NEW FACILITY FOR:

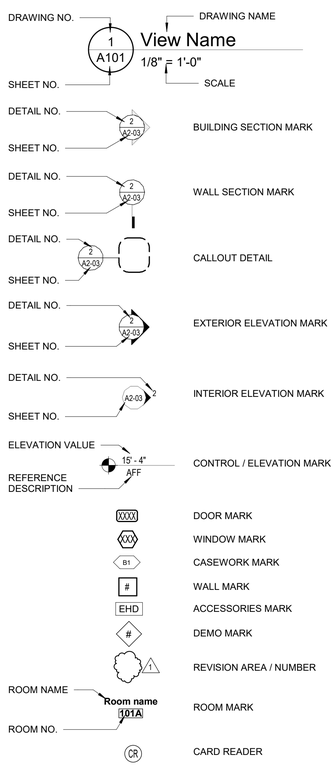
ANGIER MUNICIPAL FACILITY

55 N BROAD ST W.
ANGIER, NC 27501

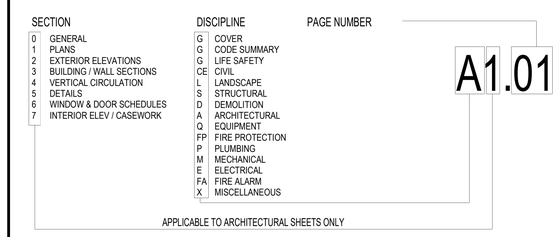
ABBREVIATIONS

@	AT
ACC	ACCENT COLOR
ACOUS	ACOUSTIC
ACT	ACOUSTICAL CEILING TILE
ACW	ACOUSTICAL WALL PANELS
AD	AREA DRAIN
ADJ	ADJUSTABLE
AE	APPROVED EQUAL
AFF	ABOVE FINISH FLOOR
AFL	ATHLETIC FLOORING
AHU	AIR HANDLING UNIT
ALUM	ALUMINUM
ANOD	ANODIZED
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ATTEN	ATTENUATION
AWP	ACRYLIC WALL PANELS
BBT	BIOBASED TILE
BF	BLOCK FILL
BFC	BROOMED FINISHED CONCRETE
BL	BLINDS
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BPG	BULLET PROOF GLASS
CB	CATCH BASIN
CEM	CEMENTIOUS SIDING
CF	CORK FLOORING
CFT	CERAMIC FLOOR TILE
CG	CURVED CEILING GRID
CI	CAST IRON
C#	CURB INLET
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONTR	CONTRACTOR
CORR	CORRUGATED
CPT	CARPET
CPTT	CARPET TILE
CRC	COLD ROLLED CHANNEL
CRF	CORK RUBBER FLOORING
CS	COUNTERSUNK
CSCI	CONTRACTOR SUPPLIED, CONTRACTOR INSTALLED
CTB	CERAMIC TILE BASE
CW	CURTAINWALL
CWT	CERAMIC WALL TILE
DFP	DRY FOG PAINT
DIA	DIAMETER
DISP	DISPENSER
DN	DOWN
DP	DEEP
DR	DOOR
DS	DOWNSPOUT
DTL	DETAIL
EDG	EDGE BANDING
EES	EMERGENCY EYE WASH AND SHOWER
EFC	EPOXY FLOOR COATING
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EIP	EXISTING IRON PIPE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EN	ENAMEL
EPT	HIGH PERFORMANCE EPOXY PAINT
EQ	EQUAL
ES	EXPOSED STRUCTURE
EST	EXISTING
EXP	EXPOSED CEILING
EXT	EXTERIOR
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
FC	FIRECODE
FD	FLOOR DRAIN
FE	FIRE EXSTINGUISHER
	SURFACE MOUNTED
FEC	FIRE EXSTINGUISHER SEMI-RECESSED
FF	FINISH FLOOR
FH	FIRE HYDRANT
FLU	FLOURESCENT
FOF	FACE OF FRAME
FOM	FACE OF MASONRY
FT	FLOOR TILE
FTG	FOOTING
FV	FLOOD VENT
GA	GAGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GCT	GRANITE COUNTERTOP
GEN	GENERATOR
GFT	GRANITE FLOOR TILE
GL	GLASS
GMT	GLASS MOSAIC TILE
GT	GROUT
GWB	GYPSUM WALL BOARD
GYP	GYPSUM BOARD
HB	HOSE BIB
HC	HOLLOW CORE
HDC	HANDICAP
HDWD	HARDWOOD
HM	HOLLOW METAL
HORZ	HORIZONTAL
HR	HOUR
ID	INSIDE DIAMETER
IMP	INSULATED METAL PANEL
INSTAL	INSTALLATION
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
JB	JOIST BEARING
JB#	JUNCTION BOX
JT	JOINT
L	LONG
LFT	LINOLEUM FLOOR TILE
LP	LIGHT POLE
LST	LINOLEUM SHEET FLOORING
LVS	LEAVES (DOOR)
LVT	LUXURY VINYL TILE
MATL	MATERIAL
MAX	MAXIMUM
MB	MASONRY - BRICK
MBL	MARBLE
MC	METAL CANOPY
MCT	METAL CEILING TILE
MECH	MECHANICAL
MFR	MANUFACTURER
MFT	MARBLE FLOOR TILE
MIN	MINIMUM
MO	MASONRY OPENING
MTB	MARBLE TILE BASE
MTD	MOUNTED
MTL	METAL
MWM	METAL WALK-OFF MAT
MWT	MARBLE WALL TILE
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NOM	NORMAL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OPP	OPPOSITE
OSC	OVERFLOW SCUPPER
OZ	OUNCE
P	PAINT
PC	POLISHED CONCRETE
PERF	PERFORATED
PFT	PORCELAIN FLOOR TILE
PIV	POST INDICATOR VALVE
PL	PLATE
P-LAM	PLASTIC LAMINATE
P-LAM WD	PLASTIC LAMINATE WOOD DOORS
PLYWD	PLYWOOD
PNT	PAINT
POLYETH	POLYETHYLENE
PP	POWER POLE
PR	PAIR
PTB	PORCELAIN TILE BASE
PTD	PAINTED
PTP	PLASTIC TOILET PARTITIONS
PWT	PORCELAIN WALL TILE
PVC	POLYVINYL CHLORIDE
QS	QUARTZ SURFACE
QT	QUARRY TILE
QZT	QUARTZ TILE
R	RADIUS
R&S	ROD AND SHELF
RB	RESILIENT BASE
RBT	RUBBER TILE
RCP	REINFORCED CONCRETE
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
RECEPT	RECEPTACLE
RECYF	RECYCLED FLOORING
REQD	REQUIRED
RES	RESILIENT
RM	RUBBER MAT
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RSF	RESINOUS FLOORING
RTF	RESILENT TILE FLOORING
SAT	SPRAYED ACOUSTICAL TREATMENT
SC	SEALED CONCRETE
SCH	SCHEDULE
SCW	SOLID CORE WOOD
SDT	STATIC DISSIPATIVE TILE
SF	STOREFRONT
SHEATH	SHEATHING
SIM	SIMILAR
SP	SPACES
SQ	SQUARE
SQFT	SQUARE FEET
SRT	SLIP RESISTANT TILE
SS	STAINLESS STEEL
SSC	STAINED SEALED CONCRETE
SSG	STRUCTURAL SILICON GLAZING
SSM	SOLID SURFACE
ST	STEEL
ST&R	STAIR TREADS AND RISERS
STD	STANDARD
SUSP	SUSPENDED
T&G	TONGUE AND GROOVE
TB	TILE BASE
TC	TERRA COTTA
TCA	TILE COUNCIL OF AMERICA
TELE	TELEPHONE
TEMP	TEMPERED
TEXD	TEXTURED
TFT	TERRAZZO FLOOR TILE
TOC	TOP OF CURB
TOS	TOP OF STEEL
TP	TELEPHONE POLE
TS	TRANSITION STRIP
TVB	TELEVISION MOUNTING BRACKET
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
U/L	UTILITY/LIGHTS
UNO	UNLESS NOTED OTHERWISE
VACT	VINYL ACOUSTICAL TILE
VB	VAPOR BARRIER
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VWC	VINYL WALL COVERING
W/	WITH
WC	WATER CLOSET
WD	WOOD
WF	WOOD FLOORING
WT	WALL TILE
WT*	WALL TILE - SEE ELEVATION
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

SYMBOL LEGEND



SHEET NAMING LEGEND



CONSULTANTS

CIVIL ENGINEER:

Wooten

120 N. BOYLAN AVE
RALEIGH, NC 27603
PHONE: 919-828-0531

STRUCTURAL ENGINEER:

ELLINWOOD + MACHADO

4242 SIX FORKS RD, SUITE 880
RALEIGH, NC 27609
PHONE: 919-322-5550

PLUMBING, MECHANICAL, & ELECTRICAL ENGINEER:

McKIM&CREED

1730 VARSITY DRIVE,
VENTURE IV BUILDING, SUITE 500
RALEIGH, NC 27606-2689
PHONE: 919-233-8091

INDEX OF DRAWINGS

ALTERNATES

S-1 PROVIDE COLD FORMED STEEL ROOF TRUSSES WITH METAL DECK IN LIEU OF WOOD TRUSSES WITH PLYWOOD DECK AS INDICATED IN STRUCTURAL PLANS.

A-1 PROVIDE PLASTIC LAMINATE FINISHED WALL PANELS IN LIEU OF WOOD PANELS IN ROOMS 101-LOBBY, 135-CORRIDOR, 136-PUBLIC LOBBY, AND 134-COUNCIL CHAMBER.

A-2 PROVIDE PLASTIC LAMINATE FINISH AT DAIS CASEWORK IN 134-COUNCIL CHAMBER THE PANELS IN LIEU OF PLYWOOD VENEER PANELS.

A-3 PROVIDE TERRAZZO FLOOR FINISH IN LIEU OF FLOOR TILE WHERE FT-1 IS SCHEDULED.

VOLUME 1 OF 2

OAKLEY COLLIER ARCHITECTS
OCA
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
1111 Haynes Street, Suite 109, Raleigh, NC 27604 (P) 919.985.7700

NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

OAKLEY COLLIER ARCHITECTS, P.A. — CERT NO. 50681 — ROCKY MOUNT, NC

BID SET

ANN W. COLLIER — REGISTERED ARCHITECT — 6886 — NORTH CAROLINA — ROCKY MOUNT — 03.22.22

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date	Project No.
03.22.21	20020A
Drawn By	Sheet No.
JS	G0.1
Checked By	
DG	

Sheet Title
COVERSHEET

2018 APPENDIX B BUILDING CODE SUMMARY

Name of Project: ANGIER MUNICIPAL FACILITY
Address: 55 N BROAD STREET, ANGIER, NORTH CAROLINA Zip Code 27801
Owner/Authorized Agent: GERALD VINCENT
Phone # 919-331-6700 E-Mail GVINCENT@ANGIER.ORG
Owned By: ■ City/County ☐ Private ☐ State
Code Enforcement Jurisdiction: ☐ City _____ ■ County HARNETT COUNTY ☐ State

CONTACT: ANN COLLIER, ARCHITECT

DESIGNER	FIRM	NAME	LICENSE#	TELEPHONE#	E-MAIL
Architectural	OAKLEY COLLIER ARCHITECTS	ANN COLLIER	6886	252-937-2500	ACOLLIER@OAKLEYCOLLIER.COM
Civil	WOOTEN	ANA WADSWORTH	042389	919-828-0531	AWADSWORTH@THEWOOTENCOMPANY.COM
Electrical	MCKIM & CREED	ANDREW SIGMON	027325	919-233-8091	ASIGMON@MCKIMCREED.COM
Fire Alarm	MCKIM & CREED	ANDREW SIGMON	027325	919-233-8091	ASIGMON@MCKIMCREED.COM
Plumbing	MCKIM & CREED	DANE WALLIN	046612	919-233-8091	DWALLIN@MCKIMCREED.COM
Mechanical	MCKIM & CREED	DANE WALLIN	046612	919-233-8091	DWALLIN@MCKIMCREED.COM
Sprinkler-Standpipe	MCKIM & CREED	DANE WALLIN	046612	919-233-8091	DWALLIN@MCKIMCREED.COM
Structural	ELLINWOOD & MACHADO	CRAIG FISHER	244147	919-864-1366	FISHERC@EMSTRUCTURAL.COM
Retaining Walls >5' High					
Other					

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ■ New Building ☐ Addition ☐ Renovation
☐ 1st 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 Alteration ☐ Prescriptive ☐ Repair ☐ Chapter 14
☐ Level I ☐ Level II ☐ Level III
☐ Historic Property ☐ Change of Use

CONSTRUCTED: (date) N/A **CURRENT OCCUPANCY(S)** (Ch.3): _____
RENOVATED: (date) N/A **PROPOSED OCCUPANCY(S)** (Ch.3): B, A-3, S-2

Risk Category (Table 1604.5): Current: ☐ I ☐ II ☐ III ☐ IV
Proposed: ☐ I ☐ II ☐ III ■ IV

BASIC BUILDING DATA

Construction Type: ☐ I-A ☐ I-B ☐ II-A ■ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ 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
Special Inspections Required: ☐ No ■ Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

GROSS BUILDING AREA TABLE

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor			
5th Floor			
4th Floor			
3rd Floor (ATTIC)	N/A	1,935	2,164
2nd Floor	N/A	9,462	9,462
1st Floor	N/A	11,801	11,801
Basement	N/A	N/A	N/A
TOTAL	N/A	23,198	23,198

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
☐ I-4
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(s): S-1, S-2
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: 0 Hr. Exception: N/A

■ Non-Separated Use (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 Use (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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

_____ + _____ + ... = _____ ≤1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	B / A-3	11,749	28,500	15,960	44,460
2	B	9,449	28,500	15,960	44,460
3	S-1	1,935	28,500	15,960	44,460

1. Frontage area increases from Section 506.3 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet minimum width = 379' (F)
   b. Total Building Perimeter = 470' (P).
   c. Ratio (F/P) = 81 (F/P)
   d. W = Minimum width of public way = 30' (W)
   e. Percent of frontage increase *If = 100[F/P-0.25] x W/30* = 56 (%).
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building 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 1
Building Height in Feet (Table 504.3) 2	75	44'-9"	N/A
Building Height in Stories (Table 504.4) 3	3	3	N/A

1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.
2. The maximum height of air traffic towers must comply with Table 412.3.1.
3. The maximum height of open parking garages must comply with Table 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL# AND SHEET#	DESIGN# FOR RATED ASSEMBLY	SHEET# FOR RATED PENETRATION	SHEET# FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	>30	0	0	N/A	N/A	N/A	N/A
Bearing Walls							
Exterior							
North	>30	0	N/A	N/A	N/A	N/A	N/A
East	N/A	N/A	N/A	N/A	N/A	N/A	N/A
West	N/A	N/A	N/A	N/A	N/A	N/A	N/A
South	10≤ X <30	0	N/A	N/A	N/A	N/A	N/A
Interior	N/A	0	N/A	N/A	N/A	N/A	N/A
Nonbearing Walls and Partitions							
Exterior walls							
North	>30	0	0	N/A	N/A	N/A	N/A
East	>30	0	0	N/A	N/A	N/A	N/A
West	>30	0	0	N/A	N/A	N/A	N/A
South	<5, VARIES	1	1	N/A	N/A	N/A	N/A
Interior walls and partitions	N/A	0	0	N/A	N/A	N/A	N/A
Floor Construction Including supporting beams and joists		0	0	N/A	N/A	N/A	N/A
Floor Ceiling Assembly		0	0	N/A	N/A	N/A	N/A
Columns Supporting Floors		0	0	N/A	N/A	N/A	N/A
Roof Construction, including supporting beams and joists		0	0	N/A	N/A	N/A	N/A
Roof Ceiling Assembly		0	0	N/A	N/A	N/A	N/A
Columns Supporting Roof		0	0	N/A	N/A	N/A	N/A
Shaft Enclosures - Exit		1	1	N/A	N/A	N/A	N/A
Shaft Enclosures - Other		1	1	N/A	N/A	N/A	N/A
Corridor Separation		0	0	N/A	N/A	N/A	N/A
Occupancy/Fire Barrier Separation		0	0	N/A	N/A	N/A	N/A
Party/Fire Wall Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Barrier Separation		N/A	N/A	N/A	N/A	N/A	N/A
Smoke Partition		N/A	N/A	N/A	N/A	N/A	N/A
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A	N/A	N/A	N/A	N/A	N/A
Incidental Use Separation		N/A	N/A	N/A	N/A	N/A	N/A

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
20 OR GREATER	UP, S	NO LIMIT	N/A
5 TO >10'	UP, S	25%	SEE SHEET G1.1
3 TO >5'	UP, S	15%	SEE SHEET G1.1

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ■ Yes
Exit Signs: ☐ No ■ Yes
Fire Alarm: ☐ No ■ Yes
Smoke Detection Systems: ☐ No ☐ Yes ■ Partial _____
Carbon Monoxide Detection: ■ No ☐ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G1.1 & G1.2

■ Fire and/or smoke rated wall locations (Chapter 7)
■ Assumed and real property line locations (if not on the site plan)
■ Exterior wall opening area with respect to distance to assumed property lines (705.8)
■ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
■ Occupant loads for each area
■ Exit access travel distances (1017)
■ Common path of travel distances (Tables 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 for Occupancy Classification I-2 (407.5)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

ACCESSIBLE PARKING
(SECTION 1106)

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

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G	-	-	-	-	-	-	-	-	-	-
	NEW	3	4	4	1	3	3	4	2	2	2
	REQ'D	5	5	-	-	3	3	-	-	1	2

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: ☐ No ☐ Yes (The remainder of this section is not applicable)
Exempt Building: ☐ No ☐ Yes (Provide code or statutory reference)_____
Climate Zone: ☐ 3A ■ 4A ☐ 5A
Method of Compliance: Energy Code ■ Performance ☐ Prescriptive
ASHRAE 90.1 ☐ Performance ☐ Prescriptive
(If "Other" specify here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: RIGID INSULATION ON METAL DECK
U-Value of total assembly: 0.03
R-Value of insulation: R-30
Skylights in each assembly: N/A
U-Value of skylight: N/A
Total square footage of skylights in each assembly: N/A

Exterior Walls (each assembly)
Description of assembly: BRICK VENEER / CI / MTL STUDS W/ BATT INSULATION
U-Value of total assembly: 0.048
R-Value of insulation: R-10 + R-19
Openings (windows or doors with glazing)
U-Value of assembly: WINDOWS =0.45 / DOORS =0.77
Solar heat gain coefficient: 0.25
Projection factor: 0.06
Door R-Values: 3

Walls below grade (each assembly)
Description of assembly: N/A
U-Value of total assembly: N/A
R-Value of total assembly: N/A

Floors over unconditioned space (each assembly)
Description of assembly: N/A
U-Value of total assembly: N/A
R-Value of total assembly: N/A

Floors slab on grade
Description of assembly: 4" SLAB ON GRADE
U-Value of total assembly: N/A
R-Value of insulation: R-15
Horizontal/vertical requirement: VERTICAL TO BOTTOM OF FOOTING
Slab heated: N/A

STRUCTURAL DESIGN

DESIGN LOADS:
Importance Factors: Snow (I_S) 1.2
Seismic (I_E) 1.5

Live Loads: Pitched Roof SEE STRUCTURAL SHEET S0-00
Flat Roof SEE STRUCTURAL SHEET S0-00
Floor SEE STRUCTURAL SHEET S0-00

Ground Snow Load: 15 psf
Wind Load: Ultimate Wind Speed 123 mph (ASCE-7)
Exposure Category C

SEISMIC DESIGN CATEGORY: ☐ A ☐ B ■ C ☐ D
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) ☐ I ☐ II ☐ III ■ IV
Spectral Response Acceleration S_S 17.2 %g S_1 8.3 %g
Site Classification (ASCE 7) ☐ 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 CAPACITIES:
Field Test (provide copy of test report) N/A psf
Presumptive Bearing capacity 3,000 psf
Pile size, type, and capacity N/A

MECHANICAL DESIGN

*SEE ALSO SHEET M001

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone
winter dry bulb: 20°F
summer dry bulb: 96/76°F
Interior design conditions
winter dry bulb: 70°F
summer dry bulb: 75°F
relative humidity: 50%
Building heating load: 335 MBH
Building cooling load: 510 MBH
Mechanical Spacing Conditioning System
Unitary
description of unit: REFER TO SCHEDULE SHEETS
heating efficiency: REFER TO SCHEDULE SHEETS
cooling efficiency: REFER TO SCHEDULE SHEETS
size category of unit: REFER TO SCHEDULE SHEETS
Boiler
Size category, if oversized, state reason: N/A
Chiller
Size category, if oversized, state reason: N/A
List equipment efficiencies: REFER TO SCHEDULE SHEETS

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 SEE LUMINIARE SHCEDULE, SHEET E002
number of lamps in fixture SEE LUMINIARE SHCEDULE, SHEET E002
ballast type used in the fixture N/A
number of ballasts in fixture N/A
total wattage per fixture SEE LUMINIARE SHCEDULE, SHEET E002
total interior wattage specified vs. allowed (whole building or space by space) 12613 vs 17565
total exterior wattage specified vs. allowed 606 vs 2004

Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)
☐ C406.2 More Efficient HVAC Equipment Performance
■ C406.3 Reduced Lighting Power Density
☐ C406.4 Enhanced Digital Lighting Controls
☐ C406.5 On-Site Renewable Energy
☐ C406.6 Dedicated Outdoor Air System
☐ C406.7 Reduced Energy Use in Service Water Heating

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NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

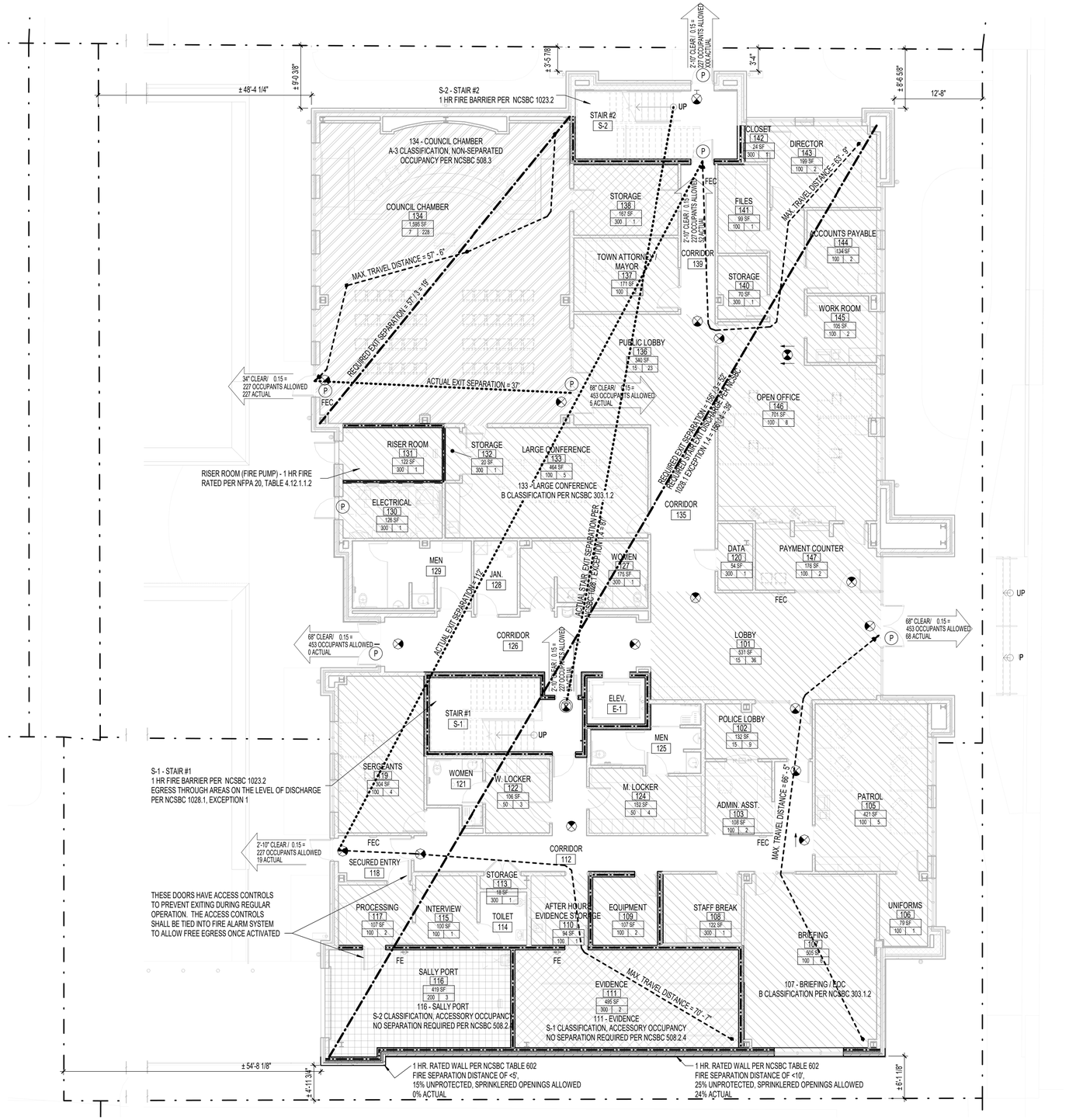
OAKLEY COLLIER ARCHITECTS, P.A. — CERT. NO. 50681 — ROCKY MOUNT, NC
BID SET

ANN W. COLLIER — REGISTERED ARCHITECT — 6886 — NORTH CAROLINA — ROCKY MOUNT, NC — 03.22.22
BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions
#	Description	Date

Date 03.22.21
Project No. 20020A
Drawn By JS
Checked By DG
Sheet No. G0.2
Sheet Title BUILDING CODE SUMMARY



OVERALL OCCUPANT LOAD

FUNCTION OF SPACE (PER TABLE 1004.1.2)	OCC. LOAD FACTOR	AREA	LOAD
ACCESSORY STORAGE, MECH. EQUIPMENT	300	3,794 SF	11
ASSEMBLY - CONCENTRATED	7	1,595 SF	228
ASSEMBLY - UNCONCENTRATED	100	464 SF	5
BUSINESS AREAS	100	8,650 SF	88
EXERCISE ROOMS WITH EXERCISE EQUIPMENT	50	1,138 SF	23
PARKING GARAGES	200	419 SF	2
WAITING AREA	15	1,444 SF	96
		17,503 SF	453

LIFE SAFETY LEGEND

- OCCUPANCY
- X | XXX — SQUARE FEET OF ROOM
- XX | XX — OCCUPANT LOAD
- OCCUPANT LOAD FACTOR
- CLEAR DOOR WIDTH
- XX" DOOR / 0.2" — EGRESS CAPACITY FACTOR
- XXX OCC. ALLOWED — EGRESS CAPACITY ALLOWED
- XXX ACTUAL — ACTUAL EGRESS LOAD
- EXIT SEPARATION DISTANCE - REQUIRED
- EXIT SEPARATION DISTANCE - PROVIDED
- MAXIMUM TRAVEL DISTANCE
- COMMON PATH OF TRAVEL
- FEC — FIRE EXTINGUISHER IN CABINET SEMI-RECESSED
- FE — FIRE EXTINGUISHER - SURFACE MOUNTED
- (H) — HANDICAP DOOR OPERATOR WALL MOUNTED SWITCH
- (P) — PANIC HARDWARE
- (DE) # — DELAYED EGRESS PANIC HARDWARE NUMBER INDICATES LENGTH OF DELAY IN SECONDS
- EXIT SIGN - NOTE 1
- EXIT SIGN/EMERGENCY LIGHT - NOTE 1
- EMERGENCY LIGHT - NOTE 1
- (H) — HORN TYPE AUDIO/VISUAL APPLIANCE - NOTE 1
- (F) — FIRE ALARM PULL STATION - NOTE 1

NOTES:
1. SEE ELECTRICAL PLANS FOR COMPLETE DESCRIPTION OF DEVICES AND ADDITIONAL DETAILS INCLUDING MOUNTING AND PLACEMENT.
2. PER NCBS 1705.17, THERE SHALL BE SPECIAL INSPECTIONS FOR FIRE RESISTANT THROUGH PENETRATIONS AND JOINTS.

OCCUPANCY LEGEND

- A-3: ASSEMBLY
- B: BUSINESS
- S-1: STORAGE, MODERATE HAZARD
- S-2: STORAGE LOW HAZARD
- UNOCCUPIED ACCESSORY (TOILET, STAIR, ETC.)

NORTH 1 G1.1

LIFE SAFETY PLAN - 1ST FLOOR

1/8" = 1'-0"

8' 4' 0' 4' 8' 16'

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BID SET

JOHN W. COLLIER — REGISTERED ARCHITECT — 6886 — NORTH CAROLINA — ROCKY MOUNT, NC — 03.22.22

BID SET

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Revisions

#	Description	Date

Date	Project No.
03.22.21	20020A
Drawn By: JS	Sheet No.: G1.1
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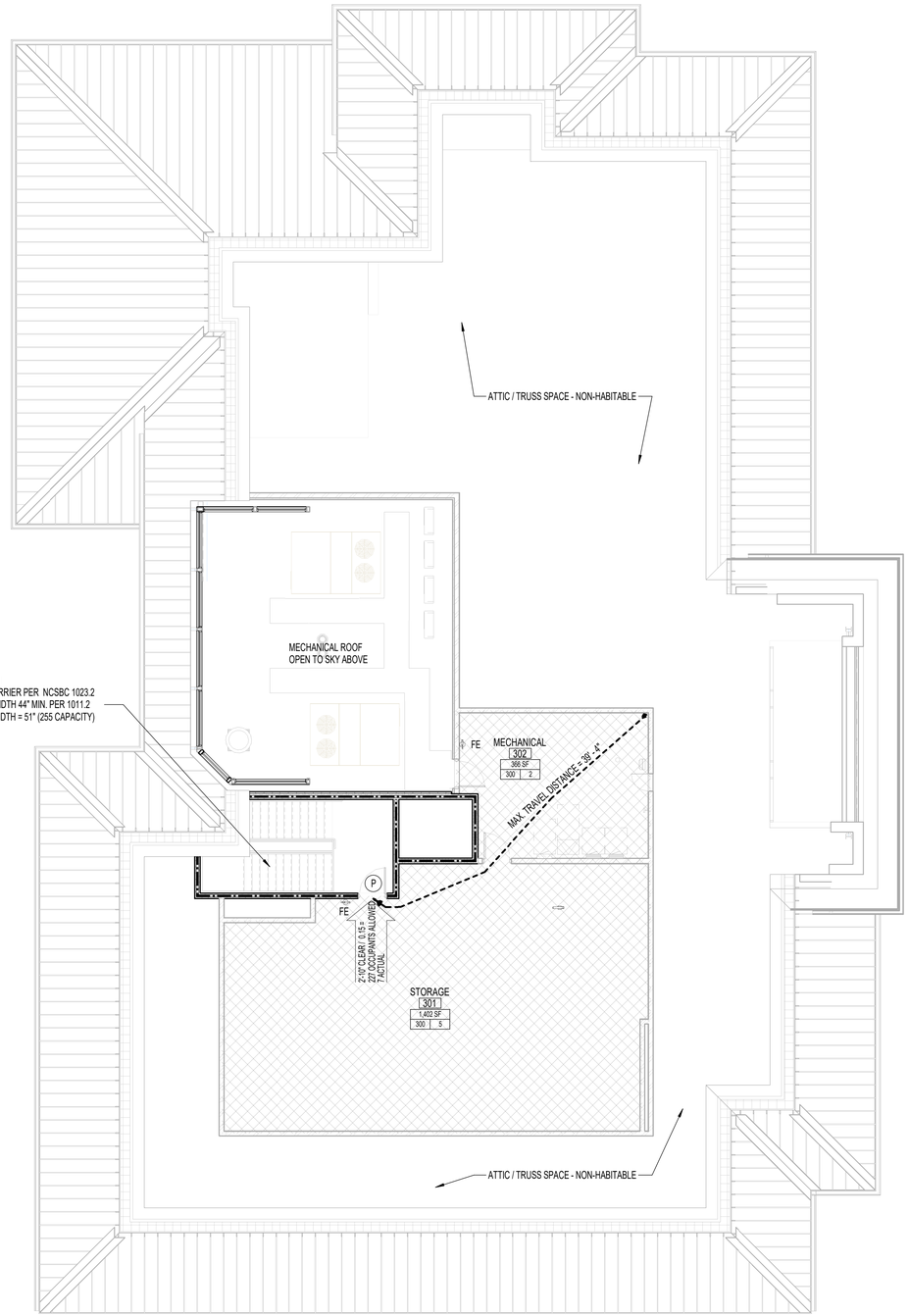
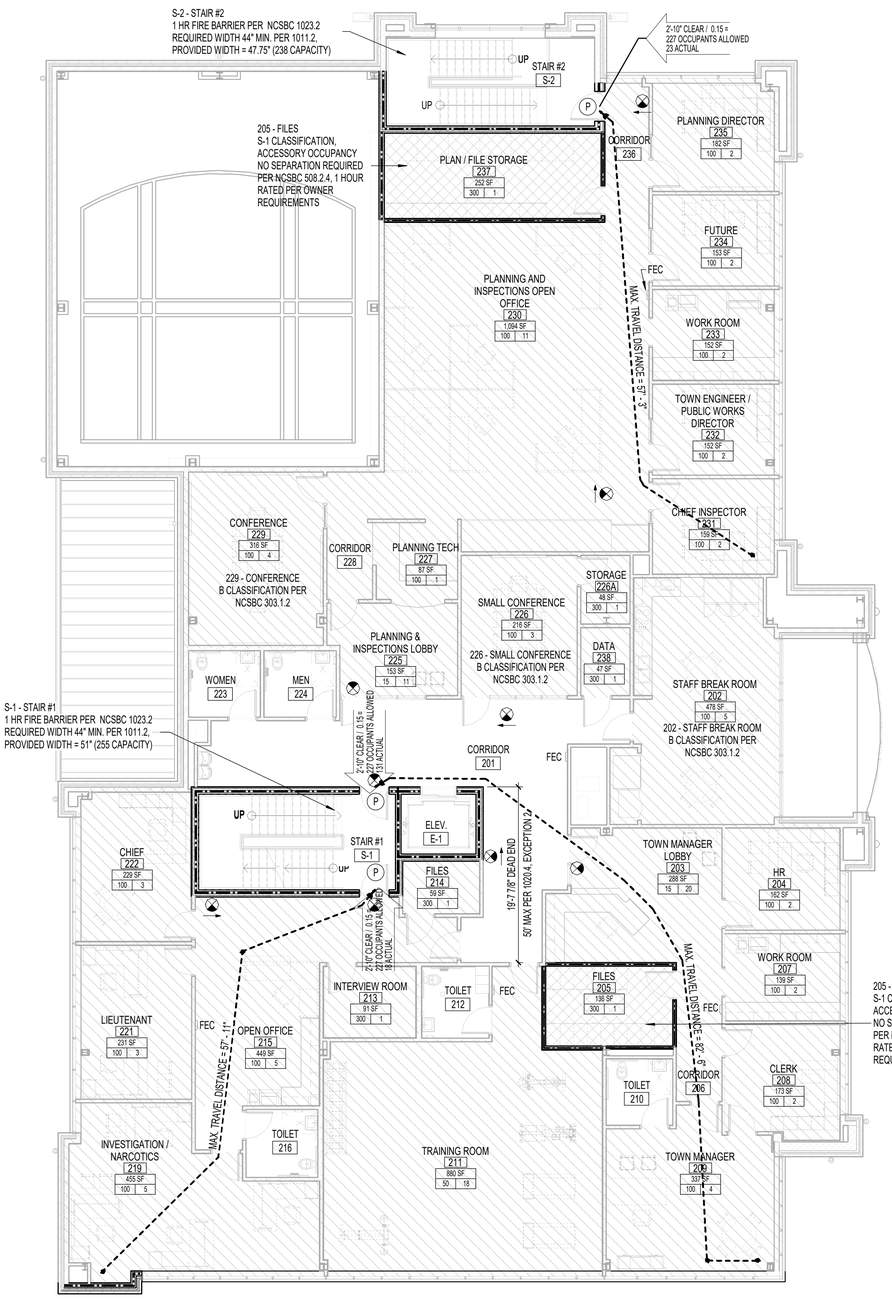
Sheet Title: LIFE SAFETY





LIFE SAFETY LEGEND

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- UNOCCUPIED ACCESSORY (TOILET, STAIR, ETC.)

NORTH 2 G1.2

LIFE SAFETY PLAN - ATTIC

1/8" = 1'-0"

8' 4' 0' 4' 8' 16'

NORTH 1 G1.2

LIFE SAFETY PLAN - 2ND FLOOR

1/8" = 1'-0"

8' 4' 0' 4' 8' 16'

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#	Description	Date

Date	Project No.
03.22.21	20020A
Drawn By: JS	Sheet No.: G1.2
Checked By: DG	

Sheet Title: LIFE SAFETY

ABBREVIATIONS:

A	AREA
ABND	ABANDONED
ABC	AGGREGATE BASE COURSE
AFF	ABOVE FINISHED FLOOR
APRX	APPROXIMATE
ASPH	ASPHALT
ASSY	ASSEMBLY
AVG	AVERAGE
ARV	AIR RELEASE VALVE
AZ	AZIMUTH
AWWA	AMERICAN WATER WORKS ASSOCIATION
B-B	BACK OF CURB TO BACK OF CURB
BLDG	BUILDING
BM	BENCHMARK
BO	BLOW-OFF
BOA	BLOW-OFF ASSEMBLY
BOT	BOTTOM
BW	BARBED WIRE
C&G	CURB AND GUTTER
CB	CATCH BASIN
C	CENTERLINE
CIP	CAST IRON PIPE
CI	CURB INLET
CLR	CLEARANCE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COMM	COMMUNICATIONS
CONC	CONCRETE
CONT	CONTINUOUS
CSTR	CONSTRUCTION
CONTR	CONTRACTOR
COR	CORNER
CPED	CABLE TV PEDESTAL
CLVT	CULVERT
D	DEPTH
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIM	DIMENSION
DISCH	DISCHARGE
DIST	DISTANCE
DNF	DID NOT FIND
DOT	DEPARTMENT OF TRANSPORTATION
DW	DOMESTIC WATER
DELTA	
E	EAST
E-E	EDGE OF PAVEMENT TO EDGE OF PAVEMENT
EACH	EACH
EFF	EFFLUENT
EIP	EXISTING IRON PIPE
EL	ELEVATION
ELEC	ELECTRIC
EPED	ELECTRIC PEDESTAL
EP	EDGE OF PAVEMENT
EW	EACH WAY
EWTR	EDGE OF WATER
Ex	EXISTING
EXPJT	EXPANSION JOINT
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHA	FIRE HYDRANT ASSEMBLY
FHL	FIRE HYDRANT LEG
FHV	FIRE HYDRANT VALVE
FIN	FINISH
FLG	FLAG
FLNG	FLANGE
FM	FORCE MAIN
FOHH	FIBER OPTIC HAND HOLE
FOM	FIBER OPTIC MARKER
FOPD	FIBER OPTIC PEDESTAL
FP	FIRE PROCECTION
FPS	FEET PER SECOND
FT	FEET
FTG	FOOTING
G	GAS
GA	GAUGE
GALV	GALVANIZED
GM	GAS METER
GPM	GALLONS PER MINUTE
GR	GRADE
GTV	GATE VALVE
GV	GAS VALVE
GYP	GYPSUM
HCP	HANDICAPPED
HH	HAND HOLE
HORZ	HORIZONTAL
HP	HORSE POWER
HWA	HIGH WATER ALARM
HWL	HIGH WATER LEVEL
ID	INSIDE DIAMETER
IN	INCH
IN/HR	INCHES PER HOUR
INF	INFLUENT
INT	INTERSECTION
INV	INVERT
IPS	IRON PIPE SET
ISL	ISLAND
JB	JUNCTION BOX
KWY	KEYWAY
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
LWL	LOW WATER LEVEL
MAX	MAXIMUM
MATL	MATERIAL
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINMUM
MJ	MECHANICAL JOINT
MON	MONUMENT
N	NORTH
NAD 83	NORTH AMERICAN DATUM 83
NCWN	NORMAL CROWN
NC GRID	NORTH CAROLINA GRID
NCGS	NORTH CAROLINA GEODETIC SURVEY
No.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NWL	NORMAL WATER LEVEL
N/A	NOT AVAILABLE
N/R	NOT REQUIRED
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
ORIG	ORIGINAL
P	PROPERTY LINE
PC	POINT OF CURVATURE
PE	PLAIN END
PED	PEDESTAL
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
POB	POINT OF BEGINNING
POC	POINT OF CONNECTION
POE	POINT OF ENDING
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PT	POINT OR POINT OF TANGENCY
PUE	PERMANENT UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
REQ'D	REQUIRED
REINF	REINFORCED
RET	RETAINING
REV	REVISED
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SCH	SCHEDULE
SDMH	STORM DRAINAGE MANHOLE
SF	SILT FENCE
SHT	SHEET
SGNL	SIGNAL POLE
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SSTL	STAINLESS STEEL
ST	STREE
STA.	STATION
STD	STANDARD
SYM	SYMBOL
S/W	SIDEWALK
T	TANGENT
TBM	TEMPORARY BENCHMARK
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCP	TERRA COTTA PIPE
TDD	TEMPORARY DIVERSION DITCH
TEMP	TEMPORARY
THH	TELEPHONE HAND HOLE
THK	THICK
TOC	TOP OF CURB
TOP	TOP OF SLOPE
TOW	TOP OF WALL
TPED	TELEPHONE PEDESTAL
TPHN	TELEPHONE
TRANS	TRANSFORMER
TRFCBX	TRAFFIC SIGNAL CONTROL BOX
TRFCPL	TRAFFIC SIGNAL POLE
TYP	TYPICAL
UMKR	UTILITY MARKER
UP	UTILITY POLE
U/G	UNDERGROUND
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WL	WATER LINE
WM	WATER METER
WT	WEIGHT
WV	WATER VALVE
WTP	WATER TREATMENT PLANT
WWF	WELDED WIRE FABRIC
WWTP	WASTE WATER TREATMENT PLANT
W/	WITH
YH	YARD HYDRANT
YI	YARD INLET

GENERAL NOTES:

1) ALL CONCRETE SIDEWALKS SHALL BE FULL 4" THICK 4000 PSI CONCRETE WITH 1" DEEP GROOVE CONTROL JOINTS AT INTERVALS INDICATED ON THE SITE PLAN, PROVIDE EXPANSION JOINTS ADJACENT TO ALL RIGID STRUCTURES. EXPANSION JOINT SPACING SHALL NOT EXCEED 30".
2) ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
3) DRIVEWAY SHALL BE CONSTRUCTED IN ACCORDANCE TO TOWN OF ANGIER SPECIFICATIONS.
4) ACCESSIBLE PARKING:
   A. AN ACCESSIBLE PARKING SPACE SHALL HAVE NO GREATER SLOPE THAT ¼" PER FOOT ACROSS THE SPACE.
   B. ALL ACCESSIBLE PARKING SPACES SHALL DISPLAY APPROVED RESERVED PARKING SPACE SIGNS AS PRESCRIBED BY THE N.C.D.O.T. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES & APPROVED FOR USE UNDER N.C. GENERAL STATUE R7-8, R7-8D *PENALTY* SIGN & HERE APPLICABLE "VAN ACCESSIBLE" SIGN.
6) THE CONTRACTOR SHALL VISIT THE SITE & FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS BEFORE SUBMITTING HIS BID.
7) ALL DISTANCES AND DATA SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATIONS MAY BE MADE PRIOR TO THE START OF WORK.
8) THE PROPOSED GRADE SHOWN ARE THE FINISH GRADES UNLESS OTHERWISE NOTED.
9) THE CONTRACTOR SHALL SUPPLY & ESTABLISH SURVEY CONTROL, INCLUDING THE HORIZONTAL & VERTICAL CONTROL POINTS. THE CONTRACTOR SHALL MAINTAIN THIS CONTROL, PROVIDE ALL BENCHMARKS STAKES, GRADES, LEVELS, & LINES NECESSARY FOR CONSTRUCTION. CONTRACTOR(S) SHALL PROVIDE ADEQUATE SUPERVISION TO PREVENT DAMAGE & MOVEMENT FROM EQUIPMENT WORKING AROUND CONSTRUCTION STAKES. THESE CONSTRUCTION STAKES SHALL REMAIN IN PLACE & BE PROTECTED UNTIL, OWNER APPROVES THEIR REMOVAL. ANY STAKES SHALL REMAIN IN PLACE AS A RESULT OF CONSTRUCTION ACTIVITY ARE TO BE REPLACED BY A LICENSED LAND SURVEYOR ENGAGED BY THE CONTRACTOR AT NO COST TO THE OWNER.
10) ALL EXISTING IMPROVEMENTS DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.
11) ALL EXISTING PAVEMENT & CONCRETE TO BE JOINED SHALL BE SAWCUT.
12) BURNING ON, OR NEAR THE SITE WILL NOT BE PERMITTED.
13) ALL FILL SHALL BE COMPACTED TO 95% PER ASTM D 698.
14) THE CONTRACTOR SHALL CLEAN THE ENTIRE SITE OF ALL CONSTRUCTION RELATED MATERIAL & DEBRIS.
15) INSPECTOR TO BE GIVEN 24 HOURS NOTICE PRIOR TO START OF CONSTRUCTION.
16) INSTALL ALL EROSION CONTROL MEASURES PRIOR TO START OF CONSTRUCTION. SEE EROSION CONTROL PLAN FOR DETAILS.
17) THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES & OTHER ABOVE & BELOW GRADE IMPROVEMENTS ARE APPROXIMATELY AS SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, INVERT ELEVATIONS OF SUCH PRIOR TO START OF CONSTRUCTION.
18) PLEASE CONTACT THE TOWN OF ANGIER TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO OBTAINING BUILDING PERMITS FOR THIS PLAN.

CONSTRUCTION SEQUENCE:

1) INSTALL GRAVEL CONSTRUCTION ENTRANCE, AND STABILIZE BARE AREAS IMMEDIATELY WITH GRAVEL AND TEMPORARY VEGETATION AS REQUIRED.
2) INSTALL INLET PROTECTION ON NEARBY STORM INLETS.
3) SAWCUT EXISTING ASPHALT WITHIN THE LIMITS SHOWN.
4) MILL AND/OR REMOVE FULL DEPTH SECTIONS AS REQUIRED.
5) CONSTRUCT ALL SITE FEATURES AS SHOWN ON PLAN.
6) STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION & PAVING, SEED AND MULCH DENUDED AREAS PER SEEDING SCHEDULE TIME FRAMES.
7) ONCE SITE HAS BEEN FULLY STABILIZED, REMOVE TEMPORARY EROSION CONTROL MEASURES AND STABILIZE ANY REMAINING BARE AREAS.

EROSION CONTROL NOTES

1) IN ADDITION TO THE REQUIREMENTS OF THIS PLAN AND OUTLINED IN THE PROJECT SPECIFICATIONS, THE CONTRACTOR SHALL ADHERE TO THE TOWN OF ANGIER AND NCDEQ SEDIMENTATION AND EROSION CONTROL MANUAL FOR GUIDANCE ON CONSTRUCTION OF MEASURES REQUIRED BY THIS PLAN. CONTRACTOR SHALL ALSO ADHERE TO THE SELF INSPECTION AND SELF REPORTING AND NPDES AS REQUIRED UNDER THE SEDIMENTATION POLLUTION CONTROL ACT AND NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NCG 01000.
2) INSTALL EROSION CONTROL DEVICES AS INDICATED ON THE DRAWINGS. CLEAR ONLY THE AREAS NECESSARY FOR INSTALLATION FOR EROSION CONTROL MEASURES.
3) MAINTAIN EROSION CONTROL DEVICES AS NECESSARY DURING SITE IMPROVEMENTS, INSPECT DEVICES AFTER EVERY RAINFALL EVENT AND CLEANOUT WHEN HALF FULL. INSPECT FOR PROPER FUNCTION AND REPLACE OR RE-INSTALL IF NOT PERFORMING INTENDED FUNCTION.
4) COMPLY WITH GROUND STABILIZATION REQUIREMENTS PER THE PLAN. ESTABLISH A PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS WITHIN 14 DAYS FOLLOWING COMPLETION OF GRADING,
5) AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES, DRESS-OUT AND RE-ESTABLISH GRADES, AND SEED AND MULCH PER PLANS AND SPECIFICATIONS.

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

1. Temporary Seeding

Planting Dates	Grass Type	Pounds/Acre
Jan. 1 - May 1	Rye (Grain)	120
	Korean Lespedeza	50
May 1 - Aug. 15	German Millet	40
	or	
	Sudangrass	50
Aug.15 - Dec. 30	Rye (Grain)	120
Lime		3,000
Fertilizer	10-10-10	800
Mulch	Straw	4,000

2. Permanent Seeding

Planting Dates	Grass Type	Pounds/Acre
Aug. 25 - Sep. 15	Tall Fescue	80
&	Kobe Lespedeza	40
Feb. 1 -Mar.21		
Lime		4,000
Fertilizer	10-10-10	1,000
Mulch	Straw	4,000

LEGEND

Font Style Indicates Existing Features

FONT STYLE INDICATES DESIGN FEATURES

ROADWAY

	CODE	Existing	PROPOSED
ASPHALT DRIVEWAY			
ASPHALT OVERLAY			
BRICK SIDEWALK / WALKWAY			
CONCRETE DRIVEWAY			
CONCRETE DRIVEWAY (STAMPED)			
CONCRETE SIDEWALK / WALKWAY	SWLK		
BACK OF CURB	BC		
FACE OF CURB	FC		
EDGE OF PAVEMENT	EP		
FLOWLINE	FLOW		

SITE

	CODE	Existing	PROPOSED
AREA LIGHT / LIGHT POLE	LP		
BOLLARD	BOL		
BUFFER			
CURB FLOW LINE			
FENCE	FNC	X X	X X
FIRE HOSE	HOSE		HOSE
FIRE WATER LINE	FWL	FWL	FWL
SIGN	SN		

EASEMENTS

	Existing	PROPOSED
ACCESS EASEMENT	AE	AE
DRAINAGE EASEMENT	SDE	PDE
PUBLIC UTILITY EASEMENT	UE/PUE	PUE
RIGHT-OF-WAY	RW	RW
SEWER EASEMENT	SSE	SSE
TEMPORARY CONSTRUCTION EASEMENT	TCE	TCE
WATER EASEMENT	WLE	WLE

SURVEY

	CODE	Existing	PROPOSED
BENCHMARK	BM		
CONCRETE MONUMENT FOUND	CMF		
CONCRETE MONUMENT SET	CMS		
CONTROL POINT	CP		
GEOTECHNICAL BORE	BORE		
IRON PIPE FOUND	IPF		
IRON PIPE SET	IPS		
IRON ROD FOUND	IRF		
IRON ROD SET	IRS		
MAG NAIL FOUND	MNF		
MAG NAIL SET	MNS		
NAIL FOUND	NLF		
NAIL SET	NLS		
PK NAIL FOUND	PKF		
PK NAIL SET	PKS		
PROPERTY LINE			
TEMPORARY BENCHMARK	TBM		

VEGETATION

	CODE	Existing	PROPOSED
CONIFEROUS TREE	CTREE		
DECIDUOUS TREE	DTREE		
HEDGE / SHRUB ROW	HED		
LANDSCAPING	LSCP		
SHRUB	SHB		
STUMP			
SHRUB (TO BE REMOVED)			
TREE (TO BE REMOVED)			
TREELINE / WOODS			

UTILITIES

	CODE	Existing	PROPOSED
CABLE TV CABLE	CTV	CTV	CTV
UNDERGROUND ELECTRICAL CABLE	UGE	UGE	UGE
OVERHEAD ELECTRICAL WIRE	OHE	OHE	OHE
ELECTRICAL HAND HOLE	EHH	EHH	
ELECTRICAL METER	EM	M	
ELECTRICAL PEDESTAL	EPED	E	
FIBER OPTIC CABLE	FOC	FOC	FOC
GAS LINE	GL	G	G
GAS METER	GM	G	
GAS VALVE	GV		
GUY / ANCHOR WIRE	GUY		
LIGHT POLE / AREA LIGHT	LP		
POWER POLE	PP		
TELECOMMUNICATIONS CABLE	COM	COM	COM
TELEPHONE CABLE	COM	COM	COM
TELEPHONE HAND HOLE	THH	THH	
TELEPHONE PEDESTAL	TPED	T	
TRANSFORMER	TRNS	ET	
UTILITY POLE	UP		

WATER

	CODE	Existing	PROPOSED
FIRE HYDRANT	FH		
FIRE HYDRANT VALVE	FHV		
PLUG	PLUG		
REDUCER / INCREASER	RDCR		
WATER LINE	WL	WL	WL
WATER METER	WM		
WATER VALVE	WV		

SEWER

	CODE	Existing	PROPOSED
CLEAN OUT	SSCO		
SEWER LINE	SS	SS	SS
SEWER MANHOLE	SSMH	S	S
PLUG	PLUG		

STORM DRAINAGE

	CODE	Existing	PROPOSED
CATCH BASIN / COMBINATION INLET	CB		
CURB INLET	CI		
DROP INLET	DI		
STORM DRAINAGE PIPE			

EROSION CONTROL

	CODE	Existing	PROPOSED
INLET PROTECTION			
RIP-RAP	RPRP		
LIMITS OF DISTURBANCE			LOD
LIMITS OF DISTURBANCE @ ACCESS EASEMENT			LOD/PAE
LIMITS OF DISTURBANCE @ EDGE OF PAVEMENT		LOD/EP	
LIMITS OF DISTURBANCE @ RIGHT-OF-WAY		LOD/RW	LOD/RW
LIMITS OF DISTURBANCE @ UTILITY EASEMENT		LOD/UE	LOD/PUE
LIMITS OF DISTURBANCE @ TEMPORARY CONSTRUCTION EASEMENT			LOD/TCE
LIMITS OF DISTURBANCE @ TEMPORARY CONSTRUCTION ACCESS			LOD/TCA
SILT FENCE	SF	SF	SF
SILT FENCE OUTLET	SFOLT		
SILT FENCE / TREE PROTECTION FENCE	SF/TPF		SF/TPF
SUPER SILT FENCE	SSF		SSF

OAKLEY COLLIER ARCHITECTS
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NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042288 ASIA M. WADSWORTH
3/22/2022

BID SET

PRELIMINARY NOT FOR CONSTRUCTION

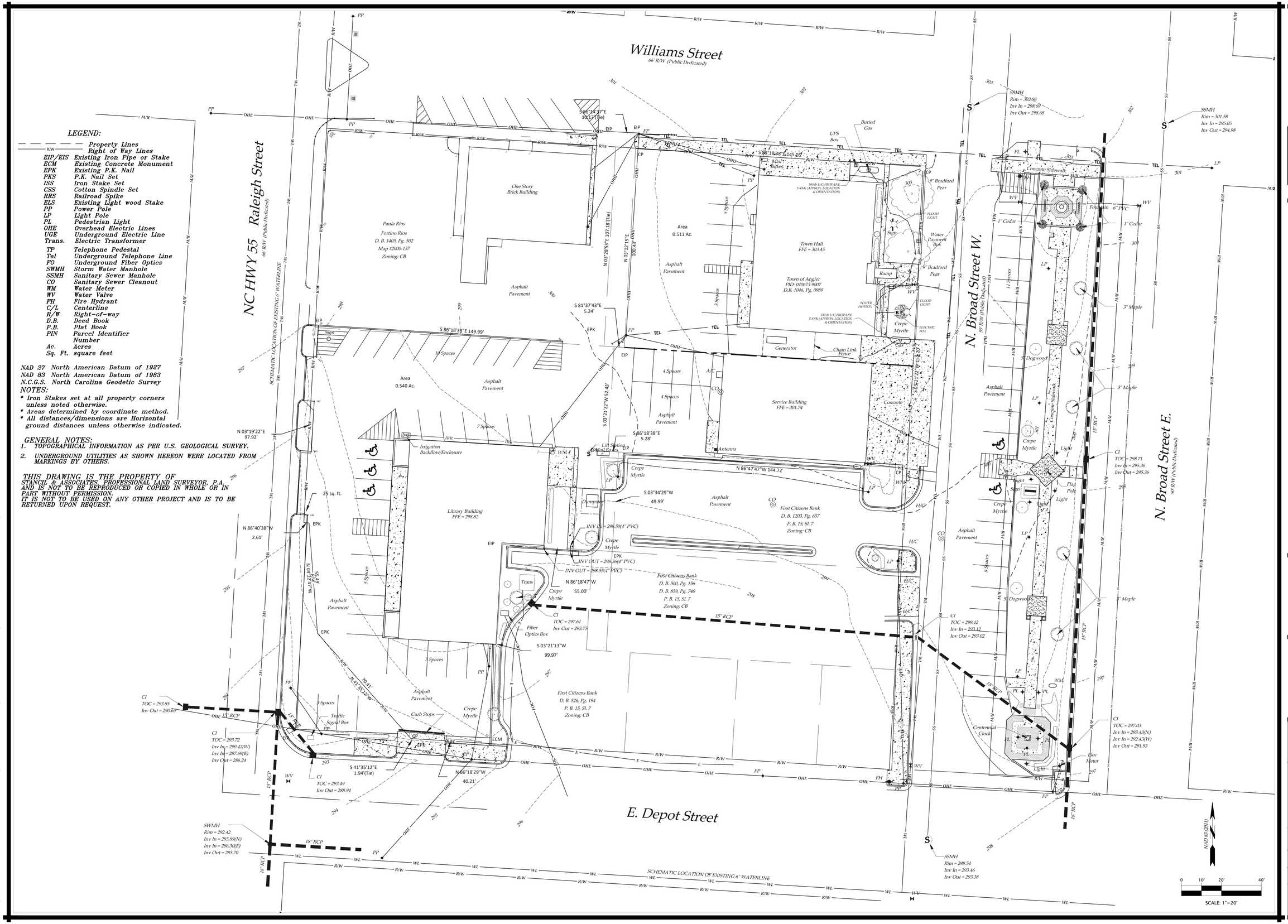
GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No. C0.01
Checked By: AMW	

Sheet Title: General Notes & Legend



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1111 Haynes Street, Suite 109, Raleigh, NC 27604 (P) 919.985.7700

NEW FACILITY FOR:

ANGIER MUNICIPAL FACILITY

55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042588 ENGINEER ANASTASIA M. WADSWORTH
3/22/2022

BID SET

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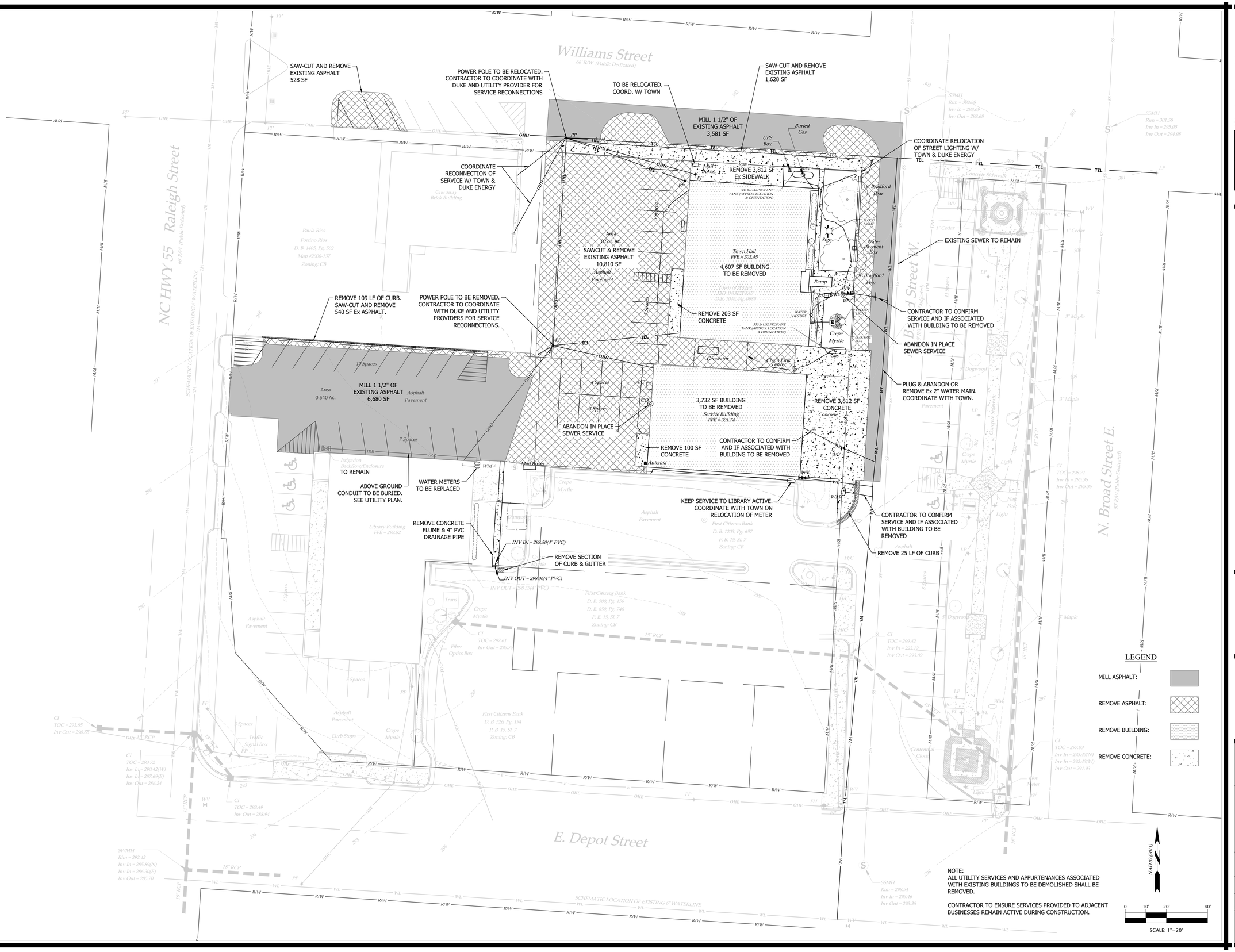
Revisions		
#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No.: C1.00
Checked By: AMW	

Sheet Title: Existing Conditions Plan



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NEW FACILITY FOR:

ANGIER MUNICIPAL FACILITY

55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042588 ENGINEER ANASTASIA M. WADSWORTH
3/22/2022

BID SET

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Revisions #	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No.: C1.01
Checked By: AMW	

Sheet Title
Demolition Plan

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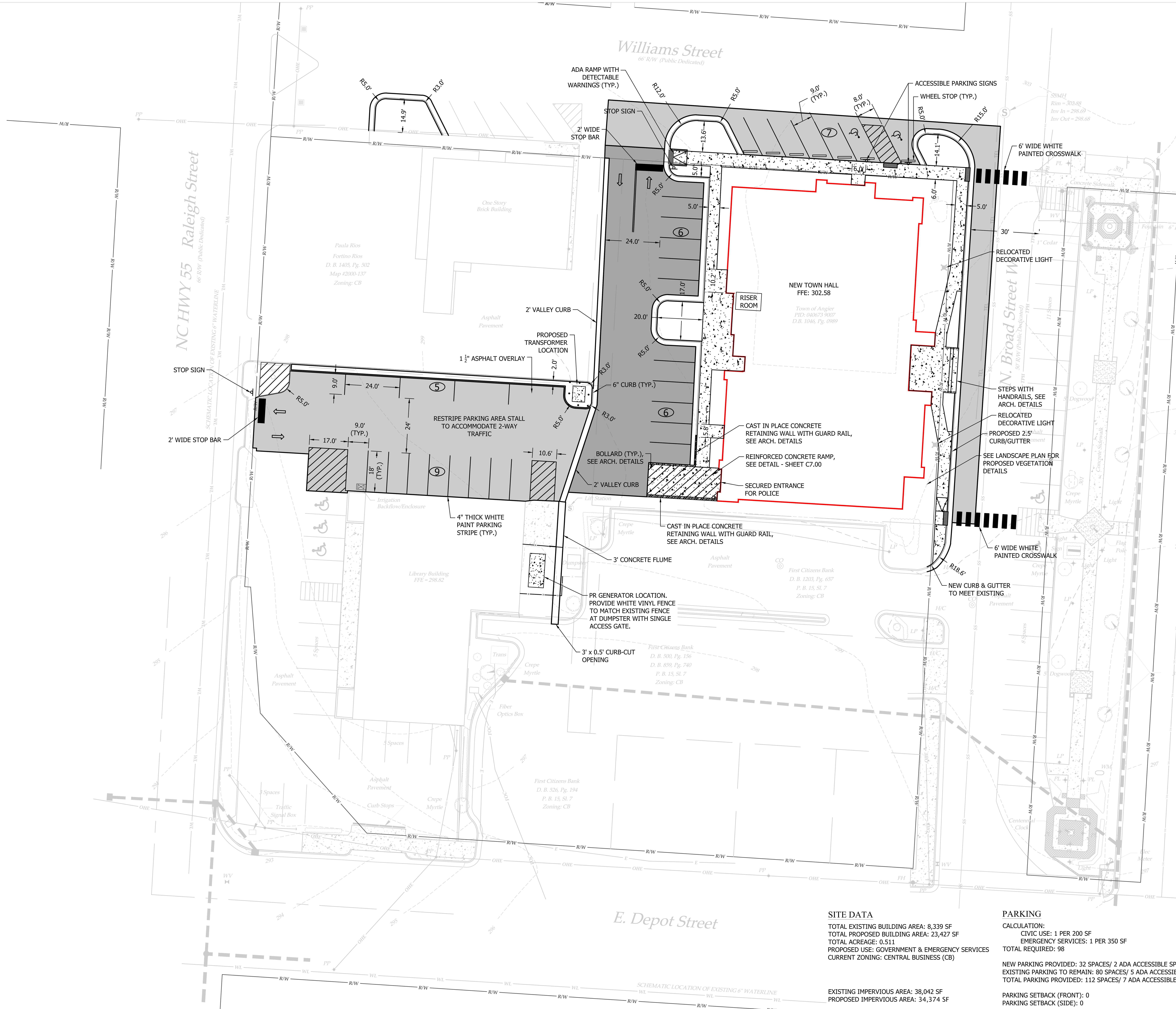

NOTE: COORDINATION WITH TOWN AND ADJACENT PROPERTY OWNERS STILL NEED TO BE CONDUCTED TO ALLOW FOR THE SITE IMPROVEMENTS OUTSIDE OF PROPERTY LIMITS.

PAVEMENT LEGEND

PROPOSED 1 1/2" OVERLAY ASPHALT:

PROPOSED FULL DEPTH PAVEMENT SECTION:

PROPOSED CONCRETE:

PAVEMENT SECTION*

LIGHT DUTY THICKNESS: 2" S9.5B, 6" ABC
HEAVY-DUTY THICKNESS: 3" S9.5B, 8" ABC

* FOR USE ONLY IN AREAS WHERE MILLING CANNOT BE PERFORMED OR IF FULL DEPTH PAVEMENT SECTION IS REQUIRED.

SITE DATA

TOTAL EXISTING BUILDING AREA: 8,339 SF
TOTAL PROPOSED BUILDING AREA: 23,427 SF
TOTAL ACREAGE: 0.511
PROPOSED USE: GOVERNMENT & EMERGENCY SERVICES
CURRENT ZONING: CENTRAL BUSINESS (CB)

EXISTING IMPERVIOUS AREA: 38,042 SF
PROPOSED IMPERVIOUS AREA: 34,374 SF

PARKING

CALCULATION:
CIVIC USE: 1 PER 200 SF
EMERGENCY SERVICES: 1 PER 350 SF
TOTAL REQUIRED: 98

NEW PARKING PROVIDED: 32 SPACES/ 2 ADA ACCESSIBLE SPACES
EXISTING PARKING TO REMAIN: 80 SPACES/ 5 ADA ACCESSIBLE SPACES
TOTAL PARKING PROVIDED: 112 SPACES/ 7 ADA ACCESSIBLE SPACES

PARKING SETBACK (FRONT): 0
PARKING SETBACK (SIDE): 0

0 10' 20' 40'
SCALE: 1"=20'

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NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042389 ENGINEER ANASTASIA M. WADSWORTH 3/22/2022

BID SET

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GENERAL NOTE:
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Revisions

#	Description	Date

Date: 3.22.22	Project No.: 20020A
Drawn By: JCB	Sheet No.: C2.00
Checked By: AMW	

Sheet Title: Site Plan

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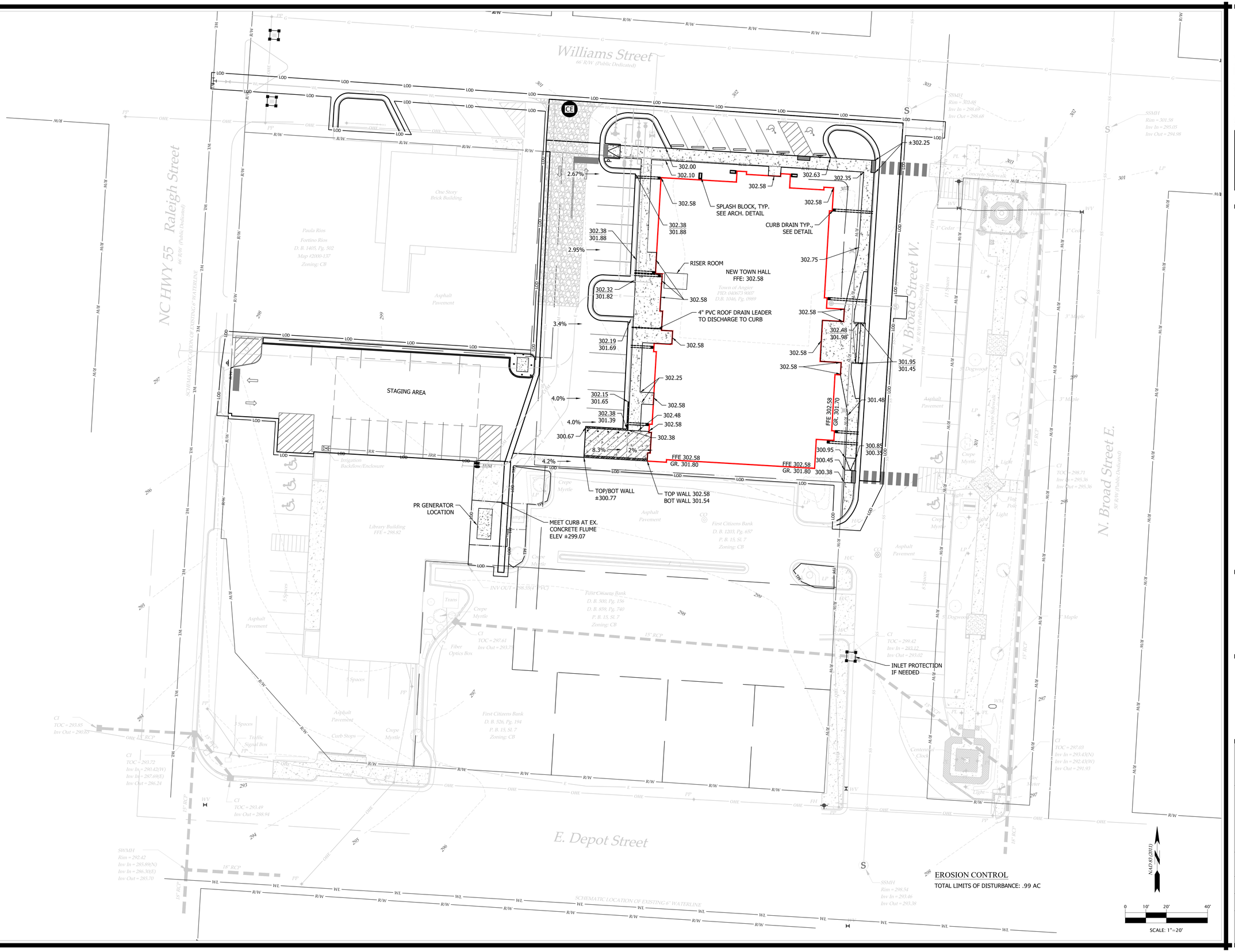

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OCA
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NEW FACILITY FOR:

ANGIER MUNICIPAL FACILITY

55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042388 ENGINEER ANASTASIA M. WADSWORTH 3/22/2022

BID SET

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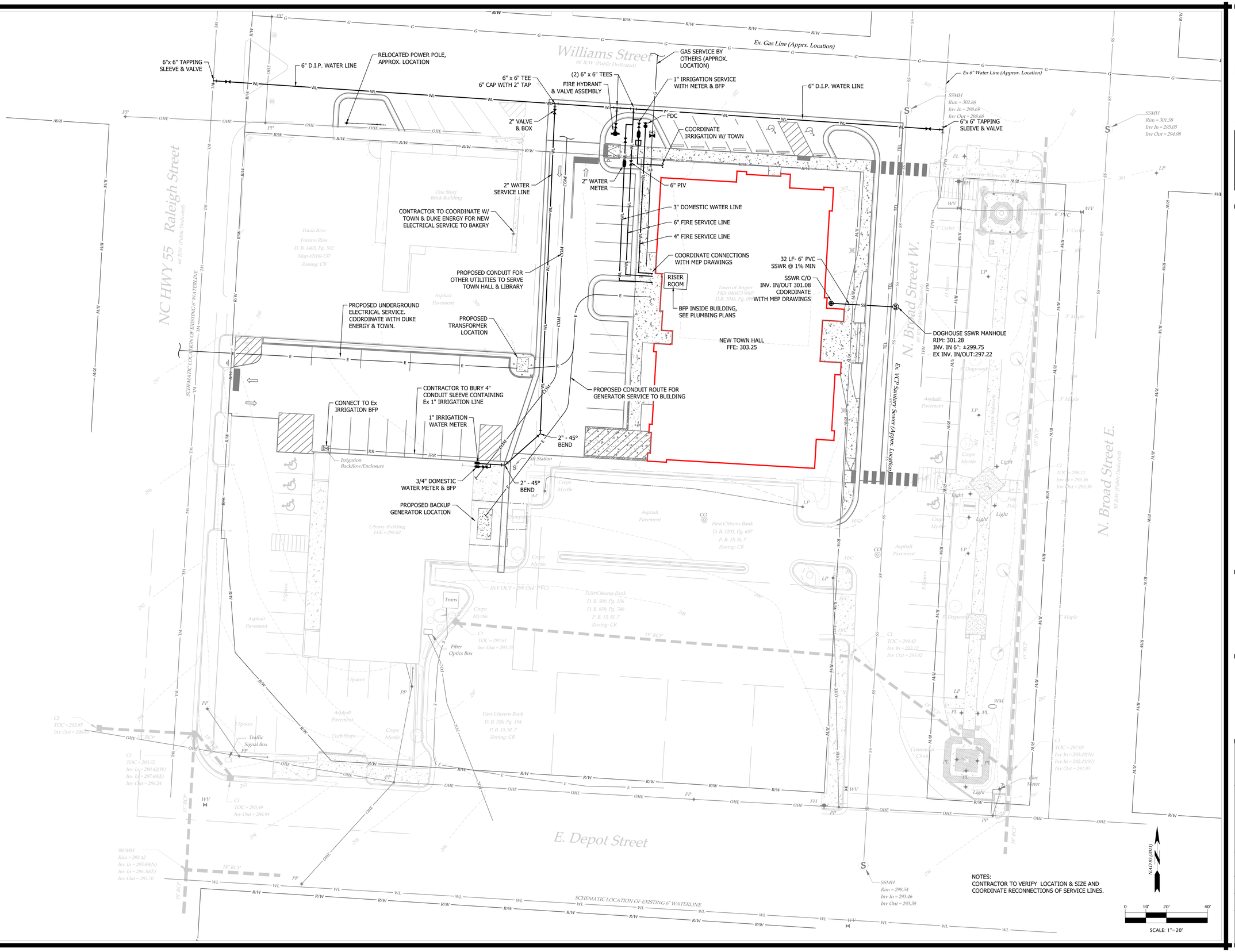
Revisions

#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No.: C3.00
Checked By: AMW	

Sheet Title
Grading, Drainage & Erosion Control Plan



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NEW FACILITY FOR:

ANGIER MUNICIPAL FACILITY

55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042388 ENGINEER NATASIA M. WADSORTH
3/22/2022

BID SET

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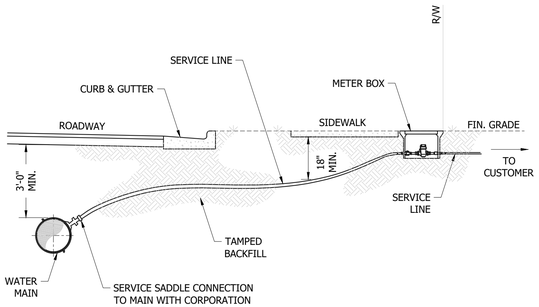
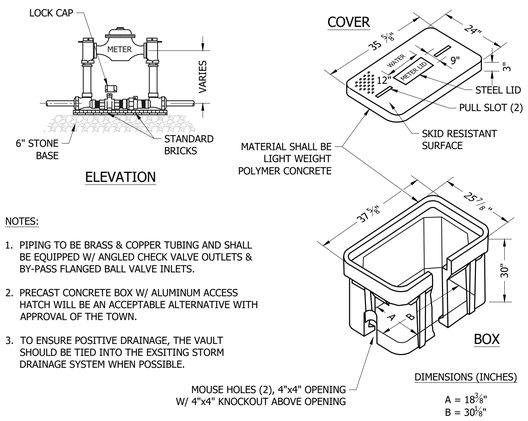
Revisions		
#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No. C4.00
Checked By: AMW	

Sheet Title
Utility Plan



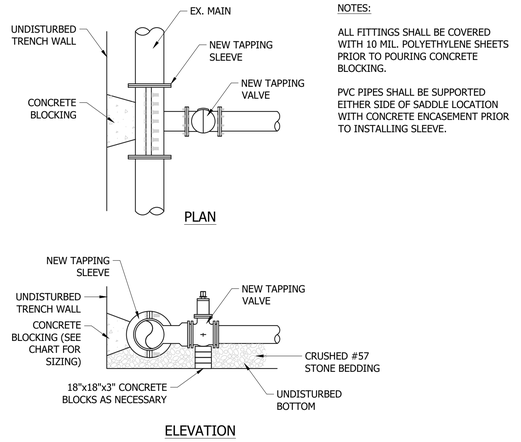
STANDARD 3/4" AND 1" METER SERVICE
NOT TO SCALE



NOTES:

1. PIPING TO BE BRASS & COPPER TUBING AND SHALL BE EQUIPPED W/ ANGLED CHECK VALVE OUTLETS & BY-PASS FLANGED BALL VALVE INLETS.
2. PRECAST CONCRETE BOX W/ ALUMINUM ACCESS HATCH WILL BE AN ACCEPTABLE ALTERNATIVE WITH APPROVAL OF THE TOWN.
3. TO ENSURE POSITIVE DRAINAGE, THE VAULT SHOULD BE TIED INTO THE EXSITING STORM DRAINAGE SYSTEM WHEN POSSIBLE.

STANDARD 1 1/2" AND 2" METER INSTALLATION AND VAULT
NOT TO SCALE

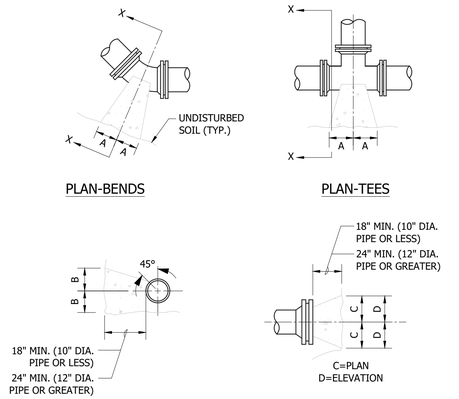


NOTES:

ALL FITTINGS SHALL BE COVERED WITH 10 MIL. POLYETHYLENE SHEETS PRIOR TO POURING CONCRETE BLOCKING.

PVC PIPES SHALL BE SUPPORTED EITHER SIDE OF SADDLE LOCATION WITH CONCRETE ENCASEMENT PRIOR TO INSTALLING SLEEVE.

TAPPING SLEEVE AND VALVE
NOT TO SCALE



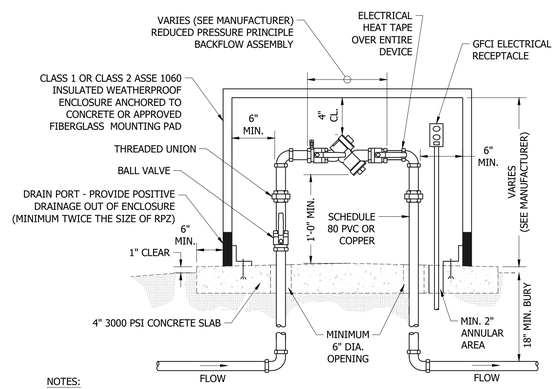
PIPE SIZE	90° BEND		45° BEND		22.5° BEND		11.25° BEND		TEE		PLUGS	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	12"	12"	10"	13"	7"	10"	7"	10"	12"	14"	13"	6"
6"	18"	12"	10"	13"	7"	10"	7"	10"	12"	14"	19"	9"
8"	24"	18"	13"	18"	10"	12"	10"	12"	16"	18"	25"	11"
10"	28"	22"	15"	22"	12"	15"	12"	15"	20"	22"	31"	14"
12"	32"	28"	19"	28"	14"	18"	14"	18"	22"	28"	37"	17"
16"	54"	38"	30"	36"	18"	36"	18"	36"	36"	42"	54"	24"

2000 PSF SOIL (SAND & GRAVEL WITH CLAY)

NOTES:

1. BASED ON 200 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER ALLOWANCE.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
3. THRUST BLOCKS TO BE USED AT ALL UNRESTRAINED LINES OPERATING UNDER PRESSURE.
4. KEEP ALL PIPING JOINTS CLEAR OF CONCRETE THRUST BLOCKS.
5. WRAP ALL FITTINGS IN 4 MIL POLYETHYLENE SHEETING.

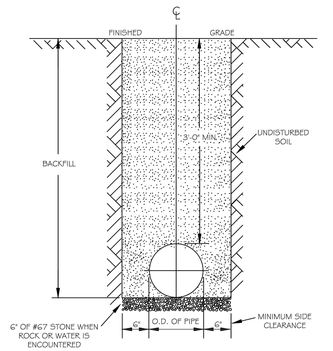
STANDARD HORIZONTAL THRUST BLOCKING
NOT TO SCALE



NOTES:

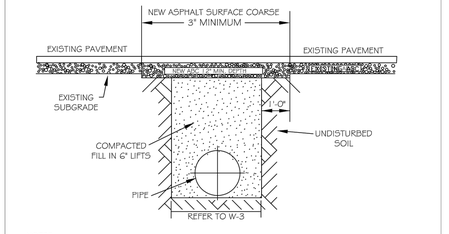
1. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY SHALL COMPLY WITH ASSE 1013 & AWWA C511.

BACKFLOW ASSEMBLY (2" AND SMALLER)
NOT TO SCALE



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

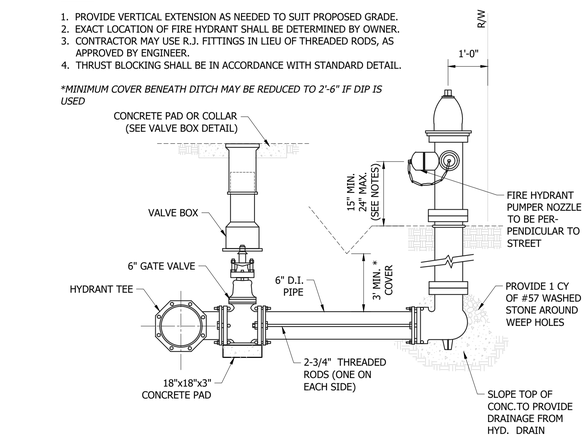
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON
NOT TO SCALE



NOTES:

1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
3. THE FINAL 1'-0" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
4. THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
7. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3. FOR ADDITIONAL DETAILS.
8. NO HAND PATCHING ALLOWED.
9. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

STANDARD ASPHALT PAVEMENT PATCH
NOT TO SCALE

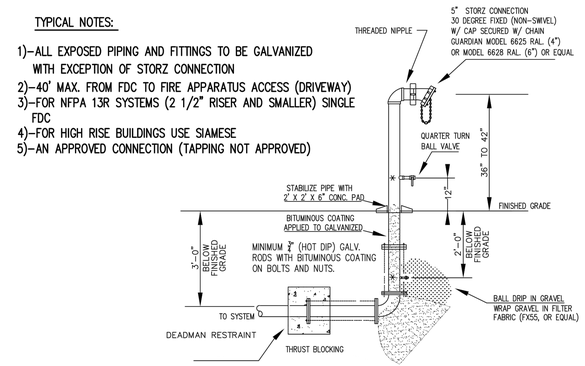


NOTES:

1. PROVIDE VERTICAL EXTENSION AS NEEDED TO SUIT PROPOSED GRADE.
2. EXACT LOCATION OF FIRE HYDRANT SHALL BE DETERMINED BY OWNER.
3. CONTRACTOR MAY USE R.J. FITTINGS IN LIEU OF THREADED RODS, AS APPROVED BY ENGINEER.
4. THRUST BLOCKING SHALL BE IN ACCORDANCE WITH STANDARD DETAIL.

**MINIMUM COVER BENEATH DITCH MAY BE REDUCED TO 2'-6" IF DIP IS USED*

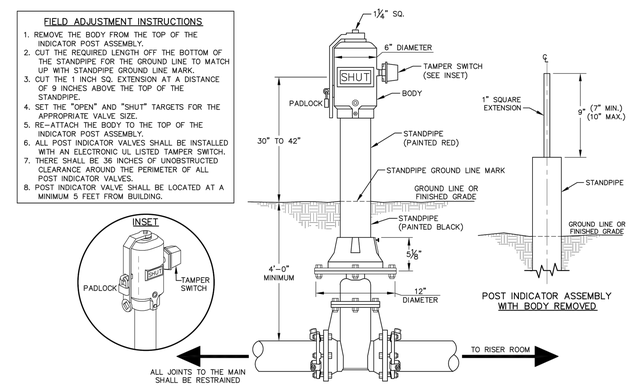
FIRE HYDRANT ASSEMBLY
NOT TO SCALE



TYPICAL NOTES:

1)-ALL EXPOSED PIPING AND FITTINGS TO BE GALVANIZED WITH EXCEPTION OF STORZ CONNECTION
2)-40' MAX. FROM FDC TO FIRE APPARATUS ACCESS (DRIVEWAY)
3)-FOR NFPA 13R SYSTEMS (2 1/2" RISER AND SMALLER) SINGLE FDC
4)-FOR HIGH RISE BUILDINGS USE SIAMESE
5)-AN APPROVED CONNECTION (TAPPING NOT APPROVED)

YARD FDC REQUIREMENTS
NOT TO SCALE



STANDARD POST INDICATOR VALVE
NOT TO SCALE

OAKLEY COLLIER ARCHITECTS
OCA
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
1111 Haynes Street, Suite 109, Raleigh, NC 27604 (P) 919.985.7700

NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042388 ENGINEER NATASHA M. WADSWORTH 3/22/2022

BID SET

PRELIMINARY NOT FOR CONSTRUCTION

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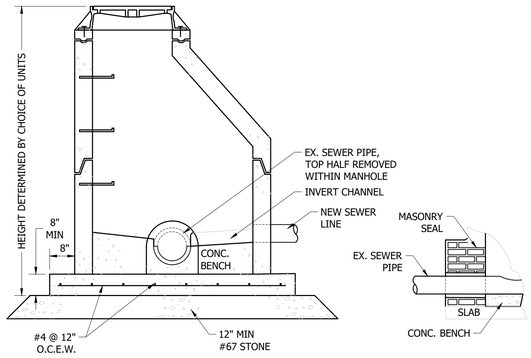
Revisions		
#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No.: C5.00
Checked By: AMW	

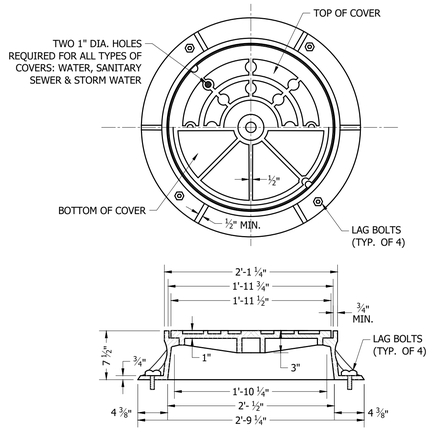
Sheet Title: Details



TYPICAL SECTION

SEAL FOR DOGHOUSE STYLE PIPE OPENING

DOGHOUSE MANHOLE
NOT TO SCALE



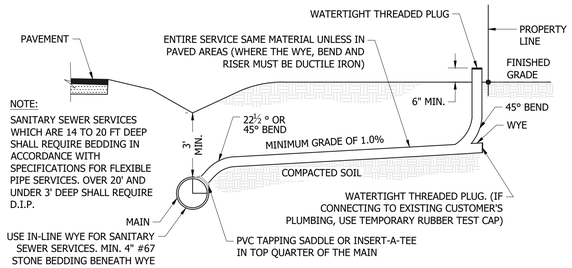
MANHOLE RING AND COVER
NOT TO SCALE

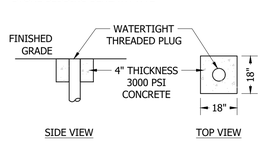
SANITARY SEWER

STORM SEWER

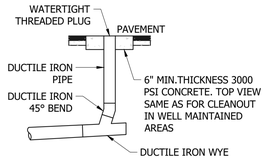
WATER

COVER LETTERING DETAIL



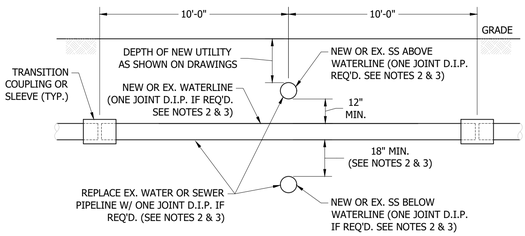


CLEANOUT FOR WELL MAINTAINED AREAS



CLEANOUT IN PAVED AREAS

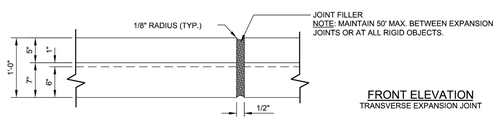
SANITARY SEWER TAP AND SERVICE
NOT TO SCALE



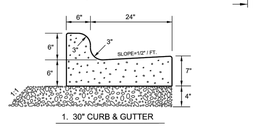
NOTES:

1. DUCTILE IRON PIPE (TYPICALLY ONE JOINT CENTERED ON CROSSING) REQUIRED FOR BOTH NEW AND EXISTING SANITARY SEWER AND WATERLINE EXTENDING 10'-0" FROM CROSSING IN ALL DIRECTIONS IF EITHER OF THE FOLLOWING CONDITIONS EXIST:
   A. WATERLINE IS BELOW SANITARY SEWER.
   B. WATERLINE IS ABOVE SANITARY SEWER BUT LESS THAN 1'-6" SEPARATION IS PROVIDED BETWEEN BARRELS OF WATERLINE AND SANITARY SEWER PIPES.
2. IN LIEU OF REPLACING EX. WATER OR SEWER LINE, THE NEW WATER OR SEWER LINE MAY BE ENCASED IN A WATERTIGHT STEEL CASING PIPE WHICH EXTENDS 10 FT. AS MEASURED PERPENDICULAR TO THE EX. LINE ON BOTH SIDES OF THE CROSSING. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED BY THE REGULATORY AGENCY FOR USE IN WATER MAIN CONSTRUCTION.

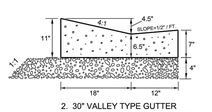
SANITARY SEWER CROSSING WATERLINE
NOT TO SCALE



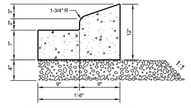
FRONT ELEVATION
TRANSVERSE EXPANSION JOINT



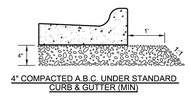
1. 30" CURB & GUTTER



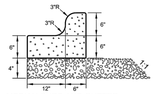
2. 30" VALLEY TYPE GUTTER



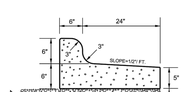
MEDIAN CURB AND GUTTER
SIDE ELEVATION



NO VALLEY CURB SHALL BE USED AT INTERSECTIONS, HYDRANTS, ETC.



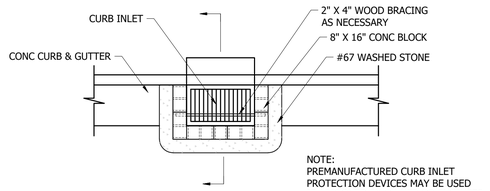
MEDIAN CURB AND GUTTER
(NON-MOUNTABLE)



SPILL CURB DETAIL

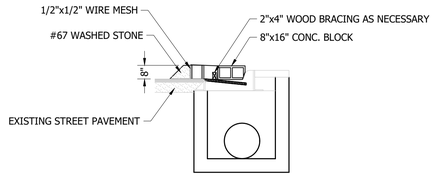
NOTES:
1. 10' MAXIMUM BETWEEN DUMMY JOINTS. 15' MAXIMUM BETWEEN DUMMY JOINTS ON MACHINE POURS.
2. 1/2" EXPANSION JOINT EVERY 50'.
3. 3000 PSI CONCRETE MINIMUM, 4" SLUMP MAXIMUM.
4. LIQUID MEMBRANE CURING COMPOUND SHALL MEET THE REQUIREMENTS OF SECTION 1026-2 OF NCDOT STANDARDS & SPECIFICATIONS FOR ROADS AND STRUCTURES.
5. ALL CONSTRUCTION JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER IN ACCORDANCE WITH NCDOT ROADWAY STANDARD DETAIL 846.01 THE JOINT MATERIAL SHALL CONFORM TO SECTION 1028-2 OF NCDOT STANDARD & SPECIFICATIONS FOR ROADS AND STRUCTURES.
6. REFER TO NCDOT DETAIL 846.01 FOR CURB AND GUTTER SUPERELEVATION RATES.

CURB & GUTTER
NOT TO SCALE



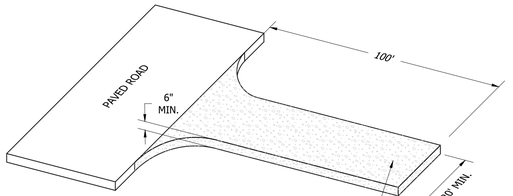
NOTE:
PREMANUFACTURED CURB INLET PROTECTION DEVICES MAY BE USED IF APPROVED BY OWNER OR ENGINEER

PLAN



SECTION

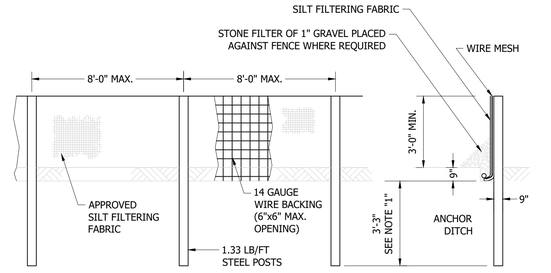
CURB INLET PROTECTION
NOT TO SCALE



NOTE:

1. ENTRANCE APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED.
2. CONSTRUCTION ENTRANCE SHALL BE PLACED FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
3. PERIODIC TOP DRESSING AND ROUTINE MAINTENANCE SHALL BE PROVIDED ON ENTRANCE AS REQUIRED. CONTRACTOR SHALL STOCKPILE FRESH STONE ON SITE.
4. ANY MATERIAL THAT MAKES IT TO EXISTING PUBLIC ROADWAY SHALL BE REMOVED AND CLEANED IMMEDIATELY.

TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

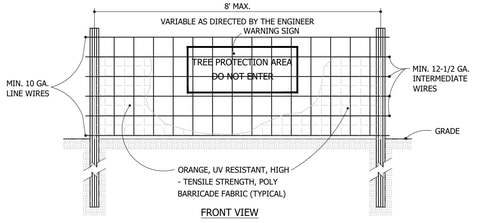


FRONT SECTION

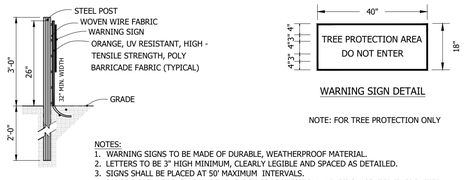
NOTES:

1. POSTS SET AT DEPTHS OF 4' FOR EARTH BACKFILL. ANCHOR DITCH IS 9" x 9" AND FILL IS TO BE COMPACTED.
2. PROVIDE ADEQUATE EXCAVATION AHEAD OF SILT FENCE TO ACT AS A VELOCITY BREAK AND SILT TRAP.
3. CONTRACTOR MAY USE ALTERNATE MATERIAL OR METHOD UPON APPROVAL FROM ENGINEER.

SILT FENCE
NOT TO SCALE



FRONT VIEW



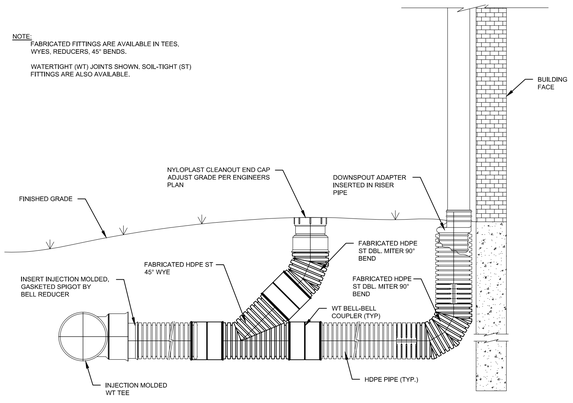
SIDE VIEW

WARNING SIGN DETAIL

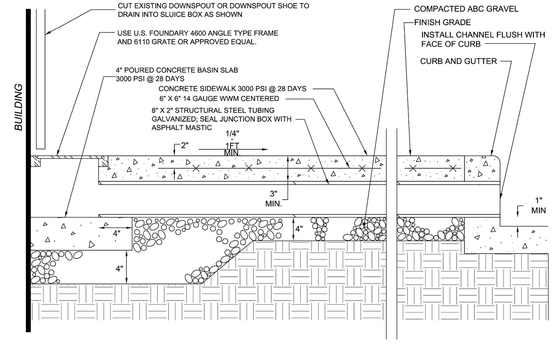
NOTE: FOR TREE PROTECTION ONLY

NOTES:
1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.
4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
7. ADDITIONAL SIGNS MAY BE REQUIRED BASED ON ACTUAL FIELD CONDITIONS.
8. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.

STANDARD TREE PROTECTION DETAIL
NOT TO SCALE



ROOF DRAIN FITTING
NOT TO SCALE



CURB DRAIN
NOT TO SCALE

OAKLEY COLLIER ARCHITECTS
OCA
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
111 I Haynes Street, Suite 109, Raleigh, NC 27604 (P) 919.985.7700

NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 042388 ENGINEER ANASTASIA M. WADSWORTH
3/22/2022

BID SET

PRELIMINARY NOT FOR CONSTRUCTION

GENERAL NOTE:
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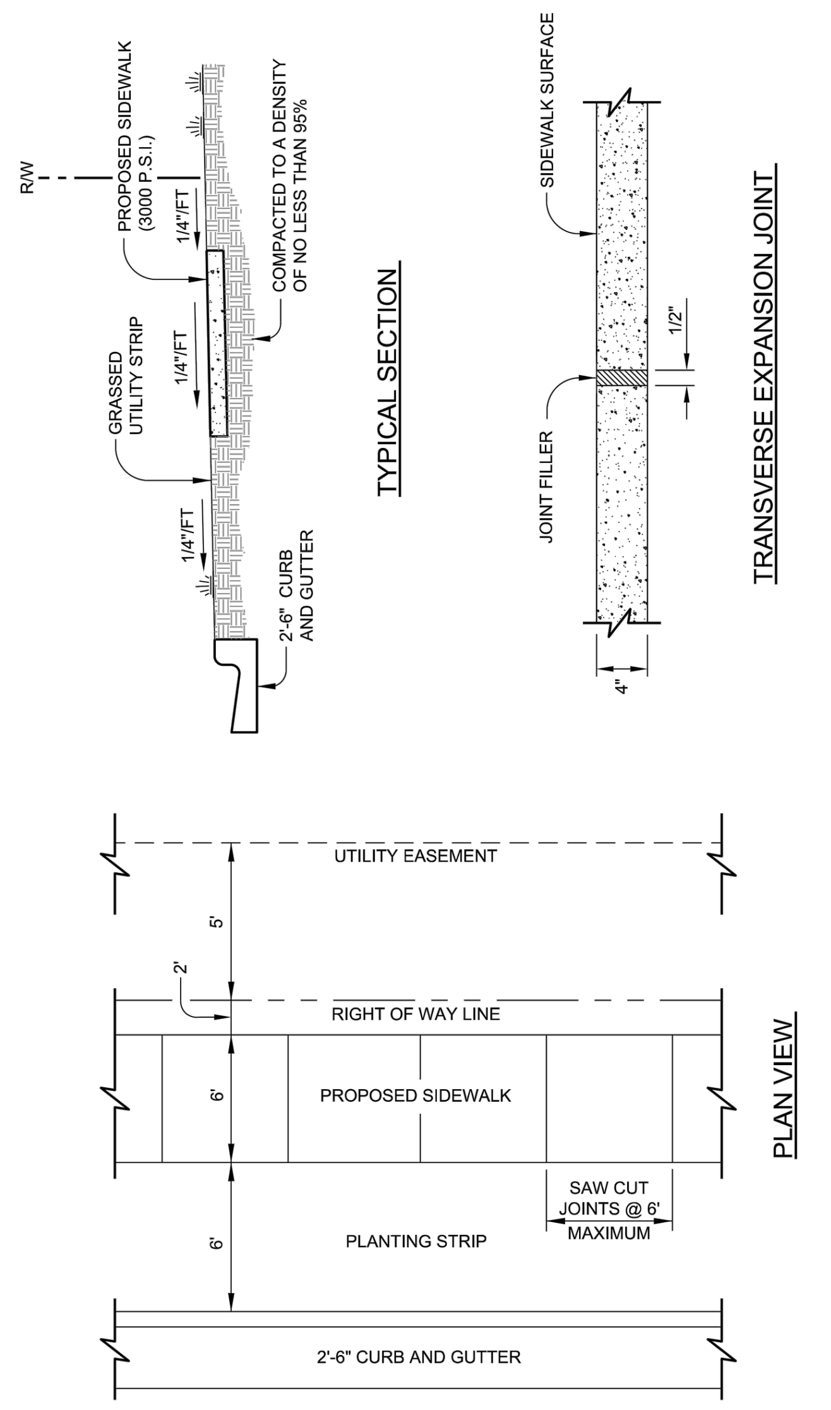
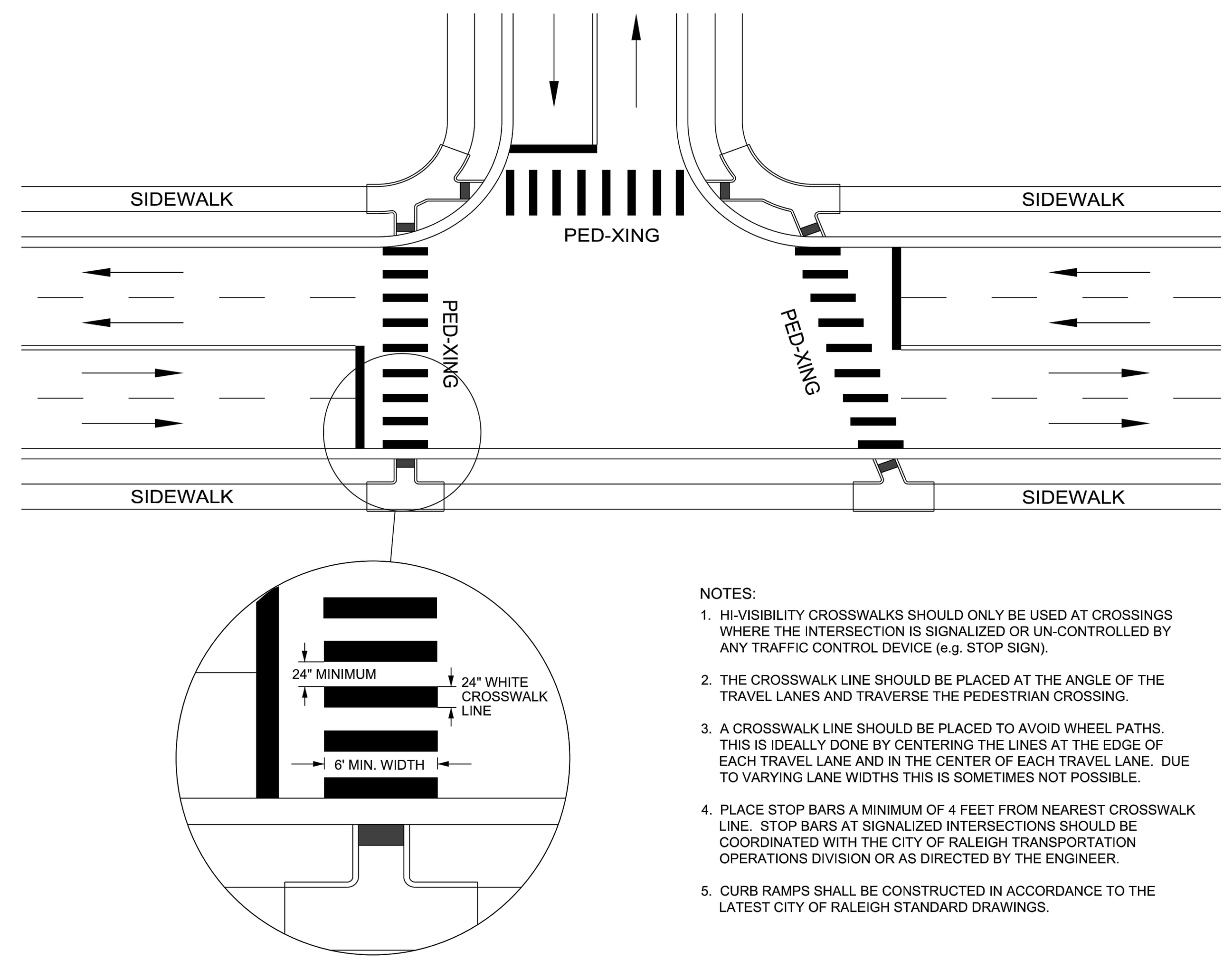
Revisions		
#	Description	Date

Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No. C6.00
Checked By: AMW	
Sheet Title: Details	



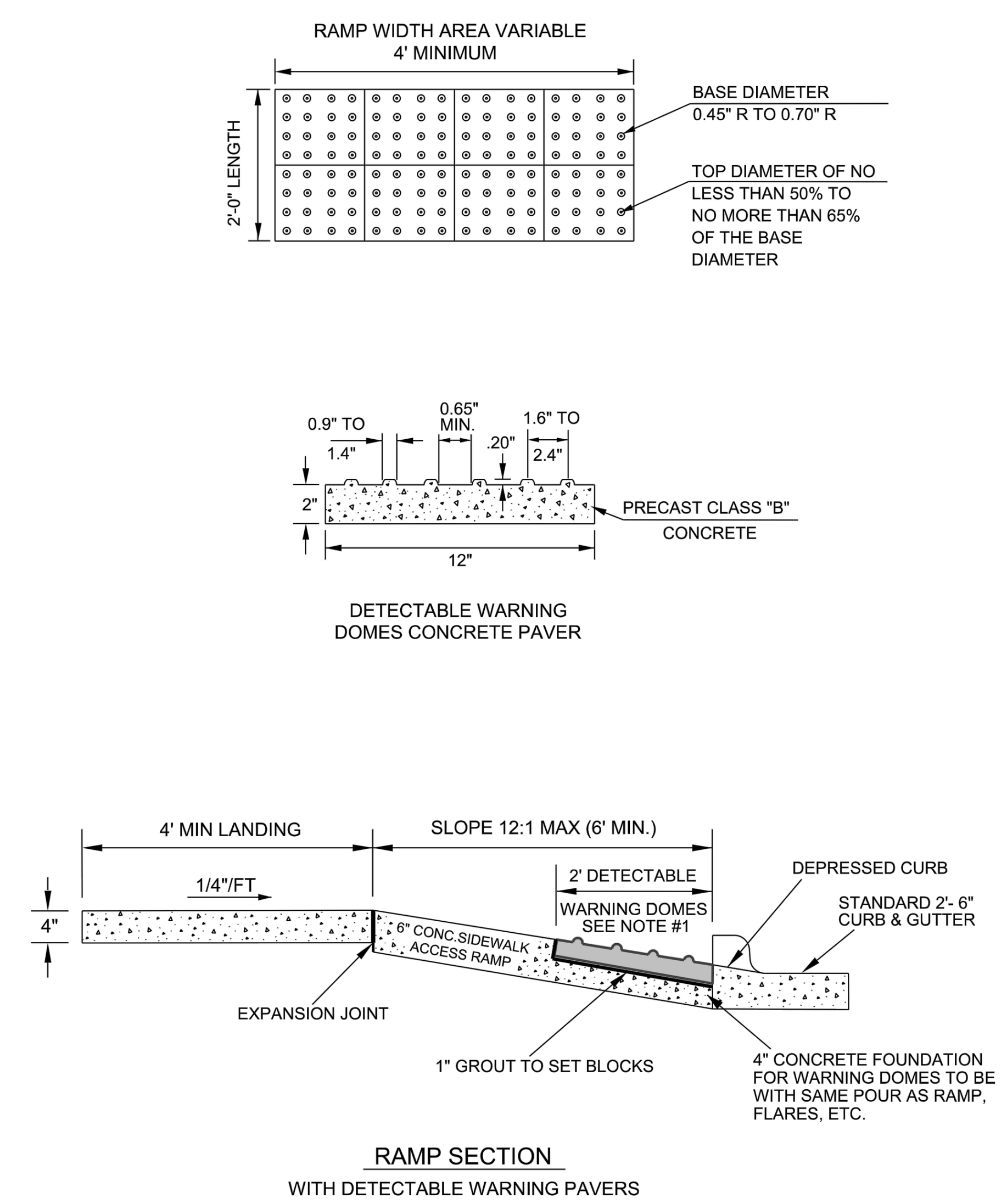
NOTES:
1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.
2. ALL CONCRETE TO BE 3000 PSI AND FINISHED WITH CURING COMPOUND.
3. A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS, AT STREET INJTERSECTIONS (ALONG THE LENGTH OF RADIUS CURB RETURNS), AND IN THE HANDICAP RAMPS.

CONCRETE SIDEWALK
NOT TO SCALE



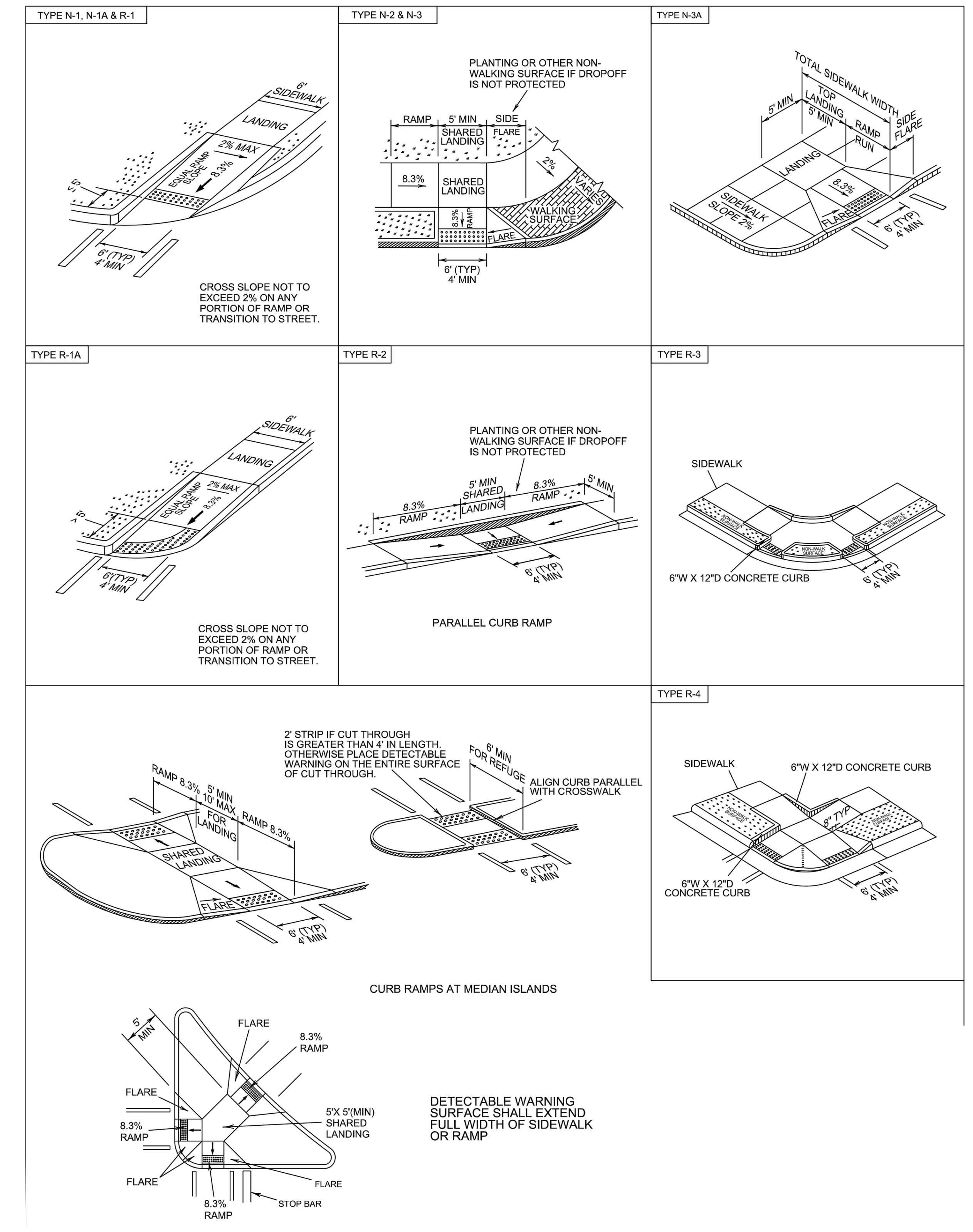
NOTES:
1. HI-VISIBILITY CROSSWALKS SHOULD ONLY BE USED AT CROSSINGS WHERE THE INTERSECTION IS SIGNALIZED OR UN-CONTROLLED BY ANY TRAFFIC CONTROL DEVICE (e.g. STOP SIGN).
2. THE CROSSWALK LINE SHOULD BE PLACED AT THE ANGLE OF THE TRAVEL LANES AND TRAVERSE THE PEDESTRIAN CROSSING.
3. A CROSSWALK LINE SHOULD BE PLACED TO AVOID WHEEL PATHS. THIS IS IDEALLY DONE BY CENTERING THE LINES AT THE EDGE OF EACH TRAVEL LANE AND IN THE CENTER OF EACH TRAVEL LANE. DUE TO VARYING LANE WIDTHS THIS IS SOMETIMES NOT POSSIBLE.
4. PLACE STOP BARS A MINIMUM OF 4 FEET FROM NEAREST CROSSWALK LINE. STOP BARS AT SIGNALIZED INTERSECTIONS SHOULD BE COORDINATED WITH THE CITY OF RALEIGH TRANSPORTATION OPERATIONS DIVISION OR AS DIRECTED BY THE ENGINEER.
5. CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST CITY OF RALEIGH STANDARD DRAWINGS.

CROSSWALK MARKING
NOT TO SCALE

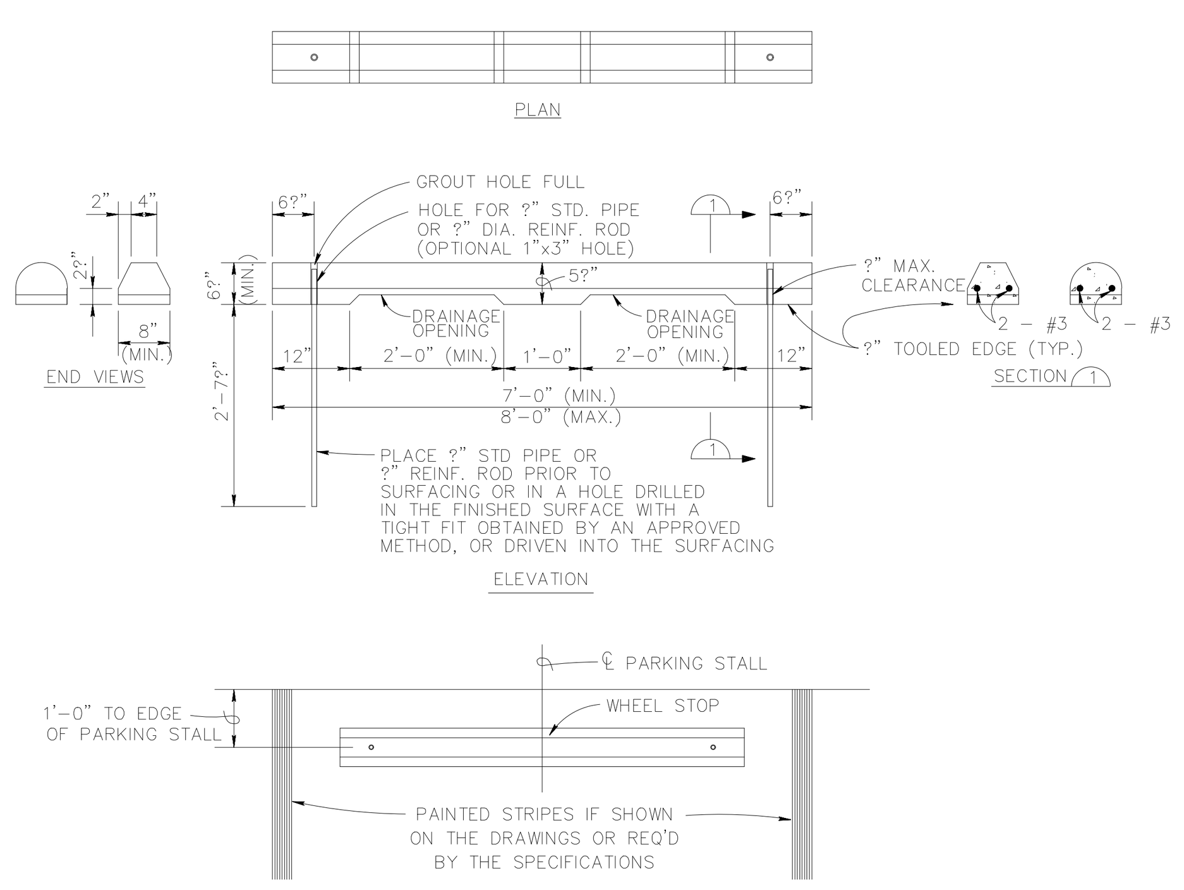


NOTES:
1. DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON DETAIL. SIZE OF PAVER SHALL BE 1' X 1'.
2. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE YELLOW FOR CONTRAST.

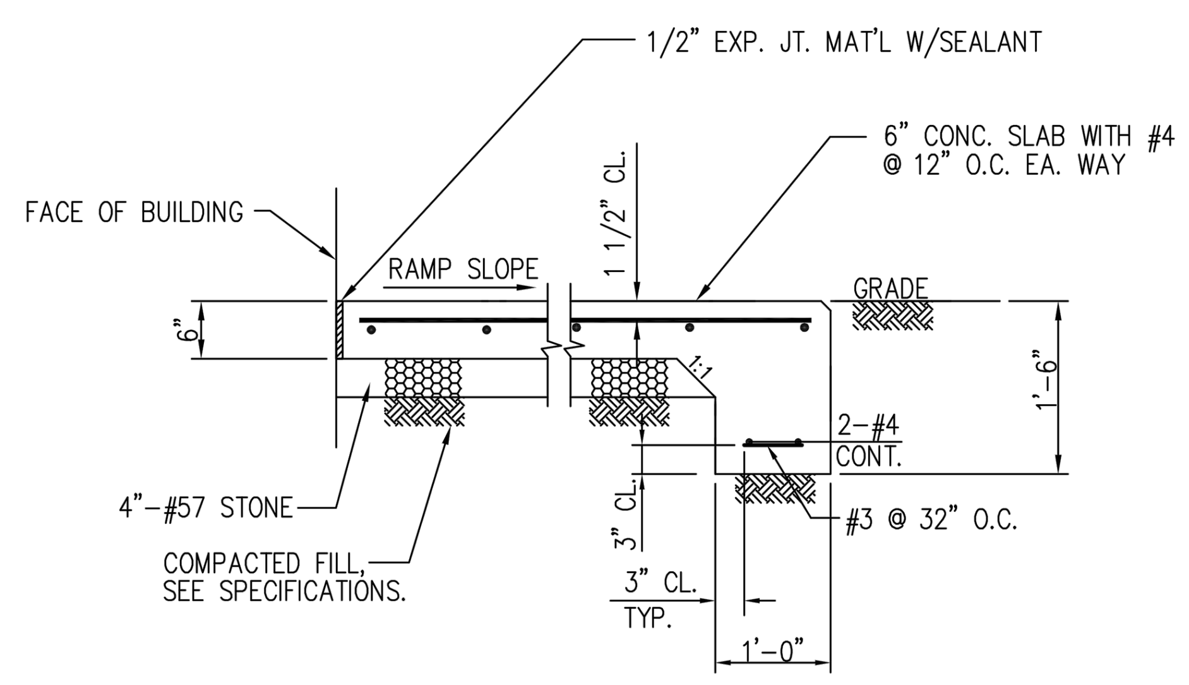
DETECTABLE WARNING SURFACE PAVERS
NOT TO SCALE



DETECTABLE WARNING SURFACE PLACEMENT
NOT TO SCALE



PRECAST CONCRETE WHEEL STOP
NOT TO SCALE



SECTION AT RAMP

REINFORCED CONCRETE RAMP
NOT TO SCALE

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OAKLEY COLLIER ARCHITECTS
OCA
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
1111 Haynes Street, Suite 109, Raleigh, NC 27604 (P) 919.985.7700

NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 042584 ANASTASIA M. WADSWORTH 3/22/2022

BID SET

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Revisions

#	Description	Date

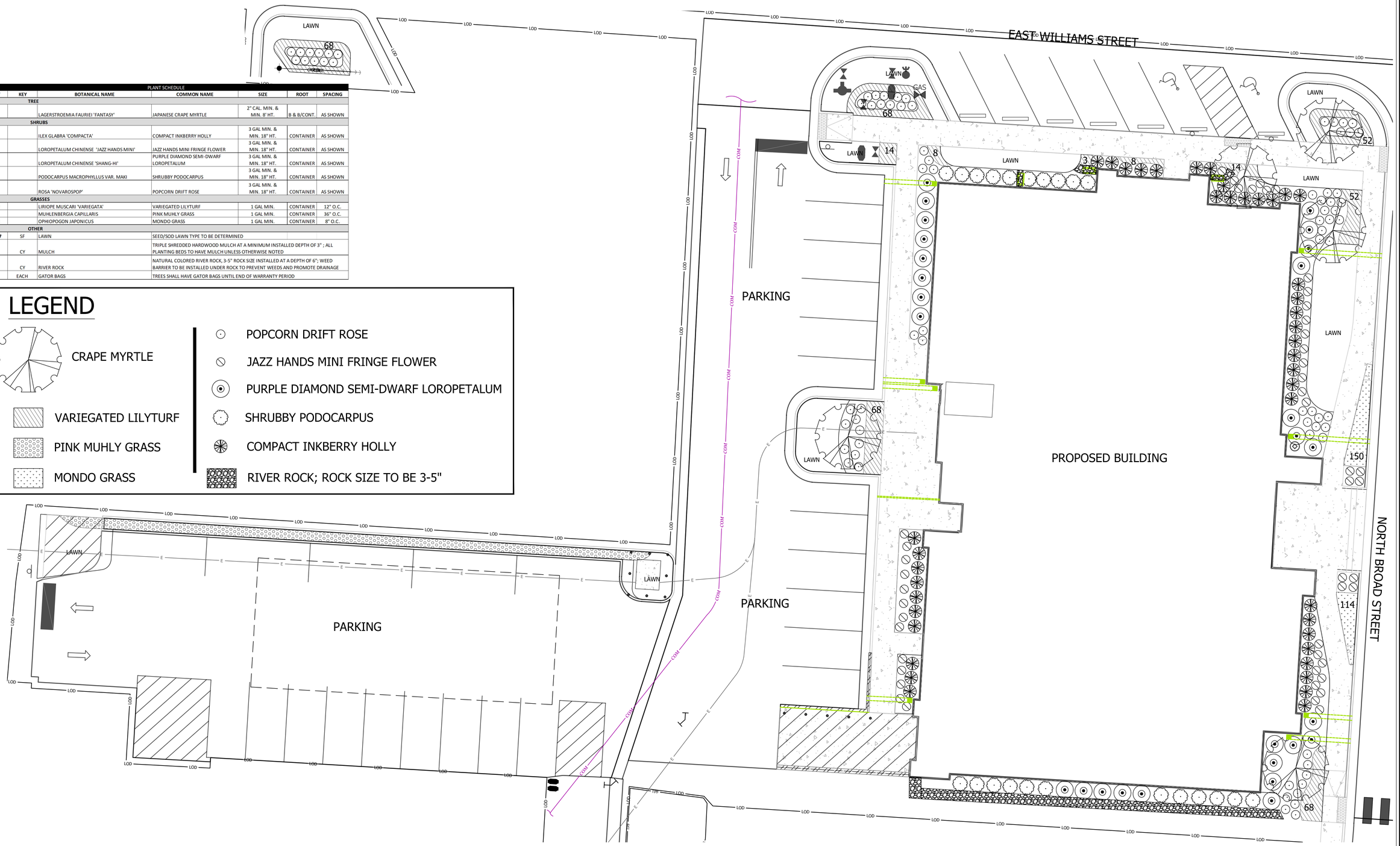
Date	Project No.
3.22.22	20020A
Drawn By: JCB	Sheet No.
Checked By: AMW	C7.00

Sheet Title
Details

PLANT SCHEDULE						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
TREE						
5		LAGERSTROEMIA FAURIEI 'FANTASY'	JAPANESE CRAPE MYRTLE	2" CAL. MIN. & MIN. 8' HT.	B & B/CONT.	AS SHOWN
SHRUBS						
42		ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY HOLLY	3 GAL MIN. & MIN. 18" HT.	CONTAINER	AS SHOWN
47		LOROPETALUM CHINENSE 'JAZZ HANDS MINI'	JAZZ HANDS MINI FRINGE FLOWER	3 GAL MIN. & MIN. 18" HT.	CONTAINER	AS SHOWN
27		LOROPETALUM CHINENSE 'SHANG-HI'	PURPLE DIAMOND SEMI-DWARF LOROPETALUM	3 GAL MIN. & MIN. 18" HT.	CONTAINER	AS SHOWN
22		PODOCARPUS MACROPHYLLUS VAR. MAKI	SHRUBBY PODOCARPUS	3 GAL MIN. & MIN. 18" HT.	CONTAINER	AS SHOWN
79		ROSA 'NOVAROSPOP'	POPCORN DRIFT ROSE	3 GAL MIN. & MIN. 18" HT.	CONTAINER	AS SHOWN
GRASSES						
423		LIRIOPE MUSCARI 'VARIEGATA'	VARIEGATED LILYTURF	1 GAL MIN.	CONTAINER	12" O.C.
27		MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	1 GAL MIN.	CONTAINER	36" O.C.
264		OPHIOPOGON JAPONICUS	MONDO GRASS	1 GAL MIN.	CONTAINER	8" O.C.
OTHER						
1,607	SF	LAWN	SEED/SOD LAWN TYPE TO BE DETERMINED			
28	CY	MULCH	TRIPLE SHREDDED HARDWOOD MULCH AT A MINIMUM INSTALLED DEPTH OF 3" ; ALL PLANTING BEDS TO HAVE MULCH UNLESS OTHERWISE NOTED			
4	CY	RIVER ROCK	NATURAL COLORED RIVER ROCK, 3-5" ROCK SIZE INSTALLED AT A DEPTH OF 6"; WEED BARRIER TO BE INSTALLED UNDER ROCK TO PREVENT WEEDS AND PROMOTE DRAINAGE			
5	EACH	GATOR BAGS	TREES SHALL HAVE GATOR BAGS UNTIL END OF WARRANTY PERIOD			

LEGEND

- CRAPE MYRTLE
- VARIEGATED LILYTURF
- PINK MUHLY GRASS
- MONDO GRASS
- POPCORN DRIFT ROSE
- JAZZ HANDS MINI FRINGE FLOWER
- PURPLE DIAMOND SEMI-DWARF LOROPETALUM
- SHRUBBY PODOCARPUS
- COMPACT INKBERRY HOLLY
- RIVER ROCK; ROCK SIZE TO BE 3-5"



PLANTING PLAN

Scale: 1" = 10'- 0"

0' 5' 10' 20' North

SageDesign
228 North Front Street
Suite 301
Wilmington, NC 28401
Ph. (910)232-3878

OAKLEY COLLIER ARCHITECTS
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
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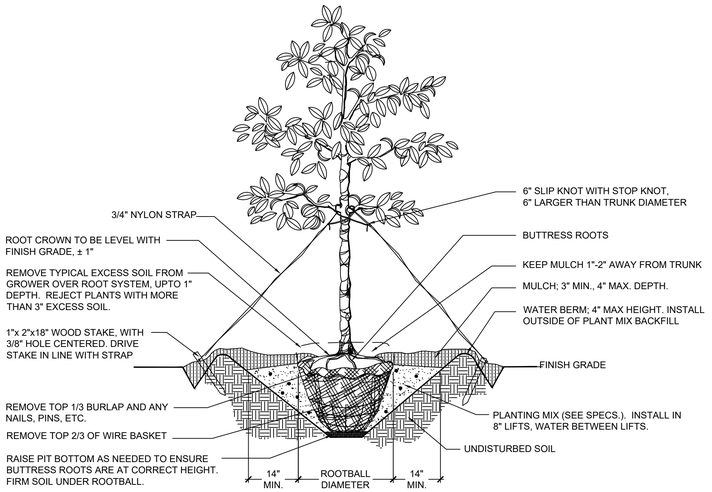
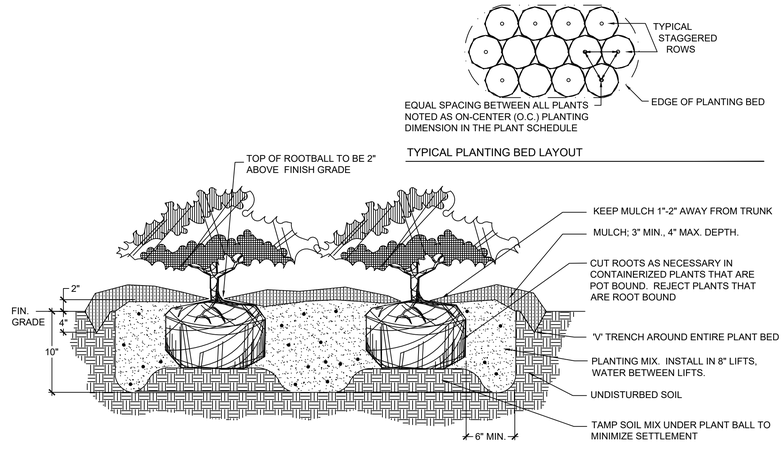
Revisions		
#	Description	Date

Date: 03.22.22	Project No.: 20020A
Drawn By: NKW	Sheet No.: L1.1
Checked By: NKW	
Sheet Title: PLANTING PLAN	



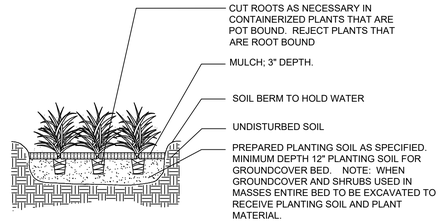
A SINGLE STEM TREE INSTALLATION DETAIL

SCALE: NTS



B SHRUB INSTALLATION DETAIL

SCALE: NTS



C GROUNDCOVER INSTALLATION DETAIL

SCALE: NTS

PLANT MATERIAL NOTES

1. CONTRACTOR SHALL FOLLOW TOWN OF ANGIER STANDARDS.
2. ALL PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT STANDARDS ESTABLISHED BY 'THE AMERICAN ASSOCIATION OF NURSERYMAN".
3. CONTAINERIZED PLANTS SHALL HAVE A ROOT SYSTEM SUFFICIENT ENOUGH IN DEVELOPMENT TO HOLD THE SOIL INTACT WHEN REMOVED FROM THE CONTAINER. THE ROOT SYSTEM SHALL NOT BE ROOT BOUND, A CONDITION WHERE THE ROOT SYSTEM IS DENSE IN MASS, EXCESSIVELY INTERTWINED, AND HAS ESTABLISHED A CIRCULAR GROWTH PATTERN.
4. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL-ROOTED PLANTS AND ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
5. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY UNLESS APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SHIPMENT.
6. ALL TREE PITS, SHRUB BEDS AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS.
7. TOPSOIL AMENDMENTS REQUIRED FOR SOIL MIXES SHALL BE PROVIDED BY CONTRACTOR AND APPROVED BY CLIENT REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR MUST LOAD, HAUL, MIX AND SPREAD ALL TOPSOIL AND OTHER SOIL ADDITIVES AS REQUIRED ON SITE.
8. CONTRACTOR SHALL VERIFY AND/ OR AMEND ALL PLANTING SOILS TO ENSURE PROPER SUITABILITY INCLUDING STATE RECOMMENDED QUANTITIES OF NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND SOIL AMENDMENTS TO BE ADDED TO PRODUCE QUALITY PLANTING SOIL FOR ALL PLANT MATERIAL TO SURVIVE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PLANTING PITS PERCOLATE PROPERLY PRIOR TO PLANTING INSTALLATION.
10. SHRUBS, BULBS, AND GROUNDCOVERS SHALL BE TRIANGULARLY SPACED AT SPACING SHOWN ON PLANTING PLANS AND/OR IN THE PLANT SCHEDULE.
11. THE CONTRACTOR SHALL THE VERIFY EXTENT OF SEEDING OR SOD AREA WITH CLIENT REPRESENTATIVE PRIOR TO INSTALLATION.
12. LANDSCAPING WILL BE APPROVED BY THE CLIENT REPRESENTATIVE PRIOR TO INSTALLATION. IF CONTRACTOR HAS COMPLIED WITH THE LANDSCAPE PLAN PROVIDED IN THE BID DOCUMENTS AND REVISIONS ARE REQUIRED IN THE FIELD THE CONTRACT WILL BE ADJUSTED USING THE BID DOCUMENT PROVISIONS FOR PROJECT CHANGES.
13. LANDSCAPER MUST BE A LICENSED NC LANDSCAPE CONTRACTOR.

TREE INSTALLATION NOTES

1. ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI, 1990, PART 1, "SHADE AND FLOWERING TREES").
2. TREES SUPPLIED MUST HAVE BEEN PROPERLY PLANTED AND GROWN IN THE NURSERY. THE ROOT CROWN (ALSO CALLED THE TRUNK FLARE) SHALL BE EVIDENT NEAR THE TOP OF THE GROUND. ANY EXCESS SOIL, UP TO 3 INCHES COVERING THE CROWN WILL HAVE TO BE REMOVED CAREFULLY BY HAND, IN ORDER TO PREVENT ROOT SCRAPES. THE TREE IS THEN TO BE PLANTED WITH THE ROOT CROWN IN PROPER RELATION TO THE SURROUNDING GRADE. ANY TREES WITH MORE THAN 3 INCHES OF SOIL ON TOP OF THE ROOT CROWN WILL BE REJECTED. THE NURSERY OWNERS MAY DIG OVERSIZE BALLS AND REMOVE THE SOIL IN ORDER FOR THE ROOT SYSTEM DIAMETER (WHICH IS THE REQUIRED ROOT BALL DIAMETER) TO MEET THE SPECIFICATION FOR THE TRUNK CALIPER REQUIRED.
3. BALL AND BURLAPPED (B&B) PLANTS MUST HAVE FIRM, NATURAL BALLS OF EARTH, OF DIAMETER NOT LESS THAN RECOMMENDED IN THE "TREE AND SHRUB TRANSPLANTING MANUAL", AND BE OF SUFFICIENT DEPTH TO INCLUDE THE FIBROUS AND FEEDING ROOTS. PLANTS MOVED WITH A BALL WILL NOT BE ACCEPTED IF THE BALL IS DRY, CRACKED OR BROKEN BEFORE OR DURING PLANTING OPERATIONS.
4. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOT BALL. AFTER SETTING IN HOLE, CUT AWAY 2/3 OF WIRE BASKET, IF ANY, AND TOP 1/3 OF BURLAP.
5. SOAK ROOT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.
6. CONSTRUCT 4" HIGH SAUCER (WATER BERM) OUTSIDE OF PLANT MIX BACK FILL.
7. WHERE TREES ARE PLANTED IN ROWS, THEY SHALL BE UNIFORM IN SIZE AND SHAPE.
8. NO EXISTING TREES SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE CLIENT REPRESENTATIVE EXCEPT WHERE NOTED ON PLANS. NO GRUBBING SHALL OCCUR WITHIN EXISTING TREE AREAS.
9. THE CONTRACTOR SHALL STAKE THE LOCATIONS OF ALL PROPOSED TREES AND OBTAIN APPROVAL FROM THE LANDSCAPE ARCHITECT AND OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
10. ALL TREES SHALL BE STAKED AT TIME OF INSTALLATION IN ACCORDANCE WITH PLANTING DETAILS.
11. THE CONTRACTOR SHALL ENSURE THAT TREES REMAIN VERTICAL AND UPRIGHT FOR THE DURATION OF THE WARRANTY PERIOD.
12. STAKES FOR TREE SUPPORT SHALL BE CONSTRUCTED OF 2"x2" x18" UNTREATED PINE. GUYING FABRIC SHALL BE 'ARBOR TAPE', AS MANUFACTURED BY NEPTCO, PAWTUCKET, RI. (401) 722-5500 (OR APPROVED EQUAL). COLOR SHALL BE OLIVE DRAB.

SHRUB INSTALLATION NOTES

1. CUT ROOTS AS NECESSARY IN CONTAINERIZED PLANTS THAT ARE POT BOUND. REJECT PLANTS THAT HAVE GIRDLED ROOT OR ARE BOUND.
2. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE.
3. TAMP PLANT SOIL MIX FIRMLY IN 8" LIFTS AROUND PLANT BALL.
4. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.

WATERING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL PLANT MATERIAL HAS ADEQUATE WATER TO ENSURE PLANT SUCCESS. CONTRACTOR SHALL WATER PLANT MATERIAL THROUGH THE DURATION OF THE PROJECT UNTIL OWNER HAS GIVEN APPROVAL AND/OR RELEASED THE CONTRACTOR FROM THE SITE.
2. IF IRRIGATION IS NOT SET UP, OR INCLUDED IN THE PROJECT SCOPE, CONTRACTOR SHALL INCLUDE GATOR BAGS MAINTAINED WITH WATER ON TREES TO ENSURE SUCCESS OF PLANT MATERIAL.
3. IF IRRIGATION IS ESTABLISHED, REFER TO IRRIGATION DRAWINGS FOR FURTHER WATERING INFORMATION.
4. PROVIDE WARRANTY AS OUTLINED BY THE PROJECT CONTRACT.

PLANTING SOIL NOTES:

PLANTING SOIL: EXISTING, NATIVE SURFACE TOPSOIL FORMED UNDER NATURAL CONDITIONS WITH THE DUFF LAYER RETAINED DURING EXCAVATION PROCESS AND STOCKPILED ON-SITE. VERIFY SUITABILITY OF NATIVE SURFACE TOPSOIL TO PRODUCE VIABLE PLANTING SOIL. CLEAN SOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

1. SUPPLEMENT WITH ASTM D 5268 TOPSOIL, WITH PH RANGE OF 5.5 TO 7, A MINIMUM OF 10 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH (25 MM) OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH WHEN PLANTING SOIL WHEN QUANTITIES ARE INSUFFICIENT.
2. MIX EXISTING, NATIVE SURFACE TOPSOIL WITH APPROPRIATE COMBINATION OF SOIL AMENDMENTS LISTED TO ACHIEVE THE PERFORMANCE SPECIFICATIONS BELOW:
   a. 40% TOPSOIL
   b. 30% ORGANIC MATTER (5-10% BY WEIGHT,)
   c. 30% SAND
3. SUPPLY COMPLETE INFORMATION ON ALL ANALYSIS / TEST METHODOLOGIES AND RESULTS; LABORATORY CERTIFICATIONS, MANUFACTURER'S SPECIFICATIONS, AND AGENCY APPROVALS TO THE CLIENT REPRESENTATIVE PRIOR TO PLACEMENT OF SOIL MIXTURES. IN ADDITION, PROVIDE THE CLIENT REPRESENTATIVE WITH THOROUGHLY MIXED SAMPLE OF SOIL MIXES FOR APPROVAL PRIOR TO PLACEMENT. LANDSCAPE CONTRACTOR SHALL MAKE MODIFICATIONS AND IMPROVEMENTS TO SOIL MIXES DEEMED NECESSARY BY THE TOWN TO MEET REQUIREMENTS SPECIFIED HERE IN BEFORE, AND TO ENSURE PROPER GROWING MEDIUM FOR PLANT MATERIAL.
4. PLANTING MIX SHALL HAVE THE FOLLOWING NUTRIENTS AT THE SPECIFIED PERCENT BASE SATURATION, TO BE DETERMINED BY SOIL TESTS CONDUCTED BY THE CONTRACTOR:
   a. CALCIUM: 55% - 80%
   b. MAGNESIUM: 10% - 30%
   c. POTASSIUM: 5% - 8%

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NEW FACILITY FOR:
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

PRELIMINARY NOT FOR CONSTRUCTION

BID SET

PRELIMINARY NOT FOR CONSTRUCTION

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions #	Description	Date

Date	Project No.
03.22.22	20020A
Drawn By: NKW	Sheet No.: L1.2
Checked By: SLB	

Sheet Title: PLANTING DETAILS

1. DESIGN CRITERIA

A. GENERAL BUILDING CODE
1. THE CONTRACT DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE (IBC) AND THE 2018 AMENDMENTS.

B. SUPPLEMENTARY BUILDING CODE REFERENCES INCLUDE THOSE REFERENCES LISTED BELOW, AS REFERENCED BY THE GENERAL BUILDING CODE.
1. GENERAL
   a. ASCE 7-10 - MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
2. CAST-IN-PLACE CONCRETE
   a. ACI 318-14 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
3. CONCRETE MASONRY
   a. ACI 530-13 - BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
   b. ACI 530.1-13 - SPECIFICATIONS FOR MASONRY STRUCTURES
4. STRUCTURAL STEEL
   a. AISC 360-10 - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS
   b. AISC 341-10 - SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS
5. STEEL DECKING
   a. ANSI/NC1.0-10 - STANDARD FOR NON-COMPOSITE STEEL FLOOR DECK
6. ANSI/SDI-RD1.0-10 - STANDARD FOR STEEL ROOF DECK
7. COLD-FORMED METAL FRAMING (CFMF)
   a. AISI S100-1 - NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
   b. AISI S200-12 - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS
   c. AISI S210-07(2012) - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - FLOOR AND ROOF SYSTEM DESIGN (REAFFIRMED 2012)
   d. AISI S211-07/S1-12(2012) - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - WALL STUD DESIGN, INCLUDING SUPPLEMENT 1, DATED 2012
   e. AISI S212-07(2012) - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - HEADER DESIGN (REAFFIRMED 2012)
   f. AISI S213-07/S1-09(2012) - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - LATERAL DESIGN WITH SUPPLEMENT 1, DATED 2009 (REAFFIRMED 2012)
   g. AISI S214-12 - NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING - TRUSS DESIGN
8. WOOD FRAMING
   a. NDS 2015 - NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION WITH 2015 SUPPLEMENT
   b. SDPWS 2015 - SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC
9. WOOD TRUSSES
   a. TPI 1-2014 - NATIONAL DESIGN STANDARDS FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION

C. DEAD LOADS:
1. FOLLOWING DEAD LOADS HAVE BEEN ASSUMED:
   a. ACTUAL WEIGHT OF PARTITIONS HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD. (15 PSF)
   b. AN ALLOWANCE OF 5 PSF HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD FOR HANGING CEILING AND MECHANICAL LOADS, SUCH AS DUCTWORK, SPRINKLER PIPES, AND MECHANICAL EQUIPMENT LOADS.
   c. THE ACTUAL WEIGHT OF THE EXTERIOR CLADDING OR CURTAIN WALL HAS BEEN APPLIED TO THE STRUCTURE.
   d. ADDITIONAL SUPER IMPOSED DEAD LOADS HAVE BEEN ASSUMED IN THE DESIGN AS FOLLOWS:

LOCATION	UNIFORM LOAD (PSF)
SLOPED ROOF	5
FLAT ROOF	5
MECHANICAL/ELECTRICAL/TELECOM	10

2. OFFICE FRAMING AND/OR MEZZANINE FRAMING (TYPE I/II CONSTRUCTION):
   a. WEIGHT OF THE PARTITIONS HAS NOT BEEN INCLUDED AS A PORTION OF THE LIVE LOAD, AS ALLOWED BY CODE (ASCE 7, §4.3.2). A LIVE LOAD OF 80 PSF HAS BEEN USED IN LIEU OF 50 PSF.
   b. AN ALLOWANCE OF 10 PSF HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD FOR HANGING CEILING AND MECHANICAL LOADS, SUCH AS DUCTWORK, SPRINKLER PIPES, AND MECHANICAL EQUIPMENT LOADS.
   c. THE ACTUAL WEIGHT OF THE EXTERIOR CLADDING OR CURTAIN WALL HAS BEEN APPLIED TO THE STRUCTURE.
   d. AT SUPPORT FOR SPRINKLER LINES, THE STRUCTURE HAS BEEN DESIGNED TO ACCOMMODATE A CONCENTRATED LOAD OF 150 LBS IN ADDITION TO THE FULL WEIGHT OF THE SPRINKLER PIPING SHOWN BELOW:

NOMIMAL PIPE DIAMETER	WEIGHT (PLF)
6" DIAMETER	32 PLF
8" DIAMETER	50 PLF
10" DIAMETER	75 PLF
12" DIAMETER	100 PLF
16" DIAMETER	160 PLF

D. LIVE LOADS

1. LIVE LOADS PRODUCED BY THE USE OR OCCUPANCY OF THE STRUCTURE HAVE BEEN INCLUDED IN THE DESIGN, BASED ON THE FOLLOWING OCCUPANCIES:

OCCUPANCY OR USE	UNIFORM LOAD (PSF)	CONCENTRATED LOAD (LB)
PITCHED ROOF (REDUCIBLE)	20	--
FLAT ROOF (UNREDUCIBLE)	32	--
FLAT ROOF W/RTU (UNREDUCIBLE)	52	250
CORRIDOR/BREEZEWAY	100	--
STAIRS, STAIR ACCESS	100	300
MECHANICAL/ELECTRICAL ROOMS	100	--
TELECOM ROOMS	100	--
ELEVATOR CONTROL ROOMS	100	--
FIRE PUMP ROOMS	100	1,000
LIGHT STORAGE AREAS-2nd FLOOR	125	--
STORAGE AT ATTIC FLOOR	100	--
PUBLIC ASSEMBLY	100	--
OFFICE	50(+15)	1,000

   THE STRUCTURAL DESIGN IS BASED ON THE GREATER OF THE EFFECTS OF THE UNIFORM LOADS NOTED ABOVE OR THE CONCENTRATED LOADS NOTED ABOVE (ASSUMED TO BE DISTRIBUTED OVER AN AREA 2.5 FEET SQUARE UNLESS SPECIFICALLY NOTED BELOW).
2. THE CONCENTRATED LOAD DUE TO TRUCK WHEELS ON SIDEWALKS, VEHICULAR DRIVEWAYS AND YARDS, SUBJECT TO TRUCKING, SHALL BE DISTRIBUTED OVER AN AREA OF 20 SQUARE INCHES.
3. THE MINIMUM CONCENTRATED LOAD ON STAIR TREADS SHALL BE 300 POUNDS ON AN AREA OF 4 SQUARE INCHES.
4. HANDRAILS AND GUARDS SHALL BE DESIGNED FOR THE EFFECTS RESULTING FROM BOTH OF THE FOLLOWING LOADING CONDITIONS. THESE LOADS SHALL NOT BE APPLIED CONCURRENTLY.
   a. A LOAD OF 50 POUNDS PER LINEAR FOOT (PLF) APPLIED IN ANY DIRECTION TO THE HANDRAIL OR GUARD.
   b. A LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT TO THE HANDRAIL OR GUARD.
5. INTERMEDIATE RAILS, BALUSTERS, PANEL FILLERS, AND THEIR CONNECTIONS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 50 POUNDS ON AN AREA NOT TO EXCEED 12"x12", INCLUDING OPENINGS AND SPACES BETWEEN RAILS, AND LOCATED SO AS TO PRODUCE THE MAXIMUM LOAD EFFECTS.
6. DESIGN LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE, SECTION 1607.10.1 AND 1607.10.2.

E. WIND LOADS
WIND LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE REFERENCED ABOVE, USING THE FOLLOWING PARAMETERS:
WIND DESIGN CRITERIA:

ULTIMATE DESIGN WIND SPEED (V/ULT)	123 MPH
NOMINAL WIND SPEED (V/ASD)	90 MPH
BUILDING EXPOSURE CATEGORY	C
RISK CATEGORY	IV
IMPORTANCE FACTOR	1.15
INTERNAL PRESSURE COEFFICIENT	±0.18
BASE WIND PRESSURE (qh)	##.# PSF
COMPONENTS AND CLADDING PRESSURES	SEE TABLE ON S0.20

F. SEISMIC LOADS
SEISMIC LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE REFERENCED ABOVE, USING THE FOLLOWING PARAMETERS:

BUILDING RISK CATEGORY	IV
SEISMIC IMPORTANCE FACTOR, I	1.50
MAPPED SPECTRAL RESPONSE ACCELERATIONS, S/S	0.172g
MAPPED SPECTRAL RESPONSE ACCELERATION, S/1	0.083g
SITE CLASS	D
SHORT PERIOD SITE COEFFICIENT, F/a	1.6
LONG PERIOD SITE COEFFICIENT, F/v	2.4
SPECTRAL RESPONSE COEFFICIENTS, SHORT PERIOD, SDS	0.184g
SPECTRAL RESPONSE COEFFICIENTS, 1 SEC. PERIOD, SD1	0.132g
SEISMIC DESIGN CATEGORY, S/DC	C

BASIC STRUCTURAL AND SEISMIC RESISTING SYSTEM:
BUILDING FRAME SYSTEM WITH ORDINARY REINFORCED MASONRY SHEAR WALLS

ANALYSIS PROCEDURE:
EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7, §12.8

RESPONSE MODIFICATION FACTOR, R	2.0
DEFLECTION AMPLIFICATION FACTOR, Cd	2.0
SEISMIC RESPONSE COEFFICIENT, C/S	0.053

DESIGN BASE SHEAR (KIPS)

WIND DESIGN BASE SHEAR (Y) LONGITUDINAL N/S	87 K
WIND DESIGN BASE SHEAR (X) TRANSVERSE E/W	144 K
SEISMIC DESIGN BASE SHEAR (X & Y)	122 K

G. SNOW LOADS
SNOW LOADS HAVE BEEN DETERMINED IN ACCORDANCE WITH THE GENERAL BUILDING CODE REFERENCED ABOVE, WITH THE FOLLOWING PARAMETERS:

GROUND SNOW LOAD, P/g	15 PSF
FLAT ROOF SNOW LOAD, P/f	18 PSF
SNOW EXPOSURE COEFFICIENT, C/e	1.00
IMPORTANCE FACTOR, I	1.2
THERMAL FACTOR, C/t	1.00

H. DESIGN LOAD COMBINATIONS
1. BASIC LOAD COMBINATIONS PER SECTION 1605.2 FOR LOAD AND RESISTANCE FACTOR DESIGN (LRFD) ARE USED.
2. BASIC LOAD COMBINATIONS PER SECTION 1605.3 FOR ALLOWABLE STRESS DESIGN (ASD) ARE USED.

I. STRUCTURAL STABILITY OF BUILDING FRAME
THE STABILITY OF THE STRUCTURAL FRAME IS DEPENDENT UPON THE FOLLOWING FRAMING COMPONENTS AND SYSTEMS:
1. STEEL FERAMED STRUCTURE
   a. LATERAL BUILDING FRAMES (ORDINARY REINFORCED CMU SHEAR WALLS)
   b. VERTICAL LOAD-BEARING ELEMENTS (STEEL BEAMS AND COLUMNS)
   c. HORIZONTAL DIAPHRAGM (CONCRETE SLAB)

J. CONSTRUCTION SEQUENCING
THE CONTRACTOR SHALL COORDINATE THE SEQUENCE AND SCHEDULE OF CONSTRUCTION WITH THE ENGINEER.

K. BUILDING DEFLECTIONS AND DRIFTS - ANTICIPATED DIFFERENTIAL MOVEMENTS FOR CLADDING DESIGN AND INSTALLATION.
1. UNDER NORMAL LOADING CONDITIONS, CONCRETE SLABS AND BEAMS WILL DEFLECT, WITH A PORTION OF THE DEFLECTION DEPENDENT ON THE LENGTH OF TIME THE LOAD IS APPLIED. STEEL STRUCTURES WILL ALSO DEFLECT UNDER LOAD AND ENVIRONMENTAL CONDITIONS.
2. PROPER ALLOWANCE MUST BE MADE IN FINISHES AND ATTACHED ELEMENTS TO PERMIT THE STRUCTURE TO DEFLECT WITHOUT DAMAGE TO THE ATTACHED ELEMENTS. DETAILS FOR ATTACHMENT OF THESE ELEMENTS MAY BE PROVIDED BY OTHERS.

2. GENERAL

A. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL.

B. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.

C. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO REVIEW INFORMATION SHOWN IN THE STRUCTURAL DRAWINGS/SPECIFICATIONS AND COORDINATE WITH REQUIREMENTS OUTLINED IN THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND/OR CIVIL DRAWINGS/SPECIFICATIONS. THE GENERAL CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION.

D. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES.

E. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.

F. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

G. WHERE A SECTION IS CUT ON THE DRAWINGS, IT SHALL APPLY AT ALL LIKE OR SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.

H. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
   a. EDGE OF SLAB (EOS) DIMENSIONS
   b. EDGE OF DECK (EOD) DIMENSIONS
   c. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS
   d. SIZE AND LOCATION OF ALL ROOF OPENINGS
   e. FLOOR AND ROOF FINISHES
   f. DETAILS OF VENEER ATTACHMENT
   g. LOCATION AND EXTENT OF INSULATION

I. SEE MECHANICAL, PLUMBING, ELECTRICAL AND/OR CIVIL DRAWINGS FOR THE FOLLOWING INFORMATION:
   a. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC.
   b. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS
   c. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES
   d. UNDERGROUND CONCRETE DUCTS, TRENCHES, PITS OR MANHOLES
   e. CONCRETE AND ASPHALT PAVEMENT

J. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE INDICATED. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ALL MEANS AND METHODS OF CONSTRUCTION AND SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR OTHER PERSONS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO: BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES, ETC. MODIFICATION OR SUBSTITUTION MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

K. FIELD VERIFY ALL EXISTING ABOVE AND BELOW GROUND CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE STARTING WORK.

L. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED.

M. THE STRUCTURAL ENGINEER OF RECORD (ELLINWOOD + MACHADO, LLC) IS NOT RESPONSIBLE FOR THE DESIGN OF THE FOLLOWING ITEMS:
1. SITE RETAINING WALLS (RETAINING WALLS THAT OCCUR OUTSIDE OF BUILDING FOOTPRINT, EXCEPT WHERE SPECIFICALLY SHOWN/DETAILED IN THESE DRAWINGS)
2. SPECIALTY FOUNDATION SYSTEMS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
   a. RAMMED AGGREGATE PIERS
3. ARCHITECTURAL PRECAST CLADDING
4. STEEL STAIRS
5. HANDRAILS (REGARDLESS OF MATERIAL(S) USED)
6. STRUCTURAL STEEL MEMBER END CONNECTIONS (UNLESS SPECIFICALLY SHOWN AND FULLY DETAILED IN THE STRUCTURAL DRAWINGS)
7. CURTAIN WALL SYSTEMS
8. WINDOW WALL SYSTEMS
9. COLD-FORMED METAL STUD (CFMS) FRAMING (TO INCLUDE LOAD-BEARING WALLS, NON-LOAD-BEARING WALLS, CEILING JOISTS, SOFFITS, ETC.)
10. COLD-FORMED STEEL TRUSS FRAMING
11. WOOD FLOOR TRUSSES
12. WOOD ROOF TRUSSES
13. STAND-ALONE STRUCTURES SHOWN ON THE LANDSCAPE ARCHITECTURE DRAWINGS (EXCEPT WHERE SPECIFICALLY SHOWN/DETAILED IN THESE DRAWINGS
14. ALL OTHER SYSTEMS NOT SPECIFICALLY SHOWN IN THE STRUCTURAL DOCUMENTS

THE ITEMS ABOVE SHALL BE CONSIDERED TO BE DELEGATED DESIGN ITEMS, WHICH REQUIRE DESIGN TO BE COMPLETED BY A SPECIALTY ENGINEER. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THIS DESIGN WILL BE PROVIDED.

DELEGATED DESIGN ITEMS MUST BE SUBMITTED FOR REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. SEAL AND SIGNATURE BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA SHALL BE REQUIRED (SEE THE PROJECT SUBMITTAL LIST ON SHEET S0.##).

3. FOUNDATION

A. FOUNDATION DESIGN IS BASED ON ALLOWABLE BEARING CAPACITY OF 2,500 PSF BASED ON GEOTECHNICAL ENGINEERING REPORT PREPARED BY STEWART WITH PROJECT NUMBER F21048.00 AND DATED JANUARY 13, 2022.

B. CONTRACTOR SHALL OBTAIN A COPY OF THE ABOVE REFERENCED SOILS REPORT AND COMPLY WITH ITS RECOMMENDATIONS.

C. GEOTECHNICAL RECOMMENDATIONS AND FINDINGS FOR SHALLOW FOUNDATIONS:

1. ALLOWABLE SOIL BEARING PRESSURE:
   CONCRETE SLAB ON GRADE WITH INTEGRAL/MONOLITHIC THICKENED SLAB ELEMENTS AND/OR INTEGRAL/MONOLITHIC SPREAD FOOTINGS BEARING ON RESIDUAL SOILS OR ENGINEERED, COMPACTED FILL MATERIAL(S) ..... 2,500 PSF

   CONCRETE SPREAD FOOTINGS BEARING ON RESIDUAL SOILS OR ENGINEERED, COMPACTED FILL MATERIAL(S) ..... 2,500 PSF

   CONTINUOUS CONCRETE WALL FOOTINGS BEARING ON RESIDUAL SOILS OR ENGINEERED, COMPACTED FILL MATERIAL(S) ..... 2,500 PSF

2. MINIMUM FOOTING BEARING DEPTH (AS MEASURED FROM TOP OF EXTERIOR GRADE TO FOOTING BEARING ELEVATION) ..... 2'-0"

3. MINIMUM FOOTING WIDTH ..... 2'-0" (STRIP FTGS)
   ##" (SPREAD FTGS)

4. LATERAL EARTH PRESSURES

ACTIVE (K/a)	50 PSF/FT
AT REST (K/o)	80 PSF/FT
PASSIVE (K/p)	330 PSF/FT
COEFFICIENT OF FRICTION: (BETWEEN BOTTOM OF FOOTING AND SOIL)	0.30

D. THE SOILS ENGINEER OF RECORD SHALL CERTIFY IN WRITING THAT ALL FOUNDATIONS WERE PLACED AND COMPLETED AS SPECIFIED.

E. SOIL-SUPPORTED CONCRETE SLABS ON GRADE SHALL BE AS FOLLOWS:
1. 4" THICK ON PREPARED SUBGRADE W/ WWR 6x6-W2.1xW2.1.
2. IN LOCATIONS THAT WILL RECEIVE LOADING FROM TRUCKS - 8" THICK ON PREPARED SUBGRADE REINFORCED W/#4@12" EA. WAY LOCATED IN TOP 2" OF SLAB THICKNESS.

   WHERE THE STRUCTURAL FOUNDATION PLANS INDICATE THAT SLABS ON GRADE ARE TO BE POST-TENSIONED, REFERENCE SECTION 12 FOR ADDITIONAL INFORMATION.

F. GEOTECHNICAL ENGINEER SHALL VERIFY THE ASSUMED BEARING PRESSURE(S) NOTED ABOVE, CONDITION AND/OR ADEQUACY OF ALL SUBGRADES, FILLS AND BACKFILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, WALLS, FILLS, BACKFILLS, ETC.

G. SIDES OF FOUNDATION ELEMENTS (FOOTINGS, GRADE BEAMS, ETC.) SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH FORMING. FOUNDATIONS POURED AGAINST THE EARTH REQUIRE THE FOLLOWING PRECAUTIONS:
1. SLOPE SIDES OF EXCAVATIONS AS APPROVED BY GEOTECHNICAL ENGINEER.
2. CLEAR UP SLOUGHING BEFORE AND DURING CONCRETE PLACEMENT.

H. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN EARTH BANKS.

I. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.

J. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED, BUT NOT BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. NO BACKFILL SHALL BE PLACED AGAINST CONCRETE WALLS UNTIL CONCRETE HAS ATTAINED FULL 28-DAY STRENGTH.

K. FOUNDATION WALLS THAT HAVE BEEN DESIGNED AS BASEMENT WALLS SHALL MEET THE FOLLOWING REQUIREMENTS.
1. PRIOR TO ANY BACKFILL BEING PLACED, THE WALL SHALL BE BRACED AGAINST LATERAL LOADING FROM SOIL BACKFILL. BRACE DESIGN SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE SUBMITTED FOR REVIEW/APPROVAL TO THE ENGINEER OF RECORD PRIOR TO INSTALLATION. BRACED DESIGN SHALL INCLUDE THE FOLLOWING, AT A MINIMUM:
   a. BRACE SIZE, MATERIAL GRADE, SPACING
   b. BRACE CONNECTION TO CONCRETE WALL
   c. BRACE CONNECTION TO DEADMAN
   d. SIZING OF DEADMAN (DIAMETER, DEPTH, CONCRETE STRENGTH, REINFORCING) AND LOCATION OF DEADMAN (DISTANCE FROM FACE OF BASEMENT WALL)
2. THE CONCRETE FOR THE BASEMENT WALL SHALL REACH A MINIMUM OF 75% OF ITS 28-DAY DESIGN STRENGTH (f'/c) PRIOR TO ANY BACKFILL BEING PLACED.
3. BACKFILLING OF THE WALL SHALL BE COMPLETED IN SUCH A MANNER THAT ALL BACKFILL LOCATED IN A ZONE OCCURRING WITHIN 5'-0" OF THE BACK FACE OF THE WALL BE COMPACTED WITH HAND-OPERATED EQUIPMENT. SHOULD THE CONTRACTOR PREFER TO USE A REMOTE CONTROLLED COMPACTOR TO COMPACT SOILS IN THE ZONE OCCURRING WITHIN 5'-0" OF THE BACK FACE OF THE WALL, THAT IS ACCEPTABLE PROVIDED THAT THE COMPACTOR IS ONE OF THOSE LISTED BELOW:
   a. WACKER NEUSON RT SERIES OR RTX SERIES TRENCH ROLLER
   b. ALTERNATE EQUIPMENT APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
4. WALL BRACING SHALL REMAIN IN PLACE UNTIL ALL OF THE FOLLOWING HAS OCCURRED:
   a. ALL BACKFILL HAS BEEN PLACED AND COMPACTED PER RECOMMENDATIONS FROM THE REFERENCED GEOTECHNICAL ENGINEERING REPORT.
   b. CONCRETE WALL HAS REACHED A MINIMUM OF 75% OF ITS 28-DAY DESIGN STRENGTH (f'/c).
   c. CONCRETE SLAB ON GRADE AT THE TOP OF THE WALL HAS BEEN CAST AND REACHED A MINIMUM OF 75% OF ITS 28-DAY DESIGN STRENGTH (f'/c).
   d. ELEVATED POST-TENSIONED CONCRETE SLAB AT THE TOP OF THE WALL HAS BEEN CAST, POST-TENSIONING TENDONS STRESSED, AND CONCRETE HAS REACHED A MINIMUM OF 75% OF ITS 28-DAY DESIGN STRENGTH (f'/c).

L. FOUNDATION WALLS THAT HAVE BEEN DESIGNED AS CANTILEVER WALLS SHALL NOT REQUIRE LATERAL BRACING DURING OR AFTER BACKFILLING, PROVIDED THAT ALL COMPACTION OF SOILS/FILL BEHIND THE WALL IS PERFORMED ONLY BY HAND OPERATED EQUIPMENT IN THE ZONE OCCURRING WITHIN 5'-0" OF THE BACK FACE OF THE WALL.
1. SHOULD THE CONTRACTOR OPT TO USE A REMOTE CONTROLLED COMPACTOR TO COMPACT SOILS IN THE ZONE OCCURRING WITHIN 5'-0" OF THE BACK FACE OF THE WALL, THAT IS ACCEPTABLE PROVIDED THAT THE COMPACTOR IS ONE OF THOSE LISTED BELOW:
   a. WACKER NEUSON RT SERIES OR RTX SERIES TRENCH ROLLER
   b. ALTERNATE EQUIPMENT APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.

M. CONTRACTOR TO PROVIDE TEMPORARY DE-WATERING IN EXCAVATIONS RESULTING FROM SURFACE WATER, GROUND WATER OR SEEPAGE, AS RECOMMENDED BY THE REFERENCED GEOTECHNICAL ENGINEERING REPORT.
1. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF CONSTRUCTION DEWATERING NECESSARY FOR ANY REQUIRED EXCAVATION. THE CONTRACTOR SHALL SUBMIT THE PROPOSED PLAN FOR CONSTRUCTION DEWATERING TO THE GEOTECHNICAL ENGINEER FOR REVIEW, PRIOR TO COMMENCEMENT OF THE EXCAVATION.

N. UNDER-SLAB DRAINAGE SYSTEMS. IF REQUIRED, ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. DRAINAGE SYSTEMS SHALL BE PROVIDED AS RECOMMENDED BY THE REFERENCED GEOTECHNICAL ENGINEERING REPORT.

Q. UNDER-SLAB VAPOR MITIGATION SYSTEMS (VMS), IF REQUIRED, ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. THE DESIGN OF THESE SYSTEMS SHALL BE PROVIDED BY OTHERS AND SUBMITTED TO THE DESIGN TEAM FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. COORDINATION WITH STRUCTURAL FOUNDATIONS MAY BE REQUIRED, DEPENDING UPON THE NATURE OF THE FOUNDATION SYSTEM, SLAB ON GRADE, AND VMS SYSTEM DESIGN.

R. UNLESS DIRECTION PROVIDED BY THE GEOTECHNICAL ENGINEER IN THE REFERENCED GEOTECHNICAL ENGINEERING REPORT STATES THAT MORE STRENUOUS REQUIREMENTS MUST BE MET, SOIL BELOW INTERIOR CONCRETE SLABS ON GRADE AND ANY FILL WITHIN 10'-0" OF BUILDING LIMIT SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR (ASTM D698) IN FINAL TWO (2) FEET OF FILL AND 95% OF STANDARD PROCTOR BELOW.

S. SUBGRADE PREPARATION FOR SLABS ON GRADE SHALL BE PERFORMED IN ACCORDANCE WITH THE REFERENCED GEOTECHNICAL ENGINEERING REPORT. THE GENERAL CONTRACTOR SHOULD ALSO REFERENCE THE CIVIL DRAWINGS FOR INFORMATION PERTAINING TO SITE GRADING.

T. WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN ONE VERTICAL TO TWO HORIZONTAL, AND THE MAXIMUM STEP HEIGHT SHALL NOT EXCEED 24". REFERENCE DETAILS IN THE S3.0# SERIES OF THESE DRAWINGS FOR ADDITIONAL INFORMATION.

U. GRADE BEAMS
1. BOTH VERTICAL FACES OF ALL GRADE BEAMS SHALL BE FORMED FOR FULL BEAM DEPTH.
2. GRADE BEAM REINFORCING SHALL BE SUPPORTED WITH A MINIMUM OF 3 INCHES CLEAR COVER USING BEAM BOLSTERS DESIGNED AND MANUFACTURED FOR SUPPORT ON SOIL.

V. CONSTRUCTION COORDINATION
1. SLABS ON GRADE HAVE NOT BEEN DESIGNED FOR CRANE LOADS. THE CONTRACTOR IS CAUTIONED AGAINST LOADING THE SLAB-ON-GRADE (AS SHOWN ON THESE DRAWINGS) WITH CRANE LOADS.
   a. SHOULD CONSTRUCTION SEQUENCING REQUIRE THAT ONE OR MORE SLABS ON GRADE BE DESIGNED TO RESIST CRANE LOADS, THE GENERAL CONTRACTOR IS REQUIRED TO EITHER (A) PRODUCE AND SUBMIT A COMPLETE DESIGN FOR THE NECESSARY SLAB(S) ON GRADE, INCLUDING CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA, OR (B) ENGAGE THE STRUCTURAL ENGINEER OF RECORD TO PROVIDE THE NECESSARY DESIGN.
   b. DESIGNING A SLAB ON GRADE FOR CRANE LOADS WILL RESULT IN AN INCREASE IN SLAB STRENGTH, THICKNESS, AND REINFORCING.
2. THE CONCRETE RETAINING WALLS HAVE NOT BEEN DESIGNED TO RESIST LATERAL LOADS RESULTING FROM CRANE LOADS. THE CONTRACTOR SHALL KEEP ALL CRANE TRACKS AWAY FROM CONCRETE RETAINING WALLS A MINIMUM OF THE WALL HEIGHT OR 15'-0", WHICHEVER IS GREATER.

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NORTH CAROLINA PROFESSIONAL SEAL 24417 John Craig Fisher ENGINEER JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date: 03.22.22	Project No.: 20020A
Drawn By: Author	Sheet No.: S0.00
Checked By: Checker	

Sheet Title: GENERAL NOTES

4. REINFORCED CONCRETE

A. THE DESIGN OF ALL REINFORCED CONCRETE SHALL CONFORM TO ACI 318, IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318, ACI 318.1 AND ACI 301.

B. CONCRETE TEST REPORTS SHALL BE FURNISHED TO THE DESIGN TEAM AS THEY ARE MADE AVAILABLE BY THE TESTING AGENCY TO ENSURE THAT REVIEW OF CONCRETE STRENGTH IS AN ON-GOING PROCESS. CONCRETE TEST REPORTS SHALL ALSO BE AVAILABLE AT THE JOB SITE.

C. CONCRETE MIX DESIGNS SHALL BE ESTABLISHED BY THE SUPPLIER IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318, CHAPTER 5. MIX DESIGNS SHALL BE SUBMITTED WITH BACK-UP DATA, PER ACI 318, CHAPTER §4.2.3, TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW PRIOR TO CONCRETE PLACEMENT. THE PROPOSED MATERIALS AND CONCRETE MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY AND/OR 3RD PARTY SPECIAL INSPECTION AGENCY. RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH IS THE CONTRACTOR'S.

D. CLASSES OF CONCRETE
ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN THE TABLE BELOW UNLESS NOTED OTHERWISE ON THESE DRAWINGS:

USAGE	COMPRESSIVE STRENGTH (f'c)	AGGREGATE SIZE (IN.)	CONCRETE EXPOSURE CLASSES
SPREAD FOOTINGS	3,000	1.00	F0, S0, P0, C1
CONTINUOUS FOOTINGS	3,000	1.50	F0, S0, P0, C1
GRADE BEAMS	3,000	1.00	F0, S0, P0, C1
PILASTERS	4,000	1.00	F0, S0, P0, C1
PEDESTALS	4,000	1.00	F0, S0, P0, C1
RETAINING WALLS	4,000	1.00	F0, S0, P0, C1
RETAINING WALLS (EXTERIOR, EXPOSED)	4,500	1.00	F2, S0, P0, C1
INTERIOR SLABS ON GRADE	3,000	1.00	F0, S0, P0, C1
EXTERIOR SLABS ON GRADE	4,500	1.00	F2, S0, P0, C1
COLUMNS (INTERIOR)	SEE SCHEDULE	1.00	F0, S0, P0, C0
COLUMNS (EXTERIOR, EXPOSED)	SEE SCHEDULE	1.00	F1, S0, P0, C1
SLABS ON METAL DECK	4,000 LWC	0.75	F0, S0, P0, C0
NON-STRUCTURAL TOPPING	3,000	0.75	F0, S0, P0, C0
NON-STRUCTURAL TOPPING AT CORRIDORS, BALCONIES (WOOD-FRAMED STRUCTURE)	2,000	- -	F0, S0, P0, C0
ARCHITECTURAL PRECAST	5,000 (MIN.)	0.75	F1, S0, P0, C1

1. COMPRESSIVE STRENGTH NOTED ABOVE SHALL BE THE 28-DAY COMPRESSIVE STRENGTH FOR ALL CONCRETE MIXES WITH A REQUIRED STRENGTH OF 6,500 PSI OR LESS.
2. COMPRESSIVE STRENGTH NOTED ABOVE SHALL BE THE 56-DAY COMPRESSIVE STRENGTH FOR STRENGTHS 7,000 PSI AND HIGHER
3. IN ADDITION TO THE MINIMUM COMPRESSIVE STRENGTH REQUIREMENT, CONCRETE MIX DESIGNS FOR ELEVATED HORIZONTAL FRAMING (SLABS, BEAMS, GIRDERS, ETC.), COLUMNS, AND WALLS SHALL BE PROPORTIONED FOR A MAXIMUM WATER-CEMENT RATIO OF 0.45.
4. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, UNLESS OTHERWISE NOTED.
5. CONCRETE SLUMP SHALL BE 4", ±1", AT LOCATION OF DISCHARGE, UNLESS OTHERWISE NOTED.
6. ALL CONCRETE MIX DESIGNS SHALL BE PROPORTIONED FOR A MAXIMUM ALLOWABLE UNIT SHRINKAGE OF 0.05% AS DETERMINED BY ASTM C157 (MEASURED AT 28 DAYS AFTER CURING IN LIME WATER WITH AIR STORAGE).
7. ALL CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN 4.5% - 6.0% ENTRAINED AIR, AS REQUIRED PER TABLE 19.3.3.1 IN ACI 318.
8. USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.
9. PORTLAND CEMENT SHALL CONFORM TO ASTM C15O, TYPE I.
10. SUPPLEMENTARY cementitious MATERIALS, AS LISTED BELOW, MAY BE USED TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX DESIGN. THE MAXIMUM PERCENTAGE OF REPLACEMENT IS SHOWN FOR EACH TYPE OF cementitious MATERIAL IN THE CHART BELOW.
    a. FLY ASH MEETING THE REQUIREMENTS OF EITHER TYPE "C" OR TYPE "F" PER ASTM C618.
    b. GROUND GRANULATED BLAST-FURNACE SLAB MEETING THE REQUIREMENTS OF ASTM C989.
    c. SILICA FUME MEETING THE REQUIREMENTS OF ASTM C1240.

RECOMMENDED UNITS ON cementitious MATERIALS FOR CONCRETE MIX DEISGNS	
cementitious MATERIAL(S)	MAXIMUM PERCENT OF REPLACEMENT, BY MASS
FLY ASH CONFORMING TO ASTM C618	25%
SLAG CEMENT CONFORMING TO ASTM C989	50%
SILICA FUME CONFORMING TO ASTM C1240	10%
TOTAL COMBINED AMOUNT OF FLY ASH (ASTM C618) AND SILICA FUME (ASTM C1240)	35%
TOTAL COMBINED AMOUNT OF FLY ASH (ASTM C618) SLAG CEMENT (ASTM C989) AND SILICA FUME (ASTM C1240)	50%

11. WHERE SUPPLEMENTARY cementitious MATERIALS (FLY ASH, SLAG AND/OR SILICA FUME) ARE TO BE USED IN CONCRETE MIX DESIGNS INTENDED FOR POST-TENSIONED CONCRETE CONSTRUCTION, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT MIX DESIGN INFORMATION THAT IS SUBMITTED FOR REVIEW AND APPROVAL CONTAINS HISTORICAL BREAK DATA FOR EARLY AGE CYLINDER BREAKS. EARLY AGE SHALL BE DEFINED AS 1-DAY, 2-DAY OR 3-DAY BREAKS. WHILE NOT A CODE REQUIREMENT, THE EARLY BREAK HISTORY IS NEEDED TO EVALUATE THE ABILITY OF THE MIX TO ACHIEVE ADEQUATE STRENGTH GAIN TO ENSURE THAT POST-TENSIONING TENDONS CAN BE STRESSED WITHIN 72 HOURS OF CONCRETE BEING CAST.

E. HORIZONTAL CONSTRUCTION JOINTS
1. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN THE PLACEMENT OF ELEVATED CONCRETE SLABS OR SLABS ON GRADE.
2. THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS IN THE PLACEMENT OF CONCRETE JOISTS, BEAMS OR GIRDERS, UNLESS SPECIFICALLY SHOWN ON THIS SET OF STRUCTURAL DRAWINGS. ANY DEVIATIONS SHALL BE SUBMITTED TO, AND APPROVED IN WRITING BY, THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL NOT PROCEED UNTIL WRITTEN APPROVAL BY THE ENGINEER OF RECORD HAS BEEN PROVIDED
    a. IT IS LIKELY THAT THE ADDITION OF A HORIZONTAL CONSTRUCTION JOINT WITHIN THE DEPTH OF A CONCRETE JOIST, BEAM OR GIRDER WILL RESULT IN CHANGES TO THE MEMBER DESIGN THAT TRANSLATE INTO CHANGES TO THE REINFORCING.
3. HORIZONTAL CONSTRUCTION JOINTS THRU COLUMNS SHALL OCCUR AT THE SOFFIT OF SLABS, DROP PANELS, OR BEAMS, UNLESS SPECIFICALLY SHOWN OTHERWISE IN THIS SET OF STRUCTURAL DRAWINGS. IF ADDITIONAL HORIZONTAL CONSTRUCTION JOINTS ARE REQUIRED AS A RESULT OF CONSTRUCTION SEQUENCING, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE THE ENGINEER OF RECORD AWARE OF THE LOCATIONS WHERE THIS CONDITION EXISTS. SHOP DRAWINGS SHALL BE PREPARED SUCH THAT THESE CONDITIONS ARE NOTED AND ADDITIONAL REINFORCING IS PROVIDED, AS REQUIRED.
4. HORIZONTAL CONSTRUCTION JOINTS THRU SHEAR WALLS SHALL OCCUR AT THE SOFFIT OF SLABS, DROP PANELS, OR BEAMS, UNLESS SPECIFICALLY SHOWN OTHERWISE IN THIS SET OF STRUCTURAL DRAWINGS. IF ADDITIONAL HORIZONTAL CONSTRUCTION JOINTS ARE REQUIRED AS A RESULT OF CONSTRUCTION SEQUENCING, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE THE ENGINEER OF RECORD AWARE OF THE LOCATIONS WHERE THIS CONDITION EXISTS. SHOP DRAWINGS SHALL BE PREPARED SUCH THAT THESE CONDITIONS ARE NOTED AND ADDITIONAL REINFORCING IS PROVIDED, AS REQUIRED.
5. HORIZONTAL CONSTRUCTION JOINTS THRU CONCRETE CANTILEVER RETAINING WALLS AND/OR CONCRETE BASEMENT WALLS ARE ACCEPTABLE, PROVIDED THAT WALL REINFORCING IS DETAILED AND PROVIDED PER THE DETAILS SHOWN IN THIS SET OF STRUCTURAL DRAWINGS.

F. VERTICAL CONSTRUCTION JOINTS
1. VERTICAL CONSTRUCTION JOINTS IN ELEVATED CONCRETE SLABS, JOISTS, BEAMS AND/OR GIRDERS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH THE REQUIREMENTS SET FORTH IN THIS SET OF STRUCTURAL DRAWINGS. WHERE MEMBERS ARE POST-TENSIONED, CONSTRUCTION JOINT LOCATIONS MUST ALSO BE COORDINATED WITH THE LAYOUT OF POST-TENSIONING TENDONS, AS WELL AS THE POST-TENSIONING STRESSING SEQUENCE.
2. VERTICAL CONSTRUCTION JOINTS THRU COLUMNS SHALL NOT OCCUR.
3. VERTICAL CONSTRUCTION JOINTS THRU SHEAR WALLS SHALL NOT OCCUR WITHOUT HAVING BEEN REVIEWED BY THE STRUCTURAL ENGINEER OF RECORD, AND APPROVAL PROVIDED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
    a. IT IS LIKELY THAT THE ADDITION OF A VERTICAL CONSTRUCTION JOINT THRU A CONCRETE SHEAR WALL WILL RESULT IN CHANGES TO THE WALL DESIGN THAT TRANSLATE INTO CHANGES TO THE REINFORCING.
4. VERTICAL CONSTRUCTION JOINT LOCATIONS IN CONCRETE CANTILEVER RETAINING WALLS AND CONCRETE BASEMENT WALLS SHALL BE DETERMINED BY THE GENERAL CONTRACTOR, AND SHALL BE IN ACCORDANCE WITH THE DETAILS PROVIDED IN THE SET OF STRUCTURAL DRAWINGS. SPACING OF VERTICAL CONSTRUCTION JOINTS SHALL NOT EXCEED 60'-0". VERTICAL CONSTRUCTION JOINTS SHALL BE THOROUGHLY ROUGHENED BY MECHANICAL MEANS AND CLEANED.

G. REFER TO ARCHITECTURAL DRAWINGS FOR CLIPS, GROOVES, ROUNDS, ETC., TO BE CAST IN CONCRETE AND CONCRETE FINISHES. CHAMFER OR ROUND ALL EXPOSED CORNERS, MINIMUM 3/4".

H. VERTICAL SLEEVED OPENINGS THRU ELEVATED CONCRETE SLABS, JOISTS, BEAMS AND/OR GIRDERS
1. SLEEVES FOR PLUMBING, ELECTRICAL, MECHANICAL, SPRINKLER, DATA, ETC. SHALL BE PLACED PRIOR TO FINAL INSPECTION OF REINFORCING. PLACEMENT SHALL BE PER THE APPROVED SLEEVING SHOP DRAWINGS SUBMITTED BY THE GENERAL CONTRACTOR FOR REVIEW AND APPROVAL BY THE DESIGN TEAM.
    - SLEEVE SIZES AND LOCATIONS ARE NOT KNOWN DURING THE DESIGN PHASE OF THE PROJECT. FOR THAT REASON, SLEEVES (AND OTHER SMALL OPENINGS) IN THE ELEVATED CONCRETE FRAMING HAVE NOT BEEN ACCOUNTED FOR BY E+M.
    - DURING REVIEW OF THE SLEEVING SHOP DRAWINGS (PREPARED BY THE GENERAL CONTRACTOR), THERE IS A POSSIBILITY THAT THE SIZE, LOCATION AND/OR QUANTITY OF SLEEVES MAY RESULT IN CHANGES NEEDING TO BE MADE TO THE MILD REINFORCING, POST-TENSIONING TENDONS AND/OR STUD RAIL IN THE ELEVATED CONCRETE SLAB.
2. REINFORCE AROUND SLEEVES AS SHOWN IN THE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
3. PROVIDE CLEARANCE BETWEEN SLEEVES AS SHOWN IN THE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
4. PROVIDE CLEARANCE BETWEEN SLEEVES AND REBAR OF NO LESS THAN 2".
5. PROVIDE CLEARANCE BETWEEN SLEEVES AND POST-TENSIONING TENDONS OF NO LESS THAN 3".
6. PROVIDE CLEARANCE BETWEEN SLEEVES AND SLAB EDGES OF NO LESS THAN 3".
7. PROVIDE CLEARANCE BETWEEN SLEEVES AND BEAM REINFORCING AND/OR BEAM VERTICAL FACES AS SHOWN IN THE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
8. IF SLEEVES ARE OMITTED AND THE GENERAL CONTRACTOR MUST LATER CORE THE CONCRETE, THE GENERAL CONTRACTOR SHALL FIRST CONTACT THE ENGINEER OF RECORD. NO CORING OF ELEVATED CONCRETE FRAMING SHALL OCCUR WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.

I. VERTICAL SLEEVED OPENINGS THRU SOIL-SUPPORTED CONCRETE SLABS ON GRADE
1. REINFORCE AROUND SLEEVES AS SHOWN IN THE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
2. PROVIDE CLEARANCE BETWEEN SLEEVES AS SHOWN IN THE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
3. PROVIDE CLEARANCE BETWEEN SLEEVES AND REBAR OF NO LESS THAN 2".
4. IF SLEEVES ARE OMITTED AND THE GENERAL CONTRACTOR MUST LATER CORE CONCRETE SLAB ON GRADE, THE GENERAL CONTRACTOR MAY PROCEED WITH CORING WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD

J. CONDUIT LOCATED WITHIN CONCRETE SLABS..
1. FOR HARD AND/OR FLEXIBLE CONDUIT IN ELEVATED SLAB FRAMING, SEE DETAILS IN THIS SET OF STRUCTURAL DRAWINGS.
2. HORIZONTAL CONDUIT IS NOT ALLOWED IN CONCRETE SLABS ON GRADE. CONDUIT SHOULD BE ROUTED BELOW THE SLAB.
3. REFER TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR CONDUIT SIZE, TYPE, MATERIAL, LAYOUTS, ETC.

K. REINFORCING STEEL
1. ALL REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS, UNLESS NOTED OTHERWISE ON THESE DRAWINGS OR IN THE NOTES BELOW.
    a. BAR SIZES #3 THRU #10 (INCLUSIVE) - ASTM A615, GRADE 60
    b. BAR SIZES #11, #14, #18 - ASTM A615, GRADE 75
2. PROVIDE REINFORCING STEEL CONFORMING TO ASTM A706 FOR ALL REINFORCING STEEL REQUIRED TO BE WELDED AND WHERE NOTED ON THESE DRAWINGS.
3. PROVIDE GALVANIZED REINFORCING STEEL IN ACCORDANCE WITH ASTM A767 CLASS II (2.0 OZ ZINC PER SQUARE FOOT), WHERE NOTED ON THESE DRAWINGS.
4. PROVIDE EPOXY-COATED REINFORCING STEEL CONFORMING TO ASTM A775 WHERE NOTED ON THESE DRAWINGS.
5. PROVIDE DEFORMED BAR ANCHORS CONFORMING TO ASTM A496 (75,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS. REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR DEFORMED BAR ANCHORS. ALL REINFORCING BAR BENDS TO BE MADE COLD.
6. PROVIDE WELDED SMOOTH WIRE REINFORCEMENT CONFORMING TO ASTM A1064 (65,000 PSI YIELD STRENGTH) AND SHALL BE PROVIDED IN FLAT SHEETS WHERE NOTED ON THESE DRAWINGS.
7. PROVIDE WELDED DEFORMED WIRE REINFORCEMENT CONFORMING TO ASTM A497 (70,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS.
8. FLAT BAR STOCK USED TO FABRICATE STUD RAILS SHALL BE ASTM A572 GRADE 50 (F/y = 50 ksi, F/u = 65 ksi).
9. HEADED STUDS USED TO FABRICATE STUD RAILS SHALL BE ASTM A10 (F/y = 51 ksi, F/u = 65 ksi).

L. WHERE WELDED WIRE REINFORCEMENT IS SPECIFIED, IT SHALL BE CONTINUOUS ACROSS THE ENTIRE CONCRETE SURFACE WITHOUT INTERRUPTION BY BEAMS, GIRDERS, OR COLUMNS. SPLICES SHALL BE LAPPED ONE CROSS WIRE SPACING PLUS 2 INCHES.

M. PROVIDE WELDED SMOOTH WIRE REINFORCEMENT (WWR 6x6-W2.9xW2.9, MINIMUM) IN ALL TOPPING SLABS AND HOUSEKEEPING SLABS, UNLESS SPECIFIED OTHERWISE ON THESE DRAWINGS.

N. CONCRETE PROTECTION FOR REINFORCEMENT OF CAST-IN-PLACE MEMBERS SHALL BE IN ACCORDANCE WITH ACI 318, §20.61..3.1. UNLESS NOTED OTHERWISE. MINIMUM CLEAR COVER OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS.
1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.............. 3.00"
2. CONCRETE EXPOSED TO EARTH AND/OR WEATHER
NO. 6 THROUGH NO. 11 BARS.. 2.00"
NO. 5 BAR AND SMALLER.. 1.50"
CONCRETE NOT EXPOSED TO WEATHER AND NOT IN CONTACT WITH GROUND
SLABS, WALLS, JOISTS W/ NO. 11 BAR AND SMALLER.................... 0.75"
BEAMS AND COLUMNS (VERTICALS, TIES, SPIRALS, STIRRUPS).................... 1.50"

O. THE FOLLOWING NOTATION IS USED ON THESE DRAWINGS TO DENOTE REINFORCING STEEL DEVELOPMENT LENGTHS AND SPLICE TYPES:

CD	COMPRESSION DEVELOPMENT LENGTH
TD	TENSION DEVELOPMENT LENGTH
CS	COMPRESSION LAP SPLICE
EB	END-BEARING COMPRESSION SPLICE
M	MECHANICAL SPLICE (MINIMUM 125% YIELD STRENGTH)
A	CLASS A TENSION LAP SPLICE
B	CLASS B TENSION LAP SPLICE

REFER TO TABLES ON THESE DRAWINGS FOR MINIMUM DEVELOPMENT AND SPLICE LENGTHS.

P. UNSCHEDULED BEAMS AND SLABS, INCLUDING GRADE BEAMS, SHALL HAVE CONTINUOUS TOP BARS LAPPED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS "A" TENSION SPLICE. BOTTOM BARS SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS "A" TENSION SPLICE.

Q. BARS SHALL BE IN CONTACT WHEN FORMING A LAP SPLICE, UNLESS NOTED OTHERWISE.

R. PROVIDE CORNER BARS AT ALL TURN-DOWN SLAB CORNERS AND CAST-IN-PLACE CONCRETE WALL CORNERS. PROVIDE CLASS "B" LAP SPLICE BETWEEN CORNER BARS AND MAIN REINFORCING.

S. VERTICAL BARS PLACED ON THE DIRT-FACING SIDE OF BASEMENT WALLS SHALL BE SPLICED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS "A" TENSION SPLICE. VERTICAL BARS LACED OPPOSITE THE DIRT-FACING SIDE SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS "A" TENSION SPLICE. HORIZONTAL BARS SHALL HAVE A LAP SPLICE AS SHOWN IN THE LAP SPLICE TABLES.

T. REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED WITH A CLASS "B" LAP SPLICE, UNLESS SPECIFICALLY DETAILED OTHERWISE. PROVIDE CONTINUOUS REINFORCEMENT WHERE EVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE (CLASS "B"), UNLESS NOTED OTHERWISE.

U. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED WALL OR COLUMN REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES (CLASS "B"), UNLESS NOTED OTHERWISE.

V. HORIZONTAL REINFORCEMENT IN FOOTINGS, TURNDOWN SLABS AND WALLS SHALL BE CONTINUOUS AROUND CORNERS. HORIZONTAL REINFORCEMENT SHALL CONTINUE AT ENDS AND CORNERS WITH BEND TO FAR FACE OF INTERSECTING ELEMENT IN EACH DIRECTION. ADDITIONAL HORIZONTAL CORNER BARS OF SAME SIZE AND SPACING MAY BE PROVIDED. PROVIDE CORNER BARS AT ALL TURN-DOWN SLAB CORNERS AND CAST-IN-PLACE CONCRETE ALL CORNERS. PROVIDE CLASS "B" LAP BETWEEN CORNER BARS AND MAIN REINFORCING.

W. DETAILING, FABRICATION AND PLACING REINFORCING STEEL AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" DETAILING MANUAL. SUBMIT SHOP DRAWINGS FOR APPROVAL, SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED.

X. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE. THE GENERAL CONTRACTOR SHALL NOT PLACE ANY REINFORCING UNTIL APPROVED SHOP DRAWINGS ARE RECEIVED AT THE JOB SITE.

Y. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE. TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.

Z. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS DIRECTED TO DO SO IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.

AA. ALL CONCRETE CONSTRUCTION SHALL BE INSPECTED BY OR BE UNDER SUPERVISION OF A LICENSED DESIGN PROFESSIONAL OR BY A QUALIFIED SPECIAL INSPECTOR.

BB. WHERE INDICATED ON THE PLANS, REINFORCING BAR STANDARD HOOKS MAY BE REPLACED WITH LENTON TERMINATORS PER ICC ER 3967.

CC. WHERE INDICATED ON THE PLANS, CLASS "B" TENSION LAP SPLICES MAY BE REPLACED WITH TYPE 2 MECHANICAL SPLICES PER ICC ER 5064 OR ICC ER 5461.

DD. THE GENERAL CONTRACTOR SHALL INCLUDE IN THEIR PRICE 50 YARDS OF 5,000 PSI CONCRETE TO BE PLACED AT THE DIRECTION OF THE ENGINEER OF RECORD. A CREDIT SHALL BE GIVEN BACK TO THE OWNER AFTER PROJECT COMPLETION FOR CONCRETE NOT PLACED.

EE. PROVIDE FOR AN ALLOWANCE OF 1.50% OF REINFORCING BAR TONNAGE TO BE FABRICATED AND PLACED DURING PROGRESS OF WORK AS MAY BE DIRECTED BY THE STRUCTURAL ENGINEER, IN ADDITION TO ALL THE STEEL INDICATED ON THE DRAWINGS.

A. ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS SHALL BE OF A SIZE AND PROFILE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

B. ARCHITECTURAL PRECAST CONCRETE CLADDING PANELS SHALL BE CAST TRUE AND ACCURATE WITH ALL OPENINGS, REVEALS AND RUSTICATIONS LOCATED AS SHOWN IN THE ARCHITECTURAL DRAWINGS.

C. ARCHITECTURAL PRECAST CONCRETE PANELS SHALL BE ATTACHED TO THE BUILDING SUPERSTRUCTURE (STRUCTURAL STEEL BEAMS AND COLUMNS) IN A MANNER THAT IS CONSISTENT WITH THE DETAILS PROVIDED BY THE STRUCTURAL ENGINEER OF RECORD. THE DESIGN OF THE PRECAST CONNECTIONS TO THE BUILDING SUPERSTRUCTURE (EMBED PLATES WITHIN PRECAST PANELS, LOOSE STEEL ANGLES, ETC.) SHALL BE BY THE PRECAST SPECIALTY ENGINEER.

D. ARCHITECTURAL PRECAST CONCRETE PANELS SHALL BE ATTACHED TO THE BUILDING SUPERSTRUCTURE (CONCRETE SLABS, CONCRETE BEAMS AND CONCRETE COLUMNS) IN A MANNER THAT IS CONSISTENT WITH THE DETAILS PROVIDED BY THE ENGINEER OF RECORD. THE DESIGN OF THE PRECAST CONNECTIONS TO THE BUILDING SUPERSTRUCTURE (EMBED PLATES WITHIN PRECAST PANELS, LOOSE STEEL ANGLES, ETC.) SHALL BE BY THE PRECAST SPECIALTY ENGINEER.

E. WHERE ELEVATED CONCRETE FRAMING SUPPORTS ARCHITECTURAL PRECAST CONCRETE PANELS, SHOP DRAWINGS FOR THE ARCHITECTURAL PRECAST SHALL BE SUBMITTED TO THE DESIGN TEAM AND REVIEWED PRIOR TO CONCRETE BEING POURED IN THE FIELD. THIS IS TO ENSURE THAT CONNECTIONS OF THE ARCHITECTURAL PRECAST PANELS TO THE CONCRETE SUPERSTRUCTURE HAVE BEEN COORDINATED, AND THAT ALL EMBEDS ARE PROVIDED IN THE CONCRETE SLABS, BEAMS AND COLUMNS.

F. ALL ARCHITECTURAL PRECAST CONCRETE PANELS SHALL BE TEMPORARILY SUPPORTED/BRACED UNTIL ALL CONNECTIONS TO THE BUILDING SUPERSTRUCTURE HAVE BEEN COMPLETED.

G. ALL WELD PLATES AND CONNECTION MATERIALS SHALL BE SUPPLIED BY THE PRECAST CONCRETE MANUFACTURER/ERECTOR.

H. ALL EXPOSED WELD PLATES AND/OR CONNECTION MATERIALS SHALL BE HOT DIPPED GALVANIZED, TYP.

I. LIFTING INSERTS SHALL BE CAST INTO ALL ARCHITECTURAL PRECAST CONCRETE PANELS AND SHALL BE DESIGNED/SPECIFIED BY THE PRECAST SPECIALTY ENGINEER. LIFTING INSERTS SHALL HAVE A MINIMUM CAPACITY FOR TENSION, PULL-OUT AND SHEAR FAILURE MODES THAT IS AT LEAST TWO (2) TIMES THE TRIBUTARY DEAD WEIGHT OF THE PANEL.

J. ARCHITECTURAL PRECAST CONCRETE PANELS WITH OPENINGS SHALL BE STRONG-BACKED ACCORDING TO THE PRECAST MANUFACTURER'S OR LIFTING INSERT SUPPLIER'S DESIGN REQUIREMENTS AND/OR RECOMMENDATIONS.

K. ARCHITECTURAL PANELS WITH SLENDER ELEMENTS AND/OR PROJECTING ELEMENTS SHALL BE TRANSPORTED AND ERECTED IN SUCH A MANNER THAT THE SLENDER AND/OR PROJECTING ELEMENTS ARE NOT SUBJECT TO LOADING THAT MAY CAUSE THEM TO CRACK. IT SHALL BE THE RESPONSIBILITY OF THE PRECAST SPECIALTY ENGINEER AND THE ERECTOR TO COORDINATE LIFTING REQUIREMENTS FOR ALL PRECAST PANELS.

L. COMPLETE FABRICATION AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW, AND SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA. DRAWINGS SHALL SHOW PANEL MARKS AND LOCATIONS IN PLAN AND ELEVATION, INCLUDING ALL BLOCKOUTS, EMBED PLATES, CONNECTION DETAILS, LIFTING INSERTS, ETC. PANELS SHALL NOT BE FABRICATED PRIOR TO APPROVED SHOP DRAWINGS BEING RETURNED FROM BOTH ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

M. A SET OF CALCULATIONS FOR THE ARCHITECTURAL PRECAST CONCRETE PANELS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. THE CALCULATIONS SHALL INCLUDE THE DESIGN OF INDIVIDUAL PANELS, AS WELL AS CONNECTIONS TO THE BUILDING SUPERSTRUCTURE. THE CALCULATIONS SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.

5. EXPANSION ANCHORS, ADHESIVE ANCHORS AND POWDER ACTUATED FASTENERS

A. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED BELOW MAY BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
1. SUBSTITUTIONS WILL ONLY BE CONSIDERED FOR PRODUCTS HAVING A CODE REPORT RECOGNIZING THE PRODUCT FOR THE APPROPRIATE APPLICATION.
2. SUBSTITUTION REQUESTS SHALL INCLUDE CALCULATIONS OR TABLE(S) OF PUBLISHED, TABULATED VALUES OBTAINED THROUGH EMPIRICAL TEST PROCEDURES THAT DEMONSTRATE THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE EQUIVALENT PERFORMANCE VALUES OF THE DESIGN BASIS PRODUCT.

B. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR PRODUCT INSTALLATION TRAINING AND A LETTER SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD INDICATING TRAINING HAS TAKEN PLACE.

C. SPECIAL INSPECTIONS ARE REQUIRED PER THE 2015 INTERNATIONAL BUILDING CODE AND PRODUCT EVALUATION REPORTS.

D. THE BELOW PRODUCTS ARE THE DESIGN BASIS FOR THIS PROJECT.
1. FOR ANCHORING INTO CONCRETE:
    a. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. PRE-APPROVED ANCHORS INCLUDE:
        - -SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-2713)
    b. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. DESIGN FOR BOND STRENGTH HAS BEEN BASED ON CRACKED CONCRETE, ACI 355.4 TEMPERATURE CATEGORY B, AND INSTALLATIONS INTO DRY HOLES DRILLED INTO CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS USING A DRILL BIT QUALIFIED BY THE MANUFACTURER. ADHESIVE ANCHORS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER WHEN REQUIRED PER ACI 318-14 D9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-14 D.9.2.4 PRE-APPROVED ANCHORS INCLUDE:
        - -SIMPSON STRONG-TIE "SET-3G" (ICC-ES ESR-4057)
2. FOR ANCHORING INTO SOLID-GROUTED CONCRETE MASONRY:
    a. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR ICC-ES AC106. PRE-APPROVED ANCHORS INCLUDE:
        - SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
    b. ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH CC-ES AC58. PRE-APPROVED ANCHORS INCLUDE:
        - SIMPSON STRONG-TIE "SET-XP" (IAPMO UES ER-265)
3. FOR ANCHORING INTO HOLLOW CONCRETE MASONRY:
    a. MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC106. PRE-APPROVED ANCHORS INCLUDE:
        - SIMPSON STRONG-TIE "TITEN-HD" (ICC-ES ESR-1056)
    b. ADHESIVE ANCHORS WITH SCREEN TUBES SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH CC-ES AC58. THE APPROPRIATE PRE-APPROVED ANCHORS INCLUDE:
        - SIMPSON STRONG-TIE "SET-XP" (IAMPO UES ER-265)

E. WHERE REQUIRED FOR ANCHORAGE TO STEEL, CONCRETE AND/OR CONCRETE MASONRY, POWER-ACTUATED FASTENERS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ICC-ES AC70.
    a. PRE-APPROVED FASTENERS INCLUDE:
        - SIMPSON STRONG-TIE "GAS ACTUATED PINS" (ICC-ES ESR-2811)
        - SIMPSON STRONG-TIE "POWDER ACTUATED PINS" (ICC-ES ESR-2138)

6. CONCRETE MASONRY

A. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (F'm) SHALL BE 1,500 PSI.

B. MATERIAL SHALL BE AS FOLLOWS:
CMU.......................... GRADE N, ASTM C-90 (UNIT STRENGTH = 1900 PSI
MORTAR.................... TYPE S FOR WALLS NOT IN CONTACT WITH EARTH
TYPE M FOR WALLS IN CONTACT WITH EARTH

C. GROUT FOR CONCRETE MASONRY WALL SHALL CONFORM TO ASTM C476, f'c = 3,000 PSI, MIN. GROUT SHALL BE CONSOLIDATED BY THOROUGHLY RODDING ALL CELLS.

D. GROUT PLACEMENT SHALL BE LOW-LIFT. THE CONSTRUCTION JOINTS ARE CREATED BY THE LEVEL OF GROUT STOPPING AT 1-1/2" FROM TOP OF MASONRY AND THE STEEL REINFORCING PROJECTING ABOVE THE TOP COURSE FOR A SUFFICIENT HEIGHT TO PROVIDE A LAP AT THE SPLICE OF 48 BAR DIAMETERS. THE CONSTRUCTION JOINT SHALL BE LOCATED 3'-0" MINIMUM FROM TOP AND BOTTOM OF STRUCTURAL ELEMENTS SUCH AS SLABS, ROOFS, ETC.

E. CONCRETE MASONRY WALLS SHALL BE TEMPORARILY BRACED DURING ERECTION. REMOVE TEMPORARY BRACING ONLY AFTER WALLS ARE CONNECTED TO SUPPORTING ELEMENTS.

F. WHERE APPLICABLE, ALL CONCRETE BLOCK BELOW THE DESIGN FLOOD ELEVATION SHALL HAVE ALL CELLS FILLED WITH GROUT. SEE ARCH. AND CIVIL DRAWINGS FOR ADDITIONAL INFO.

G. ALL CELLS CONTAINING REINFORCEMENT SHALL BE GROUTED SOLID.

H. MAXIMUM CONTROL JOINT SPACING IN MASONRY WALL = 30'-0" UNLESS NOTED. SEE ARCHITECTURAL DRAWINGS FOR LOCATION.

I. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL NON-LOAD-BEARING CMU WALLS SHALL BE REINFORCED AS SHOWN IN DETAILS ON SHEET S4.20. ADDITIONALLY:
1. PROVIDE CONTINUOUS BOND BEAM REINFORCING W/(2)-#5 CONTINUOUS AT ALL FLOOR LEVELS. WHERE FLOOR-TO-FLOOR HEIGHTS EXCEED 11'-0", PROVIDE INTERMEDIATE BOND BEAMS AT 10'-0" MAXIMUM SPACING.
2. PROVIDE CONTINUOUS 9 GAGE TRUSS-TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. VERTICALLY (EVERY OTHER COURSE), TYP.

J. DOWEL ALL CMU WALLS INTO GRADE BEAMS, SPREAD FOOTINGS, CONTINUOUS FOOTINGS, THICKENED SLAB ELEMENTS, CONCRETE FOUNDATION WALLS AND/OR ELEVATED CONCRETE FRAMING UPON WHICH IT BEARS. DOWELS SHALL HAVE STANDARD HOOKS INTO THE CONCRETE FOUNDATION, WALL OR FRAMING, TYP. DOWELS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A CLASS "B" TENSION LAP SPLICE. DOWELS SHALL BE OF SAME SIZE AND SPACING AS VERTICAL WALL REINFORCING.

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JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date: 03.22.22
Project No.: 20020A
Drawn By: Author
Checked By: Checker
Sheet No.: S0.01
Sheet Title: GENERAL NOTES

K. SEE ARCHITECTURAL DRAWINGS FOR ALL CMU WALL OPENING SIZES AND LOCATIONS.

L. ALL CMU SHALL BE PLACED IN RUNNING BOND.

M. ALL MASONRY CONSTRUCTION AND INSPECTION SHALL COMPLY WITH ACI 530 AND ACI 530.1.

N. ALL CONCRETE MASONRY CONSTRUCTION SHALL BE INSPECTED AND TESTED PER THE REQUIREMENTS OF ACI 530.1. COSTS OF THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM TESTING AND INSPECTION SERVICES SHALL BE BORNE BY THE CONTRACTOR.

O. CMU GROUT FILL SHALL ARRIVE AT THE JOB SITE WITH A SLUMP BETWEEN 3" TO 5". CMU GROUT FILL SHALL ARRIVE AT THE JOB SITE WITH A SLUMP OF 3" - 5". PRIOR TO DEPOSITING GROUT, SUPERPLASTICIZER SHALL BE ADDED TO THE GROUT AT THE JOB SITE, INCREASING THE SLUMP TO 8" - 10".

P. CMU WALL REINFORCING SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO FABRICATION. DRAWINGS SHALL SHOW ALL WALL AND PILASTER REINFORCING IN PLAN AND IN ELEVATION.

Q. PROVIDE CORNER BARS AT ALL BOND BEAMS TO ENSURE CONTINUITY AT CORNERS. LAP CORNER BARS WITH A CLASS "B" TENSION LAP SPLICE.

R. PROVIDE BAR SUPPORTS AND POSITIONERS AS REQUIRED TO ENSURE THAT FINAL IN-PLACE LOCATION OF REINFORCING IS AS INDICATED ON THE DRAWINGS.

S. MASONRY SHALL BE PROTECTED FROM FREEZING DURING PLACEMENT& CURING. COLD WEATHER MASONRY PROCEDURES SHALL COMPLY W/ACI 530 AND ACI 530.1.

T. THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL BRACING AND SHORING FOR ALL MASONRY WALLS AS REQUIRED TO ENSURE STABILITY DURING CONSTRUCTION.

U. SIDE AND TOP OF MASONRY WALL PANELS SHALL BE ANCHORED TO STRUCTURE BY DOVETAIL ANCHORS, METAL STRAPS OR STEEL ANGLES. SEE DETAILS ON SHEETS S4.2#.

V. BRICK TIES SHALL BE LOCATED/SPACED BOTH VERTICALLY AND HORIZONTALLY AS SPECIFIED BY THE ARCHITECT AND SHALL BE CAPABLE OF SUPPORTING THE BRICK FOR OUT-OF-PLANE LOADING DUE TO WIND AND SEISMIC LOADS. SEE DETAILS ON SHEET S0.20 FOR COMPONENT AND CLADDING WIND LOADS.

W. BRICK AND STONE VENEER SHALL HAVE VERTICAL CONTROL JOINTS AT 20'-0" MAXIMUM SPACING. SEE ARCHITECTURAL DRAWINGS FOR CONTROL JOINT LAYOUT, AS MORE CLOSELY SPACED CONTROL JOINTS MAY BE NECESSARY AT WINDOWS, DOORS, ETC.

7. SOLID SAWN & LAMINATED LUMBER

A. ALL LUMBER (EXCLUDING WALL STUDS) SHALL BE VISUALLY GRADED, SOUTHERN YELLOW PINE (SYP) DIMENSIONAL LUMBER, KD19 (19% MAXIMUM MOISTURE CONTENT AFTER DRYING), UNLESS NOTED OTHERWISE, AND IN ACCORDANCE WITH THE FOLLOWING MINIMUM GRADE REQUIREMENTS (GRADING PER SPIB):

JOISTS	STRUCT. GRADE NO. 2
BEAMS (2"-4" THICK)	STRUCT. GRADE NO. 2
POSTS	STRUCT. GRADE NO. 2
PLATE STOCK	STRUCT. GRADE NO. 3

B. ALL WALL STUDS SHALL BE VISUALLY GRADED, SPRUCE-PINE-FIR (SPF) DIMENSIONAL LUMBER, STRUCTURAL GRADE NO. 2, KD19 (19% MAXIMUM MOISTURE CONTENT AFTER DRYING), UNLESS NOTED OTHERWISE. GRADING SHALL BE PER PS 20-70 (AMERICAN SOFTWOOD LUMBER STANDARD) OR NLGA.

C. ALL CONNECTOR TYPES REFER TO SIMPSON STRONG-TIE SPECIFICATIONS. ANY CHANGE, MODIFICATION OR SUBSTITUTION MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.

D. INSTALL TEMPORARY BRACING DURING CONSTRUCTION AT STUD WALLS UNTIL ALL FLOOR AND ROOF SHEATHING, ROOF TRUSSES, AND SHEAR PANELS HAVE BEEN INSTALLED. LET-IN METAL OR WOOD BRACING THAT REQUIRES NOTCHING OF THE STUDS IS NOT PERMITTED.

E. ALL LUMBER USED IN EXTERIOR CONSTRUCTION AND ALL LUMBER IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE-TREATED TO MEET THE REQUIREMENTS OF AWPA U1. PRESERVATIVE TREATMENTS SHALL BE SELECTED TO MEET THE APPROPRIATE ASSIGNED USE CATEGORIES AS SHOWN BELOW:

- SILL PLATES USE CATEGORY UC2
- CMU/CONCRETE USE CATEGORY UC2
- BALCONY POSTS USE CATEGORY UC3B
- BALCONY DECK BOARDS USE CATEGORY UC3B
- BALCONY LEDGER BOARDS USE CATEGORY UC3B
- BALCONY JOISTS USE CATEGORY UC3B
- BALCONY PLYWOOD (SHEATHING) USE CATEGORY UC3B
- LUMBER IN DIRECT CONTACT WITH THE GROUND USE CATEGORY UC4B CONTRACTOR SHALL IDENTIFY AND SUBMIT THE PROPOSED PRESERVATIVE TREATMENT AND RETENTION LEVELS FOR EACH REQUIRED LUMBER APPLICATION. PRESERVATIVE SHALL BE APPLICABLE TO THE USE CATEGORY, COMMODITY SPECIFICATION AND LUMBER SPECIES AS DEFINED BY AWPA U1. CCA (CHROMATED COPPER ARSENATE) PRESERVATIVE TREATMENTS ARE NOT PERMITTED.

G. ALL FASTENERS (INCLUDING NUTS AND WASHERS) IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIP GALVANIZED PER ASTM A153. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED PER ASTM A653 AND MADE FROM CLASS G185 SHEET WITH 1.85 OUNCES (MINIMUM) OF ZINC COATING PER SQUARE FOOT. FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED LUMBER WITH A USE CATEGORY OF UC4 SHALL BE STAINLESS STEEL. FASTENERS AND ANCHORS SHALL COMPLY WITH TYPE 304 OR 305. CONNECTORS SHALL COMPLY WITH TYPE 316L.

H. ANCHORAGE OF SILL PLATES AT STUD WALLS SHALL BE AS FOLLOWS:
- SIMPSON MASA @ 48" O.C. (MAXIMUM SPACING), OR
- ½"∅ A307 THREADED ROD @ 48" O.C. (WITH CHUBBY SMACK CHAIR)

I. INSTALL BEAMS WITH CROWN UP, TYP.

J. THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2x MEMBER BEAMS SHALL MATCH THE NUMBER OF MEMBERS IN THE BEAM, UNLESS NOTED OTHERWISE. ALL ENGINEERED LUMBER BEAMS (LVL, LSL, PSL, GLULAM) SHALL HAVE A THREE (3) STUD MINIMUM BEARING, UNLESS NOTED OTHERWISE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS.

K. ALL TIMBER FRAMING CONNECTIONS SHALL BE MADE WITH JOIST HANGERS, TIE DOWNS, FRAMING ANCHORS, POST CAPS, ETC., UNLESS NOTED OTHERWISE.

L. WHEN NAILING IS NOT SHOWN IN PLANS, NAIL PER TABLE 2304.9.1 FROM THE 2012 INTERNATIONAL BUILDING CODE.

M. UNLESS WOOD COLUMNS/STUD PACKS HAVE BEEN CALLED OUT AT HEADER BEAM ENDS IN THE FRAMING PLANS, ALL WALL OPENINGS SHALL BE FRAMED PER THE INFORMATION IN THE KING AND JAMB SCHEDULE. ALL WOOD COLUMNS/STUD PACKS SHALL BE CONTINUOUS TO CONCRETE SLAB ON GRADE, CONCRETE PODIUM, OR OTHER IDENTIFIED TRANSFER CONDITION BELOW, TYP. ALL KING STUDS SHALL BE CONTINUOUS TO CONCRETE SLAB ON GRADE, CONCRETE PODIUM, OR OTHER IDENTIFIED TRANSFER CONDITION BELOW, TYP.

N. ALL FREE-STANDING WOOD COLUMNS AND/OR WOOD STUD PACKS SHALL HAVE A SIMPSON STRONG-TIE PB, PBS, CB, CBS OR LCB TYPE POST BASE. GENERAL CONTRACTOR TO COORDINATE TYPE AND SIZE WITH SCHEDULED WOOD COLUMN AND/OR STUD PACK. STANDOFF POST BASES SHALL BE FULLY GROUTED WITHIN THE BASE CAVITY, UNLESS NOTED OTHERWISE ON THESE DRAWINGS.

O. WHERE LISTED WALL ASSEMBLIES OR LISTED CEILING ASSEMBLIES, SPECIFIED BY THE ARCHITECT, REQUIRE SPECIFIC FASTENER TYPES AND/OR FASTENING SPACING(S), THE GENERAL CONTRACTOR SHALL ENSURE THAT CONSTRUCTED ASSEMBLIES MEET BOTH THE REQUIREMENTS OF THE LISTED ASSEMBLY (TO ENSURE THE LISTED ASSEMBLY HAS THE STATED FIRE RATING) AND THE STRUCTURAL REQUIREMENTS STATED IN THIS SET OF DRAWINGS.

P. WHERE COMPOSITE DECK BOARDS ARE UTILIZED AT BALCONIES, MAXIMUM JOIST SPACING SHALL BE 16" O.C. FOR DECK BOARDS RUNNING PERPENDICULAR TO JOISTS, AND 12" O.C. FOR DECK BOARDS RUNNING AT A 45° ANGLE TO JOISTS. GENERAL CONTRACTOR TO ALSO REFER TO MANUFACTURER REQUIREMENTS.

Q. ALL STRUCTURAL MEMBERS LOCATED IN UNCONDITIONED OR EXTERIOR AREAS SHALL BE RATED AND/OR TREATED FOR EXTERIOR USE. IT THE GENERAL CONTRACTOR'S RESPONSIBILITY TO VERIFY EACH LOCATION PRIOR TO CONSTRUCTION AND COORDINATE MATERIAL AVAILABILITY WITH E+M PRIOR TO CONSTRUCTION AND/OR BUYOUT.
   a. UNCONDITIONED AREAS MAY BE LOCATED UNDER ROOF AND/OR ALSO INSIDE OF AN ENCLOSED FLOOR CAVITY. GC SHALL VERIFY ALL CONDITIONS AND REPORT DISCREPANCIES TO DESIGN TEAM PRIOR TO CONSTRUCTION AND/OR BUYOUT.

R. IF ROOF TRUSSES ARE PLACED IN A UNCONDITIONED LOCATION, IT IS THE RESPONSIBILITY OF THE TRUSS DESIGNER TO VERIFY IF THE TRUSSES ARE REQUIRED TO BE TREATED AND/OR IF ANY ADDITIONAL REQUIREMENTS ARE NEEDED.
   a. IT IS RECOMMENDED THAT THE GENERAL CONTRACTOR REQUEST THIS CONFIRMATION IN WRITING PRIOR TO TRUSS DESIGN AND FABRICATION.

8. TYPE III WOOD CONSTRUCTION

A. PER CHAPTER 6 OF THE 2012 INTERNATIONAL BUILDING CODE, ALL EXTERIOR WALLS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIALS. ALL EXTERIOR WALLS, BOTH NON-LOAD-BEARING AND LOAD-BEARING, SHALL BE FRAMED WITH FIRE-RETARDENT-TREATED (FRT) LUMBER.

B. ACCEPTABLE FIRE-RETARDENT-TREATED (FRT) WOOD PRODUCTS ARE AS FOLLOWS:
   1. "DRICON" BY EXTERIOR WOOD, INC. (ICC REPORT ESR-1626)
   2. "PYROGUARD" BY HOOVER TREATED WOOD PRODUCTS, INC. (ICC REPORT ESR-1791)
   3. "D-BLAZE" BY VIANCE TREATED WOOD SOLUTIONS (ICC REPORT ESR-2645)

   IF THE CONTRACTOR INTENDS TO SUBSTITUTE A DIFFERENT FIRE-RETARDENT PRODUCT THAN ONE (1) OF THE OPTIONS LISTED HERE, THE GENERAL CONTRACTOR SHALL SUBMIT MANUFACTURER'S PRODUCT INFORMATION INCLUDING ICC REPORT AND LUMBER DESIGN VALUE MODIFICATIONS. IF LUMBER DESIGN VALUES MODIFICATIONS ARE LESS THAN LISTED BELOW, PRODUCT SUBSTITUTION MAY BE REJECTED.

C. ASSUMED LUMBER DESIGN VALUE MODIFICATIONS PER THE ACCEPTABLE PRODUCTS LISTED ABOVE ARE AS FOLLOWS:

FRT LUMBER REDUCTIONS	
DESIGN PARAMETER	MODIFIER
COMPRESSION PARALLEL TO GRAIN	0.91
HORIZONTAL SHEAR	0.93
TENSION PARALLEL TO GRAIN	0.83
MODULUS OF ELASTICITY	0.94
EXTREME FIBER STRESS (BENDING)	0.88
COMPRESSION PERPENDICULAR TO GRAIN	0.95

9. WOOD TRUSSES

A. ALL TRUSS CONNECTOR PLATES SHALL BE MANUFACTURED FROM ASTM A446-72 GRADE A GALVANIZED STEEL OF NO LESS THAN 20 GAGE THICKNESS WITH A MINIMUM YIELD OF 33,000 PSI AND AN ULTIMATE TENSILE STRENGTH OF 45,000 PSI. CONNECTOR PLATE GAUGES SHALL BE AS REQUIRED BY MANUFACTURERS DESIGN CALCULATIONS.

B. TRUSS SHOP DRAWINGS SHALL BE SUBMITTED FOR THE ARCHITECTS REVIEW PRIOR TO FABRICATION AND SHALL INCLUDE THE FOLLOWING, PER THE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE, §2303.4.1.1:
   1. SLOPE OR DEPTH, SPAN AND SPACING;
   2. LOCATION OF ALL JOINTS, LOCATIONS OF ALL SUPPORT POINTS;
   3. NUMBER OF PLIES REQUIRED, IF MORE THAN ONE (1);
   4. REQUIRED BEARING WIDTH;
   5. DESIGN LOADS, AS APPLICABLE, TO INCLUDE THE FOLLOWING AT A MINIMUM:
      a. TOP CHORD LIVE LOAD;
      b. TOP CHORD DEAD LOAD;
      c. BOTTOM CHORD LIVE LOAD;
      d. BOTTOM CHORD DEAD LOAD;
      e. ADDITIONAL LOADS AND LOCATIONS;
      f. ENVIRONMENTAL DESIGN CRITERIA AND LOADS (WIND, RAIN, SNOW, SEISMIC, ETC.)
   6. OTHER LATERAL LOADS, INCLUDING DRAG STRUT LOADS;
   7. ADJUSTMENTS TO WOOD MEMBER AND METAL CONNECTOR PLATE DESIGN VALUES FOR CONDITIONS OF USE;
   8. MAXIMUM REACTION FORCE AND DIRECTION, INCLUDING MAXIMUM UPLIFT REACTION FORCES (WHERE APPLICABLE);
   9. METAL-CONNECTOR-PLATE TYPE, SIZE, THICKNESS/GAGE, AND DIMENSIONED LOCATION OF EACH METAL CONNECTOR PLATE;
      a. WHERE CONNECTOR PLATES ARE SYMMETRIC RELATIVE TO A JOINT INTERFACE, DIMENSIONS NEED ONLY BE SUPPLIED TO PLATES ON ONE SIDE OF THE LINE OF SYMMETRY;
   10. SIZE, SPECIES AND GRADE FOR EACH WOOD MEMBER;
   11. TRUSS-TO-TRUSS CONNECTIONS, TRUSS-TO-GIRDER-TRUSS CONNECTIONS, TRUSS-TO-FLUSH BEAM CONNECTIONS, AND TRUSS FIELD ASSEMBLY REQUIREMENTS;
   12. CALCULATED SPAN-TO-DEFLECTION RATIO AND MAXIMUM VERTICAL AND HORIZONTAL DEFLECTION FOR LIVE LOAD AND TOTAL LOAD CONDITIONS;
   13. MAXIMUM AXIAL TENSION/COMPRESSION FORCES IN EACH TRUSS MEMBER;
   14. REQUIRED PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT LOCATION AND THE METHOD AND DETAILS OF RESTRAINT/BRACING TO BE USED IN ACCORDANCE WITH 2015 INTERNATIONAL BUILDING CODE, §2303.4.1.2.

C. THE FOLLOWING ITEMS WILL ALSO BE INCLUDED AS PART OF THE TRUSS SHOP DRAWINGS , AS REQUESTED BY THE ENGINEER OF RECORD:
   1. SEAL AND SIGNATURE OF TRUSS COMPANY ENGINEER OF RESPONSIBLE CHARGE ON ALL TRUSS ENGINEERED SHEETS OR DRAWINGS
   2. NAME AND TRADEMARK OF PLATE MANUFACTURER AND TRUSS FABRICATOR AS WELL AS PROJECT NAME AND LOCATION
   3. ALLOWABLE LOADS FOR STRESS GRADE LUMBER AND PLATES AS ALLOWED BY I.C.B.O. AND INCLUDING I.C.B.O. REPORT NUMBER

D. TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT, NOTCHED, DRILLED OR OTHERWISE ALTERED IN ANY WAY WITHOUT WRITTEN APPROVAL FROM THE TRUSS ENGINEER. WHERE FIELD REPAIRS OF DAMAGED TRUSSES ARE REQUIRED, THE TRUSS ENGINEER SHALL SUBMIT A SIGNED/SEALED TRUSS REPAIR PROFILE TO THE GENERAL CONTRACTOR PRIOR TO REPAIR INSTALLATION. THE GENERAL CONTRACTOR SHALL SUBMIT ALL SIGNED/SEALED TRUSS REPAIRS TO THE STRUCTURAL ENGINEER OF RECORD ON A MONTHLY BASIS FOR PROJECT RECORD (INFORMATIONAL PURPOSES ONLY).

E. THE DESIGN, MANUFACTURE AND QUALITY ASSURANCE OF METAL-PLATE-CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH TPI 1.

F. ALL ROOF TRUSSES SHALL BE MECHANICALLY FASTENED AT EACH BEARING POINT WITH UPLIFT CONNECTOR TO RESIST NET UPLIFT FORCE RESULTING FROM WIND.
   1. REFERENCE SHEET S4.90 FOR INFORMATION RELATED TO LOAD PATH FOR WIND UPLIFT.
   2. REFERENCE COMPONENT AND CLADDING WIND FORCE INFORMATION ON SHEET S0.20.

G. TRUSS SUPPLIER IS TO PROVIDE PLAN AND PROCEDURES FOR INSTALLING, SECURING AND BRACING OF ALL TRUSSES. THE GENERAL CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY BRACING FOR THE TRUSSES DURING ERECTION. ALL FLOOR AND ROOF TRUSS CONSTRUCTION PRACTICES SHALL COMPLY WITH THE BCSI DOCUMENT, "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL-PLATE-CONNECTED WOOD TRUSSES."

H. TRUSS SUPPLIER SHALL PROVIDE SHEAR PANELS CAPABLE OF TRANSFERRING LATERAL LOADS AS NOTED ON THE STRUCTURAL PLANS AND/OR IN THE STRUCTURAL DETAILS.

I. APPROVED TRUSS PLANS SHALL BE AVAILABLE ON JOB SITE DURING TIMES OF INSPECTION.

J. WHERE ROOF TRUSSES RUN PARALLEL TO SHEAR WALLS, THE TRUSS MANUFACTURER SHALL PROVIDE A ROOF TRUSS ABOVE ALL SHEAR WALLS, AS DETAILED IN THIS SET OF STRUCTURAL DRAWINGS. WHERE A ROOF TRUSS CANNOT BE PROVIDED DIRECTLY ABOVE THE SHEAR WALL, FIELD CONNECTION OF THE TRUSS TO THE SHEAR WALL WILL BE REQUIRED. REFERENCE THE S6.## SERIES OF DRAWINGS FOR SHEAR WALL LOCATIONS, EXTENTS, ORIENTATION, ETC.

K. TRUSS MANUFACTURER SHALL COORDINATE TRUSS LAYOUT WITH MECH/PLUMBING DRAWINGS TO ALLOW ALL PIPES AND DUCTS ADEQUATE SPACE FOR PROPER INSTALLATION. THE MANUFACTURER SHALL COORDINATE THE WEB MEMBER CONFIGURATION WITH THE MECHANICAL DRAWINGS AND ARCHITECTURAL DRAWINGS SUCH THAT ADEQUATE OPENING IS PROVIDED FOR ANY MECHANICAL UNITS AND DUCTS AND ACCESS CATWALKS. HARD DUCT LOCATIONS, AS INDICATED ON THE MECHANICAL DRAWINGS, SHALL BE SHOWN ON THE SUBMITTED TRUSS LAYOUT SHOP DRAWINGS FOR DESIGN TEAM REVIEW.

L. TRUSSES SHALL BE SPACED AS SHOWN ON THE PLANS.
   1. LESSER SPACING MAY BE USED IF REQUIRED BY THE TRUSS DESIGNER. HOWEVER, THE USE OF LESS TRUSS SPACINGS THAN INDICATED IN THE DESIGN DOCUMENTS SHALL NOT BE A JUSTIFICATION FOR AN OWNER CHANGE ORDER. IT IS THE RESPONSIBILITY OF THE FRAMER AND THE TRUSS DESIGNER TO REVIEW PROJECT LOADING, REQUIRED SPANS AND TRUSS CONFIGURATIONS DURING THE BIDDING PROCESS.
   2. ACTUAL TRUSS SPACING SHALL BE USED TO DETERMINE UNIFORM LOADS PER FOOT IN THE TRUSS PROFILE DESIGN.
   3. ROOF TRUSSES SHALL BE DESIGNED FOR APPLICABLE WIND LOADS AT THE PROJECT SITE IN COMBINATION WITH THE DEAD LOADS SHOWN IN THE TABLE BELOW, IN ACCORDANCE WITH THE LOAD COMBINATIONS AND PRESSURE/SUCTION FACTORS INDICATED IN THE 2015 INTERNATIONAL BUILDING CODE. UPLIFT INDICATED IS ONLY A MINIMUM.

M. SEE PLANS FOR TRUSS LOCATIONS AND SPANS.

N. TRUSS DESIGN LOADS SHALL BE AS FOLLOWS:

LOAD TYPE	TRUSS TYPE (ALL LOADS ARE POUNDS PER SQUARE FOOT, PSF)						
	ROOF (TYP/RTU)	ROOF (TERRACE)	UNIT FLOOR	UNIT FLOOR W/SLEEPERS	PUBLIC, ASSEMBLY, MECH, ELEC, TELECOM	STORAGE	BALCONY
TOP CHORD LIVE LOAD	20/45	N/A	N/A	N/A	N/A	N/A	N/A
TOP CHORD DEAD LOAD	15	N/A	N/A	N/A	N/A	N/A	N/A
TOP CHORD UPLIFT LOAD(*)	10	0	0	0	0	0	0
BOTTOM CHORD LIVE LOAD	0	0	0	0	0	0	0
BOTTOM CHORD DEAD LOAD	5	N/A	N/A	5	5	N/A	N/A

- THE ABOVE NOTED VALUES ARE MINIMUM REQUIREMENTS FOR DEAD AND LIVE LOADS. SEE SHEET S0.20 FOR COMPONENT AND CLADDING WIND FORCE INFORMATION.
- TOP CHORD DEAD LOAD SHOWN ABOVE INCLUDES 3 PSF FOR TRUSS SELF-WEIGHT. TRUSS DESIGNER SHALL INCREASE DEAD LOAD, AS REQUIRED.
- FOR ROOF TRUSS TOP CHORD LIVE LOAD, THE LOADS SHOWN (20/45) HAVE BEEN MADE WITH THE ASSUMPTION THAT THERE IS A 0'-3" MAXIMUM BETWEEN PRIMARY ROOF DRAINS AND THE SECONDARY DRAINAGE SYSTEM ENGAGED IN THE EVENT THAT THE PRIMARY DRAINS BECOME CLOGGED.

O. TRUSS MANUFACTURER TO COORDINATE WITH MECHANICAL DRAWINGS AND PLUMBING DRAWINGS FOR ADDITIONAL CONCENTRATED LOADS DUE TO DOMESTIC WATER AND SPRINKLER PIPE SUPPORTS.
   1. IN ADDITION TO THE DEAD LOADS PRESCRIBED IN THE TABLE ABOVE (WHICH INCLUDE WATER-FILLED SPRINKLER PIPING), THE TRUSS DESIGNER SHALL APPLY A MINIMUM 250 POUND CONCENTRATED LIVE LOAD TO ANY SINGLE FIRE SPRINKLER SUPPORT POINT TO ACCOMMODATE INSTALLATION PERSONNEL PER NFPA 13. THE 250 POUND POINT LOAD IS NOT REQUIRED TO BE ANALYZED CONCURRENT WITH OTHER LIVE LOADS. IF MULTIPLE SPRINKLER LINES ARE ATTACHED TO THE SAME TRUSS, THE 250 POUND POINT LOAD SHOULD BE APPLIED AT ONE (1) LOCATION AT A TIME.
   2. SPRINKLER PIPE SUPPORTS SHALL BE SPACED OR DISTRIBUTED SO THAT THE MAXIMUM POINT LOAD (CONSIDERING A FULLY FILLED PIPE) APPLIED AT ANY SINGLE SPRINKLER SUPPORT DOES NOT EXCEED 50 POUNDS.

P. MEMBERS OF THE GABLE END WALL TRUSSES SHALL BE DESIGNED FOR COMPONENT WIND FORCES AGAINST THE EXPOSED FACE OF THE TRUSS.

Q. MAXIMUM DEFLECTIONS FOR FLOOR TRUSSES SHALL BE AS FOLLOWS:
   1. FOR LIVE LOADS = L/480
   2. FOR TOTAL LOAD = L/360, BUT NOT TO EXCEED 1.00"

R. MAXIMUM DEFLECTIONS FOR ROOF TRUSSES SHALL BE AS FOLLOWS:
   1. FOR LIVE LOADS = L/240
   2. FOR TOTAL LOAD = L/180, BUT NOT TO EXCEED 1.25"

S. MAXIMUM LIVE LOAD DEFLECTION FOR ALL CANTILEVERED TRUSSES = CANTILEVER LENGTH/180.

T. ALL TRUSS FRAMING CONNECTIONS TO WALLS, GIRDER TRUSSES, LEDGERS, BEAMS OR OTHER SUPPORTS SHALL BE MADE WITH JOIST HANGERS, TIE DOWNS, FRAMING ANCHORS, POST CAPS, ETC.; AND SHALL BE DESIGNED BY AND SPECIFIED BY THE TRUSS DESIGNER/MANUFACTURER AND SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW TO THE ARCHITECT AND STRUCTURAL ENGINEER.

U. ALL HEADERS, BEARING WALLS AND POSTS SHOWN ON THE PLANS SHALL BE USED FOR BEARING IN DESIGN OF THE FLOOR AND ROOF TRUSSES. MODIFICATION BY THE TRUSS DESIGNER/MANUFACTURER OF TRUSS FRAMING DIRECTION OR BEARING ELEMENT LOCATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE PERMITTED UNLESS PREVIOUSLY APPROVED IN WRITING BY THE ENGINEER OF RECORD. SUCH CHANGES MAY RESULT IN ADDITIONAL MODIFICATIONS TO THE STRUCTURAL DRAWINGS THAT MAY HAVE A SCHEDULE OR COST IMPACT ON THE PROJECT.

V. WHERE DRAFT STOPS ARE REQUIRED BY THE ARCHITECTURAL DRAWING, PROVIDE A MINIMUM OF 2x4 VERTICALS AT 24" ON CENTER BETWEEN TRUSS TOP AND BOTTOM CHORDS AND WEB MEMBERS, AS REQUIRED, FOR DRAFT STOP NAILING.

W. ALL TRUSS-TO-TRUSS, TRUSS-TO-GIRDER-TRUSS, TRUSS-TO-BEAM AND TRUSS-TO-LEDGER CONNECTIONS SHALL BE DESIGNED BY TRUSS MANUFACTURER.

X. LOADS INDICATED HEREIN SHALL BE UTILIZED IN THE DESIGN OF ROOF GIRDER, HIP AND JACK TRUSSES, AS REQUIRED.

Y. STRONGBACKS SHALL BE INSTALLED AT A MAXIMUM SPACING OF 10'-0" ON CENTER. STRONGBACKS SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL STRONGBACK INSTALLATION DETAIL PROVIDED BY THE TRUSS MANUFACTURER. SUCCESSIVE STRONGBACK MEMBERS SHALL BE LAPPED A MINIMUM OF 4'-0" SUCH THAT THE STRONGBACKS ARE ATTACHED TO A MINIMUM OF THREE (3) COMMON TRUSS MEMBERS. WHERE STRONGBACKS ARE CUT BY OTHER TRADES (MECHANICAL, ELECTRICAL, ETC.), IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ADDITIONAL STRONGBACKS ARE INSTALLED TO MEET THE SPLICE REQUIREMENTS OUTLINED HERE.

Z. IT IS THE RESPONSIBILITY OF THE TRUSS DESIGNER AND TRUSS MANUFACTURER TO GIVE PROPER CONSIDERATION TO THE POSSIBLE EFFECT OF CROSS-GRAIN DIMENSIONAL CHANGES WHICH MAY OCCUR AS A RESULT OF SHRINKAGE EFFECTS DUE TO THE VARIABLE MOISTURE CONTENT OF THE LUMBER USED DURING TRUSS FABRICATION, STORAGE AND CONDITIONS DURING CONSTRUCTION.

AA. IF FLOOR OR ROOF TRUSSES ARE PLACED IN A UNCONDITIONED LOCATION, IT IS THE RESPONSIBILITY OF THE TRUSS DESIGNER TO VERIFY IF THE TRUSSES ARE REQUIRED TO BE TREATED AND/OR IF ANY ADDITIONAL REQUIREMENTS ARE NEEDED.
   a. IT IS RECOMMMENDED THAT THE GENERAL CONTRACOTR REQUEST THIS CONFIRMATION IN WRITING PRIOR TO TRUSS DESIGN AND FABRICATION.

10. NAILING

NAIL DIMENSIONS, INCHES						
NAIL TYPE	FEATURE	PENNY WEIGHT				
		6d	8d	10d	12d	16d
COMMON	LENGTH	2	2 1/2	3	3 1/4	3 1/2
	DIAMETER	0.113	0.131	0.148	0.148	0.162
	HEAD	0.226	0.281	0.312	0.312	0.344
BOX	LENGTH	2	2 1/2	3	3 1/4	3 1/2
	DIAMETER	0.099	0.113	0.128	0.128	0.135
	HEAD	0.226	0.297	0.312	0.312	0.344
SINKER	LENGTH	1 7/8	2 3/8	2 7/8	3 1/8	3 1/4
	DIAMETER	0.092	0.113	0.120	0.135	0.148
	HEAD	0.234	0.266	0.281	0.312	0341

A. ALL NAILS LISTED BELOW SHALL COMPLY WITH THE FOLLOWING DIMENSIONAL REQUIREMENTS:

B. FASTENING SCHEDULE

FASTENING SCHEDULE				
CONNECTION		FASTENING		LOCATION
1.	Sole plate to joist or blocking	16d (3 1/2"x0.135") @ 16" o.c. 3"x0.131" nail @ 8" o.c. 3" 14 gage staple @ 12" o.c.		typical facenail
	Sole plate to joist or blocking at shear wall	See "SHEAR WALL SCHEDULE" on S6-00A for bottom plate nailing		typical facenail
2.	Top plate to stud	(2) 16d common (3 1/2"x0.162") (3) 3"x0.131" nails (3) 3" 14 gage staples		end nail
3.	Sole plate to stud	(4) 8d common (2 1/2"x0.131") (4) 3"x0.131" nails (3) 3" 14 gage staples		toenail
		(2) 16d common (3 1/2"x0.162") (3) 3"x0.131" nails (3) 3" 14 gage staples		end nail
4.	Double studs	16d (3 1/2"x0.135") @ 24" o.c. 3"x0.131" nails @ 8" o.c. 3" 14 gage staple @ 8" o.c.		face nail
5.	Double top plates	16d (3 1/2"x0.135") @ 16" o.c. 3"x0.131" nails @ 12" o.c. 3" 14 gage staple @ 12" o.c.		typical face nail
		(8) 16d (3 1/2"x0.135") @ 16" o.c. (12) 3"x0.131" nails (12) 3" 14 gage staples		lap splice
6.	Blocking between joist or rafters to top plate	(3) 8d common (2 1/2"x0.131") (3) 3"x0.131" nails (3) 3" 14 gage staples		toenail
7.	Ladder truss/knee wall to top plate at non-shear wall locations	3"x0.131" nails @ 6" o.c. 3" 14 gage staples @ 6" o.c.		face nail
8.	Top plates, laps and intersections	(2) 16d common (3 1/2"x0.162") (3) 3"x0.131" nails (3) 3" 14 gage staples		face nail
9.	Continuous header, (2) peices	16d common (3 1/2"x0.162")		16" o.c. along edge
10.	Continuous header to stud	(4) 8d common (2 1/2"x0.131")		toenail
11.	Built-up corner studs	16d common (3 1/2"x0.162") @ 24" o.c. 3"x0.131" nails @ 16" o.c. 3" 14 gage staple @ 16" o.c.		facenail
12.	Built-up 2-ply sawn lumber beams (plus 1/2" shim if used)	SEE TYPICAL DETAILS ON SHEETS		
		SEE TYPICAL DETAILS ON SHEETS		
13.	Built-up 3-ply sawn lumber and engineered lumber beams (plus shims if used)	1/2" lag bolts in 5/16" pilot holes or 1/2" through bolts in 9/16" holes. 2"-6" o.c. max @ top and bottom staggered		
14.	Roof sheathing (to framing)	See "LIGHT FRAMED LATERAL LOAD RESISTING SYSTEM, note A.1" section of structural general notes for nailing of floor sheathing		
	Floor sheathing (to framing)	See "LIGHT FRAMED LATERAL LOAD RESISTING SYSTEM, note A.1" section of structural general notes for nailing of floor sheathing		
	Gypsum, Plywood, or OSB shear wall sheathing (to framing)	SEE SHEAR WALL SCHEDULE		
	Wood structural panels and particleboard, non-shear wall sheathing (to framing)	1/2" and less	6d 2 3/8"x0.113" nail 1 3/4" 16 gage	
		19/32" to 3/4"	8d or 6d 2 3/8"x0.113" nail 2" 16 gage 8d	
15.	Panel framing (to framing)	1/2" and less	6d	
		5/8"	8d	
16.	Fiberboard sheathing	1/2"	No. 11 gage roofing nail 6d common nail (2"x0.131") No. 16 staple	
		25/32"	No. 11 gage roofing nail 8d common nail (2"x0.131") No. 16 staple	

FOR SI: 1 INCH = 25.4mm

A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.

B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHED AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTEDTO BE COMMON BOX OR CASING.

C. COMMON OR DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

D. COMMON (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

E. DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

F. CORROSION RESISTANT SIDING (6d - 1 7/8" x 0.106"; 8d - 2 3/8" x 0.128") OR CASING (6d - 2" x 0.99", 8d - 2 1/2" x 0.113") NAIL.

G. FASTENER SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING, SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NON-STRUCTURAL.

H. CORROSION-RESISTANT ROOFING NAILS WITH 7/16 INCH-DIAMETER HEAD AND 1 1/2 INCH LENGTH FOR 1/2 INCH SHEATHING AND 1 3/4 INCH LENGTH FOR 25/32 INCH SHEATHING.

I. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16 INCH CROWN OR 1 INCH CROWN AND 1 1/4 INCH LENGTH FOR 1/2 INCH SHEATHING AND 1 1/2 INCH LENGTH FOR 25/32 INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES ON CENTER (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).

J. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2 1/2"X0.113") ARE THE MINIMUM REQUIRED FOR STRUCTURAL WOOD PANELS.

K. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.

L. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.

M. FASTENERS SPACED 4 INCHES ON CENTERAT EDGES, 8 IINCHES AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.

N. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.

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NORTH CAROLINA PROFESSIONAL ENGINEER
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John Craig Fisher
JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions		
#	Description	Date

Date 03.22.22	Project No. 20020A
Drawn By Author	Sheet No. S0.02
Checked By Checker	
Sheet Title GENERAL NOTES	

11. STRUCTURAL STEEL

A. MATERIAL
1. ALL HOT ROLLED STEEL PLATES, SHAPES, SHEET PILING, AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM SPECIFICATION A6-98A.
2. CLEARLY MARK THE GRADE OF STEEL ON EACH PIECE, WITH A DISTINGUISHING MARK VISIBLE FROM FLOOR SURFACES, FOR THE PURPOSE OF FIELD INSPECTION OF PROPER GRADE OF STEEL. UNLESS NOTED OTHERWISE ON THE DRAWINGS, STRUCTURAL STEEL SHALL BE AS FOLLOWS:
   a. ALL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992. (ASTM A572-50 IS ACCEPTABLE AS A SUBSTITUTE FOR A992).
   b. ALL CHANNEL SHAPES SHALL CONFORM TO ASTM A36.
   c. ALL ROLLED ANGLE SHAPES SHALL CONFORM TO ASTM A36.
   d. ALL PIPE SHAPES SHALL CONFORM TO ASTM A53 (TYPES E OR S), GRADE B OR ASTM A501.
   e. ALL RECTANGULAR HSS SHALL CONFORM TO ASTM A500, GRADE B (FY=46 KSI).
   f. ALL ROUND HSS SHALL CONFORM TO ASTM A500, GRADE B (FY=42 KSI).
   g. ALL BASE PLATES SHALL CONFORM TO ASTM A572 AS FOLLOWS:
      ALL CONNECTION MATERIAL, EXCEPT AS NOTED OTHERWISE HEREIN OR ON THE DRAWINGS, INCLUDING BEARING PLATES, GUSSET PLATES, STIFFENER PLATES, FILLER PLATES, ANGLES, ETC. SHALL CONFORM TO ASTM A36 UNLESS A HIGHER GRADE OF STEEL IS REQUIRED BY STRENGTH AND PROVIDED THE RESULTING SIZE ARE COMPATIBLE WITH THE CONNECTED MEMBERS.
   h. ANY OTHER STEEL NOT INDICATED OTHERWISE SHALL CONFORM TO ASTM A992 OR ASTM A572-50, EXCEPT PLATES AND ANGLES WHICH SHALL CONFORM TO ASTM A36.

B. CONNECTIONS
1. STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL BE DONE IN ACCORDANCE WITH AISC 360-10, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," AND AISC 303-05, "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES." ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED EXCEPT AS NOTED ON DRAWINGS.
2. ALL CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR. DETAILING SHALL BE PERFORMED USING RATIONAL ENGINEERING DESIGN AND STANDARD PRACTICE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE STEEL CONNECTION DETAILS SHOWN ON THE DRAWINGS ARE CONCEPTUAL ONLY AND ARE NOT INTENDED TO SPECIFICALLY INDICATE THE REQUIRED QUANTITY, SPACING OR SIZE OF BOLTS OR WELDS, UNLESS SPECIFICALLY NOTED.
3. CONNECTION DETAILS NOT COMPLETELY DETAILED ON THE DRAWINGS (INCLUDING MATERIAL GRADE AND SIZES; NUMBER, SIZE, AND GRADE OF BOLTS; AND SIZE OF WELDS) SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONNECTION DESIGN REACTIONS NOTED ON THESE DRAWINGS ARE BASED ON FACTORED (ULTIMATE) LOADS AND ARE INTENDED FOR USE WITH THE AISC LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD.
4. ALL BOLTS IN STRUCTURAL CONNECTIONS SHALL CONFORM TO ASTM A325 TYPE 1, UNLESS INDICATED OTHERWISE ON THESE DRAWINGS. FIELD BOLTS SHALL BE 3/4" DIAMETER ASTM A325 BEARING TYPE BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE, UNLESS NOTED OTHERWISE.
5. ALL SIMPLE SHEAR CONNECTIONS SHALL BE CAPABLE OF END ROTATION AS PER THE REQUIREMENTS OF THE AISC 360-05, SECTION J1.2.
6. SEE DRAWINGS FOR LOCATIONS REQUIRING SLIP CRITICAL BOLTS AND/OR BOLTS CONFORMING TO ASTM A490.
7. MINIMUM NUMBER OF BOLT ROWS BASED ON MEMBER DEPTH FOR W & C SHAPES ARE AS FOLLOWS:

UP TO 12" DEEP	2 ROWS
14" TO 16" DEEP	3 ROWS
18" TO 21" DEEP	4 ROWS
24" TO 27" DEEP	5 ROWS

8. THE GENERAL CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, FOR REVIEW, ENGINEERED AND CHECKED SHOP DRAWINGS SHOWING SHOP FABRICATION DETAILS, FIELD ASSEMBLY DETAILS AND ERECTION DRAWINGS FOR ALL STRUCTURAL STEEL. SUBMIT SHOP DRAWINGS PREPARED IN ACCORDANCE WITH AISC MANUAL "DETAILING FOR STEEL CONSTRUCTION". DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPLETED AND REVIEWED.
9. NON-COMPOSITE BEAM CONNECTIONS SHALL BE DESIGNED FOR THE REACTION DUE TO MAXIMUM ALLOWABLE LOAD FOR THE APPROPRIATE SPAN AND SHAPE BASED ON THE BEAM TABLES OF THE AISC MANUAL OF STEEL CONSTRUCTION (14TH EDITION).

C. WELDING
1. UNLESS NOTED OTHERWISE, ELECTRODES FOR WELDING SHALL CONFORM TO E70XX (SMAW), F7XX - EXXX (SAW), ER70S-X (GMAW), OR E7XT-X (FCAW). ALL FIELD WELDING SHALL BE DONE WITH E-70XX ELECTRODES.
2. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO THE "CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION", LATEST EDITION.
3. ALL WELDED JOINTS SHALL COMPLY W/ THE PROVISIONS OF AWS D1.1 STRUCTURAL WELDING CODE BY AMERICAN WELDING SOCIETY (SECTION 2207). THE GENERAL CONTRACTOR SHALL MAKE PROOF OF WELDER CERTIFICATION AVAILABLE AT THE JOB SITE.

D. ANCHOR RODS
1. UNLESS INDICATED OTHER WISE IN THE COLUMN SCHEDULE OR ON THE DRAWINGS, ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. SEE ANCHOR BOLT SCHEDULE FOR ANCHOR BOLT DIAMETERS, QUANTITY AND TYPE OF NUTS, AND REQUIRED EMBEDMENT LENGTH. DAMAGE THREADS AT TWO PLACES BELOW THE NUT TO PREVENT LOOSENING.

E. GROUT
1. GROUT BENEATH STRUCTURAL STEEL BASE PLATES SHALL BE SIMPSON STRONG-TIE FX-228 NON-METALLIC, NON-SHRINK GROUT, OR AN APPROVED EQUAL. THE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AS FOLLOWS:

BEARING MATERIAL	GROUT STRENGTH
3,000 PSI CONCRETE	6,000 PSI
4,000 PSI CONCRETE	8,000 PSI
5,000 PSI CONCRETE	8,000 PSI

F. MISCELLANEOUS
1. ALL BEAMS AND GIRDERS SHALL BE FABRICATED WITH NATURAL CAMBER UP.
2. AFTER FABRICATION, ALL STEEL SHALL BE CLEANED OF ALL RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES WITH RELATION TO TEMPERATURE DIFFERENTIALS.
4. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBER FOR THE WORK OF OTHER TRADES WITHOUT THE PRIOR APPROVAL OF THE ARCHITECT.
5. ALL ADDITIONAL STEEL REQUIRED BY THE CONTRACTOR FOR ERECTION PURPOSES AND SITE ACCESS OF STOCKPILED MATERIALS SHALL BE PROVIDED AT NO COST TO THE OWNER. ALL SUCH ADDITIONAL STEEL SHALL BE REMOVED BY THE CONTRACTOR.
6. ALL STEEL EXPOSED TO EARTH SHALL BE PAINTED WITH BITUMINOUS COATING.
7. ALL EXTERIOR STEEL, INCLUDING BUT NOT LIMITED TO LOOSE LINTELS SHALL BE HOT DIPPED GALVANIZED.
8. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING OF STRUCTURAL FRAMING UNTIL ALL PERMANENT BRACING AND MOMENT CONNECTIONS ARE COMPLETELY INSTALLED.
9. STEEL COLUMNS ARE TO BE CONTINUOUS WITH NO SPLICES UNLESS NOTED OTHERWISE. ALL STEEL COLUMNS TO HAVE 1/2" CAP PLATE UNLESS NOTED.

12. STEEL DECK

A. MATERIAL
1. SHEET STEEL FOR METAL FLOOR DECK SHALL CONFORM TO THE FOLLOWING:
   a. ASTM A653, GRADE 50
2. SHEET STEEL FOR METAL ROOF DECK SHALL CONFORM TO THE FOLLOWING:
   a. ASTM A653, GRADE 33
3. SHEET STEEL FOR METAL FLOOR DECK SHALL RECEIVE G60 GALVANIZATION.
4. SHEET STEEL FOR METAL ROOF DECKING SHALL RECEIVE G90 GALVANIZATION.

B. CONNECTIONS
1. STEEL DECK SHALL BE INSTALLED ACCORDING TO THE SDI MANUAL OF CONSTRUCTION.
2. ALL WELDING OF STEEL DECK SHALL BE IN ACCORDANCE WITH AWS D1.3. WHERE WELDS ARE SPECIFIED, USE WELDING WASHERS AS REQUIRED.
3. ATTACHMENT OF METAL FLOOR DECK TO LIGHT-GAGE METAL STUDS, STRUCTURAL STEEL FRAMING AND/OR CONCRETE OR MASONRY WALLS SHALL BE MADE VIA WELDING OR MECHANICAL FASTENERS, AS PRESCRIBED IN THE STRUCTURAL DRAWINGS.
4. ATTACHMENT OF ADJACENT STEEL DECK UNITS SHALL BE MADE VIA WELDING OR MECHANICAL FASTENERS, AS PRESCRIBED IN THE STRUCTURAL DRAWINGS.
5. STEEL DECK SHALL HAVE A MINIMUM 1½" BEARING LENGTH AT DISCONTINUOUS ENDS.
6. STEEL DECK SHALL HAVE A MINIMUM 3" BEARING LENGTH AT INTERMEDIATE SUPPORTS.
7. PROVIDE 3" MINIMUM END LAP OF DECK UNITS, TYP.

C. MISCELLANEOUS
1. WHERE UNSCHEDULED OPENINGS IN THE STEEL DECK ARE REQUIRED (OPENINGS IN THE STEEL DECK THAT ARE NOT SHOWN ON THE APPROVED STEEL DECK SHOP DRAWINGS), THE GENERAL CONTRACTOR SHALL COORDINATE OPENING LOCATION(S) WITH ARCHITECTURAL AND M/E/P DRAWINGS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY REINFORCING THESE OPENINGS DURING CONSTRUCTION. WHERE UNSCHEDULED OPENINGS IN THE STEEL DECK EXCEED 12"x12", GENERAL CONTRACTOR SHALL RECEIVE WRITTEN APPROVAL FROM STRUCTURAL ENGINEER OF RECORD PRIOR TO CUTTING OPENINGS.
2. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT STEEL FLOOR DECK AND STEEL ROOF DECK ARE NOT OVERLOADED DURING CONSTRUCTION. THE MAXIMUM ALLOWABLE LOAD ON THE STEEL DECK SHALL BE AS NOTED IN THE GENERAL NOTES (SECTION 1, PART C - "LIVE LOADS").
3. IF THE GENERAL CONTRACTOR PLANS TO STORE MATERIALS ON THE CONCRETE SLAB ON STEEL DECK OR ON THE STEEL ROOF DECK, THE GENERAL CONTRACTOR SHALL SUBMIT INFORMATION TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO ANY MATERIAL BEING STORED.

D. COMPOSITE METAL FLOOR DECK

LOCATION	DEPTH OF DECK	GAGE	TYPE	FINISH
SECOND FLOOR	2 INCH	20 GAGE	VLI	GALV (G60)
ATTIC FLOOR				

E. METAL ROOF DECK

LOCATION	DEPTH OF DECK	GAGE	TYPE	FINISH
ROOF	1.5 INCH	22 GAGE	B	GALV (G90)

13. STAIRS, HANDRAILS, AND GUARDRAILS

A. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF STEEL STAIRS, STEEL AND/OR ALUMINUM HANDRAILS AND GUARDRAILS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE IN WHICH THE PROJECT IS CONSTRUCTED AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION.

B. SHOP DRAWINGS SHALL INCLUDE DESIGN LOAD CRITERIA, DESIGN LOADS, LOCATIONS OF ANCHORAGE SUPPORT POINTS, FRAMING DETAILS, STRINGERS, STAIR TREADS, POSTS, PICKETS, TOP RAILS, INTERMEDIATE RAILS, HANGERS, POSTS AND CONNECTION DETAILS TO THE SUPPORTING STRUCTURE.

C. COMPLETE STRUCTURAL CALCULATIONS SHALL BE SUBMITTED WITH SHOP DRAWINGS. CALCULATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO CONNECTION DESIGN TO THE SUPPORTING STRUCTURE. CALCULATIONS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS CONSTRUCTED.

D. DESIGN LOAD CRITERIA SHALL MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE 2### INTERNATIONAL BUILDING CODE, AS WELL AS ANY SPECIFIC REQUIREMENTS IDENTIFIED ON THE ARCHITECTURAL PLANS. IN PARTICULAR, SECTION 1607 REQUIRES THAT STAIRS AND EXITS BE DESIGNED FOR A 100 PSF UNIFORM LIVE LOAD WITH STAIR TREADS ALSO BEING CHECKED FOR A MINIMUM CONCENTRATED LOAD OF 300 LBS OVER AN AREA OF 4 SQ. IN.

E. SECTION 1607.7.1 REQUIRES THAT HANDRAILS AND GUARDRAILS BE DESIGNED TO RESIST 50 PLF APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE. HANDRAILS AND GUARDRAILS SHALL ALSO BE ABLE TO RESIST A SINGLE CONCENTRATED LOAD OF 200 LBS APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP AND HAVE ATTACHMENT DEVICES AND SUPPORTING STRUCTURE TO TRANSFER THIS LOAD TO THE APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING. INTERMEDIATE RAILS, BALUSTERS, PICKETS, AND PANEL FILLERS SHALL BE DESIGNED TO WITHSTAND A NORMAL LOAD OF 50 LBS ON AN AREA NOT TO EXCEED 1 SQ. FT. INCLUDING OPENINGS AND SPACE BETWEEN THE RAILS.

F. COMPLY WITH NAAMM, NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS, "METAL STAIR MANUAL".

G. MINIMUM SIZES SHALL BE AS FOLLOWS:

METAL PANS:	14 GA. (UNLESS NOTED OTHERWISE)
STRINGERS:	MC12x10.6 (UNLESS NOTED OTHERWISE)

H. SEE ARCHITECTURAL DRAWINGS FOR EXACT LAYOUT AND DIMENSIONS.

14. COLD FORMED LIGHT GAUGE METAL WALL STUD FRAMING

A. UNLESS SPECIFICALLY SIZED ON THE DRAWINGS, ALL MEMBERS AND ASSOCIATED CONNECTIONS SHALL BE DESIGNED AND FABRICATED BY THE SUPPLIER IN ACCORDANCE WITH THE AISI SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL STEEL MEMBERS (LATEST EDITION.)

B. THE LIGHT GAUGE SUPPLIER SHALL SUBMIT COMPLETE CALCULATIONS FOR DESIGN OF ALL MEMBERS AND CONNECTIONS (INCLUDING CONNECTIONS TO THE SUPPORTING STRUCTURE) TO THE ARCHITECT FOR THE ARCHITECTS RECORD. CALCULATIONS SHALL BE PREPARED AND SEALED & SIGNED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE WHERE THE PROJECT IS BEING CONSTRUCTED, AND SHALL BE DONE IN ACCORDANCE WITH THE BUILDING CODE AND THE AISI SPECIFICATION (LATEST EDITION). DESIGN CALCULATIONS SHALL BE SUBMITTED WITH SHOP DWGS.

C. SHOP DWGS SHALL BE SUBMITTED FOR THE ARCHITECTS REVIEW PRIOR TO FABRICATION. SHOP DWGS SHALL INDICATE ALL MEMBER PROPERTIES, SIZES, DETAILS OF MEMBER CONNECTIONS AND DETAILS OF CONNECTIONS TO THE SUPPORTING STRUCTURE. SHOP DWGS SHALL INCLUDE ERECTION DWGS AND SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE WHERE THE PROJECT IS BEING CONSTRUCTED. ALL LIGHT GAUGE METAL SHOP DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE.

D. SEE ARCH DWGS FOR ALL DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

E. WHERE STUDS ARE NOT BRACED LATERALLY BY GYPSUM BOARD OR PLYWOOD ON EACH SIDE, PROVIDE CONTINUOUS 1 1/2" COLD ROLLED CHANNEL BRIDGING @ 48" O.C. MAX.

F. WHERE COLD FORMED METAL FRAMING IS FIELD WELDED, ALL WELDS AND SURROUNDING AREAS SHALL BE FIELD PAINTED W/ A ZINC RICH PAINT.

G. PROVIDE BUILT UP SECTIONS WHERE REQUIRED AT OPENING JAMBS, HEADS & SILLS.

H. PROVIDE SPACER, STUDS & FILLER STUDS WHERE REQUIRED TO ACHIEVE CONNECTIONS AT CORNICE FRAMING.

I. FOR COMPONENT & CLADDING WIND PRESSURES, SEE DESIGN CRITERIA IN THESE GENERAL NOTES.

J. STUD TO STUD CONNECTIONS AND STUD TO SUPPORTING STRUCTURE CONNECTIONS ARE SHOWN ON SECTIONS AND DETAILS FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL CONNECTIONS SHALL BE DESIGNED BY THE STUD SUPPLIER PER NOTE "B" ABOVE.

K. MASONRY VENEER ANCHOR TIES SHALL BE ATTACHED TO CORROSION RESISTANT STRUCTURAL BACKING WITH A MINIMUM BASE METAL THICKNESS OF .043 IN. (18 GAUGE MINIMUM) PER ACI 530-05, SECTION 6.2.2.7.3. COLD-FORMED LIGHT GAGE STEEL DESIGN SHALL CONSIDER THE LOCATIONS WHERE MASONRY VENEER IS CALLED FOR ON THE ARCHITECTURAL PLANS.

L. LATERAL DEFLECTION LIMITS FOR LIGHT GAUGE FRAMING SHALL CONFORM TO SPAN/240 FOR BRITTLE FINISHES (MASONRY VENEER) AND SPAN/120 FOR FLEXIBLE FINISHES.

15. PLYWOOD SHEATHING AT PARAPETS WITH METAL STUD BRACING

A. ALL PLYWOOD SHEATHING TO BE FASTENED TO COLD-FORMED METAL STUD FRAMING AND SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE MINIMUM 15/32 THICK EXPOSURE 1 RATED PLYWOOD SHEATHING OF 24/16 (US) AND BEAR THE TRADEMARK, STAMP OF THE AMERICAN PLYWOOD ASSOCIATION (APA).

B. ALL PLYWOOD SHEATHING TO BE FASTENED TO COLD-FORMED METAL STUD FRAMING SHALL BE ATTACHED W/ITW BUILDEX FASTENERS W/SHANK DIAMETER OF 0.12" SPACED AT 6" O.C. AT ALL SUPPORTED EDGES.

C. ITW BUILDEX FASTENERS SHALL COMPLY WITH THE CRITERIA SET FORTH IN ICC EVALUATION REPORT ER-5380, REVISED JULY 1, 2005.

D. WHERE REQUIRED, ALL PLYWOOD SHEATHING SHALL BE FIRE RETARDANT TREATED. SEE ARCHITECTURAL WALL ASSEMBLIES FOR ADDITIONAL INFORMATION.

16. EXTERIOR GLAZING SYSTEMS (STORE FRONT AND SKYLIGHTS)

A. COMPLETE SHOP DRAWINGS FOR CONSTRUCTION OF EXTERIOR GLAZING SHALL SEALED & SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA AND SHALL BE AVAILABLE AT THE JOB SITE DURING THE TIMES OF INSPECTION.

B. SHOP DRAWINGS SHALL INCLUDE DESIGN LOAD CRITERIA, DESIGN LOADS, AND LOCATIONS OF EACH EXTERIOR GLAZING ANCHOR SUPPORT POINT, EXTERIOR GLAZING FRAME MEMBER SIZES AND CONNECTION DETAILS TO THE SUPPORTING STRUCTURE.

C. COMPLETE STRUCTURAL CALCULATIONS SHALL BE SUBMITTED WITH SHOP DRAWINGS. CALCULATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO CONNECTION DESIGN TO THE SUPPORTING STRUCTURE. CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA..

D. GLAZING MANUFACTURER TO PROVIDE DETAILS THAT CLEARLY INDICATE REQUIRED ATTACHMENT TO STRUCTURE ON ALL SIDES OF EXTERIOR GLAZING SYSTEM TO ADEQUATELY RESIST THE APPLICABLE WIND DESIGN PRESSURES.

E. GLAZING MANUFACTURER TO PROVIDE MULL CLIPS ALONG ALL INTERIOR STOREFRONT GLASS PANEL BUTT JOINTS AT A MAXIMUM SPACING OF 36 INCHES ON CENTER TO ENSURE COMPLIANCE WITH THE DIFFERENTIAL DEFLECTION LIMIT OF SECTION 2403.4 OF THE BUILDING CODE.

F. GLAZING MANUFACTURER TO SUBMIT THE MANUFACTURER'S DATA SHEET FOR EACH TYPE OF MULL CLIP PROPOSED FOR SUPPORT ALONG EDGES OF INTERIOR STOREFRONT GLASS PANELS.

17. MISCELLANEOUS

A. CONTRACT DOCUMENTS:
1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

B. DRAWING CONFLICTS:
1. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS

C. EXISTING CONDITIONS:
1. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING BUILDING AT THE JOB SITE AND REPORT ANY DISCREPANCIES FROM ASSUMED CONDITIONS SHOWN ON THE DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND ERECTION OF ANY MEMBERS.

D. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION:
1. ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.

E. CONFLICTS IN STRUCTURAL REQUIREMENTS:
1. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.

F. STABILITY AND BRACING OF MASONRY WALLS DURING CONSTRUCTION:
1. ALL MASONRY WALLS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES APPLIED TO THEM IN THE FINAL CONSTRUCTED CONFIGURATION ONLY ASSUMING FULL BRACING TOP, BOTTOM, AND/OR SIDE OF WALL AS SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY AND ADEQUATELY BRACE ALL MASONRY WALLS AT ALL STAGES DURING CONSTRUCTION TO RESIST ERECTION LOADS AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF CONSTRUCTION.

G. CONTRACTOR SUBSTITUTIONS:
1. ANY MATERIALS OR PRODUCTS SUBMITTED FOR APPROVAL THAT ARE DIFFERENT FROM THE MATERIAL OR PRODUCTS SPECIFIED IN THE STRUCTURAL CONTRACT DOCUMENTS WILL BE APPROVED ONLY IF THE FOLLOWING CRITERIA ARE SATISFIED:
   a. A COST SAVINGS TO THE OWNER IS DOCUMENTED AND SUBMITTED WITH THE REQUEST.
   b. THE MATERIAL OR PRODUCT HAS BEEN APPROVED BY THE INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO) AND THE ICBO REPORT IS SUBMITTED WITH THE REQUEST. SUBMITTALS NOT SATISFYING THE ABOVE CRITERIA WILL NOT BE CONSIDERED.

H. SITE OBSERVATION BY THE STRUCTURAL ENGINEER:
1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, AND, EXCEPT WHERE SPECIFICALLY SHOWN, DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION.
2. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.
3. THE ENGINEER SHALL NOT HAVE CONTROL NOR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSION OF THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. PERIODIC SITE OBSERVATION BY FIELD REPRESENTATIVES OF ELLINWOOD + MACHADO, LLC. IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OR QUANTITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.
5. IT IS RECOMMENDED THAT THE CONTRACTOR MAINTAIN A DOCUMENTED REFERENCE FOR REMEDIATION, INCLUDING PICTURES, AS NECESSARY, NOTED AS THEY ARE ADDRESSED, FOR EACH DISCREPANCY IDENTIFIED IN FIELD REPORTS ISSUED BY E+M. PLEASE NOTE IN INSTANCES WHERE A FINAL SIGN-OFF LETTER WILL BE REQUIRED FROM THE STRUCTURAL ENGINEER OF RECORD, E+M WILL REQUIRE THAT WRITTEN DOCUMENTATION OF EACH ITEM REQUIRING REMEDIATION BE SUBMITTED TO E+M FOR REVIEW PRIOR TO ANY SUCH LETTER BEING ISSUED.

I. MAINTENANCE STATEMENT:
1. ALL STRUCTURES REQUIRE PERIODIC MAINTENANCE TO EXTEND LIFE SPAN AND TO ENSURE STRUCTURAL INTEGRITY FROM EXPOSURE TO THE ENVIRONMENT.
2. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE SUCH ITEMS SUCH AS BUT NOT LIMITED TO PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATING FOR CONCRETE, SEALANTS, CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE, AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.

18. DRAWING INTERPRETATION

A. TYPICAL DETAILS
1. DETAILS LABELED AS TYPICAL DETAILS ON THESE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. THE APPLICABILITY OF THE DETAIL TO ITS LOCATION ON THE PLANS CAN BE DETERMINED BY THE TITLE OF THE DETAIL. SUCH DETAILS SHALL APPLY WHETHER OR NOT THEY ARE KEYED AT EACH LOCATION. DECISIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.

19. SPECIAL INSPECTIONS

A. REFER TO CHAPTER 17 OF INTERNATIONAL BUILDING CODE (2015) INTERNATIONAL BUILDING CODE) AND SHEET S0.05 AND S0.06 FOR SPECIAL INSPECTION REQUIREMENTS.

B. REPORTS OF INSPECTIONS, VERIFICATIONS AND/OR TESTING SHALL BE SUBMITTED EVERY TWO WEEKS OR LESS AS REQUIRED TO ALLOW FOR TIMELY REVIEW AND FIELD MODIFICATIONS IF ANY ARE REQUIRED.

C. SPECIAL INSPECTION REPORTS AND FINAL REPORT, IN ACCORDANCE WITH SECTION 1704.2.4 OF THE REFERENCED BUILDING CODE, SHALL BE SUBMITTED TO THE BUILDING OFFICIAL PRIOR TO THE TIME THAT PHASE OF WORK IS APPROVED FOR OCCUPANCY.

CONTRACTOR SHALL PROVIDE ALLOWANCES FOR THE FOLLOWING:
5O CUBIC YARDS OF CONCRETE
2 TONS OF MILD REINFORCING STEEL
5 TONS OF WIDE FLANGE SHAPES
2 TONS OF MISCELLANEOUS PLATES, ANGLES, CHANNELS

27. STRUCTURAL ABBREVIATIONS

ADD'L, ADD	ADDITIONAL
AB, ABOLT	ANCHOR BOLT
ARCH	ARCHITECTURAL
@	AT
BM	BEAM
BRG	BEARING
BLK	BLOCK
BOT, B	BOTTOM, BOTTOM BAR
BLDG	BUILDING
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CMU	CONCRETE MASONRY UNIT
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
D	DEEP
DSN	DESIGN
FTG	FOOTING
DET, DTL	DETAIL
DIA, ∅	DIAMETER
DIAG	DIAGRAM
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
EE	EACH END
EF	EACH FACE
EW	EACH WAY
ELEV, EL	ELEVATION
ETF	ELEVATION TOP OF FOOTING
ETC	ETCETERA
EQ	EQUAL
EXIST, EXT'G	EXISTING
EXP	EXPANSION
EXP JT, EJ	EXPANSION JOINT
EXT	EXTERIOR
F/	FACE OF
FIN FL, FFE	FINISHED FLOOR
FFE	FINISHED FLOOR ELEVATION
FL, FLR	FLOOR
FRT	FIRE RETARDANT TREATED WOOD
FTG	FOOTING
FT	FEET, FOOT
FLG	FLANGE
GA, ga	GAUGE
GALV	GALVANIZED
H	HEAD
HK	HOOK
HR	HOUR
HORIZ	HORIZONTAL
INFO	INFORMATION
INT	INTERIOR
JST	JOIST
JT	JOINT
K-FT	KIP-FEET
K/FT	KIPS PER FOOT
K	KIPS
L	ANGLE
2L	DOUBLE ANGLE
LG	LONG
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUT
LLV	LONG LEG VERTICAL
LOC,N	LOCATION
M	MOMENT
MFG, MFG'R	MANUFACTURER
MECH	MECHANICAL
MPH	MILES PER HOUR
MAT'L	MATERIAL
MAX	MAXIMUM
MFR	MANUFACTURER
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
O.C	ON CENTER
OPNG	OPENING
O.H	OPPOSITE HAND
P	PAN
PAF	POWDER ACTUATED FASTENER
P/C	PRECAST
PL	PLATE
PT	POST TENSIONED
PTS	POINTS
PHSE	PENTHOUSE
PSF	POUNDS PER SQ. FOOT
PSI	POUNDS PER SQ. INCH
REF	REFERENCE
REV	REVISION
REINF	REINFORCING
REQ'D	REQUIRED
REBAR	REINFORCING BAR
SCHD, SCHED	SCHEDULE
SECT	SECTION
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SLO	SHORT LEG OUT
SIM	SIMILAR
SOG	SLAB ON GRADE
SPECS	SPECIFICATIONS
SQ	SQUARE
STD	STANDARD
STIRR	STIRRUPS
STL,ST'L	STEEL
STRUCT	STRUCTURAL
T	TOP
THK	THICK
THRD	THREADED
THRU	THROUGH
T/S, T/STL	TOP OF STEEL
T/B, T/BM	TOP OF BEAM
T/CONC	TOP OF CONCRETE
T/SLAB	TOP OF SLAB
T/FTG	TOP OF FOOTING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W	WIDE
W/	WITH
WP	WORKING POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

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SEAL 24417
JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date: 03.22.22
Project No.: 20020A
Drawn By: Author
Checked By: Checker
Sheet No.: S0.03
Sheet Title: GENERAL NOTES

Master Submittal List

Submittal Type	Description	For Approval by E.O.R.	For Review by E.O.R.	For E.O.R.'s Record	Shop Drawings Signed/Sealed by Professional Engineer?	Calculations Signed/Sealed by Proffesional Engineer?
Shallow Foundations						
Concrete Mix Design	Should include the following items, at a minimum, for each mix design being submitted: Indication as to what structural components are to be poured with a given mix design (each mix design shall have its own unique name/number), mix design showing quantities by both weight and volume, 30-break history (or alternative data per ACI 301 §4.2.3), cement mill certificate, material certificate(s) for supplementary cementicious materials (fly ash, slag, silica fume), gradation analysis (for both coarse and fine aggregates), cut sheets for all chemical admixtures, slump, air content, water/cement ratio, source data for aggregate silicious reactivity (ASR)	X				
Mild reinforcing		X				
Soil compaction test results				X		
Slabs on Grade						
Concrete Mix Design	Should include the following items, at a minimum, for each mix design being submitted: Indication as to what structural components are to be poured with a given mix design (each mix design shall have its own unique name/number), mix design showing quantities by both weight and volume, 30-break history (or alternative data per ACI 301 §4.2.3), cement mill certificate, material certificate(s) for supplementary cementicious materials (fly ash, slag, silica fume), gradation analysis (for both coarse and fine aggregates), cut sheets for all chemical admixtures, slump, air content, water/cement ratio, source data for aggregate silicious reactivity (ASR)	X				
Vapor Barrier		X				
Concrete products (form oil, sealants, repair materials, etc.)		X				
Embedded items (embed plates, chubby smack, etc.)		X				
Reinforcing steel mill certificates				X		
Mild reinforcing		X				
Architectural Precast Concrete						
Concrete Mix Design	Should include the following items, at a minimum, for each mix design being submitted: Indication as to what structural components are to be poured with a given mix design (each mix design shall have its own unique name/number), mix design showing quantities by both weight and volume, 30-break history (or alternative data per ACI 301 §4.2.3), cement mill certificate, material certificate(s) for supplementary cementicious materials (fly ash, slag, silica fume), gradation analysis (for both coarse and fine aggregates), cut sheets for all chemical admixtures, slump, air content, water/cement ratio, source data for aggregate silicious reactivity (ASR)	X				
Precast erection drawings		X			X	
Precast design and connection calculations		X				X
Elevated Structural Steel Framing						
Structural steel		X				
Structural steel connections		X				X
Structural steel mill certificates - Rolled Shapes			X			
Structural steel mill certificates - Tubing, Bar			X			
Fabricator qualification data			X			
Welder certificates			X			
Erector qualification data			X			
High-stength steel bolts		X				
Direct-tension indicator washers		X				
Tension-control high strength bolt-nut-washer assemblies		X				
Anchor rods, base plates and anchor rod templates		X				
Shear stud connectors		X				
Steel joists and joist girders		X				
Special steel joists		X			X	X
Non-shrink, non-metallic grout (for base plates)		X				
Erection basing		X			X	

Metal Decking						
Composite steel floor deck		X				
Steel roof deck		X				
Shoring and backshoring		X			X	X
Metal deck fasteners		X				
Cold-Formed Metal Stud Framing						
Load-bearing cold-formed metal studs		X			X	X
Non-load-bearing cold- formed metal studs supporting exterior cladding		X			X	X
Cold-formed metal mill certificates			X			
Cold-formed metal ceiling and/or roof rafters		X			X	X
Cold-formed member calculations (for members designed by a specialty engineer)						X
Metal stud fasteners		X				
Steel Stairs						
Stair shop drawings		X			X	
Stair calculations		X				X
Wood Framing						
Wood product information (sawn lumber)		X				
Wood product information (engineered lumber)		X				
Load-bearing stud wall layout		X				
Engineered wood trusses and girder trusses (design by specialty engineer)		X				X
Wood framing hardware		X				
Uplift anchors (as required)		X				
Nailing submittal		X				
Concrete Masonry (CMU)						
CMU product information		X				
Mild reinforcing		X				
Grout mix design		X				
Mortar mix design		X				
Embedded items (embed plates, bearing plates, etc.)		X				
Miscellaneous						
Window-washing tie-back system		X			X	
Storefront shop drawings		X			X	X
Window wall shop drawings		X			X	X
Curtainwall shop drawings		X			X	X
Crane opening(s) withing elevated/structured framing		X				
Crane connection(s) to foundation and/or elevated framing		X				X
Barrier cable / cable guard rail		X			X	X
Elevator shop drawings		X				
Handrail shop drawings (steel, aluminium, other)		X			X	X
Substitutions						
Materials		X				
Member sizes		X				
Methods of construction			X			

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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions #	Description	Date
1	01	Date 1

Date	Project No.
03.22.22	20020A
Drawn By: Author	Sheet No. S0.04
Checked By: Checker	

Sheet Title: MASTER SUBMITTAL

Statement of Special Inspections

Project: *ANGIER TOWN HALL*

Location: *55 N. BROAD STREET, ANGIER, NC*
Owner: *TOWN OF ANGIER*
Owner's Address: *55 N BROAD STREET, ANGIER, NC*

Architect of Record: *OAKLEY COLLIER AND ASSOCIATES*
Structural Engineer of Record: *Ellinwood Machado, LLC*

This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the: *2018 International Building Code.*
It includes a Schedule of Special Inspection Services applicable to this project.

The Special Inspections Engineer of Record shall keep records of specified special inspections and testing shall furnish copies of inspection and testing reports to the building official and to the appropriate registered design professionals of record. Discrepancies from the approved plans and specification and code violations observed during the conduct of special inspections services shall be brought to the immediate attention of the contractor for correction and to the attention of the appropriate registered design professionals of record. A Final Report of Special Inspections documenting completion of specified special inspections and correction of any discrepancies and observed code violations noted in the inspection and testing reports shall be submitted periodically at a frequency agreed upon by the permit applicant and the building official prior to the start of work.

Statement of Special Inspections

Schedule of Special Inpection Services

Project: *Please add project information*

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

X	Soils and Foundations		Cold-Formed Steel
	Framing		Spray Fire Resistant
X	Cast-in-Place Concrete	X	Special Inspections for Wind Resistance
	Materials	X	Special Inspections for Siesmic Resistance
X	Precast Concrete		Wood Construction
X	Masonry		Exterior Insulation and Finish System
X	Structural Steel		Special Cases

KEY FOR MINIMUM QUALIFICATIONS OF INSPECTION AGENTS (WHERE INDICATED ON SCHEDULE)	
PE	PROFESSIONAL ENGINEER
EIT	ENGINEER IN TRAINING
ACI	AMERICAN CONCRETE INSTITUTE CERTIFIED CONCRETE FIELD TESTING TECHNICIAN
AWS	AMERICAN WELDING SOCIETY CERTIFIED WELDING INSPECTOR
ASNT	AMERICAN SOCIETY OF NON-DESTRUCTIVE TESTING - LEVEL II OR III
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE INSPECTOR CERTIFICATION - LEVEL II OR III
PTI	POST-TENSIONING INSTITUTE INSPECTOR CERTIFICATION - LEVEL II

SCHEDULE OF SPECIAL INSPECTION SERVICES

PROJECT				
MATERIAL/ACTIVITY	SERVICE	APPLICABILITY TO THIS PROJECT		
		Y/N	EXTENT	AGENT*
1704.2.5 Inspection of Fabricators				
Verify fabrication/quality control proceedures	In-plant review (3)		Periodic	PE
1705.1.1 Special Cases				
(work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements)	Submittal review, shop (3) and/or field inspection			PE

1705.2 Steel Construction

1.	Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)		Submittal Review		Each submittal	EIT
2.	Material verification of structural steel		Shop (3) and field inspection		Periodic	PE & AWS
3.	Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)		Field inspection		Continuous	EIT
4.	Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents		Field inspection		Periodic	EIT
5.	Structural steel welding:					
	a.	Inspection tasks Prior to Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Shop (3) and field inspection		Observe or Perform as noted (4)	AWS
	b.	Inspection tasks During Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-1)	Shop (3) and field inspection		Observe (4)	AWS
	c.	Inspection tasks After Welding (Observe, or perform for each welded joint or member, the QA tasks listed in AISC 360, Table N5.4-3)	Shop (3) and field inspection		Observe or Perform as Noted (4)	AWS
	d.	Non destructive testing (NDT) of welded joints: see Commentary				
		1. Complete penetration groove welds 5/16" or greater in risk category III or IV	Shop (3) or field ultrasonic testing - 100%		Periodic	AWS
		2. Complete penetration groove welds 5/16" or greater in risk category II	Shop (3) or field ultrasonic testing - 10% of welds min.		Periodic	AWS
		3. Thermally cut surfaces of access holes when material t>2"	Shop (3) or field magnetic Partical or Penetrant...		Periodic	AWS
		4. Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1	Shop (3) or field radiographic or Ultrasonic testing		Periodic	AWS
		5. Fabricator's NDT reports when fabricator performs NDT	Verify Reports		Each Submittal	AWS
6.	Structural Steel Bolting:		Shop (3) and field inspection			
	a.	Inspection tasks Prior to Bolting (Observe, or perform tasks for each bolted connection, in accordance with QA tasks listed in AISC 360, Table N5.6-1)			Observe or Perform as Noted (4)	PE or EIT
	b.	Inspection tasks During Bolting (Observe the QA tasks listed in the AISC 360, Table N5.6-2)			Observe (4)	PE or EIT
		1. Pre-tensioned and slip-critical joints				
		a. Turns-of-nut with matching markings			Periodic	PE or EIT
		b. Direct tension indicator			Periodic	PE or EIT
		c. Twist-off type tension control bolt			Periodic	PE or EIT
		d. Turn-of-nut without matching markings			Continuous	PE or EIT
		e. Calibrated wrench			Continuous	PE or EIT
		2. Snug-tight joints			Periodic	PE or EIT
	c.	Inspection tasks After Bolting (Perform tasks for each bolted connection in accordance with QA tasks listed in AISC 360, Table N5.6-3)			Perform (4)	PE or EIT
7.	Inspection of steel elements of composite construction prior to concrete placement in accordance with QA tasks listed in AISC 360, Table N6.1		Shop (3) and field inspection and testing		Observe or Perform as Noted (4)	PE or EIT

1705.2.2 Steel Construction Other Than Structural Steel

1.	Material verification of cold-formed steel deck:					
	a.	Identification markings	Field inspection		Periodic	EIT
	b.	Manufacturer's certified test reports	Submittal review		Each submittal	EIT
2.	Connection of cold-formed steel deck to supporting structure:		Shop (3) and field inspection			
	a.	Welding			Periodic	AWS
	b.	Other fasteners (in accordance with AISC 360, Section N6)				
		1. Verify fasteners are in accordance with approved submittal			Periodic	EIT
		2. Verify fasteners installation is in conformance with approved submittal and manufacturer's recommendations			Periodic	EIT
3.	Reinforcing Steel		Shop (3) and field inspection			
	a.	Verification of weldability of steel other than ASTM A706			Periodic	EIT
	b.	Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, boundary elements of special concrete structural walls and shear reinforcement			Continuous	EIT
	c.	Shear reinforcement			Continuous	EIT
	d.	Other reinforcing steel			Periodic	EIT
4.	Cold-formed steel trusses spanning 60 feet or greater					
	a.	Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package			Periodic	PE or EIT

1705.3 Concrete Construction

1.	Inspection of reinforcing steel installation (see 1705.2.2 for welding)	Shop (3) and field inspection		Periodic	EIT
2.	Inspection of prestressing steel installation	Shop (3) and field inspection		Periodic	EIT or PTI
3.	Inspection of anchors cast in concrete where allowable loads have been increased per section 1908.5 or where strength design is used	Shop (3) and field inspection		Continuous	EIT
4.	Inspection of anchors and reinforcing steel post-installed in hardened concrete: Per research reports including verification of anchor type, anchor dimensions, hole dimensions, hole cleaning procedures, anchor spacing, edge distances, concrete minimum thickness, anchor embedment and tightening torque	Field inspection		Periodic or as required by the research report issued by an approved source	PE or EIT
5.	Verify use of approved mix design	Shop (3) and field inspection		Periodic	EIT
6.	Fresh concrete sampling, perform slump and air content tests and determine temperature of concrete	Shop (3) and field inspection		Continuous	ACI
7.	Inspection of concrete and shotcrete placement for proper application techniques	Shop (3) and field inspection		Continuous	ACI
8.	Inspection for maintenance of specified curing temperature and techniques	Shop (3) and field inspection		Periodic	ACI
9.	Inspection of prestressed concrete:	Shop (3) and field inspection			
	a. Application of prestressing force			Continuous	PE or PCI
	b. Grouting of bonded prestressing tendons in the seismic-force-resisting system			Coninuous	PE or PCI
10.	Erection of precast concrete members				
	a. Inspect in accordance with construction documents	Field inspection		In accordance with construction documents	EIT or PCI
	b. Perform inspections of welding and bolting in accordance with Section 1705.2	Field inspection		In accordance with Section 1705.2	AWS
11.	Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs	Review field testing and laboratory...		Periodic	ACI
12.	Inspection of formwork for shape, lines, location and dimensions	Field inspection		Periodic	EIT
13.	Concrete strength testing and verification of compliance with construction documents	Field testing and review of laborat...		Periodic	ACI

1705.4 Masonry Construction

A.	**Level A, B, and C Quality Assurance:**				
	1. Verify compliance with approved submittals	Field inspection		Periodic	EIT
B.	**Level B Quality Assurance:**				
	1. Verification of f'm and f'AAC prior to construction	Testing by unit strength method or prism test method		Periodic	ACI
C.	**Level C Quality Assurance:**				
	1. Verification of f'm and f'AAC prior to construction and for every 5,000 SF during construction	Testing by unit strength method or prism test method		Periodic	ACI
	2. Verification of proportions of materials in premixed or preblended mortar, prestressing (post-tensioning) grout, and grout other than self-consolidating grout, as delivered to the project site	Field inspection		Continuous	ACI
	3. Verify placement of masonry units	Field inspection		Periodic	EIT
D.	**Levels B and C Quality Assurance:**				
	1. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	Field Testing		Continuous	ACI
	2. Verify compliance with approved submittals	Field inspection		Periodic	EIT
	3. Verify proportions of site-mixed mortar, grout and prestressing (post-tensioning) grout for bonded tendons	Field inspection		Periodic	ACI
	4. Verify grade, type, and size of reinforcement and anchor bolts, and prestressing (post-tensioning) tendons and anchorages	Field inspection		Periodic	EIT
	5. Verify construction of mortar joints	Field inspection		Periodic	EIT
	6. Verify placement of reinforcement, connectors, and prestressing (post-tensioning) tendons and anchorages	Field inspection		Level B - Periodic	EIT
				Level C - Periodic	EIT
	7. Verify grout space prior to grouting	Field inspection		Level B - Periodic	EIT
				Level C - Periodic	EIT
	8. Verify placement of grout and prestressing (post-tensioning) grout for bonded tendons	Field inspection		Continuous	EIT
	9. Verify size and location of structural masonry elements	Field inspection		Periodic	EIT
	10. Verify type, size, and location of anchors, including details of anchorage of masonry to structural members, frames, or other construction.	Field inspection		Level B - Periodic	EIT
				Level C - Periodic	EIT
	11. Verify welding of reinforcement (see 1705.2.2)	Field inspection		Continuous	AWS
	12. Verify preparation, construction, and protestion of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90° F)	Field inspection		Periodic	EIT
	13. Verify application and measurement of prestressing force	Field inspection		Continuous	EIT or PTI
	14. Verify placement of AAC masonry units and construction of thin-bed mortar joints (first 5000 SF of AAC masonry)	Field inspection		Continuous	EIT
	15. Verify placement of AAC masonry units and construction of thin-bed mortar joints (after the first 5000 SF of AAC masonry)	Field inspection		Level B - Periodic	EIT
				Level C - Periodic	EIT
	16. Verify properties of thin-bed mortar for AAC masonry (first 5000 SF of AAC masonry)	Field inspection		Continuous	ACI
	17. Verify properties of thin-bed mortar forAAC masonry (after the first 5000 SF of AAC masonry)	Field inspection		Level B - Periodic	ACI
				Level C - Periodic	ACI
	18. Prepare grout and mortar specimens	Field Testing		Level B - Periodic	ACI
				Level C - Periodic	ACI
	19. Observe preparation of prisms	Field inspection		Level B - Periodic	ACI
				Level C - Periodic	ACI

1705.6 Soils

1.	Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection		Periodic	PE or EIT
2.	Verify excavations are extended to proper depth and have reached proper material.	Field inspection		Periodic	PE or EIT
3.	Perform classification and testing of controlled fill materials.	Field inspection		Periodic	PE or EIT
4.	Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill	Field inspection		Continuous	PE or EIT
5.	Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly	Field inspection		Periodic	PE or EIT

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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 John Craig Fisher SIGNED JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

Date	Project No.
03.22.22	20020A
Drawn By: Author	Sheet No. S0.05
Checked By: Checker	

Sheet Title
SPECIAL INSPECTIONS

1705.10.1 Structural Wood Special Inspections For Wind Resistance					
1.	Inspection of field gluing operations of elements of the main windforce-resisting system	Field inspection		Continuous	PE
2.	Inspection of nailing, bolting, anchoring and other fastening of components within the main windforce-resisting system	Shop (3) and field inspection		Periodic	PE

1705.10.2 Cold-formed Steel Special Inspections For Wind Resistance					
1.	Inspection during welding operations of elements of the main windforce-resisting system	Shop (3) and field inspection		Periodic	PE
2.	Inspections for screw attachment, bolting, anchoring and other fastening of components within the main windforce-resisting system	Shop (3) and field inspection		Periodic	PE

1705.10.3 Wind-resisting Components					
1.	Roof cladding	Shop (3) and field inspection		Periodic	PE
2.	Wall cladding	Shop (3) and field inspection		Periodic	PE

1705.11.1 Structural Steel Special Inspections for Seismic Resistance				
Inspection of structural steel in accordance with AISC 341	Shop (3) and field inspection		In accordance with AIS...	PE

1705.11.3 Cold-formed Steel Light-Frame Construction Special Inspections for Seismic Resistance					
1.	Inspection during welding operations of elements of the seismic-force-resisting system	Shop (3) and field inspection		Periodic	PE
2.	Inspections for screw attachment, bolting, anchoring and other fastening of components within the seismic-force-resisting system	Shop (3) and field inspection		Periodic	PE

1705.11.4 Designated Seismic Systems Verification				
Inspect and verify that that the component label, anchorage or mounting conforms to the certificate of compliance in accordance with Section 1705.12.3	Field inspection		Periodic	PE

1705.11.5 Architectural Components Special Inspections for Seismic Resistance					
1.	Inspection during the erection and fastening of exterior cladding and interior and exterior...	Field inspection		Periodic	PE
2.	Inspection during the erection and fastening of interior and exterior nonbearing walls	Field inspection		Periodic	PE
3.	Inspection during anchorage of access floors	Field inspection		Periodic	PE

1705.11.6 Mechanical and Electrical Components Special Inspections for Seismic Resistance					
1.	Inspection during the anchorage of electrical equipment for emergency or standby power systems	Field inspection		Periodic	PE
2.	Inspection during the anchorage of other electrical equipment	Field inspection		Periodic	PE
3..	Inspection during installation and anchorage of piping systems designed to carry hazardous materials, and their associated mechanical units	Field inspection		Periodic	PE
4.	Inspection during the installation and anchorage of HVAC ductwork that will contain hazardous materials	Field inspection		Periodic	PE
5.	Inspection during the installation and anchorage of vibration isolation systems	Field inspection		Periodic	PE

1705.11.8 Seismic Isolation Systems				
Inspection during the fabrication and installation of isolator units and energy dissipation devices used as part of the seismic isolation system	Shop and field inspection		Periodic	PE

1705.12.1 Concrete Reinforcement Testing and Qualification for Seismic Resistance					
1.	Review certified mill test reports for each shipment of reinforcement used to resist earthquake-induced flexural and axial forces in reinforced concrete special moment frames, special structural walls, and coupling beams connecting special structural walls	Review certified mill test reports		Each shipment	PE
2.	Verify reinforcement weldability of ASTM A615 reinforcement used to resist earthquake-induced flexural and axial forces in reinforced concrete special moment frames, special structural walls, and coupling beams connecting special structural walls	Review test reports		Each shipment	PE

1705.12.2 Structural Steel Testing and Qualification for Seismic Resistance				
Test in accordance with the quality assurance requirements of AISC 341	Shop (3) and field testing		Per AISC 341	PE

1705.12.3 Seismic Certification of Nonstructural Components				
Review certificate of compliance for designated seismic system components.	Certificate of compliance review		Each submittal	PE

1705.12.4 Seismic Isolation Systems				
Test seismic isolation system in accordance with ASCE 7 Section 17.8	Prototype testing		Per ASCE 7	

1705.15 Exterior Insulation and Finish Systems (EIFS)					
1.	Verify materials, details and installations are per the approved construction documents	Field inspection		Periodic	
2.	Inspection of water-resistive barrier over sheathing substrate	Field inspection		Periodic	

1705.16 Fire-Resistant Penetrations and Joints					
1.	Inspect penetration firestop systems	Field testing	X	Per ASTM E2174	
2.	Inspect fire-resistant joint systems	Field testing	X	Per ASTM E2393	

INSPECTION AGENTS		
	FIRM	**ADDRESS**
1.		
2.		
3.		
4.		

Notes:

1.	*The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional.*
2.	*The list of Special Inspectors may be submitted as a separate document, if noted so above.*
3.	*Special Insepctions as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with IBC Section 1704.2.5.2*
4.	*Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel...*
5.	*NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N7.*

Are Requirements for Seismic Resistance included in the Statement of Special Inspections?	**Yes**	**No**
Are Requirements for Wind Resistance included in the Statement of Special Inspections?	**Yes**	**No**

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
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Revisions

#	Description	Date

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03.22.22	20020A
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Checked By: Checker	

Sheet Title
SPECIAL INSPECTIONS

FOUNDATION NOTES:

1. FOUNDATIONS ARE DESIGNED FOR THE FOLLOWING ALLOWABLE BEARING PRESSURES:

   2,500 PSF — CONCRETE SLAB ON GRADE, INTEGRAL THICKENED SLAB ELEMENTS AND INTEGRAL SPREAD FOOTINGS BEARING ON RESIDUAL SOILS OR NEWLY PLACED COMPACTED, ENGINEERED FILL.

2. SEE SHEETS **S3-0#** FOR FOUNDATION DETAILS.
3. SEE SHEETS **S6-0#** FOR CMU WALL DETAILS.
4. SEE SHEET S4.41 AND S4.42 FOR STEEL COLUMN DETAILS, ANCHOR BOLT REQUIREMENTS, BASE PLATE DETAILS, ETC.
5. SEE ARCH. DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.
6. REFER TO PLANS FOR TOP OF SLAB DATUM ELEVATION.
7. TYPICAL SLAB ON GRADE SHALL BE 4" CONCRETE SLAB W/ 6x6-W2.1xW2.1 WWR.
8. WHERE SLAB ON GRADE MUST SLOPE TO DRAIN, CONTRACTOR TO THICKEN SLAB AS REQUIRED TO MAINTAIN 4" MINIMUM THICKNESS, TYP. SEE SHEETS S3-0# AND GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
9. CJ — INDICATES SLAB ON GRADE CONTROL JOINT OR CONSTRUCTION JOINT, SEE DETAIL 1/S3.02.
10. PROVIDE ONE (1) LAYER OF 10 MIL VAPOR BARRIER UNDER THE SLAB ON GRADE, TYP. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. ALL FOOTINGS TO BE CENTERED UNDER WALLS, COLUMNS, BEAM BEARING, PIERS AND PILASTERS, UNLESS NOTED OTHERWISE.
12. ALL TOP OF FOOTING ELEVATIONS SHALL BE -(2' -0") BELOW TOP OF SLAB ELEVATION, UNLESS NOTED OTHERWISE.
13. DENOTES STEP IN WALL FOOTING, SEE 7/S3.07.
14. F5.0 — INDICATES FOOTING MARK. SEE SCHEDULE.
    TOF — INDICATES TOP OF FOOTING ELEVATION.
15. SEE ARCH. FOR TRASH ENCLOSURE, COMPACTOR, AND TRANSFORMER/EQUIPMENT PADS. UNLESS NOTED OTHERWISE ON PLANS, EQUIPMENT PADS SHALL BE 6" THICK REINFORCED CONCRETE SLAB ON GRADE W/ #4@12" E.W. CENTERED IN SLAB. PROVIDE PERIMETER TURNDOWN SLAB EDGE AND ENCLOSURE WALL PER DETAILS ON S3.09.
16. CONCRETE SIDEWALKS AND STOOPS NOT WITHIN SCOPE OF STRUCTURAL DRAWINGS. SEE CIVIL/ARCH. DRAWINGS, TYP.
17. DENOTES SLAB STEP. SEE DETAIL 4/S3.01, UNLESS NOTED OTHERWISE.
18. WHERE SPREAD FOOTINGS THAT SUPPORT STEEL COLUMNS HAVE A TOP OF FOOTING ELEVATION MORE THAN 2' - 0" BELOW F.F.E., PROVIDE CONCRETE PEDESTAL PER DETAIL X/S3-0X.

1 01 FOUNDATION FIRST FLOOR

S1.01 SCALE: 1/8" = 1'-0"

Schedule_Column Footing

MARK	LENGTH	WIDTH	THICKNESS	REINFORCEMENT
F4	4'-0"	4'-0"	12"	#5@12" OC EA WAY BOTTOM
F5	5'-0"	5'-0"	12"	#5@12"OC EA WAY BOTTOM
F6	6'-0"	6'-0"	12"	#5@12"OC EA WAY BOTTOM
F7	7'-0"	7'-0"	14"	#7@12" OC EA WAY BOTTOM
F8	8'-0"	8'-0"	16"	#7@12" OC EA WAY BOTTOM

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March 22, 2022

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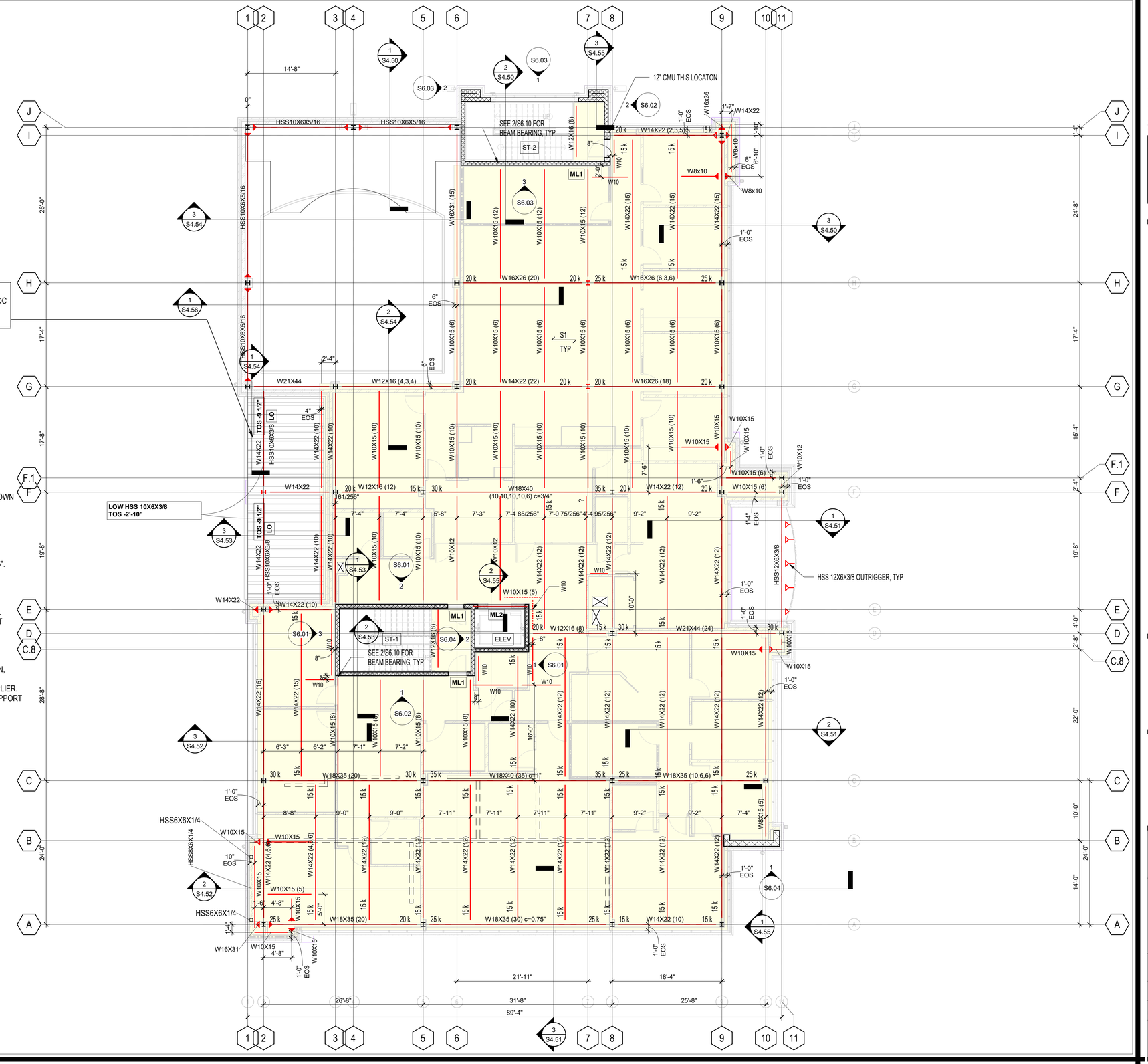
Sheet Title: FOUNDATION PLAN

BASE BID: 1 1/2" 22 GA METAL ROOF DECK WITH
PRE-FABRICATED LIGHT GAGE METAL TRUSSES AT 4 FT OC
ALTERNATE: 3/4" PLYWOOD ROOF SHEATHING WITH
PREFABRICATED WOOD ROOF TRUSSES AT 24" OC

COMPOSITE STEEL NOTES:

1. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL STRUCTURAL INFORMATION.
2. FINISHED FLOOR ELEVATION = SEE ARCH. COORDINATE SPOT EVATIONS, SLOPES AND DRAINS WITH ARCHITECTURAL DRAWINGS.
3. BEAMS THAT HAVE A DISTANCE DENOTED IN [X"] BESIDE OR BELOW THE BEAM LABEL INDICATE A TOP OF STEEL SET ABOVE OR BELOW THE TOP OF STEEL ELEVATION.
4. AT FLOOR, USE LIGHT WEIGHT CONCRETE OVER DECKING, TOTAL SLAB AND DECKING THICKNESS = 5", REFER TO DETAILS ON S4.12 FOR SLAB AND DECKING REQUIREMENTS UNLESS NOTED OTHERWISE. ADDITIONAL CONCRETE MAY BE REQUIRED TO ACHIEVE THE REQUIRED TOP OF SLAB ELEVATION DUE TO CONSTRUCTION LOAD DEFLECTION.
5. SEE THE FOUNDATION PLAN AND SHEET S5-10 FOR COLUMN SIZES.
6. UNFACCTORED BEAM REACTIONS ARE SHOWN ON THE FRAMING PLAN. BEAMS WITHOUT REACTION SHOWN SHALL BE DESIGNED FOR A 12 KIP MINIMUM REACTION, UNO.
7. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS AT STAIR LANDINGS. THE STEEL STAIRS SHALL BE DESIGNED BY THE SUPPLIER FOR A 100 PSF LIVE LOAD. INTERMEDIATE LANDINGS SHALL BE SUPPORTED ON THE PERIMETER STEEL FRAMING USING EITHER HUNG OR STUB COLUMNS. SUBMIT CERTIFIED SHOP DRAWINGS FOR STAIR DESIGN TO ELLINWOOD + MACHADO, LLC FOR REVIEW.
8. SEE ARCHITECTURAL AND MP&E DRAWINGS FOR LOCATIONS OF PENETRATIONS THROUGH THE FLOOR SLAB. REINFORCE SLAB/DECKING PER TYPICAL SLAB OPENING DETAILS FOR OPENINGS LARGER THAN 6".
9. SEE ARCHITECTURAL PLANS FOR LOCATION OF FLOOR FINISHES, AND AREAS REQUIRING SLOPED OR DEPRESSED SLABS NOT SHOWN ON PLAN.
10. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND ELEVATION OF LINTELS, WALLS AND WIND GIRTS.
11. FLOORS ARE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LOADS SHOWN ON THE CONSTRUCTION SPECIFICATIONS. SPECIAL LOADING CONDITIONS MUST BE REPORTED TO ELLINWOOD + MACHADO, LLC. ALL NONSTANDARD LOADS ARE NOTED ON THE DESIGN DOCUMENTS. ELLINWOOD + MACHADO, LLC NOT RESPONSIBLE FOR DEFECTS RESULTING FROM UNREPORTED CONDITIONS MITIGATING THE ABOVE ASSUMPTIONS.
12. FLOOR STRUCTURE HAS NOT BEEN DESIGNED TO SUPPORT HVAC EQUIPMENT THAT MAY BE HUNG FROM UNDERSIDE OF STRUCTURE. IF HVAC UNITS ARE TO BE INSTALLED AND SUPPORTED BY FLOOR STRUCTURE SUBMIT MECHANICAL DRAWINGS TO ELLINWOOD + MACHADO, LLC BEFORE CONSTRUCTION, WHICH MAY REQUIRE ADDITIONAL FRAMING OR REINFORCEMENT OF THE FRAMING SHOWN.
13. ALL CANOPIES AND AWNINGS PER THE ARCH. PLANS SHALL BE STEEL FRAMING PER THE CANOPY SUPPLIER. ALL TIE RODS SHOWN ARE ASSUMED TO BE NON-STRUCTURAL. CANOPY DESIGNER SHALL PROVIDE SUPPORT REACTIONS
AND ATTACHMENT REQUIREMENTS TO ELLINWOOD + MACHADO, LLC PRIOR TO CONSTRUCTION.
14. W10 INDICATES W10X15 WITH (5) 3/4" DIA X 4" HD STUDS, UNO.
15. ▶— INDICATES MOMENT CONNECTION. SEE S4.35.
16. SEE DETAIL 9/S4.11. ALSO SEE 3/S4.07 FOR LIGHT GAGE TRUSS BRACING. SEE 3/S4.05 FOR ALTERNATE WOOD TRUSS BLOCKING.



1 2ND FLOOR FRAMING PLAN

S1.02 SCALE: 1/8" = 1'-0"

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NEW FACILITY FOR
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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER March 25, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions		
#	Description	Date

Date 03.22.22	Project No. 20020A
Drawn By Author	Sheet No. S1.02
Checked By Checker	
Sheet Title: SECOND FLOOR FRAMING PLAN	

COMPOSITE STEEL NOTES:

1. REFER TO GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL STRUCTURAL INFORMATION.
2. FINISHED FLOOR ELEVATION = SEE ARCH. COORDINATE SPOT EVATIONS, SLOPES AND DRAINS WITH ARCHITECTURAL DRAWINGS.
3. BEAMS THAT HAVE A DISTANCE DENOTED IN [X"] BESIDE OR BELOW THE BEAM LABEL INDICATE A TOP OF STEEL SET ABOVE OR BELOW THE TOP OF STEEL ELEVATION.
4. AT FLOOR, USE LIGHT WEIGHT CONCRETE OVER DECKING, TOTAL SLAB AND DECKING THICKNESS = 5", REFER TO DETAILS ON S4.12 FOR SLAB AND DECKING REQUIREMENTS UNLESS NOTED OTHERWISE. ADDITIONAL CONCRETE MAY BE REQUIRED TO ACHIEVE THE REQUIRED TOP OF SLAB ELEVATION DUE TO CONSTRUCTION LOAD DEFLECTION.
5. SEE THE FOUNDATION PLAN AND SHEET S5-10 FOR COLUMN SIZES.
6. UNFACCTORED BEAM REACTIONS ARE SHOWN ON THE FRAMING PLAN. BEAMS WITHOUT REACTION SHOWN SHALL BE DESIGNED FOR A 12 KIP MINIMUM REACTION, UNO.
7. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS AT STAIR LANDINGS. THE STEEL STAIRS SHALL BE DESIGNED BY THE SUPPLIER FOR A 100 PSF LIVE LOAD. INTERMEDIATE LANDINGS SHALL BE SUPPORTED ON THE PERIMETER STEEL FRAMING USING EITHER HUNG OR STUB COLUMNS. SUBMIT CERTIFIED SHOP DRAWINGS FOR STAIR DESIGN TO ELLINWOOD + MACHADO, LLC FOR REVIEW.
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9. SEE ARCHITECTURAL PLANS FOR LOCATION OF FLOOR FINISHES, AND AREAS REQUIRING SLOPED OR DEPRESSED SLABS NOT SHOWN ON PLAN.
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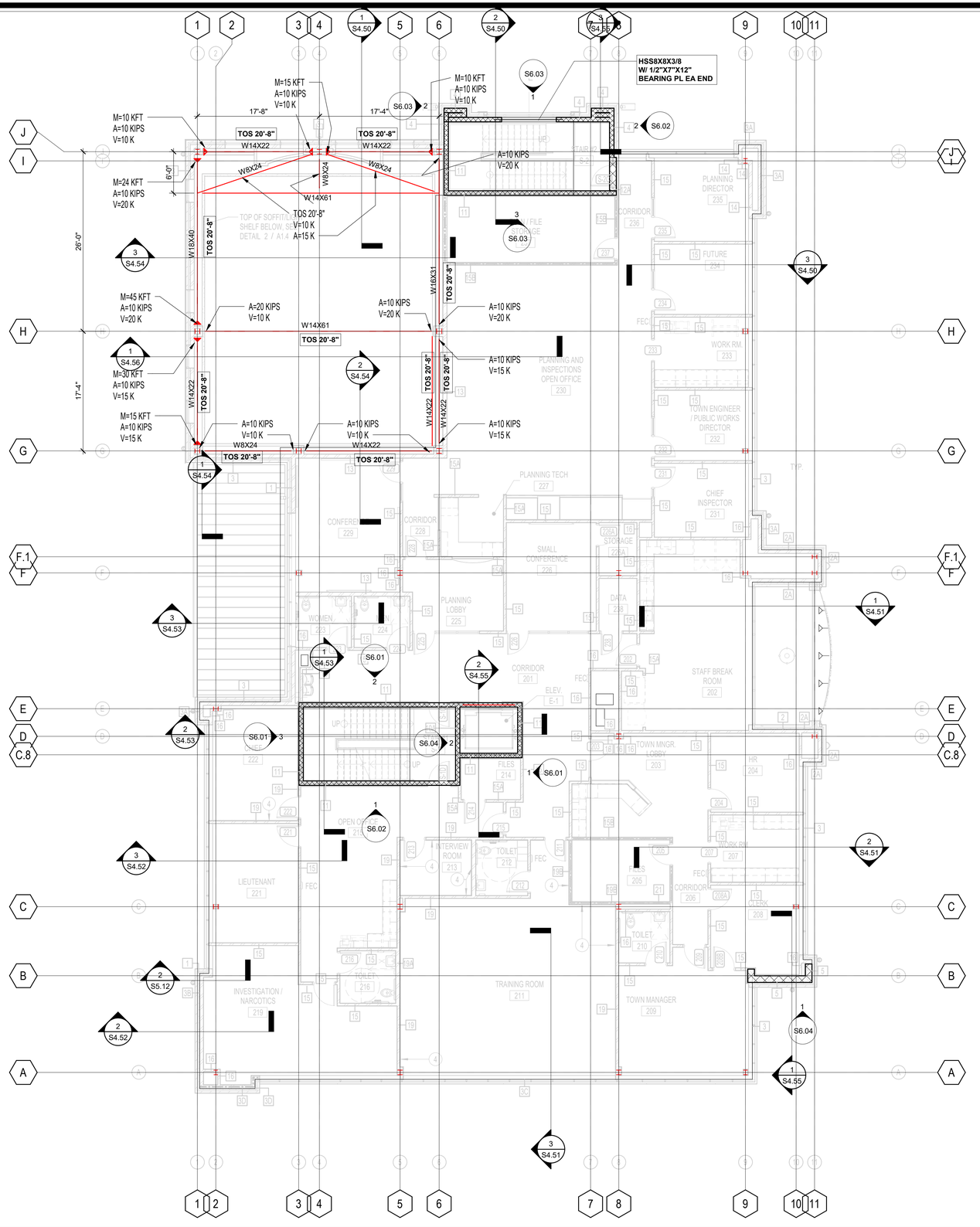
15. ▶— INDICATES MOMENT CONNECTION. SEE S4.35.
16. SEE DETAIL 9/S4.11. ALSO SEE 3/S4.07 FOR LIGHT GAGE TRUSS BRACING. SEE 3/S4.05 FOR ALTERNATE WOOD TRUSS BLOCKING.

1 02.5 LOWER ROOF FRAMING PLAN

S1.02.2 SCALE: 1/8" = 1'-0"



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NEW FACILITY FOR
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SEAL 24417 JOHN CRAIG FISHER ENGINEER
March 22, 2022

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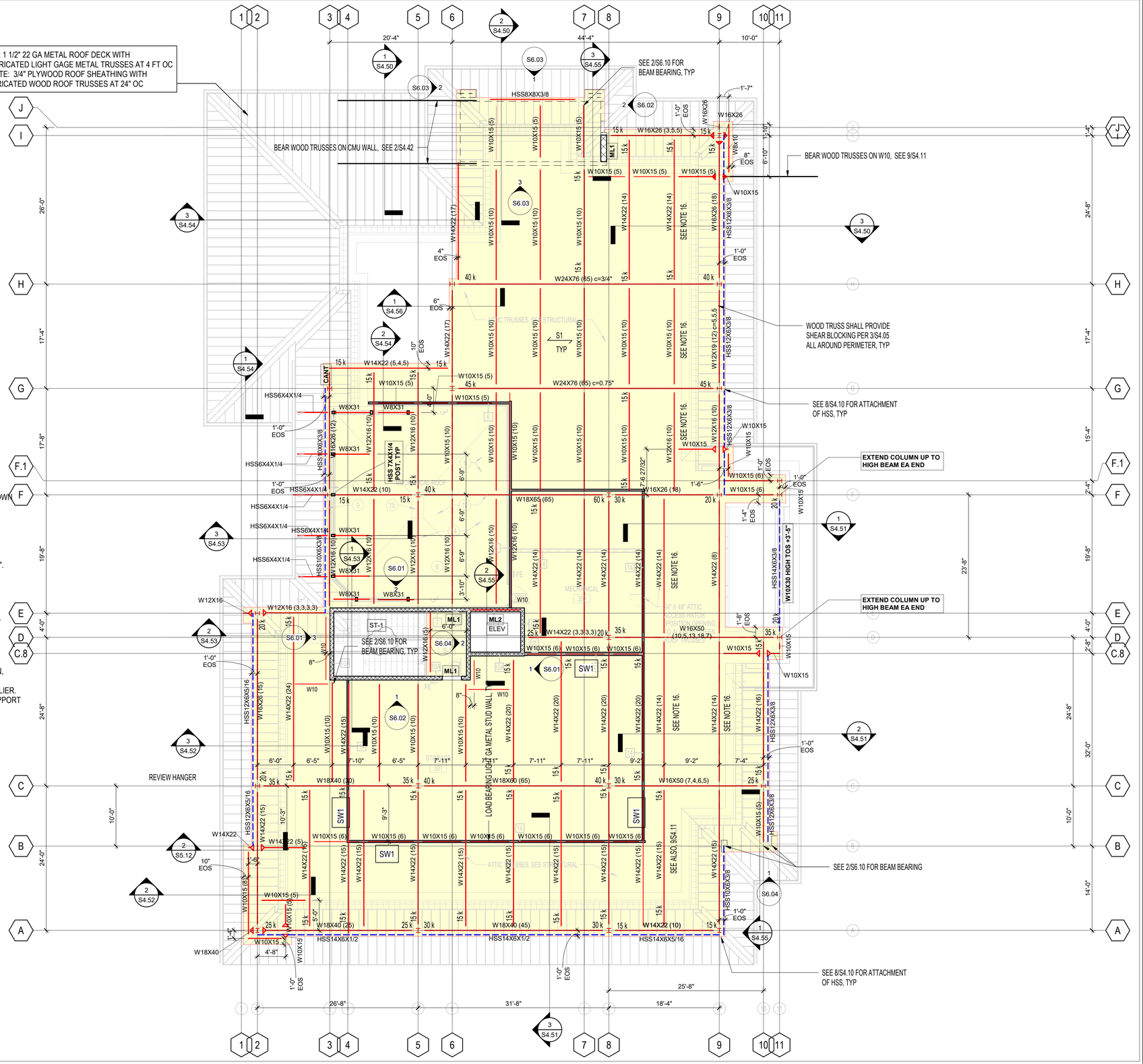
Sheet Title
LOWER ROOF FRAMING PLAN



COMPOSITE STEEL NOTES:

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16. SEE DETAIL 9/S4.11. ALSO SEE 3/S4.07 FOR LIGHT GAGE TRUSS BRACING. SEE 3/S4.05 FOR ALTERNATE WOOD TRUSS BLOCKING.

1 ATTIC FRAMING PLAN

S1.03 SCALE: 1/8" = 1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 JOHN CRAIG FISHER
SEAL 24417
JOHN CRAIG FISHER
ENGINEER
March 22, 2022

BID SET

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Revisions		
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1	01	Date 1

Date	Project No.
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Drawn By: Author	Sheet No. S1.03
Checked By: Checker	

Sheet Title: ATTIC FRAMING PLAN

ROOF STEEL FRAMING NOTES:

1. DECK BEARING ELEVATION = SEE ARCHITECTURAL DRAWINGS.
2. ROOF FRAMING SHALL CONSIST OF A 1½" DEEP, TYPE "B", 22 GAGE GALVANIZED (G90) ASTM A653 (Fy = 33 ksi) METAL ROOF DECK SUPPORTED ON LIGHT GAGE METAL TRUSSES AND STEEL BEAMS.
4. DENOTES DIRECTION OF THE METAL ROOF DECK SPAN.
5. METAL DECK UNITS SHALL BE FABRICATED AND/OR FIELD CUT SUCH THAT A MINIMUM THREE SPAN CONDITION IS PROVIDED.
7. METAL DECK SHALL BE ATTACHED TO STEEL JOISTS AND/OR STEEL BEAMS AS FOLLOWS:
   A. ATTACHMENT AT SUPPORTS SHALL BE #12 TEL SCREWS AT 12" OC.
   B. ATTACHMENT AT SIDELAPS SHALL BE #12 TEK SCREWS AT 12" OC.
   C. ATTACHMENT AT SIDE SUPPORTS ALONG PERIMETER SHALL BE #12 TEK SCREWS AT 12" OC.
   D. ATTACHMENT AT OPENING IN METAL DECK SHALL BE #12 TEK SCREWS AT 6" OC MAXIMUM SPACING.
   E. MINIMUM END LAP DIMENSION = 0' - 3"
   F. METAL ROOF DECK FASTENING PATTERN SHALL BE AS FOLLOWS:
      -36/4 WITH 4 SIDE LAP ATTACHMENTS PER SPAN

DEVIATION FROM THE FASTENING PATTERN DESCIBED HEREIN WILL NOT BE PERMITTED.

ROOF WOOD FRAMING PLAN NOTES:

1. SEE S4.30 SERIES FOR ROOF FRAMING SECTIONS AND DETAILS.
2. ROOF / FRG — DENOTES PRE-ENGINEERED OPEN WEB ROOF TRUSSES @ 24" O.C. DEPTH OF ROOF TRUSSES TO BE A MINIMUM OF 24", TYP. TRUSS DEPTH VARIES WITH SLOPE OF ROOF (TOP CHORD TO SLOPE AS REQ'D TO ACHIEVE ROOF SLOPES). SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. "G1" DENOTES A GIRDER TRUSS, TYP.
4. "H1" DENOTES A HIP TRUSS, TYP.
5. "DBL" DENOTES A DOUBLE TRUSS, TYP.
6. ALL ROOF TRUSSES SHALL BE DESIGNED BY THE TRUSS MANUFACTURER, WHICH SHALL INCLUDE ALL TRUSS-TO-TRUSS CONNECTIONS. SEE GENERAL NOTES ON SHEET S0.02 FOR ADDITIONAL INFORMATION.
7. TRUSS MANUFACTURER SHALL DESIGN ALL ROOF TRUSS COMPONENTS FOR THE NET UPLIFT WIND PRESSURE RESULTING FROM THE WIND PRESSURES SHOWN IN DETAIL 6/S0.02, TYP. ADDITIONALLY TRUSS MANUFACTURER SHALL DESIGN ROOF TRUSSES FOR POINT LOADS APPLIED VIA ROOF KICKERS. SEE ROOF FRAMING PLANS AND DETAILS FOR ADD'L INFORMATION.
8. ALL ROOF TRUSSES TO BE MECHANICALLY FASTENED AT ALL BEARING POINTS AND STUD FRAMING BELOW ACCORDING TO ROOF ANCHORAGE AND TIE-DOWN NOTES .
9. PROVIDE TIE-DOWN ANCHORS FOR ALL GIRDER TRUSSES (GT) AND DOUBLE TRUSSES (DBL) ACCORDING TO ROOF ANCHORAGE AND TIE-DOWN NOTES.

1 04 ROOF FRAMING PLAN

S1.04 SCALE: 1/8" = 1'-0"

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March 22, 2022

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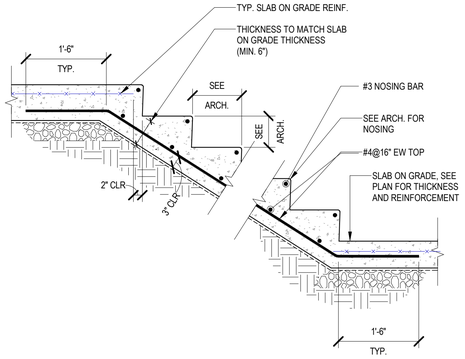
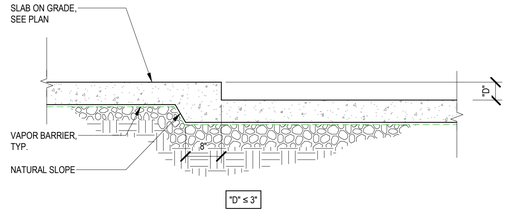
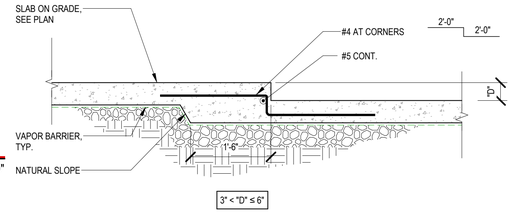
Sheet Title: ROOF FRAMING PLAN

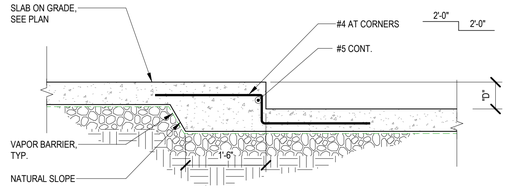


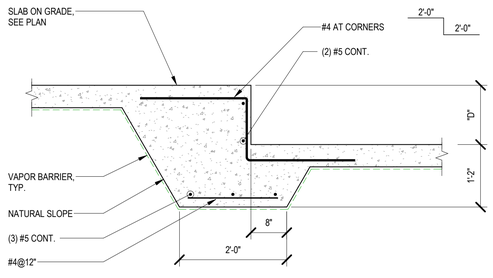
5 CONCRETE STAIR-ON-GRADE

S3.01 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"







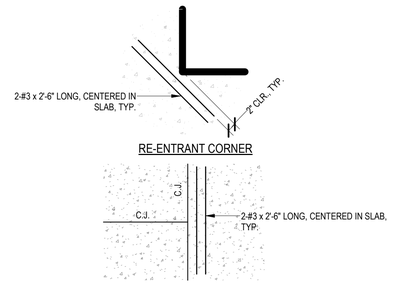


NOTES:

1. REINFORCEMENT SHOWN IN THIS DETAIL DOES NOT APPLY TO POST-TENSIONED SLABS ON GRADE. ALL PT AND MILD REINFORCEMENT IN POST-TENSIONED SLABS ON GRADE SHALL BE SPECIFIED BY A SPECIALTY ENGINEER.
2. SEE PLAN FOR LOCATION OF STEPS/DEPRESSIONS, SLAB ON GRADE THICKNESS, AND REQUIRED REINFORCEMENT.
3. COORDINATE DEPTHS AND LOCATIONS OF ALL FLOOR DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.
4. PROVIDE (1) #4 DIAGONAL TOP BAR AT CORNERS OF ALL DEPRESSIONS, TYP.

4 STEPS AND DEPRESSIONS IN SLAB-ON-GRADE

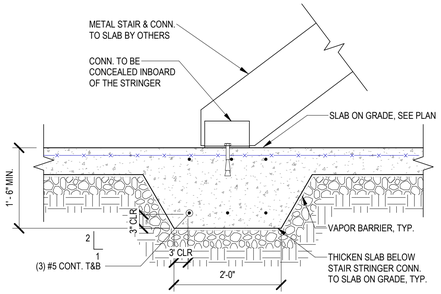
S3.01 SCALE: 3/4" = 1'-0"



DISCONTINUOUS JOINT

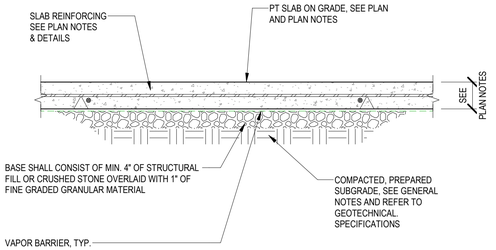
6 TYPICAL REINFORCEMENT AT SLAB RE-ENTRANT CORNERS2

S3.01 NOT TO SCALE



7 THICKENED SLAB AT STAIR DETAIL

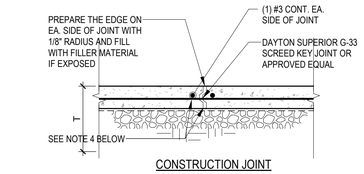
S3.01 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



MATERIAL SPECIFICATIONS:
A) STRUCTURAL FILL: DEFINED IN SPECIFICATIONS.
B) FINE-GRADED GRANULAR MATERIAL IS A CLEAN MIXTURE OF CRUSHED STONE, CRUSHED GAVEL, AND MANUFACTURED OR NATURAL SAND, ASTM D448, SIZE 10, WITH 100% PASSING A NO. 4 SIEVE AND 10-30% PASSING A NO. 100 SIEVE.

1 SLAB-ON-GRADE SUBGRADE PREPARATION

S3.01 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



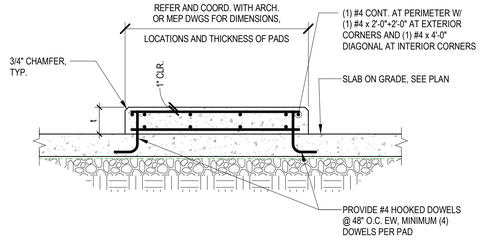
CONSTRUCTION JOINT

CONSTRUCTION JOINT NOTES:

1. SEE PLAN FOR SLAB THICKNESS (T) AND REINFORCEMENT.
2. SLAB REINFORCEMENT SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
3. DO NOT USE THE KEY JOINT FOR SCREEDING.
4. BREAK BOND BETWEEN NEW AND PREVIOUSLY PLACED SLAB BY SPRAYING OR PAINTING EXPOSED SIDE OF KEY AND DOWEL WITH A CURING COMPOUND, ASPHALTIC EMULSION, OR FORM OIL.
5. REFER TO GENERAL NOTES, GENERAL SPECIFICATIONS, AND DRAWINGS FOR SUB-FLOOR DRAINAGE SYSTEM, SUBGRADE PREPARATION AND/OR MUD SLAB AND VAPOR BARRIER REQUIREMENTS.
6. SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
7. LONG STRIP CONSTRUCTION METHOD SHALL BE USED IN PLACING CONCRETE FOR ALL SLABS ON GRADE. SEE SCHEMATIC PLAN FOR CONCRETE PLACING SEQUENCE.

2 CONSTRUCTION JOINTS IN SLAB-ON-GRADE

S3.01 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



HOUSEKEEPING PAD REINFORCING SCHEDULE		
THICKNESS (t)	TOP	BOTTOM
t ≤ 4"	6x6 - W2.9xW2.9	-
4" < t < 8"	4x4 - W5.5xW5.5	-
8" ≤ t ≤ 16"	#4 @ 12" EW	#4 @ 12" EW

3 HOUSEKEEPING PAD ON SLAB-ON-GRADE

S3.01 NOT TO SCALE

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Revisions

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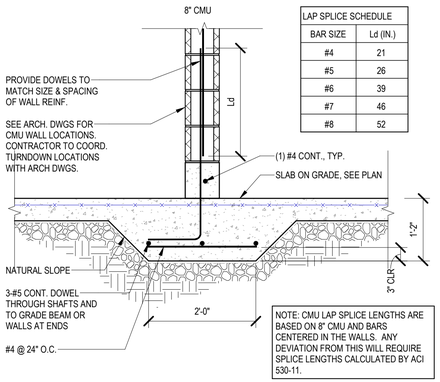
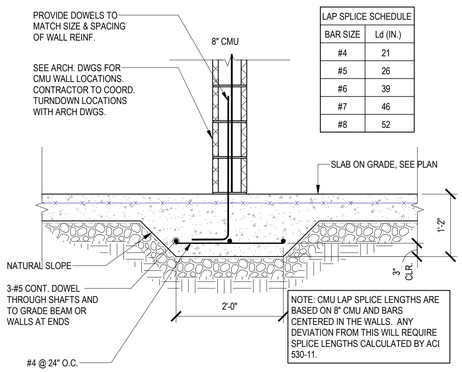
Sheet Title: TYPICAL SLAB ON GRADE DETAILS



LAP SPLICE SCHEDULE	
BAR SIZE	Ld (IN.)
#4	21
#5	26
#6	39
#7	46
#8	52

3 SLAB-ON-GRADE AT NON-LB CMU WALL WITH CIP CURB

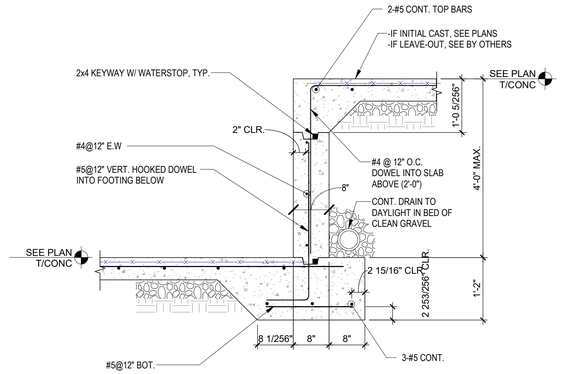
S3.02 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



LAP SPLICE SCHEDULE	
BAR SIZE	Ld (IN.)
#4	21
#5	26
#6	39
#7	46
#8	52

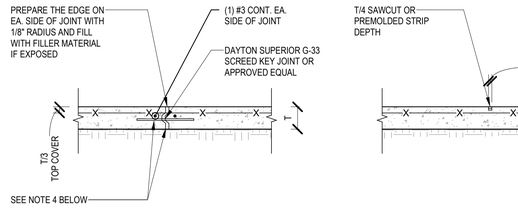
4 SLAB-ON-GRADE AT NON-LOAD-BEARING CMU WALL

S3.02 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

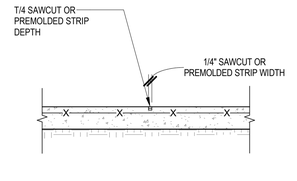


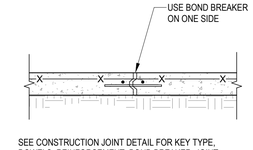
1 S.O.G. FOLD

S3.02 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

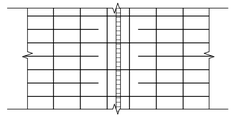


CONSTRUCTION JOINT





OPTIONAL CONTROL JOINT CONCRETE PLACED IN ONE POUR



CONTROL JOINT

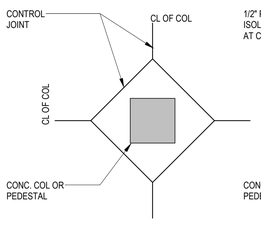
CONSTRUCTION JOINT NOTES:
1. SEE PLAN FOR SLAB THICKNESS (T) AND REINFORCEMENT.
2. SLAB REINFORCEMENT SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
3. DO NOT USE THE KEY JOINT FOR SCREEDING.
4. BREAK BOND BETWEEN NEW AND PREVIOUSLY PLACED SLAB BY SPRAYING OR PAINTING EXPOSED SIDE OF KEY AND DOWEL WITH A CURING COMPOUND, ASPHALTIC EMULSION, OR FORM OIL.
5. REFER TO GENERAL NOTES, GENERAL SPECIFICATIONS, AND DRAWINGS FOR SUB-F-LOOR DRAINAGE SYSTEM, SUBGRADE PREPARATION AND/OR MUD SLAB AND VAPOR BARRIER REQUIREMENTS.
6. SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
7. LONG STRIP CONSTRUCTION METHOD SHALL BE USED IN PLACING CONCRETE FOR ALL SLABS ON GRADE. SEE SCHEMATIC PLAN FOR CONCRETE PLACING SEQUENCE.

SAW CONTROL JOINT NOTES:
1. MAKE SAW CUT AS SOON AS SLAB IS ABLE TO SUPPORT WEIGHT OF WORKERS AND SAWING EQUIPMENT WITHOUT DAMAGE TO FINISH SURFACE OF SLAB APPROXIMATELY 4 TO 8 HOURS AFTER PLACEMENT.
2. CLEAN JOINT PRIOR TO FILLING THE JOINT.

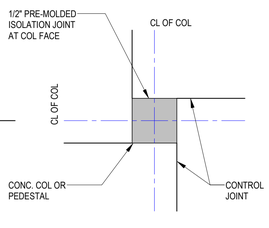
FORMED CONTROL JOINT NOTES:
1. FORM CONTROL JOINTS BY INSERTING THE PRE-MOLDED STRIP INTO FRESH CONCRETE UNTIL TOP SURFACE OF STRIP IS FLUSH WITH SLAB SURFACE.
2. TOOL SLAB EDGES ROUND ON EACH SIDE OF THE INSERT.
3. AFTER CONCRETE HAS CURED, REMOVE INSERTS AND CLEAN GROOVE OF LOOSE DEBRIS.

DOWEL NOTES:
1. ALL DOWELS SHALL CONFORM TO ASTM A615.
2. DOWELS SHALL BE CAREFULLY ALIGNED AND SUPPORTED DURING CONCRETE OPERATIONS.

JOINT SPACING NOTES:
1. PROVIDE CONTROL AND/OR CONSTRUCTION JOINTS AT EVERY COLUMN LINE AND IN BETWEEN THE COLUMN LINES SUCH THAT THE JOINT SPACING DOES NOT EXCEED +/-24 FT FOR 7" SLAB, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL PANELS SHALL BE SQUARE OR NEARLY SO. THE LENGTH OF THE SLAB PANEL SHALL NOT EXCEED 1.5 TIMES THE LENGTH.
3. CONTROL JOINTS SHALL NOT BE PLACED UNDER FLOOR AREAS WITH CERAMIC TILE. REFERENCE ARCHITECTURAL FLOOR FINISH PLAN AND SCHEDULE FOR LOCATION INFORMATION.



SQUARE COLUMN ISOLATION JOINT OPTION 1



SQUARE COLUMN ISOLATION JOINT OPTION 2

2 CONSTRUCTION AND CONTROL JOINTS IN SLAB-ON-GRADE

S3.02 NOT TO SCALE

OAKLEY COLLIER ARCHITECTS
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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 John Craig Fisher REGISTERED JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions

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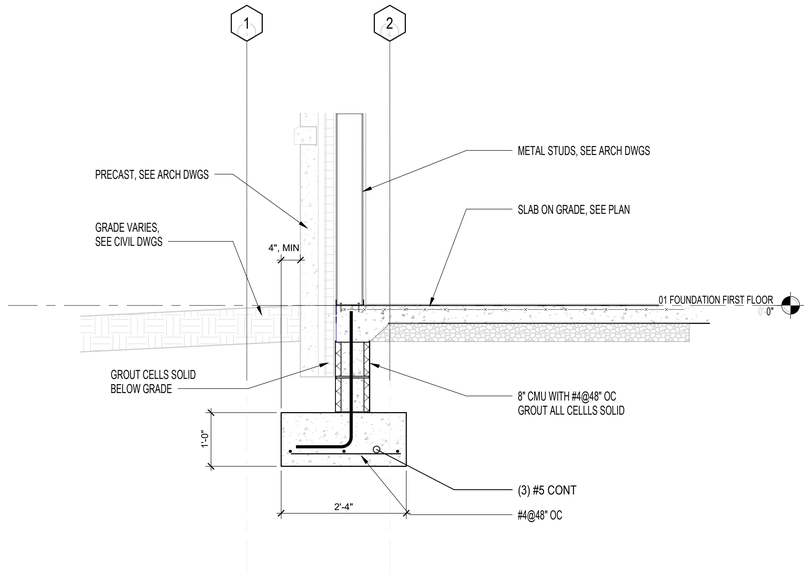
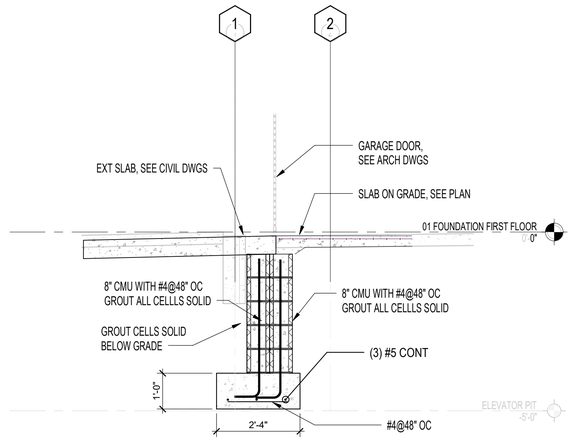
Date	Project No.
03.22.22	20020A
Drawn By: Author	Sheet No.: S3.02
Checked By: Checker	

Sheet Title: TYPICAL SLAB ON GRADE DETAILS



1 TYPICAL EXTERIOR FOUNDATION WALL DETAIL

S3.03 SCALE: 3/4" = 1'-0"



2 SECTION AT GARAGE ENTRY

S3.03 SCALE: 1/2" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
March 22, 2022

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Date	Project No.
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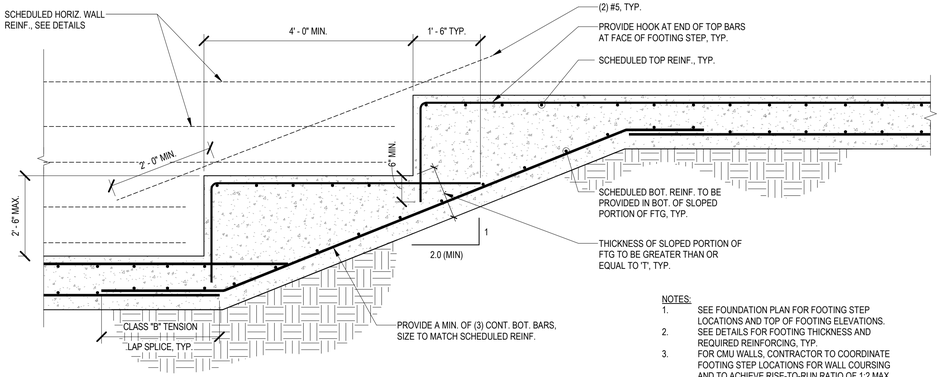
Drawn By: Author	Sheet No.: S3.03
Checked By: Checker	

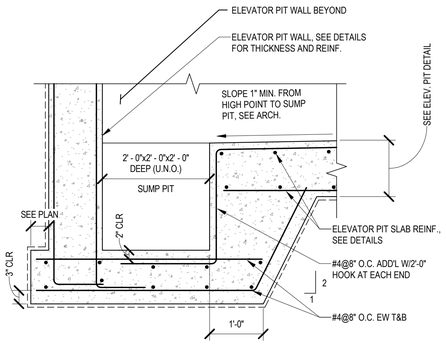
Sheet Title:
TYPICAL FOUNDATION DETAILS



NOTES:
1. SEE FOUNDATION PLAN FOR FOOTING STEP LOCATIONS AND TOP OF FOOTING ELEVATIONS.
2. SEE DETAILS FOR FOOTING THICKNESS AND REQUIRED REINFORCING, TYP.
3. FOR CMU WALLS, CONTRACTOR TO COORDINATE FOOTING STEP LOCATIONS FOR WALL COURSING AND TO ACHIEVE RISE-TO-RUN RATIO OF 1:2 MAX.

7 STEPPED WALL FOOTING DETAIL

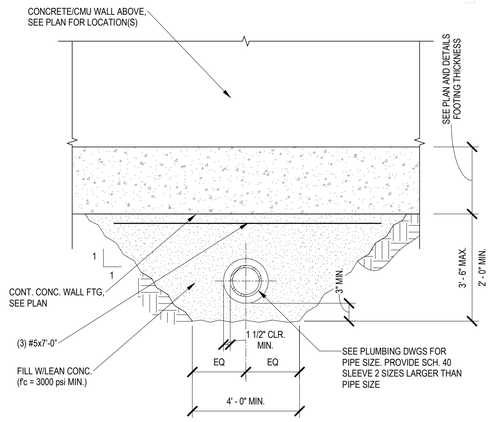
S3.07 SCALE: 3/4" = 1'-0"



NOTES:
1. VERIFY PIT SIZE AND LOCATION(S) WITH MECHANICAL, ARCHITECTURE, AND ELEVATOR MANUFACTURER.
2. SEE DETAIL 10/S3.07 FOR INFORMATION NOT SHOWN.

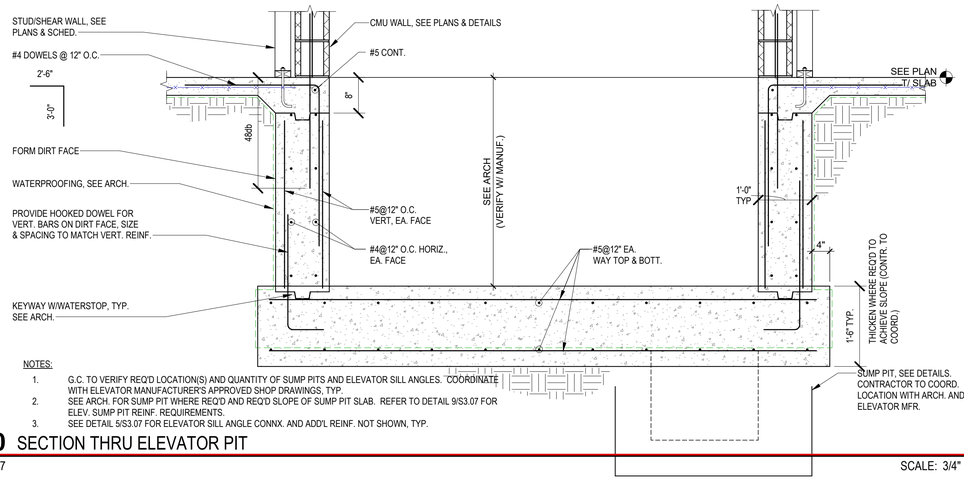
9 ELEVATOR SUMP PIT

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



8 TYP. DETAIL AT PLUMBING PIPE BELOW WALL FTG

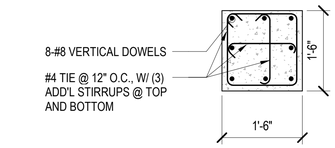
S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



NOTES:
1. G.C. TO VERIFY REQ'D LOCATION(S) AND QUANTITY OF SUMP PITS AND ELEVATOR SILL ANGLES. COORDINATE WITH ELEVATOR MANUFACTURER'S APPROVED SHOP DRAWINGS, TYP.
2. SEE ARCH. FOR SUMP PIT WHERE REQ'D AND REQ'D SLOPE OF SUMP PIT SLAB. REFER TO DETAIL 9/S3.07 FOR ELEV. SUMP PIT REINF. REQUIREMENTS.
3. SEE DETAIL 5/S3.07 FOR ELEVATOR SILL ANGLE CONNX. AND ADD'L REINF. NOT SHOWN, TYP.

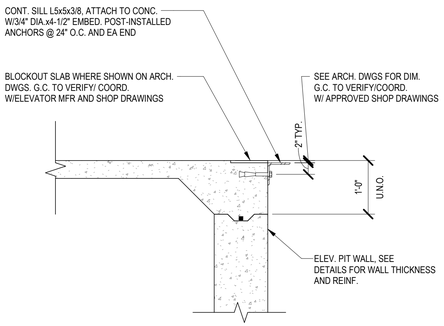
10 SECTION THRU ELEVATOR PIT

S3.07 SCALE: 3/4" = 1'-0"



4 GRAVITY COLUMN CONCRETE PEDESTAL P2

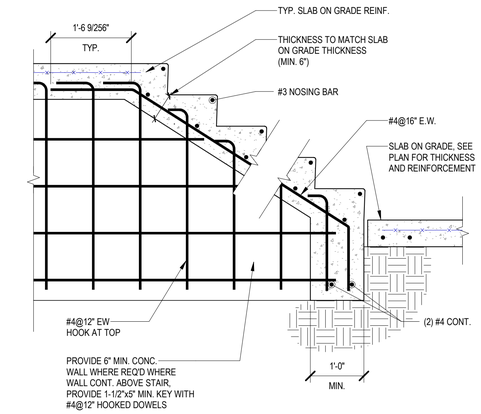
S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



NOTES:
1. CONFIRM REQUIREMENT WITH ELEVATOR MANUFACTURER.
2. PROVIDE CONTINUOUS ELEVATOR SILL ANGLE AT THRESHOLD OF ELEVATOR PIT. SEE ARCHITECTURAL DRAWINGS FOR LOCATION.
3. INSTALL ANCHORS ACCORDING TO MANUFACTURER'S REQUIREMENTS.

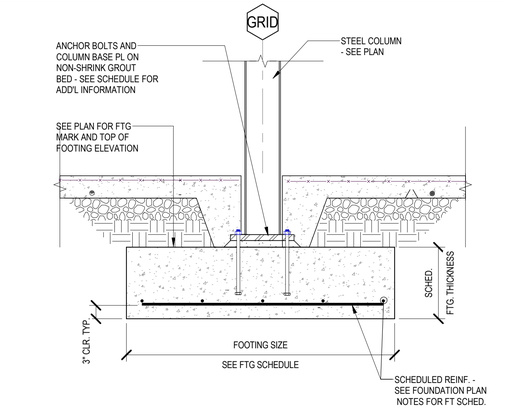
5 ELEVATOR PIT SILL ANGLE CONNECTION

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



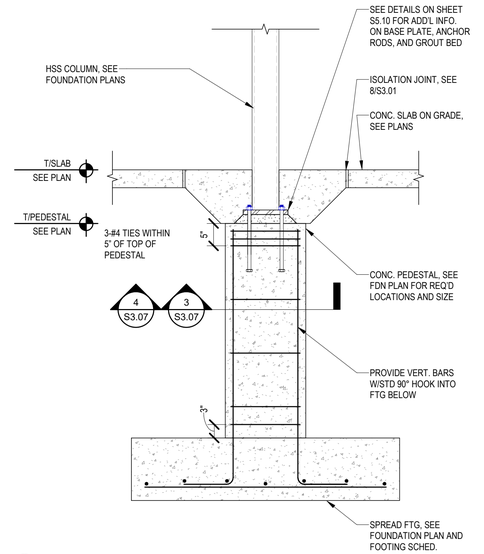
6 CONCRETE STAIR-ON-GRADE WITH CHEEK WALL

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



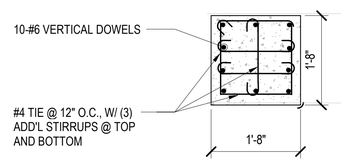
1 STEEL COLUMN BEARING ON SPREAD FOOTING

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



2 STEEL COLUMN FOOTING WITH PEDESTAL

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



3 GRAVITY COLUMN CONCRETE PEDESTAL P1

S3.07 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER March 22, 2022

BID SET

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Date	Project No.
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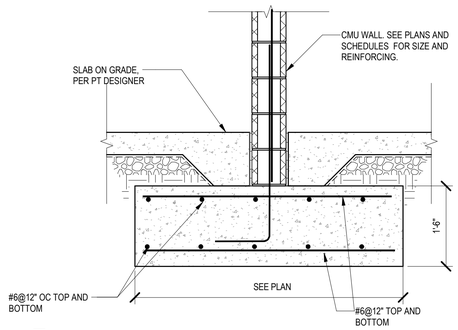
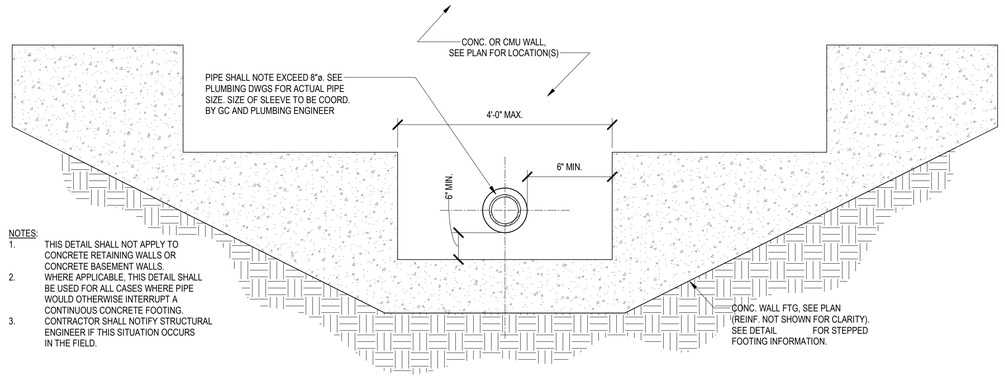
Drawn By: Author	Sheet No.: S3.07
Checked By: Checker	

Sheet Title: TYPICAL FOUNDATION DETAILS AND ELEVATOR PIT



7 TYPICAL CMU WALL FOOTING

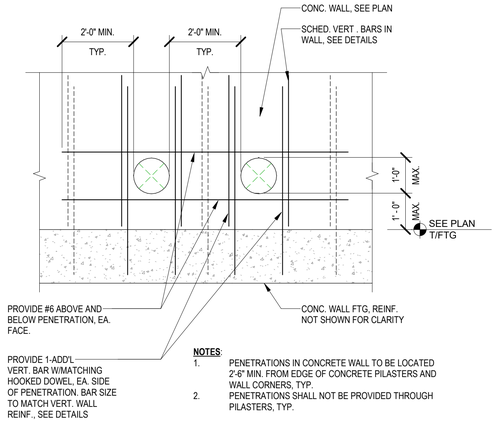
S3.08 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



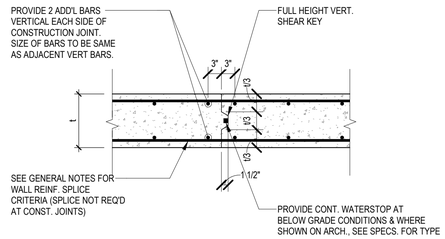
NOTES:
1. THIS DETAIL SHALL NOT APPLY TO CONCRETE RETAINING WALLS OR CONCRETE BASEMENT WALLS.
2. WHERE APPLICABLE, THIS DETAIL SHALL BE USED FOR ALL CASES WHERE PIPE WOULD OTHERWISE INTERRUPT A CONTINUOUS CONCRETE FOOTING.
3. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER IF THIS SITUATION OCCURS IN THE FIELD.

1 UTILITY OPENING THROUGH WALL DETAIL

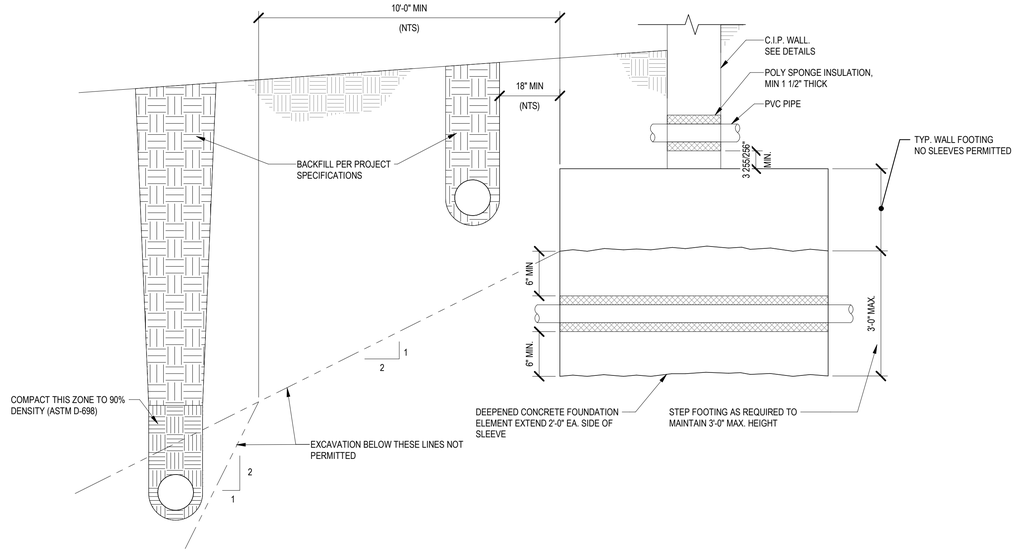
S3.08 SCALE: 3/4" = 1'-0"



NOTES:
1. PENETRATIONS IN CONCRETE WALL TO BE LOCATED 2'-6" MIN. FROM EDGE OF CONCRETE PILASTERS AND WALL CORNERS, TYP.
2. PENETRATIONS SHALL NOT BE PROVIDED THROUGH PILASTERS, TYP.



NOTES:
1. SUBMIT PROPOSED WALL JOINT LOCATIONS FOR APPROVAL PRIOR TO POURING WALL.
2. WHERE WALLS SPAN HORIZONTALLY, JOINTS SHALL BE LOCATED IN THE MIDDLE THIRD OF WALL SPANS, U.N.O. SEE PLANS FOR LOCATIONS WHERE WALLS SPAN HORIZONTALLY.
3. SEE ARCHITECTURAL DRAWINGS FOR TREATMENT OF EXPOSED CONSTRUCTION JOINTS (RUB OUT, PROVIDE REVEAL, OR OTHER) AND OTHER JOINT REQUIREMENTS.
4. PROVIDE WALL CONSTRUCTION JOINTS SUCH THAT NO SINGLE WALL POUR EXCEEDS 60'-0" IN LENGTH.
5. THERE SHALL BE NO VERTICAL CONSTRUCTION JOINT IN WALL WITHIN 5'-0" OF CORNERS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS.
6. PROVIDE CONTROL JOINTS AT 20'-0" MAX. WITH 3/4" CHAMFER STRIP EACH FACE. DISCONTINUE EVERY OTHER HORIZONTAL BAR IN EACH FACE AT CONTROL JOINT.



8 PIPE THROUGH WALL AND FOOTING

S3.08 NOT TO SCALE

5 PENETRATION THROUGH CONCRETE WALL

S3.08 E+M TYPICAL DETAIL SCALE: 1/2" = 1'-0"

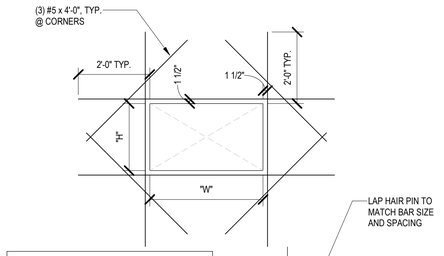


TABLE OF ADD'L REINF. AT OPENING	
LENGTH	R - REBAR
UP TO 24"	(2) #5 T&B
>24" TO 36"	(3) #6 T&B
>36" TO 66"	(4) #6 T&B

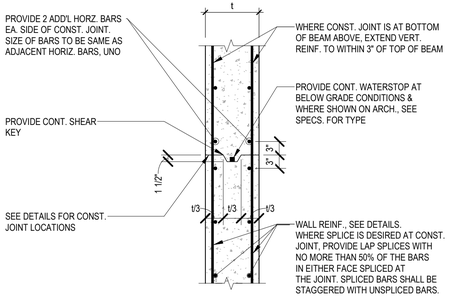
WALL SECTION

6 CONCRETE WALL OPENING DETAIL

S3.08 E+M TYPICAL DETAIL SCALE: 1/2" = 1'-0"

2 VERTICAL CONSTRUCTION JOINT AT CONCRETE WALL

S3.08 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



NOTES:
1. GENERAL CONTRACTOR SHALL OBTAIN PRIOR WRITTEN APPROVAL FROM ENGINEER IF ADDITIONAL HORIZONTAL CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS ARE DESIRED.
2. REFER TO GENERAL NOTES FOR SPLICE REINFORCEMENT, UNO ON THE DRAWINGS.

3 HORIZONTAL CONSTRUCTION JOINT AT CONCRETE WALL

S3.08 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
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Revisions		
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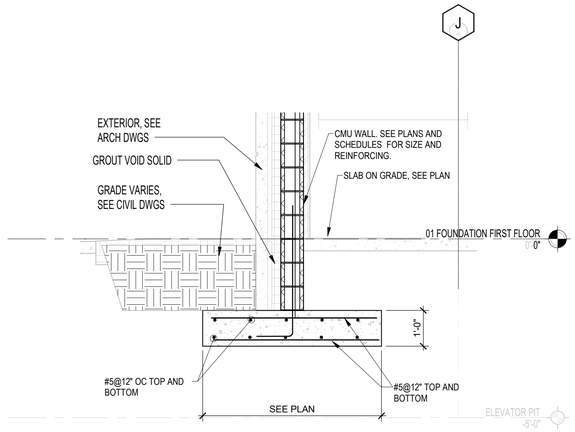
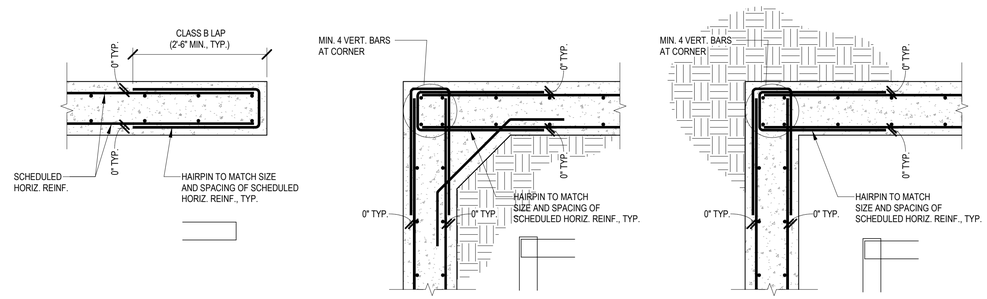
Checked By: Checker	

Sheet Title: TYPICAL FOUNDATION DETAILS



3 SECTION-EXTERIOR SHEAR WALL

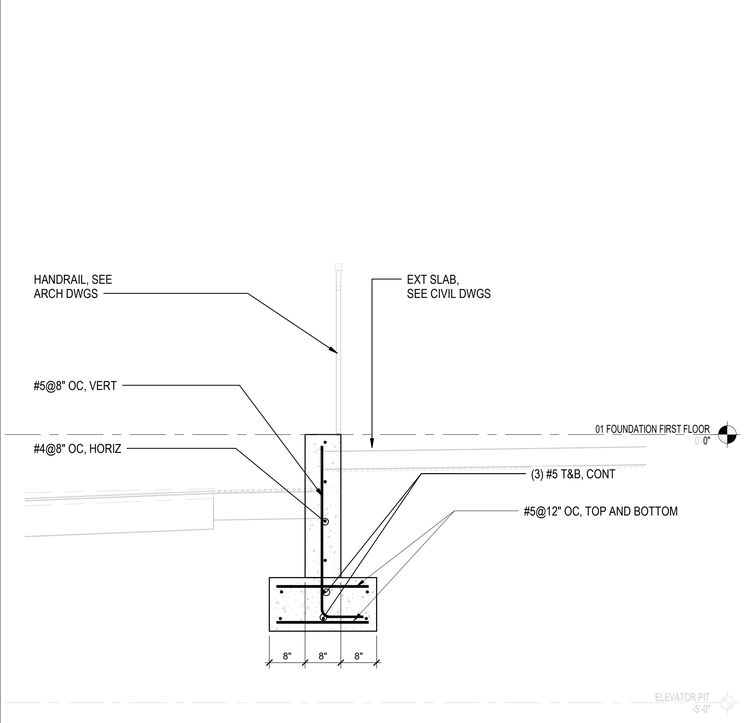
S3.09 SCALE: 1/2" = 1'-0"



NOTES:
1. SEE OTHER DETAILS FOR REQUIRED WALL THICKNESS AND REINFORCEMENT.
2. THERE SHALL BE NO VERTICAL CONSTRUCTION JOINTS LOCATED IN WALLS WITHIN 5'-0" OF CORNERS UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS.

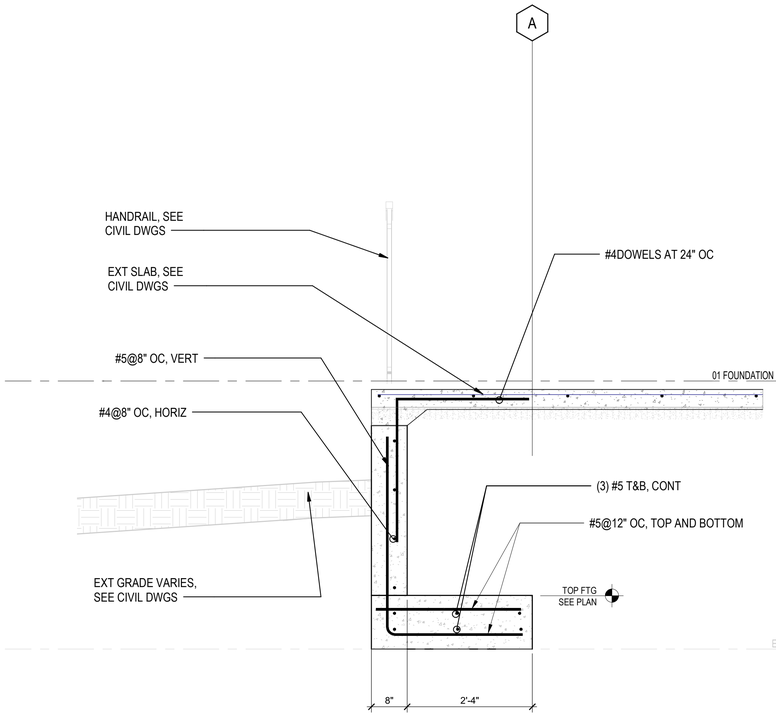
1 REINFORCING STEEL AT CORNERS AND ENDS OF CONCRETE WALLS

S3.09 NOT TO SCALE



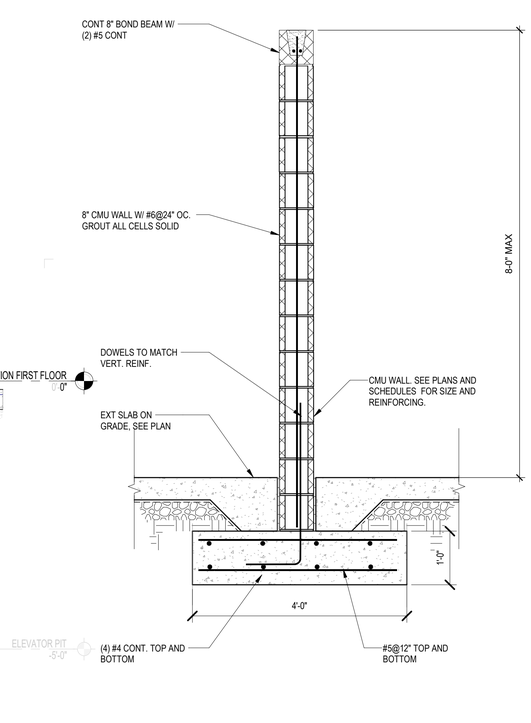
5 SECTION AT RAMP

S3.09 SCALE: 3/4" = 1'-0"



4 SECTION AT SITE WALL

S3.09 SCALE: 3/4" = 1'-0"



2 TYPICAL CMU SCREEN WALL

S3.09 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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NEW FACILITY FOR
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55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 JOHN CRAIG FISHER
March 22, 2022

BID SET

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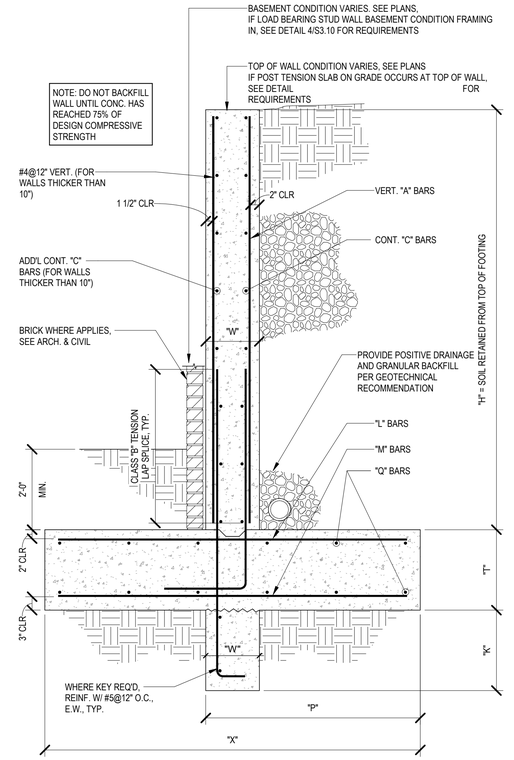
Sheet Title: TYPICAL FOUNDATION DETAILS



CANTILEVERED RETAINING WALL SCHEDULE										
DIMENSIONS						REINFORCING				
H (MAX)	W	X	P	T	K	"A"	"C"	"L"	"M"	"Q"
4'-0"	8"	3'-0"	2'-0"	1'-0"	N/A	#4@12"	#4@12"	#5@12"	#5@12"	#4@12"
6'-0"	8"	4'-0"	3'-0"	1'-4"	N/A	#5@12"	#4@12"	#5@10"	#5@10"	#4@12"
8'-0"	8"	5'-6"	4'-6"	1'-4"	N/A	#6@12"	#4@12"	#6@12"	#6@12"	#4@12"
10'-0"	10"	8'-0"	6'-0"	1'-6"	N/A	#7@10"	#4@12"	#6@10"	#6@10"	#4@12"
13'-0"	12"	11'-6"	8'-6"	1'-6"	N/A	#8@9"	#4@10"	#6@9"	#6@9"	#4@12"

ENGINEER EDIT TABLE AS REQUIRED.
ASSUMPTIONS
3,000 PSF NET ALLOWABLE BEARING CAPACITY
SURCHARGE LOAD = 100 PSF
SOIL UNIT WEIGHT 110 PCF
KA=45 PSF/FT
KP=250 PSF/FT
COEFFICIENT OF FRICTION = 0.40

CANTILEVERED RETAINING WALL SCHEDULE										
DIMENSIONS						REINFORCING				
H (MAX)	W	X	P	T	K	"A"	"C"	"L"	"M"	"Q"
4'-0"	8"	3'-0"	2'-0"	1'-0"	N/A	#4@12"	#4@12"	#5@12"	#5@12"	#4@12"
6'-0"	8"	4'-6"	3'-6"	1'-4"	N/A	#5@12"	#4@12"	#5@10"	#5@10"	#4@12"
8'-0"	8"	6'-6"	5'-6"	1'-4"	N/A	#6@12"	#4@12"	#6@12"	#6@12"	#4@12"
10'-0"	10"	8'-0"	6'-0"	1'-6"	N/A	#7@10"	#4@12"	#6@10"	#6@10"	#4@12"
13'-0"	12"	11'-6"	8'-6"	1'-6"	N/A	#8@9"	#4@10"	#6@9"	#6@9"	#4@12"

ENGINEER EDIT TABLE AS REQUIRED.
ASSUMPTIONS
2,000 PSF NET ALLOWABLE BEARING CAPACITY
SURCHARGE LOAD = 100 PSF
SOIL UNIT WEIGHT 110 PCF
KA=45 PSF/FT
KP=250 PSF/FT
COEFFICIENT OF FRICTION = 0.40

1 SECTION THROUGH CANTILEVERED RETAINING WALL

S3.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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Sheet Title
TYPICAL BUILDING RETAINING WALL DETAILS

LOAD BEARING WALL CONSTRUCTION SCHEDULE						
WALL TYPE	STUD SIZE & GA	TRACK SIZE & GA	STUD SPACING	BRIDGING	Fy[KSI]	NOTES
EXTERIOR	362S162-43	362T125-43	@16"OC	@48"OC	50	-
INTERIOR	362S162-43	362T125-43	@16"OC	@48"OC	50 50	- -

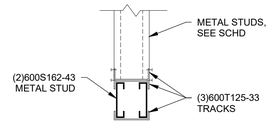
NOTES:
1. 600S___-___

GAGE
FLANGE WIDTH
STUD DEPTH

NOTES:
1. PROVIDE (2) JACK STUDS AND (2) FULL HEIGHT STUDS AT EACH END OF COLD-ROLLED HEADERS, TYPICAL. MULTIPLE STUDS SHALL BE SECURELY FASTENED TOGETHER FULL HEIGHT. SEE DETAIL 6/4-00.

4 LIGHT GAGE STUD WALL CONSTRUCTION SCHEUDULE

S4.00 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

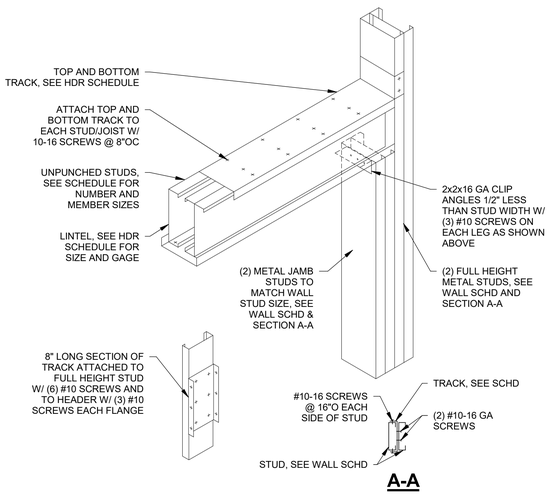


H1

NOTES:
1. PROVIDE (2) JACK STUDS AND (2) FULL HEIGHT STUDS AT EACH END OF COLD-ROLLED HEADERS, TYPICAL. MULTIPLE STUDS SHALL BE SECURELY FASTENED TOGETHER FULL HEIGHT. SEE DETAIL 6/4-00.
2. PROVIDE WEB STIFFENERS AT POINT LOAD FROM GIRDER TRUSS AND ENDS OF HEADERS.
3. COLD ROLLED HEADER MEMBERS SHALL BE UNPUNCHED SECTIONS.
4. REFER TO ARCHITECTURAL DRAWINGS FOR OPENING DIMENSIONS AND EXACT LOCATIONS.

5 HEADER SCHEDULE

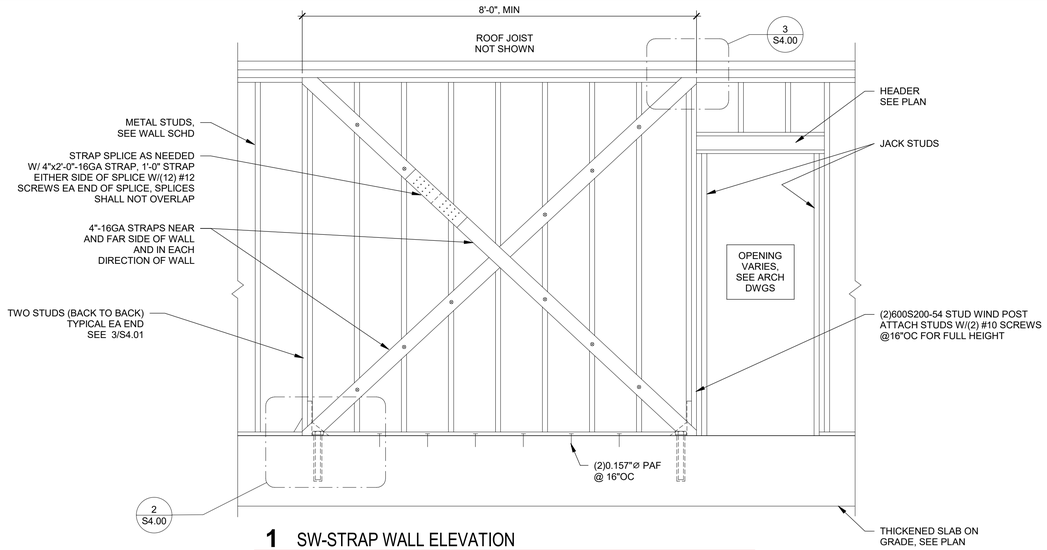
S4.00 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



A-A

6 HEADER TO JAMB CONNECTION

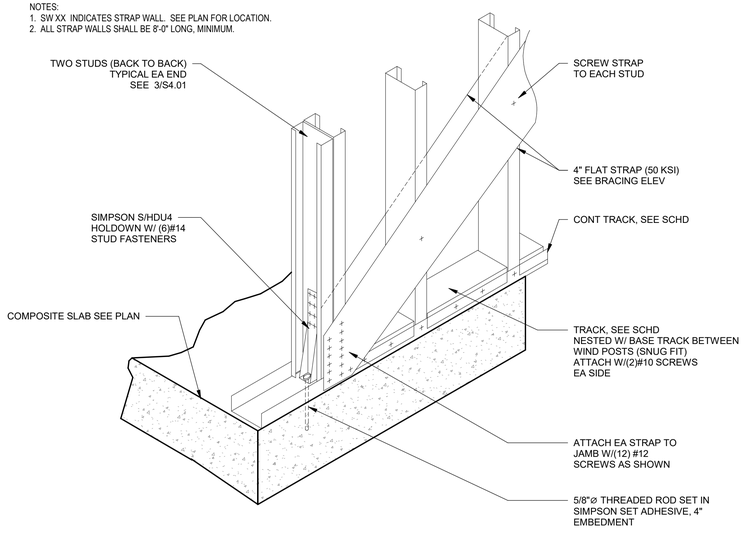
S4.00 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



1 SW-STRAP WALL ELEVATION

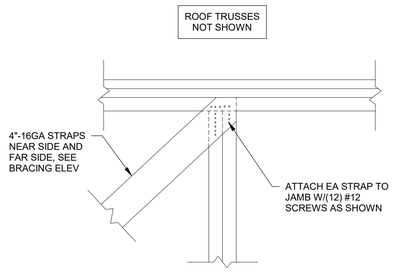
S4.00 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

NOTES:
1. SW XX INDICATES STRAP WALL. SEE PLAN FOR LOCATION.
2. ALL STRAP WALLS SHALL BE 8'-0" LONG, MINIMUM.



2 HOLDDOWN AT BASE OF STRAP WALL

S4.00 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



3 TOP OF STRAP WALL DETAIL

S4.00 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"

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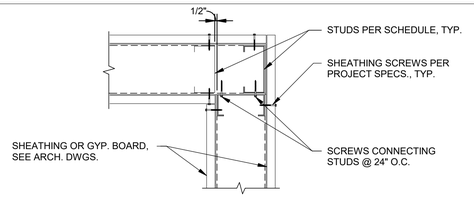
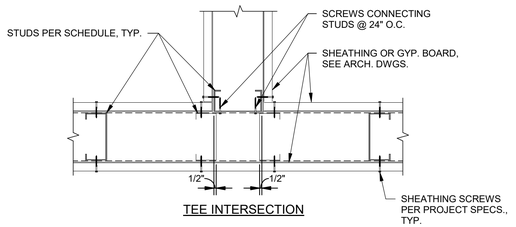
Sheet Title
TYPICAL LIGHT GAGE DETAILS



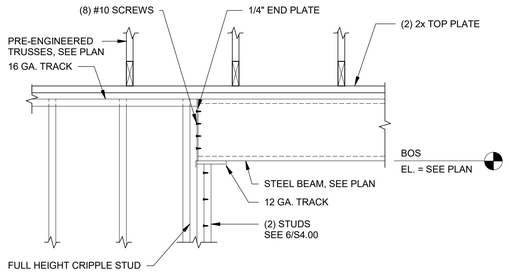
CORNER FRAMING



TEE INTERSECTION

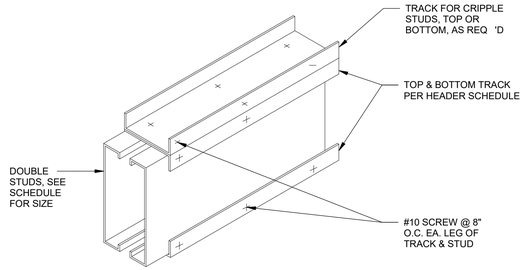
7 TYPICAL PLAN-DETAIL

S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



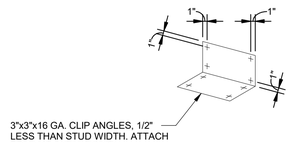
8 TYPICAL BEAM BEARING ON LIGHT GAGE WALL DETAIL

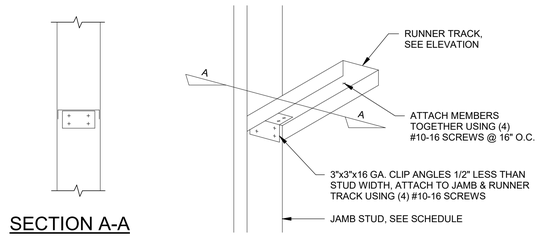
S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



4 TYPICAL HEADER DETAIL

S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

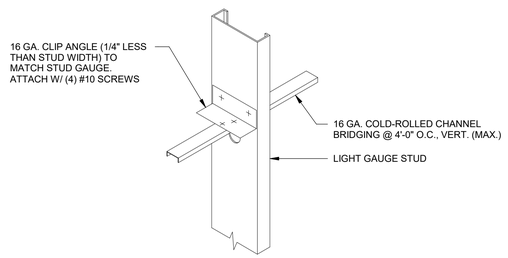




SECTION A-A

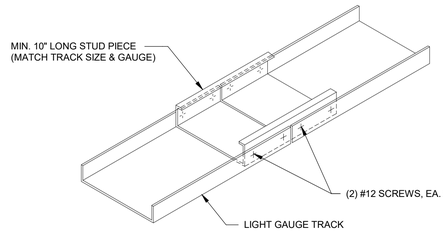
5 TYPICAL SILL ATTACHMENT DETAIL

S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



6 TYPICAL BRIDGING DETAIL

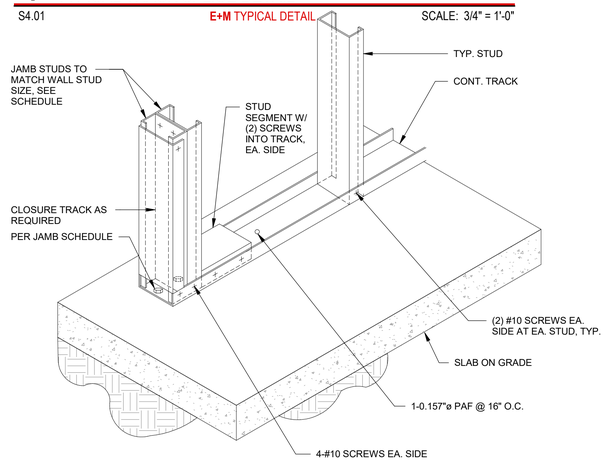
S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



NOTES:
1. SPLICE SHALL OCCUR OVER CENTERLINE OF VERTICAL STUD, TYP.

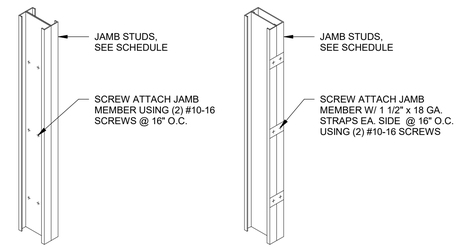
1 TYPICAL TRACK SPLICE DETAIL

S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



2 TYPICAL STUD WALL TO SLAB DETAIL

S4.01 SCALE: 3/4" = 1'-0"



NOTES:
1. IN LIEU OF SCREWS/STRAPS SHOWN, MULTIPLE STUDS CAN BE WELDED TOGETHER PER GENERAL NOTES.

3 TYPICAL BUILT UP STUD DETAIL

S4.01 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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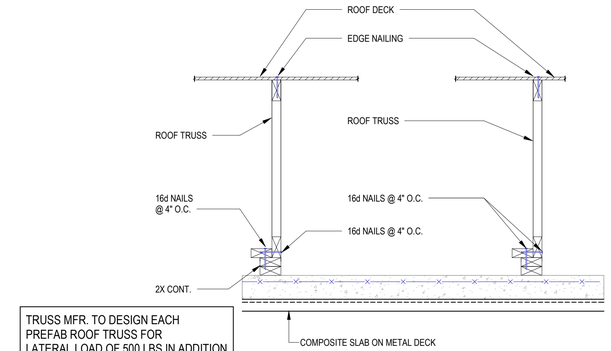
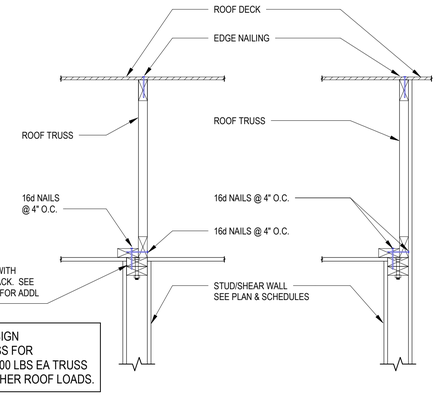
Sheet Title
TYPICAL LIGHT GAGE DETAILS



TRUSS MFR. TO DESIGN EACH PREFAB ROOF TRUSS FOR LATERAL LOAD OF 500 LBS IN ADDITION TO UNIFORM ROOF LOADS

1 ROOF TRUSS @ SHEAR WALL

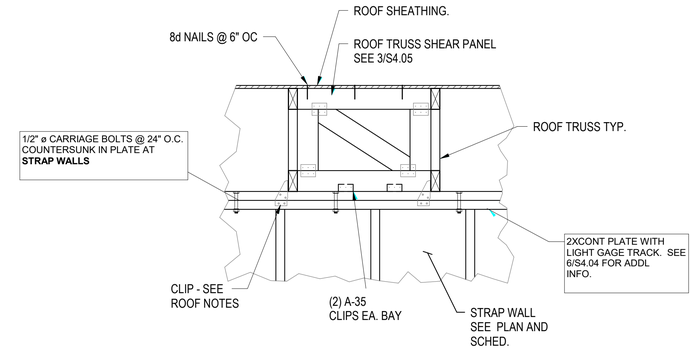
S4.03 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



TRUSS MFR. TO DESIGN PREFAB ROOF TRUSS FOR LATERAL LOAD OF 500 LBS EA TRUSS IN ADDITION TO TOTHER ROOF LOADS.

2 ROOF TRUSS @ SHEAR WALL-WOOD TRUSS

S4.03 NOT TO SCALE



3 SHEAR BLOCK PANELS AT STRAP WALL-WOOD TRUSS

S4.03 NOT TO SCALE

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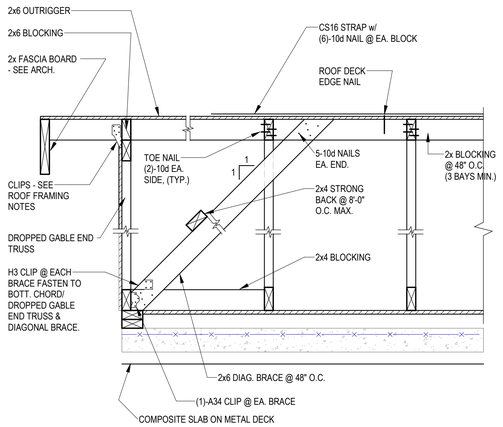
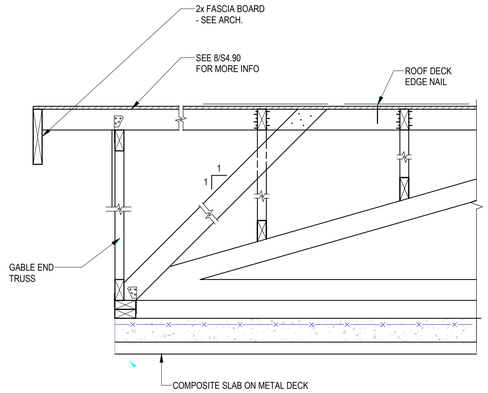
Sheet Title: TYPICAL WOOD AND LIGHT GAGE DETAILS



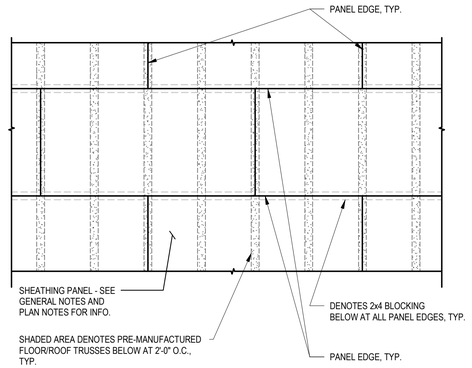
5 GABLE BRACING DETAIL

S4.04 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



3 SECTION @ GABLE END TRUSS

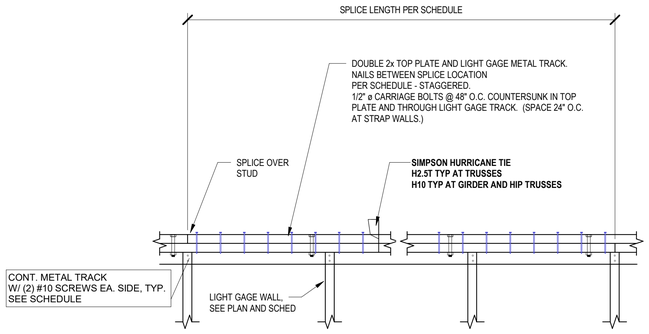
S4.04 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



NOTE: THIS DETAIL IS APPLICABLE AND SHALL BE USED ROOF DIAPHRAGMS WHERE BLOCKED DIAPHRAGM IS INDICATED IN PLAN. SEE FRAMING PLANS AND PLAN NOTES FOR ADDITIONAL INFORMATION.

1 DIAPHRAGM BLOCKING DETAIL

S4.04 **E+M** TYPICAL DETAIL SCALE: 3/8" = 1'-0"

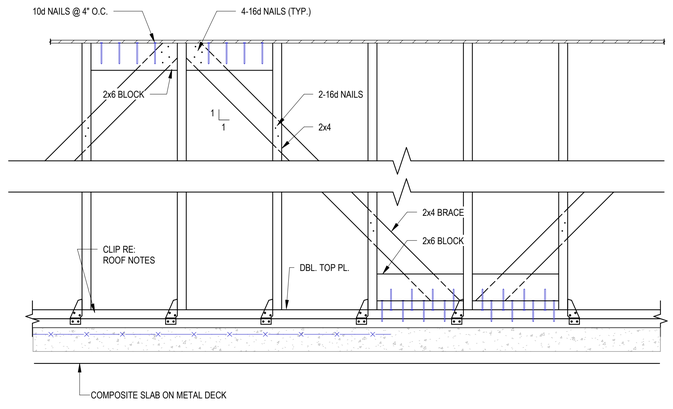


LENGTH OF WALL (BETWEEN CORNERS)	SPLICE LENGTH (MINIMUM)	NAILS ALONG SPLICE LENGTH
OVER 30'	4'-0"	18-16d
OVER 20'	2'-8"	10-16d
OVER 10'	1'-4"	6-16d
LESS THAN 10'	1'-4"	4-16d

NOTE:
1. DO NOT SPLICE TOP PLATES WITHIN 6'-0" OF ENDS OF STRAP WALLS.
2. THIS DETAIL APPLIES AT ALL EXTERIOR WALLS AND INTERIOR STRAP WALLS.

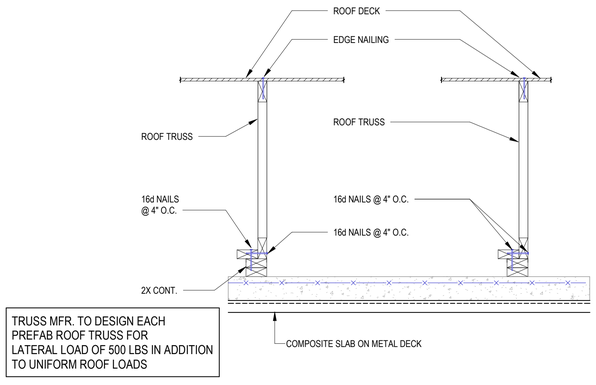
6 TYPICAL TOP PLATE SPLICE AND LIGHT GAGE TRACK

S4.04 NOT TO SCALE



4 BRACING ALONG INTERIOR ROOF TRUSS BEARING LOCATIONS

S4.04 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



TRUSS MFR. TO DESIGN EACH PREFAB ROOF TRUSS FOR LATERAL LOAD OF 500 LBS IN ADDITION TO UNIFORM ROOF LOADS

2 ROOF TRUSS @ SHEAR WALL

S4.04 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"

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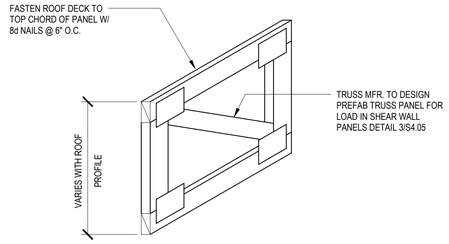
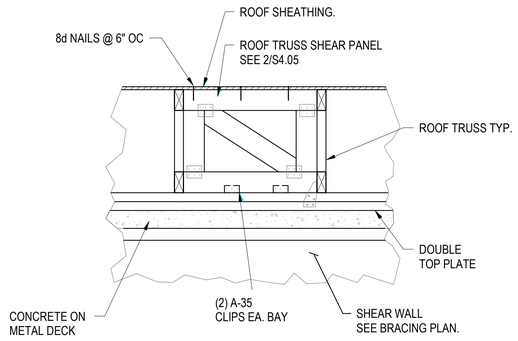
Sheet Title
WOOD FRAMING TYPICAL DETAILS



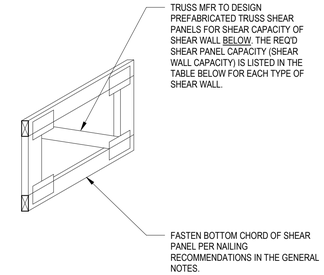
2 ROOF TRUSS SHEAR PANEL

S4.05 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"

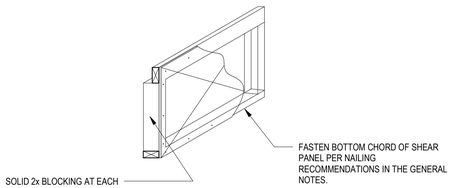


3 EXTERIOR WALL SHEAR SECTION

S4.05 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



PREFABRICATED TRUSS SHEAR BLOCKING OPTION #1



SHEATHED SHEAR PANEL BLOCKING OPTION #2

PREFABRICATED TRUSS SHEAR BLOCKING DESIGN FORCE AND SPACING

SHEAR WALL TYPE	SHEAR WALL CAPACITY (LBS/FT)	PANEL SPACING	LTP4 CONN. PER PANEL (6), (7)	SHEAR PANEL DESIGN FORCE (LBS PER PANEL)
A	1121	2'-0" O.C.	4	1121
B	857	2'-0" O.C.	3	857
C	657	2'-0" O.C.	2	657
D	438	3'-0" O.C.	2	438
E	350	4'-0" O.C.	2	1400
F	290	4'-0" O.C.	2	1160
G	230	6'-0" O.C.	2	1380

NOTES:

1. TOP CHORD OF SHEATHED SHEAR PANEL BLOCKING SHALL BE VERTICALLY ORIENTED WHEN INSTALLED UNDER LOAD BEARING LINES/POINTS.
2. TRUSS MANUFACTURER TO DESIGN PREFABRICATED TRUSS SHEAR PANELS FOR SHEAR CAPACITY OF SHEAR WALL BELOW. THE REQUIRED SHEAR PANEL CAPACITY (SHEAR WALL CAPACITY) IS LISTED IN THE TABLE ABOVE FOR EACH TYPE OF SHEAR WALL, ALONG WITH REQUIRED MAXIMUM SPACING OF SHEAR PANELS AND REQUIRED QUANTITY OF LTP4 CONNECTORS.
3. LATERAL FORCES MAY NOT NECESSITATE SHEAR PANELS IN EVERY TRUSS BAY. EMPTY TRUSS BAYS SHALL HAVE CRIPPLE STUDS PER STUD SCHEDULE ON S5.00A, OR SHALL HAVE A LADDER OR PONY TRUSS.
4. WHERE OPTION #2 IS USED, SHEAR BLOCKING SHALL BE SHEATHED WITH 15/32" PLYWOOD OR O.S.B. SHEATHING (SEE GENERAL NOTES FOR ADDITIONAL INFORMATION REGARDING SHEATHING FOR SHEAR WALLS). SHEATHING SHALL BE FASTENED TO PANEL EDGES WITH FASTENERS AND A FASTENER PATTERN (THAT MEETS (OR EXCEEDS) THAT REQUIRED FOR THE SHEAR WALL BELOW.
5. AVERAGE SPACING OF SHEAR PANELS TO EQUAL 3'-0" O.C. (MAX). THIS IS EQUIVALENT TO PROVIDING TWO (2) SHEAR PANELS IN A 3-BAY AREA (ONE OPEN BAY IN EVERY 3 TOTAL BAYS).
6. SIMPSON A35 MAY BE SUBSTITUTED FOR LTP4 WHERE WIDTH OF SHEAR PANEL WILL ALLOW FOR PROPER CONNECTION OF A35 TO BE MADE.
7. LTP4 AND/OR A35 CONNECTORS MAY BE PROVIDED ON EACH SIDE OF THE SHEAR BLOCKING PANEL. DEPENDING UPON THE LENGTH OF THE SHEAR PANEL, THIS MAY BE NECESSARY.

1 SHEAR BLOCK PANELS

S4.05 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 JOHN CRAIG FISHER
March 22, 2022

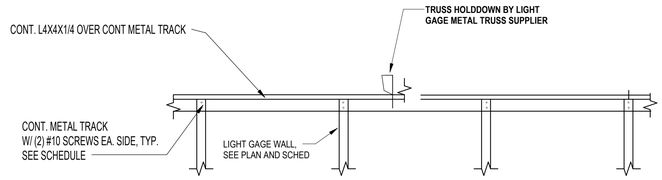
BID SET

GENERAL NOTE: Prior to construction start. Contractor shall verify & be responsible for all Dimensions.

Revisions		
#	Description	Date
1	01	Date 1

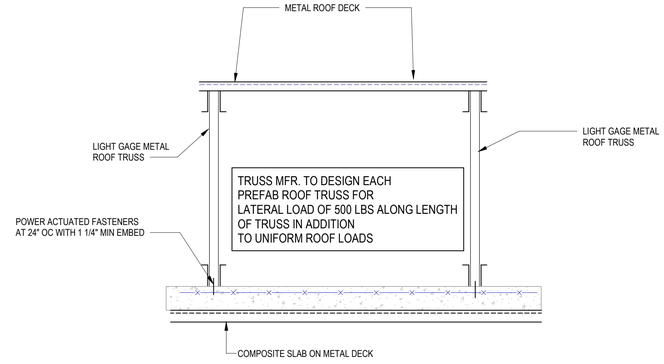
Date 03.22.22	Project No. 20020A
Drawn By Author	Sheet No. S4.05
Checked By Checker	

Sheet Title: WOOD FRAMING TYPICAL DETAILS



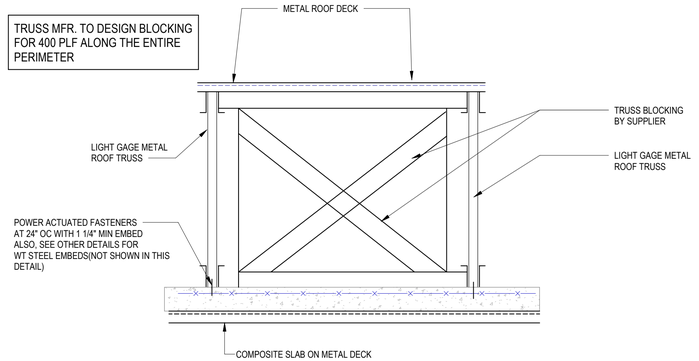
1 TYPICAL TRACK AND ANGLE ATTACHMENT

S4.07 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"



2 ROOF TRUSS @ COMPOSITE FLOOR SLAB

S4.07 NOT TO SCALE



3 ROOF TRUSS @ COMPOSITE FLOOR SLAB

S4.07 NOT TO SCALE

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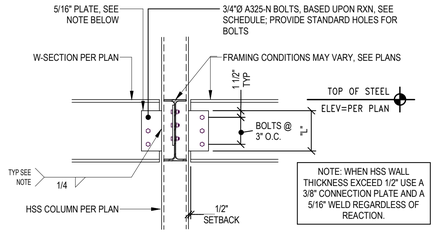
Date	Project No.
03.22.22	20020A
Drawn By: Author	Sheet No. S4.07
Checked By: Checker	

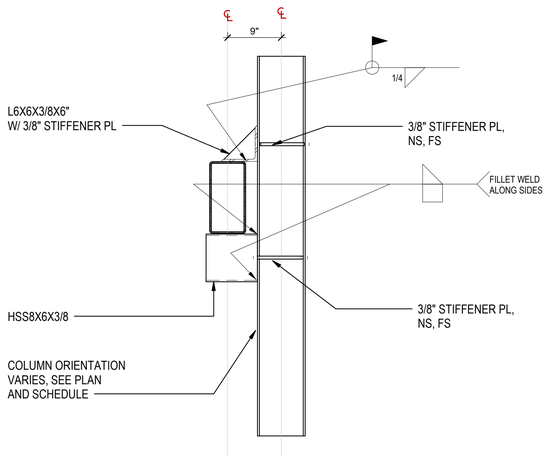
Sheet Title
LIGHT GAGE TRUSS DETAILS



NOTE: CONNECTIONS SHALL BE BASED UPON THE UNFACTORED RXNs SHOWN ON THE FRAMING PLANS. SHOULD A RXN GIVEN ON THE FRAMING PLANS EXCEED THE RXNs SHOWN ON THE BOLT SCHEDULE, THE USE OF DIFFERENT BOLTS, i.e. A490-N, OR A DIFFERENT TYPE OF CONNECTION MAY BE SELECTED PER AISC; REFER TO THE STRUCTURAL STEEL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS

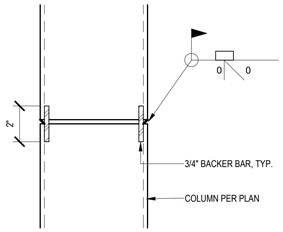
7 TYPICAL SINGLE PLATE CONNECTION AT HSS COLUMN

S4.10 NOT TO SCALE



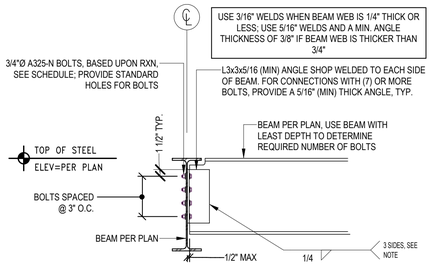
8 BEAM BRICK SHELF TO COLUMN

S4.10 SCALE: 1" = 1'-0"



4 TYPICAL HSS COLUMN SPLICE

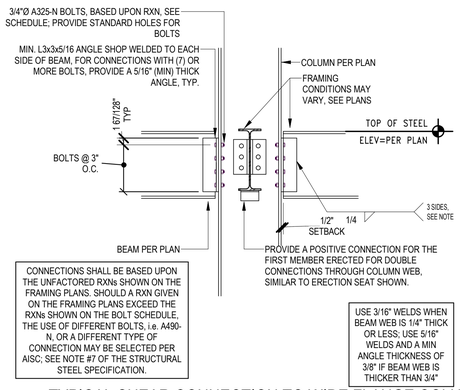
S4.10 E+M TYPICAL DETAIL SCALE: 3" = 1'-0"



NOTE: CONNECTIONS SHALL BE BASED UPON THE UNFACTORED RXNs SHOWN ON THE FRAMING PLANS. SHOULD A RXN GIVEN ON THE FRAMING PLANS EXCEED THE RXNs SHOWN ON THE BOLT SCHEDULE, THE USE OF DIFFERENT BOLTS, i.e. A490-N, OR A DIFFERENT TYPE OF CONNECTION MAY BE SELECTED PER AISC; REFER TO THE STRUCTURAL STEEL SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS

5 TYPICAL BEAM TO BEAM SIMPLE SHEAR CONNECTION

S4.10 NOT TO SCALE

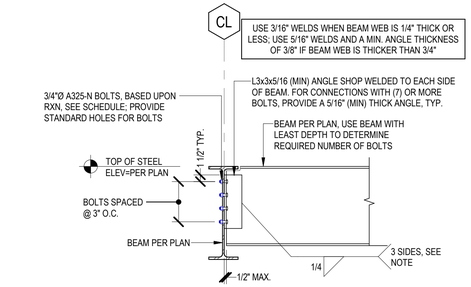


CONNECTIONS SHALL BE BASED UPON THE UNFACTORED RXNs SHOWN ON THE FRAMING PLANS. SHOULD A RXN GIVEN ON THE FRAMING PLANS EXCEED THE RXNs SHOWN ON THE BOLT SCHEDULE, THE USE OF DIFFERENT BOLTS, i.e. A490-N, OR A DIFFERENT TYPE OF CONNECTION MAY BE SELECTED PER AISC; SEE NOTE #7 OF THE STRUCTURAL STEEL SPECIFICATION.

USE 3/16" WELDS WHEN BEAM WEB IS 1/4" THICK OR LESS; USE 5/16" WELDS AND A MIN ANGLE THICKNESS OF 3/8" IF BEAM WEB IS THICKER THAN 3/4"

6 TYPICAL SHEAR CONNECTION TO WIDE FLANGE COLUMN AT FLOOR

S4.10 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



NOTE: CONNECTIONS SHALL BE BASED UPON THE UNFACTORED RXNs SHOWN ON THE FRAMING PLANS. SHOULD A RXN GIVEN ON THE FRAMING PLANS EXCEED THE RXNs SHOWN ON THE BOLT SCHEDULE, THE USE OF DIFFERENT BOLTS, i.e. A490-N, OR A DIFFERENT TYPE OF CONNECTION MAY BE SELECTED PER AISC; REFER TO THE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS

1 TYP BEAM TO BEAM SIMPLE SHEAR CONNECTION

S4.10 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

SINGLE PLATE BOLT / REACTION SCHEDULE

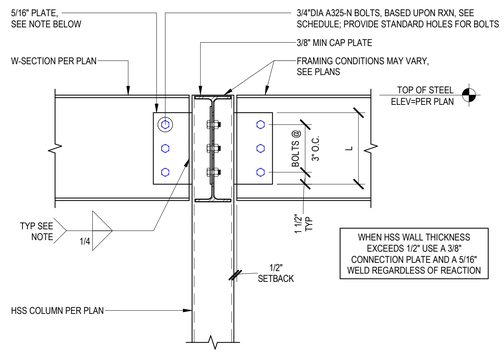
#BOLTS	LENGTH "L"	TYP. BEAM DEPTHS	MAX. FACTORED RXN
2	6"	W8, W11, W12	30.6k
3	9"	W12, W14, W16	47.7k
4	12"	W16, W18, W21	63.6k
5	15"	W21, W24, W27	79.5k
6	18"	W24, W27	95.4k
7	21"	W27, W30, W33	111.0k
8	24"	W30, W33, W36	127.0k

DOUBLE ANGLE BOLT / REACTION SCHEDULE

#BOLTS	TYP. BEAM DEPTHS	MAX. FACTORED RXN
2	W8, W10	48.9k
3	W12, W14, W16	79.7k
4	W16, W18, W21	104.0k
5	W21, W24, W27	132.0k
6	W24, W27	160.0k
7	W27, W30, W33	223.0k
8	W30, W33, W36	284.0k
9	W36, W40, W44	286.0k

2 TYP. STEEL CONN. REACTION & BOLT SCHEDULES

S4.10 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



CONNECTION SHALL BE BASED UPON THE FACTORED RXNs SHOWN ON THE FRAMING PLANS. SHOULD A RXN GIVEN ON THE FRAMING PLAN EXCEED THE RXNs SHOWN ON THE BOLT SCHEDULE, THE USE OF DIFFERENT BOLT, ie A490-N OR A DIFFERENT TYPE OF CONNECTION MAY BE SELECTED PER AISC; REFER TO THE GENERAL NOTES FOR SUBMITTAL REQUIREMENTS.

3 TYP SINGLE PLATE CONNECTION AT TOP OF HSS COLUMN

S4.10 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 24417 Tyler Craig Fisher ENGINEER TYLER CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
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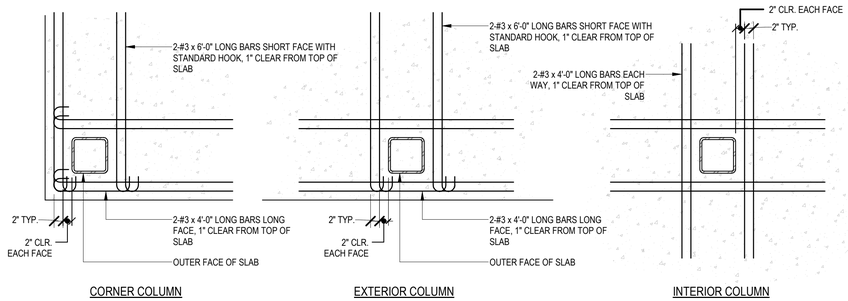
Revisions

#	Description	Date

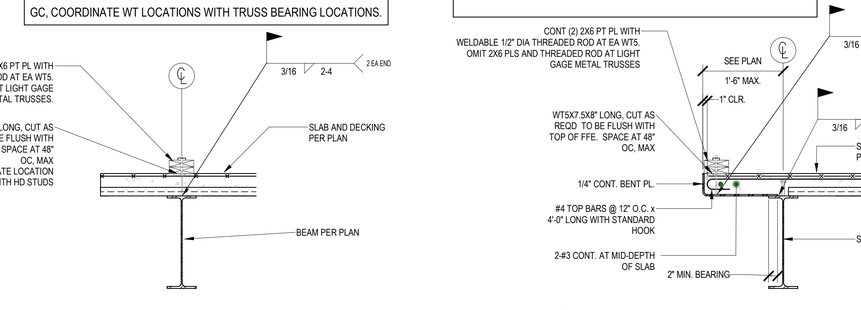
Date	Project No.
03.22.22	20020A
Drawn By: AC	Sheet No.: S4.10
Checked By: KWM	

Sheet Title: TYPICAL STEEL FRAMING SECTIONS



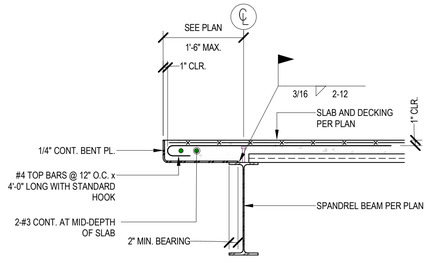
4 TYPICAL FLOOR SLAB OPENING AT COLUMN LOCATIONS

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



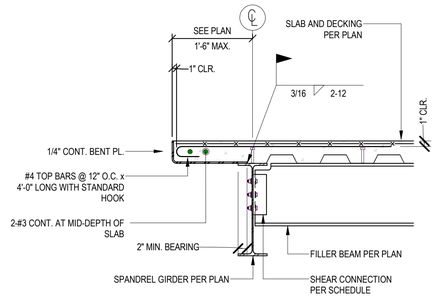
5 TYPICAL FLOOR SLAB REINFORCING AT COLUMN LOCATIONS

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



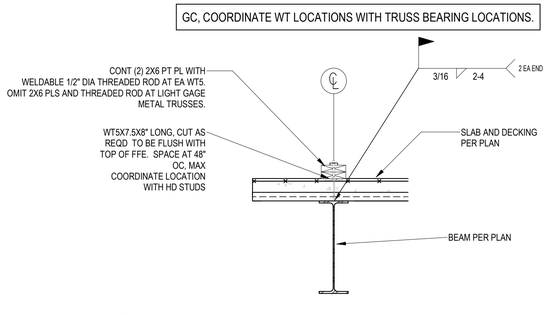
7 TYPICAL SLAB FRAMING AT EXTERIOR SPANDREL BEAM

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



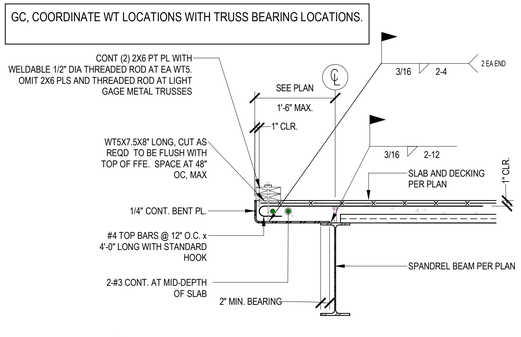
6 TYPICAL SLAB FRAMING AT EXTERIOR SPANDREL GIRDER

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



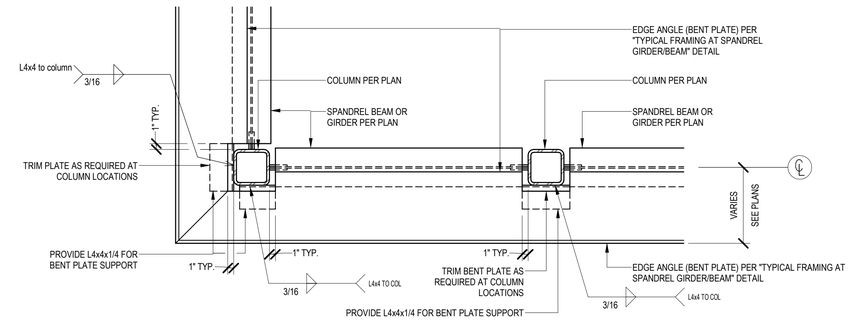
9 TYPICAL INTERIOR TRUSS BEARING WITH WT

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



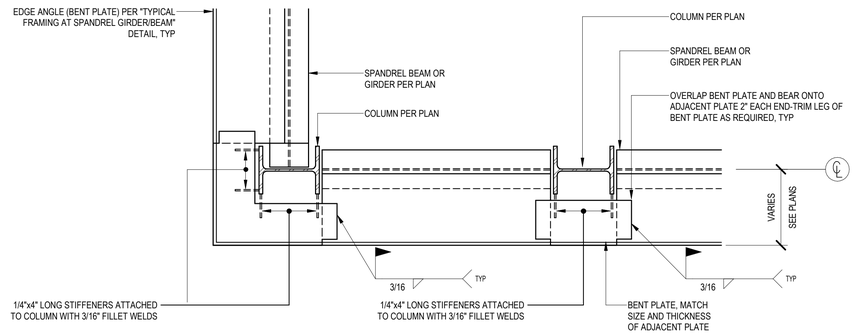
8 TYPICAL EXTERIOR EDGE OF SLAB WITH WT

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



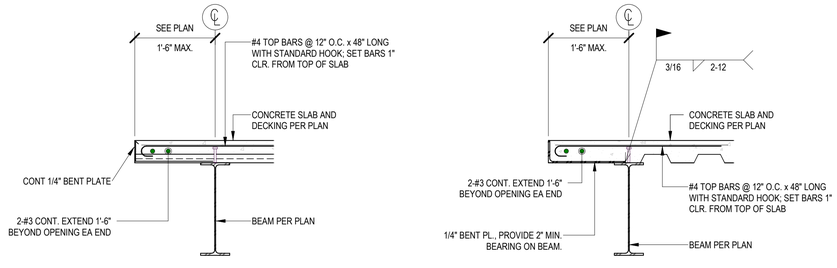
1 TYPICAL DECKING SUPPORT AT EXTERIOR COLULMNS

S4.11 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



2 TYPICAL DECKING SUPPORT AT EXTERIOR COLUMNS

S4.11 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



DECKING PERPENDICULAR DECKING PARALLEL

3 TYPICAL INTERIOR SLAB EDGE REQUIREMENTS AT OPENINGS

S4.11 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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Date	Project No.
03.22.22	20020A
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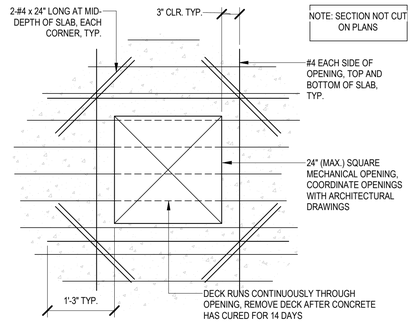
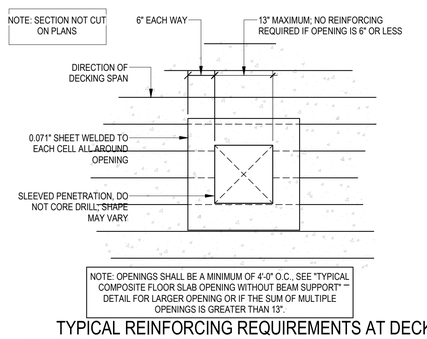
Checked By: Checker	

Sheet Title: TYPICAL COMPOSITE STEEL FRAMING



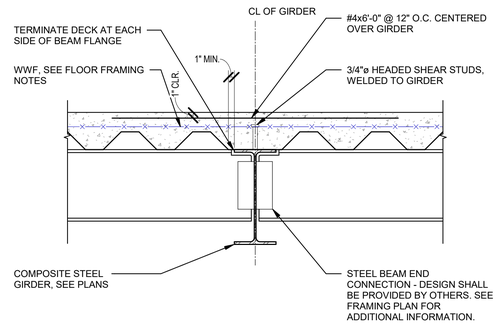
8 TYPICAL COMPOSITE FLOOR SLAB OPENING WITHOUT BEAM SUPPORT

S4.12 NOT TO SCALE



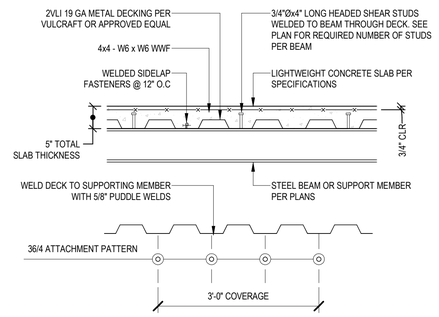
5 TYPICAL REINFORCING REQUIREMENTS AT DECK PENETRATIONS

S4.12 NOT TO SCALE



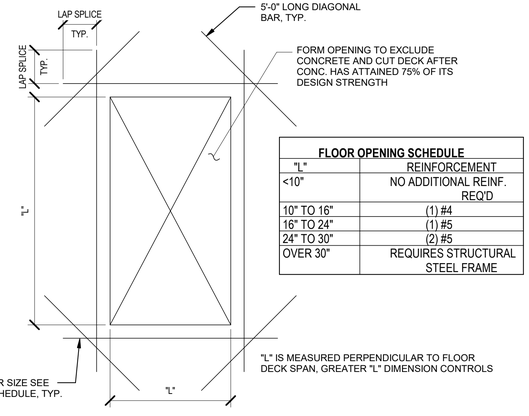
4 TYPICAL COMPOSITE GIRDER

S4.12 NOT TO SCALE



1 TYPICAL COMPOSITE FLOOR CONSTRUCTON-SLAB S1

S4.12 NOT TO SCALE

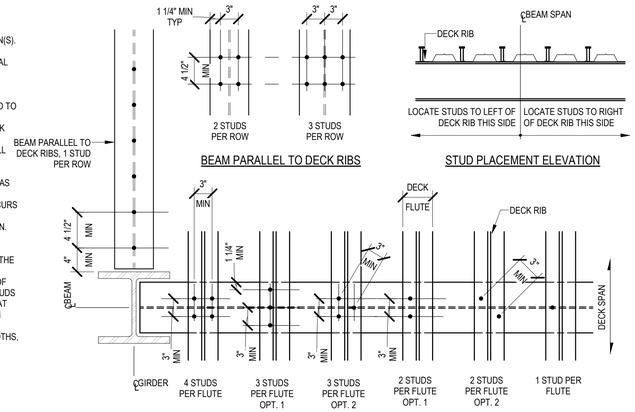


FLOOR OPENING SCHEDULE	
"L"	REINFORCEMENT
<10"	NO ADDITIONAL REINF. REQ'D
10" TO 16"	(1) #4
16" TO 24"	(1) #5
24" TO 30"	(2) #5
OVER 30"	REQUIRES STRUCTURAL STEEL FRAME

9 TYP. COMPOSITE FLOOR SLAB OPENING DETAIL

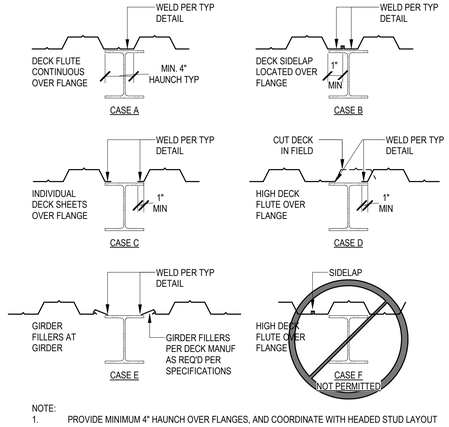
S4.12 NOT TO SCALE

NOTES:
1. REQUIRED NUMBER OF STUDS PER BEAM IS SHOWN ON FRAMING PLAN(S).
2. REFER TO THE FLOOR DECKING CONSTRUCTION DETAIL(S) FOR STUD DIAMETER AND LENGTH. REFER TO THE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
3. PLACE STUDS IN A SINGLE ROW AND DIRECTLY OVER THE BEAM WEB WHERE SPACING REQUIREMENTS PERMIT.
4. PLACE STUDS IN TWO ROWS OR THREE ROWS ONLY WHERE REQUIRED TO SATISFY THE TOTAL STUD COUNT.
5. MAXIMUM NUMBER OF STUDS PERMITTED PER INDIVIDUAL METAL DECK FLUTE IS 3
6. MAXIMUM SPACING OF STUDS ALONG THE LENGTH OF THE BEAM SHALL NOT EXCEED THE SMALLER OF 36" OR 8 TIMES THE TOTAL SLAB THICKNESS.
7. FOR BEAMS PERPENDICULAR TO DECK RIBS, PLACE STUDS AS CLOSE AS POSSIBLE TO CENTERLINE OF DECK FLUTE.
8. FOR BEAMS PERPENDICULAR TO DECK RIBS, WHERE A METAL RIB OCCURS IN A DECK FLUTE, PLACE STUDS TO THE SIDE FURTHEST FROM THE CENTER OF THE BEAM SPAN, TOWARDS THE SUPPORT. SEE ELEVATION.
9. FOR BEAMS PARALLEL TO DECK FLUTES, PLACE THE FIRST STUD A MINIMUM OF 4" FROM THE END OF THE BEAM.
10. BEAMS PERPENDICULAR TO DECK FLUTES, PLACE THE FIRST STUD IN THE DECK FLUTE CLOSEST TO THE BEAM ENDS
11. WHERE METAL DECK FLUTES DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL STUDS IN 2 ROWS OR 3 ROWS WHERE REQUIRED SHALL BE PLACED SUCH THAT THE HIGH DENSITY OF SHEAR CONNECTORS OCCURS NEAR THE BEAM ENDS.
12. BEAMS PERPENDICULAR TO DECK FLUTES WITH NARROW FLANGE WIDTHS, USE OPTION 2 FOR MULTIPLE ROWS ARE REQUIRED, OTHERWISE USE OPTION 1.



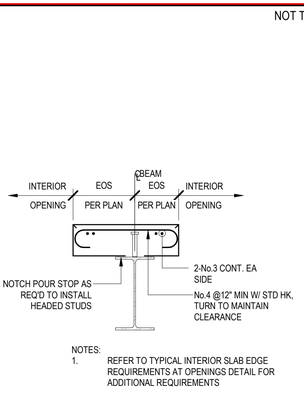
6 SHEAR STUD PLACMENT

S4.12 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



2 TYPICAL COMPOSITE FLOOR DECK ATTACHMENT DETAIL

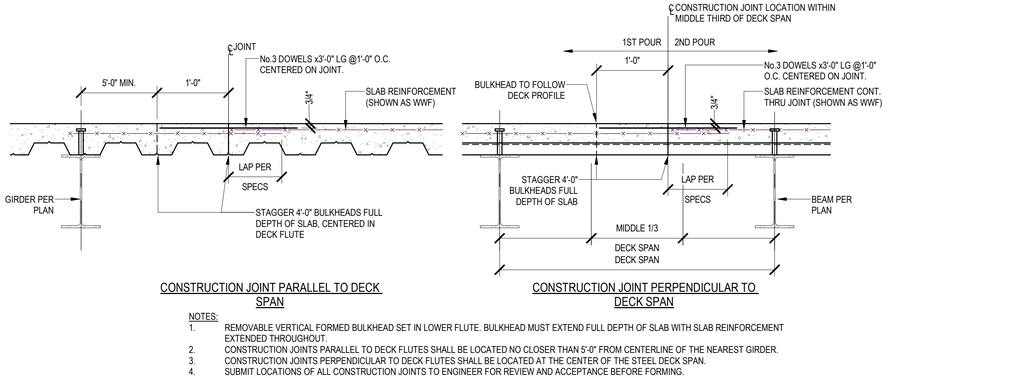
S4.12 NOT TO SCALE



NOTES:
1. REFER TO TYPICAL INTERIOR SLAB EDGE REQUIREMENTS AT OPENINGS DETAIL FOR ADDITIONAL REQUIREMENTS

10 DECK PLACEMENT AT COMPOSITE STEEL GIRDER

S4.12 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"



NOTES:
1. REMOVABLE VERTICAL FORMED BULKHEAD SET IN LOWER FLUTE. BULKHEAD MUST EXTEND FULL DEPTH OF SLAB WITH SLAB REINFORCEMENT EXTENDED THROUGHOUT.
2. CONSTRUCTION JOINTS PARALLEL TO DECK FLUTES SHALL BE LOCATED NO CLOSER THAN 5'-0" FROM CENTERLINE OF THE NEAREST GIRDER.
3. CONSTRUCTION JOINTS PERPENDICULAR TO DECK FLUTES SHALL BE LOCATED AT THE CENTER OF THE STEEL DECK SPAN.
4. SUBMIT LOCATIONS OF ALL CONSTRUCTION JOINTS TO ENGINEER FOR REVIEW AND ACCEPTANCE BEFORE FORMING.
5. LIMIT CONCRETE FILL PLACEMENT TO 160 FT MAX IN ANY DIRECTION. WHERE REQUIRED, DIVIDE AREAS EQUALLY AND ALLOW A MIN. OF (3) DAYS BETWEEN ADJACENT PLACEMENTS.

7 SLAB ON METAL DECK CONSTRUCTION JOINT

S4.12 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"

NOTE:
1. PROVIDE MINIMUM 4" HAUNCH OVER FLANGES, AND COORDINATE WITH HEADED STUD LAYOUT

3 DECK PLACEMENT AT COMPOSITE STEEL GIRDER

S4.12 E+M TYPICAL DETAIL SCALE: 1" = 1'-0"

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NEW FACILITY FOR
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 JOHN CRAIG FISHER ENGINEER
March 22, 2022

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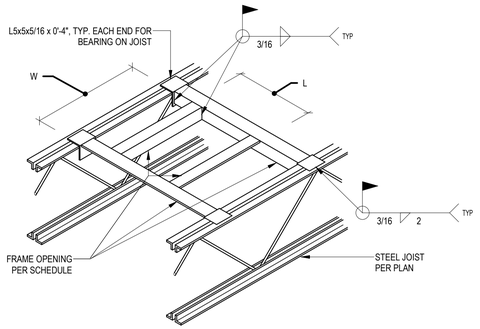
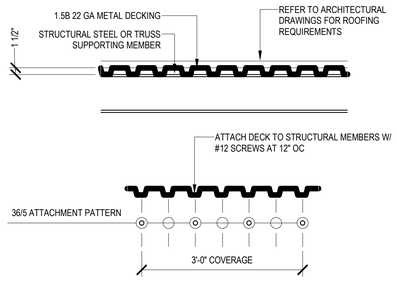
Sheet Title: TYPICAL COMPOSITE STEEL FRAMING



DECKING OPENING FRAMING SCHEDULE	
LENGTH "L" x WIDTH "W"	FRAMING AT SLAB EDGE
0 < L < 6" 0 < W < 6"	NO ADDITIONAL FRAMING REQUIRED
6" < L < 13" 6" < W < 13"	16 GAGE PLATE, MINIMUM OF 6" BEYOND EACH SIDE OF OPENING
13" < L < 4'-0" 13" < W < 4'-0"	L4x4x1/4"
4'-0" < L < 6'-6" 4'-0" < W < 9'-0"	L5x3x5/16"

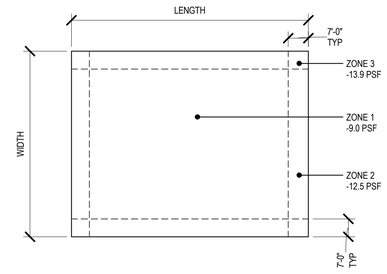
4 TYPICAL DECKING SUPPORT AT PENETRATIONS

S4.30 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



1 TYPICAL ROOF DECKING CONSTRUCTION

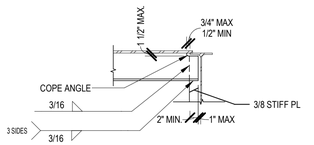
S4.30 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



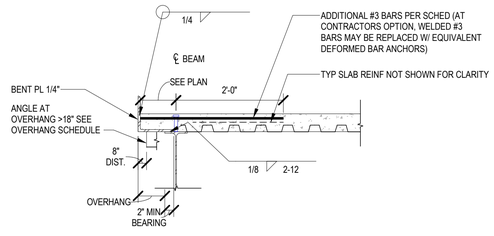
NOTE: NET UPLIFT PRESSURES ARE BASED ON SERVICE LOAD COMBINATIONS

5 NET UPLIFT DIAGRAM

S4.30 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

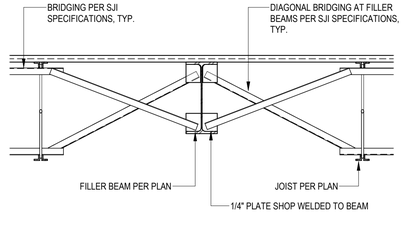


OVERHANG SCHEDULE		
OVERHANG	ANGLE	ADDITIONAL #3 BARS
24" MAX	L5x3x1/4 @ 4'-0" OC	12" OC
36" MAX	L6x4x5/16 @ 4'-0" OC	6" OC



2 TYPICAL EDGE OF SLAB

S4.30 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



3 TYPICAL BRIDGING CONNECTION TO FILLER BEAM

S4.30 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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March 22, 2022

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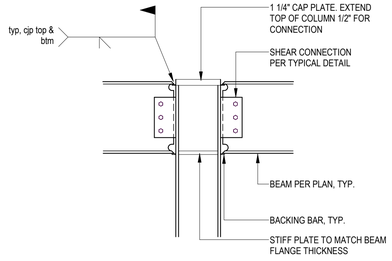
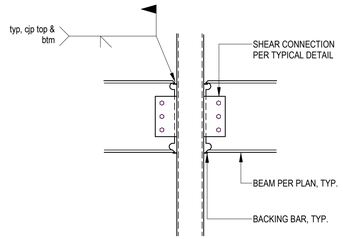
Sheet Title: TYPICAL STEEL ROOF FRAMING DETAILS



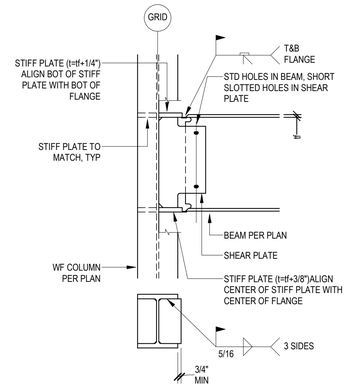
7 TYPICAL W-SECTION BEAM TO WF COLUMN MOMENT CONNECTION AT ROOF LEVEL

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



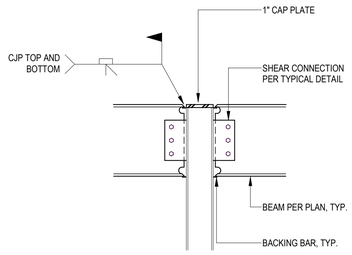
4 TYPICAL W-SECTION BEAM TO HSS COLUMN MOMENT CONNECTION

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



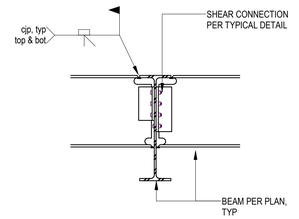
1 WEAK AXIS MOMENT CONNECTION

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



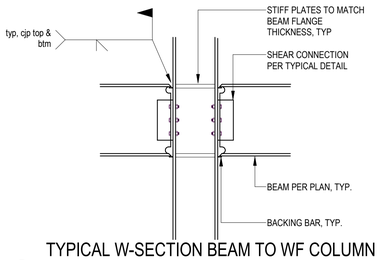
5 TYPICAL W-SECTION BEAM TO TOP OF HSS COLUMN MOMENT CONNECTION

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



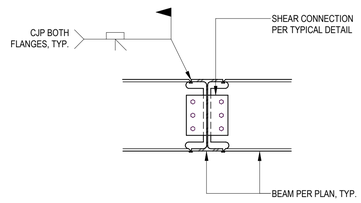
2 TYPICAL BEAM TO BEAM MOMENT CONNECTION

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



6 TYPICAL W-SECTION BEAM TO WF COLUMN MOMENT CONNECTION AT LATERAL FRAME

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



3 TYPICAL EQUAL DEPTH DEAM-TO-BEAM MOMENT CONNECTION

S4.35 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
March 22, 2022

BID SET

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Sheet Title: TYPICAL STEEL MOMENT CONNECTIONS

04 ROOF FRAMING PLAN																				04 ROOF FRAMING PLAN
34'-8" ATTIC FRAMING PLAN																				34'-8" ATTIC FRAMING PLAN
27'-4" 2ND FLOOR FRAMING PLAN		W8X28 BP 3/4"X18X18"	W8X31 BP 3/4"X16X18"	W8X31 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"		W8X31 BP 3/4"X18X18"	W8X40 BP 1"X18X18"	W8X40 BP 1"X16X18"	W8X28 BP 3/4"X18X18"		W8X31 BP 1"X16X18"	W8X28 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"					W8X28 BP 3/4"X18X18"	27'-4" 2ND FLOOR FRAMING PLAN
14'-0" 01 FOUNDATION FIRST FLOOR																	W8X28 BP 3/4"X18X18"			14'-0" 01 FOUNDATION FIRST FLOOR
0"																				0"
Column Locations	A(9")-1(7")	A-2	A-5	A-8	A-9	B(-2'-8 7/8")-1(7")	C-2	C-5	C-8	C-10	C.8(-46'-0")-11(-86'-8")	D-8	D-11	E-2	E(6'-1 3/4")-3(7")	E(2'-4")-4(1'-5 43/128")	E(2'-4")-5(-1'-7 93/128")	F-2	F-3	F-3(7")	

04 ROOF FRAMING PLAN																				04 ROOF FRAMING PLAN
34'-8" ATTIC FRAMING PLAN																				34'-8" ATTIC FRAMING PLAN
27'-4" 2ND FLOOR FRAMING PLAN		W8X31 BP 1"X18X18"	W8X35	W8X28 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"		W8X28 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"	W8X35 BP 3/4"X18X18"				W8X40 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"	W8X35 BP 3/4"X18X18"	W8X58 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"	W8X31 BP 3/4"X18X18"	W8X28 BP 3/4"X18X18"	27'-4" 2ND FLOOR FRAMING PLAN
14'-0" 01 FOUNDATION FIRST FLOOR																				14'-0" 01 FOUNDATION FIRST FLOOR
0"																				0"
Column Locations	F(-6'-9")-3(7")	F-5	F-8	F-9	F-11	F.1(4'-5")-3(7")	F.1-11	G-1	G-3	G(-3'-11 27/32")-3(8")	G(-3'-11 231/256")-4(3'-11 19/256")	G(-4'-0")-5(-1'-7 93/128")	G-6	G-7	G-9	H-1	H-6	H-7	H-9	I-9	

04 ROOF FRAMING PLAN				04 ROOF FRAMING PLAN
34'-8" ATTIC FRAMING PLAN				34'-8" ATTIC FRAMING PLAN
27'-4" 2ND FLOOR FRAMING PLAN				27'-4" 2ND FLOOR FRAMING PLAN
14'-0" 01 FOUNDATION FIRST FLOOR	W8X28 BP 3/4"X18X18"	W8X35 BP 3/4"X18X18"	W8X48 BP 3/4"X18X18"	14'-0" 01 FOUNDATION FIRST FLOOR
0"				0"
Column Locations	J-1	J-4	J-6	

COLUMN SCHEDULE

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

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NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
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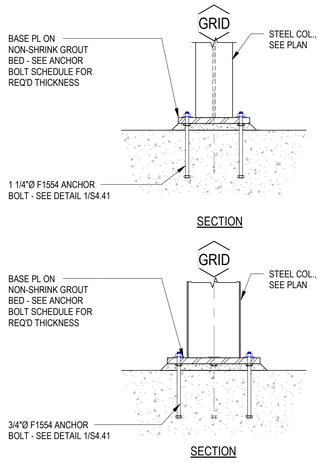
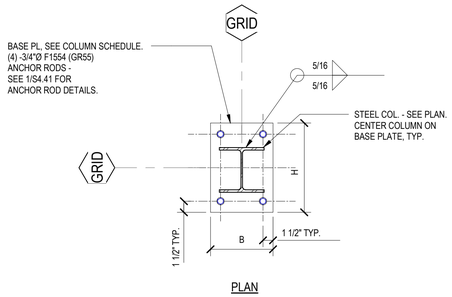
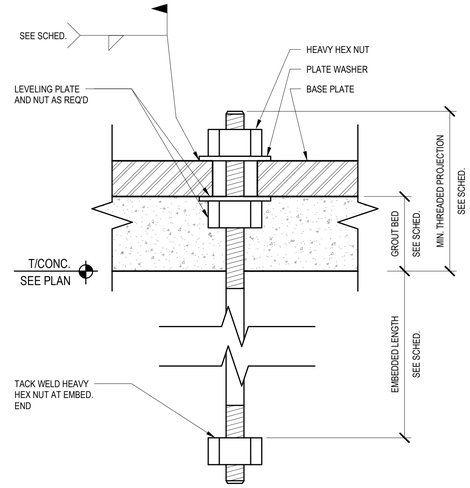


BASE PLATE SCHEDULE			
COLUMN SIZE	BASE PLATE SIZE	BASE PLATE THICKNESS	ANCHOR RODS
W8X	SEE SCHED	SEE SCHED	(4)-3/4"Ø F1554 (GR. 55)



3 WIDE FLANGE COLUMN BASE PLATE DETAIL

S4.41 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

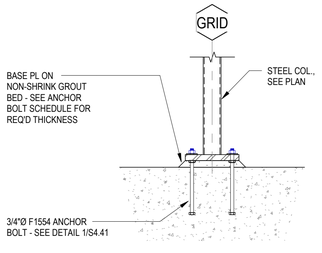


ANCHOR BOLT ø	MATERIAL GRADE	EMBED. LENGTH	MIN. THREADED PROJECTION	GROUT BED	SIZE OF HOLE IN BASE PLATE	PLATE WASHER	WELD SIZE
3/4" ø	F1554-36	9"	0'-5"	1 1/2"	1 5/16"	1/4"x2"ø	3/16"
1" ø	F1554-36	9"	0'-5"	1 1/2"	1 13/16"	3/8"x3"ø	1/4"
1 1/4" ø	F1554-36	1'-8"	0'-6"	2"	2 1/16"	1/2"x3"ø	1/4"
1 1/2" ø	F1554-55	2'-0"	0'-6"	2"	2 5/16"	1/2"x3 1/2"ø	5/16"
2" ø	F1554-55	2'-8"	0'-9"	3"	3 1/4"	3/4"x5"ø	5/16"
2 1/2" ø	F1554-55	3'-4"	0'-10"	3 1/2"	3 3/4"	7/8"x5 1/2"ø	5/16"

NOTES:
1. PROVIDE LEVELING PLATES AND NUTS AS REQUIRED. STEEL SHIMS MAY BE USED AT CONTRACTOR'S OPTION.
2. DAMAGE THREADS IN TWO (2) PLACES BELOW BOTTOM HEX NUT TO PREVENT LOOSENING.
3. PLATE WASHERS SHALL BE ASTM A36 MATERIAL. PROVIDE STANDARD HOLES IN PLATE WASHERS (1/16" LARGER THAN DIAMETER OF BOLT).
4. PLATE WASHERS SHALL BE WELDED TO BASE PLATES FOR ALL ELEMENTS OF LATERAL-LOAD-RESISTING SYSTEM. BASE PLATES TRANSMITTING ONLY VERTICAL LOADS THROUGH BEARING NEED NOT BE WELDED TO PLATE WASHERS.
5. PROVIDE WELDABLE GRADE 55 PER ASTM SPECIFICATIONS, WHERE ASTM F1554-55 HAS BEEN SPECIFIED FOR ANCHOR BOLTS.
6. LOCATION AND ELEVATION OF ANCHOR BOLTS SHALL BE VERIFIED BY SURVEYOR PRIOR TO ERECTION. WHERE ANCHOR BOLTS ARE OUT OF TOLERANCE, CONTRACTOR SHALL COORDINATE REPAIR WITH STRUCTURAL ENGINEER OF RECORD.

1 ANCHOR BOLT SCHEDULE

S4.41 **E+M** TYPICAL DETAIL SCALE: 3" = 1'-0"



BASE PLATE SCHEDULE			
COLUMN SIZE	BASE PLATE SIZE	BASE PLATE THICKNESS	ANCHOR RODS
HSS8x8	11" x 11"	1"	(4)-1"Ø F1554
HSS7x7	10" x 10"	1"	(4)-3/4"Ø F1554
HSS6x6	9" x 9"	1"	(4)-3/4"Ø F1554
HSS5x5	8" x 8"	1"	(4)-3/4"Ø F1554
HSS4-1/2x4-1/2	8" x 8"	1"	(4)-3/4"Ø F1554
HSS4x4	7" x 7"	1"	(4)-3/4"Ø F1554
HSS3-1/2x3-1/2	7" x 7"	1"	(4)-3/4"Ø F1554
HSS3x3	6" x 6"	1"	(4)-3/4"Ø F1554

4 HSS GRAVITY COLUMN BASE PLATE DETAIL

S4.41 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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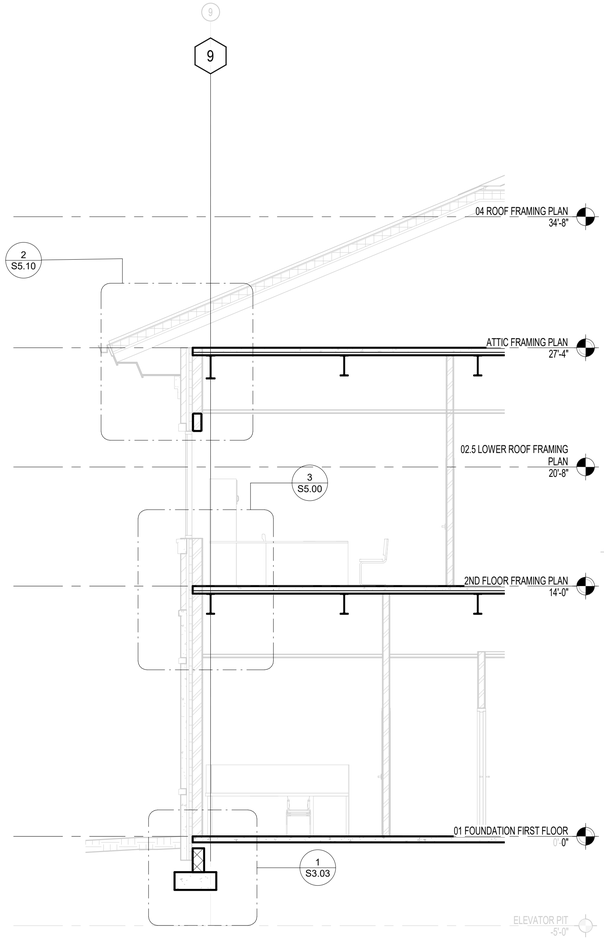
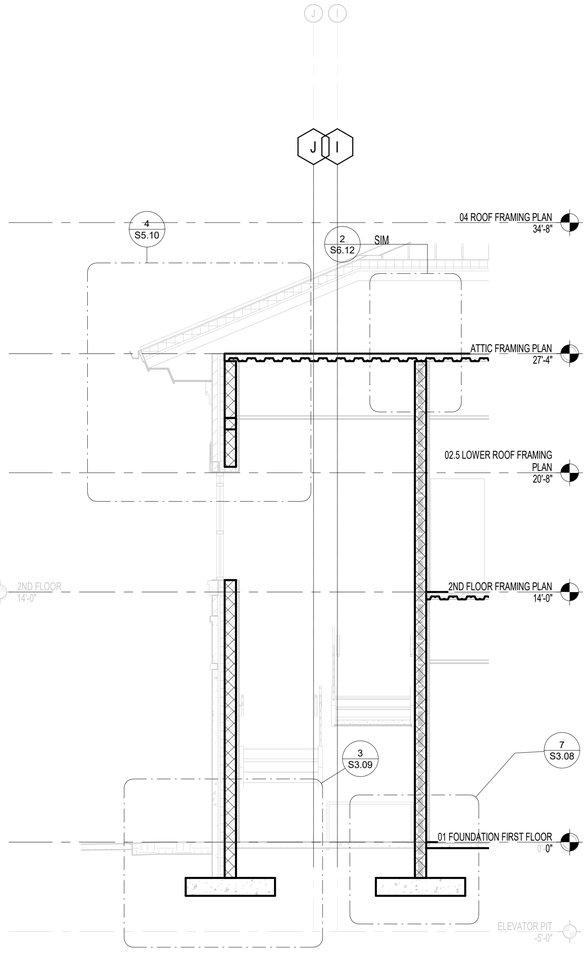


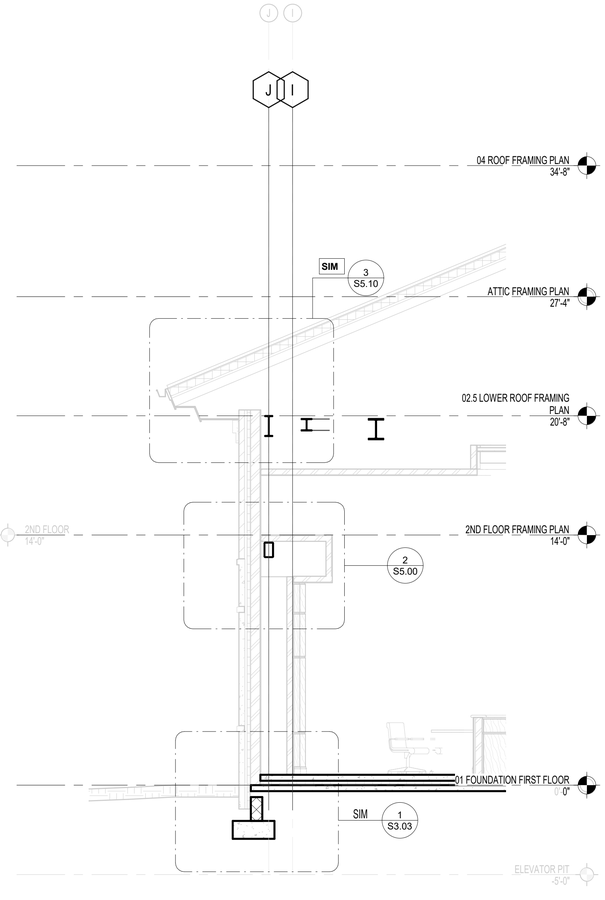
3 Section 13

S4.50 SCALE: 1/4" = 1'-0"



2 Section 11

S4.50 SCALE: 1/4" = 1'-0"



1 Section 12

S4.50 SCALE: 1/4" = 1'-0"

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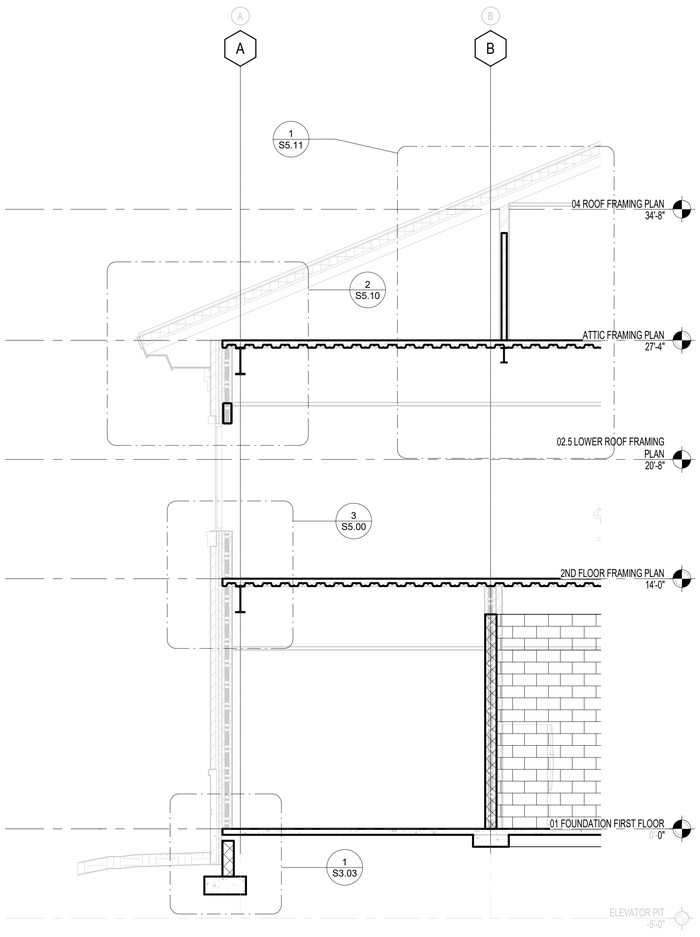
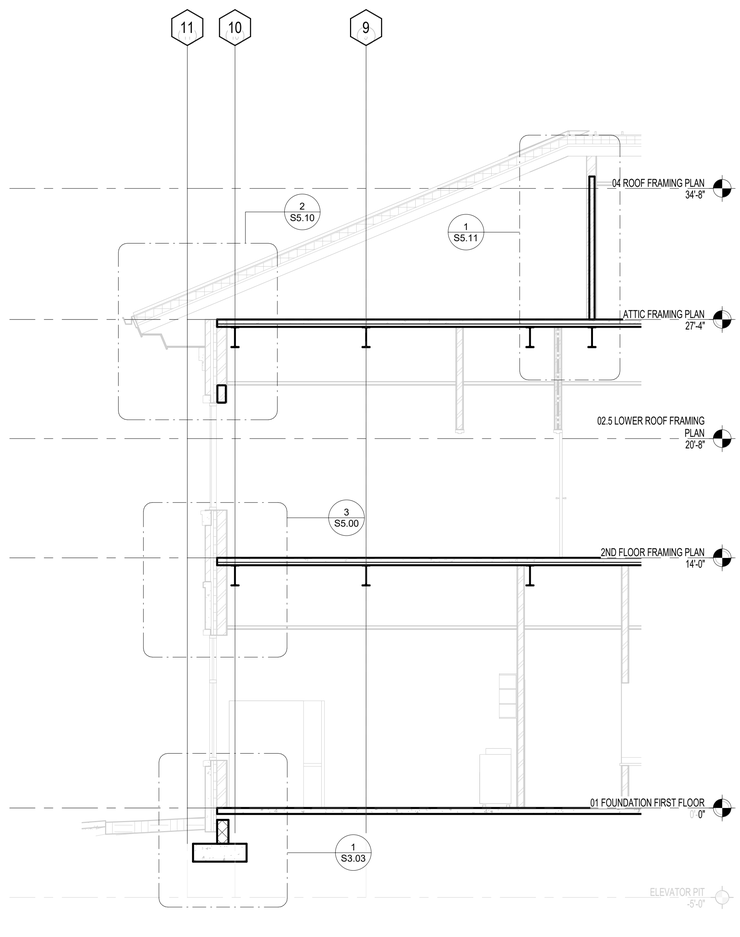
Sheet Title
SECTIONS AND DETAILS



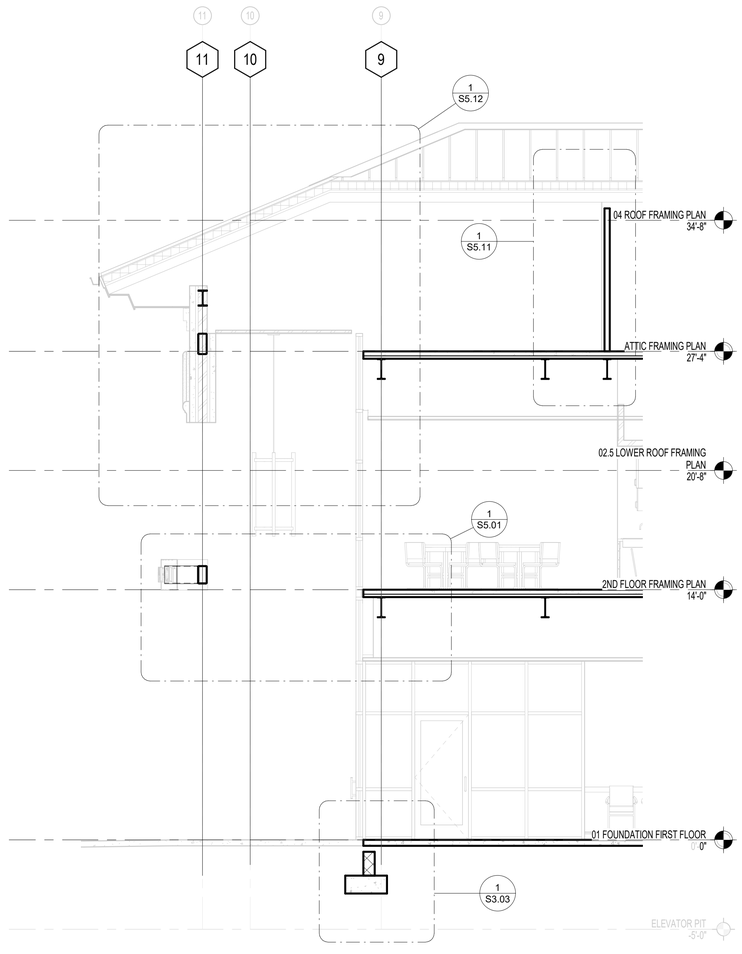
3 Section 9

S4.51 SCALE: 1/4" = 1'-0"



2 Section 15

S4.51 SCALE: 1/4" = 1'-0"



1 Section 14

S4.51 SCALE: 1/4" = 1'-0"

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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24417 CRAIG FISHER
March 22, 2022

BID SET

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#	Description	Date

Date: 03.22.22	Project No.: 20020A
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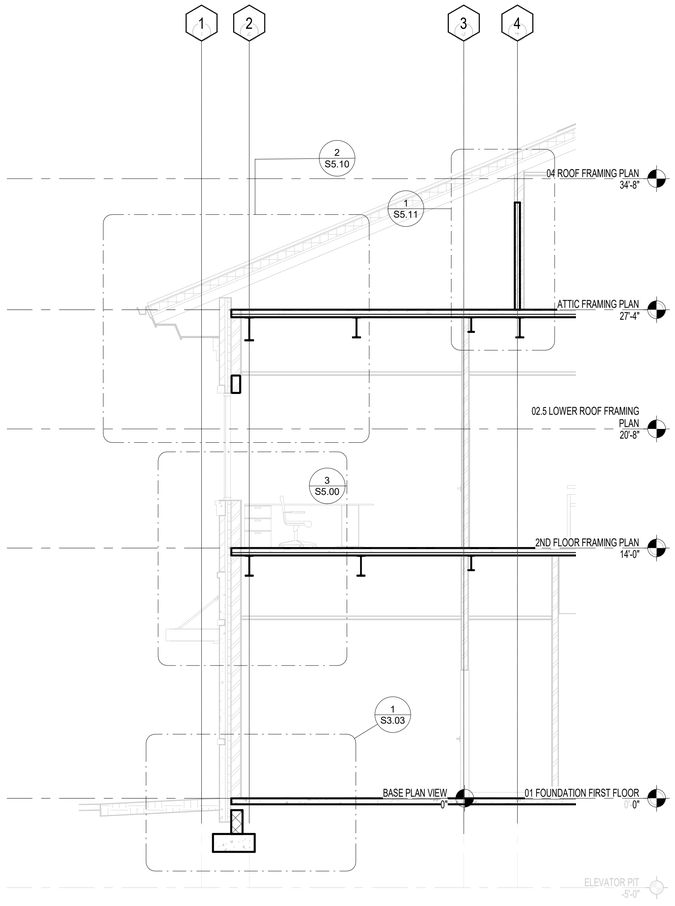
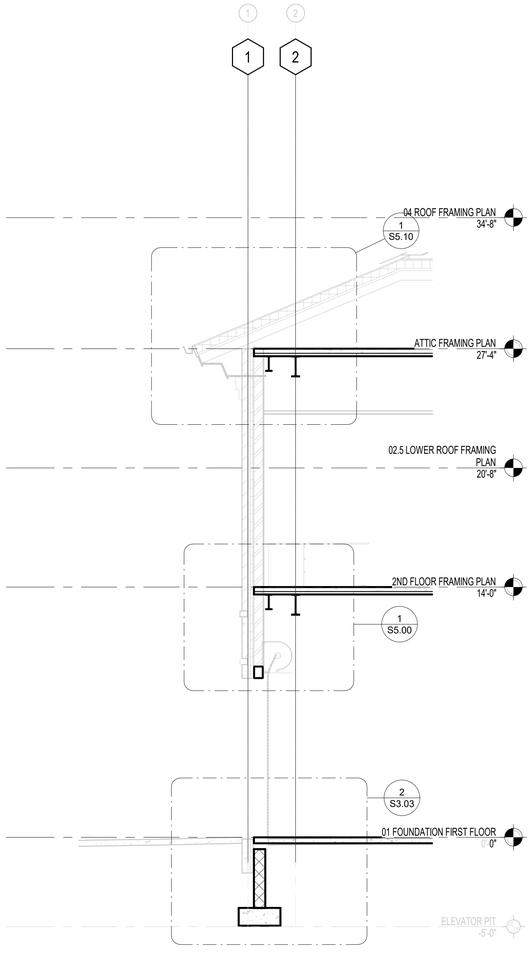
Sheet Title: SECTIONS AND DETAILS



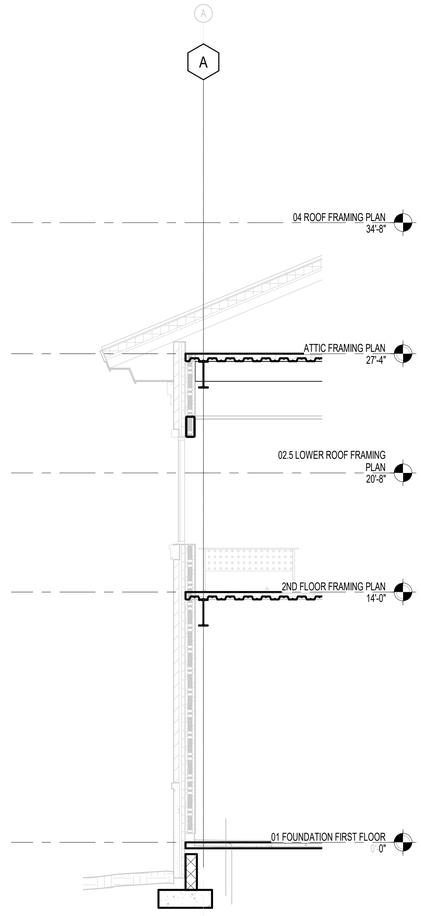
3 Section 7

S4.52 SCALE: 1/4" = 1'-0"



2 Section 2

S4.52 SCALE: 1/4" = 1'-0"



1 Section 5

S4.52 SCALE: 1/4" = 1'-0"

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Sheet Title
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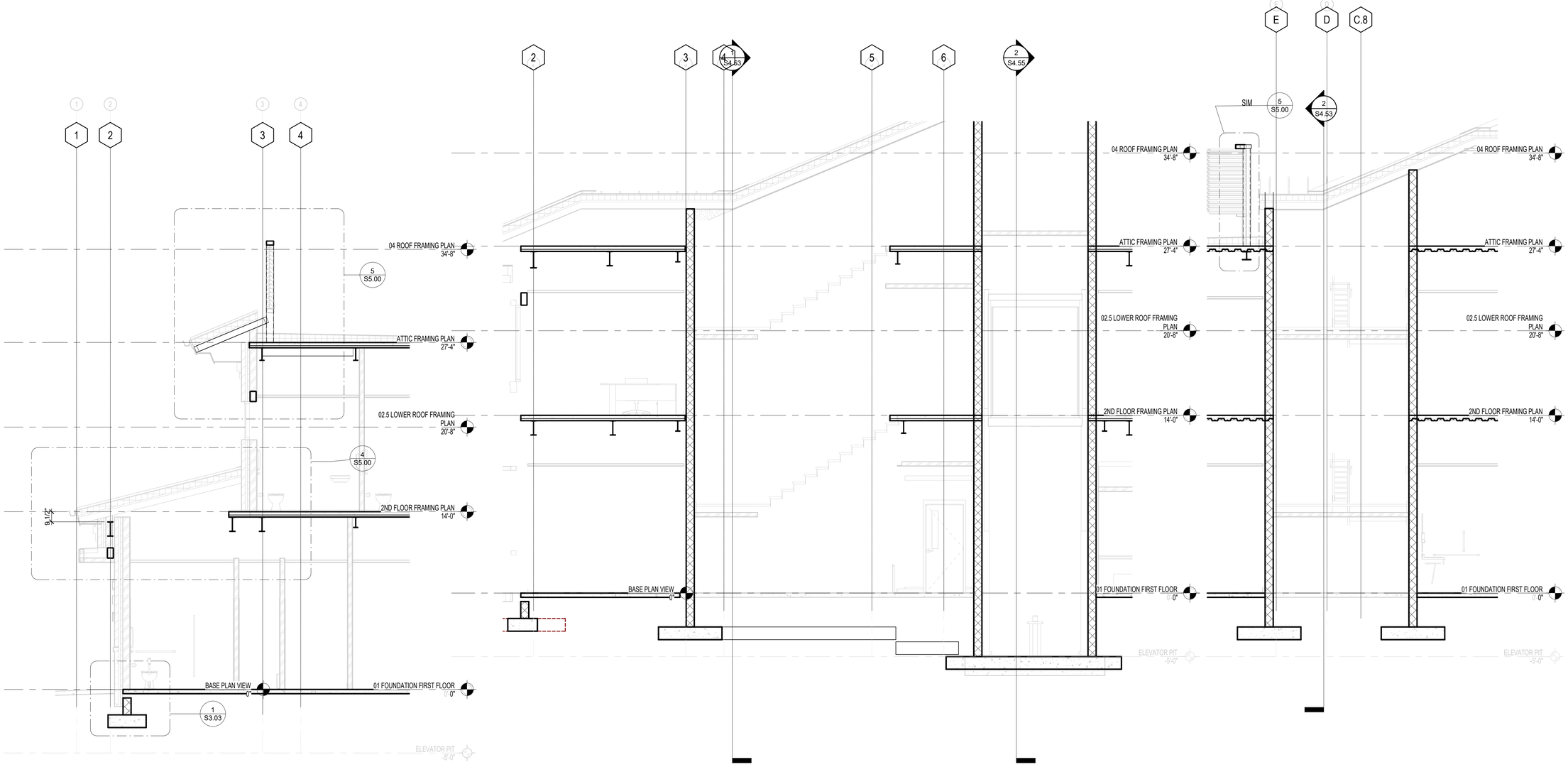

3 Section 3

S4.53 SCALE: 1/4" = 1'-0"

2 Section 6

S4.53 SCALE: 1/4" = 1'-0"

1 Section 18

S4.53 SCALE: 1/4" = 1'-0"

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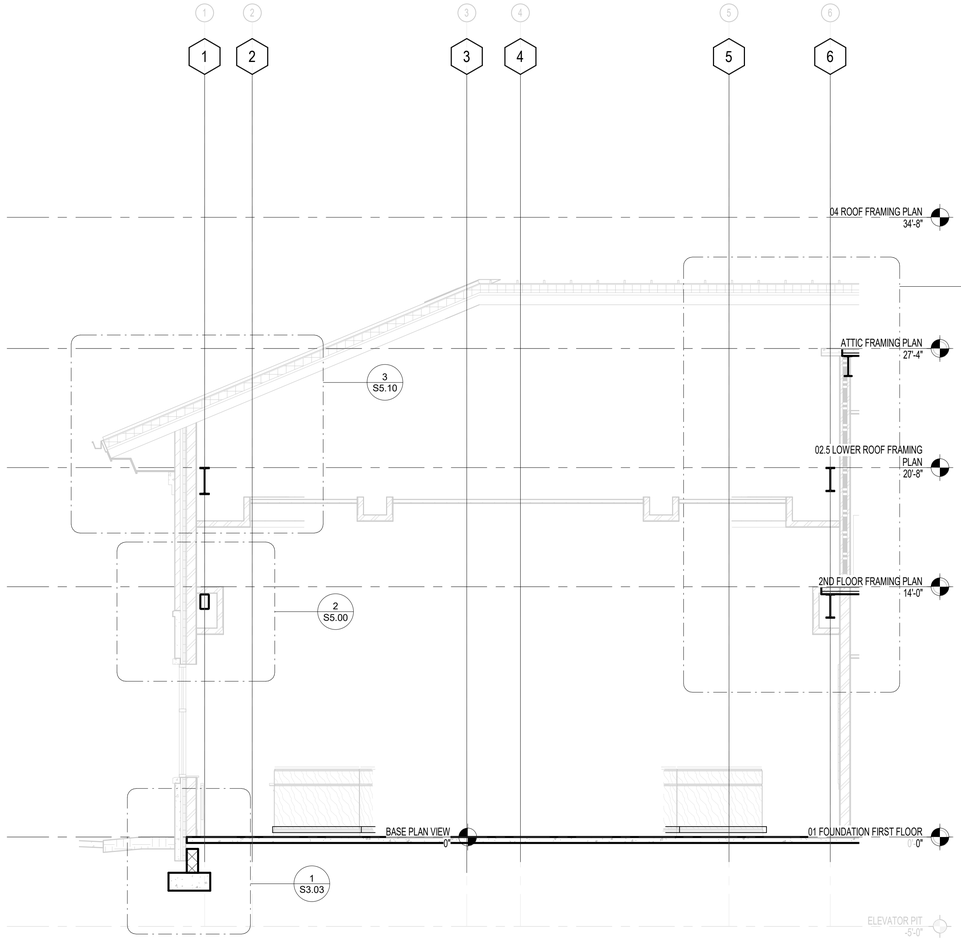
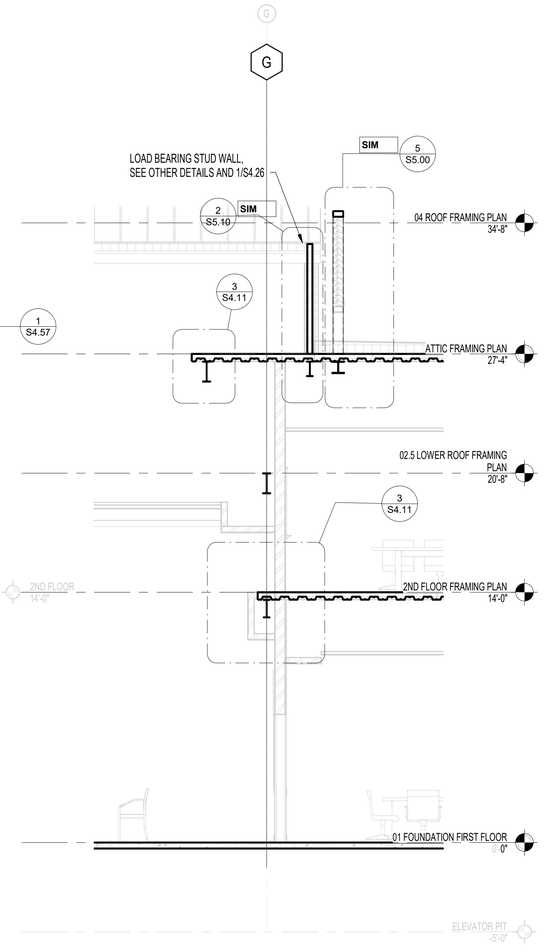


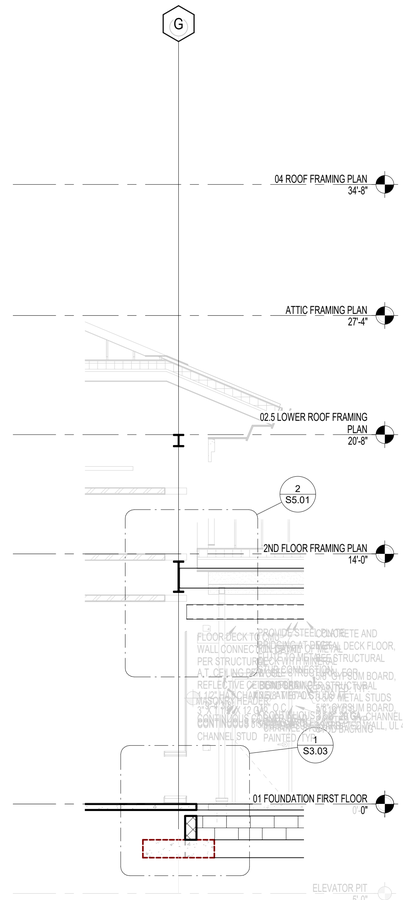
3 Section 8

S4.54 SCALE: 1/4" = 1'-0"



2 Section 17

S4.54 SCALE: 1/4" = 1'-0"



1 Section 4

S4.54 SCALE: 1/4" = 1'-0"

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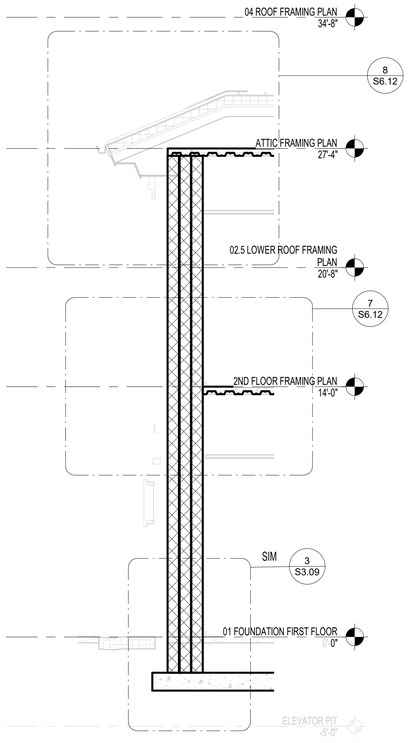
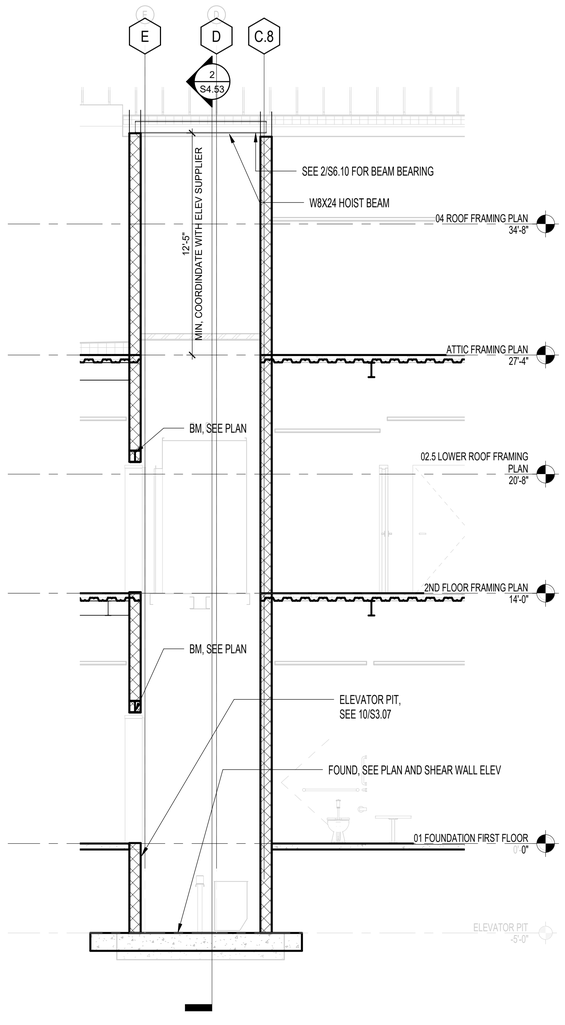


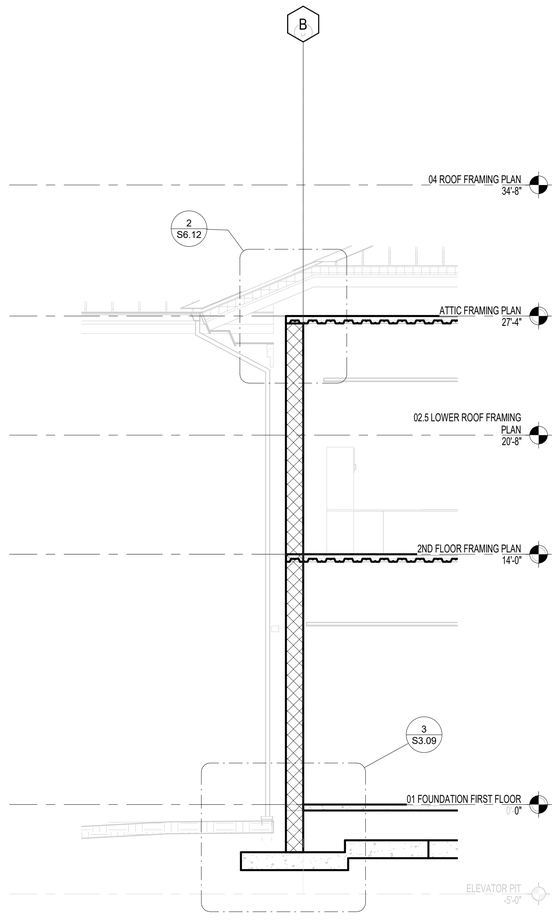
3 Section 28

S4.55 SCALE: 1/4" = 1'-0"



2 Section 27

S4.55 SCALE: 1/4" = 1'-0"



1 1/S4.55

S4.55 SCALE: 1/4" = 1'-0"

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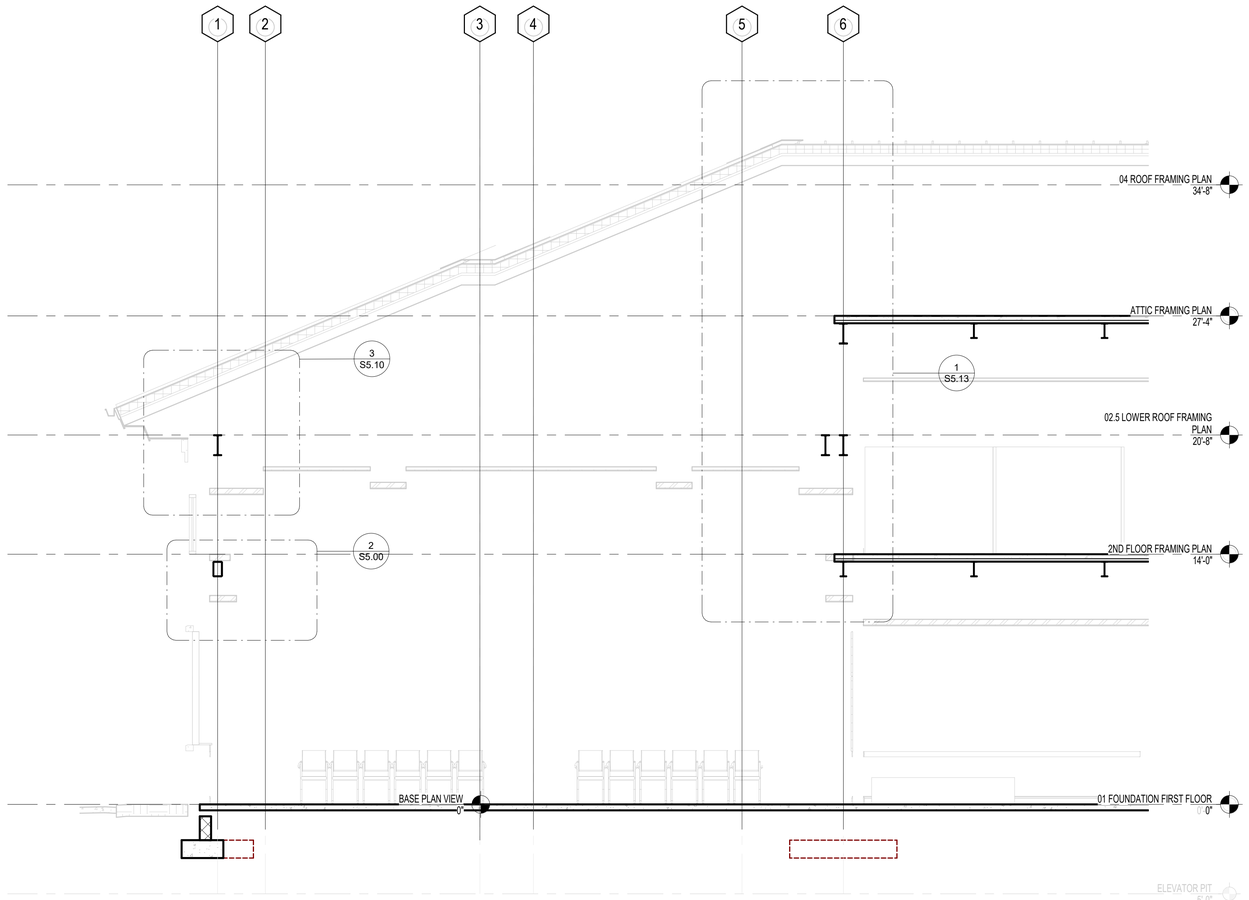

1 Section 26

S4.56 SCALE: 1/4" = 1'-0"

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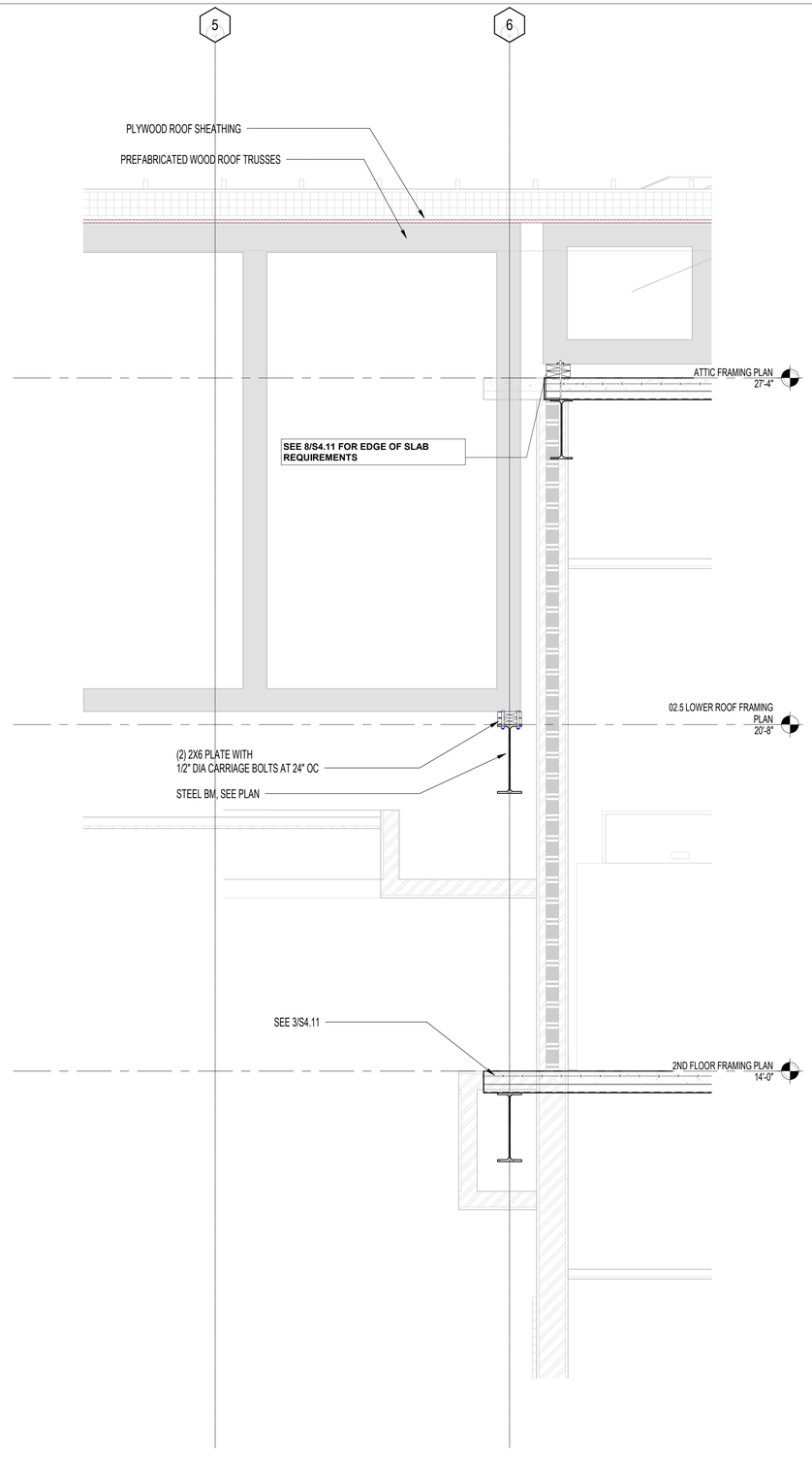

1 SECTION AT ROOF AND FLOOR AT COUNCIL CHAMBER

S4.57 SCALE: 3/4" = 1'-0"

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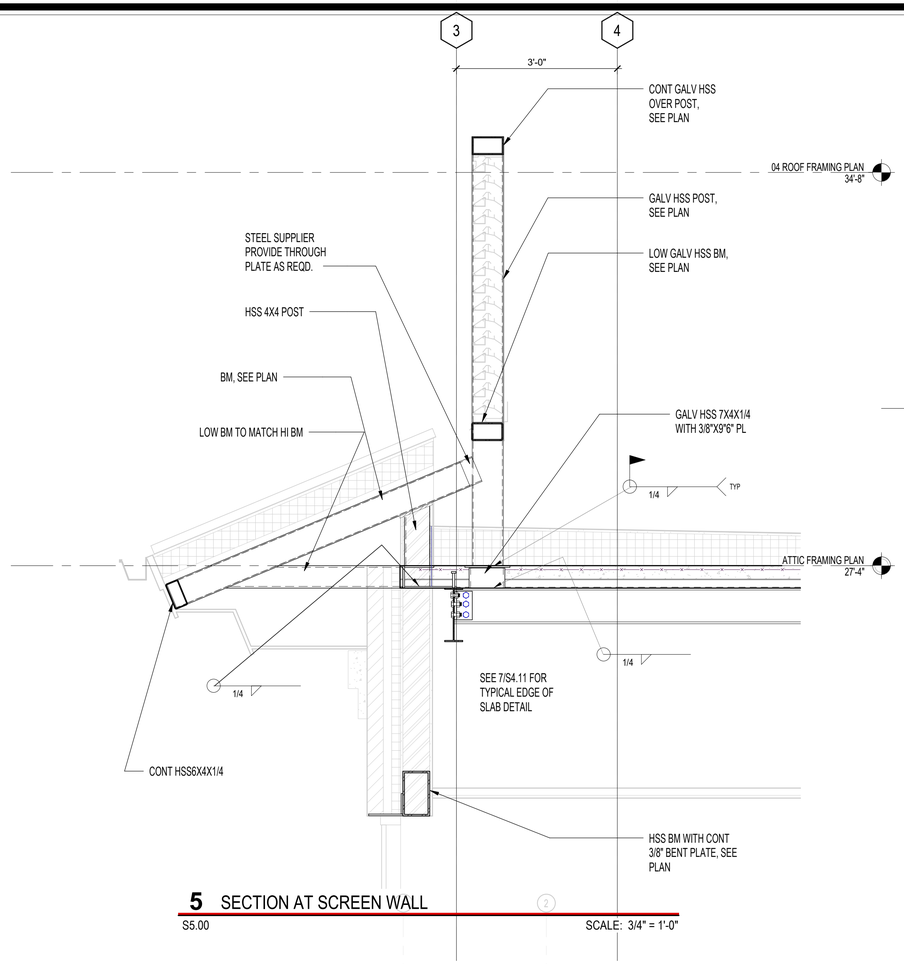
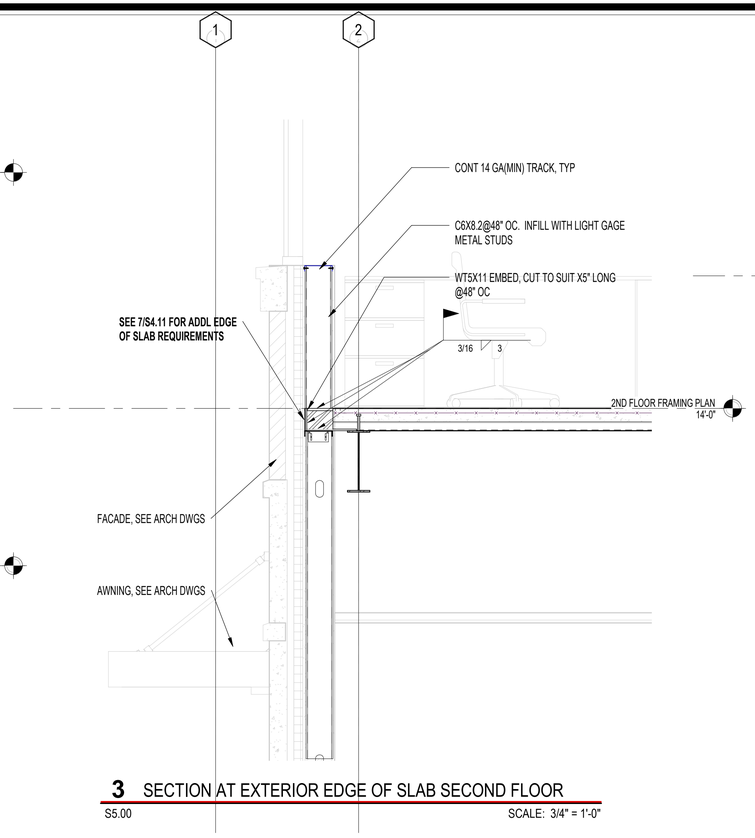
Sheet Title: SECTIONS AND DETAILS



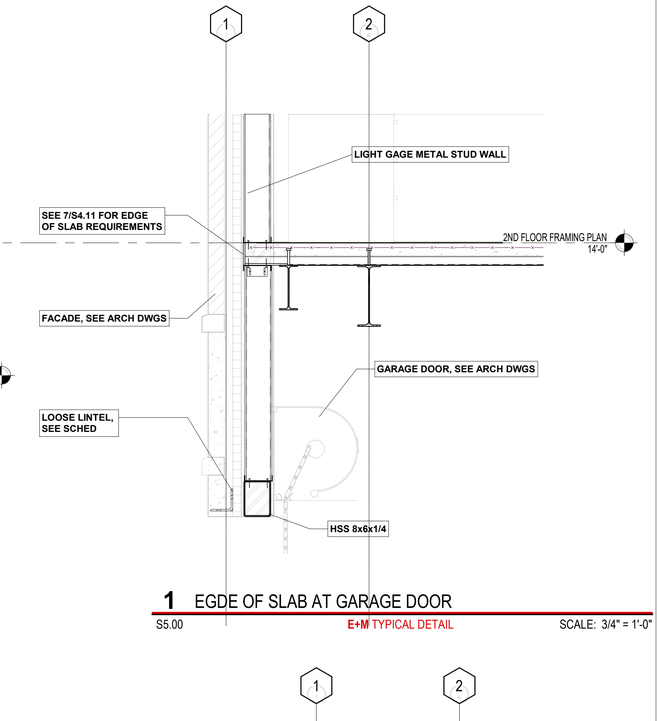
5 SECTION AT SCREEN WALL

S5.00 SCALE: 3/4" = 1'-0"



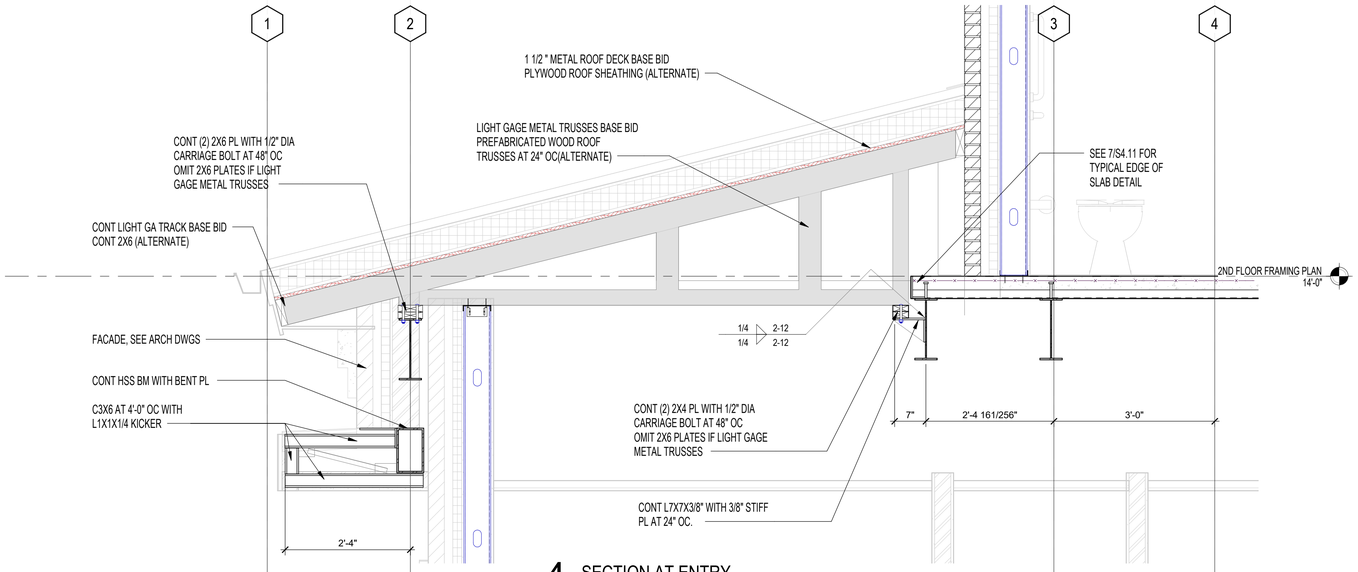
3 SECTION AT EXTERIOR EDGE OF SLAB SECOND FLOOR

S5.00 SCALE: 3/4" = 1'-0"



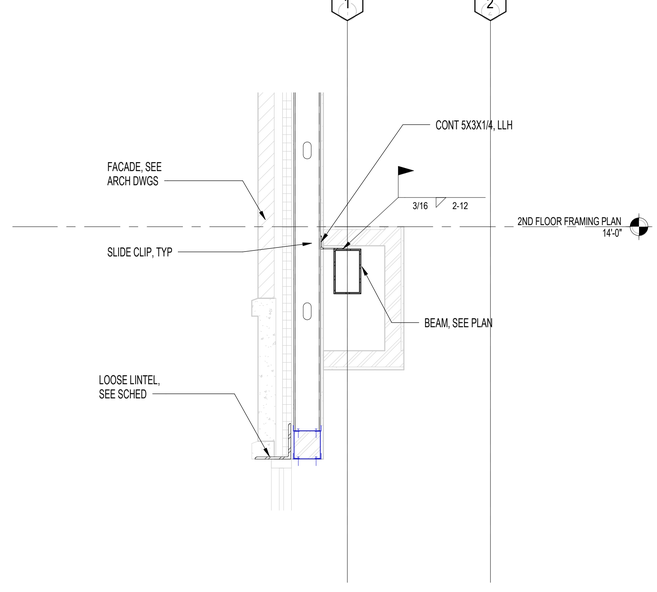
1 EGDE OF SLAB AT GARAGE DOOR

S5.00 E+M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



4 SECTION AT ENTRY

S5.00 SCALE: 3/4" = 1'-0"



2 SECTION AT COUNCIL CHAMBER

S5.00 SCALE: 3/4" = 1'-0"

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March 22, 2022

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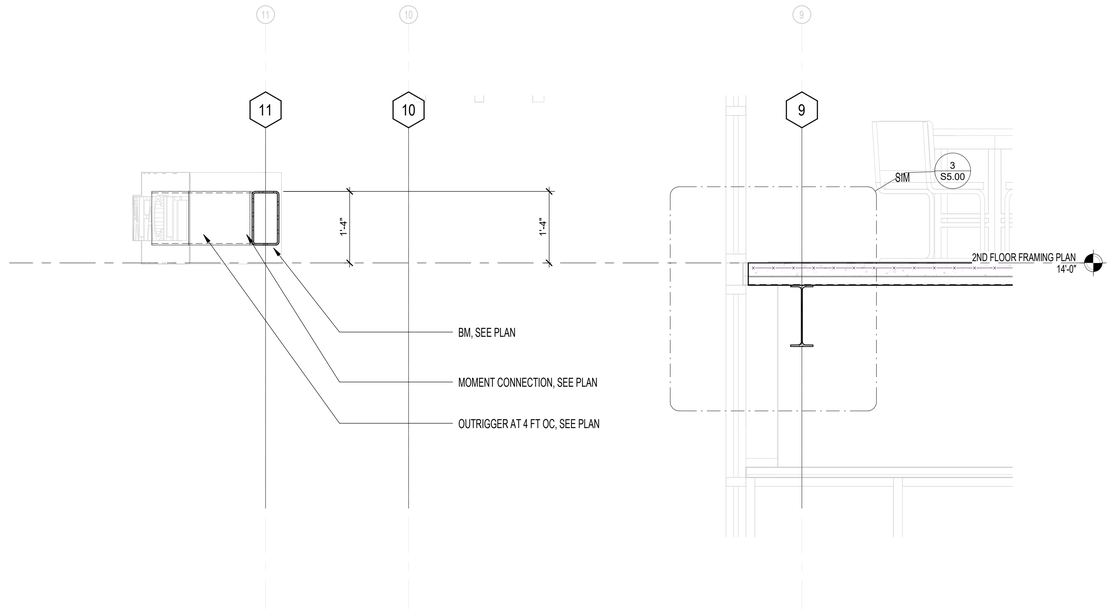
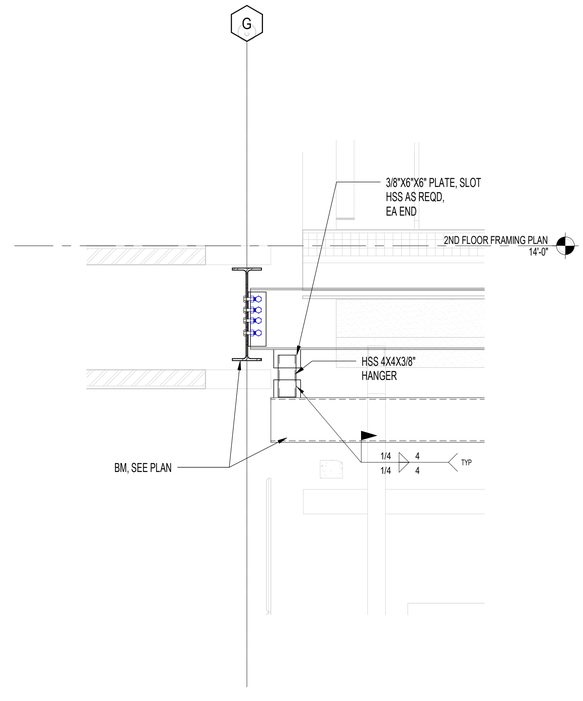
Checked By: Checker	

Sheet Title
COMPOSITE STEEL FRAMING DETAILS



1 SECTION AT ENTRY SIGNAGE

S5.01 SCALE: 3/4" = 1'-0"



2 SECTION AT HANGER

S5.01 SCALE: 3/4" = 1'-0"

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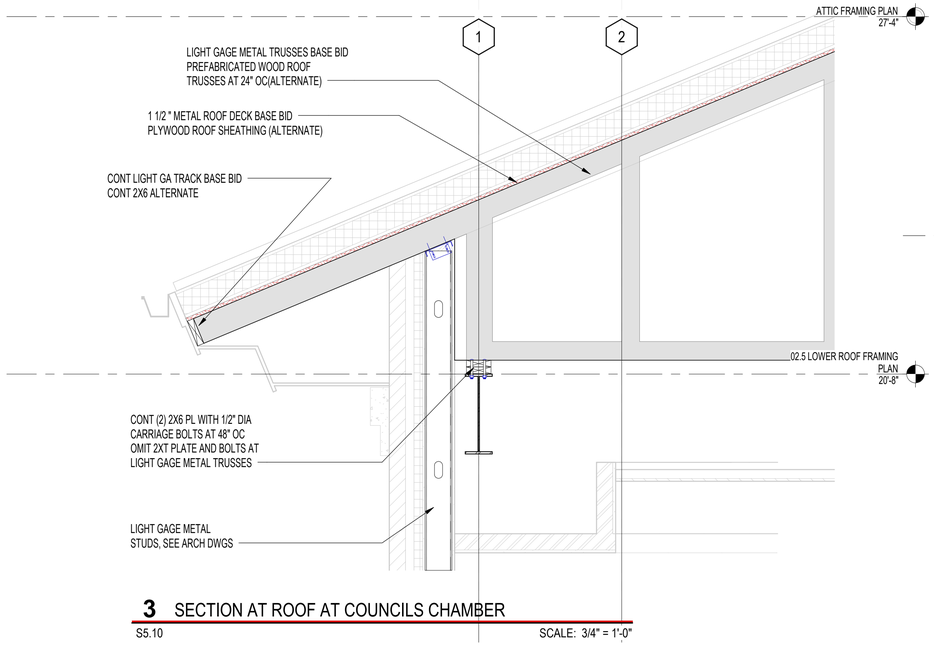
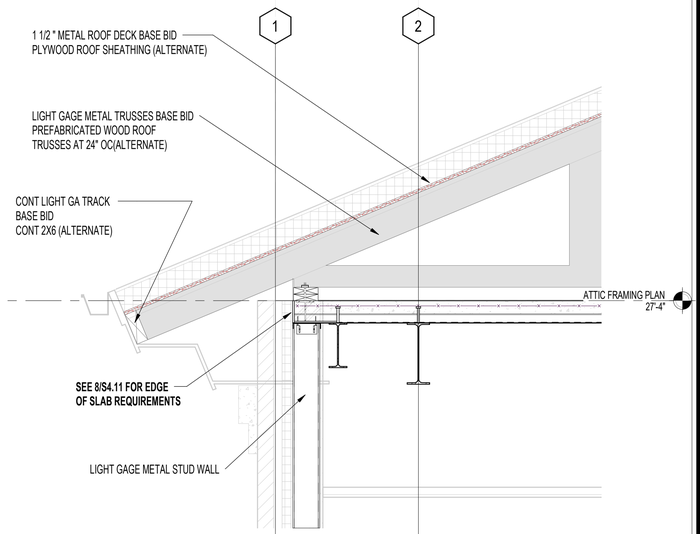
Sheet Title
COMPOSITE STEEL FRAMING DETAILS



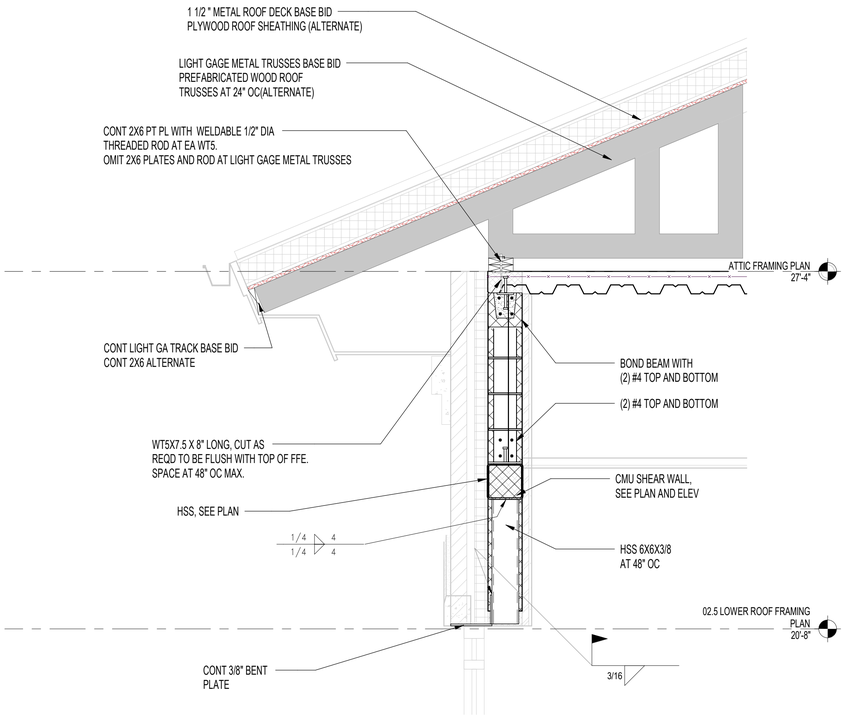
3 SECTION AT ROOF AT COUNCILS CHAMBER

S5.10 SCALE: 3/4" = 1'-0"



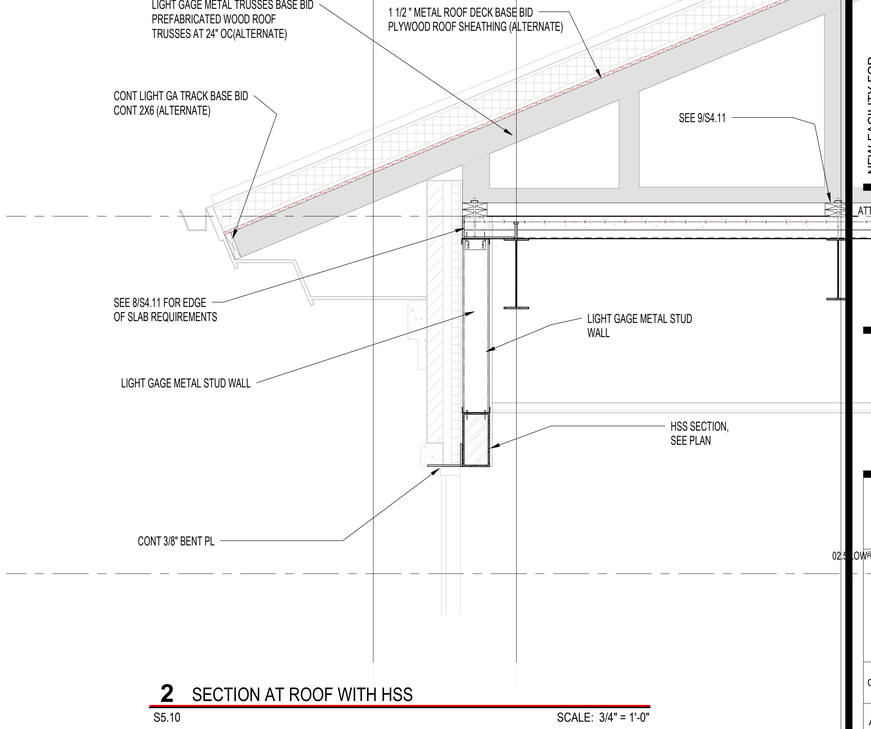
1 SECTION AT ROOF WITH WOOD TRUSSES

S5.10 SCALE: 3/4" = 1'-0"



4 SECTION AT ARCHED WINDOW AT ROOF

S5.10 SCALE: 3/4" = 1'-0"



2 SECTION AT ROOF WITH HSS

S5.10 SCALE: 3/4" = 1'-0"

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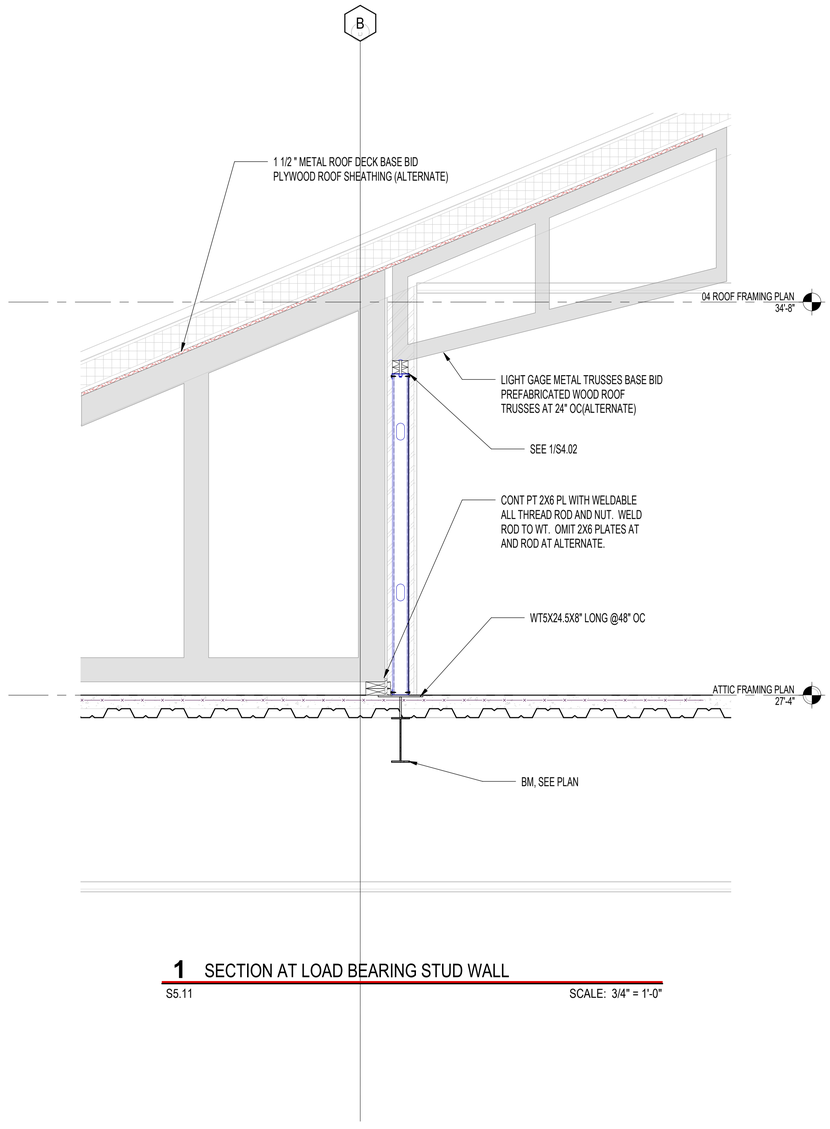
Sheet Title:
COMPOSITE STEEL DETAILS AT ROOF



1 SECTION AT LOAD BEARING STUD WALL

S5.11 SCALE: 3/4" = 1'-0"

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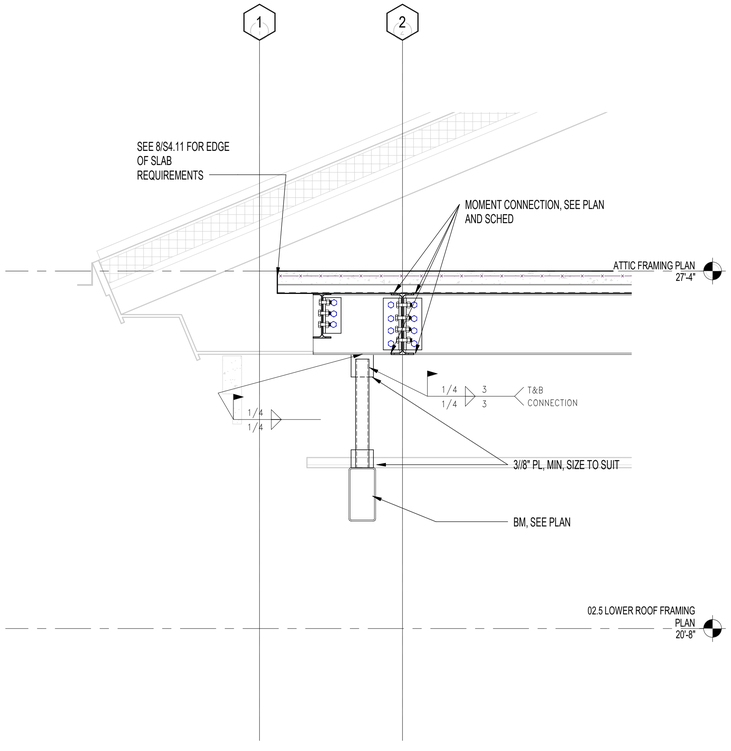
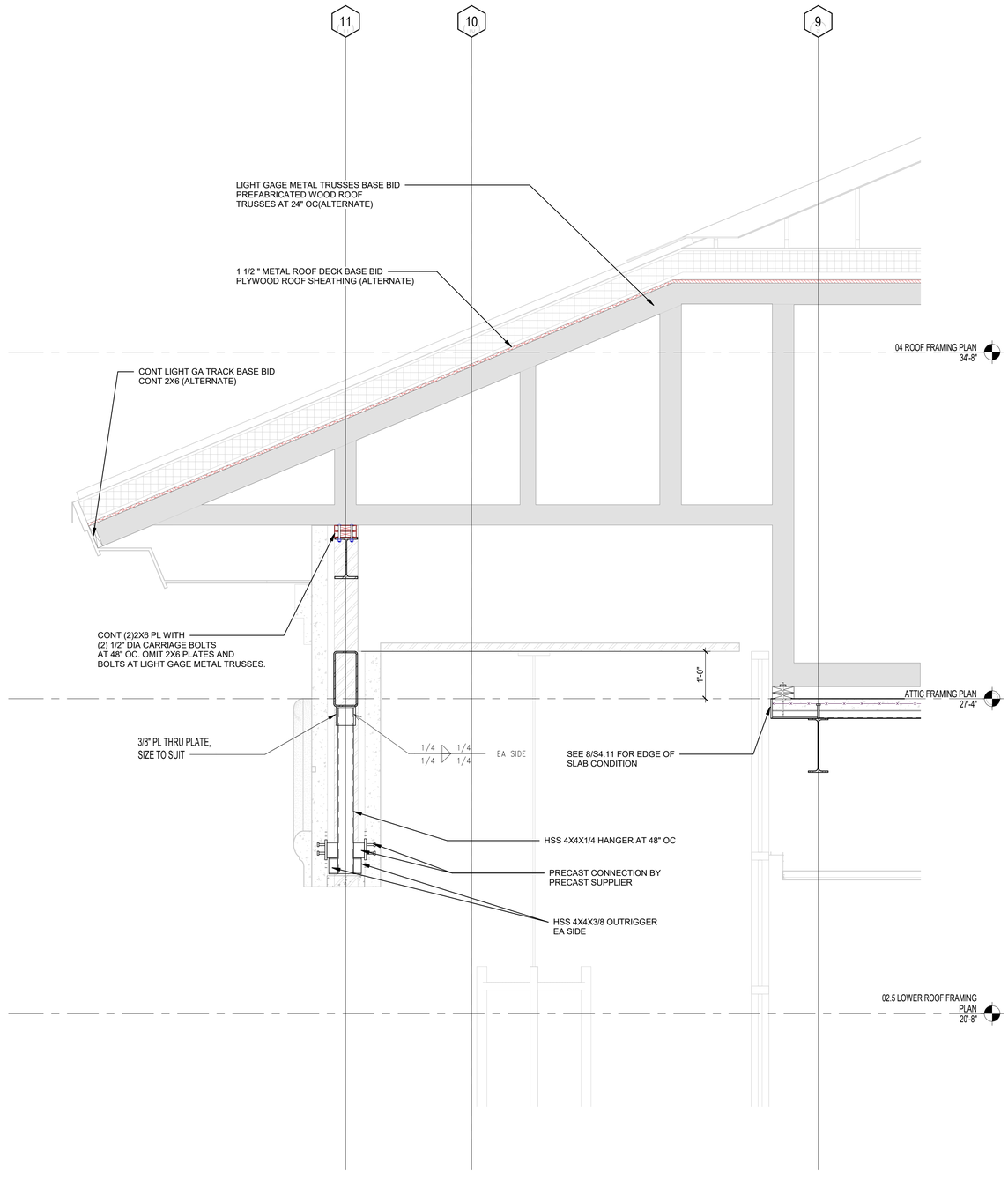
Sheet Title
COMPOSITE STEEL DETAILS AT ROOF



2 SECTION AT HANGER AT EDGE OF SLAB

S5.12 SCALE: 3/4" = 1'-0"



1 SECTION AT ENTRY WITH PRECAST

S5.12 SCALE: 3/4" = 1'-0"

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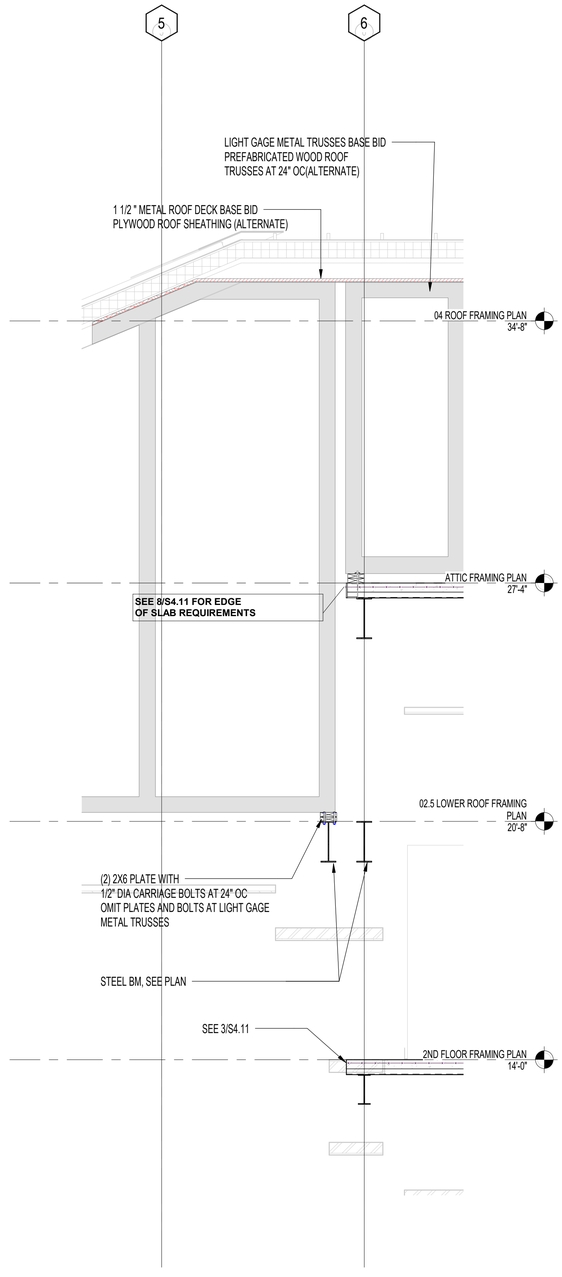
Sheet Title
COMPOSITE STEEL DETAILS AT ROOF



1 SECTION-TRUSSES AT COUNCIL CHAMBER

S5.13 SCALE: 1/2" = 1'-0"

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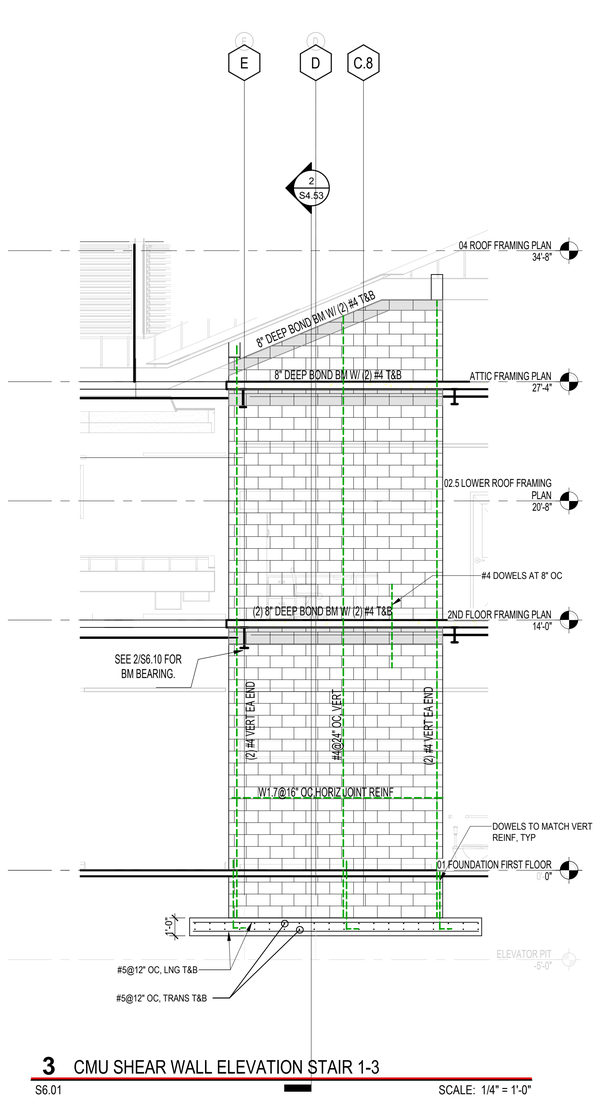
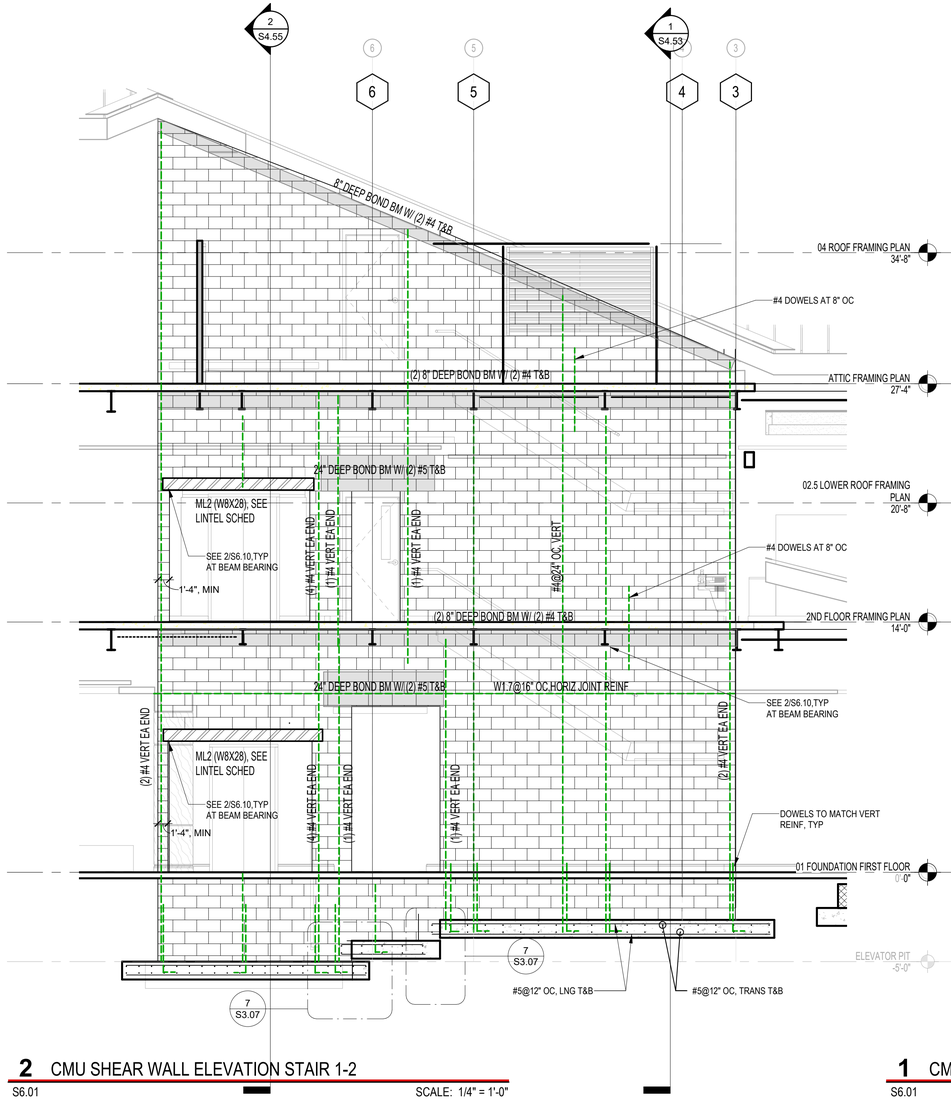
Checked By: Checker	

Sheet Title
COMPOSITE STEEL DETAILS AT ROOF



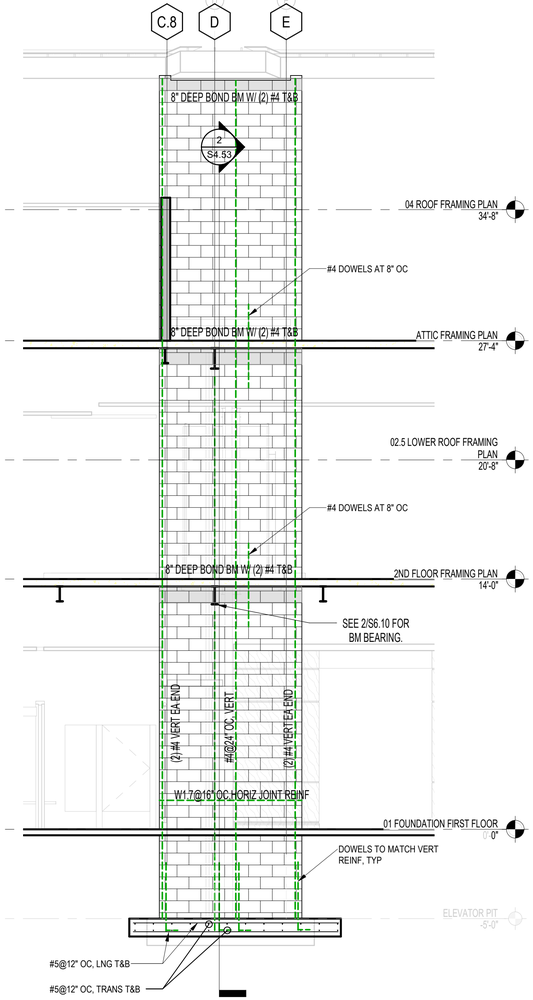
3 CMU SHEAR WALL ELEVATION STAIR 1-3

S6.01 SCALE: 1/4" = 1'-0"



2 CMU SHEAR WALL ELEVATION STAIR 1-2

S6.01 SCALE: 1/4" = 1'-0"



1 CMU SHEAR WALL ELEVATION STAIR 1-1

S6.01 SCALE: 1/4" = 1'-0"

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OCA
109 Candlewood Road, Rocky Mount, NC 27804 (P) 252.937.2500
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NEW FACILITY FOR
ANGIER MUNICIPAL FACILITY
55 N BROAD ST W, ANGIER, NC 27501

NORTH CAROLINA PROFESSIONAL SEAL 24417 ENGINEER JOHN CRAIG FISHER
March 22, 2022

BID SET

GENERAL NOTE:
Prior to construction start, Contractor shall verify & be responsible for all Dimensions.

Revisions

#	Description	Date

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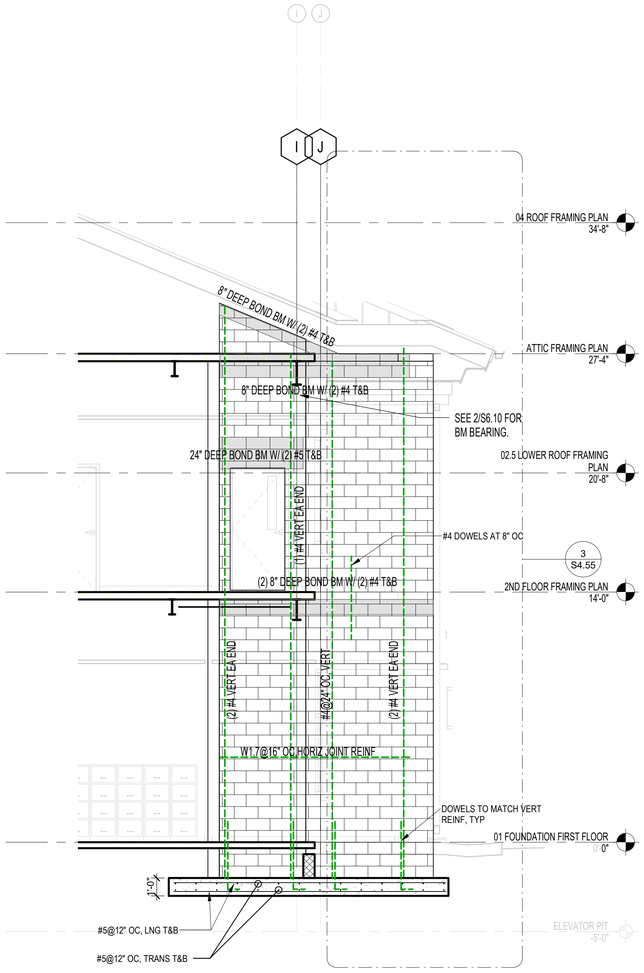
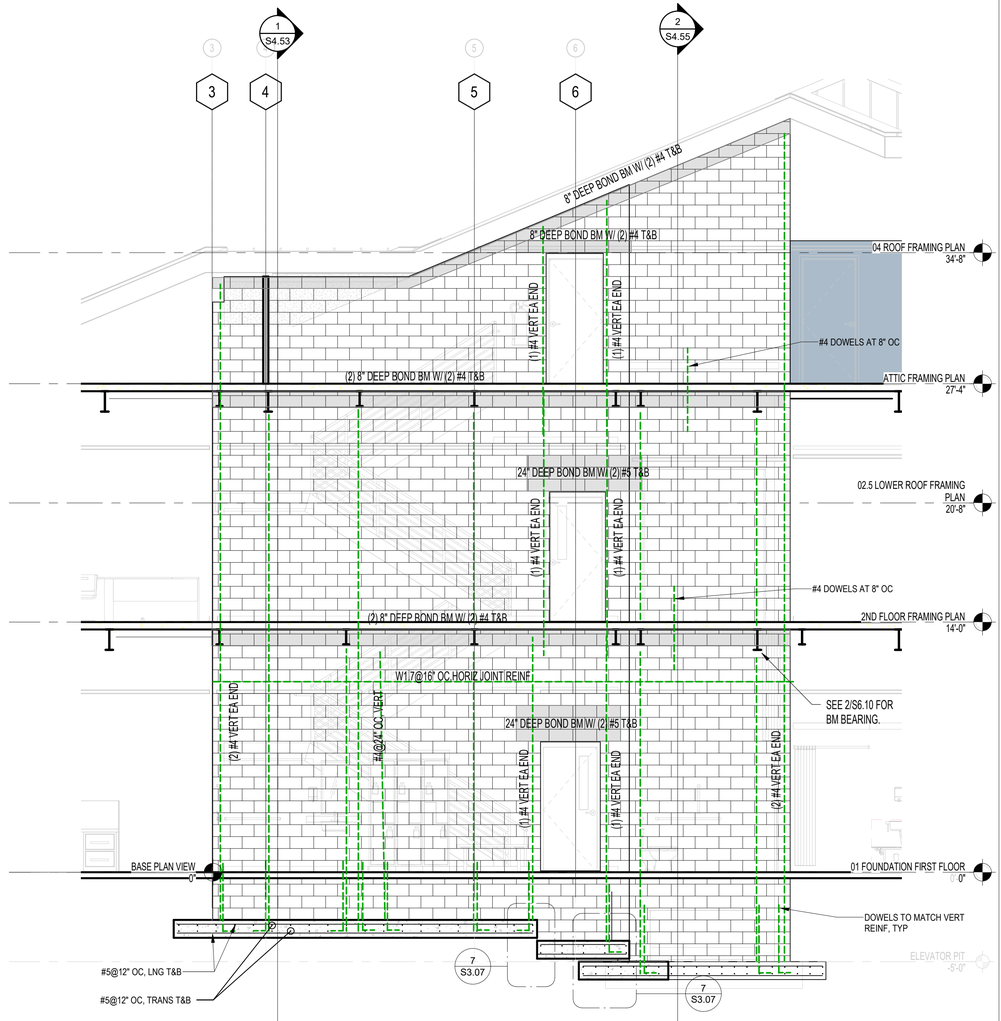
Sheet Title
CMU SHEAR WALL ELEVATIONS



2 CMU SHEAR WALL ELEVATION STAIR 2-1

S6.02 SCALE: 1/4" = 1'-0"



1 CMU SHEAR WALL ELEVATION STAIR 1-4

S6.02 SCALE: 1/4" = 1'-0"

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March 22, 2022

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03.22.22	20020A
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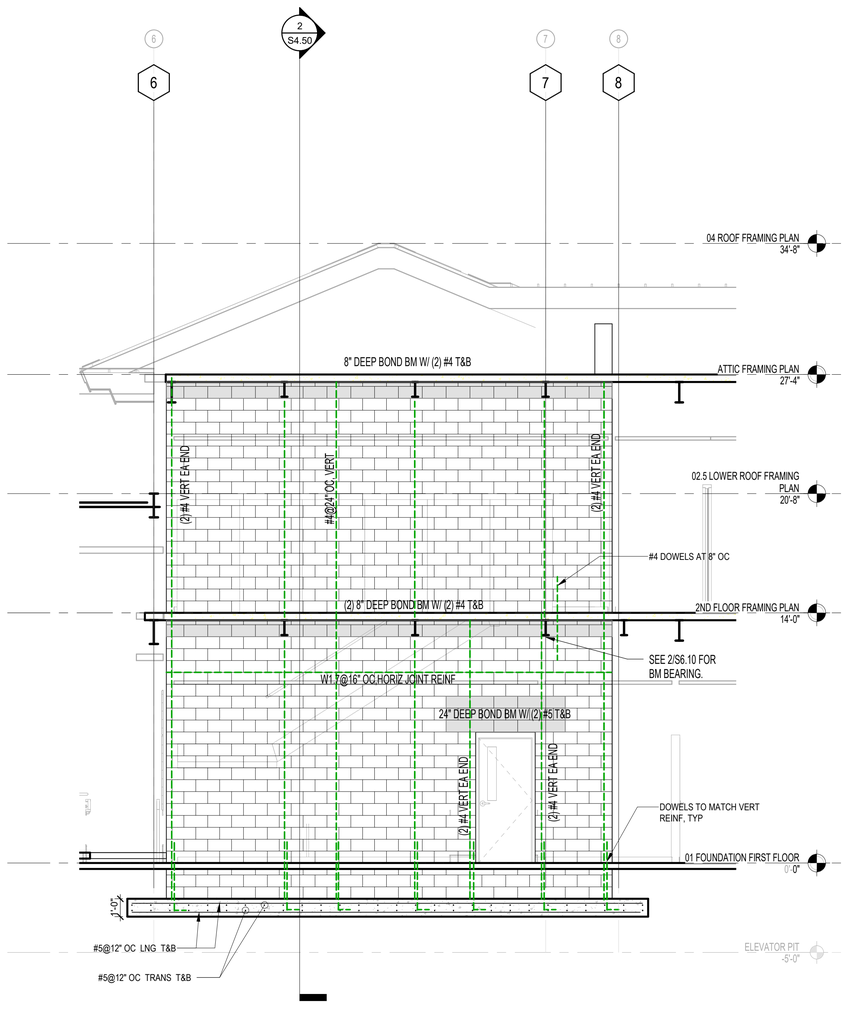
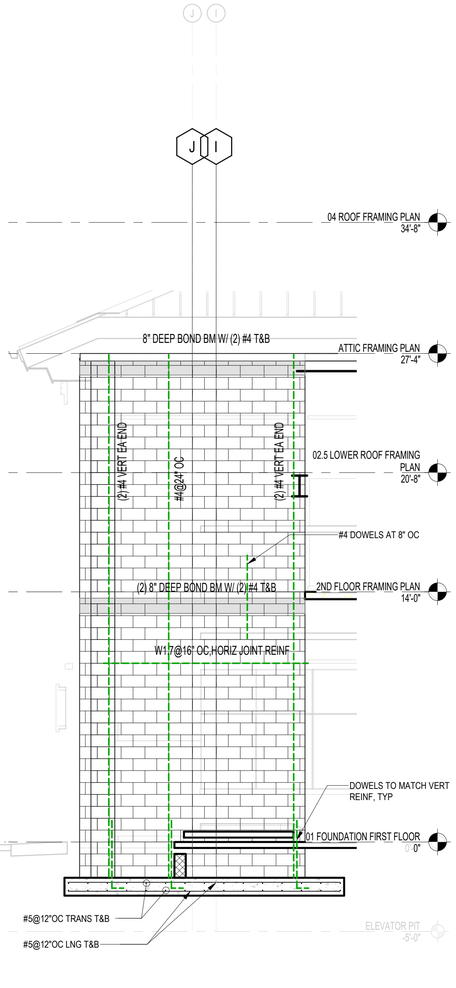
CMU SHEAR WALL ELEVATIONS



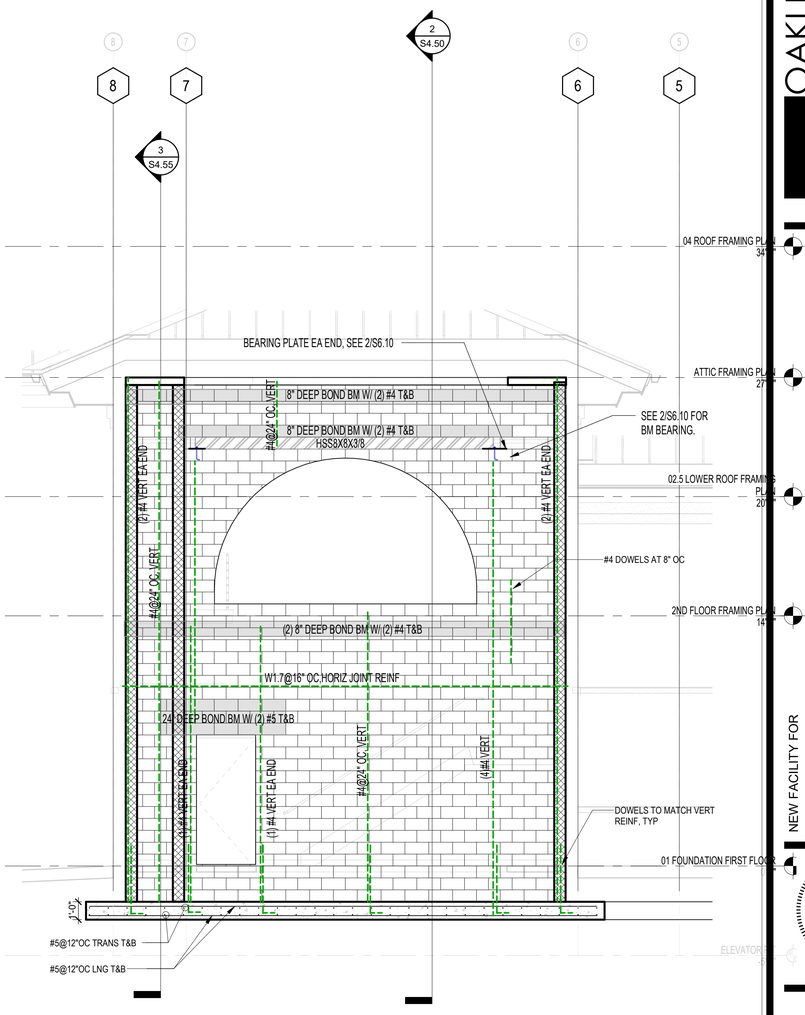
3 CMU SHEAR WALL ELEVATION STIAR 2-4

S6.03 SCALE: 1/4" = 1'-0"



2 CMU SHAR WALL ELEVATION STAIR 2-3

S6.03 SCALE: 1/4" = 1'-0"



1 CMU SHEAR WALL ELEVATION STAIR 2-2

S6.03 SCALE: 1/4" = 1'-0"

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March 22, 2022

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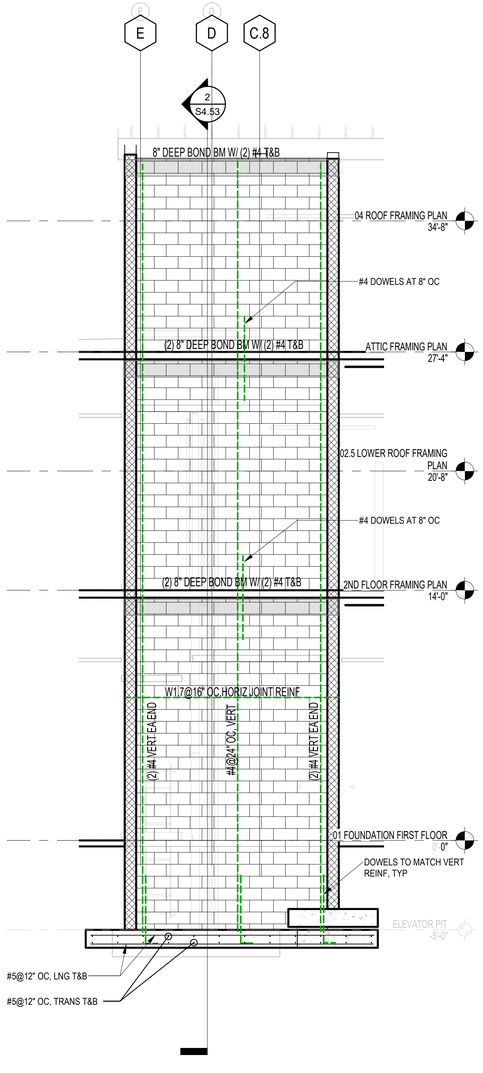
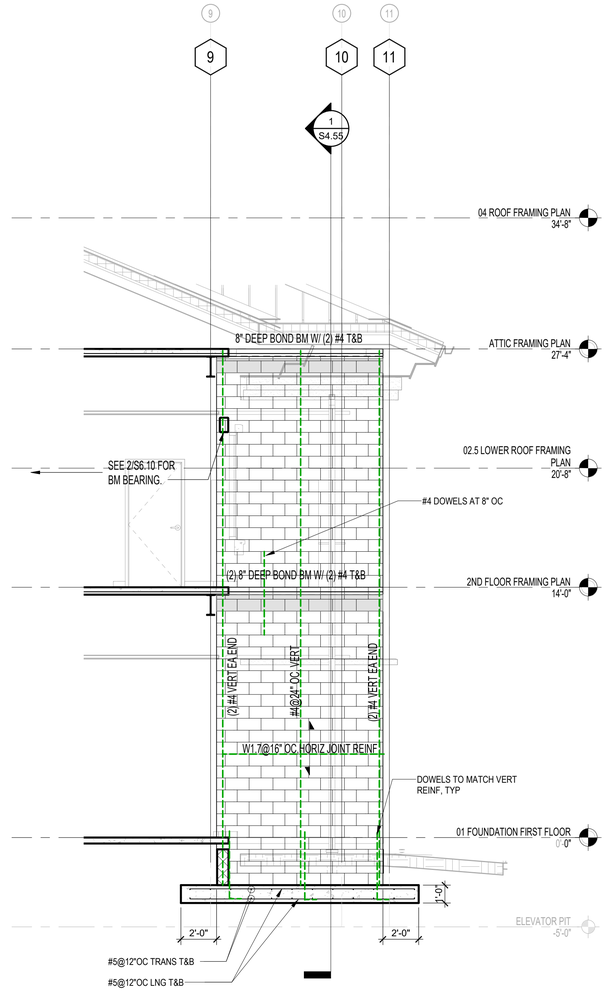
Sheet Title
CMU SHEAR WALL ELEVATIONS



2 CMU SHEAR WALL AT INT ELEVATOR WALL

S6.04 SCALE: 1/4" = 1'-0"



1 CMU SHEAR WALL GRID B

S6.04 SCALE: 1/4" = 1'-0"

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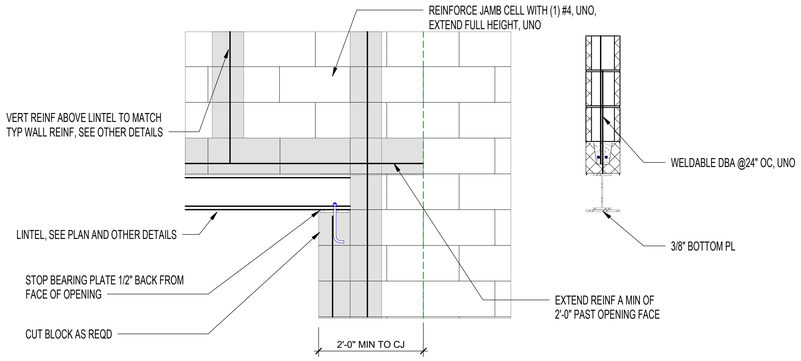
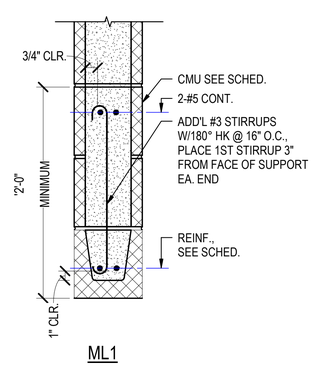
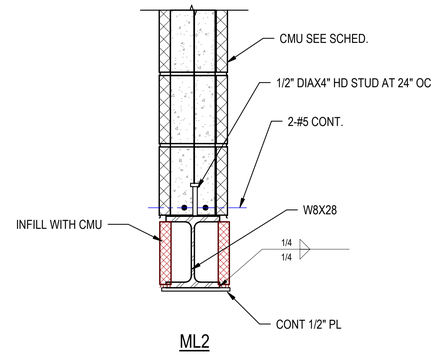


4 WIDE FLANGE AND JAMB

S6.10 NOT TO SCALE



ML1



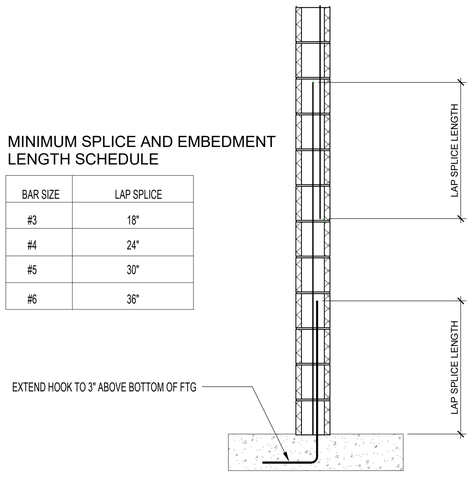
ML2

1 CMU WALL LOAD BEARING LINTEL DETAIL AND SCHEDULE

S6.10 NOT TO SCALE

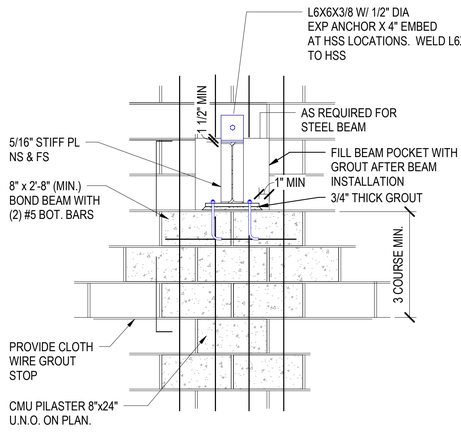
MINIMUM SPLICE AND EMBEDMENT LENGTH SCHEDULE

BAR SIZE	LAP SPLICE
#3	18"
#4	24"
#5	30"
#6	36"

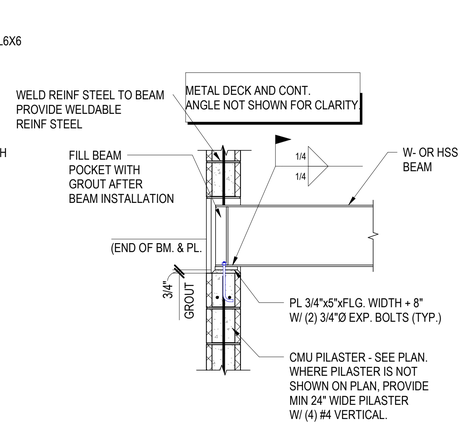


5 CMU MINIMUM SPLICE AND EMBEDMENT LENGTH SCHEDULE

S6.10 NOT TO SCALE



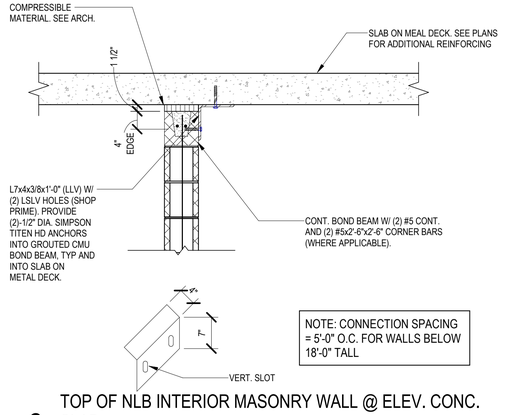
TYP ELEVATION



TYP SECTION

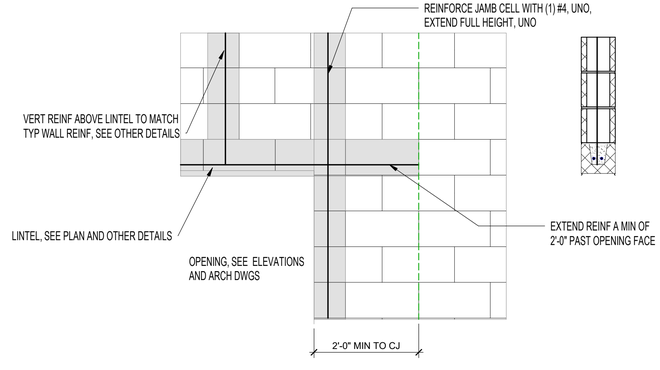
2 REINFORCING DETAIL WHERE STEEL BEAM BEARING ON CMU

S6.10 NOT TO SCALE



6 TOP OF NLB INTERIOR MASONRY WALL @ ELEV. CONC. SLAB

S6.10 E•M TYPICAL DETAIL SCALE: 3/4" = 1'-0"



3 LINTEL AND JAMB

S6.10 NOT TO SCALE

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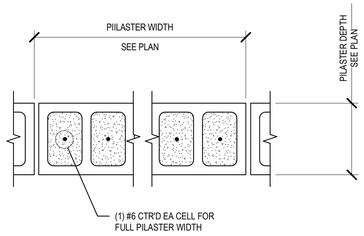
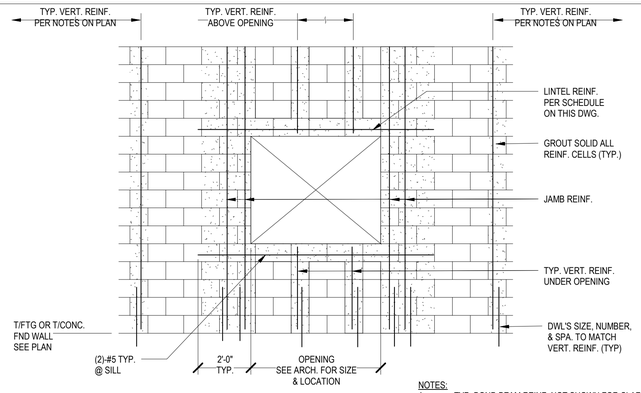
Sheet Title: CMU SECTIONS AND DETAILS



6 CMU PILASTER DETAIL

S6.11 **E+M** TYPICAL DETAIL SCALE: 1" = 1'-0"

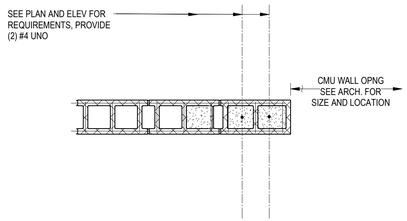


TYP WALL ELEVATION

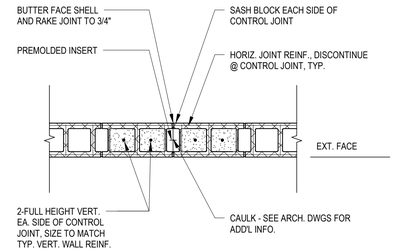
NOTES:
1. TYP. BOND BEAM REINF. NOT SHOWN FOR CLARITY.
2. DETAIL SHOWN IS FOR WINDOWS. DOOR OPNGS. ARE SIMILAR.

4 CMU WALL OPENINGS DETAIL

S6.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



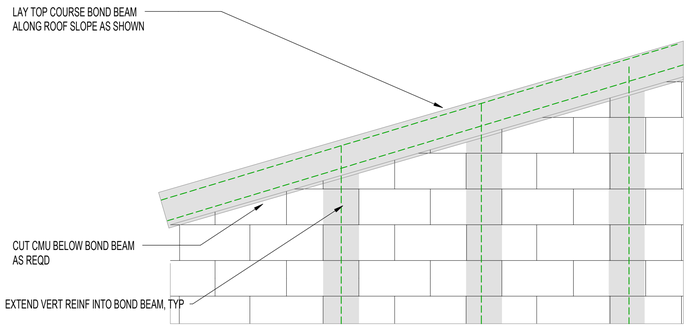
TYP JAMB DETAIL



NOTE: VERTICAL REINFORCING MAY BE REQUIRED AT EACH FACE, SEE FOUNDATION NOTES FOR REQUIREMENTS.

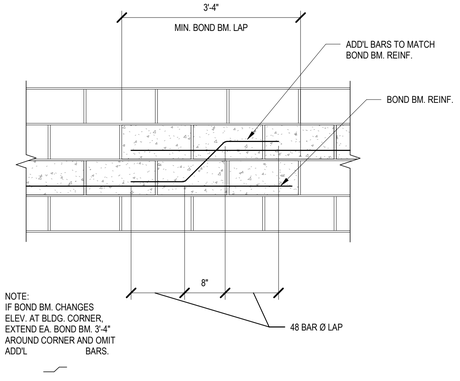
1 CMU WALL CONTROL JOINT DETAIL

S6.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



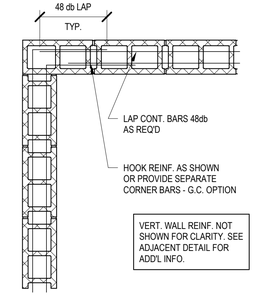
8 TYPICAL SLOPED BOND BEAM

S6.11 NOT TO SCALE

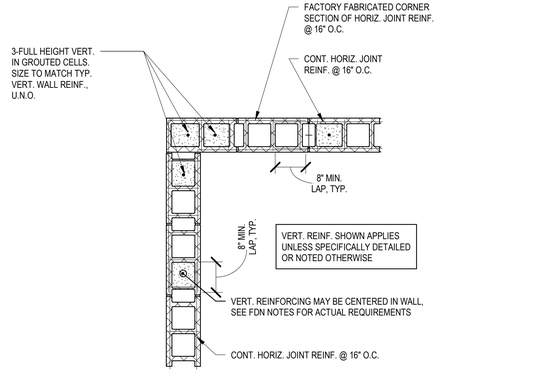


5 CMU BOND BEAM STEP

S6.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



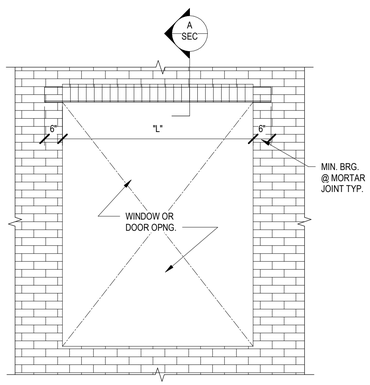
AT BOND BEAM



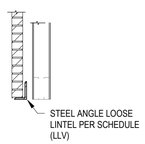
TYP. VERT. REINF. AND JOINT REINF.

2 CMU WALL CORNER DETAILS

S6.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



WINDOW ELEVATION



SECTION "A"

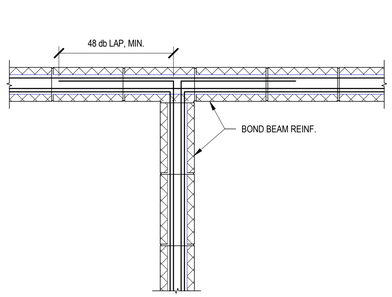
BRICK LOOSE STEEL LINTEL SCHEDULE

A. STEEL LINTEL SCHEDULE FOR MASONRY OPENING IS AS FOLLOWS:

MAXIMUM SPAN L	STEEL ANGLE SIZE (LLV)
3'-0"	L3 1/2 x 3 1/2 x 1/4 x 4'-0"
4'-0"	L5 x 3 1/2 x 1/4 x 5'-0"
5'-0"	L5 x 3 1/2 x 5/16 x 6'-0"
8'-0"	L5 x 3 1/2 x 3/8 x 9'-0"
9'-0"	L6 x 4 x 3/8 x 10'-0"
12'-0"	L7 x 4 x 1/2 x 13'-0"

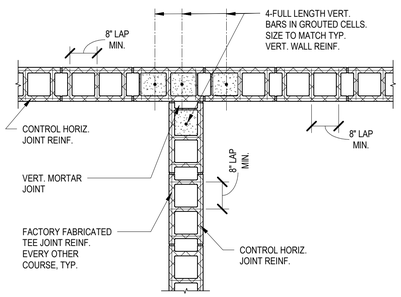
7 STEEL ANGLE BRICK LOOSE LINTEL

S6.11 **E+M** TYPICAL DETAIL SCALE: 1/2" = 1'-0"



AT BOND BEAM

NOTE: BOND BEAM REINFORCEMENT AT FRAMED FLOORS AND ROOF LEVEL SHALL BE CONTINUOUS THROUGH THE CONTROL JOINT. INTERMEDIATE BOND BEAM REINFORCEMENT, BOND BEAM REINFORCEMENT AT TOP OF PARAPETS AND BOND BEAM REINFORCEMENT AT SLAB ON GRADE ELEVATION SHALL BE DISCONTINUED AT CONTROL JOINTS.



TYP. VERT. REINF. AND JOINT REINF.

3 CMU WALL INTERSECTION DETAIL

S6.11 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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March 22, 2022

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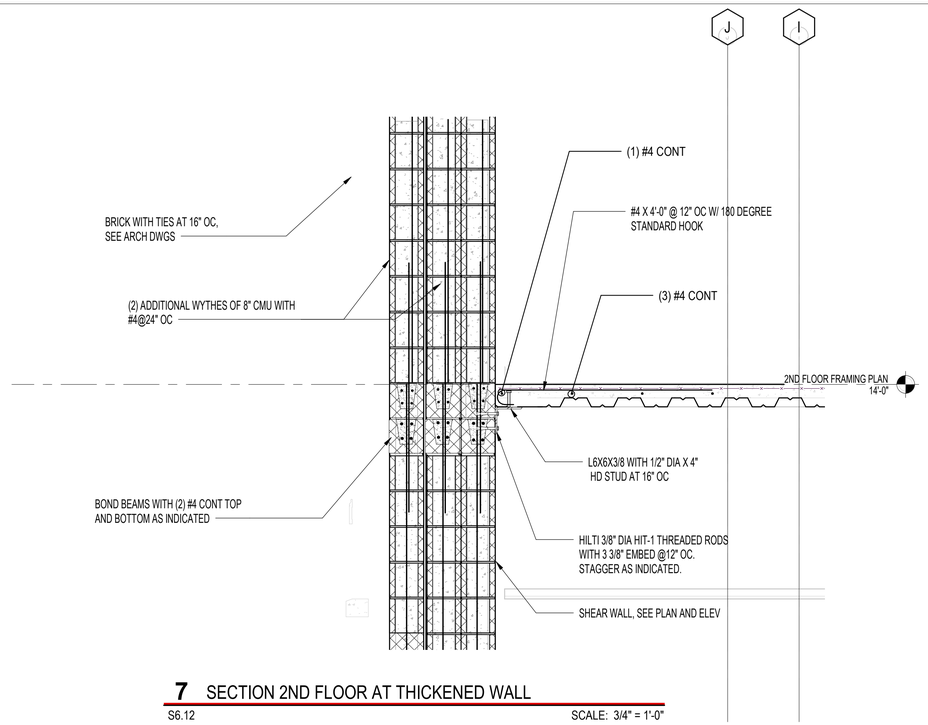
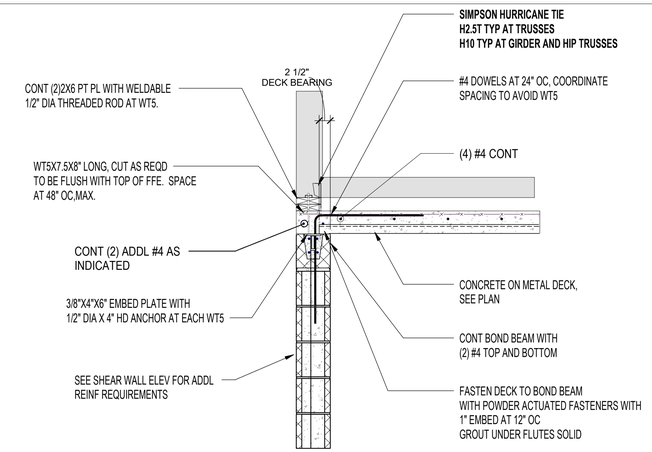
CMU SECTIONS AND DETAILS



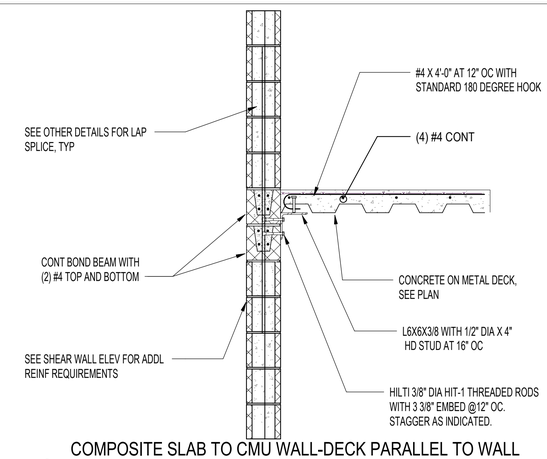
7 SECTION 2ND FLOOR AT THICKENED WALL

S6.12 SCALE: 3/4" = 1'-0"



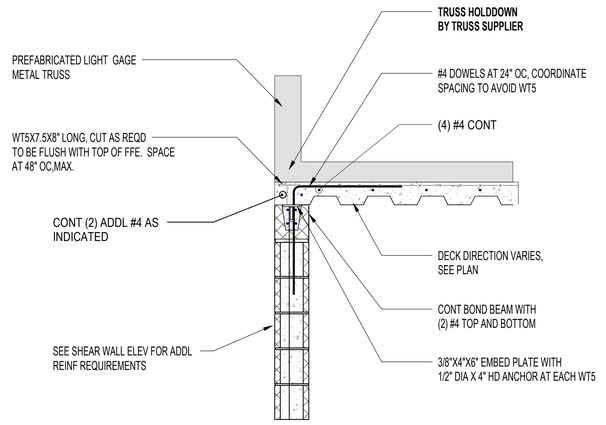
4 COMPOSITE SLAB TO CMU WALL AT WOOD TRUSS-DECK BEARING ON WALL

S6.12 SCALE: 3/4" = 1'-0"



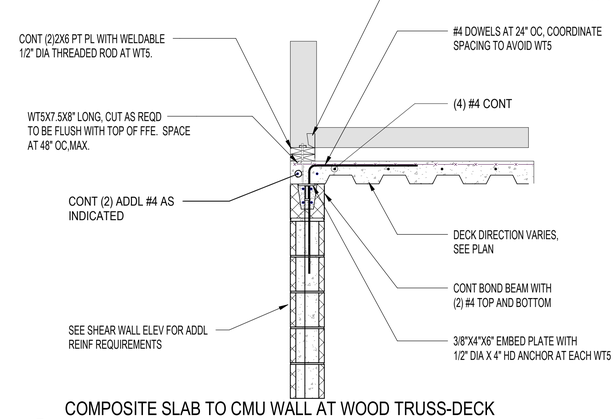
1 COMPOSITE SLAB TO CMU WALL-DECK PARALLEL TO WALL WITH ANGLE

S6.12 SCALE: 3/4" = 1'-0"



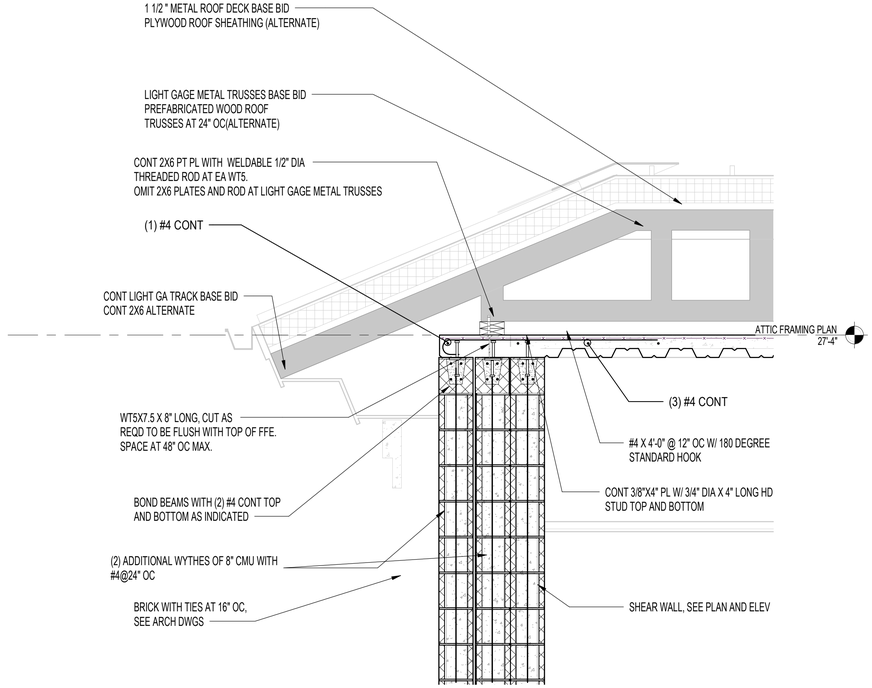
5 COMPOSITE SLAB TO CMU WALL AT LIGHT GAGE TRUSS-DECK PARALLEL TO WALL

S6.12 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



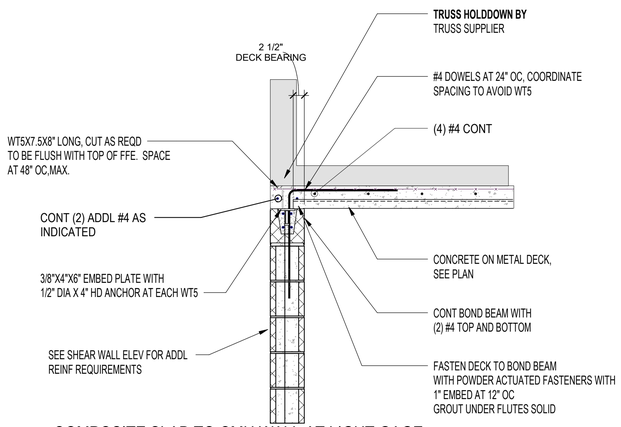
2 COMPOSITE SLAB TO CMU WALL AT WOOD TRUSS-DECK PARALLEL TO WALL

S6.12 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



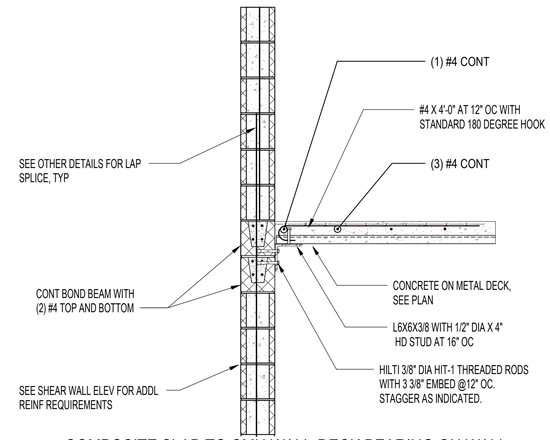
8 SECTION AT ATTIC AT THICKENED WALL

S6.12 SCALE: 3/4" = 1'-0"



6 COMPOSITE SLAB TO CMU WALL AT LIGHT GAGE TRUSS-DECK BEARING ON WALL

S6.12 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"



3 COMPOSITE SLAB TO CMU WALL-DECK BEARING ON WALL WITH ANGLE

S6.12 **E+M** TYPICAL DETAIL SCALE: 3/4" = 1'-0"

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