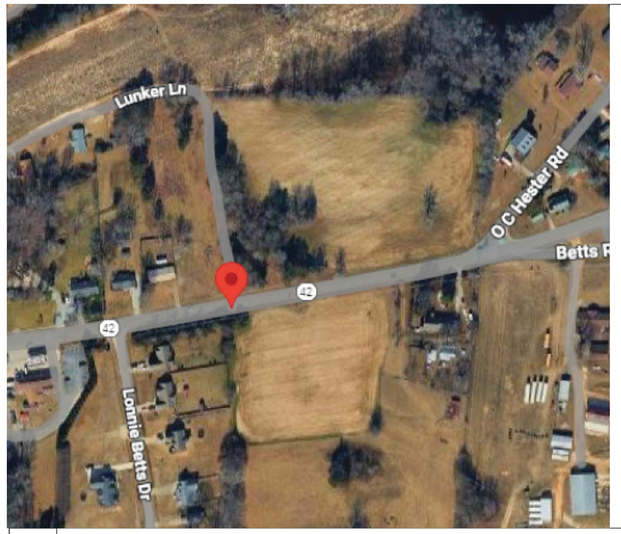
25-077



north

01 VICINITY MAP
NO SCALE

A FLEX BUILDING FOR:

Culver Flex Space

NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA

Reviewed for Fire Code Compliance
Harnett County
Leslie Jackson
08/31/2026 10:46:40 AM

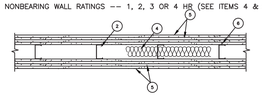
ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville, North Carolina 28312

ROBERT C. EVANS 8530 REGISTERED ARCHITECT FAYETTEVILLE, N.C. NORTH CAROLINA

12.17.25

A0.1

DESIGN NO. U419 / U465
NONBEARING WALL RATINGS -- 1, 2, 3 OR 4 HR (SEE ITEMS 4 & 5)



1. FLOOR AND CEILING RUNNERS -- (NOT SHOWN) --FOR USE WITH ITEM 2 – CHANNEL SHAPED, FABRICATED FROM MIN 25 MSG CORROSION-PROTECTED STEEL, MIN WIDTH TO ACCOMMODATE STUD SIZE, WITH MIN 1 IN. LONG LEGS, ATTACHED TO FLOOR AND CEILING WITH FASTENERS 24 IN. OC MAX.

1A. FLOOR AND CEILING RUNNERS* -- NOT SHOWN – IN LIEU OF ITEM 1 -- FOR USE WITH ITEM 2A, PROPRIETARY CHANNEL SHAPED, MIN. 3-5/8 IN. WIDE WITH 1 IN. LONG LEGS, FABRICATED FROM MIN. 0.0150 IN. (0.0146 IN., MIN BARE METAL THICKNESS) GALVANIZED STEEL, ATTACHED TO FLOOR AND CEILING WITH FASTENERS 24 IN. OC MAX.

DIETRICH INDUSTRIES INC -- ULTRASTEEL?.

1B. FLOOR AND CEILING RUNNERS -- (NOT SHOWN – IN LIEU OF ITEM FOR USE WITH ITEM 2A, PROPRIETARY CHANNEL SHAPED, MIN. 2-9/16 IN. WIDE WITH 1-3/16 IN. WIDE FLANGES, FABRICATED FROM MIN. 0.0150 IN. GALVANIZED STEEL, ATTACHED TO FLOOR AND CEILING FASTENERS 24 IN. OC. MAX.

DIETRICH INDUSTRIES INC -- ULTRASTEEL?.

2. STEEL STUDS -- CHANNEL SHAPED, FABRICATED FROM MIN 25 MSG CORROSION-PROTECTED STEEL, MIN WIDTH AS INDICATED UNDER ITEM 5, MIN 1-1/4 IN. FLANGES AND 1/4 IN. RETURN, SPACED A MAX OF 24 IN. OC. STUDS TO BE CUT 3/8 TO 3/4 IN. LESS THAN ASSEMBLY HEIGHT.

2A. STEEL STUDS* -- IN LIEU OF ITEM 2 -- PROPRIETARY CHANNEL SHAPED STUDS, MIN. WIDTH AS INDICATED UNDER ITEM 5, MIN. 1-1/4 IN. LONG LEGS AND 1/4 IN. LONG FOLDED BACK RETURN FLANGE LEGS, FABRICATED FROM MIN. 0.0155 IN. (0.0149 IN., MIN BARE METAL THICKNESS) GALVANIZED STEEL, SPACED A MAX OF 24 IN. OC. STUDS TO BE CUT 3/8 TO 3/4 IN. LESS THAN ASSEMBLY HEIGHT. ALLOWABLE USE OF STUDS IS SHOWN IN THE TABLE BELOW. FOR DIRECT ATTACHMENT OF GYPSUM BOARD ONLY.

DIETRICH INDUSTRIES INC -- ULTRASTEEL?.

2B. STEEL STUDS -- (AS AN ALTERNATE TO ITEM 2, FOR USE WITH ITEM 5B) CHANNEL SHAPED, FABRICATED FROM MIN 20 MSG (0.0327 IN. THICK) CORROSION-PROTECTED OR GALV STEEL, 3-1/2 IN. MIN WIDTH, MIN 1-1/2 IN. FLANGES AND 1/4 IN. RETURN, SPACED A MAX OF 16 IN. OC. STUDS FRICTION-FIT INTO FLOOR AND CEILING RUNNERS. STUDS TO BE CUT 5/8 TO 3/4 IN. LESS THAN ASSEMBLY HEIGHT.

3. WOOD STRUCTURAL PANEL SHEATHING -- (OPTIONAL, FOR USE WITH ITEM 5 ONLY.)– (NOT SHOWN) – 4 FT WIDE, 7/16 IN. THICK ORIENTED STRAND BOARD (OSB) OR 15/32 IN. THICK STRUCTURAL 1 SHEATHING (PLYWOOD) COMPLYING WITH DOC PS1 OR PS2, OR APA STANDARD PRP-108, MANUFACTURED WITH EXTERIOR GLUE, APPLIED HORIZONTALLY OR VERTICALLY TO THE STEEL STUDS. VERTICAL JOINTS CENTERED ON STUDS, AND STAGGERED ONE STUD SPACE FROM WALLBOARD JOINTS. ATTACHED TO STUDS WITH FLAT-HEAD SELF-DRILLING TAPPING SCREWS WITH A MIN. HEAD DIAM. OF 0.292 IN. AT MAXIMUM 6 IN. OC. IN THE PERIMETER AND 12 IN. OC. IN THE FIELD.

4. BATTS AND BLANKETS* -- (REQUIRED AS INDICATED UNDER ITEM 5) -- MINERAL WOOL BATTS, FRICTION FITTED BETWEEN STUDS AND RUNNERS. MIN NOM THICKNESS AS INDICATED UNDER ITEM 5. SEE BATTS AND BLANKETS (BKNV OR BZJZ) CATEGORIES FOR NAMES OF CLASSIFIED COMPANIES.

4A. BATTS AND BLANKETS* -- (OPTIONAL) -- PLACED IN STUD CAVITIES, ANY GLASS FIBER OR MINERAL WOOL INSULATION BEARING THE UL CLASSIFICATION MARKING AS TO SURFACE BURNING CHARACTERISTICS AND/OR FIRE RESISTANCE. SEE BATTS AND BLANKETS (BKNV OR BZJZ) CATEGORIES FOR NAMES OF CLASSIFIED COMPANIES.

5. GYPSUM BOARD* -- GYPSUM PANELS WITH BEVELED, SQUARE OR TAPERED EDGES, APPLIED VERTICALLY OR HORIZONTALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED ONE STUD CAVITY ON OPPOSITE SIDES OF STUDS. VERTICAL JOINTS IN ADJACENT LAYERS (MULTILAYER SYSTEMS) STAGGERED ONE STUD CAVITY. HORIZONTAL JOINTS NEED NOT BE BACKED BY STEEL FRAMING. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS ON OPPOSITE SIDES OF STUDS NEED NOT BE STAGGERED. HORIZONTAL EDGE JOINTS AND HORIZONTAL BUTT JOINTS IN ADJACENT LAYERS (MULTILAYER SYSTEMS) STAGGERED A MIN OF 12 IN. THE THICKNESS AND NUMBER OF LAYERS FOR THE 1 HR, 2 HR, 3 HR AND 4 HR RATINGS ARE AS FOLLOWS:

WALLBOARD PROTECTION ON EACH SIDE OF WALL

RATING	MIN STUD DEPTH, ITEM 2	MIN STUD DEPTH, ITEM 2A	NO. OF LAYERS & THKNS OF PANEL	MIN THKNS OF INSULATION (ITEM 4)
1	3-1/2	3-5/8	1 LAYER, 5/8 IN. THICK	OPTIONAL
1	2-1/2	3-5/8	1 LAYER, 1/2 IN. THICK	1-1/2 IN.
1	1-5/8	3-5/8	1 LAYER, 3/4 IN. THICK	OPTIONAL
2	1-5/8	2-1/2	2 LAYERS, 1/2 IN. THICK	OPTIONAL
2	1-5/8	2-1/2	2 LAYERS, 5/8 IN. THICK	OPTIONAL
2	3-5/8	3-5/8	1 LAYER, 3/4 IN. THICK	3 IN.
3	1-5/8	2-1/2	3 LAYERS, 1/2 IN. THICK	OPTIONAL
3	1-5/8	2-1/2	2 LAYERS, 3/4 IN. THICK	OPTIONAL
3	1-5/8	2-1/2	3 LAYERS, 5/8 IN. THICK	OPTIONAL
4	1-5/8	2-1/2	4 LAYERS, 5/8 IN. THICK	OPTIONAL
4	1-5/8	2-1/2	4 LAYERS, 1/2 IN. THICK	OPTIONAL
4	2-1/2	2-1/2	2 LAYERS, 3/4 IN. THICK	2 IN.

CANADIAN GYPSUM COMPANY -- 1/2 IN. THICK TYPE C, IP-X2 OR IPC-AR; WRC, 5/8 IN. THICK TYPE AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX OR WRC; 3/4 IN. THICK TYPES IP-X3 OR ULTRACODE

UNITED STATES GYPSUM CO -- 1/2 IN. THICK TYPE C, IP-X2, IPC-AR OR WRC; 5/8 IN. THICK TYPE SCX, SHX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 IN. THICK TYPES IP-X3 OR ULTRACODE

USG MEXICO S A DE C V -- 1/2 IN. THICK TYPE C, IP-X2, IPC-AR OR WRC; 5/8 IN. THICK TYPE AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC OR; 3/4 IN. THICK TYPES IP-X3 OR ULTRACODE

WHEN ITEM 7B, STEEL FRAMING MEMBERS*, IS USED, NONBEARING WALL RATING IS LIMITED TO 1 HR. MIN. STUD DEPTH IS 3-1/2 IN., MIN. THICKNESS OF INSULATION (ITEM 4) IS 3 IN., AND TWO LAYERS OF GYPSUM BOARD PANELS (1/2 IN. OR 5/8 IN. THICK) SHALL BE ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 6. ONE LAYER OF GYPSUM BOARD PANELS (1/2 IN. OR 5/8 IN. THICK) ATTACHED TO OPPOSITE SIDE OF STUD WITHOUT FURRING CHANNELS AS DESCRIBED IN ITEM 6.

5A. GYPSUM BOARD* -- (AS AN ALTERNATE TO ITEM 5) -- 5/8 IN. THICK, 24 TO 54 IN. WIDE, APPLIED HORIZONTALLY AS THE OUTER LAYER TO ONE SIDE OF THE ASSEMBLY. SECURED AS DESCRIBED IN ITEM 6.

CANADIAN GYPSUM COMPANY -- TYPE SHX.

UNITED STATES GYPSUM CO -- TYPE FRX-G, SHX.

USG MEXICO S A DE C V -- TYPE SHX.

5B. GYPSUM BOARD* -- (AS AN ALTERNATE TO ITEM 5 WHEN USED AS THE BASE LAYER ON ONE OR BOTH SIDES OF WALL, FOR DIRECT ATTACHMENT ONLY, NOT TO BE USED WITH ITEM 3) – NOM 5/8 IN. THICK LEAD BACKED GYPSUM PANELS WITH BEVELED, SQUARE OR TAPERED EDGES, APPLIED VERTICALLY. VERTICAL JOINTS CENTERED OVER STUDS AND STAGGERED MIN 1 STUD CAVITY ON OPPOSITE SIDES OF STUDS. WALLBOARD SECURED TO STUDS WITH 1-1/4 IN. LONG TYPE S-12 STEEL SCREWS SPACED 8 IN. OC AT PERIMETER AND 12 IN. OC IN THE FIELD.
RAY-BAR ENGINEERING CORP -- TYPE RB-LBG

6. FASTENERS -- (NOT SHOWN) --- FOR USE WITH ITEM 2 – TYPE S OR S-12 STEEL SCREWS USED TO ATTACH PANELS TO STUDS (ITEM 2) OR FURRING CHANNELS (ITEM 7). LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 8 IN. OC WHEN PANELS ARE APPLIED HORIZONTALLY, OR 8 IN. OC ALONG VERTICAL AND BOTTOM EDGES AND 12 IN. OC IN THE FIELD WHEN PANELS ARE APPLIED VERTICALLYFIRST LAYER– 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 16 IN. OC WITH SCREWS OFFSET 8 IN. FROM LAYER BELOW. THREE-LAYER SYSTEMS: OC. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. THIRD LAYER– 2-1/4 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS OR 2-5/8 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 12 IN. OC. SCREWS OFFSET MIN 6 IN. FROM LAYER BELOW. FOUR-LAYER SYSTEMS: FIRST LAYER– 1 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. THIRD LAYER– 2-1/4 IN. LONG FOR 1/2 IN. THICK PANELS, SPACED 24 IN. OC. OR 2-5/8 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 24 IN. OC. FOURTH LAYER– 2-5/8 IN. LONG FOR 1/2 IN. THICK PANELS OR 3 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 12 IN. OC. SCREWS OFFSET MIN 6 IN. FROM LAYER BELOW.

6A. FASTENERS -- (NOT SHOWN) ---FOR USE WITH ITEM 2A – TYPE S OR S-12 STEEL SCREWS USED TO ATTACH PANELS TO STUDS (ITEM 2)SINGLE LAYER SYSTEMS: 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 8-1/2 IN. OC WITH ADDITIONAL SCREWS 1 IN. AND 2-1/2 IN. FROM EDGES OF THE BOARD WHEN PANELS ARE HORIZONTALLY, OR 8 IN. OC ALONG VERTICAL AND BOTTOM EDGES AND 12 IN. OC IN THE FIELD WHEN PANELS ARE APPLIED VERTICALLYTWO LAYER SYSTEMS APPLIED VERTICALLYFIRST LAYER– 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 16 IN. OC. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS OR 2-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 24 IN. OC WITH SCREWS OFFSET 8 IN. FROM FIRST LAYERTWO LAYER SYSTEMS APPLIED HORIZONTALLYFIRST LAYER– 1 IN. LONG FOR 1/2 AND 5/8 IN. THICK PANELS OR 1-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 16 IN. OC STARTING 8 IN. FROM EACH EDGE OF THE BOARD WITH AN ADDITIONAL SCREW PLACED 1-1/4 IN. FROM EACH EDGE OF THE BOARD. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS OR 2-1/4 IN. LONG FOR 3/4 IN. THICK PANELS, SPACED 16 IN. OC STARTING 8 IN. FROM EACH EDGE OF THE BOARD WITH AN ADDITIONAL SCREW PLACED 1-1/4 IN. FROM EACH EDGE OF THE BOARD WITH SCREWS OFFSET 8 IN. FROM FIRST LAYER. FIRST LAYER– 1 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. THIRD LAYER– 2-1/4 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS OR 2-5/8 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 12 IN. OC. SCREWS OFFSET MIN 6 IN. FROM LAYER BELOW. FOR ALL LAYERS, AN ADDITIONAL SCREW SHALL BE PLACED 1-1/4 IN. FROM EACH EDGE OF THE BOARDOUR–LAYER SYSTEMS: FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. SECOND LAYER– 1-5/8 IN. LONG FOR 1/2 IN., 5/8 IN. THICK PANELS, SPACED 24 IN. OC. THIRD LAYER– 2-1/4 IN. LONG FOR 1/2 IN. THICK PANELS OR 2-5/8 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 24 IN. OC. FOURTH LAYER– 2-5/8 IN. LONG FOR 1/2 IN. THICK PANELS OR 3 IN. LONG FOR 5/8 IN. THICK PANELS, SPACED 12 IN. OC. SCREWS OFFSET MIN 6 IN. FROM LAYER BELOW. FOR ALL LAYERS, AN ADDITIONAL SCREW SHALL BE PLACED 1-1/4 IN. FROM EACH EDGE OF THE BOARD.

7. FURRING CHANNELS -- (OPTIONAL, NOT SHOWN, FOR SINGLE OR DOUBLE LAYER SYSTEMS) --- RESILIENT FURRING CHANNELS FABRICATED FROM MIN 25 MSG CORROSION-PROTECTED STEEL, SPACED VERTICALLY A MAX OF 24 IN. OC. FLANGE PORTION ATTACHED TO EACH INTERSECTING STUD WITH 1/2 IN. LONG TYPE S-12 STEEL SCREWS. NOT FOR USE WITH ITEM 5A.

7A. STEEL FRAMING MEMBERS (NOT SHOWN)* --(OPTIONAL ON ONE OR BOTH SIDES, NOT SHOWN, FOR SINGLE OR DOUBLE LAYER SYSTEMS) --- AS AN ALTERNATE TO ITEM 7, FURRING CHANNELS AND STEEL FRAMING MEMBERS AS DESCRIBED BELOW:

A. FURRING CHANNELS -- FORMED OF NO. 25 MSG GALV STEEL, 2-3/8 IN. WIDE BY 7/8 IN. DEEP, SPACED MAX. 24 IN. OC PERPENDICULAR TO STUDS. CHANNELS SECURED TO STUDS AS DESCRIBED IN ITEM B. GYPSUM BOARD ATTACHED TO FURRING CHANNELS AS DESCRIBED IN ITEM 6. NOT FOR USE WITH ITEM 5A.

B. STEEL FRAMING MEMBERS* -- USED TO ATTACH FURRING CHANNELS (ITEM 7AA) TO STUDS (ITEM 2). CLIPS SPACED MAX. 48 IN. OC. RSIC-1 CLIPS SECURED TO STUDS WITH NO. 8 X 1-1/2 IN. MINIMUM SELF-DRILLING, S-12 STEEL SCREW THROUGH THE CENTER GROMMET. RSIC-V CLIPS SECURED TO STUDS WITH NO. 8 X 9/16 IN. MINIMUM SELF-DRILLING, S-12 STEEL SCREW THROUGH THE CENTER HOLE. FURRING CHANNELS ARE FRICTION FITTED INTO CLIPS.

PAC INTERNATIONAL INC --

7B. STEEL FRAMING MEMBERS (OPTIONAL, NOT SHOWN)* -- TYPES RSIC-1, RSIC--V. CHANNELS AND STEEL FRAMING MEMBERS ON ONLY ONE SIDE OF STUDS AS DESCRIBED BELOW:

U419

02 1HR. & 2 HR. FIRE WALL
NO SCALE

* ALL RATINGS APPLY WHEN INTERIOR UPFIT IS PERMITTED

MATERIAL LEGEND

CONCRETE		BATT INSULATION	
EARTH		STEEL	
WOOD FRAMING		CONCRETE BLOCK	
WOOD TRIM		BRICK	
PLYWOOD		GYPSUM BOARD	
CARPET		CAULKING	

DRAWING SYMBOLS

01 / A5.6 — DETAIL CUT

clubroom / F214 — ROOM NAME & FINISH SCHEDULE

01 / A5.6 — ENLARGED PLAN OR DETAIL

W202 — WINDOW SCHEDULE

D201 — DOOR SCHEDULE

01 / A4.2 — DETAIL SECTION OR BUILDING SECTION

01 / A4.2 — INTERIOR ELEVATION

GENERAL NOTES

1. ALL WORK ON THIS APPLICATION SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES, LATEST AMENDMENTS.
2. THE CONTRACTOR SHALL REFER TO DIMENSIONS AND SHALL NOT SCALE THESE DRAWINGS.
3. ALL DIMENSIONS ARE SHOWN TO THE FACE OF ROUGH EXCEPT WHERE NOTED OTHERWISE.
4. NO LOADS SHALL BE APPLIED TO SUSPENDED CEILINGS.
5. THE CONTRACTOR SHALL PROVIDE BLOCKING, GROUNDS, ETC. FOR FIXTURES, SHELVING, TRIM, GYPSUM BOARD, DECKING, PLUMBING FIXTURES, ETC., WHERE THEY ARE REQUIRED.
6. THE CONTRACTOR IS RESPONSIBLE FOR AND SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND DETAILS PRIOR TO PROCEEDING WITH ANY WORK, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER IN WRITING IMMEDIATELY.

ABBREVIATIONS

ALUM. – Aluminum
ARCH. – Architectural
BD. – Board
BM. – Beam
CL – Centerline
CLG. – Ceiling
COL. – Column
CONC. – Concrete
CONT. – Continuous
DIM. – Dimension
DISP. – Disposal
DN. – Down
D.S. – Downspout
DW. – Dishwasher
EA. – Each
EQ. – Equal
F.F. – Finish Floor
FIN. – Finished
G.C. – General Contractor
GYP. – Gypsum Board
HD. – Hand
HDR. – Header
HR. – Hour
INSUL. – Insulation
L. – Linen
MFR. – Manufacturer
MW. – Microwave
O.C. – On Center
OPP. – Opposite
PLWD. – Plywood
Q. – Quarry
R. – Rod
REQ'D. – Required
RFGR. – Refrigerator
R.O. – Rough Opening
R/O – Range/Oven
S. – Shelf
S.F. – Square Feet
SIM. – Similar
T.O. – Top Of
TYP. – Typical
V. – Volt
W/ – With
WD. – Wood
W.H. – Water Heater

CONSULTANTS

STRUCTURAL

SUMMIT DESIGN GROUP, INC
STRUCTURAL • CIVIL • MECHANICAL • ELECTRICAL
PO BOX 995
BLADENBORO, NC 28320
910-876-0376

MECHANICAL

Coastal Plains Engineering
P.O. Box 2446
Pembroke, NC 28372
Phone: 910.521.7213

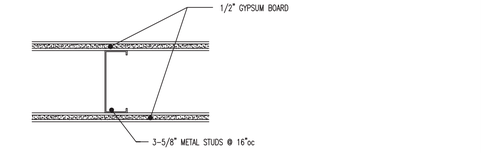
DRAWING LIST

ARCHITECTURAL
A0.1 PROJECT INFORMATION
A0.2 APPENDIX B
A1.1 BUILDING FLOOR PLAN
A1.2 LIFE SAFETY PLAN
A2.1 SCHEDULES / DETAILS
A3.1 ELEVATIONS
A4.1 BUILDING SECTION

STRUCTURAL
S1 FOUNDATION PLAN

ELECTRICAL
E1 RISER DIAGRAM / DETAILS
E2 ELECTRICAL PLAN

PLUMBING
P1 PLUMBING PLAN



TYPICAL
03 TYPICAL PARTITION
3" = 1'0"

25-077

NORTH CAROLINA BUILDING CODE SUMMARY – NC 2018 BUILDING CODE

NAME OF PROJECT: A STRIP BUILDING FOR: CULVER FLEX SPACE
PROJECT ADDRESS: NC 42, HOLLY SPRINGS, NORTH CAROLINA 27540
OWNER / CONTACT: JEFF CULVER
PHONE #: TELEPHONE: 919.896.2280
EMAIL: thphomes@gmail.com
OWNED BY: ■ PRIVATE ☐ CITY/COUNTY ☐ STATE
CODE ENFORCEMENT: ☐ CITY ■ COUNTY ☐ STATE

DESIGN PROFESSIONALS

CONTACT: ROBERT C. EVANS, ARCHITECT

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	EMAIL
ARCHITECTURAL	ROBERT C. EVANS, ARCHITECT	ROBERT C. EVANS	6530	910.624.9259	rcearch@gmail.com
CIVIL	NO WORK				
ELECTRICAL	COASTAL PLAINS ENGINEERING	CHRISTOPHER LOCKLEAR	09079	910.521.7213	coastalplainseng@gmail.com
FIRE ALARM	NO WORK				
PLUMBING	COASTAL PLAINS ENGINEERING	CHRISTOPHER LOCKLEAR	09079	910.521.7213	coastalplainseng@gmail.com
MECHANICAL	NO WORK				
SPRINKLER	NO WORK				
STRUCTURAL	SUMMIT DESIGN GROUP	ROBERT ARMSTRONG, JR.	025488	910.876.0376	rpajr@twc.com
RETAINING WALL	NO WORK				
OTHER	NO WORK				

BUILDING CODE DATA

2018 NC BUILDING CODE: ■ NEW BUILDING ☐ ADDITION ☐ RENOVATION
☐ FIRST TIME INTERIOR COMPLETION
☐ SHELL/CORE – CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS
☐ PHASED CONSTRUCTION – SHELL/CORE – CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

2018 NC EXISTING BUILDING CODE: EXISTING: ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14
ALTERATION: ☐ LEVEL I ☐ LEVEL II ☐ LEVEL III
☐ HISTORIC PROPERTY ☐ CHANGE OF USE

CONSTRUCTED: (date) UNKNOWN — PREVIOUS OCCUPANCY: n/a
RENOVATED: (date) UNKNOWN — PROPOSED OCCUPANCY: STORAGE, S-2

RISK CATEGORY: (table 1604.5) PREVIOUS: ☐ I ☐ II ☐ III ☐ IV
PROPOSED: ☐ I ■ II ☐ III ☐ IV

BASIC BUILDING DATA

CONSTRUCTION TYPE: ☐ I-A ☐ II-A ☐ III-A ☐ IV-A ☐ V-A
☐ I-B ■ II-B ☐ III-B ☐ V-B

SPRINKLERS: ■ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
STANDPIPES: ■ NO ☐ YES CLASS ☐ I ☐ II ☐ III ☐ WET ☐ DRY
FIRE DISTRICT: ■ NO ☐ YES FLOOD HAZARD AREA: ■ NO ☐ YES
BUILDING HEIGHT: 26'-0"± FEET 1 NUMBER OF STORIES ☐ UNLIMITED PER
MEZZANINE: ■ NO ☐ YES
HIGH RISE: ■ NO ☐ YES CENTRAL REFERENCE SHEET # (IF PROVIDED)
FLOOD HAZARD: ■ NO ☐ YES
SPECIAL INSPECTION REQUIRED: ■ NO ☐ YES CONTACT THE LOCAL INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES AND REQUIREMENTS

GROSS BUILDING AREA TABLE:

FLOOR	TYPICAL SUITE	TOTAL GROSS
FIRST FLOOR	2,000	16,150
	TOTAL	16,150

ALLOWABLE AREA

PRIMARY OCCUPANCY CLASSIFICATION(S):
☐ ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☐ BUSINESS
☐ EDUCATIONAL
☐ FACTORY ☐ F-1 MODERATE ☐ F-2 LOW
☐ HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM
☐ INSTITUTIONAL ☐ I-1 CONDITION ☐ 1 ☐ 2
☐ I-2 CONDITION ☐ 1 ☐ 2
☐ I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ MERCANTILE
☐ RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
■ STORAGE ☐ S-1 MODERATE ■ S-2 LOW ☐ HIGH-PILED
☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE
☐ UTILITY AND MISCELLANEOUS

ACCESSORY OCCUPANCY CLASSIFICATION: BUSINESS
INCIDENTAL USES (Table 509): N/A
SPECIAL USES (CHAPTER 4–LIST CODE SECTIONS): N/A
SPECIAL PROVISIONS (CHAPTER 5–LIST CODE SECTIONS): N/A
MIXED OCCUPANCY: ■ NO ☐ YES SEPARATION: _____ HR. EXCEPTION: _____

■ NON–SEPARATED MIXED OCCUPANCY (508.3)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ SEPARATED MIXED OCCUPANCY (508.4) – See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.
ACTUAL AREA OF OCCUPANCY A / ALLOWABLE AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B / ALLOWABLE AREA OF OCCUPANCY B ≤ 1

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR OPEN SPACE INCREASE[1,5]	(E) ALLOWABLE AREA OR UNLIMITED[2,3]
ONE	STORAGE, S–2	16,000	26,000	–	26,000
–	–	–	–	–	–
–	–	–	–	–	–

I = [F/P – 0.25] W/30

1 – FRONTAGE AREA INCREASES FROM SECTION 506.2.
2 – UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.
3 – MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES x D (MAXIMUM 3 STORIES) (506.2)
4 – THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.5.4.
5 – FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET (TABLE 504.3)	55'	24'–4"±	N/A
BUILDING HEIGHT IN STORIES (TABLE 504.4)	2	1	N/A

1 – PROVIDE CODE REFERENCE IF THE "SHOWN ON PLANS" QUANTITY IS NOT BASED ON TABLE 504.3 OR 504.4.

FIRE RESISTANCE RATINGS

* ALL RATINGS APPLY WHEN INTERIOR UPFIT IS PERMITTED

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES							
BEARING WALLS							
EXTERIOR							
NORTH	30'±	N / A	0	–	–	–	–
EAST	30'±	N / A	0	–	–	–	–
WEST	10'	N / A	0	–	–	–	–
SOUTH	30'±	N / A	0	–	–	–	–
INTERIOR	N / A	N / A	0	–	–	–	–
NONBEARING WALLS AND PARTITIONS							
EXTERIOR							
NORTH	–	0	0	–	–	–	–
EAST	–	0	0	–	–	–	–
WEST	–	0	0	–	–	–	–
SOUTH	–	0	0	–	–	–	–
INTERIOR	–	0	0	–	–	–	–
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		0	0	–	–	–	–
FLOOR CEILING ASSEMBLY		0	0	–	–	–	–
COLUMNS SOPPORTING FLOORS		0	0	–	–	–	–
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS		0	0	–	–	–	–
ROOF CEILING ASSEMBLY		0	0	–	–	–	–
COLUMNS SUPPORTING ROOF		0	0	–	–	–	–
SHAFTS ENCLOSURES – EXIT		0	0	–	–	–	–
SHAFTS ENCLOSURES – OTHER		0	0	–	–	–	–
CORRIDOR SEPARATION		0	0	–	–	–	–
OCCUPANCY / FIRE BARRIER SEPARATION		0	0	–	–	–	–
PARTY / FIRE WALL SEPARATION		2 HR	2 HR	02/COV1	U419	–	–
SMOKE BARRIER SEPARATION		0	0	–	–	–	–
SMOKE PARTITION		0	0	–	–	–	–
TENANT SEPARATION		0	1 HR	02/COV1	U419	–	–
INCIDENTAL USE SEPARATION		0	0	–	–	–	–

* INDICATE SECTION NUMBER PERMITTING REDUCTION

PERCENTAGE OF WALL OPENINGS CALCULATIONS

WALL	FIRE SEPARATION DISTANCE FROM PROPERTY LINES (FEET)	DEGREE OF OPENINGS PROTECTION TABLE 705.8	PERCENTAGE OF ALLOWABLE AREA	ACTUAL PERCENTAGE OF OPENING ON PLANS
NORTH	N/A	–	UL	UL
SOUTH	N/A	–	UL	UL
EAST	N/A	–	UL	UL
WEST	N/A	–	UL	UL

LIFE SAFETY SYSTEMS

EMERGENCY LIGHTING: ☐ NO ■ YES — SMOKE DETECTION SYSTEM: ■ NO ☐ YES
EXIT SIGNS: ☐ NO ■ YES — CARBON MONO. DETECTION: ■ NO ☐ YES
FIRE ALARM: ■ NO ☐ YES — PANIC HARDWARE: ■ NO ☐ YES

LIFE SAFETY PLAN A1.2

Check items that are applicable to this project:
■ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations
☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
■ Occupancy types for each area as it relates to occupant load calculations (Table 1004.1.1)
■ Occupant loads for each area
■ Exit access travel distance (1017)
■ Common path of travel distance (1006.2.1 & 1006.3.2(1))
☐ Dead end lengths (1020.4)
■ Clear exit widths for each exit door
■ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
■ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1010.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
☐ Location of doors with electromagnetic egress locks (1010.1.9.9)
☐ Location of doors equipped with hold–open devices
☐ Location of emergency escape windows (1030)
☐ The square footage of each fire area (202)
☐ The square footage of each smoke compartment (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS — SEE PRE-ENGINEERED PLANS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS REQUIRED	MINIMUM[2] NUMBER OF EXITS SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE TRAVEL DISTANCE	TRAVEL DISTANCE ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS[1,3] REQUIRED DISTANCE BETWEEN EXIT DOORS	ARRANGEMENT MEANS OF EGRESS[1,3] ACTUAL DISTANCE SHOWN ON PLANS
SUITE	1	2	200'	39'–7"	N/A	N/A

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] SQ FT	(b) AREA[1] PER OCCUPANT	OCCUPANT CONTENT	(c) EGRESS WIDTH PER OCCUPANT (1005.3) STAIR	(c) EGRESS WIDTH PER OCCUPANT (1005.3) LEVEL	EXIT WIDTH (IN) REQUIRED WIDTH (a ÷ b) x c STAIR	EXIT WIDTH (IN) REQUIRED WIDTH (a ÷ b) x c LEVEL	EXIT WIDTH (IN) ACTUAL WIDTH SHOWN ON PLANS STAIR	EXIT WIDTH (IN) ACTUAL WIDTH SHOWN ON PLANS LEVEL
SUITE	2,000	–	–	N/A	0.2	N/A	–	N/A	72
TOTAL OCCUPANT		–							

ACCESSIBLE DWELLING UNITS — N/A

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
–	–	–	–	–	–	–	–

ACCESSIBLE PARKING (SECTION 1106) — N/A-SEE CIVVIL PLANS

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED VAN SPACES WITH REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
NEW	–	–	–	–	–	–
TOTAL REQUIRED	–	–	–	–	–	–
TOTAL PROVIDED	–	–	–	–	–	–

PLUMBING FIXTURE REQUIREMENTS

* FIXTURE COUNT WILL BE TABULATED FOR UPFIT PERMITS APPLY WHEN INTERIOR UPFIT IS PERMITTED

		WATERCLOSETS MALE	WATERCLOSETS FEMALE	WATERCLOSETS UNISEX	URINALS	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX	SHOWERS /TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE	SERVICE SINK
SPACE	EXIST'G	–		–	–	–		–	–	–	–	–
	NEW											
	REQ'D											

SPECIAL APPROVALS — N/A

(Describe special approvals from local jurisdictions, County of State Department of Health, NC Department of Insurance, International Code Council, etc.)

ENERGY SUMMARY -

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ NO ■ YES ☐ UNKNOWN
EXEMPT BUILDING: ☐ NO ☐ YES (CODE OR STATUTORY REF.)
CLIMATE ZONE: ■ 3A ☐ 4A ☐ 5A
METHOD OF COMPLIANCE: ENERGY CODE: ☐ PERFORMANCE ■ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE

ROOF/CEILING ASSEMBLY
DESCRIPTION OF ASSEMBLY: PRE–ENGINEERED STEEL w/ SIMPLE SAVER INSUL
U–VALUE OF TOTAL ASSEMBLY: 0.0333
R–VALUE OF INSULATION: R–30
SKYLIGHTS IN EACH ASSEMBLY: –
U–VALUE OF SKYLIGHT: –
TOTAL SQ.FT. OF SKYLIGHTS IN EACH ASSEMBLY: –

EXTERIOR WALLS
DESCRIPTION OF ASSEMBLY: 6" METAL STUDS
U–VALUE OF TOTAL ASSEMBLY: 0.05
R–VALUE OF INSULATION: R–19
OPENINGS
U–VALUE OF ASSEMBLY: –
SOLAR HEAT GAIN COEFFICIENT: –
PROJECTION FACTOR: –
DOOR R–VALUE: R–6

WALLS BELOW GRADE
DESCRIPTION OF ASSEMBLY: –
U–VALUE OF TOTAL ASSEMBLY: –
R–VALUE OF INSULATION: –

FLOORS OVER UNCONDITIONED SPACE
DESCRIPTION OF ASSEMBLY: –
U–VALUE OF TOTAL ASSEMBLY: –
R–VALUE OF INSULATION: –

FLOORS SLAB ON GRADE
DESCRIPTION OF ASSEMBLY: –
U–VALUE OF TOTAL ASSEMBLY: –
R–VALUE OF INSULATION: –
HORIZONTAL/VERTICAL REQUIREMENT: –
SLAB HEATED: –

STRUCTURAL DESIGN — SEE PRE-ENGINEERED PLANS

DESIGN LOADS:
IMPORTANCE FACTORS: SNOW – SEISMIC –
LIVE LOADS: ROOF – MEZZANINE – FLOOR –
GROUND SNOW LOADS: – psf
WIND LOADS: BASIC WIND SPEED – mph (ASCE–7) EXPOSURE CATEGORY –

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ☐ C ☐ D
PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:
RISK CATEGORY (Table 1604.5): ☐ 1 ☐ 2 ☐ 3 ☐ 4
SPECTRAL RESPONSE ACCELERATION: Sms: – %g Sm1: – %g
SITE CLASSIFICATION: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F
DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA
BASIC STRUCTURAL SYSTEM: ☐ BEARING WALL ☐ DUAL w/ SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL w/ INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM
ANALYSIS PROCEDURE: ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC
ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED: ☐ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITY:
FIELD TEST: – psf
PRESUMPTIVE BEARING CAPACITY: 2,000 psf
PILE SIZE, TYPE AND CAPACITY: –

SPECIAL INSPECTIONS CHAPTER 17 — N/A

SPECIAL INSPECTIONS SHALL BE CONDUCTED ON ALL PROJECTS THAT FALL WITHIN BUILDING CATEGORIES AND/OR CONTAIN ELEMENTS SUBJECT TO SPECIAL INSPECTIONS AS PRESCRIBED BY REVISED SECTION 1704.

To schedule the required preconstruction meeting with the City of Raleigh please call 807–5111

List whom will inspect the required special inspections
Fabricator of load bearing components –
Soil tests –
Concrete, caissons, piles, piers, precast –
Post tension concrete –
Modular construction –
Steel and connections, welds, bolts, anchors –
Fire spray tests –
Smoke control –
Seismic, wind designs, Quality Assurance –
Retaining wall –
Masonry –
Wood –
Alternate Methods –
EFIS –
Other (describe) –
Other (describe) –
Owner or agent –

ELECTRICAL SUMMARY — N/A - SEE PME

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: ☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

* Provide a standard riser diagram which indicates designated points for check metering.
* Provide a standard panel schedule description which identifies different end use loads.

Lighting schedule
Lamp type required in fixture
Number of lamps in fixture
Ballast type used in the fixture
Number of ballasts in fixture
Total wattage per fixture
Total interior wattage specified vs. allowed
Total exterior wattage specified vs. allowed

Equipment schedules with motors (not used for mechanical systems)
Motor horsepower
Number of phases
Minimum efficiency
Motor type
# of poles

MECHANICAL SUMMARY — N/A - SEE PME

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Method of Compliance: ☐ Prescriptive ☐ Performance ☐ Energy Cost Budget
THERMAL ZONE
Exterior design conditions
Winter dry bulb
Summer dry bulb
Interior design conditions
Winter dry bulb
Summer dry bulb
Relative humidity
BUILDING HEATING LOAD
BUILDING COOLING LOAD
MECHANICAL SPACING CONDITIONING SYSTEM
Unitary
Description of unit
Heating efficiency
Cooling efficiency
Heat output of unit
Cooling output of unit
Boiler
Total boiler output. If oversized, state reason.
Chiller
Total chiller capacity. If oversized, state reason.
LIST EQUIPMENT EFFICIENCIES
EQUIPMENT SCHEDULES WITH MOTORS (mechanical systems)
Motor horsepower
Number of phases
Minimum efficiency
Motor type
# of poles

SHELL VARIABLE FORM -

Check each applicable line to match scope of work. Edit as necessary to provide clear detail of installation.

MECHANICAL:
■ No work ☐ Equipment set___ with___ without power ☐ Gas line
☐ Trunk line installed___ with___ without outlets ☐ Install complete operational system
☐ Other

PLUMBING:
■ No work ☐ Install water service and sewer ☐ Install complete plumbing system
☐ Install building drain___ and___ or water distribution main___ with___ without branches
☐ Other

SPRINKLER:
☐ Install complete plumbing system

BUILDING:
■ Install slab__x__ partial___ complete ☐ Install demising walls
☐ Install interior partitioning___ partial___ complete ☐ Install ceilings
☐ White box (additional interior completion permits are required for Certificate of Occupancy and power)
☐ Other

ELECTRICAL:
■ House panel (CONNECTING TO) ☐ Service laterals to meter centers/panels located on buildings
☐ Demise wall and ceilings only ☐ Conduit, duct, raceway, in slab
☐ Power and lighting circuits to "J" Box ☐ Install light fixtures
☐ Install ___ Heat/AC___ Elevator___ Generator___ Parking lot lighting
☐ Install complete system
☐ Other

Please Provide full information on any Alternative Methods and Means incorporated into the design of this project. Provide specific details and incorporate into plan submittal any supporting documents or agreement letters.

WALL LEGENDS

☐ FIRE PARTITIONS 709 ☐ FIRE WALLS 706 ☐ FIRE BARRIERS 707
☐ SMOKE PARTITIONS 711 ☐ SMOKE BARRIERS 710 ☐ SHAFT ENCLOSURE 708

ROBERT C. EVANS REGISTERED ARCHITECT 6530 NORTH CAROLINA FAYETTEVILLE, N.C.

12.17.25

ROBERT CHARLES EVANS ARCHITECT A R C H I T E C T U R E
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Appendix B

Project Name:
A Commercial Building for:
Culver Flex Space

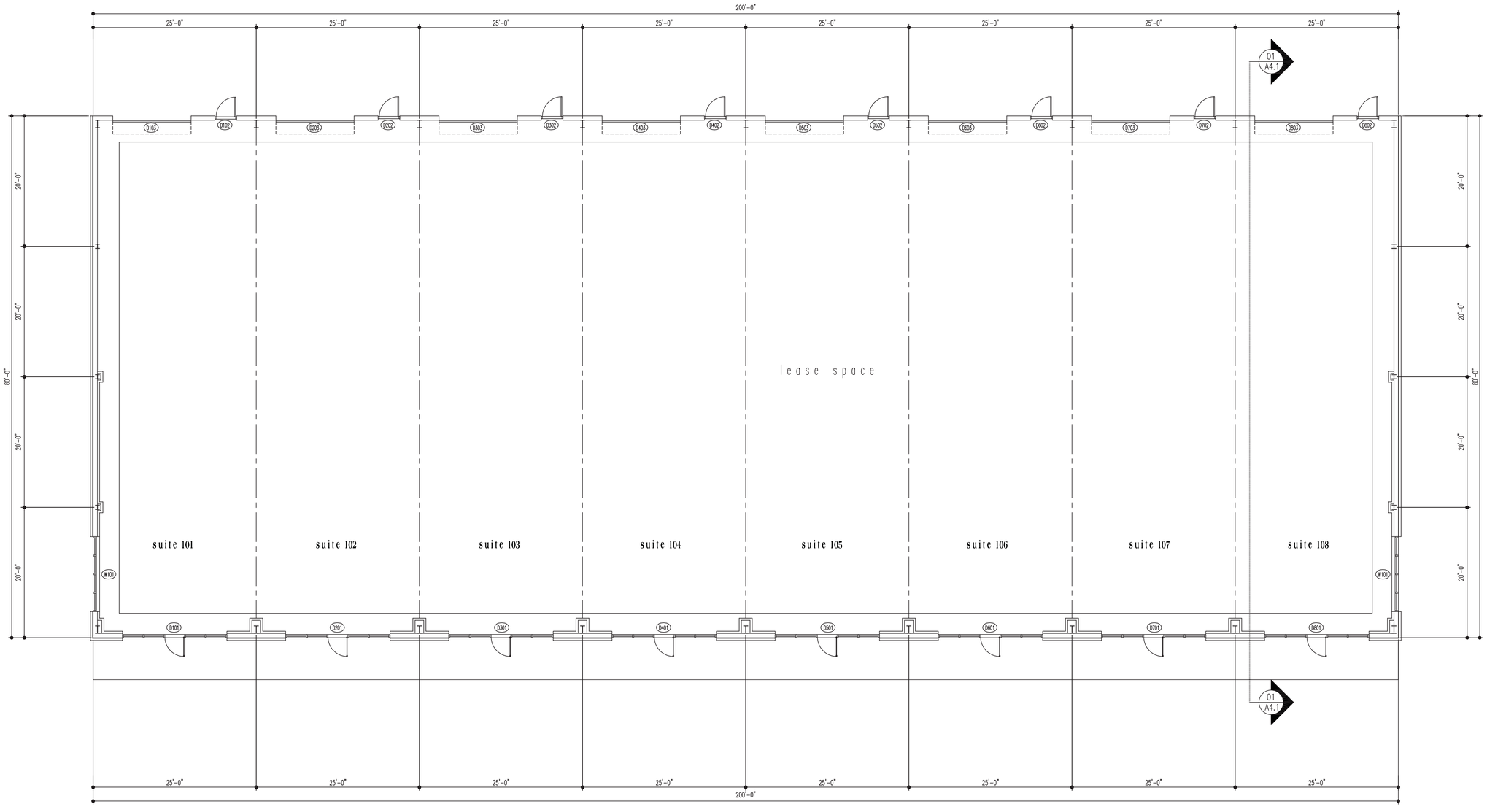
Project Location:
NC 42
Holly Springs
North Carolina 27540

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PROJECT NO:	25–077
DRAWN BY:	RCE.jec
DATE:	12.13.25
REVISIONS:	

SHEET NO:
A0.2



NOTES:

1. A 2 HOUR FIRE WALL (AS PER DETAIL 02/A0.1) NEEDS TO BE NSTALLED DURING INTERIOR UPFIT TO SEPARATE THE BUILDING INTO TWO SPACES LESS THAN 12,000sf FIRE AREA.
2. A 1 HOUR TENANT SEPARATION WALL (AS PER DETAIL 02/A0.1) NEEDS TO BE NSTALLED DURING INTERIOR UPFIT. EXTEND WALL TO ROOF DECK. SEE NCBC 2018, SECTION 508

01 BUILDING FLOOR PLAN
1/8" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
6330
NORTH CAROLINA
FAYETTEVILLE, N.C.

12.17.25

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Building Floor Plan

Project Name:
A Commercial Building for:
Culver Flex Space

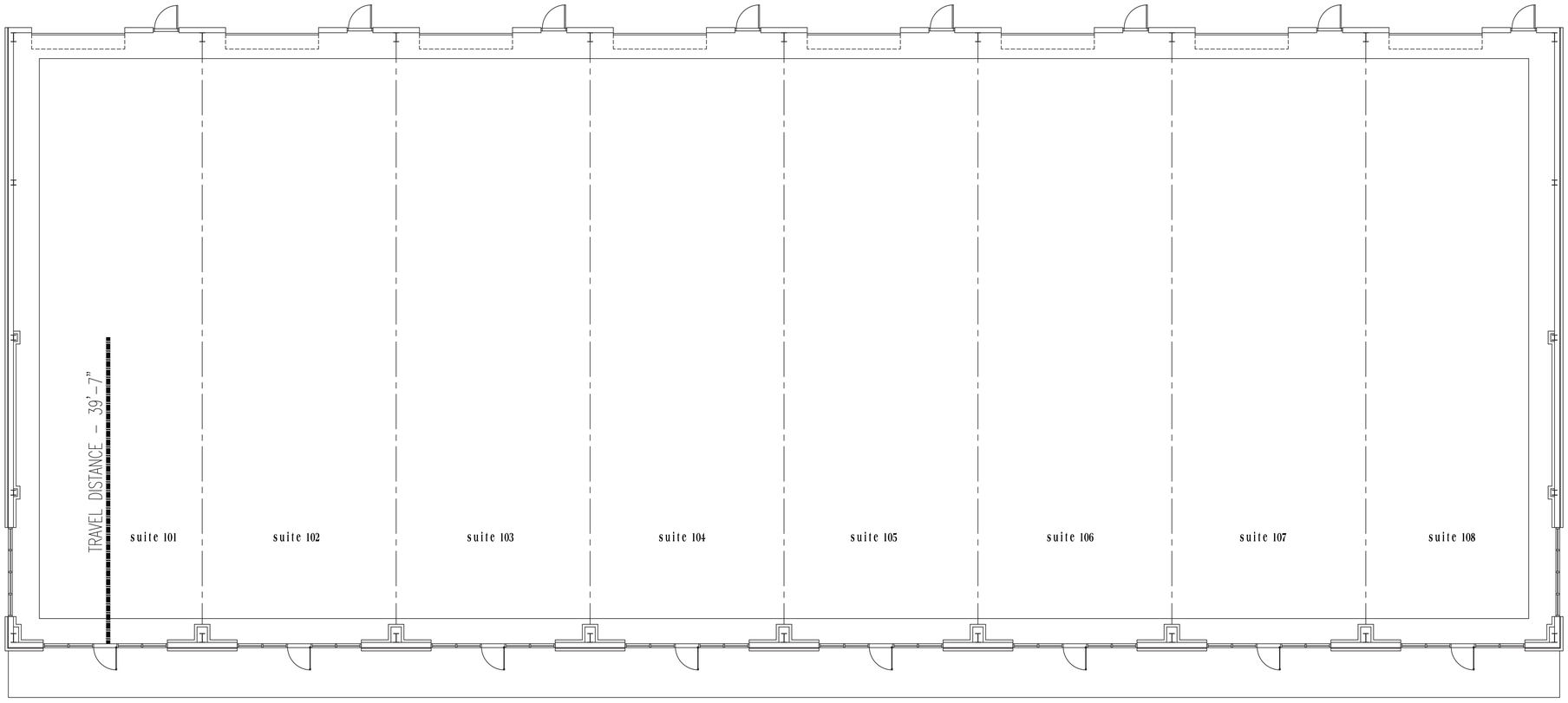
Project Location:
NC 42
Holly Springs
North Carolina 27540

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PROJECT NO:	25-077
DRAWN BY:	RCE.jec
DATE:	11.09.25
DATE:	

SHEET NO:
A1.1



NOTES:

1. ALL EXIT AND EGRESS LIGHTING TO BE INSTALLED DURING INTERIOR UPFIT.

01 LIFE SAFETY FLOOR PLAN
1/8" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
FAYETTEVILLE, N. CAROLINA

12.17.25

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Life Safety Floor Plan

Project Name:
A Commercial Building for:
Culver Flex Space

Project Location:
NC 42
Holly Springs
North Carolina 27540

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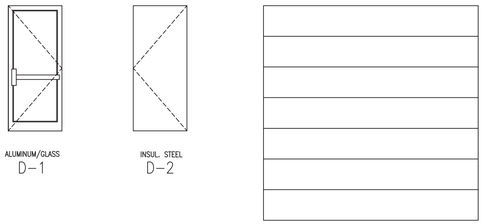
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PROJECT NO:	25-077
DRAWN BY:	RCE,jec
DATE:	11.09.25
DATE:	

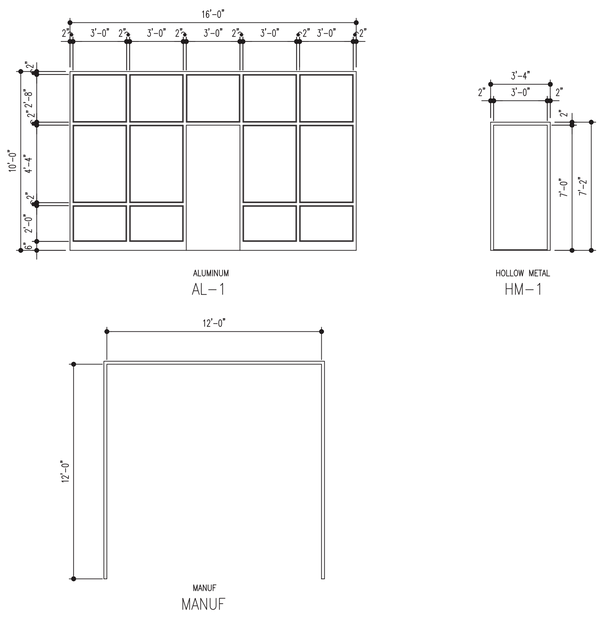
SHEET NO:
A1.2

DOOR SCHEDULE

DOOR						FRAME		HDWRE SET	REMARKS
DOOR NUMBER	TYPE	MATERIAL	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL		
D101	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D102	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D103	D-3	MANUF	12'-0"	14'-0"	–	MANUF	–	MANUF	
D201	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D202	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D203	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D301	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D302	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D303	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D401	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D402	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D403	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D501	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D502	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D503	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D601	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D602	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D603	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D701	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D702	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D703	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	
D801	D-1	ALUM/GLASS	3'-0"	7'-0"	1-3/4"	AL-1	ALUMINUM	DEADBOLT	
D802	D-2	STEEL	3'-0"	7'-0"	1-3/4"	HM-1	STEEL	KEYED	INSULATED DOOR
D803	D-3	MANUF	12'-0"	12'-0"	–	MANUF	–	MANUF	



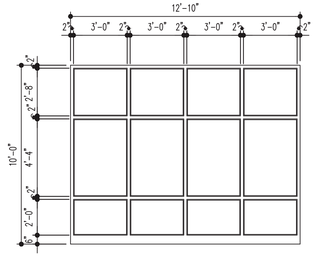
DOOR TYPES
1/4" = 1'0"



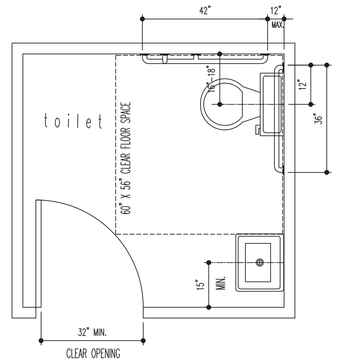
FRAME TYPES
1/4" = 1'0"

WINDOW SCHEDULE

MARK	DESCRIPTION	TYPE	WIDTH	HEIGHT	FRAME	GLASS	HEAD HEIGHT	REMARKS
W101	FIXED	W-1	12'-10"	10'-0"	ALUMINUM	–	10'-0"	–

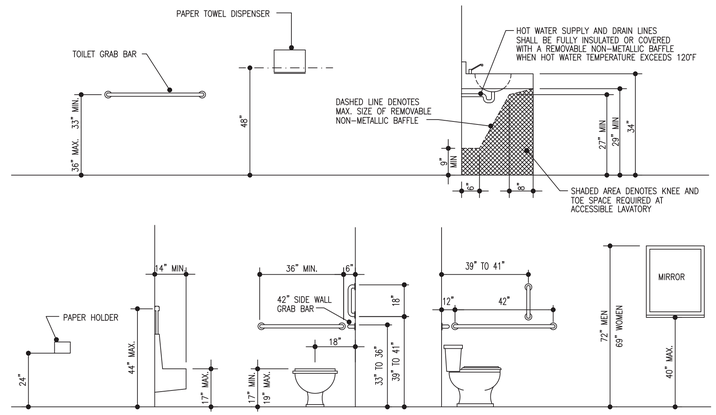


WINDOW TYPES
1/4" = 1'0"

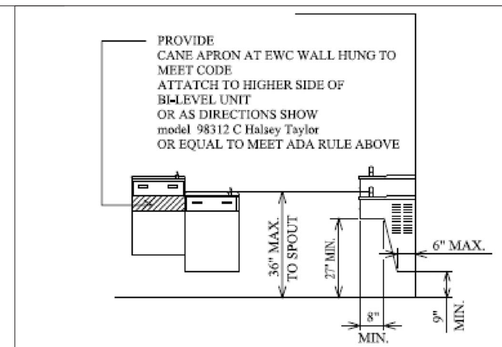


WALL FINISH IN TOILET ROOM TO BE FRP, CERAMIC TILE OR EPOXY PAINT, ETC., UP 48" AFF MINIMUM

01 TYPICAL TOILET DIMENSIONS
1/2" = 1'0"



02 ACCESSORY MOUNTING HEIGHTS - ADULTS
3/8" = 1'0"



03 HI/LO WATER COOLER-ACCESSIBILTY
NO SCALE

NOTES:
1. TOILET ROOM AND WATER FOUNTAIN DETAILS ARE FOR UPFIT ONLY.

ROBERT C. EVANS REGISTERED ARCHITECT 5838 FAYETTEVILLE, N.C. NORTH CAROLINA

12.17.25

ROBERT CHARLES EVANS ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Schedules

Project Name:
A Commercial Building for:
Culver Flex Space

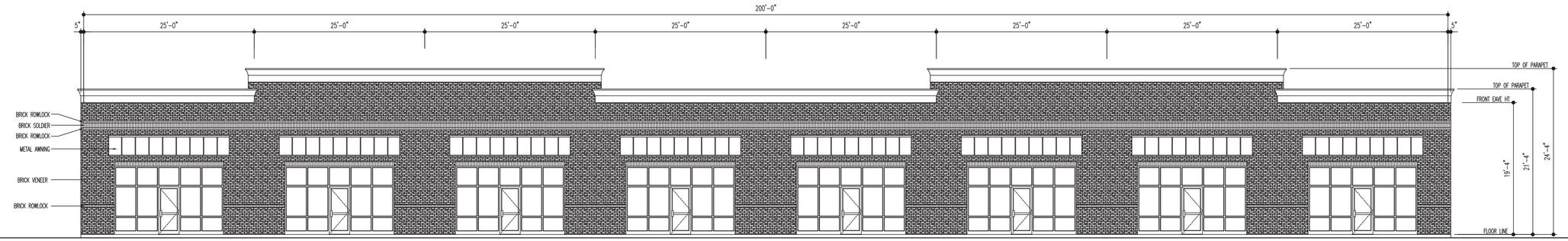
Project Location:
NC 42
Holly Springs
North Carolina 27540

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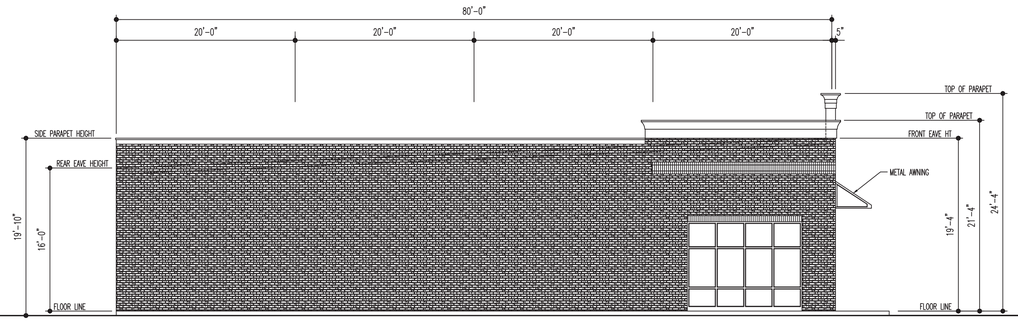
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DRAWN BY:	RCE,jec
DATE:	11.09.25
DATE:	

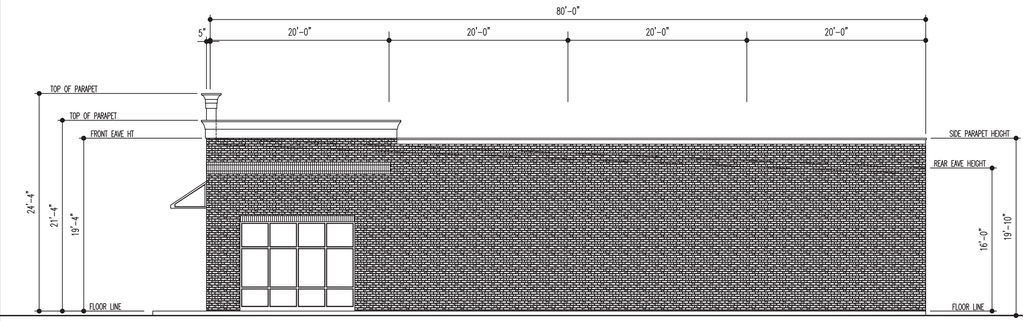
SHEET NO:
A2.1



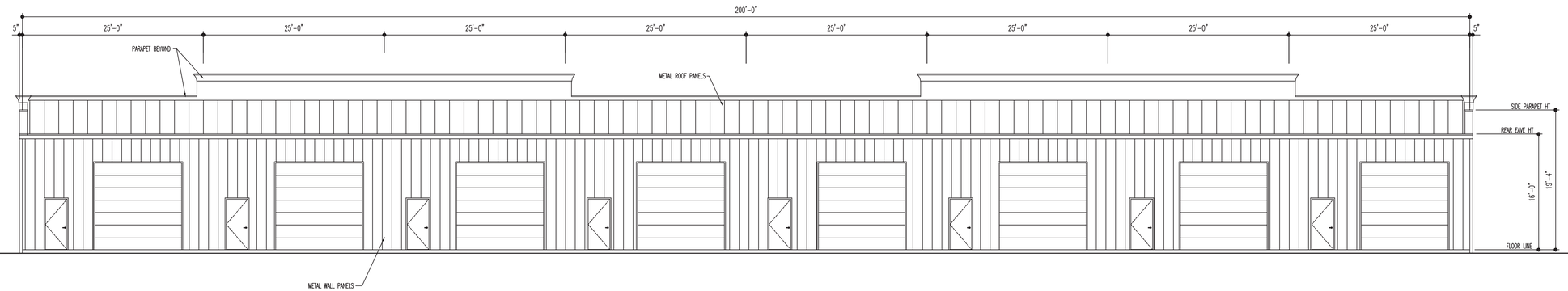
01 FRONT ELEVATION
1/8" = 1'-0"



02 LEFT SIDE ELEVATION
1/8" = 1'-0"



03 RIGHT SIDE ELEVATION
1/8" = 1'-0"



04 REAR ELEVATION
1/8" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
NORTH CAROLINA
FAYETTEVILLE, N.C.

12.17.25

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Exterior Elevations

Project Name:
A Commercial Building for:
Culver Flex Space

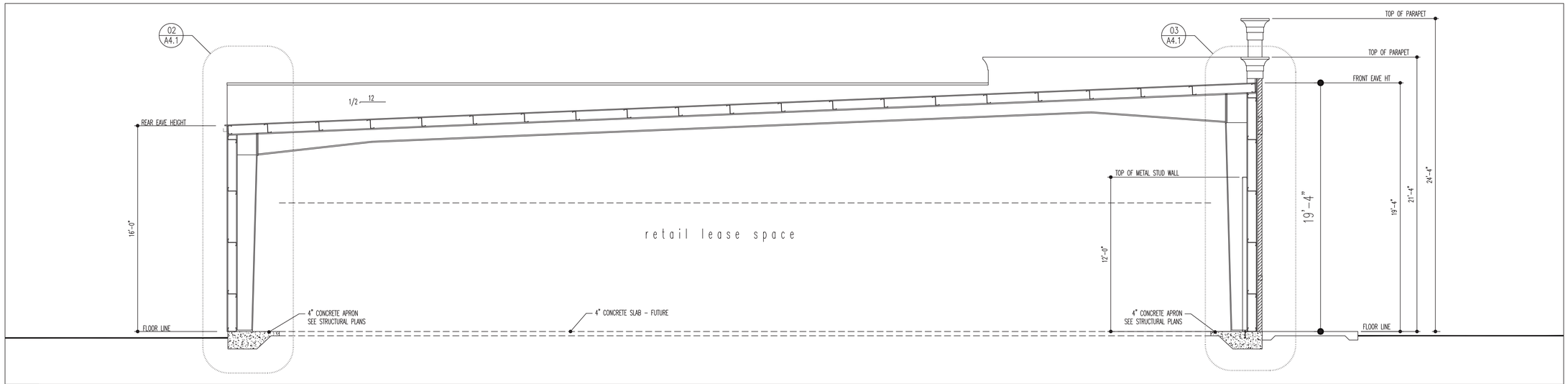
Project Location:
NC 42
Holly Springs
North Carolina 27540

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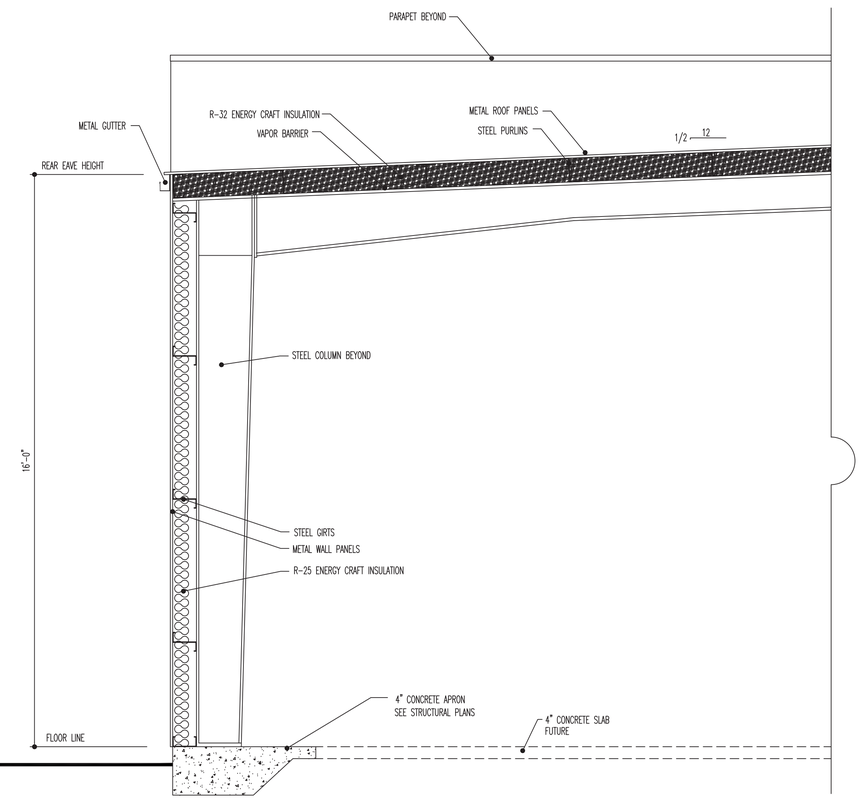
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DRAWN BY:	RCE,jec
DATE:	11.09.25
DATE:	

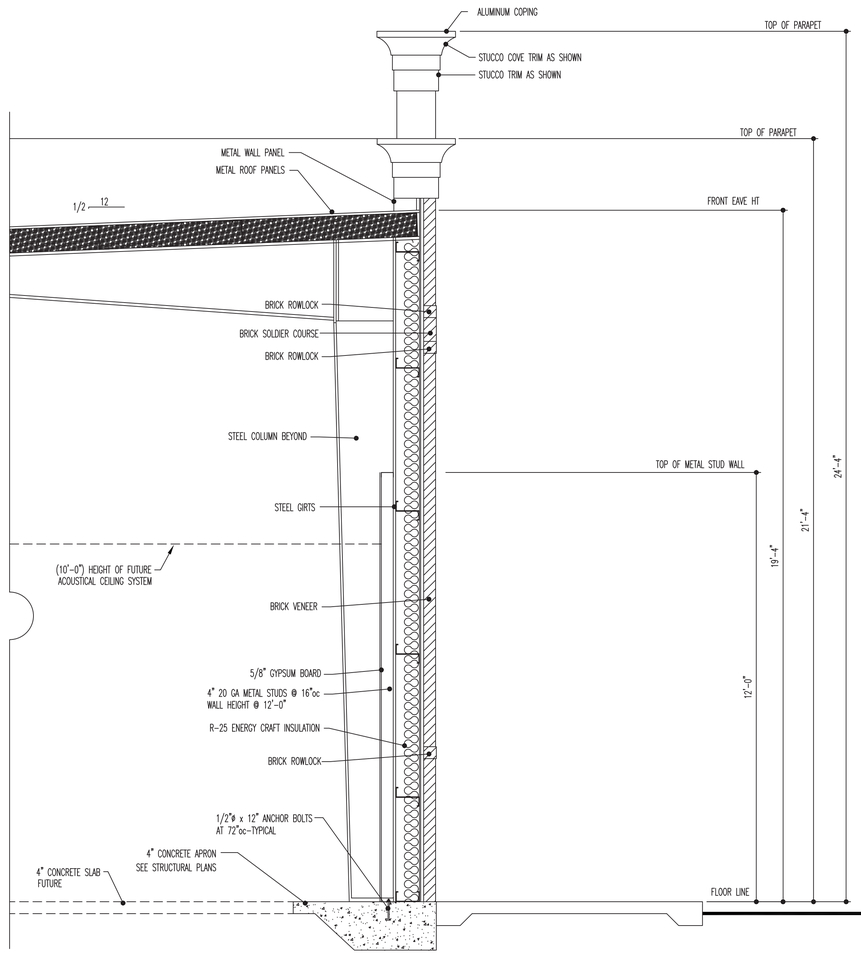
SHEET NO:
A3.1



01 BUILDING SECTION
1/4" = 1'-0"



02 WALL SECTION
1/2" = 1'-0"



03 WALL SECTION
1/2" = 1'-0"

ROBERT C. EVANS
REGISTERED ARCHITECT
30
NORTH CAROLINA
FAYETTEVILLE, N. C.

12.17.25

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Building Section
Wall Sections

Project Name:
A Commercial Building for:
Culver Flex Space

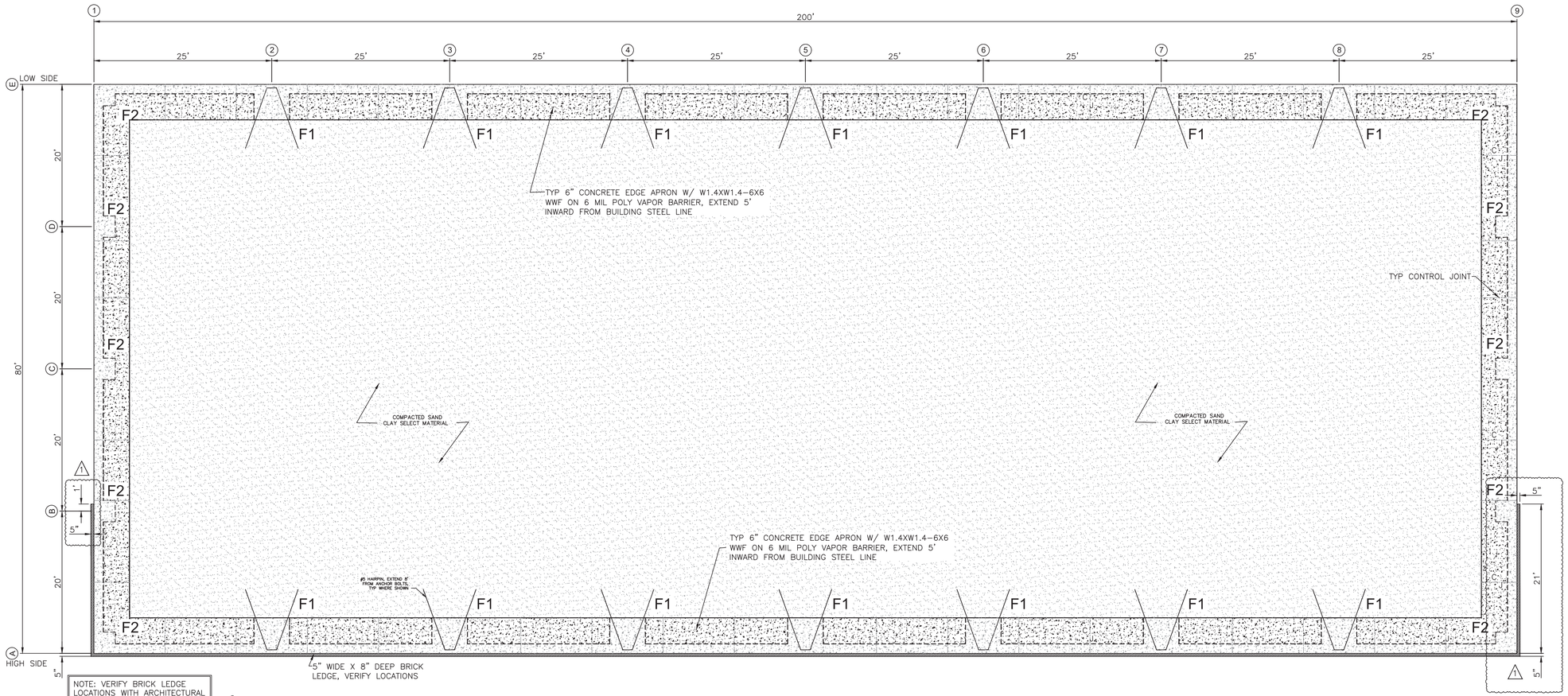
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DATE:	11.09.25
DATE:	

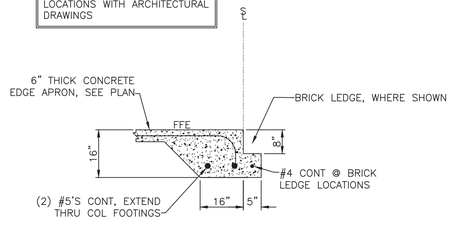
SHEET NO:
A4.1



NOTE: VERIFY BRICK LEDGE LOCATIONS WITH ARCHITECTURAL DRAWINGS

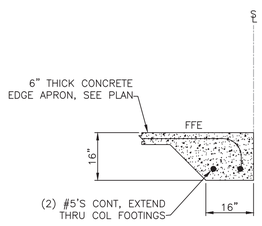
FOUNDATION PLAN

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



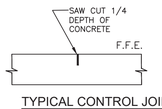
CONT. PERIMETER TURNDOWN FOOTING DETAIL W/ BRICK LEDGE

NTS



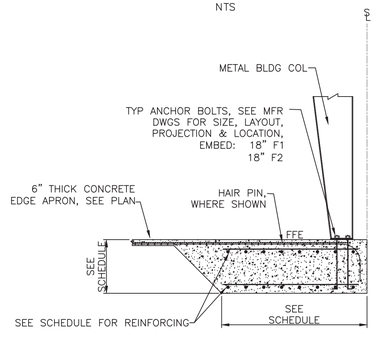
CONT. PERIMETER TURNDOWN FOOTING DETAIL

NTS



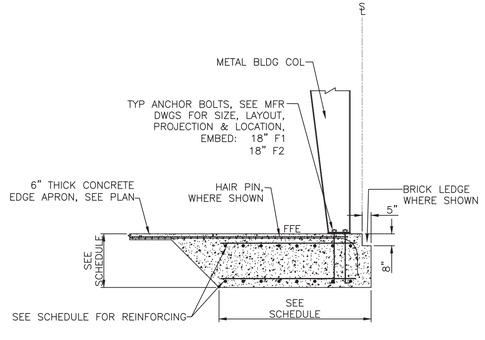
TYPICAL CONTROL JOINT

N.T.S.



TYPICAL COLUMN FOOTING DETAIL

NTS



TYPICAL COLUMN FOOTING DETAIL W/ BRICK LEDGE

NTS

FOOTING	WIDTH	LENGTH	DEPTH	REINFORCEMENT
F1	5'-0"	5'-0"	2'-0"	(6) # 5, EA. WAY, TOP & BOTTOM
F2	3'-0"	3'-0"	2'-0"	(3) # 5, EA. WAY, BOTTOM ONLY

NOTES:

1. ALL CONCRETE TO HAVE MIN. 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.
2. CONTRACTOR TO VERIFY ALL DIMENSIONS W/ METAL BUILDING MANUFACTURER'S DRAWINGS.
3. CONCRETE FOOTINGS AND SLAB TO BE PLACED ON COMPACTED SELECT MATERIAL MIN. 100% DENSITY – SELECT FILL PLACED & COMPACTED IN 6" LIFTS. ASSUMED SOIL BEARING CAPACITY = 2000 PSF.
4. CONSTRUCTION JOINTS TO BE SPACED MAX. 10' O/C.
5. SEE MANUFACTURER'S ANCHOR PLANS FOR ANCHOR BOLT LAYOUT, QUANTITY, SIZE & PROJECTION.
6. REINFORCING STEEL SHALL BE 60 KSI., ASTM A 615.
7. SEE MANUFACTURER'S DRAWINGS FOR FRAMED OPENING LOCATIONS.
8. CONT. REINFORCING STEEL SHALL HAVE 24 BAR DIA LAP OR MIN. 12".
9. CLEAR DISTANCE FOR ALL REINFORCING SHALL BE 3", UON.
10. PROVIDE CORNER BARS AT ALL FOOTING CORNERS. CORNER BARS SHALL HAVE THE SAME SIZE AND SPACING AS MAIN REINFORCING AND SHALL HAVE A MIN 48" LAP.
11. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 & A 82.
12. FLOOR LIVE LOAD DESIGN = 125 PSF
13. FOUNDATION DESIGNED USING REACTIONS PROVIDED BY THE METAL BUILDING MFR AND IN ACCORDANCE TO THE 2018 NC BUILDING CODE FOR 115 ULTIMATE WIND SPEED.
14. FOOTING AND SLAB SHALL BE POURED MONOLITHICALLY.
15. FLATNESS AND LEVELNESS IN ACCORDANCE W/ ACI 117 FF25/FL20

1 UPDATE BRICK LEDGE LOCATION

Robert Armstrong

Digitally signed by Robert Armstrong
Date: 2026.01.23 11:10:18 -05'00'

SUMMIT DESIGN GROUP, INC
STRUCTURAL • CIVIL • MECHANICAL • ELECTRICAL
1720 PEARLIE COURT SW
OCEAN ISLE BEACH, NC 28469
910-876-0376
FIRM LICENSE C-2885

ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 025468 ENGINEER ROBERT P. ARMSTRONG JR.

DRAWING DATA

DATE:	11/13/25
SCALE:	1/8" = 1'-0"
DRAWN BY:	RPA
DESIGNED BY:	RPA
CHECKED BY:	
PLOT SCALE:	N/A
CAD FILE NO:	S-1

CULVER FLEX SPACE

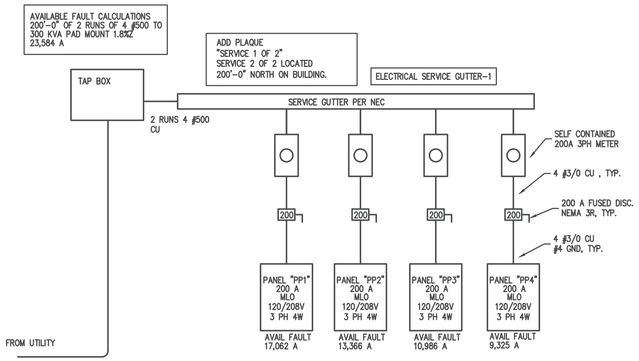
NC HWY 42, HOLLY SPRINGS, NC

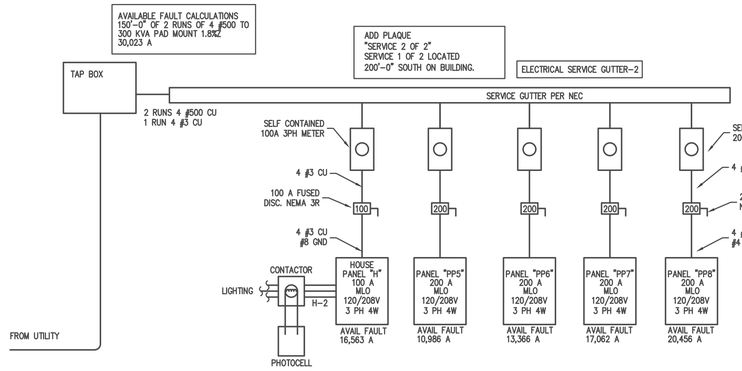
FOUNDATION PLAN

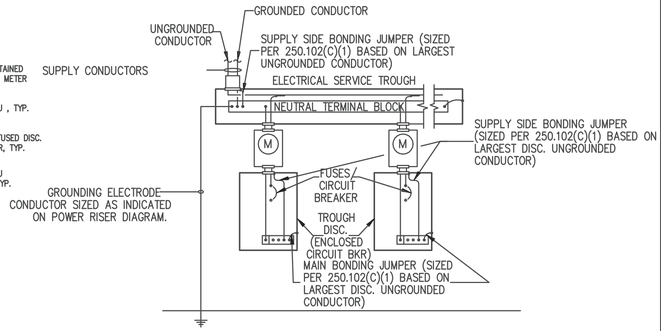
NO.	REVISION
1	1/23/26

SHEET

S-1







GROUNDING DETAIL NOTES:

1. GROUNDING ELECTRODES SHALL BE PROVIDED IN ACCORDANCE WITH NEC 250.52(A).
2. GROUNDING ELECTRODES SHALL BE INSTALLED IN ACCORDANCE WITH NEC 250.53.

4 E1 GUTTER GROUNDING DIAGRAM
N.T.S

ELECTRICAL LOAD SUMMARY

LOAD TYPE	
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
	18210 VA
TOTAL	91050 VA

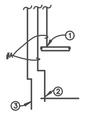
SERVICE SIZING LOAD = 91.050 KW

1 E1 ELECTRIC RISERS
N.T.S.

ELECTRICAL LOAD SUMMARY

LOAD TYPE	
HOUSE PANEL	6190 VA
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
RETAIL SPACES	18210 VA
TOTAL	79.030 VA

SERVICE SIZING LOAD = 79.030 KW



A=#4 CU PP1-8
A=#8 CU PANEL H.

TYPICAL GROUNDING

GROUNDING ELECTRODE DETAILS

GROUNDING ELECTRODE CONDUCTORS SHALL BE #4 BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC 250

1. CONNECT TO METALIC WATER PIPE AS REQ'D.
2. #A COPPER GROUND PLACED TO BLDG STEEL
3. 3/4"x10' LONG COPPER CLAD GROUNDING ROD W/ #6 COPPER GROUND.

H

ROOM
MOUNTING FLUSH
FED FROM UTILITY
NOTE

VOLTS 208Y/120V 3P 4W
BUS AMPS 100
NEUTRAL 100%

AIC 22,000
MAIN BKR MLO
LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	B	C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	B	C
1	20/1	LIGHTING	0.362			2	30/2	DUPLEX CONTROL PLANEL	1.92		
3	20/1	LIGHTING		0.72		4	|			1.92	
5	20/1	RECEPTACLE			0.36	6	20/1	SPACE			0
7	20/1	SPACE	0			8	20/1	SPACE	0		
9	20/1	SPACE		0		10	20/1	SPACE		0	
11	20/1	SPACE			0	12	20/1	SPACE			0
13	20/1	SPACE	0			14	20/1	SPACE	0		
15	20/1	SPACE		0		16	20/1	SPACE		0	
17	20/1	SPACE			0	18	20/1	SPACE			0
19	20/1	SPACE	0			20	20/1	SPACE	0		
		TOTAL CONNECTED KVA BY PHASE							2.28	2.64	0.36

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	1.08	1.35	(125%)	MOTORS	3.84	3.84	(100%)
LARGEST MOTOR	1.92	0.48	(25%)	RECEPTACLES	0.36	0.36	(50%>10)
				TOTAL LOAD		6.03	
				BALANCED 3-PHASE LOAD		16.7 A	

CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR SERVICE. A COMPLETE AND WORKING SYSTEM IS REQUIRED FOR COMPLIANCE WITH THESE DOCUMENTS. DETERMINE THE POINT OF CONNECTION TO THE UTILITY WITH THE UTILITY REPRESENTATIVE AND PROVIDE ACCORDINGLY FOR A COMPLETE WORKING SYSTEM.

WIRE AND CABLE SHALL BE INSULATED, TYPE THWN OR THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTORS SIZES NO. 10 AWG AND SMALLER MAY BE SOLID OR STRANDED. NO ROMEX PERMITTED.

EMT SHALL BE GALVANIZED STEEL TUBING, 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUNITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS.

PLASTIC CONDUIT SHALL BE RIGID, 3/4-INCH MINIMUM NON-METALLIC, HEAVY DUTY, HIGH IMPACT, POLYVINYLCHLORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2- INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH 72 INCHES FOR LIGHTING AND 36" FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUIDTIGHT OR WATERTIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUIDTIGHT OR WATERTIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TEL. OUTLETS TO BE MOUNTED BACK TO BACK, KEEP AT LEAST 2 INCHES BETWEEN RECEPTACLES AND TEL. OUTLETS.

ALL CONDUCTOR SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA.

CONTRACTOR SHALL ALIGN FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. AT NO TIME WILL AN IONIZATION DETECTOR BE LOCATED WITHIN 3'-0" OF A SUPPLY OR RETURN AIR GRILLE.

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS AND CONDUIT FOR THIS PROJECT THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT WHICH WILL ACTUALLY BE INSTALLED, RECOMPUTING WIRE AND BREAKER SIZES IF REQUIRED BY THE NEC.

ALL CONDUIT TERMINATING IN THE CEILING CAVITIES IS TO BE LABELED.

ALL CONDUIT SHALL BE COLOR CODED WITH 1/2" WIDE TAPE, 10'-0" ON CENTER IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE ARCHITECT AND OWNER, PRIOR TO INSTALLATION, FOR USE WITH ACTUAL EQUIPMENT.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER/ARCHITECT. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL REPLACED AT THE REQUEST OF THE ENGINEER/ARCHITECT AT THE CONTRACTORS EXPENSE.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS.

THE CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO THE INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE.

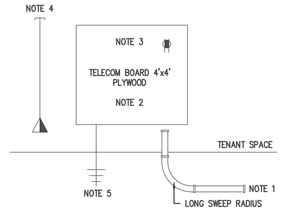
ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

WHERE EQUIPMENT PENETRATES EXTERIOR WALL OR ROOF THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ARCHITECT/ENGINEER.

ALL WORK IS TO BE DONE IN STRICT COMPLIANCE WITH THE LATEST VERSION OF THE NEC AND APPLICABLE STATE CODES

RECESSED FIXTURES INSTALLED IN RATED ASSEMBLIES SHALL BE INSTALLED WITH AN ENCLOSURE SO AS TO MAINTAIN THE RATING OF ASSEMBLY

2 E1 ELECTRICAL NOTES
N.T.S.



TELECOM RISER NOTES

1. NEW 1" CONDUIT PROVIDED UNDER SLAB TO BUILDING TELECOM CABINET. EXTEND CONDUIT STUB-IN AS NEEDED TO REACH TELECOM BOARD LOCATION.
2. 3/4" FINISH GRADE PLYWOOD BACKBOARD PAINTED WITH FLAME RETARDANT PAINT. MOUNT 24" AFF TO BOTTOM OF BOARD.
3. PROVIDE DUPLEX RECEPTACLE ON A DEDICATED CIRCUIT FOR TELEPHONE AND OTHER COMMUNICATION EQUIPMENT.
4. TELEPHONE/DATA OUTLET, +18" A.F.F. TO CENTER, W/ 3/4" CONDUIT STUBBED OUT ABOVE ACCESSIBLE CEILING.
5. PROVIDE #6 CU GROUND TO SERVICE GROUND BAR WITH ADEQUATE SLACK FOR GROUNDING OF TELECOM EQUIPMENT.

3 E1 TELECOM RISER NOTES
N.T.S.

Dec 09, 2025

NORTH CAROLINA PROFESSIONAL SEAL 20193 ENGINEER CHRISTOPHER S. LOCKLEAR

Coastal Plains Engineering, P.A.
License No: C-2059
295 LOCKLEAR RD
P.O. Box 1117
Pembroke, NC 28372
Voice: 910-521-7213
Fax: 910-521-7213
www.coastalplainseng.com

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Building Floor Plan

Project Name:
A Commercial Building for:
Culver Flex Space

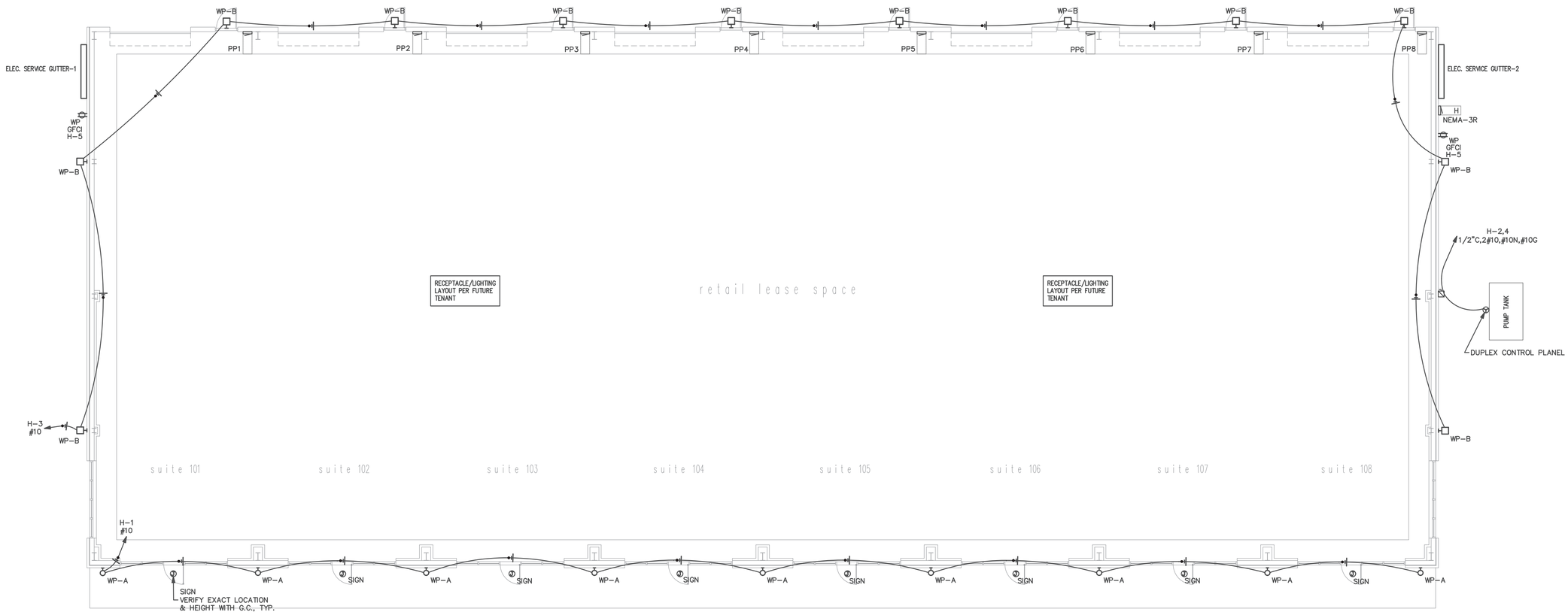
Project Location:
NC 42
Holly Springs
North Carolina 27540

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PROJECT NO:	2025-153
DRAWN BY:	CSL/MJL
DATE:	12.02.25
DATE:	

SHEET NO: E1



ELECTRICAL SYMBOL LIST

○	LIGHT FIXTURE INCADESCENT OR H.I.D.	⊖	EXIT LIGHT FIXTURE
○H	LIGHT FIXTURE WALL MOUNTED	NL	NIGHT LIGHT
▭	FLOURESCENT LIGHT FIXTURE		EMERGENCY LIGHT W/ 90 MIN. BATTERY
⊕	DUPLEX RECEPTACLE (+18")	⊕	GFI TYPE RECEPTACLE
⊕i	ISOLATED GROUND TYPE D.R.	D.R.	DUPLEX RECPTACLE
(+0")	CENTERLINE HEIGHT OF DEVICE BOX ABOVE FINISH FLOOR		
S	SINGLE POLE SWITCH (+42")	S	SW. WITH PILOT LIGHT
S_3	3-WAY SWITCH (+42")	S_3	3-WAY SW. W/ PILOT LIGHT(+42")
S_4	4-WAY SWITCH (+42")	⊛	SPECIAL PURPOSE OUTLET
S_K	KEYED SINGLE POLE SWITCH (+42")	S_3^K	KEYED THREE-WAY SWITCH
□h	N/F DISCONNECT SWITCH	⊠h	FUSED DISCONNECT SWITCH
RT	RAINTIGHT (NEMA 3R)	(60/50/3)	AMP SIZE/FUSE SIZE/POLES
⊠	STARTER	⊙F	DUPLEX RECEPT. FLOOR MTD.
S_M	MANUAL STARTER SWITCH		
Ⓜ	MOTOR SYMBOL	S_M	MANUAL STARTER SWITCH W/ PILOT LIGHT
▣	RELAY	▣	DIMMER SWITCH
▣	PHOTOCONTROL		
▣	PUSHBUTTON OR CONTROL STATION	▣	JUNCTION BOX (J.B.)
◁	TELEPHONE O.B. (3/4" C. TO CEILING SPACE)	O.B.	OUTLET BOX
◀	DATA O.B. (3/4" C. TO CEILING SPACE)	◭	CHILD-PROOF
◀	TELEPHONE & DATA O.B. (3/4" C. TO CEILING SPACE)		
□	PLAN NOTE SYMBOL	WP	WEATHERPROOF
A.F.F.	ABOVE FINISH FLR.		
C/B	CIRCUIT BREAKER	CKT.	CIRCUIT
C.	CONDUIT		
———	CONCEALED CONDUIT (2#12 AWG AND APPROVED GROUND MINIMUM – TYPICAL)		
– – –	CONDUIT BELOW FLOOR OR GRADE	-----	CONDUIT EXPOSED
#8 P1-S4	HOMERUN: NUMBER OF WIRES, PANEL DESIGNATION, CIRCUIT NUMBERS		
▬	BRANCH CIRCUIT PANELBOARD	▨	MAIN DISTRIBUTION PANEL
⊕	QUAD RECEPTACLE	◈	CATV OUTLET
Ⓐ	ALARM OUTLET BOX (3/4" CONDUIT TO CEILING SPACE)		

1 / E2 ELECTRICAL PLAN
1/8"=1'-0"

APPENDIX B 2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

ELECTRICAL DESIGN

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
Energy Code: ☒ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule (each fixture type)
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture — SEE FIXTURE SCHEDULE
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs. allowed (whole building or space by space)
1321/1740 total exterior wattage specified vs. allowed

Additional Prescriptive Compliance
☐ 506.2.1 More Efficient HVAC Equipment
☒ 506.2.2 Reduced Lighting Power Density
☐ 506.2.3 Energy Recovery Ventilation Systems
☐ 506.2.4 Higher Efficiency Service Water Heating
☐ 506.2.5 On-Site Supply of Renewable Energy
☐ 506.2.6 Automatic Daylighting Control Systems

Dec 09, 2025

NORTH CAROLINA PROFESSIONAL SEAL 20182 ENGINEER CHRISTOPHER S. LOCKLEAR

Coastal Plains Engineering, P.A.
295 LOCKLEAR RD
P.O. Box 1117
Pembroke, NC 28372
Voice: 910-521-7213
Fax: 910-521-7213
www.coastalplainseng.com
License No: C-2059

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314

Culver Flex Space

Drawing Name:
Building Floor Plan

Project Name:
A Commercial Building for:
Culver Flex Space

Project Location:
NC 42
Holly Springs
North Carolina 27540

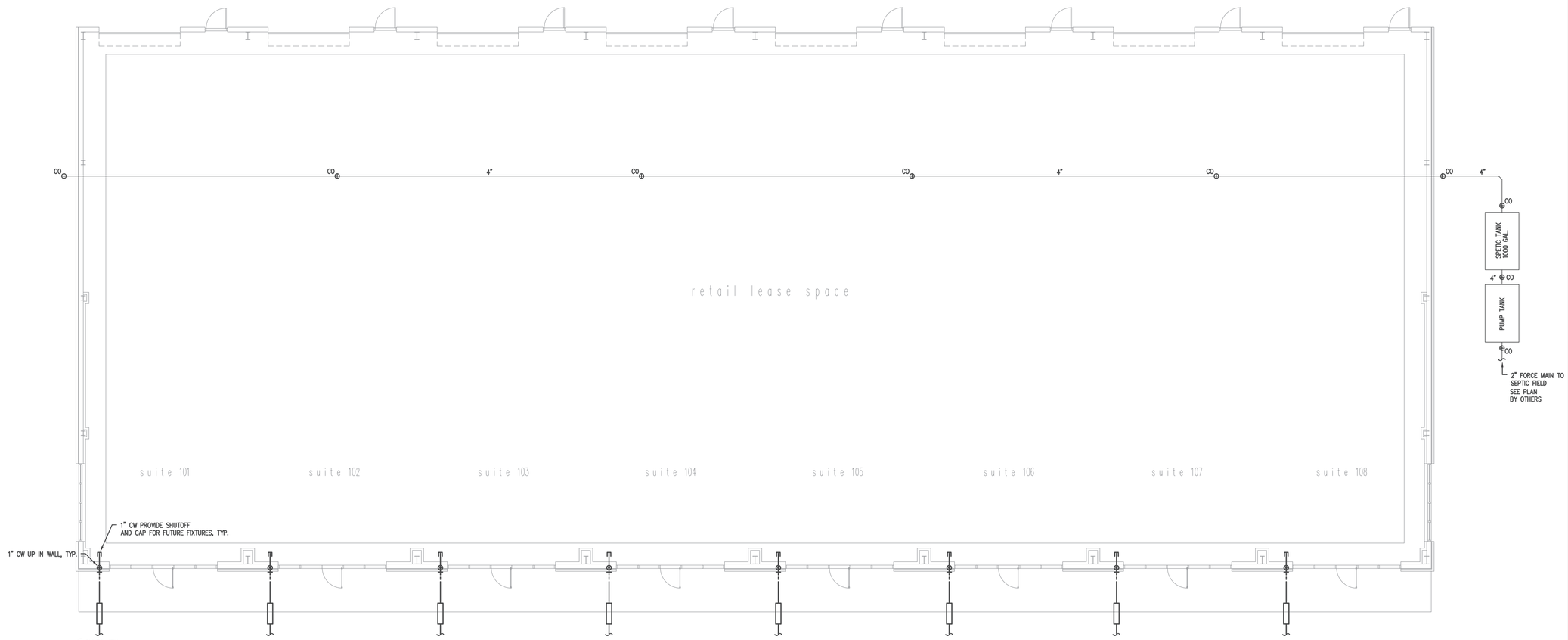
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ADA AND LEGAL DISCLAIMER
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PROJECT NO:	2025-153
DRAWN BY:	CSL/MJL
DATE:	12.02.25
DATE:	

SHEET NO: E2

ROBERT CHARLES EVANS
ARCHITECT
ARCHITECTURE
844 Montclair Road Fayetteville North Carolina 28314



1 / P1 PLUMBING NOTES
1/8"=1'-0"

GENERAL PLUMBING SYMBOLS

	UNION
	PIPE UP
	PIPE DOWN
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	TEE
	ELBOW
WCO	WALL CLEANOUT
	FLOOR CLEANOUT
	GATE VALVE
	COLD WATER
	HOT WATER
	VENT PIPING
	WASTE PIPING
RD	ROOF DRAIN PIPING

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE AS WELL AS ALL LOCAL AND OTHER APPLICABLE CODES.

ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN.

WATER LINES BELOW GRADE SHALL BE TYPE "K" COPPER (NO JOINTS BELOW GRADE) AND ABOVE GRADE TYPE "L" COPPER SUPPORTED AS REQUIRED AND SHALL BE HYDROSTATICALLY TESTED FOR TWO HOURS AT 100 PSI. ALL WATER PIPING AT WATER FIXTURES SHALL BE PROVIDED WITH 18" AIR CHAMBERS OR SHOCK ABSORBERS. STOPS SHALL BE PROVIDED ON HOT AND COLD WATER LINES. HOT WATER PIPING SHALL BE INSULATED WITH 1" CLOSED CELL RUBBER. THE ENTIRE WATER SYSTEM SHALL BE DISINFECTED PRIOR TO PLACING IN SERVICE PVC/PEX MAYBE SUBSTITUED FOR COPPER

SANITARY SEWER LINES SHALL BE PVC.

PROVIDE PRESSURE REDUCING VALVE IF STREET WATER EXCEEDS 80 PSI

GAS PIPING WILL BE SCHEDULE 40 BLACK STEEL WITH BLACK MALLEABLE IRON SCREW-TYPE FITTINGS.

THE PLUMBING CONTRACTOR SHALL PROVIDE ALL OPENINGS REQUIRED FOR THE PLUMBING WORK AND SHALL INSTALL FIRE RATED SLEEVES WHEREVER PENETRATIONS OF RATED WALLS OR FLOORS ARE MADE. THE PATCHING SHALL BE BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL REVIEW ALL UTILITY SITE PLANS AND ARCHITECTURAL SITE PLANS FOR WORK BY OTHERS.

LOCATION OF UTILITIES (WASTE AND WATER LINES, MANHOLES ETC.) THAT ARE TO BE CONNECTED TO ARE ASSUMED. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO VERIFY THESE LOCATIONS AND MAKE THE FINAL CONNECTION AS REQUIRED.

ALL FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMERS

2 / P1 PLUMBING NOTES
N.T.S.

Dec 09, 2025

NORTH CAROLINA PROFESSIONAL SEAL 20196 ENGINEER CHRISTOPHER S. LOCKLEAR

Coastal Plains Engineering, P.A.
295 LOCKLEAR RD
P.O. Box 1117
Pembroke, NC 28372
Voice: 910-521-7213
Fax: 910-521-7213
www.coastalplainseng.com
License No: C-2059

Culver Flex Space

Drawing Name:
Building Floor Plan

Project Name:
A Commercial Building for:
Culver Flex Space

Project Location:
NC 42
Holly Springs
North Carolina 27540

DRAWINGS AND THE DESIGN ARE THE PROPERTY OF THE ARCHITECT WHETHER THE PROJECT FOR WHICH THEY ARE PREPARED IS EXECUTED OR NOT. THE DRAWINGS SHALL NOT BE USED BY THE PROJECT OWNER OR ANYONE ELSE FOR ANY OTHER PROJECT.

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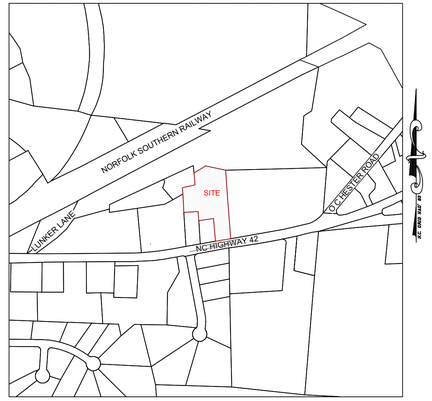
PROJECT NO:	2025-153
DRAWN BY:	CSL/MJL
DATE:	12.02.25
DATE:	

SHEET NO:
P1

42 BUSINESS PARK
INDUSTRIAL FLEX BASE

CONSTRUCTION DRAWINGS
(SITE 2507-0001)

12719 NC HIGHWAY 42
(P.I.N. 0646-10-2128)
HOLLY SPRINGS, NORTH CAROLINA 27540



VICINITY MAP
SCALE: 1"=500'

OWNER / DEVELOPER
F&S LAND DEVELOPMENT, LLC
460 AUSLEY ROAD
FUQUAY-VARINA, NORTH CAROLINA 27526
CONTACT NAME: DREW STEPHENSON
PHONE:(919) 730-7802
STEPHENSONBUILDERSINC@GMAIL.COM

CIVIL ENGINEER
RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
FUQUAY-VARINA, NORTH CAROLINA 27526
CONTACT NAME: GARY J. MCCABE, PE
PHONE:(919) 779-6851
EMAIL: GARY.MCCABE@RLENC.COM

SURVEYOR
BENTON W. DEWAR AND ASSOCIATES
PROFESSIONAL LAND SURVEYOR, PA (C-1705)
5920 HONEYCUTT ROAD
HOLLY SPRINGS, NORTH CAROLINA 27540
CONTACT NAME: BEN DEWAR, PLS
PHONE:(919) 552-9813
EMAIL: BENTONDEWAR@GMAIL.COM

CIVIL PLANS SHEET INDEX

C0.0	COVER SHEET
C1.0	NOTES, LEGENDS, VICINITY MAP, & ABBREVIATIONS
C2.0	EXISTING CONDITIONS & DEMOLITION PLAN
C3.0	OVERALL SITE & EMERGENCY VEHICLE ACCESS PLAN
C4.0	EROSION CONTROL PLAN - PHASE I
C4.1	EROSION CONTROL PLAN - PHASE II
C4.2	NPDES STABILIZATION PLAN
C5.0	OVERALL GRADING & STORMWATER MANAGEMENT PLAN
C5.1	ENLARGED FINE GRADING PLAN
C5.2	PROPOSED STORMWATER PLAN & PROFILE
C6.0	PROPOSED UTILITY PLAN
C7.0	SITE DETAILS
C8.0	EROSION CONTROL DETAILS
C8.1	EROSION CONTROL MAINTENANCE REQUIREMENTS
C9.0	UTILITY DETAILS
C10.0	SCM DETAILS
C11.0	REQUIRED LANDSCAPE IMPROVEMENTS
C12.0	PROPOSED LIGHTING PLAN

SUPPLEMENTAL DISCIPLINE SHEET INDEX

SURVEYING

S1.0	BOUNDARY & EXISITNG CONDITIONS SURVEY

SANITARY SEWER DEMAND SUMMARY:
(PER NC O2T RULES)

1.	BUILDING 2A (BASKETBALL TRAINING FACILITY)	100 GPD / LOADING BAY 8 UNITS 800 GPD
	TOTAL ESTIMATED SANITARY SEWER DEMAND	800 GPD

(NOTE: THERE IS NO FOOD SERVICE OR FOOD PREPARATION ANTICIPATED AT THIS TIME. IF FOOD SERVICE OR PREPARATION IS NEEDED, A GREASE INTERCEPTOR WILL BE REQUIRED AT THAT TIME. THE ADDITION OF FOOD SERVICE WOULD REQUIRE FURTHER APPROVALS FROM HARNETT COUNTY.)

SITE PLAN INFORMATION:

1.	NAME:	42 BUSINESS PARK
2.	STREET ADDRESS:	12719 NC HIGHWAY 42 HOLLY SPRINGS, NORTH CAROLINA 27526
3.	P.I.N.:	0646-10-2128
4.	EXISTING LAND USE:	VACANT
5.	PROPOSED LAND USE:	ASSEMBLING, PROCESSING, INDUSTRIES, WHOLESALE, AND WAREHOUSE *SPECIAL USE PERMIT FOR LIGHT INDUSTRIAL FLEX APPROVED UNDER PERMIT #BOA2409-0001 ON 11/12/24
6.	TOTAL NUMBER OF LOTS:	1
7.	TOTAL SITE AREA:	107,177 SF (2.46 ACRES)
8.	DISTURBED AREA:	2.47 ACRES
9.	CURRENT/PROPOSED ZONING:	RA-30 (RESIDENTIAL/AGRICULTURAL ZONING DISTRICT)
10.	EXISTING BUILDINGS USE & SF:	NONE
11.	PROPOSED BUILDING SF:	16,000 SF (GROSS)
12.	PROPOSED BUILDING LOT COVERAGE:	14.84%
13.	BUILDING SETBACKS:	FRONT - 35 FT. SIDE - 10 FT. REAR - 25 FT. CORNER - 20 FT.
14.	MAX BUILDING HEIGHT:	85 FT
15.	PROPOSED BUILDING HEIGHT:	35 FT
16.	INSIDE CITY LIMITS:	NO
17.	INSIDE FLOOD HAZARD BOUNDARY:	NO (PER FEMA MAP #3720064500J) EFFECTIVE DATE: 10/03/2006
18.	PARKING REQUIRED:	1 SPACE / 500 SF 16,000 SF GROSS X 1 / 500 = 32 SPACE MINIMUM REQUIRED
19.	TOTAL PARKING PROVIDED:	43 SPACES (41 REGULAR + 2 ADA)
20.	PROPOSED IMPERVIOUS SURFACE AREA: EXISTING PROPOSED TOTAL IMPERVIOUS	 0 SF / 0.00 ACRES 59,548 SF / 1.37 ACRES 59,548 SF / 1.37 ACRES
21.	WATERSHED / RIVER BASIN:	AVENTS CREEK / CAPE FEAR RIVER BASIN
22.	DEED BOOK / PAGE	4245 / 1914
23.	BOOK OF MAPS / PAGE	2025 / 338

Owner's Consent Form:
As the owner of record, I hereby formally consent to the proposed development shown on this site plan and all regulations and requirements of the Harnett County Ordinances.

1/16/2026
Signature Date

HARNETT REGIONAL WATER STANDARD NOTES:

1. WATERLINE CONSTRUCTION AND TIE-IN WILL NEED TO BE COORDINATED AND INSPECTED BY HRW CONSTRUCTION INSPECTOR CHAD EVERETT AND BRANDON WEST 910-984-6352.
2. NCDOT UTILITIES MANUAL DATED 2022 SECTION 3.4.9.1 REQUIRES FIRE HYDRANTS TO BE LOCATED AT THE BACK OF DITCH. WATER METERS WILL ALSO NEED TO BE LOCATED AT THE BACK OF THE DITCH. THE WATER LINE IS LOCATED AT THE FRONT OF DITCH.
3. APPROVAL OF THIS PLAT/PLAN DOES NOT GUARANTEE WATER CAPACITY. CURRENT/FUTURE CAPACITY MAY NOT BE AVAILABLE. THIS DEVELOPMENT MAY REQUIRE ADDITIONAL IMPROVEMENTS TO THE EXISTING WATER SYSTEM TO MEET FUTURE WATER DEMANDS PRIOR TO A PRELIMINARY PLAT, CONSTRUCTION PLAN AND/OR FINAL PLAT APPROVAL.
4. MAIL KIOSK, OPEN SPACE AND DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY THE HOME OWNERS ASSOCIATION. (HOA)

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

PRE VS POST PEAK RUNOFF SUMMARY

	PRE (CFS)	POST (CFS)	SCM (CFS)
1 YR / 24 HR	2.39	5.34	0.34
2 YR / 24 HR	3.88	7.30	0.70
10 YR / 24 HR	8.72	13.02	7.65
25 YR / 24 HR	12.01	16.65	8.72
100 YR / 24 HR	17.87	22.70	10.38

A PRIMARY SCM (INFILTRATION BASIN) IS PROPOSED FOR THIS SITE. THE PROPOSED SCM CONTROLS THE PEAK RUNOFF RATES TO BELOW THE PRE-DEVELOPED CONDITIONS FOR THE 1, 2, 10, 25 & 100 YEAR 24 HOUR STORM EVENTS. AS SUCH, NO FURTHER DOWNSTREAM ANALYSIS IS REQUIRED.

Know what's below. Call before you dig.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032614 GARY J. MCCABE
06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

FINAL DRAWING RELEASED FOR CONSTRUCTION

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RED LINE ENGINEERING
RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
FUQUAY-VARINA, NORTH CAROLINA 27526
PHONE : (919) 779-6851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
COVER SHEET

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

PROJECT NO.:	
DRAWN BY:	
REVIEWED BY:	

SHEET NUMBER:
C0.0
OF 19 SHEETS

GENERAL NOTES

(1) BOUNDARY & TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY BENTON W. DEWAR AND ASSOCIATES PROFESSIONAL LAND SURVEYOR (C-1705), PERFORMED BY BENTON W. DEWAR, P.L.S. (L-3040), DATED JANUARY 24, 2025. INFORMATION PROVIDED FOR ENGINEERING DESIGN PURPOSES ONLY. NOT FOR SALE OR RECORDATION. ENGINEER MAKES NOT GUARANTEES OR WARRANTS AS TO THE ACCURACY OF SURVEY INFORMATION PROVIDED BY OTHERS. PLEASE CONTACT SURVEYOR DIRECTLY WITH ANY QUESTIONS REGARDING SURVEY DATA.

(2) CONTRACTOR SHALL FIELD VERIFY LOCATION, SIZE, MATERIAL AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. ELEVATIONS INDICATED ON PLANS SHOWN AS APPROXIMATE, CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS PRIOR TO COMMENCING CONSTRUCTION.

(3) CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL OF ANY POTENTIAL CHANGE ORDERS PRIOR TO PROCEEDING WITH CONSTRUCTION OF THE SUBJECT IMPROVEMENTS. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK AND EXPENSE. NO CHANGE ORDERS WILL BE APPROVED FOR REWORK FOR MISINTERPRETATION OF PLANS & THE DESIGN INTENT, FAILURE OF THE CONTRACTOR TO MANAGE, SCHEDULE AND COORDINATE SUBS OR FOR FAILURE OF THE CONTRACTOR OR THEIR SUBS TO REVIEW AND UNDERSTAND THE FULL SET OF CONSTRUCTION DOCUMENTS. IF THE CONTRACTOR OR THEIR SUB HAS A QUESTION REGARDING THE DESIGN INTENT, THEY SHOULD SUBMIT A REQUEST FOR INFORMATION (RFI) TO THE OWNER, ARCHITECT & ENGINEER(S) AND RECEIVE WRITTEN RESOLUTION BEFORE PROCEEDING.

(4) CONTRACTOR IS RESPONSIBLE FOR SCHEDULING REQUIRED INSPECTIONS AND TESTING REGARDING SITE IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO COMPACTION TESTING, INFILTRATION TESTING, PRESSURE TESTING, LEAK TESTING, VACUUM TESTING, ETC.

(5) CONTRACTOR SHALL MAINTAIN ACCURATE AS-BUILT RECORDS FOR THE OWNER, ARCHITECT & ENGINEER(S) AND SHALL NOTATE ALL DEVIATIONS FROM THE APPROVED PLANS IN RED. CONTRACTOR SHALL PROVIDE SEALED AS-BUILT SURVEY (IN PDF AND DWG FORMAT) OF ALL UTILITIES, IMPERVIOUS AREAS, STORMWATER INFRASTRUCTURE, AND STORMWATER CONTROL MEASURES PRIOR TO FINAL INSPECTIONS BY ENGINEER. ACCORDING TO THE HARNETT COUNTY STANDARDS ALL WATER AND SEWER STRUCTURES, VALVES AND FITTINGS MUST BE LOCATED HORIZONTALLY AND VERTICALLY IN TABLE FORMAT ON AS-BUILT SURVEY PRIOR TO FINAL INSPECTIONS AND CERTIFICATION BY THE ENGINEER.

(6) CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIALS GENERATED THROUGH ALL CONSTRUCTION RELATED ACTIVITIES. ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED, AND MULCHED IN ACCORDANCE WITH NPDES STABILIZATION TABLE.

(8) WATER & SANITARY SEWER SERVICES TO BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE TOWN OF CLAYTON CONSTRUCTION STANDARDS, SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF APPROVAL.

(9) ACCORDING TO THE SEDIMENTATION POLLUTION CONTROL ACT OF 1973 (NORTH CAROLINA GENERAL STATUTE 113A 51-66) THIS PROJECT IS SUBJECT TO AN APPROVED SEDIMENTATION AND EROSION CONTROL PLAN. TOTAL DISTURBED AREA EXCEEDS ONE (1) ACRE, THEREFORE, A NCDEQ EROSION CONTROL PERMIT IS REQUIRED.

(10) ANY CONFLICT(S) SHALL BE SUBMITTED BY CONTRACTOR, IN WRITING, TO BOTH ENGINEER. WRITTEN CLARIFICATION/RESOLUTION MUST BE RECEIVED BY CONTRACTOR FROM ENGINEER PRIOR TO COMMENCING CONSTRUCTION.

(11) CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL SUBCONTRACTORS ARE PROVIDED AND FAMILIAR WITH THE FULL SET OF CONSTRUCTION DOCUMENTS. THE OWNER & ENGINEER(S) WILL NOT BE LIABLE FOR LACK OF COORDINATION OF CONTRACTOR AND THEIR SUBCONTRACTORS. CONTRACTOR SHALL BARE ANY AND ALL EXPENSES RESULTING FROM REWORK OR ADDITIONAL WORK DUE TO LACK OF PROPER COORDINATION OR FAMILIARITY WITH APPROVED PLANS.

(12) LATERAL SEPARATION OF SEWERS OR WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST TEN (10) FEET LATERALLY FROM EXISTING OR FUTURE SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A TEN (10) FOOT LATERAL SEPARATION -- IN WHICH CASE:

(A) THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION ON THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER; OR
(B) THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF SEWER.

(14) CROSSING A WATER MAIN OVER A SEWER. WHENEVER NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN (18) INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN EIGHTEEN (18) INCH SEPARATION -- IN WHICH CASE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE CROSSING.

(15) CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE POINT(S) OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

EROSION CONTROL CONSTRUCTION SEQUENCE

PHASE 1

1. OBTAIN ALL NECESSARY PERMITS FROM HARNETT COUNTY, NCDOT, AND NCDEQ.
2. SCHEDULE PRE-CONSTRUCTION MEETING WITH HARNETT COUNTY, NCDOT, OWNER, ENGINEER, AND ARCHITECT.
3. PERFORM CONSTRUCTION STAKEOUT. CLEAR/GRUB/ROUGH GRADE ONLY ENOUGH AREA TO INSTALL INITIAL SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO, TEMPORARY CONSTRUCTION ENTRANCE, SEDIMENT FENCE AND OUTLETS AND TREE PROTECTION FENCE.
4. EXCAVATE TOPOGRAPHY NECESSARY FOR SEDIMENT BASIN INSTALLATION. INSTALL SCM RISER, TRASH RACK, FAIRCLOTH SKIMMER, AND SEDIMENT BASIN BAFFLES. SEED SEDIMENT BASINS IMMEDIATELY AFTER CONSTRUCTION.
5. EXCAVATE TOPOGRAPHY NECESSARY FOR TEMPORARY DIVERSION DITCH INSTALLATION. INSTALL TEMPORARY ROCK CHECK DAMS PER SHEET C4.0. SEED TEMPORARY DIVERSION DITCHES IMMEDIATELY AFTER CONSTRUCTION.
6. SCHEDULE INSPECTION FOR INITIAL ONSITE EROSION CONTROL MEASURES WITH NCDEQ ENGINEERING INSPECTOR TO OBTAIN CERTIFICATE OF COMPLIANCE (C.O.C).
7. UPON APPROVAL, COMMENCE GRUBBING, AND ROUGH GRADING.
8. VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF ANY STRUCTURES OR IMPERVIOUS AREA.

PHASE 2

6. INSTALL DEVICES FOR STORM WATER COLLECTION SYSTEM AS THE SITE IS BEING GRADED AND PROTECT INLETS WITH SILT BAG INLET PROTECTION OR OTHER APPROVED MEASURES.
7. CONSTRUCT SITE UTILITY IMPROVEMENTS, (i.e. WATERLINE, STORM DRAIN, SANITARY SEWER, ETC.). INSTALL DRY UTILITIES. SHIFT AND REPAIR DIVERSION DITCH AS NEEDED TO INSTALL UTILITIES.
8. BEGIN CONSTRUCTION OF BUILDING PAD.
9. FINISH GRADE THE SITE. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, DITCH LININGS, ETC. SCARIFY, SEED, FERTILIZE, & MULCH ALL DENUDED AREAS IN ACCORDANCE WITH PERMANENT SEEDING SCHEDULE AND GROUND STABILIZATION TIME FRAMES.
4. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, SCHEDULE INSPECTIONS WITH NCDEQ.
5. UPON APPROVAL BY THE INSPECTOR, THE CONTRACTOR SHALL RETURN TO THE SITE AND REMOVE TEMPORARY DIVERSIONS, SILT FENCE, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
6. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY NCDEQ. OBTAIN A CERTIFICATE OF COMPLETION.
7. NCDEQ INSPECTOR AND ENGINEER MUST GRANT PERMISSION TO REMOVE SEDIMENT BASIN #1.
8. UPON ISSUANCE OF CERTIFICATE OF COMPLETION, OWNER MUST SUBMIT A NOTICE OF TERMINATION TO NCDEQ FOR TERMINATION OF COVERAGE FOR NCG01 PERMIT.

NOTE: THIS EROSION CONTROL SEQUENCE IS FOR ENFORCEMENT OF EROSION CONTROL MEASURES ONLY. THIS DOES NOT IN ANY WAY OBLIGATE OR DIRECT THE CONTRACTOR ON MEANS AND METHODS OF HOW TO CONSTRUCT THE PROJECT.

MAINTENANCE NOTE
1. SEED AND MULCH ALL EROSION CONTROL MEASURES IMMEDIATELY AFTER CONSTRUCTION. SLOPES SHALL BE MATTED IN ACCORDANCE WITH THE APPROVED PLAN.
2. STABILIZE SITE IN ACCORDANCE WITH THE NPDES STABILIZATION TIME FRAMES AND TEMPORARY SEEDING SCHEDULE. MAINTAIN SELF-INSPECTION RECORDS WEEKLY OR AFTER A RAINFALL EVENT IN EXCESS OF ONE INCH IN ACCORDANCE WITH NPDES.
3. CONTRACTOR SHALL INSPECT & MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAIN EVENT AND/OR A MIN. OF ONCE PER WEEK.

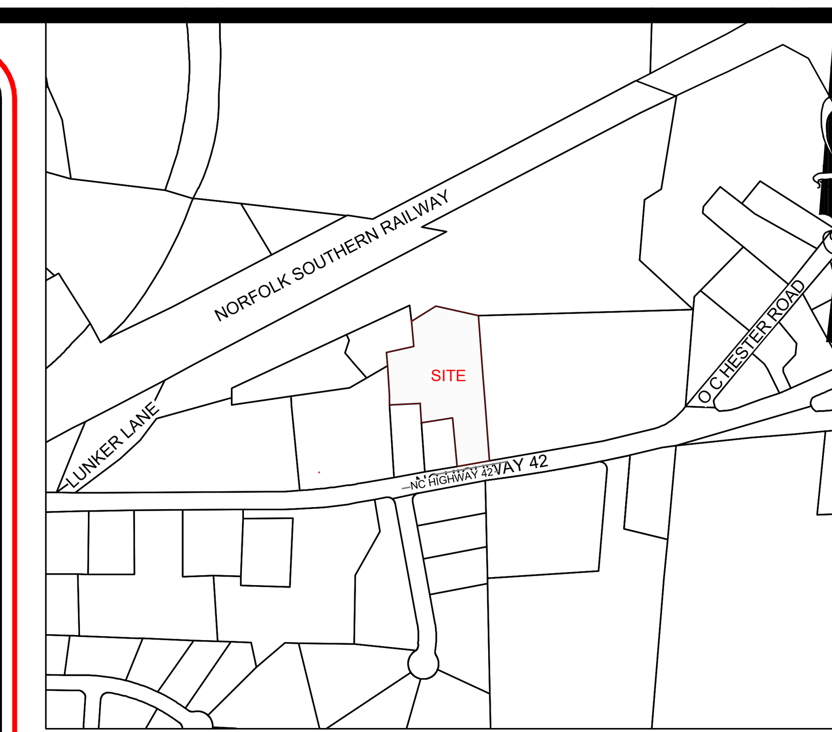
CCTV & CLEANOUT NOTE: PRIOR TO THE FINAL PUNCH LIST AND OWNER ACCEPTANCE, THE CONTRACTOR SHALL CLEAN AND CAMERA ALL INSTALLED SANITARY SEWER AND STORMWATER PIPES AND STRUCTURES TO DETERMINE THEIR CONDITION AND IDENTIFY ANY DEFECTS OR REPAIRS NECESSARY. CCTV SHALL CONFIRM THAT ALL PIPES AND STRUCTURES ARE IN COMPLIANCE WITH DESIGN STANDARDS, LOCAL, STATE AND FEDERAL CODES AND ARE FREE OF SEDIMENT, STONE OR ANY DEBRIS PRIOR TO ACCEPTANCE BY THE OWNER. A DIGITAL COPY OF ALL CAMERA WORK AND A WRITTEN REPORT OF ANY DEFICIENCIES FOUND SHALL BE PROVIDED TO THE OWNER, ENGINEER AND ARCHITECT PRIOR TO ACCEPTANCE BY THE OWNER AND FINAL PAY APPLICATION APPROVAL.

NOTE: GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL UTILTIES (I.E. ELECTRICAL, GAS, SEWER, WATER, FIBER, ETC) ARE COORDINATED WITH UTILITY PROVIDERS AND EXTENDED TO THE BUILDING.

LEGEND

EXISTING		PROPOSED
P/L	PROPERTY LINE	P/L
R/W	RIGHT OF WAY	R/W
ss	SANITARY SEWER	SS
Ⓢ	SANITARY SEWER MANHOLE	Ⓢ
CO	CLEAN OUT	SSCO
wtr	WATER LINE	W
	CENTERLINE OF ROAD	
LP	LIGHT POLES	
EIP	PROPERTY CORNER	NIP
	SETBACK	
	STORM PIPE/CULVERT	
	DROP INLET	
	CURB INLET	
98 95	CONTOURS	98 95
HYD	FIRE HYDRANT	HYD
	WATER VALVE	
	WHEELCHAIR RAMP	
X	FENCE	X
	CONCRETE	
	LIGHT POLE	
	POWER POLE	
oe	OVERHEAD POWER	
	CURB END TAPER	
	WHEEL STOP	

ADA NOTE: ALL GRADING MUST CONFORM TO ADA REQUIREMENTS FOR MEANS OF INGRESS/EGRESS AND ADA PARKING. CONTRACTOR SHALL CHECK FORMS PRIOR TO CONCRETE BEING POURED AND NOTIFY ENGINEER IMMEDIATELY IF THERE ARE ANY ADA CONFLICTS, PRIOR TO CONSTRUCTING ANY SIDEWALKS, CURB & GUTTER, RAMPS, STEPS, ETC. ANY ELEVATION DISCREPANCIES OR CONFLICTS SHALL REQUIRE WRITTEN RESOLUTION FROM OWNER, ARCHITECT & ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK AND EXPENSE.



VICINITY MAP
SCALE: 1"=200'

ABBREVIATIONS

AC	ACRE
B-B	BACK OF CURB-BACK OF CURB
BO	BLOWOFF VALVE
BOC	BACK OF CURB
BOW	BOTTOM OF WALL
CATV	CABLE PEDESTAL
CI	CURB INLET
DI	DROP INLET
EG	EXISTING GRADE
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATIONS
FG	FINISHED GRADE
FP	FLAG POLE
FW	FIRE WATER
GW	GUY WIRE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
INV.	INVERT
LF	LINEAR FEET
LP	LIGHT POLE
PIV	POST INDICATOR VALVE
PP	POWER POLE
R/W	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
SB	UNDERGROUND SIGNAL BOX
SDM	STORM DRAIN MANHOLE
SF	SQUARE FEET
SMH	SEWER MANHOLE
SP	TRAFFIC SIGNAL POLE
TB	TELEPHONE BOX
TERRA	TERRACOTTA PIPE
TBOC	TOP BACK OF CURB
TOS	TOP OF SLAB
TOW	TOP OF WALL
WV	WATER VALVE
YI	YARD INLET
YL	YARD LIGHT

HARNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES UTILITY NOTES - WATER

A. THE FIRE MARSHAL'S OFFICE SHALL APPROVE ALL HYDRANT TYPES AND LOCATIONS IN NEW SUBDIVISIONS. HOWEVER, HARNETT REGIONAL WATER (HRW) PREFERS THE CONTRACTORS TO INSTALL ONE OF THE FOLLOWING FIRE HYDRANTS:

1. MUELLER - SUPER CENTURION 250 A-423 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE);
2. AMERICAN DARLING - MARK B-84-B MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE);
3. WATEROUS - PACER B-67-250 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE) OR APPROVED EQUAL FOR STANDARDIZATION.

*ALL FIRE HYDRANTS LISTED ABOVE MUST HAVE "AMERICAN NATIONAL FIRE HOSE CONNECTION SCREW THREADS" NST/NH HOSE THREADS.

B. FIRE HYDRANTS ARE INSTALLED AT CERTAIN ELEVATIONS. ANY GRADE CHANGE NEAR ANY FIRE HYDRANT, WHICH IMPEDES ITS OPERATION, SHALL BECOME THE RESPONSIBILITY OF THE UTILITY CONTRACTOR FOR CORRECTION. CORRECTIONS WILL BE MONITORED BY THE HRW UTILITY CONSTRUCTION INSPECTOR AND THE HARNETT COUNTY FIRE MARSHAL.

C. THE PROFESSIONAL ENGINEER (PE) SHALL OBTAIN AND PROVIDE THE NCDEQ "AUTHORIZATION TO CONSTRUCT" PERMIT TO THE UTILITY CONTRACTOR BEFORE THE CONSTRUCTION OF THE WATER LINE SHALL BEGIN. THE UTILITY CONTRACTOR MUST POST A COPY OF THE NCDEQ "AUTHORIZATION TO CONSTRUCT" PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ) ON SITE PRIOR TO THE START OF CONSTRUCTION. THE PERMIT MUST BE MAINTAINED ON SITE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OF THE PROPOSED WATER LINES THAT WILL SERVE THIS PROJECT.

D. THE UTILITY CONTRACTOR SHALL NOTIFY HARNETT REGIONAL WATER (HRW) AND THE PROFESSIONAL ENGINEER (PE) AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE UTILITY CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH MR. CHAD EVERETTE, HRW UTILITY CONSTRUCTION INSPECTOR AT LEAST TWO (2) DAYS BEFORE CONSTRUCTION WILL BEGIN AND THE UTILITY CONTRACTOR MUST COORDINATE WITH HRW FOR REGULAR INSPECTION VISITATIONS AND ACCEPTANCE OF THE WATER SYSTEM(S). CONSTRUCTION WORK SHALL BE PERFORMED ONLY DURING THE NORMAL WORKING HOURS OF HRW WHICH IS 8:00 AM - 5:00 PM MONDAY THROUGH FRIDAY. HOLIDAY AND WEEKEND WORK IS NOT PERMITTED BY HRW.

E. THE PROFESSIONAL ENGINEER (PE) SHALL PROVIDE HRW AND THE UTILITY CONTRACTOR WITH A SET OF NCDEQ APPROVED PLANS MARKED "RELEASED FOR CONSTRUCTION" AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE REGISTERED LAND SURVEYOR (RLS) SHOULD STAKE OUT ALL LOT CORNERS AND THE GRADE STAKES FOR THE PROPOSED FINISH GRADE FOR EACH STREET BEFORE THE UTILITY CONTRACTOR BEGINS CONSTRUCTION OF THE WATER LINE(S). THE GRADE STAKES SHOULD BE SET WITH A CONSISTENT OFFSET FROM THE STREET CENTERLINE SO AS NOT TO INTERFERE WITH THE STREET GRADING AND UTILITY CONSTRUCTION.

F. THE UTILITY CONTRACTOR SHALL PROVIDE THE HRW UTILITY CONSTRUCTION INSPECTOR WITH MATERIAL SUBMITTALS AND SHOP DRAWINGS FOR ALL PROJECT MATERIALS PRIOR TO THE CONSTRUCTION OF ANY WATER LINE EXTENSION(S), AND ASSOCIATED WATER SERVICES IN HARNETT COUNTY. THE MATERIALS TO BE USED ON THE PROJECT MUST MEET THE ESTABLISHED SPECIFICATIONS OF HRW AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. ALL SUBSTANDARD MATERIALS OR MATERIALS NOT APPROVED FOR USE IN HARNETT COUNTY FOUND ON THE PROJECT SITE MUST BE REMOVED IMMEDIATELY WHEN NOTIFIED BY THE HRW UTILITY CONSTRUCTION INSPECTOR.

G. THE WATER MAIN(S), FIRE HYDRANTS, SERVICE LINES, METER SETTERS AND ALL ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED IN STRICT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT REGIONAL WATER (HRW). THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE NEWLY INSTALLED WATER MAIN(S), WATER SERVICE LINES AND ALL ASSOCIATED METER SETTERS AND METER BOXES FOR OTHER UTILITY COMPANIES AND THEIR CONTRACTORS UNTIL THE NEW WATER MAIN(S) HAVE BEEN APPROVED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF ENVIRONMENTAL HEALTH, PUBLIC WATER SUPPLY SECTION (NCDEQ, DEH, PWS) AND ACCEPTED BY HRW.

H. PRIOR TO ACCEPTANCE, ALL SERVICES WILL BE INSPECTED TO ENSURE THAT THEY ARE INSTALLED AT THE PROPER DEPTH. ALL METER BOXES MUST BE FLUSH WITH THE GROUND LEVEL AT FINISH GRADE AND THE METER SETTERS MUST BE A MINIMUM OF 8" BELOW THE METER BOX LID. METER SETTERS SHALL BE CENTERED IN THE METER BOX AND SUPPORTED BY BRICK, BLOCK OR STONE.

I. THE UTILITY CONTRACTOR SHALL PROVIDE THE PROFESSIONAL ENGINEER (PE) AND HRW UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE DRAWINGS IDENTIFYING THE COMPLETE WATER SYSTEM INSTALLED FOR EACH PROJECT. THE RED LINE DRAWINGS SHOULD IDENTIFY THE MATERIALS, PIPE SIZES AND APPROXIMATE DEPTHS OF THE WATER LINES AS WELL AS THE GATE VALVES, FIRE HYDRANTS, METER SETTERS, BLOW OFF ASSEMBLIES AND ALL ASSOCIATED APPURTENANCES FOR ALL WATER LINE(S) CONSTRUCTED IN HARNETT COUNTY. THE RED LINE DRAWINGS SHOULD CLEARLY IDENTIFY ANY DEVIATIONS FROM THE NCDEQ APPROVED PLANS. ALL CHANGE ORDERS MUST BE APPROVED BY HRW AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

J. POTABLE WATER MAINS CROSSING OTHER UTILITIES AND NON-POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWENTY-FOUR (24") INCHES BETWEEN THE POTABLE WATER MAIN AND ALL OTHER UTILITIES. NCDOT REQUIRES THE NEW WATER MAINS TO BE INSTALLED UNDER THE STORM WATER LINES. THE POTABLE WATER MAIN SHALL BE INSTALLED WITH TWENTY-FOUR (24") INCHES OF VERTICAL SEPARATION AND WITH DUCTILE IRON PIPE WHEN DESIGNED TO BE PLACED UNDER A NONPOTABLE WATER LINE SUCH AS SANITARY SEWER OR STORM SEWER LINES. IF THESE SEPARATIONS CANNOT BE MAINTAINED THEN THE WATER MAIN SHALL BE INSTALLED WITH DUCTILE IRON PIPE. BOTH THE POTABLE WATER MAIN AND THE NON-POTABLE WATER LINE MUST BE CAST IRON OR DUCTILE IRON PIPE (DIP) IF THE STATE MINIMUM SEPARATIONS CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE MUST BE LAID SO THE MECHANICAL JOINTS ARE AT LEAST (10') FEET FROM THE POINT WHERE THE POTABLE WATER MAIN CROSSES THE NON-POTABLE WATER LINE.

K. POTABLE WATER MAINS INSTALLED PARALLEL TO NON-POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF TEN (10') FEET BETWEEN THE POTABLE WATER MAIN AND SANITARY SEWER MAINS, SEWER LATERALS AND SERVICES. THE HORIZONTAL SEPARATION BETWEEN THE POTABLE WATER MAIN AND ANY OTHER UTILITY OR STORM SEWER SHALL NOT BE LESS THAN FIVE (5') FEET. THE POTABLE WATER MAIN MUST BE DUCTILE IRON PIPE IF THIS HORIZONTAL SEPARATION OF TEN (10') FEET CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST TEN (10') FEET BEYOND THE POINT WHERE THE MINIMUM REQUIRED HORIZONTAL SEPARATION OF TEN (10') FEET CAN BE RE-ESTABLISHED.

L. METER SETTERS SHALL BE INSTALLED IN PAIRS ON EVERY OTHER LOT LINE WHERE POSSIBLE TO LEAVE ADEQUATE SPACE FOR OTHER UTILITIES TO BE INSTALLED AT A LATER TIME. THE METER SETTERS SHALL BE INSTALLED AT LEAST ONE (1') FOOT INSIDE THE RIGHT-OF-WAY AND AT LEAST THREE (3') TO FIVE (5') FEET FROM THE PROPERTY LINE BETWEEN THE LOTS.

M. HRW REQUIRES THAT METER BOXES FOR ¾" SERVICES SHALL BE 12" WIDE X 17" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH CAST IRON LIDS/COVERS. METER BOXES FOR 1" SERVICES SHALL BE 17" WIDE X 21" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS. METER BOXES FOR 2" SERVICES SHALL BE 20" WIDE X 32" LONG ABS PLASTIC BOXES AT LEAST 20" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS.

N. MASTER METERS MUST BE INSTALLED IN CONCRETE VAULTS SIZED FOR THE METER ASSEMBLY AND ASSOCIATED APPURTENANCES SO AS TO PROVIDE AT LEAST EIGHTEEN (18") INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE CONCRETE VAULT AND THE BOTTOM OF THE METER SETTER. THE MASTER METER MUST BE PROVIDED TEST PORTS IF THE METER IS NOT EQUIPPED WITH TEST PORTS FROM THE MANUFACTURER IN ACCORDANCE WITH THE HRW ESTABLISHED STANDARD SPECIFICATIONS AND DETAILS. DUCTILE IRON PIPE MUST BE USED FOR THE MASTER METER VAULT PIPING AND VALVE VAULT PIPING. THE UTILITY CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR THE METER VAULTS TO HRW PRIOR TO ORDERING THE CONCRETE VAULTS.

O. THE UTILITY CONTRACTOR WILL INSTALL POLYETHYLENE SDR-9 WATER SERVICE LINES THAT CROSS UNDER THE PAVEMENT INSIDE A SCHEDULE 40 PVC CONDUIT TO ALLOW FOR REMOVAL AND REPLACEMENT IN THE FUTURE. TWO (2) INDEPENDENT ¾" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE (1) - TWO (2") INCH SCHEDULE 40 PVC CONDUIT OR TWO (2) INDEPENDENT 1" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE (1) - THREE (3") INCH SCHEDULE 40 PVC CONDUIT, BUT EACH WATER SERVICE SHALL BE TAPPED DIRECTLY TO THE WATER MAIN. SPLIT SERVICES ARE NOT ALLOWED BY HRW. IF SIDEWALKS ARE PROPOSED, THE CONDUIT MUST EXTEND PAST THE SIDEWALK.

P. THE WATER MAIN(S), FIRE HYDRANTS, GATE VALVES, SERVICE LINES, METER SETTERS AND ASSOCIATED APPURTENANCES MUST BE RATED FOR 200 PSI AND HYDROSTATICALLY PRESSURE TESTED TO 200 PSI. THE HYDROSTATIC PRESSURE TEST(S) MUST BE WITNESSED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR MUST NOTIFY HRW WHEN THEY ARE READY TO BEGIN FILLING IN LINES AND COORDINATE WITH HARNETT REGIONAL WATER TO WITNESS ALL PRESSURE TESTING.

Q. THE UTILITY CONTRACTOR SHALL CONDUCT A PNEUMATIC PRESSURE TEST USING COMPRESSED AIR OR OTHER INERT GAS ON THE STAINLESS STEEL TAPPING SLEEVE(S) PRIOR TO MAKING THE TAP ON THE EXISTING WATER MAIN. THIS PNEUMATIC PRESSURE TEST MUST BE WITNESSED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR SHALL USE ROMAC BRAND STAINLESS STEEL TAPPING SLEEVE(S) OR APPROVED EQUAL FOR ALL TAPS MADE IN HARNETT COUNTY. ALL NEW WATER LINE EXTENSIONS MUST BEGIN WITH A RESILIENT WEDGE TYPE GATE VALVE SIZED EQUAL TO THE DIAMETER OF THE NEW WATER LINE EXTENSION IN ORDER TO PROVIDE A MEANS OF ISOLATION BETWEEN HARNETT REGIONAL WATER'S EXISTING WATER MAINS AND THE NEW WATER LINE EXTENSIONS UNDER CONSTRUCTION.

R. ALL WATER MAINS WILL BE CONSTRUCTED WITH SDR-21 PVC PIPE OR CLASS 50 DUCTILE IRON PIPE RATED FOR AT LEAST 200 PSI OR GREATER. ALL PIPES MUST BE PROTECTED DURING LOADING, TRANSPORT, UNLOADING, STAGING, AND INSTALLATION. PVC PIPE MUST BE PROTECTED FROM EXTENDED EXPOSURE TO SUNLIGHT PRIOR TO INSTALLATION.

S. ALL WATER MAINS WILL BE FLUSHED AND DISINFECTED IN STRICT ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT REGIONAL WATER. ALL WATER SAMPLES COLLECTED FOR BACTERIA TESTING WILL BE COLLECTED BY THE HRW UTILITY CONSTRUCTION INSPECTOR AND TESTED IN THE HRW LABORATORY.

T. ALL FITTINGS LARGER THAN TWO (2") INCHES DIAMETER SHALL BE DUCTILE IRON. HRW REQUIRES THAT MECHANICAL JOINTS BE ASSEMBLED WITH GRIP RINGS AS "MEGALUG" FITTINGS ARE NOT APPROVED BY HARNETT REGIONAL WATER FOR PIPE SIZES SMALLER THAN TWELVE INCHES (12") DIAMETER. PVC PIPE USED FOR WATER MAINS SHALL BE CONNECTED BY SLIP JOINT OR MECHANICAL JOINT WITH GRIP RINGS. GLUED PIPE JOINTS ARE NOT ALLOWED ON PVC PIPE USED FOR WATER MAINS IN HARNETT COUNTY.

U. HRW REQUIRES THAT THE UTILITY CONTRACTOR INSTALL TRACER WIRE IN THE TRENCH WITH ALL WATER LINES. THE TRACER WIRE SHALL BE 12 GA. INSULATED, SOLID COPPER CONDUCTOR AND IT SHALL BE TERMINATED AT THE TOP OF THE VALVE BOXES OR MANHOLES. NO SPLICED WIRE CONNECTIONS SHALL BE MADE UNDERGROUND ON TRACER WIRE INSTALLED IN HARNETT COUNTY. THE TRACER WIRE MAY BE SECURED WITH DUCT TAPE TO THE TOP OF THE PIPE BEFORE BACKFILLING.

V. THE UTILITY CONTRACTOR WILL PROVIDE PROFESSIONAL ENGINEER (PE) AND THE HRW UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE FIELD DRAWINGS TO IDENTIFY THE INSTALLED LOCATIONS OF THE WATER LINE(S) AND ALL ASSOCIATED SERVICES. ALL CHANGE ORDERS MUST BE PRE-APPROVED BY HRW AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

W. THE UTILITY CONTRACTOR SHALL SPOT DIG TO EXPOSE EACH UTILITY PIPE OR LINE WHICH MAY CONFLICT WITH CONSTRUCTION OF PROPOSED WATER LINE EXTENSIONS WELL IN ADVANCE TO VERIFY LOCATIONS OF THE EXISTING UTILITIES. THE UTILITY CONTRACTOR SHALL PROVIDE BOTH HORIZONTAL AND VERTICAL CLEARANCES TO THE PROFESSIONAL ENGINEER (PE) TO ALLOW THE PE TO ADJUST THE WATER LINE DESIGN IN ORDER TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES, PIPES, WIRES, CABLES, SIGNS AND/OR UTILITIES INCLUDING SERVICES IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS DURING WATER LINE INSTALLATION, GRADING AND STREET CONSTRUCTION.

X. PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN ESTABLISHED UTILITY EASEMENTS OR NCDOT RIGHT-OF-WAYS THE UTILITY CONTRACTOR IS REQUIRED TO HAVE A SIGNED NCDOT ENCROACHMENT AGREEMENT POSTED ON SITE AND NOTIFY ALL CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH G.S. 87-102. THE UTILITY CONTRACTOR MUST CALL THE NC ONE CALL CENTER AT 811 OR (800) 632-4949 TO VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION. EXISTING UTILITIES SHOWN IN THESE PLANS ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED OR VERIFIED BY THE P.E. (I.E. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.). THE UTILITY CONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY AND ALL DAMAGES TO THE SATISFACTION OF THE RELATED UTILITY COMPANY.

Y. THE UTILITY CONTRACTOR SHALL PROVIDE HRW WITH AT LEAST ONE (1) FIRE HYDRANT WRENCH AND ONE (1) BREAK-AWAY FLANGE KIT FOR EVERY SUBDIVISION WITH FIRE HYDRANTS DEVELOPED IN HARNETT COUNTY. THESE ITEMS MUST BE PROVIDED TO HRW BEFORE THE FINAL INSPECTION WILL BE SCHEDULED BY THE HRW UTILITY CONSTRUCTION INSPECTOR. IN ADDITION, THE UTILITY CONTRACTOR SHALL INSTALL A 4" X 4" CONCRETE VALVE MARKER AT THE EDGE OF THE RIGHT-OF-WAY TO IDENTIFY THE LOCATION OF EACH GATE VALVE INSTALLED IN THE NEW WATER SYSTEM WITH THE EXCEPTION OF THE FIRE HYDRANT ISOLATION VALVES. THE CONTRACTOR SHALL MEASURE THE DISTANCE FROM THE CENTER OF THE CONCRETE MARKER TO THE CENTER OF THE VALVE BOX. THIS DISTANCE (IN LINEAR FEET) SHALL BE STAMPED ON THE BRASS PLATE LOCATED ON THE TOP OF THE CONCRETE VALVE MARKER. IN LIEU OF INSTALLING THE CONCRETE VALVE MARKERS, THE UTILITY CONTRACTOR MAY PROVIDE AT LEAST TWO MEASUREMENTS FROM TWO INDEPENDENT PERMANENT ABOVE GROUND STRUCTURES TO THE PROFESSIONAL ENGINEER (PE) IN THE RED LINE DRAWINGS TO IDENTIFY THE VALVE LOCATIONS. THE PROFESSIONAL ENGINEER (PE) MUST INCLUDE THESE MEASUREMENTS IN THE AS-BUILT RECORD DRAWINGS SUBMITTED TO HRW.

Z. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO LEAKAGE DAMAGE FROM POOR WORKMANSHIP DURING THE ONE (1) YEAR WARRANTY PERIOD ONCE THE WATER SYSTEM IMPROVEMENTS HAVE BEEN ACCEPTED BY HARNETT REGIONAL WATER. HARNETT REGIONAL WATER WILL PROVIDE MAINTENANCE AND REPAIRS WHEN REQUESTED AND BILL THE DEVELOPER AND/OR UTILITY CONTRACTOR IF NECESSARY DUE TO LACK OF RESPONSE WITHIN 48 HOURS OF NOTIFICATION OF WARRANTY WORK. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO DAMAGES RESULTING FROM FAILURE TO LOCATE THE NEW WATER LINES AND ASSOCIATED APPURTENANCES FOR OTHER UTILITIES AND THEIR CONTRACTORS UNTIL THE WATER LINES HAVE BEEN APPROVED BY NCDEQ AND ACCEPTED BY HRW. THE FINAL INSPECTION OF WATER SYSTEM IMPROVEMENTS CANNOT BE SCHEDULED WITH HRW UNTIL THE STREETS HAVE BEEN PAVED; THE RIGHTS-OF-WAY AND UTILITY EASEMENTS HAVE BEEN SEEDED AND STABILIZED WITH AN ADEQUATE STAND OF GRASS IN PLACE TO PREVENT EROSION ISSUES ON SITE.

AA. THE ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT CONSTRUCTION IS, AT ALL TIMES, IN COMPLIANCE WITH ACCEPTED SANITARY ENGINEERING PRACTICES AND APPROVED PLANS AND SPECIFICATIONS. NO FIELD CHANGES TO THE APPROVED PLANS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY HRW. A COPY OF EACH ENGINEER'S FIELD REPORT IS TO BE SUBMITTED TO HRW AS EACH SUCH INSPECTION IS MADE ON SYSTEM IMPROVEMENTS OR TESTING IS PERFORMED BY THE CONTRACTOR. WATER AND SEWER INFRASTRUCTURE MUST PASS ALL TESTS REQUIRED BY HRW SPECIFICATIONS AND THOSE OF ALL APPLICABLE REGULATORY AGENCIES. THESE TESTS INCLUDE, BUT ARE NOT LIMITED TO: AIR TEST, VACUUM TEST, MANDREL TEST, VISUAL TEST, PRESSURE TEST, BACTERIOLOGICAL TEST, ETC. A HRW INSPECTOR MUST BE PRESENT DURING TESTING AND ALL TEST RESULTS SHALL BE SUBMITTED TO HRW. ALL TESTS MUST BE SATISFIED BEFORE THE FINAL INSPECTION WILL BE SCHEDULED WITH THE HRW INSPECTOR. THE ENGINEER OF RECORD MUST REQUEST IN WRITING TO SCHEDULE THE FINAL INSPECTION ONCE ALL CONSTRUCTION IS COMPLETE. THE DEVELOPER'S ENGINEER OF RECORD AND THE HRW UTILITY CONSTRUCTION INSPECTOR SHALL PREPARE A WRITTEN PUNCH LIST OF ANY DEFECTS OR DEFICIENCIES NOTED DURING THE FINAL INSPECTION, SHOULD ANY EXIST. UPON COMPLETION OF THE PUNCH LIST, THE DEVELOPER'S ENGINEER OF RECORD WILL SCHEDULE ANOTHER INSPECTION. IN THE EVENT THE NUMBER OF INSPECTIONS PERFORMED BY THE HRW EXCEEDS TWO, ADDITIONAL FEES MAY BE ASSESSED TO THE DEVELOPER.

NOTE: CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK.

STORMWATER STRUCTURE NOTE: ELEVATIONS, PIPE LENGTHS AND SLOPES REFERENCED IN THE STORM PIPE TABLE AND STORM STRUCTURE TABLE ARE APPROXIMATE AND MAY HAVE BEEN ROUNDED. DEPENDING ON SUPPLIER OF PIPES AND STRUCTURES, SOME ELEVATIONS MAY REQUIRE FIELD ADJUSTMENT. IF THE CONTRACTOR FINDS A CONFLICT OR ERROR IN THE ELEVATIONS WITHIN THESE TABLES OR WITH SUPPLIER CUT SHEETS, THEY MUST CONTACT THE ENGINEER IMMEDIATELY AND OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION, OTHERWISE CONTRACTOR PROCEEDS AT THEIR OWN RISK AND EXPENSE.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

811 Know what's below. Call before you dig.

NORTH CAROLINA PROFESSIONAL SEAL 032614 ENGINEER GARY J. MCCABE
06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

FINAL DRAWING RELEASED FOR CONSTRUCTION

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RED LINE ENGINEERING
RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
FUQUAY-VARINA, NORTH CAROLINA 27526
PHONE - (919) 779-6851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

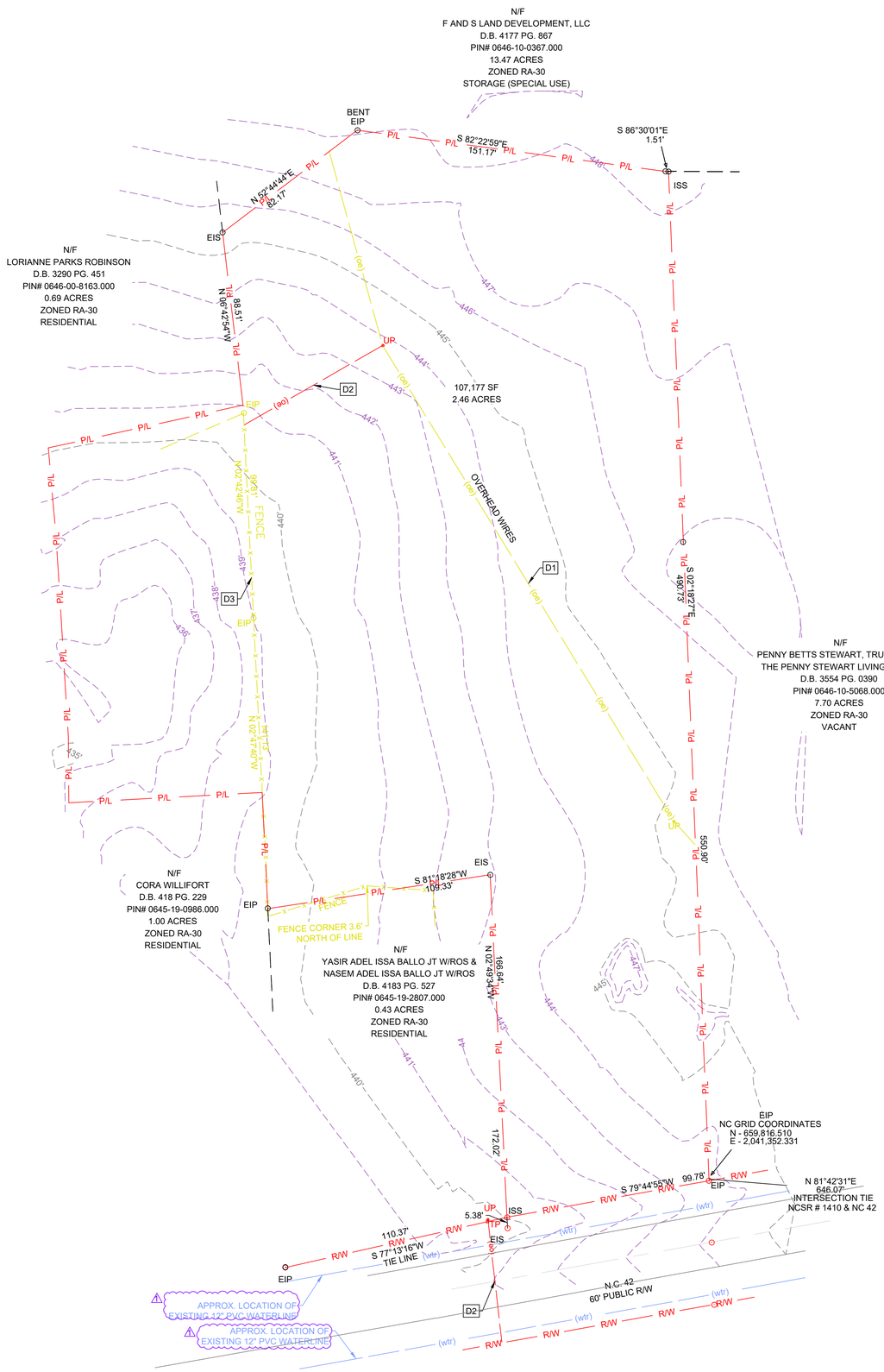
42 BUSINESS PARK INDUSTRIAL FLEX BASE
NOTES, LEGENDS, AND ABBREVIATIONS

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

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PROJECT NO.:
DRAWN BY:
REVIEWED BY:

SHEET NUMBER:
C1.0
OF 19 SHEETS



SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY DUE TO METHODS OF REPRODUCTION.

EXISTING CONDITIONS & DEMO PLAN KEYNOTES	
D1	EXISTING OVERHEAD ELECTRICAL WIRES TO BE REMOVED.
D2	EXISTING OVERHEAD ELECTRICAL WIRES TO REMAIN.
D3	EXISTING FENCE TO BE REMOVED

STORMWATER EXEMPTION NOTE: PROJECT IS NOT LOCATED WITHIN A PHASE 2 POST-CONSTRUCTION STORMWATER REGULATED AREA.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE HARNETT COUNTY AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

NOTE: CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN ARCHITECTURAL, P.M.E., STRUCTURAL & CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK.

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NORTH CAROLINA PROFESSIONAL SEAL 032614 ENGINEER GARY J. MCCABE

06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. SEAL C-3075 NORTH CAROLINA

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RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE - (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
EXISTING CONDITIONS AND DEMOLITION PLAN

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
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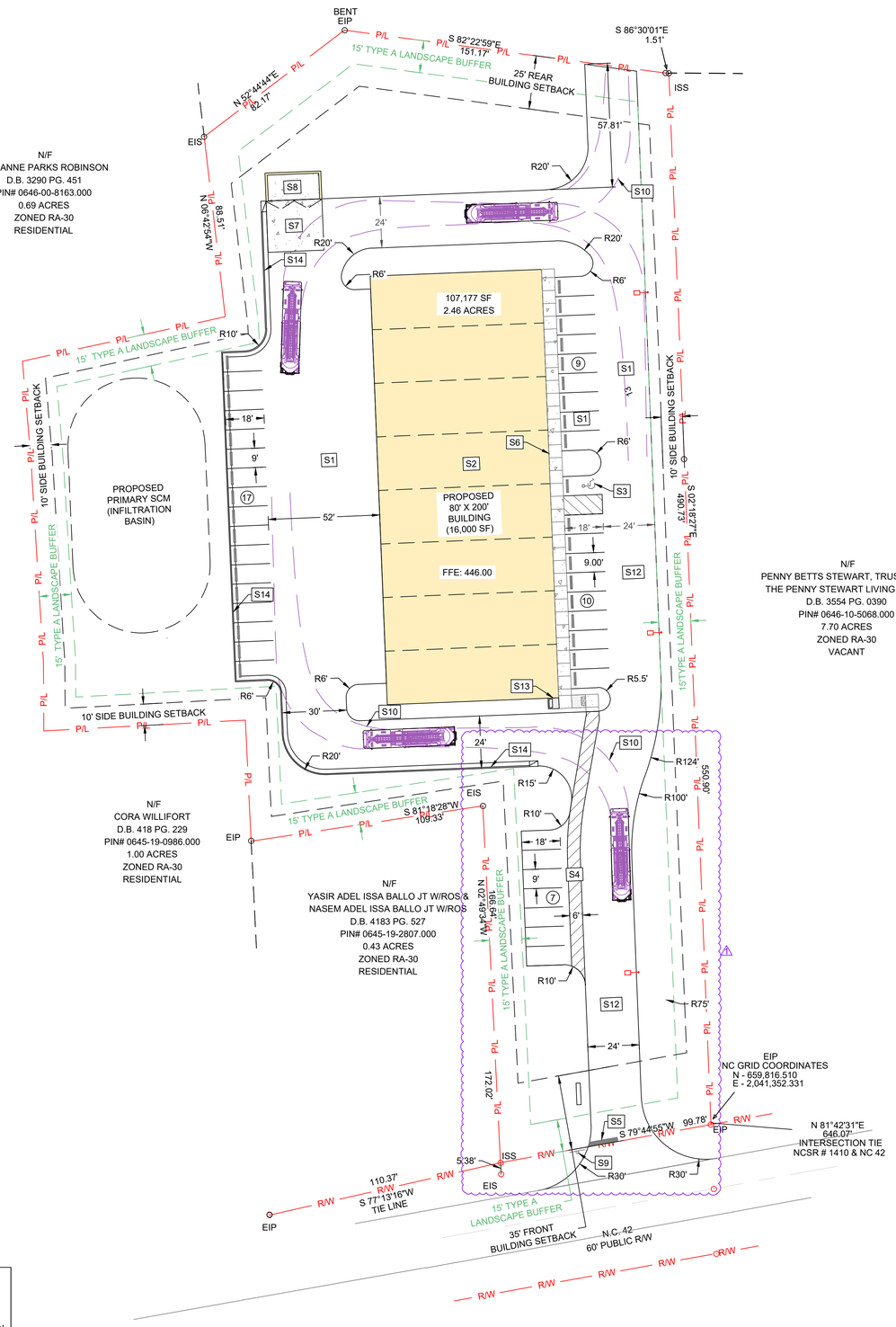
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OF 19 SHEETS



SCALE: 1" = 30'

30' 0 30'

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DUE TO METHODS OF REPRODUCTION.

SITE PLAN KEYNOTES	
S1	INSTALL HEAVY DUTY ASPHALT IN DRIVE AISLE AND PARKING STALLS AS SHOWN (SEE DETAIL SHEET C7.0).
S2	PROPOSED 16,000 SF BUILDING
S3	INSTALL 9' X 18' ADA COMPLIANT PARKING SPACE WITH 9' STRIPED AISLE AND SIGNAGE AS SHOWN (PER HARNETT COUNTY STANDARDS).
S4	PROPOSED 6 FT WIDE STRIPED WALKWAY ADJACENT TO PARKING LOT.
S5	INSTALL 24" THERMOPLASTIC STOP BAR STRIPING AS SHOWN PER LATEST NCDOT & MUTCD STANDARDS (TYP)(SEE DETAIL ON C7.0).
S6	INSTALL 6' WIDE CONCRETE SIDEWALK FROM PARKING TO BUILDING (SEE DETAIL ON SHEET C7.0).
S7	INSTALL 8" THICK REINFORCED CONCRETE SLAB FOR DUMPSTER ACCESS. DOWEL NEW SLAB INTO EXISTING SLAB. CUT CONTROL JOINTS AT 10 FT O.C. INSTALL EXPANSION JOINTS ABUTTING ALL OTHER CONCRETE OR MASONRY STRUCTURES. (SEE DETAILS ON SHEET C7.0)
S8	PROPOSED MASONRY DUMPSTER ENCLOSURE. COLOR AND MATERIALS SHALL BE SIMILAR TO COLOR(S) AND MATERIAL(S) OF BUILDING (SEE DETAILS ON SHEET C7.0).
S9	INSTALL STOP SIGN AS SHOWN PER LATEST NCDOT & MUTCD STANDARDS (TYP)(SEE DETAIL ON C7.0).
S10	FIRE TRUCK WHEEL PATH (LADDER TRUCK)
S11	INSTALL CONCRETE WHEEL STOP 30" FROM SIDEWALK/CURB TO TIRE SIDE OF WHEEL STOP.
S12	PROPOSED PRIVATE ROAD. ROAD NAME OPTIONS TO BE SUBMITTED BY OWNER AND APPROVED BY E-911.
S13	PROPOSED MAIL KIOSK (SEE TYPICAL KIOSK DETAIL ON SHEET C7.0).
S14	INSTALL 30" CURB & GUTTER (SEE DETAIL ON SHEET C7.0).

MONUMENT SIGN NOTE: MONUMENT SIGN TO BE SETBACK AT LEAST 20' FROM THE RIGHT-OF-WAY INTERSECTION AND PERMITTED SEPARATELY (BY OTHERS).

PROPERTY MAINTENANCE NOTE: SITE, PARKING, AND LANDSCAPE BUFFER SHALL BE MAINTAINED THROUGH CONTRACTORS HIRED BY F&S LAND DEVELOPMENT.

NOTE: NC 50 IS ON THE HARNETT COUNTY COMPREHENSIVE TRANSPORTATION PLAN.

NOTE: THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

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06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

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WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC

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HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
OVERALL SITE & EMERGENCY VEHICLE ACCESS PLAN

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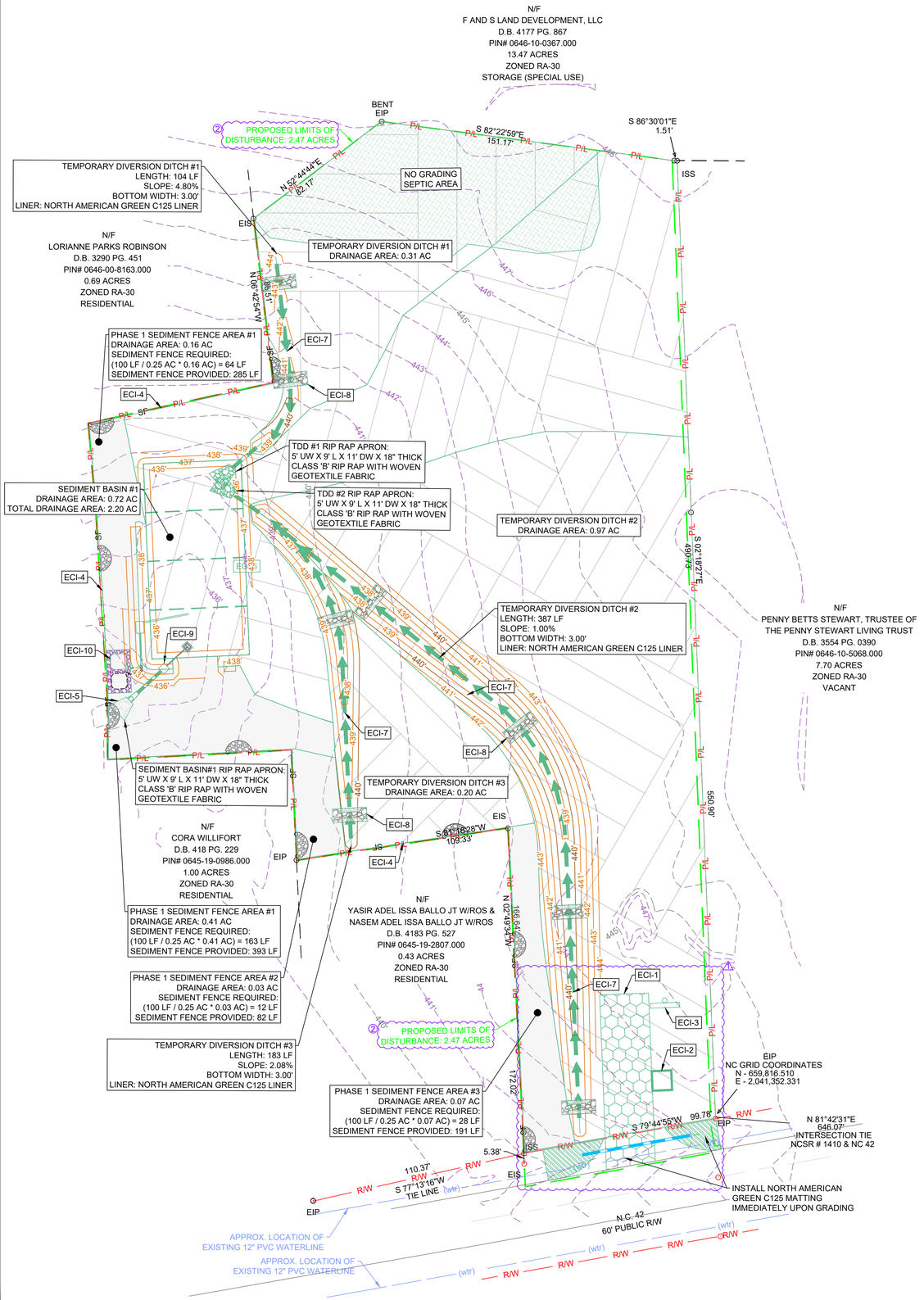
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EROSION CONTROL CONSTRUCTION SEQUENCE

PHASE 1

1. OBTAIN ALL NECESSARY PERMITS FROM HARNETT COUNTY, NCDOT AND NCDEQ.
2. SCHEDULE PRE-CONSTRUCTION MEETING WITH NCDOT, OWNER, AND ENGINEER.
3. PERFORM CONSTRUCTION STAKEOUT. CLEAR/GRUB/ROUGH GRADE ONLY ENOUGH AREA TO INSTALL INITIAL SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO, TEMPORARY CONSTRUCTION ENTRANCE, COMBINATION TREE PROTECTION AND SEDIMENT FENCE WITH OUTLETS. SEED TEMPORARY DIVERSION DITCHES IMMEDIATELY AFTER CONSTRUCTION.
5. EXCAVATE TOPOGRAPHY NECESSARY FOR SEDIMENT BASIN INSTALLATION. INSTALL RISER, FAIRCLOTH SKIMMER, AND SEDIMENT BASIN BAFFLES. SEED SEDIMENT BASINS IMMEDIATELY AFTER CONSTRUCTION.
6. SCHEDULE INSPECTION FOR INITIAL ONSITE EROSION CONTROL MEASURES WITH NCDEQ ENGINEERING INSPECTOR TO OBTAIN CERTIFICATE OF COMPLIANCE (C.O.C).
7. UPON ISSUANCE OF C.O.C, COMMENCE GRUBBING, AND ROUGH GRADING.
8. VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO GRADING.

NOTE: THIS EROSION CONTROL SEQUENCE IS FOR ENFORCEMENT OF EROSION CONTROL MEASURES ONLY. THIS DOES NOT IN ANY WAY OBLIGATE OR DIRECT THE CONTRACTOR ON MEANS AND METHODS OF HOW TO CONSTRUCT THE PROJECT.

MAINTENANCE NOTE

1. SEED AND MULCH ALL EROSION CONTROL MEASURES IMMEDIATELY AFTER CONSTRUCTION. SLOPES SHALL BE MATTED IN ACCORDANCE WITH THE APPROVED PLAN.
2. STABILIZE SITE IN ACCORDANCE WITH THE NPDES STABILIZATION TIME FRAMES AND TEMPORARY SEEDING SCHEDULE. MAINTAIN SELF-INSPECTION RECORDS WEEKLY OR AFTER A RAINFALL EVENT IN EXCESS OF ONE INCH IN ACCORDANCE WITH NPDES.
3. CONTRACTOR SHALL INSPECT & MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAIN EVENT AND/OR A MIN. OF ONCE PER WEEK.

EROSION CONTROL PHASE I KEYNOTES	
ECI-1	INSTALL 25'X70'X12" TEMPORARY CONSTRUCTION ENTRANCE.
ECI-2	INSTALL CONCRETE WASHOUT PIT AT AT ENTRANCE.
ECI-3	APPROXIMATE LOCATION OF RAIN GAUGE AND PERMITS/RECORD BOX ON-SITE.
ECI-4	INSTALL APPROX. 839 LF SEDIMENT FENCING WITH SEDIMENT FENCE OUTLETS EVERY 100 LF MAX AS SHOWN.
ECI-5	INSTALL RIP RAP APRON AT THE END OF FLARED END SECTION AS SHOWN.
ECI-6	INSTALL TEMPORARY PROPOSED 100'X50'X2' DEEP SEDIMENT BASIN WITH BAFFLES AND SKIMMER AS SHOWN.
ECI-7	INSTALL TEMPORARY DIVERSION DITCHES WITH TEMPORARY EROSION CONTROL LINER AS SHOWN. DIVERSION DITCH TO END WITH 18" PVC (SCH40) TEMPORARY SLOPE DRAIN TO SEDIMENT BASIN.
ECI-8	INSTALL TEMPORARY ROCK CHECK DAMS EVERY 100 FT MAX IN TEMPORARY DIVERSION DITCHES.
ECI-9	INSTALL SCM RISER AND 12" RCP OUTLET PIPE. CONNECT 2" FAIRCLOTH SKIMMER WITH 1.8" Ø ORIFICE TO RISER UNDERDRAIN LOCATION. AFTER CONVERSION, REMOVE SKIMMER AND INSTALL 6" PVC UNDERDRAIN.
ECI-10	INSTALL DEWATERING PUMP WITH (2) 8'x8' DEWATERING SILT BAGS

EROSION CONTROL SUMMARY:

(1) 1 CONSTRUCTION ENTRANCES

(2) 840 LF COMBINATION TREE PROTECTION / SEDIMENT FENCE

(3) 9 SEDIMENT FENCE OUTLETS

(4) 674 LF TEMPORARY DIVERSION DITCHES

(5) 8 TEMPORARY ROCK CHECK DAMS

(6) 6 INLET PROTECTION

(7) 4 RIP RAP APRONS

NPDES STABILIZATION TIME FRAMES		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1 - 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETERS AND HQW ZONES

SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY DUE TO METHODS OF REPRODUCTION.

SITE GRADING & EROSION CONTROL NOTES:

(1) SEE GENERAL NOTES, SHEET C1.0.

(2) DISTURBED/DENUDED AREA: 2.47 ACRES A\2

(3) TOTAL TRACT AREA: 2.46 ACRES

(4) ALL DISTURBED AREAS SHALL BE SEEDED, MULCHED OR OTHERWISE STABILIZED WITHIN IN ACCORDANCE WITH THE NPDES TIME FRAMES LOCATED ON THIS SHEET AND WITH THE TEMPORARY SEEDING SCHEDULE ON SHEET C8.0.

(5) ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

(6) CONTRACTOR TO SWEEP AND KEEP CLEAN OF SEDIMENT THE ROADWAY ADJACENT TO THE PROJECT SITE AT ALL TIMES OR WASH STATION WILL BE REQUIRED.

(7) ALL DISTURBED AREAS SHALL BE SEEDED WITH NON-CLUMPING NATIVE GRASSES (i.e. BERMUDA, FESCUE, CENTIPEDE, ETC.)

EROSION CONTROL LEGEND

	PROPOSED
LIMITS OF DISTURBANCE	
COMBINATION TREE PROTECTION / SEDIMENT FENCE	SF
TEMPORARY SEDIMENT FENCE OUTLET	
TEMPORARY CONSTRUCTION ENTRANCE	
TEMPORARY DIVERSION DITCH	
TEMPORARY ROCK CHECK DAM	
TEMPORARY INLET PROTECTION W/ SILT BAG	
RIPRAP APRON	
SEDIMENT BASIN BAFFLES	
SEDIMENT BASIN SKIMMER	
TEMPORARY SLOPE DRAIN	

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123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
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WWW.RLENC.COM

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42 BUSINESS PARK INDUSTRIAL FLEX BASE
EROSION CONTROL PLAN - PHASE I

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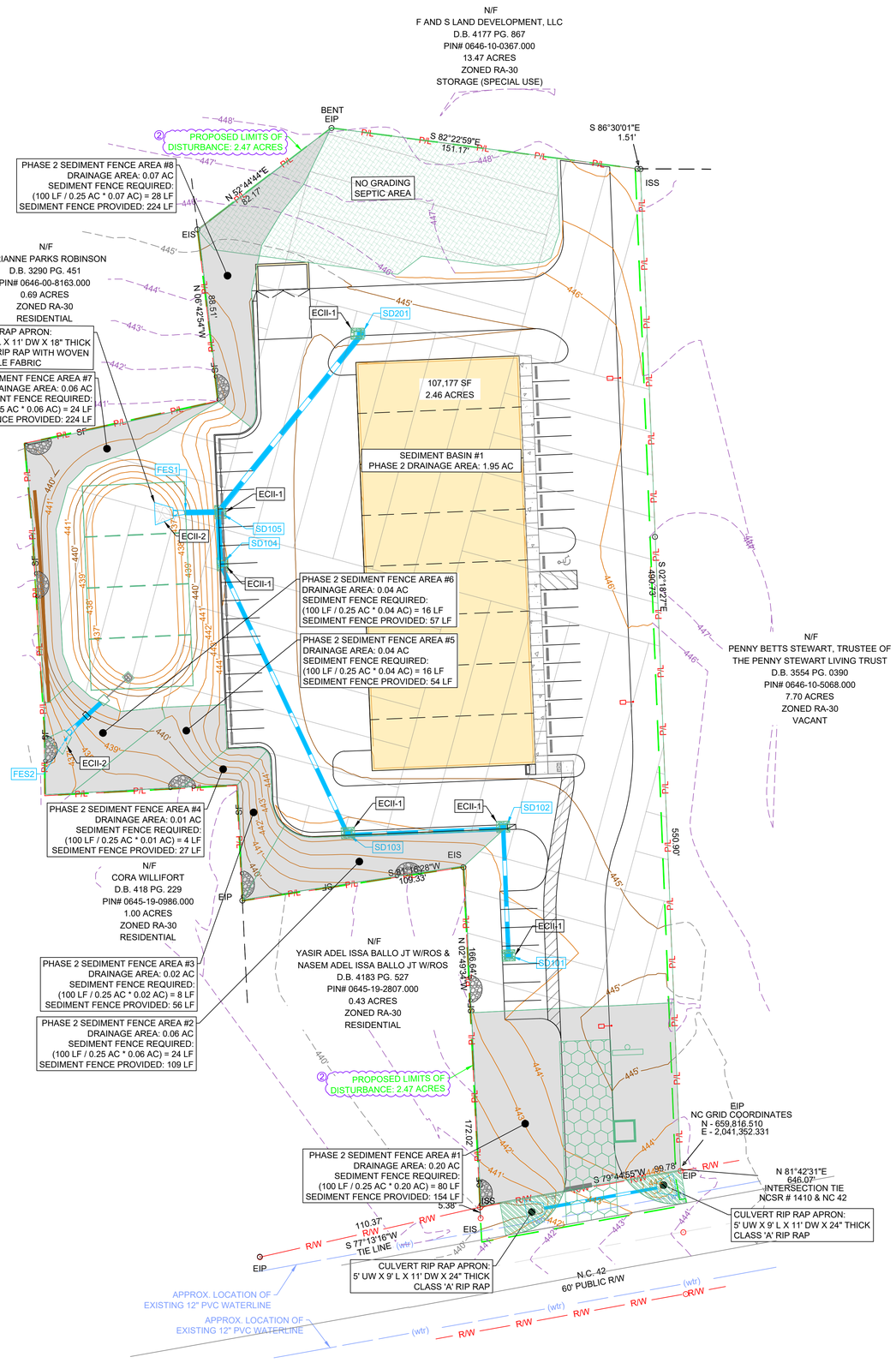
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OF 19 SHEETS



EROSION CONTROL CONSTRUCTION SEQUENCE

PHASE 2

1. INSTALL DEVICES FOR STORM WATER COLLECTION SYSTEM AS THE SITE IS BEING GRADED AND PROTECT INLETS WITH SILT BAG INLET PROTECTION OR OTHER APPROVED MEASURES.
2. SHIFT AND REPAIR DIVERSION DITCH AS NEEDED TO INSTALL UTILITIES.
3. FINISH GRADE THE SITE. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, DITCH LININGS, ETC. SCARIFY, SEED, FERTILIZE, & MULCH ALL DENUDED AREAS IN ACCORDANCE WITH PERMANENT SEEDING SCHEDULE AND GROUND STABILIZATION TIME FRAMES.
4. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, SCHEDULE INSPECTIONS WITH NCDEQ.
5. UPON APPROVAL BY THE INSPECTOR, THE CONTRACTOR SHALL RETURN TO THE SITE AND REMOVE TEMPORARY DIVERSIONS, SILT FENCE, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
6. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY NCDEQ. OBTAIN A CERTIFICATE OF COMPLETION.
7. NCDEQ INSPECTOR AND ENGINEER MUST GRANT PERMISSION TO REMOVE SEDIMENT BASIN #1.
8. UPON ISSUANCE OF CERTIFICATE OF COMPLETION, OWNER MUST SUBMIT A NOTICE OF TERMINATION TO NCDEQ FOR TERMINATION OF COVERAGE FOR NCG01 PERMIT.

NOTE: THIS EROSION CONTROL SEQUENCE IS FOR ENFORCEMENT OF EROSION CONTROL MEASURES ONLY. THIS DOES NOT IN ANY WAY OBLIGATE OR DIRECT THE CONTRACTOR ON MEANS AND METHODS OF HOW TO CONSTRUCT THE PROJECT.

MAINTENANCE NOTE

1. SEED AND MULCH ALL EROSION CONTROL MEASURES IMMEDIATELY AFTER CONSTRUCTION. SLOPES SHALL BE MATTED IN ACCORDANCE WITH THE APPROVED PLAN.
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3. CONTRACTOR SHALL INSPECT & MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAIN EVENT AND/OR A MIN. OF ONCE PER WEEK.

EROSION CONTROL PHASE II KEYNOTES	
ECII-1	INSTALL TEMPORARY SILT SACK INLET PROTECTION (ACF SILT SACK - TYPE B OR EQUAL) AND GRAVEL YARD INLET PROTECTION IN ALL YARD INLETS.
ECII-2	INSTALL RIP RAP APRON AT FLARED END SECTION.

EROSION CONTROL SUMMARY:

(1) 1 CONSTRUCTION ENTRANCES
(2) 840 LF COMBINATION TREE PROTECTION / SEDIMENT FENCE
(3) 9 SEDIMENT FENCE OUTLETS
(4) 674 LF TEMPORARY DIVERSION DITCHES
(5) 8 TEMPORARY ROCK CHECK DAMS
(6) 6 INLET PROTECTION
(7) 4 RIP RAP APRONS

NPDES STABILIZATION TIME FRAMES		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1 - 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETERS AND HQW ZONES

SCALE: 1" = 30'
30' 0 30'
SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.

SITE GRADING & EROSION CONTROL NOTES:

(1) SEE GENERAL NOTES, SHEET C1.0.
(2) DISTURBED/DENUDED AREA: 2.47 ACRES 1,2
(3) TOTAL TRACT AREA: 2.46 ACRES
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EROSION CONTROL LEGEND

	PROPOSED
LIMITS OF DISTURBANCE	
COMBINATION TREE PROTECTION / SEDIMENT FENCE	SF
TEMPORARY SEDIMENT FENCE OUTLET	
TEMPORARY CONSTRUCTION ENTRANCE	
TEMPORARY DIVERSION DITCH	
TEMPORARY ROCK CHECK DAM	
TEMPORARY INLET PROTECTION W/ SILT BAG	
RIPRAP APRON	
SEDIMENT BASIN BAFFLES	
SEDIMENT BASIN SKIMMER	
TEMPORARY SLOPE DRAIN	

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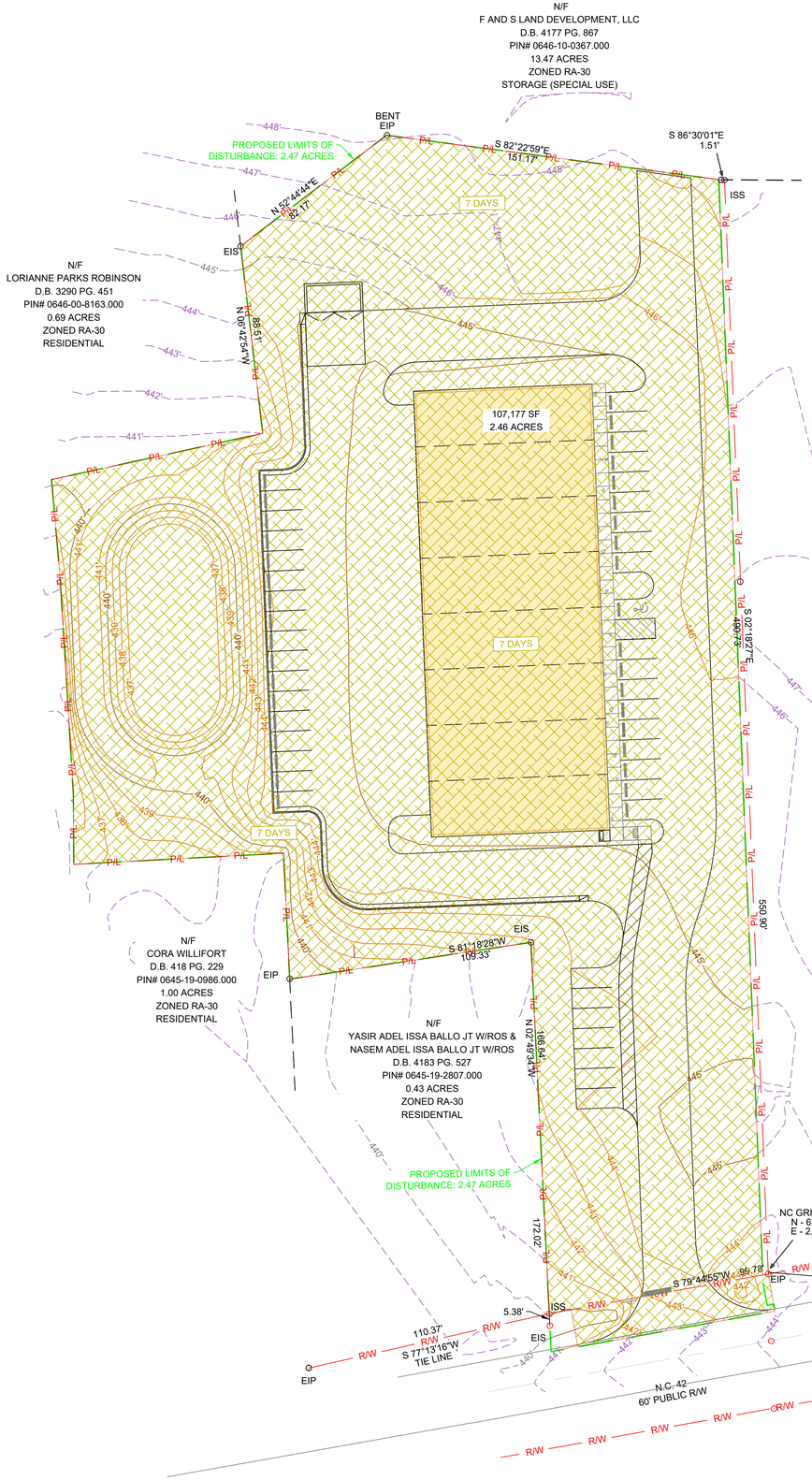
42 BUSINESS PARK INDUSTRIAL FLEX BASE
EROSION CONTROL PLAN - PHASE II

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NPDES STABILIZATION TIME FRAMES		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1 - 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETERS AND HQW ZONES

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

Inspect	Frequency (Starting normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If on daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is recorded, the next business day inspection record shall indicate the unattended days (and this will determine if a rain inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indications of stormwater pollution such as oil sheens, floating or suspended solids or discoloration, 5. Indications of whether flow was leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the property, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the streams 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 E, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover) 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or 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 includes a statement that all measures have been installed as E&SC. 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 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 notifications. • **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 notifications. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• **Within 24 hours**, an oral or electronic notification. • **Within 7 calendar days**, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.[40 CFR 122.41(l)(7)]	• **Within 24 hours**, an oral or electronic notification. • **Within 7 calendar days**, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)]. • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING — EFFECTIVE: 04/01/19

PART III, SECTION G, ITEM (d)
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.

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• 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

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

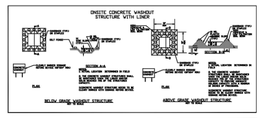
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, 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

1. 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.
3. 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

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



CONCRETE WASHOUTS

1. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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.
3. 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.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

NORTH CAROLINA Environmental Quality

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

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RED LINE ENGINEERING
RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE : (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVLOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
NPDES STABILIZATION PLAN

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

PROJECT NO.:	24-013
DRAWN BY:	GJM
REVIEWED BY:	GJM

SHEET NUMBER:

C4.2

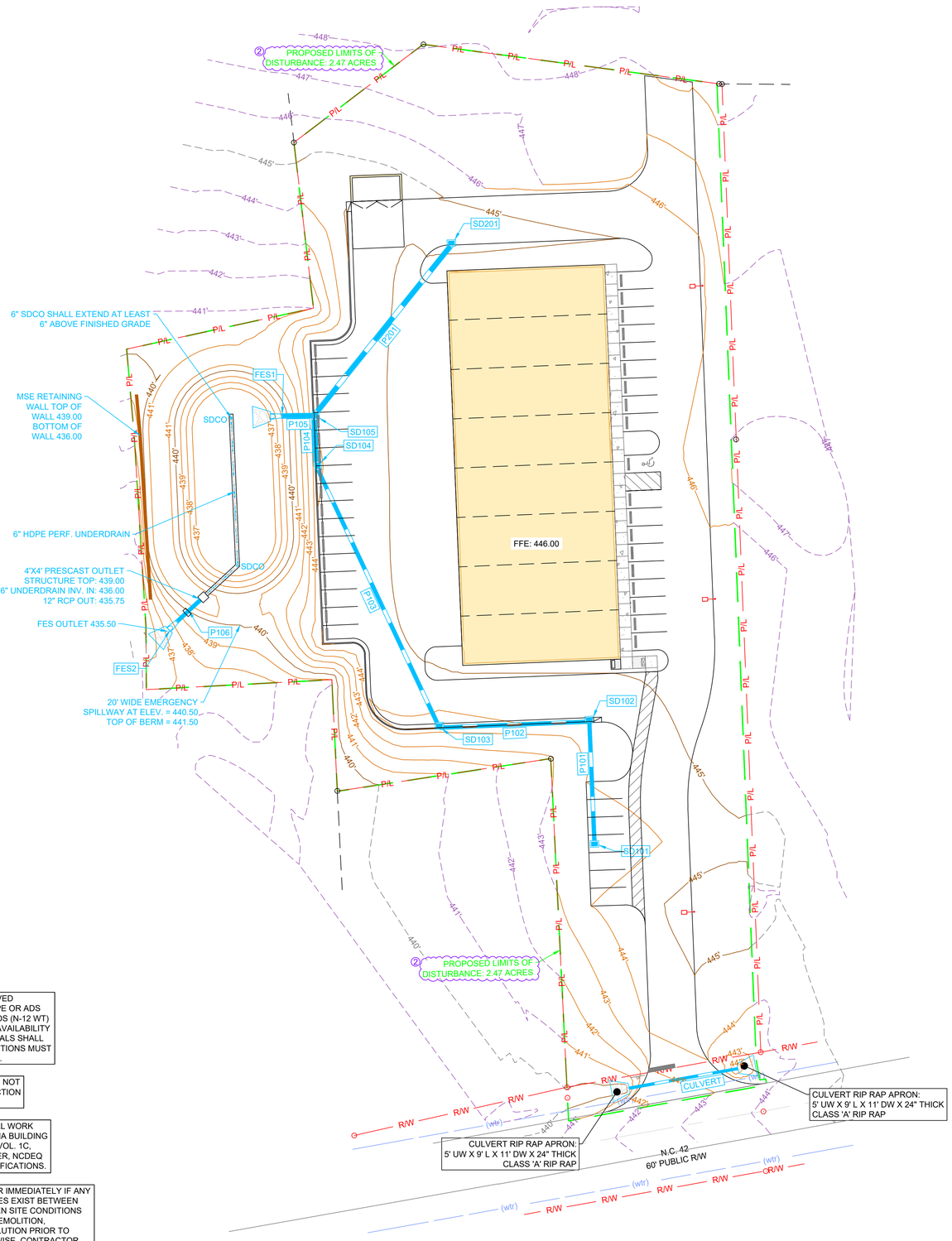
OF 19 SHEETS

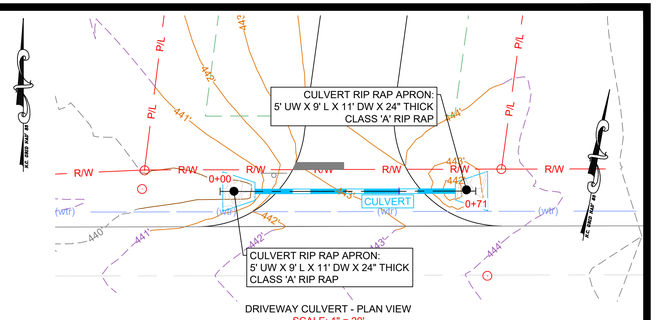
811 Know what's below. Call before you dig.

SCALE: 1" = 30'

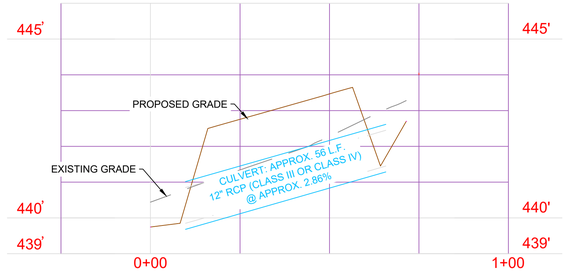
30' 0 30'

SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.





DRIVEWAY CULVERT - PLAN VIEW
SCALE: 1" = 20'



DRIVEWAY CULVERT - PROFILE VIEW
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

STORM PIPE TABLE

PIPE NAME	DIAMETER (IN.)	MATERIAL	LENGTH	SLOPE
CULVERT	12	12 RCP (CLASS III OR IV)	56	2.86%
P101	18	18" HDPE (ADS N-12WT)	62	0.65%
P102	18	18" HDPE (ADS N-12WT)	76	0.53%
P103	18	18" HDPE (ADS N-12WT)	147	0.85%
P104	24	24" HDPE (ADS N-12WT)	26	0.82%
P105	24	24" RCP (CLASS III OR IV)	16	0.88%
P106	18	12" RCP (CLASS III OR IV)	16	1.01%
P201	24	24" HDPE (ADS N-12WT)	111	2.12%

STORM STRUCTURE TABLE

STRUCTURE NAME	STRUCTURE TYPE	RIM (FLOWLINE)	INV. IN	INV. OUT
FES1	18" FLARED END SECTION	439.29		
FES2	18" FLARED END SECTION	439.29		
SD101	2'X3' DROP INLET	443.00		440.30 (18")
SD102	2'X3' CURB INLET	444.20	439.90 (18")	439.80 (18")
SD103	2'X3' CURB INLET	443.82	439.40 (18")	439.30 (18")
SD104	2'X3' CURB INLET	443.90	438.05 (18")	437.95 (24")
SD105	2'X3' CURB INLET	444.03	437.74 (24") 437.65 (24")	437.64 (24")
SD201	2'X3' DROP INLET	444.51		440.00 (24")

PRE VS POST PEAK RUNOFF SUMMARY

	PRE (CFS)	POST (CFS)	SCM (CFS)
1 YR / 24 HR	2.39	5.34	0.34
2 YR / 24 HR	3.88	7.30	0.70
10 YR / 24 HR	8.72	13.02	7.65
25 YR / 24 HR	12.01	16.65	8.72
100 YR / 24 HR	17.87	22.70	10.38

A PRIMARY SCM (INFILTRATION BASIN) IS PROPOSED FOR THIS SITE. THE PROPOSED SCM CONTROLS THE PEAK RUNOFF RATES TO BELOW THE PRE-DEVELOPED CONDITIONS FOR THE 1, 2, 10, 25 & 100 YEAR 24 HOUR STORM EVENTS. AS SUCH, NO FURTHER DOWNSTREAM ANALYSIS IS REQUIRED.

STORM PIPE MATERIAL NOTE: NCDOT APPROVED MATERIALS SUCH AS RCP (CLASS III OR IV) PIPE OR ADS HP STORM PIPE MAY BE SUBSTITUTED FOR ADS (N-12 WT) PIPE BY THE OWNER/DEVELOPER BASED ON AVAILABILITY OF MATERIALS. TRANSITIONS IN PIPE MATERIALS SHALL OCCUR IN STRUCTURES ONLY. ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.

STORMWATER EXEMPTION NOTE: PROJECT IS NOT LOCATED WITHIN A PHASE 2 POST-CONSTRUCTION STORMWATER REGULATED AREA.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

NOTE: CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK.

Know what's below. Call before you dig.

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123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE - (919) 779-8851
WWW.RLENC.COM

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42 BUSINESS PARK INDUSTRIAL FLEX BASE
OVERALL GRADING & STORMWATER MANAGEMENT PLAN

REVISIONS:	DATE:
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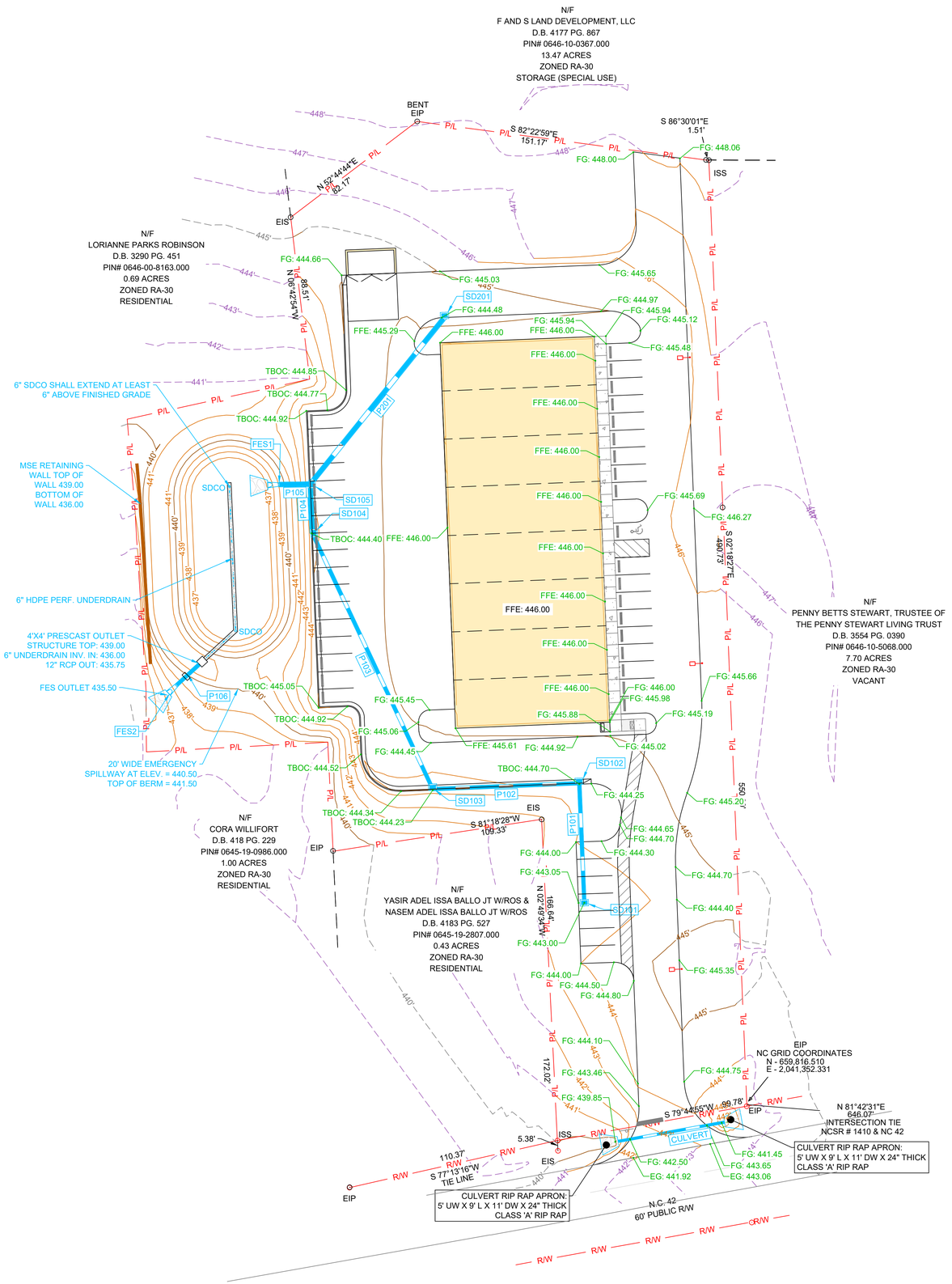
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REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

PROJECT NO.:	24-013
DRAWN BY:	GJM
REVIEWED BY:	GJM

SHEET NUMBER:

C5.0

OF 19 SHEETS



SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.

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PHONE : (919) 779-8851
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42 BUSINESS PARK INDUSTRIAL FLEX BASE
ENLARGED FINE GRADING PLAN

FINE GRADING NOTE: SPOT ELEVATIONS SHOWN ARE PROVIDED AS A COURTESY ONLY. CONTRACTOR SHALL HAVE LICENSED PROFESSIONAL LAND SURVEYOR GENERATE A SEPARATE STAKING PLAN PRIOR TO CONSTRUCTING PROPOSED IMPROVEMENTS. CONTRACTOR SHALL DOUBLE CHECK ALL GRADES, STAKES, FORMS, ETC. PRIOR TO CONSTRUCTING IMPROVEMENTS. ENGINEER, ARCHITECT, AND OWNER SHALL NOT BE LIABLE FOR ANY DISCREPANCIES IN SPOT ELEVATIONS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST ON CIVIL DRAWINGS, GRADING, AND SPOT ELEVATIONS. BEFORE INSTALLATION. ALL ELEVATION DISCREPANCIES OR ISSUES SHALL REQUIRE WRITTEN RESOLUTION FROM ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK AND EXPENSE.

VEGETATION NOTE: EXISTING VEGETAION INCLUDES, BUT NOT LIMITED TO, MATURE SOFTWOOD TREES, NATIVE GRASSES, AND A MIX OF EVERGREEN TREES. THOSE TREES LOCATED WITHIN THE PROPOSED 20' NATURAL WOODED BARRIER BUFFER WILL NOT BE TOUCHED. A MINIMUM AMOUNT OF ALL OTHER VEGETATION WILL BE REMOVED AS NECESSARY WITHIN LIMITS OF DISTURBANCE.

STORMWATER EXEMPTION NOTE: PROJECT IS NOT LOCATED WITHIN A PHASE 2 POST-CONSTRUCTION STORMWATER REGULATED AREA.

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE NORTH CAROLINA BUILDING CODES, HANDICAPPED ACCESSIBILITY CODE VOL. 1C, HARNETT COUNTY, HARNETT REGIONAL WATER, NCDEQ AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

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1 PER NCDOT/HRW	03/23/26
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3 PER HRW	06/18/26

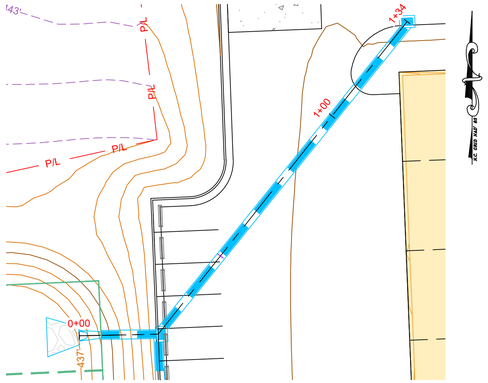
ISSUED FOR:	DATE:
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NCDOT & HRW	01/14/26

PROJECT NO.:	24-013
DRAWN BY:	GJM
REVIEWED BY:	GJM

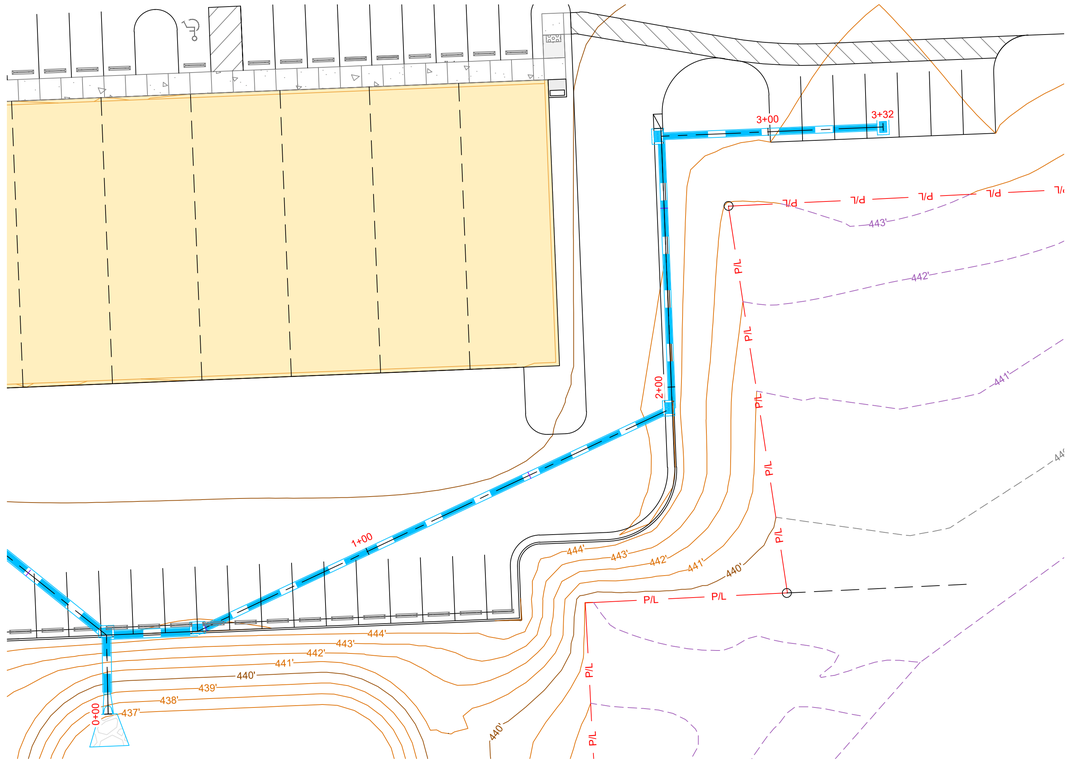
SHEET NUMBER:

C5.1

OF 19 SHEETS



STORMWATER COLLECTION SYSTEM NORTH - PLAN VIEW
SCALE: 1" = 20'



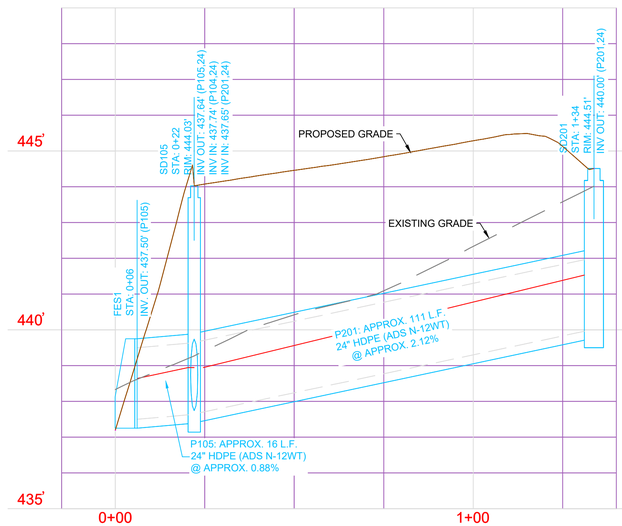
STORMWATER COLLECTION SYSTEM SOUTH - PLAN VIEW
SCALE: 1" = 20'

CCTV & CLEANOUT NOTE: PRIOR TO THE FINAL PUNCH LIST AND OWNER ACCEPTANCE, THE CONTRACTOR SHALL CLEAN AND CAMERA ALL INSTALLED SANITARY SEWER AND STORMWATER PIPES AND STRUCTURES TO DETERMINE THEIR CONDITION AND IDENTIFY ANY DEFECTS OR REPAIRS NECESSARY. CCTV SHALL CONFIRM THAT ALL PIPES AND STRUCTURES ARE IN COMPLIANCE WITH DESIGN STANDARDS, LOCAL, STATE AND FEDERAL CODES AND ARE FREE OF SEDIMENT, STONE OR ANY DEBRIS PRIOR TO ACCEPTANCE BY THE OWNER. A DIGITAL COPY OF ALL CAMERA WORK AND A WRITTEN REPORT OF ANY DEFICIENCIES FOUND SHALL BE PROVIDED TO THE OWNER, ENGINEER AND ARCHITECT PRIOR TO ACCEPTANCE BY THE OWNER AND FINAL PAY APPLICATION APPROVAL.

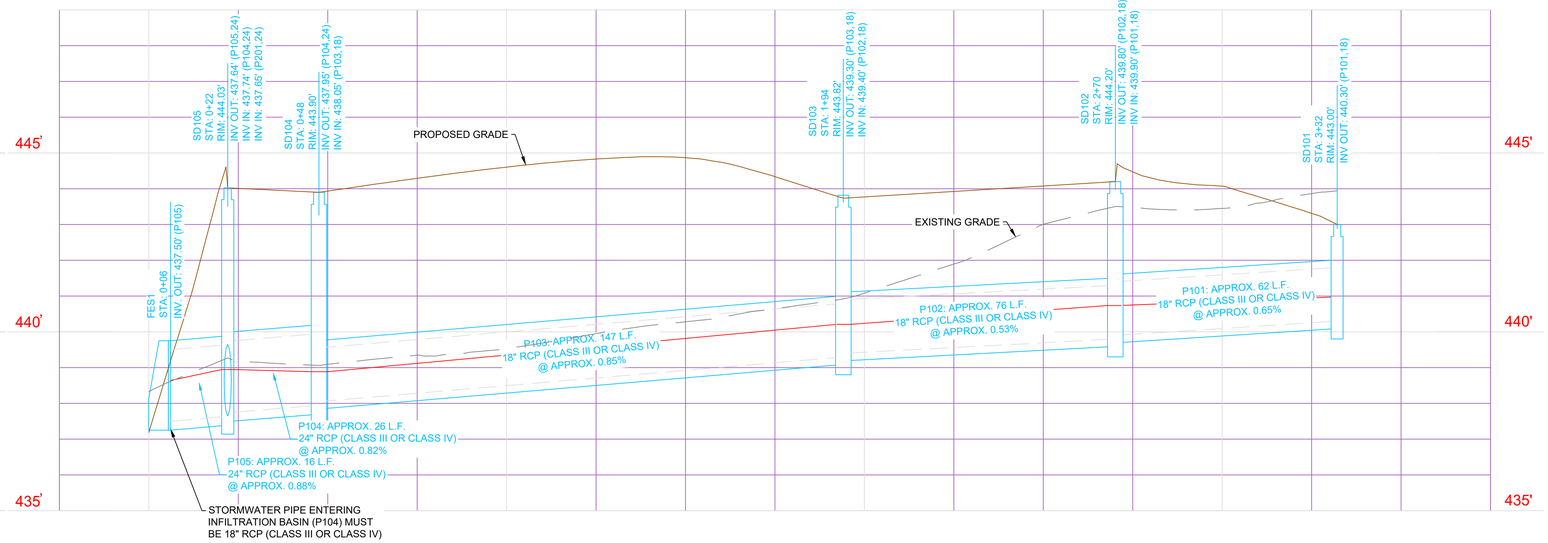
STORM PIPE MATERIAL NOTE: NCDOT APPROVED MATERIALS SUCH AS RCP (CLASS III OR IV) PIPE OR ADS HP STORM PIPE MAY BE SUBSTITUTED FOR ADS (N-12 WT) PIPE BY THE OWNER/DEVELOPER BASED ON AVAILABILITY OF MATERIALS. TRANSITIONS IN PIPE MATERIALS SHALL OCCUR IN STRUCTURES ONLY. ALL SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER OF RECORD.

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STORMWATER COLLECTION SYSTEM NORTH - PROFILE VIEW
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'



STORMWATER COLLECTION SYSTEM SOUTH - PROFILE VIEW
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

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06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

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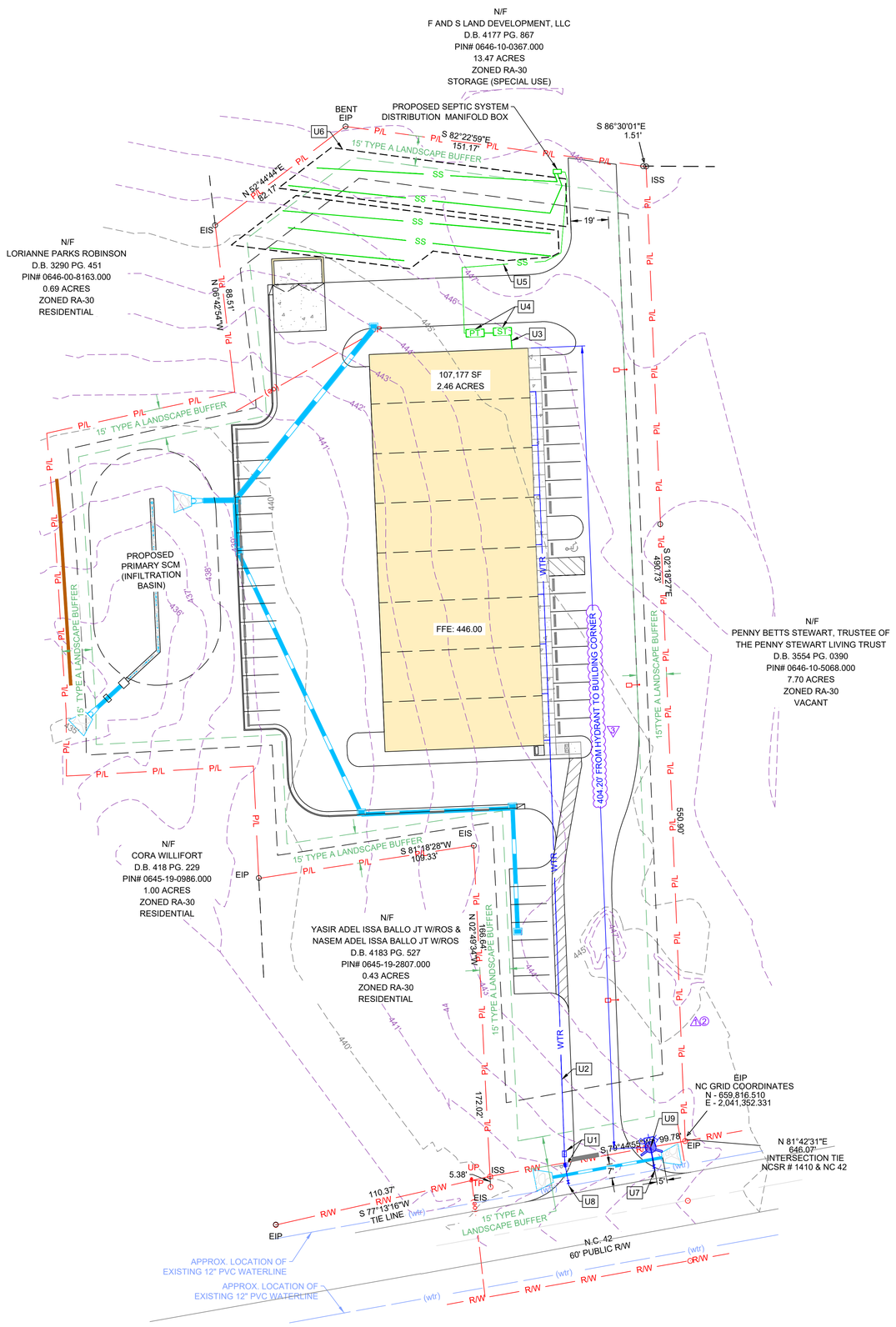
42 BUSINESS PARK INDUSTRIAL FLEX BASE
PROPOSED STORMWATER PLAN & PROFILE

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PROJECT NO.:	24-013
DRAWN BY:	GJM
REVIEWED BY:	GJM

SHEET NUMBER:
C5.2
OF 19 SHEETS



SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.

UTILITY PLAN KEYNOTES

U1	INSTALL 2" WATER METER IN METER VAULT AND 2" RPZ IN HOTBOX ENCLOSURE FOR DOMESTIC WATER SERVICE.
U2	INSTALL APPROX. 390 LF 2" PRIVATE WATER SERVICE LATERAL (PE (SDR-9)) FROM WATER METER TO BUILDING. 2" WATER SERVICE FROM METER TO EXISTING 12" WATER MAIN SHALL REMAIN PUBLIC.
U3	INSTALL APPROX. 15 LF 4" PVC (SCH40) SANITARY SEWER LATERAL (MIN. SLOPE = 1/8" PER FOOT) FROM BUILDING TO SEPTIC TANK.
U4	1,000 GALLON SEPTIC TANK AND 1,000 GALLON PUMP TANK FOR OFFICE BUILDING SEPTIC SYSTEM. PUMP TANK MAY BE ELIMINATED IF GRAVITY CAN BE PROVIDED AT TIME OF INSTALLATION.
U5	INSTALL APPROX. 128 LF 1 1/2" PVC (SDR26) SANITARY SEWER FORCEMAIN WITH 1 1/2" GATE VALVE IN A METER BOX TO SEPTIC TANK.
U6	INSTALL PROPOSED SEPTIC SYSTEM (BY OTHERS). CONTRACTOR SHALL INSTALL CONSTRUCTION FENCING TO PROTECT SEPTIC AND REPAIR AREA FROM ANY CONSTRUCTION TRAFFIC MATERIALS AND LAY-DOWN ACTIVITIES THROUGHOUT CONSTRUCTION.
U7	CONNECT TO EXISTING 12" PVC WATERLINE WITH 12"X6" TAPPING SLEEVE AND VALVE ASSEMBLY (HRW APPROVED).
U8	CONNECT TO EXISTING 12" PVC WATERLINE WITH 2" SADDLE TAP AND CORPORATION STOP.
U9	INSTALL 6" PUBLIC FIRE HYDRANT AT RIGHT OF WAY. PROVIDE 5'X5' PUBLIC UTILITY EASEMENT AROUND THE FIRE HYDRANT FOR MAINTENANCE. FIRE HYDRANT AND VALVES SHALL BE EQUIPPED WITH A 5 ¼" STORZ CONNECTION AND SHALL BE OF APPROVED MAKE, MODEL AND MATERIALS PER HARNETT COUNTY WATER STANDARDS, SPECIFICATIONS, AND DETAILS.

△1 △2 △3

△1 △2 △3

SEPTIC SYSTEM SIZING CALCULATIONS

PROJECTED WASTEWATER DAILY DISCHARGE FOR OFFICE BUILDING
25 EMPLOYEES X 25 GPD = 625 GPD

REQUIRED LF OF TRENCH = (625 GPD) / (0.4 GPD/SF) / 3 SF/LF

REQUIRED LF OF TRENCH = 521 LF OF SEPTIC TRENCH

EZ FLOW REDUCTION (25%) = 521 LF X 0.75 = 391 LF

AREA FOR CONVENTIONAL SEPTIC SYSTEM = 391 FT X 9 FT = 3,519 SF

LF OF SEPTIC TRENCH PROVIDED = 100 FT X 4 LINES = 400 LF

AREA OF SEPTIC SYSTEM PROVIDED = 3,600 SF

LF OF REPAIR TRENCH = 400 LF

AREA OF SEPTIC REPAIR = 100' X 36' = 3,600 SF

HYDRANT FLOW TEST: A FIRE HYDRANT FLOW TEST WAS PERFORMED BY ANDREW KING ENGINEERING, PLLC ON MARCH 18, 2026. A COPY OF THE FLOW TEST SHALL SERVE AS THE BASIS OF DESIGN FOR THE WATER MODEL & FIRE FLOW ANALYSIS HEREIN.

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42 BUSINESS PARK INDUSTRIAL FLEX BASE
PROPOSED UTILITY PLAN

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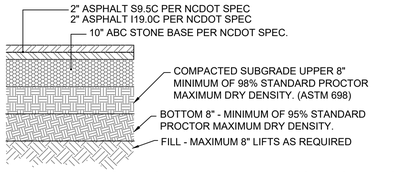
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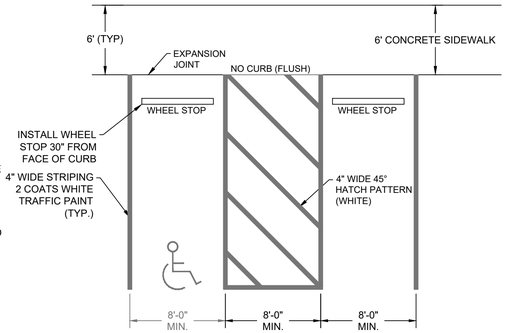


NOTE: HEAVY DUTY ASPHALT SHALL BE INSTALLED IN ALL COMMERCIAL VEHICLE PARKING SPACES, ROADWAYS AND DRIVE AISLES. OWNER MAY INSTALL A DIFFERENT HD ASPHALT SECTION UPON SITE SPECIFIC APPROVAL OF THE GEOTECHNICAL ENGINEER, BASED ON TESTING OF SOILS PRESENT ONSITE. GEOTECHNICAL ENGINEER SHALL APPROVE FINAL SECTION.

MATERIALS SHALL MEET THE REQUIRED SECTIONS OF THE N.C.D.O.T. STANDARD SPECIFICATION FOR ROADS AND STRUCTURES.

HEAVY DUTY ASPHALT PAVEMENT
DETAIL

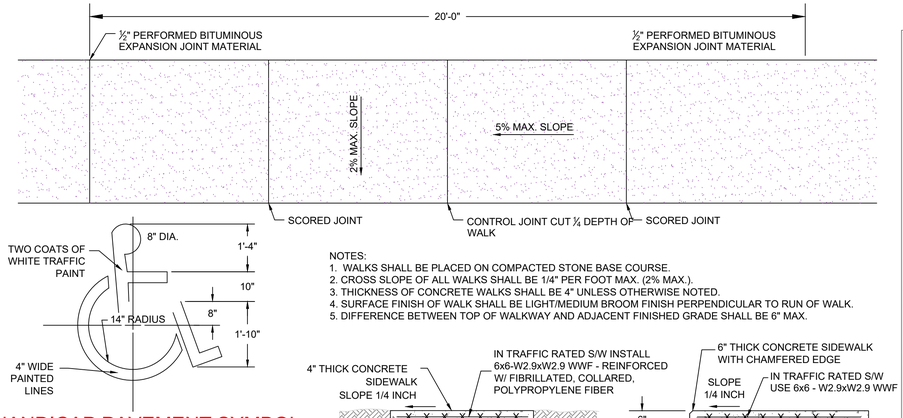
SCALE: NOT TO SCALE



NOTES:
1. SEE OVERALL SITE PLAN FOR ACTUAL DIMENSIONS AND LAYOUT. TYPICAL DIMENSIONS SHOWN ABOVE ARE FOR REFERENCE ONLY.
2. WHEEL STOPS SHALL BE MADE OF REINFORCED CONCRETE AND ANCHORED WITH STEEL RODS.
3. WHEEL STOPS SHALL BE PLACED SUCH THAT THERE IS 30" FROM THE FRONT OF SIDEWALK TO THE TIRE SIDE OF THE WHEEL STOP.
4. WHEEL STOPS ARE OPTIONAL WHEN 6 FT SIDEWALK WITH CURB AND GUTTER IS PROVIDED FOR A TOTAL WIDTH OF 6.5 FT FROM FACE OF CURB TO BACK OF SIDEWALK.

TYPICAL HC PARKING LAYOUT & STRIPING
DETAIL

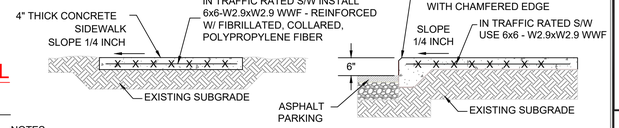
SCALE: NOT TO SCALE



HANDICAP PAVEMENT SYMBOL
DETAIL

SCALE: NOT TO SCALE

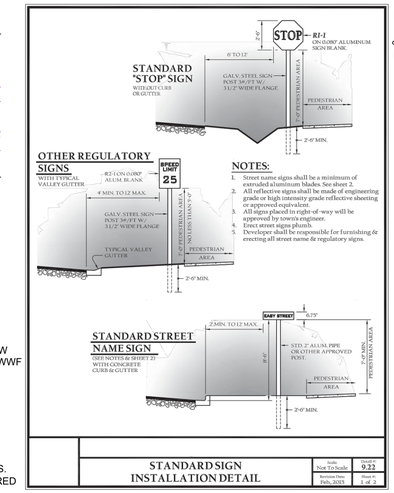
NOTES:
1. WALKS SHALL BE PLACED ON COMPACTED STONE BASE COURSE.
2. CROSS SLOPE OF ALL WALKS SHALL BE 1/4" PER FOOT MAX. (2% MAX.).
3. THICKNESS OF CONCRETE WALKS SHALL BE 4" UNLESS OTHERWISE NOTED.
4. SURFACE FINISH OF WALK SHALL BE LIGHT/MEDIUM BROOM FINISH PERPENDICULAR TO RUN OF WALK.
5. DIFFERENCE BETWEEN TOP OF WALKWAY AND ADJACENT FINISHED GRADE SHALL BE 6" MAX.



NOTES:
1. A GROOVE JOINT 1" DEEP WITH A 1/8" RADIUS SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 20' INTERVALS. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3,000 PSI IN 28 DAYS. (4,000 PSI FOR TRAFFIC RATED SIDEWALKS)

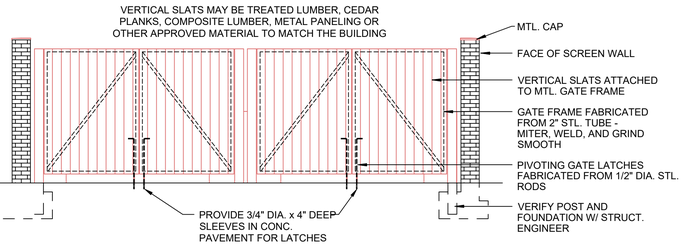
CONCRETE WALKWAYS
DETAIL

SCALE: NOT TO SCALE

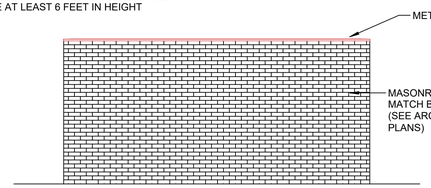


STANDARD SIGN INSTALLATION DETAIL

Scale: Not To Scale | Drawing #: 9.22 | Revision Date: Feb, 2015 | Sheet #: 1 of 2

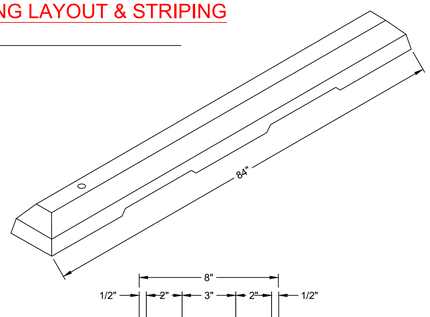


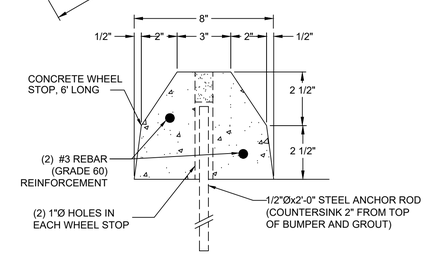
NOTE:
THE DUMPSTER ENCLOSURE SHALL BE AT LEAST 6 FEET IN HEIGHT



DUMPSTER ENCLOSURE
DETAIL

SCALE: NOT TO SCALE

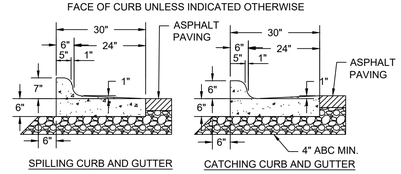




CONCRETE WHEEL STOP
DETAIL

SCALE: NOT TO SCALE

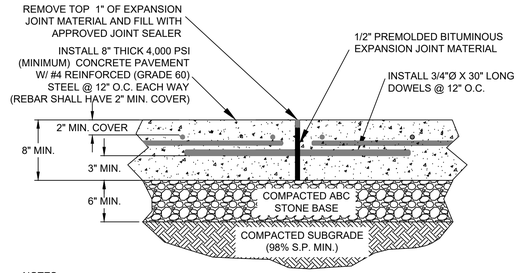
NOTE: PAVEMENT DIMENSIONS: REFER TO FACE OF CURB UNLESS INDICATED OTHERWISE



CONCRETE FOR CURBING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.
CONSTRUCTION STAKING FOR CURBING INSTALLATION SHALL BE REFERENCED (CUT OR FILL) TO THE FACE OF CURB AT CONTRACTOR'S OPTION THE GUTTER THICKNESS MAY BE INCREASED AT THE EDGE OF THE PAVEMENT TO MAKE BOTTOM OF GUTTER PARALLEL WITH PAVING OF BASE COURSE.
CONTRACTION JOINTS AT 10'-0" O.C. TOOLED 1/4" (± 1/16",-0) WIDE, 1" OR MAX. D/4 DEEP WHEREVER IS GREATER. EXPANSION JOINTS AT 40' MAX. AND ALL P.C.'s, UNLESS APPROVED OR INDICATED OTHERWISE ON PLAN VIEW JOINT PATTERN.

30" CURB AND GUTTER SECTION
DETAIL

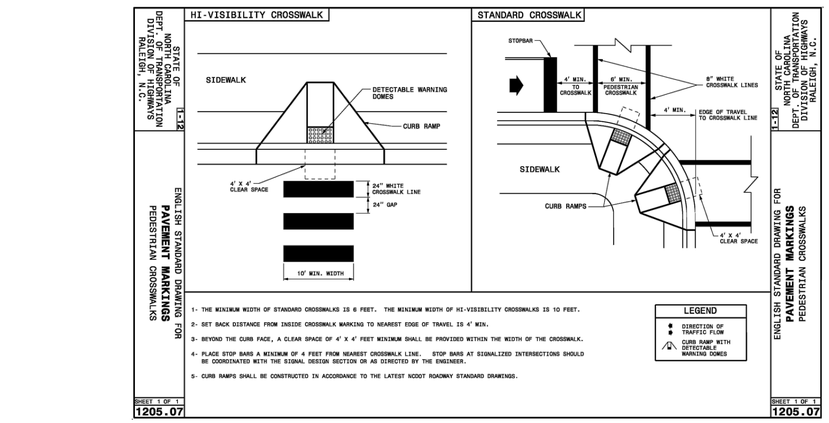
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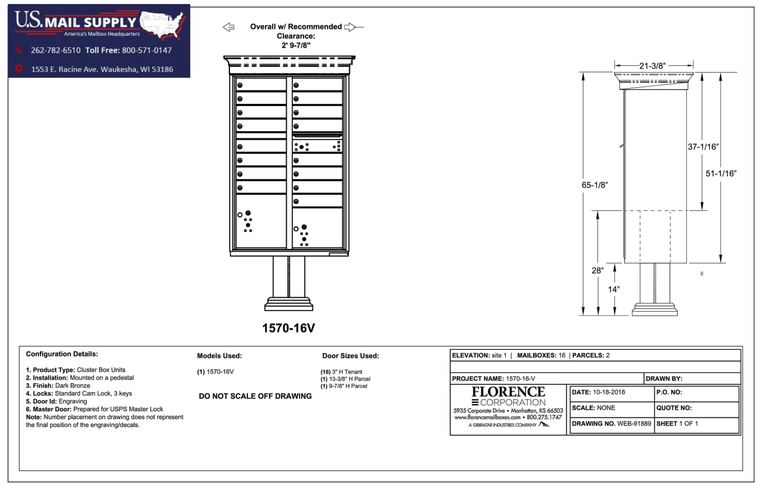


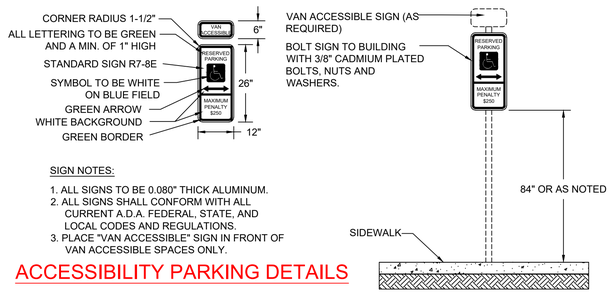
NOTES:
1.) ALL CONCRETE SHALL ACHIEVE A MINIMUM 28 DAY YIELD STRENGTH OF 4,000 PSI.
2.) ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 3 INCHES AND 2-4% AIR ENTRAINMENT
3.) CONTRACTOR SHALL INSTALL EXPANSION JOINTS WITH PREFORMED FILLER STRIPS:
A.) EVERY 50 LF EACH WAY FOR FLATWORK AND CURB & GUTTER
B.) AT TERMINATION OF ALL PROPOSED PAVEMENT
C.) WHERE PROPOSED PAVEMENT ABUTTS ANY STRUCTURE, BUILDING, AND CURB AND GUTTER
D.) BETWEEN PROPOSED AND EXISTING PAVEMENT
4.) INSTALL CONTROL JOINTS EVERY 10 LF EACH WAY.
5.) WELDED WIRE MAY BE SUBSTITUTED FOR REBAR, WITH THE USE OF 4,000 PSI CONCRETE. (CONTRACTOR MUST HAVE ENGINEER'S APPROVAL PRIOR TO SUBSTITUTION)

TYPICAL CONCRETE PAVEMENT SECTION THROUGH EXPANSION/ISOLATION JOINT
DETAIL

SCALE: NOT TO SCALE







SIGN NOTES:
1. ALL SIGNS TO BE 0.080" THICK ALUMINUM.
2. ALL SIGNS SHALL CONFORM WITH ALL CURRENT A.D.A. FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
3. PLACE "VAN ACCESSIBLE" SIGN IN FRONT OF VAN ACCESSIBLE SPACES ONLY.

ACCESSIBILITY PARKING DETAILS
DETAIL

SCALE: NOT TO SCALE

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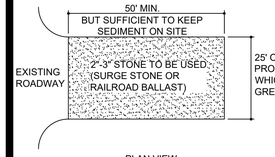
42 BUSINESS PARK INDUSTRIAL FLEX BASE
SITE DETAILS

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

PROJECT NO.:	
DRAWN BY:	
REVIEWED BY:	

SHEET NUMBER:
C7.0
OF 19 SHEETS

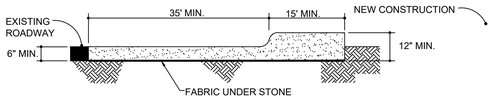


MAINTENANCE NOTE:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.

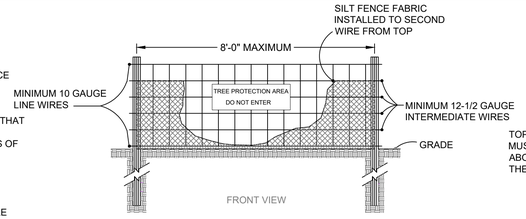
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.

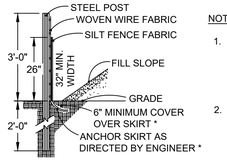
3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.



STANDARD CONSTRUCTION ENTRANCE DETAIL

SCALE: NOT TO SCALE





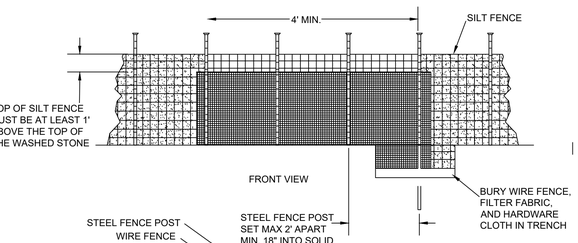
NOTES:

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

2. REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.

STANDARD TEMPORARY SILT FENCE / TREE PROTECTION FENCE DETAIL

SCALE: NOT TO SCALE



MAINTENANCE NOTE:

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.

2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

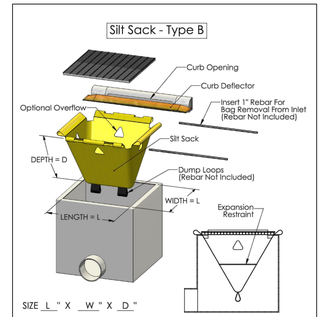
STANDARD SILT FENCE OUTLET DETAIL

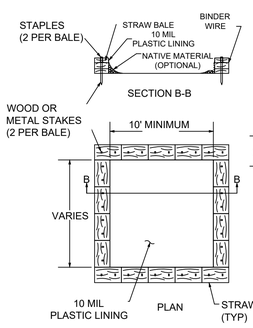
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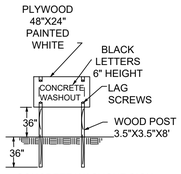
TEMPORARY SEEDING		
SPECIES	RATE (LB/AC)	DATES
RYE (GRAIN)	120	DEC 1-APR. 15
KOBE LESPEDEZA	50	DEC. 1 - APR. 15
GERMAN MILLET	40	APR. 15 - AUG. 15
RYE (GRAIN)	120	AUG. 15 - DEC. 30
SOIL AMENDMENTS		
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRIGULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER		
MULCH		
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		
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 LB/ACRE 10-10-10 FERTILIZER. RESEED, REFERTILIZE, AND MULCH AREA IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. IF SEEDING IN FALL, TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.		

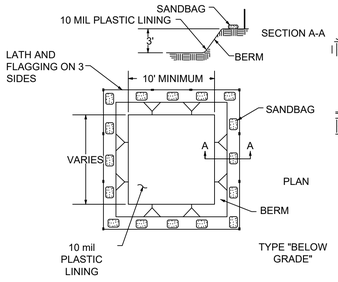
TEMPORARY SEEDING SCHEDULE DETAIL

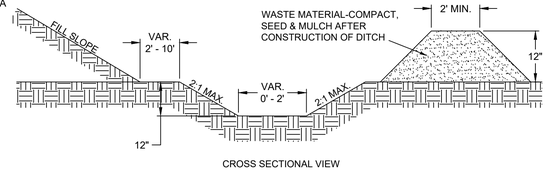
SCALE: NOT TO SCALE











MAINTENANCE NOTE:

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

CONCRETE WASH OUT DETAIL

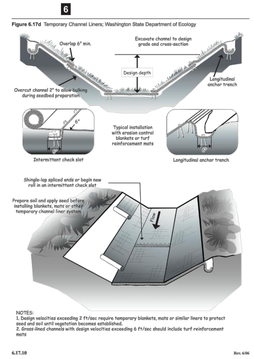
SCALE: NOT TO SCALE

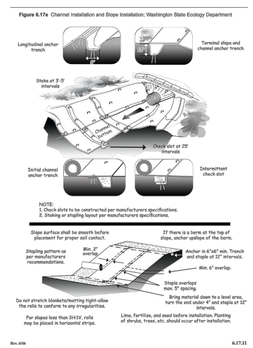
MAINTENANCE NOTE:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

STANDARD TEMPORARY DIVERSION DITCH DETAIL

SCALE: NOT TO SCALE





TYPICAL ROLLED EROSION CONTROL PRODUCT DETAIL

SCALE: NOT TO SCALE

SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)

DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE 25 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	300 LBS/ACRE
APR 15 - JUN 30	HULLED COMMON BERMUDA GRASS	25 LBS/ACRE
JUL 1 - AUG 15	TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRID	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
	SLOPES (3:1 TO 2:1)	
MAR 1 - JUN 1	SERICEA LESPEDEZA (SCARIFIED) &	50 LBS/ACRE
(MAR 1 - APR 15) (MAR 1 - JUN 30)	ADD TALL FESCUE OR ADD HULLED COMMON BERMUDA GRASS	120 LBS/ACRE 25 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
SEP 1 - MAR 1	SERICEA LESPEDEZA (UNHULLED-UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE 120 LBS/ACRE
(NOV 1 - MAR 1)	ADD ABRUZZI RYE	25 LBS/ACRE

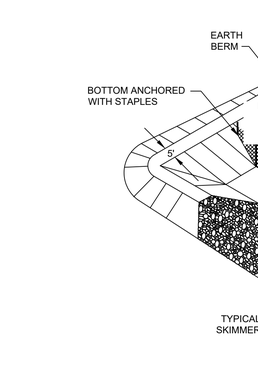
CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS.

THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

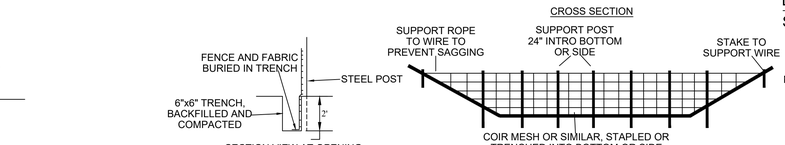
PERMANENT SEEDING SCHEDULE DETAIL

SCALE: NOT TO SCALE



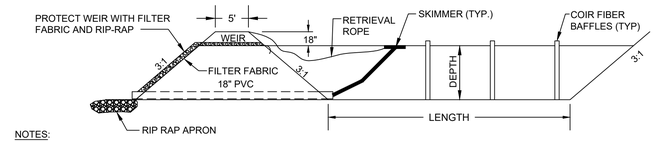
SEDIMENT BASIN DETAIL DETAIL

SCALE: NOT TO SCALE



NOTES:

1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
4. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL



NOTES:

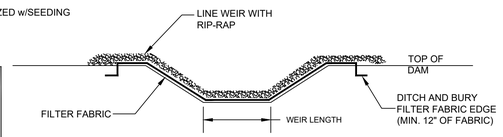
1. USE FOR DRAINAGE AREAS NOT EXCEEDING 5 (FIVE) ACRES.

2. EARTH BERM SHALL BE STABILIZED w/SEEDING ACCORDING TO TOWN SPECIFICATIONS.

DESIGN OF SPILLWAYS

DRAINAGE AREA (ACRES)	WEIR LENGTH (FT)[1]
1	4.0
2	6.0
3	8.0
4	10.0
5	12.0

[1] DIMENSIONS SHOWN ARE MINIMUM

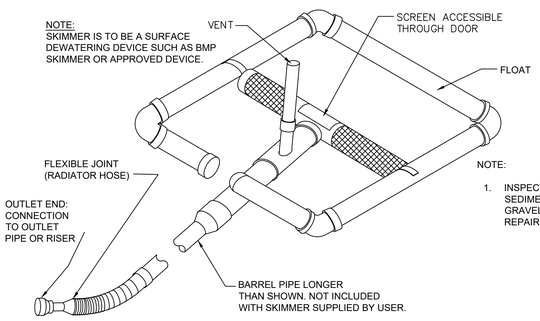


MAINTENANCE NOTE:

INSPECT TEMPORARY SEDIMENT BASIN AND EMPTY SKIMMER OF ALL DEBRIS AFTER EACH PERIOD OF SIGNIFICANT RAINFALL. REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE BASIN. PLACE THE SEDIMENT THAT IS REMOVED IN A DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

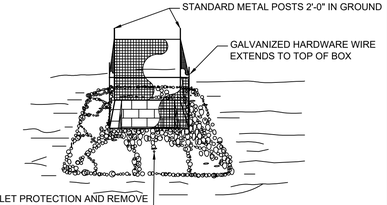
CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FT BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIP RAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE BASIN IMMEDIATELY AFTER CONSTRUCTION WITH SEEDING.



STANDARD SKIMMER DETAIL DETAIL

SCALE: NOT TO SCALE



NOTE:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

STANDARD GRAVEL YARD INLET PROTECTION DETAIL

SCALE: NOT TO SCALE

Know what's **below.** **Call** before you dig.

NOTICE: LICENSED PROFESSIONAL ENGINEER NORTH CAROLINA SEAL 032614 GARY J. MCCABE

06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

FINAL DRAWING RELEASED FOR CONSTRUCTION

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RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
HOLLY SPRINGS, SOUTH CAROLINA 27526
PHONE - (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
EROSION CONTROL DETAILS

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C8.0

OF 19 SHEETS

CONSTRUCTION

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

MAINTENANCE

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

STANDARD CONSTRUCTION ENTRANCE CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. SUBGRADE PREPARATION - PREPARE THE SUBGRADE FOR RIPRAP AND FILTER TO THE REQUIRED LINES AND GRADES SHOWN ON THE PLANS. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTURBED MATERIAL OR OVERFILL DEPRESSIONS WITH RIPRAP. REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.

   CUT THE SUBGRADE SUFFICIENTLY DEEP THAT THE FINISHED GRADE OF THE RIPRAP WILL BE AT THE ELEVATION OF THE SURROUNDING AREA. CHANNELS SHOULD BE EXCAVATED SUFFICIENTLY TO ALLOW PLACEMENT OF THE RIPRAP IN A MANNER SUCH THAT THE FINISHED INSIDE DIMENSIONS AND GRADE OF THE RIPRAP MEET DESIGN SPECIFICATIONS.
2. SYNTHETIC FILTER FABRIC - PLACE THE CLOTH FILTER DIRECTLY ON THE PREPARED FOUNDATION. OVERLAP THE EDGES BY AT LEAST 12 INCHES, AND SPACE ANCHOR PINS EVERY 3 FT ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE CLOTH A MINIMUM OF 12 INCHES BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE CLOTH OR OVER LAP WITH THE NEXT SECTION AS REQUIRED.

   TAKE CARE NOT TO DAMAGE THE CLOTH WHEN PLACING RIPRAP. IF DAMAGE OCCURS REMOVE THE RIPRAP, AND REPAIR THE SHEET BY ADDING ANOTHER LAYER OF FILTER MATERIAL WITH A MINIMUM OVERLAP OF 12 INCHES AROUND THE DAMAGED AREA. IF EXTENSIVE DAMAGE IS SUSPECTED, REMOVE AND REPLACE THE ENTIRE SHEET.

   WHERE LARGE STONES ARE USED OR MACHINE PLACEMENT IS DIFFICULT, A 4-INCH LAYER OF FINE GRAVEL OR SAND MAY BE NEEDED TO PROTECT THE FILTER CLOTH.
3. STONE PLACEMENT - PLACEMENT OF RIPRAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER. PLACE RIPRAP SO THAT IT FORMS A DENSE, WELL-GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, AND CONTROLLED DUMPING DURING FINAL PLACEMENT. PLACE RIPRAP TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE RIPRAP BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF STONE SIZES. TAKE CARE NOT TO DISLODGE THE UNDERLYING BASE OR FILTER WHEN PLACING THE STONES.

   THE TOE OF THE RIPRAP SLOPE SHOULD BE KEYED TO A STABLE FOUNDATION AT ITS BASE. THE TOE SHOULD BE EXCAVATED TO A DEPTH ABOUT 1.5 TIMES THE DESIGN THICKNESS OF THE RIPRAP, AND SHOULD EXTEND HORIZONTALLY FROM THE SLOPE.

   THE FINISHED SLOPE SHOULD BE FREE OF POCKETS OF SMALL STONE OR CLUSTERS OF LARGE STONES. HAND PLACING MAY BE NECESSARY TO ACHIEVE THE PROPER DISTRIBUTION OF STONE SIZES TO PRODUCE A RELATIVELY SMOOTH, UNIFORM SURFACE. THE FINISHED GRADE OF THE RIPRAP SHOULD BLEND WITH THE SURROUNDING AREA. NO OVERFALL OR PROTRUSION OF RIPRAP SHOULD BE APPARENT.

MAINTENANCE

1. RIPRAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES.
2. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

RIPRAP APRON CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL.
2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.

MAINTENANCE

1. INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL.
2. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE.
3. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
4. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

TEMPORARY DIVERSION DITCH CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

NOTE: CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH APPLICABLE SAMPSON COUNTY AND NCDOT STANDARDS, DETAILS AND SPECIFICATIONS.

NOTE: CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ANY CONFLICTS, INCONSISTENCIES OR AMBIGUITIES EXIST BETWEEN CIVIL DRAWINGS & SPECIFICATIONS. IF HIDDEN SITE CONDITIONS ARE DISCOVERED DURING CONSTRUCTION/DEMOLITION, CONTRACTOR SHALL OBTAIN WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH CONSTRUCTION. OTHERWISE, CONTRACTOR PROCEEDS AT THEIR OWN RISK.

CONSTRUCTION

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)
3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIEAR TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURLY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
8. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
10. AN ALTERNATIVE TO EXCAVATING A TRENCH, SEDIMENT MAY BE INSTALLED USING SPECIALLY DESIGNED EQUIPMENT THAT INSERTS THE FABRIC INTO A CUT SLICED IN THE GROUND WITH A DISC.

MAINTENANCE

1. INSPECT SEDIMENT FENCE AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SEDIMENT FENCE (SILT FENCE) CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

MAINTENANCE

1. INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.
2. ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.
3. REMOVE SEDIMENT ACCUMULATED 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.

ROCK CHECK DAM CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)

DATE	TYPE	PLANTING RATE
~~AUG 15 - NOV 1~~	~~TALL FESCUE~~	~~300 LBS/ACRE~~
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE 25 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	300 LBS/ACRE
APR 15 - JUN 30	HULLED COMMON BERMUDA GRASS	25 LBS/ACRE
JUL 1 - AUG 15	TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRID	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE

SLOPES (3:1 TO 2:1)

DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	SERICEA LESPEDEZA (SCARIFIED) &	50 LBS/ACRE
(MAR 1 - APR 15)	ADD TALL FESCUE	120 LBS/ACRE
(MAR 1 - JUN 30)	OR ADD WEEPING LOVEGRASS	10 LBS/ACRE
(MAR 1 - JUN 30)	OR ADD HULLED COMMON BERMUDA GRASS	25 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
SEP 1 - MAR 1	SERICEA LESPEDEZA (UNHULLED-UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE 120 LBS/ACRE
(NOV 1 - MAR 1)	ADD ABRUZZI RYE	25 LBS/ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS.

THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING, OTHERWISE FESCUE MAY BE SHADED OUT.

PERMANENT SEEDING SCHEDULE DETAIL

SCALE: NOT TO SCALE

CONSTRUCTION

1. SITE PREPARATIONS - CLEAR, GRUB, AND STRIP TOPSOIL FROM AREAS UNDER THE EMBANKMENT TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. DELAY CLEARING THE POOL AREA UNTIL THE DAM IS COMPLETE AND THEN REMOVE BRUSH, TREES, AND OTHER OBJECTIONABLE MATERIALS TO FACILITATE SEDIMENT CLEANOUT. STOCKPILE ALL TOPSOIL OR SOIL CONTAINING ORGANIC MATTER FOR USE ON THE OUTER SHELL OF THE EMBANKMENT TO FACILITATE VEGETATIVE ESTABLISHMENT. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW THE BASIN AS NEEDED.
2. CUT-OFF TRENCH - EXCAVATE A CUT-OFF TRENCH ALONG THE CENTER LINE OF THE EARTH FILL EMBANKMENT. CUT THE TRENCH TO STABLE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN 2 FEET DEEP. THE CUT-OFF TRENCH MUST EXTEND INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE RISER CREST. MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN 2 FEET. MAKE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1:1. COMPACTION REQUIREMENTS ARE THE SAME AS THOSE FOR THE EMBANKMENT. KEEP THE TRENCH DRY DURING BACKFILLING AND COMPACTION OPERATIONS.
3. EMBANKMENT - TAKE FILL MATERIAL FROM THE APPROVED AREAS SHOWN ON THE PLANS. IT SHOULD BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, ROCKS, AND OTHER OBJECTIONABLE MATERIAL. SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING FILL. THE FILL MATERIAL MUST CONTAIN SUFFICIENT MOISTURE SO IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. PLACE FILL MATERIAL IN 6 TO 8 INCH CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND COMPACT IT. COMPACTION MAY BE OBTAINED BY ROUTING THE CONSTRUCTION HAULING EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF EACH LAYER IS TRAVERSED BY AT LEAST ONE WHEEL OR TREAD TRACK OF HEAVY EQUIPMENT, OR A COMPACTOR MAY BE USED. CONSTRUCT THE EMBANKMENT TO AN ELEVATION 10 PERCENT HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLING.
4. CONDUIT SPILLWAYS - SECURELY ATTACH THE RISER TO THE BARREL OR BARREL STUB TO MAKE A WATERTIGHT STRUCTURAL CONNECTION. SECURE ALL CONNECTIONS BETWEEN BARREL SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES. PLACE THE BARREL AND RISER ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE OR ANTI-SEEP COLLARS. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS, AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.

   PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. ANCHOR THE RISER IN PLACE BY CONCRETE OR OTHER SATISFACTORY MEANS TO PREVENT FLOTATION. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
5. EMERGENCY SPILLWAY - INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE EMERGENCY SPILLWAY.
6. INLETS - DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
7. EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
8. INSTALL POROUS BAFFLES.
9. SAFETY - SEDIMENT BASINS MAY ATTRACT CHILDREN AND CAN BE DANGEROUS. AVOID STEEP SIDE SLOPES, AND FENCE AND MARK BASINS WITH WARNING SIGNS IF TRESPASSING IS LIKELY. FOLLOW ALL STATE AND LOCAL REQUIREMENTS.

MAINTENANCE

1. INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.
2. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH.
3. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT.
4. MAKE ALL NECESSARY REPAIRS IMMEDIATELY.
5. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.

SKIMMER SEDIMENT BASIN CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. COMPOST SOCKS SHOULD BE LOCATED AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.
2. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND OTHER DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF THE COMPOST SOCK.
3. COMPOST SOCKS SHOULD BE INSTALLED PARALLEL TO THE TOE OF A GRADED SLOPE, A MINIMUM OF 10 FEET BEYOND THE TOE OF THE SLOPE. SOCKS LOCATED BELOW FLAT AREAS SHOULD BE LOCATED AT THE EDGE OF THE LAND-DISTURBANCE. THE ENDS OF THE SOCKS SHOULD BE TURNED SLIGHTLY UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE END OF THE SOCKS.
4. FILL SOCK NETTING UNIFORMLY WITH COMPOST TO THE DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
5. OAK OR OTHER DURABLE HARDWOOD STAKES 2" X 2" IN CROSS SECTION SHOULD BE DRIVEN VERTICALLY PLUMB, THROUGH THE CENTER OF THE COMPOST SOCK. STAKES SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 4 FEET, OR A MAXIMUM INTERVAL OF 8 FEET IF THE SOCK IS PLACED IN A 4 INCH TRENCH. THE STAKES SHOULD BE DRIVEN TO A MINIMUM DEPTH OF 12 INCHES, WITH A MINIMUM OF 3 INCHES PROTRUDING ABOVE THE COMPOST SOCK.
6. IN THE EVENT STAKING IS NOT POSSIBLE (I.E., WHEN SOCKS ARE USED ON PAVEMENT) HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SOCK TO HOLD IT IN PLACE DURING RUNOFF EVENTS.
7. IF THE COMPOST SOCK IS TO BE LEFT AS PART OF THE NATURAL LANDSCAPE, IT MAY BE SEEDED AT TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION USING THE SEEDING SPECIFICATION IN THE EROSION AND SEDIMENTATION CONTROL PLAN.
8. COMPOST SOCKS ARE NOT TO BE USED IN PERENNIAL OR INTERMITTENT STREAMS.

MAINTENANCE

1. INSPECT COMPOST SOCKS WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1/2 INCH OR GREATER). REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS.
2. THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN.
3. IF PONDING BECOMES EXCESSIVE, THE SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE.
4. THE SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLODGED.
5. THE COMPOST SOCK SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPLETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.
6. ONCE ALL SOIL HAS BEEN STABILIZED AND CONSTRUCTION ACTIVITY HAS BEEN COMPLETED, THE COMPOST MEDIA MAY BE DISPERSED WITH A LOADER, RAKE, BULLDOZER OR SIMILAR DEVICE AND MAY BE INCORPORATED INTO THE SOIL AS AN AMENDMENT OR LEFT ON THE SOIL SURFACE TO AID IN PERMANENT SEEDING OR LANDSCAPING. THE MESH NETTING MATERIAL WILL BE EXTRACTED FROM THE MEDIA AND DISPOSED OF PROPERLY. THE PHOTODEGRADABLE MESH NETTING MATERIAL WILL DEGRADE IN 2 TO 5 YEARS IF LEFT ON SITE. BIODEGRADABLE MESH NETTING MATERIAL IS AVAILABLE AND DOES NOT NEED TO BE EXTRACTED AND DISPOSED OF, AS IT WILL COMPLETELY DECOMPOSE IN APPROXIMATELY 6 TO 12 MONTHS.

COIR FIBER WATTLE (COMPOST SOCK) CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. PLACE SLOPE DRAINS ON UNDISTURBED SOIL OR WELL COMPACTED FILL AT LOCATIONS AND ELEVATIONS SHOWN ON THE PLAN. PRACTICE STANDARDS AND SPECIFICATIONS 6.32.3
2. SLIGHTLY SLOPE THE SECTION OF PIPE UNDER THE DIKE TOWARD ITS OUTLET.
3. HAND TAMP THE SOIL UNDER AND AROUND THE ENTRANCE SECTION IN LIFTS NOT TO EXCEED 6 INCHES.
4. ENSURE THAT FILL OVER THE DRAIN AT THE TOP OF THE SLOPE HAS MINIMUM DIMENSIONS OF 1.5 FEET DEPTH, 4 FEET TOP WIDTH, AND 3:1 SIDE SLOPES.
5. ENSURE THAT ALL SLOPE DRAIN CONNECTIONS ARE WATERTIGHT.
6. ENSURE THAT ALL FILL MATERIAL IS WELL-COMPACTED. SECURELY FASTEN THE EXPOSED SECTION OF THE DRAIN WITH GROMMETS OR STAKES SPACED NO MORE THAN 10 FEET APART.
7. EXTEND THE DRAIN BEYOND THE TOE OF THE SLOPE, AND ADEQUATELY PROTECT THE OUTLET FROM EROSION.
8. MAKE THE SETTLED, COMPACTED DIKE RIDGE NO LESS THAN 1 FEET ABOVE THE TOP OF THE PIPE AT EVERY POINT.
9. IMMEDIATELY STABILIZE ALL DISTURBED AREAS FOLLOWING CONSTRUCTION.

MAINTENANCE

1. INSPECT THE SLOPE DRAIN AND SUPPORTING DIVERSION AFTER EVERY RAINFALL, AND PROMPTLY MAKE NECESSARY REPAIRS.
2. WHEN THE PROTECTED AREA HAS BEEN PERMANENTLY STABILIZED, TEMPORARY MEASURES MAY BE REMOVED, MATERIALS DISPOSED OF PROPERLY, AND ALL DISTURBED AREAS STABILIZED APPROPRIATELY.

TEMPORARY SLOPE DRAIN CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

TEMPORARY SEEDING

SPECIES	RATE (LB/AC)	DATES
RYE (GRAIN)	120	DEC 1-APR. 15
KOBE LESPEDEZA	50	DEC. 1 - APR. 15
GERMAN MILLET	40	APR. 15 - AUG. 15
RYE (GRAIN)	120	AUG. 15 - DEC. 30

SOIL AMENDMENTS

FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRIGULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

MULCH

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

IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE IN THE SECOND YEAR ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 LB/ACRE 10-10-10 FERTILIZER. RESEED, REFERTILIZE, AND MULCH AREA IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. IF SEEDING IN FALL, TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING SCHEDULE DETAIL

SCALE: NOT TO SCALE

CONSTRUCTION

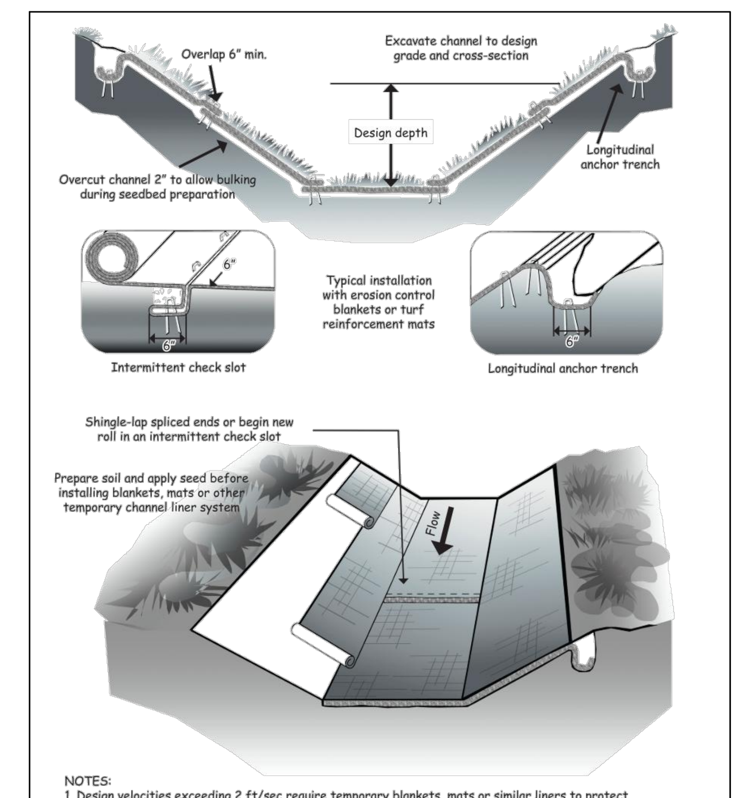
1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
3. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP (PRACTICE 6.62, SEDIMENT FENCE).
4. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES AND SPACED A MAXIMUM OF 4 FEET APART. THE TOP OF THE FABRIC SHOULD BE A MINIMUM OF 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE A MINIMUM OF 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
6. ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POSTS AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHT SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
7. EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T-POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS AS SHOWN IN FIGURE 6.65B.
8. DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 6 INCHES ABOVE THE SPILLWAY ELEVATION. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN.
9. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.
10. ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.

MAINTENANCE

1. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL, TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT, AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

POROUS BAFFLES CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE



NOTES:
1. Design velocities exceeding 2 ft/sec require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
2. Grass-lined channels with design velocities exceeding 6 ft/sec should include turf reinforcement mats

MAINTENANCE

1. INSPECT ROLLED EROSION CONTROL PRODUCTS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAIN FALL EVENT REPAIR IMMEDIATELY.
2. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE RECP.
3. ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED.
4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
5. MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

ROLLED EROSION CONTROL PRODUCTS CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

CONSTRUCTION

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NC DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER

MAINTENANCE

1. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (½ INCH OR GREATER) RAINFALL EVENT.
2. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS.
3. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

STANDARD GRAVEL YARD INLET PROTECTION CONSTRUCTION & MAINTENANCE

SCALE: NOT TO SCALE

Know what's below. Call before you dig.

N.C. GRID NAD' 83

NORTH CAROLINA PROFESSIONAL SEAL 032614 ENGINEER GARY J. MCCABE

06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. CORPORATE SEAL C-3075 NORTH CAROLINA

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RED LINE ENGINEERING
RED LINE ENGINEERING, P.C. (C-3075)
123 RALEIGH STREET
FUQUAY-VARINA, NORTH CAROLINA 27526
PHONE - (919) 779-6851
WWW.RLENC.COM

F&S LAND DEVLOPMENT LLC

12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
EROSION CONTROL MAINTENANCE REQUIREMENTS

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

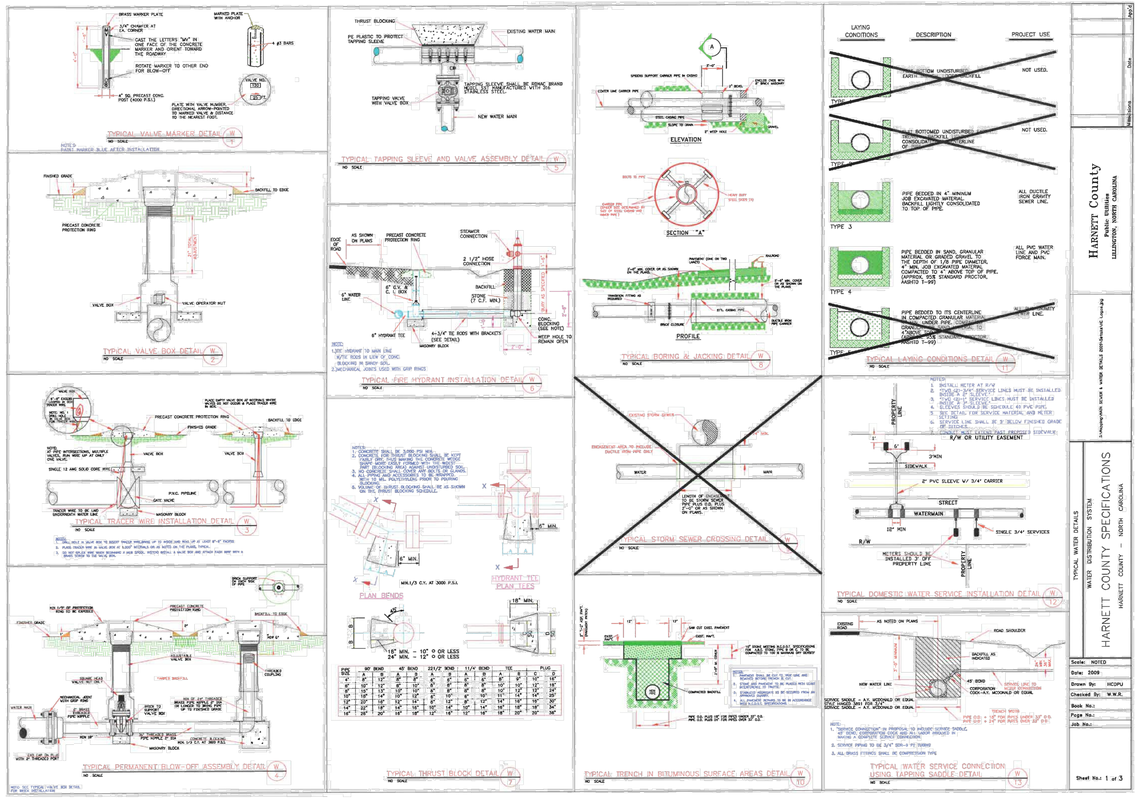
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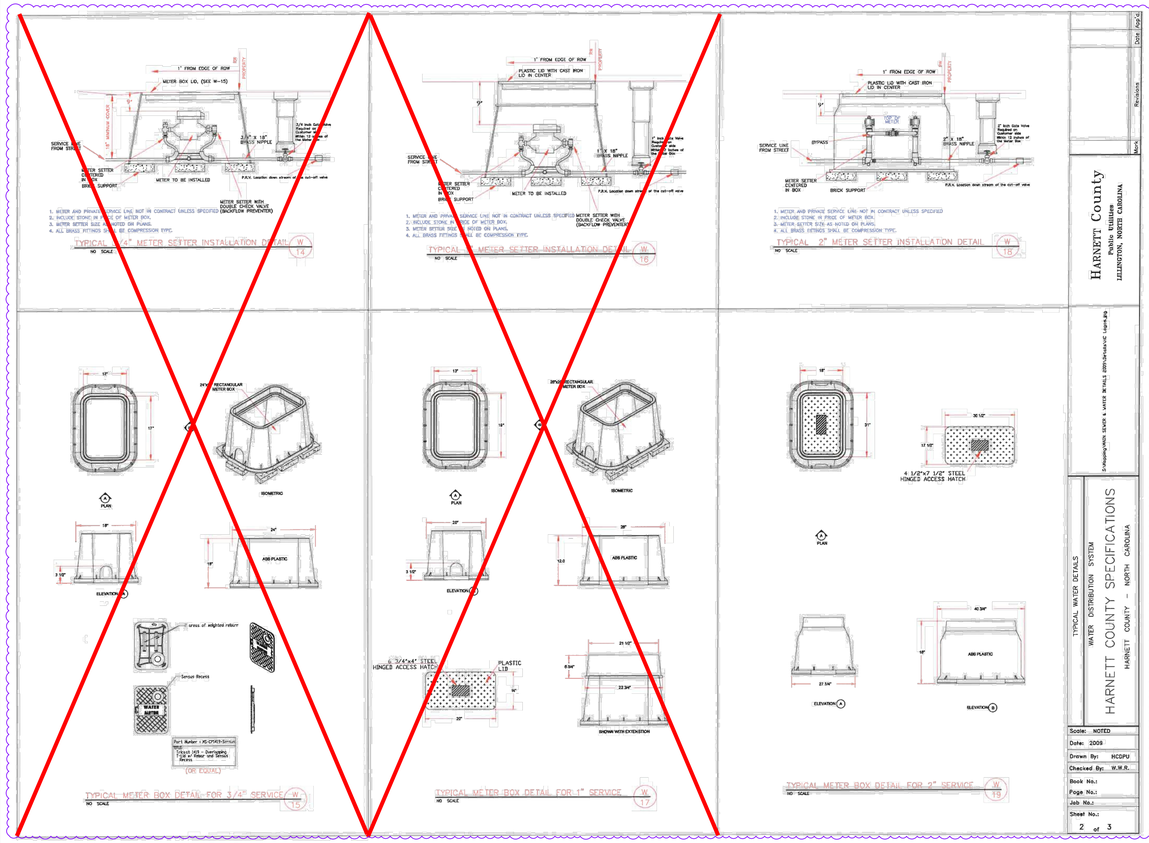
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OF 19 SHEETS





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RED LINE ENGINEERING, P.C. (C-3075)
RED LINE ENGINEERING
123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE : (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE UTILITY DETAILS

REVISIONS:	DATE:
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3 PER HRW	06/18/26

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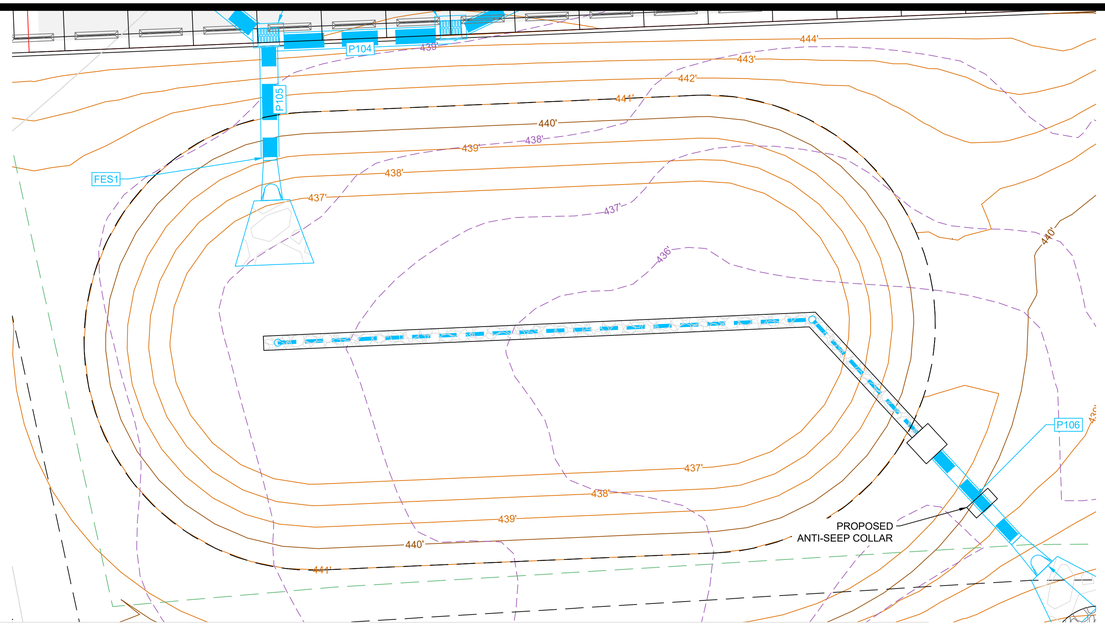
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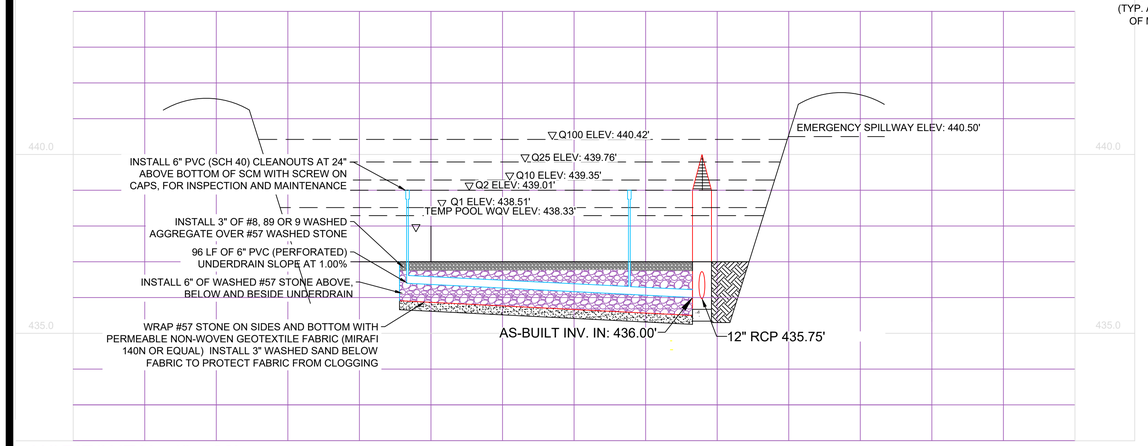
OF 19 SHEETS

Know what's **below.** **Call** before you dig.



INFILTRATION BASIN

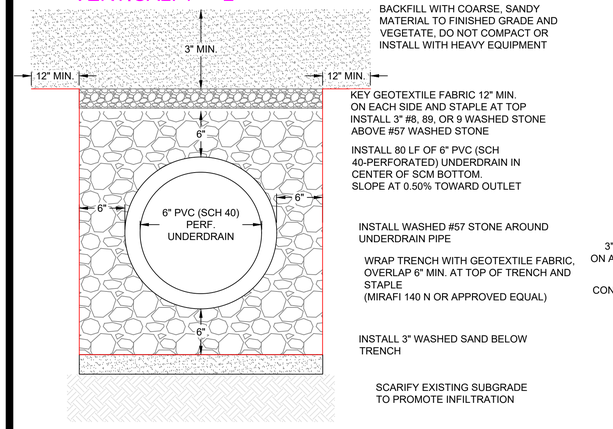
PLAN VIEW



HORIZONTAL: 1" = 20'
VERTICAL: 1" = 2'

INFILTRATION BASIN

PROFILE VIEW A-A



BACKFILL WITH COARSE, SANDY MATERIAL TO FINISHED GRADE AND VEGETATE, DO NOT COMPACT OR INSTALL WITH HEAVY EQUIPMENT

KEY GEOTEXTILE FABRIC 12" MIN. ON EACH SIDE AND STAPLE AT TOP INSTALL 3" #8, 89, OR 9 WASHED STONE ABOVE #57 WASHED STONE

INSTALL 80 LF OF 6" PVC (SCH 40-PERFORATED) UNDERDRAIN IN CENTER OF SCM BOTTOM. SLOPE AT 0.50% TOWARD OUTLET

INSTALL WASHED #57 STONE AROUND UNDERDRAIN PIPE

WRAP TRENCH WITH GEOTEXTILE FABRIC, OVERLAP 6" MIN. AT TOP OF TRENCH AND STAPLE (MIRAFI 140 N OR APPROVED EQUAL)

INSTALL 3" WASHED SAND BELOW TRENCH

SCARIFY EXISTING SUBGRADE TO PROMOTE INFILTRATION

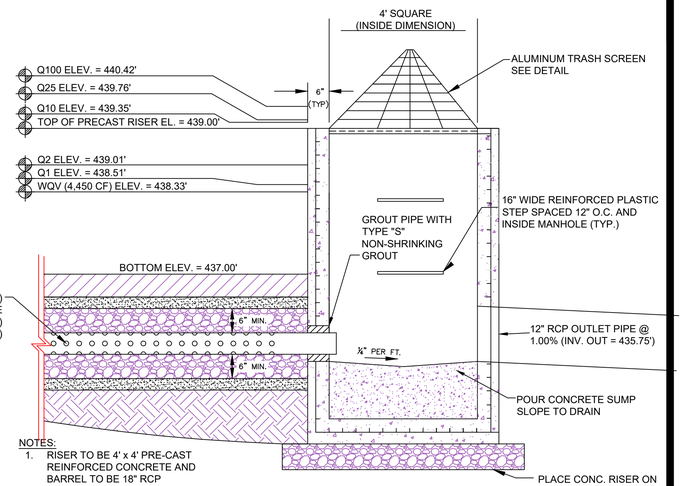
UNDERDRAIN SECTION DETAIL
DETAIL

SCALE: NOT TO SCALE



SCM CONVERSION NOTES:

1. INFILTRATION BASIN MAY BE SODDED WITH NATIVE GRASSES (I.E. FESCUE, BERMUDA, ZOYSIA, CENTIPEDE), LINED WITH EXCELSIOR MATTING AND SEED, HYDRO-SEEDED OR CONVENTIONALLY SEEDED WITH SEED, STRAW AND TACK(AT THE OWNER'S DISCRETION).
2. IF SOD IS USED, SOD MUST BE GROWN IN SANDY SOIL, NOT CLAY SOIL. OWNER SHALL VERIFY WITH PROVIDER AND ENGINEER PRIOR TO PLACEMENT.
3. BLEND COARSE SAND INTO THE BOTTOM 12" OF THE SCM TO PROMOTE INFILTRATION.
4. LANDSCAPER SHALL NOT COMPACT THE BOTTOM OF THE POND OR PLACE HEAVY EQUIPMENT IN THE BOTTOM OF THE POND. LANDSCAPER MAY NEED TO IMPORT 4-6" OF SANDY TOPSOIL TO HELP THE VEGETATION ROOT AND ESTABLISH.

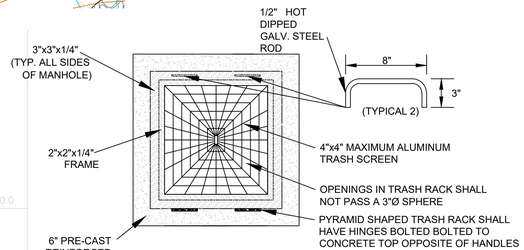


NOTES:

1. RISER TO BE 4' x 4' PRE-CAST REINFORCED CONCRETE AND BARREL TO BE 18" RCP
2. ALL CONCRETE SHALL BE A MIN. 3,000 PSI CONCRETE (28 DAY STRENGTH)

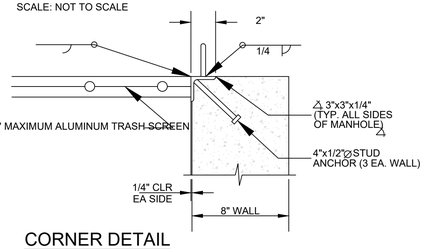
INFILTRATION BASIN OUTLET/BYPASS STRUCTURE
DETAIL

SCALE: NOT TO SCALE



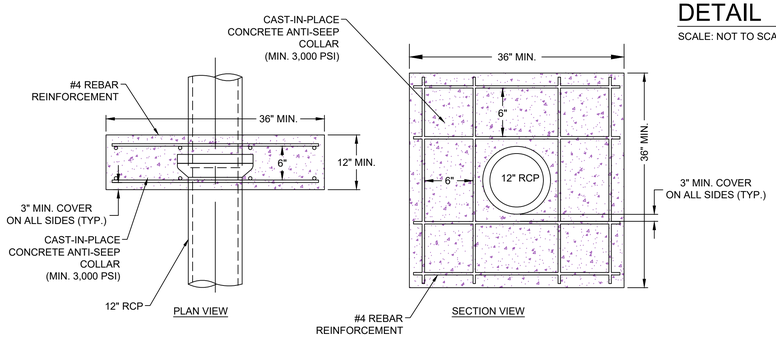
OUTLET STRUCTURE TRASH SCREEN
DETAIL

SCALE: NOT TO SCALE



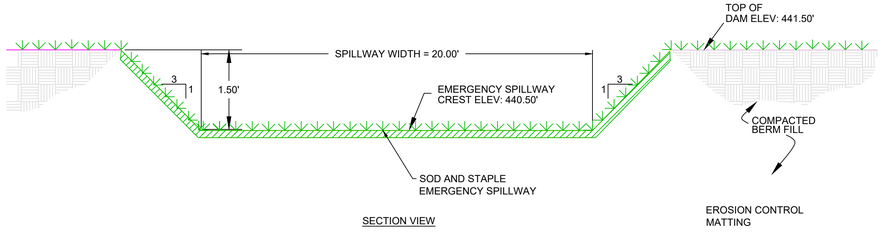
CORNER DETAIL
DETAIL

SCALE: NOT TO SCALE



ANTI-SEEP COLLAR (TYP.)
DETAIL

SCALE: NOT TO SCALE



SECTION VIEW

NOTES:

1. THE EROSION CONTROL MATTING SHALL BE INSTALLED AFTER GRASS SEED AND SOIL AMENDMENTS HAVE BEEN APPLIED.
2. WHEN INSTALLING THE EROSION CONTROL MATTING THE MANUFACTURER'S RECOMMENDATIONS SHALL BE FOLLOWED FOR LAP DISTANCES, ANCHOR SPACING & NUMBER, AND TRENCHING.
3. FERTILIZER, LIME, AND SEED SHALL BE APPLIED BEFORE MATTING IS INSTALLED. SEEDING AND SOIL AMENDMENTS SHALL BE APPLIED AT TWICE SCHEDULED RATES IN THE SPILLWAY SECTION.

EMERGENCY SPILLWAY (SOD)
DETAIL

SCALE: NOT TO SCALE

PRE VS POST PEAK RUNOFF SUMMARY

	PRE (CFS)	POST (CFS)	SCM (CFS)
1 YR / 24 HR	2.39	5.34	0.34
2 YR / 24 HR	3.88	7.30	0.70
10 YR / 24 HR	8.72	13.02	7.65
25 YR / 24 HR	12.01	16.65	8.72
100 YR / 24 HR	17.87	22.70	10.38

A PRIMARY SCM (INFILTRATION BASIN) IS PROPOSED FOR THIS SITE. THE PROPOSED SCM CONTROLS THE PEAK RUNOFF RATES TO BELOW THE PRE-DEVELOPED CONDITIONS FOR THE 1, 2, 10, 25 & 100 YEAR 24 HOUR STORM EVENTS. AS SUCH, NO FURTHER DOWNSTREAM ANALYSIS IS REQUIRED.

INFILTRATION NOTE: PER ONSITE INFILTRATION TESTING AND CONDUCTED ON SEPTEMBER 20TH, 2023, BY NV5 ENGINEERS & CONSULTANTS, INC., THE INFILTRATION RATES OF THE INSITU SOILS IN THE BOTTOM OF THE POND RANGED FROM 3.75 TO 0.5 IN/HR, WITH AN AVERAGE INFILTRATION RATE OF 1.5 IN/HR. THE EXISTING POND IS THUS BEING CONVERTED FROM A WET DETENTION POND TO AN INFILTRATION BASIN.

SHWT SEPARATION NOTE: PER ONSITE TESTING AND FIELD OBSERVATION ON NOVEMBER 30TH, 2023, BY NV5 ENGINEERS & CONSULTANTS, INC., THE SEASONAL HIGH WATER TABLE (SHWT) WAS NOT PRESENT WITHIN SIX (6) FEET OF THE BOTTOM OF THE EXISTING POND. 24 INCHES OF SEPARATION IS REQUIRED. THE PROPOSED DESIGN EXCEEDS THIS REQUIREMENT.

BASIN BERM NOTE: TOP OF BERM ON BASIN SHALL BE DOMED 6" TO MIDDLE TO PROVIDE POSITIVE DRAINAGE. TOP OF BERM IN CENTER = 382.50

POND LINER NOTE: CLAY LINER IS REQUIRED WITH A MAXIMUM INFILTRATION RATE OF 0.01 IN/HR. NO GEOTECHNICAL TESTING OF ONSITE SOILS HAS BEEN PROVIDED AT THIS TIME. A GEOTECHNICAL ENGINEER SHALL CERTIFY THAT PROPER PLACEMENT, COMPACTION AND INFILTRATION RATE FOR THE POND LINER HAVE BEEN ACHIEVED PRIOR TO PLACING SCM INTO SERVICE. IF ONSITE MATERIAL CANNOT MEET 0.01 IN/HR MAX INFILTRATION RATE, IMPORTED MATERIAL WILL BE REQUIRED.

NORTH CAROLINA PROFESSIONAL SEAL 032614 ENGINEER GARY J. MCCABE

06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. SEAL C-3075 NORTH CAROLINA

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123 RALEIGH STREET
HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE: (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
SCM DETAILS

REVISIONS:	DATE:
3 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
1 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

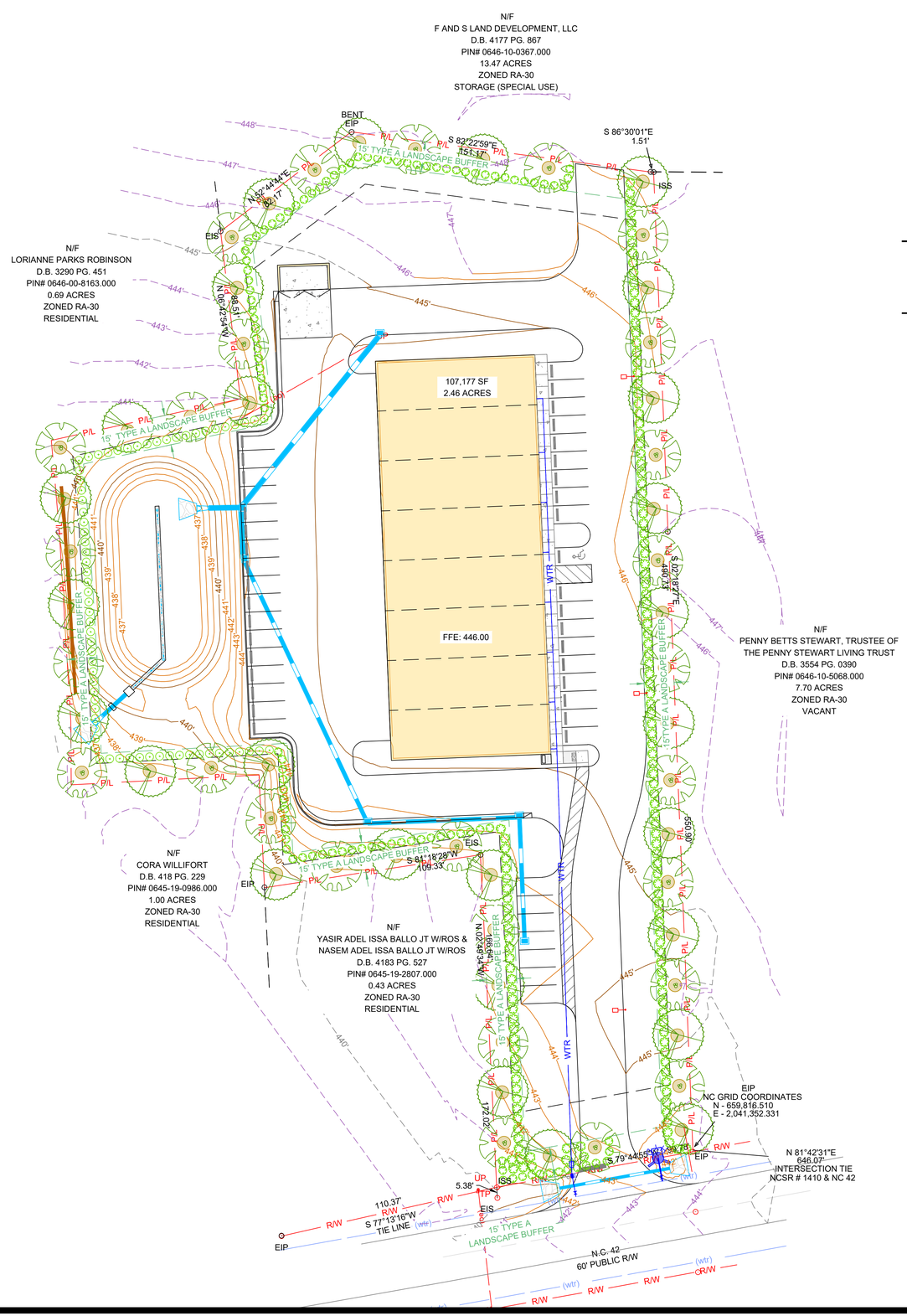
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OF 19 SHEETS

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SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.

PLANTING SCHEDULE

	SYMBOL	CODE NAME	QUANTITY	COMMON NAME	SCIENTIFIC NAME	PLANTING SIZE	
SHRUBS		DEH	142	DISTYLIUM 'EMERALD HEIGHTS (e)	DISTYLIUM PIIDIST-I, MED HT	3 GAL. / 18" HT. MIN. AT PLANTING	36" HT. X 30" SPREAD WITHIN 3 YRS
SHRUBS		DJC	103	DWARF JAPANESE CEDAR (e)	CRYPTOMERIA JAPONICA 'GLOBOSA NANA'	3 GAL. / 18" HT. MIN. AT PLANTING	36" HT. X 30" SPREAD WITHIN 3 YRS
SHRUBS		IlcoD	67	DWARF BURFORD HOLLY (e)	ILEX CORNUTA 'DWARF BURFORD'	3 GAL. / 18" HT. MIN. AT PLANTING	36" HT. X 30" SPREAD WITHIN 3 YRS
CANOPY TREES		Quph	27	WILLOW OAK	QUERCUS PHELLOS	2 1/2" CAL. / 8' HT. MIN. AT PLANTING	40' MIN. HT. / 30' SPREAD AT MATURITY
CANOPY TREES			27			2 1/2" CAL. / 8' HT. MIN. AT PLANTING	40' MIN. HT. / 30' SPREAD AT MATURITY

LANDSCAPE SUMMARY

LANDSCAPE BUFFER DATA:

West PL	Type A Buffer - 15' width	805.36 lf
1 canopy trees req./30ft 1 shrubs req./6ft		27 canopy trees req./prov. 135 shrubs req. 149 shrubs prov.
North PL	Type A Buffer - 15' width	208.98 lf
1 canopy trees req./30ft 1 shrubs req./6ft		7 canopy trees req./prov. 39 shrubs req. 40 shrubs prov.
East PL	Type A Buffer - 15' width	490.73 lf
1 canopy trees req./30ft 1 shrubs req./6ft		17 canopy trees req./prov. 82 shrubs req. 93 shrubs prov.
South PL (ROW)	Type A Buffer - 15' width	71.64 lf
1 canopy trees req./30ft 10 shrubs req./1 canopy tree		3 canopy trees req./prov. 30 shrubs req. 30 shrubs prov.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032614 GARY J. MCCABE

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F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
REQUIRED LANDSCAPE IMPROVEMENTS

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

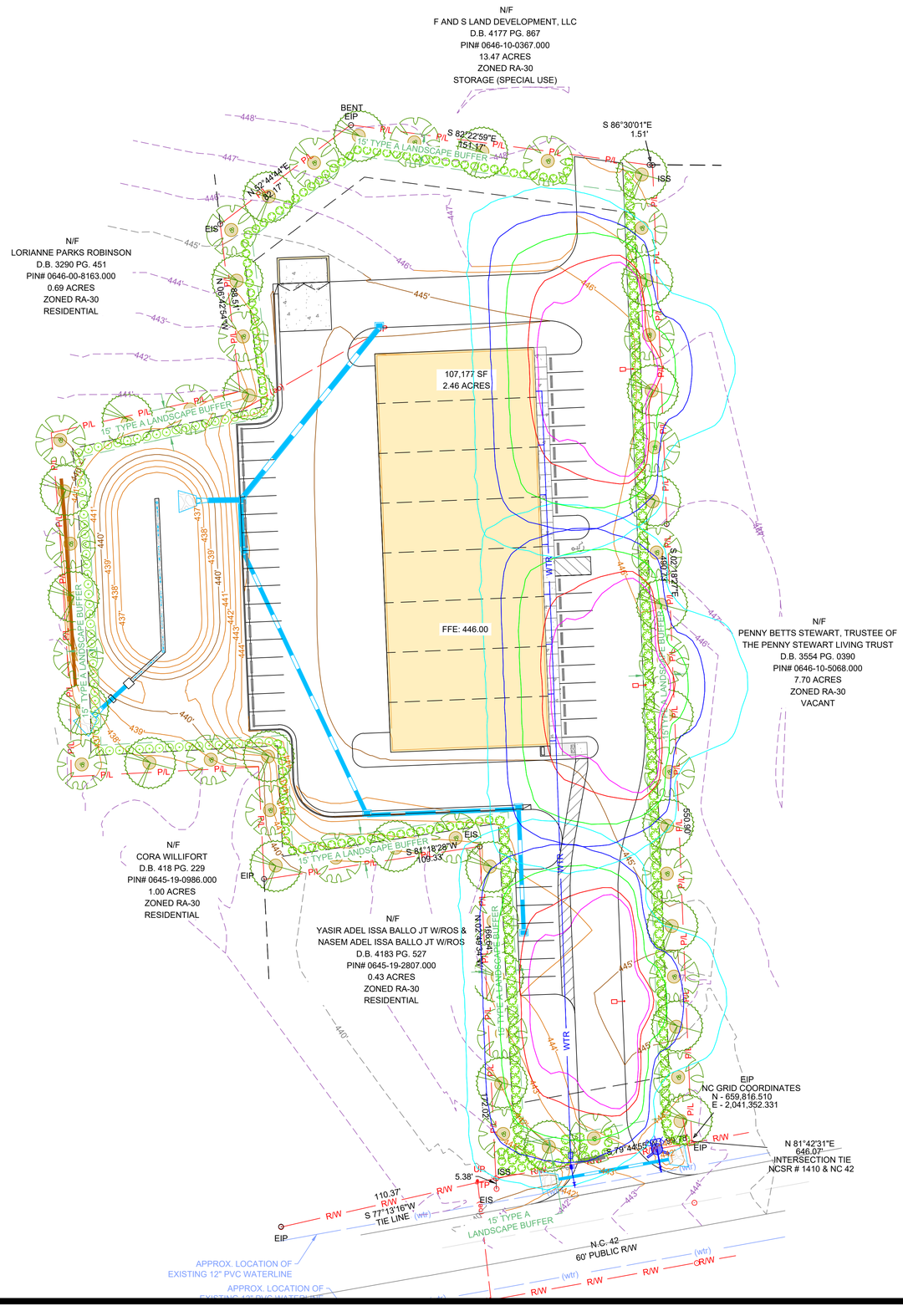
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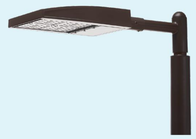


SCALE: 1" = 30'

30' 0 30'

SCALE OF MAP MAY VARY
DUE TO METHODS OF REPRODUCTION.

Outdoor Lighting



SHOEBOX LED
(Meets Dark Sky Criteria)

LED (Light-emitting diode)	150 | 220 | 420 | 530 watts
Mounting height	25', 30', 35'
Color	Black | Bronze | Gray | White
Pole	Fiberglass *(1 or 2 fixtures per pole)* Decorative tapered metal Decorative square metal
Applications	Neighborhoods Roadways Shopping centers

Light source: LED *(white)*

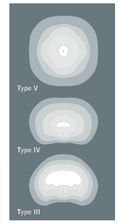
Wattage: 150 | 220 | 420 | 530 watts

Light pattern: IES Type V | Type IV (forward throw) | Type III

IESNA cutoff classification: Full-cutoff

BUG rating: 150W Type III = B2U0G3 / Type IV = B3U0G4 / Type V = B5U0G3
220W Type III = B2U0G4 / Type IV = B3U0G4 / Type V = B4U0G3
420W Type IV = B3U0G5 / Type V = B5U0G5
530W Type IV = B3U0G5 / Type V = B5U0G5

Color temperature: 4,000K



light distribution pattern

POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Round tapered decorative metal*	35'	Black, Bronze
Decorative square metal*	25' and 30'	Black, Bronze, Gray, White
Fiberglass	25' and 30'	Black *(1 or 2 fixtures per pole)* Gray *(1 or 2 fixtures per pole)*

FEATURES	BENEFITS
Turnkey operation	Provides hassle-free installation and service
Little or no installation cost	Frees up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting ordinances
Maintenance, electricity & warranty included	Eliminates high and unexpected repair bills
One low monthly cost on your electric bill	Convenience and savings for you

For additional information, email us at
ODLCarolinas@duke-energy.com.

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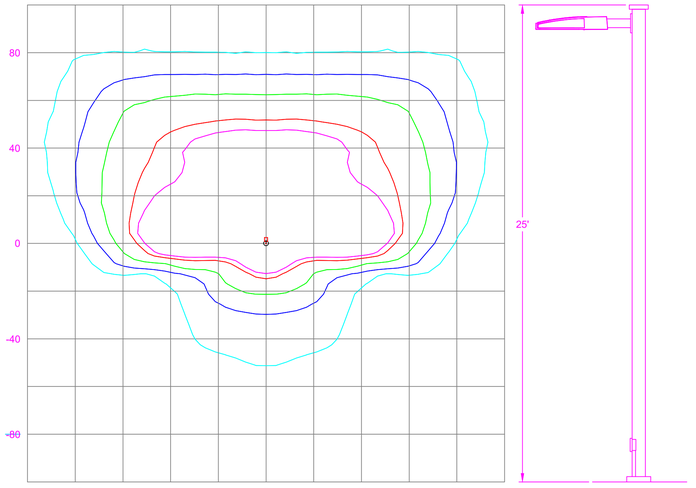
©2022 Duke Energy Corporation 222298 DEP 9/22

ISOFOOTCANDLE CURVES

FIXTURE: LED150W SHOEBOX
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED'S, 3000K, 70 CRI
LUMENS: 16176
PATTERN: TYPE IV B2-U0-G3 (ZERO LIGHT AT OR ABOVE 90 DEGREES)

ASSY# LFIX-SBX-LED-150-BLK-IV-3000K-___-P
POLE ASSY# LPOLE-AB-STL-25FT-BLK-SQ-___-P (BLACK)
BRACKET ASSY# LBKT-SIDE-12IN-BLK-UNV-STL-___-P (BLACK)

NOTE: THE FOOTCANDLE READINGS BELOW ARE MAINTAINED AND HAVE BEEN DEPRECIATED FOR LED LUMEN DEPRECIATION AND LUMINAIRE DIRT DEPRECIATION. FOR INITIAL FOOTCANDLES, DIVIDE THE READINGS BELOW BY .85.



LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25

NORTH CAROLINA PROFESSIONAL SEAL 032614 ENGINEER GARY J. MCCABE

06/18/26 10:27:26 AM

RED LINE ENGINEERING, P.C. SEAL C-3075 NORTH CAROLINA

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HOLLY SPRINGS, NORTH CAROLINA 27526
PHONE : (919) 779-8851
WWW.RLENC.COM

F&S LAND DEVELOPMENT LLC
12719 NC HIGHWAY 42
HOLLY SPRINGS, NORTH CAROLINA, 27526

42 BUSINESS PARK INDUSTRIAL FLEX BASE
PROPOSED LIGHTING PLAN

REVISIONS:	DATE:
1 PER NCDOT/HRW	03/23/26
2 PER HRW	05/14/26
3 PER HRW	06/18/26

ISSUED FOR:	DATE:
REVIEW/PERMIT	07/22/25
NCDOT & HRW	01/14/26

PROJECT NO.:	
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REVIEWED BY:	

SHEET NUMBER:

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Harnett COUNTY NORTH CAROLINA

CentralPermitting@Harnett.org
(910) 893-7525 ext:1
420 McKinney Pkwy (physical)
PO Box 65 (mailing)
Lillington, NC 27546

COMMERCIAL BUILDING APPLICATION

Site Address: 12719 NC 42, Holly Spring NC **PIN:** 0646-10-2128.000

Owner: F & S Land Development, LLC **Phone:** 919-730-7802 **Email:** THPHomes@Gmail.com

Description of Proposed Work: Build New Commercial Flex Bldg **Total Job Cost:** $_____

GENERAL CONTRACTOR INFORMATION

* Must be owner or licensed contractor. Address, company name & phone must match information on license.

Triangle Home Pros LLC
General Contractor's Company Name

919-346-1528
Phone

6312 Lavaca Ln, Fuquay Varina, NC
Address

THPHomes@Gmail.com
Email

77019
License #

Signature of Owner/Contractor/Officer of Corp.

$ 850,000.00
Building Cost (excluding trades)

ELECTRICAL CONTRACTOR INFORMATION

Description of Work: Electric Wiring New Flex Bldg Service Size: 200 Amps T-Poles: YES ☒ NO ☐

NEC Power
Electrical Contractor's Company Name

919-812-6624
Phone

117 Wild Blossom Dr, Apex 27539
Address

Permits@NECPower.com
Email

28370
License #

Signature of Owner/Contractor/Officer of Corp.

$_____
Electrical Cost

MECHANICAL/HVAC CONTRACTOR INFORMATION

Description of Work: N/A # of Units: _____

Mechanical Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

$_____
Mechanical Cost

PLUMBING CONTRACTOR INFORMATION

Description of Work: Rough Plumb Flex Bldg # of Baths: 0

Romanoff Group
Plumbing Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

$_____
Plumbing Cost

APPLICATION CONTINUES ON BACK

Harnett COUNTY NORTH CAROLINA

CentralPermitting@Harnett.org
(910) 893-7525 ext:1
420 McKinney Pkwy (physical)
PO Box 65 (mailing)
Lillington, NC 27546

COMMERCIAL BUILDING APPLICATION

Site Address: 12719 NC 42, Holly Spring NC **PIN:** 0646-10-2128.000

Owner: F & S Land Development, LLC **Phone:** 919-730-7802 **Email:** THPHomes@Gmail.com

Description of Proposed Work: Build New Commercial Flex Bldg **Total Job Cost:** $ 1,075,000.00

GENERAL CONTRACTOR INFORMATION

* Must be owner or licensed contractor. Address, company name & phone must match information on license.

Triangle Home Pros LLC
General Contractor's Company Name

919-346-1528
Phone

6312 Lavaca Ln, Fuquay Varina, NC
Address

THPHomes@Gmail.com
Email

77019
License #

Signature of Owner/Contractor/Officer of Corp.

$ 850,000.00
Building Cost (excluding trades)

ELECTRICAL CONTRACTOR INFORMATION

Description of Work: Electric Wiring New Flex Bldg Service Size: 200 Amps T-Poles: YES ☒ NO ☐

NEC Power
Electrical Contractor's Company Name

919-812-6624
Phone

117 Wild Blossom Dr, Apex 27539
Address

Permits@NECPower.com
Email

28370
License #

See Sub Sheet
Signature of Owner/Contractor/Officer of Corp.

$ 25,000.00
Electrical Cost

MECHANICAL/HVAC CONTRACTOR INFORMATION

Description of Work: N/A # of Units:

Mechanical Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

$
Mechanical Cost

PLUMBING CONTRACTOR INFORMATION

Description of Work: Rough Plumb Flex Bldg # of Baths: 0

Romanoff Group
Plumbing Contractor's Company Name

919-678-0111
Phone

2728 Capital Blvd Suite 101 Raleigh NC 27604
Address

Uschluter@RomanoffGroup.com
Email

29022
License #

See Sub Sheet
Signature of Owner/Contractor/Officer of Corp.

$ 6000.00
Plumbing Cost

APPLICATION CONTINUES ON BACK

REFRIGERATION CONTRACTOR INFORMATION

N/A
Refrigeration Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

SPRINKER CONTRACTOR INFORMATION

N/A
Sprinkler Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

FIRE ALARM CONTRACTOR INFORMATION

N/A
Fire Alarm Contractor's Company Name

Phone

Address

Email

License #

Signature of Owner/Contractor/Officer of Corp.

Driveway Access - NC Department of Transportation Driveway Access/Permit? YES ☒ NO ☐

I hereby certify that I have the authority to complete this application, that the application is correct and that the construction will conform to the regulations in the Building, Electrical, Plumbing and Mechanical codes and in the Harnett County Zoning Ordinance. I state the information on the aforementioned contractors is correct as it is known to me and that **by signing below I have obtained all subcontractors permission to obtain these permits** and if **any** changes occur including listed contractors, site plan, number of bedrooms, building and trade plans, Environmental Health permit changes or proposed use changes, I certify it is my responsibility to notify the Harnett County Central Permitting Department of all changes.

EXPIRED PERMIT FEES - 6 months to 2 years re-issue fee is $150.00. After 2 years re-issue fee is as per current fee schedule.

Signature of Owner/Contractor/Officer of Corp.

8/5/2026
Date

APPLICATION CONTINUES ON BACK

Harnett COUNTY NORTH CAROLINA

Affidavit for Worker's Compensation N.C.G.S. 87-14

The undersigned applicant being the:

__X__ General Contractor _____ Owner _____ Officer/Agent of the Contractor or Owner

Does hereby confirm under penalties of perjury that the person(s), firm(s) or corporation(s) performing the work set forth in the permit:

_____ Has 3 or more employees and has obtained workers' compensation insurance to cover them,

_____ Has 1 or more subcontractors and has obtained workers' compensation insurance to cover them,

__X__ Has 1 or more subcontractors who has their own policy of workers' compensation insurance covering themselves,

_____ Has no more than 2 employees and no subcontractors,

While working on the project for which this permit is sought and it is understood that the Central Permitting Department issuing the permit may require certificates of workers' compensation insurance coverage from any person, firm, or corporation carrying out the work prior to issuance of the permit or at any time during the permitted work.

Signature of Owner/Contractor/Officer of Corporation

8/5/2026
Date

Harnett COUNTY NORTH CAROLINA

CentralPermitting@Harnett.org
(910) 893-7525 ext:1
420 McKinney Pkwy (physical)
PO Box 65 (mailing)
Lillington, NC 27546

COMMERCIAL LAND USE APPLICATION

SITE ADDRESS: 12719 NC 42 Hollysprings **PIN:** 0646-10-2128.000

LANDOWNER: F&S Land Development LLC Mailing Address: 460 Ausley R.d

City: Fuquay Varina State: NC Zip: 27526 Phone: 919-730-7802 Email: THPHomes@Gmail.com

**Please fill out applicant information if different than landowner.*

APPLICANT: Triangle Home Pros LLC Mailing Address: 6312 Lavaca Ln

City: Fuquay Varina State: NC Zip: 27526 Phone: 919-346-1528 Email: THPHomes@Gmail.com

PROPOSED USE:

☐ **Multi-Family Dwelling**: # Units:_____ # Bedrooms/Unit:_____

☒ **Business**: SQ. FT.: Retail Space: 16,000 Type: Flex # Employees: 0 Hours of Operation: 6:00 AM-11:00 PM

☐ **Daycare**: # Preschoolers:_____ # Afterschoolers:_____ # Employees:_____ Hours of Operation:_____

☐ **Industry**: SQ. FT.:_____ Type:_____ # Employees:_____ Hours of Operation:_____

☐ **Church**: Seating Capacity:_____ # Bathrooms:_____ Kitchen: Yes ☐ No ☐

☐ **Sign**: (Size_____x_____) Type:_____ Illuminated: Yes ☐ No ☐ If yes, Internal ☐ External ☐

☐ **Accessory/Addition/Other**: (Size_____x_____) Use:_____

UTILITIES:

Water Supply: County ☒ Existing Well ☐ New Well (# of facilities using well _____) ☐

Sewage Supply: New Septic Tank ☒ Expansion ☐ Relocation ☐ Existing Septic Tank ☐ County Sewer ☐

(Complete Environmental Health Checklist on other side of application if Septic is selected)

COMMENTS: _____

If permits are granted, I agree to conform to all ordinances and laws of the State of North Carolina regulating such work and the specifications of plans submitted. I hereby state that the foregoing statements are accurate and correct to the best of my knowledge. Permit subject to revocation if false information is provided.

Signature of Owner or Owner's Agent **Date** 8/5/2026

*****Permits are valid for 6 months from the issue date, or 12 months from last inspection once inspections have been initiated. It is the owner/applicant's responsibility to provide the county with any applicable information about the subject property, including but not limited to: boundary information, house location, underground or overhead easements, etc. The county or its employees are not responsible for any incorrect or missing information that is contained within these applications.*****

APPLICATION CONTINUES ON BACK

Harnett COUNTY NORTH CAROLINA

Environmental Health Department Application for Improvement Permit and/or Authorization to Construct

If the information in this application is falsified, changed, or the site is altered, then the permit shall become invalid. This permit will be valid for 60 months.

☒ **NEW SEPTIC SYSTEM INSPECTION**

- ***All property irons must be made visible.*** Place pink flags on each corner of lot & approximately every 50 feet between corners.
- Place orange flags at the corners of each proposed structure per site plan submitted to Central Permitting.
- Post orange Environmental Health sign in location that is visible from road to assist in locating property.
- If property is thickly wooded, you will be required to clean out the **undergrowth** to allow the soil evaluation to be performed. Inspectors should be able to walk freely around site. **DO NOT GRADE PROPERTY.**

☐ **EXISTING TANK INSPECTION**

- Follow above instructions for placing flags and sign on property.
- Prepare for inspection by removing soil over **outlet end** of tank, lift lid straight up (*if possible*), and then **put lid back in place**. ***Does not apply to septic tank in a mobile home park****
- **DO NOT LEAVE LIDS OFF OF SEPTIC TANK**

SEPTIC CHECK LIST

If applying for Authorization to Construct, please indicate desired system type(s): Can be ranked in order of preference, must choose one.

☒ Accepted ☐ Innovative ☐ Conventional ☐ Any ☐ Alternative

☐ Other _____

The applicant shall notify the local health department upon submittal of this application if any of the following apply to the property in question. If the answer is "yes," applicant **MUST ATTACH SUPPORTING DOCUMENTATION**:

YES ☐ NO ☐ Does the site contain any jurisdictional wetlands?

YES ☐ NO ☒ Do you plan to have an irrigation system now or in the future?

YES ☐ NO ☐ Does or will the building contain any drains? Please explain: _____

YES ☐ NO ☒ Are there any existing wells, springs, waterlines, or wastewater systems on this property?

YES ☐ NO ☒ Is any wastewater going to be generated on the site other than domestic sewage?

YES ☐ NO ☒ Is the site subject to approval by any other Public Agency?

YES ☒ NO ☐ Are there any easements or rights-of-way on this property?

YES ☒ NO ☐ Does the site contain any existing water, cable, phone, or underground electric lines?

If yes, please call No Cuts at 800-632-4949 to locate the lines. This is a free service.

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized County and State Officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. I understand that a $25.00 return trip fee may be incurred for failure to uncover outlet lid, mark house corners and property lines, etc. once lot is confirmed to be ready.

_____ 8/5/2026

Signature of Owner or Owner's Agent **Date**

DO NOT REMOVE!

Details: Appointment of Lien Agent

Entry #: 2660564

Filed on: 08/17/2026
Initially filed by:
bryan.thphomes@gmail.com

Designated Lien Agent

Chicago Title Company, LLC

Online: www.liensnc.com
Address: 223 S. West Street, Suite 900 / Raleigh, NC 27603
Phone: 888-690-7384
Fax: 913-489-5231
Email: support@liensnc.com

Project Property

12719 NC 42
Holly Springs, NC 27540
Harnett County

Property Type

Other

Owner Information

Triangle Home Pros, LLC
6312 Lauraca Ln
Fuquay Varina, NC 27526
United States
Email: thphomes@gmail.com
Phone: 919-346-1528

Date of First Furnishing

08/01/2026

Print & Post

Contractors:
Please post this notice on the Job Site.

Suppliers and Subcontractors:
Scan this image with your smart phone to view this filing. You can then file a Notice to Lien Agent for this project.

View Comments (0)

Technical Support Hotline: (888) 690-7384