

# STRUCTURAL ABBREVIATIONS

●	AT	ICC	INTERNATIONAL CODE COUNCIL
∠	ANGLE	ID	INSIDE DIAMETER
ABV	ABOVE	IN (*)	INCH
AB	ANCHOR BOLT	INTR	INTERIOR
AC	ASPHALTIC CONCRETE	INFO	INFORMATION
ACI	AMERICAN CONCRETE INSTITUTE	JST	JOIST
ADDNL	ADDITIONAL	JT	JOINT
ADJ	ADJACENT	LL	LIVE LOAD
AFF	ABOVE FINISH FLOOR	LLH	LONG LEG HORIZONTAL
AGG	AGGREGATE	LLV	LONG LEG VERTICAL
ASC	AMERICAN INSTITUTE FOR STEEL CONSTRUCTION	LG	LONG
ALT	ALTERNATE	LGTH	LENGTH
ALUM	ALUMINUM	LONG	LONGITUDINAL
APA	THE ENGINEERED WOOD ASSOCIATION	LS	LAG SCREW
APPROX	APPROXIMATE	LSTL	LAMINATED STRAND LUMBER
ARCH	ARCHITECT/ARCHITECTURAL	LT WT	LIGHT WEIGHT
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS	LVL	LAMINATED VENEER LUMBER
AWS	AMERICAN WELDING SOCIETY	LWC	LIGHT WEIGHT CONCRETE
BEV	BEVELED	MAX	MAXIMUM
BLW	BELOW	MB	MACHINE BOLT
BLDG	BUILDING	MCJ	MASONRY CONTROL JOINT
BLK	BLOCK	MECH	MECHANICAL
BLK/G	BLOCKING	MEP	MECHANICAL, ELECTRICAL, PLUMBING
BM	BEAM	MEZZ	MEZZANINE
BN	BOUNDARY NAILING/BOUNDARY FASTENING	MFR	MANUFACTURER
BOC	BOTTOM OF CONCRETE	MIN	MINIMUM
BOF	BOTTOM OF FOOTING	MISC	MISCELLANEOUS
BOTT	BOTTOM	MLB	MICROLAM BEAM
BRBF	BRACING-RESTRAINED BRACED FRAME	MRD	METAL ROOF DECK
BRGC	BRACING	MTL	METAL
BRG	BEARING	(N)	NEW
BRG P	BEARING PLATE	N/A	NOT APPLICABLE
BTW	BETWEEN	NC	NOT IN CONTRACT
BYD	BEYOND	NO. (#)	NUMBER OR POUNDS
C	CAMBER	NOM	NOMINAL
CBC	CALIFORNIA BUILDING CODE	NS&FS	NEARSD & FARSIDE
CCR	CALIFORNIA CODE OF REGULATIONS	NSG	NON SHRINK GROUT
CC	CENTER TO CENTER	NTS	NOT TO SCALE
CE	CIVIL ENGINEER	NWC	NORMAL WEIGHT CONCRETE
CG	CENTER OF GRAVITY	OC	ON CENTER
CIP	CAST IN PLACE	OD	OUTSIDE DIAMETER
CJ	CONSTRUCTION JOINT	OSB	ORIENTED STRAND BOARD
CL	COMPLETE JOINT PENETRATION	OSH	OFFICE OF STATEWIDE HEALTH
CLG	CEILING	PLWD	PLYWOOD
C	CENTERLINE	OWJ	OPEN WEB JOIST
CLR	CLEAR	OPG	OPENING
CMU	CONCRETE MASONRY UNIT	OPP	OPPOSITE
COL	COLUMN	OPH	OPPOSITE HAND
CONC	CONCRETE	PCC	PRECAST CONCRETE
CONN	CONNECTION	PC	PIPE COLUMN
CONSTR	CONSTRUCTION	PCF	PER CUBIC FOOT
CONT	CONTINUOUS	PERP	PERPENDICULAR
COORD	COORDINATE/COORDINATION	PJP	PARTIAL JOINT PENETRATION
CP	COMPLETE PENETRATION	PL	PLATE
CRG	COLD ROLLED CHANNEL	PLWD	PLYWOOD
CTR	CENTER	PN	PERIMETER NAILING
CTRD	CENTERED	PP	PARTIAL PENETRATION
DBL	DOUBLE	PSI	POUNDS PER SQUARE INCH
DEG	DEGREE	PSF	PER SQUARE FOOT
DEMO	DEMOLITION	PSL	PARALLEL STRAND LUMBER
DEPR	DEPRESSED	PTDF	PRESURE TREATED DOUG FIR
DF	DIAGONALS FIR	PT	POINT
DIA (Ø)	DIAMETER	R	RADIUS
DIAG	DIAGONAL	REINF	REINFORCING/REINFORCEMENT
DL	DIMENSION	REQ	REQUIRED
DM	DEAD LOAD	RJ	ROOF JOIST
DLT	DEEP LEG TRACK	RR	ROOF RAFTER
DN	DOWN	RDR	SEE ARCHITECTURAL DRAWINGS
DO	Duplicate ORDER	SAD	SLIP CRITICAL
DSA	DIVISION OF THE STATE ARCHITECT	SC	SPECIAL CONCENTRIC BRACED FRAME
DTL	DETAIL	SCBF	SCHEDULE
DWG	DRAWING	SCHED	SCHEDULE
(E)	EXISTING CONDITION	SDST	SELF-DRILLING SELF-TAPPING
EA	EACH	SE	STRUCTURAL ENGINEER
EE	EACH END	SEIS	SEISMIC JOINT
EF	EACH FACE	SHT	SHEET
EJ	EXPANSION JOINT	SHTG	SHEATHING
ELEV	ELEVATION	SHRWL	SHEARWALL
EN	EDGE NAILING/EDGE FASTENING	SIM	SHIM
EOS	EDGE OF SLAB	SJ	SHRINKAGE JOINT
EOR	ENGINEER OF RECORD	SLH	SHORT LEG HORIZONTAL
EQAL	EQUAL	SLRS	SEISMIC LOAD RESISTING SYSTEM
ES	EACH SIDE	SLV	SHORT LEG VERTICAL
EW	EACH WAY	SMT	SHEET METAL
EB	EXPANSION BOLT	SMS	SHEET METAL SCREWS
EQUIP	EQUIPMENT	SLG	SLAB ON GRADE
EXTR	EXTERIOR	SP	STRUCTURAL PANELING
FAB	FABRICATE	SPCG	SPACING
f'c	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE	SPEC	SPECIFICATION
FD	FLOOR DRAIN	SQ	SQUARE
FF	FINISH FLOOR	SS	STAINLESS STEEL
FFE	FINISH FLOOR ELEVATION	STAG	STAGGER
FG	FINISH GRADE	STD	STANDARD
FHWS	FLAT HEAD WOOD SCREW	STIFF	STIFFENER
FJ	FLOOR JOIST	STL	STEEL
FIN	FINISH	STRUC	STRUCTURAL
FLG	FLANGE	SYM	SYMMETRICAL
FLR	FLOOR	T24	TITLE 24 CALIFORNIA CODE
f'm	MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF MASONRY	t	THIRD
FN	FIELD NAILING/FIELD FASTENING	THK	THICK/THICKNESS
FND	FOUNDATION	TN	TOE NAIL
FOC	FACE OF CONCRETE	T.O.	TOP OF
FOM	FACE OF MASONRY	TOC	TOP OF CONCRETE
FOS	FACE OF STUD	TOP	TOP OF FOOTING/
FRMG	FRAMING	TOP	TOP OF FRAMING
FRP	FIBER REINFORCED POLYMER	TOS	TOP OF STEEL
FT	FOOT/FEET	TOW	TOP OF WALL
FTG	FOOTING	TRAN	TRANSVERSE
Fy	SPECIFIED YIELD STRENGTH OF REINFORCING, PSI OR SPECIFIED MINIMUM YIELD STRESS OF STEEL, KS	TS	(SEE HSS)
GA	GALVEANIZED	TYP	TYPICAL
GALV	GALVANIZED	TOP & BOTTOM	TOP & BOTTOM
GL	GLUE LAMINATED LUMBER	T&G	TONGUE & GROOVE
GRD	GRADE	UBC	UNIFORM BUILDING CODE
GT	GROUT	UNO	UNLESS NOTED OTHERWISE
GWB	GYPSSUM WALLBOARD	URM	UNREINFORCED MASONRY
HC	HANDICAP	VERT	VERTICAL
HD	HOLDOWN	VF	VERIFY IN FIELD
HDL	HOLD-DIPPED GALVANIZED	W/	WITH
HDR	HEADER	W/O	WITHOUT
HK	HOOK	WDW	WINDOW
HORIZ	HORIZONTAL	WF	WIDE FLANGE
HT	HEIGHT	WP	WORK POINT
HST	HIGH STRENGTH BOLT (A325)	WRT	WITH RESPECT TO
HSS	HOLLOW STRUCTURAL SECTION	WS	WOOD SCREW
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS	WT	WEIGHT/STRUCTURAL TEE
		WWF	WELDED WIRE FABRIC

# CONCRETE:

- CONCRETE CONSTRUCTION SHALL CONFORM TO THE CODE PER GENERAL NOTES.
- CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ASTM C94 AND ACI STANDARD 304. IN ADDITION, MAXIMUM FREE FALL OF CONCRETE SHALL BE 4'-0".
- ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY SUITABLE MEANS DURING PLACEMENT AND SHALL BE THOROUGHLY WORKED AROUND REINFORCEMENT AND EMBEDDED FIXTURES AND INTO CORNERS OF FORMS.
- THE MINIMUM 28 DAY STRENGTH SHALL BE PER MIX DESIGN SCHEDULE.
- CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR II.
- CONCRETE AGGREGATES:
  - NATURAL SAND AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
  - MINERAL ADMIXTURES SHALL COMPLY WITH ASTM C618 CLASS F.
  - LIQUID ADMIXTURES SHALL COMPLY WITH THE FOLLOWING:
    - WATER REDUCERS . . . . . ASTM C494 TYPE A
    - MID-RANGE WATER REDUCERS . . . . . ASTM C494 TYPE A & F
    - NON-CHLORIDE ACCELERATORS . . . . . ASTM C494 TYPE C OR C & E
    - RETARDING ADMIXTURES . . . . . ASTM C494 TYPE B OR B & D
- GENERAL:
  - NO PIPES OR DUCT SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
  - REFER TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS FOR ALL MOULDS, GROOVES, ORNAMENTS, CLIPS, ETC. TO BE CAST IN CONCRETE.
- ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CODE SECTION 1906.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR REVIEW BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.
- REMOVE ALL DEBRIS AND EXCESS WATER FROM THE FORMS BEFORE PLACING ANY CONCRETE.
- REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED AND FREE OF EXCESSIVE SCALE, RUST, DIRT, GREASE, OIL OR ANY OTHER SUBSTANCES THAT WILL IMPAIR BOND WITH CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
- NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE CONCRETED.
- CONTRACTOR SHALL PREPARE AND SUBMIT CONCRETE MIX DESIGNS TO THE ARCHITECT/ENGINEER OF RECORD FOR REVIEW PRIOR TO PLACEMENT OF ANY CONCRETE. CONCRETE MIX DESIGNS SHALL BE PER CBC SECTION 1905. CALCIUM CHLORIDE OR ADMIXTURES WHICH ADD CHLORIDES ARE NOT PERMITTED.
- NOTIFY THE ENGINEER OF RECORD (AND BUILDING OFFICIAL WHEN REQUIRED) 2 BUSINESS DAYS PRIOR TO PLACING CONCRETE.
- CAST-IN-PLACE CONCRETE (NON-PRESTRESSED). THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
  - CONCRETE EXPOSED TO EARTH OR WEATHER:
    - NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER . . . . . 1 1/2"
- ALL BARS SHALL HAVE A CLASS B MINIMUM SPLICE LAP UNLESS OTHERWISE NOTED. SEE REINFORCEMENT LAP SPLICES TABLE.
  - SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. UNO.
  - DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH THE SAME SIZE REINFORCING. UNO.
  - SPLICE CONTINUOUS BARS IN GRADE BEAMS, ETC. AS FOLLOWS: TOP BARS AT MID-SPAN, BOTTOM BARS AT CENTERLINE SUPPORT UNO.
- REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH ACI 315. SEE REINFORCING STEEL NOTES FOR ADDITIONAL REQUIREMENTS.
- FINAL PRODUCT AS INDICATED ON DRAWINGS SHALL COMPLY WITH THE FOLLOWING:
  - ALL CONCRETE SHALL HAVE A "CLASS B" FINISH PER ACI 347 WITH GRADUAL IRREGULARITIES LIMITED TO 1/4" IN 5'-0" AS MEASURED WITH A STRAIGHT EDGE.
  - SURFACE IRREGULARITIES ATTRIBUTABLE TO PLACEMENT AND CONSOLIDATION DEFICIENCIES AS DEFINED IN ACI 309.2R (E.G., BUG HOLES, HONEYCOMB, ETC.) WILL BE REVIEWED BY THE ARCHITECT AND ENGINEER. UNSATISFACTORY WORK SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  - GRADUAL SURFACE IRREGULARITIES SHALL NOT BE CUMULATIVE.

MIX DESIGN SCHEDULE							
TYPE	USE CLASS	STRENGTH $f'c$ MIN @ 28 DAYS (PSI)	CONCRETE WEIGHT (PCF)	MAX AGGREGATE SIZE (IN)	MAX $(S_5)$ SLUMP (IN)	MAX WATER TO CEMENT RATIO (%)	FLY ASH (%)
A	SLAB ON GRADE	4000	150	1"±1/4"	4"±1"	.40	15% MIN 25% MAX
B	FOUNDATIONS	3500	150	1"±1/4"	4"±1"	.50	15% MIN 25% MAX

- FOOTNOTES:**
- ADD WATER REDUCING ADMIXTURES PER SPECIFICATIONS FOR PLACING.
  - FOR HOT WEATHER CONCRETING REFER TO ACI 305R.
  - FOR COLD WEATHER CONCRETING REFER TO ACI 306R.
  - OTHER ADMIXTURES SHALL BE REVIEWED BY THE ENGINEER OF RECORD AND TESTING LABORATORY UPON CONCRETE MIX DESIGN SUBMITTAL.
  - SLUMPS SHALL NOT EXCEED 8"±1/2" WHEN USING MID-RANGE WATER REDUCERS.
  - ADDITIONAL WATER SHALL NOT BE ADDED TO THE CONCRETE UNO THE TRUCK LEAVES THE BATCH PLANT.
  - MIX DESIGN SHALL NOT BE PROPORTIONED WITHOUT FIELD EXPERIENCE OR TRIAL MIXTURES PER ACI 318, SECTION 5.4 WHEN USING MORE THAN 15% FLY ASH REPLACEMENT BY WEIGHT.

# REINFORCEMENT LAP SPLICE LENGTHS (IN INCHES)

$f'c = 3500$ PSI AT 28 DAYS										
SPLICE CLASS	REINFORCEMENT LOCATION	REINFORCEMENT SIZE (GR60, UNO)								
		#3	#4	#5	#6	#7	#8	#9	#10	#11
B	TOP	26	34	43	51	75	86	96	107	118
	OTHER	20	26	33	40	58	66	74	82	91

- FOOTNOTES:**
- TABLE ABOVE BASED ON UNCOATED REINFORCING.
  - TOP REINFORCING IN HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF FRESH CONCRETE CAST BELOW IT.
  - FOR BARS WITH COVER LESS THAN 1 BAR DIAMETER OR WITH CLEAR SPACING LESS THAN 2 BAR DIAMETERS, INCREASE LAP SPLICE BY 50%.
  - FOR LIGHTWEIGHT AGGREGATE CONCRETE, (WT = 110 PCF) INCREASE LAP SPLICE BY 30%.
  - ALL LAP SPLICES SHALL BE CLASS B, UNO

# DESIGN CRITERIA:

**OCCUPANCY**  
CATEGORY . . . . . III

**LIVE LOADS**  
ROOF . . . . . 20.0 PSF (REDUCIBLE) TYP  
FLOOR . . . . . 85.0 PSF (REDUCIBLE) TYP UNO  
PARTITION . . . . . 15.0 PSF TYP  
CORRIDORS . . . . . 100.0 PSF (REDUCIBLE) TYP  
STORAGE . . . . . 125 PSF TYP

**SNOW LOADS**  
 $P_g = 100$  PSF  
 $P_f = 83.2$  PSF  
 $C_e = 0.9$   
 $I = 1.1$   
 $C_t = 1.2$

**LATERAL LOADS**  
**WIND**  
EXPOSURE . . . . . C  
WIND SPEED . . . . . 85 MPH (3 SEC GUST)  
IMPORTANCE FACTOR I . . . . . 1.15  
INTERNAL PRESSURE COEFFICIENT . . . . .  $C_{pi} = ±0.18$  (ENCLOSED)

COMPONENTS & CLADDING (DEFERRED SUBMITTALS - CONTRACTOR RESPONSIBLE FOR DESIGN)  
WINDOW SYSTEMS . . . . . 27.8 PSF  
ROOF . . . . . 48.9 PSF  
CLADDING . . . . . 27.8 PSF

**SEISMIC**  
V = EQUIVALENT LATERAL FORCE PROCEDURE BASE SHEAR (STRENGTH DESIGN)  
 $V = C_w W = 0.192W$        $F_p = 0.4 \frac{S_{DS} C_p}{R/I} (1+2 z/h)W = 0.336W$   
 $C_s = \frac{S_{DS}}{(R/I)} = 0.192$

BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT-FRAMED WALLS SHEATHED  
R = 6.5      SITE CLASS = D  
I = 1.25       $S_a = 1.499$        $F_a = 1.0$        $S_{DS} = 0.999$        $C_p = 1.0$       h = 16  
 $\Omega_o = 3.5$        $S_1 = 0.543$        $F_v = 1.5$        $S_{D1} = 0.543$        $R_p = 2.5$       z = 29  
 $\rho = 1.3$   
 $C_d = 4$       SEISMIC DESIGN CATEGORY = D

# INSPECTION NOTES:

- GENERAL:**  
IN ADDITION TO THE INSPECTIONS REQUIRED BY SECTION 110 OF THE 2010 CBC, THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM SPECIAL INSPECTIONS & TESTS AS INDICATED ON THE STATEMENT OF SPECIAL INSPECTIONS.
- INSPECTORS: ALL TESTS AND INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AGENCY WHICH IS IN THE EMPLOYMENT OF THE OWNER.
  - ALL SPECIAL INSPECTION & TESTING AGENCIES SHALL BE QUALIFIED PER ASTM E329 AND APPROVED BY THE BUILDING DEPARTMENT.
  - PROVIDE INSPECTION REPORTS TO BUILDING DEPARTMENT, OWNER, ARCHITECT AND ENGINEER WITHIN TWO WEEKS OF PERFORMANCE INSPECTION OR TEST.
  - REFER TO CHAPTER 17 OF THE CODE FOR OTHER REQUIRED SPECIAL INSPECTIONS AND TESTS NOT LISTED.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THE TESTS AND INSPECTIONS ARE PERFORMED. JOB SITE VISITS BY THE STRUCTURAL ENGINEER DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS.
  - WHERE THE CONTRACTOR CHOOSES TO USE AN APPROVED ALTERNATIVE MEANS FOR FASTENING OR ANCHORING MATERIALS THAT REQUIRE SPECIAL FIELD INSPECTION, SUCH AS FIELD WELDING, ADHESIVE OR EXPANSION ANCHORS, ETC. ALL ADDITIONAL SPECIAL INSPECTION AND TESTING COSTS SHALL BE PAID BY THE OWNER AND DEDUCTED FROM THE CONTRACT AMOUNT.

# FOUNDATIONS:

- FOUNDATION DESIGN IS BASED ON SOIL STRATA THAT IS UNDISTURBED, NON-ORGANIC NATIVE SOIL, CLASS 5 AS PER CBC CHAPTER 18 AND TABLE 1804.2, WITH A BEARING CAPACITY OF 1500 PSF. FOUNDATIONS SHALL BEAR ON FIRM FOUNDATION SOIL STRATA AS APPROVED BY THE BUILDING OFFICIAL OF JURISDICTION. EXPANSIVE, ORGANIC, LOOSE OR SOFT SOILS SHALL NOT BE UTILIZED FOR SUPPORT OF FOOTINGS OR SLABS ON GRADE. THE ENGINEER IS NOT RESPONSIBLE FOR SETTLEMENT DUE TO SOFT SOILS OR EFFECTS DUE TO EXPANSIVE SOILS. IT IS THE OWNER'S RESPONSIBILITY TO INSURE COMPLIANCE WITH THESE REQUIREMENTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SHORE AND BRACE AS REQUIRED. SEE SAFETY NOTES FOR ADDITIONAL INFORMATION.
- ALL FOUNDATIONS ARE SHOWN AND DIMENSIONED AS BEING FORMED. FOUNDATIONS MAY BE PLACED IN NEAT EXCAVATIONS PROVIDED FOOTINGS ARE INCREASED 2" IN WIDTH, SEE TYPICAL UNFORMED FOOTING DETAIL.
- EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS AND LOOSE SOIL. STANDING WATER SHALL BE REMOVED PRIOR TO CONCRETE PLACEMENT.
- BOTTOMS OF ALL FOUNDATIONS SHALL BE LEVEL. CHANGES IN BOTTOM OF FOUNDATION ELEVATION SHALL BE MADE ACCORDING TO STEPPED FOOTING DETAILS.
- FOOTINGS SHALL BE CENTERED UNDER WALLS AND/OR COLUMNS UNLESS OTHERWISE INDICATED ON DRAWINGS.
- CONTRACTOR SHALL CHECK FOOTING FORMS TO VERIFY THAT THEY ARE SQUARE & PLUMB. THE CONTRACTOR SHALL ALSO VERIFY THAT ALL INSERTS & EMBEDS ARE IN THEIR CORRECT LOCATION & ORIENTATION PRIOR TO PLACING CONCRETE.
- NOTIFY THE STRUCTURAL ENGINEER 48 HOURS IN ADVANCE OF PLACING CONCRETE.

# REINFORCING STEEL

- REINFORCING SHALL CONFORM TO ASTM A615 - GRADE 60 UNO.
- NO REINFORCING BARS ARE TO BE WELDED UNLESS SPECIFICALLY DETAILED IN CONTRACT DOCUMENTS. ALL BARS SO DETAILED TO BE WELDED SHALL BE ASTM A706 BARS.
- ALL REBAR TO BE WELDED SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED TESTING LABORATORY. CONTRACTOR MUST FURNISH TO THE LABORATORY MILL CERTIFICATES SHOWING CHEMICAL ANALYSIS. ALL PREHEATING AND WELDING SHALL BE DONE BY WELDERS CERTIFIED TO WELD REINFORCING BARS IN ACCORDANCE WITH AWS D1.4-05 STANDARDS.
- E80xx ELECTRODE SHALL BE USED FOR ALL REBAR WELDING.
- TACK WELDING TO REBAR IS STRICTLY PROHIBITED.
- WIRE FABRIC SHALL CONFORM TO ASTM A185. WELDED WIRE FABRIC SHALL BE LAP SPLICED TWO SQUARES MIN EACH DIRECTION.
- REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. OBTAIN APPROVAL OF ALL AFFECTED TRADES PRIOR TO PLACING CONCRETE.
- DRILL THROUGH STEEL COLUMNS AND BEAMS TO PASS CONTINUOUS REINFORCING (1" DIAMETER MAXIMUM) UNO.
- SEE CONCRETE NOTES AS APPLICABLE FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL PROVIDE AN ALLOWANCE OF 2% OF THE BID FOR ALL REINFORCING STEEL TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. UNUSED AMOUNT TO REVERT TO THE OWNER UPON COMPLETION OF THE JOB.

# GENERAL NOTES:

- ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION. IF DISCREPANCIES ARE NOT BROUGHT TO THE ARCHITECT'S ATTENTION IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
- TYPICAL NOTES AND DETAILS SHALL APPLY UNLESS OTHERWISE SHOWN OR NOTED ON DRAWINGS.
- DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITION.
- ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE 2010 CALIFORNIA BUILDING CODE, CCR, TITLE 24, PART 2, VOLUME 2 WITH LATEST REVISIONS REFERRED TO HEREIN AS "THE CODE", AND OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK. IF CONFLICTS OCCUR BETWEEN DRAWINGS AND SPECIFICATIONS, THE MOST EXPENSIVE MATERIALS OR METHODS SHALL PREVAIL (FOR BIDDING). STRUCTURAL ENGINEER SHALL BE NOTIFIED OF CONFLICTS AND THAT PORTION OF WORK SHOULD NOT PROCEED UNTIL CONFLICT IS RESOLVED.
- THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
- ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
- CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
- HEAVY EQUIPMENT, CRANES AND MATERIAL STOCKPILES SHALL NOT BE LOCATED ON OR ADJACENT TO SHORING.
- SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE, OR DETAILS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER AND APPROVED BY THE APPROPRIATE AGENCY. FOR A SUBSTITUTION TO BE REVIEWED THE CONTRACTOR SHALL AGREE & COMPLY WITH THE FOLLOWING:
  - THE CONTRACTOR SHALL BE BILLED ON A TIME AND MATERIALS BASIS FOR THE REVIEW OF THE SUBSTITUTION WITH NO GUARANTEE OF APPROVAL.
  - VERIFY THAT THE SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.
  - THE CONTRACTOR SHALL ALSO PAY FOR CHANGES TO THE BUILDING DESIGN, WHICH INCLUDES BUT IS NOT LIMITED TO; ENGINEERING DESIGN, DETAILING, APPROVAL AGENCY PROCESS AND CONSTRUCTION COSTS CAUSED BY THE REQUESTED SUBSTITUTION.
  - THE PROPOSED SUBSTITUTION IS TO HAVE NO ADVERSE AFFECT ON OTHER TRADES, THE CONSTRUCTION SCHEDULE OR THE SPECIFIED WARRANTY REQUIREMENTS.
- NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN ADVANCE OR SHOWN ON THESE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. DIMENSIONS AND ELEVATIONS MUST BE VERIFIED WITH ARCHITECTURAL DRAWINGS. IN THE EVENT OF A CONFLICT, THE STRUCTURAL ENGINEER AND ARCHITECT ARE TO BE NOTIFIED IMMEDIATELY. DRAWING SCALES GIVEN ARE APPROXIMATE- DO NOT SCALE PLANS OR DETAILS.
- SITE VISITS BY STRUCTURAL ENGINEER SHALL NOT BE IN LIEU OF INSPECTIONS.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
  - SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS.
  - DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR THE FOLLOWING:
  - PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC. EXCEPT AS SHOWN OR NOTED.
  - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALL OR SLABS.
  - CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
  - SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOTOR MOUNTS.

# EXISTING BUILDING NOTES:

- EXISTING BUILDING INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON OUR INTERPRETATION OF THE EXISTING CONDITIONS, WHICH IS BASED UPON A LIMITED VISUAL INSPECTION. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT AND ENGINEER IF ANY DISCREPANCIES WITH THESE DRAWINGS ARE FOUND BEFORE PROCEEDING WITH WORK.

# SAFETY NOTES:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
- THE STRUCTURAL ENGINEER DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING FOR VERTICAL AND/OR LATERAL LOADS, SHORING AND LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER WILL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

# STRUCTURAL SHEET INDEX:

SHEET S-1.0	GENERAL NOTES & ABBREVIATIONS		NUMBER OR LETTER IDENTIFYING PLAN, SECTION, ELEVATION OR DETAIL
SHEET S-1.1	GENERAL NOTES		
SHEET S-1.2	TYPICAL DETAILS - CONCRETE		
SHEET S-1.3	TYPICAL DETAILS - WOOD		
SHEET S-2.0	FOUNDATION/FIRST FLOOR FRAMING PLAN		
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SHEET S-2.2	ROOF FRAMING PLAN		
SHEET S-3.0	SECTIONS & DETAILS		
SHEET S-4.0	DETAILS		

**PRESSEY ASSOCIATES**  
AN ARCHITECTURAL CORPORATION

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REVISION HISTORY
03-19-2014
04-04-2014

## FASTENER (SCREW) REQUIREMENTS:

- ALL FASTENERS SUPPLIED TO THE PROJECT SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO USE. THIS REVIEW DOES NOT CONSTITUTE AN APPROVAL. IT IS PROVIDED FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- PROVIDE AN INTERNATIONAL CODE COUNCIL (ICC) EVALUATION REPORT FOR ALL TYPES AND BRANDS OF FASTENERS USED.
- SUBSTITUTIONS FOR SPECIFIC FASTENERS IDENTIFIED WITHIN THESE PLANS MAY BE MADE PROVIDED THAT THE SUBSTITUTION IS COMPLIANT WITH NOTES 1 & 2, AND FOUND TO BE ACCEPTABLE FOR USE BY THE BUILDING DEPARTMENT. EACH REQUEST SHALL BE IN WRITTEN FORM IDENTIFYING THE ITEM BEING SUBSTITUTED FOR, THE SUBSTITUTION ITEM WITH BRAND NAME, PART NUMBER, AND INTERNATIONAL CODE COUNCIL (ICC) REPORT. THE AFFECTED PLANS, DETAILS, AND SECTIONS SHALL ALSO BE IDENTIFIED. SEE GENERAL NOTES FOR ADDITIONAL SUBSTITUTION REQUIREMENTS.
- FASTENERS SHOWN TO PROJECT THROUGH MAIN FRAMING MEMBERS SHALL PROJECT BEYOND THE MEMBER BY 3 FULL THREADS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE PROPER FASTENER FEATURES UNLESS NOTED:
  - FLAT HEAD FASTENERS SHALL BE USED AT PLYWOOD CONNECTIONS.
  - WAFFER HEAD FASTENERS SHALL BE USED AT FRAMING CONNECTIONS COVERED WITH PLYWOOD, GYPSUM BOARD OR OTHER MATERIAL THAT MAY BE IMPEDED BY THE PROJECTION OF THE FASTENER HEAD.
  - HEX WASHER HEAD FASTENERS SHALL BE USED AT ALL OTHER CONDITIONS.
  - THREAD PITCH SHALL BE COMPATIBLE WITH THE THICKNESS OF THE PARTS BEING CONNECTED. THINNER GAUGE PARTS REQUIRE COARSER THREADS COMPARED TO THICKER GAUGE PARTS.
  - THE FASTENER SHALL BE OF SUFFICIENT LENGTH IN ORDER TO COMPLY WITH NOTE 4 ABOVE.
  - SELECT THE PROPER PROPRIETARY SELF-DRILLING TIP TYPE THAT IS CAPABLE OF PUNCHING THE MATERIALS BEING CONNECTED.
- ALL SCREWS SHALL BE MANUFACTURED BY GRABBER CONSTRUCTION PRODUCTS UNLESS PROVIDING AN EQUIVALENT SUBSTITUTION IN ACCORDANCE WITH NOTE 3 ABOVE.
- FRAMING SCREWS SHALL BE #8 (16 MM) WAFFER HEAD SELF-DRILLING, UNO.
- PLYWOOD SCREWS SHALL BE A MINIMUM #8 (25 MM) FLAT HEAD WITH A MINIMUM HEAD DIAMETER OF 0.292" (7.4 MM), UNO.

## EXPANSION & ADHESIVE ANCHORS:

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE ICC REPORTS:
  - CONCRETE ANCHORS:
    - HILTI KWIK-BOLT TZ EXPANSION ANCHORS . . . . . ESR-1917
    - HILTI HIT-RE 500-SD ADHESIVE ANCHORS . . . . . ESR-2322
    - SIMPSON STRONG-TIE STRONG-BOLT 2 WEDGE ANCHORS . . . . . ESR-3037
    - SIMPSON STRONG-TIE SET-XP ADHESIVE ANCHORS . . . . . ESR-2508
- SPECIAL INSPECTION IS REQUIRED FOR ALLOWABLE TENSION VALUES LISTED IN ICC REPORTS NOTED ABOVE. UNLESS NOTED OTHERWISE ANCHORS HAVE BEEN DESIGNED FOR SPECIAL INSPECTION.
- SEE ANCHOR SCHEDULE(S) FOR ALLOWABLE LOAD AND TEST LOAD VALUES.
- EACH ANCHOR OF DIFFERENT DIAMETER AND EMBEDMENT DEPTH (LOADED IN EITHER TENSION OR SHEAR) SHALL HAVE 50 PERCENT OF THE ANCHORS (ALTERNATE ANCHORS IN EACH GROUP ARRANGEMENT) TESTED TO THE TEST LOADS NOTED ABOVE FOR EACH TYPE & STRENGTH OF CONCRETE.
- FAILURE/ACCEPTANCE CRITERIA. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
  - HYDRAULIC RAM METHOD: THE ANCHOR MUST NOT EXHIBIT OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP-IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD.
  - TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE FOR WEDGE OR SLEEVE-TYPE ANCHORS MUST BE REACHED WITHIN THE FOLLOWING LIMITS, ONE-HALF (1/2) TURN OF THE NUT; ONE QUARTER (1/4) TURN OF THE NUT FOR THE 3/8" SLEEVE ANCHOR ONLY.
  - PULL ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME CATEGORY, NOT PREVIOUSLY TESTED, SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS THE TEST REQUIREMENTS. THE INITIAL TESTING FREQUENCY SHALL THEN BE RESUMED.
- WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS.
- THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE GOVERNING AGENCY AND ARCHITECT/STRUCTURAL ENGINEER. TESTING SHALL OCCUR AT MINIMUM OF 24 HOURS AFTER THE INSTALLATION OF THE ANCHORS.
- APPLY TENSION TEST LOADS TO EXPANSION OR ADHESIVE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT POSSIBLE, REPLACE THE NUT WITH A THREADED COUPLER OF THE SAME DIAMETER AND TORQUE TO THE SAME LEVEL AS THE ORIGINAL NUT AND APPLY TEST LOAD.
- REACTION LOADS FROM TEST FIXTURES SHALL NOT BE APPLIED CLOSE TO THE ANCHOR BEING TESTED.
- TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

## EQUIPMENT ANCHORAGE:

ANCHORAGE OF ALL EQUIPMENT TO BE INSTALLED, AS A PART OF THIS PROJECT SHALL BE DETAILED ON THESE PLANS, EXCEPT FOR THE FOLLOWING:

- EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
- FURNITURE (EXCEPT AS NOTED IN ASCE 7-05, SECTION 1615A.1.12).
- TEMPORARY OR MOVABLE EQUIPMENT (EXCEPT AS NOTED IN ASCE 7-05, SECTION 1615A.1.12).
- EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS.
- EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

PERMANENT EQUIPMENT IN ITEMS 1, 4, AND 5 MUST BE SUPPORTED AND ANCHORED TO RESIST THE FORCES DESCRIBED BY SECTION 1615A.1.12 AND THE ANCHORAGE SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD AND OSHPD AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

## NAILING NOTES & SCHEDULE:

- ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON STEEL WIRE NAILS COMPLYING WITH SECTION 2303.6. HOLES SHALL BE PRE-DRILLED WHERE NECESSARY TO PREVENT SPLITTING. NAILING NOT NOTED IN SCHEDULE, ON DRAWINGS, OR CBC TABLE 2304.9.1 SHALL BE A MINIMUM OF TWO NAILS AT EACH CONTACT:
  - 8d FOR 1x MATERIAL AND 16d FOR 2x MATERIAL.
- FASTENERS USED IN WET OR EXTERIOR LOCATIONS, INCLUDING EXTERIOR WALL COVERING ATTACHMENTS, SHALL COMPLY WITH SECTION 2304.9.1.1.
- FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED LUMBER SHALL COMPLY WITH SECTION 2304.9.5.
- PNEUMATIC FASTENERS INSTALLED IN SIMPSON HARDWARE SHALL BE APPROVED BY SIMPSON AND THE BUILDING DEPARTMENT PRIOR TO INSTALLATION.
- PNEUMATIC FASTENERS TO BE INSTALLED INTO PLYWOOD SHEATHING SHALL BE APPROVED BY THE BUILDING DEPARTMENT AND SHALL FALL WITHIN THE 10% TOLERANCE LIMIT FOR HAND DRIVEN NAILS PER ASTM F1667 FOR HEAD DIAMETER. ALL NAIL HEADS TO BE FULL ROUND HEADS.
- MINIMUM NAIL DIMENSIONS:

NAIL	SHANK DIAMETER	HEAD DIAMETER	LENGTH
6d	.113"	.266"	2"
8d	.131"	.281"	2½"
10d	.148"	.312"	3"
16d	.162"	.344"	3½"
20d	.192"	.406"	4"

NAILING SCHEDULE 7	
CONNECTION	NAILING
1. JOIST OR RAFTERS TO SIDES OF STUDS	3- 16d
8-INCH JOIST OR LESS FOR EACH ADDITIONAL 4 INCHES IN DEPTH OF JOIST	1- 16d
2. BRIDGING TO JOIST, TOENAIL EACH END	2- 8d
A. BLOCKING BETWEEN JOISTS OR RAFTERS- TO JOIST OR RAFTERS- TOENAILS EACH SIDE, EACH END	2- 10d <sup>5</sup>
B. BLOCKING BETWEEN STUDS, EACH END	2- 10d TOENAILS OR 2- 16d
3. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" OC
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3- 16d PER 16"
4. TOP PLATE TO STUD, END NAIL	2x4: 2- 16d 2x6, 2x8: 3- 16d
5. STUD TO SOLE PLATE	4- 8d, TOENAIL OR 2- 16d, END NAIL
6. MULTIPLE STUDS, FACE NAIL STAGGERED	16d AT 24" OC
7. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" OC
DOUBLED TOP PLATES, LAP SPLICE	8- 16d
8. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3- 8d
9. RIM JOIST TO TOP PLATE, TOENAIL	8d AT 6" OC
10. TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	2- 16d
11. CONTINUOUS HEADER, TWO PIECES	16d AT 16" OC ALONG EACH EDGE
12. CEILING JOISTS TO PLATE, TOENAIL	3- 8d
13. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3- 16d
14. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3- 16d
15. JOISTS OR RAFTERS AT ALL BEARINGS, TOENAIL	3- 8d
16. BUILT-UP CORNER STUDS	16d AT 24" OC
17. BUILT-UP GIRDER & BEAMS, FACE NAIL (10" DEEP MAX)	20d AT 32" OC AT TOP & BOTTOM STAGGERED ON OPPOSITE SIDES & 2- 20d AT ENDS & AT EACH SPLICE
18. WOOD STRUCTURAL PANELS & PARTICLEBOARD	
SUBFLOOR, ROOF & WALL SHEATHING (TO FRAMING):	
½" OR LESS . . . . .	6d 2
¾" - 1" . . . . .	8d 4 OR 6d 3
1½" - 1¾" . . . . .	8d 2
1½" - 1¾" . . . . .	10d 4 OR 8d 3
COMBINATION SUBFLOOR-UNDERLAYMENT (TO FRAMING):	
¾" & LESS . . . . .	6d 3
¾" - 1" . . . . .	8d 3
1½" - 1¾" . . . . .	10d 4 OR 8d 3
<sup>1</sup> NAILS SPACED AT 6" OC AT EDGES, 12" AT INTERMEDIATE SUPPORTS EXCEPT 6" AT ALL SUPPORTS WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL DIAPHRAGMS AND SHEARWALLS, REFER TO SECTION 2305 AND THE TYPICAL STRUCTURAL PLYWOOD NAILING DETAIL. NAILS FOR WALL SHEATHING SHALL BE COMMON. <sup>2</sup> COMMON OR DEFORMED SHANK. <sup>3</sup> DEFORMED SHANK <sup>4</sup> COMMON <sup>5</sup> WHEN POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOENAILS. <sup>6</sup> SEE NAILING EXAMPLES DETAIL. <sup>7</sup> FOR WOOD MEMBER CONNECTIONS NOT IDENTIFIED IN THE DRAWINGS OR NAILING SCHEDULE, CONNECT PER CBC TABLE 2304.9.1.	

## SHOP DRAWINGS:

PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER:

- THE CONTRACTOR AGREES THAT SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS.
- THE CONTRACTOR AGREES THAT THE PURPOSE OF SHOP DRAWING SUBMITTALS IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN INTENT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS BY INDICATING WHICH MATERIAL THE CONTRACTOR INTENDS TO FURNISH AND INSTALL AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS THE CONTRACTOR INTENDS TO USE.
- THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS ON THE SHOP DRAWINGS, WHICH MUST BE CONFIRMED AND CORRELATED AT THE JOB SITE, FOR COORDINATION OF HIS OR HER WORK WITH THAT OF ALL OTHER TRADES AND FOR PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER.
- THE CONTRACTOR IS RESPONSIBLE FOR MATERIAL QUANTITIES ON THE SHOP DRAWINGS. THE CONTRACTOR IS TO REVIEW AND BE IN AGREEMENT WITH COMMENTS BY THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH FABRICATION.
- THE SHOP DRAWINGS SHALL BE PREPARED FROM FRESH WORK. REPRODUCTIONS OF THE APPROVED DRAWINGS IS NOT PERMITTED.
- PRIOR TO SUBMISSION THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SHALL STAMP SUBMITTALS AS BEING "REVIEWED FOR CONFORMANCE".
- ANY DETAIL ON THE SHOP DRAWING THAT DEVIATES FROM THE CONTRACT DOCUMENTS SHALL BE CLEARLY MARKED WITH THE NOTE "THIS IS A CHANGE". SEE GENERAL NOTES FOR MATERIAL SUBSTITUTIONS.
- SHOP DRAWINGS OR CALCULATIONS SUBMITTED FOR REVIEW THAT REQUIRE MORE THAN ONE SUBMITTAL FOR REVIEW SHALL BE BILLED HOURLY FOR SUCH TIME TO THE GENERAL CONTRACTOR. THE THIRD REVIEW WILL NOT PROCEED WITHOUT WRITTEN APPROVAL FROM THE GENERAL CONTRACTOR FOR ADDITIONAL ENGINEERING REVIEW SERVICES.
- CAD FILES OF APPROVED DRAWINGS WILL NOT BE PROVIDED TO THE CONTRACTOR, SUBCONTRACTOR OR FABRICATOR FOR THE PREPARATION OF SHOP DRAWINGS.
- SHOP DRAWING REVIEWS DO NOT CONSTITUTE AN APPROVAL FOR PURCHASE OR FABRICATION OF MATERIALS.

## WOOD:

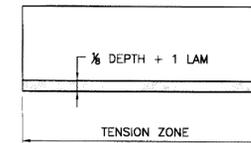
- ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:
  - DOUGLAS FIR-COAST REGION . . . . . WEST COAST LUMBER INSPECTION BUREAU GRADING RULES #17.
  - PLYWOOD . . . . . APA VOLUNTARY PRODUCT STANDARD PS 1-95 & PS 2-92 FOR SOFTWOOD PLYWOOD.
- MINIMUM GRADES SHALL BE:
  - STRUCTURAL FRAMING (SF) . . . . . DF #1 TYPICAL EXCEPT: CEILING JOISTS DF #2 ALL MEMBERS TO BE FREE OF HEART CENTER. TYPICAL UNO.
  - STRUCTURAL PLYWOOD (SP) . . . . . WALL PLYWOOD: ½" APA RATED SHEATHING, 5 PLY, 3/8" SPAN RATING, CD, UNO. ROOF PLYWOOD: ¾" APA RATED SHEATHING, 5 PLY, 3/8" SPAN RATING, STRUCTURAL 1, UNO.
- WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT WALL AND PARTITION INTERSECTION WITH 3- 16d NAILS. SPLICE UPPER AND LOWER PLATES AS SHOWN IN TYPICAL WALL FRAMING DETAIL.
- PROVIDE SOLID BLOCKING BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS (8'-0" OC MAX, SEE BRIDGING DETAIL).
- WHEN TOP PLATES ARE NOTCHED OR BORED, SEE TYPICAL DETAIL.
- ALL BOLTS AND LAG SCREWS SHALL COMPLY WITH THE 2005 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (ANSI/NFOPA NDS-2005).
- HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/8".
- HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME NOMINAL DIAMETER AND DEPTH AS THE SHANK. THE REMAINDER OF THE HOLE SHALL BE NO LARGER THAN THE ROOT OF THE THREAD.
- LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE.
- ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO EXPANSION AND EPOXY ANCHORS.

BOLT-DIA	MALLEABLE IRON WASHER	STEEL WASHER	CARRIAGE BOLT-DIA	WROUGHT IRON WASHER
½"Ø	2½"Øx¼"	2"x2"x¼"	½"	¾" (2" OD)
¾"Ø	2¾"Øx¼"	2½"x2½"x¼"	¾"	1" (2½" OD)
1"Ø	3"Øx¼"	3"x3"x¼"	1"	1½" (3" OD)
1½"Ø	3½"Øx¼"	3½"x3½"x¼"	1½"	1¾" (3¾" OD)
2"Ø	4"Øx¼"	3¾"x3¾"x¼"	2"	1½" (3¾" OD)
1¼"Ø	5"Øx¼"	5"x5"x¼"		

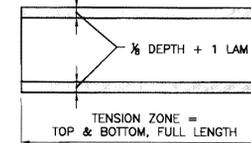
- ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED AT TIME OF INSTALLATION AND RE-TIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
- INSTALL ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS.
- JOISTS UNDER AND PARALLEL TO NON-BEARING PARTITIONS SHALL BE DOUBLED AND NAILED TOGETHER.
- WHERE FRAMING HANGERS ARE REQUIRED AND ARE NOT SHOWN ON SECTIONS, DETAILS OR PLANS THE FOLLOWING SIMPSON HANGERS SHALL BE USED. SLOPE, SKEW, TURN IN FLANGES AND PROVIDE TOE FLANGE HANGERS AS REQUIRED:
  - 2x & 3x MEMBERS . . . . . U HANGERS
  - 4x MEMBERS . . . . . HU HANGERS
  - 6x MEMBERS . . . . . HUF HANGERS
  - 1-JOIST MEMBERS . . . . . MIT HANGERS
  - GLU LAM MEMBERS . . . . . LEG HANGERS
- ALL METAL HARDWARE SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, OR APPROVED EQUAL. ALL ITEMS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS TO THE MAXIMUM CAPACITY.
- WOOD SYMBOLS:



- PROVIDE PLYWOOD/OSB EDGE NAILING AROUND ALL OPENINGS AND BLOCK ALL UNSUPPORTED PLYWOOD/OSB EDGES.
- UPSET THREADS ON SILL BOLTS ARE NOT ALLOWED.
- ALL FRAMING LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF INSTALLATION AND SHALL BE AT 19% MAXIMUM MOISTURE CONTENT (VERIFIED BY CONTRACTOR) BEFORE BEING ENCLOSED BY INSULATION, GYP BOARD, OR OTHER SURROUNDING ARCHITECTURAL MATERIALS. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROVIDE LUMBER MEETING THESE CRITERIA.
- BOLTS ARE NOT TO BE INSTALLED IN LUMBER OVER 19% MOISTURE CONTENT.
- EDGE NAILING OF STRUCTURAL WALL SHEATHING TO THE SILL PLATE SHALL NOT OCCUR UNTIL ROOF FRAMING AND SHEATHING IS COMPLETE.
- ALL FASTENERS INTO PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED.
- ALL WOOD MEMBERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-PRESERVATIVE TREATED.
- GLUED LAMINATED MEMBERS:
  - ALL SIMPLE SPAN FLOOR BEAMS AND WALL HEADERS SHALL HAVE 3500 FT RADIUS CAMBER UNO. ALL SIMPLE SPAN ROOF BEAMS SHALL HAVE 1600 FT RADIUS CAMBER UNO.
  - ALL GLUED LAMINATED MEMBERS SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 16%.
  - SPECIAL INSPECTION OF GLUED LAMINATED BEAMS SHALL BE IN ACCORDANCE WITH CBC SECTION 2303.1.3 AND SECTION 1704A.6.2.1. SPECIAL INSPECTION IS NOT REQUIRED FOR NON-CUSTOM MEMBERS OF 5/8" INCH MAXIMUM WIDTH AND 18" INCH MAXIMUM DEPTH, AND WITH A MAXIMUM CLEAR SPAN OF 32 FEET, MANUFACTURED AND MARKED IN ACCORDANCE WITH ANSI/AITC A190.1 SECTION 6.1.1 FOR NON-CUSTOM MEMBERS.
  - SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION OF GLUED LAMINATED MEMBERS. SHOP DRAWINGS SHALL INDICATE BEAMS AS SIMPLE OR CONTINUOUS.
  - APPEARANCE OF MEMBERS SHALL BE FRAMING OR INDUSTRIAL APPEARANCE EXCEPT MEMBERS IN EXPOSED ARCHITECTURAL APPLICATIONS SHALL BE ARCHITECTURAL APPEARANCE UNO.
  - COMPLY WITH AITC 111 FOR PROTECTION DURING SHIPPING AND FIELD HANDLING.
  - SHADED AREAS BELOW SHALL HAVE A 6" MINIMUM JOINT SPACING IN ADJACENT LAMINATIONS.



SIMPLE SPAN BEAMS



CONTINUOUS & CANTILEVER BEAMS

**PRESSEY ASSOCIATES**  
AN ARCHITECTURAL CORPORATION

2015 H ST. THIRD FLOOR  
SACRAMENTO, CA 95811  
TEL 916-346-4280

REVISION HISTORY
03-19-2014
04-04-2014

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CYS No. 13045



8-26-14  
THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

MONO COUNTY MEMORIAL HALL

73 NORTH SCHOOL ST.  
BRIDGEPORT, CA 93571

## GENERAL NOTES

PROJECT NO. 13045  
SCALE AS SHOWN  
DATE 09-04-2013  
DRAWN MAM

PLAN REVIEW ACCEPTANCE  
SEP 12 2014  
WEST COAST CODE CONSULTANTS, INC.

**S-1.1**

- 29 of 17 64



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2	
3	03-19-2014
4	04-04-2014
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**REVISION HISTORY**

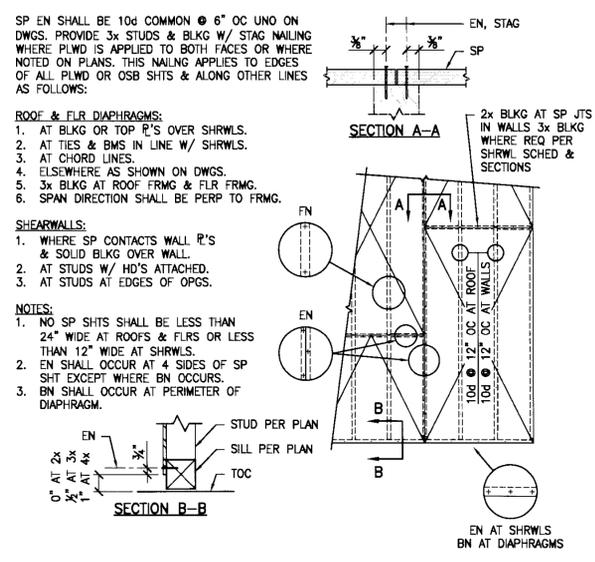


**MONO COUNTY MEMORIAL HALL**

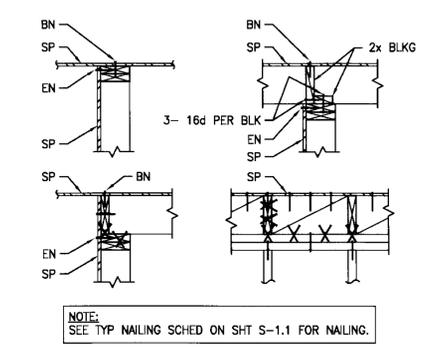
73 NORTH SCHOOL ST.  
BRIDGEPORT, CA 9571

**TYPICAL DETAILS - WOOD**

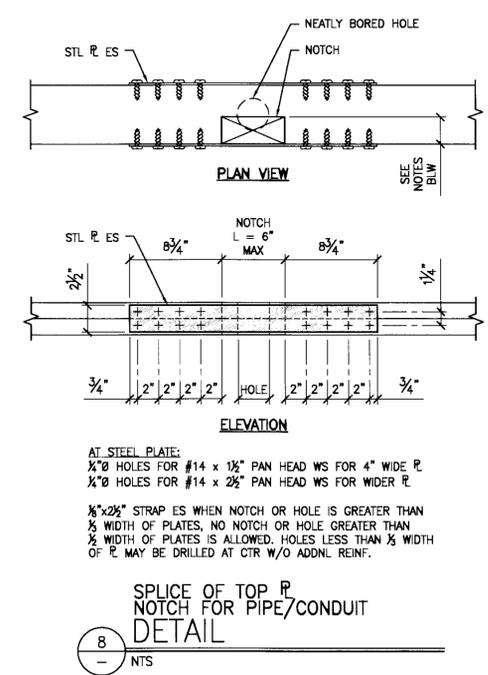
PROJECT NO.	13045
SCALE	AS SHOWN
DATE	09-04-2013
DRAWN	MAM



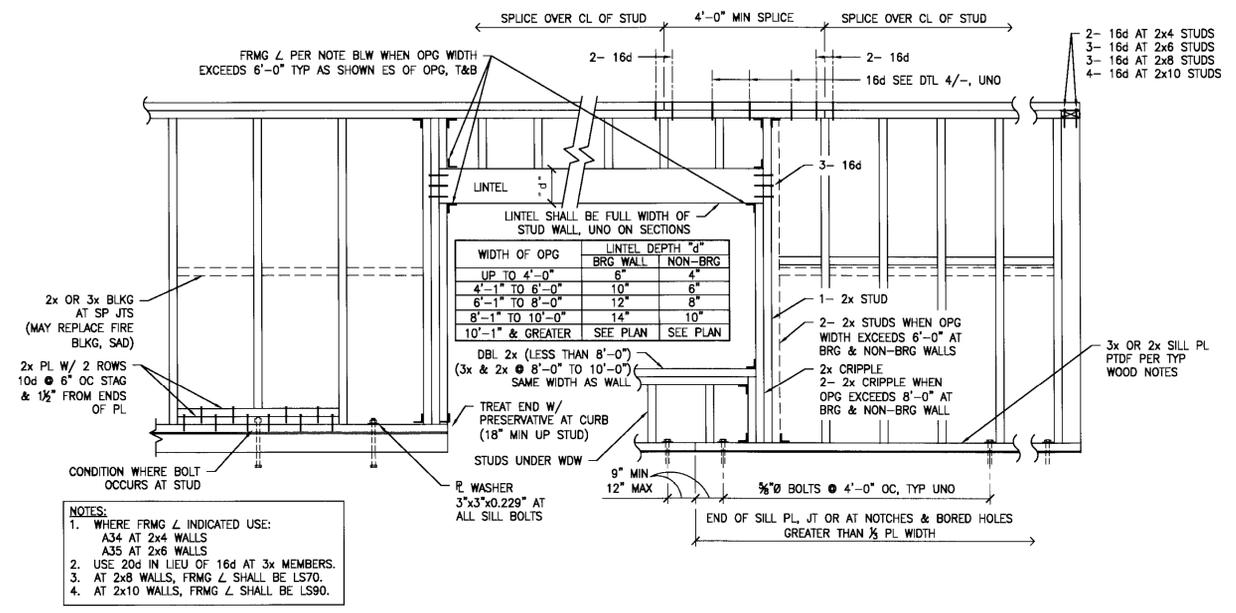
**6**  
STRUC PLWD NAILING  
DETAIL  
NTS



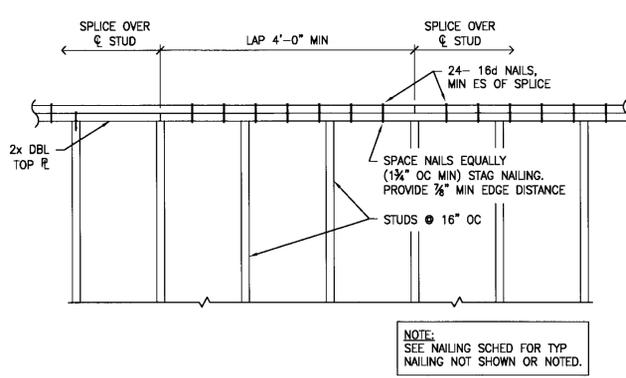
**7**  
TYP NAILING EXAMPLES  
DETAIL  
NTS



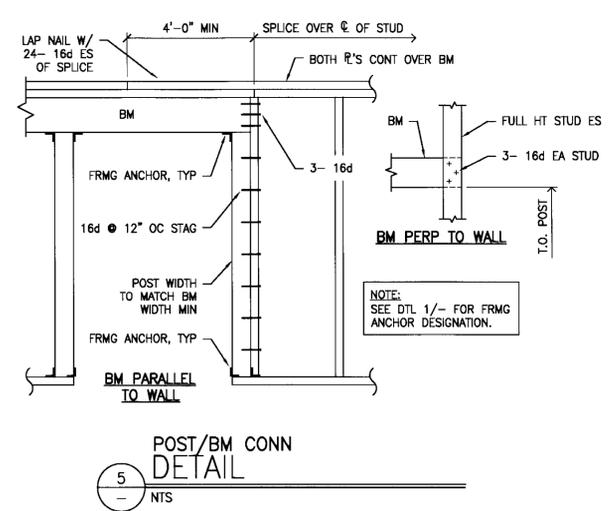
**8**  
SPLICE OF TOP P.  
NOTCH FOR PIPE/CONDUIT  
DETAIL  
NTS



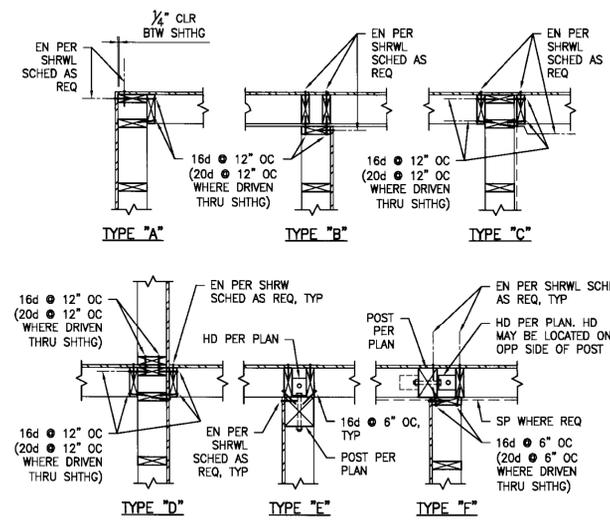
**1**  
WALL OPG FRMG  
DETAIL  
NTS



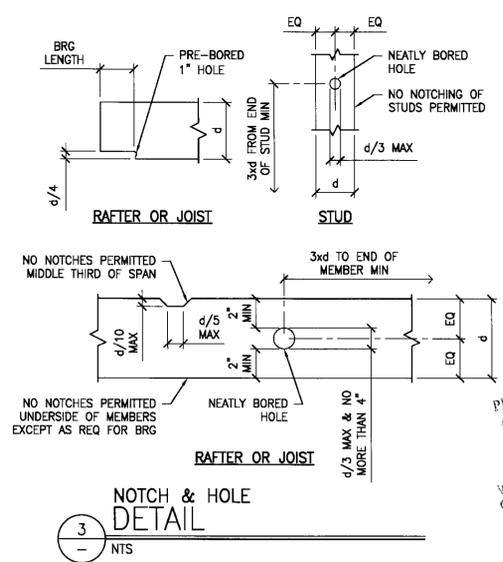
**4**  
TYP NAILED TOP P SPLICE, UNO  
DETAIL  
NTS



**5**  
POST/BM CONN  
DETAIL  
NTS



**2**  
STUD FRMG AT CORNERS  
DETAIL  
NTS



**3**  
NOTCH & HOLE  
DETAIL  
NTS

L:\Jobs\1313091 Mono County Memorial Hall\AC\DWG\STRUC\1.3.dwg Time:Apr07,2014 10:50am Login:camachom DimScale:16 LScale:8

1	
2	
3	03-19-2014
4	04-04-2014
5	
6	

REVISION HISTORY

**CYS**  
STRUCTURAL ENGINEERS INC.  
2495 Natoma Park Drive, Suite 430  
Sacramento, CA 95833  
(916) 939-0000 (916) 939-1216 Fax  
www.cyseng.com  
CYS No. 13091



THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED BY THE ENGINEER OF RECORD.

MONO COUNTY MEMORIAL HALL

73 NORTH SCHOOL ST.  
BRIDGEPORT, CA 93571

FOUNDATION/FLOOR FRAMING PLAN

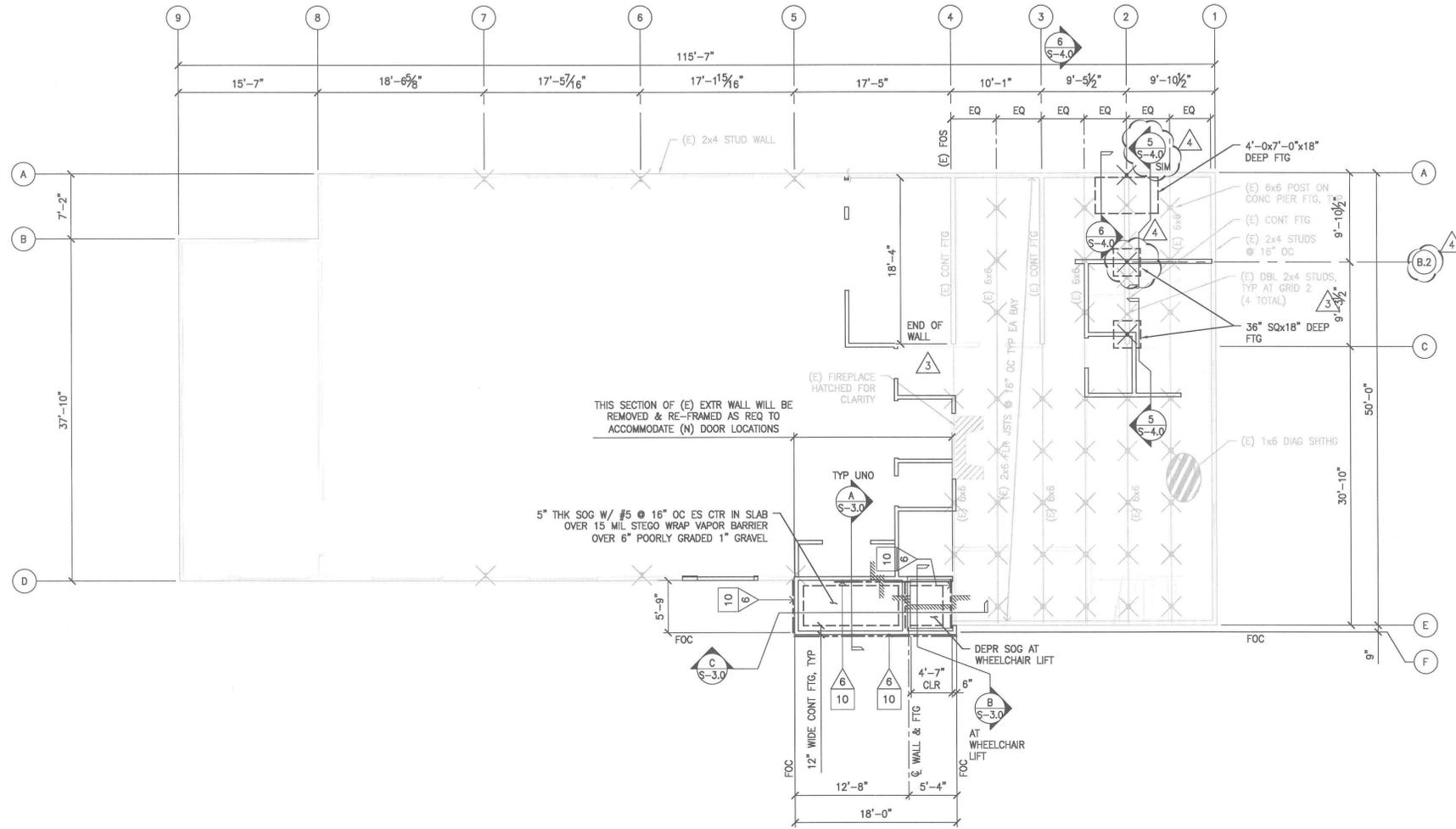
PROJECT NO.	13045
SCALE	AS SHOWN
DATE	04-04-2014
DRAWN	MAM

PLAN REVIEW ACCEPTANCE  
SEP 12 2014

WEST COAST CODE CONSULTANTS, INC.

**S-2.0**

- 27 OF 1764



FOUNDATION/FLOOR FRAMING PLAN

1/8" = 1'-0"



FOUNDATION NOTES

- FOR GENERAL FOUNDATION & FRAMING NOTES SEE SHEETS S-1.0 & S-1.1. SEE TYPICAL DETAILS ON SHEETS S-1.2 THRU S-1.3 FOR ITEMS NOT SHOWN OR NOTED.
- FOR DIMS, EXTENT & NATURE OF ALL WALLS, SAD.
- SAD FOR TOP OF SLAB ELEVS, DIMS & LOCATIONS OF SLAB STEPS, SLOPES, CURBS & SLAB EDGES.
- SAD FOR LOCATION OF (E) NON-STRUC ITEMS, DEMOLITION & REPAIR. CONTRACTOR SHALL VERIFY ALL (E) CONDITIONS AS IT PERTAINS TO WORK PRIOR TO START OF WORK.
- FFE: +0'-0", UNO.
- ALL (N) EXTR STRUC WALLS ARE 2x6 STUDS @ 16" OC, UNO & SHALL HAVE 1/2" PLWD W/ 10d @ 6" OC EN, UNO.
- FN SHALL BE 10d @ 12" OC, UNO.
- FOR SHEARWALL LOCATIONS, SEE THIS SHT.
- UPSET THREADS ON SILL BOLTS ARE NOT ALLOWED.
- HOLES IN SILL PLATES SHALL BE 1/8" MAX LARGER THAN BOLT DIA.

FOUNDATION LEGEND

- INDICATES (E) POST PER PLAN
- INDICATES (E) WF COL PER PLAN
- INDICATES (E) DBL STUD PER PLAN
- INDICATES (N) HSS 3x3x3/8
- INDICATES (N) STRUC STUD WALL PER PLAN SEE SECTIONS FOR CURB LOCATIONS
- INDICATES (E) WALL
- INDICATES (N) ARCH PARTITION WALL PER PLAN, SAD FOR INFO
- INDICATES DEPRESSED SLAB (WRT, TYP) VERIFY EXTENT & DEPTH W/ ARCH.
- INDICATES LOCATION OF STRUC SHTHG, NAIL TYPE & SPCG
- SPCG AT PANEL EDGES
- COMMON NAIL SIZE

10-18-2013
03-19-2014
04-04-2014

REVISION HISTORY

**CYS**  
STRUCTURAL ENGINEERS INC.  
2450 Natomas Park Drive, Suite 650  
Sacramento, CA 95833  
(916) 920-9000 (916) 920-1336 Fax  
www.cyseng.com  
CYS No. 13091

REGISTERED PROFESSIONAL ENGINEER  
CALIFORNIA  
No. 55614  
8-26-14  
THESE DRAWINGS ARE PRELIMINARY  
AND NOT FOR CONSTRUCTION  
UNLESS STAMPED & SIGNED BY  
THE ENGINEER OF RECORD.

MONO COUNTY MEMORIAL HALL

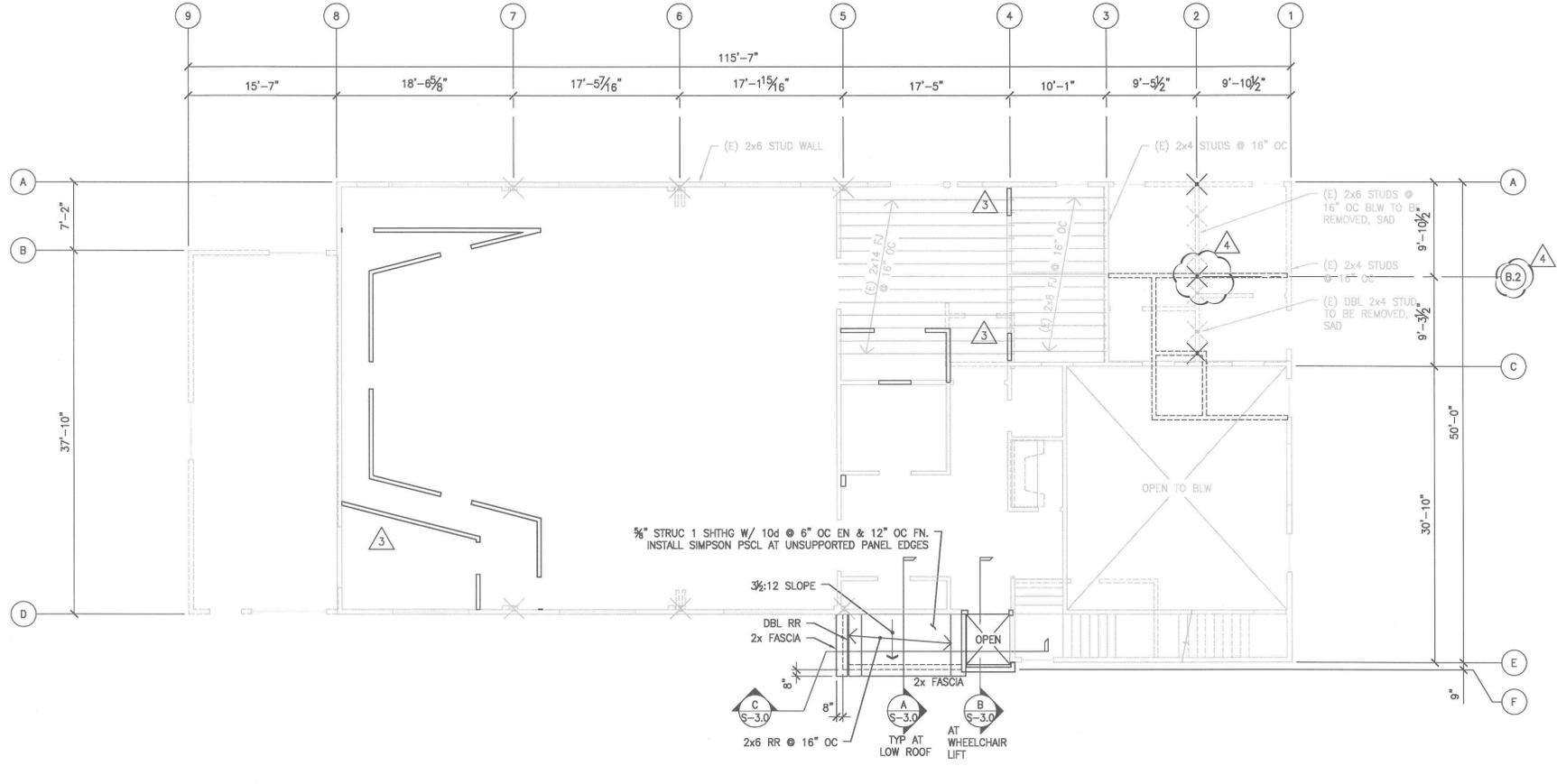
73 NORTH SCHOOL ST.  
BRIDGEPORT, CA 93571

SECOND FLOOR FRAMING PLAN

PROJECT NO.	13045
SCALE	AS SHOWN
DATE	04-04-2014
DRAWN	MAM

PLAN REVIEW  
ACCEPTANCE  
SEP 12 2014  
WEST COAST CODE  
CONSULTANTS, INC.

S-2.1



SECOND FLOOR FRAMING PLAN

1/8" = 1'-0"



FRAMING NOTES

- FOR GENERAL FOUNDATION & FRAMING NOTES SEE SHEETS S-1.0 & S-1.1. SEE TYPICAL DETAILS ON SHEETS S-1.2 THRU S-1.3 FOR ITEMS NOT SHOWN OR NOTED.
- FOR DIMS, EXTENT & NATURE OF ALL WALLS, SAD.
- SAD FOR DIMS, ROOF SLOPES & RADIUS, PARAPETS, OPGS, CANTILEVERS, CRICKETS & ROOF DRAINAGE NOT LOCATED ON STRUC DRAWINGS. ROOF SLOPES SHOWN ARE FOR REFERENCE ONLY & SHALL NOT GOVERN OVER ANY ELEVS PROVIDED.
- SAD FOR LOCATION OF (E) NON-STRUC ITEMS, DEMOLITION & REPAIR. CONTRACTOR SHALL VERIFY ALL (E) CONDITIONS AS IT PERTAINS TO WORK PRIOR TO START OF WORK.
- ALL (N) EXTR STRUCT WALLS ARE 2x6 @ 16" OC, UNO & SHALL HAVE 1/2" CD SP W/ 10d @ 6" OC EN, UNO.
- FN SHALL BE 10d @ 12" OC, UNO.
- SEE SHIT S-2.0 FOR SHEARWALL LOCATIONS.
- ALL SHEARWALL PLWD EDGES SHALL BE BLOCKED. PROVIDE BLKG AT CONT HORIZ WALL PANEL JTS.

FRAMING LEGEND

- X INDICATES (E) WF COL PER PLAN
- X INDICATES (E) DBL STUD PER PLAN
- X INDICATES (N) HSS 3x3x3/8 COL
- INDICATES (N) STUD WALL BLW
- INDICATES (E) WALL
- INDICATES (E) WALL BLW
- INDICATES (N) ARCH PARTITION WALL PER PLAN, SAD FOR INFO

L:\bbs\1313951 Mono City Memorial Hall\CAD\STRUC\1313951.dwg Time: April 07, 2014 10:59am Login: camachon DimScale: 96 LT Scale: 48







IN-LINE EXHAUST FAN SCHEDULE													
MARK	GREENHECK MODEL NO.	FAN				MOTOR			LOCATION	SONES	SERVED	WEIGHT	REMARKS
		CFM	S.P.	LWA	RPM	HP	SERVICE V/Ø/HZ	MOTOR TYPE					
IEF-1	SQ-100-VG	750	0.25	63	1108	1/4	115/1/60	ODP	ATTIC	5.7	1ST FLOOR	70	SEE NOTES 1 THRU 6
IEF-2	SQ-90-VG	300	0.25	59	1171	1/6	115/1/60	TENV	ATTIC	4.7	2ND FLOOR	70	SEE NOTES 1 THRU 6

- NOTES:
1. PROVIDE WITH BACKDRAFT DAMPER.
  2. PROVIDE WITH EXTENDED LUBE LINES.
  3. PROVIDE WITH THERMAL OVERLOAD.
  4. PROVIDE WITH FLEXIBLE CONNECTIONS ON INLET AND OUTLET.
  5. PROVIDE WITH VARI-GREEN MOTOR.
  6. SWITCH ON/OFF W/WALL SWITCH.

AC UNIT SCHEDULE															
MARK	RUDD OR RHEEM	SUPPLY FAN			DX COOLING COIL		FILTERS		ELECTRICAL SERVICE V/Ø/HZ	APPROX. OPER. WT. LBS.	AREA SERVED	MINIMUM OUTSIDE AIR (CFM)	REMARKS		
		CFM	EXT. S.P.	FULL LOAD AMPS	HP	MBH SENS/TOT	EAT ØB T ØB T	LAT ØB T ØB T						QTY	SIZE (IN)
AC-1	MODEL AS REQUIRED	2550	0.5	6.2	1 1/2	33.4/43.8	80 59	51.4 45.3	3	16x25x1	230/1/60	325	ASSEMBLY	745	1,3,4,5,6
AC-2	MODEL AS REQUIRED	2300	0.5	6.2	1 1/2	47.6/56.7	80 59	54.7 48.3	1	16x20x1 20x20x1	230/1/60	235	ASSEMBLY	745	1,3,4,5,6
AC-3	MODEL AS REQUIRED	2850	0.5	7.7	2.0	34.0/44.0	80 59	51.9 45.8	3	16x25x1	230/1/60	325	THEATER	780	2,3,4,5,6
AC-4	MODEL AS REQUIRED	3150	0.5	7.7	2.0	35.6/44.6	80 59	52.9 46.8	3	16x25x1	230/1/60	325	THEATER	780	2,3,4,5,6

- NOTES:
1. TOTAL AND SENSIBLE MBH DERATED FOR LOCATION OF PROJECT.
  2. FLOOR MOUNTED UP-FLOW UNIT.
  3. ATTIC MOUNTED HORIZONTAL UNIT.
  4. FAN COIL UNIT WITH INTEGRAL COOLING COIL. PROVIDE GAS FIRED DUCT FURNACE FOR HEATING, SEE DUCT FURNACE SCHEDULE.
  5. PROVIDE MERV 8 FILTERS.
  6. PROVIDE SMOKE DETECTOR AND INTERLOCK TO SHUTDOWN UNIT UPON DETECTION OF SMOKE IN THE SUPPLY DUCT.

AIR COOLED CONDENSING UNIT SCHEDULE												
MARK	RUDD OR RHEEM	COMPRESSOR			CONDENSER		ELECTRICAL SERVICE V/Ø/HZ	MIN. CIRCUIT AMPS	SEER AT ARI CONDITIONS	UNIT SERVED	APPROX. OPERATING WT. LBS.	REMARKS
		NO.	RLA EA	LRA EA	NO.	FLA EA						
ACCU-1	MODEL AS REQUIRED	1	21.8	83.0	1	1.2	230/1/60	28.0	14.0	AC-1	205	1-7
ACCU-2	MODEL AS REQUIRED	1	28.8	110.0	1	0.93	230/1/60	35.0	13.25	AC-2	230	1-7
ACCU-3	MODEL AS REQUIRED	1	21.8	83.0	1	1.2	230/1/60	28.0	14.0	AC-3	205	1-7
ACCU-4	MODEL AS REQUIRED	1	21.8	83.0	1	1.2	230/1/60	28.0	14.0	AC-4	205	1-7

- NOTES:
1. PROVIDE WITH R-410 REFRIGERANT
  2. PROVIDE WITH COMPRESSOR START ASSIST
  3. PROVIDE WITH CRANKCASE HEATER
  4. FREEZSTAT FOR EVAPORATOR
  5. LOW AMBIENT HEAD PRESSURE CONTROL
  6. PROVIDE WITH CYCLE PROTECTUR
  7. PROVIDE THERMOSTATIC EXPANSION VALVE

DUCT FURNACE SCHEDULE									
MARK	REZNOR MODEL NO.	CFM	HEATING			ELECTRICAL SERVICE V/Ø/HZ	APPROX. OPER. WT. LBS.	UNIT SERVED	REMARKS
			MBH		DERATED OUTPUT				
			INPUT	OUTPUT					
DF-1	HSC-200	2550	200	160	131.2	115/1/60	285	AC-1	1-9
DF-2	HSC-200	2300	200	160	131.2	115/1/60	285	AC-2	1-9
DF-3	HSC-150	2850	150	120	98.4	115/1/60	205	AC-3	1-9
DF-4	HSC-150	3150	200	160	131.2	115/1/60	205	AC-4	1-9

- NOTES:
1. CONDENSING FURNACE, SEALED COMBUSTION, STAINLESS STEEL HEAT EXCHANGER, BURNER AND DRAIN PAN.
  2. PROVIDE WITH PROPANE CONVERSION KIT.
  3. VERTICAL CONCENTRIC TERMINATION KIT WITH VENT CAP.
  4. PROVIDE CONTROL VOLTAGE TRANSFORMER.
  5. PROVIDE 2-STAGE GAS CONTROLS.
  6. RIGHT SIDE CONTROLS.
  7. CONDENSATE DRAIN FLANGE KIT.
  8. VENT TERMINAL/COMBUSTION AIR ASSEMBLY.
  9. THERMOSTAT.

**MECHANICAL LEGEND**

AC	AIR CONDITIONING	MIN. WOCP	MINIMUM OVER CURRENT PROTECTION
AD	ACCESS DOOR	MO	MOTORIZED DAMPER
AE	AIR EXTRACTOR	MVD (N)	MANUAL VOLUME DAMPER NEW
AFF	ABOVE FINISHED FLOOR	OBD	OPPOSED BLADE DAMPER
AL	ACOUSTICAL LINING	OC	ON CENTER
BDD	BACKDRAFT DAMPER	OPNG.	OPENING
BHP	BRAKE HORSEPOWER	OSA	OUTSIDE AIR
BOD	BOTTOM OF DUCT	OSH	OUTSIDE AIR HOOD
CD	CONDENSATE DRAIN	Ø	PHASE
CFM	CUBIC FEET PER MINUTE	POC	POINT OF CONNECTION
CEF	CEILING EXHAUST FAN	QTY	QUANTITY
Ø	CENTERLINE	RA	RETURN AIR
DB	DRY BULB	RD	RETURN DIFFUSER
DL	DOOR LOUVER	REF	ROOF EXHAUST FAN
DN.	DOWN	RH	RADIANT HEATER
EA	EXHAUST AIR	RL	REFRIGERANT LIQUID
EAL	EXHAUST AIR LOUVER	RR(G)	RETURN REGISTER (GRILLE)
EAT	ENTERING AIR TEMPERATURE	RS	REFRIGERANT SUCTION
EF	EXHAUST FAN	SENS	SENSOR
(E)	EXISTING	SD	SMOKE DETECTOR
EG	EXHAUST GRILLE	SM	SHEET METAL
ESP	EXTERNAL STATIC PRESSURE	SA	SUPPLY AIR
F	DEGREES FAHRENHEIT	SD(R)(G)	SUPPLY DIFFUSER (REGISTER) (GRILLE)
FA	FRESH AIR	SS	STAINLESS STEEL
FC	FRESH AIR LOUVER	SS	STAINLESS STEEL
FD	FIRE DAMPER	TBD	TO BE DETERMINED
FSD	FIRE/SMOKE DAMPER	TOP	TEMPERATURE CONTROL PANEL
FFM	FEET PER MINUTE	TEMP.	TEMPERATURE
FLA	FULL LOAD AMPS	TD	TRANSFER DUCT
FT	FOOT OR FEET	TG	TRANSFER GRILLE
GA	GAUGE	TSP	TOTAL STATIC PRESSURE
GI	GALVANIZED IRON	TV	TURNING VANES
GSM	GALVANIZED SHEET METAL	TYP	TYPICAL
H&V	HEATING & VENTILATION	UCD	UNDERCUT DOORS
HZ	HERTZ	UTR	UP THRU ROOF
HP	HORSE POWER	V	VOLTS
IF	INDOOR FAN	VAV	VARIABLE AIR VOLUME
LAT	LEAVING AIR TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
LBS.	POUNDS	W	WITH
LRA	LOCK ROTOR AMPS	WB	WET BULB
MBH	THOUSAND BTU PER HOUR	WT.	WEIGHT
MAX.	MAXIMUM		
MCA	MINIMUM CIRCUIT AMPACITY		
MFR	MANUFACTURER		

**GENERAL NOTES**

1. ALL WORK SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, CITY AND LOCAL CODES AND ORDINANCES.
2. THE CONTRACTOR SHALL READ ALL OF THE GENERAL NOTES, SPECIFICATIONS AND PLANS AND SHALL BE SATISFIED TO THEIR TRUE MEANING AND INTENT AND SHALL BE RESPONSIBLE FOR COMPLYING WITH EACH. WHEREVER TWO OR MORE SPECIFICATIONS MAY CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL TAKE PRECEDENCE.
3. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIAL NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THIS WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES THAT MAY EXIST IN THE PLANS AND/OR SPECIFICATIONS PRIOR TO SUBMITTING BID. THE OWNER'S REPRESENTATIVE AND THE ENGINEER'S INTERPRETATION THEREOF SHALL BE CONCLUSIVE.
4. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNERS REPRESENTATIVE.
5. CONTRACTOR SHALL INSTALL ALL PIPING AND DUCTWORK SYSTEMS TO BEST SUIT FIELD CONDITIONS, AND COORDINATE WITH THE INSTALLATION WORK OF OTHER TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION OF PIPING. NOTIFY CONSTRUCTION MANAGER OF ANY DEVIATIONS FROM THESE DRAWINGS PRIOR TO FABRICATION AND/OR INSTALLATION.
6. LOCATIONS AND DIMENSIONS OF EQUIPMENT, PIPING, AND THEIR SUPPORTS ARE SHOWN DIAGRAMMATICALLY AND SHALL NOT BE SCALED TO DETERMINE EXACT LOCATION OF PIPING OR DUCTWORK. ACTUAL DIMENSIONS AND LOCATIONS ARE DEPENDENT ON MATERIAL SUPPLIED BY CONTRACTORS. CONTRACTORS SHALL PROVIDE OR DETERMINE DIMENSIONS AND PROVIDE LAYOUT DRAWINGS FOR COORDINATION WITH OTHER TRADES IN ACCORDANCE WITH THE SPECIFICATIONS.
7. CONTRACTOR SHALL REMOVE RUBBISH WASTE MATERIALS ON DAILY BASIS AND PROTECT AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE WHICH MAY OCCUR.
8. ALL WORK SHOWN ANYWHERE ON THE DRAWINGS IS INCLUDED; SHOULD AN ITEM (SUCH AS A VALVE) BE SHOWN ON A DETAIL OR SCHEMATIC BUT NOT ON A PLAN VIEW OR VICE VERSA, IT MUST BE PROVIDED AS THOUGH IT WERE SHOWN IN ALL PLACES ON THE DRAWINGS.
9. CONTRACTOR SHALL FURNISH ALL NECESSARY STRUCTURES, INSERTS, SLEEVES, HANGING DEVICES, MISCELLANEOUS ANGLES, CHANNELS, UNISTRUT ETC. FOR INSTALLATION OF MECHANICAL AND PLUMBING EQUIPMENT, DUCTWORK AND PIPING, ETC. CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR AND ALL BUILDING TRADES TO AVOID CONFLICTS AND TO MAINTAIN EQUIPMENT ACCESS AND SERVICEABILITY.
10. EACH MECHANICAL APPLIANCE SHALL BE APPROVED BY THE ADMINISTRATIVE AUTHORITY FOR SAFE USE OR COMPLY WITH APPLICABLE NATIONALLY RECOGNIZED STANDARDS AS EVIDENCED BY THE LISTING AND LABEL OF AN APPROVED AGENCY.
11. THERMOSTATS SHALL BE LOCATED AT A MAXIMUM OF 48 INCHES AND A MINIMUM OF 15 INCHES ABOVE THE FLOOR. CBC 11B-308117B.6
12. APPROVED LINING MATERIALS INSTALLED WITHIN DUCTS TO HAVE MOLD, HUMIDITY, AND EROSION RESISTANT SURFACE THAT MEETS THE REQUIREMENTS OF CMC.
13. FACTORY MADE AIR DUCT SHALL BE CLASS 1 OR 0. CMC 603.2.
14. FACTORY MADE AIR DUCT SHALL COMPLY WITH UL 181, AND CLOSURE SYSTEM (I.E. TAPE) SHALL COMPLY WITH UL 181B. CMC 3601.2.2.4 & 601.2.2.5.
15. INSULATION MATERIAL APPLIED TO THE EXTERIOR OF THE DUCTS LOCATED IN THE BUILDING TO HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND SMOKE-DENSITY NOT EXCEEDING 50 WHEN TESTED AS A COMPOSITE INSTALLATION. CMC 604.3.
16. DUCT WILL BE SUPPORTED PER THE MINIMUM REQUIREMENTS OF CMC TABLE 6-E AND SHALL BE BRACED AND GUYED TO PREVENT LATERAL OR HORIZONTAL SWING. THE USE OF LATERAL OR HORIZONTAL SEISMIC RESTRAINT GUIDELINES PER "SMACNA" IS ALSO APPLICABLE. CMC 603.

**DIFFUSER, REGISTER AND GRILLE SCHEDULE**

NECK SIZE AND DEFLECTION ARE SHOWN ON FLOOR PLANS					
MARK	TITUS MODEL	BORDER TYPE	OBD	FINISH	REMARKS
EG-S	50F	SURFACE	NO	WHITE	1/2x1/2x1/2 CORE
EG	23RL	SURFACE	NO	WHITE	HORIZONTAL VANES
SD-S	MCD	SURFACE	NO	WHITE	MODULAR CORE
SG	272RL	SURFACE	NO	WHITE	HORIZONTAL 3/4" BLADES, DOUBLE DEFLECTION, INDIVIDUALLY ADJUSTABLE, HORIZONTAL LONG BLADE
RG	350	SURFACE	NO	WHITE	LOUVERED HORIZONTAL 3/4" BLADE
RG2	350RL	SURFACE	NO	WHITE	LOUVERED HORIZONTAL 45° DEFLECTION 3/4" BLADE

**PRESSEY ASSOCIATES**  
AN ARCHITECTURAL CORPORATION

2015 H ST. THIRD FLOOR  
SACRAMENTO, CA 95811  
TEL 916-346-4280

2411 Alhambra Blvd, Ste. 100  
Sacramento, CA 95817  
Tel (916) 447-2841  
**PETERS engineering**  
www.peterseng.com  
Job no. 13.084  
consulting mechanical and electrical engineers

7/7/14 PLAN CHECK COMMENTS  
8/20/14 PLAN CHECK COMMENTS

**REVISION HISTORY**



PLT DATE: 8/20/2014

MONO COUNTY MEMORIAL HALL

73 NORTH SCHOOL ST.  
BRIDGEPORT, CA 93517

**SYMBOLS, NOTES & SCHEDULES**

PLAN REVIEW ACCEPTANCE  
SEP 12 2014  
WEST COAST CODE CONSULTANTS, INC.

PROJECT NO. 13045  
SCALE AS SHOWN  
DATE MARCH 21, 2014  
DRAWN JM/SB

**M0.1**

32 OF 64

**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST** (Part 1 of 5) **MECH-1C**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

Project Address: **73 NORTH SCHOOL ST. BRIDGEPORT** Climate Zone: **16** Total Cond. Floor Area: **6,186** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  
 Schools (Public School)  Relocatable Public School Bldg.  Conditioned Spaces  Unconditioned Spaces (affidavit)

Phase of Construction:  New Construction  Addition  Alteration

Approach of Compliance:  Component  Overall Envelope TDV Energy  Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: **90 deg**

**HVAC SYSTEM DETAILS**

Equipment <sup>2</sup>	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST	
		Pass	Fail - Describe Reason <sup>3</sup>
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-1/ACCU-1/DF-1	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type <sup>3</sup> :	Split DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity <sup>1</sup>	123,560 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency <sup>1</sup>	80% AFUE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity <sup>1</sup>	61,229 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency <sup>1</sup>	14.0 SEER / 12.6 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	Attic, Ceiling Ins. vented / 8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	No	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.  
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.  
3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other.

EnergyPro 5.1 by EnergySoft User Number: 3104 RunCode: 2014-05-06T10:08:48 ID: 13.084a Page 3 of 17

**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST** (Part 1 of 5) **MECH-1C**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

Project Address: **73 NORTH SCHOOL ST. BRIDGEPORT** Climate Zone: **16** Total Cond. Floor Area: **6,186** Addition Floor Area: **n/a**

**GENERAL INFORMATION**

Building Type:  Nonresidential  High-Rise Residential  Hotel/Motel Guest Room  
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Phase of Construction:  New Construction  Addition  Alteration

Approach of Compliance:  Component  Overall Envelope TDV Energy  Unconditioned (file affidavit)

Front Orientation: N, E, S, W or in Degrees: **90 deg**

**HVAC SYSTEM DETAILS**

Equipment <sup>2</sup>	Inspection Criteria	FIELD INSPECTION ENERGY CHECKLIST	
		Pass	Fail - Describe Reason <sup>3</sup>
Item or System Tags (i.e. AC-1, RTU-1, HP-1)	AC-3/ACCU-3/DF-3	<input type="checkbox"/>	<input type="checkbox"/>
Equipment Type <sup>3</sup> :	Split DX	<input type="checkbox"/>	<input type="checkbox"/>
Number of Systems	1	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Heating Capacity <sup>1</sup>	173,185 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Minimum Heating Efficiency <sup>1</sup>	80% AFUE	<input type="checkbox"/>	<input type="checkbox"/>
Max Allowed Cooling Capacity <sup>1</sup>	84,820 Btu/hr	<input type="checkbox"/>	<input type="checkbox"/>
Cooling Efficiency <sup>1</sup>	14.0 SEER / 12.6 EER	<input type="checkbox"/>	<input type="checkbox"/>
Duct Location/ R-Value	Attic, Ceiling Ins. vented / 8.0	<input type="checkbox"/>	<input type="checkbox"/>
When duct testing is required, submit MECH-4A & MECH-4-HERS	No	<input type="checkbox"/>	<input type="checkbox"/>
Economizer	No Economizer	<input type="checkbox"/>	<input type="checkbox"/>
Thermostat	Setback Required	<input type="checkbox"/>	<input type="checkbox"/>
Fan Control	Constant Volume	<input type="checkbox"/>	<input type="checkbox"/>

1. If the Actual installed equipment performance efficiency and capacity is less than the Proposed (from the energy compliance submittal or from the building plans) the responsible party shall resubmit energy compliance to include the new changes.  
2. For additional detailed discrepancy use Page 2 of the Inspection Checklist Form. Compliance fails if a Fail box is checked.  
3. Indicate Equipment Type: Gas (Pkg or Split), VAV, HP (Pkg or split), Hydronic, PTAC, or other.

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**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST** (Part 3 of 5) **MECH-1C**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

**Required Acceptance Tests**

**Designer:**

This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and listed all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

**Building Departments:**

**Systems Acceptance:** Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.  
**Systems Acceptance:** Before occupancy permit is granted, all newly installed HVAC equipment must be tested using the Acceptance Requirements.

The MECH-1C form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed equipment. In addition a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation, certificates, and operating and maintenance information meet the requirements of §10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

TEST DESCRIPTION	MECH-2A	MECH-3A	MECH-4A	MECH-5A	MECH-6A	MECH-7A	MECH-8A	MECH-9A	MECH-10A	MECH-11A	
Equipment Requiring Testing or Verification	City	Outdoor Ventilation For VAV & CAV	Constant Volume & Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation DCV	Supply Fan VAV	Valve Leakage Test	Supply Water Temp. Reset	Hydronic System Variable Flow Control	Automatic Demand Shed Control
RUDD AC-1/ RUDD ACCU-1 W/ DUCT FUR/1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-2/ RUDD ACCU-2 W/ DUCT FUR/1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-3/ RUDD ACCU-3 W/ DUCT FUR/1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-4/ RUDD ACCU-4 W/ DUCT FUR/1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**CERTIFICATE OF COMPLIANCE and FIELD INSPECTION ENERGY CHECKLIST** (Part 4 of 5) **MECH-1C**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

TEST DESCRIPTION	MECH-12A	MECH-13A	MECH-14A	MECH-15A
Equipment Requiring Testing	City	Fault Detection & Diagnostics for DX Units	Automatic Fault Detection & Diagnostics for Air & Zone	Distributed Energy Storage DX AC Systems
RUDD AC-1/ RUDD ACCU-1 W/ DUCT FUR/1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-2/ RUDD ACCU-2 W/ DUCT FUR/1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-3/ RUDD ACCU-3 W/ DUCT FUR/1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RUDD AC-4/ RUDD ACCU-4 W/ DUCT FUR/1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**CERTIFICATE OF COMPLIANCE** (Part 5 of 5) **MECH-1C**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

**Documentation Author's Declaration Statement**

I certify that this Certificate of Compliance documentation is accurate and complete.

Name: **Sean R. Tichenor, P.E.** Signature: *[Signature]*

Company: **Peters Engineering** Date: **5/6/2014**

Address: **2411 ALHAMBRA BLVD, SUITE 100** CEPA #:

City/State/Zip: **SACRAMENTO, CA 95817** Phone: **916-447-2841**

**The Principal Mechanical Designer's Declaration Statement**

- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the mechanical design.
- This Certificate of Compliance identifies the mechanical features and performance specifications required for compliance with Title-24, Parts 1 and 6 of the California Code of Regulations.
- The design features represented on this Certificate of Compliance are consistent with the information provided to document this design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Name: **Sean R. Tichenor, P.E.** Signature: *[Signature]*

Company: **Peters Engineering** Date: **5/6/2014**

Address: **2411 Alhambra Blvd Ste. 100** License #: **M31176**

City/State/Zip: **Sacramento, CA 95817** Phone: **916-447-2841**

**Mandatory Measures**

Indicate location on building plans of Note Block for Mandatory Measures.

**MECHANICAL COMPLIANCE FORMS & WORKSHEETS (check box if worksheet is included)**

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, please refer to the 2008 Nonresidential Manual. Note: The Enforcement Agency may require all forms to be incorporated onto the building plans.

MECH-1C Certificate of Compliance. Required on plans for all submittals.  
 MECH-2C Mechanical Equipment Summary is required for all submittals.  
 MECH-3C Mechanical Ventilation and Reheat is required for all submittals with mechanical ventilation.  
 MECH-4C Fan Power Consumption is required for all prescriptive submittals.

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**MECHANICAL MANDATORY MEASURES: NONRESIDENTIAL** **MECH-MM**

Project Name: **MONO COUNTY MEMORIAL HALL (NEW MECHANICAL EQUIPMENT)** Date: **5/6/2014**

**Equipment and System Efficiencies**

§111: Any appliance for which there is a California standard established in the Appliance Efficiency Regulations will comply with the applicable standard.

§115(a): Fan type central furnaces shall not have a pilot light.

§123: Piping, except that conveying fluids at temperatures between 60 and 105 degrees Fahrenheit, or within HVAC equipment, shall be insulated in accordance with Standards Section 123.

§124: Air handling duct systems shall be installed and insulated in compliance with Sections 601, 602, 603, 604, and 605 of the CMC Standards.

**Controls**

§122(e): Each space conditioning system shall be installed with one of the following:

- Each space conditioning system serving building types such as offices and manufacturing facilities (and all others not explicitly exempt from the requirements of Section 112 (d)) shall be installed with an automatic time switch with an accessible manual override that allows operation of the system during off-hours for up to 4 hours. The time switch shall be capable of programming different schedules for weekdays and weekends and have program backup capabilities that prevent the loss of the device's program and time setting for at least 10 hours if power is interrupted; or
- An occupancy sensor to control the operating period of the system; or
- A 4-hour timer that can be manually operated to control the operating period of the system.

Each space conditioning system shall be installed with controls that temporarily restart and temporarily operate the system as required to maintain a setback heating and/or a setup cooling thermostat setback.

§122(g): Each space conditioning system serving multiple zones with a combined conditioned floor area more than 25,000 square feet shall be provided with isolation zones. Each zone shall not exceed 25,000 square feet; shall be provided with isolation devices, such as valves or dampers that allow the supply of heating or cooling to be setback or shut off independently of other isolation areas; and shall be controlled by a time control device as described above.

§122(c): Thermostats shall have numeric setpoints in degrees Fahrenheit (F) and adjustable setpoint stops accessible only to authorized personnel.

§122(b): Heat pumps shall be installed with controls to prevent electric resistance supplementary heater operation when the heating load can be met by the heat pump alone.

§122(a&b): Each space conditioning system shall be controlled by an individual thermostat that responds to temperature within the zone. Where used to control heating, the control shall be adjustable down to 55 degrees F or lower. For cooling, the control shall be adjustable up to 85 degrees F or higher. Where used for both heating and cooling, the control shall be capable of providing a deadband of at least 5 degrees F within which the supply of heating and cooling is shut off or reduced to a minimum.

**Ventilation**

§121(e): Controls shall be provided to allow outside air dampers or devices to be operated at the ventilation rates as specified on these plans.

§122(i): All gravity ventilating systems shall be provided with automatic or readily accessible manually operated dampers in all openings to the outside, except for combustion air openings.

§121(f): Ventilation System Acceptance. Before an occupancy permit is granted for a newly constructed building or space, or a new ventilating system serving a building or space is operated for normal use, all ventilation systems serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

**Service Water Heating Systems**

§113(c) Installation

- Temperature controls for public lavatories. The controls shall limit the outlet Temperature to 110° F.
- Circulating service water-heating systems shall have a control capable of automatically turning off the circulating pump when hot water is not required.

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