## GENERAL NOTES

### GENERAL

1. All work shall comply with the California Building Code 2007 (CBC) 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 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.
3. 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.
5. 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.
7. Typical details shall apply in general construction unless specifically detailed. Where no details are given, construction shall be as shown for similar work.
8. 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 architectural, electrical and mechanical drawings for details, conditions, pits, trenches, depressions, roof 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.

### EARTHWORK

1. See Report of Foundation Exploration by converse consultans dated Oct 30, 2008.
2. Soils consist of mixtures of sand, silt and clay.
3. Ground water was not encountered in the borings at/to a depth of 51.5 feet. If ground water should occur during excavation special procedures shall be implemented as recommended by the Soils Engineer.
4. Any existing fill or unsuitable soils, as determined by the Soils Engineer,shall be excavated and replaced as properly compacted fill.
5. Extreme care shall be exercised when excavating or grading adjacent to existing structures or improvements so as not to damage or undermine foundations, walls, slabs, utilities, etc.
6. Any import fill soil that may be required shall have a low potential for expansion and shall be approved by the Soils Engineer prior to importing.
7. All required backfill shall be mechanically compacted in 8" maximum thick layers. Flooding is not permitted. Backfill shall be compacted to 90% of the maximum dry density obtainable by the ASTM D1557-00 method of compaction.
8. The soil shall be overexcavated and recompacted per soil report.
9. The allowable soil bearing pressure of 2500 psf used in the design of continuous and spread footings. The allowable passive pressure of 250 psf/ft. of depth and a coefficient of friction of 0.30.
10. All earthwork and site preparation shall be performed in accordance with the above mentioned report which is on file with the Architect. All foundation excavations shall be observed and approved by the Soils Engineer.
11. Where deep excavation is required, and the necessary space is available, temporary unsurcharged excavations may be sloped back in lieu of shoring. Excavations shall be done as as recommended by, and under the observation of the Soils Engineer. The top of excavations shall be protected by barricades, etc. to prevent surcharging and bermed to prevent water run-off from entering and eroding the excavation. Adjacent to existing buildings or improvements, the excavation shall be restricted to 2:1 (horizontal to vertical) downward from the toe of the existing footing, etc. unless special procedures are implemented as recommended by the Soils Engineer. All applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act of 1970, and the Construction Safety Act shall be met. If ample space is not the available for the required excavation slope, or as a the available for the construction option, shoring may be a a possible alternate. The Contractor shall follow shoring recommendations by the Soils Engineer and conform to General Note No. 8 concerning construction measures.

### CONCRETE

1. All cement shall conform to ASTM C-150, Type I or II.
2. Fine and coarse aggregate shall conform to ASTM C-33.
3. Concrete shall have the following minimum 28 day strength:
   All concrete U.N.O. - 3000 psi reg. wt. (145 pcf)
   Exterior Concrete Walks, Curbs, etc.
   and Misc. Concrete - 2500 psi regular weight.
4. Concrete design mixes shall be approved by the Structural Engineer.
5. Placing of all concrete shall be inspected by a special inspector approved by the architect & city to verify that reinforcing steel is securely supported in place during the pour.
6. Location of construction joints or pour joints shall be as shown on plans or as approved by the Engineer or Architect prior to pouring concrete and conform to CBC, section 1906.4.
7. Anchor bolts, dowels, reinforcing steel, inserts, etc., shall be securely tied in place prior to pouring concrete. Concrete blocks only shall be used to support reinforcing off grade.
8. Concrete slabs shall be cured by keeping continuously wet for 14 days. No curing compounds shall be used unless approved by the Structural Engineer.
9. Provide 3/4" chamfer on all exposed concrete corners.
10. All concrete shall be vibrated in place during placing of concrete.
11. No stakes, steel or wood, shall be permitted in any concrete pour.Suspend forms from above grade.
12. Drypack shall be 1:3 1/2 Portland cement to sand with a minimum 28 day strength of 3000 psi.

### REINFORCING

1. All reinforcing shall conform to ASTM A-615 specifications, Grade 60. Welded bars shall be ASTM A-706. #3 bars maybe Grade 40.
2. Reinforcing bars shall be spliced and bent in strict accordance with the drawings and details and C.R.S.I. publications. No kinks allowed. All bars shall be clean prior to concrete placement.
3. Provide dowels of same size and number from adjacent pour, both vertically and horizontally to match typical reinforcing shown. Laps to be in accordance with the drawings and details. Dowels shall be cleaned after pour.
4. Use low hydrogen electrodes, E-90 (for grade 60), welding all of reinforcing bars.
5. Shop drawings for reinforcing steel shall be submitted to the structural engineer for approval prior to fabrication.
6. Field welding or bending of reinforcing is not permitted except as indicated on the drawings or as approved by the Structural Engineer.
7. The contractor shall furnish (as installed) 2 tons of reinforcing (rebar & tendons) in addition to that required by the drawings to be used at the discretion of the Structural Engineer. (At no additional cost to the owner.)

### STRUCTURAL STEEL

1. Structural steel shall conform to ASTM Specifications as noted below and to the AISC Specifications for fabrication and erection:
   -All WF shapes A-992, Grade 50.
   -Pipe Sections: A-53, Grade B.
   -Tube Sections: A-500, Grade B.
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.
3. 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.
4. All steel exposed to weather shall be hot-dipped galvanized after fabrication. Abraded areas to be touched up with galvalox. All tubes and/or pipes shall have welded cap plates to seal exposed ends.
5. Bolts shall conform to ASTM A-307 specifications typically unless noted otherwise as H.S.B. High strength bolts to conform to ASTM A-325SC (std.).
6. 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.
7. All field welding except tack welding, shall be continuously inspected by an approved welding inspector.
8. Provide one shop coat of paint on all structural steel not covered with concrete, fireproofing, masonry or at contact surfaces at high strength bolts.
9. All complete penetration groove welds contained in joints and splices shall be tested 100%.
10. High strength bolting shall be continuously inspected by an approved inspector.
11. Anchor bolt shall confirm to ASTM A-307. F155 4-GR36 optional.

### INTERIOR METAL STUDS

Interior metal studs shall be per SSMA ICC# ER-4943P.

SEE (J / S2.4) FOR MORE INFORMATION

### EXTERIOR METAL STUDS

1. Exterior metal studs shall be per S.S.M.A., ICC# ER-4943P as specified hereafter.
2. Studs shall be painted.
3. Stud framing shall be in accordance with AISI, "Specifications for Design of Cold Formed Steel Structural Members".
4. Studs shall conform to ASTM C955 and A1003, Grade 50. Tracks shall conform To ASTM C955 and A1003, Grade 50.
5. All bracing stud shall be min. 4"x16GA. @ 4'-0" Max. Spacing O.C. U.N.O.
6. Studs shall have the following properties: (Minimum Effective)

| Stud Type | S in3 | A in2 | I in4 | Equivalent SSMA Designation |
|---|---|---|---|---|
| 6"x16 Ga. | 0.927 | 0.556 | 2.860 | 600S162-54 |
| 6"x16 Ga. (*) | 1.069 | 0.670 | 3.760 | 600S250-54 |
| **Track Type** | **S in3** | **A in2** | **I in4** | |
| 6"x14 Ga. | 1.059 | 0.641 | 3.309 | 600T150-68 |
| 6"x14 Ga. (*) | 1.277 | 0.712 | 3.990 | 600T200-68 |
| 6"x16 Ga. | 0.843 | 0.509 | 2.611 | 600T150-54 |
| 6"x16 Ga. (*) | 1.015 | 0.565 | 3.145 | 600T200-54 |
| **Bracing Type** | **S in3** | **A in2** | **I in4** | |
| 4"x16 Ga. | 0.549 | 0.443 | 1.098 | 4005162-54 |

(*) Indicates Stud with 2 1/2" flange and track with 2" flg., see Section Property above.

### EXPANSION ANCHOR BOLTS

1. All field installed concrete expansion anchors shall be approved for the type and installation, for its application, and materials. All bolts shall have an approved ICC research report number. Hilti KB-TZ (ESR-1917).
2. All anchors shall be tested as follows: (Hardrock or Lightweight Concrete).

| ANCHOR DIA. (in.) | WEDGE LOAD (LBS) | WEDGE TORQUE (FT-LBS) | SLEEVE LOAD (LBS) | SLEEVE TORQUE (FT-LBS) | SCREW LOAD (LBS) | SCREW TORQUE (FT-LBS) |
|---|---|---|---|---|---|---|
| 1/4 | 800 | 10 | 400 | 4 | N/A | N/A |
| 5/16 | N/A | N/A | 400 | 5 | N/A | N/A |
| 3/8 | 1100 | 25 | 700 | 10 | N/A | 10 |
| 1/2 | 2000 | 50 | 900 | 20 | N/A | 10 |
| 5/8 | 2300 | 80 | 1100 | 45 | N/A | 10 |
| 3/4 | 3700 | 150 | 1400 | 90 | N/A | 20 |
| 1 | 5800 | 250 | N/A | N/A | N/A | N/A |

Minimum anchor embedment and edge distance are as follows:

| | | | | | |
|---|---|---|---|---|---|
| Bolt Diameter (d) | 1/4" | 3/8" | 1/2" | 5/8" | 3/4" |
| Min. Embedment (8xd) | 2" | 2 1/2" | 3 1/2" | 4" | 4 3/4" |
| Min. Edge Distance (10xd) | 2 1/2" | 3 3/4" | 5" | 6 1/4" | 7 1/2" |

(*) Use cast in place bolts in lieu of expansion bolts if minimum embedment cannot be provide as noted.

A. Anchor diameter refers to the thread size for a WEDGE categories and to the anchor outside diameter for the SLEEVE category.
B. Apply proof test loads to WEDGE and SLEEVE anchors without removing the nut if possible. If not, remove the nut and install a threaded coupler nut to the same tightness of the original nut using a torque wrench and apply load.
C. For SLEEVE internally threaded categories, verify that the anchor is not prevented from withdrawing by a baseplate or other fixtures. If restraint is found, loosen and shim or remove fixture(s) prior to testing.
D. Reaction loads from test fixtures may be applied close to the anchor being tested. Provided the anchor is not restrained from withdrawing by the fixture(s).
E. Test equipment shall be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
F. 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 the 3/8 in. sleeve anchor only.
G. Testing should occur 24 hours minimum after installation of the subject anchors.
H. For WEDGE and SLEEVE type anchors test 50% of the anchors (alternate anchors in any group arrangement). If any anchor fails testing, test all anchors of the same category not previously tested until 20 (twenty) consecutive pass. Then resume the initial testing frequency.
I. 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.

### DESIGN LOADS

1. Structure has been designed in compliance with of the California Building Code 2007 edition Volume 2.
2. Seismic Respond Coefficient, Cs = 0.222
   I = 1.0
   R = 4.5
   ρ = 1.0
   V = 0.222W
   Basic Seismic-Force Resistance: Steel Moment Resisting Frame and Wood Shear Wall Combination.
   Analysis Procedure = Statics

2A. Seismic Design Catagory = D
   Site Class = D
   Occupancy Catagory = II
   Seismic Respond Coefficient, Cs = 0.154
   I = 1.0
   R = 6.5
   ρ = 1.0
   V = 0.11W (ASD)
   Basic Seismic-Force Resistance: Wood Shear Wall
   Analysis Procedure = Statics

3. Live Load: Typical Roof 20 psf (reducible)
4. Snow Load: Pg = Zero
5. Wind = 85 mph (3 - second gust), EXposure C
6. Flood Hazard: N/A

### WOOD & GLU-LAM

1. All lumber shall be graded per Grading Rules #16 of West Coast Lumberman's Association.
2. Wood shall be grade marked Douglas Fir-Larch and as follows:

| | |
|---|---|
| 2x Horizontal Framing | No. 1 and Better |
| Studs | No. 1 |
| Sills & Blocking | No. 2 |
| Posts & Columns | No. 1 |
| Lintels & Beams | No. 1 |

3. All pressure treated lumber shall be marked with a stamp per AWPB as LP-2 or LP-22.
4. All wood in contact with concrete or masonry shall be pressure treated.
5. Plywood sheathing shall be Douglas Fir Plywood, 5 ply, Structural 1, conforming to PS 1 83. All plywood shall be grade marked "DFPA Structural 1, Interior with Exterior Glue".
6. Plywood nailing shall be approved by the job inspector and Engineer or Architect, prior to covering up.
7. Framing hardware shall be as manufactured by the Simpson Strong Tie or approved equal. Fasteners to be furnished by the manufacturer and all fastener holes to be filled.
8. Machine applied nailing is subject to a satisfactory jobsite demonstration for each project and the approval by the project Architect or Structural Engineer. The approval is subject to continued satisfactory performance. If nailheads penetrate the outer ply more than would be normal for a hand hammer, or if minimum allowable edge distances are not maintained, the performance will be deemed unsatisfactory.
9. Provide plate washers under all bolts, nuts and heads.
10. Re-tighten all bolts prior to closing in.
11. Glue laminated beams shall be Douglas Fir in conformance with Product Standards PS 56-73 and shall be of combination 24F-V4 (CBC 2007) Architectural finish with adhesive for wet use.
12. All structural glued laminated timber shall be continuously inspected during fabrication by inspector specifically approved by the Cities agency. An AITC Certificate will not meet this requirement. Submit shop drawings.
13. All nailing shall conform to tables set forth in the California Building Code except specifically detailed connections. Use only common nails.
14. Truss joist shall be fabricated and erected by a fabricator approved by the checking agency for this work. Structural calculations and shop drawings signed by a Registered Civil Engineer shall be provided by Fabricator and reviewed by Architect.
15. All framing members shall be erected with natural or built-in camber up unless noted otherwise.
16. Glu Lam Beam shall have the following standard camber (U.N.O.) :

| LENGTH (FEET) | CAMBER (INCHES) |
|---|---|
| 16 | 0.240 |
| 18 | 0.304 |
| 20 | 0.375 |
| 22 | 0.454 |
| 24 | 0.540 |
| 26 | 0.634 |
| 28 | 0.735 |
| 30 | 0.844 |
| 32 | 0.960 |
| 34 | 1.084 |
| 36 | 1.215 |
| 38 | 1.354 |
| 40 | 1.500 |

### STRUCTURAL DRAWING LIST


| | |
|---|---|
| S-1.0 | GENERAL NOTES |
| S-1.1 | GENERAL NOTES |
| S-1.2 | TYPICAL DETAILS |
| S-1.3 | TYPICAL DETAILS |
| | |
| S-2.1 | FOUNDATION PLAN |
| S-2.2 | ROOF FRAMING PLAN |
| S-2.3 | DETAILS & SECTIONS |
| S-2.4 | DETAILS & SECTIONS |
| S-2.5 | DETAILS & SECTIONS |
| S-2.6 | DETAILS & SECTIONS |
| S-2.7 | DETAILS & SECTIONS |
| S-2.8 | DETAILS & SECTIONS |
| S-2.9 | DETAILS & SECTIONS |
| | |
| S-3.1 | FOUNDATION PLAN |
| S-3.2 | ROOF FRAMING PLAN |
| S-3.3 | DETAILS & SECTIONS |
| S-3.4 | DETAILS & SECTIONS |
| S-3.5 | DETAILS & SECTIONS |
| S-3.6 | DETAILS & SECTIONS |
| S-3.7 | DETAILS & SECTIONS |
| | |
| S-4.1 | FOUNDATION & ROOF FRAMING PLAN |
| S-4.2 | DETAILS & SECTIONS |
| S-4.3 | DETAILS & SECTIONS |
| S-4.4 | DETAILS & SECTIONS |
| S-4.5 | DETAILS & SECTIONS |
| S-4.6 | DETAILS & SECTIONS |
| | |
| S-5.1 | MAIN BLDG. FOUNDATION PLAN & DETAILS |
| | |
| TOTAL | 27 SHEETS |



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# PERRIS VALLEY Big League Dreams

2155 Trumble Road
Perris, California 92570

SHEET TITLE

100% CONSTRUCTION DOCUMENT

| DATE | REVISIONS |
|---|---|
| | |

STAMP

REGISTERED PROFESSIONAL ENGINEER — LARRY C. TSANG — No. S7292 — Exp. 06/30/2010 — STRUCTURAL — STATE OF CALIFORNIA

| CHECKED BY | DATE |
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| SY | . |
| DATE 01-07-10 | FILE NAME |
| DRAWN BY DG | SHEET S-1.0 |
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