

GENERAL NOTES

GENERAL

- All work shall comply with the California Building Code 2013 (CBC) and VA Seismic Design Requirements H-18-8
- 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 Structural Engineer 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.
- All symbols and abbreviations used on the drawings are considered to be construction standards. is required, the Contractor shall notify the Structural Engineer prior to proceeding with the work.
- 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.
- 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.
- 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 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.
- 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.
- Refer to 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.
- No holes, notches, blockouts, etc. are allowed in structural elements unless detailed on the structural drawings or approved by the Structural Engineer.
- 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 Engineer so that proper clarification may be made. Modification of details of construction shall not be made without written approval of the Structural Engineer.

DEMOLITION

- All demolition shall be carried on in such a way as not to damage existing elements which are to be in the finished building.
- All elements of the structure which are to remain and which are damaged during demolition work shall be replaced at no added cost. Existing elements to be protected to the fullest extent possible to reduce such damage to a minimum.

CONCRETE

- All cement shall conform to ASTM C-150, Type I or II.
- Fine and coarse aggregate shall conform to ASTM C-33.
- Concrete shall have the following minimum 28 day strength:  
All concrete U.N.O. - 3000 psi reg. wt. (145 pcf)
- Concrete design mixes shall be approved by the Structural Engineer.
- Placing of all concrete shall be inspected by a special inspector approved by the city to verify that reinforcing steel is securely supported in place during the pour.
- Location of construction joints or pour joints shall be as shown on plans or as approved by the Engineer prior to pouring concrete and conform to CBC, section 1906.4.
- 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.
- Concrete slabs shall be cured by keeping continuously wet for 14 days. No curing compounds shall be used unless approved by the Structural Engineer.
- Notify the Structural Engineer 48 hours minimum prior to all pours.
- Provide 3/4" chamfer on all exposed concrete corners.
- All concrete shall be vibrated in place during placing of concrete.
- No stakes, steel or wood, shall be permitted in any concrete pour. Suspend forms from above grade.
- Drypack shall be 1:3 1/2 Portland cement to sand with a minimum 28 day strength of 8000 psi.
- Grout shall be 1:3:2 Portland cement to sand (No Pea Gravel) with a minimum 28 day strength of 8000 psi.
- No Pea Gravel Concrete mix shall be used unless approved by the Structural Engineer.

REINFORCING

- All reinforcing shall conform to ASTM A-615 specifications, Grade 60. Welded bars shall be ASTM A-706. #3 bars maybe Grade 40.
- 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.
- 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.
- Use low hydrogen electrodes, E-90 (for grade 60), welding all of reinforcing bars.
- Shop drawings for reinforcing steel shall be submitted to the structural engineer for approval prior to fabrication.
- Field welding or bending of reinforcing is not permitted except as indicated on the drawings or as approved by the Structural Engineer.

STRUCTURAL STEEL

- 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.
- 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.
- 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.
- All steel exposed to weather shall be hot-dipped galvanized after fabrication. Abraded areas to be touched up with galvaloy. All tubes and/or pipes shall have welded cap plates to seal exposed ends.
- 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.).
- 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.
- All field welding except tack welding, shall be continuously inspected by an approved welding inspector.
- Provide one shop coat of paint on all structural steel not covered with concrete, fireproofing, masonry or at contact surfaces at high strength bolts.
- All complete penetration groove welds contained in joints and splices shall be tested 100%.
- High strength bolting shall be continuously inspected by an approved inspector.

ANCHOR BOLTS

- All field installed concrete anchors shall be approved for the type and installation, for its application, and materials. All bolts shall have an approved ICC research report number.
- Test post-installed anchors in concrete shall comply with section 1913A.7, 2013 CBC. Post-installed anchors shall be tested as follows: (Hardrock f<sub>c</sub>=3000psi).

ANCHOR	WEDGE (HILTI KB-TZ ICC ESR-1917)
DIA. (in.)	TESTING TORQUE (FT-LBS)
1/2 (2" EMBED.)	25
5/8 (3 1/8" EMBED.)	60
5/8 (4" EMBED.)	60
3/4 (3 3/4" EMBED.)	110
3/4 (4 3/4" EMBED.)	110
	(HILTI HDA ICC ESR-1546)
	TESTING TORQUE (FT-LBS)
HDA - PM10x100 (3.94" EMBED.)	37
HDA - PM12x125 (4.92" EMBED.)	59
HDA - PM16x190 (7.48" EMBED.)	89
HDA - PM20x250 (9.84" EMBED.)	221
HILTI HIT-RE 500-SD ADHESIVE ANCHOR (ICC ESR-2322)	
ANCHOR, Test loads are twice the allowable tension load per ICC ESR-2322, Table 35	
DIA. (in.)	LOAD (LBS)
#4 REBAR: 1/2 (3" EMBED.)	4806
#5 REBAR: 5/8 (3 1/4" EMBED.)	5822
#6 REBAR: 3/4 (3 1/2" EMBED.)	6900
Minimum edge distance are as follows:	
Bolt Diameter (d)	3/8" 1/2" 5/8" 3/4" 0.83"
Min. Edge Distance (10xd)	3-3/4" 5" 6-1/4" 7-1/2" 8-1/2"

Notes:

- Apply proof test loads to mechanical anchors without removing the nut, if possible. If not, remove nut and install a threaded coupler to the same tightness as the original nut using a torque wrench and apply load.
- For internally threaded anchors (e.g. drop-ins, etc), verify that the anchor is not prevented from withdrawing by a base plate or other fixtures prior to testing. If restraint is found, loosen and shim or remove fixture(s) prior to testing.
- Reaction loads from test fixtures may be applied close to the anchor being tested, if the anchor is not restrained from withdrawing by the fixture(s).
- Test equipment (including torque wrenches) shall be calibrated by an approved testing laboratory in accordance with recognized standard procedures.
- Testing shall occur a minimum of 24 hours after installation of the subject anchors.
- All tests shall be performed in the presence of the special inspector/ Inspector of Record.

- When installing drilled-in anchors and/or powder driven pins in existing non-prestressed reinforced concrete, use care and caution to avoid cutting or damaging the existing reinforced bars. When installing them into existing prestressed concrete (pre- or post-tensioned) locate the prestressed tendons by using a non-destructive method prior to installation. Exercise extreme care and caution to avoid cutting or damaging the tendons during installation. Maintain a minimum clearance of one inch between the reinforcement and the drilled-in anchor and/or pin.

DESIGN LOADS

- Structure has been designed in compliance with of the California Building Code 2013 edition Volume 2 and VA Seismic Design Requirements H-18-8
- Seismic Design Catagory = D  
Site Class = D  
Occupancy Catagory = IV  
I<sub>p</sub> = 1.5  
S<sub>S</sub> = 1.761 S<sub>1</sub> = 0.610  
S<sub>D5</sub> = 1.173 S<sub>D1</sub> = 0.610
- Snow Load: P<sub>g</sub> = Zero
- Wind = 85 mph (3 - second gust), Exposure C

STRUCTURAL DRAWING LIST

S-1	GENERAL NOTES
S-2	TYPICAL AND MISCELLANEOUS DETAILS
TOTAL	2 SHEETS

GENERAL NOTES

ARCHITECT/ENGINEERS:

**HMC**

Architecture • Interiors • Planning

**ARCHITECTS**

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HMC Project #226907H-000

Drawing Title

GENERAL NOTES

Approved Project Director

Project Title

Canteen Services (2nd Floor)  
Ventilation Upgrade

Location

VA LOMA LINDA HEALTHCARE SYSTEM  
11201 BENTON STREET  
LOMA LINDA, CALIFORNIA 92357

Date

03/30/16

Checked

R. Wang

Drawn

M. Tjan

Drawing Number

S-1

Dwg. of

NONE 1

Office of  
Construction  
and Facilities  
Management

Department of  
Veterans Affairs



