

### GENERAL NOTES

- THE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2010 EDITION OF TITLE 24, PART 2, CALIFORNIA BUILDING CODE AND AMENDMENTS.
- DETAILS AND NOTES SHALL APPLY UNLESS SPECIFICALLY SHOWN OTHERWISE. DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONDITIONS. DETAILS ON THIS SHEET ARE AT NO SCALE, UNLESS NOTED OTHERWISE.
- DO NOT SCALE STRUCTURAL DRAWINGS. IF DIMENSIONS OR DETAILS ARE NOT CLEAR, OR IF DISCREPANCIES EXIST ON THE DRAWINGS OR SPECIFICATIONS, CONTACT THE ARCHITECT.
- SEE MECHANICAL, ELECTRICAL AND/OR ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF PIPES, CONDUITS, FLOOR DRAINS, VENTS, DUCTS, DRAIN LEADERS AND OTHER SIMILAR OPENINGS NOT INDICATED ON THE STRUCTURAL DRAWINGS.
- SEE MECHANICAL, ELECTRICAL AND/OR ARCHITECTURAL DRAWINGS FOR EMBEDMENT OF BOLTS, ANCHORS AND OTHER MISCELLANEOUS EMBEDDED ITEMS NOT SHOWN ON STRUCTURAL DRAWINGS.

### WOOD NOTES

- UNLESS SPECIFICALLY SHOWN OTHERWISE, BOLTS WHERE CALLED FOR ON THE DRAWINGS SHALL BE MACHINE BOLTS CONFORMING TO ASTM A307.
- ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD.
- BOLTS AND SCREWS SHALL BE TIGHTENED AT TIME OF ERECTION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
- FRAMING ANCHORS AND CONNECTORS SHOWN ON THE DRAWINGS SHALL BE MANUFACTURED BY SIMPSON COMPANY, SAN LEANDRO, CA, OR EQUIVALENT. PROVIDE FASTENERS IN ACCORDANCE WITH MANUFACTURER'S CATALOG C-2011.
- SATISFACTORY INSTALLATION SHALL BE DEMONSTRATED ON THE JOB AND THE ACCEPTANCE OF THE ARCHITECT SHALL BE OBTAINED BEFORE THE USE OF MACHINE-APPLIED NAILS CAN BE APPROVED. APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE.
- NO UPSET THREADS ALLOWED ON ANCHOR BOLTS.
- ALL NAILS ARE COMMON NAILS.
- ALL BORED HOLES ARE (1/16 - 1/32) LARGER THAN BOLT SIZE.
- FRAMING LUMBER SHALL BE KILN DRIED OR MC-15, GRADE AND MARKED IN CONFORMANCE WITH WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) STANDARD GRADING RULES.
- ALL STRUCTURAL FRAMING LUMBER SHALL BE DOUGLAS FIR-LARCH (NORTH) NO.2 AND BETTER.
- ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE. ALL WOOD EXPOSED TO WEATHER WITHOUT THE ADEQUATE PROTECTION SHALL BE AN APPROVED WOOD OF NATURAL RESISTANCE TO DECAY OR PRESERVE TREATED.
- ALL ROOF JOISTS SHALL BE 1 1/2"x9 1/2" TIMBERSTRAND LSL, 1.5E.
- PLYWOOD SHEATHING SHALL BE STRUCTURAL I EXTERIOR GLUE IN CONFORMANCE WITH APA STANDARDS. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD. BOTH ROOF AND WALL SHEATHING SHALL BE 3/8" THICK MINIMUM.

### CONCRETE EPOXIED REBAR & BOLT NOTES

- EPOXY SHALL BE SIMPSON SET ADHESIVE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY, INC., 4637 CHABOT DRIVE, SUITE 200, PLEASANTON, CALIFORNIA, 94588. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND I.C.C. REPORT NO. ESR-1772.
- EMBEDMENT DEPTHS SHALL BE AS FOLLOWS:
 

REBAR SIZE	BOLT SIZE	MINIMUM EMBEDMENT*	TENSION TEST LOADS (LBS.)
# 3	3/8"	3 1/2"	4,096
# 4	1/2"	4 1/4"	7,220
# 5	5/8"	5"	11,784
# 6	3/4"	6 3/4"	16,916
# 7	7/8"	7 3/4"	20,808
# 8	1"	9"	25,016
- ALL EPOXIED BOLTS AND/OR REBAR SHALL BE INSPECTED BY AN APPROVED TESTING AND INSPECTION AGENCY AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE I.C.C. REPORT AND CBC SECTIONS 1923A.3.5 TO THE TENSION TEST VALUES STATED IN THE TABLE ABOVE. THE LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR, SUCH DIRECT PULL WITH A HYDRAULIC JACK, A TORQUE WRENCH CALIBRATED FOR THE USE WITH THE SPECIFIC ANCHOR, CALIBRATED SPRING-LOADED DEVICES, ETC.
- WHEN INSTALLING EPOXIED BOLTS AND/OR REBAR, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE EXISTING REINFORCEMENT AND THE EPOXIED BOLTS AND/OR REBAR.
- ANY REBAR/BOLTS SHOWN ON THE APPROVED PLANS AS BEING EPOXIED MAY BE EPOXIED WITH SPECIAL INSPECTION IN ACCORDANCE WITH SECT. 4.4 IN THE I.C.C. REPORT. ANY ITEMS THAT REQUIRE EPOXY BUT ARE NOT SPECIFICALLY SHOWN AS BEING EPOXIED ON THE APPROVED PLANS MUST BE IN ACCORDANCE WITH SECT. 4.2 OF THE I.C.C. REPORT PRIOR TO BEING INSTALLED.

- \* - SEE PLANS AND DETAILS FOR MINIMUM EMBEDMENT FOR HOLDOWN ANCHOR BOLTS.
- SEE DSA IR 19-1 FOR TEST CRITERIA
  - POST INSTALLED ANCHORS MUST BE COMPLIANT w/ THE FOLLOWING & HAVE CURRENT ICC-ESR
    - ACI 318-08, APPD.
    - ICC-AC 193
    - ICC-AC 308
 OTHERWISE R<sub>f</sub>=1.5

### 16 STRUCTURAL NOTES

S1.01 SD0000-02 SCALE: NO SCALE

### NAILING SCHEDULE

UNLESS SPECIFICALLY NOTED OTHERWISE, NAILING SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE, USING ONLY COMMON WIRE NAILS. NAILING NOT NOTED BELOW OR ON PLANS SHALL HAVE A MINIMUM OF 2 NAILS AT EACH CONTACT, 8d FOR 1" MATERIAL AND 16d FOR 2" MATERIAL.

WHERE POSSIBLE, NAILS DRIVEN PERPENDICULAR TO THE GRAIN SHALL BE USED INSTEAD OF TOENAILS.

- JOISTS OR RAFTERS AT BEARING, TOENAIL EACH SIDE . . . . . 2-10d
- BRIDGING TO JOIST, TOENAIL EACH END . . . . . 2-8d
- SOLE PLATE TO JOIST OR BLOCKING, BLOCKING, FACE NAIL . . . . . 16d AT 16" O.C.
- TOP PLATE TO STUD, END NAIL . . . . . 2-16d FOR 2x4  
3-16d FOR 2x6  
4-16d FOR 2x8
- STUD TO SOLE PLATE, 2x4 . . . . . 4-8d TOENAILS  
(USE ONE HALF OF REQUIRED TOE NAILS ON ONE SIDE WHERE A35 ANCHORS ARE USED).  
2x6 . . . . . 6-8d TOENAILS  
OR 3-16d END NAILS  
2x8 . . . . . 8-8d TOENAILS  
OR 4-16d END NAILS
- DOUBLE STUDS, FACE NAILS . . . . . 16d AT 24" O.C.
- DOUBLE TOP PLATES, FACE NAILS . . . . . 16d AT 16" O.C.
- TOP PLATES, LAPS AT INTERSECTIONS, FACE NAILS . . . . . 2-16d
- CEILING JOIST TO PLATE, TOENAIL . . . . . 3-8d
- CONTINUOUS HEADER TO STUD, TOENAIL . . . . . 4-8d
- CEILING JOIST, LAPS OVER PARTITIONS, FACE NAILS . . . . . 3-16d
- CEILING JOIST TO PARALLEL RAFTERS, FACE NAILS . . . . . 3-16d
- 1.1" BRACE TO EACH STUD AND PLATE, FACE NAILS . . . . . 2-8d
- DOUBLE RAFTERS, FACE NAIL . . . . . 16d AT 12" O.C.
- BUILT UP STUDS . . . . . 16d AT 24" O.C.
- BLOCKING BETWEEN JOISTS OR RAFTERS TO JOIST OR RAFTERS  
TOE NAILS, EACH SIDE, EACH END . . . . . 2-10d  
TO JOIST OR RAFTER BEARINGS  
TOE NAILS EACH END . . . . . 2-10d
- BLOCKING BETWEEN STUDS . . . . . 2-16d OR 2-10d  
TOENAILS, EA. SIDE,  
EA. END
- 1.1x8 SHEATHING EACH BEARING . . . . . 3-8d
- 1.1x8 SHEATHING EACH BEARING . . . . . 2-8d

NAILS SHALL ACHIEVE THE MINIMUM PENETRATION SPECIFIED IN THE TABLE BELOW. NAILS SHALL NOT BE DRIVEN CLOSER TOGETHER THAN THE MINIMUM SPACING NOR CLOSER TO THE MEMBERS END OR EDGE THAN 1/2 THE MINIMUM SPACING. HOLES SHALL BE BORED WHERE NECESSARY TO PREVENT SPLITTING.

- ALL NAILS USED FOR PRESSURE TREATED WOOD SHALL BE GALVANIZED

COMMON WIRE NAIL PROPERTIES		
SIZE	NAIL DIA.	MINIMUM PENETRATION* AND SPACING
6d	0.113"	1.36"
8d	0.131"	1.57"
10d	0.148"	1.78"
16d	0.162"	1.94"
20d	0.192"	2.30"

\*PENETRATION INTO THE PIECE RECEIVING THE POINT

### 11 NAILING SCHEDULE

S1.01 SD0000-04 SCALE: N.T.S.

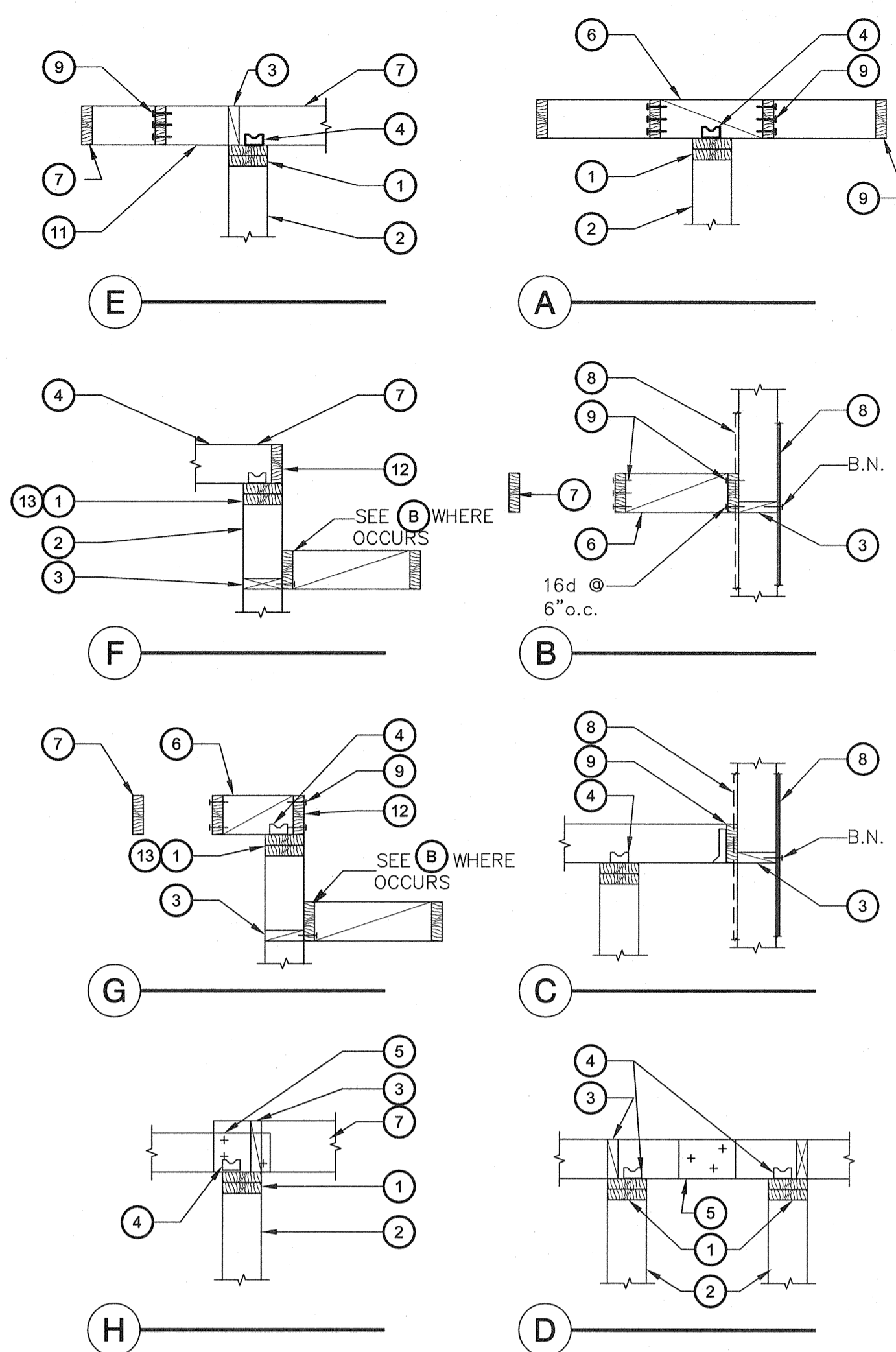
### DESIGN LOADS

ROOF DL = 6.1 PSF  
ROOF COLLATERAL LOAD = 3.9 PSF  
ROOF LL = 20 PSF (REDUCIBLE)

WIND LOAD = 85 MPH  
EXPOSURE C  
I=1.15  
Kz = 0.9  
Kd = 0.85  
Kzt = 1  
qn = 0.00256 Kz Kzt Kd V² I = 16.3 POF  
P = qn [(Gcpl)-(Gcpi)]

EARTHQUAKE DESIGN DATA:  
R=6, 1/2, 0=3, Cd=4, P=1.3, J=1.25  
SDS=0.813, S<sub>D</sub>=0.445  
CS=SDS/(R/I)=0.156  
V=CSW=0.156W  
PV=0.202, 0.V=0.468W

SITE CLASS D  
GEOCHEMICAL INFORMATION PER  
KYAZAN'S SOILS REPORT DATED  
MAY 25, 2010.  
ALLOWABLE SOIL  
BEARING FOR D+L=1500PSF.  
D + E = 2000 PSF  
NOT A FLOOD ZONE

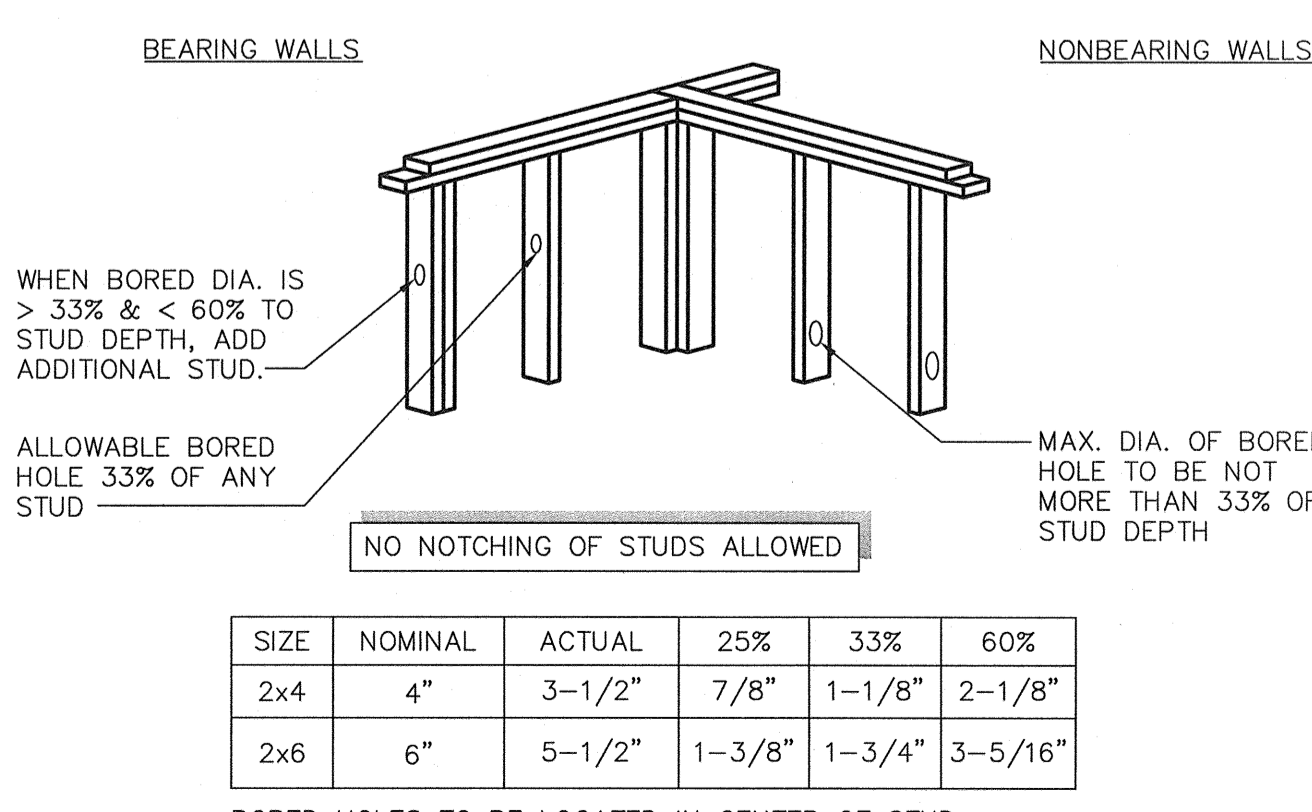


#### KEYNOTES:

- (2)-2x TOP PL
- 2x STUDS @ 16" o.c., SEE PLANS FOR SIZE.
- 2x FULL DEPTH BLOCK
- SIMPSON A34 ONE SIDE
- LAP JOIST 8" MIN. AND FACE NAIL WITH (3)-16d
- 2x JOIST DEPTH BLOCK @ 24" o.c., MAX.
- 2x JOIST-SEE PLAN FOR SIZE AND SPACING
- PLYWD. SHEATHING WHERE OCCURS, RUN BEHIND LEDGERS.
- (2)-16d @ 3" o.c., TOENAIL @ LEDGER.
- NOT USED
- EXTEND JOIST TO PERPENDICULAR JOIST.
- 2x RIM JOIST
- NO SLICES IN PL BETWEEN CROSS WALLS U.N.O.

### 7 CEILING FRAMING AT STUD WALLS

S1.01 SD0000-01 NO SCALE



### 8 TYPICAL BORING OF STUDS

S1.01 SDW240-03 SCALE: 1 1/2" = 1'-0"

- EXPANSION BOLTS SHALL BE HILTI KWIK BOLT T2 CARBON AS MANUFACTURED BY HILTI INC., 5400 SOUTH 122nd EAST AVENUE, TULSA, OKLAHOMA 74146. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND ICC REPORT NO. ESR-1917.

EMBEDMENT DEPTHS SHALL BE AS FOLLOWS:

DIAMETER	EMBEDMENT
3/8"	2 1/2"
1/2"	3 1/2"
5/8"	4"
3/4"	4 3/4"

- EXPANSION BOLTS SHALL BE TESTED IN TENSION BY AN APPROVED TESTING AND INSPECTION AGENCY TO THE TENSION TEST LOADS LISTED BELOW. TENSION TEST ALL EXPANSION BOLTS USED FOR STRUCTURAL APPLICATIONS. WHEN EXPANSION BOLTS ARE USED FOR NON-STRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORS 50 PERCENT OR ALTERNATE BOLTS IN A GROUP SHALL BE TENSION TESTED. WHEN EXPANSION BOLTS ARE USED FOR SILL PLATE BOLTING, 10 PERCENT OF THE EXPANSION BOLTS SHALL BE TENSION TESTED.

THE LOAD MAY BE APPLIED BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION IN THE ANCHOR, SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, A TORQUE WRENCH CALIBRATED FOR THE USE WITH THE SPECIFIC ANCHOR, CALIBRATED SPRING-LOADING DEVICES, ETC. ANCHORS IN WHICH THE TORQUE IS USED TO EXPAND THE ANCHOR WITHOUT APPLYING TENSION TO THE BOLT MAY NOT BE VERIFIED WITH A TORQUE WRENCH.

- THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

**HYDRAULIC RAM METHOD:** THE ANCHOR SHOULD HAVE NO 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.

**TORQUE WRENCH METHOD:** THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN THE FOLLOWING LIMITS:  
WEDGE OR SLEEVE TYPE: ONE-HALF (1/2) TURN OF THE NUT  
ONE-QUARTER (1/4) TURN OF THE NUT FOR 3/8" SLEEVE ANCHOR ONLY

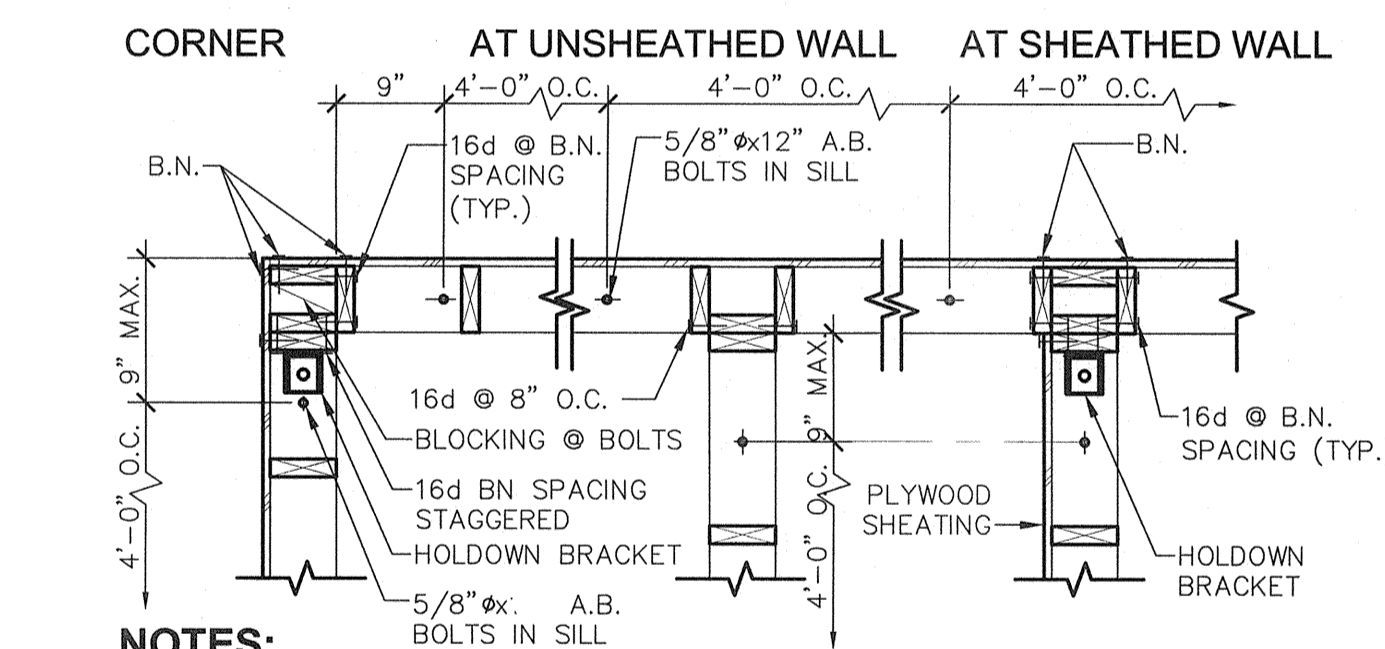
TENSION TEST LOADS		
DIAMETER	TENSION (LBS.)	TORQUE (FT.-LBS.)
3/8"	1,848	20
1/2"	4,000	40
5/8"	5,532	85
3/4"	7,160	150

NOTE: LOADS BASED ON f'c = 3000 PSI

- WHEN INSTALLING EXPANSION BOLTS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE-INCH BETWEEN THE REINFORCEMENT AND THE EXPANSION BOLT. IF MANUFACTURER INSTALLATION TORQUE IS LESS THAN TEST TORQUE LISTED, USE THE INSTALLATION TORQUE VALUE FOR TESTING PURPOSES. TEST 24 HOURS MINIMUM AFTER INSTALLATION.

### 2 CONCRETE EXPANSION BOLT NOTES

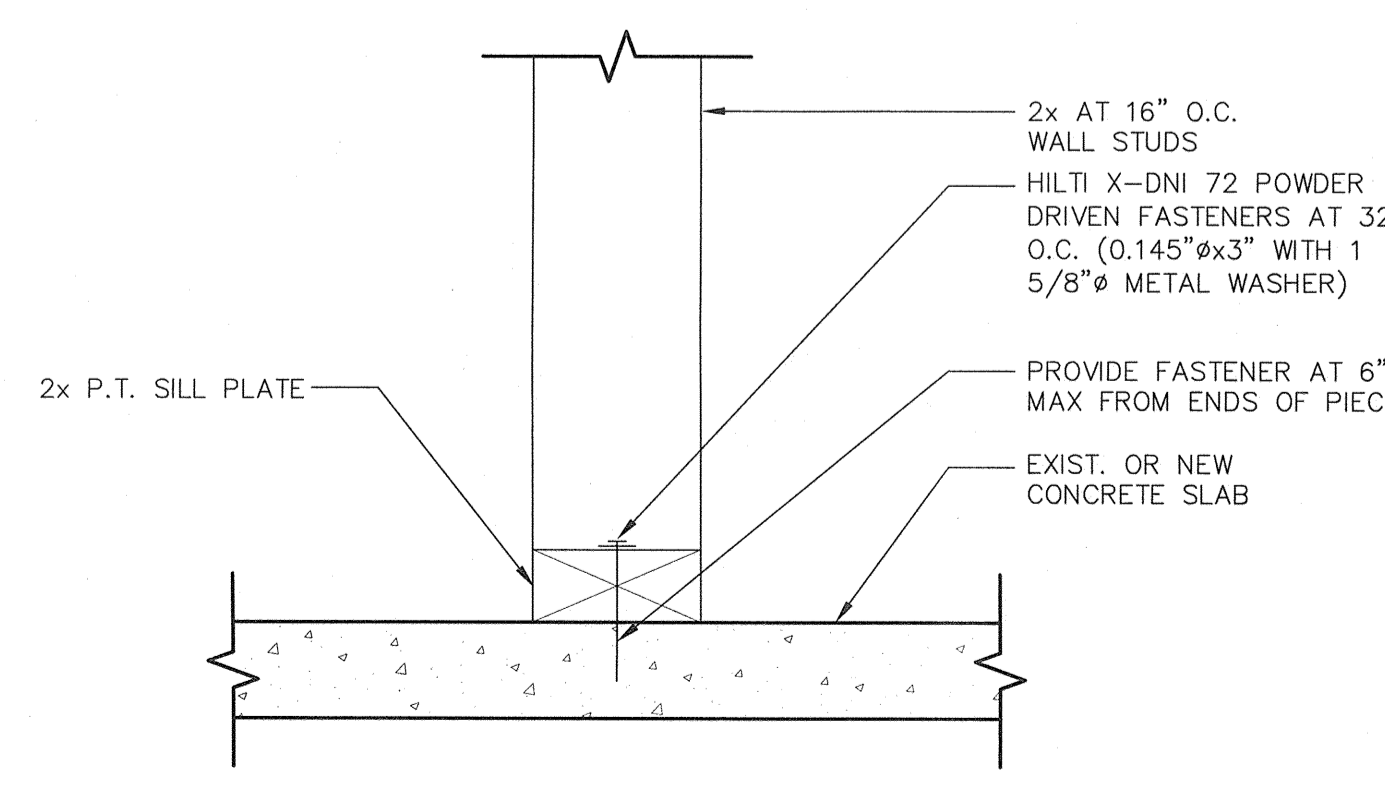
S1.01 SD0000-01 SCALE: NO SCALE



- NOTES:**
- THESE DETAILS TO BE USED WHERE EVER PLANS OR SECTIONS SHOW SIMILAR POSITIONS OF WALLS OR SHEATHING UNLESS OTHERWISE SHOWN.
  - ANCHOR BOLT SIZE SHOWN IS MIN. AND SPACING SHOWN IS MAX., SEE PLYWOOD SHEAR WALL SCHEDULE FOR SPECIFIC REQUIREMENTS. PROVIDE MIN. OF 2 ANCHOR BOLTS PER PIECE.

### 3 TYPICAL STUD WALL CORNER AND INTERSECTIONS

S1.01 SDW240-02 SCALE: 3/4" = 1'-0"



### 4 INTERIOR NON-BEARING WALL FOOTING

S1.01 SDW240-04 SCALE: 3" = 1'-0"

Ownership of Documents  
This document, the ideas and designs incorporated herein, as an instrument of Professional Service is the property of Integrated Designs by SOMAM Inc. and is not to be used, in whole or in part for any other project without written authorization.  
© COPYRIGHT 2012

Integrated designs by SOMAM, Inc.  
ARCHITECTURE - ENGINEERING - INTERIOR DESIGN - CONSTRUCTION MANAGEMENT  
6011 N. Fresno, Suite 130 - Fresno, California 93710  
Phone (559) 438-0881 Fax (559) 438-0881 E-mail: design@integrateddesigns.com  
www.integrateddesigns.com

Rev. Date	Revision Description

STRUCTURAL DETAILS

Project Name & Address:  
**MT. VERNON ELEMENTARY SCHOOL KITCHEN ADDITION**  
BAKERSFIELD CITY SCHOOL DISTRICT  
2161 POTOMAC AVENUE BAKERSFIELD CA.

Issue Date: 07/20/12  
Date: 07/31/12  
Designer: [Signature]  
DR: [Signature]  
PC: CUM

Agency Approval Stamp:

FILE # 15-6  
IDENTIFICATION STAMP  
DIV. OF THE STATE ARCHITECT  
OFFICE OF REGULATION SERVICES

03-114521  
AC: FLS SS  
DATE: 8/11/12

TRACKING #: 63321-118

Stamp(s):

REGISTERED PROFESSIONAL ARCHITECT  
CURTIS MCNALLY  
No. 3877  
Exp. 6-30-13  
STRUCTURAL  
STATE OF CALIFORNIA  
1/3/12

Job No.: **3990**

Sheet No.: **S1.01**

Release: -  
CURTIS MCNALLY