VOLUME 1



CJMW ARCHITECTURE
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DATE: 10-24-2023 COMMISON NO. 22-0410

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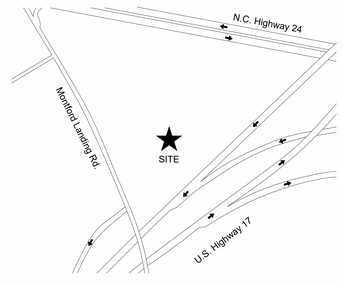
HICAPS

RAA

SAMET

LOCATION MAP



CAROLINA MUSEUM OF THE MARINE

111 Montford Point Dr,
Jacksonville, NC 28540

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SURFACE 678, PA
THE IMPERIAL BUILDING
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919-419-1199

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BETHANIA, NC 27010
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NORWALK, CT 06851
203-866-5538

ACOUSTICAL CONSULTANT
JAFFE HOLDEN
114-A WASHINGTON STREET
NORWALK, CT 06854
203-838-4167

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FOODESIGN ASSOCIATES
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MATTHEWS, NC 28105
704-545-6151

LOW VOLTAGE, SECURITY & AV CONSULTANTS
J&A ENGINEERING CONSULTANTS
4994 LOWER ROSSWELL RD., SUITE 1
MARIETTA, GA 30068
770-817-4220

CONSTRUCTION DOCUMENTS

DATE: 10-24-2023
REVISION:

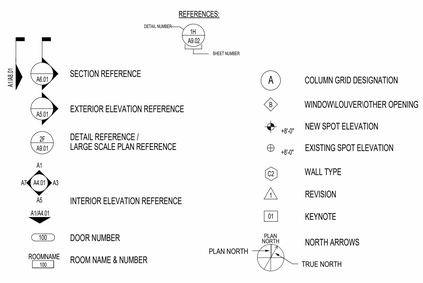
DOCUMENT PHASE: CONSTRUCTION DOCUMENTS

COMMISSION NO. 22-0410
PROJECT NAME: MUSEUM OF THE MARINE
SHEET: COVER SHEET VOLUME 1

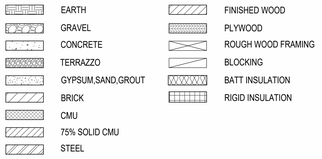
ABBREVIATIONS

&	and	C.H.	ceiling height	E.C.	electric contractor	H.B.	hose bibb	MAX.	maximum	Q.T.	quarry tile			SUSP.	suspended
∠	angle	C.I.	cast iron	E.J.	expansion joint	H.C.	hollow core	MBR.	member					SW.	switch
@	at		control joint or construction joint	E.W.C.	electric water cooler	H.M.	hollow metal	MECH.	mechanic (al)	R.	riser, radius			SYM.	symmetry (ical)
℄	centerline	C.M.T.	ceramic mosaic tile	EA.	each	H.P.	horsepower	MED.	medium	R.A.	return air				
[	channel	C.M.U.	concrete masonry unit	ELEC.	electric (al)	HDW.	hardware	MEMB.	membrane	R.C.P.	reinforced concrete pipe			T&B.	top and bottom
∅	diameter or round	C.T.	ceramic tile	ELEC. CAB.	electric cabinet	HDWD.	hardwood	MET.	metal	R.D.	roof drain			T&G.	tongue and groove
⊥	perpendicular	C. to C.	center to center	ELEV.	elevator, elevation	HORIZ.	horizontal	MEZZ.	mezzanine	R.H.	right hand			T.	tread
▱	plate	CAB.	cabinet	EMER.	emergency	HT.	height	MFGR.	manufacture (er)	R.O.	rough opening			T.C.	top of curb
#	pound or number	CER.	ceramic	ENCL.	enclose (ure)	HVAC.	heating/ventilating air conditioning	MIN.	minimum	R.O.W.	right of way			T.P.	top of pavement
		CLG.	ceiling	ENTR.	entrance	HWY.	highway	MISC.	miscellaneous	REINF.	reinforcing bar			T.P.D.	toilet paper dispenser
		CLO.	closet	EQ.	equal			MOD.	modified	REC.	recessed			T.W.	top of wall
		CLR.	clear	EQUIP.	equipment	I.P.S.	iron pipe size	MTD.	mounted	RECT.	rectangular			TEL.	telephone
		CNTR.	counter	ESTAB.	establish	ID.	inside diameter	MUL.	mullion	REF.	reference			TEMP.	tempered or temperature
		COL.	column	EXP.	expansion	IN.	inches			REFRIG.	refrigerator			TERRZ.	terrazzo
		COMP.	composition	EXISTG.	existing	INCL.	include (ed) (sion)	N.	north	REG.	register			THK.	thick (ness)
		CONC.	concrete	EXT.	exterior	INSUL.	insulation (ed)	N.C.	not in contract	REINF.	reinforced			THRES.	threshold
		CONF.	conference			INTR.	interior	N.T.S.	not to scale	REQ.	required			T.O.T.	toilet
		CONN.	connection			INV.	invert	NO. or #	number	RESIL.	resilient			TV.	television
		CONSTR.	construction	F.B.O.	furnished by others			NOM.	nominal	RET.	return			TYP.	typical
		CONT.	continuous	F.D.	floor drain	O. to O.	out to out			REV.	revision(s), revised				
		CONTR.	contractor	F.E.	fire extinguisher	O.C.	on center (s)			RFG.	roofing			U.O.N.	unless otherwise noted
		CPT.	carpet	F.E.C.	fire extinguisher cab.	O.D.	outside diameter			RM.	room			UNFIN.	unfinished
		CSWK.	casework	F.H.C.	fire hose cabinet	OFF.	office							UTIL.	utility
		CT.	ceramic tile	F.O.C.	face of concrete	O.H.	opposite hand			S-P.	single-ply				
		CTR.	center	F.O.F.	face of finish	OPNG.	opening			S.	south			V.B.	vinyl base
		CTSK.	countersink (sunk)	F.O.S.	face of studs	OPP.	opposite			S.C.	solid core			V.C.T.	vinyl composition tile
		CUBT.	cubicle	F.S.	full size	OUT.	outlet			S.C.J.	structural control joint			V.I.F.	verify in field
		D.	diameter	F.T.F.	face to face	OZ.	ounce			S.D.	soap dispenser or storm drain			V.F.	vinyl fabric
		DEPT.	department	FDN.	foundation			P.C.	plumbing contractor					V.T.	vinyl tile
		DET.	detail	FIN.	finish (ed)	L.	left, length	S.N.D.	sanitary napkin dispenser					V.W.F.	vinyl wall fabric
		DF.	drinking fountain	FL.	floor (ing)	L.H.	left hand	S.N.R.	sanitary napkin receptacle					VENT.	ventilating
		DH.	double hung	FLASHG.	flashing	L.L.	live load	S.S.	stainless steel					VERT.	vertical
		DIA.	diameter	FLUOR.	fluorescent	L.P.	low point	S.T.C.	sound transmission classification					VEST.	vestibule
		DL.	dead load	FRPF.	fireproof (ing)	L.R.	living room							VOL.	volume
		DBL.	double			L.W.	lightweight	P.S.F.	pounds per square foot						
B.U.R.	built-up roofing	DEM.	demolish, demolition	F.P.W.H.	freeze proof wall hydrant	LAB.	laboratory	P.S.I.	pounds per square inch	S4S.	surfaced 4 sides			W.	west, women
BD.	board	DEPT.	department	FT.	foot or feet	LAM.	laminate (d)	P.T.D.	paper towel dispenser	SAN.	sanitary			W.C.	water closet
BEV.	beveled	DIAG.	diagonal, diagram	FTG.	footing	LAV.	lavatory	P.T.R.	paper towel receptacle	SCHED.	schedule			W.F.	wide flange
BITUM.	bituminous	DIFF.	diffuser	FURN.	furnish	LT.	light	P.T.	pressure treat (ed)	SECT.	section			W.F.	wrought iron
BLDG.	building	DIM.	dimension	FURR.	furring	LTG.	lighting	PLAS.	plaster	SFTWD.	softwood			W.I.	welded wire fabric
BLK.	block	DMT.	demountable	FUT.	future	LVR.	louver	PLYWD.	plywood	SHT.	sheet			W.W.F.	with
BLKG.	blocking	DN.	down	F.V.	field verify			PNL.	panel	SIM.	similar			W/	without
BM.	beam or bench mark	DO.	door opening			M.C.	medicine cabinet or mechanical contractor	PNT(d).	paint (ed)	SPEC.	specification			WD.	wood
BR.	bedroom	DR.	door	G.B.	grab bar			PR.	pair	SQ.	square			WDW.	window
BRCG.	bracing	DS.	downspout	G.C.	general contractor	M.H.	manhole	PT.	point	SQ. FT.	square foot			WP.	waterproofing
BRG.	bearing	DTL.	detail	GA.	gage, gauge	M.O.	masonry opening	PTDR.	combination paper towel dispenser & receptacle	STD.	standard			WSCT.	wainscot
BSMT.	basement	DWG.	drawing	GALV.	galvanized	MACH.	machine			STL.	steel			WT.	weight
BTW.	between	DWR.	drawer	GL.	glass, glazing	MAINT.	maintenance	PTN.	partition	STOR.	storage				
C.B.	catch basin	E.	east	GR.	grade	MAS.	masonry	PVC.	polyvinyl chloride	STRUC.	structure (al)				
				GYP.	gypsum	MATL.	material (s)	PVMT.	pavement	SURF.	surface			YD.	yard

SYMBOLS



MATERIAL DESIGNATIONS



Autodesk Docs://Museum of the Marine/22-0410_Museum of the Marine_R22.rvt

VOLUME	SHEET	SHEET NAME	CD 10/24/2023
GENERAL			
1	G0.00	COVER SHEET VOLUME 1	•
1	G0.01	SHEET INDEX VOLUME 1	•
1	G0.02	CODE - APPENDIX B	•
1	G0.03	LIFE SAFETY PLAN	•
1	G0.04	EVENT SEATING PLAN - PARTITIONED CONFERENCE	•
1	G0.05	EVENT SEATING PLAN - BANQUET	•
1	G0.06	UL DESIGNS	•
1	G0.07	UL DESIGNS	•
1	G0.08	UL DETAILS	•
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1	C-002	CIVIL GENERAL NOTES	•
1	VF100	CIVIL EXISTING CONDITIONS PLAN - 1	•
1	VF101	CIVIL EXISTING CONDITIONS PLAN - 2	•
1	CD100	CIVIL DEMOLITION PLAN - 1	•
1	CD101	CIVIL DEMOLITION PLAN - 2	•
1	CS100	CIVIL SITE AND UTILITY PLAN - 1	•
1	CS101	CIVIL SITE & UTILITY PLAN - 2	•
1	CS102	ATFP BUILDING SETBACKS	•
1	CP100	CIVIL PAVING PLAN - 1	•
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1	CG100	CIVIL GRADING PLAN	•
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1	C-500	CIVIL DETAILS - 1	•
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1	C-502	CIVIL DETAILS - 3	•
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1	C-505	CIVIL DETAILS - 6	•
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1	S2.02	SECOND FLOOR AND LOW ROOF FRAMING PLAN	•
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1	S2.04	NET WIND UPLIFT, STEEL ROOF DECK FASTENING, PRECAST SHEAR WALLS, AND SCHEDULES	•
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1	A5.01	EXTERIOR BUILDING ELEVATIONS	•
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1	I2.05	INTERIOR ELEVATIONS & DETAILS -RECEPTION AREA	•
1	I2.06	INTERIOR ELEVATIONS & DETAILS -GIFT SHOP	•
1	I2.07	INTERIOR ELEVATIONS - GREAT HALL	•
1	I2.08	INTERIOR ELEVATIONS & DETAILS	•
1	I2.09	OVERALL FURNITURE PLAN	•

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HICAPS

RAA

SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE THOMPSON III 032161 REGISTERED ARCHITECT GREENSBORO, NC 10/24/2023

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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SHEET INDEX VOLUME 1

G0.01

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

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APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: **CAROLINA MUSEUM OF THE MARINE**
Address: **Montford Point Road, Jacksonville, NC** Zip Code **28540**
Owner/Authorized Agent: **Kevin Stewart** Phone # (**760**) **207** - **0344** E-Mail **kstewart@museumofthemarine.org**
Owned By: Private
Code Enforcement Jurisdiction: Marine Corps Base Camp Lejeune

CONTACT:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	CJMW Architecture	John Drinkard	5117	336.724.1503	john.drinkard@cjmw.com
Civil	Cape Fear Engineering	Matthew T. Haley	038615	910.383.1044	matt.haley@capefearengineering.com
Electrical	Altieri Sebor Wieber	J. Kenny Wieber	040487	203.663.5646	tgaffney@altierisw.com
Fire Alarm	Altieri Sebor Wieber	J. Kenny Wieber	040487	203.663.5646	tgaffney@altierisw.com
Plumbing	Altieri Sebor Wieber	J. Kenny Wieber	040487	203.663.5646	tgaffney@altierisw.com
Mechanical	Altieri Sebor Wieber	J. Kenny Wieber	040487	203.663.5646	tgaffney@altierisw.com
Sprinkler-Standpipe					
Structural	Adams Engineering	Steven E. Adams	13449	336.749.8604	steve@adams.engineering.com
Retaining Walls >5' High	N/A				
Landscape Design	Surface 678	Robert J. Pratt	1747	919.282.9128	rpratt@surface678.com
Low Voltage	J&A Engineering	Jorge E Gomez	030225	770.817.4220	jgomez@jaengineering.net
Food Service	FOODESIGN	Ashley Gaines	N/A	704.545.6151	againes@foodesignassociates.com
Exhibit Design	RAA	Matt Krupanski	N/A	212.334.8200	mattkrupanski@raai.com

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

APPLICABLE CODES:

- **Unified Facilities Criteria (UFC) 1-200-01 DOD Building Code, 01 September 2022 with Change 1, 24 February 2023. The following Model Codes adopted by reference:**
  - **2021 International Building Code:** New Building
  - **NFPA 101 - 2021 Life Safety Code**
  - **Refer to "UFC Compliance Intent" Section for additional information**

BASIC BUILDING DATA
Construction Type: II-B
Sprinklers: Yes NFPA 13
Standpipes: No
Primary Fire District: No — LOCATED IN CAMP LEJEUNE FIRE DISTRICT: ISO RATING 1
Flood Hazard Area: No — LOCATED IN ZONE X PER NC FRIS
Special Inspections Required: Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
2nd Floor	N/A	2,300 GSF	2,300 GSF
1st Floor	N/A	26,750 GSF	26,750 GSF
TOTAL	**N/A**	**26,750 GSF**	**26,750 GSF**

ALLOWABLE AREA

Primary Occupancy Classification(s): Assembly - A-3
Accessory Occupancy Classification(s): Business (B), Mercantile (M), Storage (S-1)
Incidental Uses (NFPA 101, 8.7): Boiler Room, Electrical Room, Mechanical Room to Assembly: 1 HR (NFPA 101, 12.3.2.1.1(2));
Special Uses (IBC Chapter 4 – List Code Sections): N/A
Special Provisions: (Chapter 5 – List Code Sections): N/A
Mixed Occupancy: Yes Separation: NONE Exception: NONE
Non-Separated Use (508.3)

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

______ + ______ + …… = ______ ≤ 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]
1st Flr.	Museum (A-3)	26,750 GSF	28,500 sf	n/a	28,500 sf
2nd Flr.	Mechanical Room	2,300 GSF	28,500 sf	n/a	28,500 sf

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _______ (F)
b. Total Building Perimeter = ________ (P)
c. Ratio (F/P) = ___________ (F/P)
d. W = Minimum width of public way = ________ (W)
e. Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30$ = ________ (%)
[2] Unlimited area applicable under conditions of Section 507.
[3] Maximum Building Area = total number of stories in the building x D (maximum3 stories) (506.2).
[4] The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
[5] Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	75 feet	41 feet	
Building Height in Stories (Table 504.4)	3 stories	2 stories	

[1] Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS: IBC Table 601, Unless Otherwise Noted

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 FEET	0 HR					
Bearing Walls							
Exterior	>30 FEET	0 HR					
Interior	N/A	0 HR					
Nonbearing Walls and Partitions							
Exterior walls	>30 FEET	0 HR					
Interior walls and partitions	N/A	0 HR					
Floor Construction Including supporting beams and joists		1 HR	1 HR	G0.07	UL N823		
Floor Ceiling Assembly		0 HR	1 HR	G0.08	UL H505		
Columns Supporting Floors		0 HR	1 HR	G0.07	UL X829		
Roof Construction, including supporting beams and joists		0 HR					
Roof Ceiling Assembly		0 HR					
Columns Supporting Roof		0 HR					
Shaft Enclosures – Exit (NFPA 101, 7.1.3.2.1.1)		1 HR	1 HR	G0.06	UL U419		
Shaft Enclosures – Other		1 HR	1 HR	G0.06	UL U415		
Corridor Separation		N/A					
Occupancy/Fire Barrier Separation		Not required					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/ Sleeping Unit Separation		N/A					
Incidental Use Separation		1 HR	1 HR	G0.06	UL U419 (FOR STUD WALL). IBC TABLE 721.1(2). ITEM #3-1.4 (FOR CMU WALL).		

* Indicate section number permitting reduction
** Followed table 722.2.2.1 for minimum equivalent thickness of concrete floors to meet 1 hour rating for sleeping unit separation. Refer to structural drawings.

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (IBC TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30 feet	Unprotected, Sprinklered	No Limit	

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: Yes
Exit Signs: Yes
Fire Alarm: Yes
Smoke Detection Systems: Yes
Carbon Monoxide Detection: Yes
Panic Hardware: Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: **G0.03**

- [x] Fire and/or smoke rated wall locations
- [ ] Assumed and real property line locations (if not on the site plan)
- [ ] Exterior wall opening area with respect to distance to assumed property lines
- [x] Occupancy Use for each area as it relates to occupant load calculation
- [x] Occupant loads for each area (NFPA 101 Table 7.3.1.2 & UFC 3-600-01 Table 10-1)
- [x] Exit access travel distances
- [x] Common path of travel distances
- [x] Dead end lengths
- [x] Clear exit widths for each exit door
- [x] Maximum calculated occupant load capacity each exit door can accommodate based on egress width
- [x] 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
- [x] Location of doors with panic hardware
- [ ] Location of doors with delayed egress locks and the amount of delay
- [ ] Location of doors with electromagnetic egress locks
- [ ] Location of doors equipped with hold-open devices
- [ ] Location of emergency escape windows
- [ ] The square footage of each fire area
- [ ] The square footage of each smoke compartment for Occupancy Classification I-2
- [x] Note any code exceptions or table notes that may have been utilized regarding the items above

EXIT REQUIREMENTS
NUMBER AND ARRANGEMENT OF EXITS
(PER NFPA 101)

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM NUMBER OF EXITS REQ'D	MINIMUM NUMBER OF EXITS PROP.	EXIT ACCESS TRAVEL DISTANCE (EATD) ALLOWED	EATD PROP.	COMMON PATH OF EGRESS TRAVEL (CPET) ALLOWED	CPET PROP.	DISTANCE BETWEEN EXITS (7.5.1.3.3) REQ'D	DISTANCE BETWEEN EXITS PROP.
1ST FLOOR – A (Ch. 12)	4*	8	250'	SEE PLAN	20'	SEE PLAN	SEE PLAN	SEE PLAN
1ST FLOOR – A (CH. 12), <50 Occ.	1	1	250'	SEE PLAN	75'	SEE PLAN	N/A	N/A
1ST FLOOR – B (Ch. 38)	2**	2	300'	SEE PLAN	100'	SEE PLAN	SEE PLAN	SEE PLAN
1ST FLOOR – M, Class C (Ch. 36)	2	2	250'	SEE PLAN	100'	SEE PLAN	SEE PLAN	SEE PLAN
1ST FLOOR – S, Ordinary (Ch. 42)	1***	1	400'	SEE PLAN	100'	SEE PLAN	N/A	N/A
2ND FLOOR – S, Low (Ch. 42)	1+	1	100'	SEE PLAN	100'	SEE PLAN	N/A	N/A

*: Main entrance shall be sized to accommodate not less than 1/2 the ground floor occupant load (NFPA 101 12.2.3.6.2(1)). All doors from the Great Hall can be counted toward satisfying this requirement (NFPA 101 12.2.3.6.5)

**: Spaces with an occupant load less than 100 and a total travel distance from remote point to the exterior of less than 100' allowed to have a single exit per NFPA 101, 38.2.4.3.

***: 1 means of egress allowed in all Low hazard areas; and in Ordinary Hazard areas where the listed CPET is not exceeded – See NFPA 101, 42.2.4.1. Definitions of Low Hazard and Ordinary Hazard in compliance with NFPA 101, 6.2.2.

+: Single exit allowed from 2nd Floor per NFPA 101, 7.13.2

- Door Egress Capacity (NFPA 101, 7.2.1.2.2.1): Face of leaf to stop, with door open to 90 degrees. Hardware projection not more than 3.5", not more than 38" above floor, otherwise counted as an obstruction.
- Door Leaf Minimum Width (NFPA 101, 7.2.1.2.3.2): 32" clear, face of leaf to stop, with door open to 90 degrees
- Stair Minimum Width (NFPA 101, 7.2.2.2.1.2)
  - 36" minimum, less than 50 Occ. Served
  - 44" minimum, 50 - 2000 Occ. Served
- Egress Path Minimum Width (NFPA 101, 7.3.4.1(2)): Not less than calculation based on per-occupant factor or 36", whichever is greater. See Life Safety Plans for additional information.

ACCESSIBLE PARKING
(IBC SECTION 1106)

(REFER TO CIVIL PACKAGE FOR ADDITIONAL INFORMATION)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES REQUIRED	TOTAL # OF PARKING SPACES PROVIDED	# OF ACCESSIBLE SPACES PROVIDED: 8' WIDE STD WITH 5' ACCESS AISLE	11' WIDE VAN WITH 5' ACCESS AISLE	8' WIDE VAN WITH 8' ACCESS AISLE	TOTAL # ACCESSIBLE PROVIDED
MAIN PARKING	55	78	6	0	3	9
SERVICE AREA	0	0	0	0	0	0
TOTAL	55	78	6	0	3	9

PLUMBING FIXTURE REQUIREMENTS
(IBC TABLE 2902.1)

USE		OCC LOAD	WATERCLOSETS MALE	WATERCLOSETS FEMALE	WATERCLOSETS UNISEX OR FAMILY	URNIALS*	LAVATORIES MALE	LAVATORIES FEMALE	LAVATORIES UNISEX OR FAMILY	SHOWERS/ TUBS	DRINKING FOUNTAINS REGULAR	DRINKING FOUNTAINS ACCESSIBLE	OTHER**
GROUND FLOOR	A-2 REQ'D	910	6.07	6.07			2.28	2.28			1.82		1 SERVICE SINK
	A-3 REQ'D	307	1.23	2.36			0.77	0.77			0.61		1 SERVICE SINK
	B REQ'D	33	0.66	0.66			0.41	0.41			0.33		1 SERVICE SINK
	M REQ'D	19	0.02	0.02			0.01	0.01			0.02		1 SERVICE SINK
	S REQ'D	22	0.11	0.11			0.11	0.11			0.02		1 SERVICE SINK
	TOTAL REQ'D	**1,291**	**9**	**10**	**1*** **		**4**	**4**	**1**		**3**	**1**	**1 SERVICE SINK**
	TOTAL PROVIDED		**4**	**13**	**1**	**5**	**4**	**4**	**1**		**2**	**1**	**1 SERVICE SINK**

*** URINALS ARE SUBSTITUTED FOR NOT MORE THAN 67% OF THE REQUIRED NUMBER OF WATER CLOSETS IN EACH BATHROOM PER SECTION 424.2 OF THE 2021 INTERNATIONAL PLUMBING CODE.**
**** The code requires only one service sink per building if all occupancies have access to the service sink at all times.**
*****A family restroom is required per 2021 IBC, section 1110.2.1. Per 2021 IBC, section 2902.1.2; and 2021 IPC, section 403.1.2; family restrooms are permitted to be included in the number of required fixtures for either male or female occupants.**

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 **N/A – NEW BUILDING**

Exempt Building: No Provide code or statutory reference:

Climate Zone: 3A

Method of Compliance: ASHRAE 90.1 - Performance
(If "Other" specify source here)________________

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________
Skylights in each assembly: ____________
U-Value of skylight: ____________
total square footage of skylights in each assembly: ________

Exterior Walls (each assembly)

PRE-CAST INSULATED PANELS:
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________

CMU WALLS:
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________

METAL STUD WALLS:
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________

Openings (windows or doors with glazing)
Curtainwall:
U-Value of assembly: ____________
Solar heat gain coefficient: ____________
projection factor (PF=A/B): ____________
Door U-Values: ____________

Insulated Hollow Metal Doors:
U-Value of assembly: ____________
Solar heat gain coefficient: ____________
projection factor (PF=A/B): ____________
Door R-Values: ____________

Walls below grade (each assembly)
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________

Floors over unconditioned space (each assembly)
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________

Floors slab on grade
Description of assembly: ____________
U-Value of total assembly: ____________
R-Value of insulation: ____________
Horizontal/vertical req't ____________
slab heated: ____________

SPECIAL APPROVALS

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

CAMP LEJEUNE OFFICE OF PUBLIC WORKS

UFC COMPLIANCE INTENT

CJMW Building Code Design Criteria and Compliance Intent:
The purpose of this summary is to inform the Authority Having Jurisdiction of the design team's intended path of compliance with the Unified Facilities Criteria for the Museum of the Marine project. Due to the nature of this project (privately funded on federal property but outside of the Camp Lejeune perimeter) some unique conditions exist.

The building will comply with Unified Facilities Criteria standards where applicable / feasible, and the 2021 International Building Code as referenced by UFC 1-200-01 DOD Building Code (01 September 2022 with Change 1, 24 February 2023), Section 1-6.1.

Documents referenced for anti-terrorism / means of egress / fire protection / energy efficiency
- Anti-Terrorism: UFC 4-010-01; as directed in UFC 1-200-01, section 1-6.3.4.3
- Means of Egress: UFC 3-600-01, referencing NFPA 101; as directed in UFC 1-200-01, section 2-10
- Fire Protection: UFC 3-600-01, referencing NFPA 101; as directed in UFC 1-200-01, sections 2-7 and 2-9
- Energy Efficiency: UFC 1-200-02, referencing ASHRAE 90.1; as directed in UFC 1-200-01, section 2-13

Document versions used are as follows:
- UFC 4-010-01 "DoD Minimum Antiterrorism Standards for Buildings": 12 December 2018 with Change 2, 30 July 2022
- UFC 3-600-01 "Fire Protection Engineering for Facilities": 8 August 2016 with Change 6, 6 May 2021
- UFC 1-200-02 "High Performance and Sustainable Building Requirements": 1 December, 2020 with Change 02, 1 June 2022
- NFPA 101-2021 Life Safety Code
- ASHRAE 90.1 – 2013 "Energy Standard for Buildings Except Low-Rise Residential Buildings"; Version as directed by UFC 1-200-02, Section 2-3.1.1, with design commencing prior to 7 April 2023

Anti-terrorism Design Criteria, per previous correspondence with Camp Lejeune (via confirmation letter on 2/14/2011):
- Location: Controlled Perimeter or Parking and Roadways without a Controlled Perimeter
- Building Category: Inhabited
- Applicable Level of Protection: Very Low
- Conventional Construction Standoff Distance (UFC 4-010-01 Table C-1): 93 feet (windows control): See Life Safety Plan for standoff distances provided.
- Design Basis Threat: Active shooter(s) and / or explosive, Type I (220 Pound bomb)
- Exterior glazing will be laminated and designed to meet blast resistant requirements as outlined in UFC 4-010-01, Section B-3.1, utilizing "Conventional Construction Standoff Distances."
- Exterior landscape and overhead mounted architectural features shall conform to the requirements of UFC 4-010-01.

Per previous Camp Lejeune approval (via letter on 12/10/2010), UFC 1-300-09N "Navy and Marine Corps Design Procedures" Design Procedures" is not applicable to this project (metric unit requirements, drawing numbering and noting requirements, UFGS format for project specifications, Geotechnical / soil borings requirements, etc.). Camp Lejeune has requested a complete set of "As Built or Record" drawings and specifications upon construction completion to have on file in the Technical Records Section, Public Works Divisions located in building 1005.

Several UFC sections are not applicable to this project. The following are examples, as previously approved by Camp Lejeune (via letter on 12/10/2010):
- UFC-3-110-03 "Roofing", Section 2-3.1 requirement for a 1/2:12 roof pitch has been reduced to 1/4:12.
- UFC 3-120-01 "Air Force Sign standard" (Now titled "Design: Sign Standards") is not applicable to this project
- UFC 3-190-02FA "Builders Hardware" has been cancelled. Locks shall be a minimum of BHMA grade 1 and hinges BHMA grade 2.
- UFC Design guides that are specific to an individual Department of Defense Agency, other than Department of Navy, are not applicable to this project.

List above is a sampling, not all inclusive: multiple other UFC sections also do not apply to this Project.

APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
STRUCTURAL DESIGN
(PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)

REFER TO SHEET S1.01

DESIGN LOADS:

Importance Factors: Snow (I_S) Select one; Seismic (I_E) Select one

Live Loads: Roof _______ psf; Mezzanine _______ psf; Floor ____ psf

Ground Snow Load: _______ psf

Wind Load: Basic Wind Speed ______ mph (ASCE-7); Exposure Category Select one

SEISMIC DESIGN CATEGORY: Select one
Provide the following Seismic Design Parameters:
Risk Category (Table 1604.5) Select one
Spectral Response Acceleration S_S_____ %g S_1____
Site Classification (ASCE 7) Select one
Data Source: Select one
Basic structural system Select one
Analysis Procedure: Select one
Architectural, Mechanical, Components anchored? Select one

LATERAL DESIGN CONTROL: Select one

SOIL BEARING CAPACITIES:
Select one ______ psf
Pile size, type, and capacity ____________

APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)

MECHANICAL SUMMARY

REFER MECH. DWGS.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone
winter dry bulb: ________
summer dry bulb: ________

Interior design conditions
winter dry bulb: ________
summer dry bulb: ________
relative humidity: ________

Building heating load: ________

Building cooling load: ________

Mechanical Spacing Conditioning System
Unitary
description of unit: ________
heating efficiency: ________
cooling efficiency: ________
size category of unit: ________
Boiler
Size category. If oversized, state reason.: ________
Chiller
Size category. If oversized, state reason.: ________

List equipment efficiencies: ________

APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)

ELECTRICAL SUMMARY

REFER TO ELECTRICAL DWGS.

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Select one

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

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

OCCUPANT LOAD CHART

STORY	ROOM #	ROOM NAME	AREA	OCC. LOAD FACTOR (NFPA 101, TABLE 7.3.1.2)	OCCUPANT LOAD	OCC. CLASS FOR FIXTURE COUNTS
Ground Floor						
	--	Great Hall	4,960.0 SF	7	709	A-2
	--	Café	868.0 SF	15	58	A-2
	--	Kitchen	401.0 SF	100	5	A-2
	--	Meeting Room	1,039.0 SF	15	70	A-2
	--	Classroom	1,047.0 SF	15	70	A-2
	--	Large Gallery	4,483.0 SF	30	150	A-3
	--	Small Gallery	1,075.0 SF	30	36	A-3
	--	Medium Gallery	3,507.0 SF	30	117	A-3
	--	Office	239.0 SF	150	2	B
	--	Warming Kitchen	832.0 SF	100	9	B
	--	Viewing Room	233.0 SF	150	2	B
	--	Gift Shop	563.0 SF	30	19	M
	--	AV	249.0 SF	300	1	S
	--	Partition Stacking	29.0 SF	300	1	S
	--	Table Storage	248.0 SF	300	1	S
	--	Storage	903.0 SF	300	4	S
	--	Collections Storage	308.0 SF	300	2	S
	--	Vestibule Staging	876.0 SF	300	3	S
	--	Electric	196.0 SF	500	1	S
	--	Emg. Dist.	143.0 SF	500	1	S
	--	Fire Pump	200.0 SF	500	1	S
	--	Boiler	538.0 SF	500	2	S
Gross minus Assigned			3,153.0 SF	150	22	B
		IBC Gross Floor Area	**26,090.0 SF**	**--**	**1286**	**--**
					912	A-2 Total
					303	A-3 Total
					35	B Total
					19	M total
					17	S Total
Mechanical Mezzanine						
		IBC Gross Floor Area	**2,024.0 SF**	**500**	**5**	**S**
TOTAL BUILDING						
		IBC Gross Floor Area	**28,114.0 SF**	**--**	**1,291**	

CJMW ARCHITECTURE
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Winston-Salem, NC 27101
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HICAPS
RAA
SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, P.A. CERT. NO. 50356 WINSTON-SALEM, NC
JOHN LESLIE DRINKARD 5117 10/24/2023 GREENSBORO N.C.

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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CODE - APPENDIX B

G0.02

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

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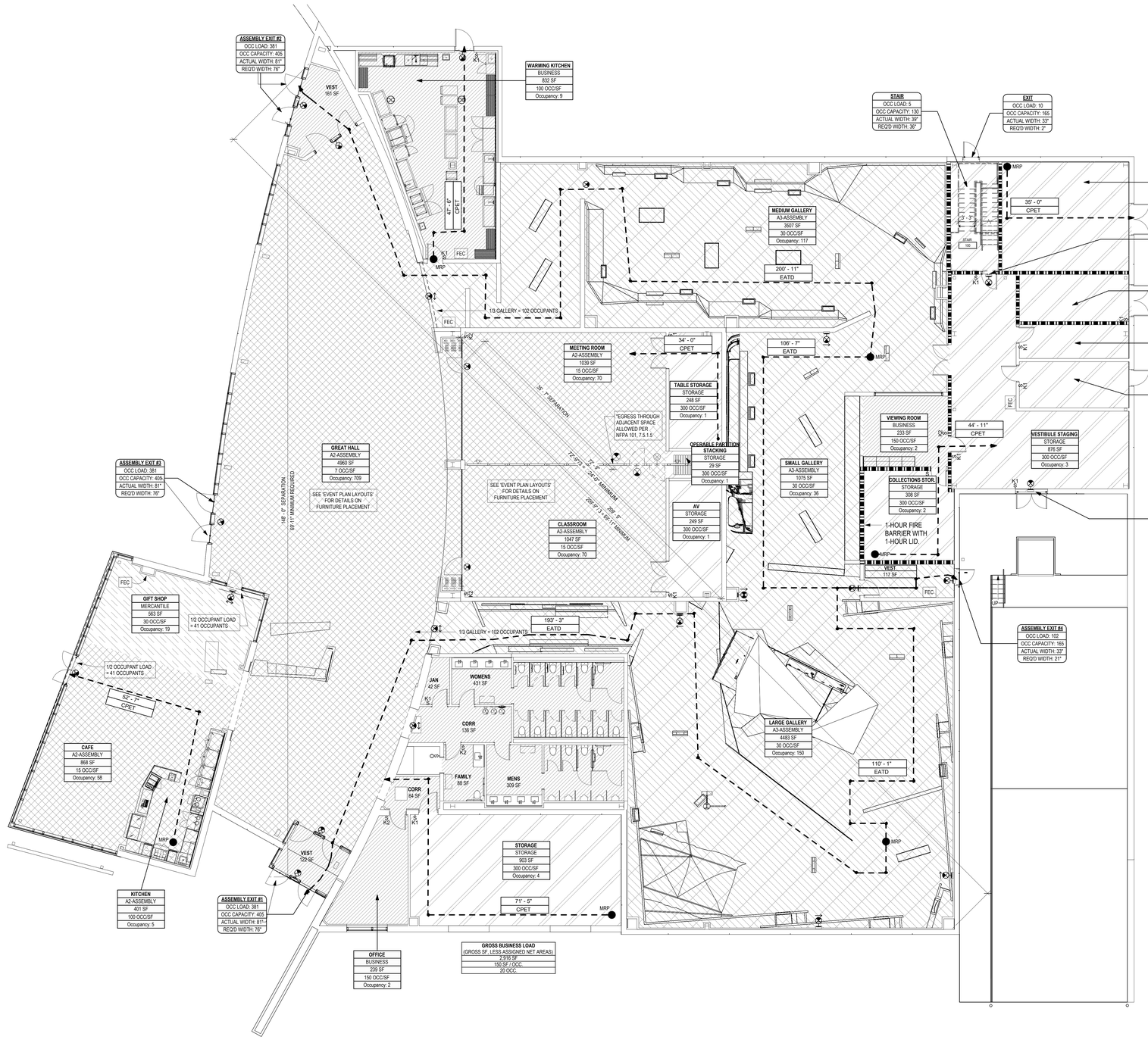
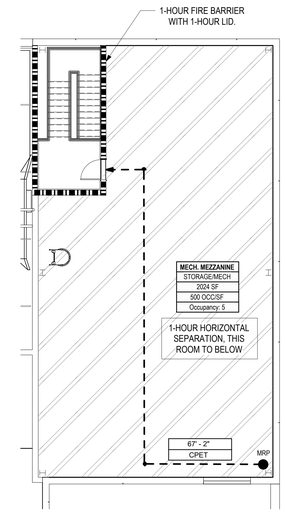


2ND FLOOR LIFE SAFETY PLAN
1/8" = 1'-0" **G3**



1ST FLOOR LIFE SAFETY PLAN
1/8" = 1'-0" **C5**

OCCUPANT LOAD CHART

STORY	ROOM #	ROOM NAME	AREA	OCC. LOAD FACTOR (NFPA 101, TABLE 7.3.1.2)	OCCUPANT LOAD	OCC. CLASS FOR FIXTURE COUNTS
Ground Floor						
	--	Great Hall	4,960.0 SF	7	709	A-2
	--	Café	868.0 SF	15	58	A-2
	--	Kitchen	401.0 SF	100	5	A-2
	--	Meeting Room	1,039.0 SF	15	70	A-2
	--	Classroom	1,047.0 SF	15	70	A-2
	--	Large Gallery	4,483.0 SF	30	150	A-3
	--	Small Gallery	1,075.0 SF	30	36	A-3
	--	Medium Gallery	3,507.0 SF	30	117	A-3
	--	Office	239.0 SF	150	2	B
	--	Warming Kitchen	832.0 SF	100	9	B
	--	Viewing Room	233.0 SF	150	2	B
	--	Gift Shop	563.0 SF	30	19	M
	--	AV	249.0 SF	300	1	S
	--	Partition Stacking	29.0 SF	300	1	S
	--	Table Storage	248.0 SF	300	1	S
	--	Storage	903.0 SF	300	4	S
	--	Collections Storage	308.0 SF	300	2	S
	--	Vestibule Staging	876.0 SF	300	3	S
	--	Electric	196.0 SF	500	1	S
	--	Emg. Dist.	143.0 SF	500	1	S
	--	Fire Pump	200.0 SF	500	1	S
	--	Boiler	538.0 SF	500	2	S
Gross minus Assigned			3,153.0 SF	150	22	B
		IBC Gross Floor Area	**26,090.0 SF**	--	**1286**	--
					912	A-2 Total
					303	A-3 Total
					35	B Total
					19	M total
					17	S Total
Mechanical Mezzanine						
		IBC Gross Floor Area	**2,024.0 SF**	**500**	**5**	**S**
TOTAL BUILDING						
		IBC Gross Floor Area	**28,114.0 SF**	--	**1,291**	

SUMMARY OF EXIT CAPACITY (BASED ON OCCUPANT LOAD CHART)

EXITS #1 - 3

1,119 OCCUPANTS (REMAINING) = 18 OCCUPANTS (GROSS BUSINESS LOAD) = **1,137 OCCUPANTS**
OCCUPANT LOAD: 1,137 OCCUPANTS / 3 EXITS = **379 OCCUPANTS / EXIT**
OCCUPANT CAPACITY: **405**
ACTUAL WIDTH: **81"**
REQUIRED WIDTH: 379 OCCUPANTS X 0.2 = **76" / EXIT**

EXIT #4

1/3 CAPACITY OF TOTAL GALLERY SPACE: 9,065 SF / 3 = 3,022 SF
OCCUPANT LOAD: 3,022 SF / 30 SF/OCCUPANT = **101 OCCUPANTS**
OCCUPANT CAPACITY: **165 OCCUPANTS**
ACTUAL WIDTH: **33"**
REQUIRED WIDTH: 102 OCCUPANTS X 0.2 = **21"**

REMAINING = 6,043 SF / 30 SF/OCCUPANT = **202 OCCUPANTS**
(ACCOUNTED FOR IN EXITS #1 - #3)

***MAIN EXIT* CALCULATION (NFPA 101, 12.2.3.6.2(2))**
- TOTAL ASSEMBLY LOAD: 1,215
- 1,215 / 2 = 608 REQUIRED TO BE SERVED BY MAIN EXIT
- 608 X 0.2" PER OCCUPANT (NFPA 101, 7.3.3) = 121.6" REQUIRED
- 4 DOOR LEAVES* @ 40.5" CLEAR (43.5" LEAVES, LESS HINGE OFFSET & STOP)
= 174" ACTUAL

*NORTH AND SOUTH EXITS ALLOWED TO CONTRIBUTE TO REQUIRED EXITS PER NFPA 101, SECTION 12.2.3.6.5

ROOM NAME	OCCUPANCY	AREA	OCC. LOAD FACTOR	OCCUPANCY LOAD
GREAT HALL	A2-ASSEMBLY	4,960 SF	7	710
STORAGE	STORAGE	903 SF	300	5
OFFICE	BUSINESS	239 SF	150	3
AV	STORAGE	249 SF	300	2
CLASSROOM	A2-ASSEMBLY	1,047 SF	15	71
MEETING ROOM	A2-ASSEMBLY	1,039 SF	15	71
TABLE STORAGE	STORAGE	248 SF	300	2
OPERABLE PARTITION STACKING	STORAGE	29 SF	300	2
2/3 REMAINING GALLERY SPACE	A-3 ASSEMBLY	6,043 SF	30	202
1/2 GIFT SHOP	A-2 ASSEMBLY	282 SF	15	19
1/2 CAFE	A-2 ASSEMBLY	434 SF	15	29
1/2 KITCHEN	A-2 ASSEMBLY	203 SF	100	3

1,119 OCCUPANTS

GROSS BUSINESS LOAD
(GROSS SF, LESS ASSIGNED NET AREAS)

GROSS FLOOR AREA: 26,090 SF
- ASSIGNED NET AREA: 22,937 SF
3,153 SF

3,153 SF / 150 SF OCCUPANT = **22 OCCUPANTS**

OCCUPANT LOAD REQUIREMENTS

OCCUPANT LOADS CALCULATED BASED ON OCCUPANT LOAD FACTORS TAKEN FROM NFPA 101, TABLE 7.3.1.2 AS AMENDED BY UFC 3-600-01 TABLE 10-1:

ASSEMBLY USE:
- CONCENTRATED, WITHOUT FIXED SEATING: 7 SF NET
- LESS CONCENTRATED, WITHOUT FIXED SEATING: 15 SF NET
- KITCHENS: 100 SF GROSS
- EXHIBIT GALLERIES; MUSEUMS: 30 SF NET
- CONFERENCE ROOMS W/ TABLES & CHAIRS: 15 SF NET

BUSINESS USE: 150 SF GROSS

MERCANTILE USE:
- SALES AREA ON GROUND FLOOR:30 SF GROSS
- STORAGE AREAS: 300 SF GROSS

STORAGE OCCUPANCIES: MAXIMUM PROBABLE NUMBER OF OCCUPANTS
- 300 SF GROSS /USED

MECH., ELEC., OTHER BLDG. EQUIPMENT SPACES: 500 GROSS

IT EQUIPMENT ROOMS: 300 GROSS

ANY SPACE OR THE FACILITY AS A WHOLE SHALL NOT EXCEED 1 PERSON PER 7 SF OF NET FLOOR SPACE PER UFC 3-600-01, SECTION 10-3.2

OCCUPANCY LEGEND

- A2-ASSEMBLY
- A3-ASSEMBLY
- BUSINESS
- MERCANTILE
- STORAGE

LIFE SAFETY LEGEND

- NON-RATED SMOKE PARTITION
- 1 HOUR SMOKE BARRIER
- 1 HOUR RATED WALL
- 2 HOUR RATED WALL
- EXIT ROUTE
- EXIT SIGN
- FEC — FIRE EXTINGUISHER CABINET (REFER TO DETAILS ON A1.01)

DESCRIPTION	
OCC LOAD: 000	OCCUPANT LOAD
OCC CAPACITY: 000	OCCUPANT CAPACITY
ACTUAL WIDTH: 000"	ACTUAL EGRESS WIDTH
REQ'D WIDTH: 36"	REQUIRED EGRESS WIDTH

LIFE SAFETY NOTES

1.ALL WORK SHALL BE IN ACCORDANCE WITH 2012 IBC AND ANY LOCAL CODES.

2.CEILING HEIGHTS SHALL BE 9'-0" A.F.F UNLESS NOTED OTHERWISE. CEILING FINISH SHALL BE SMOOTH PAINTED, UNLESS NOTED OTHERWISE.

3.REFER TO ELECTRICAL DRAWINGS FOR OTHER CEILING MOUNTED DEVICES, LIGHTS, AND EXIT SIGNS.

4.PROVIDE ACCESS PANELS IN GWB. CEILINGS AS REQUIRED BY PLUMBING, FIRE PROTECTION, ELECTRICAL, AND MECHANICAL DRAWINGS.

5.A FIRE RATED SUB-CEILING IS ATTACHED TO THE UNDERSIDE OF ALL FLOOR AND CEILING ASSEMBLIES. CEILING FINISHES SHOWN SHALL BE SUSPENDED BELOW THIS FIRE CEILING UNLESS NOTED OTHERWISE. UNIT CEILINGS SHALL BE THE FIRE RATED SUB-CEILING.

6.PROVIDE A FIRE RATED GYPSUM WALLBOARD ENCLOSURE AT RECESSED DOWN LIGHTS IN FIRE RATED CEILINGS.

7.CENTER ACOUSTICAL CEILING TILE IN CORRIDORS AND ROOMS UNLESS NOTED OTHERWISE. ACOUSTICAL TILE SHOULD BE NO LESS THAN 6" WIDE. USE AN OVERSIZED TILE CUT FROM A 2X4 TILE WHEN NECESSARY TO ENSURE A TILE IS NO LESS THAN 6" IN A 2X2 GRID.

8.CENTER LIGHTS, SPRINKLER HEADS, ETC. WITHIN CEILING TILE, UNLESS NOTED OTHERWISE.

9.G.C. SHALL COORDINATE HEIGHT OF ALL SUSPENDED FIXTURES WITH ARCHITECT ON SITE PRIOR TO FINAL INSTALLATION.

PLAN NORTH

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS
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SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. 58556 — JOHN WESLEY MAY NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 10/24/2023

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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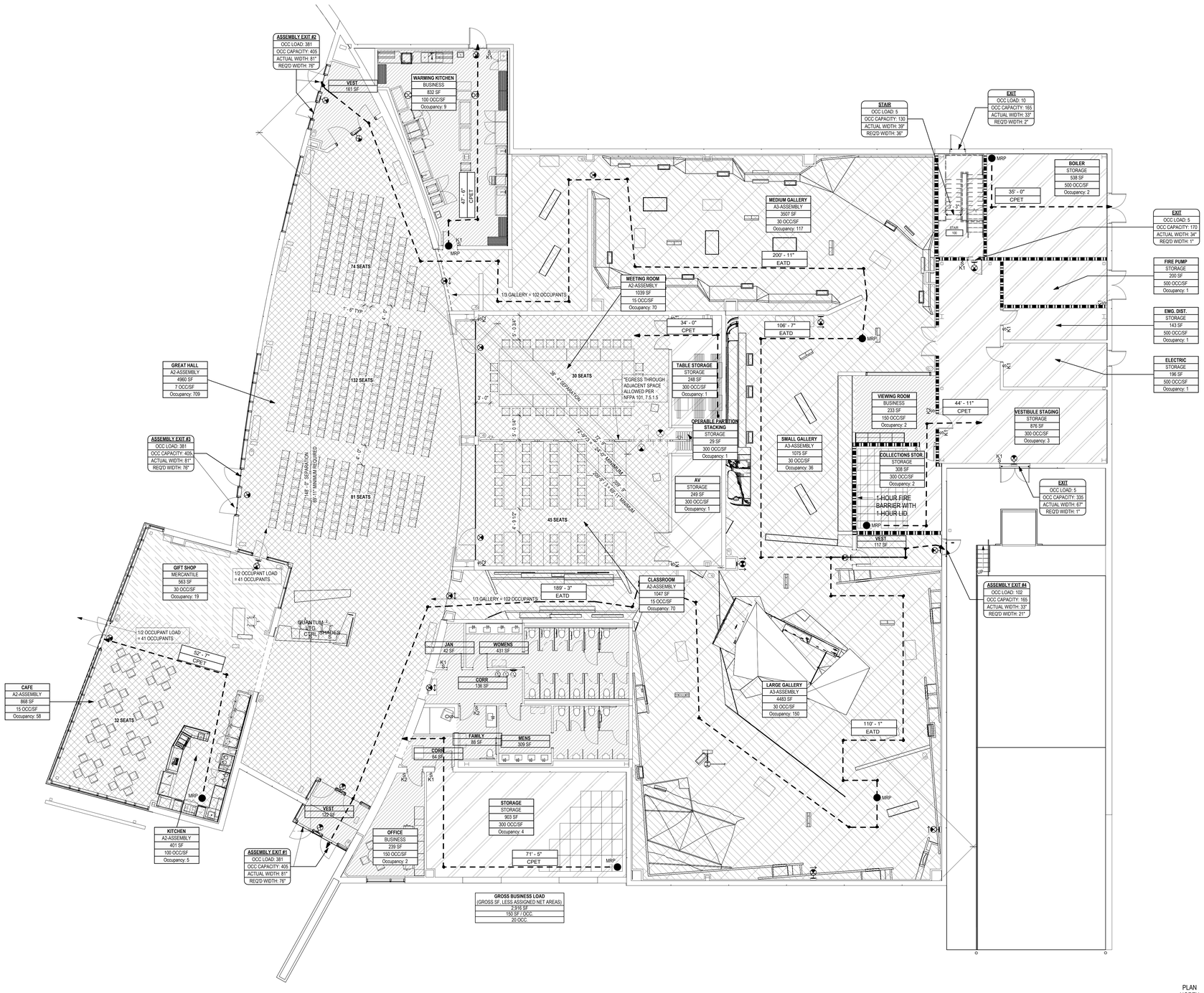
LIFE SAFETY PLAN

G0.03

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



EVENT SEATING PLAN - PARTITIONED CONFERENCE A2

1/8" = 1'-0"

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EVENT SEATING PLAN - PARTITIONED CONFERENCE

G0.04

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
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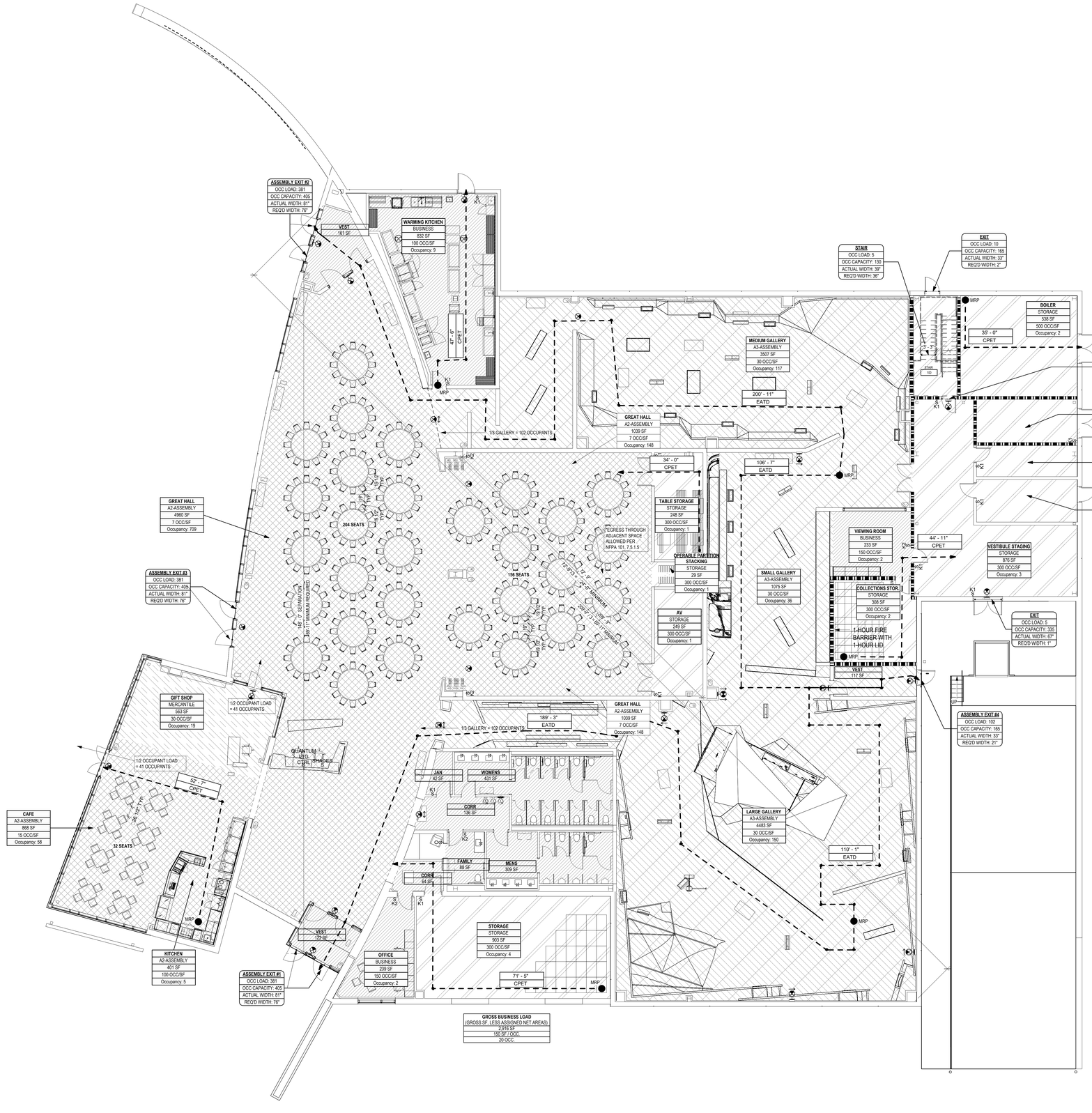

EVENT SEATING PLAN - BANQUET
1/8" = 1'-0"
A2

PLAN NORTH

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, PA
CERT. NO. 50856
WINSTON-SALEM, NC

JOHN LESLIE DOWNS
10/24/2023
GREENSBORO, NC

#	Description	Date

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EVENT SEATING PLAN - BANQUET

G0.05

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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UL Product iQ®

BXUV.U415 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U415**

February 14, 2022

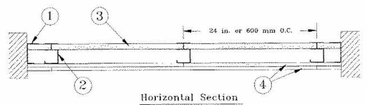
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

System A – 1 Hr.



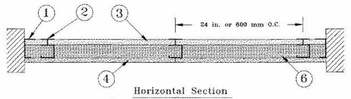
Horizontal Section

System B – 2 Hr.



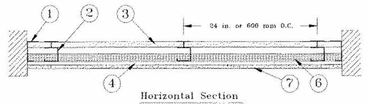
Horizontal Section

System C – 2 Hr.



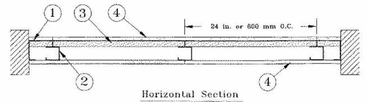
Horizontal Section

System D – 2 Hr.



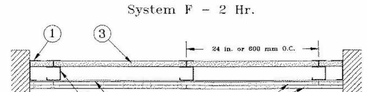
Horizontal Section

System E – 2 Hr.



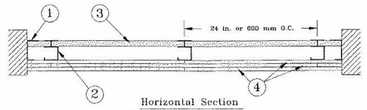
Horizontal Section

System F – 2 Hr.



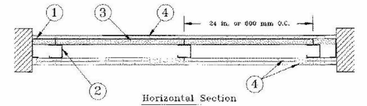
2B Horizontal Section

System G – 3 Hr.



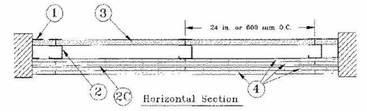
Horizontal Section

System H – 3 Hr.



Horizontal Section

System I – 4 Hr.



Horizontal Section

1. **Floor, Side and Ceiling Runners —** "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs —** "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs —** (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels —** (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels —** For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A2378

2F. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2H. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Resilient Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC. and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

2I. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

3. **Gypsum Board* —** Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board* —**

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULIX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX, USGX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C. IP-X2, IPC-AR or WRC, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

System D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR, 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC- AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. , Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, ULIX, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, ULIX, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Joint Tape and Compound —** (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. **Batts and Blankets* —**

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m^3

THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units* —** (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive* —** (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJUZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips —** (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips —** (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

10. **Lead Discs or Tabs —** (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs —** (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips —** (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tabs —** (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2022-02-14

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UL Product iQ®

BXUV.U419 - Fire-resistance Ratings - ANSI/UL 263

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Fire-resistance Ratings - ANSI/UL 263

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States
BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. **U419**

September 5, 2022

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5 through 5J)
*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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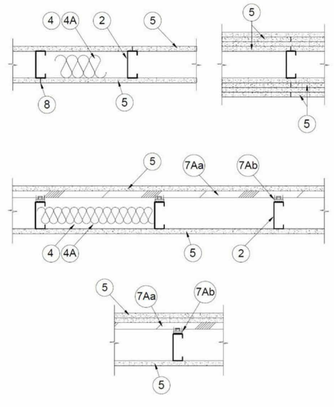

1. **Floor and Ceiling Runners —** (Not Shown) — For use with Item 2 — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max.

1A. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper25™ Track

CRACO MFG INC — SmartTrack25™

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper25™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper25™ Track

1B. **Framing Members* — Floor and Ceiling Runner —** Not Shown — In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track

MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track

IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

1C. **Framing Members* — Floor and Ceiling Runners —** (Not Shown) — In lieu of Item 1 — Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.
ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV — Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

TELLING INDUSTRIES L L C

2I. **Framing Members* — Steel Studs —**

2J. **Framing Members* — Metal Studs —** Not Shown — In lieu of Item 2 — proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights

2K. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
EB METAL INC — NITROSTUD

2L. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
OLMAR SUPPLY INC — PRIMESTUD

2M. **Framing Members* — Steel Studs —** As an alternate to Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.
MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2N. **Framing Members*— Steel Studs** — As an alternate to Item 2 — proprietary channel shaped steel studs, min depth 3-1/2 in. and as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 0.018 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in length than assembly height.
RESCUE METAL FRAMING, L L C — AlphaSTUD

2O. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, galv steel. Studs to be cut 3/8 to 3/4 in. less in length than assembly height. Spaced 24 in. OC max.
RONDO BUILDING SERVICES PTY LTD — Rondo Lopped Wall Stud

2P. **Framing Members* — Steel Studs —** As an alternate to Item 2 — proprietary channel shaped steel studs, min width as indicated under Item 5, min 25 MSG galv steel. Studs to be cut 3/8 to 3/4 in. less in lengths than assembly height. Spaced 24 in. OC max.
OEG BUILDING MATERIALS — OEG Stud

2Q. **Framing Members* — Steel Studs —** Not Shown — In lieu of Item 2 — For use with Item 1O, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max of 24 in. OC, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.
CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X

3. **Wood Structural Panel Sheathing —** (Optional, For use with Item 5 Only) — (Not Shown) — 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in.

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at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, gypsum panels attached over OSB or plywood panels and fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets* —** (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4A. **Batts and Blankets* —** (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance.
See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4B. **Fiber, Sprayed* —** (Optional, for use with Type ULIX) Where insulation is required - Spray applied granulated mineral fiber material. The fiber is applied with adhesive at a minimum density of 4.0 pcf to completely fill the wall cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

4C. **Foamed Plastic* —** (Where Batts and Blankets*, Item 4, are optional, for use with Item 5K) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in.
CARLISLE SPRAY FOAM INSULATION — Types SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim 21, SealTite Pro One Zero, Foamsulate Closed Cell, Foamsulate OCX, Foamsulate 70, and Foamsulate HFO.

4D. **Foamed Plastic* —** (Where Batts and Blankets*, Item 4, are optional, for use with Item 5L) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity, for up to 2 hour rated assemblies only. When foamed plastic is used, minimum stud depth shall be 3-1/2 in. with minimum 20 MSG steel thickness.
BASF CORP - Enertite® NM, Enertite® G, FE178®, Spraytite ® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, Walltite HP+, FE137®, FE158®, Spraytite® 158, Spraytite® SP and Spraytite® 81205

5. **Gypsum Board* —** Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) with Type ULIX need not be staggered. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

Gypsum Board Protection on Each Side of Wall

Rating, Hr	Min Stud Depth, in. Items 2, 2C, 2D, 2F, 2G, 2O	No. of Layers & Thkns of Panel	Min Thkns of Insulation (Item 4)
1	3-1/2	1 layer, 5/8 in. thick	Optional
1	2-1/2	1 layer, 1/2 in. thick	1-1/2 in.
1	1-5/8	1 layer, 3/4 in. thick	Optional
2	1-5/8	2 layers, 1/2 in. thick	Optional
2	1-5/8	2 layers, 5/8 in. thick	Optional
2	3-1/2	1 layer, 3/4 in. thick	3 in.
3	1-5/8	3 layers, 1/2 in. thick	Optional

Feedback

3	1-5/8	2 layers, 3/4 in. thick	Optional
3	1-5/8	3 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 5/8 in. thick	Optional
4	1-5/8	4 layers, 1/2 in. thick	Optional
4	2-1/2	2 layers, 3/4 in. thick	2 in.

CGC INC — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR SCX, SHX, ULIX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — 1/2 in. thick Type C and 5/8 in. thick Type SCX

UNITED STATES GYPSUM CO — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, ULIX, WRX, IP-X1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR; 3/4 in. thick Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, ULTRACODE

USG MEXICO S A DE C V — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, **Steel Framing Members*,** is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in., min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.
CGC INC — Type SHX.

UNITED STATES GYPSUM CO — Type FRX-G, SHX

USG MEXICO S A DE C V — Type SHX.

5B. **Gypsum Board* —** (Not Shown) — As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or 3/4 in. thick products are specified. For direct attachment only to steel studs Item 2A, (not to be used with Item 3) — Nom 5/8 in. or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

5C. **Gypsum Board* —** (For Use With Item 2B) — Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.

Feedback

CGC INC — Type SCX, ULIX.

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type SCX

UNITED STATES GYPSUM CO — Type SCX, SGX, ULIX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type SCX

5D. **Gypsum Board* —** (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.
CGC INC — Type USGX

UNITED STATES GYPSUM CO — Type USGX

USG BORAL DRYWALL SFZ LLC — Type USGX

USG MEXICO S A DE C V — Type USGX

5E. **Gypsum Board* —** (Not Shown) — (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified. For direct attachment only to steel studs Item 2A, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5K. **Gypsum Board* —** (As alternate to Item 5 when Foam Plastic insulation (Item 4C) is used) **—** Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-5/8 in. long steel screws spaced 8 in. OC.

Feedback

5L. **Gypsum Board* —** (As an alternate to Item 5 when Foam Plastic insulation (Item 4D) is used) **—** Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 5 above. Applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-1/4 in. long Type S steel screws spaced 8 in. OC at perimeter and in the field. For 2 layer assemblies outer layer will be attached to studs over inner layer with the 1-7/8 in. long steel screws spaced 8 in. OC.

6. **Fasteners —** (Not Shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Single layer system with Type ULIX:** 1 in. long, spaced 12 in. OC in the field and perimeter, when panels are applied horizontally or vertically.**Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer.**Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

7. **Furring Channels —** (Optional, Not Shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A.

7A. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

7B. **Framing Members* —** (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

7C. **Framing Members* —** (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:

Feedback

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

7D. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or AJ37R

7E. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Eb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7F. **Steel Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 7Fa) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

7G. **Framing Members* —** (Optional on one or both sides, not shown, for single or double layer systems) — As an alternate to Item 7, furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ga) to studs (Item 2). Clips spaced max. 48 in. OC. Clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

8. **Joint Tape and Compound —** Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco —** (Optional, Not Shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants* —** (Optional, Not Shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.
UNITED STATES GYPSUM CO — Type AS

11. **Lead Batten Strips —** (Not Shown, For Use With Item 5B) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind vertical joints

11A. **Lead Batten Strips —** (Not Shown, For Use With Item 5H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations.

12. **Lead Discs or Tabs —** (Not Shown, For Use With Item 5B) — Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw location prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

12A. **Lead Discs —** (Not Shown, for use with Item 5H) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

13. **Lead Batten Strips —** (Not Shown, For Use With Item 5E) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.

14. **Lead Tabs —** (Not Shown, For Use With Item 5E) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

15. **Barrier Mesh —** (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 5) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier

Feedback

Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.
CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

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Last Updated on 2022-09-05

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UL Solutions

BXUV.N823 - Fire-resistance Ratings - ANSI/UL 263

Design/System/Construction/Assembly Usage Disclaimer

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- Authorities Having Jurisdiction should be consulted before construction.
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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. N823

April 29, 2020

Restrained Beam Ratings — 1, 1-1/2, 2, 3 and 4 Hr.

Unrestrained Beam Ratings — 1, 1-1/2, 2, 3 and 4 Hr.

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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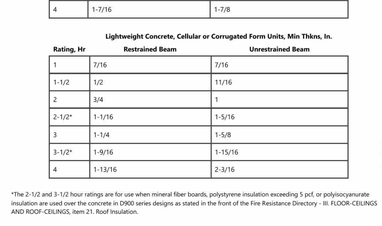

1. **Steel Beam —** W8x28 min size.

2. **Normal Weight or Lightweight Concrete —** Compressive strength 2800 psi. For normal weight concrete either carbonate or siliceous aggregate may be used. Unit weight 150 pcf. For lightweight concrete, unit weight 102 pcf.

3. **Shear Connector (Optional) —** Studs, 3/4 in. diameter headed type or equivalent per AISC specifications. Welded to top flange of beam through the steel floor units.

4. **Welded Wire Fabric —** (optional) 6x6, W1.4xW1.4.

5. **Steel Floor and Form Units —** 1-1/2 to 3 in. deep fluted, cellular or corrugated units, welded to beam.

6. **Spray-Applied Fire Resistive Materials* —** Applied by spraying with water to the final thicknesses shown below. Crest areas shall be filled with Spray-Applied Fire Resistive Materials above the beam. Beam surfaces must be clean and free of dirt, loose scale and oil. Min average density of 13 pcf with min. ind density of 11 pcf for Types II, II HS, , or DC/F. Min avg and min ind densities of 22 and 19 pcf, respectively, for Type HP. For method of density determination, refer to Design Information Section.

Normal Weight Concrete, Fluted Floor and Form Units, Min Thkns, In.

Rating, Hr	Restrained Beam	Unrestrained Beam
1	3/8	3/8
1-1/2	3/8	1/2
2	1/2	3/4
2-1/2*	3/4	15/16
3	1	1-3/16
3-1/2*	1-1/4	1-3/8
4	1-7/16	1-9/16

Lightweight Concrete, Fluted Floor and Form Units, Min Thkns, In.

Rating, Hr	Restrained Beam	Unrestrained Beam
1	3/8	3/8
1-1/2	7/16	5/8
2	3/4	1
2-1/2*	1	1-5/16
3	1-1/4	1-9/16
3-1/2*	1-1/2	1-13/16
4	1-13/16	2

Normal Weight Concrete, Cellular or Corrugated Form Units, Min Thkns, In.

Rating, Hr	Restrained Beam	Unrestrained Beam
1	3/8	3/8
1-1/2	3/8	1/2
2	1/2	13/16
2-1/2*	7/8	1-1/8
3	1	1-5/16
3-1/2*	1-1/4	1-5/8
4	1-7/16	1-7/8

Lightweight Concrete, Cellular or Corrugated Form Units, Min Thkns, In.

Rating, Hr	Restrained Beam	Unrestrained Beam
1	7/16	7/16
1-1/2	1/2	11/16
2	3/4	1
2-1/2*	1-1/16	1-5/16
3	1-1/4	1-5/8
3-1/2*	1-9/16	1-15/16
4	1-13/16	2-3/16

*The 2-1/2 and 3-1/2 hour ratings are for use when mineral fiber boards, polystyrene insulation exceeding 5 pcf, or polyisocyanurate insulation are used over the concrete in D900 series designs as stated in the front of the Fire Resistance Directory - III. FLOOR-CEILINGS AND ROOF-CEILINGS, item 21. Roof Insulation.

ISOLATEK INTERNATIONAL — Type D-C/F, HP, II, or Type II HS. Investigated for exterior use. Type EBS or Type X adhesive/surface sealer optional.

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Last Updated on 2020-04-29

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UL Solutions

BXUV.X829 - Fire-resistance Ratings - ANSI/UL 263

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- Authorities Having Jurisdiction should be consulted before construction.
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- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. X829

May 03, 2018

Ratings — 1/2, 1, 1-1/2, 2, 3, 4 Hr

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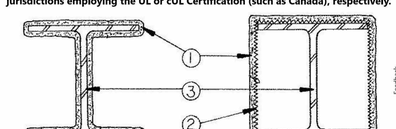
1
3
2

W8X28	0.68	13/16	1-5/16	1-11/16	2-9/16	3-7/16
W10X49	0.83	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W12X106	1.46	1/2	13/16	1-1/8	1-5/8	2-3/16
W14X233	2.52	7/16	9/16	9/16	1-1/16	1-1/2
W14X730	6.68	3/8	3/8	3/8	1/2	11/16

ISOLATEK INTERNATIONAL — Type D-C/F, HP, II, or II HS. Type D-C/F, HP or II investigated for exterior use. Type EBS or Type X adhesive/sealer optional.

2. **Metal Lath —** (Optional for contour application) — 3.4 lb/sq yd galvanized or painted expanded steel lath. Lath shall be lapped 1 in. and tied together with No. 13 SWG galvanized steel wire spaced vertically 6 in. O.C. or alternately, attached with No. 24 MSG spring clips, 1/2 in. wide, pushed onto column flanges, vertically spaced 6 in. O.C.

3. **Steel Column —** Min. sizes as shown above in Item 1.

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Last Updated on 2018-05-03

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BXUV.H505 - Fire-resistance Ratings - ANSI/UL 263

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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. H505

June 30, 2020

Unrestrained Assembly Rating —1 and 2 Hr (Refer to Item 4)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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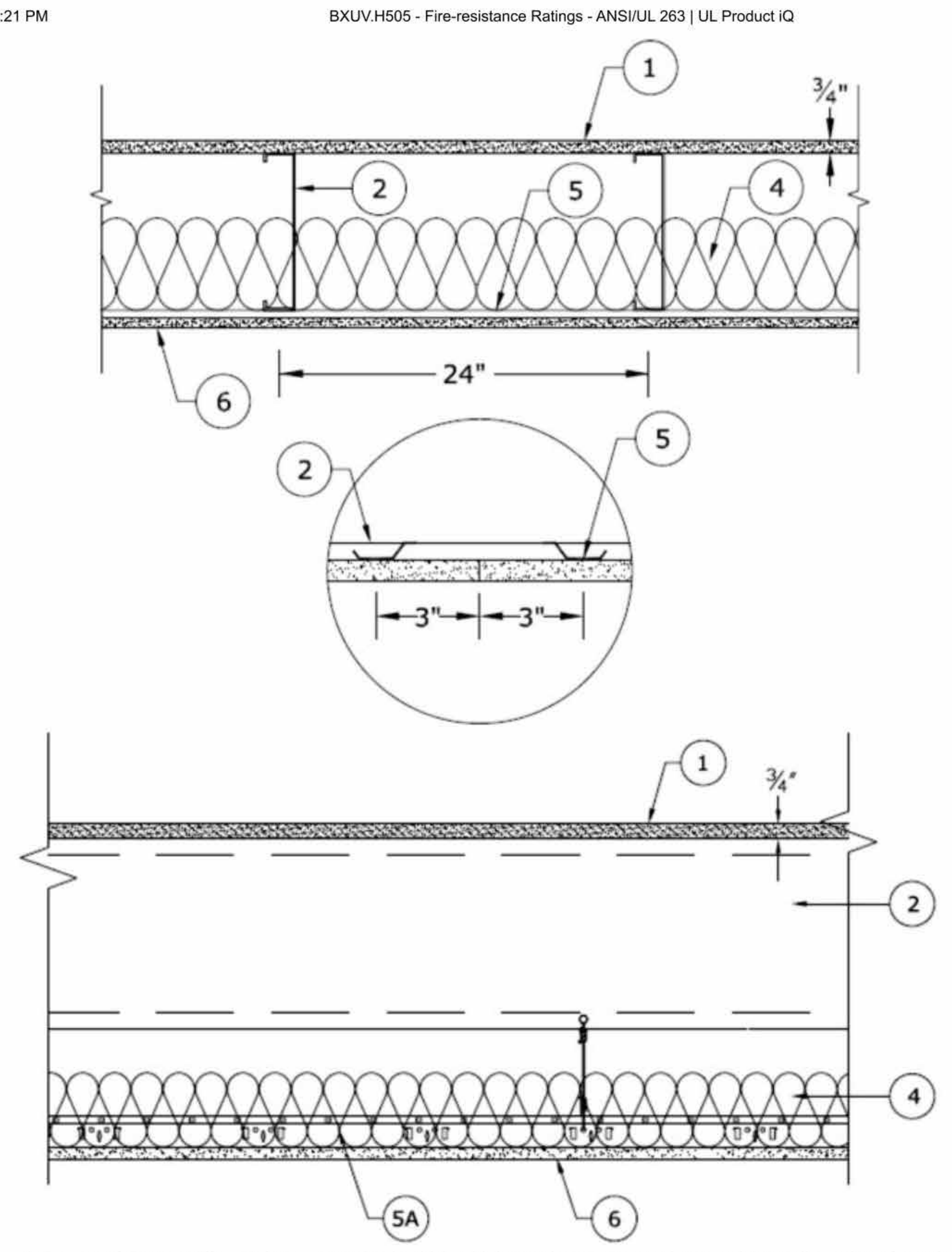
Feedback



1. **Structural Cement-Fiber Units* —** Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to joists with end joints staggered a min of 2 ft and centered over the joists. Panels secured to steel joists with 1-5/8 in. long No. 8 self-drilling, self-countersinking steel screws spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the side edges of the panel.
As an alternate to the 1-5/8" long No. 8 fastener, the following power-actuated pins may be used for min. 1/8" thick, hot-rolled A36 steel sections for joist specified in Item 2E:

Feedback

Hilti pin model X-U 32MX with a min. 0.157" shank diameter min. 1-1/4" long, DeWalt pin model 50458-PWR with a min. 0.157" shank diameter min. 1-1/4" long or Aerosmith model 5324HPG with a min. 0.145 shank diameter min. 1-1/4" long.

UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

2. **Steel Joists —** Channel-shaped, min 8 in. deep with min 1-5/8 in. wide flanges and 1/2 in. long stiffening flanges. Fabricated from min No. 16 MSG galv steel. Min yield strength of 50,000 psi. Joists spaced max 24 in. OC. Supplied with appropriate rim tracks of same size and gauge.

2A. **Clip Angles —** (Not Shown) - 18 MSG, 7-1/4 in. long steel angles with 1-1/2 in. legs for 8 in. deep joists. Secured to track and joist with six No.10, 3/4 in. long, self -drilling, hex head screws, located 1 in. from each end of the clip angle and at the centerline. Only one clip angle per joist end.

2B. **Structural Steel Members* —** (Not Shown) - As an alternate to Item 2, - Pre-fabricated steel truss system consisting of cold-formed, galvanized steel chord and web sections. Truss top and bottom chords min. 4 in. high by 1-11/16 in. wide by 18 ga. Truss webs min. 1-1/2 in. by 1-1/2 in. by 20 ga. square tube bent and triangulated as shown. Chords and web connected by fillet welds. Overall truss depth min. 12 in. Trusses spaced a max of 24 in. OC. Truss ends placed over and secured to Bearing Seats (Item 2B1) with two min. #10 by 3/4 in. long screws on each side of Bearing Seats. Allowable loading must be calculated so as to stress the steel trusses to a maximum of 98% of the stress calculated in accordance with the allowable stress design approach outlined in the manufacturer's load tables.
EISEN PANEL SYSTEMS L L C — Type Gateway Panel pre-fabricated steel truss system.

2B1. **Bearing Seats* —** (Not Shown) — Galvanized steel tube, min. 1 in. by 2-1/2 in. by 13 ga., oriented vertically and welded to min. 4 in. by 4 in. by 10 ga., galvanized steel plate. Bearing seats spaced 24 in. OC and attached to bearing supports by welding or screw attaching the steel plate to the bearing supports.
EISEN PANEL SYSTEMS L L C — Type Gateway Panel bearing seat.

2B2. **Bracing —** (Not Shown) - For use with Item 2B — Galvanized channel-shaped steel sections, min. 1-1/2 in. wide with 1/4 in. flanges, min. 16 ga. Bracing attached to underside of trusses with min. #10 by 3/4 in. long screws through truss bottom chord. Bracing installed in truss cavities by scoring, bending and flattening the ends to form a tab for attachment to truss top and bottom chords. Two pieces of bracing crossed and tabs secured to truss chords with min. #10 by 3/4 in. long screws. Location and spacing of underside and crossed bracing to be specified on truss engineering.

2C. **Structural Steel Members* —** As an alternate to Item 2 — Pre-fabricated light gauge steel truss system consisting of cold-formed, galvanized steel cord and web sections. Trusses fabricated in various sizes, depths, and from various steel thickness. Trusses minimum 12 in. deep, spaced a max of 24 in. OC.
AEGIS METAL FRAMING, DIV OF MITEK — Ultra-Span, Pre-fabricated Light Gauge Steel Truss System

TRUSSTEEL, DIV OF ITW BUILDING COMPONENTS INC — TrusSteel

2D. **Steel Trusses —** As an alternate to Item 2, - Cold-formed galvanized steel truss chord and web sections manufactured from steel conforming to ASTM A653 Grade 33 or higher yield strength. Steel thickness of truss chord and web sections as required by design to meet governing code requirements. Truss members connected together with No. 10-16 (min size) self-drilling screws or equivalent. Truss chord and web members to be designed in accordance with the American Iron and Steel Institute's Specification for the Design of Cold-Formed Steel Structural Members, 1996 Edition. Trusses spaced a max of 24 in. OC. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 12 in.

2E. **Steel Joists —** As an alternate to Item 2, minimum 12K1, spaced a max 24 in. OC.

Feedback

2F. **Structural Steel Members* —** As an alternate to Item 2 - Limited to the 1 Hour Ratings. Pre-fabricated light gauge steel truss system consisting of cold-formed, galv steel cord and web sections. Trusses fabricated in various sizes, depths and from various steel thickness. Trusses spaced a max of 24 in. OC. Location of lateral bracing for truss chord and web sections to be specified on truss engineering.
TRUSS LINK INC — Truss Link

3. **Joist Bridging —** (Not Shown) - For use with Item 2 — Installed immediately after joists are erected and before construction loads are applied. The bridging shall consist of rim track cut 8 in. longer than span between joists, with rim track legs cut through 4 inches back from each end and bent at a 90° angle and screw attached through the rim track legs into the joists with four screws at each end, two on top and two on the bottom at each end of rim track. Flat strap bracing of 1-1/2 in. wide by 20-ga galvanized steel is also screw-attached to bottom joist flange at mid-span.

4. **Batts and Blankets* —** (When Insulation is not used the rating shall be 1 Hr.). 3-1/2 in. thick glass fiber batt insulation draped over the resilient channels. Any glass fiber batt insulation bearing the UL Classification Marking for Surface Burning Characteristics having a flame spread index of 25 or less and a smoke developed index of 50 or less may be used. See **Batts and Blankets** (BKNV) category in the Building Materials Directory for names of manufacturers.

5. **Resilient Channels —** Formed of No. 25 MSG galv steel, 1/2 in. deep, spaced max 12 in. OC, perpendicular to joists. Channel splices located beneath joists and overlapped 4 in. Channels secured to each joist with one 1/2 in. long Type S-12 low profile steel screw. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown on the illustration above. Additional channels shall extend min 6 in. beyond each side edge of board.

5A. **Steel Framing Members* —** (Optional, Not Shown) — When it is desired to drop the ceiling below the bottom plane of the structural steel members (Item 2), a suspension system may be used in lieu of the resilient channels. Main runners, cross tees, cross channels and wall angle as listed below:

a. **Main Runners —** Nom 10 or 12 ft long , 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 24 in. OC, a min of 4 in. below bottom flange of joist, twist-tied to #10 -3/4 in. long screws installed in the web, 1/2 in. from the bottom flange of the steel joist. Hanger wires to be located adjacent to main runner/cross tee intersections.

b. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

c. **Cross Channels —** Nom 4 ft or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC.

d. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
CGC INC — Type DGL or RX

USG INTERIORS LLC — Type DGL or RX.

5B. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 5 — Furring channels and Steel Framing Members as described below:

a. **Furring channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 12 in. OC, perpendicular to joists. Channel secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Additional channels shall be positioned so that the distance from the end of the board to the center of the first channel is 3 in. and from the board end to the center of the next channel is 12 in.

Feedback

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to joists (Item 2). Clips spaced 48 in. OC and secured to the bottom chord of joists with min 1-5/8 in. long No. 8 self-drilling, self-tapping, bugle, flat or hex head screw through the center grommet. Furring channels are friction fitted into clips. Additional clips required to hold furring channel that supports the gypsum board butt joints.
PLITEQ INC — Type Genie Clip

5C. **Alternate Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Items 5 to 5B, furring channels and Steel Framing Members as described below.

a. **Furring channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 12 in. OC, perpendicular to joists. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the steel joists (Item 2). Clips spaced a max of 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the wallboard butt joints, as described in Item 6.
PAC INTERNATIONAL L L C — Types RSIC-1 or RSIC-1 (2.75)

5D. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 5.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 12 in. OC, perpendicular to the joists. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 6), each extending a min of 6 in. beyond both side edges of the board.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to joists, friction-fitted into the channel caddy on the Steel Framing Members (Item 5Dc) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Steel Framing Members* —** Spaced 48 in. OC. max along joist, and secured to the joist on alternating joists with two, No. 10-16 TEK screws through mounting holes on the hanger bracket.
PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

5E. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 5.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced 12 in. OC perpendicular to joists and friction fit into Steel Framing Members (Item 5Eb). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 6). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

Feedback

b. **Steel Framing Members* —** Used to attach furring channels (Item 5Ea) to joists. Clips spaced 48 in. OC and secured along joist webs at each furring channel intersection with min. 3/4 in. long self-drilling No. 10-16 TEK screws through each of the provided hole locations. Furring channels are friction fitted into clips.
PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

6. **Gypsum Board* —** One layer of nom 5/8 in. thick by 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels, furring channels or cross tees of suspension system. Gypsum panels secured to resilient channels, furring channels or drywall suspension system with 1 in. long Type S bugle-head screws spaced 8 in. OC, with screws located minimum of 1 in. from the side joints and 3 in. from the end joints. End joints secured to both resilient/furring channels as shown in end joint detail. When **Steel Framing Members** (Item 5B or 5C) are used, the butt joints in the gypsum board shall be supported by two furring channels. The two furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one RSIC-1, RSIC-1 (2.75) or Genie clip at each end of the channel.
When **Steel Framing Members** (Item 5D) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 6 as per hourly ratings. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 5E) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 6 as per hourly ratings. Butt joints staggered minimum 24 in. OC.

CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

7. **Finishing System - (Not Shown) —** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum panels.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-06-30

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Feedback

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HICAPS

RAA

SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, P.A. CERT. NO. 50356 WINSTON-SALEM, NC
JOHN LESLIE DRINKARD 5117 10/24/2023 GREENSBORO N.C.

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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UL DETAILS

G0.08

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

CIVIL GENERAL NOTES:

1. REFER TO THE PROJECT SPECIFICATIONS IN EACH SITUATION. BRING CONFLICTS BETWEEN PROJECT SPECIFICATIONS AND PLANS TO THE ATTENTION OF THE CONTRACTING OFFICER AND/OR ENGINEER FOR RESOLUTION. MATERIALS AND WORKMANSHIP MUST CONFORM TO THE PROJECT SPECIFICATIONS.
2. EXISTING UTILITY INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. LOCATION, VERIFICATION, SUPPORT AND PROTECTION OF ABOVE GROUND AND UNDERGROUND UTILITIES TO REMAIN IN PLACE, INCLUDING UTILITIES NOT INDICATED ON CONTRACT DRAWINGS IS REQUIRED. CONFLICTS OR DISCREPANCIES MUST BE BROUGHT TO THE CONTRACTING OFFICER'S AND/OR ENGINEER'S ATTENTION IMMEDIATELY.
3. PRIOR TO EXCAVATION, CONTRACTOR MUST HAVE THE EXISTING UNDERGROUND LINES MARKED ON THE GROUND SURFACE IN THE AREAS OF CONSTRUCTION. POTHOLE AND PHYSICALLY VERIFY DEPTH AND LOCATION OF UTILITY LINES IN THE WORK AREA THAT REQUIRE COORDINATION WITH WORK ITEMS. POTHOLE VERIFICATION MUST BE DONE WELL IN ADVANCE OF ACTUAL WORK SO THAT POTENTIAL UTILITY CONFLICTS CAN BE VERIFIED AND RESOLVED WITHOUT CAUSING SCHEDULE DELAYS.
4. PROTECT EXISTING STRUCTURES, TREES, PAVEMENT, UTILITIES, AND OTHER PROPERTY UNLESS THEY ARE DEMOLISHED. PROPERTY NOT AUTHORIZED FOR REMOVAL, BUT DAMAGED BY THE CONTRACTOR MUST BE RESTORED BY THE CONTRACTOR TO THEIR PRE-CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. MAKE EVERY EFFORT TO SAVE PROPERTY IRONS, MONUMENTS, OTHER PERMANENT POINTS AND LINES OF REFERENCE AND CONSTRUCTION STAKES. PROPERTY IRONS, MONUMENTS, AND OTHER PERMANENT POINTS OF REFERENCE DESTROYED BY THE CONTRACTOR MUST BE REPLACED BY A NC LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
6. WORK PERFORMED UNDER THIS CONTRACT MUST NOT IMPACT THE OPERATION OF ADJACENT PROPERTIES UNLESS A UTILITY OUTAGE HAS BEEN APPROVED IN ADVANCE.
7. SEQUENCE WORK TO ENSURE THAT UTILITY SERVICES, INCLUDING FIRE HYDRANTS, REMAIN OPERATIONAL DURING CONSTRUCTION.
8. RESTORE ACCESS ROADS AND STAGING AREAS USED BACK TO THEIR PRE-CONSTRUCTION CONDITION OR BETTER. VEGETATE DISTURBED AREAS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
9. TAKE ADEQUATE PROTECTIVE MEASURES TO ENSURE THAT EXISTING PAVEMENT SURFACES ARE NOT DAMAGED FROM TRACKED CONSTRUCTION EQUIPMENT OR OTHER POSSIBLE SOURCE WHEN EQUIPMENT IS BEING MOVED. REPAIR PAVED AREAS DAMAGED DURING CONSTRUCTION TO THEIR PRE-CONSTRUCTION CONDITION OR BETTER.
10. EXISTING PAVEMENTS AND OTHER AREAS ADJACENT TO THE SITE MUST BE KEPT CLEAN. DO NOT ALLOW BUILD UP OF SOIL, MUD, DUST OR OTHER DEBRIS.
11. CONTRACTOR IS RESPONSIBLE FOR SURVEYING AND STAKING TO COMPLETE THE WORK.
12. MATERIAL QUANTITIES INDICATED ON THIS PLAN SET ARE FOR REFERENCE ONLY. CONTRACTOR MUST VERIFY MATERIAL QUANTITIES SHOWN.
13. KEEP REDLINE MARK-UPS OF CHANGES MADE FROM THE APPROVED PLAN AND PROVIDE COPY OF REDLINES TO ENGINEER UPON PROJECT COMPLETION.
14. THE PROJECT DRAINS TO BURNT HOUSE BRANCH (SC;NSW) WITHIN THE WHITE OAK RIVER BASIN.

EXISTING CONDITION NOTES:

1. SEE SHEETS VF100 THROUGH VF101 FOR EXISTING CONDITIONS AND SURVEY INFORMATION.

OFFSITE BORROW AREA NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ENSURING OFFSITE BORROW AREA HAS AN APPROVED EROSION CONTROL PERMIT AND APPROPRIATE MEASURES IN PLACE PRIOR TO LAND DISTURBING ACTIVITY.
2. NO BORROW MATERIALS ARE AVAILABLE ON GOVERNMENT PROPERTY.

DEMOLITION PLAN NOTES:

1. LOCATE UNDERGROUND UTILITIES AND COORDINATE DEMOLITION AND / OR RELOCATION WORK. SPECIFICALLY TAKE EXTRA CAUTIONARY MEASURES TO PREVENT DISRUPTION OF TELECOM FIBER IN THE PROJECT AREA. ONCE LOCATED IN THE FIELD, POSITIVE VERIFICATION BY POTHOLING IS REQUIRED. REPORT CONFLICTS OR DISCREPANCIES TO ENGINEER.
2. LIMITS OF DEMOLITION AND DIMENSIONS ARE SHOWN FOR GENERAL REFERENCE. CONTRACTOR MUST BE RESPONSIBLE FOR REMOVAL OF ITEMS, INCLUDING EXCAVATED MATERIALS NECESSARY TO COMPLETE WORK WITHIN THIS CONTRACT.
3. WHERE ASPHALT/CONCRETE DEMOLITION IS REQUIRED, USE A SAW CUT AT THE LIMITS OF DEMOLITION OR NEAREST JOINT TO OBTAIN A CLEAN VERTICAL EDGE.
4. DEDICATED DEMOLITION AND OTHER WASTE AREAS/EARTHEN MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50' FROM STORMDRAINS OR STREAMS.
5. REPORT UNSUITABLE SOILS, CONTAMINATED SOILS, AND BURIED CONCRETE AND DEBRIS TO THE CONTRACTING OFFICER.
6. CONTRACTOR MUST PROVIDE TEMPORARY THRUST BLOCKS AND TEMPORARILY CAP WATERLINES FOR SEQUENCING OF WATERLINE DEMOLITION AND INSTALLATION OF NEW TEES AND FITTINGS.
7. CONTRACTOR MUST SEQUENCE DEMOLITION OF STORM AND SANITARY SEWER TO ENSURE SYSTEMS REMAIN ONLINE DURING WORK. CONTRACTOR MUST PROVIDE TEMPORARY CAPS AND PLUGS FOR SEQUENCING OF DEMOLITION AND NEW WORK.
8. UNDERGROUND UTILITIES SHOWN ON THE DEMOLITION PLANS MAY EXTEND FURTHER THAN SHOWN. CONTRACTOR IS RESPONSIBLE FOR COMPLETE REMOVAL OF UTILITIES WITHIN THE ENTIRE PROJECT SITE UNLESS OTHERWISE NOTED.

SIGNAGE, STRIPING, AND MARKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR PEDESTRIAN AND VEHICULAR TRAFFIC DETOURS AND MUST USE APPROPRIATE SIGNAGE AND BARRICADES IN ACCORDANCE WITH BASE, STATE, AND FEDERAL REQUIREMENTS.
2. ROAD AND LANE CLOSURES MUST BE REQUESTED AND APPROVED BY THE CONTRACTING OFFICER PRIOR TO CLOSING OF ROADWAYS.
3. ROAD CLOSURES MUST BE SUBMITTED TO THE CONTRACTING OFFICER A MINIMUM OF 15 DAYS PRIOR TO THE REQUIRED DATE OF CLOSURE AND MUST INCLUDE A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH MUTCD AND EM 385-1-1.
4. TRAFFIC CONTROL METHODS AND DEVICES, BOTH TEMPORARY AND PERMANENT, MUST BE IN ACCORDANCE WITH THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), MOST RECENT EDITION AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT).
5. USE THE COLOR WHITE FOR PAVEMENT MARKINGS AND SYMBOLS UNLESS OTHERWISE NOTED.
6. DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.
7. DO NOT PLACE PAVEMENT MARKING SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CONCRETE PAVEMENTS UNLESS APPROVED BY THE ENGINEER.
8. CONFORM SYMBOLS TO THE NCDOT AND MUTCD STANDARDS, IN ADDITION TO PROJECT SPECIFICATIONS AND DETAILS.
9. SEE SIGNAGE & PAVEMENT MARKINGS ON SITE PLAN AND DETAIL SHEETS.
10. PAVEMENT MARKINGS MUST BE COLORED PER THE PLANS. PAVEMENT MARKINGS LOCATED IN PARKING AREAS MUST BE WATER-BASED. CROSSWALKS AND PAVEMENT MARKINGS IN TRAFFIC AREAS MUST BE THERMOPLASTIC.
11. EXISTING PAVEMENT MARKINGS IN THE VICINITY OF THE PROJECT LIMITS THAT ARE DAMAGED DURING CONSTRUCTION MUST BE REPAIRED OR REPLACED TO THE CONTRACTING OFFICER'S SATISFACTION.

SIDEWALK AND PAVING NOTES:

1. COMPLY WITH THE CURRENT NCDOT STANDARDS AND SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE NOTED.
2. INSTALL EXPANSION JOINT WITH THICKENED EDGE WHERE CONCRETE PAVEMENT ABUTS BUILDINGS, MANHOLES, INLETS, AND OTHER STRUCTURES IN THE PAVEMENT UNLESS NOTED OTHERWISE.
3. FREE CONCRETE PAVEMENT EDGES THAT ABUT GRAVEL OR ASPHALT PAVEMENT AREAS MUST BE THICKENED.
4. CONSTRUCTION JOINTS MUST BE USED AT THE END OF EACH DAY'S PLACING OPERATIONS AND WHEN CONCRETE PLACEMENT IS INTERRUPTED FOR 30 MINUTES OR LONGER.
5. ODD SHAPED SLABS (WHERE L:W RATIO IS GREATER THAN 1.25) AND SLABS WITH PENETRATIONS (FOR UTILITIES, BASINS, BOLLARDS, ETC) MUST BE REINFORCED WITH WWF (6X6-W2.1X2.1) IN CENTER OF SLAB.
6. REFER TO PROJECT SPECIFICATIONS FOR SPACING AND DIMENSIONS OF CONSTRUCTION AND EXPANSION JOINTS.

STORMWATER AND GRADING NOTES:

1. THERE IS AN EXISTING STORMWATER PERMIT (SW8 060145) FOR THE PROJECT AREA.
2. NO INSTALLATION OF IMPERVIOUS SURFACES IN EXCESS OF 10,000 SF MUST BE DONE PRIOR TO OBTAINING APPROVAL FROM NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ).
3. CUT OR FILL SLOPES MUST BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
4. DURING CONSTRUCTION, PERFORM GRADING IN A MANNER AND SEQUENCE THAT WILL PROVIDE PROPER DRAINAGE.
5. ADJUST AND/OR CUT EXISTING PAVEMENT TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
6. FOR NEW BUILDINGS, PROVIDE A MINIMUM 5% SLOPE AWAY FROM THE BUILDING FOR THE FIRST 10-FEET AND ASSURE THAT FINISHED FLOOR ELEVATIONS ARE A MINIMUM OF 6-INCHES ABOVE THE ADJACENT SITE GRADE IN NON-PAVED AREAS.
7. STORM PIPE MUST BE CLASS III REINFORCED CONCRETE PIPE (RCP), UNLESS OTHERWISE NOTED ON THE PLANS.
8. UPON THE COMPLETION OF CONSTRUCTION AND SITE STABILIZATION, NEW PIPES AND EXISTING PIPES IMPACTED BY CONSTRUCTION MUST BE CLEANED TO REMOVE ACCUMULATED SILT, SEDIMENT AND DEBRIS.
9. STORM PIPE ENTERING STRUCTURES (NEW AND EXISTING) MUST BE CUT FLUSH TO INSIDE OF THE BOX AND GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT; MAXIMUM PROTRUSION MUST BE 6 INCHES OR LESS.
10. STORMWATER STRUCTURES IN PAVED AREAS MUST BE FLUSH WITH PAVEMENT AND BE HEAVY-DUTY TRAFFIC RATED.

GENERAL UTILITY NOTES:

1. UTILITY MATERIALS, CONSTRUCTION, TESTING AND WORKMANSHIP MUST CONFORM TO THE PROJECT SPECIFICATIONS, UFC STANDARDS, AND MUST MEET OR EXCEED NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY AND CAMP LEJEUNE STANDARDS AND SPECIFICATIONS.
2. A NORTH CAROLINA LICENSED UTILITY CONTRACTOR MUST PERFORM UTILITY WORK INVOLVED IN CONSTRUCTING THIS PROJECT.
3. COORDINATE WITH THE UTILITY PROVIDERS FOR REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
4. ISOLATE NEW PIPING FROM EXISTING PIPING UNTIL NEW PIPING HAS BEEN TESTED, CERTIFIED TO UTILITY PROVIDER AND ACCEPTED FOR SERVICE.
5. FIELD VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITY LINES PRIOR TO THE INSTALLATION OF NEW LINES.
6. FILL MATERIAL IS MUST BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF UTILITIES. IF NOT, CONTRACTOR MUST ENSURE THAT MINIMUM COVER REQUIREMENTS ARE MET AND THAT UTILITIES ARE ADEQUATELY PROTECTED.
7. ADJUST UTILITY STRUCTURE RIM ELEVATIONS TO MATCH FINAL ELEVATIONS.
8. NOTIFY THE UTILITY PROVIDER'S INSPECTORS AND CONTRACTING OFFICER, AND ENGINEER AT LEAST 72 HOURS BEFORE CONNECTING TO EXISTING LINE AND/OR BEGINNING UTILITY LINE INSTALLATION.
9. NOTIFY AND RECEIVE APPROVAL FROM THE UTILITY PROVIDER'S INSPECTORS AND CONTRACTING OFFICER AT LEAST 15 DAYS PRIOR TO UTILITY DISRUPTIONS.
10. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF UTILITIES. DISCREPANCIES MUST BE BROUGHT TO ENGINEER'S ATTENTION IMMEDIATELY.
11. THE UTILITY DRAWINGS DO NOT SHOW EVERY OFFSET, TRANSITION, AND FITTING THAT MAY BE REQUIRED. DETERMINE AND PROVIDE FITTINGS AND CONCRETE THRUST BLOCKS NECESSARY FOR COMPLETION OF THE SYSTEM.
12. NATURAL GAS SERVICE TO BUILDINGS WILL BE DESIGNED AND INSTALLED BY PIEDMONT NATURAL GAS (PNG). GAS LINES MUST HAVE A MINIMUM 3' OF COVER.
13. PROVIDE EXTERIOR CORROSION PROTECTION ON UNDERGROUND METALLIC PIPE LINES UNLESS OTHERWISE NOTED.
14. UNDERGROUND UTILITIES MUST BE INSTALLED A MINIMUM OF 10 FEET FROM NEW OR EXISTING FOUNDATIONS.

WATER NOTES:

1. BACKFLOW PREVENTION ASSEMBLIES AND METERS MUST BE LOCATED WITHIN THE BUILDING MECHANICAL ROOMS UNLESS LOCATED OTHERWISE ON PLANS.
2. MINIMUM UTILITY SEPARATIONS
   SANITARY SEWER - 10-FEET (LATERALLY)
   - 18-INCHES (VERTICAL - WATER OVER SEWER)
   STORM SEWER - 18-INCHES (VERTICAL)
3. WHERE A WATER MAIN PASSES OVER A SEWER, AND THE VERTICAL SEPARATION IS LESS THAN 18" OR WHERE WATER PASSES UNDER SEWER, THE SEWER AND WATERMAIN MUST BOTH BE DUCTILE IRON PIPE FOR A DISTANCE OF 10' ON EACH SIDE OF THE CROSSING (20' LENGTH CENTERED AT CROSSING - NO JOINTS).
4. WATERLINES MUST HAVE A MINIMUM OF 36-INCHES OF COVER FROM FINISHED GRADE, UNLESS DUCTILE IRON IS SPECIFIED.
5. WATERLINES MUST HAVE A MINIMUM OF 18-INCHES OF SEPARATION BETWEEN UNDERGROUND POWER AND COMMUNICATION LINES. COORDINATE WITH THE SITE ELECTRICAL/COMMUNICATIONS CONTRACTOR.
6. WHERE A WATERLINE PASSES UNDER A STORM DRAIN PIPE, THE WATERLINE MUST MAINTAIN A MINIMUM OF 18-INCHES OF VERTICAL SEPARATION FOR A DISTANCE OF 10' ON EACH SIDE OF THE CROSSING (20' LENGTH CENTERED AT CROSSING - NO JOINTS).
7. WATERLINES MUST HAVE A MINIMUM OF 18-INCHES OF SEPARATION FROM GAS LINES. COORDINATE WITH SITE GAS CONTRACTOR.

SANITARY SEWER NOTES:

1. CLEANOUT SYMBOLS SHOWN REPRESENT THE LOCATION OF SURFACE ACCESS POINTS. CONTRACTOR MUST LOCATE WYE APPROPRIATELY BASED ON PIPE SIZE AND PIPE DEPTH.
2. MAXIMUM DISTANCE BETWEEN CLEANOUTS ON SERVICE LINES IS 100-FEET. CLEANOUTS MUST BE PLACED AT VERTICAL AND HORIZONTAL CHANGES OF DIRECTION.
3. MANHOLES AND CLEANOUTS LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS MUST BE SET FLUSH TO FINISHED GRADE AND BE HEAVY-DUTY TRAFFIC RATED (HS-20).
4. MANHOLES AND CLEANOUTS IN UNPAVED AND NON-TRAFFIC AREAS MUST BE SET 1-INCH ABOVE FINISHED GRADE.
5. SEWER LINES MUST HAVE A MINIMUM OF 36-INCHES OF COVER FROM FINISHED GRADE UNLESS DUCTILE IRON PIPE.
6. MINIMUM UTILITY SEPARATIONS:
   WATER - SEE WATER NOTES
   STORM SEWER - 24-INCHES VERTICAL
7. SEWER LINES MUST HAVE A MINIMUM OF 18-INCHES OF SEPARATION FROM UNDERGROUND POWER AND COMMUNICATION LINES. COORDINATE WITH SITE ELECTRICAL/COMMUNICATION CONTRACTOR.
8. SEWER LINES MUST HAVE A MINIMUM OF 18-INCHES OF SEPARATION FROM GAS LINES. COORDINATE WITH PIEDMONT NATURAL GAS (PNG).

EROSION CONTROL NOTES:

1. TOTAL DISTURBED AREA IS 5.06 AC.
2. NO DISTURBANCE MUST BE DONE PRIOR TO OBTAINING APPROVAL FROM NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ).
3. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN ACCORDANCE WITH THE NORTH CAROLINA SEDIMENTATION AND EROSION CONTROL DESIGN MANUAL (LATEST EDITION).
4. DIMENSIONS AND GRADES SHOWN ON THE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IN WRITING IF DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES.
5. PROVIDE POSITIVE DRAINAGE AWAY FROM THE SITE.
6. CONTRACTOR TO NOTIFY PWD, DESIGN BRANCH (TALIA.PRENDERGAST@USMC.MIL) AND EMD, COMPLIANCE BRANCH (MICHAEL.TAYLOR@USMC.MIL) A MINIMUM OF 48 HOURS PRIOR TO LAND DISTURBING ACTIVITIES.
7. CONTRACTOR MUST PROVIDE A MINIMUM 48 HOUR NOTICE TO NCDEQ WILMINGTON REGIONAL OFFICE PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.

SEQUENCE OF LAND DISTURBANCE:

1. PRECONSTRUCTION CONFERENCE MUST BE HELD PRIOR TO THE BEGINNING OF WORK.
2. DETERMINE AND MARK LIMITS OF DISTURBANCE. INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND TEMPORARY SILT FENCE AND SILT FENCE ROCK OUTLETS.
3. PROVIDE STORMDRAIN INLET PROTECTION AT EXISTING INLETS.
4. CONSTRUCT STRUCTURAL BMPS INCLUDING BUT NOT LIMITED TO SEDIMENT TRAPS, SEDIMENT BASINS, OUTLET STRUCTURES, AND SKIMMER DEWATERING DEVICES.
5. INSTALL NEW STORM DRAIN STRUCTURES, OUTLET STRUCTURES AND PIPES, PROVIDE INLET PROTECTION AT NEW STORM DRAIN INLETS.
6. BRING SITE TO FINAL GRADE. SPREAD STOCKPILED TOPSOIL OVER DISTURBED AREAS AFTER VERTICAL CONSTRUCTION IS COMPLETE.
7. INSPECT AND MAINTAIN EROSION CONTROL DEVICES EVERY 7 DAYS AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1.0" OR GREATER).
8. PLACE TEMPORARY SEEDING, INCLUDING MULCHING AND CRIMPING, IN AREAS THAT ARE LEFT IDLE FOR MORE THAN 14 DAYS.
9. PERMANENT GRASS MUST BE INSTALLED PER PROJECT SPECIFICATIONS FOR AREAS AT FINAL GRADE AND IN SEASON. FERTILIZE, WATER AND REPLACE TO ESTABLISH A VIGOROUS STAND OF GRASS. TEMPORARY IRRIGATION MAY BE REQUIRED UNTIL GRASS IS FULLY ESTABLISHED.
10. AFTER COMPLETION OF CONSTRUCTION AND THE SITE IS STABILIZED, REMOVE ACCUMULATED SEDIMENT FROM SILT FENCE AND OTHER EROSION CONTROL MEASURES. GRASS THESE AREAS IMMEDIATELY AND REMOVE EROSION CONTROL MEASURES.
11. REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM WET SWALE. RESHAPE WET SWALE TO RESTORE DESIGN GEOMETRY. INSTALL FINAL LAYER OF TOPSOIL AND WETLAND PLANTINGS. REMOVE TEMPORARY SKIMMER AND INSTALL FINAL DRAWDOWN PIPE WITH WIRE SCREEN. PROVIDE PERMANENT SODDING FOR AREAS NOT RECEIVING WETLAND PLANTS.
12. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING SEDIMENT OFFSITE AND DISPOSING OF SEDIMENT IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

LEGEND:

EXISTING FEATURES: / DEMOLISHED FEATURES:

PROJECT BOUNDARY
BUILDING
ASPHALT PAVEMENT
CONCRETE PAVEMENT
GRAVEL
CONCRETE PAD/SIDEWALK
SIGN
PAVEMENT MARKING
FENCE
GATE
GUY WIRE(S)
BOLLARD
WATERLINE
FIRE HYDRANT
WATERLINE VALVE
WATER METER
SANITARY SEWER LINE
SANITARY SEWER MANHOLE
SANITARY SEWER CLEANOUT
UNDERGROUND COMM
COMM MANHOLE
UNDERGROUND ELECTRIC
OVERHEAD ELECTRIC
ELECTRIC MANHOLE
LIGHT POLE
POWER POLE
TRANSFORMER
TELEPHONE PEDESTAL
FENCE TIE BACK
FORCE MAIN
UNDERGROUND STEAM
STORM PIPE
DROP INLET / CATCH BASIN
ROOF DRAIN
UNDER DRAIN
STORMDRAIN MANHOLE
UNKNOWN UTILITY
RAISE/LOWER EXISTING TO MEET MIN. DEPTH
TREE/SHRUBS
CONTOURS
SURVEY BENCHMARK (BM-XXX)
GAS/FUEL LINE
TREE LINE
POST INDICATOR VALVE
WETLAND MARSH
DITCH LINE

LEGEND:

NEW FEATURES:

BUILDING
BUILDING SETBACK (ATFP)
HEAVY DUTY ASPHALT PAVEMENT
NORMAL DUTY CONCRETE PAVEMENT
NORMAL DUTY ASPHALT PAVEMENT
CURB AND GUTTER
STANDARD CURB
VALLEY CURB
LANDSCAPE ROCK MULCH
CONCRETE SIDEWALK
BOLLARD
DOUBLE SWING GATE
CHAINLINK FENCE
ORNAMENTAL FENCE
GUARDRAIL
PARKING STRIPING
CONCRETE WHEEL STOPS
SIGN
LIGHT POLE
WATER LINE
FDC
PIPE BENDS AND TEES
WATERLINE VALVE
FIRE HYDRANT
SANITARY SEWER LINE
SANITARY SEWER MANHOLE
SANITARY SEWER CLEANOUT
UNDERGROUND COMM LINE
UNDERGROUND POWER
GAS/FUEL LINE (VARIES SEE PLANS)
STORMDRAIN PIPE
ROOF DRAIN LINE
UNDER DRAIN
STORMDRAIN INLET
TRENCH DRAIN
STORMDRAIN CLEANOUT
STORMDRAIN JUNCTION BOX
FLARED END SECTION
DITCH
CONTOURS
SPOT ELEVATIONS (9.70EX, 9.40)
TEMPORARY CONS. ENTRANCE
SILT FENCE
INLET PROTECTION
SKIMMER
TEMPORARY DIVERSION
LIMITS OF DISTURBANCE (LOD)
TREE LINE

SYMBOL LEGEND:

DETAIL REFERENCE — 1 / C-500 — IDENTIFICATION NUMBER; SHEET # FOR SECTION/DETAIL

SECTION — A1 / C-500 — IDENTIFICATION NUMBER; SHEET # FOR SECTION/DETAIL

VIEW TITLE — 1 VIEW TITLE, 1" = 20' — SCALE; PLAN NORTH

DETAIL TITLE — 1 DETAIL TITLE, NOT TO SCALE — SCALE; IDENTIFICATION NUMBER

ABBREVIATIONS

A/C	AIR CONDITIONER
AST	ABOVEGROUND STORAGE TANK
ATFP	ANTI TERRORISM FORCE PROTECTION
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BW	BARBED WIRE
C&G	CURB AND GUTTER
CC	CONCRETE CURB
CDI	CURB DROP INLET
CJ	CONTRACTION JOINT
CLF	CHAIN LINK FENCE
CMH	COMMUNICATION MANHOLE
CONC	CONCRETE
D/B	DESIGN/BUILD
DCJ	DOWELED CONSTRUCTION JOINT
DI	DROP INLET
DIP	DUCTILE IRON PIPE
DUMP	DUMPSTER
E	EAST
EHH	ELECTRICAL HANDHOLE
EG	EXISTING GAS
EJ	EXPANSION JOINT
ELEC	ELECTRIC
EMH	ELECTRICAL MANHOLE
EL	ELEVATION
FES	FLARED END SECTION
FFE	FINISH FLOOR ELEVATION
FL	FLOW LINE
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
IE	INVERT ELEVATION
JB	JUNCTION BOX
LP	LIGHT POLE
MAT	MATERIAL
MH	MANHOLE
MOF	METAL ORNAMENTAL FENCE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NCDEQ	NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY
NCDOT	NORTH CAROLINA DIVISION OF TRANSPORTATION
NE	NORTHEAST
NIC	NOT IN CONTRACT
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NW	NORTHWEST
PNG	PIEDMONT NATURAL GAS
PP	POWER POLE
PT	PHYSICAL TRAINING
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
S	SOUTH
SCM	STORMWATER CONTROL MEASURE
SDMH	STORM DRAIN MANHOLE
SE	SOUTHEAST
SEP	SEPARATION
SMH	SANITARY SEWER MANHOLE
STA	STATION
STY	STORY
SW	SOUTHWEST
TC	TOP OF CURB
TD	TRENCH DRAIN
TE	THICKENED EDGE
TEJ	THICKENED EDGE EXPANSION JOINT
THH	TELECOMMUNICATION HANDHOLE
TMH	TELECOMMUNICATION MANHOLE
TRANS	TRANSFORMER
TSB	TEMPORARY SEDIMENT BASIN
TYP	TYPICAL
UG	UNDERGROUND
UNK	UNKNOWN
W	WEST
W/BW	WITH BARBED WIRE
WV	WATER VALVE
YI	YARD INLET

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HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038615 MATTHEW T. HALEY 10/24/23

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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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CIVIL GENERAL NOTES

C-001

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY

SELF-INSPECTION REPORT FOR LAND DISTURBING ACTIVITY AS REQUIRED BY NCGS 113A-54.1 15A NCAC 04B .0131 SELF-INSPECTIONS

WHERE INSPECTIONS ARE REQUIRED BY G.S. 113A-54.1(E), THE FOLLOWING APPLY:

(1) THE PERSON WHO PERFORMS THE INSPECTION SHALL MAKE A RECORD OF THE SITE INSPECTION BY DOCUMENTING THE FOLLOWING ITEMS:

(A) ALL OF THE EROSION AND SEDIMENTATION CONTROL MEASURES, PRACTICES AND DEVICES, AS CALLED FOR IN A CONSTRUCTION SEQUENCE CONSISTENT WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN, INCLUDING BUT NOT LIMITED TO SEDIMENTATION CONTROL BASINS, SEDIMENTATION TRAPS, SEDIMENTATION PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SEDIMENT FENCE OR BARRIERS, ALL FORMS OF INLET PROTECTION, STORM DRAINAGE FACILITIES, ENERGY DISSIPATERS, AND STABILIZATION METHODS OF OPEN CHANNELS, HAVE INITIALLY BEEN INSTALLED AND DO NOT SIGNIFICANTLY DEVIATE (AS DEFINED IN SUB-ITEM (1)(E) OF THIS RULE) FROM THE LOCATIONS, DIMENSIONS AND RELATIVE ELEVATIONS SHOWN ON THE APPROVED EROSION AND SEDIMENTATION PLAN. SUCH DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING EACH MEASURE OR PRACTICE SHOWN ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT THAT LISTS EACH MEASURE, PRACTICE OR DEVICE SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THIS DOCUMENTATION IS REQUIRED ONLY UPON THE INITIAL INSTALLATION OF THE EROSION AND SEDIMENTATION CONTROL MEASURES, PRACTICES AND DEVICES AS SET FORTH BY THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR IF THE MEASURES, PRACTICES AND DEVICES ARE MODIFIED AFTER INITIAL INSTALLATION;

(B) THE COMPLETION OF ANY PHASE OF GRADING FOR ALL GRADED SLOPES AND FILLS SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN, SPECIFICALLY NOTING THE LOCATION AND CONDITION OF THE GRADED SLOPES AND FILLS. SUCH DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT. THE LOCATION OF TEMPORARY OR PERMANENT GROUND COVER, AND THAT THE INSTALLATION OF THE GROUND COVER DOES NOT SIGNIFICANTLY DEVIATE (AS DEFINED IN SUB-ITEM (1)(E) OF THIS RULE) FROM THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. SUCH DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT;

(C) THAT MAINTENANCE AND REPAIR REQUIREMENTS FOR ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES, PRACTICES AND DEVICES HAVE BEEN PERFORMED. SUCH DOCUMENTATION SHALL BE ACCOMPLISHED BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT (THE GENERAL STORM WATER PERMIT MONITORING FORM MAY BE USED TO VERIFY THE MAINTENANCE AND REPAIR REQUIREMENTS); AND

(D) ANY SIGNIFICANT DEVIATIONS FROM THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN, CORRECTIVE ACTIONS REQUIRED TO CORRECT THE DEVIATION AND COMPLETION OF THE CORRECTIVE ACTIONS. SUCH DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT. A SIGNIFICANT DEVIATION MEANS AN OMISSION, ALTERATION OR RELOCATION OF AN EROSION OR SEDIMENTATION CONTROL MEASURE THAT PREVENTS THE MEASURE FROM PERFORMING AS INTENDED.

(2) THE DOCUMENTATION, WHETHER ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR AN INSPECTION REPORT, SHALL INCLUDE THE NAME, ADDRESS, AFFILIATION, TELEPHONE NUMBER, AND SIGNATURE OF THE PERSON CONDUCTING THE INSPECTION AND THE DATE OF THE INSPECTION. ANY RELEVANT LICENSES AND CERTIFICATIONS MAY ALSO BE INCLUDED. ANY DOCUMENTATION OF INSPECTIONS THAT OCCUR ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN SHALL OCCUR ON A SINGLE COPY OF THE PLAN AND THAT PLAN SHALL BE MADE AVAILABLE ON THE SITE. ANY INSPECTION REPORTS SHALL ALSO BE MADE AVAILABLE ON THE SITE.

(3) THE INSPECTION SHALL BE PERFORMED DURING OR AFTER EACH OF THE FOLLOWING PHASES OF A PLAN:

(A) INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES;

(B) CLEARING AND GRUBBING OF EXISTING GROUND COVER;

(C) COMPLETION OF ANY PHASE OF GRADING OF SLOPES OR FILLS THAT REQUIRES PROVISION OF TEMPORARY OR PERMANENT GROUND COVER PURSUANT TO G.S. 113A-57(2);

(D) COMPLETION OF STORM DRAINAGE FACILITIES;

(E) COMPLETION OF CONSTRUCTION OR DEVELOPMENT; AND

(F) QUARTERLY UNTIL THE ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION OR UNTIL THE FINANCIALLY RESPONSIBLE PARTY HAS CONVEYED OWNERSHIP OR CONTROL OF THE TRACT OF LAND FOR WHICH THE EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN APPROVED AND THE AGENCY THAT APPROVED THE PLAN HAS BEEN NOTIFIED. IF THE FINANCIALLY RESPONSIBLE PARTY HAS CONVEYED OWNERSHIP OR CONTROL OF THE TRACT OF LAND FOR WHICH THE EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN APPROVED, THE NEW OWNER OR PERSON IN CONTROL SHALL CONDUCT AND DOCUMENT INSPECTIONS QUARTERLY UNTIL THE ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.

A.S. 113A-57 NO LAND-DISTURBING ACTIVITY SUBJECT TO THIS ARTICLE SHALL BE UNDERTAKEN EXCEPT IN ACCORDANCE WITH THE FOLLOWING MANDATORY REQUIREMENTS:

(1) PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING THE COMPLETION OF CONSTRUCTION OR DEVELOPMENT (FINAL GRADE).

(2) THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

ALL PERIMETER DIKES, DITCHES, SWALES, PERIMETER SLOPES OR SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS.

MAINTENANCE DURING ESTABLISHMENT PERIOD

MAINTENANCE OF THE SEEDED AREAS SHALL INCLUDE PROTECTING EMBANKMENTS AND DITCHES FROM SURFACE EROSION; MAINTAINING EROSION CONTROL MATERIALS AND MULCH; PROTECTING INSTALLED AREAS FROM TRAFFIC; MOWING; WATERING; AND POST-FERTILIZATION.

MOWING

A. TURF AREAS: TURF AREAS SHALL BE MOWED TO A MINIMUM 3 INCH HEIGHT WHEN THE TURF IS A MAXIMUM 4 INCHES HIGH. CLIPPINGS SHALL BE REMOVED WHEN THE AMOUNT CUT PREVENTS SUNLIGHT FROM REACHING THE GROUND SURFACE.

B. EROSION CONTROL AREAS: EROSION CONTROL AREAS SHALL BE MOWED TO A MINIMUM 4 INCH HEIGHT WHEN THE PLANTS ARE A MAXIMUM 8 INCHES HIGH. CLIPPINGS SHALL BE REMOVED WHEN THE AMOUNT CUT PREVENTS SUNLIGHT FROM REACHING THE GROUND SURFACE.

POST-FERTILIZATION

AFTER THE PERMANENT GRASS HAS BEEN ACCEPTED, AND BETWEEN THE DATES OF APRIL 15 AND OCTOBER 15, APPLY 425 POUNDS OF FERTILIZER PER ACRE.

REPAIR OR REINSTALL

UNSATISFACTORY STAND OF GRASS PLANTS AND MULCH SHALL BE REPAIRED OR REINSTALLED, AND ERODED AREAS SHALL BE REPAIRED UNTIL A SATISFACTORY STAND OF GRASS RESULTS.

6.06 TEMPORARY CONSTRUCTION ENTRANCE/EXIT:

CONSTRUCTION SPECIFICATIONS

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS OR AS REQUIRED AND SMOOTH IT.
3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
4. USE GEOTEXTILE FABRIC TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.
5. WHERE CONSTRUCTION ENTRANCES CROSS EXISTING DRAINAGE SWALES OR OTHER FEATURES, INSTALL TEMPORARY TRAFFIC-RATED CULVERTS UNDERNEATH ENTRANCE TO MAINTAIN EXISTING DRAINAGE.

MAINTENANCE

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

6.12 SODDING

CONSTRUCTION SPECIFICATIONS

1. SELECT APPROPRIATE SPECIES OF SOD BASED ON CONTRACT DOCUMENTS.
2. USE ONLY HIGH QUALITY SOD OF KNOWN GENETIC ORIGIN, FREE OF NOXIOUS WEEDS, DISEASE, AND INSECT PROBLEMS. IT SHOULD APPEAR HEALTHY AND VIGOROUS AND CONFORM TO THE FOLLOWING SPECIFICATIONS:

- SOD SHOULD BE MACHINE CUT AT A UNIFORM DEPTH OF 0.5 TO 2 INCHES (EXCLUDING SHOOT GROWTH AND THATCH).
- SOD SHOULD NOT BE CUT IN EXCESSIVELY WET OR DRY WEATHER.
- SECTIONS OF SOD SHOULD BE A STANDARD SIZE AS DETERMINED BY THE SUPPLIER, UNIFORM, AND UNTORN.
- SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT, AND RETAIN THEIR SIZE AND SHAPE WHEN LIFTED BY ONE END.
- HARVEST, DELIVERY, AND INSTALLATION OF SOD SHOULD TAKE PLACE WITHIN A PERIOD OF 36 HOURS.

SOIL PREPARATION

TEST SOIL TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. SOIL TESTS MAY BE CONDUCTED BY THE STATE SOIL SCIENTIST OR A REPUTABLE COMMERCIAL LABORATORY.

INSTALL TOPSOIL AS REQUIRED BY CONTRACT DOCUMENTS. SPREAD SOIL AMENDMENTS EVENLY ACROSS THE AREA TO BE SODDED AND INCORPORATE INTO THE TOP 4 TO 8 INCHES OF SOIL BY DISKING, HARROWING, OR OTHER EFFECTIVE MEANS.

PRIOR TO LAYING SOD, CLEAR THE SOIL OF TRASH, DEBRIS, ROOTS, BRANCHES, STONES, AND CLODS LARGER THAN 2 INCHES IN DIAMETER. FILL LOW OR LEVEL LOW SPOTS IN ORDER TO AVOID STANDING WATER. RAKE OR HARROW THE SITE TO ACHIEVE A SMOOTH AND LEVEL FINAL GRADE.

COMPLETE SOIL PREPARATION BY ROLLING OR CULTIPACKING TO FIRM THE SOIL. AVOID USING HEAVY EQUIPMENT ON THE AREA, PARTICULARLY WHEN THE SOIL IS WET AS THIS MAY CAUSE EXCESSIVE COMPACTION, AND MAKE IT DIFFICULT FOR THE SOD TO TAKE ROOT.

SOD INSTALLATION

1. MOISTENING THE SOD AFTER IT IS UNROLLED HELPS MAINTAIN ITS VIABILITY. STORE IT IN THE SHADE DURING INSTALLATION.
2. RAKE THE SOIL SURFACE TO BREAK THE CRUST JUST BEFORE LAYING SOD. DURING THE SUMMER, LIGHTLY IRRIGATE THE SOIL, IMMEDIATELY BEFORE LAYING THE SOD TO COOL THE SOIL, REDUCE ROOT BURNING, AND DIE BACK.
3. DO NOT SOD ON GRAVEL, FROZEN SOILS, OR SOILS THAT HAVE BEEN TREATED RECENTLY WITH STERILANTS OR HERBICIDES.
4. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE PERPENDICULAR TO THE DIRECTION OF FLOW WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. STAGGER STRIPS IN A BRICK-LIKE PATTERN. BE SURE THAT THE SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHTLY TO PREVENT VOIDS. USE A KNIFE OR SHARP SPADE TO TRIM AND FIT IRREGULARLY SHAPED AREAS.
5. INSTALL STRIPS OF SOD WITH THEIR LONGEST DIMENSION PERPENDICULAR TO THE SLOPE. ON SLOPES 3:1 OR GREATER, OR WHENEVER EROSION MAY BE A PROBLEM, SECURE SOD WITH PEGS OR STAPLES.
6. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, ROLL SOD TO PROVIDE FIRM CONTACT BETWEEN THE ROOTS AND SOIL.
7. AFTER ROLLING, IRRIGATE UNTIL THE SOIL IS WET 4 INCHES BELOW THE SOD.
8. KEEP SODDED AREAS MOIST TO A DEPTH OF 4 INCHES UNTIL THE GRASS TAKES ROOT. THIS CAN BE DETERMINED BY GENTLY TUGGING ON THE SOD - RESISTANCE INDICATES THAT ROOTING HAS OCCURRED.
9. MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2-3 WEEKS.

MAINTENANCE

AFTER THE FIRST WEEK, WATER AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE IN THE ROOT ZONE AND PREVENT DORMANCY OF THE SOD. DO NOT REMOVE MORE THAN ONE-THIRD OF THE SHOOT IN ANY MOWING. GRASS HEIGHT SHOULD BE MAINTAINED BETWEEN 2 TO 3 INCHES UNLESS OTHERWISE SPECIFIED. AFTER THE FIRST GROWING SEASON, ESTABLISHED SOD REQUIRES FERTILIZATION, AND MAY ALSO REQUIRE LIME. FOLLOW SOIL TEST RECOMMENDATIONS.

6.14 MULCHING:

CONSTRUCTION SPECIFICATIONS

SELECT A MATERIAL BASED ON SITE AND PRACTICE REQUIREMENTS, AVAILABILITY OF MATERIAL, LABOR, AND EQUIPMENT.

BEFORE MULCHING, COMPLETE THE REQUIRED GRADING, INSTALL SEDIMENT CONTROL PRACTICES, AND PREPARE AREA FOR MULCH INSTALLATION.

ORGANIC MULCHES ARE EFFECTIVE WHERE THEY CAN BE TACKED SECURELY TO THE SURFACE. PROVIDE SUITABLE MEANS OF ANCHORING MULCH.

SPREAD MULCH UNIFORMLY BY HAND, OR WITH A MULCH BLOWER. WHEN SPREADING MULCH BY HAND, DIVIDE THE AREA TO BE MULCHED INTO SECTIONS OF APPROXIMATELY 1,000 SF AND PLACE 70-90 LBS OF STRAW (1 ½ TO 2 BALES) IN EACH SECTION TO FACILITATE UNIFORM DISTRIBUTION. AFTER SPREADING MULCH, NO MORE THAN 25% OF THE GROUND SURFACE SHOULD BE VISIBLE.

CHEMICAL MULCHES MAY BE EFFECTIVE FOR SOIL STABILIZATION IF USED BETWEEN MAY 1 AND JUNE 15, OR SEPT. 15 AND OCT. 15, PROVIDED THAT THEY ARE USED ON SLOPES NO STEEPER THAN 4:1, AND THAT PROPER SEEDBED PREPARATION HAS BEEN ACCOMPLISHED, INCLUDING SURFACE ROUGHENING WHERE REQUIRED.

MAINTENANCE

INSPECT ALL MULCHES PERIODICALLY, AND AFTER RAINSTORMS TO CHECK FOR RILL EROSION, DISLOCATION OR FAILURE. WHERE EROSION IS OBSERVED, APPLY ADDITIONAL MULCH. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE, AND REINSTALL MULCH. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

6.15 RIP-RAP OUTLET PROTECTION:

CONSTRUCTION SPECIFICATIONS

SUBGRADE PREPARATION

PREPARE THE SUBGRADE FOR RIP-RAP AND CLOTH FILTER TO THE REQUIRED LINES AND GRADES SHOWN ON THE PLANS. COMPACT ANY FILL MATERIAL REQUIRED IN THE SUBGRADE TO A DENSITY APPROXIMATING THAT OF THE SURROUNDING UNDISTURBED MATERIAL OR OVERFILL DEPRESSIONS WITH RIP-RAP. REMOVE BRUSH, TREES, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. CUT THE SUBGRADE SUFFICIENTLY DEEP THAT THE FINISHED GRADE OF THE RIP-RAP WILL BE AT THE ELEVATION OF THE SURROUNDING AREA. CHANNELS SHOULD BE EXCAVATED SUFFICIENTLY TO ALLOW PLACEMENT OF THE RIP-RAP IN A MANNER SUCH THAT THE FINISHED INSIDE DIMENSIONS AND GRADE OF THE RIP-RAP MEET THE DESIGN SPECIFICATIONS.

SAND AND GRAVEL FILTER BLANKET

PLACE THE FILTER BLANKET IMMEDIATELY AFTER THE GROUND FOUNDATION IS PREPARED. FOR GRAVEL, SPREAD FILTER STONE IN A UNIFORM LAYER TO THE SPECIFIED DEPTH. WHERE MORE THAN ONE LAYER OF FILTER MATERIAL IS USED, SPREAD THE LAYERS WITH MINIMAL MIXING.

SYNTHETIC FILTER FABRIC

PLACE THE CLOTH FILTER DIRECTLY ON THE PREPARED FOUNDATION. OVERLAP THE EDGES BY AT LEAST 12 INCHES AND SPACE ANCHOR PINS EVERY 3 FT ALONG THE OVERLAP. BURY THE UPSTREAM END OF THE CLOTH A MINIMUM OF 12 INCHES BELOW GROUND AND WHERE NECESSARY, BURY THE LOWER END OF THE CLOTH TO OVERLAP WITH THE NEXT SECTION AS REQUIRED.

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

WHERE LARGE STONES ARE USED OR MACHINE PLACEMENT IS DIFFICULT, A 4 INCH LAYER OF FINE GRAVEL OR SAND MAY BE NEEDED TO PROTECT THE FILTER CLOTH.

STONE PLACEMENT

PLACEMENT OF RIP-RAP SHOULD FOLLOW IMMEDIATELY AFTER PLACEMENT OF THE FILTER. PLACE RIP-RAP SO THAT IT FORMS A DENSE, WELL GRADED MASS OF STONE WITH A MINIMUM OF VOIDS. THE DESIRED DISTRIBUTION OF STONES THROUGHOUT THE MASS MAY BE OBTAINED BY SELECTIVE LOADING AT THE QUARRY, AND CONTROLLED DUMPING DURING FINAL PLACEMENT. PLACE RIP-RAP TO ITS FULL THICKNESS IN ONE OPERATION. DO NOT PLACE RIP-RAP BY DUMPING THROUGH CHUTES OR OTHER METHODS THAT CAUSE SEGREGATION OF STONE SIZES. TAKE CARE NOT TO DISLODGE THE UNDERLYING BASE OR FILTER WHEN PLACING THE STONES.

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

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

MAINTENANCE

IN GENERAL, ONCE A RIP-RAP INSTALLATION HAS BEEN PROPERLY DESIGNED AND INSTALLED IT REQUIRES VERY LITTLE MAINTENANCE. RIP-RAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

6.20 TEMPORARY DIVERSIONS

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

MAINTENANCE

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

6.30 GRASS LINED CHANNELS (GL):

CONSTRUCTION SPECIFICATIONS

1. REMOVE ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREAS AND DISPOSE OF PROPERLY.
2. EXCAVATE THE CHANNEL, AND SHAPE IT TO NEAT LINES AND DIMENSIONS SHOWN ON THE PLANS PLUS A 0.2-FOOT OVERCUT AROUND THE CHANNEL PERIMETER TO ALLOW FOR BULKING DURING SEEDBED PREPARATIONS AND SOD BUILDUP.
3. REMOVE AND PROPERLY DISPOSE OF ALL EXCESS SOIL SO THAT THE SURFACE WATER MAY ENTER THE CHANNEL FREELY.
4. THE PROCEDURE USED TO ESTABLISH GRASS IN THE CHANNEL WILL DEPEND ON THE SEVERITY OF THE CONDITIONS AND SELECTION OF SPECIES. PROTECT THE CHANNEL WITH MULCH OR A TEMPORARY LINER TO WITHSTAND ANTICIPATED VELOCITIES DURING THE ESTABLISHMENT PERIOD.

MAINTENANCE

DURING THE ESTABLISHMENT PERIOD, CHECK GRASSED LINED SWALES AFTER EVERY RAINFALL. AFTER GRASS IS ESTABLISHED, PERIODICALLY CHECK THE CHANNEL; CHECK IT AFTER EVERY HEAVY RAINFALL EVENT. IMMEDIATELY MAKE REPAIRS. IT IS PARTICULARLY IMPORTANT TO CHECK THE CHANNEL OUTLET AND ALL ROAD CROSSINGS FOR BANK STABILITY AND EVIDENCE OF PIPING OR SCOUR HOLES. REMOVE ALL SIGNIFICANT SEDIMENT ACCUMULATIONS TO MAINTAIN THE DESIGNED CARRYING CAPACITY. KEEP THE GRASS IN A HEALTHY, VIGOROUS CONDITION AT ALL TIMES, SINCE IT IS THE PRIMARY EROSION PROTECTION FOR THE CHANNEL.

6.41 OUTLET STABILIZATION STRUCTURE:

CONSTRUCTION SPECIFICATIONS

1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
3. FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.
4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.
5. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
6. RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.
7. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
8. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
9. IMMEDIATELY AFTER CONSTRUCTION,STABILIZE ALL DISTURBED AREASWITH VEGETATION (PRACTICES 6.10, TEMPORARY SEEDING, AND 6.11, PERMANENT SEEDING).

MAINTENANCE

INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1.0 INCH AND GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

6.51 HARDWARE CLOTH AND GRAVEL INLET PROTECTION

CONSTRUCTION SPECIFICATIONS

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

MAINTENANCE

INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1.0 INCH AND GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

6.55 ROCK PIPE INLET PROTECTION

CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. INSTALL THE CLASS B OR CLASS 1 RIP-RAP IN A SEMI-CIRCLE AROUND THE PIPE INLET. THE STONE SHOULD BE BUILT HIGHER ON EACH END WHERE IT TIES TO THE EMBANKMENT. THE MINIMUM CREST WIDTH OF THE RIP-RAP SHOULD BE 3 FEET, WITH A MINIMUM BOTTOM WIDTH OF 11 FEET, THE MINIMUM HEIGHT SHOULD BE 2 FEET, BUT ALSO 1 FOOT LOWER THAN THE SHOULDER OF THE EMBANKMENT OR DIVERSIONS.
3. A 1 FOOT THICK LAYER OF NCDOT #5 OR #57 STONE SHOULD BE PLACED ON THE OUTSIDE SLOPE OF THE RIP-RAP.
4. THE SEDIMENT STORAGE AREA SHOULD BE EXCAVATED AROUND THE OUTSIDE OF THE STONE HORSESHOE 18 INCHES BELOW NATURAL GRADE.
5. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, FILL DEPRESSION AND ESTABLISH FINAL GRADING ELEVATIONS, COMPACT AREA PROPERLY, AND STABILIZE WITH GROUND COVER.

MAINTENANCE

INSPECT ROCK PIPE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1.0 INCH AND GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PLACE THE SEDIMENT THAT IS REMOVED IN THE DESIGNATED DISPOSAL AREA AND REPLACE THE CONTAMINATED PART OF THE GRAVEL FACING.

CHECK THE STRUCTURE FOR DAMAGE. ANY RIP-RAP DISPLACED FROM THE STONE HORSESHOE MUST BE REPLACED IMMEDIATELY.

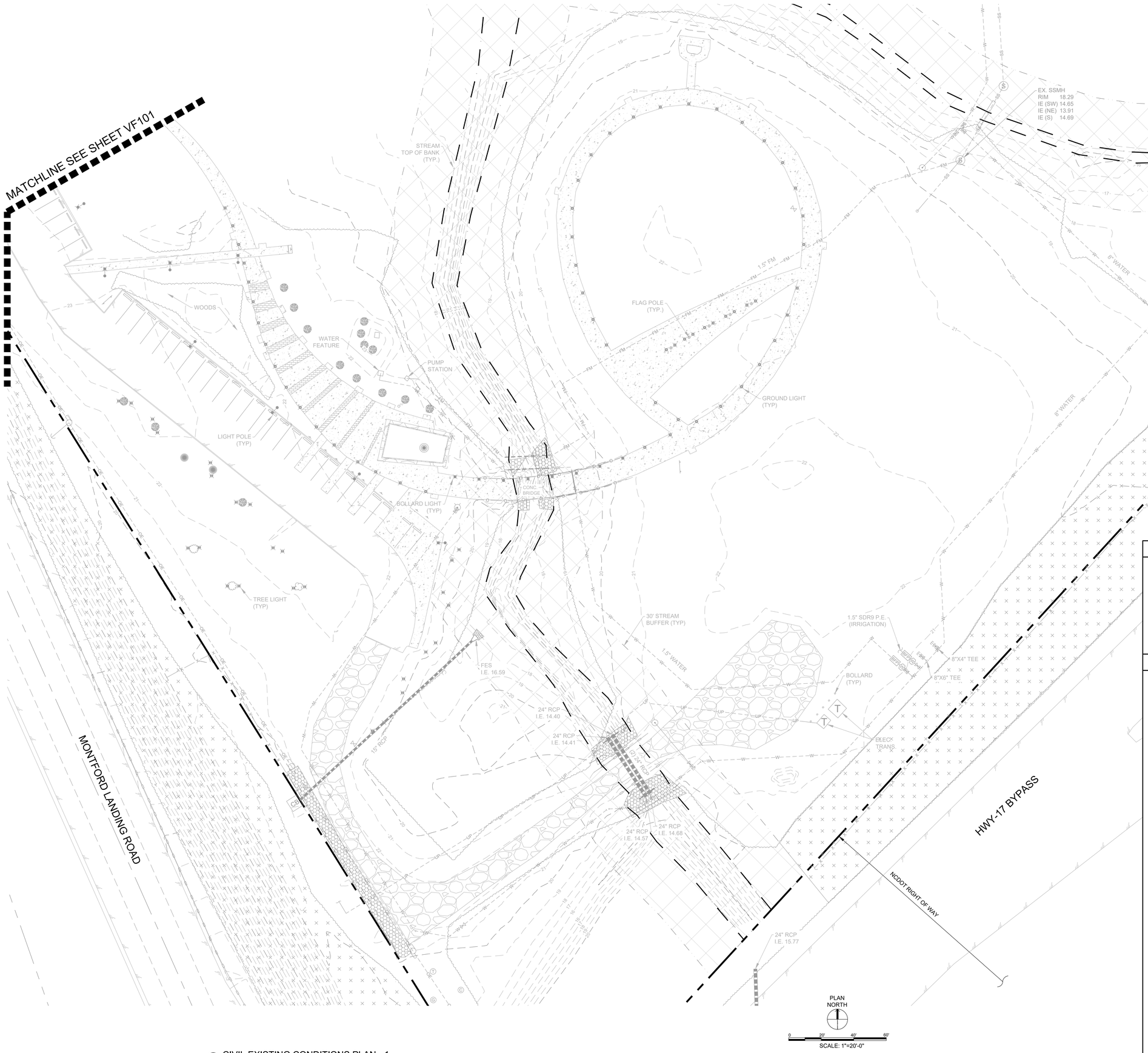
AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND PROVIDE PERMANENT GROUND COVER.

6.62 TEMPORARY SILT FENCE (SF):

CONSTRUCTION SPECIFICATIONS

MATERIALS

1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS OF ASTM D 6461. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT AT TEMPERATURE RANGE OF 0 TO 120° F.
2. ENSURE THE POSTS FOR SEDIMENT FENCES ARE 1.25 LB/LINEAR FT STEEL WITH A MINIMUM LENGTH OF 5 FT. MAKE SURE THAT STEE



1 CIVIL EXISTING CONDITIONS PLAN - 1
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001, C-002 & C-003 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SURVEY NOTES

1. EXISTING CONDITIONS SURVEY PERFORMED BY CAPE FEAR ENGINEERING IN APRIL-MAY 2023.
2. HORIZONTAL DATUM IS NAD 83 AND ELEVATIONS ARE BASED ON NAVD 88 (2011) VERTICAL DATUM.
3. UNDERGROUND UTILITIES LOCATED BY CAPE FEAR ENGINEERING USING A COMBINATION OF GPR, LOCATING EQUIPMENT, VISIBLE EVIDENCE, AND ORIGINAL PROJECT DESIGN / ASBUILT DRAWINGS.

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CONSTRUCTION DOCUMENTS

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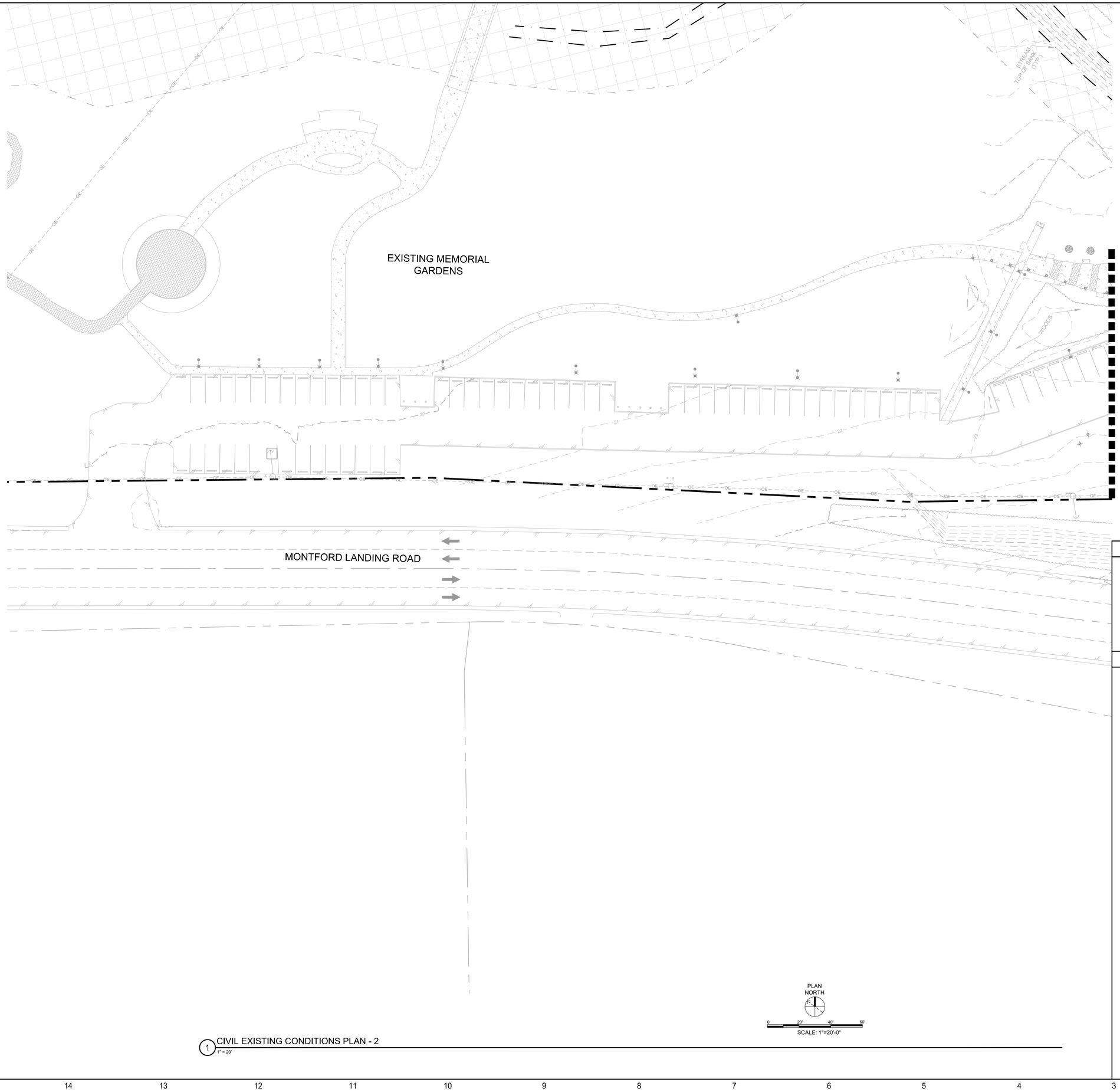
CIVIL EXISTING CONDITIONS PLAN - 1

VF100

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



1 CIVIL EXISTING CONDITIONS PLAN - 2
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001, C-002 & C-003 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SURVEY NOTES

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CIVIL EXISTING CONDITIONS PLAN - 2

VF101

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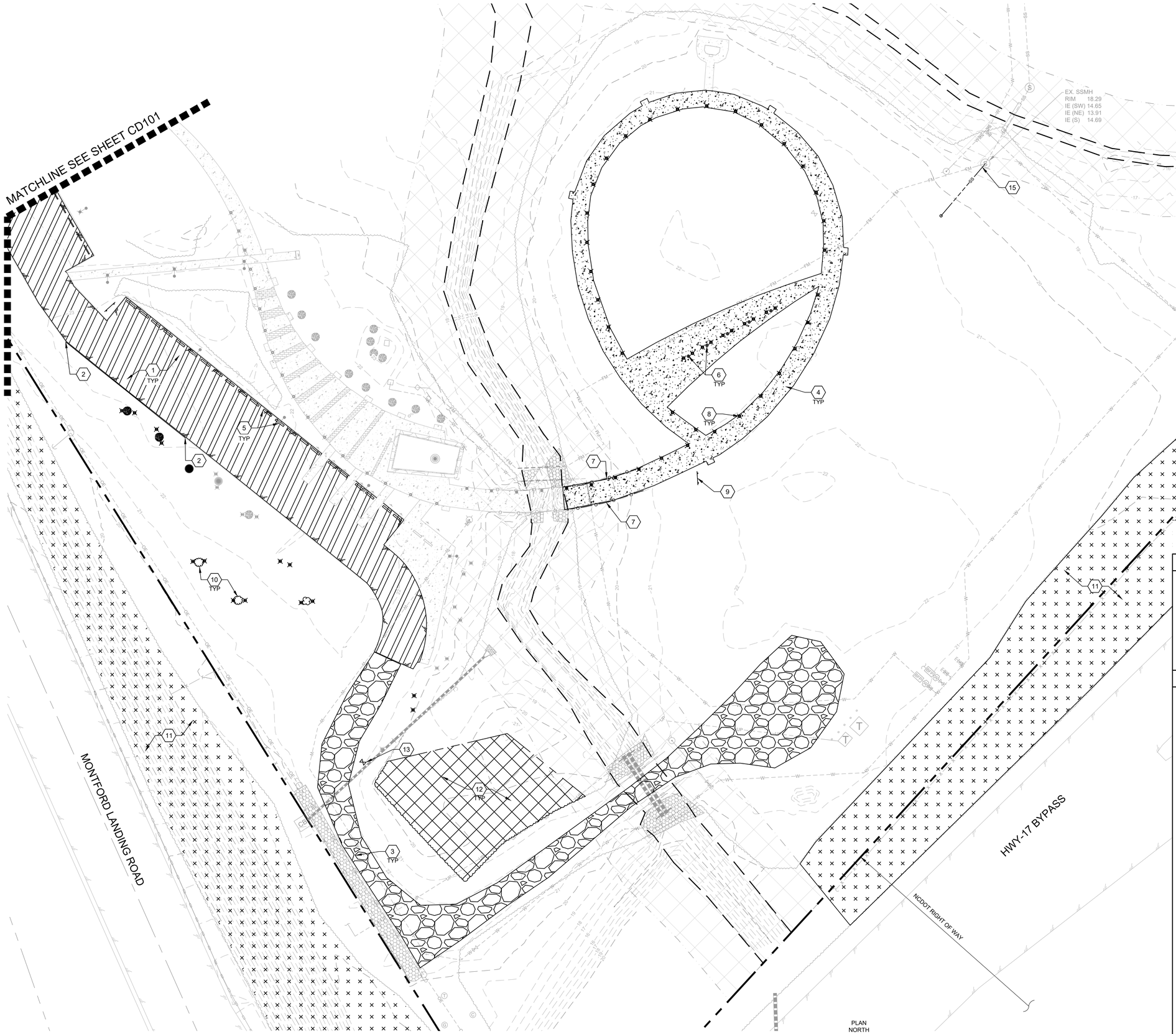

1 CIVIL DEMOLITION PLAN - 1
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT UP TO CONNECTION TO MONTFORD LANDING RD AS REQUIRED FOLLOWING CONSTRUCTION.
2. REMOVE CONCRETE RIBBON CURB.
3. REMOVE GRAVEL DRIVE.
4. REMOVE CONCRETE SIDEWALK.
5. REMOVE CONCRETE WHEEL STOP AS REQUIRED FOR PAVEMENT REPLACEMENT (STORE FOR RE-USE).
6. REMOVE FLAG POLE (STORE FOR REUSE).
7. REMOVE GUARD RAIL (STORE FOR RE-USE).
8. REMOVE BOLLARD LIGHT AND REMOVE / RELOCATE UNDERGROUND ELECTRIC AS REQUIRED (SEE ELECTRICAL PLANS).
9. REMOVE SIGN.
10. REMOVE TREE AND LANDSCAPE LIGHTING. REMOVE / RELOCATE UNDERGROUND WIRING AS REQUIRED (SEE ELECTRICAL PLANS).
11. SELECTIVE CLEARING / VEGETATION REMOVAL TO IMPROVE VISIBILITY FROM HIGHWAY.
12. CLEAR AND GRUB TREES AND VEGETATION
13. REMOVE IRRIGATION VALVE AND RELOCATE IRRIGATION LINE AS REQUIRED (NOT SHOWN).
14. EXCLUDE MILLING AND ASPHALT REPLACEMENT WHERE EXISTING GUY WIRE IS LOCATED.
15. REMOVE EXISTING SANITARY SEWER CLEANOUT UP TO EXISTING MANHOLE.

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CIVIL DEMOLITION PLAN - 1

CD100

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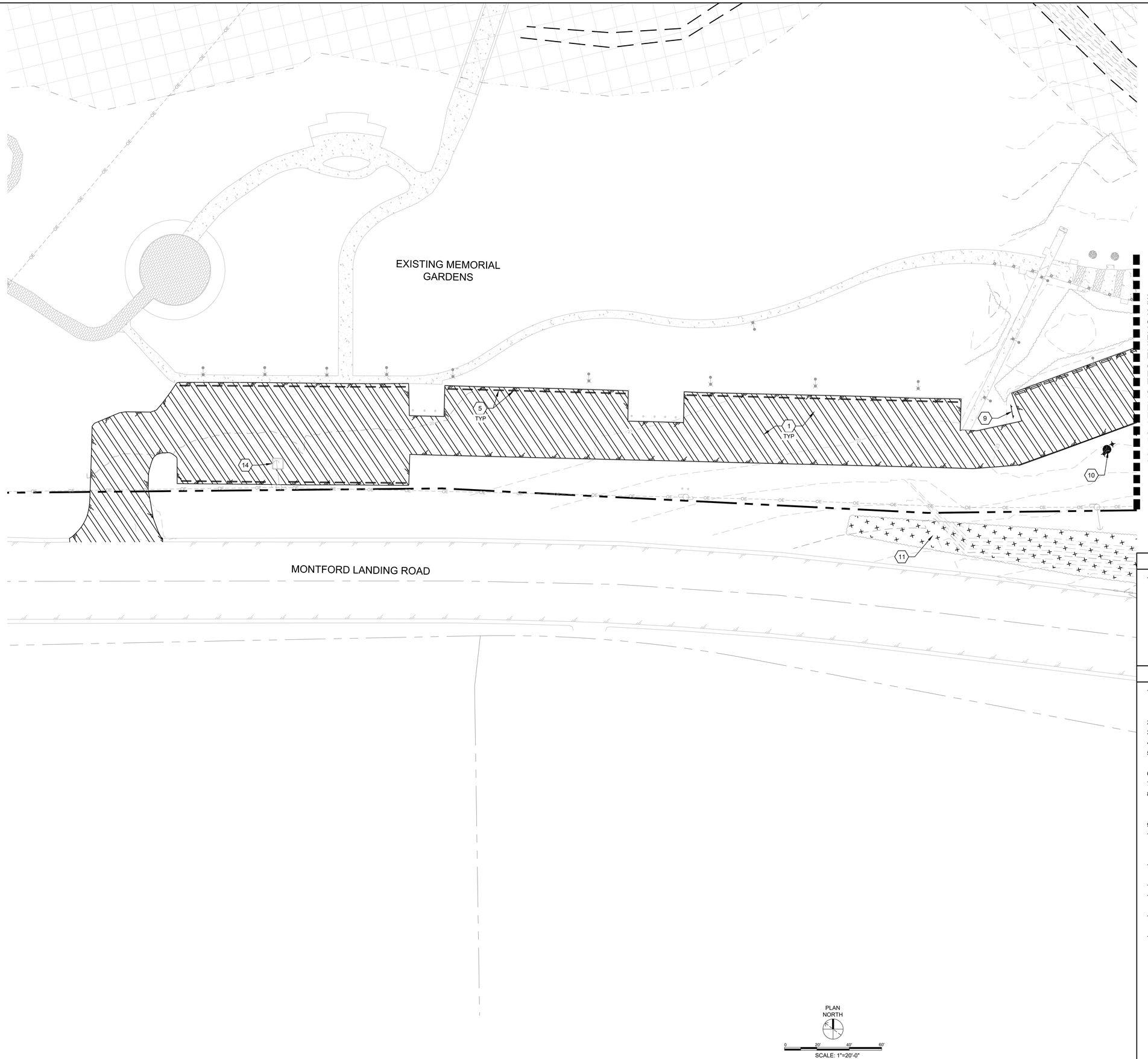

1 CIVIL DEMOLITION PLAN - 2
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. REMOVE AND REPLACE EXISTING ASPHALT PAVEMENT UP TO CONNECTION TO MONTFORD LANDING RD AS REQUIRED FOLLOWING CONSTRUCTION.
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3. REMOVE GRAVEL DRIVE.
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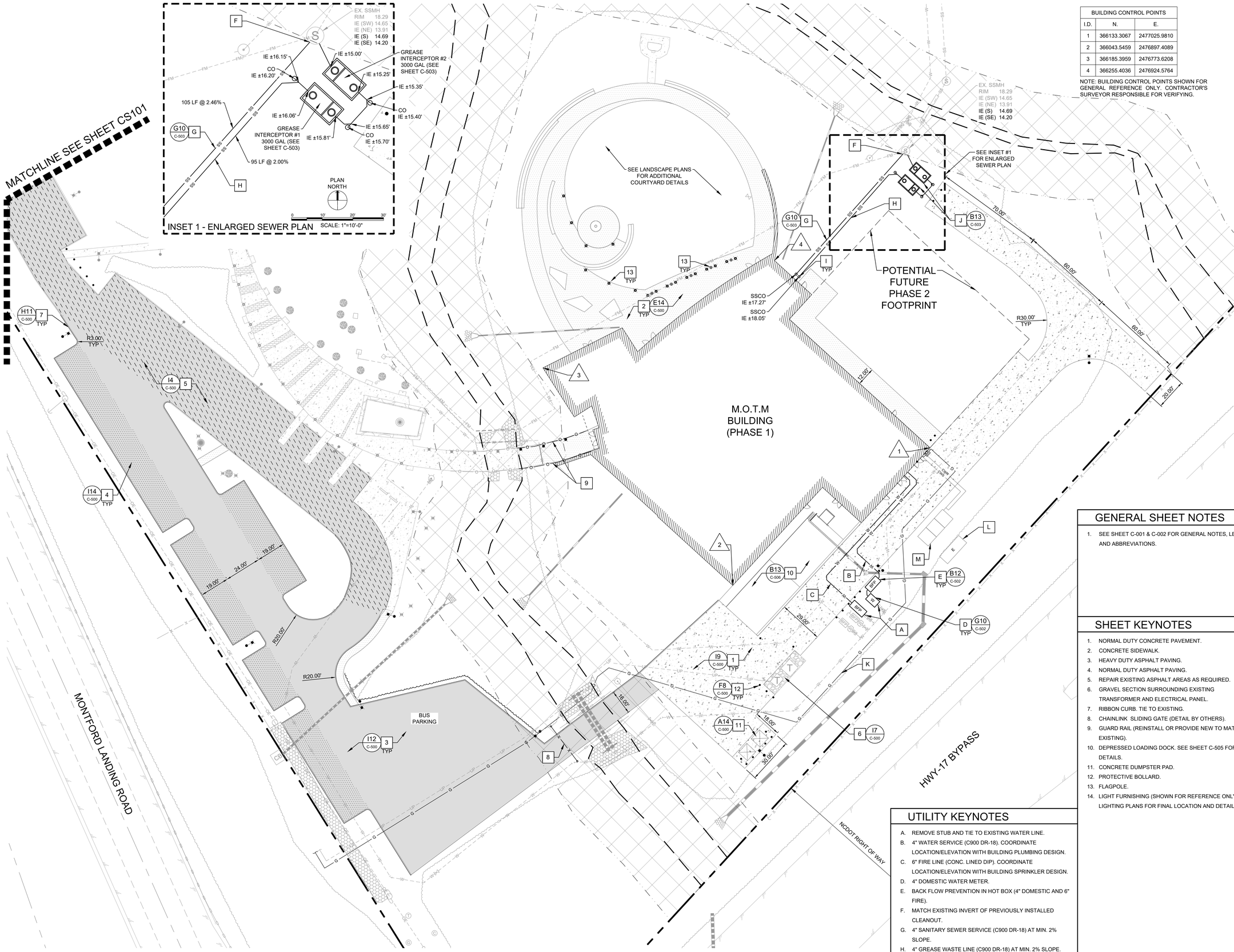

BUILDING CONTROL POINTS		
I.D.	N.	E.
1	366133.3067	2477025.9810
2	366043.5459	2476897.4089
3	366185.3959	2476773.6208
4	366255.4036	2476924.5764

NOTE: BUILDING CONTROL POINTS SHOWN FOR GENERAL REFERENCE ONLY. CONTRACTOR'S SURVEYOR RESPONSIBLE FOR VERIFYING.

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. NORMAL DUTY CONCRETE PAVEMENT.
2. CONCRETE SIDEWALK.
3. HEAVY DUTY ASPHALT PAVING.
4. NORMAL DUTY ASPHALT PAVING.
5. REPAIR EXISTING ASPHALT AREAS AS REQUIRED.
6. GRAVEL SECTION SURROUNDING EXISTING TRANSFORMER AND ELECTRICAL PANEL.
7. RIBBON CURB. TIE TO EXISTING.
8. CHAINLINK SLIDING GATE (DETAIL BY OTHERS).
9. GUARD RAIL (REINSTALL OR PROVIDE NEW TO MATCH EXISTING).
10. DEPRESSED LOADING DOCK. SEE SHEET C-505 FOR DETAILS.
11. CONCRETE DUMPSTER PAD.
12. PROTECTIVE BOLLARD.
13. FLAGPOLE.
14. LIGHT FURNISHING (SHOWN FOR REFERENCE ONLY. SEE LIGHTING PLANS FOR FINAL LOCATION AND DETAIL).

UTILITY KEYNOTES

A. REMOVE STUB AND TIE TO EXISTING WATER LINE.
B. 4" WATER SERVICE (C900 DR-18). COORDINATE LOCATION/ELEVATION WITH BUILDING PLUMBING DESIGN.
C. 6" FIRE LINE (CONC. LINED DIP). COORDINATE LOCATION/ELEVATION WITH BUILDING SPRINKLER DESIGN.
D. 4" DOMESTIC WATER METER.
E. BACK FLOW PREVENTION IN HOT BOX (4" DOMESTIC AND 6" FIRE).
F. MATCH EXISTING INVERT OF PREVIOUSLY INSTALLED CLEANOUT.
G. 4" SANITARY SEWER SERVICE (C900 DR-18) AT MIN. 2% SLOPE.
H. 4" GREASE WASTE LINE (C900 DR-18) AT MIN. 2% SLOPE.
I. SEWER CLEANOUT. COORDINATE LOCATION/ELEVATION WITH PLUMBING DESIGN.
J. GREASE INTERCEPTOR.
K. NEW GAS SERVICE. COORDINATE WITH PIEDMONT NATURAL GAS. (SEE PLUMBING PLANS).
L. GENERATOR (SEE ELECTRICAL PLANS).
M. CHILLER (SEE MECHANICAL PLANS).

1 CIVIL SITE AND UTILITY PLAN - 1
1" = 20'

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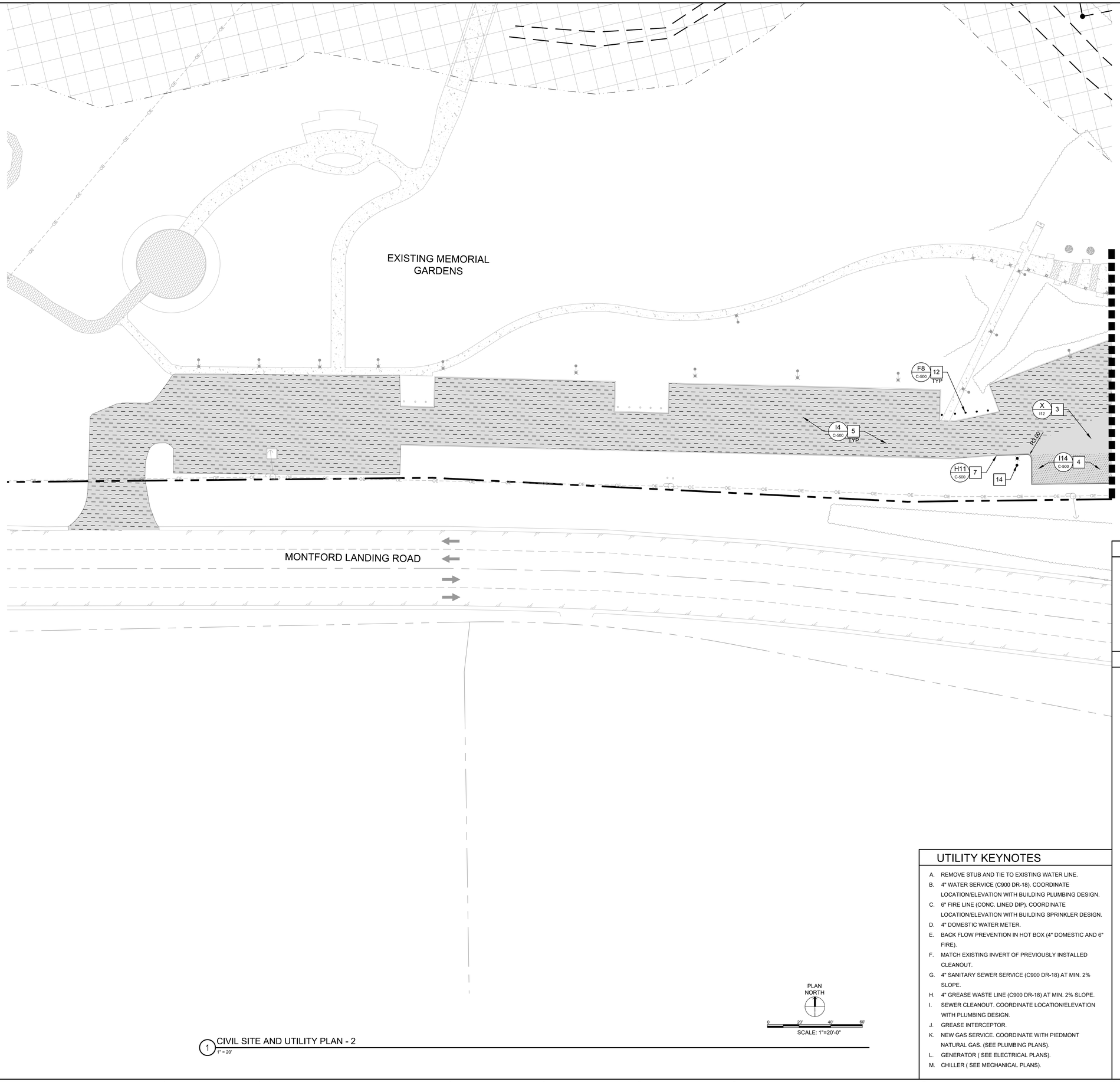
CIVIL SITE AND UTILITY PLAN - 1

CS100

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



1 CIVIL SITE AND UTILITY PLAN - 2
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. NORMAL DUTY CONCRETE PAVEMENT.
2. CONCRETE SIDEWALK.
3. HEAVY DUTY ASPHALT PAVING.
4. NORMAL DUTY ASPHALT PAVING.
5. REPAIR EXISTING ASPHALT AREAS AS REQUIRED.
6. GRAVEL SECTION SURROUNDING EXISTING TRANSFORMER AND ELECTRICAL PANEL.
7. RIBBON CURB. TIE TO EXISTING.
8. CHAINLINK SLIDING GATE (DETAIL BY OTHERS).
9. GUARD RAIL (REINSTALL OR PROVIDE NEW TO MATCH EXISTING).
10. DEPRESSED LOADING DOCK. SEE SHEET C-505 FOR DETAILS.
11. CONCRETE DUMPSTER PAD.
12. PROTECTIVE BOLLARD.
13. FLAGPOLE.
14. LIGHT FURNISHING (SHOWN FOR REFERENCE ONLY. SEE LIGHTING PLANS FOR FINAL LOCATION AND DETAIL).

UTILITY KEYNOTES

A. REMOVE STUB AND TIE TO EXISTING WATER LINE.
B. 4" WATER SERVICE (C900 DR-18). COORDINATE LOCATION/ELEVATION WITH BUILDING PLUMBING DESIGN.
C. 6" FIRE LINE (CONC. LINED DIP). COORDINATE LOCATION/ELEVATION WITH BUILDING SPRINKLER DESIGN.
D. 4" DOMESTIC WATER METER.
E. BACK FLOW PREVENTION IN HOT BOX (4" DOMESTIC AND 6" FIRE).
F. MATCH EXISTING INVERT OF PREVIOUSLY INSTALLED CLEANOUT.
G. 4" SANITARY SEWER SERVICE (C900 DR-18) AT MIN. 2% SLOPE.
H. 4" GREASE WASTE LINE (C900 DR-18) AT MIN. 2% SLOPE.
I. SEWER CLEANOUT. COORDINATE LOCATION/ELEVATION WITH PLUMBING DESIGN.
J. GREASE INTERCEPTOR.
K. NEW GAS SERVICE. COORDINATE WITH PIEDMONT NATURAL GAS. (SEE PLUMBING PLANS).
L. GENERATOR (SEE ELECTRICAL PLANS).
M. CHILLER (SEE MECHANICAL PLANS).

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CIVIL SITE & UTILITY PLAN - 2

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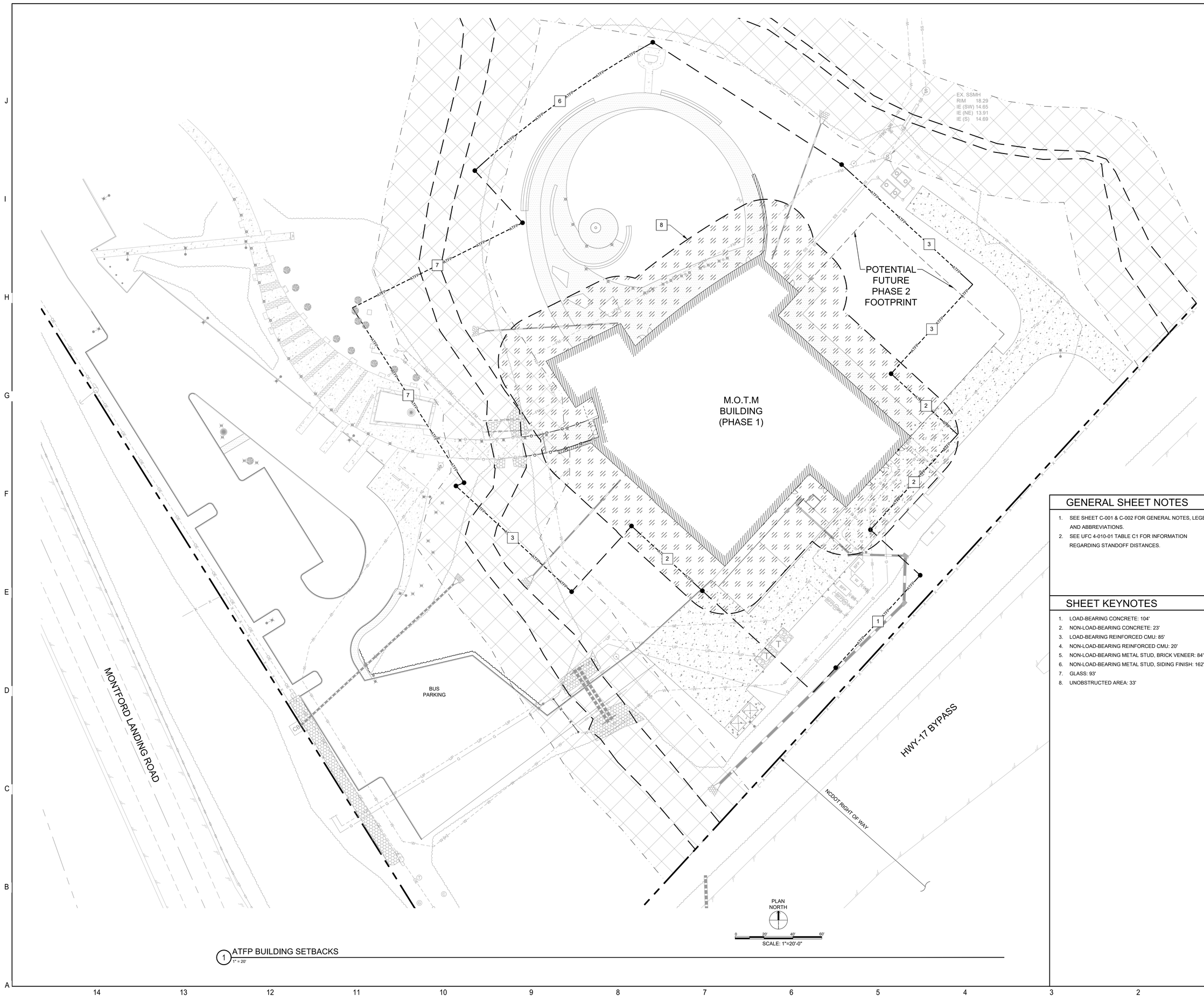

1 ATFP BUILDING SETBACKS
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.
2. SEE UFC 4-010-01 TABLE C1 FOR INFORMATION REGARDING STANDOFF DISTANCES.

SHEET KEYNOTES

1. LOAD-BEARING CONCRETE: 104'
2. NON-LOAD-BEARING CONCRETE: 23'
3. LOAD-BEARING REINFORCED CMU: 85'
4. NON-LOAD-BEARING REINFORCED CMU: 20'
5. NON-LOAD-BEARING METAL STUD, BRICK VENEER: 84'
6. NON-LOAD-BEARING METAL STUD, SIDING FINISH: 162'
7. GLASS: 93'
8. UNOBSTRUCTED AREA: 33'

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ATFP BUILDING SETBACKS

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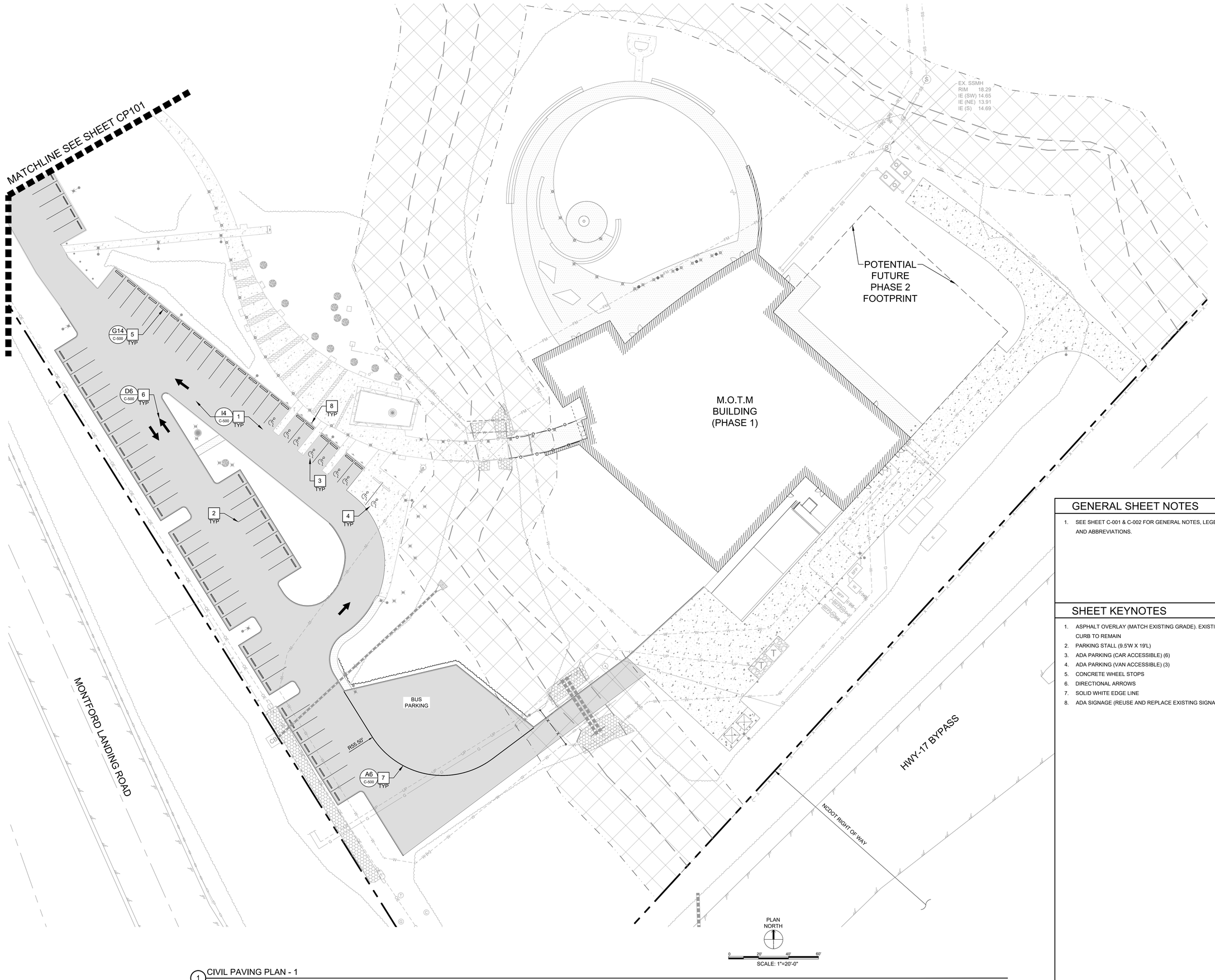

1 CIVIL PAVING PLAN - 1
1" = 30'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. ASPHALT OVERLAY (MATCH EXISTING GRADE). EXISTING CURB TO REMAIN
2. PARKING STALL (9.5'W X 19'L)
3. ADA PARKING (CAR ACCESSIBLE) (6)
4. ADA PARKING (VAN ACCESSIBLE) (3)
5. CONCRETE WHEEL STOPS
6. DIRECTIONAL ARROWS
7. SOLID WHITE EDGE LINE
8. ADA SIGNAGE (REUSE AND REPLACE EXISTING SIGNAGE)

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CIVIL PAVING PLAN - 1

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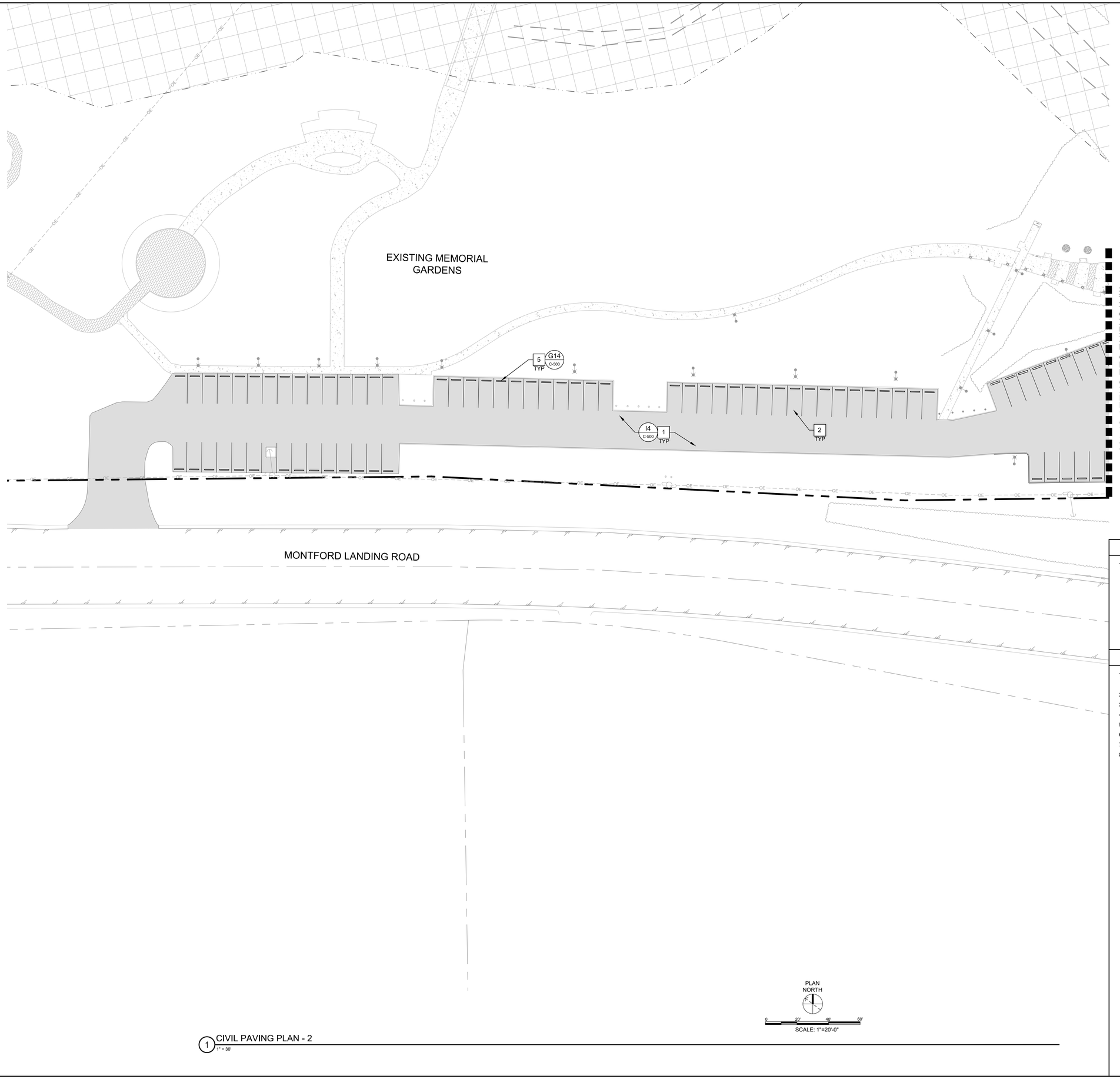

1 CIVIL PAVING PLAN - 2
1" = 30'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. ASPHALT OVERLAY (MATCH EXISTING GRADE). EXISTING CURB TO REMAIN
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7. SOLID WHITE EDGE LINE
8. ADA SIGNAGE (REUSE AND REPLACE EXISTING SIGNAGE)

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CIVIL PAVING PLAN - 2

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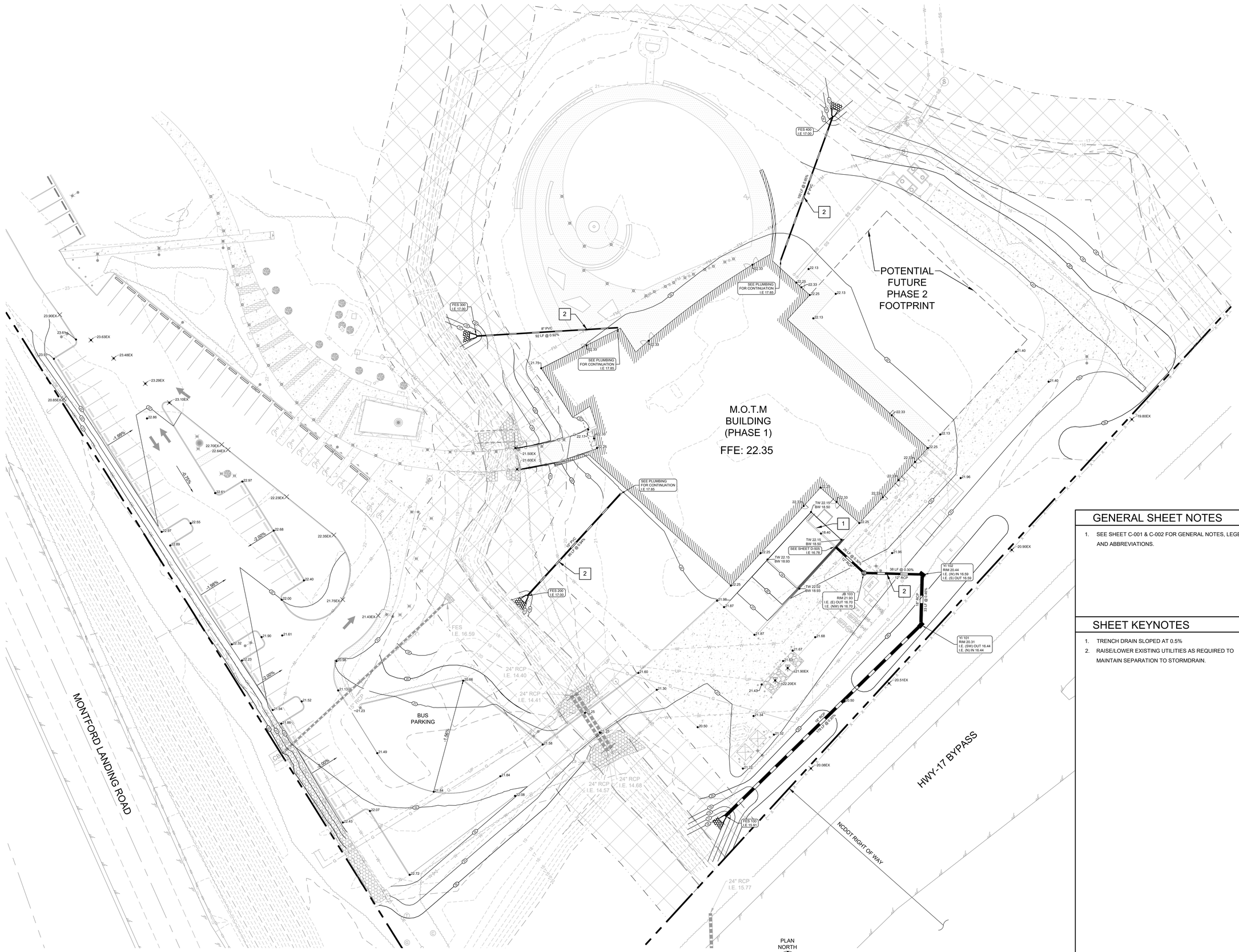

1 CIVIL GRADING PLAN
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. TRENCH DRAIN SLOPED AT 0.5%
2. RAISE/LOWER EXISTING UTILITIES AS REQUIRED TO MAINTAIN SEPARATION TO STORMDRAIN.

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CIVIL GRADING PLAN

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1 CIVIL EROSION CONTROL PLAN
1" = 20'

GENERAL SHEET NOTES

1. SEE SHEET C-001 & C-002 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. LIMITS OF DISTURBANCE
2. SILT FENCE
3. DOUBLE SILT FENCE
4. ROCK CHECK DAM
5. TEMPORARY DIVERSION SWALE
6. TEMPORARY INLET PROTECTION
7. TEMPORARY CONSTRUCTION ENTRANCE

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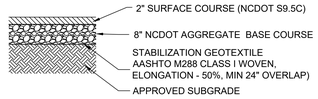
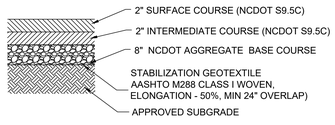


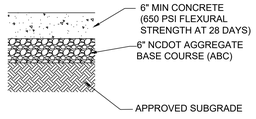
NOTE:
IN AREAS OF PAVEMENT PATCH/REPAIRS/WIDENING
CONTRACTOR MUST MATCH EXISTING PAVEMENT SECTION IF
GREATER THAN DETAIL SHOWN

I14 NORMAL DUTY ASPHALT PAVEMENT
NOT TO SCALE

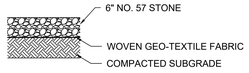


NOTE:
IN AREAS OF PAVEMENT PATCH/REPAIRS/WIDENING
CONTRACTOR MUST MATCH EXISTING PAVEMENT SECTION IF
GREATER THAN DETAIL SHOWN

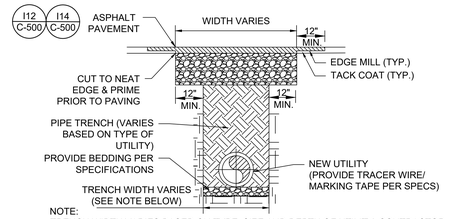
I12 HEAVY DUTY ASPHALT PAVEMENT
NOT TO SCALE



I9 NORMAL DUTY CONCRETE PAVEMENT
NOT TO SCALE

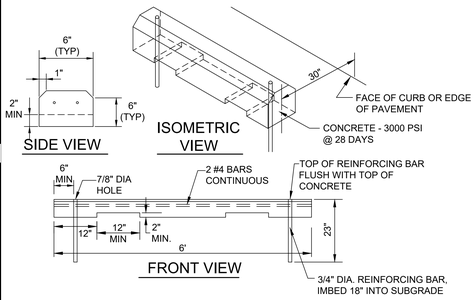


I7 PERIMETER GRAVEL
NOT TO SCALE



NOTE:
TRENCH WIDTH VARIES BASED ON TYPE, SIZE AND DEPTH OF UTILITY. CONTRACTOR MUST PROVIDE A TRENCH WIDTH REQUIRED FOR COMPLETE INSTALLATION PER SPECIFICATIONS. THE MINIMUM TRENCH WIDTH FOR ANY OPEN CUT IS 5 FEET.

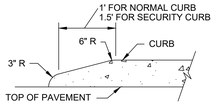
I4 CUTTING AND REPLACING PAVEMENT
NOT TO SCALE



G14 CONCRETE WHEEL STOPS
NOT TO SCALE

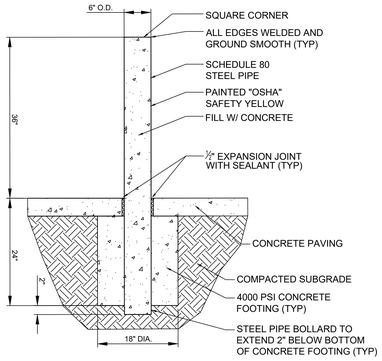


H11 RIBBON CURB
NOT TO SCALE

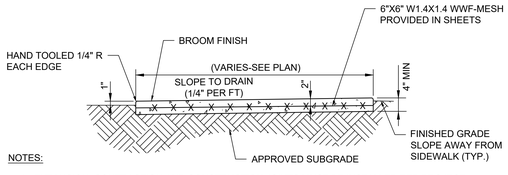


NOTE:
REFER TO PROJECT SPECIFICATIONS FOR
CONCRETE STRENGTH REQUIREMENTS.

G11 CURB WIPEDOWN
NOT TO SCALE



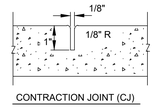
F8 BOLLARD TYPE B
NOT TO SCALE

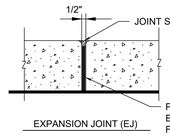


NOTES:

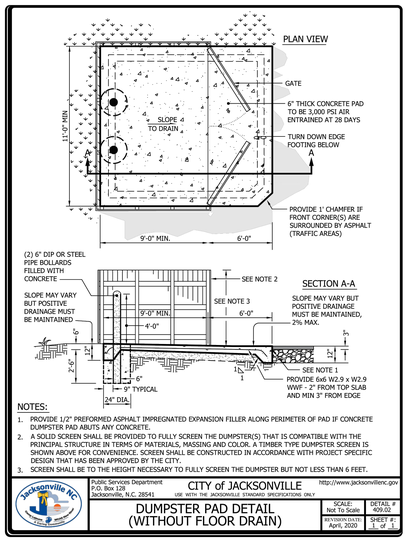
1. EXPANSION, CONTRACTION AND CONSTRUCTION JOINTS MUST BE INSTALLED PER PROJECT SPECIFICATIONS (SEE DETAIL A2 THIS SHEET)
2. CONCRETE COMPRESSIVE STRENGTH MUST BE PER SPECIFICATIONS.

E14 CONCRETE SIDEWALK/STOOP
NOT TO SCALE





E11 TYPICAL CONCRETE WALK JOINTS
NOT TO SCALE



NOTES:

1. PROVIDE 1/2" PREFORMED ASPHALT IMPREGNATED EXPANSION FILLER ALONG PERIMETER OF PAD IF CONCRETE DUMPSTER PAD ABUTS ANY CONCRETE.
2. A SOLID SCREEN SHALL BE PROVIDED TO FULLY SCREEN THE DUMPSTER(S) THAT IS COMPATIBLE WITH THE PRINCIPAL STRUCTURE IN TERMS OF MATERIALS, MASSING AND COLOR. A TIMBER TYPE DUMPSTER SCREEN IS SHOWN ABOVE FOR CONVENIENCE. SCREEN SHALL BE CONSTRUCTED IN ACCORDANCE WITH PROJECT SPECIFIC DESIGN THAT HAS BEEN APPROVED BY THE CITY.
3. SCREEN SHALL BE TO THE HEIGHT NECESSARY TO FULLY SCREEN THE DUMPSTER BUT NOT LESS THAN 6 FEET.

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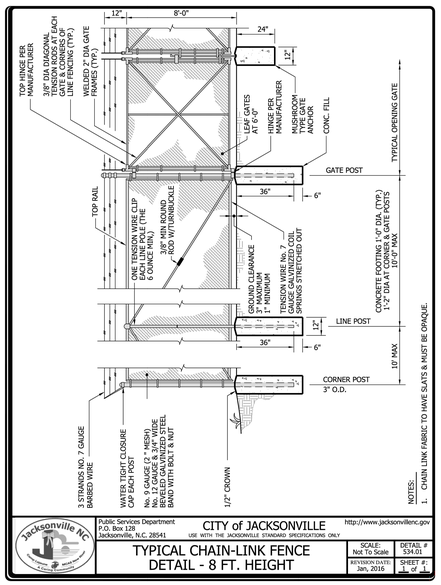
	DUMPSTER PAD DETAIL (WITHOUT FLOOR DRAIN)	SCALE: Not To Scale; DETAIL #: 409.02; REVISION DATE: April, 2020; SHEET #: 1 of 1

A14 DUMPSTER PAD
NOT TO SCALE



NOTES:
1. CHAIN LINK FABRIC TO HAVE SLATS & MUST BE OPAQUE.

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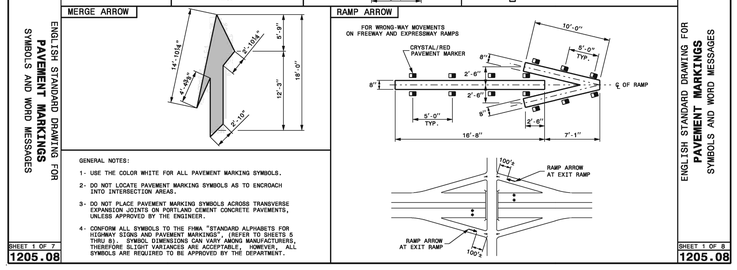
	TYPICAL CHAIN-LINK FENCE DETAIL - 8 FT. HEIGHT	SCALE: Not To Scale; DETAIL #: 534.01; REVISION DATE: Jan, 2016; SHEET #: 1 of 1

A12 TYPICAL CHAINLINK FENCE
NOT TO SCALE



GENERAL NOTES:

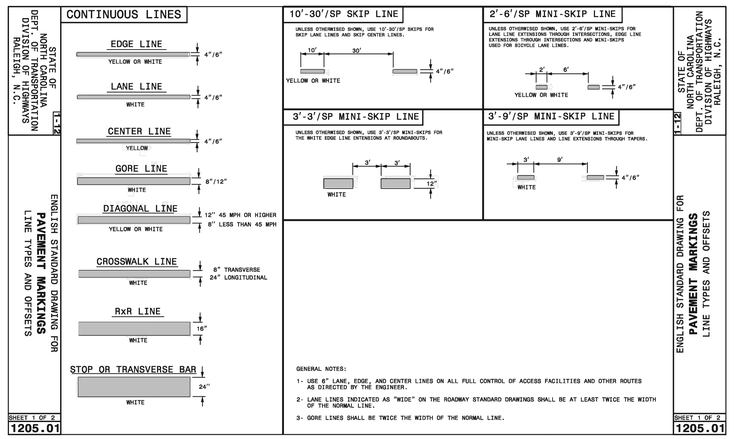
1- USE THE COLOR WHITE FOR ALL PAVEMENT MARKING SYMBOLS.

2- DO NOT LOCATE PAVEMENT MARKING SYMBOLS AS TO ENCROACH INTO INTERSECTION AREAS.

3- DO NOT PLACE PAVEMENT MARKING SYMBOLS ACROSS TRANSVERSE EXPANSION JOINTS ON PORTLAND CEMENT CONCRETE PAVEMENTS, UNLESS APPROVED BY THE ENGINEER.

4- CONFORM ALL SYMBOLS TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", (REFER TO SHEETS 5 THRU 8). SYMBOL DIMENSIONS CAN VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE. HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY THE DEPARTMENT.

D6 STRIPING DETAIL - 2
NOT TO SCALE



GENERAL NOTES:

1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.

2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

A6 STRIPING DETAIL - 1
NOT TO SCALE

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CIVIL DETAILS-1

C-500

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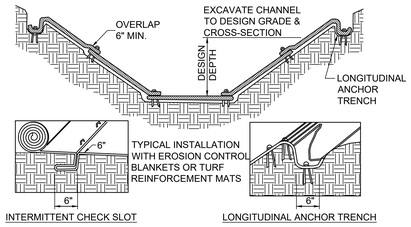
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY

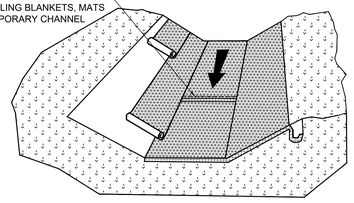


INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH

SHINGLE-LAP SPLICED ENDS OR BEGIN NEW ROLL IN AN INTERMITTENT CHECK SLOT.

PREPARE SOIL AND APPLY SEED BEFORE INSTALLING BLANKETS, MATS OR OTHER TEMPORARY CHANNEL LINER SYSTEM.



NOTES:

1. CHANNEL LINER MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.17 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-002 AND C-003 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.
2. IN LIEU OF INSTALLING CHANNEL LINER, CONTRACTOR MAY INSTALL PERMANENT SOD. (IN SEASON AND PER PROJECT SPECIFICATIONS)
3. DESIGN VELOCITIES EXCEEDING 2FT/SEC REQUIRE TEMPORARY BLANKETS, MATS OR SIMILAR LINES TO PROTECT SEED AND SOIL UNTIL VEGETATION BECOMES ESTABLISHED,
4. GRASS-LINED CHANNELS WITH DESIGN VELOCITIES EXCEEDING 6FT/SEC SHOULD INCLUDE TURF REINFORCEMENT MATS.

E14 TEMPORARY CHANNEL LINER
NOT TO SCALE

MULCHING MATERIALS AND APPLICATION RATES

MATERIAL	RATE PER ACRE	QUALITY	NOTES
STRAW	2 TONS	DRY, UNCHOPPED, UNWEATHERED; AVOID WEEDS	SHOULD COME FROM WHEAT OR OATS SPREAD BY HAND OR MACHINE, MUST BE TACKED DOWN.

TEMPORARY SEEDING

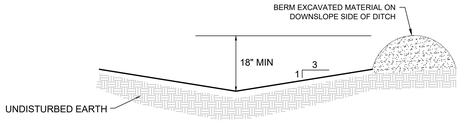
TIME OF SEEDING	GRASS TYPE	AMOUNT/ ACRE	FERTILIZATION/ ACRE	FERTILIZATION/ACRE MAINTENANCE	
DEC 1 - APR 15	RYE (GRAIN) & LESPEDEZA, KOBE	120 LBS. & 50 LBS.	750 LBS. 10-10-10	NA	NA
APRIL 15-AUG 15	GERMAN MILLET	40 LBS.	750 LBS. 10-10-10	NA	NA
AUG 15-DEC 30	RYE (GRAIN)	120 LBS.	1,000 LBS. 10-10-10	NA	NA

PERMANENT VEGETATION

DISTURBED AREAS MUST BE SODDED WITH CENTIPEDE SOD.

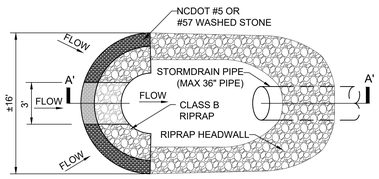
NOTE: TEMPORARY SEEDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.10 AND PERMANENT SEEDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.11 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SODDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.12 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL AND PROJECT SPECIFICATIONS. SEE SHEET CIVIL GENERAL NOTES SHEETS FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

I11 VEGETATION SCHEDULE
NOT TO SCALE

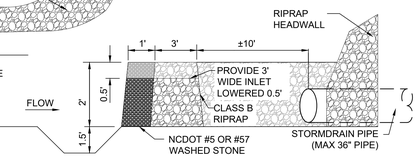


NOTE: INSPECT TEMPORARY DIVERSION ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS. WHEN THE AREA IS PROTECTED IS PERMANTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

G11 TEMPORARY DIVERSION DITCH
NOT TO SCALE



PLAN VIEW



SECTION A-A

NOTES:

1. ROCK PIPE INLET PROTECTION MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.55 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-003 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

E11 ROCK PIPE INLET PROTECTION
NOT TO SCALE

TEMPORARY STABILIZATION

PROVIDE MULCHING FOR DISTURBED AREAS. TEMPORARY SEEDING IS NOT PERMITTED. MULCHING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.14 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL AND PROJECT SPECIFICATIONS.

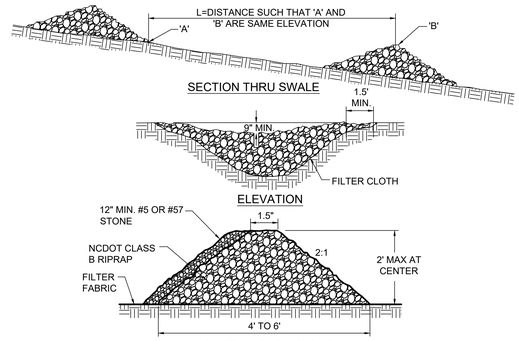
PERMANENT STABILIZATION

PROVIDE SAND-BASED CENTIPEDE SOD (EREMOCHLOA OPHIUROIDES) FOR TURF AREAS. SODDING MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.12 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL AND PROJECT SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

NEW STABILIZATION TIMEFRAMES

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

I7 STABILIZATION SCHEDULE
NOT TO SCALE

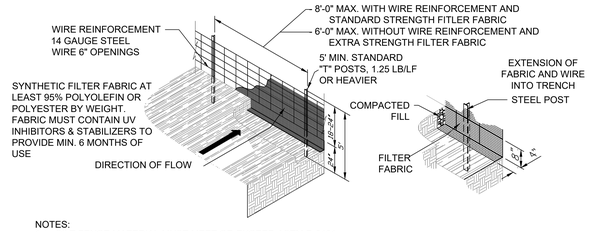


SECTION THRU STONE

NOTES:

1. STONE CHECK DAM MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.83 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-004 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.
2. CONTRACTOR MUST INSTALL CHECK DAMS ON PLANS AND ADDITIONAL CHECK DAMS BASED ON SPACING REQUIREMENTS SHOWN ABOVE.
3. CONTRACTOR MUST PLACE CHECK DAM STONE OVER CHANNEL BANKS TO KEEP WATER FROM CUTTING AROUND DAM.

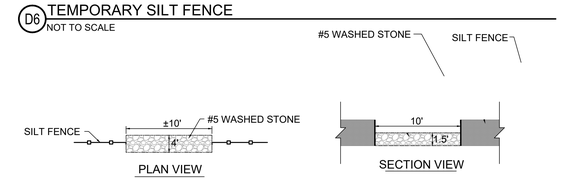
F6 STONE CHECK DAM (IN SWALE)
NOT TO SCALE



NOTES:

1. SILT FENCE MATERIAL MUST MEET OR EXCEED ASTM D 6461
2. SILT FENCE MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.62 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-004 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

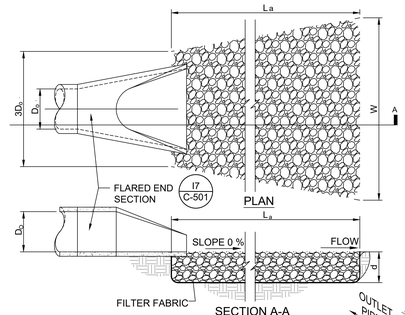
D6 TEMPORARY SILT FENCE
NOT TO SCALE



PLAN VIEW

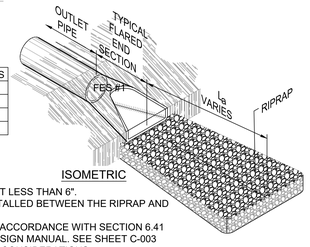
SECTION VIEW

C6 SILT FENCE ROCK OUTLET
NOT TO SCALE



SECTION A-A

STRUCT. ID	D_o (IN.)	L_a (FT.)	W(FT.)	d (IN.)	CLASS
FES #100	18"	6	4.5	12	A
FES #200	10"	3.33	2.5	12	A
FES #300	8"	2.66	2	12	A
FES #400	8"	2.66	2	12	A

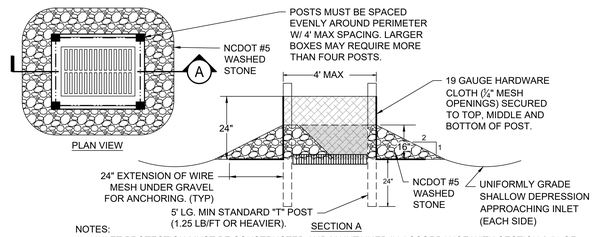


ISOMETRIC

NOTES:

1. SEE APPROPRIATE SCHEDULE FOR DIMENSIONS
2. L_a IS THE LENGTH OF THE RIPRAP APRON.
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.
5. RIP RAP MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.41 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-003 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

A14 RIP-RAP OUTLET/INLET PROTECTION
NOT TO SCALE

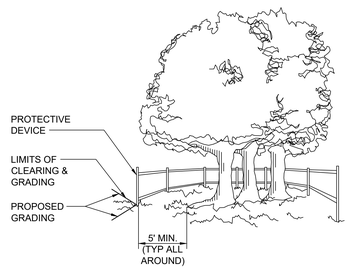


SECTION A

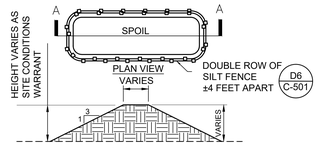
NOTES:

1. INLET PROTECTION MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.51 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-003 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

C11 TEMPORARY INLET PROTECTION
NOT TO SCALE



A10 TREE PROTECTION
NOT TO SCALE

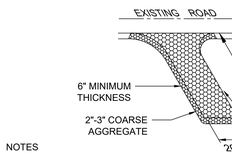


SECTION A-A

NOTE:

1. CONTRACTOR MUST LOCATE STOCKPILES FOR CONSTRUCTION SEQUENCE/PHASING.
2. STOCKPILES MUST BE LOCATED AT LEAST 50-FEET FROM STORMDRAINS, WETLANDS AND STREAMS.

A7 SPOIL STORAGE BERM
NOT TO SCALE



NOTES

1. FILTER FABRIC UNDERLAY MUST BE INSTALLED BETWEEN STONE AND SOIL FOUNDATION.
2. TEMPORARY CONSTRUCTION ENTRANCE MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH SECTION 6.06 OF THE NCDEQ EROSION CONTROL PLANNING AND DESIGN MANUAL. SEE SHEET C-002 FOR ADDITIONAL SPECIFICATIONS AND MAINTENANCE CONSIDERATIONS.

A4 TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 10/24/23 SEAL 03865

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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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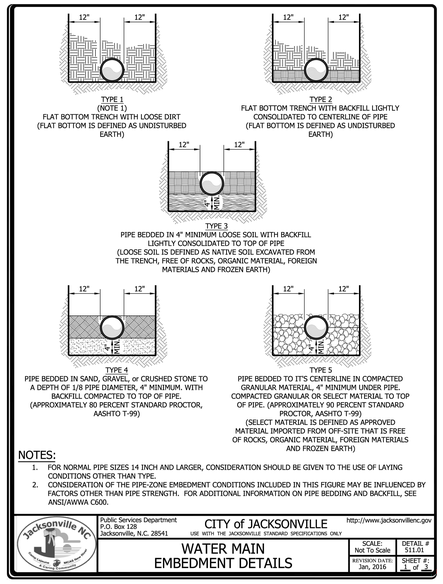
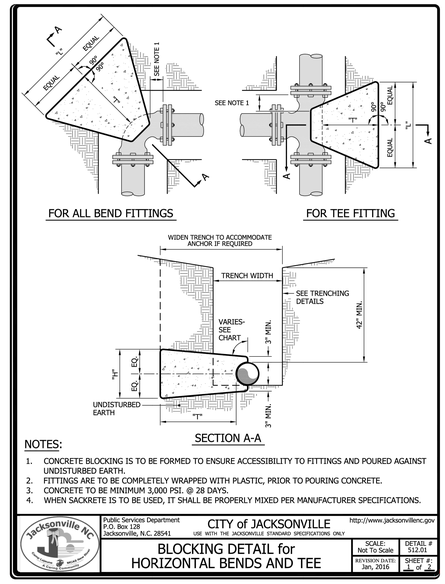
CIVIL DETAILS-2

C-501

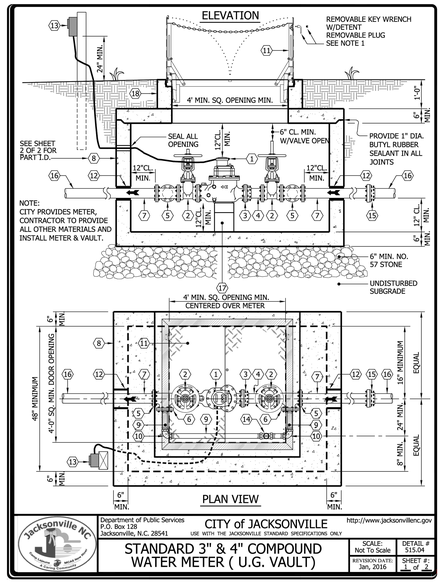
ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



G13 WATER DETAIL - 1
NOT TO SCALE



G10 WATER DETAILS - 2
NOT TO SCALE



#	PART	MANUFACTURER MODEL / Cat. No.
1	COMPOUND METER	SEE SPECIFICATIONS
2	OS&Y GATE VALVE WITH RESILIENT SEATS (FLANGED)	AMERICAN FLOW CONTROL, CLOW, MUELLER, KENNEDY
3	FLANGED COUPLING ADAPTER	ROCKWELL 912, DRESSER #127 OR APPROVED EQUAL
4	DIP CLASS 350 NIPPLE (FLANGE x PE)	SIZE & TYPE DETERMINED BY NC PE. TO BE APPROVED BY CITY
5	DIP CLASS 350 TEE (FLANGED)	-----
6	BLIND FLANGE TAPPED FOR 2"	-----
7	DIP CLASS 350 FLANGED NIPPLE	-----
8	PRECAST CONCRETE UTILITY VAULT BOX. MIN. 4,000 PSI @ 28 DAYS VERIFY FITTINGS WILL FIT INSIDE BOX BEFORE ORDERING	SIZE & TYPE DETERMINED BY NC PE. H20 LOAD RATING (OR APPROVED EQUIVALENT)
9	2" BRASS RIPPLE WITH IP THREADS	-----
10	BRASS 90° ELBOW WITH IP THREADS	-----
11	4' x 4' MIN. DOOR CAST INTO RISER (DRAIN TO OUTSIDE)	BILCO / JD-4AL DOUBLE LEAF ACCESS DOOR PEDESTRIAN LOAD - 300 PSF, USE H20 LOADING IN TRAFFIC AREAS. (OR APPROVED EQUIVALENT)
12	WALL SLEEVE WITH LINK SEAL OR APPROVED EQUAL	TO BE APPROVED BY CITY
13	REMOTE METER READOUT (IN GALLONS)	TO BE APPROVED BY CITY
14	CORPORATION STOP WITH IP THREADS	2" MUELLER MARK II ORISEAL 110 CORPORATION STOP (LOCKING TYPE) OR APPROVED EQUAL
15	CAST IRON FLANGED COUPLING ADAPTER	ROCKWELL 912, DRESSER #127 OR APPROVED EQUAL
16	DIP CLASS 350	SIZE & TYPE DETERMINED BY NC PE. TO BE APPROVED BY CITY
17	SOLID CONCRETE BLOCK	
18	4' x 4' INSIDE DIMENSION REINFORCED CONCRETE RISER	BY PRECAST VAULT MANUFACTURER

NOTES:
1. ENSURE POSITIVE SURFACE GRADE AWAY FROM BOX.
2. DESIGNER TO EVALUATE VAULT FOR BOUYANCY AND PROVIDE NECESSARY MODIFICATIONS/WEIGHT TO VAULT TO PREVENT FLOTATION.

Public Services Department
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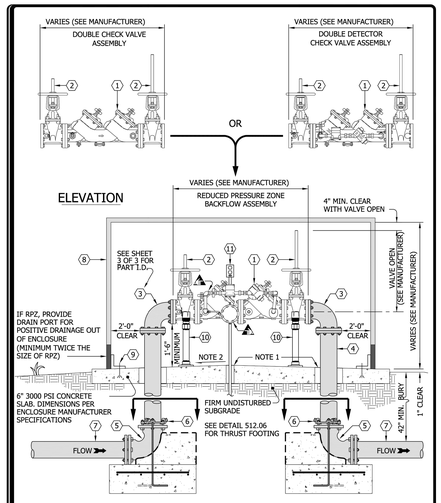
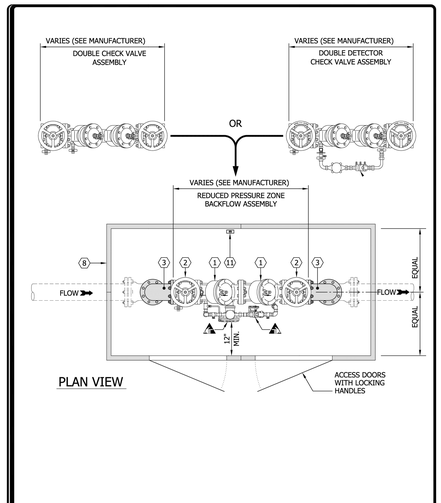
STANDARD 3" & 4" COMPOUND WATER METER (U.G. VAULT)
SCALE: Not To Scale
DETAIL # 515.04
REVISION DATE: Jan, 2016
SHEET #: 2 of 2





#	PART	MANUFACTURER MODEL / Cat. No.
1	BACKFLOW ASSEMBLY	USC APPROVED
2	OS&Y GATE VALVE WITH RESILIENT SEATS	JACKSONVILLE CITY OFFICIAL APPROVED
3	90° DIP FLANGE x FLANGE ELBOW	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
4	DIP FLANGE x PE PIPE (VERIFY LENGTH)	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., U.S. PIPE & FOUNDRY
5	90° DIP MJ x MJ ELBOW	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
6	WEDGE ACTION RESTRAINT GLAND JOINT RESTRAINT	EBBA IRON SALES, INC. / STAR PIPE PRODUCTS
7	3" THRU 10" DIP	AMERICAN CAST IRON PIPE, GRIFFIN PIPE CO., UNION-TYLER PIPE CO., or U.S. PIPE & FOUNDRY
8	ASSE STANDARD 1060 INSULATED ENCLOSURE WITH LOCKING ACCESS DOORS AND HEATER (120 V, 1 PHASE, 60 HZ) VERIFY FITTINGS WILL FIT INSIDE BOX BEFORE ORDERING	HOTBOX / HBAE - HBUDE (OR APPROVED EQUIVALENT)
9	STAINLESS STEEL EXPANSION ANCHOR BOLTS PER BOX MANUFACTURER RECOMMENDED SIZE & SPACING	
10	ADJUSTABLE PIPE SUPPORTS HOT DIP GALVANIZED	SHOP FABRICATED AND HOT DIP GALVANIZED OR "STANDOM" MODEL S92 SADDLE SUPPORT
11	PROVIDE 120V RECEPTACLE ON GFCI NEAR PIPE RISER, SET MINIMUM 12" ABOVE DISCHARGE POINT OF RPZ. (AS APPLICABLE)	UL STD. 943-NEMA 3R.

NOTES:
1. PROVIDE MINIMUM 3" ANNULAR CLEARANCE AROUND ALL DIP RISERS AND 1" AROUND ELECTRICAL CONDUIT.
2. SLOPE FLOOR TO DRAIN TO PORTS AT BOTH ENDS. ENSURE POSITIVE SURFACE GRADE AWAY FROM ENCLOSURE.
3. SPECIFIC PRODUCTS CITED BY THIS DETAIL ARE USED TO DENOTE THE QUALITY STANDARD OF PRODUCT DESIRED

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CITY of JACKSONVILLE
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2 1/2" to 10" DCV, DDCV, RPZ ASSEMBLY (ABOVE GROUND)
SCALE: Not To Scale
DETAIL # 519.01
REVISION DATE: Jan, 2016
SHEET #: 3 of 3

B12 WATER DETAILS - 3
NOT TO SCALE

CJMW ARCHITECTURE
525 Vine Street, Suite 350
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www.cjmw.com
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SAMET
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 10/24/23 SEAL D.MOORE
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151 Poole Rd. Suite 100 | Leland, NC, 28451
TEL (910) 383-1044 | FAX (910) 383-1045
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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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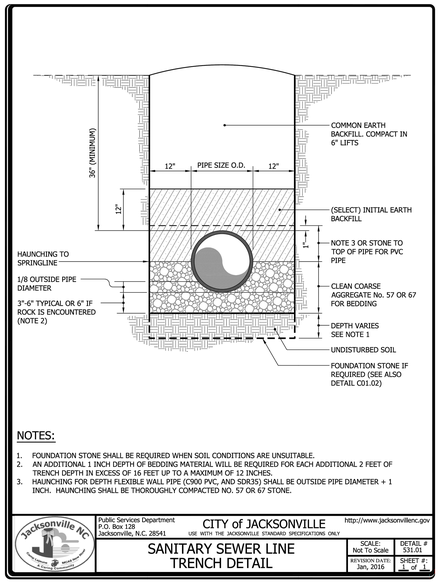
CIVIL DETAILS-3

C-502

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



NOTES:

1. FOUNDATION STONE SHALL BE REQUIRED WHEN SOIL CONDITIONS ARE UNSUITABLE.
2. AN ADDITIONAL 1 INCH DEPTH OF BEDDING MATERIAL WILL BE REQUIRED FOR EACH ADDITIONAL 2 FEET OF TRENCH DEPTH IN EXCESS OF 16 FEET UP TO A MAXIMUM OF 12 INCHES.
3. HAUNCHING FOR DEPTH FLEXIBLE WALL PIPE (C900 PVC, AND SDR35) SHALL BE OUTSIDE PIPE DIAMETER + 1 INCH. HAUNCHING SHALL BE THOROUGHLY COMPACTED NO. 57 OR 67 STONE.

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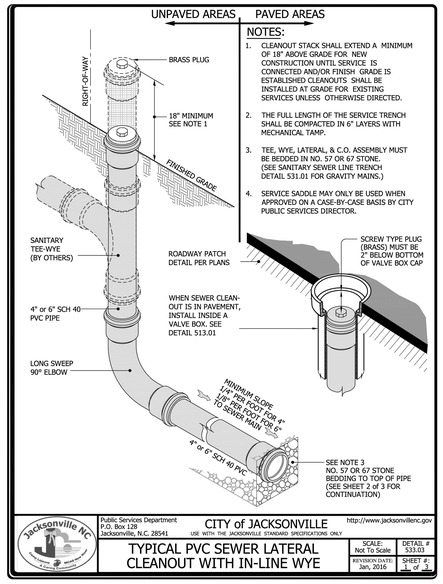
SANITARY SEWER LINE TRENCH DETAIL

SCALE: Not To Scale | DETAIL # 531.01
REVISION DATE: Jan, 2016 | SHEET #: 1 of 1

G13 SEWER DETAIL - 1
NOT TO SCALE



NOTES:

1. CLEANOUT STACK SHALL EXTEND A MINIMUM OF 18" ABOVE GRADE FOR NEW CONSTRUCTION UNTIL SERVICE IS CONNECTED AND/OR FINISH GRADE IS ESTABLISHED CLEANOUTS SHALL BE INSTALLED AT GRADE FOR EXISTING SERVICES UNLESS OTHERWISE DIRECTED.
2. THE FULL LENGTH OF THE SERVICE TRENCH SHALL BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP.
3. TEE, WYE, LATERAL, & C.O. ASSEMBLY MUST BE BEDDED IN NO. 57 OR 67 STONE. (SEE SANITARY SEWER LINE TRENCH DETAIL 531.01 FOR GRAVITY MAINS.)
4. SERVICE SADDLE MAY ONLY BE USED WHEN APPROVED ON A CASE-BY-CASE BASIS BY CITY PUBLIC SERVICES DIRECTOR.

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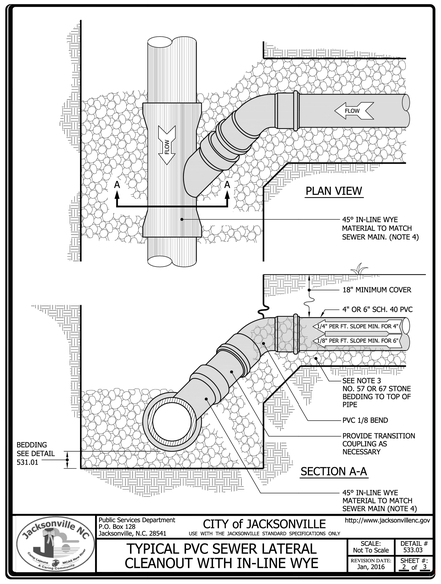
TYPICAL PVC SEWER LATERAL CLEANOUT WITH IN-LINE WYE

SCALE: Not To Scale | DETAIL # 533.03
REVISION DATE: Jan, 2016 | SHEET #: 1 of 3

G10 SEWER DETAILS - 2
NOT TO SCALE



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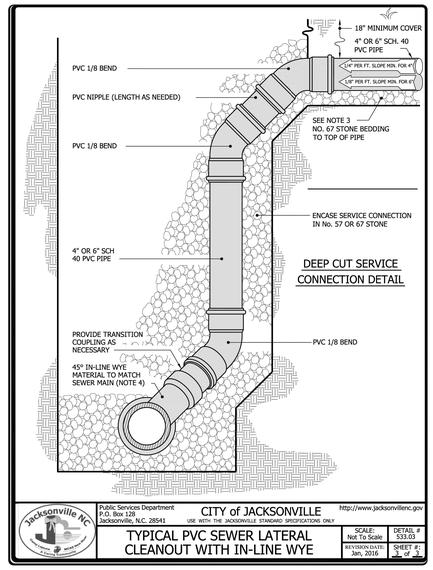
TYPICAL PVC SEWER LATERAL CLEANOUT WITH IN-LINE WYE

SCALE: Not To Scale | DETAIL # 533.03
REVISION DATE: Jan, 2016 | SHEET #: 2 of 3



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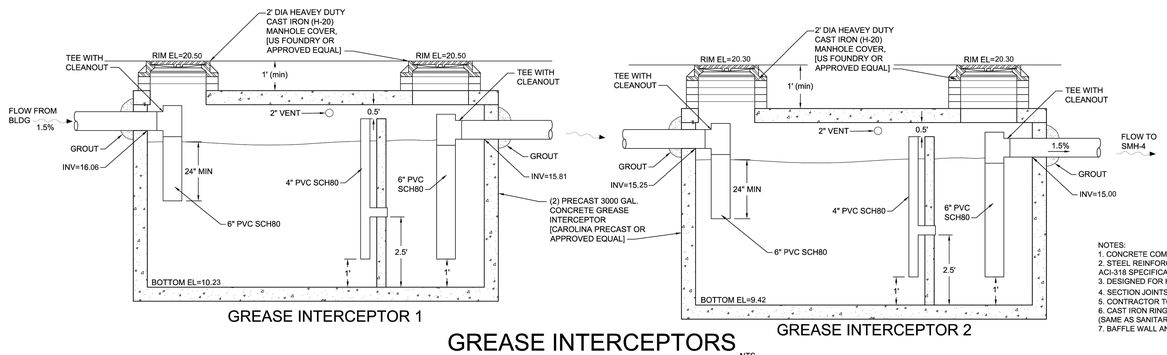
TYPICAL PVC SEWER LATERAL CLEANOUT WITH IN-LINE WYE

SCALE: Not To Scale | DETAIL # 533.03
REVISION DATE: Jan, 2016 | SHEET #: 3 of 3



GREASE INTERCEPTORS
NTS

NOTES:
1. CONCRETE COMPRESSIVE STRENGTH 4,000 PSI MINIMUM.
2. STEEL REINFORCING TO CONFORM TO THE REQUIREMENTS OF THE LATEST ACI-318 SPECIFICATIONS FOR REINFORCED CONCRETE.
3. DESIGNED FOR H-20 -44 LOADING.
4. SECTION JOINTS TO BE SEALED WITH 1 $\frac{1}{4}$" DIA. BUTYL RUBBER SEALANT.
5. CONTRACTOR TO ADJUST GRADE AS REQUIRED USING GRADE RINGS.
6. CAST IRON RING AND COVER PER CITY OF JACKSONVILLE SPECIFICATIONS (SAME AS SANITARY MANHOLE REQUIREMENTS).
7. BAFFLE WALL AND ALL PIPING TO BE GROUTED.

DESIGN OF GREASE INTERCEPTORS

1. NC DEH Requirements:

The grease trap liquid capacity shall be sufficient to provide for at least five gallons of storage per meal served per day, or at least two-thirds of the required septic tank liquid capacity, or capacity determined in accordance with the following:

LC = D x GL x ST x HR/2 x LF

Where:
- LC = grease trap liquid capacity (gallons)
- D = number of seats in the dining area.
- GL = gallons of wastewater per meal (1.5 single-service; 2.5 full service)
- ST = storage capacity factor = 2.5
- HR = number of hours establishment is open.
- LF = loading factor: (1.25 interstate hwy, 1.0 other hwy & rec areas, 0.8 secondary rds)

2. Design

Museum Private Functions:

(D) =	478	
(GL) =	1.5	
(ST) =	2.5	
(HR) =	6	
(LF) =	1.0	
Required Grease Interceptor:	5378	gallons
Number of Tanks:	2	
Size of Tank # 1=	3000	gallons
Size of Tank # 2=	3000	gallons

B13 GREASE INTERCEPTORS
NOT TO SCALE

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CONSTRUCTION DOCUMENTS

#	Description	Date

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CIVIL DETAILS-4

C-503

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

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

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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CIVIL DETAILS-5

C-504

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY

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

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

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

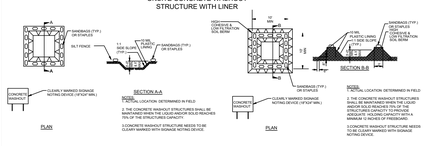
PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

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

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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CONSTRUCTION DOCUMENTS

#	Description	Date

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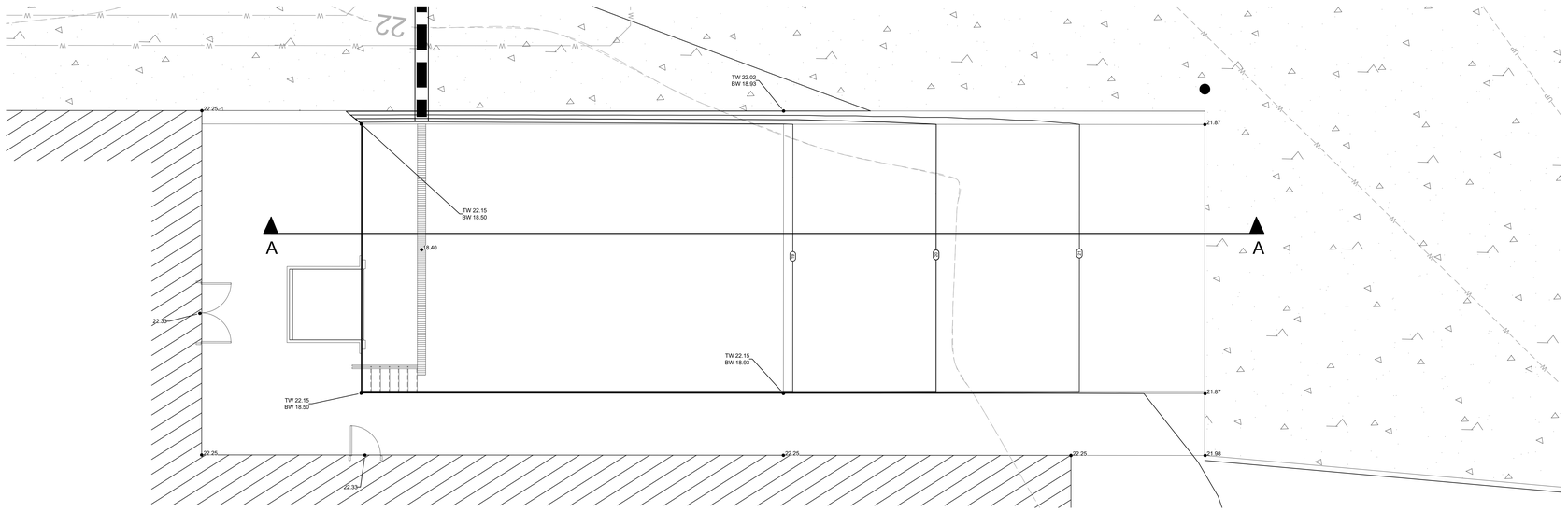
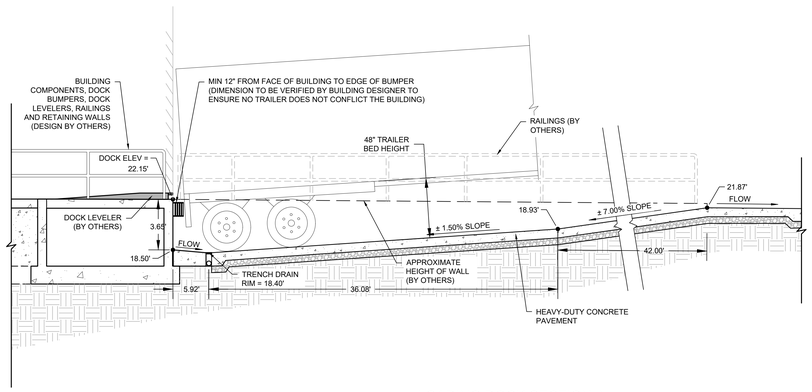
CIVIL DETAILS-6

C-505

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



LOADING DOCK PLAN VIEW
SCALE 1"-5'



LOADING DOCK SECTION A
NOT TO SCALE

B13 LOADING DOCK
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 038615 MATTHEW T. HALEY
10/24/23

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CONSTRUCTION DOCUMENTS

#	Description	Date

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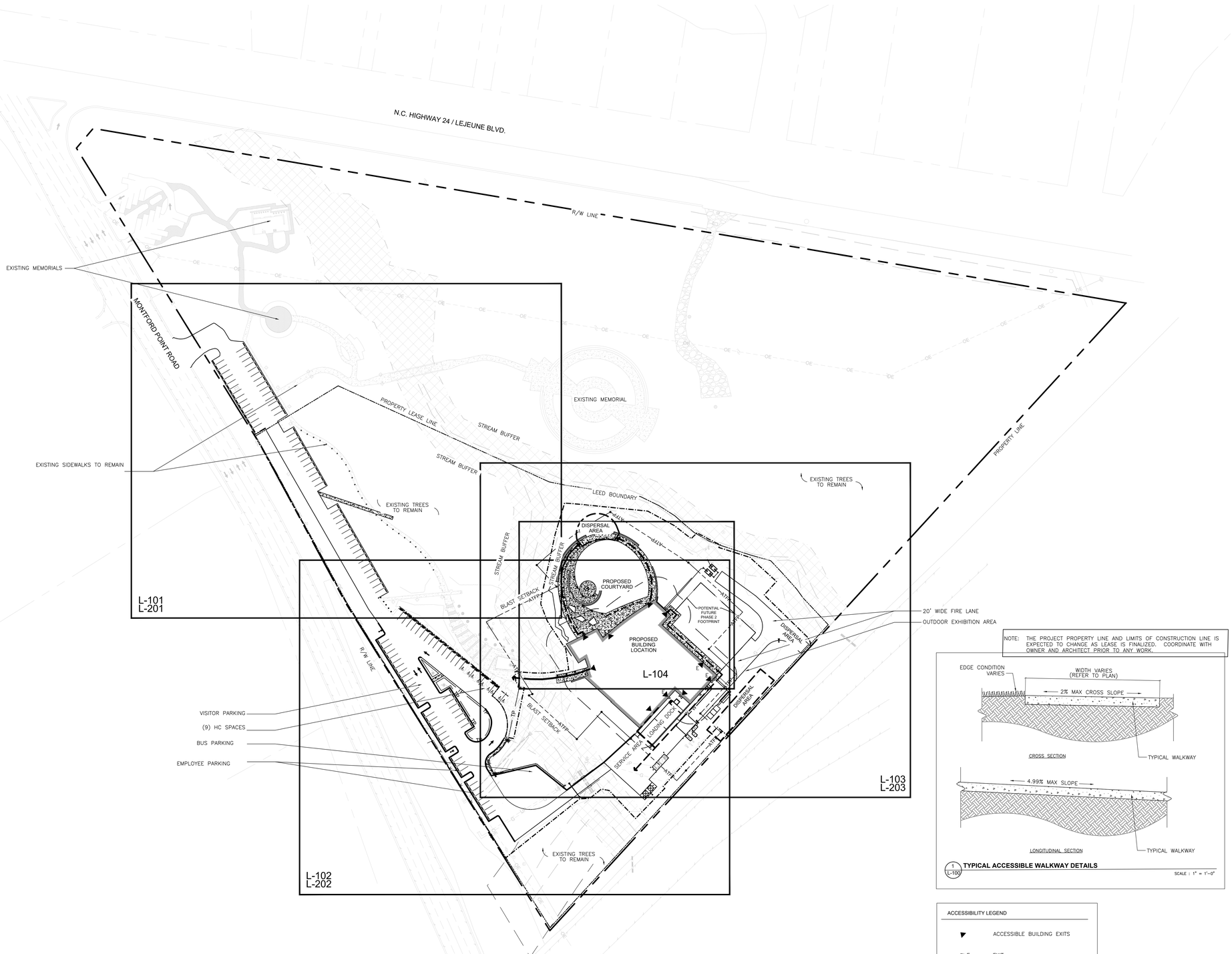
CIVIL DETAILS-7

C-506

ISSUE DATE: 10-24-23
PROJECT NUMBER: 554-75
DRAWN BY: D. MOORE
CHECKED BY: M. HALEY



NOTE: THE PROJECT PROPERTY LINE AND LIMITS OF CONSTRUCTION LINE IS EXPECTED TO CHANGE AS LEASE IS FINALIZED. COORDINATE WITH OWNER AND ARCHITECT PRIOR TO ANY WORK.

1 L-100 **TYPICAL ACCESSIBLE WALKWAY DETAILS**

SCALE : 1" = 1'-0"

ACCESSIBILITY LEGEND

- ACCESSIBLE BUILDING EXITS
- E EXIT
- ACCESSIBLE EGRESS ROUTES
- DISPERSAL AREA

SCALE: 1"= 60'-0"

0 30 60 120

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p : 919-419-1199
f : 919-419-1669

CONSTRUCTION DOCUMENTS

NORTH CAROLINA SURFACE 678, P.A. C-098

NORTH CAROLINA ROBERT J. PRATT 10/20/23

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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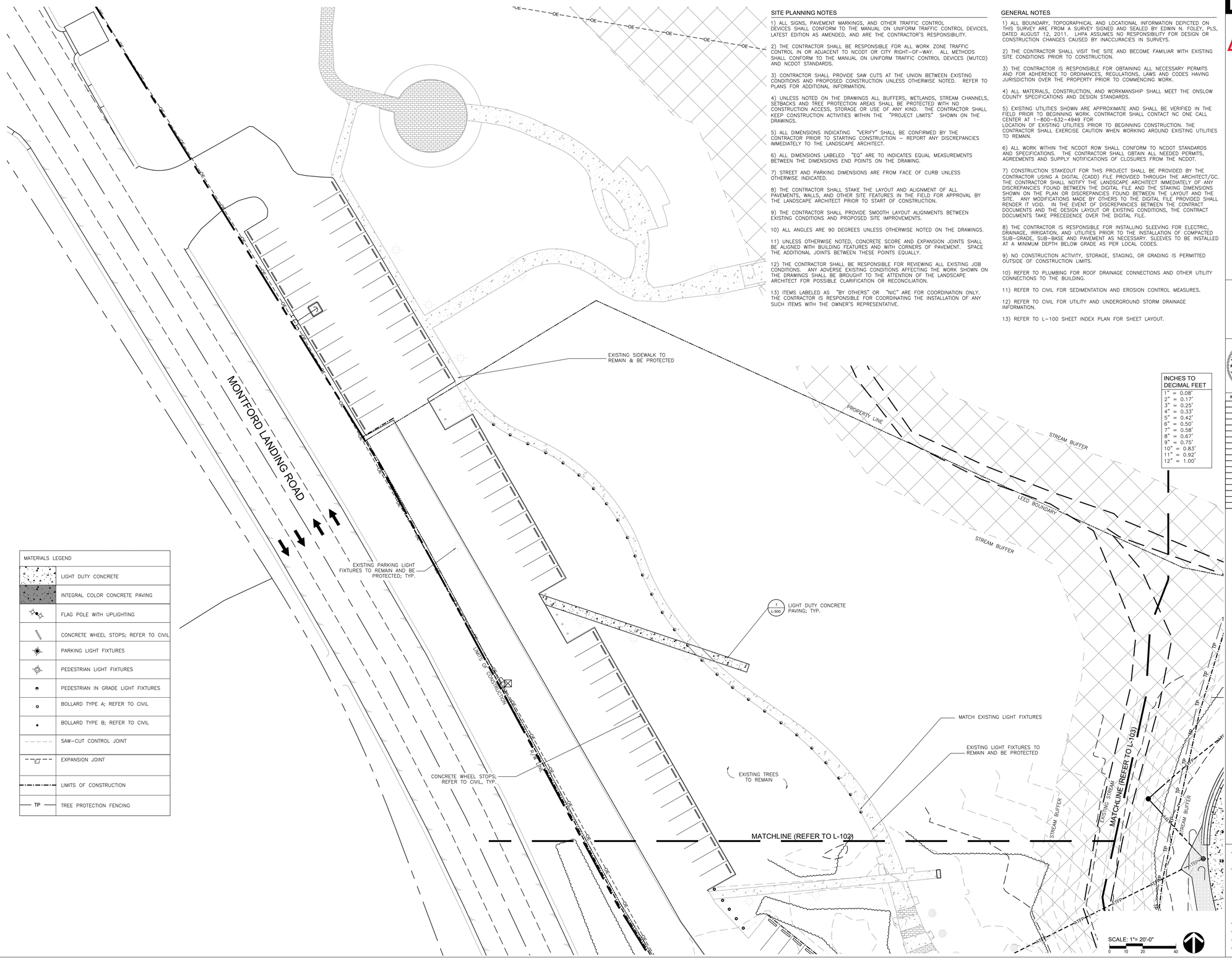
INDEX PLAN

L-100

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AP, RP, JC, JH, MA, JW, DG
CHECKED BY: RP



MATERIALS LEGEND	
	LIGHT DUTY CONCRETE
	INTEGRAL COLOR CONCRETE PAVING
	FLAG POLE WITH UPLIGHTING
	CONCRETE WHEEL STOPS; REFER TO CIVIL
	PARKING LIGHT FIXTURES
	PEDESTRIAN LIGHT FIXTURES
	PEDESTRIAN IN GRADE LIGHT FIXTURES
	BOLLARD TYPE A; REFER TO CIVIL
	BOLLARD TYPE B; REFER TO CIVIL
	SAW-CUT CONTROL JOINT
	EXPANSION JOINT
	LIMITS OF CONSTRUCTION
TP	TREE PROTECTION FENCING

SITE PLANNING NOTES

1) ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AS AMENDED, AND ARE THE CONTRACTOR'S RESPONSIBILITY.

2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT OR CITY RIGHT-OF-WAY. ALL METHODS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.

3) CONTRACTOR SHALL PROVIDE SAW CUTS AT THE UNION BETWEEN EXISTING CONDITIONS AND PROPOSED CONSTRUCTION UNLESS OTHERWISE NOTED. REFER TO PLANS FOR ADDITIONAL INFORMATION.

4) UNLESS NOTED ON THE DRAWINGS ALL BUFFERS, WETLANDS, STREAM CHANNELS, SETBACKS AND TREE PROTECTION AREAS SHALL BE PROTECTED WITH NO CONSTRUCTION ACCESS, STORAGE OR USE OF ANY KIND. THE CONTRACTOR SHALL KEEP CONSTRUCTION ACTIVITIES WITHIN THE "PROJECT LIMITS" SHOWN ON THE DRAWINGS.

5) ALL DIMENSIONS INDICATING "VERIFY" SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION – REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.

6) ALL DIMENSIONS LABELED "EQ" ARE TO INDICATES EQUAL MEASUREMENTS BETWEEN THE DIMENSIONS END POINTS ON THE DRAWING.

7) STREET AND PARKING DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE INDICATED.

8) THE CONTRACTOR SHALL STAKE THE LAYOUT AND ALIGNMENT OF ALL PAVEMENTS, WALLS, AND OTHER SITE FEATURES IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO START OF CONSTRUCTION.

9) THE CONTRACTOR SHALL PROVIDE SMOOTH LAYOUT ALIGNMENTS BETWEEN EXISTING CONDITIONS AND PROPOSED SITE IMPROVEMENTS.

10) ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED ON THE DRAWINGS.

11) UNLESS OTHERWISE NOTED, CONCRETE SCORE AND EXPANSION JOINTS SHALL BE ALIGNED WITH BUILDING FEATURES AND WITH CORNERS OF PAVEMENT. SPACE THE ADDITIONAL JOINTS BETWEEN THESE POINTS EQUALLY.

12) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING THE WORK SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR POSSIBLE CLARIFICATION OR RECONCILIATION.

13) ITEMS LABELED AS "BY OTHERS" OR "NIC" ARE FOR COORDINATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ANY SUCH ITEMS WITH THE OWNER'S REPRESENTATIVE.

GENERAL NOTES

1) ALL BOUNDARY, TOPOGRAPHICAL AND LOCATIONAL INFORMATION DEPICTED ON THIS SURVEY ARE FROM A SURVEY SIGNED AND SEALED BY EDWIN N. FOLEY, PLS, DATED AUGUST 12, 2011. LHPA ASSUMES NO RESPONSIBILITY FOR DESIGN OR CONSTRUCTION CHANGES CAUSED BY INACCURACIES IN SURVEYS.

2) THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.

3) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR ADHERENCE TO ORDINANCES, REGULATIONS, LAWS AND CODES HAVING JURISDICTION OVER THE PROPERTY PRIOR TO COMMENCING WORK.

4) ALL MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL MEET THE ONSLOW COUNTY SPECIFICATIONS AND DESIGN STANDARDS.

5) EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.

6) ALL WORK WITHIN THE NCDOT ROW SHALL CONFORM TO NCDOT STANDARDS AND SPECIFICATIONS. THE CONTRACTOR SHALL OBTAIN ALL NEEDED PERMITS, AGREEMENTS AND SUPPLY NOTIFICATIONS OF CLOSURES FROM THE NCDOT.

7) CONSTRUCTION STAKEOUT FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR USING A DIGITAL (CADD) FILE PROVIDED THROUGH THE ARCHITECT/GC. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND BETWEEN THE DIGITAL FILE AND THE STAKING DIMENSIONS SHOWN ON THE PLAN OR DISCREPANCIES FOUND BETWEEN THE LAYOUT AND THE SITE. ANY MODIFICATIONS MADE BY OTHERS TO THE DIGITAL FILE PROVIDED SHALL RENDER IT VOID. IN THE EVENT OF DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND THE DESIGN LAYOUT OR EXISTING CONDITIONS, THE CONTRACT DOCUMENTS TAKE PRECEDENCE OVER THE DIGITAL FILE.

8) THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING SLEEVING FOR ELECTRIC, DRAINAGE, IRRIGATION, AND UTILITIES PRIOR TO THE INSTALLATION OF COMPACTED SUB-GRADE, SUB-BASE AND PAVEMENT AS NECESSARY. SLEEVES TO BE INSTALLED AT A MINIMUM DEPTH BELOW GRADE AS PER LOCAL CODES.

9) NO CONSTRUCTION ACTIVITY, STORAGE, STAGING, OR GRADING IS PERMITTED OUTSIDE OF CONSTRUCTION LIMITS.

10) REFER TO PLUMBING FOR ROOF DRAINAGE CONNECTIONS AND OTHER UTILITY CONNECTIONS TO THE BUILDING.

11) REFER TO CIVIL FOR SEDIMENTATION AND EROSION CONTROL MEASURES.

12) REFER TO CIVIL FOR UTILITY AND UNDERGROUND STORM DRAINAGE INFORMATION.

13) REFER TO L-100 SHEET INDEX PLAN FOR SHEET LAYOUT.

INCHES TO DECIMAL FEET
1" = 0.08'
2" = 0.17'
3" = 0.25'
4" = 0.33'
5" = 0.42'
6" = 0.50'
7" = 0.58'
8" = 0.67'
9" = 0.75'
10" = 0.83'
11" = 0.92'
12" = 1.00'

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT C-098 SURFACE 678, P.A.

10/20/23

#	Description	Date

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MATERIALS PLAN

L-101

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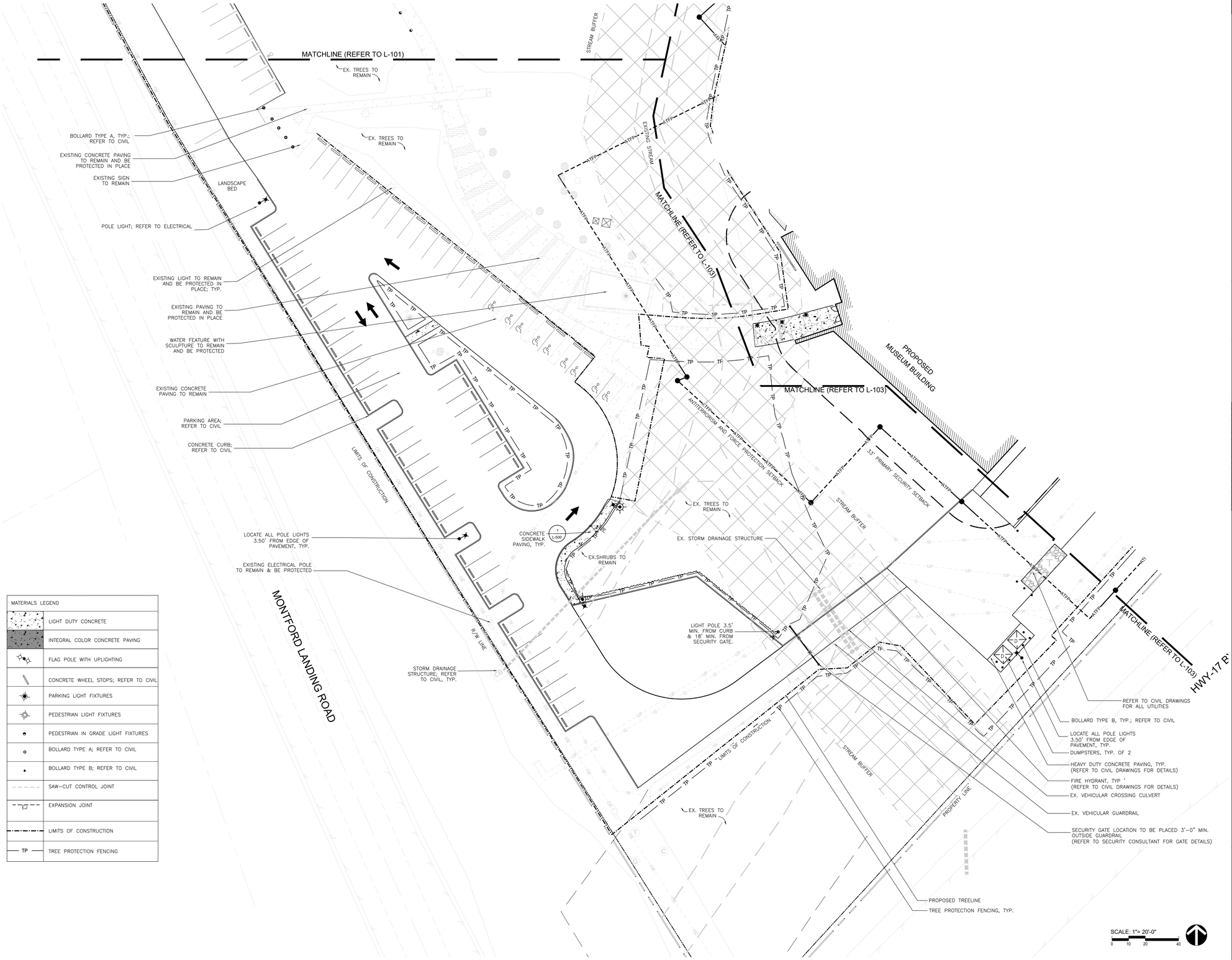

MATERIALS LEGEND	
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	INTEGRAL COLOR CONCRETE PAVING
	FLAG POLE WITH UPLIGHTING
	CONCRETE WHEEL STOPS; REFER TO CIVIL
	PARKING LIGHT FIXTURES
	PEDESTRIAN LIGHT FIXTURES
	PEDESTRIAN IN GRADE LIGHT FIXTURES
	BOLLARD TYPE A; REFER TO CIVIL
	BOLLARD TYPE B; REFER TO CIVIL
	SAW-CUT CONTROL JOINT
EJ	EXPANSION JOINT
	LIMITS OF CONSTRUCTION
TP	TREE PROTECTION FENCING

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA SURFACE 678, P.A. C-098

NORTH CAROLINA ROBERT J. PRATT 10/20/23

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MATERIALS PLAN

L-102

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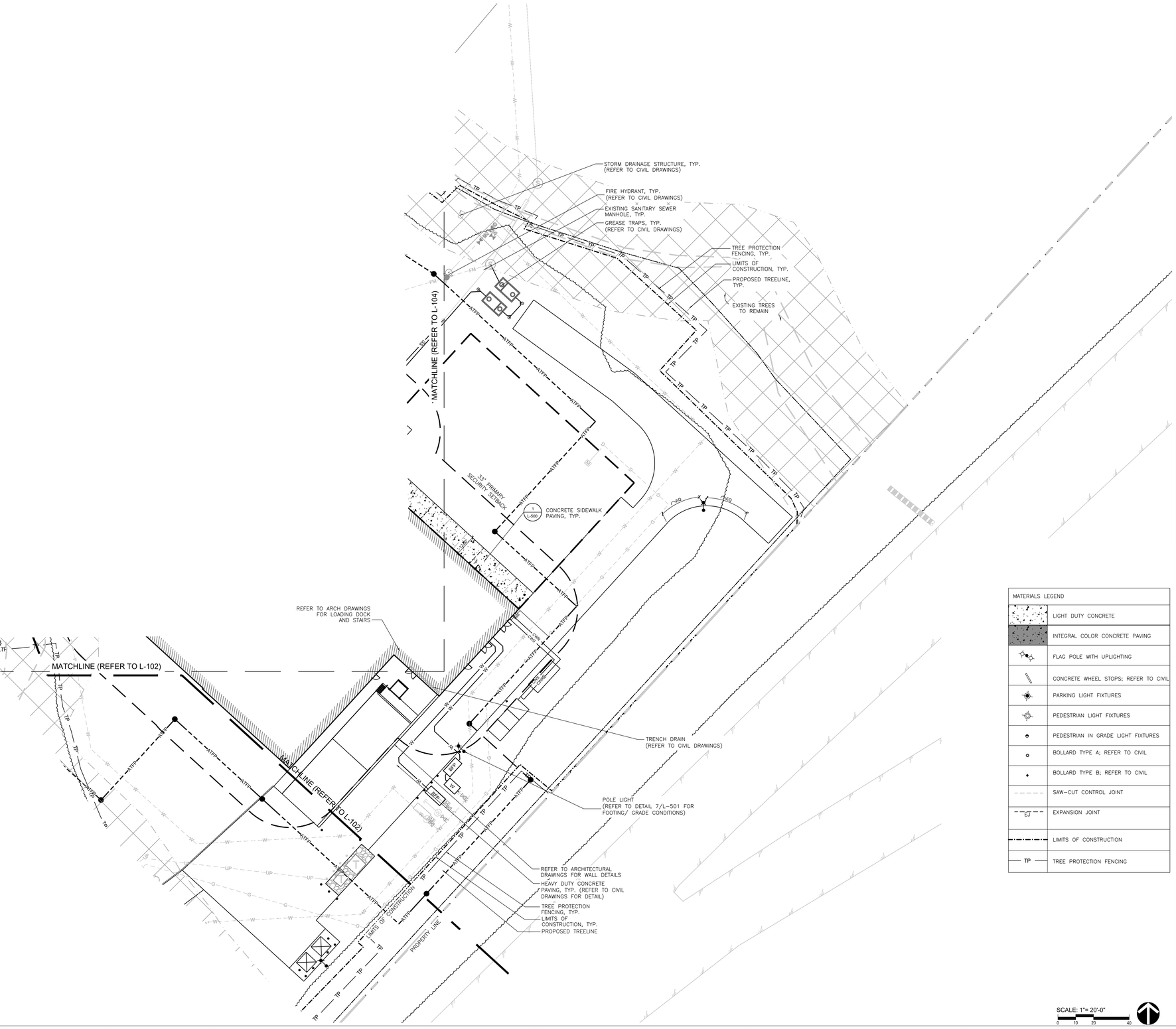

MATERIALS LEGEND	
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	INTEGRAL COLOR CONCRETE PAVING
	FLAG POLE WITH UPLIGHTING
	CONCRETE WHEEL STOPS; REFER TO CIVIL
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	PEDESTRIAN IN GRADE LIGHT FIXTURES
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	BOLLARD TYPE B; REFER TO CIVIL
	SAW-CUT CONTROL JOINT
EJ	EXPANSION JOINT
	LIMITS OF CONSTRUCTION
TP	TREE PROTECTION FENCING

SCALE: 1"= 20'-0"

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MATERIALS PLAN

L-103

ISSUE DATE: 10-24-2023
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MATERIALS LEGEND	
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	INTEGRAL COLOR CONCRETE PAVING
	FLAG POLE WITH UPLIGHTING
	CONCRETE WHEEL STOPS; REFER TO CIVIL
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	PEDESTRIAN LIGHT FIXTURES
	PEDESTRIAN IN GRADE LIGHT FIXTURES
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	BOLLARD TYPE B; REFER TO CIVIL
	SAW-CUT CONTROL JOINT
EJ	EXPANSION JOINT
	LIMITS OF CONSTRUCTION
TP	TREE PROTECTION FENCING

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NORTH CAROLINA ROBERT J. PRATT 10/20/23

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ENLARGEMENT PLAN

L-104

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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CHECKED BY: RP



PLANT LIST

SYM	QTY	COMMON NAME	SCIENTIFIC NAME	MIN CAL/RT	MIN HT.	MIN SPR	NOTES
		LARGE TREES					
T_JS	11	JUNIPERUS SCOPULORUM 'BLUE HEAVEN'	BLUE HEAVEN JUNIPER	BB	8'	5'	FULL, 8'OC
T_TF	5	TRACHYCARPUS FORTUNEI	WINDMILL PALM	BB	12'	5'	FULL, LIMBED TO 6'-0"
		SHRUBS					
S_IG	182	ILEX GLABRA 'DENSA'	DENSE INKBERRY HOLLY		18"	15"	
S_HQ	72	HYDRANGEA QUERCIFOLIA 'PEE WEE'	PEE WEE OAKLEAF HYDRANGEA		42"	24"	
S_YC	54	YUCCA FILAMENTOSA 'COLORGUARD'	VARIEGATED ADAM'S NEEDLE		24"	18"	4' OC
S_PC	17	PRUNUS CAROLINIANA 'COMPACTA#2'	CAROLINA CHERRY LAUREL		42"	24"	
S_YF	85	YUCCA FILAMENTOSA	EMERALD KING ADAM'S NEEDLE YUCCA		30"	20"	3' OC
S_IC	32	ILEX CRENATA 'HOOGENDORN'	HOOGENDORN JAPANESE HOLLY		15"	18"	
		GROUNDCOVERS					
G_cc	95	CAREX CHEROKEENSIS	CHEROKEE SEDGE	PLUG			15" OC
G_cp	212	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	PLUG			10" OC
G_ms	25	MISCANTHUS SINENSIS 'GRAZIELLA'	GRAZIELLA MISCANTHUS	1 GAL. CONT.			24" OC
G_pa	1469	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	PLUG			32 TRAY, 24" OC
G_es	481	ERAGROSTIS SPECTABILIS	PURPLE LOVE GRASS	PLUG			32 TRAY, 18" OC
G_ss	1004	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	STANDING OVATION LITTLE BLUESTEM	PLUG			32 TRAY, 18" OC
G_pv	60	PANICUM VIRGATUM 'CLAUDE NINE'	TALL SWITCHGRASS	PLUG			24" OC, FULL
		SOD	CENTIPEDE GRASS				
		SEEDED MEADOW					SEE SPECS
		MULCH	LONG LEAF PINE NEEDLE MULCH				SEE SPECS
◉		DECORATIVE STONE					SEE SPECS
◉	4 L-501	TREE UPLIGHTS: 3'-0" MIN. FROM BASE OF TREE. UPLIGHT POSITIONS TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO FINAL INSTALLATION.					

* PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE. CONTRACTOR IS TO BID PLAN.

PLANTING NOTES

1) EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.

2) PLANT LIST IS PROVIDED FOR CONVENIENCE ONLY. IN THE CASE OF DISCREPANCIES BETWEEN THE PLAN AND PLANT LIST QUANTITIES, THE PLAN SHALL TAKE PRECEDENCE.

3) AFTER THE SITE IS STABILIZED AND FREE OF SEDIMENTATION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES, SILT, RIP RAP AND TEMPORARY STONE STAGING AREAS FOR REPLACEMENT WITH PLANTING SOIL. PROVIDE PLANTING ACCORDING TO THE LANDSCAPE PLAN.

4) TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.

5) UNLESS OTHERWISE NOTED IN THE PLANT LIST, THE CONTRACTOR SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT – GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.

6) ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.

7) FURNISHED PLANT MATERIAL SHALL MEET THE MINIMUM HEIGHT OR MINIMUM SPREAD DIMENSIONS SHOWN IN THE PLANT LIST HEADINGS. THE CONTRACTOR SHALL UTILIZE THE MOST STRINGENT DIMENSION SHOWN ON THE PLANT LIST.

8) DO NOT PLANT IN STORM WATER CONVEYANCE SWALES OR PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES.

9) PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER SHAPE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES.

10) THE PLANTING LAYOUT WITHIN PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS.

11) THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS INCLUDING CONSTRUCTION ACCESS OUTSIDE PROJECT LIMITS

12) ALL SUBSTITUTIONS IN PLANT MATERIALS SHALL BEAPPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

13) ALL MAJOR TREE PLANTINGS AND BEDS SHALL BE STAKED FOR APPROVAL PRIOR TO INSTALLATION.

14) ALL TREES SHALL BE PLANTED IN 5' DIAMETER MULCH BEDS EXCEPT AS OTHERWISE NOTED ON PLANS. ALL TREES, SHRUBS AND GROUND COVERS SHALL RECEIVE UNIFORM MULCH COVER AS SPECIFIED.

15) THE LANDSCAPE CONTRACTOR SHALL EVALUATE ALL PLANTING AREAS FOR DRAINAGE AND CONTACT THE LANDSCAPE ARCHITECT WITH IMPROPER DRAINAGE CONDITIONS.

INCHES TO DECIMAL FEET:

1"	= 0.08'
2"	= 0.17'
3"	= 0.25'
4"	= 0.33'
5"	= 0.42'
6"	= 0.50'
7"	= 0.58'
8"	= 0.67'
9"	= 0.75'
10"	= 0.83'
11"	= 0.92'
12"	= 1.00'

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

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT C-098 SURFACE 678, P.A.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 10/20/23 RYAN PRATT

#	Description	Date

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PLANTING PLAN

L-201

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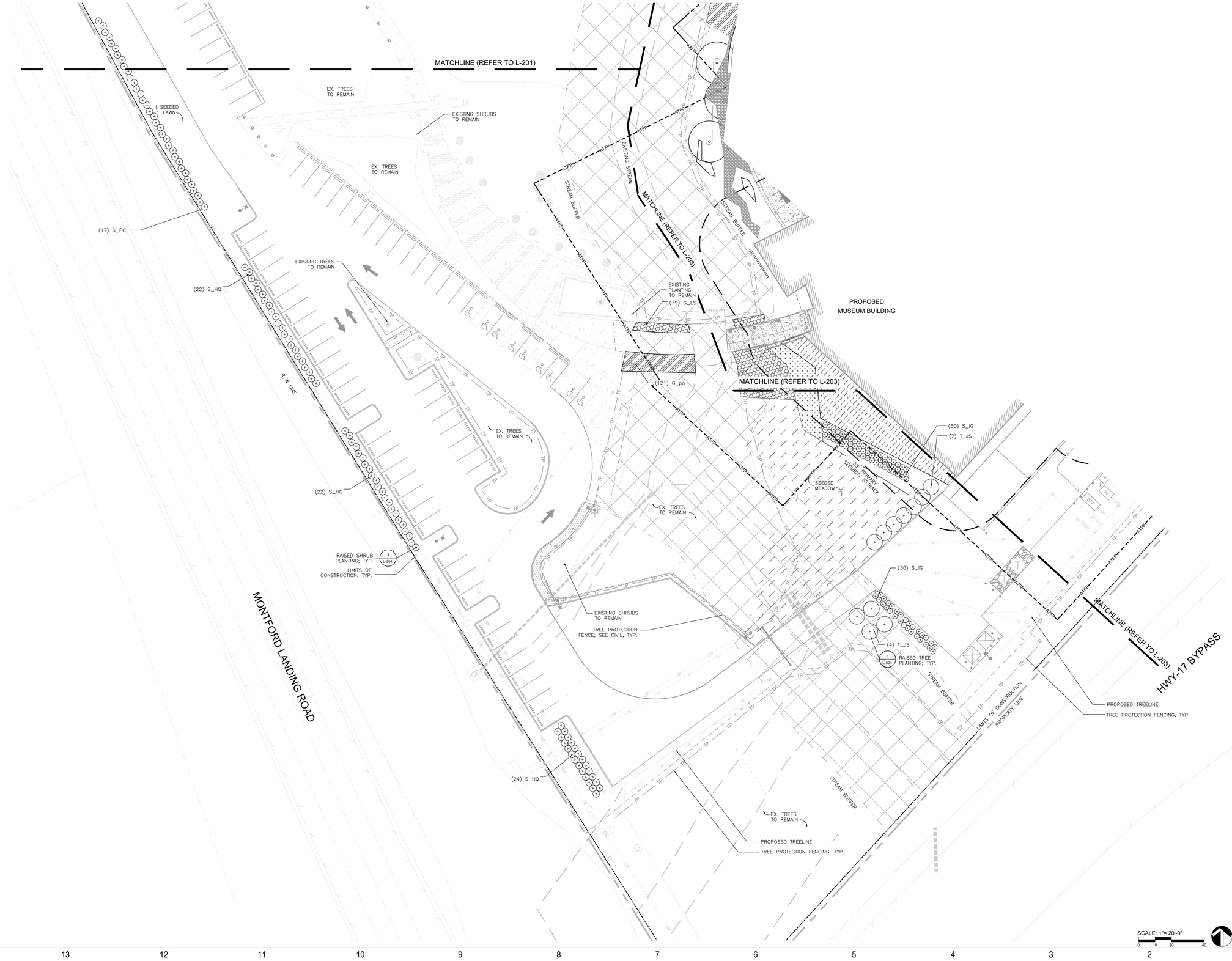

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA SURFACE 678, P.A. C-098

NORTH CAROLINA ROBERT J. PRATT 10/20/23

#	Description	Date

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PLANTING PLAN

L-202

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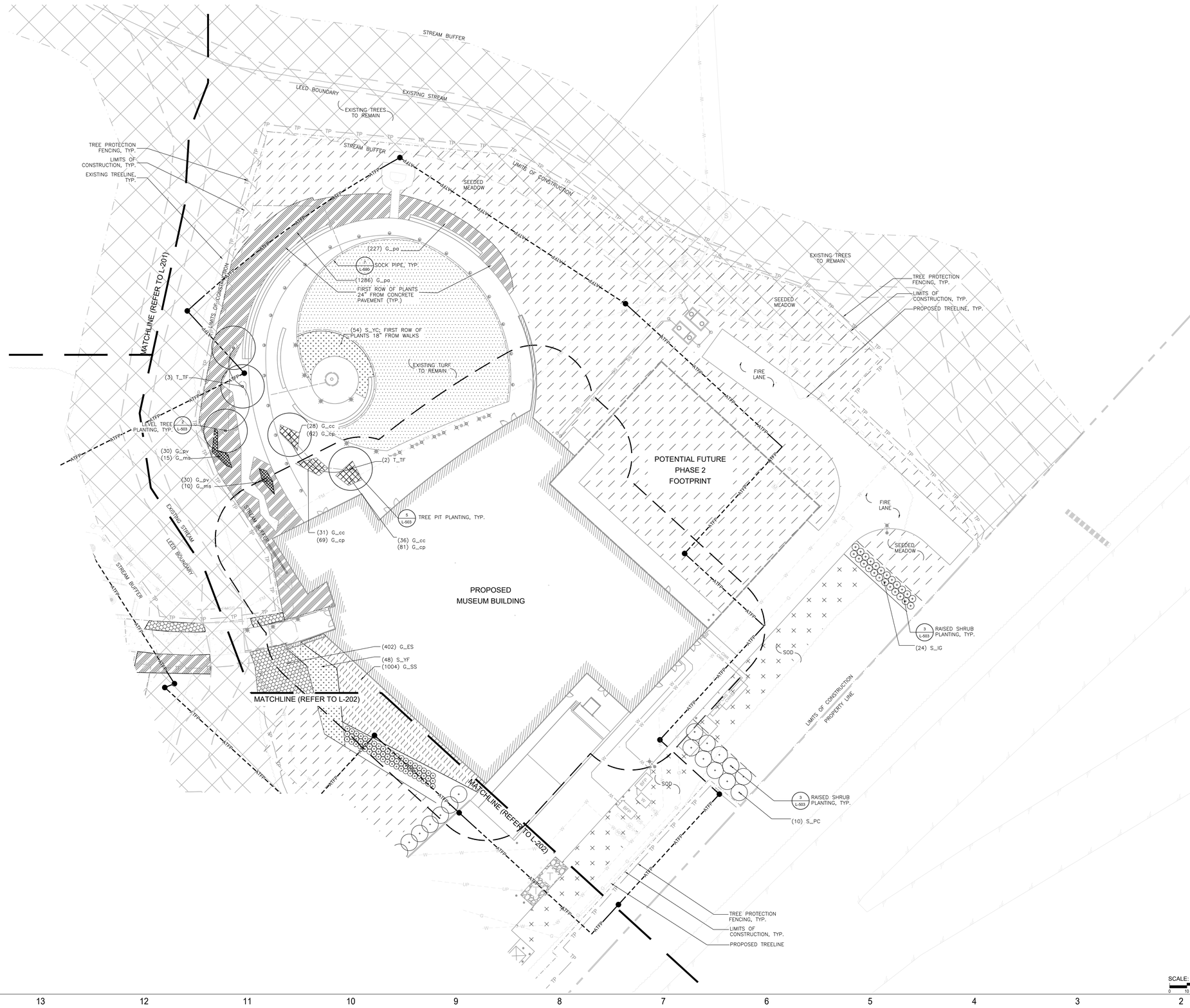

SCALE: 1"= 20'-0"
0 10 20 40

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT C-098 SURFACE 678, P.A.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT ROBERT PRATT 10/20/23

#	Description	Date

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PLANTING PLAN

L-203

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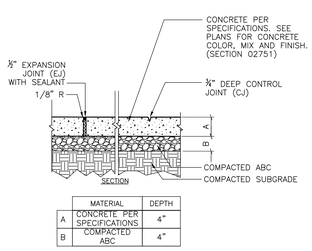
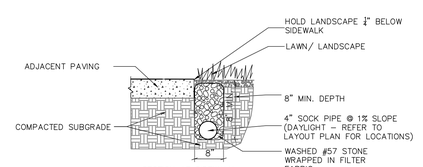


	MATERIAL	DEPTH
A	CONCRETE PER SPECIFICATIONS	4"
B	COMPACTED ABC	4"

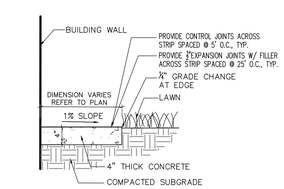
1 / L-500 LIGHT DUTY CONCRETE PAVING

SCALE: 1"=1'-0"



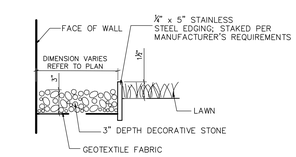
8 / L-500 SOCK PIPE

SCALE: 1"=1'-0"



9 / L-500 CONCRETE MOW STRIP

SCALE: 1"=1'-0"



10 / L-500 GRAVEL MOW STRIP

SCALE: 1"=1'-0"

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA C-098 SURFACE 678, P.A.

NORTH CAROLINA 10/20/23 REGISTERED LANDSCAPE ARCHITECT

#	Description	Date

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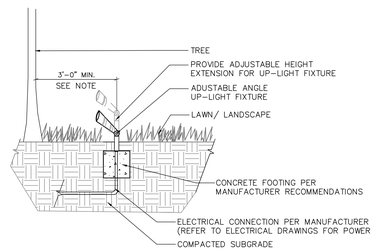
DETAILS

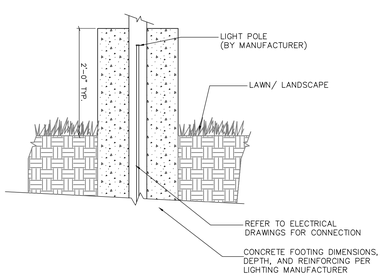
L-500

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AP, RP, JC, JH, MA, JW, DG
CHECKED BY: RP

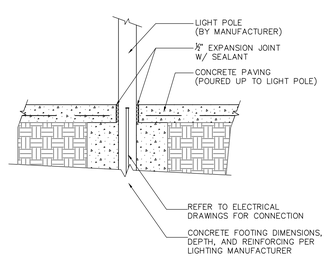


5 / L-501 TREE UPLIGHT INSTALLATION CONDITION (TYP) — SCALE: 1"=1'-0"

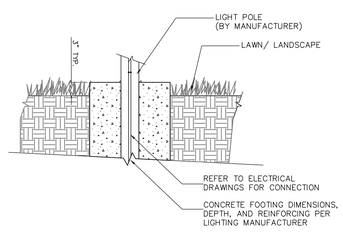
* UPLIGHT POSITIONS TO BE FIELD VERIFIED BY LANDSCAPE ARCHITECT PRIOR TO FINAL INSTALLATION



7 / L-501 PARKING LIGHT POLE FOOTING CONDITION (TYP) — SCALE: 1"=1'-0"



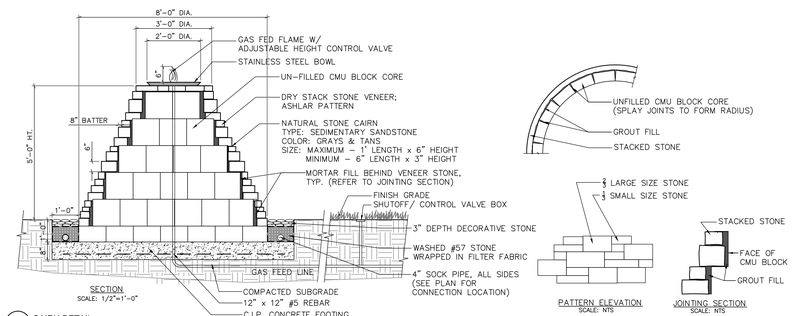
FLUSH CONDITION: IN PAVING



RAISED CONDITION: IN LANDSCAPE

8 / L-501 DIRECT BURIAL FOR PEDESTRIAN LIGHT POLE FOOTING (TYP) — SCALE: 1"=1'-0"

* REFER TO ELECTRICAL DRAWINGS FOR FIXTURE TYPE AND SIZES



9 / L-501 CAIRN DETAIL — SCALE: 1/2"=1'-0"

* CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION/ CONSTRUCTION
* CONTRACTOR TO PROVIDE A DRY-STACK STONE MOCKUP FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION

CJMW ARCHITECTURE
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CONSTRUCTION DOCUMENTS

NORTH CAROLINA C-098 SURFACE 678, P.A.

NORTH CAROLINA 10/20/23 REGISTERED LANDSCAPE ARCHITECT

#	Description	Date

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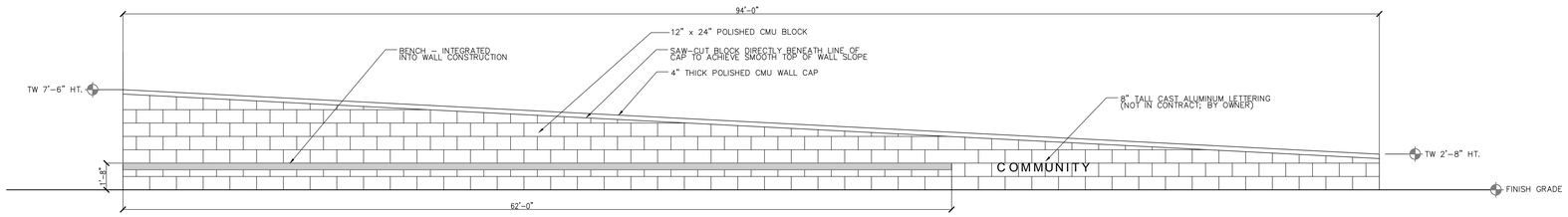
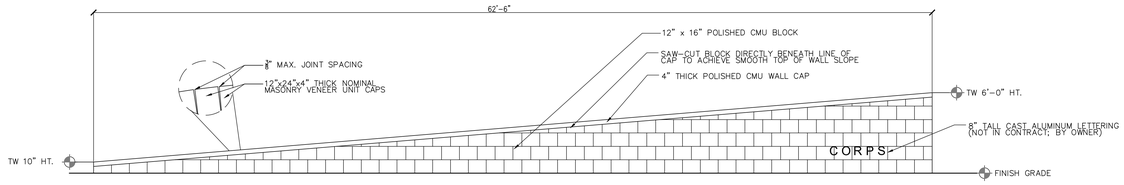
DETAILS

L-501

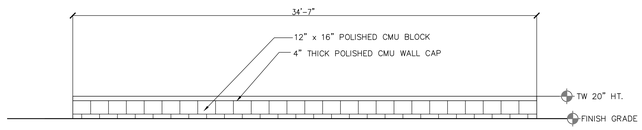
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AP, RP, JC, JH, MA, JW, DG
CHECKED BY: RP



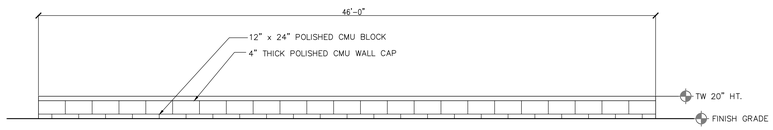
1 L-502 SITE WALL ELEVATION
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1/4"=1'-0"



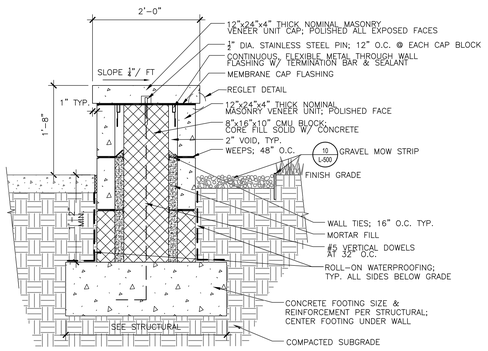
2 L-502 SITE WALL ELEVATION
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1/4"=1'-0"



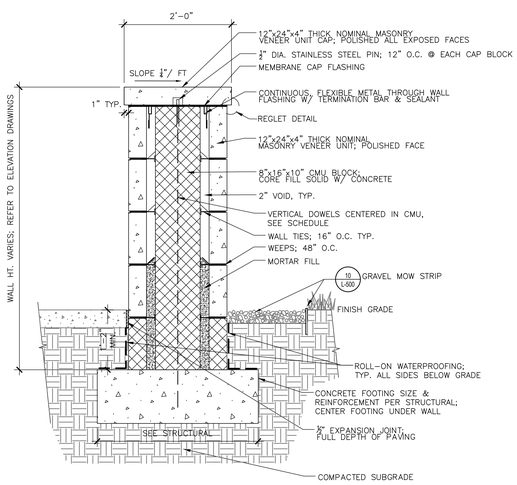
3 L-502 SEAT WALL ELEVATION
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1/4"=1'-0"



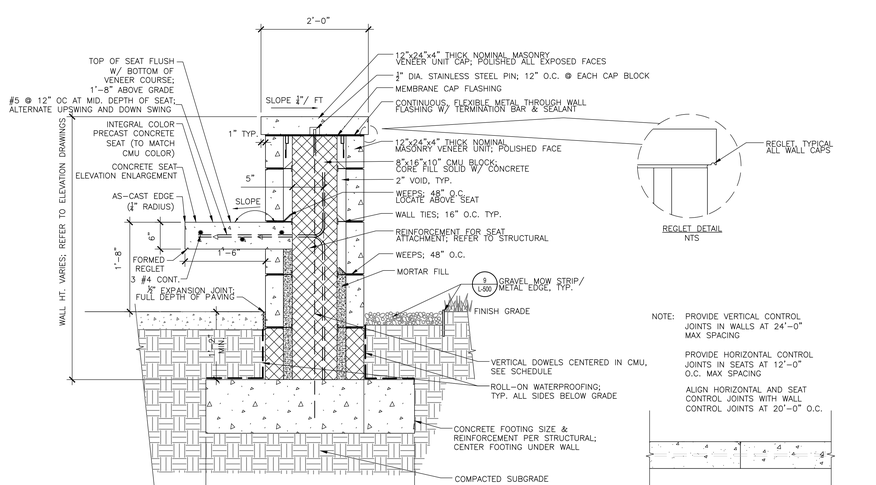
4 L-502 SEAT WALL ELEVATION
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1/4"=1'-0"



5 L-502 SEAT WALL
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1"=1'-0"



6 L-502 SITE WALL
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1"=1'-0"



7 L-502 SITE WALL W/ SEATING
• CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
SCALE: 1"=1'-0"

NOTE: PROVIDE VERTICAL CONTROL JOINTS IN WALLS AT 24'-0" MAX SPACING

PROVIDE HORIZONTAL CONTROL JOINTS IN SEATS AT 12'-0" O.C. MAX SPACING

ALIGN HORIZONTAL AND SEAT CONTROL JOINTS WITH WALL CONTROL JOINTS AT 20'-0" O.C.

CONCRETE SEAT ELEVATION
SCALE: 1"=1'-0"

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CONSTRUCTION DOCUMENTS

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT C-098 SURFACE 678, P.A.

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT RICHARD PRATT 10/20/23

#	Description	Date

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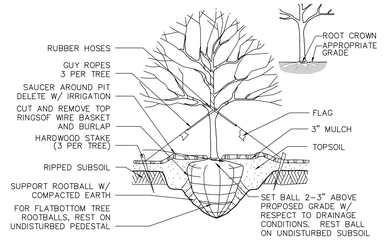
DETAILS

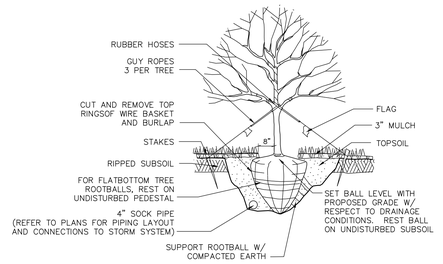
L-502

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AP, RP, JC, JH, MA, JW, DG
CHECKED BY: RP



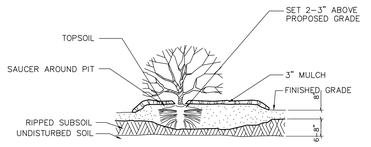
1 L-503 RAISED TREE PLANTING

SCALE: NTS



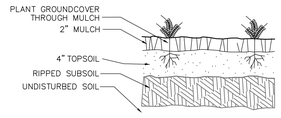
2 L-503 LEVEL TREE PLANTING

SCALE: NTS



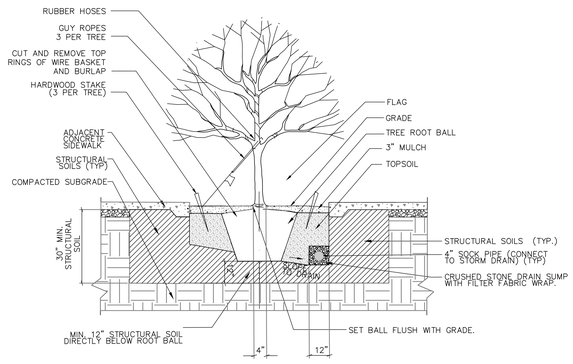
3 L-503 RAISED SHRUB PLANTING

SCALE: NTS



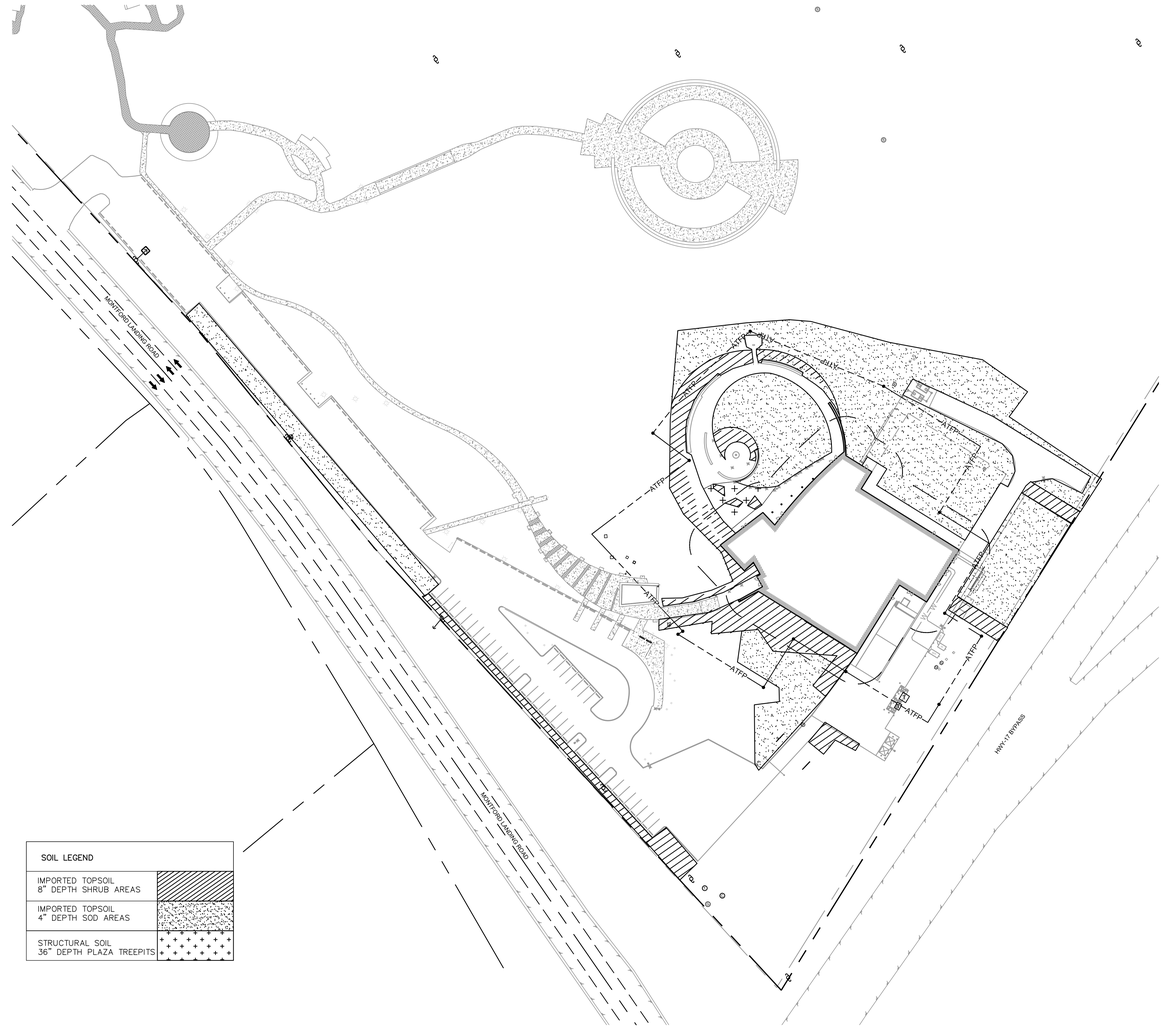
4 L-503 GROUNDCOVER PLANTING

SCALE: NTS



5 L-503 TREE PIT TREE PLANTING

SCALE: NTS


SOIL LEGEND
IMPORTED TOPSOIL 8" DEPTH SHRUB AREAS
IMPORTED TOPSOIL 4" DEPTH SOD AREAS
STRUCTURAL SOIL 36" DEPTH PLAZA TREEPITS
ATFP
ATFP
ATFP

STRUCTURAL GENERAL NOTES

DESIGN CRITERIA

BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE (IBC)

DESIGN STANDARDS:
1. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) ASCE/SEI 7-16 "MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES"
2. U.S. DEPARTMENT OF DEFENSE, UNIFIED FACILITIES CRITERIA (UFC):
   A. UFC 1-200-01, SEPTEMBER 1, 2022 "DOD BUILDING CODE"
   B. UFC 3-301-01, FEBRUARY 4, 2022 "STRUCTURAL ENGINEERING"
   C. UFC 4-01D-01, JULY 30, 2022 "DOD MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS"
      1. LEVEL OF PROTECTION: VERY LOW
      2. DESIGN BASIS THREAT: 220 LBS. TNT EQUIVALENT CHARGE MASS AT A STAND-OFF DISTANCE OF 93 FEET.

BUILDING RISK CATEGORY: III

BLAST LOADING ON CURTAIN WALLS (ASTM F2248-19): 120 PSF 3-SECOND EQUIVALENT DESIGN LOAD

DESIGN GRAVITY LOADS:

	LIVE LOAD	SUPERIMPOSED DEAD LOAD
ROOF (TYPICAL)	20 PSF	25 PSF ★
DOCK CANOPY ROOF	20 PSF	5 PSF
ROOF OVER MECH. RM.	20 PSF	35 PSF
ROOF OVER GALLERY	20 PSF	35 PSF ★
CEILING JOISTS	0 PSF	10 PSF
PLATFORM JOISTS	20 PSF	10 PSF
2ND FLOOR MECH. RM.	150 PSF	65 PSF
SLAB-ON-GRADE (TYPICAL)	150 PSF	0 PSF
SLAB-ON-GRADE (GALLERY & COLLECTIONS STORAGE)	250 PSF ★★	0 PSF

★ ADDITIONAL CONCENTRATED SUSPENDED LOADS FOR ROOF FRAMING OVER THE GREAT HALL AND GALLERY SPACES: 1000 LBS.FROM ONE, SINGLE BOTTOM CHORD PANEL POINT OF EACH ROOF JOIST OR BOTTOM FLANGE OF BEAMS. OTHER ADDITIONAL SUSPENDED SUPERIMPOSED DEAD LOADS FOR PARTITIONS, PIPING OR EQUIPMENT ARE NOTED ON THE PLANS.
★★ LOADS FOR HEAVY EQUIPMENT OR VEHICLE EXHIBITS ARE ADDITIONAL AND INDICATED ON PLAN WHERE THEY OCCUR.

SNOW LOAD: Ce = 1.0, Ct = 1.2, I=1.1, Pg = 10 psf, Pf = 9.24 psf, Pm = 11 psf

RAIN LOAD CRITERIA:

INTENSITY (100 YRS.):	7.98 INCHES/15 MIN.
STATIC HEAD:	2 INCHES
MIN. OVERFLOWN DRAIN DIA.:	6 INCHES
HYDRAULIC HEAD:	3 INCHES
UNIFORM RAIN LOAD:	26 PSF (CONTROLS)

WIND LOAD CRITERIA:

BASIC DESIGN WIND SPEED (Vult):	147 MPH
ALLOWABLE STRESS DESIGN WIND SPEED (Vasd):	114 MPH
EXPOSURE FACTOR:	B
GROUND ELEVATION FACTOR:	1.0
WIND BASE SHEARS:	Vx = 221K Vy = 235.0K

SEISMIC LOAD CRITERIA:

MAPPED SPECTRAL RESPONSE ACCELERATIONS:	Ss = 11.3%g S1 = 5.5%g
IMPORTANCE FACTOR:	1.25
SITE CLASSIFICATION:	D
SITE COEFFICIENTS:	Fa = 1.6 Fv = 2.4
DESIGN SPECTRAL RESPONSE ACCELERATIONS:	Sds = 0.197 Sd1 = 0.138
DESIGN SEISMIC CATEGORY:	B
SEISMIC FORCE RESISTING SYSTEM:	INTERMEDIATE REINFORCED MASONRY SHEAR WALLS & ORDINARY PRECAST SHEAR WALLS
RESPONSE MODIFICATION FACTOR(R):	3.50
DEFLECTION AMPLIFICATION FACTOR(Cd):	2.25
SYSTEM OVERSTRENGTH FACTOR:	2.50
REDUNDANCY FACTOR:	1.00
RESPONSE COEFFICIENT (Cs):	0.0430
SEISMIC BASE SHEAR:	Vx = 79K Vy = 87K
ANALYSIS PROCEDURE:	EQUIVALENT LATERAL FORCE
ARCHITECTURAL AND MECHANICAL COMPONENTS ANCHORED FOR SEISMIC?	NO
LATERAL DESIGN CONTROL:	X: WIND Y: WIND

WIND PRESSURES FOR COMPONENTS AND CLADDING

BASIS: ASCE 7-16: FIGURE 30.3-1: 147 MPH: EXPOSURE B: ROOF SLOPE <10 DEGREES

WIND PRESSURES FOR EXTERIOR WALLS, DOORS, WINDOWS AND STOREFRONT						
	EFFECTIVE WIND AREA(2)					
	10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	100 SQ. FT.	200 SQ. FT.	500 SQ. FT.
ZONE 4(1)	40 PSF	39 PSF	36 PSF	35 PSF	33 PSF	31 PSF
ZONE 5(1)	49 PSF	46 PSF	42 PSF	39 PSF	36 PSF	31 PSF

(1) ZONE 4 PRESSURES SHALL BE USED TO DESIGN ALL WALL COMPONENTS AND CLADDING, EXCEPT ZONE 5 SHALL BE USED FOR ELEMENTS WITHIN 13'-3" OF A BUILDING CORNER.
(2) EFFECTIVE WIND AREA IS THE SPAN LENGTH MULTIPLIED BY AN EFFECTIVE WIDTH THAT NEED NOT BE LESS THAN ONE-THIRD THE SPAN LENGTH. FOR CLADDING FASTENERS, THE EFFECTIVE WIND AREA SHALL NOT BE GREATER THAN THE AREA THAT IS TRIBUTARY TO AN INDIVIDUAL FASTENER.

SPECIAL INSPECTIONS

1. SPECIAL INSPECTIONS ARE REQUIRED IN CONFORMANCE WITH BUILDING CODE CHAPTER 17.
2. A STATEMENT OF SPECIAL INSPECTIONS HAS BEEN PREPARED AND MAKES REFERENCE TO OBSERVATION AND TESTING FOR THE FOLLOWING BUILDING SYSTEMS.
   A. INSPECTION OF FABRICATORS
   B. STEEL CONSTRUCTION
   C. COLD-FORMED STEEL CONSTRUCTION
   D. CONCRETE CONSTRUCTION
   E. MASONRY CONSTRUCTION
   F. SOILS
   G. ARCHITECTURAL COMPONENTS
   H. MECHANICAL AND ELECTRICAL COMPONENTS

SOILS SUPPORTING SLABS AND FOUNDATIONS

GEOTECHNICAL ENGINEER: ECS SOUTHEAST, LLP
WILMINGTON, NC

THE FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS CONTAINED IN THE "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING ANALYSIS", DATED SEPTEMBER 13, 2007 BY THE PROJECT GEOTECHNICAL ENGINEER: PROJECT NO. 22-13112

DESIGN SOIL BEARING PRESSURE: 2000 PSF

FROST DEPTH: 12"
1. BOTTOM OF ALL EXTERIOR FOOTINGS AND TURNED-DOWN SLABS SHALL BEAR AT OR BELOW SPECIFIED FROST DEPTH MEASURED FROM TOP OF GRADE.

BUILDING PAD:
1. THE BUILDING PAD SHALL BE PREPARED AND VERIFIED TO MEET THE SPECIFICATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

DRAINAGE COURSE:
1. FREE-DRAINING, WASHED ABC STONE FREE OF FINES OR CLEAN SAND WITH LESS THAN 3% FINES, GRADE TO TOLERANCE REQUIREMENTS OF ACI 302, SECTION 4.1.3 (+0", -1")

TESTING AND INSPECTION:
1. THE PROJECT GEOTECHNICAL ENGINEER SHALL SET ACCEPTANCE CRITERIA AND FREQUENCY OF INSPECTIONS AND TESTS FOR SOILS SUPPORTING SLABS AND FOUNDATIONS.
2. AN INDEPENDENT TESTING LABORATORY (ITL) SHALL BE RETAINED TO INSPECT, TEST AND ASSESS ALL SOILS SUPPORTING SLABS AND FOUNDATIONS.
3. INSPECTIONS AND TESTS SHALL BE COORDINATED BY THE CONTRACTOR AND ITL TO INCLUDE, BUT NOT LIMITED TO:
   A. SELECTED FILL MATERIAL
   B. PROOFROLLING
   C. MEASUREMENT OF CUT AND FILL FOR EARTH AND ROCK
   D. COMPACTION
   E. FIELD ADJUSTMENTS TO SUBGRADES OR BEARING CONDITIONS
   F. FIELD DENSITY TESTS OF ENGINEERED FILL
   G. ALL FOUNDATION BEARING STRATA

CAST-IN-PLACE CONCRETE

DESIGN AND CONSTRUCTION STANDARDS:
1. AMERICAN CONCRETE INSTITUTE (ACI) ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-20 "SPECIFICATIONS FOR CONCRETE CONSTRUCTION."
2. AMERICAN CONCRETE INSTITUTE (ACI) ACI 302.-1R-15 "GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION"

DESIGN COMPRESSIVE STRENGTH AT 28 DAYS:

SLABS-ON-GRADE:	4,000 PSI
ELEVATED SLAB:	4,000 PSF
CAST-IN-PLACE WALLS:	4,000 PSI
ALL OTHER CONCRETE:	3,000 PSI

PRECAST CONCRETE PER SUPPLIERS SPECIFICATION

DENSITY: 145 PCF (NORMAL WEIGHT)

MIX DESIGNS:
1. CEMENT SHALL CONFORM TO ASTM C150, TYPE 1 OR 1L PORTLAND CEMENT, UNLESS OTHERWISE ACCEPTED BY THE STRUCTURAL ENGINEER.
2. FLY ASH SHALL BE ASTM C618, TYPE C OR F, BUT NOT EXCEEDING 4% BY LOSS ON IGNITION. FLY ASH SHALL NOT EXCEED 25% OF CEMENT CONTENT BY WEIGHT.
3. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33. AGGREGATE SIZE SHALL BE #57 OR #67 FOR ALL CONCRETE EXCEPT 3/8" MAXIMUM FOR MASONRY GROUT. PROVIDE WELL-GRADED AGGREGATE FOR SLABS-ON-GRADE.
4. AIR ENTRAINING ADMIXTURE SHALL BE USED IN ACCORDANCE WITH ACI 301 IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING.
5. ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 5", EXCEPT CONCRETE UTILIZING HIGH OR MID-RANGE WATER REDUCERS SHALL HAVE A MAXIMUM SLUMP OF 8".

REINFORCING STEEL:
1. REBAR: ASTM A615, GRADE 60
2. WELDED WIRE MAT: ASTM A184 AND ASTM A185
3. LAP SPLICES:
   A. ALL BARS MARKED CONTINUOUS ("CONT.") SHALL BE LAPPED A MINIMUM OF 57 BAR DIAMETERS.
   B. ALL WALL AND FOOTING DOWELS SHALL EXTEND 30 BAR DIAMETERS OR 24" INTO WALL, WHICHEVER IS GREATEST (U.N.O. IN DETAILS).
   C. WELDING OR TACK WELDING OF REINFORCING BARS IS PROHIBITED.
   D. WELDED WIRE MAT AND FABRIC SHALL BE LAPPED 1'-0" AT ALL SPLICES.
4. CONCRETE COVER FOR REINFORCEMENT:
   A. UNFORMED SURFACE CAST AGAINST EARTH: 3"
   B. FORMED SURFACE EXPOSED TO EARTH OR WEATHER: 2"
   C. FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER:
      SLABS: 3/4"
      WALLS: 1"
      CURBS & PIERS: 1 1/2"

PLACEMENT:
1. WHEN HOT WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 305.
2. WHEN COLD WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 306.
3. PLACE AND CONSOLIDATE CONCRETE IN CONFORMANCE WITH ACI 309.
4. NO CONCRETE FOOTINGS OR PIERS SHALL BE SLEEVED FOR PIPING OR UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR OTHERWISE ACCEPTED BY THE STRUCTURAL ENGINEER.
5. ALUMINUM EMBEDMENTS OF ANY KIND ARE PROHIBITED IN CONCRETE.

SLAB FINISHING:
1. FINISH SLAB-ON-GRADE FREE OF TROWEL MARKS, UNIFORM IN TEXTURE AND APPEARANCE WITH SURFACE PLANE FLATNESS OF F, 35 AND F, 25 IN CONFORMANCE WITH ASTM E1155.
2. APPLY PENETRATING CONCRETE DENSIFIER/DUSTPROOFER OVER ALL INTERIOR FLOORS. APPLY IN STRICT CONFORMANCE WITH SUPPLIERS SPECIFICATIONS.
3. THE CONTRACTOR, CONCRETE SUPPLIER AND CONCRETE FINISHERS SHALL FOLLOW ACI 302.1R-15 GUIDELINES FOR PROPORTIONING, MIXING, TRANSPORT AND PLACEMENT OF CONCRETE FOR SLABS.

CURING:
1. CURE CONCRETE SLABS WITH MINIMUM 30% SOLIDS, LIQUID MEMBRANE CURING COMPOUND APPLIED WITHIN TWO HOURS AFTER COMPLETION OF FINISHING.
2. DO NOT APPLY MEMBRANE CURING COMPOUND ON SURFACES TO RECEIVE FINISHES THAT ARE INCOMPATIBLE WITH THE CURING PRODUCT. APPLY DISSIPATING CURING COMPOUND OR OTHER NON-MEMBRANE MEANS.
3. ALTERNATIVELY, APPLY CONTINUOUS MOIST CURING FOR A MINIMUM OF SEVEN DAYS USING WATERPROOF BUILDING PAPER, POLYETHYLENE SHEET OR SATURATED BURLAP.

REINFORCING STEEL SHOP DRAWINGS:
1. SUBMIT DRAWINGS TO ARCHITECT FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT IN COMPLIANCE WITH ACI SP-66. CONTRACTOR SHALL REVIEW AND APPLY APPROVAL STAMP TO SHOP DRAWINGS PRIOR TO SUBMISSION.

TESTING AND INSPECTION:
1. AN INDEPENDENT TESTING LABORATORY (ITL) SHALL BE RETAINED THAT IS QUALIFIED TO INSPECT AND TEST CONCRETE IN ACCORDANCE WITH THE FOLLOWING PROGRAM:
   A. SLUMP: ASTM C143: ONE TEST FOR EACH CONCRETE LOAD AT POINT OF DISCHARGE.
   B. AIR CONTENT: ASTM C173: ONE TEST FOR EACH SET OF COMPRESSIVE STRENGTH CYLINDERS
   C. TEMPERATURE: FOR EACH LOAD, AT POINT OF DISCHARGE. TEST WHEN AIR TEMPERATURE IS BELOW 40 DEG. F AND ABOVE 80 DEG. F. AND EACH TIME A SET OF COMPRESSIVE STRENGTH CYLINDERS IS MADE.
   D. COMPRESSIVE STRENGTH: ASTM C31: ONE SET OF 4 STANDARD CYLINDERS FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF, OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY OR FOR EACH 10,000 SQUARE FEET OF SURFACE AREA PLACED. TEST ONE CYLINDER AT 7 DAYS, TWO AT 28 DAYS, WITH ONE HELD IN RESERVE.
   E. RECORD OF TEST RESULTS SHALL BE SUBMITTED BY THE ITL TO THE CONTRACTOR AND ARCHITECT.

PRECAST CONCRETE SANDWICH WALL PANELS

DESIGN STANDARDS:
1. AMERICAN CONCRETE INSTITUTE (ACI) ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 301-20 "SPECIFICATIONS FOR CONCRETE CONSTRUCTIONS"
2. PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI) MNL 116 "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF STRUCTURAL PRECAST CONCRETE PRODUCTS" AND MNL 117 "MANUAL FOR QUALITY CONTROL FOR PLANTS AND PRODUCTION OF ARCHITECTURAL PRECAST CONCRETE PRODUCTS."
3. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
4. AMERICAN WELDING SOCIETY (AWS) AWS D1.1 "STRUCTURAL WELDING CODE - STEEL. AWS D1.4" AND "STRUCTURAL WELDING CODE - STEEL REINFORCING BARS."

QUALIFICATIONS:
1. MANUFACTURER SHALL HAVE A MINIMUM OF FIVE (5) YEARS OF PRODUCTION EXPERIENCE IN ARCHITECTURAL PRECAST CONCRETE WORK OF THE QUALITY AND SCOPE REQUIRED ON THIS PROJECT.
2. MANUFACTURER SHALL BE A MEMBER OF THE PRECAST/PRESTRESSED CONCRETE INSTITUTE AND PCI CERTIFIED.

GENERAL:
1. PRECAST CONCRETE SANDWICH WALL PANELS AND CONNECTIONS SHALL BE DESIGNED, FABRICATED, HANDLED AND ERECTED IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS OF THE NCSBC, ACI, PCI, AISC AND AWS.
2. DESIGN OF PRECAST WALL PANELS SHALL INCLUDE GRAVITY LOAD, WIND AND SEISMIC LOADS CONSISTENT WITH THE DESIGN CRITERIA SPECIFIED HEREIN. DESIGN SHALL ACCOMMODATE STRESSES DUE TO HANDLING AND PLACEMENT.
3. EXCEPT WHERE NOTED OTHERWISE IN THE DRAWINGS, THE WEIGHT OF PRECAST WALL PANELS SHALL BE SUPPORTED DIRECTLY UPON FOUNDATIONS. PANEL WEIGHT SHALL NOT BE IMPOSED UPON ANY STEEL ROOF BEAMS EXCEPT WHERE SPECIFICALLY DETAILED IN THE DRAWINGS.
4. ENGINEERING FOR PRECAST CONCRETE WALL PANELS SHALL BE COMPLETED BY A DELEGATED SPECIALTY STRUCTURAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA AND EITHER IN DIRECT EMPLOY OR CONTRACTED TO THE PRECAST CONCRETE SUPPLIER.
5. DESIGN AND CONSTRUCTION DRAWINGS SEALED BY THE DELEGATED SPECIALTY STRUCTURAL ENGINEER SHALL BE PROVIDED BY THE PRECAST SUPPLIER. DRAWINGS SHALL INCLUDE A DESCRIPTION OF ALL APPLIED LOADS AND LOAD COMBINATIONS USED IN DESIGN, IN ADDITION TO ALL REACTIONS FROM THE PRECAST WALL PANELS UPON THEIR SUPPORTS.
6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND INCLUDE THE COST OF ALL TEMPORARY BRACING OR SHORING NECESSARY FOR THE HANDLING AND PLACEMENT OF THE PRECAST WALL PANELS. THE GENERAL CONTRACTOR SHALL ALSO INCLUDE THE PRICE OF ANY OTHER ITEMS SPECIFIED BY THE PRECAST SUPPLIER NOT ALREADY INCLUDED IN THESE DRAWINGS AND NOT OTHERWISE PROVIDED BY THE PRECAST SUPPLIER'S SUBCONTRACT PRICE.

STRUCTURAL MASONRY

DESIGN STANDARDS:
1. THE MASONRY SOCIETY (TMS) TMS 402/602 "BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES. 2016"

CONCRETE MASONRY UNITS (CMU): ASTM C90

DENSITY: LIGHTWEIGHT, 105 PCF MAX.
NET AREA UNIT COMPRESSIVE STRENGTH (ASTM C140): 2000 PSI
DESIGN COMPRESSIVE STRENGTH (f'm): 2000 PSI

1. AGGREGATE: ASTM 331, MANUFACTURED BY THE ROTARY KILN PROCESS, FREE OF ORGANIC IMPURITIES THAT WILL CAUSE RUSTING, STAINING OR POPOUTS. BOTTOM ASH OR OTHER WASTE PRODUCTS ARE NOT PERMITTED.
2. ALL MASONRY WALLS SHALL BE PLACED IN RUNNING BOND INCLUDING CURVED WALLS. ALIGN CORES FOR PLACEMENT OF GROUT AND VERTICAL REINFORCING.

MORTAR: ASTM C270, TYPE "M" OR "S". WITH 28-DAY COMPRESSIVE STRENGTH OF 1800 PSI

FIRE-RESISTANCE RATINGS: ASTM E119 BY EQUIVALENT MASONRY THICKNESS.
1. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING REQUIREMENTS.

CONCRETE GROUT:

AGGREGATE: ASTM C476, EITHER FINE (SAND) OR COARSE (SAND + #78M STONE)
28-DAY COMPRESSIVE STRENGTH (f'c): 2500 PSI

GROUTING:
1. ALL BOND BEAMS, REINFORCED VERTICAL CELLS AND OTHER CMU NOTED TO BE SOLID GROUTED SHALL BE FILLED WITH CONCRETE GROUT, NOT MORTAR.
2. FOR CMU WALL CONSTRUCTION INDICATED TO BE "GROUTED SOLID," PROVIDE FULLY MORTARED HEAD JOINTS AND BED JOINTS. UNFILLED SPACES OR GAPS WITHIN OR BETWEEN CMU UNITS ARE NOT PERMITTED.
3. VERTICAL GROUTING SHALL BE LOW LIFT OR HIGH LIFT AS FOLLOWS:
   A. LOW LIFT GROUTING SHALL BE USED FOR ALL CAVITY WALLS AND MAY BE USED AT ALL WALLS AT THE OPTION OF THE CONTRACTOR. LIFTS SHALL NOT EXCEED 4 FEET IN HEIGHT.
   B. HIGH LIFT GROUTING IS PERMISSABLE ONLY FOR FILLING OF CMU AND SHALL NOT EXCEED ONE STORY IN HEIGHT.
4. VERTICAL REINFORCING BARS SHALL BE HELD IN POSITION TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 4 FEET. WIRE BAR POSITIONER ACCESSORIES FOR SUCH SUPPORT SHALL BE USED.

STEEL REINFORCING:
1. REBAR: ASTM A615, GRADE 60
   A. SPLICED REINFORCING SHALL BE LAPPED 72 BAR DIAMETERS. EXCEPT WALL DOWELS IN FOOTINGS SHALL BE SPLICED 24" MINIMUM TO EACH VERTICAL BAR. U.N.O.
   B. VERTICAL WALL REINFORCING SHALL BE CENTERED IN GROUTED CELLS. U.N.O.
2. HORIZONTAL JOINT REINFORCING: ASTM A951
   PROTECTION: HOT-DIP GALVANIZED
   TYPE: LADDER
   SIZE: 3/16" DIA. SIDE RODS AND 9 GA. CROSS RODS
   SPACING: 16" MAX.
   A. SIZE FOR CMU WALL WIDTHS INDICATED, AND 1" MAX. FROM OUTSIDE FACE OF SOLID UNIT WYTHES.
   B. PROVIDE PREFABRICATED CORNER AND TEE UNITS.
   C. LAP 6" MIN. AT ALL SPLICES INCLUDING CORNERS AND TEES.
   D. DO NOT EXTEND THROUGH WALL CONTROL JOINTS.
   E. DO NOT PLACE IN CURVED MASONRY WALLS. USE REINFORCED BOND BEAMS AT 4'-0" MAXIMUM VERTICAL SPACING.

WALL BRACING:
1. MASONRY WALLS ARE DESIGNED TO BE PERMANENTLY BRACED AT THE ROOF AND FOUNDATION. TEMPORARY CONSTRUCTION BRACING IS REQUIRED TO STABILIZE MASONRY WALLS OVER 8 FEET TALL ABOVE TOP OF FOOTING UNTIL THE SUPPORTING ROOF FRAMING AND STEEL ROOF DECK IS FULLY SECURED IN PLACE.
2. TEMPORARY WALL BRACING SHALL BE APPLIED IN CONFORMANCE WITH OSHA STANDARDS AS WELL AS THE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION." DATED DECEMBER, 2012, DEVELOPED BY THE COUNCIL FOR MASONRY WALL BRACING OF THE MASON CONTRACTORS ASSOCIATION OF AMERICA (MCAA). FURTHER INFORMATION AND EXAMPLES MAY BE FOUND IN THE "MASONRY WALLBRACING DESIGN HANDBOOK" DATED MARCH, 2003, BY THE MCAA.

STRUCTURAL STEEL

DESIGN STANDARDS:
1. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC). "STEEL CONSTRUCTION MANUAL," FIFTEENTH EDITION
2. AMERICAN WELDING SOCIETY (AWS), "STRUCTURAL WELDING CODE." AWS D1.1

GRADES OF STEEL:

WIDE FLANGE ROLLED SHAPES: ASTM A572, GRADE 50 OR ASTM A992
PLATES, CHANNELS, ANGLES AND BARS: ASTM A36 OR A572, GRADE 50
ROUND HOLLOW STRUCTURAL SECTIONS: ASTM A53, GRADE B
SQUARE AND RECTANGULAR STRUCTURAL SECTIONS: ASTM A500, GRADE B
ANCHOR BOLTS: ASTM F1554, GRADE 36

STUD CONNECTORS: ASTM A29/A108 GRADE 1010 - 1020
1. ANCHOR TYPES:
   1/2" & 5/8" DIA. HEADED CONCRETE ANCHORS, AWS D1.1 TYPE A OR B
   3/4" DIA. SHEAR CONNECTOR STUDS, AWS D1.1 TYPE B. Fu = 65 KSI
   3/4" DIA. FULLY THREADED STUDS WITH REDUCED BASE FOR SNUG PLY BOLTING. SUPPLY COMPATIBLE NUTS.

GENERAL:
1. ALL BEAMS SHALL BE PLACED WITH MILL CAMBER UP.
2. ALL RE-ENTRANT CORNERS FOR CUTS AND COPES SHALL HAVE MINIMUM 1/2" RADIUS.

CONNECTIONS:
1. MEMBER FORCES AND REACTIONS INDICATED IN THE DRAWINGS ARE ASD LOADS. AND INCLUDE FACTORS APPLICABLE TO CODE BASED ASD LOAD COMBINATIONS. NO FURTHER REDUCTION IN FORCES OR INCREASES IN DESIGN STRESSES ARE PERMITTED.
   A. OPTIONALLY, FOR LRFD CONNECTION DESIGN, MULTIPLY FORCES INDICATED IN THE DRAWINGS BY 1.6.
2. UNLESS BEAM REACTIONS ARE SHOWN ON THE DRAWINGS AS "R=xK", CONNECTIONS OF STEEL BEAM FRAMING SHALL BE DESIGNED FOR ONE-HALF (1/2) THE MAXIMUM TOTAL UNIFORM LOAD ON THE MEMBER AS DEFINED IN TABLES 3-6 THRU 3-9 IN PART 3, "MAXIMUM TOTAL UNIFORM LOAD, KIPS" IN THE AISC STEEL CONSTRUCTION MANUAL, FIFTEENTH EDITION.
3. DIAPHRAGM COLLECTOR BEAMS HAVE AXIAL LOAD REACTIONS WHERE INDICATED ON PLAN AS "A=xK".
4. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH A325N BOLTS. 3/4" DIA. MINIMUM, UNLESS NOTED OTHERWISE.
5. SLIP CRITICAL CONNECTIONS WITH A325SC BOLTS SHALL BE USED FOR ALL BOLTED MOMENT CONNECTIONS, BRACING CONNECTIONS, DIAPHRAGM COLLECTOR BEAMS AND WHERE INDICATED ON THE DRAWINGS.

COMPOSITE BEAMS:
1. COMPOSITE BEAMS AND GIRDERS DO NOT REQUIRE TEMPORARY SHORING FOR CONSTRUCTION LOADS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
2. SHEAR CONNECTOR STUDS SHALL BE 3/4" DIAMETER. STUDS SHALL EXTEND NOT LESS THAN 1 1/2" ABOVE THE TOP OF THE STEEL DECK AND SHALL HAVE NOT LESS THAN 1/2" CONCRETE COVER ABOVE THE TOP OF STUD AFTER WELDING.

PAINTING & GALVANIZING:
1. PREPARE STEEL SURFACES AND PRIME PAINT ALL STEEL WITH FABRICATOR'S STANDARD NON-LEAD PRIMER.
   A. THICKNESS: 1.5 MILS MIN.
   B. CLEANING: HAND TOOL (SSPC-SP-2) OR POWER TOOL (SSPEC-SP-3)
   C. DO NOT PAINT TOP FLANGE OF COMPOSITE BEAMS OR STEEL MEMBERS TO BE SPRAY-FIREPROOFED.
2. HOT DIP GALVANIZE ALL EXTERIOR EXPOSED STRUCTURAL STEEL. INCLUDING BUT NOT LIMITED TO THE LOADING DOCK CANOPY FRAMING AND ALL MASONRY LINTELS OVER EXTERIOR DOORS, WINDOWS AND STOREFRONTS.
3. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR FINISH PAINT COAT ON EXPOSED STRUCTURAL STEEL.

ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS):
1. ALL STRUCTURAL STEEL PERMANENTLY EXPOSED TO VIEW SHALL BE FABRICATED, ERECTED AND CONNECTED IN COMPLIANCE WITH CHAPTER 16.3, SECTION 10 "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" OF THE AISC STEEL CONSTRUCTION MANUAL.
2. AESS CATEGORY: "AESS 2" FEATURE ELEMENTS VIEWED AT A DISTANCE GREATER THAN 20 FT., INCLUDING ALL WELDED CONNECTIONS.
   A. REMOVE ALL BACKING BARS EXPOSED TO VIEW. REMOVE BURS AND GRIND SMOOTH.

NON-SHRINK GROUT:
1. PREMIXED, NON-METALLIC, NON-CORROSIVE, NON-STAINING GROUT CONTAINING SILICA SANDS, PORTLAND CEMENT, SHRINKAGE COMPENSATING AGENTS, PLASTICIZING, AND WATER REDUCING AGENTS. COMPLY WITH CRD-C621-80. MINIMUM ASTM C109 COMPRESSIVE STRENGTH SHALL BE 2500 AFTER ONE DAY, AND 7000 PSI AFTER 28 DAYS.

SHOP DRAWINGS:
1. SUBMIT DRAWINGS TO ARCHITECT FOR DETAILS, FABRICATION AND ERECTION OF STRUCTURAL STEEL. CONTRACTOR SHALL REVIEW AND APPLY APPROVAL STAMP TO SHOP DRAWINGS PRIOR TO SUBMISSION.

TESTING AND INSPECTION:
1. AN INDEPENDENT TESTING LABORATORY (ITL) SHALL BE RETAINED TO TEST AND INSPECT STRUCTURAL STEEL AND WELDING IN CONFORMANCE WITH THE FOLLOWING:
   A. VISUALLY INSPECT ALL FIELD WELDS, CHECK FOR SIZE, PINHOLES, UNDERCUT AND OVERLAP. ANY VISUAL INDICATION OF CRACKS SHALL BE CHECKED FURTHER USING MAGNETIC PARTICLE METHODS.
   B. CONFIRM THAT ALL FIELD WELDING INDICATED ON THE ERECTOR'S FIELD USE DRAWINGS AND THE CONSTRUCTION DOCUMENTS HAS BEEN FULLY PROVIDED.
   C. PERFORM NON-DESTRUCTIVE TESTS OF WELDS AS FOLLOWS:
      3. COMPLETE PENETRATION WELDS - TEST ENTIRE LENGTH OF ALL SHOP AND FIELD WELDS FOR CANTILEVERED BEAMS AND HANGERS. USE RADIOGRAPHIC OR ULTRASONIC METHODS.
   D. VISUALLY INSPECT ALL HIGH-STRENGTH BOLTED CONNECTIONS FOR SNUG TIGHT FIT. CONFIRM THAT ALL BOLTING INDICATED ON THE FABRICATOR'S FIELD USE SHOP DRAWINGS HAS BEEN FULLY PROVIDED.
   E. TEST BOLTS IN ALL SLIP-CRITICAL BOLTED CONNECTIONS IN CONFORMANCE WITH AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."
   F. PERFORM VISUAL INSPECTIONS OF ALL COPES AND CUTS IN MEMBERS. CHECK FOR NOTCHES AND SHARP RE-ENTRANT CORNERS.
   G. REPORT ANY FIELD MODIFICATIONS NOT SUPPORTED BY CONSTRUCTION DOCUMENTATION.
   H. RE-TEST ALL NON-CONFORMING WORK AFTER CORRECTION.
   I. REPORT RESULTS OF ALL INSPECTIONS AND TESTS TO THE STRUCTURAL ENGINEER.

POST-INSTALLED CONCRETE/MASONRY MECHANICAL ANCHORS

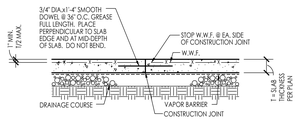
GENERAL:
1. POST-INSTALLED MECHANICAL ANCHORS ARE PERMITTED FOR EMBEDMENT IN CONCRETE OR SOLID GROUTED MASONRY ONLY. EMBEDMENT OF ANCHORS INTO BRICK OR UNGROUTED HOLLOW CONCRETE MASONRY IS NOT PERMITTED.
2. MECHANICAL ANCHORS INSTALLED IN GROUT-FILLED CMU SHALL BE 1 1/2" MINIMUM FROM ANY MORTAR JOINT AND 4" FROM ANY FREE EDGE.
3. NO MORE THAN ONE MECHANICAL ANCHOR PER MASONRY CELL IS PERMITTED.
4. MECHANICAL ANCHORS SHALL BE INSTALLED IN STRICT COMPLIANCE WITH SUPPLIERS SPECIFICATIONS.

SCREW TYPE CARBON STEEL CONCRETE/MASONRY ANCHORS, "SCREW ANCHORS":
1. PROVIDE ONE OF THE FOLLOWING PRE-APPROVED ANCHORS OR SUBMIT FOR APPROVAL:
   "KWIK HUS-EZ (KH-EZ)" BY HILTI
   "TITEN HD" BY SIMPSON STRONG-TIE
2. MINIMUM NOMINAL EMBEDMENT DEPTHS FOR SCREW ANCHORS:
   1/4" ANCHORS: 2 1/2"
   3/8" ANCHORS: 3 1/4"

WEDGE TYPE CARBON STEEL CONCRETE/MASONRY ANCHORS "WEDGE ANCHORS":
1. PROVIDE ONE OF THE FOLLOWING PRE-APPROVED ANCHORS OR SUBMIT FOR APPROVAL:
   "KWIK BOLT 3 (KB3)" BY HILTI
   "WEDGE-ALL" BY SIMPSON STRONG-TIE
2. MINIMUM NOMINAL EMBEDMENT DEPTHS FOR WEDGE ANCHORS:
   3/4" "WEDGE ALL" ANCHORS: 6 3/4" IN CONCRETE
   5 1/4" IN GROUT-FILLED CMU
   3/4" "KWIK BOLT 3" ANCHORS: 5 5/8" IN CONCRETE
   4 3/4" IN GROUT-FILLED CMU

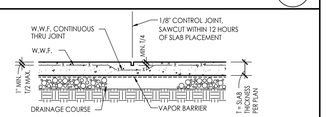
POST-INSTALLED CONCRETE/MASONRY EPOXY ANCHORS

GENERAL:
1. POST-INSTALLED EPOXY ANCHORS ARE PERMITTED FOR EMBEDMENT IN CONCRETE. BRICK OR C



TYPICAL SLAB-ON-GRADE CONSTRUCTION JOINT (K11)

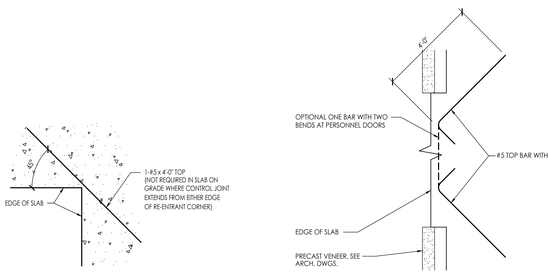
S102 — 3/4"=1'-0"



DO NOT CUT CONTROL JOINTS IN 8" GALLERY SLAB, NOR ELEVATED SLABS ON STEEL DECK UNLESS NOTED ON PLAN.

TYPICAL SLAB-ON-GRADE CONTROL JOINT (C.J.) (J11)

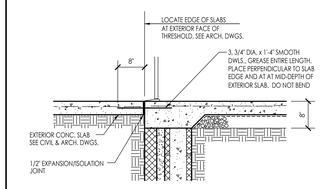
S102 — AT INTERIOR SLABS



RE-ENTRANT CORNER SLAB REINFORCING AT DOORS

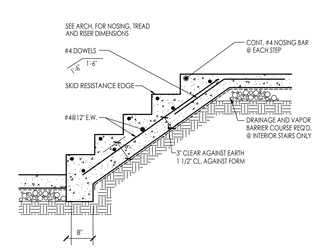
TYP. REINFORCING AT RE-ENTRANT CORNERS IN SLAB-ON-GRADE (J7)

S102



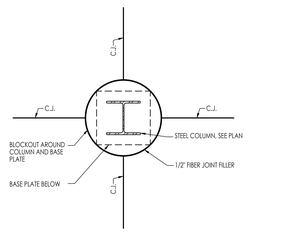
TYP. SLAB AT THRESHOLD (J5)

S102



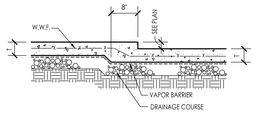
TYP. CONCRETE STAIR-ON-GRADE (J3)

S102



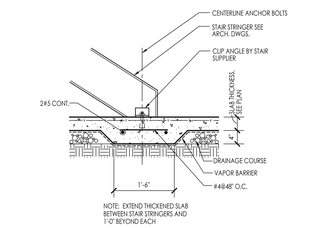
TYP. COLUMN ISOLATION JOINT (J1)

S102



TYPICAL RECESS IN SLAB-ON-GRADE (G11)

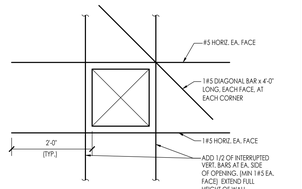
S102



NOTE: EXTEND THICKENED SLAB BETWEEN STAIR STRINGERS AND 1'-0" BEYOND EACH

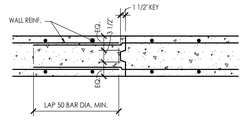
TYPICAL THICKENED SLAB-ON-GRADE AT BASE OF STEEL STAIR STRINGER (G9)

S102



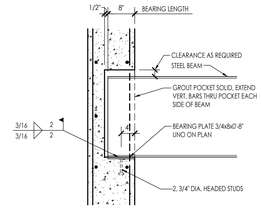
TYPICAL REINFORCING AT OPENINGS IN CAST-IN-PLACE CONCRETE WALLS (G7)

S102



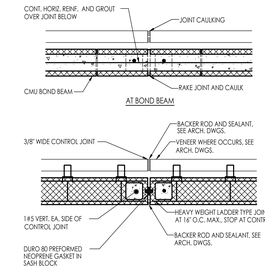
TYP. CONSTRUCTION JOINT AT CONCRETE WALLS (G5)

S102



TYP. BEAM POCKET DETAIL (G3)

S102 — AT CONCRETE WALL



TYPICAL MASONRY WALL CONTROL JOINT (C.J.) (G1)

S102 — AT NON-CURVED MASONRY WALL

TYP. CORNER REINFORCING AT MASONRY BOND BEAMS (E11)

S102

TYPICAL MASONRY REINFORCEMENT AT DISCONTINUITIES (E9)

S102

TYPICAL CONTROL JOINT AT MASONRY PARTITION/CONCRETE WALL INTERSECTIONS (E7)

S102

NOTE: BLOCK COURSING SHOWN VARIES WITH ACTUAL JOB CONDITIONS.

TYPICAL STEPPED BOND BEAM (E5)

S102

BEARING PLATE SCHEDULE		
WALL TYPE	BRG. PLATE SIZE	L
8" NOM.	1/2x6	6"
12" NOM.	3/4x8	8"

BRG. PLATES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN WHERE THEY OCCUR.

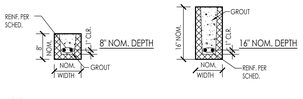
TYPICAL BEAM POCKET DETAIL IN CMU WALLS (E3)

S102

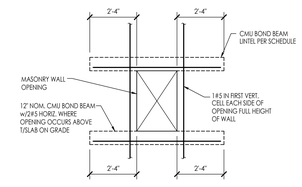
BEAM BEARING AT END OF CMU WALL (E1)

S102

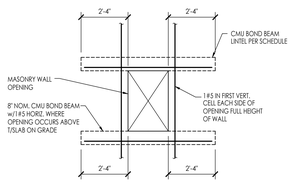
CLEAR OPENING	DEPTH	REINFORCING	
		8" CMU	12" CMU
6'-0" OR LESS	8"	1-#5	2-#5
6'-0" TO 8'-0"	16"	1-#5	2-#5
OVER 8'-0"	NOT PERMITTED		



NOTES:
1. THIS DETAIL APPLIES TO ALL MASONRY WALL OPENINGS 12 FEET WIDE OR LESS, UNLESS OTHERWISE SHOWN ON PLAN TO HAVE A STEEL LINTEL.



WALL ELEVATION AT 12" CMU WALL

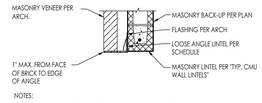


WALL ELEVATION AT 8" CMU WALL

TYPICAL CMU WALL LINTELS (C7)

S102

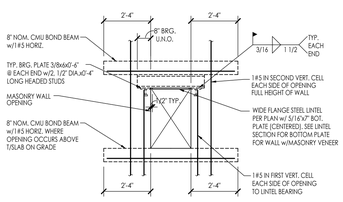
CLEAR OPENING	ANGLE SIZE	MIN. BRG.
LESS THAN 4'-1"	L7x4x3/8 (LLH)	4"
LESS THAN 6'-9"	L7x4x3/8 (LLH)	8"
LESS THAN 8'-1"	L7x4x3/8 (LLH)	8"

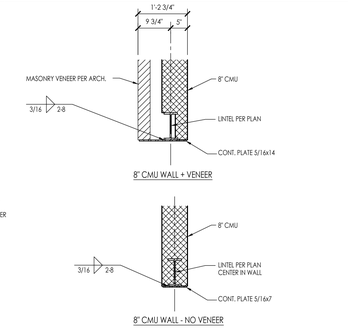


NOTES:
1. THESE LINTELS ARE DESIGNED FOR SELF-WEIGHT OF MASONRY VENEER ONLY.
2. STEEL ANGLE LINTELS SHALL BE GALVANIZED AND PAINTED.

TYPICAL LOOSE ANGLE LINTELS FOR MASONRY VENEER (C5)

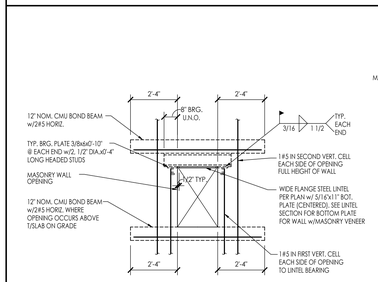
S102





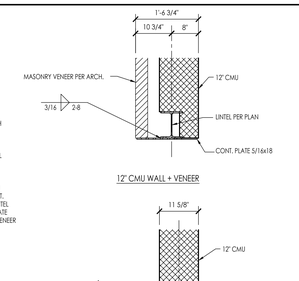
TYPICAL STEEL LINTEL DETAILS (C1)

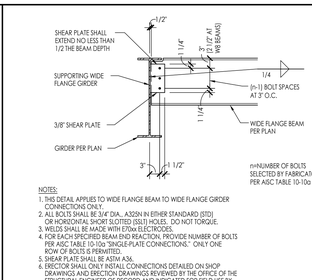
S102 — 8" CMU WALL



TYPICAL STEEL LINTEL DETAILS (A9)

S102 — 12" CMU WALL

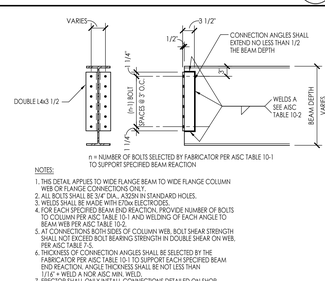




NOTES:
1. THIS DETAIL APPLIES TO WIDE FLANGE BEAM TO WIDE FLANGE GIRDER CONNECTIONS ONLY.
2. ALL BOLTS SHALL BE 3/4" DIA., A325N IN EITHER STANDARD (STD) OR HORIZONTAL SHORT SLOTTED (SSLT) HOLES. DO NOT TORQUE.
3. WELDS SHALL BE MADE WITH E70xx ELECTRODES.
4. FOR EACH SPECIFIED BEAM END REACTION, PROVIDE NUMBER OF BOLTS PER AISC TABLE 10-10a "SINGLE-PLATE CONNECTIONS." ONLY ONE ROW OF BOLTS IS PERMITTED.
5. SHEAR PLATE SHALL BE ASTM A36.
6. ERECTOR SHALL ONLY INSTALL CONNECTIONS DETAILED ON SHOP DRAWINGS AND ERECTION DRAWINGS REVIEWED BY THE OFFICE OF THE STRUCTURAL ENGINEER OF RECORD AND INDICATED FOR FIELD USE BY THE FABRICATOR.
7. ERECTOR SHALL NOT FIELD WELD ANY CONNECTIONS DETAILED BY THE FABRICATOR TO BE FIELD BOLTED.
8. SEE "MINIMUM ROWS OF BOLTS FOR SHEAR CONNECTIONS", THIS SHEET.

TYPICAL WIDE FLANGE BEAM TO GIRDER CONNECTION (A7)

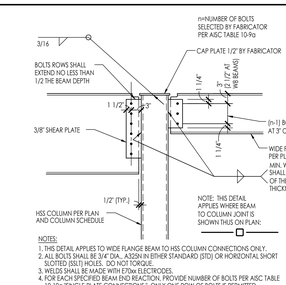
S102



NOTES:
1. THIS DETAIL APPLIES TO WIDE FLANGE BEAM TO WIDE FLANGE COLUMN WEB OR FLANGE CONNECTIONS ONLY.
2. ALL BOLTS SHALL BE 3/4" DIA., A325N IN STANDARD HOLES.
3. WELDS SHALL BE MADE WITH E70xx ELECTRODES.
4. FOR EACH SPECIFIED BEAM END REACTION, PROVIDE NUMBER OF BOLTS TO COLUMN PER AISC TABLE 10-1 AND WELDING OF EACH ANGLE TO BEAM WEB PER AISC TABLE 10-2.
5. AT CONNECTIONS BOTH SIDES OF COLUMN WEB, BOLT SHEAR STRENGTH SHALL NOT EXCEED BOLT BEARING STRENGTH IN DOUBLE SHEAR ON WEB, PER AISC TABLE 7-5.
6. THICKNESS OF CONNECTION ANGLES SHALL BE SELECTED BY THE FABRICATOR PER AISC TABLE 10-1 TO SUPPORT EACH SPECIFIED BEAM END REACTION. ANGLE THICKNESS SHALL BE NOT LESS THAN 1/16" + WELD A NOR AISC MIN. WELD.
7. ERECTOR SHALL ONLY INSTALL CONNECTIONS DETAILED ON SHOP DRAWINGS AND ERECTION DRAWINGS REVIEWED BY THE OFFICE OF THE STRUCTURAL ENGINEER OF RECORD AND INDICATED FOR FIELD USE BY THE FABRICATOR.
8. ERECTOR SHALL NOT FIELD WELD ANY CONNECTIONS DETAILED BY THE FABRICATOR TO BE FIELD BOLTED.
9. SEE "MINIMUM ROWS OF BOLTS FOR SHEAR CONNECTIONS", THIS SHEET.

TYPICAL WIDE FLANGE BEAM TO WIDE FLANGE COLUMN CONNECTION (A5)

S102



NOTES:
1. THIS DETAIL APPLIES TO WIDE FLANGE BEAM TO HSS COLUMN CONNECTIONS ONLY.
2. ALL BOLTS SHALL BE 3/4" DIA., A325N IN EITHER STANDARD (STD) OR HORIZONTAL SHORT SLOTTED (SSLT) HOLES. DO NOT TORQUE.
3. WELDS SHALL BE MADE WITH E70xx ELECTRODES.
4. FOR EACH SPECIFIED BEAM END REACTION, PROVIDE NUMBER OF BOLTS PER AISC TABLE 10-10a "SINGLE-PLATE CONNECTIONS." ONLY ONE ROW OF BOLTS IS PERMITTED.
5. SHEAR PLATE SHALL BE ASTM A36.
6. ERECTOR SHALL ONLY INSTALL CONNECTIONS DETAILED ON SHOP DRAWINGS AND ERECTION DRAWINGS REVIEWED BY THE OFFICE OF THE STRUCTURAL ENGINEER OF RECORD AND INDICATED FOR FIELD USE BY THE FABRICATOR.
7. ERECTOR SHALL NOT FIELD WELD ANY CONNECTIONS DETAILED BY THE FABRICATOR TO BE FIELD BOLTED.
8. SEE "MINIMUM ROWS OF BOLTS FOR SHEAR CONNECTIONS", THIS SHEET.

TYP. BEAM-TO-COLUMN CONNECTION (A3)

S102 — AT HSS COLUMNS

BEAM SIZES	MINIMUM ROWS OF BOLTS
W8	2
W10	2
W12	3
W14	3
W16	4
W18	4
W21	5
W24	6
W27	7
W30	8

1. SEE TYPICAL CONNECTION DETAILS ON SHT. S1.02
2. MINIMUM NUMBER OF BOLT ROWS DOES NOT EXCLUDE MIN. CONNECTION SHEAR, MOMENT, AND/OR AXIAL REACTION REQUIREMENTS. SEE GENERAL NOTES, SHT. S1.01.

MINIMUM ROWS OF BOLTS FOR SHEAR CONNECTIONS (A1)

S102

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NORTH CAROLINA PROFESSIONAL 13449 ENGINEER STEPHEN E. ADAMS — 10/24/2023

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TYPICAL DETAILS

S1.02

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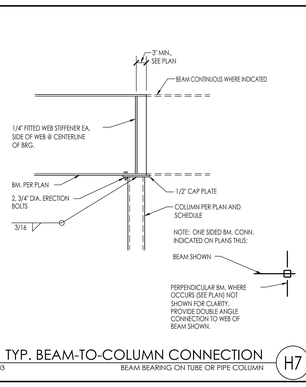
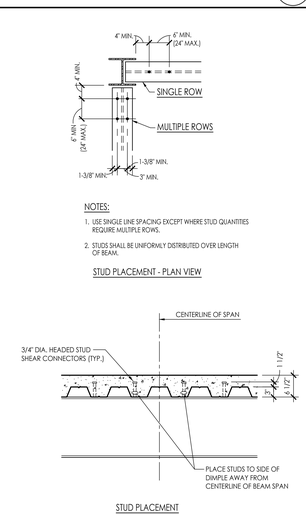


TYP. BEAM-TO-COLUMN CONNECTION H7

S103 BEAM BEARING ON TUBE OR PIPE COLUMN

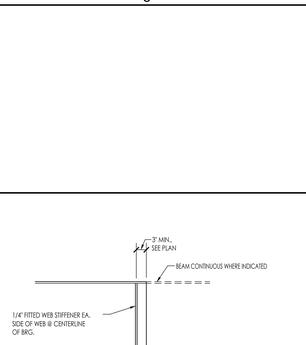


TYPICAL SHEAR STUD SPACING E7

S103

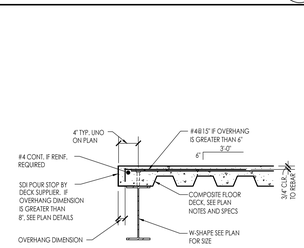
TYPICAL COMPOSITE BEAM DESIGNATIONS C7

S103



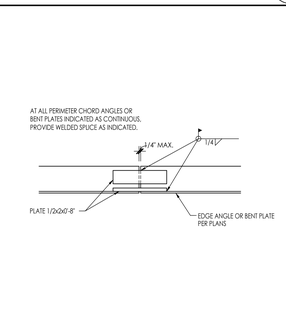
TYP. LOAD BEARING STUD PROFILE J5

S103



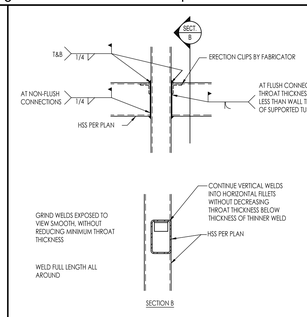
TYPICAL INTERIOR EDGE OF FRAMED FLOOR SLAB G5

S103



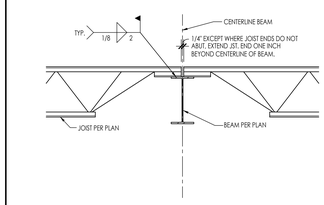
TYPICAL ROOF ANGLE SPLICE E5

S103 AT ALL CONTINUOUS EDGE ANGLES



TYPICAL RECTANGULAR HSS-TO-HSS CONNECTION J3

S103

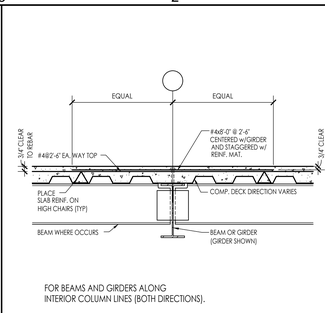


TYP. JOIST BEARING DETAIL G3

S103 AT BEAMS

TYP. STEEL FRAME AT ROOF OPENINGS E3

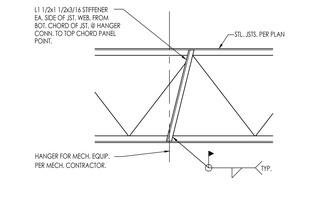
S103 1 1/2" STEEL ROOF DECK



FOR BEAMS AND GIRDERS ALONG INTERIOR COLUMN LINES (BOTH DIRECTIONS).

TYPICAL COMPOSITE SLAB REINF. J1

S103

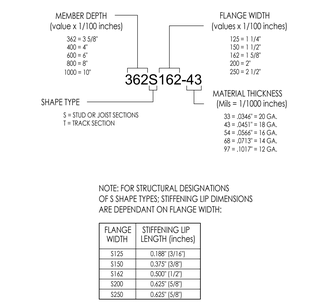


TYPICAL SUSPENDED MECHANICAL UNIT SUPPORT G1

S103

TYP. STEEL FRAME AT ROOF OPENINGS E1

S103 3" STEEL ROOF DECK

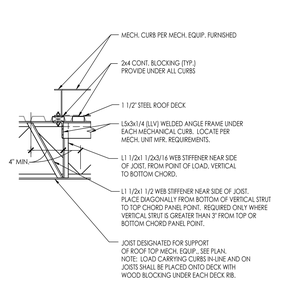


NOTE: FOR STRUCTURAL DESIGNATIONS OF S SHAPE TYPES; STIFFENING LIP DIMENSIONS ARE DEPENDANT ON FLANGE WIDTH;

FLANGE WIDTH	STIFFENING LIP LENGTH (inches)
S125	0.188" (3/16")
S150	0.375" (3/8")
S162	0.500" (1/2")
S200	0.625" (5/8")
S250	0.625" (5/8")

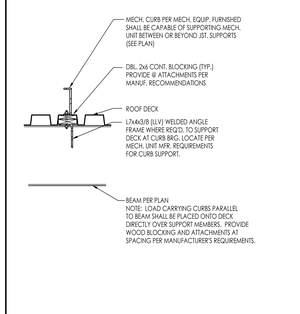
SSMA PRODUCT IDENTIFICATION STANDARD C1

S103 FOR COLD-FORMED STEEL SHAPES



SUPPORT DETAIL AT ROOF EQUIPMENT CURB C5

S103 (1 1/2" STEEL ROOF DECK)



SUPPORT DETAIL AT ROOF EQUIPMENT CURB C3

S103 (3" STEEL ROOF DECK)

TYPICAL LATERAL SUPPORT AT MASONRY PARTITIONS A1

S103

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10/24/2023

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TYPICAL DETAILS

S1.03

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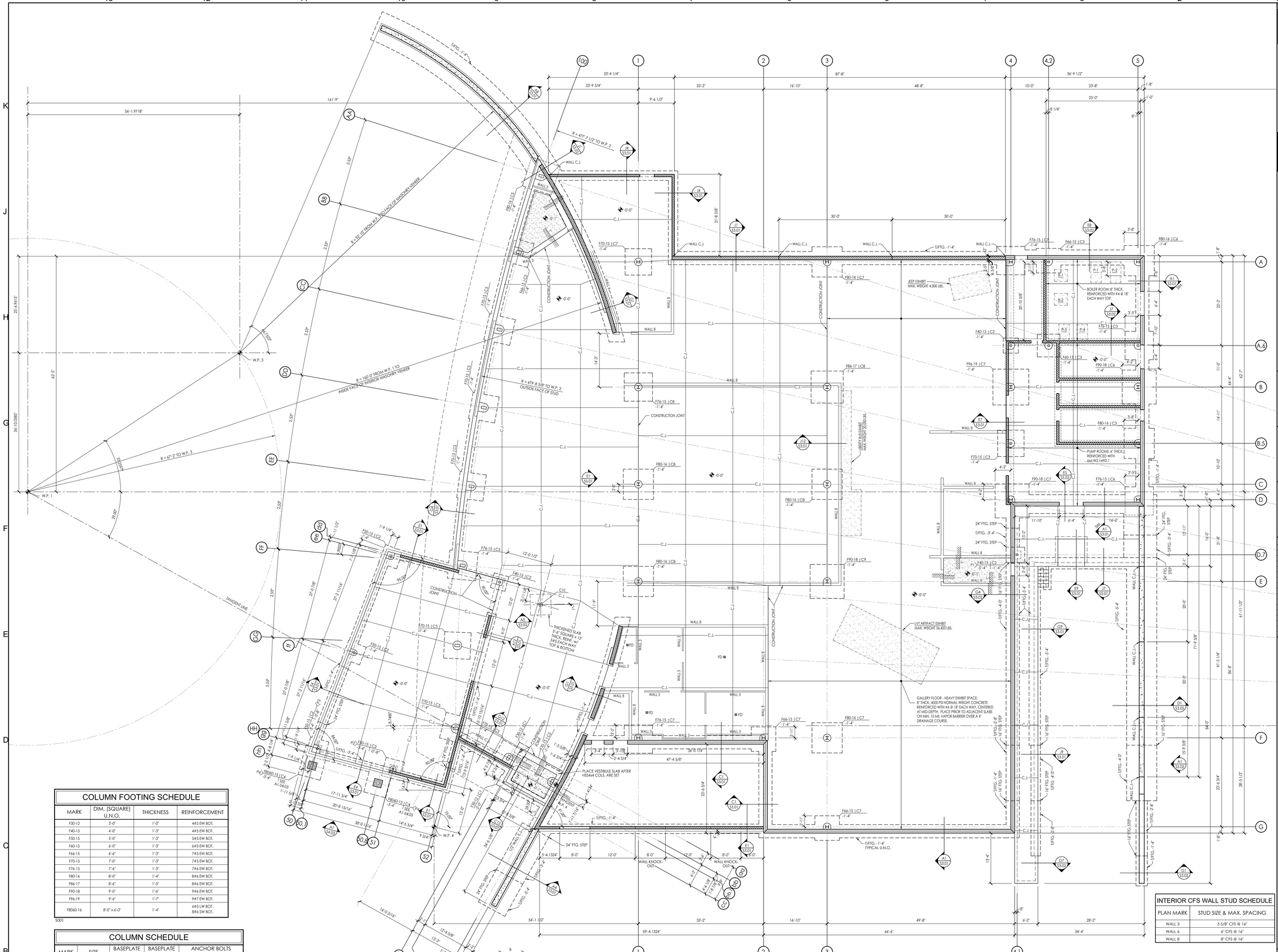


COLUMN FOOTING SCHEDULE

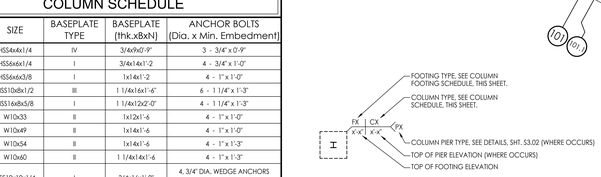
MARK	DIM. (SQUARE) U.N.O.	THICKNESS	REINFORCEMENT
F30-12	3'-0"	1'-0"	4#5 EW BOT.
F40-15	4'-0"	1'-3"	4#5 EW BOT.
F50-15	5'-0"	1'-3"	5#5 EW BOT.
F60-15	6'-0"	1'-3"	6#5 EW BOT.
F66-15	6'-6"	1'-3"	7#5 EW BOT.
F70-15	7'-0"	1'-3"	7#5 EW BOT.
F76-15	7'-6"	1'-3"	7#6 EW BOT.
F80-16	8'-0"	1'-4"	8#6 EW BOT.
F86-17	8'-6"	1'-5"	8#6 EW BOT.
F90-18	9'-0"	1'-6"	9#6 EW BOT.
F96-19	9'-6"	1'-7"	9#7 EW BOT.
F8060-16	8'-0" x 6'-0"	1'-4"	6#5 LW BOT. 8#6 EW BOT.

S001

COLUMN SCHEDULE

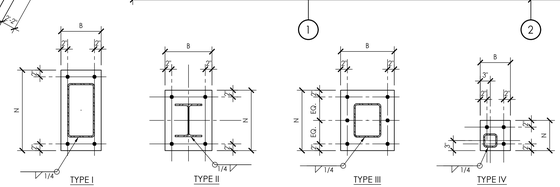
MARK	SIZE	BASEPLATE TYPE	BASEPLATE [thk.xBxN]	ANCHOR BOLTS (Dia. x Min. Embedment)
C1	HSS4x4x1/4	IV	3/4x9'0"-9"	3 - 3/4" x 0'-9"
C2	HSS6x6x1/4	I	3/4x14x1'-2	4 - 3/4" x 1'-0"
C3	HSS6x6x3/8	I	1x14x1'-2	4 - 1" x 1'-0"
C4	HSS10x8x1/2	III	1 1/4x16x1'-6"	6 - 1 1/4" x 1'-3"
C5	HSS16x8x5/8	I	1 1/4x12x2'-0"	4 - 1 1/4" x 1'-3"
C6	W10x33	II	1x12x1'-6	4 - 1" x 1'-0"
C7	W10x49	II	1x14x1'-6	4 - 1" x 1'-0"
C8	W10x54	II	1x14x1'-6	4 - 1" x 1'-3"
C9	W10x60	II	1 1/4x14x1'-6	4 - 1" x 1'-3"
C10	HSS10x10x1/4	I	3/4x16x1'-8"	4, 3/4" DIA. WEDGE ANCHORS WITH MIN. 6 1/2" EMBEDMENT
C11	HSS8x6x3/8	I	1x14x1'-4	4 - 1" x 1'-0"

S003



COLUMN FOOTING KEY

S002



COLUMN BASE PLATE DETAILS 3/4"=1'-0"

S004

VERIFY ALL EXTERIOR T/FTG. ELEVATIONS WITH FINAL SITE GRADING PLANS

INTERIOR CFS WALL STUD SCHEDULE

PLAN MARK	STUD SIZE & MAX. SPACING
WALL 3	3 5/8" CFS @ 16"
WALL 6	6" CFS @ 16"
WALL 8	8" CFS @ 16"

FOUNDATION PLAN 1/8"=1'-0"

S201

PLAN NOTES:

1. TYPICAL DATUM TOP OF SLAB ELEVATION = 0'-0". ALL OTHER ELEVATIONS ARE REFERENCED + OR - FROM DATUM.
2. TYPICAL SLAB ON GRADE IS 5" THICK, 4000 PSI NORMAL WEIGHT CONCRETE REINFORCED WITH 6x6-W2.1xW2.1 (IN FLAT SHEETS) ON MIN. 10 MIL VAPOR BARRIER OVER A 4" DEEP DRAINAGE COURSE OF CLEAN, WASHED CRUSHED STONE. SEE PLAN FOR 6" THICK SLAB IN PUMP ROOMS, AND 8" THICK SLAB AT THE GALLERY AND BOILER ROOM.
3. TYPICAL TOP OF WALL FOOTING ELEVATION = -1'-4". CONTRACTOR COORDINATE AND CONFIRM ALL TOP OF FOOTING ELEVATIONS WITH FINAL GRADING PLANS AND PROVIDE FOOTING STEPS IF NECESSARY.
4. COORDINATE WITH OTHER DISCIPLINES AND TRADES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, EQUIPMENT, RECESSES, SLEEVES AND PIPING.
5. SEE S1 SERIES SHEETS FOR GENERAL NOTES AND TYPICAL DETAILS PERTAINING TO THIS PLAN.
6. SEE SHT. S3.02 FOR THE EXTERIOR CHILLER PAD PLAN AND SECTION.

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10/24/2025

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FOUNDATION PLAN

S2.01

ISSUE DATE: 10-24-2023
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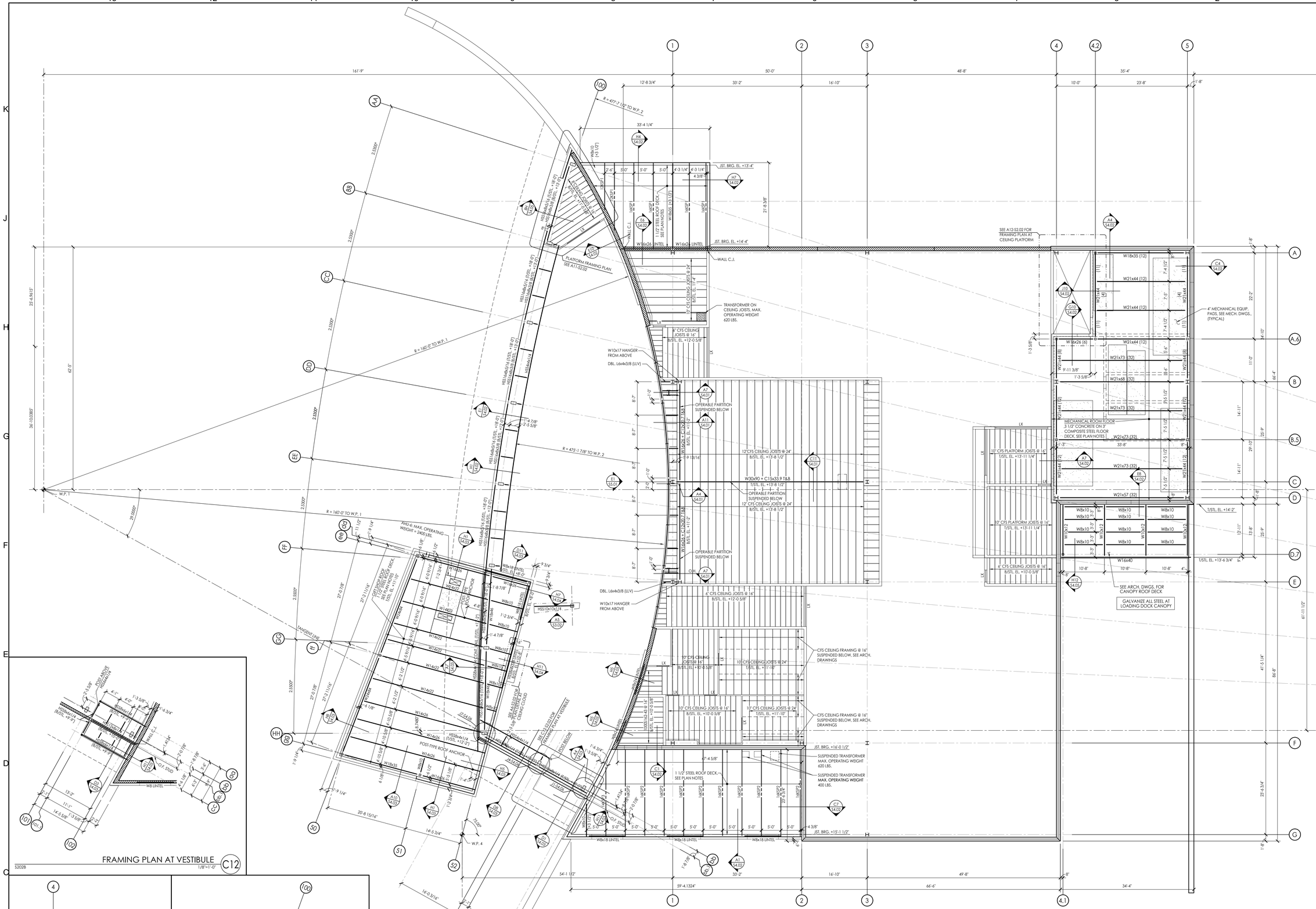
W.P. 1
W.P. 2
W.P. 3
W.P. 4
R = 160'-0" TO W.P. 1
R = 475'-1 7/8" TO W.P. 2
R = 477'-7 1/2" TO W.P. 2
TANGENT LINE
161'-9"
50'-0"
48'-8"
35'-4"
33'-4 1/4"
33'-2"
16'-10"
10'-0"
23'-8"
W18x35 (12)
W21x44 (12)
W16x26 (6)
W21x68 (32)
W21x73 (32)
W21x57 (32)
W21x44 (8)
W21x44 (2)
W8x10
W10x12
W16x40
W8x18 LINTEL
W16x26 LINTEL
W10x17 HANGER FROM ABOVE
DBL. L6x4x3/8 (LLV)
OPERABLE PARTITION SUSPENDED BELOW
6" CFS CEILING JOISTS @ 16"
10" CFS CEILING JOISTS @ 24"
10" CFS PLATFORM JOISTS @ 16"
CFS CEILING FRAMING @ 16" SUSPENDED BELOW, SEE ARCH. DRAWINGS
1 1/2" STEEL ROOF DECK, SEE PLAN NOTES
MECHANICAL ROOM FLOOR 3 1/2" CONCRETE ON 3" COMPOSITE STEEL FLOOR DECK, SEE PLAN NOTES
SUSPENDED TRANSFORMER MAX. OPERATING WEIGHT 620 LBS.
SUSPENDED TRANSFORMER MAX. OPERATING WEIGHT 400 LBS.
TRANSFORMER ON CEILING JOISTS, MAX. OPERATING WEIGHT 620 LBS.
4" MECHANICAL EQUIP. PADS, SEE MECH. DWGS., (TYPICAL)
SEE A12.52.02 FOR FRAMING PLAN AT CEILING PLATFORM
PLATFORM FRAMING PLAN, SEE A11.52.02
SEE ARCH. DWGS. FOR CANOPY ROOF DECK
GALVANIZE ALL STEEL AT LOADING DOCK CANOPY
JST. BRG. EL. +13'-4"
JST. BRG. EL. +14'-4"
JST. BRG. EL. +16'-0 1/2"
JST. BRG. +15'-1 1/2"
1/STL. EL. +14'-2"
1/STL. EL. +13'-6 3/4"
W.P. 1 TO W.P. 2 = 29'-0"
W.P. 2 TO W.P. 3 = 25'-4 9/16"
W.P. 3 TO W.P. 4 = 36'-10.0385"
W.P. 4 TO W.P. 1 = 62'-5"
W.P. 1 TO W.P. 4 = 59'-4.132"
W.P. 2 TO W.P. 4 = 66'-6"
W.P. 3 TO W.P. 4 = 54'-1 1/2"
W.P. 3 TO W.P. 1 = 20'-8 15/16"
W.P. 2 TO W.P. 1 = 14'-5 3/4"
HSS14x8x5/16 (1/STL. +18'-0") HSS14x8x5/16 (B/STL. +13'-0")
HSS6x6x1/4
HSS8x4x1/4 (1/STL. +12'-2")
HSS8x4x1/4
W10x54
W8x10
W8x18
W14x22
W14x26
W14x30
W14x68
W18x35
W16x40
HSS10x10x1/4
HSS3 1/2x3 1/2x1/4
HSS4x4x1/4
HSS5x5x1/4
HSS6x4x1/4
HSS6x6x1/4
HSS8x8x1/4
HSS10x8x1/4
HSS12x8x1/4
HSS14x10x1/4
W10x12
W10x17
W10x22
W10x45
W12x14
W12x19
W12x26
W12x45
W12x50
W12x65
W12x72
W12x87
W12x96
W12x106
W12x120
W12x136
W12x152
W12x170
W12x190
W12x210
W12x230
W12x252
W12x279
W12x305
W12x336
W12x361
W12x385
W12x414
W12x441
W12x470
W12x504
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W12x826
W12x858
W12x887
W12x921
W12x952
W12x985
W12x1016
W12x1045
W12x1079
W12x1106
W12x1136
W12x1170
W12x1200
W12x1230
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W12x1290
W12x1320
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W12x1830
W12x1860
W12x1890
W12x1920
W12x1950
W12x1980
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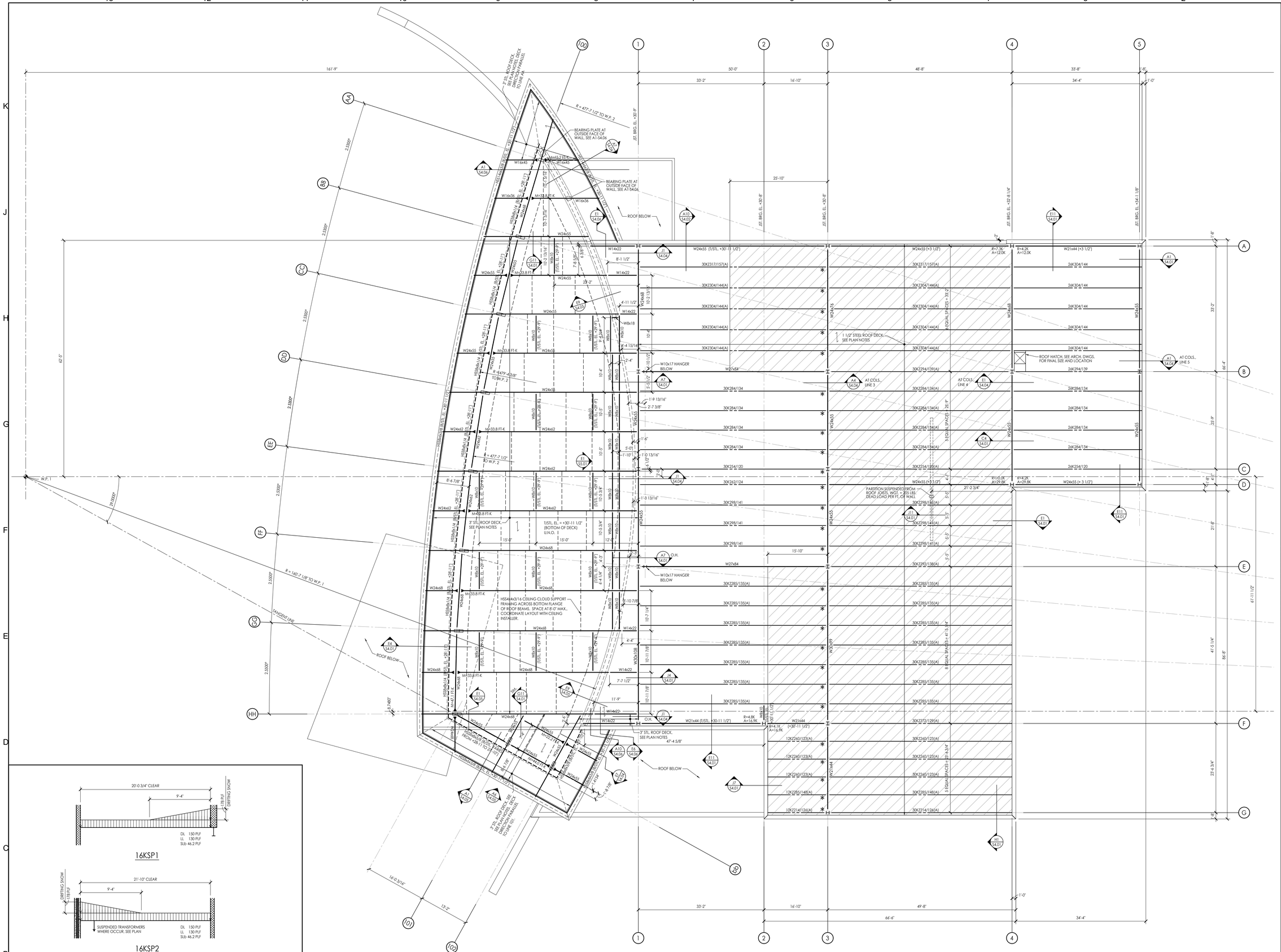
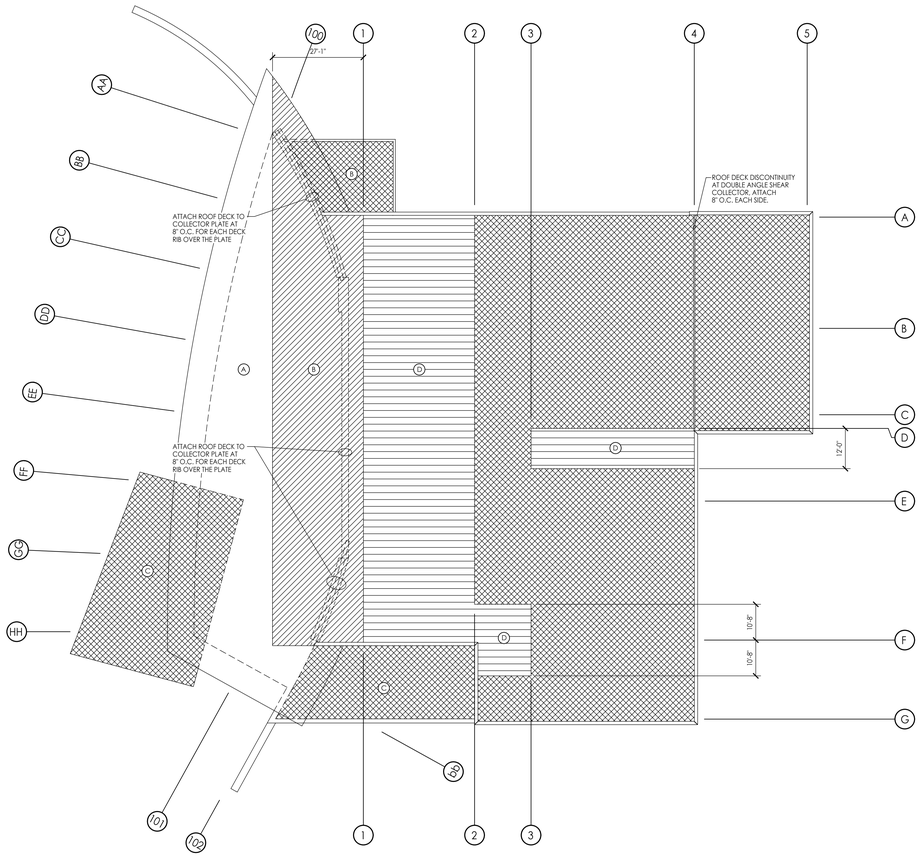

R = 477-7 1/2" TO W.P. 2
R = 479'-4 3/8" TO W.P. 2
R = 160'-7 1/8" TO W.P. 1
TANGENT LINE
W.P. 1
W.P. 2
JST. BRG. EL. +30'-0"
JST. BRG. EL. +32'-8 1/4"
JST. BRG. EL. +34'-1 1/8"
T/STL. ROOF DECK, SEE PLAN NOTES, DECK DIRECTION PARALLEL TO LINE 101
BEARING PLATE AT OUTSIDE FACE OF WALL, SEE A1-S4.06
ROOF BELOW
T/STL. EL. = +30'-11 1/2" (BOTTOM OF DECK) U.N.O.
3" STL. ROOF DECK, SEE PLAN NOTES
1 1/2" STEEL ROOF DECK, SEE PLAN NOTES
ROOF HATCH, SEE ARCH. DWGS. FOR FINAL SIZE AND LOCATION
AT COLS., LINE 5
AT COLS., LINE 3
AT COLS., LINE 4
W10x17 HANGER BELOW
PARTITION SUSPENDED FROM ROOF JOISTS, WGT. = 20 LBS DEAD LOAD PER FT. OF WALL
HSS6x6x1/4 (B.O.T. EL. +28'-1")
HSS6x6x1/4 (B.O.T. EL. +29'-1")
HSS6x6x1/4 (B.O.T. EL. +29'-11")
HSS6x6x1/4 (B.O.T. EL. +30'-11 1/2")
HSS6x6x1/4 (B.O.T. EL. +30'-11 1/2") FROM +28'-1"
HSS6x6x1/4 (B.O.T. EL. +30'-11 1/2") FROM +29'-1"
HSS6x6x1/4 (B.O.T. EL. +30'-11 1/2") FROM +29'-11"
HSS6x6x1/4 (B.O.T. EL. +30'-11 1/2") FROM +30'-11 1/2"
HSS4x4x3/16 CEILING CLOUD SUPPORT FRAMING ACROSS BOTTOM FLANGE OF ROOF BEAMS, SPACE AT 8'-0" MAX., COORDINATE LAYOUT WITH CEILING INSTALLER.
ROOF BELOW
3" STL. ROOF DECK, SEE PLAN NOTES
47'-4 5/8"
T/STL. ROOF DECK, SEE PLAN NOTES
2 EQUAL SPACES @ 33'-2"
2 EQUAL SPACES @ 25'-9"
3 EQUAL SPACES @ 22'-4 3/4"
8 EQUAL SPACES @ 41'-5 1/4"
5 EQUAL SPACES @ 22'-4 3/4"
W24x55
W24x68
W24x62
W24x65
W24x68
W24x55
W24x55
W24x55

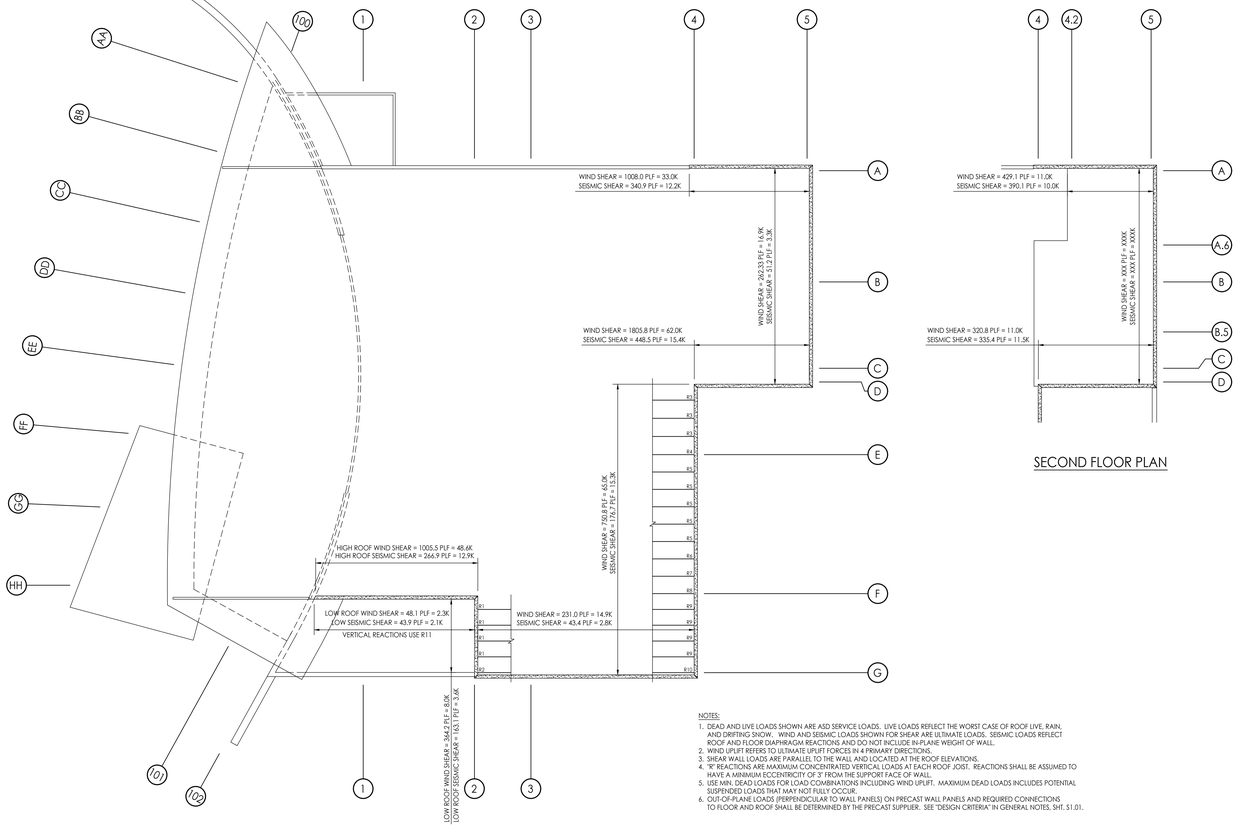


S204A

STEEL ROOF DECK FASTENING PLAN AND SCHEDULE F1
1/16"=1'-0"

STEEL ROOF DECK FASTENING SCHEDULE			
PATTERN	ZONE	DECK TYPE	FASTENING DESCRIPTION
	A	3" TYPE N	ANCHOR DECK UNITS WITH 5/8" DIA. PUDDLE WELDS IN A 24/4 PATTERN TO ALL INTERIOR STEEL SUPPORTING MEMBERS AND AT 8" O.C. AROUND ALL PERIMETER EDGES. FASTEN SIDELAPS OF DECK WITH 3, #10 TEK SCREWS PER SPAN.
	B	3" TYPE N	ANCHOR DECK UNITS WITH 5/8" DIA. PUDDLE WELDS IN A 24/4 PATTERN TO ALL INTERIOR STEEL SUPPORTING MEMBERS AND AT 8" O.C. AROUND ALL PERIMETER EDGES. FASTEN SIDELAPS OF DECK WITH 6, #10 TEK SCREWS PER SPAN.
	C	1 1/2" TYPE B	ANCHOR DECK UNITS WITH 5/8" DIA. PUDDLE WELDS IN A 36/7 PATTERN TO ALL INTERIOR STEEL SUPPORTING MEMBERS AND AT 8" O.C. AROUND ALL PERIMETER EDGES. FASTEN SIDELAPS OF DECK WITH 1, #10 TEK SCREWS PER SPAN.
	D	1 1/2" TYPE B	ANCHOR DECK UNITS WITH 5/8" DIA. PUDDLE WELDS IN A 36/9 PATTERN TO ALL INTERIOR STEEL SUPPORTING MEMBERS AND AT 8" O.C. AROUND ALL PERIMETER EDGES. FASTEN SIDELAPS OF DECK WITH 1, #10 TEK SCREWS PER SPAN.

ROOF JOIST REACTIONS ON PRECAST PANELS							
MARK	MIN. DEAD LOAD (K)	MAX. DEAD LOAD (K)	LIVE LOAD	WIND UPLIFT (+X)	WIND UPLIFT (-X)	WIND UPLIFT (+Y)	WIND UPLIFT (-Y)
R1	0.32	2.12	1.03	-1.27	-0.82	-1.27	-0.59
R2	0.30	1.61	0.66	-0.82	-0.52	-0.82	-0.38
R3	1.06	5.20	3.43	-1.95	-4.07	-1.95	-1.95
R4	1.03	5.10	3.35	-1.90	-3.98	-2.27	-1.90
R5	1.01	5.00	3.28	-1.86	-3.89	-2.59	-1.86
R6	0.97	4.81	3.28	-1.86	-3.89	-3.31	-1.86
R7	0.97	4.81	3.28	-1.86	-3.89	-4.04	-1.86
R8	0.97	4.81	3.13	-2.19	-3.72	-3.86	-1.78
R9	0.92	4.62	2.98	-2.52	-3.54	-3.68	-1.69
R10	0.87	3.13	1.91	-1.62	-2.27	-2.36	-1.09
R11	0.39	1.37	1.70	-0.64	-0.64	-1.35	-0.64



SECOND FLOOR PLAN

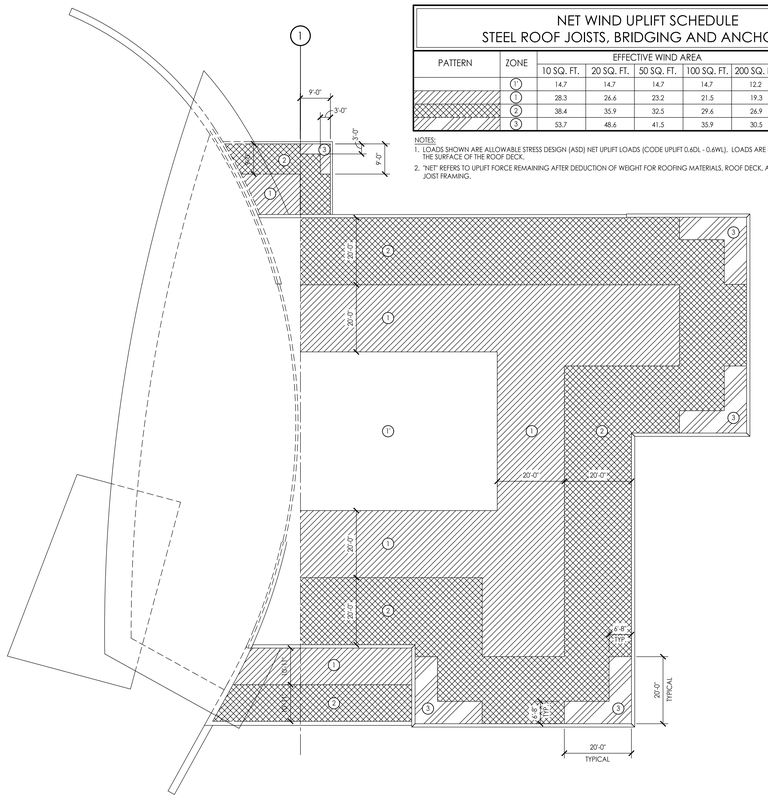
NOTES:
1. DEAD AND LIVE LOADS SHOWN ARE ASD SERVICE LOADS. LIVE LOADS REFLECT THE WORST CASE OF ROOF LIVE, RAIN, AND DRIFTING SNOW. WIND AND SEISMIC LOADS SHOWN FOR SHEAR ARE ULTIMATE LOADS. SEISMIC LOADS REFLECT ROOF AND FLOOR DIAPHRAGM REACTIONS AND DO NOT INCLUDE IN-PLANE WEIGHT OF WALL.
2. WIND UPLIFT REFERS TO ULTIMATE UPLIFT FORCES IN 4 PRIMARY DIRECTIONS.
3. SHEAR WALL LOADS ARE PARALLEL TO THE WALL AND LOCATED AT THE ROOF ELEVATIONS.
4. "R" REACTIONS ARE MAXIMUM CONCENTRATED VERTICAL LOADS AT EACH ROOF JOIST. REACTIONS SHALL BE ASSUMED TO HAVE A MINIMUM ECCENTRICITY OF 3" FROM THE SUPPORT FACE OF WALL.
5. USE MIN. DEAD LOADS FOR LOAD COMBINATIONS INCLUDING WIND UPLIFT. MAXIMUM DEAD LOADS INCLUDES POTENTIAL SUSPENDED LOADS THAT MAY NOT FULLY OCCUR.
6. OUT-OF-PLANE LOADS (PERPENDICULAR TO WALL PANELS) ON PRECAST WALL PANELS AND REQUIRED CONNECTIONS TO FLOOR AND ROOF SHALL BE DETERMINED BY THE PRECAST SUPPLIER. SEE "DESIGN CRITERIA" IN GENERAL NOTES, SHT. S1.01.

S204B

PRECAST SHEAR WALL GRAVITY AND LATERAL FORCES A7
1/16"=1'-0"

NET WIND UPLIFT SCHEDULE STEEL ROOF JOISTS, BRIDGING AND ANCHORAGE								
PATTERN	ZONE	EFFECTIVE WIND AREA						
		10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	100 SQ. FT.	200 SQ. FT.	500 SQ. FT.	1000 SQ. FT.
	1'	14.7	14.7	14.7	14.7	12.2	8.8	6.2
	1	28.3	26.6	23.2	21.5	19.3	16.4	16.4
	2	38.4	35.9	32.5	29.6	26.9	23.2	23.2
	3	53.7	48.6	41.5	35.9	30.5	23.2	23.2

NOTES:
1. LOADS SHOWN ARE ALLOWABLE STRESS DESIGN (ASD) NET UPLIFT LOADS (CODE UPLIFT 0.6DL - 0.6WL). LOADS ARE NORMAL (PERPENDICULAR) TO THE THE SURFACE OF THE ROOF DECK.
2. "NET" REFERS TO UPLIFT FORCE REMAINING AFTER DEDUCTION OF WEIGHT FOR ROOFING MATERIALS, ROOF DECK, AND JOIST FRAMING.



S204

NEW WIND UPLIFT PLAN A1
1/16"=1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13449 STEPHEN E. ADAMS
10/24/2023

#	Description	Date

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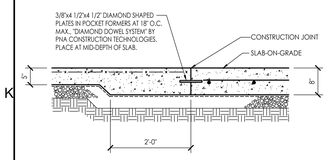
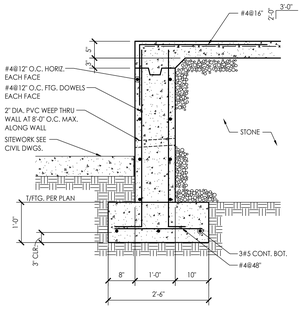
NET WIND UPLIFT, STEEL ROOF DECK FASTENING, PRECAST SHEAR WALLS, AND SCHEDULES

S2.04

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: SEA & MBR
CHECKED BY: SEA



S301 SECTION J12 3/4"=1'-0"



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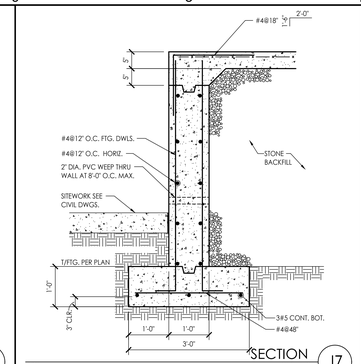

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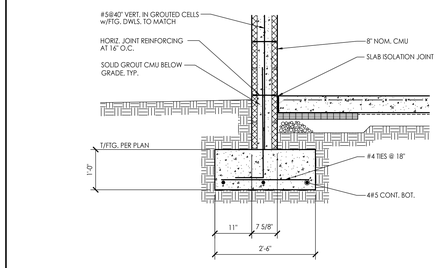

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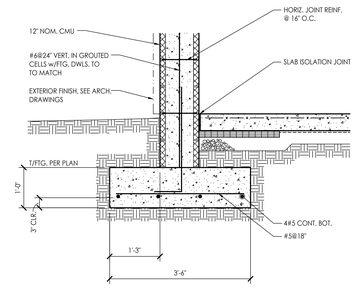

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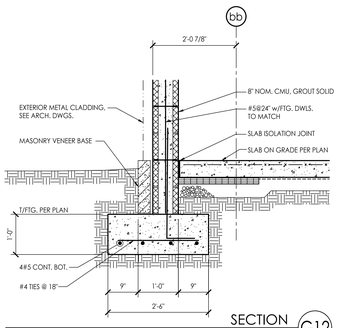

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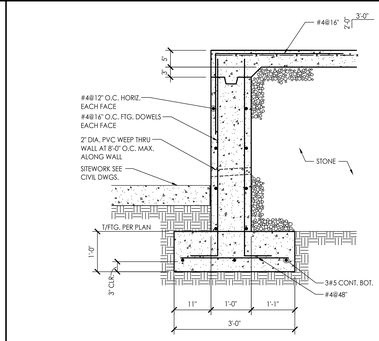

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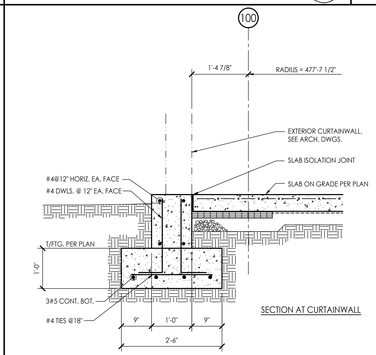

SECTION AT CURTAINWALL

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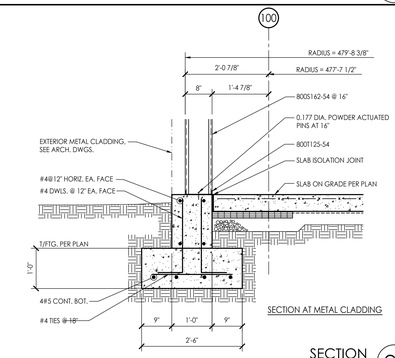

SECTION AT METAL CLADDING

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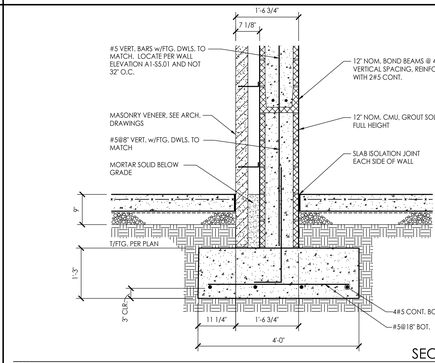

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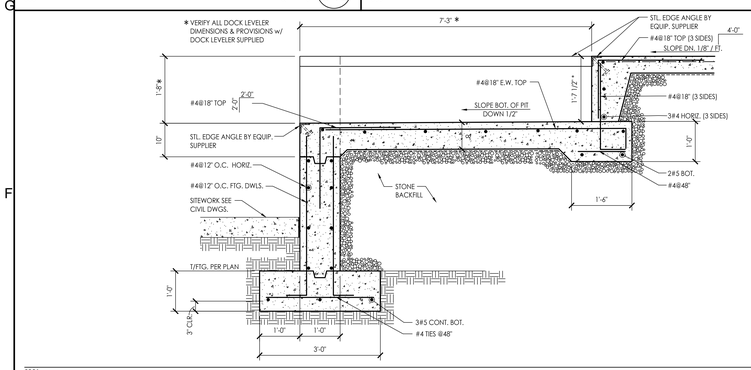

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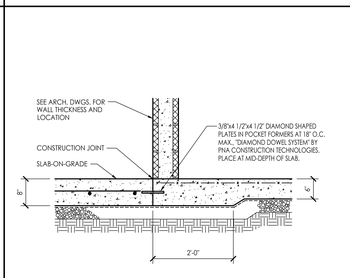

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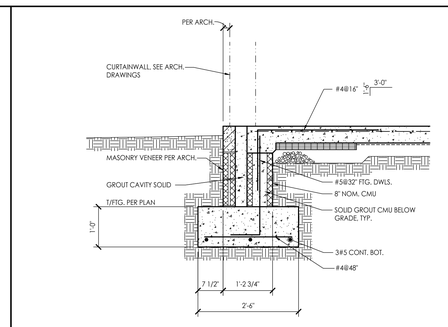

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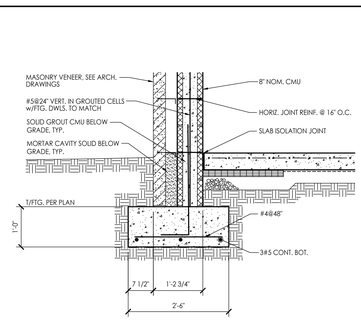

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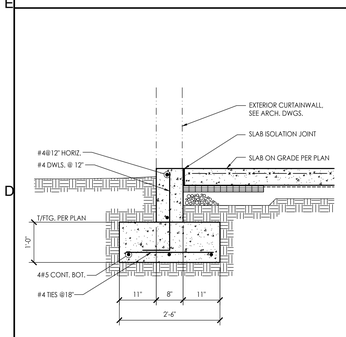

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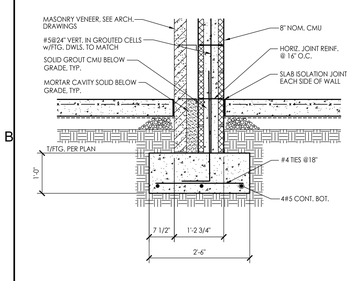

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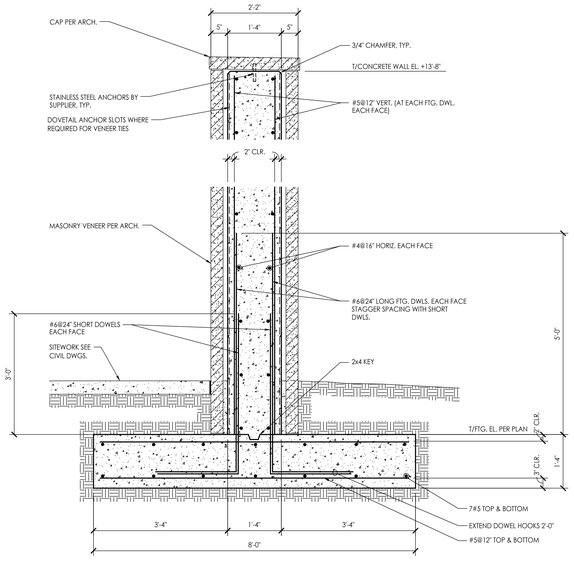

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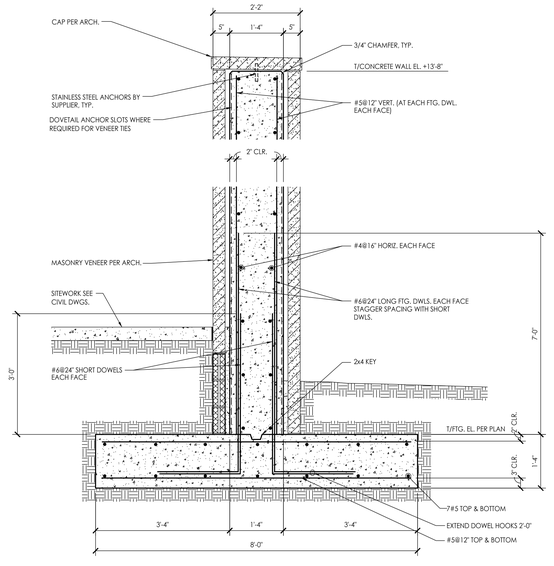

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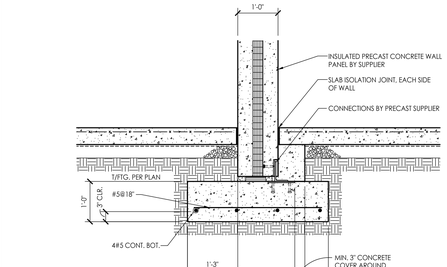

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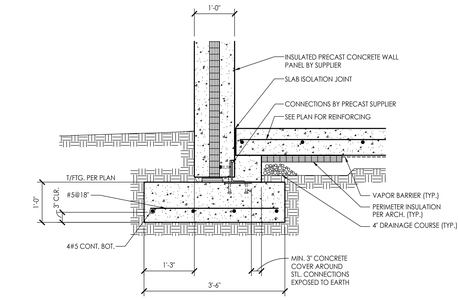

S301 SECTION A1 3/4"=1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13449 STEPHEN E. ADAMS 10/24/2023

#	Description	Date

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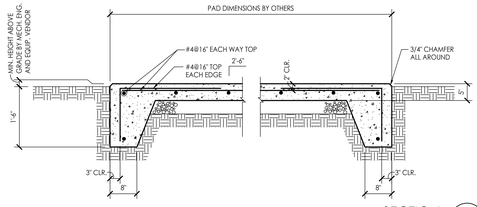
FOUNDATION DETAILS

S3.01

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: SEA & MBR
CHECKED BY: SEA



SECTION J9

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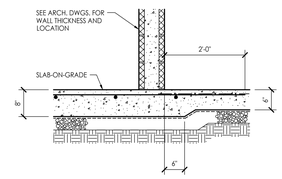

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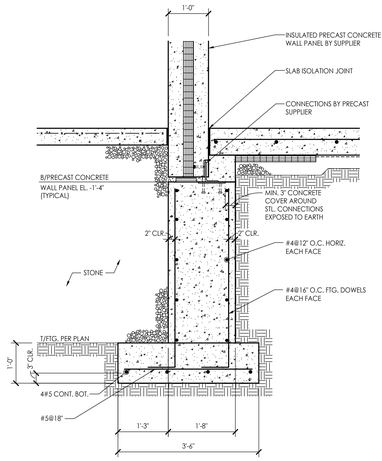
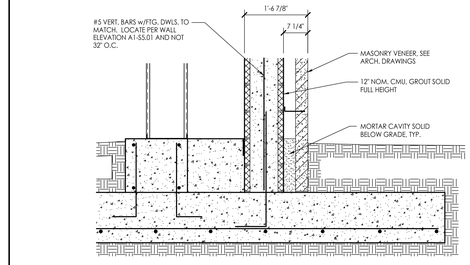


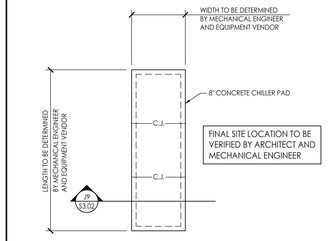
SECTION G4

S302 3/4"=1'-0"



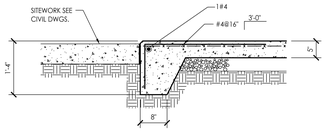
SECTION J1

S302 3/4"=1'-0"



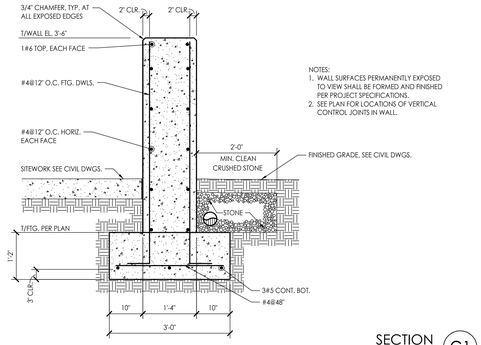
FOUNDATION PLAN - CHILLER PAD

S201A 3/4"=1'-0"



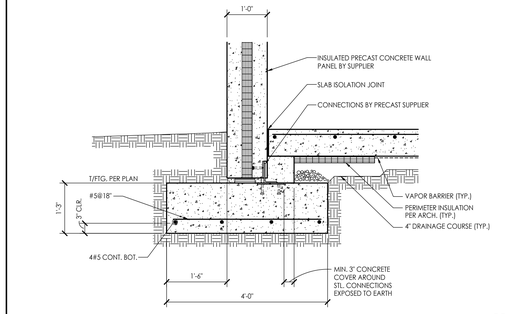
SECTION G7

S302 3/4"=1'-0"



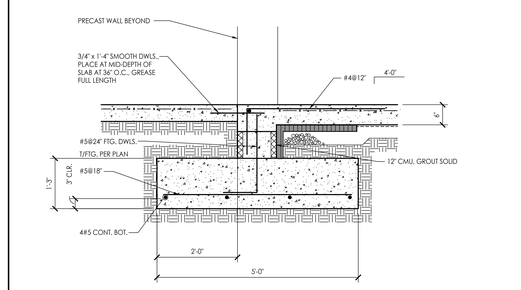
SECTION G1

S302 3/4"=1'-0"



SECTION E8

S302 3/4"=1'-0"



SECTION E5

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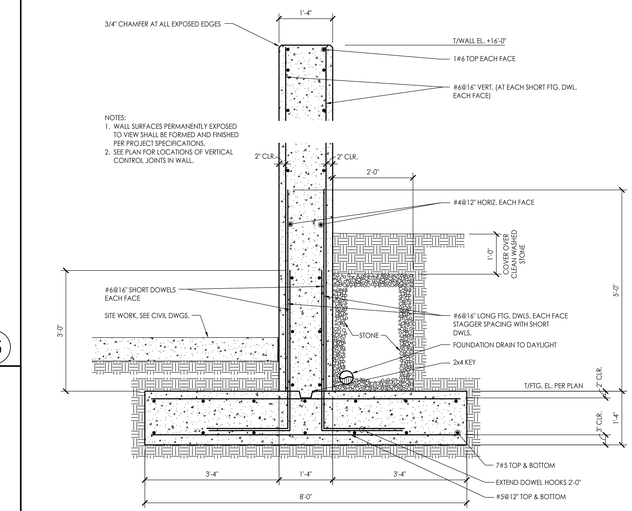
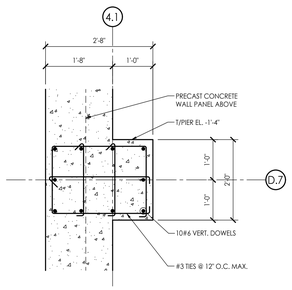
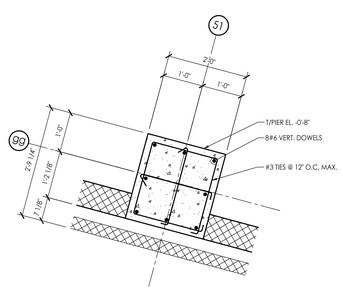


SECTION D1

S302 3/4"=1'-0"



PIER P1



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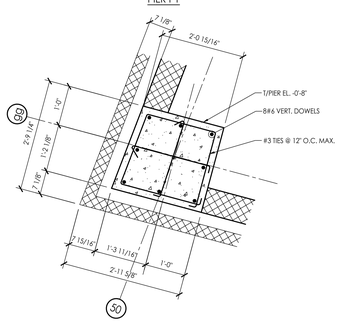
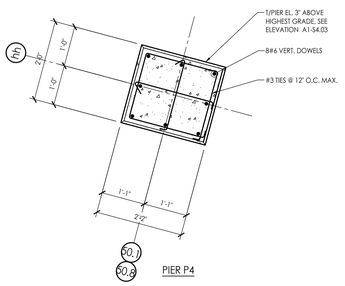


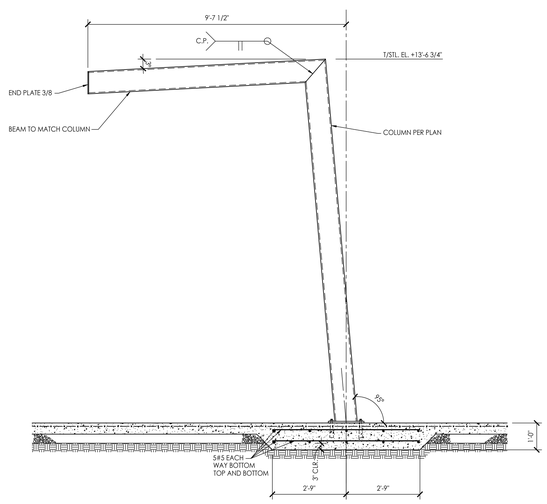
PIER P3



PIER P4

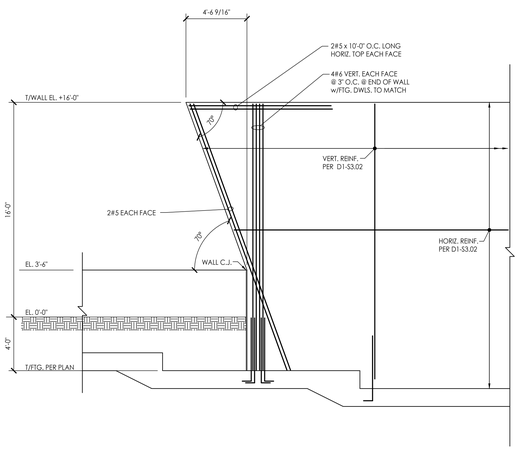
SECTION A9

S302 3/4"=1'-0"



ELEVATION A5

S302B 1/2"=1'-0"



ELEVATION A1

S302A 1/4"=1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 13449 ENGINEER STEPHEN E. ADAMS
6/24/2025

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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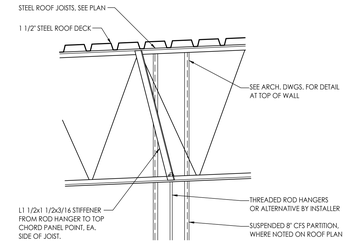
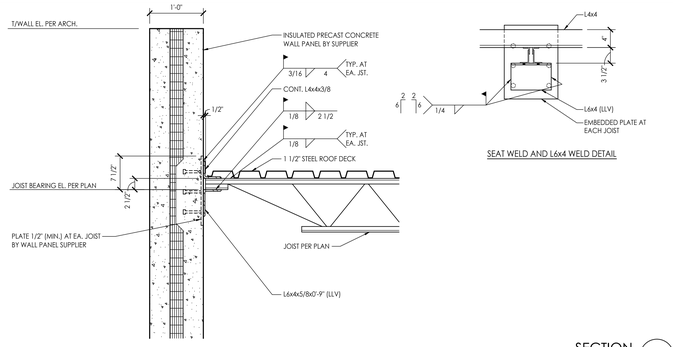
FOUNDATION DETAILS

S3.02

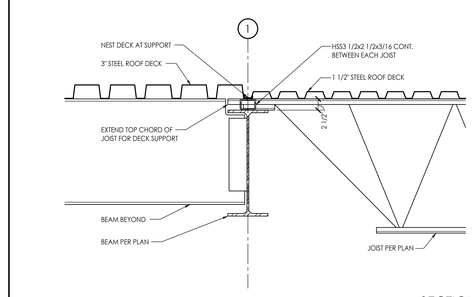
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: SEA & MBR
CHECKED BY: SEA



S401 — SECTION J11



S401 — SECTION J7 — 1"=1'-0"



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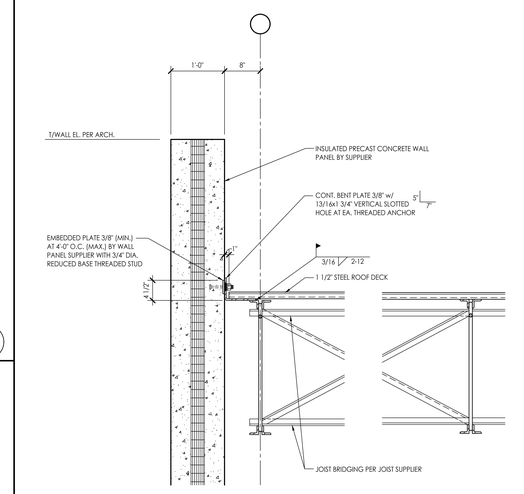
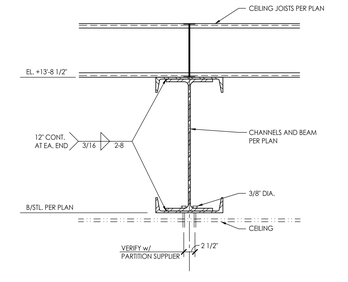
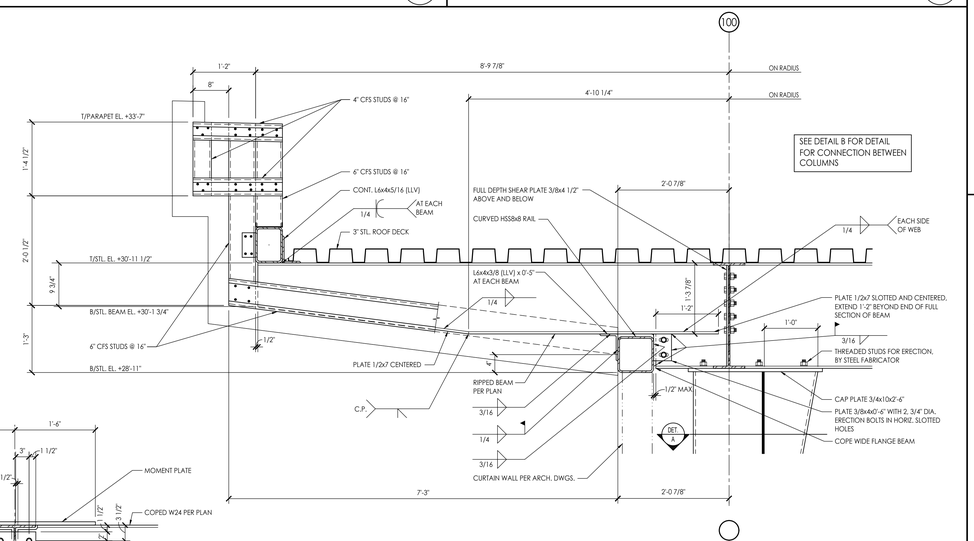
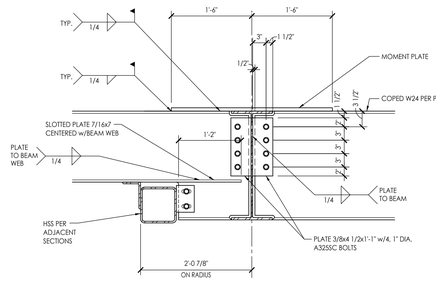


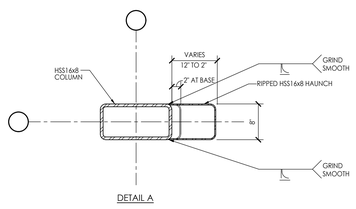
S401 — SECTION H1 — 1"=1'-0"



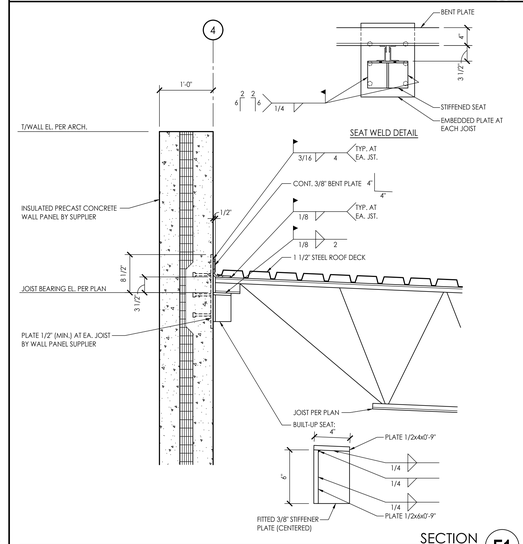
S401 — SECTION G11



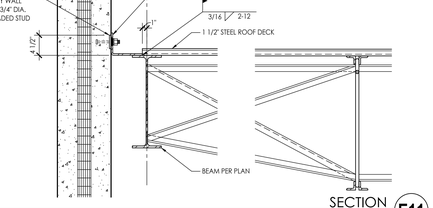




S401 — SECTION E4

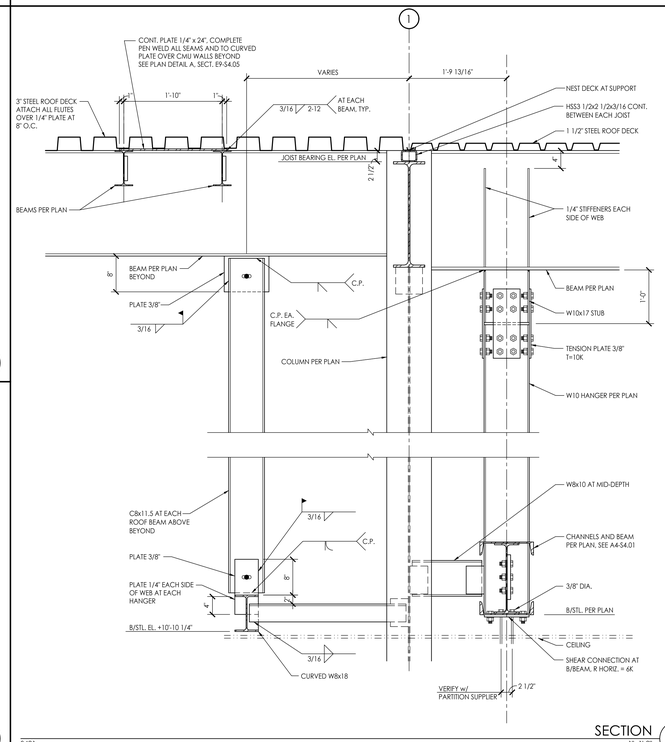


S401 — SECTION E1

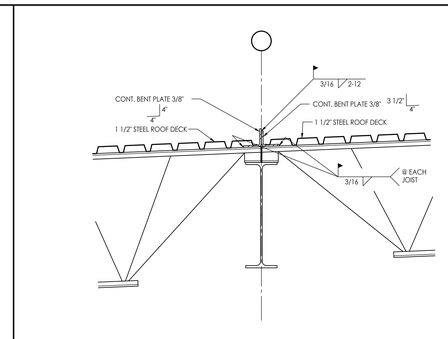


S401 — SECTION E11

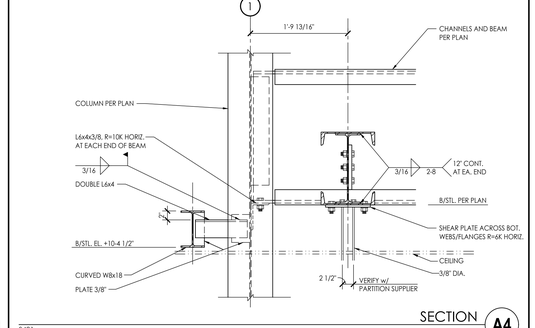
S401 — SECTION C11



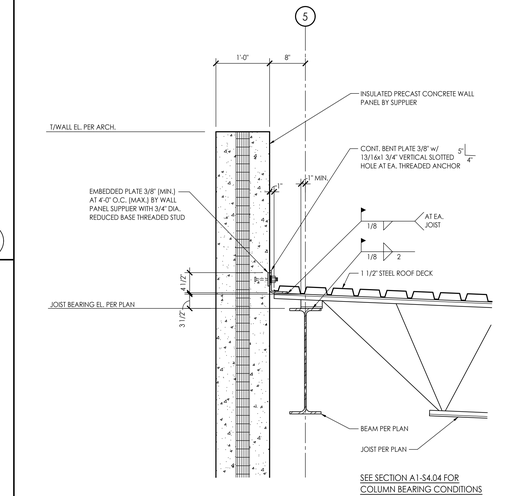
S401 — SECTION A7 — 1"=1'-0"



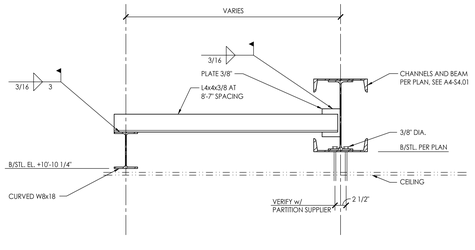
S401 — SECTION C4



S401 — SECTION A4



S401 — SECTION A1



S401 — SECTION A11

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13449 STEPHEN E. ADAMS
10/24/2023

#	Description	Date

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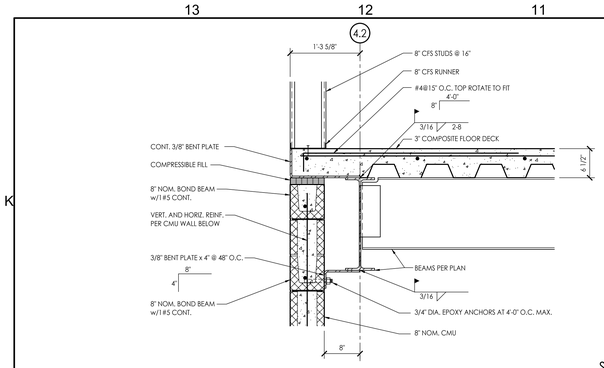
FRAMING DETAILS

S4.01

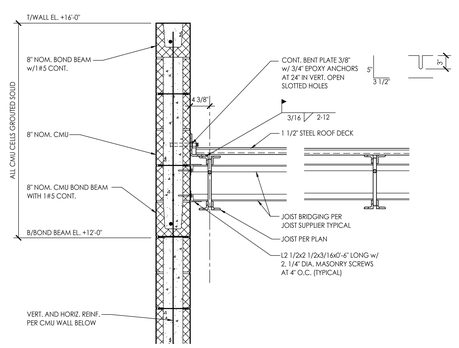
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: SEA & MBR
CHECKED BY: SEA



S402

SECTION J10

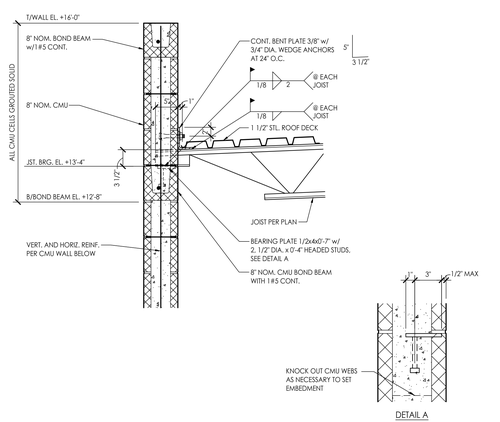
1"=1'-0"



S402

SECTION H7

1"=1'-0"



S402

SECTION H4

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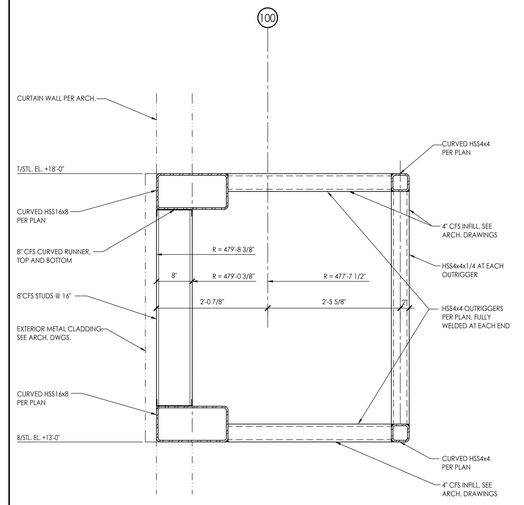

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SECTION H1

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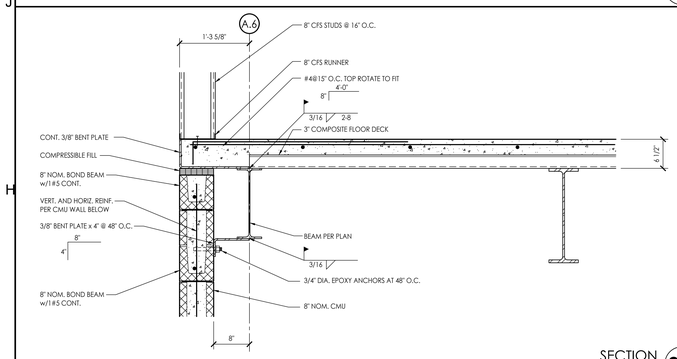

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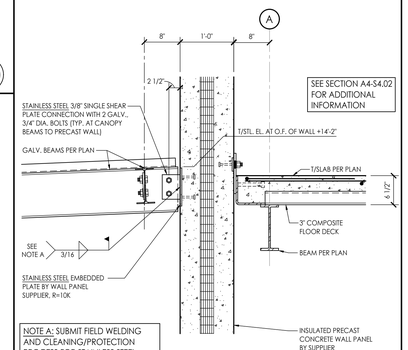
SECTION G10

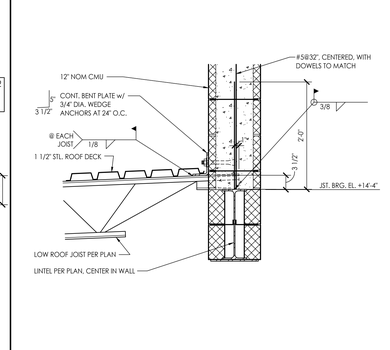
1"=1'-0"



S402

SECTION E8

1"=1'-0"



S402

SECTION E6

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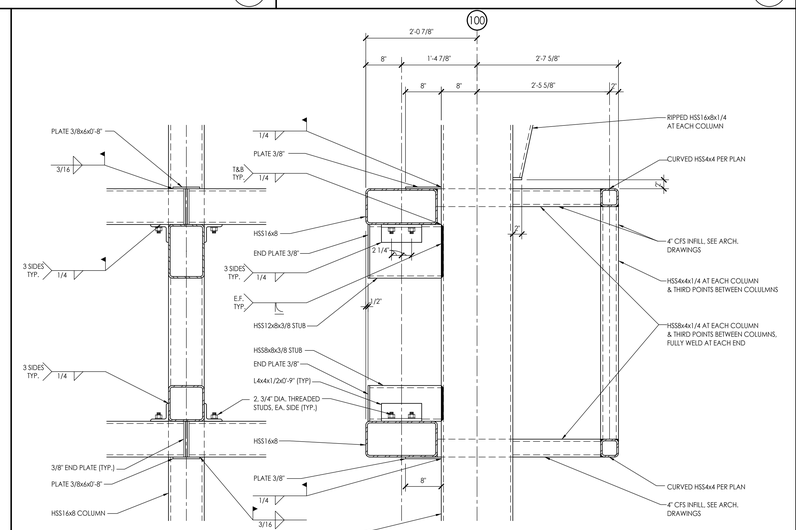

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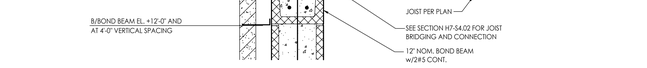
SECTION E1

1"=1'-0"



S402

SECTION A10

1"=1'-0"



S402

SECTION C7

1"=1'-0"

S402

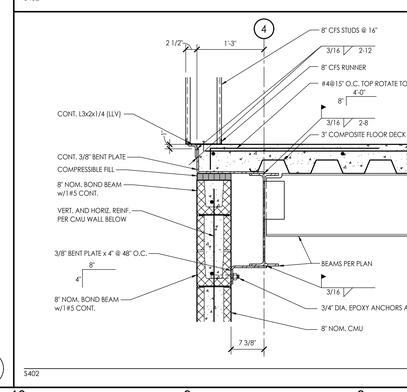
SECTION C4

1"=1'-0"

S402

SECTION C1

1"=1'-0"



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SECTION A7

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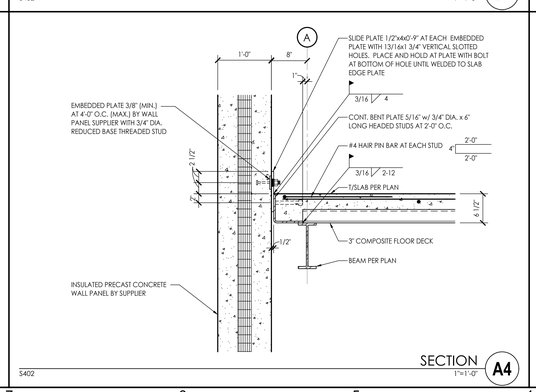

S402

SECTION A4

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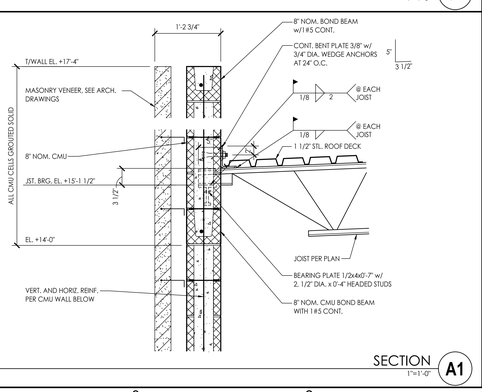

S402

SECTION A1

1"=1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 13449 STEPHEN E. ADAMS

10/24/2023

#	Description	Date

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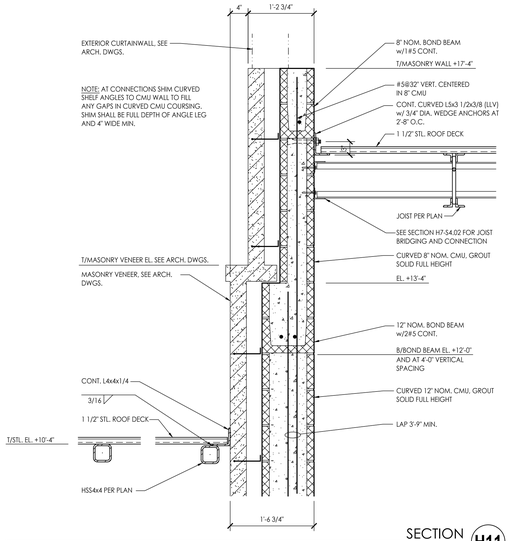
FRAMING DETAILS

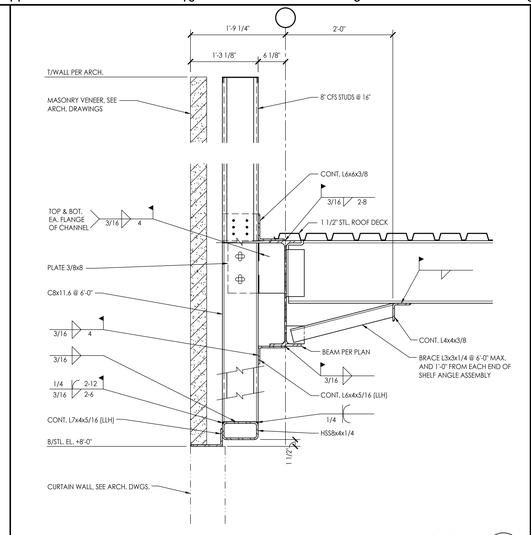
S4.02

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: SEA & MBR
CHECKED BY: SEA



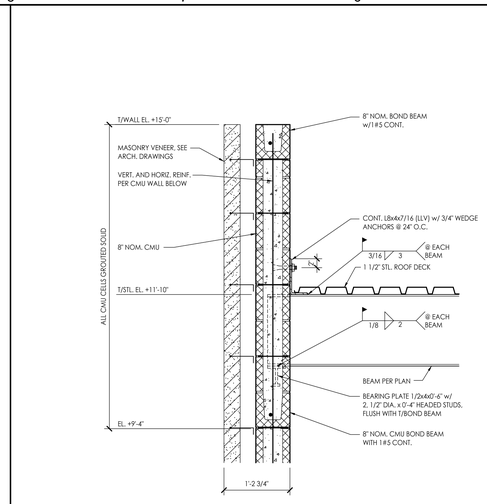
SECTION H11

S403



SECTION H8

S403



SECTION H5

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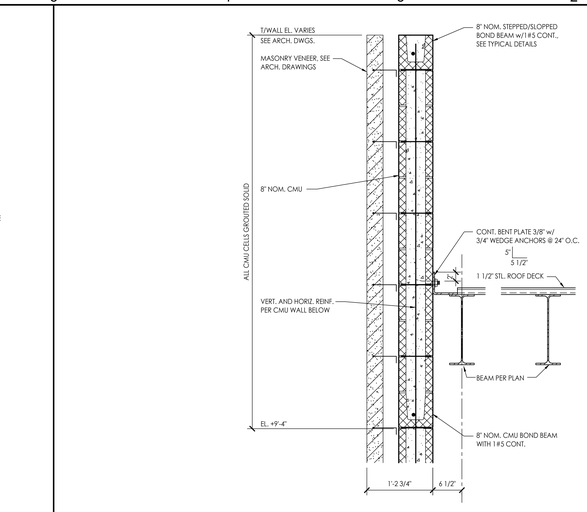
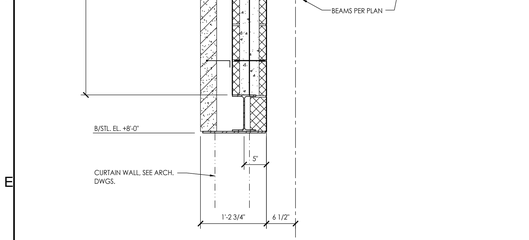


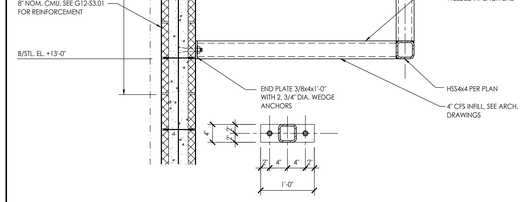
SECTION H1

S403



SECTION D11

S403



SECTION D8

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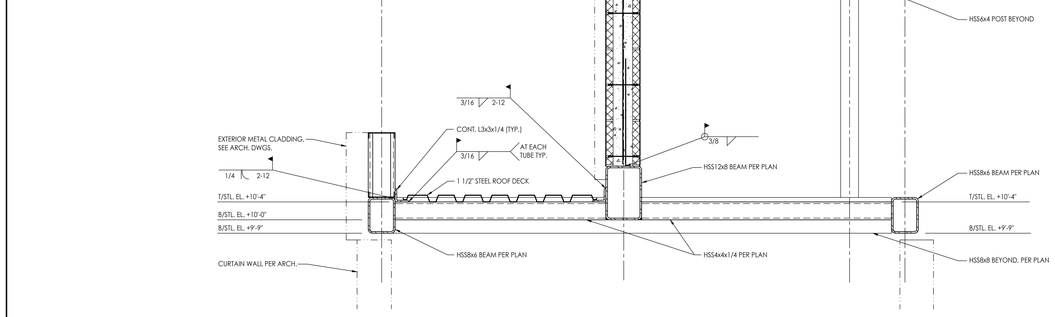

SECTION D1

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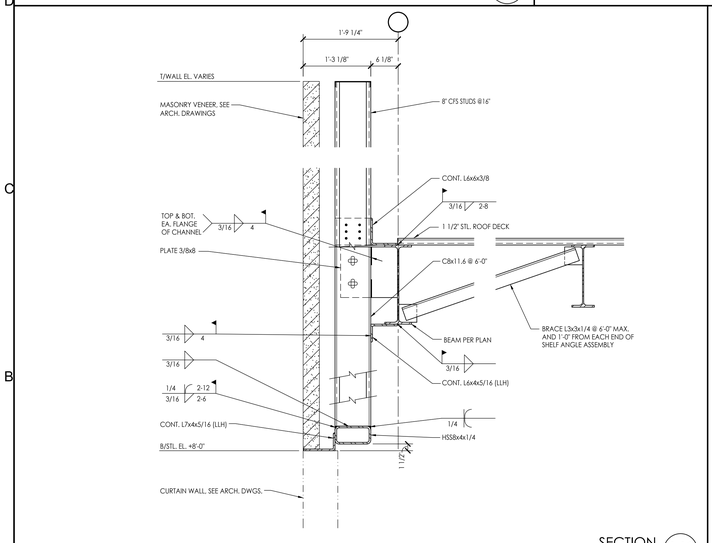
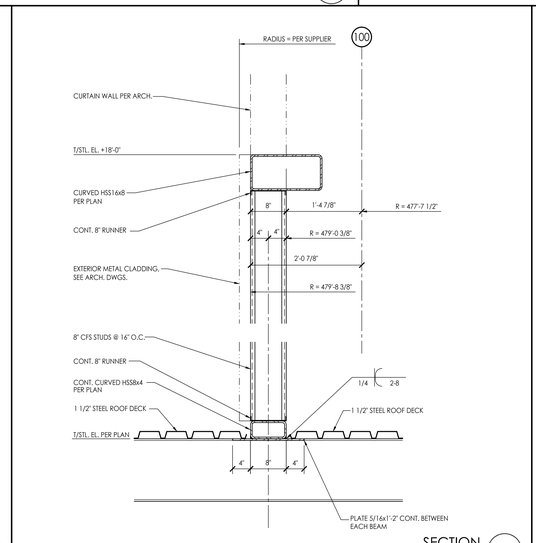


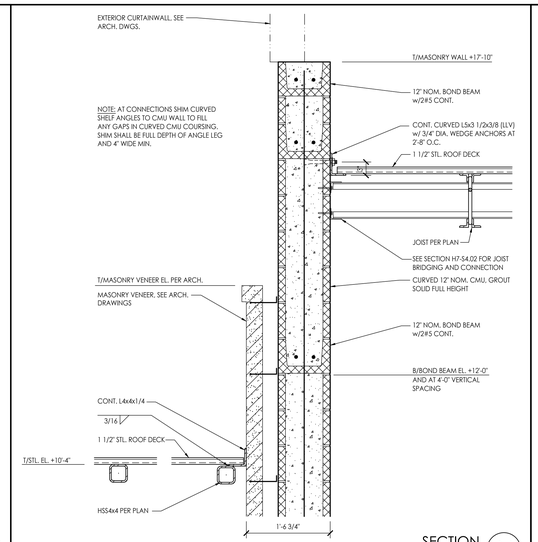
SECTION A10

S403



SECTION A7

S403



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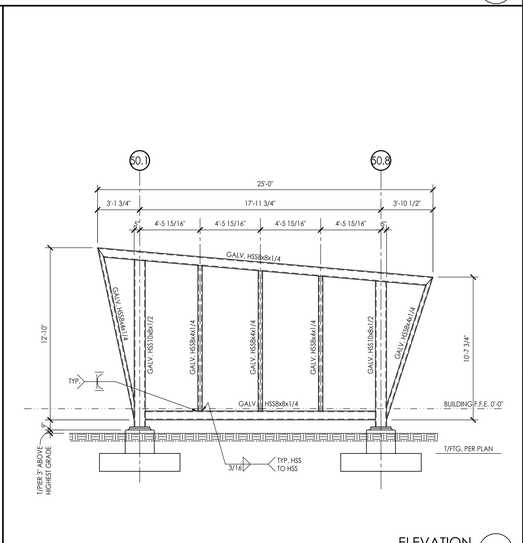

ELEVATION A1

S403A

1/4"=1'-0"

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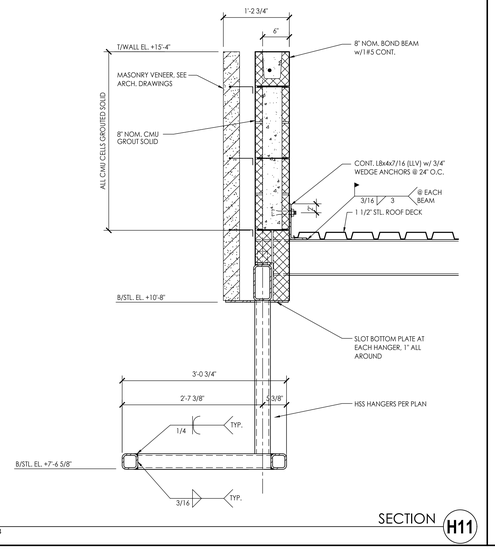

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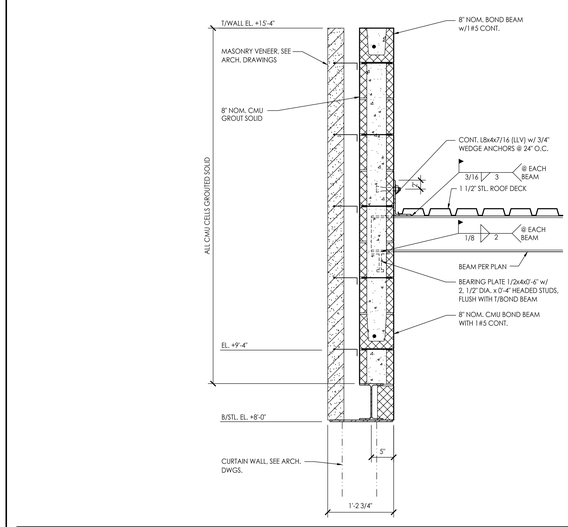
SECTION H11



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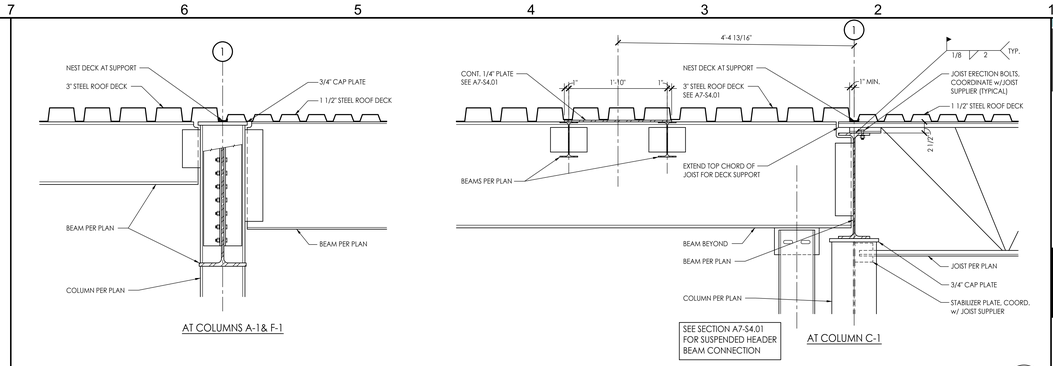
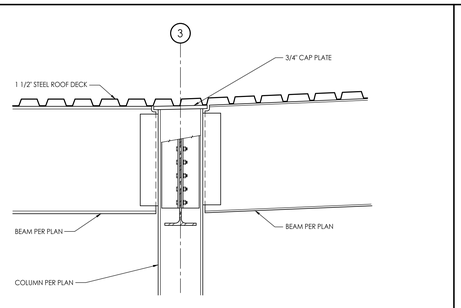
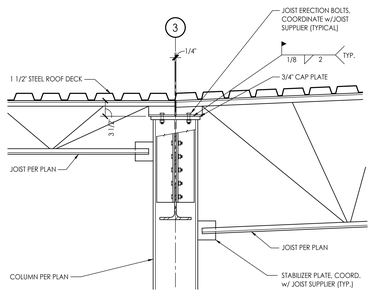
SECTION H7

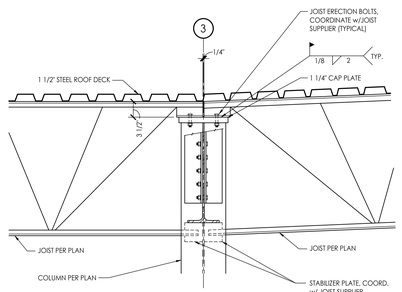


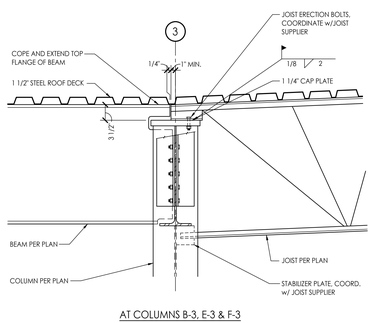
S404

COLUMN CAP PLATE DETAILS J1



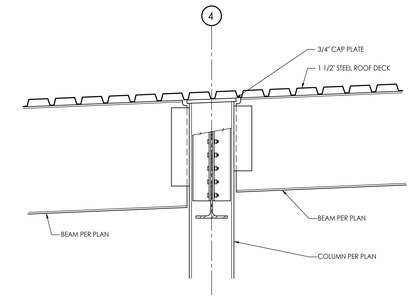


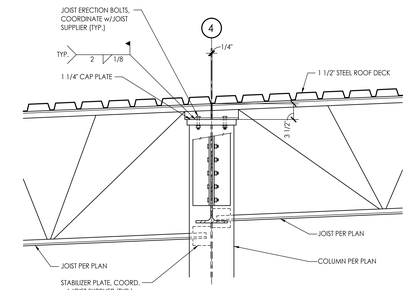




S404

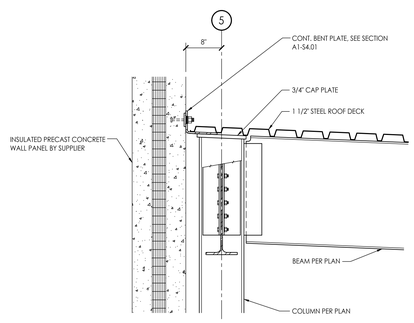
COLUMN CAP PLATE DETAIL A4

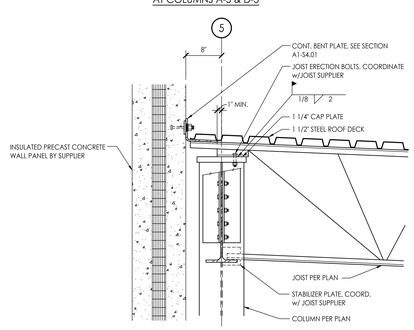




S404

COLUMN CAP PLATE DETAILS E1





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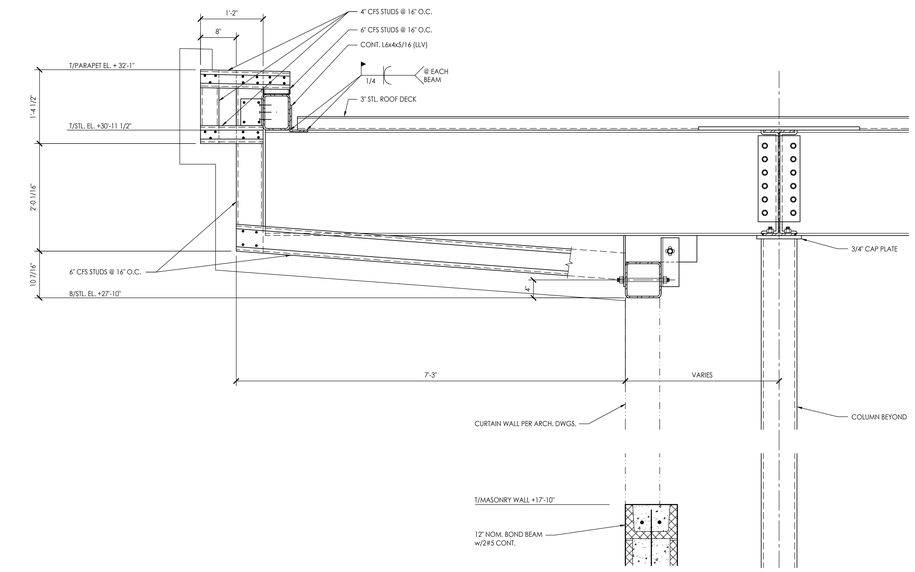
COLUMN CAP PLATE DETAILS A1



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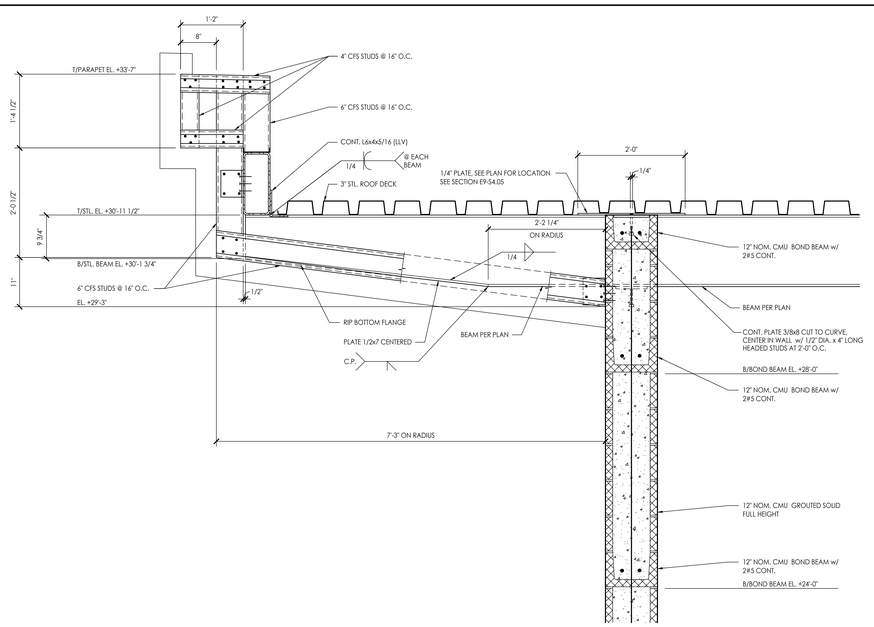
SECTION E7



S404

SECTION A7

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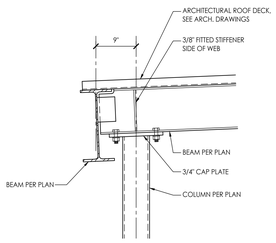
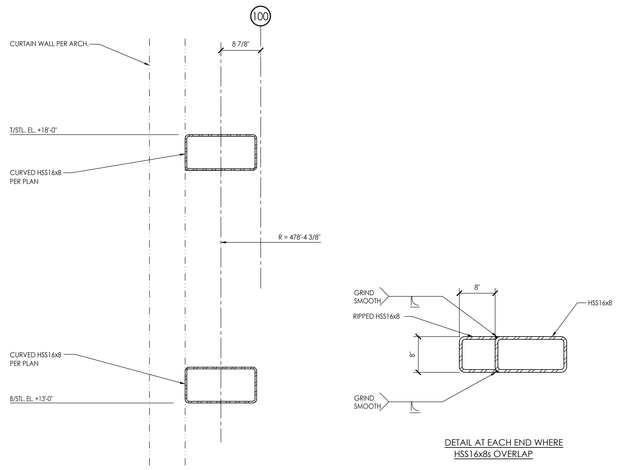


SECTION H12

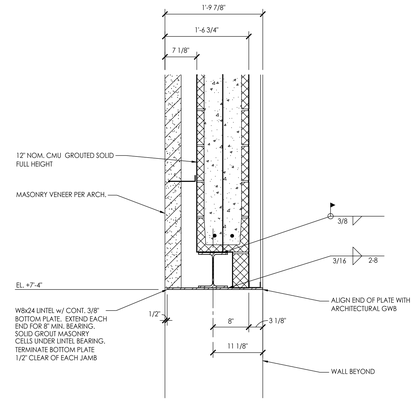
S405



DETAIL AT EACH END WHERE HSS16x8s OVERLAP

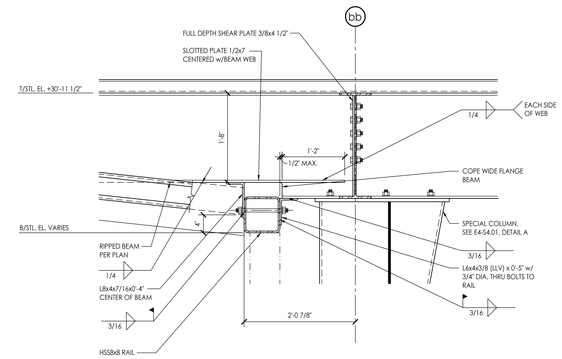
SECTION H8

S405



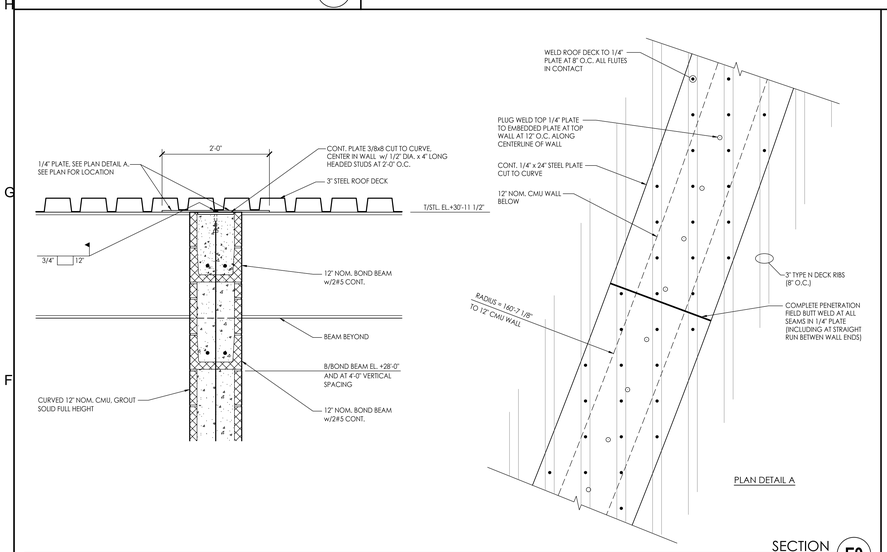
SECTION H5

S405



SECTION H1

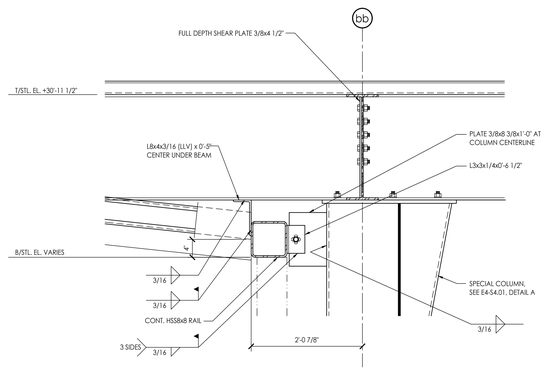
S405



PLAN DETAIL A

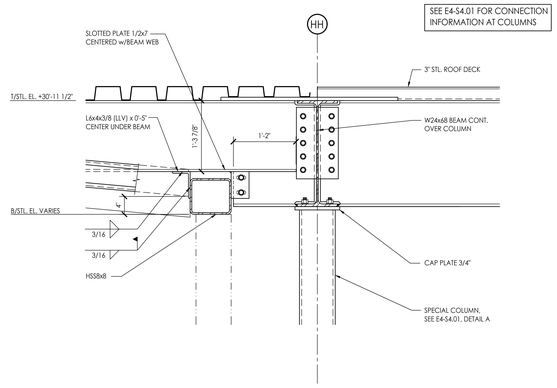
SECTION E9

S405



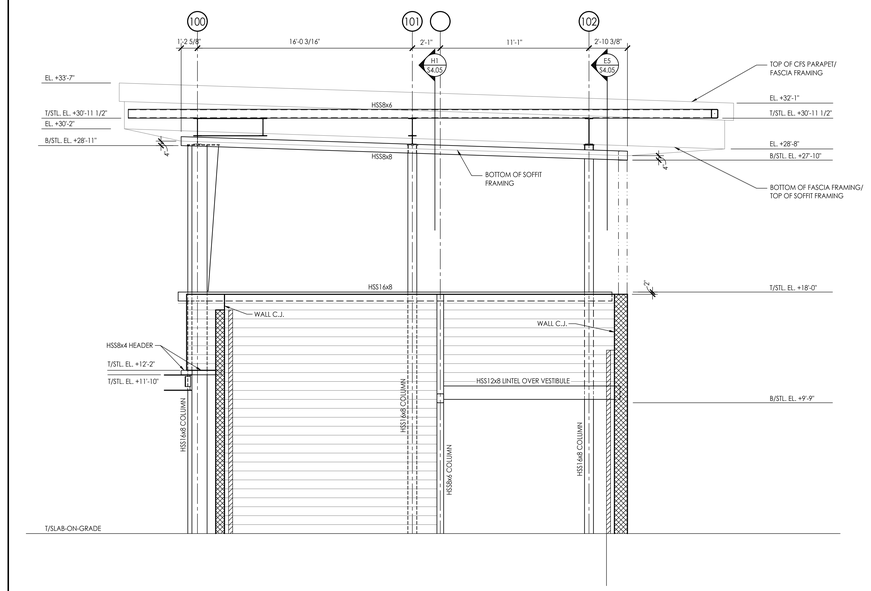
SECTION E5

S405



SECTION E1

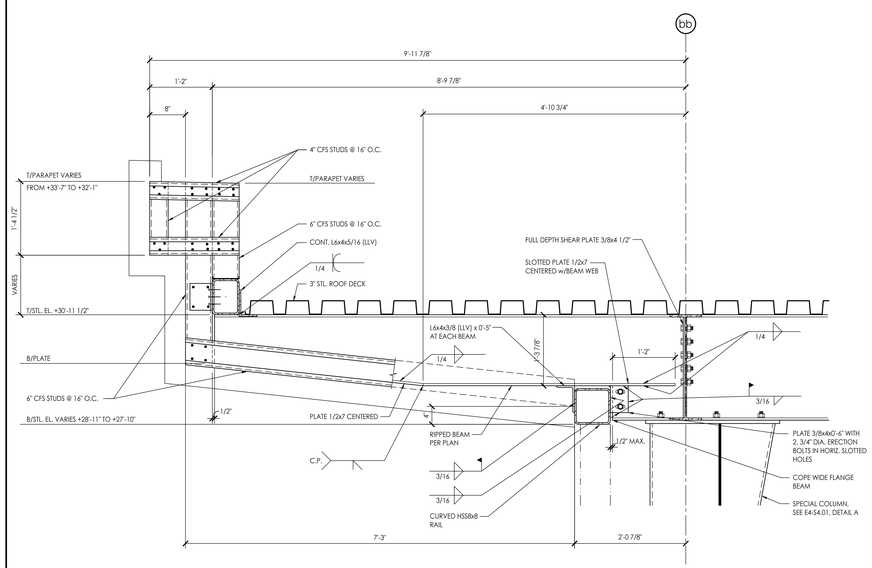
S405



ELEVATION A6

1/4"=1'-0"

S405A



SECTION A1

S405

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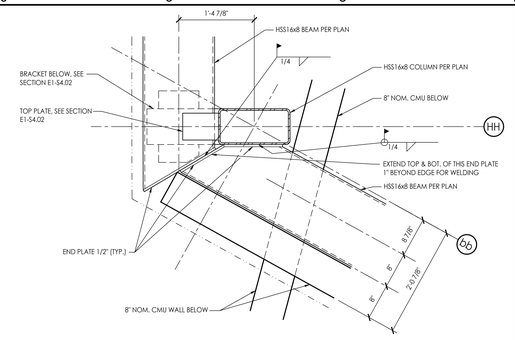
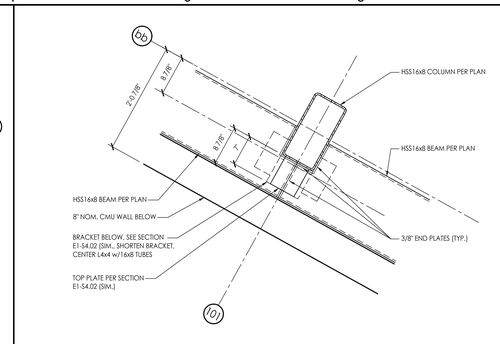


PLAN DETAIL **J7**

S406



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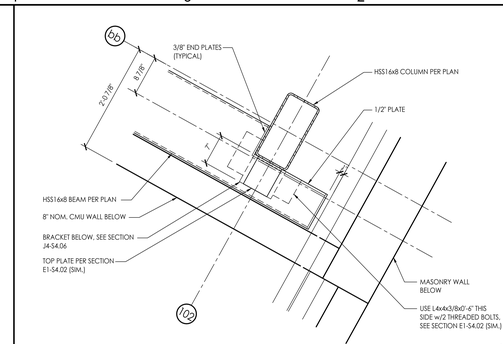
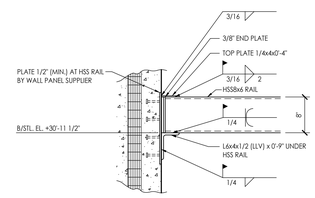
S406

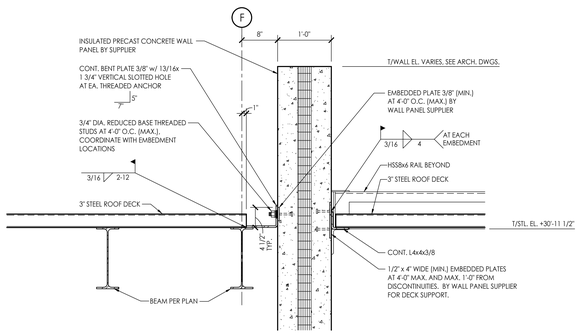


PLAN DETAIL **J1**

S406



SECTION AT HSS8x6 RAIL



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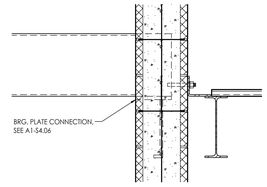

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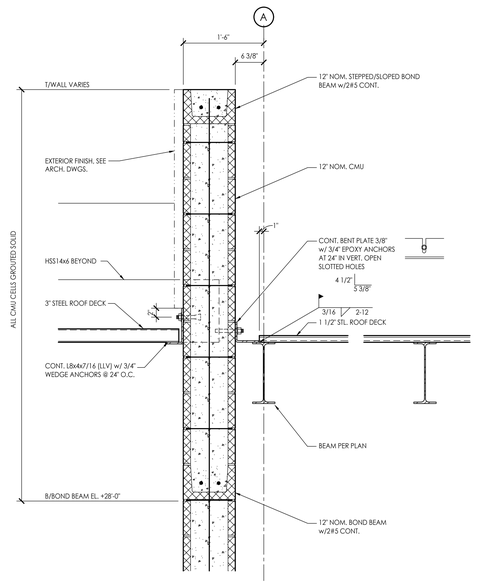

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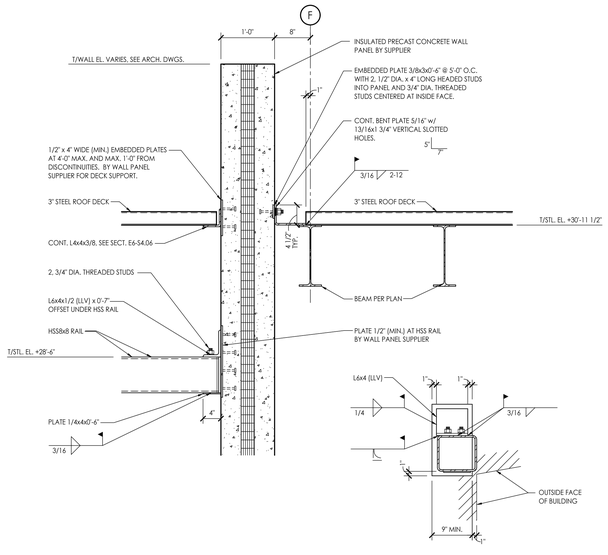

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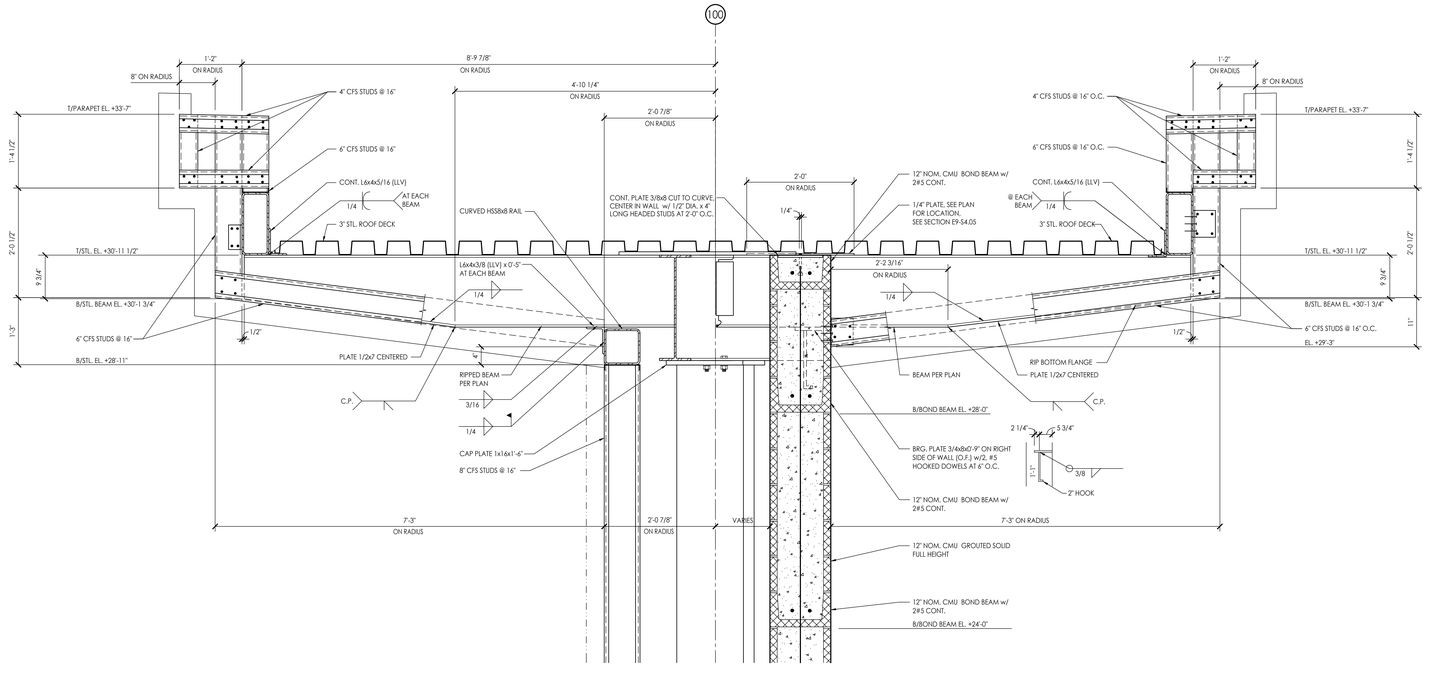

SECTION **A1**

S406

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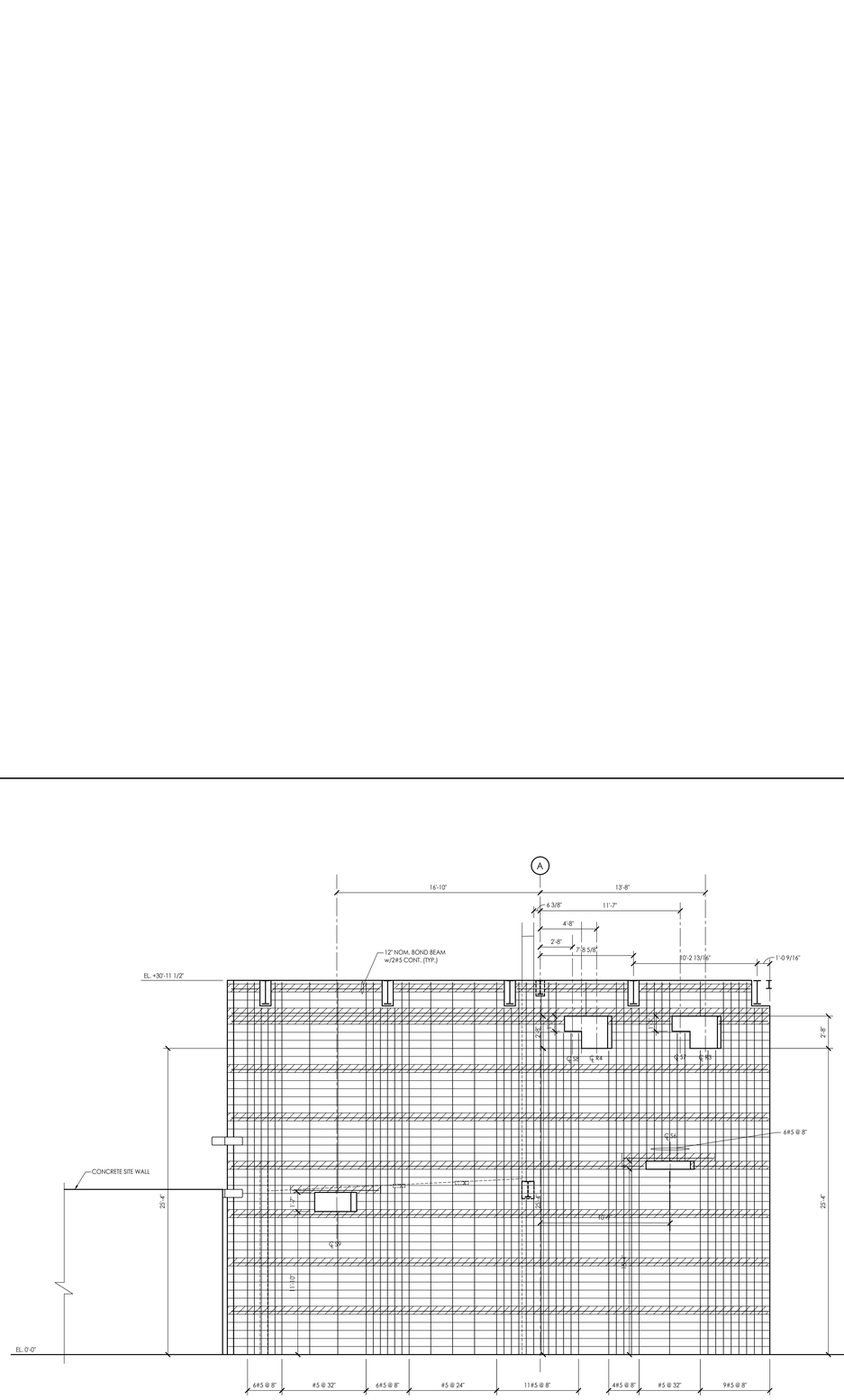
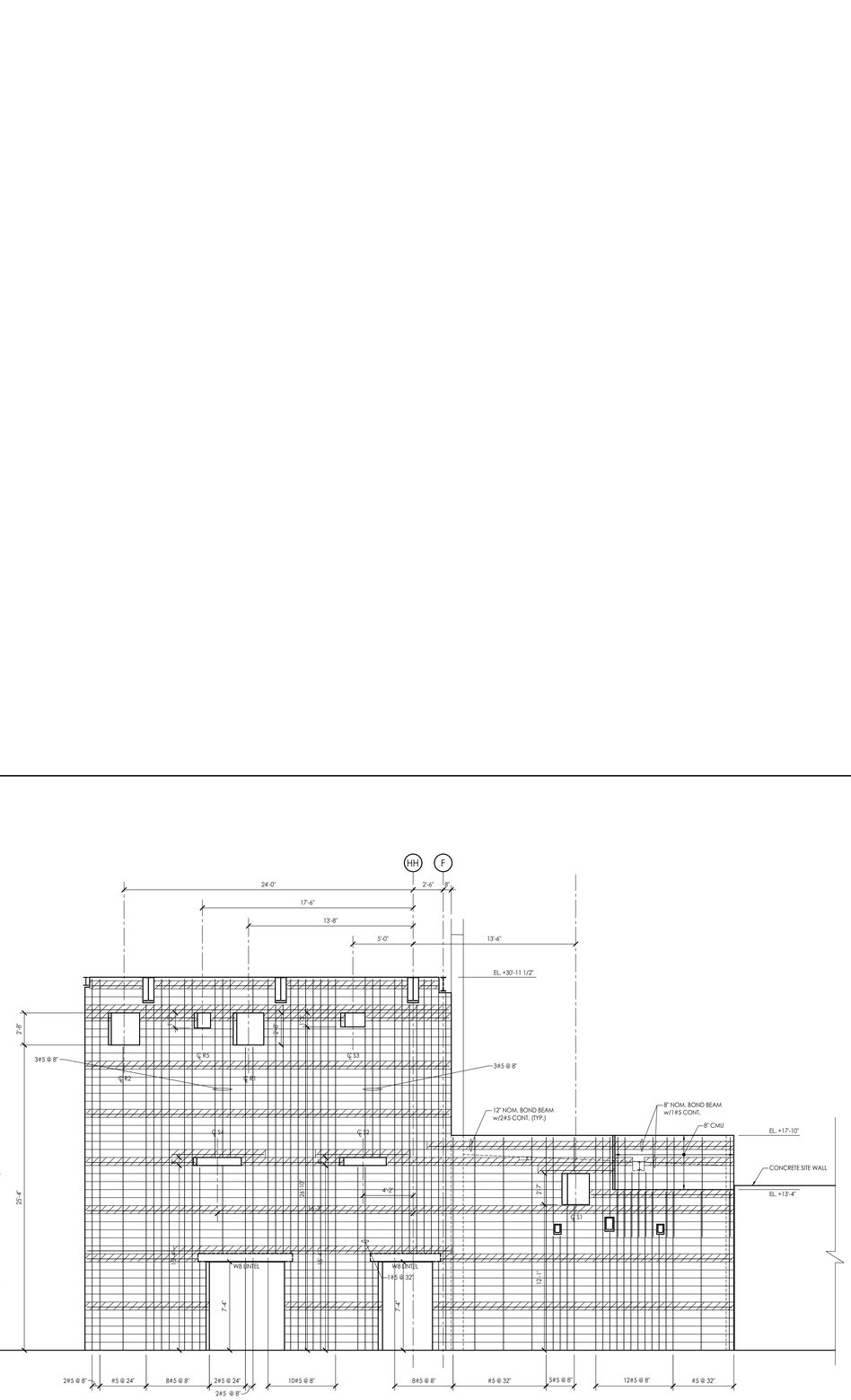


NORTH CURVED 12" NOM. CMU WALL

ELEVATION NOTES:
1. WALL ELEVATIONS ARE DRAWN AS VIEWED LEFT-TO RIGHT ON THE PLAN. THEY ARE NOT FLATTENED. DIMENSIONS GIVEN ARE PERPENDICULER TO THE COLUMN GRIDLINES SHOWN.
2. LOCATIONS OF VERTICAL WALL REINFORCING SHOWN IS APPROXIMATE DEPENDING ON FIELD LOCATION OF VERTICAL CMU COURSING. INSTALL TO MEET INTENT OF LAYOUT SHOWN ALIGNING BARS UNDER BEAM BEARING POCKETS AND IN CELLS ADJACENT TO VERTICAL EDGES OF OPENINGS. OTHERWISE, SPACE VERTICAL BARS NOT TO EXCEED 32" O.C.
3. ALIGN VERTICAL CELLS IN CURVED WALLS AND GROUT ALL CELLS SOLID.
4. PROVIDE FOOTING DOWELS TO MATCH ALL VERTICAL WALL REINFORCING.
5. ////// INDICATES HORIZ. BOND BEAMS AT 4'-0" VERTICAL SPACING AND OVER WALL OPENINGS. REINFORCE 12" CMU WITH 2#5 CONT. AND 8" CMU WITH 1#5 CONT. LAP BOND BEAM BARS 3'-9" MIN., STAGGER LAPS IN 12" CMU. SEE TYPICAL DETAILS AND PLAN SECTIONS.



SOUTH CURVED 12" NOM. CMU WALL

ELEVATION 1/4"=1'-0" A1

3501

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ELEVATIONS

S5.01

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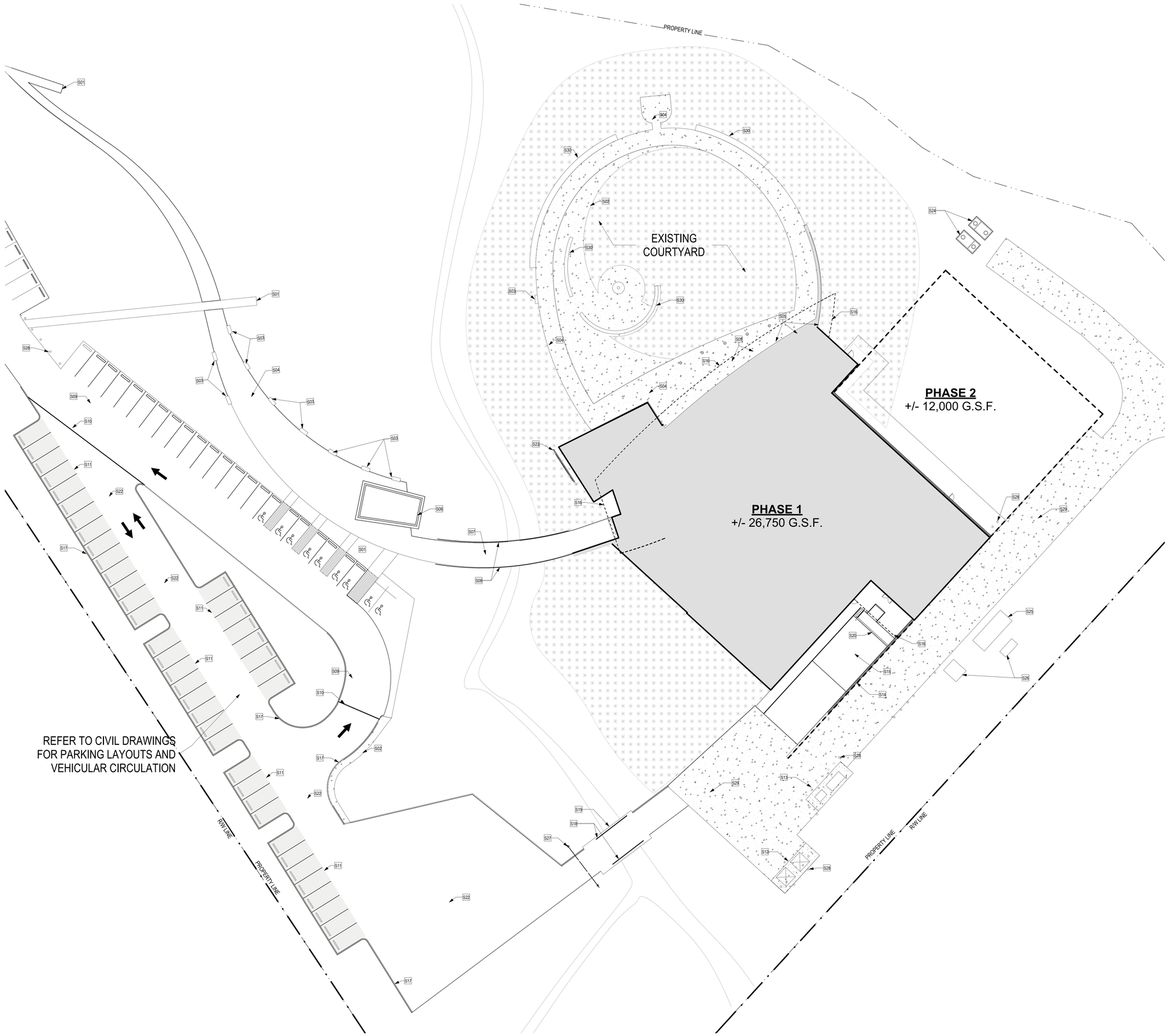

SITE
1" = 20'-0"
A3

ARCH. SITE PLAN GENERAL NOTES

1. ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY. REFER TO CIVIL AND LANDSCAPE DRAWINGS FOR DETAILED SITE INFORMATION.

ARCH. SITE KEYED NOTES

S01 EXISTING CONCRETE SIDEWALK
S02 CONCRETE SIDEWALK, REFER TO LANDSCAPE DRAWINGS
S03 EXISTING CONCRETE BENCH
S04 EXISTING CONCRETE PATHWAY
S05 PROPOSED FLAGPOLE LOCATIONS, REFER TO CIVIL DRAWINGS
S06 EXISTING WATER FEATURE
S07 EXISTING PEDESTRIAN BRIDGE
S08 EXISTING PEDESTRIAN BRIDGE GUARDRAILS
S09 EXISTING ASPHALT
S10 APPROX. EXTENT OF EXISTING ASPHALT, REFER TO CIVIL DRAWINGS
S11 NORMAL DUTY ASPHALT, REFER TO CIVIL DRAWINGS
S12 DUMPSTER PAD, REFER TO CIVIL DRAWINGS
S13 UTILITY PAD, REFER TO CIVIL DRAWINGS
S14 SCREEN WALL
S15 DEPRESSED LOADING DOCK, REFER TO CIVIL DRAWINGS
S16 OUTLINE OF ROOF PLANE ABOVE
S17 RIBBON CURB, REFER TO CIVIL DRAWINGS
S18 EXISTING VEHICULAR GUARDRAILS
S19 EXISTING VEHICULAR CULVERT
S20 TRENCH DRAIN, REFER TO CIVIL DRAWINGS
S22 HEAVY DUTY ASPHALT, REFER TO CIVIL DRAWINGS
S23 MUSEUM SIGN
S24 GREASE INTERCEPTORS, REFER TO CIVIL DRAWINGS
S25 MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS
S26 ELECTRICAL EQUIPMENT, REFER TO ELECTRICAL DRAWINGS
S27 GATE, REFER TO CIVIL DRAWINGS
S28 BOLLARDS, REFER TO CIVIL DRAWINGS
S29 CONCRETE ACCESS ROAD, REFER TO CIVIL DRAWINGS
S30 SITE WALL, REFER TO LANDSCAPE DEAWINGS

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JOHN LESLIE [illegible] REGISTERED LANDSCAPE ARCHITECT 3417 GREENSBORO, NC
10/24/2023

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ARCHITECTURAL SITE PLAN

A1.01

ISSUE DATE: 10-24-2023
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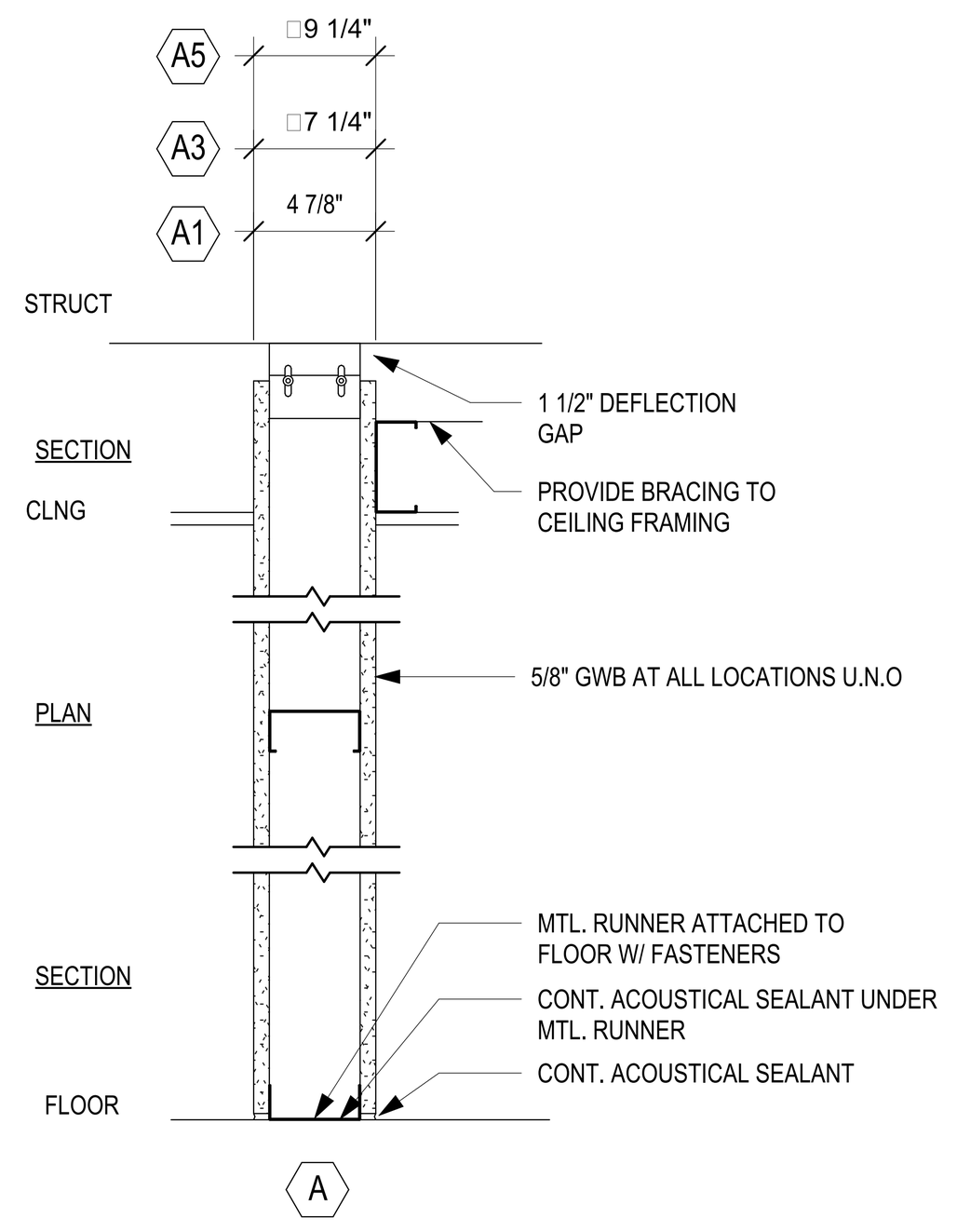
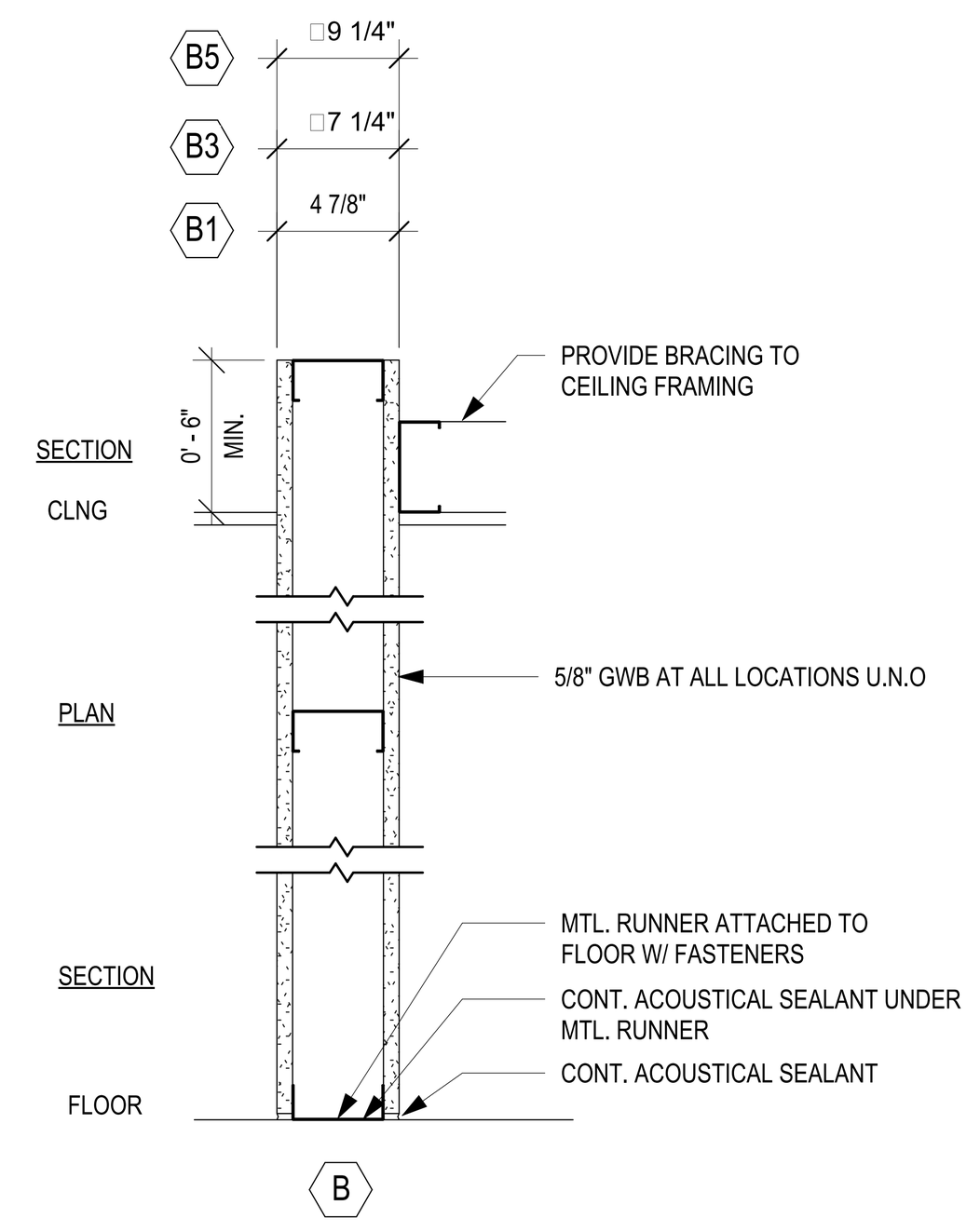
DRAWN BY: JBJ
CHECKED BY: Checker

TRUE NORTH

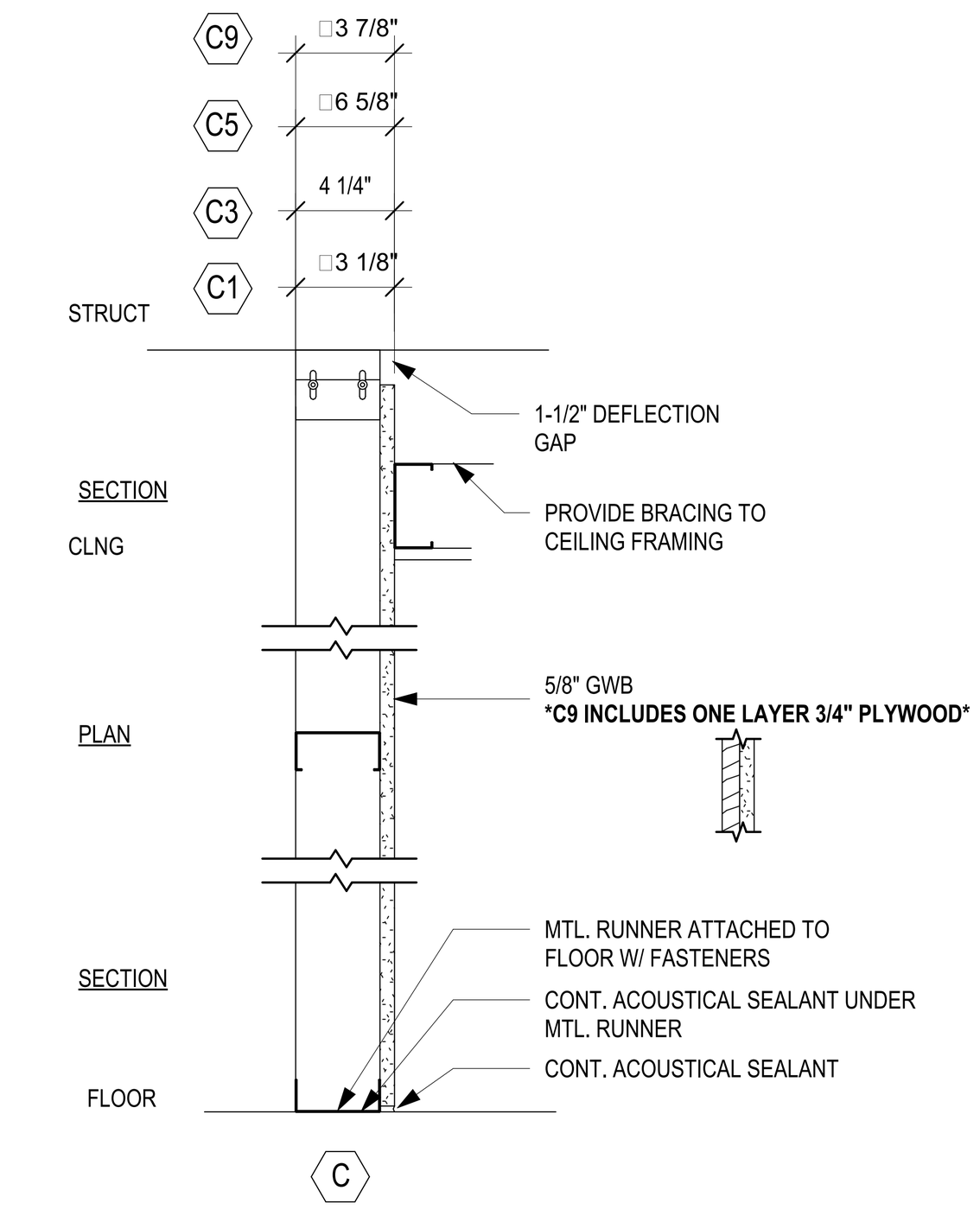
14 13 12 11 10 9 8 7 6 5 4 3 2 1



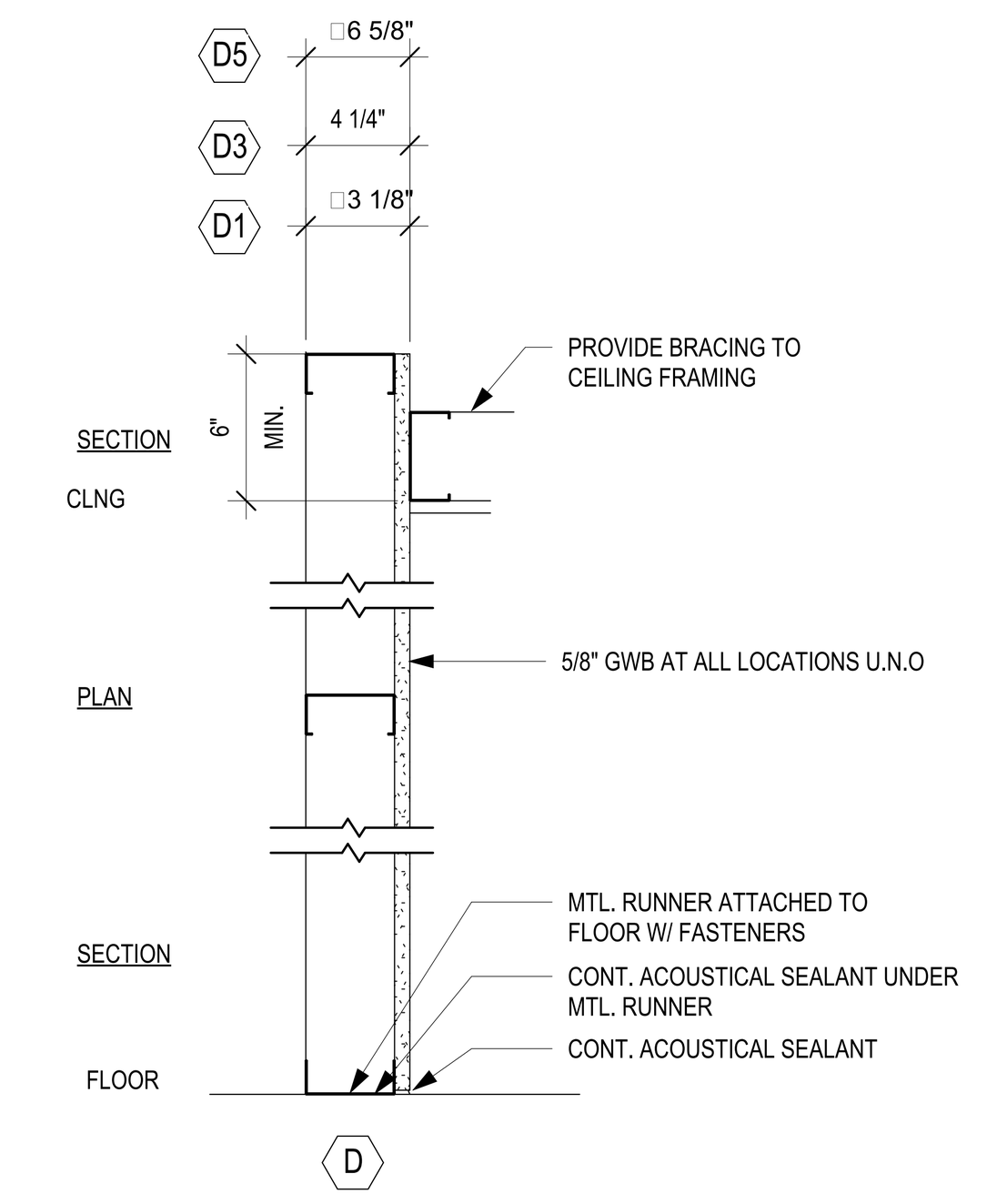
- A1 3-5/8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- A2 SAME AS A1 WITH SOUND ATTENUATION BLANKETS
- A3 6" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- A4 SAME AS A3 WITH SOUND ATTENUATION BLANKETS
- A5 8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- A6 SAME AS A5 WITH SOUND ATTENUATION BLANKETS



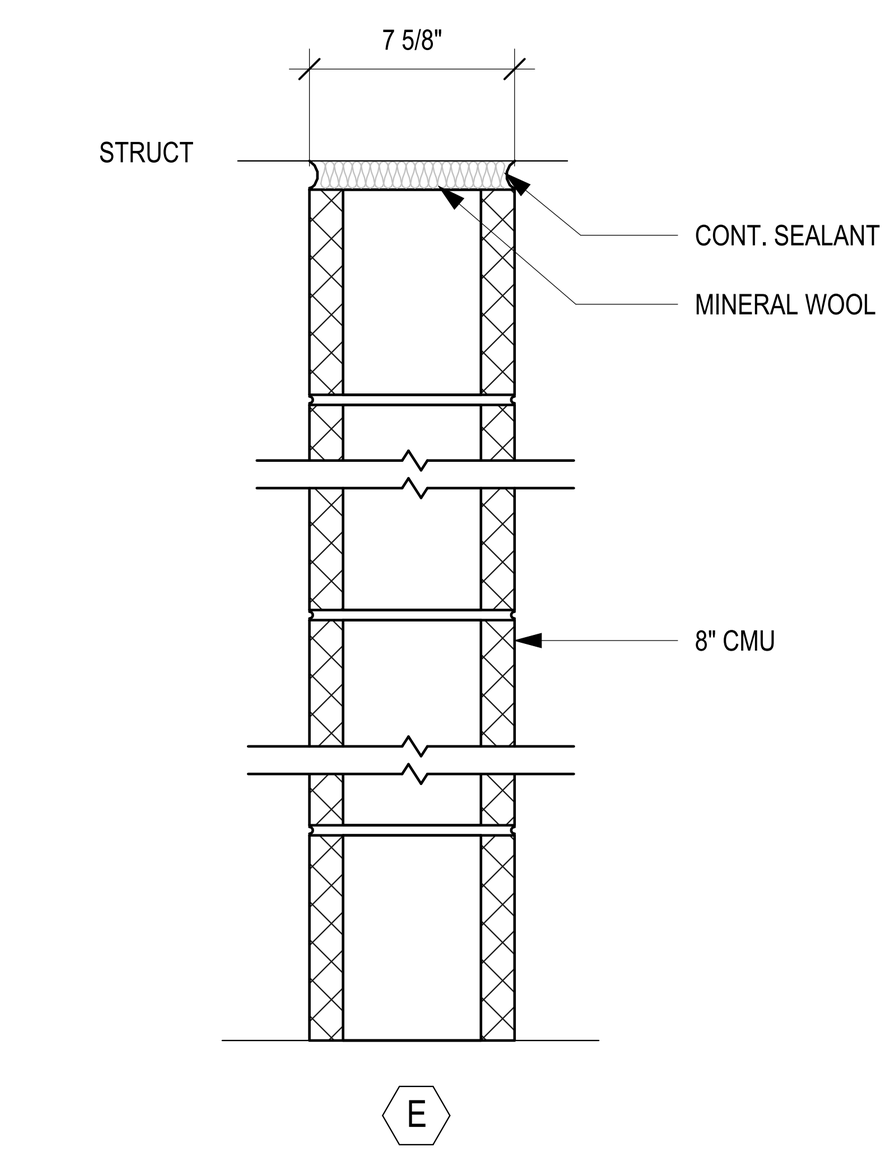
- B1 3-5/8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES
- B2 SAME AS B1 WITH SOUND ATTENUATION BLANKETS
- B3 6" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES
- B4 SAME AS B3 WITH SOUND ATTENUATION BLANKETS
- B5 8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES
- B6 SAME AS B5 WITH SOUND ATTENUATION BLANKETS



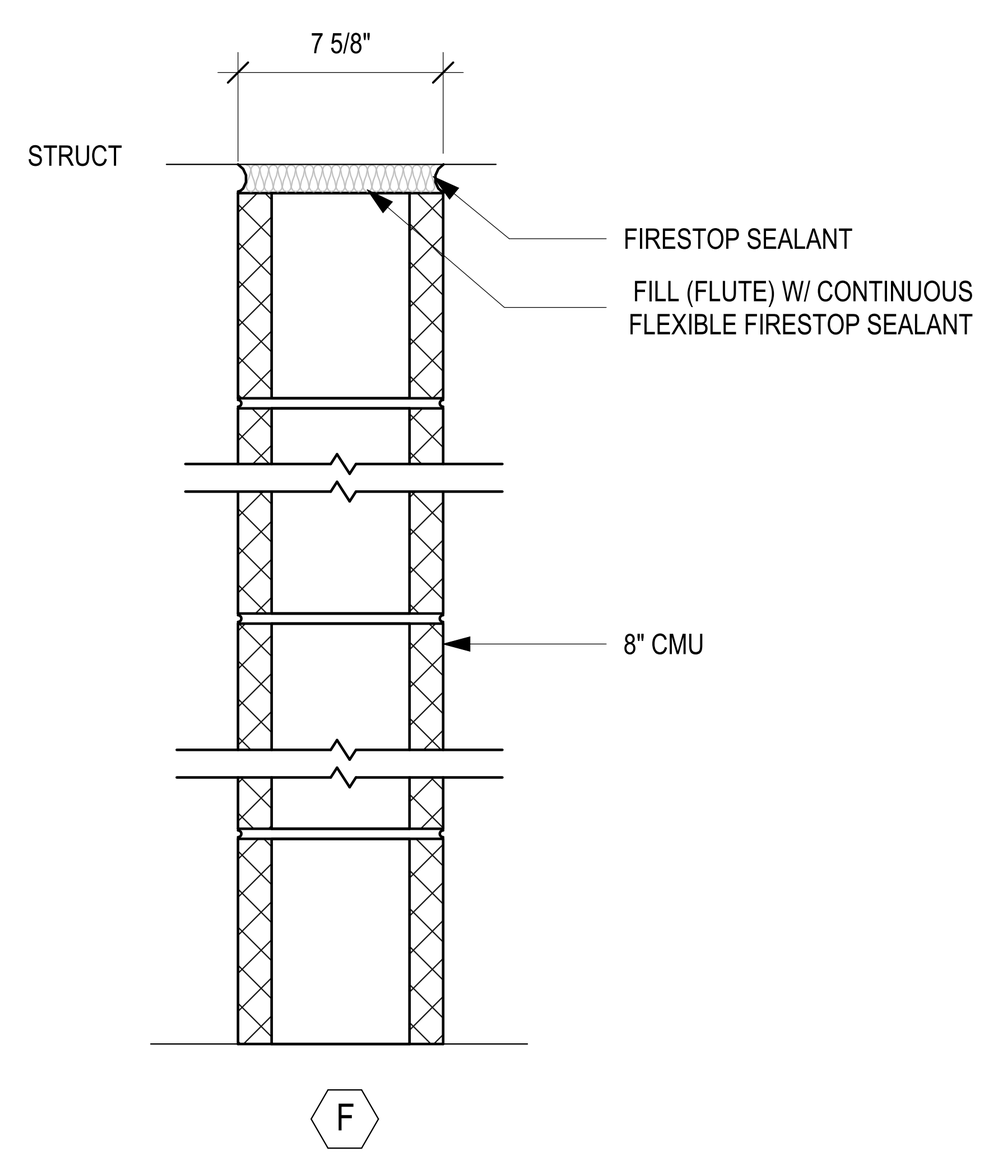
- C1 2-1/2" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- C2 SAME AS C1 WITH SOUND ATTENUATION BLANKETS
- C3 3-5/8" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- C4 SAME AS C3 WITH SOUND ATTENUATION BLANKETS
- C5 6" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- C6 SAME AS C5 WITH SOUND ATTENUATION BLANKETS
- C7 8" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- C8 SAME AS C7 WITH SOUND ATTENUATION BLANKETS
- C9 2 1/2" STUD WITH ONE LAYER 3/4" PLYWOOD & ONE LAYER OF GWB. ON ONE SIDE



- D1 2-1/2" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- D2 SAME AS D1 WITH SOUND ATTENUATION BLANKETS
- D3 3-5/8" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- D4 SAME AS D3 WITH SOUND ATTENUATION BLANKETS
- D5 6" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE
- D6 SAME AS D5 WITH SOUND ATTENUATION BLANKETS
- D7 1-5/8" MTL. STUD AT 16" O.C. WITH GWB. ONE SIDE

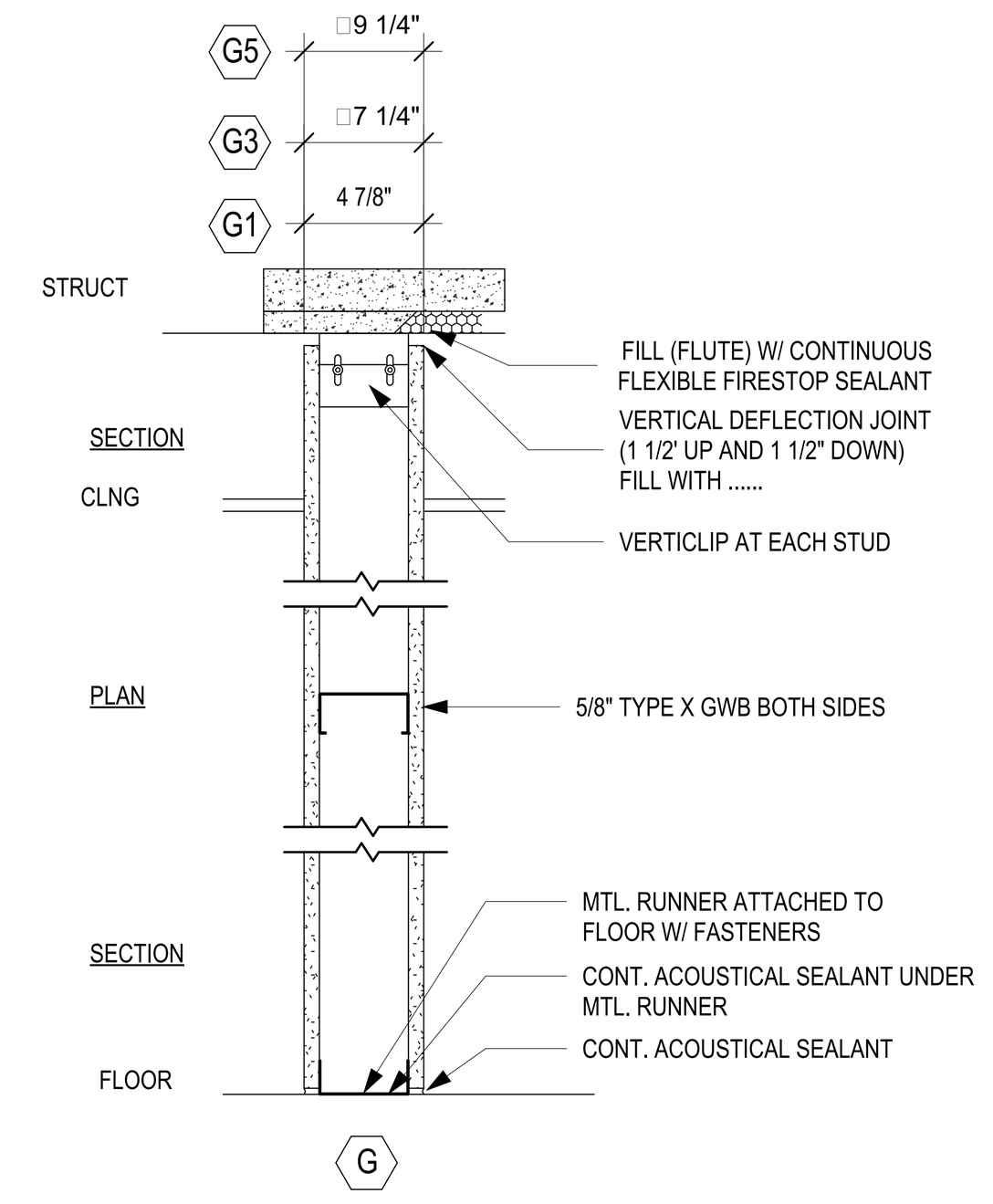


- E1 8" NOM. CMU TO STRUCTURE
- E2 12" NOM. CMU TO STRUCTURE



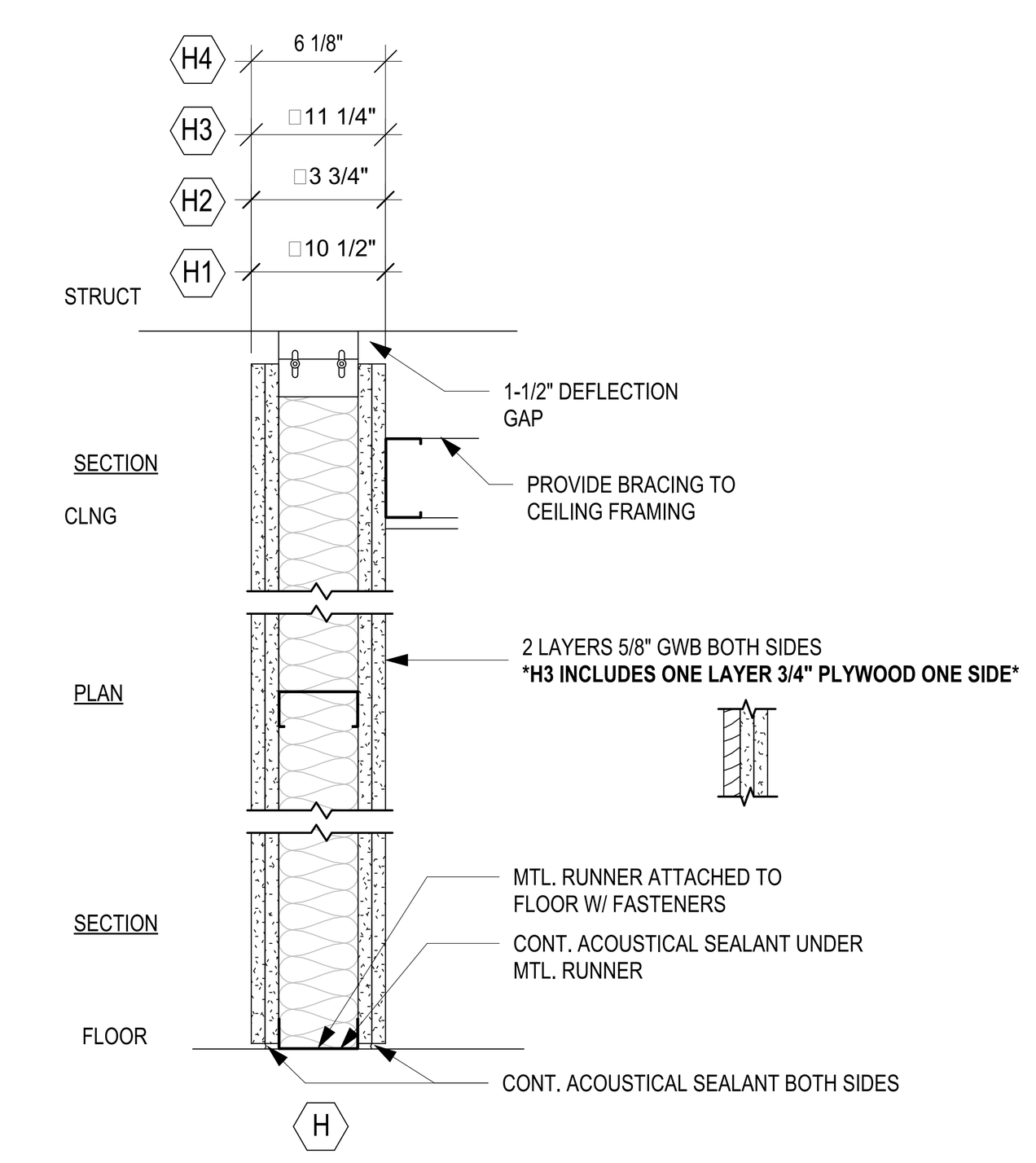
- * F1 8" NOM. CMU TO STRUCTURE

***FOR RATED WALL SEE G0.02**



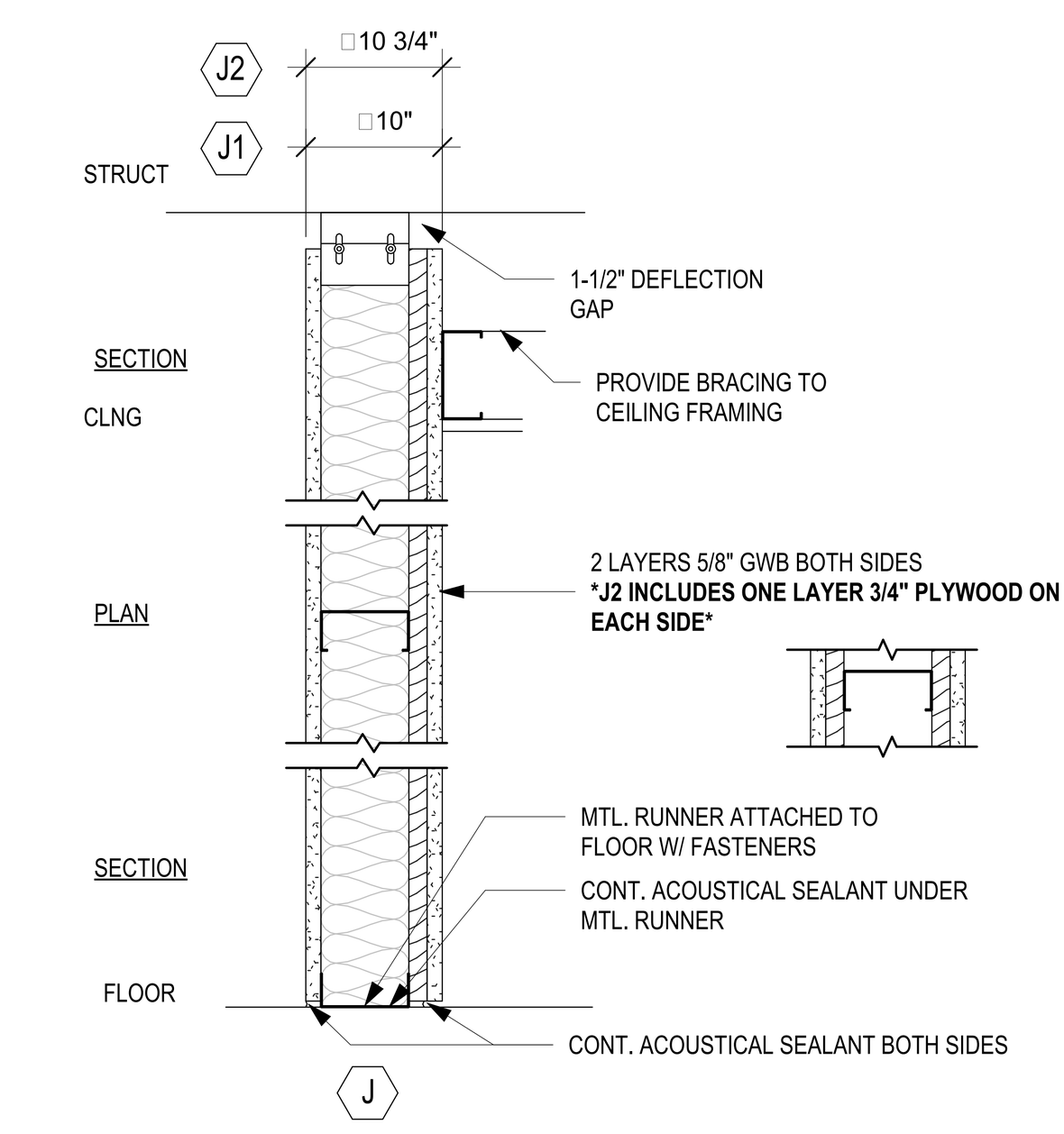
- G1 3-5/8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- G2 SAME AS G1 WITH SOUND ATTENUATION BLANKETS
- G3 6" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- G4 SAME AS G3 WITH SOUND ATTENUATION BLANKETS
- G5 8" MTL. STUD AT 16" O.C. WITH GWB. BOTH SIDES TO STRUCTURE
- G6 SAME AS G5 WITH SOUND ATTENUATION BLANKETS

UL U419



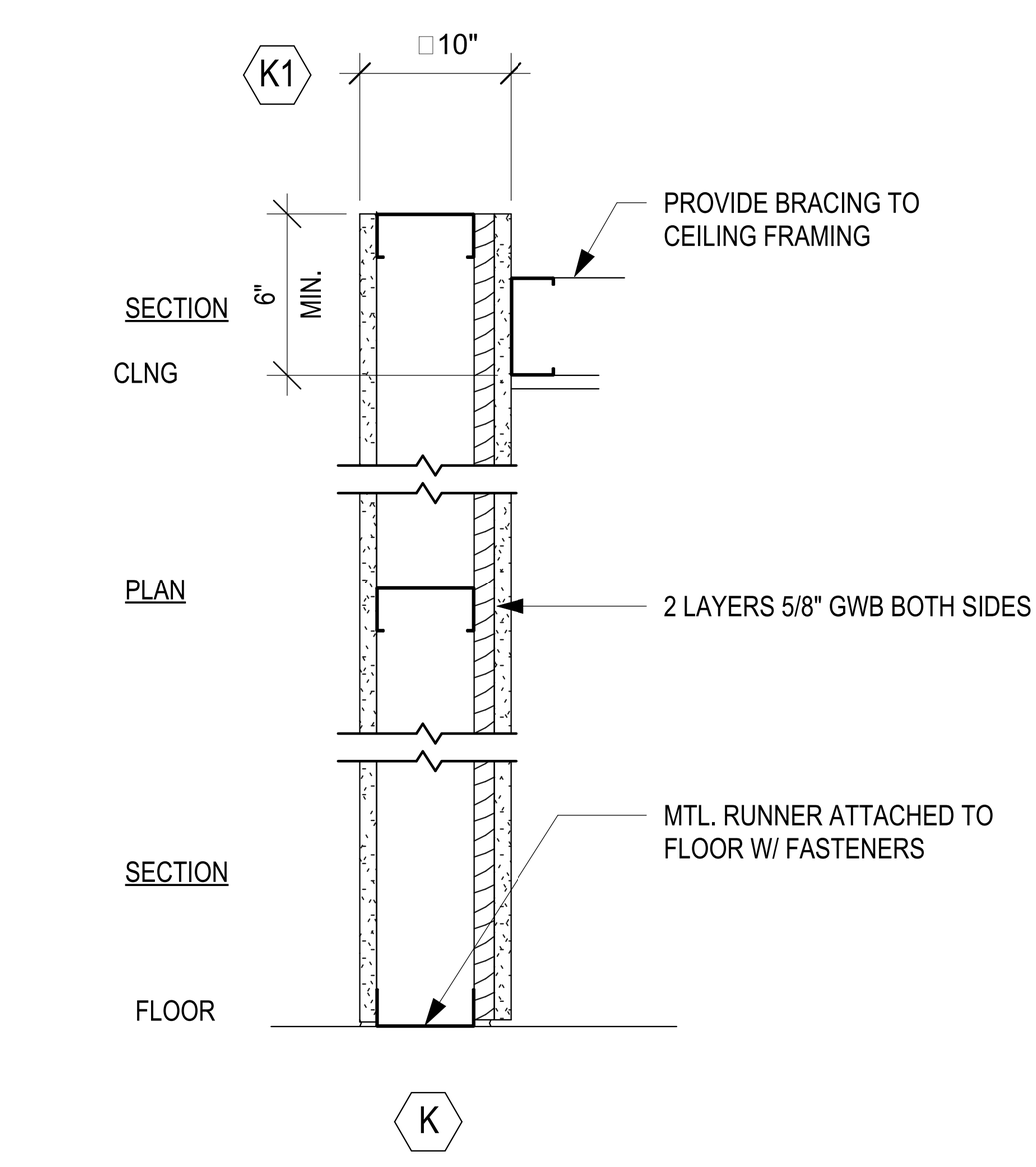
- H1 8" MTL. STUD AT 16" O.C. WITH 2 LAYERS GWB. EACH SIDE AND SOUND ATTENUATION BLANKETS
- H2 2-1/2" MTL. STUD AT 16" O.C. WITH 2 LAYERS GWB. EACH SIDE AND SOUND ATTENUATION BLANKETS
- H3 8" STUD (SOUND BATTS) WITH 2 LAYERS OF GWB. ON ONE SIDE & ONE LAYER OF 3/4" PLYWOOD & TWO LAYERS OF GWB. ON OTHER SIDE
- H4 3-5/8" MTL. STUD AT 16" O.C. WITH 2 LAYERS GWB. EACH SIDE AND SOUND ATTENUATION BLANKETS

PLYWOOD IS ALWAYS LOCATED ON GALLERY FACING SIDE OF PARTITION*



- J1 8" MTL. STUD MTL. STUD WITH 1 LAYER OF GWB. ON ONE SIDE & ONE LAYER OF 3/4" PLYWOOD WITH 1 LAYER OF GWB. ON OTHER SIDE AND SOUND ATTENUATION BLANKETS.
- J2 8" MTL. STUD WITH 3/4" PLYWOOD & 1 LAYER OF GWB. ON EACH SIDE.

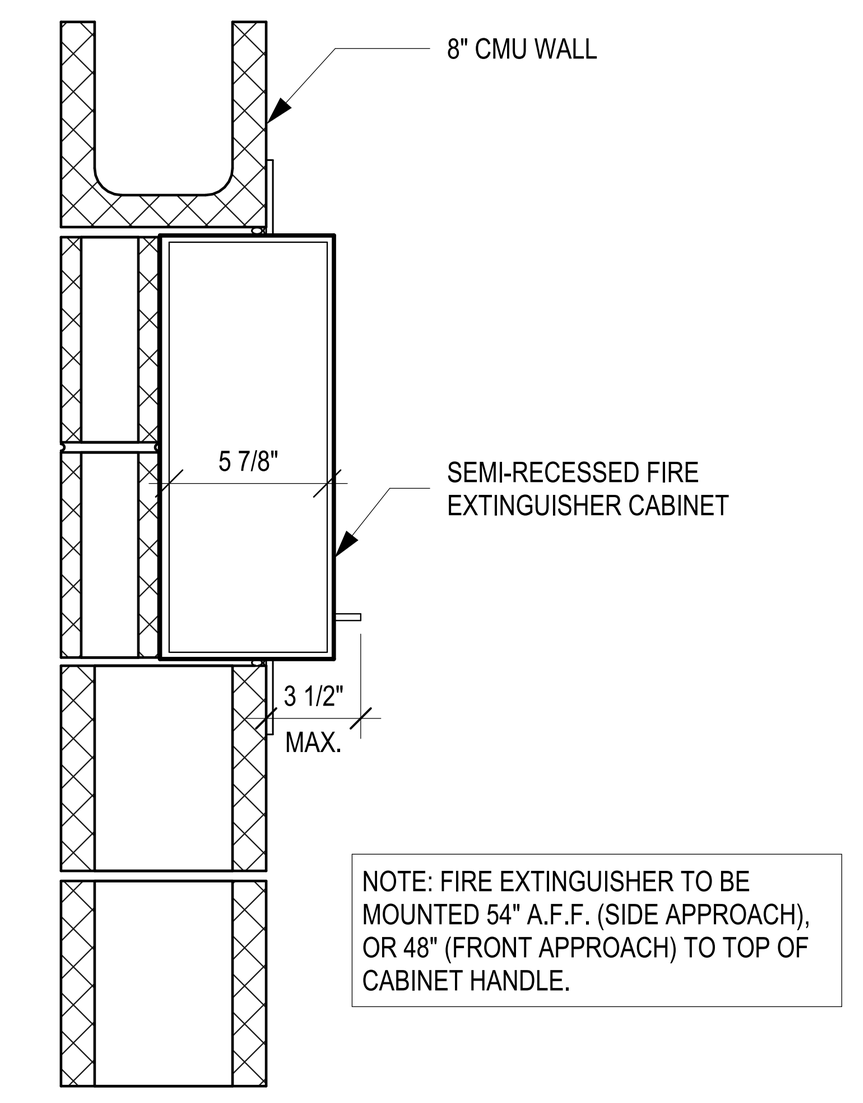
PLYWOOD IS ALWAYS LOCATED ON GALLERY FACING SIDE OF PARTITION*



- K1 8" MTL. STUD MTL. STUD WITH 1 LAYER OF GWB. ON ONE SIDE & ONE LAYER OF 3/4" PLYWOOD WITH 1 LAYER OF GWB. ON OTHER SIDE..

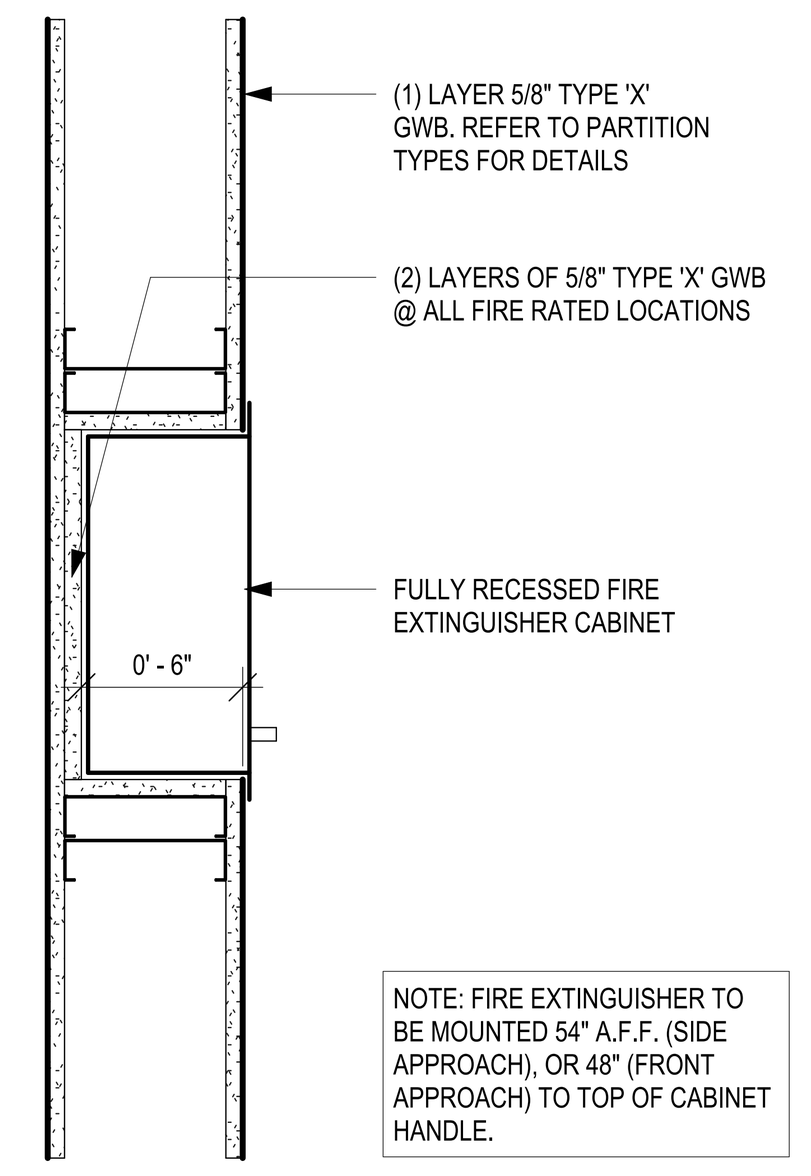
PLYWOOD IS ALWAYS LOCATED ON GALLERY FACING SIDE OF PARTITION*

PARTITION TYPES E6
1 1/2" = 1'-0"



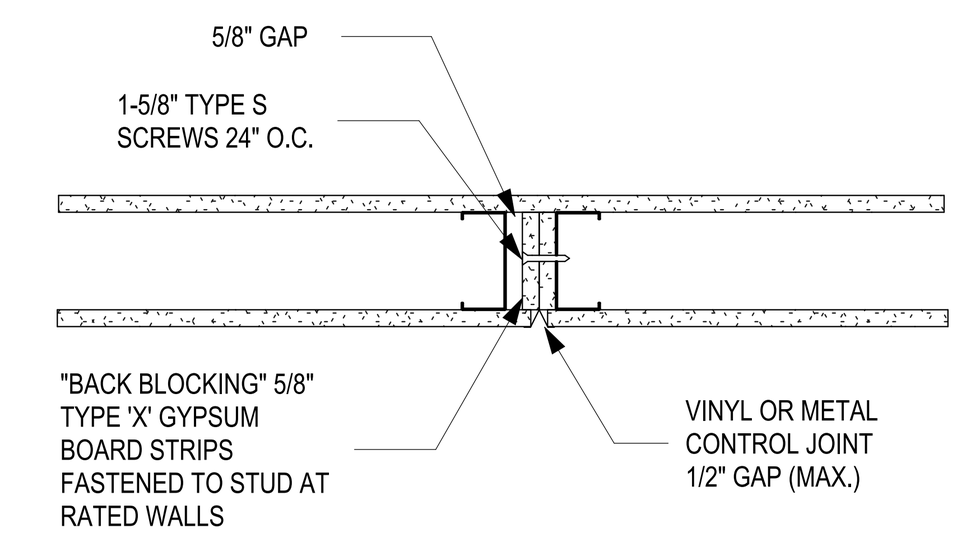
NOTE: FIRE EXTINGUISHER TO BE MOUNTED 54" A.F.F. (SIDE APPROACH), OR 48" (FRONT APPROACH) TO TOP OF CABINET HANDLE.

PARTIALLY RECESSED CMU FEC DETAIL A12
1 1/2" = 1'-0"



NOTE: FIRE EXTINGUISHER TO BE MOUNTED 54" A.F.F. (SIDE APPROACH), OR 48" (FRONT APPROACH) TO TOP OF CABINET HANDLE.

FULLY RECESSED FEC DETAIL A9
1 1/2" = 1'-0"

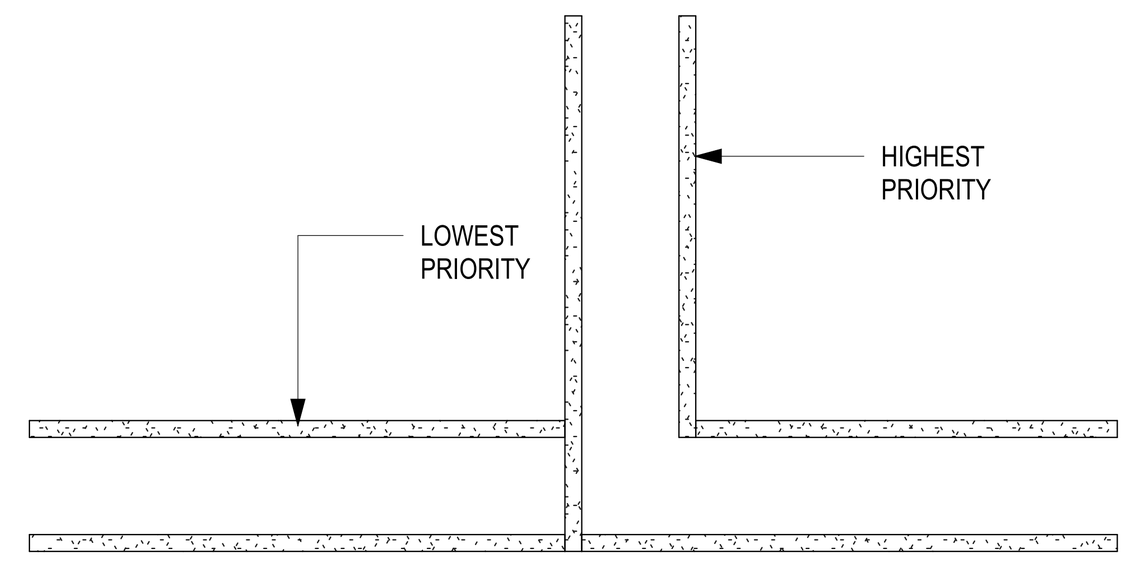


NOTE: REFER TO PARTITION TYPE FOR TYPE AND NUMBER OF GWB. LAYERS

PROVIDE CONTROL JOINTS IN FACE LAYER OF GYPBOARD AS FOLLOWS:

- AS INDICATED OR SCHEDULED ELSEWHERE.
- AT CHANGES IN BACKUP OR SUBSTRATE MATERIAL
- IN CONTINUOUS GYPSUM BOARD PARTITIONS AND CEILINGS WHICH EXTEND IN ANY DIRECTION MORE THAN AT 30'-0" WITHOUT BREAK OR CHANGE IN PLANE. LOCATE 30'-0" O.C. MAX.
- WHERE DRYWALL CEILING OR SOFFIT ABUTTS PARTITION, EXTEND CONTINUOUS HORIZONTALLY AND VERTICALLY.
- HORIZONTAL IN EACH STAIRWELL AT FLOOR LINE.
- PROVIDE GYPBOARD BACKING AT CONTROL JOINTS IN RATED ASSEMBLIES AS DETAILED IN GYPSUM ASSOC. FIRE RESISTANCE DESIGN MANUAL.
- ALL LOCATION SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION. LOCATE AT CORNER OF DOOR FRAMES WHERE PRACTICAL.

CJ DETAIL A6
1 1/2" = 1'-0"



WALL PRIORITY LEGEND

- 2 HOUR FIRE & SMOKE WALL ------ PRIORITY 1 (HIGHEST)
- 2 HOUR FIRE WALL -------------------- PRIORITY 2
- 2 HOUR SHAFT WALL ---------------- PRIORITY 2
- 1 HOUR FIRE & SMOKE WALL ----- PRIORITY 3
- 1 HOUR FIRE WALL ------------------ PRIORITY 4
- NON-RATED WALL -------------------- PRIORITY 5

REFER TO LIFE SAFETY PLAN FOR LOCATIONS OF FIRE RATED WALLS

WALL PRIORITY LEGEND A3
1 1/2" = 1'-0"

GENERAL NOTES

1. REFER TO BUILDING AND WALL SECTIONS FOR EXTERIOR WALL CONSTRUCTION.
2. REFER TO LIFE SAFETY PLAN FOR ALL FIRE RATED AND SMOKE RATED PARTITION LOCATIONS.
3. FIRE RATED INTERIOR PARTITIONS NOTED WITH FIRE RATING 1HR, ETC. INDICATES THAT THE PARTITION SHALL BE CONSTRUCTED TO MEET THAT FIRE RATING AS INDICATED ON LIFE SAFETY DRAWINGS. THE PARTITION SHALL EXTEND FROM STRUCTURAL SLAB TO THE UNDERSIDE OF THE RATED FLOOR OR CEILING ASSEMBLY. ALL JOINTS AND PENETRATIONS SHALL BE FIRE SEALED. THE CONTRACTOR SHALL MAINTAIN ALL RATED WALLS AS SHOWN ON LIFE SAFETY DRAWINGS.
4. ALL MTL. STUD PARTITIONS AND FURRING SHALL EXTEND A MIN. OF 6" ABOVE FINISH CEILING UNLESS NOTED OTHERWISE. BRACE TO STRUCTURE OR OTHER WALLS FOR STABILITY. TOP OF ALL WALLS ARE TO BE ENCLOSED AT FLOOR DECK OR CAPPED WITH TOP TRACK TO AVOID WALL AS OPEN VERTICAL CHASE. WHERE WALL SHEATHING DIFFERS IN HEIGHT ON EACH SIDE OF THE PARTITION, THE WALL SHALL BE CONSTRUCTED AND BRACED AS A WALL WITH A KNEE WALL ABOVE THE LOWEST SHEATHING. ALTERNATELY, SHEATHING CAN BE BROUGHT TO SAME HEIGHT ON EACH SIDE OF STUD AND CAPPED WITH TOP TRACK TO AVOID SHAFT CONDITION.
5. PARTITIONS NOTED AS INCLUDING SOUND ATTENUATION BLANKETS SHALL HAVE 3" SOUND ATTENUATION BATTS U.N.O. PROVIDE ACOUSTICAL SEALANT CONTINUOUSLY ALONG BOTTOM TRACK AND AT ALL PENETRATIONS AND OUTLETS.
6. WHERE SOUND ATTENUATION BLANKETS ARE INDICATED AT PLUMBING CHASES, PIPE CHASES, OR SIMILAR CONDITION, PROVIDE SOUND BATTS ON ONE SIDE ONLY (IN FULL HEIGHT OR TALLER PARTITION IF APPLICABLE.)
7. 6" INTERIOR METAL STUDS TO BE 16" O.C. U.N.O. 3-5/8" INTERIOR METAL STUDS TO BE 16" O.C. U.N.O. PROVIDE (2) STUDS AT EACH SIDE OF INTERIOR DOORS. PROVIDE AN ADDITIONAL STUD WITHIN 6" ON EACH SIDE OF OPENING.
8. PROVIDE 5/8" TYPE "X" GYPSUM WALLBOARD AT ALL RATED PARTITIONS USING GYP.BD.
9. WHERE GYP.BD. AND METAL STUD PARTITIONS ABUT STRUCTURAL DECK CONSTRUCTION OR VERTICAL STRUCTURAL ELEMENTS, PROVIDE DEFLECTION JOINTS BETWEEN METAL FRAMING AND STRUCTURE AS RECOMMENDED BY MANUFACTURER TO PREVENT TRANSFER OF STRUCTURAL LOADS OR MOVEMENT TO PARTITIONS.
10. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 30'-0" O.C. MAXIMUM, HORIZONTAL AND VERTICAL. LOCATION SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION. GYPSUM BOARD CONTROL JOINTS TO BE LOCATED AT DOOR FRAME CORNERS WHERE APPLICABLE. GYPSUM BOARD CONTROL JOINTS IN RATED WALL AND CEILING ASSEMBLIES SHALL BE FIRE RATED OR SHALL HAVE GYPSUM BOARD BACKING PANELS PER U.L. REQUIREMENTS.
11. PROVIDE MOISTURE RESISTANT (M.R.) GYPSUM BOARD WHERE INDICATED AND AT THE FOLLOWING LOCATIONS:
 -TOILET ROOMS, JANITOR CLOSETS, KITCHENS, DRINKING FOUNTAINS
 -ALL PARTITIONS RECEIVING EPOXY PAINT
 -ALL PARTITIONS OR CASEWORK WITHIN 5'-0" OF PLUMBING FIXTURES
 -ALL EXTERIOR APPLICATIONS
12. PROVIDE CEMENTITIOUS BACKER BOARD WHERE INDICATED, AND AT THE FOLLOWING LOCATIONS: ALL PARTITIONS WITH CERAMIC WALL TILE, EXCEPT CMU.
13. PROVIDE STENCILED LABELS VISIBLE ABOVE CEILINGS ON WALLS WHICH ARE RATED PARTITIONS, SMOKESTOP PARTITIONS, HORIZONTAL EXIT PARTITIONS, AND RATED CORRIDORS. STENCILED LABEL SHALL BE 3" HIGH RED LETTERING.
15. REFER TO ROOM FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
16. ALL RATED WALLS TO BE SEALED TO FLOOR SLAB.
17. AT EDGE OF RECESSED SLABS, WALL WILL TERMINATE ON HIGH SIDE OF STEP, U.N.O.
18. ALL CEILINGS AND BULKHEADS TO RECEIVE 5/8" GYP.BD. U.N.O. OR AT RATED CONDITIONS.
19. PROVIDE MASONRY CONTROL JOINTS AT 25'-0" O.C. MAXIMUM. LOCATION SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION IF NOT SHOWN ON ARCHITECTURAL AND STRUCTURAL DRAWINGS.
20. NOTE THAT SOME WALLS TO DECK MAY ALSO BE WALLS TO INTERMEDIATE DECKS, NOT JUST ROOF DECK.

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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, P.A. CERT. NO. 50356 WINSTON-SALEM, NC

JOHN LESLIE DRUHARD 5117 10/24/2023 NORTH CAROLINA GREENSBORO N.C.

#	Description	Date

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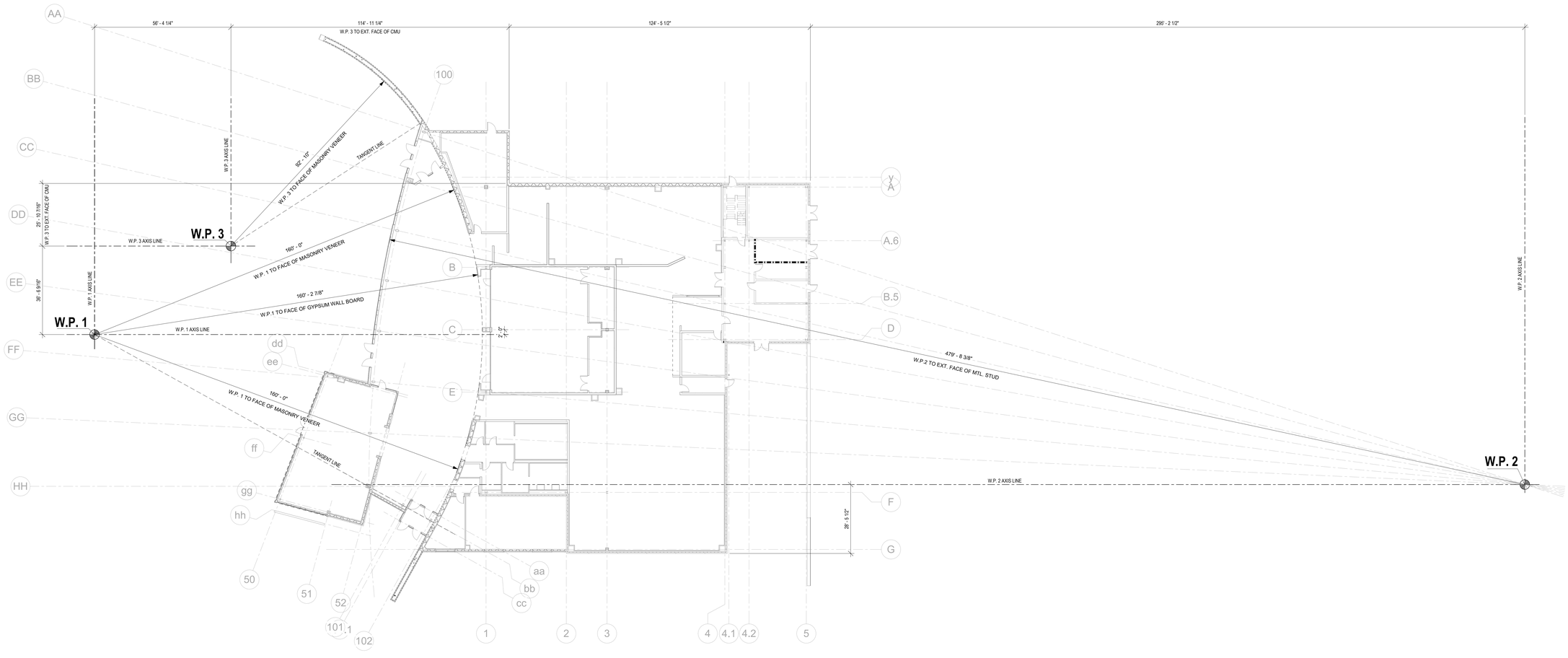
PARTITION TYPES

A1.02

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



WORK POINTS PLAN
1/16" = 1'-0"
A1

PLAN NORTH

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#	Description	Date

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WORK POINTS PLAN

A2.00

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

FLOOR PLAN GENERAL NOTES

1. SEE CODE SUMMARY AND APPENDIX B FOR CODES APPLICABLE TO THE PROJECT.
2. ALL INTERIOR PLAN DIMENSIONS ARE TO FACE OF FINISH INTERIOR WALLS, FACE OF CONCRETE OR MASONRY WALLS, AND CENTER LINE OF COLUMNS, UNLESS OTHERWISE NOTED. ALL EXTERIOR PLAN DIMENSIONS ARE TO FACE OF STUD OR FACE OF SHEATHING, U.N.O.
3. REFER TO LIFE SAFETY DRAWINGS FOR ANY FIRE RESISTANCE REQUIREMENTS FOR PARTITIONS.
4. REFER TO SHEET A1.02 FOR FIRE EXTINGUISHER CABINET DETAILS. FOR F.E.C. RECESSED AND SEMI-RECESSED, COORDINATE FIRE RATED & NON-RATED BOXES WITH ALLOWABLE ROOM AT EACH LOCATION. COORDINATE HAZARD RATINGS & TYPE OF EXTINGUISHERS.
5. SEE ENLARGED PLANS FOR SPECIFIC INFORMATION REGARDING DIMENSIONS, DOOR SCHEDULES, AND DETAILS.
6. PLANS MAY BE ROTATED FOR CLARITY. REFER TO NORTH ARROWS FOR ORIENTATION.
7. REFER TO STRUCTURAL DRAWINGS FOR LOAD-BEARING WALL LOCATIONS, STUD SPACING AND HEADER REQUIREMENTS.
8. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 35'-0" O.C. MAX. LOCATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO INSTALLATION. GYPSUM BOARD CONTROL JOINTS TO BE LOCATED AT DOOR FRAME CORNERS WHERE APPLICABLE. CONTROL JOINTS IN RATED WALL AND CEILING ASSEMBLIES TO HAVE GYPSUM BOARD BACKING PANELS PER U.L. REQUIREMENTS.
9. REFER TO CIVIL AND STRUCT. DRAWINGS FOR ADDITIONAL INFORMATION AND UTILITY PADS FOR EQUIPMENT.
10. COORDINATE MASONRY CONTROL JOINTS (MCJ) SHOWN IN PLAN AND ELEVATION WITH VENEER COURSING.
11. COORDINATE MCJ LOCATIONS WITH STRUCTURAL TO IDENTIFY WHICH JOINTS ARE TO BE CONTINUED TO THE BACKUP CMU.
12. PRECAST PANELS DIMENSIONED TO CENTERLINE OF JOINTS. JOINTS ARE 3/4" TYPICAL.
13. CAULK AT JUNCTURE OF INTERIOR FACES OF DOOR FRAMES, VIEW WINDOW FRAMES, EXTERIOR WINDOW FRAMES AND CASEWORK AT ADJACENT MATERIAL TRANSITIONS.
14. MAINTAIN FIRE RATING OF CONSTRUCTION AROUND ALL CASEWORK, ACCESS PANELS, AND BOXES THAT ARE RECESSED IN FIRE RATED WALLS, FLOORS AND CEILING ASSEMBLIES.
15. COORDINATE LOCATION OF FLOOR BOXES WITH STRUCTURAL SLAB, ELECTRICAL AND A/V INFRASTRUCTURE PLANS. GC TO COORDINATE RECESSES IN SLAB BEFORE CONCRETE POUR.
16. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE SLAB, UNO.
17. FIELD MEASURE AND CONFIRM DIMENSIONS FOR ALL OWNER PROVIDED EQUIPMENT AND FURNISHINGS. COORDINATE WITH THE OWNER ON DELIVERY AND INSTALLATION OF OWNER PROVIDED / CONTRACTOR INSTALLED ITEMS. MINIMUM REQUIRED OPENINGS AND ADA ACCESSIBLE ROUTES TO THE INSTALLATION AREA SHALL BE COORDINATED WITH THE SUPPLIER.
18. REFER TO ADDITIONAL DRAWING SHEETS IN CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION.
19. SEE I SHEETS FOR INTERIOR FINISHES, INTERIOR ELEVATIONS AND MILLWORK DETAILS.

FLOOR PLAN KEYED NOTES

01 NOT USED
02 OPERABLE PARTITION SHOWN IN DEPLOYED CONDITION; REFER TO ENLARGED PLAN AS INDICATED FOR STORED CONFIGURATION
03 COMPACT STORAGE SYSTEM - NIC
04 RECESSED WALK OFF MAT, COORDINATE SLAB RECESS W/ STRUCTURAL
05 ADA PUSH BUTTON WALL MOUNT
06 ALTERNATE TO ADD STOREFRONT TO THIS AREA. COORDINATE WITH STRUCTURAL.
07 ENTRY SIGN
08 OPERABLE DOOR WITHIN ACCOUSTICAL PARTITION. PROVIDE PANIC HARDWARE AND EXIT SIGN
09 SEE INTERIOR DESIGN DRAWINGS // SHEETS|FOR MILLWORK DETAILS
10 DOCK LEVELER
11 CAST IN PLACE CONCRETE STAIR
12 BOLLARD
13 HIGH LOW DRINKING FOUNTAIN
14 DRINKING FOUNTAIN W/ BOTTLE FILLER
15 REFER TO ELECTRICAL DRAWINGS FOR FLOOR BOX LOCATIONS.
16 LOADING DOCK BUMPERS
17 PTD STEEL PIPE HANDRAILS

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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. C-0656 REGISTERED ARCHITECT WINSTON-SALEM, NC

JOHN LESLIE LUTH 30161 REGISTERED ARCHITECT GREENSBORO, NC 10/24/2023

#	Description	Date

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1ST FLOOR PLAN

A2.01

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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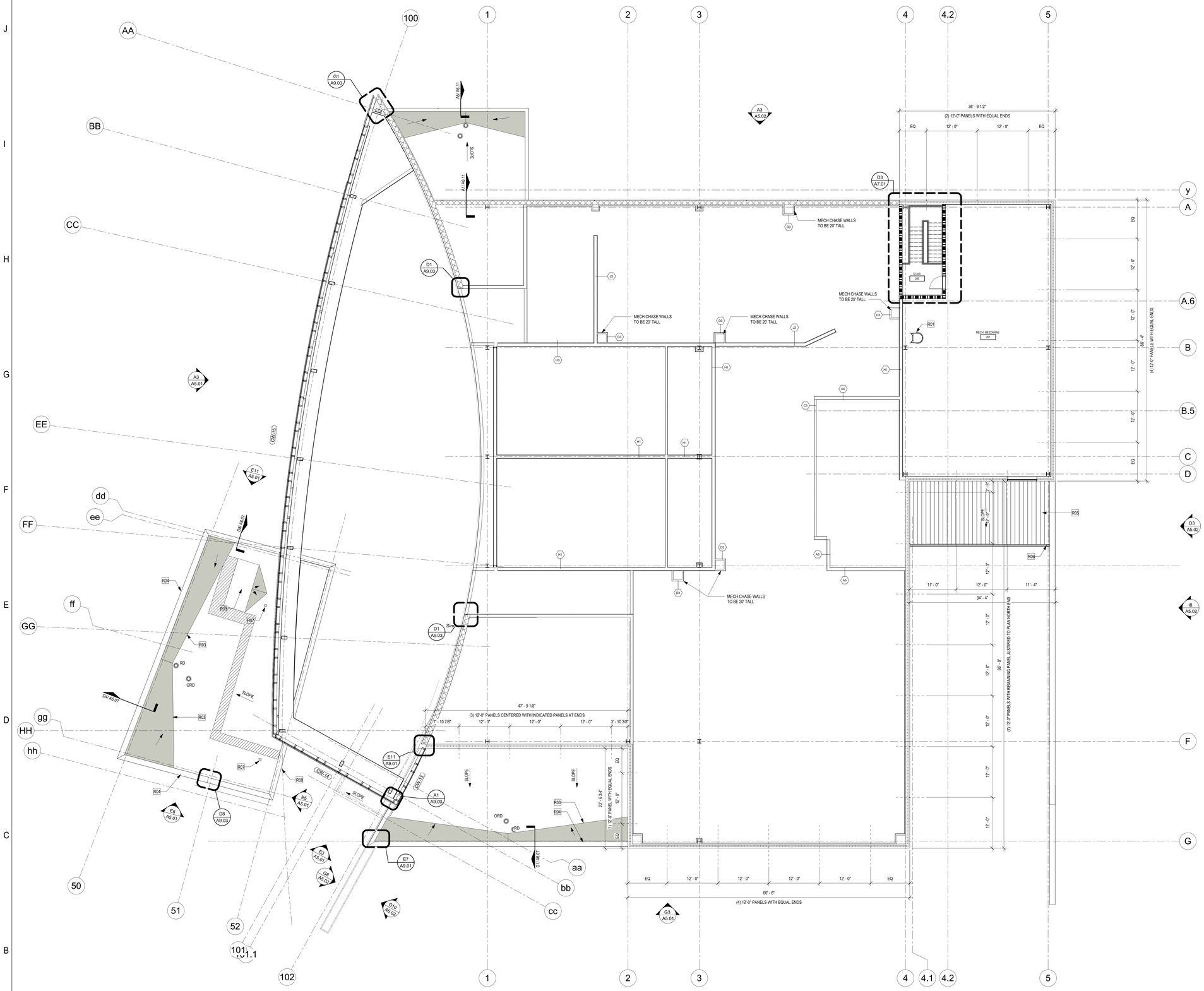
PLAN NORTH

1ST FLOOR PLAN A3
1/8" = 1'-0"



2ND FLOOR PLAN / LOW ROOF PLAN A3
1/8" = 1'-0"

ROOF PLAN GENERAL NOTES

1. ROOF LEADERS TO BE INSULATED.
2. PRIMARY ROOF LEADERS TO BE COLLECTED AND TIED INTO STORM SEWER, REFER TO CIVIL DRAWINGS FOR ADDITIONAL NOTES. OVERFLOW LEADERS TO BE OUTLET ABOVE GRADE IN VISIBLE LOCATION.
3. PENETRATION DETAILS SHOWN ARE TO BE APPROVED BY ROOFING MANUFACTURE.
4. ROOFING DETAILS TO COMPLY WITH THE LATEST EDITION OF SMACNA & NRCA MANUAL.
5. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF ACOUSTICAL ROOF DECK.
6. WIND UPLIFT RATING (ALL ROOFS), FIELD - 120 PSF.

ROOF LEGEND

O.R.D. - OVERFLOW ROOF DRAIN

R.D. - ROOF DRAIN

HATCHED AREAS DENOTE 1/2" PER FOOT CRICKETING

HATCHED AREAS DENOTE 1" PER FOOT CRICKETING

HATCHED AREAS DENOTE WALKWAY PROTECTION MEMBRANE

ROOF KEYED NOTES

R01 CAGED ROOF LADDER
R02 ROOF HATCH
R03 ON CURB RTU, SEE MECHANICAL DRAWINGS
R04 PREFIN ALUM COPING - COLOR TO MATCH ADJACENT WALL SURFACE/CLADDING
R05 STANDING SEAM METAL ROOF
R06 PREFIN ALUM GUTTER AND DOWNSPOUT
R07 ROOF ANCHORS. ALIGN WITH BEAM BELOW (SEE STRUCTURAL).
R08 PORTABLE LADDER ACCESS ROUTE

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CONSTRUCTION DOCUMENTS

#	Description	Date

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2ND FLOOR AND LOW ROOF PLAN

A2.02

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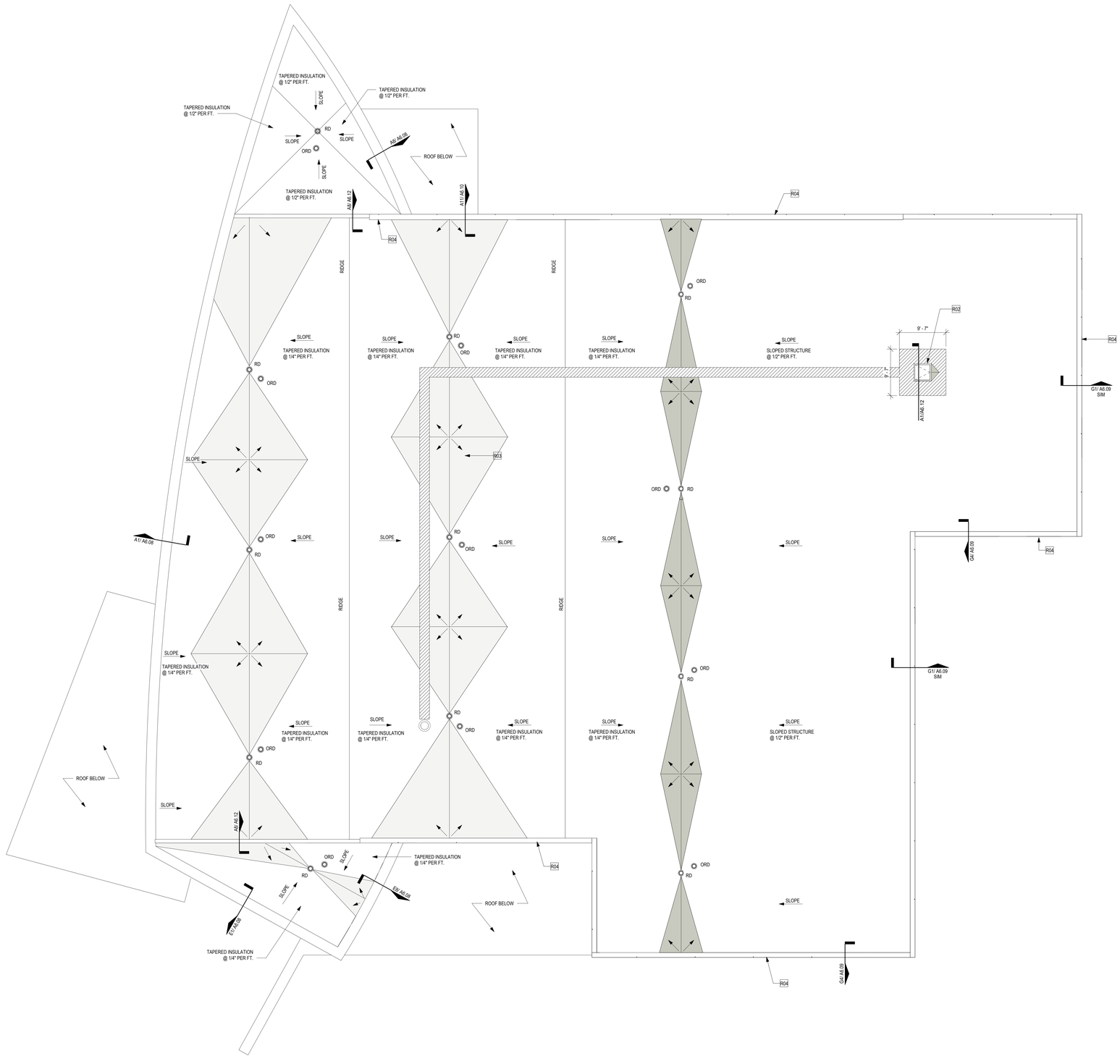
PLAN NORTH



ROOF PLAN GENERAL NOTES

1. ROOF LEADERS TO BE INSULATED.
2. PRIMARY ROOF LEADERS TO BE COLLECTED AND TIED INTO STORM SEWER, REFER TO CIVIL DRAWINGS FOR ADDITIONAL NOTES. OVERFLOW LEADERS TO BE OUTLET ABOVE GRADE IN VISIBLE LOCATION.
3. PENETRATION DETAILS SHOWN ARE TO BE APPROVED BY ROOFING MANUFACTURE.
4. ROOFING DETAILS TO COMPLY WITH THE LATEST EDITION OF SMACNA & NRCA MANUAL.
5. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF ACOUSTICAL ROOF DECK.
6. WIND UPLIFT RATING (ALL ROOFS), FIELD - 120 PSF.

ROOF LEGEND

O.R.D. - OVERFLOW ROOF DRAIN

R.D. - ROOF DRAIN

HATCHED AREAS DENOTE 1/2" PER FOOT CRICKETING

HATCHED AREAS DENOTE 1" PER FOOT CRICKETING

HATCHED AREAS DENOTE WALKWAY PROTECTION MEMBRANE

ROOF KEYED NOTES

R01 CAGED ROOF LADDER

R02 ROOF HATCH

R03 ON CURB RTU, SEE MECHANICAL DRAWINGS

R04 PREFIN ALUM COPING - COLOR TO MATCH ADJACENT WALL SURFACE/CLADDING

R05 STANDING SEAM METAL ROOF

R06 PREFIN ALUM GUTTER AND DOWNSPOUT

R07 ROOF ANCHORS. ALIGN WITH BEAM BELOW (SEE STRUCTURAL).

R08 PORTABLE LADDER ACCESS ROUTE

HIGH ROOF PLAN A3
1/8" = 1'-0"

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Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE THOMPSON 032161 REGISTERED ARCHITECT NORTH CAROLINA 10/24/2023 GREENSBORO, NC

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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HIGH ROOF PLAN

A2.03

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

PLAN NORTH



RCP GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE CODES. SEE CODE SUMMARY OR APPENDIX B FOR ADDITIONAL INFORMATION.
2. CEILING HEIGHTS SHALL BE 9'-0" A.F.F UNLESS NOTED OTHERWISE. CEILING FINISH SHALL BE SMOOTH PAINTED, UNLESS NOTED OTHERWISE.
3. REFER TO ELECTRICAL DRAWINGS FOR OTHER CEILING MOUNTED DEVICES, LIGHTS, AND EXIT SIGNS.
4. PROVIDE ACCESS PANELS IN GWB. CEILINGS AS REQUIRED BY PLUMBING, FIRE PROTECTION, ELECTRICAL, AND MECHANICAL DRAWINGS.
5. PROVIDE A FIRE RATED GYPSUM WALLBOARD ENCLOSURE AT RECESSED DOWN LIGHTS IN FIRE RATED CEILINGS.
6. CENTER ACOUSTICAL CEILING TILE IN CORRIDORS AND ROOMS UNLESS NOTED OTHERWISE. ACOUSTICAL TILE SHOULD BE NO LESS THAN 6" WIDE. USE AN OVERSIZED TILE CUT FROM A 2X4 TILE WHEN NECESSARY TO ENSURE A TILE IS NO LESS THAN 6" IN A 2X2 GRID.
7. CENTER LIGHTS, SPRINKLER HEADS, ETC. WITHIN CEILING TILE, UNLESS NOTED OTHERWISE.
8. G.C. SHALL COORDINATE HEIGHT OF ALL SUSPENDED FIXTURES WITH ARCHITECT ON SITE PRIOR TO FINAL INSTALLATION.

RCP KEYED NOTES

C01 MOTORIZED SUNSHADE AT +13'-0" AFF (HATCHED FOR CLARITY)
C02 MANUAL ROLLER SHADE (HATCHED FOR CLARITY)
C03 CLERESTORY GLAZING TO RECEIVE CAMPAIGN COLOR BARS PATTERNING (BY EXHIBIT DESIGNER). SUSPENDED BEHIND HIGH LEVEL CURTAIN WALL AT WEST FACADE ONLY
C04 MOTORIZED SUNSHADE AT +29'-0" AFF (HATCHED FOR CLARITY)
C05 MANUAL SUNSHADE AT +13'-0" AFF. SHADES AT EXIT DOORS TO BE MOUNTED TO DOORS (HATCHED FOR CLARITY)
C06 PROVIDE LEVEL 5 GYP. BD. FINISH.
C07 EXPOSED STRUCTURE
C08 LINE OF ROOF SOFFIT ABOVE
C09 SEE 2ND FLOOR RCP FOR DETAILS IN THIS AREA.
C10 ROOF LADDER.
C11 SUSPENDED DECORATIVE CEILING CLOUD, PROVIDE LEVEL 5 GYP. BD. FINISH.
C12 ACOUSTICAL PLASTER.
C13 10'-0" X10'-0" UNISTRUT GRID SYSTEM (SEE STRUCTURAL DWGS).
C14 LINEAR RECESSED LIGHT FIXTURE (SEE ELECTRICAL DWGS).
C15 SLOT SUPPLY DIFFUSER (REFER TO MECHANICAL DWGS).
C16 CEILING ACCESS PANEL, COORDINATE WITH OVERHEAD DOOR
C17 CEILING ACCESS PANEL, COORDINATE WITH MECHANICAL

CEILING LEGEND

- GYPSUM WALL BOARD
- 2' x 2' ACT, SEE I-SHEETS FOR BASIS OF DESIGN SPECIFICATIONS AND LOCATIONS
- 8" x 8" OPEN CELL CEILING, SEE I-SHEETS FOR BASIS OF DESIGN AND LOCATIONS
- SUN SHADE (HATCHED FOR CLARITY)
- LINE INDICATING SUSPENDED ACRYLIC PANELS TO RECEIVE CAMPAIGN COLOR BARS PATTERNING (BY EXHIBIT DESIGNER).
- MECHANICAL SUPPLY, SEE M-SHEETS FOR SPEC'S AND LOCATIONS
- MECHANICAL SUPPLY, SEE M-SHEETS FOR SPEC'S AND LOCATIONS
- MECHANICAL RETURN, SEE M-SHEETS FOR SPEC'S AND LOCATIONS
- OC OCCUPANCY SENSOR, SEE E-SHEETS FOR SPEC'S AND LOCATIONS
- EXIT SIGN, SEE E-SHEETS FOR SPEC'S AND LOCATIONS
- DOWN LIGHT FIXTURE
- MECHANICAL DIFFUSER

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CJMW ARCHITECTURE PLLC CERT. NO. 58556 WINSTON-SALEM, NC

JOHN LESLIE LOWE 032117 REGISTERED 10/24/2023 LANDSCAPE ARCHITECT

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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1ST FLOOR REFLECTED CEILING PLAN

A2.04

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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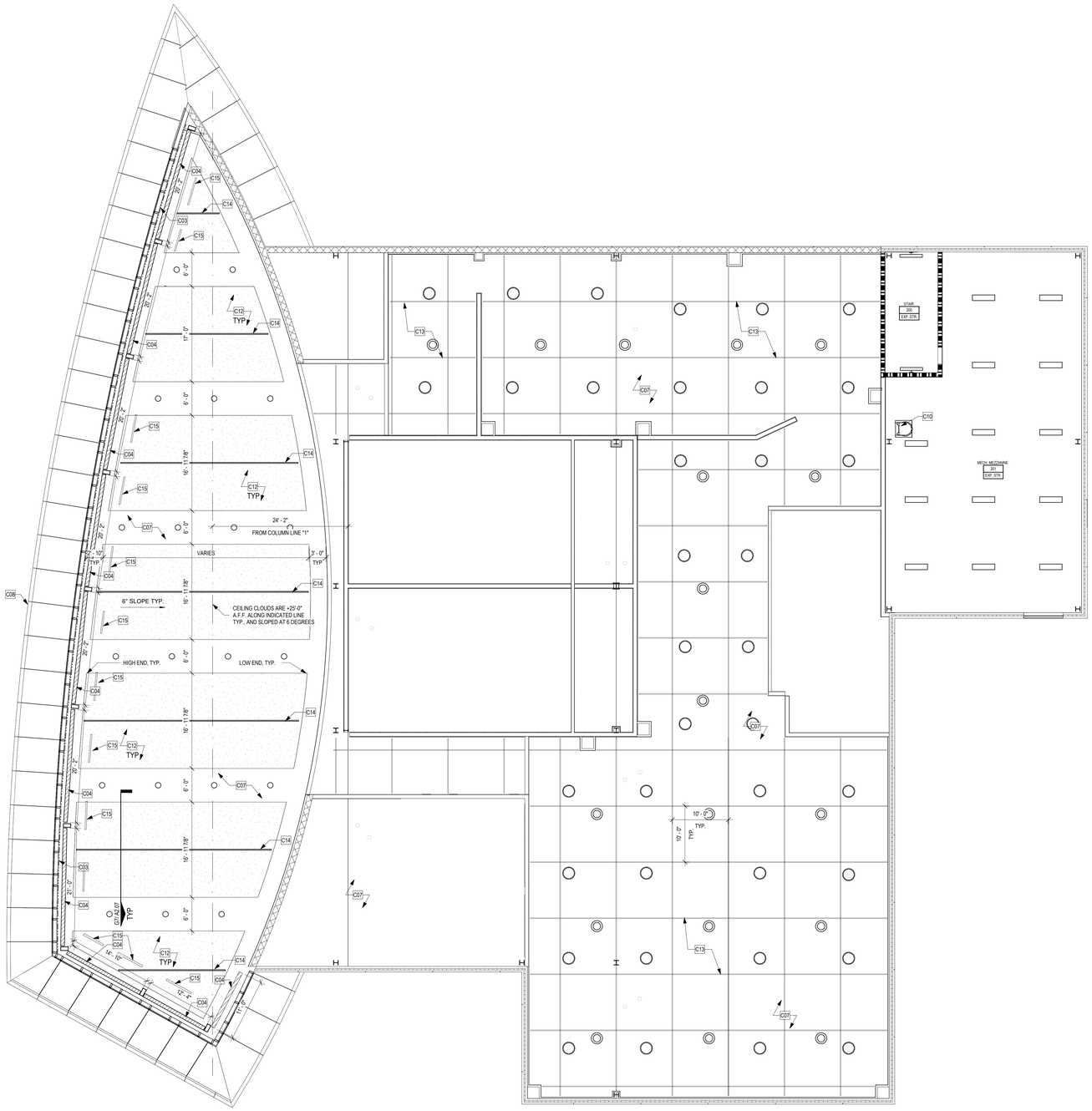
CHECKED BY: Checker

PLAN NORTH

1ST FLOOR REFLECTED CEILING PLAN A3
1/8" = 1'-0"



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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, CERT. NO. 58056, WINSTON-SALEM, NC

JOHN LESLIE MAY, 10/24/2023, GREENSBORO, NC

#	Description	Date

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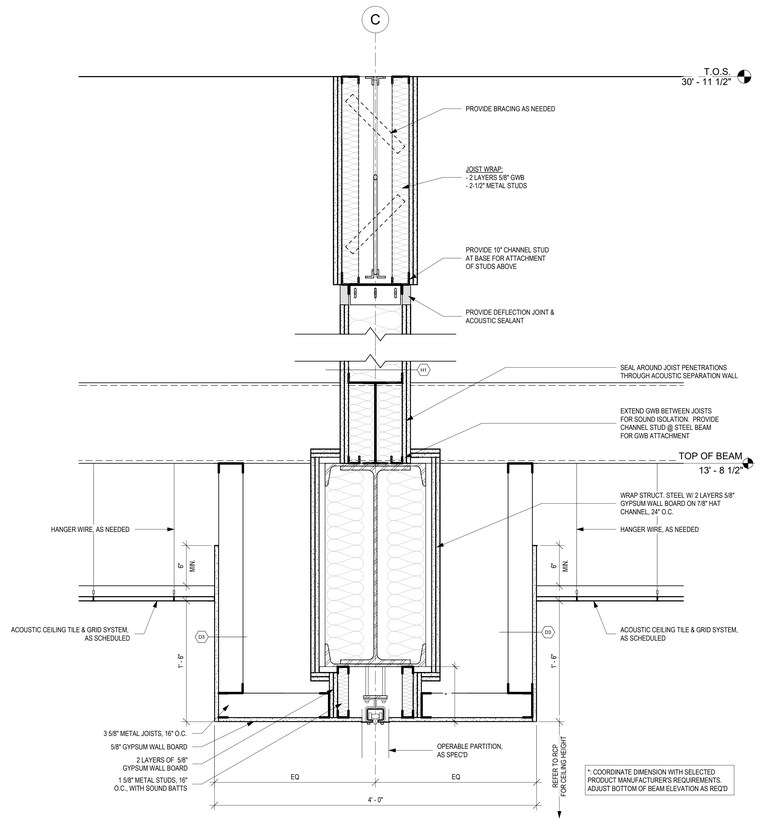
2ND FLOOR REFLECTED CEILING PLAN

A2.05

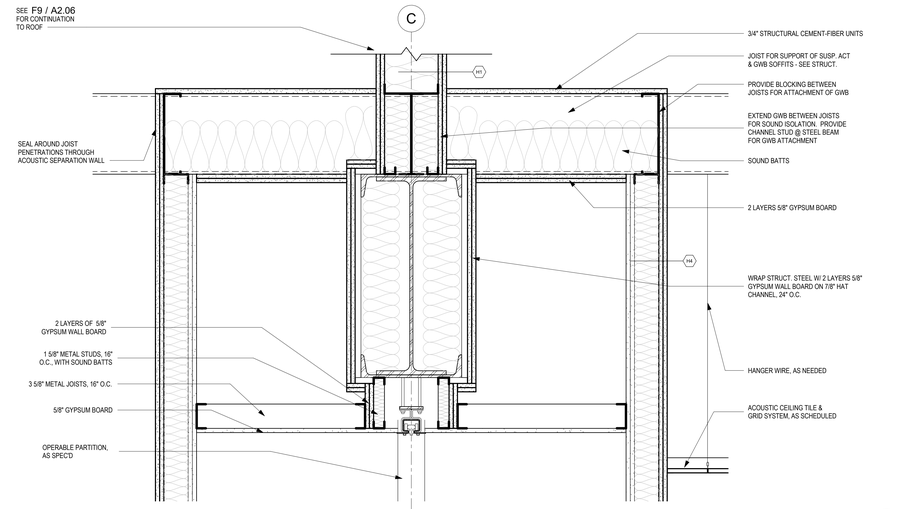
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

PLAN NORTH

2ND FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0" A3



CEILING DETAIL @ E/W OPERABLE PARTITION **F9**
1 1/2" = 1'-0"



CEILING DETAIL @ OPERABLE PARTITION ALCOVE **3H**
1 1/2" = 1'-0"

CEILING FRAMING LEGEND & NOTES

1. HEIGHTS INDICATED ON THIS PLAN ARE FOR SUPPORT FRAMING ABOVE CEILING FINISH. REFER TO REFLECTED CEILING PLAN FOR CEILING FINISH HEIGHTS
2. REFER TO STRUCT. DRAWINGS FOR JOIST SIZING, SPACING, AND SPAN ORIENTATION
3. HATCHED BOUNDARIES INDICATE EXTENT AND BEARING LOCATION OF FRAMING. REFER TO DETAILS AND STRUCT. DRAWINGS FOR ADDITIONAL INFORMATION.

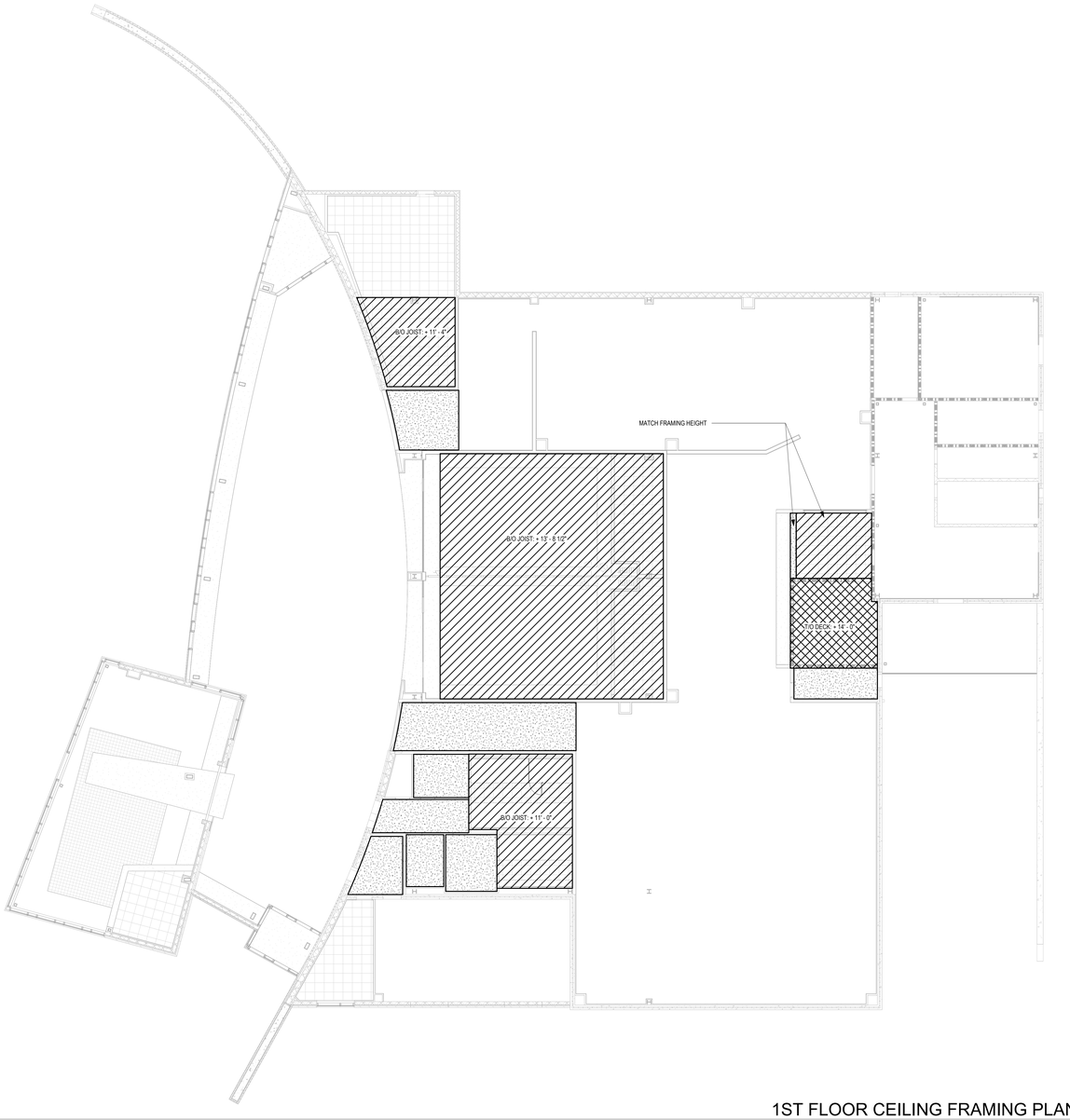
T/O JOIST: TOP OF JOIST, ABOVE 1ST FLOOR
B/O JOIST: BOTTOM OF JOIST, ABOVE 1ST FLOOR

T/O DECK: TOP OF STRUCTURAL DECK, ABOVE 1ST FLOOR

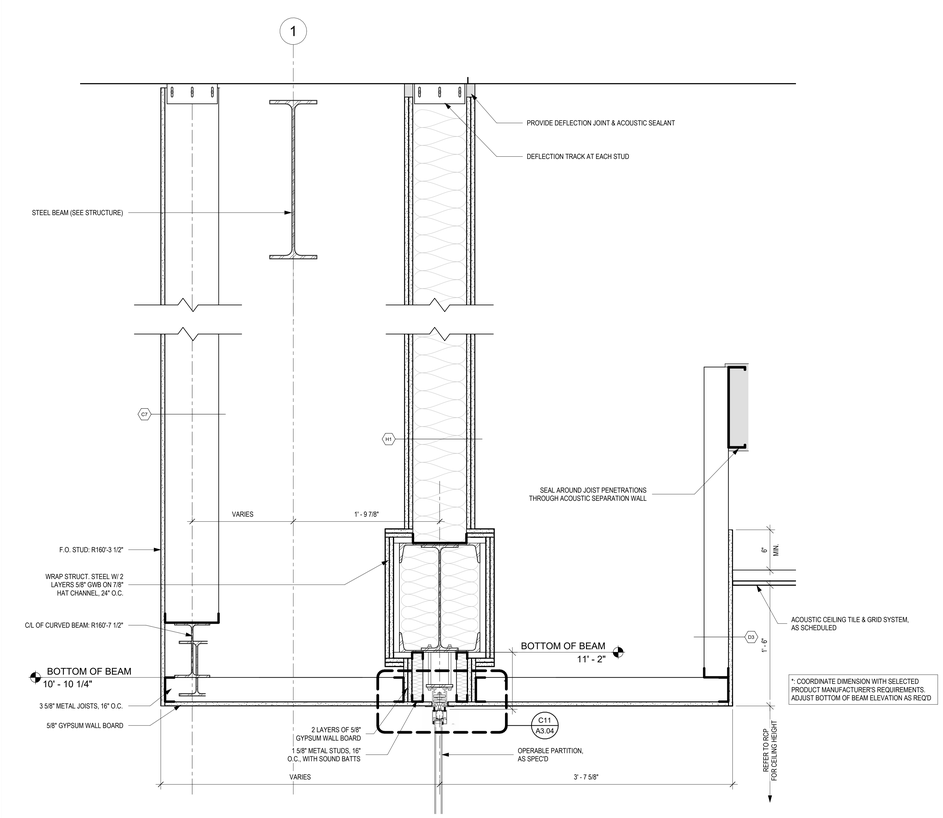
GYPSUM WALL BOARD FINISH, DIRECT APPLIED TO B/O JOISTS. NO TOP MEMBRANE

JOIST FRAMING ABOVE SUSPENDED FINISH CEILING. NO TOP MEMBRANE

FIRE-RATED HORIZ. ASSEMBLY - SEE LIFE SAFETY PLAN FOR ADDITIONAL INFORMATION



1ST FLOOR CEILING FRAMING PLAN **A1**
3/32" = 1'-0"



CEILING DETAIL @ N/S OPERABLE PARTITION **A9**
1 1/2" = 1'-0"

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CJMW ARCHITECTURE PLLC CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE THOMAS III 032777 REGISTERED LANDSCAPE ARCHITECT 10/24/2023 GREENSBORO, NC

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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FRAMED CEILING DIAGRAM & CEILING DETAILS

A2.06

ISSUE DATE: 10-24-2023
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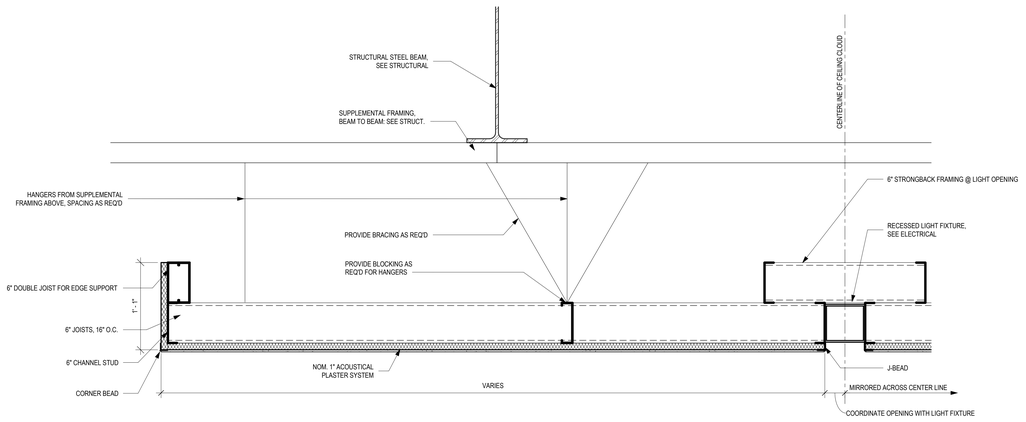
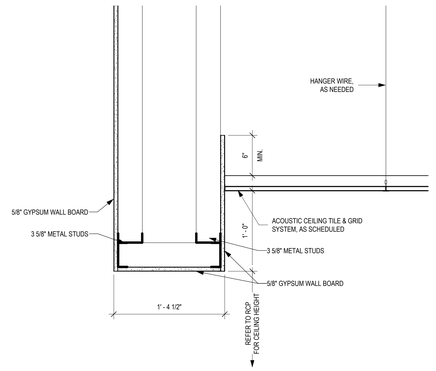
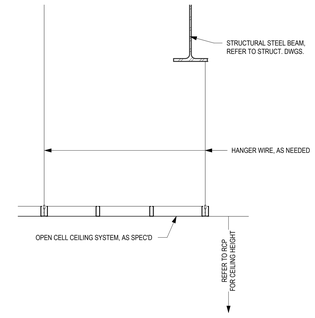
CHECKED BY: Checker



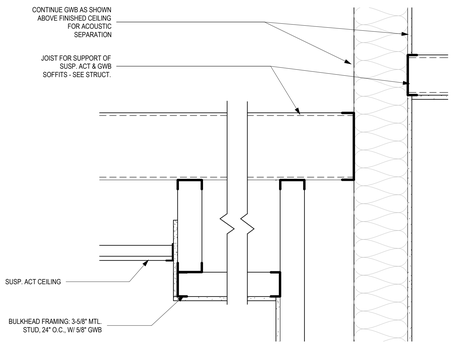
CEILING DETAIL @ SLOPED CLOUD **G7**
1 1/2" = 1'-0"



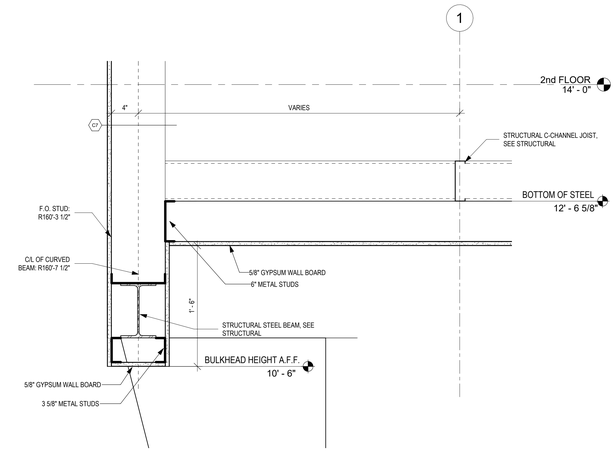
CEILING DETAIL @ KITCHEN SOFFIT **G4**
1 1/2" = 1'-0"



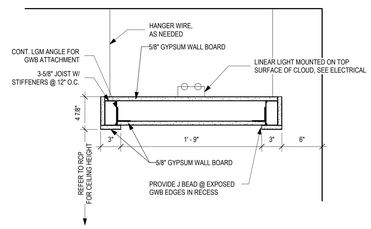
CEILING DETAIL @ OPEN CELL CLNG EDGE **G1**
1 1/2" = 1'-0"



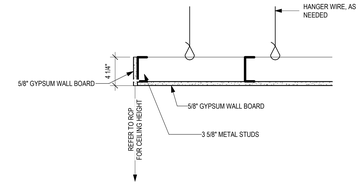
CEILING DETAIL @ TOILET BULKHEAD **D11**
1 1/2" = 1'-0"



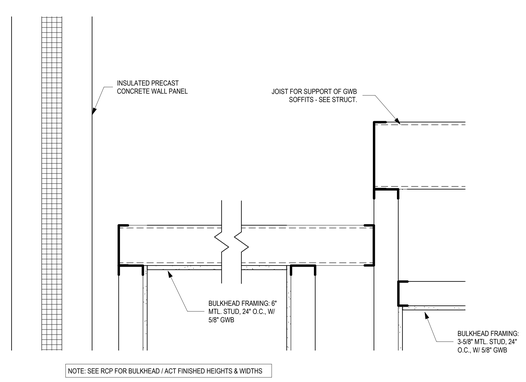
CEILING DETAIL @ CURVED WALL EDGE **D7**
1 1/2" = 1'-0"



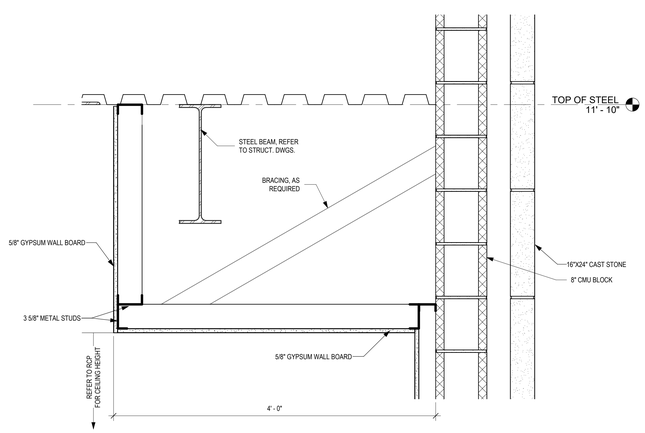
CEILING DETAIL @ VANITY CLOUD **D4**
1 1/2" = 1'-0"



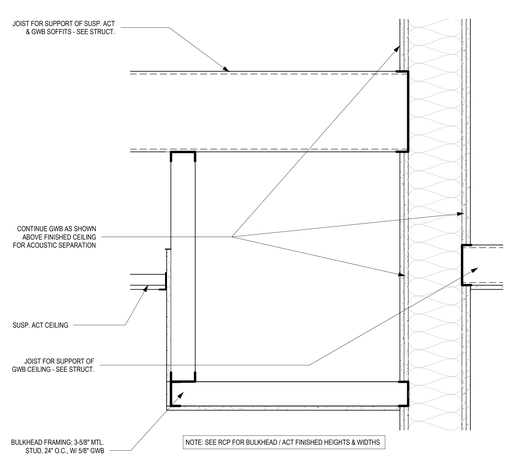
TYP CEILING DETAIL @ GYP CLOUD EDGE **D1**
1 1/2" = 1'-0"



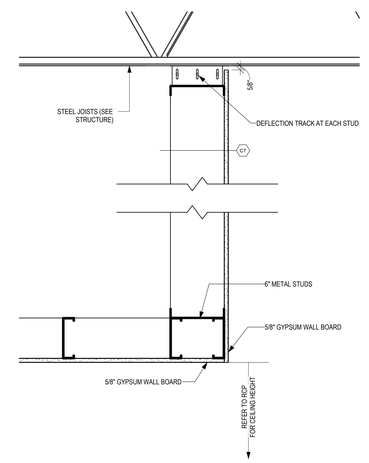
CLNG DTL @ TOILET BULKHEAD (HIGH - LOW) **A12**
1 1/2" = 1'-0"



CEILING DETAIL @ GWB SOFFIT @ CMU **A7**
1 1/2" = 1'-0"



CEILING DETAIL @ GWB TO ACT **A4**
1 1/2" = 1'-0"



TYP CEILING DETAIL @ GWB SOFFIT **A1**
1 1/2" = 1'-0"

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CJMW ARCHITECTURE PLLC CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE [illegible] NC LICENSED ARCHITECT 10/24/2023 GREENSBORO, NC

#	Description	Date

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CEILING DETAILS

A2.07

ISSUE DATE: 10-24-2023
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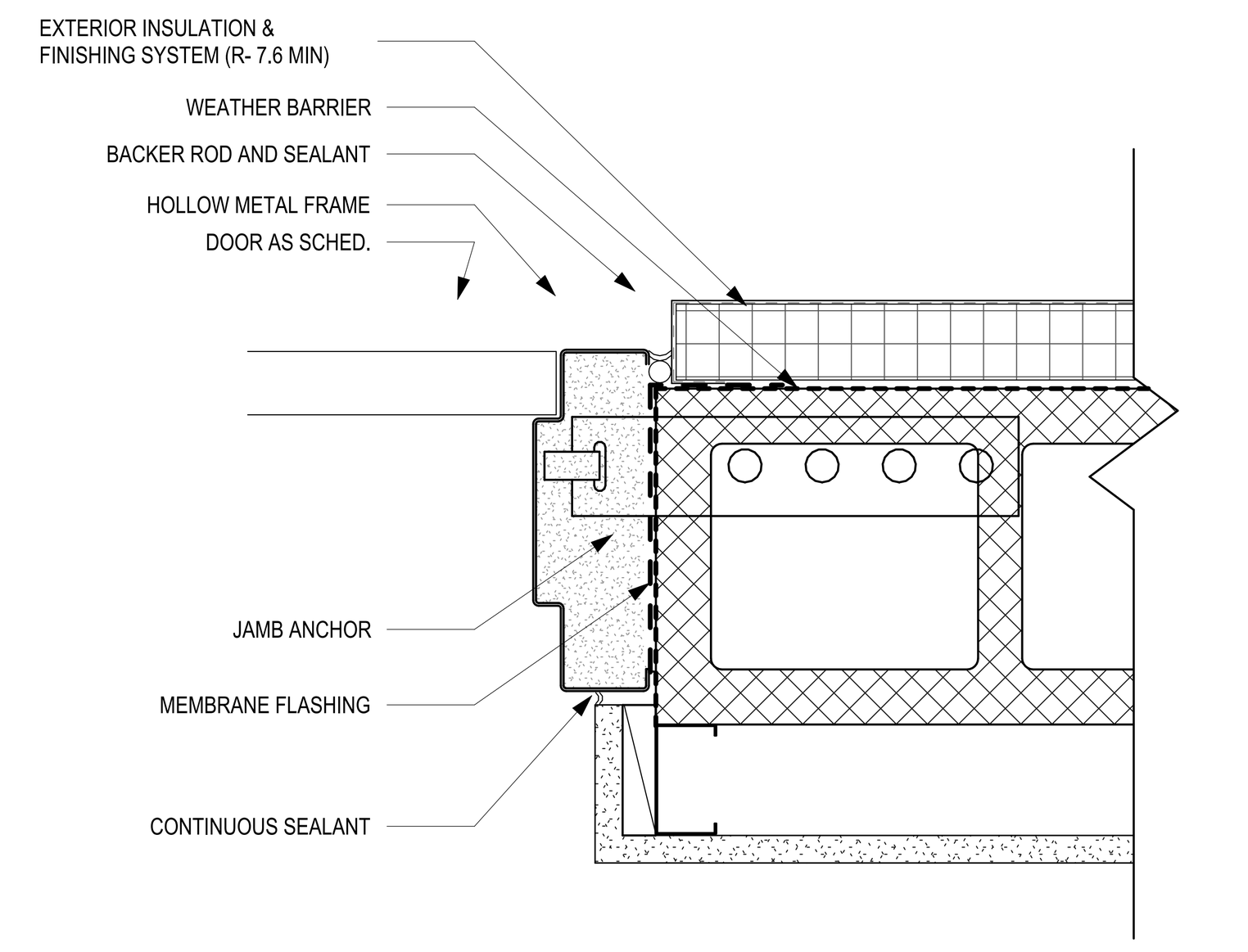
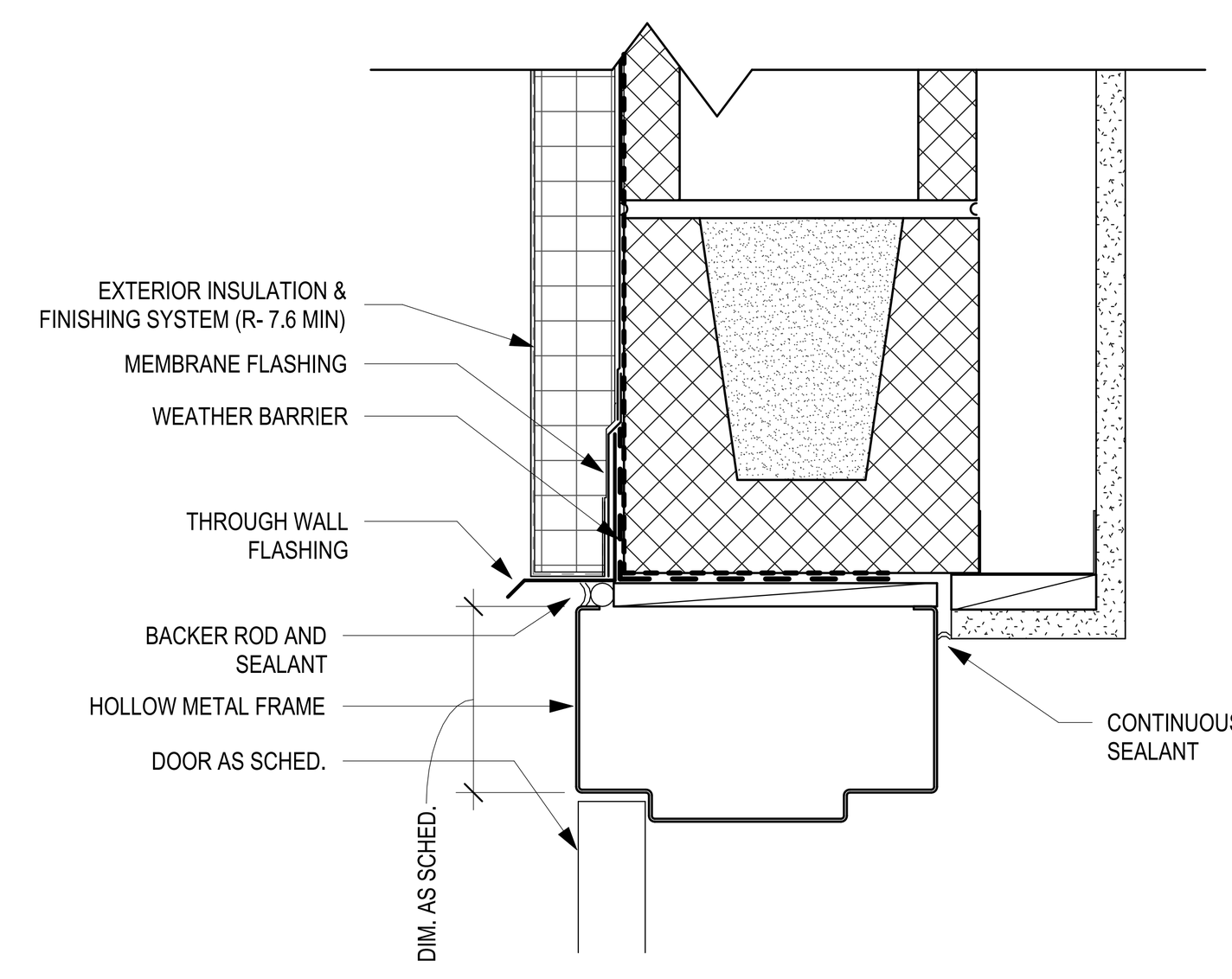


HM JAMB DETAIL @ EIFS EXTERIOR (I12)
3" = 1'-0"



HM HEAD DETAIL @ EIFS EXTERIOR (I10)
3" = 1'-0"

DOOR ID	ROOM NAME	DOOR WIDTH	DOOR HEIGHT	DOOR THK	DOOR MAT'L	DOOR TYPE	DOOR FINISH	FIRE RATING	FRAME MAT'L	FRAME TYPE	FRAME FINISH	HEAD	JAMB	SILL	REMARKS	HARDWARE
1st FLOOR																
100A	STAIR	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A		60 MIN.	HM	F2		C12/A3.01	E3/A3.01		5	15.0
100B	STAIR	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A			HM	F1		E10/A3.01	E12/A3.01		5	6.0
101A	VEST	3' - 6"	7' - 1 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04	F12/A3.04	1, 5	1.0
101B	VEST	3' - 6"	7' - 1 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04	F12/A3.04	1, 5	4.0
101C	VEST	3' - 6"	7' - 1 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04		1, 5	11.0
101D	VEST	3' - 6"	7' - 1 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04		1, 5	10.0
102A	GREAT HALL	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F8/A3.04	F10/A3.04	F12/A3.04		2.0
102B	GREAT HALL	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F8/A3.04	F10/A3.04	F12/A3.04	1, 5	2.0
103	GREAT HALL	3' - 0"	7' - 6 1/4"	0' - 1 3/4"	AL/GL	D			AL	F4		H1/A304	F6/A3.04		1, 5	10.0
103C	CAFE	12' - 0"	10' - 3"	0' - 2"	AL	G			AL	F4		A1/A3.04	H4/A3.04		3	REFER TO SPECS.
104	CAFE	6' - 0"	7' - 6 1/4"	0' - 1 3/4"	AL/GL	E			AL	F5		H1/A304	F6/A3.04	F12/A3.04	1, 5	3.0
106	JAN	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4	21.0
107	WOMENS	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4	24.0
108	MENS	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4	24.0
109	FAMILY	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4	23.0
111	STORAGE	3' - 6"	7' - 0"	0' - 1 3/4"	WD	F			HM	F1		G10/A3.01	G12/A3.01		4	21.0
112	OFFICE	3' - 0"	7' - 0"	0' - 1 3/4"	WD	C			HM	F1		G10/A3.01	G12/A3.01		4	18.0
113	AV	6' - 0"	7' - 0"	0' - 1 3/4"	WD	B			HM	F3		G3/A3.01	G5/A3.01		4	16.0
114	CLASSROOM	23' - 10 1/2"	10' - 6"	0' - 2"	AL/GL	J			AL			C11/A3.04	B11/A3.04	A11/A3.04	2, 5	REFER TO SPECS.
115	MEETING ROOM	23' - 10 1/2"	10' - 6"	0' - 2"	AL/GL	H			AL			C11/A3.04	B11/A3.04	A11/A3.04	2, 5	REFER TO SPECS.
116	TABLE STORAGE	6' - 0"	7' - 0"	0' - 1 3/4"	WD	B			HM	F3		G3/A3.01	G5/A3.01		4	19.0
119A	VEST	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4, 5	12.0
119B	VEST	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A			HM	F1		E10/A3.01	E12/A3.01		5	6.0
122A	VIEWING ROOM	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A		45 MIN.	HM	F2		C12/A3.01	E3/A3.01			19.0
122B	COLLECTIONS STOR.	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A		45 MIN.	HM	F1		G3/A3.01	G5/A3.01			19.0
123A	VESTIBULE STAGING	6' - 0"	7' - 0"	0' - 1 3/4"	WD	B		45 MIN.	HM	F6		E5/A3.01	E8/A3.01		4	17.0
123B	VESTIBULE STAGING	6' - 0"	7' - 0"	0' - 1 3/4"	HM	B			HM	F3		E10/A3.01	E12/A3.01		5	7.0
124A	ELECTRIC	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A			HM	F1		C12/A3.01	E3/A3.01		5	13.0
124B	ELECTRIC	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A			HM	F1		E10/A3.01	E12/A3.01		5	6.0
125	EMG. DIST.	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A			HM	F1		C12/A3.01	E3/A3.01			21.0
126	FIRE PUMP	6' - 0"	7' - 0"	0' - 1 3/4"	HM	B			HM	F3		E10/A3.01	E12/A3.01			8.0
127	BOILER	6' - 0"	7' - 0"	0' - 1 3/4"	HM	B			HM	F3		E10/A3.01	E12/A3.01			8.0
128A	WARMING KITCHEN	3' - 0"	7' - 0"	0' - 1 3/4"	WD	A			HM	F1		G3/A3.01	G5/A3.01		4	22.0
128B	WARMING KITCHEN	3' - 6"	7' - 0"	0' - 1 3/4"	HM	A			HM	F2		I10/A3.01	I12/A3.01			9.0
129A	VEST	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F8/A3.04	F10/A3.04	F12/A3.04	1, 5	4.0
129B	VEST	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F8/A3.04	F10/A3.04	F12/A3.04	1, 5	5.0
129C	VEST	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04		1, 5	11.0
129D	VEST	3' - 6"	7' - 5 3/4"	0' - 1 3/4"	AL/GL	D			AL	F4		F4/A3.04	F6/A3.04		1, 5	10.0
HMF-01	MENS	3' - 0"	7' - 0"						HM	F1		G6/A3.01	G8/A3.01			N/A
HMF-02	WOMENS	3' - 0"	7' - 0"						HM	F1		G6/A3.01	G8/A3.01			N/A
HMF-03	MOTHER'S ROOM	3' - 0"	7' - 0"													N/A
2nd FLOOR																
201	MECH. MEZZANINE	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A		60 MIN.	HM	F1		G3/A3.01	G5/A3.01		5	14.0

DOOR SCHEDULE

DOOR GENERAL NOTES

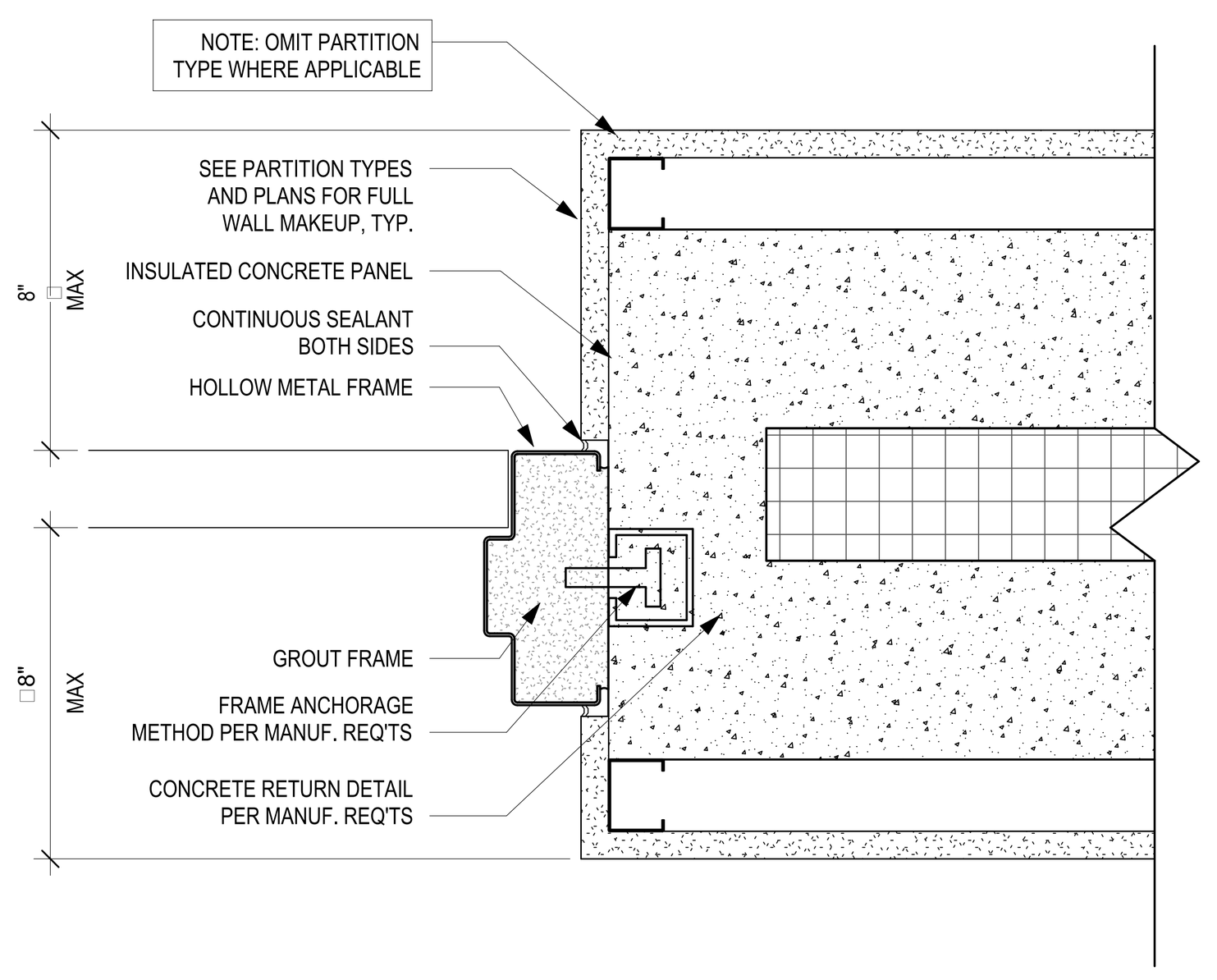
1. VERIFY ALL DOORS/HARDWARE/FRAMES ARE IN COMPLIANCE WITH REQUIREMENTS OF THE 2021 IBC AND CURRENT ANSI REQUIREMENTS.
2. DISTANCE FROM BACK SIDE OF HINGE SIDE OF FRAME TO WALL SHALL BE 4" CLEAR, U.N.O. FOR INTERIOR HOLLOW METAL FRAMES. SEE DETAIL THIS SHEET.

DOOR REMARKS

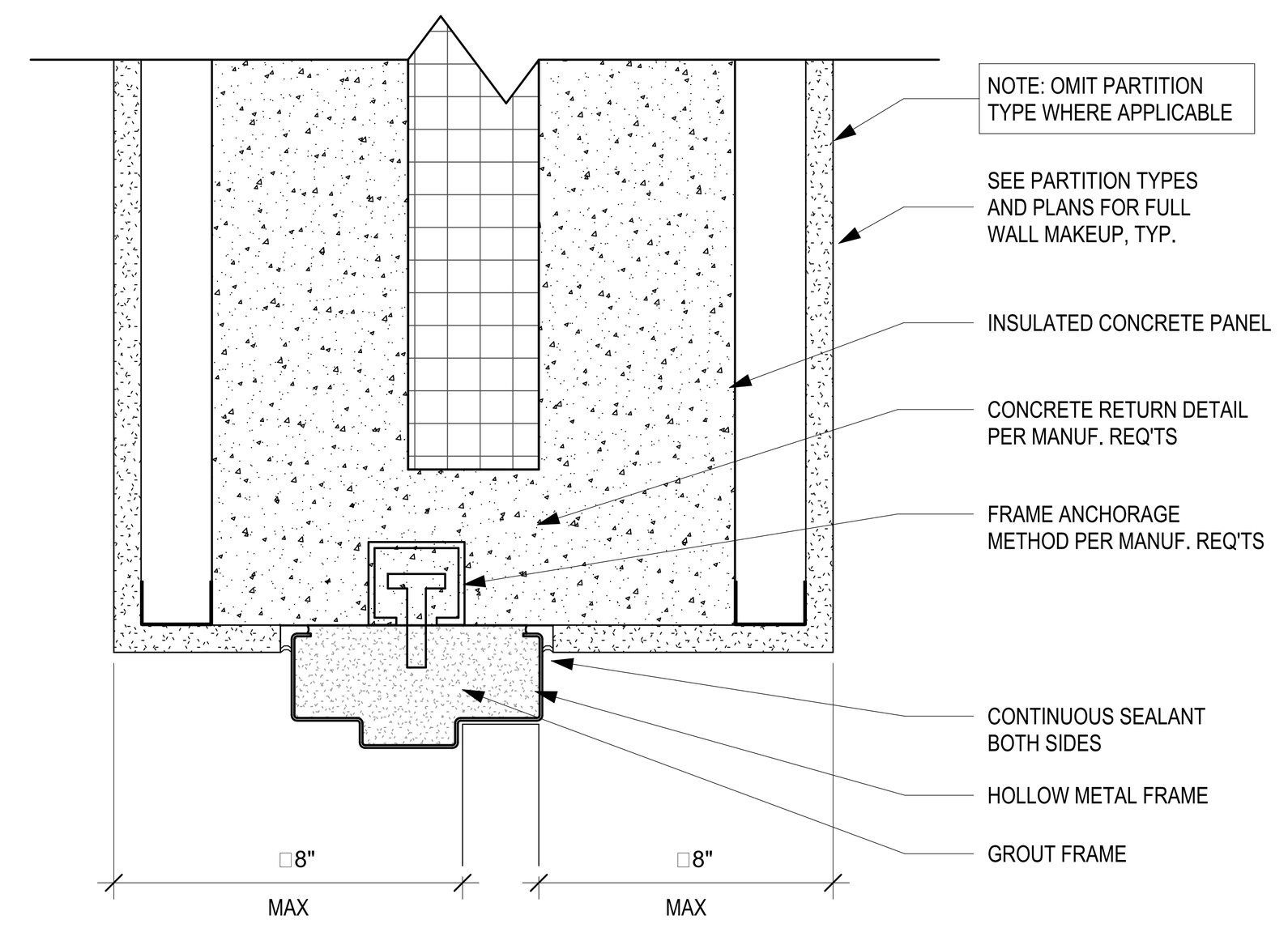
1. CURTAIN WALL / STOREFRONT DOOR - COORDINATE DOOR & FRAME SIZE WITH SURROUNDING CURTAIN WALL FRAMING
2. FOLDING GLASS DOOR SYSTEM (BASIS OF DESIGN: SUNFLEX SF 55 HSW)
3. MOTORIZED OVERHEAD COILING SECURITY GRILLE
4. STAIN GRADE WOOD
5. PROVIDE PANIC HARDWARE

ABBREVIATIONS

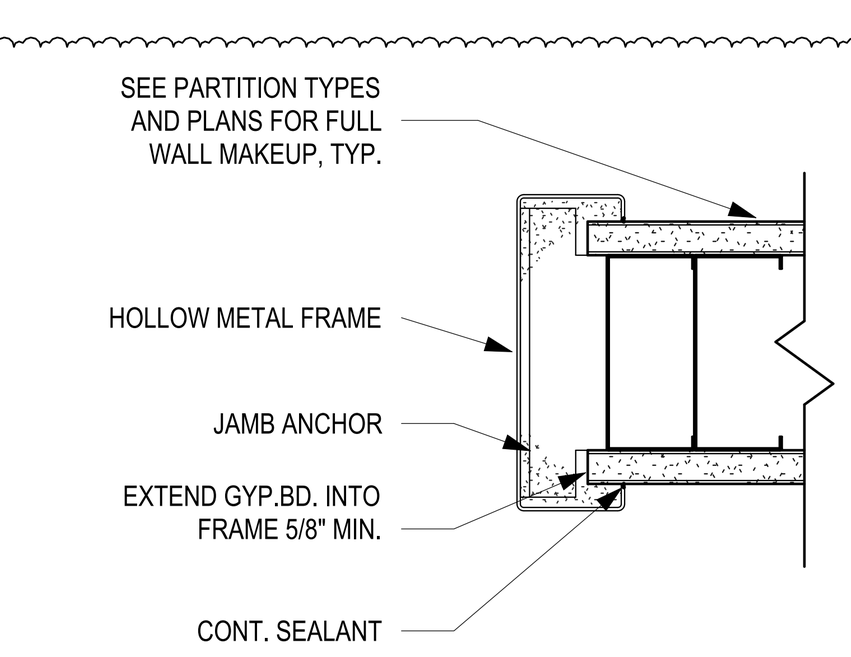
HM HOLLOW METAL
WD WOOD
AL ALUMINUM
GL GLASS
PT PAINTED
STN STAINED
SF STOREFRONT
CW CURTAINWALL



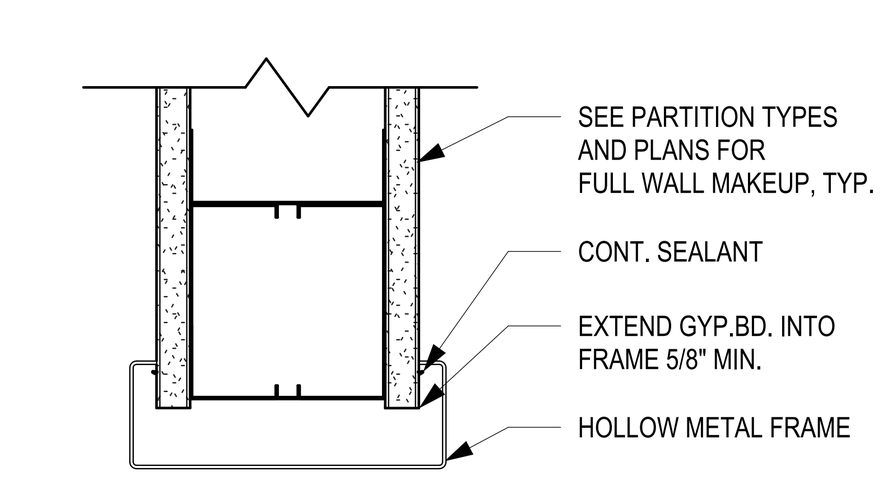
HM JAMB DETAIL @ INT. FURRED PRECAST (G12)
3" = 1'-0"



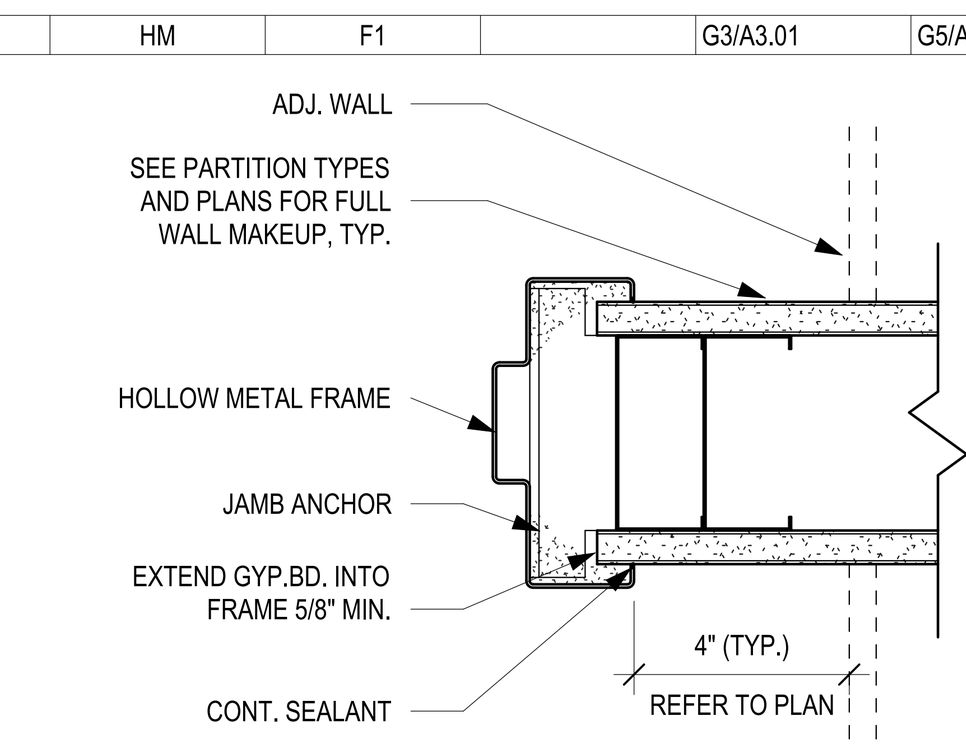
HM HEAD DETAIL @ INT. FURRED PRECAST (G10)
3" = 1'-0"



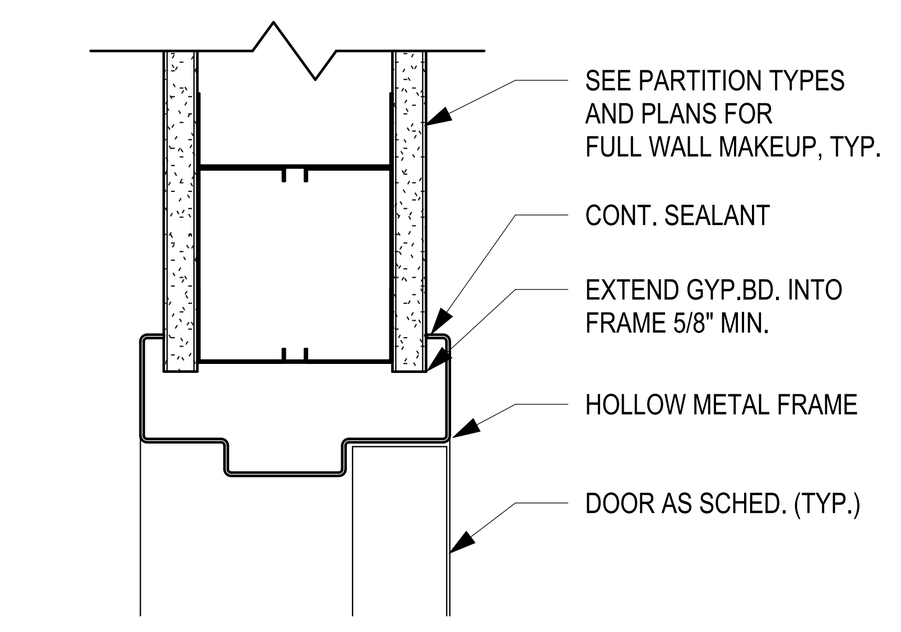
HM CASED JAMB DETAIL @ METAL STUD (G8)
3" = 1'-0"



HM CASED HEAD DETAIL (G6)
3" = 1'-0"



HM JAMB DETAIL @ METAL STUD (G4)
3" = 1'-0"



HM HEAD DETAIL @ METAL STUD (G3)
3" = 1'-0"

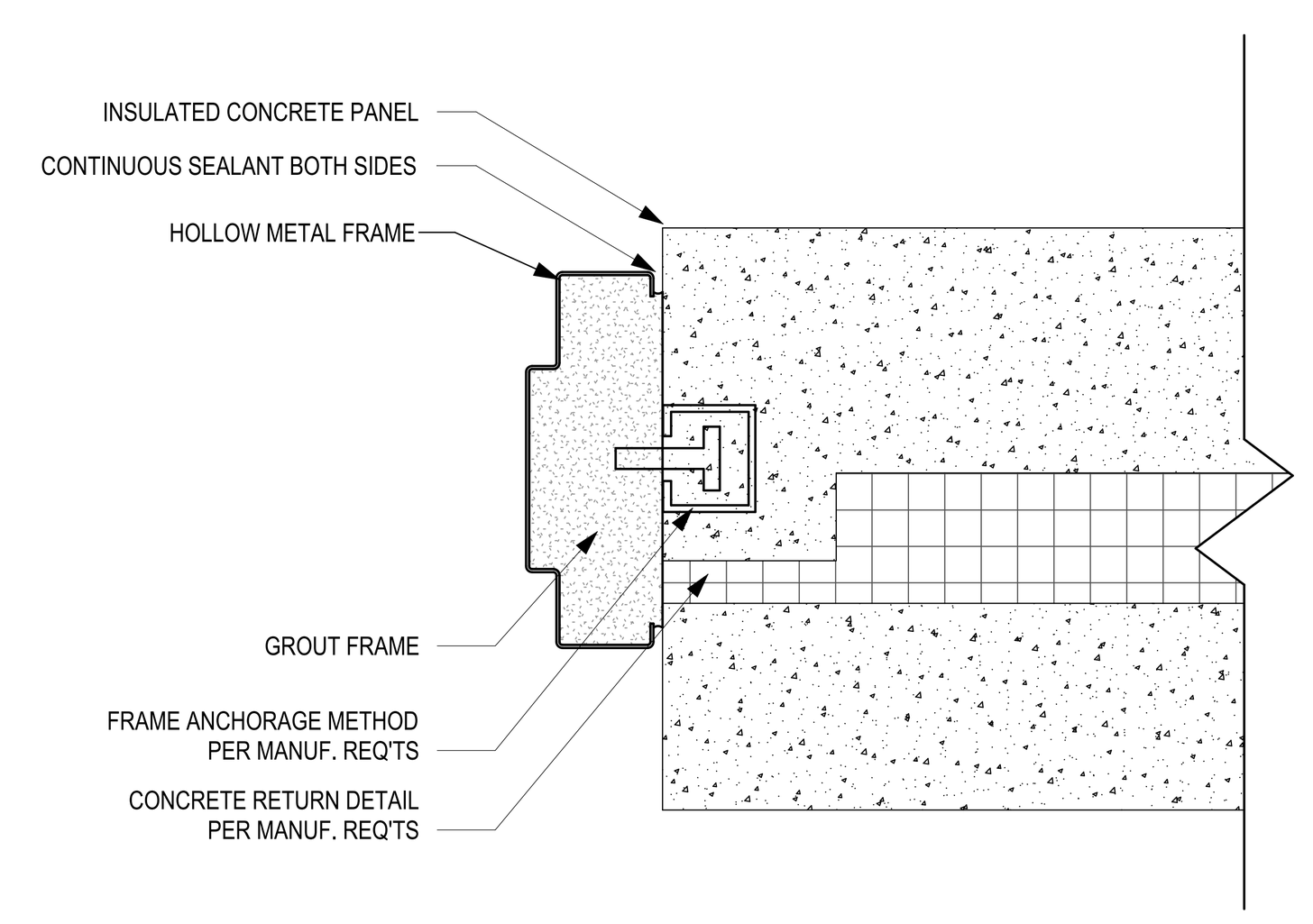
GLAZING TYPES

INSULATING GLASS UNITS

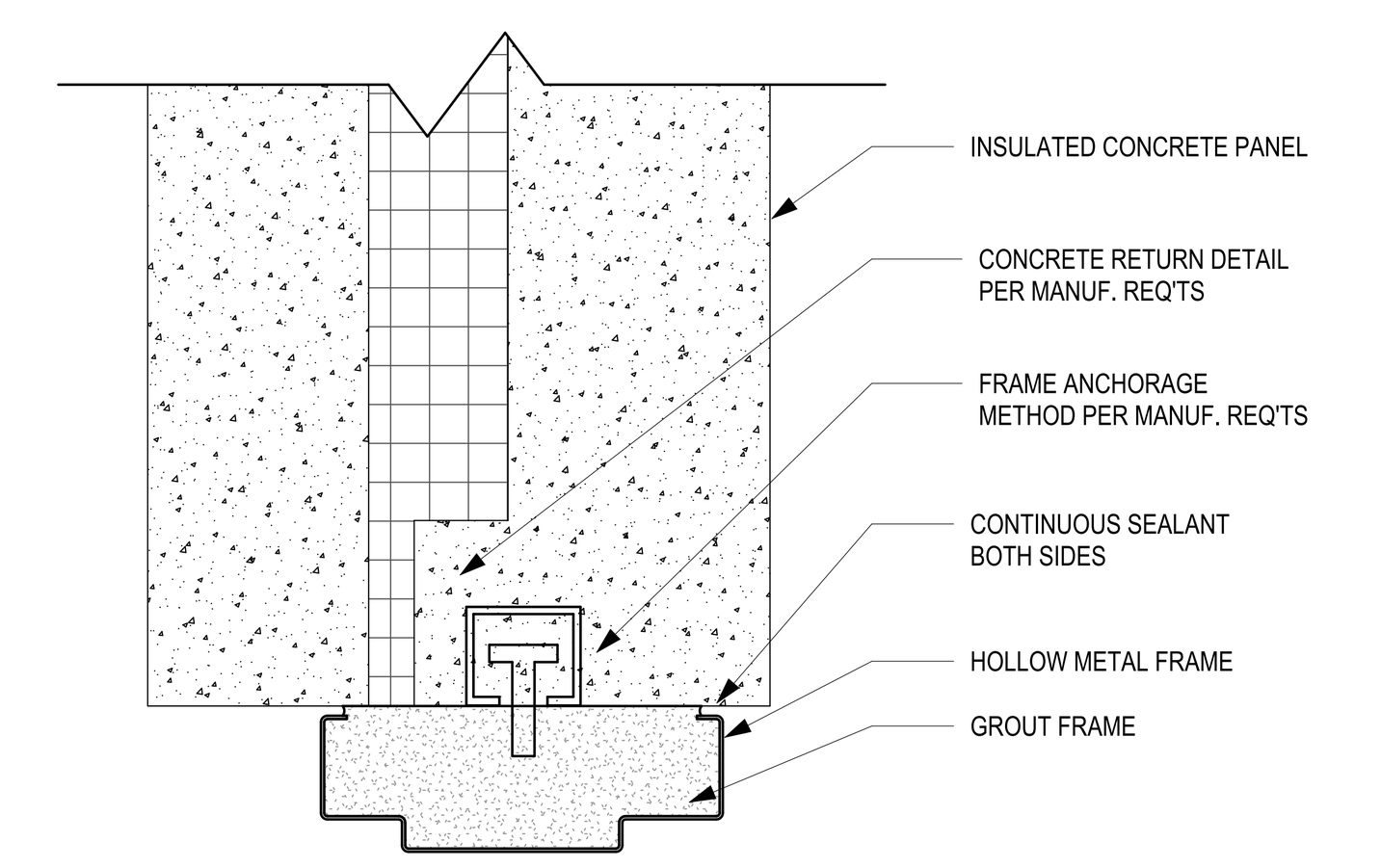
- GL-01 - VISION GLASS, DOUBLE GLAZED. LOW-E, HEAT STRENGTHENED AND LAMINATED.
- GL-02 - VISION GLASS, DOUBLE GLAZED. LOW-E, TEMPERED AND LAMINATED.
- GL-03 - ACID ETCHED, DOUBLE GLAZED. LOW-E, LAMINATED.
- GL-08 - VISION GLASS, DOUBLE GLAZED. LAMINATED.

MONOLITHIC GLASS UNITS

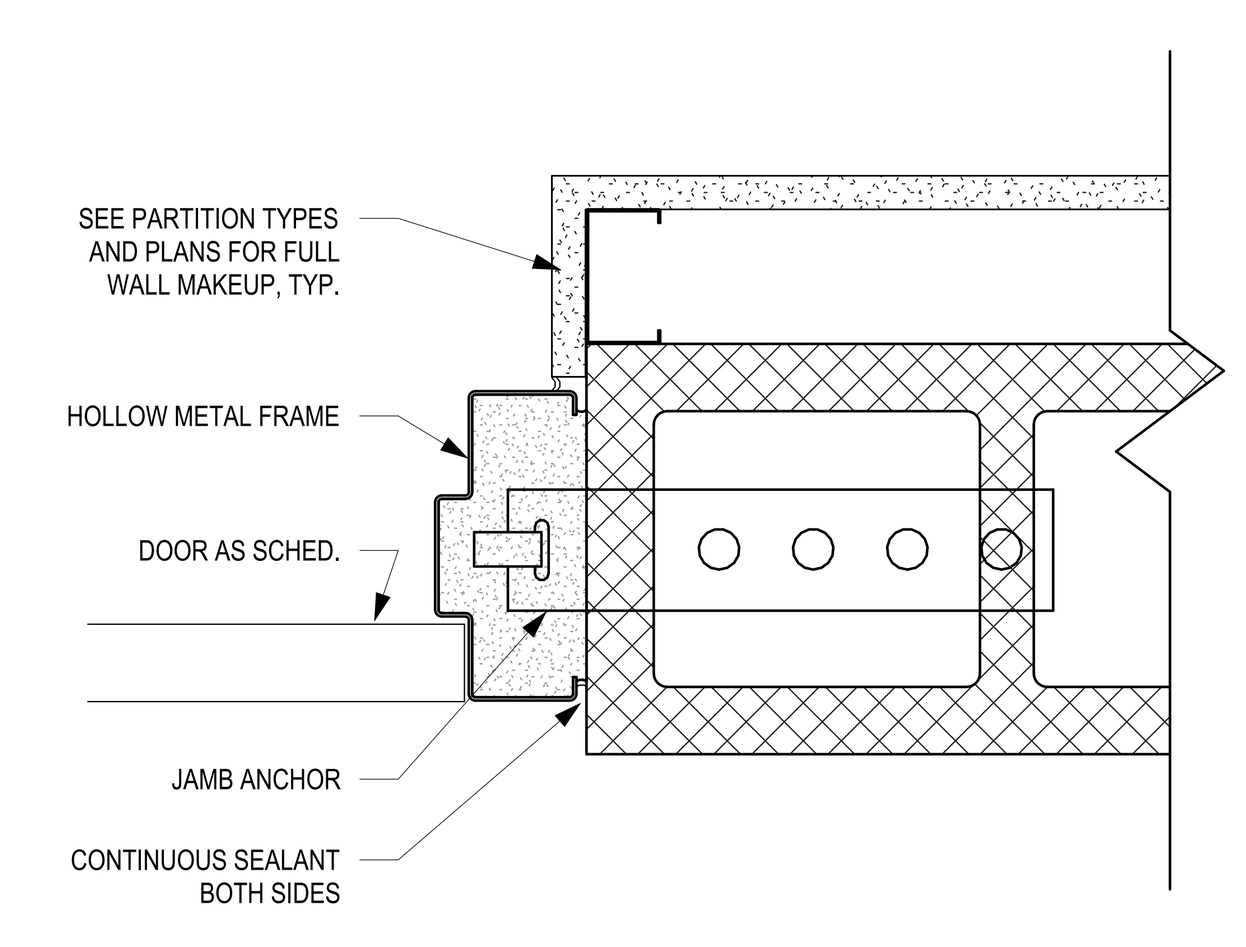
- GL-04 - EXTERIOR GLAZING, VISION GLASS,TEMPERED.
- GL-05 - INTERIOR GLAZING, ACID ETCHED,TEMPERED.
- GL-06 - INTERIOR GLAZING, VISION GLASS,TEMPERED.
- GL-07 - INTERIOR GLAZING, HEAT STRENGTHENED GLASS.



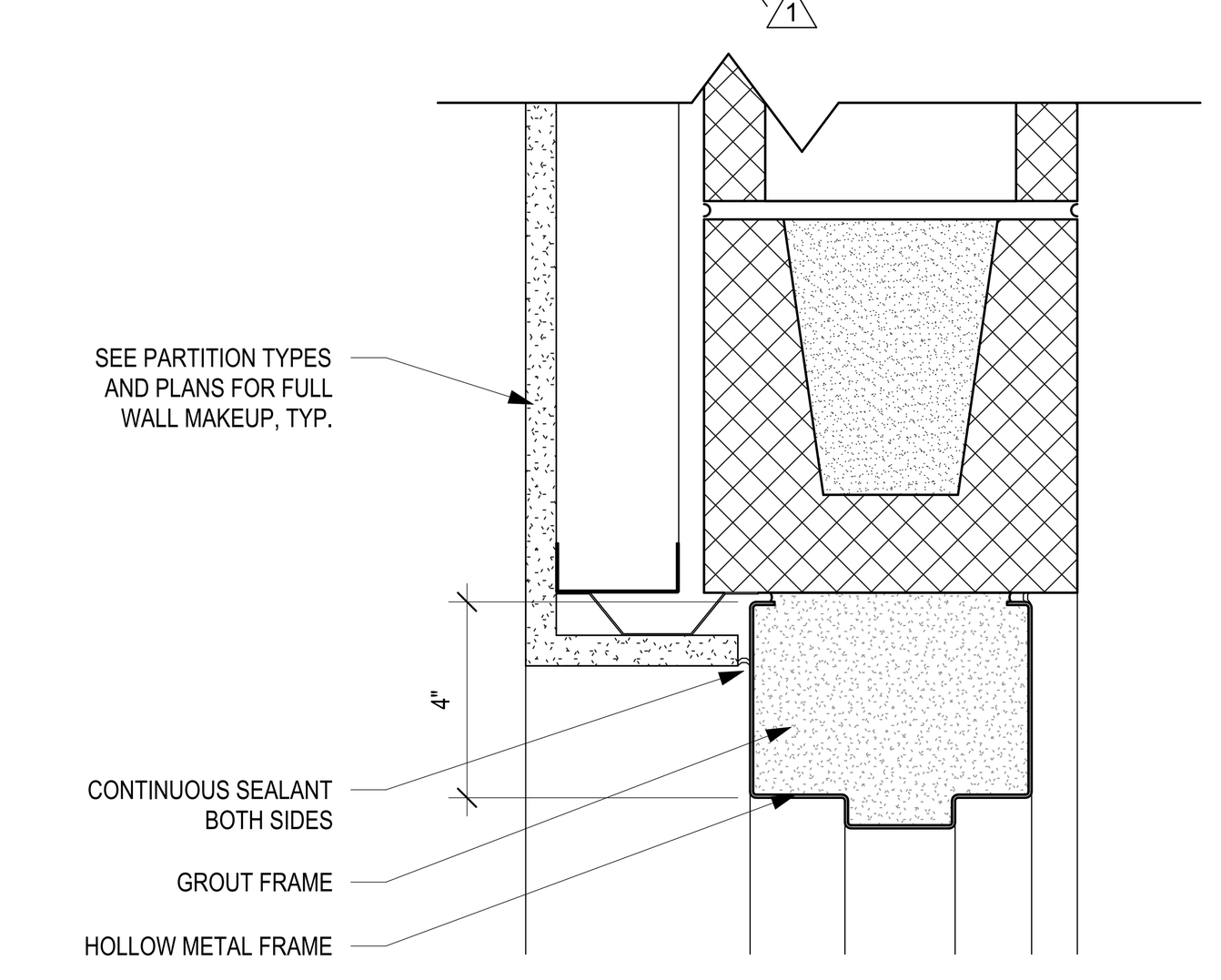
HM JAMB DETAIL @ PC PANEL (E12)
3" = 1'-0"



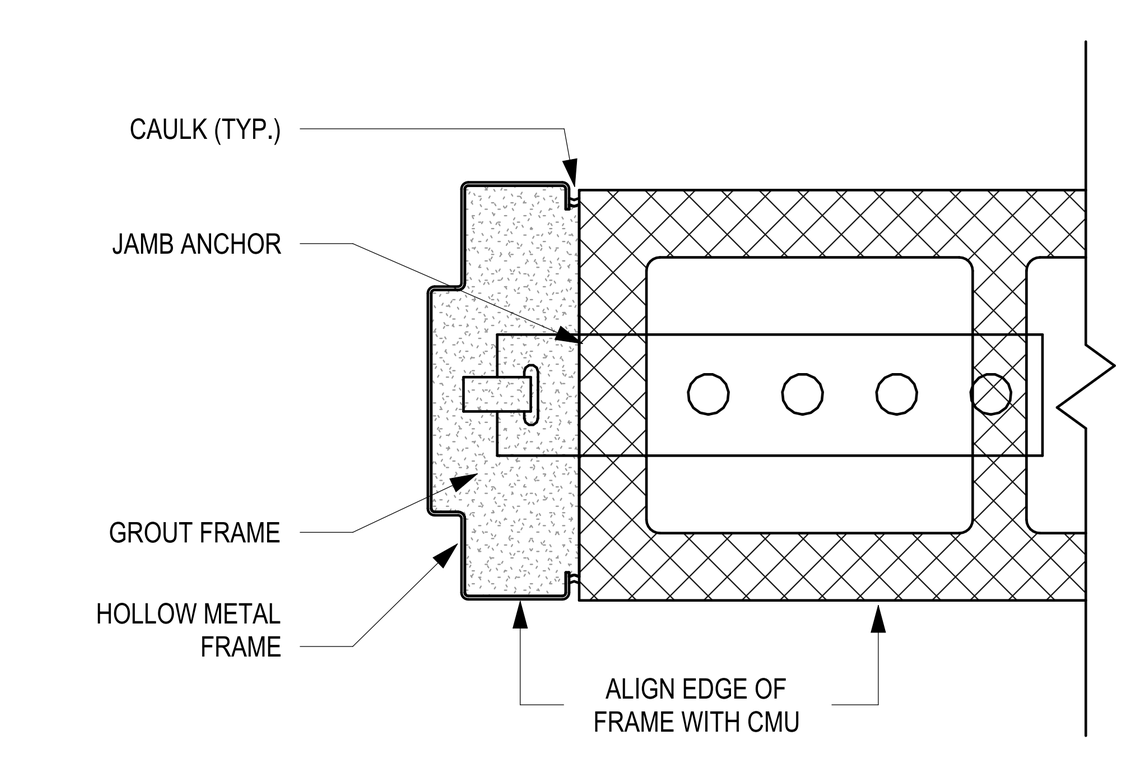
HM HEAD DETAIL @ PC PANEL (E10)
3" = 1'-0"



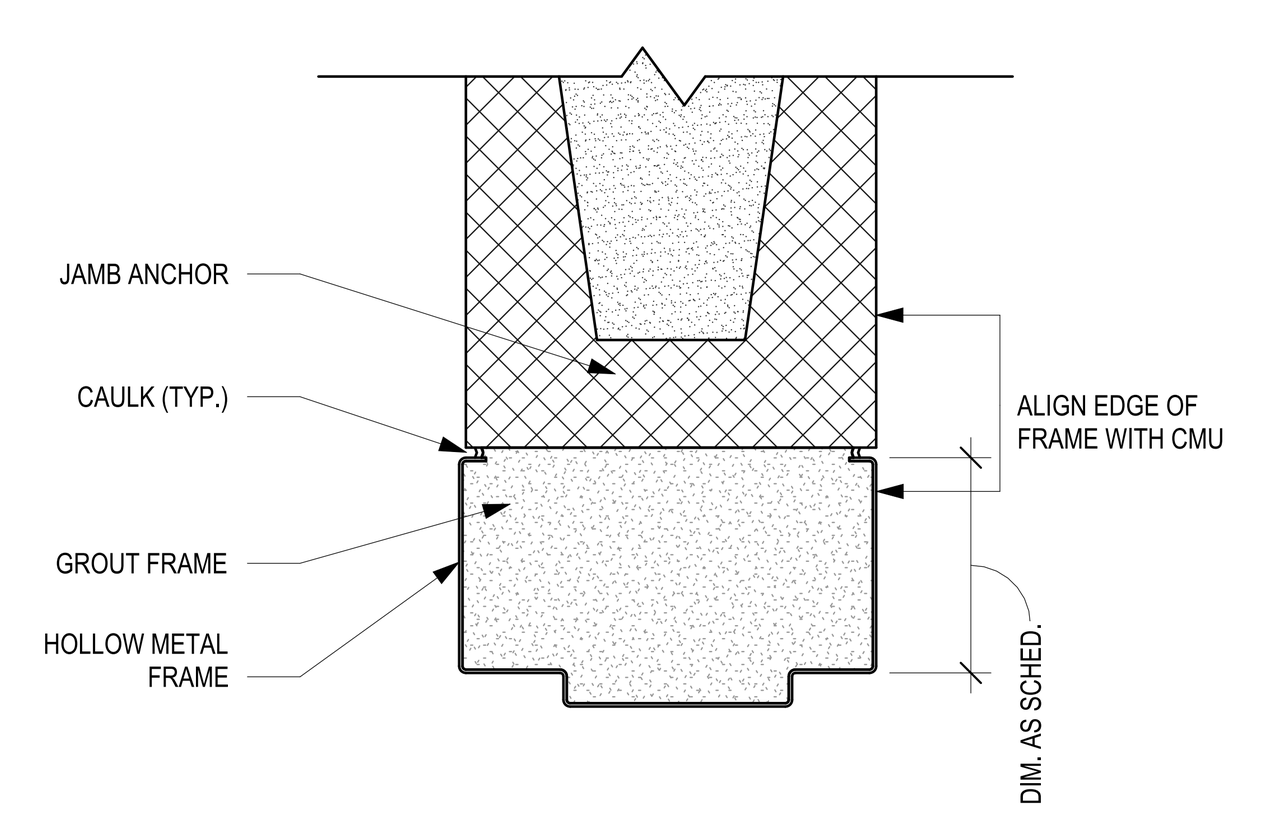
HM JAMB DETAIL @ INT. CMU (E8)
3" = 1'-0"



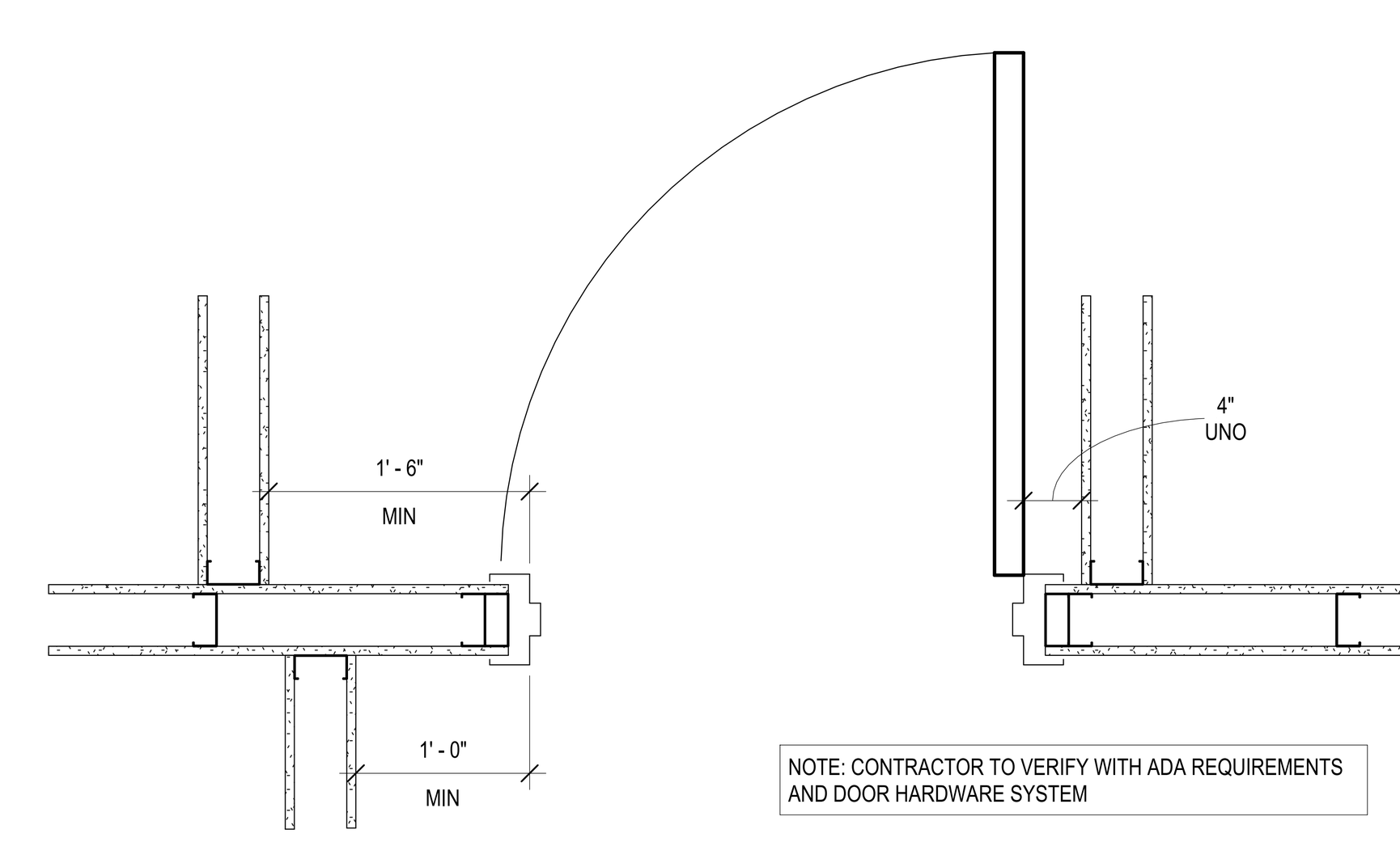
HM HEAD DETAIL @ INT. CMU (E5)
3" = 1'-0"



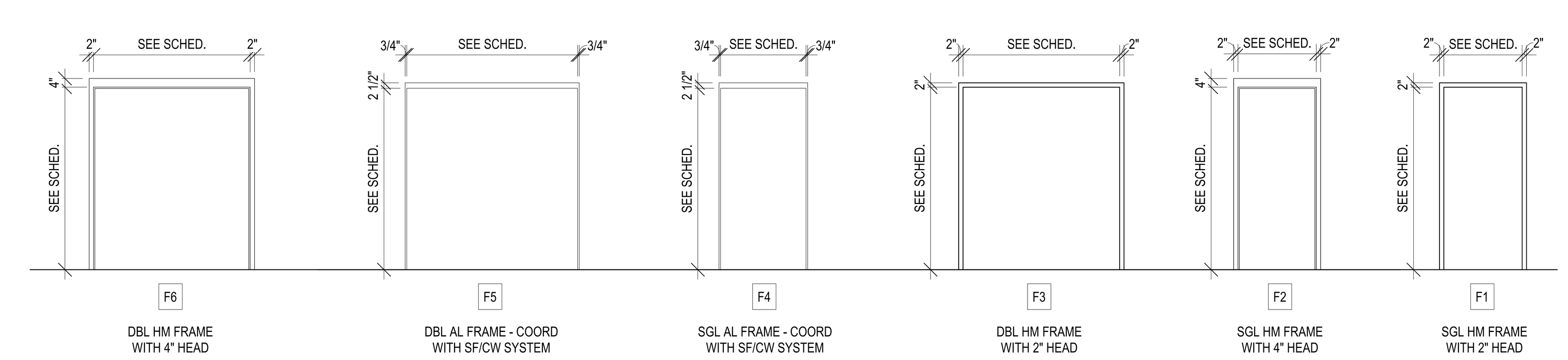
HM JAMB DETAIL @ CMU (E3)
3" = 1'-0"



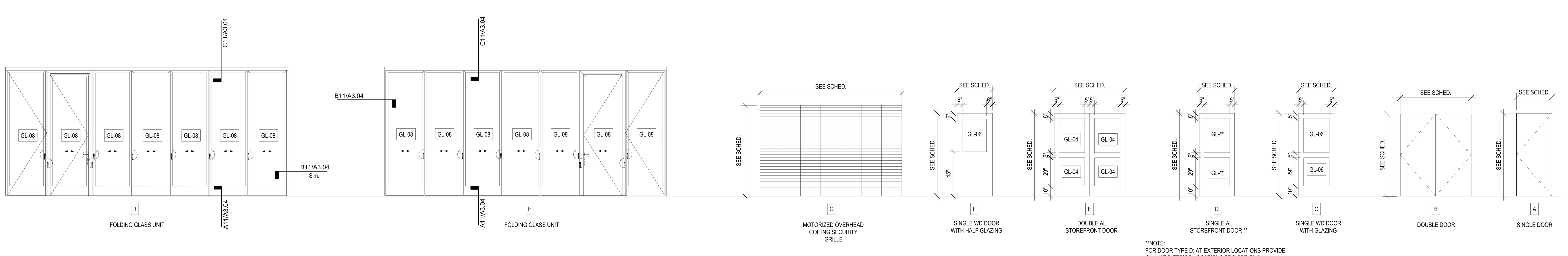
HM HEAD DETAIL @ CMU (C12)
3" = 1'-0"



TYPICAL PUSH/PULL DETAIL
1" = 1'-0"



DOOR FRAME TYPE LEGEND
1/4" = 1'-0"



**NOTE:
FOR DOOR TYPE D: AT EXTERIOR LOCATIONS PROVIDE GL-4. AT INTERIOR LOCATIONS PROVIDE GL-6

DOOR TYPE LEGEND
1/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE, P.A. CERT. NO. 50356 WINSTON-SALEM, N.C.

JOHN LESLIE DRAPARD 5117 10/24/2023 GREENSBORO N.C.

#	Description	Date
1	ADDENDUM 01	09/25/2023

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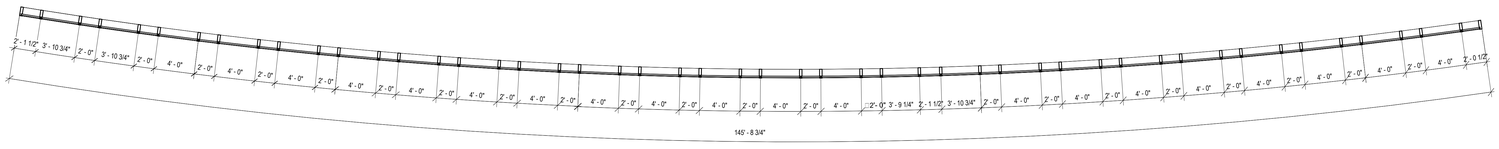
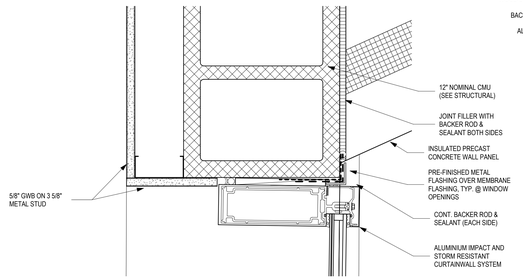
DOOR + WINDOW SCHEDULE, DOOR + FRAME TYPES

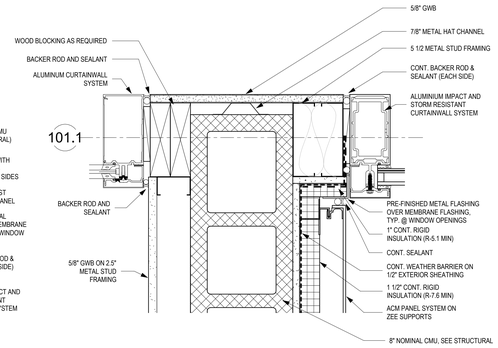
A3.01

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

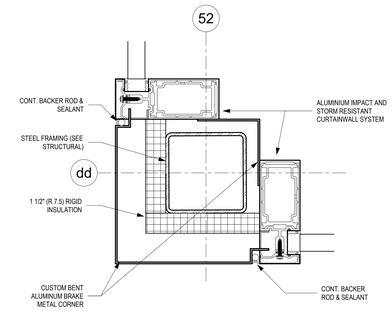

2' - 1 1/2"
3' - 10 3/4"
2' - 0"
3' - 10 3/4"
2' - 0"
4' - 0"
2' - 0"
4' - 0"
2' - 0"
4' - 0



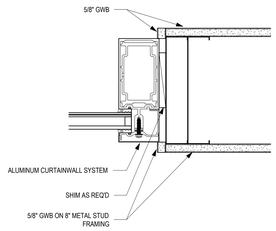
CW JAMB @ LOW ROOF PRECAST **I12**
3" = 1'-0"



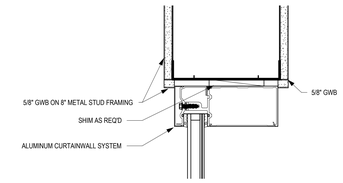
CW JAMB @ 101 VEST. STUD WALL **I9**
3" = 1'-0"



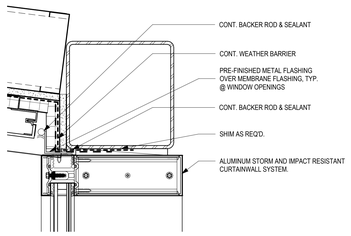
CW JAMB @GIFT SHOP INT. CORNER **I6**
3" = 1'-0"



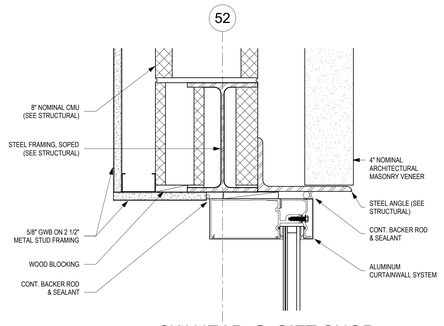
CW JAMB @ VEST. 129 INT. **I4**
3" = 1'-0"



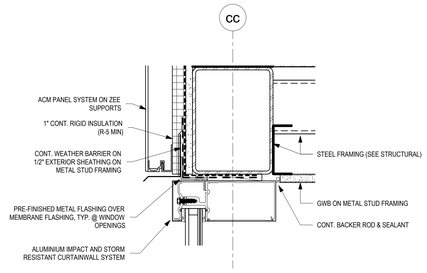
CW HEAD @ VEST. 129 INT. **I1**
3" = 1'-0"



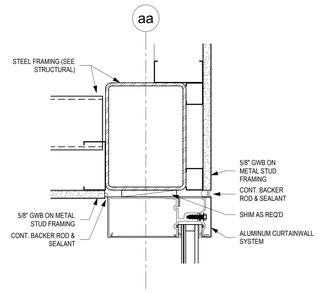
CW HEAD @ TYP. OVERHANG **F12**
3" = 1'-0"



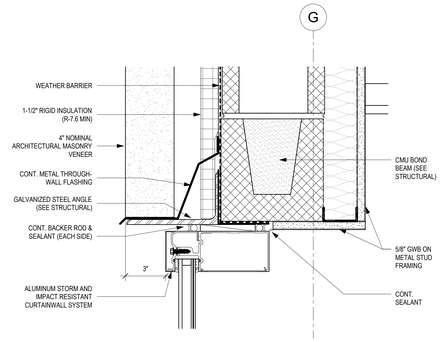
CW HEAD @ GIFT SHOP 103 INT **F9**
3" = 1'-0"



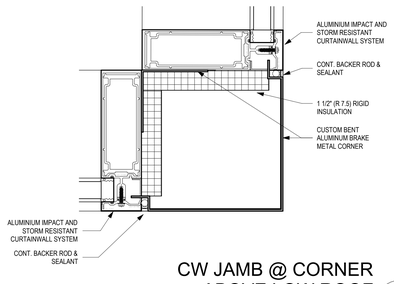
CW HEAD @ VEST 101 EXT **F6**
3" = 1'-0"



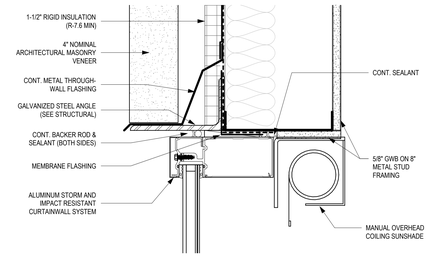
CW HEAD @ VEST 101 INT **F4**
3" = 1'-0"



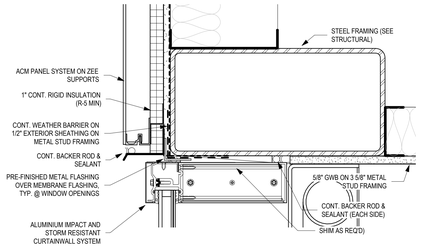
CW HEAD @ MASONRY VENEER / CMU WALL **F1**
3" = 1'-0"



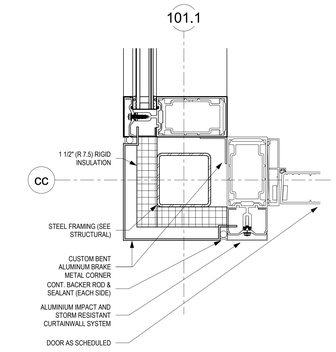
CW JAMB @ CORNER ABOVE LOW ROOF **D12**
3" = 1'-0"



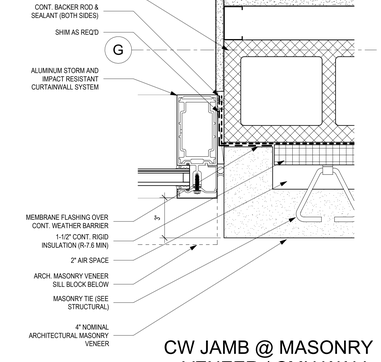
CW HEAD @ MASONRY VENEER / STUD WALL **D9**
3" = 1'-0"



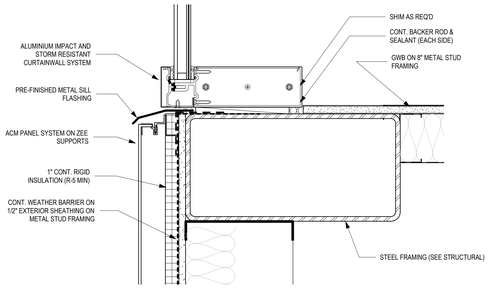
CW HEAD @ MTL PANEL **D6**
3" = 1'-0"



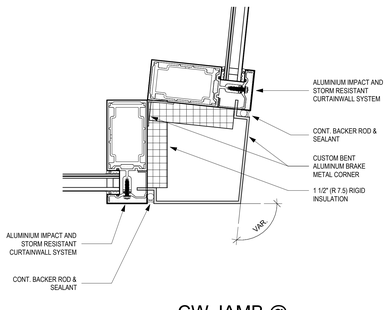
CW JAMB - CORNER DETAIL **D4**
3" = 1'-0"



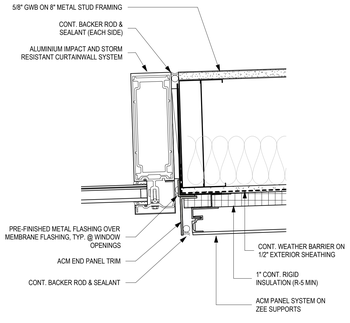
CW JAMB @ MASONRY VENEER / CMU WALL **D1**
3" = 1'-0"



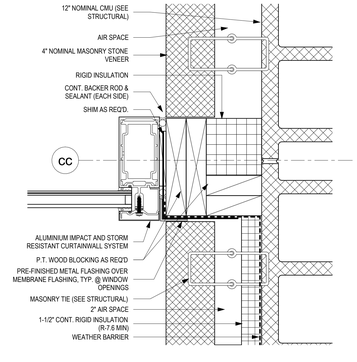
CW SILL @ MTL PANEL **A12**
3" = 1'-0"



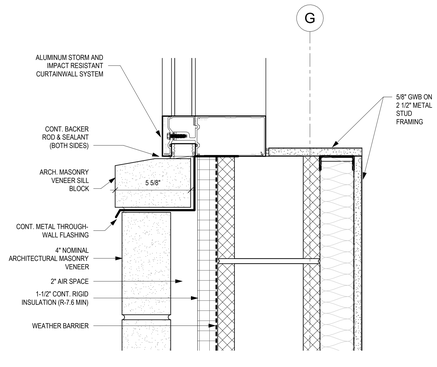
CW JAMB @ CORNER-GIFT SHOP **A9**
3" = 1'-0"



CW JAMB @ MTL PANEL **A6**
3" = 1'-0"



CW JAMB @ VEST. 101 EXT. **A4**
3" = 1'-0"



CW SILL @ MASONRY VENEER / CMU WALL **A1**
3" = 1'-0"

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JOHN LESLIE [illegible] NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1115 10/24/2023 GOLDSBORO, NC

#	Description	Date

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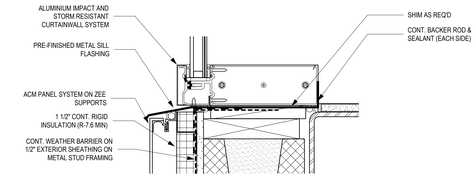
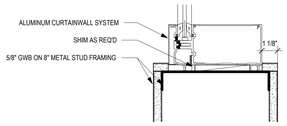
HEAD JAMB AND SILL DETAILS

A3.03

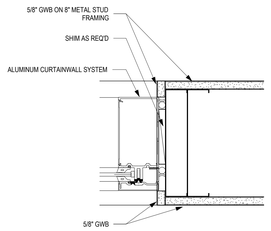
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



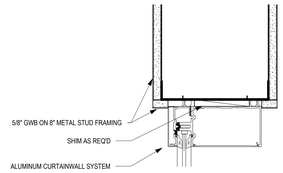
CW SILL @ METAL PANEL ON CMU **I1**
3" = 1'-0"



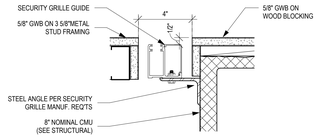
SILL @ VIEWING WINDOW **I10**
3" = 1'-0"



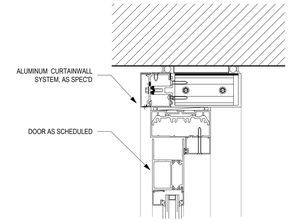
JAMB @ VIEWING WINDOW **I8**
3" = 1'-0"



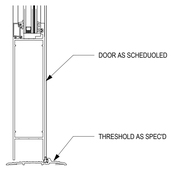
HEAD @ VIEWING WINDOW **I6**
3" = 1'-0"



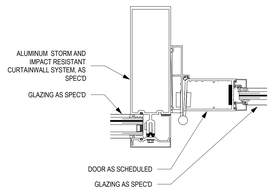
JAMB @ SECURITY GRILLE **H4**
3" = 1'-0"



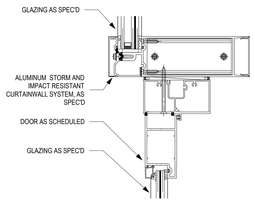
CW DOOR HEAD @ GIFT SHOP **H1**
3" = 1'-0"



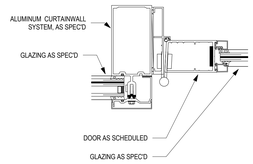
CW DOOR SILL- EXT. **F12**
3" = 1'-0"



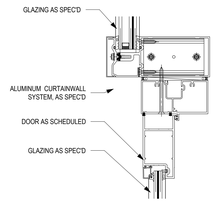
CW DOOR JAMB- 10 INCH SYSTEM **F10**
3" = 1'-0"



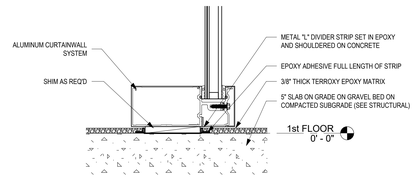
CW DOOR HEAD-10 INCH SYSTEM **F8**
3" = 1'-0"



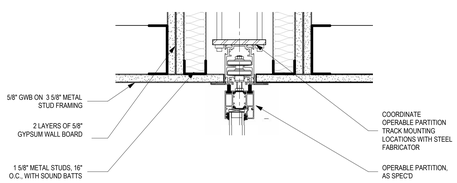
CW DOOR JAMB **F6**
3" = 1'-0"



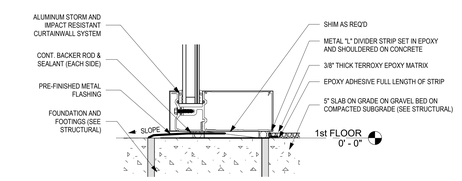
CW DOOR HEAD **F4**
3" = 1'-0"



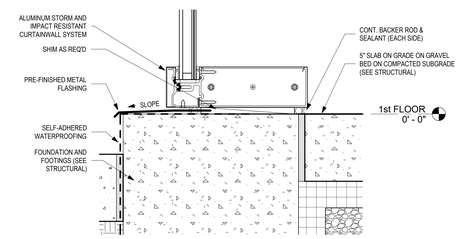
CW SILL, INT. TYP. **F1**
3" = 1'-0"



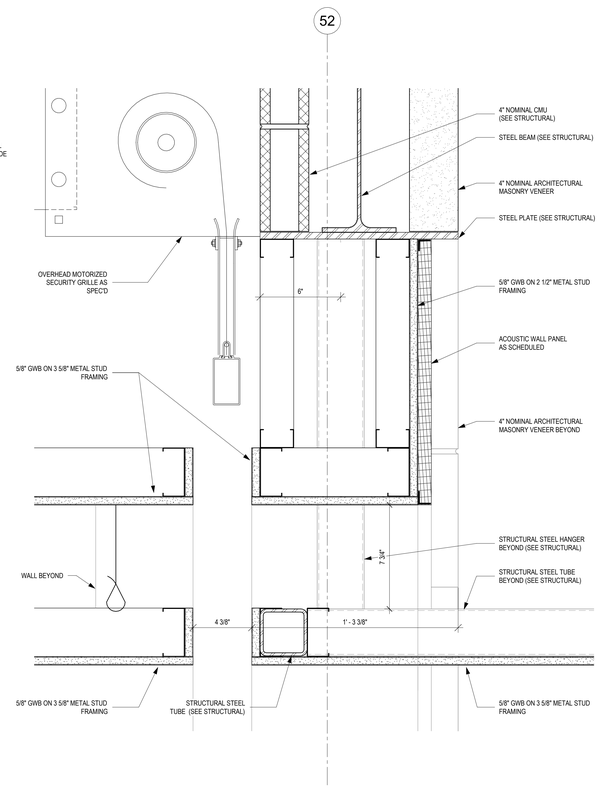
GLASS OPERABLE PARTITION HEAD **C11**
3" = 1'-0"



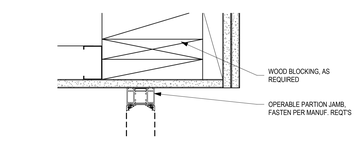
CW SILL @ VEST. 101 EXT. **C8**
3" = 1'-0"



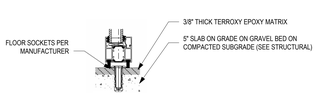
CW SILL @ CONC. CURB **C5**
3" = 1'-0"



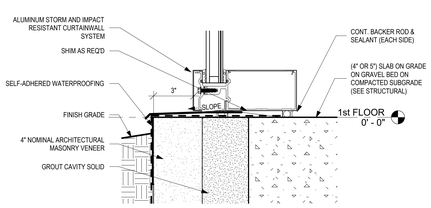
HEAD @ SECURITY GRILLE **A1**
3" = 1'-0"



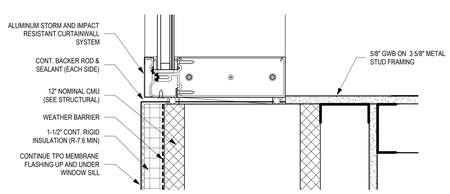
GLASS OPERABLE PARTITION JAMB **B11**
3" = 1'-0"



GLASS OPERABLE PARTITION SILL **A11**
3" = 1'-0"



CW SILL @ CONC. SLAB **A8**
3" = 1'-0"



CW SILL @ LOW ROOF **A5**
3" = 1'-0"

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JOHN LESLIE [illegible] NC LICENSED ARCHITECT 10/24/2023 GREENSBORO, NC

#	Description	Date

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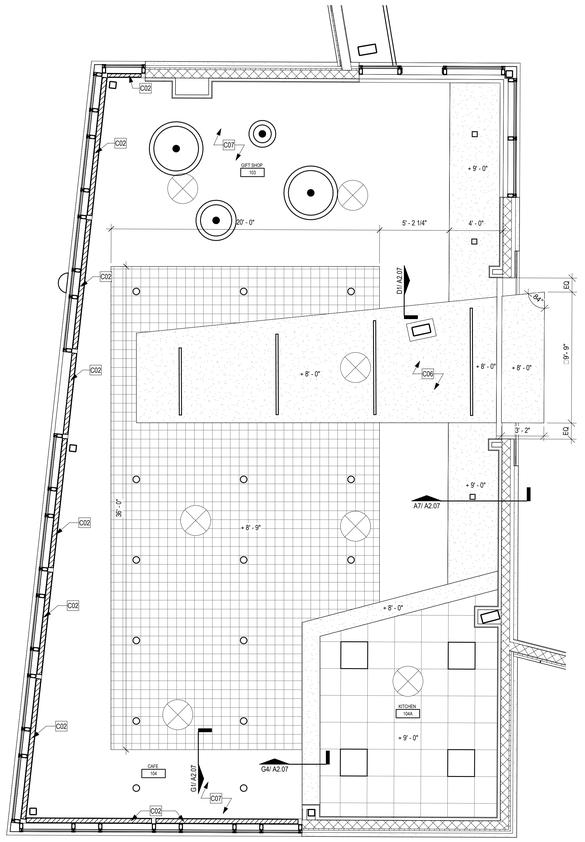
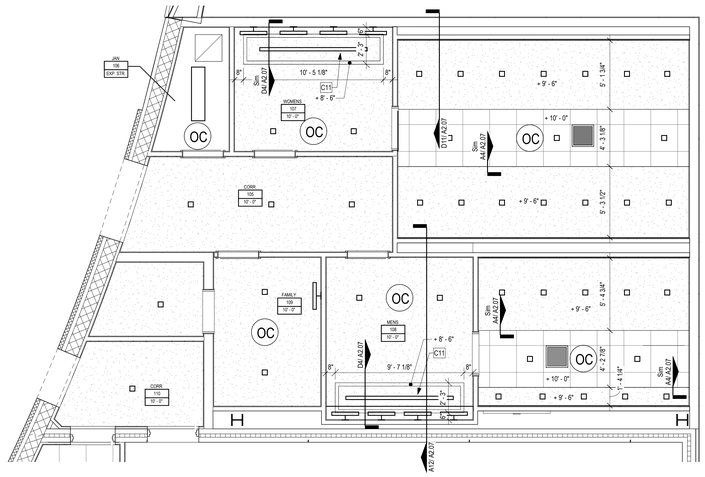
HEAD JAMB AND SILL DETAILS

A3.04

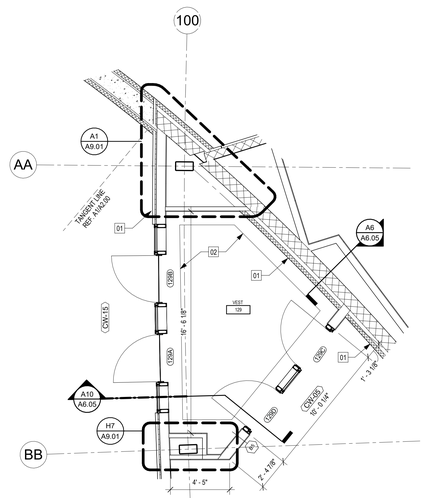
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



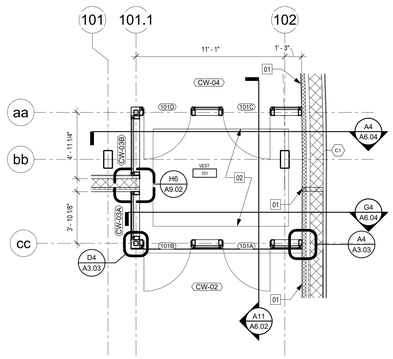
103 GIFT SHOP / 104 CAFE / 104A KITCHEN ENLARGED RCP **E9**
1/4" = 1'-0"



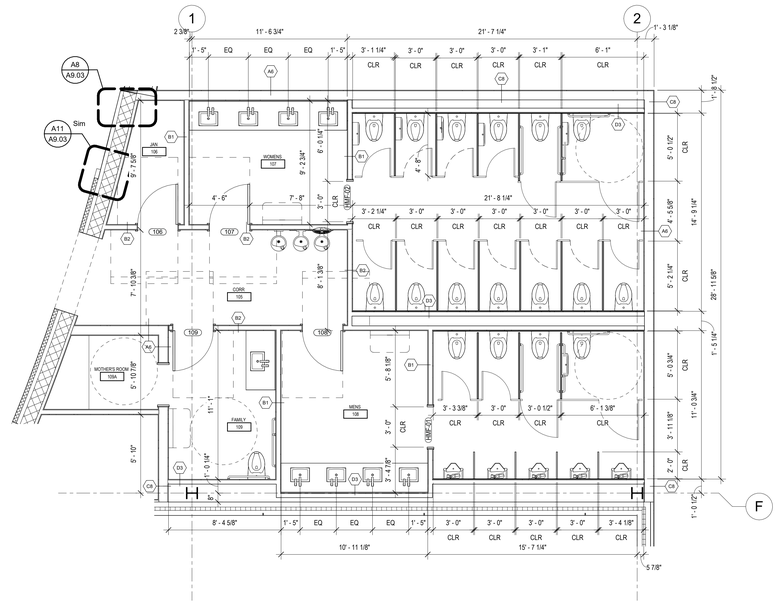
107 WOMENS / 108 MENS / 109 FAMILY ENLARGED RCP **E1**
1/4" = 1'-0"



129 VEST ENLARGED PLAN **A11**
1/4" = 1'-0"



101 VEST ENLARGED PLAN **A8**
1/4" = 1'-0"



107 WOMENS / 108 MENS / 109 FAMILY ENLARGED PLAN **A3**
1/4" = 1'-0"

ENLARGED FLOOR PLAN NOTES

SEE SHEET E.04 FOR RESTROOM ELEVATIONS AND TOILET ACCESSORY INFORMATION

ENLARGED PLAN KEYED NOTES

01 ADA PUSH BUTTON WALL MOUNT

02 RECESSED WALK OFF MAT, COORDINATE SLAB RECESS W/ STRUCTURAL

RCP KEYED NOTES

C01 MOTORIZED SUNSHADE AT +13'-0" AFF (HATCHED FOR CLARITY)

C02 MANUAL ROLLER SHADE (HATCHED FOR CLARITY)

C03 CLERESTORY GLAZING TO RECEIVE CAMPAIGN COLOR BARS PATTERNING (BY EXHIBIT DESIGNER). SUSPENDED BEHIND HIGH LEVEL CURTAIN WALL AT WEST FACADE ONLY

C04 MOTORIZED SUNSHADE AT +29'-0" AFF (HATCHED FOR CLARITY)

C05 MANUAL SUNSHADE AT +13'-0" AFF ,SHADES AT EXIT DOORS TO BE MOUNTED TO DOORS (HATCHED FOR CLARITY)

C06 PROVIDE LEVEL 5 GYP. BD. FINISH.

C07 EXPOSED STRUCTURE

C08 LINE OF ROOF SOFFIT ABOVE

C09 SEE 2ND FLOOR RCP FOR DETAILS IN THIS AREA.

C10 ROOF LADDER.

C11 SUSPENDED DECORATIVE CEILING CLOUD, PROVIDE LEVEL 5 GYP. BD. FINISH.

C12 ACOUSTICAL PLASTER.

C13 10'-0" X10'-0" UNISTRUT GRID SYSTEM (SEE STRUCTURAL DWGS).

C14 LINEAR RECESSED LIGHT FIXTURE (SEE ELECTRICAL DWGS).

C15 SLOT SUPPLY DIFFUSER (REFER TO MECHANICAL DWGS).

C16 CEILING ACCESS PANEL, COORDINATE WITH OVERHEAD DOOR

C17 CEILING ACCESS PANEL, COORDINATE WITH MECHANICAL

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JOHN LESLIE LUTHER SEAL 030556 10/24/2023 GREENSBORO, NC

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ENLARGED PLANS & RCPS

A4.01

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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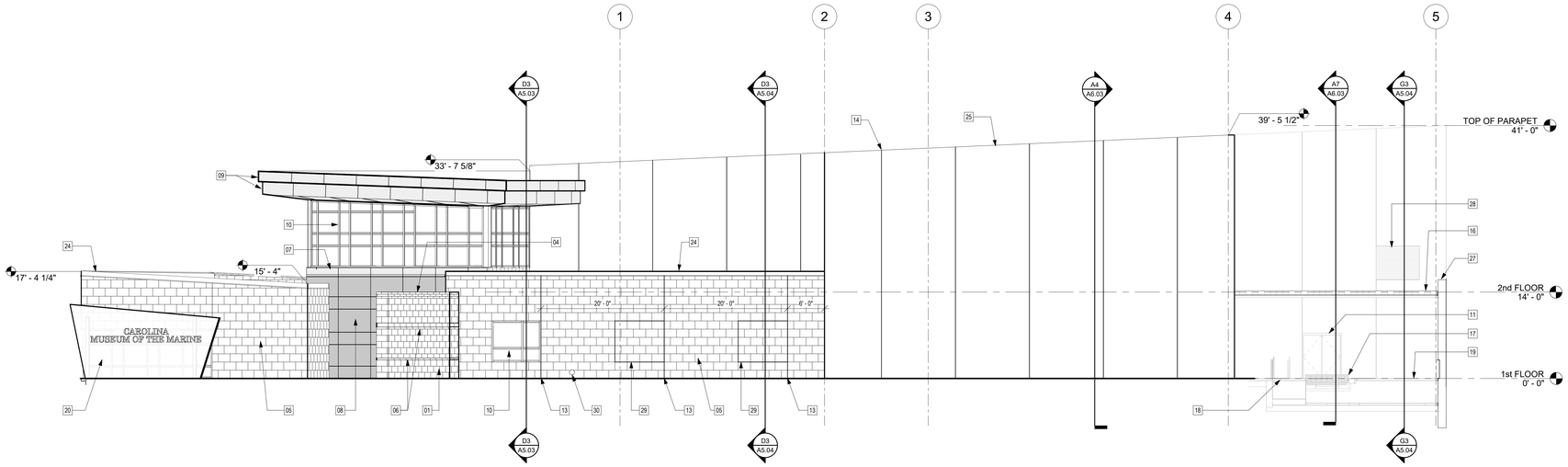
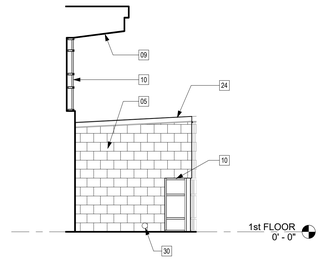
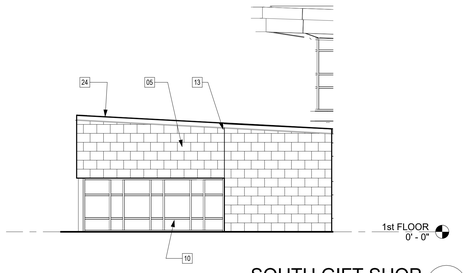


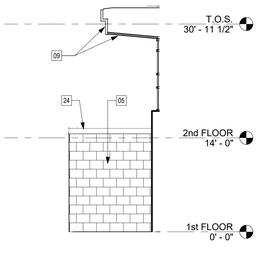
SOUTH ELEVATION 1/8" = 1'-0" **G3**



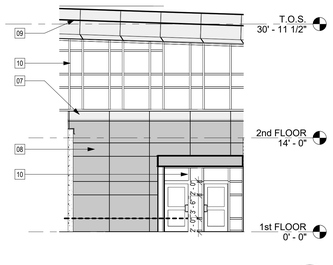
NORTH GIFT SHOP 1/8" = 1'-0" **E11**



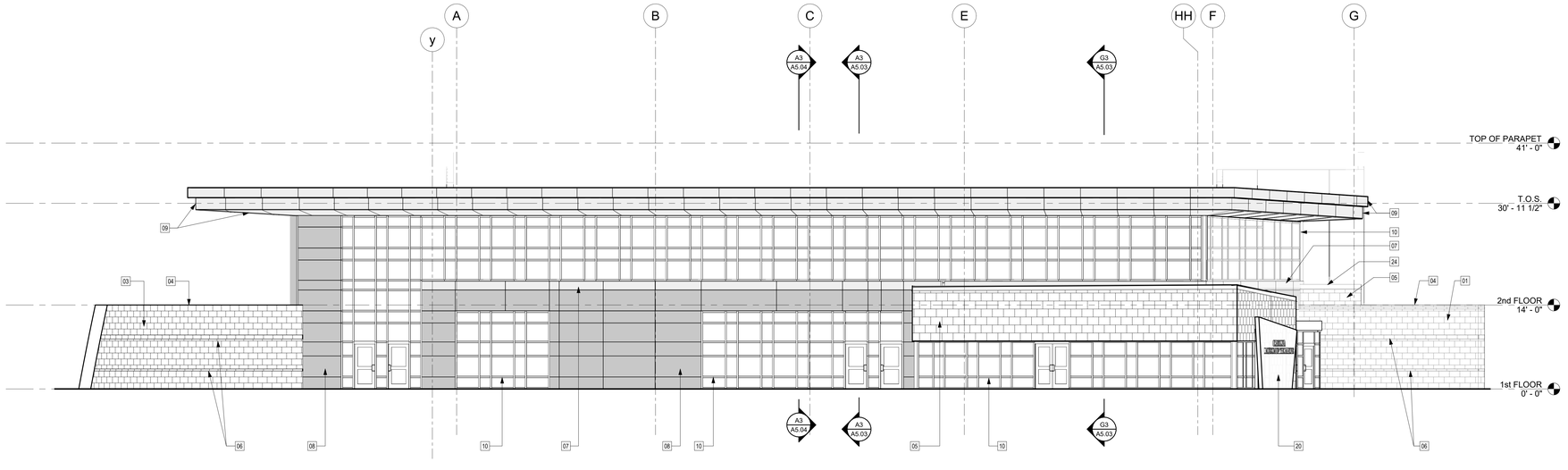
SOUTH GIFT SHOP 1/8" = 1'-0" **E8**



EAST GIFT SHOP 1/8" = 1'-0" **E5**



SOUTH ENTRY ELEVATION 1/8" = 1'-0" **E3**



WEST ELEVATION 1/8" = 1'-0" **A3**

EXTERIOR ELEVATIONS KEYED NOTES

01 MASONRY STONE VENEER; TEXTURE: CHISEL FACE - (12" X 24"W) TYP SIZE
02 MASONRY STONE VENEER; TEXTURE: ROCK FACE - (12" H X 24"W) TYP SIZE (INTERIOR ONLY)
03 MASONRY STONE VENEER; TEXTURE: GROUND FACE - (12" H X 24"W) TYP SIZE
04 MASONRY STONE VENEER; COPING CAP
05 ARCHITECTURAL STONE VENEER (16"H X 24"W) TYP. SIZE
06 MASONRY STONE VENEER ACCENT BANDS; TEXTURE: GROUND FACE
07 ALUMINUM COMPOSITE MATERIAL (ACM) PANEL - COLOR - MTL-01
08 ALUMINUM COMPOSITE MATERIAL (ACM) PANEL - COLOR - MTL-02
09 ALUMINUM COMPOSITE MATERIAL (ACM) FASCIA - COLOR - MTL-01. ALIGN PANEL JOINTS WITH CURTAINWALL / METAL PANEL MODULE BELOW.
10 ALUMINUM STORM AND IMPACT RESISTANT CURTAIN WALL SYSTEM
11 INSULATED HOLLOW METAL DOOR AND FRAME
12 CONTROL JOINT IN CAST-IN-PLACE CONCRETE WALL
13 MASONRY CONTROL JOINT. MASONRY STONE VENEER PROVIDER TO PROVIDE JOINT REINFORCEMENT AS REQUIRED TO UTILIZE MASONRY CONTROL JOINTS INDICATED
14 PRECAST PANEL JOINT; COORDINATE FINAL MANUF. RECOMMENDED LOCATIONS w/ ARCHITECT
15 EIFS
16 PRE-FINISHED METAL ROOF CANOPY
17 DOCK LEVELER
18 CAST-IN-PLACE CONCRETE STAIR
19 CAST-IN-PLACE CONCRETE PLATFORM
20 PERFORATED METAL MESH CLADDING @ MONUMENT SIGN
21 EXTERIOR WALL-MOUNTED CAMERAS - OWNER PROVIDED. COORDINATE WITH OWNER'S SECURITY DESIGN
22 EXTERIOR LIGHTING FIXTURE - REFER TO ELECTRICAL DRAWINGS
23 FDC - REFER TO FIRE PROTECTION DRAWINGS
24 PREFINISHED ALUMINUM COPING
25 INSULATED CONCRETE PANEL
26 OVERFLOW ROOF DRAIN OUTLET - COORD w/ PLUMBING DRAWINGS
27 CAST-IN-PLACE CONCRETE SCREEN WALL
28 ALUMINUM STORM AND IMPACT RESISTANT LOUVER
29 KNOCK OUT PANEL
30 OVERFLOW ROOF DRAIN OUTLET - COORD w/ PLUMBING DRAWINGS

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CJMW ARCHITECTURE, PLLC CERT. NO. 58056 WINSTON-SALEM, NC
JOHN LESLIE [illegible] NC 10/4/2023 GREENSBORO, NC

#	Description	Date

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EXTERIOR BUILDING ELEVATIONS

A5.01

ISSUE DATE: 10-24-2023
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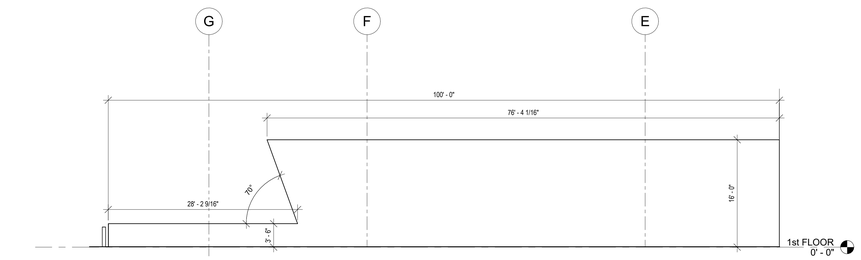
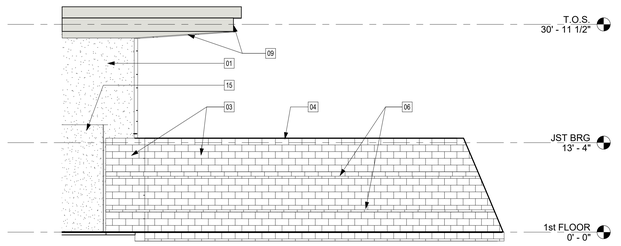
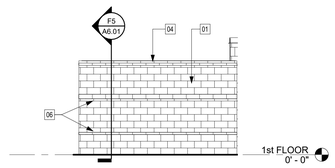
DRAWN BY: Author
CHECKED BY: Checker



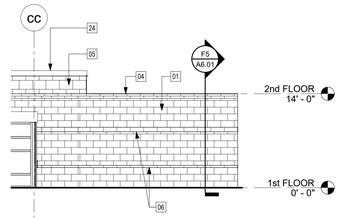
LOADING DOCK SCREEN WALL
1/8" = 1'-0" **I8**



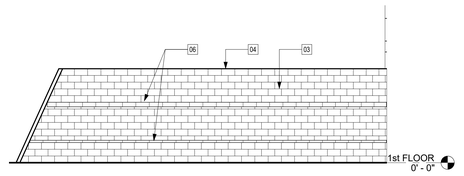
NORTH CURVED MASONRY VENEER WALL - BACK
1/8" = 1'-0" **I3**



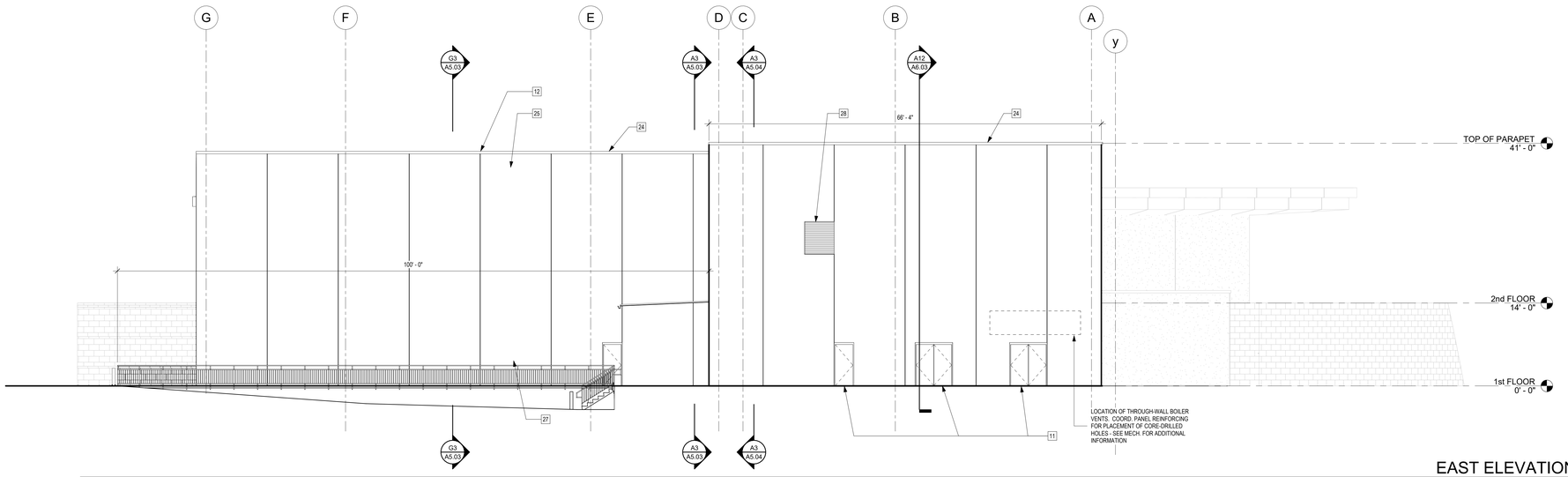
SOUTH CURVED M.V. WALL - BACK
1/8" = 1'-0" **G10**



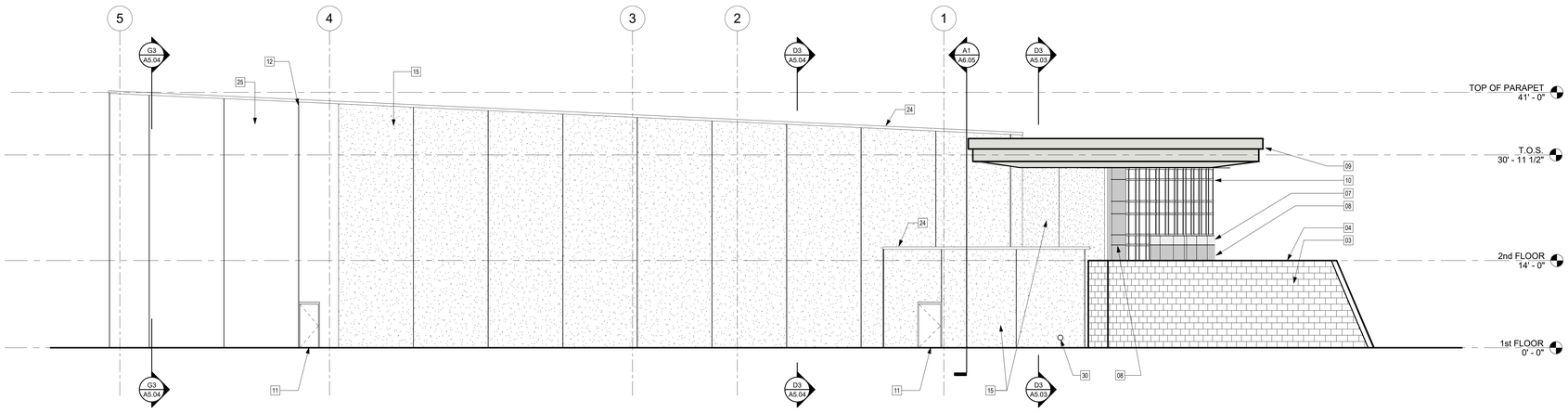
SOUTH CURVED M.V. WALL - FRONT
1/8" = 1'-0" **G8**



NORTH CURVED MASONRY VENEER WALL - FRONT
1/8" = 1'-0" **G3**



EAST ELEVATION
1/8" = 1'-0" **D3**



NORTH ELEVATION
1/8" = 1'-0" **A3**

EXTERIOR ELEVATIONS KEYED NOTES

01	MASONRY STONE VENEER; TEXTURE: CHISEL FACE - (12" X 24"W) TYP SIZE
02	MASONRY STONE VENEER; TEXTURE: ROCK FACE - (12" H X 24"W) TYP SIZE (INTERIOR ONLY)
03	MASONRY STONE VENEER; TEXTURE: GROUND FACE - (12" H X 24"W) TYP SIZE
04	MASONRY STONE VENEER; COPING CAP
05	ARCHITECTURAL STONE VENEER (16"H X 24"W) TYP. SIZE
06	MASONRY STONE VENEER ACCENT BANDS; TEXTURE: GROUND FACE
07	ALUMINUM COMPOSITE MATERIAL (ACM) PANEL - COLOR - MTL-01
08	ALUMINUM COMPOSITE MATERIAL (ACM) PANEL - COLOR - MTL-02
09	ALUMINUM COMPOSITE MATERIAL (ACM) FASCIA - COLOR - MTL-01. ALIGN PANEL JOINTS WITH CURTAINWALL / METAL PANEL MODULE BELOW.
10	ALUMINUM STORM AND IMPACT RESISTANT CURTAIN WALL SYSTEM
11	INSULATED HOLLOW METAL DOOR AND FRAME
12	CONTROL JOINT IN CAST-IN-PLACE CONCRETE WALL
13	MASONRY CONTROL JOINT. MASONRY STONE VENEER PROVIDER TO PROVIDE JOINT REINFORCEMENT AS REQUIRED TO UTILIZE MASONRY CONTROL JOINTS INDICATED
14	PRECAST PANEL JOINT; COORDINATE FINAL MANUF. RECOMMENDED LOCATIONS w/ ARCHITECT
15	EIFS
16	PRE-FINISHED METAL ROOF CANOPY
17	DOCK LEVELER
18	CAST-IN-PLACE CONCRETE STAIR
19	CAST-IN-PLACE CONCRETE PLATFORM
20	PERFORATED METAL MESH CLADDING @ MONUMENT SIGN
21	EXTERIOR WALL-MOUNTED CAMERAS - OWNER PROVIDED. COORDINATE WITH OWNER'S SECURITY DESIGN
22	EXTERIOR LIGHTING FIXTURE - REFER TO ELECTRICAL DRAWINGS
23	FDC - REFER TO FIRE PROTECTION DRAWINGS
24	PREFINISHED ALUMINUM COPING
25	INSULATED CONCRETE PANEL
26	OVERFLOW ROOF DRAIN OUTLET - COORD w/ PLUMBING DRAWINGS
27	CAST-IN-PLACE CONCRETE SCREEN WALL
28	ALUMINUM STORM AND IMPACT RESISTANT LOUVER
29	KNOCK OUT PANEL
30	OVERFLOW ROOF DRAIN OUTLET - COORD w/ PLUMBING DRAWINGS

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EXTERIOR BUILDING ELEVATIONS

A5.02

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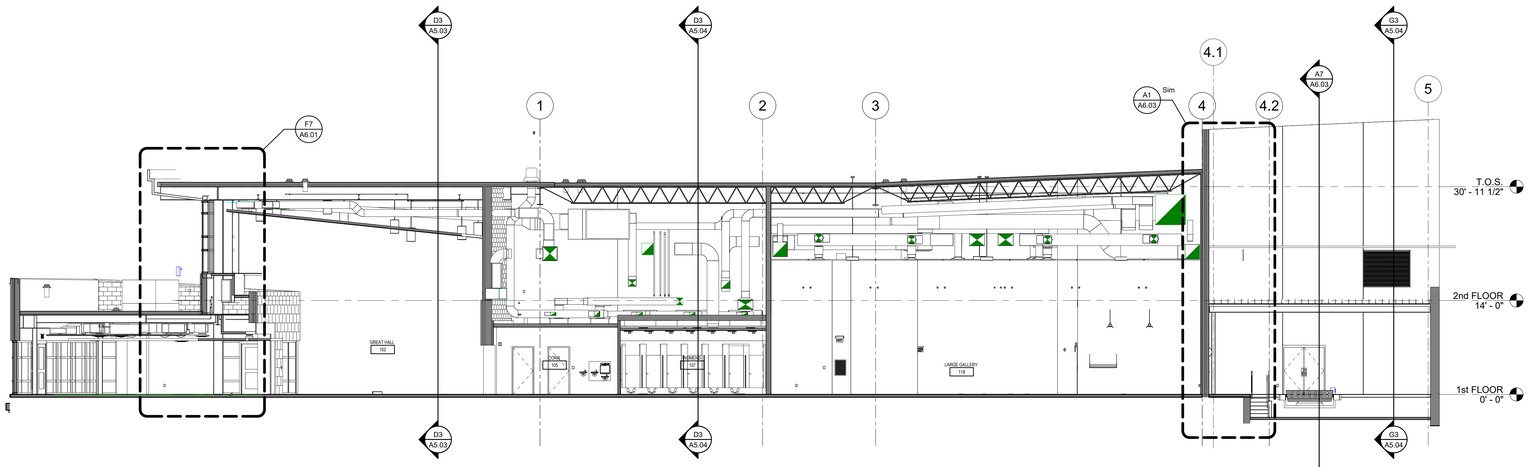
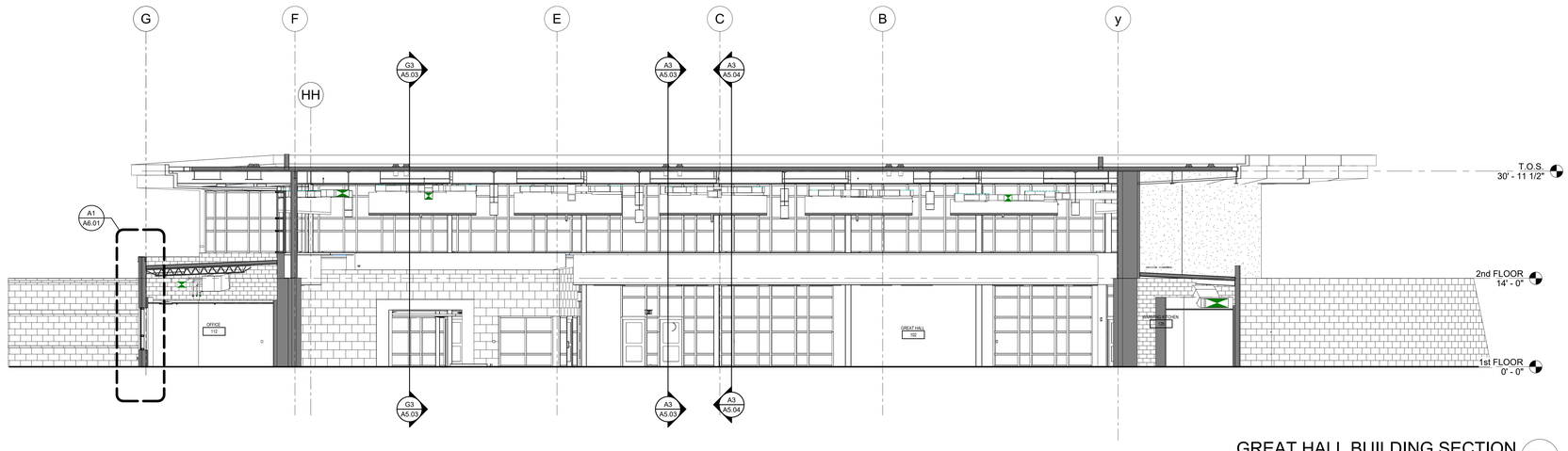
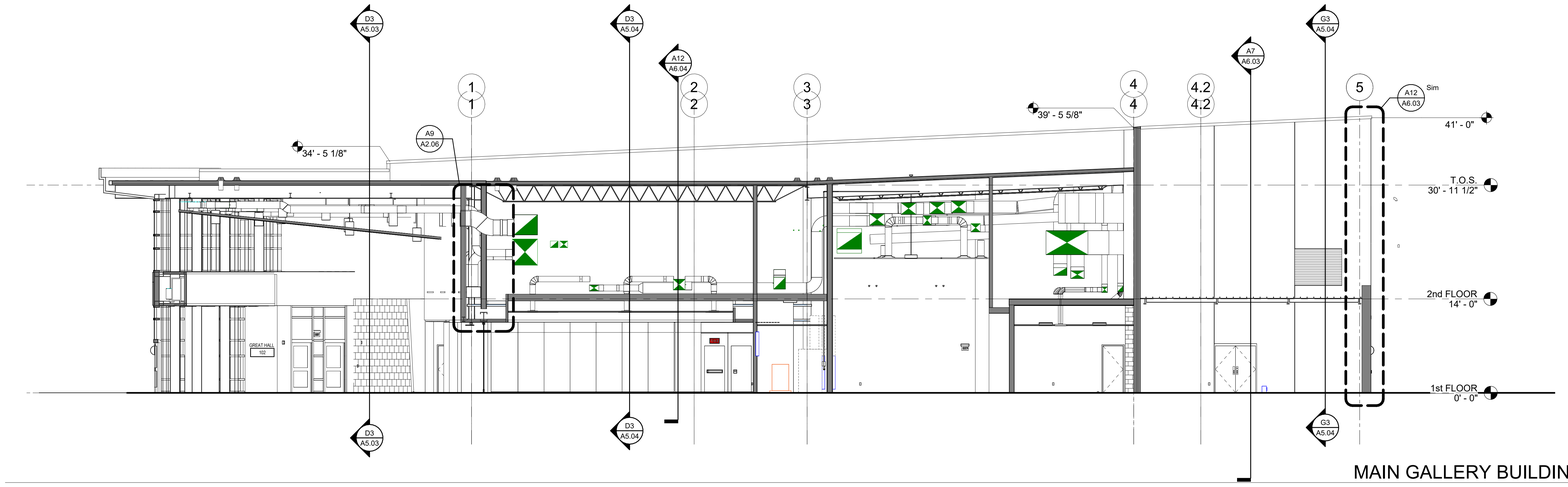


GIFT SHOP BUILDING SECTION G3
1/8" = 1'-0"



GREAT HALL BUILDING SECTION D3
1/8" = 1'-0"



MAIN GALLERY BUILDING SECTION A3
1/8" = 1'-0"

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BUILDING SECTIONS

A5.03

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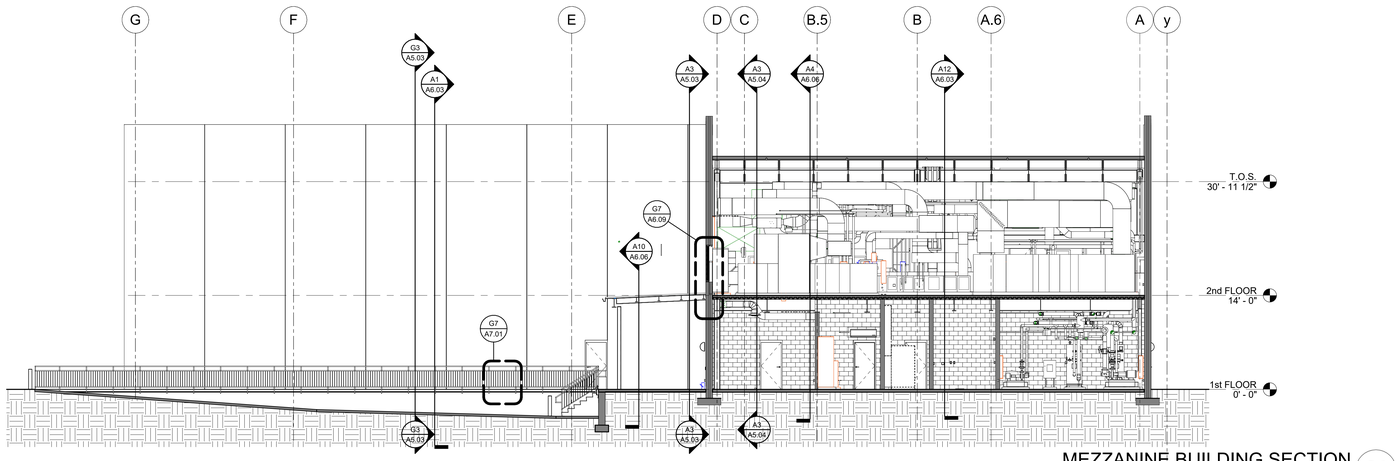
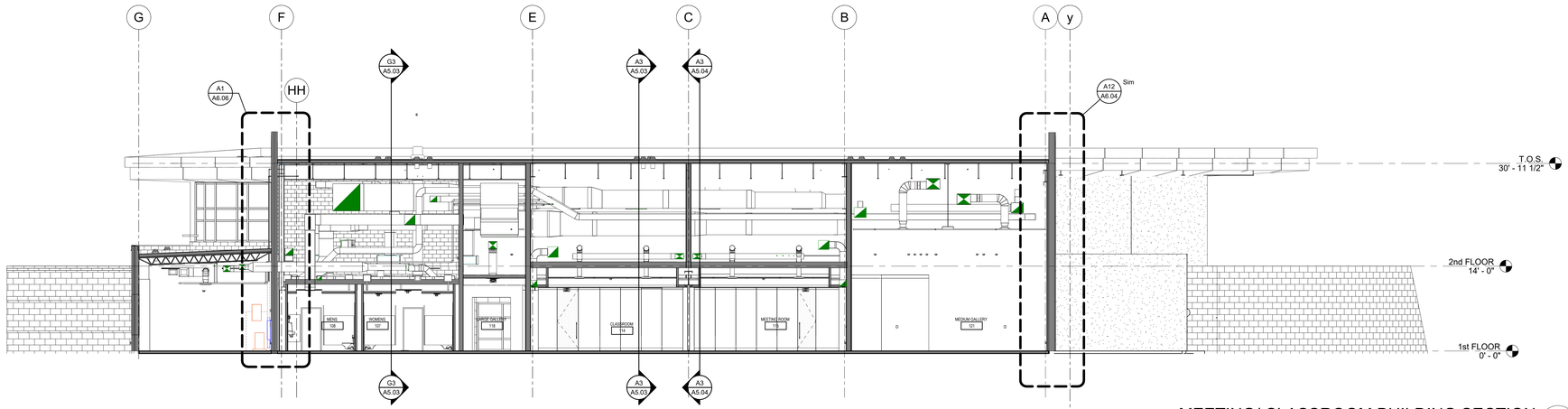
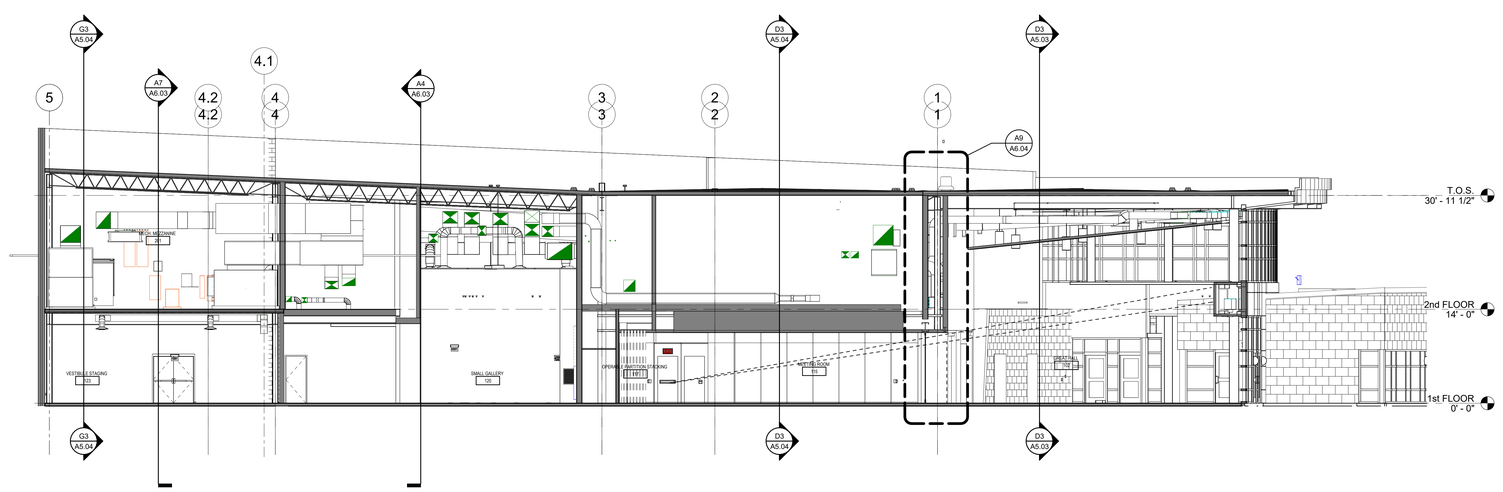


MEZZANINE BUILDING SECTION G3
1/8" = 1'-0"



MEETING/ CLASSROOM BUILDING SECTION D3
1/8" = 1'-0"



MEETING SPACE BUILDING SECTION A3
1/8" = 1'-0"

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BUILDING SECTIONS

A5.04

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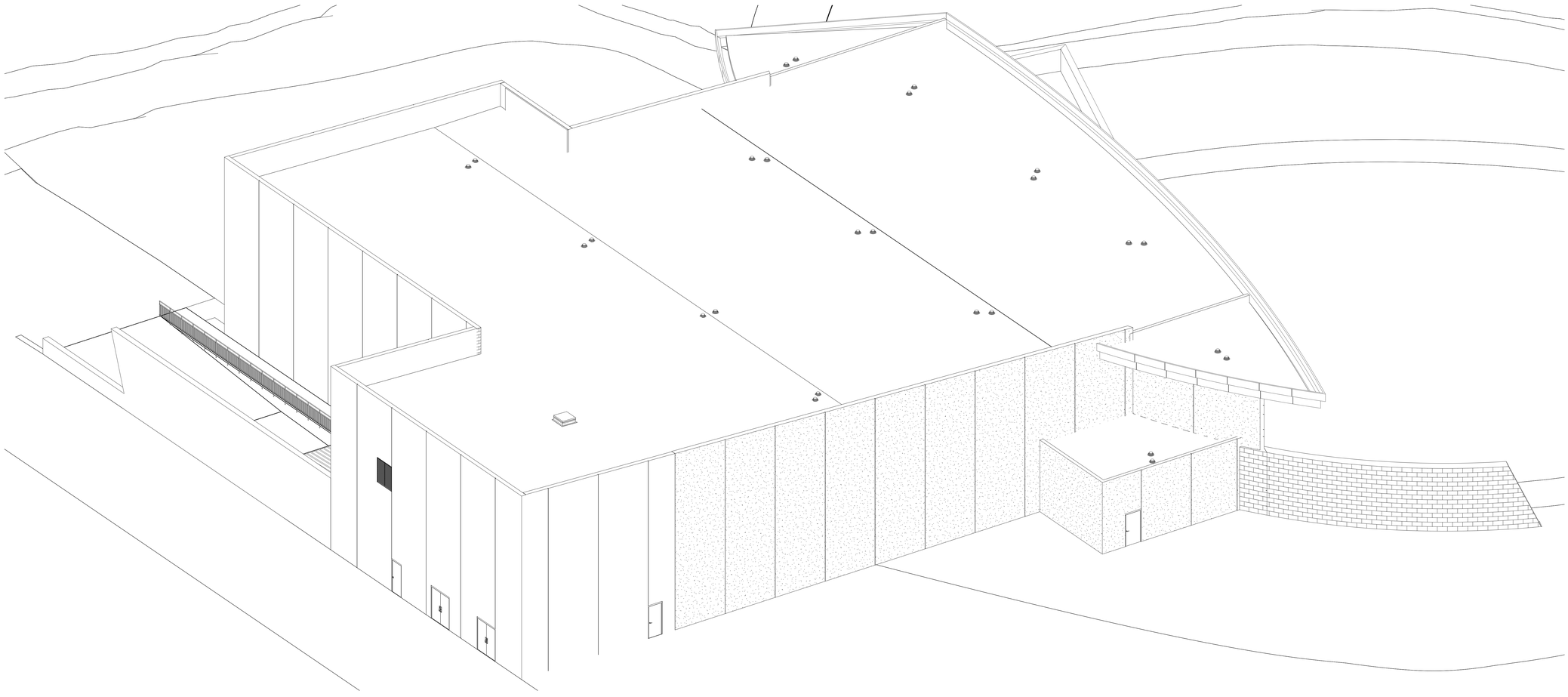
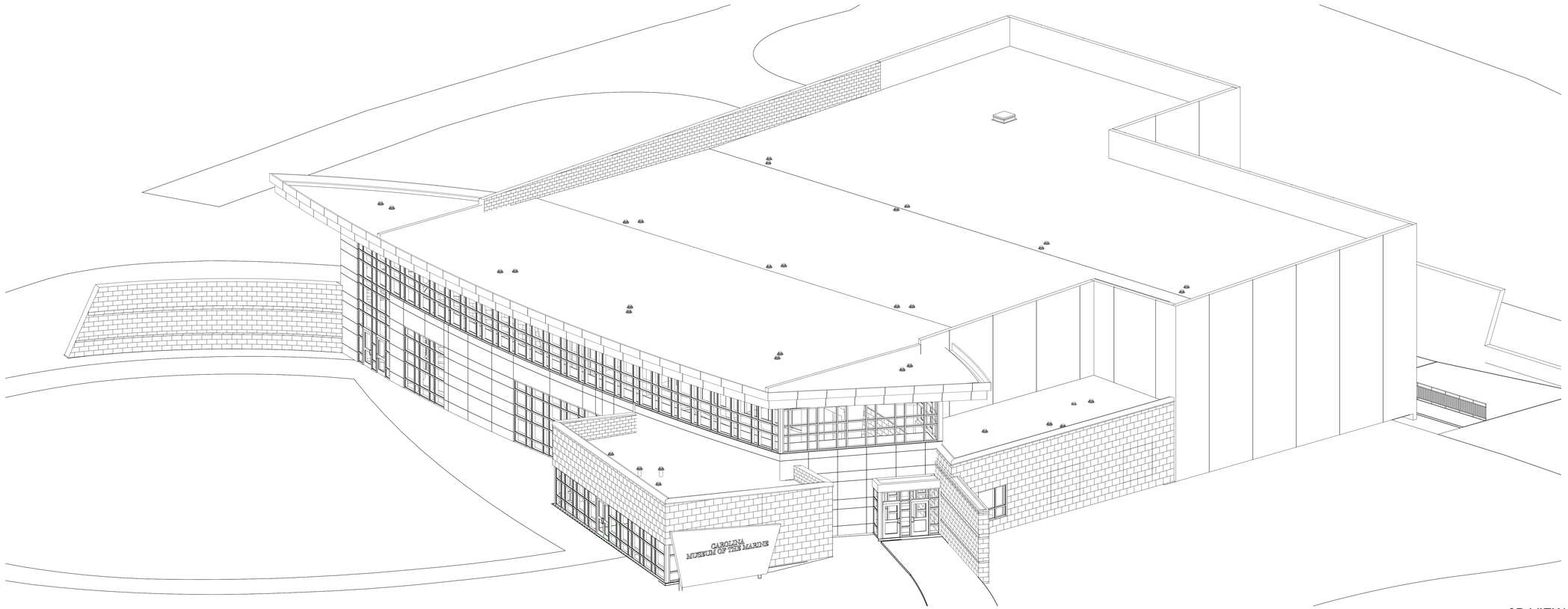


3D VIEW F1



3D VIEW A1

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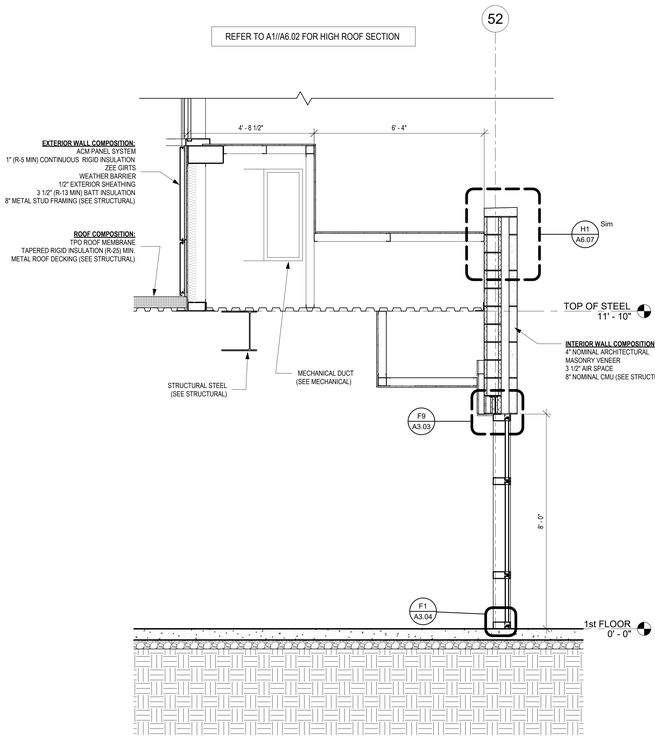
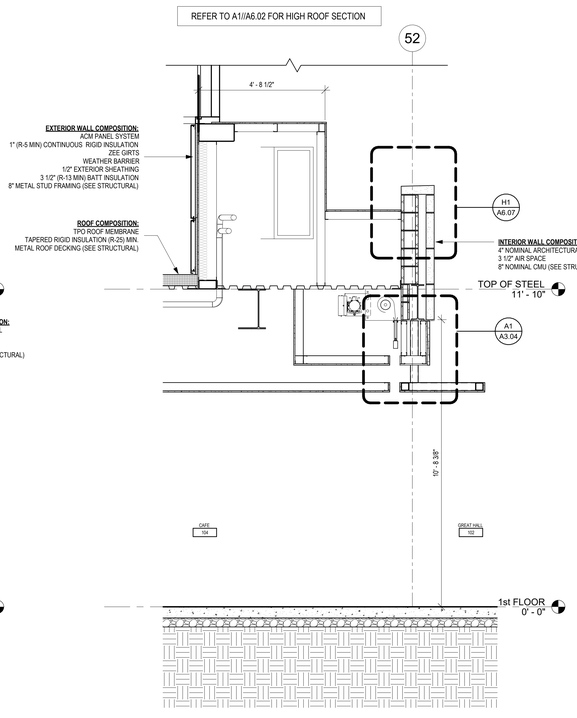
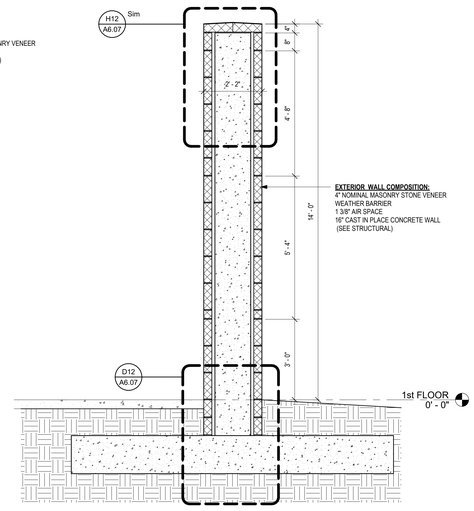


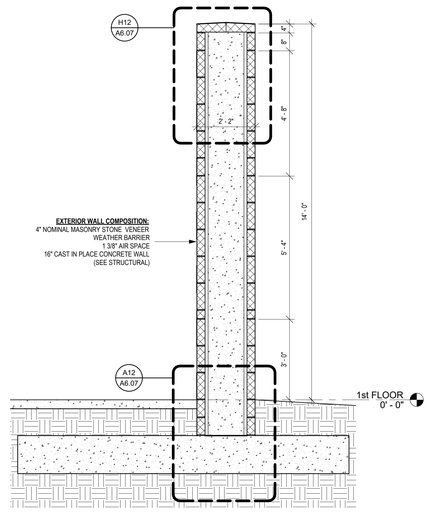
WALL SECTION @ GIFT SHOP 103 INTERIOR C.W. **F11**
1/2" = 1'-0"



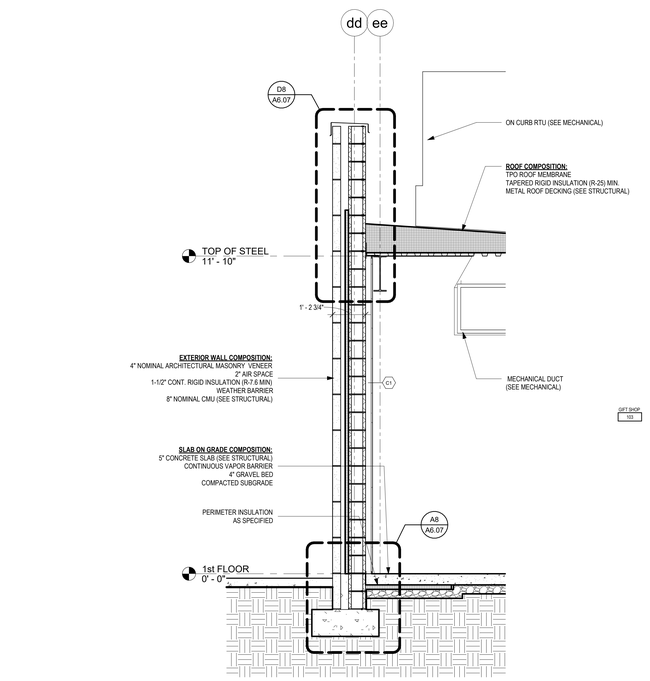
WALL SECTION @ GIFT SHOP 103 SECURITY GRILLE **F7**
1/2" = 1'-0"



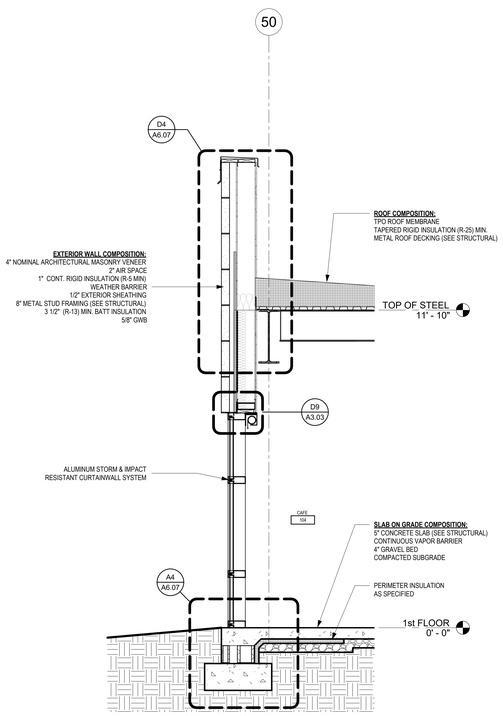
WALL SECTION @ S. MASONRY VENEER WALL **F5**
1/2" = 1'-0"



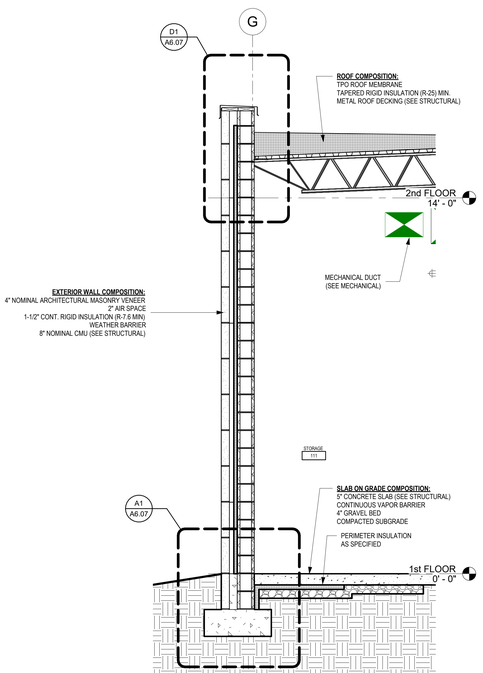
WALL SECTION @ N. MASONRY VENEER WALL **F1**
1/2" = 1'-0"



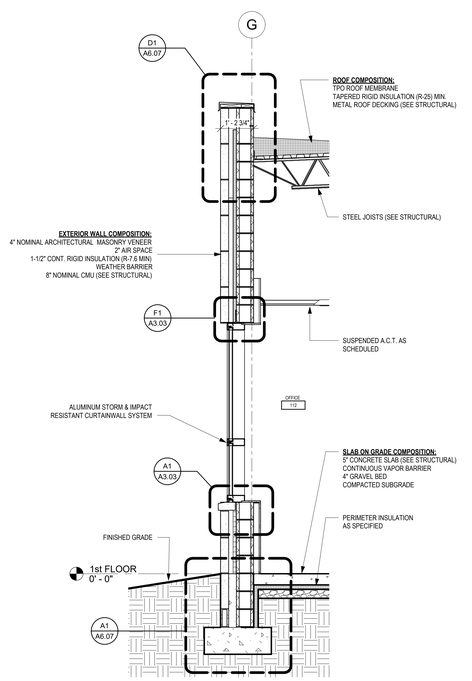
WALL SECTION @ GIFT SHOP 103 **A11**
1/2" = 1'-0"



WALL SECTION @ CAFE 104 **A8**
1/2" = 1'-0"



WALL SECTION @ STORAGE 111 **A4**
1/2" = 1'-0"



WALL SECTION @ OFFICE 112 **A1**
1/2" = 1'-0"

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WALL SECTIONS

A6.01

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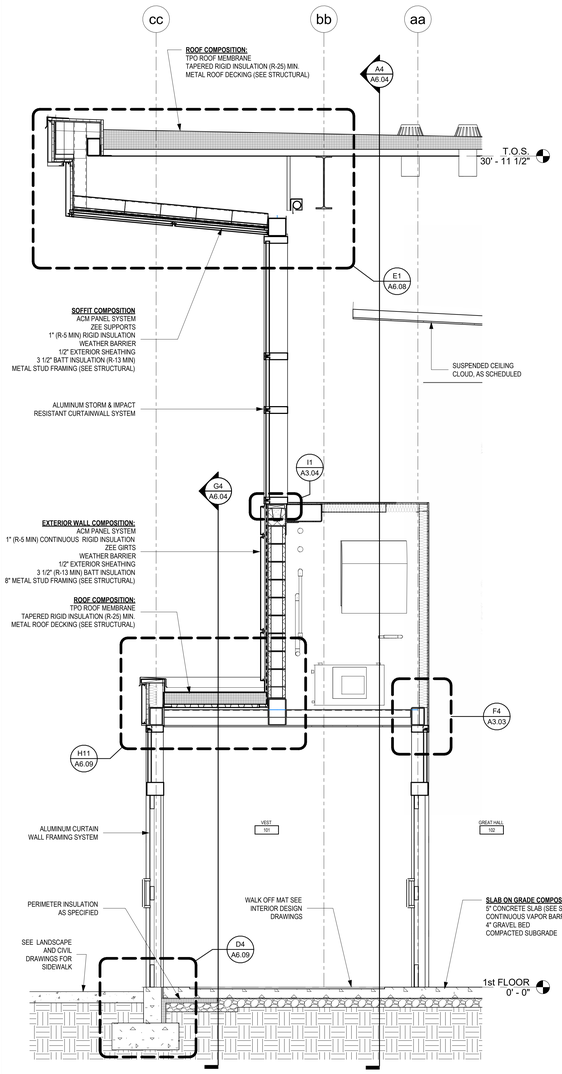
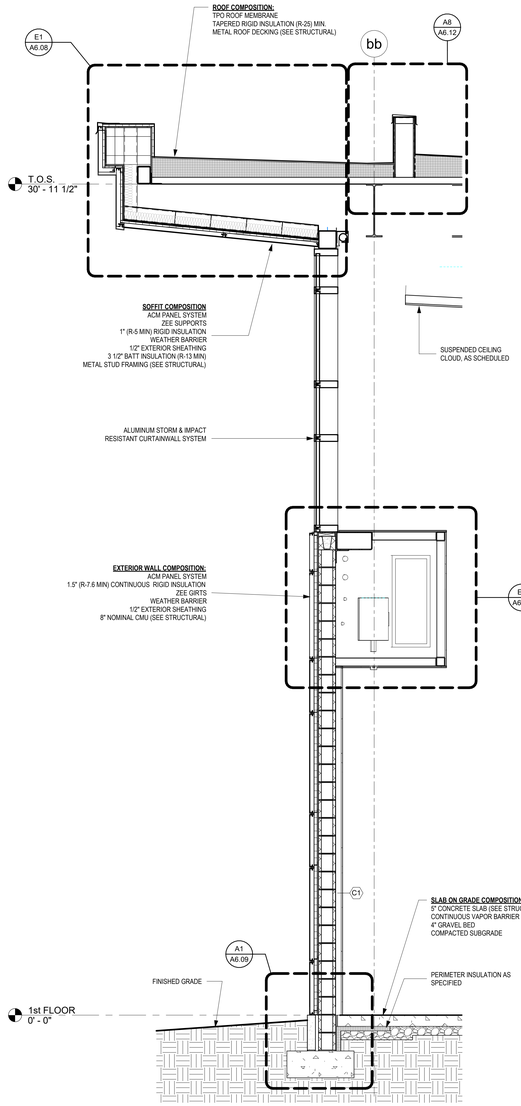
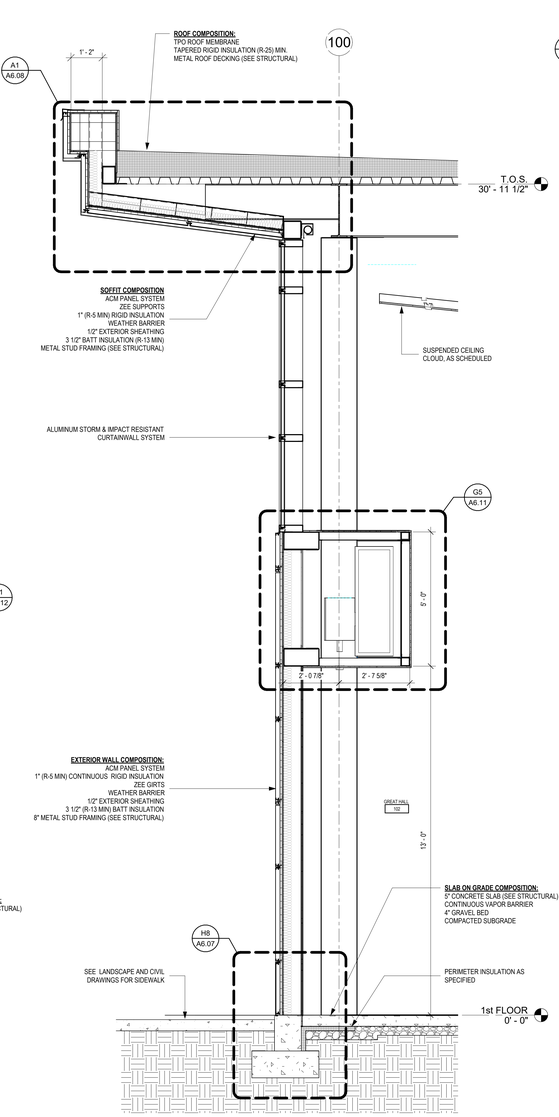


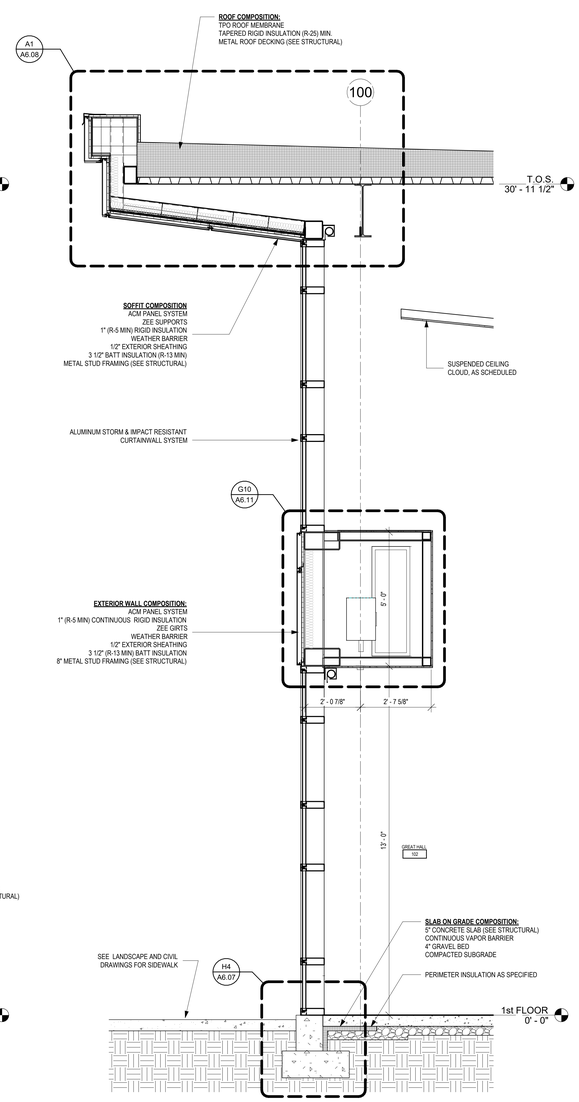
WALL SECTION @ SOUTH VESITBULE 101 **A11**
1/2" = 1'-0"



WALL SECTION @ METAL PANELS SOUTH **A8**
1/2" = 1'-0"



WALL SECTION @ GREAT HALL 102 METAL PANELS **A4**
1/2" = 1'-0"



WALL SECTION @ GREAT HALL 102 CURTAIN WALL **A1**
1/2" = 1'-0"

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WALL SECTIONS

A6.02

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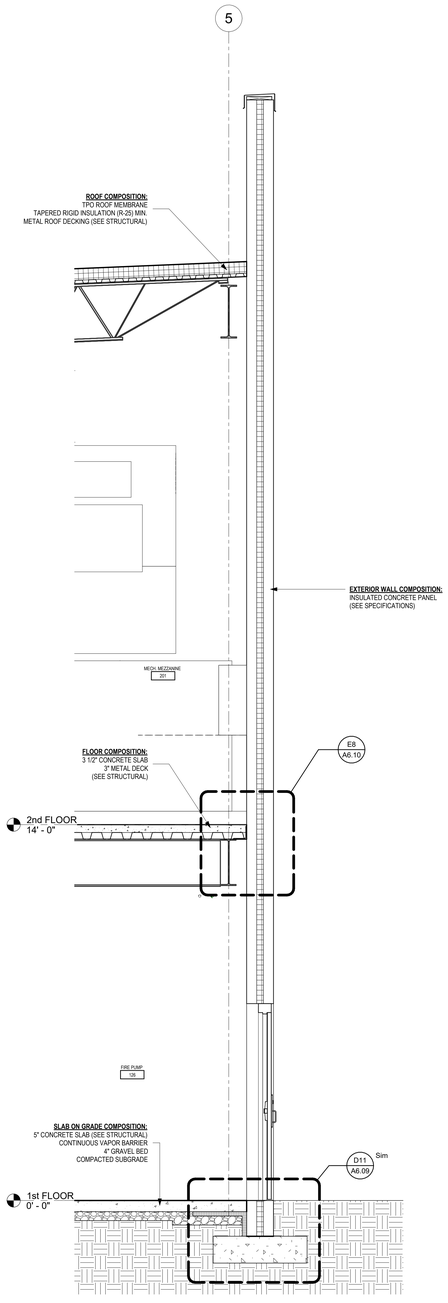
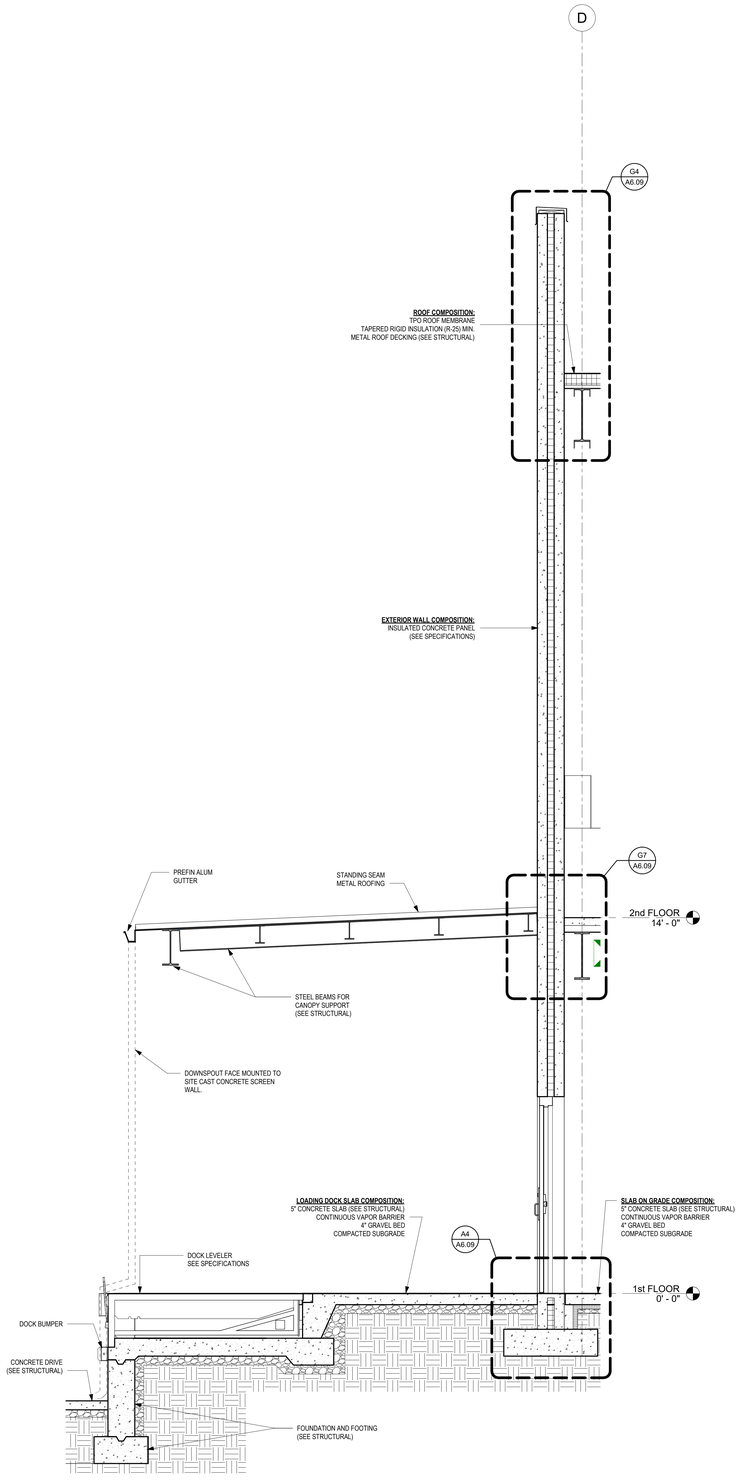
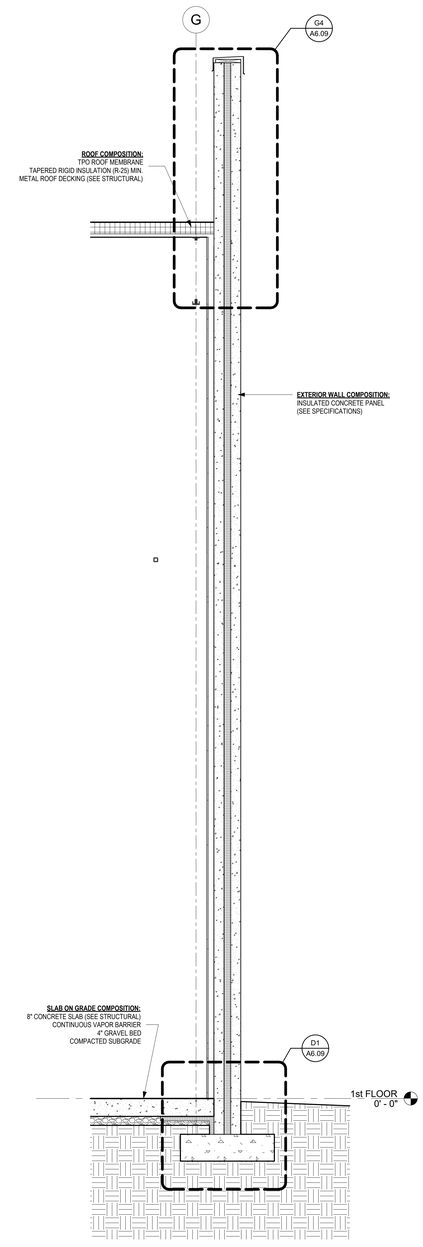


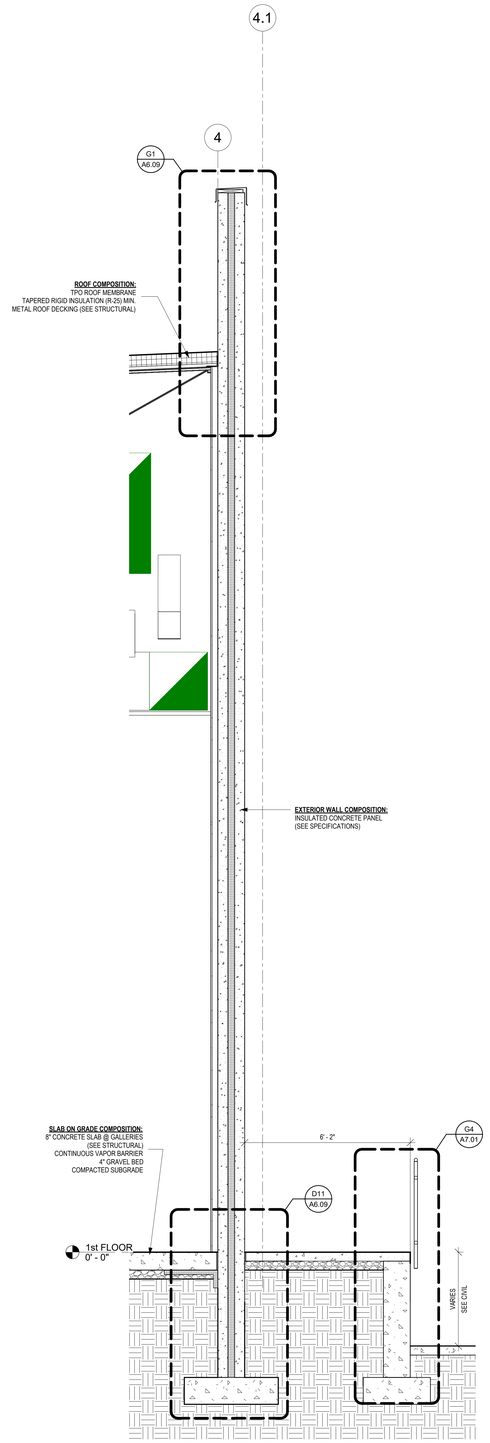
WALL SECTION @ FIRE PUMP 126 **A12**
1/2" = 1'-0"



WALL SECTION @ DOCK LEVELER **A7**
1/2" = 1'-0"



WALL SECTION @ LG. GALLERY 118 (SOUTH) **A4**
1/2" = 1'-0"



WALL SECTION @ LG. GALLERY 118 (EAST) **A1**
1/2" = 1'-0"

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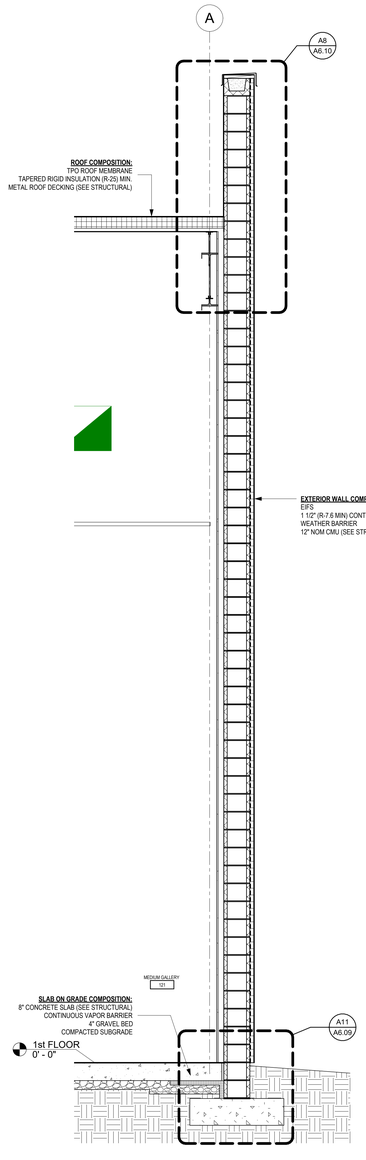
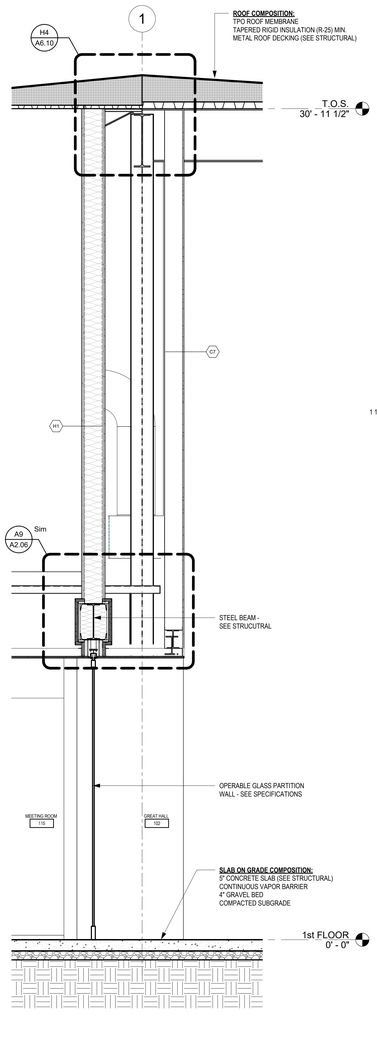
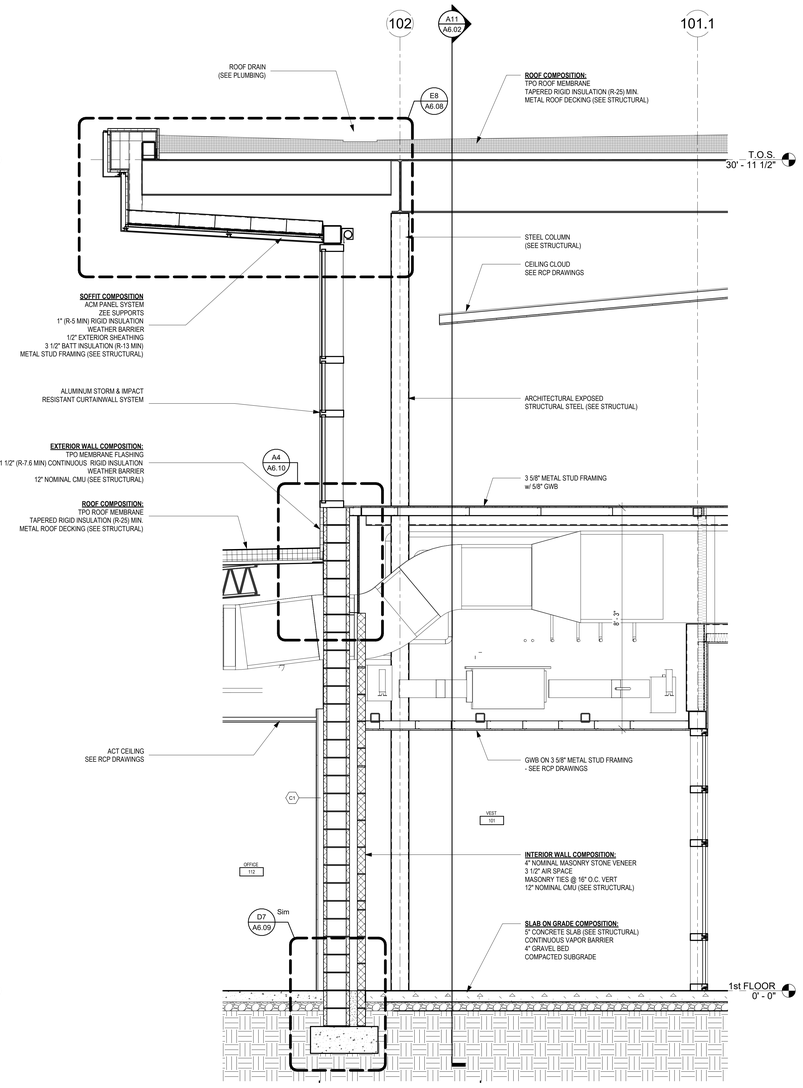


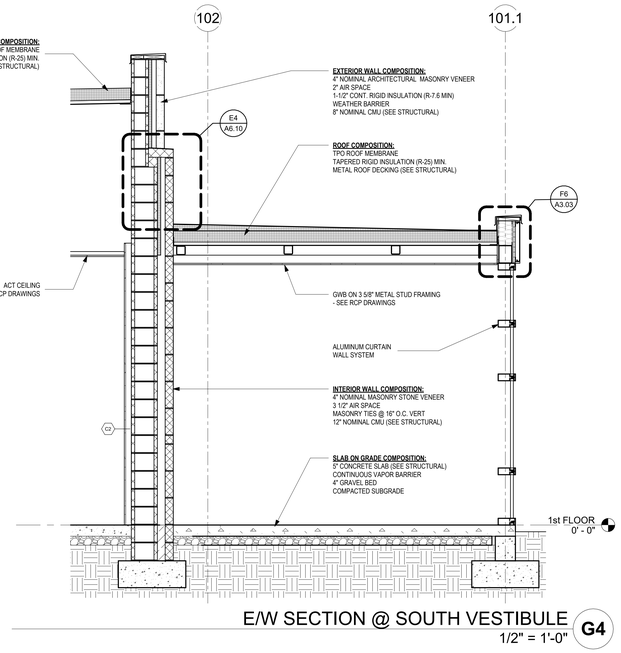
WALL SECTION @ MEDIUM GALLERY 121 **A12**
1/2" = 1'-0"



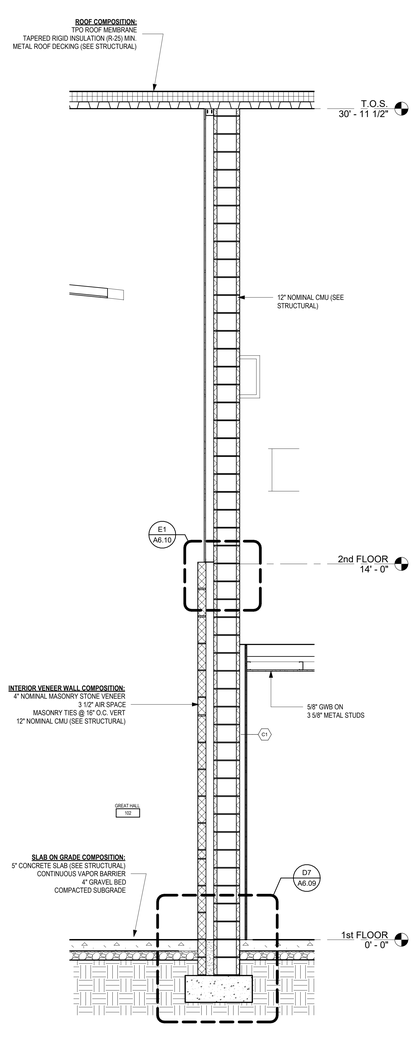
WALL SECTION @ MTG RM 115 / GREAT HALL **A9**
1/2" = 1'-0"



WALL SECTION @ SOUTH VESTIBULE 101 **A4**
1/2" = 1'-0"



E/W SECTION @ SOUTH VESTIBULE **G4**
1/2" = 1'-0"



WALL SECTION @ GREAT HALL / CORR. 110 **A1**
1/2" = 1'-0"

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WALL SECTIONS

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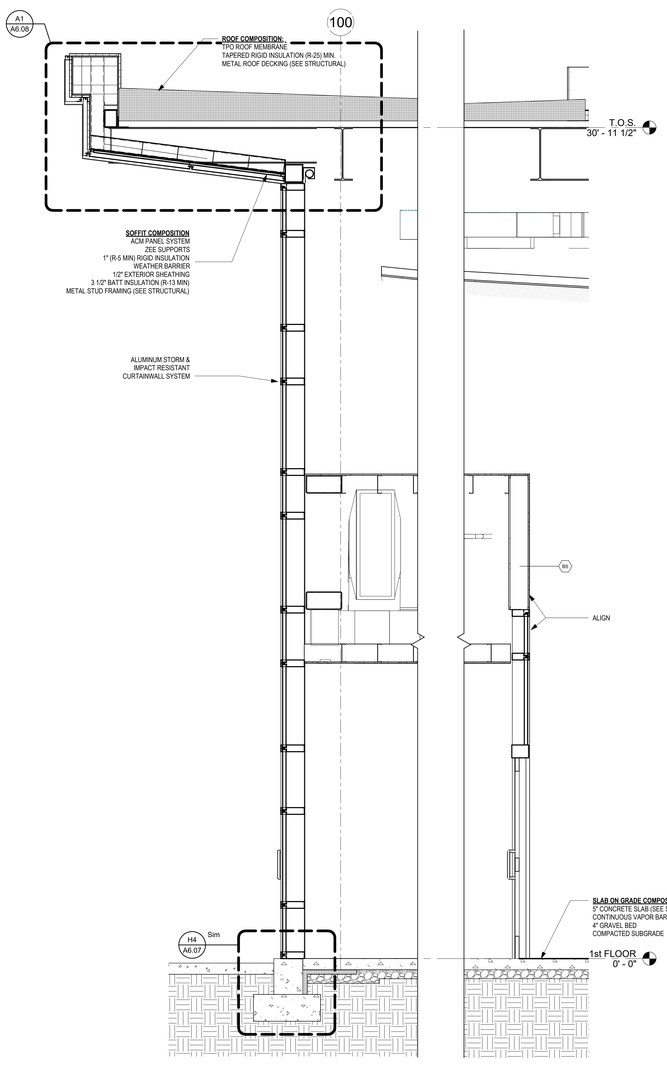
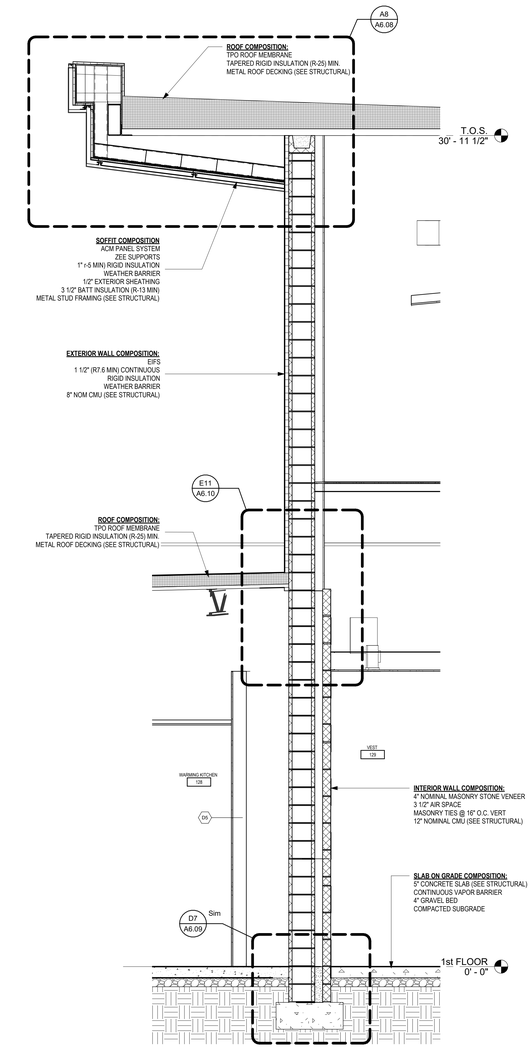
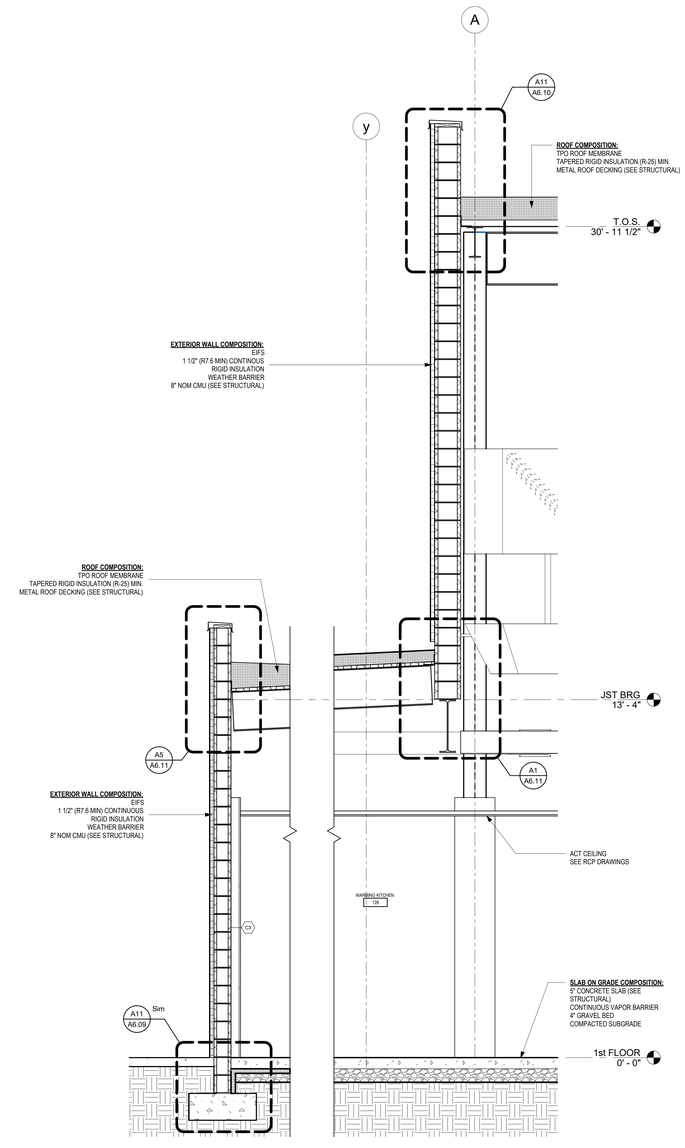


WALL SECTION @ N. VESTIBULE 129 **A10**
1/2" = 1'-0"



WALL SECTION @ N. VEST. 129 / WARMING KITCH. 128 **A6**
1/2" = 1'-0"



WALL SECTION @ WARMING KITCHEN 128 **A1**
1/2" = 1'-0"

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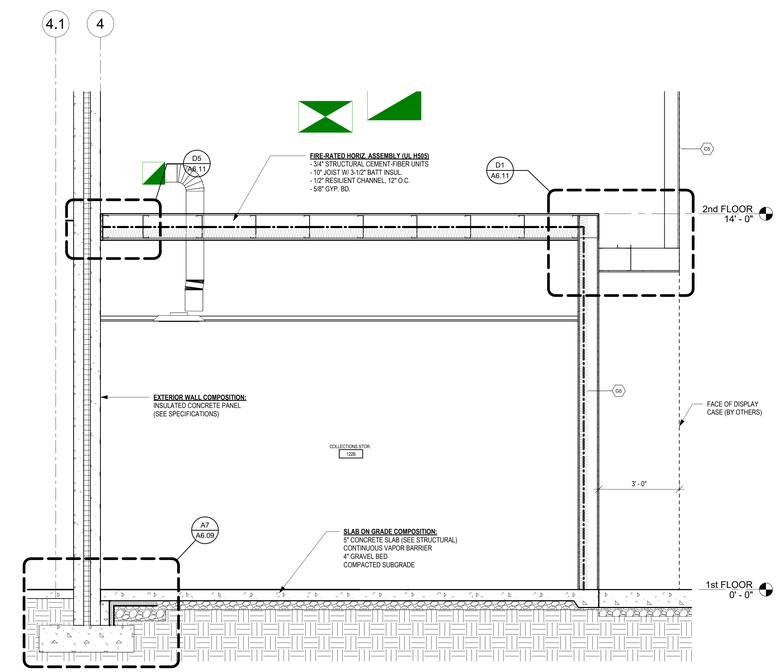
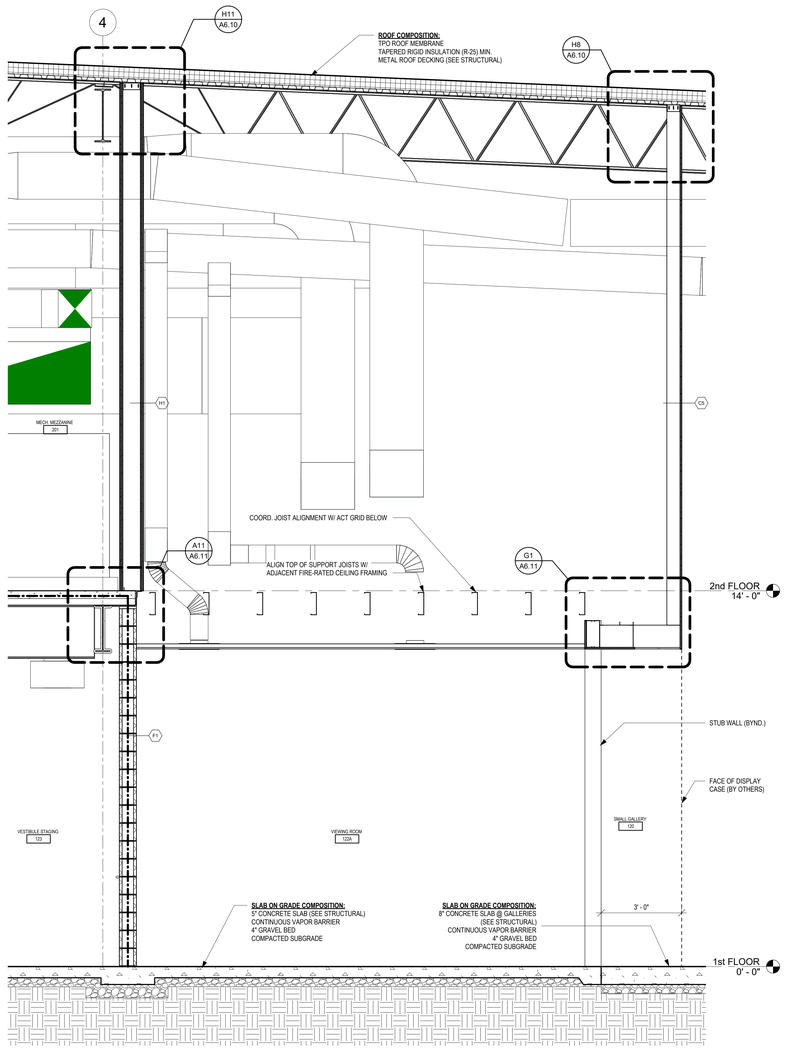
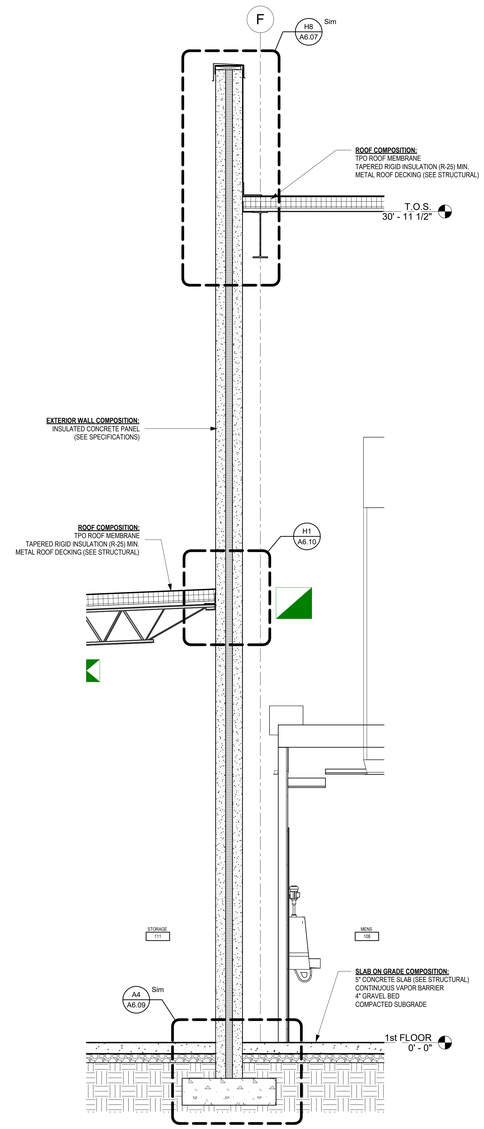


WALL SECTION @ COLLECTIONS STORAGE 122B A10
1/2" = 1'-0"



WALL SECTION @ VIEWING ROOM 122A A4
1/2" = 1'-0"



WALL SECTION @ STG. 111 & MENS 108 A1
1/2" = 1'-0"

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CONSTRUCTION DOCUMENTS

#	Description	Date

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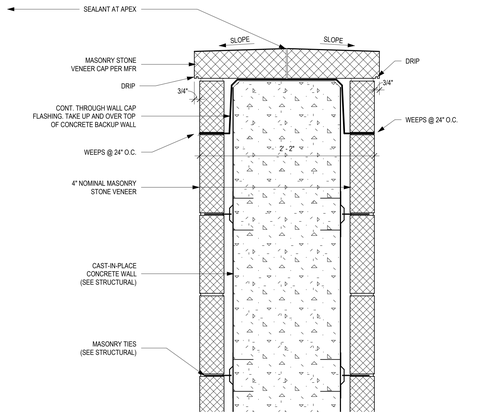
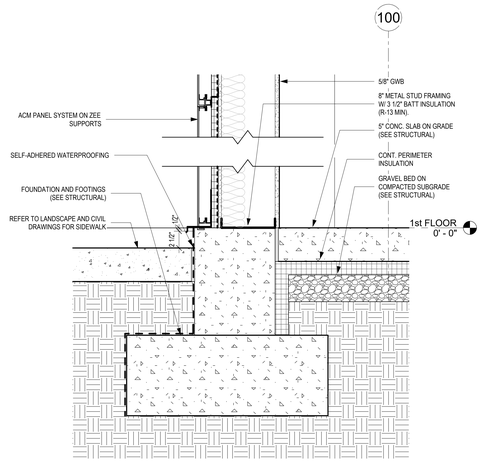
WALL SECTIONS

A6.06

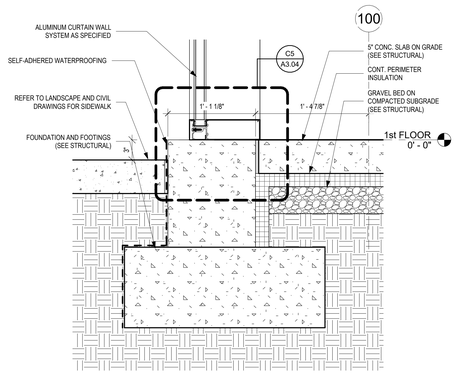
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



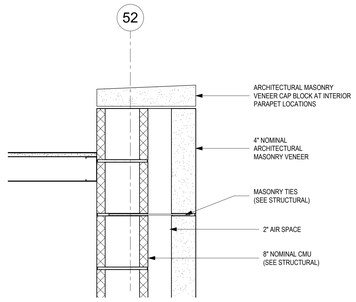
MASONRY STONE VENEER CAP **H12**
1 1/2" = 1'-0"



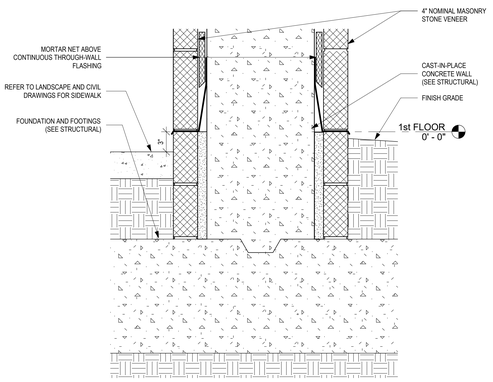
FOUNDATION @ GREAT HALL MTL PANEL **H8**
1 1/2" = 1'-0"



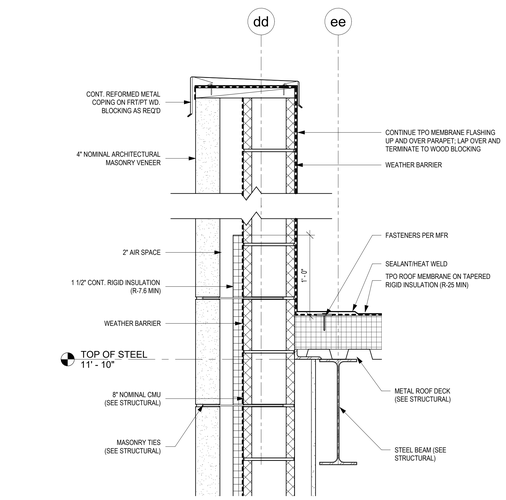
FOUNDATION @ GREAT HALL CW **H4**
1 1/2" = 1'-0"



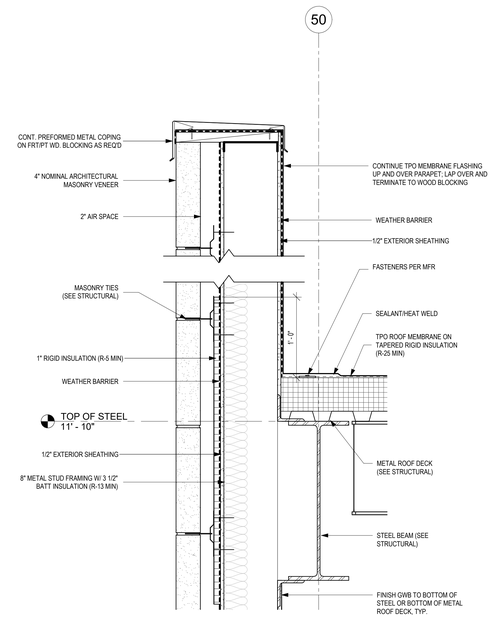
INTERIOR PARAPET @ AMV/CMU **H1**
1 1/2" = 1'-0"



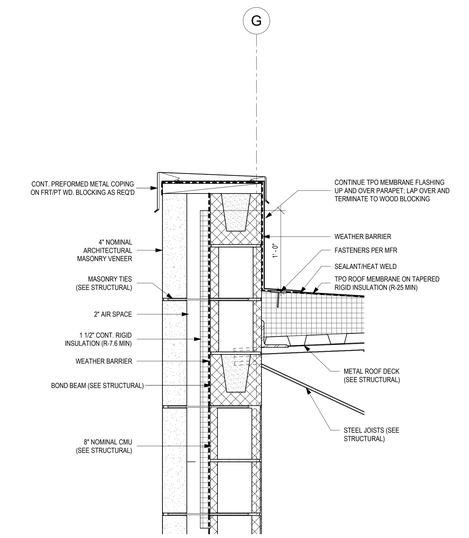
FOUNDATION @ S. MSV WALL **D12**
1 1/2" = 1'-0"



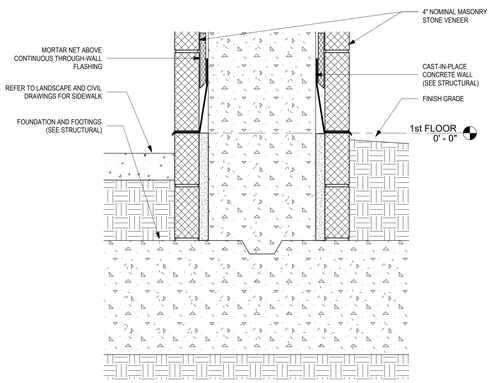
PARAPET @ ARCH MASONRY VENEER / CMU **D8**
1 1/2" = 1'-0"



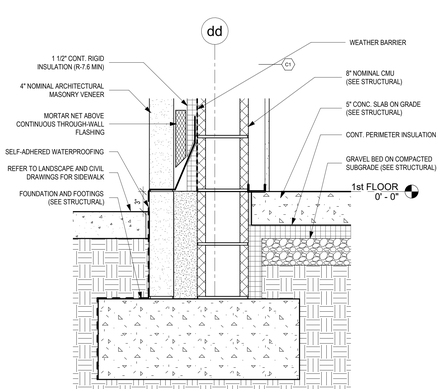
PARAPET @ ARCH MASONRY VENEER / MTL STUD **D4**
1 1/2" = 1'-0"



JOIST BEARING PARAPET @ AMV **D1**
1 1/2" = 1'-0"



FOUNDATION @ N. MSV WALL **A12**
1 1/2" = 1'-0"
**M.S.V. = MASONRY STONE VENEER*



FOUNDATION @ AMV / HARDSCAPE **A8**
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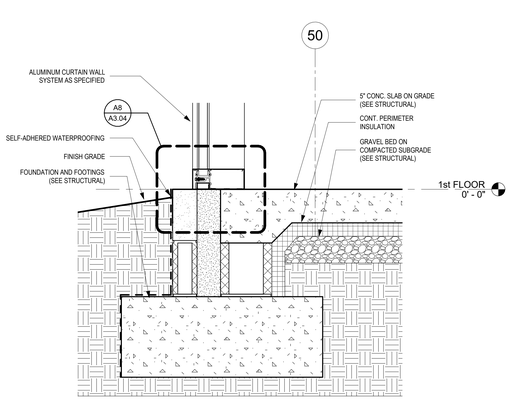
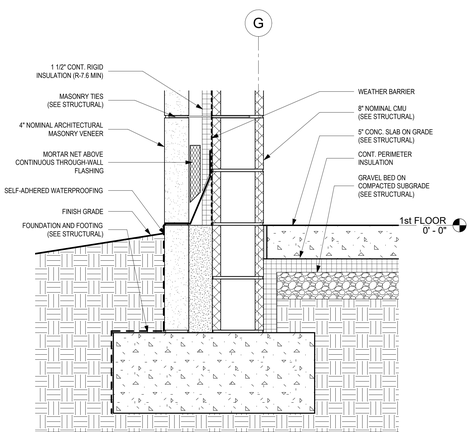


FOUNDATION @ GIFT SHOP CW **A4**
1 1/2" = 1'-0"



FOUNDATION @ AMV / GRADE **A1**
1 1/2" = 1'-0"
**A.M.V. = ARCHITECTURAL MASONRY VENEER*

CJMW ARCHITECTURE
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Winston-Salem, NC 27101
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HICAPS

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CONSTRUCTION DOCUMENTS

#	Description	Date

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SECTION DETAILS

A6.07

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
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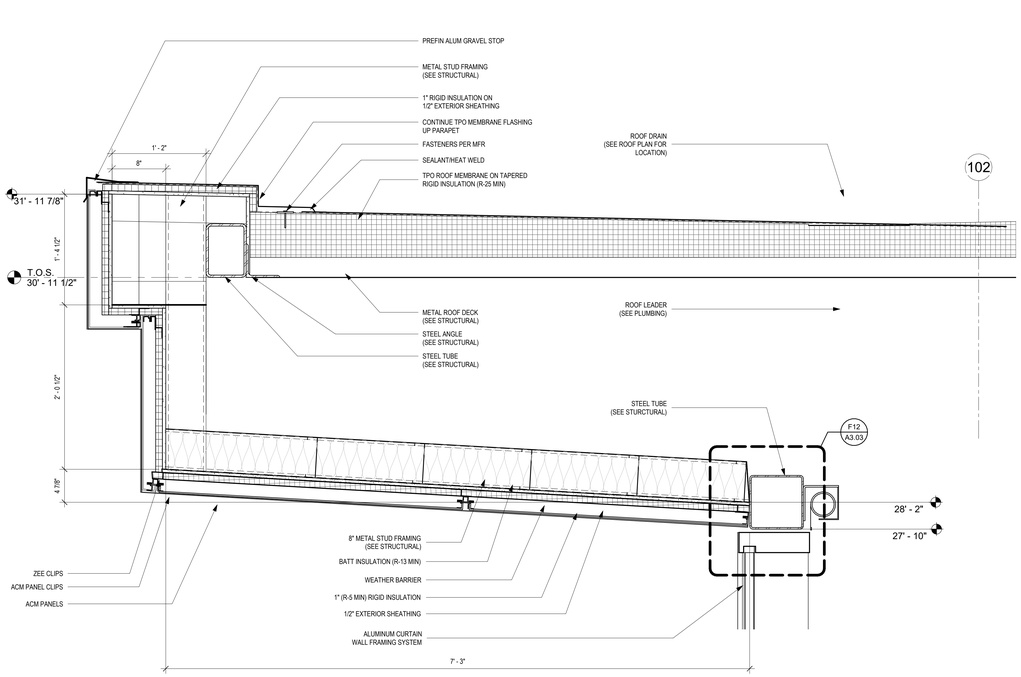
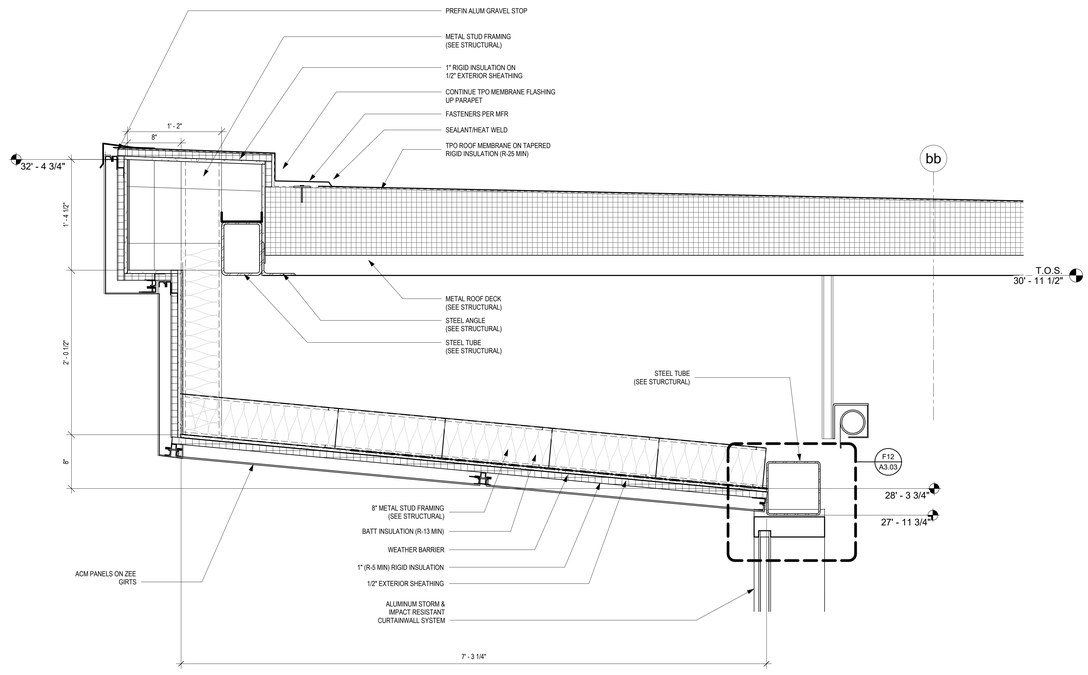


OVERHANG ABOVE LOW ROOF **E8**
1 1/2" = 1'-0"



OVERHANG @ ENTRY VESTIBULE **E1**
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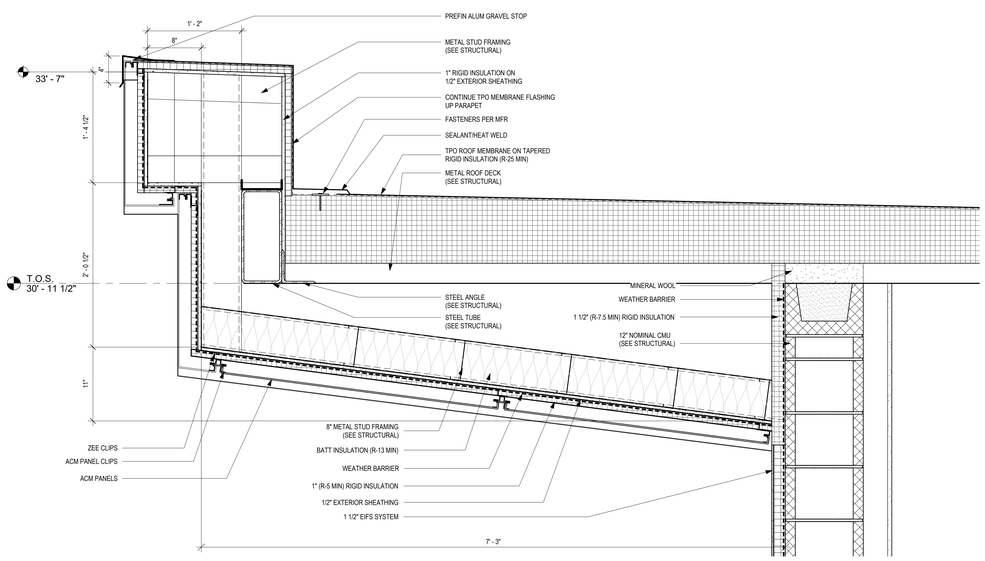
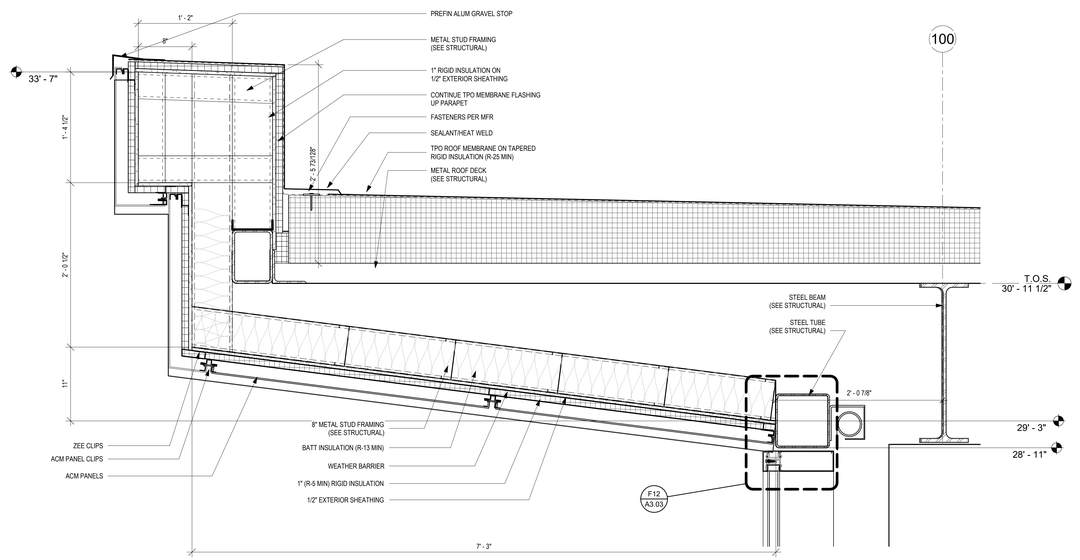


OVERHANG DETAIL @ CMU **A8**
1 1/2" = 1'-0"



OVERHANG DETAIL @ CURTAIN WALL **A1**
1 1/2" = 1'-0"

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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE THOMPSON IV 032978 REGISTERED ARCHITECT GREENSBORO, NC 10/24/2023

#	Description	Date

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SECTION DETAILS

A6.08

ISSUE DATE: 10-24-2023
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DRAWN BY: Author
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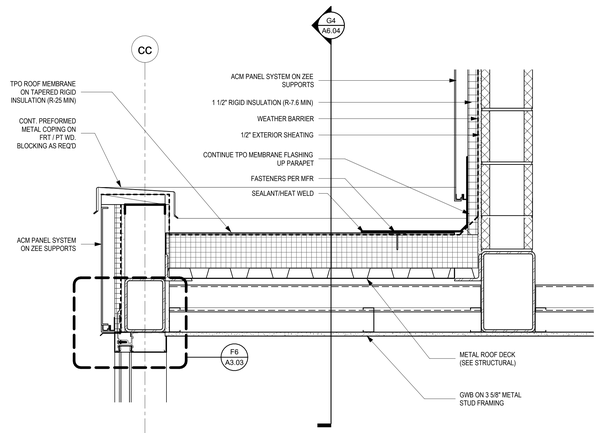
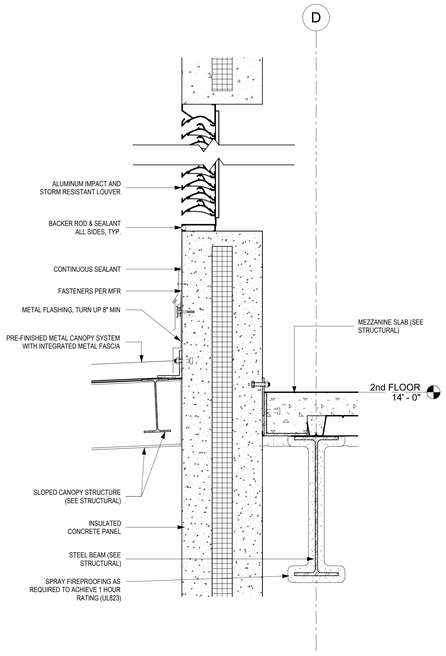
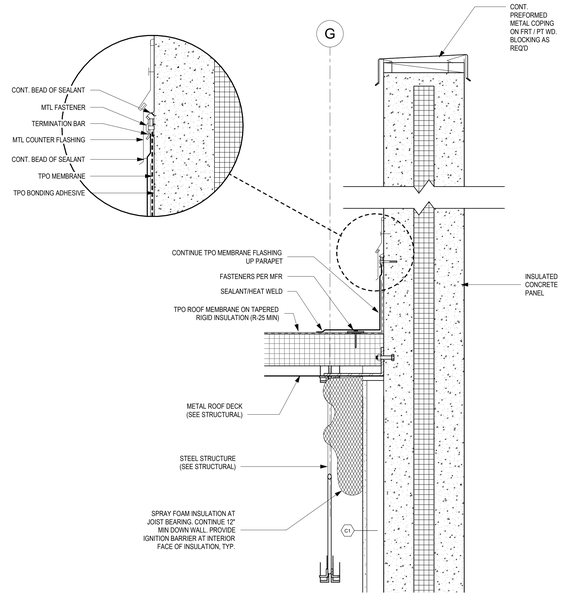


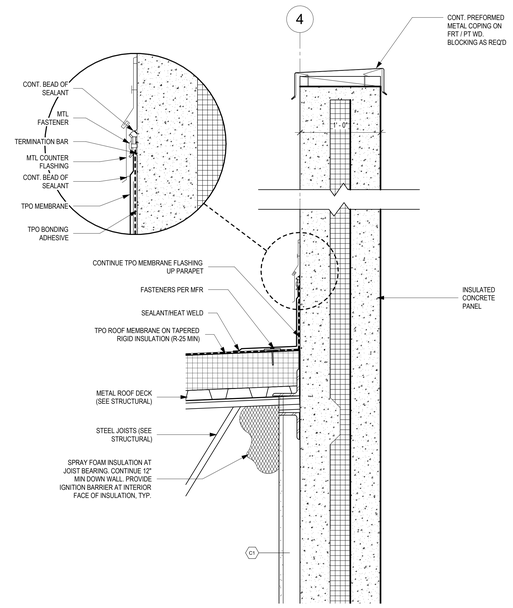
VESTIBULE ROOF DETAIL **H11**
1 1/2" = 1'-0"



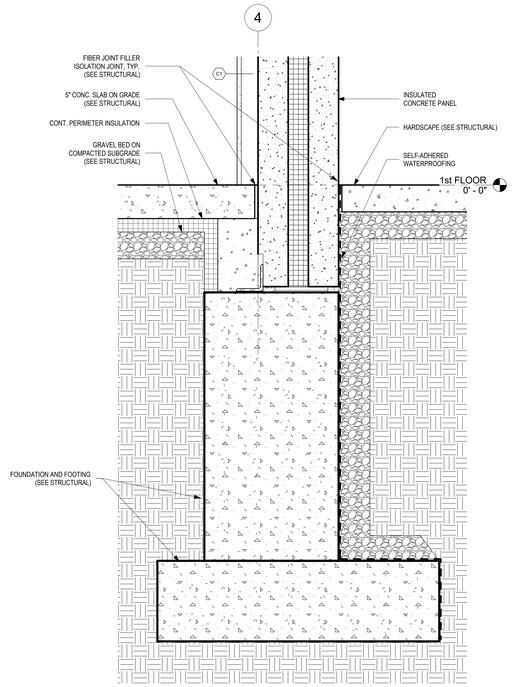
LOADING DOCK CANOPY **G7**
1 1/2" = 1'-0"



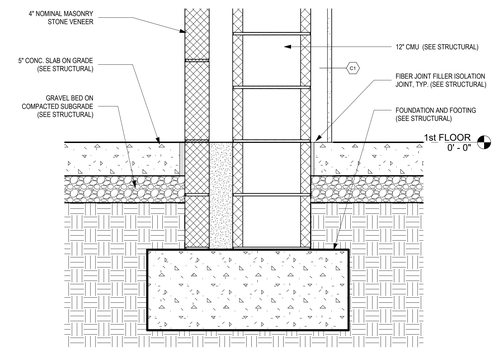
PARAPET @ PRECAST NON BEARING **G4**
1 1/2" = 1'-0"



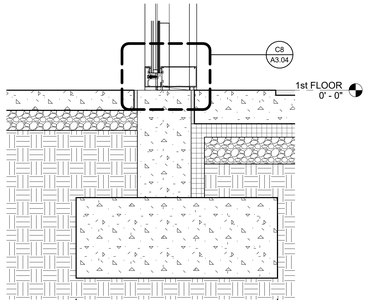
PARAPET @ PRECAST JOIST BEARING **G1**
1 1/2" = 1'-0"



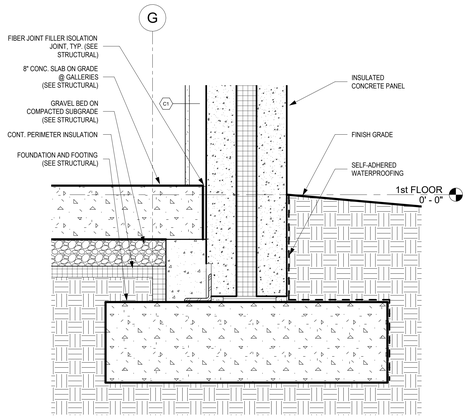
FOUNDATION @ PERIMETER PRECAST **D11**
1 1/2" = 1'-0"



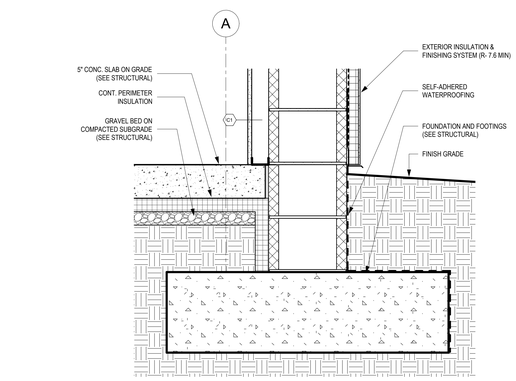
FOUNDATION @ M.S.V. CURVED WALL **D7**
1 1/2" = 1'-0"
M.S.V. = MASONRY STONE VENEER



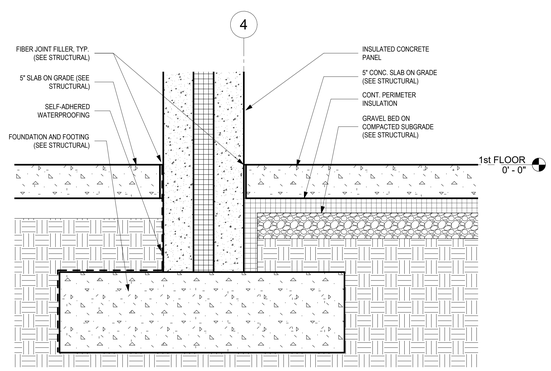
FOUNDATION @ VESTIBULE CW **D4**
1 1/2" = 1'-0"



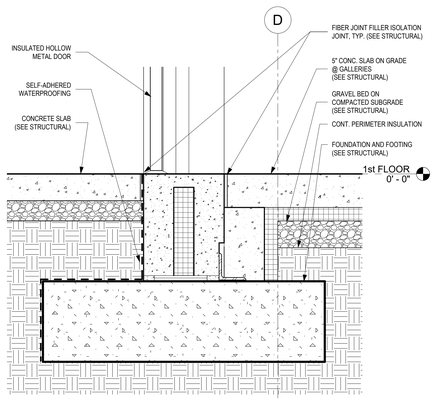
FOUNDATION @ PRECAST / GRADE **D1**
1 1/2" = 1'-0"



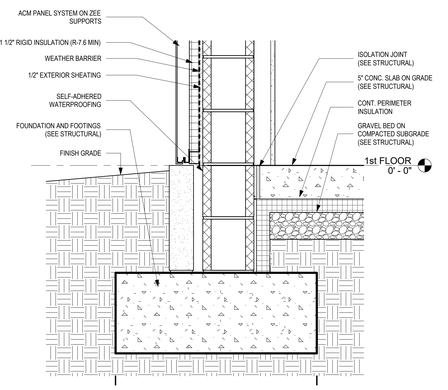
FOUNDATION @ EIFS **A11**
1 1/2" = 1'-0"



FOUNDATION @ COLLECTIONS STG. PRECAST **A7**
1 1/2" = 1'-0"



FOUNDATION @ PRECAST **A4**
1 1/2" = 1'-0"



FOUNDATION @ MTL PANEL / GRADE **A1**
1 1/2" = 1'-0"

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CONSTRUCTION DOCUMENTS

CERT. NO. 26536 — REGISTERED ARCHITECTURE — WINSTON-SALEM, NC

CHRISTOPHER LESLIE DAVIS — SEAL 026536 — 10/24/2023 — REGISTERED ARCHITECT — WINSTON-SALEM, NC

#	Description	Date

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SECTION DETAILS

A6.09

ISSUE DATE: 10-24-2023
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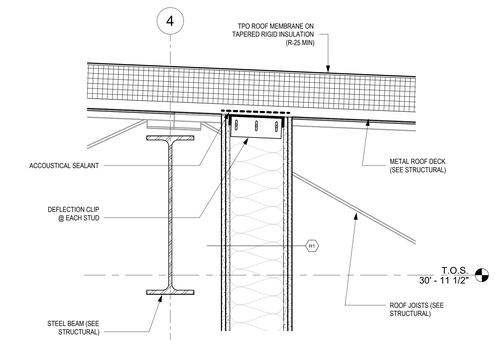
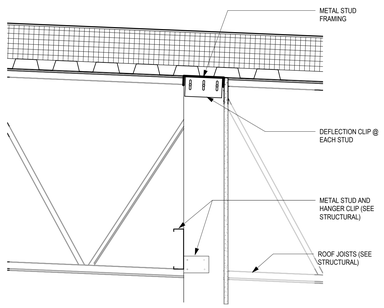
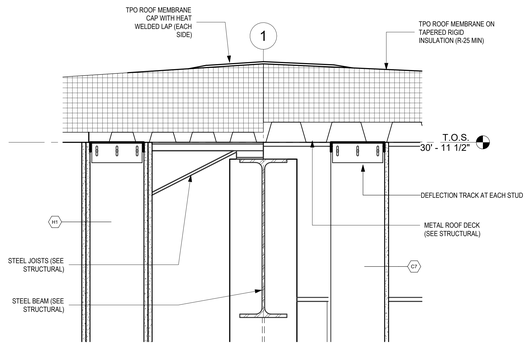


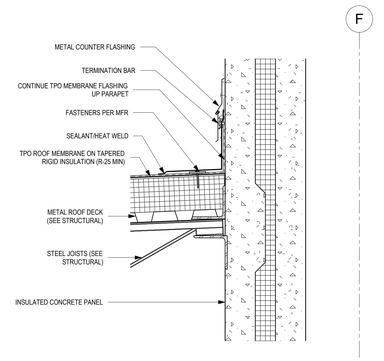
ROOF DETAIL @ MECH. MEZZ. **H11**
1 1/2" = 1'-0"



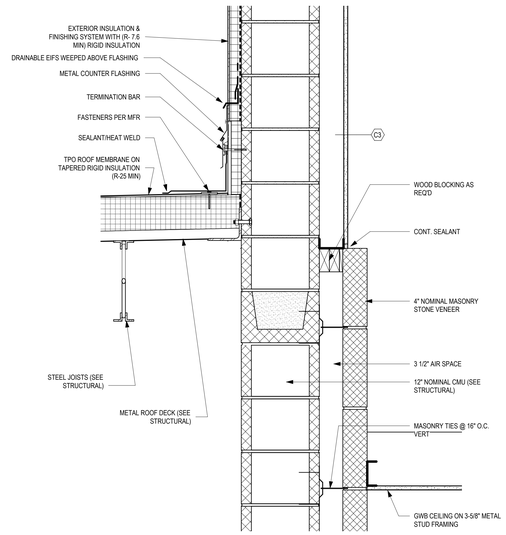
ROOF DETAIL @ SM. GALLERY 120 WALL **H8**
1 1/2" = 1'-0"



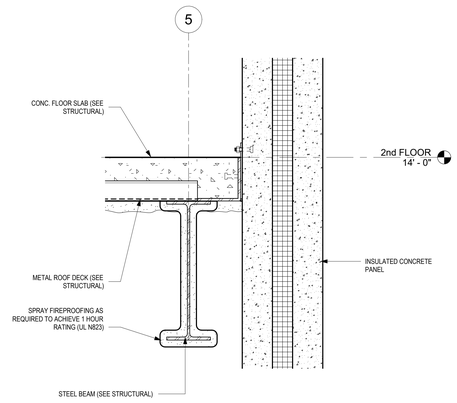
ROOF TRANSITION DETAIL **H4**
1 1/2" = 1'-0"



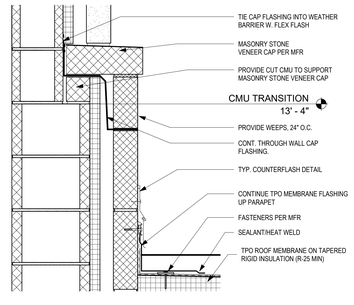
LOW ROOF @ PRECAST WALL **H1**
1 1/2" = 1'-0"



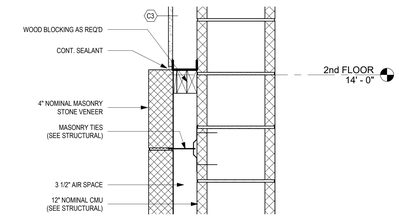
MASONRY STONE VENEER TRANSITION @ N. VESTIBULE **E11**
1 1/2" = 1'-0"



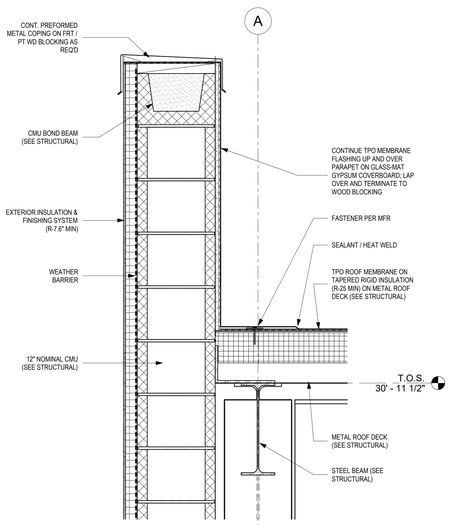
MEZZ @ PRECAST DETAIL **E8**
1 1/2" = 1'-0"



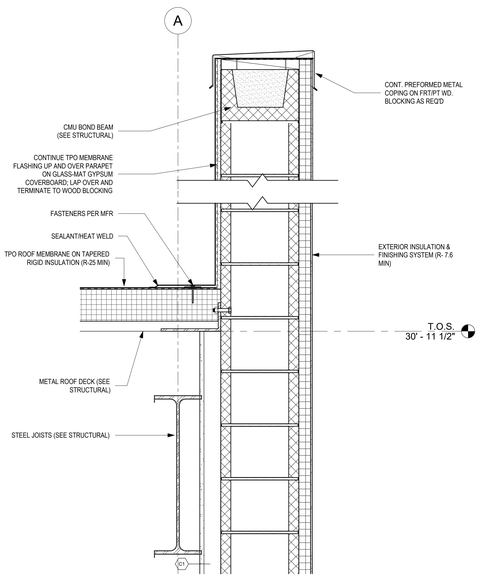
DETAIL @ PARAPET TRANSITION **E4**
1 1/2" = 1'-0"



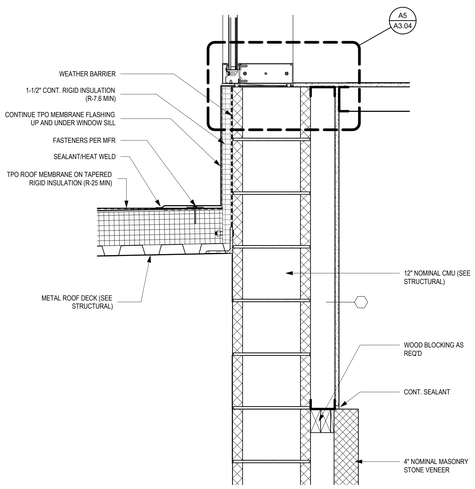
MASONRY STONE VENEER @ GWB TRANSITION **E1**
1 1/2" = 1'-0"



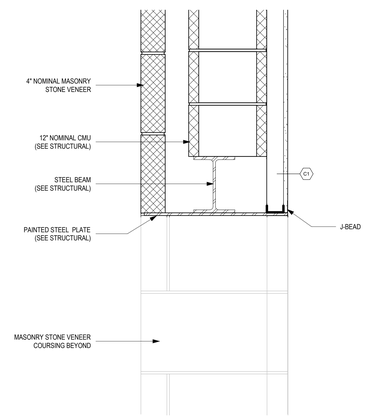
PARAPET @ EIFS / 12" CMU @ WARMING KITCHEN **A11**
1 1/2" = 1'-0"



ROOF CONNECTION @ MEDIUM GALLERY **A8**
1 1/2" = 1'-0"



LOW ROOF DETAIL @ CURTAIN WALL **A4**
1 1/2" = 1'-0"



HEAD @ MASONRY STONE VENEER OPENING **A1**
1 1/2" = 1'-0"

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p. 336.724.1503
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CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE P.A. CERT. NO. 58056 WINSTON-SALEM, NC

JOHN LESLIE [illegible] SEAL 032161 REGISTERED LANDSCAPE ARCHITECT 10/24/2023 CARY, NORTH CAROLINA

#	Description	Date

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SECTION DETAILS

A6.10

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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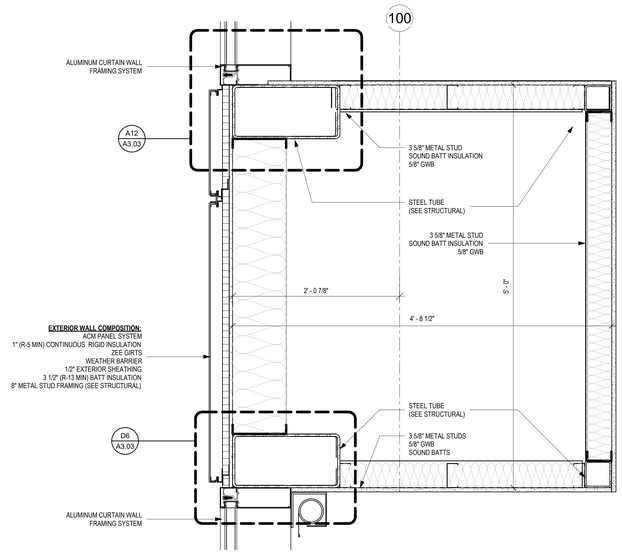
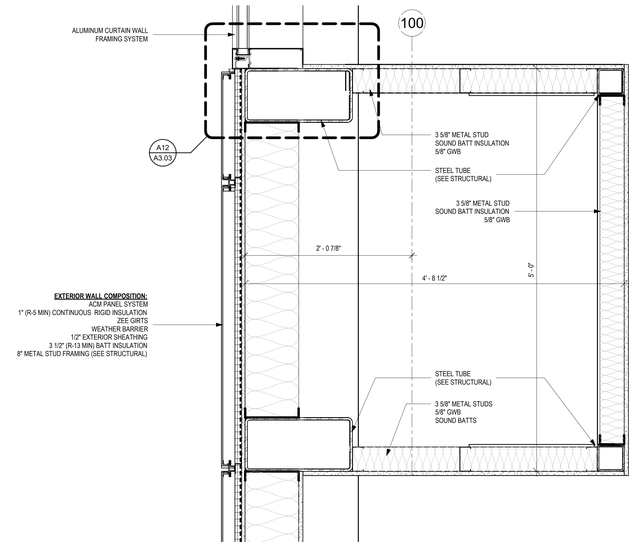
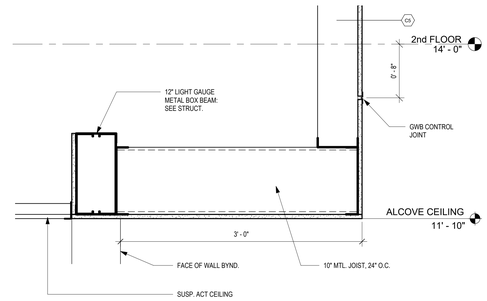


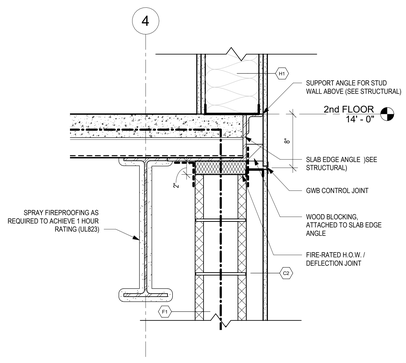
GREAT HALL BULKHEAD @ CW **G10**
1 1/2" = 1'-0"



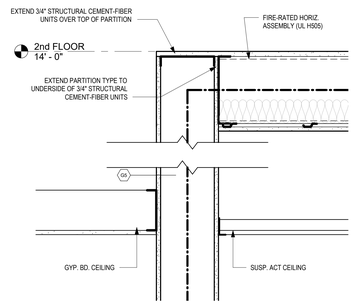
GREAT HALL BULKHEAD @ METAL PANEL **G5**
1 1/2" = 1'-0"



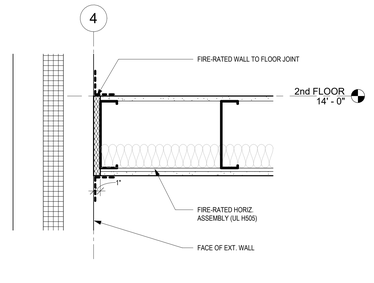
DETAIL @ ALCOVE HEAD **G1**
1 1/2" = 1'-0"



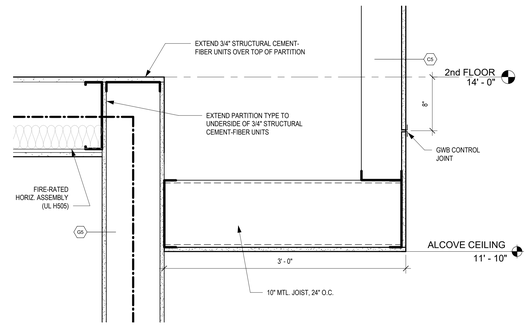
GWB CONTROL JOINT @ LINE 4 **D11**
1 1/2" = 1'-0"



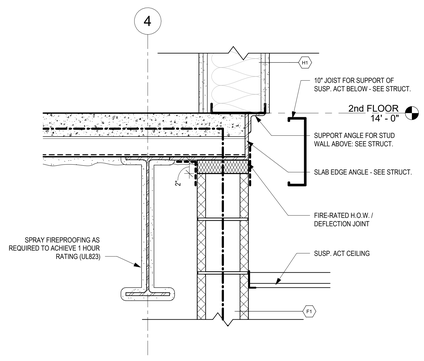
EDGE OF FIRE-RATED CLNG **D8**
1 1/2" = 1'-0"



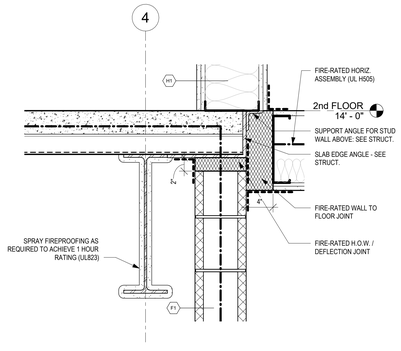
FIRE-RATED CAP - EXT. WALL **D5**
1 1/2" = 1'-0"



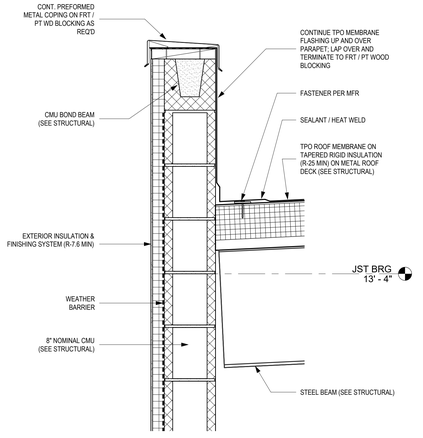
FIRE-RATED CAP - INT. WALL **D1**
1 1/2" = 1'-0"



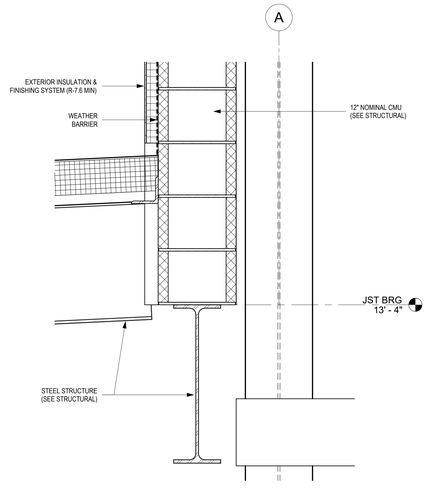
DETAIL @ CMU TO FLOOR @ LINE 4 **A11**
1 1/2" = 1'-0"



FIRE-RATED CEILING @ CMU **A8**
1 1/2" = 1'-0"



PARAPET @ EIFS / 8" CMU @ WARMING KITCH. **A5**
1 1/2" = 1'-0"



LOW ROOF CONNECTION @ WARMING KITCHEN **A1**
1 1/2" = 1'-0"

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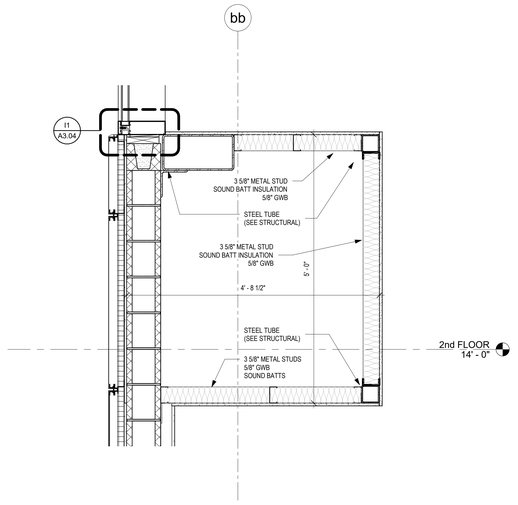
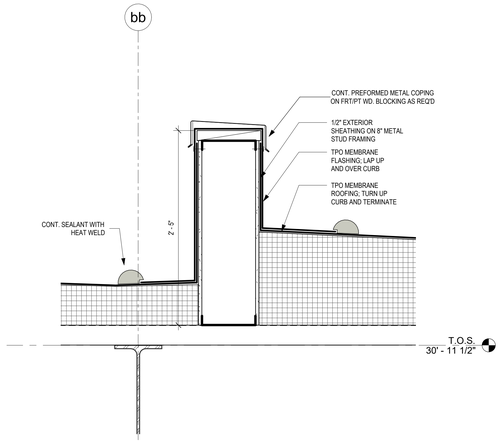
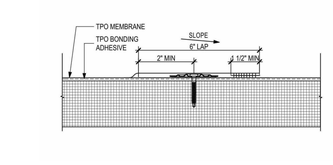


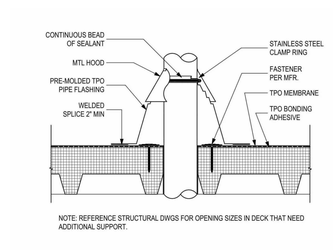
GREAT HALL BULKHEAD @METAL PANEL ON CMU **E1**
1" = 1'-0"



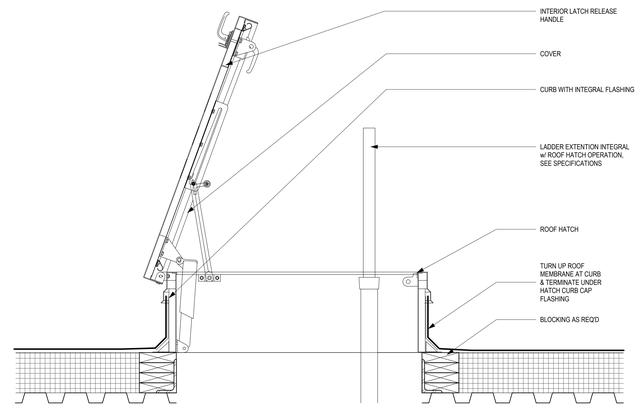
ROOF AREA DIVIDER **A8**
1 1/2" = 1'-0"



TYP LAP SPLICE **C6**
3" = 1'-0"



TYP ROOF PENETRATION **A6**
3" = 1'-0"



ROOF HATCH SECTION **A1**
1 1/2" = 1'-0"

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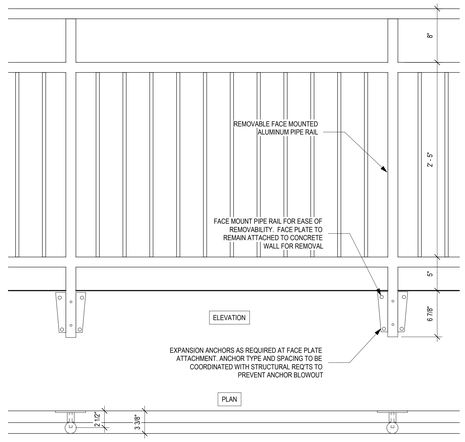
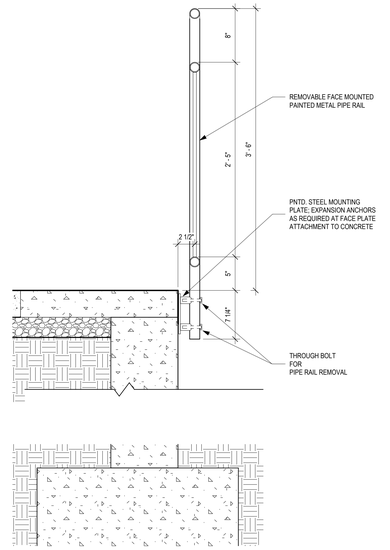
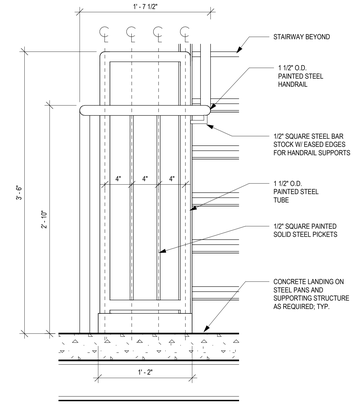


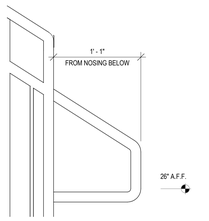
FACE MOUNTED RAILING DETAIL **G7**
1 1/2" = 1'-0"



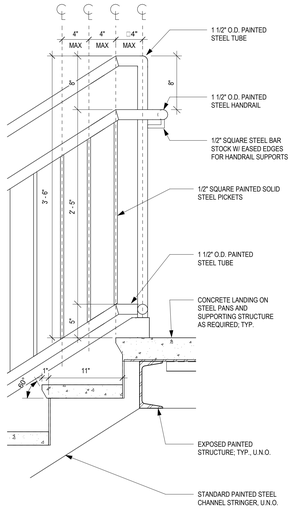
RAILING @ LOADING DOCK PLATFORM **G4**
1 1/2" = 1'-0"



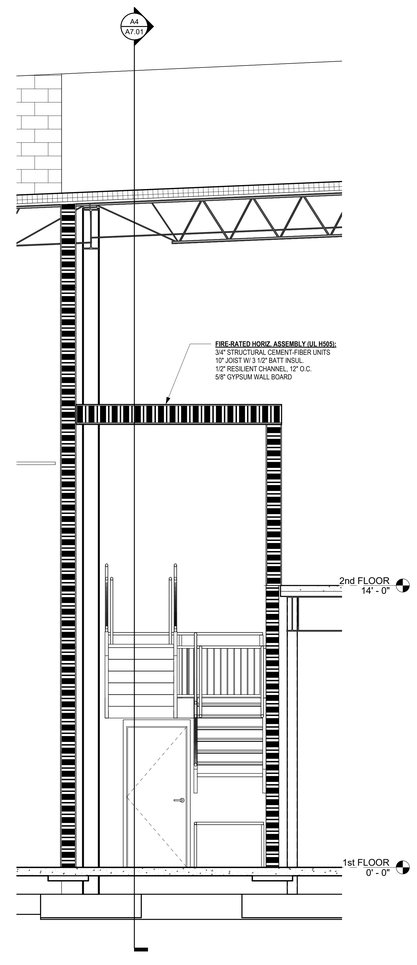
RAILING DETAIL @ STAIR LANDING **G1**
1 1/2" = 1'-0"



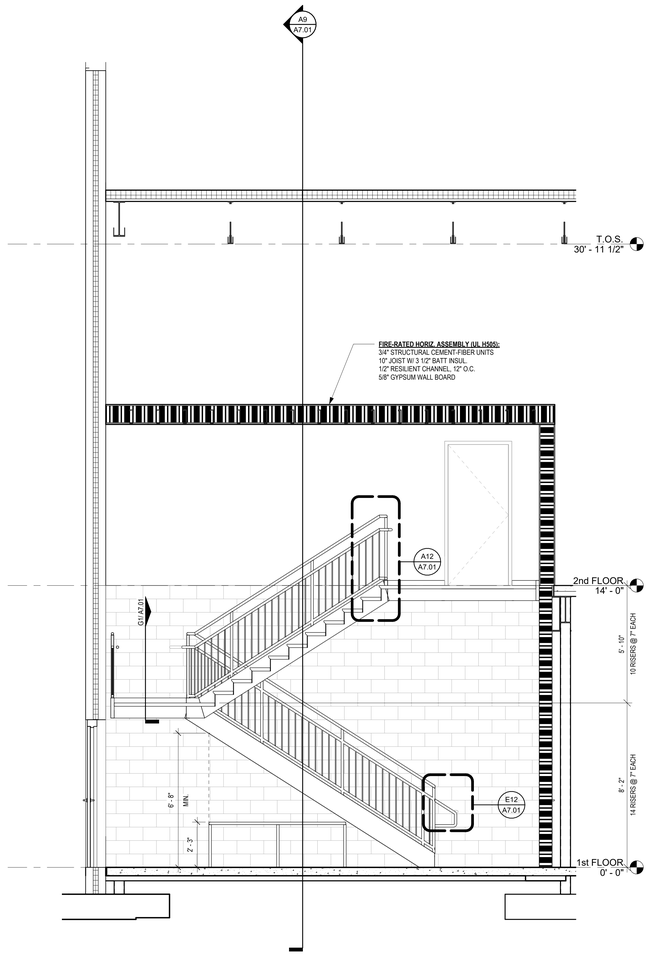
HANDRAIL EXT. DETAIL **E12**
1 1/2" = 1'-0"



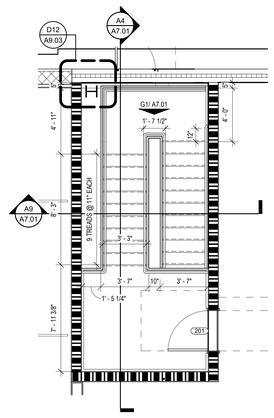
RAILING DETAIL **A12**
1 1/2" = 1'-0"



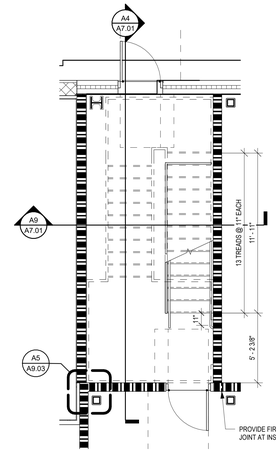
MECHANICAL MEZZ STAIR SECTION **A9**
3/8" = 1'-0"



MECHANICAL MEZZ STAIR CROSS SECTION **A4**
3/8" = 1'-0"



MECHANICAL MEZZ STAIR - 2nd FLOOR **D3**
1/4" = 1'-0"



MAIN LEVEL - MECHANICAL MEZZ STAIR **A1**
1/4" = 1'-0"

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ENLARGED STAIR PLANS AND DETAILS

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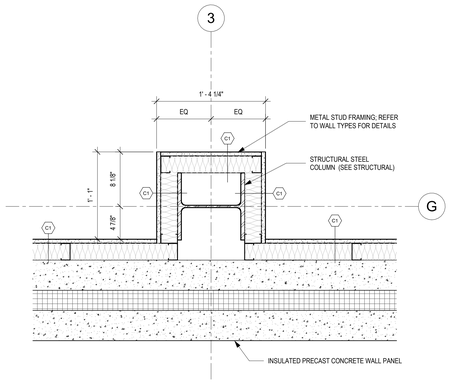
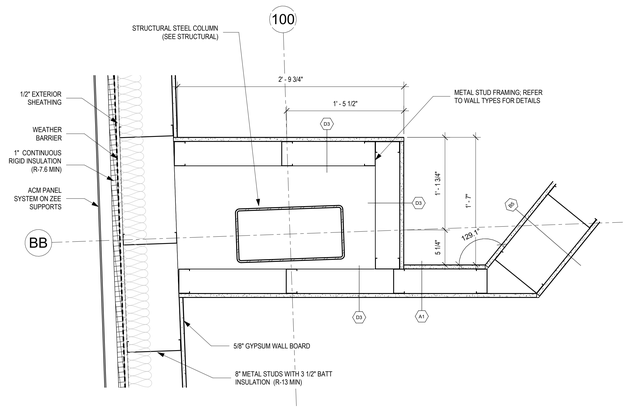
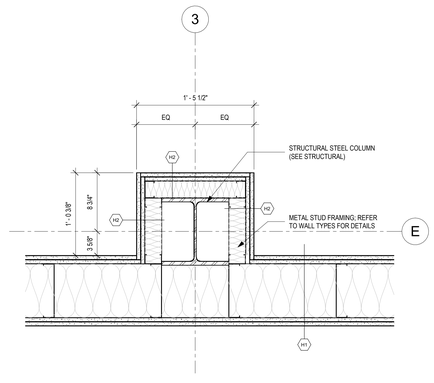


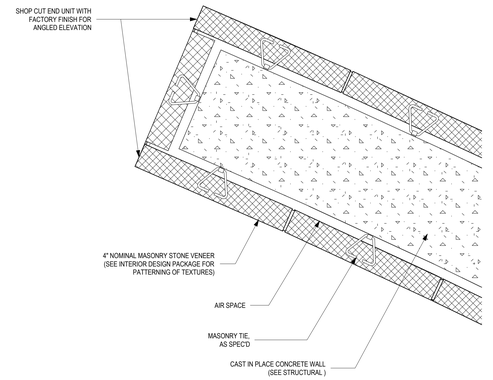
PLAN DETAIL @ COLUMN WRAP **H11**
1 1/2" = 1'-0"



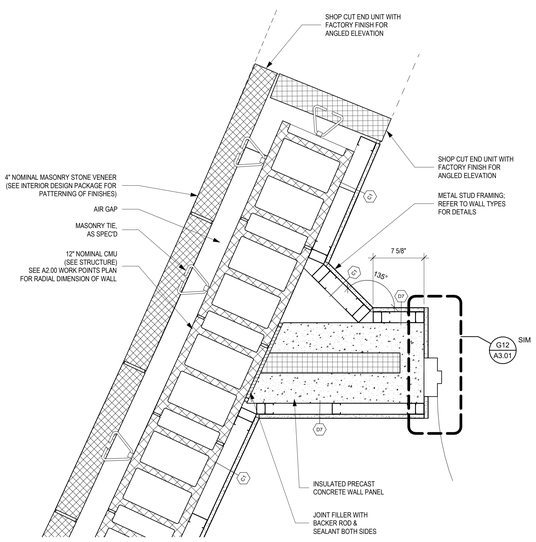
PLAN DETAIL @ NORTH VESTIBULE COLUMN **H7**
1 1/2" = 1'-0"



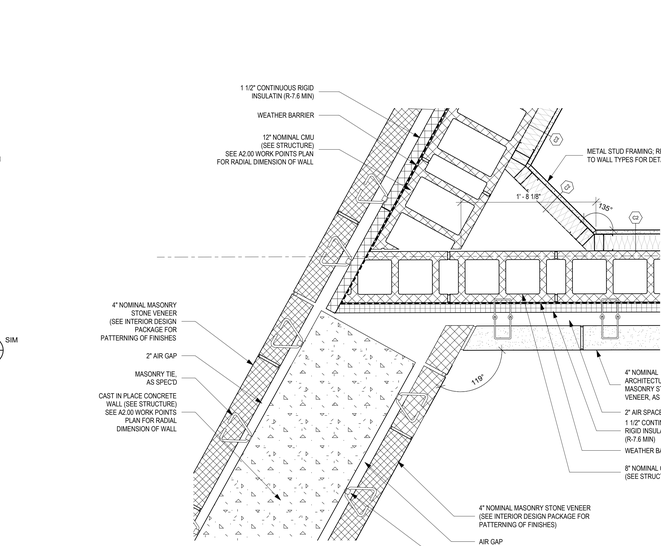
PLAN DETAIL @ COLUMN WRAP **H4**
1 1/2" = 1'-0"



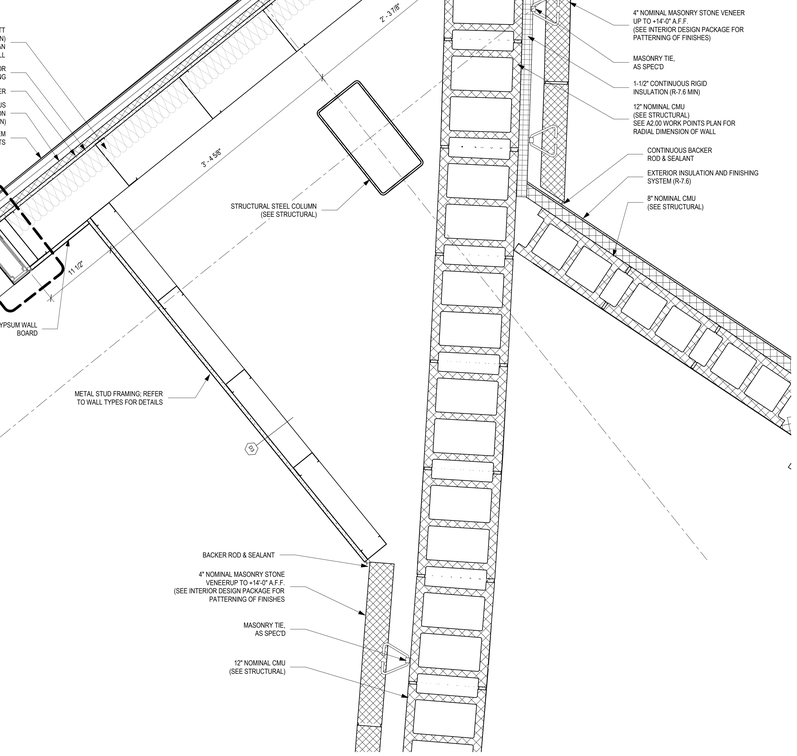
PLAN DETAIL @ END OF CURVED WALL N **H1**
1 1/2" = 1'-0"



PLAN DETAIL @ CURVED WALL JOINT (HIGH) **E11**
1 1/2" = 1'-0"



PLAN DETAIL @ CURVED WALL INTERSECTION S (HIGH) **E7**
1 1/2" = 1'-0"



PLAN DETAIL @ N. VESTIBULE CURVED WALL INTERSECTION (HIGH) **A1**
1 1/2" = 1'-0"

PLAN DETAIL @ CURVED WALL JOINT (LOW) **A11**
1 1/2" = 1'-0"

PLAN DETAIL @ CURVED WALL INTERSECTION S (LOW) **A7**
1 1/2" = 1'-0"

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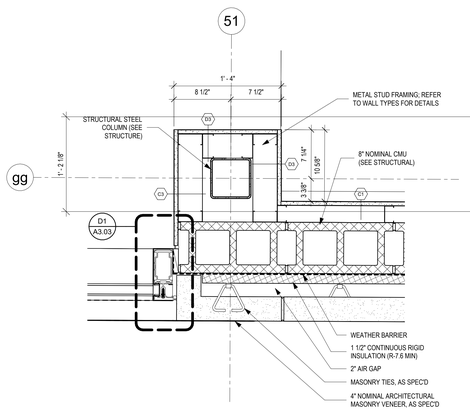
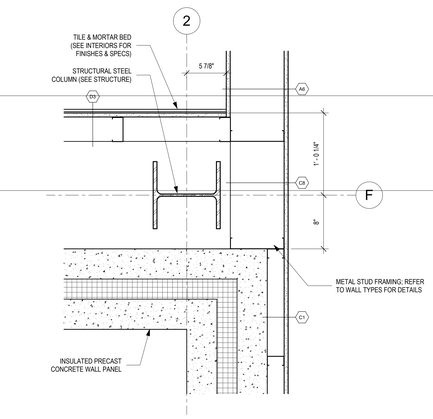
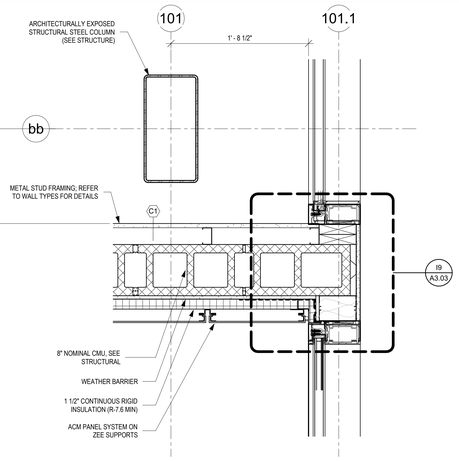


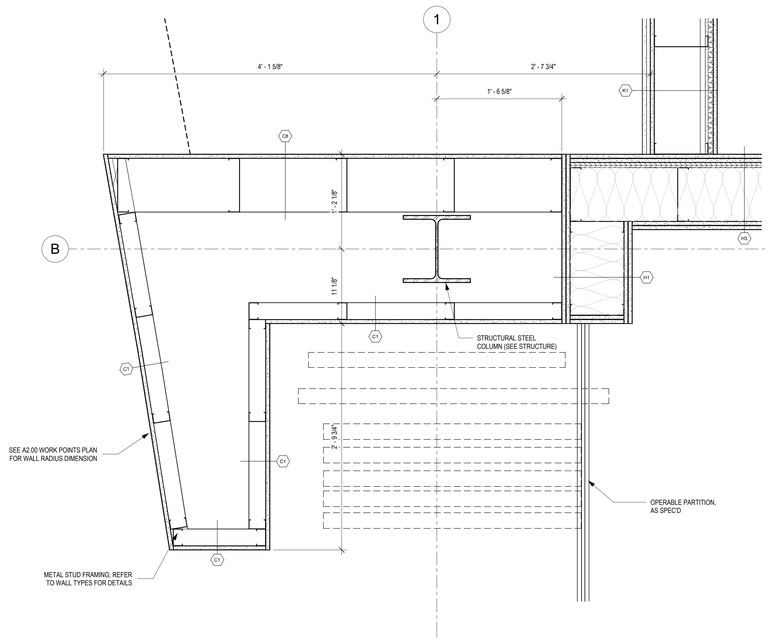
PLN DTL @ GIFT SHOP COLUMN WRAP (LOW) **H12**
1 1/2" = 1'-0"



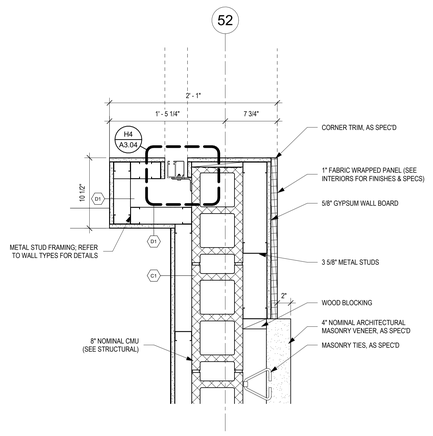
PLAN DETAIL @ CHASE & COLUMN **H9**
1 1/2" = 1'-0"



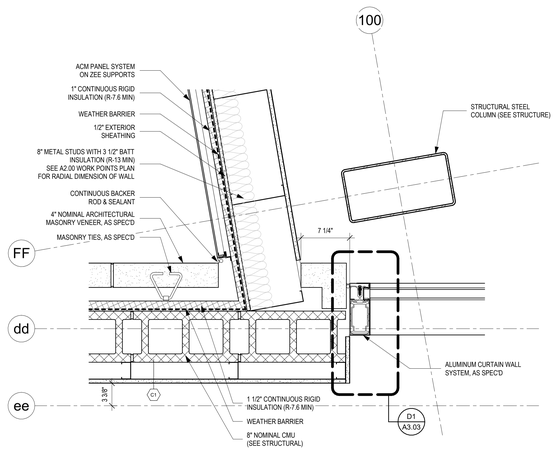
PLAN DETAIL @ ENTRY VESTIBULE CW **H6**
1 1/2" = 1'-0"



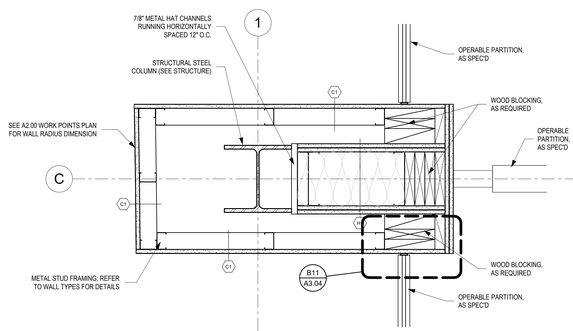
PLAN DETAIL @ OPERABLE PARTITION STACKING NORTH **G1**
1 1/2" = 1'-0"



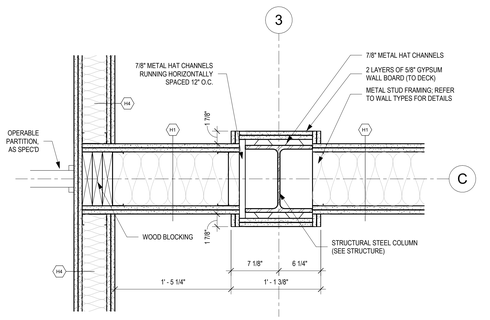
PLAN DETAIL @ CAST STONE OPENING **E12**
1 1/2" = 1'-0"



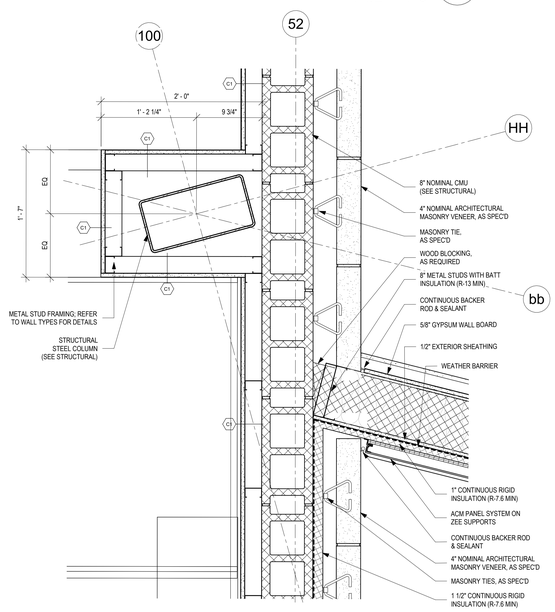
PLAN DTL @ N GIFT SHOP WALL INTERSECT **E8**
1 1/2" = 1'-0"



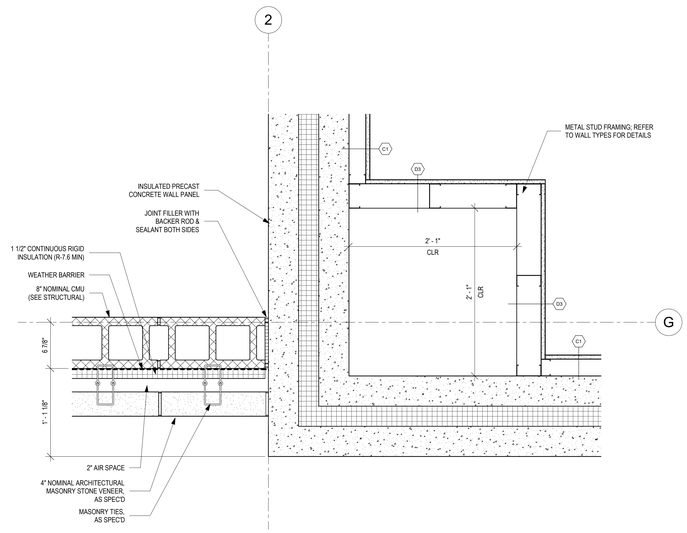
COLUMN DETAIL @ OPERABLE PARTITION WEST **E4**
1 1/2" = 1'-0"



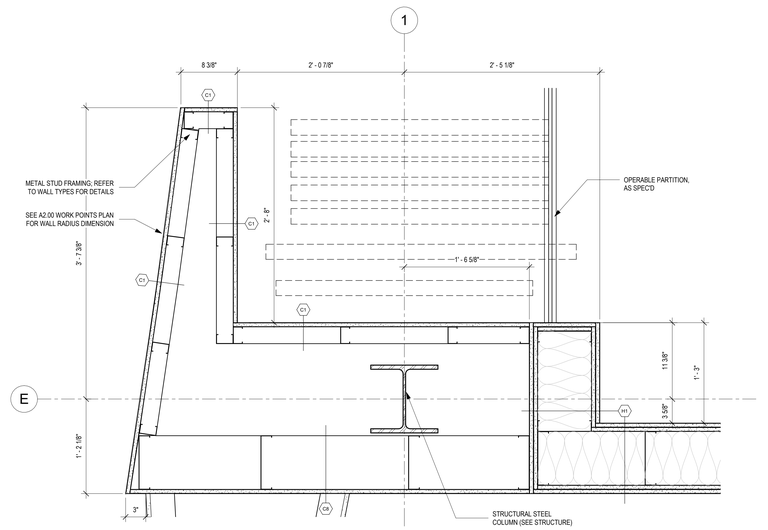
PLAN DETAIL @ OPERABLE PARTITION EAST **E1**
1 1/2" = 1'-0"



PLAN DETAIL @ CAFE & GREAT HALL INTERSECTION **A11**
1 1/2" = 1'-0"



PLAN DTL @ CONCRETE TO CMU **A6**
1 1/2" = 1'-0"



PLAN DETAIL @ OPERABLE PARTITION STACKING SOUTH **A1**
1 1/2" = 1'-0"

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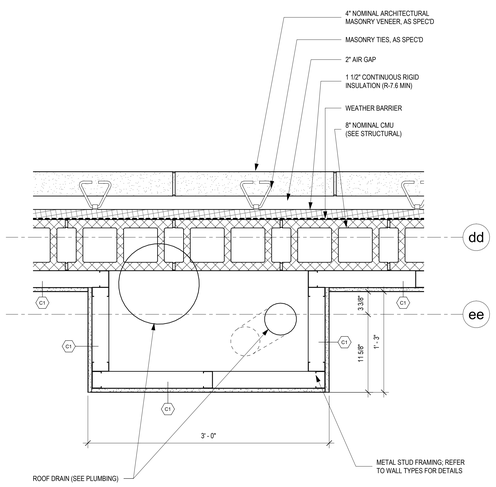
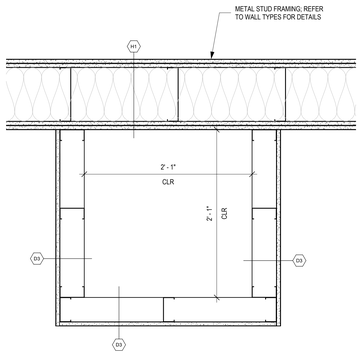
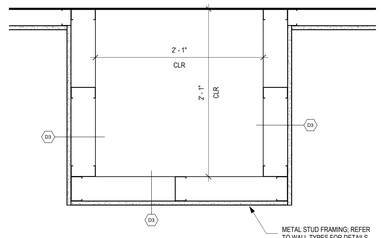


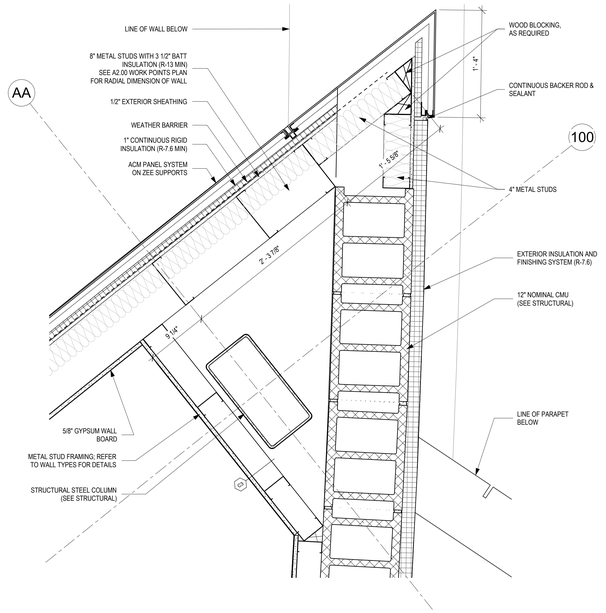
PLAN DETAIL @ OVERFLOW CHASE **G12**
1 1/2" = 1'-0"



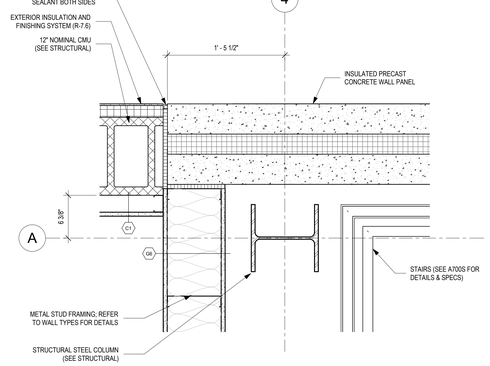
TYP PLN DTL @ ACOUSTIC WALL & MECHANICAL RETURN **G8**
1 1/2" = 1'-0"



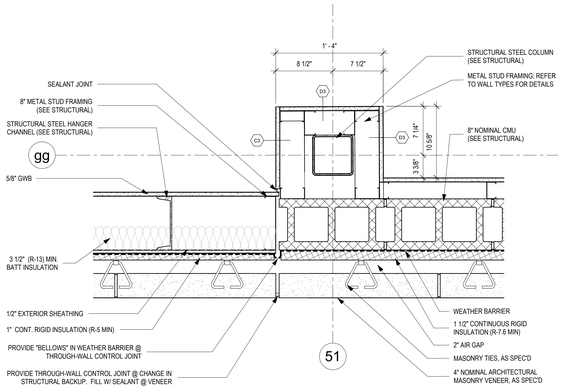
TYP PLN DTL @ MECHANICAL RETURN **G5**
1 1/2" = 1'-0"



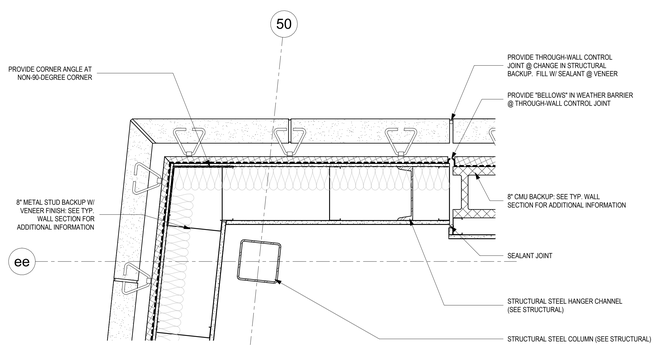
PLN DTL @ N. VESTIBULE CURVED WALL INTERSECTION (HIGH) **G1**
1 1/2" = 1'-0"



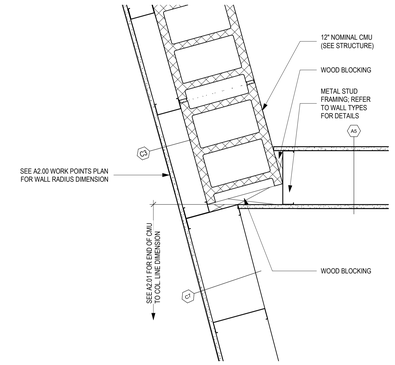
COLUMN PLAN DETAIL @ GRID A, 4 **D12**
1 1/2" = 1'-0"



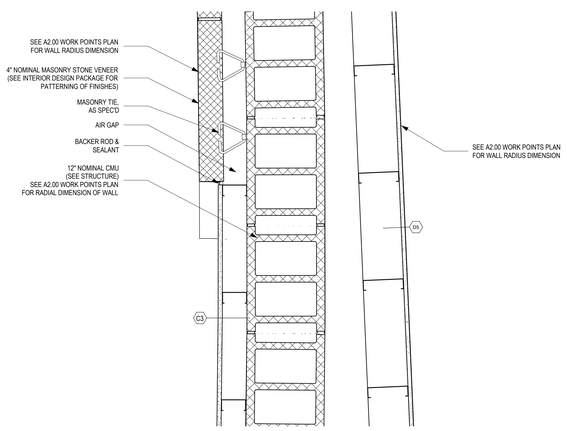
PLAN DETAIL @ GIFT SHOP CMU TO STUD (HIGH) **D8**
1 1/2" = 1'-0"



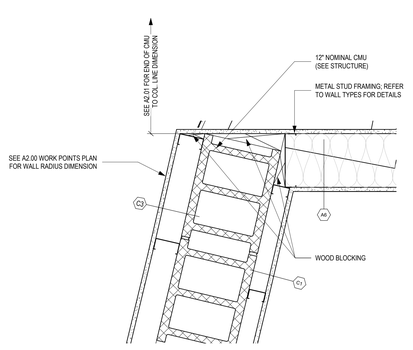
PLAN DTL @ GIFT SHOP N CORNER (HIGH) **D4**
1 1/2" = 1'-0"



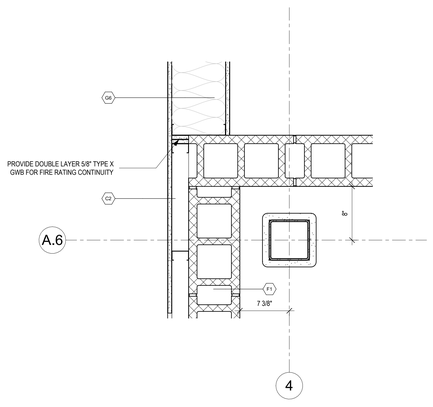
PLAN DETAIL @ CURVED CAST STONE WALL JOINT **D1**
1 1/2" = 1'-0"



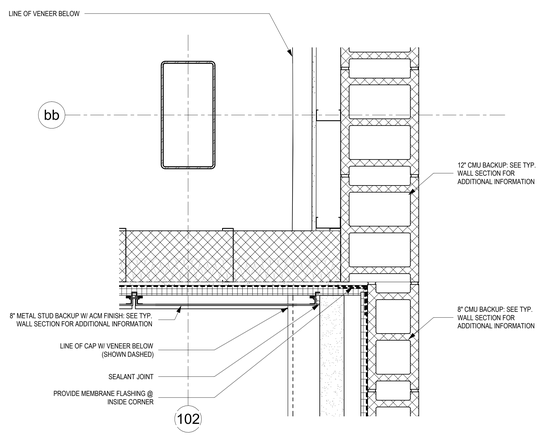
PLAN DETAIL @ MASONRY VENEER REVEAL **A11**
1 1/2" = 1'-0"



PLAN DETAIL @ CURVED WALL EDGE **A8**
1 1/2" = 1'-0"



PLN DTL @ FIRE-RATED CORNER @ STAIR **A5**
1 1/2" = 1'-0"



PLAN DETAIL @ WALL INTERSECTION ABOVE S. VEST. **A1**
1 1/2" = 1'-0"

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE CERT. NO. 326536 REGISTERED ARCHITECT WINSTON-SALEM, NC

CHRISTOPHER LESLIE DEAN SEAL 032717 REGISTERED ARCHITECT 10/24/2023 NORTH CAROLINA

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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PLAN DETAILS

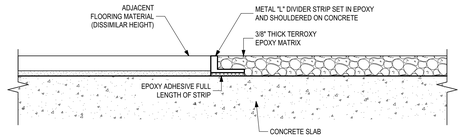
A9.03

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker

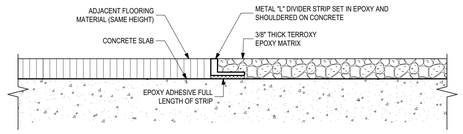
FINISH LEGEND

CODE	PRODUCT TYPE	MANUFACTURER	STYLE	COLOR	SPECIFICATION	CONTACT	LOCATION
033500 - CONCRETE FINISHING							
SC-01	SEALED CONCRETE	CUSTOM	--	--	SEALED CONCRETE, REFER TO ARCHITECTURAL DRAWINGS FOR CONTROL JOINT LOCATIONS		OVERALL
042000 - UNIT MASONRY							
MV-01	STONE VENEER	ECHELON	CORDOVA STONE - CHISEL FACE	ALABASTER	4"X12"X24", SEE INTERIOR ELEVATIONS FOR PATTERN AND LOCATION	EDDIE JORDON (919) 795-3558	GREAT HALL
MV-02	STONE VENEER	ECHELON	CORDOVA STONE - ROCK FACE	ALABASTER	4"X12"X24", SEE INTERIOR ELEVATIONS FOR PATTERN AND LOCATION	EDDIE JORDON (919) 795-3558	GREAT HALL
MV-03A	STONE VENEER	ECHELON	CORDOVA STONE - GROUND FACE	ALABASTER	4"X12"X24", SEE INTERIOR ELEVATIONS FOR PATTERN AND LOCATION	EDDIE JORDON (919) 795-3558	GREAT HALL
MV-03B	STONE VENEER	ECHELON	FRANKLIN STONE - SMOOTH FACE	MONUMENT WHITE	4"X4"X24", REFER TO ELEVATIONS FOR ASSOCIATED TRIM PIECES AND VARIED BLOCK SIZES (ACCENT BANDS)	EDDIE JORDON (919) 795-3558	GREAT HALL
MV-03C	STONE VENEER	ECHELON	FRANKLIN STONE - SMOOTH FACE	MONUMENT WHITE	4"X8"X24", REFER TO ELEVATIONS FOR ASSOCIATED TRIM PIECES AND VARIED BLOCK SIZES (ACCENT BANDS)	EDDIE JORDON (919) 795-3558	GREAT HALL
057000 - DECORATIVE METAL							
DM-01	DECORATIVE METALS	FORMS AND SURFACES	LINEN	STAINLESS STEEL	0.8MM THICKNESS	MARK MEISSNER (336) 740-4860	RECEPTION MILLWORK
064000 - ARCHITECTURAL WOODWORK							
WB-01	WOOD BASE	CUSTOM	FLAT STOCK	PNT-13	4" TALL FLAT STOCK PROFILE, PAINT GRADE WOOD		GALLERY BASE
WB-02	WOOD BASE	CUSTOM	FLAT STOCK	PNT-01	4" TALL FLAT STOCK PROFILE, PAINT GRADE WOOD		MEETING ROOM & CLASSROOM BASE
WD-01	WOOD	BRUNER LUMBER	SINKER CYPRESS	COMMON GRADE WOOD	5.25" FACE; THICKNESS TBD; TONGUE & GROOVE INSTALLATION	ASHLYN ENCARDES (850) 865-0952	RECEPTION MILLWORK
WD-02	WOOD	SURFACING SOLUTION	PROFILE: 493	WOOD SPECIES: RED OAK	SLAT WIDTH: 1", 1/2"H	JERAMEY FISTROVICH (952) 448-6566	CAFÉ PREP
064100 - ARCHITECTURAL WOOD CASEWORK							
PL-01	PLASTIC LAMINATE	LAMIN-ART	CHRYSALIS FINISH	2422 PORCELAIN	VERTICAL APPLICATION	ELLIE GOODNOW (704) 778-9854	RECEPTION
PL-02	PLASTIC LAMINATE	LAMIN-ART	CRISSCROSS FINISH	2418 GRAPHITE		ELLIE GOODNOW (704) 778-9854	GIFT SHOP
PL-03	PLASTIC LAMINATE	WILSONART	79 RIDGEWOOD FINISH WITH AEON™	RANDOLPH FOREST 8225	APPROXIMATE DESIGN REPEAT WIDTH: 30.5", APPROXIMATE DESIGN REPEAT LENGTH: 43.3"	APRIL BRICKLE (540) 537-3431	RESTROOM VERTICAL SURFACE
PL-04	PLASTIC LAMINATE	FORMICA	FENIX 0032	BIANCO KOS	1.2MM THICK; MATCHED COLOR CORE; VERTICAL APPLICATION	SHERI REID (704) 534-7300	FEATURE WALL
PL-05	PLASTIC LAMINATE	WILSONART	16 CASUAL RUSTIC FINISH WITH AEON™	FAWN CYPRESS 8208	APPROXIMATE DESIGN REPEAT WIDTH: 25", APPROXIMATE DESIGN REPEAT LENGTH: 51"	APRIL BRICKLE (540) 537-3431	VIEWING ROOM VERTICAL SURFACE
PL-06	PLASTIC LAMINATE	WILSONART	38 FINE VELVET FINISH	NEW AGE OAK 7938-38	APPROXIMATE DESIGN REPEAT WIDTH: 32.5", APPROXIMATE DESIGN REPEAT LENGTH: 42.5"	APRIL BRICKLE (540) 537-3431	CAFÉ PREP VERTICAL SURFACE
068316 - FIBERGLASS REINFORCED PANELING							
FRP-01	FIBERGLASS REINFORCED PLASTIC	MARLITE	SMOOTH FRP	S 100 S/2/S WHITE	0.09" THICKNESS, ALL COORDINATING TRIM PIECES TO MATCH, MEETS CLASS C AND CLASS A FIRE RATING, INSTALLATION PER MANUFACTURERS RECOMMENDATION		WARMING KITCHEN, JANITOR'S CLOSET
FRP-02	FIBERGLASS REINFORCED PLASTIC	MARLITE	SMOOTH FRP	BLACK	0.09" THICKNESS, ALL COORDINATING TRIM PIECES TO MATCH, MEETS CLASS C AND CLASS A FIRE RATING, INSTALLATION PER MANUFACTURERS RECOMMENDATION		CAFÉ PREP MILLWORK
093000 - TILING							
GT-01	GLASS TILE	FLORIDA TILE	BLISS RANDOM STRIP MOSAIC	CAPPUCCINO	SIZE: 12"X12", THICKNESS: 8 MM; TYPE: NATURAL STONE AND GLASS	DANIELLE WRIGHT (919) 348-7924	RESTROOM VANITY WALL TILE
QT-01	QUARRY TILE	DALTILE	ARID	GREY 0Q42	6"X6" FLOOR TILE; 1/2" THICKNESS; DCOF VALUE ≥0.42; GROUT JOINT 3/8" PER MANUFACTURERS RECOMMENDATION - CEG-IG 100% SOLIDS INDUSTRIAL GRADE EPOXY GROUT: COLOR TO MATCH LATICRETE 56 DESERT KHAKI	JONATHAN STUDIOSO (704) 516-6310	CAFÉ PREP
QTB-01	QUARRY TILE BASE	DALTILE	ARID	GREY 0Q42	5"X6" COORDINATING QUARRY TILE COVE BASE; GROUT JOINT 3/8" PER MANUFACTURERS RECOMMENDATION - CEG-IG 100% SOLIDS INDUSTRIAL GRADE EPOXY GROUT: COLOR TO MATCH LATICRETE 56 DESERT KHAKI	JONATHAN STUDIOSO (704) 516-6310	CAFÉ PREP
TB-01	TILE BASE	FLORIDA TILE	CONTINENT	29936 COASTAL SAND	6"X12" COVE BASE, 8" THICKNESS, ANSI A326.3: INTERIOR WET PLUS, BREAKING STRENGTH: > 365 LBF. AVG, SURFACE HARDNESS: 7 MOHS, SEE DRAWINGS FOR PATTERN AND LOCATION; 1/16" GROUT JOINTS - COLOR: LATICRETE MARBLE BEIGE	DANIELLE WRIGHT (919) 348-7924	RESTROOM COVE BASE
TL-01	TILE	FLORIDA TILE	CONTINENT	29936 COASTAL SAND	12"X 12", 8MM THICKNESS, ANSI A326.3: INTERIOR WET PLUS, BREAKING STRENGTH: > 365 LBF. AVG, SURFACE HARDNESS: 7 MOHS, SEE DRAWINGS FOR PATTERN AND LOCATION; 1/16" GROUT JOINTS - COLOR: LATICRETE MARBLE BEIGE	DANIELLE WRIGHT (919) 348-7924	RESTROOM FLOOR TILE
TL-02	TILE	FLORIDA TILE	CONTINENT	29936 COASTAL SAND	12"X 24", 8MM THICKNESS, ANSI A326.3: INTERIOR WET PLUS, BREAKING STRENGTH: > 365 LBF. AVG, SURFACE HARDNESS: 7 MOHS, SEE DRAWINGS FOR PATTERN AND LOCATION; 1/16" GROUT JOINTS - COLOR: LATICRETE MARBLE BEIGE	DANIELLE WRIGHT (919) 348-7924	RESTROOM WALL TILE
TL-03	TILE	FLORIDA TILE	CONTINENT	29936 COASTAL SAND	6"X 24", 8MM THICKNESS, ANSI A326.3: INTERIOR WET PLUS, BREAKING STRENGTH: > 365 LBF. AVG, SURFACE HARDNESS: 7 MOHS, SEE DRAWINGS FOR PATTERN AND LOCATION; 1/16" GROUT JOINTS - COLOR: LATICRETE MARBLE BEIGE	DANIELLE WRIGHT (919) 348-7924	RESTROOM ACCENT WALL TILE
TL-04	TILE	MOSAIC TILE COMPANY	COVE	15COVSTO1224	12"X24", 9MM THICKNESS, MATTE FINISH, COLOURED BODY PORCELAIN CONCRETE LOOK TILE, SEE DRAWINGS FOR PATTERN AND LOCATION; 1/16" GROUT JOINTS - COLOR: LATICRETE MARBLE BEIGE	ANN HARTLEY (919) 602-6125	GIFT SHOP
TL-05	TILE	TILE BAR	DIESEL CAMP SMOKE GLAZED CERAMIC SUBWAY WALL TILE	BLACK GLAZE	4"X12", 7MM THICKNESS; STACKED INSTALLATION; 1/16" GROUT JOINTS - MAPEI: COLOR 50/10 BLACK	ERIN SALIN (202) 870-0441	CAFÉ PREP
TTS-01	TILE TRANSITION STRIPS	SCHLUTER SYSTEMS	RENO-TK	SATIN NICKEL ANODIZED ALUMINUM	SLOPED TRANSITION: TILE TO CARPET; RADIUS PROFILE; 10MM HEIGHT	TYLER HERBERT (980) 402-2785	GIFT SHOP
095100 - ACOUSTICAL CEILINGS							
ACT-01	ACOUSTICAL CEILING TILE	ARMSTRONG CEILING AND WALL SYSTEMS	MESA™ ANGLED TEGULAR FINE TEXTURE #681	WHITE	15/16" PRELUDE SUSPENSION SYSTEM; 24"X24"X3/4"THICKNESS; 0.60 NRC/ 35 CAC; LIGHT REFLECTANCE 85%; ASTM E1264 CLASSIFICATION: TYPE III, FORM 2, PATTERN C E. FIRE CLASS A	ALIANA POPLIN (980) 419-3795	OVERALL
ACT-02	ACOUSTICAL CEILING TILE	ARMSTRONG CEILING AND WALL SYSTEMS	FINE FISSURED™ SQUARE LAY-IN #465	WHITE	15/16" PRELUDE SUSPENSION SYSTEM; 24"X24"X5/8"THICKNESS; 0.55 NRC/ 35 CAC; LIGHT REFLECTANCE 82%; ASTM E1264 CLASSIFICATION TYPE III, FORM 2, PATTERN C E. FIRE CLASS A	ALIANA POPLIN (980) 419-3795	BACK OF HOUSE & COLLECTION STORAGE
ACT-03	ACOUSTICAL CEILING TILE	ARMSTRONG CEILING AND WALL SYSTEMS	KITCHEN ZONE™ SQUARE LAY-IN SMOOTH TEXTURE #673	WHITE	15/16" PRELUDE SUSPENSION SYSTEM, 24"X24"X5/8"THICKNESS; 33 CAC; LIGHT REFLECTANCE 89%; ASTM E1264 CLASSIFICATION TYPE IX, FORM 2, PATTERN G. FIRE CLASS A	ALIANA POPLIN (980) 419-3795	CAFÉ PREP & WARMING KITCHEN
ACT-04	ACOUSTICAL CEILING TILE	ARMSTRONG CEILING AND WALL SYSTEMS	METALWORKS™ OPEN CELL SQUARE LAY-IN SMOOTH TEXTURE #51MM1	WHITE POWDER-COAT	9/16" T-BAR SUSPENSION SYSTEM; 24"X24"X0.016"THICKNESS; 8" INTERIOR CELL SIZE; 90% OPEN AREA; CLASS A. ASTM E84 SURFACE BURNING CHARACTERISTICS	ALIANA POPLIN (980) 419-3795	GIFT SHOP
ACT-05	ACOUSTICAL CEILING TILE	ARMSTRONG CEILING AND WALL SYSTEMS	DESIGNFLEX® SQUARES & RECTANGLES USING CALLA®	90% WHITE, 10% COLOR - 5% CUSTOM COLOR TO MATCH SHERWIN WILLIAMS SW 7019 GAUNTLET GRAY; 5% CUSTOM COLOR TO MATCH SHERWIN WILLIAMS SW 7600 BOLERO	PATTERN SR-8 - SEE RCP FOR LAYOUT; 9/16" SUPRAFINE® XM 9/16" SUSPENSION SYSTEM: UP TO 0.80 NRC/ 35 CAC; LIGHT REFLECTANCE 85%; FIRE CLASS A; LIGHTING AND DIFFUSERS INTEGRATED IN GRID SYSTEM; SEE MECHANICAL & ELECTRICAL DRAWINGS FOR FURTHER DETAIL	ALIANA POPLIN (980) 419-3795	MEETING/CLASSROOMS
096500 - RESILIENT FLOORING							
RB-01	RUBBER BASE	JOHNSONITE	4" RESILLIENT COVE BASE	55 SILVER GREY WG	4.5"H, PHTHALATE-FREE, 14% RECYCLED CONTENT, RESTART®	TOMMY KERR (336) 202-7212	BACK OF HOUSE
RTS-01	RESILIENT TRANSITION STRIP	MOHAWK GROUP	CRA08	002 NIGHT SKIES	1/4" UNDERSLUG REDUCER TO FLOOR; PROPRIETARY TP RUBBER FORMULATION INCLUDING PIGMENTS, STABILIZERS AND OTHER FUNCTIONAL FILLERS	LEE BREWER (704) 989-0913	CLASSROOM
096623 - RESINOUS MATRIX TERRAZZO FLOORING							
TZ-01	TERRAZZO	TERRAZZO & MARBLE SUPPLY COMPANIES	CUSTOM BLEND; TM #23-1306	MATRIX COLOR: BM INTENSE WHITE OC-51	MATCH ARCHITECTS SAMPLE	CHERYL SIMERLY (704) 577-8717	OVERALL FLOORING
TZ-02	TERRAZZO	TERRAZZO & MARBLE SUPPLY COMPANIES	CUSTOM BLEND; TM #23-1307	MATRIX COLOR: SW 9563 BEDROCK	MATCH ARCHITECTS SAMPLE	CHERYL SIMERLY (704) 577-8717	ACCENT FLOORING
TZ-03	TERRAZZO	TERRAZZO & MARBLE SUPPLY COMPANIES	CUSTOM BLEND; TM #23-1308	MATRIX COLOR: SW 7019 GAUNTLET GRAY	MATCH ARCHITECTS SAMPLE	CHERYL SIMERLY (704) 577-8717	ACCENT FLOORING
TZ-04	TERRAZZO	TERRAZZO & MARBLE SUPPLY COMPANIES	CUSTOM BLEND; TM #23-1310	MATRIX COLOR: SW 6991 BLACK MAGIC	MATCH ARCHITECTS SAMPLE	CHERYL SIMERLY (704) 577-8717	ACCENT FLOORING
TZM-01	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	REFERENCE TERRAZZO TRANSITION DETAILS	ALUMINUM	TERRAZZO TO CARPET	CHERYL SIMERLY (704) 577-8717	CLASSROOM & MEETING ROOM
TZM-02	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	REFERENCE TERRAZZO TRANSITION DETAILS	ALUMINUM	TERRAZZO TO CONCRETE	CHERYL SIMERLY (704) 577-8717	GREAT HALL
TZM-03	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	REFERENCE TERRAZZO TRANSITION DETAILS	ALUMINUM	TERRAZZO TO TILE	CHERYL SIMERLY (704) 577-8717	RESTROOMS & GIFT SHOP
TZM-04	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	REFERENCE TERRAZZO TRANSITION DETAILS	ALUMINUM	TERRAZZO TO EPOXY	CHERYL SIMERLY (704) 577-8717	WARMING KITCHEN
TZM-05	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	DECORATIVE METAL STRIP	ALUMINUM	1/4" DECORATIVE STRIP FOR TERRAZZO FLOORING, NTMA CERTIFIED INSTALLER	CHERYL SIMERLY (704) 577-8717	GREAT HALL
TZM-06	TERRAZZO TRANSITION STRIP	TERRAZZO & MARBLE SUPPLY COMPANIES	DECORATIVE METAL STRIP	ALUMINUM	1" DECORATIVE STRIP FOR TERRAZZO FLOORING, NTMA CERTIFIED INSTALLER	CHERYL SIMERLY (704) 577-8717	GREAT HALL
096800 - CARPETING							
CPT-01	CARPET TILE	MOHAWK GROUP	SIDE STRIPE GT419	HERITAGE 963	SIZE: 24"X24"; SOLUTION DYED; INSTALL METHOD: ASHLAR; BACKING: ECOFLEX ONE; FIBER TYPE: DURACOLOR® TRICOR PREMIUM NYLON; FLAMMABILITY: ASTM E 648 CLASS 1	LEE BREWER (704) 989-0913	CLASSROOM, MEETING ROOM, OFFICE & GIFT SHOP
098300 - ACOUSTIC ROOM COMPONENTS							
AP-01	ACOUSTICAL PRODUCTS	NOVAWALL	1" CLASSIC PANEL WITH SQUARE EDGE	CARNEGIE XOREL; PATTERN: STRIE, COLOR: 809; UNBACKED	52"W, 1" FIBERGLASS CORE (6LB DENSITY), UNBACKED	DANIELLE MILESKY (704) 942-7319	GREAT HALL CURVED WALL
AP-02	ACOUSTICAL PRODUCTS	NOVAWALL	1" CLASSIC PANEL WITH SQUARE EDGE	CARNEGIE XOREL; PATTERN: STRIE, COLOR: 811; UNBACKED	52"W, 1" FIBERGLASS CORE (6LB DENSITY), UNBACKED	DANIELLE MILESKY (704) 942-7319	GREAT HALL CURVED WALL
AP-03	ACOUSTICAL PRODUCTS	NOVAWALL	1" CLASSIC PANEL WITH SQUARE EDGE	CARNEGIE XOREL; PATTERN: STRIE, COLOR: 818; UNBACKED	52"W, 1" FIBERGLASS CORE (6LB DENSITY), UNBACKED	DANIELLE MILESKY (704) 942-7319	GREAT HALL CURVED WALL
AP-04	ACOUSTICAL PRODUCTS	NOVAWALL	1" CLASSIC PANEL WITH SQUARE EDGE	CARNEGIE XOREL; PATTERN: STRIE, COLOR: 803; UNBACKED	52"W, 1" FIBERGLASS CORE (6LB DENSITY), UNBACKED	DANIELLE MILESKY (704) 942-7319	GREAT HALL CURVED WALL
AP-05	ACOUSTICAL PRODUCTS	TECHNATURE	RECYCLED COTTON ECHOTOUCH INSULATION BOARD	WHITE	SEE PROJECT MANUAL FOR BASIS OF DESIGN AND DETAILS		GREAT HALL
AP-06	ACOUSTICAL PRODUCTS	OWENS CORNING	ACOUSTICAL BLACK AND DUCT LINER BOARD	BLACK	SEE PROJECT MANUAL FOR BASIS OF DESIGN AND DETAILS		GALLERY SPACES
AP-07	ACOUSTICAL PRODUCTS	STARSILENT	SUPRAFINE FINISH	STANDARD WHITE	SEE PROJECT MANUAL FOR BASIS OF DESIGN AND DETAILS		GREAT HALL
099123 - INTERIOR PAINTING							
PNT-01	PAINT	SHERWIN WILLIAMS	--	SW 9166 DRIFT OF MIST	EGGSHELL FINISH	STEVE GOODE (980) 207-9410	OVERALL
PNT-02	PAINT	SHERWIN WILLIAMS	--	SW 9166 DRIFT OF MIST	SEMIGLOSS FINISH	STEVE GOODE (980) 207-9410	TRIM
PNT-03	PAINT	SHERWIN WILLIAMS	--	HIGH HIDING WHITE	FLAT FINISH	STEVE GOODE (980) 207-9410	GREAT HALL SOFFITS
PNT-04	PAINT	SHERWIN WILLIAMS	--	SW 6258 TRICORN BLACK	FLAT FINISH	STEVE GOODE (980) 207-9410	GALLERY CEILING
PNT-05	PAINT	BENJAMIN MOORE & CO.	--	1605 WINTER SOLSTICE	FLAT FINISH	CANDICE CARTER (980) 621-3894	BATHROOM SOFFIT ACCENT PAINT
PNT-06	PAINT	SHERWIN WILLIAMS	--	SW 7669 SUMMIT GRAY	FLAT FINISH	STEVE GOODE (980) 207-9410	CAFÉ & GIFT SHOP SOFFIT
PNT-07	PAINT	SHERWIN WILLIAMS	--	SW 7600 BOLERO	DEVTHANE 379IH ALIPHATIC URETHANE GLOSS ENAMEL	STEVE GOODE (980) 207-9410	CAFÉ & GIFT SHOP CEILING CLOUD
PNT-08	PAINT	SHERWIN WILLIAMS	--	SW 7019 GAUNTLET GRAY	FLAT FINISH	STEVE GOODE (980) 207-9410	GALLERY OVERALL
PNT-09	PAINT	SHERWIN WILLIAMS	--	SW 7600 BOLERO	EGGSHELL FINISH	STEVE GOODE (980) 207-9410	GREAT HALL COLUMN ACCENT
PNT-10	PAINT	SHERWIN WILLIAMS	--	SW 7615 SEA SERPENT	EGGSHELL FINISH	STEVE GOODE (980) 207-9410	OFFICE ACCENT
PNT-11	PAINT	SHERWIN WILLIAMS	--	HIGH HIDING WHITE	HIGH-GLOSS FINISH	STEVE GOODE (980) 207-9410	BATHROOM SOFFIT
PNT-12	PAINT	BENDHEIM	--	CW-405 DAMASK GOLD	EGGSHELL FINISH	DAN LURIE (704) 521-9328	BATHROOM NICHE ACCENT
PNT-13	PAINT	SHERWIN WILLIAMS	--	SW 7019 GAUNTLET GRAY	SEMIGLOSS FINISH	STEVE GOODE (980) 207-9410	GALLERY TRIM
099656 - EPOXY COATINGS							
EXP-01	EPOXY PAINT	DUR-A-FLEX, INC.	POLY-CRETE® SLB	GREY; COLORFAST	SEAMLESS; 3/16"; 100% SOLIDS; PIGMENTED TOPCOAT; CEMENTITIOUS-URETHANE; SELF-LEVELING; SELF-PRIMING CONCRETE RESURFACING SYSTEM W/NATURAL QUARTZ AGGREGATE BROADCAST; SLIP-RESISTANT GLOSS FINISH; REFER TO SPEC BOOK FOR SURFACE PREPARATION & FURTHER DETAILS		WARMING KITCHEN
102113 - TOILET COMPARTMENTS							
TA-12	TOILET PARTITION	SCRANTON PRODUCTS	HINYHIDERS	NICKLE	FLUSH DOOR STYLE. PROVIDE MANUFACTURER STANDARD HARDWARE IN STAINLESS STEEL FINISH - COAT HOOK, DOOR BUMPER FOR OUT SWINGING DOORS, DOOR PULL THAT COMPLIES WITH ADA. PROVIDE OVERHEAD BRACING AS REQUIRED.	MATT WILHELM (800) 445-5148	RESTROOM
102600 - WALL AND DOOR PROTECTION							
CG-01	CORNER GUARD	COMMERCIAL CORNER GUARDS	CORNER GUARD, 1" WIDTH	CLEAR	8' LENGTH, SELF-STICK TAPE INSTALLATION, MOUNTED AT 90 DEGREE WALLS		CORRIDORS
CG-02	CORNER GUARD	COMMERCIAL CORNER GUARDS	ADJUSTABLE ANGLE CORNER GUARD, 1" WIDTH	CLEAR PETG	8' LENGTH, SELF-STICK TAPE INSTALLATION, MOUNTED AT ANGLED WALL		CORRIDORS
121700 - ART GLASS							
DG-01	DECORATIVE GLASS PRODUCTS	SKYLINE	PURL E	CLEAR OR GRAY	CUSTOM GRAPHIC ETCH IN GLASS - SEE ELEVATIONS AND DETAILS	ROY HINZE (336) 681-2495	RECEPTION FEATURE WALL
123600 - COUNTERTOP							
QC-01	QUARTZ COUNTER	CORIAN	QUARTZ	CLOUD WHITE	SINGLE POLISHED	BARBARA DAVIS (704) 654-8498	RECEPTION & GIFT SHOP MILLWORK
QC-02	QUARTZ COUNTER	WILSONART	Q4031	DESERT WIND	2CM THICKNESS	APRIL BRICKLE (540) 537-3431	RESTROOM COUNTERTOP
QC-03	QUARTZ COUNTER	WILSONART	Q1001	SERENE	2CM THICKNESS	APRIL BRICKLE (540) 537-3431	VIEWING ROOM COUNTERTOP
124813 - ENTRANCE FLOOR MATS AND FRAMES							
WM-01	WALK-OFF MAT	CONSTRUCTION SPECIALTIES	GRIDLINE G6	STAINLESS STEEL	GRIDLINE G6 5/8" STAINLESS STEEL - HIDDEN LOCKDOWNS, ROLLING LOAD CAPACITY: 1,000 LBS. PER WHEEL. ASTM D-2047-96 SCOF: .70 WET	MEG EISEMANN (704) 543-8181	ENTRY VESTIBULES

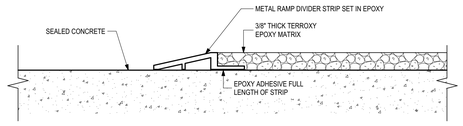
NOTE: TERRAZZO MUST BE INSTALLED FIRST IN ALL CONDITIONS



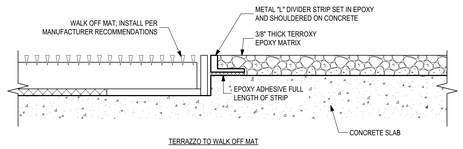
TERRAZZO TO TILE



TERRAZZO TO CARPET

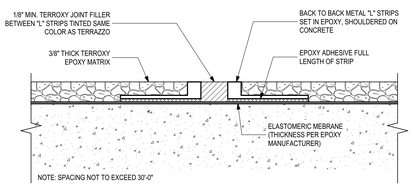


TERRAZZO TO CONCRETE

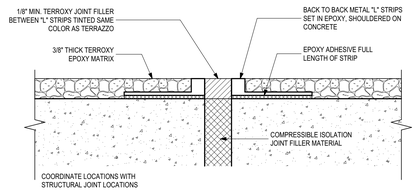


TERRAZZO TO WALK OFF MAT

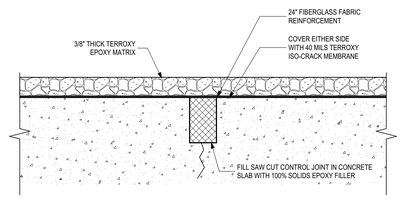
TERRAZZO TRANSITIONS G3
SCALE: 1" = 1'-0"



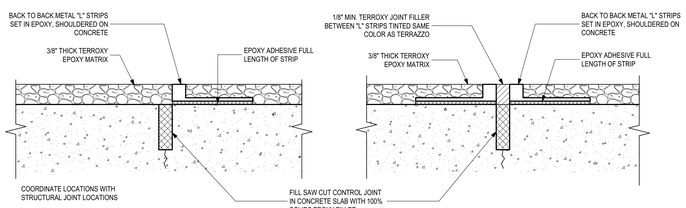
TERRAZZO CONTROL JOINT E3
SCALE: 1" = 1'-0"



TERRAZZO ISOLATION JOINT (AT COLUMN BASES) D3
SCALE: 1" = 1'-0"

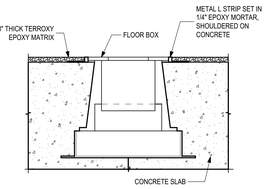


TERRAZZO BURIED CONTROL JOINT B3
SCALE: 1" = 1'-0"

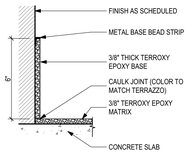


TERRAZZO CONTRACTION JOINTS A3
SCALE: 1" = 1'-0"

NOTE:
COORDINATE ACTUAL FLOOR BOX SIZE WITH ELECTRICAL AND SLAB RECESS REQUIREMENTS WITH STRUCTURAL



FLOOR BOX IN TERRAZZO I1
SCALE: 3" = 1'-0"



TERRAZZO BASE H1
SCALE: 3" = 1'-0"

GENERAL INTERIOR FINISH NOTES

A. REFER TO **ROOM FINISH LEGEND** FOR CUSTOM MATERIALS, COLORS AND SPECIFICATIONS.

B. REFER TO **GENERAL SPECIFICATIONS MANUAL** (WHEN PROVIDED) FOR ADDITIONAL FINISH INFORMATION.

C. REFER TO **FLOOR/WALL FINISH PLANS** FOR FLOORING TRANSITIONS, FLOOR FINISH PATTERNS, WALL FINISH STOPS AND MATERIAL EXTENTS.

D. REFER TO ARCHITECTURAL **REFLECTED CEILING PLANS** FOR SOFFIT LOCATIONS. UNDERSIDE OF SOFFIT TO MATCH VERTICAL SURFACE OF SOFFIT UNLESS NOTED OTHERWISE.

E. REFER TO **INTERIOR ELEVATIONS** FOR FINISH LOCATION CALL OUTS AND WALL PATTERNS.

F. REFER TO ARCHITECTURAL DRAWINGS FOR INTERIOR **WALL TYPE PARTITIONS** AND **RATED WALL LOCATIONS**.

G. IT IS THE INTENT OF THE DRAWINGS THAT **ALL EXPOSED SURFACES RECEIVE FINISHES** AS INDICATED ON DRAWINGS AND SPECIFICATIONS UNLESS SPECIFICALLY NOTED OTHERWISE. ANY SURFACE WHICH DOES NOT HAVE A SPECIFIC FINISH NOTED OR IS NOTED TO REMAIN UNFINISHED SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/INTERIOR DESIGNER AND FINISHED PER ARCHITECT/INTERIOR DESIGNER'S INSTRUCTIONS.

H. **INSPECT ALL FINISH PRODUCTS IMMEDIATELY UPON RECEIPT** AND BEFORE INSTALLATION TO ENSURE THEY ARE FREE FROM DEFECTS OR DAMAGE (INSPECT COMPLETE LENGTHS OF VINYL WALLCOVERING). COMPARE THE PRODUCT WITH THE FINISH LEGEND TO ENSURE THE CORRECT QUANTITIES, WIDTHS, THICKNESSES, PATTERNS, COLORS, ETC. HAVE BEEN ORDERED AND DELIVERED. NOTIFY THE ARCHITECT/INTERIOR DESIGNER OF ANY DEVIATIONS.

I. INSTALL ALL MATERIALS PER **MANUFACTURER'S INSTRUCTIONS**. RESEARCH PRODUCT THOROUGHLY TO ENSURE ALL ASSOCIATED ADHESIVES, GROUT, SEALANTS, PADDING, ETC. ARE ORDERED PER MANUFACTURER INSTRUCTIONS AND IN A TIMELY MATTER.

J. **ATTIC STOCK**: SALVAGE MATERIAL AND OVERAGES FOR OWNER'S STORAGE INCLUDING ALL WALLCOVERING, PAINT, CEILING TILE, FLOORING, ETC. GENERAL CONTRACTOR TO REVIEW ANY CARPET OVERAGES WITH OWNER PRIOR TO ORDERING MATERIAL.

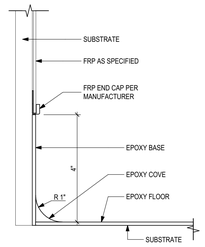
K. ALL SCHEDULED **FLOORING AND WALL FINISHES TO CONTINUE UNDERNEATH/BEHIND** ALL VANITIES, LAVATORIES, STAIRS, BANQUETTES OR ANY OTHER BUILT-IN MILLWORK UNLESS NOTED OTHERWISE.

L. PROVIDE **SHOE MOULD** AT ALL HARD FLOOR SURFACES SCHEDULED TO RECEIVE WOOD BASE UNLESS NOTED OTHERWISE.

M. ALL FLOOR TILE AND WALL **TILE JOINTS TO ALIGN** WITH ONE ANOTHER UNLESS NOTED OTHERWISE.

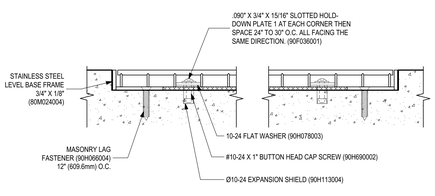
N. **FEATHER SUBFLOOR** WHERE TILE FLOOR IS TO BE INSTALLED TO ENSURE TILE IS LEVEL TO ADJACENT FLOOR FINISH (CARPET, RESILIENT FLOORING, ETC.) AS NECESSARY TO MEET ACCESSIBILITY REQUIREMENTS.

O. PROVIDE **4" HIGH TILE BASE** OR BUILD UP OF SMALLER BASE EQUAL TO



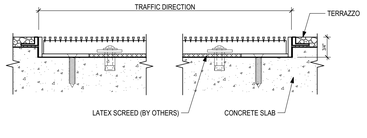
EPOXY BASE DETAILS F11

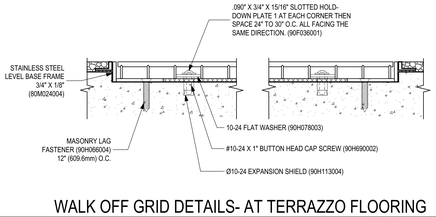
SCALE: 6" = 1'-0"



WALK OFF GRID DETAILS C11

SCALE: 6" = 1'-0"





WALK OFF GRID DETAILS- AT TERRAZZO FLOORING A11

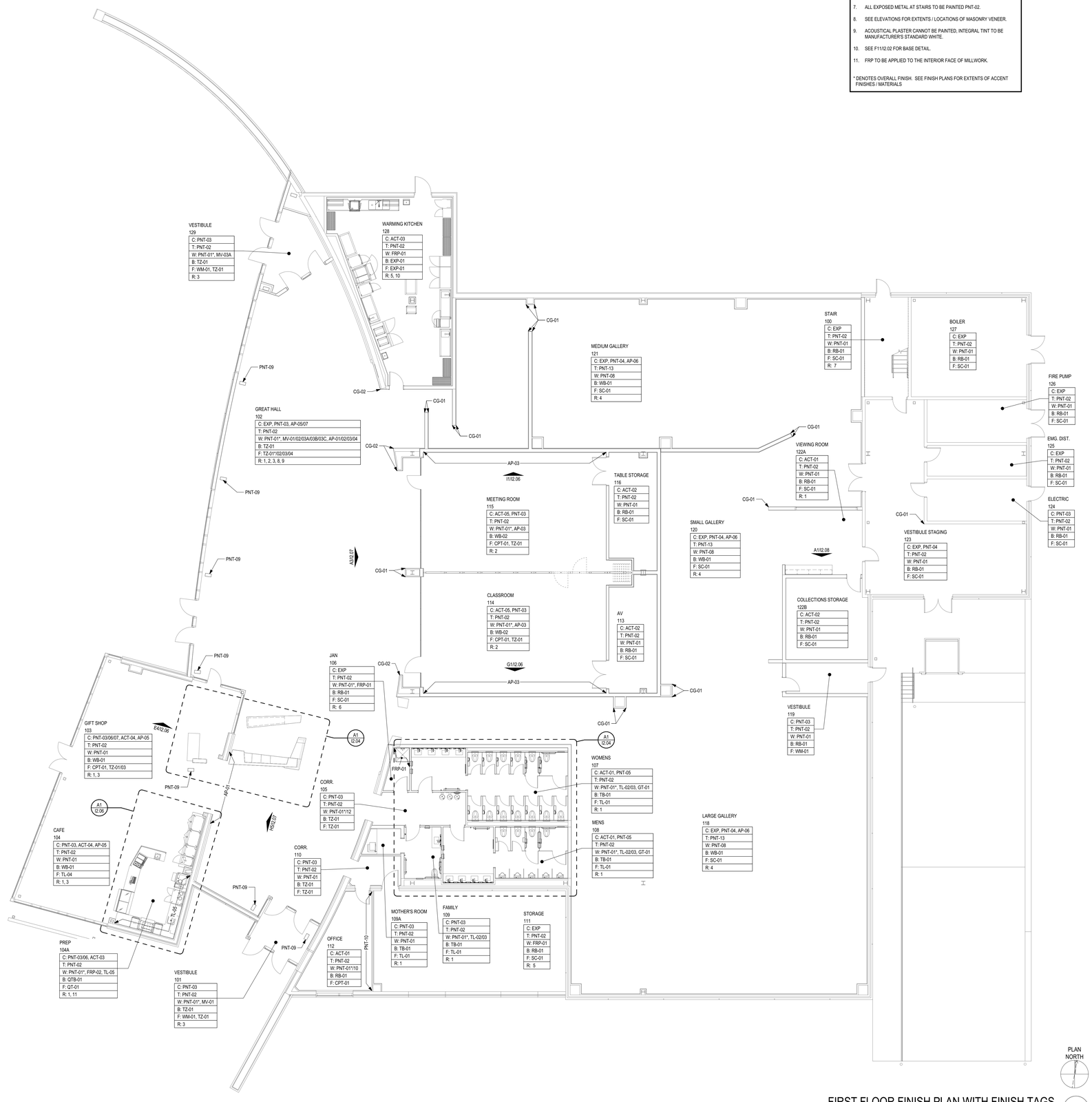
SCALE: 6" = 1'-0"

FINISH TAG REMARKS

1. SEE INTERIOR ELEVATIONS FOR MILLWORK FINISHES.
2. SEE INTERIOR ELEVATIONS FOR ACOUSTICAL PANEL (AP) LOCATIONS AND LAYOUTS.
3. ALL EXPOSED CEILING/ROOF DECK/MECHANICAL DUCTS AND DIFFUSERS TO BE PAINTED TO PNT-03. CEILING PAINT TO EXTEND 12" BELOW LOWEST MECHANICAL DUCT PENETRATION.
4. ALL EXPOSED CEILING/ROOF DECK/MECHANICAL DUCTS AND DIFFUSERS TO BE PAINTED PNT-08. CEILING PAINT TO EXTEND 12" BELOW LOWEST MECHANICAL DUCT PENETRATION.
5. FRP TO BE FULL HEIGHT.
6. EXTENTS OF FRP IS ONE FULL PANEL ON TWO ADJACENT WALLS AT MOP SINK.
7. ALL EXPOSED METAL AT STAIRS TO BE PAINTED PNT-02.
8. SEE ELEVATIONS FOR EXTENTS / LOCATIONS OF MASONRY VENEER.
9. ACOUSTICAL PLASTER CANNOT BE PAINTED, INTEGRAL TINT TO BE MANUFACTURER'S STANDARD WHITE.
10. SEE F11/I2.02 FOR BASE DETAIL.
11. FRP TO BE APPLIED TO THE INTERIOR FACE OF MILLWORK.

* DENOTES OVERALL FINISH. SEE FINISH PLANS FOR EXTENTS OF ACCENT FINISHES / MATERIALS

FINISH TAG LEGEND	
C -	CEILING FINISH
T -	TRIM FINISH
W -	WALL FINISH
B -	WALL BASE
F -	FLOOR FINISH
R -	REMARKS



FIRST FLOOR FINISH PLAN WITH FINISH TAGS A1

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

CJMW ARCHITECTURE
525 Vine Street Suite 350
Winston-Salem NC 27101
p. 336-724-1503
www.cjmw.com

HICAPS

RAA

SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE P.A. CERT. NO. 50356

JOHN LESLIE HOUSTON 24117 REGISTERED ARCHITECT GREENSBORO N.C.

#	Description	Date

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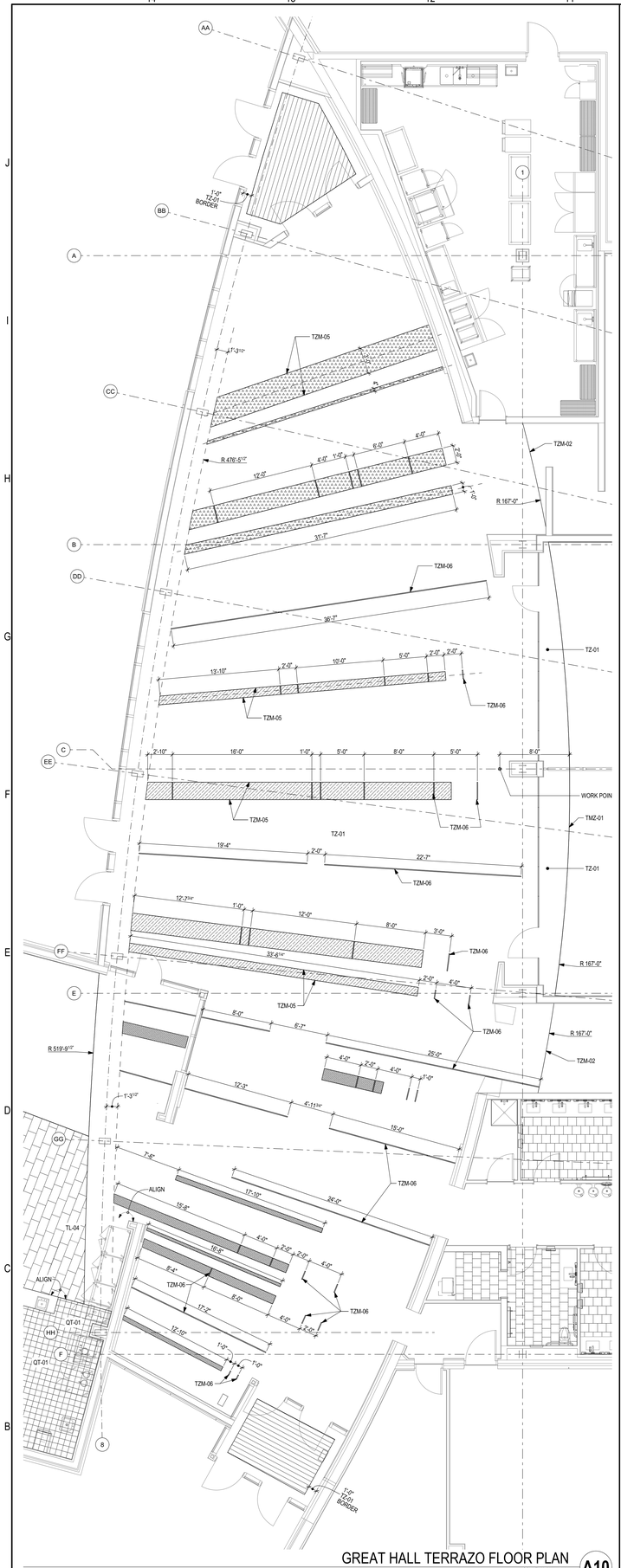
WALL FINISH AND ROOM FINISH PLAN

I2.02

ISSUE DATE: **10-24-2023**
PROJECT NUMBER: **22-0410**
DRAWN BY: **KP, MC, CL, MH**
CHECKED BY: **--**



GREAT HALL TERRAZO FLOOR PLAN

SCALE: 3/16" = 1'-0"

A10



FIRST FLOOR - FLOOR FINISH PLAN

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

A1

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CONSTRUCTION DOCUMENTS

#	Description	Date

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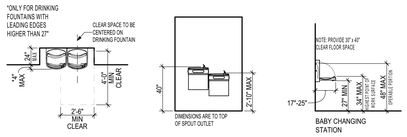
FLOOR FINISH PLANS

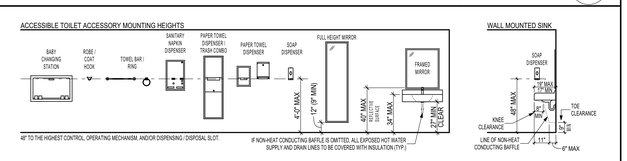
I2.03

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: KP, MC, CL, MH
CHECKED BY: ..



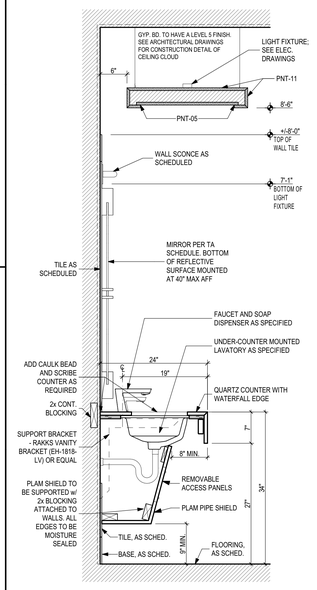
MISC. MOUNTING HEIGHTS & CLEARANCES — I11

SCALE: 1/4" = 1'-0"



ACCESSIBLE TOILET ACCESSORY MOUNTING HEIGHTS — G11

SCALE: 1/4" = 1'-0"



ACCESSIBLE LAVATORY — G9

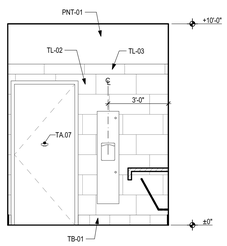
SCALE: 1" = 1'-0"

GENERAL NOTES

1. CENTER TILE ON WALLS UNLESS NOTED OTHERWISE
2. CENTER MIRROR AND WALL SCONCE OVER FAUCET UNLESS NOTED OTHERWISE.
4. SEE SHEET I2.01 FOR FINISH LEGEND
5. ACCESSIBLE SINKS AND LAVATORIES TO HAVE SCHEDULED FLOORING TO CONTINUE UNDERNEATH.
6. PROVIDE BLOCKING AS REQUIRED FOR ALL GRAB BARS AND TOILET ACCESSORIES.
7. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON TOILET ACCESSORIES.
8. REFER TO FINISH LEGEND FOR ADDITIONAL INFORMATION ON TOILET PARTITIONS (TA.12)

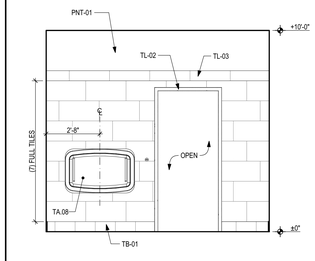
TOILET ACCESSORY SCHEDULE

ID	Description	Manufacturer	Model / Line Name	Model Number
TA.01	36" Grab Bar	Bobrick	--	B-5806x36
TA.02	42" Grab Bar	Bobrick	--	B5806x42
TA.03	18" Grab Bar	Bobrick	--	B-5806x18
TA.04	Toilet Tissue Dispenser	Bobrick	Fino Collection	B-6890
TA.05	Toilet Seat Cover Dispenser - Recessed	Bobrick	Trim Line Series	B-3013
TA.06	Sanitary Napkin Disposal	Bobrick	Trim Line Series	B-35139
TA.07	Coat Hook	Bobrick	Classic Series	B-6727
TA.08	Baby Changing Station (includes bag hook)	Koala Kare	--	KB310-SSWM
TA.09	Framed Mirror - 24" x 60"	Bobrick	--	B-290 2460.MBLK
TA.10	Semi-Recessed Paper Towel Dispenser / Waste Combo	Bobrick	Trim Line Series	B-38032
TA.11	Mirror 31"x47" (N.I.C. - OWNER PROVIDED FFE)	Arteriors	Wilder Mirror	WM110
TA.12	Toilet Partition	Scranton Products	Hiny Hiders	



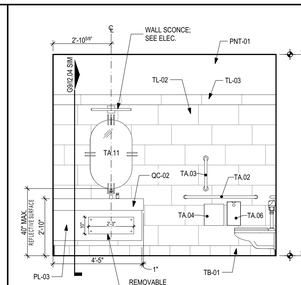
109 FAMILY N — H7

SCALE: 3/8" = 1'-0"



109 FAMILY W — H5

SCALE: 3/8" = 1'-0"



109 FAMILY E — H3

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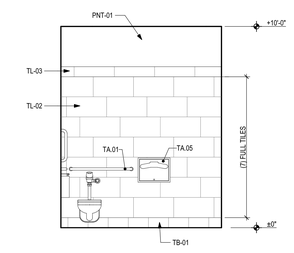
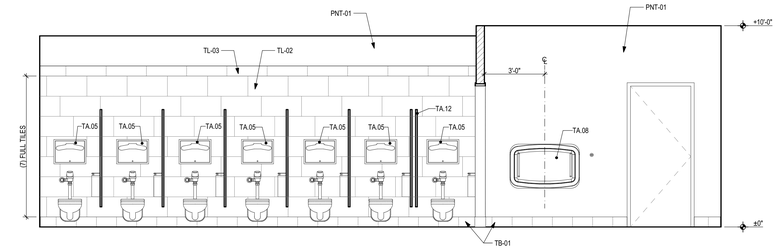


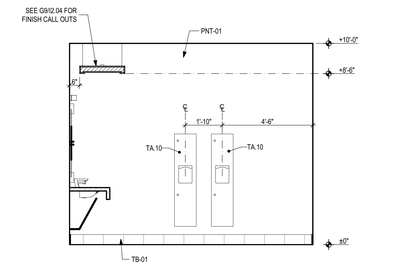
109 FAMILY S — H1

SCALE: 3/8" = 1'-0"



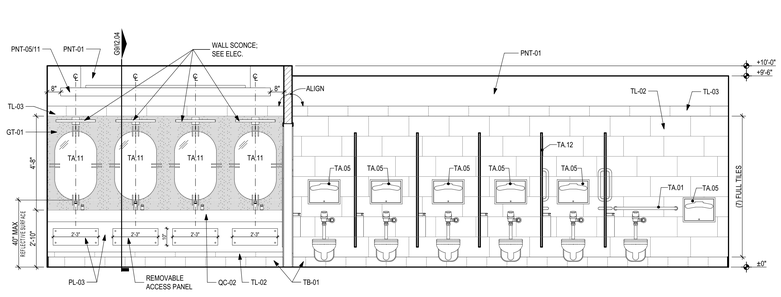
107 WOMENS — F1

SCALE: 3/8" = 1'-0"



108 MENS - SIDE ELEV AT VANITY — E6

SCALE: 3/8" = 1'-0"



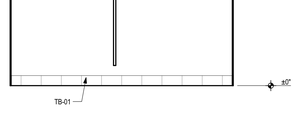
107 WOMENS - VANITY WALL — D1

SCALE: 3/8" = 1'-0"



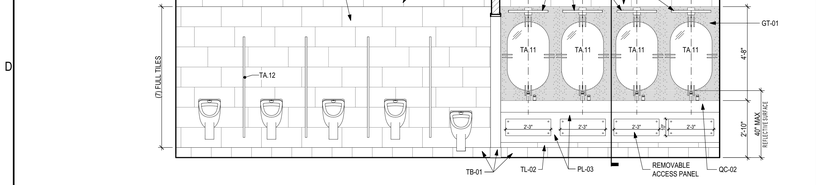
108 MENS SIDE WALL — E12

SCALE: 3/8" = 1'-0"



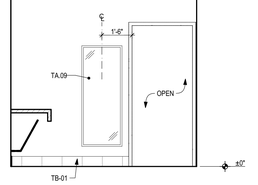
108 MENS - SIDE ELEV — E9

SCALE: 3/8" = 1'-0"



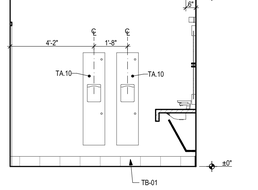
108 MENS - VANITY WALL — C10

SCALE: 3/8" = 1'-0"



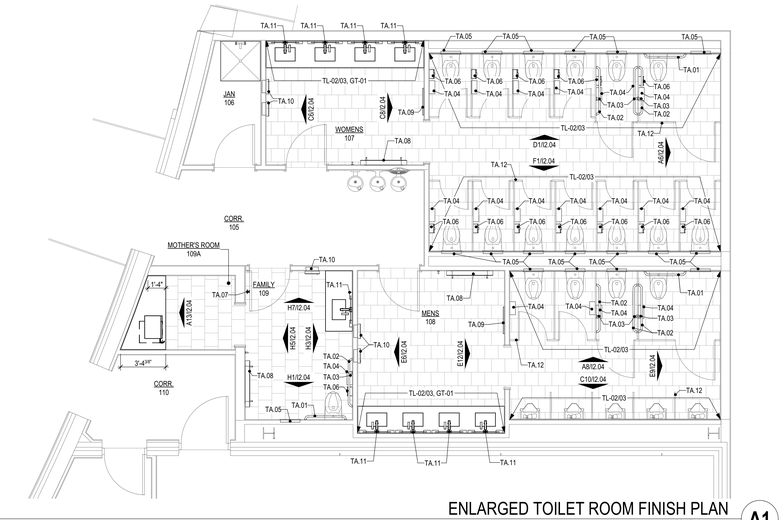
107 WOMENS — C8

SCALE: 3/8" = 1'-0"



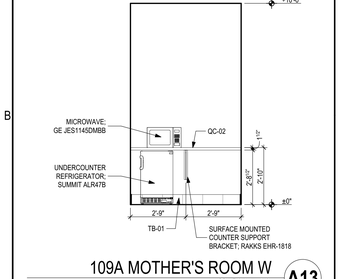
107 WOMENS - SIDE ELEV — C6

SCALE: 3/8" = 1'-0"



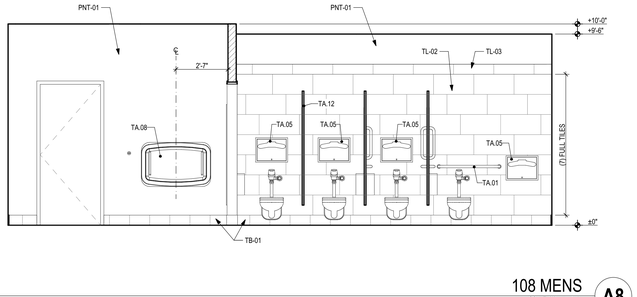
ENLARGED TOILET ROOM FINISH PLAN — A1

SCALE: 1/4" = 1'-0"



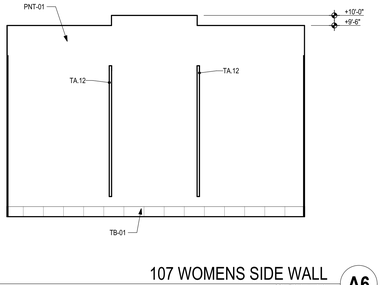
109A MOTHER'S ROOM W — A13

SCALE: 3/8" = 1'-0"



108 MENS — A8

SCALE: 3/8" = 1'-0"



107 WOMENS SIDE WALL — A6

SCALE: 3/8" = 1'-0"

CJMW ARCHITECTURE
525 Vine Street Suite 350
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LESLIE JOHNSON 10/24/2023 NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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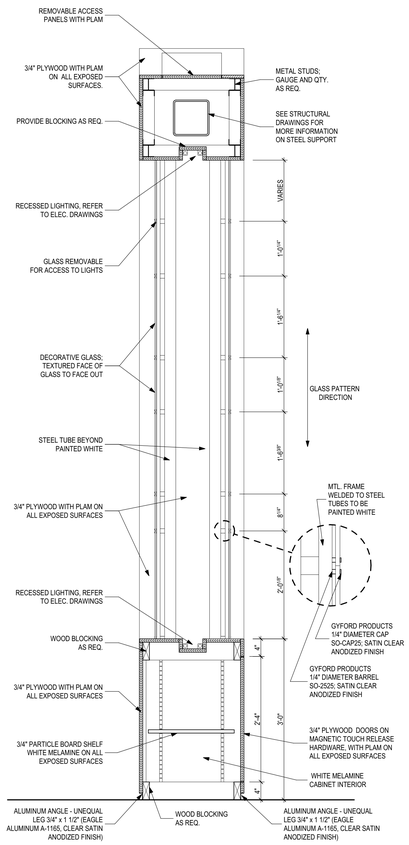
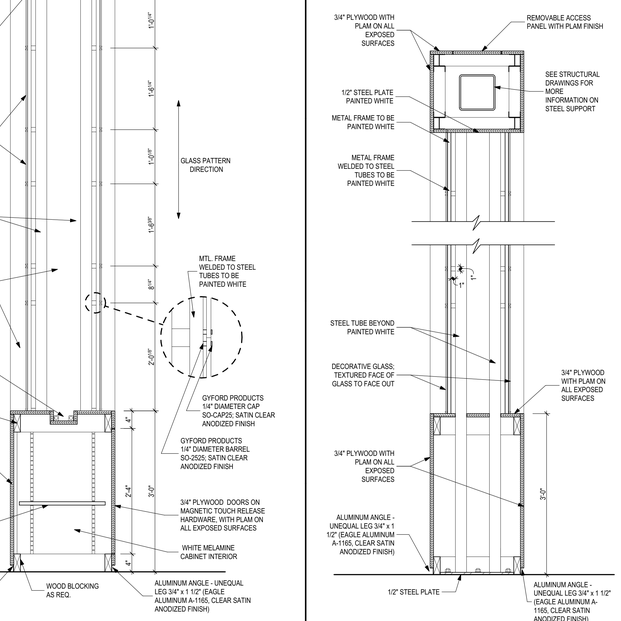
ENLARGED TOILET PLANS, ELEVATIONS, AND DETAILS

I2.04

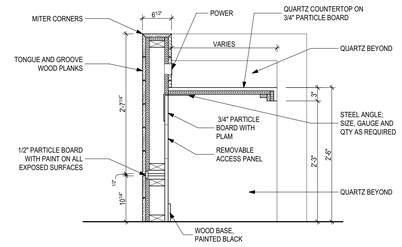
ISSUE DATE: **10-24-2023**
PROJECT NUMBER: **22-0410**
DRAWN BY: **KP, MC, CL, MH**
CHECKED BY: **--**



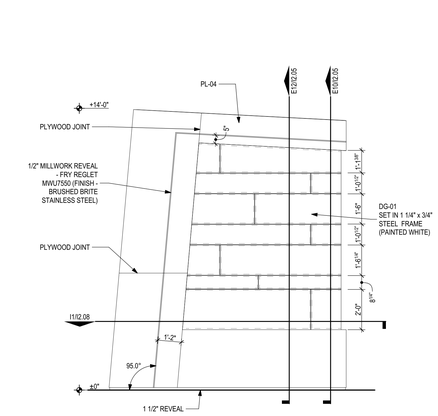
FEATURE WALL @ CABINET — SCALE: 1" = 1'-0" — **E12**



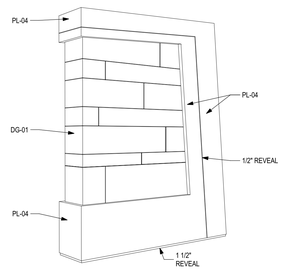
FEATURE WALL SECTION — SCALE: 1" = 1'-0" — **E10**



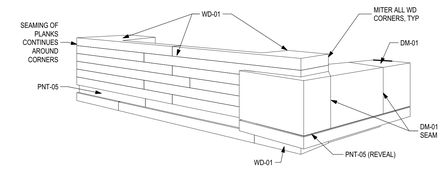
RECEPTION DESK SECTION — SCALE: 1" = 1'-0" — **I7**



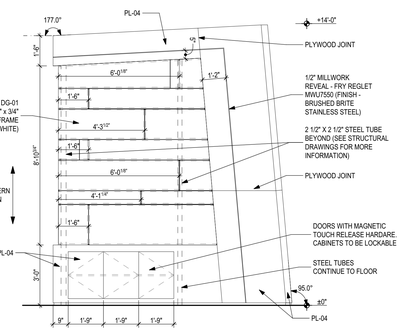
FEATURE WALL S — SCALE: 3/8" = 1'-0" — **F7**



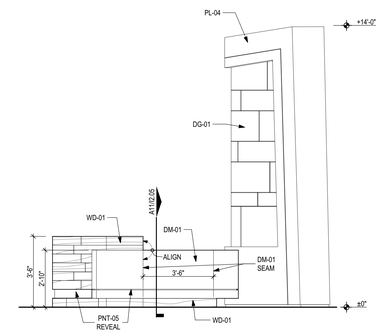
FEATURE WALL PERSPECTIVE — FOR DESIGN INTENT ONLY — NOT TO SCALE — **I4**



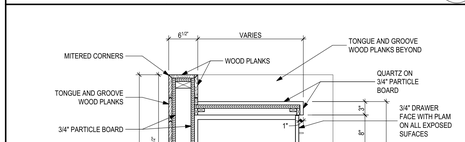
RECEPTION DESK PERSPECTIVE — FOR DESIGN INTENT ONLY — NOT TO SCALE — **I1**



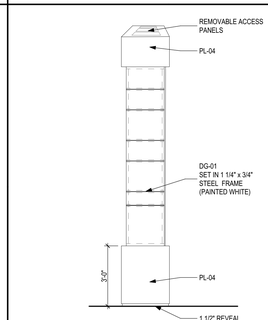
FEATURE WALL N — SCALE: 3/8" = 1'-0" — **F4**



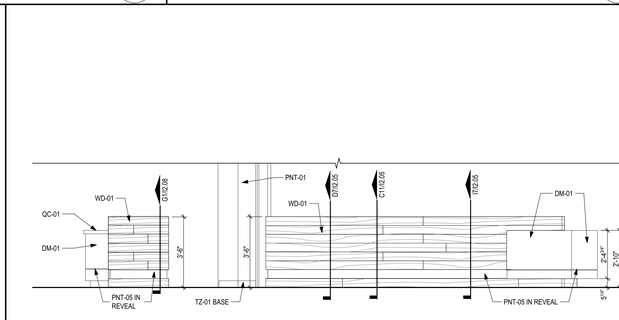
RECEPTION DESK SIDE ELEVATION — SCALE: 3/8" = 1'-0" — **F1**



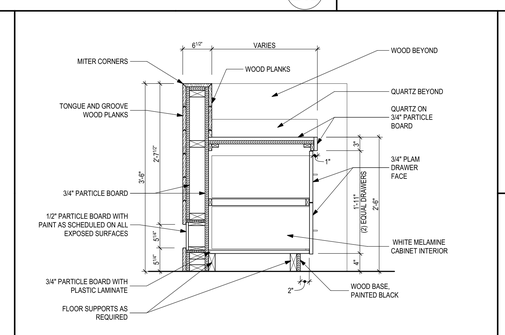
RECEPTION DESK @ CABINET — SCALE: 1" = 1'-0" — **D7**



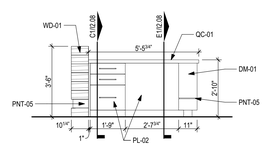
FEATURE WALL E — SCALE: 3/8" = 1'-0" — **D5**



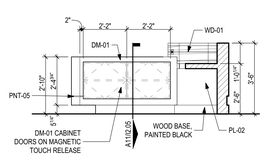
RECEPTION & GIFT SHOP DESKS FRONT ELEVATION — SCALE: 3/8" = 1'-0" — **D1**



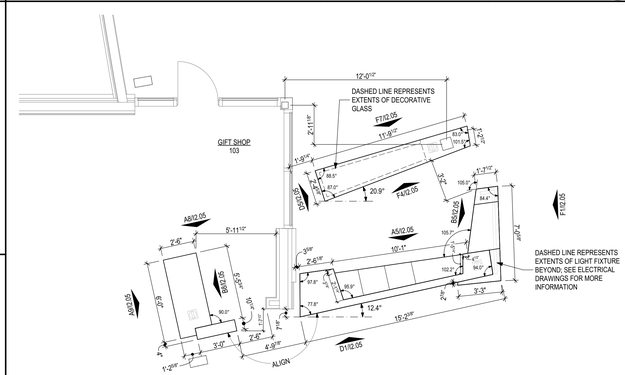
RECEPTION DESK @ DRAWERS — SCALE: 1" = 1'-0" — **C11**



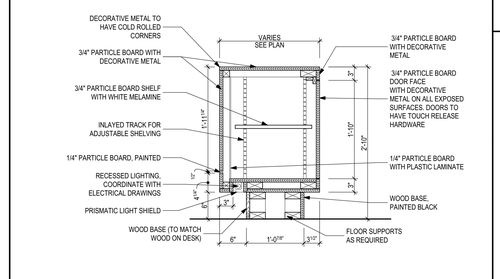
GIFT SHOP MILLWORK W — SCALE: 3/8" = 1'-0" — **B8**



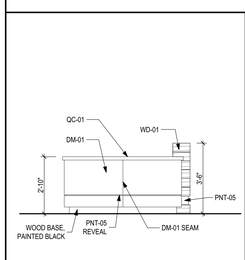
RECEPTION DESK E — SCALE: 3/8" = 1'-0" — **B5**



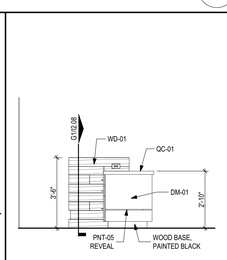
ENLARGED PLAN AT DESK — SCALE: 1/4" = 1'-0" — **A1**



RECEPTION DESK @ SIDE — SCALE: 1" = 1'-0" — **A11**

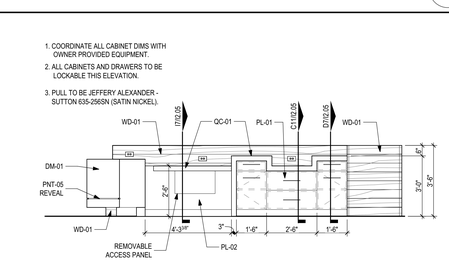


GIFT SHOP MILLWORK E — SCALE: 3/8" = 1'-0" — **A9**



GIFT SHOP MILLWORK S — SCALE: 3/8" = 1'-0" — **A8**

1. COORDINATE ALL CABINET DIMS WITH OWNER PROVIDED EQUIPMENT.
2. ALL CABINETS AND DRAWERS TO BE LOCKABLE THIS ELEVATION.
3. PULL TO BE JEFFERY ALEXANDER - SUTTON 635-256SN (SATIN NICKEL).



RECEPTION DESK BACK ELEVATION — SCALE: 3/8" = 1'-0" — **A5**

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CJMW ARCHITECTURE P.A. CERT. NO. 50356 — JOHN LESLIE JOHNSON 29371

#	Description	Date

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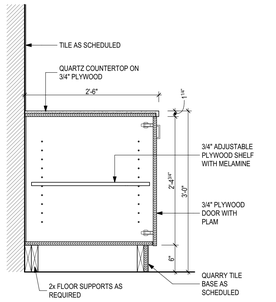
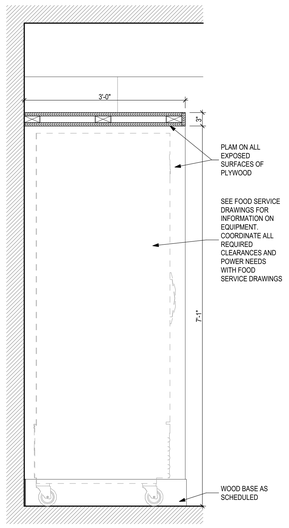
INTERIOR ELEVATIONS & DETAILS - RECEPTION AREA

I2.05

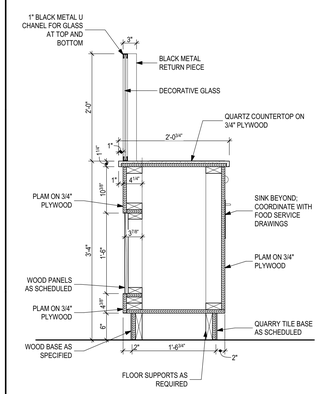
ISSUE DATE: **10-24-2023**
PROJECT NUMBER: **22-0410**
DRAWN BY: **KP, MC, CL, MH**
CHECKED BY: **..**



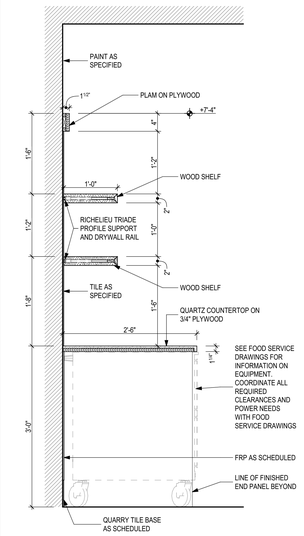
CABINET SECTION — SCALE: 1" = 1'-0" — I13



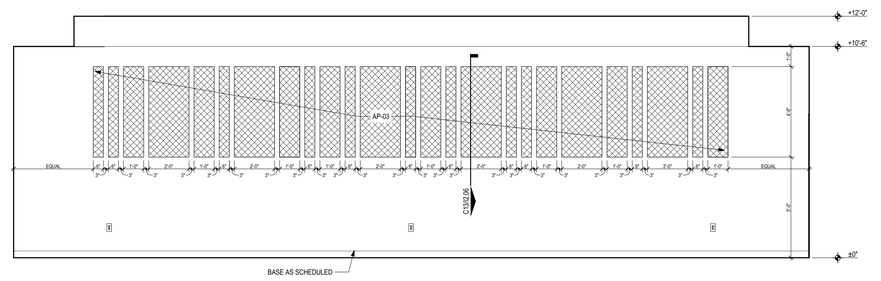
EQUIPMENT SURROUND — SCALE: 1" = 1'-0" — G11



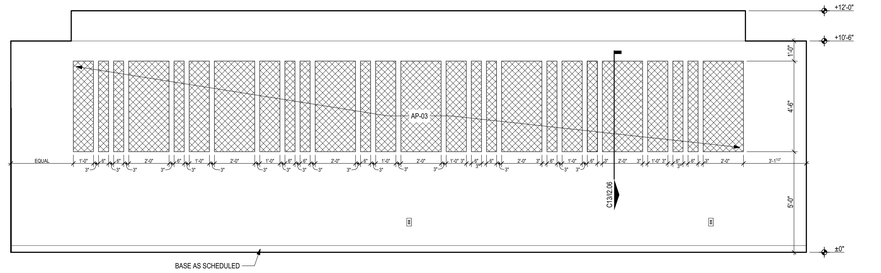
SIDE COUNTER — SCALE: 1" = 1'-0" — H9



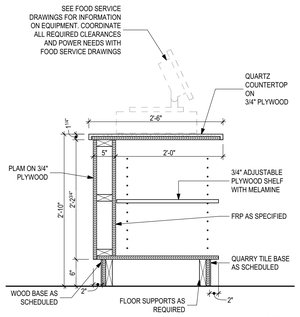
COUNTER SECTION — SCALE: 1" = 1'-0" — G7



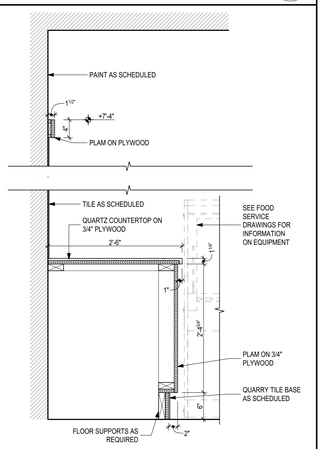
115 MEETING ROOM N — SCALE: 3/8" = 1'-0" — I1



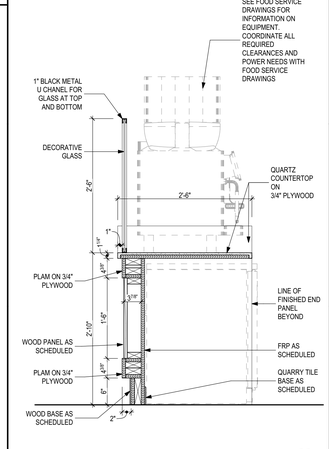
114 CLASSROOM S — SCALE: 3/8" = 1'-0" — G1



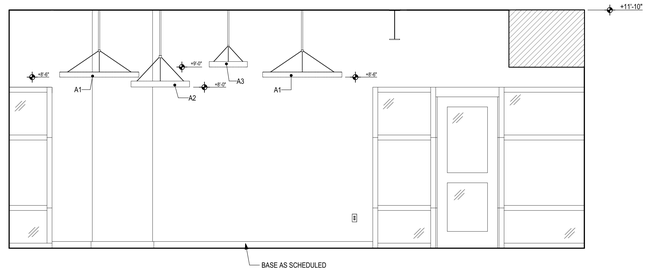
SALES COUNTER — SCALE: 1" = 1'-0" — G13



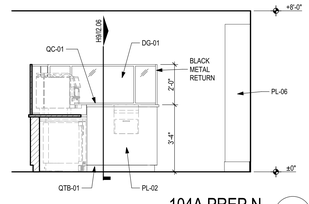
END COUNTER — SCALE: 1" = 1'-0" — E11



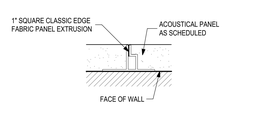
COUNTER @ COFFEE — SCALE: 1" = 1'-0" — E9



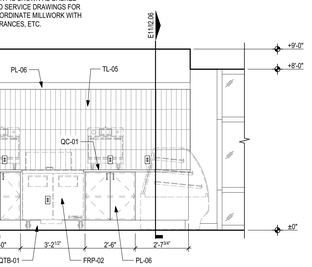
103 GIFT SHOP N — SCALE: 3/8" = 1'-0" — E4



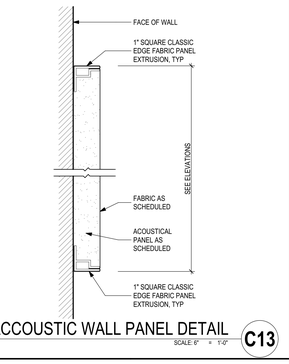
104A PREP N — SCALE: 3/8" = 1'-0" — E1



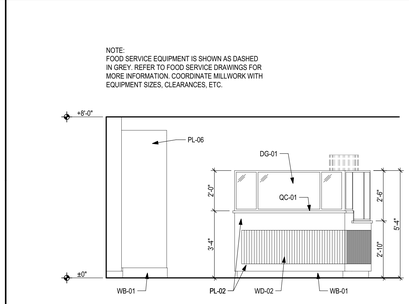
MID SEAM DETAIL — SCALE: 6" = 1'-0" — E13



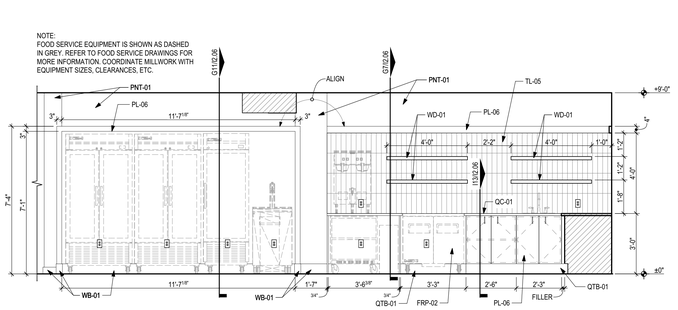
104A PREP S — SCALE: 3/8" = 1'-0" — C1



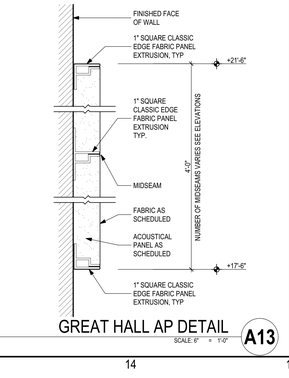
ACCOUSTIC WALL PANEL DETAIL — SCALE: 6" = 1'-0" — C13



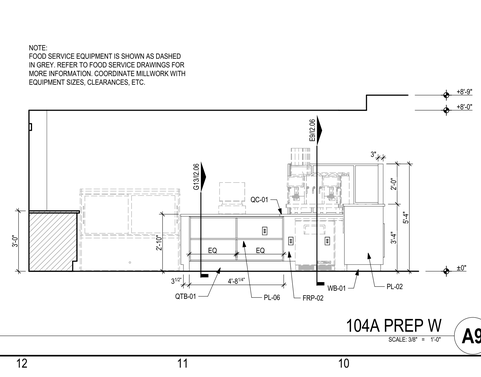
104A KITCHEN - END ELEVATION — SCALE: 3/8" = 1'-0" — C9



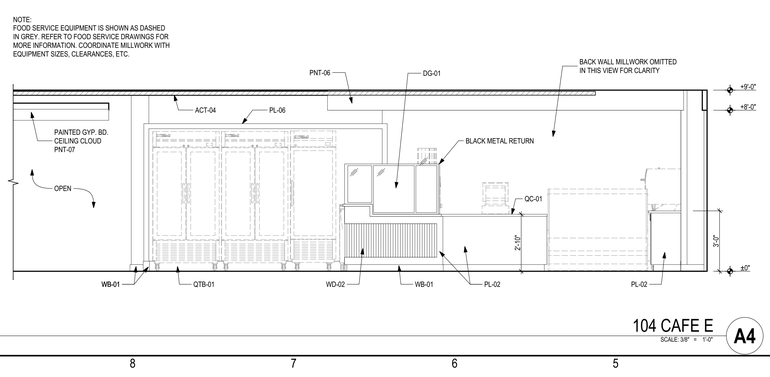
104A PREP E — SCALE: 3/8" = 1'-0" — C4



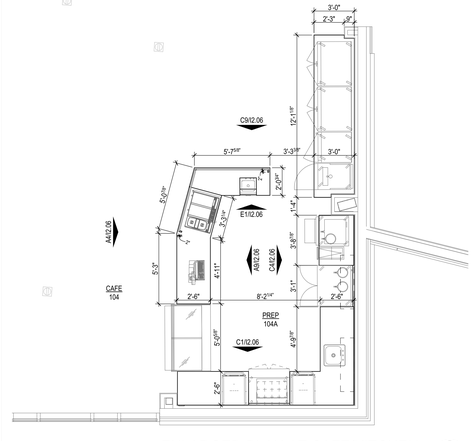
GREAT HALL AP DETAIL — SCALE: 6" = 1'-0" — A13



104A PREP W — SCALE: 3/8" = 1'-0" — A9



104 CAFE E — SCALE: 3/8" = 1'-0" — A4



ENLARGED PLAN AT CAFE/KITCHEN — SCALE: 1/4" = 1'-0" — A1

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HICAPS

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CONSTRUCTION DOCUMENTS

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JOHN LESLIE JOHNSON 49177 — GREENSBORO, NC

#	Description	Date

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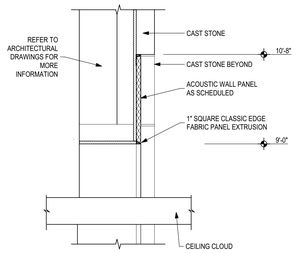
INTERIOR ELEVATIONS & DETAILS - GIFT SHOP

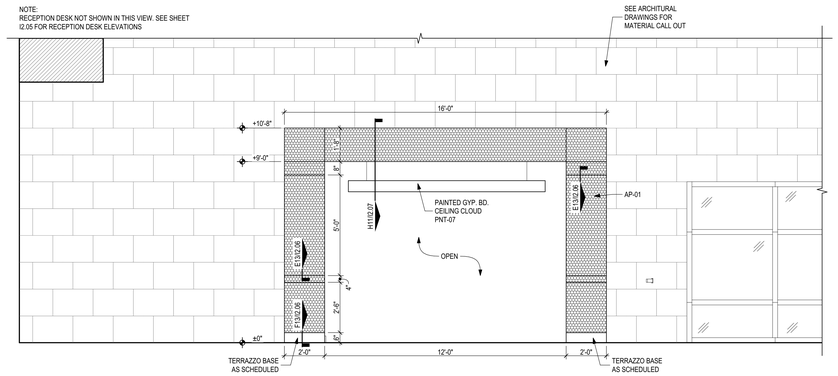
I2.06

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: KP, MC, CL, MH
CHECKED BY: ...



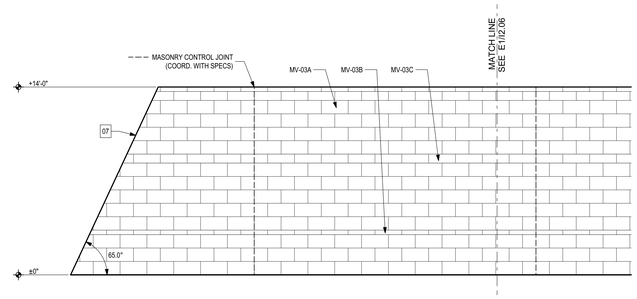
ACCOUSTIC WALL PANEL DETAIL H11

SCALE 1" = 1'-0"



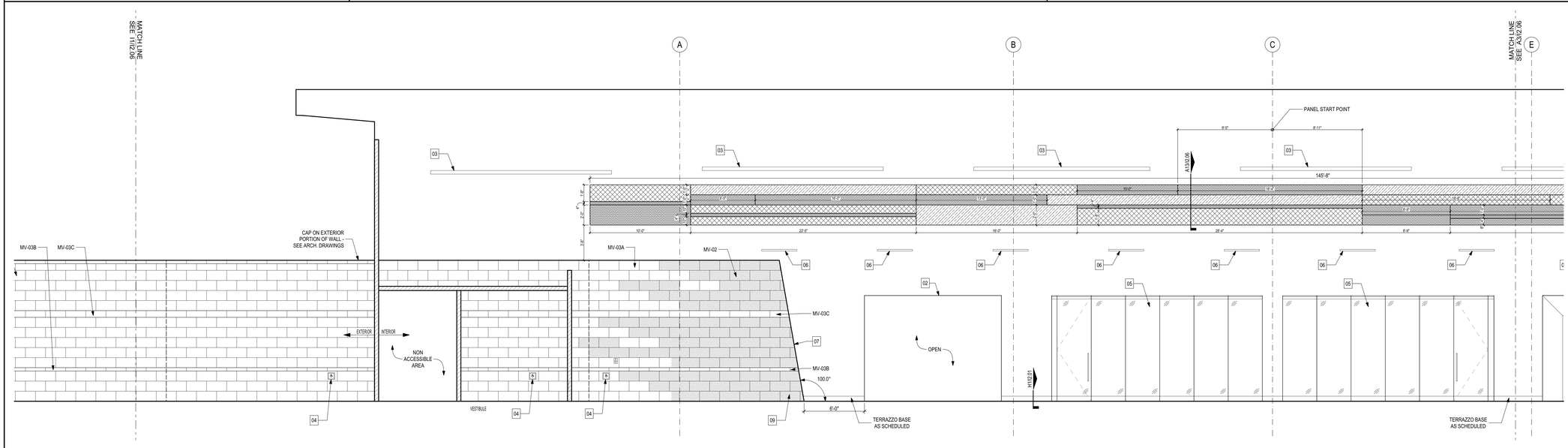
102 GREAT HALL W H5

SCALE 3/8" = 1'-0"



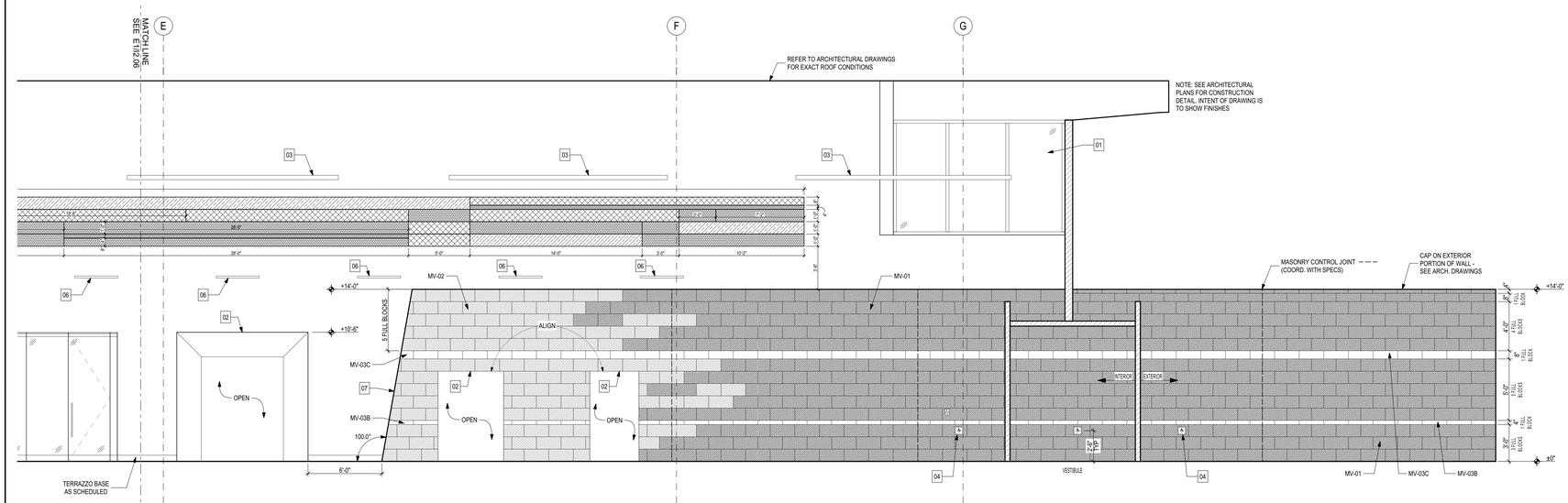
102 GREAT HALL E - FLATTENED ELEVATION OF CURVED WALL H1

SCALE 1/4" = 1'-0"



102 GREAT HALL E - FLATTENED ELEVATION OF CURVED WALL E1

SCALE: 1/4" = 1'-0"



102 GREAT HALL E - FLATTENED ELEVATION OF CURVED WALL A3

SCALE: 1/4" = 1'-0"

ACOUSTICAL WALL PANEL LEGEND

- AP-01
- AP-02
- AP-03
- AP-04

KEYED NOTES

01 ALUMINUM CURTAIN WALL SYSTEM - REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION

02 OPENING IN WALL - REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION

03 CEILING CLOUD - REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION

04 ADA PUSH BUTTON WALL MOUNT; CENTER IN MASONRY UNIT. COORDINATE LOCATIONS WITH ELECTRICAL DRAWINGS

05 OPERABLE GLASS PARTITION - REFER TO ARCHITECTURAL DRAWINGS FOR MORE INFORMATION

06 MECHANICAL DIFFUSERS, COORDINATE WITH MECH. DRAWINGS

07 VENEER COURSING TO BE LAID OUT SO THAT THE MINIMUM CUT SIZE IS NO LESS THAN 4" WIDE. ALL EXPOSED EDGES OF VENEER TO BE FACTORY FINISHED

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#	Description	Date

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INTERIOR ELEVATIONS - GREAT HALL

I2.07

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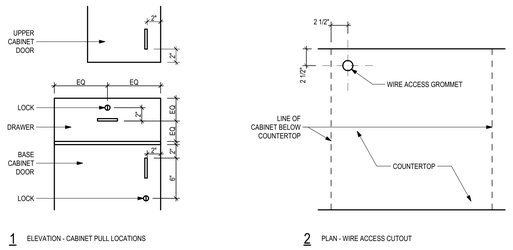
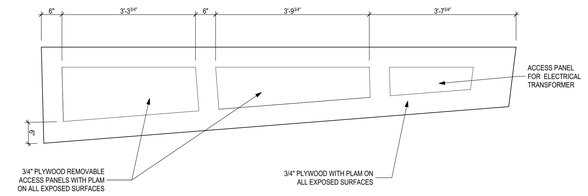


1 ELEVATION - CABINET PULL LOCATIONS

2 PLAN - WIRE ACCESS CUTOUT

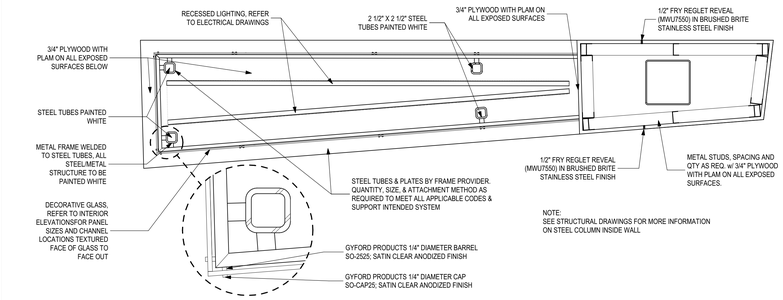
CABINET HARDWARE DETAILS H11

SCALE: 1 1/2" = 1'-0"



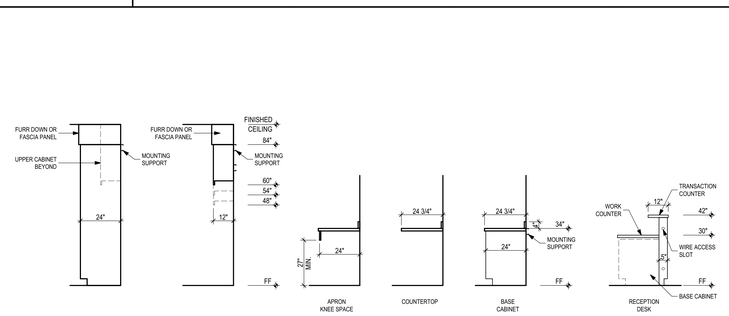
FEATURE WALL - TOP PLAN VIEW I6

SCALE: 3/4" = 1'-0"



FEATURE WALL CROSS SECTION I1

SCALE: 1" = 1'-0"



CABINET DIMENSIONS G6

SCALE: 3/8" = 1'-0"

CABINET HARDWARE

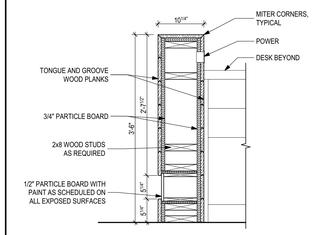
HARDWARE NOTES: ADJUSTABLE SHELF SUPPORTS: STANDARD SIDE-MOUNTED SYSTEM USING MULTIPLE HOLES FOR PIN SUPPORTS AND COORDINATED SELF RESTS, SATIN CHROME FINISH U.N.O. , FOR NOMINAL 1 INCH SPACING ADJUSTMENTS. DRAWER AND DOOR PULLS: INTERIOR DESIGNER TO SPECIFY. CABINET LOCKS: KEYED CYLINDER, TWO KEYS PER LOCK, MASTER KEYED, STEEL WITH FINISH TO MATCH PULL. CATCHES: TOUCH TYPE. DRAWER SLIDES: FULL EXTENSION, STATIC LOAD CAPACITY - EXTRA HEAVY DUTY GRADE, BOTTOM MOUNTED, POSITIVE TYPE STOPS, SELF CLOSING/STAY CLOSED TYPE. HINGES: FULLY CONCEALED HINGES, 2 PAIRS PER DOOR, EUROSTYLE-SELF CLOSING, STEEL WITH SATIN FINISH.

CABINET HARDWARE:

BOH AREA CASEWORK PULLS: EPCO 4" STAINLESS STEEL WIRE PULL, FINISH: SATIN STAINLESS STEEL (EPC-MC402-4-SS)

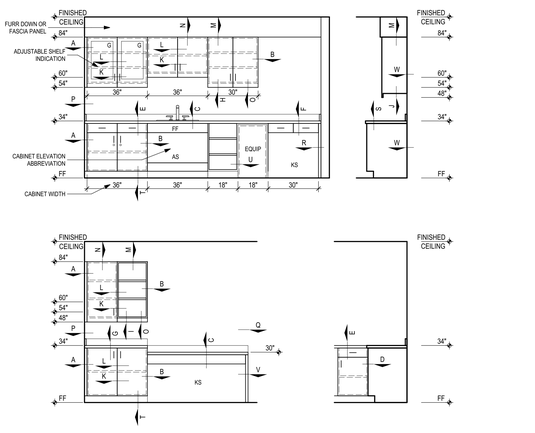
GENERAL CABINET NOTES

1. REFERENCE ARCHITECTURAL PLANS FOR MILLWORK FINISH AND MATERIAL SPECIFICATIONS.
2. THE GENERAL CONTRACTOR SHALL CLOSELY COORDINATE HIS WORK WITH THAT OF THE CABINET CONTRACTOR.
3. ALL "INSTALLED" CABINETRY SHALL COMPLY WITH LOCAL BUILDING CODES.
4. ALL CABINET FINISHES SHALL BE BUILT AS NOTED ON ARCHITECTURAL PLANS.
5. ALL "INSTALLED" CABINETS SHALL BE SCRIBED TO WALL OR CEILING AS REQUIRED. CABINET CONTRACTOR TO CHECK JOB PROGRESS AND COORDINATE WITH OTHER TRADES INVOLVED.
6. THE CABINET CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT AS REQUESTED.
7. THE CABINET CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE.
8. THE CABINET CONTRACTOR SHALL PROVIDE RUBBER BUMPERS ON ALL WOOD DOORS.
9. WHERE MEMBERS ARE MITERED OR BUTTED, THEY SHALL BE JOINED AND SECURED IN A MANNER TO ENSURE AGAINST THE JOINT OPENING.
10. ALL FINISHED WORK, AS FAR AS PRACTICAL, SHALL BE ASSEMBLED AND FINISHED IN THE SHOP AND DELIVERED TO THE BUILDING READY TO ERECT IN PLACE.
11. ALL THE WORK SHALL BE FABRICATED, ASSEMBLED, FINISHED, AND ERECTED TO MEET CURRENT AWI STANDARDS. REFERENCE SECTION 6400.
12. ALL MILLWORK SHOP DRAWINGS ARE TO CALL OUT ALL MATERIALS AND FINISHES. ALL JOINTS, CORNERS, AND EDGES ARE TO BE DETAILED IN INDIVIDUAL DETAILS. ALL DIMENSIONS, CRITICAL OR OTHERWISE, ARE TO BE CALLED OUT ON THE SHOP DRAWINGS.
13. ALL MILLWORK, SPECIAL PRODUCTS, AND SPECIAL ASSEMBLIES ARE SUBJECT TO SUBMITTAL AND SHOP DRAWING PREPARATION FOR REVIEW. SHOP DRAWINGS AND SUBMITTALS SHALL NOT BE WAIVED UNLESS WRITTEN PERMISSION TO DO SO IS GIVEN BY THE ARCHITECT.
14. THE MILLWORK CONTRACTOR SHALL COORDINATE ALL MILLWORK INSTALLATIONS WITH OTHER SUBCONTRACTORS AND SHALL BEAR ANY COST ASSOCIATED WITH RECONFIGURATION OF MILLWORK IN CONFLICT WITH THE OTHER TRADES.
15. THE CABINET CONTRACTOR SHALL COORDINATE THE DELIVERY OF ALL MILLWORK ITEMS TO ENSURE THAT THEY WILL FIT THROUGH EXISTING DOORS AND INTO EXISTING ELEVATOR COMPARTMENTS. MILLWORK SHALL BE FABRICATED, WHOLE OR IN COMPONENTS AS NECESSARY TO ACCOMMODATE DELIVERY INTO THE BUILDING.
16. CABINET ARE WIDTHS BASED ON 3" MODULE INCREMENT U.N.O.
17. PROVIDE FILLER PANELS AND TRIM WHERE EQUIPMENT IS LOCATED WITHIN CABINETS.
18. PROVIDE FINISHED END PANELS / RETURNS AT OPEN ENDED CABINETS, KNEE SPACES AND ACCESSIBLE SINKS.
19. PROVIDE 1 1/2" THICK FINISHED END PANEL AT FREE STANDING END OF ACCESSIBLE SINKS AND KNEE SPACES.
20. WHEN FILLER PANELS ARE REQUIRED AT BOTH ENDS OF CASEWORK TERMINATION, FILLER PANELS SHALL BE EQUAL WIDTH.
21. PROVIDE WALL BRACKET SUPPORTS AT 36" O.C. MAX. TO SUPPORT COUNTERTOP AT CONTINUOUS KNEE SPACE.
22. PROVIDE END SPLASH WHEN COUNTERTOP IS ADJACENT TO WALL AT SIDES. WHEN AN ADJACENT WALL IS LESS THAN 2 FEET AWAY FROM A SINK AND FULL HEIGHT BACKSPLASH IS CALLED OUT, A FULL HEIGHT END SPACE IS REQUIRED U.N.O.
23. PROVIDE HOLES FOR GROMMETS IN COUNTERTOPS AT THE FOLLOWING LOCATIONS:
    - ONE EACH WIRE ACCESS HOLE WITH GROMMET AT KNEE SPACE.
    - WIRE ACCESS HOLES WITH GROMMETS AT 36" O.C. FOR CONTINUOUS RUNS OF KNEE SPACE.
    - ONE WIRE ACCESS GROMMET BEHIND EACH KEYBOARD DRAWER.
24. PROVIDE ADJUSTABLE SHELVES IN CABINETS AT THE FOLLOWING LOCATIONS U.N.O. ON ELEVATIONS:
    - BASE CABINET: ONE SHELF.
    - FULL HEIGHT CABINET: FIVE SHELVES, ONE FIXED.
    - WALL CABINET: ONE SHELF AT 24" HIGH, TWO SHELVES AT TALLER CABINETS. SHELVES TO BE 3/4" THICK FOR SPANS UP TO 32" AND 1" THICK FOR SPANS UP TO 36".
25. GLASS FRONTS TO BE 1/4" THICK CLEAR TEMPERED GLASS U.N.O.
26. PROVIDE AN APRON AT ALL KNEE SPACES 34" OR HIGHER U.N.O.
27. ALL CABINETS TO BE PLASTIC LAMINATE U.N.O. ALL COUNTERS TO BE PLASTIC LAMINATE U.N.O. ALL COUNTERS WITH SINKS OR IN ROOMS WITH SINKS TO BE SOLID SURFACE MATERIAL U.N.O.
28. ALL CLEAN SINKS SHALL HAVE SPLASH GUARDS WHERE THERE IS NOT A WALL OR FULL HEIGHT CABINET U.N.O.
29. PLASTIC LAMINATE WOOD GRAIN TO RUN VERTICALLY ON CABINET AND PLAM FASCIA U.N.O.
30. WHEN WIDTH OF FASCIA PANEL EXCEEDS 48", ALIGN VERTICAL JOINTS WITH CASEWORK JOINTS BELOW.
31. ALL LAMINATE COUNTERTOPS TO HAVE CLASSIC SQUARE EDGE U.N.O. ALL GRANITE, QUARTZ AND SOLID SURFACE COUNTERTOPS TO HAVE EASED EDGE U.N.O.
32. SEE FINISH LEGEND FOR DEFINITION OF INTERIOR MATERIAL DESIGNATIONS.
33. ALL ROUGH EDGES MUST BE SANDED SMOOTH, ALL FASTENERS TO BE FLUSH WITH SUBSTRATE OR FINISH MATERIAL, AND ALL EDGES AT WET LOCATIONS TO BE MOISTURE SEALED. THIS INCLUDES THE UNDERSIDE AND CONCEALED AREAS OF MILLWORK.
34. PROVIDE DOOR STOPS ON CABINET DOORS ADJACENT TO WALLS TO PREVENT DOORS FROM CRASHING INTO THE WALL. ALLOW DOOR TO OPEN 85-88° U.N.O.



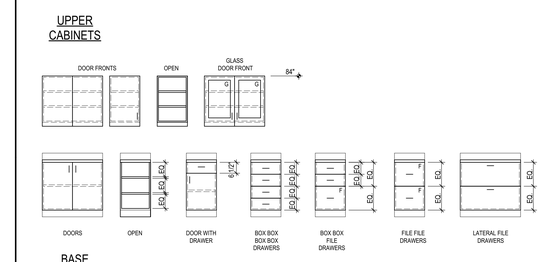
DESK @ WOOD G1

SCALE: 1" = 1'-0"



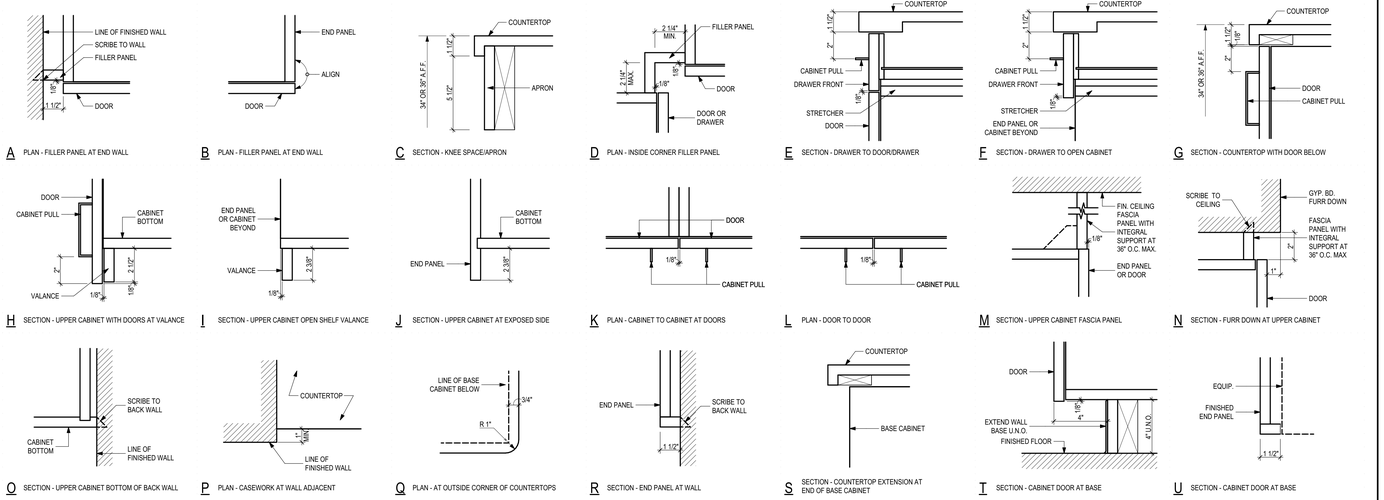
CABINET ELEVATIONS E11

SCALE: 3/8" = 1'-0"



CABINET TYPES E6

SCALE: 3/8" = 1'-0"

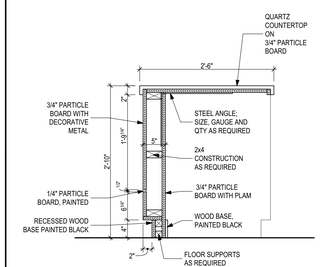


CABINET ASSEMBLY DETAILS A6

SCALE: 3" = 1'-0"

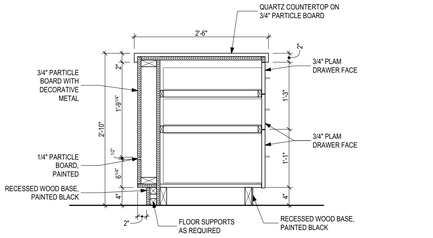
CABINET ELEVATION ABBREVIATIONS

AS	ACCESSIBLE SINK	KB	KEYBOARD DRAWER
BF	BOX FILE	KS	KNEE SPACE
BBF	BOX BOX FILE	LK	DRAWER/CABINET LOCK
FD	FILE DRAWER	SS	SLIDING SHELF
FE	FINISHED END PANEL	TC	TRASH CHUTE - HOLE IN COUNTERTOP
FF	FALSE FRONT	TL	TASK LIGHT
FS	FIXED SHELF	UCL	UNDER CABINET LIGHTING
GF	GLASS FRONT		
GR	GROMMET		



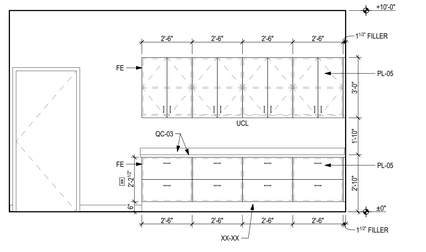
GIFT SHOP DESK E1

SCALE: 1" = 1'-0"



DESK @ BBF C1

SCALE: 1" = 1'-0"



122A VIEWING ROOM S A1

SCALE: 3/8" = 1'-0"

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INTERIOR ELEVATIONS & DETAILS

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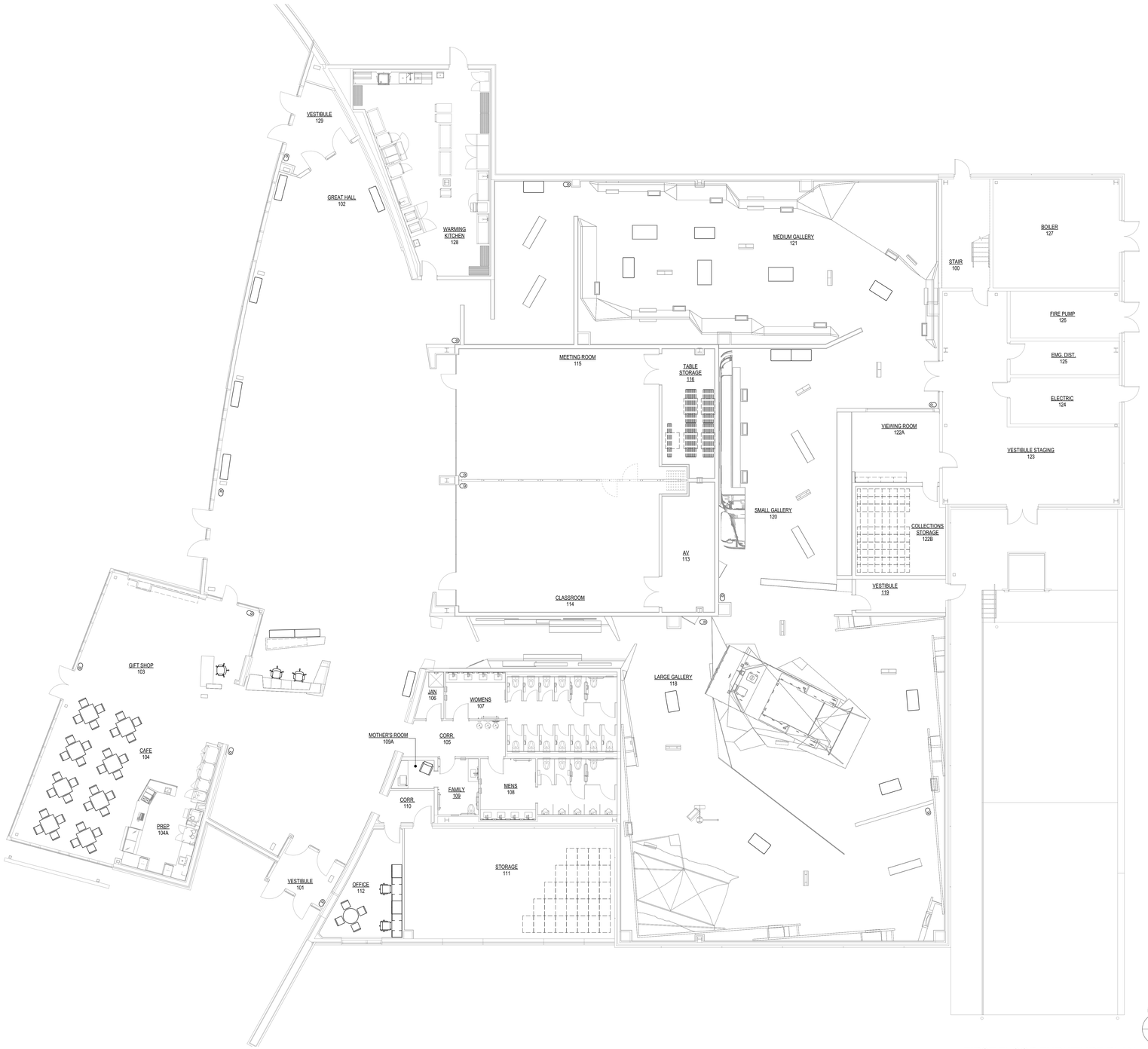

*FURNITURE SHOWN FOR REFERENCE ONLY; NOT IN G.C. SCOPE OF WORK

FIRST FLOOR FURNITURE PLAN

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

A1

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OVERALL FURNITURE PLAN

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