

STRUCTURAL GENERAL NOTES:

DESIGN AND LOADING

THE STRUCTURAL DESIGN OF THIS BUILDING WAS BASED ON THE DESIGN CRITERIA:

1. BUILDING CODE: 2015 INTERNATIONAL BUILDING CODE
2. FLOOR:
LIVE LOAD: 100 PSF
3. ROOF
LIVE LOAD: 20 PSF
DEAD LOAD: 20 PSF
4. SNOW:
GROUND LOAD: 20 PSF
FLAT ROOF LOAD: 20 PSF
5. WIND:
BASIC WIND SPEED: 115 MPH (3-SECOND GUST ULTIMATE)
IMPORTANCE FACTOR: 1.00
BUILDING OCCUPANCY CATEGORY: II
WIND EXPOSURE: C
PRESSURES PER ASCE7-10
6. SEISMIC:
OCCUPANCY CATEGORY: II
IMPORTANCE FACTOR: 1.00
SITE CLASS: D (ASSUMED)
 $S_s = 0.203g$, $S_1 = 0.107g$
 $S_{ds} = 0.216$, $S_{d1} = 0.169$
DESIGN CATEGORY: C

FOUNDATION NOTES

THE FOUNDATION DESIGN OF THIS BUILDING WAS BASED ON THE FOLLOWING CRITERIA:

1. MAXIMUM ALLOWABLE SOIL BEARING CAPACITY = 1500 PSF. (ASSUMED)
2. GEOTECHNICAL ENGINEER TO VERIFY THE ACTUAL ALLOWABLE SOIL BEARING CAPACITY ON SITE PRIOR TO CONSTRUCTION.
3. FOUNDATIONS INDICATED MUST BE MODIFIED IF THE ACTUAL SOIL BEARING CAPACITY IS LESS THAN THE VALUE NOTED IN ITEM #1.

ALL EXTERIOR FOOTINGS SHALL EXTEND BELOW THE MAXIMUM ANTICIPATED DEPTH OF FROST.

ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

CONCRETE AND REINFORCING

1. ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE "AMERICAN CONCRETE INSTITUTE BUILDING CODE" (ACI 318) AND WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) LATEST EDITIONS.
2. ALL NORMAL WEIGHT CONCRETE (145 PCF) SHALL OBTAIN A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (3500 PSI FOR SLABS).
3. ALL CONCRETE SUBJECT TO EXTERIOR EXPOSURE SHALL BE AIR ENTRAINED AS RECOMMENDED BY ACI 318.
4. TEST CYLINDERS SHALL BE MADE AND TESTED AS OUTLINED IN CHAPTER 16 OF ACI-301.
5. REINFORCING BARS SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. ALL REINFORCING AND ACCESSORIES SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI STANDARD 315 AND 315R.
6. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITIONS SHOWN ON THE PLANS AND DETAILS. PLASTIC COATED ACCESSORIES SHALL BE USED IN ALL EXPOSED CONCRETE WORK.
7. THE GENERAL CONTRACTOR SHALL CHECK WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND THE SUB-CONTRACTORS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, BAR DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR PROPER LOCATION.

SAWN LUMBER

ALL GRADES OF LUMBER SHALL BE RATED BY THE SOUTHERN PINE INSPECTION BUREAU (SPIB), OR THE WESTERN WOOD PRODUCTS ASSOCIATION (WWPA). LUMBER GRADES SHALL BE AS FOLLOWS, WITH A MAXIMUM MOISTURE CONTENT OF 19%:

- SOUTHERN PINE NO. 1.
- DOUGLAS FIR-LARCH NO. 1.
- HEM-FIR NORTH NO. 1

BOLT HEADS AND NUTS BEARING ON WOOD SHALL BE PROVIDED WITH STANDARD CUT WASHERS. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.

MINIMUM NAILED CONNECTIONS FOR WOOD FRAMING MEMBERS SHALL BE IN ACCORDANCE WITH THE LOCAL BUILDING CODE OR TABLE 2304.9.1 OF THE INTERNATIONAL BUILDING CODE IF NO OTHER CRITERIA IS GIVEN.

CONNECTORS SHOWN ON THE DETAILS ARE MANUFACTURED BY SIMPSON. WRITTEN
APPROVAL BY ENGINEER REQUIRED FOR SUBSTITUTIONS.

TYPICAL CONNECTIONS (NEW TO NEW WOOD CONSTRUCTION)

- | | |
|---------------------------|-------------------------------------------------------------------------------|
| 1. JOIST TO SILL: | (3)-8d COMMON (TOE-NAIL) |
| 2. TOP PLATE TO STUD: | (2)-16d COMMON (END NAIL) |
| 3. STUD TO SOLE PLATE: | (6)-8d COMMON (TOE NAIL) |
| 4. DOUBLE TOP PLATES: | (1)-16d COMMON @ 24" O.C. (FACE NAIL) |
| 5. LAPS OR INTERSECTIONS: | (3)-16d COMMON (FACE NAIL) |
| 6. BUILT-UP BEAMS: | (1)-20d COMMON @ 32" O.C. FACE NAIL T&B
STAGGERED ON OPPOSITE SIDES U.N.O. |

ROOF & WALL SHEATHING

ALL SHEATHING SHALL CONFORM TO AMERICAN PLYWOOD ASSOCIATION (APA) DESIGN SPECIFICATIONS, LATEST EDITION. SHEATHING SHALL BE CONTINUOUS OVER THREE ADJACENT SPANS MINIMUM.

WALL SHEATHING SHALL BE 15/32" (1/2" NOMINAL) APA RATED SHEATHING,
EXPOSURE 1, 32/16. ALL WALL SHEATHING SHALL BE FASTENED TO SUPPORTING
MEMBERS W/ 8d COMMON NAILS @ 6" O.C. AT PANEL EDGES AND 12" O.C. AT
INTERMEDIATED SUPPORTS, U.N.O.

ROOF SHEATHING SHALL BE 23/32" (3/4" NOMINAL) APA RATED SHEATHING, EXPOSURE 1, 48/24, UNO. ALL ROOF SHEATHING SHALL BE FASTENED TO SUPPORTING MEMBERS W/16d COMMON NAILS @ 6" O.C. AT PANEL EDGES, AND 12" O.C. AT INTERMEDIATE SUPPORTS. UNO.

SHOP DRAWINGS

SHOP DRAWING SUBMITTALS TO BE SUBMITTED ELECTRONICALLY.

SHOP DRAWINGS SHALL BE REVIEWED BY CONTRACTOR TO VERIFY THAT SUBMITTAL IS COMPLETE PRIOR TO SUBMITTING TO ARCHITECT/ENGINEER.

DRAWINGS CREATED BY THE ENGINEER OF RECORD CANNOT BE REPRODUCED AND/OR USED AS A SHOP DRAWING SUBMITTAL.

SHOP DRAWING SUBMITTALS SHALL INCLUDE THE FOLLOWING:

1. CONCRETE MIX DESIGN
2. CONCRETE REINFORCING STEEL
3. ROOF SHEATHING
4. TRELLIS SYSTEM & CALCULATIONS
5. STRUCTURAL STEEL

MISCELLANEOUS

ALL DIMENSIONS ON STRUCTURAL DRAWINGS TO BE CHECKED AGAINST ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS BY THE GENERAL CONTRACTOR AND ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT IMMEDIATELY.

THE CONTRACTOR SHALL ASSUME RESPONSIBILITY, UNRELIEVED BY REVIEW OF SHOP DRAWINGS OR PERIODIC OBSERVATION OF CONSTRUCTION, FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS, FOR FABRICATION PROCESSES AND CONSTRUCTION TECHNIQUES, AND FOR SAFE CONDITIONS ON THE JOB SITE.

DO NOT SCALE THE DRAWINGS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN CONFORMANCE WITH THE AISC360 "SPECIFICATION FOR STRUCTURAL STEEL". SEISMIC DESIGN OF STRUCTURAL STEEL STRUCTURES SHALL CONFORM TO AISC 341.
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

A. ANCHOR RODS	F1554, GRADE 36
B. HIGH STRENGTH STRUCTURAL BOLTS	A325-N U.N.O.
C. STRUCTURAL SHAPES (W)	A992
D. STRUCTURAL SHAPES (M, S, C, MC, PLATES)	A36
E. STRUCTURAL SHAPES (HP)	A572
F. STRUCTURAL TUBING (HSS)	A500 GRADE B
G. STRUCTURAL ANGLES	A36
3. ALL WELDING ELECTRODES SHALL BE E70-XX. ALL SHOP AND FIELD WELDING SHALL BE MADE IN ACCORDANCE WITH A.W.S. D1.1 "CODE FOR WELDING IN BUILDING CONSTRUCTION" AND SHALL BE MADE BY CERTIFIED WELDERS.

MASONRY

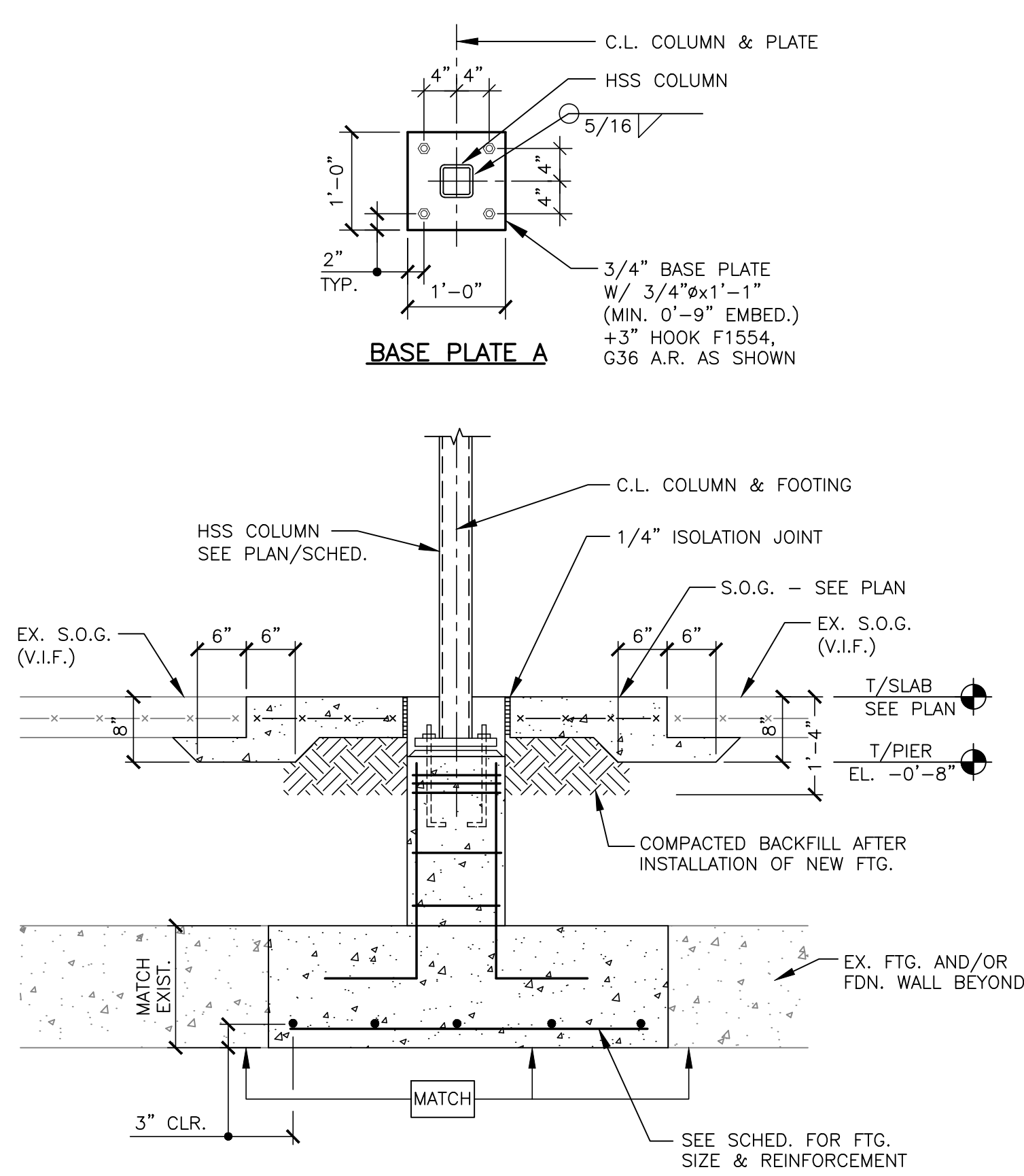
CONCRETE BLOCK DESIGN AND CONSTRUCTION SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES," TMS 402/ACI 530/ASCE 5 AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602/ACI 530.1/ASCE 6)

1. MASONRY MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS:
 - A. HOLLOW LOAD BEARING CONCRETE BLOCK: ASTM C-90. MINIMUM COMPRESSIVE STRENGTH = 1900 PSI AT 28 DAYS.
 - B. MORTAR: ASTM C-270, TYPE S. MINIMUM COMPRESSIVE STRENGTH = 1800 PSI AT 28 DAYS.
 - C. MORTAR: ASTM C-270, TYPE M. MINIMUM COMPRESSIVE STRENGTH = 2500 PSI AT 28 DAYS. (USED FOR BELOW GRADE WORK)
 - D. GROUT: ASTM C-476. MINIMUM COMPRESSIVE STRENGTH = 2000 PSI AT 28 DAYS
 - E. MASONRY REINFORCEMENT: ASTM A-82 GALVANIZED
 - F. MASONRY PRISM STRENGTH: $F'_m = 1500$ PSI
2. PRIOR TO DELIVERY OF MASONRY UNITS TO THE JOB SITE, FURNISH TO THE OWNER AFFIDAVITS FROM AN APPROVED TESTING LABORATORY CERTIFYING THAT ALL UNITS CONFORM TO THEIR RESPECTIVE ASTM REQUIREMENTS.
3. GROUT ALL CAVITIES CONTAINING REINFORCEMENT IN LIFTS NOT TO EXCEED 5'-0".
4. LABORATORY PREPARED MIXES SHALL BE PREPARED AND TESTED IN ACCORDANCE WITH ASTM C-270. FIELD MORTAR SHALL BE TESTED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH ASTM C-780 TWO SETS OF THREE MORTAR CUBES SHALL BE TAKEN DIRECTLY FROM THE MIXER FOR EACH DAY OF MASONRY WORK. TEST THE CUBES AT 28 DAYS. ACCEPTANCE OF THE MORTAR SHALL BE AT THE DISCRETION OF THE ENGINEER.
5. CALCIUM CHLORIDE AND/OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE INCLUDED IN MORTAR OR GROUT MIX, EXCEPT WHEN APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. NO ANTI FREEZE COMPOUNDS SHALL BE USED TO LOWER THE MORTAR'S FREEZING POINT.
6. NO EXTERIOR MASONRY SHALL BE LAID WHEN THE OUTSIDE AIR TEMPERATURE IS LESS THAN 40 DEGREES FAHRENHEIT, UNLESS THE RECOMMENDATIONS SPECIFIED BY THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" TMS 402/ACI 530/ASCE 5 AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (TMS 602/ACI 530.1/ASCE 6) FOR COLD WEATHER CONSTRUCTION ARE STRICTLY FOLLOWED.
7. THE MASONRY CONTRACTOR SHALL PROVIDE BRACING TO WITHSTAND HORIZONTAL PRESSURES AS REQUIRED BY THE BUILDING CODE AND LOCAL ORDINANCE.

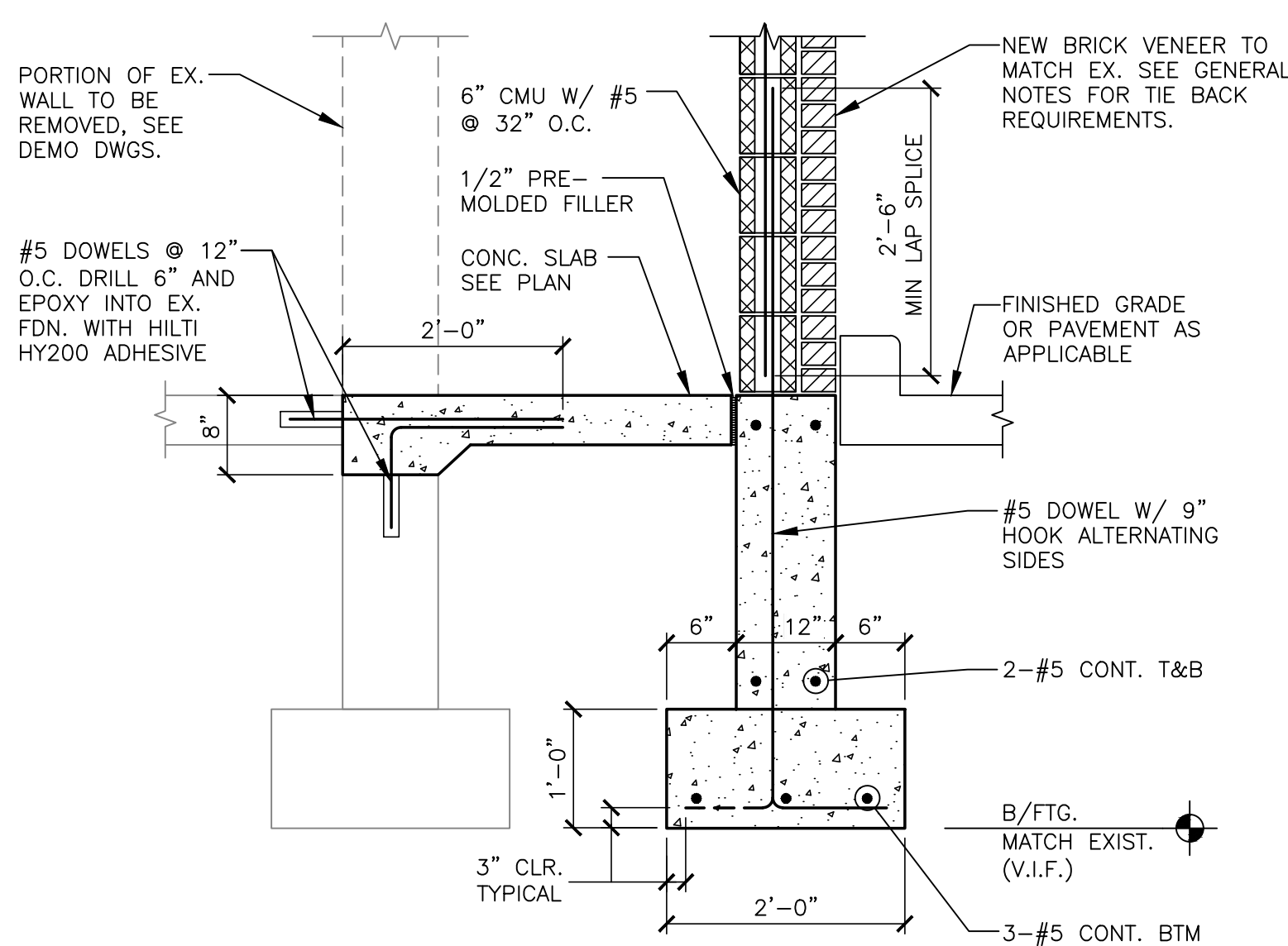
CONCRETE BLOCK JOINT REINFORCEMENT:

ALL CONCRETE BLOCK WALLS TO RECEIVE THE FOLLOWING JOINT REINFORCEMENT:
LADDER TYPE JOINT REINFORCING WITH SIDE AND CROSS RODS WITH WIRE SIZE
(W2.8 OR 3/16"Ø) SPACED 16" O.C. VERTICALLY. (HOHMANN & BARNARD 220
"SUPER HEAVY DUTY" OR EQUAL) SIMILAR FOR CONCRETE BRICK PRODUCTS.

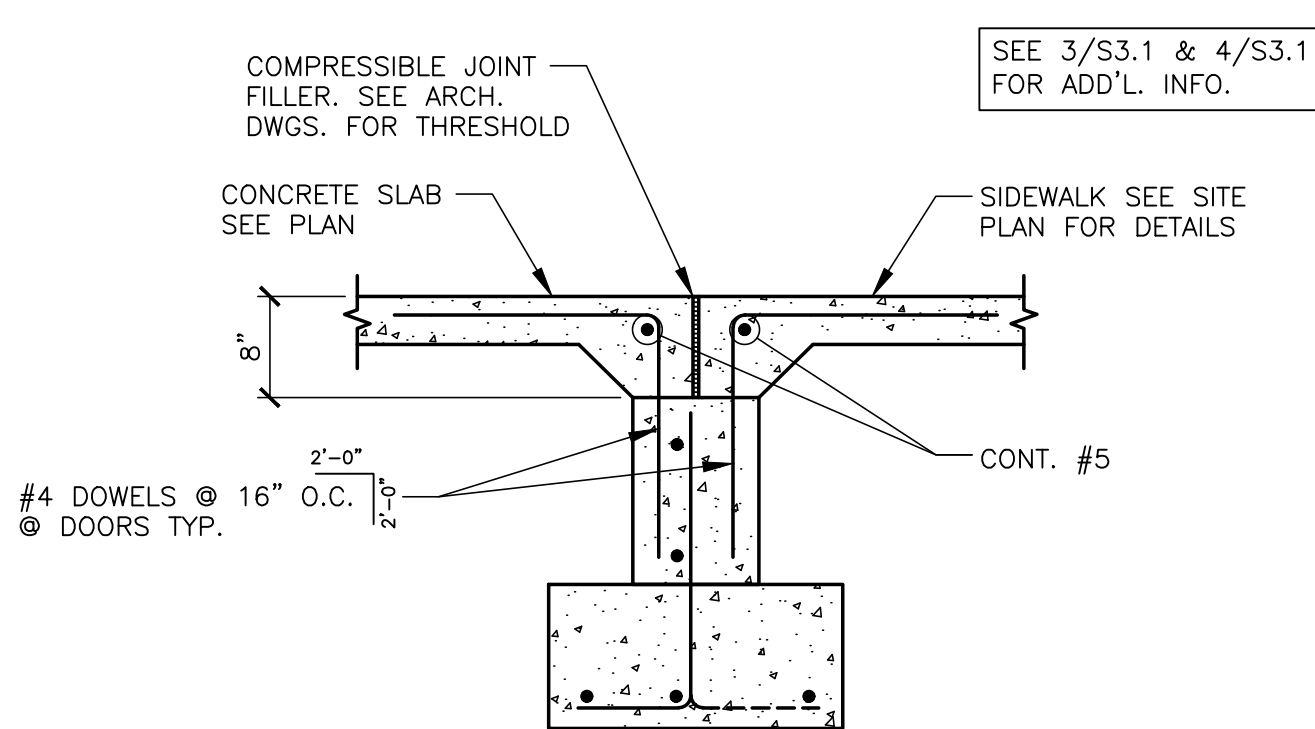
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2 SECTION
S1.1 3/4" = 1'-0"



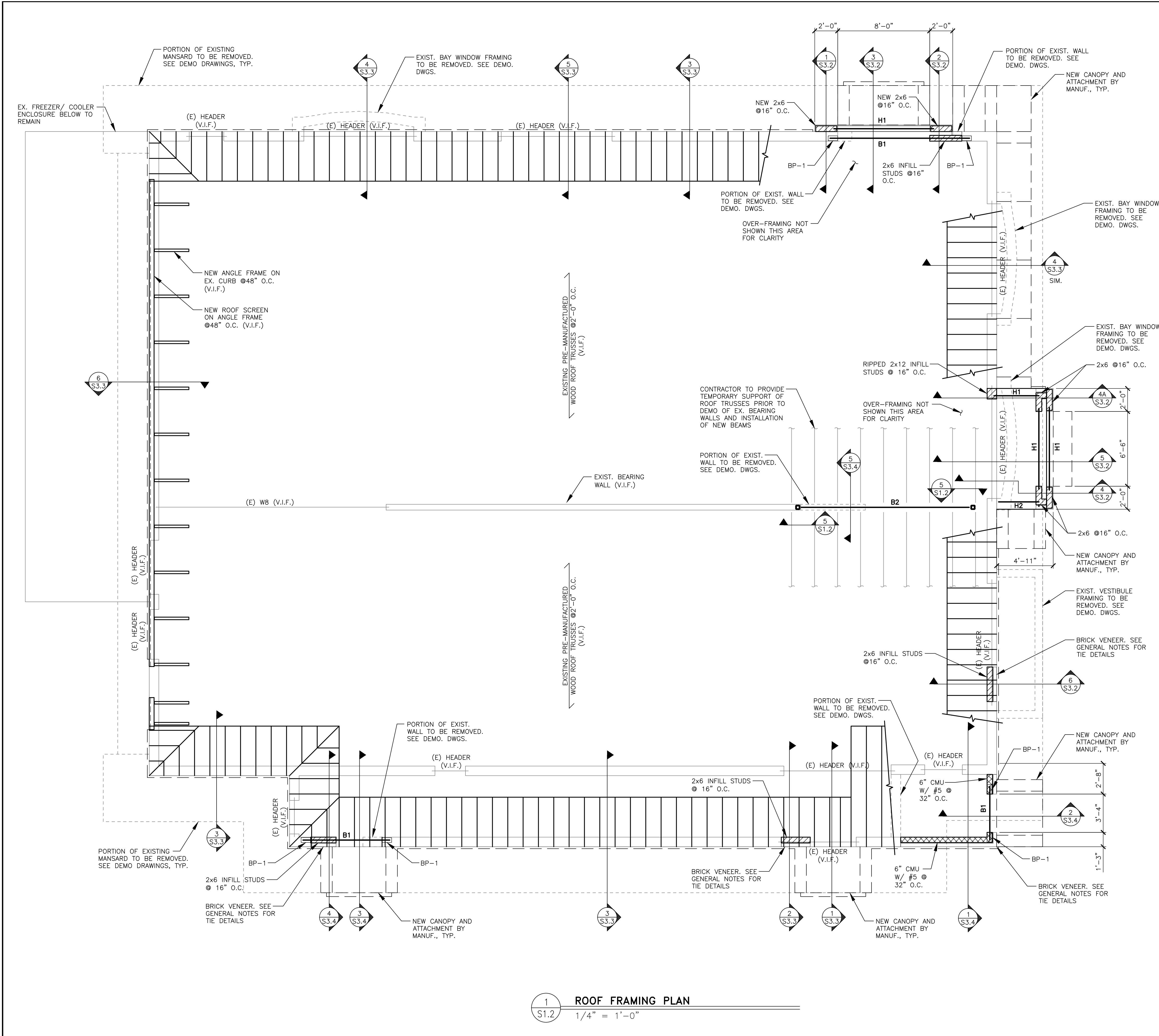
3 SECTION
S1.1 3/4" = 1'-0"



4 SECTION
S1.1 $3/4'' = 1'-0''$

FOOTING SCHEDULE		
MARK	SIZE	REINFORCING
F1	4'-0"x4'-0"x1'-0"	5-#5 E.W.-B.

[illegible]



BEAM SCHEDULE

MARK	MEMBER	SHAPE	SUPPORT	REMARKS
B1	W8x21	I	BP1	SEE DETAIL 4/S1.2
B2	W16x26	I	C1	SEE DETAIL 5/S1.2
B3	W16x26	I	BP1	SEE DETAIL 4/S1.2

COL. EXTENDS TO ROOF

3/8" THRU PLATE W/ (4) 3/4"Ø A325 BOLTS

WF BEAM SEE PLAN

5

S1.2

BEAM DETAIL

3/4" = 1'-0"

4

S1.2

BASE PLATE DETAIL

3/4" = 1'-0"

HEADER SCHEDULE

MARK	MEMBER	SHAPE	BEARING
H1	(3)2x8	III	DETAIL 2/S1.2
H2	(3)2x8	III	DETAIL 2/S1.2 & 3/S1.2
H3	(3)2x8 W/ L5x3½x5/16" LLV LOOSE LINTEL	III	DETAIL 2/S1.2

WOOD HEADER W/ 20d NAILS @ 32" O.C. STAGGERED, N.S. & F.S.

1 1/2" MAX

SIMPSON HUC68 CONCEALED FLANGE HANGER W/ (14) ½" DIA. x 2¾" TITEN 2 SCREWS TO EX. MASONRY & (6) 16d TO HEADER

3

S1.2

HEADER DETAIL

3/4" = 1'-0"

2

S1.2

HEADER DETAIL

3/4" = 1'-0"

TITLE

MRP PROGRAM

CORE 16 2.0

DESCRIPTION

EXISTING MASONRY WALL CONSTRUCTION

EXISTING WOOD ROOF TRUSSES

TILE ARCADES - FRONT ENTRY

SHEET NO.

S1.2

FRAMING PLAN

PREPARED BY:

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DRAWN BY

JCARAS

STD ISSUE DATE

MAY 2018

REVIEWED BY

D-JAFFE

DATE ISSUED

10/12/18

C.S.G. PROJECT #

MCD-24772

SITE ADDRESS

815 EASTLAND DRIVE

JEFFERSON CITY, MO 65101

ENGINEER OF RECORD:

DAVID BALMA

NUMBER PE-2013003007

PROFESSIONAL ENGINEER

APR 12 2019

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DESCRIPTION

DATE

REV

BY