#### GENERAL NOTES

#### A. GENERAL

- 1. All work shall comply with 2007 California Building Code, California Code of Regulations, Title 24, Part 2, Volume 2 of 2 (including all supplements) and all other local or state agencies having jurisdiction over this project.
- 2. All drawings and specifications are considered to be a part of the Contract Documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies that occur shall be brought to the attention of the Architect prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the Contract Documents or any code requirements shall be corrected by the Contractor at his own expense and at no expense to the Owner or Architect.
- All symbols and abbreviations used on the drawings are considered to be construction standards. If clarification is required, the Contractor shall notify the Architect prior to proceeding with the work.
- 4. All dimensions and the site conditions shall be verified by the Contractor at the job site prior to bid submittal, start of shop drawings, start of construction, and/or fabrication of materials. If discrepancies are encountered, or conditions develop not covered by the Contract Documents, the Architect shall be notified for clarification. Contractor shall provide and be responsible for the protection and repair of adjacent
- existing surfaces and areas which may be damaged as a result of new work. 6. Do not scale drawings. Printed dimensions have precedence over scaled drawings
- and large scale over small. Typical details shall apply in general construction unless specifically detailed. Where no details are given, construction shall be as shown for similar work.
- The Contract Documents and Specifications represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure and safety of workmen during construction. Such measures shall include but not be limited to, bracing, shoring for loads due to construction equipment, etc. Observation visits to the site by the Architect or Structural Engineer shall not include inspection of the above items and does not in any way relieve the Contractor of his responsibilities for the above.
- 9. For trenches or excavations (5) five feet or more in depth into which a person is required to descend, the Contractor is to obtain the necessary permit from the State of California, Division of Industrial Safety, prior to the issuance of a building permit.
- 10. Refer to the architectural, electrical and mechanical drawings, etc. for details, dimensions. conditions, pits, trenches, depressions, openings, sleeves, items to be embedded or attached to structural elements, etc., not shown on the structural drawings.
- 11. No holes, notches, blockouts, etc. are allowed in structural elements unless detailed on the structural drawings or approved by the Structural Engineer
- 12. All information shown on the drawings relative to existing conditions is given as the best present knowledge from plans supplied by the Owner, but without guarantee of accuracy. Where actual conditions conflict with the drawings, they shall be reported to the Architect or Engineer so that proper clarification may be made. Modification of details of construction shall not be made without written approval of the Architect or Structural Engineer.

## B. STRUCTURAL STEEL

- Structural steel shall conform to ASTM Specifications as noted below and to the AISC Specifications for fabrication and erection:
- All Wide Flange columns, Wide Flange shapes W12 and larger (U.N.O.): A-992. All Wide Flange beams W10 and smaller, angles, channels and
- A-53. Grade B. Pipe Sections:
- Tube Sections: A-500. Grade B. Plates A-572. Grade 50.
- 2. All welding shall conform to the specifications of the American Welding Society and shall be performed by certified welders using E70XX electrodes (U.N.O.) and the electric arc process. Submit welding procedure specifications for approval prior to
- Weld lengths called for on the plans are the net effective length required. Where fillet weld symbol is given without indication of size, use minimum size welds as specified in AISC Manual of Steel Construction, 13th Edition, Table J.2.4.
- 4. High Strength Bolts (H.S.B.) shall conform to ASTM A-325SC standard specifications typically unless noted otherwise. Other bolts, as noted, shall conform to ASTM A-307. All structural steel shall be fabricated in the shop of a fabricator licensed by the local
- building department and shop drawings shall be submitted to the Architect for approval prior to fabrication.
- 6. All field welding, except minor or tack welding, shall be continuously inspected by an approved welding inspector and conform to welding requirements as per AWS D1.1:
- 2006. 7. Provide one shop coat of paint on all structural steel not covered with concrete.
- fireproofing, masonry or at contact surfaces at high strength bolts. 8. All complete penetration groove welds shall be tested 100%. All C.P. weld joints with members of different thickness or widths shall be transitioned per AWS
- D1.1. U.N.O. 9. High strength bolting shall be continuously inspected by an approved inspector.

## C. METAL DECKING

- 1. All roof and floor metal deck and accessories shall be formed from steel sheets conforming to ASTM A653 SS Grade 33 or higher specifications.
- 2. Deck shall be galvanized in accordance with ASTM A924 commercial coating Class G-60 or G-90.
- Cutting and framing of openings for other trades shall be the responsibility of the trades involved. Holes that are located and dimensions on the drawings shall be the responsibility of the deck erector.
- 4. All deck shall be BHP (ICBO 2757) or Verco (ICC ER 2078P) and the types and gauges shall be as indicated on the drawings, and as follows:

## SECTION PROPERTIES Depth

Type	Gauge	Depth	I(min.)	S(min.)
B or HSB (Roof)	20	1-1/2"	0.216	` <i>0.235</i>
	18	1-1/2"	0.302	0.322
	16	1-1/2"	0.377	0.411
W3 or W3 Formlok	20	3"	0.896	0.534
	18	<i>3"</i>	1.203	0.767
	<i>16</i>	<i>3"</i>	1.509	0.960

- Decks shall have minimum 2" bearing at supports.
- Welding of decking shall be continuously inspected by an approved inspector.
- All floor and roof deck shall be vented. Conduits are not allowed in concrete slab on metal deck.

## D. MECHANICAL ANCHORS

1. Expansion anchor systems:

- A. Concrete: Use only expansion anchor systems that have been issued an ICC-ES report in accordance with the provisions of ICC-ES AC193. Anchor systems should be approved for use in cracked concrete and Seismic Design Categories A-F per Section 2.0 of the ICC Evaluations Services Report. Anchor systems shall be installed per the requirements of the ICC-ES Evaluation Services Report for the specific anchor, and as required by the manufacturer. All expansion anchors shall be Hilti TZ (ICC ESR-1917, as specified on detail. Any substitution must be approved by SEOR
- 2. Where the manufacturer's installation instructions or applicable ICC-ES Evaluation Services Report call for the application of an installation torque, the specified torque shall be applied with a calibrated torque wrench. The specified installation torque shall not be exceeded.
- Anchors are typically available in electro-galvanized carbon steel, hot-dipped galvanized carbon steel, and stainless steel. Use of electro-galvanized carbon steel anchors is typically limited to dry, interior locations, unless otherwise noted. Stainless steel or hot-dipped galvanized anchors shall be used applications exposed to exterior weather conditions. Final authority on the type of anchor coating utilized rests with the Structural Engineer of Record and must be approved by such.

#### D. MECHANICAL ANCHORS (continued)

- 4. Expansion anchors for non-vibration isolated mechanical equipment rated over 10hp are not permitted by ASCE 7-05 Section 13.6.5.5. Anchors installed in overhead conditions for non-vibration isolated equipment with reciprocating or rotating mechanisms shall be undercut anchors.
- 5. The special inspector shall be on the jobsite continuously during anchor installations, unless otherwise noted in ICC-ES ESR, to verify anchor type, anchor dimensions, concrete type, concrete compressive strength, hole dimensions, anchor spacings, edge distances, slab thickness, anchor embedment, and tightening torque.
- 6. The tension testing of the expansion anchors shall be done in the presence of the special inspector and a report of the test results shall be submitted to the enforcement agency. If any anchors fail the tension—testing requirements, the additional testing requirements shall be performed according to CAN2-1916 A.8.
- 7. Test quantity of anchors as noted below:

**Application** <u>Quantity</u> 100% of bolts Structural 50% of bolts Non-structural 10% of bolts Sill plate bolting

- 8. Anchors to be tested shall be selected at random by the special inspector.
- 9. Undercut anchors that allow visual confirmation of full set need not be tested. unless otherwise noted by enforcement agency or engineer or record.
- 10. The test load may be applied by any method that will effectively transmit a measurable tension load to the anchor. Acceptable methods include:
  - A. Use of a hydraulic jack, whereby either unconfined or confined testing shall be acceptable:
  - B. Use of calibrated spring loaded devices; or
  - C. Use of a calibrated torque wrench for torque—controlled expansion anchors.
- 11. The following criteria apply for the acceptance of installed anchors:
  - A. Hydraulic ram method: the anchor shall have no observable movement at the applicable test load. For expansion anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.
  - B. Torque wrench method: the applicable test torque must be reached within one-half (1/2) turn of the nut.
- 12. If any anchor fails testing, test all anchors of the same type, installed by the same trade, not previously tested until twenty (20) consecutive anchors pass, then resume the initial test frequency.
- 13. When installing drilled-in anchors in existing non-prestressed 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 drilled-in anchor.
- 14. If rebar is encountered during the drilling, the contractor shall immediately terminate drilling and contact the engineer of record.
- 15. Locate reinforcement and confirm final anchor locations prior to fabricating plates. members, or other steel assemblies attached with mechanical anchors.
- 16. If the concrete cracks during the installation of the anchor, the anchor shall be removed or abandoned.
- 17. Unless otherwise noted, provide minimum embedment of anchors as follows:

AnchorDiameter	WedgeAnchor Embedment	Heavy Duty Sleeve Anchor Embedment*	UndercutAnchor Embedment**
3/8" (10 mm)	2"	2-3/4"	4"
1/2" (12 mm)	2"	3-1/4"	5 <b>"</b>
5/8" (16 mm)	3-1/8"	4"	7-1/2"
3/4" (20 mm)	3-3/4"	<i>5"</i>	9-7/8"
1" (24 mm)	N/A	6"	N/A

\* Embedments based on ICC-ES ESR 1545.

\*\* Embedments based on ICC-ES ESR 1546

- 18. Required test loads shall be determined as the lesser of twice the maximum allowable tension load provided in the ICC-ESR for the specific anchor or 80% of the nominal yield strength of the anchor element.
- 19. Testing shall occur a minimum of 24 hours after installation of the subject anchors.

## E. POWDER ACTUATED FASTERNERS

- 1. All powder actuated fasteners shall be approved for type, application and installation and shall have an approved ICC report number. Powder actuated fasteners shall be qualified under ICC ES AC70. Refer to OSHPD CAN 2-1912A.1
- 2. Powder actuated fastening systems shall be installed in normal weight and lightweight concrite, masonry and steel per the requirements of the ICC-ES Evaluation Services Report for the specific fastener, and as required by the manufacturer.
- 3. When installing powder actuated fasteners in existing non-prestressed reinforced concrete, use care and caution to avoid hitting the existing reinforcing bars. Maintain a minimum clearance of one inch between the reinforcement and the fastener.
- 4. Powder actuated fasteners are not permitted by ASCE 7-05 Section 13.4.5 for seismic tension load applications. Powder actuated fasteners shall not be used to carry seismic tension loads (except for vertical seismic load produced by self-weight of the components supported) or in cracked concrete unless pre-approved for such loading by the enforcement agency.
- 5. Powder actuated fastener may be used for seismic shear, when they are specifically listed for service in resisting lateral loads in areas subject to earthquake.
- 6. Minimum edge distance for powder actuated fasteners shall be the larger of the values given in ASTM E 1190 or the applicable ICC-ES Evaluation Services Report.
- 7. Fasteners to be tested shall be selected at random by the special inspector.
- 8. Testing of powder actuated fasteners used to attach tracks of interior non-shear wall partitions for shear only, where there are at least three fasteners, is not required.
- 9. If any fasteners fails testing, test all fasteners of the same type, installed by the same trade, not previously tested until twenty (20) consecutive fasteners pass, then resume the initial test frequency.
- 10. The test load may be applied by any method that will effectively measure the tension in the fastener, such as direct pull with a hydraulic jack, calibrated spring loaded devices, etc. Powder actuated fasteners shall be tension tested to twice the allowable tension load as listed in the ICC-ES Evaluation Services Report.

## F. QUALITY CONTROL

1. Unless noted otherwise, materials shall conform and tests and inspections shall be performed by the approved testing agency and/or the job inspector who is approved by OSHPD, the Architect and the Structural Engineer and conform to the provisions of the 2007 California Building Code, per general note A.1 on S-0. Coordinate and work with the OSHPD Testing, Inspection and Observation (TIO) program form for the project.

## G. DESIGN CRITERIA

### **GENERAL**

1. Structure has been designed to comply with ASCE/SEI 7-05 (Minimum Design loads for Buildings and other structures) as modified by 2007 California Building Code and supplements.

Seismic Design Category-D, I = 1.5, Ip = 1.5, R = 8 (Special Moment Resisting Frames)

Site Coefficients A.  $S_{ms} = 1.379q$ ,  $S_{M1} = 0.747q$ , Site Class:  $S_{d}$ 

#### H. ABBREVIATIONS

Diameter

Each Face

Each Side

Each Way

Egual

Each

E.W.

Electl.

Equiv.

Exist.

Exp.

Extr.

F.O.

F.O.C.

*Angle* 

DRAWING

592 29 TOTAL SHEETS

#	Number or pounds	LLV	Long Leg Vertical	Spec.	Specification
<b>@</b>	At	LB.	Pound	Śą.	Square
A.B.	Anchor Bolt	LT. WT.	Lightweight	Std.	Standard
AFF	Above Finish Floor	M.B.	Machine Bolt	Stiff.	Stiffener
ALT.	Alternate	Мах.	Maximum	St/.	Steel
Anch.	Anchor	Mech.	Mechanical	Suppt.	Support
<i>B.O.</i>	Bottom of	Mfr.	Manufacturer	Supt'g.	Supporting
B.O.F.	Bottom of Footing	Min.	Minimum	Sym.	Symmetrical
B.O.P.	Bottom of Pile	Mtl.	<i>Metal</i>	T&B	Top and Bottom
Bm.	Beam	(N)	New	T. O.	Top of
Bott.	Bottom	N./. C.	Not in Contract	T.O.F.	Top of Footing
Btwn.	Between	N. S.	Nelson Stud	T.O.P.	Top of Parapet
CNTR'S	Centers	N. T. S.	Not to Scale	T.O.S.	Top of Steel
C. G.	Central Gravity	No.	Number	T.O.W.	Top of Wall
C.I.P.	Cast In Place	N. WT.	Normal Weight	T.S.W.	Top Seam Weld
C.J.P.	Complete Joint Penetration	O.C.	On Center	Thk.	Thick
CL	Center line	0.F.	Outside Face	Тур.	Typical
Clr.	Clear	O.H.	Opposite Hand	Û.N.O.	Unless Noted Otherwise
Col.	Column	Opn'g.	Opening	V./.F.	Verify in Field
Conc.	Concrete	Pc	PIECE	V.O.J.	Verify on Job
Conn.	Connection	PDF	Powder Driven Fastener	V.O.S.	Verify on Site
Cont.	Continuous	P.H.	Penthouse	Vert.	Vertical
C.P.	Complete Penetration	P.J.P.	Partial Joint Penetration	W/	With
CRC	Cold Rolled Channel	PL	Plate	Ŵ.P.	Work Point
Dbl.	Double	Plcs.	Places	Wt.	Weight
Det.	Detail	P.P.	Partial Penetration	WWF	Welded Wire Fabric
Dia.	Diameter	Reinf.	Reinforcing		
Dim.	Dimension	Req'd.	Required		
Dwg.	Drawing	Sched.	Schedule		
Dwl.	Dowel	Sect.	Section		
(E)	Existing	Sep'n.	Separation		

Similar

<u>I. LEGEND</u>

Long Leg Horizontal

SMS

Existing Concrete

Wood in Section Continuous

Wood in Section

Masonry

Blocking

**MATERIALS** Elevation Electrical Elevator or Elevation Earth Equivalent Existing Expansion Exterior Concrete Poured in Place Flange Floor Drain Face of Face of Concrete Steel Face of Finish

F.O.F. F.O.S. Face of Stud F.O.W. Face of Wall 0000 Foundation Grave/ Finish Fin. Floor Framing Grout or Drypack Feet or Sand Footing

Gauge Galvanized J. OTHER GLBGlu Lam Beam C.P. Grade Beam Hdr. Header P.P. Hanaer Horiz. Horizontal H.S.B. High Strength Bolt 5/1-18

Inside Face Interior Joint K.O. Knockout

Complete joint penetration (C.J.P.) weld Partial joint penetration (P.J.P.) weld

Weld size, length & spacing, etc. shown one side of symbol reference line is typical to opposite side (if symbol occurs opposite side) U.N.O.

Metal Stud \_\_\_\_\_ 

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# FKP Architects

ARCHITECT OF RECORD

Sheet Metal Screw

'Achitect of Record signature line only; this drawing was not prepared under the direct supervision of the Architect of Record. The direct responsibility for preparation of this sheet lies with its corresponding professional stamp and signature. The signature of the Architect of Record in general responsible charge of the project is provided as required by Title 24, Part 1 Section 7-115 (a)".

Changes on these drawings do not consist of materially altered changes to approved drawing and don't require a change order OSHPD review ACO\_ OSHPD review FLSO OSHPD review DSE

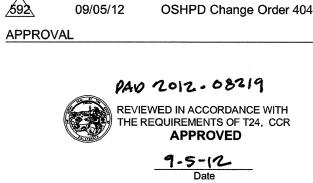
ARCHITECT - PAUL C. GLORIOD

T M A D • STRUCTURAL TAYLOR MECHANICAL ELECTRICAL

&GAINES - CIVIL 320 North Halstead Street, Suite 200 Pasadena, California 91107 Phone: 626.351.8881 Fax: 626.351.5319



Refer to sheet S0 for revisions not noted OSHPD Change Order 327 OSHPD Change Order 34/ 03/14/12 04/09/12 ASI #198 OSHPD Change Order 364 05/30/12 OSHPD Change Order 379 OSHPD Change Order 381 OSHPD Change Order 384



OSHPD Change Order 387

Office of Statewide Health

## CHILDREN'S HOSPITAL OF ORANGE COUNTY

Orange, CA 92868-3874

**TOWER II** 

455 S. Main St.



PROJECT NUMBER 12011.00 Increment #7

**OSHPD - PROJECT NUMBER** 

IL 072072-30 **OSHPD** Permit

01/28/2010

**DRAWING TITLE** 

**GENERAL NOTES** 

DRAWING NUMBER