STRUCTURAL DESIGN CRIT	ERIA
Risk Category:	II
Roof:	
Dead Load:	DL =
Ground Snow Load:	Pg =
Flat Roof Snow Load:	Pf =
Snow Exposure Factor:	Ce =
Snow Importance Factor:	=
Thermal Factor:	Ct =
Wind Load:	
Basic Wind Speed:	V =
Importance Factor:	=
Wind Exposure:	"C"
Seismic:	
Procedure:	Equ
Site Class:	D (F
Importance Factor:	=
Seismic Design Category:	D
Spectral Response	
Accelerations:	Ss =
	S1 =
Spectral Response Coef:	SDS
	SD1
Basic Seismic-Force-Resis	_
Special Reinforced Ma	-
R=5.0, Omega=2.5, Co	1=3.5
Seismic Base Shear:	

Soils:

Net Allowable Soil Pressure = 1800 PSF (per soils report)

### GENERAL

V = 95 kips (ASD)

- or the Structural Drawings
- International Building Code.
- involved.
- limited to, bracing, shoring for construction equipment, etc.

- the job site.
- safety or until all structural elements are complete.
- the structure within the limits of the design loads. 14. The General Contractor shall have Shop Drawings reviewed by the Architect and Engineer prior to the fabrication or erection for the following items:
- Reinforcing Steel, Structural Steel, Concrete Mix Design, Roof Decking. 15. Observation visits to the job site by field representatives of Calder Richards Consulting Engineers shall neither be construed as inspection nor approval of construction.
- steel.
- 17. Thermal or moisture protection, furnishings, doors, windows, equipment, the responsibility of the Structural Engineer.

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L = 25 PSF a = 47 PSF f = 33 PSF e = 1.0 1.0 t = 1.0

= 105 MPH (3 Sec Gust) 1.0

guivalent Lateral Force (Per Soils Report) 1.0

s = 1.251 1 = 0.443DS = 1.001 D1 = NA g System: nry Shear Walls:

3.5, Cs=0.20

1. All details, sections, and notes shown on the drawings are intended to be typical and shall apply to similar situations elsewhere unless noted or shown otherwise. Notes and details on drawings shall take precedence over these General Notes. General Notes shall take precedence over the Specifications. Refer to the Specifications for information not covered by these General Notes

3. See the Architectural Drawings for dimensions, doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfers, kerfs, etc. 4. All design, construction, and inspection shall be in conformance with the 2018

5. The Contractor shall verify all dimensions and conditions at the site. 6. All omissions or conflicts between the various elements of the working drawings and/or Specifications shall be brought to the attention of the Architect and/or Structural Engineer before proceeding with any work involved. 7. The Structural Drawings shall be used in conjunction with the entire set of Construction Drawings. This means that detailing and shop drawing production for structural elements will require information that is contained on the Architectural and/or other consultants' drawings. The Structural Drawings may not show all dimensions, slopes, elevations, depressions, mechanical housekeeping pads, etc. The Contractor shall verify all dimensions that are shown on the Structural Drawings with the Architectural and/or other consultants' drawings. Any discrepancies shall be brought to the attention of the Architect and/or Structural Engineer before proceeding with any work

8. Drawings indicate the finished product. They do not indicate a method of construction. Contractor shall take all precautions necessary to protect the structure during construction. Such precautions shall include, but not be

9. The Contractor shall be responsible for compensating the Owner for any changes made as a result of a deviation from the Contract Documents, deviation from the Specifications, faulty materials, or faulty workmanship. 10. Options are for the Contractor's convenience. The Contractor shall be responsible for coordinating all required design changes. Cost associated with any design work initiated by the option shall be borne by the Contractor.

11. Contractor shall be responsible for safety and protection within and adjacent to

12. Temporary shoring and bracing shall be provided wherever necessary to support all loads to which the structure may be subjected including wind and soil loads. Such bracing shall be left in place as long as may be required for

13. During and after construction the Contractor and/or Owner shall keep loads on

16. Sizes, locations, and anchorages of equipment shall be verified in the field with

equipment manufacturers (suppliers) prior to placing concrete or fabricating

mechanical, electrical, finishes, siding, paneling, and veneers are not part of

- QUALITY ASSURANCE PLAN
- 1. Special Inspection shall be provided by the contractor (approved by the Owner) according to IBC Chapter 17 for the items identified in this section and on the Contract Documents. See Structural Special Inspection Schedule below for additional information on Steel, Concrete, Masonry, and Soils Special Inspection requirements.
- 2. The names and credentials of Special Inspectors to be used shall be submitted to the Building Department when applying for a Building Permit.
- 3. Special Inspection Reports shall be delivered to the Engineer of Record, Architect, and Owner (as requested) bi-weekly or more frequently as required by the Inspector or Building Official.
- 4. Off-Site Fabrication: Where fabrication of structural load-bearing members and assemblies are being performed on the premises of a fabricator's shop. special inspection of the fabricated items shall be in accordance with IBC Section 1704.2.5 unless the fabricator is approved according to IBC Section 1704.2.5.1.
- 5. Steel Construction: Special Inspections for steel elements shall be provided in accordance with Section 1705.2, Chapter N of AISC 360-16, and Chapter J of AISC 341-16.
- 6. Welding: Welding Inspection shall be provided in accordance with Sections N5.4 and N5.5 of AISC 360-16. Elements that are part of the Seismic-Force-Resisting System shall also be inspected according to Section J6 of AISC 341-16
- 7. High-Strength Bolts: Special Inspection shall be provided for installation of
- high-strength bolts in accordance with Section N5.6 of AISC 360-16. 8. Concrete Construction: Special Inspections and verifications shall be provided
- in accordance with Section 1705.3 and Table 1705.3 of the IBC. 9. Masonry Construction: Level B Special Inspection shall be provided for
- masonry construction in accordance with IBC Section 1705.4 and Section 3.1.2 of TMS 402-16 / 602-16.
- 10. Soils: Special Inspection shall be provided for placement of fill in accordance with Section 1705.6 and Table 1705.6.

QUALITY ASSURANCE - CONTRACTOR RESPONSIBILITY Each Contractor responsible for the construction of a Wind or Seismic-Force-Resisting System, Designated Seismic System, or Wind or Seismic Resisting Component listed in the quality assurance plan shall submit a written Contractor's Statement of Responsibility to the Building Official and to the Owner prior to the commencement of work on the system or component. The Contractor's Statement of Reponsibility shall contain the following:

- 1. Acknowledgment of awareness of the special requirements contained in the Quality Assurance Plan.
- 2. Acknowledgment that control will be exercised to obtain conformance with the Construction Documents approved by the Building Official.
- 3. Procedures for exercising control within the Contractor's organization, the method and frequency of reporting, and the distribution of reports.
- 4. Identification and gualifications of the person(s) exercising such control and the position(s) in the organization.

### STRUCTURAL DEFERRED SUBMITTALS

Contractor shall submit Drawings and Calculations bearing the seal of a Professional Engineer Licensed in the State of the project to Architect/Engineer before submitting to jurisdiction for review and permitting.

### Items: 1. Concrete Mix Design

2. Attachment of Mechanical Unit to Support

## STRUCTURAL OBSERVATION

Calder Richards Consulting Engineers shall be notified by the Contractor 5 business days before the completion of the items listed in this section so that Structural Observation may be performed in accordance with IBC Section 1704.6. The observations will be performed at the discretion of Calder Richards Consulting Engineers.

- 1. Before first footing pour.
- 2. Before first lift of masonry placed.
- 3. After roof framing & decking placed.

### FOOTINGS

- 1. Follow all recommendations in soils report, as well as in the specifications for soil preparation below the building pad. All footings shall bear on native soils or on a minimum 12 inches of structural fill extending to native soils.
- 2. Footing elevations shown on plan are top of footings and are minimum depth. Different or unusual conditions shall be reported to the Architect and/or
- Engineer. 3. Exterior wall footings shall bear at a minimum depth of 3'-0" below finished exterior grade.
- 4. NO footings shall be placed in water or on frozen ground.
- 5. Any soil condition encountered during excavation that is contrary to the conditions used for design of footings as outlined in the Soils Report by Terracon (Dated 4-11-2022), or on the drawings shall be brought to the attention of the Architect before proceeding.
- 6. DO NOT back fill behind foundation walls until top and bottom slabs have been poured and attained their design strengths.

- 7. Back fill both sides of foundation walls at same time to prevent overturning. 8. Wall footings, where not shown otherwise, shall be 12" thick with an 8" spread each side of wall and provided with (1) #5 x continuous at bottom for each 8" of footing width.
- 9. Where a pipe passes through an interior or exterior foundation wall, step the footing down to pass below pipe and then step back up to indicated elevation. Provide pipe sleeve through foundation wall.
- 10. All footing excavations shall be examined by a Geotechnical Engineer for verification of adequate bearing conditions before placing concrete.

### REINFORCING STEEL

- Manual 315R-18 and ACI Standard 318-14. 2. Reinforcing steel shall be ASTM A615 Grade 60.
- 3. Welded wire fabric shall conform to ASTM A185. Lap one mesh tie.
- 4. All reinforcement shall be securely tied and held in place.
- 5. Provide accessories recommended by the CRSI necessary to properly support
- reinforcing at positions shown on plans. 6. Reinforcing bars that are to be welded, including Deformed Bar Anchors (DBA)
- in accordance with the AWS recommendations. 7. All continuous reinforcement shall terminate with a 90 degree turn or a separate corner bar. All splices shall have a minimum lap or embedment per Reinforcing Schedule.
- 8. Where the length of a bar is given and it is to be hooked, the hook shall be in addition to the length given, unless shown otherwise.
- 9. Cover to main reinforcement from adjacent surfaces shall be as follows unless shown otherwise:
- A. Unformed surfaces in contact with ground or exposed to the weather (bottom of footings)...... 3' B. Slabs on Grade.
- C. Formed surfaces in contact with the ground or exposed to the weather (Grade Beams,
- Walls, etc), Beams and Columns.. D. Structural Slabs and Joints not exposed
- to weather or earth.
- E. Interior Wall surfaces.
- F. Interior Beams and Columns.. G. In all cases minimum cover shall not be
- less than the diameter of adjacent bars.
- 10. Prior to fabrication and placement, Shop Drawings for all reinforcing steel shall be reviewed by the Structural Engineer

### CONCRETE

Concrete shall attain the following min
Footings
Foundation Walls
Interior Slabs on Grade
Exterior Flat Work

### 2. The various concrete items are assigned to the following Exposure Categories and Classes per Section 19.3 of ACI 318-14: Footings ..

F1, S1, W0, C1 Foundation Walls .. . F1, S1, W0, C1 Interior Slabs on Grade . F0, S1, W0, C1 Exterior Flat Work . . F1, S1, W0, C2

See Table 19.3.1.1 of ACI 318-14 for explanations of Categories and Classes listed above.

- 3. A Statement of Mix Design for all concrete shall be submitted to and reviewed by the Structural Engineer prior to commencing work. All mix designs shall incorporate requirements and restrictions found in Section 19.3 & Tables 19.3.1.1, 19.3.2.1, and 19.3.3.1 of ACI 318-14, as well as the soils report. If two or more requirements are in conflict, the more restrictive requirement shall be followed.
- 4. All concrete work shall be placed, cured, stripped, and protected as directed by the specifications and ACI Standards and Practices.

	the specification	JIS and ACT Star	iuarus a
5.	Unless noted	otherwise on the	drawing
	Width	Horiz Reinf	Vert Re
	8" Wall	#4 @ 12"	#4 (
	16" Wall	#4 @ 12",	#4 (
		Each Face	Eac

- 6. Dowel vertical bars 36 diameters into structure above and footings below. Provide 90 degree hook where 36 diameter is not possible. In addition, provide (2) #4 continuous bars top and bottom of 6" and 8" walls and (2) #5 bars top and bottom of walls 10" or thicker.
- Before concrete is poured, check with all trades to ensure proper placement of all openings, sleeves, curbs, conduits, bolts, inserts, etc, relative to work. injurious to concrete shall be embedded in concrete.
- 8. Place (2) #5 bars minimum around all openings in concrete (unless otherwise shown or noted) and project 24" beyond corner of opening.
- 9. Where openings larger than 16" in any direction occur in walls or slabs, provide same size additional, full length reinforcing at each side of opening equal to 1/2 the number of bars interrupted by the opening. Space additional bars at 4 x bar diameter.
- 10. Provide a #3 nosing bar in all stair treads. 11. Refer to drawings for typical construction joint details. Unless noted in drawings, all reinforcement shall be continuous through joints and each
- construction joint shall be keyed. 12. Where exterior slabs on grade abut walls or columns, provide 3/8" pre-formed expansion joint with sealant.
- 13. Admixtures:
- B. Calcium chloride shall not be added to concrete mix.
- 14. Maximum aggregate size shall be 3/4".

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1. All reinforcement shall be detailed and placed in accordance with ACI Detailing

shall comply with ASTM A706 or another weldable grade and shall be welded

.. 1 1/2"

nimum compressive strengths at 28 days: ..... 3500 PSI ...... 3500 PSI

..... 4000 PSI ..... 5000 PSI

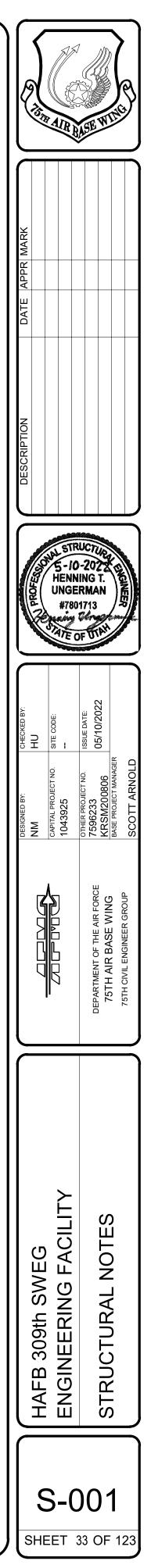
gs, reinforce concrete walls as follows:

@ 16" Center of Wall

@ 12", Each Face

NO aluminum conduit nor product containing aluminum nor any other material

A. Air-entraining admixtures (when used), shall comply with ASTM C260.



### MASONRY (CMU)

- NOTED ON THE PLANS. voids
- follows:
- vertical reinforcing. 7. Reinforcement Protection (Cover):
- coverage from the exposed face.
- Minimum coverage shall be 2".

- beyond edges of openings at each end.

- 14. All anchor bolts must be placed in grouted cells.
- otherwise shown.
- each corner, end of wall, and jamb of all openings.
- the masonry for a period of at least 48 hours.

# **UNCLASSIFIED - FOR OFFICIAL USE ONLY**

**TERMS AND ABBREVIATIONS** STRUCTURAL STEEL 1. Concrete masonry units shall be medium weight, Grade N units conforming to 1. All structural steel and structural steel work shall comply with both the AISC ABBRV TERM ASTM Designation C90 and shall have a minimum compressive strength "Manual of Steel Construction" containing the specifications for the design, of 2000 PSI on the net section (Design strength, f'm = 2000 PSI). fabrication and erection of structural steel buildings, including the "Code of Numerical quantities when enclosed in parentheses 2. Mortar shall conform to ASTM C270, Type "S" (Section 2103.2 of the Standard Practices" (latest edition), and with the IBC 2018 edition. International Building Code). Use Portland Cement, Type I or II. 2. All wide flange structural steel shall be ASTM A992 and all miscellaneous Architect / Engineer shapes shall be ASTM A36, unless noted otherwise 3. All masonry shall be reinforced with both horizontal and vertical reinforcement. AB Anchor Bolt 3. Structural steel tubing shall conform to ASTM A500 Grade B; Yield Stress = 46 All grouted block cells or brick cavities with reinforcement shall be grouted full ABV Above using 2500 PSI grout. Grout shall conform to the requirements of ASTM ADDM Addendum 4. Structural steel pipe columns shall conform to ASTM A53, Grade B; Yield C476. Cells shall be aligned to preserve unobstructed vertical cavities of 2"x3" AFF Above Finished Floor minimum. DO NOT SOLID GROUT WALLS UNLESS SPECIFICALLY Stress = 35 KSI. ALUM Aluminum 5. Use A325 Bolts for steel to steel connections, F1554 GR36 for Anchor Bolts, APPROX Approximately and A307 Bolts for all other connections (unless specified otherwise on ARCH Architect (Architectural)\* 4. Grout shall have 3/8" maximum size course aggregate with a slump between ASTM American Society for Testing 8 and 11 inches so the concrete will flow into the block cells without leaving drawings). Use 3/4" diameter minimum. and Materials 6. Prior to fabrication and erection, shop drawings for all steel items shall be 5. Masonry Reinforcement: Unless noted otherwise on the drawings, the reviewed by the Structural Engineer. The Contractor shall verify all shop B PL Base Plate minimum reinforcement in grouted cells for all masonry walls shall be as drawing dimensions with Structural and Architectural plans and details. R/R Back to Back 7. All welds shall be made with E70XX electrodes and by welders certified by BLKG Blocking 8" Walls: #5 @ 32" OC Vertical and (2) #4 @ 48" OC Horizontal AWS Standards within the past 12 months; provide written certification if BLW Below 6. All horizontal reinforcing at ends of walls shall terminate with a hook around requested. All welds shall have a minimum Charpy V-Notch toughness of 20 BM Beam BOS foot-pound (27.1N-m) at 0° F, unless noted otherwise on the plans. Bottom of Steel BOT Bottom 8. All high-strength bolts shall be tightened to the appropriate minimum bolt BRG Bearing A. Joint reinforcement shall have not less than 5/8" mortar tension in accordance with AISC "Specifications for Structural Joints using BTWN Between ASTM A325 or A490 Bolts." The preferred method of tightening is by use of "Twist off type tension control bolt assemblies." "Direct Tension Indicator" and B. Other reinforcement shall have a minimum coverage of C TO C Center to Center one bar diameter over all the bars, but not less than 3/4" the Turn-of-Nut method may also be used. CD Contract Documents 9. Special Inspections and testing of welds as required by IBC 2018 shall be when masonry is exposed to weather or soil. CIP Cast-In-Place provided by the contractor (approved by the Owner). Construction Joint 8. Continue vertical reinforcing bars in masonry columns through foundation 10. All beam connections, not shown to be moment connections and not detailed (Control Joint)\* wall into footings with matching bars and dowels. Enclose these bars with otherwise shall be made using AISC Steel Construction Manual (15th Edition) Centerline CMU Concrete Masonry Uni Table 10-10 "Single Plate Connections" with the maximum number of rows same size ties at same spacing as in masonry column. Provide matching COL Column dowels for vertical bars in masonry walls to structure below shown for that beam. CONC Concrete 9. Continue horizontal reinforcement in walls through masonry columns and 11. Mechanical roof top units shall be placed over additional or special joists as CONN Connection pilasters. This reinforcement shall have matching dowels, corner bars, at shown on drawings. The weight, size and location of all proposed units and CONT Continuous (Continue)\* curbs shall be submitted to the Architect / Engineer for verification before corners and at intersections of the walls with required lap lengths. CONTR Contractor 10. Unless noted otherwise, hollow cells at all four (4) sides of openings in walls fabrication of steel. COORD Coordinate shall be grouted and reinforced with (2) #5, minimum, with 2'-8" projection 12. Frames for roof openings and supports for roof mounted mechanical CTR Center equipment are indicated on drawings for bid purposes only. Upon receipt of 11. Horizontal bars shall be placed in bond beams filled with grout at the top of mechanical submittals, the contractor shall furnish steel supplier Depth Pennyweight Nail all walls and at 48" OC maximum between top of wall and foundation. Bond supplementary drawings or other information necessary to layout and detail DB Deck Bearing beam units and reinforcing shall continue uninterrupted around all corners this portion of the work. Other steel work shall not be delayed by this portion of DBA Deformed Bar Anchor and wall intersections. Where structural steel columns or beams interrupt the the work. Shop drawings shall be submitted to engineer for review. DBL Double continuity of a bond beam, dowels matching bond beam reinforcement shall 13. All steel exposed to the elements shall be hot-dip galvanized in accordance DFS Douglas Fir - South with ASTM A-123 (Grade 100). be welded to the structural steel to provide continuity. DIA Diameter 12. All vertical reinforcing bars shall be doweled to structure below with bars DIAG Diagonal of same size and spacing. Place all bars securely prior to grouting. DIM Dimension 13. Stop grout pours 1/2" below top of block units between grout lifts. DL Dead Load METAL ROOF DECK DTL Detail 1. Steel roof deck shall comply with the latest requirements of the Steel Deck DWG 15. Where beams bear on concrete block walls, block cells shall be filled with Drawing Institute, SDI. Submit Evaluation Report with shop drawings. grout 1'-4" wide to foundation and reinforce with a #5 each cell, unless 2. Steel roof deck shall be 1 1/2" deep x 20 gage galvanized (G90), Type "B" Existing Modulus of Elasticity wide rib deck with interlocking side seams. The following minimum properties 16. An additional vertical bar (matching wall reinforcement) shall be placed at Each must be satisfied: Expansion Joint Fy = 50 KSI17. All steel joist, joist girder, and steel beam pockets in masonry shall be Elevation  $I = 0.231 \text{ in}^4/\text{ft}$ grouted solid unless otherwise indicated on the drawings. ELEV Elevator  $Sp = 0.230 \text{ in}^3/\text{ft}$ 18. No masonry shall be laid when the temperature of the outside air is below ENGR Engineer Sn = 0.237 in^3/ft 40 degrees Farenheit, unless approved methods are used during construction Equal 3. Weld steel roof deck to supporting framing members with 3/4" diameter to prevent damage to the masonry. Such methods shall include protection of EQL SP Equally Spaced (Equal puddle welds at the following spacings: (baces EQUIP (7) welds per 36-inch sheet to all supports Equipment 19. All reinforcing shall be in place prior to grouting. Vertical reinforcing bars shall EQUIV Equivalent be held in position at the top, bottom and at intervals not farther apart than perpendicular to deck corrugations. EST Estimate 6" OC to all supports parallel to deck corrugations. 200 bar diameters. Provide wire ties at all lap splices. ETC And so forth 6" OC over all drag struts, shear walls, braced frames and roof perimeter. 20. All masonry walls shall have vertical control joints at: Major changes in wall EW Each Way 4. Attach overlapping seams with top seam welds @ 18" OC maximum between height, at changes in wall thickness, at building construction joints, and not EXCL Exclude adjacent pieces of decking. farther apart than 40 feet elsewhere. Provide matching control joints for brick EXP Expansion 5. Provide a 2" minimum bearing and a 4" lap at the splice points of all pieces of EXT veneer. Consult Architectural Drawings for locations. Vertical cells each side Exterior deck. of control joints shall be grouted and reinforced with rebars to match vertical 6. Where possible, all deck shall be (3) span continuous minimum. In areas Future reinforcement used throughout that wall. Horizontal rebars in bond beams (F) FDTN Foundation where (3) span conditions are not possible, the deck shall meet the loading shall continue through control joints. Provide full height hard rubber key FFE **Finished Floor Elevation** criteria for the span condition. The contractor shall provide heavier gage deck at joint. Where joint locations are not shown on the drawings the Contractor FIN Finish (Finished)\* as required for one or two span conditions. shall submit proposed locations to Architect / Engineer for review. FLR Floor FRMG Framing FSE Finshed Slab Elevation FTG Footing Field Verify Gage / Gauge GALV Galvanized GLB Glued Laminated Wood Beam HGR Hanger HORIZ Horizontal (Horizontally)\* HSA Headed Stud Anchor HSS Hollow Structural Section Moment of Inertia Inside Diameter Interior <u>NOTES</u>

- ENGINEER IF MEANING IS NOT OBVIOUS.
- 2. NOT ALL ABBREVIATIONS ARE USED.
- 3. MANY ABBREVIATIONS MAY BE MADE PLURAL BY ADDING AN S SUFFIX.

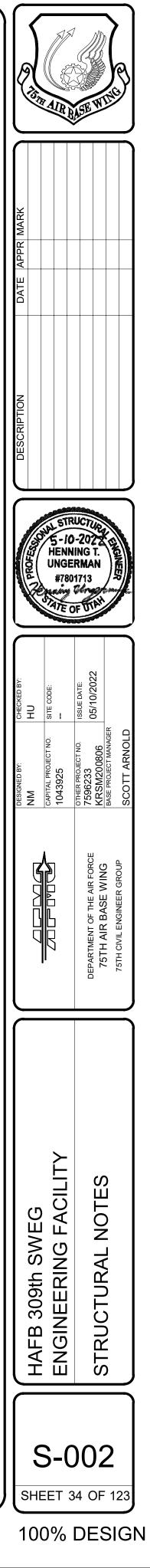


	TERM
JST	Joist
KIP (K)	Thousand Pounds
KIP FT	Thousand Foot/Pounds
KLF	KIPs per Lineal Foot
	Daund
lb LHS	Pound Left Hand Shoe
	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LONG LSL	Longitudinal Laminated Strand Lumber
LTWT	Lightweight
LVL	Laminated Veneer Lumber
MAX	Maximum
MECH	Mechanical
MFR	Manufacturer
MIN	Minimum
MISC	Miscellaneous
N/A	Not Applicable
NTS	Not to Scale
OC OD	On Center Outside Diameter
od Opng	Outside Diameter Opening
OPP	Opposite
OPT	Optional
OSB	Oriented Strand Board
P/T	Pressure Treated
PERP	Pressure Treated Perpendicular
PLF	Pounds per Lineal Foot
PSL	Parallel Strand Lumber
PT	Post Tensioned
QA	Quality Assurance
QC	Quality Control
(RE) REINF	Remove Existing Reinforce (Reinforced,
REINF	Reinforcing)*
REQD	Required
RFI	Request for Information
RS	Rough Sawn
RTU	Roof Top Unit
SCHED	Schedule
SECT	Section
SF	Square Foot (Feet)*
SGL SHTHG	Single Sheathing
SIM	Sineathing
SL	Snow Load
SOG	Slab on Grade
SPCL	Special
SPEC	Specification
SQ STD	Square Standard
STIF	Stiffener
STRUCT	Structure (Structural)*
SYMM	Symmetrical
T&B	Ton & Pottom
T&B T&G	Top & Bottom Tongue and Groove
THRU	Through
TO FDTN	Top of Foundation
ТОВ	Top of Beam
TOC	Top of Concrete
TOF	Top of Footing
TOJ	Top of Joist
Tom Top	Top of Masonry Top of Parapet
TOP	Top of Steel
TOW	Top of Wall
TWS	Threaded Welded Stud
TYP	Typical
UNO	Unless Noted Otherwise
VERT	Vertical (Vertically)*
W/	With
W/O	Without
WL	Wind Load
WLD WWF	Weld (Welded)* Welded Wire Fabric
X XS	Extra Strong Double Extra Strong

1. \* CONTEXT INDICATES WHICH ABBREVIATION TERM IS IMPLIED. CONTACT

4. FOR ABBREVIATIONS NOT LISTED, REFER TO US NATIONAL CAD STANDARD, VERSION 3.1, TERMS AND ABBREVIATIONS SECTION, OR CONTACT ENGINEER.

1717\_01



### SCHEDULE - MASONF Reinforcement Mark Thick Depth Bottom Horiz Top Horiz MB-1 WALL 24" (2) #5 (2) #5 MB-2 32" WALL (2) #5 (2) #5 MB-3 | WALL | 40" (4) #5 (2) #5

# MASONRY BEAM NOTES

1. VERT WALL REINF (SIZE AND SPACING) SHALL BE USED, UNO. VERT REINF ENDS WITH STD MASONRY HOOK AND LAP ABOVE BEAM. WHERE NO WALL OCCURS ABOVE BEAM OR LAP IS NOT POSSIBLE, PROVIDE 180° STD HOOK AT TOP.

2. GROUT BEAMS SOLID FOR DEPTH SHOWN IN SCHED, PLUS AS PER DETAILS, SCHED.

TOP BARS SHALL EXTEND THE GREATER OF SUPPORTING COLUMN LENGTH, 24", OR 48 BAR STD LAP BEYOND FACE OF SUPPORTS AND BE SPLICED WHEN NECESSARY AT MID SPAN.

SCHEDULED TOP HORIZ REINF, EXTEND TOP BARS BEYOND OPENING, SEE NOTE 3. 180° STD HOOK, ALTERNATE BARS SCHEDULED BEAM VERT REINF SCHEDULED WALL HORIZ REINF STD STD GROUT BEAM SOLID 180° STD HOOK, ALTERNATE BARS WHERE NOTED WIDTH SCHEDULED BOT HORIZ REINF WHERE MORE THAN (2) BARS ARE REQD, PLACE (2) BARS IN EA HORIZ COURSE U BLOCK MASONRY BEAM DETAIL 

SCHEDULED WALL ABOVE

**BEAM, WHERE OCCURS** 

## MASONRY BEAM SCHEDULE **C2**

NO SCALE

	S	CHEDULE	- MASONRY COLU	MNS / PIERS	
			Reinfor	rcement	
Mark	Length	Width	Vertical	Horizontal Ties	
MC-1	8"	Wall	(2) #5	-	Ś
MC-2	24"	Wall	(6) #5	(2) #3 @ 8" OC	
MC-3	24"	24"	(4) #5	#3 @ 8" OC	

## MASONRY COLUMN NOTES

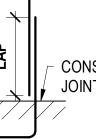
- 1. HORIZONTAL WALL REINFORCEMENT SHALL RUN CONTINUOUS THROUGH MASONRY COLUMNS.
- 2. GROUT ALL REINFORCED
- CELLS AND VOIDS SOLID. 3. MASONRY COLUMN REINFORCING SHALL EXTEND FULL HEIGHT FROM MARK ON PLAN UP TO FLOOR/ROOF. DOWEL VERT REINFORCING INTO FOUNDATIONS.
- SEE C4/S-501 1 2 SCHEDULED EXTEND HORIZ WALL LENGTH HEDI REINF THROUGH MCs, TYP <u>TYPE 1</u> DRAWINGS FOR SPECIAL COURSING ARRANGEMENTS. SCHEDULED LENGTH WITH A STANDARD MASONRY STEEL COL, SEE PLAN. ר 2" CLR HOOK, SEE **B4/S-003** GROUT ALL AROUND SCHEDULE FOR REBAR LAP LENGTHS. TO ALL: DOORS, WINDOWS, OPENINGS, CONTROL JOINTS, <u>li li li li</u> AND AT ENDS OF EACH WALL. <u>TYPE 2</u>
- 4. SEE ARCHITECTURAL 5. ALL TIES SHALL TERMINATE 6. SEE MASONRY REBAR SPLICE 7. PLACE AN MC-1 COLUMN NEXT

**MASONRY COL SCHEDULE A2** NO SCALE

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					SCHEDU	LE - MASONRY	WALLS				
Mark MW-1	Thick 8"	<b>Vertica</b> (1) #5 @ 32		ing Horizontal 2) #4 @ 48" O	Grout	Reinf (Location)	Mas Wall Material CMU	Comments			
	SCHEDUL	E - MASONF	RY REBAI	R SPLICES			NOTES				
Masonr	<b>ar Size</b> ry Single Mat y Double Mat	_		2' - 0" 2' -	6     #7       10"     3' - 10"       4"     7' - 4"		OPENINGS, EACH ALL ENDS AND CO SPACING. SEE PL	L REINFORCING EACH SIDE OF ALL SIDE OF MASONRY CONTROL JOINTS AND ORNERS IN ADDITION TO SCHEDULED AN WHERE SPECIAL MASONRY COLUMNS DOWEL VERTICAL REINFORCING TO			
. USE # 2. fm = 2 3. DOUB 2" CLE AND E	Y REBAR SPLI 6 BAR IN 10" O 000 PSI, fy = 60 LE MAT REINF ARANCE BETV DGE OF VERT	OR LARGER V D,000 PSI ORCEMENT WEEN FACE TICAL BAR.	SHALL H OF WALL	AVE - <u>REBAR DI</u>			LEVEL(S). SEE PL SPECIAL HORIZON OPENINGS. SEE O INTERSECTING W 3. WHERE NO MARK FOR 8" CMU WALL 4. SPECIAL INSPECT CONSTRUCTION. 5. WHERE ONLY ONE SCHEDULED, THIS TWO (2) BARS ARE	IS SHOWN ON PLANS, USE WALL TYPE MW S. TON IS REQUIRED FOR ALL MASONRY E (1) VERTICAL REINFORCING BAR IS S SHALL BE CENTERED IN THE WALL. WHEI E SCHEDULED, LOCATE FACE OF REBAR A			
							FROM EACH FACE REQUIREMENTS.	E. SEE SCHEDULE <b>THIS SHEET</b> FOR BAR LA			
	Stan	Idard		native	Min Bend		6. PROVIDE 90° HOC	OKS AT ALL HORIZONTAL REINFORCEMENT			
Bar Size "		180°	90°	135°	Diameter			CORNERS AND INTERSECTIONS. HOOKS ERTICAL REINFORCING.			
#3	4 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"			HIS SHEET FOR STANDARD MASONRY HOC			
#4	6"	2 1/2"	3"	3"	3"		DIMENSIONS.				
#5	7 1/2"	2 1/2"	3 3/4"	3 3/4"	3 3/4"		<ol> <li>WHERE MARKED "SOLID" IN SCHEDULE GROUT COLU HOLLOW AND REINFORCED CELLS SHALL BE GROUTE OTHERWISE, ONLY GROUT REINFORCED CELLS SOLI</li> </ol>				
#6	9"	3"	4 1/2"	4 1/2"	4 1/2"						
#7	10 1/2"	3 1/2"	5 1/4"	5 1/4"	5 1/4"			Y GROUT REINFORCED CELLS SOLID. TECTURAL DRAWINGS FOR GROUTING AND			
1. Stand Notei 2. Altef And B 3. Colui	D OTHERWISE RNATIVE HOOK EAM STIRRUP MN TIES SHALI DIAMETER IS I	SHALL BE AF	ROUND A NGS. Y ALLOW TANDARD FROM IN	ED FOR MAS OR 135° AL SIDE FACE ( C	6" CULAR BAR, UNL CONRY COLUMN TERNATE HOOP OF REINFORCING 45° <u>135° HO</u>	N TIES K. G.	RATINGS. 10. ALL CELLS WITH F DIAMETER OR LAF PIPES OF 8" OUTS MASONRY WALL, A SOLID. PENETRA HAVE AN MB-1 AB REINFORCING BA OF 8" OF SOLID M BETWEEN EACH F PASS THROUGH T WITH THE RULES MOVED FOR PIPE APPROVAL FROM REQUIREMENTS F 11. SEE MASONRY W	JIREMENTS RELATED TO SOUND AND FIRE PIPE PENETRATIONS OF 2" OUTSIDE RGER SHALL BE GROUTED SOLID. WHERE SIDE DIAMETER OR LARGER PASS THROUG ALL ADJACENT CELLS SHALL BE GROUTED TIONS 16" DIAMETER OR LARGER SHALL AL OVE AND ONE WALL TYPICAL VERTICAL R EACH SIDE. THERE SHALL BE A MINIMUN ASONRY VERTICALLY AND HORIZONTALLY PIPE PENETRATION. MULTIPLE PIPES MAY THE SAME PENETRATION SIZE COMPLIES ABOVE. NO REINFORCING MAY BE CUT OF PENETRATIONS WITHOUT WRITTEN ENGINEER. SEE <b>C2/S-004</b> FOR ADDITIONA FOR PENETRATIONS THROUGH WALLS. ALL ELEVATION <b>C4/S-004</b> FOR BOND BEAM WALL IS 12'-0" OR LESS BETWEEN OPENING			
<u>90° HOO</u>	ANDARD HOO										
<u>ST</u>		/ \									
	SONR	Y WAL	L 30								
<u>ST</u>		<u>Y WAL</u>	<u>L 50</u>	ΠΕΟΟ				5757_			

					SCHED	JLE - MASONRY	WALLS	
Mark MW-1	Thick 8"	<b>Vertic</b> (1) #5 @ 3	-	ng Horizontal ) #4 @ 48" C	Grout	Reinf (Location)	Mas Wall Material CMU	Comments
	SCHEDUL	E - MASON	IRY REBAF	R SPLICES			NOTES	ERTICAL REINFORCING EACH SIDE OF ALL
Ba	ar Size	#3	#4	#5 #	#6 #7			S, EACH SIDE OF MASONRY CONTROL JOINTS AND
	y Single Mat Double Mat	1' - 0" 1' - 2"	1' - 4" 1' - 10"		- 10" 3' - 10" - 4" 7' - 4"		SPACING.	AND CORNERS IN ADDITION TO SCHEDULED SEE PLAN WHERE SPECIAL MASONRY COLUMNS I JAMBS. DOWEL VERTICAL REINFORCING TO
I. USE #6 2. f'm = 20 3. DOUBL 2" CLE	EXAMPLE AND THE TRANSPORT OF THE TRANSPO	R LARGER ),000 PSI ORCEMEN WEEN FACI	T SHALL H	AVE			SPECIAL F OPENINGS INTERSEC 3. WHERE N FOR 8" CM 4. SPECIAL I CONSTRU 5. WHERE O	NSPECTION IS REQUIRED FOR ALL MASONRY
SCHEDULE - MASONRY REINFORCEMENT HOOKS							TWO (2) B	ARS ARE SCHEDULED, LOCATE FACE OF REBAR A CH FACE. SEE SCHEDULE <b>THIS SHEET</b> FOR BAR LA
		"L"						MENTS. 90° HOOKS AT ALL HORIZONTAL REINFORCEMENT
		dard		native	Min Bend			ENDS, CORNERS AND INTERSECTIONS. HOOKS
Bar Size "[ #3	<b>)" 90°</b> 4 1/2"	<b>180°</b> 2 1/2"	<b>90°</b> 2 1/2"	<b>135°</b> 2 1/2"	Diameter 2 1/2"			GAGE VERTICAL REINFORCING. EDULE <b>THIS SHEET</b> FOR STANDARD MASONRY HOO
#3	6"	2 1/2	3"	3"	3"		DIMENSIO	
#5	7 1/2"	2 1/2"	3 3/4"	3 3/4"	3 3/4"			ARKED "SOLID" IN SCHEDULE GROUT COLUMN, AL
#6	9"	3"	4 1/2"	4 1/2"	4 1/2"			AND REINFORCED CELLS SHALL BE GROUTED. SE, ONLY GROUT <b>REINFORCED CELLS</b> SOLID.
#7 #8	10 1/2" 12"	3 1/2" 4"	5 1/4" 6"	5 1/4" 6"	5 1/4" 6"			ARCHITECTURAL DRAWINGS FOR GROUTING AND
1. STAND NOTED 2. ALTER AND BI 3. COLUM	OTHERWISE NATIVE HOOM EAM STIRRUP IN TIES SHAL	SHALL BE A ON DRAW S ARE ONI S. L BE 180° S	Around A Ings. Ly Allowi Standard	ED FOR MAS	CULAR BAR, UI SONRY COLUM TERNATE HOO OF REINFORCI	N TIES K. IG.	DIAMETEF PIPES OF MASONRY SOLID. PE HAVE AN I REINFORC OF 8" OF S BETWEEN PASS THR WITH THE MOVED FC APPROVA REQUIREN 11. SEE MASC	S WITH PIPE PENETRATIONS OF 2" OUTSIDE R OR LARGER SHALL BE GROUTED SOLID. WHERE 8" OUTSIDE DIAMETER OR LARGER PASS THROUG WALL, ALL ADJACENT CELLS SHALL BE GROUTED ENETRATIONS 16" DIAMETER OR LARGER SHALL AI MB-1 ABOVE AND ONE WALL TYPICAL VERTICAL CING BAR EACH SIDE. THERE SHALL BE A MINIMUM SOLID MASONRY VERTICALLY AND HORIZONTALLY I EACH PIPE PENETRATION. MULTIPLE PIPES MAY ROUGH THE SAME PENETRATION SIZE COMPLIES RULES ABOVE. NO REINFORCING MAY BE CUT OF OR PIPE PENETRATIONS WITHOUT WRITTEN L FROM ENGINEER. SEE <b>C2/S-004</b> FOR ADDITIONA MENTS FOR PENETRATIONS THROUGH WALLS. ONRY WALL ELEVATION <b>C4/S-004</b> FOR BOND BEAM WHERE WALL IS 12'-0" OR LESS BETWEEN OPENIN
<b>k</b>		30° HOOK	<u>9</u>	<u>0° HOOK</u>	<u>135° H</u>	<u>00K</u>		
<u>90° HOOP</u>				<u>ALTER</u>	<u>NATE HOOKS</u>			
	<u>( 18</u> NDARD HOO							
<u>st</u> MA	SONR	<u>KS</u>	L SC	HEDU	LE			
<u>ST/</u>	SONR	<u>KS</u>	<u>_L SC</u>	HEDU	LE			5757_



					SCHEDU	LE - MASONRY \	VALLS	
Mark MW-1	Thick 8"	<b>Vertica</b> (1) #5 @ 32		ng Horizontal ) #4 @ 48" OC	Grout	Reinf (Location)	Mas Wall Material CMU	Comments
	SCHEDULI	E - MASONR	RY REBAF			·	NOTES	
Bar	Size	#3	#4	#5 #6	#7			ERTICAL REINFORCING EACH SIDE OF ALL 5, EACH SIDE OF MASONRY CONTROL JOINTS AND /
	Single Mat Double Mat	_		2' - 0" 2' - 10 2' - 10" 5' - 4			SPACING. OCCUR AT	AND CORNERS IN ADDITION TO SCHEDULED SEE PLAN WHERE SPECIAL MASONRY COLUMNS JAMBS. DOWEL VERTICAL REINFORCING TO OR THICKENED SLAB, WHERE OCCURS.
<ol> <li>USE #6</li> <li>f'm = 200</li> <li>DOUBLE</li> <li>2" CLEA</li> </ol>	REBAR SPLIC BAR IN 10" OF 0 PSI, fy = 60 MAT REINFC RANCE BETW GE OF VERTI	R LARGER W ,000 PSI DRCEMENT VEEN FACE	SHALL HA	AVE -			SPECIAL H OPENINGS INTERSEC 3. WHERE NO FOR 8" CM 4. SPECIAL IN CONSTRUC 5. WHERE ON SCHEDULE	SPECTION IS REQUIRED FOR ALL MASONRY
SCHEDULE - MASONRY REINFORCEMENT HOOKS							FROM EAC	CH FACE. SEE SCHEDULE <b>THIS SHEET</b> FOR BAR LA
		"L"					REQUIREN	1ENTS. 30° HOOKS AT ALL HORIZONTAL REINFORCEMENT /
Bar Size "D'	Stand	dard 180°	Alterr 90°		Min Bend Diameter		ALL WALL	ENDS, CORNERS AND INTERSECTIONS. HOOKS
#3	4 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"			GAGE VERTICAL REINFORCING. DULE <b>THIS SHEET</b> FOR STANDARD MASONRY HOO
#4	6"	2 1/2"	3"	3"	3"		DIMENSIO	
#5	7 1/2"	2 1/2"	3 3/4"	3 3/4"	3 3/4"			ARKED "SOLID" IN SCHEDULE GROUT COLUMN, ALL
#6	9"	3"	4 1/2"	4 1/2"	4 1/2"			ND REINFORCED CELLS SHALL BE GROUTED. SE, ONLY GROUT <b>REINFORCED CELLS</b> SOLID.
#7	10 1/2"	3 1/2"	5 1/4"	5 1/4"	5 1/4"			ARCHITECTURAL DRAWINGS FOR GROUTING AND
I. STANDA NOTED 2. ALTERN	OTHERWISE ATIVE HOOK AM STIRRUPS N TIES SHALL	Shall be af on drawin S are only S. . Be 180° St	Round A NGS. Y Allowe Tandard	6" PERPENDICU ED FOR MASO OR 135° ALTE SIDE FACE OF	NRY COLUMN ERNATE HOOK REINFORCING 45°	I TIES K. G.	RATINGS. 10. ALL CELLS DIAMETER PIPES OF & MASONRY SOLID. PE HAVE AN M REINFORC OF 8" OF S BETWEEN PASS THRE WITH THE MOVED FC APPROVAL REQUIREM 11. SEE MASO	IN REQUIREMENTS RELATED TO SOUND AND FIRE WITH PIPE PENETRATIONS OF 2" OUTSIDE OR LARGER SHALL BE GROUTED SOLID. WHERE B" OUTSIDE DIAMETER OR LARGER PASS THROUGH WALL, ALL ADJACENT CELLS SHALL BE GROUTED NETRATIONS 16" DIAMETER OR LARGER SHALL ALS IB-1 ABOVE AND ONE WALL TYPICAL VERTICAL SING BAR EACH SIDE. THERE SHALL BE A MINIMUM OUID MASONRY VERTICALLY AND HORIZONTALLY EACH PIPE PENETRATION. MULTIPLE PIPES MAY OUGH THE SAME PENETRATION SIZE COMPLIES RULES ABOVE. NO REINFORCING MAY BE CUT OR OR PIPE PENETRATIONS WITHOUT WRITTEN FROM ENGINEER. SEE <b>C2/S-004</b> FOR ADDITIONAL IENTS FOR PENETRATIONS THROUGH WALLS. ONRY WALL ELEVATION <b>C4/S-004</b> FOR BOND BEAM WHERE WALL IS 12'-0" OR LESS BETWEEN OPENING
3. COLUMI BEND D		<u>↓</u> <u>0° HOOK</u> <u>(S</u>	<u>9</u>	<u>ALTERNA</u>	<u>TE HOOKS</u>			
	NDARD HOOP	<u>(S</u>						
3. COLUMI BEND D	NDARD HOOP	<u>(S</u>		ALTERNA HEDUL				5757_(
3. COLUMI BEND D	NDARD HOOP	<u>(S</u>						5757_(

Lengthwise

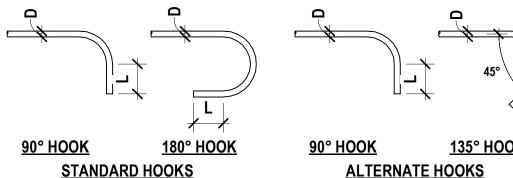
Reinforcing

(3) #4 x Cont

(6) #4 x 4'-0"

(5) #4 x 3'- 6"

(6) #4 x 4' - 0"



					SCHEDUL
				Cross	swise
Mark	Width	Length	Thickness	Reinforcing	Spacing
FC2.0	2' - 0"	Cont	12"	-	-
FC4.5	4' - 6"	Cont	12"	#4 @ 12" OC	EQ
FS4.0	4' - 0"	4' - 0"	12"	(5) #4 x 3' - 6"	EQ
FS4.5	4' - 6"	4' - 6"	12"	(6) #4 x 4' - 0"	EQ

## FOOTING NOTES:

NO SCALE

**A4** 

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- 1. PLACE CROSSWISE REINFORCING 3" CLEAR FROM GRADE.
- 2. WHERE TOP REINFORCING IS INDICATED, PLACE TOP CROSSWISE REINFORCING 2" CLEAR FROM TOP OF FOOTING AND LENGTHWISE REINFORCING UNDER CROSSWISE REINFORCING.

**FOOTING SCHEDULE** 

- REINFORCE FOOTINGS MARKED WITH AN - 3.
- ASTERISK (\*) EQUALLY, TOP & BOTTOM. 4. REINFORCE FOOTINGS MARKED WITH A
- PLUS SIGN (+), W/ #4 @ 12" OC, EACH WAY AT TOP MAT AND BOTTOM MAT AS SCHEDULED.

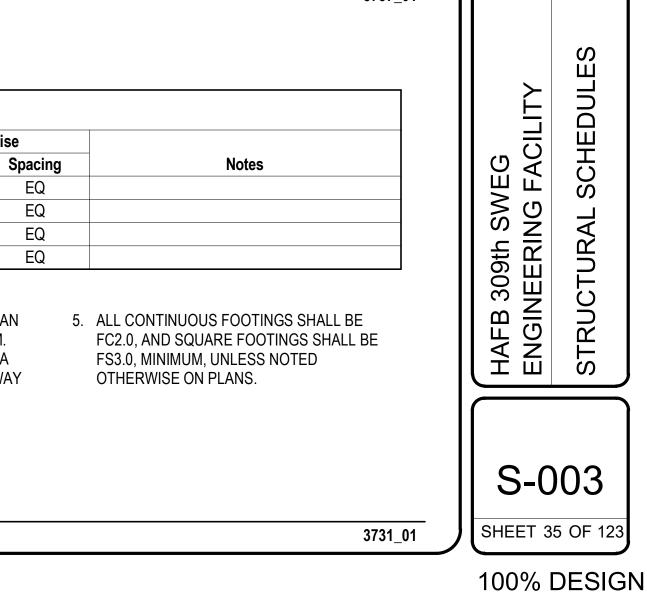
Vertical Notes	RY BEAMS		6
	Vertical	Notes	
	#4 x J @ 16" OC	Typical, UNO	
#4 x J @ 16" OC	#4 x J @ 16" OC		
#4 x ∫ @ 8" OC	#4 x J @ 8" OC		

- STRUCT NOTES AND / OR WALL

Туре

- 4. BOT BARS SHALL EXTEND THE GREATER OF 24" OR 48 BAR DIAMETERS INTO SUPPORTS AND BE SPLICED OVER SUPPORTS WHEN NECESSARY. WHERE THE **EXTENSIONS NOTED CANNOT BE PROVIDED, HOOK BARS** INTO SUPPORTS.
- 5. GROUT SIDES OF OPENING SOLID 1" / FT OF OPENING WIDTH, MIN ONE 8" CELL FOR UP TO 8'-0" SPAN (2) CELLS FOR UP TO 16'-0" SPAN, ETC, UNO. PROVIDE ONE VERT BAR IN EACH GROUTED CELL. SEE PLAN AND SCHED WHERE SPECIAL MASONRY COLS OCCUR AT JAMBS, BELOW BEAM BEARING OR OTHER LOCATIONS.
- AT MECH OR OTHER OPNGS IN WALLS USE MASONRY BEAMS OF SIMILAR SIZE AND REINF AS SHOWN IN THOSE WALLS FOR EQUIVALENT WIDTH OPNGS, UNO. NO MECH OR OTHER OPNGS SHALL BE PLACED **BELOW BEAM BEARING OR** THROUGH SOLID GROUTED MASONRY BEAM DEPTH. NO DUCTS, OPENINGS, OR
- PENETRATIONS SHALL OCCUR THROUGH BEAMS UNLESS NOTED ON STRUCT DWGS.
- MASONRY WALLS ABOVE BEAMS, WHERE OCCUR, SHALL HAVE MINIMUM REINF AS PER STRUCT NOTES, UNO.
- REINF INDICATED IN BEAM SCHED IS IN ADDITION TO STD WALL HORIZ AND VERT REINF. **10. SPECIAL INSPECTION IS REQD**
- FOR ALL MASONRY CONSTRUCTION.
- 11. AT WALLS NOT SHOWN ON STRUCT DWGS: FOR OPNGS UP TO 4'-0" CLEAR, USE MB-1; FOR OPNGS UP TO 6'-8" CLEAR, USE MB-2; FOR OPNGS UP TO 10'-0" CLEAR, USE MB-3. THESE SHALL BE CONSIDERED AS MINIMUM. UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT / ENGINEER.

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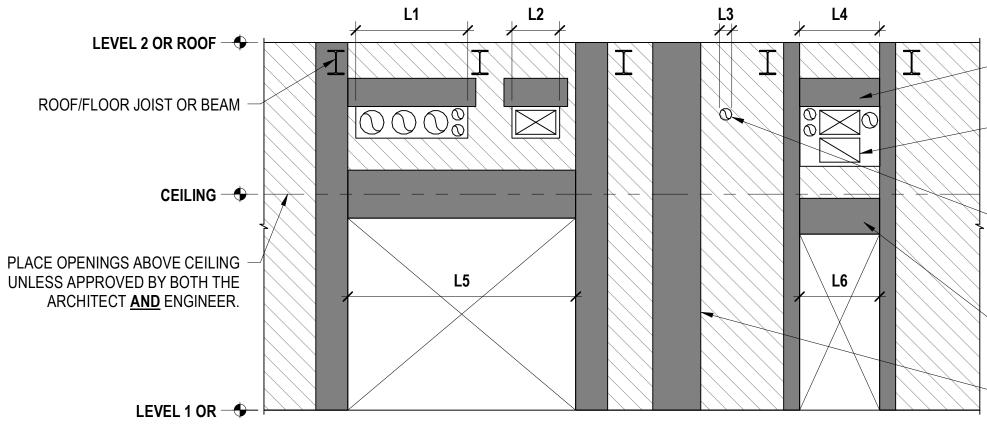
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\*THE SUM OF THE OPENINGS (i.e. L1 + L2 + L3 + L4) SHALL BE NO GREATER THAN THE SUM OF THE OPENINGS BELOW (L5 + L6) IN ANY LENGTH OF WALL W/O CONSULTING W/ CRCE. \*WHERE POSSIBLE PLACE OPENINGS IN NON-REINFORCED CELLS (SEE TYPICAL WALL REINFORCEMENT) SO THAT WALL REINFORCEMENT WILL NOT REQUIRE ADJUSTING. OPENINGS MAY NOT BE PLACED IN <u>MBs & MCs.</u>

\*REINFORCE ALL 4 SIDES OF OPENINGS PER NOTE 10 UNDER 'MASONRY' NOTES ON SHEET **S-002**. \*AS MUCH AS POSSIBLE DO NOT PLACE OPENINGS BELOW FLOOR/ROOF JOISTS AND BEAMS. IF NECESSARY MAINTAIN MASONRY BEAM WIDTH BETWEEN JOIST/BEAM BEARING AND TOP OF OPENING.



LEVEL 2

\*PROVIDE MB-1 MASONRY BEAMS ABOVE OPENINGS NO GREATER THAN 2'-0" WIDE. PROVIDE MB-3 MASONRY BEAMS ABOVE OPENINGS NO GREATER THAN 4'-0" WIDE. NO SINGLE OPENING SHALL BE MORE THAN 4'-0" WIDE.

\*MAKE OPENINGS IN 0'-8" INCREMENTS (HEIGHT AND WIDTH) TO MATCH MASONRY COURSING. MAINTAIN A MINIMUM 1'-4" WIDTH OF MASONRY BETWEEN OPENINGS. \*CONSULT CALDER RICHARDS FOR ANY UNUSUAL CONDITIONS NOT MATCHING THOSE SHOWN ABOVE BEFORE PROCEEDING.



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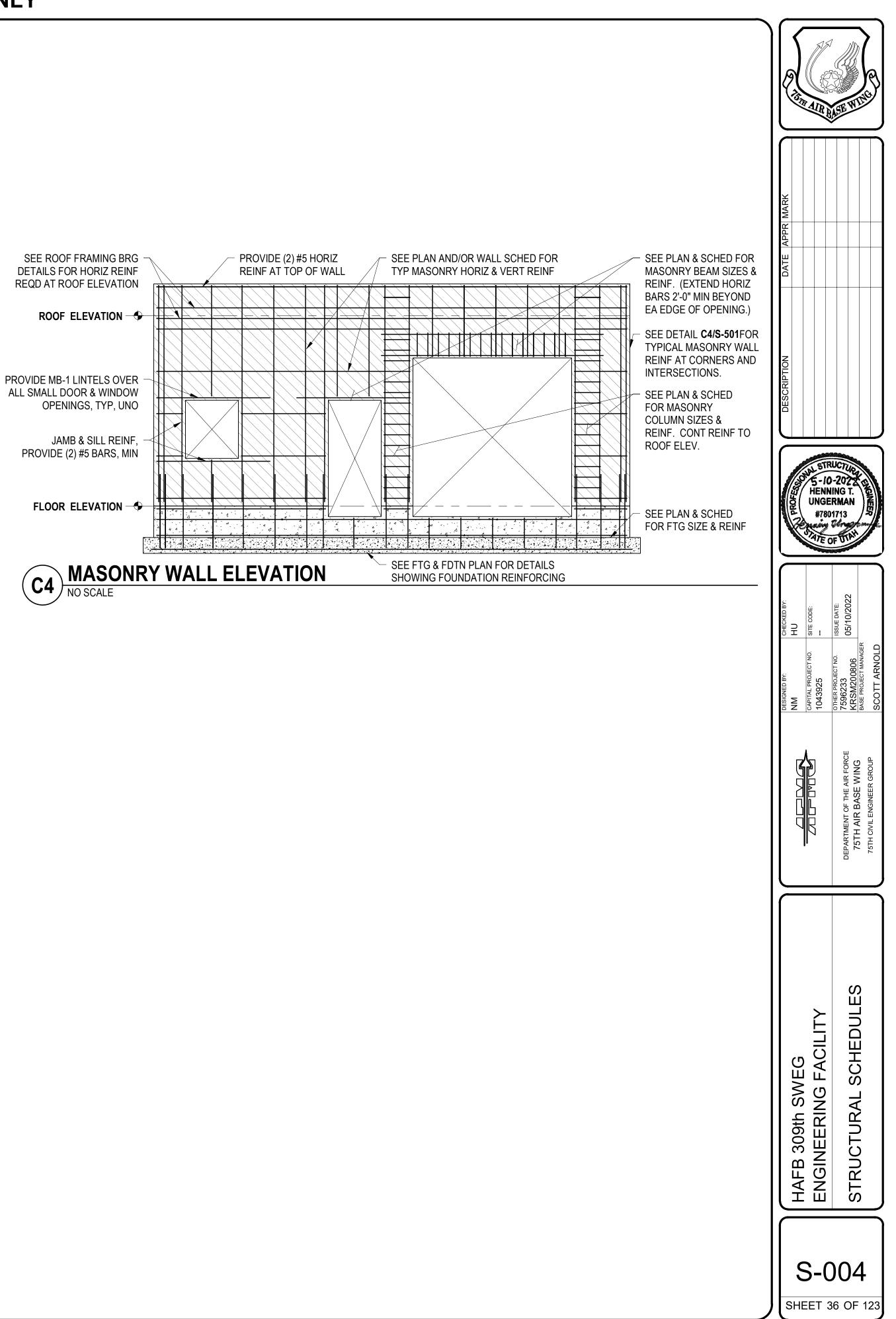
MASONRY BEAM ABOVE OPENINGS. SEE NOTES BELOW.

WHERE POSSIBLE, STACK UTILITIES. IT IS PREFERABLE TO MAKE OPENINGS TALLER THAN WIDER.

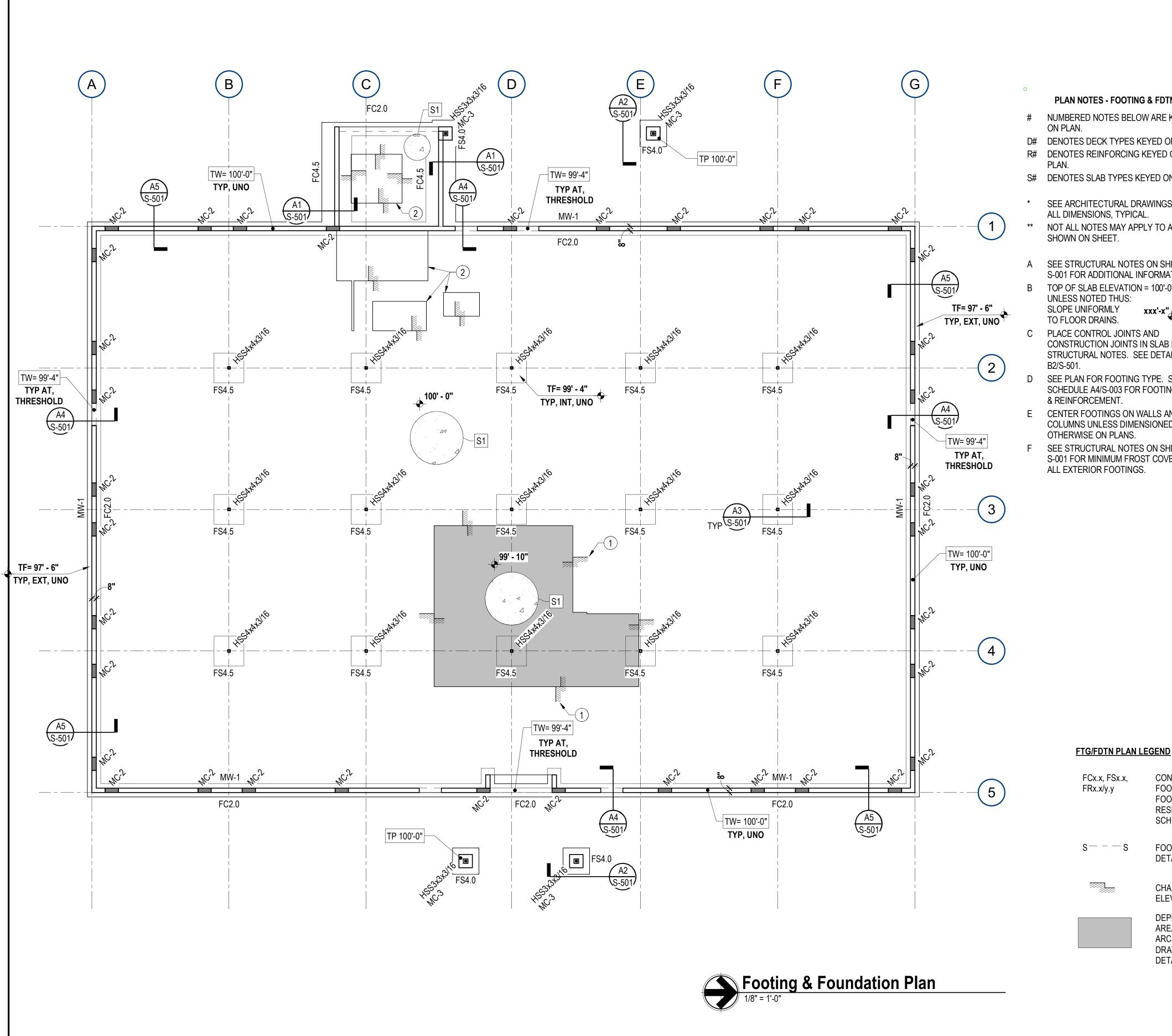
OPENINGS FOR SINGLE LINES LESS THAN 8"Ø MAY BE SIMPLY CORED THROUGH WALL. MAINTAIN A MINIMUM DISTANCE OF 16" BETWEEN OPENINGS.

DO NOT PLACE OPENINGS IN MASONRY BEAMS (INCLUDING THE REBAR EXTENSIONS EACH SIDE).

DO NOT PLACE OPENINGS IN MASONRY COLUMNS, INCLUDING MC-1 COLUMNS.



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### **PLAN NOTES - FOOTING & FDTN**

	NUMBERED NOTES BELOW ARE KEYED ON PLAN.
#	DENOTES DECK TYPES KEYED ON PLAN.
#	DENOTES REINFORCING KEYED ON
H	PLAN.
#	DENOTES SLAB TYPES KEYED ON PLAN.
	SEE ARCHITECTURAL DRAWINGS FOR
	ALL DIMENSIONS, TYPICAL.
	NOT ALL NOTES MAY APPLY TO AREA SHOWN ON SHEET.
	SHOWIN ON SHEET.
	SEE STRUCTURAL NOTES ON SHEET
	S-001 FOR ADDITIONAL INFORMATION.
	TOP OF SLAB ELEVATION = 100'-0",
	UNLESS NOTED THUS:
	SLOPE UNIFORMLY XXX'-X"
	PLACE CONTROL JOINTS AND
	CONSTRUCTION JOINTS IN SLAB PER
	STRUCTURAL NOTES. SEE DETAIL
	B2/S-501.
	SEE PLAN FOR FOOTING TYPE. SEE
	SCHEDULE A4/S-003 FOR FOOTING SIZE & REINFORCEMENT.
	CENTER FOOTINGS ON WALLS AND
	COLUMNS UNLESS DIMENSIONED
	OTHERWISE ON PLANS.
	SEE STRUCTURAL NOTES ON SHEET
	S-001 FOR MINIMUM FROST COVER FOR

LOCATIONS.

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CONTINUOUS

FOOTING, SPOT

FOOTING TYPES

RESPECTIVELY, SEE

SCHEDULE A4/S-003

FOOTING STEP, SEE

DETAIL B3/S-501

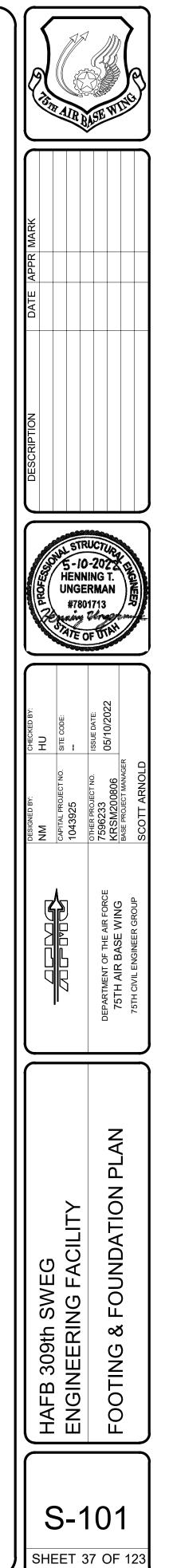
DEPRESSED SLAB AREAS, COORD W/

ARCHITECTURAL

DRAWINGS AND DETAIL **B5/S-501** 

CHANGE IN

ELEVATION



### PLAN NOTES - FOOTING & FDTN

G FOOTING ELEVATIONS SHOWN ARE BASED ON A UNIFORM GRADE 6" BELOW SLAB PLUS 3'-0" FROST COVER. COORDINATE ELEVATIONS SHOWN WITH CIVIL AND SITE PLANS FOR ANY ADDITIONAL DEPTH THAT MAY BE REQUIRED TO MAINTAIN MINIMUM FROST COVER OVER FOOTINGS. H SEE PLAN AND SECTIONS FOR TOP OF FOUNDATION WALL ELEVATIONS. SEE DETAILS C4/S-501 AND C5/S-501 FOR TYPICAL CONCRETE AND MASONRY WALL REINFORCEMENT AT CORNERS AND INTERSECTIONS. K FOUNDATION DESIGN INFORMATION WAS OBTAINED FROM THE SOILS REPORT PREPARED BY TERRACON (DATED 4-11-2022). ALL SITE PREPARATION, EXCAVATION, FILL, COMPACTION, AND PLACEMENT WORK PERFORMED SHALL COMPLY WITH THE RECOMMENDATIONS OUTLINED IN THE ABOVE REFERENCED REPORT. L DO NOT PLACE BACKFILL AGAINST FOUNDATION WALLS UNTIL BRACING FLOOR IS IN PLACE OR ADEQUATE SHORING IS INSTALLED. M SEE DETAIL C3/S-501 FOR CONTROL JOINTS IN MASONRY. SEE ARCHITECTURAL DRAWINGS FOR MC-# DENOTES MASONRY COLUMN, SEE SCHEDULE A2/S-003 FOR SIZE &

REINFORCMENT. CONTINUE ALL MASONRY COLUMNS UP TO FLOOR OR ROOF DECK BEARING ABOVE, OR TO BEAM BEARING PLATE, TYP.

### PLAN NOTES - FOOTING & FDTN

- P SEE ARCHITECTURAL / SITE DRAWINGS FOR INFORMATION AND LOCATION OF SITE WALLS, STEPS, PLANTERS, RAMPS, ETC.
- R SEE DETAIL B3/S-501 FOR FOOTING STEP. STEP LOCATIONS ARE SHOWN SCHEMATICALLY ONLY. COORDINATE STEPS WITH FINISH GRADES AND FLOOR ELEVATIONS TO MAINTAIN MINIMUM FROST DEPTH.
- STEP FOOTINGS FOR UTILITIES PER DETAIL B4/S-501. COORDINATE FOOTING STEPS FOR UTILITIES WITH CIVIL, ELECTRICAL, AND MECHANICAL DRAWINGS.
- STEP IN SLAB, SEE DETAIL B5/S-501. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF STEPS.
- PROVIDE 4" THICK HOUSEKEEPING PADS FOR MECHANICAL UNITS AS REQUIRED BY THE MECHANICAL DRAWINGS. PADS TO BE POURED MONOLITHICALLY WITH THE SLAB ON GRADE OR ANCHORED WITH REBAR. PADS ARE SHOWN SCHEMATICALLY ONLY. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND LAYOUT.
- SLAB ON GRADE SHALL BE 4" CONCRETE S1 OVER 6" FREE-DRAINING GRAVEL, UNO. REINFORCE SLAB WITH 6x6-W1.4xW1.4 WWF (USE FLAT SHEETS).

€ <sup>xxx'-xx</sup> "	FINISH FLOOR ELEVATION

TW xxx'-xx" TOP OF WALL

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ELEVATION TOP OF PIER TP xxx'-xx"

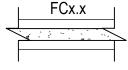
ELEVATION

TOP OF FTG

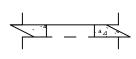
ELEVATION

CONCRETE SLAB ON GRADE

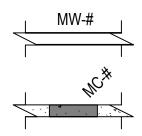
STEEL COLUMNS WIDE FLANGE, TUBE, PIPE











CONCRETE FOOTING & FDTN WALL, SEE SCHEDULE A4/S-003

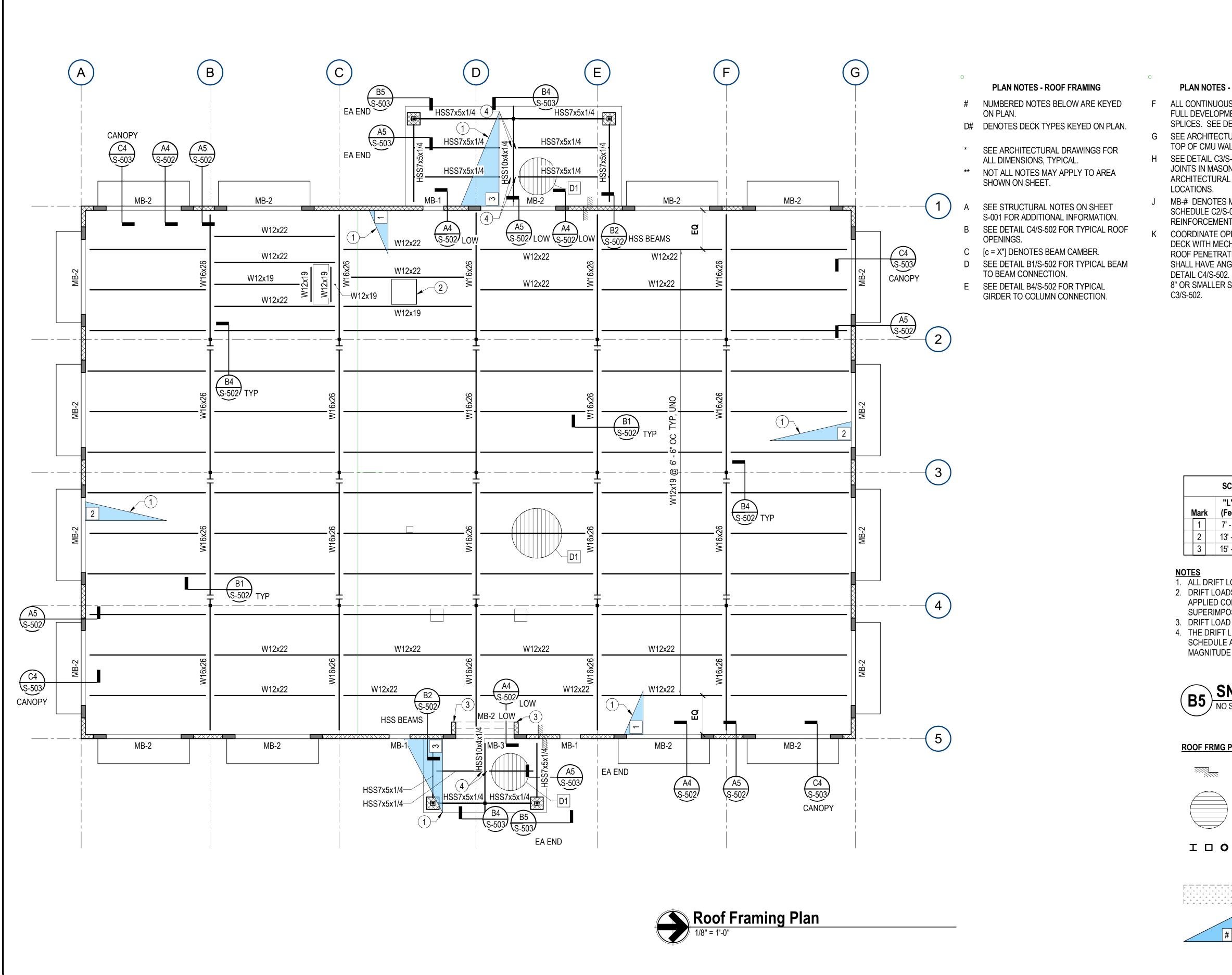
CONCRETE WALL TYPE, SEE STRUCTURAL NOTES ON SHEET **S-001** 

**RECESS IN** CONCRETE FDTN WALL

SITE WALL, COORD W/ ARCH CIVIL DWGS

MASONRY WALL TYPE ABOVE, SEE SCHEDULE B4/S-003

MASONRY COLUMN IN WALL ABOVE, SEE SCHEDULE A2/S-003



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ALL CONTINUOUS DECK ANGLES TO BE FULL DEVELOPMENT WELDED AT SPLICES. SEE DETAIL C2/S-502.

G SEE ARCHITECTURAL DRAWINGS FOR TOP OF CMU WALL ELEVATIONS.

H SEE DETAIL C3/S-501 FOR CONTROL

JOINTS IN MASONRY. SEE ARCHITECTURAL DRAWINGS FOR

MB-# DENOTES MASONRY BEAM, SEE SCHEDULE C2/S-003 FOR SIZE & REINFORCEMENT.

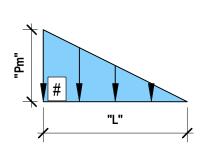
COORDINATE OPENINGS THRU ROOF DECK WITH MECHANICAL DRAWINGS. **ROOF PENETRATIONS LARGER THAN 8**"

SHALL HAVE ANGLE FRAMING PER DETAIL C4/S-502. ROOF PENETRATIONS 8" OR SMALLER SHALL BE DETAILED PER

## PLAN NOTES - ROOF FRAMING

- SNOW DRIFT LOAD DIAGRAM. DESIGN JOISTS FOR SNOW DRIFT LOAD IN ADDITION TO UNIFORM AND MECHANICAL LOADS, SEE SCHEDULE THIS SHEET.
- 2 PROVIDE DECK SUPPORT ANGLES FOR ROOF HATCH OPENINGS PER DETAIL C4/S-502.
- DO NOT EXTEND MASONRY RETURN UP TO ROOF DECK, SEE ARCHITECTURAL DRAWINGS.
- SEE B4.1/S503 FOR BEAM TO RIDGE 4 CONNECTION
- D1 ROOF DECK SHALL BE 1 1/2" VERCO TYPE "HSB-36", 20 GAUGE, GALVANIZED, OR EQUIVALENT. PLACE DECK 3 SPANS CONTINUOUS, MIN. ATTACH DECK AS FOLLOWS: A. SPAN PERPENDICULAR TO SUPPORTS: (7) 3/4"Ø PUDDLE WELDS. B. SPAN PARALLEL TO SUPPORTS: 3/4"Ø PUDDLE WELDS @ 6" OC. C. SEAMS: 1 1/2" TOP SEAM WELDS @ 18" OC.

		SCHEDULE - SNOW DRIFT								
Mark	(	"L" - (Feet)	"Pm" - (PSF)	Notes						
1		7' - 0"	18	-						
2		13' - 0"	33	-						
3		15' - 0"	74	-						



1. ALL DRIFT LOADS TO RUN FULL LENGTH ALONG A WALL LINE, UNO. 2. DRIFT LOADS ON JOISTS THAT OCCUR 90° TO EACH OTHER SHALL BE APPLIED CONCURRENTLY EXCEPT THE TWO LOADS NEED NOT BE SUPERIMPOSED (REFER TO FIGURE 7.7-3 OF ASCE 7-16). 3. DRIFT LOAD IS IN ADDITION TO BASE REQUIRED SNOW LOAD. 4. THE DRIFT LENGTH "L" SHALL BE THE LESSER OF THAT SHOWN IN THE SCHEDULE AND THE ACTUAL LENGTH OF THE ROOF. IN EITHER CASE, THE MAGNITUDE SHALL TAPER TO 0 PSF AT THE END OF THE DRIFT LENGTH.

SNOW DRIFT SCHEDULE (B5) SINUV

1777\_01

MASONRY WALL

COLUMN IN WALL

MASONRY BEAM

MASONRY

C2/S-003

## ROOF FRMG PLAN LEGEND

STEEL ROOF DECK W/ SPAN DIRECTION INDICATED

CHANGE IN

ELEVATION

STEEL COLUMNS: WIDE FLANGE, TUBE, PIPE

**SNOW DRIFT** 

AREA

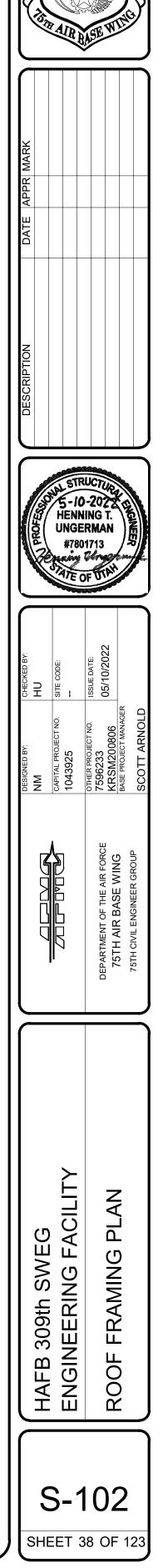


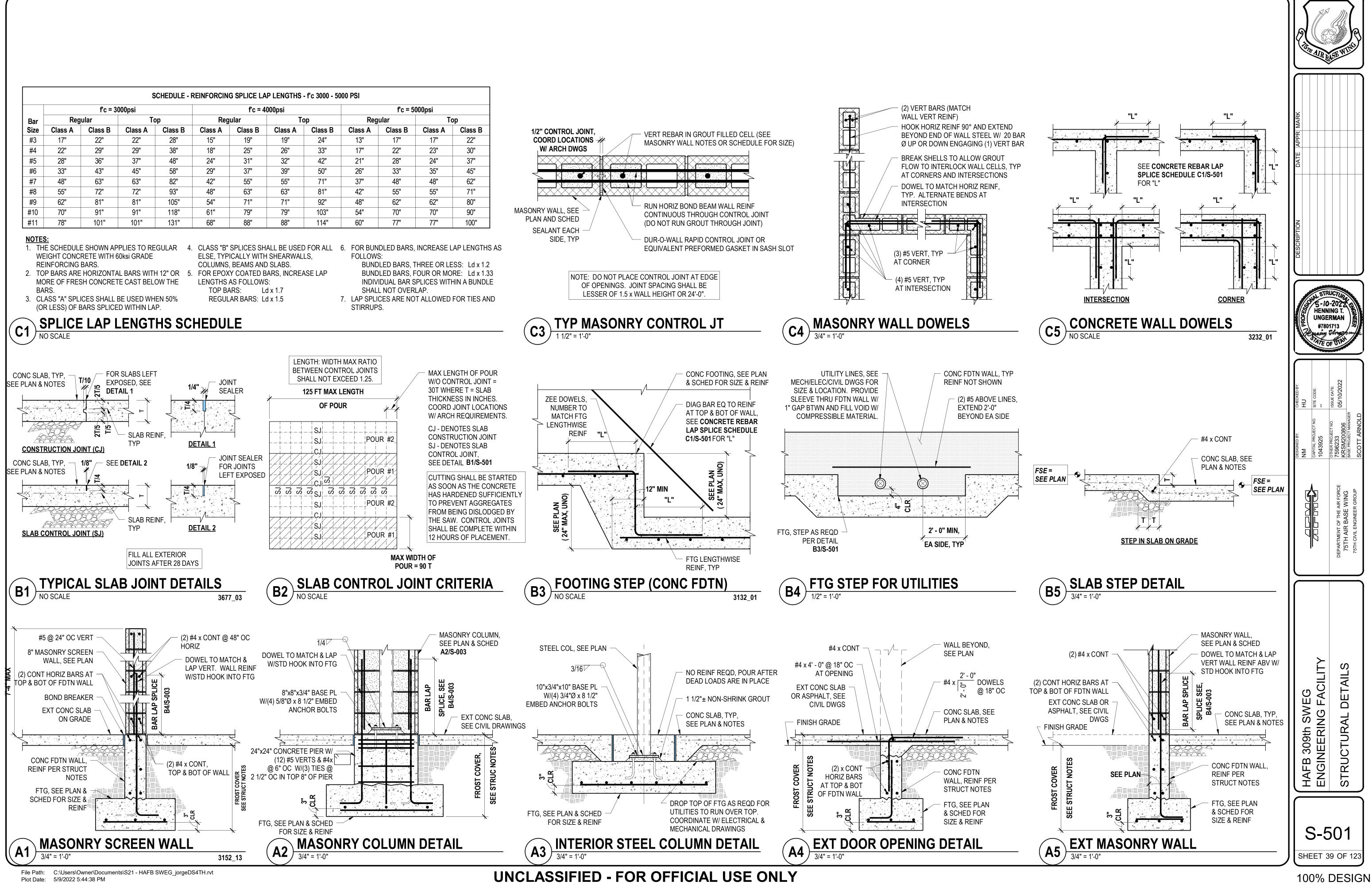
SNOW DRIFT DIAGRAM, SEE SCHEDULE THIS SHEET

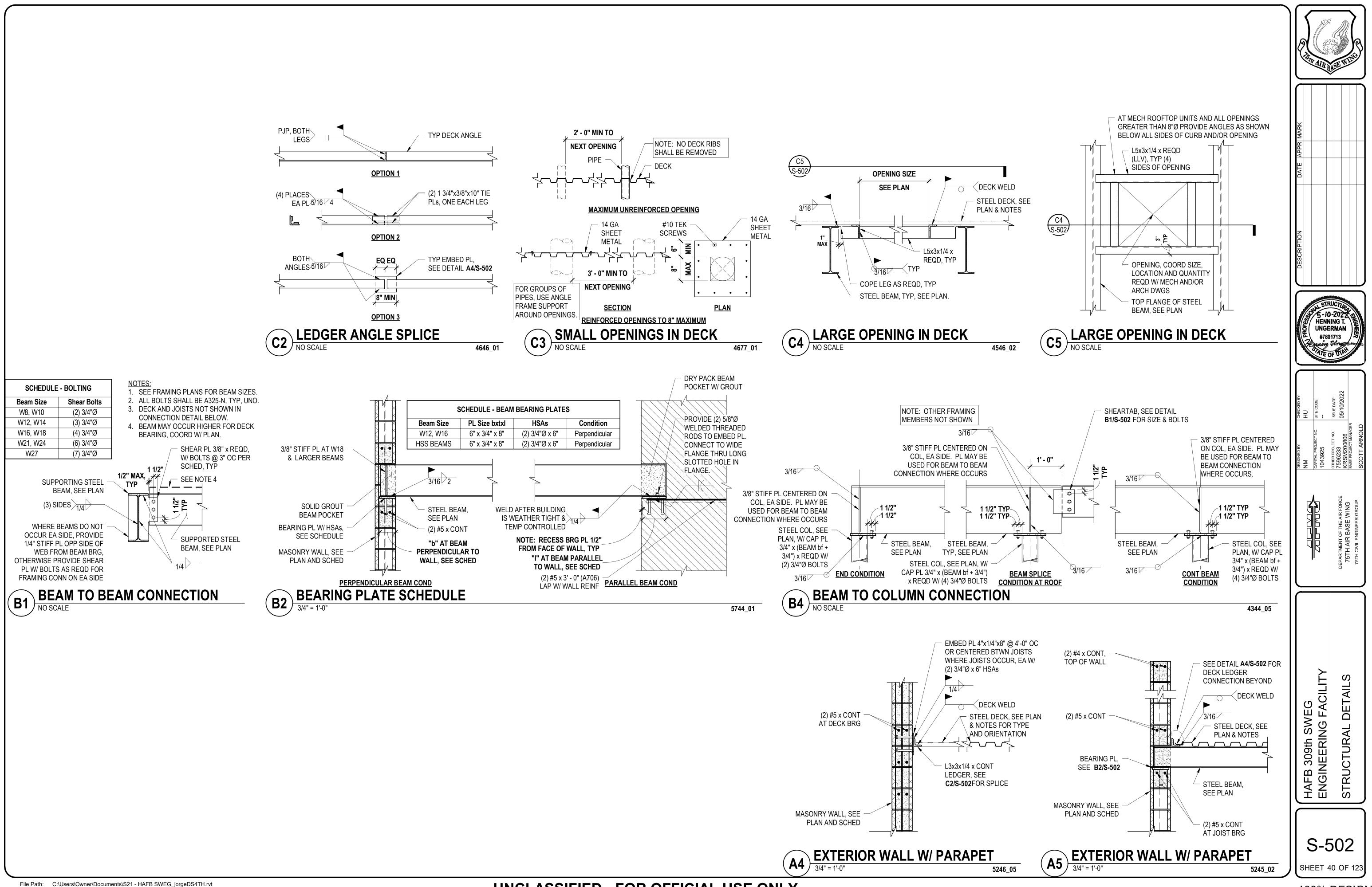
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BEAM SPLICE, SEE DETAIL B4/S-502

MARK, SEE SCHEDULE







# **UNCLASSIFIED - FOR OFFICIAL USE ONLY**

<sup>100%</sup> DESIGN



