

GENERAL STRUCTURAL NOTES

I. GENERAL

- MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2013 EDITION OF THE CALIFORNIA HISTORIC BUILDING CODE, WITH CITY OF LONG BEACH AMENDMENTS AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THESE GENERAL NOTES SUPPLEMENT THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. IN CASE OF CONFLICT BETWEEN THE PLANS AND SPECIFICATIONS, FOLLOW THE MORE STRINGENT OF THE TWO, UNLESS OTHERWISE NOTED BY THE OWNER'S REPRESENTATIVE.
- REFERENCE TO CODES, RULES, REGULATIONS, STANDARDS, MANUFACTURER'S INSTRUCTIONS OR REQUIREMENTS OF REGULATORY AGENCIES IS TO THE LATEST PRINTED EDITION OF EACH IN EFFECT AT THE DATE OF SUBMISSION OF BID UNLESS THE DOCUMENT DATE IS SHOWN.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
- DETAILS AND SHEETS TITLED 'TYPICAL' APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR CHECKING DIMENSIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES AND RESOLVE BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE THE DRAWINGS.
- PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION. RETAIN A REGISTERED CIVIL ENGINEER WHO IS PROPERLY QUALIFIED TO DESIGN BRACING, SHORING, ETC. VISITS TO THE SITE BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.
- INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
- REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF FLOOR, ROOF AND WALL OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS. COORDINATE THE SIZE AND LOCATION OF OPENINGS ASSOCIATED WITH, BUT NOT LIMITED TO, ELECTRICAL, MECHANICAL, AND PLUMBING TRADES. SUBMIT FINAL SIZING AND LOCATION REQUIREMENTS OF OPENINGS TO THE OWNER'S REPRESENTATIVE FOR REVIEW.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK TO ENSURE THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK.
- COORDINATE THE MECHANICAL EQUIPMENT WITH ALL TRADES BEFORE INSTALLATION.

II. REINFORCING STEEL

- REINFORCING TO CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:

LOCATION	TYPE
REINFORCING STEEL #7 AND SMALLER	ASTM A615, 60 KSI
REINFORCING STEEL #8 AND LARGER AND REINFORCING STEEL TO BE WELDED	ASTM A706, 60 KSI
1/2 INCH DIAMETER LOW RELAXATION SEVEN WIRE POST-TENSIONING STRAND	ASTM A416, 270 KSI
SMOOTH STEEL WIRE FOR SPIRALS	ASTM A82, 70 KSI
WELDED STEEL WIRE FABRIC	ASTM A185, 70 KSI
SMOOTH DOWELS IN SLAB ON GRADE	ASTM A36, 36 KSI
DEFORMED BAR ANCHORS NELSON/TRW TYPE "D:1" PER ICBO REPORT ER-5217 OR APPROVED EQUIVALENT	ASTM A496, 70 KSI

- FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH CURRENT CRSI (DA4) - MANUAL OF STANDARD PRACTICE AND ACI 318.

- ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3-FOOT SPACING. PLACE REINFORCING BARS IN ACCORDANCE WITH CURRENT CRSI (P1).

- MECHANICAL COUPLERS: LENTON THREADED OR INTERLOCK COUPLERS BY ERICO, ICBO #3967, CADWELD BY ERICO, ICBO #3967, OR XTENDER BY HEADED REINFORCEMENT CORPORATION, ICBO #2764 OR BAR-LOCK, DAYTON SUPERIOR CORPORATION, ICBO #2495. COUPLERS FOR BEAM AND SLAB BARS AT FORMED CONSTRUCTION JOINTS MAY BE LENTON FORM SAVERS BY ERICO, ICBO #3967.

- WELD REINFORCING STEEL IN ACCORDANCE WITH AWS D1.4 USING QUALIFIED WELDERS.

- WELDABILITY TEST OF EXISTING REINFORCING STEEL SHALL BE PERFORMED PRIOR TO WELDING. PROPER WELDING PROCEDURE SHALL BE SELECTED BASED ON THE CHEMICAL COMPOSITION OF EXISTING REINFORCING STEEL AND RECOMMENDATION FROM AWS D1.4.
- TERMINATE REINFORCING STEEL IN STANDARD HOOKS, UNLESS OTHERWISE SHOWN.
- PROVIDE REINFORCING SHOWN OR NOTED CONTINUOUS IN LENGTHS AS LONG AS PRACTICAL.
- TIE WIRE TO BE ANNEALED, MINIMUM 16 GAGE. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS ARE TO BE SIZED AND SHAPED FOR ADEQUATE SUPPORT OF REINFORCEMENT DURING CONCRETE PLACEMENT.

III. CAST-IN-PLACE CONCRETE

- CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED. WHERE REINFORCING IS NOT SPECIFICALLY SHOWN OR WHERE DETAILS ARE NOT GIVEN, PROVIDE REINFORCING SIMILAR TO THAT SHOWN FOR SIMILAR CONDITIONS, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
- ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS. SUBMIT ALTERNATE JOINT LOCATIONS OR JOINTS NOT SHOWN TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
- AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.
- AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING MASONRY, THOROUGHLY ROUGHEN CONTACT SURFACES BY LIGHT SANDBLASTING OR OTHER SUITABLE MEANS AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.
- REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF ADDITIONAL CONCRETE CURBS AND HOUSEKEEPING PADS NOT SHOWN.
- CONCRETE CLEAR COVER TO REINFORCING BARS IS AS FOLLOWS, UNLESS OTHERWISE NOTED:

LOCATION	CLEAR COVER
CONCRETE PLACED AGAINST EARTH	3 INCHES
FORMED SURFACES EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: #6 BARS AND LARGER #5 BARS AND SMALLER	2 INCHES 1 1/2 INCHES
SLABS ON GRADE (TOP CLEARANCE)	1 1/2 INCHES
BEAMS, GIRDERS AND COLUMNS NOT EXPOSED TO WEATHER OR EARTH	1 1/2 INCHES
WALL OR SLAB SURFACES NOT EXPOSED TO WEATHER OR EARTH: #5 & SMALLER #6 & #7 #8, #9, #10 & #11 #14 & #18	3/4 INCH 1 INCH 1 1/2 INCHES 2 1/2 INCHES

- CONCRETE TYPES:

CLASS	28-DAY STRENGTH	TYPE	LOCATION
A	4,000 PSI	NORMAL WEIGHT	FOUNDATIONS, MISC. CURBS, HOUSE-KEEPING PADS, ETC.

- CEMENT SHALL CONFORM TO ASTM C150 TYPE II.
- FINE AND COARSE AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATE SHALL CONFORM TO ASTM C330.
- WATER SHALL BE CLEAN AND NOT DETRIMENTAL TO CONCRETE.
- FLY ASH USED IN CONCRETE MIX SHALL CONFORM TO ASTM C618 CLASS C OR F. CALCINED POZZOLAN SHALL CONFORM TO ASTM C 618, CLASS N, SILICA FUME SHALL CONFORM TO ASTM C 1240, PROPORTIONED IN ACCORDANCE WITH ACI 211.1, AND AIR ENTRAINMENT ADMIXTURE SHALL CONFORM TO ASTM C 260. LIQUID CURING SHALL CONFORM TO ASTM C309 TYPE 1-D.
- FOR EACH CLASS OF CONCRETE, A CONCRETE MIX DESIGN SHALL BE PREPARED BASED ON FIELD EXPERIENCE OR TRIAL MIXTURES IN CONFORMANCE TO ACI 211 AND ACI 301.
- CONCRETE MIX DESIGNS SHALL BE REVIEWED BY THE OWNER'S TESTING AGENCY. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGN FOR EACH CLASS OF CONCRETE, INCLUDING LETTER OF CONFORMANCE FROM OWNER'S TESTING AGENCY, TO OWNER'S REPRESENTATIVE FOR REVIEW. AS AN ALTERNATE TO THE LETTER OF CONFORMANCE FROM THE OWNER'S TESTING AGENCY, THE CONCRETE MIX DESIGN MAY BE PREPARED BY A CIVIL ENGINEER LICENSED IN STATE OF CALIFORNIA. THE MIX DESIGN SHALL BEAR THE STAMP AND SIGNATURE OF THE CIVIL ENGINEER.
- CONCRETE SHALL BE TESTED IN ACCORDANCE WITH ASTM C 39/C 39 M.

- PERFORM WORK IN ACCORDANCE WITH ACI 301 AND ACI 318. FOLLOW RECOMMENDATIONS OF ACI 305R WHEN CONCRETING DURING HOT WEATHER AND ACI 306R WHEN CONCRETING DURING COLD WEATHER.
- CONTINUOUSLY MOIST CURE CONCRETE SLABS-ON-GRADE FOR 7 DAYS MINIMUM. WATER FOG SPRAYS, PONDING, SATURATED ABSORPTIVE COVERS, MOISTURE RETAINING COVERS OR CURING COMPOUNDS MAY BE USED.
- VAPOR BARRIER SHALL BE 6 MIL THICK CLEAR POLYETHYLENE FILM TYPE RECOMMENDED FOR BELOW GRADE APPLICATION. LAP JOINTS MINIMUM 6 INCHES AND SEAL WATERTIGHT BY TAPING EDGES AND ENDS. PROVIDE SAND AS INDICATED ON DRAWINGS.
- REPAIR UNDERSLAB VAPOR RETARDER DAMAGE DURING PLACEMENTS OF CONCRETE REINFORCING. REPAIR WITH VAPOR RETARDER MATERIAL; LAP OVER DAMAGED AREAS 6 INCHES AND SEAL WATERTIGHT.
- CONCRETE FILL THICKNESS SHOWN ON THE FRAMING PLANS ARE MINIMUM THICKNESSES. NO ALLOWANCES HAVE BEEN SHOWN FOR ADDITIONAL CONCRETE FILL REQUIRED TO COMPENSATE FOR FRAME, DECK, OR FORMWORK DEFLECTIONS TO MAINTAIN SURFACE TOLERANCES SPECIFIED.
- PLACE CONCRETE IN ACCORDANCE WITH ACI 304R, PLACE CONCRETE FOR FLOOR SLABS IN ACCORDANCE WITH ACI 302.1R, DO NOT INTERRUPT SUCCESSIVE PLACEMENT; DO NOT PERMIT COLD JOINTS TO OCCUR. SAW CUT JOINTS WITHIN 24 HOURS AFTER PLACING.
- SEPARATE SLABS ON GRADE FROM VERTICAL SURFACES WITH JOINT FILLER UNLESS OTHERWISE INDICATED IN THE DRAWINGS.
- PLACE JOINT FILLER IN FLOOR SLAB PATTERN PLACEMENT SEQUENCE. SET TOP TO REQUIRED ELEVATIONS. SECURE TO RESIST MOVEMENT BY WET CONCRETE.
- EXTEND JOINT FILLER FROM BOTTOM OF SLAB TO WITHIN 1/2 INCH OF FINISHED SLAB SURFACE.
- INSTALL JOINT DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- NON-SHRINK GROUT SHALL CONFORM TO ASTM C 1107/C 1107M, 7000 PSI MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: EUCLID CHEMICAL COMPANY'S 'EUCO-NS', L&M CRYSTEX, MASTER BUILDERS' 'MASTERFLOW 713', OR FIVE STAR GROUT. WHERE HIGH FLUIDITY OR INCREASED PLACING TIME IS REQUIRED, USE EUCLID CHEMICAL COMPANY'S 'EUCO HI-FLOW GROUT' OR MASTER BUILDERS' 'MASTERFLOW 928'.

IV. STRUCTURAL STEEL

- STRUCTURAL STEEL TO CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:

SECTIONS	TYPE
ROLLED SHAPES WIDE FLANGES CHANNELS, ANGLES, & OTHER	ASTM A992 (50 KSI) ASTM A36
PLATES COLUMN BASE PLATES BRACE GUSSET PLATES BEAM SHEAR CONNECTION PLATES COLUMN CONTINUITY PLATES BEAM STIFFENER PLATES DECK CLOSURE PLATES OTHER	ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50 ASTM A572, GR 50
STEEL PIPE	ASTM A53 GRADE B
COLD FORMED HOLLOW STRUCTURAL SECTION (HSS)	ASTM A500 GRADE B
STAINLESS STEEL SHAPES, PLATES AND BARS	ASTM A276
BOLTS	ASTM A325X
MACHINE BOLTS	ASTM A307
ANCHOR BOLTS AND RODS	ASTM F1554, GR 55
THREADED AND HANGER ROD	ASTM A572, GR 50
WELDED SHEAR CONNECTORS NELSON/TRW PER ICBO REPORT ER-2614 OR APPROVED EQUIVALENT	ASTM A 108, GRADE 1015 THROUGH 1020 (50 KSI)
WELDED THREADED STUDS NELSON/TRW OR APPROVED EQUIVALENT	ASTM A 108, GRADE 1015 THROUGH 1020
NUTS FOR BOLTS AND MACHINE BOLTS	ASTM A563
HARDENED WASHERS	ASTM F436
UNHARDENED WASHERS	ASTM F844
PLAIN WASHERS	ANSI B18.22.1
BEVELED WASHERS	ANSI B18.23.1

- HOT DIP GALVANIZE IN ACCORDANCE WITH ASTM A123 AND ASTM A153 STRUCTURAL STEEL AND FASTENERS THAT ARE PERMANENTLY EXPOSED TO THE WEATHER. REPAIR GALVANIZING AFTER WELDING IN ACCORDANCE WITH ASTM A780.
- STRUCTURAL STEEL AND CONNECTIONS EXPOSED TO VIEW IN THE COMPLETED BUILDING ARE DESIGNATED ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

DRAWING INDEX

- S0.1 GENERAL STRUCTURAL NOTES & DRAWING INDEX
- S0.2 GENERAL STRUCTURAL NOTES CONTINUED
- S0.3 GENERAL STRUCTURAL NOTES CONT'D, SYMBOLS & ABBREVIATIONS
- S0.4 TYPICAL WOOD DETAILS
- S2.0 FIRST FLOOR/FOUNDATION PLAN
- S2.1 SECOND FLOOR PLAN ANCHOR LAYOUT
- S2.2 SECOND FLOOR PLAN PLYWOOD LAYOUT
- S2.3 ROOF PLAN
- S7.1 DETAILS
- S7.2 DETAILS

- ARC-WELDING ELECTRODES/FILLER METALS TO BE LOW HYDROGEN TYPES E70XX, E70TXX OR E70XX MINIMUM AS APPLICABLE. ELECTRODES WITH CHERRY V-NOTCH (CVN) TESTS VALUES OF A MINIMUM 20 FOOT-POUNDS AT -20 DEGREES FAHRENHEIT ARE TO BE USED AT THE FOLLOWING LOCATIONS:
 - COMPLETE JOINT PENETRATION WELDS
 - BEAM TO COLUMN MOMENT CONNECTIONS - INCLUDING FLANGE, WEB, AND CONTINUITY PLATE FILLET AND PARTIAL JOINT PENETRATION WELDS
 - BRACE CONNECTIONS - INCLUDING BRACE, GUSSET, BASE PLATES, BEAM STIFFENER PLATES, AND CONTINUITY PLATE FILLET AND PARTIAL JOINT PENETRATION WELDS
 - WELDS NOTED 'CVN' ON THE DRAWINGS
- WELDERS TO BE CERTIFIED BY AWS AND THE GOVERNING JURISDICTION.
- WHERE FIELD WELDING IS NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY.
- PROVIDE NATURAL CAMBER UP, UNLESS NOTED OTHERWISE, EXCEPT AT CANTILEVERS. AT CANTILEVERS PROVIDE CAMBER SUCH THAT TIP OF CANTILEVER IS ABOVE FINAL ELEVATION.
- SPlice MEMBERS ONLY WHERE INDICATED.

V. ADHESIVE ANCHORS AND DOWELS

- ANCHORS AND DOWELS INSTALLED INTO CONCRETE: HILTI HIT-RE 500-SD (ICC #ESR 2322), SIMPSON SET-XP (ICC #ESR 2508), OR APPROVED EQUAL. EMBEDMENT DEPTH, MINIMUM EDGE DISTANCE, AND MINIMUM SPACING FOR ANCHORS AND DOWELS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

ROD DIA OR BAR SIZE	EMBEDMENT	MINIMUM EDGE DISTANCE	MINIMUM SPACING	MINIMUM BASE MATERIAL THICKNESS
1/2"	5"	15"	3"	8" NOMINAL
5/8"	6"	18"	3-3/4"	12" NOMINAL
3/4"	7"	21"	4-1/2"	12"
7/8"	9"	27"	5-1/4"	14"
1"	11"	33"	6"	14"
#4	6-1/2"	19-1/2"	3"	14"
#5	8"	24"	3-3/4"	14"
#6	10"	30"	4-1/2"	14"

- ANCHORS AND DOWELS INSTALLED INTO GROUT-FILLED MASONRY UNITS: HIT HY-150 MAX BY HILTI (ICC #ESR 1967), EPOXY-TIE SET BY SIMPSON STRONG-TIE (ICBO #ESR-1772), OR APPROVED EQUAL. EMBEDMENT DEPTH FOR ANCHORS AND DOWELS IS AS FOLLOWS, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

ROD DIA OR BAR SIZE	EMBEDMENT	MINIMUM EDGE DISTANCE	MINIMUM SPACING	MINIMUM BASE MATERIAL THICKNESS
1/2"	4-1/2"	20"	17"	8" NOMINAL
5/8"	5-5/8"	20"	20"	8" NOMINAL
3/4"	6-3/4"	27"	27"	8" NOMINAL

- ANCHORS AND DOWELS INSTALLED INTO UNREINFORCED BRICK MASONRY (URM): HIT HY-70 BY HILTI (ICC #ER-3342), OR EPOXY-TIE ET OR SET FOR BRICK AND EPOXY-TIE SET FOR HOLLOW MASONRY BY SIMPSON STRONG-TIE (ICC #ER-4945). USE SCREENS AS SPECIFIED BY THE MANUFACTURER. EMBEDMENT DEPTH FOR ANCHORS AND DOWELS IS AS FOLLOWS, UNLESS OTHERWISE NOTED IN DRAWINGS. PROVIDE SPECIAL INSPECTION AS REQUIRED BY THE ICC EVALUATION REPORT:

ROD DIA OR BAR SIZE	EMBEDMENT	MINIMUM EDGE DISTANCE	MINIMUM SPACING	MINIMUM BASE MATERIAL THICKNESS
5/8"	8"	24"	32"	13"
3/4"	8"	24"	32"	13"
3/4"-22.5" BEND	12"	16"	32"	13"

- IF FIELD CONDITION DOES NOT MEET THE EMBEDMENT, MINIMUM EDGE DISTANCE, OR MINIMUM SPACING REQUIREMENT AS NOTED IN TABLES ABOVE, NOTIFY THE OWNER'S REPRESENTATIVE FOR FURTHER INSTRUCTIONS.
- ANCHORS: ASTM A193 GRADE B7 THREADED RODS WITH ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F 436 WASHERS.



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NO.	DESCRIPTION	DATE
REVISIONS		

RANCHO LOS ALAMITOS
ADOBE SEISMIC PHASE 3
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6400 BIXBY HILL ROAD
LONG BEACH
CALIFORNIA

SHEET TITLE

GENERAL
STRUCTURAL NOTES
& DRAWING INDEX

ISSUANCE

DATE

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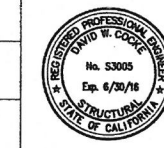
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GENERAL STRUCTURAL NOTES CONTINUED

V. ADHESIVE ANCHORS AND DOWELS (CONT.)

- DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.
- REMOVE GREASE, OIL, FUST, AND OTHER LANTAGE FROM RODS AND DOWELS PRIOR TO INSTALLATION.
- THE DIAMETER OF THE HOLES IS PER THE MANUFACTURER'S INSTRUCTIONS. DRILL HOLES FOR CONCRETE AND FULLY GROUTED CONCRETE MASONRY ANCHORS AND DOWELS WITH CARBIDE-TIPPED DRILL BITS COMPLYING WITH ANSI B212.15-1994. DRILL HOLES FOR ANCHORS AND DOWELS IN UNREINFORCED BRICK MASONRY OR ADJBE UNITS WITH A NON-IMPACT ROTARY DRILL. PRIOR TO INSTALLING ANCHORS OR DOWELS, WIRE BRUSH HOLES TO REMOVE RESIDUE, BLOW OUT WITH OIL-FREE COMPRESSED AIR, AND ALLOW HOLE TO DRY.
- PLACE ADHESIVE WITH THE MANUFACTURER'S RECOMMENDED APPLICATION TOOL TO A DEPTH AS SPECIFIED BY THE MANUFACTURER AND TO MINIMIZE THE AMOUNT OF ADHESIVE THAT WILL OVERFLOW OUT OF THE HOLE WHEN THE BAR IS INSERTED. REMOVE EXCESS ADHESIVE ON THE ADJACENT SURFACES.
- INSERT THE ANCHOR OR DOWEL IN THE HOLE WITH A TWISTING MOTION TO THE REQUIRED EMBEDMENT DEPTH. DO NOT PUMP THE ANCHOR OR DOWEL IN AND OUT OF THE HOLE.
- WEDGE BARS TIGHT AND CENTERED IN THE HOLE WITH WOODEN WEDGES (GOLF TEES) TO HOLD IT IN PLACE UNTIL THE ADHESIVE SETS.
- IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
- LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH ADHESIVE ANCHORS.
- OWNER'S TESTING LABORATORY WILL PERFORM TENSION TESTS ON 25% OF ANCHOR AND DOWELS FOR THE FOLLOWING TEST LOADS. ANCHORS SHALL BE TESTED AFTER ANCHORS HAVE PROPERLY CURED. SEE ICBO REPORTS FOR CURE TIME REQUIREMENTS.

ROD DIA OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL
3/8"	4"	1800#	CONCRETE
1/2"	5"	3200#	CONCRETE
5/8"	6"	5000#	CONCRETE
3/4"	7"	7100#	CONCRETE
7/8"	9"	9700#	CONCRETE
1"	11"	12800#	CONCRETE

#3	5"	3000#	CONCRETE
#4	6 1/2"	5400#	CONCRETE
#5	8"	8400#	CONCRETE
#6	10"	11900#	CONCRETE
#7	12"	16200#	CONCRETE
#8	14"	21300#	CONCRETE

3/8"	3 1/2"	3100#	MASONRY
1/2"	4 1/2"	3600#	MASONRY
5/8"	5"	4500#	MASONRY
3/4"	6 5/8"	7500#	MASONRY

5/8"	12"	3000#	URM
3/4"	12"	3000#	URM

- REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, NOTIFY OWNER'S REPRESENTATIVE AND TEST 100% OF THE DOWELS AND ANCHORS INSTALLED IN THE LAST 2 DAYS OF ANCHOR INSTALLATION.

VI. ROUGH CARPENTRY

- FRAMING LUMBER: DOUGLAS FIR (COAST REGION) GRADED AND MARKED IN ACCORDANCE WITH THE STANDARD GRADING RULES NO. 17 OF THE WEST COAST LUMBER INSPECTION BUREAU (W.C.L.I.B.) OR WESTERN LUMBER GRADING RULES, OF THE WESTERN WOOD PRODUCTS ASSOCIATION (W.W.P.A.). COMPLY WITH PS 20. LUMBER FABRICATED FROM OLD GROWTH TIMBER IS NOT PERMITTED. USE LUMBER OF THE FOLLOWING GRADES:

MEMBER	MOISTURE CONTENT	WOOD/GRADE
SILLS & LUMBER IN CONTACT WITH ROOFING, FLASHING, WATERPROOFING, MASONRY, OR CONCRETE	19%	D.F. #1 PRESSURE OR PRESERVATIVE TREATED OR FOUNDATION GRADE REDWOOD
STUDS	19%	D.F. #2
JOISTS, PLANKS AND PLATES	15%	D.F. #1
BEAMS, 5" & WIDER	GREEN	D.F. SELECT STRUCTURAL
BEAMS, 4" & NARROWER	GREEN	D.F. #1 & BETTER
POSTS, 6X6 & LARGER	GREEN	D.F. SELECT STRUCTURAL
POSTS, 4X6 & SMALLER	19%	D.F. #1
FRAMING, BLOCKING & BRIDGING	15%	D.F. #2
PLYWOOD BLOCKING	19%	D.F. #1
BACKING, STRIPPING AND FURRING	19%	CONSTRUCTION

- PANEL SHEATHING: IDENTIFY WOOD STRUCTURAL PANELS WITH THE APPROPRIATE TRADEMARK OF APA-THE ENGINEERED WOOD ASSOCIATION AND MEET THE REQUIREMENTS OF THE VOLUNTARY PRODUCT STANDARD PS-1 OR PS-2 AND APA PRP-108 PERFORMANCE STANDARD.

- PANEL SHEATHING TO BE EXPOSURE 1.
- PLYWOOD PANELS TO BE 5-PLY MINIMUM, EXCEPT 3/8" PANELS TO BE 3-PLY MINIMUM.
- PLYWOOD TO BE CC GRADE AT LOCATIONS EXPOSED TO WEATHER; CD GRADE ELSEWHERE.

- PROVIDE THE FOLLOWING GRADE AND SPAN RATINGS:

PANEL THICKNESS	MINIMUM GRADE	ROOF/FLOOR RATING
3/8"	STRUCTURAL 1	24/0
7/16"	STRUCTURAL 1	24/16
15/32"	STRUCTURAL 1	32/16
19/32" AND 5/8"	CD/CC	40/20
3/4"	CD/CC	48/24
7/8" AND 1"	CD/CC	54/32
1 1/8"	CD/CC	60/48

- ROUGH HARDWARE:
 - NAILS: COMMON WIRE NAILS, FEDERAL SPECIFICATION FF-N-105B, STANDARD LENGTHS U.O.N. USE HOT-DIPPED ZINC-COATED GALVANIZED NAILS PER ASTM A 153/A 153 M FOR EXTERIOR INSTALLATIONS AND WHEN PENETRATING PRESSURE TREATED OR FIRE-RETARDANT LUMBER IS USED.
 - BOLTS AND THREADED RODS: ASTM A307, SQUARE OR HEXAGONAL HEAD MACHINE BOLTS WITH ASTM A563 NUTS. USE MALLEABLE IRON WASHERS UNDER HEAD AND NUT WHEN IN CONTACT WITH WOOD. AT SILL PLATES USE 3"x3"x1/4" MINIMUM PLATE WASHERS. VERIFY PLATE WASHER SIZE PER LOCAL JURISDICTION.
 - LAG SCREWS: ASTM A307, ANSI/ASME STANDARD B18.2.1. USE ANSI B18.22.1 WASHERS UNDER HEAD WHEN IN CONTACT WITH WOOD.
 - SCREWS: ASTM A307, ANSI/ASME STANDARD B18.6.1. USE CADMIUM-PLATED PAN OR ROUND HEADED SCREWS AT STEEL TO WOOD AND WOOD TO WOOD CONNECTIONS.
 - MISCELLANEOUS STEEL: ASTM A36.
 - BOLTS, NUTS, WASHERS, STRAPS AND OTHER HARDWARE EXPOSED TO THE WEATHER TO BE HOT-DIPPED GALVANIZED PER ASTM A 653/A 653 M OR STAINLESS STEEL.
 - FRAMING CLIPS, SHEET METAL STRAPS, ETC.: SIMPSON, UNIVERSAL, OR SILVER, WITH ICBO REPORTS. DESIGNATIONS ON DRAWINGS ARE BASED ON SIMPSON CATALOGUE NUMBERS.

- NAILING:
 - DRIVE NAILS PERPENDICULAR TO THE GRAIN, U.O.N.
 - PREDRILL HOLES TO 3/4 OF NAIL DIAMETER WHERE SPECIFIED AND WHEN WOOD TENDS TO SPLIT.
 - AIR-DRIVEN NAILS TO BE FULL-HEADED NAILS. DO NOT OVERDRIVE NAILS.

D. PANEL SHEATHING:

- AT FLOOR AND ROOF SHEATHING, USE RING SHANK NAILS. USE SMOOTH SHANK NAILS AT WALLS.
- USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOB SITE DEMONSTRATION FOR EACH PROJECT AND APPROVAL BY THE OWNER'S REPRESENTATIVE. NAILHEADS THAT PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF THE MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE INSTALLATION IS UNSATISFACTORY. MACHINE NAILING IS NOT APPROVED IN 5/16" OR LESS SHEATHING.
- GLUE FLOOR SHEATHING AT ALL POINTS OF CONTACT.

E. MINIMUM NAILING TO BE AS FOLLOWS, UNLESS OTHERWISE NOTED:

- 2X JOISTS OR RAFTERS TO SIDES OF STUDS:
8 INCH DEPTH OR LESS 3-16d
FOR EACH ADD'L 4 INCH IN DEPTH OF JOIST ADD'L 1-16d
- JOISTS OR RAFTERS AT ALL BEARINGS:
TOENAILS 2-8d EACH SIDE
- STUDS TO BEARING:
TOENAILS 2-8d EACH SIDE
END NAIL @ 2X 2-16d
END NAIL @ 3X 2-20d
- BLOCKING BETWEEN JOISTS OR RAFTERS:
TOENAILS EACH END 3-8d EACH SIDE
- CROSS-BRIDGING BETWEEN JOISTS OR RAFTERS:
TOENAILS EACH END 2-8d
HERRINGBONE BLOCKING 2-10d
- DOUBLE TOP PLATES:
LOWER PLATE TO TOP OF STUD 2-16d
UPPER PLATE TO LOWER PLATE STAGGERED 16d @ 16" O.C.
- DOUBLE 2X JOISTS:
STAGGERED 2 ROWS 16d @ 12" O.C.
- CONTINUOUS CONTACTS:
ALL OTHER WOOD CONTACTS: 16d MIN. @ 12" O.C.
2-8d @ 1" MATERIAL
2-16d @ 2" MATERIAL
2-40d @ 3" MATERIAL
- WHERE BLOCKED APART, @ EACH BLOCK 2-16d
- BUILT-UP STUDS, GIRDERS AND BEAMS:
CORNER STUDS: 16d @ 24" O.C.
GIRDERS & BEAMS: 20d @ 32" O.C. TOP & BOTTOM
AND STAGGERED 2-20d @ EACH SPLICE & ENDS

- PROVIDE MINIMUM NAILING PER TABLE 2304.9.1 OF THE CODE, U.O.N.
- BOLT AND SCREW INSTALLATION:
 - DRILL BOLT HOLES A MAXIMUM OF 1/16 INCH LARGER IN DIAMETER THAN THE BOLT NOMINAL DIAMETER.
 - DRILL PRE-BORED LEAD HOLES FOR WOOD SCREWS AS FOLLOWS.
 - DRILL LEAD HOLE FOR THE SHANK TO A DEPTH EQUAL TO THE LENGTH OF THE UNTHREADED PORTION IN THE MAIN MEMBER. USE A DRILL BIT 7/8 THE DIAMETER OF THE WOOD SCREW.
 - EXTEND THE LEAD HOLE FOR THE THREADED PORTION OF THE SCREW WITH A DRILL BIT WHOSE DIAMETER IS 7/8 THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD.
 - INSERT THE SCREW INTO LEAD HOLE BY TURNING. DO NOT DRIVE WITH A HAMMER.
 - LUBRICATE WITH SOAP OR BEESWAX TO FACILITATE INSTALLATION.
- DRILL PRE-BORED LEAD HOLES FOR LAG SCREWS AS FOLLOWS.
 - DRILL LEAD HOLE FOR THE SHANK TO A DEPTH EQUAL TO THE LENGTH OF THE UNTHREADED PORTION IN THE MAIN MEMBER. USE A DRILL BIT OF THE SAME DIAMETER AS THE LAG SCREW.
 - EXTEND THE LEAD HOLE FOR THE THREADED PORTION OF THE LAG SCREW WITH A DRILL BIT WHOSE DIAMETER IS 60 PERCENT OF THE NOMINAL LAG SCREW DIAMETER.
 - INSERT LAG SCREW INTO LEAD HOLE BY TURNING. DO NOT DRIVE WITH A HAMMER.
 - LUBRICATE WITH SOAP OR BEESWAX TO FACILITATE INSTALLATION.
- INSTALL SOLID BLOCKING BETWEEN JOISTS AT ENDS AND OVER SUPPORTS. PROVIDE 2 INCH BY 3 INCH CROSS BRIDGING, METAL BRIDGING, OR SOLID BLOCKING BETWEEN JOISTS IN SPANS EQUALLY SPACED 8 FEET ON CENTER MAXIMUM AND WHERE INDICATED.
- DO NOT USE WOOD SHINGLE SHIMS UNDER STUDS, JOISTS, BEAMS, OR POSTS.

VII. STRUCTURAL TESTS, INSPECTIONS, AND OBSERVATIONS

- AN INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTORS WILL BE RETAINED BY THE OWNER TO PERFORM THE FOLLOWING TESTS AND INSPECTION. PROVIDE ACCESS AND FURNISH SAMPLES TO THE AGENCY AS REQUIRED BY THE CONTRACT DOCUMENTS.
- IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.
- THE FOLLOWING ITEMS REQUIRE TESTS AND INSPECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CHAPTER 'STRUCTURAL TESTS AND INSPECTIONS' OF THE CODE OF THE GOVERNING JURISDICTION AS NOTED IN THE GENERAL SECTION OF THESE GENERAL NOTES. ADDITIONAL ITEMS AND REQUIREMENTS FOR TESTS AND INSPECTIONS ARE IDENTIFIED IN THE SPECIFICATIONS.

Continuous	Periodic	STRUCTURAL STEEL
	✓	Review Mill Certificates & Test Reports
	✓	Identification Markings
		Sample & Test Sections <input checked="" type="checkbox"/> As Specified
	✓	Field Erection Inspection
	✓	Fabrication Inspection
	✓	Review Welding Procedure Specification & Welder Certifications
✓		Welding Inspection - Complete & Partial Joint Penetration Groove
✓		Welding Inspection - Multi-Pass Fillet & > 5/16" Fillet
✓		Welding Inspection - Plug & Slot
✓		Welding Inspection - Single-Pass & < 5/16" Fillet
✓		Non-Destructive Weld Test <input checked="" type="checkbox"/> Shop <input checked="" type="checkbox"/> Field
✓		Review Compliance Certificates for Weld Filler Material
✓		High-Strength Bolts, Nuts & Washer Identification Markings
✓		High-Strength Bolts, Nuts & Washer Manufacturer's Certificate of Compliance
✓		Bolting Inspection - Snug-Tight Joints
✓		Bolting Inspection - Pre-Tensioned & Slip-Critical With Indicator
✓		Bolting Inspection - Pre-Tensioned & Slip-Critical Without Indicator
✓		Composite Stud Inspection & Testing
✓		Steel Frame Joint Detail Inspection
Continuous	Periodic	REINFORCING STEEL
	✓	Review Mill Certificates & Test Reports
	✓	Sample & Test Reinforcing Bars
	✓	Sample & Test Reinforcing Wire Fabric
	✓	Placement Inspection
✓		Welding Inspection - Moment Frames & Boundary Zone Reinforcement
✓		Welding Inspection - Shear Reinforcement
✓		Welding Inspection - Other
✓		Test Existing Reinforcement for Weldability
Continuous	Periodic	STRUCTURAL LUMBER
	✓	Review Certificates & Test Reports
	✓	Sample & Test Timber Connectors
✓		Fabrication Inspection - Glulam
✓		Fabrication Inspection - Trusses
✓		Fabrication Inspection - Open Web Joist
✓		Field Erection Inspection
✓		Diaphragm & Shear Wall Nailing
✓		Bolting of Drag Struts & Hold Downs
Continuous	Periodic	CONCRETE & SHOTCRETE
	✓	Mix Design Review
	✓	Batch Plant Inspections
✓		Sample & Test (Cast, Pick-Up, & Compression)
✓		Slump, Entrained Air, & Temperature Test (At time of Sampling)
		Unit Weight Test <input type="checkbox"/> Wet <input type="checkbox"/> Dry
		Shrinkage Test
✓		Inspection of Formwork for Shape, Locations & Dimensions
✓		Placement Inspection
✓		Inspection for Proper Application Technique
✓		Inspection for Curing Maintenance & Temperature
✓		Core & Test
✓		Cast-in-Place Anchors
✓		Post-Installed Anchors
✓		Application of Pre-stressing Forces
✓		Erection of Precast Concrete Members
Continuous	Periodic	GROUT & MORTAR
	✓	Cement Test
	✓	Mix Design Review
	✓	In-situ Mix Proportion Review
	✓	Shrinkage Test
	✓	Core & Test

- THE REQUIREMENTS FOR TESTING AND INSPECTION LISTED ABOVE MAY CHANGE DUE TO THE METHOD OF CONSTRUCTION SELECTED BY THE CONTRACTOR.
- THE TESTING AGENCY AND SPECIAL INSPECTOR SHALL REVIEW CONSTRUCTION DOCUMENTS AND COORDINATE WITH CONTRACTOR TO DEVELOP A PLAN FOR TESTING AND INSPECTION. SUBMIT THE PLAN FOR TESTING AND INSPECTION TO OWNER'S REPRESENTATIVE FOR REVIEW.



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REVISIONS		

RANCHO LOS ALAMITOS
ADOBE SEISMIC PHASE 3
VOLUNTARY UPGRADE

6400 BIXBY HILL ROAD
LONG BEACH
CALIFORNIA

SHEET TITLE

GENERAL
STRUCTURAL NOTES
CONTINUED

ISSUANCE

DATE

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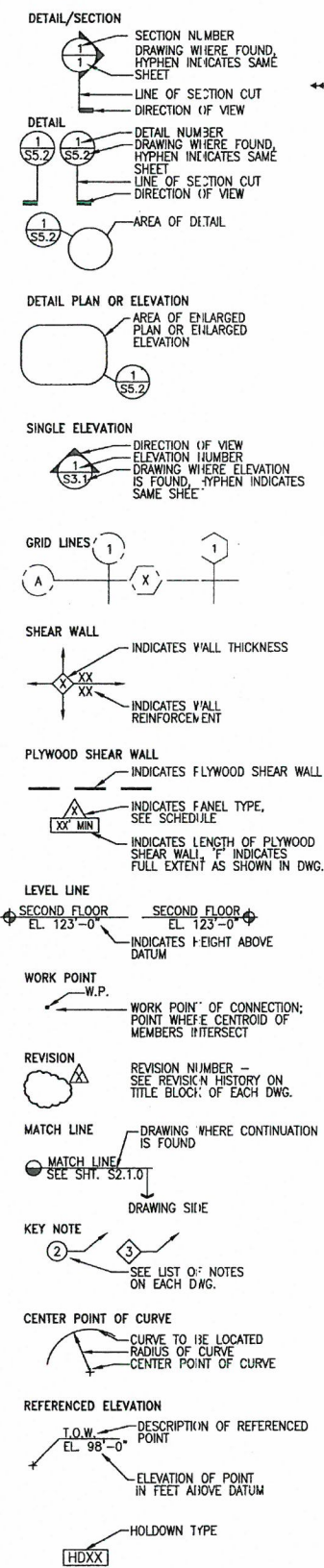


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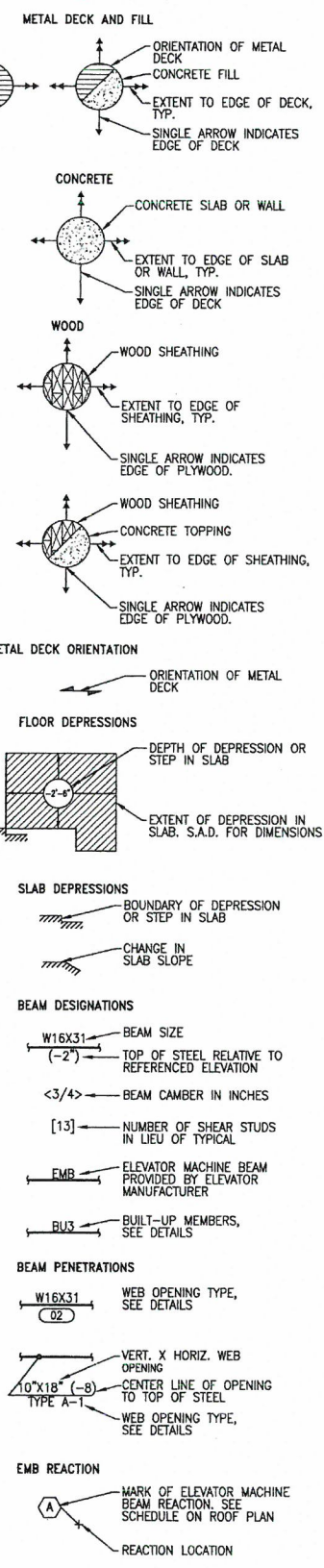
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SYMBOLS

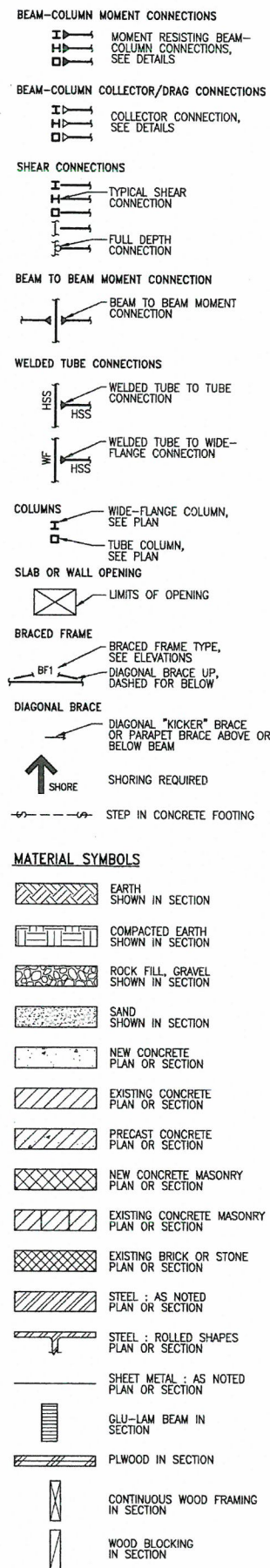
REFERENCE SYMBOLS



PLAN SYMBOLS



PLAN SYMBOLS cont'd



ABBREVIATIONS

(E)	EXISTING	dh	HOOK DEVELOPMENT LENGTH
(N)	NEW	LEV	LEVEL
1	NUMBER	LLBB	LONG LEG BACK TO BACK
2	AND	LLH	LONG LEG HORIZONTAL
3	AT	LLV	LONG LEG VERTICAL
A.A.	ADHESIVE ANCHOR	LOC	LOCATION
A.B.	ANCHOR BOLT	LONGIT	LONGITUDINAL
ABV	ABOVE	L.P.	LOW POINT
ADD'L	ADDITIONAL	LS	LAP SPICE LENGTH
ADJ	ADJACENT	LSL	TIMBERSTRAND, LAMINATED STRAND LUMBER
AGGR	AGGREGATE	LT	LIGHT
AL	ALUMINUM	LVL	MICROLLAM, LAMINATED VENEER LUMBER
ALT	ALTERNATE	LWC	LIGHT WEIGHT CONCRETE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MAX	MAXIMUM
APPROX	APPROXIMATE	M.B.	MACHINE BOLT
ARCH	ARCHITECTURAL	MECH	MECHANICAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING
A.C.	ASPHALT CONCRETE	MEZZ	MEZZANINE
AWG	AMERICAN WIRE GAUGE	MFR	MANUFACTURER
BET	BETWEEN	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BLKG	BLOCKING	MTD	MOUNTED
BM or BMS	BEAM or BEAMS	MTL	METAL
B.N.	BOUNDARY NAILING	N	NORTH
B.O.	BOTTOM OF FOOTING	N.F.	NEAR FACE
BOT	BOTTOM	N.I.C.	NOT IN CONTRACT
BP	BASE PLATE	NO. or #	NUMBER
BRG	BEARING	NOM	NOMINAL DIAMETER
B.S.	BOTH SIDES	N.S.	NEAR SIDE
BSMT	BASEMENT	N.T.S.	NOT TO SCALE
CH	CHANNEL	NWC	NORMAL WEIGHT CONCRETE
CIP	CAST IN PLACE	O.C.	ON CENTER
C.J.	CONSTRUCTION JOINT	O.D.	OUTSIDE DIAMETER (DIM)
CL or CLG	CENTERLINE	O.H.	OPPOSITE HAND
CLR	CLEAR	OPNG	OPENING
C.M.U.	CONCRETE MASONRY UNIT	OPP	OPPOSITE
COL	COLUMN	OWSG	OPEN WEB STEEL GIRDER
CONC	CONCRETE	OWSJ	OPEN WEB STEEL JOIST
CONN	CONNECTION	PC or PCS	PERPENDICULAR
CONSTR	CONSTRUCTION	PERP	PERPENDICULAR
CONT	CONTINUOUS	PL	PLATE
CP	COMPLETE PENETRATION	PLYWD	PLYWOOD
CSK	COUNTERSINK	PP	PARTIAL PENETRATION
CTR	CENTER	PR	PAIR
d	PENNY (NAIL SIZE)	PRCST	PRE CAST
DBL	DOUBLE	PSL	PARALLAM, PARALLEL STRAND LUMBER
DEMO	DEMOLITION	PT	POINT
DET or DETS	DETAIL or DETAILS	PTN	PARTITION
DIAG	DIAGONAL	R or RAD	RADIUS
DIA or Ø	DIAMETER	REBAR	REINFORCING BAR
DIM or DIMS	DIMENSION or DIMENSIONS	REF	REFERENCE
DIST	DISTANCE	REINF	REINFORCED or REINFORCING
DK or DKG	DECK or DECKING	REQ'D	REQUIRED
DN	DOWN	REV	REVISE OR REVISION
DO	DITTO	RFB	ROUGH OPENING
DWG or DWGS	DRAWING or DRAWINGS	R.O.	ROLLED STEEL JOIST
DWL or DWLS	DOWEL or DOWELS	RSJ	SEE ARCH. DOCUMENTS
EA	EACH	S.A.D.	SCHEDULE SECTION
E.A.	EACH FACE	SCHED	SCHEDULE
E.F.	EXPANSION JOINT	SECT	SECTION
E.J.	ELEVATION	SHT	SHEET
EL	ELEVATOR	SHTG	SHEATHING
ELEC	ELECTRICAL	SIM	SIMILAR
ELEV	ELEVATOR	SL	SLOPE
EMBED	EMBEDMENT	S.M.S.	SHEET METAL SCREW
E.N.	EDGE NAILING	S.O.G.	SLAB ON GRADE
E.O.S.	EDGE OF SLAB	SPEC	SPECIFICATION or SPECIFICATIONS
EQ	EQUAL	SQ	SQUARE
EQUIP	EQUIPMENT	S.S. or SST	STAINLESS STEEL
E.S.	EACH SIDE	STAG	STAGGER or STAGGERED
EV	EVERY	STD	STANDARD
E.W.	EACH WAY	STIFF	STIFFENER
EXCAV	EXCAVATE or EXCAVATION	STR	STIRRUP or STIRRUPS
EXP	EXPANSION	STR	STEEL
EXT	EXTERIOR	STRUC	STRUCTURAL
FDN	FOUNDATION	SUBST	SUBSTITUTE
F.F.	FAR FACE	SUSP	SUSPENDED
FIN	FINISH	SYM	SYMMETRICAL
FLR or FLRS	FLOOR or FLOORS	T&B	TOP AND BOTTOM
F.N.	FACE OF	T&G	TONGUE AND GROOVE
F.O.	FACE OF CONCRETE	THK	THICK
F.O. CONC	FACE OF CONCRETE	THRD	THREADED
F.O. STUD	FACE OF STUDS	THRU	THROUGH
FPRF	FIREPROOFING	T.O.	TOP OF
F.S.	FAR SIDE	T.O. B.P.	TOP OF BASE PLATE
FT	FOOT AND FEET	T.O. CONC	TOP OF CONCRETE
FTG or FTGS	FOOTING or FOOTINGS	T.O. STL	TOP OF STEEL
GA	GAUGE	T.O. SLAB	TOP OF STRUCTURAL SLAB
GALV	GALVANIZED	TRANS	TRANSVERSE
GL	GLASS or GLAZING	TR	TREAD
GLB	GLU-LAM BEAM	TS	TUBE STEEL
GRND	GROUND	TYP	TYPICAL
GR	GRADE	U.O.N.	UNLESS OTHERWISE NOTED
GYP BD	GYPSON BOARD	URM	UNREINFORCED MASONRY
HD	HOLDOWN	VENT	VENTILATE
H.D.G.	HOT DIPPED GALVANIZED	VERT or (V)	VERTICAL
HDR	HEADER	V.F.	VERIFY IN FIELD
HK or HKS	HOOK or HOOKS	W/F.	WITH
HORIZ or (H)	HORIZONTAL	W/O	WITHOUT
H.P.	HIGH POINT	W or WF	WIDE FLANGE
H.S.B.	HIGH STRENGTH BOLTS	WD	WOOD
HSS	HOLLOW STRUCTURAL SECTION	WP	WORK POINT
HT	HEIGHT	WT	WEIGHT
I.D.	INSIDE DIAMETER	WWT	WELDED WIRE MESH
INFO	INFORMATION	X HVY	EXTRA HEAVY
JST or JSTS	JOIST or JOISTS	XX HVY	DOUBLE EXTRA HVY.
JT	JOINT	X STR	EXTRA STRONG
K.O.	KNOCK-OUT	XX STR	DOUBLE EXTRA STRONG
L	ANGLE		
Ld	DEVELOPMENT LENGTH		

GENERAL STRUCTURAL NOTES CONTINUED

VII. STRUCTURAL TESTS, INSPECTIONS, AND OBSERVATIONS (CONT.)

6. THE CONTRACTOR SHALL NOTIFY STRUCTURAL FOCUS AT LEAST THREE BUSINESS DAYS IN ADVANCE OF THE SIGNIFICANT CONSTRUCTION STAGES NOTED BELOW AND PRIOR TO PLACING CONCRETE, APPLYING FIREPROOFING, DRYWALL, OR OTHERWISE COVERING THE STRUCTURAL ELEMENTS, AND SHALL THEN PROVIDE ACCESS FOR STRUCTURAL OBSERVATIONS. THIS NOTIFICATION REQUIREMENT SHALL APPLY TO ANY SITE VISIT OR ON SITE MEETING REQUESTED BY THE CONTRACTOR.

AS REQUIRED BY THE APPLICABLE BUILDING CODE, STRUCTURAL FOCUS WILL PERFORM A VISUAL OBSERVATION OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE WITH THE APPROVED CONTRACT DOCUMENTS AT SIGNIFICANT STAGES OF CONSTRUCTION. STRUCTURAL FOCUS WILL, BASED ON OUR JUDGMENT AS ENGINEER-OF-RECORD, DETERMINE WHICH STAGES OF CONSTRUCTION ARE SIGNIFICANT, AND COORDINATE STRUCTURAL OBSERVATION OF THOSE STAGES WITH THE GENERAL CONTRACTOR.

THE LIST OF STAGES OF CONSTRUCTION IDENTIFIED BELOW IS NOT INTENDED TO IMPLY THAT STRUCTURAL FOCUS WILL PROVIDE A STRUCTURAL OBSERVATION AT EACH AND EVERY OCCURRENCE. STRUCTURAL OBSERVATION MAY BE LIMITED TO THE FIRST SIGNIFICANT OCCURRENCE OF A PARTICULAR STAGE OF CONSTRUCTION. SIGNIFICANT STAGES OF CONSTRUCTION MAY INCLUDE THE FOLLOWING:

- A. PLYWOOD BOND BEAM INSTALLATION
- B. CHIMNEY BRACING

VIII. DESIGN CRITERIA

1. APPLICABLE CODE: 2013 CALIFORNIA HISTORIC BUILDING CODE

2. GRAVITY LOADS:

DEAD LOADS - VARY BASED ON ACTUAL BUILDING AND EQUIPMENT OPERATING WEIGHTS

6. SEISMIC DESIGN:

BASE SHEAR $V = 0.30 W$

WHERE:

- $R = 1.5$
- $I = 1.0$
- LATITUDE = 33.77676 DEGREES NORTH
- LONGITUDE = 118.10697 DEGREES WEST
- SITE CLASS = D
- SS = 1.561
- S1 = 0.580
- SDS = 1.041
- SD1 = 0.580

OUT OF PLANE
 $fp = CVX V = 0.375 v$



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NO.	DESCRIPTION	DATE
REVISIONS		

RANCHO LOS ALAMITOS

ADOBE SEISMIC PHASE 3
VOLUNTARY UPGRADE

6400 BIXBY HILL ROAD
LONG BEACH
CALIFORNIA

SHEET TITLE

GENERAL STRUCTURAL NOTES CONTINUED, SYMBOLS & ABBREVIATIONS

ISSUANCE

DATE

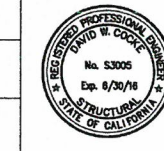
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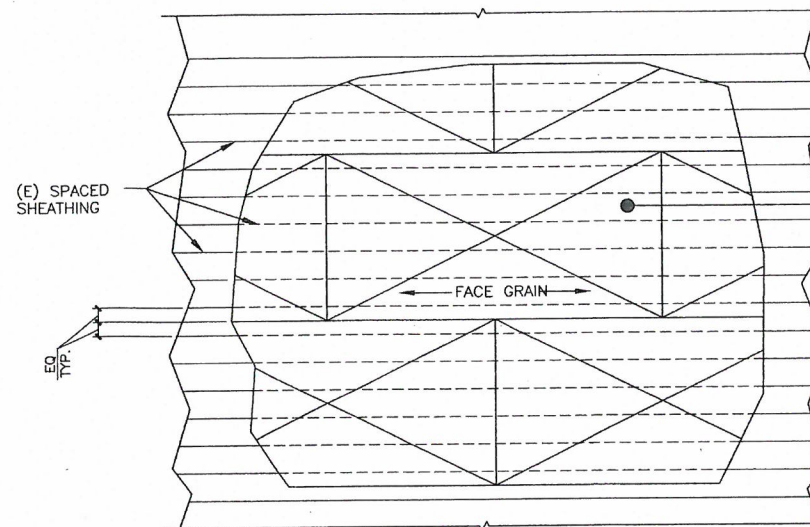


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(N) 1/2" OSB SHEATHING (4'x8' MIN). CENTER LONGITUDINAL EDGE OF PLYWOOD SHEATHING ON (E) STRAIGHT SHEATHING. PROVIDE #6 x 1 1/4" SCREWS @ 6" O.C. @ PANEL EDGES W/ #6 x 1 1/4" SCREWS @ 12" O.C. FIELD SCREWING.

- NOTES:
 1. APPLY PLYWOOD SHEATHING WITH FACE GRAIN PARALLEL TO (E) SHEATHING U.O.N. ON PLANS.
 2. STAGGER 4'-0" EDGES AS SHOWN.
 3. NEW SHEATHING TO BE OBSERVED BY EOR PRIOR TO INSTALLATION OF ROOFING MATERIAL.

5 PLYWOOD SHEATHING OVER (E) SPACED SHEATHING AT ROOF
 N.T.S.

PLAN CHECK 01-19-15

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RANCHO LOS ALAMITOS
 ADOBE SEISMIC PHASE 3
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6400 BIXBY HILL ROAD
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SHEET TITLE

TYPICAL WOOD
 DETAILS

ISSUANCE

DATE

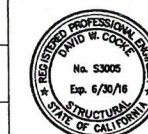
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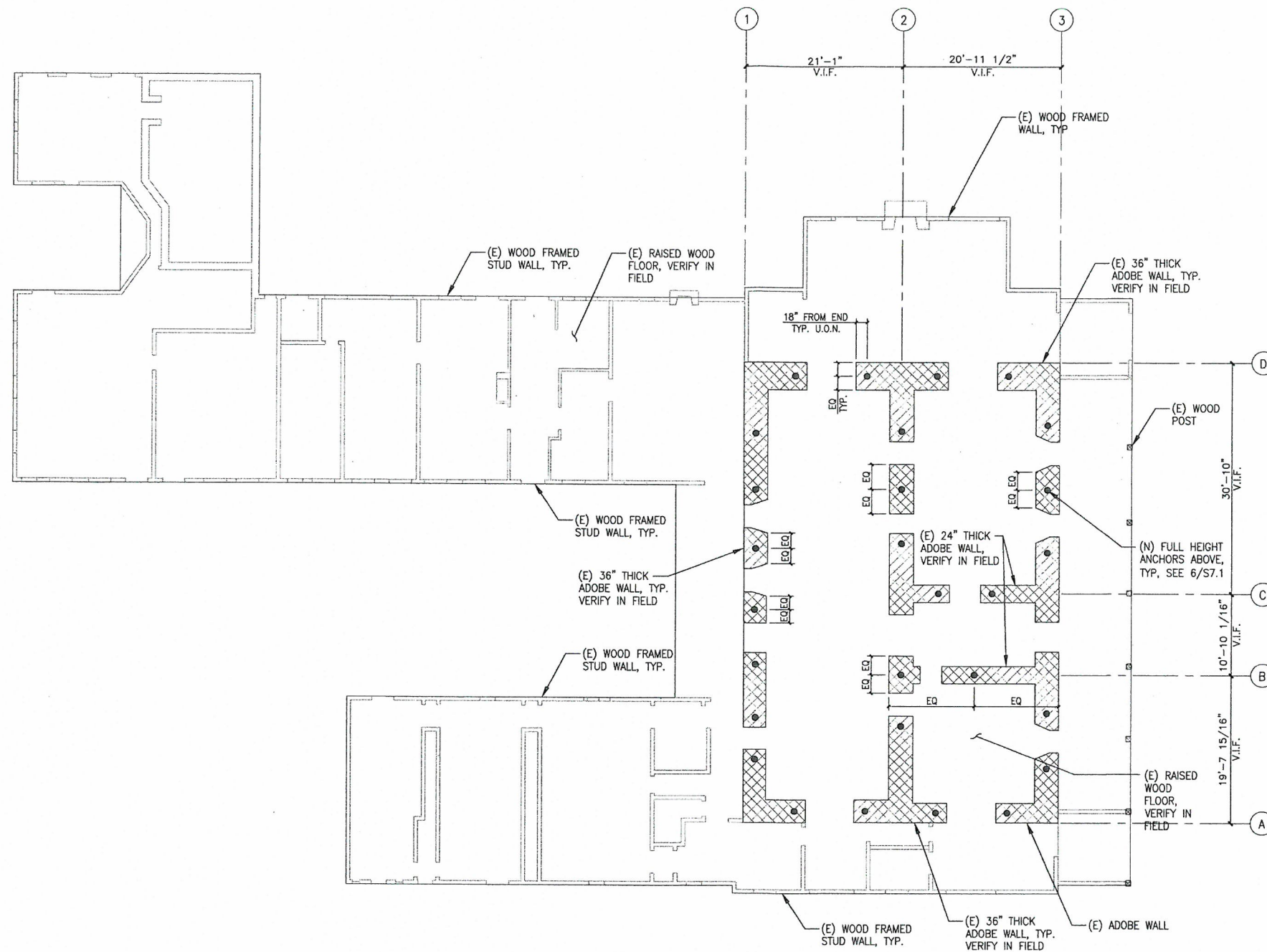


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- NOTES:
1. CONTRACTOR TO VERIFY LOCATION AND DIMENSIONS OF (E) ADOBE WALLS IN FIELD PRIOR TO COMMENCING ANCHOR INSTALLATION.
 2. NOTIFY EOR & OWNER'S REP OF ANY (E) GUNITE MATERIAL ENCOUNTERED AT ADOBE WALLS, DO NOT REMOVE MATERIAL WITHOUT AUTHORIZATION.

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RANCHO LOS ALAMITOS
 ADOBE SEISMIC PHASE 3
 VOLUNTARY UPGRADE

6400 BIXBY HILL ROAD
 LONG BEACH
 CALIFORNIA

SHEET TITLE

FIRST FLOOR/
 FOUNDATION PLAN

ISSUANCE
DATE

PROJ. NO.	14128
DRAWN	
CHECKED	SOM



DRAWING NO.

S2.0

1 FIRST FLOOR/FOUNDATION PLAN
 1/8"=1'-0"

24"x36" OR 22"x34" SHEET SIZE. IF SHEET SIZE IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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RANCHO LOS ALAMITOS
 ADOBE SEISMIC PHASE 3
 VOLUNTARY UPGRADE

6400 BIXBY HILL ROAD
 LONG BEACH
 CALIFORNIA

SHEET TITLE

**SECOND FLOOR PLAN
 ANCHOR LAYOUT**

ISSUANCE

DATE

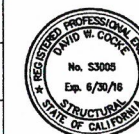
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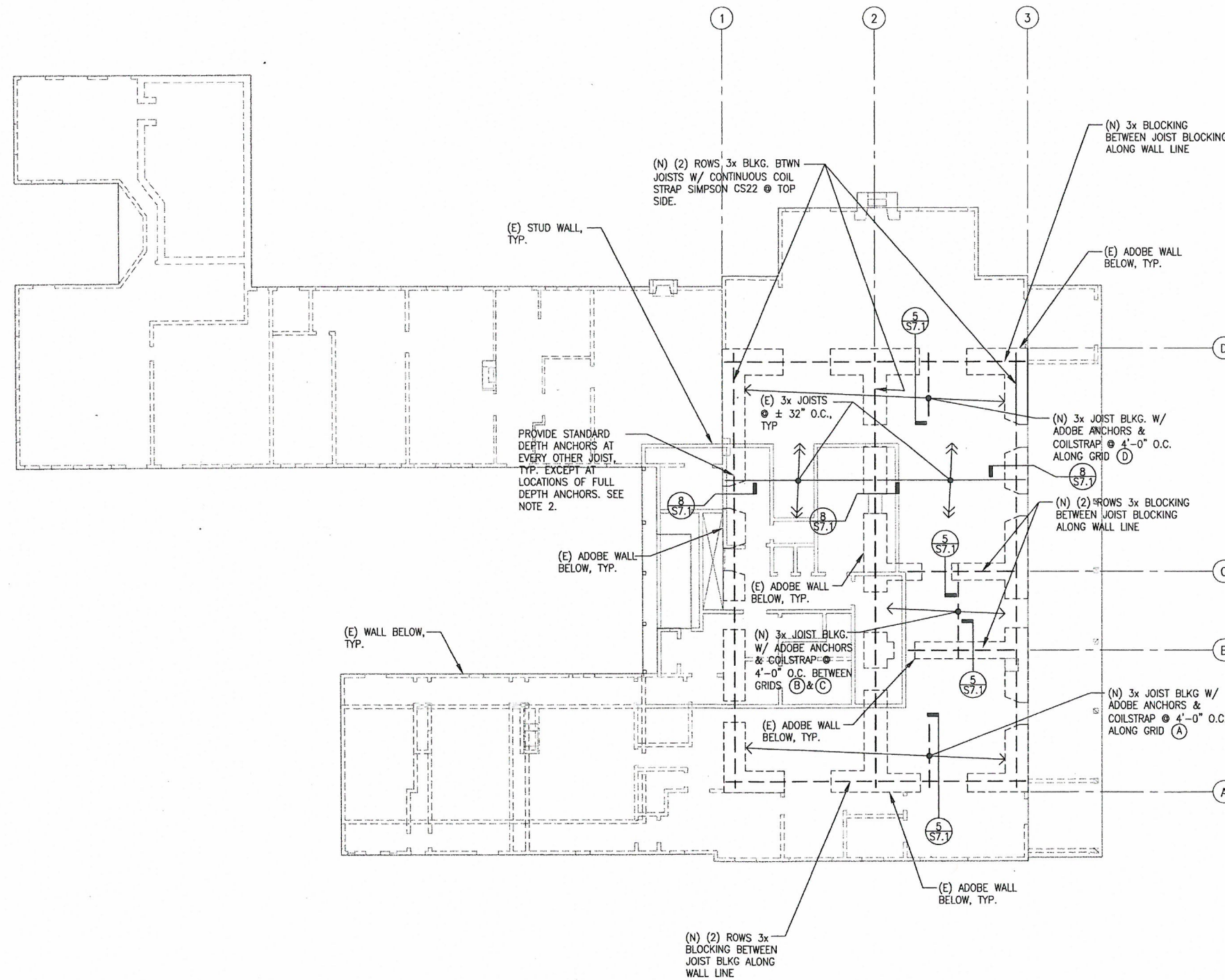
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SOM



DRAWING NO.

S2.1



- NOTES:**
- CONTRACTOR TO VERIFY LOCATION AND DIMENSIONS OF (E) ADOBE WALLS IN FIELD PRIOR TO COMMENCING ANCHOR INSTALLATION.
 - SEE SHEET S2.0 WHERE ADOBE ANCHORS SHALL BE FULL HEIGHT.
 - ALL (N) WOOD IN CONTACT W/ (E) ADOBE SHALL BE PRESSURE TREATED.

**1 SECOND FLOOR PLAN
 ANCHOR LAYOUT**
 1/8" = 1'-0"



24"x36" OR 22"x34" SHEET SIZE. IF SHEET SIZE IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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 FAX: 310.323.9925

PLAN CHECK 01-19-15

NO.	DESCRIPTION	DATE
REVISIONS		

RANCHO LOS ALAMITOS
 ADOBE SEISMIC PHASE 3
 VOLUNTARY UPGRADE

6400 BIXBY HILL ROAD
 LONG BEACH
 CALIFORNIA

SHEET TITLE

**SECOND FLOOR PLAN
 PLYWOOD LAYOUT**

ISSUANCE

DATE

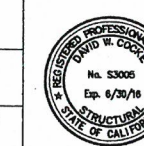
PROJ. NO.

14128

DRAWN

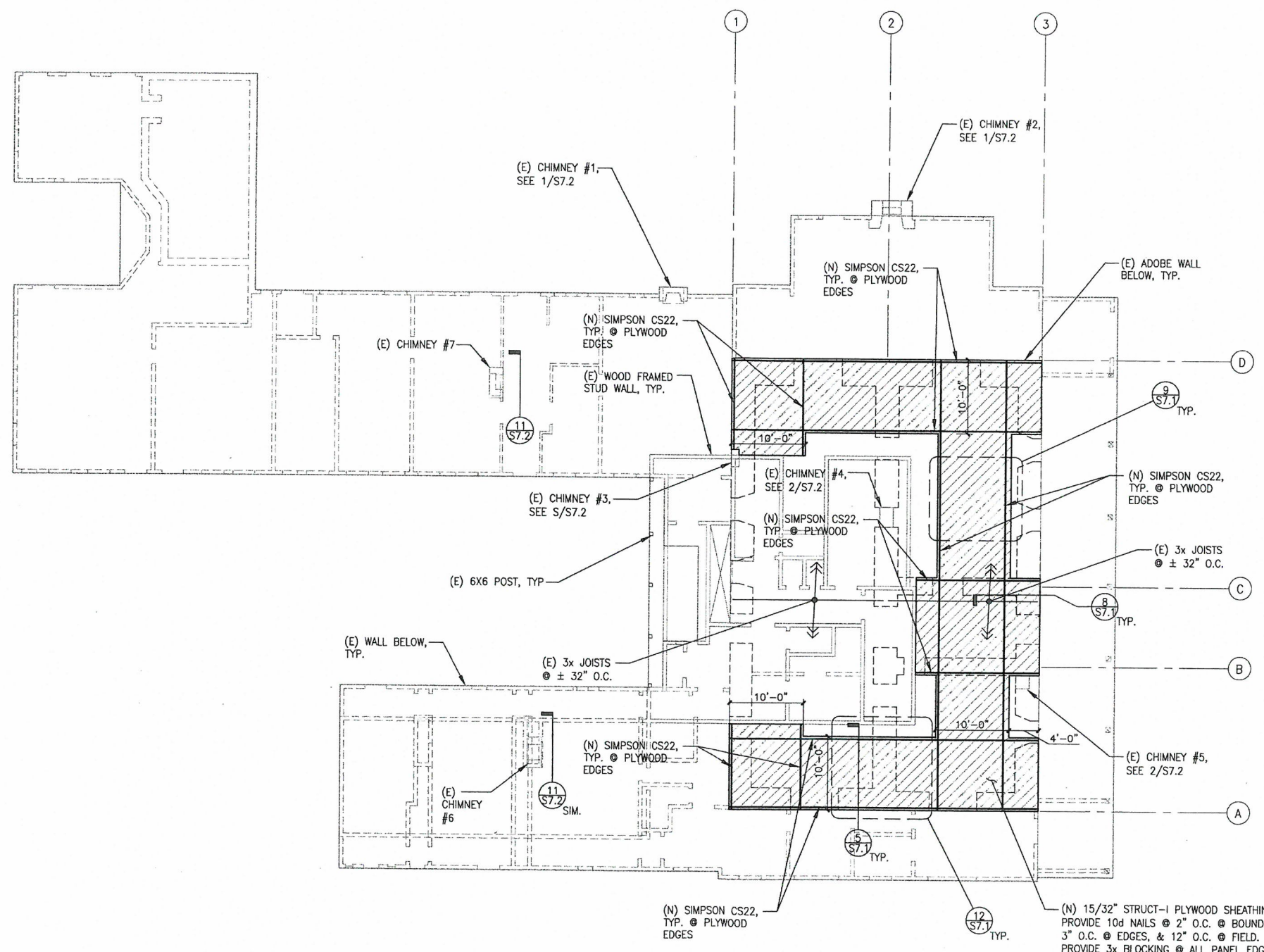
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SOM



DRAWING NO.

S2.2



- NOTES:
1. ALL (N) WOOD IN CONTACT W/ (E) ADOBE SHALL BE PRESSURE TREATED.
 2. SEE SHEET S2.1 FOR ADDITIONAL INFORMATION NOT SHOWN.

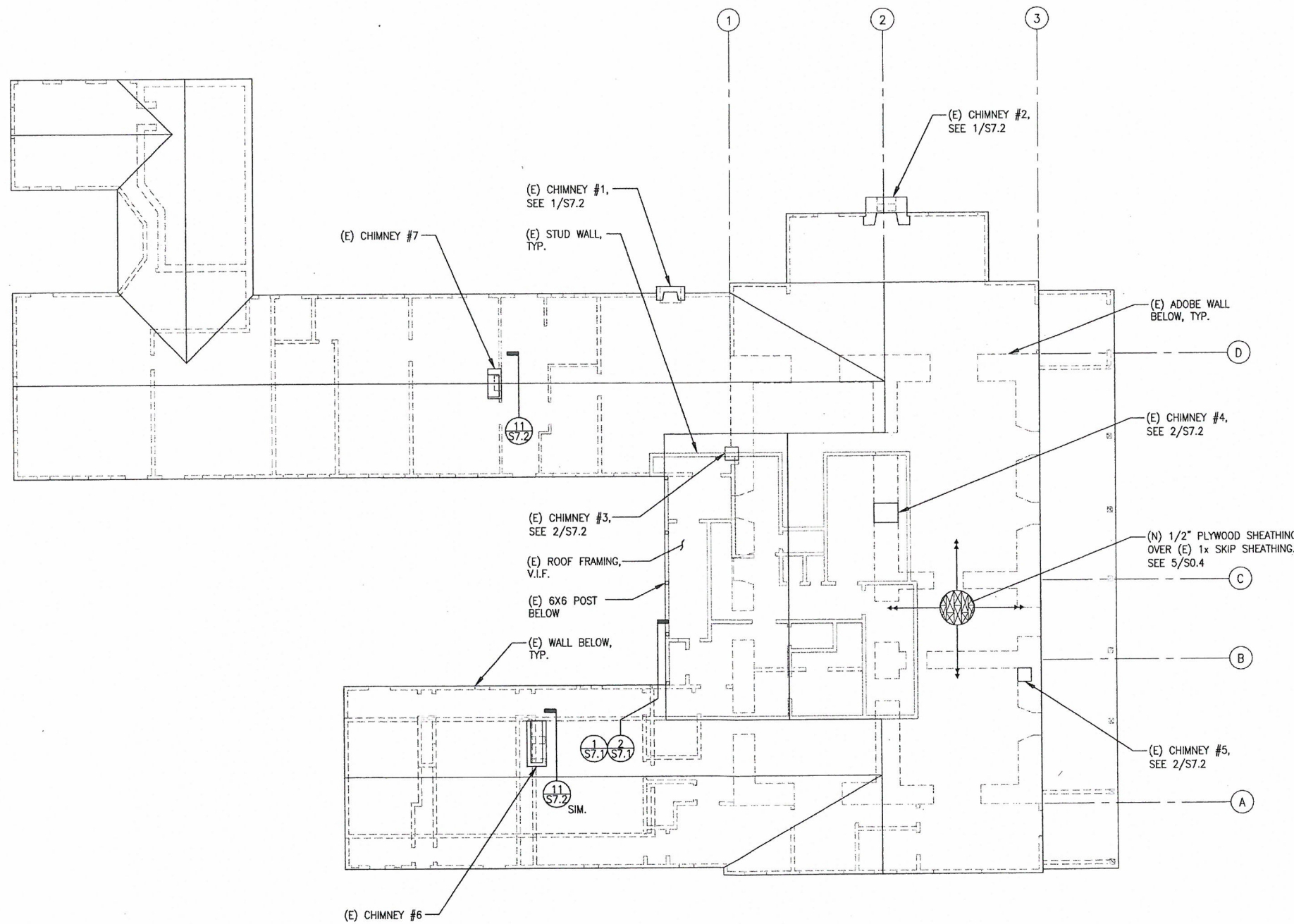
**1 SECOND FLOOR PLAN
 PLYWOOD LAYOUT**
 1/8" = 1'-0"



24"x36" OR 22"x34" SHEET SIZE. IF SHEET SIZE IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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RANCHO LOS ALAMITOS
 ADOBE SEISMIC PHASE 3
 VOLUNTARY UPGRADE

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 CALIFORNIA

SHEET TITLE

ROOF PLAN

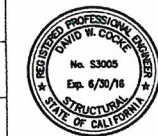
ISSUANCE

DATE

PROJ. NO.
 14128

DRAWN

CHECKED
 SOM



DRAWING NO.

S2.3

1 ROOF PLAN
 1/8"=1'-0"
 ↑ NORTH

24"x36" OR 22"x34" SHEET SIZE. IF SHEET SIZE IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



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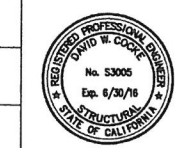
RANCHO LOS ALAMITOS

ADOBE SEISMIC PHASE 3
VOLUNTARY UPGRADE

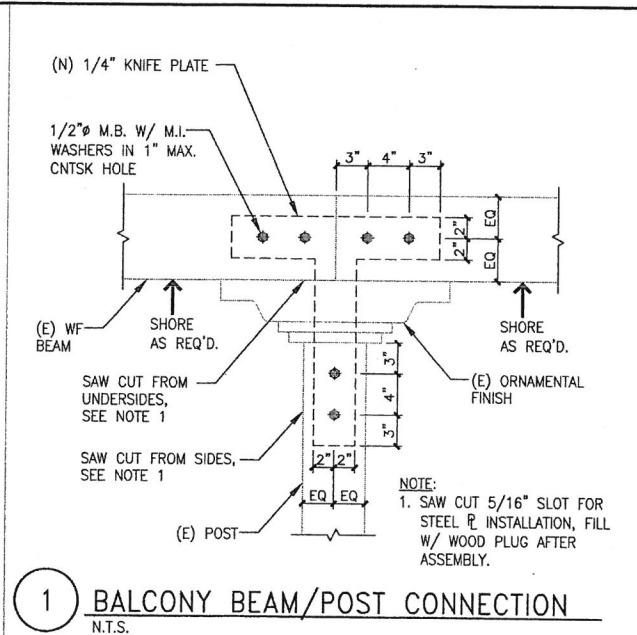
6400 BIXBY HILL ROAD
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CALIFORNIA

SHEET TITLE
DETAILS

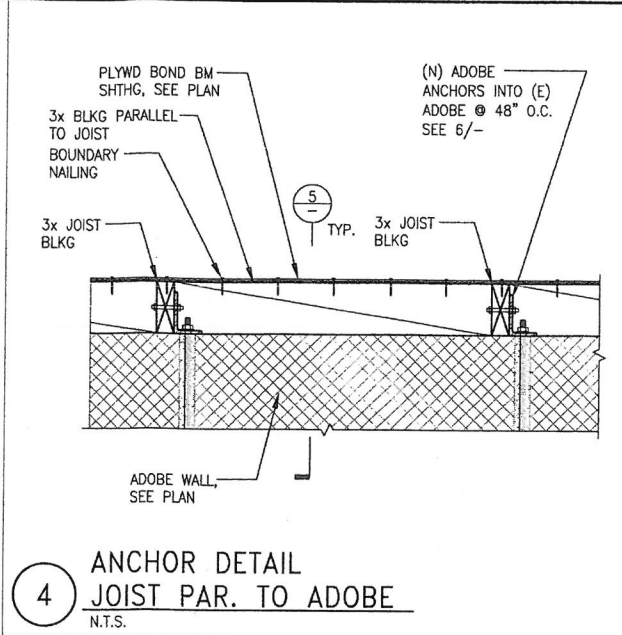
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DATE	
PROJ. NO.	14128
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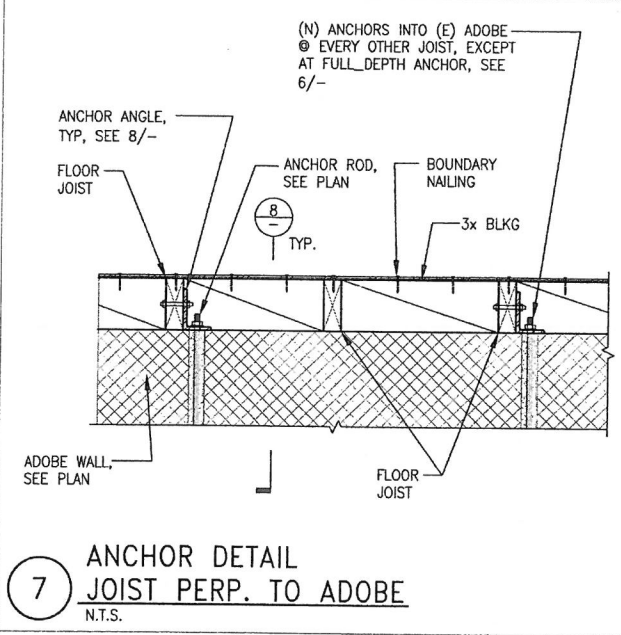
DRAWING NO.
S7.1



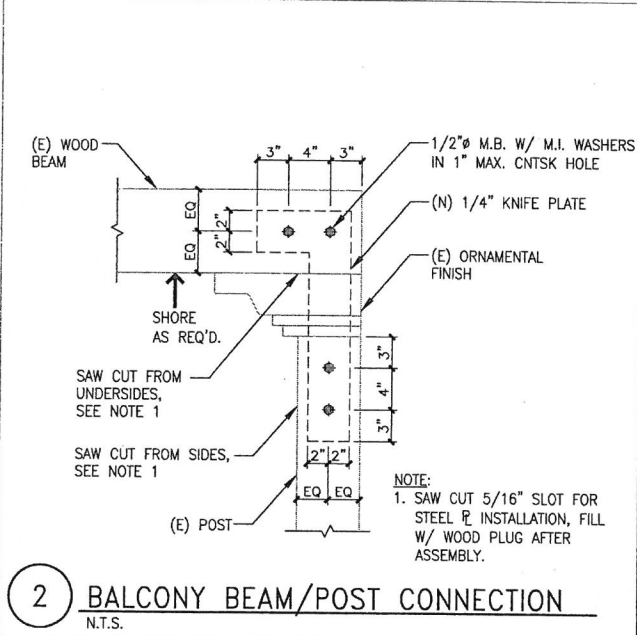
1 BALCONY BEAM/POST CONNECTION
N.T.S.



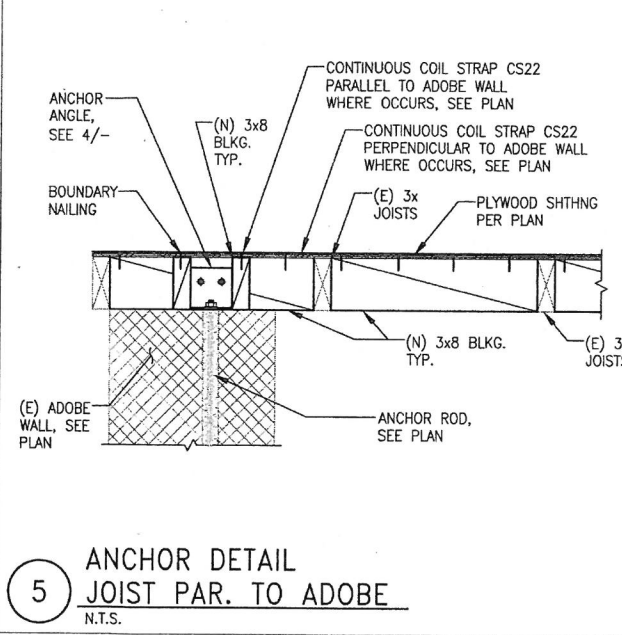
4 ANCHOR DETAIL JOIST PAR. TO ADOBE
N.T.S.



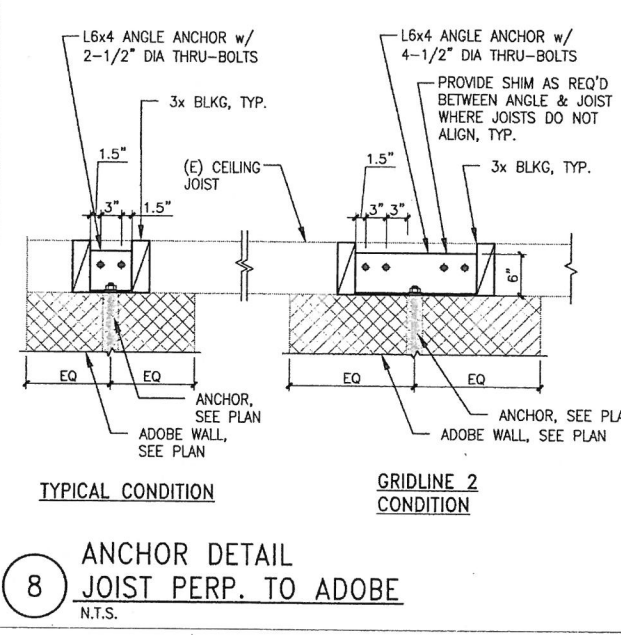
7 ANCHOR DETAIL JOIST PERP. TO ADOBE
N.T.S.



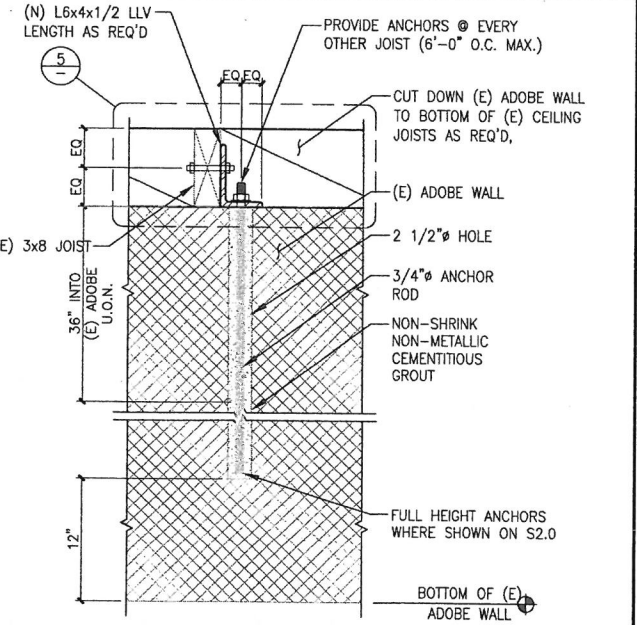
2 BALCONY BEAM/POST CONNECTION
N.T.S.



5 ANCHOR DETAIL JOIST PAR. TO ADOBE
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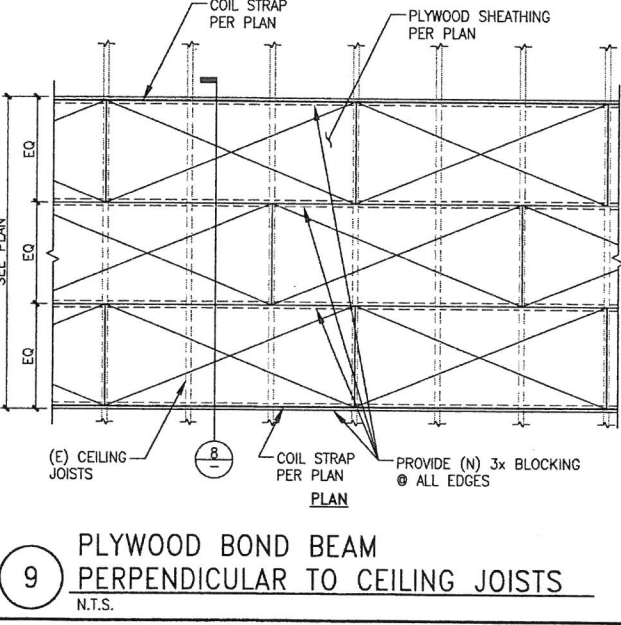


8 ANCHOR DETAIL JOIST PERP. TO ADOBE
N.T.S.

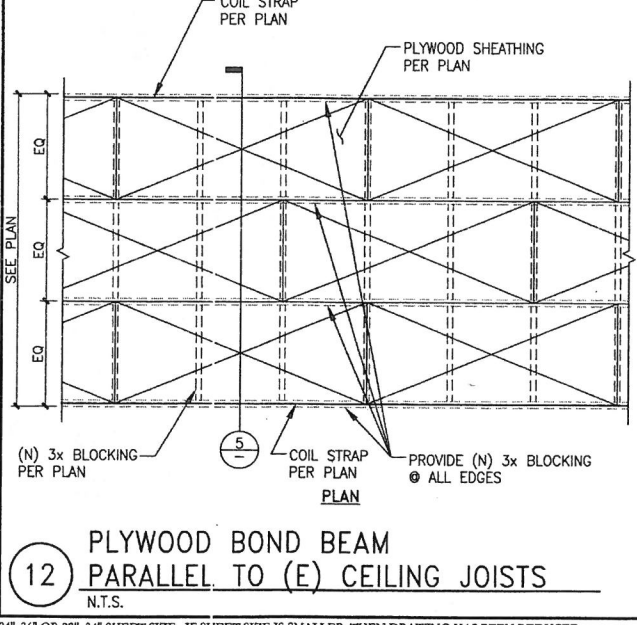


6 ADOBE ANCHORS
N.T.S.

- NOTES:**
1. DRILLING OF ANCHORS: NO WATER SHALL BE USED IN DRILLING THE CONCRETE BOND BEAMS OR THE ADOBE WALLS. IMPACT DRILLS SHALL NOT BE USED. NON-IMPACT ROTARY-TYPE DRILLS SHALL BE USED OR APPROVED EQUIVALENT.
 2. PRIOR TO ANCHOR INSTALLATION: AFTER THE ANCHOR HOLES ARE DRILLED, APPROVAL SHALL BE OBTAINED FROM THE INSPECTOR BEFORE THE ANCHORS ARE INSTALLED TO INSURE THE HOLES ARE ADEQUATELY CLEANED OUT.
 3. INSTALLATION OF RODS IN GROUTED HOLES: THE GROUT MAY BE VERY FLOWABLE AS PERMITTED BY THE MANUFACTURER. THE GROUT SHALL BE POURED INTO THE ANCHOR HOLE AND FILLED TO BE APPROXIMATELY 70 PERCENT FULL. PLACE THE ANCHOR ROD IN THE HOLE AND MOVE THE ANCHOR UP AND DOWN TO REMOVE ANY AIR POCKETS. WITH THE ANCHOR IN-PLACE, FILL THE REMAINING PORTION OF THE HOLE. THE ROD SHALL BE VISUALLY CENTERED IN THE HOLE AT THE TOP OF THE HOLE.
 4. SAMPLE INSTALLATION: ONE ANCHOR OF EACH TYPE (ONE SHORT ANCHOR AND ONE FULL-HEIGHT ANCHOR) SHALL BE USED AS A SAMPLE INSTALLATION FOR DRILLING. CLEANOUT AND PLACEMENT OF THE ANCHORS. AFTER INSPECTOR APPROVAL OF THE SAMPLE INSTALLATION, DRILLING FOR THE REMAINING ANCHORS MAY PROCEED.
 5. PLYWOOD BOND BEAM NOT SHOWN FOR CLARITY.

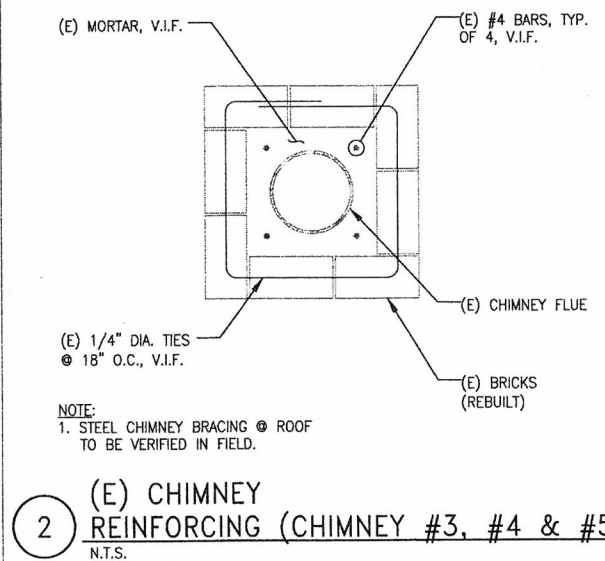
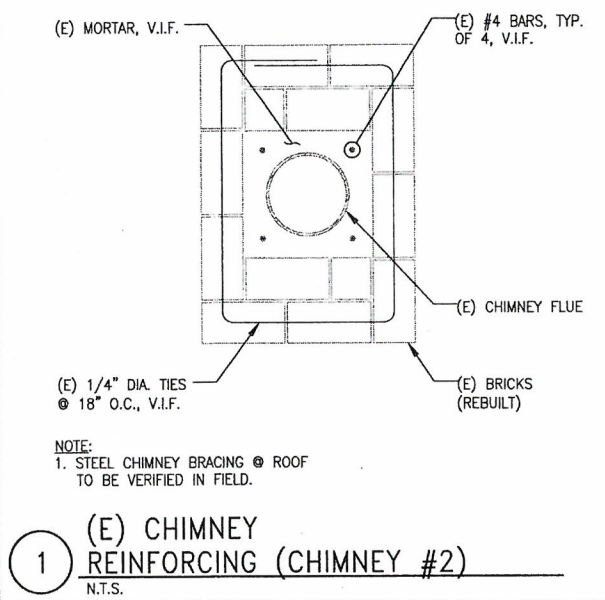
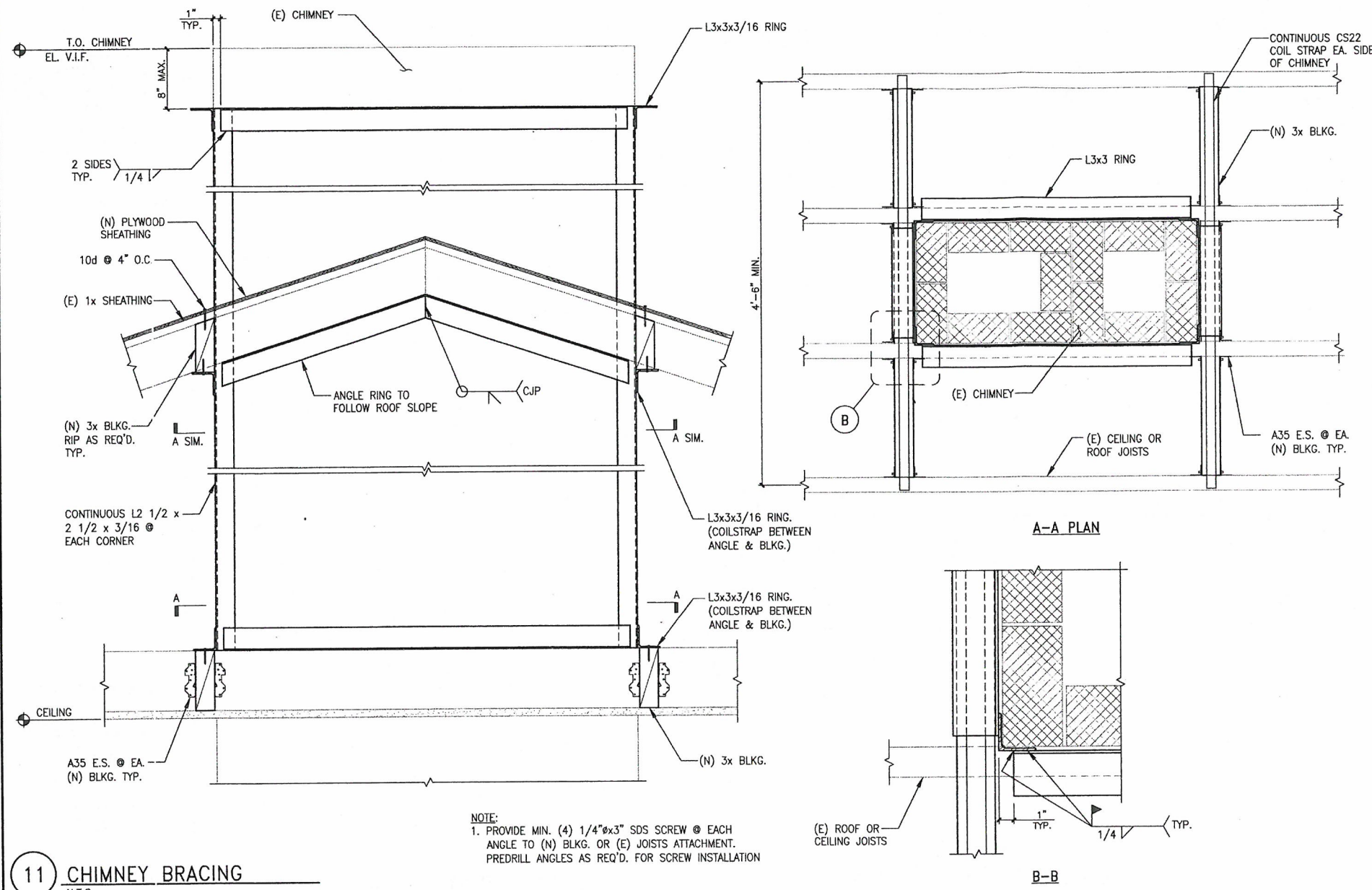


9 PLYWOOD BOND BEAM PERPENDICULAR TO CEILING JOISTS
N.T.S.



12 PLYWOOD BOND BEAM PARALLEL TO (E) CEILING JOISTS
N.T.S.

24"x36" OR 22"x34" SHEET SIZE. IF SHEET SIZE IS SMALLER, THEN DRAWING HAS BEEN REDUCED.



11 CHIMNEY BRACING
N.T.S.

1 (E) CHIMNEY REINFORCING (CHIMNEY #2)
N.T.S.

2 (E) CHIMNEY REINFORCING (CHIMNEY #3, #4 & #5)
N.T.S.

STRUCTURAL FOCUS
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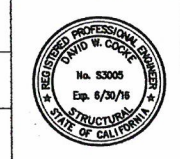
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