NECESSARY BY THE ENGINEER THAT A SUBSURFACE DRAINAGE 24. SYSTEM IS REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL MATERIALS. TOOLS, LABOR, EQUIPMENT, TIE-IN'S TO EXISTING DRAINAGE STRUCTURES AND ALL OTHER INCIDENTALS NECESSARY TO PROVIDE COMPLETE INSTALLATION. IMPROPERLY INSTALLED AND NON-FUNCTIONING DRAINAGE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING FRENCH DRAINAGE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AND OR REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- STORM DRAINAGE REPAIRS BY CONTRACTOR DUE TO CONSTRUCTION DAMAGE AND JOINTS EXPOSED DURING CONSTRUCTION SHALL BE INSPECTED BY THE OWNER PRIOR TO BACKFILLING.
- CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT AND MATERIAL AND PERFORM ALL WORK REQUIRED FOR INSTALLATION OF SEWER LINES, MANHOLES 26. ONCE ACCEPTANCE AND START OF THE COLLECTION SYSTEM HAS BEEN AND APPURTENANCES AS OUTLINED ON DRAWINGS AND ON SPECIFICATIONS, ALL OF WHICH BECOME PART OF THE CONTRACT DOCUMENTS.
- 10. ALL CONSTRUCTION OF SANITARY SEWER MAINS AND APPURTENANCES IN THE COLLECTION SYSTEMS SHALL BE IN STRICT ACCORDANCE WITH PLANS AND SPECIFICATIONS PREPARED AS PART OF THE CONTRACT DOCUMENTS AND AS APPROVED BY THE BPG, INC. ENGINEER. ALL MATERIALS SHALL BE NEW AND UNUSED. PRIOR TO CONSTRUCTION OF THE APPROVED SANITARY SEWER, CONTRACTOR SHALL PROVIDE FIELD STAKEOUT INCLUDING ADEQUATE LINE AND GRADE STAKES IN ORDER THAT SANITARY SEWER AND APPURTENANCES MAY BE CONSTRUCTED IN ACCORDANCE WITH CONTRACT DRAWINGS.
- A PRECONSTRUCTION CONFERENCE SHALL BE HELD AT THE COMPLETION OF THE FIFI D STAKEOUT WITH THE ENGINEEER AN HIS/HER REPRESENTATIVE CURRITUCK COUNTY REPRESENTATIVE. NCDENR REPRESENTATIVE. AND ANY REQUISITE UTILITY REPRESENTATIVES THAT WILL REQUIRE COORDINATION WITH DURING THE COURSE OF CONSTRUCTION. A MINIMUM OF 2 DAYS NOTICE SHALL BE GIVEN FOR MEETING REPRESENTATIVES.
- PREPARE PHOTOGRAPHIC DOCUMENTATION OF PRE-EXISTING CONDITIONS OF THE PROJECTED CONSTRUCTION ROUTE PRIOR TO COMMENCING WORK.
- 13. IF ANY DEVIATION IS CONTEMPLATED IN LOCATION OR LINE GRADE OF ANY SEWER. STRUCTURE OR APPURTENANCE AS SHOWN ON THE CONTRAC DRAWINGS, A REVISION OF THE DRAWINGS SHOWING THE PROPOSED DEVIATION SHALL BE SUBMITTED TO THE BPG, INC. ENGINEER FOR REVIEW AND APPROVAL BEFORE ANY CHANGES ARE CONSTRUCTED. MINOR FIELD CHANGES MAY BE MADE WITH APPROVAL OF BPG, INC. APPOINTED FIELD INSPECTOR. SHOULD CONTRACTOR DISCOVER AND/OR DAMAGE ANY UNDERGROUND UTILITY FACILITIES. WHICH ARE NOT SHOWN ON DRAWINGS AND/OR MARKED ON THE GROUND, CONTRACTOR SHALL PROMPTLY NOTIFY UTILITY OWNER AND OWNER'S PROJECT REPRESENTATIVE. RELOCATION OF ANY UTILITIES SHALL BE APPROVED AND COORDINATED WITH THE APPROPRIATE UTILITY OWNER.
- EXCAVATION SHALL CONFORM TO THE LINES AND GRADES SHOWN ON THE PLANS. THE WIDTH OF EXCAVATION FOR TRENCHES SHALL BE A MINIMUM OF 24" EXCAVATION SHALL NOT BE CARRIED BELOW THE ESTABLISHED GRADES AND ANY EXCAVATION BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH SUITABLE, THOROUGHLY COMPACTED GRANULAR BEDDING MATERIAL. CONTRACTOR SHALL INSTALL ALL SHEETING, BRACING, AND SHORING NECESSARY TO PERFORM THE WORK. TO PROTECT EXISTING STRUCTURES AND ALL EXCAVATIONS AS REQUIRED UNDER NORTH CAROLINA OSHA REGULATIONS. COMPLIANCE WITH PROVISIONS OF THE OVERHEAD HIGH VOLTAGE LINE SAFETY ACT IS REQUIRED.
- DEWATERING EQUIPMENT SHALL BE SIZED TO MAINTAIN THE TRENCH IN A SATISFACTORY DEWATERED CONDITION SUITABLE FOR PIPE LAYING AND BACKFILLING. PIPE LAYING WILL BE PERMITTED ONLY WHERE THE DEPTH OF WATER IS MAINTAINED BELOW THE BEDDING MATERIAL. BEDDING MATERIAL SHALL NOT BE PLACED ON UNSTABLE TRENCH MATERIAL.
- NOT MORE THAN ONE HUNDRED FIFTY FEET (150') OF TRENCH SHALL BE OPENED IN ADVANCE OF THE COMPLETED PIPE LAYING. TRENCH WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. EXCAVATION AT MANHOLES AND SIMILAR STRUCTURES SHALL PROVIDE A MINIMUM CLEARANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTER SURFACE OF THE STRUCTURE AND THE EMBANKMENT OR SHEETING.
- WHEREVER FOUNDATION MATERIAL IS UNSUITABLE, IT SHALL BE EXCAVATED UNTIL A STABLE FOUNDATION IS ACHIEVED. GRANULAR MATERIAL, #67 STONE PER ASTM C 12. SHALL THEN BE PLACED IN SIX INCH (6") LAYERS AND COMPACTED UNTIL THE TRENCH BOTTOM HAS BEEN STABILIZED. STANDARD GRANULAR PIPE BEDDING MATERIAL SHALL BE PLACED IN ACCORDANCE WITH ASTM D 2321 FOR PVC PIPE AND ASTM C 12 FOR DIP.
- 18. ALL GRAVITY SEWER MAINS, SERVICE LATERALS AND FORCE MAINS SHALL HAVE A MINIMUM COVER OF THREE FEET (3') AS MEASURED FROM TOP OF PIPE TO FINISH GRADE. THE BPG, INC. ENGINEER MAY REQUIRE ADDITIONAL COVER AS NEEDED FOR PIPE PROTECTION. SEWERS, WHICH HAVE A DEPTH OF COVER LESS THAN THREE FEET (3'), SHALL BE APPROVED AND INSTALLED AS PER BPG, INC. ENGINEER'S WRITTEN INSTRUCTIONS.
- 19. PIPE SHALL BE LAID TRUE TO LINE AND GRADE WITH BELLS UPSTREAM AND SHALL

INVERT. PIPE SHALL BE PUSHED HOME BY HAND. THE USE OF EQUIPMENT (I.E. BACKHOE) SHALL NOT BE PERMITTED. CUTTING OF PIPE SHALL BE PERFORMED BY SAWING. STANDARD BEDDING SHALL BE SHAPED TO THE CURVATURE OF BOTH THE BELL AND BARREL OF THE PIPE. THE TRENCH SHALL BE KEPT FREE OF

WATER WHILE THE WORK IS IN PROGRESS. THE ENDS OF THE PIPE SHALL BE CLEANED SO THAT PROPER JOINTS CAN BE MADE. AS THE WORK PROGRESSES, THE INTERIOR OF THE PIPE SHALL BE CLEARED OF DIRT, CEMENT, OR OTHER DELETERIOUS MATERIAL.

- AND FITTINGS SHALL BE FULLY CLOSED TO PREVENT EARTH, WATER OR OTHER SUBSTANCES FROM ENTERING PIPE. TRENCH SHALL BE COMPLETELY BACKFILLED AT END OF EACH WORKDAY. WHEN NEW PIPE IS TIED INTO AN EXISTING MANHOLE, NEW PIPE SHALL BE PLUGGED WITH A STANDARD SEWER PLUG AND SHALL REMAIN PLUGGED UNTIL ALL NEW LINE(S) THAT WILL FLOW TO EXISTING MANHOLE HAVE BEEN COMPLETED, TESTED, AND ACCEPTED.
- BACKFILL SHALL BEGIN AT THE TOP OF THE STANDARD GRANULAR BEDDING AND SHALL BE PLACED IN SIX INCH (6") LAYERS FOR THE INITIAL ONE FOOT OVER THE 4 PIPE AND SHALL BE THOROUGHLY TAMPED TO NINETY-FIVE PERCENT (95%) OF THE MAXIMUM THEORETICAL COMPACTION DENSITY AS DETERMINED BY A STANDARD PROCTOR ON THE MATERIAL. REMAINDER OF THE BACKFILL SHALL BE IN TWO FOOT (2') LAYERS PROPERLY TAMPED.
- TESTS SHALL PROMPTLY FOLLOW INSTALLATION OF WASTEWATER PIPE INCLUDING SERVICES AND KEPT WITHIN A MAXIMUM OF 1000 FEET BEHIND THE WASTEWATER PIPE LAYING OPERATION.
- CONTRACTOR SHALL FURNISH WEIRS, STAND PIPES, PIPE PLUGS, WATER, PRESSURE GAUGES, STOP WATCHES, AIR COMPRESSOR, VACUUM PUMP, HOSE AND SUCH MATERIALS AND ASSISTANCE AS REQUIRED TO PERFORM THESE TESTS. ALL ACCEPTANCE TESTS SHALL BE CONDUCTED BY CONTRACTOR IN THE PRESENCE OF A BPG, INC. APPOINTED INSPECTOR.
- ACCEPTANCE TESTS SHALL NOT BE MADE UNTIL SANITARY SEWER, MANHOLES AND PROPOSED SEWER SERVICE CONNECTIONS. AS SHOWN ON THE APPROVED SEWER PLANS, HAVE BEEN INSTALLED, THE SEWER TRENCHES (INCLUDING MANHOLES AND CLEANOUT STACKS) BACKFILLED AND COMPACTED TO FINISHED
- 25. CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR MAINTAINING SEWER FLOWS DURING PROJECT TO INCLUDE ANY REQUIRED BY-PASS PUMPING OF WASTEWATER BETWEEN MANHOLES DURING INSTALLATION OF SEWER LINES AND/OR MANHOLES. BY-PASS PUMPING SYSTEM SHALL PROVIDE CONTINUOUS FULL CONVEYANCE AND CONTAINMENT OF WASTEWATER PRESENT DURING THE WORK AND SHALL NOT SURCHARGE THE UPSTREAM PUMP STATION BY MORE THAN TWO (2) FEET ABOVE THE NORMAL EFFLUENT LEVELS.
- RECIEVED, THE CONTRACTOR SHALL PROCEED WITH THE ABANDONMENT PROCEDURES OF THE EXISTING WASTEWATER COLLECTION SYSTEM AS DESCRIBED HEREON.
- 27. THE NOTES CONTAINED HEREIN ARE INTENDED TO SUPPLEMENT THE TECHNICAL SPECIFICATIONS AND PROVIDE EASY REFERENCE FOR THE CONTRACTOR. IN NO CASE SHALL THESE NOTES VOID ANY PART, SECTION OR REQUIREMENT OUTLINED IN THE TECHNICAL SPECIFICATIONS CONTAINED IN THE CONTRACT DOCUMENTS.

FRENCH DEWATERING DURING SEWER LINE INSTALLATION

- ALL GROUND WATER WHICH MAY BE FOUND IN THE TRENCHES AND ANY WATER WHICH MAY GET INTO THEM FROM ANY CAUSE WHATSOEVER SHALL BE PUMPED OR BAILED OUT SO THAT THE TRENCH SHALL BE DRY DURING THE PIPE LAYING PERIOD. NO WATER SHALL BE PERMITTED TO REACH CONCRETE UNTIL IT HAS SET SUFFICIENTLY. ALL WATER PUMPED FROM THE TRENCHES SHALL BE DISPOSED OF IN A MANNER SATISFACTORY TO THE OWNER. CONTRACTOR SHALL PROVIDE AT LEAST TWO (2) PUMPS FOR EACH TRENCH OPENED IN WET GROUND AND AT THE SAME TIME, HE SHALL HAVE ONE (1) PUMP IN RESERVE.
- 2. IF, DURING ANY TIME THAT CONTRACTOR IS PERMITTED TO LAY PIPE IN A TRENCH CONTAINING UNAVOIDABLE TRENCH WATER AND CONSTRUCTION IS INTERRUPTED FOR ANY REASON, THE OPEN ENDS OF PIPE SHALL BE CLOSED BY WATERTIGH PLUGS OR CAPS, OR OTHER MEANS APPROVED BY THE OWNER. IN ANY CASE, SUCH PROTECTION SHALL BE PROVIDED WHEN WORK IS SUSPENDED OVERNIGHT OR ON WEEKENDS AND HOLIDAYS, REGARDLESS OF THE CONDITION OF THE TRENCH WITH RESPECT TO WATER AT THE TIME THAT THE WORK IS SUSPENDED
- 3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL STRUCTURES, INCLUDING PIPES AND MANHOLES, AGAINST ANY TENDENCY TO FLOAT LINDER CONDITIONS OF HIGH WATER, WHETHER DUE TO HIGH GROUND WATER OR FLOOD CONDITIONS ON THE PROJECT SITE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE WHATEVER STEPS MAY BE REQUIRED, INCLUDING THE INSTALLATION AND OPERATION OF PUMPS AND PUMPING SYSTEMS WELL POINTS OR RELIEF DEVICES TO PREVENT ANY STRUCTURE FROM FLOATING DURING CONSTRUCTION.
- 4. COST OF THE NECESSARY PUMPS, WELL POINTS OR OTHER APPURTENANCES REQUIRED TO PREVENT FLOTATION SHALL BE INCLUDED IN THE UNIT PRICES BID IN THE PROPOSAL FOR THE VARIOUS BID ITEMS, AND NO EXTRA COMPENSATION SHALL BE ALLOWED FOR SUCH WORK. ANY DAMAGE WHICH MAY OCCUR TO ANY PART OF THE WORK AS THE RESULT OF THE FLOTATION EFFECT OF GROUND OR FLOOD WATERS SHALL BE REPAIRED IN A MANNER FULLY SATISFACTORY TO THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.
- 5. CONTRACTOR SHALL PROVIDE AND PLACE ALL NECESSARY FLUMES OR OTHER CHANNELS OF ADEQUATE SIZE TO CARRY TEMPORARILY ALL STREAMS. BROOKS STORMWATER OR OTHER WATER. WHICH MAY FLOW ALONG OR ACROSS THE LINES OF THE PIPE LINE. ALL FLUMES OR CHANNELS THUS UTILIZED SHALL BE TIGHT SO AS TO PREVENT I FAKAGE INTO THE TRENCHES WATER PUMPED FROM TRENCHES SHALL BE LED TO NATURAL WATERCOURSES. EXISTING SEWERS SHALL NOT BE EMPLOYED AS A DRAIN FOR THE REMOVAL OF DEWATERING WASTES.

SEWER SERVICE LATERAL NOTES

- CONTRACTOR SHALL MAKE UP STACK AND SUBMIT TO ENGINEER FOR APPROVAL AND SHALL SUBMIT TAPPING SADDLE IF USED TO ENGINEER FOR APPROVAL
- HOLE IN SANITARY SEWER MAIN MUST BE CUT WITH SHELL CUTTER. NO HAMMER TAPS ALLOWED.
- LATERAL SHALL CONFORM TO ASTM SPECS. D-3034 SDR-35 UNLESS OTHERWISE INDICATED AS DUCTILE IRON.
- ALL PIPE AND FITTINGS SHALL BE 4" OR 6" UNLESS OTHERWISE SPECIFIED. ALL D.I. PIPE SHALL HAVE AN INTERIOR LINING OF CERAMIC EPOXY OR FUSED CALCIUM ALUMINATE CEMENT WITH FUSED CALCIUM ALLUMINATE AGGREGATES. THE ENTIRE D.I. LATERAL SHALL BE COMPRISED OF D.I. PIPE AND MECHANICAL JOINT FITTINGS.
- ALL CONNECTIONS SHALL HAVE RUBBER GASKET SEALS INSTALLED. THE CONTRACTOR SHALL USE SDR 35 P.V.C. WYE FOR CONNECTION TO SDR 35 P.V.C. PIPE OR DI TEE FOR CONNECTION TO DUCTILE IRON PIPE. PVC WYE SHALL BE ONE PIECE MOLDED OR FABRICATED.
- INSTALLATION OTHER THAN AS SHOWN MUST BE ENGINEER APPROVED TAPPING PROCESS SHOWN SHALL BE USED FOR ALL SANITARY SEWER MAINS.
- 10. SLOPE AND DEPTH OF THE SERVICE LATERAL SHALL BE DETERMINED BY THE TOPOGRAPHY OF THE LOT AS APPROVED BY THE ENGINEER OR AS INDICATED ON THE DRAWINGS
- 11. SLOPE OF LATERALS SHALL CONFORM TO 1/4" PER FOOT MIN. FOR 4" PIPE AND 1/8" PER FOOT MIN. FOR 6" PIPE. MAXIMUM CLEAN OUT SPACING FOR 4" PIPE IS 75', 100' FOR 6" PIPE
- 12. ENTIRE SEWER LATERAL ASSEMBLY SHALL BE AIR TESTED CONCURRENTLY WITH SEWER MAIN
- 13. INDIVIDUAL LATERALS SHALL BE CLEANED AND FLUSHED PRIOR TO FLUSHING SANITARY SEWER MAINS. 14. LATERAL SHALL NOT BE BACK-FILLED UNTIL INSPECTED BY THE PROJECT
- ENGINEER OR HIS REPRESENTATIVE. 15. WYE CONNECTIONS SHALL NOT BE USED TO TIE LATERALS INTO A MANHOLE,
- UNLESS OTHERWISE APPROVED BY ENGINEER. IF BENDS ARE APPROVED BY THE PROJECT ENGINEER. STONE BEDDING IS
- REQUIRED TO BE INSTALLED FROM UNDISTURBED SOIL TO BOTTOM OF BEND. 17. PVC COMBINATION SHALL BE 2 PIECE TEE-WYE, GASKETED, SDR35, AS

MANUFACTURED BY HARCO, GPK OR APPROVED EQUAL.

BE JOINTED TOGETHER SUCH THAT THE COMPLETED PIPE WILL HAVE A SMOOTH UTILITY GENERAL NOTES

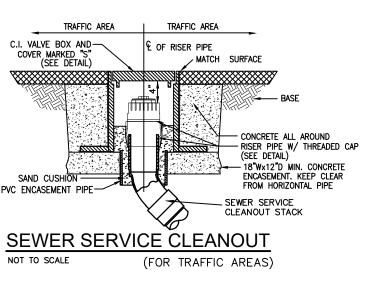
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- THE CONTRACTOR SHALL DIG UP EACH UTILITY WHICH MAY CONFLICT WITH CONSTRUCTION 14 DAYS IN ADVANCE TO VERIFY LOCATIONS (HORIZONTALLY AND VERTICALLY) TO ALLOW THE ENGINEER AN OPPORTUNITY TO ADJUST THE DESIGN TO AVOID CONFLICTS (NO SEPARATE PAYMENT).
- 3. ALL SANITARY SEWER & WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARDS AND SPECIFICATIONS OF THE NCDENR-DWQ & NCDENR-PWS. STORM DRAINAGE, STREET CONSTRUCTION AND PAVING SHALL BE IN ACCORDANCE WITH THE N.C.D.O.T
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- 5. CONTRACTOR SHALL COORDINATE WITH UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES AND SIGNS AND/OR UTILITIES IN ACCORDANCE WITH UTILITY OWNER REQUIREMENTS DURING THE UTILITY MAIN INSTALLATION AND STREET CONSTRUCTION. (NO SEPARATE
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- ANY DRIVEWAY CULVERTS DAMAGED DURING CONSTRUCTION SHALL BE EITHER REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE. FILTER FABRIC CLOTH SHALL BE PLACED OVER EITHER CULVERT ENDS DURING THE COURSE OF CONSTRUCTION. ALL EX. DRAINAGE INFRASTRUCTURE WILL BE RETURNED TO PRE-EXISTING CONDITIONS PRIOR TO FINAL PROJECT APPROVALS.

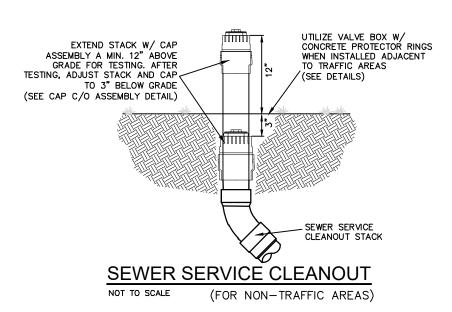
GENERAL NOTES SANITARY SEWER UTILITY

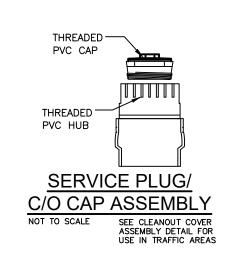
CLEANOUT ELEVATIONS AND/OR LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER WHEN NECESSARY. CLEANOUT STACK TOP ELEVATION IS DETERMINED BY INTERPOLATING FIELD DATA AND MAY NOT BE EXACT. CLEANOUT ELEVATION TOP SHALL BE SET IN ACCORDANCE WITH THE TYPICAL DETAIL DESCRIBED HEREON. (NO SEPARATE PAYMENT).

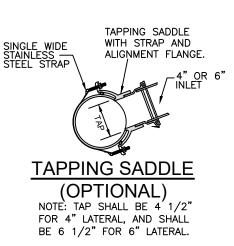
2. WHERE SANITARY SEWER MAINS ARE TO BE CONSTRUCTED WITHIN 20' OF EXISTING RESIDENCES SPECIAL CONSIDERATION SHALL BE GIVEN TO MINIMIZE UNDERMINING OR OTHERWISE DISTURBING EXISTING RESIDENCES ADJACENT TO THE SEWER MAIN. THE CONTRACTOR SHALL USE A RUBBER TIRED BACK HOE AND NO MECHANICAL COMPACTION EQUIPMENT IN THESE AREAS. THE TRENCH SHALL BE SHORED ADEQUATELY TO PREVENT ANY SLOTHING OF THE SIDE SLOPES. SUITABLE BACK FILL SHALL BE PLACED IN THE TRENCH. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR REPAIR OF STRUCTURES. FOUNDATIONS, FOOTINGS, ETC. DAMAGED DUE TO CONSTRUCTION.

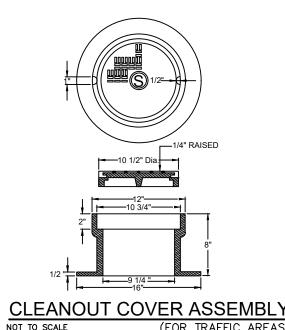
SANITARY SEWER MANHOLE DEFLECTION ANGLE'S ARE 180 DEGREES UNLESS NOTED OTHERWISE. ALL INVERT ELEVATIONS ARE SHOWN TO THE MANHOLE

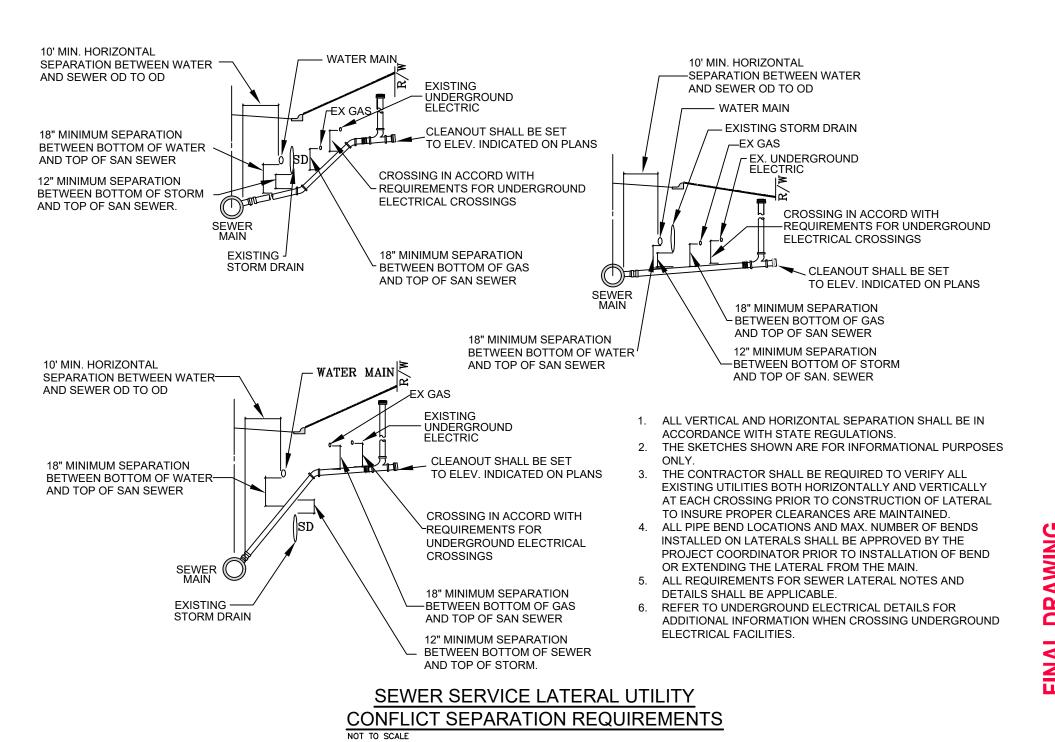












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