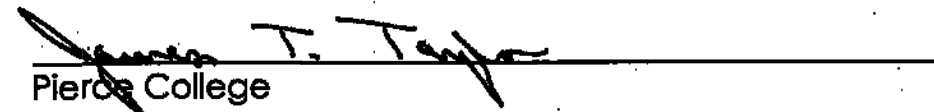



RAINIER BUILDING PLANETARIUM

FOR PIERCE COLLEGE

9401 Farwest Drive SW, Lakewood, WA. 98498-1999
State Project No. 2003-200 H (2)

APPROVALS:


Pierce College Date: 12/29/12


Steve Simpson
Department of Enterprise Services
Division of Engineering and Architectural Services Date: 12/29/12

ARCHITECT:

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OLYMPIA, WA 98501
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FX: 360.352.7005
Garner Miller, PROJECT ARCHITECT
EMAIL: garnerm@msgsrch.com

STRUCTURAL ENGINEER:

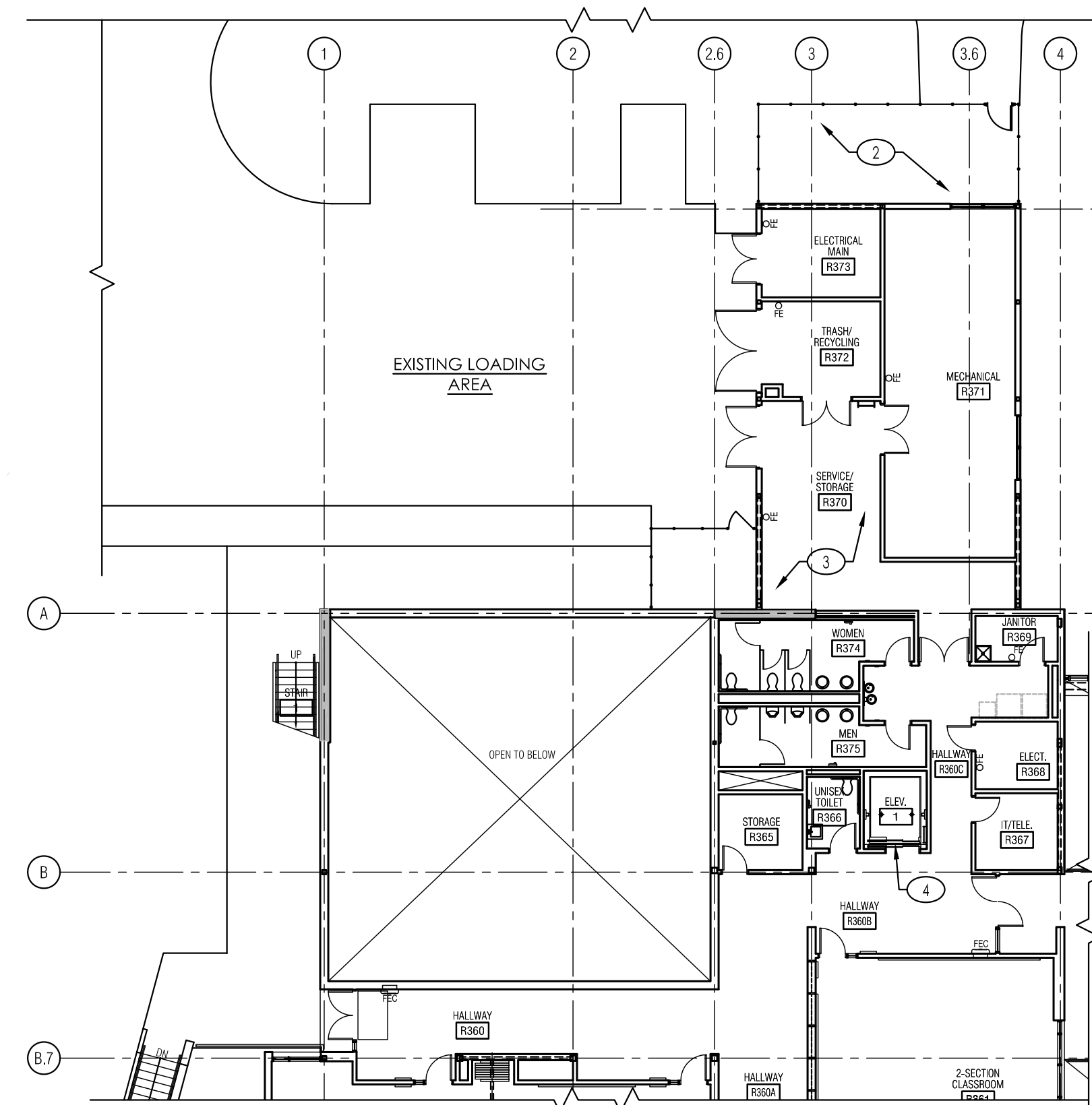
PCS STRUCTURAL SOLUTIONS
1250 PACIFIC AVE., SUITE 701
TACOMA, WA 98402
PH: 253.383.2797
Jack Pinkard, SE
EMAIL: jpinkard@pcs-structural.com

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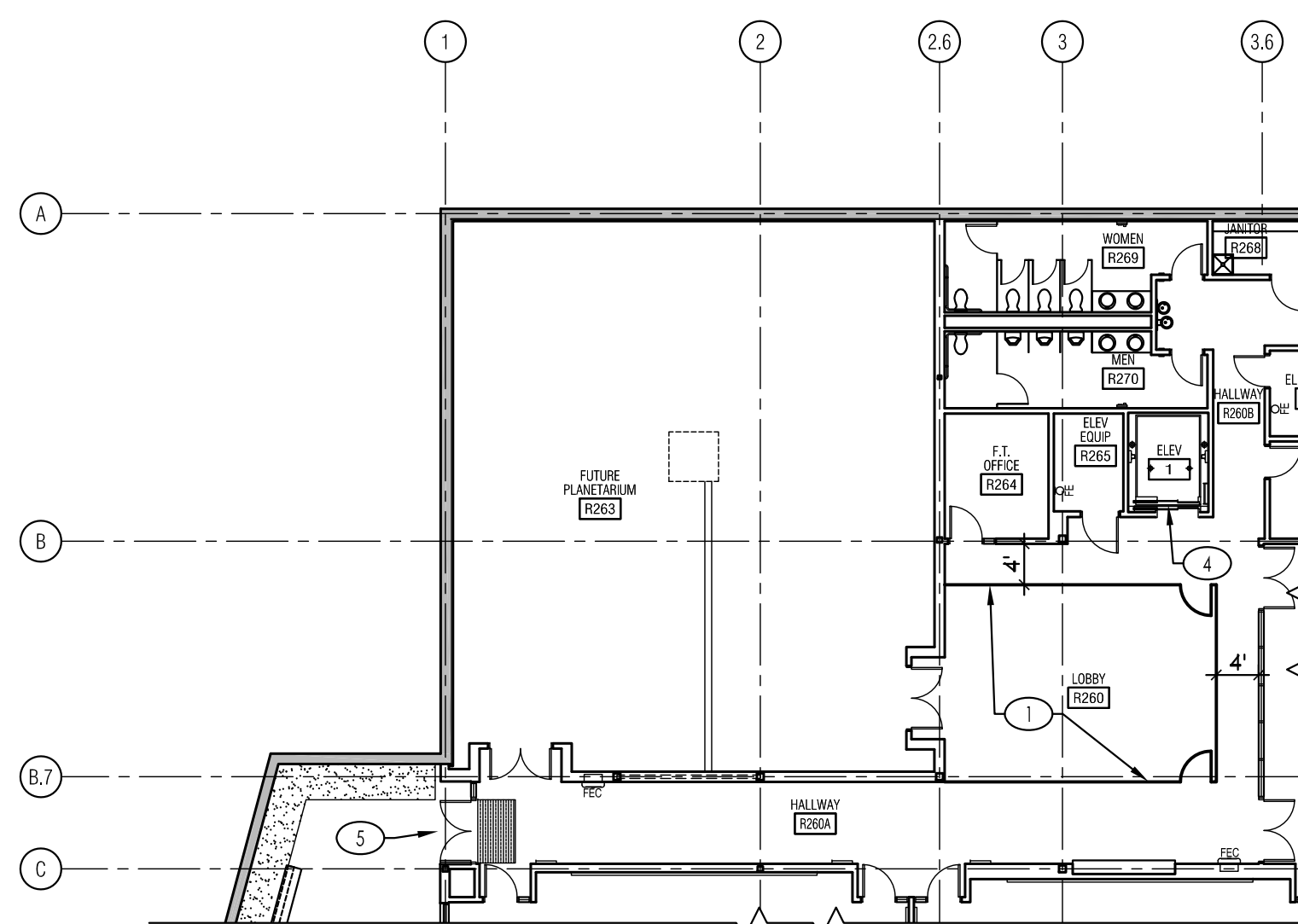
BCE ENGINEERS
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FIFE, WA 98424
PH: 253.922.0446
Chris Caffee, PE
EMAIL: chris.caffee@bceengineers.com

ELECTRICAL ENGINEER:

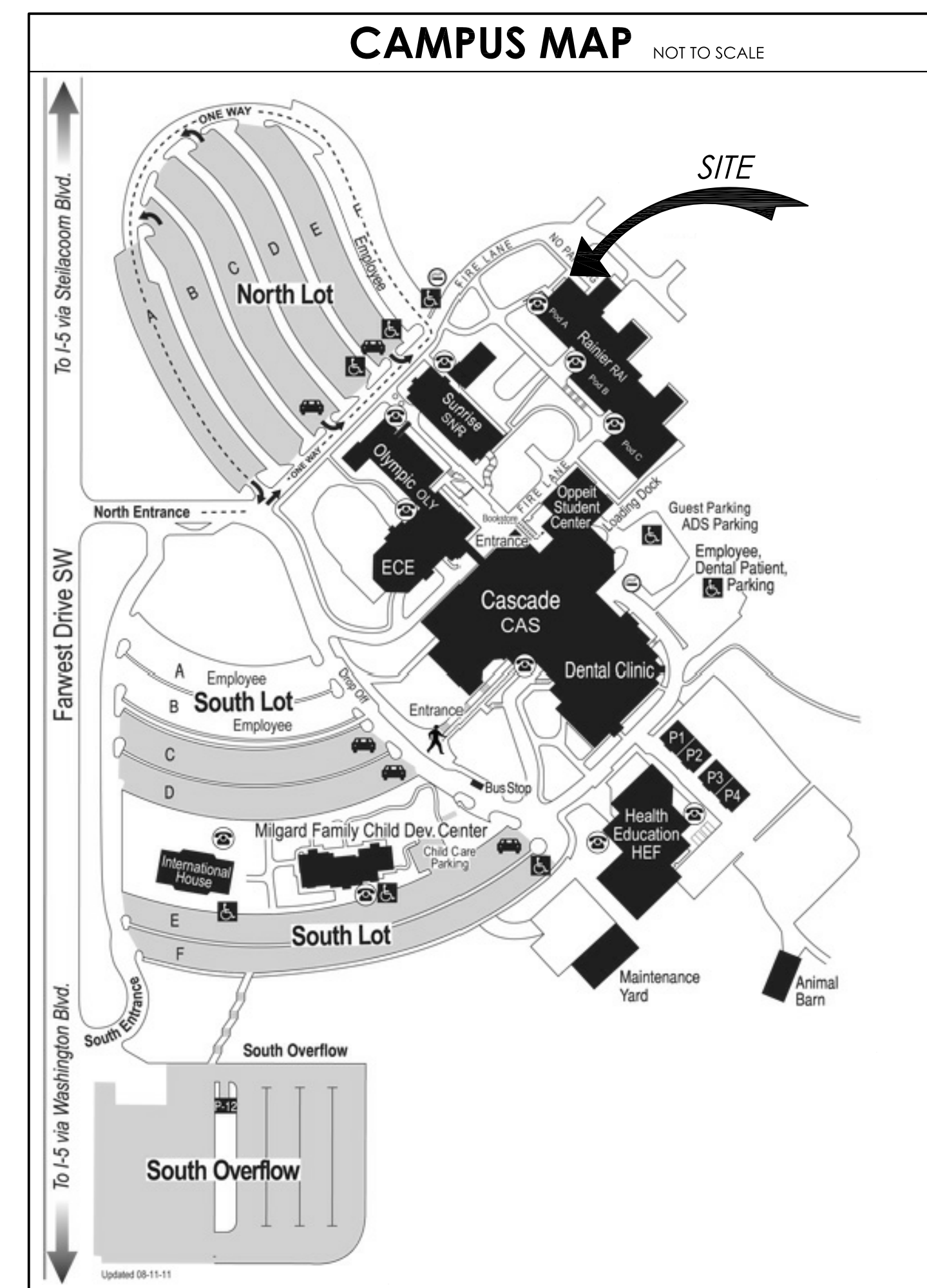
BCE ENGINEERS
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FIFE, WA 98424
PH: 253.922.0446
Carrie Taylor, Associate
EMAIL: carrie.taylor@bceengineers.com



THIRD LEVEL - STAGING PLAN
1/16" = 1'-0"



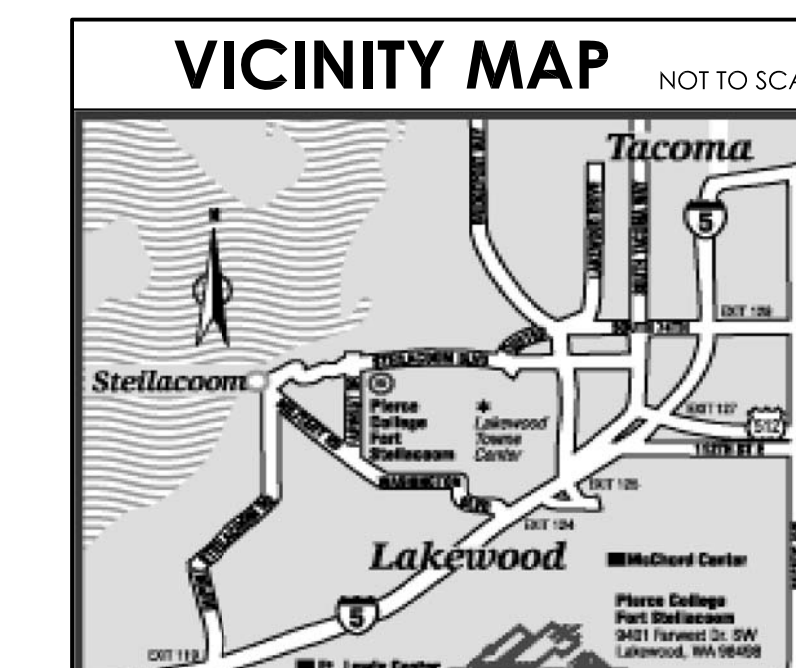
SECOND LEVEL - STAGING PLAN
1/16" = 1'-0"



- STAGING NOTES:**
1. PROVIDE TEMPORARY PLYWOOD PARTITIONS FOR INTERIOR STAGING AREA. PROTECT FLOOR W/ PLYWOOD.
 2. EXISTING FENCED AREA MAY BE USED FOR STAGING.
 3. LIMITED INDOOR STAGING AVAILABLE. COORDINATE WITH OWNER.
 4. SERVICE ELEVATOR MAY BE USED FOR MOVING MATERIALS.
 5. ENTRANCE MAY BE USED ON A LIMITED, AS NEEDED BASIS.

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A2.02	FINISH AND RAISED RISER DIMENSION PLAN
A2.03	PLANETARIUM EQUIPMENT PLATFORM PLAN
A2.04	PLANETARIUM REFLECTED CEILING PLAN
A2.05	REFLECTED CEILING PLAN ABOVE PLANETARIUM
A3.01	BUILDING SECTION AT PLANETARIUM
A3.02	WALL SECTIONS
A3.03	WALL SECTIONS AND DETAILS
A8.01	WALL TYPES AND DETAILS
STRUCTURAL	
S1.01	GENERAL NOTES
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MECHANICAL	
M1.01	MECHANICAL LEGEND AND SCHEDULES
M2.02	MEZZANINE HVAC PLAN
M3.01	MECHANICAL DETAILS AND CONTROLS
M4.01	FIRE PROTECTION DESIGN CRITERIA AND LEGEND
M4.02	FIRE PROTECTION RISER DETAILS
M4.03	FIRE PROTECTION FLOOR PLAN NOTES
M4.04	ENLARGED PLANETARIUM SECOND FLOOR FIRE PROTECTION PLAN
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E0.01	ELECTRICAL LEGEND AND LIGHTING FIXTURE SCHEDULE
E2.01	ENLARGED PLANETARIUM LIGHTING PLAN
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E2.03	PARTIAL SECOND LEVEL LIGHTING PLAN
E3.01	ENLARGED PLANETARIUM POWER AND SYSTEMS PLAN
E3.02	MEZZANINE POWER AND SYSTEMS PLAN
E3.03	PARTIAL SECOND AND THIRD LEVEL EXISTING POWER PLAN
E3.04	PARTIAL SECOND AND THIRD LEVEL EXISTING SYSTEMS PLAN
E5.00	EXISTING ONE-LINE DIAGRAM
E5.01	PANEL SCHEDULES

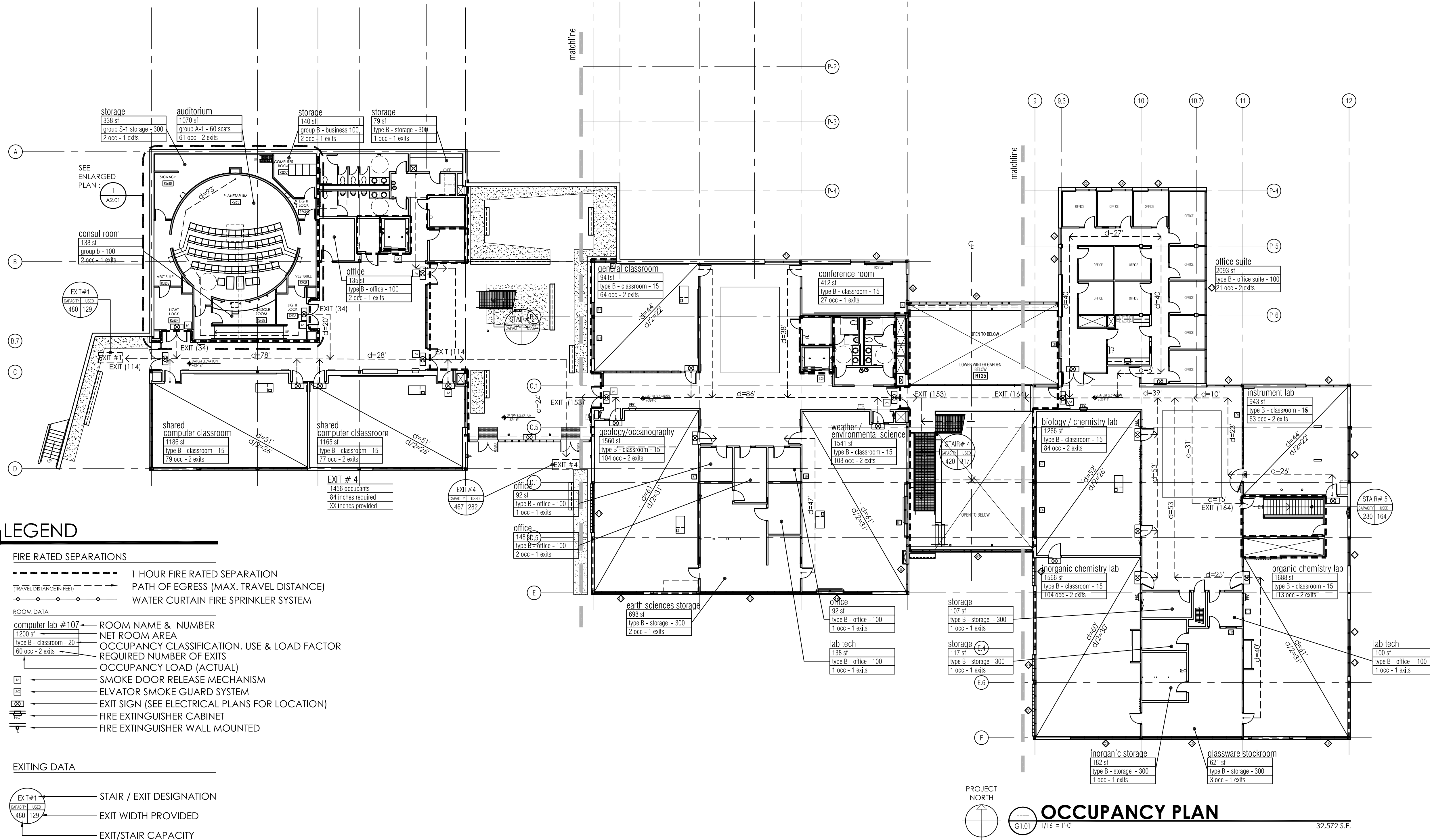


AS-BUILTS
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Date: 12/13/2012 By: GFM

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RAINIER BUILDING PLANETARIUM FOR PIERCE COLLEGE
9401 Farwest Drive SW, Lakewood, WA. 98498-1999
STATE PROJECT NO. 2003-200 H (2)

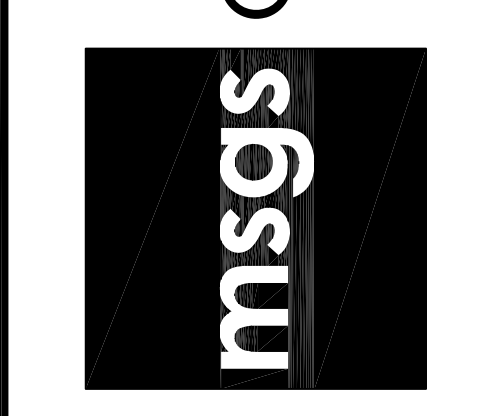
JAN. 3, 2012
BID SET
No.



CITY OF LAKEWOOD

PROJECT DATA

<p>BUILDING ADDRESS: 9401 Farwest Drive SW Lakewood, Washington 98498</p> <p>CODES: International Existing Building Code, 2009 Edition International Building Code, 2009 Edition International Fire Code, 2009 Edition International Mechanical Code, 2009 Edition Uniform Plumbing Code, 2006 Edition National Electrical Code, 2005 Edition International Code Council / American National Standard ICC/ANSI A117.1-2003</p> <p>International Building Code Design Criteria for New Work: Wind Load: 105 mph, Exposure D Seismic Load: See Structural Drawings Flood Zone Designation: N/A Seismic Design Category: D</p>	<p>PROJECT NARRATIVE: This project is to complete the interior renovation for a Planetarium Auditorium within the existing Rainier Science and Technology Building. The building had been designed for this function, but the completion of this space was deferred until this time. The project consists of a domed-screen auditorium with 58 fixed seats + two wheelchair spaces, a consul control room, a computer server room, storage, and an equipment access mezzanine. The space is currently provided with fire sprinkler and alarm systems, however these systems will be modified to meet the requirements of Chapter 9 of the IBC and the International Fire Code.</p> <p>Washington State Energy Code (2009) Washington State Barrier Free Regulations (WAC 51-50) Washington State Ventilation & Indoor Air Quality Code, 2006 Edition State Water Conservation Standards (With Local Amendments)</p> <p>DEFERRED SUBMITTALS: Fire Sprinkler detailed design</p>	<p>CODE ITEM REFERENCE</p> <p>IBC Chapter 3 Use and Occupancy Classification</p> <p>IBC Chapter 6 Types of Construction</p> <p>IBC Chapter 5 Building Height and Area, Table 508.4 1 Hr separation required between groups A & E</p> <p>IBC Chapter 8 Interior Finishes Section 803 Wall and Ceiling Finishes Table 803-5 Interior Wall & Ceiling Finish Requirements by Occupancy Page 165</p> <p>A: Flame spread 0-25 smoke dev 0-450 B: Flame spread 26-75 smoke dev 0-450 C: Flame spread 76-200 smoke dev 0-450</p> <p>Group A-1 Sprinkled: Class Exit passageways B Exit access corridors B Rooms & Enclosed spaces C</p>	<p>ACTUAL BUILDING DESIGN</p> <p>Existing Use and Occupancy: A-1 Auditorium, S-1 Storage (Planned for future build-out)</p> <p>Proposed Use and Occupancy: A-1 Auditorium, S-1 Storage</p> <p>No Change of Use</p> <p>Existing Construction Type: II-B All work in this project to be non-combustible consistent with Type II-B construction</p> <p>Existing building was constructed with a 1 hour separation in anticipation of this project.</p> <p>Material Fire Classification</p> <ul style="list-style-type: none"> Plastic Laminate Class A Acoustical Ceiling Tile Class A Sheet Vinyl Flooring Class 1 (ASTM E648) Carpeting Class 1 (ASTM E648) 	<p>IBC Chapter 10 Means of Egress Section 1003.2</p> <p>The means of egress shall have a ceiling height of not less than 7 feet 6 inches- Exception 8, Areas above and below mezzanine floors shall not be less than 7 feet per 505.1</p> <p>1004 - Occupant Load Table 1004.1.1 Occupant Computation, Page 204</p> <p>Ground Floor Occupancy Use</p> <table border="1"> <tr> <td>Assembly</td> <td>SF/Occ</td> </tr> <tr> <td>Business</td> <td>100 gross</td> </tr> <tr> <td>Storage</td> <td>300 gross</td> </tr> </table> <p>1005.1 Egress Width - The means of egress width shall not be less than required by this section.</p> <p>Stairs 0.3 in./occ. Other Egress Components 0.2 in./occ.</p> <p>1016.1 Exit Travel Distance Per Table 16.1, A Occupancy Group, Sprinklered Building, maximum travel distance = 250 feet.</p>	Assembly	SF/Occ	Business	100 gross	Storage	300 gross	<p>Actual ceiling height is 7'-0" or greater.</p> <p>Refer to Occupancy Plan</p> <p>Work Area Minimum Egress Width 36 occ x 0.2 in/occ = 7.2 req'd, 64" of egress width provided.</p> <p>Maximum travel distance = 191 feet. Refer to Occupancy Plan for specific route.</p>	<p>IBEC Classification of Work</p> <p>404 Alteration Level 2; Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment, and shall comply with Chapter 6 for Level 1 as well as the provisions for Chapter 7.</p> <p>704.2 Automatic Sprinkler System Automatic sprinkler systems in accordance with Sections 704.2.1 through 704.2.5.</p> <p>This project is classified as Alteration Level 2.</p> <p>The entire building is provided with an NFPA 13 automatic sprinkler system per IBC 903.3.1.1.</p>	<p>PLUMBING SYSTEMS</p> <table border="1"> <thead> <tr> <th rowspan="2">OCCUPANCY/ AREA</th> <th rowspan="2">PLUMBING OCCUPANT LOAD FACTOR</th> <th colspan="2">PLUMBING OCCUPANT CLOSETS</th> <th colspan="2">WATER CLOSETS</th> <th colspan="2">LAVATORIES</th> </tr> <tr> <th>LOAD</th> <th>M</th> <th>F</th> <th>M</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>A PLANETARIUM</td> <td>15 SF</td> <td>72</td> <td>1</td> <td>2</td> <td>1</td> <td>1</td> <td></td> </tr> <tr> <td>A CONFERENCE RMS</td> <td>30 SF</td> <td>83</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>B</td> <td>200 SF</td> <td>216</td> <td>6</td> <td>6</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td colspan="2">TOTAL NUMBER OF FIXTURES</td> <td></td> <td>REQUIRED</td> <td>9</td> <td>10</td> <td>5</td> <td>5</td> </tr> <tr> <td colspan="2"></td> <td></td> <td>PROVIDED</td> <td>18</td> <td>18</td> <td>12</td> <td>12</td> </tr> <tr> <td colspan="2"></td> <td></td> <td>UNISEX</td> <td>2</td> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td colspan="2">TOTAL NUMBER OF DRINKING FOUNTAINS</td> <td></td> <td>REQUIRED</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2"></td> <td></td> <td>PROVIDED</td> <td></td> <td></td> <td>8</td> <td>12</td> </tr> </tbody> </table>	OCCUPANCY/ AREA	PLUMBING OCCUPANT LOAD FACTOR	PLUMBING OCCUPANT CLOSETS		WATER CLOSETS		LAVATORIES		LOAD	M	F	M	F	A PLANETARIUM	15 SF	72	1	2	1	1		A CONFERENCE RMS	30 SF	83	2	2	2	2		B	200 SF	216	6	6	2	2		TOTAL NUMBER OF FIXTURES			REQUIRED	9	10	5	5				PROVIDED	18	18	12	12				UNISEX	2	2	1	1	TOTAL NUMBER OF DRINKING FOUNTAINS			REQUIRED								PROVIDED			8	12
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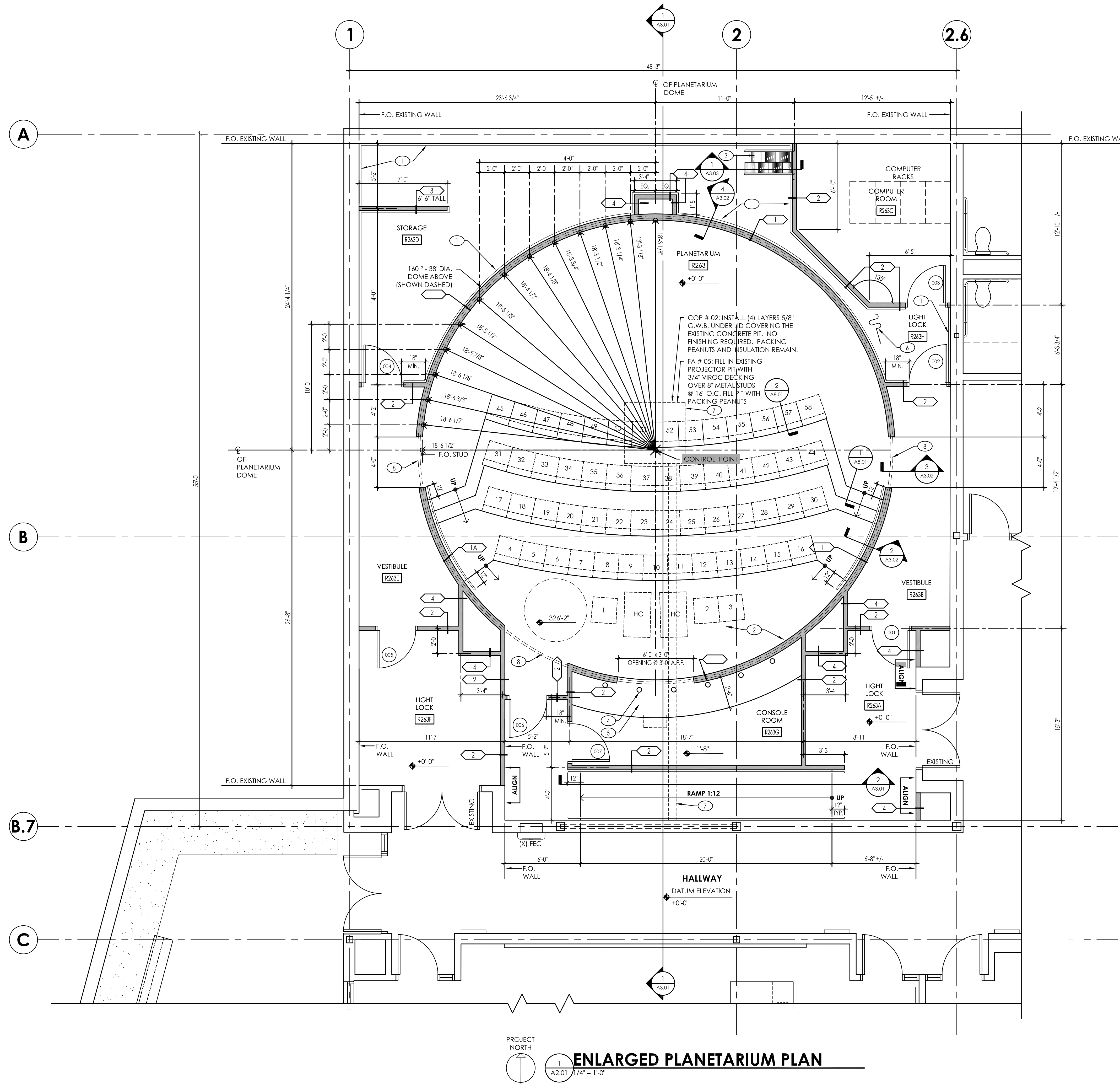
BID SET JAN. 3, 2012

Revisions Closing Date

OCCUPANCY PLAN & PROJECT DATA

Sheet No.
G1.01
Project No.
11-122

11-122 - G1.01 OCCUPANCY PLAN & PROJECT DATA.dwg - cotlym - 12/13/2012 3:43 PM



- Keynotes
1. ACOUSTICAL WALL TREATMENT. FLOOR TO TOP OF WALL.
 2. (NOT USED).
 3. ALTERNATING TREAD DEVICE.
 4. 2" DIA. GROMMET HOLES IN COUNTER. (6) TOTAL EQUALLY SPACED.
 5. P.LAM COUNTERTOP 30" CLEAR A.F.F.
 6. CURTAIN.
 7. EXISTING TRENCH W/ STEEL COVER PLATE.
 8. DOME STRUCTURE ABOVE.

General Notes:

1. THE DOME IS INSTALLED ON A 10 DEGREE TILT, THEREFORE THE SUPPORT WALL IS AN ELLIPSE. DIMENSIONS FOR THIS QUADRANT SAME FOR ALL 4 QUADRANTS.
2. SEE A2.02 FOR FINISHES AND RISER DIMENSIONS.

- Legend**
- NEW METAL STUD WALL. SEE WALL TYPES
 - WALL TYPE SYMBOL. REFER TO WALL TYPES, SHEET A8.01
 - WINDOW TYPE SYMBOL. REFER TO WINDOW TYPES.
 - DOOR TYPE SYMBOL. REFER TO DOOR SCHEDULE.

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Sheet Title

ENLARGED PLANETARIUM FLOOR PLAN

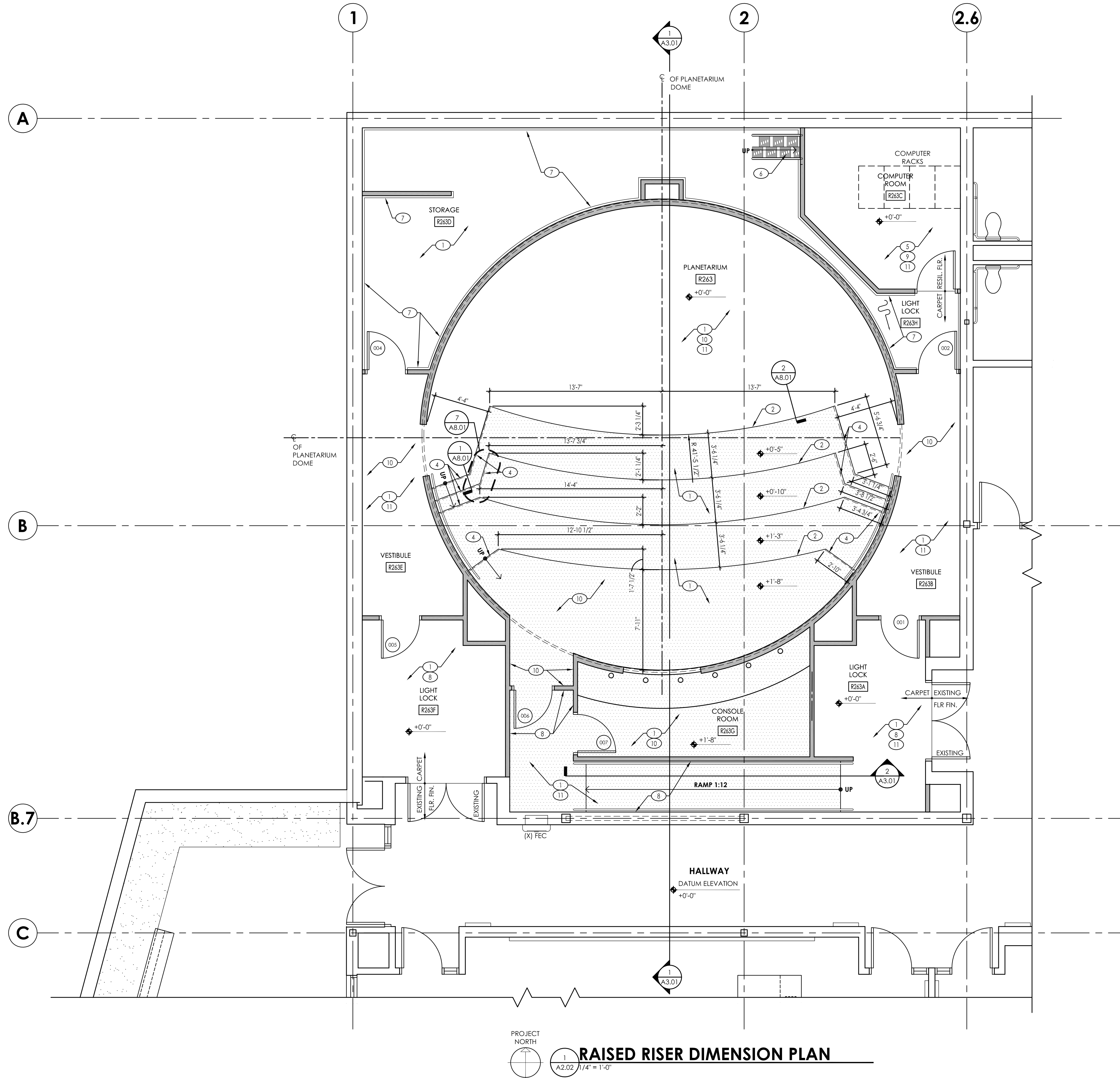
Sheet No.
A2.01

Project No.
2003-200 H (2)

msgs architects
for PIERCE COLLEGE
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510 capital way south
olympia, washington 98501

11-122 - A2.02 RAISED RISER DIMENSION PLAN.dwg - garmem - 12/14/2012 7:05 AM



RAISED RISER DIMENSION PLAN

1
A2.02 1/4" = 1'-0"

Keynotes

1. CARPET TILE FLOOR FINISH.
2. PERFORATED RISER.
3. WALL CARPET.
4. PERFORATED RISER W/ INTEGRAL LED LIGHTING IN RUBBER NOSING.
5. ANTI-STATIC RESILIENT FLOORING.
6. STEEL ALTERNATING TREAD DEVICE.
7. ACOUSTICAL WALL TREATMENT.
8. PAINT ALL G.W.B. WALLS AND H.M. DOORS AND FRAMES COLOR P-1.
9. PAINT G.W.B. WALLS P-2.
10. WALL CARPET FROM FLOOR TO CEILING. ALL WALLS THIS ROOM.
11. RUBBER BASE ALL WALLS THIS ROOM.

General Notes:

1. ALL EXPOSED SURFACES, PIPES, DUCTS, CONDUIT, GUARDRAILS, MECHANICAL EQUIPMENT ETC. IN STORAGE R263D, R263H, TO BE PAINTED MATTE BLACK.

Legend

INDICATES LOCATION OF RAISED FLOOR SYSTEM.

p 360 943 6774 f 360 352 7005
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510 capital way south
olympia, washington 98501

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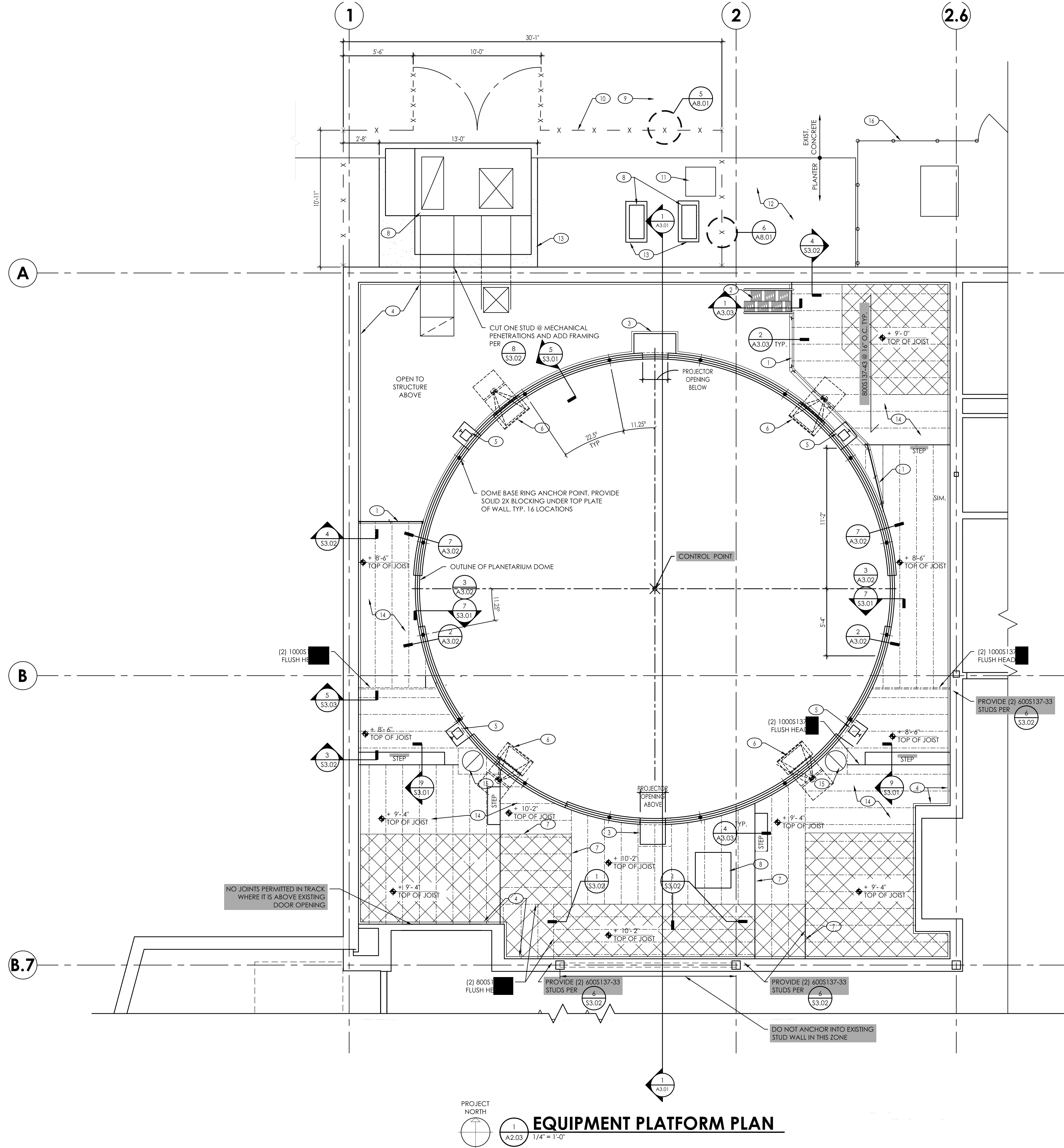
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Sheet Title
FINISH AND RAISED RISER DIMENSION PLAN

Sheet No.
A2.02

Project No.
2003-200 H (2)

11-122-A2.03 PLANETARIUM EQUIPMENT PLATFORM PLAN.dwg - gornheim - 12/14/2012 7:10 AM



PROJECT NORTH
EQUIPMENT PLATFORM PLAN
 1
 A2.03 1/4" = 1'-0"

- Keynotes
- 1 1/2" O.D. PIPE GUARDRAIL.
 - 2 ALUMINUM ALTERNATING TREAD DEVICE.
 - 3 PROJECTOR SHELF.
 - 4 ACOUSTICAL WALL TREATMENT.
 - 5 WORK LITE SHELF.
 - 6 SPEAKER, BY PLANETARIUM EQUIP. PROVIDER.
 - 7 ACOUSTIC INSULATION ON VERTICAL SURFACE.
 - 8 MECHANICAL EQUIPMENT. SEE MECHANICAL DWGS.
 - 9 EXISTING SIDEWALK.
 - 10 NEW 6' TALL CHAIN LINK FENCE AND GATE.
 - 11 EXISTING CATCH BASIN.
 - 12 EXISTING PLANTER.
 - 13 NEW MECHANICAL EQUIPMENT PADS, SEE 7/S3.02
 - 14 PAINT FLOOR DECK MATTE BLACK.
 - 15 DUCT, SEE MECHANICAL DWGS.
 - 16 EXISTING CHAIN LINK FENCE.

General Notes:

1. ALL EXPOSED SURFACES, FLOOR DECK, CONDUIT, MECHANICAL AND ELECTRICAL EQUIPMENT AND DEVICES, GUARD RAILS, SUPPORT CHAINS, ETC. TO BE PAINTED MATTE BLACK.

Legend

ACOUSTIC INSULATION LAID LOOSE ON FLOOR DECK.

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Sheet Title

PLANETARIUM EQUIPMENT PLATFORM PLAN

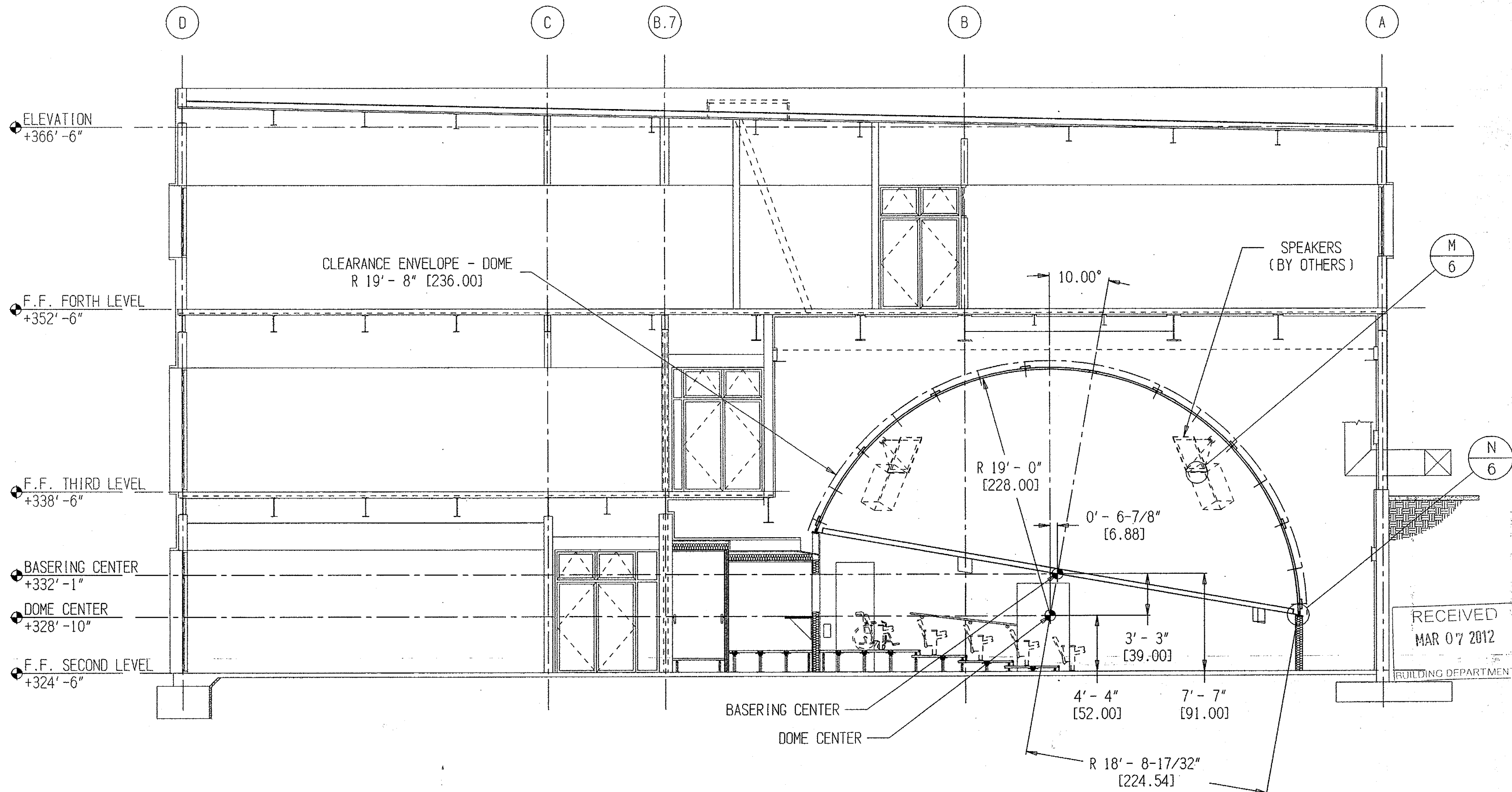
Sheet No.
A2.03

Project No.
 2003-200 H (2)

Keynotes

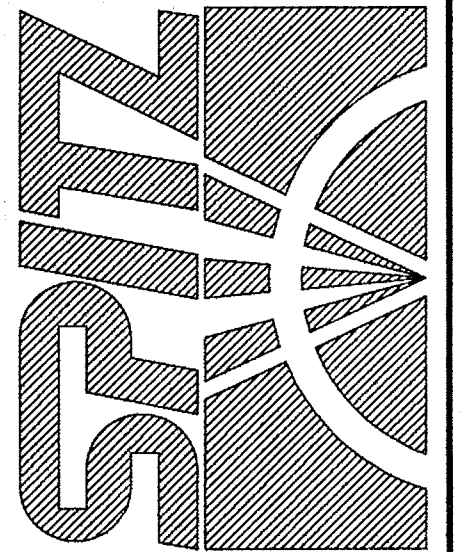
1 1/2" O.D. PIPE GUARDRAIL.
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 15 DUCT, SEE MECHANICAL DWGS.
 16 EXISTING CHAIN LINK FENCE.

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 CHADDS FORD, PA 19317 USA
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 FX: (610) 459-3830
 email: spitz@spitzinc.com



DRAWN CJC
 CHECKED
 SCALE NONE

38ft Ø 160° DOME
 32 GORES - 10° TILT
 PIERCE COLLEGE
 LAKEWOOD, WASHINGTON

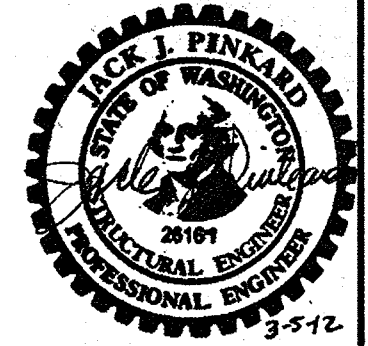
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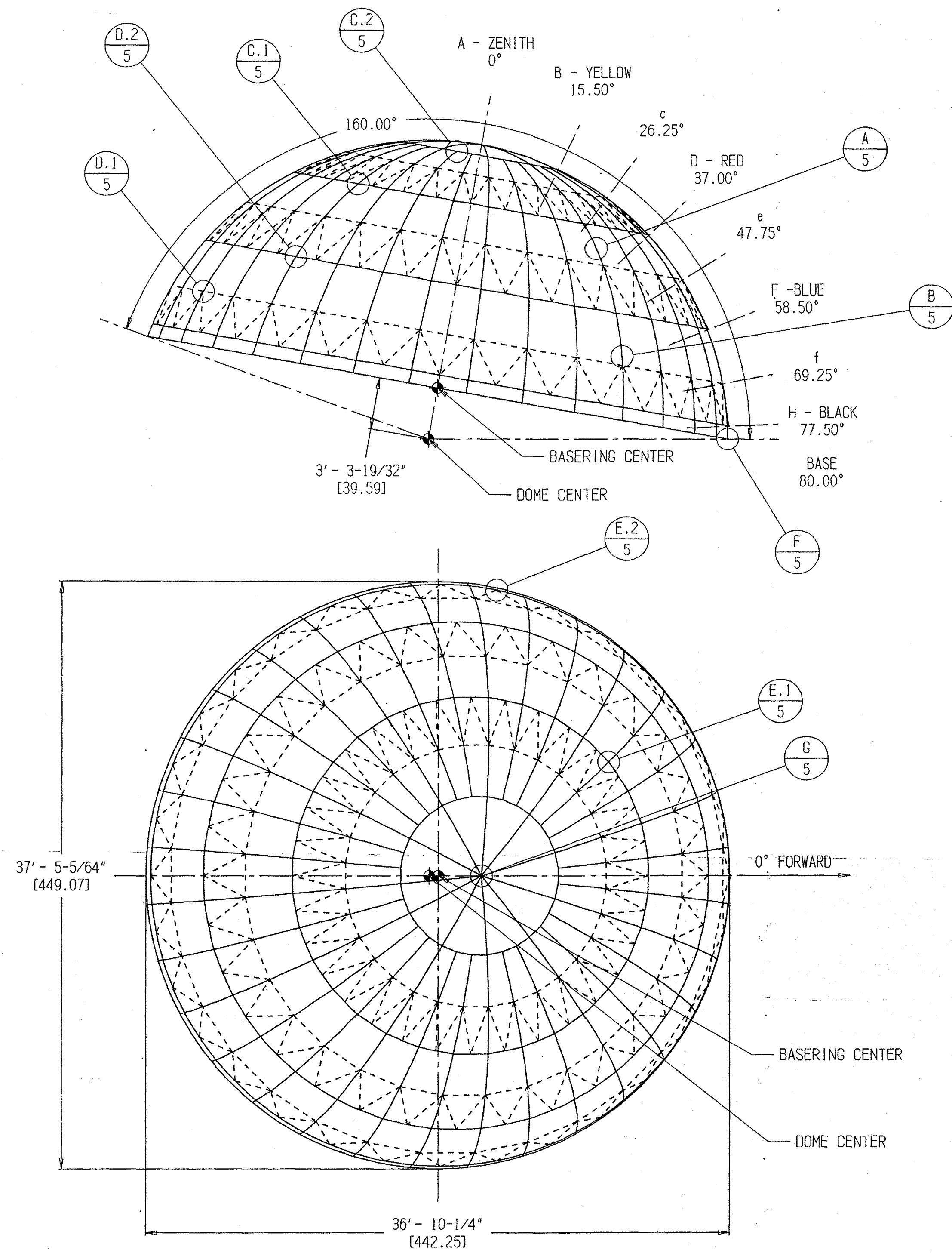
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REVISION : DATE
 A : 02/03/12

SIZE C SHEET 2 OF 6

DRAWING # 305487
 REVISION A



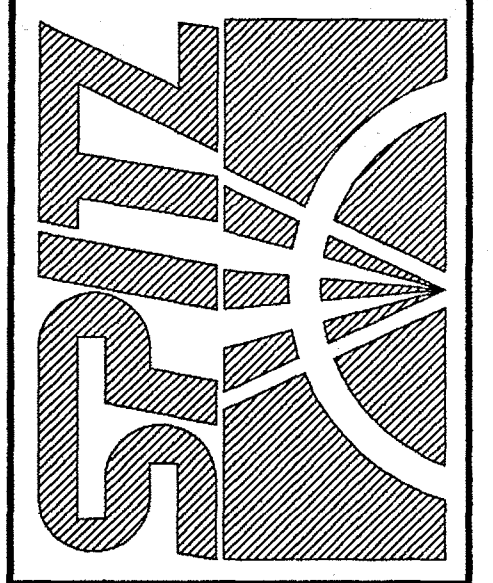


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REVISION : DATE	
A : 02/03/12	
SIZE	SHEET
C	3 OF 6
DRAWING #	
305487	
REVISION	
A	

PANELS 305490-TAB

ZONE	TAB	QTY
SPR	007	5
F-H	006	32
D-F	005	32
B-D	004	32
A-B	003	10
A-B	002	1
ZTH	001	1

STRUTS/C-BRACES 305493-TAB

ZONE	COLOR	TAB	QTY
G-H	BLK-BLK	001	64
G	BLK	002	32
E-F	BLU-BLU	003	64
E	BLU	004	32
C-D	RED-RED	005	64
C	RED	006	32

ZENITH PLATE 305495
QTY : (1)

RIBS 305491-TAB

NUMBER	TAB	QTY
#1	001	32
#2	002	21
#3	003	11

RIB SPLICE 305494
QTY : (32)

HUBS 305497-TAB

ZONE	COLOR	TAB	QTY
B	YEL	004	32
D	RED	003	32
F	BLU	002	32
H	BLK	001	32

TROUGH SEGMENT 305499-001
QTY : (5) [ALTERNATING]

TROUGH SEGMENT 305499-002
QTY : (5) [ALTERNATING]

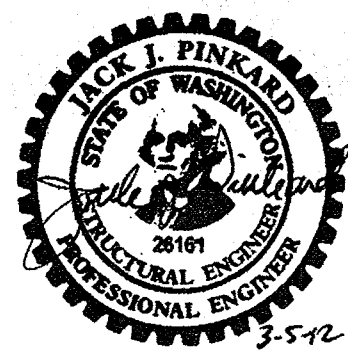
BASERING SEGMENT 305498-001
QTY : (10)

BASERING SEGMENT 305498-002
QTY : (1)

0° FORWARD

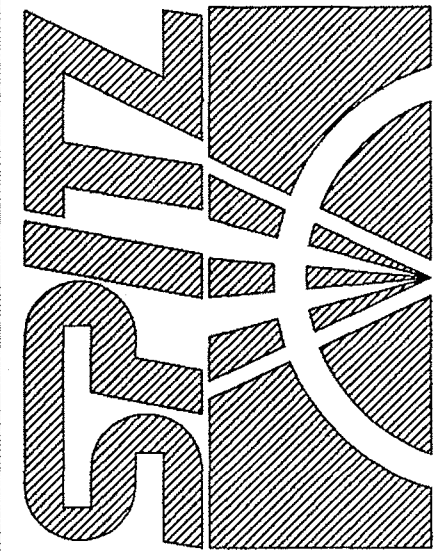
BASERING SPLICE 305498-003
QTY : (11)

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DRAWN CJC
CHECKED
SCALE NONE

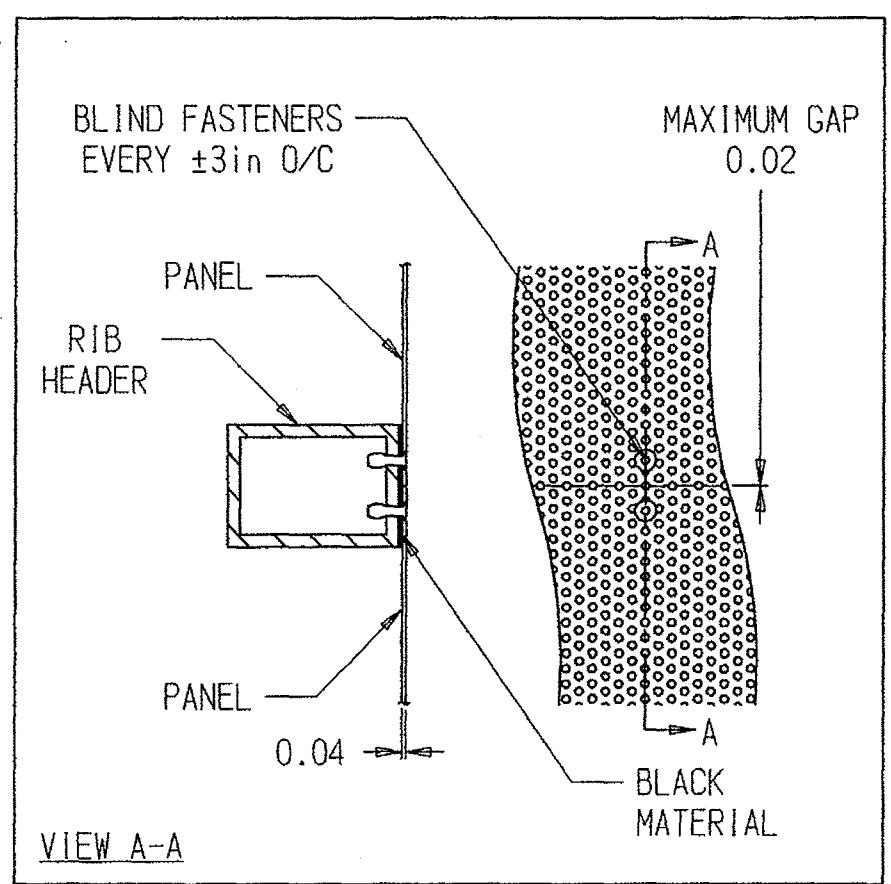
38ft Ø 160° DOME
32 GORES - 10° TILT
PIERCE COLLEGE
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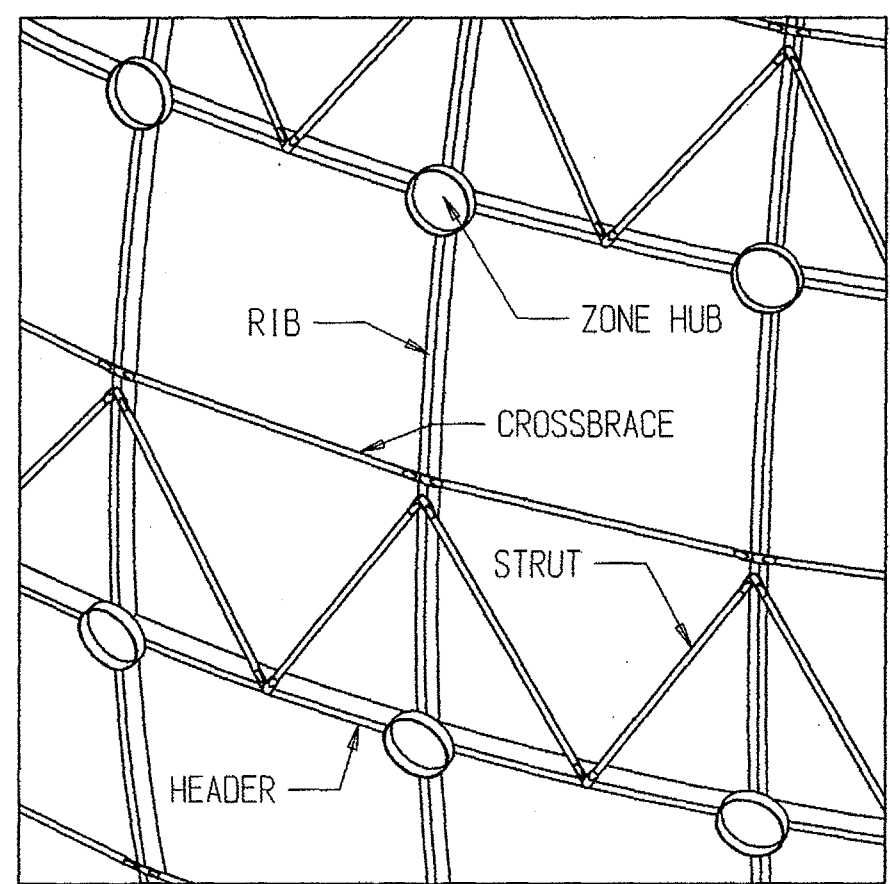
VIEW
PART CALL-OUT
REVISION : DATE
A : 02/03/12

SIZE C SHEET 4 OF 6

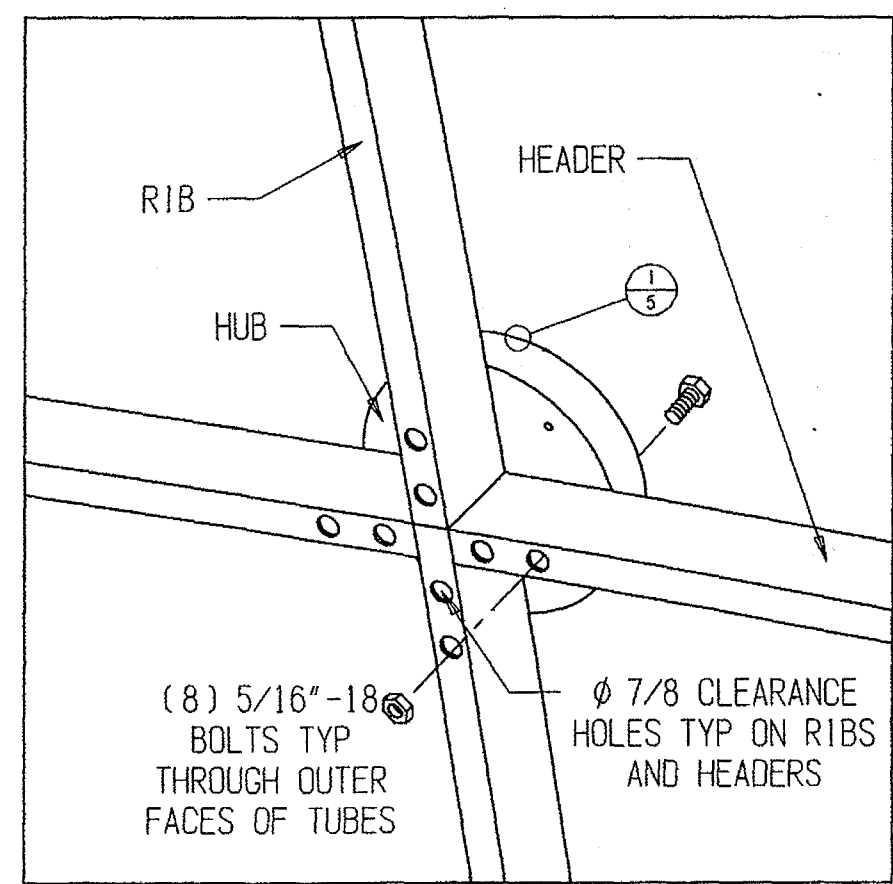
DRAWING # 305487
REVISION A



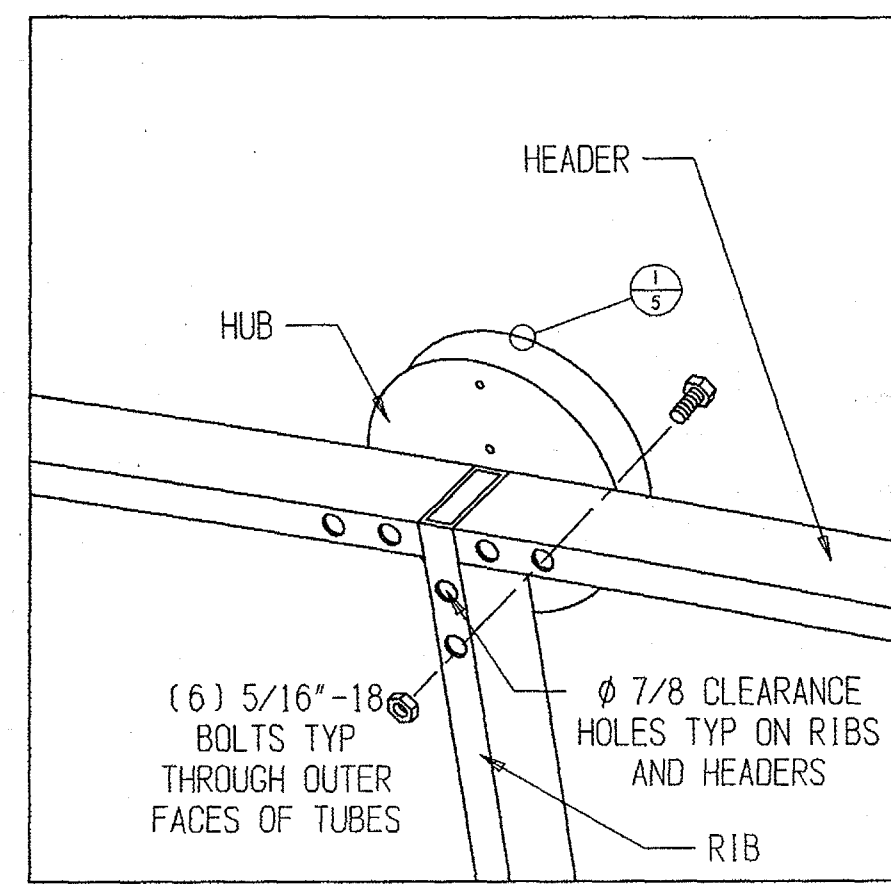
A TYPICAL PANEL ATTACHMENT - ALL SEAMS (NanoSeam)



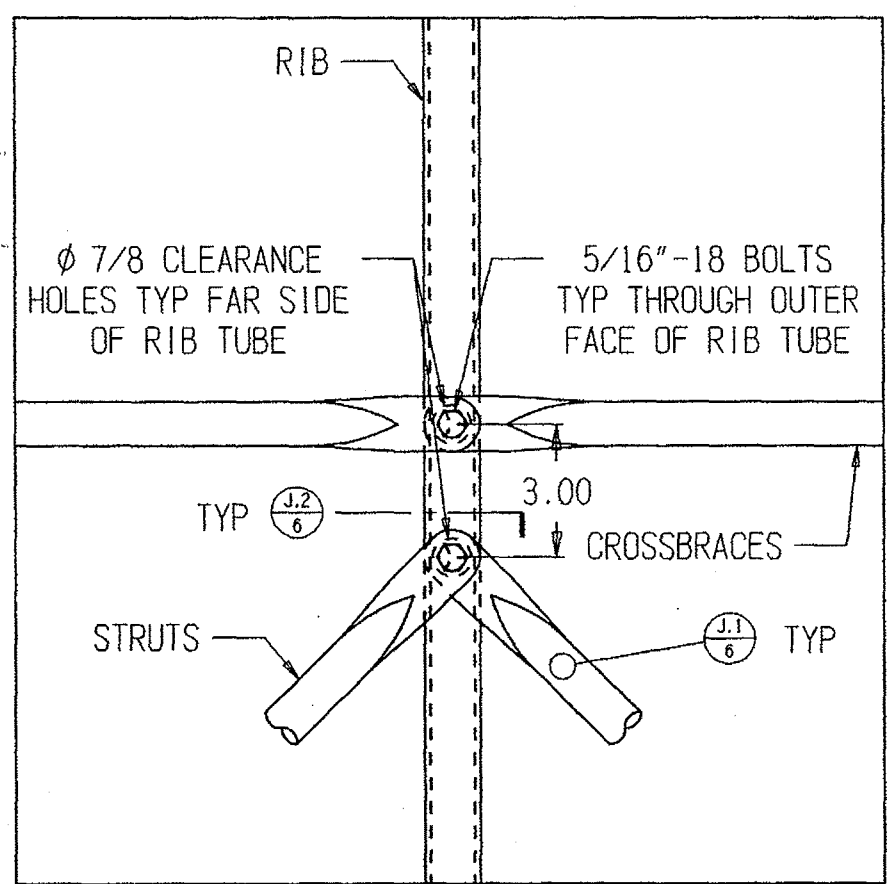
B TYPICAL FRAMING CONFIGURATION



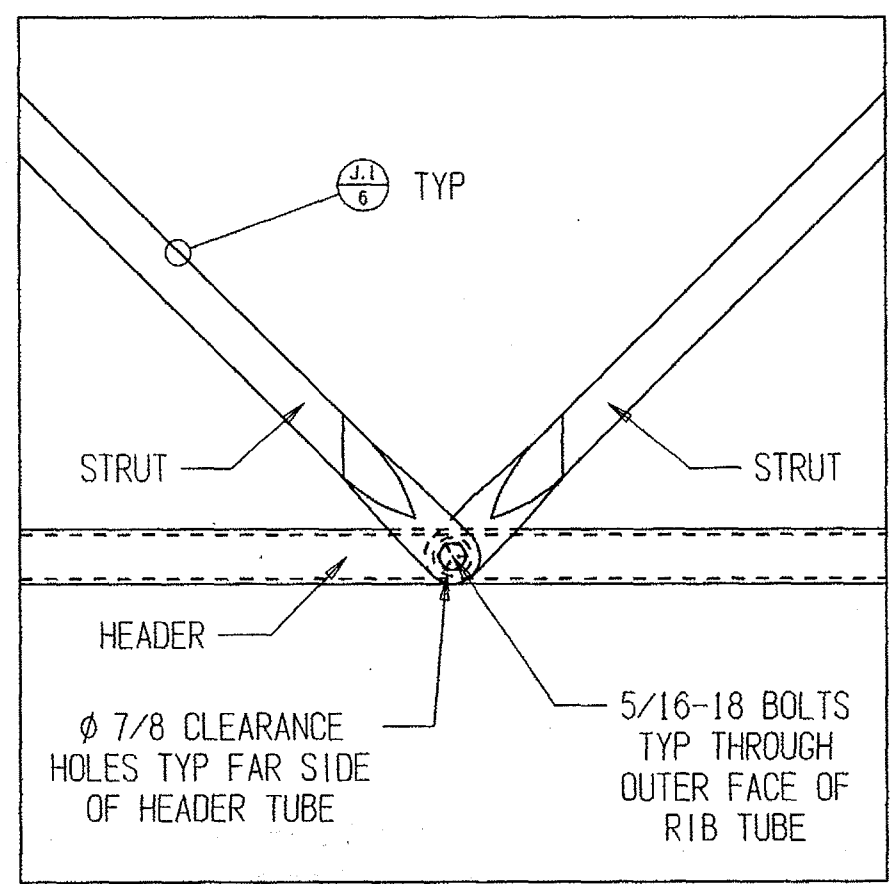
C.1 TYPICAL RIB/HEADER/HUB CONNECTION ZONES: B, D, F, H



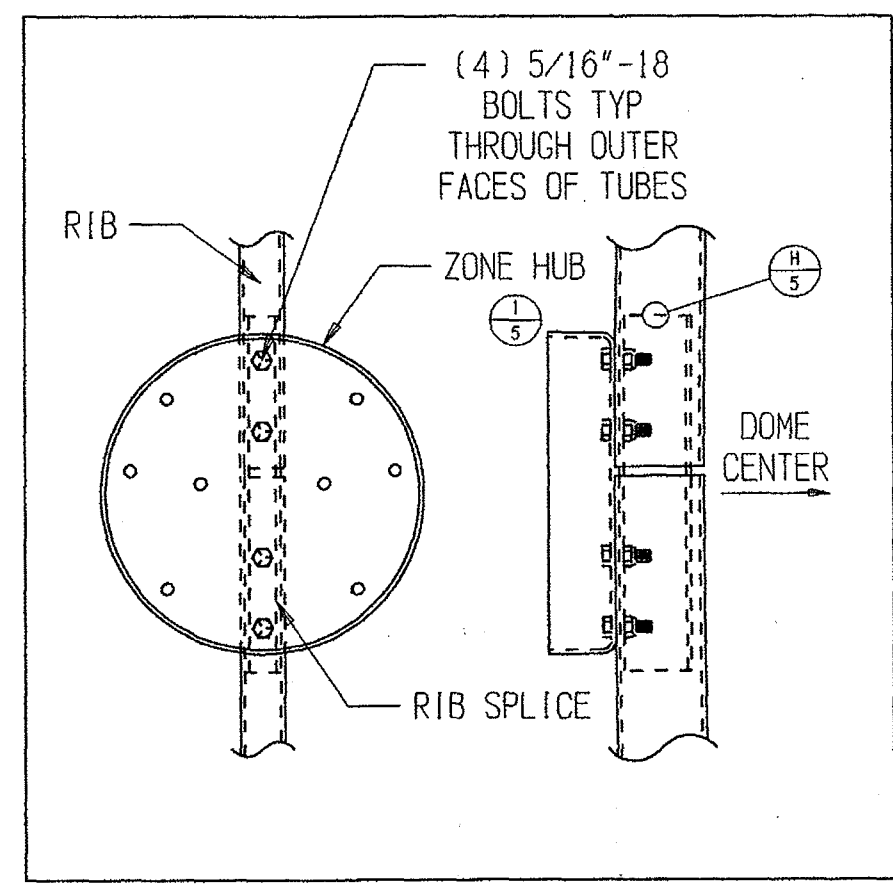
C.2 TYPICAL RIB/HEADER/HUB CONNECTION ZONES: B



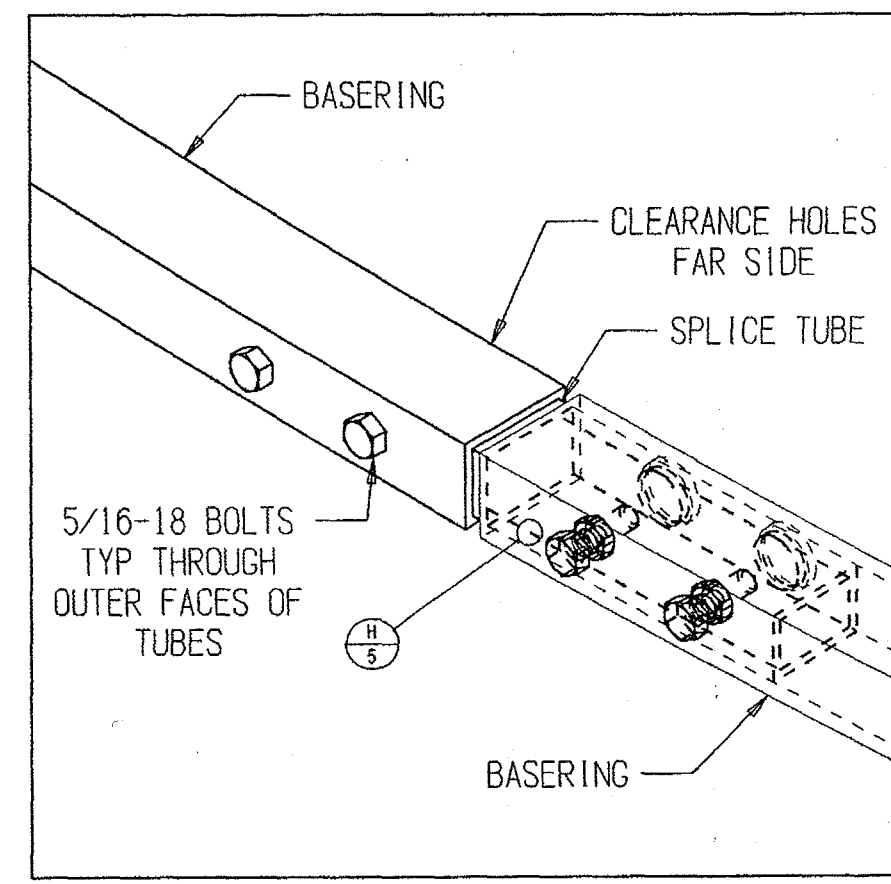
D.1 TYPICAL STRUT/CROSSBRACE/RIB CONNECTION ZONES: c, e, g



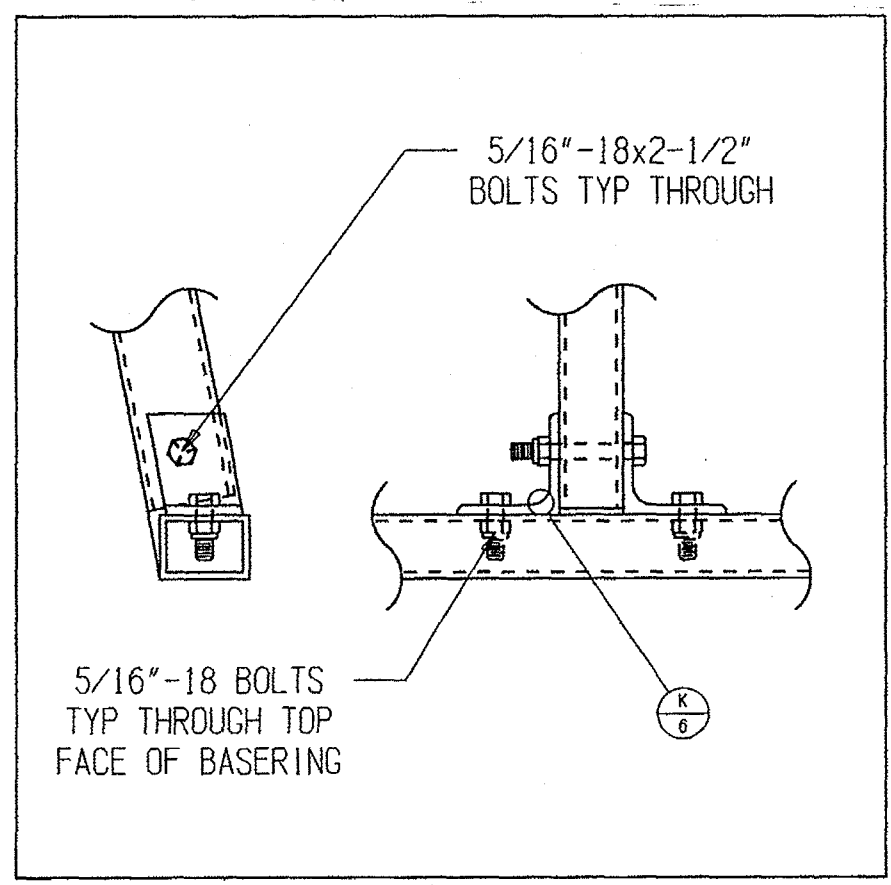
D.2 TYPICAL STRUT/HEADER CONNECTION ZONES: D, F, H



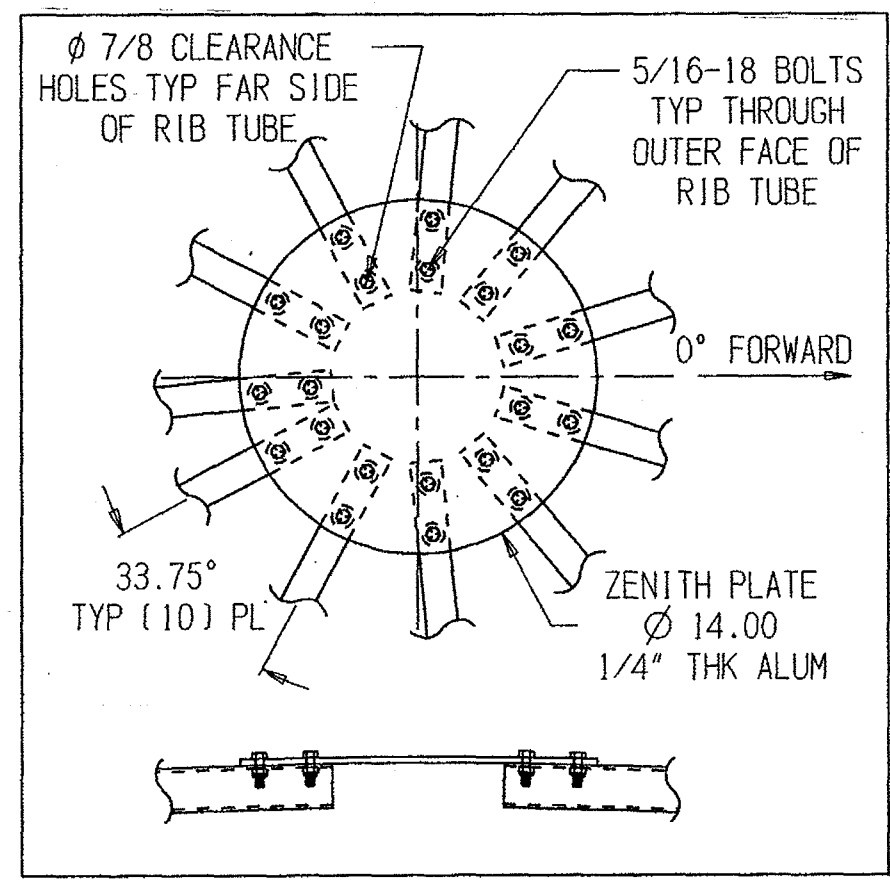
E.1 TYPICAL RIB SPLICE ZONES: D



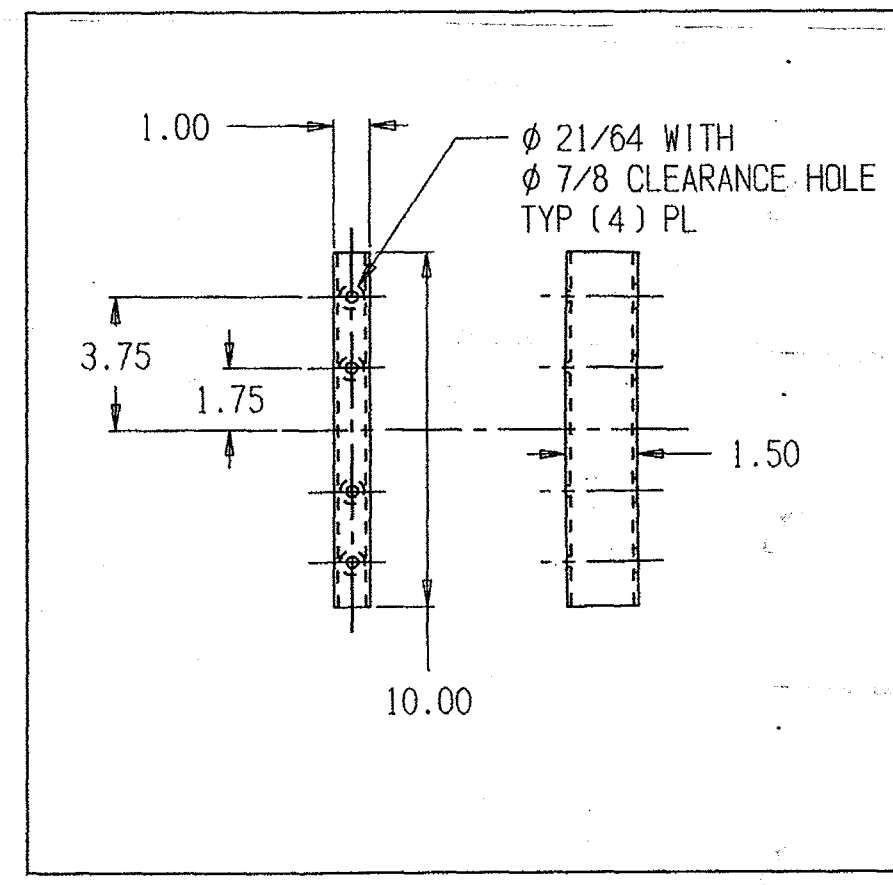
E.2 TYPICAL BASERING SPLICE CONNECTION



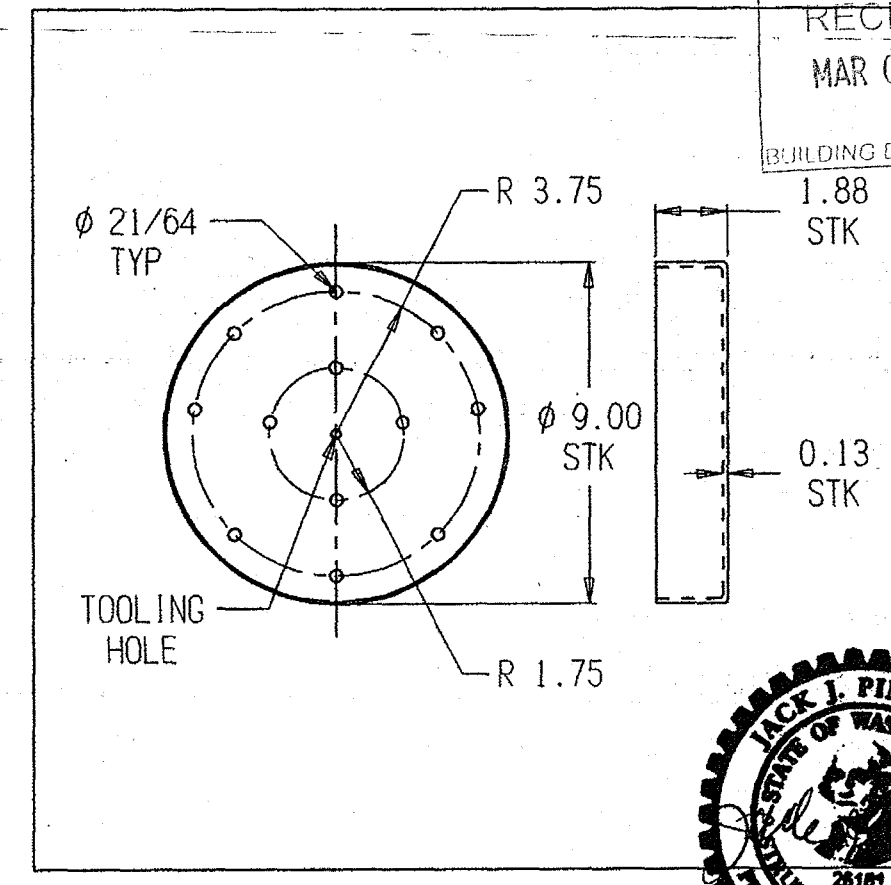
F TYPICAL RIB/BASERING CONNECTION



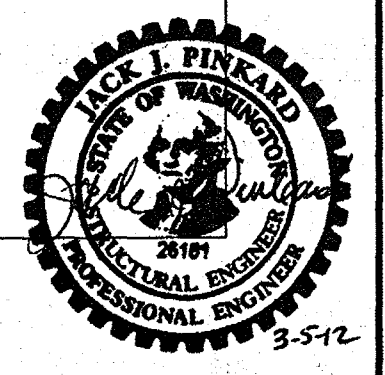
G ZENITH CONNECTION



H TYPICAL RIB/BASERING SPLICE TUBE

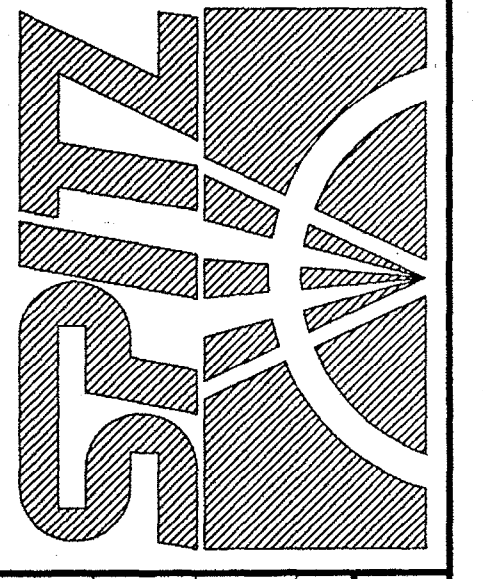


I TYPICAL ZONE HUB - STANDARD



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GAIN PS 0.45
PS 1.00

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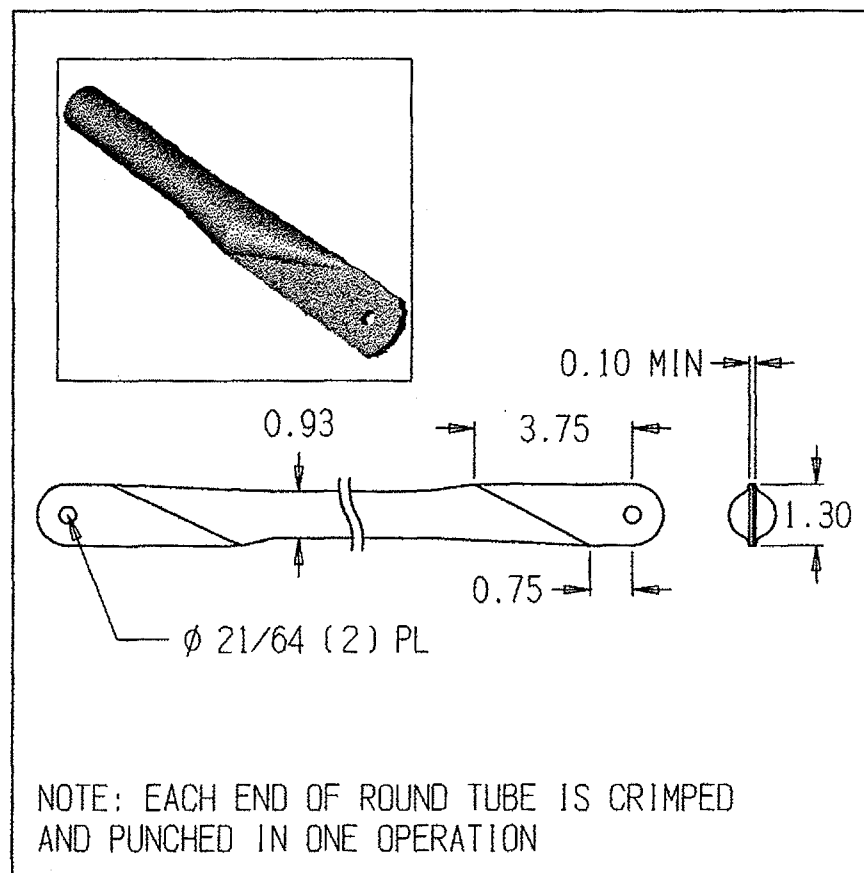
DRAWN	CJC	SCALE	NONE
CHECKED			

38ft Ø 160° DOME
32 GORES - 10° TILT
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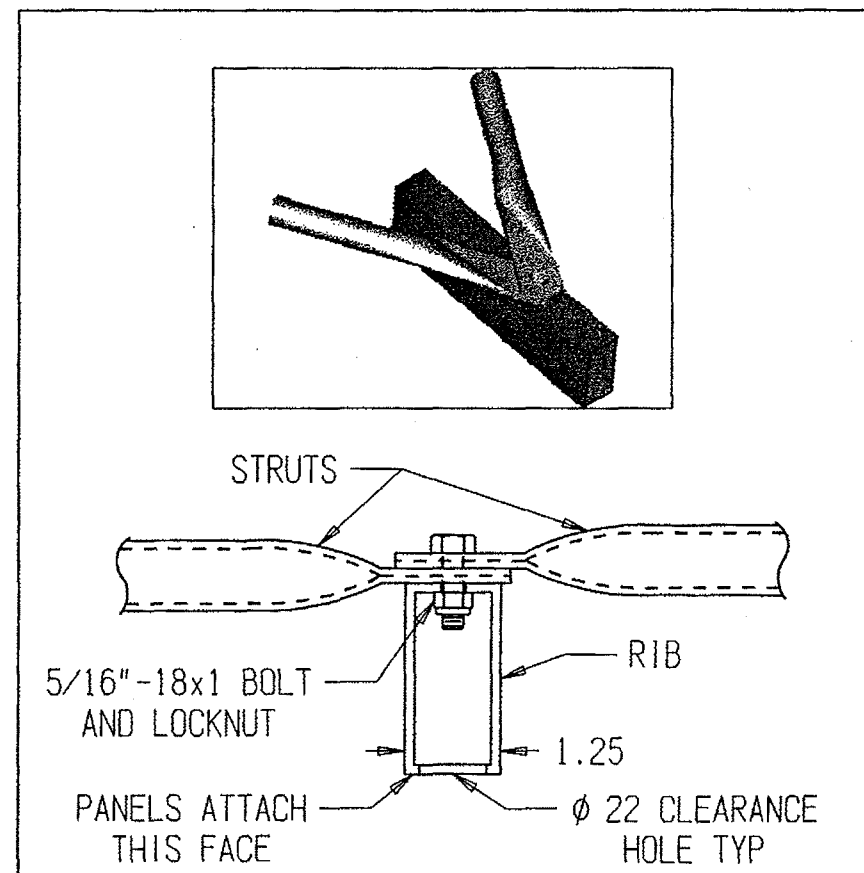
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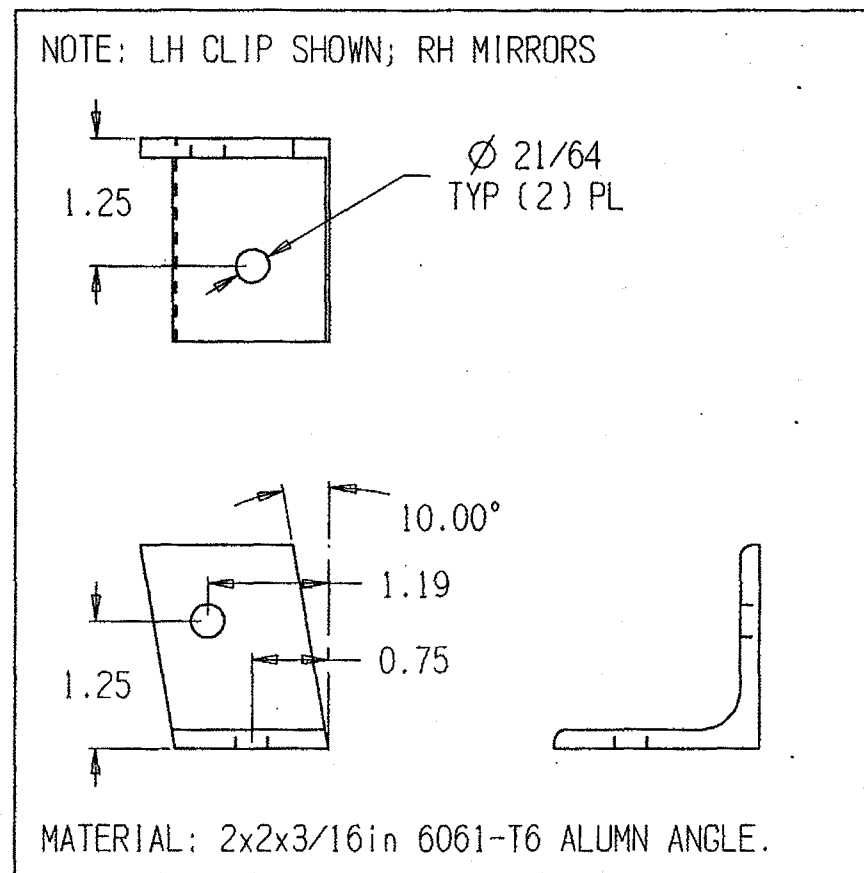
VIEW	
DETAILS	
REVISION : DATE	
A : 02/03/12	
SIZE	SHEET
C	5 OF 6
DRAWING #	
305487	
REVISION	
A	



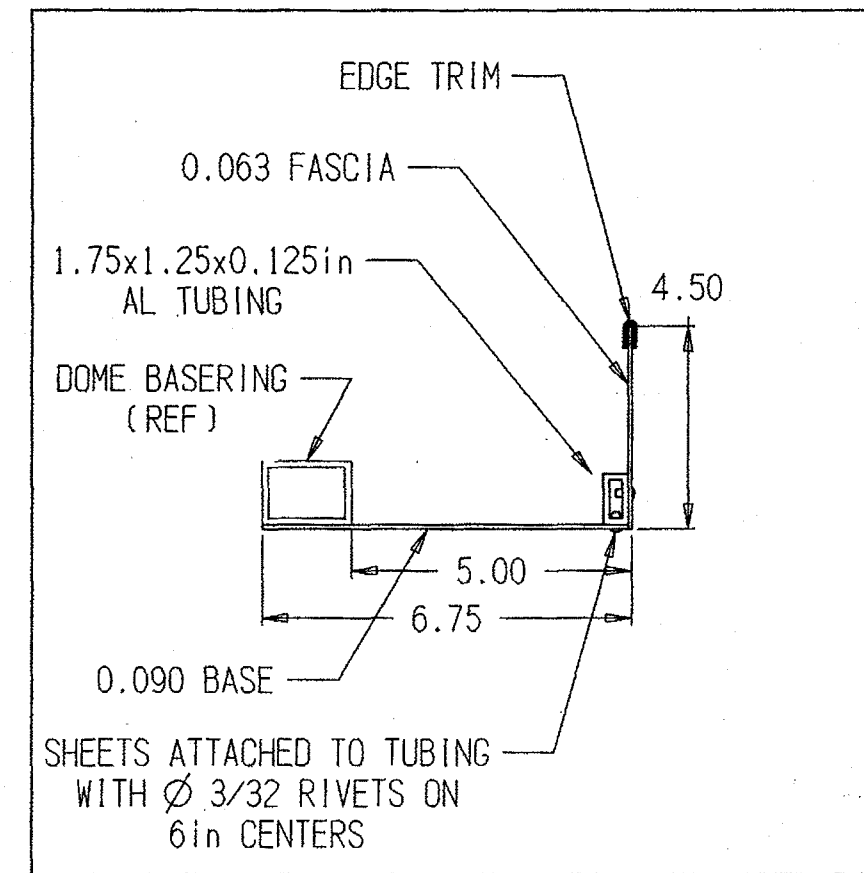
J.1 TYPICAL STRUT/CROSSBRACE GEOMETRY



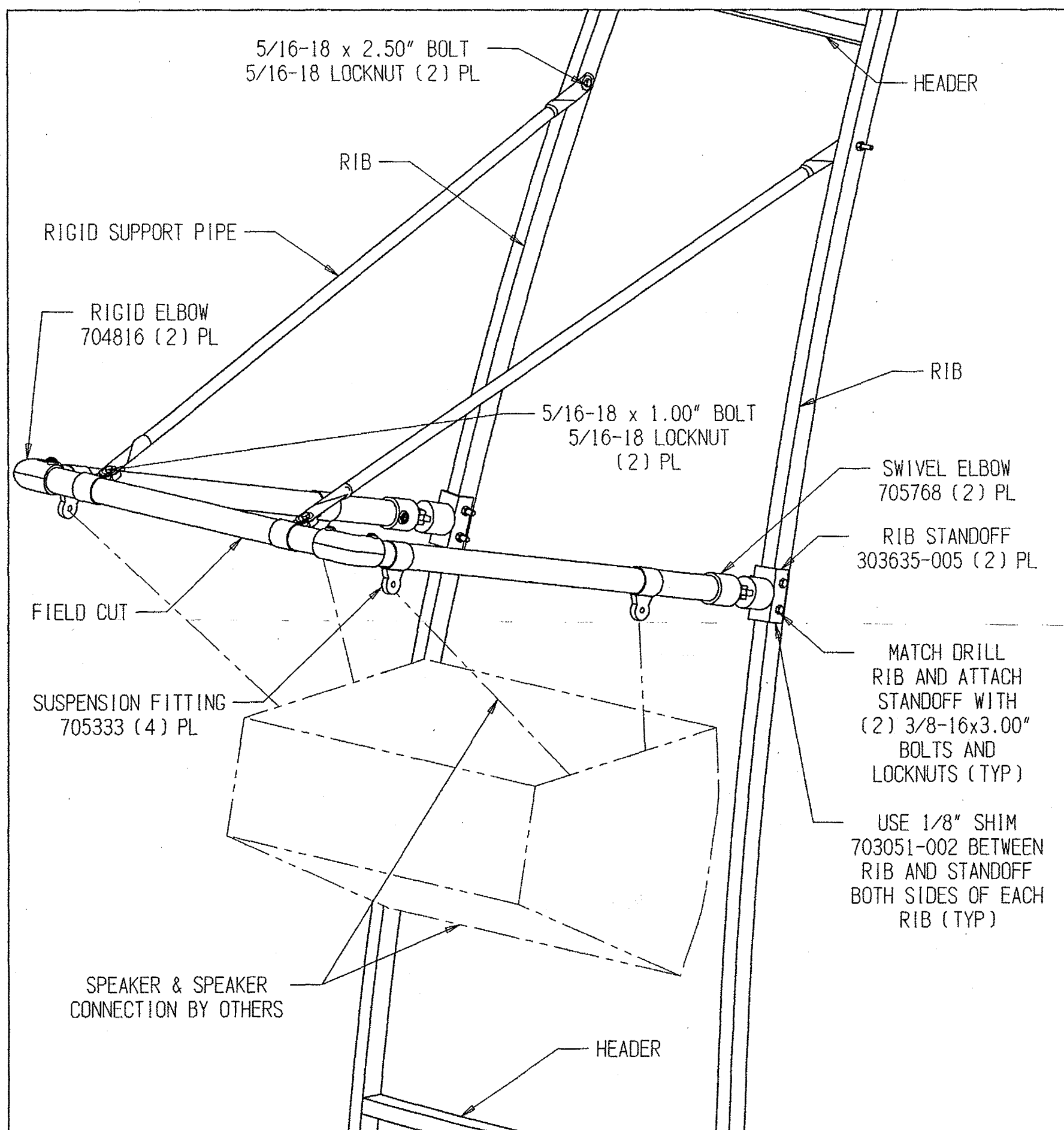
J.2 TYPICAL STRUT/CROSSBRACE/RIB JOINT



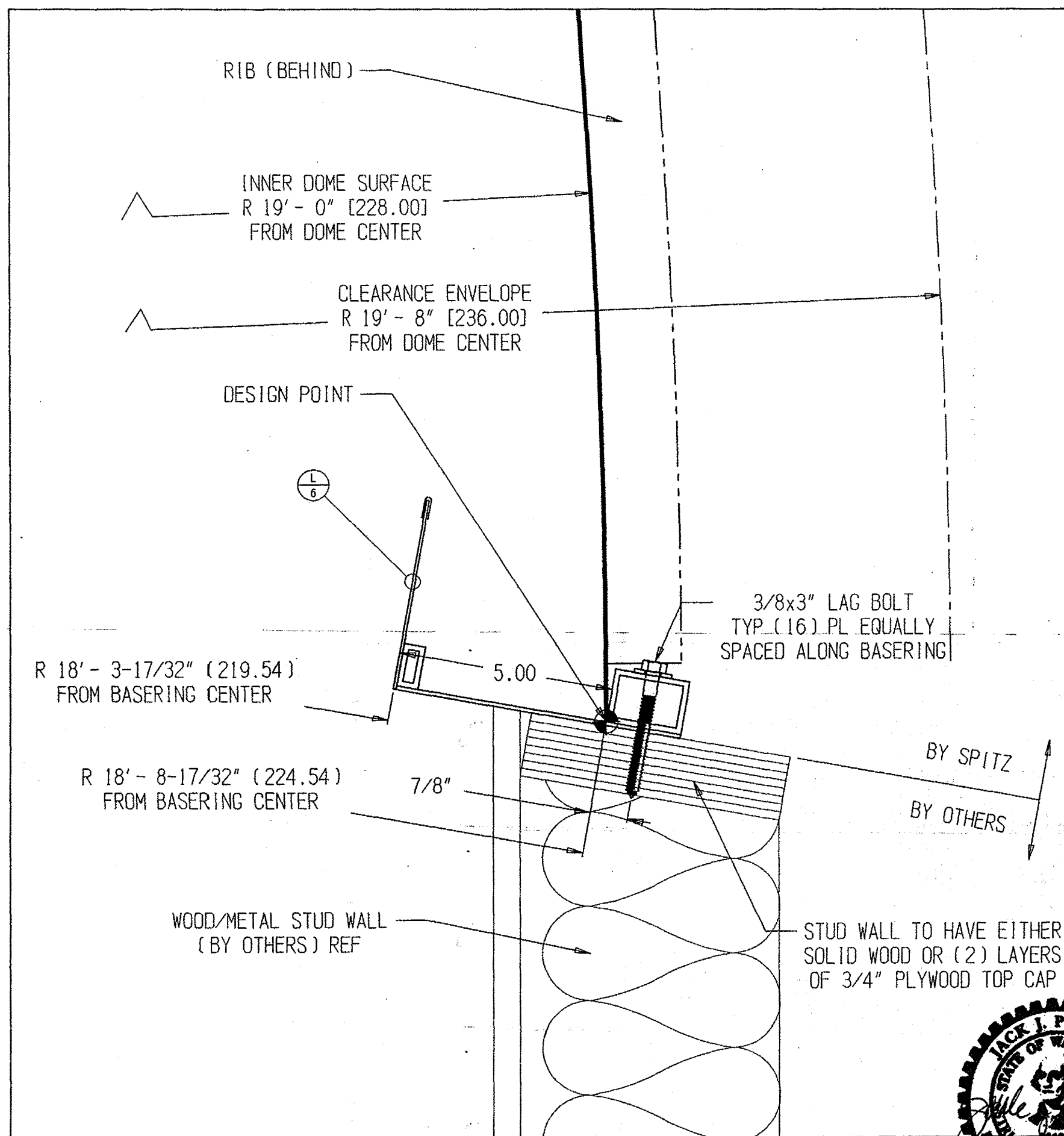
K TYPICAL SPECIAL FRAME CLIP ANGLE



L TROUGH CONSTRUCTION



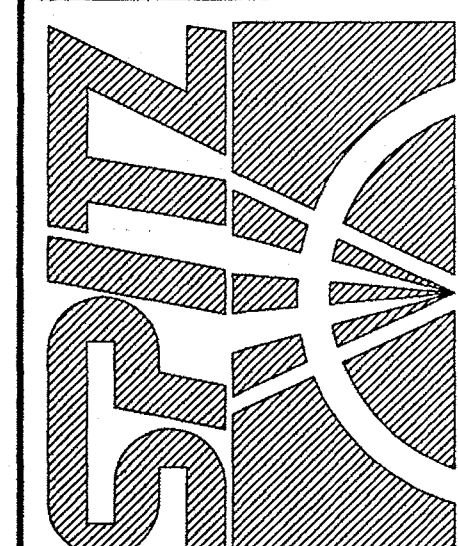
M TYPICAL SPEAKER MOUNT CONNECTION



N TYPICAL RIB CONNECTION TO STUD WALL

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CHECKED			

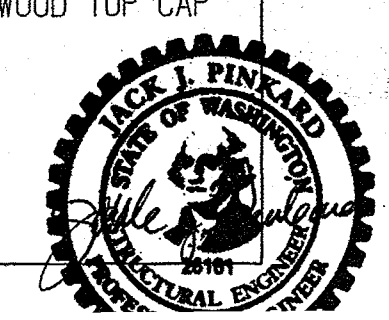
Ø 160° DOME
32 GORES - 10° TILT
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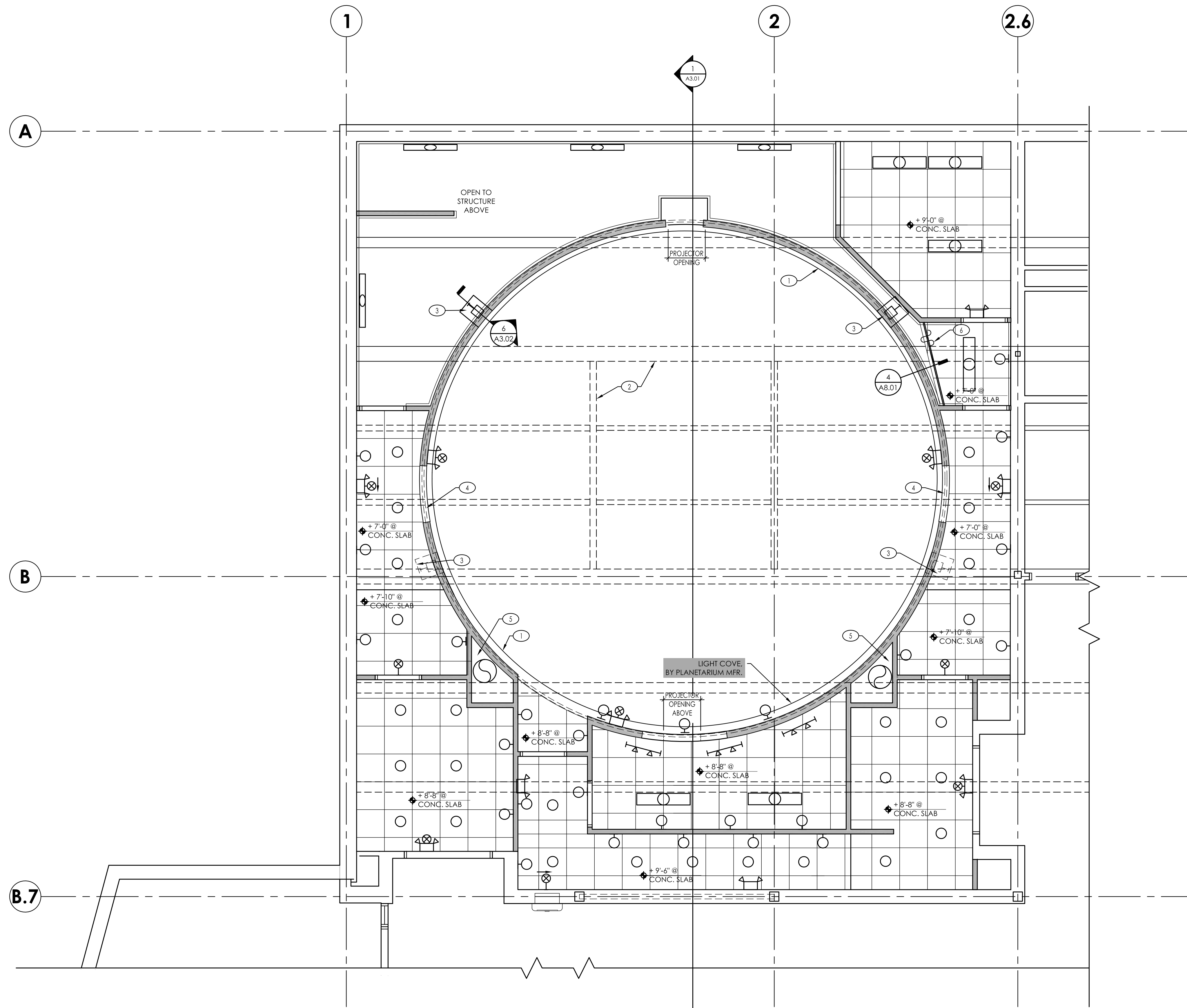
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VIEW	
DETAILS	
REVISION : DATE	
A : 02/03/12	
SIZE	SHEET
C	6 OF 6
DRAWING #	
305487	
REVISION	



11-122 - A2.04 PLANETARIUM REFLECTED CEILING PLAN.dwg - cch/mm - 1/21/14/2012 7:15 AM



1
A2.04

PLANETARIUM REFLECTED CEILING PLAN

1/4" = 1'-0"

Keynotes

1. LIGHT COVE BY PLANETARIUM EQUIPMENT PROVIDER.
2. EXISTING STEEL BEAMS ABOVE (SHOWN DASHED)
3. WORK LIGHT OPENING.
4. OUTLINE OF PLANETARIUM DOME.
5. OPEN TO SHEATHING ABOVE.
6. BLACK OUT CURTAIN AND TRACK.

General Notes:

AS-BUILTS
 The Architect has compiled a set of "AS-BUILTS" drawings conforming to the construction records of the Contractor as provided to the Architect. While the information submitted by the Contractor incorporated by the Architect into the "AS-BUILT" drawing is assumed to be reliable, the Architect will not be responsible for the accuracy of this information, nor for errors or omissions which may appear in the "AS-BUILT" drawing as a result.
 12/13/2012 GFM
 Date By

Legend

- 'BLACK' GLUE-ON ACOUSTICAL CEILING TILE OVER 5/8" G.W.B.
- LIGHT FIXTURES. SEE ELECTRICAL PLANS
- EXIT AND EGRESS LIGHT

BID SET JAN. 3, 2012

Revisions Closing Date

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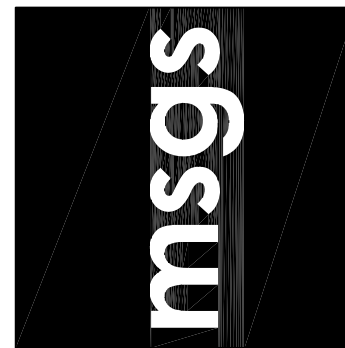
Sheet Title

PLANETARIUM REFLECTED CEILING PLAN

Sheet No.
A2.04

Project No.
 2003-200 H (2)

p 360 943 6774 f 360 352 7005
 www.msgsarch.com



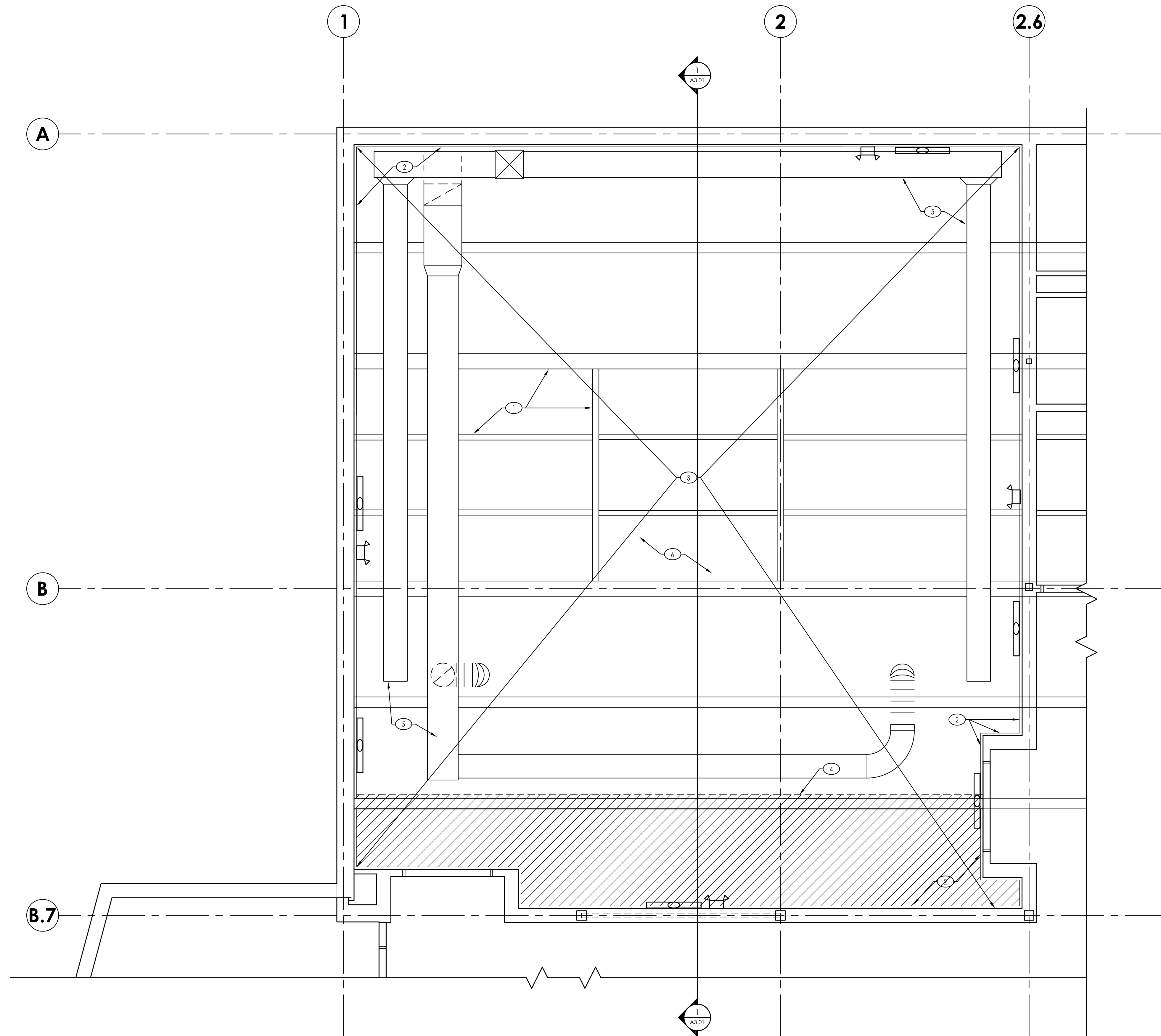
RAINIER BUILDING PLANETARIUM

for PIERCE COLLEGE

9401 Farwest Drive SW, Lakewood, WA, 98498-1999

510 capital way south
 olympia, washington 98501

11-122-11-122-A2.05 REFLECTED CEILING PLAN ABOVE PLANETARIUM.dwg - cathy.m -
12/14/2012 7:30 AM



1
A2.05

REFLECTED CEILING PLAN ABOVE PLANETARIUM

1/4" = 1'-0"

Keynotes

1. EXISTING BEAMS, TYP.
2. ACOUSTICAL WALL TREATMENT, TYP.
3. ACOUSTIC INSULATION APPLIED TO METAL DECK. PROVIDE SUPPORT UNDER ACOUSTIC CEILING INSULATION AS FOLLOWS: PROVIDE BLACK METAL STRAPS @ 24" ON CENTER MAX. SPACING UNDER ALL CEILING INSULATION. FASTEN INTO STEEL BEAMS.
4. ACOUSTIC WALL TREATMENT ON FACE OF WALL ABOVE.
5. EXPOSED MECHANICAL DUCTS. SEE MECHANICAL DWGS. PAINT MATTE BLACK.
6. EXISTING METAL DECK, TYP.

General Notes:

1. ALL EXPOSED SURFACES, STEEL DECK, STRUCTURAL PIPES, DUCTS, CONDUIT, MECHANICAL AND ELECTRICAL DEVICES, SUPPORT CHAINS, ETC. TO BE PAINTED MATT BLACK.

Legend

AREA OF LOW HEAD ROOM. HEIGHT VARIES BETWEEN 3'-4" - 4'-0" FROM EQUIPMENT PLATFORM LEVEL.

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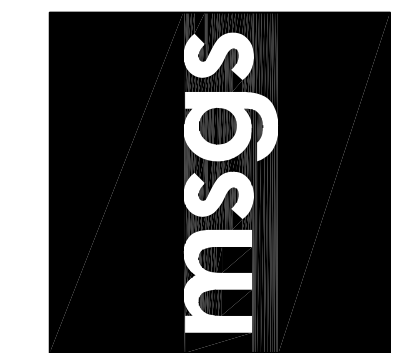
Sheet Title

REFLECTED CEILING PLAN ABOVE PLANETARIUM

Sheet No.
A2.05

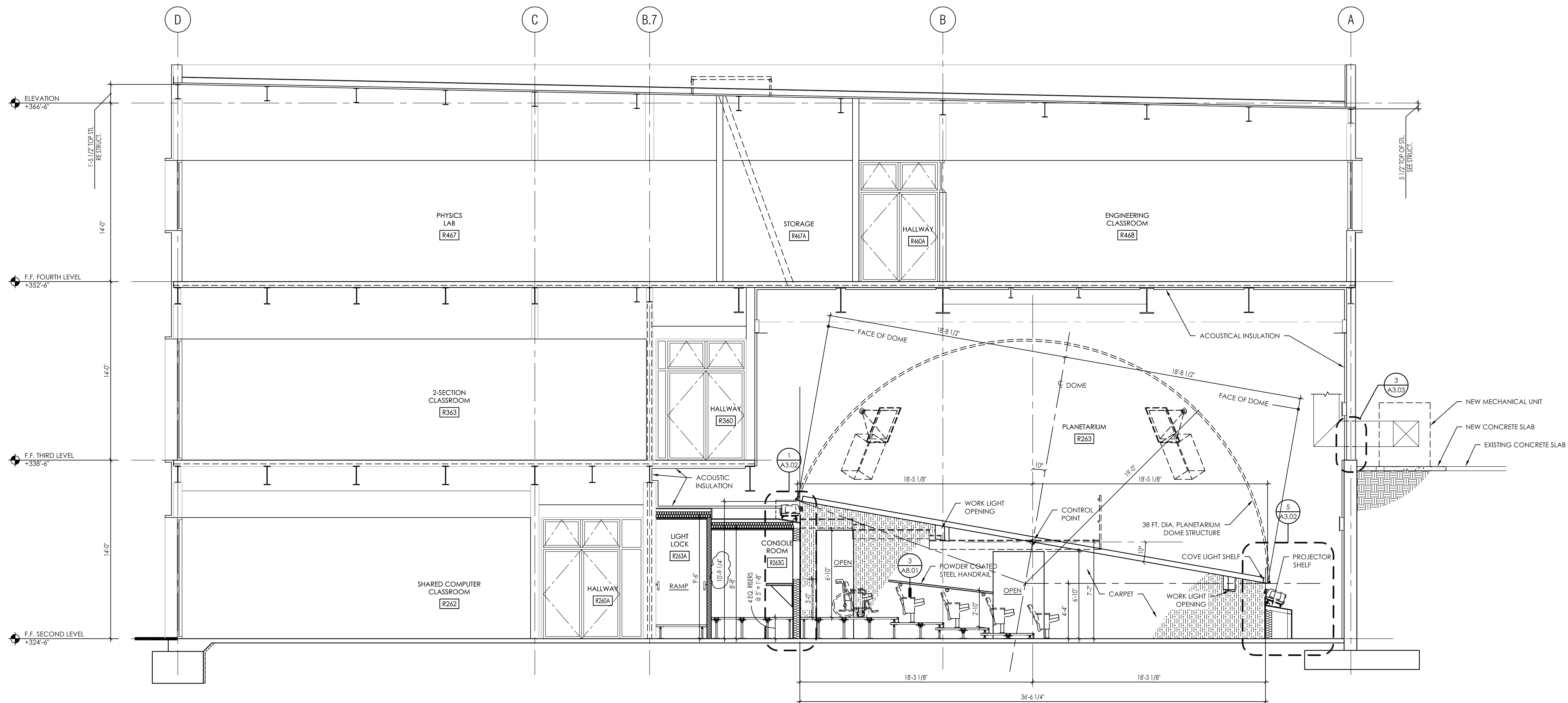
Project No.
2003-200 H (2)

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for PIERCE COLLEGE
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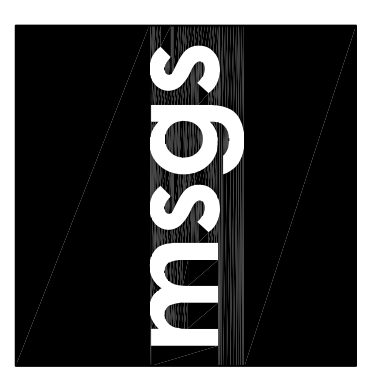
11-122-11122-A3.01 BUILDING SECTION @ PLANETARIUM.dwg - cchym - 12/14/2012 7:24 AM



SECTION @ ACCESSIBLE RAMP
 2
 A3.01 1/4" = 1'-0"

SECTION A-A
 1
 A3.01 1/4" = 1'-0"

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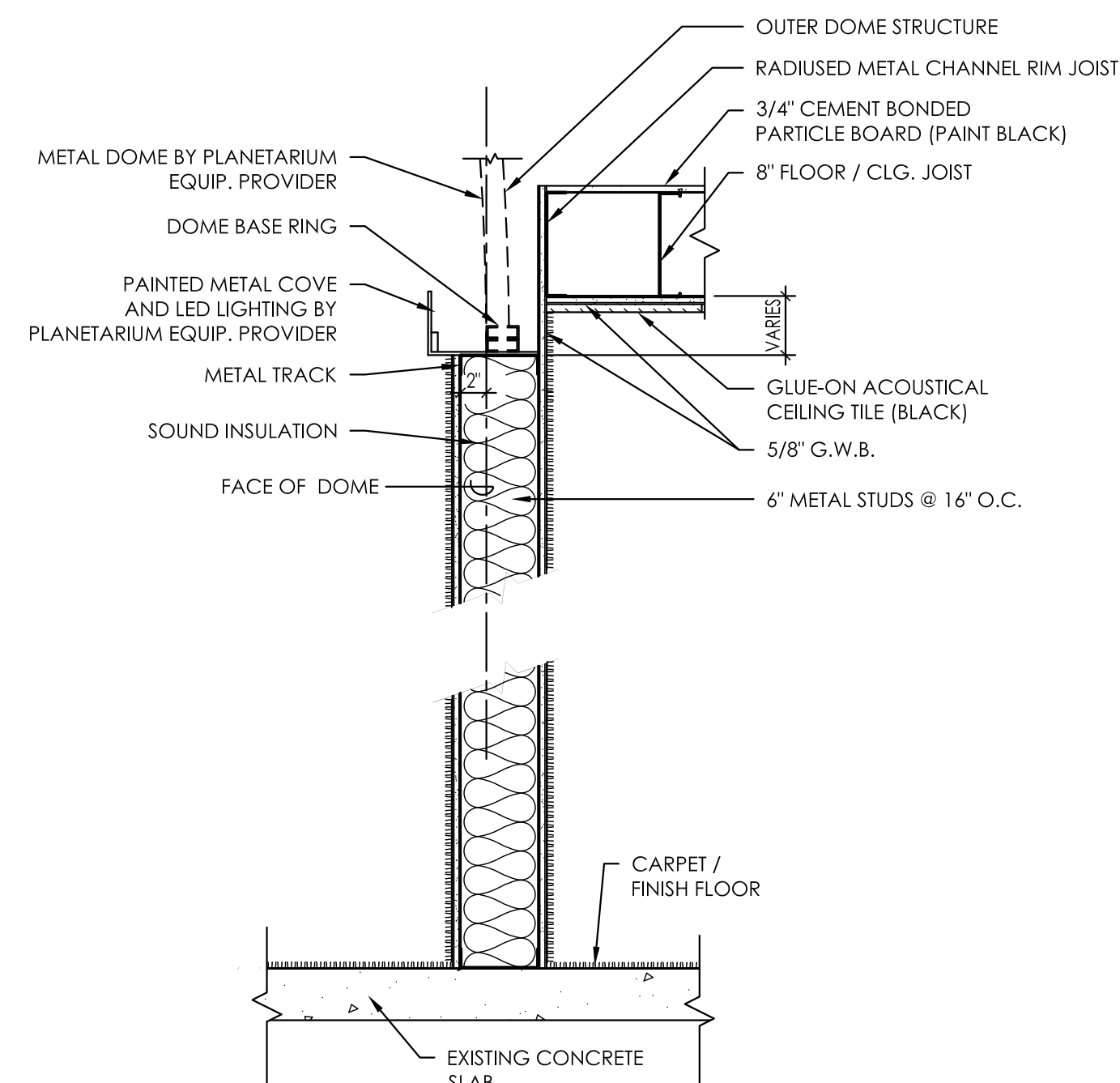
Sheet Title

BUILDING SECTION @ PLANETARIUM

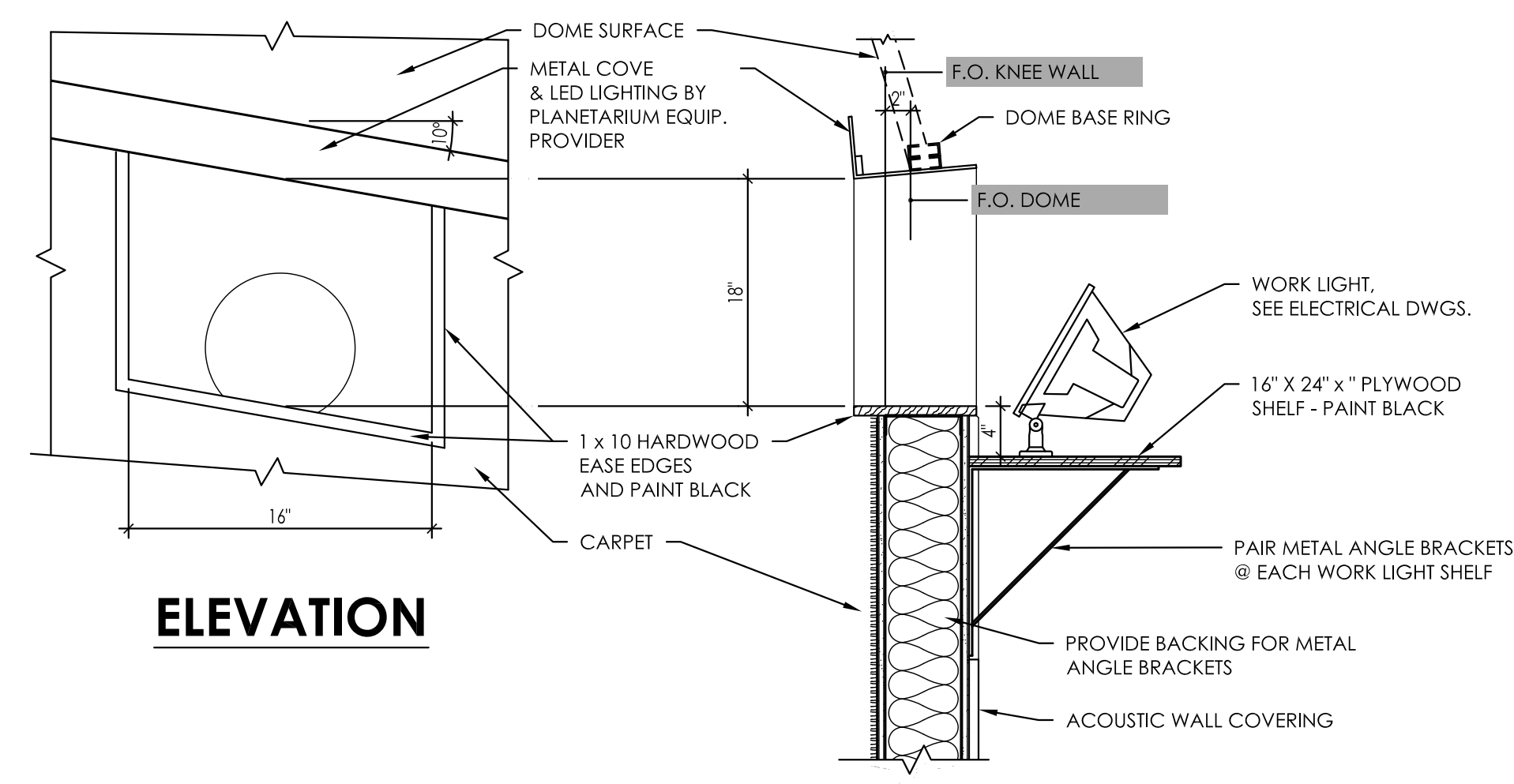
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Project No.
 2003-200 H (2)

11-122-1-1122-A3.02 WALL SECTIONS.dwg - cathym - 12/14/2012 7:32 AM

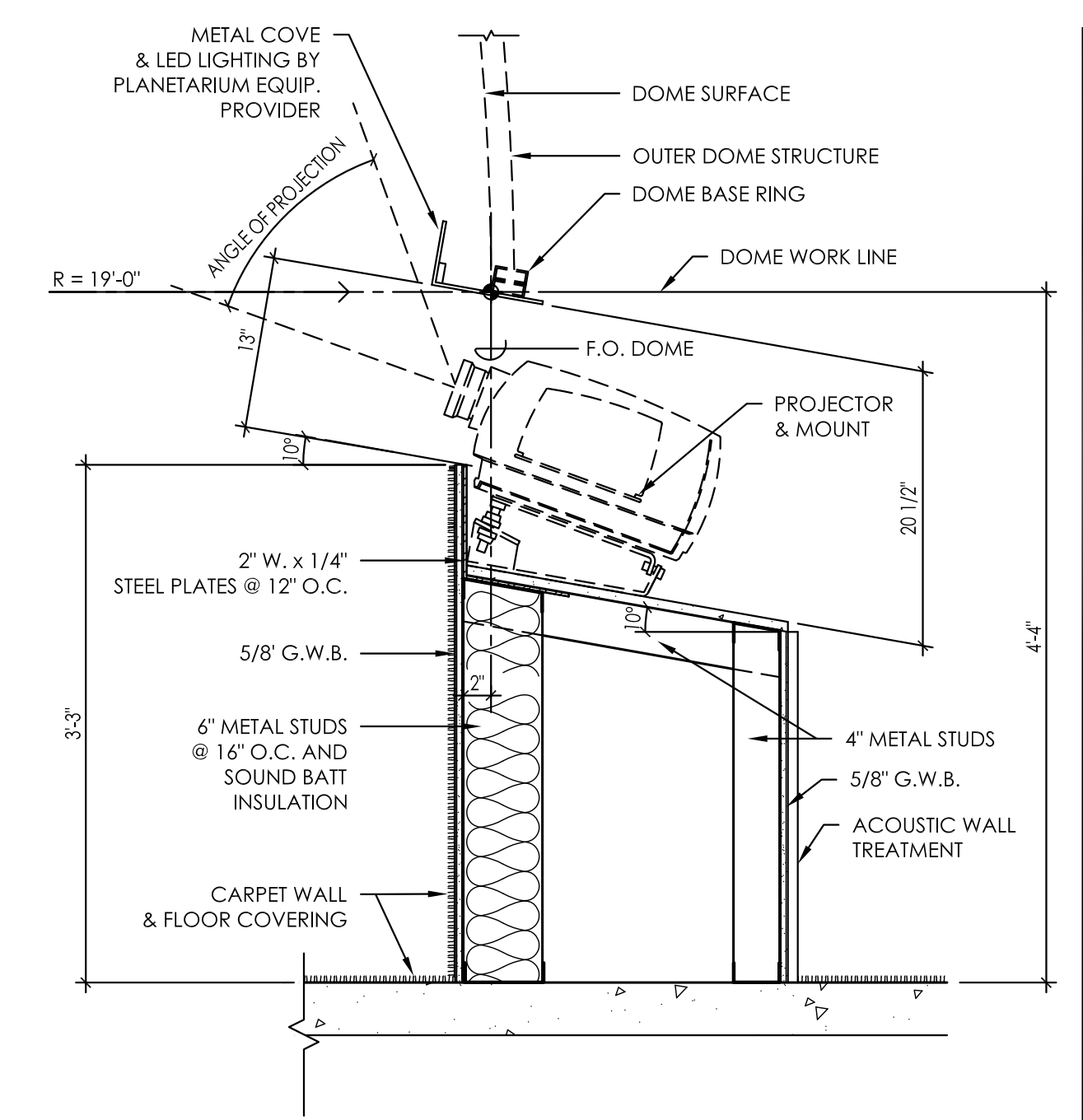


7 WALL SECTION 07
A3.02 1" = 1'-0"

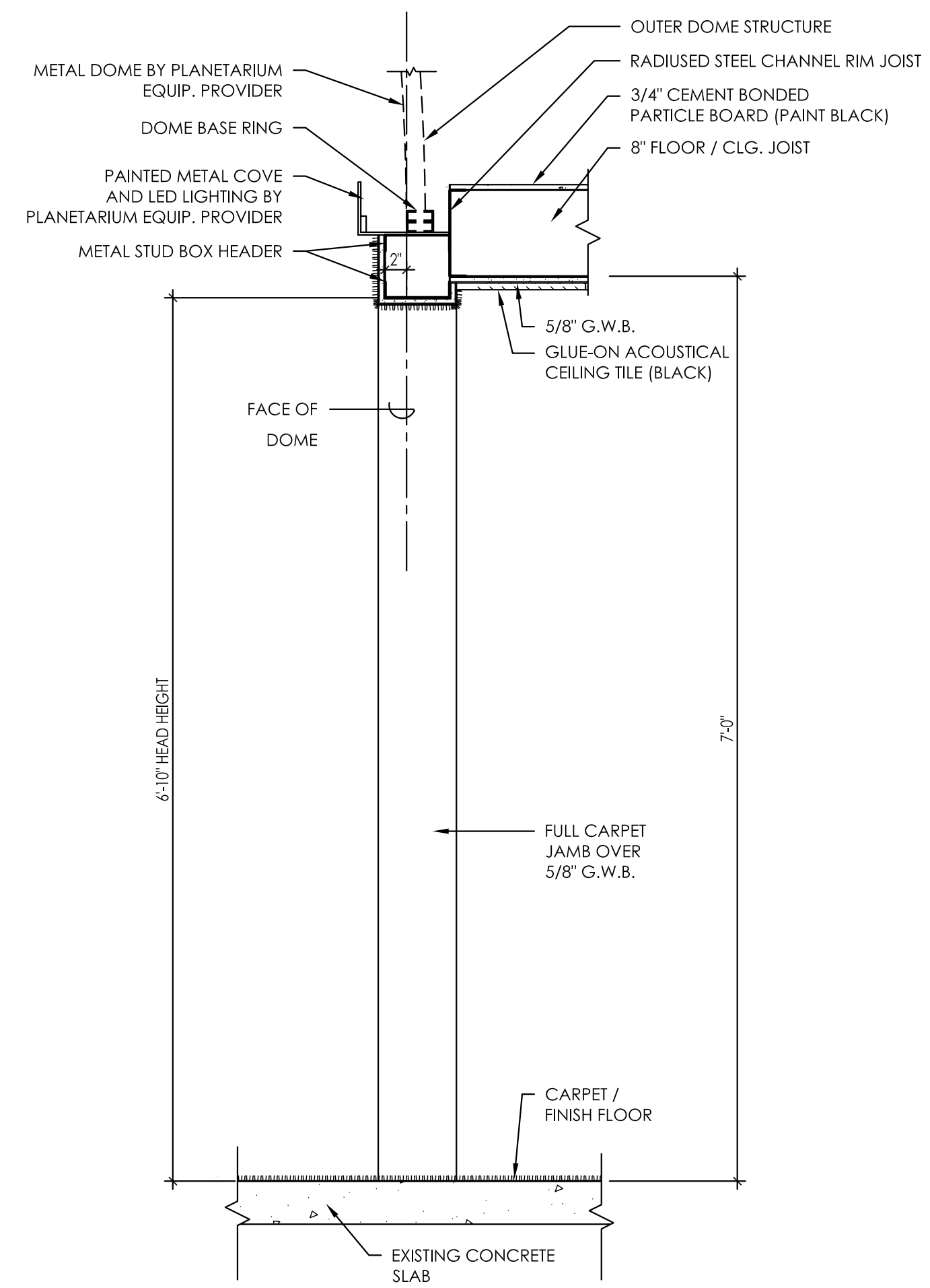


ELEVATION

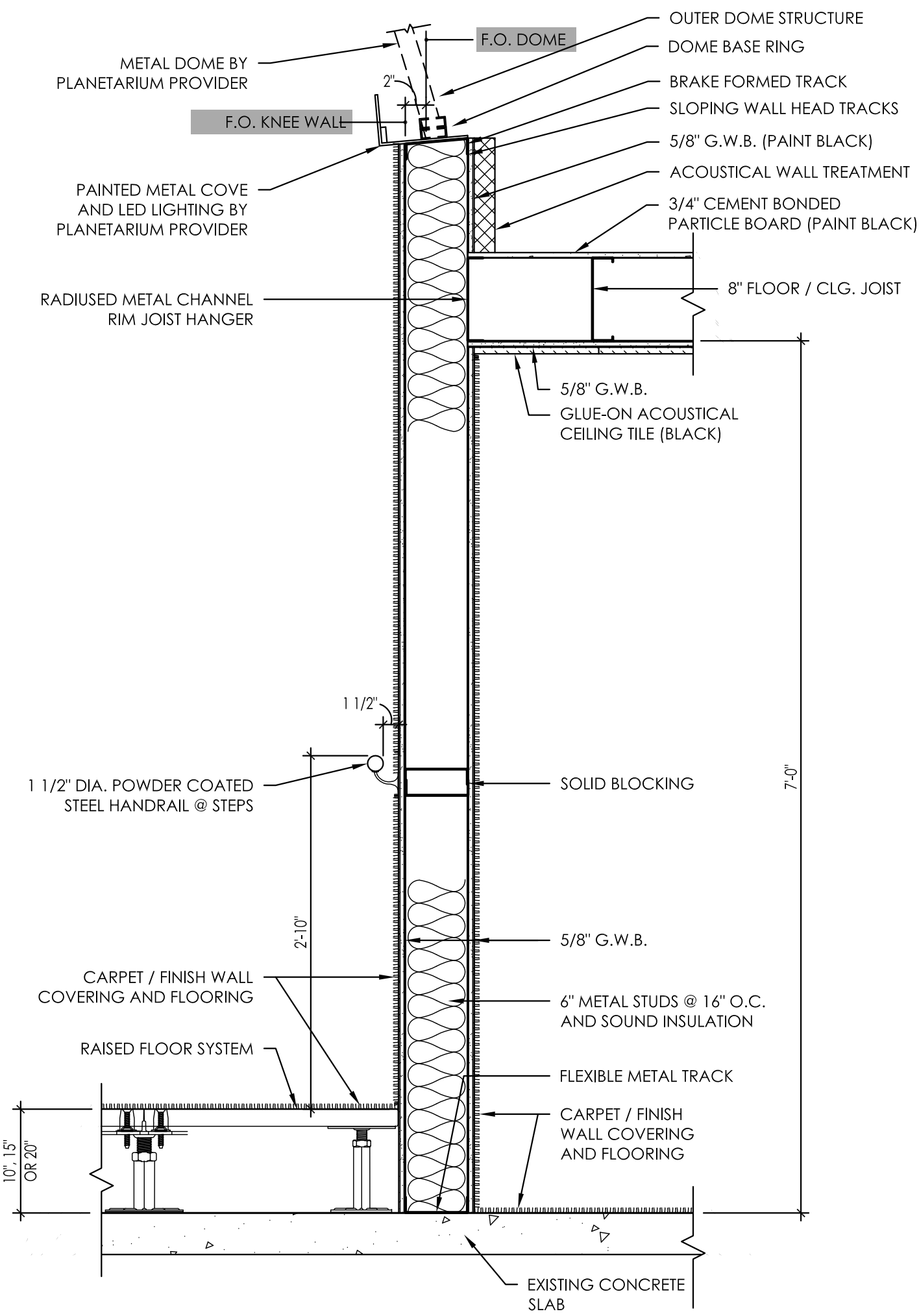
6 WALL SECTION @ WORK LITE OPENING
A3.02 1" = 1'-0"



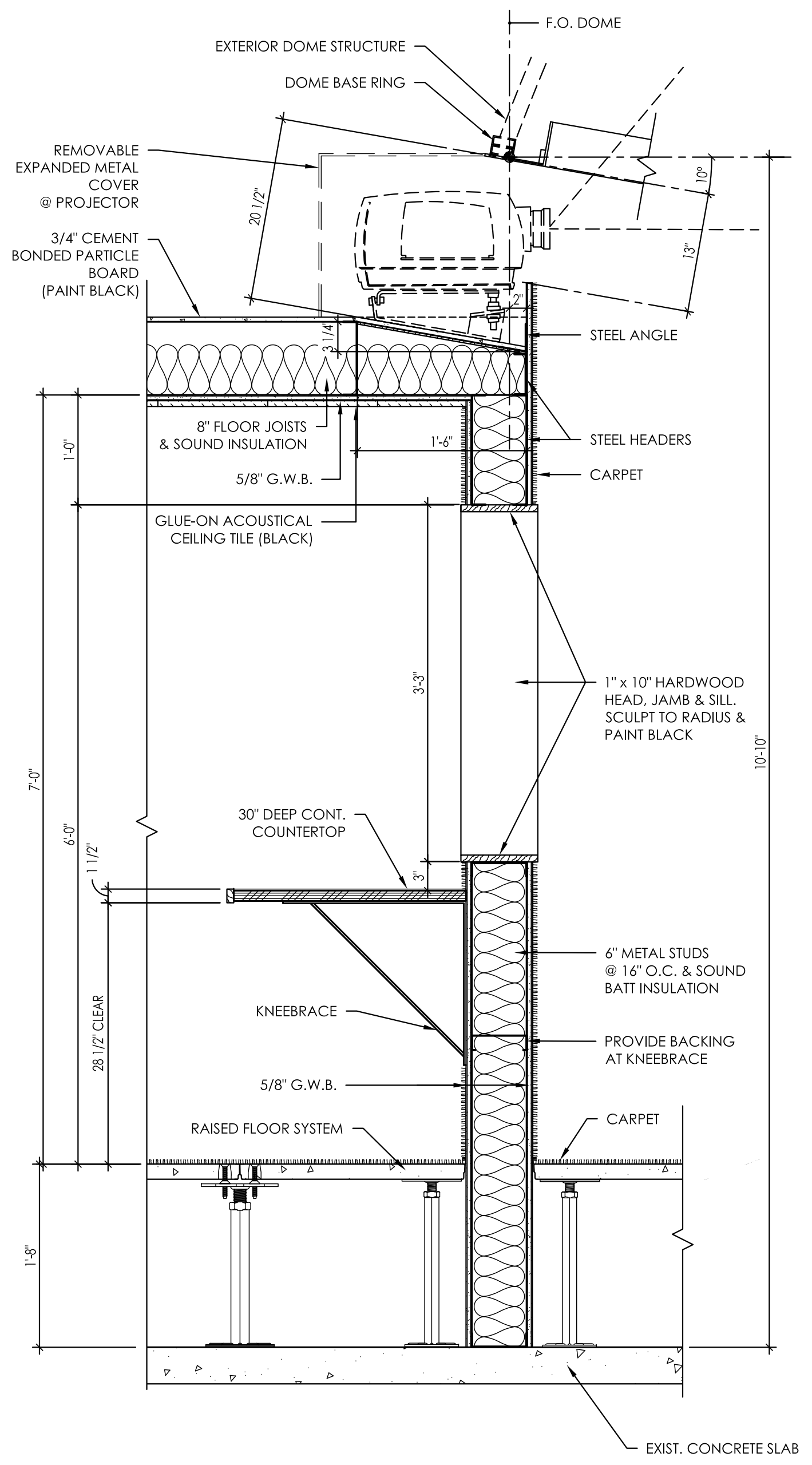
5 WALL SECTION 05
A3.02 1" = 1'-0"



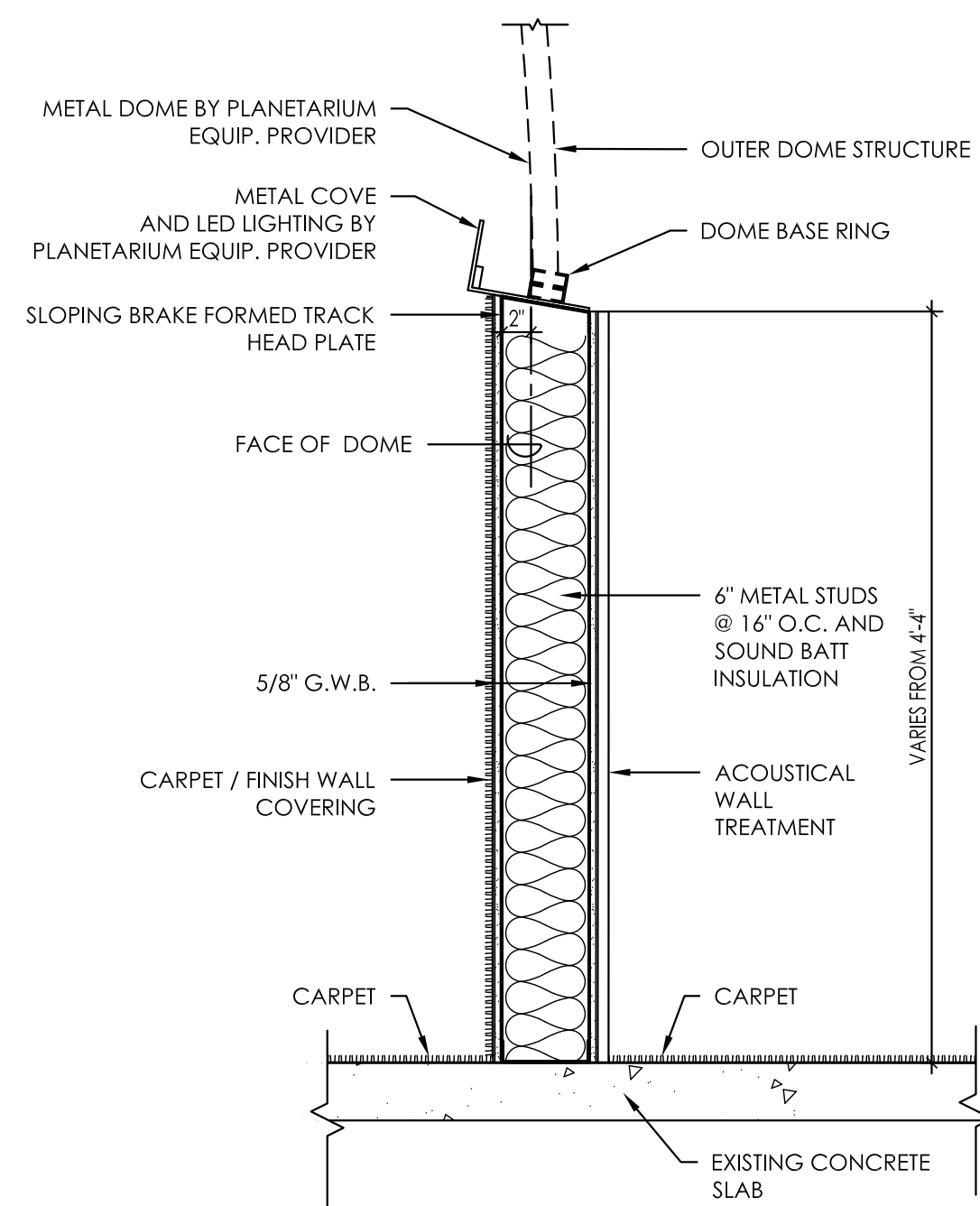
3 WALL SECTION 03
A3.02 1" = 1'-0"



2 WALL SECTION 02
A3.02 1" = 1'-0"



1 WALL SECTION 01
A3.02 1" = 1'-0"



4 WALL SECTION 04
A3.02 1" = 1'-0"

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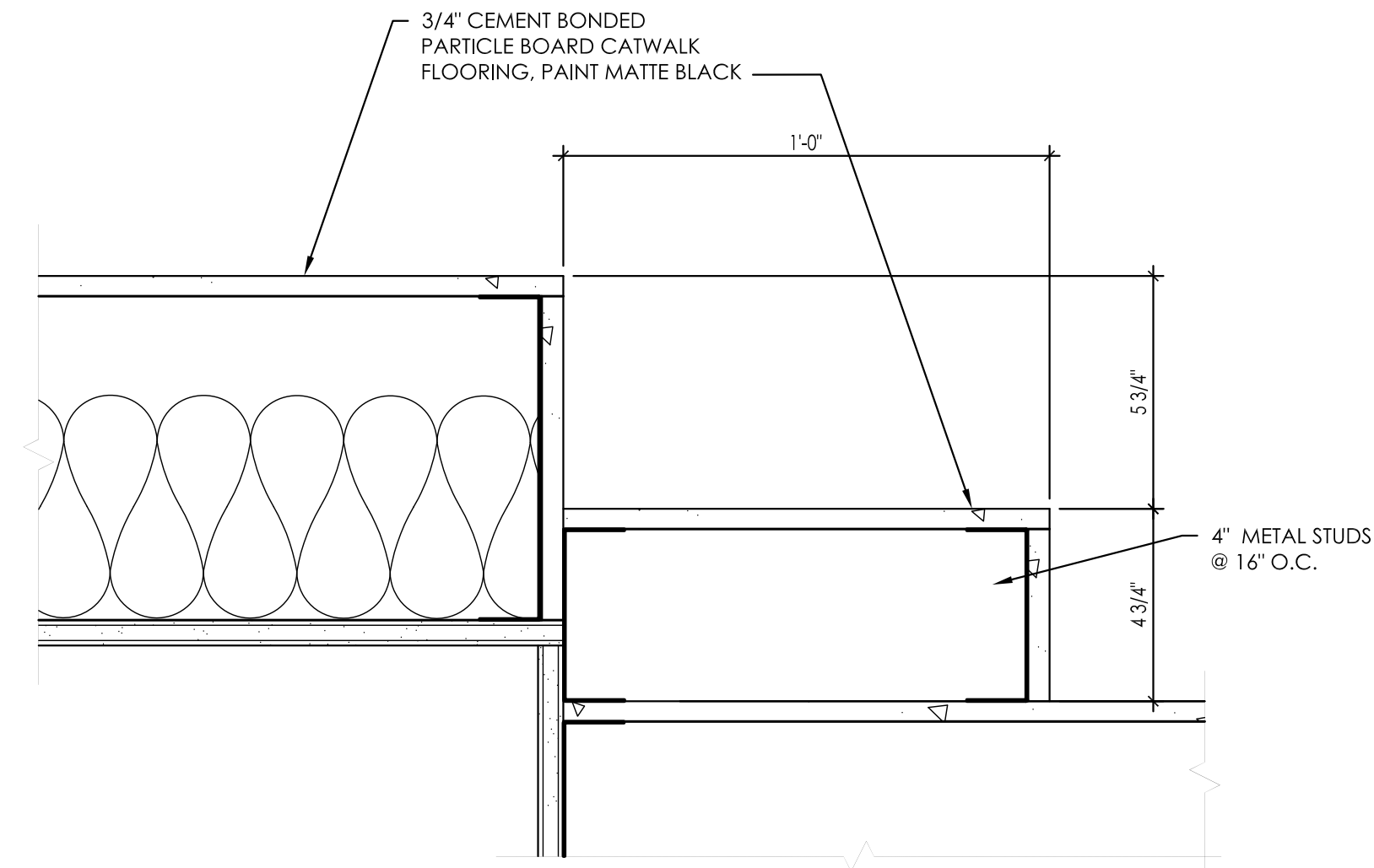
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Sheet Title

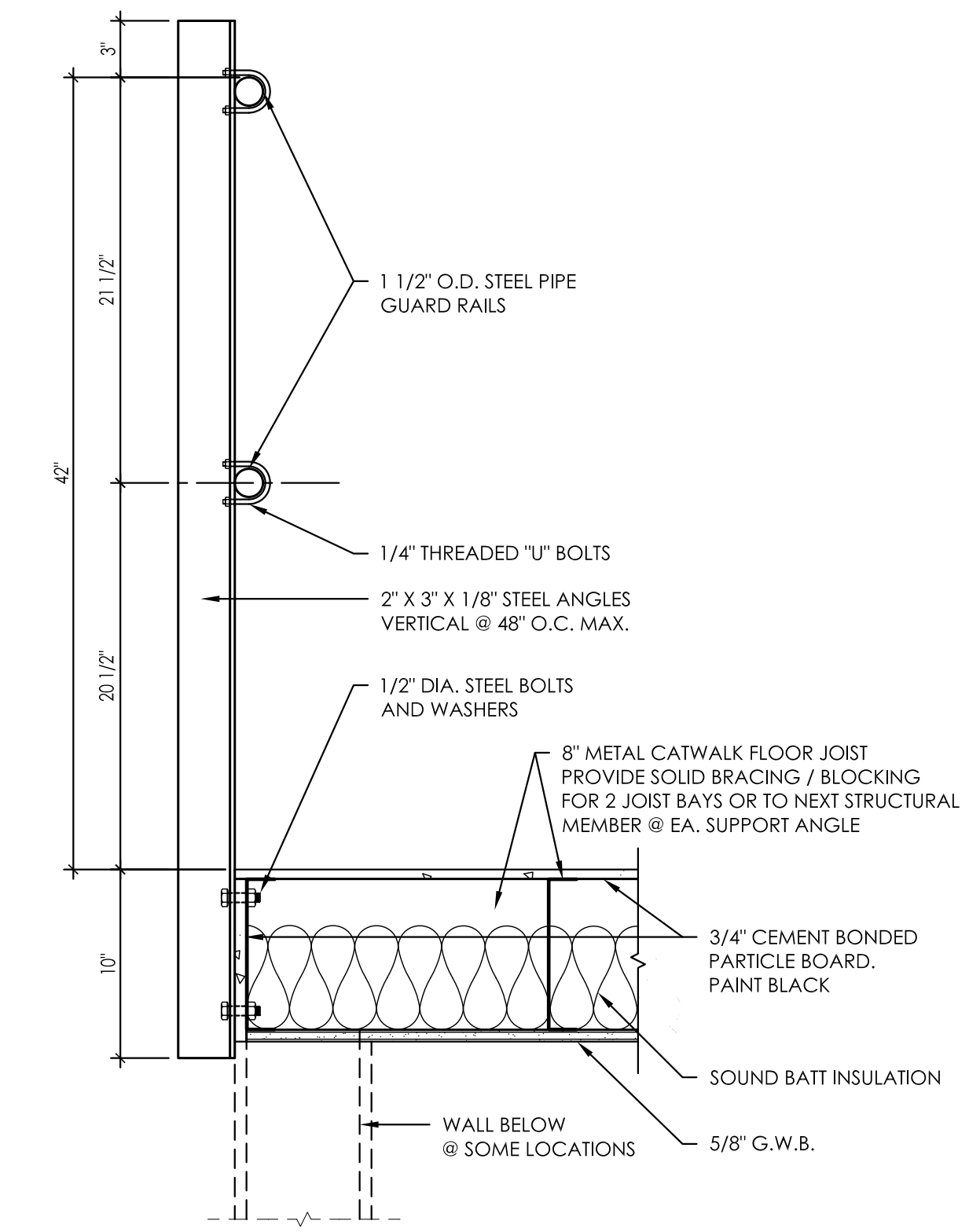
WALL SECTIONS

Sheet No.
A3.02
Project No.
2003-200 H (2)

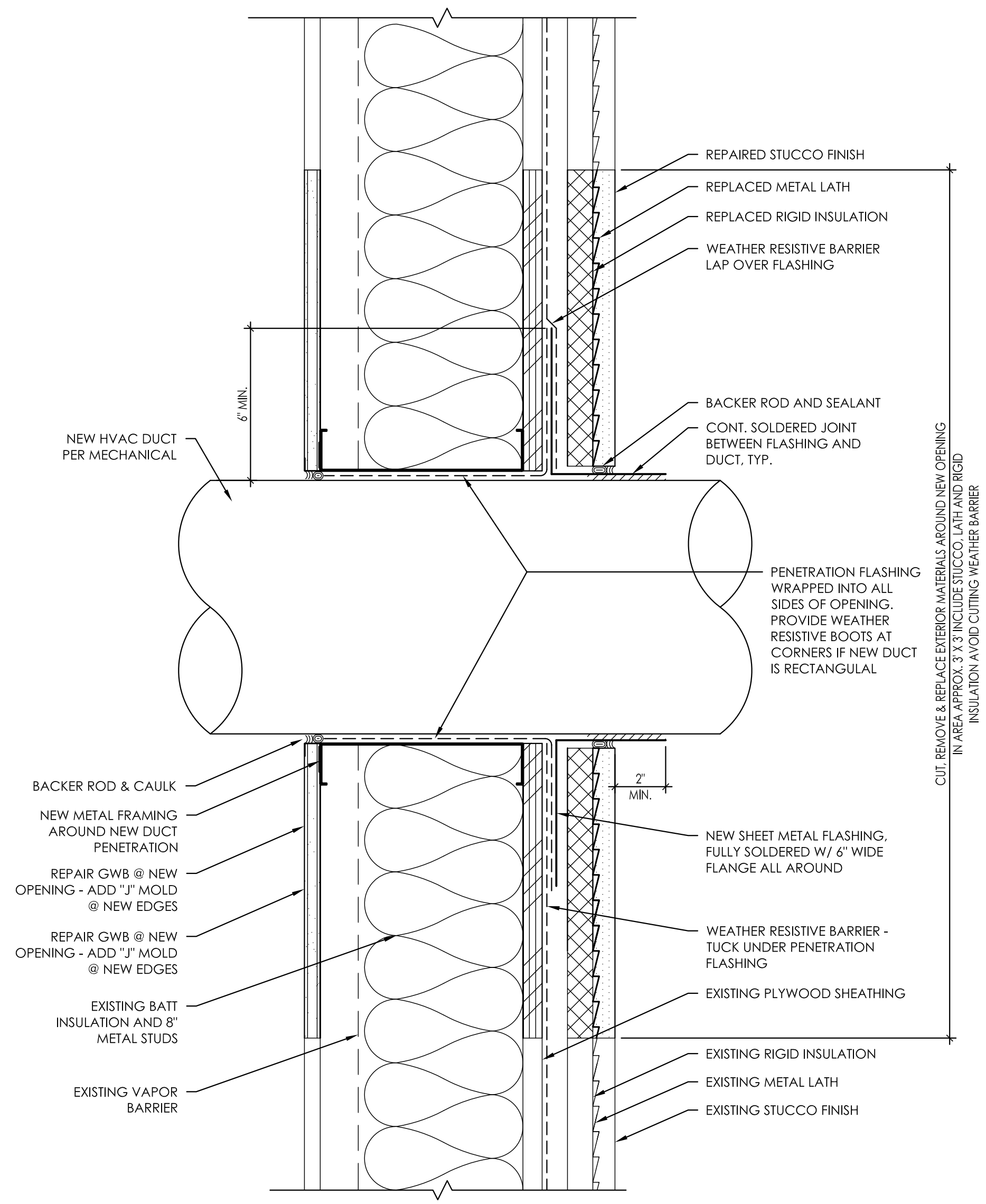
11-122 - 11-122-A3.03 WALL SECTIONS.dwg - cathym - 12/14/2012 7:55 AM



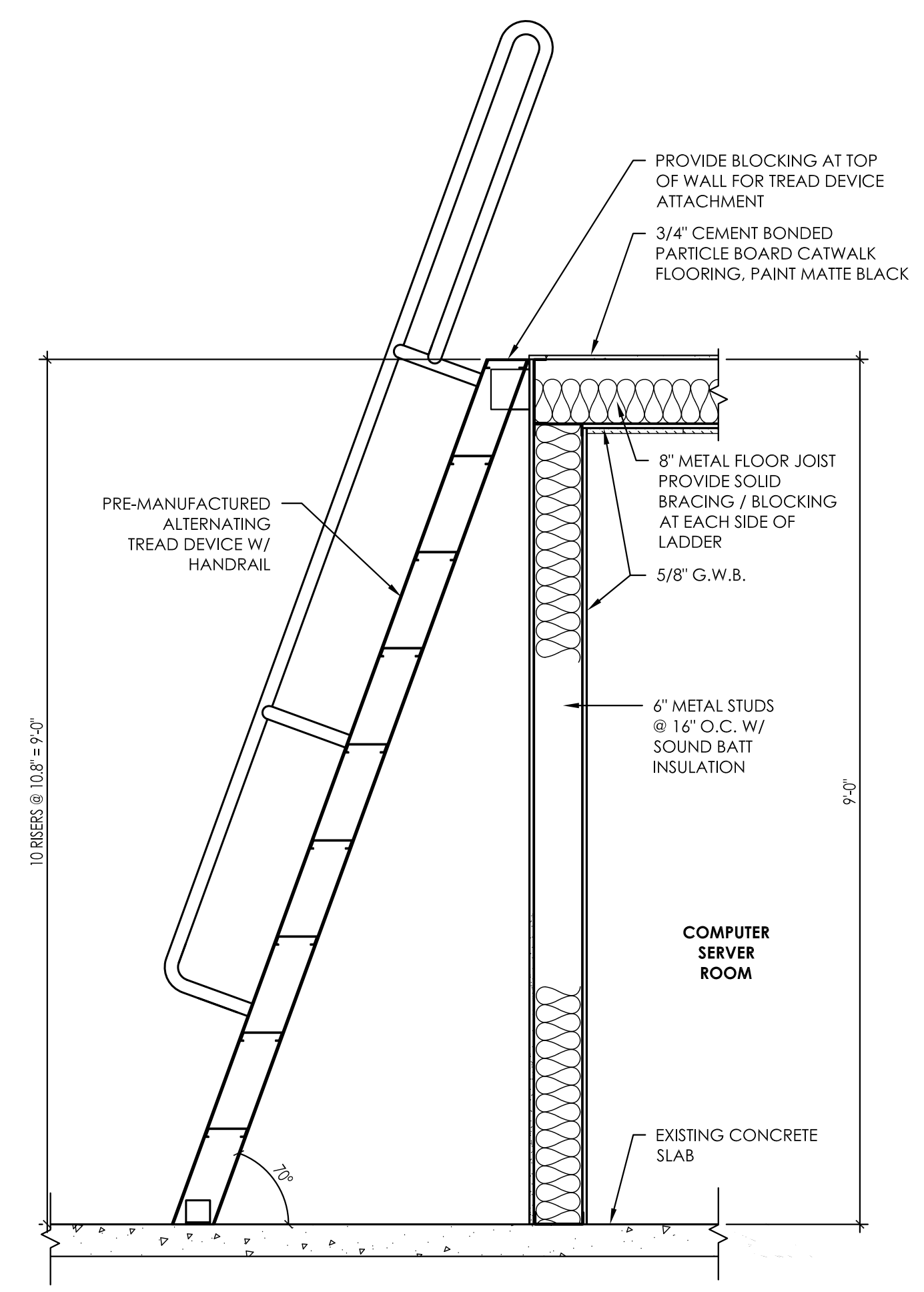
4 STAIR DETAIL
A3.03 3/4" = 1'-0"



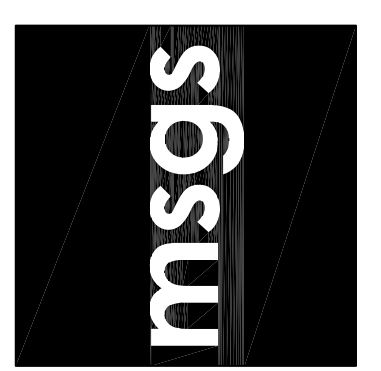
2 CATWALK HANDRAIL DETAIL
A3.03 1 1/2" = 1'-0"



3 HVAC DUCT THROUGH EXTERIOR WALL
A3.03 3/4" = 1'-0"



1 LADDER DETAIL
A3.03 3/4" = 1'-0"



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for PIERCE COLLEGE

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Date	By

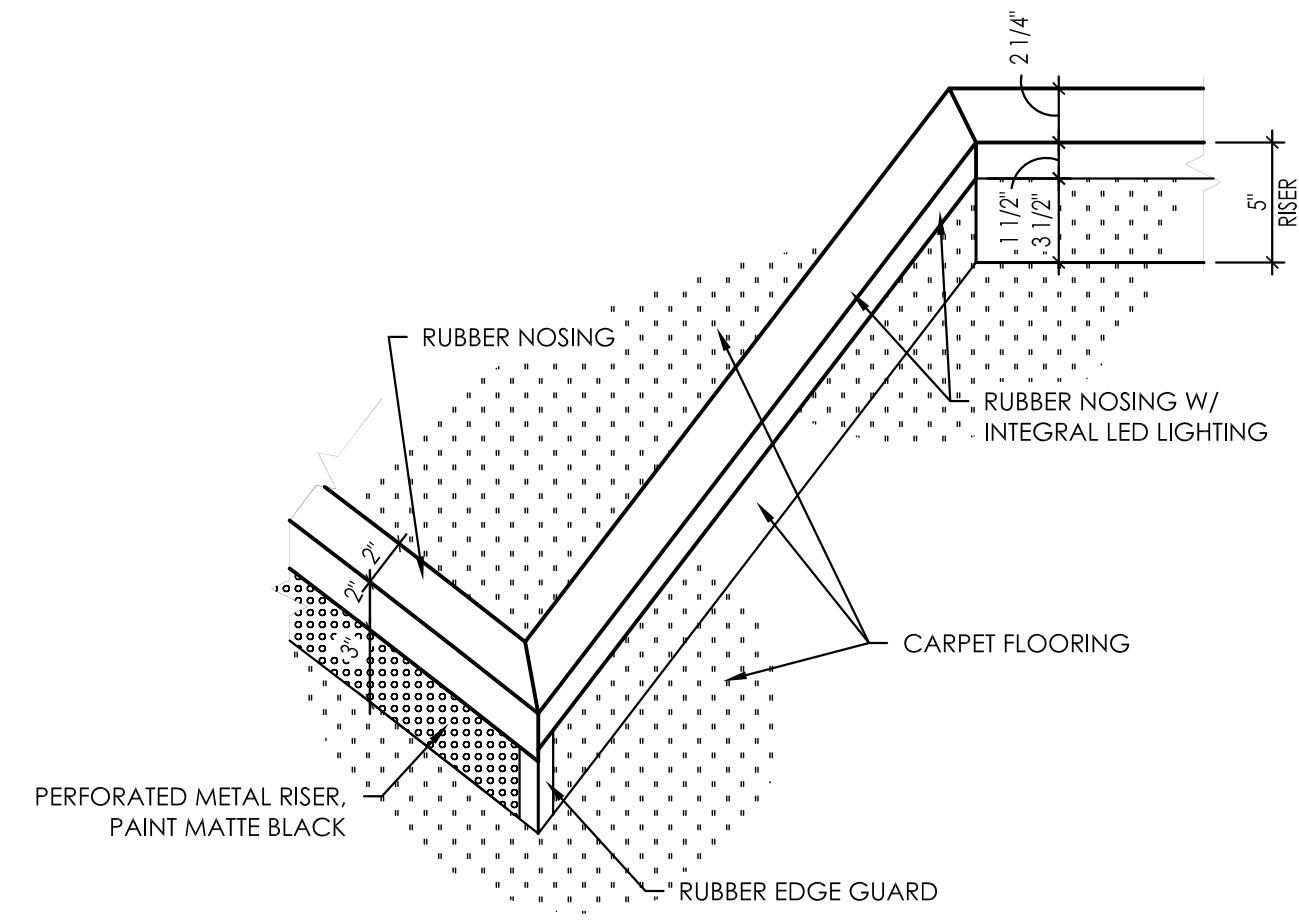
BID SET JAN. 3, 2012

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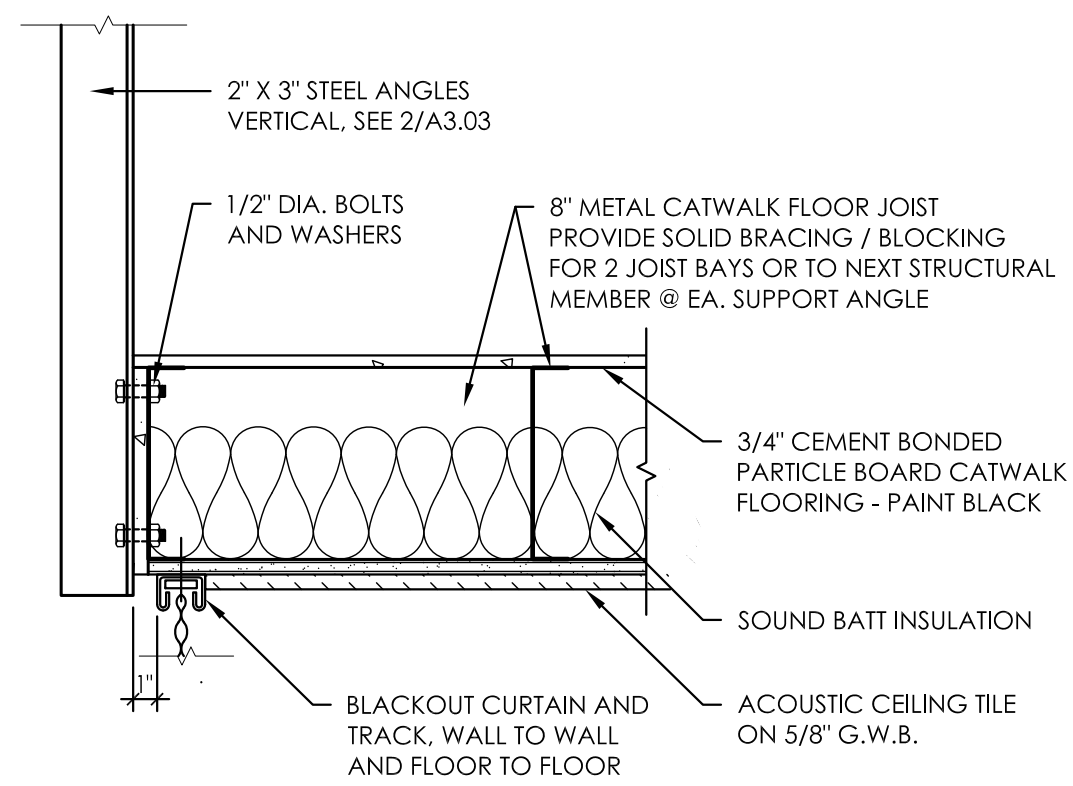
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WALL SECTIONS & DETAILS

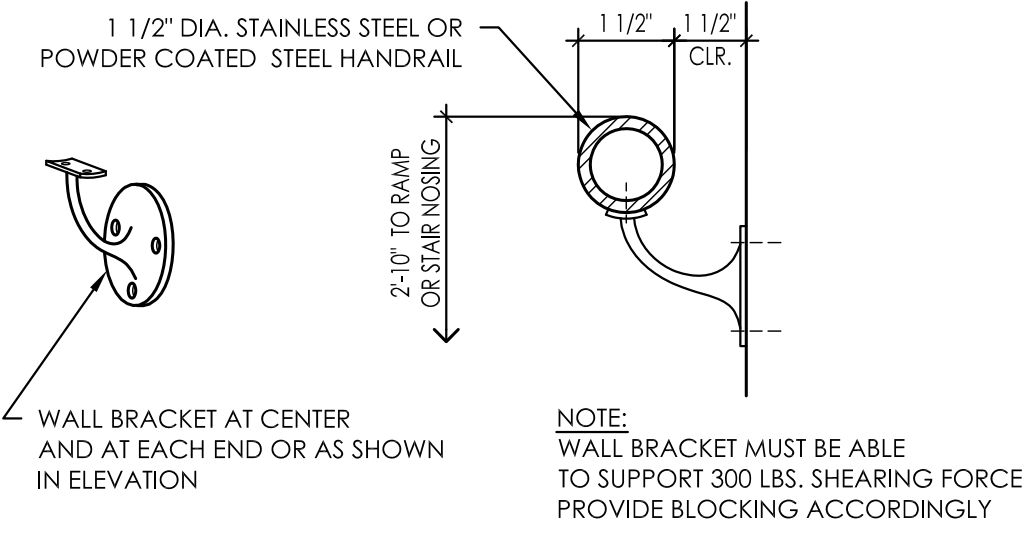
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A3.03
Project No.
2003-200 H (2)



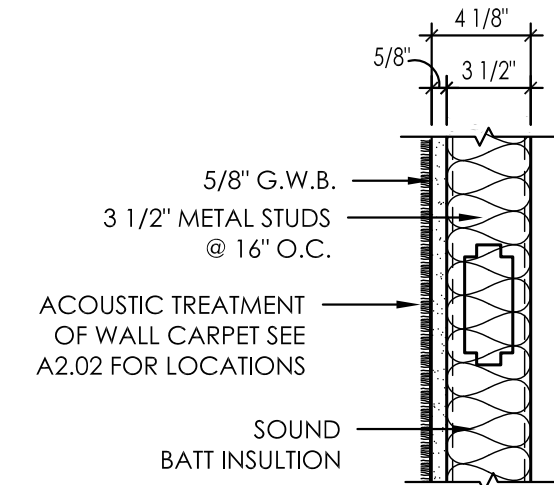
7 RISER EDGE DETAIL
A8.01 1 1/2" = 1'-0"



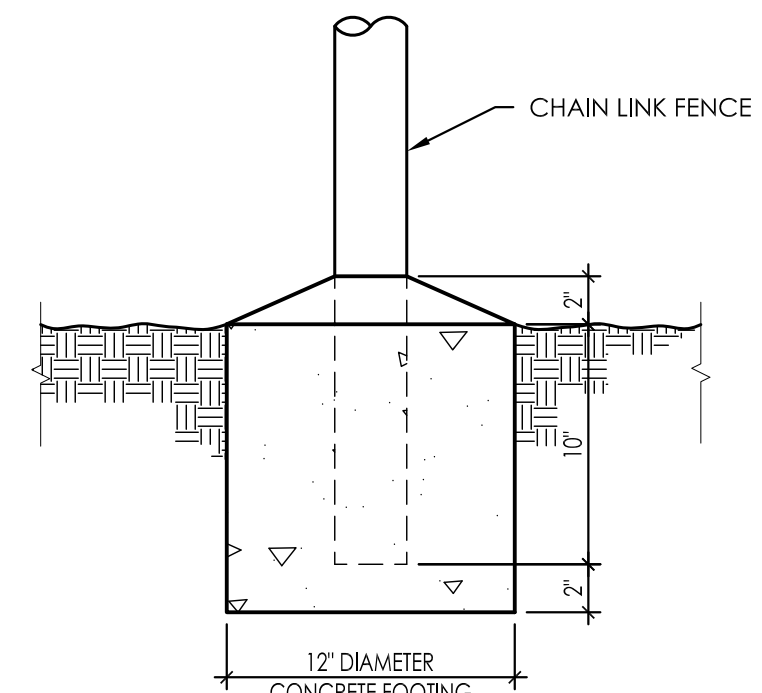
4 CURTAIN TRACK DETAIL
A8.01 1 1/2" = 1'-0"



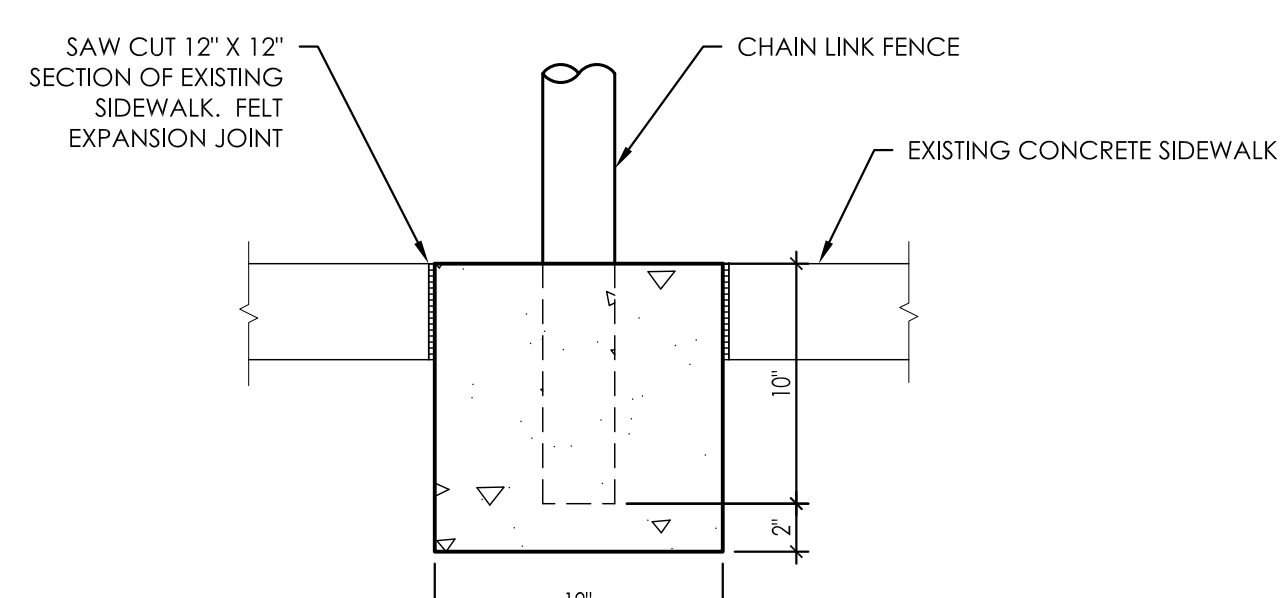
3 HANDRAIL SECTION
A8.01 3\"/>



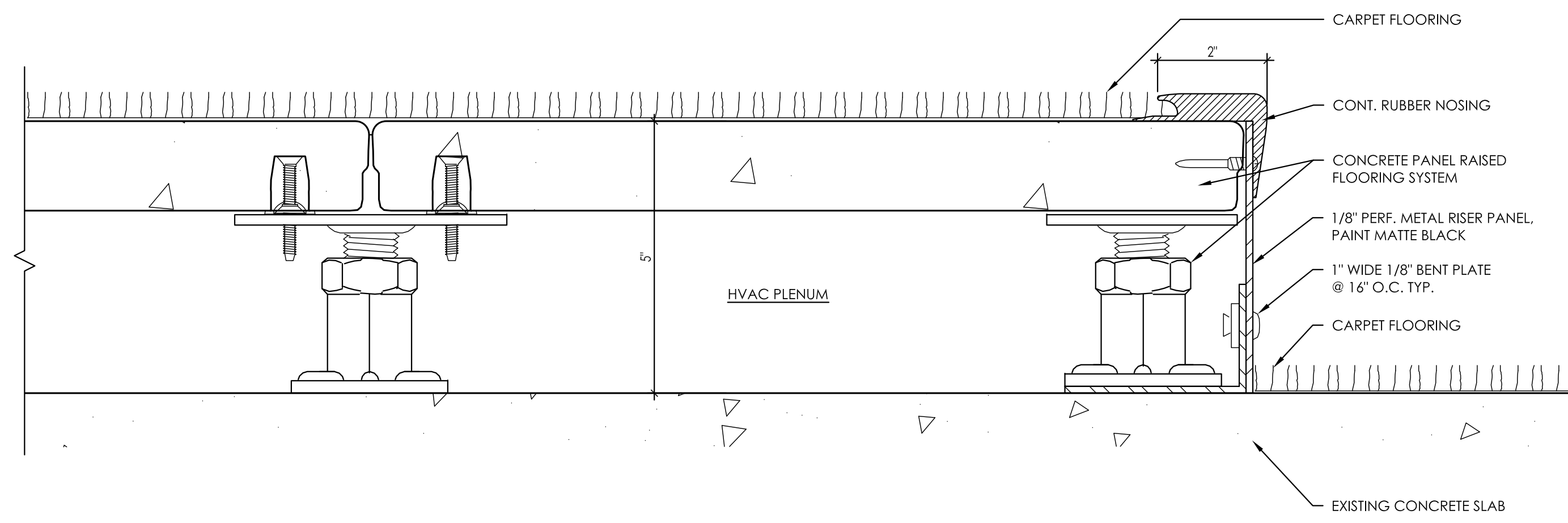
WALL TYPE 4
1 1/2" = 1'-0"



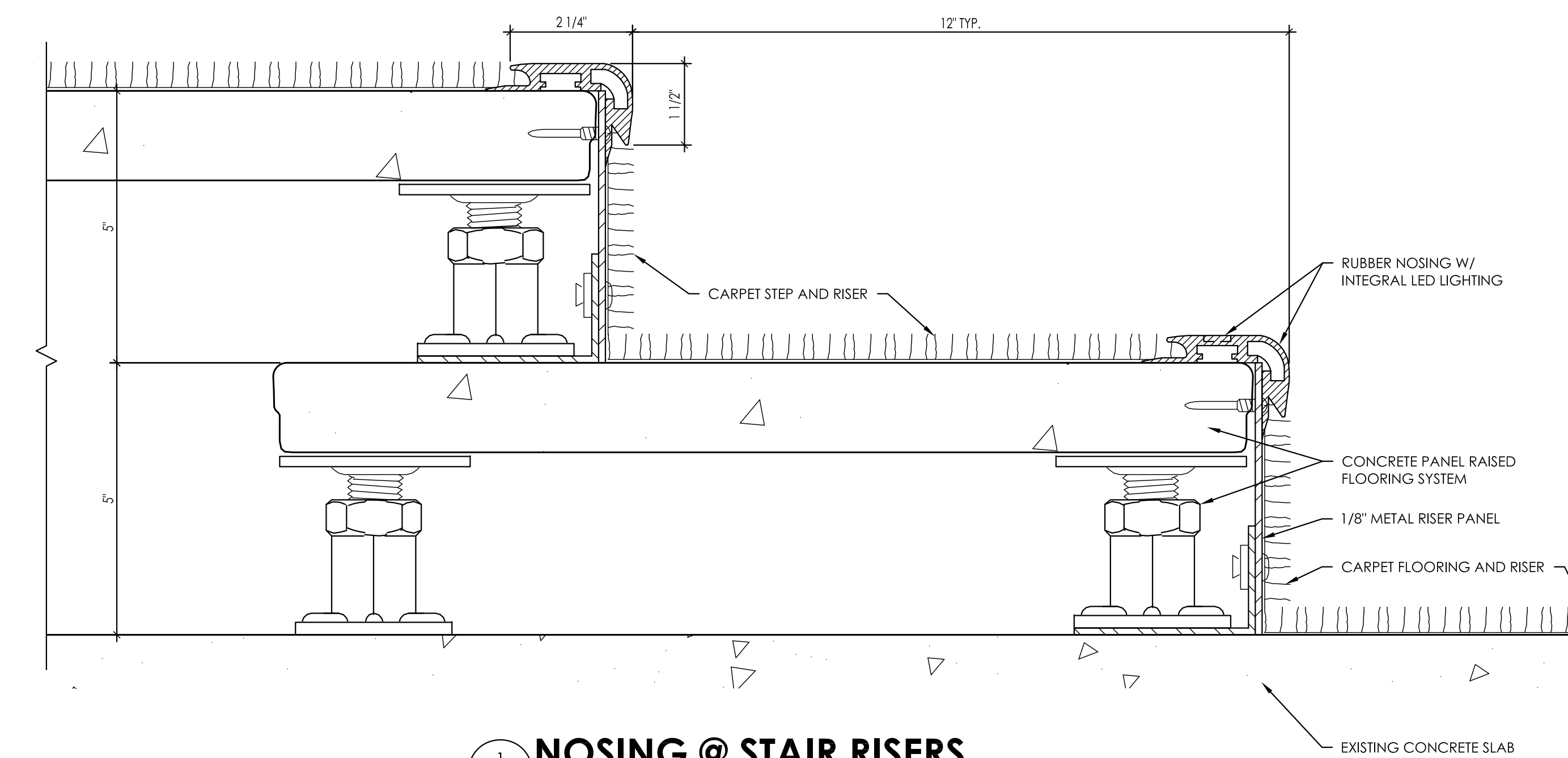
6 CHAIN LINK FOOTING DETAIL 02
A8.01 1 1/2" = 1'-0"



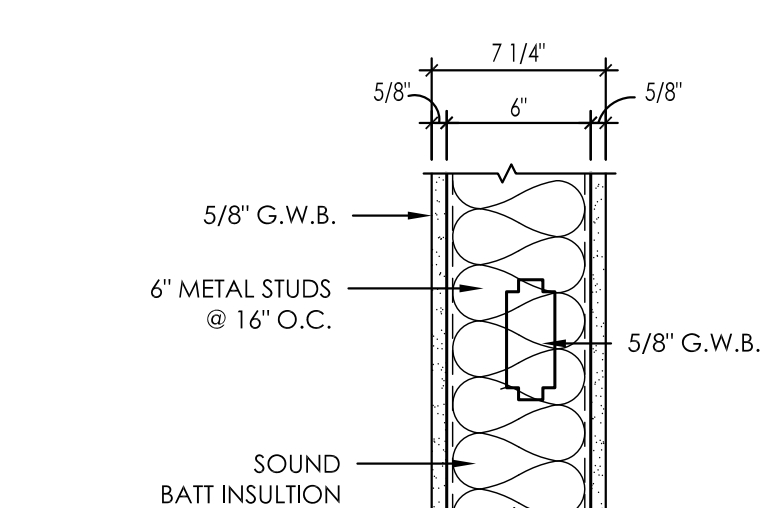
5 CHAIN LINK FENCE FOOTING DETAIL
A8.01 1 1/2" = 1'-0"



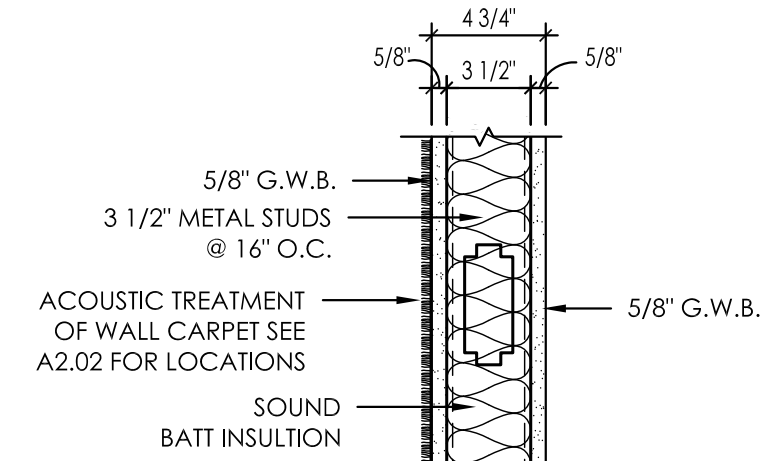
2 NOSING @ SEATING RISERS
A8.01 6\"/>



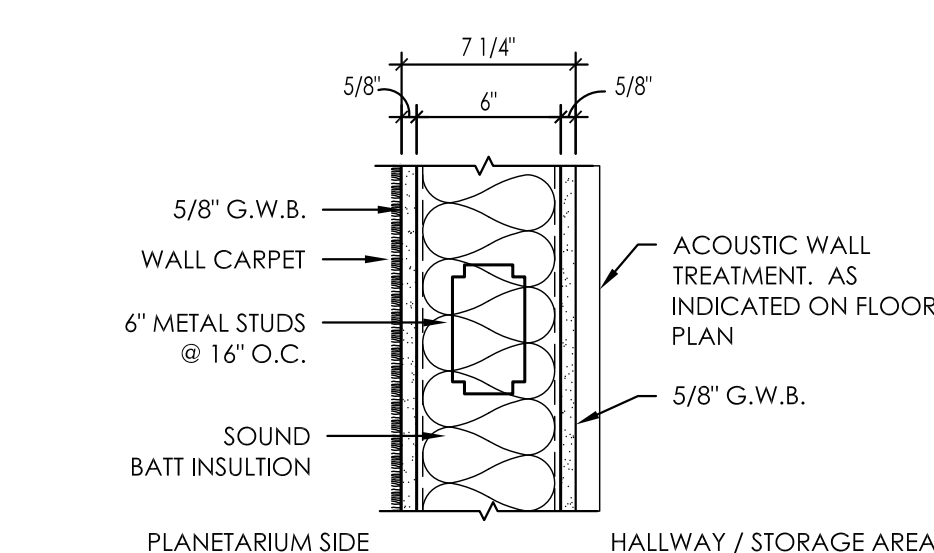
1 NOSING @ STAIR RISERS
A8.01 6\"/>



WALL TYPE 3
1 1/2" = 1'-0"



WALL TYPE 2
1 1/2" = 1'-0"



WALL TYPE 1
1 1/2" = 1'-0"

AS-BUILTS
The Architect has compiled a set of "AS-BUILTS" drawings conforming to the construction records of the Contractor as provided to the Architect. While the information submitted by the Contractor incorporated by the Architect into the "AS-BUILT" drawing is assumed to be reliable, the Architect will not be responsible for the accuracy of this information, nor for errors or omissions which may appear in the "AS-BUILT" drawing as a result.
Date: 12/13/2012 By: GFM

BID SET JAN. 3, 2012

Revisions Closing Date

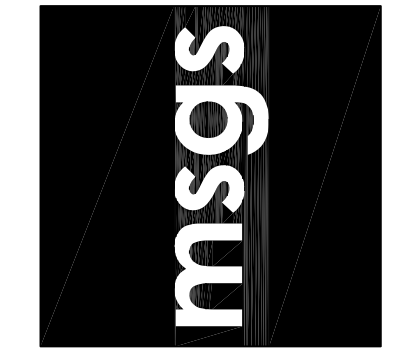
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Sheet Title

WALL TYPES & DETAILS

Sheet No. **A8.01**

Project No. 2003-200 H (2)



RAINIER BUILDING PLANETARIUM
for PIERCE COLLEGE
9401 Forwest Drive SW, Lakewood, WA, 98498-1999

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LIGHTING		SWITCHES	
	SURFACE OR PENDANT MOUNT FLUORESCENT LIGHT FIXTURE (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)		SINGLE POLE SWITCH
	WALL MOUNT LIGHT FIXTURE		DIMMING SWITCH - SINGLE POLE
	SURFACE OR RECESSED COMPACT FLUORESCENT LIGHT FIXTURE		TIMER SWITCH
	SURFACE OR PENDANT MOUNT STRIP LIGHT (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)		COMBINATION SWITCH / OCCUPANCY SENSOR
	FIXTURE ON EMERGENCY GENERATOR. PROVIDE WITH GENERATOR TRANSFER DEVICE.		THREE WAY SWITCH
	INCANDESCENT LIGHT FIXTURE		CEILING MOUNTED OCCUPANCY SENSOR (LIGHTING CONTROL)
	WALL MOUNTED INCANDESCENT LIGHT FIXTURE		LOW VOLTAGE SWITCH
	TRACK LIGHT FIXTURE	FIRE ALARM SYSTEM	
	FLOOD LIGHT		SMOKE DETECTOR
	EXIT LIGHT FIXTURE (PROVIDE DIRECTION ARROWS AS INDICATED) PROVIDE UNSWITCHED HOT LEG.		COMBINATION SPEAKER/STROBE - WALL MOUNT AT +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER (L INDICATES LOW TAP)
	WALL MOUNTED EXIT LIGHT FIXTURE (PROVIDE DIRECTION ARROWS AS INDICATED) PROVIDE UNSWITCHED HOT LEG.		STROBE ONLY - WALL MOUNT AT +80" AFF OR 6" BELOW CEILING, WHICHEVER IS LOWER
	EMERGENCY BATTERY PACK WITH TWIN HEAD FLOOD PROVIDE UNSWITCHED HOT LEG.		DOOR HOLD OPEN
RECEPTACLES			FIRE ALARM CONNECTION
	DUPLEX RECEPTACLE		FLOW SWITCH
	DUPLEX RECEPTACLE (G INDICATES GROUND FAULT CIRCUIT INTERRUPTER)		TAMPER SWITCH
	DUPLEX RECEPTACLE (C INDICATES ABOVE COUNTER)		PRESSURE SWITCH
	FOUR-PLEX RECEPTACLE	NETWORK INFRASTRUCTURE	
EQUIPMENT AND WIRING			COMMUNICATION / DATA OUTLET - WALL MOUNT WITH (3) DATA PORTS AND (3) CAT6 CABLES (4/S BOX WITH SINGLE GANG MUDRING AND COVER PLATE) 3/4"C. TO ACCESSIBLE CEILING SPACE, MOUNT AT +18" AFF UNLESS NOTED OTHERWISE.
	CONDUIT STUB OUT (PROVIDE CONCRETE MARKER ON EXTERIOR)		CABLE TRAY
	DEDICATED CONDUIT HOMERUN TO PANEL & CIRCUIT NUMBERS AS INDICATED ON PLANS	MISCELLANEOUS	
	RACEWAY CONCEALED IN WALL OR CEILING		CONSTRUCTION NOTES
	RACEWAY CONCEALED UNDERGROUND OR UNDER FLOOR SLAB		ALL DEVICES WITH LIGHT LINE WEIGHT INDICATES EXISTING TO BE RETAINED
	MARKS INDICATE NUMBER OF #12 AWG UNLESS NOTED OTHERWISE		ALL DEVICES WITH DASH LINE INDICATES EXISTING TO BE REMOVED
	FLEXIBLE CONDUIT		WEATHERPROOF
	GROUNDING SYSTEM PER CODE		
	JUNCTION BOX - SIZE PER CODE (F INDICATES FIRE ALARM SYSTEM)		
	MOTOR CONNECTION		
	MANUAL STARTER		
	120/208 VOLT PANELBOARD (OR AT RATED VOLTAGE AS NOTED)		
	EXISTING PANELBOARD TO BE RETAINED		
	MAIN DISTRIBUTION BOARD		
	TRANSFORMER		
	UNINTERRUPTIBLE POWER SUPPLY		
	MECHANICAL EQUIPMENT CONNECTION. SEE SCHEDULE.		

MECHANICAL EQUIPMENT CONNECTION SCHEDULE (EXHAUST FANS, AIR HANDLING UNITS, ETC)											
EQUIP.	VOLT/PH	LOAD			CIRCUIT		CONDUIT/WIRE SIZE	MANUAL STARTER (NOTE 1)	MAGNETIC STARTER (NOTE 1)	FUSED DISC. (NOTE 1)	REMARKS
		VA	MCA	HP	PANEL	BKR					
HP- 1	480/3	59167	71		XSB-2		1-1/4"C., (4) #4	---	EC	EC - 80A	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
OCU- 1	208/1	2704	13		P	35,37	1/2"C., (3) #12		MFR	EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
OCU- 2	208/1	2704	13		P	39, 41	1/2"C., (3) #12		MFR	EC	PROVIDE WITH WEATHERPROOF DEVICES AND CONNECTIONS
ICU- 1	208/1	--	--		P	35, 37	1/2"C., (3) #12		MFR	EC	PROVIDE POWER FROM OCU-1
ICU- 2	208/1	--	--		P	39, 41	1/2"C., (3) #12		MFR	EC	PROVIDE POWER FROM OCU-2

NOTE: 1. CONTRACTOR LISTED SHALL FURNISH AND INSTALL THE LISTED DEVICE.

GENERAL NOTES (APPLY TO ALL DRAWINGS)

- ONLY BRANCH CIRCUIT HOMERUNS ARE SHOWN WITH NUMBER OF CONDUCTORS/WIRES. E.C. SHALL PROVIDE ALL REQUIRED CONDUCTORS/WIRES TO ALL DEVICES AS NECESSARY IN ORDER TO INSTALL ALL CIRCUITS, SWITCHING AND GROUNDING COMPLETE. PANEL CIRCUIT NUMBERS ARE SHOWN TO CLARIFY CIRCUITING CONFIGURATION. CONDUCTOR HASH MARKS ARE NOT SHOWN FOR WIRE, SWITCH LEGS OR GROUNDING CONDUCTORS BETWEEN DEVICES.
- ALL CONDUITS MUST BE A MINIMUM OF 6'-6" ABOVE ALL MECHANICAL EQUIPMENT AND MECHANICAL CLEARANCE SPACES. E.C. WILL BE RESPONSIBLE TO MOVE ANY CONDUITS WHICH DO NOT COMPLY.
- FEED THROUGH GFCI RECEPTACLES SHALL NOT BE USED.
- PROVIDE DEDICATED NEUTRALS FOR ALL RECEPTACLE CIRCUITS.
- PANEL DESIGNATION AND CIRCUIT NUMBER SHALL BE LABELED ON EACH FACEPLATE WITH A CLEAR BACKGROUND WITH BLACK TYPED LETTERING.
- ALL SPARE CONDUITS (FUTURE) SHALL BE LABELED WITH INTENDED USE IN PERMANENT MARKER.
- ALL LIGHTING CIRCUITS SERVING EMERGENCY EGRESS LIGHTING ARE TO BE INSTALLED IN SEPARATE RACEWAYS FROM ALL LIGHTING CIRCUITS SERVING NON-EMERGENCY EGRESS LIGHTING.
- ALL EXIT SIGNS TO BE NON-SWITCHED AND CONNECTED TO AN EMERGENCY EGRESS LIGHTING CIRCUIT.
- ALL OUTLETS AND COVERS TO BE "BLACK".

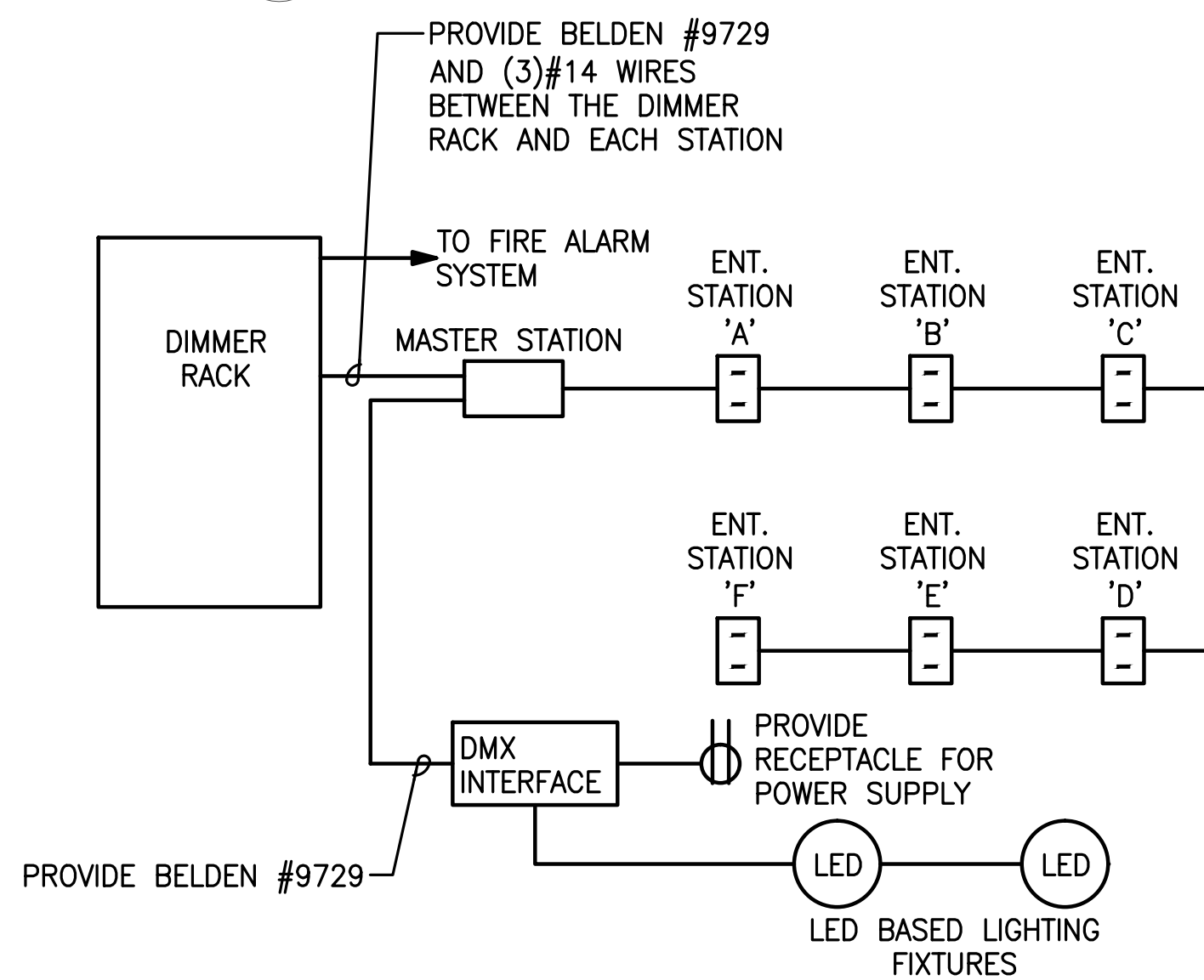
GENERAL NOTES FOR LIGHTING FIXTURE SCHEDULE

- PROVIDE UNSWITCHED HOT LEG TO ALL EMERGENCY EGRESS LIGHTS.
- PROVIDE CONNECTIONS TO ALL OCCUPANCY SENSORS WITHIN EACH SPACE.
- FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT, OCCUPANCY SENSORS AND TIME CLOCK CONTROLS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TESTING OF THE CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS TO MAKE SURE THEY ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED IN THE PRESENCE OF THE ENGINEER. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.
- ALL FLUORESCENT DIMMING BALLASTS SHALL BE 2-WIRE - ADVANCE MARK X BALLASTS OR SIMILAR.

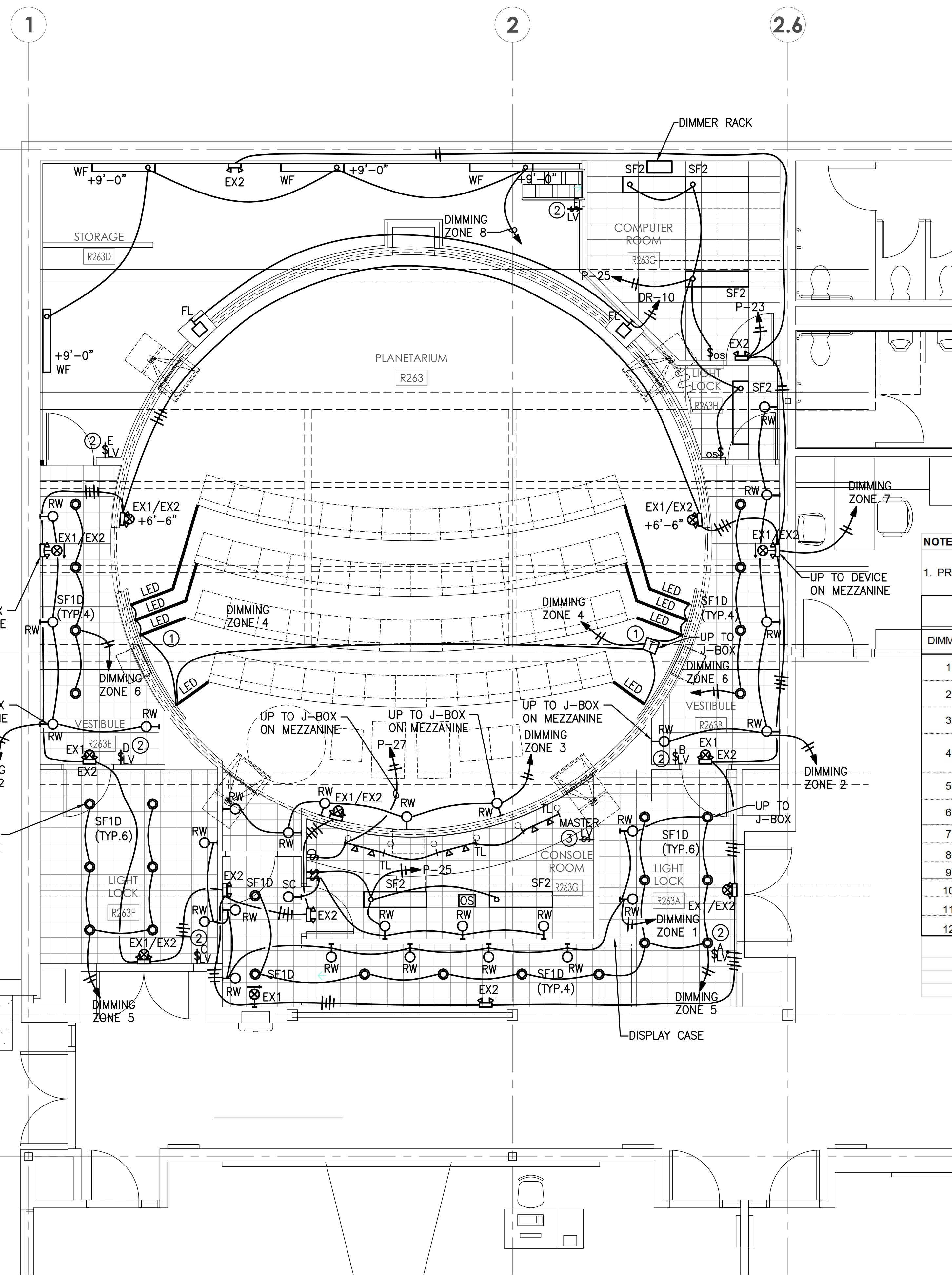
LIGHTING FIXTURE SCHEDULE

SYMBOL	FIXTURE DESCRIPTION	MANUFACTURER/MODEL #	LAMPS	V	W	MOUNTING & REMARKS
RW	LED STEP LIGHT	MP LIGHTING #L21-2.5W-RED LED-0-F-S3-DIMMABLE DRIVER-LED20W700i	(1) 2.5W RED LED	120	2.5	MOUNT AT +18" AFF
SC	SURFACE MOUNT 'IN USE' SIGN - RED LED WITH BLACK HOUSING	LITHONIA LIGHTING #LQM-P-R-SW09	RED LED	120	5	MOUNT ABOVE DOOR
SF1D	SURFACE MOUNT ROUND DOWNLIGHT - DIMMABLE - BLACK HOUSING	GOTHAM LIGHTING #CFZ12-1/26DTT-8-4P-LD-DMHL-DBL	(1) 26W CFL	120	30	VERIFY DIMMING BALLAST TYPE IS COMPATIBLE WITH THE DIMMING SYSTEM
SF2	1X4 FLOURESCENT SURFACE MOUNT - BLACK HOUSING	PEERLESS LIGHTING - LIGHTLINE #LLMS-S-S-1-54T5HO-SSB-4-GED10-SCT-C099- BLACK-GLR	(1) 54W T5HO	120	59	
WF	1X4 FLOURESCENT SURFACE WALL MOUNT - BLACK HOUSING	PEERLESS LIGHTING - LIGHTLINE #LLWA-D-1-54T5HO-SSB-4-GED10-SCT-C099- BLACK-GLR	(1) 54W T5HO	120	59	
TL	4 FOOT LONG TRACK WITH (2) LIGHTS - BLACK HOUSING	HALO LIGHTING #L736-MB/L651-MB	(2) 75W PAR 30	120	150	
EX1	RED LED EXIT SIGN - DIMMABLE WITH INTERFACE TO FIRE ALARM SYSTEM AND BLACK HOUSING	SURE-LITES #TPX-7-1-70-90-R-B-SD	RED LED	120	5	
EX2	EMERGENCY EGRESS LIGHT - BLACK HOUSING	SURE-LITES #CC3-BK	MR16	120	5	
LED	RED LED STAIR LIGHTING - BLACK HOUSING	TEMPO INDUSTRIES - GUARDJIAN #2006BK-1-R-T	RED LED	120	1W/LF	PROVIDE WITH POWER SUPPLIES. MOUNT ON NOSE OF STAIR TREAD.
FL	FLOOD LIGHT - BLACK HOUSING	500 WATT HALOGEN WORK LIGHT WITH WIREGUARD & CORD - PAINTED BLACK	(1) 500W HALOGEN	120	500	MOUNT ON LIGHT SHELF & CONNECT TO RECEPTACLE ADJACENT TO THE SHELF
PF	1X4 FLOURESCENT PENDANT MOUNT - BLACK HOUSING	PEERLESS LIGHTING - LIGHTLINE #LLMS-1-54T5HO-SSB-4-GED10-SCT-C099- BLACK-GLR	(1) 54W T5HO	120	59	

REFER TO DIMMER RACK SCHEDULE ON THIS SHEET FOR LIGHTS TO BE CONTROLLED ALONG WITH LAMP/BALLAST INFORMATION. THE MASTER STATION SHALL BE ABLE TO CONTROL ALL LIGHTING ZONES LISTED ON THE DIMMER RACK SCHEDULE. THE ENTRANCE STATION CONTROLS WILL BE DEFINED DURING SUBMITTAL PROCESS FOR THE LIGHTS THAT EACH STATION WILL BE CONTROLLING. THE DMX-512 CONTROLS SHALL ALLOW THE 'PLANETARIUM DOME LIGHTING CONTROL COMPUTER' TO ADJUST THE BRIGHTNESS OF THE LIGHTS AUTOMATICALLY IN THE COURSE OF RUNNING A THEATER SHOW. THE DIMMING CONTROL SYSTEM SHALL BE PROVIDED WITH MANUFACTURER STARTUP, INITIAL SETUP AND ON SITE COORDINATION WITH THE PLANETARIUM DOME SYSTEM INSTALLER AND THEIR SYSTEM INTERFACE.



2 DIMMER SYSTEM ONE-LINE DIAGRAM
E2.01 NOT TO SCALE



1 ENLARGED PLANETARIUM LIGHTING PLAN
E2.01 1/4" = 1'-0" project north true north

CONSTRUCTION NOTES

- 1 MOUNT POWER SUPPLY UNDER ACCESS FLOOR PANEL.
- 2 PROVIDE 2-BUTTON "ON/OFF" ENTRANCE STATION. CONNECT TO DIMMER RACK. PROVIDE SINGLE GANG 3.5" DEEP BACK BOX. BACK BOX MUST BE GROUNDED.
- 3 PROVIDE A MASTER STATION. CONNECT TO DIMMER RACK.

GENERAL NOTES

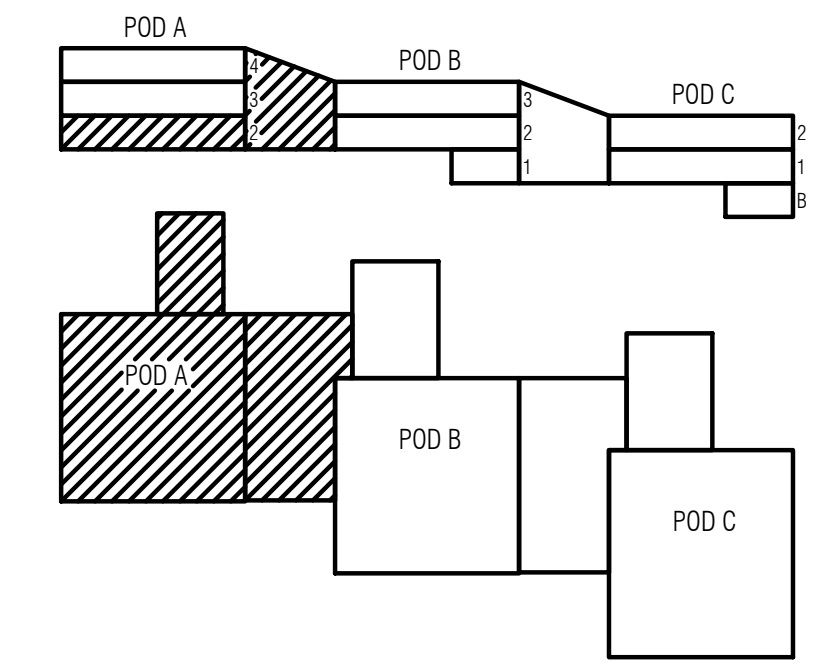
1. PROVIDE UNSWITCHED HOT LEG TO ALL TYPE 'EX2' FIXTURES - SEPARATE FROM TYPE 'EX1' FIXTURES.
2. PROVIDE FIRE ALARM CONNECTION TO ALL 'EX1' FIXTURES FOR FULL OVERRIDE 'ON' UPON SIGNAL FROM FIRE ALARM SYSTEM.
3. ALL BRANCH CIRCUITS MUST HAVE SEPARATE NEUTRALS.

NOTES:

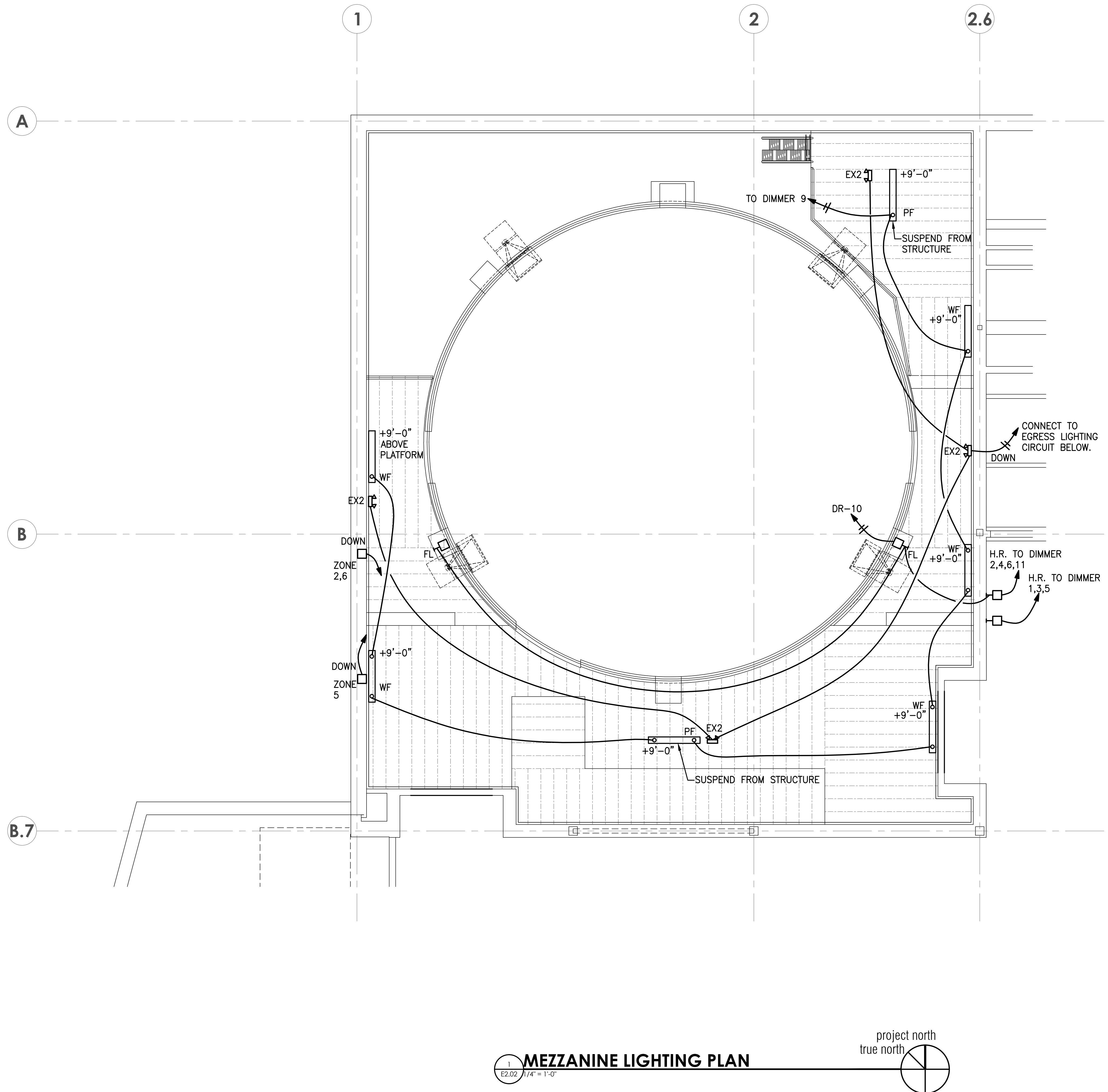
1. PROVIDE FIRE ALARM CONNECTION FOR BY-PASS FUNCTION.

DIMMER RACK				
DIMMER	DESCRIPTION	LAMP TYPE	TYPE OF BALLAST	TOTAL LOAD (WATTS)
1	TYPE 'RW' - RED LED STEP LIGHTS IN LIGHT LOCK AREAS	LED	LED DIMMABLE DRIVER	25
2	TYPE 'RW' - RED LED STEP LIGHTS IN VESTIBULE AREAS	LED	LED DIMMABLE DRIVER	22.5
3	TYPE 'RW' - RED LED STEP LIGHTS BACK WALL OF PLANETARIUM	LED	LED DIMMABLE DRIVER	12.5
4	TYPE 'LED' - RAISED FLOOR PLATFORM STEPS - PLANETARIUM	LED	LED DIMMABLE DRIVER	44
5	TYPE 'SF1D' - CEILING LIGHTS - LIGHT LOCK AREAS	COMPACT FLUORESCENT	FLUORESCENT DIMMABLE BALLAST	540
6	TYPE 'SF1D' - CEILING LIGHTS - VESTIBULE AREAS	COMPACT FLUORESCENT	FLUORESCENT DIMMABLE BALLAST	240
7	TYPE 'EX1' - LED EXIT SIGNS	LED	LED DIMMABLE DRIVER	45
8	STORAGE AREA LIGHTS TYPE 'WF'	FLUORESCENT	NON-DIM	236
9	MEZZANINE LIGHTS TYPE 'WF'	FLUORESCENT	NON-DIM	413
10	PLANETARIUM WORK LIGHTS 'FL'	FLUORESCENT	NON-DIM	1000
11	PLANETARIUM WORK LIGHTS SOUTH	FLUORESCENT	NON-DIM	1000
12	SPARE			
			TOTAL LOAD:	3578
			VOLTAGE:	208V-3PH
			TOTAL AMPACITY:	40 AMPS

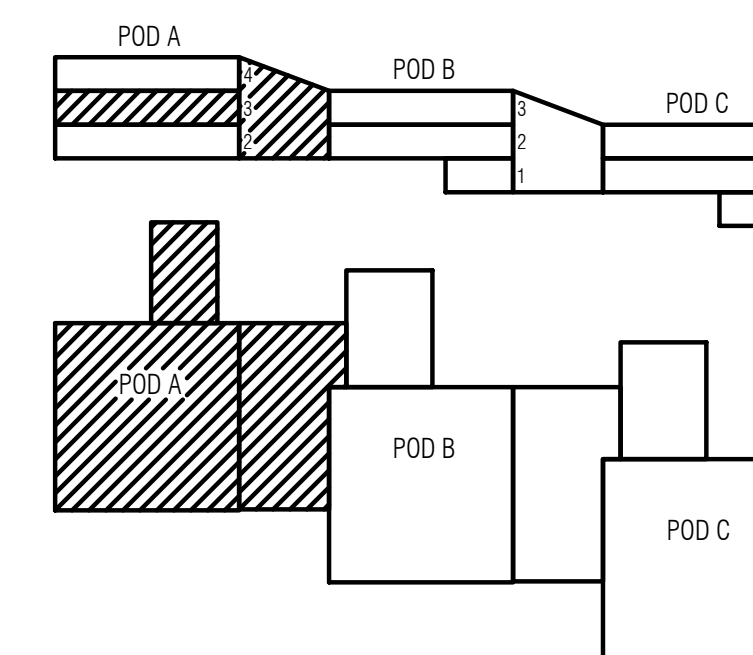
key plan



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key plan



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Sheet Title

MEZZANINE LIGHTING PLAN

Sheet No.

E2.02

Project No. 2003-200 H (2)

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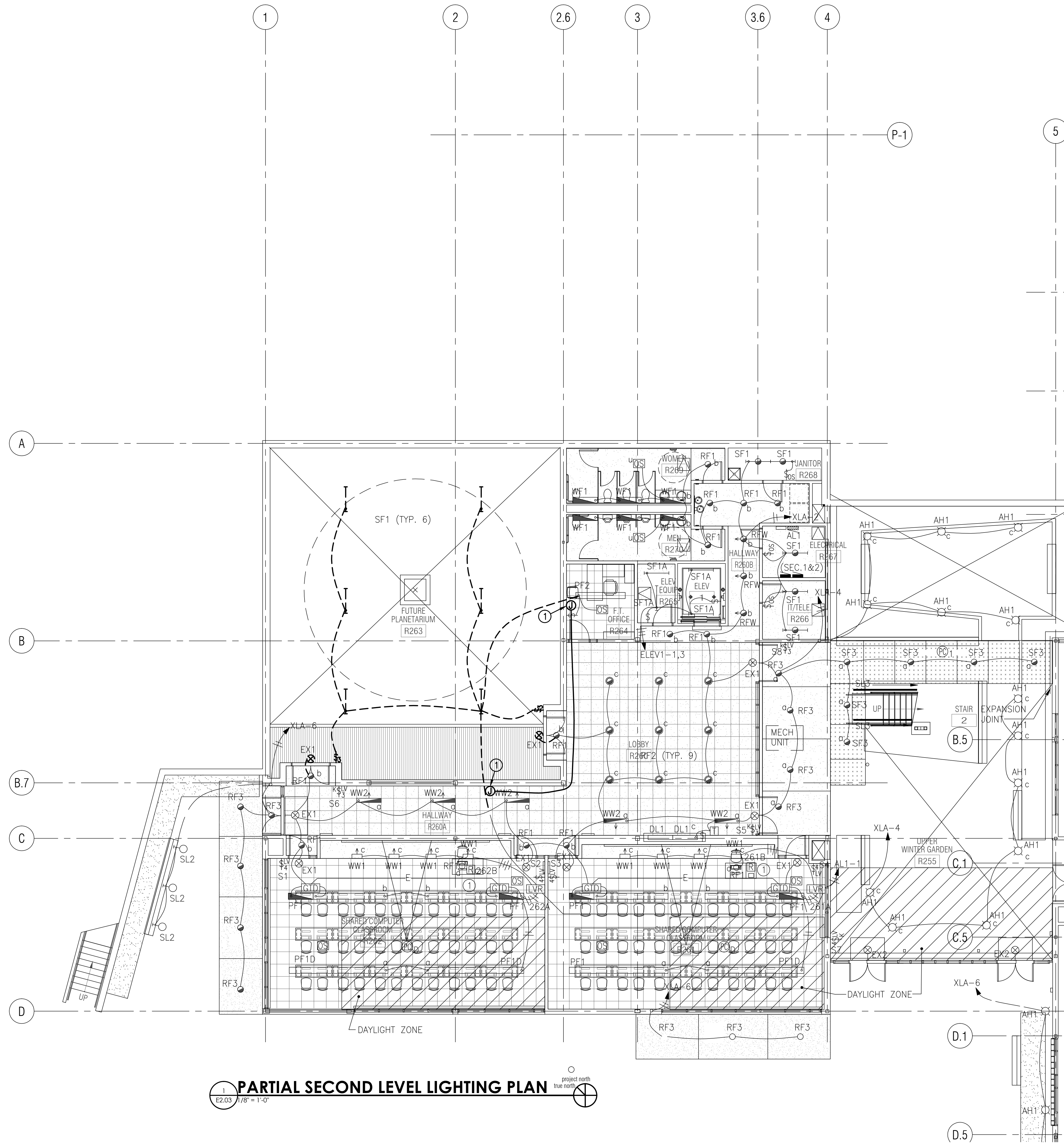
RAINIER BUILDING PLANETARIUM

FOR PIERCE COLLEGE

9401 Forwest Drive SW, Lakewood, WA, 98498-1999

510 capital way south
olympia, washington 98501

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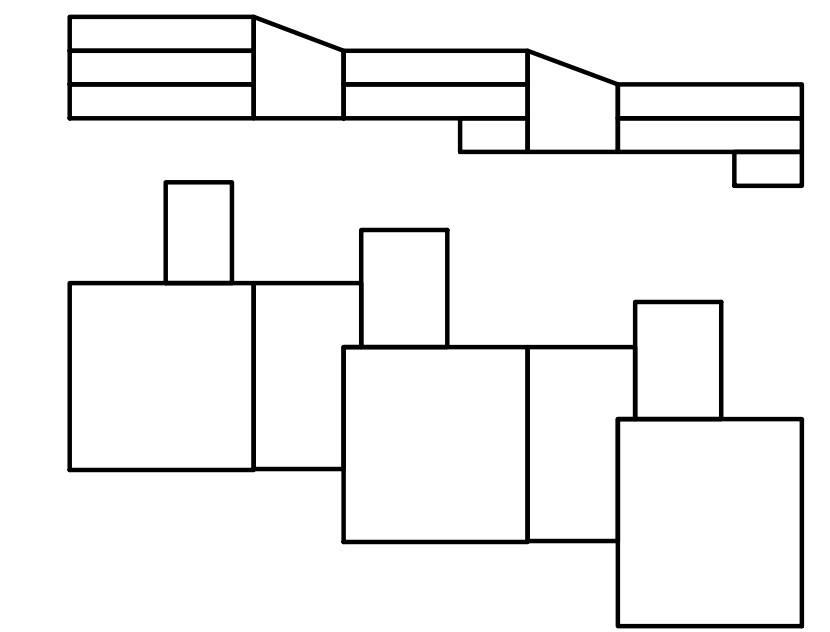


1 PARTIAL SECOND LEVEL LIGHTING PLAN
 E2.03 1/8" = 1'-0" project north true north

CONSTRUCTION NOTES

- 1 INTERCEPT EXISTING CONDUIT AND WIRING FOR LIGHTING CIRCUIT. REROUTE AROUND THE PLANETARIUM SPACE.

key plan



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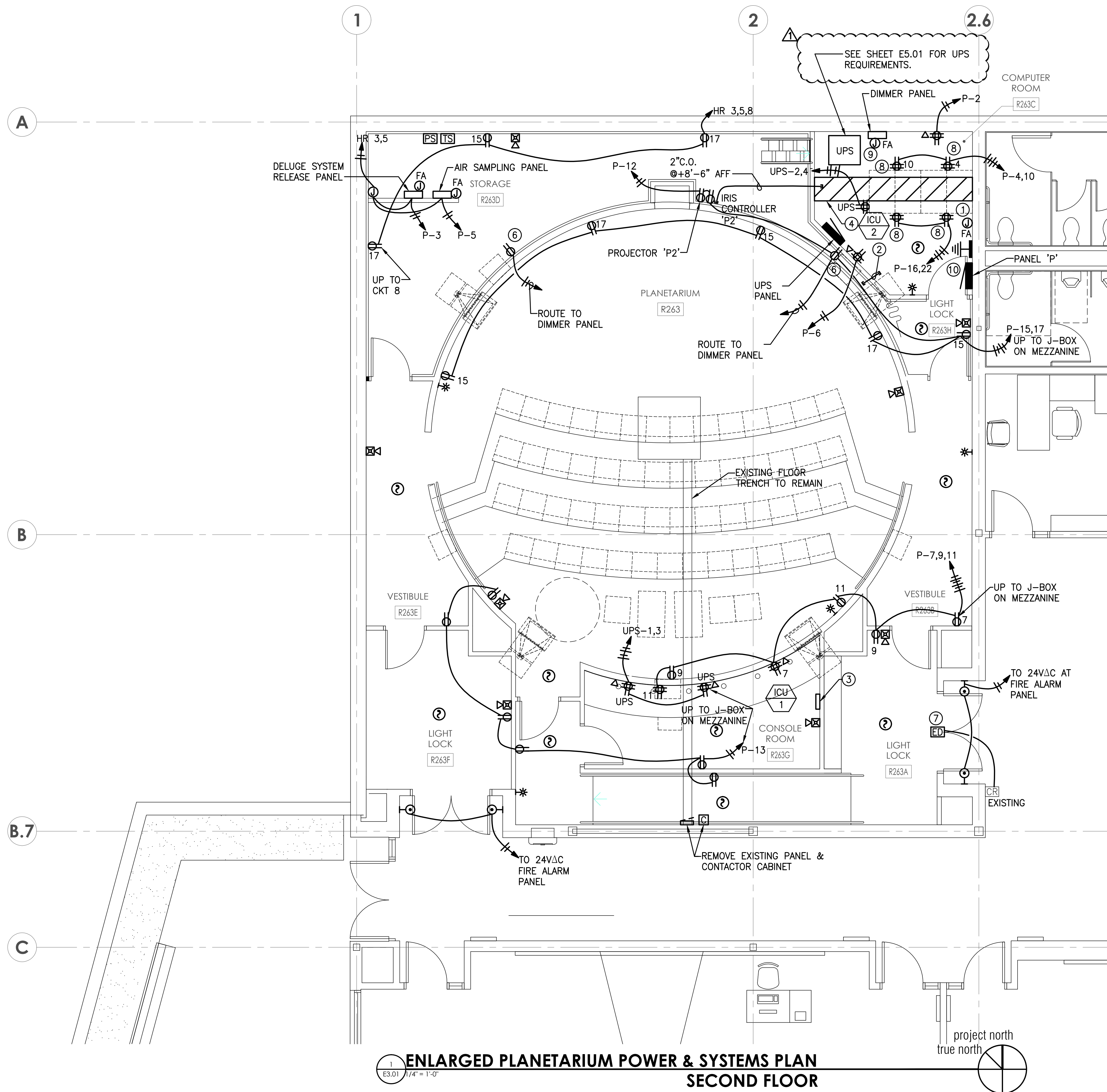
PARTIAL SECOND LEVEL LIGHTING PLAN

Sheet No.

E2.03

Project No.
 2003-200 H (2)

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ENLARGED PLANETARIUM POWER & SYSTEMS PLAN
SECOND FLOOR
 1/4" = 1'-0"

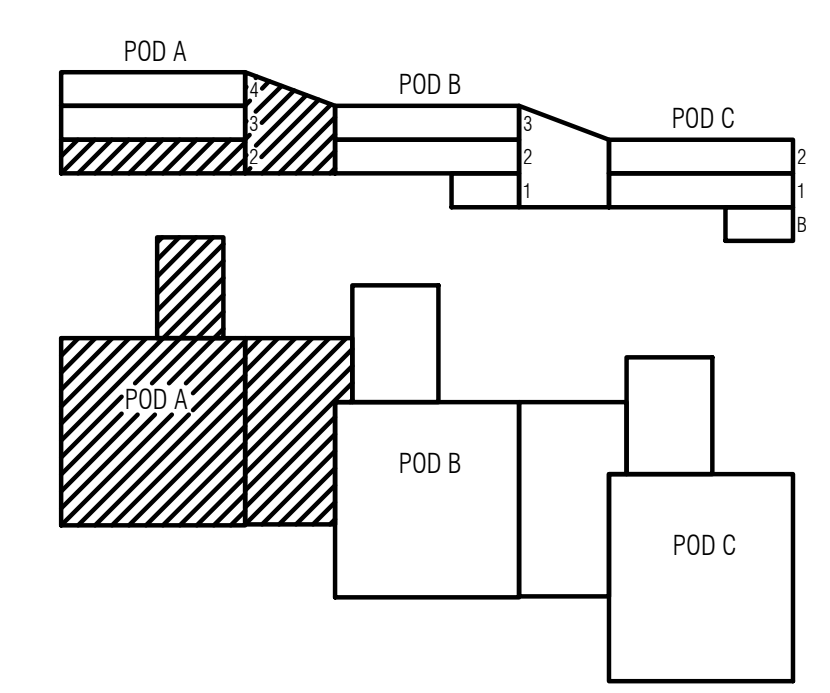
GENERAL NOTES

1. PROVIDE RECEPTACLES ON UPS POWER AS 'RED' IN COLOR.
2. PROVIDE CIRCUIT DESIGNATIONS ON ALL FACE PLATES.
3. ALL DATA CABLING TO BE ROUTED TO IT/TEL ROOM R367. SEE SHEET E3.04 FOR LOCATION OF ROOM AND AVAILABLE PATHWAYS.
4. SEE SHEET E3.04 FOR FIRE ALARM PANEL LOCATION.
5. E.C. SHALL COORDINATE ALL DEVICES, PANELS, LADDER RACK AND CONDUIT SLEEVE LOCATIONS WITH THE PLANETARIUM EQUIPMENT SUPPLIER PRIOR TO INSTALLATION OF ANY ELECTRICAL COMPONENTS. EXACT LOCATIONS MAY VARY DEPENDING ON FINAL PLANETARIUM EQUIPMENT RACK LOCATIONS AND REQUIREMENTS.

CONSTRUCTION NOTES

- 1 PROVIDE FIRE ALARM INTERFACE TO AUDIO RACK FOR FIRE ALARM OVERRIDE OF SOUND SYSTEM UPON ACTIVATION.
- 2 PROVIDE 2"C.O. @ 8'-6" AFF.
- 3 PROVIDE WIREMOLD AL4000 SERIES SURFACE RACEWAY FROM CEILING TO FLOOR FOR ROUTING OF LOW VOLTAGE CABLING. PAINT BLACK.
- 4 PROVIDE 24" WIDE LADDER TYPE CABLE RUNWAYS ACROSS TOP OF RACKS.
- 5 UNDER RAISED FLOOR-SMOKE SAMPLING SYSTEM.
- 6 PROVIDE TWIST-LOCK RECEPTACLE FOR WORK LIGHTS.
- 7 PROVIDE CONNECTIONS TO NEW ELECTRIFIED DOOR HARDWARE DEVICES.
- 8 DEDICATED RECEPTACLES FOR AUDIO RACK. ALL SHALL BE ON THE SAME PHASE.
- 9 PROVIDE FIRE ALARM INTERFACE TO DIMMER RACK FOR FIRE ALARM OVERRIDE.
- 10 PROVIDE GROUNDING BUSBAR WITH STANDOFFS (CHATSWORTH 40153-012). PROVIDE (1)#2 GR. TO BUILDING GROUNDING ELECTRODE SYSTEM. PROVIDE (1)#6 GR. TO THE CABLE TRAY AND EACH RACK.

key plan



AS-BUILT 01/28/2013

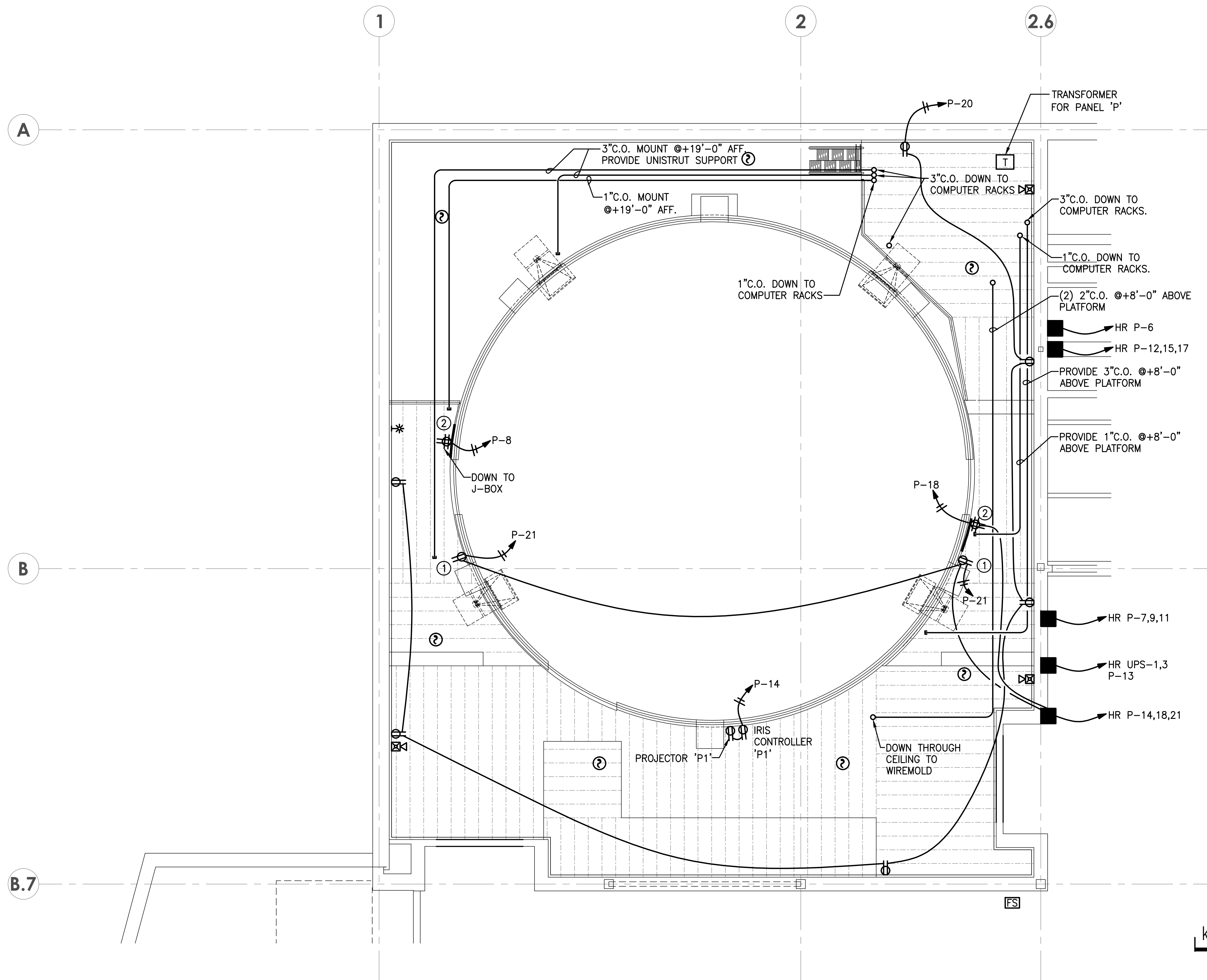
Revisions	Closing Date
ADDENDUM NO. 1	

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Sheet Title
ENLARGED PLANETARIUM POWER & SYSTEMS PLAN

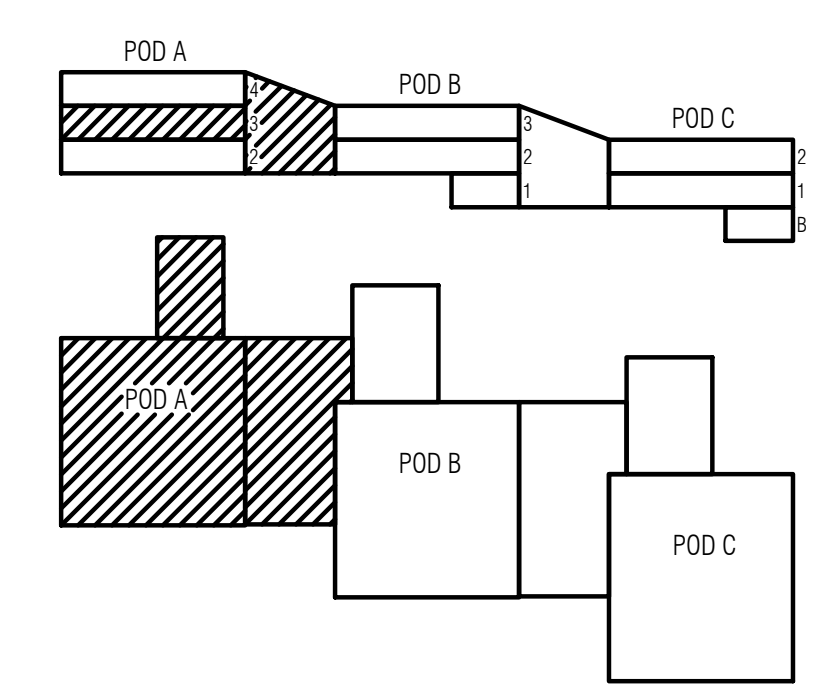
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E3.01
 Project No.
 2003-200 H (2)

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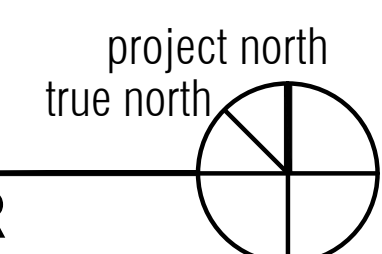


- GENERAL NOTES**
1. PROVIDE CIRCUIT DESIGNATIONS ON ALL FACE PLATES.
 2. ALL DATA CABLING TO BE ROUTED TO IT/TEL ROOM R367. SEE SHEET E3.04 FOR LOCATION OF ROOM AND AVAILABLE PATHWAYS.
 3. SEE SHEET E3.04 FOR FIRE ALARM PANEL LOCATION.
- CONSTRUCTION NOTES**
- ① PROVIDE TWIST-LOCK RECEPTACLE FOR WORK LIGHT.
 - ② PROVIDE 3'X2'X3/4" FIRE RETARDANT PLYWOOD WITH 2GANG BACK BOX AND (2) NEMA 5-20R RECEPTACLE FOR LED LIGHTING POWER SUPPLIES.

key plan



1 MEZZANINE POWER AND SYSTEMS PLAN THIRD FLOOR
E3.02 1/4" = 1'-0"



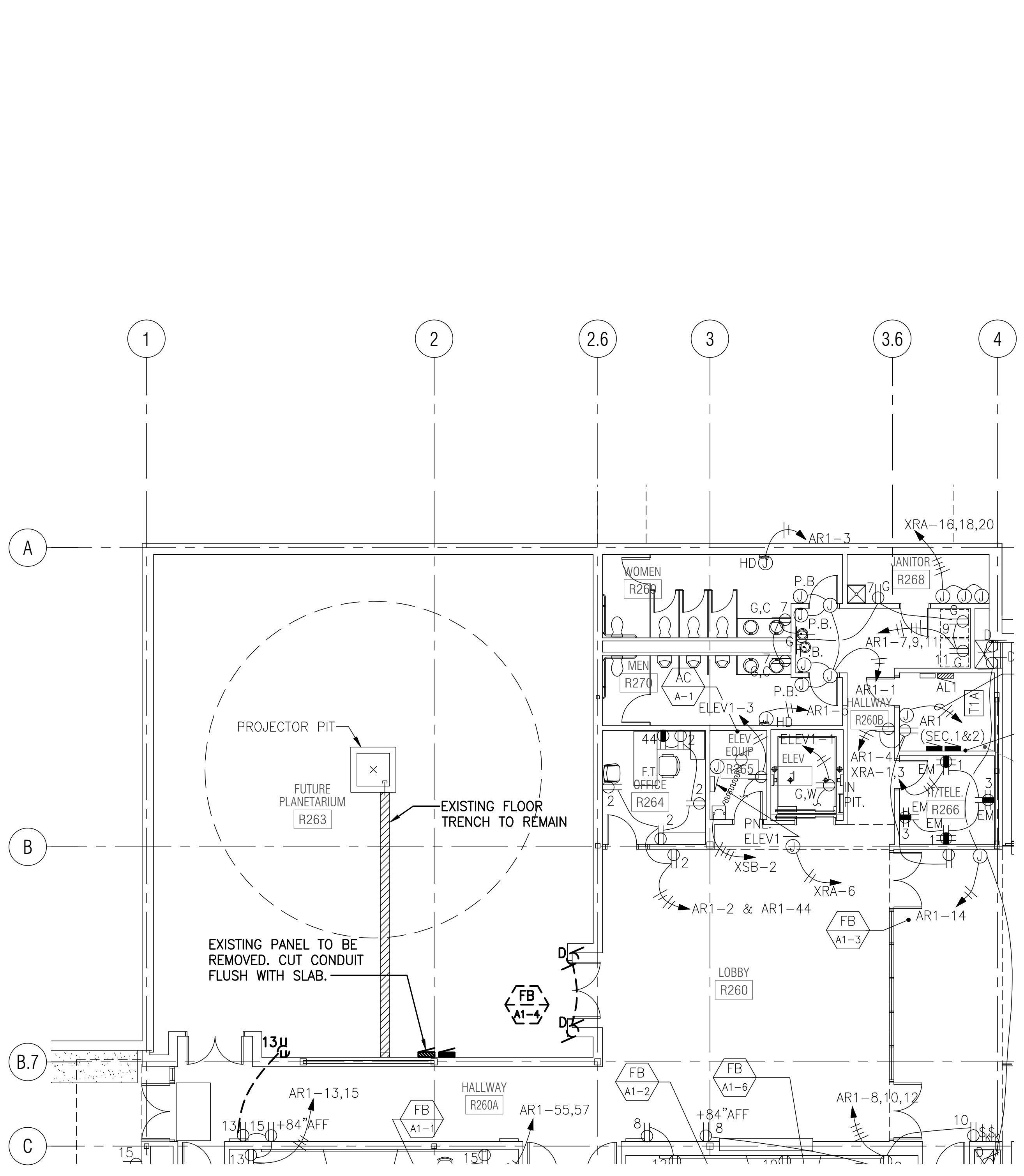
AS-BUILT	01/28/2013
Revisions	Closing Date

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MEZZANINE POWER AND SYSTEMS PLAN

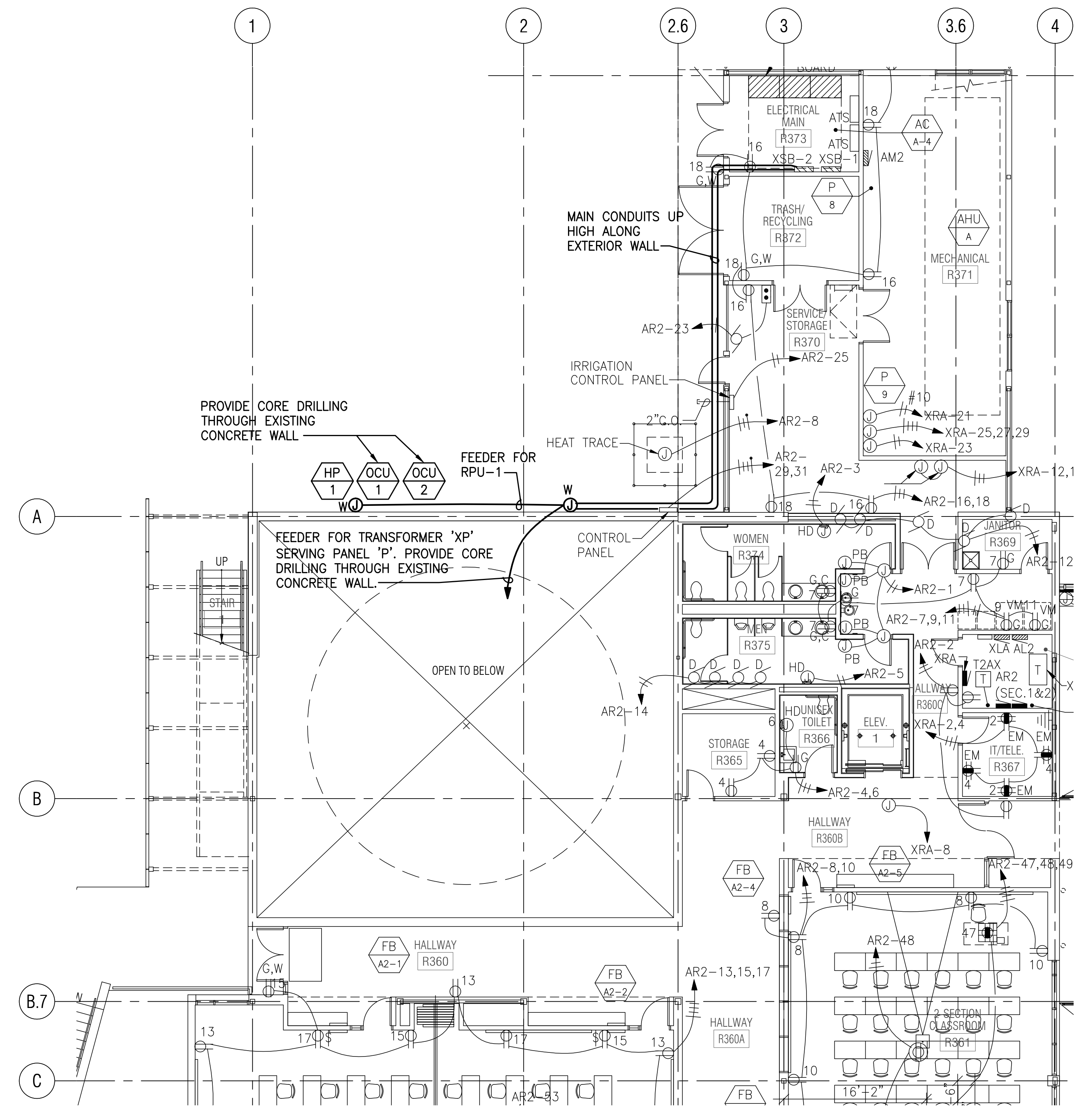
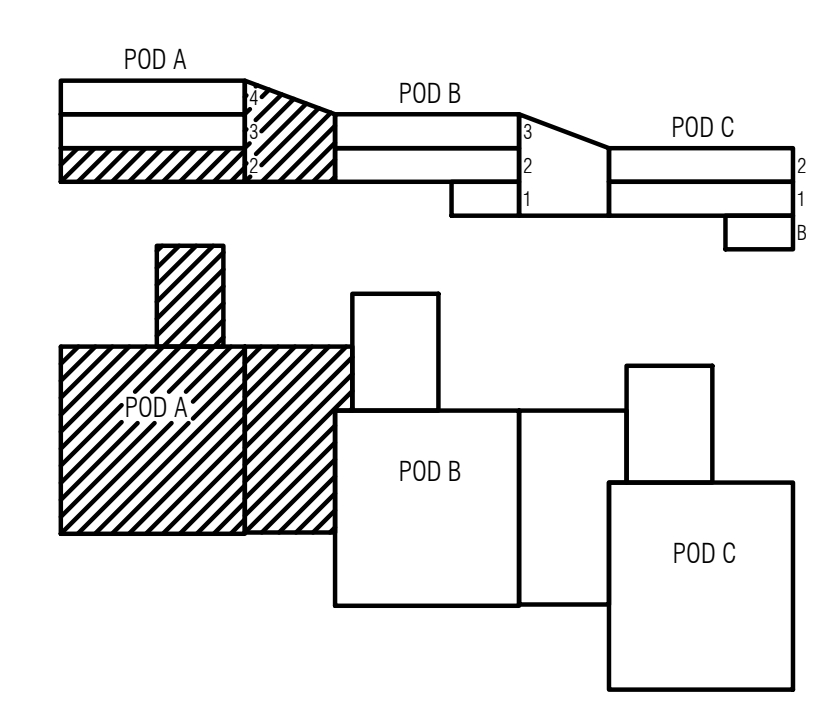
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E3.02

Project No.
2003-200 H (2)



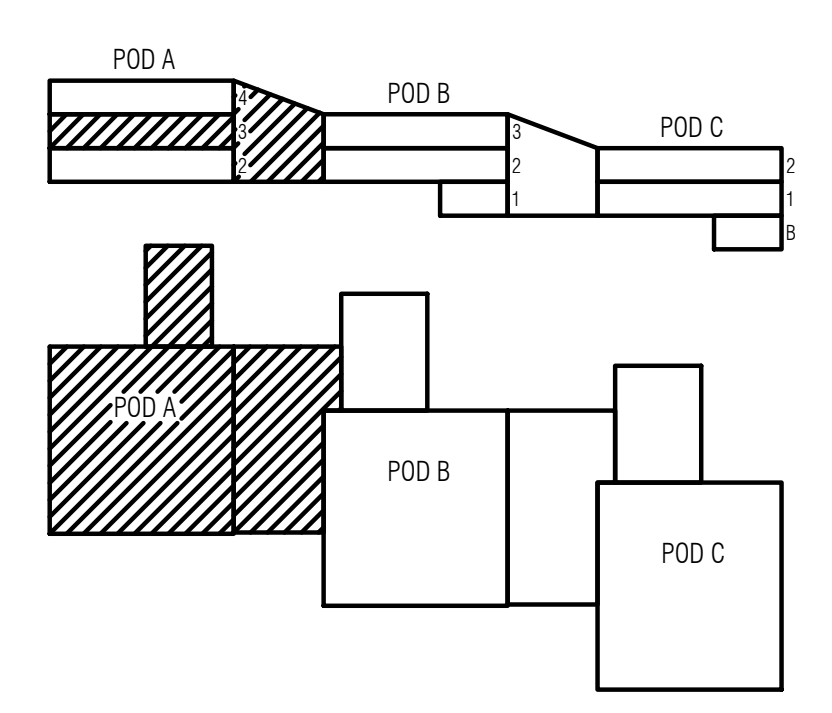
1 PARTIAL SECOND LEVEL EXISTING POWER PLAN
E3.03 1/8" = 1'-0"

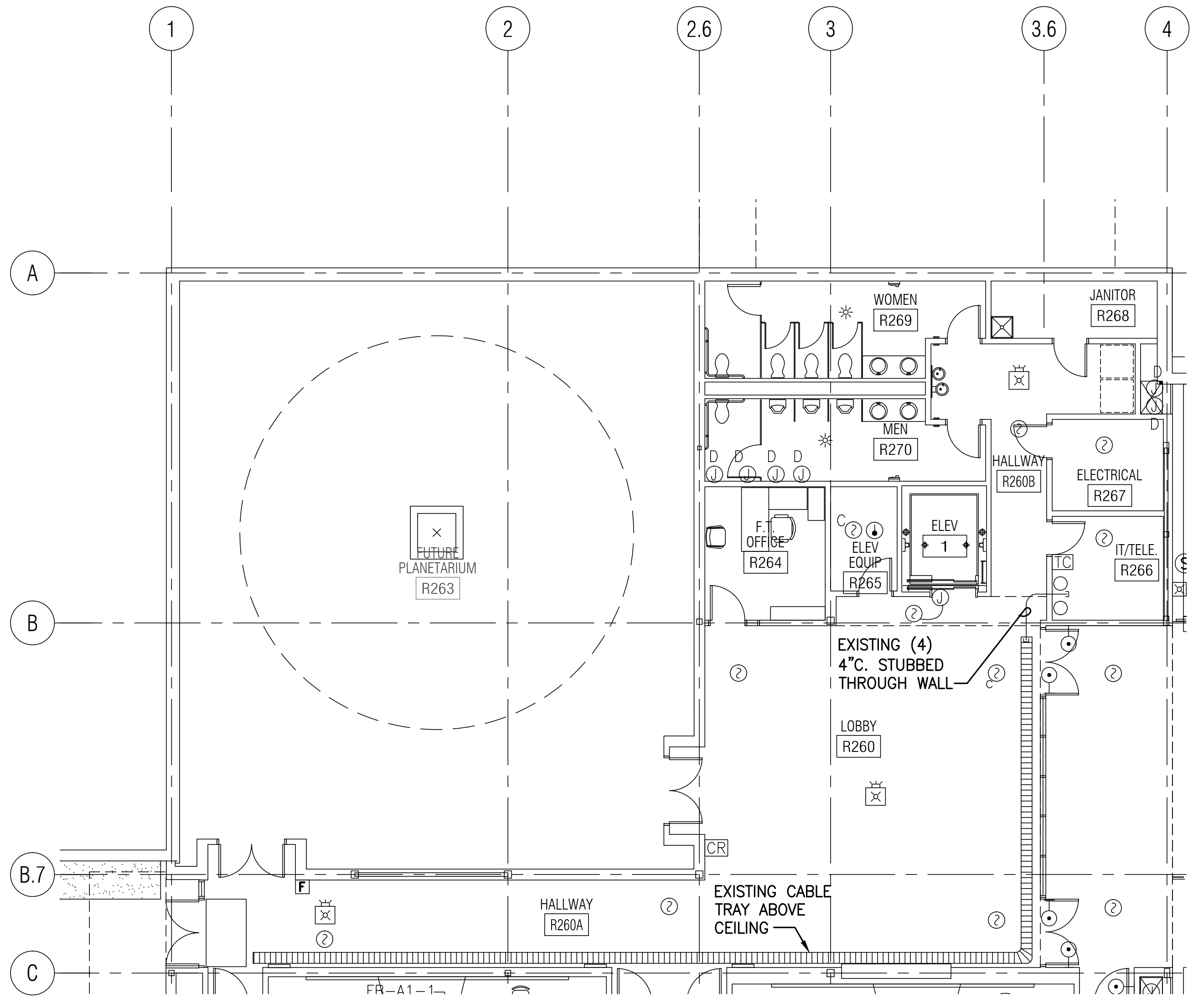
key plan



2 PARTIAL THIRD LEVEL EXISTING POWER PLAN
E3.03 1/8" = 1'-0"

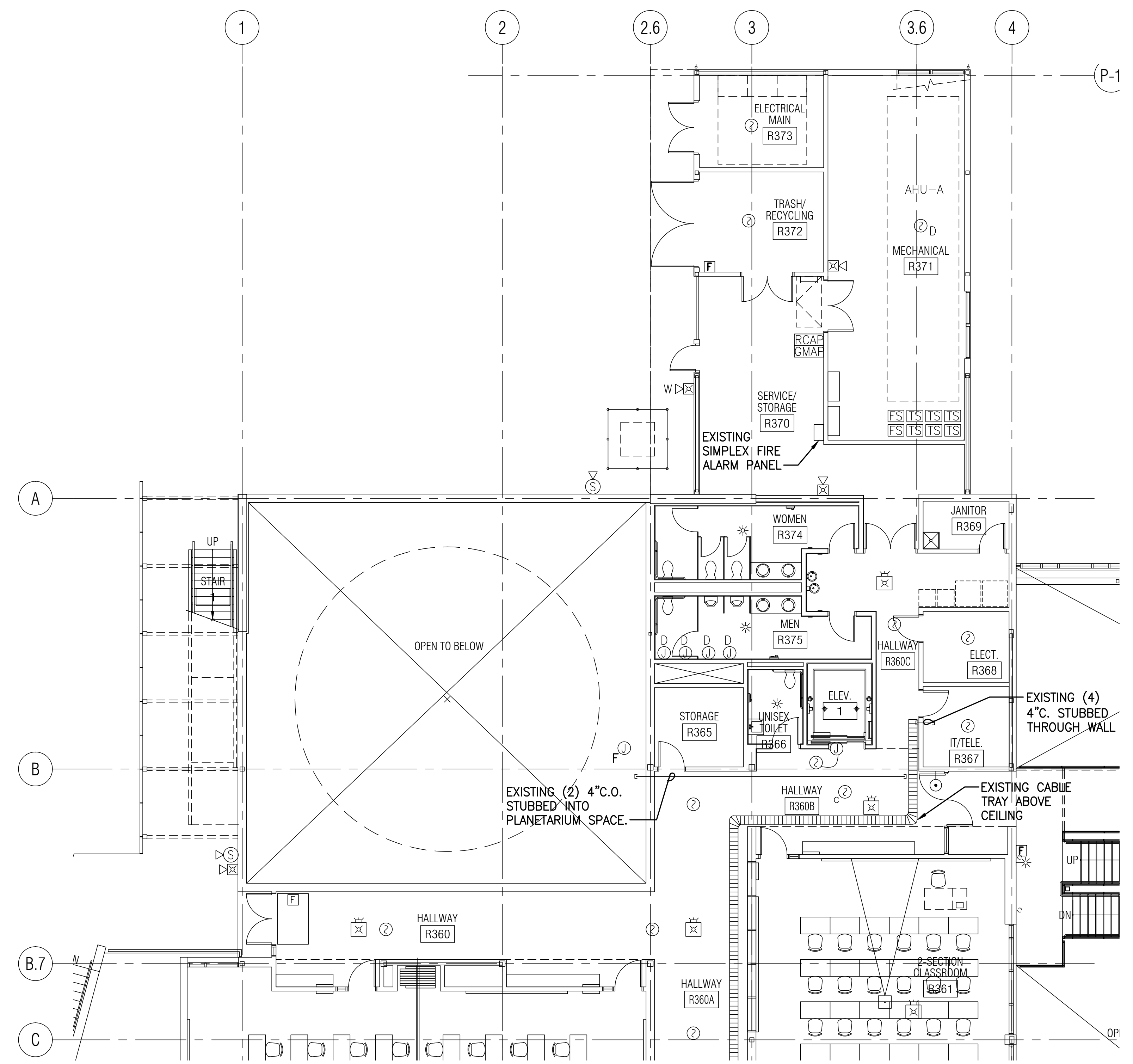
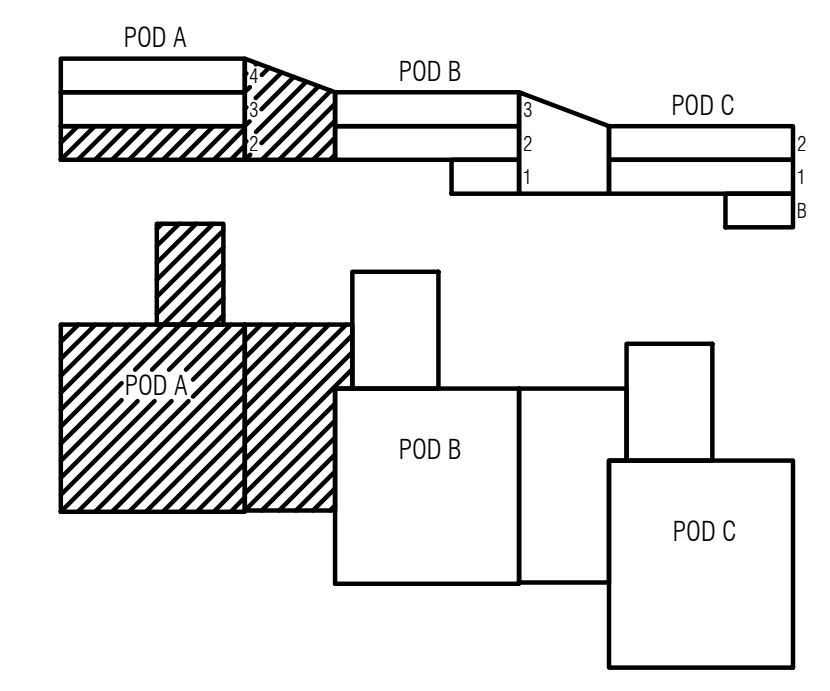
key plan





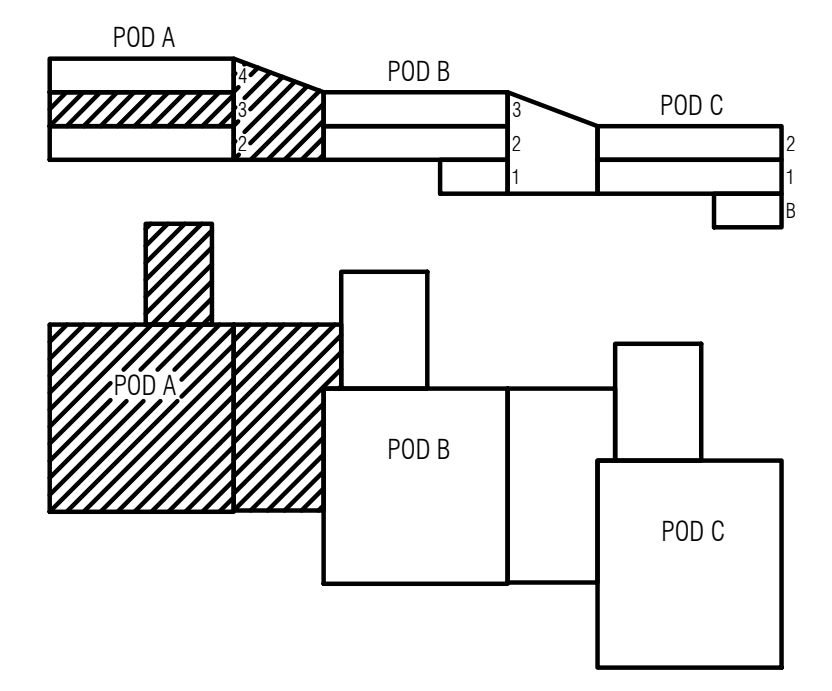
1 PARTIAL SECOND LEVEL EXISTING SYSTEMS PLAN project north true north
E3.03 1/8" = 1'-0"

key plan

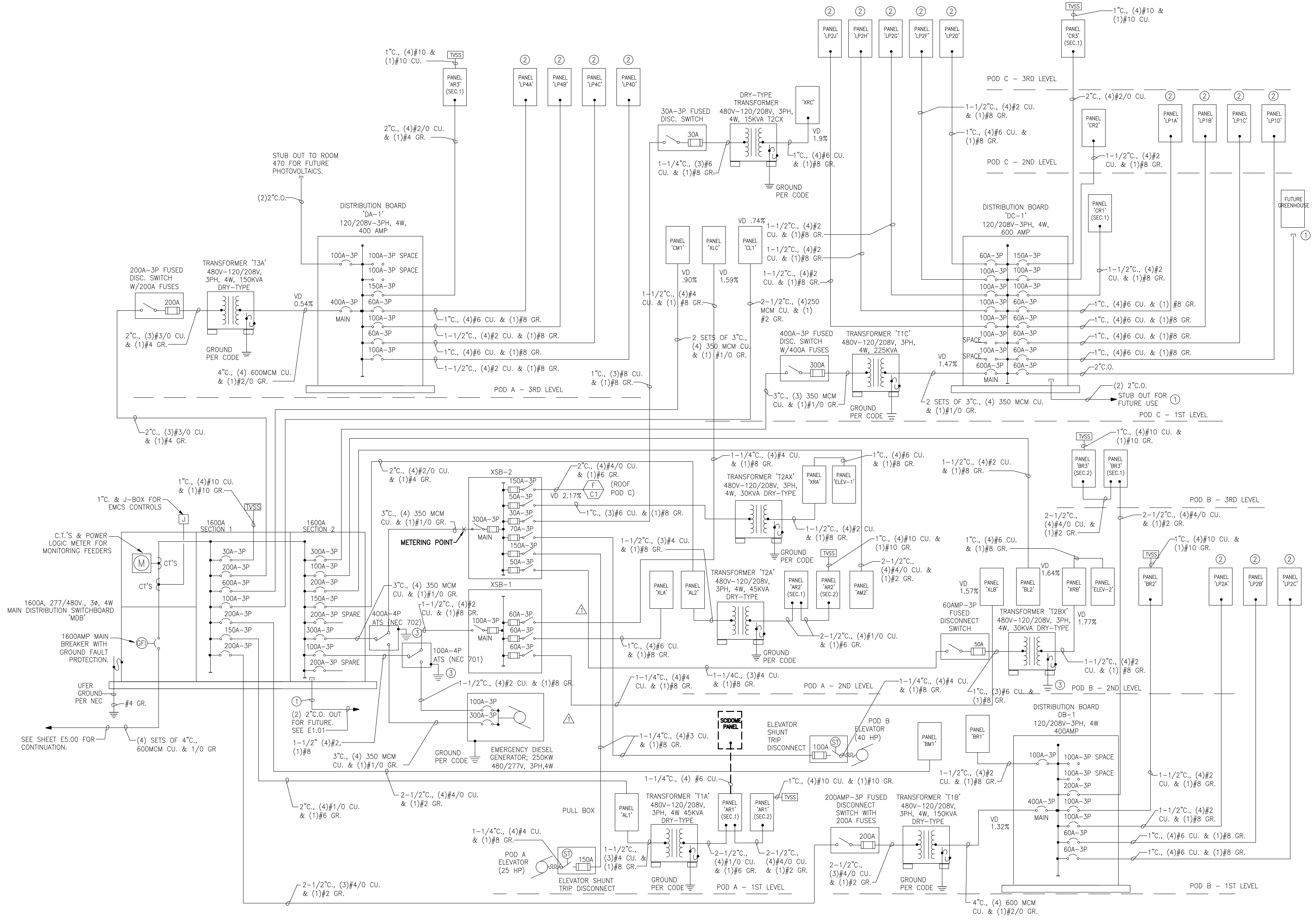


2 PARTIAL THIRD LEVEL EXISTING SYSTEMS PLAN project north true north
E3.03 1/8" = 1'-0"

key plan



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1600A, 277/480V, 3Ø, 4W MAIN DISTRIBUTION SWITCHBOARD "MDB"
 1600AMP MAIN BREAKER WITH GROUND FAULT PROTECTION.
 UFER GROUND PER NEC #4 GR.

SEE SHEET E5.00 FOR CONTINUATION.
 (4) SETS OF 4", 600MCM CU. & 1/0 GR

EXISTING PARTIAL POWER ONE LINE DIAGRAM
 NO SCALE

GENERAL NOTES
 1. FEEDERS ARE OVERSIZED TO ACCOMMODATE VOLTAGE DROP.

CONSTRUCTION NOTES
 ① PROVIDE A FLUSH-INGRADE CONCRETE MARKER.
 ② REFER TO 'LE' SERIES SHEETS FOR PANEL SCHEDULES.
 ③ GROUND PER CODE.

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Sheet Title

EXISTING ONE-LINE DIAGRAM

Sheet No. **E5.00**

Project No. 2003-200 H (2)

FOR PIERCE COLLEGE
 9401 Farwest Drive SW, Lakewood, WA, 98498-1999

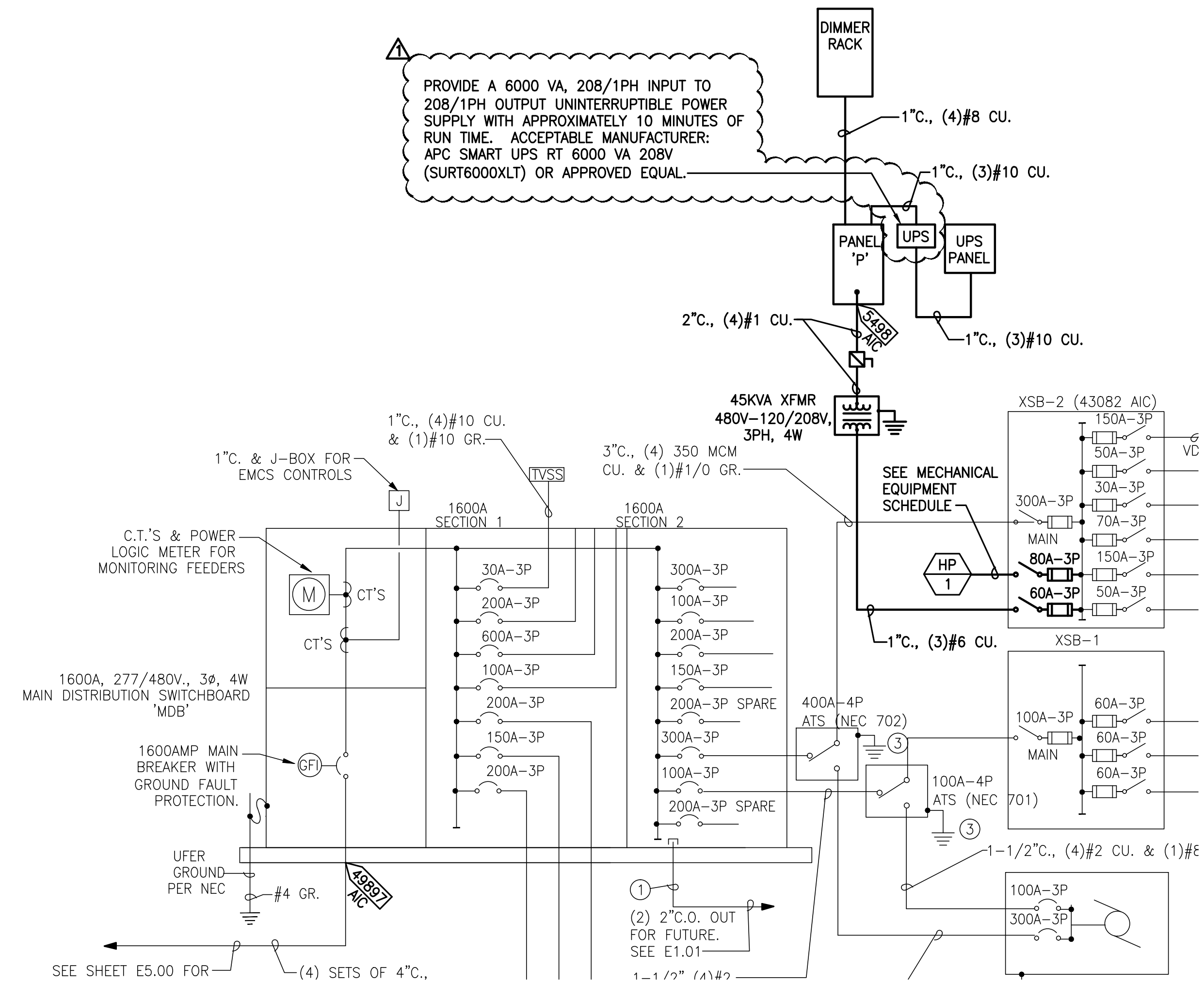
msgS architects
 www.msgsarch.com
 P 360 948 6774 F 360 352 7005
 510 capital way south
 olympia, washington 98501

RAINIER BUILDING PLANETARIUM

XSB-2 EXISTING EMERGENCY NON-LIFE SAFETY LOADS		3 PHASE 4 WIRE 277/480 VOLTS			400A MAIN WITH 43082 AIC RATING			300A-3P BREAKER		
TOTAL LOAD	CIRCUIT DIRECTORY	SURFACE MOUNT			CIRCUIT DIRECTORY			TOTAL LOAD		
		CIR. NO.	BRKR. P	AMP	A	B	C			
56750	ELEVATOR 1	1	3		44917	44917		2	F-C1 (SCIENCE ROOM FAN ON ROOF)	78000
				150	20443	44917				
34083	ELEVATOR 2	3			21259	18643		4	XFMR T2BX (PANEL XRB,ELEV2)	26262
				70	14500					
29073	XFMR T2AX (PANEL XRA, ELEV1)	5			13280			6	XFMR T2CX (PANEL XRC)	10872
				50		12164				
59167	RPU-1	7			27629			8	XFMR TP (PANEL P)	28420
				80		27667				
179073					107489	106557	103391			143554
TOTAL CONNECTED LOAD: 322,627 VA		VA		388 AMPS		390 AMPS				
TOTAL DEMAND LOAD: 324,477 VA		VA		388 AMPS		390 AMPS				

PANEL UPS NEW		1 PHASE 3 WIRE 120/240 VOLTS			30A/2P MAIN BREAKER					
LOAD	CIRCUIT DIRECTORY	SURFACE MOUNT			CIRCUIT DIRECTORY			LOAD		
		CIR. NO.	BRKR. P	AMP	A	B	C			
360	CONSOLE R2G3G	1	1	20	1460			2	DIGISTAR RACK	1100
360	CONSOLE R2G3G	3	1	20		1460		4	DIGISTAR RACK	1100
	SPARE	5	1	20				6	SPARE	
	SPACE	7						8	SPACE	
	SPACE	9						10	SPACE	
720					1460	1460				2200
TOTAL CONNECTED LOAD: 2,920 VA		VA		12.2 AMPS		12.2 AMPS				
TOTAL DEMAND LOAD: 2,920 VA		VA		12.2 AMPS		12.2 AMPS				

PANEL P		3 PHASE 4 WIRE 120/208 VOLTS			22,000 AIC			125A MAIN		
LOAD	CIRCUIT DIRECTORY	SURFACE MOUNT			CIRCUIT DIRECTORY			TOTAL LOAD		
		CIR. NO.	BRKR. P	AMP	A	B	C			
	SPARE	1	1	20	360			2	RECEPT - R263C	
1000	VESDA PANEL	3	1	20		1360		4	AUDIO CONSOLE	
1000	VESDA PANEL	5	1	20			1360	6	RECEPT - R263C	
540	RECEPT R263B, R263G	7	1	20	1040			8	LED POWER SUPPLY	
360	RECEPT R263B, R263G	9	1	20		720		10	AUDIO CONSOLE	
540	RECEPT R263B, R263G	11	1	20			2040	12	PROJECTOR P-2	
1080	RECEPT R263G, R263F	13	1	20	2580			14	PROJECTOR P-1	
720	RECEPT R263, R263D	15	1	20		1080		16	AUDIO CONSOLE	
720	RECEPT R263, R263D	17	1	20			1220	18	LED POWER SUPPLY	
1000	RECEPT - WORK LIGHT	19	1	20	2080			20	RECEPT - MEZZANINE	
1000	RECEPT - WORK LIGHT	21	1	20		1360		22	AUDIO CONSOLE	
65	EGRESS LIGHTS	23	1	20			65	24	SPARE	
348	LIGHTS - R263C, R263G	25	1	20	348			26	SPARE	
300	TRACK LIGHTS R263G	27	1	20		1760		28	UPS PANEL	
	SPARE	29	1	20			1460	30		
	SPARE	31	1	20				32	SPACE	
	SPARE	33	1	20				34	SPACE	
1402	OCU-1/1CU-1	35	2				701	36	SPACE	
1402		37			1099			38		
1402	OCU-2/1CU-2	39	2			1099		40	DIMMER RACK	
1402		41				1099		42		
14281					7507	7379	7945			
TOTAL CONNECTED LOAD: 28,020 VA		VA		78 AMPS		82 AMPS				
TOTAL DEMAND LOAD: 29,444 VA		VA		78 AMPS		82 AMPS				



1 EXISTING PARTIAL POWER ONE LINE DIAGRAM
E5.01 NO SCALE

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INDOOR UNIT SPLIT SYSTEM SCHEDULE											
UNIT NO	MFR.	MODEL	LOCATION	AREA SERVED	CFM	WEIGHT (lbs)	ELECTRICAL		STARTER FURN. BY	DISCONNECT FURN. BY	REMARKS
							MCA	MOP			
ICU-1	MITSUBISHI	PLA-A18BA	CONSOLE ROOM	CONSOLE ROOM	420	55	②	②	MFR	EC	①③④⑤
ICU-2	MITSUBISHI	PKA-A12HA	COMPUTER ROOM	COMPUTER ROOM	370	29	②	②	MFR	EC	①④

NOTES FOR INDOOR UNIT SPLIT SYSTEM SCHEDULE.

- ① PROVIDE UNIT WITH A SINGLE POINT POWER CONNECTION. PROVIDE ALL POWER TRANSFORMERS AS NECESSARY.
- ② POWER THROUGH THE OUTDOOR UNIT.
- ③ PROVIDE WITH CONDENSATE PUMP.
- ④ PROVIDE WITH MANUFACTURER'S STAND ALONE ROOM THERMOSTAT. PROVIDE BLACK OR PAINTED BLACK GUARD COVER.
- ⑤ PROVIDE BLACK DIFFUSER OR PAINT DIFFUSER BLACK.

OUTDOOR UNIT SPLIT SYSTEM SCHEDULE																
UNIT NO	MFR.	MODEL	LOCATION	EER (SEER)	COOLING		HEATING		WEIGHT (LBS)	ELECTRICAL			STARTER FURN. BY	DISCONNECT FURN. BY	REMARKS	
					TOTAL MBH	SEER	MBH	COP (HSPF)		MCA	MOP	VOLTS				Ø
OCU-1	MITSUBISHI	PUZ-A18	OUTSIDE	9.05	18.0	14.2	19.0	(9.8)	100	13	15	208	1	MFR	EC	①
OCU-2	MITSUBISHI	PUY-A12	OUTSIDE	(10.0)	12.0	15.2	-	-	90	13	15	208	1	MFR	EC	①

NOTES FOR OUTDOOR UNIT SPLIT SYSTEM SCHEDULE.

- ① PROVIDE SINGLE POINT POWER CONNECTION. PROVIDE POWER TRANSFORMERS AS NECESSARY.

MECHANICAL LEGEND			
HVAC			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT UP		FLEXIBLE DUCT
	SUPPLY DUCT DOWN		VOLUME DAMPER (VD)
	RETURN, RELIEF, TRANSFER, OSA DUCT UP		MOTORIZED DAMPER
	RETURN, RELIEF, TRANSFER, OSA DUCT DOWN		FLEXIBLE CONNECTION (DUCT)
	EXHAUST DUCT UP		TURNING VANES (TV)
	EXHAUST DUCT DOWN		BACKDRAFT DAMPER (BD)
	RECTANGULAR DUCT SQUARE ELBOW UP	①	THERMOSTAT (T'STAT)
	RECTANGULAR DUCT, RADIUS ELBOW UP		CARBON DIOXIDE SENSOR
	RECTANGULAR DUCT, SQUARE ELBOW DOWN	XØ	ROUND DUCT
	RECTANGULAR DUCT, RADIUS ELBOW DOWN	X/X	SQUARE DUCT
	ROUND DUCT ELBOW UP	$\frac{12 \times 12 \text{ CD}}{300 \text{ CFM}}$	AIR TERMINAL SIZE, TYPE & CFM
	ROUND DUCT ELBOW DOWN		CEILING AIR TERMINAL - SQUARE
PLUMBING/HYDRONIC			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONDENSATE PIPING	MC	MECHANICAL CONTRACTOR
	REFRIGERANT SUCTION/LIQUID	EC	ELECTRICAL CONTRACTOR
	PIPE DOWN	GC	GENERAL CONTRACTOR
	PIPE UP	POC	POINT OF CONNECTION
	TEE	BFF	BELOW FINISHED FLOOR
	ELBOWS, 90° & 45°	AFF	ABOVE FINISHED FLOOR
	CROSSING LINES, NON CONNECTING		
	PIPE CONTINUATION		

HEAT PUMP PACKAGED UNIT SCHEDULE																													
UNIT NO	MFR.	MODEL	LOCATION	AREA SERVED	EER (SEER)	COOLING CAPACITY					HEATING			BLOWER					WEIGHT (lbs)	ELECTRICAL			STARTER FURN. BY	DISCONNECT FURN. BY	DUCT SMOKE DETECTOR FURN. BY	REMARKS			
						EWB	EAT	TOTAL MBH	SENS. @ 80°F	ECONOMIZER	TOTAL MBH	EAT	COP (HSPF)	AUX. KW	CFM	MIN. OSA	EX. (IN. WC)	S.P. RPM		FAN HP	EXHAUST MOTOR HP	MCA					MOP	VOLTS	Ø
HP-1	AAON	RN016	OUTSIDE	PLANETARIUM	9.9	67	80	175	119	100%	80	49	2.83	40	4000	600	1.0	1170	3	2	2770	71	80	480	3	MFR	EC	⑤	①②③④⑥

NOTES FOR ROOFTOP PACKAGED UNIT SCHEDULE

- ① PROVIDE WITH SINGLE POINT ELECTRICAL CONNECTION KIT.
- ② PROVIDE DIRECT DRIVE PLENUM FAN
- ③ PROVIDE A POWERED EXHAUST KIT WITH CIRCUIT PRE-WIRED AT FACTORY.
- ④ PROVIDE WITH DUAL COMPRESSOR, ONE SHALL BE DIGITAL SCROLL COMPRESSOR.
- ⑤ UNIT SHUT DOWN TO BE INCORPORATED INTO THE ROOM SMOKE DETECTION SYSTEM. (SEE FIRE PROTECTION SHEETS.)
- ⑥ PROVIDE, INSTALL, AND PROGRAM VCMX CONTROLLER WITH PT LINK CARD. CONTROLLER SHALL HAVE A USER INTERFACE AT THE UNIT. CONTROLLER SHALL HAVE ECONOMIZER CAPABILITIES. PROVIDE A CO2 SENSOR IN RETURN DUCT TO MODULATE OUTSIDE AIR TO A MINIMUM VALUE NO LESS THAN 10% OF THE SCHEDULED MINIMUM. MINIMUM OSA LISTED SHALL BE THE SETTING IF CO2 FAILS.

03/23/12

BID SET 01/03/2012

Revisions Closing Date
AS BUILTS 08/07/2012

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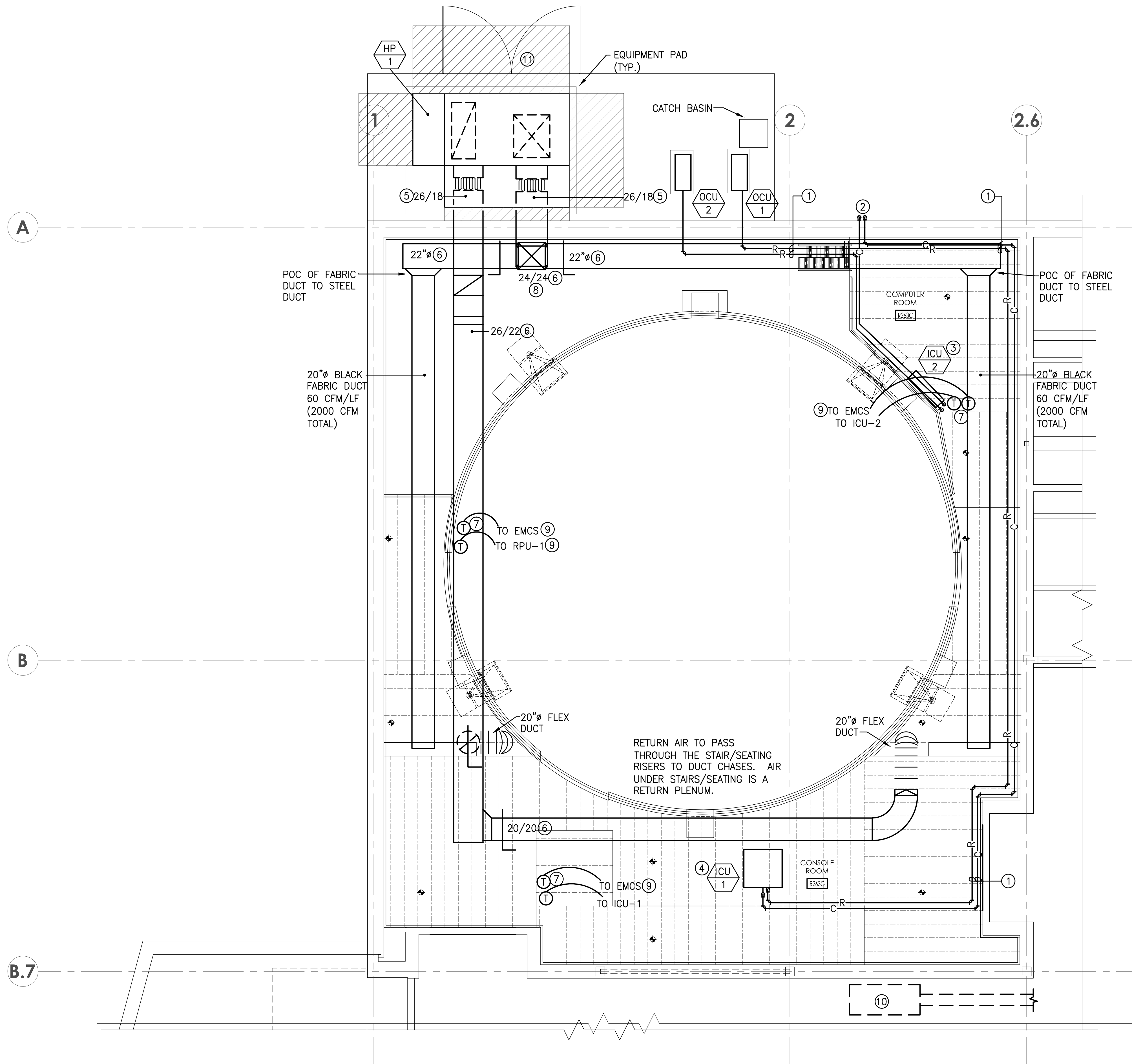
Sheet Title

MECHANICAL LEGEND AND SCHEDULES

Sheet No.

M1.01

Project No.
2003-200 H (2)



GENERAL NOTES

1. REFRIGERANT PIPE SHOWN REPRESENTS BOTH LIQUID AND SUCTION PIPING.
2. EVERYTHING OUTSIDE OF THE SCIENCE DOME SHALL BE A FLAT BLACK MATERIAL OR PAINTED FLAT BLACK.
3. ALL STEEL DUCT SHALL BE A MINIMUM 22 GAUGE.
4. OWNER IS SELF PERFORMING AIR SYSTEM TESTING & BALANCING. THIS CONTRACTOR TO PROVIDE LABOR TO START UP AND RUN EQUIPMENT DURING TESTING. ALSO, THIS CONTRACTOR TO MAKE CHANGES TO DAMPERS AND FAN DRIVE SYSTEM; AND REPAIR ANY DUCT LEAKS AT NO COST TO THE OWNER.

CONSTRUCTION NOTES

- ① PIPE OFFSET FOR CLARITY. PIPE STACKED ALONG WALL.
- ② TERMINATE CONDENSATE 6" ABOVE GRADE WITH COPPER ELBOW.
- ③ WALL UNIT LOCATED WITH COMPUTER ROOM
- ④ CEILING UNIT LOCATED IN CEILING OF CONSOLE ROOM. UNIT WILL PENETRATE MEZZANINE FLOOR.
- ⑤ PROVIDE 1" LINER.
- ⑥ PROVIDE 2" LINER.
- ⑦ THERMOSTATS LOCATED IN ROOM.
- ⑧ TRANSITION FROM 26/18 TO 24/24 IN VERTICAL RISE AS SOON AS POSSIBLE.
- ⑨ THERMOSTATS SHALL BE FLAT PLATE PAINTED BLACK.
- ⑩ REMOVE VAV FAN TERMINAL AND ALL ASSOCIATED DUCT AND PIPING. CAP PRIMARY DUCT AND PIPING AT WALL OF THIS SPACE. SALVAGE VAV FAN TERMINAL AND CONTROL VALVE DEVICES TO OWNER. EMCS CONTROLLER MAY REMAIN FOR CONNECTION OF NEW CONTROLS.
- ⑪ COORDINATE LOCATION OF FENCE DOOR WITH ACCESS AREA OF UNIT.

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Sheet Title

MEZZANINE HVAC PLAN

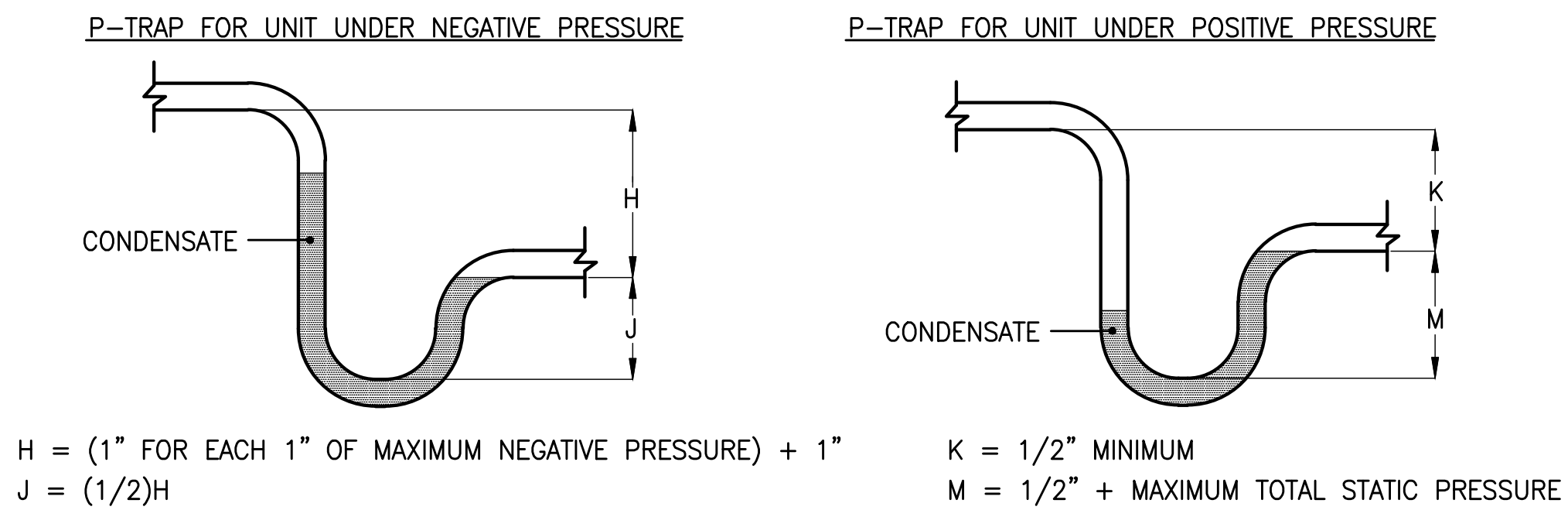
Sheet No.

M2.02

Project No.
2003-200 H (2)

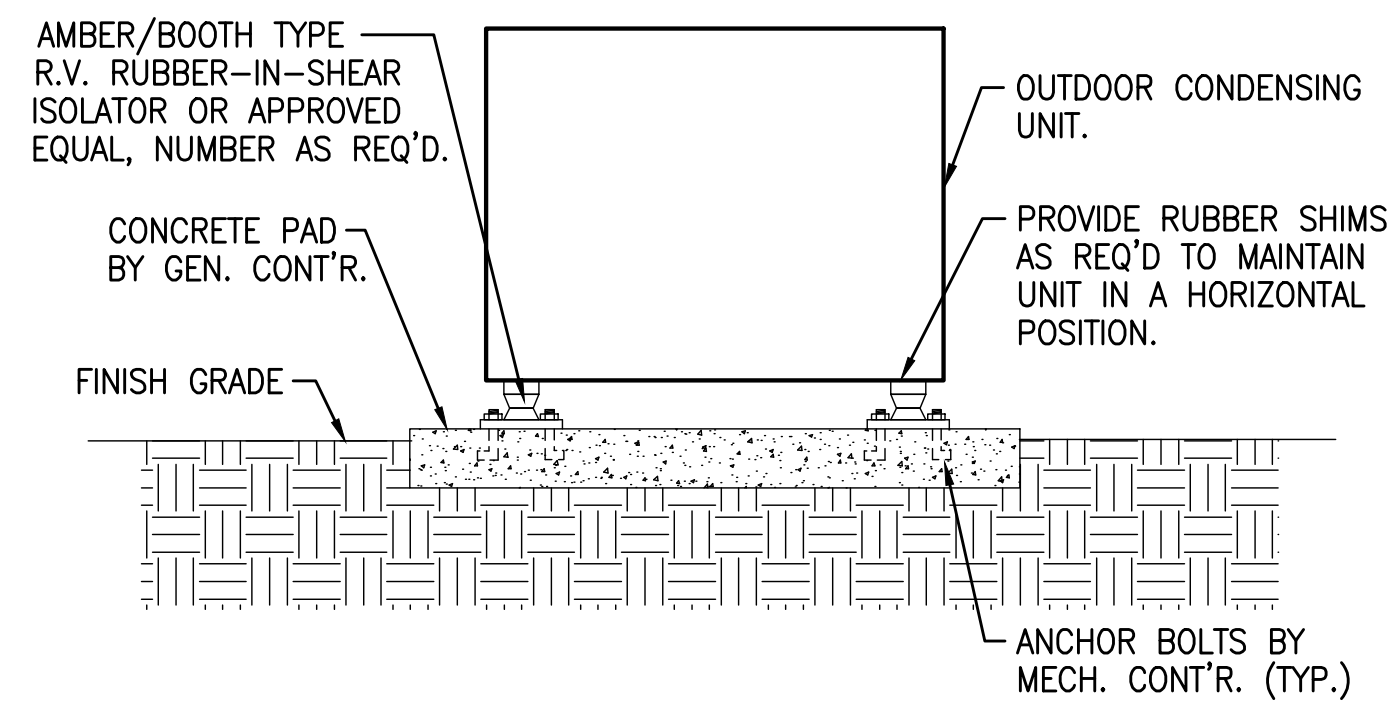
MISC CONTROLS

1. PROVIDE AND INSTALL ALL DEVICES AND SOFTWARE TO RECORD VIA THE EXISTING BUILDING EMCS ALL FAN AND COMPRESSOR STATUS ASSOCIATED WITH RPU-1 AND COMPUTER, CONSOLE, AND DOME SPACE TEMPERATURES. CREATE AN OUT OF TOLERANCE SPACE TEMPERATURE ALARMS FOR THE COMPUTER, CONSOLE, AND DOME SPACE TEMPERATURES.
2. CO2 SENSOR TO BE LOCATED IN RETURN DUCT OF RPU-1.
3. RPU-1 STAND ALONE CONTROLS TO MAINTAIN CONSTANT TEMPERATURE WITHOUT DEADBAND TO PREVENT DAMAGE TO PROJECTOR EQUIPMENT. NIGHT TIME SETBACK TO COMPLETELY SHUT OUTSIDE AIR DAMPER, BUT MAINTAIN ROOM TEMPERATURES.
4. HEAT PUMP SHALL INCLUDE MICROPROCESSOR CONTROLS THAT MINIMIZE SUPPLEMENTAL HEAT USAGE DURING START-UP, SET-UP, AND DEFROST.
5. ECONOMIZER SHALL BE FIRST STAGE OF COOLING. ECONOMIZER SHALL BE CAPABLE OF PARTIAL COOLING EVEN WHEN ADDITIONAL MECHANICAL COOLING IS REQUIRED TO MEET THE REMAINDER OF THE COOLING LOAD.
6. SPLIT SYSTEM COOLING AND HEATING SHALL BE CONTROLLED BY MANUFACTURER STAND ALONE CONTROLS. DDC SHALL PROVIDE AN ALARM IF TEMPERATURE OF ROOM EXCEEDS 3 DEGREES OVER SETPOINT. INFORMATION AT THE DDC TERMINAL SHALL BE SPACE TEMPERATURE AND ALARM/TROUBLE CONDITIONS.
7. EXISTING BUILDING DDC CONTROLS SYSTEM IS JOHNSON.
8. PT LINK CARD TO BE INSTALLED AND ADDRESSED BY CONTROLS CONTRACTOR.

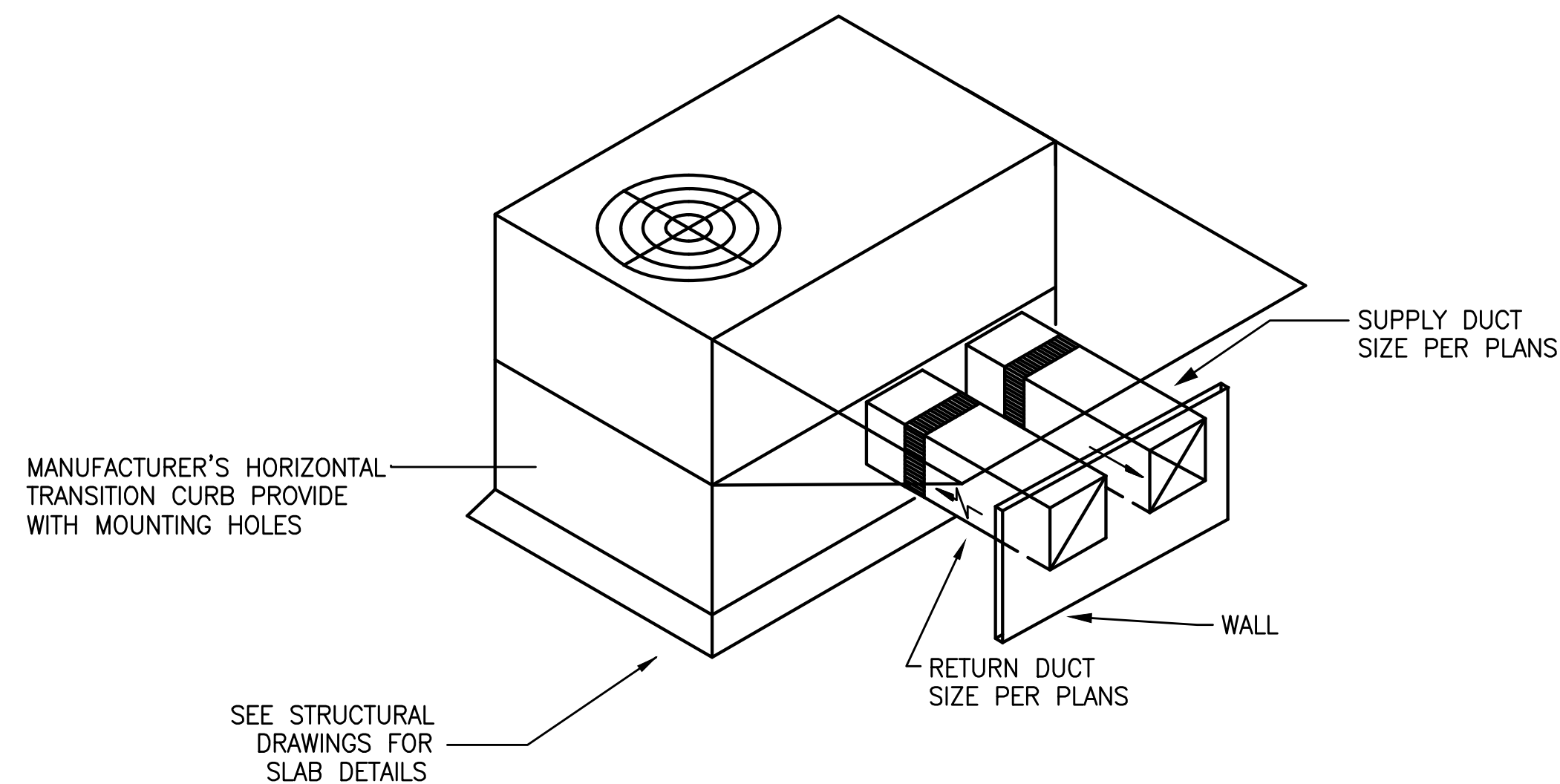


TOTAL PRESSURE	H	J	K	M
1" W.C.	2"	1"	1/2"	1-1/2"
2" W.C.	3"	1.5"	1/2"	2-1/2"
3" W.C.	4"	2"	1/2"	3-1/2"

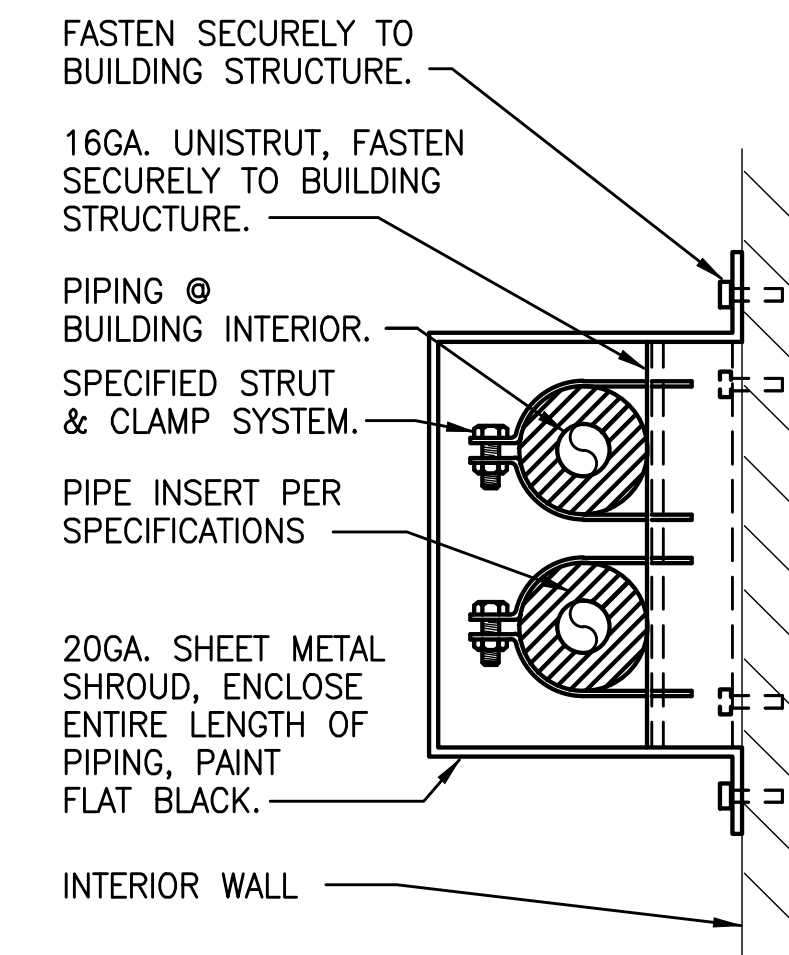
CONDENSATE P-TRAP DETAIL
NOT TO SCALE



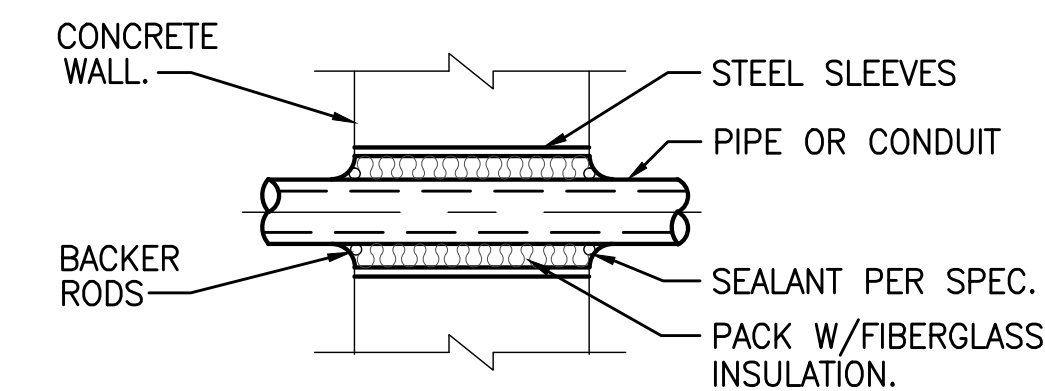
OUTDOOR HEAT PUMP MOUNTING DETAIL
DIAGRAMMATIC



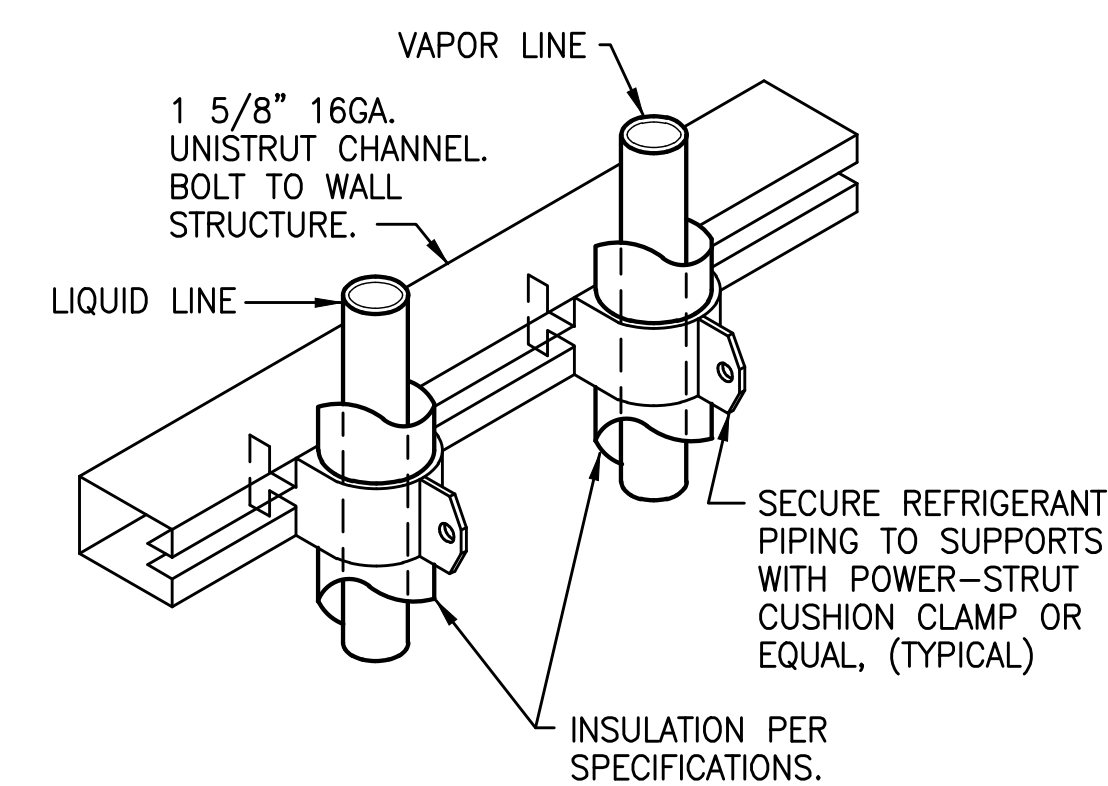
NOTE: MC TO PROVIDE CONCRETE EXPANSION ANCHORS TO ATTACH CURB TO SLAB.
HORIZONTAL DISCHARGE GROUND MOUNTED HEAT PUMP UNIT INSTALLATION DETAIL
NOT TO SCALE



INTERIOR PIPE SUPPORT DETAIL
NOT TO SCALE



PIPE THROUGH CONCRETE WALL PENETRATION DETAIL
NOT TO SCALE



REFRIGERANT PIPE SUPPORT DETAIL
DIAGRAMMATIC

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Sheet Title

MECHANICAL DETAILS AND CONTROLS

Sheet No.

M3.01

Project No.
2003-200 H (2)

MINIMUM FIRE PROTECTION DESIGN CRITERIA						
ROOM NAME	HAZARD CLASSIFICATION	DESIGN DENSITY (G.P.M. / SQ. FT.)	MINIMUM REMOTE AREA (SQ. FT.) UNMODIFIED	MAXIMUM HEAD SPACING (SQUARE FEET)	HOSE STREAMS (G.P.M.)	MINIMUM REMOTE AREA MODIFICATIONS THAT APPLY
VESTIBULE	LIGHT HAZARD OCCUPANCY	0.10	1500	225	100	1 & 5
LIGHT LOCK						
CONSOLE ROOM						
COMPUTER ROOM						
SPACE OVER PLANETARIUM						
PLANETARIUM (DELUGE SYSTEM)	LIGHT HAZARD OCCUPANCY	0.10	ENTIRE AREA	225	100	5
STORAGE ROOM	ORDINARY HAZARD GROUP II OCCUPANCY	0.20	1500	130	250	1 & 5
SYSTEM MODIFICATIONS THAT ARE REQUIRED TO BE PERFORMED ON THE MINIMUM REMOTE AREA SIZE						
MODIFICATION NUMBER	REASON FOR MODIFICATION		REMOTE AREA MODIFICATION			
1	WET PIPE SYSTEM, Q.R. SPRINKLERS, 20' OR LESS CEILING, CEILING POCKETS PROTECTED		USE FIGURE 11.2.3.2.3.1 OF THE 2010 EDITION OF N.F.P.A. #13			
2	CEILING OR ROOF SLOPE EXCEEDS A 2 IN 12 PITCH		INCREASE REMOTE AREA 30%			
3	DRY PIPE SPRINKLER SYSTEM OR DOUBLE INTERLOCK PRE-ACTION SPRINKLER SYSTEM		INCREASE REMOTE AREA 30%			
4	UTILIZING HIGH TEMPERATURE SPRINKLERS IN AN EXTRA HAZARD OCCUPANCY		REDUCE REMOTE AREA 30%, BUT NOT LESS THAN 2,000 SQ. FT.			
5	EXTENDED COVERAGE SPRINKLER HEADS MAY EXCEED THE MAXIMUM HEAD SPACING LISTED		MINIMUM DESIGN AREA OR (5) SPRINKLERS, WHICHEVER IS GREATER			
6	COMBUSTIBLE CONCEALED SPACE (INCLUDING ROOF VENTING SPACES)		3,000 SQ. FT. AFTER ALL OTHER MODIFICATIONS HAVE BEEN MADE			

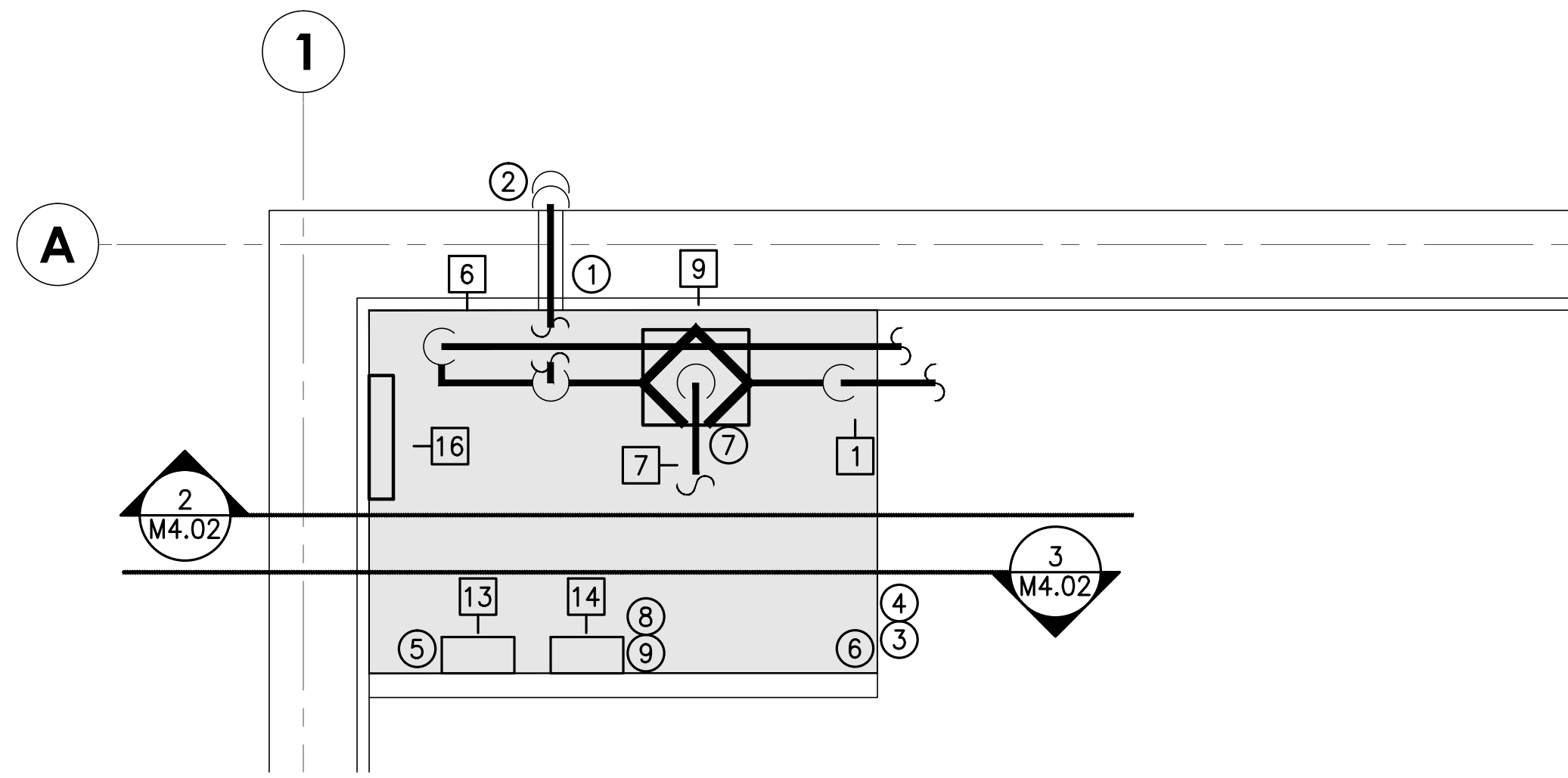
* THE HYDRAULIC CALCULATIONS FOR THE DELUGE SYSTEM SHALL ALSO INCLUDE THE OVERHEAD SPRINKLER SYSTEM CALCULATIONS FOR THE SYSTEM INSTALLED AT THE ROOF LEVEL FLOWING SIMULTANEOUSLY OVER THE PLANETARIUM.

FLOW TEST INFORMATION

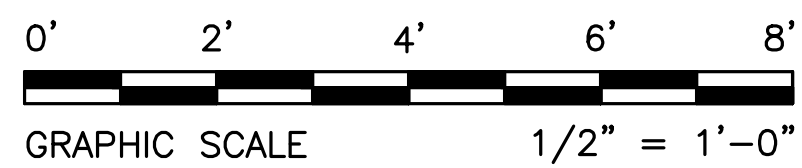
BASE HYDRAULIC CALCULATIONS FOR THE BID ON THE DISCHARGE CHARACTERISTICS OF AN EXISTING DIESEL DRIVEN FIRE PUMP RATED FOR 1,500 G.P.M. AT 100 P.S.I. THAT IS CONNECTED TO THE CAMPUS WATER SYSTEM. THE DIESEL DRIVEN FIRE PUMP IS CAPABLE OF PROVIDING A CHURN PRESSURE OF APPROXIMATELY 103 P.S.I. AND IS CAPABLE OF PROVIDING APPROXIMATELY 84 P.S.I. AT 150 PERCENT OF THE RATED CAPACITY. THIS INFORMATION IS PROVIDED BY THE DATA PLATE ATTACHED TO THE EXISTING DIESEL DRIVEN FIRE PUMP.

CAMPUS WATER SYSTEM HYDRANT FLOW TEST RESULTS ARE NOT AVAILABLE AND IS THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTORS RESPONSIBILITY FOR HAVING A HYDRANT FLOW TEST PERFORMED. SEE PROJECT SPECIFICATIONS FOR MORE INFORMATION.

FIRE PROTECTION LEGEND	
SYMBOL	DESCRIPTION
	PIPE DOWN
	PIPE UP
	BRANCH-TOP CONNECTION
	BRANCH-BOTTOM CONNECTION
	BRANCH-SIDE CONNECTION
	CAP ON END OF PIPE
	GROOVED RIGID COUPLING
	GROOVED FLEXIBLE COUPLING
	GROOVED CHECK VALVE
	GROOVED BUTTERFLY VALVE
	THREADED BALL VALVE
	THREADED PRESSURE RELIEF VALVE
	THREADED UNION
	4-WAY SWAY BRACE LOCATION
	HEAVY LINE INDICATES NEW PIPING
	DASHED LINE INDICATES EXISTING PIPING
	C.P.V.C. (SLIP) X STEEL (THREAD) ADAPTER
	EQUIPMENT LIST ITEM CALL OUT
	CONSTRUCTION NOTE CALL OUT
	PIPE ELEVATION CALL OUT

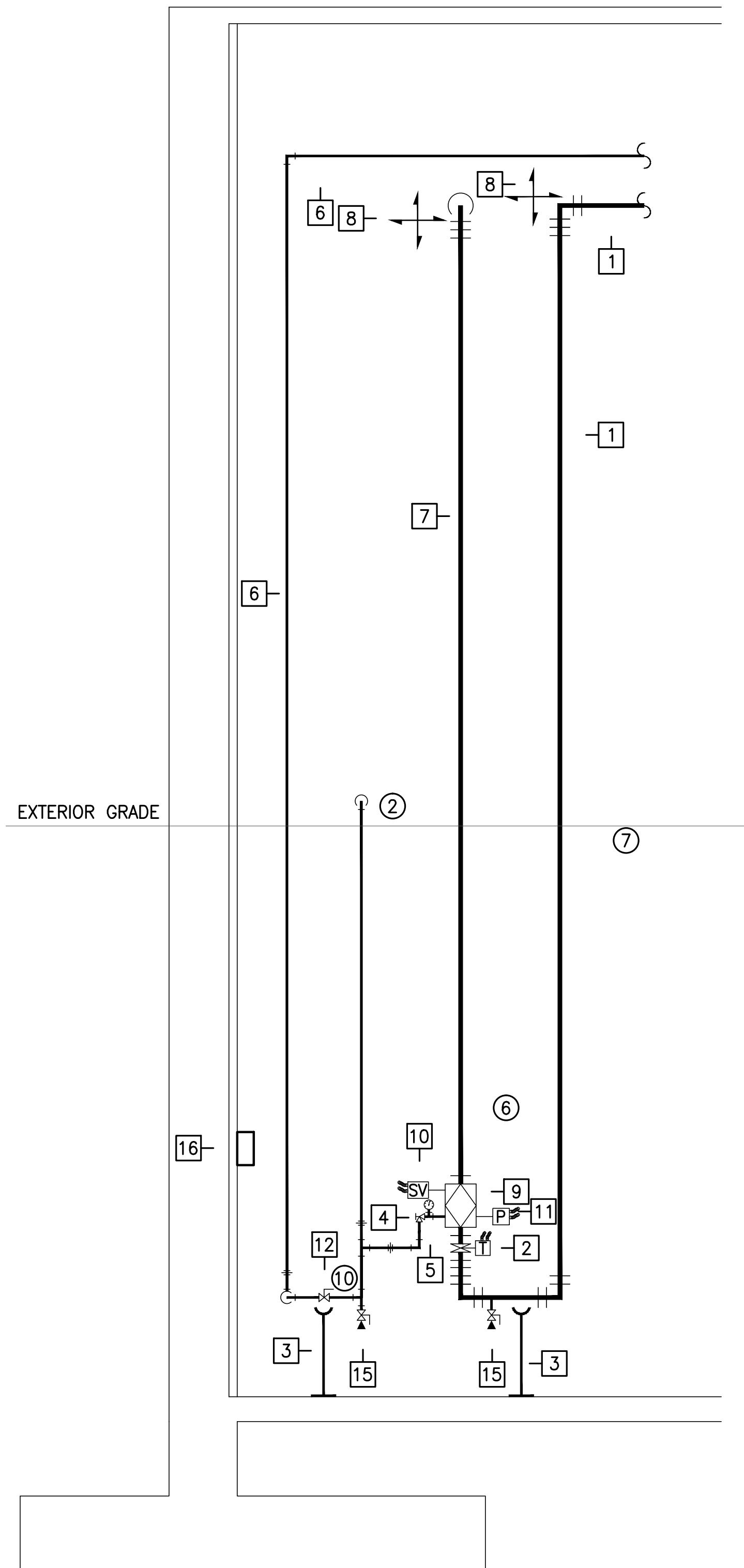


1 FIRE PROTECTION DELUGE SYSTEM RISER - PLAN VIEW
M4.02 1/2" = 1'-0"

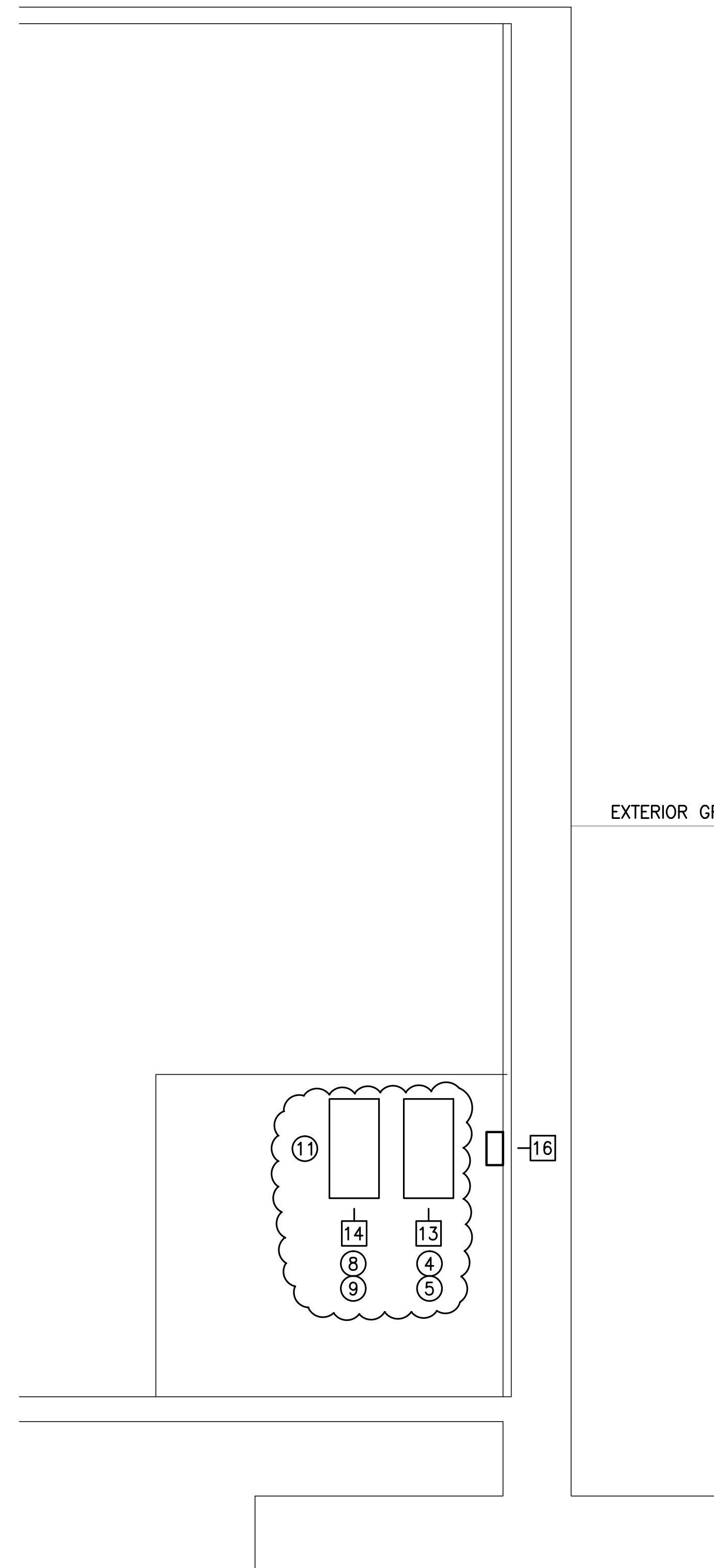
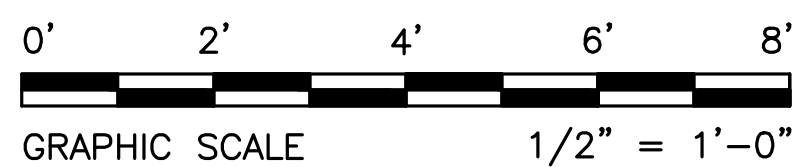


CONSTRUCTION NOTES

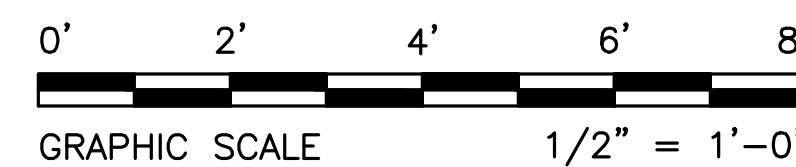
- ① ALL RISER APPURTENANT PENETRATIONS OF THE FINISHED FLOOR, EXTERIOR WALL, AND NON-FRANGIBLE INTERIOR WALLS TO HAVE A 2" ANNULAR SPACE FOR PIPING 4" AND LARGER IN SIZE AND A 1" ANNULAR SPACE FOR PIPING LESS THAN 4" IN SIZE.
- ② THE FIRE PROTECTION SPRINKLER CONTRACTOR SHALL COMBINE THE MAIN DRAIN DISCHARGE, AND THE WET SYSTEM INSPECTORS TEST VALVE DISCHARGE TOGETHER TO MAKE A SINGLE PENETRATION THROUGH THE EXTERIOR WALL. TERMINATE DISCHARGE PIPING WITH A 45° DOWN TURNED ELBOW. ALL PIPING AND FITTINGS INSTALLED ON THE EXTERIOR OF THE BUILDING SHALL BE GALVANIZED SCHEDULE 40. COORDINATE EXACT TERMINATION LOCATION WITH THE GENERAL CONTRACTOR AND THE BUILDING OWNER.
- ③ SHADED AREA REPRESENTS THE CLEAR SPACE REQUIRED FOR THE FIRE PROTECTION SPRINKLER SYSTEM EQUIPMENT IN WHICH STORAGE OF COMMODITIES IS NOT ALLOWED.
- ④ PER THE REQUEST OF PIERCE COLLEGE, THERE WILL BE NO MANUAL ACTIVATION OF THE DELUGE SYSTEM PROVIDED.
- ⑤ SEE PROJECT SPECIFICATION FOR DELUGE SYSTEM SEQUENCE OF OPERATION.
- ⑥ THE RISER DETAIL IS CONCEPTUAL IN NATURE WITH THE MINIMUM QUANTITY AND TYPES OF SPRINKLER SYSTEM RISERS BEING REQUIRED FOR THIS PROJECT. ACTUAL QUANTITY AND TYPES OF SYSTEM RISERS REQUIRED FOR THIS PROJECT SHALL BE DETERMINED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR. IF ADDITIONAL SYSTEM RISERS ARE NECESSARY, THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL INCLUDE THEM IN THEIR SCOPE OF WORK, PRIOR TO BIDDING.
- ⑦ ALL DELUGE SYSTEM PIPING, FITTINGS, HANGERS AND ALL OTHER SYSTEM EQUIPMENT SHALL BE PAINTED FLAT BLACK. THAT IS NOT HIDDEN BY THE SCREEN WALL.
- ⑧ THE AIR SAMPLING SYSTEM SUPPLY PIPING FOR BOTH DETECTION PORTS SHALL BE 3/4" CPVC THAT TRANSITIONS TO 3/4" SCHEDULE 40 BLACK PIPE PRIOR TO RISING ABOVE THE SCREEN WALL. ALL AIR SAMPLING SYSTEM STEEL PIPE, FITTINGS AND HANGERS SHALL BE PAINTED FLAT BLACK AND IS THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTORS RESPONSIBILITY TO DO SO.
- ⑨ THE AIR SAMPLING SYSTEM DISCHARGE PIPING SHALL BE 1" CPVC.
- ⑩ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE A PERMANENTLY AFFIXED SIGN ADJACENT TO THE WET SYSTEM INSPECTORS TEST VALVE LOCATED BY THE NEW DELUGE FIRE PROTECTION SYSTEM RISER AND ANOTHER AFFIXED SIGN AT THE WET SYSTEM INSPECTORS TEST VALVE LOCATED BY THE NEW DELUGE FIRE PROTECTION SYSTEM RISER STATING THAT, "PRIOR TO ACTIVATION OF THE INSPECTORS TEST VALVE, THE FIRE ALARM SYSTEM SHALL BE IN A NORMAL STATE OF OPERATION. FAILURE TO CHECK THE FIRE ALARM SYSTEM MAY RESULT IN ACCIDENTAL DISCHARGE OF THE DELUGE SYSTEM". SIGNAGE SHALL BE MADE OF WEATHER PROOF METAL OR RIGID PLASTIC AND ZONE SIGN SHALL BE AFFIXED TO WALL WITH A SCREW IN EACH CORNER OF THE SIGN AND THE OTHER SIGN SHALL BE AFFIXED TO THE INSPECTORS TEST VALVE WITH CHAIN ATTACHED TO TWO CORNERS OF THE SIGN.



2 FIRE PROTECTION DELUGE SYSTEM RISER - ELEVATION VIEW
M4.02 1/2" = 1'-0" LOOKING NORTH



3 FIRE PROTECTION DELUGE SYSTEM RISER - ELEVATION VIEW
M4.02 1/2" = 1'-0" LOOKING SOUTH



⑪ THE FIRE SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE A PERMANENTLY AFFIXED SIGN ADJACENT TO THE AIR SAMPLING SYSTEM CONTROL PANEL. SIGNAGE SHALL BE MADE OF WEATHER PROOF METAL OR RIGID PLASTIC AND SHALL BE AFFIXED TO WALL WITH A SCREW IN EACH CORNER OF THE SIGN. THE SIGN SHALL STATE "THE AIR SAMPLING PIPING LOCATED AT THE ROOF LEVEL OVER THE PLANETARIUM DOME HAS BEEN PROVIDED WITH A SPOT OF WHITE PAINT ON THE TOP SIDE OF THE PIPING. THIS WHITE SPOT IS PROVIDED TO ASSIST MAINTENANCE AND CLEANING OF THE AIR SAMPLING SYSTEM BY IDENTIFYING LOCATIONS OF ALL AIR SAMPLING PORTS".

DELUGE SYSTEM EQUIPMENT LIST

ITEM	QTY.	SIZE	DESCRIPTION	ITEM	QTY.	SIZE	DESCRIPTION
1	1	--	DELUGE SYSTEM SUPPLY PIPING	9	1	--	DELUGE VALVE
2	1	--	GROOVED BUTTERFLY VALVE WITH INTEGRAL TAMPER SWITCH (VALVE NORMALLY OPEN)	10	1	--	ELECTRONIC SOLENOID VALVE
3	2	--	PIPE STAND (REFERENCE THE 2001 EDITION OF N.F.P.A. #15 TABLES 6.3.2.2.1 & 6.3.2.2.2 FOR SIZE, HEIGHT, AND SPACING)	11	1	1/2"	PRESSURE SWITCH - ALARM
4	1	--	MAIN DRAIN VALVE	12	1	--	INSPECTORS TEST VALVE
5	1	1/4"	WATER PRESSURE GAUGE	13	1	--	DELUGE SYSTEM RELEASE PANEL
6	1	1"	INSPECTOR'S TEST PIPING	14	1	--	AIR SAMPLING SYSTEM CONTROL PANEL
7	1	--	DELUGE SYSTEM SUPPLY PIPING	15	2	1"	AUXILIARY DRAIN VALVE WITH PLUG
8	2	1"	4-WAY SEISMIC BRACE ASSEMBLY LOCATED AT THE TOP OF THE SYSTEM RISER	16	-	12 HEAD	SPARE HEAD CABINET (INCLUDING HEAD WRENCHES)

APPROXIMATE MOUNTING ELEVATION

MAIN DRAIN:	0'-6" A.E.G.
SPARE HEAD CABINET:	5'-0" A.F.F.

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FLOOR PLAN CONSTRUCTION NOTES

- ① THE FIRE PROTECTION SPRINKLER SYSTEM DESIGN SHALL BE BASED UPON N.F.P.A. #13 DESIGN CRITERIA FOR LIGHT HAZARD OCCUPANCY. SEE "MINIMUM DESIGN CRITERIA" TABLE ON SHEET M4.01 AND PROJECT SPECIFICATIONS FOR MORE INFORMATION.
- ② THE FIRE PROTECTION SPRINKLER SYSTEM DESIGN SHALL BE BASED UPON N.F.P.A. #13 DESIGN CRITERIA FOR ORDINARY HAZARD GROUP II OCCUPANCY. SEE "MINIMUM DESIGN CRITERIA" TABLE ON SHEET M4.01 AND PROJECT SPECIFICATIONS FOR MORE INFORMATION.
- ③ SEE ENLARGED FIRE PROTECTION DELUGE RISER DETAIL ON SHEET M4.02 FOR ADDITIONAL NOTES.
- ④ AREA OPEN TO ABOVE AND PROTECTED BY THE EXISTING SPRINKLER SYSTEM INSTALLED AT THE ROOF LEVEL.
- ⑤ SPRINKLER PROTECTION FOR ALL SUPPORT SPACES AROUND THE PERIMETER OF THE PLANETARIUM SHALL BE SERVED FROM THE SPRINKLER SYSTEM INSTALLED ON THE SECOND FLOOR LEVEL. ACTIVATION OF A SPRINKLER HEAD IN ANY SUPPORT ROOM SHALL NOT ACTIVATE THE FLOW SWITCH THAT IS TO BE INSTALLED UNDER CONSTRUCTION NOTE #9.
- ⑥ SPRINKLER PROTECTION ABOVE THE NEW PLANETARIUM DOME IS PROVIDED BY THE EXISTING CEILING LEVEL PROTECTION.
- ⑦ AREA WITHIN PLANETARIUM UNDER NEW PLANETARIUM DOME WILL BE PROTECTED BY A NEW DELUGE SYSTEM. THE NEW DELUGE SYSTEM SHALL HAVE SEMI RECESSED HORIZONTAL SIDEWALL SPRINKLER HEADS INSTALLED IN THE HARD WALL LOCATED DIRECTLY BENEATH THE EDGE OF THE PLANETARIUM DOME. THE HARD WALL VARIES IN HEIGHT FROM APPROXIMATELY 3'-9" IN THE FRONT UP TO APPROXIMATELY 10'-6" IN THE BACK.
- ⑧ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL REMOVE EXISTING 3" COUPLING FROM THE WET SYSTEM MAIN PIPING, CUT 3" MAIN PIPING BACK, IN-THE-AIR GROOVE THE 3" MAIN THAT HAS BEEN CUT, AND ADD A 3" GROOVED TEE OR CUT IN A MECHANICAL TEE ON THE EXISTING 3" WET SYSTEM MAIN PIPING WITH AN APPROPRIATELY SIZED OUTLET TO SERVE THE NEW DELUGE FIRE PROTECTION SYSTEM.
- ⑨ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL CUT IN A WATER FLOW DETECTOR ON THE EXISTING 2" PIPING SERVING THE PLANETARIUM AREA IN THE CORRIDOR PRIOR TO THE PENETRATION INTO THE PLANETARIUM AREA.
- ⑩ EXISTING 3" WET SYSTEM MAIN PIPING.
- ⑪ DELUGE FIRE PROTECTION SYSTEM SUPPLY PIPING.
- ⑫ ALL DROPS TO DELUGE HEADS SHALL BE RESTRAINED AGAINST EXCESSIVE MOVEMENTS PER PROJECT SPECIFICATIONS.
- ⑬ ALL HORIZONTAL SIDEWALL DELUGE HEADS SHALL BE RESTRAINED FROM MOVEMENT TO PREVENT THE HEAD FROM MOVING OUT OF THE WALL PENETRATION WHEN THE SYSTEM IS DISCHARGED.
- ⑭ EXISTING 2½" WET SYSTEM MAIN PIPING.
- ⑮ EXISTING 2" WET SYSTEM MAIN PIPING.
- ⑯ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE A 1" OUTLET TO THE EXISTING 2" GROOVED CAP AND ROUTE 1" PIPING TO THE LOCATION OF THE NEW DELUGE SYSTEM RISER FOR THE INSTALLATION OF A NEW INSPECTOR'S TEST VALVE. SEE SHEET M4.02 FOR INSPECTOR'S TEST VALVE LOCATION AND TEST DISCHARGE LOCATION.
- ⑰ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE AN AIR SAMPLING SYSTEM FOR SMOKE SENSING. THE AIR SAMPLING SYSTEM PANEL SHALL HAVE A MINIMUM OF (2) INLET PORTS. ONE PORT SHALL BE FOR THE SAMPLING PIPING LOCATED AT THE ROOF AND THE OTHER PORT FOR THE SAMPLING PIPING LOCATED IN THE RETURN AIR DUCT UNDER THE RAISED FLOOR OF THE SEATING AREA INSIDE THE PLANETARIUM. THE AIR SAMPLING SYSTEM CONTROL PANEL SHALL BE CAPABLE OF H.V.A.C. SYSTEM SHUTDOWN.
- ⑱ THE FIRE PROTECTION SPRINKLER CONTRACTOR SHALL PROVIDE A RELEASE PANEL FOR THE DELUGE SYSTEM THAT WILL REQUIRE (2) FORMS OF INPUT AT A MINIMUM. ONE INPUT IS FROM THE AIR SAMPLING SYSTEM CONTROL PANEL AND ONE INPUT IS FROM THE NEW WATERFLOW DETECTOR THAT IS INSTALLED UNDER CONSTRUCTION NOTE #9. SEE PROJECT SPECIFICATIONS FOR DELUGE SYSTEM SEQUENCE OF OPERATIONS.
- ⑲ PER THE REQUEST OF PIERCE COLLEGE, A MANUAL MEANS OF ACTIVATING THE DELUGE SYSTEM WILL NOT BE PROVIDED FOR THIS PROJECT.
- ⑳ ALL NEW AND EXISTING PIPING, FITTINGS, HANGERS, SEISMIC BRACING AND OTHER EQUIPMENT LOCATED BETWEEN GRIDLINES "1" & "2.6" AND GRIDLINES "A" & "B.7" SHALL BE PAINTED FLAT BLACK.
- ㉑ ALL NEW DELUGE SYSTEM SEMI-RECESSED HORIZONTAL SIDEWALL SPRINKLER HEADS SHALL BE FLAT BLACK FINISH WITH FLAT BLACK FINISHED ESCUTCHEONS.
- ㉒ THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE A PERMANENTLY AFFIXED SIGN ADJACENT TO THE WET SYSTEM INSPECTORS TEST VALVE LOCATED BY THE NEW DELUGE FIRE PROTECTION SYSTEM RISER AND ANOTHER AFFIXED SIGN AT THE WET SYSTEM INSPECTORS TEST VALVE LOCATED BY THE NEW DELUGE FIRE PROTECTION SYSTEM RISER STATING THAT, "PRIOR TO ACTIVATION OF THE INSPECTORS TEST VALVE, THE FIRE ALARM SYSTEM SHALL BE IN A NORMAL STATE OF OPERATION. FAILURE TO CHECK THE FIRE ALARM SYSTEM MAY RESULT IN ACCIDENTAL DISCHARGE OF THE DELUGE SYSTEM". SIGNAGE SHALL BE MADE OF WEATHER PROOF METAL OR RIGID PLASTIC AND ZONE SIGN SHALL BE AFFIXED TO WALL WITH A SCREW IN EACH CORNER OF THE SIGN AND THE OTHER SIGN SHALL BE AFFIXED TO THE INSPECTORS TEST VALVE WITH CHAIN ATTACHED TO TWO CORNERS OF THE SIGN.
- ㉓ THE EXISTING 26 UPRIGHT SPRINKLER HEADS LOCATED AT THE ROOF SERVED BY THE WET PIPE SPRINKLER SYSTEM SHALL BE REPLACED WITH NEW UPRIGHT SPRINKLER HEADS THAT HAVE A FLAT BLACK FINISH.
- ㉔ THE FIRE SPRINKLER SYSTEM CONTRACTOR SHALL PROVIDE A SPOT OF WHITE PAINT TO THE TOP OF THE AIR SAMPLING PIPE THAT IS DIRECTLY OVER EACH AIR SAMPLING PORT.

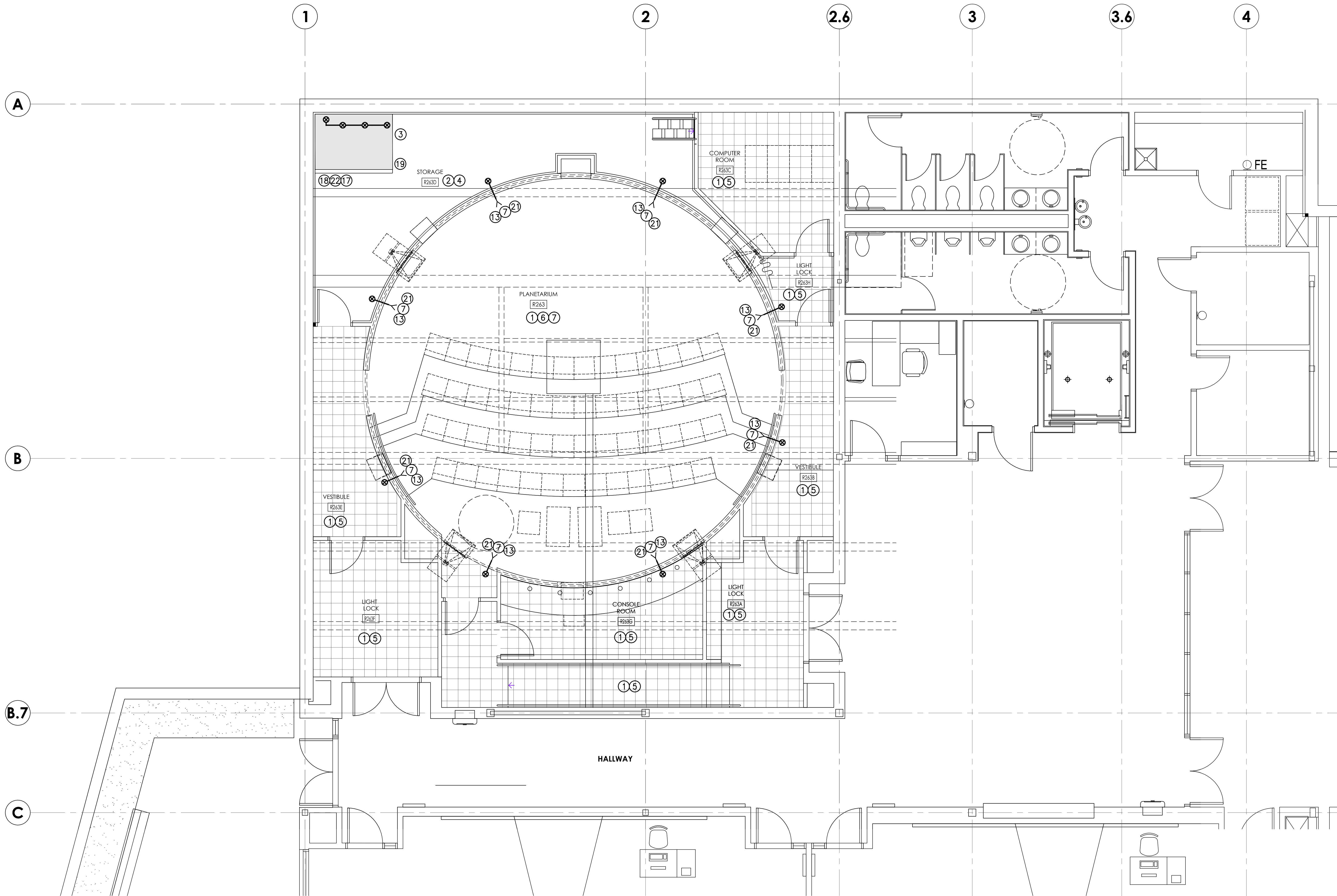
FLOOR PLAN GENERAL NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE ALL SHORT TERM SCHEDULES WITH OWNER PRIOR TO COMMENCING WORK.
2. ALL SPRINKLER HEAD LOCATIONS SHALL TAKE INTO ACCOUNT THE CONFIGURATION OF THE AREA BEING PROTECTED AND SHALL CONFIGURE THE LAYOUT TO BE SYMMETRICALLY SPACED.
3. COORDINATE SPRINKLER HEAD LOCATIONS IN ACOUSTICAL CEILING TILES AND GYPSUM WALLBOARD CEILINGS WITH THE ARCHITECTURAL DRAWINGS FOR CEILING LOCATIONS AND HEIGHTS, MECHANICAL DRAWINGS FOR H.V.A.C. DIFFUSER LOCATIONS, AND ELECTRICAL DRAWINGS FOR CEILING GRID LAYOUT, LIGHT LOCATIONS, AND FIRE ALARM DEVICES. ACOUSTICAL CEILING GRID LAYOUT AND DEVICES INDICATED ON THE ARCHITECTURAL DRAWINGS MAY NOT BE CORRECT.
4. ALL PIPING IN FINISHED AREAS SHALL BE INSTALLED CONCEALED ABOVE THE CEILING SPACE UNLESS SPECIFICALLY NOTED OTHERWISE. ANY PORTION OF THE SPRINKLER SYSTEM INSTALLED EXPOSED SHALL BE ADDRESSED IN WRITING WITH SKETCHES (PRIOR TO THE PIPING BEING FABRICATED OR INSTALLED) TO THE ARCHITECT AND ENGINEER TO EVALUATE.
5. ALL SPRINKLER BRANCH LINES SHALL BE RESTRAINED AGAINST EXCESSIVE MOVEMENT PER PROJECT SPECIFICATIONS.
6. ALL DROPS TO PENDENT SPRINKLER HEADS THAT ALLOW THE SPRINKLER HEAD TO MOVE MORE THAN 3" FROM A STAGNANT POSITION OR TO CONTINUE TO OSCILLATE BACK AND FORTH WITHOUT READILY DAMPENING SHALL BE RESTRAINED AGAINST EXCESSIVE MOVEMENT PER PROJECT SPECIFICATIONS.
7. THE FIRE PROTECTION SPRINKLER SYSTEM PIPING SHALL BE INSTALLED TO MINIMIZE PIPING OFFSETS IN ROOMS OF EXPOSED STRUCTURE. PIPING SHALL BE INSTALLED AS TIGHT TO STRUCTURE AS POSSIBLE AND SHALL BE INSTALLED TO MINIMIZE VISUAL IMPACTS.
8. ALL AUXILIARY DRAINS AND INSPECTOR'S TEST VALVES PLACED AT THE REMOTE PART OF THE SPRINKLER SYSTEM SHALL TERMINATE ON THE EXTERIOR OF THE BUILDING UNLESS OTHERWISE NOTED.
9. N.F.P.A. #70 (NATIONAL ELECTRICAL CODE) REQUIRES A DEDICATED SPACE OF 6'-0" ABOVE ALL ELECTRICAL PANELS, TRANSFORMERS, SWITCH GEARS, ETC. NO PIPING, DUCTS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE PER SECTION 110.26(f)(1)(o). ALL SPRINKLER PIPING THAT IS NOT COORDINATED TO AVOID THESE AREAS SHALL BE MODIFIED AND RELOCATED AT THE FIRE PROTECTION SPRINKLER CONTRACTOR EXPENSE.
10. INTERMEDIATE TEMPERATURE RATED SPRINKLER HEADS SHALL BE REQUIRED FOR ALL SPRINKLER HEADS PLACED CLOSER THAN 2'-6" FROM THE CENTER OF A H.V.A.C. CEILING MOUNTED SUPPLY GRILLE.
11. SPRINKLER HEADS LOCATED IN ACOUSTICAL CEILING TILES SHALL BE INSTALLED IN A CONSISTENT PATTERN, CENTERED BOTH DIRECTIONS WITHIN THE CEILING TILES (12" FROM A CEILING GRID), AND PLACED TO AVOID ALL LIGHTS AND AIR DIFFUSER GRILLES.
12. ALL PENDENT SPRINKLER HEADS INSTALLED IN CEILING SYSTEMS THAT ARE HARD PIPED SHALL HAVE A 1" ANNULAR CLEARANCE AROUND THE CEILING SYSTEM PENETRATION THAT WILL ALLOW FREE MOVEMENT OF AT LEAST 1" IN ALL DIRECTIONS. THE CEILING PENETRATION SHALL BE CONCEALED WITH AN OVERSIZED ESCUTCHEON OF THE SAME FINISH AS THE SPRINKLER HEAD AND WILL BE PROVIDED BY THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR.
13. ADD, DELETE, OR RELOCATE EXISTING SPRINKLER HEADS (AS REQUIRED) IN THE TENANT IMPROVEMENT AREA(S) TO REFLECT NEW WALLS, CEILINGS, H.V.A.C. GRILLES, AND LIGHT LOCATIONS.
14. THE CONTRACTOR IS ADVISED THERE WILL BE NO PAYMENTS FOR "ENGINEERING" UNTIL THE SUBMITTAL MATERIALS (SHOP DRAWINGS, SEISMIC BRACE CALCULATIONS, HYDRAULIC CALCULATIONS, AND EQUIPMENT SUBMITTALS) HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT AND/OR ENGINEER.
15. ALL SPRINKLER SYSTEM COMPONENTS, DEVICES, AND MATERIALS INSTALLED AS PART OF THIS PROJECT SHALL BE NEW.
16. ALL EXISTING COMPONENTS, DEVICES, AND MATERIALS THAT ARE REMOVED FROM IT'S ORIGINAL INSTALLATION LOCATION SHALL NOT BE RE-INSTALLED OR PLACED BACK INTO SERVICE AS PART OF THE NEW SYSTEM UNLESS SPECIFICALLY IDENTIFIED ON THE CONTRACT DOCUMENTS.

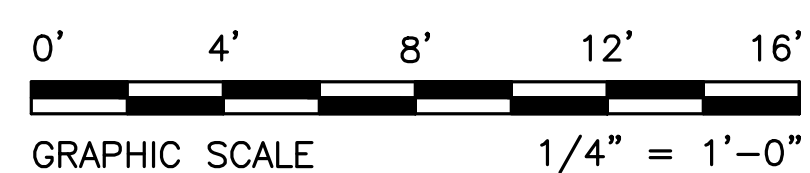
FLOOR PLAN SPECIAL NOTES

1. THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL DRAWINGS TO DETERMINE IF THE INSTALLED WORK IS TO BE "PHASED". THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR SHALL MAKE THE NECESSARY ACCOMMODATIONS ON THE SUBMITTAL DRAWINGS TO CONFORM WITH THE ARCHITECT'S "PHASING PLAN".
2. THE FIRE PROTECTION SPRINKLER SYSTEM CONTRACTOR IS RESPONSIBLE FOR MAKING ALL ELEVATION AND HORIZONTAL ADJUSTMENTS IN THE PIPING REQUIRED TO FOLLOW THE BUILDING'S STRUCTURE, CEILING HEIGHTS, AND ARCHITECTURAL FEATURES. THE CONTRACT DOCUMENTS ARE CONCEPTUAL IN NATURE AND SHOW THE PROPOSED PIPE ROUTING, BUT DO NOT INCLUDE ALL REQUIRED FITTINGS OR OFFSETS THAT ALLOW THE PIPING TO BE INSTALLED AS IT IS SHOWN ON THE CONTRACT DOCUMENTS.
3. THE ONLY KWIK BOLT LISTED AND APPROVED FOR SUPPORT IN CRACKED CONCRETE AND FOR SEISMIC BRACING IN CONCRETE IS HILTI KWIK BOLT MODEL KB-TZ. ALL OTHER KWIK BOLTS WILL NOT BE ALLOWED.
4. SEE THE "GENERAL FIRE PROTECTION" SPECIFICATION SECTION FOR DEFINITION OF ABBREVIATIONS USED ON THE FIRE PROTECTION CONTRACT DOCUMENTS.

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1 ENLARGED PLANETARIUM SECOND FLOOR FIRE PROTECTION PLAN
 M4.04 1/4" = 1'-0"



RAINIER BUILDING PLANETARIUM

FOR PIERCE COLLEGE

9401 Farwest Drive SW, Lakewood, WA, 98498-1999

03/23/12

BID SET 01/03/2012

Revisions Closing Date
 AS BUILTS 08/06/2012

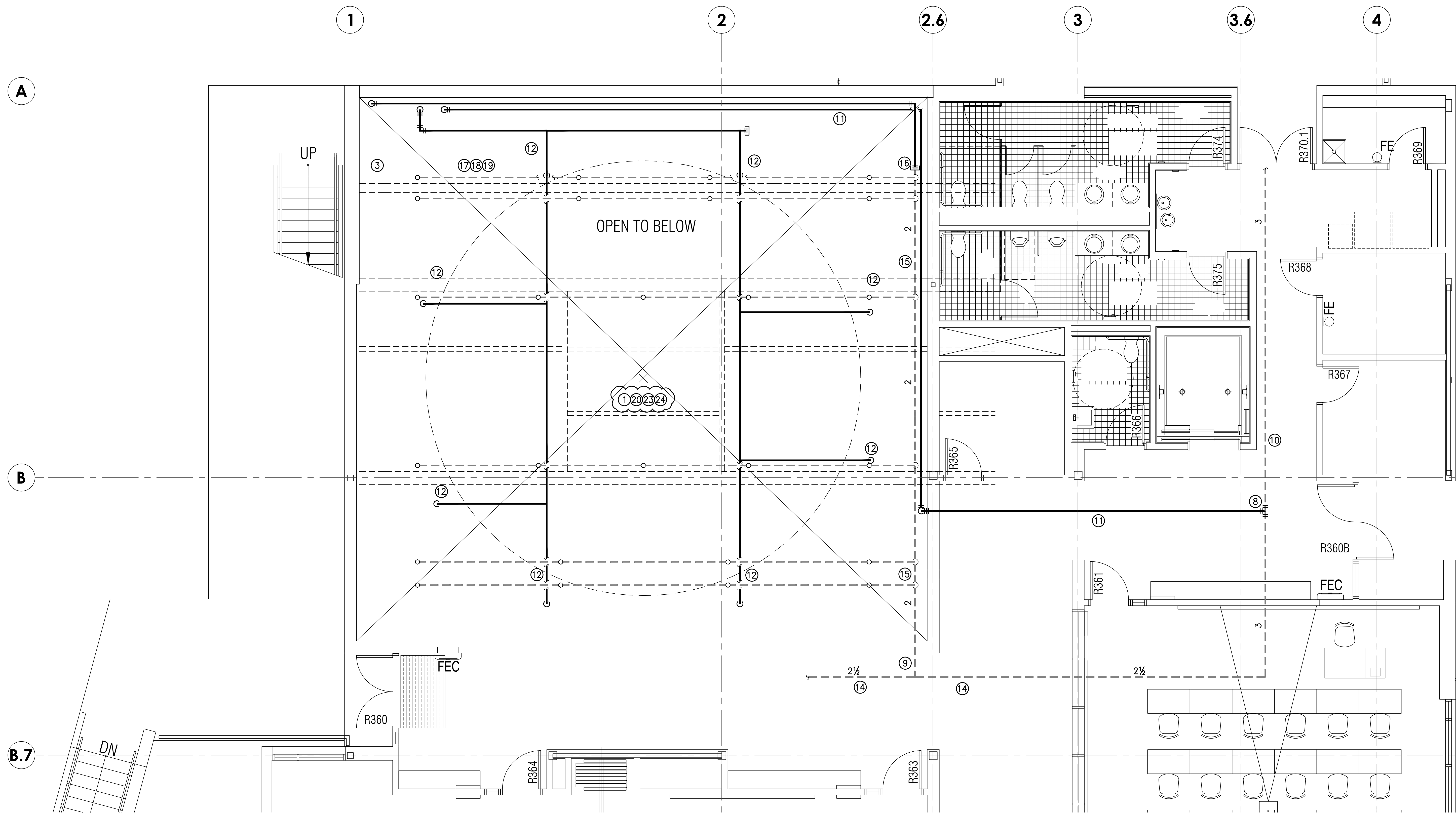
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Sheet Title
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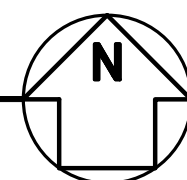
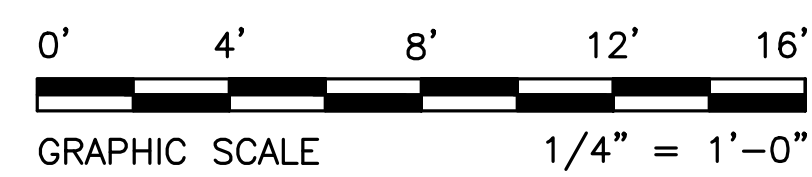
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Project No.
 2003-200 H (2)

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1 ENLARGED PLANETARIUM THIRD FLOOR FIRE PROTECTION PLAN
 M4.05 1/4" = 1'-0"



03/23/12

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Sheet Title
ENLARGED PLANETARIUM THIRD FLOOR FIRE PROTECTION PLAN

Sheet No.
M4.05

Project No.
 2003-200 H (2)