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HARRY S TRUMAN MEMORIAL
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FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

SIGNATURE BLOCK:

DIRECTOR OF SPECIALTY CARE
INFECTION CONTROL PRACTITIONER
CHIEF ENGINEER
ASSISTANT DIRECTOR
ASSOCIATE DIRECTOR OF PATIENT SERVICES
CHIEF OF STAFF
ASSOCIATED DIRECTOR
MEDICAL CENTER DIRECTOR

No.	Date	Revisions

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DIVISION 1 - GENERAL REQUIREMENTS

1.1 CONSTRUCTION MEANS AND METHODS

A. Contractor agrees that Contractor shall assume sole and complete responsibility for job site conditions during the course of the Work, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that Contractor shall defend, indemnify, and hold Owner and Structural Engineer harmless from any and all liability, real or alleged, in connection with the performance of the Work on this Project, excepting for liability arising from the sole negligence of Owner or Structural Engineer.

B. The Contract Documents represent the finished structure. They do not include the method of construction. Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to: protection of subgrade from freezing conditions, bracing, shoring for loads due to construction equipment, temporary structures, and partially completed work. Observation visits to the site by Structural Engineer shall not include inspection of the above items.

C. KPFF Consulting Engineers shall not have control over or charge of and shall not be responsible in any way for construction means, methods, techniques, sequences, or procedures, or for safety or safety precautions and programs in connection with any construction activities, since these are solely Contractor's responsibility under the Contract.

D. KPFF Consulting Engineers shall not be responsible for Contractor's schedule or failures to carry out any construction activities in accordance with the Contract Documents. KPFF Consulting Engineers shall not have control over or charge of actions of Contractor, Subcontractor, or any of their Agents, or employees, or any other persons performing portions of any construction activities.

E. The structure is stable only in its completed form. Temporary supports required for stability of the structure during all intermediate stages of construction shall be designed and provided by Contractor.

1.2 SUBMITTALS

A. Submittals prepared by Subcontractors shall be reviewed by Contractor prior to submitting to Architect.

B. Reproduction of Structural Drawings shall be in accordance with AISC Code of Standard Practice.

C. Contractor shall verify the structurally supported equipment weights, opening sizes, and locations indicated on the Structural Drawings with Documents from other disciplines and notify Architect of any discrepancies.

D. Contractor shall submit Shop Drawings showing size, method of anchorage, weight, openings, and locations of equipment not indicated on the Structural Drawings prior to ordering for review by Structural Engineer to determine adequacy of the structure.

E. All submittals reviewed by Structural Engineer are reviewed for general conformance with design concept only and does not relieve the fabricator/vendor of responsibility for conformance with design drawings and Specifications, all of which have priority over submittals.

F. Submittals shall be reviewed within 10 working days after being received by Structural Engineer.

1.3 QUALITY REQUIREMENTS

A. Reference to standard specifications or codes of any technical society, organization, or association or references to laws or regulations of local or state authorities, shall mean the standards in effect as of date of the Contract Documents, unless otherwise noted.

B. Contract Documents shall govern in the event of a conflict with standard specifications or codes of any technical society, organization, or association.

C. No provision of any referenced standard specification or code, whether or not specifically incorporated by reference in the Contract Documents, shall be effective to change the duties and responsibilities of Owner, Architect, Structural Engineer, Contractor, or any of their Consultants, Agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Structural Engineer or any of Structural Engineer's Consultants, Agents, or employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibilities contrary to the provisions of the Contract Documents.

D. All omissions and conflicts within the Contract Documents shall be brought to the attention of Architect prior to proceeding with the Work.

E. Contractor shall verify dimensions and conditions at the job site. Any discrepancies between the conditions found and those indicated in the Contract Documents shall be brought to the attention of Architect prior to proceeding with the Work.

F. See Documents by other disciplines for floor, wall, and roof openings, trenches, pits, pipe sleeves, equipment pads, metal pan stairs, miscellaneous iron, etc.

G. No pipes, ducts, chases, etc. shall be placed in structural beam and column members nor shall any structural member be cut for pipes, ducts, etc., unless noted otherwise. Notify Structural Engineer when Documents by other disciplines show openings, pockets, etc. not indicated in the Structural Drawings, but are located in structural members. Contractor shall obtain prior approval from Structural Engineer for installation of such pipes, ducts, chases, etc.

H. Details labeled "Typical" on the Structural Drawings apply to all situations occurring on Project that are the same or similar to those locations specifically indicated. Where a detail is not indicated, the detail shall be the same as for other similar conditions.

I. The design responsibility of the elements listed below is being delegated to a Specialty Structural Engineer hired by the Contractor. The designated elements shall be designed in accordance with the Building Code and specific requirements in the contract documents by an engineer licensed in the state where the Project is located. Submittals shall be sealed by the responsible licensed Engineer. The following elements and their connections shall be designed by a Specialty Structural Engineer:
1. Temporary bracing and shoring
2. Structural steel connections
3. Cold-formed metal framing
4. Seismic Anchorage and Sway Bracing of Mechanical, Electrical and Plumbing Systems Components
5. Ladders
6. Windows and curtain wall systems
7. Patient service boom support and bracing.

1.4 STRUCTURAL SPECIAL INSPECTIONS

A. Special inspections shall be in accordance with the Building Code and the Statement Of Special Inspections on sheet S-002.

B. Special inspection reports shall be furnished to Building Official, Owner, Architect, Structural Engineer, and Contractor. Discrepancies shall be brought to the attention of Contractor, and if not corrected, shall be reported to Building Official, Owner, Architect, and Structural Engineer.

C. The Special Inspector shall submit a final report stating that the structural work was, to the best of the Special Inspector's knowledge, performed in accordance with the Contract Documents.

D. The following types of work require Special Inspections: (Refer to the Building Code and Specifications for detailed inspection requirements.)
1. Concrete Construction
2. Steel Construction
3. Masonry construction
4. Wall Panels and Veneers
5. Sprayed Fire resistive Materials

1.5 DESIGN CRITERIA:

A. The structure is designed in accordance with the following building and design codes and standards.
1. ICC International Building Code, 2009 Edition
2. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures
3. Department of Veterans Affairs document "H-18-8 Seismic Design Requirements", February 2011
4. Department of Veterans Affairs, Physical Security Manual: Mission Critical Facilities, July 2007.
5. ACI 318-05, Building Code Requirements for Structural Concrete
6. AISC 360-05 Specification for Structural Steel Buildings
7. AISC 341-05 Seismic Provisions for Structural Steel Buildings, including Supplement No. 1 dated 2005.

B. No provisions have been made for the future horizontal or vertical expansion.

C. Gravity Loads:
1. Uniform Roof Live Loads:
a. Live Load: 20 psf
b. Snow Load:
1) Ground Snow Load: 20 psf
2) Flat Roof Snow Load: 24 psf
3) Snow Exposure Factor: 1.0
4) Snow Importance Factor: 1.2
5) Snow Thermal Factor: 1.0
2. Uniform Floor Live Loads (reduced as allowed by the Building Code, unless otherwise noted):

Clinical & Support Services	80 psf
Corridors	100 psf
Mechanical Rooms	125 psf
Stairs	100 psf

3. Concentrated Floor Live Loads
a. Loads are distributed over an area of 2-1/2 sq. ft., unless noted otherwise.

Access floor systems	2000 lb.
Catwalks - for maintenance access	300 lb.
Stairs	300 lb. (over 4 sq. in.)

4. Concentrated Lateral Live Loads
a. Handrails assemblies:
1) Top Rail: 200 lb. or 50 lb/ft applied non-concurrently in any direction.
2) Infill: 50 lb. applied over 1 sq. ft. applied non-concurrently with the top rail load.

D. Lateral Loads:
1. Wind Design Data
a. Basic Wind Speed: 90MPH
b. Importance Factor: 1.15
c. Exposure: B
d. Enclosure Classification: Enclosed Building
e. Internal Pressure Coefficient: +/-0.18
2. Earthquake Design Data
a. Seismic Importance Factor:1.5
b. Mapped Spectral Response Accelerations: Ss=0.198, S1=0.088
c. Site Classification: C
d. Spectral Response Coefficients: Sds=0.158, Sd1=0.10
e. Occupance Category: IV
f. Seismic Design Category: C
g. Basic Structural System: Building Frame System
h. Basic Seismic Force Resisting System: Steel Systems-
Not specifically detailed for seismic resistance (NDS) for building north of Column Line 3.2 and steel moment frames (SMF) for building south of Column Line 3.2.
i. Response Modification Factor: R = 3 (NDS)
j. Deflection Amplification Factor: Cd = 3 (NDS)
k. Response Modification Factor: R = 5(SMF)
l. Deflection Amplification Factor: Cd = 5.5(SMF)
3. MEP Seismic Anchorage:
a. Contractor shall design and install MEP supports in accordance with the latest local Ordinances and Building Code.

DIVISION 2- FOUNDATIONS (NOT APPLICABLE)

DIVISION 3 - CONCRETE

3.1 REINFORCING

A. GENERAL
1. Reinforcing steel shall be ASTM A615, Grade 60, deformed bars, unless noted otherwise. Welding of ASTM A615, Grade 60 reinforcing is not allowed.
2. Reinforcing steel to be welded shall be ASTM A706, deformed bars.
3. Welded wire reinforcing shall be ASTM A185, contact lap spliced 12 inches minimum.
4. All reinforcing bars shall be detailed, fabricated, supported, and placed in accordance with ACI 315-99 "Details and Detailing of Concrete Reinforcement" and CRSI's "Manual of Standard Practice," 2001.
5. Reinforcing, including dowels, shall be securely tied and cast with the lower member. Placing reinforcing after concrete has been placed is not permitted.
6. Field bending of reinforcing partially embedded in concrete is not allowed unless specifically noted in the Structural Documents or approved by Structural Engineer.
7. Provide corner bars to match horizontal reinforcing at corners and intersections.
8. Adhesive for reinforcing dowels into existing concrete shall be Hilti HIT HY 150 MAX-SD or approved equal. Minimum embedment length shall be 12 bar diameters, unless noted otherwise.
9. All reinforcing shall be contact lap spliced or doweled as follows:

#3 bars -- 28"	#7 bars -- 81"
#4 bars -- 37"	#8 bars -- 93"
#5 bars -- 47"	#9 bars -- 105"
#6 bars -- 56"	#10 bars -- 118"
#11 bars -- 131"	

B. SLABS
1. Provide slab bolsters, high chairs, and #5 support bars as necessary to maintain proper placement of reinforcing.
2. Provide 2-#5 top x 5'-0" diagonals at corners of openings and re-entrant corners, unless noted otherwise.

3.2 CAST-IN-PLACE CONCRETE

A. Reinforced concrete shall have the following minimum 28-day compressive strengths:
1. Class A 3000 psi normal weight concrete
2. Class B 3500 psi lightweight concrete
3. Class C 4000 psi normal weight concrete

B. Place concrete as follows:
1. Class A:
a. Housekeeping pads
2. Class B:
a. Lightweight concrete slab on metal deck
3. Class C:
a. Normal weight concrete slab
b. Normal weight concrete slab on metal deck
c. Concrete Curb

C. All concrete to have the following unit weights (+/- 3 pcf):
1. Normal weight concrete: plastic = 145 pcf
2. Lightweight: plastic = 117 pcf, air-dried = 110 pcf

D. All concrete exposed to freezing and thawing and deicer chemicals shall have 6% (+1%/-1.5%) air entrainment. Do not air entrain concrete to be trowel finished.

E. Provide concrete cover for reinforcing as follows:
1. Concrete cast against and permanently exposed to earth.....3"
2. Concrete exposed to earth or weather.....2"
3. Concrete not exposed to weather or in contact with ground:
a. Slabs and walls.....3/4"
b. Beams and columns.....1-1/2"

F. For concrete cast on metal deck, concrete thickness indicated is nominal. Contractor shall allow for the deflection of the floor assembly due to the wet weight of the concrete when calculating concrete quantity.

G. Locate construction joints for joists, beams, girders, and slabs in the middle 1/3 of the span. Place joints so they do not compromise the strength of the structure. Offset joints in a girder at least twice the beam width from a beam/girder intersection.

H. Interface of construction joints shall be roughened to a full amplitude of 1/4". Surface of construction joints shall be clean and free of laitance. Immediately before new concrete is placed, construction joints shall be wetted and standing water removed.

I. See Architectural Drawings for waterstops.

J. Conduit and pipes embedded in walls, beams, or slabs shall be no larger in outside dimension than 1/3 the overall member thickness or 2" maximum, and shall be placed no closer than 3 diameters or widths on center.

K. Conduit and pipes, with their fittings, embedded within a column shall not displace more than 4 percent of the area of the column cross section.

L. Provide 4" high concrete housekeeping pads under equipment. Pads shall extend beyond equipment 6" nominal on all sides. Apply bonding agent to existing concrete slab prior to placing housekeeping pad. See Documents from other disciplines for equipment locations.

M. At floor drains, locally slope floor towards drain. See Documents from other disciplines for drain locations.

N. Unless noted otherwise, structural slabs exposed to weather shall be sloped approximately 1/4 inch per foot away from occupied space toward floor drains, scuppers, gutters, etc. For exterior non-structural flatwork (eg. sidewalks, pavement) reference Civil site plan and specifications.

O. See Architectural Documents for molds, grooves, ornaments, clips, etc. required to be encased in concrete and for location of floor finishes and slab depressions.

DIVISION 4 - CONCRETE MASONRY

4.1 REINFORCING

A. Reinforcing steel shall be ASTM A615, Grade 60, deformed bars, unless noted otherwise. Welding of ASTM A615, Grade 60 reinforcing is not allowed.

B. Reinforcing steel to be welded shall be ASTM A706, deformed bars.

C. Joint reinforcing shall be ladder type conforming to ASTM A951, with prefabricated corner and tee units at corners and intersections.

D. Dowels to supporting structure shall be same grade, size, and number as vertical reinforcing.

E. Provide corner bars to match horizontal reinforcing at corners and intersections.

F. Vertical reinforcing shall be centered in wall, unless noted otherwise.

G. Reinforcing shall be lapped 48 bar diameters with contact lap splices. Joint reinforcing shall be lapped 6".

H. Reinforce concrete masonry vertically with #5 rebar full height at 32" o.c., unless noted otherwise.

I. Space joint reinforcement at 16" o.c. vertically typical and at 8" o.c. vertically at parapets and at cantilevered walls, unless noted otherwise.

J. Reinforce bond beams with 2-#5 rebars continuous, unless noted otherwise.

K. Provide #5 rebar at all sides of openings, to extend a minimum of 30" beyond the opening.

4.2 CONCRETE MASONRY

A. Concrete masonry units shall be ASTM C90, normal weight.

B. Provide concrete unit masonry that develops the following minimum net-area compressive strength (f'm) at 28-days: 1500 psi.

C. Mortar shall be of the following types:
Bearing walls: Type M or S

D. Grout shall conform to ASTM C476. Grout shall be proportioned with a slump of 8" to 11" using 3/8" nominal maximum size course aggregate.

E. Grout vertical reinforced cells and bond beams solid.

F. Insulation shall not be permitted in reinforced cells.

G. Grout concrete masonry below grade solid. Grout cavities of multi-wythe walls below grade.

H. All vertical cells to be grouted shall have vertical alignment to maintain a continuous unobstructed cell area not less than 2" x 3".

I. Grout solid under beams and lintels for full height of wall.

J. Conduits, pipes, and sleeves shall be no closer than 3 diameters on center.

K. Maximum area of vertical conduits, pipes, or sleeves placed in columns or pilasters shall not displace more than 2 percent of the net cross section.

DIVISION 5 - METALS

5.1 STRUCTURAL STEEL

A. GENERAL
1. Structural steel fabrication and erection shall comply with the applicable provisions of the following:
a. AISC 360-05 Specification for Structural Steel Buildings
b. AISC 303-05 Code of Standard Practice for Steel Buildings and Bridges
c. Specification for Structural Joints using ASTM A325 or A490 Bolts
2. Materials shall conform to the following, unless noted otherwise.

a. W's and WT's	ASTM A992
b. Plates & other shapes	ASTM A36
c. HSS:	ASTM A500, Grade B
d. Pipe	ASTM A53, Type E or S, Grade B
e. Bolts	ASTM A325, 3/4" diameter (min.),
hex head	
f. Anchor Rods	ASTM F1554, Grade 105 with A36
washers and heavy hex nuts	
g. Threaded Rod	ASTM A36
h. Headed Studs	AWS D1.1, Type B
i. Electrodes	Matching strength, 70 ksi min.

3. Detail steel beam connections as simple span beams, unless noted otherwise.
4. Beam connections not fully detailed shall be designed by Contractor for factored forces indicated in the Structural Drawings considering the forces to be acting simultaneously.
a. Minimum beam shear reaction is 15 kips.
5. All bolted connections shall be designed as snug-tight bearing connections with threads included in the shear plane, unless noted otherwise. 8. Bolted connections at the following locations s as fully tensioned bearing connections with threads included in the shear plane:
a. Moment frames
b. Vertical braces
c. Column splices
d. Beam and girder connections to columns
e. Hangers
9. Bolted connections designated as fully tensioned shall be installed with direct-tension indicator washers or tension-control bolts.
10. All steel beams bearing on concrete or masonry shall have 8" minimum bearing, unless noted otherwise.
11. Where items are to be anchored to concrete or masonry, except at column baseplates, use standard sized holes in steel member, unless noted otherwise.
12. Use prequalified welded joints in accordance with AISC and AWS D1.1:2000. Non-prequalified joints shall be qualified prior to fabrication.
13. Studs for composite beams at 5-1/4" thick slab shall be 3/4" diameter x minimum 4", maximum 4-3/4" long after welding.
14. Studs for composite beams at 6-1/4" thick slab shall be 3/4" diameter x minimum 5", maximum 5-3/4" long after welding.

B. STEEL LINTELS
1. Loose lintels for 4" and 8" masonry shall be the following, one angle (LLV) per 4" width of masonry:

L3-1/2x3-1/2x5/16	for spans less than 4'-11
L5x3-1/2x5/16	for spans between 5'-0" and 7'-11"
L6x3-1/2x5/16	for spans between 8'-0" and 9'-11"
L7x4x3/8	for spans between 10'-0" and 12'-11"

2. Loose lintels for 6" and 12" masonry shall be the following, one angle per 6" width of masonry:

L5x5x5/16	for spans less than 4'-11"
L5x5x3/8	for spans between 5'-0" and 8'-0"

3. Double angle lintels back to back shall be bolted at 32" o.c. maximum spacing, with 5/8" diameter A307 bolts, minimum of two bolts per span.
4. At beam lintels with continuous plates, the plate width shall be 1" less than the nominal width of the supported wall. Plate thickness shall be 5/16", unless noted otherwise.
5. Lintels bearing on masonry or concrete shall have 8" minimum bearing, unless noted otherwise.
a. Each lintel, unless noted otherwise, shall be field welded to an embedded plate with two 3" long x 3/16" fillet welds. Minimum width of embedded steel plate shall be 4" larger than the beam flange width.
b. Where less than 1'-0" of masonry exists at the end of the beam adjacent to a column, wall, or other vertical member, extend the beam and provide a connection to the column or wall.
6. Exterior lintels whether loose or attached to the structure shall be galvanized.
7. Contractor shall coordinate with the Structural Drawings and Documents of other disciplines for openings.

C. ANCHORS TO CONCRETE AND MASONRY
1. Anchors shall be adhesive anchors, unless noted otherwise.
2. Expansion anchors shall be Hilti Kwik Bolt TZ anchors or approved equal. Anchors shall be plain, uncoated except provide galvanized anchors where supported item is galvanized.
3. Adhesive anchors shall be Hilti HIT HY adhesive anchors or approved equal. Use HY 150 MAX-SD adhesive when anchoring into concrete or grouted concrete masonry base material. Use HY 20 adhesive plus a screen tube when anchoring to or through ungrouted concrete masonry or multiwythe masonry base material. Anchors shall be plain, uncoated except provide galvanized anchors where supported item is galvanized.
4. When installing anchors, do not cut existing reinforcing. Install anchors to accommodate the standard hole size in steel.
5. Expansion anchor embedment depth shall be as follows, unless noted otherwise:
3/8" diam. : 2-1/2" embedment
1/2" diam. : 3-1/2" embedment
5/8" diam. : 4" embedment
3/4" diam. : 4-3/4" embedment
1" diam. : 6" embedment
6. Adhesive anchor embedment depth shall be as follows, unless noted otherwise:
3/8" diam. : 3-1/2" embedment
1/2" diam. : 4-1/4" embedment
5/8" diam. : 5" embedment
3/4" diam. : 6-5/8" embedment
1" diam. : 8-1/4" embedment

5.2 METAL DECK

A. GENERAL
1. Deck shall be continuous over 3 spans, unless noted otherwise.
2. At supports parallel to the deck span, raise steel supports or provide shims at fastening points if the deck valley does not engage the support.
3. Where deck is welded to supports, provide welding washers for deck with design thickness less than 0.028".
4. At Contractor's option, Hilti X-EDN and ENP fastening systems or approved equal may be used in lieu of welds to supports.
5. Metal deck accessories, including but not limited to: girder fillers, Z-closures, and cover plates; that are integral with the floor diaphragm or roof diaphragm shall be of the same material, finish and minimum thickness as the metal deck. Accessories shall be anchored to supporting members by arc spot welds or self drilling screws at 12 inch maximum spacing.

B. ROOF DECK
1. Roof deck shall be designed, fabricated, and installed in accordance with "SDI Specifications and Commentary for Steel Roof Deck" in SDI Publication No. 29, 1995.
2. Roof deck shall be galvanized.
3. Do not support ducts, ceilings, lights, plumbing, sprinklers, etc. from the roof deck.

C. COMPOSITE FLOOR & ROOF DECK
1. Composite floor deck shall be designed, fabricated, and installed in accordance with "SDI Specifications and Commentary for Composite Steel Floor Deck" in SDI Publication No. 29, 1995.
2. Composite floor deck shall be galvanized.
3. Shore composite floor deck where required by manufacturer.
4. 2" composite deck with design thickness 0.0358" (20 gauge) shall have the following minimum properties: Ip=0.418 in^4/ft, In=0.415 in^4/ft, Sp=0.355 in^3/ft, Sn=0.360 in^3/ft, Fy=40 ksi.
5. Composite floor deck shall be welded to supports, both perpendicular and parallel to the deck, with 5/8" diameter puddle welds and fastened at sidelaps with No. 10 screws as follows:
a. Typical installation, unless noted otherwise:
1) Weld Pattern: 36/4
2) Sidelap Fasteners: 6/span, maximum 18"

5.3 COLD-FORMED METAL FRAMING

A. GENERAL
1. Cold-formed metal framing shall be designed, fabricated, and erected in accordance with AISI's "Specification for the Design of Cold-Formed Steel Structural Members," 1996. Exterior studs and connections have been designed for blast loads and shall be as indicated on structural drawings.
2. Materials shall conform to the following, unless noted otherwise.

a. Structural Steel Sheet	ASTM A653 SS
1) 0.0451 inch thick or less	Grade 33
2) 0.0566 inch thick or greater	Grade 50, Class 1
b. Self-Drilling Screws	SAE J78
c. Electrodes	E60XX

B. Complete, uniform, and level bearing support shall be provided for the top and bottom tracks of stud walls, or full size shims shall be installed to provide such bearing.

C. Studs shall be installed with their bearing ends positioned flush against the inside track web.

D. Full-height double studs shall be provided at the ends of partitions, at wall openings, beneath bar joists, beneath trusses, and at other locations indicated in the Structural Drawings.
1. Weld the flanges of double studs together full height using 2" of weld at 12" o.c. each side, unless noted otherwise.

E. Anchor stud tracks with low-velocity powder actuated fasteners with a minimum shank diameter of 0.145", and a minimum penetration of 1-1/8", unless noted otherwise.
1. Locate anchors at 3" from the ends of partitions, and at 6" o.c. (maximum), 4" o.c. (minimum) throughout.

F. Provide sheathing attached to both faces of wall studs throughout the length of the studs or provide bridging at 4'-0" o.c.

G. Provide stud wall bridging according to manufacturer's recommendations.

H. Splices in studs shall not be permitted. Do not cut studs.

I. Slide clip connections shall be as indicated on structural drawings. Slide clips not detailed shall be designd for a minimum lateral force of 500Lbs wherever required.

J. Wall studs shall have the following minimum effective properties. In the designation below, 362 is the member depth in 1/100 inches, S is the member style, 162 is the flange width in 1/100 inches, and 54 is the material thickness in mils.

Designation	Design Thick.	Effective Properties Ix, in4	Sx, in3	A, in2	Fy, ksi
362S162-43	0.0451	0.710	0.389	0.340	33
362S162-54	0.0566	0.873	0.468	0.422	50
362S162-68	0.0713	1.069	0.584	0.524	50
600S162-43	0.0451	2.316	0.767	0.447	33
600S162-54	0.0566	2.860	0.927	0.566	50
600S162-68	0.0713	3.525	1.164	0.693	50
800S162-43	0.0451	4.633	1.158	0.537	33
800S162-54	0.0566	5.736	1.397	0.670	50
800S162-68	0.0713	7.089	1.757	0.836	50

K. At locations requiring welding of or to metal studs, minimum stud thickness shall be 54 mil.

L. Provide matching thickness track (54 mil minimum) at top and bottom of stud walls and at headers for stud walls.

5.4 GRATING

1. Grating shall be W-19-4 (2 x 3/16) steel, unless noted otherwise.
2. Provide saddle clips and machine bolts at 24" o.c. minimum, (minimum 4 per section of grating - 2 per bearing side).

ABBREVIATIONS

A

AB	ANCHOR BOLT
ADDL	ADDITIONAL
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
AHR	ANCHOR, ANCHORAGE
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECTURAL/ARCHITECT

B

BAL	BALANCE
BI	BOTTOM OF
B/B	BACK TO BACK
BC	BOTTOM OF CONCRETE
BL	BRICKLEDGE
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BMD	BOTTOM OF METAL DECK
BO	BOTTOM OF __
BOT	BOTTOM
BP	BOTTOM OF PIER
BSMT	BASEMENT
BRDG	BRIDGING
BRG	BEARING
BT	BENT
BTWN	BETWEEN
BW	BOTTOM OF WALL

C

CAM	CAMBER
CANTL	CANTILEVER
CFMF	COLD-FORMED METAL FRAMING
CJ	CONTROL JOINT OR CONSTRUCTION JOINT
CL	CENTER LINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CONX	CONNECTION
COORD	COORDINATE
CS	COLUMN STRIP
CTR	CENTER
C TO C	CENTER TO CENTER

D

DB	DIAMETER OF REBAR
DBL	DOUBLE
DEG	DEGREE
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DN	DOWN
DWG	DRAWING
DWL	DOWEL

E

EA	EACH
EBF	EXCENTRICALLY BRACED FRAME
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC/ELECTRICAL
ELEV	ELEVATOR
EMBED	EMBEDMENT
ENGR	ENGINEER
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
(E)	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERIOR

F

FAB	FABRICATOR
FD	FLOOR DRAIN
FDTN	FOUNDATION
FF	FAR FACE
FF EL	FINISH FLOOR ELEVATION
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FH	FLAT HEAD
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
FOB	FACE OF BRICK
FOC	FACE OF CONCRETE
FS	FAR SIDE
FT	FEET, FOOT, FIRE TREATED
FTG	FOOTING
FUT	FUTURE

G

GA	GAGE
GALV	GALVANIZED
GLU LAM	GLUE LAMINATED WOOD
GR BM	GRADE BEAM
GT	GIRDER TRUSS

H

H	HIGH
HCT	HOLLOW CLAY TILE
HD	HEADED
HK	HOOK
HORIZ	HORIZONTAL
HPT	HIGH POINT
HT	HEIGHT
HVAC	HEATING, VENTILATING & AIR CONDITIONING

I

ID	INSIDE DIAMETER
IF	INSIDE FACE
IMF	INTERMEDIATE MOMENT FRAME
IN	INCH
INFO	INFORMATION
INT	INTERIOR

J

JS	JOIST SUBSTITUTE
JST	JOIST
JT	JOINT

K

K	KIP
KB	KNEE BRACE

L

L	LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLO	LON LEG OUT
LLV	LONG LED VERTICAL
LOC	LOCATION
LPT	LOW POINT
LSH	LONG SLOTTED HOLE, LONG SIDE HORIZ
LSL	LAMINATED STRANDED LUMBER
LSV	LONG SIDE VERTICAL
LT	LIGHT
LVL	LAMINATED VENEER LUMBER

M

MAS	MASONRY
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MS	MIDDLE STRIP
MTL	METAL

N

(N)	NEW
NA	NOT APPLICABLE
NF	NEAR FACE
NIC	NOT IN CONTRACT
NS	NEAR SIDE
NTS	NOT TO SCALE

O

O/O	OUT-TO-OUT
OA	OVER ALL
OC	ON CENTER
OCBF	ORDINARY CONCENTRICALLY BRACED FRAME
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OMF	ORDINARY MOMENT FRAME
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE

P

PAF	POWDER ACCUATED FASTENER
PC	PIER CAP, PILE CAP
PCC	PRECAST CONCRETE
PL	PLATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PREFAB	PREFABRICATED
PSF	PER SQUARE FOOT
PSI	PER SQUARE INCH
PSL	PARALLEL STRANDED LUMBER
PT	POINT

Q

QTY	QUANTITY

R

R	RADIUS
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REF	REFERENCE, REFER TO
REINF	REINFORCE
REQD	REQUIRED
REQ'S	REQUIREMENTS
REV	REVISION
RO	ROUGH OPENING
RST	REINFORCING STEEL
RTU	ROOF TOP UNIT

S

SC	SLIP CRITICAL
SCBF	SPECIAL CONCENTRICALLY BRACED FRAME
SCHED	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SLO	SHORT LEG OUT
SM	SHEET METAL
SMF	SPECIAL MOMENT FRAME
SOG	SLAB ON GRADE
SPA	SPACE
SPCL	SPECIAL
SPEC	SPECIFICATIONS
SQ	SQUARE
SST	STAINLESS STEEL
STD	STANDARD
STIF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEAR WALL
SYMM	SYMMETRICAL

T

T	TREAD, THICK
T&B	TOP AND BOTTOM
TB	TIE BEAM
TBR	TO BE REMOVED
TO	TOP OF
TOC	TOP OF CONCRETE, OR CURB
TOF	TOP OF FTG
TOM	TOP OF MASONRY
TOP	TOP OF PIER, PILASTER, OR PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TPC	TOP OF PIER OR PILE CAP
TEMP	TEMPORARY
THK	THICKNESS
THRU	THROUGH
TMPD	TEMPERED
TOM	TOP OF MASONRY
TRTD	TREATED
TYP	TYPICAL

U

UNO	UNLESS NOTED OTHERWISE

V

VAR	VARIES
VB	VERTICAL BRACE
VERT	VERTICAL(LY)
VIF	VERIF'Y IN FIELD

W

W	WIDE, WIDTH
W/(O)	WITH/(OUT)
WBL	WOOD BLOCKING
WD	WOOD
WF	WIDE FLANGE
WF BM	WIDE FLANGE BEAM
WT	WEIGHT
WDW	WINDOW
WP	WORKING POINT
WS	WATER SEAL, WATER STOP
WWR	WELDED WIRE REINFORCING

X

XBRA	X CROSS BRACING

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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Drawing Title: GENERAL NOTES

DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUM

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS

GENERAL
The Owner will engage and employ a qualified special inspection agency or agencies to conduct special inspections of structural work as required by chapter 17 of the 2009 International Building Code and as delineated below. Agencies that are considered qualified and acceptable to act as special inspectors will be those acceptable to the building official of the jurisdiction that grants the building permit and the owner.

SPECIAL INSPECTION REPORT REQUIREMENTS
Special Inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the Building Official, Owner, Architect, Structural Engineer, and Contractor. Reports shall indicate that the structural work inspected was done in conformance to approved Contract Documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official, Owner, Architect, and Structural Engineer prior to the completion of that phase of work. A final report of inspections documenting required special inspections of structural work and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon by the Owner and the Building Official prior to the start of work.

REQUIRED SPECIAL INSPECTIONS
The following types of structural work require special inspections. Refer to individual Specification Sections for specific testing and inspecting requirements. Continuous inspection is the full-time observation of work by a qualified special inspector who is present in the area where the work is being performed. Periodic special inspection is the part-time or intermittent observation of work by a qualified special inspector who is present in the area where the work has been or is being performed and at the completion of the work.

CONCRETE CONSTRUCTION

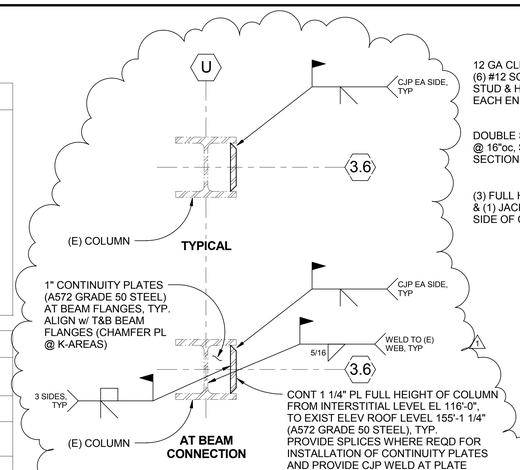
SPECIAL INSPECTION ITEM	TYPE OF INSPECTION		REMARKS
	CONTINUOUS	PERIODIC	
1. Inspection of steel reinforcement, including size, quantity and placement.		X	
2. Inspection of anchor rods, headed bolts, headed studs, shear stud shear reinforcing and other embedded items prior to and during placement of concrete.	X		
3. Inspection of anchors installed in hardened concrete.			See "Post Installed Anchors" table
4. Verification of use of required design mixture.		X	
5. Testing of slump, air content, and temperature of concrete at the time fresh concrete is sampled to fabricate specimens for strength tests.	X		Frequency of test per specifications.
6. Inspection of concrete placement, including conveying and depositing.	X		
7. Inspection of curing procedures and maintenance of curing temperatures.		X	
8. Verification of concrete strength before removal of shores and forms from beams and slabs.		X	
9. Verification that approved shop drawings are being used on site.		X	

STEEL CONSTRUCTION

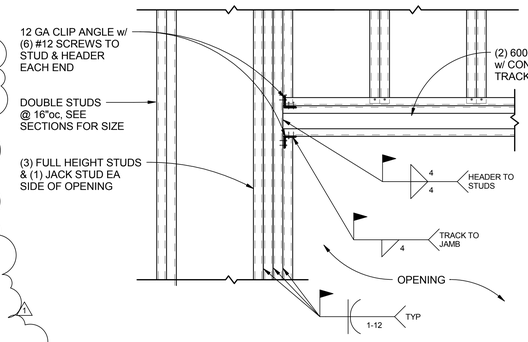
SPECIAL INSPECTION ITEM	TYPE OF INSPECTION		REMARKS
	CONTINUOUS	PERIODIC	
1. Material verification of high-strength bolts, nuts, and washers:			
a. Identification markings to conform to ASTM standards specified in the approved construction documents.		X	
b. Manufacturer's certificate of compliance required.		X	
2. Inspection of high-strength bolting:			
a. Snug-tight joints.		X	
b. Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation.		X	
c. Pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation.	X		
3. Material verification of structural steel and cold-formed steel deck:			
a. For structural steel, identification markings to conform to AISC 360.		X	
b. For other steel, identification markings to conform to ASTM standards specified in the approved construction documents.		X	
c. Manufacturer's certified test reports.		X	
4. Material verification of weld filler materials:			
a. Identification markings to conform to AWS specification in the approved construction documents.		X	
b. Manufacturer's certificate of compliance required.		X	
5. Inspection of structural steel and cold-formed steel deck welding:			
a. Complete and partial joint penetration groove welds.	X		
b. Multi-pass fillet welds.	X		
c. Single-pass fillet welds greater than 5/16 inches thick.	X		
d. Plug and slot welds.	X		
e. Single-pass fillet welds less than or equal to 5/16 inches		X	
f. Floor and roof deck welds and side lap fasteners.		X	
6. Inspection of steel frame joint details for compliance with details such as bracing and stiffening, member locations, and application of joint details at each connection.		X	
7. Verification that approved shop drawings are being used on site.		X	

STRUCTURAL LIGHT GAGE STUD CONSTRUCTION

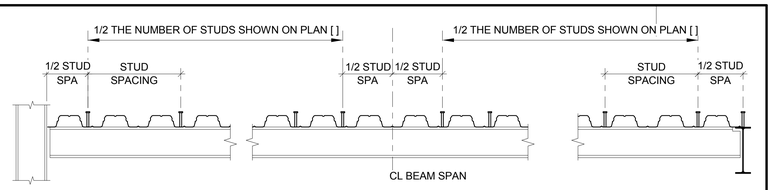
SPECIAL INSPECTION ITEM	TYPE OF INSPECTION		REMARKS
	CONTINUOUS	PERIODIC	
1. Material verification of studs and weld electrodes.		X	
2. Inspection of light gage welds to structure.		X	
3. Inspection of welding operations of elements of wind and seismic force resisting systems.		X	
4. Inspection of screw attachment, bolting, anchoring and other fastening of components within wind and seismic force resisting systems, including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.		X	



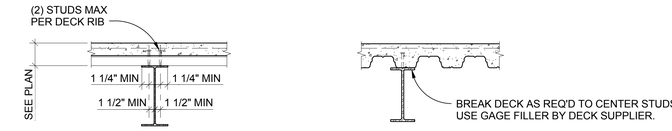
3 SS 002 DETAIL
3/4" = 1'-0"



2 SS 002 TYPICAL LIGHT GAUGE METAL STUD WALL OPENING DETAIL
3/4" = 1'-0"



TYPICAL STUD LAYOUT PATTERN



PERPENDICULAR TO DECK

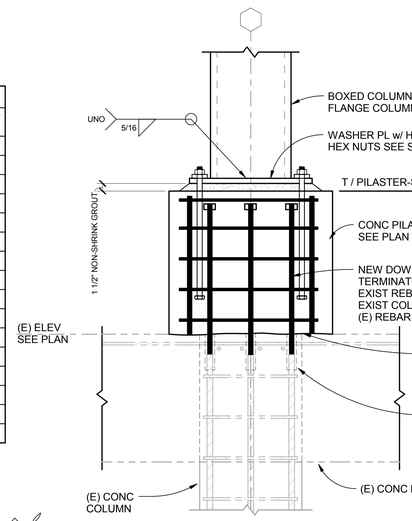
PARALLEL WITH DECK

NOTE: MINIMUM DIMENSIONS APPLY TO BOTH PERPENDICULAR AND PARALLEL CONDITIONS.

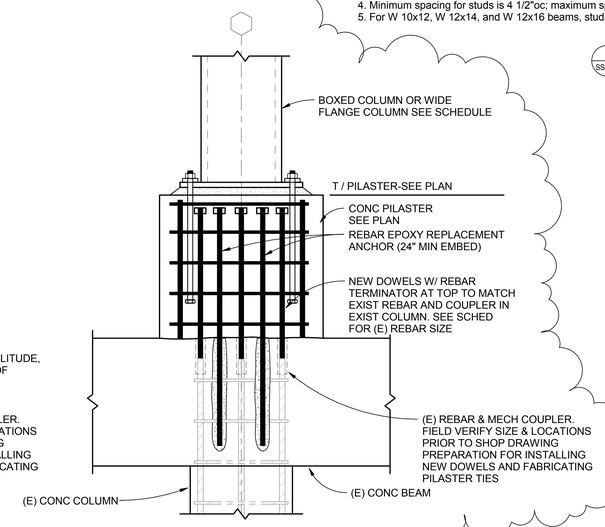
NOTES:
1. Number in brackets after beam designation [XX] indicates the number of end welded studs equally spaced on top flange of beam. Composite beam is designed unshored, unless noted otherwise in plan.
2. Weld deck at each support with (3) 5/8" puddle welds per sheet. Stud welding through decking can be considered as one puddle weld. Do NOT prime top flange of steel beams. Side laps to be crimped or screwed at 36"oc Max.
3. Place studs in deck valleys. Use two rows of studs if required.
4. Minimum spacing for studs is 4 1/2"oc; maximum spacing is 3'-0" oc. Provide 2 rows of studs if minimum spacing cannot be met.
5. For W 10x12, W 12x14, and W 12x16 beams, studs shall be welded directly over the beam web.

1 SS 002 TYPICAL COMPOSITE BEAM HEADED STUD DETAILS
N.T.S.

EXIST CONC COL SPLICE BAR SCHED		
GRID	(E) CON COL SIZE	(E) COL SPLICE REBAR w/ MECH COUPLER
U-5.1	20" x 20"	(8) #10
U-6.3	20" x 20"	(4) #9
U-7.6	20" x 20"	(4) #11
U-8.9	20" x 20"	(8) #10
U-10.2	20" x 20"	(8) #10
W-6.3	24" x 24"	(4) #9
W-7.6	24" x 24"	(4) #9
W-8.9	24" x 24"	(8) #9
W-10.2	20" x 20"	(12) #10
W.4-3.6	16" x 16"	(4) #8
Y-4.1	20" x 20"	(4) #10
Y-5.1	20" x 20"	(4) #9
Y-6.3	20" x 20"	(4) #9
Y-7.6	20" x 20"	(4) #9
Y-8.9	20" x 20"	(4) #9
Y-10.2	20" x 20"	(12) #10



DETAIL A: TYPICAL COLUMN AT BASE PLATE DETAIL USING ALL EXISTING COUPLERS



NOTE: SEE DETAIL A FOR BALANCE OF INFO

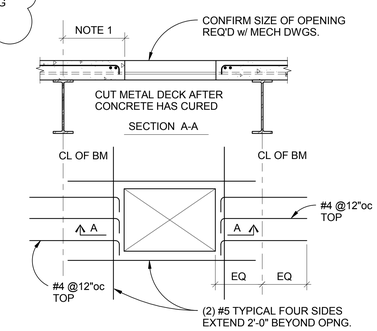
DETAIL B: REPAIR DETAILS FOR REPLACEMENT REBAR EPOXY ANCHORS DUE TO UNUSABLE COUPLERS (SEE NOTE 6).

4 SS 002 TYPICAL COLUMN BASE PLATE DETAIL AT EXIST O.R. ROOF
N.T.S

NOTES:
1. FIELD VERIFY EXISTING CONCRETE COLUMN SIZE, LOCATIONS OF EXISTING BEAM AND COLUMN REINFORCING, AND LOCATIONS OF EXISTING MECHANICAL COUPLERS PRIOR TO SHOP DRAWING PREPERATION FOR INSTALLING NEW MATCHING DOWELS, AND FABRICATING PILASTER TIES.
2. CONTRACTOR TO PERFORM X-RAY OR OTHER NON-DESTRUCTIVE TESTING TO FIELD VERIFY LOCATIONS OF ALL EXISTING REINFORCING AT TOP OF BEAMS AND COLUMNS PRIOR TO DRILLING EPOXY ANCHORS AS REQUIRED. CUTTING OF REINFORCING IN EXISTING BEAMS AND COLUMNS IS NOT PERMITTED.
3. FOLLOWING NON-DESTRUCTIVE TESTING OF NOTE NO. 2 ABOVE, CONTRACTOR TO PERFORM DETAILED EXPLORATORY INVESTIGATION TO ACCURATELY LOCATE ALL EXISTING MECHANICAL COUPLERS. DO NOT CUT OR DAMAGE EXISTING REINFORCING DURING EXPLORATION.
4. PROVIDE REPORT WITH FIELD VERIFIED ACCURATE LOCATIONS OF COUPLERS PRIOR TO SHOP DRAWING PREPERATION FOR FABRICATION OF PILASTER REINFORCING, PILASTER TIES & FABRICATION OF COLUMN BASE PLATES FOR ENGINEER REVIEW. AWAIT ENGINEER REVIEW PRIOR TO PROCEEDING TO No. 5.
5. FABRICATE PILASTER TIES & BASE PLATES ONLY AFTER FIELD VERIFYING PLAN LOCATIONS AND ELEVATIONS OF ALL EXISTING MECHANICAL COUPLERS.
6. NOTE THAT ALL EXISTING MECHANICAL COUPLERS AT THE TOP OF EXISTING CONCRETE COLUMNS MAY NOT BE USABLE FOR INSTALLING NEW REBAR DOWELS DUE TO INTERFERENCE WITH EXISTING TOP REINF OF BEAMS IN EACH DIRECTION. ANY UNUSABLE COUPLERS WILL REQUIRE REPAIR BY CORING OR DRILLING & EPXOY GROUTING OF ANCHORS SIMILAR TO REPAIR DETAILS SHOWN ABOVE. FOR BIDDING PURPOSES, PROVIDE THE FOLLOWING:
   A. ASSUME 50% OF ALL EXISTING MECHANICAL COUPLERS UNUSABLE FOR INSTALLATION OF NEW REBAR DOWELS SHOWN TYPICALLY ABOVE IN DETAIL A AND PROVIDE COST FOR REPAIRS OF UNUSABLE COUPLERS PER DETAIL B. ALSO, PROVIDE UNIT COST FOR EACH UNUSABLE COUPLER FOR ADJUSTMENTS ON NET VARIATION OF TOTAL REPLACEMENT QUANTITIES.
   B. DEPENDING ON THE NUMBER OF UNUSABLE COUPLERS WHICH EXIST, LOCATIONS OF THE EXISTING COUPLERS AND THE LOCATIONS OF ALL BEAM AND COLUMN REINF BASED ON FIELD VERIFICATION NOTES ABOVE, THE STRUCTURAL ENGINEER WILL PERFOM STRUCTURAL EVALUATION AT EACH COLUMN LOCATION. BASED UPON EVALUATION AT EACH COLUMN, STRUCTURAL ENGINEER WILL PROVIDE REPAIR DETAILS, WHICH WILL INLCUDE THE NUMBER, SIZE AND LOCATIONS OF EPOXY REPLACEMENT ANCHORS AND IF REQUIRED, SIZE MODIFICATIONS TO PILASTER AND REVISIONS TO BASE PLATE SIZE AND COLUMN ANCHOR LOCATIONS. INCLUDE AN ADDITION FEE OF $20,000 IN THE BID FOR FUTURE STRUCTURAL EVALUATION AND REPAIR DETAILS.
   C. IN ADDITION TO COSTS IN THE BID FOR ITEMS IN NOTE No. 6 ABOVE, PROVIDE COSTS FOR ITEMS NOTED IN NOTES No.1 THROUGH 5 ABOVE.

ROUGH OPENING SIZE	ANGLE SIZE
UP TO 1'-0"	NONE
1'-1" TO 3'-4"	L 4 x 4 x 1/4
3'-5" TO 4'-8"	L 4 x 4 x 5/16
4'-9" TO 6'-8"	L 6 x 4 x 5/16
6'-9" TO 9'-4"	L 6 x 4 x 3/8
ALL ANGLES MUST HAVE 8" OF BEARING AT EACH END. ALL ANGLES ORIENTED LONG LEG VERTICAL.	

7 SS 002 LINTEL SCHEDULE
N.T.S



NOTE 1
#4 HOOKED BARS ARE REQUIRED ONLY WHEN THE DISTANCE FROM THE EDGE OF THE OPENING TO THE CENTERLINE OF THE BEAM EXCEEDS 17".

5 SS 002 TYPICAL OPENING IN COMPOSITE SLAB DETAIL
N.T.S

POST INSTALLED ANCHORS TO CONCRETE AND MASONRY

SPECIAL INSPECTION ITEM	TYPE OF INSPECTION		REMARKS
	CONTINUOUS	PERIODIC	
1. Use of proper anchor system and manufacturer.		X	
2. Review of installer's qualifications including certification by anchor manufacturer.		X	* See Note 1
3. Anchor installation process as noted in general notes.			* See Note 2
4. Verification of supporting material's condition.		X	
5. Proof testing as outlined in general notes.		X	

* Remark Notes:
1. Inspector shall be familiar with anchor manufacturer's written installation procedure and ESR report.
2. Refer to manufacturer's ESR for type of inspection periodic vs. continuous.

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	1/14/15	Amendment #4

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Drawing Title: TYPICAL DETAILS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	SRH	TJR	LDS

Drawing Number: SS 002

Dwg. 64 of 201

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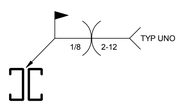
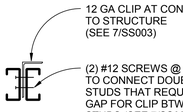
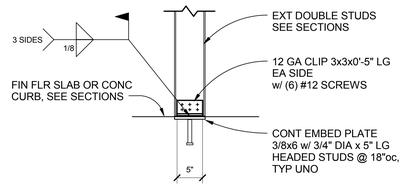


CONDITION 1

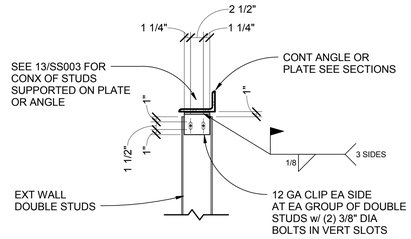


CONDITION 2

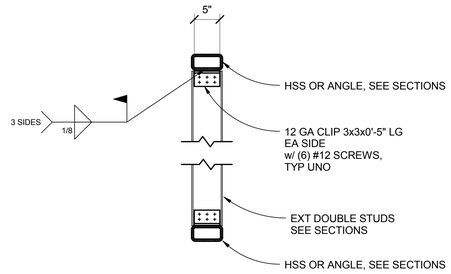
5 / SS 003 TYPICAL DOUBLE STUDS CONNECTION
N.T.S



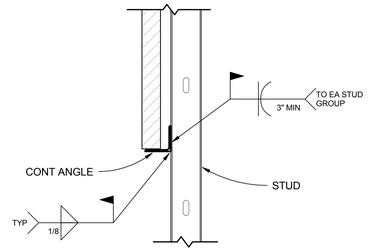
4 / SS 003 TYPICAL EXTERIOR DOUBLE STUDS TO FLOOR SLAB OR CONC CURB CONNECTION
N.T.S



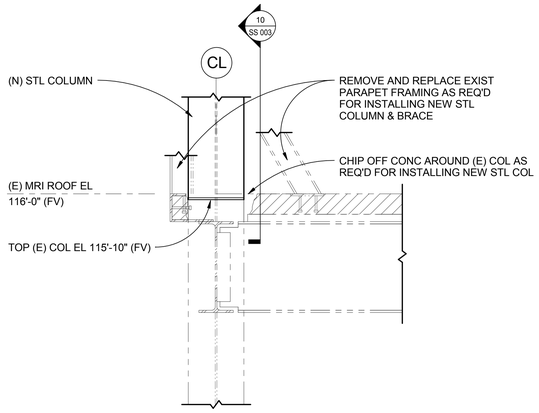
3 / SS 003 TYPICAL EXTERIOR DOUBLE STUDS TO ANGLE/PLATE VERTICAL SLIP CONNECTION AT TOP
N.T.S



2 / SS 003 TYPICAL EXTERIOR WALL STUDS TO HSS OR ANGLE CONNECTION
N.T.S

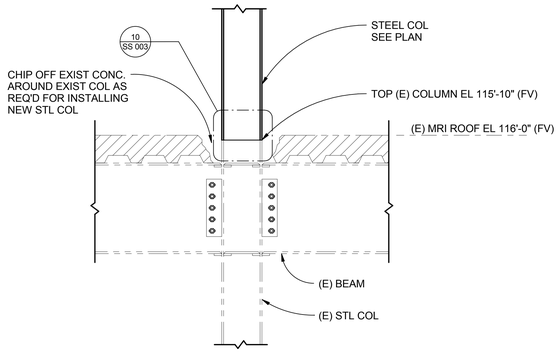


1 / SS 003 TYPICAL SHELF ANGLE TO STUD ATTACHMENT DETAIL
N.T.S



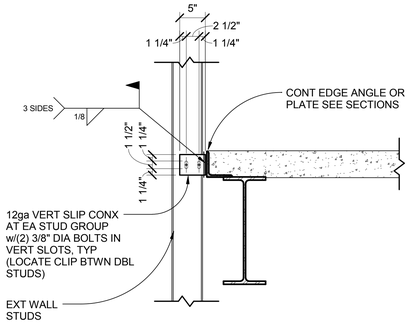
NOTE: TOP OF (E) COL IS LEVEL CUT FOR (F) VERTICAL EXPANSION COL WELDS / CONX. CONTR TO FIELD VERIFY TOP CONDITION AND PREP AS REQ'D FOR COL SPLICE PRIOR TO FABRICATING STEEL COLUMNS.

9 / SS 003 TYPICAL EXTERIOR COLUMN BASE DETAIL AT EXIST MRI ROOF
3/4" = 1'-0"

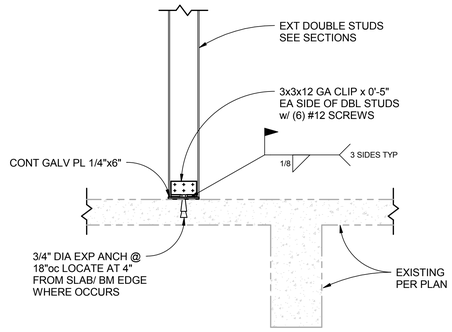


NOTE: TOP OF (E) COL IS LEVEL CUT FOR (F) VERTICAL EXPANSION COL WELDS / CONX. CONTR TO FIELD VERIFY TOP CONDITION AND PREP AS REQ'D FOR COL SPLICE PRIOR TO FABRICATING STEEL COLUMNS.

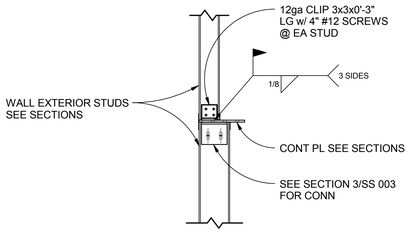
8 / SS 003 TYPICAL INTERIOR COLUMN BASE DETAIL AT EXIST MRI ROOF
3/4" = 1'-0"



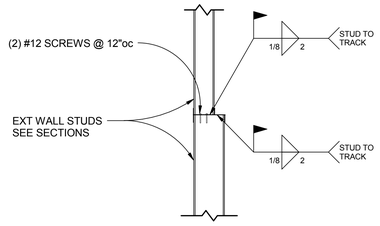
7 / SS 003 TYPICAL VERTICAL SLIDE CONX STUD TO SLAB EDGE
N.T.S



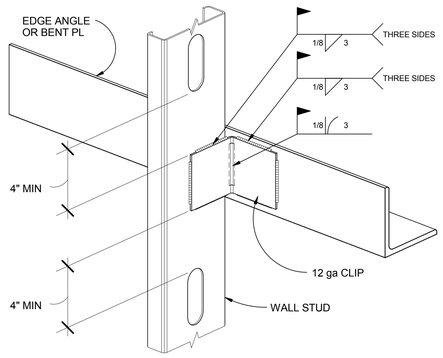
6 / SS 003 TYPICAL DOUBLE STUDS CONNECTION AT EXIST O.R. ROOF SLAB
N.T.S



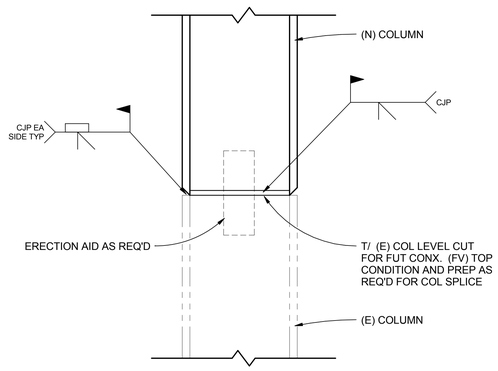
13 / SS 003 TYPICAL EXTERIOR STUD TO PLATE/ ANGLE CONNECTIONAT BOTTOM
1" = 1'-0"



12 / SS 003 TYP EXTERIOR 4" SUTD TO 6" STUD CONNECTION DETAIL
1" = 1'-0"



11 / SS 003 TYPICAL LIGHT GAUGE STUD CLIP ATTACHMENT DETAIL
N.T.S



10 / SS 003 COLUMN SPLICE
1 1/2" = 1'-0"

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
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303RD ENGINEERING GROUP, LLC
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DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Drawing Title: TYPICAL DETAILS

Project Title: INTENSIVE CARE UNIT

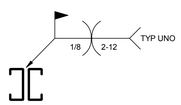
Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	SRH	TJR	LDS

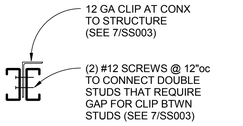
Project Number: 110348.01
Building Number: #1
Drawing Number: SS 003
Dwg. 65 of 201

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

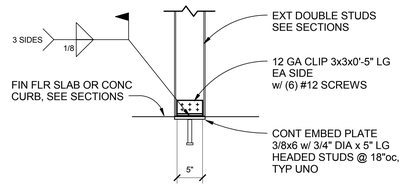


CONDITION 1

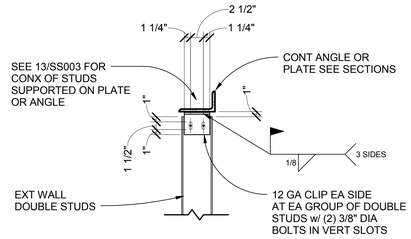


CONDITION 2

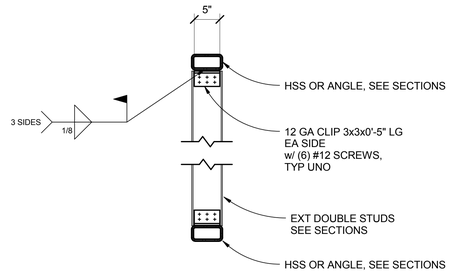
5 / SS 003.# TYPICAL DOUBLE STUDS CONNECTION
N.T.S



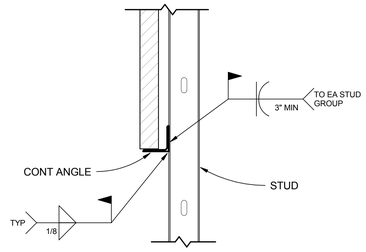
4 / SS 003.# TYPICAL EXTERIOR DOUBLE STUDS TO FLOOR SLAB OR CONC CURB CONNECTION
N.T.S



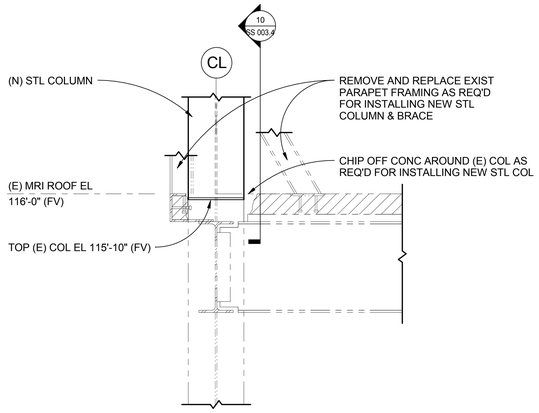
3 / SS 003.# TYPICAL EXTERIOR DOUBLE STUDS TO ANGLE/PLATE VERTICAL SLIP CONNECTION AT TOP
N.T.S



2 / SS 003.# TYPICAL EXTERIOR WALL STUDS TO HSS OR ANGLE CONNECTION
N.T.S



1 / SS 003.# TYPICAL SHELF ANGLE TO STUD ATTACHMENT DETAIL
N.T.S



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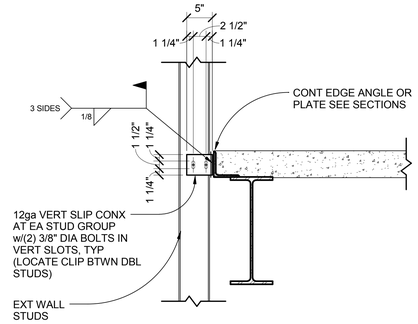
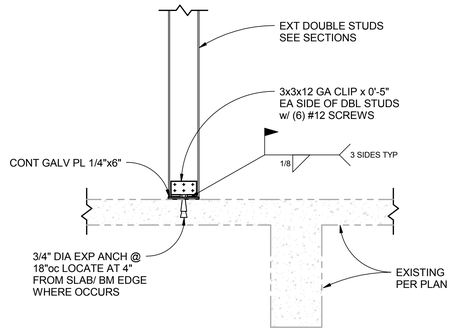
9 / SS 003.# TYPICAL EXTERIOR COLUMN BASE DETAIL AT EXIST MRI ROOF
3/4" = 1'-0"

NOT USED

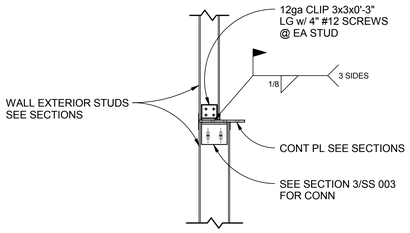
8 / SS 003.# NOT USED
3/4" = 1'-0"



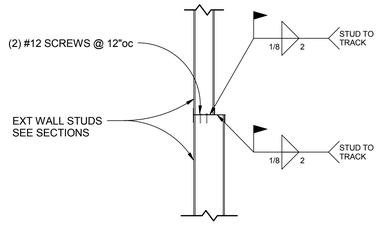
7 / SS 003.# TYPICAL VERTICAL SLIDE CONX STUD TO SLAB EDGE
N.T.S



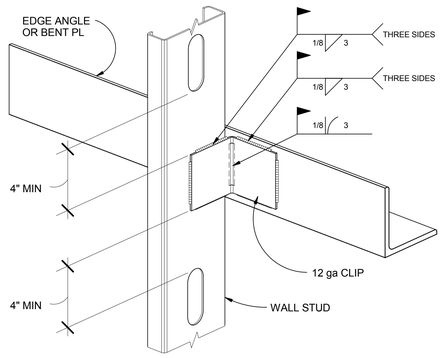
6 / SS 003.# TYPICAL DOUBLE STUDS CONNECTION AT EXIST O.R. ROOF SLAB
N.T.S



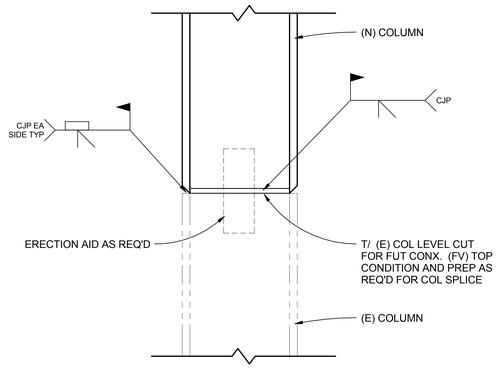
13 / SS 003.# TYPICAL EXTERIOR STUD TO PLATE/ ANGLE CONNECTIONAT BOTTOM
1" = 1'-0"



12 / SS 003.# TYP EXTERIOR 4" SUTD TO 6" STUD CONNECTION DETAIL
1" = 1'-0"



11 / SS 003.# TYPICAL LIGHT GAUGE STUD CLIP ATTACHMENT DETAIL
N.T.S



10 / SS 003.# COLUMN SPLICE
1 1/2" = 1'-0"

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

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1204 WASHINGTON AVE. SUITE 200
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DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Drawing Title: TYPICAL DETAILS DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

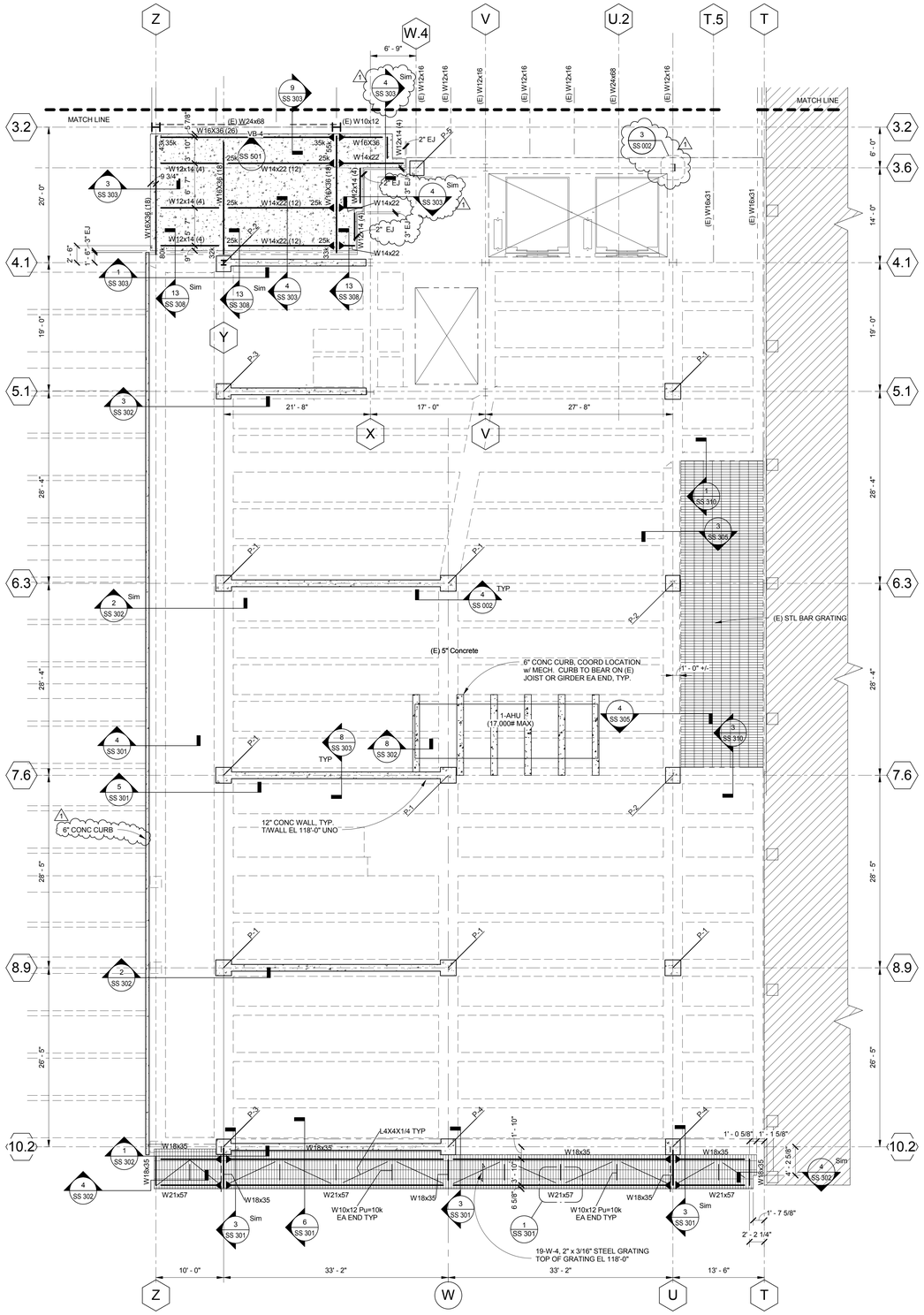
Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	SRH	TJR	LDS

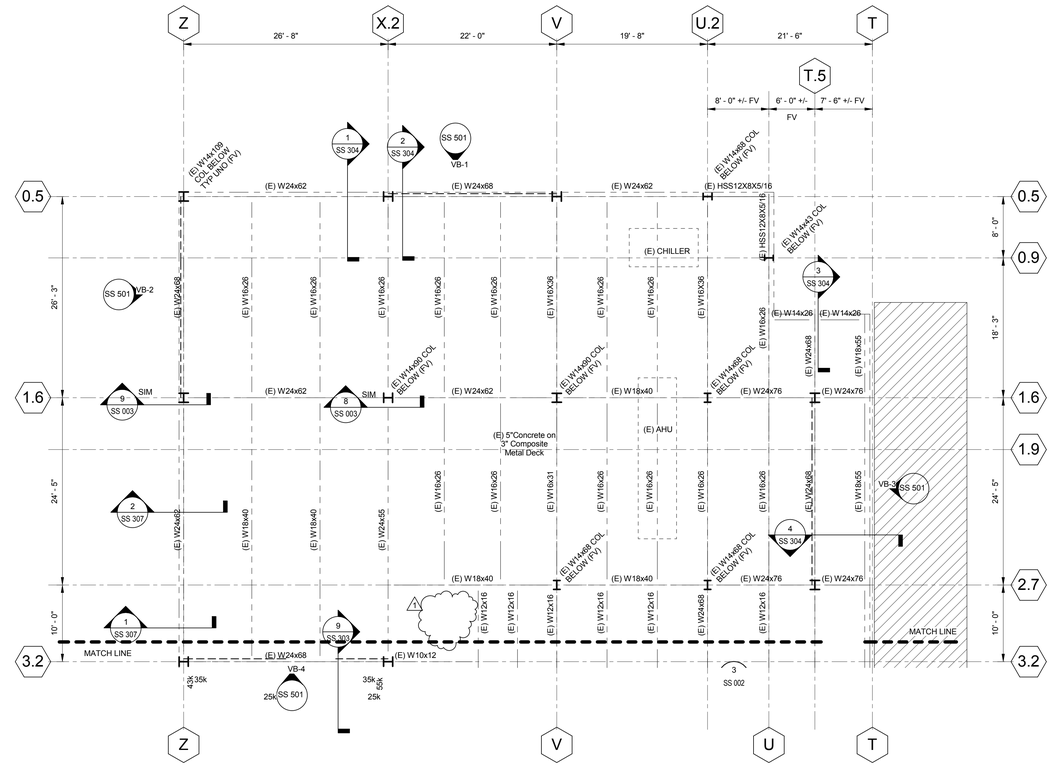
Project Number: 110348.01
Building Number: #1
Drawing Number: SS 003.4
Dwg.104 of 296

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



1 SS 101 INTERSTITIAL MECHANICAL LEVEL FLOOR PLAN - SOUTH
1/8" = 1'-0"



2 SS 101 INTERSTITIAL MECHANICAL LEVEL FLOOR PLAN - NORTH
1/8" = 1'-0"

CONCRETE PEDESTAL SCHEDULE		
MARK	SIZE	REF: DETAIL
P-1	28" x 28"	9/SS401
P-2	26" x 26"	12/SS401
P-3	26" x 27"	11/SS401
P-4	28" x 26"	10/SS401
P-5	25" x 26"	13/SS401

NOTES:
1. EXISTING O. R. ROOF SLAB ELEVATION = 116'-0". FIELD VERIFY.
2. COLUMNS ARE CENTERED ON GRID LINES, UNO.
3. SEE ARCHITECT DRAWINGS FOR DEMOLITION PLANS.
4. GENERAL NOTES AND TYPICAL DETAILS ARE ON SHEET SS 001 THRU SS 003.
5. TOP OF PILASTER = 118'-6" TYPICAL UNLESS NOTED OTHERWISE
6. ▶ INDICATES MOMENT RESISTANT CONNECTION, SEE DETAILS ON SHEET SS 402.
7. INDICATES NEW 3 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITE METAL DECK (5 1/4" TOTAL THICKNESS) REINFORCE WITH 6x6-W2.9xW 2.9 WWR. COORDINATE LOCATION AND DIMENSIONS WITH ARCH.
8. REACTIONS SHOWN ON BEAMS ARE FACTORED SHEAR LOADS. BEAMS WITHOUT REACTIONS SHALL BE DESIGNED FOR 15k MIN FACTORED SHEAR LOAD.
   a.) CONNECTION DESIGN NOTATION:
   Vu = FACTORED VERTICAL SHEAR
   Pu = FACTORED AXIAL LOAD
   FORCES NOTED WITHOUT AN IDENTIFIER ARE Vu.
   b.) WHERE MULTIPLE FORCES ARE SHOWN, CONNECTION SHALL BE DESIGNED ASSUMING FORCES ACT SIMULTANEOUSLY.
9. REMOVE AND REPLACE EXISTING PARAPET FRAMING AS REQUIRED FOR INSTALLATION OF NEW VERTICAL BRACE. SEE ARCHITECTURAL DRAWINGS.

THE DIMENSIONS AND ELEVATIONS SHOWN FOR THE EXISTING CONSTRUCTION ARE ***NOT*** AS-BUILT DIMENSIONS BUT WERE OBTAINED FROM OTHER DRAWINGS AND DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ***FIELD VERIFY*** ALL DIMENSIONS, ELEVATIONS, AND MEMBER SIZES AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION, FABRICATION, ETC.

PLAN

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	1/14/15	Amendment #4

CONSULTANTS:

MECHANICAL/ELECTRICAL:
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DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Drawing Title: INTERSTITIAL MECHANICAL FLOOR PLAN

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

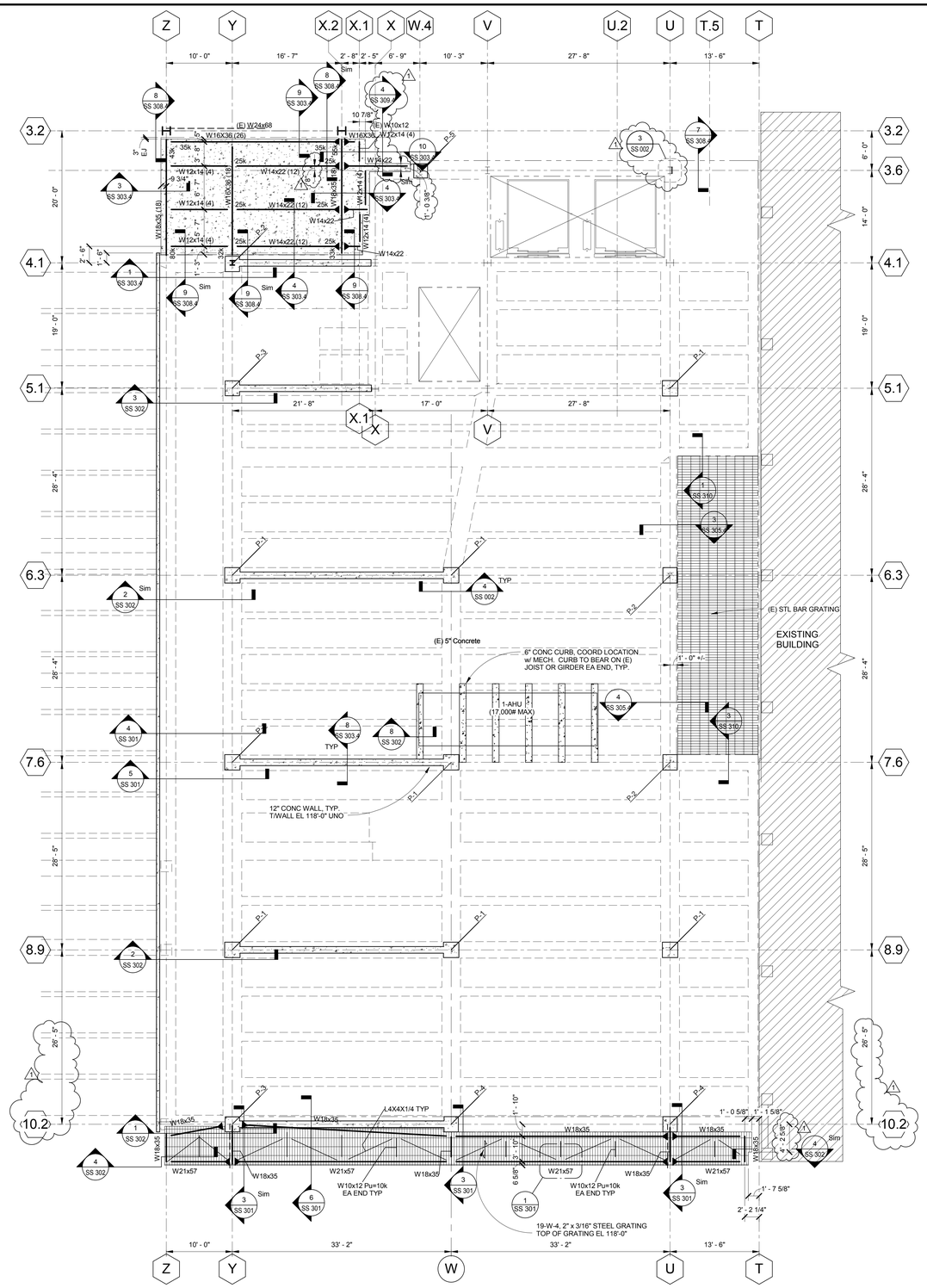
Drawing Number: SS 101

Dwg. 66 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



1 SS 101.4 INTERSTITIAL MECHANICAL LEVEL FLOOR PLAN
1/8" = 1'-0"

CONCRETE PEDESTAL SCHEDULE		
MARK	SIZE	REF: DETAIL
P-1	28" x 28"	9/SS401
P-2	26" x 28"	12/SS401
P-3	26" x 27"	11/SS401
P-4	28" x 26"	10/SS401
P-5	25" x 26"	13/SS401

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1. EXISTING O. R. ROOF SLAB ELEVATION = 116'-0", FIELD VERIFY.
2. COLUMNS ARE CENTERED ON GRID LINES, UNO.
3. SEE ARCHITECT DRAWINGS FOR DEMOLITION PLANS.
4. GENERAL NOTES AND TYPICAL DETAILS ARE ON SHEET SS 001, SS 002 & SS 003.4.
5. TOP OF PILASTER = 118'-6" TYPICAL UNLESS NOTED OTHERWISE
6. ▶—— INDICATES MOMENT RESISTANT CONNECTION, SEE DETAILS ON SHEET SS 402.
7. ⋯ INDICATES NEW 3 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITE METAL DECK (5 1/4" TOTAL THICKNESS) REINFORCE WITH 6x6-W2.9xW 2.9 WWR. COORDINATE LOCATION AND DIMENSIONS WITH ARCH.
8. REACTIONS SHOWN ON BEAMS ARE FACTORED SHEAR LOADS. BEAMS WITHOUT REACTIONS SHALL BE DESIGNED FOR 15k MIN FACTORED SHEAR LOAD.
   a.) CONNECTION DESIGN NOTATION:
   Vu = FACTORED VERTICAL SHEAR
   Pu = FACTORED AXIAL LOAD
   FORCES NOTED WITHOUT AN IDENTIFIER ARE Vu.
   b.) WHERE MULTIPLE FORCES ARE SHOWN, CONNECTION SHALL BE DESIGNED ASSUMING FORCES ACT SIMULTANEOUSLY.
9. REMOVE AND REPLACE EXISTING PARAPET FRAMING AS REQUIRED FOR INSTALLATION OF NEW VERTICAL BRACE. SEE ARCHITECTURAL DRAWINGS.

THE DIMENSIONS AND ELEVATIONS SHOWN FOR THE EXISTING CONSTRUCTION ARE ***NOT*** AS-BUILT DIMENSIONS BUT WERE OBTAINED FROM OTHER DRAWINGS AND DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ***FIELD VERIFY*** ALL DIMENSIONS, ELEVATIONS, AND MEMBER SIZES AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION, FABRICATION, ETC.

PLAN

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No.	Date	Revisions
1	1/14/15	Amendment #4

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DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Drawing Title: INTERSTITIAL MECHANICAL FLOOR PLAN DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	Checker	Author	Approver

Drawing Number: SS 101.4

Dwg.105 of 201

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Department of Veterans Affairs

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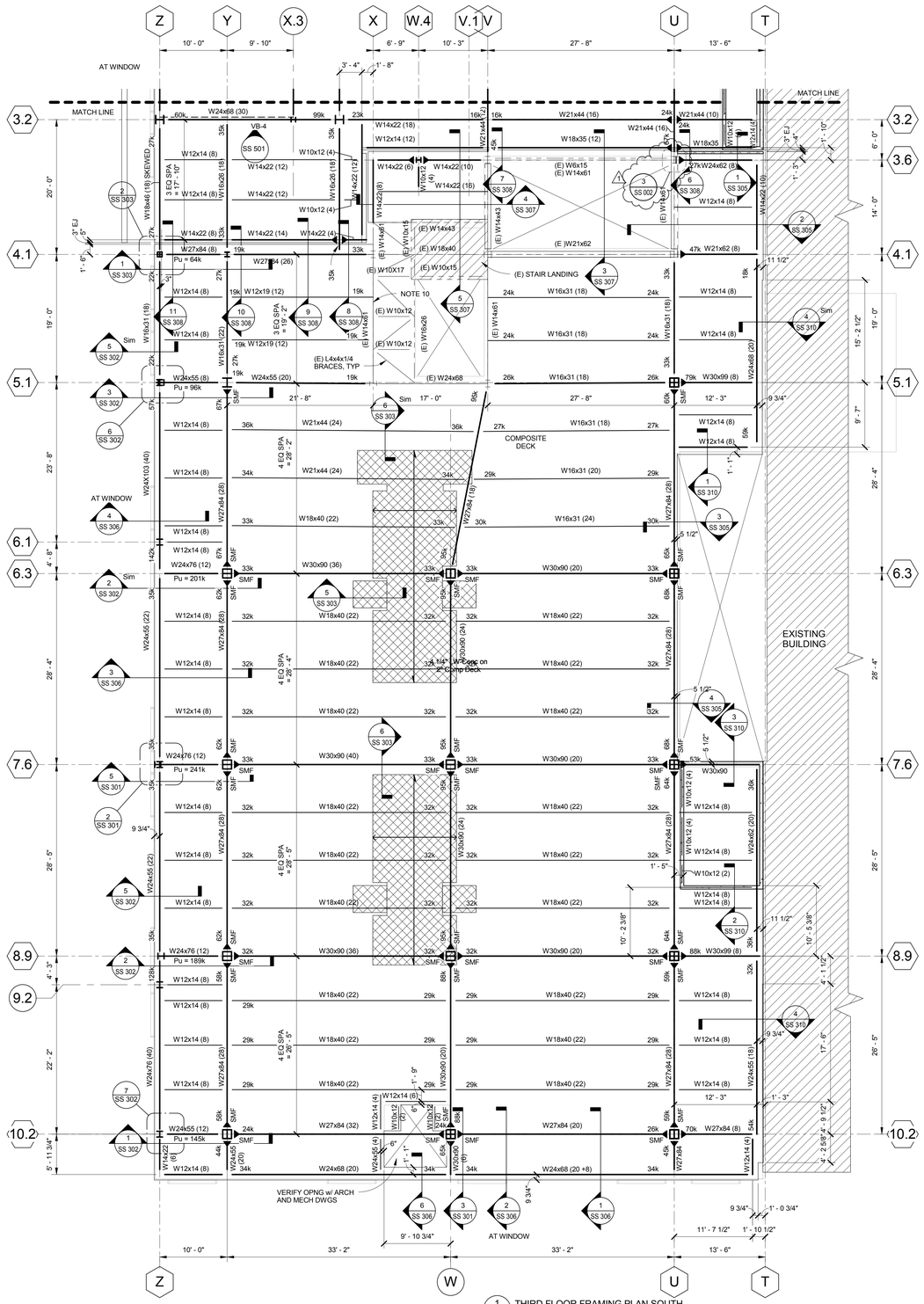
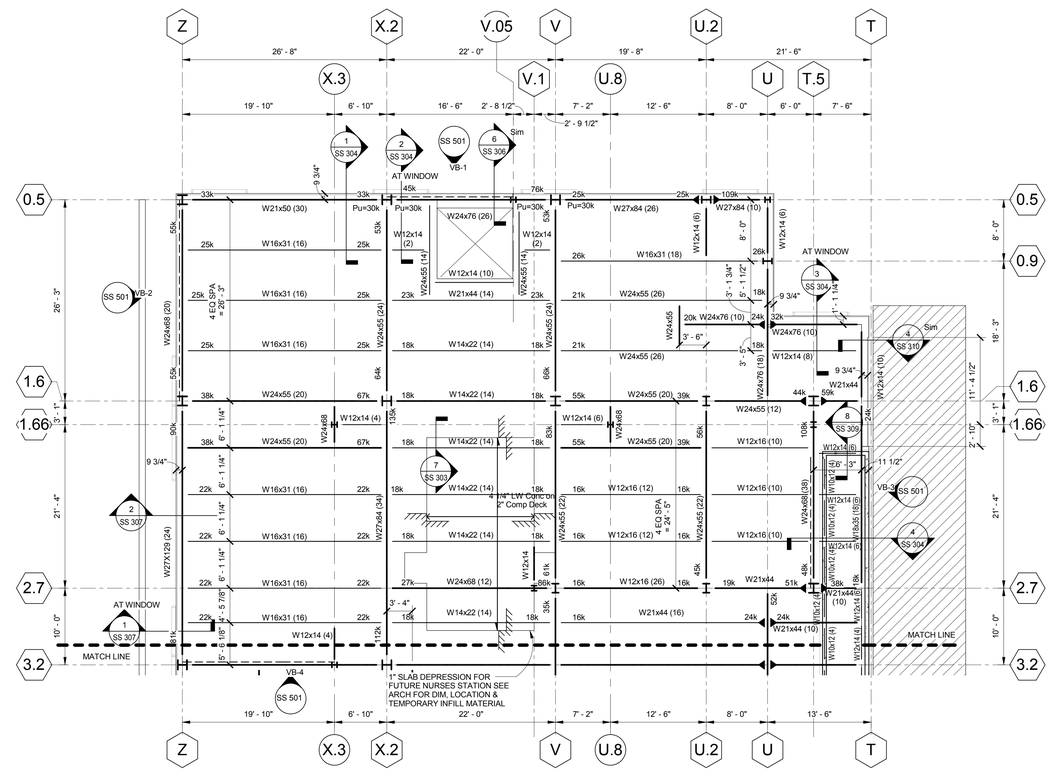


1 SS 102 THIRD FLOOR FRAMING PLAN SOUTH
1/8" = 1'-0"



2 SS 102 THIRD FLOOR FRAMING PLAN NORTH
1/8" = 1'-0"

NOTES:

1. THIRD FLOOR FINISHED SLAB ELEVATION = 126'-5 1/4".
2. COLUMNS ARE CENTERED ON GRIDLINES, UNO.
3. FLOOR CONSTRUCTION TO BE 4 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITE METAL DECK (6 1/4" TOTAL THICKNESS) REINFORCE WITH 6x6-W2.9xW 2.9 WWR.
4. [XX] INDICATES THE NUMBER OF STUDS PER BEAM, EQUALLY SPACED FROM MID SPAN OF THE BEAM, UNO.
5. ▶—— INDICATES MOMENT RESISTANT CONNECTION (SEE SS402 FOR DETAILS).
6. REACTIONS SHOWN ON STEEL BEAMS ARE FACTORED SHEAR LOADS. BEAMS WITHOUT REACTIONS SHALL BE DESIGNED FOR A MINIMUM 15 KIPS FACTORED SHEAR LOAD.
7. ⌒ INDICATES A 1" SLAB DEPRESSION WITH 2" LIGHT WEIGHT CONCRETE ON EPS-12 (MIN) GEOFOAM FILL REINFORCED WITH 6x6-W1.4xW1.4 WWR. COORDINATE LOCATION AND DIMINSION WITH ARCH.
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   b.) WHERE MULTIPLE FORCES ARE SHOWN, CONNECTION SHALL BE DESIGNED ASSUMING FORCES ACT SIMULTANEOUSLY.
10. REMOVE (E) VERTICAL BRACE & GUSSET PL BTWEEN LINES 4.1 & 5.1 ON GRID LINE X ALL LEVELS
11. SLOPE SLAB LOCALLY AT DRAINS. SEE ARCH & PLUMBING FOR LOCATIONS & DETAILS. SLAB RECESS FOR SLOPE NOT TO EXCEED 2".
12. PROVIDE 2'-0" x 2'-0" x 1" MAX SLAB DEPRESSION IN (N) FLOOR SLAB AT TOILETS. COORDINATE FINAL SIZE AND LOCATION WITH ARCH & PLUMBING.
13. WALL MOUNTED PATIENT BOOM SUPPORT AND BRACING BY SUPPLIER.
14. GENERAL NOTES AND TYPICAL DETAILS ARE ON SHEET SS 001 THRU SS 003.

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Drawing Title: THIRD FLOOR FRAMING PLAN

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Drawing Number: SS 102

Dwg. 67 of 201

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Office of Construction and Facilities Management

Department of Veterans Affairs

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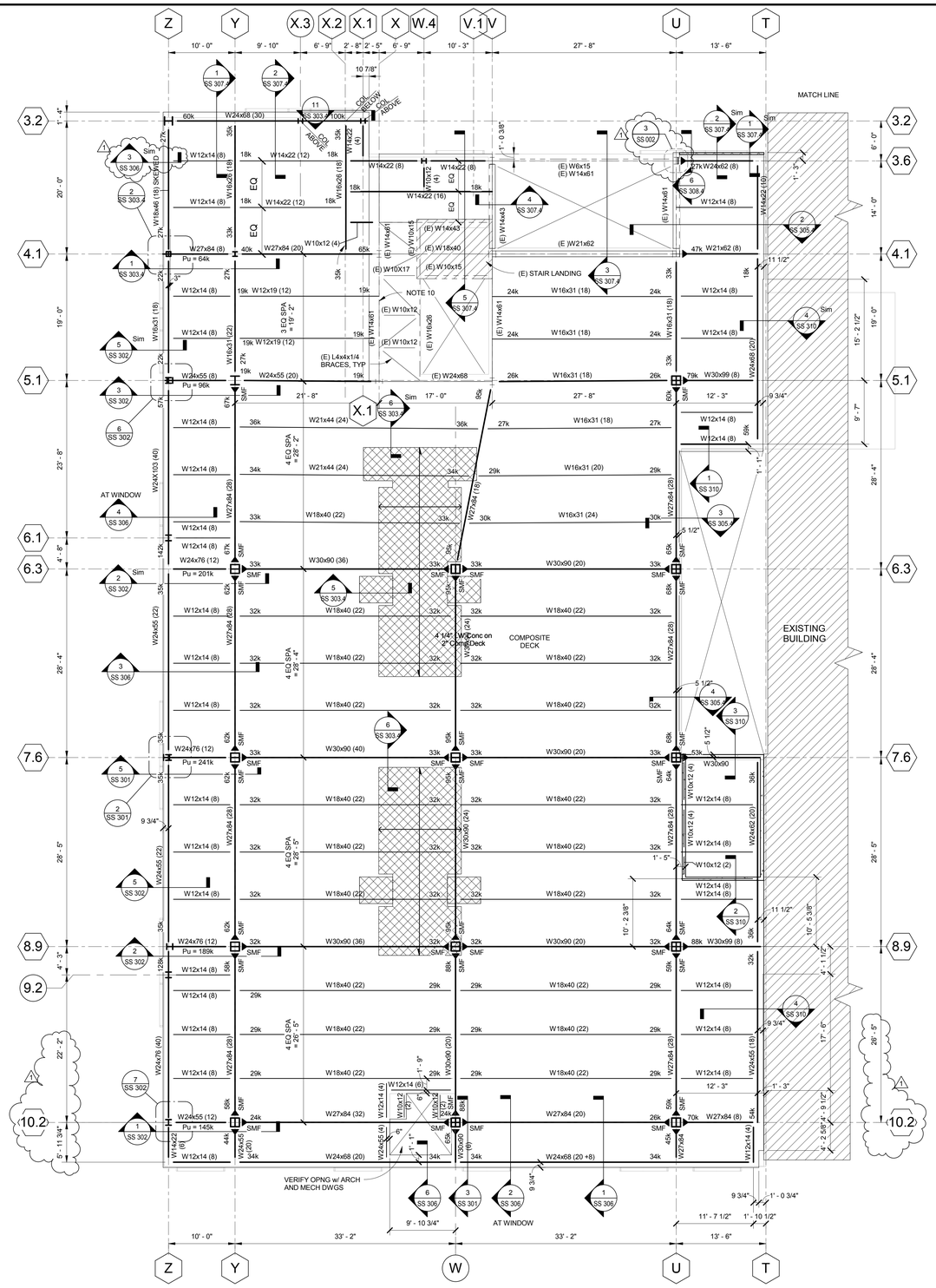

1 THIRD FLOOR FRAMING PLAN
SS 102.4 1/8" = 1'-0"

NOTES:

1. THIRD FLOOR FINISHED SLAB ELEVATION = 126'-5 1/4".
2. COLUMNS ARE CENTERED ON GRIDLINES, UNO.
3. FLOOR CONSTRUCTION TO BE 4 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITEMETAL DECK (6 1/4" TOTAL THICKNESS) REINFORCE WITH 6x6-W2.9xW 2.9 WWR.
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6. REACTIONS SHOWN ON STEEL BEAMS ARE FACTORED SHEAR LOADS. BEAMS WITHOUT REACTIONS SHALL BE DESIGNED FOR A MINIMUM 15 KIPS FACTORED SHEAR LOAD.
7. ▭ INDICATES A 1" SLAB DEPRESSION WITH 2" LIGHT WEIGHT CONCRETE ON EPS-12 (MIN) GEOFOAM FILL REINFORCED WITH 6x6-W1.4xW1.4 WWR. COORDINATE LOCATION AND DIMINSION WITH ARCH.
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11. SLOPE SLAB LOCALLY AT DRAINS. SEE ARCH & PLUMBING FOR LOCATIONS & DETAILS. SLAB RECESS FOR SLOPE NOT TO EXCEED 2".
12. PROVIDE 2'-0" x 2'-0" x 1" MAX SLAB DEPRESSION IN (N) FLOOR SLAB AT TOILETS. COORDINATE FINAL SIZE AND LOCATION WITH ARCH & PLUMBING.
13. WALL MOUNTED PATIENT BOOM SUPPORT AND BRACING BY SUPPLIER.
14. GENERAL NOTES AND TYPICAL DETAILS ARE ON SHEET SS 001, SS 002 & SS 003.4.

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Drawing Title: THIRD FLOOR FRAMING PLAN DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	Checker	Author	Approver

Drawing Number: SS 102.4

Dwg.106 of 201

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Department of Veterans Affairs

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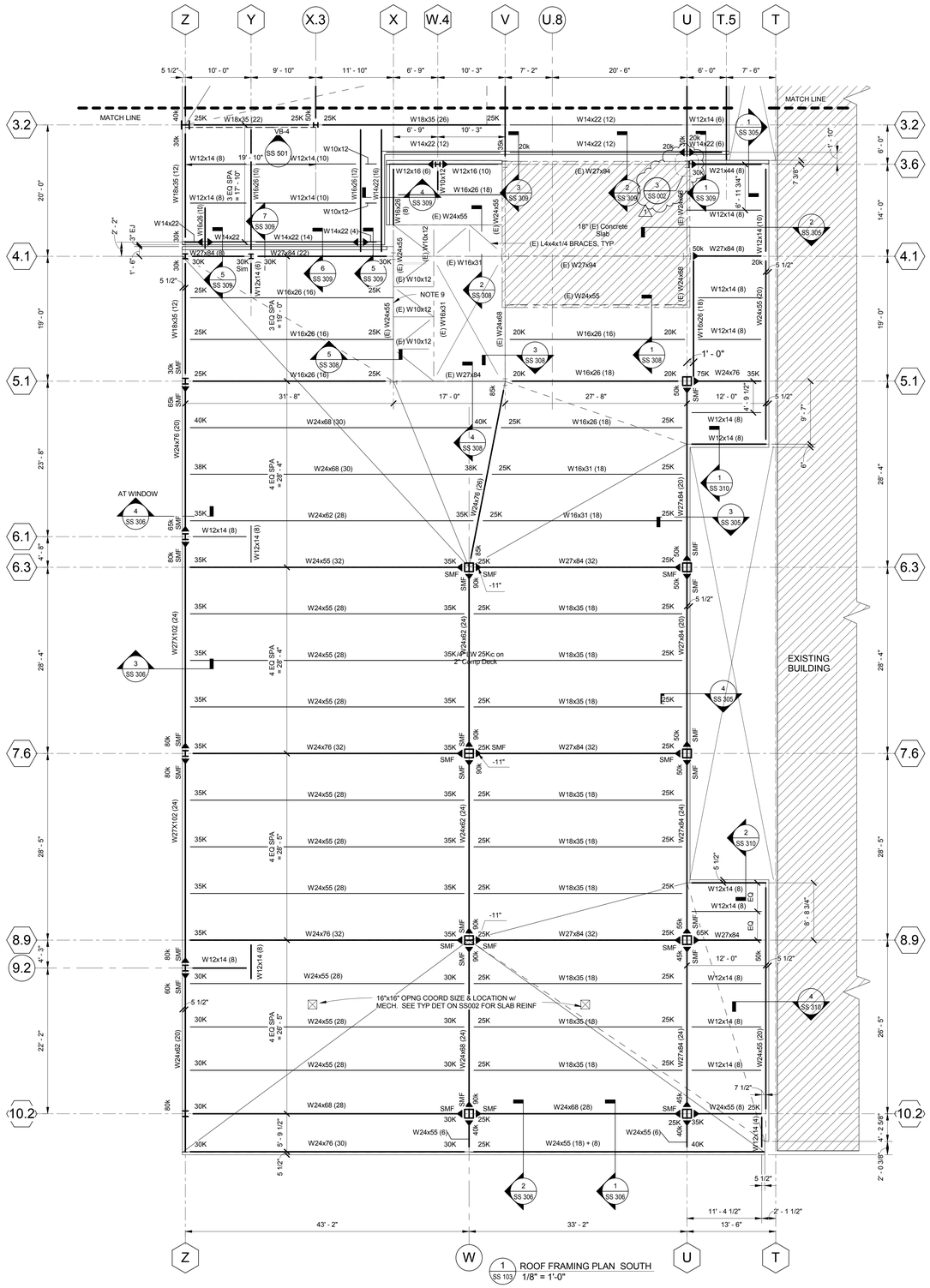
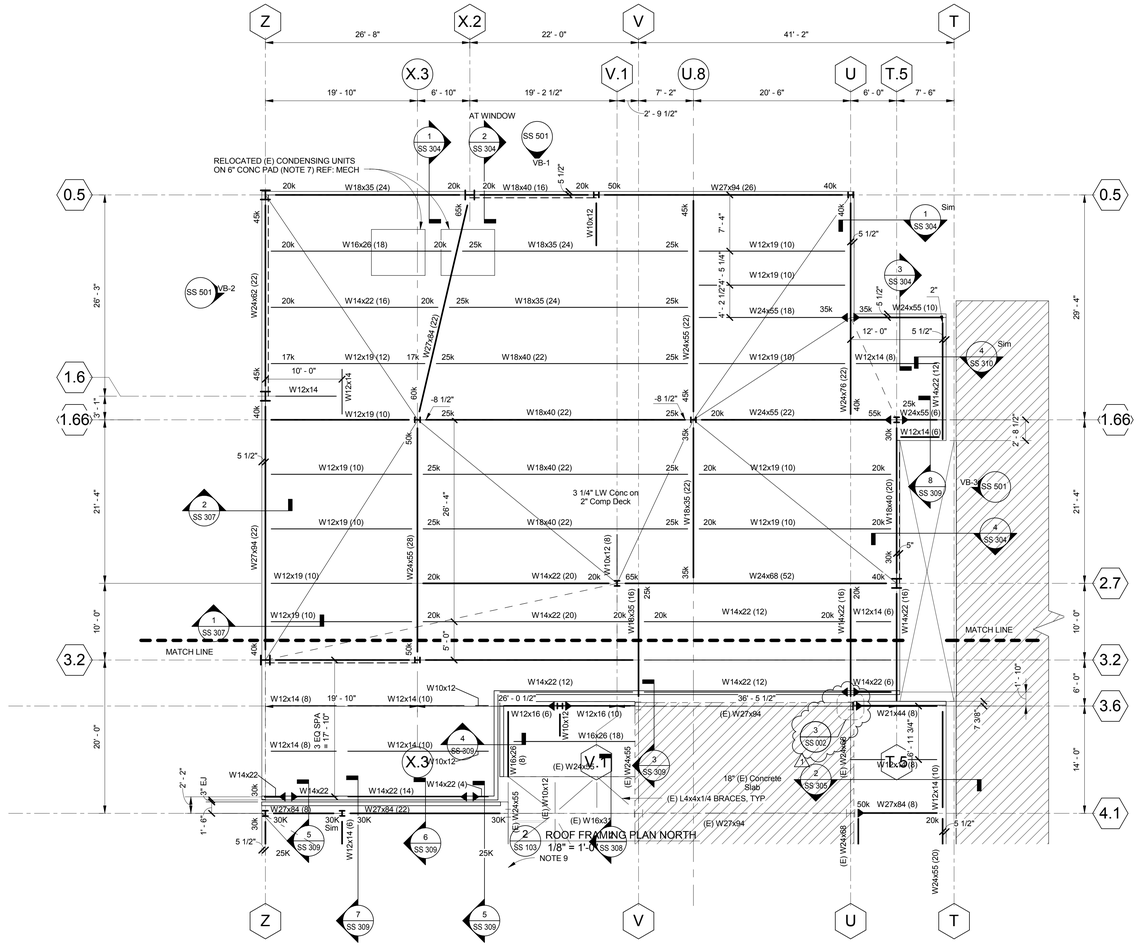


1 SS 103 ROOF FRAMING PLAN SOUTH
1/8" = 1'-0"



2 SS 103 ROOF FRAMING PLAN NORTH
1/8" = 1'-0"
NOTE 9

NOTES:

1. ROOF FINISHED SLAB ELEVATION = 142'-2 1/2", UNO. SEE PLAN FOR ROOF STEEL SLOPES.
2. COLUMNS ARE CENTERED ON GRIDLINES, UNO.
3. ROOF CONSTRUCTION TO BE 3 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITE METAL DECK (5 1/4" TOTAL THICKNESS) REINFORCE WITH #3 @ 15"oc EACH WAY AT SLAB MID DEPTH.
4. [XX] INDICATES THE NUMBER OF STUDS PER BEAM, EQUALLY SPACED FROM MID SPAN OF THE BEAM, UNO.
5. ►—— INDICATES MOMENT RESISTANT CONNECTION (SEE SHEET SS402 FOR DETAILS).
6. SMF INDICATES SPECIAL MOMENT FRAME CONNECTION (SEE SS402 FOR DETAILS).
7. 6" EQUIPMENT PAD, REINF w/ #3 @ 12"oc EW MIDHEIGHT COORD ALL SIZES AND LOCATIONS WITH MECH EQUIPMENT SUPPLIER.
8. REACTIONS SHOWN ON BEAMS ON PLAN ARE FACTORED SHEAR LOADS WITHOUT CONSIDERING BLAST LOADS. BEAM REACTIONS INCLUDING BLAST LOADS ARE SHOWN BELOW. BEAMS SHALL BE DESIGNED FOR GREATEST OF REACTIONS SHOWN ON PLAN OR THE REACTIONS NOTED IN 8.c.) BELOW.
   BEAMS WITHOUT REACTIONS SHALL BE DESIGNED FOR 20k MIN FACTORED SHEAR LOAD, UNO.
   a.) CONNECTION DESIGN NOTATION:
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   b.) WHERE MULTIPLE FORCES ARE SHOWN, CONNECTION SHALL BE DESIGNED ASSUMING FORCES ACT SIMULTANEOUSLY.
   c.) FACTORED REACTIONS INCLUDING BLAST LOADS:

BEAMS	REACTION (KIPS)	GIRDERS	REACTIONS (KIPS)
W10	20		
W12	30	W12	36
W14	42	W14	58
W16	55	W16	80
W18	67	W18	108
W21	80	W21	120
W24	120	W24	146
W27	167	W27	160

9. REMOVE (E) VERTICAL BRACE & GUSSET PL BTWEEN LINES 4.1 & 5 ON GRID LINE X ALL LEVELS
10. GENERAL NOTES AND TYPICAL DETAILS ARE ON SHEET SS 001 THRU SS 003.

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Drawing Title: ROOF FRAMING PLAN

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Drawing Number: SS 103

Dwg. 68 of 201

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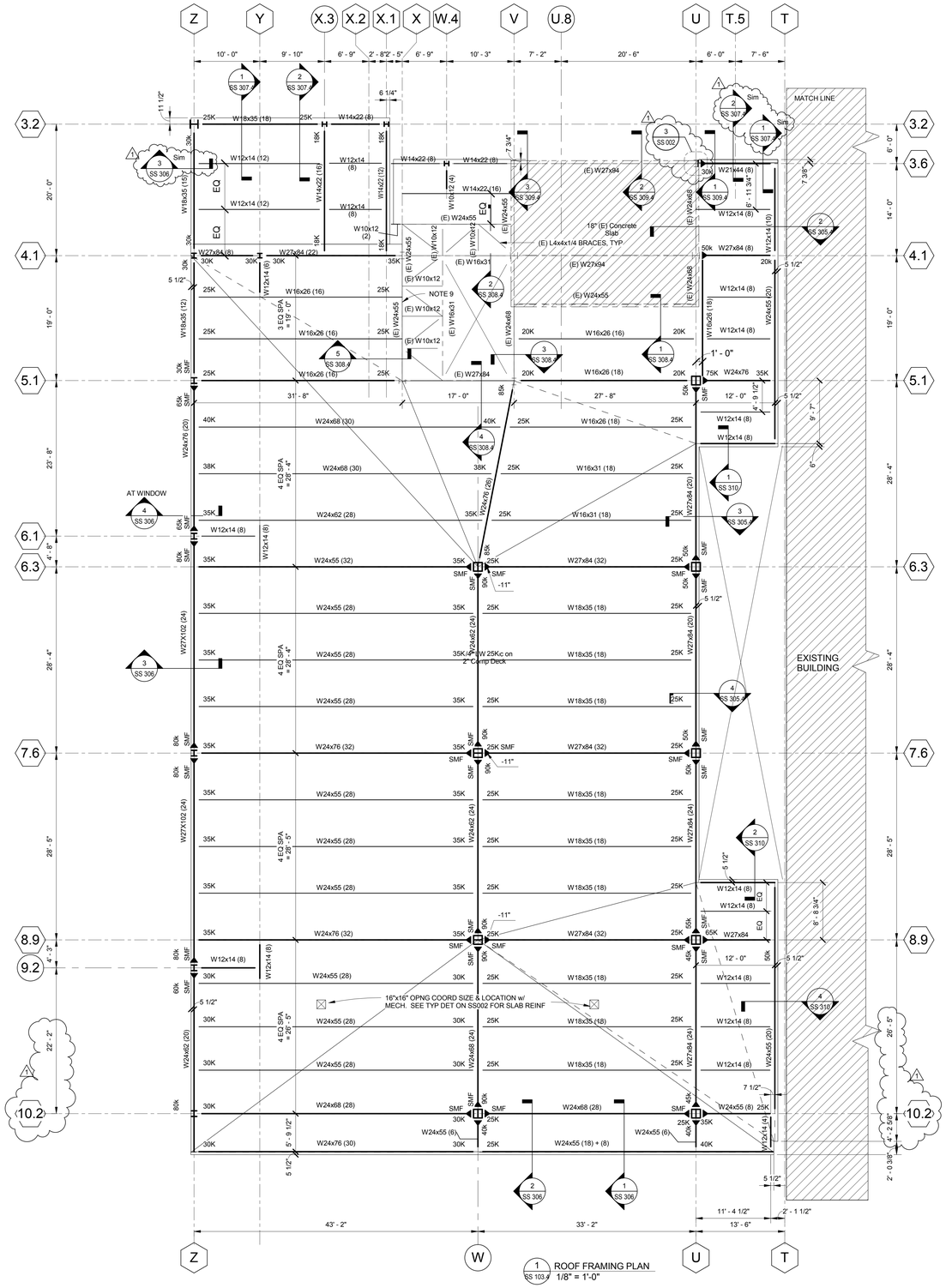

1 SS 103.4 ROOF FRAMING PLAN
1/8" = 1'-0"

NOTES:

1. ROOF FINISHED SLAB ELEVATION = 142'-2 1/2", UNO. SEE PLAN FOR ROOF STEEL SLOPES.
2. COLUMNS ARE CENTERED ON GRIDLINES, UNO.
3. ROOF CONSTRUCTION TO BE 3 1/4" LIGHT WEIGHT CONCRETE ON 2" x 20 ga GALV COMPOSITE METAL DECK (5 1/4" TOTAL THICKNESS) REINFORCE WITH #3 @ 15"oc EACH WAY AT SLAB MID DEPTH.
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ST. LOUIS, MO 63103

COMMISSIONING:
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CHESTERFIELD, MO 63017

ENVIROMENTAL:
EVIRONMENTAL CONSULTANTS, LLC
#6 MEADOW HEIGHTS PROFESSIONAL PARK DR.
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62234

STRUCTURAL ENGINEER
kpff Consulting Engineers
1630 Des Peres Road, Suite 100
Saint Louis, MO 63131
(314) 835-0524 Fax (314) 835-0749
Mo. Certificate of Authority No. 2001010829

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ARCHITECT/ENGINEERS:

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ARCHITECTS | DESIGNERS | PLANNERS | LANDSCAPE ARCHITECTS
168 N MERAMEC, SUITE 400 | ST. LOUIS, MISSOURI 63105
TEL 314 725 2927 | FAX 314 725 2928 | CHRISTNERINC.COM

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DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Drawing Title: ROOF FRAMING PLAN DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	JM	TJR	LDS

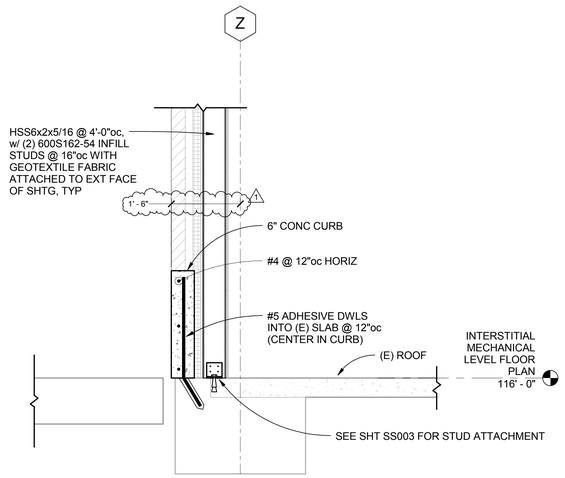
Drawing Number: SS 103.4

Dwg 107 of 201

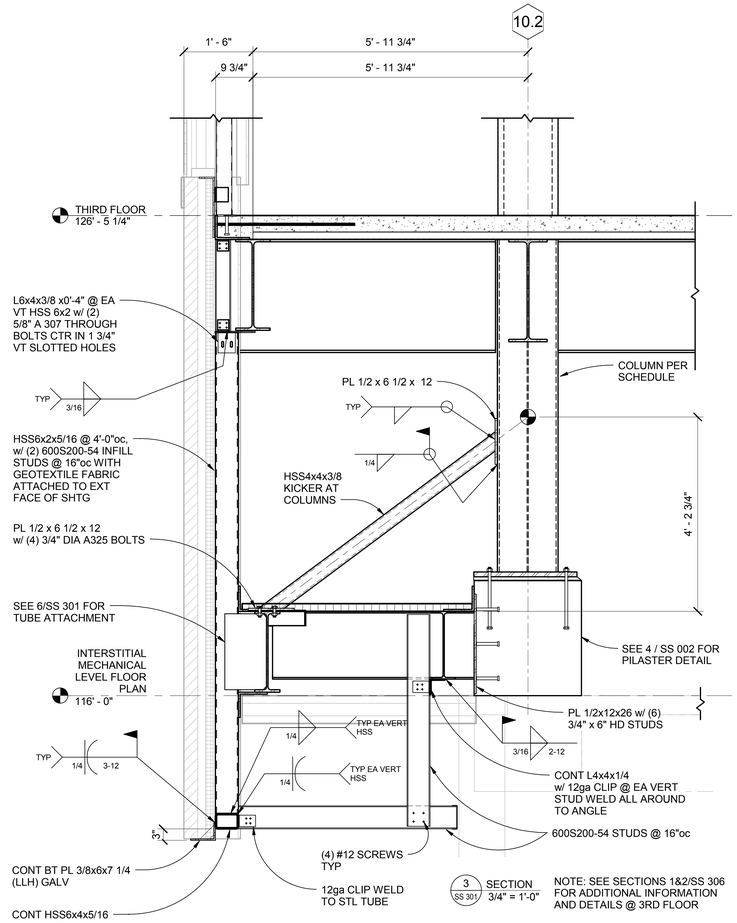
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

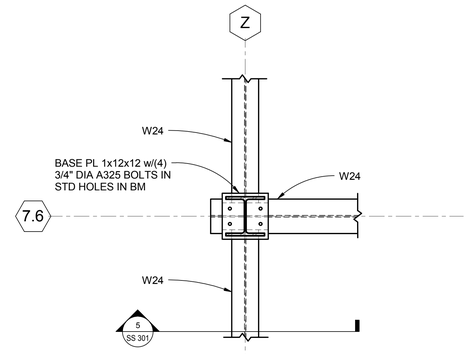


4 SS 301 SECTION 3/4" = 1'-0"



3 SS 301 SECTION 3/4" = 1'-0"

NOTE: SEE SECTIONS 1&2/SS 306 FOR ADDITIONAL INFORMATION AND DETAILS @ 3RD FLOOR



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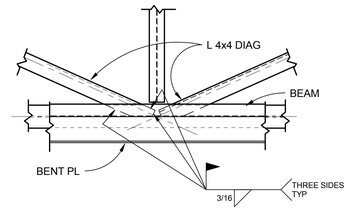

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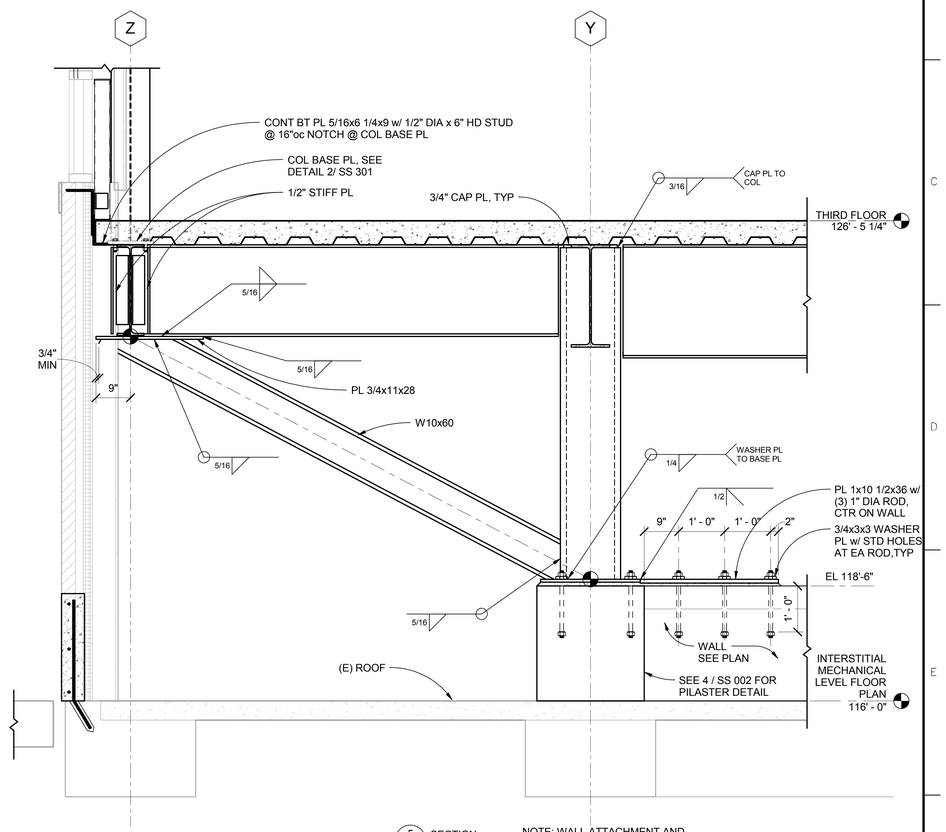

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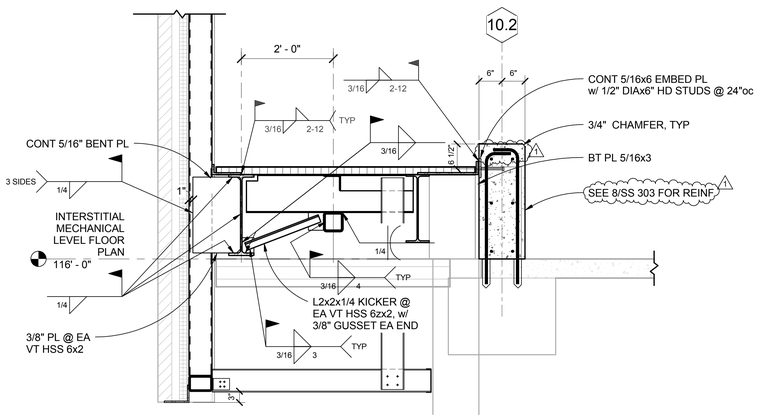

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FOR BALANCE OF INFORMATION REF: SECTION 3/SS301

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Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Drawing Number: SS 301

Dwg. 69 of 201

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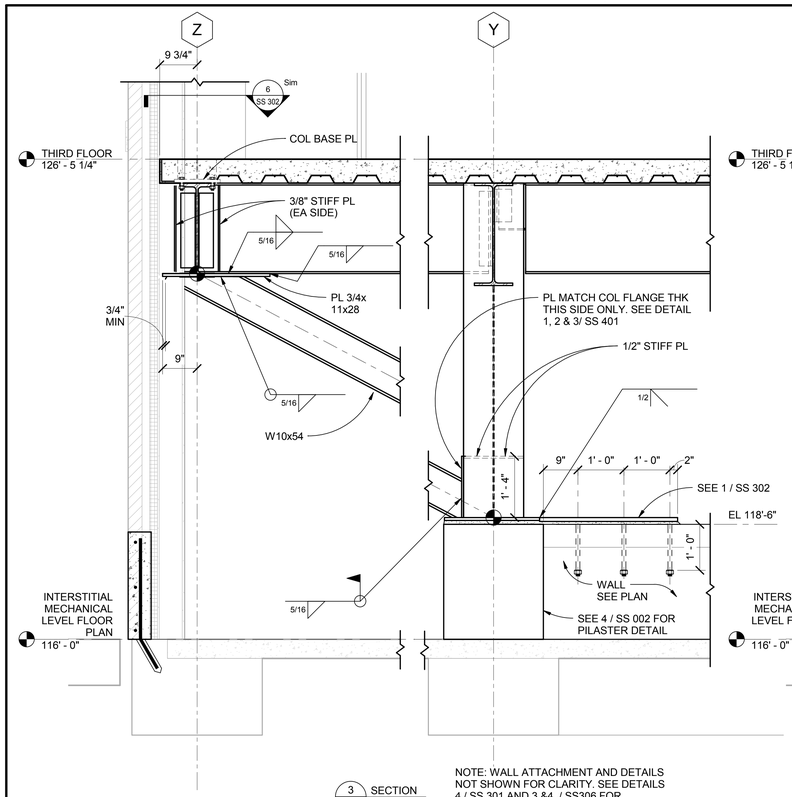
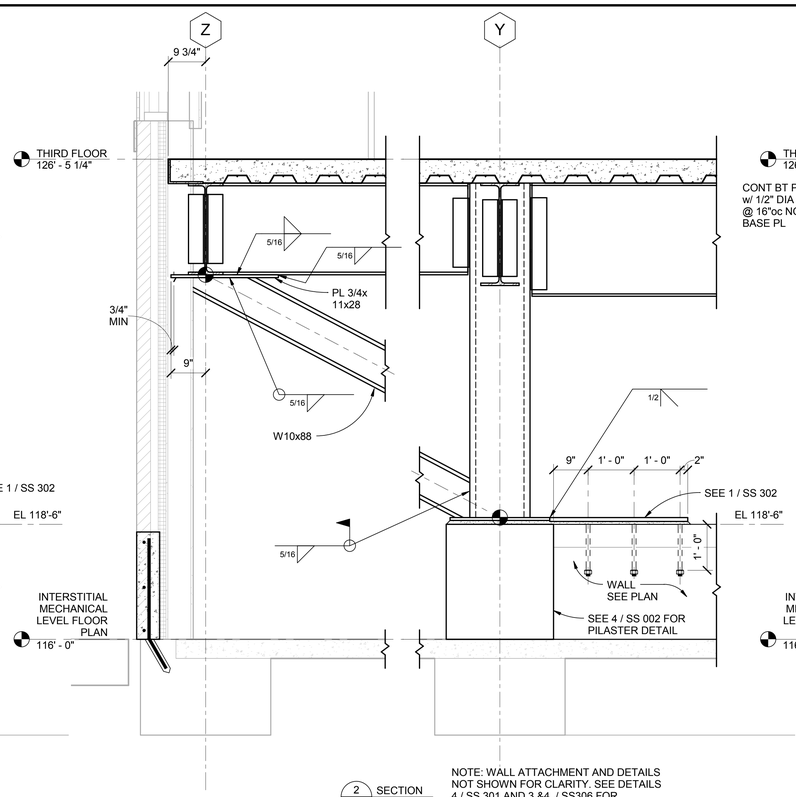


3 SS 302 SECTION 3/4" = 1'-0"

NOTE: WALL ATTACHMENT AND DETAILS NOT SHOWN FOR CLARITY. SEE DETAILS 4 / SS 301 AND 3 &4 ./ SS306 FOR ADDITIONAL INFORMATION



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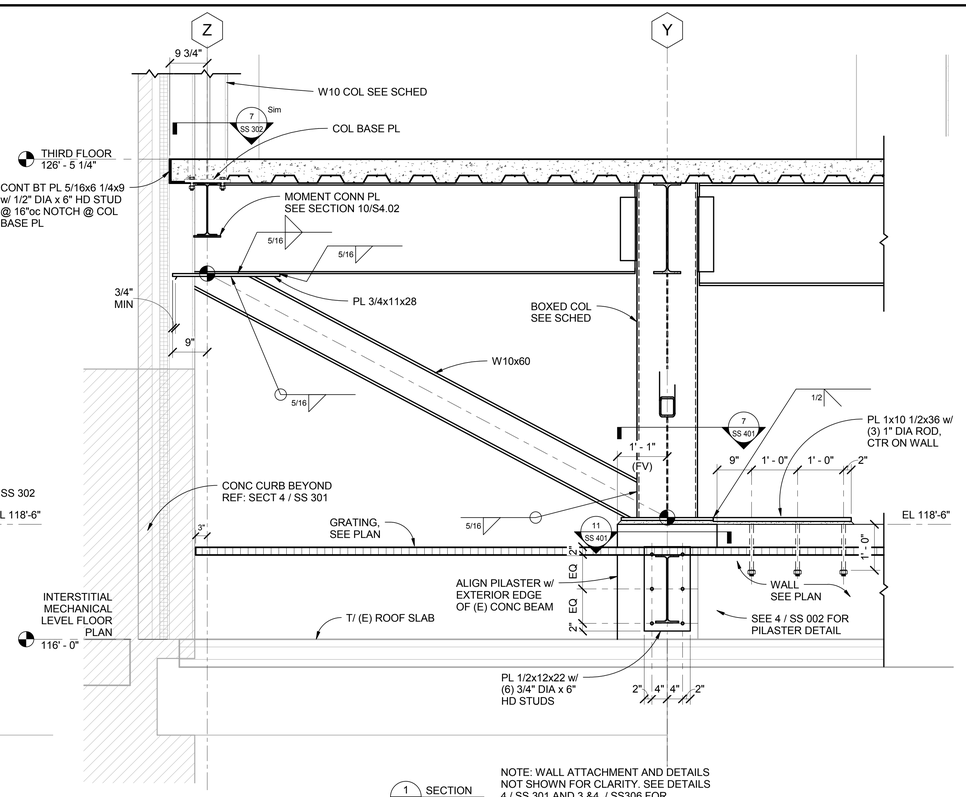

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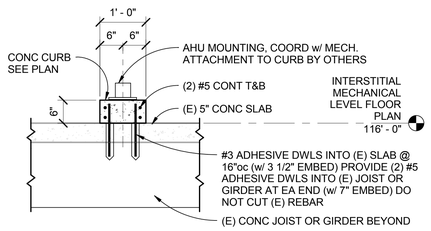

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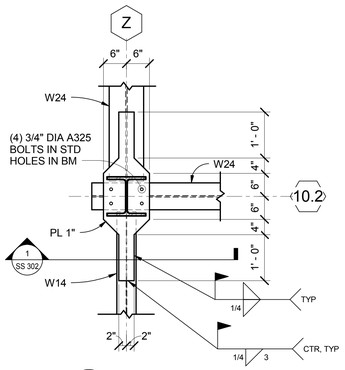
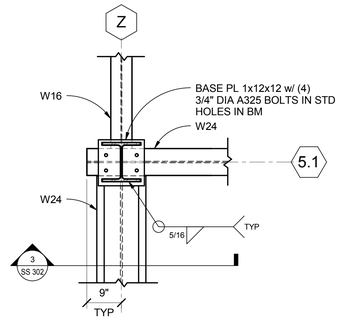


7 SS 302 BASE PLATE DETAIL 3/4" = 1'-0"



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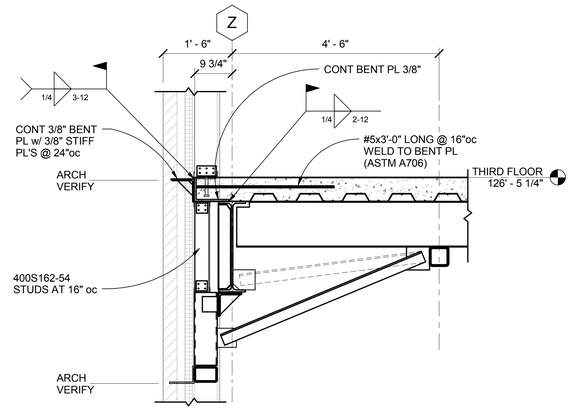

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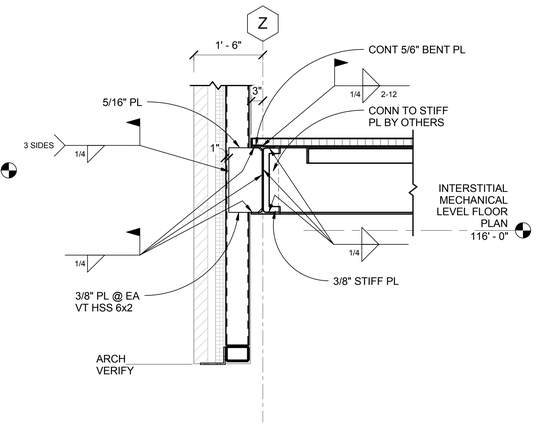
NOTE: SEE SECTION 1 / SS 307 FOR BALANCE OF INFORMATION



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Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Drawing Number: SS 302

Dwg. 70 of 201

Office of Construction and Facilities Management

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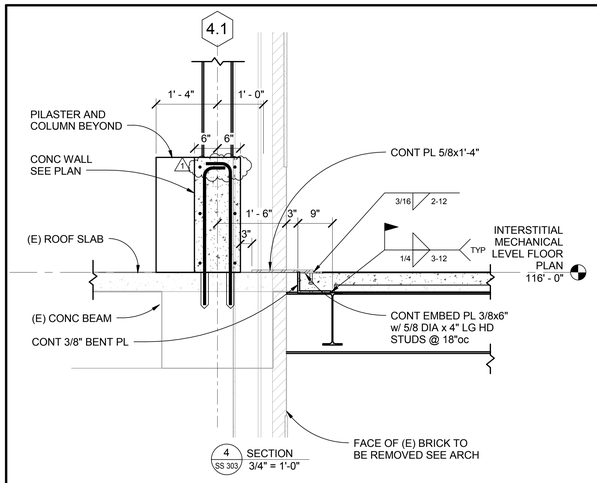

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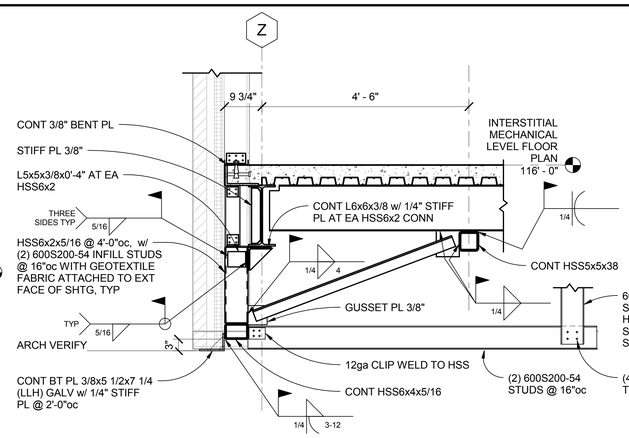

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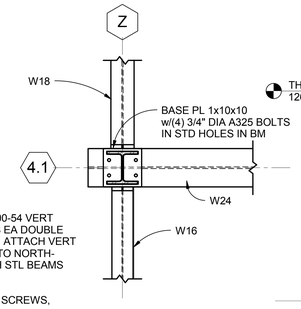

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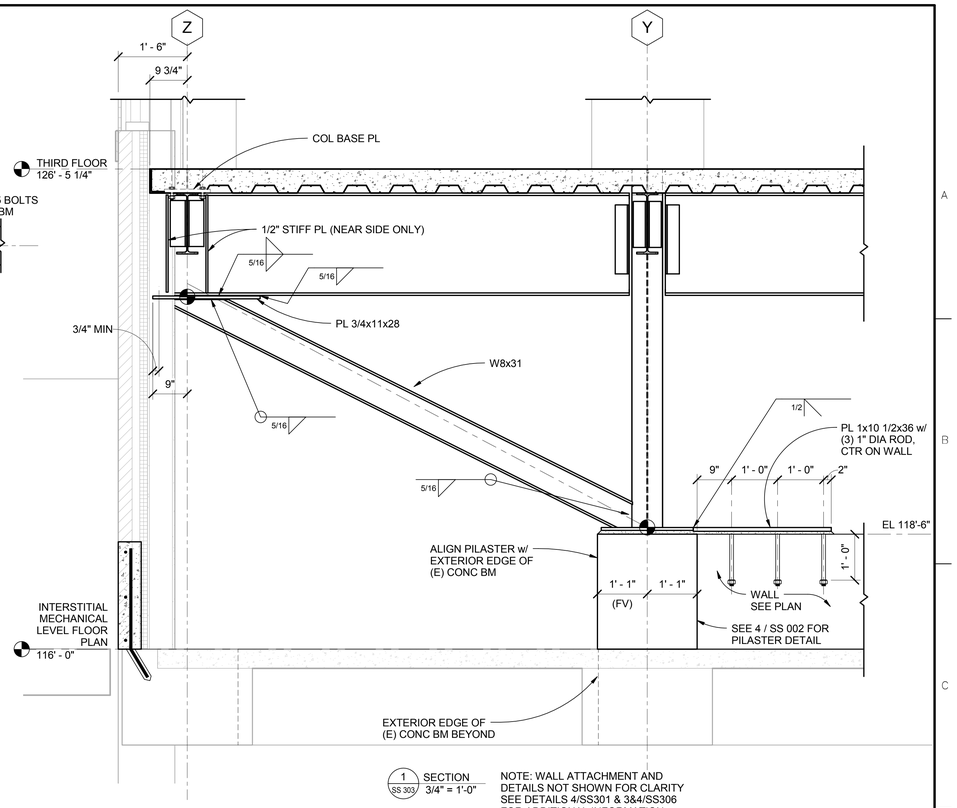

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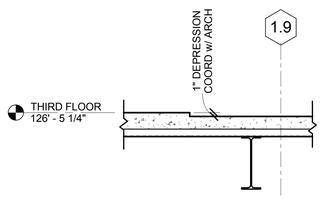

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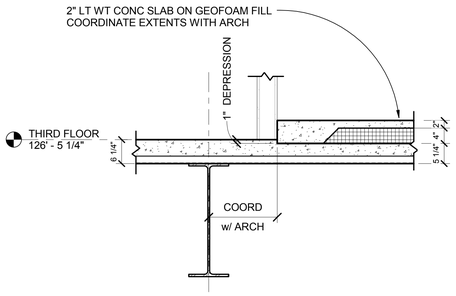

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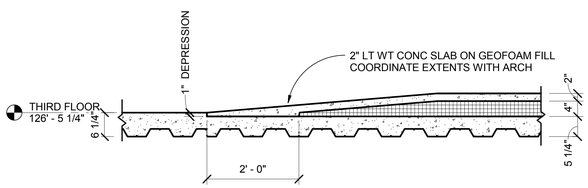

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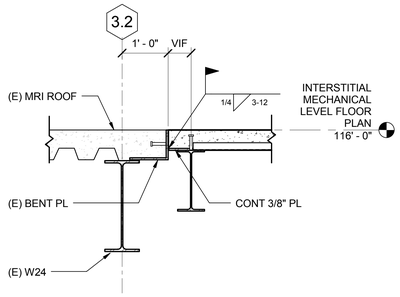

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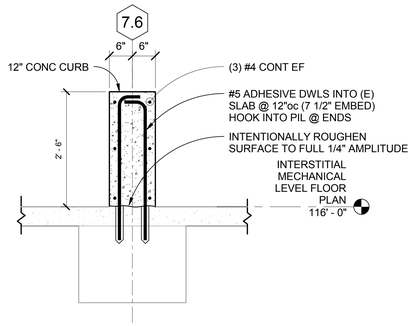

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Project Number: 110348.01
Building Number: #1
Location: HARRY S. TRUMAN VAMC
Drawing Number: SS 303
Dwg. 71 of 201

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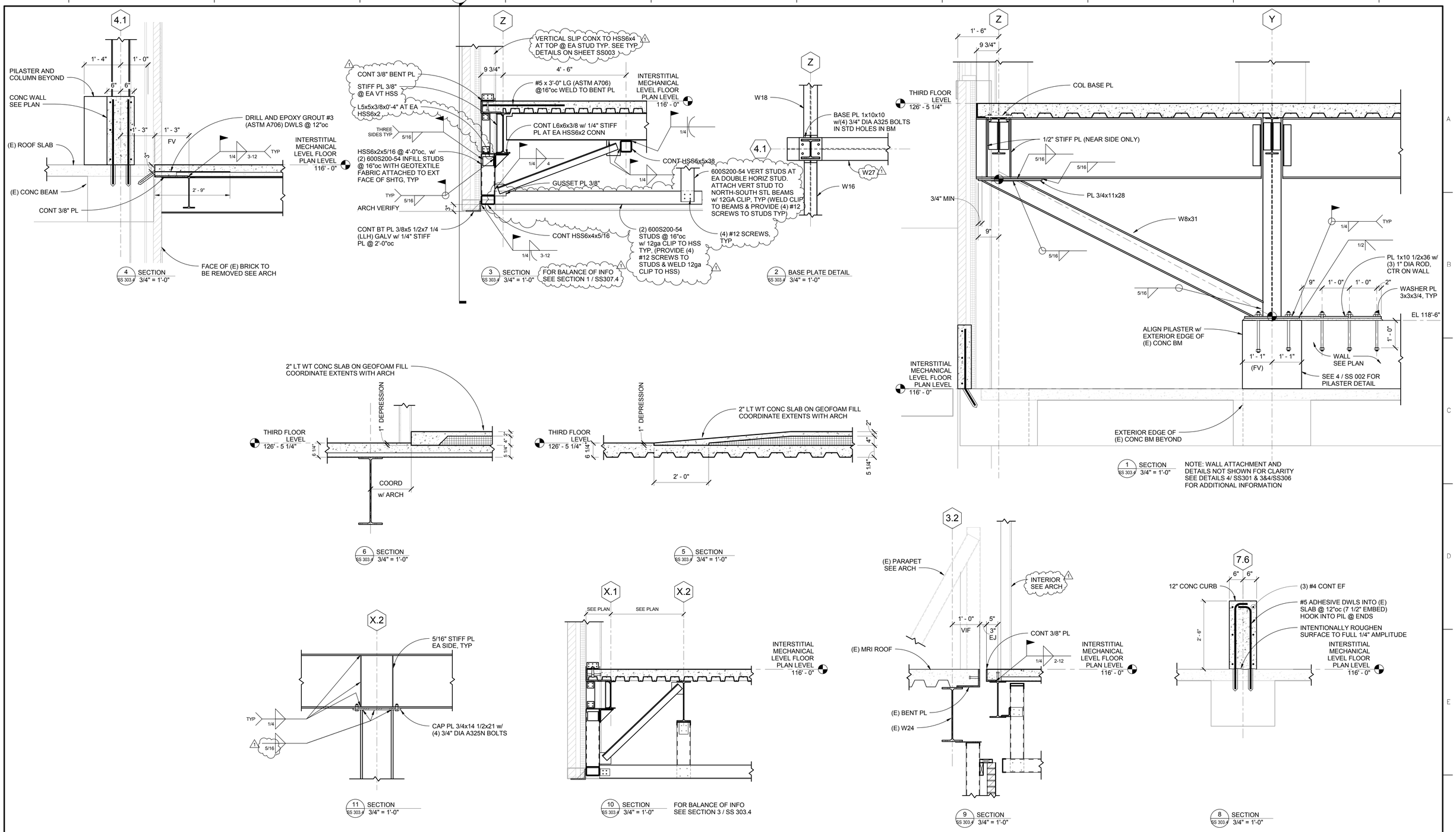

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Department of Veterans Affairs

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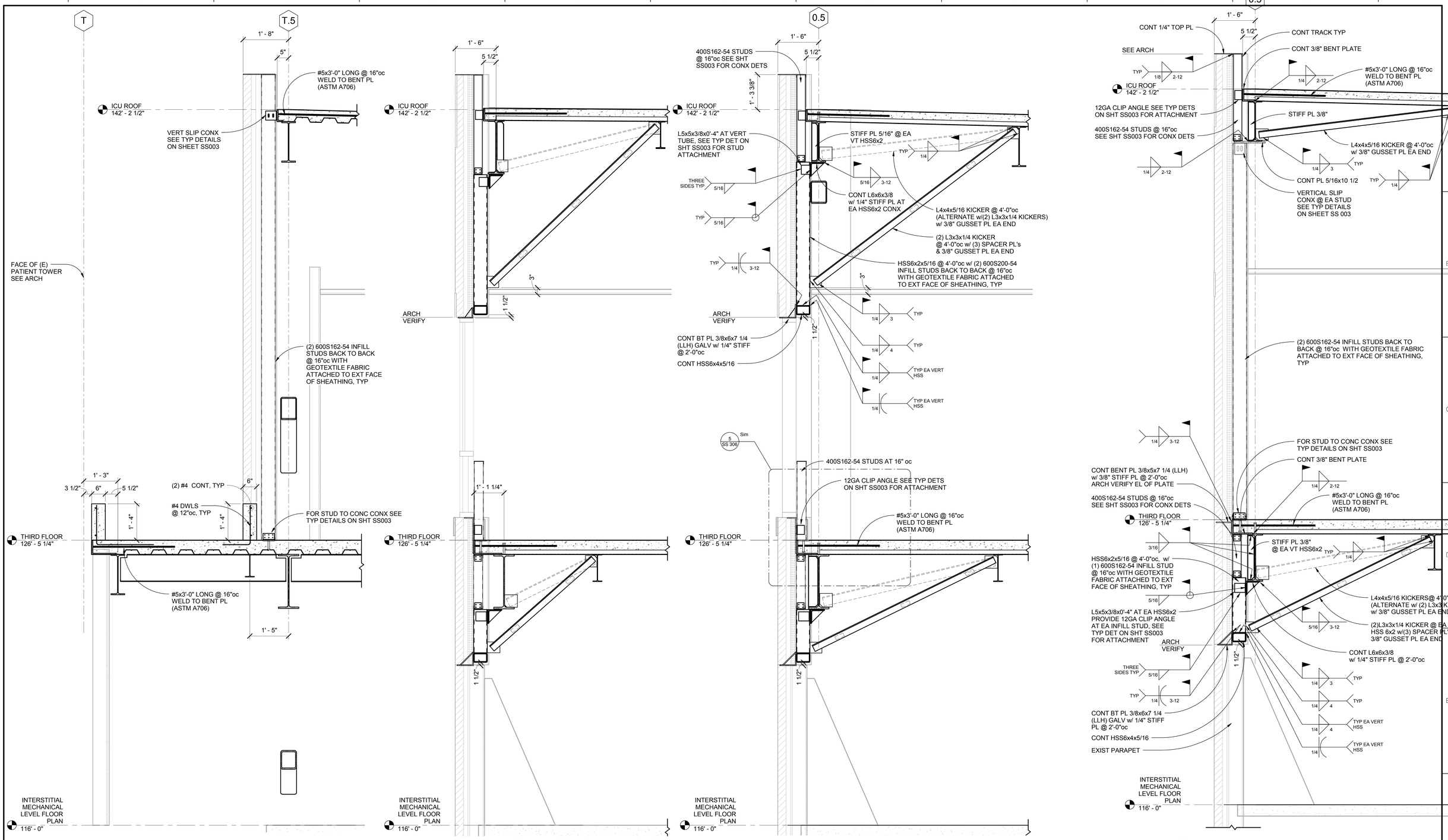

4 SS 304 SECTION 3/4" = 1'-0" — FOR BALANCE OF INFORMATION SEE SECTION 3/SS305

3 SS 304 SECTION 3/4" = 1'-0" — FOR BALANCE OF INFORMATION SEE SECTION 1 & 2/SS304

2 SS 304 SECTION 3/4" = 1'-0" — FOR BALANCE OF INFORMATION SEE SECTION 1/SS304

1 SS 304 SECTION 3/4" = 1'-0"

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

MECHANICAL/ELECTRICAL:
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#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
KWAME BUILDING GROUP
1204 WASHINGTON AVE. SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY/FIRE PROTECTION:
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Drawing Title: SECTIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Drawing Number: SS 304

Dwg. 72 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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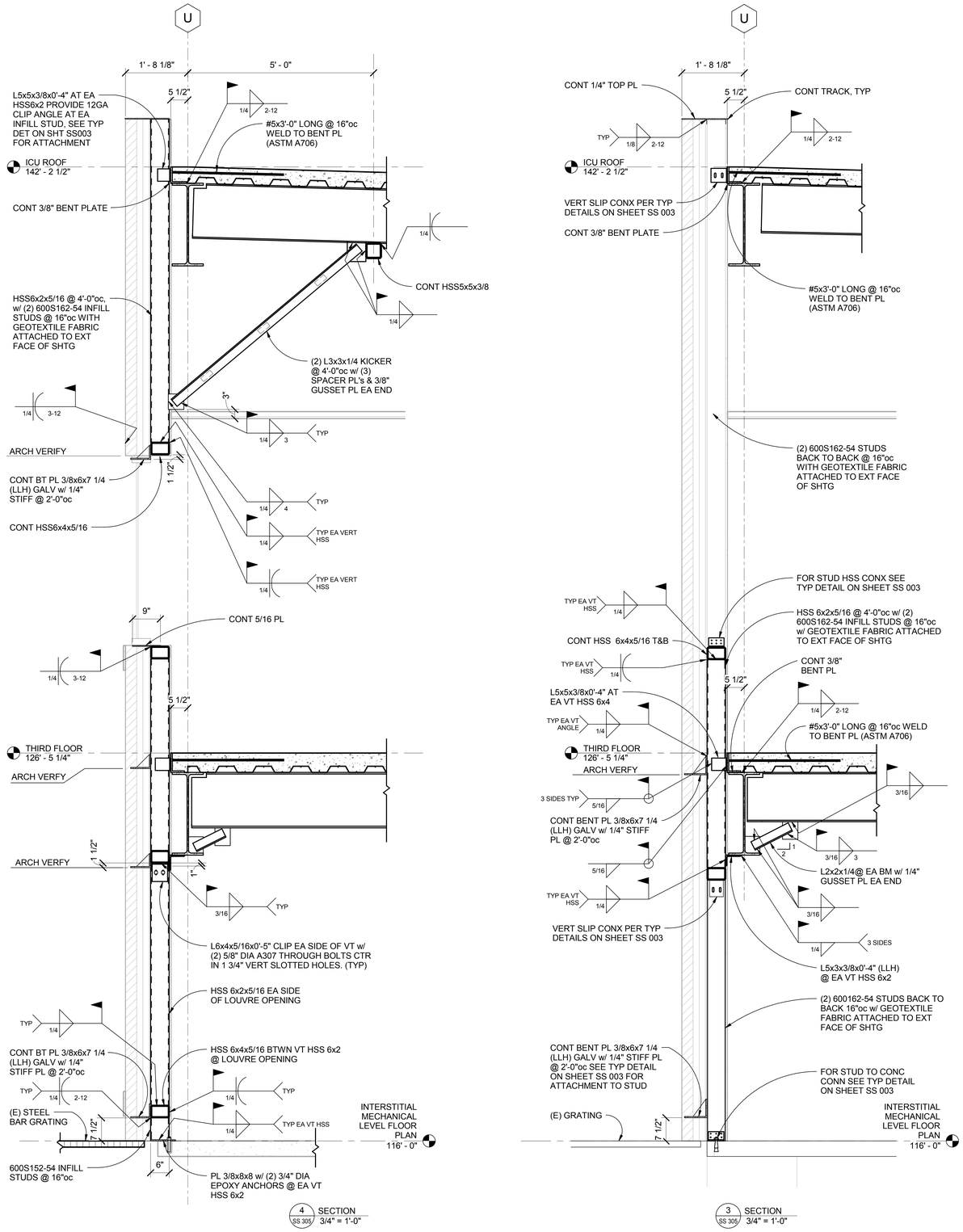

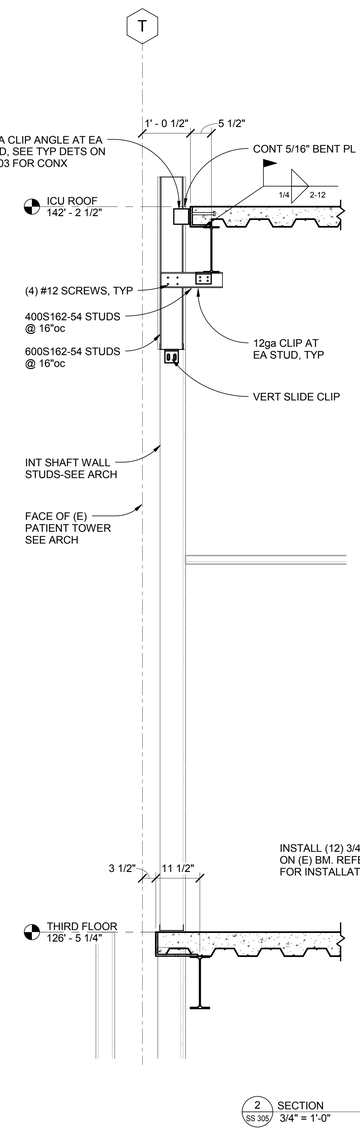

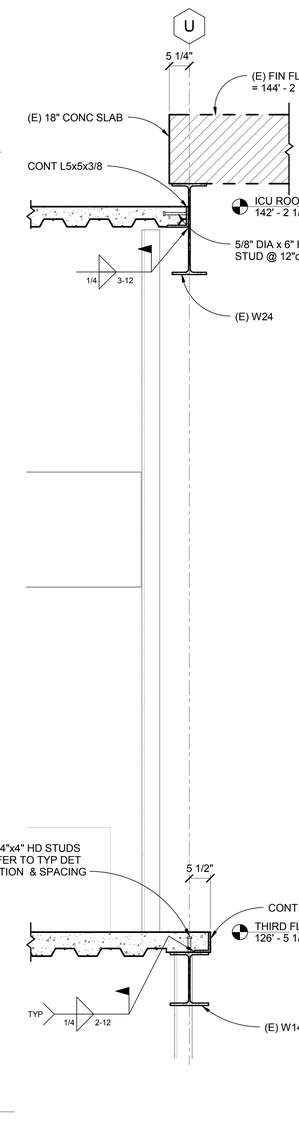

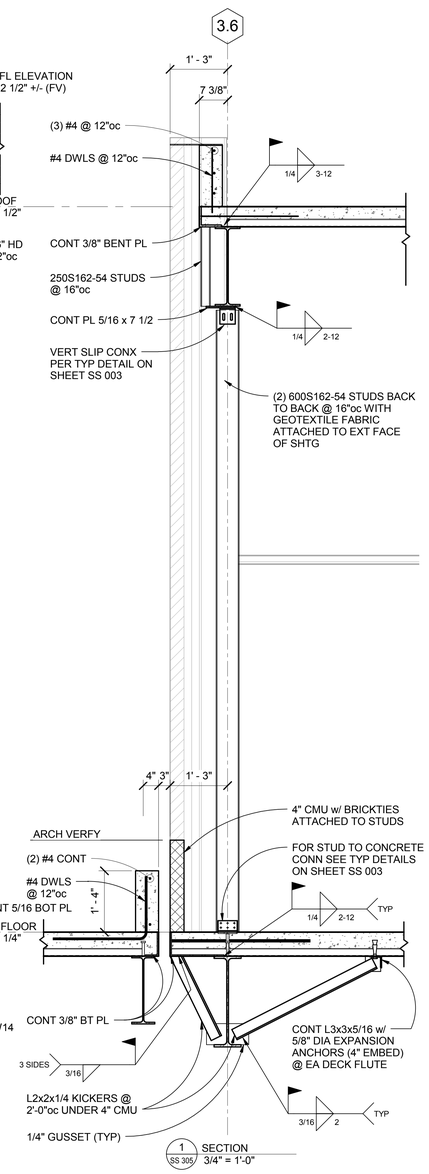

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Drawing Title: SECTIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

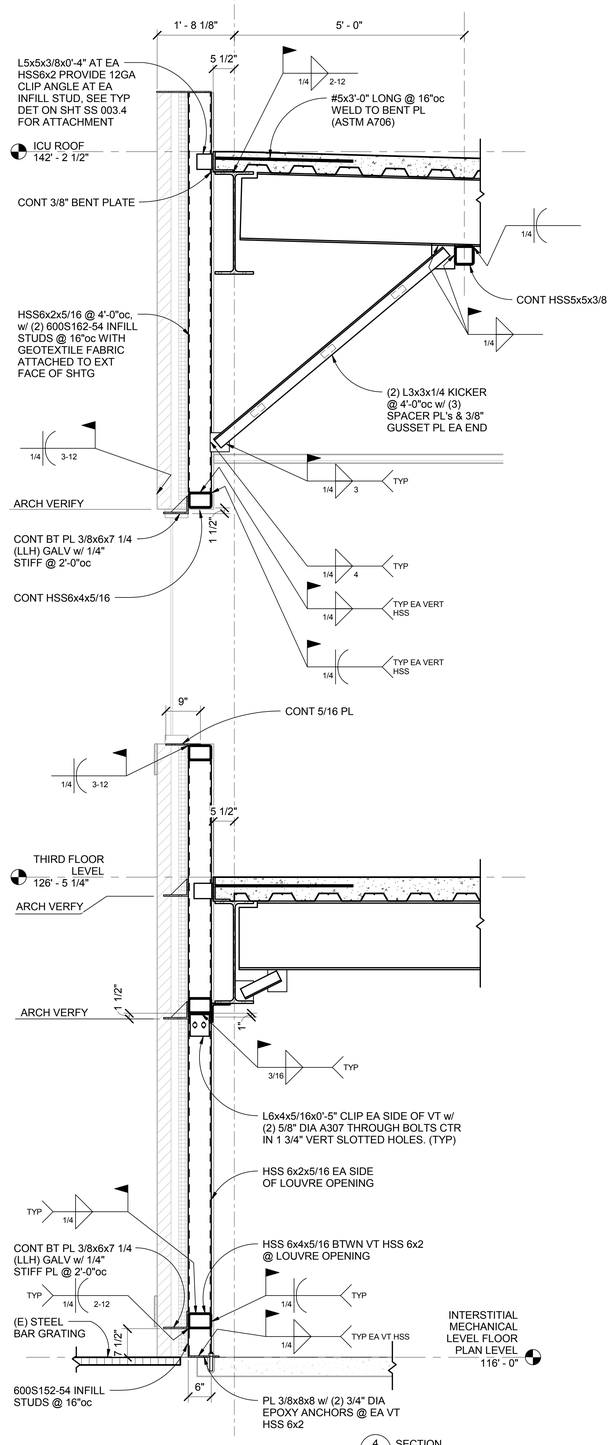
Drawing Number: SS 305

Dwg. 73 of 201

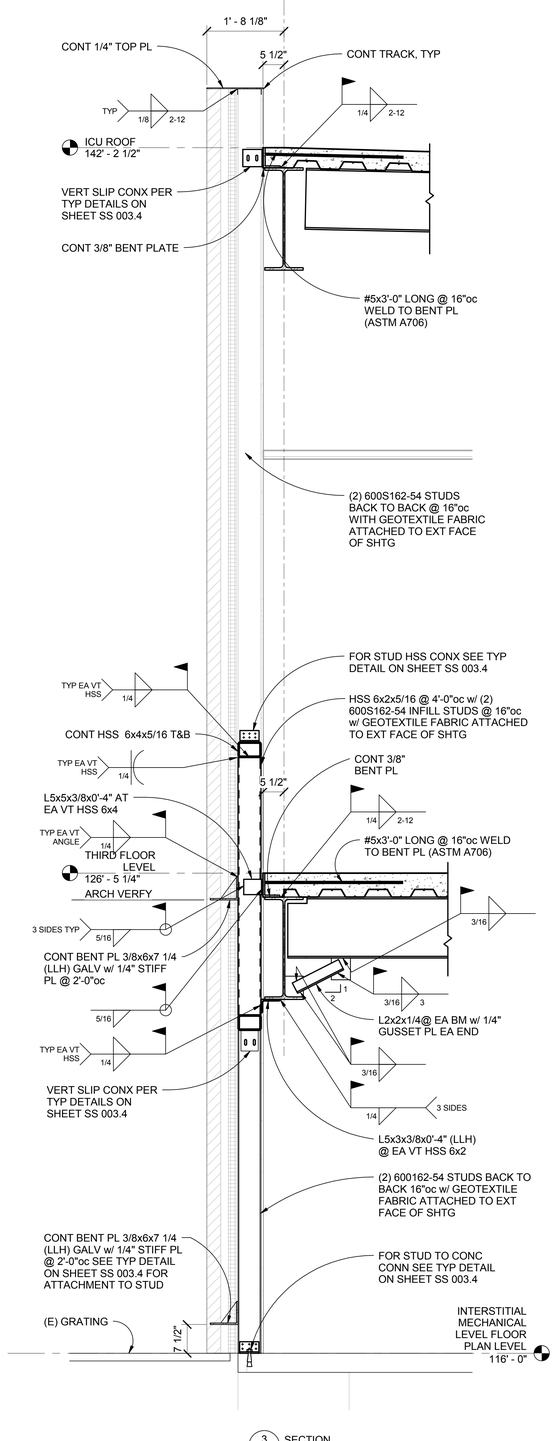
Office of Construction and Facilities Management

Department of Veterans Affairs

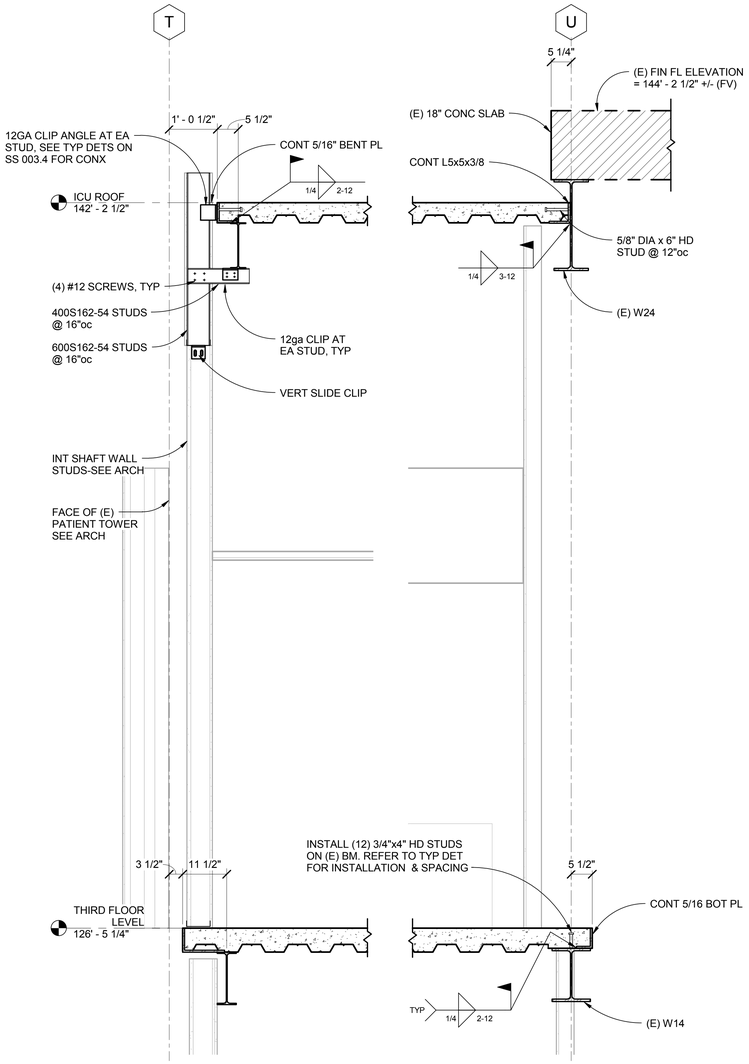
VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



4 SS 305.4 SECTION 3/4" = 1'-0"



3 SS 305.4 SECTION 3/4" = 1'-0"



2 SS 305.4 SECTION 3/4" = 1'-0"

NOT USED

1 SS 305.4 SECTION 3/4" = 1'-0"

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1	1/14/15	Amendment #4

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Drawing Title: SECTIONS DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	JM	TJR	LDS

Drawing Number: SS 305.4

Dwg.109 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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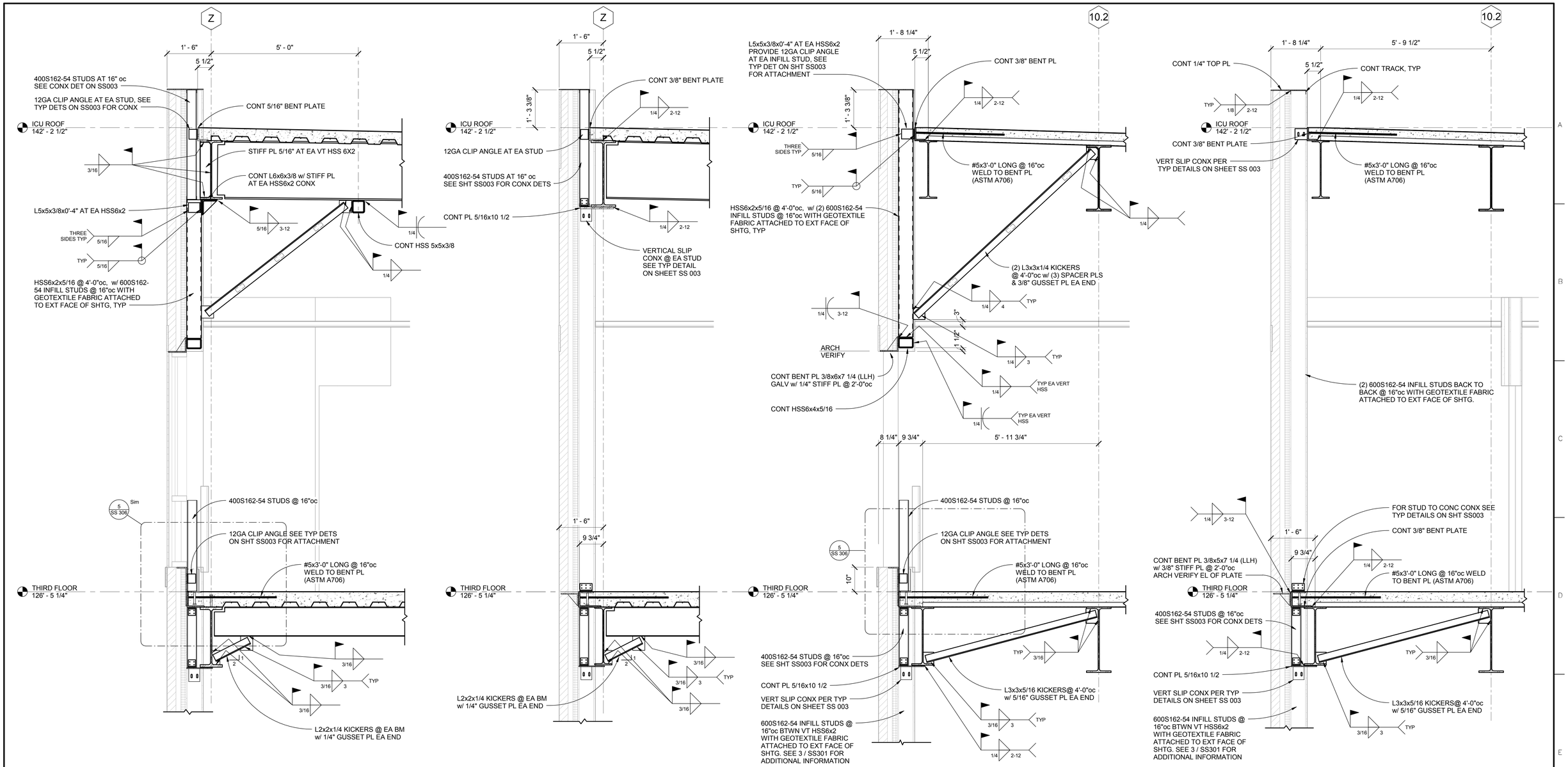
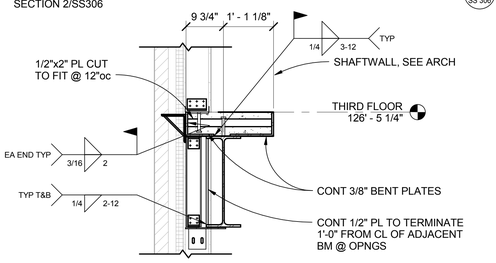
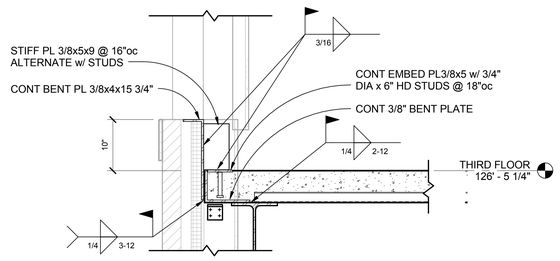




6 SS 306 SECTION 3/4" = 1'-0"

FOR BALANCE OF INFORMATION SEE SECTION 1/SS306



5 SS 306 PLATE DETAIL 1" = 1'-0"

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CONSTRUCTION DOCUMENTS

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Drawing Title: SECTIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Drawing Number: SS 306

Dwg. 74 of 201

Date	Checked	Drawn	Approved
12/30/13	JM	AIS	LDS

Office of Construction and Facilities Management

Department of Veterans Affairs

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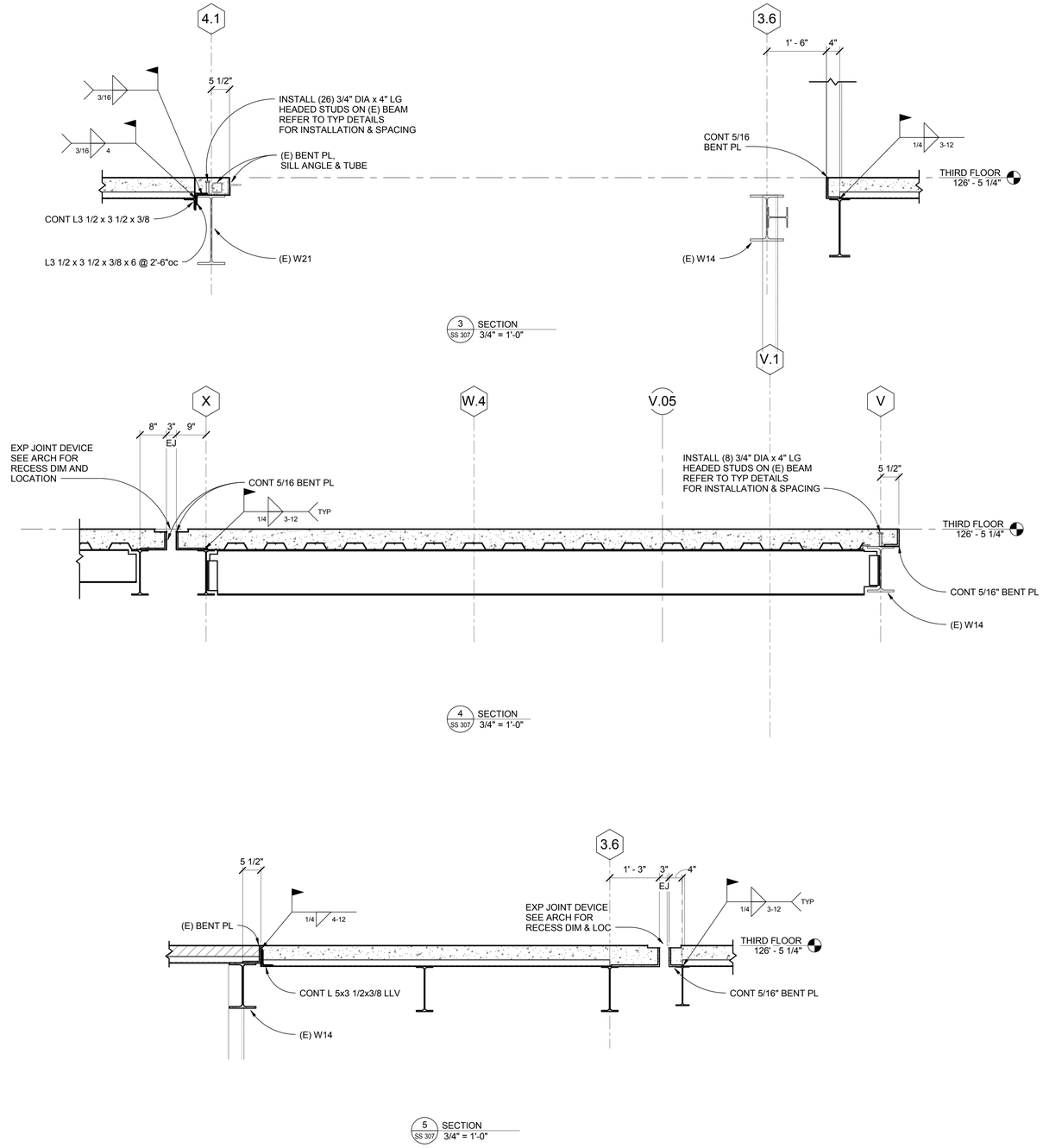

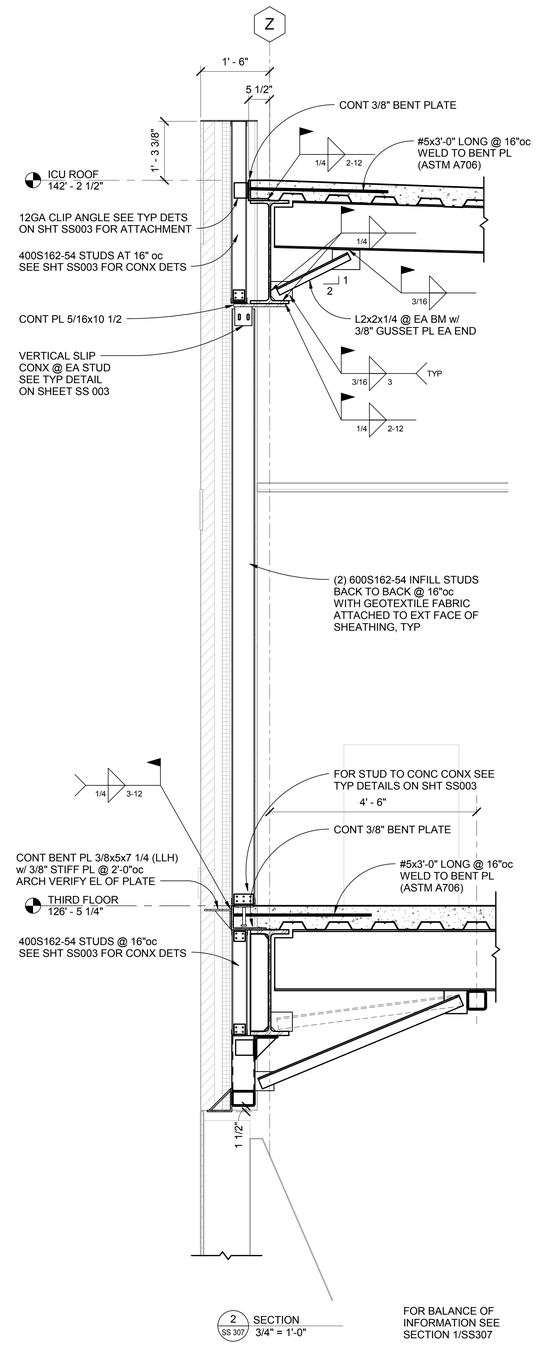

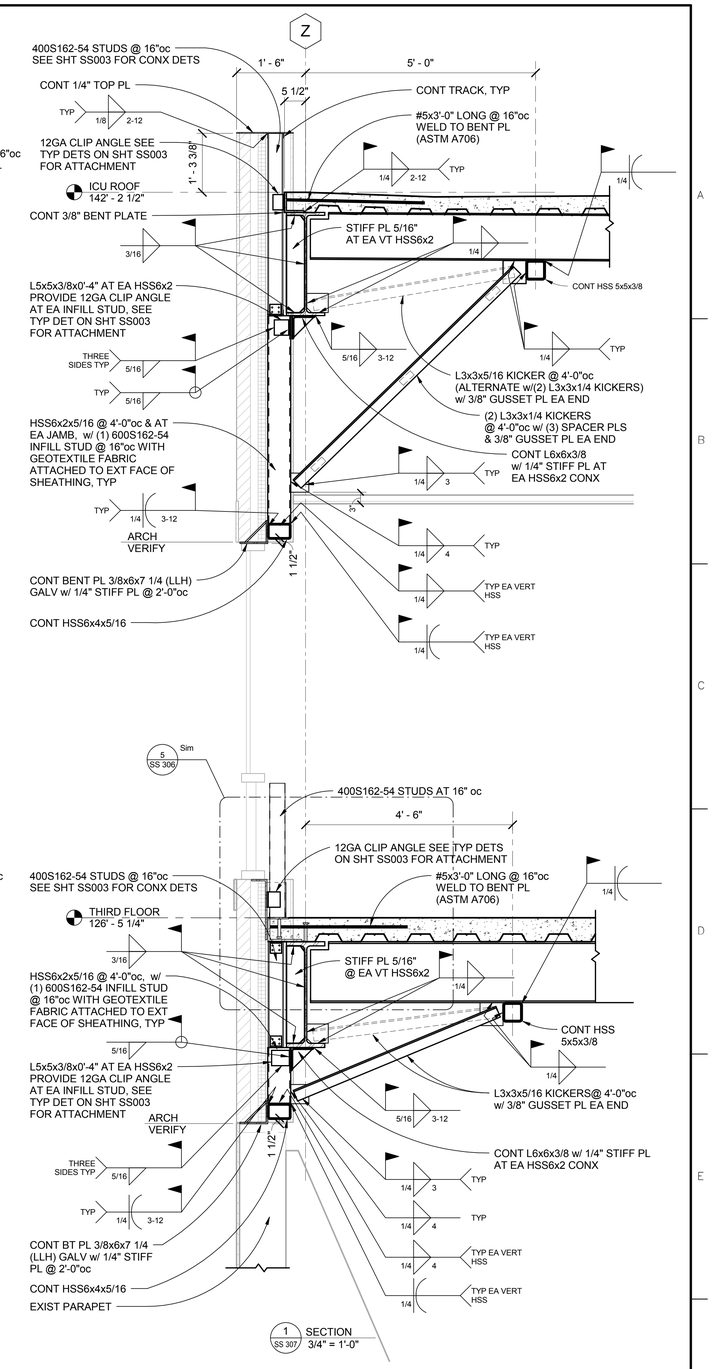

FOR BALANCE OF INFORMATION SEE SECTION 1/SS307

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Drawing Title: SECTIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
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Drawing Number: SS 307

Dwg. 75 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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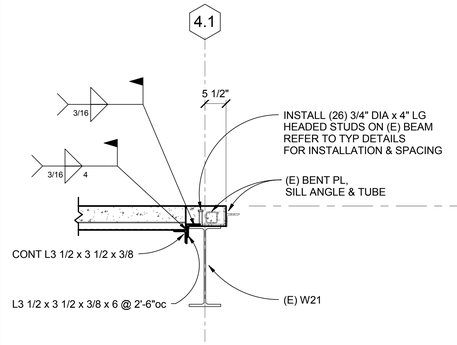
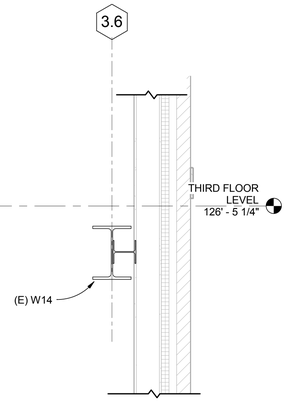
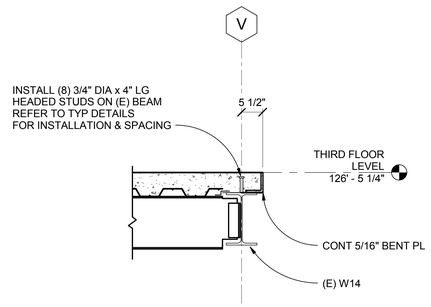


3 SS 307.4 SECTION 3/4" = 1'-0"





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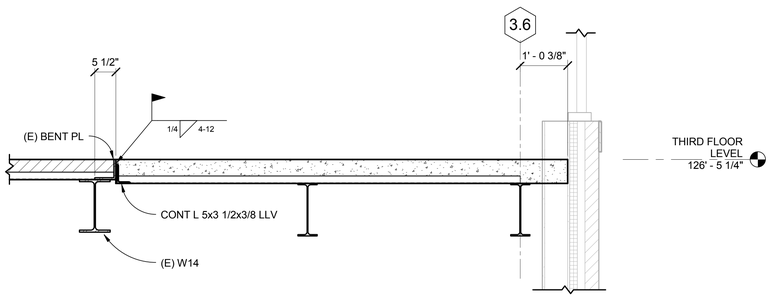
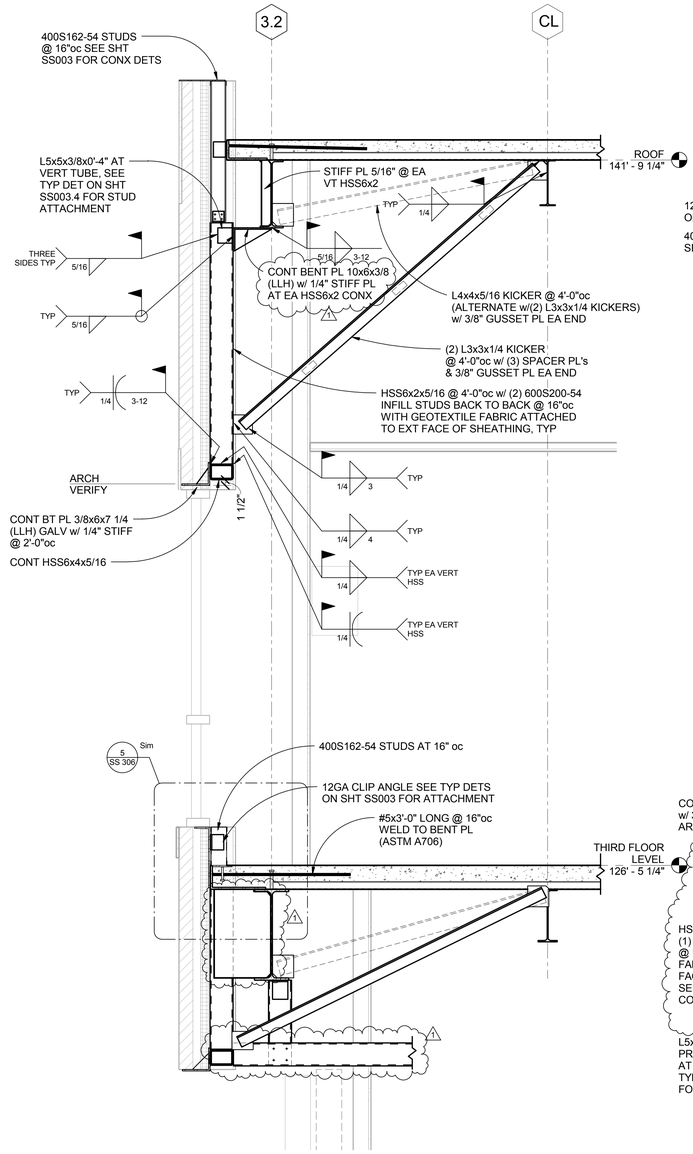
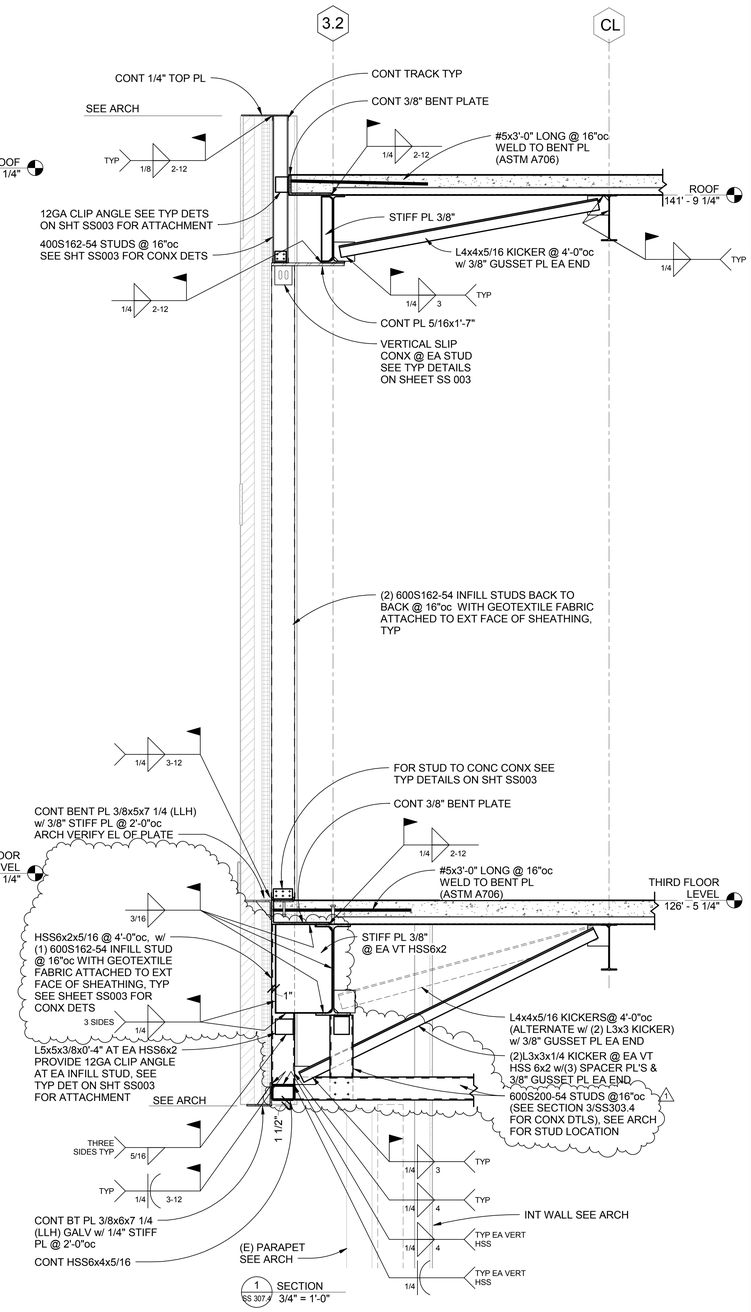


5 SS 307.4 SECTION 3/4" = 1'-0"



2 SS 307.4 SECTION 3/4" = 1'-0"

FOR BALANCE OF INFO
SEE SECTION 1 / SS 307.4



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Drawing Title: SECTIONS DEDUCT ALTERNATES 4,5

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Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	JM	AIS	LDS

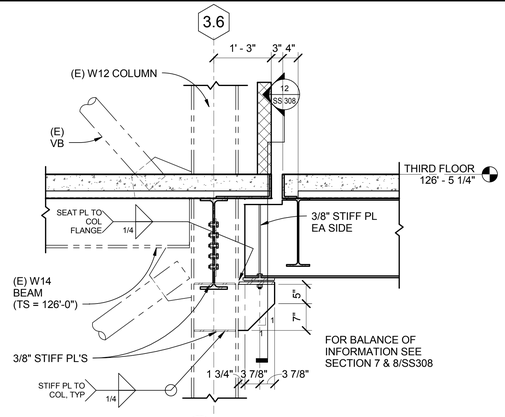
Drawing Number: SS 307.4

Dwg.110 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



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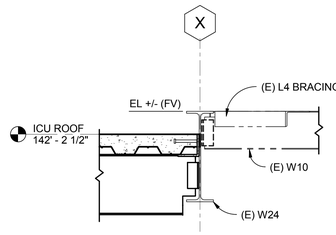

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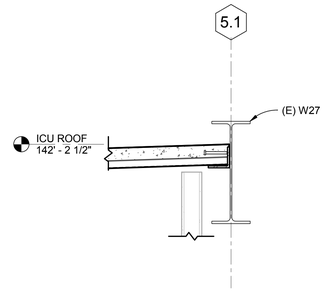

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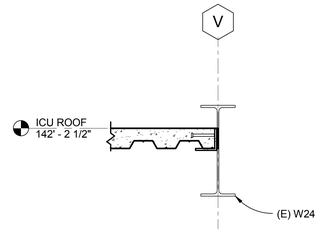

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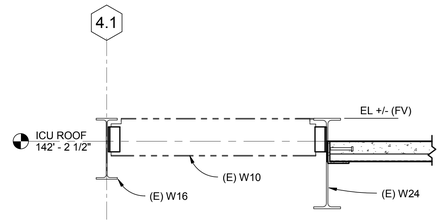

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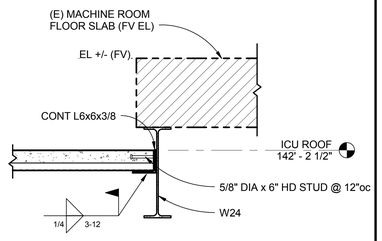

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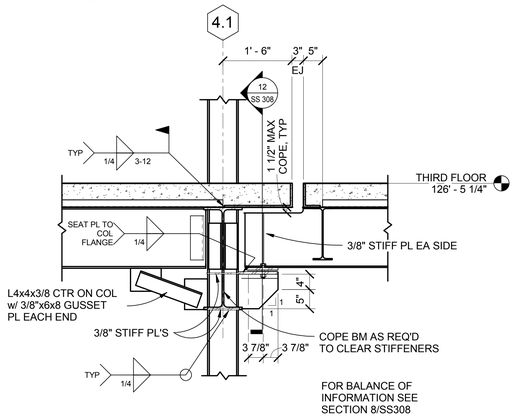

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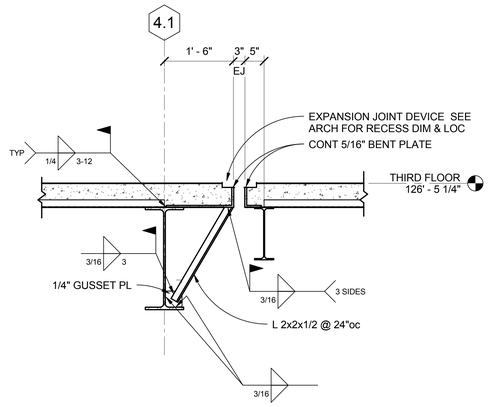

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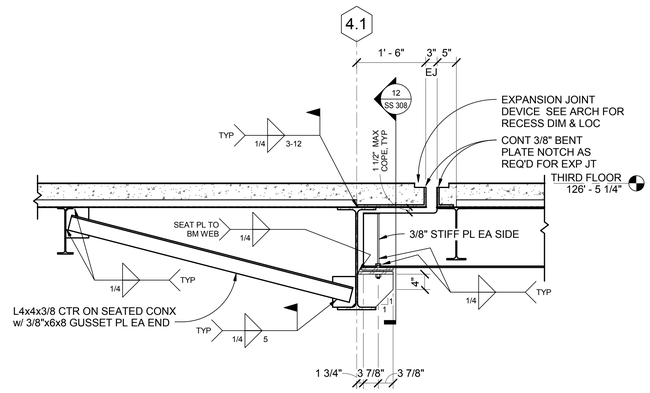

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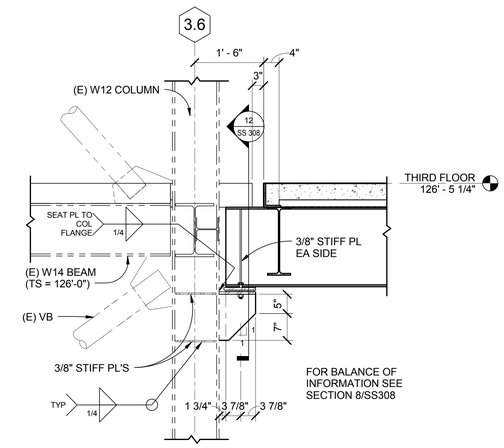
GRID LINE	BEARING PLATE	PTFE BEARING PAD	SEAT PLATE
Y	3/4 x 7 3/4 x 22	7 3/4 x 22	3/4 x 9 1/2 x 22
X.2	3/4 x 7 3/4 x 22	7 3/4 x 22	3/4 x 9 1/2 x 22
V	3/4 x 7 3/4 x 22 1/2	7 3/4 x 22 1/2	3/4 x 9 1/2 x 22 1/2
U	3/4 x 7 3/4 x 23	7 3/4 x 23	3/4 x 9 1/2 x 23
Z	3/4 x 7 3/4 x 22 1/2	7 3/4 x 22 1/2	3/4 x 9 1/2 x 22 1/2



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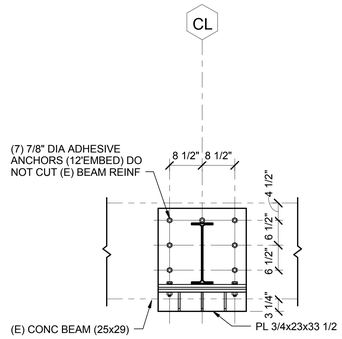
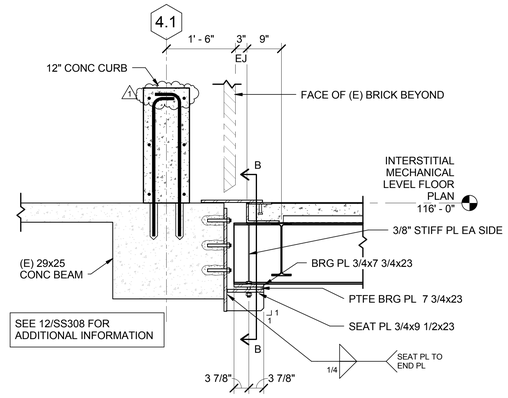


SECTION B-B



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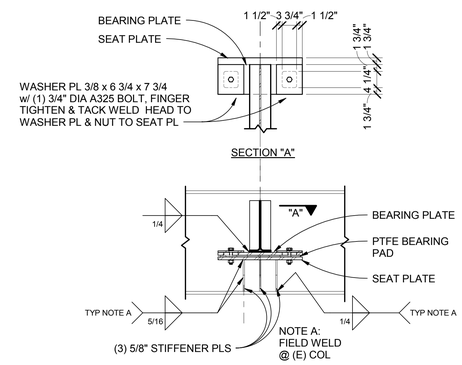
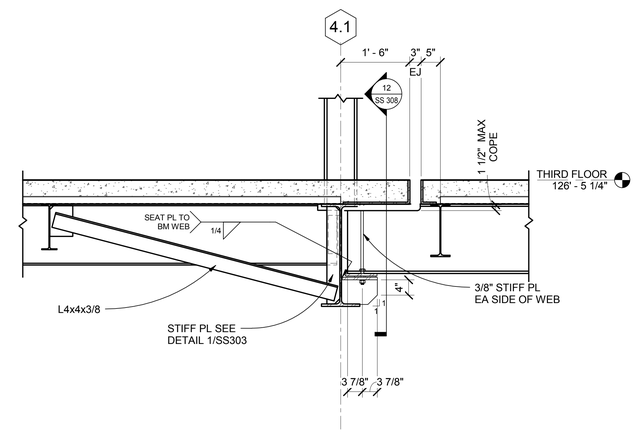


12 SS 308 EXPANSION JOINT FLOOR BEAM BEARING SEAT 3/4" = 1'-0"



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Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date: 12/30/13 | Checked: JM | Drawn: AIS | Approved: LDS

Drawing Number: SS 308

Dwg. 76 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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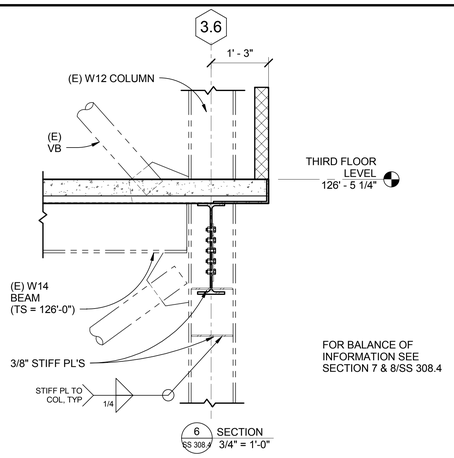

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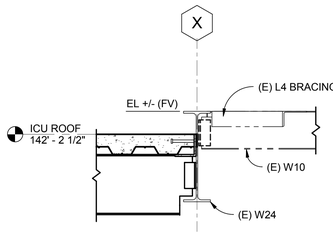

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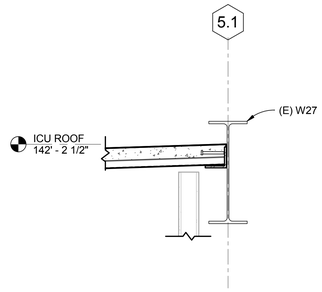

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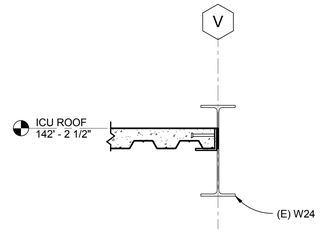

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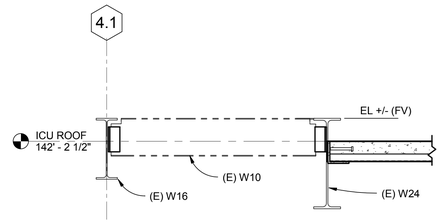

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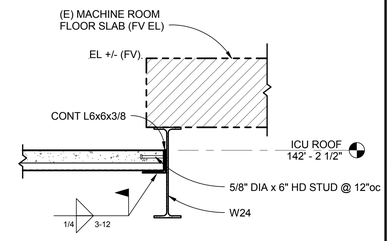

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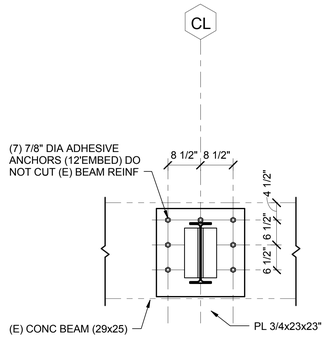
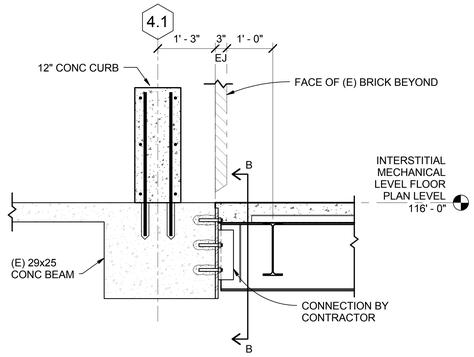


SECTION B-B



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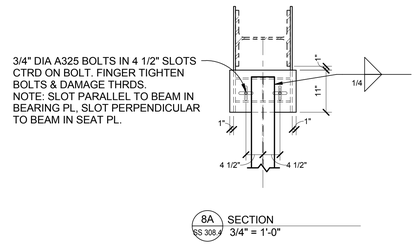

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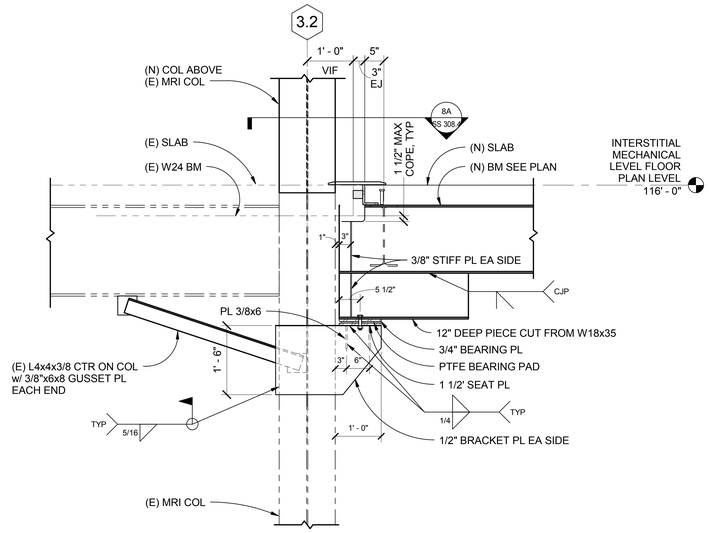

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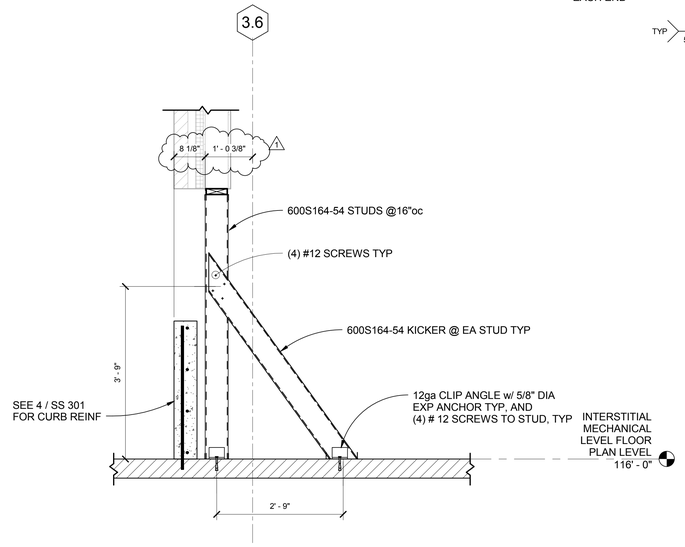

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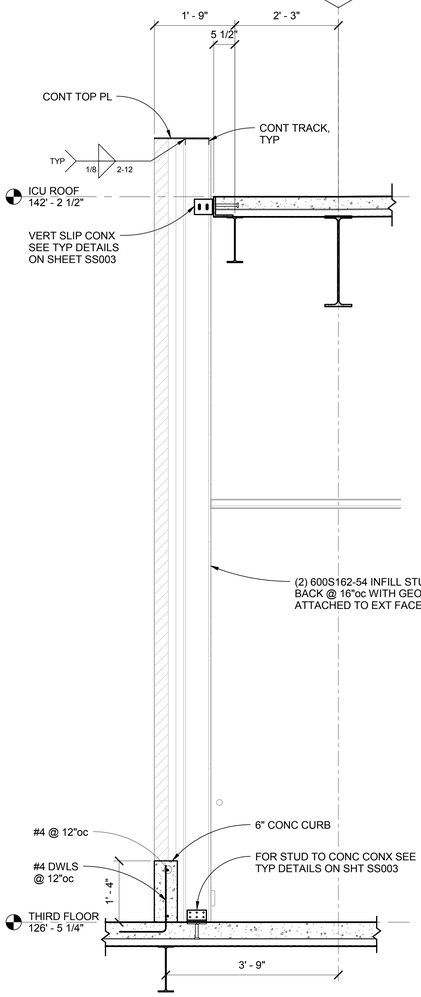

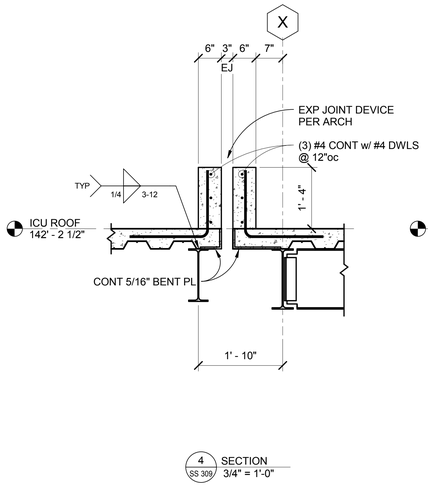

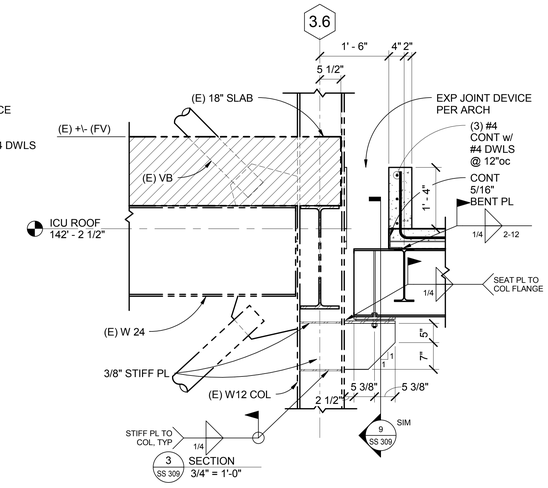

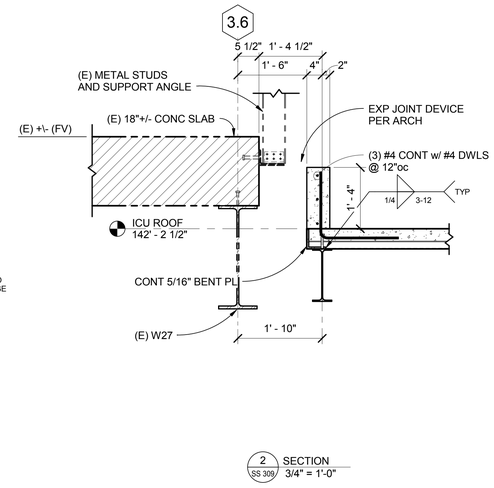

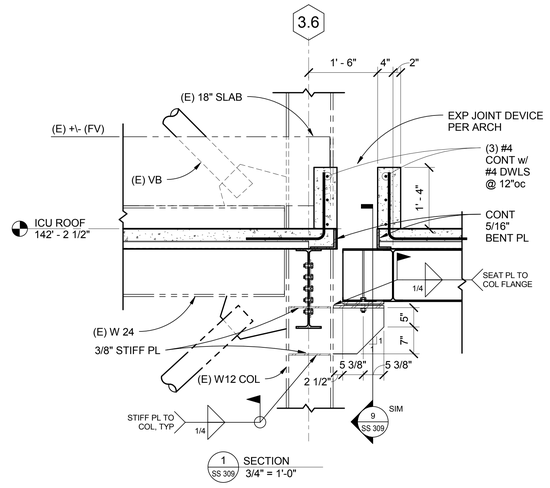

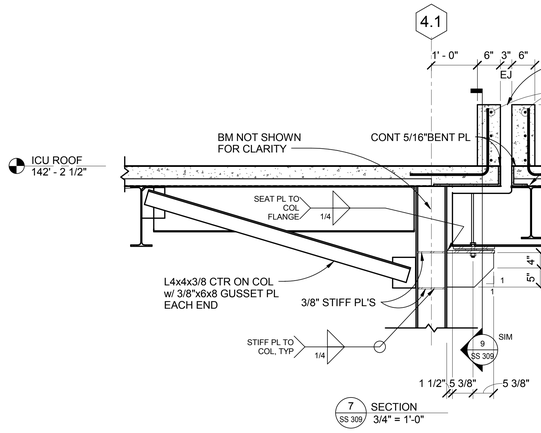

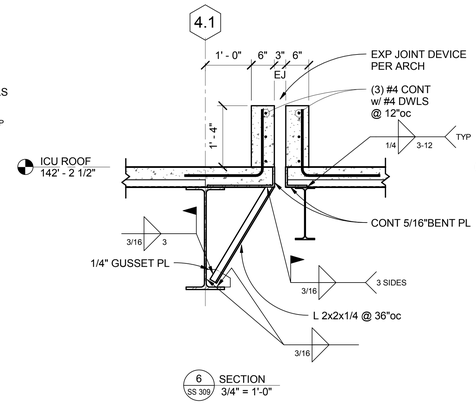

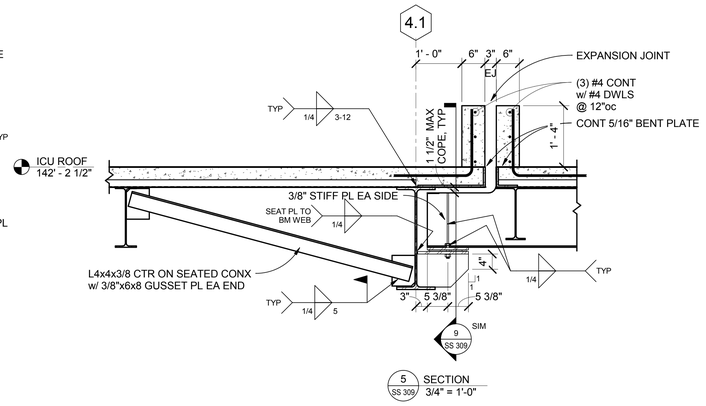

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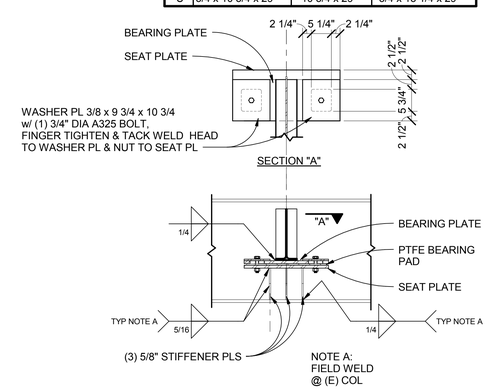
X.2	3/4 x 10 3/4 x 29	10 3/4 x 29	3/4 x 13 1/4 x 29
V	3/4 x 10 3/4 x 30	10 3/4 x 30	3/4 x 13 1/4 x 30
U	3/4 x 10 3/4 x 29	10 3/4 x 29	3/4 x 13 1/4 x 29



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DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Drawing Title: SECTIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Drawing Number: SS 309

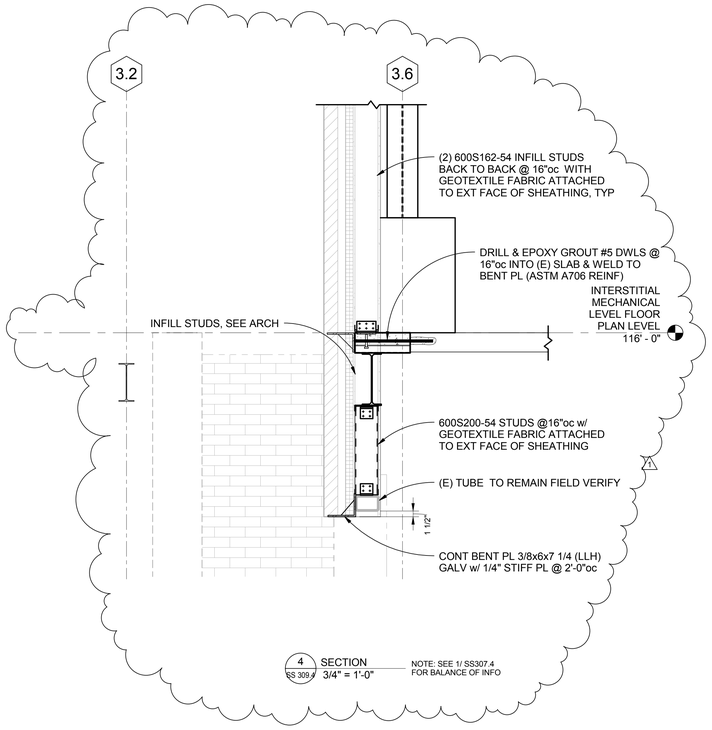
Dwg. 77 of 201

Date	Checked	Drawn	Approved
12/30/13	SRH	AIS	LDS

Office of Construction and Facilities Management

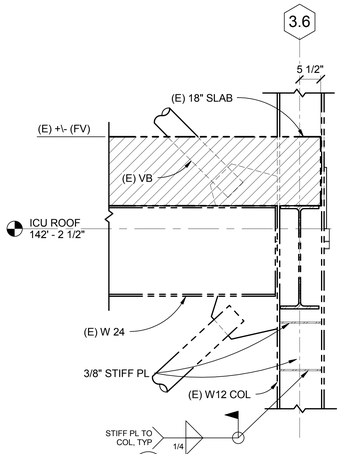
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

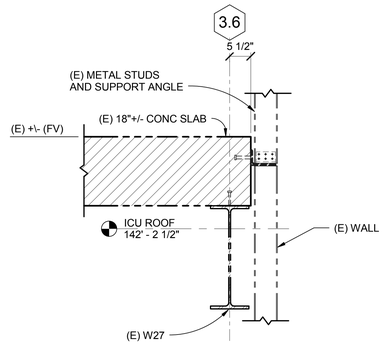


4 SECTION SS 309.4 3/4" = 1'-0"

NOTE: SEE 1/ SS307.4 FOR BALANCE OF INFO



3 SECTION SS 309.4 3/4" = 1'-0"



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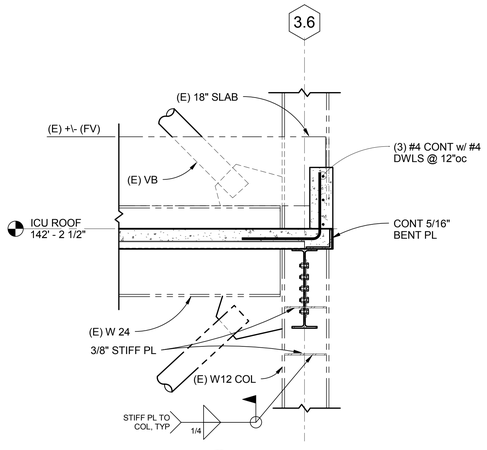

1 SECTION SS 309.4 3/4" = 1'-0"

THE DIMENSIONS AND ELEVATIONS SHOWN FOR THE EXISTING CONSTRUCTION ARE ***NOT*** AS-BUILT DIMENSIONS BUT WERE OBTAINED FROM OTHER DRAWINGS AND DOCUMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ***FIELD VERIFY*** ALL DIMENSIONS, ELEVATIONS, AND MEMBER SIZES AS REQUIRED PRIOR TO BEGINNING CONSTRUCTION, FABRICATION, ETC.

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	1/14/15	Amendment #4

CONSULTANTS:

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
#15 SUNNEN DRIVE, SUITE 104
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Drawing Title: SECTIONS DEDUCT ALTERNATES 4,5

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Project Title: INTENSIVE CARE UNIT

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	SRH	AIS	LDS

Project Number: 110348.01

Building Number: #1

Drawing Number: SS 309.4

Dwg.112 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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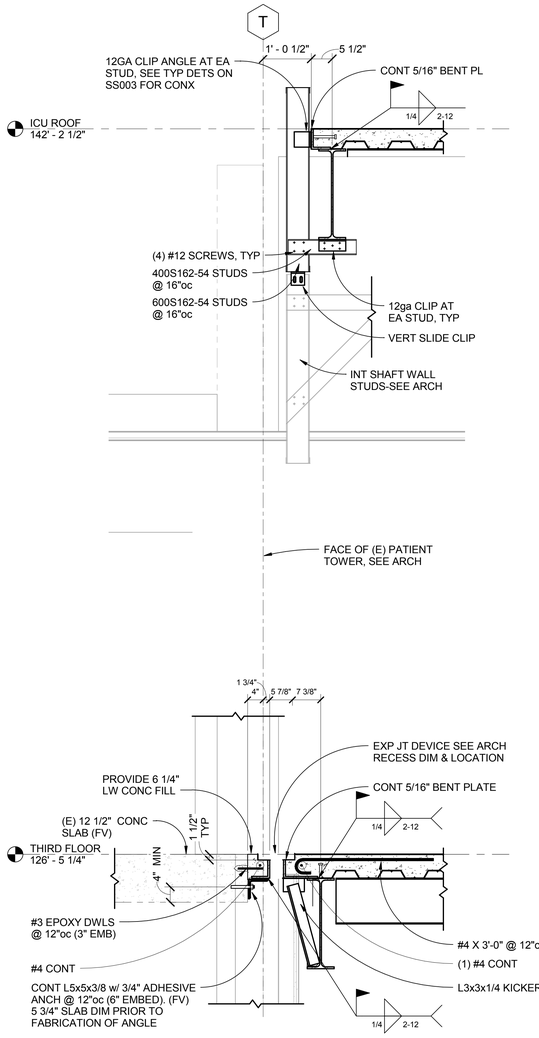
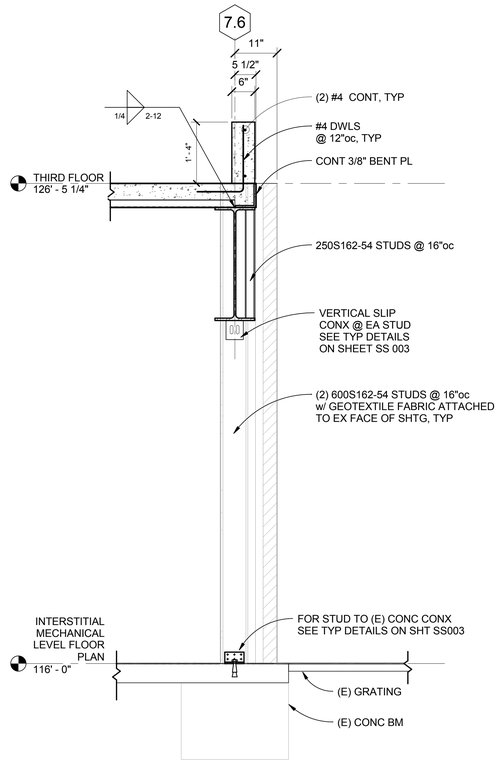
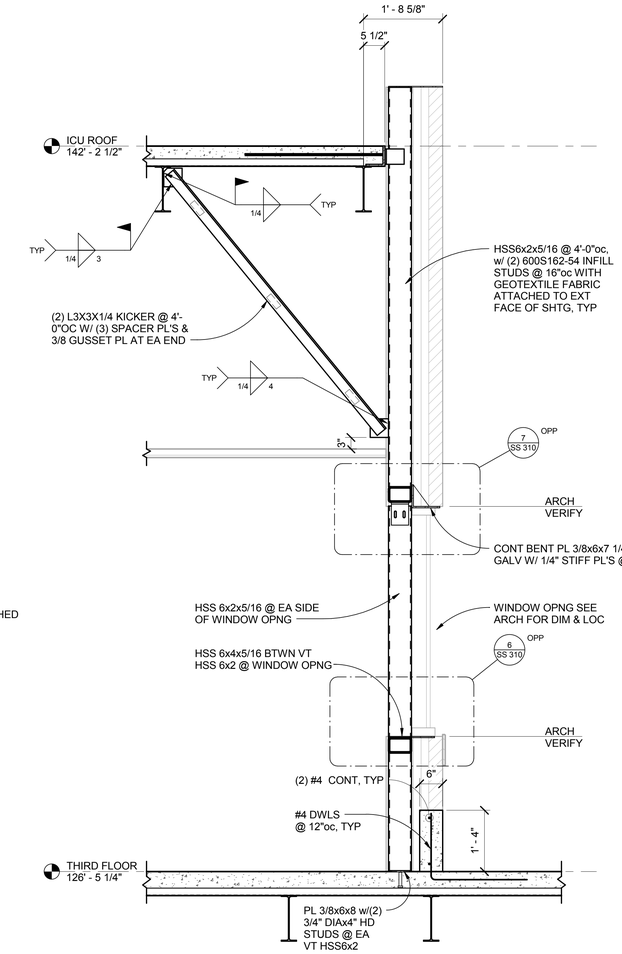


4 SS 310 SECTION 3/4" = 1'-0"

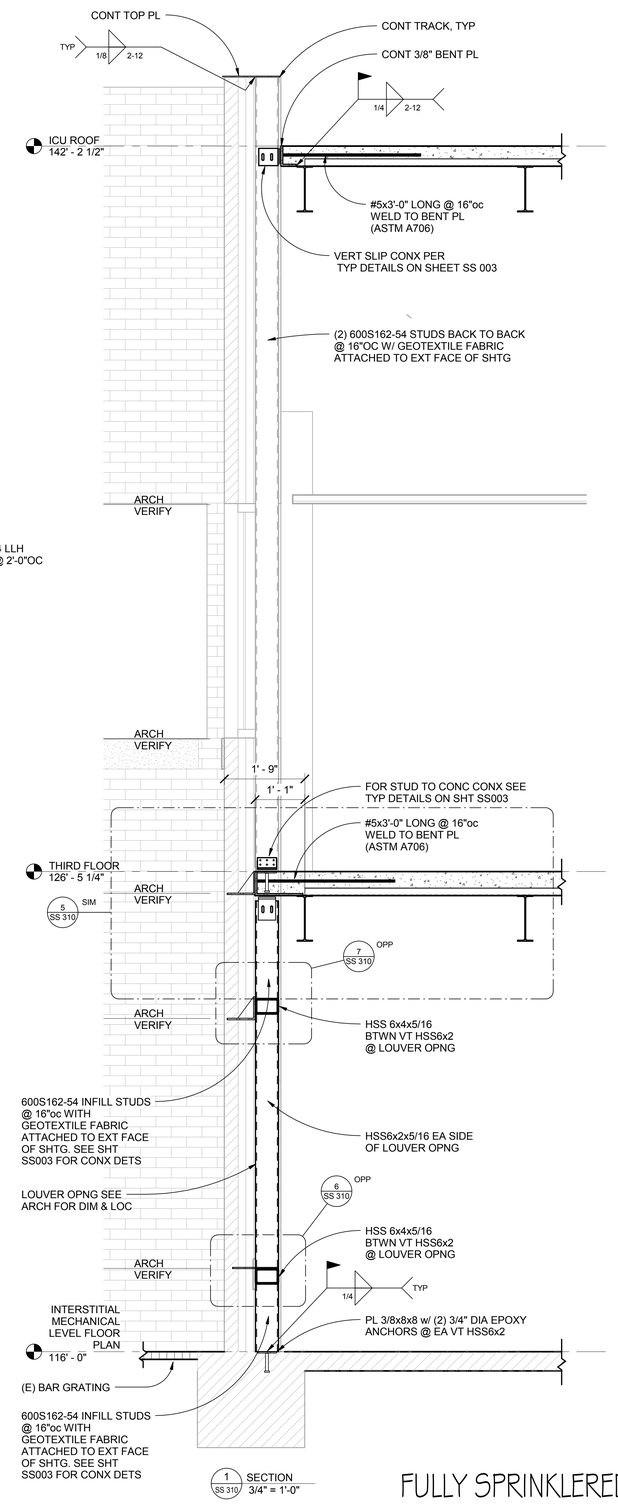


3 SS 310 SECTION 3/4" = 1'-0"



2 SS 310 SECTION 3/4" = 1'-0"

FOR BALANCE OF INFORMATION REF: SECTION 1/SS310



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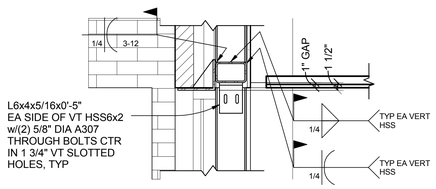
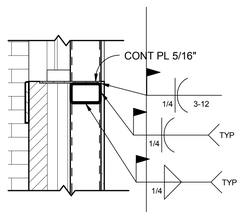
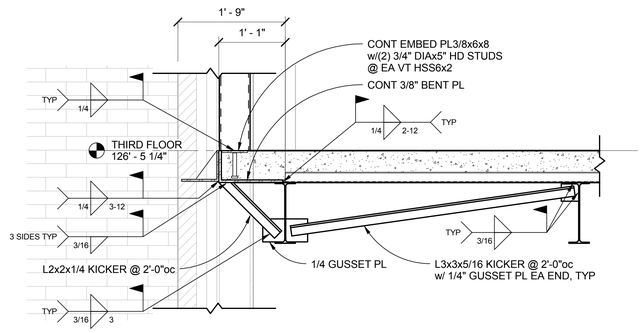


7 SS 310 DETAIL 1" = 1'-0"



6 SS 310 DETAIL 1" = 1'-0"



5 SS 310 DETAIL 1" = 1'-0"

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Project Title: INTENSIVE CARE UNIT

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	JKE	LDS

Project Number: 110348.01

Building Number: #1

Drawing Number: SS 310

Dwg. 78 of 201

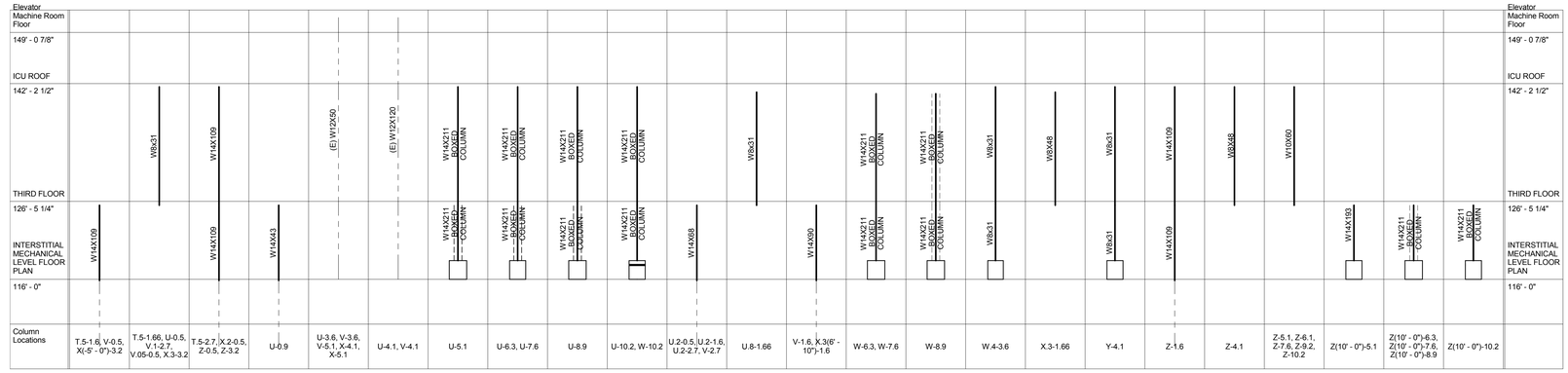
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

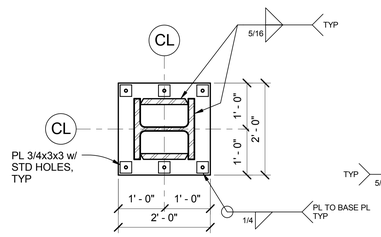
STEEL COLUMN BASE PLATE AND ANCHOR BOLT SCHEDULE

Column Location Mark	SIZE	BASE PLATE	ANCHOR BOLTS	COMMENTS
T.5-1.6	W14X109			SEE DETAILS 8 & 9/SS003
T.5-1.66	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
T.5-2.7	W14X109			SEE DETAILS 8 & 9/SS003
U-0.5	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
U-0.9	W14X43			SEE DETAILS 8 & 9/SS003
U-5.1	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-6.3	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-7.6	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-8.9	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-10.2	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U.2-0.5	W14X68			SEE DETAILS 8 & 9/SS003
U.2-1.6	W14X68			SEE DETAILS 8 & 9/SS003
U.2-2.7	W14X68			SEE DETAILS 8 & 9/SS003
U.8-1.66	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
V-0.5	W14X109			SEE DETAILS 8 & 9/SS003
V-1.6	W14X90			SEE DETAILS 8 & 9/SS003
V-2.7	W14X68			SEE DETAILS 8 & 9/SS003
V.1-2.7	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
V.05-0.5	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
W-6.3	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-7.6	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-8.9	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-10.2	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W.4-3.6	W8x31	3/4x14x14	(4) 3/4" DIA	
X(-5' - 0")-3.2	W14X109			SEE DETAILS 8 & 9/SS003
X.2-0.5	W14X109			SEE DETAILS 8 & 9/SS003
X.3(6' - 10")-1.6	W14X90			SEE DETAILS 8 & 9/SS003
X.3-1.66	W8X48	1x10x14	(4) 3/4" DIA	A325 BOLTS
X.3-3.2	W8x31	1x10x14	(4) 3/4" DIA	A325 BOLTS
Y-4.1	W8x31	3/4x14x14	(4) 3/4" DIA	
Z(10' - 0")-5.1	W14X193	1x24x24	(4) 1" DIA	SEE SECTION 1/SS303
Z(10' - 0")-6.3	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 2/SS303
Z(10' - 0")-7.6	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 5/SS301
Z(10' - 0")-8.9	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 2/SS302
Z(10' - 0")-10.2	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 1/SS301
Z-0.5	W14X109			SEE DETAILS 8 & 9/SS003
Z-1.6	W14X109			SEE DETAILS 8 & 9/SS003
Z-3.2	W14X109			SEE DETAILS 8 & 9/SS003
Z-4.1	W8X48	3/4x14x14	(4) 3/4" DIA	
Z-5.1	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 7/SS302
Z-6.1	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 14/SS401
Z-7.6	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 2/SS301
Z-9.2	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 14/SS401
Z-10.2	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 1/SS302

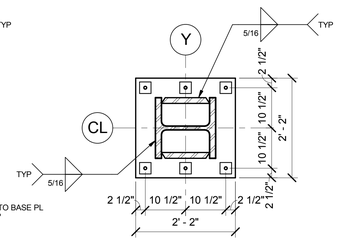


NOTE: SLOPING COLUMNS NOT SHOWN IN SCHEDULE. REF: PLANS AND DETAILS

COLUMN SCHEDULE
N.T.S

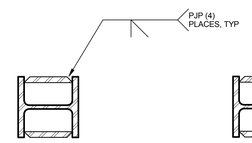


5 SS 401 TYPICAL BASE PLATE DETAIL AT BOXED COLS (UNO)
3/4" = 1'-0"

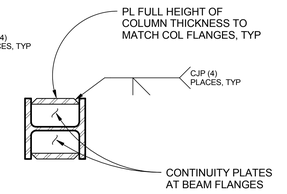


NOTE:
1. SEE DETAIL 2 & 3/SS 401 FOR BOXED COL ASSEMBLY

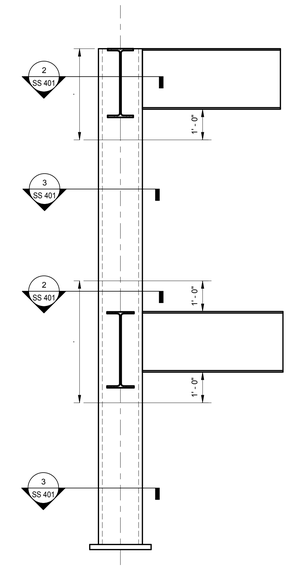
4 SS 401 BASE PLATE DETAIL AT BOXED COLS ON LINE "Y" (UNO)
3/4" = 1'-0"



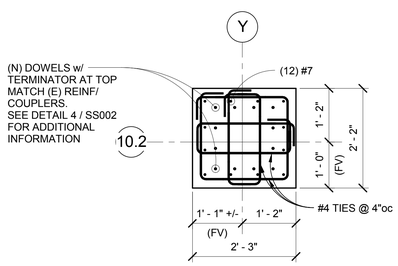
3 SS 401 SECTION
3/4" = 1'-0"



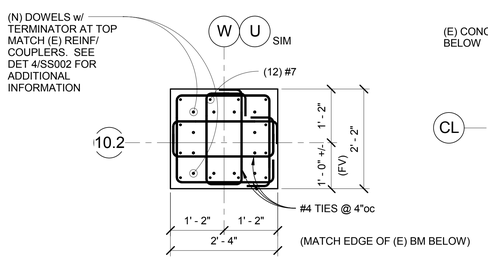
2 SS 401 SECTION
3/4" = 1'-0"



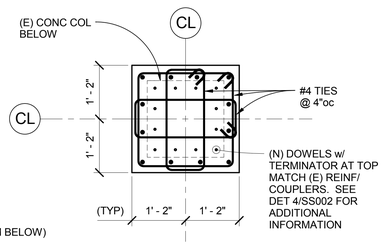
1 SS 401 TYPICAL BOXED COLUMN ELEVATION
1/2" = 1'-0"



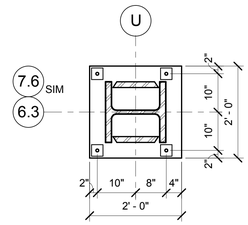
11 SS 401 DETAIL
3/4" = 1'-0"



10 SS 401 DETAIL
3/4" = 1'-0"



9 SS 401 TYPICAL PILASTER DETAIL
3/4" = 1'-0"



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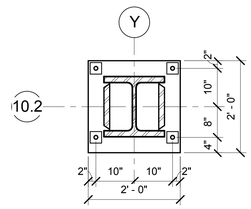

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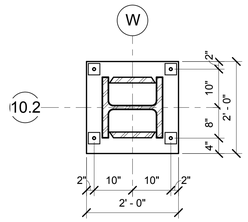

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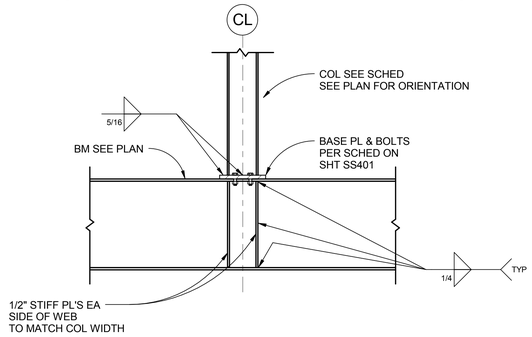
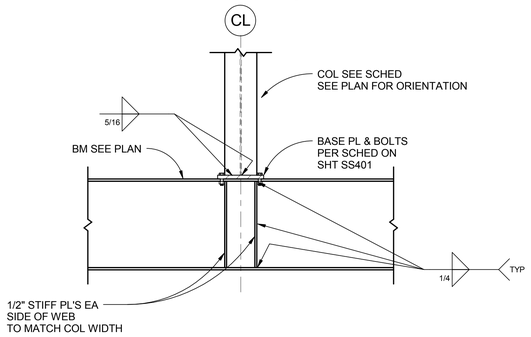
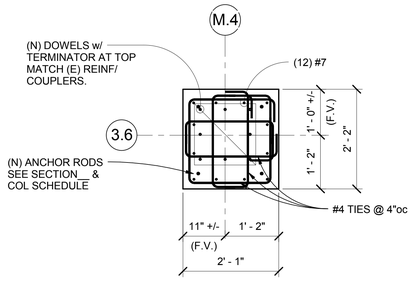
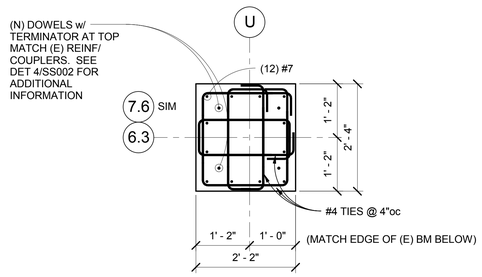




14 SS 401 TYP COL TO BM CONNECTION, UNO
3/4" = 1'-0"



13 SS 401 DETAIL
3/4" = 1'-0"



12 SS 401 DETAIL
3/4" = 1'-0"

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Drawing Title: COLUMN SCHEDULE

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01
Building Number: #1

Location: HARRY S. TRUMAN VAMC

DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

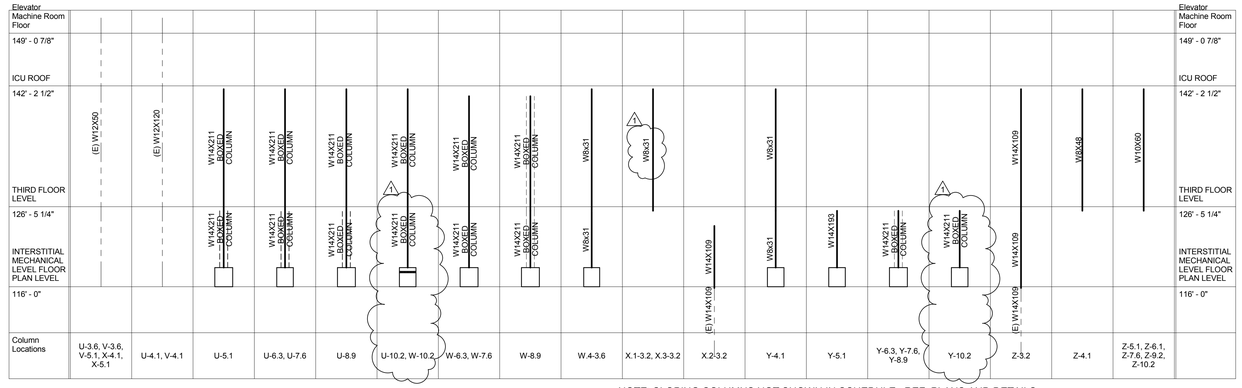
Drawing Number: SS 401
Dwg. 79 of 201

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

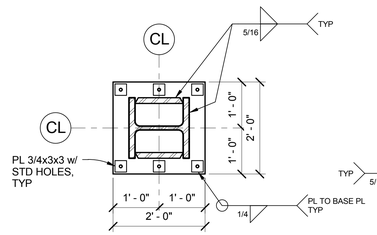
STEEL COLUMN BASE PLATE AND ANCHOR BOLT SCHEDULE

Column Location Mark	SIZE	BASE PLATE	ANCHOR BOLTS	COMMENTS
U-5.1	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-6.3	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-7.6	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-8.9	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
U-10.2	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-6.3	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-7.6	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-8.9	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W-10.2	W14X211 BOXED COLUMN	1x24x24	(4) 1" DIA	
W.4-3.6	W8x31	3/4x14x14	(4) 3/4" DIA	
X.1-3.2	W8x31	3/4x9x10		A325 BOLTS, SEE DETAIL 14 / SS 401.4
X.2-3.2	W14X109			SEE DETAILS 8 & 9/SS003.4
X.3-3.2	W8x31	3/4x9x10	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 14 / SS 401.4
Y-4.1	W8x31	3/4x14x14	(4) 3/4" DIA	
Y-5.1	W14X193	1x24x24	(4) 1" DIA	SEE SECTION 1/SS303.4
Y-6.3	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 2/SS303.4
Y-7.6	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 5/SS301
Y-8.9	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 2/SS302
Y-10.2	W14X211 BOXED COLUMN	1x24x24	(6) 1" DIA	SEE SECTION 1/SS301
Z-3.2	W14X109			SEE DETAILS 8 & 9/SS003.4
Z-4.1	W8X48	3/4x14x14	(4) 3/4" DIA	
Z-5.1	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 7/SS302
Z-6.1	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 14/SS401.4
Z-7.6	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 2/SS301
Z-9.2	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 14/SS401.4
Z-10.2	W10X60	1x12x12	(4) 3/4" DIA	A325 BOLTS, SEE DETAIL 1/SS302

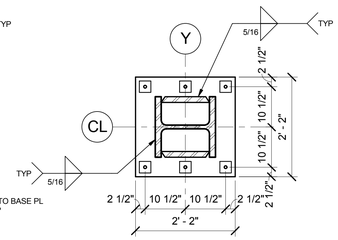


NOTE: SLOPING COLUMNS NOT SHOWN IN SCHEDULE. REF: PLANS AND DETAILS

COLUMN SCHEDULE
N.T.S

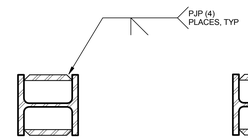


5 SS 401.4 TYPICAL BASE PLATE DETAIL AT BOXED COLS (UNO)
3/4" = 1'-0"

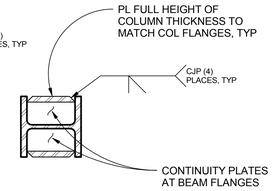


NOTE:
1. SEE DETAIL 2 & 3/SS 401 FOR BOXED COL ASSEMBLY

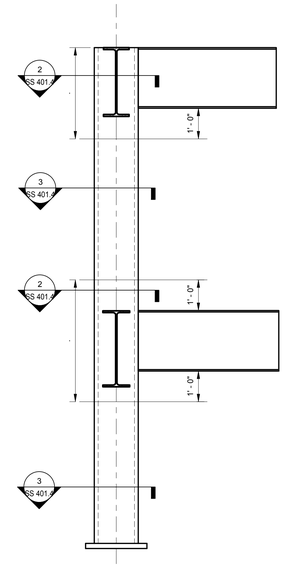
4 SS 401.4 BASE PLATE DETAIL AT BOXED COLS ON LINE "Y" (UNO)
3/4" = 1'-0"



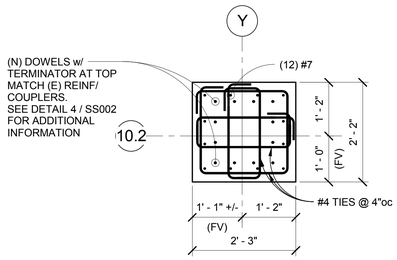
3 SS 401.4 SECTION
3/4" = 1'-0"



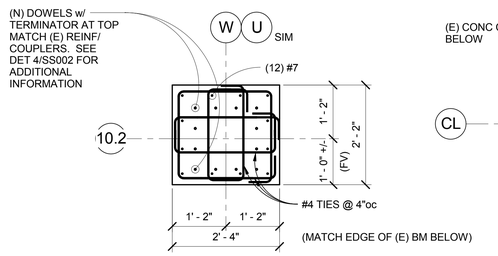
2 SS 401.4 SECTION
3/4" = 1'-0"



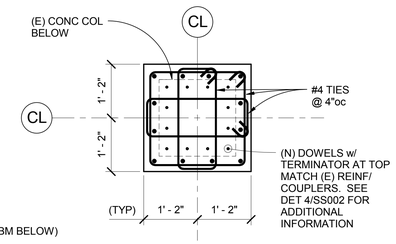
1 SS 401.4 TYPICAL BOXED COLUMN ELEVATION
1/2" = 1'-0"



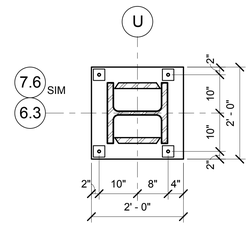
11 SS 401.4 DETAIL
3/4" = 1'-0"



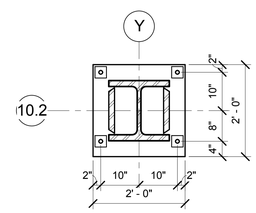
10 SS 401.4 DETAIL
3/4" = 1'-0"



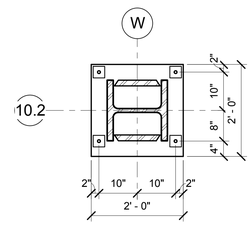
9 SS 401.4 TYPICAL PILASTER DETAIL
3/4" = 1'-0"



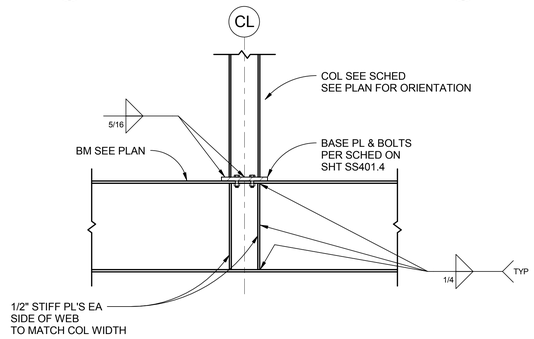
8 SS 401.4 SECTION
3/4" = 1'-0"

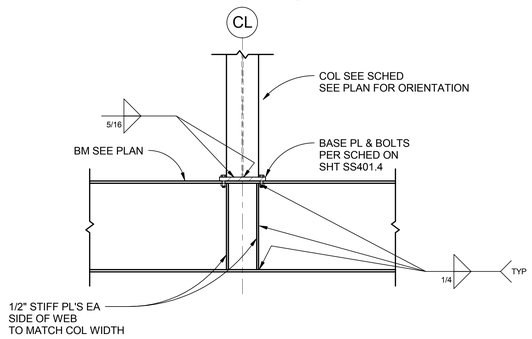


7 SS 401.4 SECTION
3/4" = 1'-0"

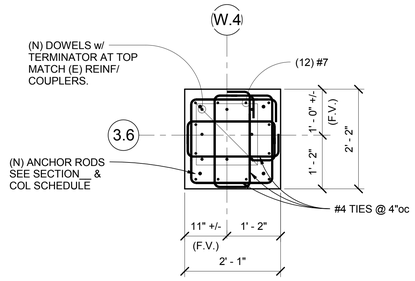


6 SS 401.4 SECTION
3/4" = 1'-0"

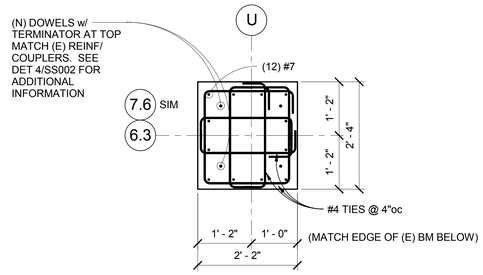




14 SS 401.4 TYP COL TO BM CONNECTION, UNO
3/4" = 1'-0"



13 SS 401.4 DETAIL
3/4" = 1'-0"



12 SS 401.4 DETAIL
3/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	1/14/15	Amendment #4

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Drawing Title: COLUMN SCHEDULE DEDUCT ALTERNATES 4,5

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
9/4/14	JM	TJR	LDS

Drawing Number: SS 401.4

Dwg.113 of 201

Office of Construction and Facilities Management

Department of Veterans Affairs

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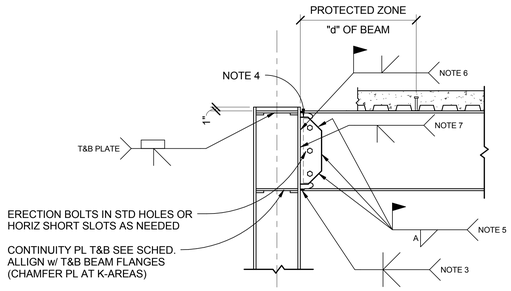
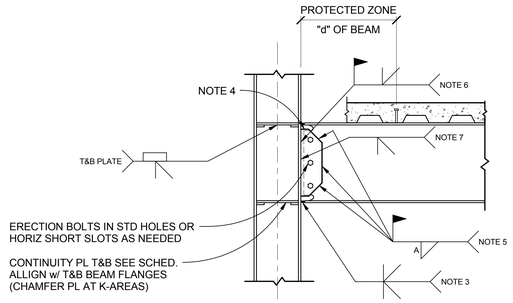
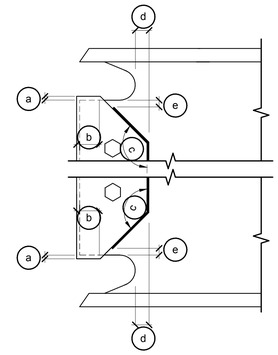


4 SS 402 SMF CONNECTION AT ROOF LEVEL
N.T.S.



3 SS 402 SMF CONNECTION AT FLOOR LEVEL
N.T.S.

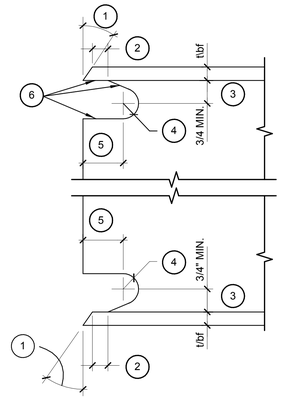


NOTES

a 1/4" MINIMUM, 1/2" MAXIMUM.
b 1" MINIMUM
c 30 DEGREES (+/- 10 DEGREES)
d 2" MINIMUM
e 1/2" MINIMUM DISTANCE, 1" MAXIMUM DISTANCE, FROM END OF FILLET WELD TO EDGE OF WELD ACCESS HOLE

NOTE:
TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25 DEG.

2 SS 402 SMF CONNECTION SHEAR PLATE DETAIL
N.T.S.



NOTES

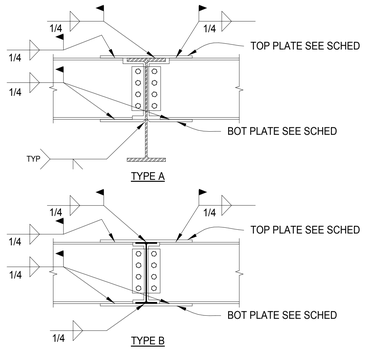
1 BEVEL AS REQUIRED BY AWS D1.1 FOR SELECTED GROOVE WELD PROCEDURE.
2 LARGER OF t/bf OR 1/2". (PLUS 1/2 t/bf, OR MINUS 1/4 t/bf.)
3 3/4" t/bf TO t/bf, 3/4" MINIMUM (+/- 1/4").
4 3/8" MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0).
5 3 t/bf. (+/- 1/2").
6 SEE AISC 341-05, RECOMMENDED SPECIFICATIONS AND QUALITY ASSURANCE GUIDELINES FOR STEEL MOMENT-FRAME CONSTRUCTION FOR SEISMIC APPLICATIONS FOR FABRICATION DETAILS INCLUDING CUTTING METHODS AND SMOOTHNESS REQUIREMENTS.

NOTE:
TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACCESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25 DEG.

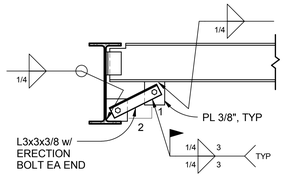
1 SS 402 SMF CONNECTION WELD ACCESS HOLES DETAIL
N.T.S.

BEAM TO BEAM MOMENT CONNECTON SCHEDULE

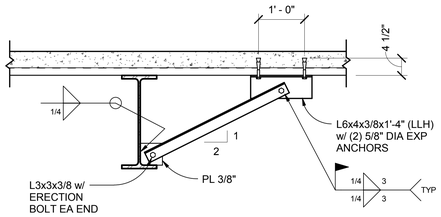
BEAM SIZE	TYPE	TOP PLATE	BOTTOM PLATE	NOTE
W 14x22	A	PL 3/4 x 4 1/2 x 2'-3"	PL 3/4 x 5 1/2 x 9	
W 14x22	B	PL 3/4 x 4 1/2 x 2'-3"	PL 3/4 x 4 1/2 x 2'-3"	
W 16x31	B	PL 3/4 x 5 x 2'-7"	PL 3/4 x 6 1/2 x 2'-7"	
W 18x35	A	PL 3/4 x 5 1/2 x 2'-10"	PL 3/4 x 6 1/2 x 1'-2"	
W 21x44	B	PL 1 x 6 x 2'-10"	PL 1 x 7 x 2'-10"	
W 24x55	B	PL 1 x 6 1/2 x 4'-0"	PL 1 x 7 1/2 x 4'-0"	
W 24x76	B	PL 1 1/4 x 8 1/2 x 4'-8"	PL 1 1/4 x 9 1/2 x 4'-8"	5/16 WELD



10 SS 402 TYPICAL BEAM TO BEAM MOMENT CONNECTION DETAIL
12" = 1'-0"



6 SS 402 TYPICAL MOMENT FRAME BOTTOM FLANGE BRACING
N.T.S.



5 SS 402 TYPICAL MOMENT FRAME BOTTOM FLANGE BRACING AT SLAB
N.T.S.

GENERAL NOTES FOR SEISMIC FORCE RESISTING SYSTEM SMF:

1. CONNECTION DETAIL IS FOR A PREQUALIFIED WELDED UNREINFORCED FLANGE-WELDED WEB (WUF-W) MOMENT CONNECTION PER SUPPLEMENT NO. 1 TO ANSI/AISC 358-05 AND SHALL CONFORM TO THE REQUIREMENTS OF THAT STANDARD AS WELL AS ANSI/AISC 341-05 AS APPLICABLE.
2. THE PROTECTED ZONE SHALL CONFORM TO ALL OF THE REQUIREMENTS OF SECTION 7.4 OF ANSI/AISC 341-05. SPECIFICALLY NO SHEAR STUDS SHALL BE WELDED TO THE TOP OF THE FLANGE WITHIN THE PROTECTED ZONE.
3. BEAM FLANGES SHALL BE CONNECTED TO COLUMN FLANGES USING COMPLETE-JOINT-PENETRATION GROOVE WELDS CONFORMING TO THE REQUIREMENTS FOR DEMAND CRITICAL WELDS IN SECTION 7.3 AND APPENDIX W OF AISC 341-05.
4. WELD ACCESS HOLE GEOMETRY SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.8 SECTION 6.9.1.2. WELD ACCESS HOLE REQUIREMENTS SHALL CONFORM OF THE REQUIREMENTS OF AWS D1.8 SECTION 6.9.2. SEE SMRF MOMENT CONNECTION WELD ACCESS HOLE DETAIL.
5. WELD OF THE SINGLE PLATE TO THE BEAM WEB SHALL EXTEND ALONG THE SLOPED TOP AND BOTTOM PORTIONS AS WELL AS THE FULL SINGLE PLATE HEIGHT. THE WELDS ON THE SLOPED TOP AND BOTTOM PORTIONS OF THE SINGLE PLATE SHALL BE TERMINATED AT LEAST 1/2", BUT NO MORE THAN 1" FROM THE EDGE OF THE WELD ACCESS HOLE.
6. CJP WELD OF THE BEAM WEB TO COLUMN FLANGE SHALL BE PROVIDED OVER THE FULL LENGTH OF THE WEB BETWEEN WELD ACCESS HOLES. THE WELD SHALL CONFORM TO THE REQUIREMENTS FOR DEMAND CRITICAL WELDS IN SECTION 7.3 AND APPENDIX W OF AISC 341-05. WELD TABS ARE NOT REQUIRED. IF WELD TABS ARE USED, THEY MUST BE REMOVED AFTER WELDING IN ACCORDANCE WITH SECTION 3.4 OF ANSI/AISC 358-05.
7. CJP WELD OF SINGLE PLATE TO COLUMN FLANGE. TERMINATE WELD AT LEAST 1/2" BUT NOT MORE THAN 1" FROM EDGE OF WELD ACCESS HOLE.

SMF CONNECTON SCHEDULE

BEAM SIZE	SINGLE PLATE THICKNESS	WELD SIZE "A"	CONTINUITY PLATE THICKNESS	BOTTOM FLANGE BRACE SPACING
W 24x55	1/2"	7/16"	5/8"	7'-0" o.c.
W 24x62	1/2"	7/16"	5/8"	7'-0" o.c.
W 24x68	1/2"	7/16"	5/8"	7'-0" o.c.
W 24x76	5/8"	9/16"	3/4"	7'-0" o.c.
W 27x84	5/8"	9/16"	3/4"	7'-0" o.c.
W 30x90	5/8"	9/16"	3/4"	7'-0" o.c.

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

MECHANICAL/ELECTRICAL:
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Drawing Title: MOMENT CONNECTION DETAILS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

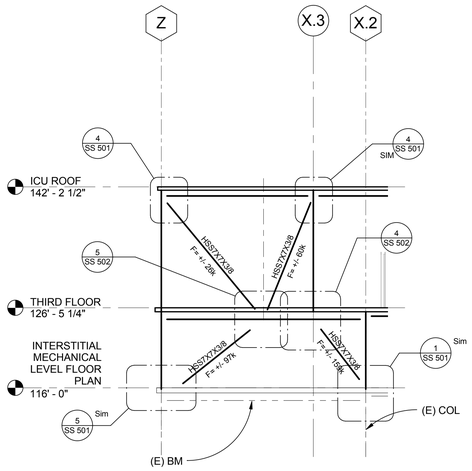
Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	TJR	LDS

Drawing Number: SS 402
Dwg. 80 of 201

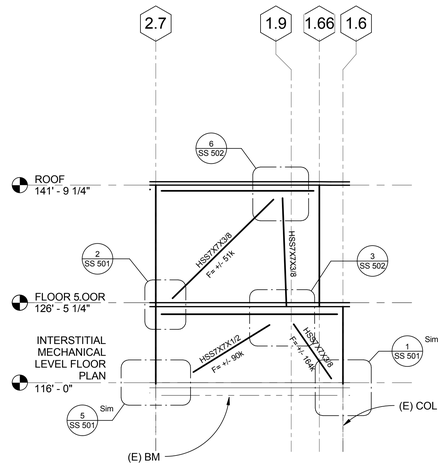
Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



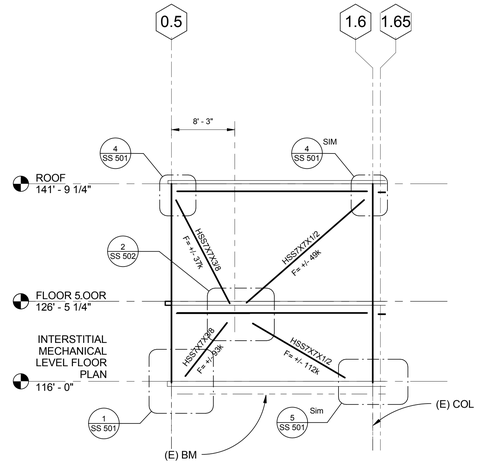
NOTE: DESIGN CONNECTIONS FOR FACTORED BRACE LOADS INDICATED

VB-4 / SS 501 VB-4 1/8" = 1'-0"



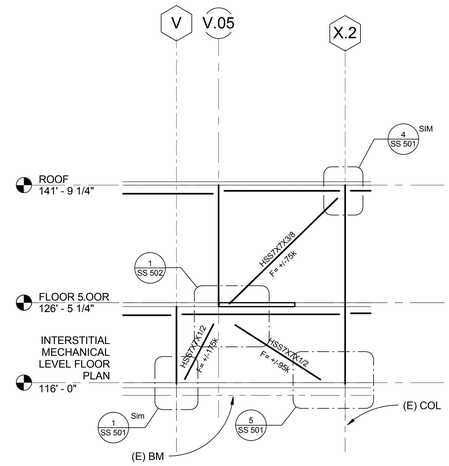
NOTE: DESIGN CONNECTIONS FOR FACTORED BRACE LOADS INDICATED

VB-3 / SS 501 VB-3 1/8" = 1'-0"



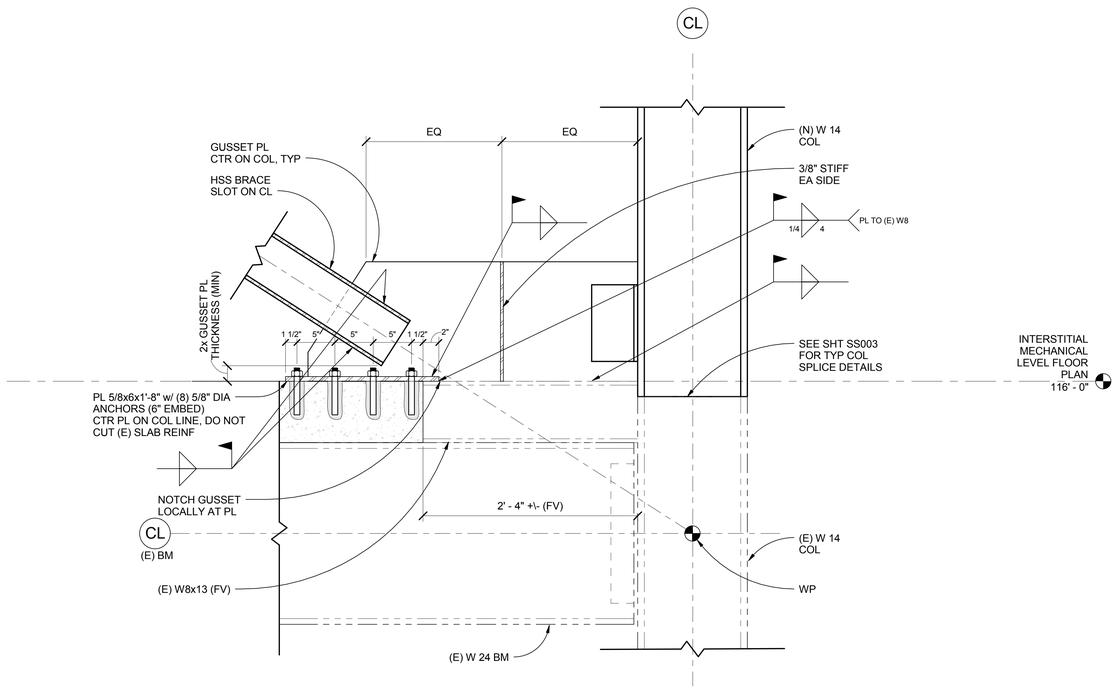
NOTE: DESIGN CONNECTIONS FOR FACTORED BRACE LOADS INDICATED

VB-2 / SS 501 VB-2 1/8" = 1'-0"

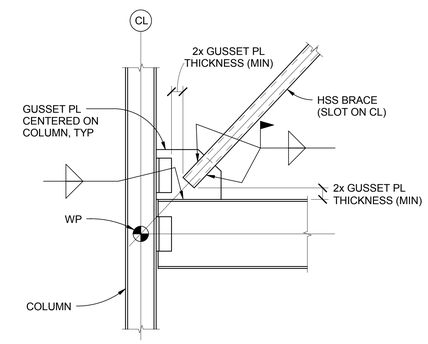


NOTE: DESIGN CONNECTIONS FOR FACTORED BRACE LOADS INDICATED

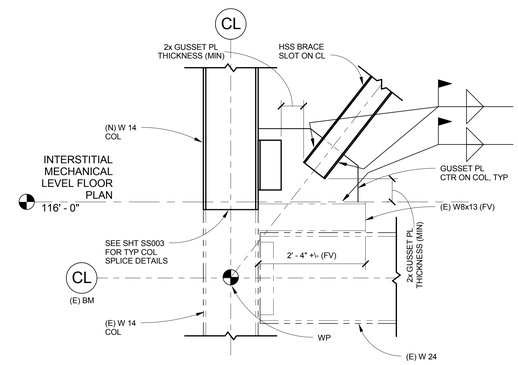
VB-1 / SS 501 VB-1 1/8" = 1'-0"



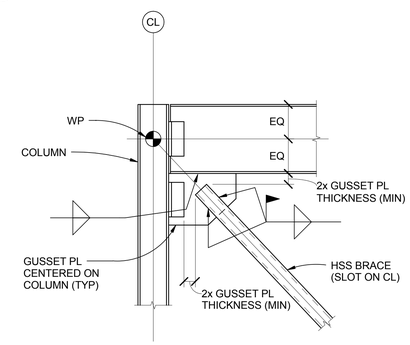
5 / SS 501 VERTICAL BRACE CONNECTION AT EXIST BM AND COLUMN DETAIL
1 1/2" = 1'-0"



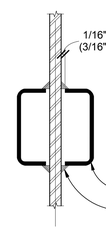
2 / SS 501 VERTICAL BRACE CONNECTION AT BEAM AND COLUMN DETAIL
3/4" = 1'-0"



1 / SS 501 VERTICAL BRACE CONNECTION AT EXIST BM AND COLUMN DETAIL
3/4" = 1'-0"



4 / SS 501 VERTICAL BRACE CONNECTION AT TOP OF COLUMN DETAIL
3/4" = 1'-0"



NOTE:
IF THE GAP BETWEEN THE GUSSET PL AND THE HSS BRACE EXCEEDS 1/16", THE REQD WELD SIZE MUST BE INCREASED BY 1/8"

3 / SS 501 TYPICAL HSS BRACE SLOT AT GUSSET PLATE
3/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
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Drawing Title: VERTICAL BRACING ELEVATIONS

Project Title: INTENSIVE CARE UNIT

Project Number: 110348.01

Building Number: #1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	SRH	TJR	LDS

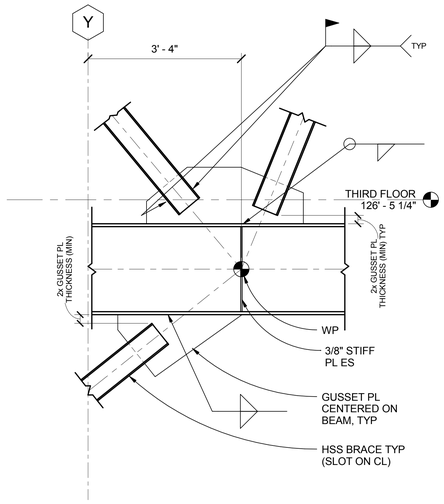
Drawing Number: SS 501

Dwg. 81 of 201

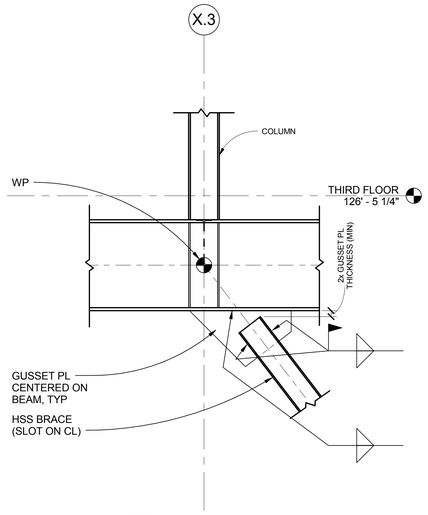
Office of Construction and Facilities Management

Department of Veterans Affairs

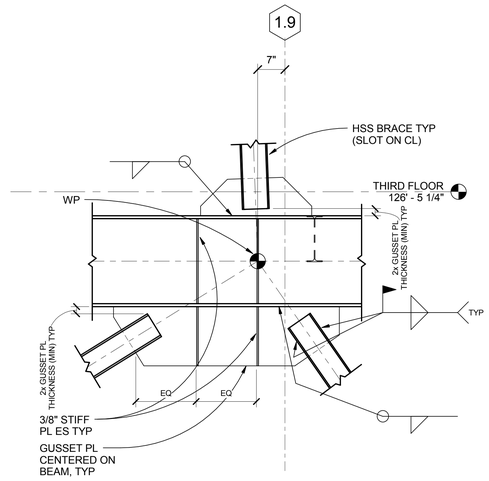
VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"



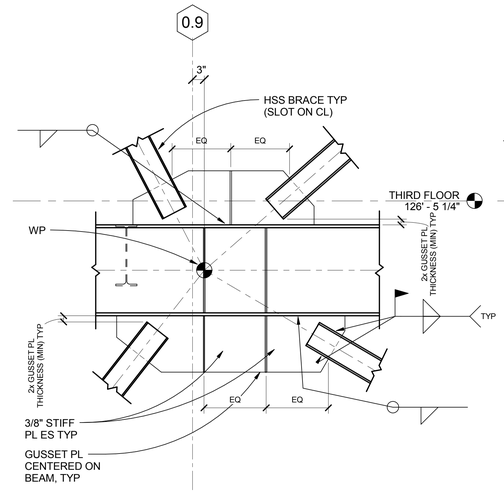
5 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"



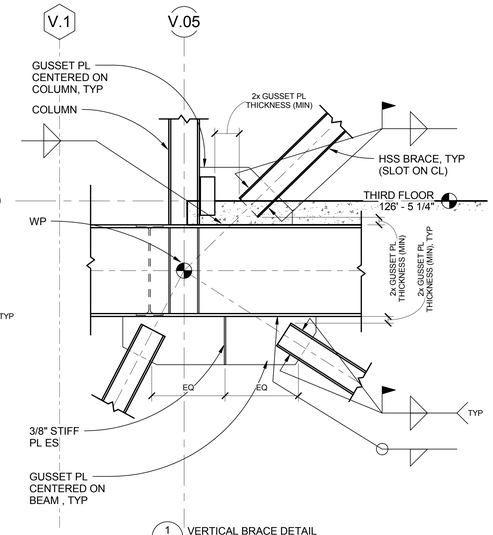
4 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"



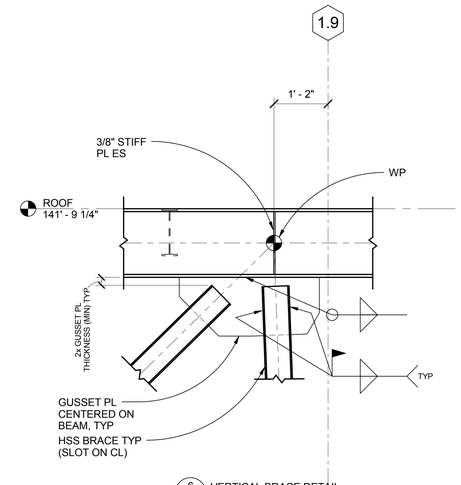
3 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"



2 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"



1 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"



6 SS 502 VERTICAL BRACE DETAIL
3/4" = 1'-0"

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CONSTRUCTION DOCUMENTS

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Drawing Title
VERTICAL BRACING DETAILS

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Project Title
INTENSIVE CARE UNIT

Location
HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
12/30/13	JM	AIS	LDS

Project Number
110348.01

Building Number
#1

Drawing Number
SS 502
Dwg. 82 of 201

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON ORIGINAL SIZE OF SHEET IS 30" X 42"

PLUMBING ABBREVIATIONS

AAP	AREA ALARM PANEL
A/E	ARCHITECT / ENGINEER
AD	AREA DRAIN
AF	ABOVE FINISH FLOOR
AF	ABOVE FINISH GRADE
AG	AIR GAP
AP	ACCESS PANEL
ASD	AUTOMATIC SPRINKLER DRAIN
ASHRAE	AMERICAN SOCIETY HEATING, REFRIGERATION, AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY MECHANICAL ENGINEERS
ASPE	AMERICAN SOCIETY PLUMBING ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
BFP	REDUCED PRESSURE BACKFLOW PREVENTER
BHP	BREAK HORSEPOWER
BSP	BLACK STEEL PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CELSIUS
CGA	COMPRESSED GAS ASSOCIATION
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
CV	CONTROL VALVE
CW	COLD WATER
DA	DENTAL AIR
DV	DENTAL VACUUM
DAC	DENTAL AIR COMPRESSOR
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DHWR	DOMESTIC WATER RETURN
DHWS	DOMESTIC HOT WATER SUPPLY
DI	DEIONIZED WATER
DN	DOWN
DOE	DEPARTMENT OF ENERGY
DS	DOWNSPOUT
DW	DISHWASHER
DWG	DRAWING
DWH	DOMESTIC WATER HEATER
DWV	DRAIN WASTE VENT
EL	ELEVATION
EMCS	ENERGY MONOSERRAT AND CENTRAL SYSTEM
EPA	ENVIROMENTAL PROTECTION AGENCY
EPACT	ENERGY POLICY ACT
ESC	ESCUTCHEON
ESH	EMERGENCY SHOWER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWS	EYE WASH STATION
EX	EXISTING
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FCW	FILTERED COLD WATER
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT (HOSE) CONNECTION
FM	FLOW METER
FOP	FUEL OIL PUMP
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FS	FLOOR SINK
FS	FLOW SWITCH
FU	FIXTURE UNITS
GAL	GALLON
GCO	GRADE CLEANOUTS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GRS	GAS REGULATOR STATION
GT	GREASE TRAP
GVTR	GAS VENT THROUGH ROOF
GWH	GAS FIRED WATER HEATER
HW	HOT WATER
HWR	HOT WATER RETURN
HB	HOSE BIBB
HD	HUB DRAIN
HEX	HEAT EXCHANGER
HP	HORSEPOWER
HS	HAND SINK
HST	HOT WATER STORAGE TANK (DOMESTIC)
HWB	HOT WATER BOILER
HWCP	HOT WATER CIRCULATING PUMP
HWP	HOT WATER PUMP
HYD	HYDRANT
ICW	INDUSTRIAL COLD WATER
INV	INVERT
IPC	INTERNATIONAL PLUMBING CODE
IRW	IRRIGATION WATER
IW	INDIRECT WASTE
IWH	INSTANTANEOUS WATER HEATER
IWR	INDUSTRIAL WATER RETURN
IWS	INDUSTRIAL WATER SUPPLY
KW	KILOWATT
KWHR	KILOWATT-HOUR
L/S	LITER PER SECOND
LA	LABORATORY AIR
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LCW	LABORATORY COLD WATER
LHW	LABORATORY HOT WATER
LNG	LIQUID NATURAL GAS
LOX	LIQUID OXYGEN
LV	LABORATORY VACUUM
LW	LOW WATER
M	METER
MA	MEDICAL AIR
MAV	MANUAL AIR VENT
MBH	1000 BTUH
MED	MEDICAL
MH	MANHOLE
MS	MOP SERVICE
MV	MEDICAL VACUUM
MGO	MEDICAL GAS OUTLET
N2	NITROGEN
N2O	NITROUS OXIDE
NC	NORMALLY CLOSED
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM.	NOMINAL
NPW	NON-POTABLE WATER
NTS	NOT TO SCALE
O2	OXYGEN
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFD	OVERFLOW DRAIN (ROOF)
OR	OPERATING ROOM
OVFL	OVERFLOW
PA	PASCAL
PD	PRESSURE DROP OR DIFFERENCE
PDI	PLUMBING AND DRAINAGE INSTITUTE
PG	PRESSURE GAGE
PP	PLUMBING PUMP
PPM	PARTS PER MILLION
PRS	PRESSURE REDUCING STATION
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ATMOSPHERE
PSIG	POUNDS PER SQUARE INCH GAUGE
PTRV	PRESSURE TEMPERATURE RELIEF VALVE
PW	POTABLE WATER
RD	ROOF DRAIN
RDL	ROOF DRAIN LEADER
RL	ROOF LEADER
RO	REVERSE OSMOSIS WATER
1 RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
RWL	RAIN WATER LEADER
SAN	SANITARY SEWER
SD	STORM DRAIN
SSD	SECONDARY STORM DRAIN
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SCFM	STANDARD CUBIC FOOT/MINUTE
SCW	SOFTENED COLD WATER
SDMH	STORM DRAIN MANHOLE
SK	SINK
SP	SUMP PUMP
SPR	SPRINKLER LINE
SQFT	SQUARE FEET
SS	STAINLESS STEEL
ST	STORAGE TANK
SW	STORM WATER
TCV	TEMPERATURE CONTROL VALVE
TD	TEMPERATURE DIFFERENCE
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
TSTAT	THERMOSTAT
TWR	TEMPERED WATER RETURN
TWS	TEMPERED WATER SUPPLY
TYP	TYPICAL
UPC	UNIFORM PLUMBING CODE
V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VCO	VACUUM CLEANER OUTLET
VP	VACUUM PUMP
VS	VENT STACK
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WG	WATER GAGE
WH	WALL HYDRANT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER
WL	WATER LINE
WM	WATER METER
WPD	WATER PRESSURE DROP
WS	WASTE STACK
YCO	YARD CLEANOUT
YH	YARD HYDRANT
ZVB	ZONE VALVE BOX (MEDICAL GAS SYSTEMS)

ALL WORK IN O.R. DEPARTMENT, MRI DEPARTMENT, OR EXISTING PORTIONS OF HOSPITAL TO BE COMPLETED ON NIGHTS AND WEEKENDS. CONTRACTOR SHALL COORDINATE WITH FACILITY MANAGER.

GENERAL PLUMBING SYMBOLS

- DIRECTION OF PIPE PITCH (DOWN)
- DIRECTION OF FLOW
- ANCHOR
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- RISE OR DROP IN PIPE
- UNION
- PIPE UP
- PIPE DOWN
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- LIMIT OF DEMOLITION
- STRAINER
- THERMOMETER
- PRESSURE GAGE
- FE — FLOW ELEMENT
- WATER HAMMER ARRESTOR

PLUMBING VALVE SYMBOLS

- SHUT-OFF VALVE
- GLOBE VALVE
- GATE VALVE WITH 3/4" HOSE ADAPTER
- CHECK VALVE
- ANGLE GLOBE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- MODULATING CONTROL VALVE
- TWO POSITION CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE
- THREE-WAY TWO POSITION CONTROL VALVE
- PRESSURE REGULATING VALVE
- AUTOMATIC FLOW CONTROL VALVE
- PRESSURE RELIEF VALVE
- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMPERATURE)
- AV — AUTOMATIC AIR VENT

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	01/14/2015	Amendment #4

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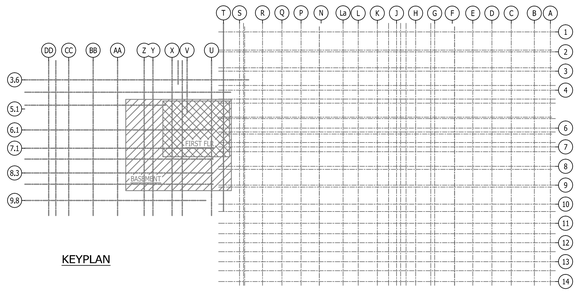
Drawing Title: LEGEND & NOTES
PLUMBING & MEDICAL GAS
BASE BID, DEDUCT ALTERNATES 1, 2, 3, 4, & 5

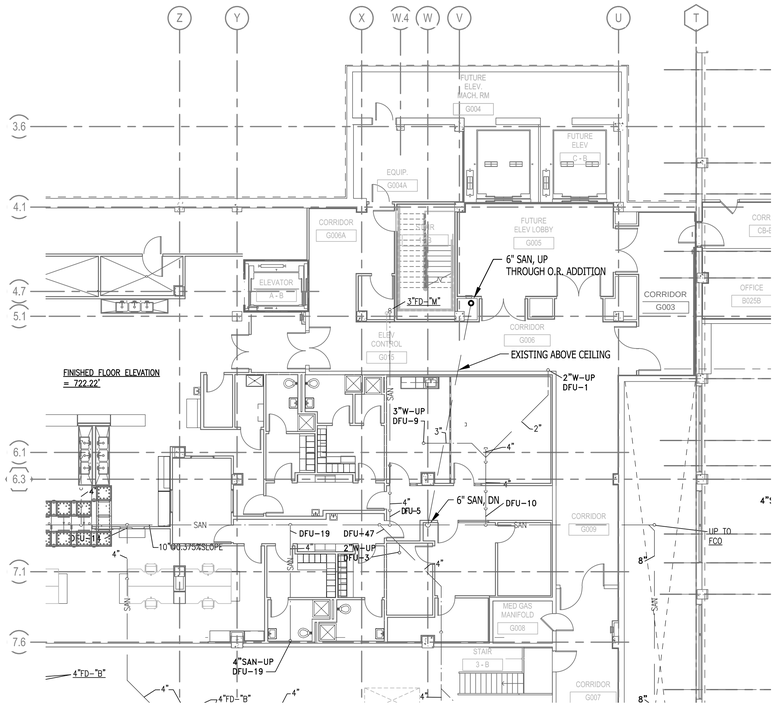
DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Project Title: INTENSIVE CARE UNIT
Project Number: 589-330
Building Number: 1
Location: HARRY S. TRUMAN VAMC
Drawing Number: P001.0
Date: 08/22/14 | Checked: CKF | Drawn: JGM | Approved:
Dwg. 114 of 296

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: January 14, 2015 ORIGINAL SIZE OF SHEET IS 30" X 42"

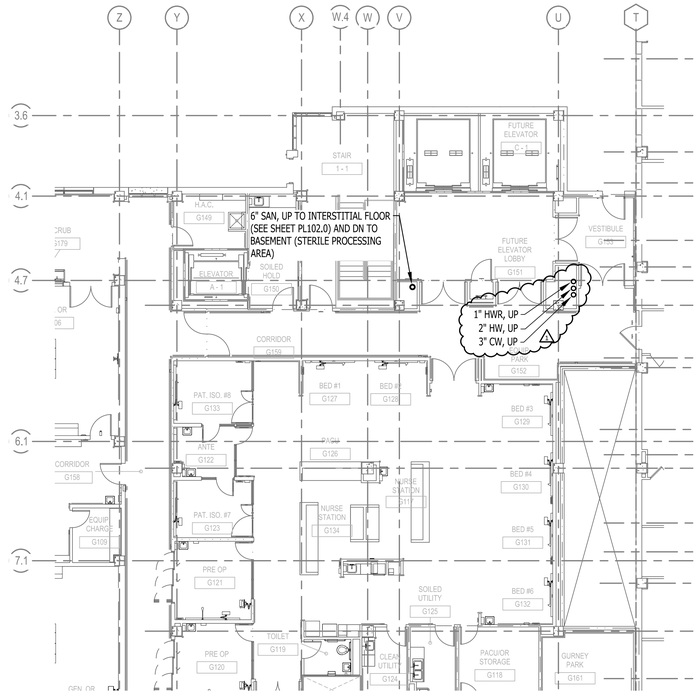




NORTH

BASEMENT FLOOR PLAN

SCALE: 3/32" = 1'-0"



NORTH

FIRST FLOOR PLAN

SCALE: 3/32" = 1'-0"

PLAN

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#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
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1204 WASHINGTON AVE. SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY:
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2043 WOODLAND PARKWAY, SUITE 300
ST. LOUIS, MO 63146

ACOUSTICAL ENGINEERS:
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ST. LOUIS, MO 63103

COMMISSIONING:
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ARCHITECT/ENGINEERS:

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Drawing Title
EXISTING BASEMENT & FIRST FLOOR PLANS
PLUMBING
BASE BID, DEDUCT ALTERNATES 1 & 2

Project Title
INTENSIVE CARE UNIT

Project Number
589-330

Building Number
1

Location
HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

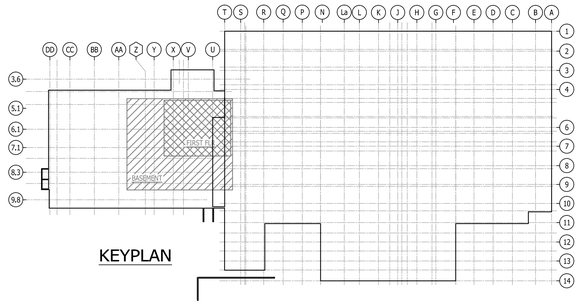
Drawing Number
PL101.0

Dwg. 115 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

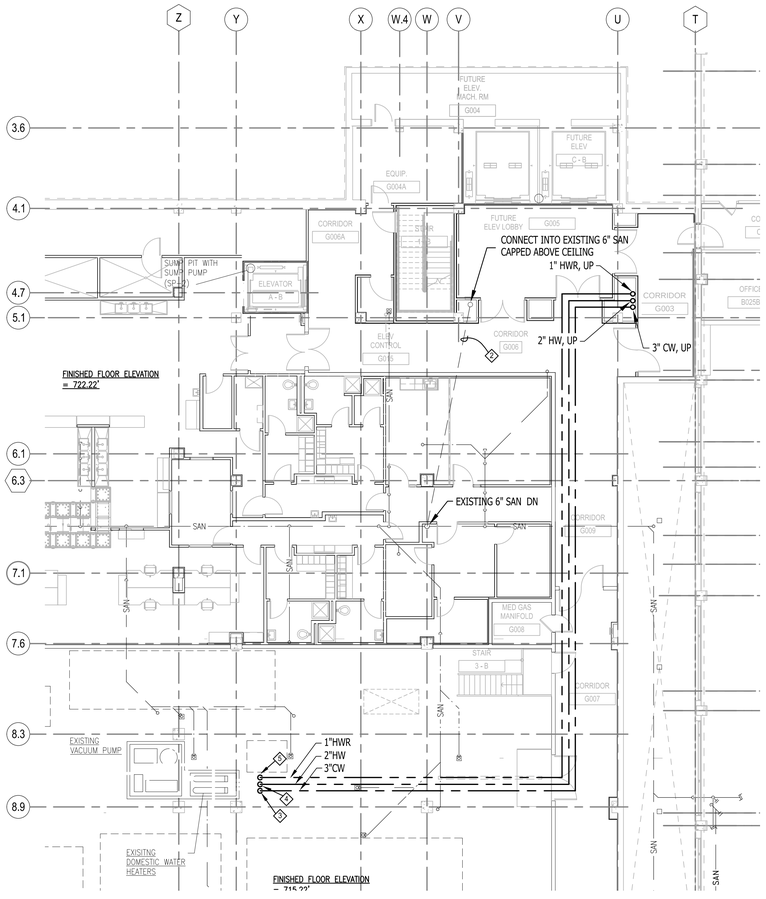
VA FORM 08-6231 PRINTED ON: January 14, 2015 ORIGINAL SIZE OF SHEET IS 30" X 42"



KEYPLAN

KEYED NOTES

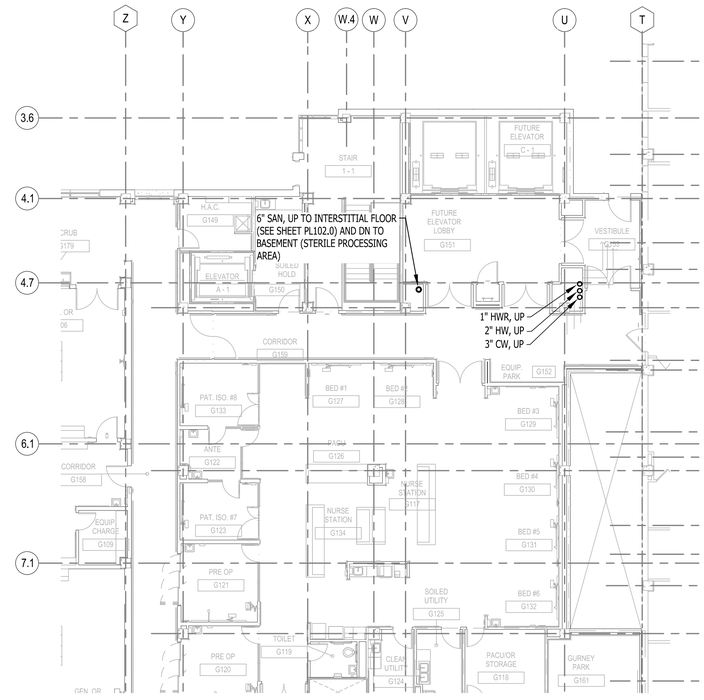
1. NOT USED.
2. EXISTING SANITARY INSTALLED IN SPD PROJECT FOR ICU.
3. CONNECT NEW 3" CW PIPING TO NEAREST EXISTING COLD WATER SERVICE.
4. CONNECT NEW 2" HW PIPING TO OUTLET OF EXISTING WATER HEATER.
5. CONNECT NEW 1" HWR PIPING TO SUCTION SIDE OF EXISTING HOT WATER CIRCULATION PUMP. PROVIDE CIRCUIT SETTER AT CONNECTION AND SET AT 5 GPM.



NORTH

EXISTING BASEMENT FLOOR PLAN

SCALE: 3/32" = 1'-0"



NORTH

EXISTING FIRST FLOOR PLAN

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

STRUCTURAL ENGINEER:
KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
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MECHANICAL/ELECTRICAL:
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Drawing Title: EXISTING BASEMENT & FIRST FLOOR PLANS PLUMBING DEDUCT ALTERNATES 3, 4, & 5

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Drawing Number: PL101.3

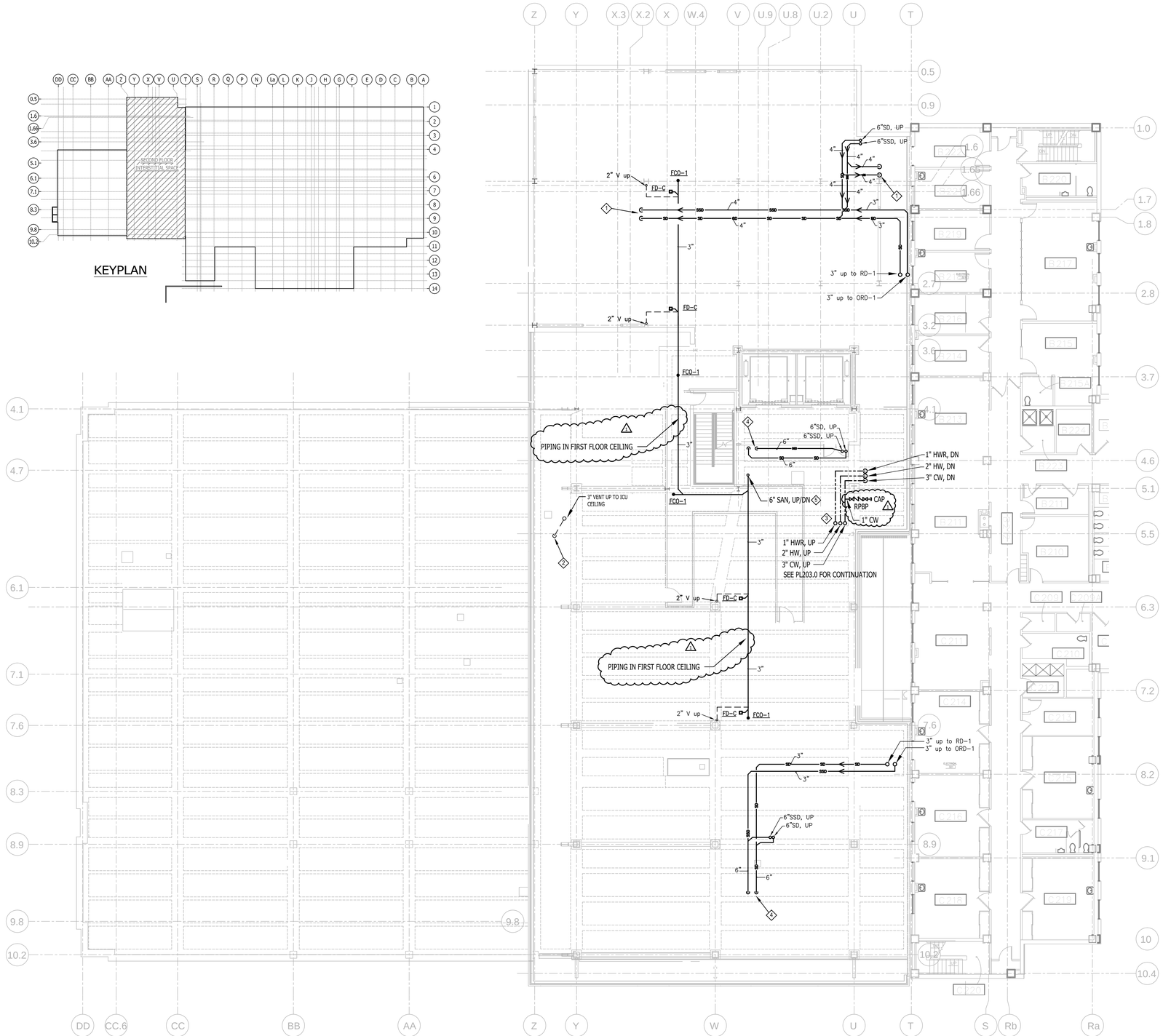
Dwg. 116 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 22, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"

KEYPLAN



KEYED NOTES

1. REMOVE EXISTING ROOF AND OVERFLOW ROOF DRAIN BODIES AND CONNECT NEW 4" STORM DRAIN PIPING TO EXISTING 4" STORM DRAIN PIPING.
2. CONNECT EXISTING PLUMBING VENT PIPE TO 3" VENT STACK.
3. CONNECT TO EXISTING WATER RISERS IN FIRST FLOOR CEILING SPACE. SEE PL101.0.
4. REMOVE EXISTING ROOF AND OVERFLOW DRAIN BODIES AND CONNECT NEW 6" STORM DRAIN PIPING TO EXISTING 6" STORM DRAIN PIPING.
5. REMOVE EXISTING 6" SANITARY CAP FOR CONNECTION OF NEW 6" SANITARY DRAIN PIPING.

NORTH

INTERSTITIAL FLOOR PLAN - PLUMBING

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	01/14/2015	Amendment #4

CONSULTANTS:

STRUCTURAL ENGINEER:
KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
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Drawing Title: INTERSTITIAL SPACE SANITARY & STORM BASE BID, DEDUCT ALTERNATES 1, 2, & 3

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Drawing Number: PL102.0

Dwg. 117 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

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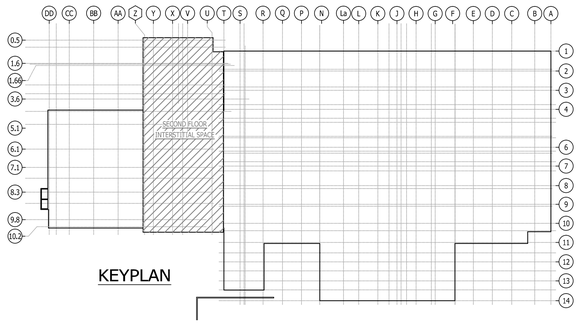
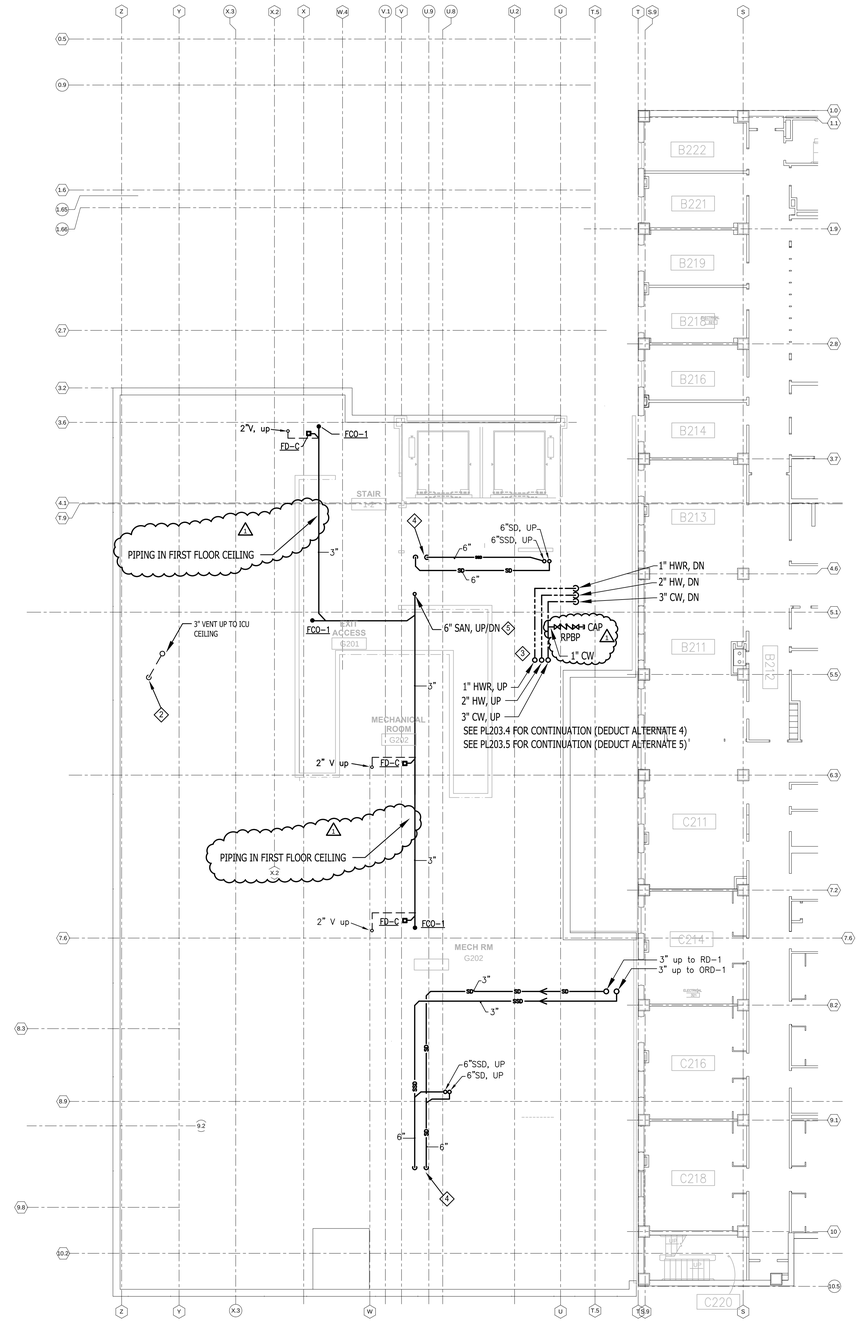


KEYPLAN



KEYED NOTES

1. NOT USED.
2. CONNECT EXISTING PLUMBING VENT PIPE TO 3" VENT STACK.
3. CONNECT TO EXISTING WATER RISERS IN FIRST FLOOR CEILING SPACE. SEE PL101.3.
4. REMOVE EXISTING ROOF AND OVERFLOW DRAIN BODIES AND CONNECT NEW 6" STORM DRAIN PIPING TO EXISTING 6" STORM DRAIN PIPING.
5. REMOVE EXISTING 6" SANITARY CAP FOR CONNECTION OF NEW 6" SANITARY DRAIN PIPING.

NORTH

INTERSTITIAL FLOOR PLAN - PLUMBING

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	01/14/2015	Amendment #4

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STRUCTURAL ENGINEER:
KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
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MECHANICAL/ELECTRICAL:
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ST. LOUIS, MO 63141

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ST. LOUIS, MO 63118

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CHESTERFIELD, MO 63017

ENVIROMENTAL:
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Drawing Title: INTERSTITIAL SPACE SANITARY & STORM DEDUCT ALTERNATES 4 & 5

DIRECTOR OF SPECIALTY CARE | INFECTION CONTROL PRACTITIONER | CHIEF ENGINEER | ASSISTANT DIRECTOR | ASSOCIATE DIRECTOR OF PATIENT SERVICES | CHIEF OF STAFF | ASSOCIATE DIRECTOR | MEDICAL CENTER DIRECTOR

Project Title: INTENSIVE CARE UNIT

Location: HARRY S. TRUMAN VAMC

Date: 08/22/14 | Checked: CKF | Drawn: JGM | Approved:

Project Number: 589-330

Building Number: 1

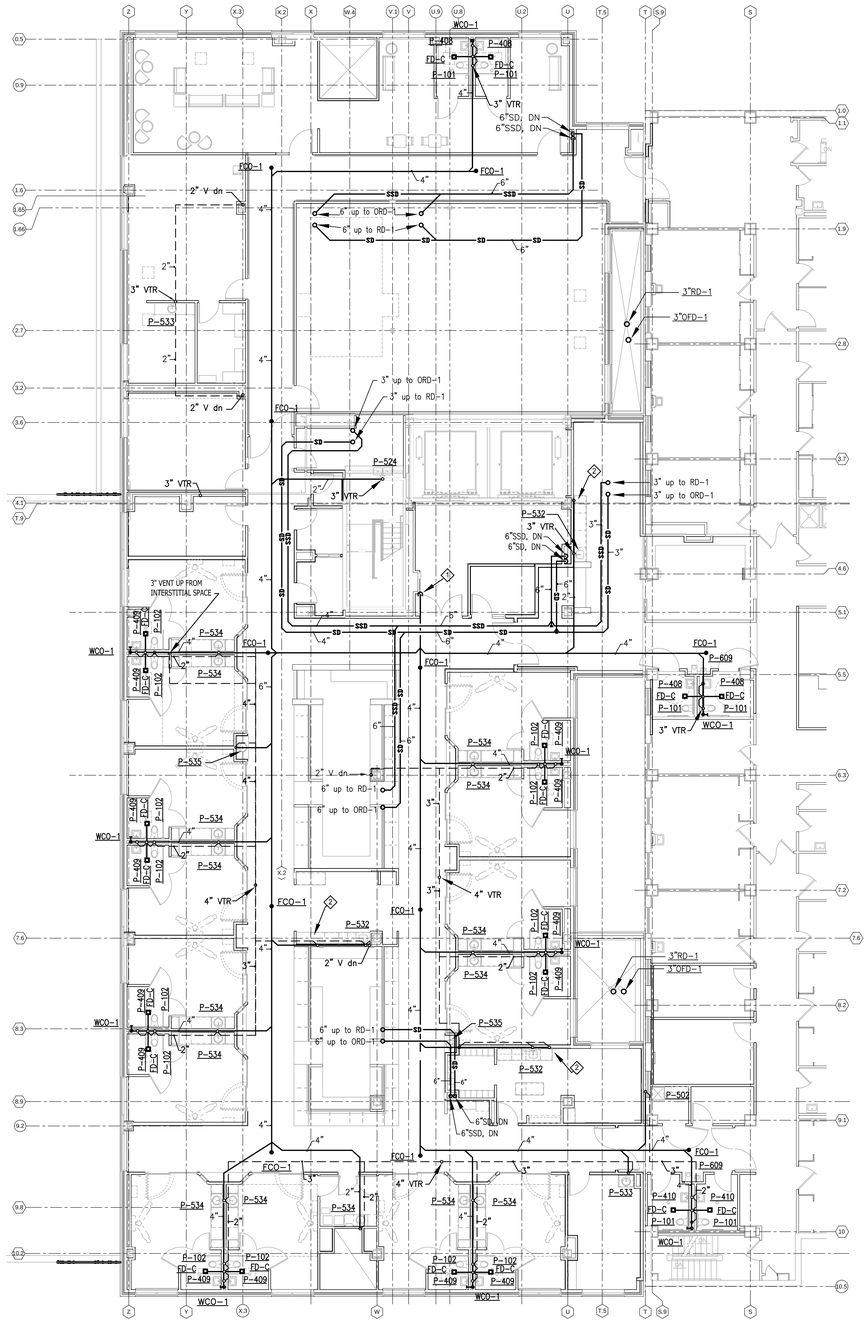
Drawing Number: PL102.4

Dwg. 118 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: January 14, 2015 ORIGINAL SIZE OF SHEET IS 30" X 42"



LEGEND

P-101 TOILET
P-102 TOILET AUTOMATIC FLUSH
P-408 WALL HUNG LAVATORY
P-410 INTEGRAL SINK
P-421 COUNTER MNT LAVATORY

SANITARY PIPING
VENT PIPING
COLD WATER PIPING
HOT WATER PIPING
HOT WATER CIRCULATION PIPING
STORM PIPING

KEYED NOTES

1. 6"" SANITARY LINE DOWN TO SPD AREA CONNECT TO EXISTING 6" SANITARY RISER.

NORTH

ICU FLOOR PLAN - SANITARY AND STORM

SCALE: 3/32" = 1'-0"

PLAN

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CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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ST. LOUIS, MO 63118

ESTIMATING:
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1204 WASHINGTON AVE. SUITE 200
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Drawing Title
ICU FLOOR PLAN
SANITARY AND STORM
BASE BID & DEDUCT ALTERNATE 1

DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Project Title
INTENSIVE CARE UNIT

Location
HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Project Number
589-330

Building Number
1

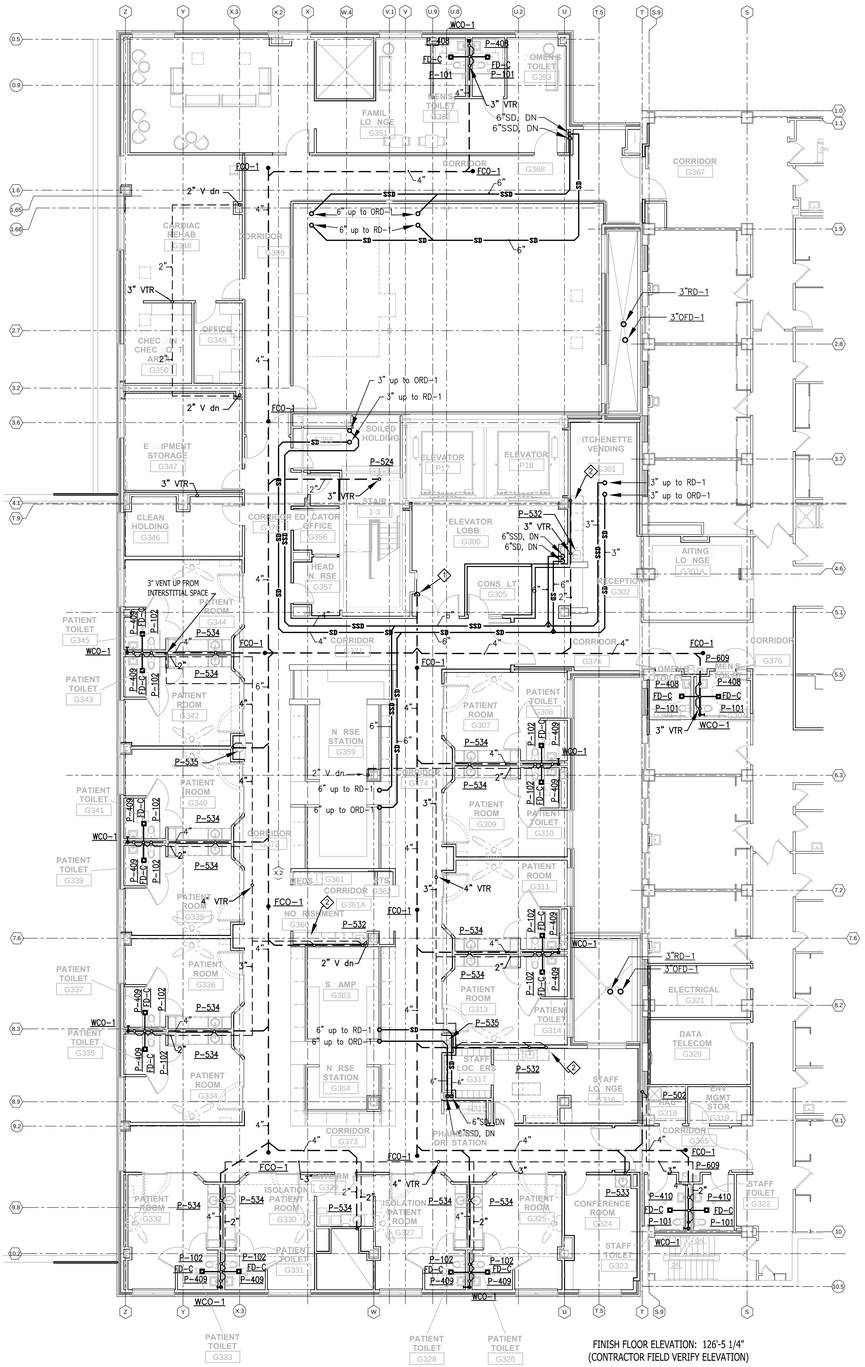
Drawing Number
PL103.0

Dwg. 119 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 22, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"



LEGEND

P-101	TOILET, SENSOR FLUSH
P-102	TOILET, ADA, MANUAL
P-116	BEDPAN WASHER
P-408	WALL HUNG LAVATORY
P-409	WALL HUNG LAVATORY, WRIST BLADE HANDLES
P-410	WALL HUNG LAVATORY, FOOT PEDALS
P-502	MOP SINK
P-524	INTEGRAL SS SINK, FOOT PEDALS
P-532	UNDERCOUNTER SS SINK, WRIST BLADE HANDLES
P-533	INTEGRAL SINK, WRIST BLADE HANDLES,
P-534	INTEGRAL SINK, FOOT PEDALS
P-535	INTEGRAL SINK, FOOT PEDALS, EMERGENCY EYE WASH
P-609	ELECTRIC WATER COOLER, DUAL HEIGHT

KEYED NOTES

1. 6" SANITARY LINE DOWN TO INTERSTITIAL SPACE CONNECT TO EXISTING 6" SANITARY RISER.
2. 2" SANITARY AND 1 1/2" VENT FOR ICE / WATER DISPENSER.

NORTH

ICU FLOOR PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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Drawing Title: ICU FLOOR PLAN SANITARY & STORM DEDUCT ALTERNATE 2

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Date: 08/22/14 | Checked: CKF | Drawn: JGM | Approved:

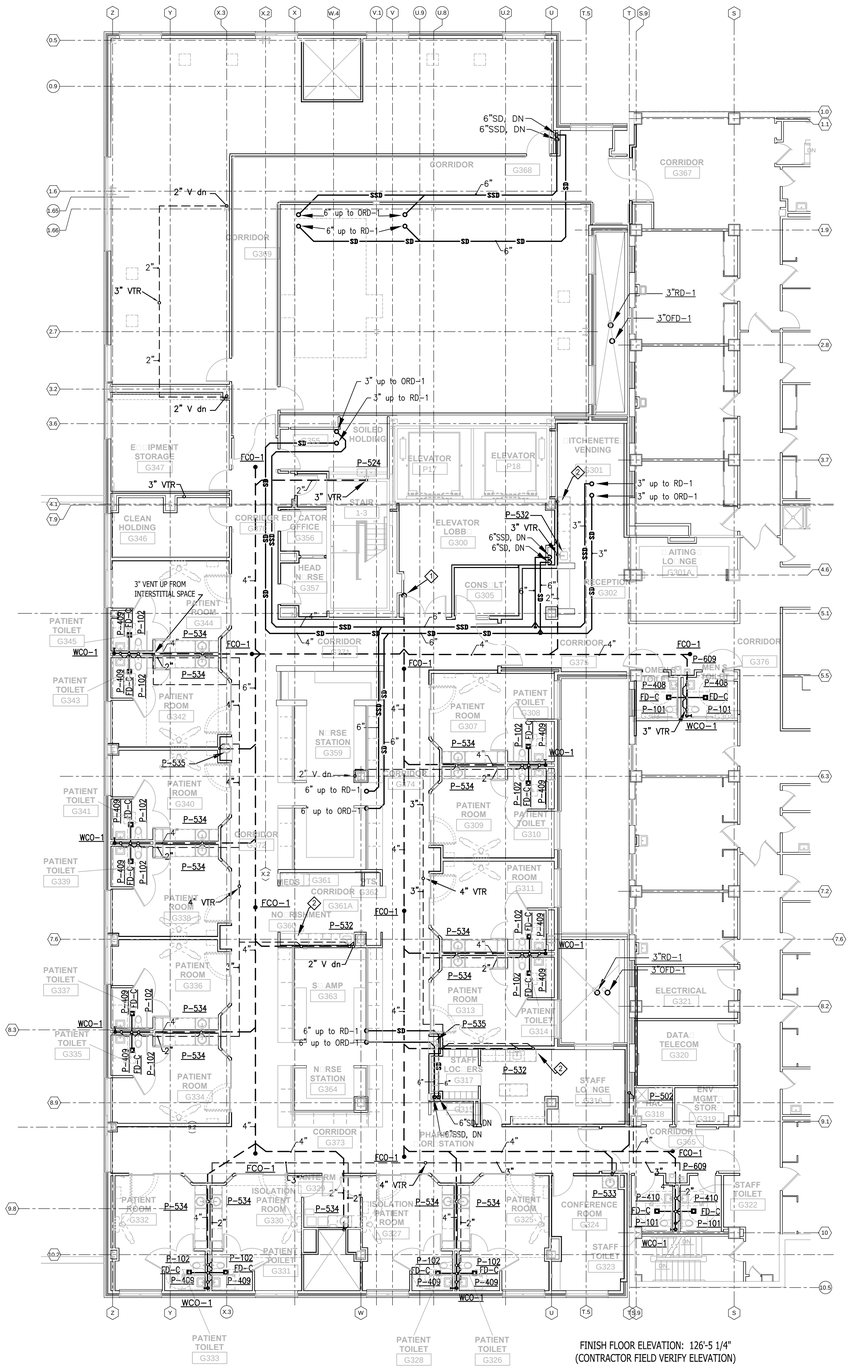
Drawing Number: PL103.2

Dwg. 120 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 22, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"



LEGEND

P-101	TOILET, SENSOR FLUSH
P-102	TOILET, ADA, MANUAL
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P-408	WALL HUNG LAVATORY
P-409	WALL HUNG LAVATORY, WRIST BLADE HANDLES
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P-532	UNDERCOUNTER SS SINK, WRIST BLADE HANDLES
P-533	INTEGRAL SINK, WRIST BLADE HANDLES,
P-534	INTEGRAL SINK, FOOT PEDALS
P-535	INTEGRAL SINK, FOOT PEDALS, EMERGENCY EYE WASH
P-609	ELECTRIC WATER COOLER, DUAL HEIGHT

SANITARY PIPING
VENT PIPING
COLD WATER PIPING
HOT WATER PIPING
HOT WATER CIRCULATION PIPING
STORM PIPING
SECONDARY STORM PIPING

KEYED NOTES

1. 6" SANITARY LINE DOWN TO INTERSTITIAL SPACE CONNECT TO EXISTING 6" SANITARY RISER.
2. 2" SANITARY AND 1 1/2" VENT FOR ICE / WATER DISPENSER.

NORTH

ICU FLOOR PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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STRUCTURAL ENGINEER:
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Drawing Title: ICU FLOOR PLAN SANITARY & STORM DEDUCT ALTERNATE 3

Project Title: INTENSIVE CARE UNIT

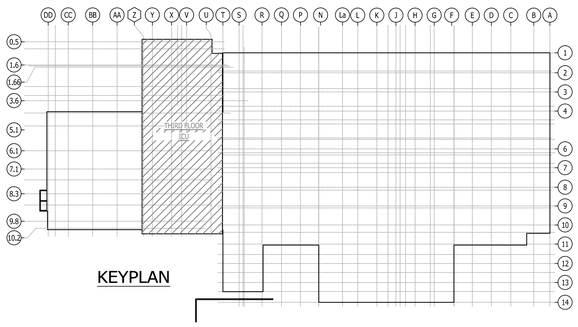
Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

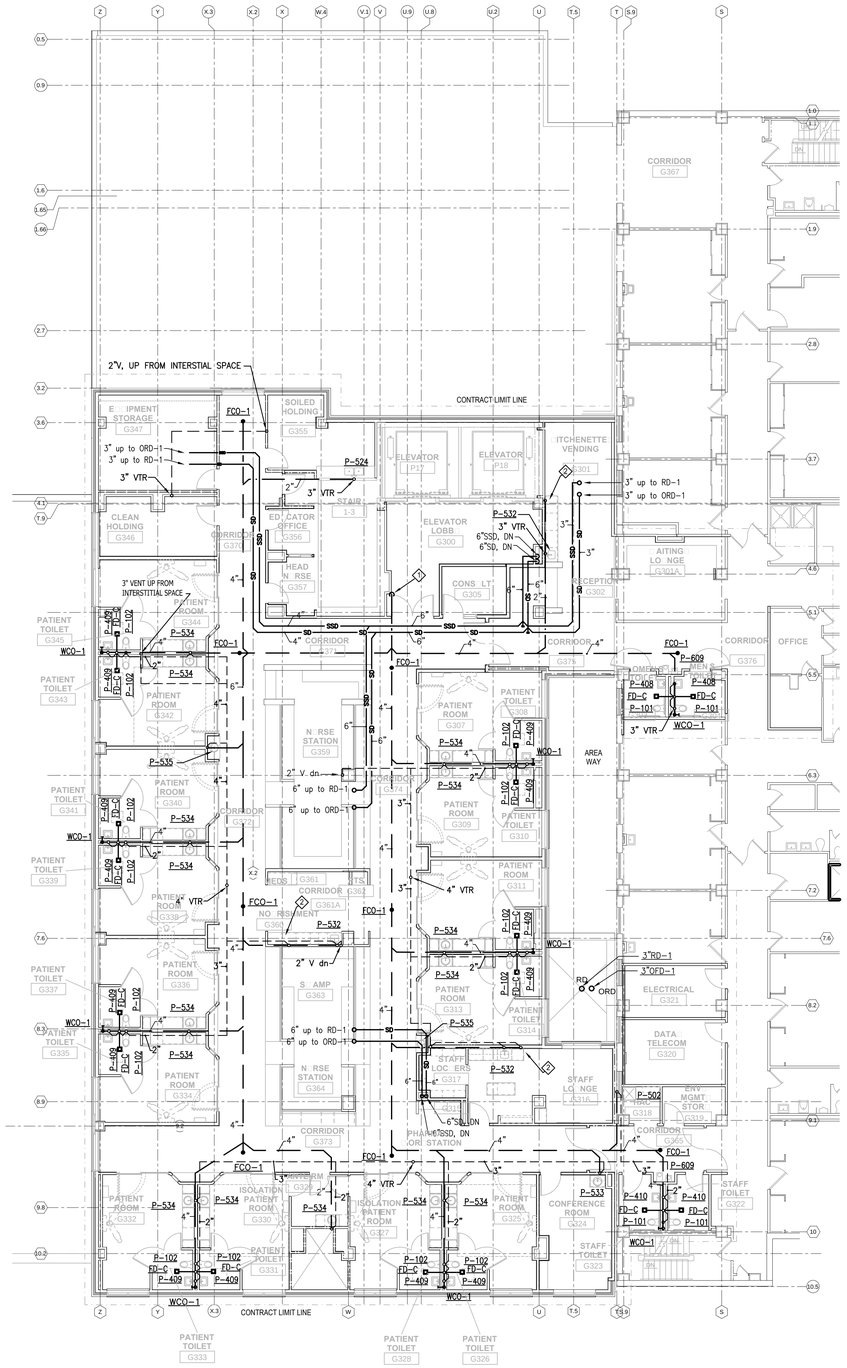
Project Number: 589-330
Building Number: 1
Drawing Number: PL103.3
Dwg. 121 of 296

Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 22, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"



KEYPLAN



FINISH FLOOR ELEVATION: 126'-5 1/4"
(CONTRACTOR FIELD VERIFY ELEVATION)

LEGEND

P-101	TOILET, SENSOR FLUSH
P-102	TOILET, ADA, MANUAL
P-116	BEDPAN WASHER
P-408	WALL HUNG LAVATORY
P-409	WALL HUNG LAVATORY, WRIST BLADE HANDLES
P-410	WALL HUNG LAVATORY, FOOT PEDALS
P-502	MOP SINK
P-524	INTEGRAL SS SINK, FOOT PEDALS
P-532	UNDERCOUNTER SS SINK, WRIST BLADE HANDLES
P-533	INTEGRAL SINK, WRIST BLADE HANDLES,
P-534	INTEGRAL SINK, FOOT PEDALS
P-535	INTEGRAL SINK, FOOT PEDALS, EMERGENCY EYE WASH
P-609	ELECTRIC WATER COOLER, DUAL HEIGHT

SANITARY PIPING
VENT PIPING
COLD WATER PIPING
HOT WATER PIPING
HOT WATER CIRCULATION PIPING
SD — STORM PIPING
SSD — SECONDARY STORM PIPING

KEYED NOTES

1. 6" SANITARY LINE DOWN TO INTERSTITIAL SPACE CONNECT TO EXISTING 6" SANITARY RISER.
2. 2" SANITARY AND 1 1/2" VENT FOR ICE / WATER DISPENSER.

NORTH

ICU FLOOR PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

STRUCTURAL ENGINEER:
KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
ST. LOUIS, MO 63131

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
KWAME BUILDING GROUP
1204 WASHINGTON AVE. SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY:
CODE CONSULTANTS, INC.
2043 WOODLAND PARKWAY, SUITE 300
ST. LOUIS, MO 63146

ACOUSTICAL ENGINEERS:
ACOUSTICONTROL LLC
1709 WASHINGTON AVENUE, LOFT 300
ST. LOUIS, MO 63103

COMMISSIONING:
ZODIAC INTERNATIONAL
16100 CHESTERFIELD PARKWAY, SUITE 365
CHESTERFIELD, MO 63017

ENVIROMENTAL:
EVIROMENTAL CONSULTANTS, LLC
#6 MEADOW HEIGHTS PROFESSIONAL PARK DR.
COLLINSVILLE, IL
62234

ARCHITECT/ENGINEERS:

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Drawing Title: ICU FLOOR PLAN SANITARY & STORM DEDUCT ALTERNATE 4

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Drawing Number: PL103.4

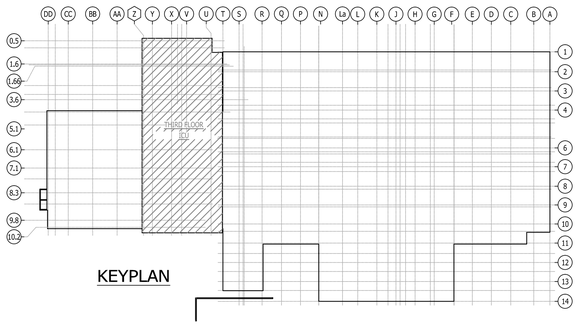
Dwg. 122 of 296

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

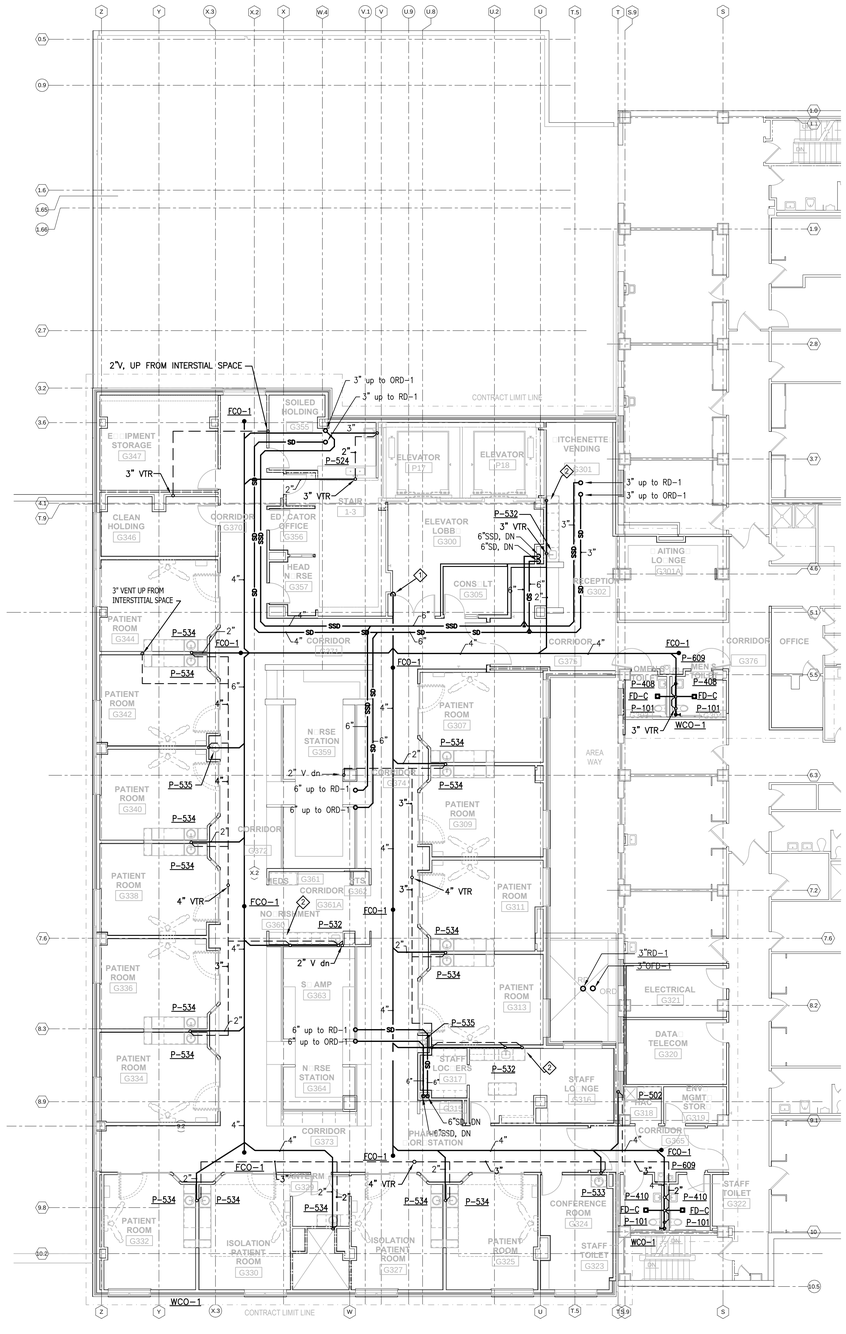
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 27, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"



KEYPLAN



FINISH FLOOR ELEVATION: 126'-5 1/4"
(CONTRACTOR FIELD VERIFY ELEVATION)

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P-534	INTEGRAL SINK, FOOT PEDALS
P-535	INTEGRAL SINK, FOOT PEDALS, EMERGENCY EYE WASH
P-609	ELECTRIC WATER COOLER, DUAL HEIGHT CLINIC SINK

SANITARY PIPING
VENT PIPING
COLD WATER PIPING
HOT WATER PIPING
HOT WATER CIRCULATION PIPING
SD — STORM PIPING
SSD — SECONDARY STORM PIPING

KEYED NOTES

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2. 2" SANITARY AND 1 1/2" VENT FOR ICE / WATER DISPENSER.

NORTH

ICU FLOOR PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

CONSULTANTS:

STRUCTURAL ENGINEER:
KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
ST. LOUIS, MO 63131

MECHANICAL/ELECTRICAL:
KJWW ENGINEERING CONSULTANTS - ST. LOUIS
#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
KWAME BUILDING GROUP
1204 WASHINGTON AVE. SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY:
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ST. LOUIS, MO 63146

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ST. LOUIS, MO 63103

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Drawing Title: ICU FLOOR PLAN SANITARY & STORM DEDUCT ALTERNATE 5

DIRECTOR OF SPECIALTY CARE	INFECTION CONTROL PRACTITIONER	CHIEF ENGINEER	ASSISTANT DIRECTOR	ASSOCIATE DIRECTOR OF PATIENT SERVICES	CHIEF OF STAFF	ASSOCIATE DIRECTOR	MEDICAL CENTER DIRECTOR

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Drawing Number: PL103.5

Dwg. 123 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231 PRINTED ON: August 22, 2014 ORIGINAL SIZE OF SHEET IS 30" X 42"

NORTH

ICU ROOF PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions
1	01/14/2015	Amendment #4

CONSULTANTS:

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1630 DES PERES RD, SUITE 100
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ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
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1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
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1204 WASHINGTON AVE, SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY:
CODE CONSULTANTS, INC.
2043 WOODLAND PARKWAY, SUITE 300
ST. LOUIS, MO 63146

ACOUSTICAL ENGINEERS:
ACOUSTICONTROL LLC
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ST. LOUIS, MO 63103

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CHESTERFIELD, MO 63017

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Drawing Title: ICU ROOF PLAN SANITARY & STORM BASE BID & DEDUCT ALTERNATE 1

Project Title: INTENSIVE CARE UNIT

Location: HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Project Number: 589-330

Building Number: 1

Drawing Number: PL104.0

Dwg. 124 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

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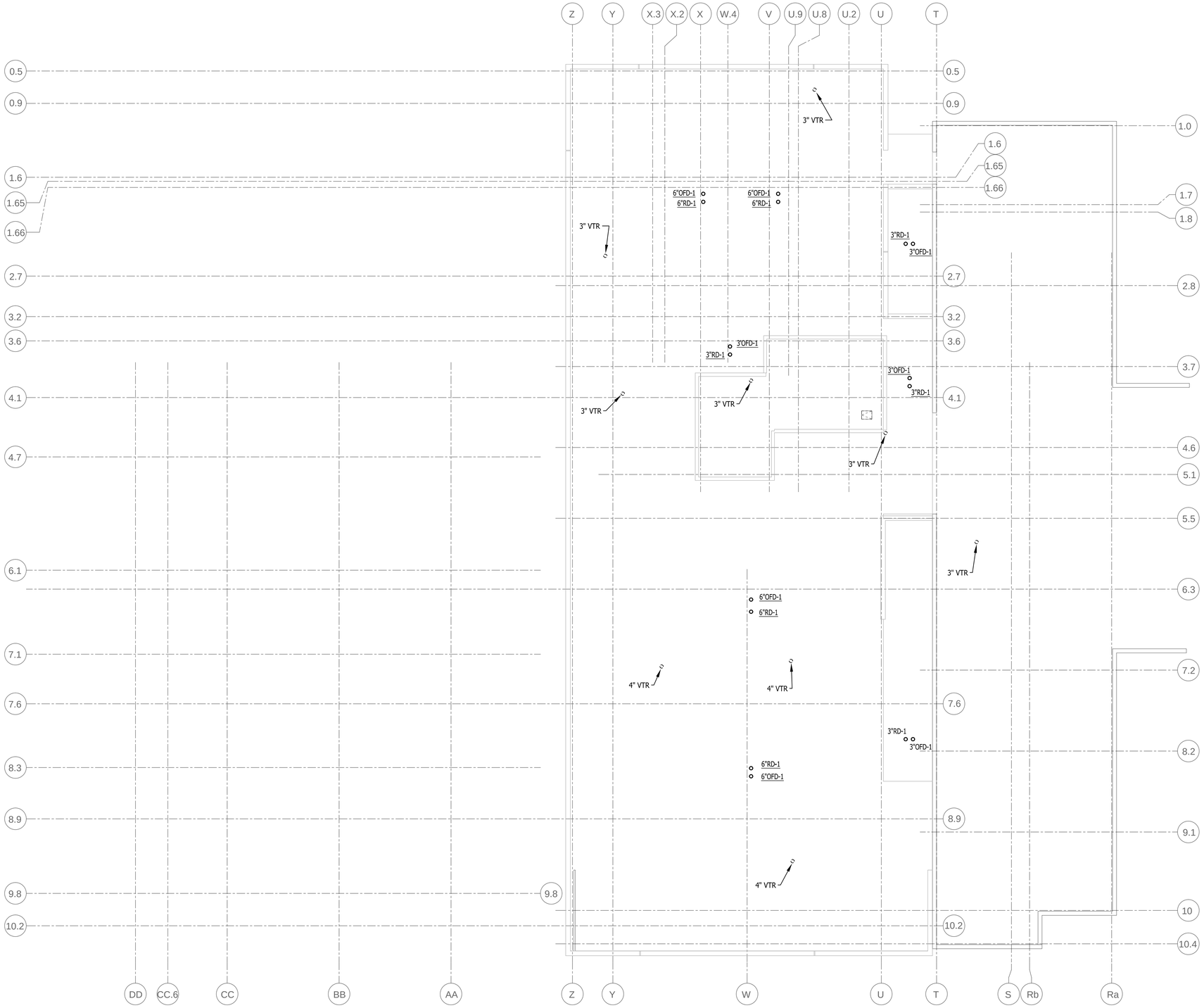

NORTH

ICU ROOF PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED
CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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MECHANICAL/ELECTRICAL:
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ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
303RD ENGINEERING GROUP, LLC
1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
KWAME BUILDING GROUP
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ST. LOUIS, MO 63103

LIFE SAFETY:
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2043 WOODLAND PARKWAY, SUITE 300
ST. LOUIS, MO 63146

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Drawing Title: ICU ROOF PLAN SANITARY & STORM DEDUCT ALTERNATE 2

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Drawing Number: PL104.2

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Dwg. 125 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

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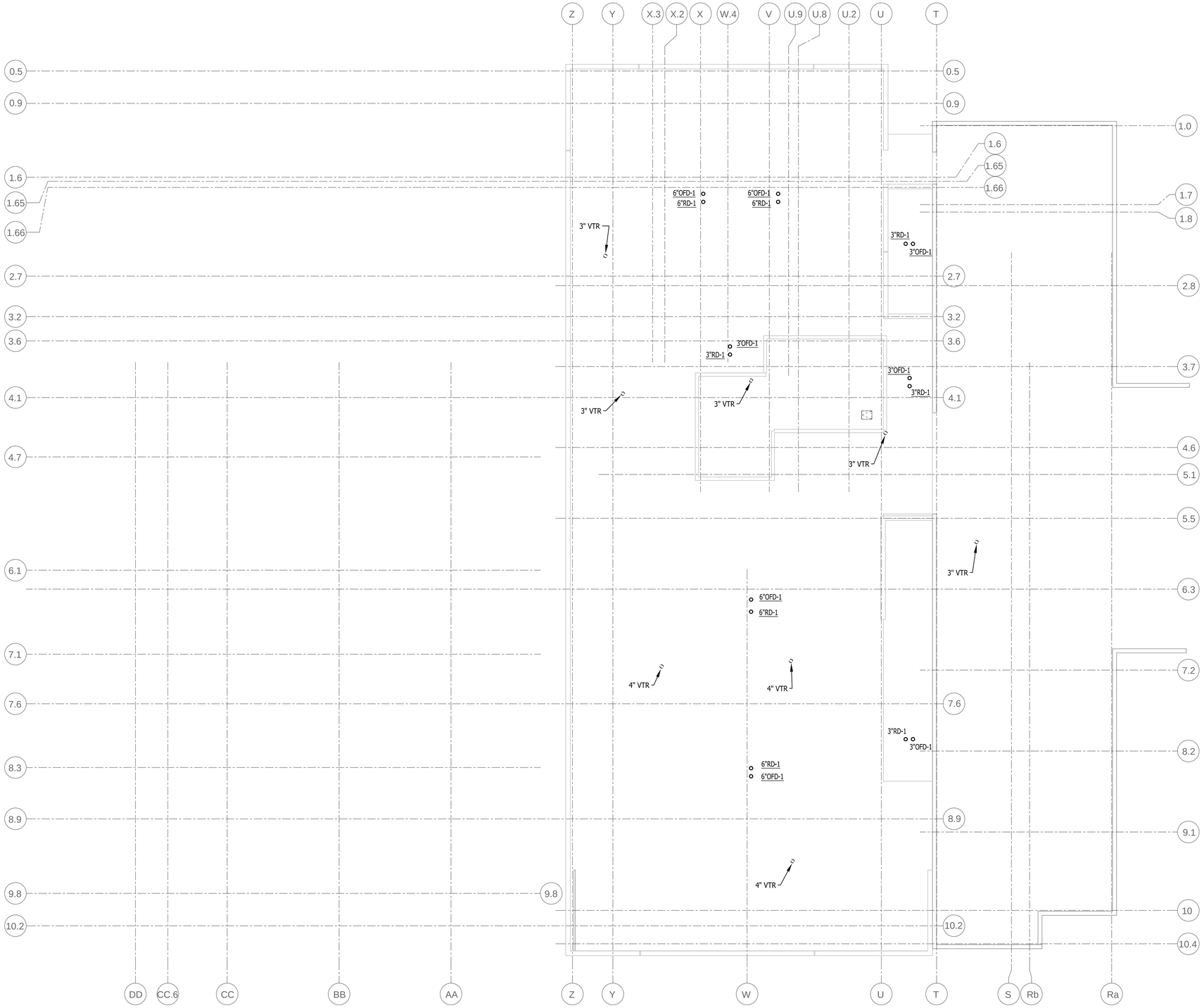

NORTH

ICU ROOF PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

FULLY SPRINKLERED CONSTRUCTION DOCUMENTS

No.	Date	Revisions

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KPFF CONSULTING ENGINEERS - ST. LOUIS
1630 DES PERES RD, SUITE 100
ST. LOUIS, MO 63131

MECHANICAL/ELECTRICAL:
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#15 SUNNEN DRIVE, SUITE 104
ST. LOUIS, MO 63141

PLUMBING/FIRE PROTECTION:
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1935 ARSENAL STREET
ST. LOUIS, MO 63118

ESTIMATING:
KWAME BUILDING GROUP
1204 WASHINGTON AVE, SUITE 200
ST. LOUIS, MO 63103

LIFE SAFETY:
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ST. LOUIS, MO 63146

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ST. LOUIS, MO 63103

COMMISSIONING:
ZODIAC INTERNATIONAL
16100 CHESTERFIELD PARKWAY, SUITE 365
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ENVIROMENTAL:
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Drawing Title: ICU ROOF PLAN SANITARY & STORM DEDUCT ALTERNATE 3

Project Title: INTENSIVE CARE UNIT

Project Number: 589-330

Building Number: 1

Location: HARRY S. TRUMAN VAMC

Drawing Number: PL104.3

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Dwg. 126 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

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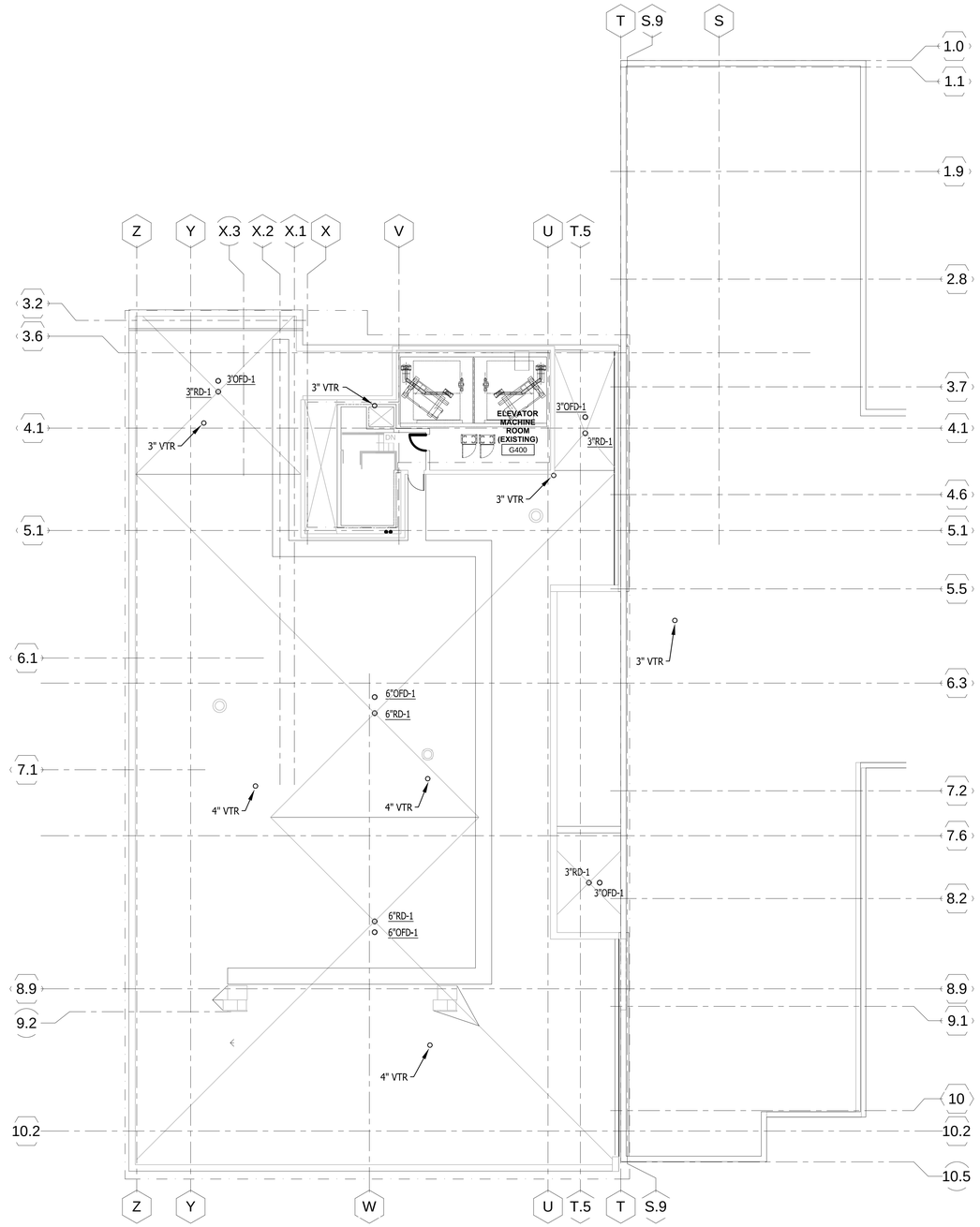

NORTH

ICU ROOF PLAN - SANITARY & STORM

SCALE: 3/32" = 1'-0"

PLAN

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CONSTRUCTION DOCUMENTS

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Drawing Title
ICU ROOF PLAN
SANITARY & STORM
DEDUCT ALTERNATES 4 & 5

Project Title
INTENSIVE CARE UNIT

Project Number
589-330

Building Number
1

Location
HARRY S. TRUMAN VAMC

Date	Checked	Drawn	Approved
08/22/14	CKF	JGM	

Drawing Number
PL104.4

Dwg. 127 of 296

Office of Construction and Facilities Management

Department of Veterans Affairs

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