Blumel Hall

Roof Replacement

PORTLAND STATE UNIVERSITY

NE Entry

Existing Roof View

Project Information

Project Description
Provide new insulation and weatherproof the main roof deck, and mechanical penthouse with SBS roofing. Remove the existing 3-ply asphalt built-up roof system with a granule surfaced cap sheet, and rooftop equipment, including mechanical equipment to be re-installed or specified for replacement. New metal coping and scuppers. Raise height of existing guardrail, remove and reinstall metal siding on mechanical penthouse as required for proper roofing installation, modify support at existing rooftop metal stair.

Building Area
Gross Bldg. Area 199,600 S.F.
Roof Areas 19,488 S.F.

Applicable Code
2010 Oregon Structural Specialty Code
Fire/Windstorm Classification: Class 1A-90

Project Team

Facilities and Planning
Architectural Services &
Mech/Plumbing Engineering
617 SW Montgomery St., #202
(503)725-3738

Roofing Consultant
Professional Roof Consultants
1108 SE Grand Ave., Ste. 300
Portland, OR 97214
(503)280-8759

Steven McBride
Owen Davis

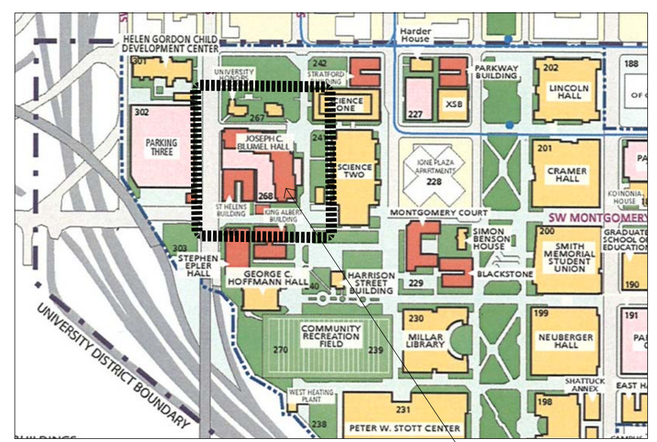
Structural Engineering
ABHT Structural Engineers
1640 NW Johnson St.
Portland, OR 97209
(503)243-6682

Clinton Ambrose, P.E., S.E.
Justin Lyons, P.E.

Sheet Index

Vicinity Map

No Scale



3/9/12
issued for bid

Cover Sheet

Revisions :	Date : 3/9/12
Drawn : TP	
Checked : TA	A12.1

Portland State UNIVERSITY

PSU Facilities and Planning

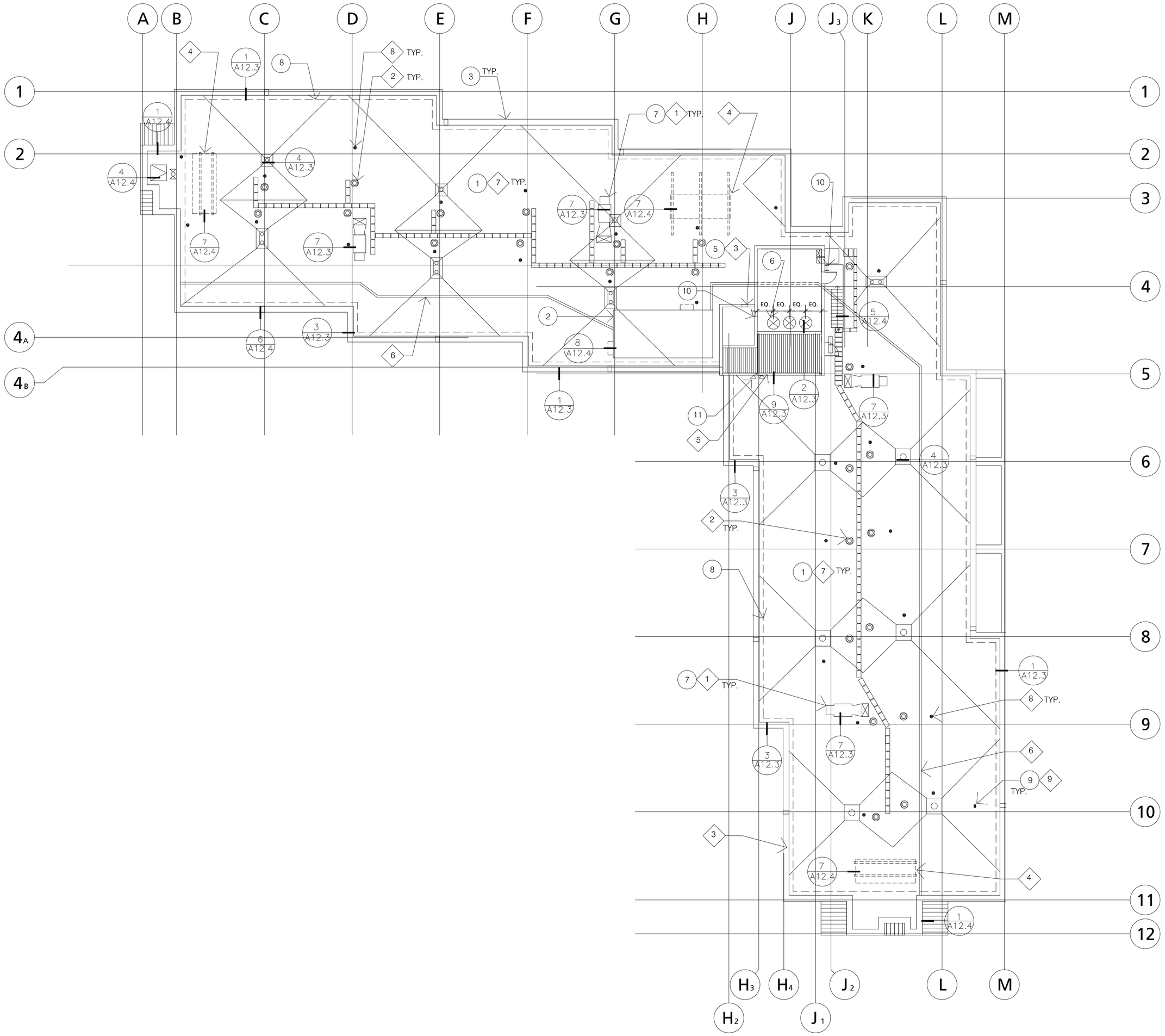
Joseph C. Blumel Hall

Residence Hall

RE-PIPE REMODEL

(Block 268)
1705 SW 11th Ave.
Portland, Oregon 97201

REGISTERED ARCHITECT
9324
E. THOMAS ANDREW
GLADSTONE, OREGON
STATE OF OREGON



1 roof plan

1 /16" = 1' - 0"

symbols

- AIR HANDLING UNIT
- EXHAUST FAN
- ROOF DRAIN WITH OVERFLOW
- ROOF DRAIN
- BOILER STACK
- (E) PIPE PENETRATION
- FIRE SPRINKLER STANDPIPE

general notes

1. Contractor to independently verify type, location and condition of all rooftop equipment, penetrations and structures.
2. All existing equipment and accessories to remain unless otherwise noted. Coordinate disconnect/safe-off and reconnection with Owner.
3. Contractor to coordinate work with and around AT&T equipment with AT&T contractor/team.

demo notes

1. Remove existing roof system and related flashings down to the concrete and metal roof decks.
2. Remove and reinstall siding materials at existing AT&T structure as required to provide new vertical substrate for roofing/flashings. Remove and reuse/re-install the two-piece sheet metal counter flashing around the base flashing.
3. Remove and disguard designated existing sheet metal coping cap and surface mounted sheet metal flashings.
4. Remove all abandoned equipment and through-roof penetrations, coordinate with Owner. Provide infill at abandoned openings.
5. Remove through-wall scupper and leader heads. Infill brick at abandoned penetrations.
6. Coordinate removal of existing boiler room hot stack.
7. Coordinate removal of existing HVAC equipment, support curbs and related abandoned penetrations.
8. Remove guardrail supports and sections, modify baseplate and post, see struc'l. dwgs.
9. Remove all window washing support anchors, typical.
10. Remove and reuse/reinstall the fixed access ladders.
11. Remove and reinstall siding materials at existing penthouse as required to install proper flashings/roofing. Coordinate removal and reinstallation for fire sprinkler check valve with fire department and Owner.

key notes

1. New mechanical equipment (by others) at existing location. Provide new treated wood curbs.
2. Existing exhaust fan, hoods removed and reinstalled during roof replacement. Provide new treated wood curbs.
3. Install new scupper. Locate new through-wall scupper and leaderhead 12" min. away from wall.
4. New AT&T structure. Coordinate complete installation of sleeper supports with AT&T contractor prior to roof replacement. See 7/A12.4 for insulation/roofing assembly.
5. New continuous 24 GA. pre-painted to match existing steel gutter and downspouts. Provide undergutter brackets and spacers for heavy duty securement..
6. Existing AT&T conduit busway. Coordinate with AT&T contractor/team to temporarily elevate conduit during demolition and new roofing.
7. Install new roof system, including tapered insulation and overlay board. Install new walk pads.
8. Replace all penetration flashings and provide new flashings at all active penetrations.
9. Provide new window washing anchors, see 9/A12.4 and dwg. RA101 (for reference only).

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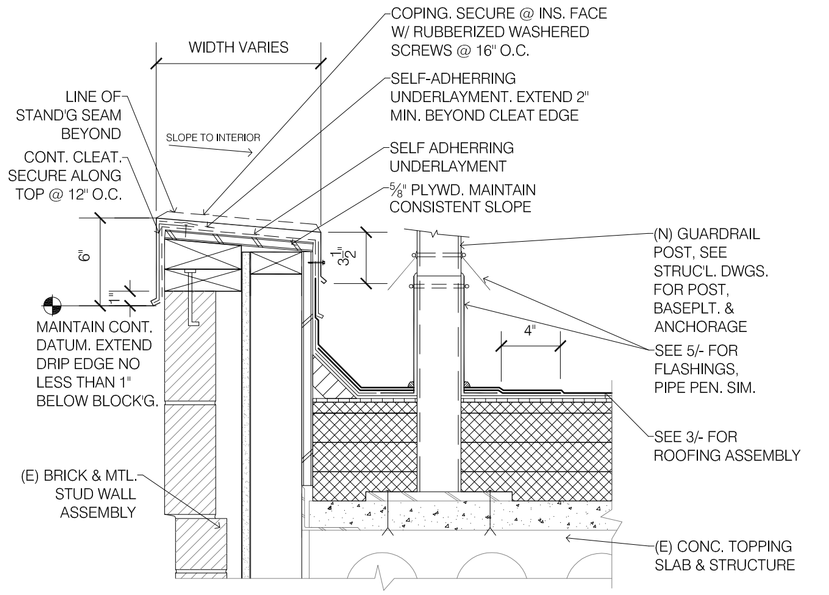
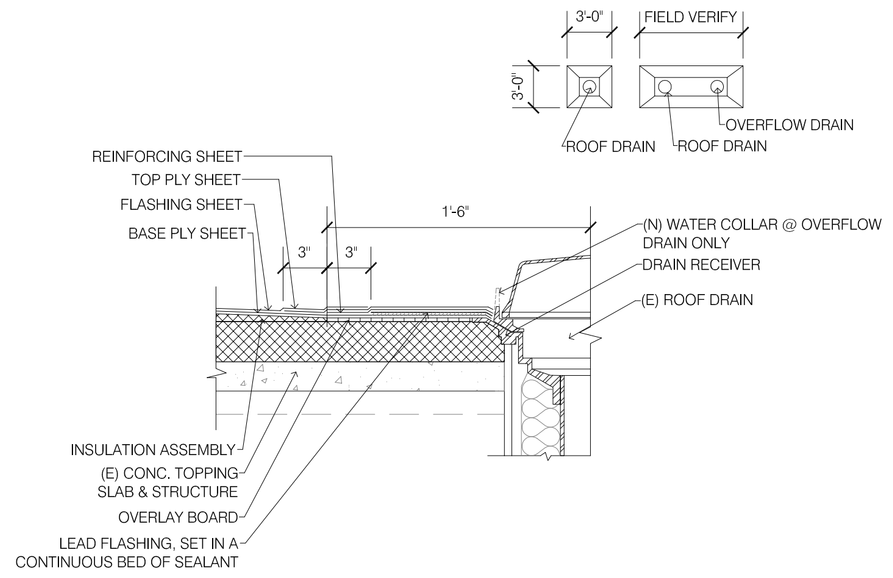


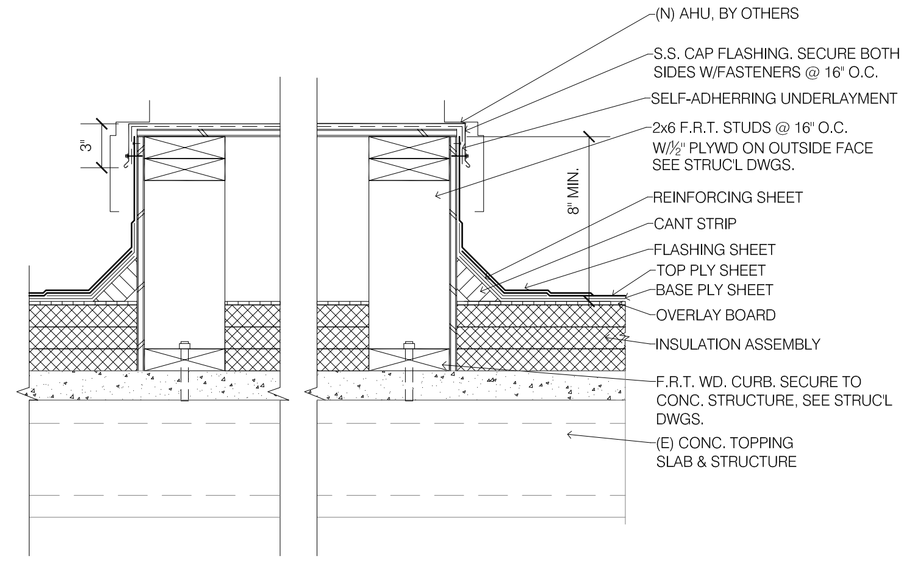
1 - typ. parapet/guardrail

1 1/ 2 " = 1' - 0"



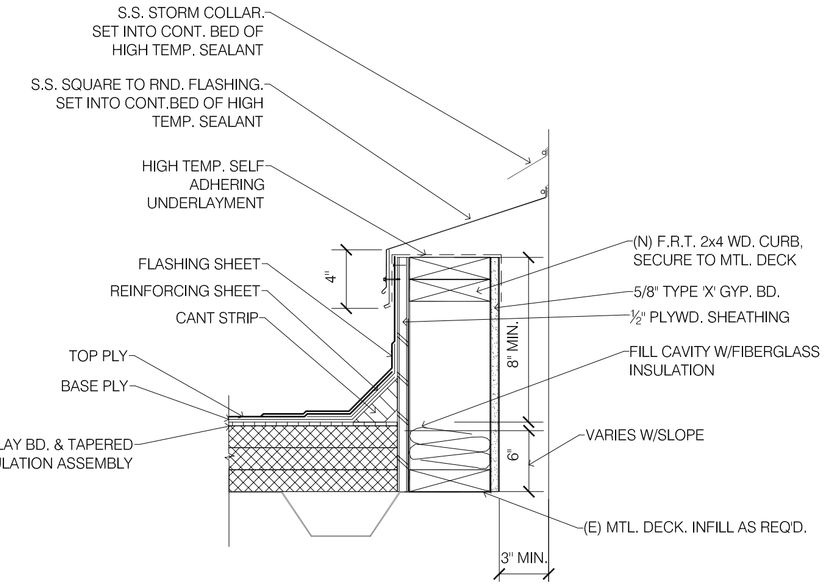
4 - roof drain

1 1/ 2 " = 1' - 0"



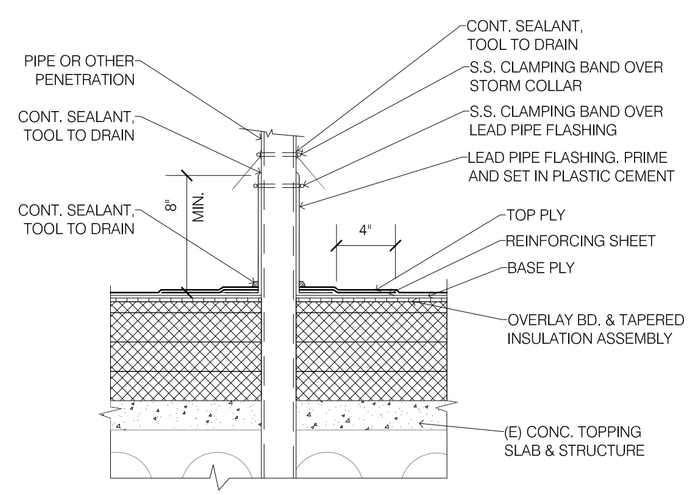
7 - air handling unit curb

1 1/ 2 " = 1' - 0"



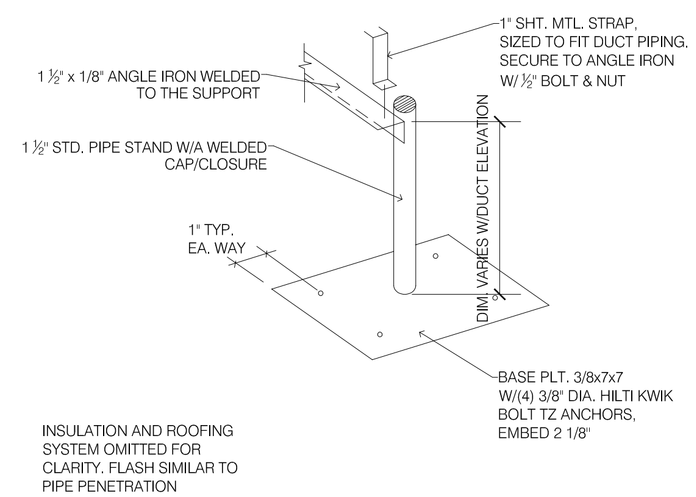
2 - boiler stack flashing

1 1/ 2 " = 1' - 0"



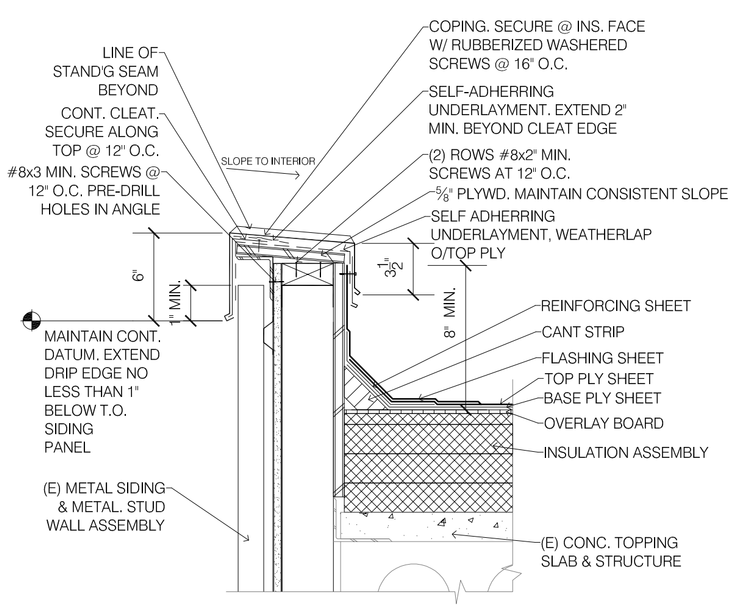
5 - pipe penetration

1 1/ 2 " = 1' - 0"



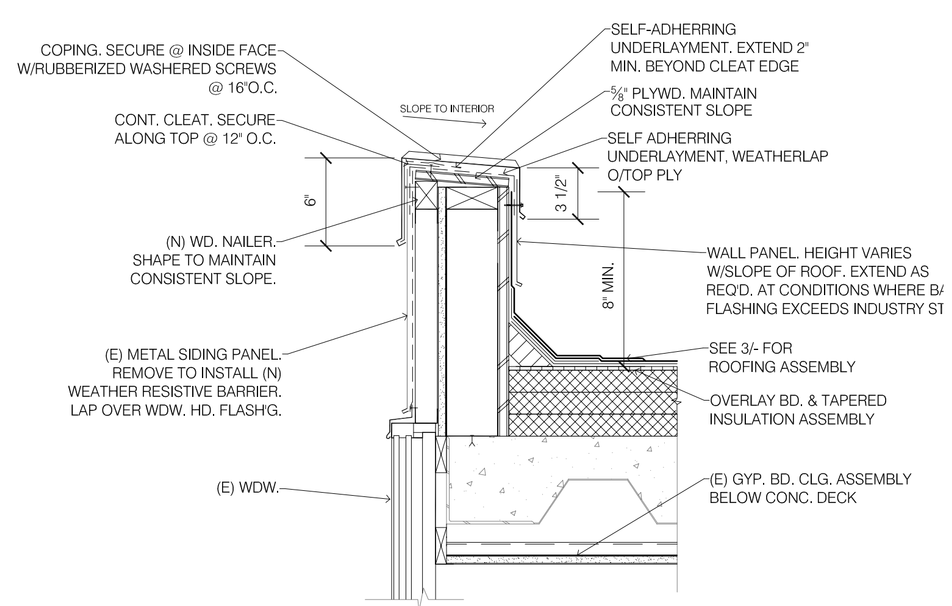
8 - duct support

NO SCALE



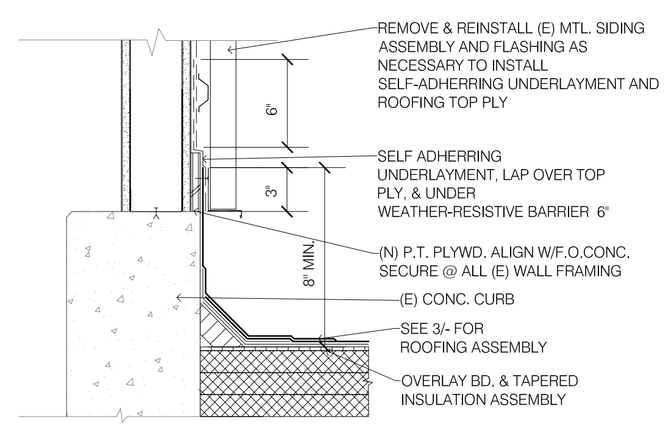
3 - parapet at metal siding

1 1/ 2 " = 1' - 0"



6 - parapet at window

1 1/ 2 " = 1' - 0"



9 - roof to wall at elev. penthouse

1 1/ 2 " = 1' - 0"

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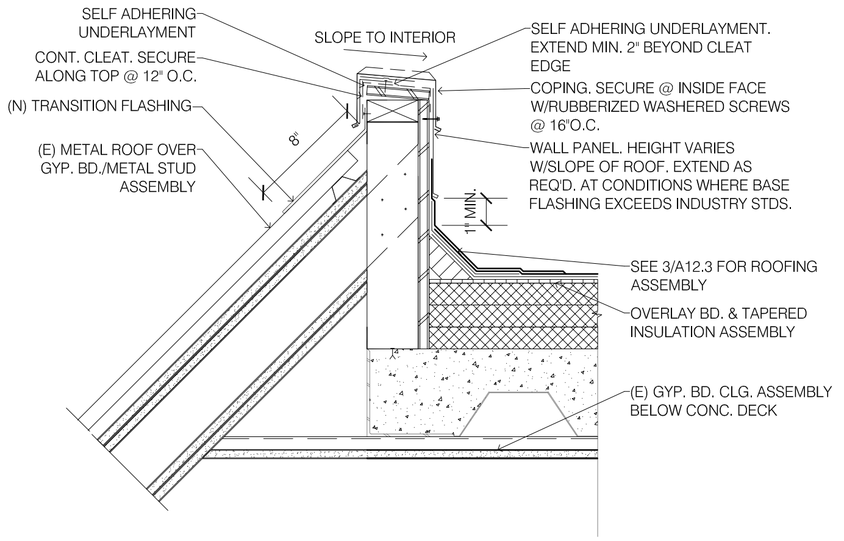
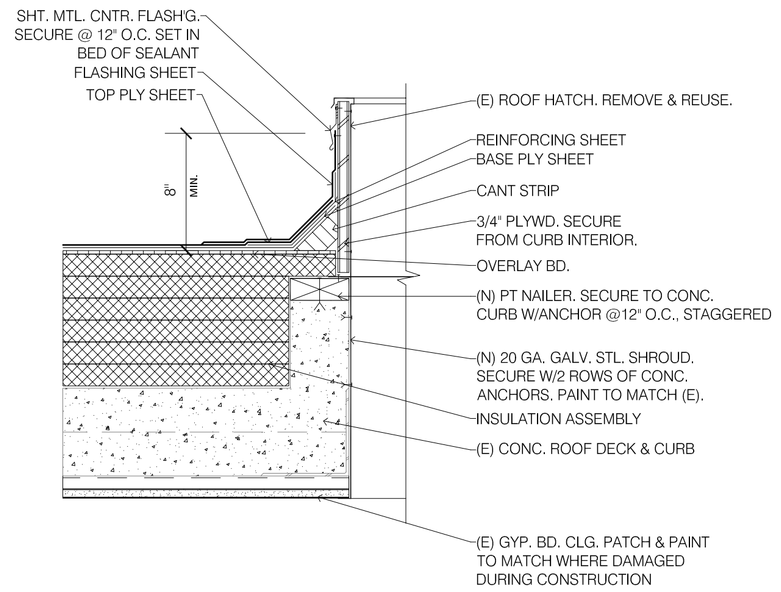


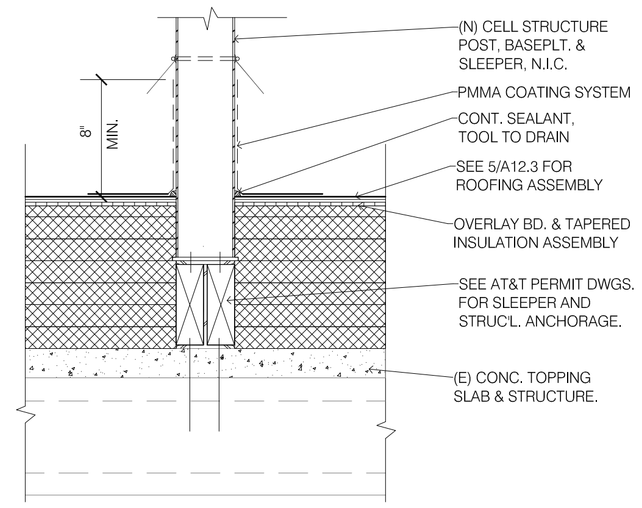
1 - parapet at metal roof

1 1/ 2 " = 1' - 0"



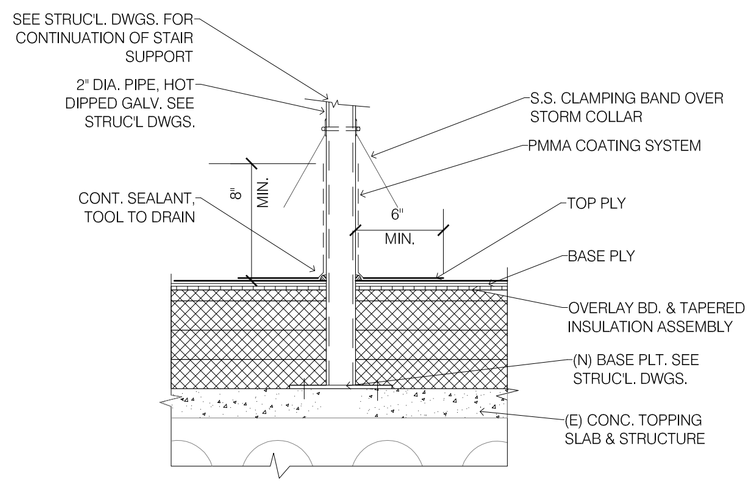
4 - (e) roof hatch

1 1/ 2 " = 1' - 0"



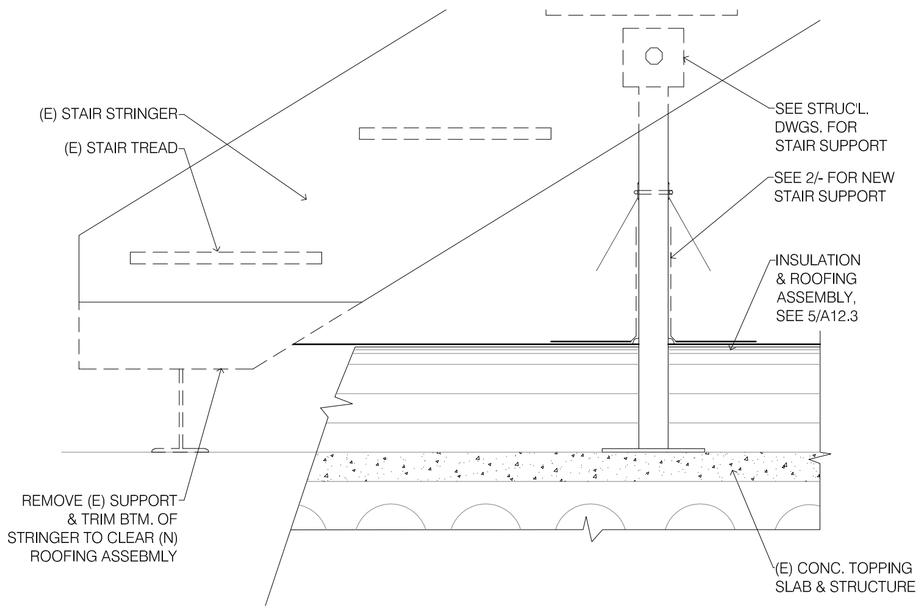
7 - flash'g at (n) at&t structure support

1 1/ 2 " = 1' - 0"



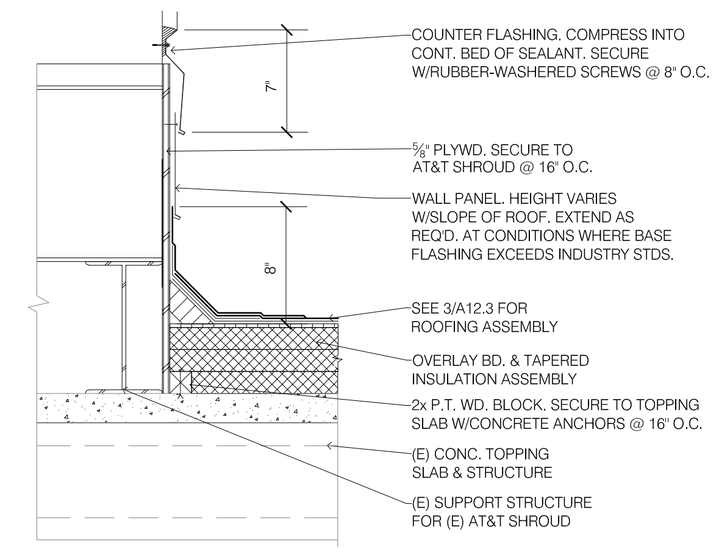
2 - stair support

1 1/ 2 " = 1' - 0"



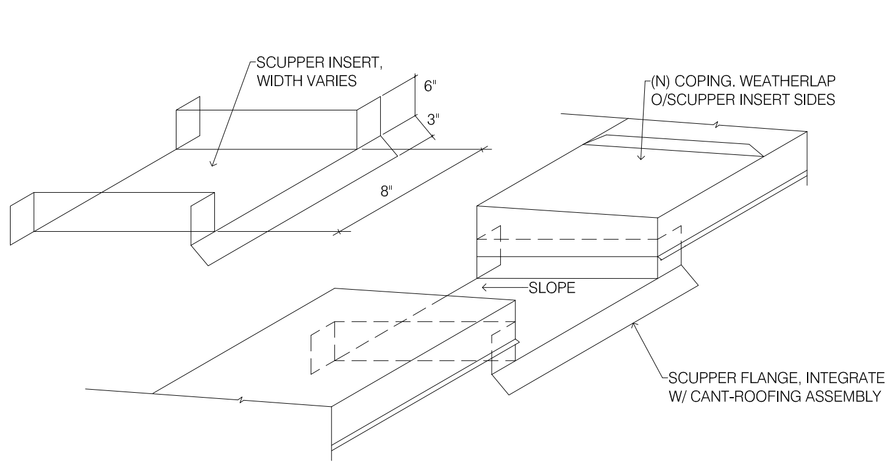
5 - (e) stair with modified support

1 1/ 2 " = 1' - 0"



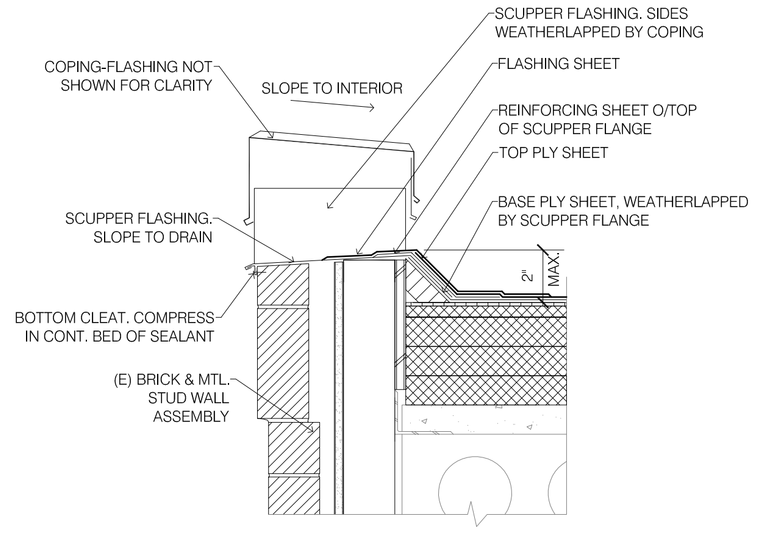
8 - roof to wall at (e) at&t structure

1 1/2" = 1'-0"



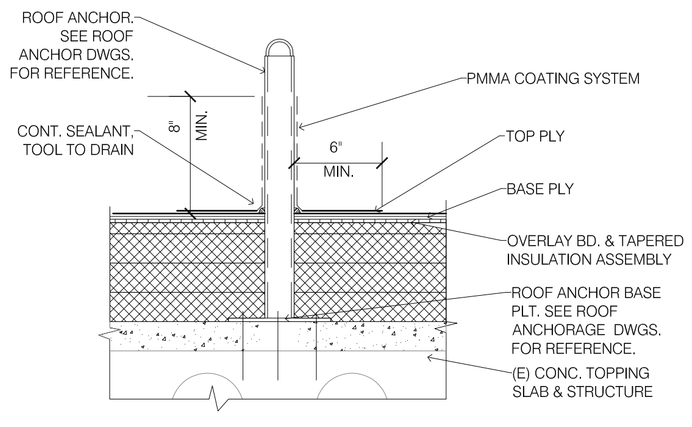
3 - scupper flashing insert

NO SCALE



6 - scupper flashing

1 1/ 2 " = 1' - 0"



9 - rooftop anchor

1 1/2" = 1'-0"

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A12.4

GENERAL STRUCTURAL NOTES

GENERAL NOTES:

1. ALL CONSTRUCTION AND DESIGN SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON.
2. THE STRUCTURAL DRAWINGS SHALL BE UTILIZED IN CONJUNCTION WITH OTHER DESIGN CONSULTANT'S DRAWINGS (ARCHITECTURAL, MECHANICAL, ETC.). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE REQUIREMENTS OF THE DRAWINGS INTO THEIR SHOP DRAWINGS AND CONSTRUCTION.
3. THE GENERAL STRUCTURAL NOTES ARE INTENDED FOR USE IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE TWO, THE GENERAL STRUCTURAL NOTES SHALL SUPERSEDE THE PROJECT SPECIFICATIONS. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER.
4. CONSTRUCTION SEQUENCE AND METHODS:
   A. THE STRUCTURAL DRAWINGS ARE INTENDED FOR THE STRUCTURE TO ACT AS A WHOLE ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY (I.E. TEMPORARY BRACING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.
   B. THE CONTRACTOR SHALL TAKE INTO ACCOUNT COLD WEATHER CONSTRUCTION AND THE EFFECTS OF THERMAL MOVEMENT DURING THE CONSTRUCTION SCHEDULE.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. THE ARCHITECT AND/OR ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY BETWEEN THE EXISTING CONDITIONS AND CONSTRUCTION DOCUMENTS.
6. SUBMITTALS:
   A. SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION. SUCH ITEMS INCLUDE:

      STRUCTURAL STEEL (INCLUDING MILL TEST REPORTS)

      SHOP DRAWINGS OR CONTRACTOR ENGINEERED DETAILS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF OREGON IF IT DIFFERS FROM THE DESIGN OF THE STRUCTURAL DRAWINGS. ANY REVISION FROM THE STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND IS SUBJECT TO THE REVIEW AND ACCEPTANCE BY THE ENGINEER.

   B. CALCULATIONS, DESIGN DRAWINGS, AND SHOP DRAWINGS FOR THE DESIGN, FABRICATION, AND CONSTRUCTION OF BIDDER DESIGN ITEMS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED STRUCTURAL ENGINEER IN THE STATE OF OREGON AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION. BIDDER DESIGN ITEMS FOR THIS PROJECT INCLUDE:

      FALL PROTECTION SYSTEMS.

      CALCULATIONS AND BIDDER DESIGN DRAWINGS SHALL INCLUDE THE DESIGN, CONNECTION TO THE STRUCTURE, AND ACCOUNTING OF ANY LOCALIZED EFFECTS THE CONNECTIONS OR SYSTEMS MAY INDUCE ON THE STRUCTURE. ALL SUCH BIDDER DESIGNED ITEMS SHALL BE BASED ON THE DESIGN REQUIREMENTS AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES.

   C. SEISMIC BRACING AND RESTRAINT TO THE STRUCTURE OF ANY MEP EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONNECTIONS NOT IN COMPLIANCE WITH SMACNA (SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION) OR THE MEP DESIGN DRAWINGS, SHALL BEAR THE SEAL OF REGISTERED ENGINEER IN THE STATE OF OREGON AND SHALL BE SUBMITTED ALONG WITH CALCULATIONS TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.
7. DESIGN CRITERIA:
   A. CODE: 2009 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF OREGON (2010 OSSC).
   B. LOADS AND DESIGN CRITERIA: THE FOLLOWING LIVE LOADS AND CRITERIA WERE USED IN ADDITION TO THE DEAD LOAD OF THE STRUCTURE.

      LIVE LOADS:

GUARDRAILS	50 PLF OR 200# APPLIED ANY DIRECTION
FALL PROTECTION SYSTEM	5000# ULTIMATE IN ANY DIRECTION

      LATERAL CRITERIA:

WIND	95 MPH, EXPOSURE B Iw = 1.0 (COMPONENTS)
SEISMIC	Ie = 1.0 (COMPONENTS) Ss = 0.986g S1 = 0.347g SITE CLASS D (PER IBC 1615.1.1 DEFAULT) Sds = 0.727g Sd1 = 0.395g SEISMIC DESIGN CATEGORY D

STRUCTURAL STEEL:

1. STEEL DESIGN, FABRICATION, AND ERECTION SHALL CONFORM WITH "AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" AND THE "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. THE GRADE AND SPECIFICATION OF THE STEEL MEMBERS SHALL BE AS FOLLOWS:

PLATES AND ANGLES (U.N.O.)	ASTM A36
HOLLOW STRUCTURAL SECTIONS (PIPES)	ASTM A53 GRADE B (Fy=35 KSI)

3. BOLTS SHALL CONFORM TO ASTM SPECIFICATIONS FOR A307 BOLTS UNLESS NOTED OTHERWISE. BOLTS SHALL BE INSTALLED TO SNUG-TIGHT CONDITIONS UNLESS NOTED OTHERWISE.
4. WELDING SHALL CONFORM TO THE AWS CODES FOR BUILDING CONSTRUCTION. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDING PROCEDURE SPECIFICATION (WPS) AS REQUIRED IN AWS D1.1 AND APPROVED BY THE ENGINEER OF RECORD. THE WPS VARIABLES SHALL BE WITHIN THE PARAMETERS ESTABLISHED BY THE FILLER-METAL MANUFACTURER.
5. WELDS SHALL UTILIZE E70XX ELECTRODES AND SHALL BE A MINIMUM OF 3/16" IN SIZE UNLESS NOTED OTHERWISE.

SAWN LUMBER:

1. ALL WOOD FRAMING MEMBERS INCLUDING BUT NOT LIMITED TO WALL STUDS AND JOISTS, ARE INTENDED TO ACT AS A SYSTEM AS DETAILED IN THE STRUCTURAL DRAWINGS AND ONCE CONSTRUCTION IS COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE SAFETY AND STABILITY OF WOOD FRAMING SYSTEMS (I.E. TEMPORARY BRACING IF REQUIRED) DURING CONSTRUCTION AS A RESULT OF CONSTRUCTION METHODS AND SEQUENCES.
2. ALL SAWN LUMBER SHALL CONFORM TO THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU GRADING RULES. LUMBER SHALL BE OF THE SPECIES AND GRADE SHOWN BELOW:

MEMBER	GRADE
2x AND 4x FRAMING	DOUGLAS FIR-LARCH NO. 2
5x AND GREATER BEAMS	DOUGLAS FIR-LARCH NO. 1
POSTS/ COLUMNS	DOUGLAS FIR-LARCH NO. 1

3. STORAGE OF ALL LUMBER AND TIMBER ON SITE SHALL BE KEPT OFF GROUND, UNDER COVER AND PROTECTED FROM DAMAGE.
4. ALL DIMENSIONAL LUMBER SHALL BE CERTIFIED BY THE SUPPLIER IN WRITING TO BE KILN DRIED.
5. ALL TIMBER SHALL BE CERTIFIED BY THE SUPPLIER IN WRITING TO BE LESS THAN 19% MOISTURE CONTENT.
6. ALL LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR CMU SHALL BE PRESSURE TREATED.

SAWN LUMBER (CONT.):

7. FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. FASTENINGS FOR WOOD FOUNDATIONS SHALL BE AS REQUIRED IN AF&PA TECHNICAL REPORT NO. 7.
8. ALL PLATES AND LEDGERS SHALL BE FASTENED WITH A MINIMUM (3) ANCHORS PER PIECE.
9. ALL METAL HARDWARE AND FRAMING ACCESSORIES SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. ALL NAIL HOLES SHALL BE FILLED WITH THE RECOMMENDED FASTENER UNLESS NOTED OTHERWISE ON THE DRAWINGS.
10. ALL WALLS SHALL HAVE DOUBLE TOP PLATES AND SHALL BE SPLICED PER THE TYPICAL TOP PLATE SPLICE DETAIL, UNLESS NOTED OTHERWISE. TOP PLATES AT WALL INTERSECTIONS SHALL BE LAPPED AND NAILED WITH (3) 16d NAILS.
11. HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT + 1/16". LEAD HOLES FOR LAG SCREWS SHALL BE BORED PER NDS 11.1.3
12. ALL BOLTS, CARRIAGE BOLTS, LAG SCREWS, EXPANSION BOLTS AND EPOXY BOLTS SHALL BE INSTALLED WITH STANDARD CUT WASHERS UNDER THE BOLT HEADS AND NUTS THAT BEAR DIRECTLY ON THE WOOD. ALL NUTS SHALL BE TIGHTENED AT THE TIME OF INSTALLATION AND RE-TIGHTENED IF NECESSARY, DUE TO WOOD SHRINKAGE, PRIOR TO CLOSE-IN OR AT THE COMPLETION OF THE PROJECT. BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME STANDARD B18.2.1-1996.
13. CUTTING AND NOTCHING OF STUDS SHALL BE IN CONFORMANCE WITH BOTH THE 2010 OSSC SECTIONS 2308.8.2, 2308.9.10, 2308.9.11, AND 2308.10.4.2 AND IN CONFORMANCE WITH THE FOLLOWING CRITERIA:

    A. WALL STUDS — STUDS ARE PERMITTED TO BE CUT OR NOTCHED TO A MAXIMUM DEPTH NOT EXCEEDING 25% OF ITS WIDTH. A HOLE NOT GREATER THAN 40% OF THE STUD WITH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION AS A CUT OR NOTCH.

14. WOOD SYMBOLS:

    

    CONTINUOUS

    

    BLOCKING

15. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS UNLESS NOTED OR DETAILED OTHERWISE. HOLES SHALL BE PRE-DRILLED WHERE NECESSARY TO PREVENT SPLITTING. NAILING NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE PER THE NAILING SCHEDULE BELOW:

NAIL TYPE	SHANK DIAMETER - INCHES	MINIMUM PENETRATION - INCHES
6d	0.113	1.13
8d	0.131	1.31
10d	0.148	1.48
12d	0.148	1.48
16d	0.162	1.63
20d	0.192	1.92

    NAILING SCHEDULE

A.	JOIST SITTING ON SILL OR GIRDER	(3) 8d TOENAILS, EA. SIDE
B.	BLOCKING BETWEEN JOISTS/RAFTERS	(2) 10d TOENAILS, EA. SIDE, EA. END
	RIM BLOCKING BETWEEN JOISTS/RAFTERS	(3) 10d TOENAILS EA. END
C.	TOP PLATE TO STUD	(2) 16d END NAILS
D.	STUD TO SILL PLATE	(2) 16d END NAILS OR (4) 8d TOENAILS
E.	DOUBLE STUDS	16d AT 24" o.c.
F.	DOUBLE TOP PLATES - BETWEEN SPLICE NAILING	16d AT 16" o.c. FACE NAILS
G.	DOUBLE TOP PLATES - EACH SIDE OF SPLICED PLATE	(8) 16d
H.	BLOCKING TO TOP PLATE	(2) 10d TOENAILS EACH SIDE
	BLOCKING TO FLOOR/ROOF SHEATHING	(4) 10d NAILS
I.	RIM JOIST TO TOP PLATE OR SILL PLATE	8d TOENAILS AT 6" o.c.
J.	CONTINUOUS (2) AND (3) PIECE HEADERS	16d AT 16" o.c. ALONG EACH EDGE
K.	CEILING JOIST LAPS OVER PARTITIONS	(3) 16d FACE NAILS, MINIMUM
L.	RAFTER TO TOP PLATE OR SILL PLATE	(3) 8d TOENAILS EACH SIDE
M.	BUILT-UP CORNER STUDS	16d AT 24" o.c.
N.	TONGUE AND GROOVE DECKING	(2) 16d AT EACH BEARING
P.	CROSS BRIDGING	(2) 10d EACH END
R.	HORIZONTAL BLOCKING BETWEEN WALL STUDS	(2) 10d TOENAILS EACH END
S.	I-JOIST SITTING ON TOP PLATE OR BEAM	(2) 10d NAILS THROUGH JOIST FLANGE, (1) EA. SIDE

    NAILING SCHEDULE NOTES:
    1. ALL OTHER NAILING REQUIREMENTS NOT SHOWN ON DRAWINGS OR IN SCHEDULE ABOVE SHALL BE IN ACCORDANCE WITH 2009 INTERNATIONAL BUILDING CODE.
    2. POWER DRIVEN OR PNEUMATIC NAILS OTHER THAN COMMON NAILS MAY BE USED IF DATA IS SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO USE.
    3. MINIMUM NAIL LENGTHS SHALL BE SUFFICIENT TO ACHIEVE MINIMUM PENETRATION INTO MAIN MEMBER AS NOTED IN SCHEDULE.

WOOD STRUCTURAL PANELS:

1. STRUCTURAL WOOD PANELS SHALL CONFORM TO THE REQUIREMENTS OF ONE OF THE FOLLOWING STANDARDS AND PUBLICATIONS:
   A. U.S. PRODUCT STANDARD PS1-95 FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD.
   B. U.S. PRODUCT STANDARD PS2-92 PERFORMANCE STANDARD FOR WOOD BASED STRUCTURAL USE PANELS
   C. APA PRP-108 PERFORMANCE STANDARDS
   D. ANY CODE-APPROVED STANDARD OR PUBLICATION. APPROVAL MUST BE OBTAINED FROM ABHT STRUCTURAL ENGINEERS.
2. ROOF AND WALL PANELS SHALL BE APA RATED, EXPOSURE 1, 1/2", 5 PLY PLYWOOD WITH A 32/16 SPAN RATING UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. ALL ROOF AND FLOOR SHEATHING SHALL BE INSTALLED WITH THE FACE GRAIN PERPENDICULAR TO THE SUPPORTS AND A 1/8" GAP AT ALL PANEL EDGES UNLESS RECOMMENDED OTHERWISE BY THE PANEL MANUFACTURER.
4. ALL NAILS SHALL BE COMMON NAILS EXCEPT AT ROOF SHEATHING WHERE RING SHANK NAILS SHALL BE USED. GALVANIZED NAILS SHALL BE USED AT PERMANENTLY EXPOSED EXTERIOR AREAS. GALVANIZED NAILS SHALL BE HOT DIPPED OR TUMBLED ONLY.

DRAWING INDEX

SPECIAL INSPECTION PROGRAM

TABLE 2

REQUIRED STRUCTURAL SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION: IBC CODE REFERENCE	INSPECTION: CODE or STANDARD REFERENCE	FREQUENCY: Continuous	FREQUENCY: Periodic	REMARKS
FABRICATORS					
FABRICATORS	1704.2			X	SPECIAL INSPECTIONS APPLY TO VERIFICATION OF DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES INCLUDING REVIEW FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS
STEEL					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL	1704.3 2203.1	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 M5.5		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS	1704.3	AISC 360 A3.4 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1704.3.1	AISC 360 A3.5 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	COPY OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	1704.3.1	AWS D1.1 SECTION 6	X		ALL WELDS VISUALLY INSPECTED PER AWS D1.1 6.9
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"	1704.3.1 TABLE 1704.4	AWS D1.1, SECTION 6		X	
POST INSTALLED CONCRETE ANCHORS					
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE	1912.1	ICC EVALUATION REPORT ACI 318: 3.8.6, 8.1.3, 21.1.8		X	SPECIAL INSPECTIONS APPLY TO ANCHOR PRODUCT NAME, TYPE, AND DIMENSIONS, HOLE DIMENSIONS, COMPLIANCE WITH DRILL BIT REQUIREMENTS, CLEANLINESS OF THE HOLE AND ANCHOR, ADHESIVE EXPIRATION DATE, ANCHOR/ADHESIVE INSTALLATION, ANCHOR EMBEDMENT, AND TIGHTENING TORQUE

SPECIAL INSPECTION FOOTNOTES

SPECIAL INSPECTIONS SHALL CONFORM TO CHAPTER 17 OF THE 2009 "INTERNATIONAL BUILDING CODE" AND OREGON AMENDMENTS. REFER TO THE TABLE 2 FOR SPECIAL INSPECTION AND TESTING REQUIREMENTS.

SPECIAL INSPECTIONS AND ASSOCIATED TESTING SHALL BE PERFORMED BY AN APPROVED ACCREDITED INDEPENDENT AGENCY MEETING THE REQUIREMENTS OF ASTM E329 (MATERIALS), ASTM D3740 (SOILS), ASTM C1077 (CONCRETE), ASTM A880 (STEEL), AND ASTM E543 (NON-DESTRUCTIVE). THE INSPECTION AND TESTING AGENCY SHALL FURNISH TO THE STRUCTURAL ENGINEER A COPY OF THEIR SCOPE OF ACCREDITATION. SPECIAL INSPECTORS SHALL BE CERTIFIED BY THE BUILDING OFFICIAL. WELDING INSPECTORS SHALL BE QUALIFIED PER SECTION 6.1.4.1.1 OF AWS D1.1. THE OWNER SHALL SECURE AND PAY FOR SERVICES OF THE INSPECTION AND TESTING AGENCY TO PERFORM ALL SPECIAL INSPECTIONS AND TESTS.

THE SPECIAL INSPECTOR SHALL OBSERVE THE INDICATED WORK FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, NOTED IN THE INSPECTION REPORTS, AND IF NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND THE BUILDING OFFICIAL.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER, CONTRACTOR, AND OWNER. THE SPECIAL INSPECTION AGENCY SHALL SUBMIT A FINAL REPORT INDICATING THE WORK REQUIRING SPECIAL INSPECTION WAS INSPECTED AND IS IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THAT ALL DISCREPANCIES NOTED IN THE INSPECTION REPORTS HAVE BEEN CORRECTED.

STRUCTURAL OBSERVATION: THE STRUCTURAL ENGINEER OF RECORD WILL PERFORM STRUCTURAL OBSERVATION BASED ON THE REQUIREMENTS OF THE 2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC) AND THE FOLLOWING CRITICAL STAGES OF CONSTRUCTION: UPON COMPLETION OF ALL STRUCTURAL WORK, BUT PRIOR TO ROOF INSULATION PLACEMENT . COPIES OF SITE OBSERVATION REPORTS AND FINAL OBSERVATION REPORT WILL BE SUBMITTED TO THE BUILDING OFFICIAL, ARCHITECT, CONTRACTOR AND OWNER.

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STRUCTURAL REGISTERED PROFESSIONAL ENGINEER 19,495PE OREGON NOV. 18, 1997 CLINTON J. AMBROSE EXPIRES 12-31-13

3/9 / 12
issue for bid

GENERAL STRUCTURAL NOTES, DRAWING INDEX, AND SPECIAL INSPECTION PROGRAM

Revisions :

Date : 3/9/2012

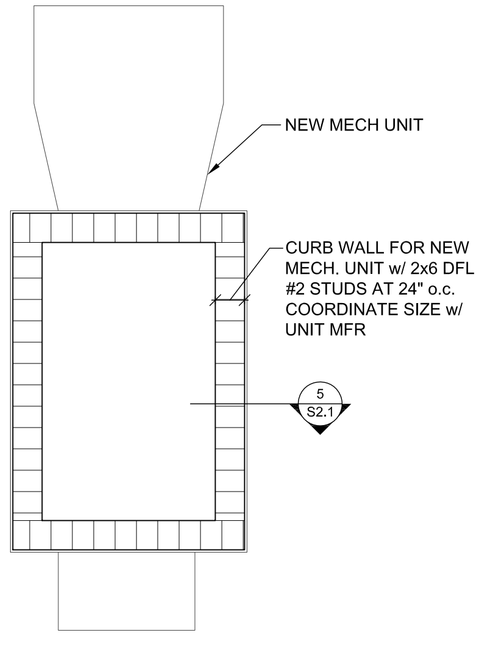
Drawn : ALBR

Checked : CJA

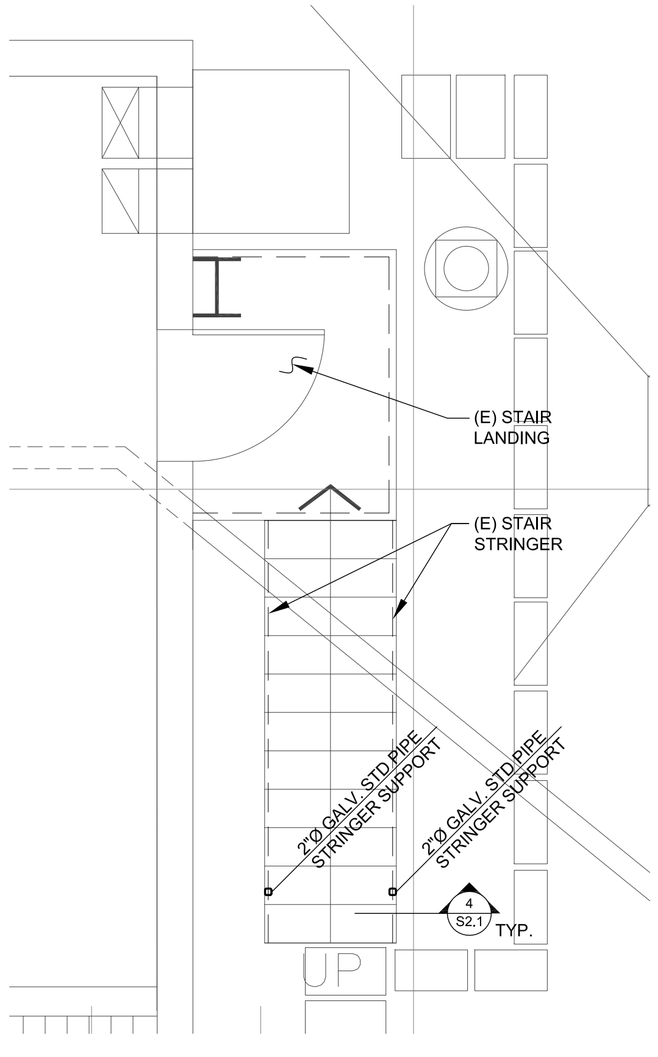
S0.1

SHEET NOTES:

1. VERIFY ALL DIMENSIONS, OPENINGS, DRAINS, STEPS AND LOCATIONS OF ALL EXISTING ROOF TOP EQUIPMENT (RTU) WITH ARCHITECTURAL DRAWINGS.
2. VERIFY ALL ROOF SLOPES, CRICKETS, AND DOWNSPOUTS WITH ARCHITECTURAL DRAWINGS.
3. (E) INDICATES EXISTING.



3 MECHANICAL CURB WALL PLAN
1/2"=1'-0"



2 PARTIAL PLAN AT STAIR
3/8"=1'-0"

1 ROOF PLAN
1/16"=1'-0"

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ROOF PLANS

Revisions :	Date : 3/9/2012
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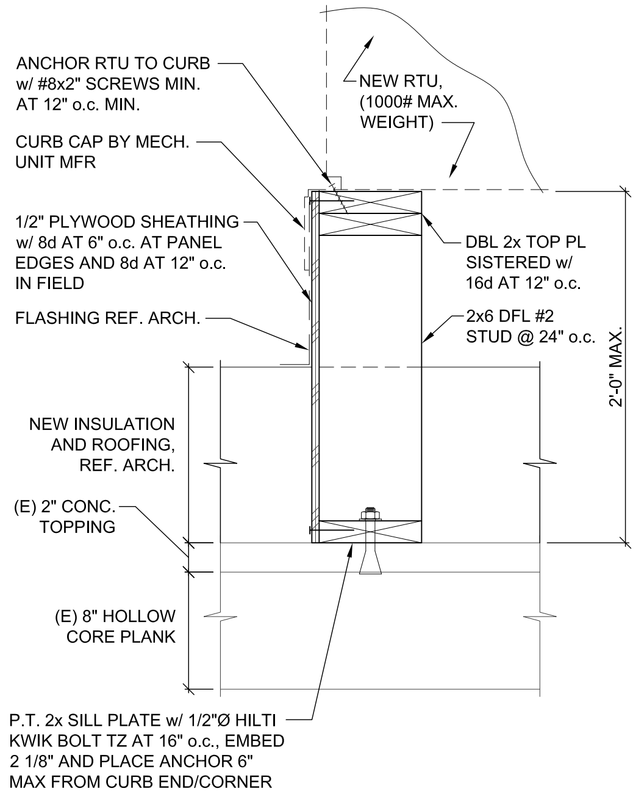
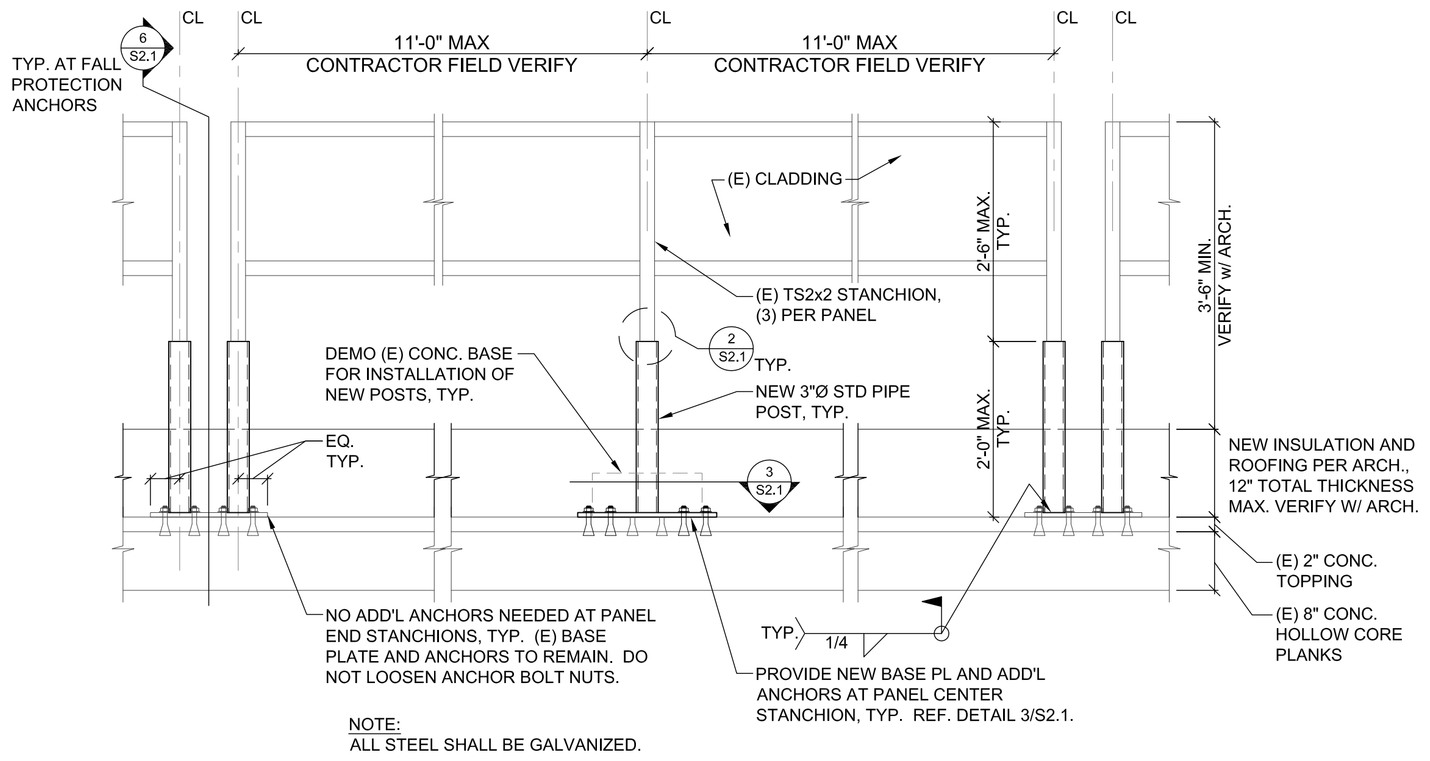
Checked : CJA	

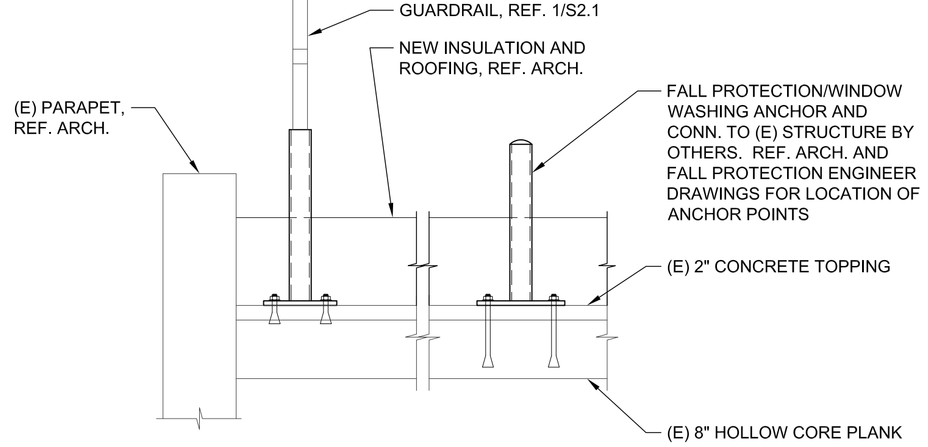
S1.1



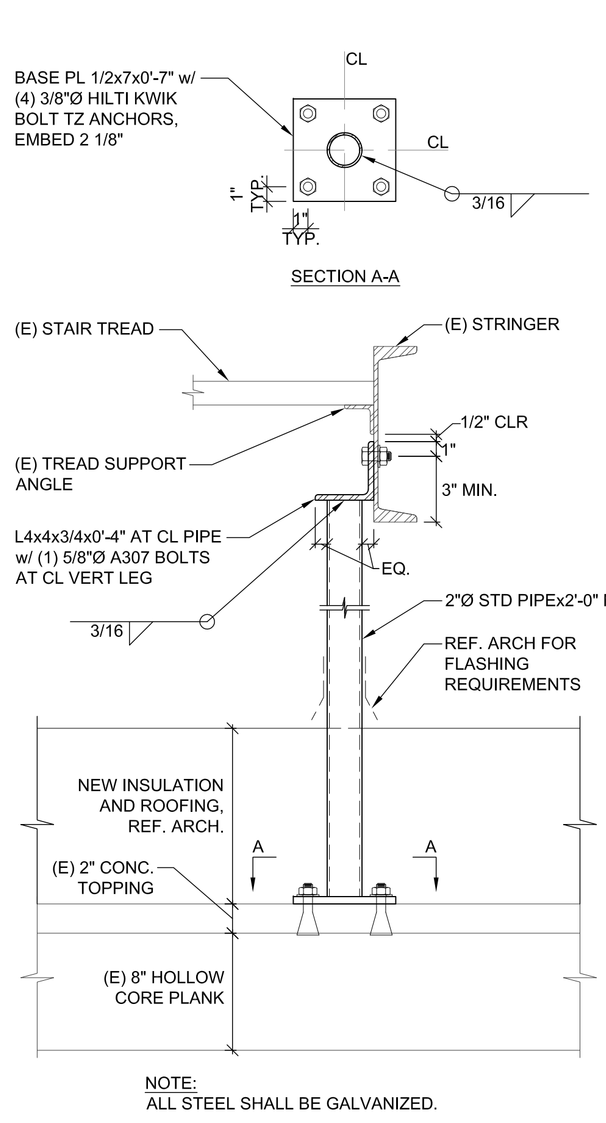
5 TYP. MECHANICAL UNIT CURB
1 1/2"=1'-0"



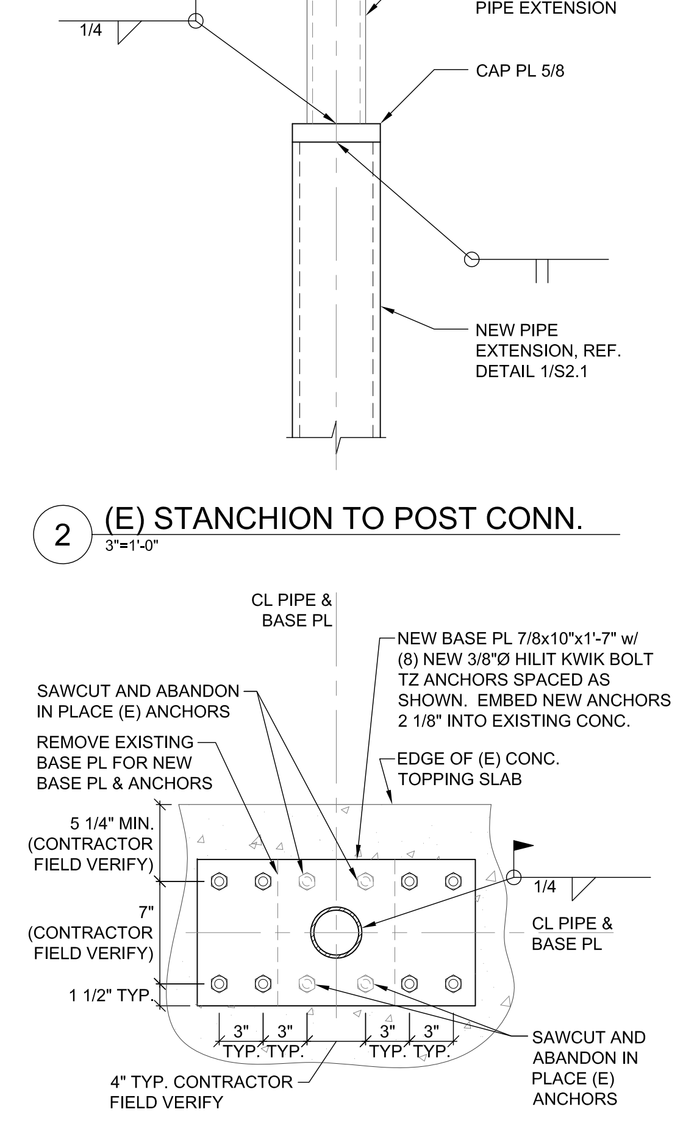
1 TYPICAL GUARDRAIL PANEL ELEVATION
3/4"=1'-0"



6 FALL PROTECTION REFERENCE DETAIL
3/4"=1'-0"



4 TYP. PENTHOUSE STAIR STRINGER BASE SUPPORT
1 1/2"=1'-0"



3 CENTER STANCHION NEW BASEPLATE ANCHORAGE
1 1/2"=1'-0"

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EXPIRES 12-31-13

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DETAILS

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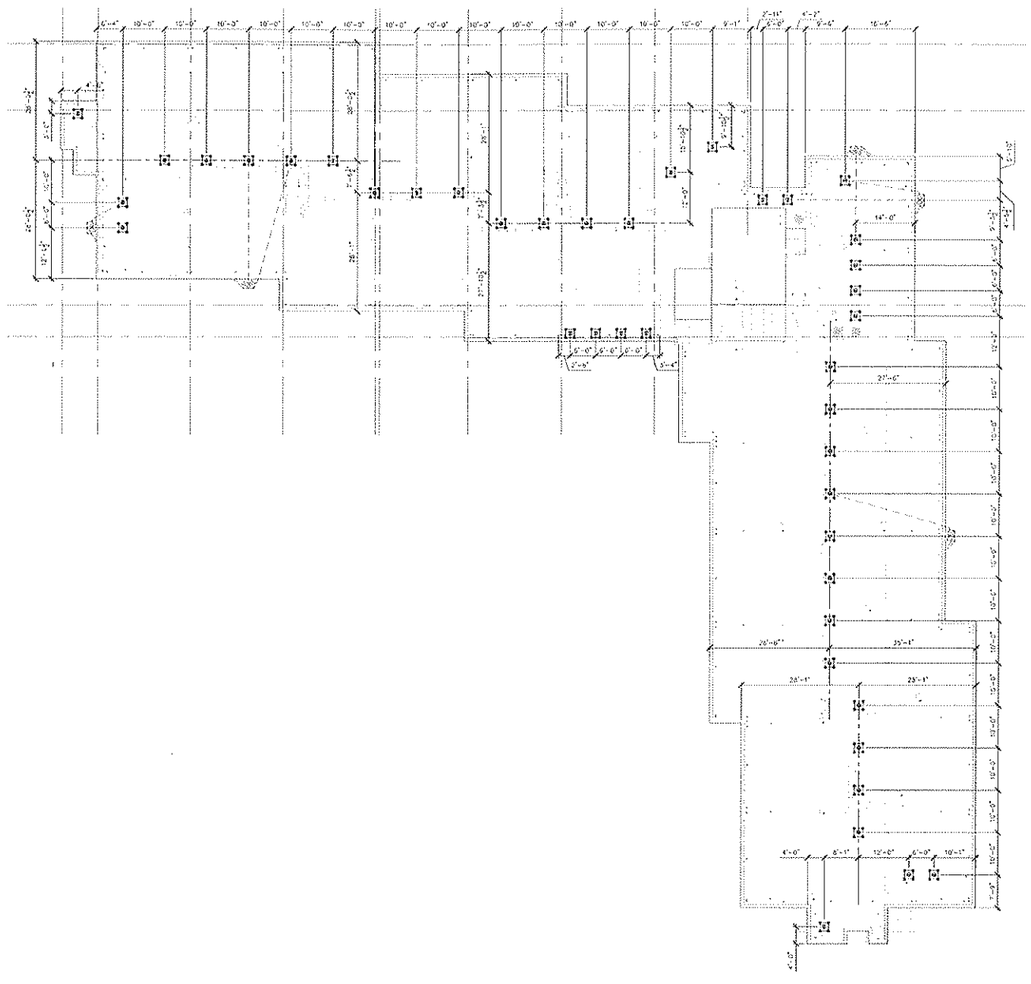
Date : 3/9/2012

Drawn : ALBR

Checked : CJA

S2.1

BID SET - NOT FOR CONSTRUCTION

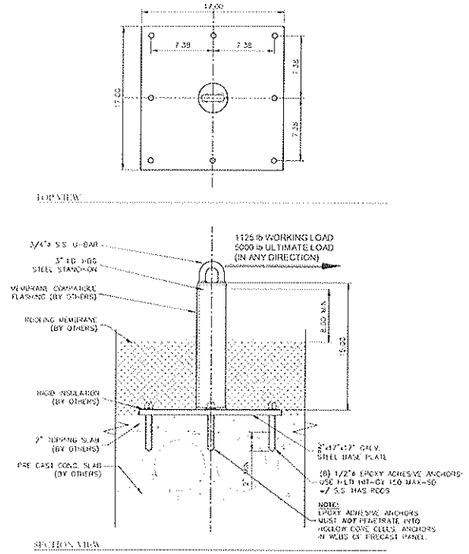


ROOF PLAN

SCALE: 1/16" = 1'-0"

SYMBOL LEGEND

BOLT THROUGH ROOFTOP ANCHOR (43 TOTAL)



1 EPOXY ADHESIVE ROOFTOP ANCHOR

FOR REFERENCE ONLY

ROOFTOP ANCHOR INC.

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PROJECT NAME
BLUMEL HALL
1765 SW 11th AVENUE
PORTLAND, OR

PROJECT OWNER
PORTLAND STATE UNIVERSITY

DRAWING TITLE
ANCHOR LAYOUT PLAN

PROJECT #	PSU104
DRAWN BY	JM
CHECKED BY	KW
SCALE	AS NOTED
PLOT DATE	03.02.12

REVISION SCHEDULE

DATE	DESCRIPTION

DRAWING NO
RA101