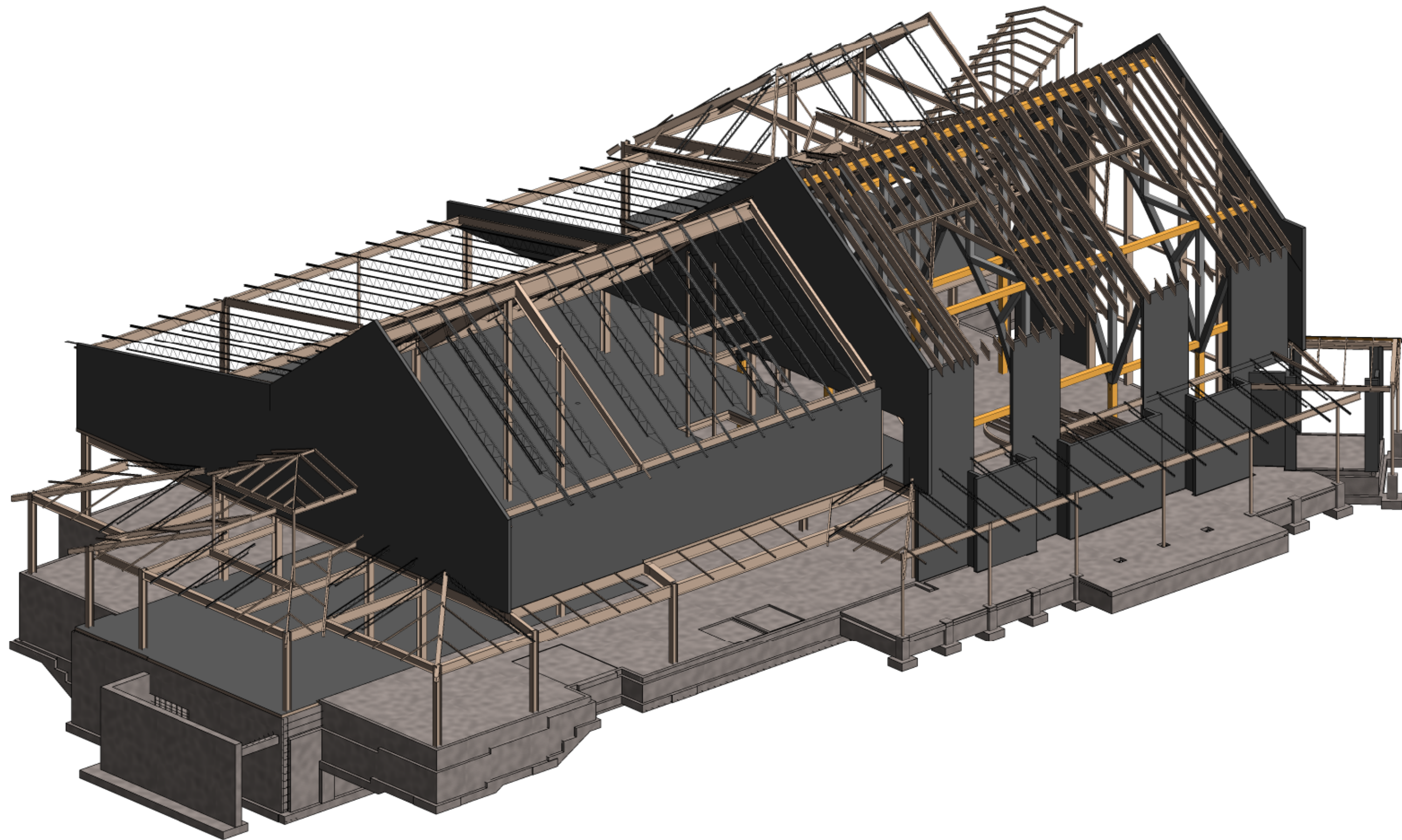
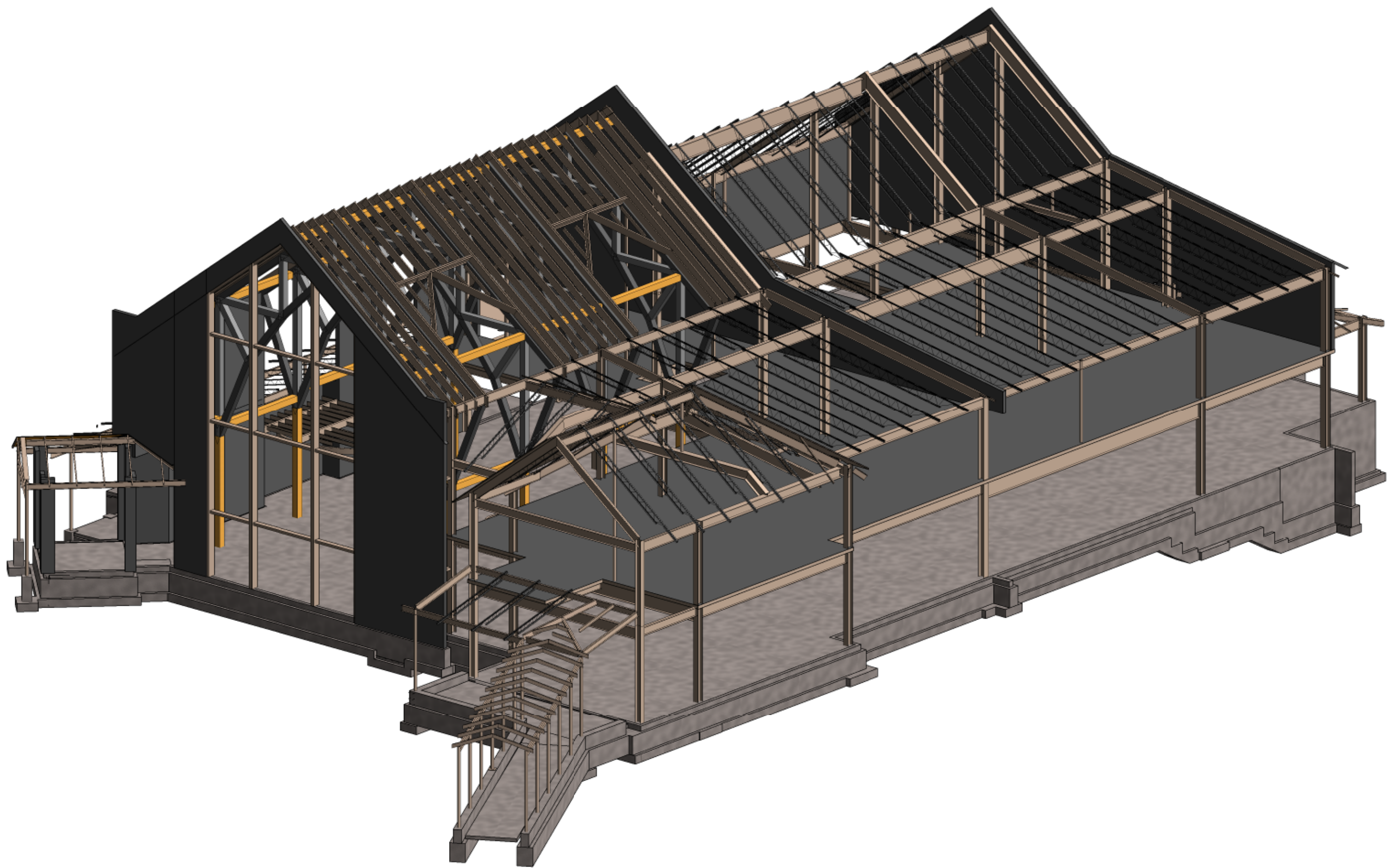


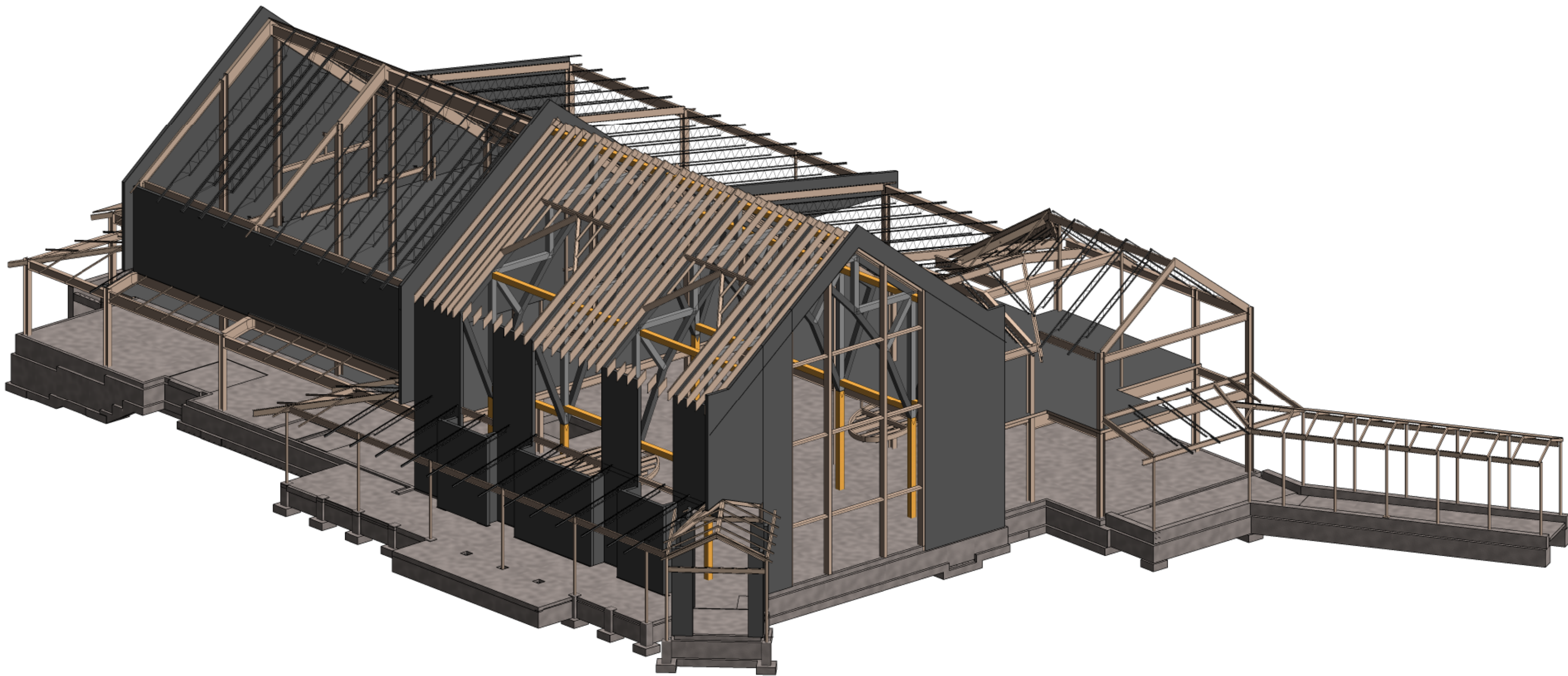
1 3D-NORTHEAST VIEW



2 3D-NORTHWEST VIEW



3 3D-SOUTHEAST VIEW



4 3D-SOUTHWEST VIEW

FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

	CONSULTANTS:						ARCHITECT:	Project Number	3468	Scale		Drawing Title	3D VIEWS		Project Title	Behavioral Health Complex		VA Project Number	595-109	Office of Facilities Management
	Civil Engineer	Structural Engineer	MEP Engineer	Environmental Consultant	Cost Estimator											Building Number	34			
																Drawing Number	S000			
	600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 576-8663 Fax (973) 738-8710	180 W. Ridge Pike Limerick, PA 19468 Tel (214) 329-5559	1407 Scalp Avenue Johnstown, PA 15804 Tel (814) 269-8300 Fax (814) 269-9301	1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel (610) 621-2000	221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888												Dwg. 22 of 123			
Revisions	Date							2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406			Approved: Project Director	Location 1700 South Lincoln Ave. Lebanon, PA 17042								
								t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com				Date 07/27/2012		Checked NEW	Drawn RAZ					



DESIGN CRITERIA NOTES		
1.	THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2009 EDITION.	
2.	DESIGN LOADS ARE AS LISTED BELOW. NO PROVISIONS HAVE BEEN MADE FOR FUTURE EXPANSION.	
	LIVE LOADS:	
	FIRST FLOOR	100 PSF
	OFFICES	50 PSF
	STAIRS	100 PSF
	GENERAL AREAS ABOVE FIRST FLOOR	80 PSF
	MECHANICAL ROOMS	EQUIP. WT.
	STORAGE AREAS	125 PSF
	ROOF	20 PSF
	KITCHENS	150 PSF
	PARTITIONS IN NON-PUBLIC AREAS	20 PSF
	SUPERIMPOSED DEAD LOADS:	
	MECHANICAL, ELECTRICAL AND CEILING FINISHES WHERE SHOWN ON ARCHITECTURAL	10 PSF AS REQUIRED
3.	LOADINGS FOR MECHANICAL ROOMS ARE BASED ON WEIGHTS OF ASSUMED EQUIPMENT AS INDICATED BY THE MECHANICAL DOCUMENTS (INCLUDING THE WEIGHT OF CONCRETE PADS, WHERE INDICATED). ANY CHANGES IN TYPE, SIZE, OR NUMBER OF PIECES OF EQUIPMENT SHALL BE REPORTED TO THE ARCHITECT FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.	
4.	BASIC DESIGN SNOW LOADS ARE IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2009.	
	GROUND SNOW LOAD, Pg	30 PSF
	FLAT-ROOF SNOW LOAD, Pf	26 PSF
	SNOW EXPOSURE FACTOR, Ce	1.0
	SNOW LOAD IMPORTANCE FACTOR, Is	1.1
	THERMAL FACTOR, Ct	1.2
5.	BASIC DESIGN WIND LOADS ARE IN ACCORDANCE WITH THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2009 EDITION.	
	BASIC WIND SPEED:	90 MPH
	EXPOSURE	B
	IMPORTANCE FACTOR	1.15
6.	SEISMIC DESIGN - THE STRUCTURE HAS BEEN DESIGNED ACCORDING TO THE INTERNATIONAL BUILDING CODE, 2009 AND THE VA HANDBOOK H-18-8, "SEISMIC DESIGN REQUIREMENTS."	
	SEISMIC IMPORTANCE FACTOR, I	1.25
	0.2 SECOND SPECTRAL ACCELERATION, Ss	7.3g
	1.0 SECOND SPECTRAL ACCELERATION, S1	26.3g
	SITE CLASS	B
	SEISMIC DESIGN CATEGORY	B
	DESIGN BASE SHEAR	30K
	RESPONSE MODIFICATION FACTOR, R	3

#### FOUNDATION NOTES

- FOUNDATION DESIGN AND SUBSURFACE INFORMATION IS BASED ON THE GEOTECHNICAL RECOMMENDATIONS PREPARED BY DEWBERRY-GOODKIND, INC DATED AUGUST 22, 2011.
- SPREAD FOOTINGS ARE DESIGNED FOR THE ALLOWABLE NET SOIL BEARING PRESSURE OF 6000 PSF.
- LATERAL DESIGN SOIL PRESSURE FOR BASEMENT WALLS, (WALLS RESTRAINED AT TOP AND BOTTOM), IS 360 PCF EQUIVALENT HYDROSTATIC PRESSURE. AN ADDITIONAL SURFACE SURCHARGE OF 250 PSF HAS BEEN USED.
- LATERAL DESIGN SOIL PRESSURE FOR CANTILEVERED RETAINING WALLS IS 40 PCF EQUIVALENT HYDROSTATIC PRESSURE. AN ADDITIONAL SURFACE SURCHARGE OF 250 PSF HAS BEEN USED.
- BASEMENT WALLS SHALL NOT BE BACKFILLED UNTIL FLOORS AT TOP AND BOTTOM ARE IN PLACE AND HAVE REACHED REQUIRED DESIGN STRENGTH.
- PROVIDE CRACK CONTROL JOINTS IN SLABS-ON-GRADE AS INDICATED BY THE SPECIFICATIONS.
- DO NOT ALLOW SURFACE WATER TO ACCUMULATE AND/OR POND IN EXCAVATIONS. TEMPORARY DEWATERING SYSTEM TO BE USED DURING CONSTRUCTION WILL BE DESIGNED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT AND THE REQUIREMENTS OF THE GOVERNING BUILDING CODE.

#### MISCELLANEOUS NOTES

- THE DETAILS SHOWN ON SHEETS S2.01, S2.02, AND S2.03 DESIGNATED AS "TYPICAL DETAILS" APPLY GENERALLY TO THE DRAWINGS IN AREAS WHERE CONDITIONS ARE SIMILAR TO THOSE DESCRIBED IN THE DETAILS, UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS, AND DETAILS. DO NOT SCALE THE DRAWINGS.
- PRINCIPAL OPENINGS, CURBS, AND SLAB DEPRESSIONS ARE SHOWN ON THE DRAWINGS. SEE ARCHITECTURAL, MECH'L, ELECTR'L, AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS, OTHER OPENINGS, AND SLAB DEPRESSIONS. NOT SHOWN. THE CONTRACTOR SHALL PROVIDE FOR ALL OPENINGS, CURBS, AND SLAB DEPRESSIONS WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. SIZE AND LOCATION OF OPENINGS SHALL BE VERIFIED WITH THE MECHANICAL CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.
- THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE ARCH'L, MECH'L, ELECTR'L, PLUMBING, AND CIVIL DRAWINGS TO CONFIRM ALL REQUIREMENTS OF THE WORK. REPORT ANY CONFLICT/DISCREPANCY BETWEEN THE DISCIPLINES TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS.
- THE HORIZONTAL AND VERTICAL DIMENSIONS OF EXISTING STRUCTURES SHALL BE VERIFIED BEFORE WORK IS BEGUN. ANY VARIATION BETWEEN DIMENSIONS SHOWN AND EXISTING DIMENSIONS SHALL BE REPORTED TO THE ARCHITECT.
- THE CONTRACTOR SHALL INSURE THAT CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS AND THAT THESE LOADS ARE NOT PUT ON THE STRUCTURAL MEMBERS PRIOR TO THE TIME THAT THE CONCRETE REACHES THE FULL DESIGN STRENGTH AND ALL FRAMING MEMBERS AND THEIR CONNECTIONS ARE IN PLACE.
- PROVIDE CHAMFERS AS SPECIFIED AND/OR DETAILED ON THE ARCHITECTURAL DRAWINGS. CHAMFERS HAVE NOT BEEN SHOWN ON THE STRUCTURAL DRAWINGS.

#### CONCRETE NOTES

##### A. CAST-IN-PLACE CONCRETE

- CLASSES OF CONCRETE SHALL BE AS FOLLOWS:

LOCATION	F <sub>c</sub> (psi)	MAX. NOM. 28-DAY * CONC TYPE	COARSE AGG. SIZE
ALL CONC. U.N.O.	3,000	N.W.C.	1 1/2"
SLAB-ON-GRADE	3,500	N.W.C.	1 1/2"
PILASTERS, WALLS	4,000	N.W.C.	1 1/2"
BEAMS, SLABS, TOPPING SLABS	4,000	N.W.C.	3/4"
COLUMNS	5,000	N.W.C.	1"
SLABS ON METAL DECK	3,500	N.W.C.	3/4"

\* N.W.C.-DENOTES NORMAL WEIGHT CONC. WITH A MAX. DRY DENSITY = 150 PCF

- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS NOTED BELOW. SEE SECTION 7.7. ACI 318-08 FOR CONDITIONS NOT NOTED.

PIER FOUNDATIONS, PIER CAPS, WALL FOOTINGS, COLUMN FOOTINGS, AND OTHER CONCRETE PLACED AGAINST SOIL	3"
BEAMS, COLUMNS, PILASTERS,	1 1/2"
WALLS	1 1/2" BACKFILLED SIDES 1" NON-BACKFILLED SIDES
GRADE BEAMS	2" TOP AND SIDES 3" BOTTOM
SLABS	1"
COMPOSITE SLABS ON METAL DECK [MESH SHALL BE DRAPED]	1" TOP
SLABS-ON-GRADE	3" BOTTOM (MINIMUM) 1" TOP
TOPPING SLABS	1 1/2" TOP

- HORIZONTAL CONSTRUCTION JOINTS SHALL BE PERMITTED ONLY WHERE SHOWN ON THE STRUCTURAL DRAWINGS.

- ALL GRADE BEAMS SHALL BE FORMED ON SIDES.

#### CONCRETE REINFORCEMENT NOTES

##### A. REINFORCING STEEL

- CONCRETE REINFORCING BARS SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60, EXCEPT AS NOTED. COLUMN TIES AND FIELD BENT #3 DOWELS MAY BE ASTM A615, GRADE 40. REINFORCEMENT REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706, U.N.O.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. THE FOLLOWING WELDED WIRE FABRIC SHALL BE USED FOR AREAS SPECIFIED BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS:  

5 INCH SLAB-ON-GRADE	6 X 6 - W2.9 X W2.9
NON-STRUCTURAL TOP/G SLABS	6 X 6 - W1.4 X W1.4
- HEADED STUDS AND DEFORMED BAR ANCHORS USED IN FABRICATION OF EMBEDDED ASSEMBLIES SHALL BE WELDED TO THOSE ASSEMBLIES USING A FULL FUSION PROCESS.
- REINFORCING BARS MAY BE SPLICED ONLY AS SHOWN ON THE DRAWINGS EXCEPT THAT REINFORCING DESIGNATED AS "CONTINUOUS" SHALL HAVE A CLASS "B" LAP SPLICE (ACI 318-02, SECTION 12.15.1). LAP SPLICES OF CONTINUOUS REINFORCING SHALL BE MADE OVER SUPPORTS FOR BOTTOM BARS AND FOR INTERMEDIATE BARS AND AT MIDSPAN FOR TOP BARS. AT EXTERIOR SUPPORTS, TOP AND BOTTOM BARS SHALL BE HOOKED AND INTERMEDIATE BARS SHALL EXTEND TO WITHIN 2" OF EXTERIOR FACE.
- HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL WALL CORNER BAR PLACING DETAILS.
- LAPS IN WELDED WIRE FABRIC SHALL BE TWO MESH AT SPLICES.
- PROVIDE STANDARD BAR CHAIRS WITH PROTECTIVE TIPS AND SPACERS SPACED AS REQUIRED TO PROVIDE SPECIFIED CONCRETE PROTECTION FOR REINFORCEMENT BUT NOT TO EXCEED 3" ON CENTER FOR SLABS, BEAMS, AND GRADE BEAMS. PLACE BAR CHAIRS LONGITUDINALLY IN BEAMS DIRECTLY BELOW THE STIRRUPS.

#### STEEL NOTES

##### A. STRUCTURAL STEEL

- STRUCTURAL STEEL CONSTRUCTION HAS BEEN DESIGNED IN ACCORDANCE WITH A.I.S.C. "LOAD AND RESISTANCE FACTOR DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", DATED SEPTEMBER 1, 1986, U.N.O.
- STRUCTURAL STEEL SHAPES, PLATES, ETC., SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS, U.N.O.  

FLOOR/ROOF BEAMS AND GIRDERS EXCLUDING W8X10 AND SMALLER	ASTM A992-50
COLUMNS, WEB DOUBLER PLATES	ASTM A992-50
CHANNELS, TEES, ANGLES, BARS, PLATES, W8X10 AND SMALLER BEAMS	ASTM A36
STEEL TUBING (TS SECTIONS) (Fy = 46 KSI)	ASTM A500-GR. B
STEEL PIPE TYPE "E" OR "S"	ASTM A501 OR A53
ANCHOR BOLTS	ASTM A307 ASTM A449 AS NOTED
- CONNECTION BOLTS SHALL CONFORM TO ASTM A325. USE BEARING TYPE

BOLTS WITH THREAD ALLOWED ACROSS THE SHEAR PLANE (TYPE N) AT TYPICAL BEAM SHEAR CONNECTIONS, U.N.O. USE TYPE "SC" BOLTS WITH EITHER DIRECT TENSION INDICATOR OR LOAD INDICATOR WASHERS AT ALL BOLTED SLIP CRITICAL CONNECTIONS.

- A LISTING OF CONNECTIONS CONSIDERED "SLIP CRITICAL" IS AS FOLLOWS:  

BOLTED CONNECTIONS OF TENSION MEMBERS.  
BOLTS USED IN MOMENT CONNECTIONS.

- STEEL BEAM CONNECTIONS NOT DETAILED ON THE DRAWINGS SHALL BE DESIGNED BY THE STRUCTURAL STEEL FABRICATOR. BEAM CONNECTIONS SHALL DEVELOP THE END REACTIONS GIVEN ON THE DRAWINGS. WHERE END REACTIONS ARE NOT SPECIFIED, THE BEAM CONNECTION SHALL DEVELOP 50% OF THE BEAMS WEB ALLOWABLE SHEAR CAPACITY. A MINIMUM CONNECTION CAPACITY OF 12 KIPS SHALL BE PROVIDED FOR ALL BEAMS, UNLESS NOTED OTHERWISE BY SPECIFIED REACTION.

THE STRUCTURAL STEEL FABRICATOR SHALL PROVIDE CERTIFICATION BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF THE PROJECT, THAT THE CONNECTION DESIGN IS IN ACCORDANCE WITH ALL APPLICABLE CODES AND SPECIFICATIONS.

- FOR ALL HIGH STRENGTH BOLTS, HARDENED WASHERS SHALL BE PROVIDED.

- GALVANIZING OF STEEL MEMBERS SHALL CONFORM TO ASTM A123.

- HEADED STUDS AND DEFORMED BAR ANCHORS USED IN FABRICATION OF EMBEDDED ASSEMBLIES SHALL BE WELDED TO THOSE ASSEMBLIES USING A FULL FUSION PROCESS.

- STEEL BEAMS SHALL BE ERECTED WITH NATURAL CAMBER UP.

- ANCHOR BOLTS HAVE NOT BEEN DESIGNED FOR ANY SPECIFIC ERECTION FORCES. THE ERECTOR IS RESPONSIBLE FOR ANY AND ALL GUYING AND BRACING REQUIRED TO ERECT THE BUILDING.

- COMPOSITE BEAMS USING CONCRETE SLAB AS COMPRESSION FLANGE ARE DESIGNED UNSHORED CONSTRUCTION. THE CONTRACTOR SHOULD ANTICIPATE UP TO 3/8" DEFLECTION UNDER WET WEIGHT OF CONCRETE FOR BEAMS WHICH HAVE NO CAMBER SHOWN ON THE STRUCTURAL DRAWINGS.

- OPEN WEB STEEL JOISTS AND BRIDGING SHALL CONFORM TO THE STANDARDS OF THE STEEL JOIST INSTITUTE. BRIDGING SHALL BE WELDED TO STEEL BEAMS AND ANCHORED TO MASONRY OR CONCRETE WALLS AT THE ENDS, U.N.O.

- THE RESPONSIBILITY FOR ANY TEMPORARY SHORING OR BRACING DURING THE CONSTRUCTION PHASE BEFORE COMPLETION OF CONNECTION AND POURING OF FLOOR SLAB IS ADDRESSED IN THE SPECIFICATIONS AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

- IF NOT SHOWN ON DRAWINGS, SUPPORT OF METAL DECK AROUND COLUMN CLOSURE, SCREED PLATES AROUND THE OPENINGS AND EDGE SLAB SHALL BE PROVIDED BY THE CONTRACTOR.
- DURING CONSTRUCTION, THE ERECTED STRUCTURAL STEEL SHALL NOT PROCEED HIGHER THAN THE CONCRETE CORE CONSTRUCTION. THE CONTRACTOR SHALL MAKE SAFE PROVISIONS FOR STABILIZING THE STEEL STRUCTURE BOTH HORIZONTALLY AND VERTICALLY. THE STABILITY OF THE FRAME DURING ERECTION IS THE CONTRACTOR'S RESPONSIBILITY.

##### B. WELDING

- WELDED CONSTRUCTION SHALL CONFORM TO THE AMERICAN WELDING SOCIETY "STRUCTURAL WELDING CODE" D1.1; AWS D1.3-SHEET STEEL; AND AWS D14 "REINFORCING STEEL WELDING CODE".
- ELECTRODES FOR FIELD AND SHOP WELDS OF STRUCTURAL STEEL SHALL BE E70XX, U.N.O.
- ELECTRODES FOR WELDING OF REINFORCING STEEL SHALL BE E80XX.
- ELECTRODES FOR WELDING OF SHEET STEEL SHALL CONFORM TO AWS D1.3.
- WHEN WELDS ARE NOT CALLED-OUT ON DRAWINGS, THEY ARE MINIMUM SIZE CONTINUOUS FILLET WELDS IN ACCORDANCE WITH AWS D1.1. FILLET WELDS NOT SPECIFIED AS TO LENGTH SHALL BE CONTINUOUS.
- UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL GROOVE WELDS SHALL BE FULL PENETRATION.
- ONLY LOW HYDROGEN ELECTRODES SHALL BE USED ON REINFORCING STEEL AND ASTM A992 STEEL.
- PROVIDE FILLET WELDS AT ALL CONTACT JOINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

##### C. HEADED STUDS/SHEAR CONNECTORS

- SHEAR CONNECTORS USED IN COMPOSITE CONSTRUCTION WITH NORMAL WEIGHT CONCRETE SLAB SHALL BE 3/4" DIAMETER HEADED STUDS AUTOMATICALLY END WELDED IN THE FIELD THRU THE METAL DECK TO STEEL BEAMS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. SHEAR CONNECTORS SHALL HAVE A CAPACITY OF 11.5 KIPS PER CONNECTOR WITH A MINIMUM FACTOR OF SAFETY OF TWO. SHEAR CONNECTORS SHALL HAVE A MINIMUM LENGTH OF 4" AFTER WELDING. SUBSTITUTION OF SHEAR CONNECTORS WITH A DESIGN SHEAR CAPACITY OTHER THAN GIVEN ABOVE WILL BE ACCEPTABLE PROVIDED REQUIRED HORIZONTAL SHEAR CAPACITY IN A BEAM OR GIRDER IS UNALTERED. THE ARRANGEMENT AND SPACING OF SHEAR CONNECTORS SHALL BE SUBJECT TO THE STRUCTURAL ENGINEER'S APPROVAL. CONTRACTOR SHALL SUBMIT NECESSARY CALCULATIONS AND DIAGRAMS OF STUD LAYOUT FOR APPROVAL.
- REMOVE CERAMIC FERRULES FROM STUD AND DECK BEFORE PLACING CONCRETE.
- REFER TO TYPICAL DETAILS FOR STUD LAYOUT INFORMATION.

#### METAL DECK NOTES

- COMPOSITE METAL DECK SHALL BE GALVANIZED AND SHALL BE PLACED WITH CONTINUOUS SPANS OF THREE OR MORE WHERE POSSIBLE. IN NO CASE SHALL UNSHORED METAL DECK SPANS EXCEED THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS OR DEFLECTION CRITERIA OF SPAN DIVIDED BY 240. METAL DECK SHALL PROVIDE THE FOLLOWING MINIMUM PROPERTIES:  

TYPICAL FLOOR COMPOSITE METAL DECK
2" - 20 GA.
I = 409 IN <sup>4</sup> /FT.
SP = 341 IN <sup>3</sup> /FT.
SN = 346 IN <sup>3</sup> /FT.
- DECK UNITS SHALL BE LAPPED ONLY OVER SUPPORTS.
- SHORING SHALL REMAIN UNDER THOSE DECK UNITS REQUIRING SHORING UNTIL CONCRETE CYLINDER COMPRESSIVE STRENGTH IS A MINIMUM OF 2500 PSI.

- ROOF DECK OVER OPEN WEB STEEL JOISTS SHALL BE INTERMEDIATE RIBBED AND GALVANIZED METAL ROOF DECK WITH THE FOLLOWING MINIMUM PROPERTIES:

1.5B - 20 GA.  
I = 201 IN<sup>4</sup>/FT.  
SP = 234 IN<sup>3</sup>/FT.  
SN = 247 IN<sup>3</sup>/FT.

WELD DECK TO SUPPORTING MEMBERS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. DECK AND WELDS SHALL HAVE A MINIMUM DESIGN DIAPHRAGM SHEAR CAPACITY OF 300 PLF.

#### SPECIAL INSPECTION

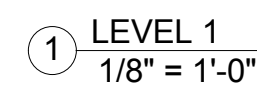
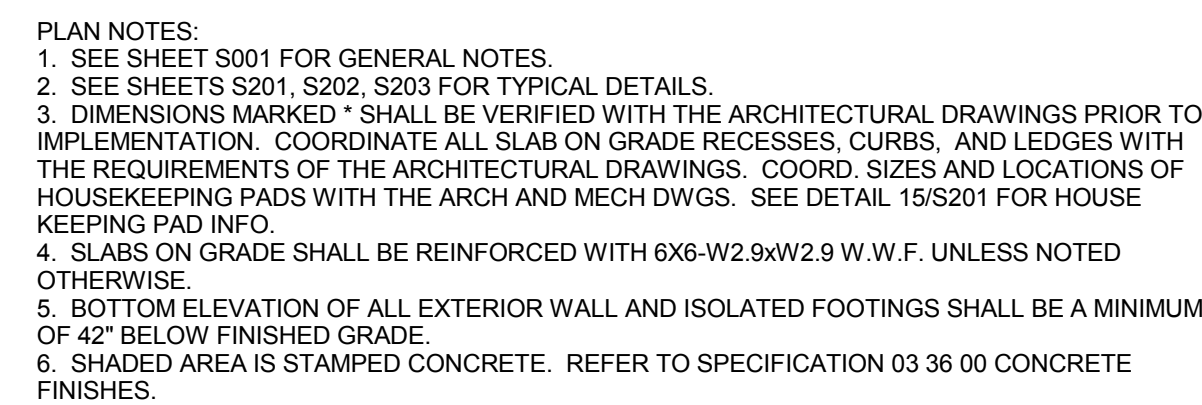
- SPECIAL INSPECTION BY A QUALIFIED INSPECTOR APPROVED BY THE RESIDENT ENGINEER SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK. SEE THE PROJECT SPECIFICATIONS FOR SPECIFIC REQUIREMENTS IN EACH CATEGORY.

- ALL CONCRETE WORK
- REINFORCING STEEL
- FABRICATED STRUCTURAL STEEL
- WELDING:  
STRUCTURAL STEEL  
MOMENT CONNECTIONS  
METAL DECKING  
SHEAR CONNECTORS
- ANCHOR BOLTS
- HIGH STRENGTH BOLTING
- EXPANSION TYPE ANCHOR BOLTS
- ADHESIVE TYPE ANCHOR BOLTS
- COMPACTED FILL

FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

CONSULTANTS:		ARCHITECT:		Project Number 3468	Scale 1 : 84	Drawing Title General Notes	Project Title Behavioral Health Complex	VA Project Number 595-109	Office of Facilities Management  Department of Veterans Affairs
<div><div>Civil Engineer <b>Dewberry</b></div><div>Structural Engineer <b>WZIG</b></div><div>MEP Engineer <b>THE LENZ GROUP</b></div><div>Environmental Consultant <b>SSM</b></div><div>Cost Estimator <b>INTERNATIONAL CONSULTANTS, INC.</b></div></div> <div><div>600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 576-9953 Fax (973) 759-9710</div><div>180 W. Ridge Pike Limerick, PA 19468 Tel (214) 329-5559</div><div>1407 Scalp Avenue Johnstown, PA 15904 Tel (814) 269-9200 Fax (814) 269-9201</div><div>1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel (610) 621-2000</div><div>221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888</div></div> <div><div></div><div><b>ARRAY</b> healthcare facilities solutions</div></div> <div>2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406  t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com</div> <td data-cs="2" data-kind="parent">Approved: Project Director</td> <td data-kind="ghost"></td> <td>Location 1700 South Lincoln Ave. Lebanon, PA 17042</td> <td>Drawing Number S001</td> <td data-kind="ghost"></td>	Approved: Project Director		Location 1700 South Lincoln Ave. Lebanon, PA 17042	Drawing Number S001					
Revisions		Date	Date 07/27/2012	Checked NEW	Drawn RAZ	Dwg. 23 of 123			





(M) (5) (6) *FULLY SPRINKLERED*  
 100% CONSTRUCTION DOCUMENTS

		<b>CONSULTANTS:</b>							<b>ARCHITECT:</b>		Project Number 3468		Scale 1/8" = 1'-0"		Drawing Title <b>BASEMENT &amp; FIRST FLOOR FRAMING PLAN</b>		Project Title <b>Behavioral Health Complex</b>		VA Project Number <b>595-109</b>		<div>Office of Facilities Management</div> <div> Department of Veterans Affairs</div>				
		<b>Civil Engineer</b>  600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel: (973) 576-9683 Fax: (973) 739-8710		<b>Structural Engineer</b>  180 W. Ridge Pike Jonestown, PA 15064 Tel: (214) 329-5559		<b>MEP Engineer</b>  1407 Sculp Avenue Limerick, PA 15064 Tel: (814) 269-8300 Fax: (814) 269-8301		<b>Environmental Consultant</b>  1047 North Park Road, P.O. Box 5307 Reading, PA 19610 Tel: (610) 621-2000		<b>Cost Estimator</b>  221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel: (215) 923-8888		 <b>ARRAY</b> healthcare facilities solutions		2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406  t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com				Approved: Project Director		Location <b>1700 South Lincoln Ave. Lebanon, PA 17042</b>			Building Number <b>34</b>		
Revisions		Date														Drawing Number <b>S111</b>		Dwg. 24 of 123							
																Date <b>07/27/2012</b>		Checked <b>NEW</b>		Drawn <b>RAZ</b>					



② ROOF FRAMING PLAN  
1/8" = 1'-0"

1 SECOND FLOOR FRAMING PLAN  
1/8" = 1'-0"

PLAN NOTES:

1. SEE SHEET S001 FOR GENERAL NOTES.
2. SEE SHEETS S201, S202, S203 FOR TYPICAL DETAILS

		CONSULTANTS:						ARCHITECT:		Project Number 3468		Scale 1/8" = 1'-0"		Drawing Title SECOND FLOOR & ROOF FRAMING PLANS		Project Title Behavioral Health Complex		VA Project Number 595-109		Office of Facilities Management			
		Civil Engineer 		Structural Engineer 		MEP Engineer 		Environmental Consultant 		Cost Estimator 		 7/27/2012		2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406  t: 610.270.0599 f: 610.270.0995 www.arrayffs.com		Approved: Project Director		Location 1700 South Lincoln Ave. Lebanon, PA 17042				Drawing Number 34	
Revisions		Date																Date 07/27/2012				Checked NEW	
																							

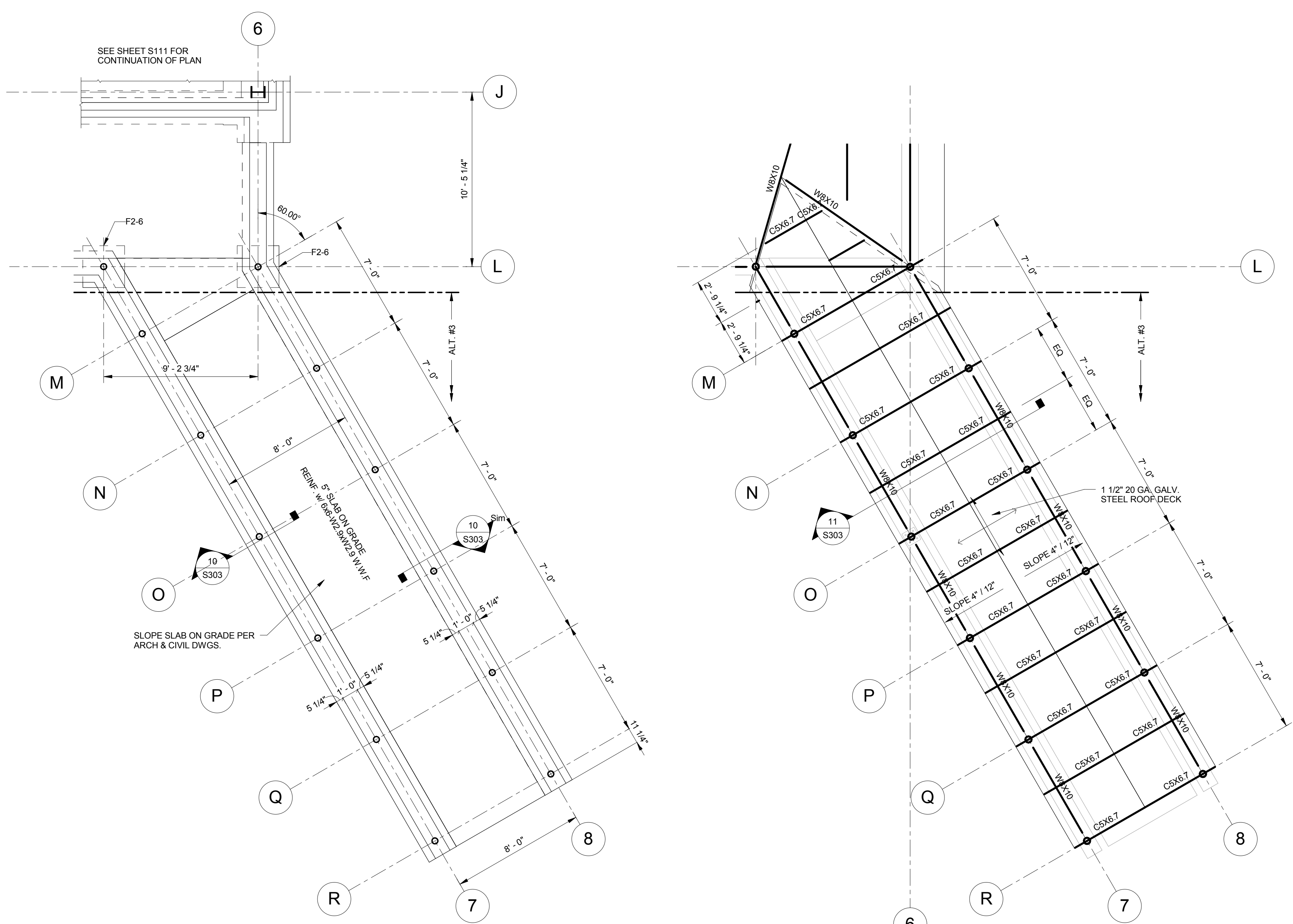
FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

Office of  
Facilities  
Management

 Department of  
Veterans Affairs

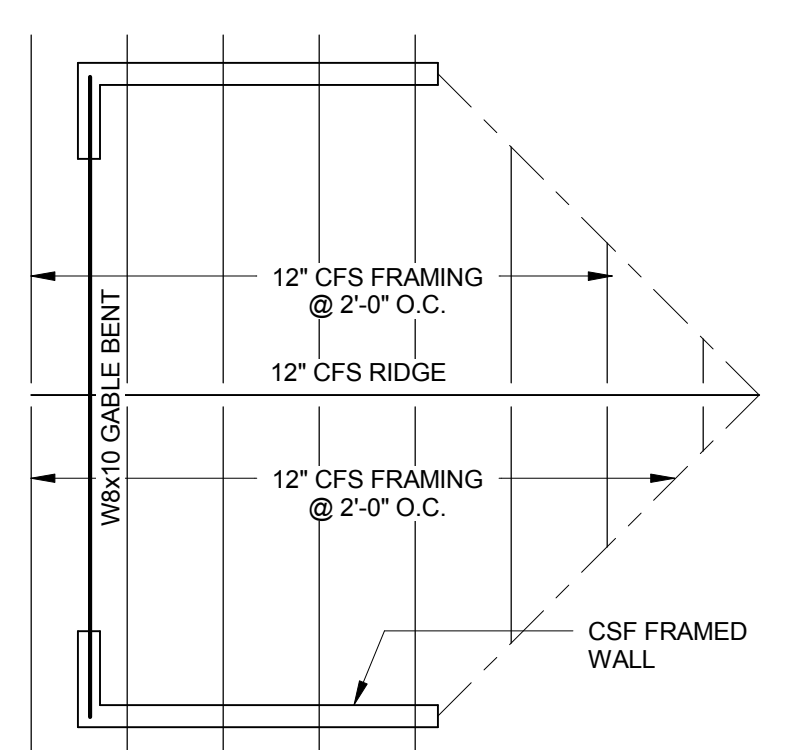


three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one sixteenth inch = one foot

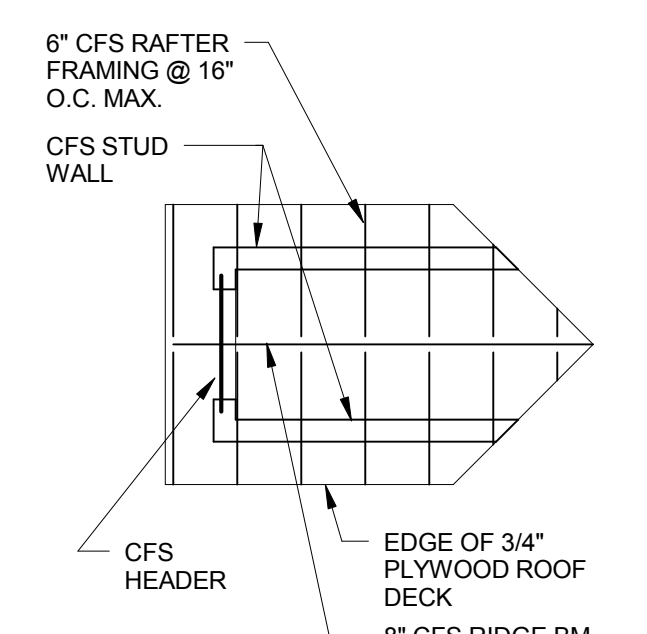


1 Partial Plan Covered Walkway Foundation (Alternate #3)  
1/4" = 1'-0"

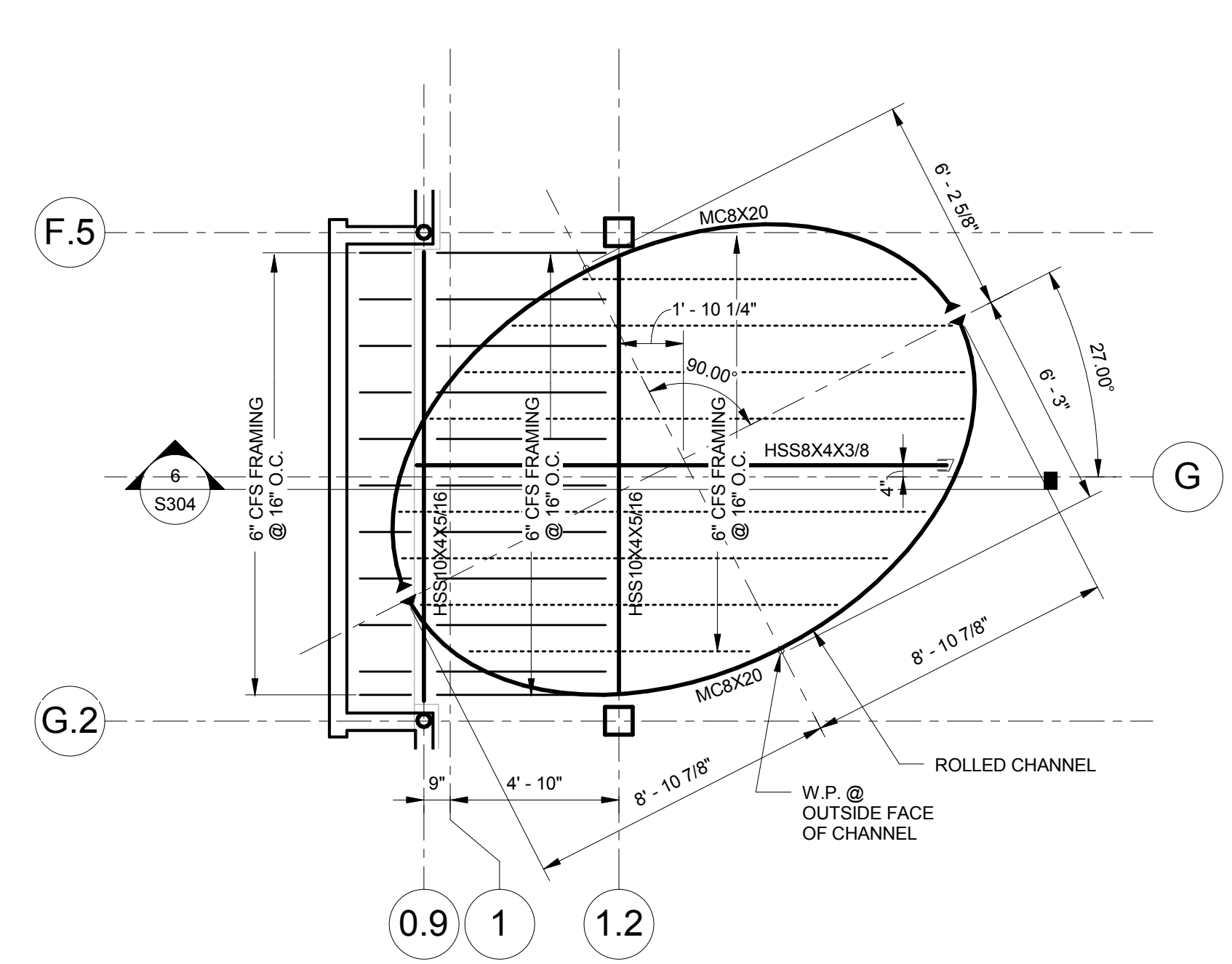
2 Partial Plan Covered Walkway Framing (Alternate #3)  
1/4" = 1'-0"



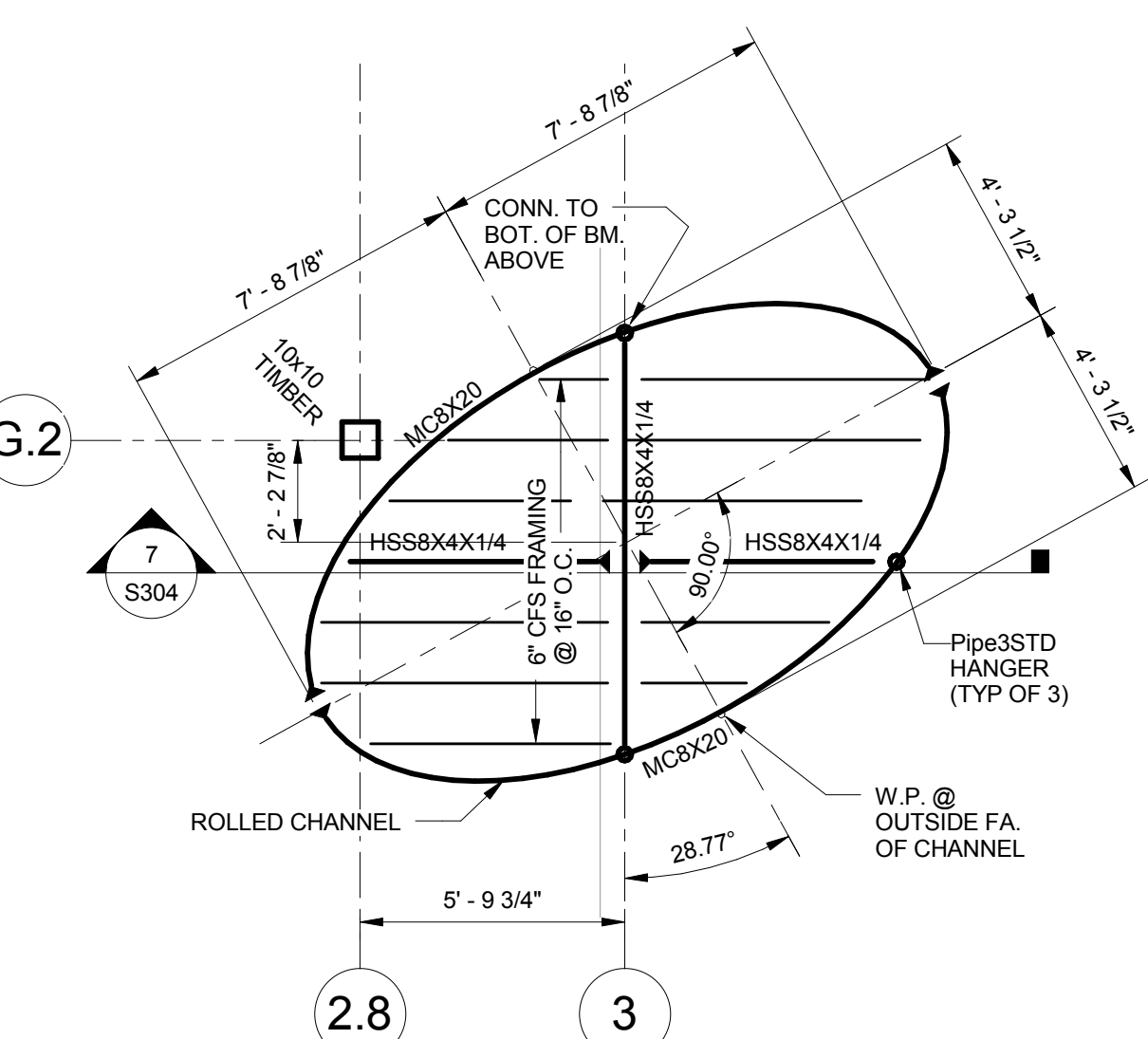
4 TYPICAL DORMER FRAMING PLAN  
1/4" = 1'-0"



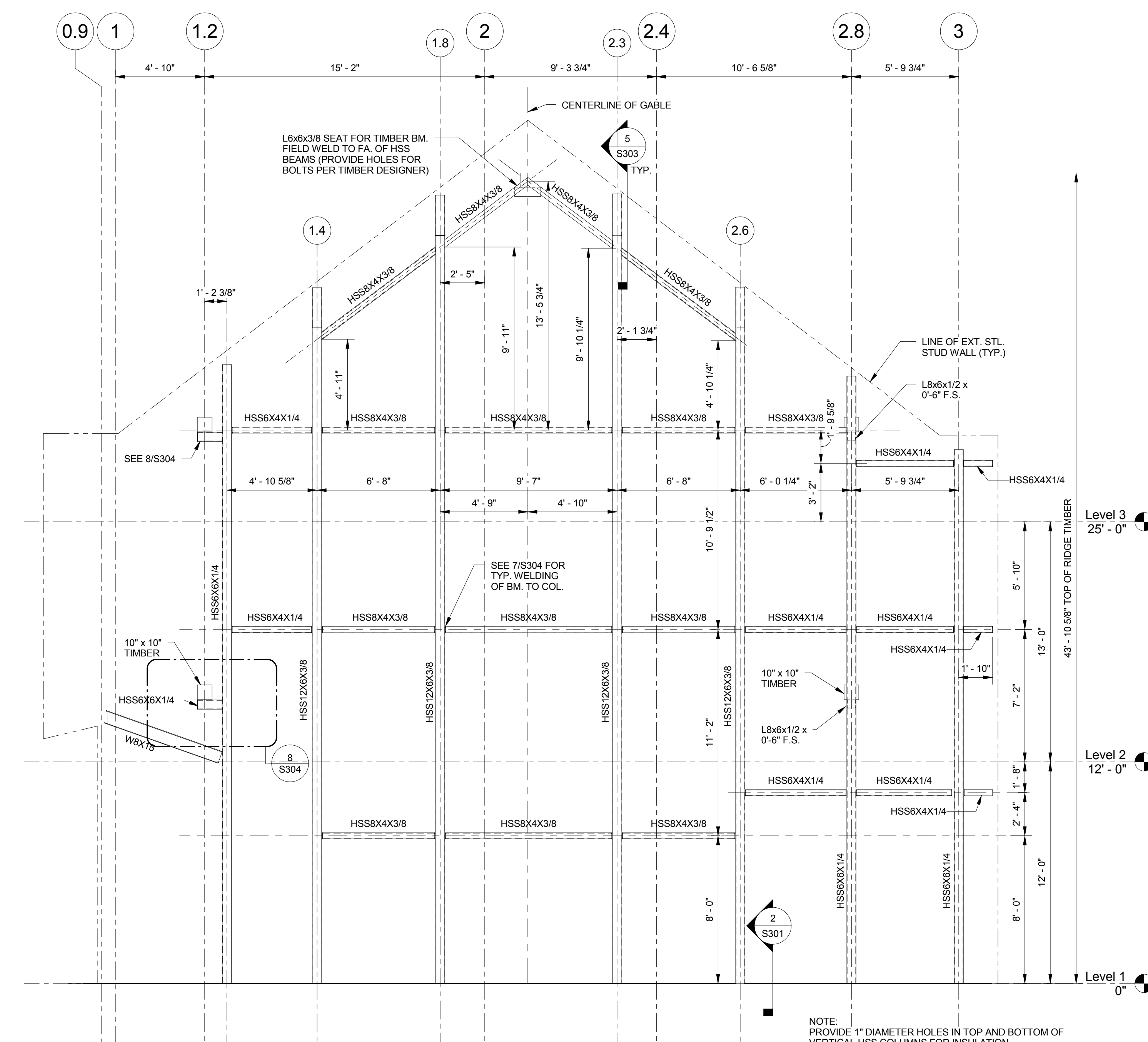
5 SMALL DORMER FRAMING PLAN  
1/4" = 1'-0"



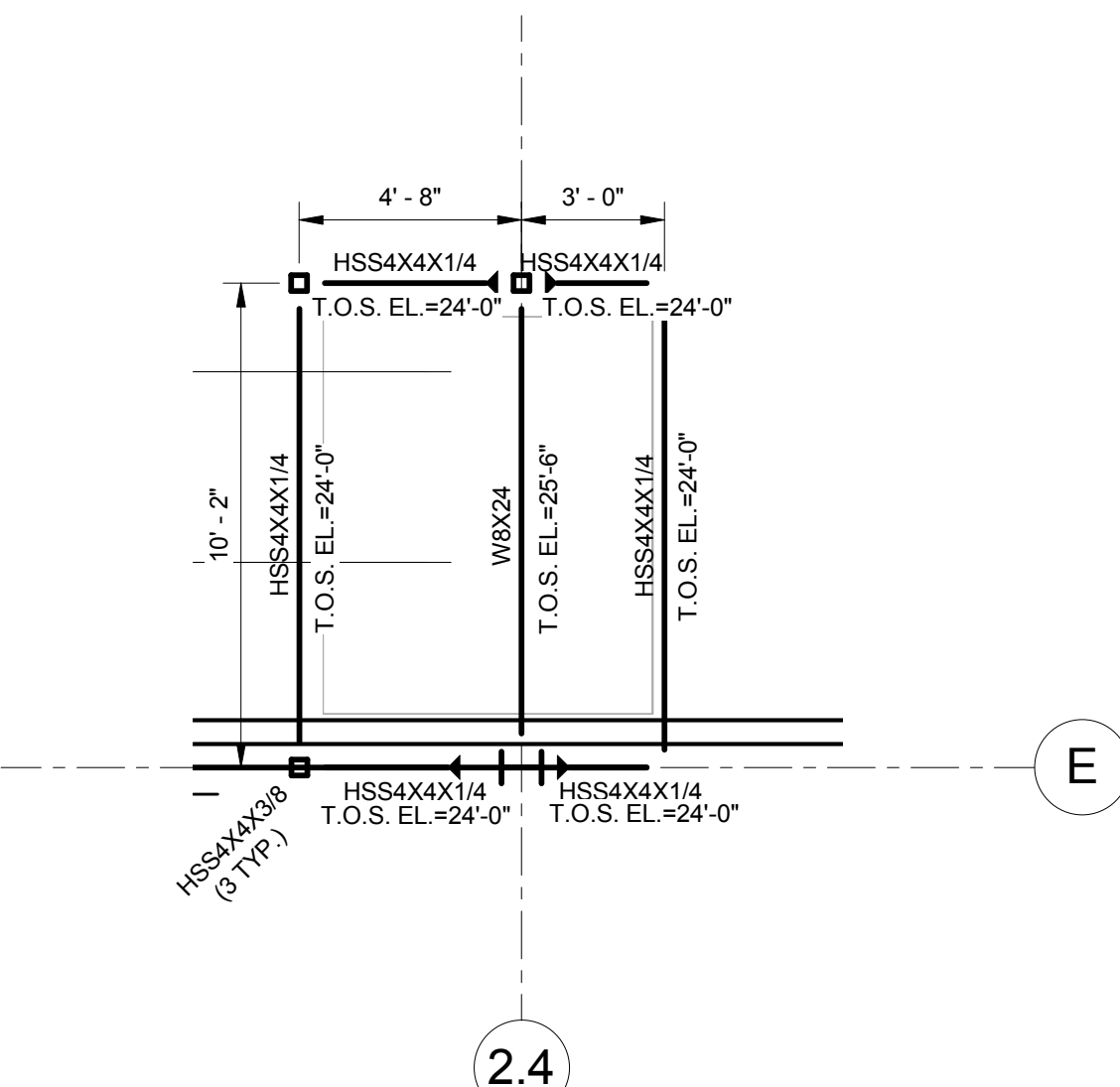
6 CLOUD CEILING FRAMING ABOVE CAFE  
1/4" = 1'-0"



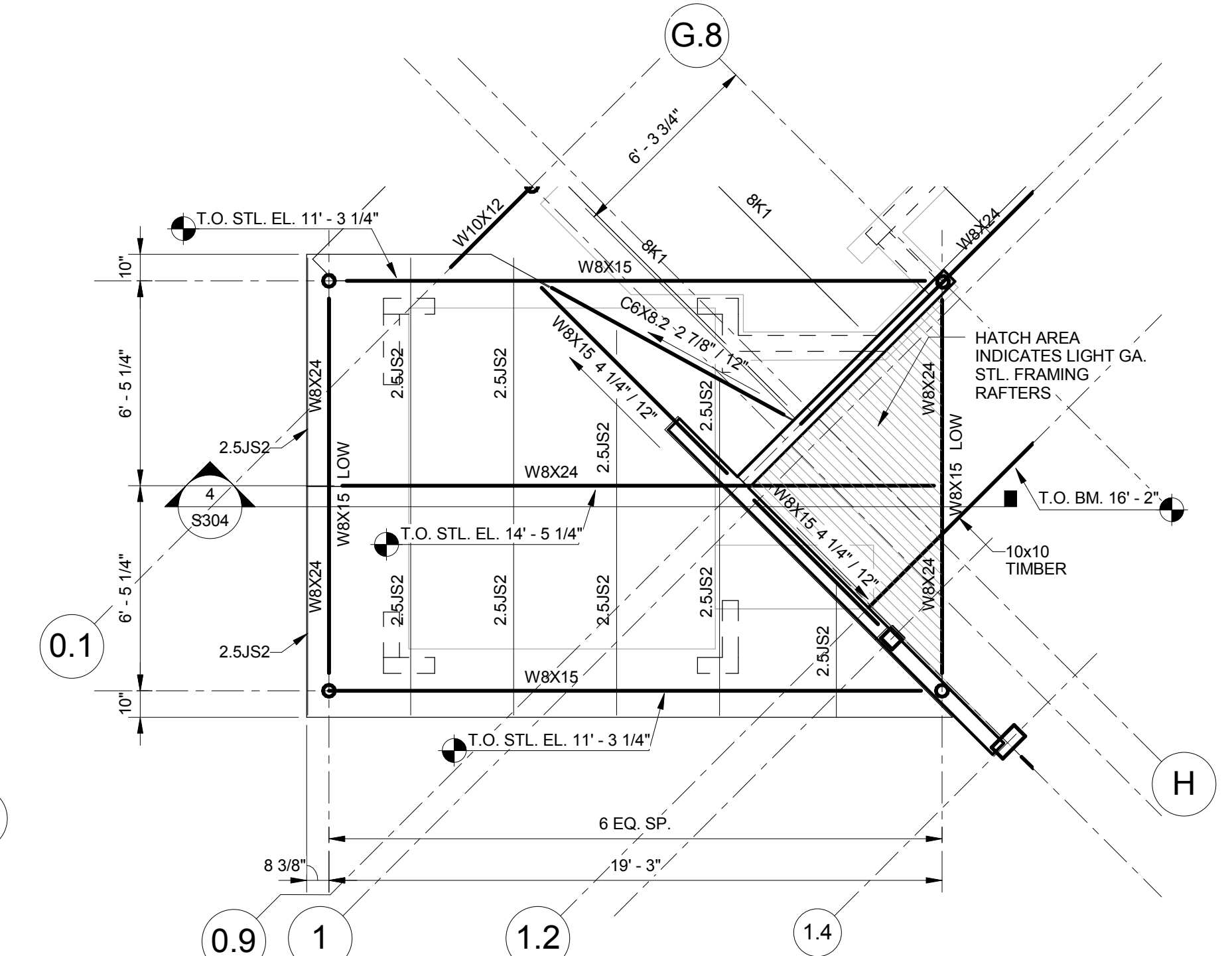
7 CLOUD CEILING FRAMING ABOVE RECEPTION  
1/4" = 1'-0"



3 South Wall Framing Elevation  
1/4" = 1'-0"



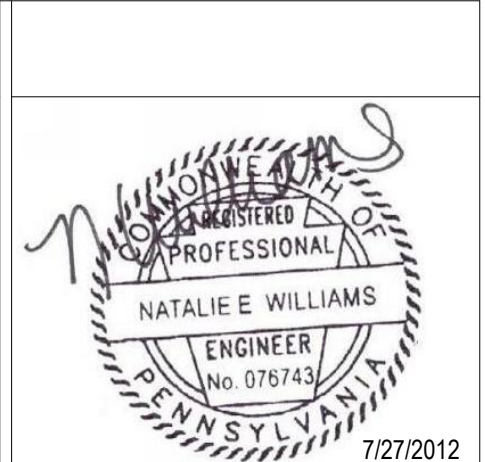
8 ELEVATOR GUIDE RAIL SUPPORT  
1/4" = 1'-0"



9 Partial Plan Front Entrance Roof Framing  
1/4" = 1'-0"

CONSULTANTS:

Civil Engineer <b>Dewberry</b> 600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 976-9953 Fax (973) 759-9710	Structural Engineer <b>WZIG</b> 180 W. Ridge Pike Limerick, PA 19468 Tel (214) 329-5559	MEP Engineer <b>H. E. LENZ COMPANY</b> 1407 Scalp Avenue Johnstown, PA 15904 Tel (814) 269-9300 Fax (814) 269-9301	Environmental Consultant <b>SSM</b> 1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel (610) 621-2000	Cost Estimator <b>INTERNATIONAL CONSULTANTS, INC.</b> 221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888
--	---	---	--	--



ARCHITECT:

**ARRAY**  
healthcare facilities solutions

Project Number 3468  
Scale 1/4" = 1'-0"

2520 Renaissance Boulevard, Suite 110  
King of Prussia, PA 19406  
t: 610.270.0599  
f: 610.270.0995  
www.arrayhfs.com

Drawing Title <b>Partial Plans &amp; Elevations</b>
Approved: Project Director

Project Title <b>Behavioral Health Complex</b>
Location <b>1700 South Lincoln Ave. Lebanon, PA 17042</b>
Date <b>07/27/2012</b>

VA Project Number <b>595-109</b>
Building Number <b>34</b>
Drawing Number <b>S131</b>

Office of Facilities Management

Department of Veterans Affairs

FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

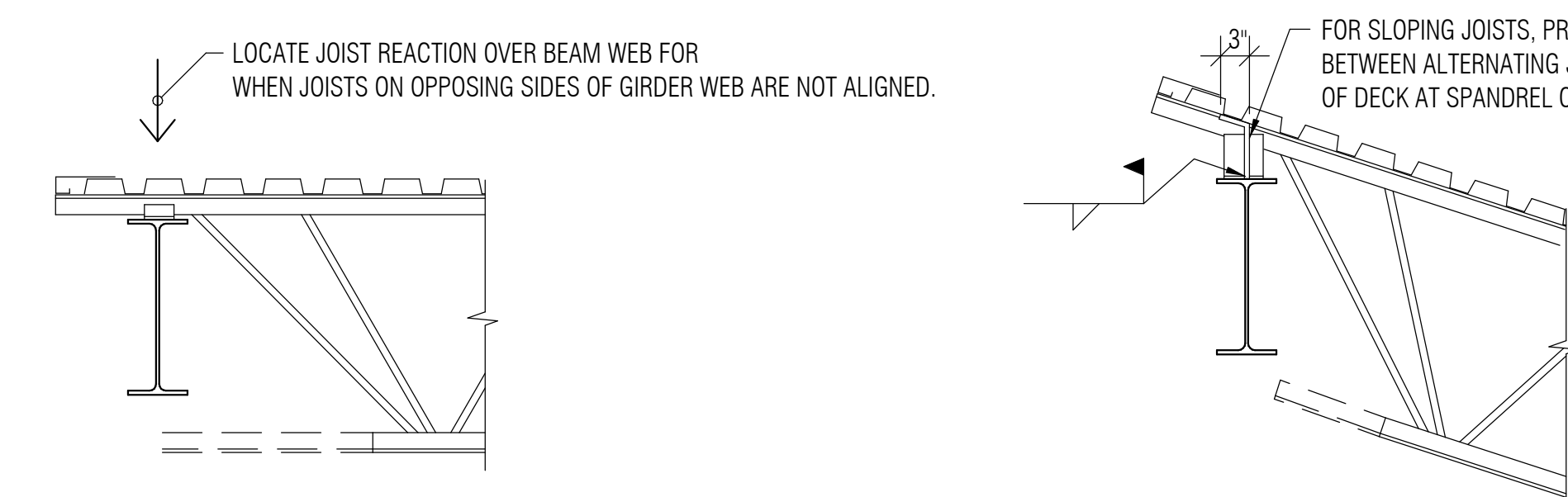








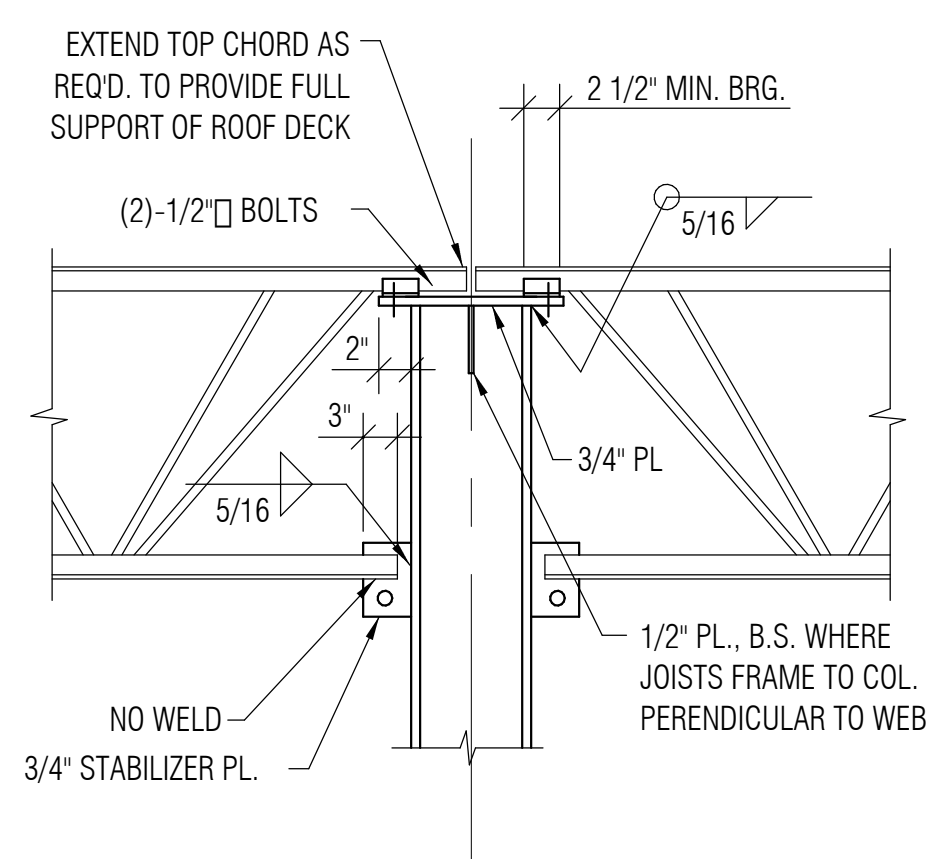




- NOTES:
1. JOIST MANUFACTURER SHALL DESIGN AND PROVIDE SPECIAL JOIST SEATS AT LOCATIONS WHERE THE WIDTH OF BEARING AT SUPPORTS IS LESS THAN THE MINIMUM DIMENSION SPECIFIED BY THE STEEL JOIST INSTITUTE.
  2. INCREASE SEAT DEPTH WHERE REQUIRED ON SLOPING JOISTS; COORDINATE SEAT DEPTH DIMS. WITH STRUCTURAL STEEL DETAILER AND ADJUST BEAM TOP OF STEEL ELEVATIONS AS REQUIRED.

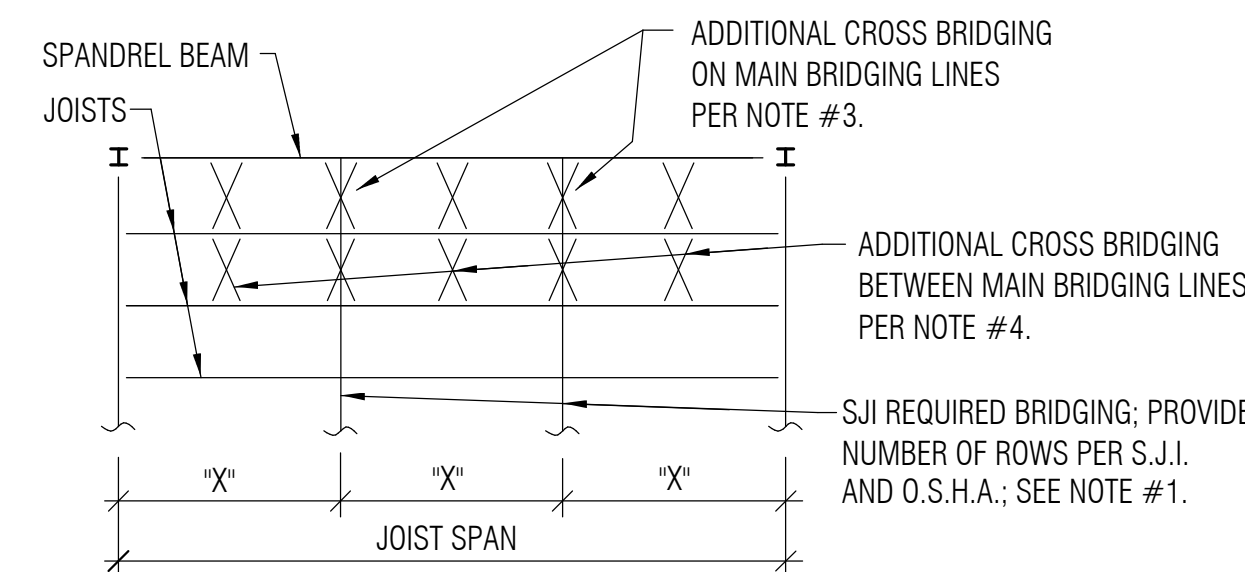
1 K-SERIES JOIST BEARING ON STEEL BEAM

Scale: 3/4" = 1'-0"



2 K-SERIES JOIST CONNECTION TO STEEL COLUMN

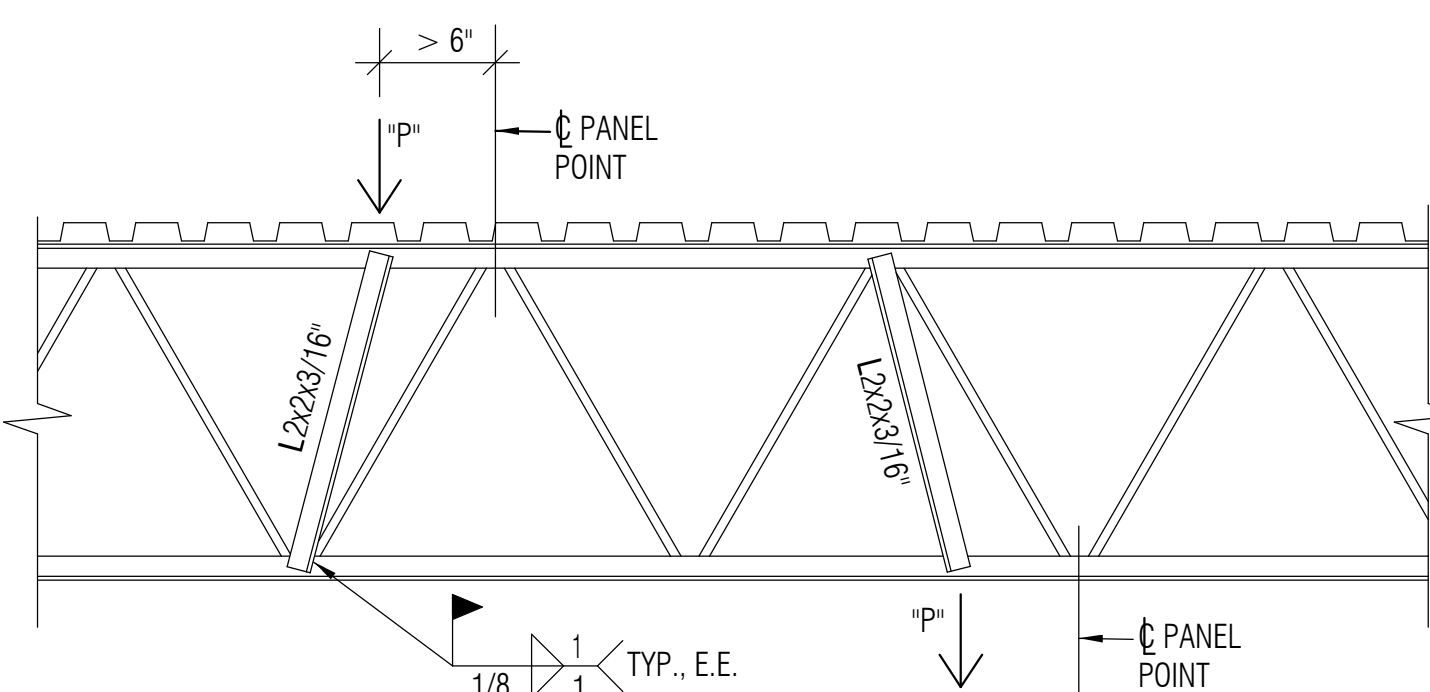
Scale: 3/4" = 1'-0"



- NOTES:
1. PROVIDE BRIDGING IN ACCORDANCE WITH S.J.I. AND O.S.H.A. REQUIREMENTS.
  2. CROSS BRIDGING BETWEEN SPANDREL BEAM AND FIRST TWO JOISTS SHALL BE AT LEAST L2x2x1/8 AND SHALL BE LARGER WHERE REQUIRED PER S.J.I. AND O.S.H.A.
  3. WHERE SJI REQUIRES ONLY HORIZONTAL BRIDGING, PROVIDE ADDITIONAL CROSS BRIDGING AS SHOWN ALIGNED WITH HORIZONTAL BRIDGING.
  4. WHERE DIM. 'X' > 8'-0" INSTALL ADDITIONAL CROSS BRIDGING AS SHOWN BETWEEN MAIN BRIDGING LINES; WHERE DIM. 'X' > 16'-0" INSTALL TWO ROWS OF ADDITIONAL CROSS BRIDGING EQUALLY SPACED BETWEEN ADJACENT LINES OF MAIN BRIDGING.
  5. SEE 'BRIDGING TERMINATION AT STEEL BEAM' DETAIL FOR BRIDGING ANCHORAGE TO BEAM.

3 JOIST BRIDGING ANCHORAGE TO SPANDREL BEAM

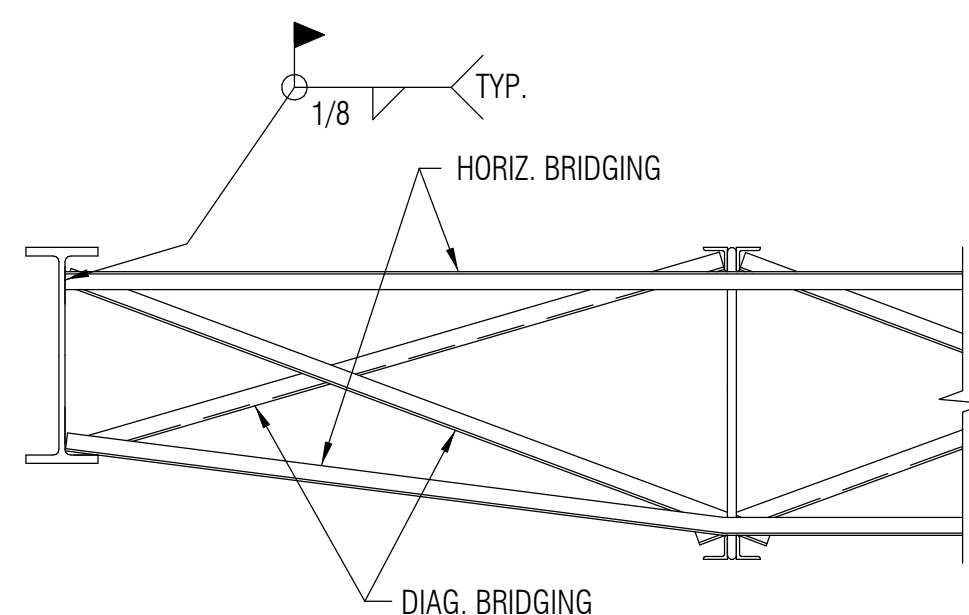
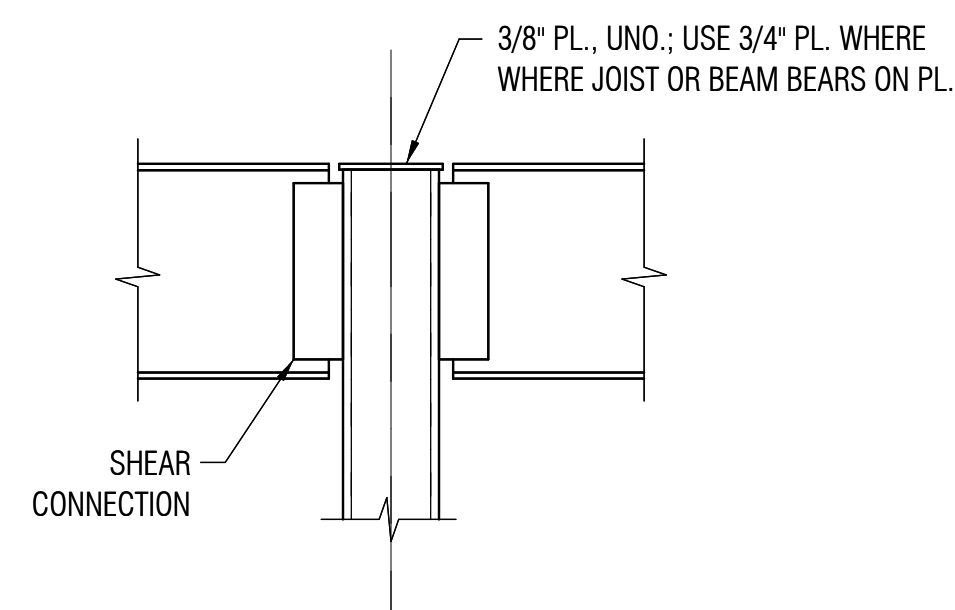
Scale: 3/4" = 1'-0"



- NOTES:
1. INSTALL L 2x2 STIFFENER ANGLES PER THIS DETAIL AT LOCATIONS WHERE CONCENTRATED LOADS > 150 POUNDS ARE ATTACHED TO THE TOP OR BOTTOM CHORDS OF JOISTS AT LOCATIONS > 3" THE CLOSEST ADJACENT PANEL POINT.
  2. INDIVIDUAL CONCENTRATED LOADS SHALL NOT EXCEED THE FOLLOWING:
- | 'K' SERIES JOIST DEPTH | MAX. PERMITTED CONC. LOAD |
|------------------------|---------------------------|
| 8" TO 12"              | 200#                      |
| 14" TO 16"             | 300#                      |
| 18" TO 20"             | 400#                      |
| 22" TO 26"             | 500#                      |
| 28" TO 30"             | 600#                      |
3. NO MORE THAN TWO CONCENTRATED LOADS > MAX. LOAD 1/3 MAY BE ATTACHED TO ANY ONE JOIST.
  4. CONCENTRATED LOADS > MAX. LOAD 1/3 MUST BE LOCATED AT LEAST SPAN/3 APART.

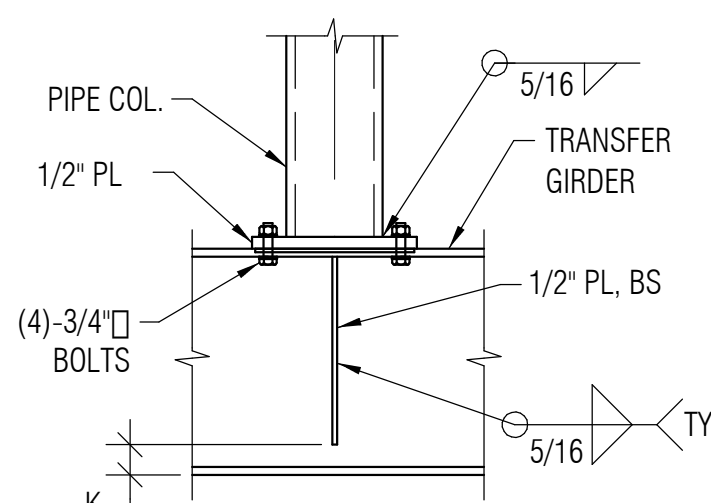
4 JOIST REINFORCING ('K' SERIES JOISTS)

Scale: 3/4" = 1'-0"



6 W COLUMN CONNECTION TO TRANSFER GIRDER

Scale: 3/4" = 1'-0"



7 PIPE COLUMN CONN. TO TRANSFER GIRDER

Scale: 3/4" = 1'-0"

8 BEAM CONNECTION TO HSS OR PIPE COLUMN

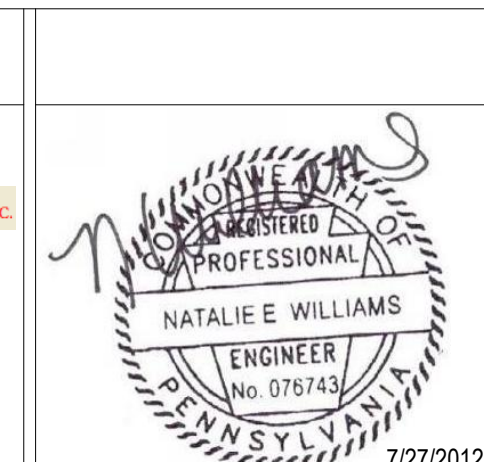
Scale: 3/4" = 1'-0"

9 RIDGE BEAM OVERHANG CONNECTION

Scale: 3/4" = 1'-0"

CONSULTANTS:

Civil Engineer <b>Dewberry</b>	Structural Engineer <b>WZIG</b>	MEP Engineer <b>H.E. LENZ</b>	Environmental Consultant <b>SSM</b>	Cost Estimator <b>INTERNATIONAL CONSULTANTS, INC.</b>
600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 576-9953 Fax (973) 759-9710	180 W. Ridge Pike Limerick, PA 19468 Tel (214) 329-5559	1407 Scalp Avenue Johnstown, PA 15904 Tel (814) 269-9300 Fax (814) 269-9301	1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel (610) 621-2000	221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888



ARCHITECT:



Project Number  
3468

Scale  
3/4" = 1'-0"

Drawing Title  
Typical Details

Approved: Project Director

Project Title  
Behavioral Health Complex

Location  
1700 South Lincoln Ave. Lebanon, PA 17042

Date  
07/27/2012

Checked  
Author

VA Project Number  
595-109

Building Number  
34

Drawing Number  
S203

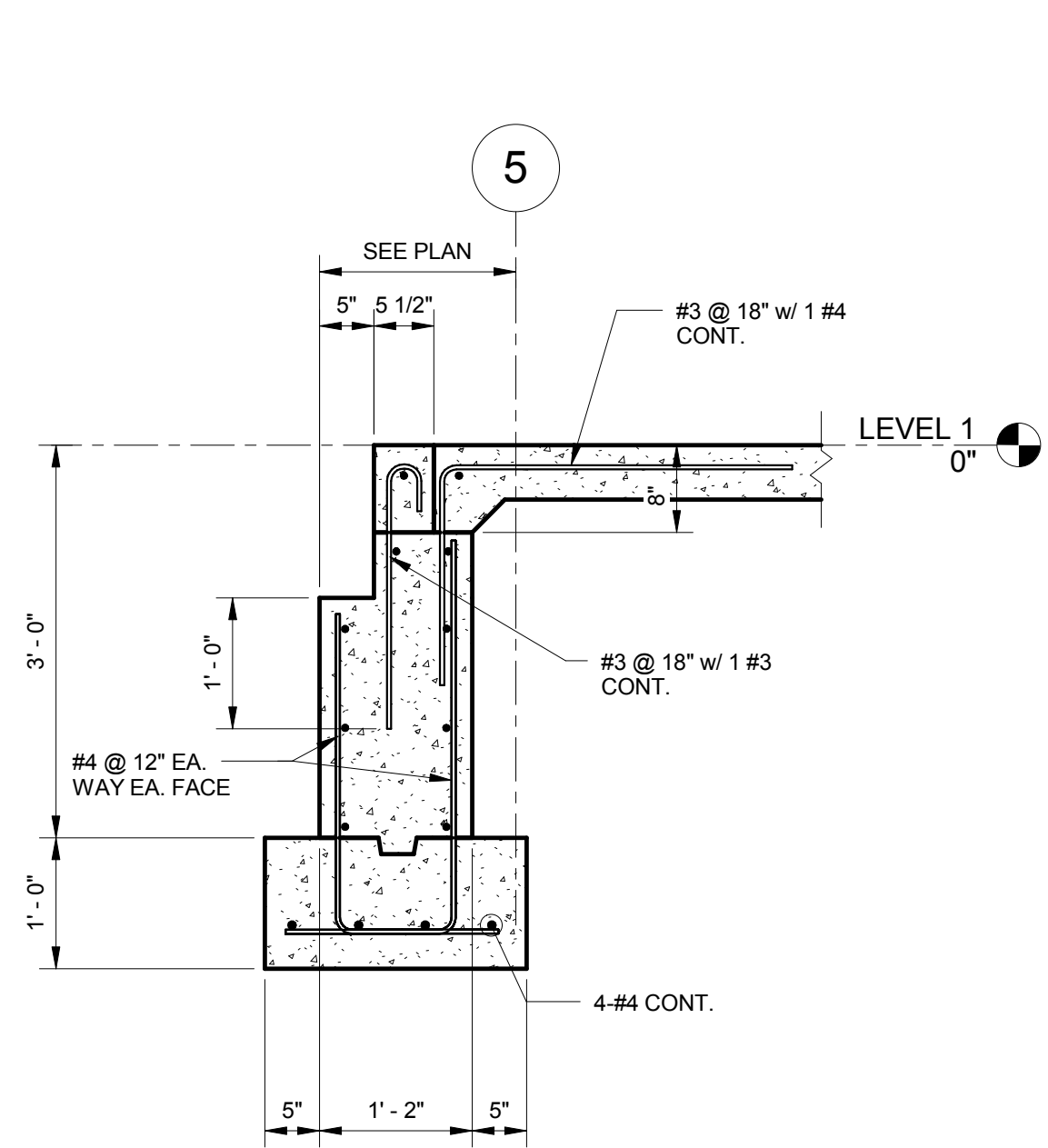
Dwg. 29 of 123

Office of  
Facilities  
Management

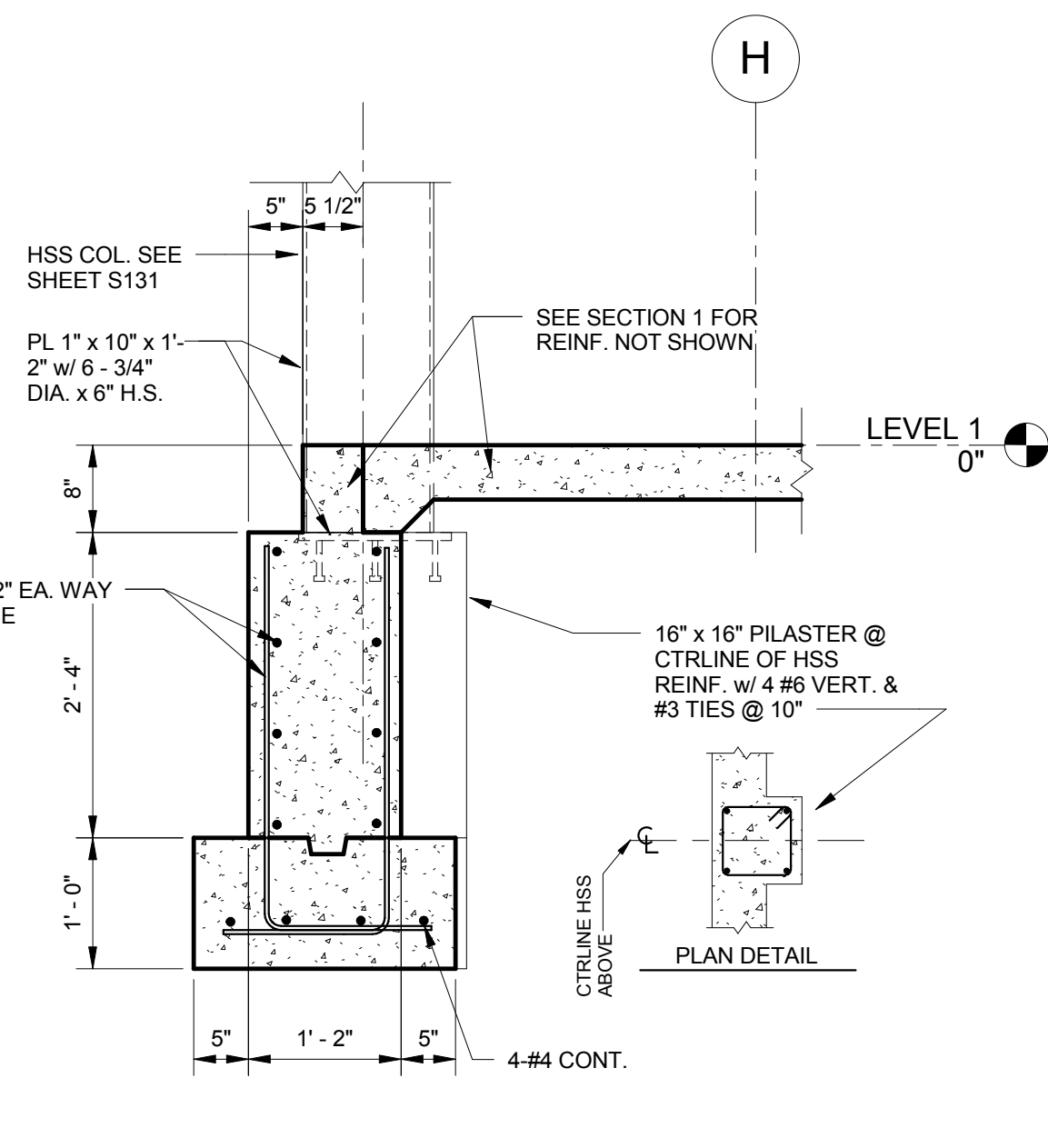


FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

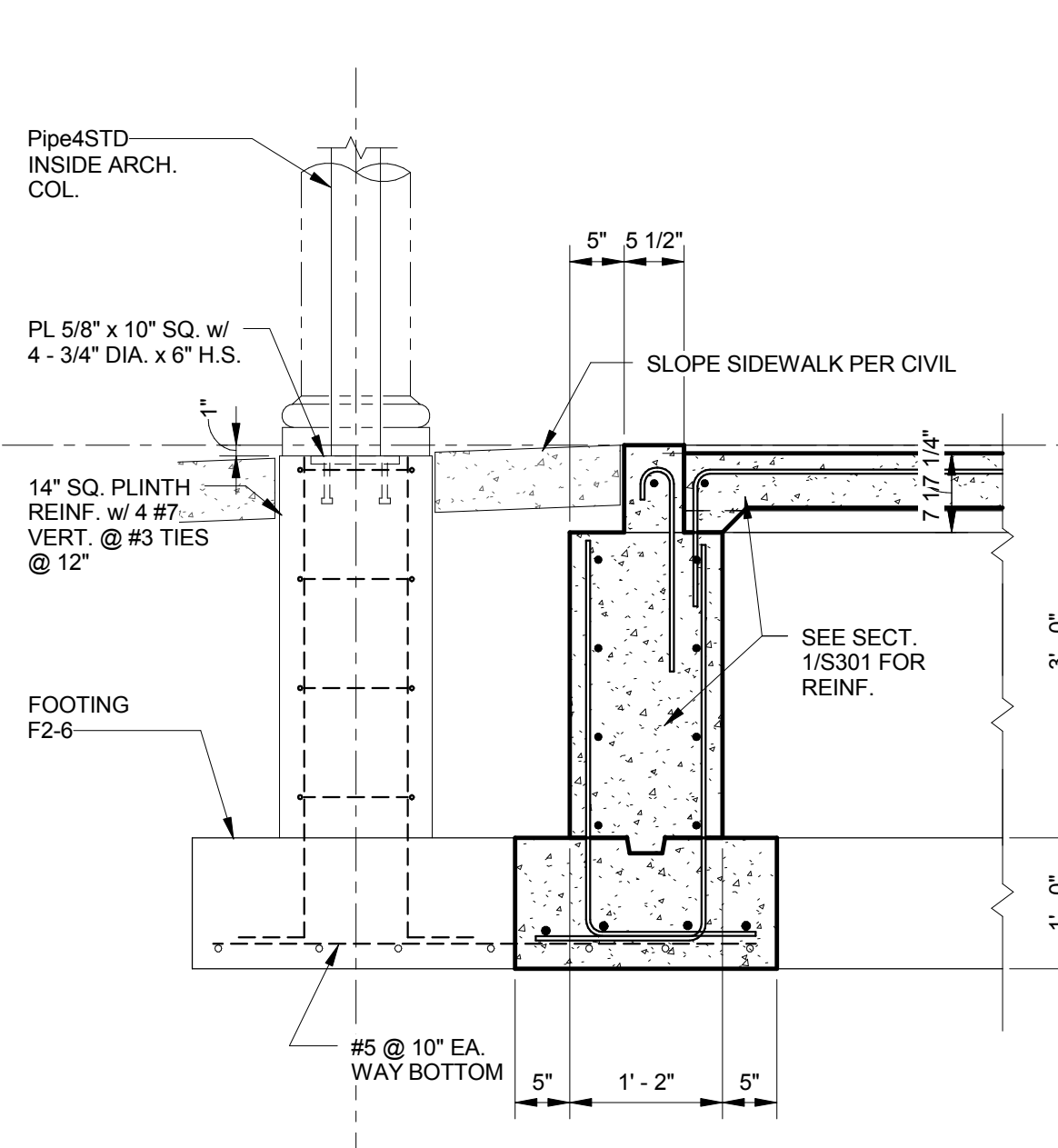




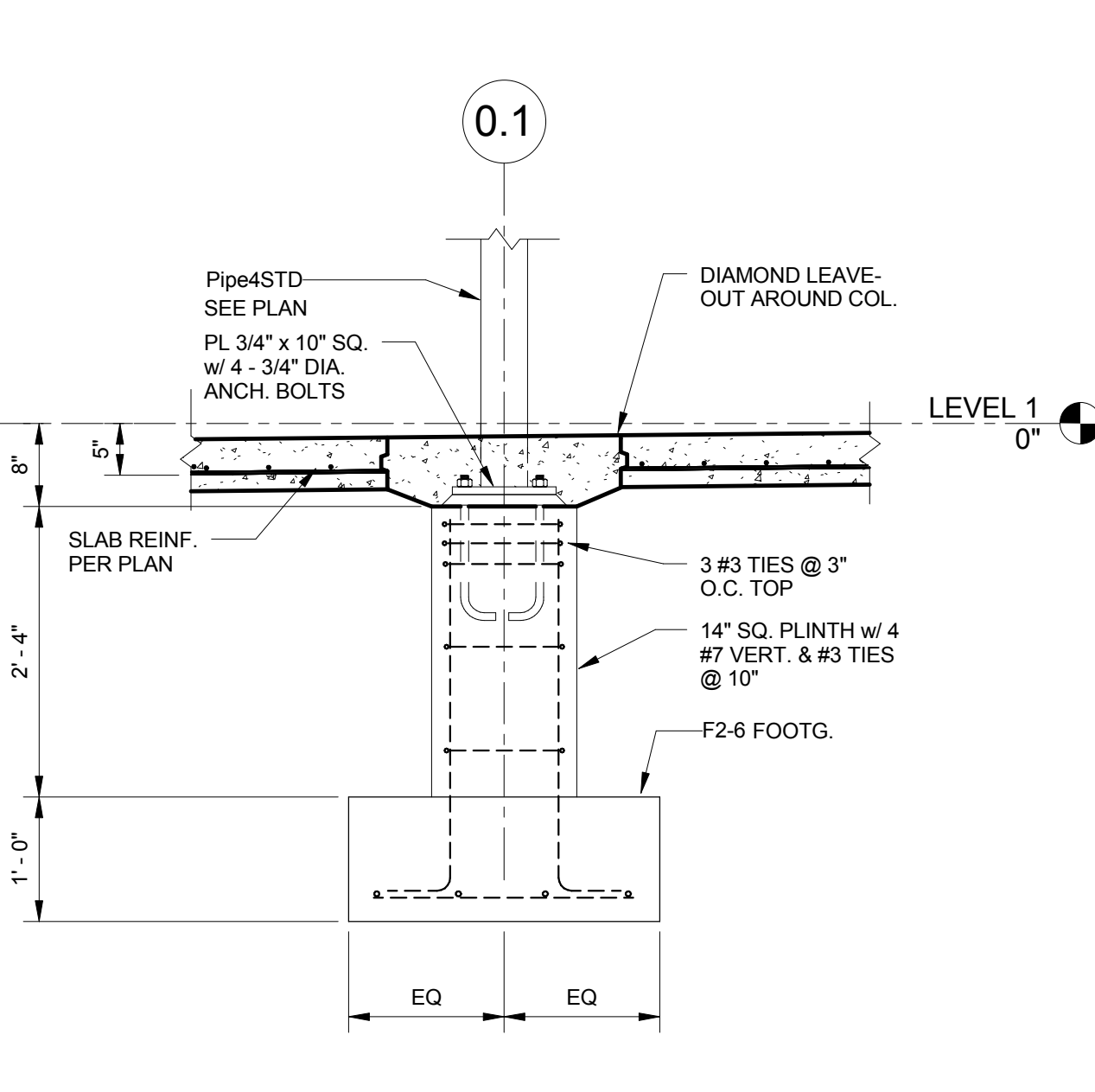
SECTION  
3/4" = 1'-0"



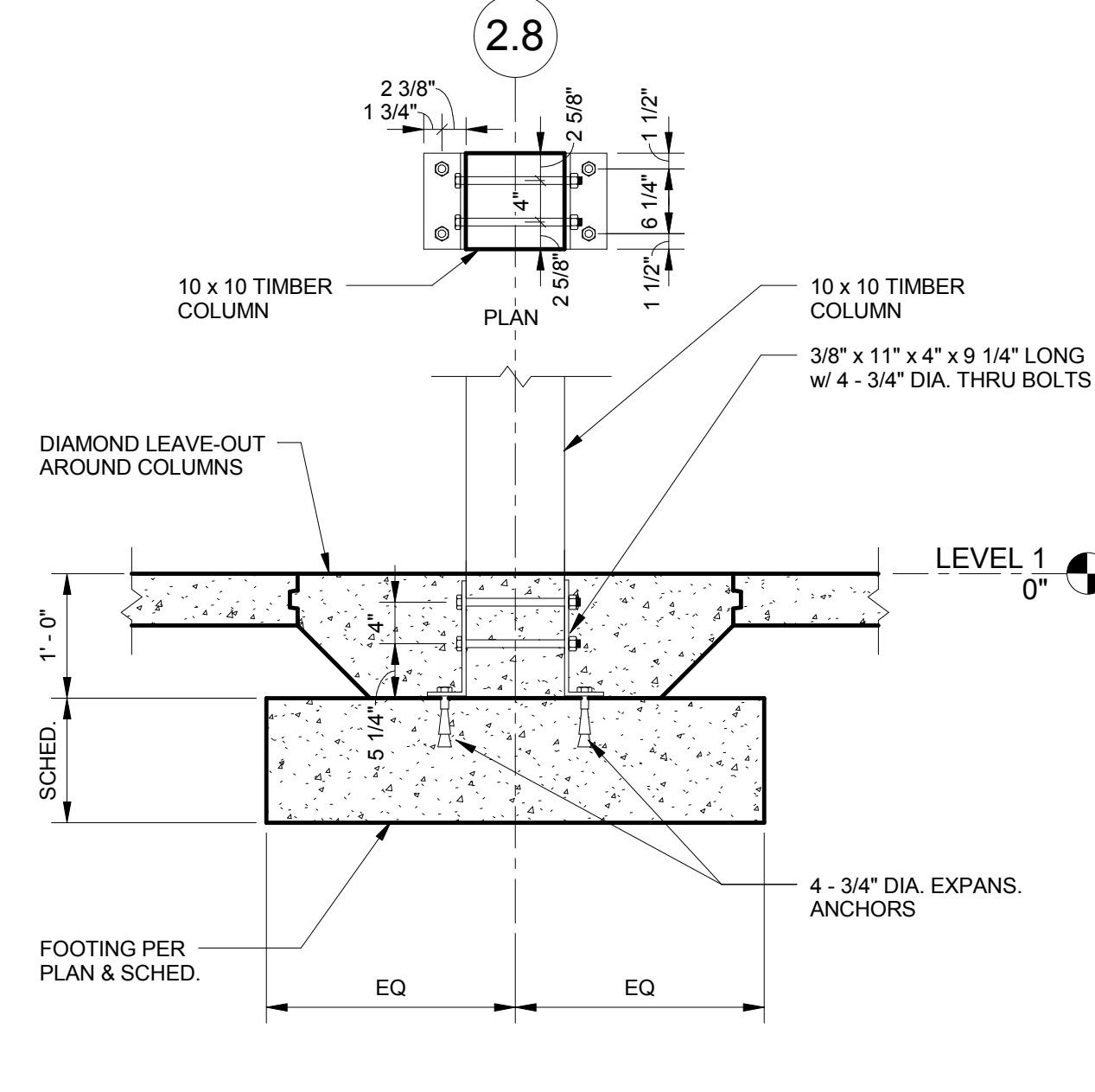
SECTION  
3/4" = 1'-0"



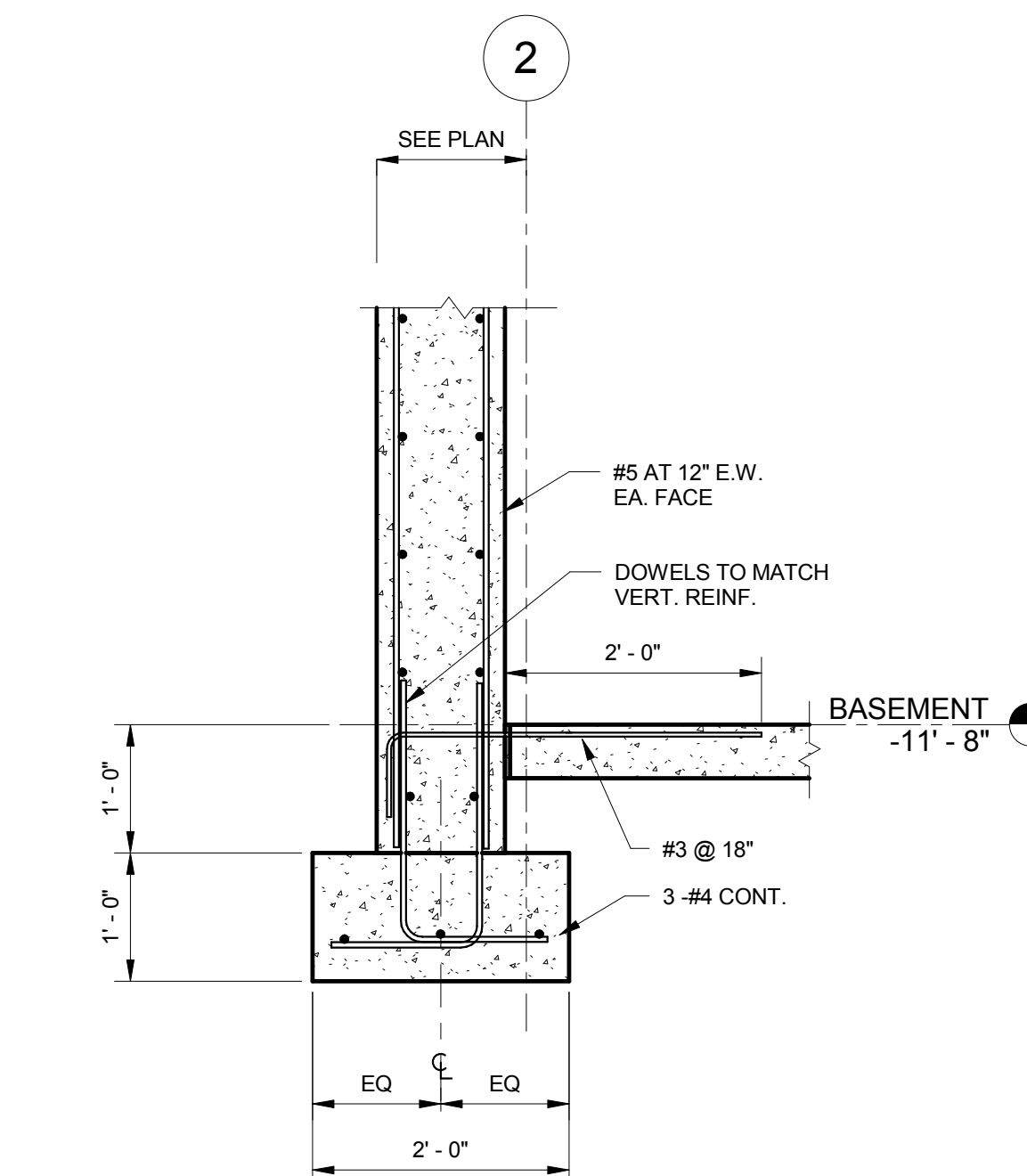
SECTION  
3/4" = 1'-0"



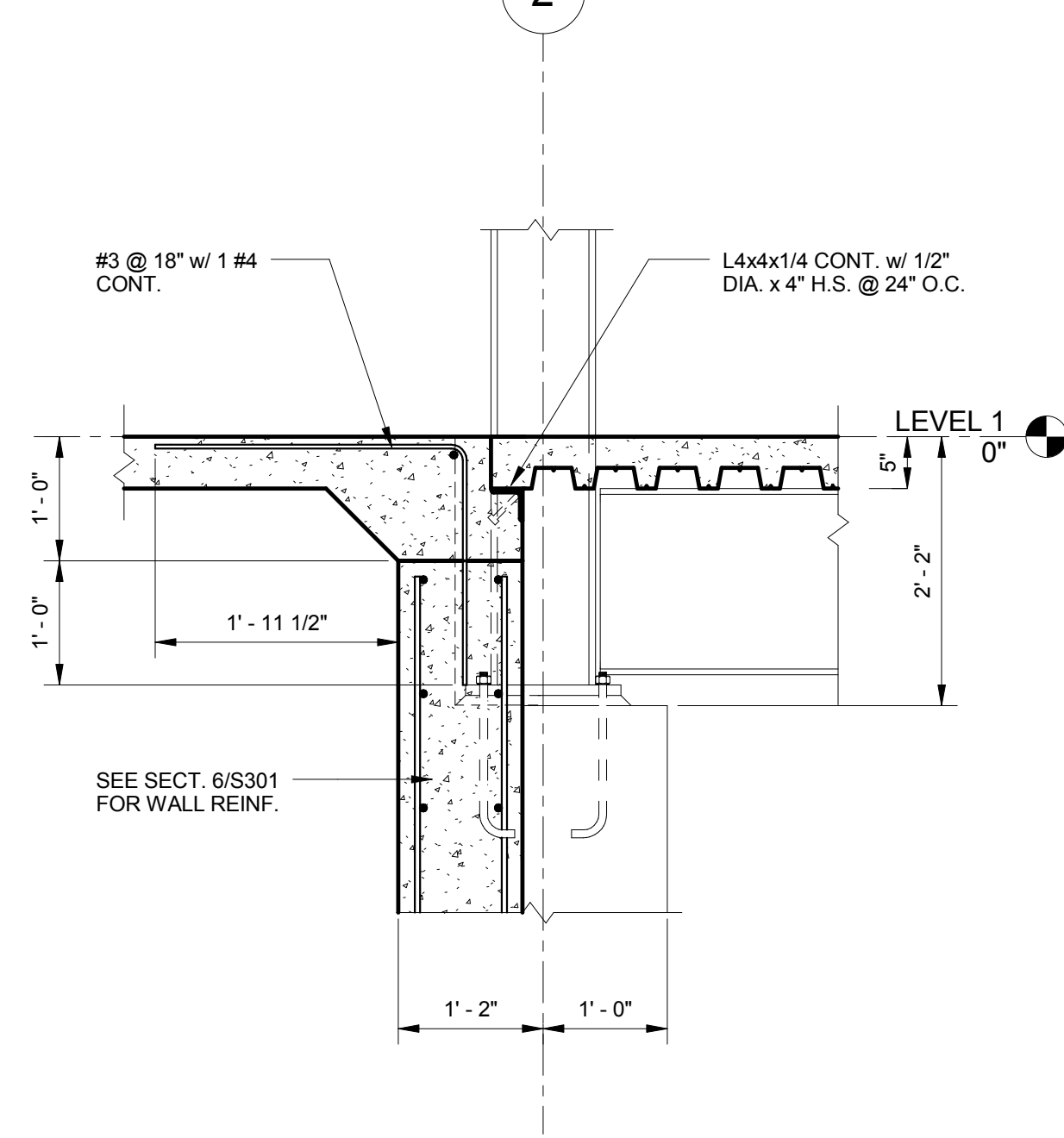
SECTION  
3/4" = 1'-0"



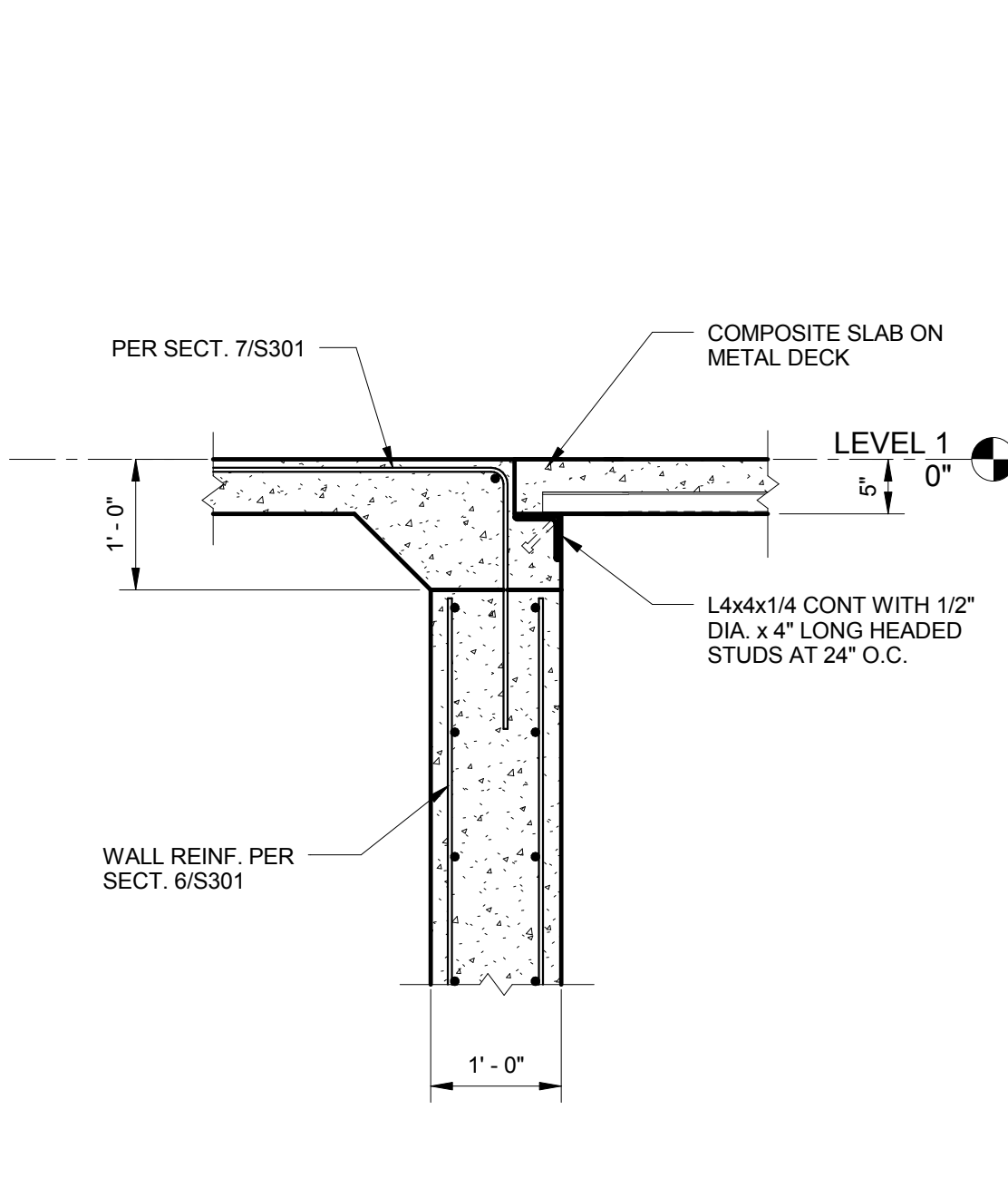
SECTION  
3/4" = 1'-0"



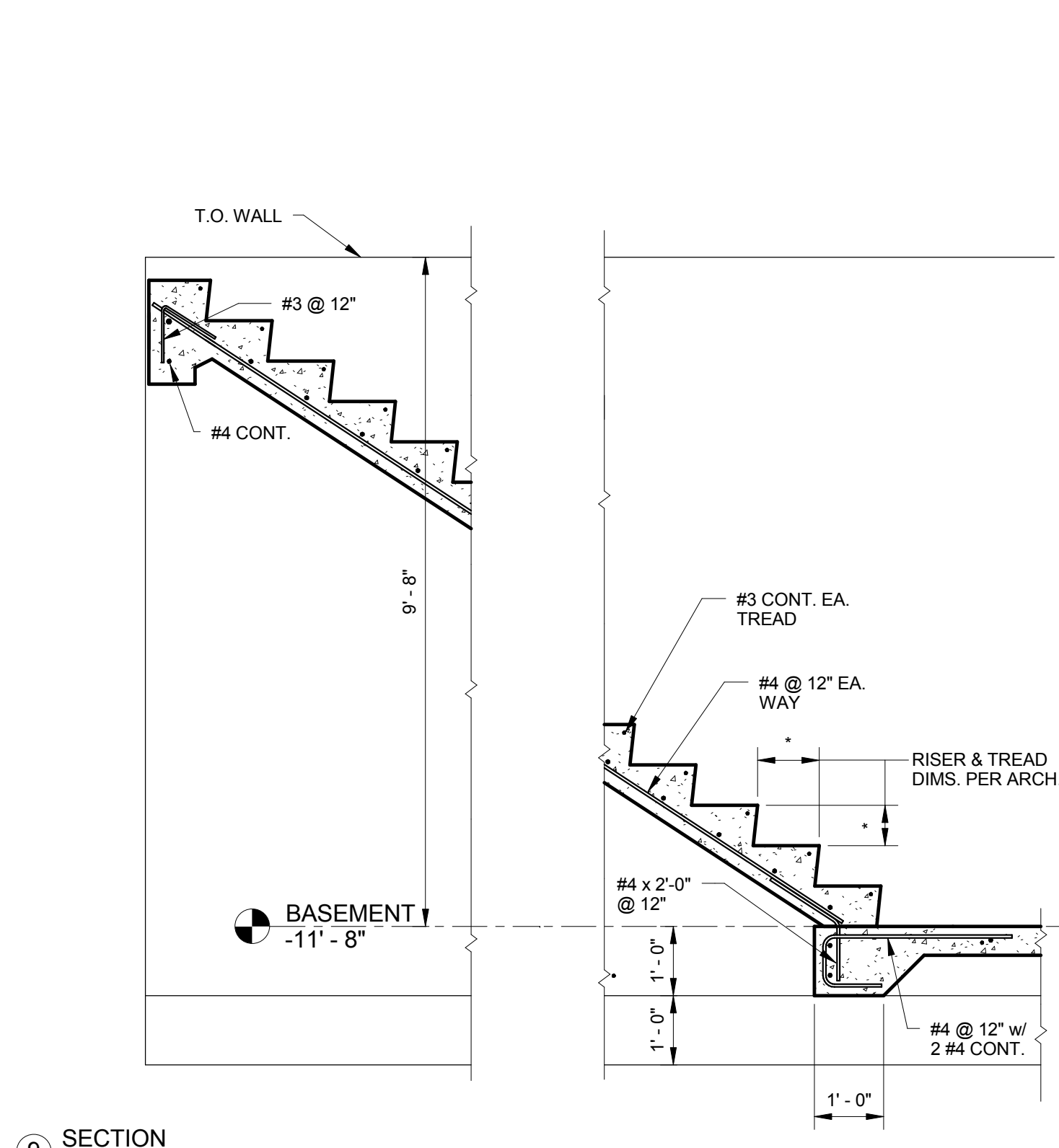
SECTION  
3/4" = 1'-0"



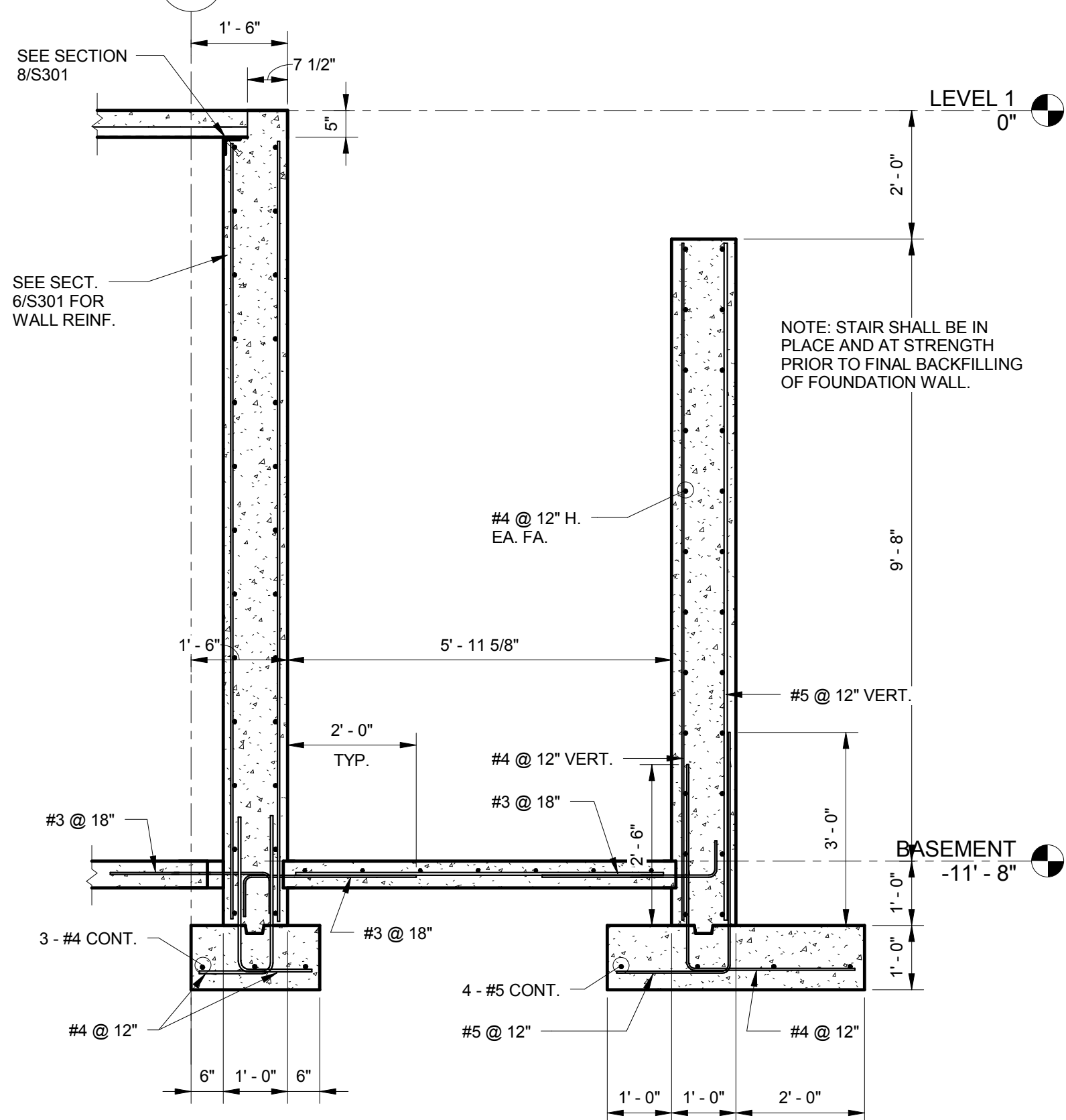
SECTION  
3/4" = 1'-0"



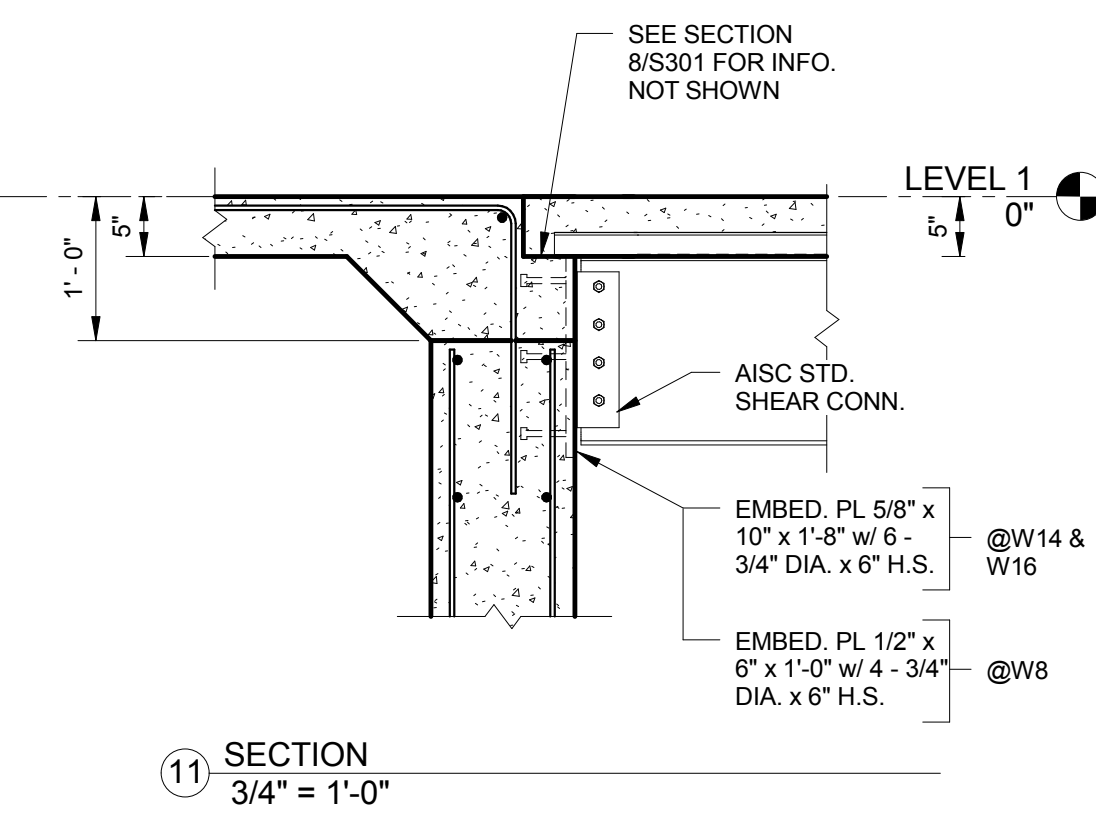
SECTION  
3/4" = 1'-0"



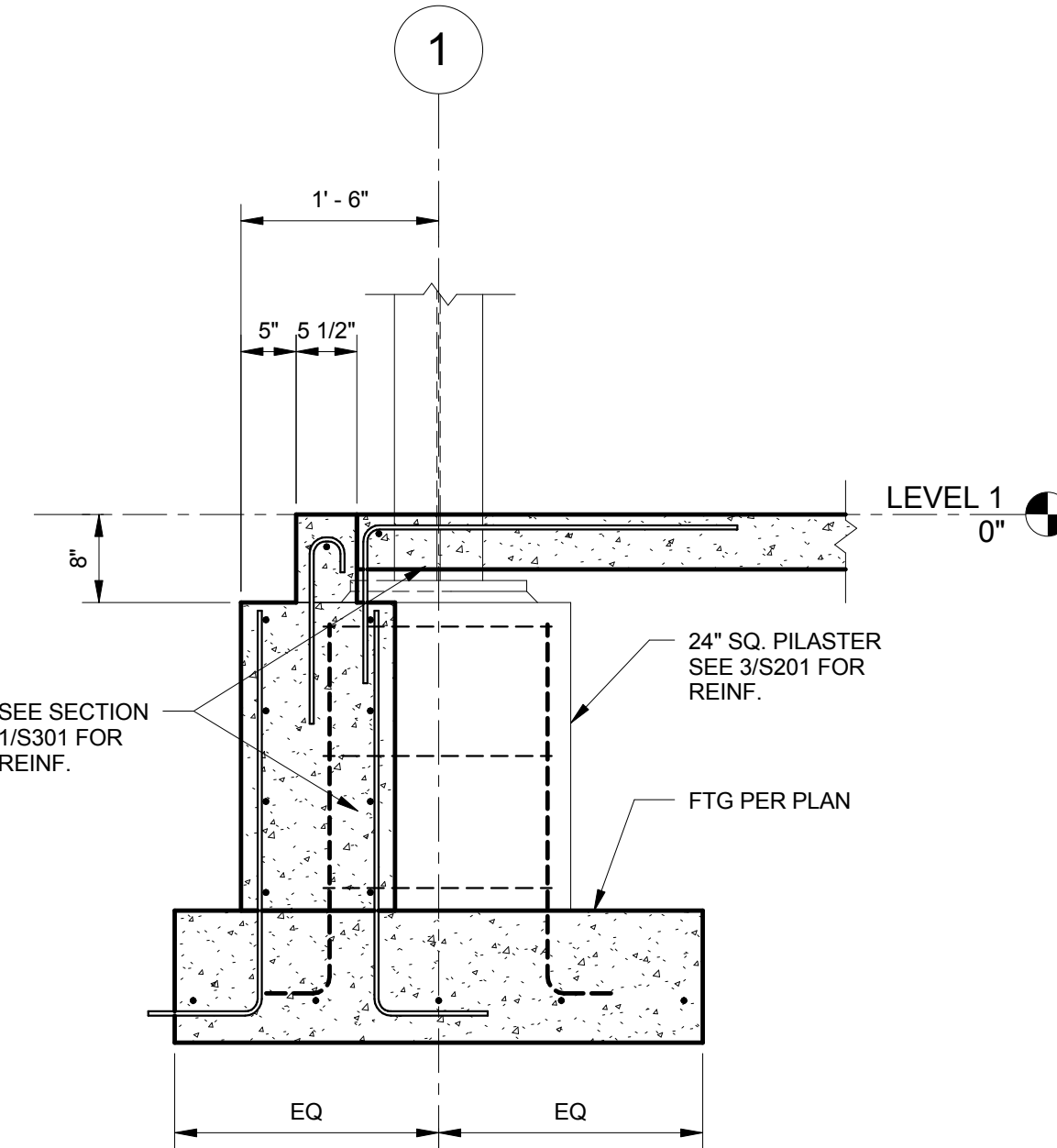
SECTION  
1/2" = 1'-0"



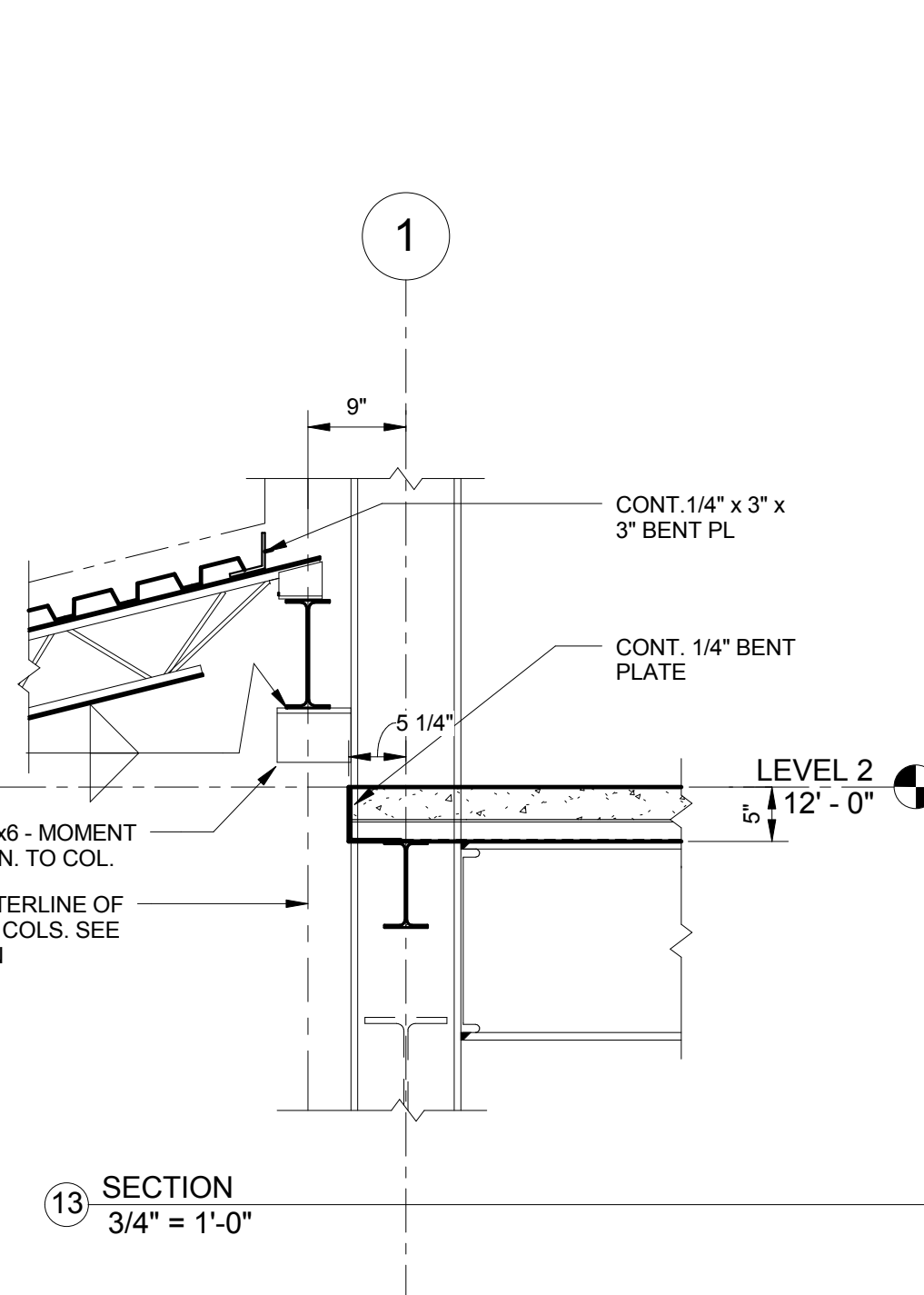
SECTION  
1/2" = 1'-0"



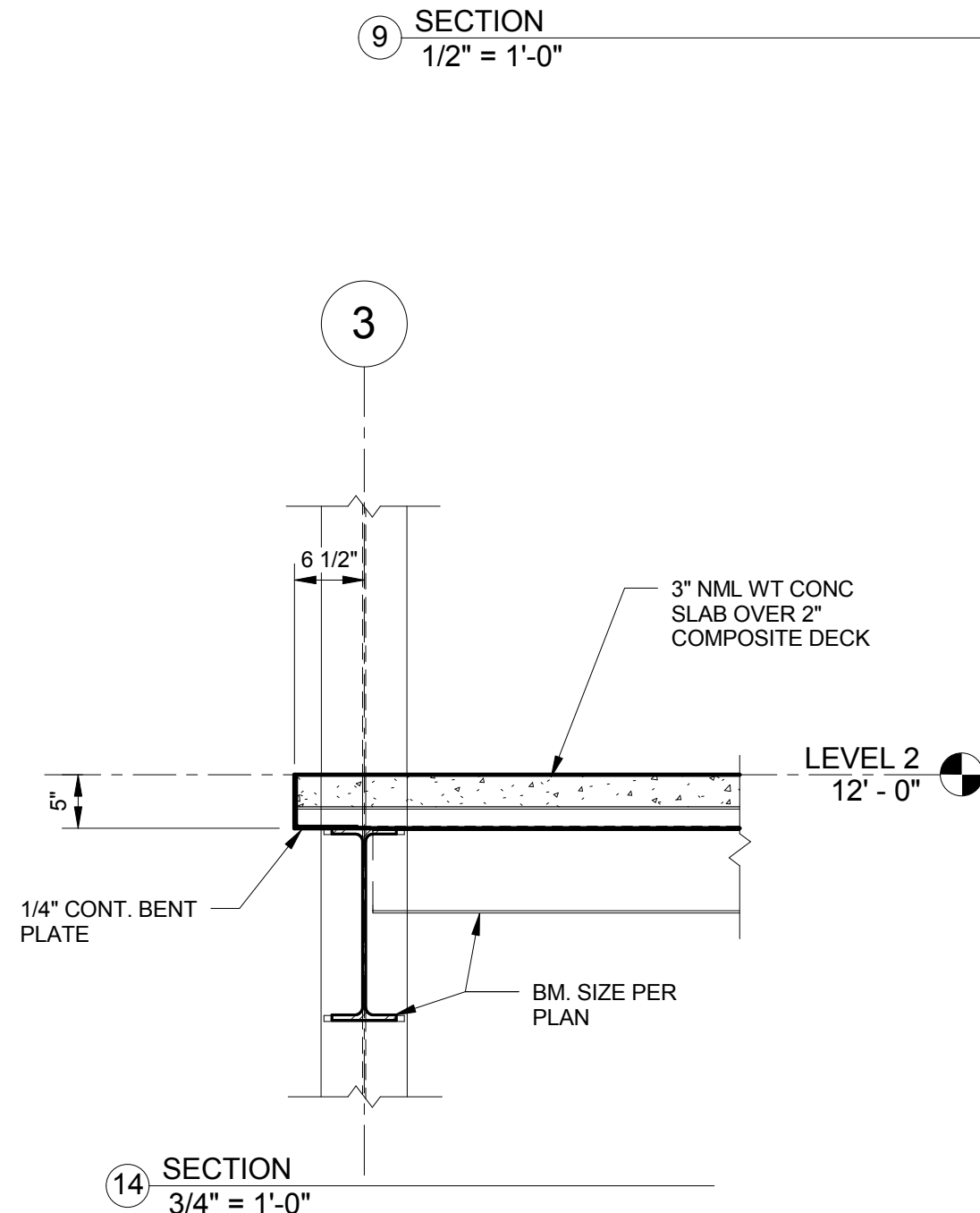
SECTION  
3/4" = 1'-0"



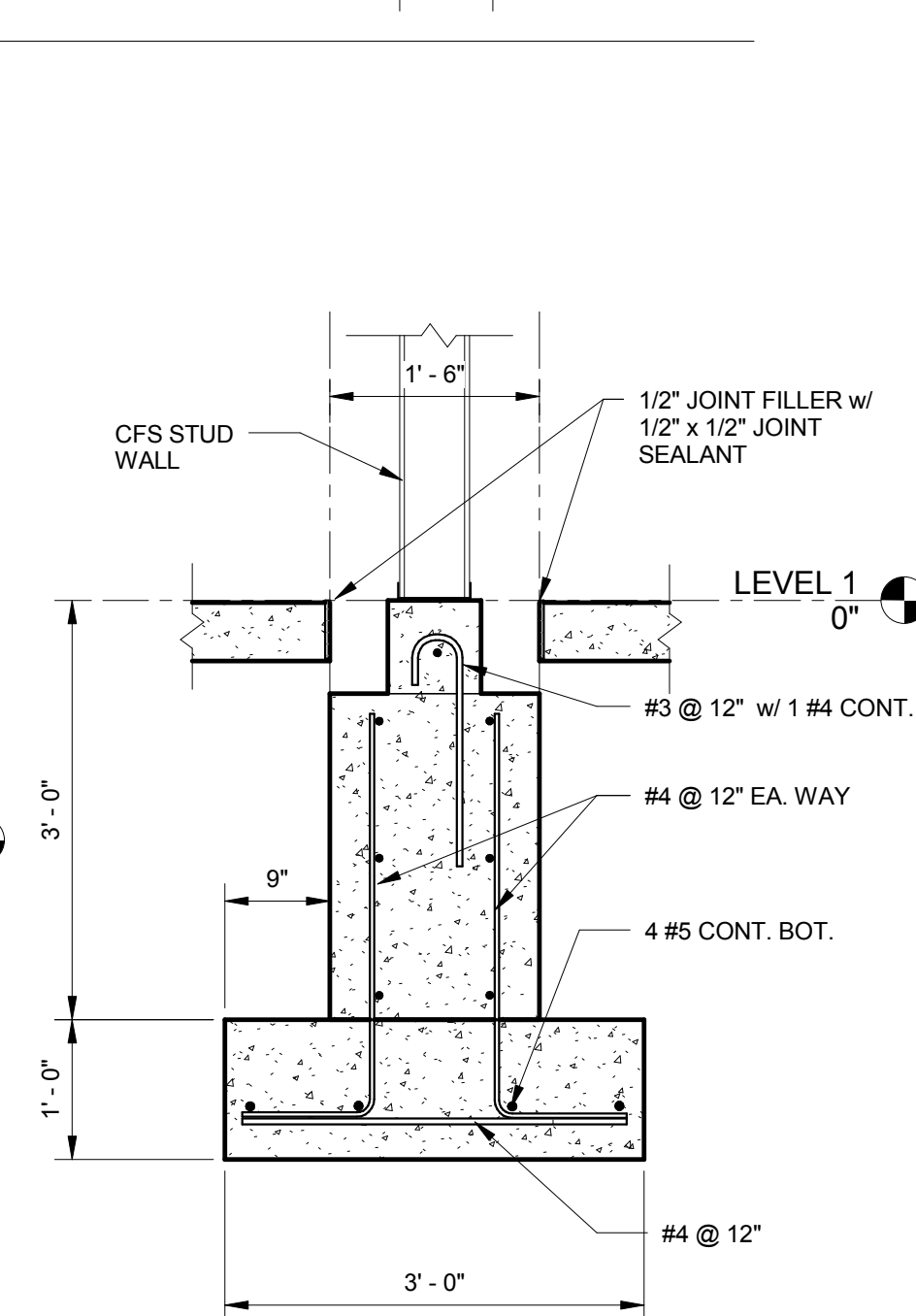
SECTION  
3/4" = 1'-0"



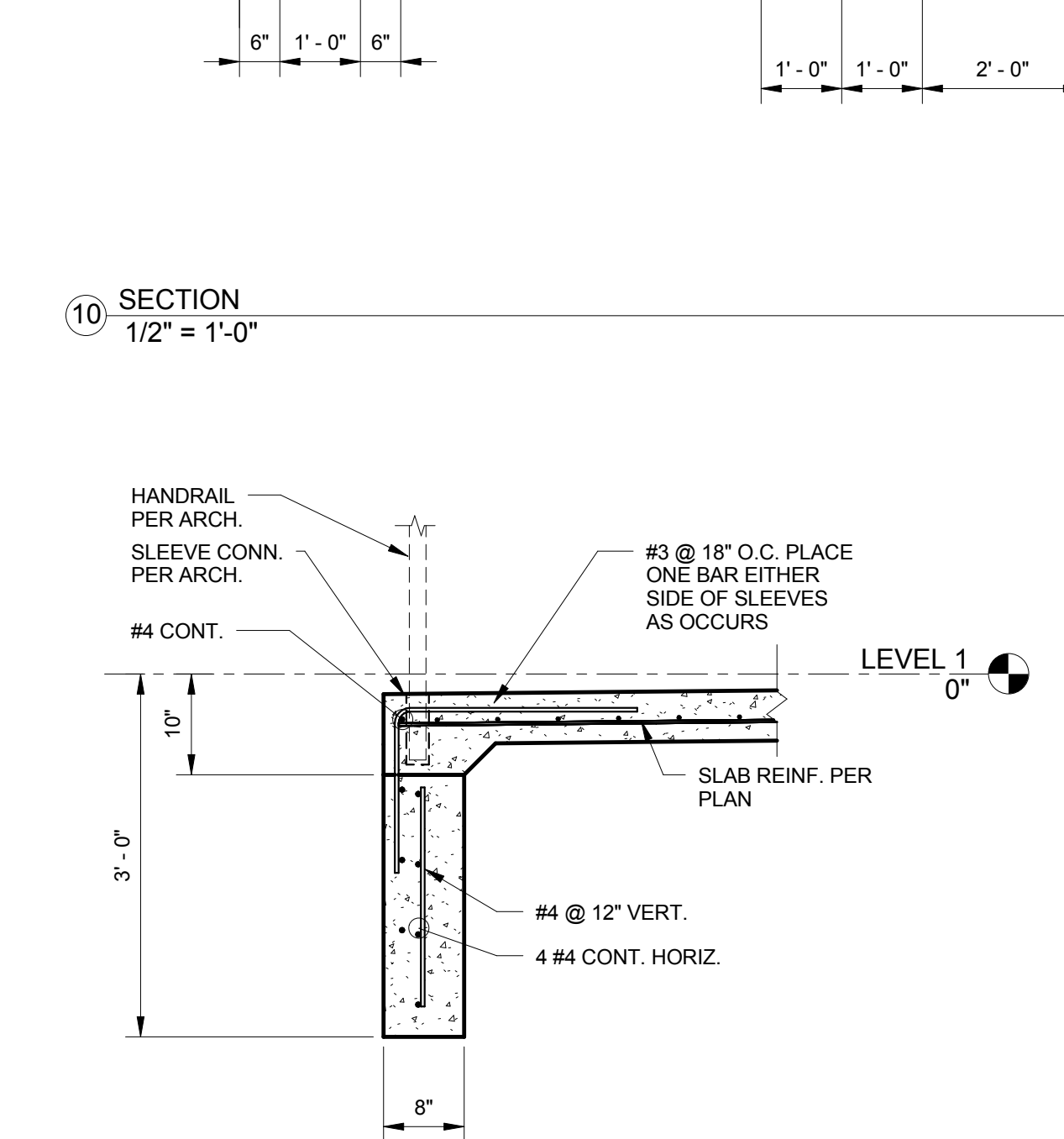
SECTION  
3/4" = 1'-0"



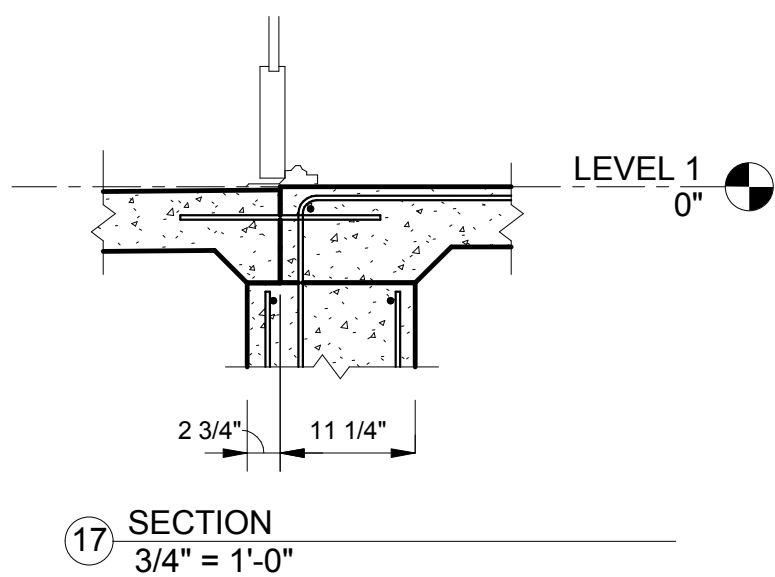
SECTION  
3/4" = 1'-0"



SECTION  
3/4" = 1'-0"



SECTION  
3/4" = 1'-0"



SECTION  
3/4" = 1'-0"

CONSULTANTS:

Civil Engineer



600 Parsippany Road, Suite 301  
Parsippany, NJ 07054-3715  
Tel (973) 576-9953  
Fax (973) 759-9710

Structural Engineer



180 W. Ridge Pike  
Limerick, PA 19468  
Tel (214) 329-5559

MEP Engineer



1407 Scalp Avenue  
Johnstown, PA 15904  
Tel (814) 269-9300  
Fax (814) 269-9301

Environmental Consultant



1047 North Park Road, P.O. Box 6307  
Reading, PA 19610  
Tel (610) 621-2000

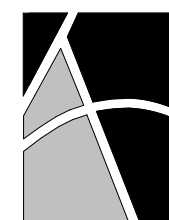
Cost Estimator



221 Chestnut Street, Suite 200  
Philadelphia, PA 19106  
Tel (215) 923-8888



ARCHITECT:



ARRAY

healthcare facilities solutions

Project Number  
3468

Scale  
As indicated

2520 Renaissance Boulevard, Suite 110  
King of Prussia, PA 19406

t: 610.270.0599  
f: 610.270.0995  
www.arrayhfs.com

Drawing Title

Sections

Approved: Project Director

Project Title

Behavioral Health Complex

Location

1700 South Lincoln Ave. Lebanon, PA 17042

Date

07/27/2012

Checked

NEW

Drawn

RAZ

VA Project Number

595-109

Building Number

34

Drawing Number

S301

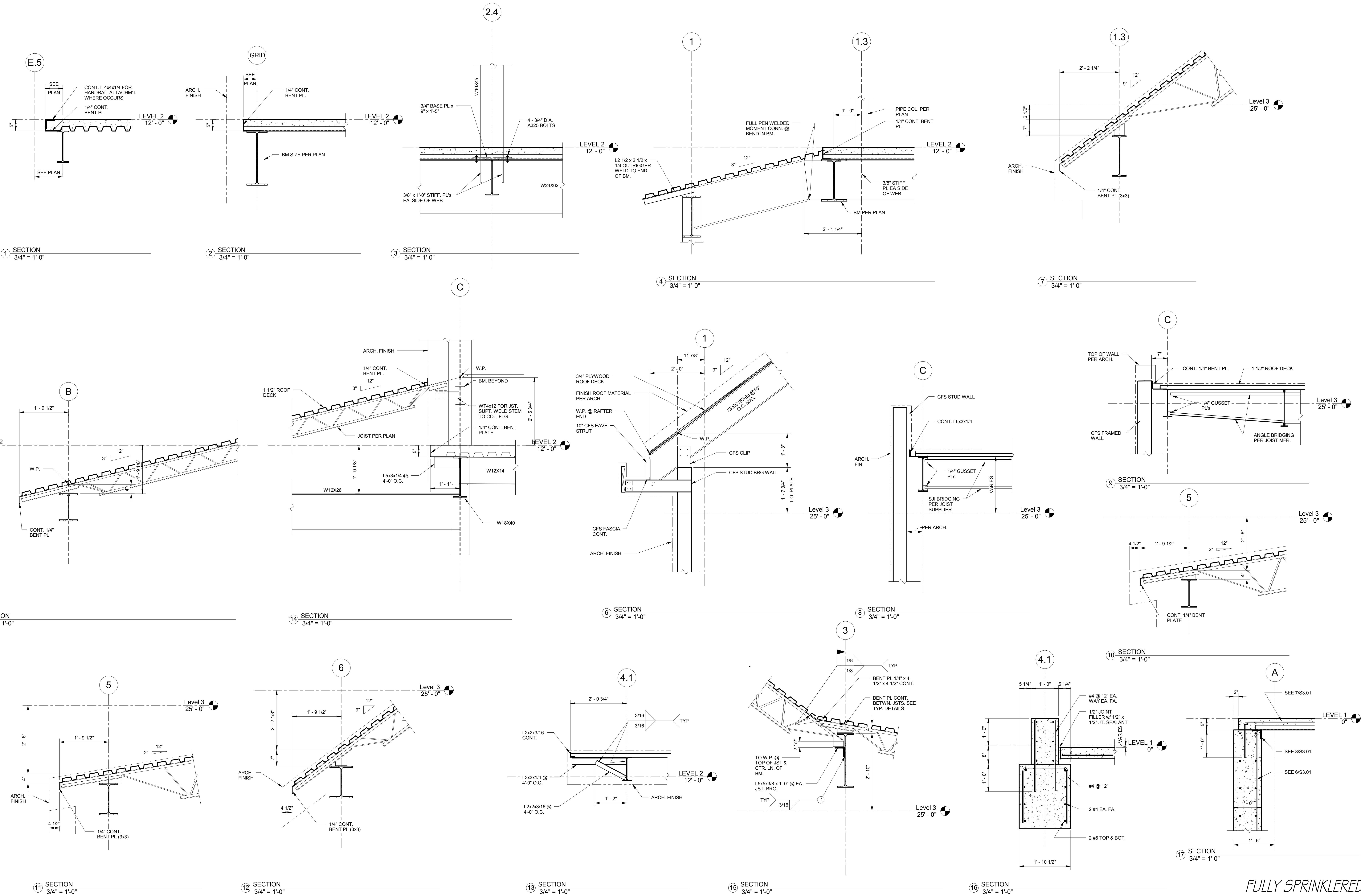
Dwg. 30 of 123

Office of  
Facilities  
Management



FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

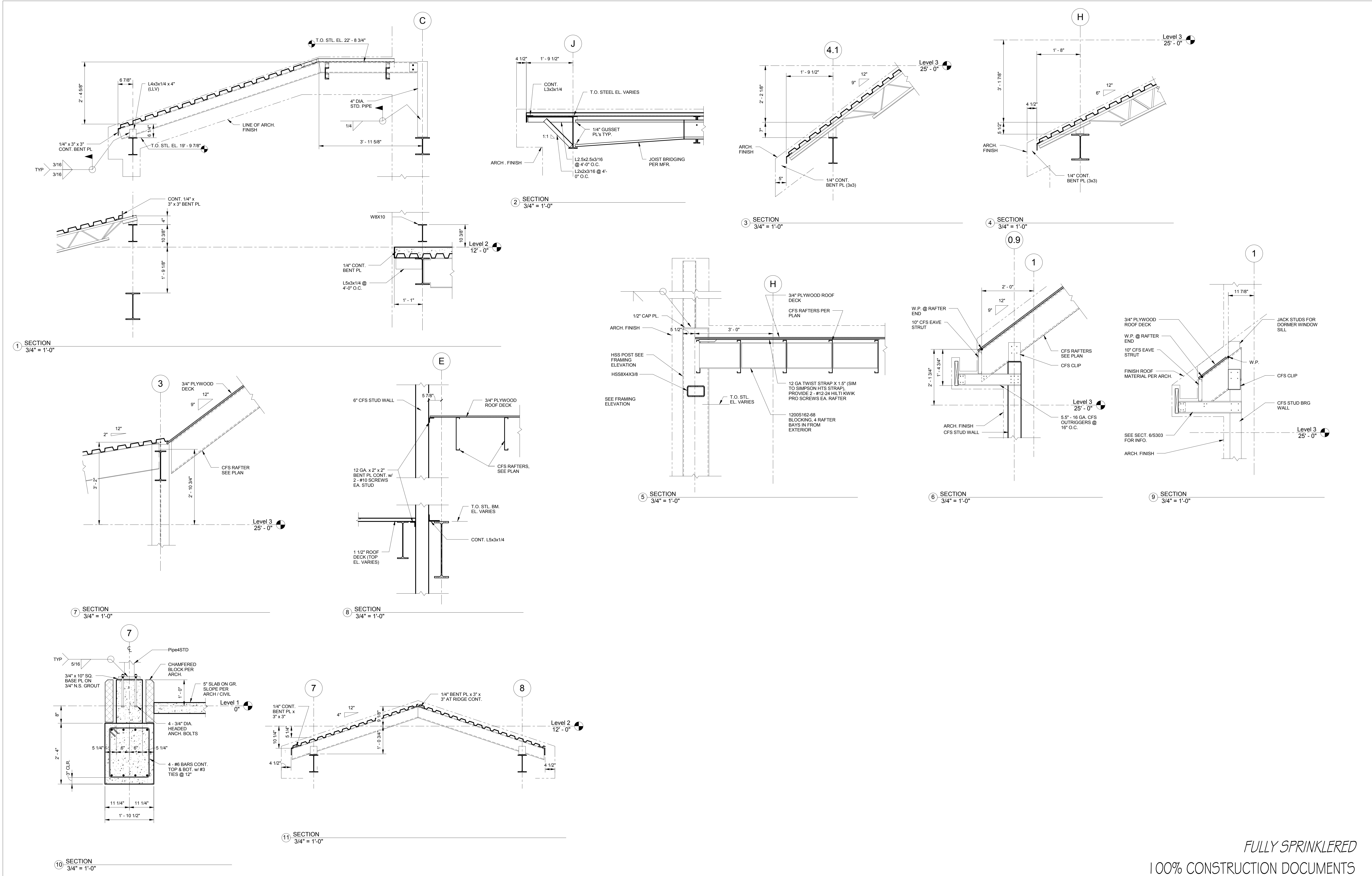




FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

		<b>CONSULTANTS:</b>						<b>ARCHITECT:</b>		Project Number 3468		Scale 3/4" = 1'-0"		Drawing Title  Sections		Project Title  Behavioral Health Complex		VA Project Number 595-109		Office of Facilities Management	
		<b>Civil Engineer</b>  600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 578-8683 Fax (973) 738-8710		<b>Structural Engineer</b>  180 W. Ridge Pike Limerick, PA 19610 Tel (214) 329-5559		<b>MEP Engineer</b>  1407 Scalo Avenue Jonestown, PA 19004 Tel (814) 269-0500 Fax (814) 269-0501		<b>Environmental Consultant</b>  1047 North Park Road, P.O. Box 6307 Philadelphia, PA 19106 Tel (610) 621-2000		<b>Cost Estimator</b>  221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888		 NATALIE E. WILLIAMS ENGINEER No. 076743 Exp. 7/27/2012		2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406  t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com		Approved: Project Director		Location 1700 South Lincoln Ave. Lebanon, PA 17042			
				Drawing Number  S302																	
						Date 07/27/2012		Checked NEW													
																				Drawn RAZ	

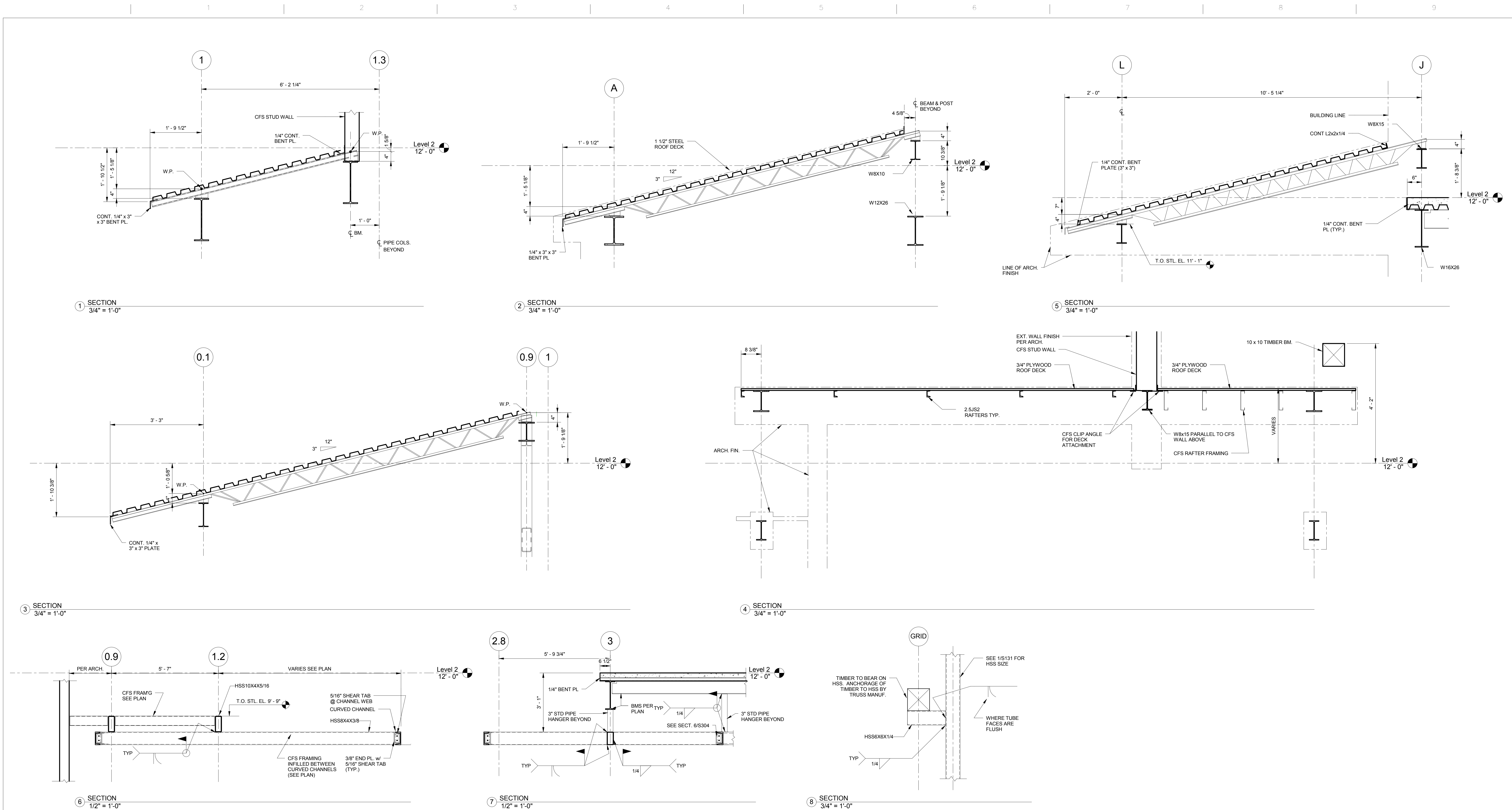




FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

		<b>CONSULTANTS:</b>						<b>ARCHITECT:</b>		Project Number 3468		Scale 3/4" = 1'-0"		Drawing Title  Sections		Project Title  Behavioral Health Complex		VA Project Number 595-109		Office of Facilities Management	
		Civil Engineer 		Structural Engineer 		MEP Engineer 		Environmental Consultant 		Cost Estimator 											
		600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel: (973) 576-9953 Fax: (973) 759-9710		180 W. Ridge Pike Limerick, PA 19468 Tel: (214) 329-5559		1407 Scalp Avenue Johnstown, PA 15904 Tel: (814) 269-9300 Fax: (814) 269-9301		1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel: (610) 621-2000		221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel: (215) 923-8888						Drawing Number  S303					
Revisions		Date										t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com				Location 1700 South Lincoln Ave. Lebanon, PA 17042		Dwg. 32 of 123			
										 <b>ARRAY</b> healthcare facilities solutions											



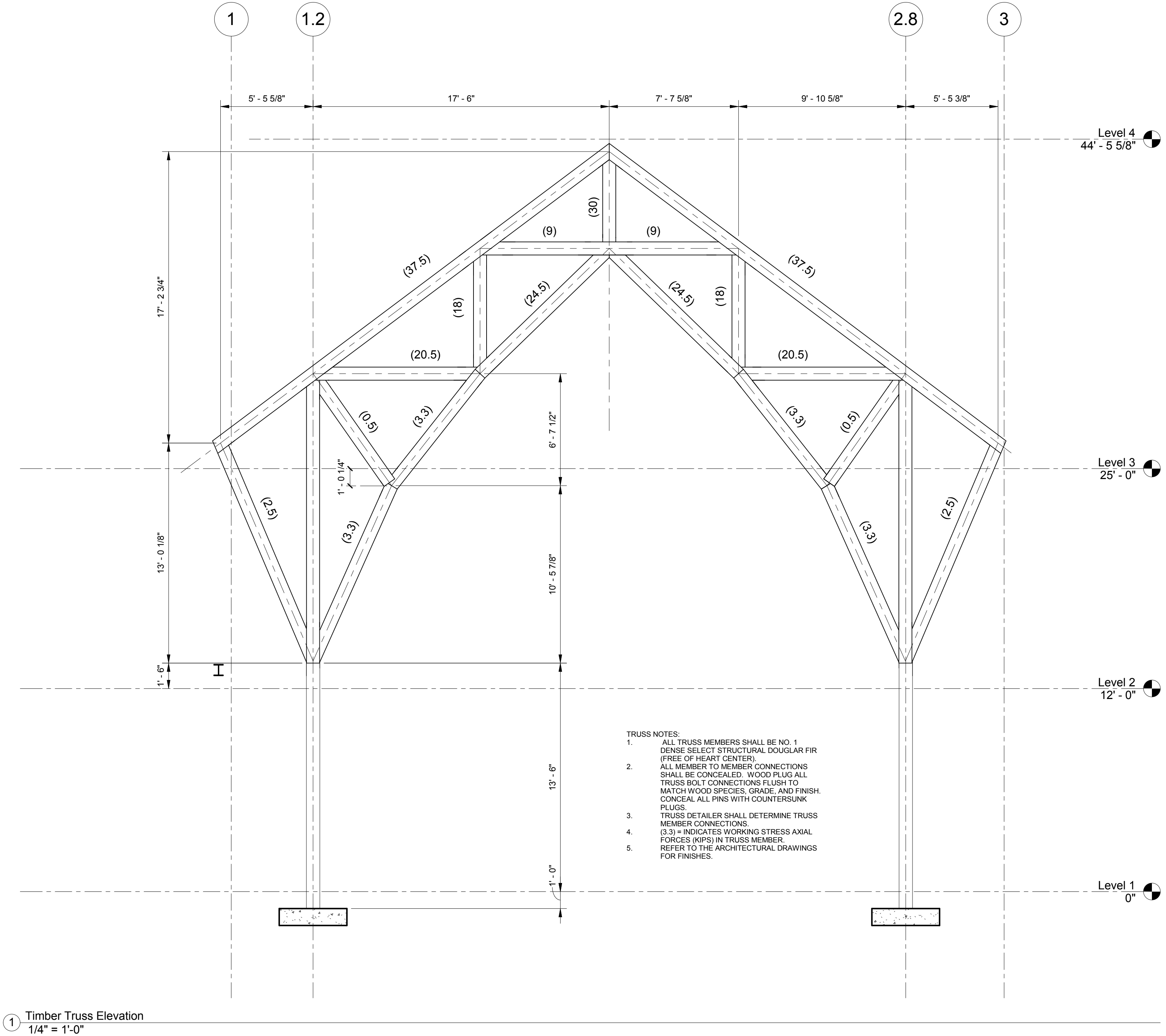
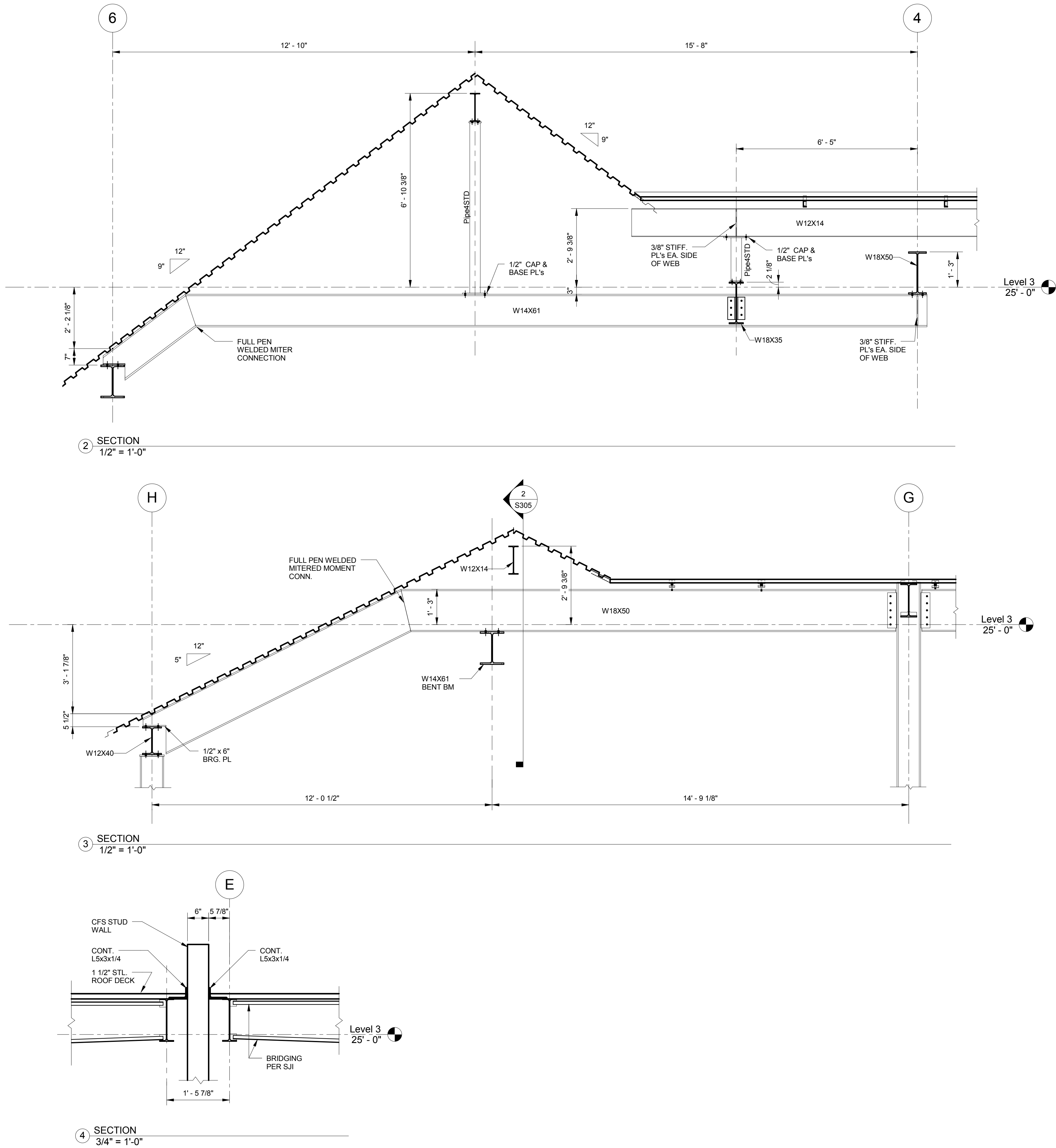


FULLY SPRINKLERED  
100% CONSTRUCTION DOCUMENTS

<b>CONSULTANTS:</b> <div><div>Civil Engineer <b>Dowberry</b> 600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel: (973) 976-9963 Fax: (973) 759-9710</div><div>Structural Engineer <b>WZIG</b> 180 W. Ridge Pike Limerick, PA 19468 Tel: (214) 329-5559</div><div>MEP Engineer <b>THE LENZ COMPANY</b> 1407 Scalp Avenue Johnstown, PA 15904 Tel: (814) 269-9300 Fax: (814) 269-9301</div><div>Environmental Consultant <b>SSM</b> 1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel: (610) 621-2000</div><div>Cost Estimator <b>INTERNATIONAL CONSULTANTS, INC.</b> 221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel: (215) 923-8888</div></div>		<b>ARCHITECT:</b> <div><div><b>ARRAY</b> healthcare facilities solutions</div><div>Project Number 3468 Scale As indicated 2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406 t: 610.270.0599 f: 610.270.0995 www.arrayhfs.com</div></div>		Drawing Title Sections Approved: Project Director		Project Title Behavioral Health Complex Location 1700 South Lincoln Ave. Lebanon, PA 17042 Date 07/27/2012		VA Project Number 595-109 Building Number 34 Drawing Number S304 Dwg. 33 of 123		Office of Facilities Management Department of Veterans Affairs	
Revisions Date											



three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot



	CONSULTANTS:						ARCHITECT:	Project Number 3468	Scale As indicated	Drawing Title Timber Truss Elevation & Details	Project Title Behavioral Health Complex	VA Project Number 595-109	Office of Facilities Management		
	Civil Engineer  600 Parsippany Road, Suite 301 Parsippany, NJ 07054-3715 Tel (973) 976-8863 Fax (973) 759-9710	Structural Engineer  180 W. Ridge Pike Limerick, PA 19468 Tel (214) 329-5559	MEP Engineer  1407 Scalp Avenue Johnstown, PA 15904 Tel (814) 269-9300 Fax (814) 269-9301	Environmental Consultant  1047 North Park Road, P.O. Box 6307 Reading, PA 19610 Tel (610) 621-2000	Cost Estimator  221 Chestnut Street, Suite 200 Philadelphia, PA 19106 Tel (215) 923-8888		 healthcare facilities solutions	2520 Renaissance Boulevard, Suite 110 King of Prussia, PA 19406  t: 610.270.0599 f: 610.270.0995 www.arrayffs.com			Approved: Project Director	Location 1700 South Lincoln Ave. Lebanon, PA 17042		Drawing Number S305	 Department of Veterans Affairs
	Revisions	Date												Dwg. 34 of 123	