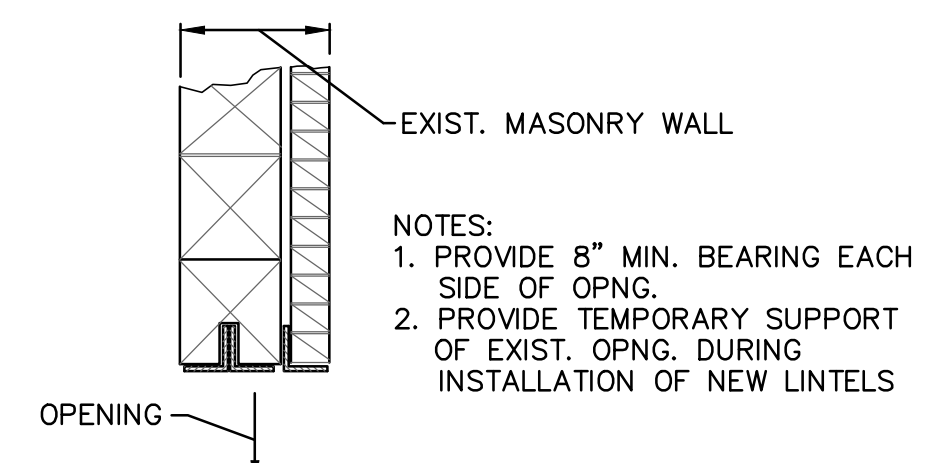


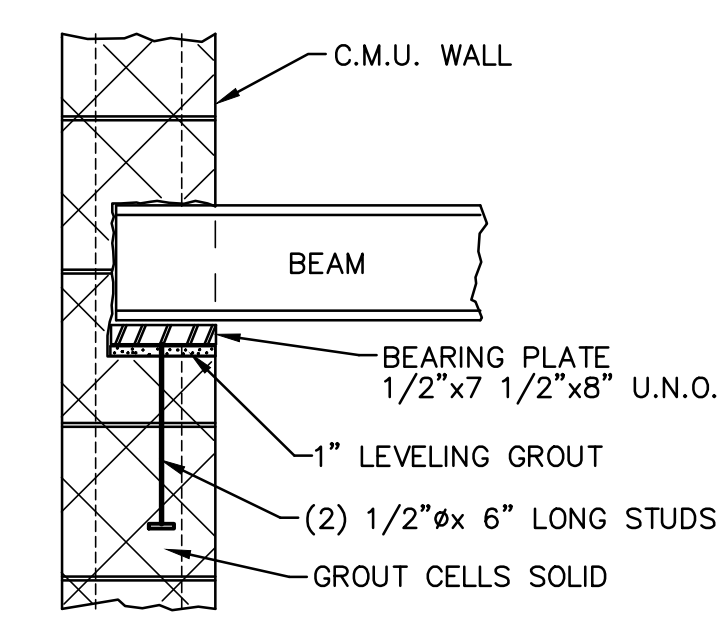
2 S1.1 **DETAIL - FRAME SUPPORT FOR MECH. UNIT ON ROOF**  
N.T.S.



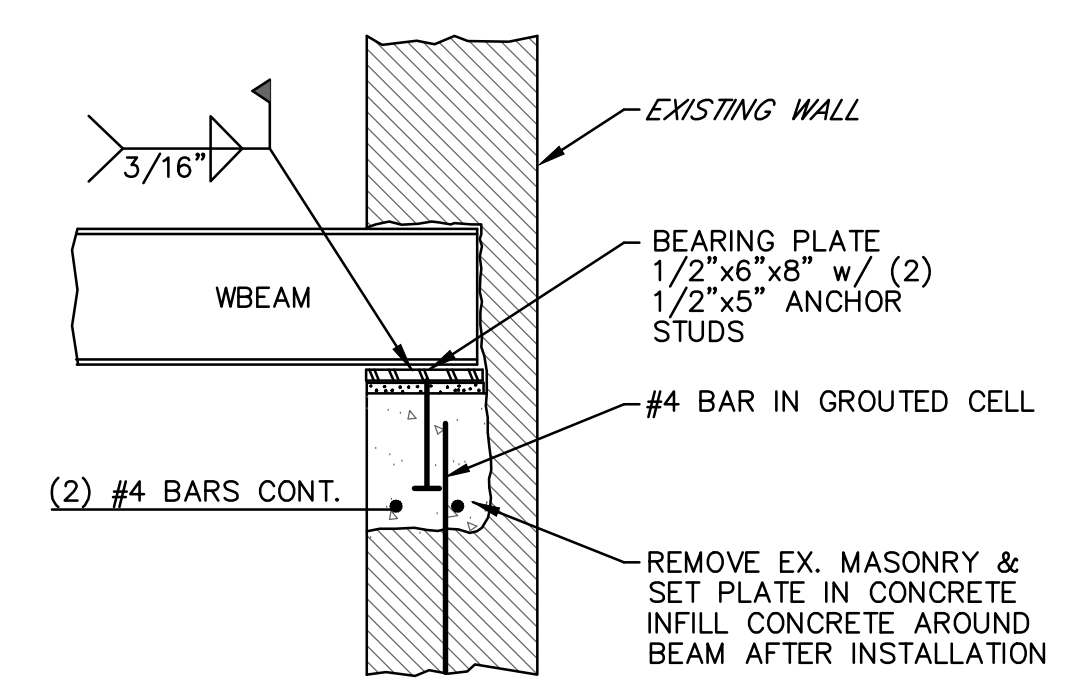
NOTES:  
1. PROVIDE 8" MIN. BEARING EACH SIDE OF OPNG.  
2. PROVIDE TEMPORARY SUPPORT OF EXIST. OPNG. DURING INSTALLATION OF NEW LINTELS

4'-0" CLEAR OR LESS - USE 4"x3 1/2"x5/16" PER 4" WIDTH OF WALL  
4'-0" - 6'-0" CLEAR - USE 5"x3 1/2"x5/16" PER 4" WIDTH OF WALL  
6'-0" - 8'-0" CLEAR - USE 6"x3 1/2"x5/16" PER 4" WIDTH OF WALL  
FOR OPENINGS GREATER THAN 8'-0" - STEEL BEAM REQ'D. SEE SECTION ③

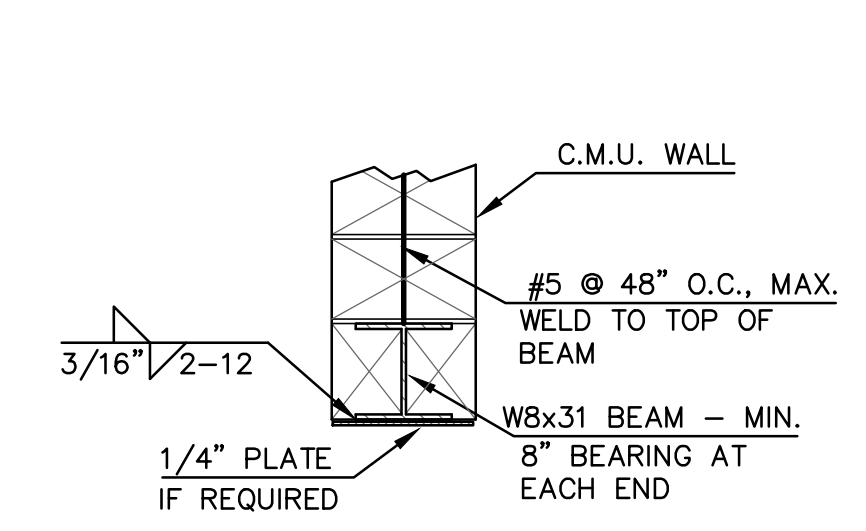
3 S1.1 **SECTION - STEEL LINTEL (EXISTING WALL)**  
3/4"=1'-0"



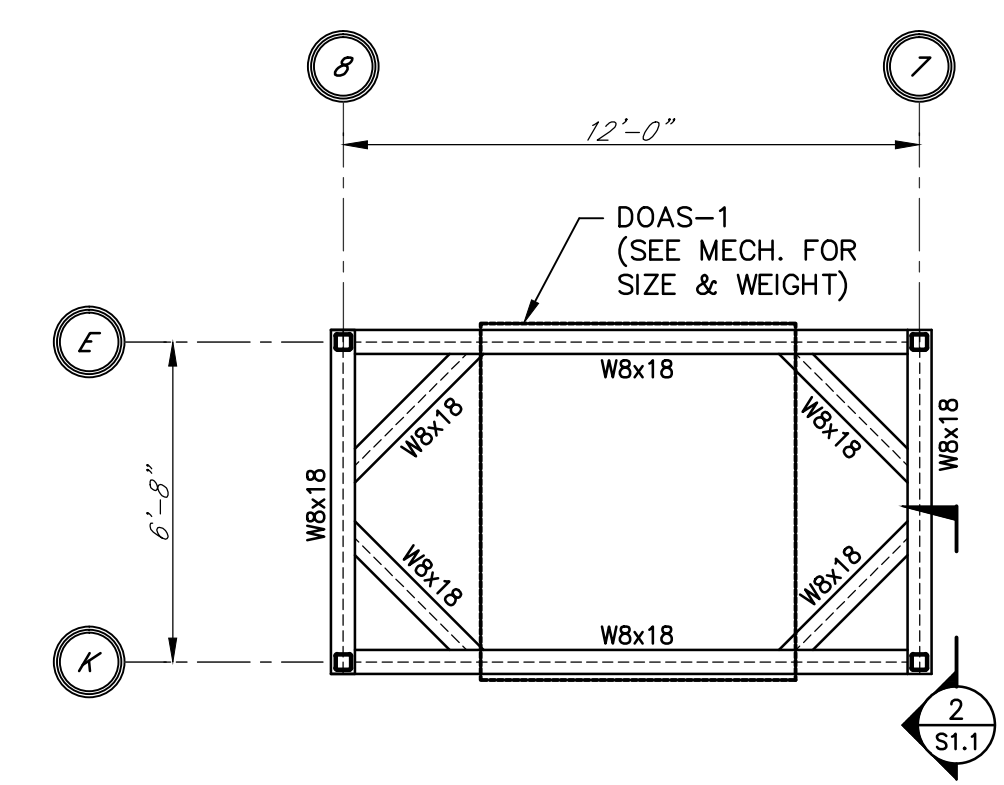
4 S1.1 **SECTION - BEAM CONNECTION TO C.M.U. WALL**  
N.T.S.



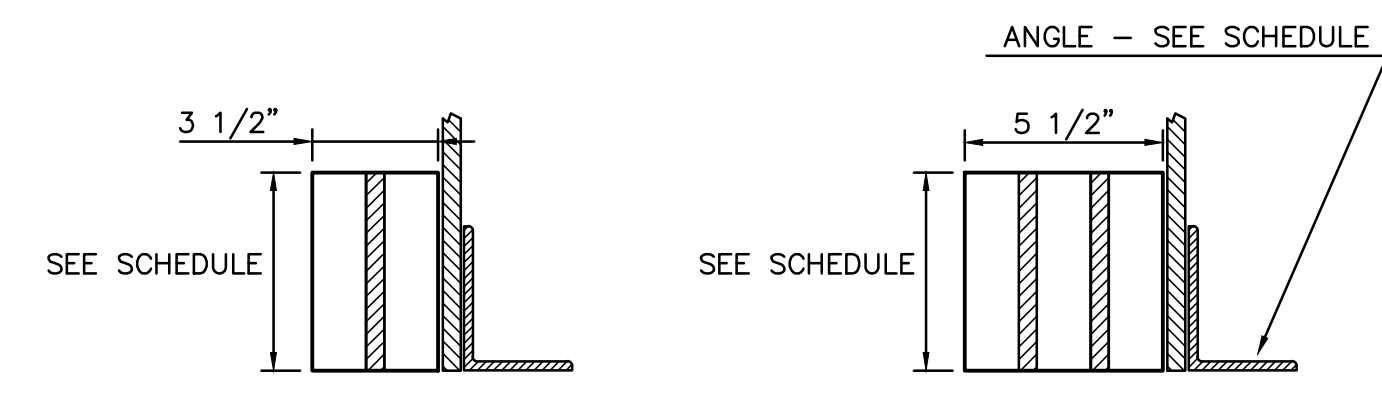
5 S1.1 **SECTION - BEAM BEARING ON EXISTING CMU**  
3/4"=1'-0"



6 S1.1 **SECTION - BEAM LINTEL**  
N.T.S.



1 S1.1 **FRAMING PLAN - DOAS-1**  
SCALE: 1/4"=1'-0"

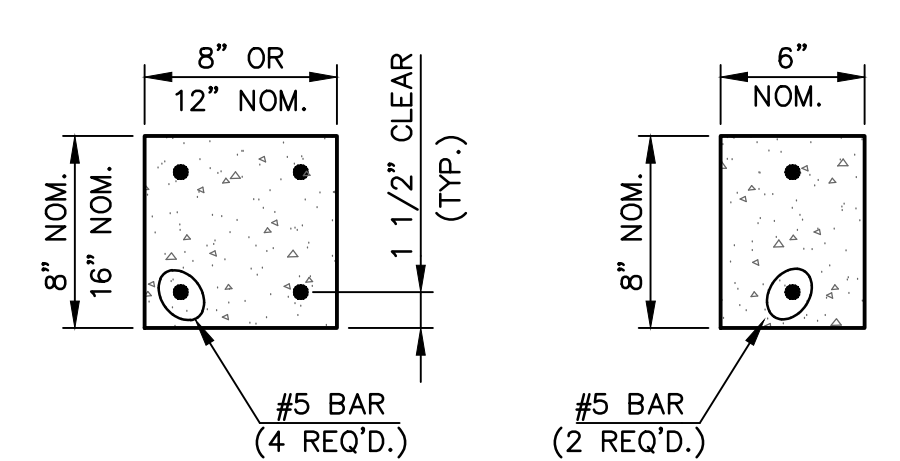


	OPENING	LINTEL
2"x4" WALL	0'- TO 4'-0"	(2) 2"x10" w/ 1/2" PLYWOOD
2"x6" WALL	4'-1" TO 6'-0"	(2) 2"x12" w/ 1/2" PLYWOOD
	0'- TO 4'-0"	(3) 2"x10" w/ (2) 1/2" PLYWOOD
2"x4" & 2"x6" WALL	4'-1" TO 6'-0"	(3) 2"x12" w/ (2) 1/2" PLYWOOD
	OVER 6'-0"	SEE PLAN (L.V.L. BEAM)

**WOOD/STEEL LINTEL SCHEDULE**

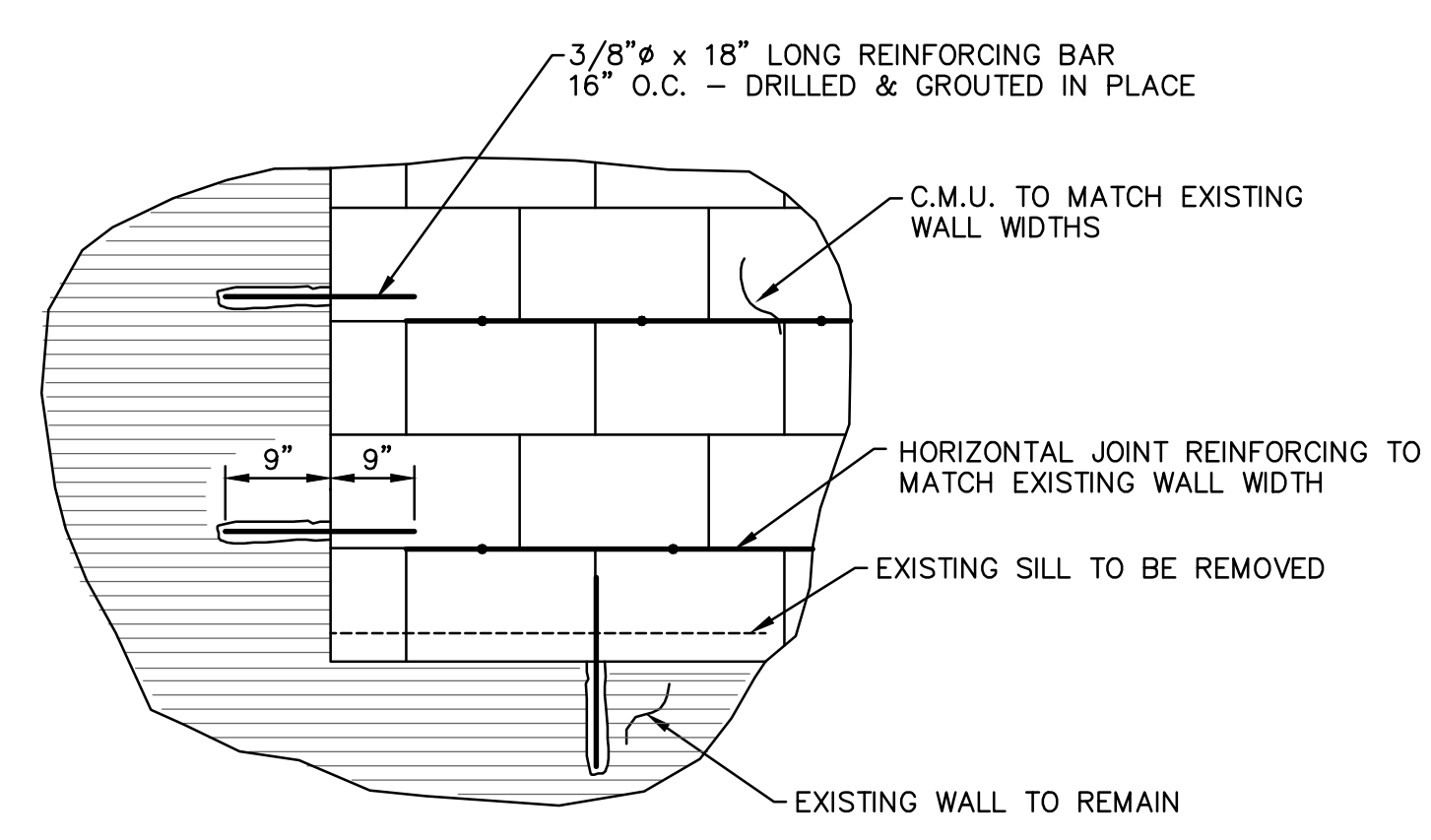
4'-0" CLEAR OR LESS - USE 4"x3 1/2"x5/16" PER 4" WIDTH OF BRICK  
4'-0" - 6'-0" CLEAR - USE 5"x3 1/2"x5/16" PER 4" WIDTH OF BRICK  
6'-0" - 8'-0" CLEAR - USE 6"x3 1/2"x5/16" PER 4" WIDTH OF BRICK  
FOR OPENINGS GREATER THAN 8'-0" - USE 7"x4"x3/8" ANGLE PER WIDTH OF WALL & L.V.L. BEAM

A S1.1 **LINTEL SCHEDULE**  
N.T.S.



- 1) ALL BLOCK CELLS SHALL BE FULLY GROUTED BELOW LINTEL.
- 2) PRECAST LINTELS MAY BE USED WHEN THE LINTEL OCCURS IN A NON-LOAD BEARING WALL AND THE MASONRY OPENING IS LESS THAN OR EQUAL TO 6'-4".
- 3) MINIMUM END BEARING SHALL BE 8".
- 4) PRECAST LINTELS MAY BE USED IN BEARING WALLS IF STRUCTURE BEARING IS GREATER THAN 1/2 THE CLEAR SPAN ABOVE THE TOP OF THE LINTEL.

B S1.1 **DETAIL - PRECAST LINTELS**  
1 1/2"=1'-0"



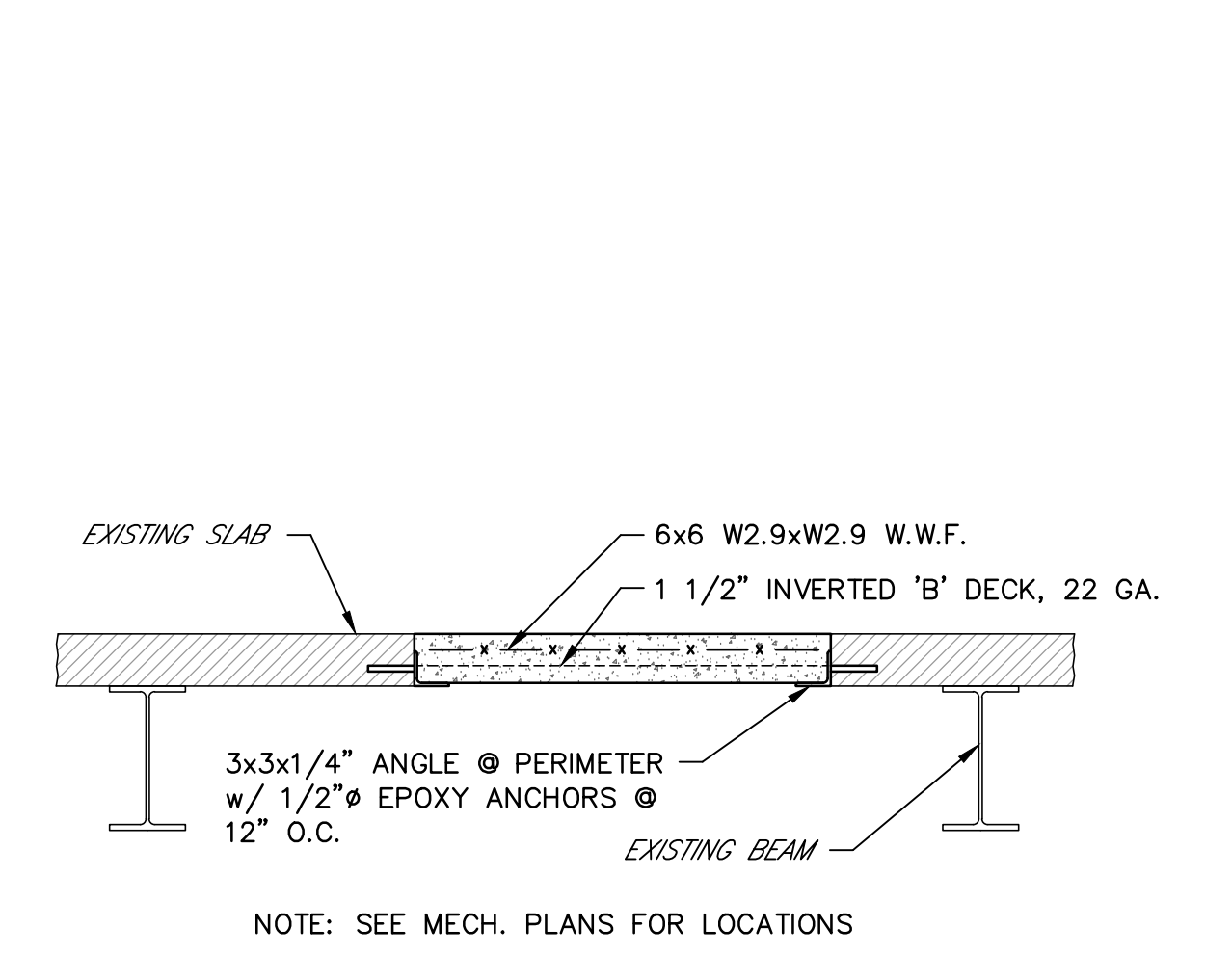
C S1.1 **MASONRY - INFILL (EXISTING WALL)**  
N.T.S.

**STRUCTURAL NOTES**

- GENERAL**
- 1) THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
  - 2) NOTES AND DIMENSIONS ON DRAWINGS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS.
  - 3) ALL WORK SHALL BE IN ACCORDANCE WITH THE MORE STRINGENT REQUIREMENTS OF THE MINIMUM STANDARDS LISTED IN THE GOVERNING CODE OR AS INDICATED HEREON. GOVERNING CODE SHALL BE I.B.C. 2012.
  - 4) COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS WITH REGARD TO DIMENSIONS, OPENINGS, LOCATION OF EQUIPMENT, ETC.
  - 5) THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION, INCLUDING ALL BRACING AND SHORING REQUIRED TO RESIST THE ACTUAL CONSTRUCTION LOADS.
  - 6) ASTM SPECIFICATIONS LISTED SHALL BE THE LATEST EDITION.
  - 7) DESIGN LIVE LOADS:  
ROOF LIVE LOAD 30 PSF NON-REDUCED  
ROOF LOAD BASED ON 40 PSF GROUND SNOW SLAB ON GRADE 125 PSF  
WIND LOAD BASED ON 115 MPH (MIN. 15 PSF) ELEVATED SLABS 80PSF

- CONCRETE**
- 1) ALL CONCRETE SHALL CONFORM WITH THE REQUIREMENTS OF THE A.C.I. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08).  
CONCRETE FOR FOOTINGS 3000 PSI  
CONCRETE FOR SLABS, WALLS, PIERS 4000 PSI
  - 2) CLEAR COVERAGE OVER OUTER REINFORCING BAR SHALL BE AS FOLLOWS:  
CONCRETE POURED DIRECTLY AGAINST EARTH 3 INCHES  
STRUCTURAL SLABS (TOP AND BOTTOM) 1 INCH  
FORMED CONCRETE WITH EARTH BACKFILL 2 INCHES  
BEAMS-CLEAR TO MAIN REINFORCING (AS NOTED) 2 INCHES  
COLUMNS-CLEAR TO MAIN REINFORCING (AS NOTED) 2 INCHES  
REBAR MUST BE SUPPORTED BY CHAIRS TO PREVENT DEFLECTION.
  - 3) CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE STRUCTURAL ENGINEER.
  - 4) PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE 1A IF CONCRETE IS IN CONTACT WITH SOIL OR SUBJECT TO FREEZING AND THAWING. TYPE 1 SHALL BE USED ELSEWHERE.
  - 5) AGGREGATE FOR CONCRETE SHALL CONFORM TO ALL THE REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH THE PERMISSION OF THE STRUCTURAL ENGINEER.
  - 6) GROUT SHALL BE PLACED USING LOW LIFT CONSTRUCTION; 4" MAX. FILL HEIGHT OR PRESSURE PUMPED FROM BOTTOM OF UNIT TO BE FILLED.- 8" MINIMUM SLUMP.
  - 7) MAX. SLAB CONTROL JOINT PATTERN SHALL NOT EXCEED 400 SF OF AREA.

- REINFORCING STEEL**
- 1) REINFORCING STEEL SHALL CONFORM TO ASTM DESIGNATION A-615 GRADE 60. TIES AND STIRRUPS MAY BE GRADE 40.
  - 2) ALL REINFORCING SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE 'BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE' (ACI LATEST APPROVED EDITION), AND THE 'MANUAL OF STANDARD PRACTICE FOR CONCRETE REINFORCEMENT' BY C.R.S.I.
  - 3) ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
  - 4) WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A-185. FABRIC TO BE SUPPLIED IN FLAT SHEETS ONLY.
  - 5) MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF WHICHEVER IS GREATER.
  - 6) DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME SIZE, GRADE, AND SPACING OR NUMBER AS THE VERTICAL REINFORCING, RESPECTIVELY.



D S1.1 **DETAIL - SLAB INFILL REINF.**  
N.T.S.

- MASONRY**
- 1) CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO ACI 530.08 AND THE NCMA SPECIFICATION.
  - 2) CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C90. USE OPEN END UNITS FOR BOND BEAM UNITS AT HORIZONTAL REINFORCING.
  - 3) CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
  - 4) MORTAR SHALL BE TYPE S AND SHALL ATTAIN A COMPRESSIVE STRENGTH OF 1800 P.S.I. AT 28 DAYS.
  - 5) GROUT SHALL ATTAIN A COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL MASONRY CELLS WITHOUT SEGREGATION. (SEE NOTE 6 UNDER CONCRETE)
  - 6) PROVIDE A MINIMUM OF 1/2 IN. GROUT BETWEEN MAIN REINFORCING BARS AND MASONRY UNITS. LOW LIFT CONSTRUCTION SHALL BE FOLLOWED WITH A MAXIMUM POUR HEIGHT OF 4 FEET.
  - 7) CELLS IN CONCRETE BLOCKS SHALL BE IN VERTICAL ALIGNMENT WITH THE FOOTING DOWELS PLACED TO MATCH THIS VERTICAL ALIGNMENT. FILL ALL CELLS SOLID BELOW FINISH FLOOR OR FINISH GRADE.
  - 8) HORIZONTAL JOINT REINFORCING SHALL CONSIST OF TRUSS REINFORCING, 9 GAGE AT 16 INCHES ON CENTER VERTICALLY. DURO-EYE (2 PIECE)
  - 9) PROVIDE CONTROL JOINTS AS SHOWN NOT TO EXCEED A MAXIMUM SPACING OF 24 FEET.

- STRUCTURAL STEEL**
- 1) STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (LATEST EDITION).
  - 2) ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A-992, GRADE 50 FOR W SHAPES AND ASTM A-36 FOR MISC. STRUCTURAL SHAPES UNLESS OTHERWISE NOTED.
  - 3) PIPE COLUMNS SHALL CONFORM TO ASTM DESIGNATION A-53 GRADE 'B'. ALL STEEL TUBES SHALL CONFORM TO ASTM DESIGNATION A-500 GRADE 'B' COLD FORMED TUBES WITH FY = 46 KSI.
  - 4) BEAM CONNECTIONS SHALL BE LONGEST PERMITTED BY BEAM WEB DEPTH. ALL BOLTS SHALL BE A325-N EXCEPT AS NOTED. ALL WELDS SHALL BE MADE WITH 70KSI ELECTRODES. ALL WELDS SHALL BE SHOP PAINTED, FIELD WELDS SHALL BE PAINTED TO MATCH.
  - 5) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BRACING FOR NEW AND EXISTING STRUCTURAL STEEL. THE FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
  - 6) BOLT HOLES SHALL BE 1/16 INCH LARGER DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNLESS OTHERWISE NOTED.
  - 7) ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE SHALL BE LEFT UNPAINTED. PRIMER SHALL BE USED ELSEWHERE. SEE SPECIFICATIONS.
  - 8) ALL WELDS SHALL BE IN CONFORMANCE WITH THE STRUCTURAL WELDING CODE (AWS D1.1) OF THE AMERICAN WELDING SOCIETY.
  - 9) ALL BOLTED CONNECTIONS ARE DESIGNED FOR THE BEARING-TYPE CONDITION WITH THREADS INCLUDED IN THE SHEAR PLANE. BOLTS SHALL BE TIGHTENED TO THE SNUG-TIGHT CONDITION.
  - 10) ALL NEW STEEL FRAMING MEMBERS EXPOSED TO THE WEATHER SHALL BE G90 HOT-DIPPED GALVANIZED. WELDED CONNECTIONS SHALL BE PAINTED WITH ZINC RICH PAINT.

- TIMBER NOTES**
- 1) TIMBER CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF 'MANUAL OF HOUSE FRAMING' AS PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION AND THE 'AMERICAN INSTITUTE OF TIMBER CONSTRUCTION' (LATEST EDITION).
  - 2) STRUCTURAL FRAMING MEMBERS AND LIGHT FRAMING MEMBERS SHALL BE SPF No.2.
  - 3) ALL TIMBER FRAMING SHALL BE TEMPORARILY BRACED UNTIL ALL CONNECTING MEMBERS HAVE BEEN ERECTED AND FASTENED IN PLACE.
  - 4) PSL BEAMS SHALL CONFORM WITH THE FOLLOWING MINIMUM DESIGN PROPERTY REQUIREMENTS:  
MODULUS OF ELASTICITY 2,000,000 PSI  
ALLOWABLE BENDING FIBER STRESS 2800 PSI  
HORIZONTAL SHEAR STRESS 285 PSI  
COMPRESSION STRESS PARALLEL TO GRAIN 2900 PSI

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RMA JOB# 14-006

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 5-6-2016

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FIRST FLOOR RENOVATIONS  
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TYPICAL STRUCTURAL NOTES & DETAILS

**S1.1**  
OF 1 SHEETS  
DATE: 08/15/14