

POST-INSTALLED ANCHOR NOTES

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED ON THESE DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING, AT A MINIMUM, THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE BUILDING CODE.

- TYPICAL POST-INSTALLED ANCHORS IN CONCRETE AND CMU SHALL COMPLY WITH THE LATEST OF THEIR RESPECTIVE ICC EVALUATION REPORTS.
- WHEN INSTALLING ANCHORS IN CONCRETE AND CMU, CONTRACTOR SHALL LOCATE EXISTING REINFORCING STEEL, CONDUITS, ETC. PRIOR TO DRILLING FOR ANCHORS. CONTRACTOR SHALL USE CARE AND CAUTION TO PREVENT DAMAGE TO EXISTING REINFORCING BARS.
- CONTRACTOR SHALL PROVIDE 1" MINIMUM CLEARANCE BETWEEN EDGES OF ANY HOLES FOR POST-INSTALLED ANCHORS AND EXISTING REINFORCING STEEL.
- CONTRACTOR SHALL PROVIDE INSPECTION AND TESTING AS REQUIRED PER THE "SPECIAL INSPECTIONS" SECTION OF THESE GENERAL STRUCTURAL NOTES.

MASONRY LAP SPlice LENGTH NOTES

- CONTRACTOR SHALL PROVIDE DEVELOPMENT AND REBAR SPlice LENGTHS SHOWN IN THE TABLES AS A MINIMUM UNLESS INDICATED OTHERWISE IN STRUCTURAL DETAILS OR NOTES.
- "SINGLE" INDICATES ONE BAR PER CELL. "DOUBLE" INDICATES TWO BARS PER CELL. SEE PLAN.

f'm = 1,500 psi - MASONRY LAP SPlice LENGTH (INCHES) TABLE (2003 IBC)					
BAR SIZE	CMU SIZE	8"		12"	
		SINGLE	DOUBLE	SINGLE	DOUBLE
#4	6	17	21	17	21
#5	8	32	50	32	50
#6	9	58	58	100	100

PRE-FABRICATED WOOD TRUSS NOTES

- DESIGN AND FABRICATION SHALL BE IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE PUBLICATION "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES", LATEST EDITION.
- PROVIDE ALL PERMANENT TRUSS BRACING INDICATED ON DRAWINGS OR SPECIFIED BY TRUSS MANUFACTURER. IN ADDITION, PROVIDE TEMPORARY BRACING AS INDICATED IN THE TRUSS PLATE INSTITUTE BOOKLET "BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS BWT-76".
- NO FIELD MODIFICATIONS OF TRUSSES ARE PERMITTED UNLESS FABRICATOR PROVIDES CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER (REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED).
- REFER TO "DEFERRED SUBMITTALS" FOR ADDITIONAL REQUIREMENTS.

PRE-FABRICATED WOOD ROOF TRUSSES - DESIGN CRITERIA TABLE

TOP CHORD	20 psf LIVE LOAD 10 psf DEAD LOAD
BOTTOM CHORD	10 psf DEAD LOAD
WIND UPLIFT	PER "DESIGN LOADS" ON THESE GENERAL NOTES
LOAD DURATION FACTOR	AS REQUIRED
TRUSS SPACING	PER PLAN
DEFLECTION LIMITS	L/240 MAXIMUM LIVE LOAD
CAMBER	75 PERCENT OF DEAD LOAD

WOOD FASTENER TYPES SCHEDULE		
NOTE: "SD" AND "SDS" SCREWS ARE MANUFACTURED BY SIMPSON STRONG-TIE.		
TYPE	DIAMETER	LENGTH
16d COMMON	0.162"	3 1/2"
16d SINKER	0.148"	3 1/4"
10d COMMON	0.148"	3"
8d COMMON	0.131"	2 1/2"
#9 SD SCREW	0.131"	1 1/2" OR 2 1/2"
#10 SD SCREW	0.161"	1 1/2" OR 2 1/2"
SDS SCREW	0.25"	VARIES 1 1/2"-8"

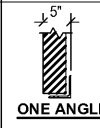
REINFORCED MASONRY NOTES

- MASONRY CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PORTIONS OF TMS 602, "SPECIFICATIONS FOR MASONRY STRUCTURES". CONCRETE MASONRY UNITS SHALL BE CLASSIFIED AS NORMAL WEIGHT DENSITY AND CONFORM TO ASTM C90. THE MASONRY ASSEMBLY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'm) = 2,000 psi.
- GROUT IN ACCORDANCE WITH ASTM C476 MAY BE FINE OR COARSE, SELF-CONSOLIDATING OR CONVENTIONAL (AT CONTRACTOR'S OPTION), AND SHALL BE PROPORTIONED TO ACHIEVE THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF MASONRY. GROUT SHALL HAVE A DRY DENSITY OF 135 +/- 3pcf. NORMAL WEIGHT AGGREGATES IN GROUT SHALL COMPLY WITH ASTM C404. MORTAR SHALL COMPLY WITH PROPORTION SPECIFICATION REQUIREMENTS OF ASTM C270.
- ALL MASONRY WALLS SHALL HAVE LADDER TYPE HORIZONTAL JOINT REINFORCING CONSISTING OF GALVANIZED EXTRA HEAVY 220 LADDER MESH BY HOHMANN & BARNARD, INC OR EQUAL. LOCATE AT 8"oc UNLESS NOTED OTHERWISE ON PLAN OR SECTIONS / CONTINUOUS HORIZONTAL BOND BEAMS WITH SIZE AND SPACING PER MASONRY WALL ELEVATIONS, PLUS 9ga. LADDER-TYPE HORIZONTAL JOINT REINFORCING @ 16"oc MAX. VERTICAL REINFORCEMENT IS PER FOUNDATION PLAN.
- SUPPLY VERTICAL REINFORCING IN MINIMUM LENGTHS EQUAL TO 4'-0" PLUS LAP SPlice LENGTH PER TABLE.
- WALL CONSTRUCTION LIFTS FOR REINFORCING BARS AND INSULATION FILL SHALL BE PER ACI 530.
- TYPE "S" MORTAR IS REQUIRED FOR ALL WALLS UNLESS NOTED OTHERWISE.
- ARCHITECTURAL PLANS FOR LOCATION AND DETAIL OF CONTROL JOINTS AND EXPANSION JOINTS. SEE TYPICAL CONTROL JOINT DETAIL FOR GUIDANCE.
- VERTICAL REINFORCING IS TO BE CONTINUOUS ABOVE LINTELS TO TOP OF WALL. WELD REBAR OR WHS PER SECTIONS TO TOP OF STEEL LINTEL, GROUT CELLS SOLID AROUND REINFORCING AS NOTED ON PLANS.
- REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DETAILS OF DOOR AND WINDOW OPENINGS FOR SPECIAL COURSING AND OTHER MASONRY DETAILS. THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS IS INTENDED TO DEFINE THE STRUCTURAL REQUIREMENTS ONLY.
- ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS SHALL BE GROUTED SOLID INTO POSITION WITH MINIMUM EDGE DISTANCE FROM ANCHOR TO EDGE OF GROUTED PORTION OF CMU IN ALL DIRECTIONS AS NOTED ON DRAWINGS.
- REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED ON DRAWINGS. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706.
- WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN (ONE HORIZONTAL IN 6 VERTICAL), OR 10 DEGREES. DOWEL MAY BE GROUTED INTO CELL IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCING, AS LONG AS THE CENTER-TO-CENTER SPACE BETWEEN THE WALL REINFORCING AND THE DOWEL DOES NOT EXCEED 8 INCHES. DOWELS SHALL NOT BE BENT INTO ALIGNMENT AFTER CONCRETE HAS BEEN CAST.
- SPliced REINFORCING SHALL BE LAPPED ACCORDING TO "MASONRY LAP SPlice LENGTH" TABLE. SPliced BARS SHALL BE WIRED TOGETHER. CONTRACTOR MAY OPT TO STAGGER SPlices.
- VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF THE REINFORCING OR 10'-0"
- REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE AND INSPECTED BEFORE GROUTING STARTS.
- VERTICAL GROUTING MAY BE EITHER "LOW LIFT" OR "HIGH LIFT" AT THE CONTRACTOR'S OPTION.
- VERTICAL CELLS THAT WILL BE GROUTED SHALL HAVE VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSERVED CELL AREA NOT LESS THAN 2"x3".
- GROUTING OF MASONRY BEAMS OVER OPENINGS SHALL BE DONE IN ONE CONTINUOUS OPERATION.
- VERTICAL REINFORCING BARS SHALL MAINTAIN MINIMUM CLEARANCES AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS:
 - INSIDE FACE OF MASONRY = 3/4"
 - ADJACENT BARS NOT SPliced = 1" OR 1 BAR DIAMETER, WHICHEVER IS GREATER.
- INSULATION INSERTS ARE NOT PERMITTED IN GROUTED CELLS.
- PRISM TESTS IN ACCORDANCE WITH ASTM C1314 AND ASTM C140 SHALL BE PERFORMED WITH TEST REPORTS SENT TO ARCHITECT AND ENGINEER FOR RECORD. REFER TO SPECIAL INSPECTIONS TABLE ITEM "EVALUATION OF STRENGTH" FOR ADDITIONAL INFORMATION.

WOOD FRAMING NOTES

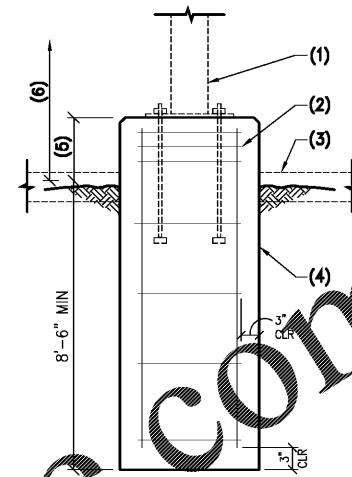
- WOOD FRAMING SHALL CONFORM TO THE "LUMBER TABLE" UNLESS NOTED OTHERWISE.
- FOR STRUCTURAL GLUE-LAMINATED TIMBER MEMBERS, AN AITC CERTIFICATION OF CONFORMANCE ISSUED BY A CURRENT, ICC-APPROVED QUALITY CONTROL AGENCY SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
- FOR WOOD FASTENING REQUIREMENTS, REFER TO TABLE 2304.9.1 FOR IBC 2012 AND OLDER, OR TABLE 2304.10.1 FOR IBC 2015 AND NEWER.
- ALL NAILS SHALL BE GALVANIZED COMMON WIRE NAILS UNLESS OTHERWISE NOTED. SEE "WOOD FASTENER TYPES SCHEDULE" FOR MINIMUM FASTENER DIMENSIONS. NAILS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316). WHEN REQUIRED TO PREVENT SPLITTING, PRE-DRILL FOR NAILS WITH 1/8" DIAMETER DRILL BIT.
- BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 AND ANSI/ASME STANDARD B18.2.1-1981, AND SHALL BE GALVANIZED. BOLTS AND LAG SCREWS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316). STANDARD WASHERS SHALL BE PROVIDED UNDER HEAD AND NUT OF ALL BOLTS IN WOOD FRAMING. BOLT THREADS SHALL NOT BEAR ON WOOD. DRILLED HOLES FOR BOLTS SHALL BE 1/16" LARGER IN DIAMETER THAN BOLT.
- ALL BOLTS SHALL BE RETIGHTENED IMMEDIATELY PRIOR TO CLOSING IN FRAMING. METAL FRAMING CONNECTORS SHALL BE "SIMPSON" BRAND OR ENGINEERED APPROVED EQUIVALENT AND SHALL BE GALVANIZED. METAL FRAMING CONNECTORS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A123) OR STAINLESS STEEL (TYPE 316L). METAL FRAMING CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST PUBLISHED INSTALLATION INSTRUCTIONS USING THE LARGER SIZE AND QUANTITY OF FASTENERS INDICATED, UNLESS OTHERWISE NOTED.
- WASHERS USED IN SHEAR WALLS AND ANCHOR HOLD DOWNS SHALL BE SQUARE WASHERS OF SIZE AND THICKNESS INDICATED IN "SHEAR WALL SHEATHING AND FASTENER SCHEDULE". ROUND WASHERS ARE NOT ACCEPTABLE FOR SHEAR WALL APPLICATIONS.
- ALL BOLTS, WASHERS, NAILS, METAL FRAMING CONNECTORS AND OTHER FASTENERS IN CONTACT WITH PRESERVATIVE OR FIRE RETARDANT TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316).
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT WOOD USED FOR STRUCTURAL PURPOSES IS KEPT AS DRY AS POSSIBLE BEFORE AND DURING CONSTRUCTION. A MAXIMUM MOISTURE CONTENT SHALL BE MAINTAINED UNTIL THE BUILDING ENVELOPE IS CLOSED IN AN AIR-WATER-ROOFED AS FOLLOWS:
 - KILN-DRIED LUMBER: 19%
 - TIMBERS: 19%
 - GLULAM BEAMS: 16%
 - LVL & PSL: 12%
 - PLYWOOD: 8%
 - OSB: 8%

LUMBER TABLE		
MEMBER	SPECIES	GRADE
PLATES, STRIPPING, MISC CONCEALED FRAMING, BLKG, & FIRE STOPPING	SOUTHERN PINE	NO 2
SILLS ON CONCRETE OR MASONRY	PRESSURE TREATED SOUTHERN PINE	NO 2
2x6	SOUTHERN PINE	NO 2
2x8 WALL STUDS	SOUTHERN PINE	SELECT STRUCTURAL
ALL 4x DIMENSIONED LUMBER	SOUTHERN PINE	NO 2
TIMBER 5x5 AND LARGER	SOUTHERN PINE	NO 1
PARALLEL STRAND LUMBER (PSL)	PER MANUFACTURER	2.0E
ENGINEERED WOOD RIM BOARD	PER MANUFACTURER	APA RATED RIM BOARD PLUS
LAMINATED VENEER LUMBER (LVL) HEADERS, BEAMS, STRINGERS AND POSTS	PER MANUFACTURER	ICC ESR-1254, GRADE 1.9E; OR ICC ESR-1307, GRADE 1.9E; OR ICC ESR-1618, GRADE 1.9E; OR ICC ESR-1994, GRADE 2.0E
SHEAR WALL SHEATHING	PER MANUFACTURER	APA RATED SHEATHING, EXPOSURE 1 (PS 1 OR PS 2)
ROOF SHEATHING	PER MANUFACTURER	APA RATED SHEATHING, EXPOSURE 1 (PS 1 OR PS 2)

STEEL LINTEL SCHEDULE		KEY
FOR LINTELS NOT SHOWN IN THE DOOR OR WINDOW SCHEDULE OR ON THE ARCHITECT'S DRAWINGS, USE THE ANGLE SIZE SHOWN IN THE TABLE BELOW.		 ONE ANGLE
OPENING SIZE	BRICK VENEER ANGLE SIZE	
UP TO 1'-0"	N/A	
1'-1" TO 3'-4"	L 4"x4"x1/4"	
3'-5" TO 4'-8"	L 4"x4"x1/4"	
4'-9" TO 6'-8"	L 4"x4"x1/4"	
6'-9" TO 10'-0"	L 6"x4"x3/8" LLV	
10'-0" TO 12'-0"	L 6"x4"x3/4" LLV	

NOTES

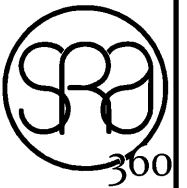
- ALL ANGLES MUST HAVE 8" OF BEARING AT EACH END.
- THIS SCHEDULE DOES NOT INCLUDE EFFECT OF ROOF FRAMING LOADS.
- ALL ANGLES TO BE GALVANIZED.



LIGHT POLE FOOTING
NOT TO SCALE

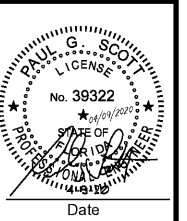
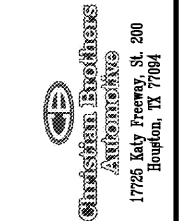
NOTES:

- LIGHT POLE AND BASE CONNECTION BY OTHERS.
- 3 #3 TIES IN TOP 5".
- FINISHED GRADE OR CONCRETE SLAB AS OCCURS.
- 24" DIA. CONCRETE CAISSON TYPE FOOTING WITH (6) #6 VERTICALS AND #3 TIES AT 8" O.C.
- SEE ARCH'D DRAWINGS - 30" MAX ABOVE FINISHED GRADE.
- TOP OF LIGHT POLE SHALL NOT BE GREATER THAN 23'-0" MAX ABOVE FINISHED GRADE.



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Revisions

11/13/19 - Prototype Update
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Project No. 19-097

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GENERAL STRUCTURAL NOTES

Drawing No.

S-2
10RHS-11-2019

PROJECT NUMBER	19-1252	PROJECT MANAGER	RAD
PROJECT ENGINEER	RAD	PROJECT DRAFTER	JSB

THESE DRAWINGS/CALCULATIONS ARE CONSIDERED PRELIMINARY - NOT FOR CONSTRUCTION OR RECORDING UNLESS THE STRUCTURAL ENGINEER OF RECORD'S SEAL IS AFFIXED WITH WRITTEN SIGNATURE.

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