### <u>GENERAL NOTES</u>

- 1. Interpretation of Drawings & Specifications a. Where specifications have been prepared for this project, they are arranged in several sections, but such separation shall not be considered as the limits of the work required of any separate trade. The terms and conditions of such initations are wholly between the contractor and his subcontractors. b. In general, the working details will indicate dimensions, position and kind of construction, and the specifications, qualities and methods. Any work indicated on the working details and not mentioned in the specifications, or vice versa, shall be furnished as though fully set forth in both. Work not particularly detailed, marked or specified, shall be identical or similar to like cases of construction that are detailed, marked or specified. If conflicts occur on drawings and/or specifications, the most expensive materials or methods will prevail. c. Should an error appear in the working details or specifications or in work done by others affecting this work, the **C**ontractor shall notify the Architect at once and in writing. If the Contractor proceeds with the work so affected without having given such written notice and without receiving the necessary approval, decision or instructions in writing from the Owner, then he shall have no valid claim against the Owner, for the cost of so proceeding and shall make good any esulting damage or defect. No verbal approval, decision, or instruction shall be valid or be the basis for any claim against the Owner, its officers, employees or
- agents. The foregoing includes typical errors in the specifications or notational errors in the working details where the interpretation is doubtful or where the error is sufficiently apparent as to place a reasonably prudent contractor on notice that, should he elect to proceed, he is doing so at his own risk. Construction shall conform to all applicable codes and regulations. 3. Shop Drawing Note:
- When not addressed bu division I of the specifications, paper format Structural Shop Drawings shall be submitted in the form of three copies minimum of each Shop Didwings shall be submitted in the form of thire copies minimum of each sheet. Where submittals are electronic, format shall be PDF, The purpose of Shop Drawing submittals by the Contractor is to demonstrate to the Structural Engineer that he understands the design concept by indicating which material he intends to furnish and install, and by detailing the fabrication and installation methods he intends to use on a stand alone set of documents. Duplication of design documents for the purpose of shop drawings is not acceptable.
- , Prior to fabrication, Shop Drawings shall be submitted for review by the Structural Engineer, Shop Drawing submittals shall include, but are not necessarily limited to, structural steel, reinforcing steel, & glue-laminated beams. d, Prior to submission the Contractor shall review all submittals for conformance with the Contract Documents and shall stamp submittals as being "Reviewed
- for Conformance". e, Shop Drawing submittals processed by the Structural Engineer are not Change f, Any detail on the Shop Drawings that deviates from the Contract Documents shall clearly be marked with the note "This is a change".
- a, Shop drawings or calculations submitted for review that require resubmittal for re-review shall be billed hourly for such time to the General Contractor. Re-review will not proceed without written approval from the General Contractor or additional engineering review services.
- 4, Safety Note: a.It is the Contractors responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California latest edition, and all OSHA requirements. b. The Contractor shall be responsible for adequate design and construction of all forms and shoring required. Shoring indications (location, direction, duration, etc.) are only shown on the Structural dwgs when required to implement the design intent of the final work product. Determination whether shoring is required for temporary or intermediate conditions during construction is wholly
- the responsibility of the contractor. c.The Owner and the Structural Engineer do not accept any responsibility for the contractor's failure to comply with these requirements. 5. The contractor shall notify the Architect and Structural Engineer where a conflict or discrepancy occurs between the Structural drawings and any other portion of the Contract Documents or existing field conditions. Such notification shall be given in due time so as not to affect the construction schedule. In case of a conflict between Structural drawings and specifications the more restrictive condition shall take precedence unless written approval has been given for the least restrictive. Contractor shall verify all dimensions with Architectural prior to
- commencing any work. 6. When construction attaches to or is within an existing building, a complete set of drawings of the existing building shall be kept on the job site. Contractor to obtain these drawings from the Owner (if they are available). 7. Contractor shall provide an allowance equal to 2% of the bid for structural steel, misc, iron and reinforcing steel to be used at the discretion of the Structural Enaineer. Unused amount to revert to the Owner upon completion of the job.
- 8, Any substitutions for structural members, hardware or details shall be reviewed by the Architect and Structural Engineer. Such review will be billed on a time and materials basis to the General Contractor with no guarantee that the substitution will be allowed 9, Do not scale drawings. Contact the Architect or Structural Engineer for any
- dimensions not shown. 10, These drawings are not complete until reviewed and accepted by local Building Officials and the Owner and signed by the Structural Engineer.

$\Delta B$ $\Delta nchor Bolt$	MT Malleable Tron
abyAbove	mtl Metal
hiwBelow	(n)
bofBottom of Ecoting	NIC Not in Contract
bra Bogning	Nic mornida
DrgBeunrig	
DTWNBetween	nts Not to Scale
ccCenter to Center	NW Normal Weight
CJConstruction Joint	OH Opposite Hand
cirCiear	OSB Oriented Strand Board
CMUConcrete Masonry Unit	pc Piece
contContinuous	PJP Partial Joint Penetration
contrContractor	PT Pressure Treated
CPComplete Joint Penetration	rein Reinforcina
cakCounteraink	rwd Pedwood
DEDoualas Eir	SC Slip Critical
DrDouglus rii Di Doad Load	obta Shoathing
	Shiry Sheathing
	sim Similar
awgDrawing	5J Slad Control Joint
(e)Existing	SMS Sheet Metal Screw
EFEach Face or Edge Fastener	SP Structural Panel
EJExpansion Joint	stfnr Stíffener
ElevElevation	stard Staaaered
ENEdae Nailina	ati Steel
eneEdge Adming	t#b Top # Bottom
	$t_{a}$
Eld Each Mar	thid Throadod
EMEUCH MUY	
EWEREach Way Each race	
FBFace of Block (or Brick) or	to lopol
Flat Bar	toc lop of Concrete (slab uno)
FCFace of Concrete or	tof        Top of Footing or
Framing Clip(Simpson A35 uno)	Top of Framing
FFFinish Floor	tos Top of Steel
FSFace of Stud or Far Side	том То́р оf Wall
ETEire Treated	uno Unless Noted Otherwise
anGauge or gage	VIE Verifu In Eield
alb	
UDG	
HDGHOT Dipped Gaivariized	W/O WIINOUI
narHeader	WPWORK POIRI
HSBHigh Strength Bolt	M5 WOOD SCREW
HSSHollow Structural Section	WWF Welded Wire Fabric
htHeight	⊈
jhJoist Hanger	12 Plate
LLLive Load	kF Wide Flanae
LLHLona Lea Horizontal	# Number or Pounds
LLVLona Lea Vertical	sa Sauare
15lag Screw	a Pound or Diameter
l kll iaht kleiaht	Cont Wood in Section
LixitLight NG19111	Wood Blocking in Soction
MB Machine Delt	(a) "mombar" abaya
	(a) member above
mtrMahutacturer	(D) "Memder" delow

### DESIGN CRITERIA

<u>ABBREVIATIONS</u>

- <sup>1</sup>. Codes and Standards 2013 California Building Code (CBC) 4505 T-10 ASCE 41-13
- CI 318-11 AISC 360-10, 341-10, 358-10 TMS 402-11/ACI 530-11/ASCE 5-11 TMS 602-08/ACI 530,1-08/ASCE 6-08
- 2012 NDS, 2008 SDPWS 2. Vertical loads
- Roof Live Load = <u>20</u> psf Live loads are reduced where permitted by code.
- 3. Soils Values Allowable soils pressure
- a. DL <u>3000</u> psf b. DL + LL <u>3000</u> psf c. DL + LL + Seismic <u>4000</u> psf
- Footing Minimum depth =  $\frac{2^{2}}{15}$ Minimum width = <u>18"</u>

## Lateral loads Site Class

- So =  $\frac{1,824}{;}$  Sdo =  $\frac{1,215}{0.130}$ SI = 0.130; SdI = 0.130 $I_{E} = 1.0; R = 5.0$  $\Omega = 2.5; Cd = 5.0$ Risk Category: <u>II</u> Seismic Design Category: <u>D</u> S-3 (LS) under BSE-R (20%/50yr return) -5 (CÁ) under BSE-C` (5%/50yr̃ return)´ Cm = 1.0 ; C1=C2 = 1.4 Seismic Force Resisting System: <u>CMU & Shotcrete Shear Walls</u> Analysis Procedure: <u>Equivalent</u>
- Lateral Force Procedure
- V<sub>ult</sub> = <u>110</u> mph ; V<sub>asd</sub> = <u>89</u> mph Risk Category: <u>11</u> Expose Category: <u>B</u> GĆpí = <u>±.18</u>

#### STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING . Special inspections and testing shall be provided by an inspection agency employed by the owner, and qualified by the building official to inspect the particular type of construction. Tests and inspections, as required by sections 110, 1704, 1705.10, 1705.11 and 1705.12 of the 2013 CBC, shall be

- Structural Steel Construction Steel Construction other han Structural Steel
- Cold-formed Steel Trusses 5pannin**a > 60** ft Concrete Construction Masonry Construction-Level A
- Masonry Construction-Level B Masonry Construction-Level C Prefabricated Wood Structural Section 1705.5
- Elements High Load Diaphragm Metal-Plate-Connected Wood russes Spanning <u>></u> 60 ft **S**Oíls
- Driven Deep Foundations Cast-in-place Deep Foundations Section 1705.8 Helical Pile Foundations Post-Installed Anchors
- Lateral Force-Resisting System: Structural Steel Structural Wooa
- Cold-Formed Steel Light-Frame Construction ■ Concrete Reinforcement Inspections shall be continuous or periodic as noted for the individual material or
- component inspection sections and tables noted above. The special inspector shall submit inspection reports to the building official and the design professional in responsible charge. The reports shall indicate whether work inspected conformed to the Construction Documents. Any discrepancies shall be immediately prought to the attention of the Contractor for correction. If discrepancies are not corrected, they shall be brought to the attention of the
- building official and the design professional in responsible charge. 4. All Special Inspection Agencies / Individuals and Shop Fabricators shall be approved by the building official prior to commencement of work. 5. Testing and inspection records shall be retained until completion of construction.
- ÕI3 CBC.
- Engineer of Record. 8. For testing and inspection requirements for non-structural materials and
- 9. Special inspections and testing of the lateral force resisting system shall be performed as noted above.
- <u>FOUNDATIONS</u>
- . All foundation work shall be done in accordance with the requirements of the Soils Report #13-526 by Rockridge Geotechnical Dated 9/17/2013. Foundations shall bear on <u>undisturbed native clay</u>.
   See notes and details on sheet <u>SI.2</u>.
   All filling, backfilling and compaction shall be done under the observation of a minimum.
- representative of the Soils Engineer and must be compacted to the minimum density specified in accordance with the procedure outlined in the soils report. . Building pad construction shall conform to the requirements of the soils report. The
- be determined at time of construction by a representative of the Soils Engineer. oundation depths indicated on plans are for estimatina purposes onlu. 5. Bottoms of all foundations shall be level. Changes in bottom of foundation elevation shall be made according to Stepped Footing Detail on the Typical Detail
- 6. Foundation concrete may be placed directly into neat excavations provided the excavations are stable (as 2x/2 ,  $1x^3$  , 2x/2 , 2x/2 , 2x/2determined by a representative of the Soils Engineer), Otherwise, foundations shall be fully formed. Use minimum planking shown to protect against sloughing, as required. Planking does not replace mwork required to stabilize excavation. . The surface of all horizontal construction joints shall be cleaned & roughened by exposing clean aggregate solidly embedded in mortar matrix.
- 8. Notify the Structural Engineer 48 hours before casting foundations. 9. A representative of the Soils Engineer shall advise the Building Official in writing The building pad was prepared in accordance with the soils report. The utility Trenches have been properly backfilled and compacted and; . The foundation excavation depth and material are adequate to achieve design bearing capacity; and forming comply with the soils report and approved plan

## CONCRETE 300SN001-1

- 1. Structural concrete shall attain 28 day compressive strength as required in note #28. Maximum slump shall not exceed 4 inches. by Owner's testing laboratory and submitted to the Structural Engineer for reviewed. 3. Cementitious materials:
- Cement shall conform to ASTM C-150 type II or V. Fly ash shall conform to ASTM C-618. Max. quantity of fly ash shall be as given in
- 6. Reinforcing steel shall conform to ASTM A-615 Grade 60 for #3 and larger, except reinforcing steel to be welded shall conform to ASTM A-706. Contractor shall
- submit rebar mill certificates. 7. All preheating and welding of reinforcing bars shall be done in accordance with AWS D1.4 latest edition and shall be continuously inspected by a qualified aboratory. Contractor shall furnish WPS for all rebar welding to the laboratory
- 8. Reinforcing steel shall be fabricated according to "Manual of Standard Practice for Reinforced Concrete Construction 9. Wire fabric shall conform to ASTM A-185. O. Dimensions shown for location of reinforcing are to the face of bars listed and denote clear coverage. Non-prestressed, cast-in-place concrete coverage shall be as follows, uno:
- Concrete deposited directly against ground (except slabs)--- 3" Concrete exposed to ground or weather placed in forms: #5 and smaller-----#6 and laraer---Beams & Columns (ties)------ 1-1/2" Beams & Columns (main reinforcing)------2 ast-In-Place Wàlls (exterior face & soil side)------ see above ast-In-Place Walls (interior face-#11 & smaller)------ 3/4"
- '-Up Walls-------- see details Slabs (on forms)---------- 3/4′ Slabs (on ground)------ 2" clear from top uno 1. Splices in continuous reinforcement shall be lapped uno, see schedule this sheet. Splices in adjacent bars shall be greater than 5'-O" apart. Splice continuous bars in soil-bearing grade beams, structural slabs on grade and mat foundations as follows uno: top bars at centerline of support; bottom bars at mid-span. Splice
- continuous bars in elevated slabs and beams, etc. as follows uno: top bars at midspan; bottom bars at centerline of support. All bars size #14 and larger shall be continuous for full length shown or spliced with mechanical couplers as noted in details. Splices in WWF shall be 1-1/2 meshes wide. 2. The minimum clear spacing between parallel bars in a layer shall not be less than the larger of bar diameter, 1", or 33% greater than the maximum aggregate size (nominal), whichever is greatest. This requirement also applies to the clear spacing between different layers of parallel bars and to the clear distance between a contact lap
- splice and adjacent splices or bars. 13. All hooks shall be standard hooks unless otherwise shown or noted. At walls, provide hooks at ends of all reinforcing at ends, corners and intersections, uno. 14. Construction joints shall be made rough and all laitance removed from the surface. Concrete may be roughened by chipping the entire surface, sand blasting, or raking the surface to provide 1/4" deep deformations.
- 15, Remove all debris from forms before casting any concrete. 6, Reinforcing, dowels, bolts, anchors, sleeves, etc. to be embedded in concrete shall be securely positioned before placing concrete. 7. Anchor bolts (AB's) cast in concrete or masonry for wall sill and ledger applications shall be headed bolts with cut threads conforming to ASTM A307, uno. Refer to "Wood" notes for additional requirements for bolts in contact with pressure treated or fire retardant material. Refer to 'Structural Steel' note for requirements for anchor rods (AR's) cast in concrete for column base plate and steel émbed
- applications. 18. Walls shall be cast in horizontal layers of 2'**-0**" maximum depth. 19, Concrete in walls, piers or columns shall set at least 2 hours before placing concrete in beams, spandrels, or slabs supported thereon. 20, Horizontal wall bars in multi-curtain cast in place walls shall be staggered. 21. Dowel all vertical reinforcing in walls and columns from foundation with same size
- 22. Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with the recommended practices of ACI 309 to suit the type of concrete and project conditions. Concrete shall not be dropped through reinforcing steel (as in walls) so as to cause segregation of aggregates. In such cases hoppers and chutes or trunks of variable lengths shall be used so that the free unconfined fall of concrete shall notexceed6feet.
- 3. No wood spreaders allowed. No wood stakes allowed in areas to be concreted. 4. Additional reinforcing in precast or tilt-up panels required for lifting stresses shall be supplied by Contractor. 25. Provide #5 x 4'-O" diagonal reinforcing at top and bottom of slab at all re-entrant corners typical. This applies to slab on grade, concrete over metal deck, and
- elevated structural slab conditions. 26. All saw cutting shall be done after initial set has occurred to avoid tearing or damage by the saw blade, but before initial shrinkage has occurred. Notify Structural Engineer a minimum of 48 hours before placing any concrete.
- 28, CONČRETE STRENĞTHS & MIX PROPERTIES: f'C @ a. Foundations, Elevator Pits, 3000 psi
- Tie Beams . Slab on grade , Columns, beams, walls, 4000 psi elevated slabs, pile caps
- Site # miscellaneous see Civil or Arch'l dr \* w/cm = Water : Cementitious material ratio

# GENERAL NOTES APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

#### performed during construction on the types of work listed below; Inspections/Testing Section 1705.2.1 Section 1705.2.2 Section 1705.2.2.2 Section 1705,3 Section 1705.4 Section 1705.4 Section 1705.4 oction 1705 5 Section 1705.5.2 Section 1705 A Section 170= Section 1705.9 See Drilled-In Anchor Notes # Section 1705,12

Bection 17**0**5.11 Section 1705.11.3 Section 1705,12,1

6. The Contractor shall submit a written statement to the building official acknowledging responsibility for construction of the main lateral-force resisting system prior to commencement of that work as required by section 1704,4 of the . All soils and foundation excavation inspections shall be by the Geotechnical components, see construction documents and comply with chapter 17 of the 2013

extent and depth of overexcavation and placement of engineered fill shall at a minimum be as shown on the plans. Final depth and extent of excavation and fill shall footing

4. Concrete aggregates shall conform to ASTM C-33 for normal weight concrete and ASTM C-330 for lightweight concrete.
5. Non-shrink grout or drypack shall consist of a premixed nonmetallic formula.

nax aggr. size	weight	max w/cm* ratio
1-1/2″	NŴ	0.58
1‴ 1″	NW NW	0.45 0.50
awings		

<u>REINFO</u> 300SN002-1 (All leng	REINFORCEMENT LAP SPLICE SCHEDULE       ACI 3/8         3005N002-1       CBC/IBC         (All lengths shown are in inches.)       CBC/IBC						318 /IBC			
			f	°c′ <b>=</b> 3 <b>0</b> 0	<b>00</b> psí c	conc				
Splice Class	<b>R</b> einf Location	#3	#4	#5	#6	#7	#8	#9	#10	#11
P	Тор	19	37	47	56	81	93	105	118	131
D	Other	15	29	36	43	63	72	81	91	101
	fc' <b>=</b> 3500 psi conc									
Splice Class	Reinf Location	#3	#4	#5	#6	#7	#8	#9	#10	#11
	Тор	18	35	43	52	75	86	97	109	121
D	Other	14	27	33	40	58	66	75	84	93
	fc' <b>=</b> 4000 pai conc									
Splice Class	<b>R</b> einf Location	#3	#4	#5	#6	#7	#8	#9	#10	#11
B	Тор	17	32	40	48	70	80	91	102	113
	Other	13	25	31	37	54	62	70	79	87

Schedule applies to normal weight concrete with uncoated, Grade 60 reinforcing steel for #4 bars and larger (values for #3 bars based on Grade 40). Top reinforcement is horizontal reinforcement located such that more than 12 inches of 'fresh concrete is cast in the member below the splice. When lightweight concrete is used, multiply lap lengths by 1.30.
 Where clear spacing of bars being spliced is less than 2 bar dia. OR where clear cover of bars being spliced is less than 1 bar dia., multiply lap lengths by 1.50, uno. 5. Where notes #3 AND #4 occur, multiply lap lengths by 2.00, uno.

6. Where Class A lap splice is noted in detail, divide lengths above by 1.30. <u>SHOTCRETE</u>

- 1. Contractor shall have at least three years experience in shotcrete construction and must list at least five constructed structural projects. 2. Only experienced foremen and workmen shall be employed and satisfactory evidence of such experience shall be furnished upon demand.
- Concrete may be pneumatically placed, provided the Contractor engages a qualified testing laboratory to design concrete mixes for pneumatic placement.
   Tolerances will be strictly enforced on all phases of this work. Improper work will be re lected. 5. Shotcrete work shall comply with all pertinent recommendations of the current edition of ACI 506.2, ACI 506 and the code designated in the 'Design Criteria' note. Where the recommendations of these publications are in conflict, the more stringent recommendations shall apply. 6. Inspect adjacent construction and surfaces to receive shotcrete and make
- sure that all conditions detrimental to the timely or proper performance of this iork have been corrected before proceedir Remove all unsound material before applying shotcrete. Chip or roughen any area to be repaired to remove offsets which would cause an abrupt change in thickness without suitable reinforcement. Taper edges to leave no square shoulders at the perimeter of a cavity. Remove all loose material from areas receiving shotcrete. Wet the surfaces until they are damp but without visible free 8. If shotcrete is to be applied over existing concrete or masonry, surface shall be
- sandblasted, 9. Placina: a. Place shotcrete using suitable delivery equipment and procedures that will result in in-place shotcrete conforming to the requirements of these plans, b. Control thickness, method of support, air pressure, and/or water content of shotcrete to preclude sagging or sloughing off. Discontinue shotcreting or provide suitable means to screen the nozzle stream if wind or air currents
  - cause separation of the nozzle stream during placement. Dampen absorptive substrates before placing shotcrete to facilitate bond and to reduce the possibility of shrinkage cracking developing from premature loss of mixing water.
- d. Broom or scarify the surface of freshly placed shotcrete to which additional layers of shotcrete are to be bonded. Dampen shotcrete surfaces just béfore applying succeeding layers. e. Provide a supply of clean, dry air adequate for maintaining sufficient nozzle
- velocity for all parts of the work and, if required, for simultaneous operation of a suitable blow pipe for clearing away rebound. 10. Shotcrete shall be kept moist for a minimum of 7 days by continuous fog spray or absorptive mat kept continuously wet. Preconstruction tests shall be provided if required by the provisions of the code designated in the 'Design Criteria' notes or at the discretion of the Architect. Testing and Inspection shall conform to the the code designated in the 'Design Criteria' under

### DRILLED-IN ANCHORS

Criteria' note.

- 1. For concrete construction, epoxy anchors shall be Hilti HIT-HY 200 per ESR-3187, Hilti HIT-RE500-SD per ESR-2322, Simpson SET-XP per ESR-2508, or Powers Pure IIO per ESR-3298 for thr'd rod & rebar. Expansion anchors shall be Hilti KB-TZ per ESR-1917, Simpson Strong-Bolt 2 per ESR-3037, or Powers Power-Stud+ SD2 per ESR-2502. Screw anchors shall be Hilti KWIK HUS-EZ (KH-EZ) per ESR-3027, Simpson Titen HD per ESR-2713, or Powers Wedgebolt+ per ESR-2526. 2. For masonry construction, epoxy anchors shall be Hilti HIT-HY 70 per ESR-2682, Simpson SET per ESR-1772, or Powers T308+ per ESR-3149 for thrd'd rod & rebar. Expansion anchors shall be Hilti Kwik Bolt 3 (KB3) per ESR-1385, Simpson Wedge-Al
- per ESR-1396, or Powers Power-Stud+ per ESR-2966. Screw anchors shall be Hilti Kwik HUS-EZ (KH-EZ) per ESR-3056, Simpson Titen HD per ESR-1056, or Powers Wedgebolt+per ESR-1678, 3. Anchor type, size & embedment shall be indicated in drawings. Post-installed anchors for repair shall be evaluated on a case by case basis. Notify Structural Engineer for
- 4. Anchors shall be installed in accordance with the requirements given in the ICC . Unless noted otherwise anchors have been designed for special inspection. Provide Special Inspection as indicated in the ICC report. 6, When installing drilled-in anchors in existing concrete or masonry, use care and
- caution to avoid cutting or damaging existing reinforcing bars. Do <u>not</u> install anchors in prestressed concrete elements. 7. Anchors installed from the bottom into metal deck with concrete <u>shall be installed in</u> <u>the center of the low flute of the decking</u> unless noted otherwise in ICC report. The decking shall have a minimum thickness of 20 gauge. The minimum thickness of the concrete above the high flute of the metal deck shall be as indicated in the ICC report. See ICC report for additional requirements, including minimum dimensions or flute width and depth.
- 8. Adhesive anchors shall be installed in concrete having a minimum age of 21 days at the time of anchor installation per ACI 318, appendix  $\vec{D.}$ 7. Installer certification and inspection is required for horizontal and upwardly inclined adhesive anchors subjected to sustained tension loading in  ${\sf accordence}$  with  ${\sf ACI}$ 318. appendix D 10. The inspection of the anchors shall be done by a qualified inspection agency and a report of the inspection results shall be submitted to the governing agency and Architect/Structural Engineer.
- POWDER ACTUATED FASTENERS (SHOT PINS)
- 1. These notes govern all conditions called out on the plans as 'shot pins' unless specifically noted otherwise. 2. All shot pins shall be X-U Universal Knurled Shank Fasteners with shank diameter of 0.157" as manufactured by Hilti Incorporated in accordance with ICC ESR-2269 and the current edition of the Hilti 'Product Technical Guide." 3. All shot pins shall include standard Hilti steel washers.
- 4. Shot pin's driven into steel base material shall maintain a minimum edge distance at all steel elements of 1/2" and minimum fastener spacing shall be 1". Length of pin shall be as required to penetrate thru steel member u.n.o. At 3/4" thick steel, penetration need not exceed 1/2". 5. Shot pins driven into concrete base material shall maintain a minimum edge distance at all concrete elements of 3" and minimum fastener spacing shall be 4"." Pins shall
- have 11/4" penetration u.n.o. Minimum concrete thick ness shall be 3 times the penetration depth. Concrete shall attain full design strength prior to installing shot 6. Shot pins driven into 3 1/4" minimum light weight concrete fill over 3"x 20 ga minimum metal deck may be installed from the top or from the bottom in either the high or low flute. Pins installed from the top shall be spaced as noted above for typical concrete elements. Pins installed from the bottom in the high flutes shall be installed within 1" of flute center. Pins installed from the bottom in the low flutes shall be installed within 1" of the flute center and shall be no closer than 1 1/8" to the edge of the low flute. Pins installed from the bottom shall be spaced no closer than 5 1/2"
- parallel to the flutes. Pins shall have I" penetration into concrete u.n.o. Concrete shall attain full design strength prior to installing shot pins. I. Shot pins may be driven into 8" nominal minimum thickness fully grouted normal-weight CMU with type 5 mortar and minimum f'm = 1500 psi at time of installation. Shot pins may be installed into the face shells, horizontal mortar joints or vertically certered in the top of grouted cells. Shot pins shall not be installed in vertical mortar joints or within of vertical mortar joints. No more than one shot pin may occur in an individual masonry unit cell and must be installed a minimum of 4'' from the edge of the wall. Shot
- ping in mortar joints must be a minimum of 8" from the end of the wall and shall have a minimum spacing of 8". 8. Shot pin installers shall be certified by Hilti and have a current Hilti issued operators license. Shot pin installation shall meet all OSHA requirements.



uppermost unit.

minimum Of 5'-O".

straight and plumb.

<u>Bar Type</u> Vertical bars

amb bars

<u>STRUCTURAL STEEL</u>

ASTM A36, uno.

reauirements.

Bolted Connections:

Horizontal bars

Chord bars/Drag Bars



19. Single conduits (3/4" max) may be placed in vertical cells not containing vert rebar. No horizontal conduits allowed in wall construction. Anchor bolts cast in masonry shall be headed bolts with cut threads conforming to ASTM A307, ASTM A36, or ASTM F/554 as indicated on drawings. Bent bar anchor bolts shall not be permitted. Use open end block for all stack bond construction. All rebar shall be lap spliced as follows (uno); <u>Notes</u> Splices for multiple bars in the same Lap Length



Splices for multiple bars in the same cell must be stgrd 24" or lapped 94d a. where epoxy coated rebar is used, multiply lap lengths by 1.50. b. at retaining wall conditions, vertical reinforcing to have 72d lap typ.

#### ation, erection and materials shall conform with the AISC Specifi Structural Steel Buildings, the AISC Seismic Provisions for Structural Steel Buildings, and the California Building Code, latest editions uno in the Design Criteria Notes. Structural Steel wide flange shapes shall conform with ASTM A992. All other Structural Steel rolled shapes (channels, angles, etc) and plates shall conform with

3. Steel Pipe shall conform to ASTM A53, Types E or S, Grade B. 4. All Hollow Structural Sections (HSS) shall conform to ASTM A500, Grade B. All structural steel shall receive a minimum of one shop coat of red primer paint. Do not paint areas to be field welded, fireproofed, galvanized, to receive slip-critical igh strength bolts, or to be embedded in concrete. Provide additional painting as noted in the specifications. . All structural steel shall be erected plumb and true to line. Temporary bracing shall be installed and shall be left in place until other means are provided to adequately brace the structure. Contractor responsible for reviewing all base plate and support conditions during erection and bracing as required. See AISC and OSHA Place non-shrink grout under all base plates before adding vertical load. Structural steel below grade shall have 3 inches minimum of concrete cover.

a. Bolted connections shall consist of unfinished bolts conforming to ASTM A307 uno, Where high strength bolts are indicated, bolts conforming to ASTM A325 or ASTM A490 as specified shall be provided, Anchor rods cast in concrete or masonry shall be headed bolts with cut thread, full diameter body style conformin to ASTM F1554 gr. 36, 55 (weldable per SI Supplementary Requirements), or 105 as indicated on drawings. In lieu of headed anchor bolts, threaded rod conforming t the above specification may be used with a single nut welded to the rod or double nuts tightened to prevent rotation. Anchor rod projection above top of foundation shall be as noted on the drawings. b. Bolted connections shall have washers conforming to ASTM F436 uno. Washers may be omitted at snug-tightened and slip-critical connections, except where required by the RCSC Specification for Structural Joints, latest edition. c. Base plates shall have nuts and washers at top and bottom of plate. Washers for base plates shall be A36 square or circular plate unless ASTM F844 washers are permitted. See base plate details for plate size and permissible washer type. Additional Requirements for "Slip-Critical" Bolted Connections: a. "Slip-critical" connections (A325SC design values with special inspection) are

required at all braced frame connections, at all connections along chord lines and drag lines (as noted on plans), and uno, at all bolts in oversized or slotted b. The special inspector must be present during installation and tightening operation of "slip-critical" connections. . Provide 3/4'' diameter stitch bolts and ring fills, spaced at not more than 2'-O'' on center for all double angle members uno. At wood to steel parallel contact, bolt with 1/2" diameter bolts at maximum 24"cc Holes for unfinished bolts shall be of the same nominal diameter of the bolt plus 1/16". Use standard AISC gage and pitch for bolts except as noted otherwise. Welding shall be done by the electric arc process in accordance with American 14. Welding Society Standards, using only certified welders. All groove welds shall have complete penetration unless noted otherwise. All exposed welds shall be ground smooth. All electrodes for welding shall comply with AWS code, ETO series . Weld lengths called for on plans are the net effective lengths required. 16. Minimum fillet welds: 3/16" @ t < 1/2"

5/16"@+>3/4" Welding Procedure Specifications (WPS) for shop and field pregualified weld joints and wêld joints qualified by test shall be prepared for review prior to fabrication. All welding procedure items such as base metals, welding processes, filler metals and joint details that meet the requirements of AWS DL. Section 3 shall be considered as prequalified. Any change or substitution that is beyond the range  $^{\circ}$  tolerance or requirements for prequalification shall be qualified by test per  $\overline{AWS}$ DI.1 Section 4 part B. Qualification testing is required for partial penetration and 18. For hondestructive testing of welded connections excluding primary members of a. Welded connections shall be tested by nondestructive methods for

compliance with AISC N5.5, and job specifications. Ultrasonic Testing shall be in accordance with AWS DI.1, ASTM EI64 and ASME Section V. Radiography shall be in accordance with AWS DL1, ASTM E94 and E99, and ASME Section V. This testing shall be part of the special inspection required by an approved independent testing laboratory as follows: . Base metal thicker than 1-1/2 inch when subject to through thickness weld 2. All complete joint penetration groove or butt welds. 3. All partial joint penetration groove welds when used in column splices b. Any material discontinuities shall be accepted or rejected on the basis o defect rating in accordance with the (larger reflector) criteria of AISC N5.5.

- Douglas Fir Coast Region WCLIB grading rules #17 or WWPA standard grading rules for western lumber. 2x, 3x and 4x members - #2 uno. 6x and larger members - #l uno. 2x decking - Select Dex
- Members 3x and larger shall be free of heart center Redwood - California Redwood, RIS. Sheathing - US Product Standard PS 1-09 and PS2-10, APA rated Struct I/sheathing w/ exterior glue @ walls, floors, & roofs uno Pressure Treated Douglas Fir - type as appropriate for exterior
- above ground use as specified, by AMPA, 2. All wood in direct contact with concrete shall be pressure treated, except ledgers, which do not need to be pressure treated. . Field cuts and bolt holes in pressure treated wood shall be protected in accordance with AWPA standard M4.
- 4. Bearing and shear walls shall have double top plates, lapped at wall and partition intersection with 3 - 16d nails. Splice upper and lower plates as in "Typical Stud Wall & Opening Framing Detail" on Typical Detail Sheet . Provide solid blocking between joists and rafters at all supports. Provide blocking at all ceiling levels.
- Joists under and parallel to partitions shall be doubled and nailed together The moisture content of 2x material at time of initial use shall be less than 19%. The moisture content of lumber 3x and larger at time of initial use shall be less than 30% uno. 9. Holes for bolts in wood shall be bored with a bit of the same nominal diameter
- as the bolt plus 1/16". 2. Holes for lag screws shall be first bored to the same diameter and depth as the unthreaded shank. The threaded portion shall be drilled to 50% of the shank diameter unless noted otherwise in the specifications. . Lag screws and wood screws shall be screwed and not driven into place. Soap may be used to lubricate screws. 2. All bolts and lag screws shall be provided with metal washers under heads and
- nuts which bear on wood. Applies also to expanding and adhesive fasteners. Square steel washers shall be Simpson BP or BPS type (3" sq. min. w/ std cut washer where req'd by code). Malleable Iron (MI) washers shall be round and cast. Standard flåt washers shall be per ANSI B18.22.1 type A - wide pattern. All washers for sill anchors shall be square steel and shall be hot-dipped galvanized . All bolts and lag screws shall be tightened on installation and retightened before closing in or at completion of job. 4. All bolts shall be full nominal dimension a unthreaded portion. No upset threaded olts allowed, 5. All fasteners except lag screws & bolts shall be hot-dipped galvanized or
- stainless steel where in contact w/ pressure treated or fire retardant material. . Use of machine nailing is subject to satisfactory review for each project and subject to approval by the governing agency. The approval is subject to continued satisfactory performance. Machine nailing will not be approved in 5/16" sheathing. If nail heads penetrate the outer ply by more than would be normal for a hammer or if minimum allowable edge distances are not maintained, the performance will be deemed unsatisfactory. Block shtg joints with 2x4 flat blocking where noted on roof or floor framing
- plans and with blocking same size as studs at walls. Use plyclips at midspan of unsupported roof sheathing edges, raming hardware shown on the plans is Simpson Strong-Tie. Use framing hardware as manufactured by Simpson Company or equivalent. Prior to installation of any non-Simpson hardware, the contractor shall submit a list of all detail references where a hardware substitution is proposed, the designation for the Simpson item and non-Simpson proposed equivalent and an IČC report for each substitution item.

#### 19, Lay all structural sheathing on roof and floors with long dimension erpendicular to supports unless noted otherwise. 20. Notify Structural Engineer after wall, floor, and roof shtg nailing has been completed and a minimum of 48 hours prior to concealing nailing. NAILING SCHEDULE

600SN002-1
All nails for structural work shall be common wire nails uno, conforming to the following minimum sizes:
8d = 0,131" diameter x 2-1/2" 10d = 0,148" diameter x 3" 10d sheathing = 0,148" diameter x 1-1/2" plus thickness of shtg 10d short = 0,148" diameter x 1-1/2" 16d = 0,162" diameter x 3-1/2" 20d = 0,192" diameter x 4" 20d box = 0,148" diameter x 4" 40d box = 0,162" diameter x 5"
Holes shall be sub-drilled where necessary to prevent splitting. Nailing not noted below or on plans shall be a minimum of two nails at each contact. 8d for 1x material and 16d for 2x material.

1. Joists or Rafters 2. Studs to Bearings	Sawn lumber brg on plates I-joists brg on plates Lapped to sides of studs 2x4 studs 2x6 and 2x8 studs	TN each side2-10d each side of web2-10d 2x4, 2x63-16d 2x8 - 2x124-16d TN each side2-10d EN in lieu of TN2-16d TN each side3-16d
3, Blocking	2x10 and 2x12 studs between joists, rafters or studs between joist or rafter bearinas (plates)	EN IN 1184 OF TN
4. Ledgers	to studs	1x ledger2-8d
5, Double Top Plates	lower plate to 2x4 stud lower plate to 2x6 or 2x8 st upper plate to lower plate	22, 160 2-16d tud See "Typical Stud Wall & Openina Framina" Detail
6. Sill Plates	to parallel framing	each contact2=6d
1, MUITIPIE STUds 8, Built Up Beams- \$ Sistered Members	stagger for wiaths more the 2-2x members, top and bott 3 or more 2x members or 4x	an 4" 16d @ 12"cc om 16d @ 12"cc clinched ( members 1/2" diameter bolts at 12"cc staggered
9, Ceiling Stripping	holes shall be pre-drilled for nails at ends of stripping boards, Where ceiling is plaster or E gypsum use Annular Ring No (no slant),	2x 2-16d (1-slant) 2x 2-16d (1-slant) 5/8" ails

- --- See "Shear Wall Nailing" detail 10. Shear Wall Nailing -----Floor or Roof Nailing ----------- See plan notes and sheet SI.4. , Non-Structural -----at edges and interior HDG casing nails ----- 6d @ 6"cc supports 13. Non-Structural ----- at edges Nails to match shear walls @ 6"cc Sheathing Nails to match shear walls @ 12"cc
- 14. Use deformed shank nails for all floor sheathing. 15. All exposed fasteners shall have a zinc-coating corrosion resistive 16. Nails used into pressure treated or fire retardant material shall be

hot-dipped galvanized per ASTM A123 or stainless steel.

by the enforcement agency and the Structural Engineer.

SIMPSON HARDWARE

- , Simpson hardware for this project has been specified based on of the allowable load values and product information given in the Simpson catalog for the year that these drawings are dated. . Plans, sections and details indicate general product type and any required modifications (i.e.; slopes and skews). Specific catalog call outs are determined by individual member sizes.
- Examples: Plans/sections indicate 2x10 members supported by Simpson 'U' hangers. Simpson call-out: U2IO, Plans/sections indicate 5-1/8"x18" glob supported by 4x6 post and Simpson ECC cap, Simpson callout: ECC5 \$\[4-4 or option with straps rotated 90° ECC5#1/4-6 3. Where the Simpson catalog indicates two sizes may be used for the same size member, use the larger size.
- Example: Plans/sections indicate 4x8 member supported by Simpson LUS hangers, Simpson catalog indicates LUS46 or LUS48 may be used. The LUS48 shall be used uno.
  4. Use Simpson 'max' nailing configuration ("fill all holes with nails"), typical uno.
  5. Where multiple nail sizes are indicated in Simpson catalog, use largest nail size listed, 6. Hardware supplier other than Simpson shall submit a comparative material list itemizing product designation, load rating, and supported member size for review

COLD FORMED METAL FRAMING

minimum yield strength of 33 ksi for 43 mils (18 ga) and thinner and ASTM A653, structural quality, with a minimum yield strength of 50 ksi for 54 mils (16 ga) and thicker. Hot-rolled carbon sheet and strip steel used in the fabrication of cold-formed members shall conform to ASTM AIOII with a rust inhibitive coating. 2. Metal stude and joists shall be of size and thickness shown on drawings with the minimum effective section properties shown in the table(s).
3. Minimum thickness shown in table for the thickness specified represents 95% of design thickness per 2007 AISI-NAS 2/2010 supplement. 4. Metal framing shall be per ICC-ES No. 3064P. Contractor shall be responsible for obtaining agency approval for any substitutions. 5. Welding shall be in accordance with AWS D1.3 "Structural Welding Code-Sheet Steel". Welders shall be AWS certified. Welding Rods: E60XX series. All field welding shall have special inspection. Typical metal track shall be same gauge as studs which it supports, unpunched, with a flange width of 1 1/4 inches and a depth equal to the nominal stud plus 2 times the track thickness plus the radius. Nested tracks shall be fabricated to fill the outside of a typical metal track. Deep leg tracks shall have a minimum flange width of 2 inches. Use slotted slip tracks where specified. See sections and typical metal stud details. Metal studs shall not have punch-outs closer than 10" from the end of the stud or at intermediate lateral bearing points of studs. Metal studs which are part of built-up header sections shall be unpunched full length.

1. Galvanized sheet steel shall conform to ASTM A653, structural quality, with a

<u> 2LD FORMED METAL FRAMING SECTION PROPERTIES - SSMA C STUDS & JOISTS - 62 SECTIONS<sup>2,3</sup></u>

e/Mil	20	1/33	18,	143	167	'54	14/4	68	S studs ∉ joists		ds \$ sts	
nation	5162-33		5162-43		<b>S</b> 162 <b>-</b> 54		<b>S</b> 162	5162 <b>-</b> 68				
n 1ess	0,0	7329	0,0	0428	0,0	7538	0.0	7677				
"h "D"	Ix	Sx	Ix	Sx	Ix	Sx	Ix	Sx			15/8″	
2″	0.235	0.180	0.302	0.240	0.370	0.284	0.450	0.357			typ	
8″	0,551	0.268	0.710	0.372	0.873	0,444	1.069	0,574	<b>⊺</b>			_
	0.692	0.299	0.892	0,417	1.098	0.498	1.346	0.648	Ω		 Q	I
	1.793	0.577	2.316	0,767	2.860	0.916	3.525	1.164			" ty	
	3.384	0,710	4.500	1.019	5.600	1.229	7.070	1.663			1/2	
	-	-	7.523	1.302	9.391	1.572	11,978	2.154				
	-	-	-	-	14.298	1,914	18.390	2.645				

. For complete section designations in accordance with SSMA standards, add member depth to front of indicated designation. Example: For 3 5/8" member with gauge/mil of 18/43, the full designation is 3626162-43. . Section properties shown are effective properties conforming to AISI A7.2 per 55MA st'andards for material strength noted below. Provide 33 ksi min material for 18/43 ¢ listed sections, provide 50 ksi material for 16/54 *theavier* sections. <u>METAL DECK NOTES</u>

Provide metal decking of type and gauge as shown on plans. . Metal floor deck shall be composite type, conforming to ASTM A653, structural quality, with minimum yield strength of 38 ksi and shall be zinc coated per ASTM A653, G60 coating designation. 3. Metal roof deck shall conform to ASTM A653, structural quality, with minimum yield strength of 38 ksi and shall be zinc coated per ASTM A653, G60 coating 4. Prior to fabrication, the Contractor shall submit shop drawings for the metal decking, showing deck gauge, size and layout as well as closure conditions, welds to supports and side lap details. Conhection and welding of decking to structural supports and deck side seams shall be as specified in the structural drawings. All electrodes for welding shall comply with AWS code, E60 series minimum.

6. All reinforced openings in metal deck shall be installed by metal deck subcontractor. At metal decks to receive concrete, absolutely no conduit or piping of any type is to be placed horizontally within the depth of the concrete above the metal deck.
 At metal deck without concrete fill the following may be attached without specific approval of the Structural Engineer; acoustical tile and gypsum board ceilings only; no piping, ducting or conduit, Maximum ceiling weight - 3,5 psf. Maximum wire hanger load = 60#, 9. Where suspension or hanger wires are required by others, verify and coordinate locations, patterns, spacings, etc. with the appropriate trade. Drill or punch holes at bottom of deck flutes of sufficient size to pass support wires. Wire

supports shall be looped and secured with a minimum of three (3) tight turns around a minimum 1-1/2"  $\times$  12" long furring channel or No. 3  $\times$  12" long reinforcing bar centered above the hole and laid in the deck flutes.

Structural Sheet Index



General Notes Typical Details Typical Details Typical Details Foundation Plan Roof Framing Plan Sections Elevations Details



CONSULTANT Structural Engineers, Inc. 600 Q Street, Suite 200, Sacramento, CA 95811 tel 916.443.0303 fax 916.443.0313 Sacramento . Phoenix . San Francisco CONSULTANT STAMP WILLIAM F RADER No. 3592 STRUCTUR 뿌 Ο S S M ШК Ш MMO Ζ мШζ ш>а PROJECT NAME NO. DATE ISSUES & REVISIONS BY 06/29/2015 BUILDING DEPT SUBMITTAL 1. 09/29/2015 BUILDING DEPT RESUBMITTAL 2. 11/3/2015 BUILDING DEPT RESUBMITTAL 2 PROJECT TRUE NORTH NORTH

DRAWN BY: PROJECT NUMBER: SHEET ISSUE DATE SHEET TITLE:

Author 2015-001400 06/15/15

**General Notes** 

SHEET NUMBER



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# APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

530SD002-1	Metal Deci eld Patter	k ns
Deck Type	Profile	No. 3/4″ø PW per sheet
Туре ЗМЗ6	36"	4

![](_page_1_Picture_14.jpeg)

![](_page_2_Figure_0.jpeg)

## APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

![](_page_2_Picture_5.jpeg)

1					
3	<u>Inte</u>	erior,	Wall C	2pen	ing
	Deflectic	n Limit = L/12C	<u>, , , , , , , , , , , , , , , , , , , </u>		
width				HC4-8 SC	rew <b>S</b> pc <b>g</b>
<sup>6</sup> 15	Jambs	Header	Sill	3 <b>-5/8</b> ″	6" <b>‡</b> 8" Walls
-0″	JI <sup>1,2,3</sup>	H2	Si		
-0″	J2	H4	SI 9		
<i>-0″</i>	J3	4,5,12 HC4-8	<b>S</b> 2	8"CC	4″cC
-0″	J4	6,7,8,12 HC4-8	54 <sup>10</sup>	8"CC	4″cc

1. Use J2 minimum at door openings

2. Use J2 at 4'-0" max opngs in 20ga walls 3. Use J2 at 4'**-0**" max opngs in 8"x18ga walls

4. H4-6 may be used at 12'**-O**" max opngs in 16ga and 14ga walls w/ the exception of 8" walls

5. Use 18ga min. headers at 12'-O" max opngs in 8" walls

6. Use l6ga min. headers at l6'-O" max opngs in 3-5/8"  $\notin$  4" walls

7. Use 14ga min. headers at 16'-O" max opngs in 6"  $\ddagger$  8" walls uno 8. Use HC4-10 headers at 16'-O'' max opngs in 8"x14ga walls

9. Use 52 sills at 8'-0" max opngs in 3-5/8x20ga, 4"x20ga, and 6"x20ga walls.

10, 52 may be used at 16'-0" max opngs in 16ga and 14ga walls w/ the exception of 3-5/8" walls

11. See sheet SI.4 for jamb, header, and sill details

 11. See Street Contract
 12. "H4-8" indicates header type and depth of vertical stud elements inside header, "HC4-8" indicates composite header w/ add'l screw requirements - see schedule \$ 51,4 13. For connection @ base of wall at jambs see  $\left( \begin{array}{c} l \end{array} \right)$ (51.3)

14. For connection @ top of wall at jambs see  $\begin{pmatrix} 5 \end{pmatrix}$ S1.3

15. 'W' width is the max width of a single opening or the combined width of side by side openings that share a single jamb stud configuration.

## Interior Metal Stud Partitions

Maximum Height for Metal Studs with Sds = 0,75, Ip = 1,0 Deflection Limit L/120 - Non Bearing with Cabinet or Equipment

Gage	Designation <sup>3</sup>	Height
20	3625162-33	17′-1″
18	362 <b>5</b> 162 <b>-</b> 43	18′-6″
16	362 <b>5</b> 162 <b>-</b> 54	20'-10"
14	3625162-68	<i>22′<b>-</b>7″</i>
20	4005162-33	18′-10″
18	4005162-43	20'-11"
16	4005162-54	<i>22′-7″</i>
14	4005162-68	24′-7″
20	6005162-33	25′-7″
18	6005162-43	28′ <b>-</b> 8″
16	6005162-54	32'-8"
14	6005162-68	35'-10"
20	8005162-33	29′-2″
18	8005162-43	36′-11″
16	8005162-54	42′-1″
14	8005162-68	46'-10"

Stude shall be depth as indicated on Arch drawings and gauge as determined by height of wall and the schedule above.

2. See elevations  $\begin{pmatrix} A \\ S_{1,3} \end{pmatrix}$  for typical wall framing conditions.

3. Designation conforms to Steel Stud Manufacturers Association standards.

5. The max, hts noted in this table are based upon the use of seismic component load Fp or a live load of 5psf, whichever governs.

![](_page_2_Picture_29.jpeg)

![](_page_3_Figure_0.jpeg)

![](_page_3_Figure_1.jpeg)

![](_page_3_Figure_2.jpeg)

![](_page_3_Figure_3.jpeg)

![](_page_3_Figure_4.jpeg)

![](_page_3_Figure_7.jpeg)

![](_page_3_Picture_8.jpeg)

![](_page_3_Figure_9.jpeg)

![](_page_3_Figure_10.jpeg)

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Author

06/15/15

![](_page_4_Figure_0.jpeg)

![](_page_4_Picture_2.jpeg)

![](_page_4_Picture_3.jpeg)

Foundation Plan - 1/8" = 1'-0"

18. Indicates (e) URM wall Indicates (e) concrete wall Indicates (e) wood column Indicates (e) wide flange column Indicates (e) concrete column

19,

## Site preparation and building pad construction shall be done in accordance with Soils Report #13-526 by Rockridge Geotechnical dated 9/17/2013 Bottom of footing excavations shall be reviewed by Geotechnical Engineer prior to placement of reinforcing steel. Foundations shall bear on <u>compacted</u> <u>existing soil</u> per the requirements of the Soils Report.

Verify all building dimensions and elevations w/ Arch'l drawings. Notify the Architect immediately if there are any conflicts w/ dimensions

3. Dimensions shown are to face of wall, face of block or  $\pounds$  block, or  $\pounds$  block,

5. See sheets SI.1 thru SI.5 for General Notes & Typical Details which are applicable to all drawings uno.

6. It is the contractor's responsibility to coordinate slab control joints with any architecturally exposed slab areas or the location of tile crack control joints. Verify special condition control joints with Arch'l drawings.

7. Contractor to coordinate exact dimensions and locations of thickened slabs, housekeeping pads , etc. with all other disciplines' dwg's as well as with the equipment provided prior to commencing work.

10. [\_\_\_\_] Indicates conc wall per plan. See elevations for add'l info, All horiz reinf shall have std 90° hooks & ends, typ.

Indicates 8" CMU wall. For reinforcing, see  $\begin{pmatrix} 10 \\ SI 2 \end{pmatrix}$ . Conduits in CMU to be per CMU notes.

S1.2

13. Contractor should anticipate encountering (e) fdns associated with former buildings. Consider that additional earthwork will be required for mitigating the removal of these foundations.

14. The dimension between grids and face of building is approximate and is intended to accommodate the potential variability of the existing building, Structural elements shall be the full dimension shown on the plan or greater. Where surfaces are shown in contact, contractor shall

16. All construction is new unless noted as existing (e) on the drawings.

SHEET NUMBER

![](_page_4_Picture_24.jpeg)

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NORTH	N
	PROJECT NORTH

![](_page_4_Picture_27.jpeg)

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HOLLIDAY

DEVELOPMENT

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ARCHITECT

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NO. DATE ISSUES & REVISIONS BY

06/29/2015 BUILDING DEPT SUBMITTAL 1. 09/29/2015 BUILDING DEPT RESUBMITTAL

2. 11/3/2015 BUILDING DEPT RESUBMITTAL 2

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PROJECT NAME

Buehler & Buehler Structural Engineers, Inc. 600 Q Street, Suite 200, Sacramento, CA 95811 tel 916.443.0303 fax 916.443.0313 Sacramento . Phoenix . San Francisco

> VILLIAM E RADER No. 3592

STRUCTUR

DRAWN BY: PROJECT NUMBER: SHEET ISSUE DATE: SHEET TITLE:

2015-001400 06/15/15

Author

Foundation Plan

![](_page_5_Figure_0.jpeg)

![](_page_5_Picture_2.jpeg)

<u> Roof Framing Plan</u> – 1/8" = 1'-0"

![](_page_5_Figure_4.jpeg)

![](_page_5_Figure_5.jpeg)

14. Refer to Arch'l dwgs for information regarding vent openings at blocking and

15. Indicates Mech'l unit. The general contractor shall coordinate all Mech'l equip for size & location with other trades & the structural drawings. Unit

6. The Indicates solid grouted conc masonry wall. See foundation plan for add'l info.

7. Indicates concrete wall. See foundation plan for add'l info.

8. Splices at CMST straps shall be lapped a minimum of 16" & nails driven thru both. 9. Install straps over shtg. Strap nails may replace typ shtg nailing.

 $+10^{\prime} - 0^{\prime}$ Indicates top of framing elevation (i.e. underside of roof shtg)  $+10^{\prime} + 0^{\prime}$ above reference top of concrete (+0'-0") typ, uno.

4. Separation joint dimensions shown on plan indicates minimum clear distance required btwn adjacent bldg elements. Where bldg finishes/fire protection occur, dimension shall be maintained btwn those elements.

W12x26 (18) 53.1  $L6 \times 4 \times 1/2 (LLV)$ 

(53.1)

– shotcrete shear wall per Foundation Plan

 $L6 \times 4 \times 1/2 (LLV)$ 

3" NW conc over — 3"x2Oga deck w/ #3 @ 18"cc, EW @ mid-depth of slab, typ

g sim

(55.1

53.1

53

THE COV PROJECT NAME NO. DATE ISSUES & REVISIONS BY 06/29/2015 BUILDING DEPT SUBMITTAL 1. 09/29/2015 BUILDING DEPT RESUBMITTAL 2. 11/3/2015 BUILDING DEPT RESUBMITTAL 2

DROFESS WILLIAM B RADER No. 3592 STRUCTURA

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![](_page_5_Picture_42.jpeg)

![](_page_5_Picture_43.jpeg)

![](_page_5_Picture_44.jpeg)

![](_page_5_Picture_45.jpeg)

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![](_page_5_Picture_46.jpeg)

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PROJECT TRUE NORTH NORTH

PROJECT NUMBER:

SHEET ISSUE DATE:

SHEET TITLE:

**S2.2** 

Roof Framing Plan

Author

2015-001400

06/16/15

WRITTEN CONSENT OF THE ARCHITECT

SHEET NUMBER

![](_page_6_Figure_1.jpeg)

![](_page_6_Figure_2.jpeg)

![](_page_6_Figure_3.jpeg)

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![](_page_6_Figure_7.jpeg)

![](_page_6_Figure_8.jpeg)

![](_page_6_Figure_9.jpeg)

![](_page_7_Figure_0.jpeg)

![](_page_7_Figure_1.jpeg)

•

 $\underline{Elevation}_{Evation 1-a} \underbrace{\begin{pmatrix} 2 \\ \$4.1 \end{pmatrix}}_{2} - \frac{1}{4''} = \frac{1}{-0''}$ 

![](_page_7_Figure_4.jpeg)

 $\underline{Elevation}_{\text{Elevation 3-a}} \xrightarrow{3} - 1/4 = 1' - 0''$ 

![](_page_7_Figure_6.jpeg)

 $\underline{Elevation}_{Evaluation} \underbrace{4}_{S4,l} - 1/4'' = 1'-0''$ 

![](_page_7_Figure_8.jpeg)

![](_page_7_Figure_9.jpeg)

![](_page_7_Figure_13.jpeg)

![](_page_7_Figure_14.jpeg)

![](_page_7_Figure_15.jpeg)

![](_page_7_Figure_16.jpeg)

<u>Section A-A (NTS)</u>

![](_page_7_Picture_18.jpeg)

![](_page_8_Figure_0.jpeg)

![](_page_8_Figure_1.jpeg)

![](_page_8_Figure_2.jpeg)

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Projective         Anti-Arrive
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