

GENERAL NOTES

CODES AND STANDARDS

- New construction has been designed to, and shall be constructed in accordance with the following building codes and standards:
 - 2012 International Building Code (IBC 2012)
 - ASCE/SEI 7-10, Minimum Design Loads for Buildings and Other Structures
- Unless explicitly modified in the Contract Drawings and Specifications, the Contractor shall comply with provisions of:
 - ACI 301-10, Specifications for Structural Concrete
 - ACI 318-11, Building Code Requirements for Structural Concrete
 - ACI 530-11/ASCE 5-11/TMS 402-11, Building Code Requirements for Masonry Structures
 - ANSI/AISC 360-10 Specification for Structural Steel Buildings
 - AWS D1.1-2008, Structural Welding Code - Steel
 - SDI - No. MOG2, SDI Manual of Construction with Steel Deck, 2010

DESIGN LOADS

Floor live load (unless otherwise noted)

Engineering Space	125 psf
Offices	65 psf (1)
Corridors	80 psf

(1) Includes 15 psf partition allowance, unreduced (IBC 1607.5)

Earthquake design data

Seismic importance factor (ASCE 7, Table 11.5-1)	$I_e = 1.5$
Occupancy category (IBC Table 1604.5)	IV
Mapped spectral response accelerations	
Short period (IBC 1613.5.1)	$S_s = 0.180 g$
1-second period (IBC 1613.5.1)	$S_1 = 0.058 g$
Site class (IBC Table 1613.5.2)	C
Spectral response coefficients	
Short period (IBC 1613.5.4)	$S_{ms} = 0.144 g$
1-second period (IBC 1613.5.4)	$S_{m1} = 0.058 g$
Seismic design category	A

Alterations are in accordance with ASCE 7, Appendix 11B.4. Proposed structural alterations comply with IBC requirements for new structures. Additionally, proposed alterations do not increase the seismic force in any existing structural element by more than 10 percent, nor do they decrease the design strength of any existing structural element to resist seismic forces by more than 10 percent. Therefore, further analysis and design of the existing structure for seismic force-resistance are not required.

DESIGN STRESSES

Concrete minimum compressive strength in 28 days:	
Lightweight concrete on metal deck (120 pcf max. air dried)	4,000 psi
Normal weight concrete for equipment pads	4,000 psi
Reinforcing bars (ASTM A615, Grade 60)	$F_y = 60,000$ psi
Welded wire reinforcement (ASTM A185)	$f_t = 30,000$ psi
Structural steel W shapes	
(ASTM A992 or ASTM A572/50)	$F_y = 50,000$ psi
Structural steel other shapes (ASTM A36)	$F_y = 36,000$ psi
Metal decks	$f_t = 20,000$ psi

GENERAL

- All new construction shall comply with the Contract Documents and the Building Code.
- Typical details and general notes apply to all parts of the work except where specifically detailed or unless otherwise noted.
- The structural drawings illustrate structural members. Refer to architectural, mechanical, and electrical drawings for non-structural items which require special provisions during the construction of the structural members.
- Drawings are not to be scaled.
- Refer to architectural plans for floor depressions, openings, slopes, drains, curbs, pads, embedded items, non-bearing partitions, etc. Refer to mechanical and electrical plans for sleeves, openings, and hangers for pipes, ducts, and equipment.
- The Contractor shall verify and be responsible for all dimensions and conditions which impact the work. Field verify sizes, elevations, hole locations, etc., prior to fabrication.
- The Contractor shall carefully review the drawings to identify the scope of work required, visit the site to relate the scope of work to existing conditions and determine the extent to which those conditions and physical surroundings will impact the work.
- Existing conditions as shown on these plans are for reference only. The Contractor is required to field verify all existing conditions prior to construction.
- The Contractor shall resolve any conflicts on the drawings or in the specifications with the Architect/Engineer before proceeding with the work.
- Any deviation, modification, or substitution from the approved set of structural drawings shall be submitted to the Owner, Architect, and Engineer for review/approval prior to its use or inclusion on the shop drawings.
- The Contractor shall provide all necessary shores, braces, and gys required to support all loads to which the building structure and components, soils, other structures, and utilities may be subjected during construction. Shoring systems shall be designed, signed, and sealed by a professional engineer licensed in the jurisdiction where the project is located.
- The Contractor shall provide means, method, techniques, sequence, and procedure of construction as required.
- The Contractor shall protect all work, materials, and equipment from damage and shall provide proper storage facilities for materials and equipment during construction.
- Site visits performed by the Architect/Engineer do not include inspections of means and methods of construction performed by the Contractor.
- Structural observations performed by the Architect/Engineer during construction are not the continuous and special inspection services and do not waive the responsibility for the inspections required of the Building Department Inspector or the testing agency. Observations also do not guarantee the Contractor's performance and shall not be considered as a supervision of construction.
- The Contractor shall review shop drawings for completeness and compliance with contract documents. The Contractor shall stamp shop drawings prior to submission to the Architect and Engineer.
- Review of the shop drawings by the Architect's Engineers shall not be construed as an authorization to deviate from the Contract Documents.
- Shop drawings will not be processed if they are incomplete, lack coordination with relevant portion of contract documents, lack calculations (if required), or if deviations, modifications, and substitutions are indicated without prior written approval from the Architect/Engineer.

STRUCTURAL TESTING AND SPECIAL INSPECTIONS

Special structural testing and inspections are required. The Contractor shall hire an approved independent testing agency. The agency shall be designated as the special inspector and shall provide structural testing and special inspections as required by the building code and as noted in the Contract Documents. Reports of inspection and testing shall be sent to the Architect, Engineer, Owner, Contractor, and Building Department. Structural testing and special inspection shall include:

- Concrete: mix data, daily pour reports, cylinder tests, slump, and temperature. See specifications for all testing and inspection requirements.
- Reinforcement: placement, type, size, and grade of steel. See specifications for all testing and inspection requirements.
- Structural steel: welding and bolting in the shop and field. See specifications for all testing and inspection requirements.

CONCRETE CONSTRUCTION

- All concrete construction shall be in accordance with the latest Building Code Requirements for Structural Concrete ACI 318 and ACI Detailing Manual.
- Furnish bar supports where necessary during construction.
- Provide pipe sleeves and inserts in concrete work where required. See architectural and mechanical drawings.
- Provide a minimum of #4 dowels at 12" on center connecting framed floors to concrete walls. Slab thickness indicated over steel form deck includes form depth. Use decks that will safely support all construction loads, including wet weight of concrete.
- Horizontal floors supported shall be finished level. The slab thickness noted is minimum. Add concrete as necessary to overcome member deflections. Shored construction shall be finished to a constant depth.
- Drawings show typical reinforcing conditions. Contractor shall prepare detailed placement drawings of all conditions showing quantity, spacing, sizes, clearances, and coverage required by the structural details, applicable code, and trade standards. Contractor shall notify reinforcing inspector of any adjustments from typical conditions which are proposed in placement drawings to facilitate field placement of reinforcing steel and concrete. Bar bends shall be made cold. Bars shall not be bent after any portion of the bar is encased in concrete.

Bar Size	Class B Tension Lap Splice					
	$f_c = 3000$ psi		$f_c = 4000$ psi		$f_c = 5000$ psi	
	Top	Other	Top	Other	Top	Other
#3	28"	22"	24"	19"	22"	17"
#4	37"	29"	33"	25"	29"	23"
#5	47"	36"	41"	31"	36"	28"
#6	56"	43"	49"	37"	43"	34"
#7	81"	63"	71"	54"	63"	49"
#8	93"	72"	81"	62"	72"	56"
#9	105"	81"	91"	70"	81"	63"
#10	118"	91"	102"	79"	92"	70"
#11	131"	101"	113"	87"	102"	78"

LOOSE LINTEL SCHEDULE

- Lintels shall be shop painted.
 - Bottom plates in beamplate assemblies shall be 1/2" less in width than the supported masonry wall. Stop bottom plates at face of masonry opening.
 - Weld bottom plates to lintels with continuous fillet welds (each side).
 - Lintels shall have minimum bearing at each end of 1" per foot of opening (6" minimum) except as detailed.
 - Lintels shall have 8" minimum solid masonry below bearing points and shall extend beyond the full bearing area.
 - Lintel bearing plates shall be held back 1/2" minimum from face of masonry at opening. Provide flexible caulk between lintel and masonry at this location. Match mortar color. The following schedules apply to all masonry walls:
- | Span Limits | Angle Size | |
|----------------|-------------------|------------|
| | Span Limits | Angle Size |
| 0'-0" to 4'-0" | L3 x 3 1/2 x 1/4 | |
| 4'-1" to 5'-0" | L4 x 3 1/2 x 5/16 | |
| 5'-1" to 7'-0" | L5 x 3 1/2 x 5/16 | |
| 7'-1" to 9'-6" | L6 x 3 1/2 x 3/8 | |
- For 6" walls provide:

Span Limits	Lintel Size
0'-0" to 4'-0"	WT5x6
4'-1" to 5'-6"	WT5x8.5
5'-7" to 9'-6"	WT7x11

STEEL CONSTRUCTION

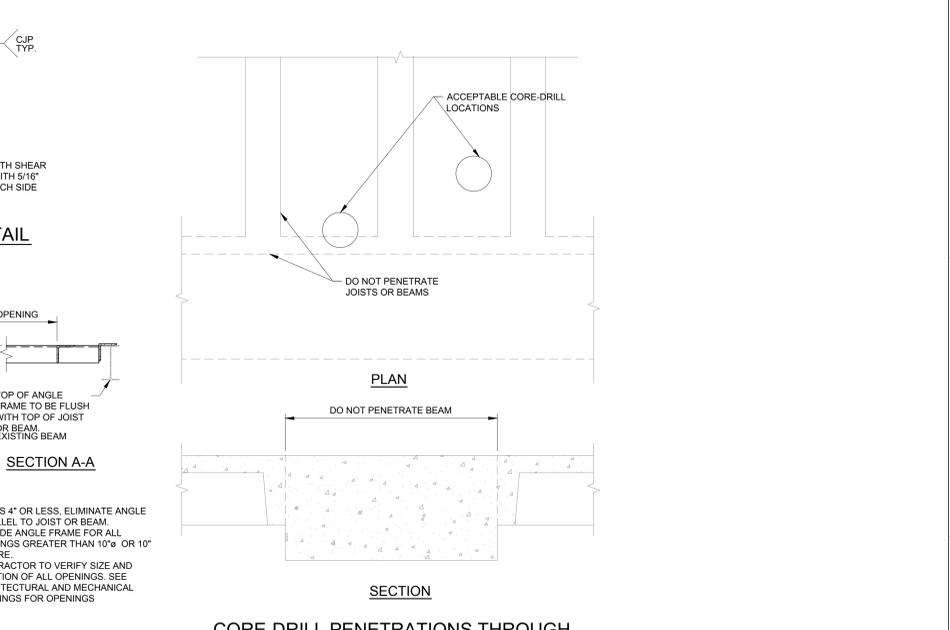
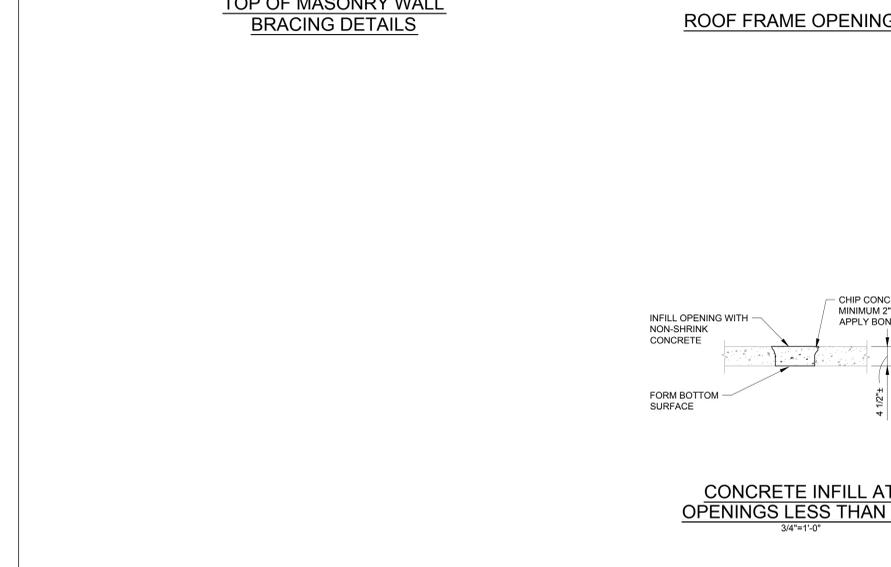
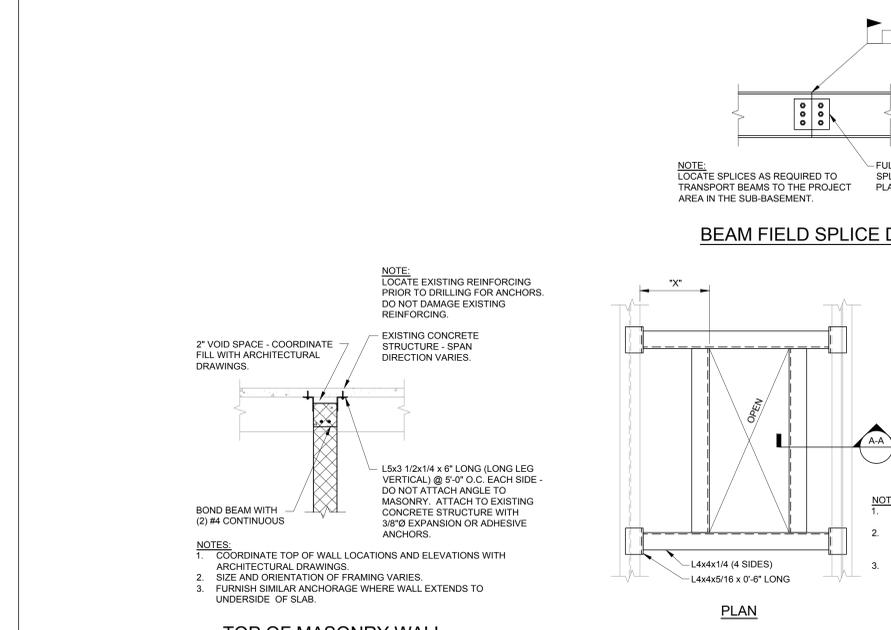
- Steel detailing, fabrication, and erection shall conform to the AISC Specification for Structural Steel Buildings and Code of Standard Practice, and the AWS Structural Welding Code.
- Stresses occurring during fabrication, shipment, and erection shall be temporary and not excessive. Stresses at all times shall be less than design and allowable stresses. The full design and load-carrying capacity of the steel work shall not be impaired due to fabrication, shipment, or erection procedures. Throughout the complete process, the stability of all individual members and assemblies shall be maintained.
- The Contractor shall be responsible for the control of all erection procedures and sequences with relation to temperature differentials and weld shrinkage.
- All additional steel required for erection purposes shall be provided at no additional cost and shall be removed unless approved by the Owner in writing.
- Connections - welded or high strength bolted:
 - High-strength bolts shall be installed in accordance with "Specifications for Structural Joints Using ASTM A325 or A490 Bolts".
 - A325SC with hardened washers: use for connections as noted on drawings.
 - A325N with hardened washers: use for all connections unless otherwise noted.
 - Provide hardened washers under nuts at all high-strength bolts, except where plate washers are used per AISC Specifications.
 - Unless snug tight connections are noted on the drawings as being permitted, all bolts should be tightened to full pretensioning load.
 - Use standard holes with the following exceptions: oversize holes are permitted when bolts are loaded in tension; short slotted holes are permitted for shear loading perpendicular to the slot.
 - Provide beveled washers on all connections to sloping flanges of I sections and channels where slope exceeds 1:20.
 - Where minimum AISC fillet weld thickness requirement exceeds welds shown on details, or weld size is not specified, provide minimum AISC weld.
- Welding electrodes shall be E70XX except where other electrodes are required for compatibility with material being welded.
- Shop drawings are required and shall note type of electrodes, size of all welds, and type and size of all bolts.
- See all contract drawings for miscellaneous steel requirements.
- All shop and field welding shall be performed by a recently certified welder.
- All welding and high strength bolting must be inspected by a qualified testing laboratory. Laboratory shall be approved by the Architect and/or Engineer.

ADHESIVE AND EXPANSION ANCHORS

- For connections to existing concrete or solid masonry, use torque controlled expansion anchors or adhesive anchors with diameter and embedment length as noted on the drawings. Submit product information for approval prior to use.
- For connections to existing hollow masonry or brick, use sleeve anchors or adhesive anchors with screen tube with diameter and embedment length as noted on the drawings. Submit product information for approval prior to use.
- Locate existing reinforcing by means of a rebar detector prior to drilling. Adjust the connection as required to avoid damaging any reinforcing.
- Notify the Architect or Engineer if the existing concrete or masonry is cracked in the vicinity of the anchors prior to drilling.

STEEL DECK

- The metal decking shall be of the type and gauge as indicated on the drawings. Decking and all accessories shall be formed from steel sheets conforming to ASTM A653. The steel shall be zinc coated conforming to ASTM A924, Class G60 as required in the specifications. Deck units shall be continuous over three or more spans where possible.
- Diaphragm action shall be provided for in all areas with welding pattern in accordance with manufacturer's recommendations.
- All welding of metal deck shall be in accordance with AWS D1.3.
- Hangers supported by metal decking with structural concrete fill shall be installed using ICSO approved anchorage systems. Such hangers shall be used to support duct work 54" x 16" maximum, 4" diameter pipe maximum, or ceilings. Hangers must be two flutes apart on same deck span. Larger ductwork and piping shall be supported by structural beams or columns (see mechanical drawings).
- All metal deck shall be welded to structural steel by qualified welders experienced in welding light-gauge steel, and using prequalified procedures. The erector shall establish a welding procedure for the arc spot welding weld of the steel decking to the structural steel of a particular gauge used. Prior to the start of erection of steel deck, each welder shall be qualified using this procedure and witnessed by the Owner's testing agency.
- Steel deck and framing will deflect during placement of concrete. These deflections will require placement of concrete in excess of the amount based on nominal dimensions in order to bring the slab within tolerances of a horizontal plane. The Contractor shall provide the excess concrete at no cost to the Owner.
- Section properties shall be determined according to the Light Gauge Steel Institute.
- Headed studs used as shear connectors shall be 3/4" diameter Nelson studs unless otherwise noted.
- Comply with Steel Deck Institute Specifications for deck attachment and connectors.
- Steel deck shall be erected and fastened in accordance with the manufacturer's specifications and erection layouts.



FINAL CONSTRUCTION DOCUMENTS SUBMISSION	11/04/14
ADDENDUM #1	08/14/15
Revisions:	Date

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Drawing Title
GENERAL NOTES AND DETAILS

Approved:

Project Title
ENHANCE MEDICAL, SPECIALTY CARE, AND ADMIN. SERVICES

Project Number
541-15-101

Building Number
1

Location
VAMC - WADE PARK

Date
11/04/2014

Checked
HMS

Drawn
JAM

Drawing Number
1-S2

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Office of Facilities Management

Department of Veterans Affairs