

# CITY OF SPARKS

## PUBLIC WORKS DEPARTMENT

# TMWRF LABORATORY BUILDING ROOF REPLACEMENT

PROJECT NO. BID # 18/19 - 006  
PWP NO. WA-2018-248

### SITE DATA

ADDRESS: 8500 CLEAN WATER WAY  
RENO, NV 89502  
APN: 021-020-02  
ZONING: PF  
CITY: CITY OF SPARKS

### OWNER

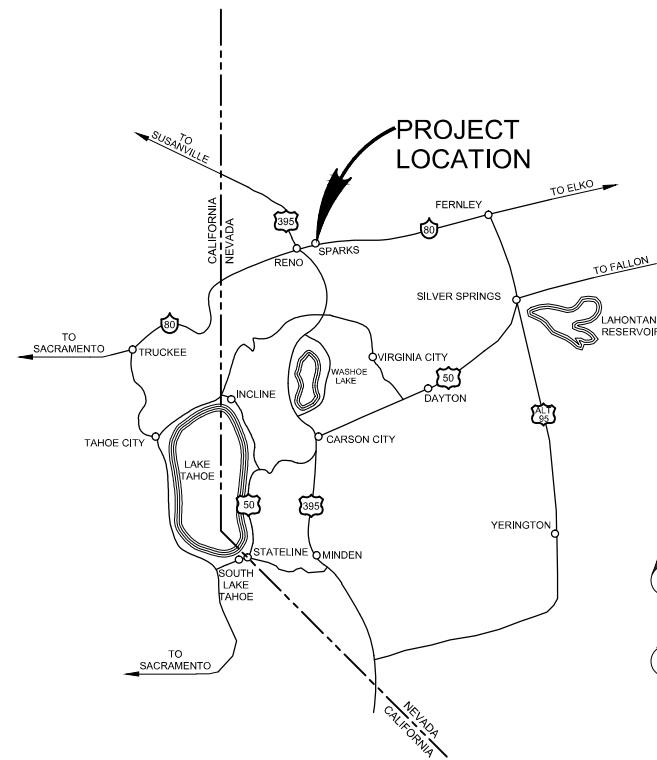


CITY OF SPARKS  
TRUCKEE MEADOWS WATER  
RECLAMATION WATER FACILITY  
8500 CLEAN WATER WAY  
RENO, NV 89502  
PHONE: (775) 861-4125  
FAX: (775) 861-4115

### ENGINEER



1325 AIRMOTIVE WAY, SUITE 215  
RENO, NV 89502  
PHONE: (775) 834-0165  
FAX: (602) 567-4001

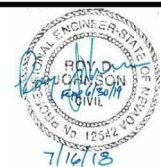


VICINITY MAP  
SCALE: NONE



LABORATORY BUILDING  
LOCATION MAP  
SCALE: NONE

REV	DATE	BY	DESCRIPTION	APVD	DATE



DESIGNED  
BRG  
DRAWN  
BRG  
CHECKED  
DFC  
DATE  
JUNE 2018



TMWRF LAB ROOF  
GENERAL  
COVER SHEET

100% SUBMITTAL	
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. <b>G-1</b>
	SHEET NO. 1 OF 13

FILENAME:



STAGING AND STORAGE AREA

LAB BUILDING

**LABORATORY BUILDING  
STAGING ACCESS**

SCALE: 1" = 40'






**NOTES:**

1. CONTRACTOR MAY CLOSE ROAD WITHIN STAGING AND STORAGE AREA TO VEHICLE ACCESS DURING CONSTRUCTION.
2. MAINTAIN PROTECTED PEDESTRIAN ACCESS TO ALL SIDEWALKS AND ALL BUILDING ENTRANCES AT ALL TIMES.
3. ACCESS TO LAB ROOF IS EXTERIOR ONLY, NO INTERIOR ACCESS IS AVAILABLE.

**SHEET LIST**

Sheet Number	Sheet Title	SHEET TITLE
<b>GENERAL</b>		
1	G-1	COVER SHEET
2	G-2	STAGING ACCESS AND SHEET LIST
<b>ARCHITECTURAL</b>		
3	A-1	SYMBOLS ABBREVIATIONS AND GENERAL NOTES
4	A-2	DEMOLITION ROOF PLAN
5	A-3	ROOF PLAN
6	A-4	ELEVATIONS
7	A-5	MISCELLANEOUS DETAILS
8	A-6	MISCELLANEOUS DETAILS
9	A-7	MISCELLANEOUS DETAILS
<b>STRUCTURAL</b>		
10	S-1	SPECIAL INSPECTION NOTES
11	S-2	MISCELLANEOUS DETAILS
12	S-3	EXISTING STAIR MODIFICATIONS
<b>ELECTRICAL</b>		
13	E-1	EXISTING ROOF CONDUIT MODIFICATIONS

\*\*ASBESTOS ABATEMENT - SEE ATTACHMENT "A"

						DESIGNED BRG DRAWN BRG CHECKED DFC DATE JUNE 2018	  	<b>100% SUBMITTAL</b> TMWRf LAB ROOF GENERAL STAGING ACCESS AND SHEET LIST	VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING  IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. DRAWING NO. <b>G-2</b> SHEET NO. 2 OF 13
FILENAME:	REV	DATE	BY	DESCRIPTION	APVD	DATE				

**ABBREVIATIONS**

ACOUS	ACOUSTICAL	JC	JANITOR'S CLOSET
ADMIN	ADMINISTRATION	JT	JOINT
AFF	ABOVE FINISH FLOOR	LAB	LABORATORY
AL	ALUMINUM	LAV	LAVATORY
&	AND	LP	LOW POINT
A	ARCHITECTURAL	MFR	MANUFACTURER
@	AT	MAT'L	MATERIAL
B & B	BALLED & BURLAPPED	MAX	MAXIMUM
BSMT	BASEMENT	MECH	MECHANICAL
BM	BEAM	MTL	METAL
BLK	BLOCK	MEZZ	MEZZANINE
BD	BOARD	MIN	MINIMUM
BOT	BOTTOM	MOD	MODULAR
BC	BRICK COURSES	N	NORTH
BLDG	BUILDING	NTS	NOT TO SCALE
CAB	CABINET	NO	NUMBER
CIP	CAST IN PLACE	OC	ON CENTER
CLG	CEILING	OPNG	OPENING
C/S	CIVIL SANITARY	OPP	OPPOSITE
CLO	CLOSET	OD	OUTSIDE DIAMETER
COL	COLUMN	OHCD	OVERHEAD COILING DOOR
CONC	CONCRETE	OHSD	OVERHEAD SLIDING DOOR
CB	CONCRETE BLOCK	PT	PRESSURE TREATED
CONT	CONTINUOUS	PTD	PAINTED
CJ	CONTROL JOINT	PNL	PANEL
CTSK	COUNTERSINK	PART	PARTITION
CU	CUBIC	P	PLASTER
CL	CLEAR	PL	PLATE
DETS	DETAILS	PVC	POLYVINYL CHLORIDE
DIA	DIAMETER	PVF	POLYVINYL FLUORIDE
DIM	DIMENSION	PCP	PORTLAND CEMENT PLASTER
DO	DOOR OPENING	PSF	POUNDS PER SQUARE FOOT
DR	DOOR	PJ	PREMOLDED JOINT
DN	DOWN	QUAN	QUANTITY
DOW	DOWEL	QT	QUARRY TILE
DWG	DRAWING	RAD	RADIUS
DF	DRINKING FOUNTAIN	R	RISER
EA	EACH	REF	REFERENCE
E	EAST	REINF	REINFORCING
EWC	ELECTRIC WATER COOLER	REQ'D	REQUIRED
ELEC	ELECTRICAL	RD	ROOF DRAIN
EL	ELEVATION	RM	ROOM
ENGR	ENGINEER	RO	ROUGH OPENING
EQ	EQUAL	SECT	SECTION
EQUIP	EQUIPMENT	SHT	SHEET
EXIST	EXISTING	SMS	SHEET METAL SCREWS
EXP	EXPANSION	S	SOUTH
EJ	EXPANSION JOINT	SPECS	SPECIFICATIONS
EXT	EXTERIOR	SQ	SQUARE
FRP	FIBER REINFORCED PLASTIC	S STL	STAINLESS STEEL
FWP	FIBROUS WOOD PANEL	STD	STANDARD
FIN	FINISH	STA	STATION
FIN FL	FINISH FLOOR	STOR	STORAGE
FE	FIRE EXTINGUISHER	STRUCT	STRUCTURAL
FL	FLOOR	SUSP	SUSPENDED
FD	FLOOR DRAIN	TER	TERRAZZO
GA	GAGE	TC	TERRA COTTA
GALV	GALVANIZED	THKN'S	THICKNESS
GL	GLASS	TOS	TOP OF STEEL
GSFT	GLAZED STRUCTURAL FACE	TOP	TOPPING
	TILE	TSM	TRANSOM
GR	GRADE	T	TREAD
GCFFB	GROUND AND CEMENTITIOUS FILLED FACE	TYP	TYPICAL
	CONCRETE BLOCK	UL	UNDERWRITER'S LABORATORIES
GCFFAB	GROUND AND CEMENTITIOUS FILLED FACE - SLOTTED ACOUSTICAL BLOCK	U.O.N	UNLESS OTHERWISE NOTED
	CONCRETE BLOCK	VAR	VARIES
	CONCRETE BLOCK	VERT	VERTICAL
	CONCRETE BLOCK	VP	VISION PANEL
GYP	GYPSONUM	WT	WEIGHT
HDN	HARDENER	W	WEST
HDW	HARDWARE	W/	WITH
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	W/O	WITHOUT
	HEATING, VENTILATING AND AIR CONDITIONING	WD	WOOD
HDCT	HEAVY DUTY CONCRETE TOPPING		
HT	HEIGHT		
HP	HIGH POINT		
HM	HOLLOW METAL		
HORIZ	HORIZONTAL		
INFO	INFORMATION		
ID	INSIDE DIMENSION		
INSUL	INSULATION		
INT	INTERIOR		

**ARCHITECTURAL GRAPHIC CONVENTION**

	BRICK		EARTH
	CONCRETE MASONRY UNIT		RIGID INSULATION
	CONCRETE		GRATING
	GROUT		BATT INSULATION
	STEEL		

**GENERAL ARCHITECTURAL NOTES**

1. THE SYMBOLS, ABBREVIATIONS AND GRAPHIC CONVENTIONS ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS, ABBREVIATIONS AND GRAPHIC CONVENTIONS CONTAINED ON THIS SHEET ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. ITEMS NOT NOTED ON DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.
3. ASTERISK (\*) INDICATES VERIFY DIMENSION WITH MANUFACTURER OF EQUIPMENT SUPPLIED.
4. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS.

**SHEET REFERENCES**

1. FOR ROOF DETAILS REFERENCE DRAWING A-5, A-6, AND A-7.

**ARCHITECTURAL SYMBOLS**

	STRUCTURAL COLUMN CENTERLINE. WALL CENTERLINE IF NOT COLUMN		CENTERLINE
	ACCESSORY, LAB FURNITURE & EQUIPMENT KEY		DIAMETER
	BUILDING ELEVATION THIS SIDE		WALL ELEVATION SYMBOL
	WINDOW NUMBER SYMBOL		WALL NUMBER
	ROOM NUMBER		SHEET NUMBER
	WALL PARTITION TYPE		EXISTING COLUMN CENTERLINE
	DOOR IDENTIFICATION		MECHANICAL EQUIPMENT TYPES
			NEW CONSTRUCTION
			EXISTING CONSTRUCTION
			SECTION AND DETAIL KEY

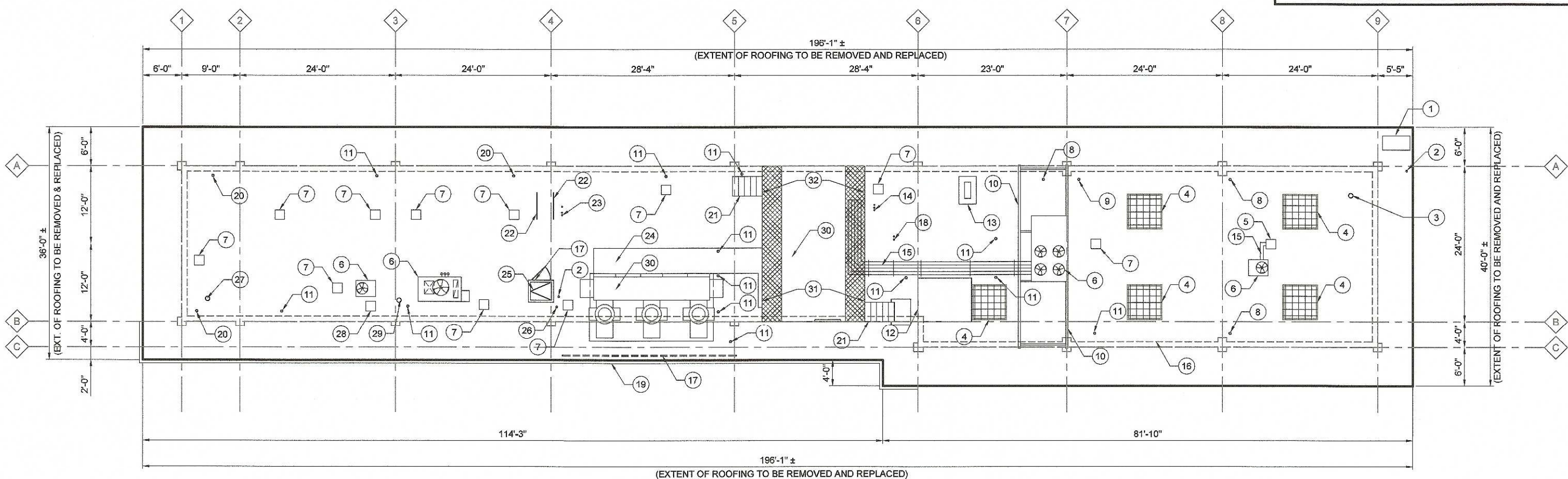
\* WHEN PERTAINING TO SECTIONS. SQUARE IS REPLACED WITH A CIRCLE

**BUILDING CODES**

- INTERNATIONAL BUILDING CODE 2012
- INTERNATIONAL EXISTING BUILDING CODE 2012 - ALTERATION LEVEL 1
- INTERNATIONAL ENERGY CONSERVATION CODE 2012 - CLIMATE ZONE 5B - INSULATION ENTIRELY ABOVE DECK - MINIMUM R-25

FILENAME:					REV					DATE					BY					DESCRIPTION					APVD					DATE														
																				DESIGNED BRG DRAWN BRG CHECKED DFC DATE JUNE 2018																				100% SUBMITTAL				
															TMWRF LAB ROOF ARCHITECTURAL SYMBOLS ABBREVIATIONS AND GENERAL NOTES															VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"					JOB NO. DRAWING NO. A-1 SHEET NO. 3 OF 13									

- NOTES:**
1. THE SCOPE OF WORK INCLUDES THE REMOVAL AND REPLACEMENT OF THE EXISTING ROOFING SYSTEM (BUILT-UP AND SPRAY FOAM INSULATION SYSTEM) EQUIPMENT AND PENETRATION FLASHINGS, METAL EDGE FLASHING, GUTTER AND DOWNSPOUTS AND EQUIPMENT AND PENETRATIONS AS NOTED ON THE DEMOLITION ROOF PLAN.
  2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING EQUIPMENT AND ROOF PENETRATIONS.
  3. THE CONTRACTOR SHALL INFORM THE ENGINEER OF ANY DETERIORATED CONCRETE UNCOVERED DURING THE DEMOLITION PROCESS.
  4. ENSURE THAT DEMOLISHED ROOFING MATERIAL TEMPORARILY STORED ON THE ROOF SURFACE DOES NOT CAUSE OVERSTRESS OF THE ROOF STRUCTURE DURING DEMOLITION.



**DEMOLITION ROOF PLAN**  
SCALE: 1/8" = 1'-0"

- KEY NOTES:**
- |  |   |  |   |
|--|---|--|---|
| 1. EXISTING POST FOR WINDSOCK SHALL BE REMOVED.                                  | 10. EXISTING SUPPORT STRUCTURE AND ROOF PENETRATIONS SHALL REMAIN.                              | 18. EXISTING POST AND PIPE PENETRATION SHALL BE REMOVED.                                   | 26. ABANDONED EXISTING PENETRATION SHALL BE REMOVED.                                      |
| 2. EXISTING EYE-HOOK SHALL BE REMOVED.   | 11. EXISTING 2-INCH VENT PIPE SHALL REMAIN.   | 19. EXISTING GUTTER AND DOWNSPOUTS SHALL BE REMOVED AND REPLACED.                          | 27. EXISTING 8-INCH EXHAUST VENT SHALL BE REMOVED.  |
| 3. EXISTING 8-INCH VENT PIPE SHALL REMAIN.                                       | 12. TOP OF EXISTING ELEVATOR SHAFT.   | 20. EXISTING 4-INCH VENT PIPE SHALL REMAIN.  | 28. EXISTING CONDENSER ELECTRICAL POWER SUPPLY SHALL REMAIN.                              |
| 4. EXISTING SKYLIGHT AND FALL PROTECTION SYSTEM SHALL BE REMOVED (TYPICAL OF 5). | 13. PACKAGE AIR CONDITIONING UNIT SHALL REMAIN.   | 21. EXISTING STAIRS SHALL REMAIN AND SHALL BE MODIFIED.                                    | 29. EXISTING VAREC GAUGE AND THIEF HOLE COVER SHALL BE REMOVED. PATCH HOLE AFTER REMOVAL. |
| 5. EXISTING ELECTRIC COOLANT EQUIPMENT SHALL REMAIN.                             | 14. THREE EXISTING CONDUIT PENETRATIONS TO REMAIN.  | 22. EXISTING WOOD BLOCKING SHALL BE REMOVED, TYPICAL OF 2.                                 | 30. EXISTING HVAC EQUIPMENT SHALL REMAIN.   |
| 6. EXISTING CONDENSER UNIT SHALL REMAIN.   | 15. EXISTING HVAC LINES SHALL REMAIN (DO NOT DISTURB AND MAINTAIN EXISTING SLOPE AT ALL TIMES). | 23. ABANDONED EXISTING ELECTRICAL AND REFRIGERANT LINES SHALL BE REMOVED (3 PENETRATIONS). | 31. EXISTING GRATING SHALL REMAIN.  |
| 7. EXISTING COVER SHALL BE REMOVED.  | 16. LINE OF BUILDING WALL BELOW.  | 24. EXISTING DUCT SHALL REMAIN   | 32. EXISTING GUARDRAIL SHALL REMAIN.  |
| 8. EXISTING 1 1/2-INCH VENT PIPE SHALL REMAIN.                                   | 17. EXISTING GUARDRAIL SHALL BE REMOVED.  | 25. EXISTING ROOF ACCESS HATCH SHALL BE REMOVED.   |   |
| 9. EXISTING ELECTRICAL CONDUIT PENETRATION SHALL REMAIN.                         |   |  |   |

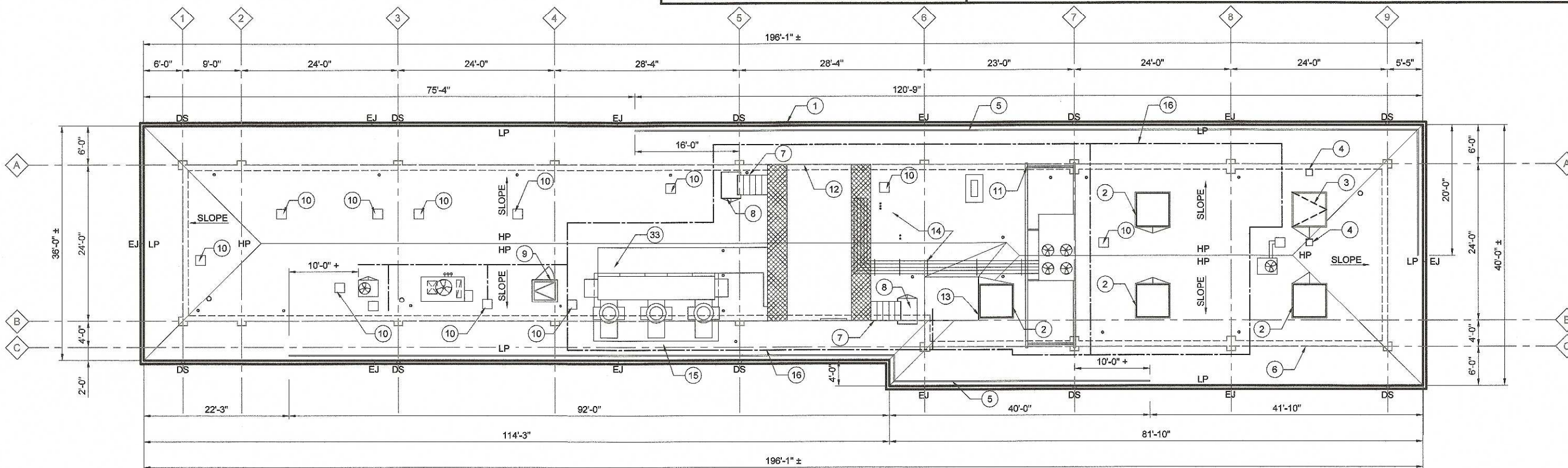
						DESIGNED BRG DRAWN BRG CHECKED DFC DATE JUNE 2018		100% SUBMITTAL VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DRAWING NO. A-2 SHEET NO. 4 OF 13
FILENAME:	REV:	DATE:	BY:	DESCRIPTION:	APVD:	DATE:	TMWRF LAB ROOF ARCHITECTURAL DEMOLITION ROOF PLAN		

**LEGEND**

DS - DOWNSPOUT LOCATION  
EJ - GUTTER EXPANSION JOINT

**NOTES:**

- ALL DIMENSIONS SHALL BE FIELD VERIFIED. EXISTING CONSTRUCTION SHOWN IS BASED ON EXISTING CONSTRUCTION DOCUMENTS.
- COORDINATE THE EXTENT OF THE DEMOLITION WITH DRAWING A-2.
- COORDINATE THE EXTENT OF THE ABATEMENT DEMOLITION WITH ATTACHMENT "A".
- PATCH AND REPAIR ALL SURFACES AND FINISHES DAMAGED DURING THE DEMOLITION WORK. REPAIRED SURFACES AND FINISHES SHALL BE LIKE NEW TO MATCH ADJACENT WORK.
- HP INDICATES THE HIGH POINT OF THE ROOF INSULATION 5-INCHES ABOVE THE TOP OF THE SLOPING CONCRETE.
- LP INDICATES THE LOW POINT OF THE ROOF INSULATION 5-INCHES ABOVE THE TOP OF THE SLOPING CONCRETE.
- MODIFY THE HEIGHT OF THE UNISTRUT DUCT SUPPORTS TO ACCOMMODATE THE HEIGHT OF THE ROOFING SYSTEM.
- THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING GUTTER AND DOWNSPOUT SYSTEM AS PART OF THE BASE BID.
- THE CONTRACTOR SHALL PROVIDE A SEPARATE BID ALTERNATE TO INSTALL A GUTTER AND DOWNSPOUT SYSTEM AT THE PERIMETER OF THE ROOF AS SHOWN ON DRAWINGS A-3 AND A-4.
- THE CONTRACTOR SHALL PROVIDE A PROTECTIVE SCREEN AROUND THE PERIMETER OF ALL HVAC EQUIPMENT FOR THE DURATION OF THE CONSTRUCTION. THE PROTECTIVE SCREEN SHALL ELIMINATE THE POTENTIAL FOR ANY DEBRIS TO ENTER THE HVAC SYSTEMS. ALL HVAC SYSTEMS SHALL REMAIN IN WORKING ORDER DURING CONSTRUCTION.



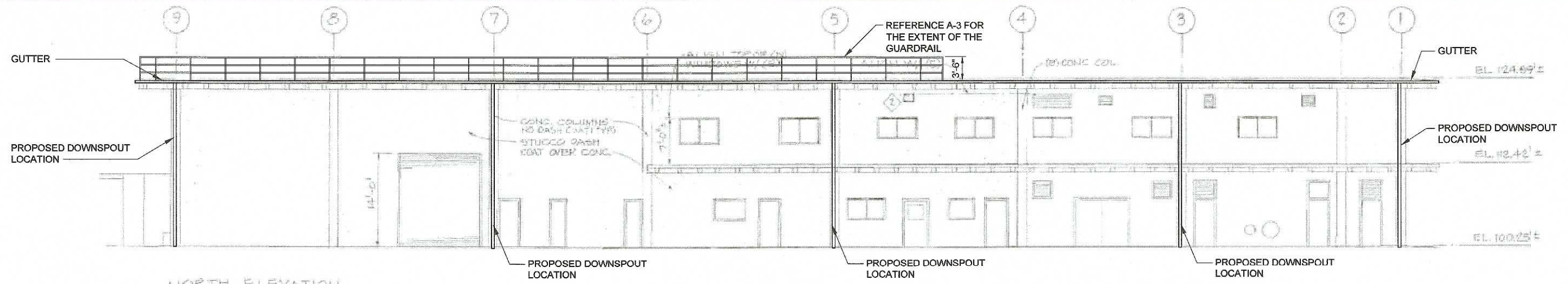
**ROOF PLAN**

SCALE: 1/8" = 1'-0"

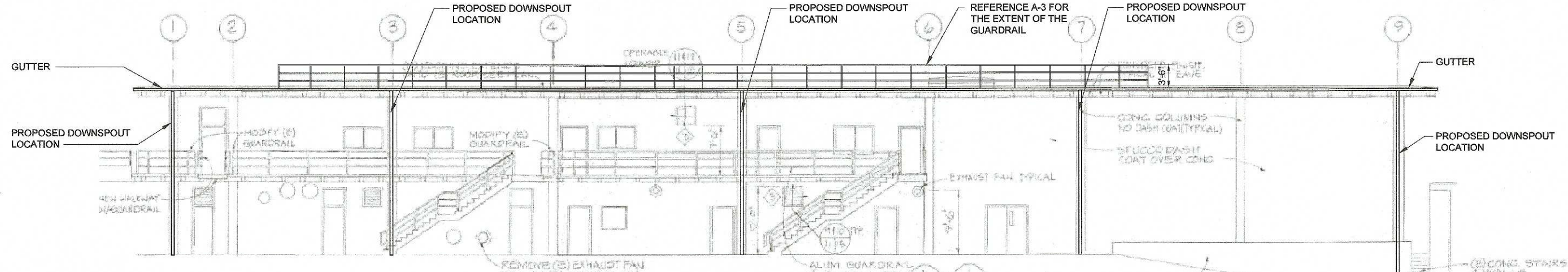
**KEY NOTES:**

- GUTTER.
- 3/8" STAINLESS STEEL CLOSURE PLATE ON EXISTING CURB (REFERENCE DETAIL ON A-5).
- CUSTOM 48" X 48" (VERIFY IN FIELD) SINGLE LEAF EQUIPMENT ACCESS HATCH (TYPE VM) BY BILCO ON EXISTING CURB. (MAINTAIN EXISTING CURB INTERIOR CLEARANCE). PROVIDE BIL-GUARD 2.0 HATCH RAILING SYSTEM BY THE BILCO COMPANY.
- FALL PROTECTION TIE-OFF.
- EXTENT OF GUARDRAIL.
- LINE OF BUILDING WALL BELOW.
- THE LAST TREAD OF THE STAIR SHALL BE REMOVED AND THE STRINGER AND GUARDRAIL SHALL BE MODIFIED TO REST ON THE CONCRETE PAD. THE TOP OF THE CONCRETE PAD SHALL BE SET ONE RISER HEIGHT DOWN FROM THE SECOND TO LAST RISER. (REFERENCE CONCRETE PAD AT EXISTING STAIR DETAIL ON A-7 AND STAIR DETAIL ON S-3)
- CONCRETE PAD, 4 FEET WIDE BY 3 FEET DEEP. (REFERENCE CONCRETE PAD AT EXISTING STAIR DETAIL ON A-7 AND STAIR DETAIL ON S-3)
- ROOF ACCESS HATCH S-50 (ALUMINUM 30-INCHES BY 36") AND BIL-GUARD 2.0 HATCH RAILING SYSTEM BY THE BILCO COMPANY.
- 3/8" STAINLESS STEEL CLOSURE PLATE ON EXISTING CURB. ROOFING SHALL EXTEND OVER THE ALUMINUM CLOSURE PLATE (REFERENCE DETAIL ON A-6).
- EXISTING COUNTER FLASHING SHALL BE REMOVED AND REINSTALLED AT THE COMPLETION OF THE ROOFING SYSTEM INSTALLATION. TYPICAL OF 4 LOCATIONS.
- EXTEND THE PVC FLASHING VERTICALLY UP THE FACE OF THE HVAC EQUIPMENT CURB (FULL HEIGHT).
- PROVIDE A TRANSITION DETAIL BETWEEN THE TOP OF THE ELEVATOR SHAFT AND THE TOP OF THE CLOSURE PLATE.
- PROVIDE H-BLOCK BASE TO ACCOMMODATE THE CHANGE IN HEIGHT OF THE INSULATION SYSTEM. MAINTAIN THE SLOPE OF THE EXISTING HVAC LINES.
- ADJUST THE HEIGHT OF OR REPLACE THE BLOCKING SUPPORTING THE CONDUIT TO ACCOMMODATE THE HEIGHT OF THE INSULATION SYSTEM.
- LINE INDICATES EXTENT OF WALKWAY

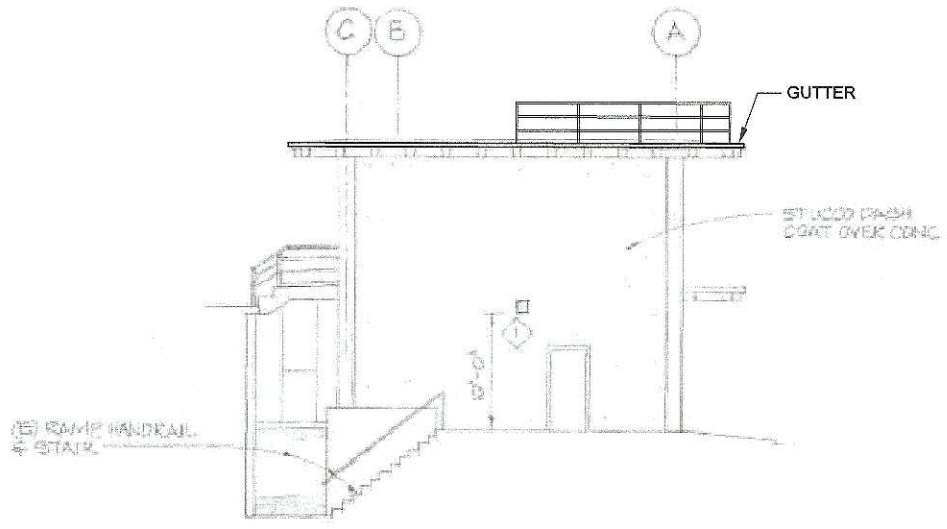
		DESIGNED BRG DRAWN BRG CHECKED DFC DATE JUNE 2018				TMWRF LAB ROOF ARCHITECTURAL  ROOF PLAN	100% SUBMITTAL VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. DRAWING NO. <b>A-3</b> SHEET NO. 5 OF 13	
FILENAME:	REV	DATE	BY	DESCRIPTION	APVD	DATE			



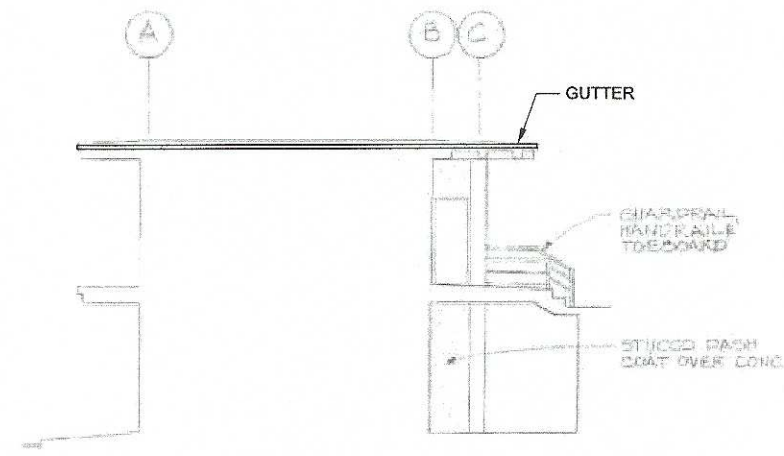
NORTH ELEVATION  
1/8" = 1'-0"



SOUTH ELEVATION  
1/8" = 1'-0"



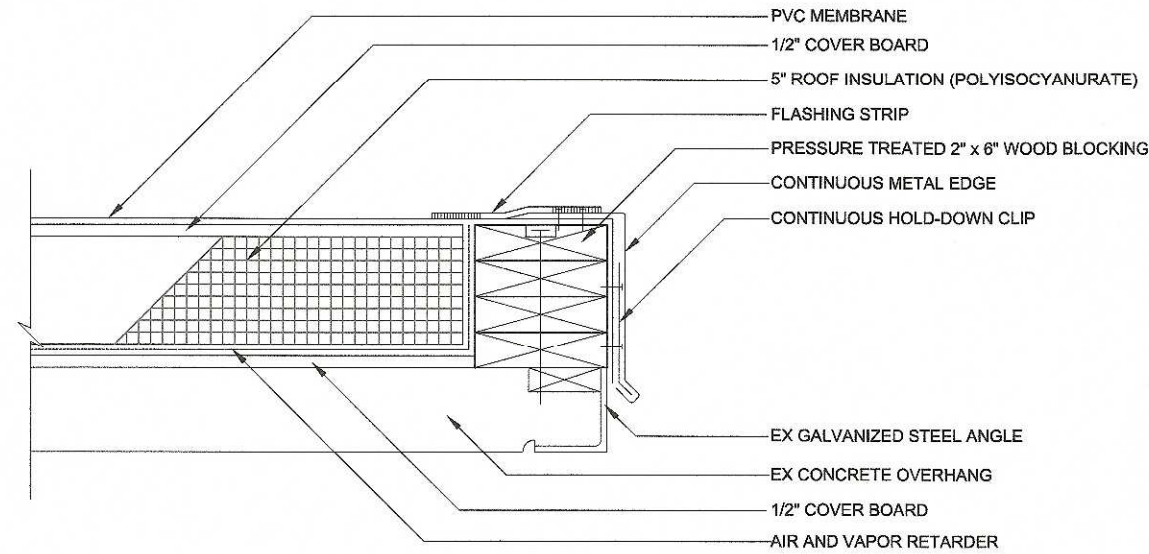
EAST ELEVATION  
1/8" = 1'-0"



WEST ELEVATION  
1/8" = 1'-0"

- NOTES:**
1. THE EXISTING ELEVATIONS SHOWN ON THIS DRAWING ARE TO ESTABLISH THE EXTENT OF THE GUTTERS AND DOWNSPOUTS ONLY.
  2. THE CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING GUTTER AND DOWNSPOUT SYSTEM AS PART OF THE BASE BID.
  3. THE CONTRACTOR SHALL PROVIDE A SEPARATE BID ALTERNATE TO INSTALL A GUTTER AND DOWNSPOUT SYSTEM AT THE PERIMETER OF THE ROOF AS SHOWN

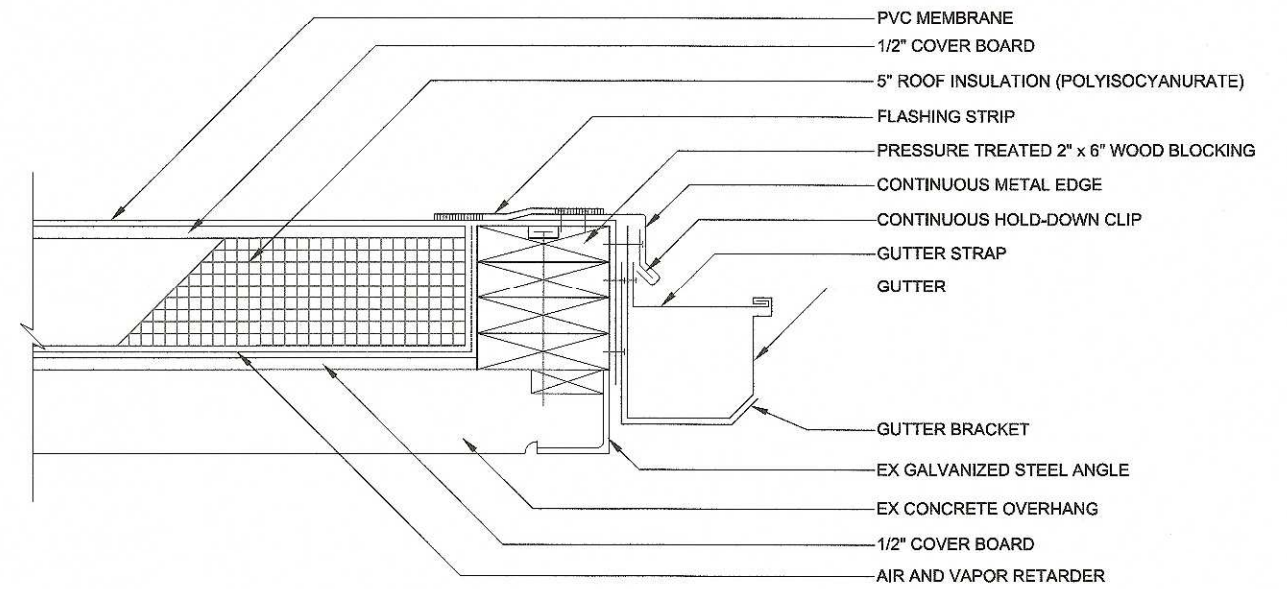
DESIGNED BRG DRAWN BRG CHECKED DFC DATE JUNE 2018												100% SUBMITTAL TMWRF LAB ROOF ARCHITECTURAL ELEVATIONS		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"		JOB NO. DRAWING NO. <b>A-4</b> SHEET NO. 6 OF 13	
FILENAME:	REV	DATE	BY	DESCRIPTION	APVD	DATE											



**TYPICAL METAL EDGE**

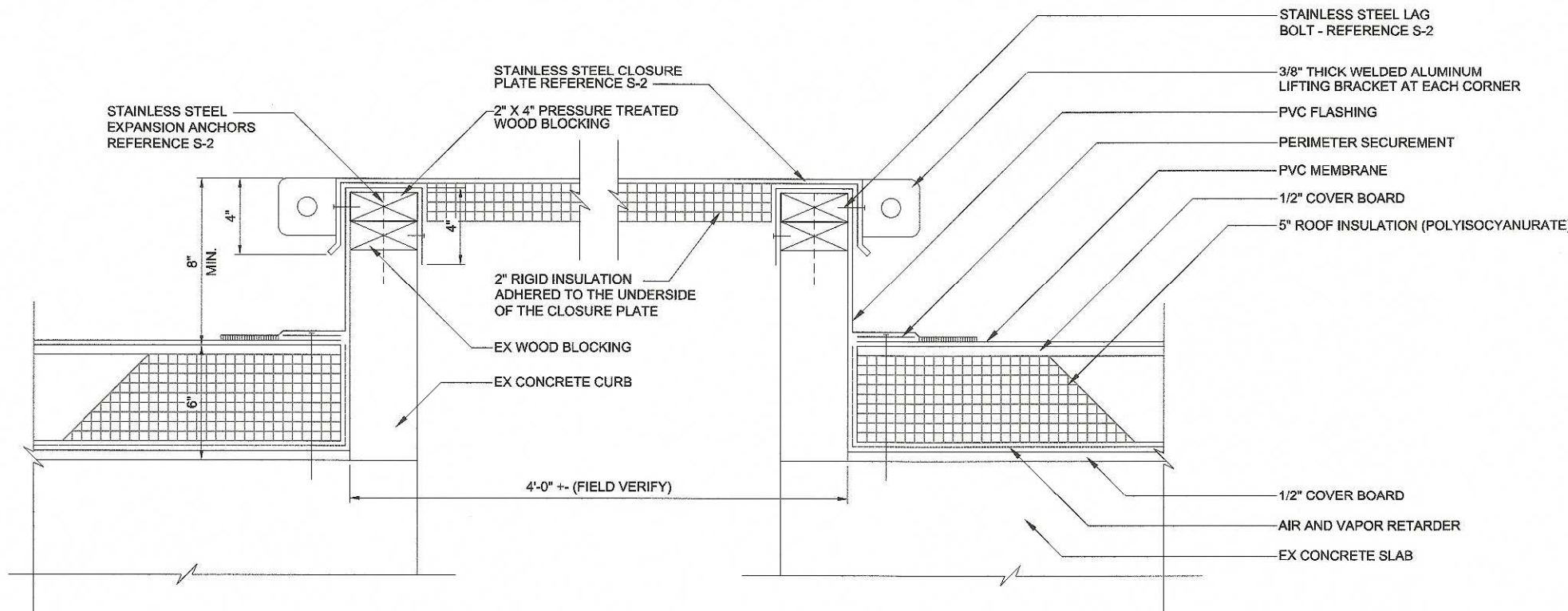
SCALE: 3" = 1'-0"

(THIS DETAIL SHALL BE REFERENCED IF THE GUTTER IS NOT INSTALLED AROUND THE PERIMETER OF THE ROOF)



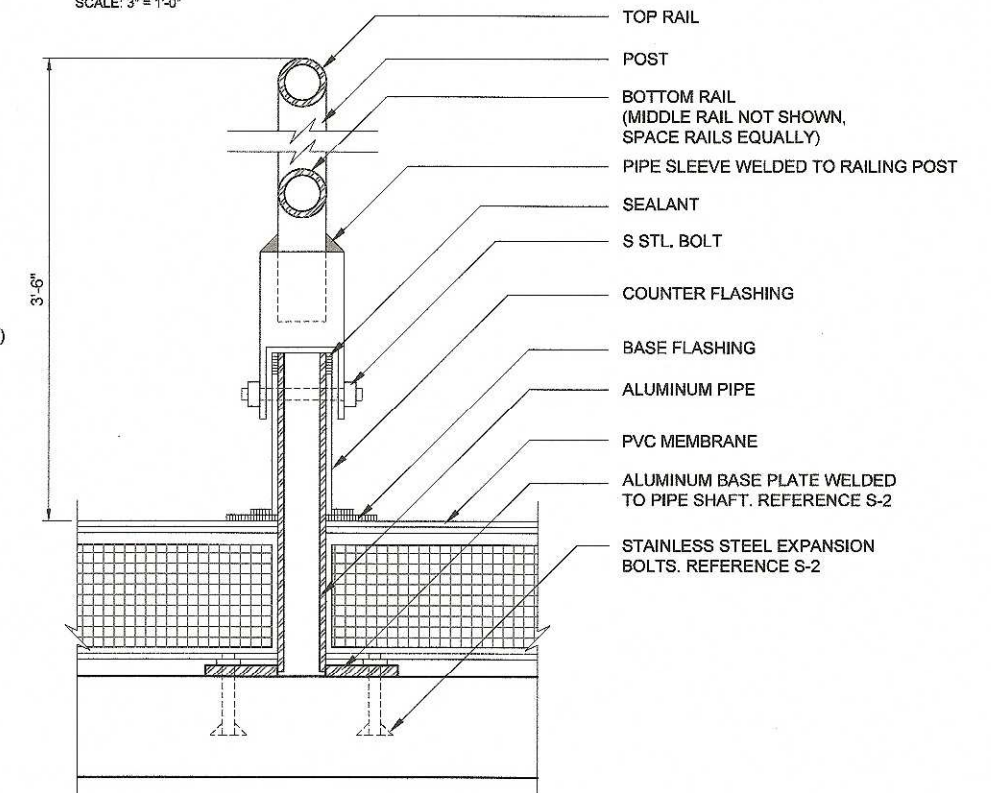
**GUTTER EDGE**

SCALE: 3" = 1'-0"



**CLOSURE AT EXISTING OPENINGS (KEYNOTE 2 ON A-3)**

SCALE: 3" = 1'-0"

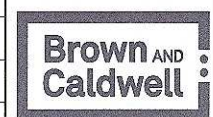


**GUARDRAIL SUPPORT**

SCALE: 3" = 1'-0"

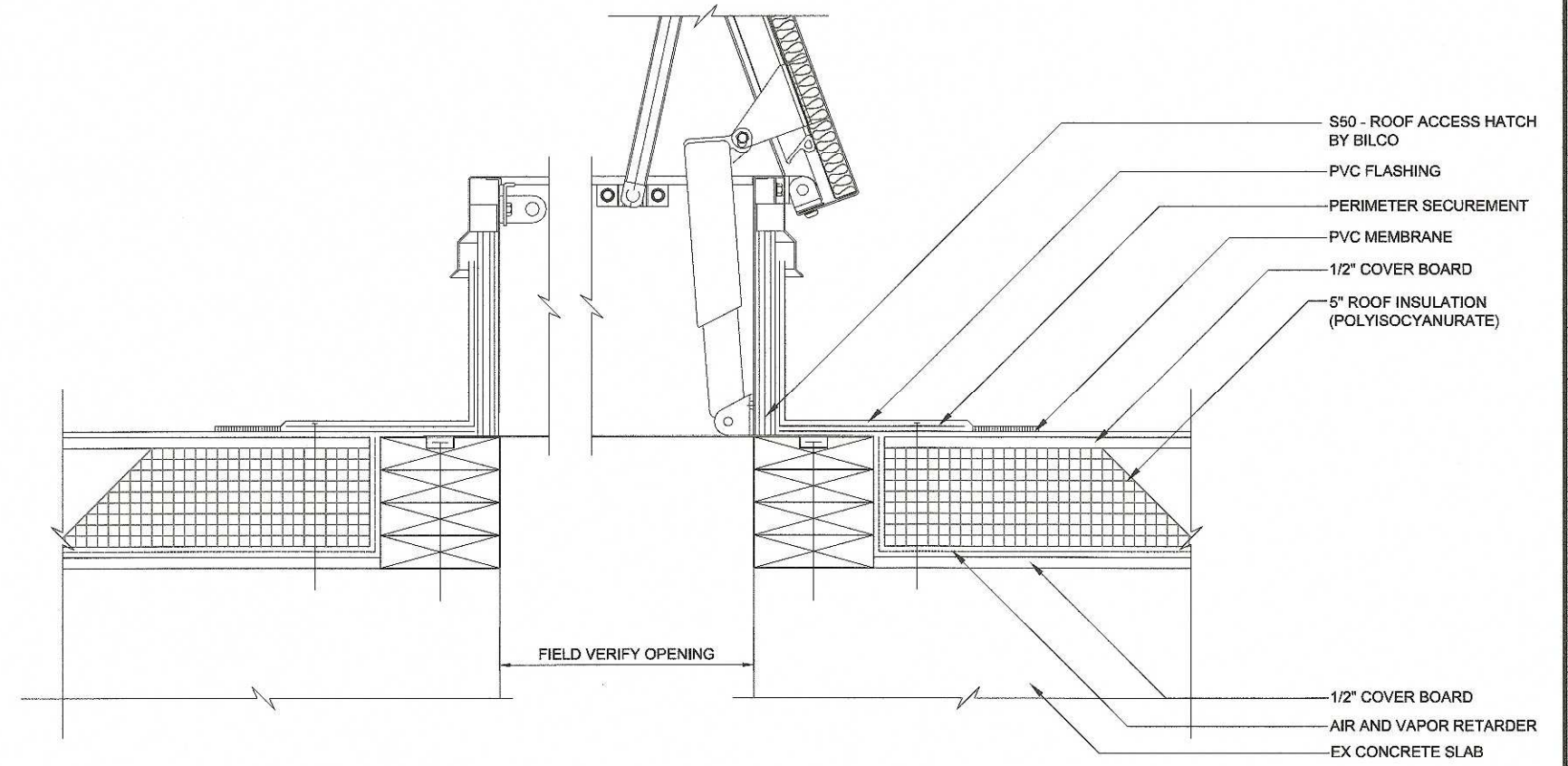
REV	DATE	BY	DESCRIPTION	APVD	DATE

DESIGNED BRG  
 DRAWN BRG  
 CHECKED DFC  
 DATE JUNE 2018



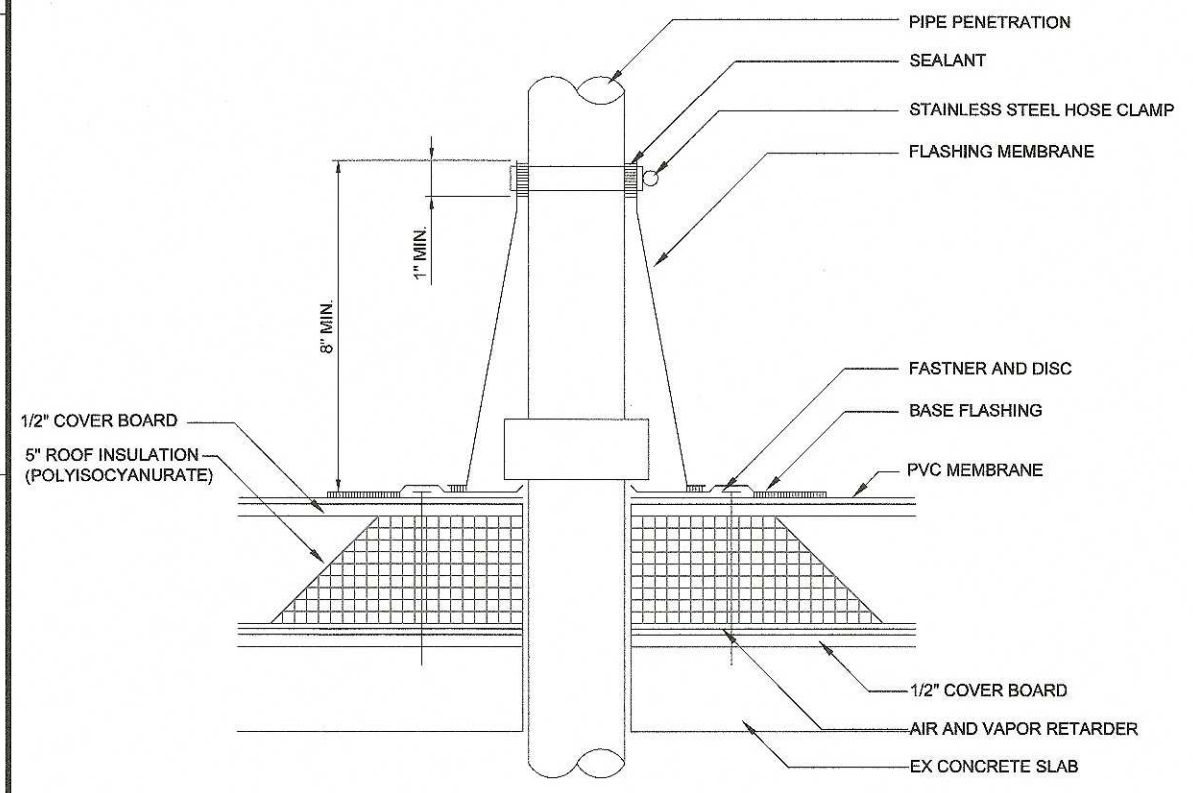
100% SUBMITTAL
TMWRP LAB ROOF ARCHITECTURAL
MISCELLANEOUS DETAILS

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. DRAWING NO. A-5 SHEET NO. 7 OF 13
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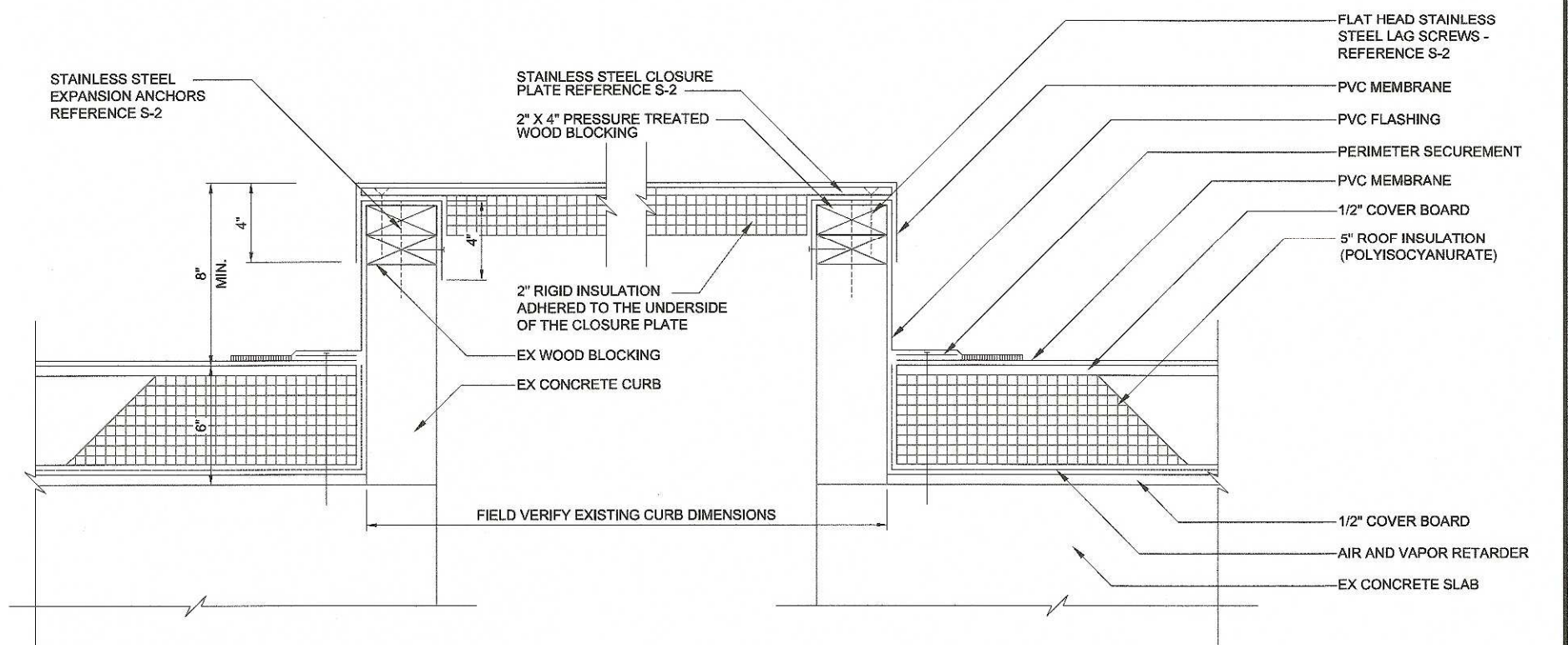
ROOF HATCH AT EXISTING HATCH OPENING (KEYNOTE 9 ON A-3)

SCALE: 3" = 1'-0"



PIPE PENETRATION

SCALE: 3" = 1'-0"



CLOSURE AT EXISTING OPENINGS (KEYNOTE 10 ON A-3)

SCALE: 3" = 1'-0"

REV	DATE	BY	DESCRIPTION	APVD	DATE

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 DATE JUNE 2018

**Brown AND Caldwell**

**City of Sparks**

**TRUCKEE MEADOWS**  
 WATER RECLAMATION FACILITY

TMWRF LAB ROOF  
 ARCHITECTURAL

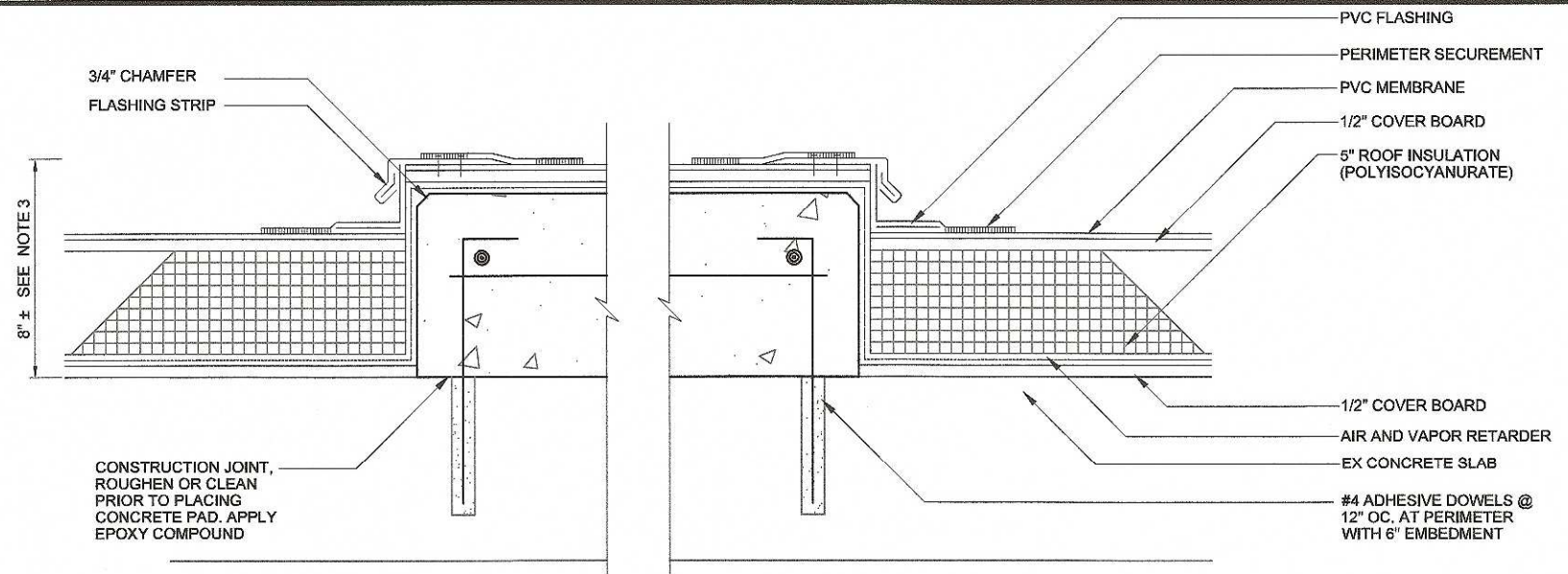
MISCELLANEOUS DETAILS

100% SUBMITTAL

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
 DRAWING NO.  
 A-6  
 SHEET NO.  
 8 OF 13



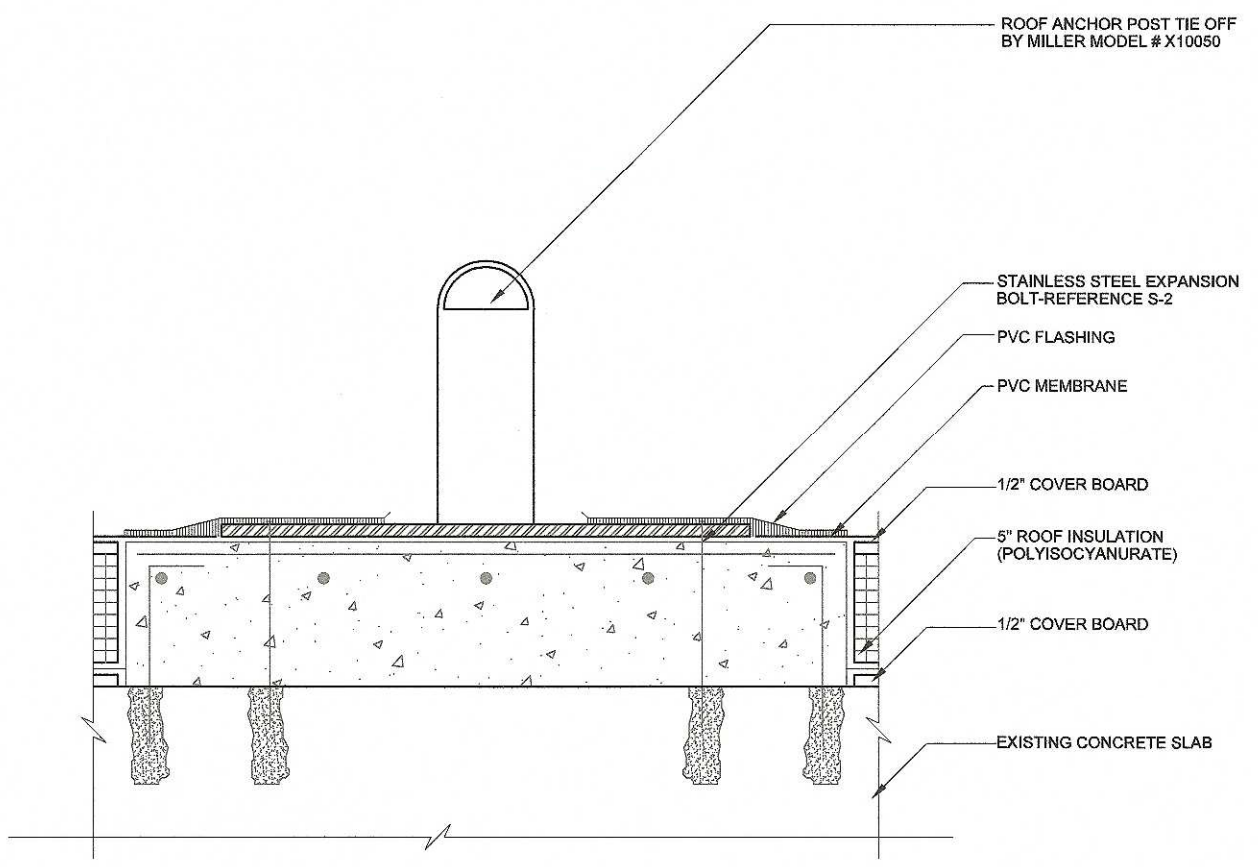


CONCRETE PAD AT EXISTING STAIR

SCALE: 3" = 1'-0"

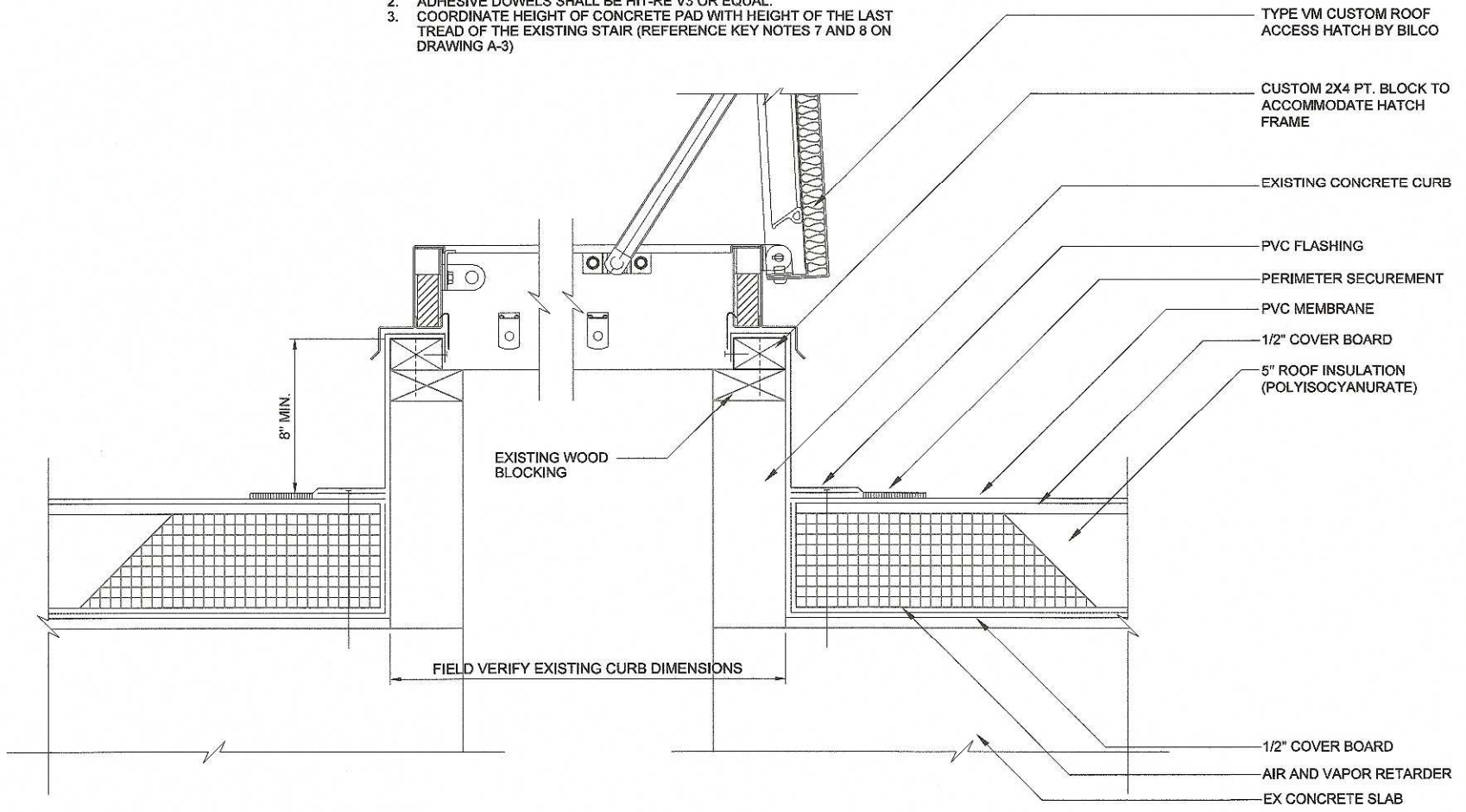
NOTE:

1. PROVIDE 3" MINIMUM FROM THE CENTER OF THE REINFORCING TO THE FACE OF THE CONCRETE TOP AND BOTTOM.
2. ADHESIVE DOWELS SHALL BE HIT-RE V3 OR EQUAL.
3. COORDINATE HEIGHT OF CONCRETE PAD WITH HEIGHT OF THE LAST TREAD OF THE EXISTING STAIR (REFERENCE KEY NOTES 7 AND 8 ON DRAWING A-3)



ROOF TIE OFF (KEYNOTE 4 ON A-3)

SCALE: 3" = 1'-0"



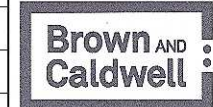
ROOF HATCH AT EXISTING OPENING (KEYNOTE 3 ON A-3)

SCALE: 3" = 1'-0"

REV	DATE	BY	DESCRIPTION	APVD	DATE



DESIGNED BRG  
 DRAWN BRG  
 CHECKED DFC  
 DATE JUNE 2018



100% SUBMITTAL

TMWRF LAB ROOF  
 ARCHITECTURAL

MISCELLANEOUS DETAILS

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
 DRAWING NO. A-7  
 SHEET NO. 9 OF 13

**SPECIAL INSPECTIONS**

S1.1 AN INDEPENDENT TESTING COMPANY RETAINED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL SHALL INSPECT THE FOLLOWING:


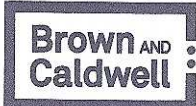


**QUALITY ASSURANCE NOTES**

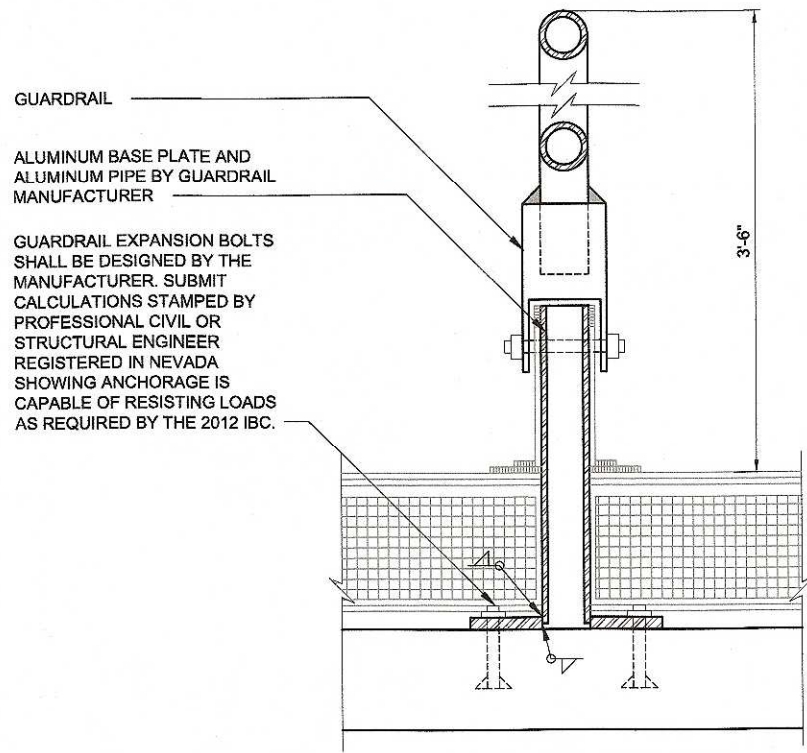
1. THE QUALITY OF THE WORKMANSHIP AND THE QUALITY OF THE MATERIALS OF CONSTRUCTION ARE GOVERNED BY THE INTERNATIONAL BUILDING CODE, 2012 EDITION (IBC).
2. ALL NEW STRUCTURES AND MODIFICATIONS TO EXISTING STRUCTURES TO BE CONSTRUCTED AS A PART OF THIS PROJECT ARE CLASSIFIED AS OCCUPANT CATEGORY III, WASTE WATER TREATMENT FACILITY, IN ACCORDANCE WITH THE IBC. THE STRUCTURES ARE CLASSIFIED AS SEISMIC DESIGN CATEGORY D.
3. TO ASSURE THE QUALITY OF THE CONSTRUCTION OF THIS PROJECT, STRUCTURAL TESTS, SPECIAL INSPECTION AND STRUCTURAL OBSERVATION WILL BE PERFORMED IN ACCORDANCE WITH IBC, CHAPTER 17.
4. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE CONTINUOUS, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED AND PROVIDING FULL-TIME OBSERVATION OF THE WORK REQUIRING SPECIAL INSPECTION.
5. WHERE FREQUENCY OF INSPECTION IS SPECIFIED TO BE PERIODIC, THE SPECIAL INSPECTOR IS EXPECTED TO BE PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK (PRIOR TO THE NEXT CONSTRUCTION TASK).
6. SPECIAL INSPECTIONS ARE IN ADDITION TO INSPECTIONS BY THE BUILDING OFFICIALS. CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL. COORDINATE WITH BUILDING DEPARTMENT TO DETERMINE REQUIRED INSPECTIONS.
7. CONTRACTOR SHALL PROVIDE ACCESS TO THE WORK FOR REQUIRED INSPECTIONS. CONTRACTOR SHALL PROVIDE NOTIFICATION IN ADVANCE OF REQUIRED INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS.

**STRUCTURAL DEFERRED SUBMITTALS** (IBC 2012, SECTION 107.3.4.1)

- THE CONTRACTOR SHALL SUBMIT DRAWINGS AND CALCULATIONS BEARING THE SEAL OF A PROFESSIONAL ENGINEER LICENSED IN NEVADA TO THE ENGINEER FOR REVIEW. STRUCTURAL DEFERRED SUBMITTALS INCLUDE:
1. ANCHOR BOLTS FOR ALL EQUIPMENT ANCHORAGE AND FOR GUARDRAIL AND FALL PROTECTION DEVICES.
  2. GUARDRAILS AND HANDRAILS

TABLE 1 REQUIRED SPECIAL INSPECTIONS - STRUCTURAL SYSTEMS				
SYSTEM OR MATERIAL	REQUIRED INSPECTION	FREQUENCY OF INSPECTION		REMARKS
		CONTINUOUS	PERIODIC	
	INSPECT ANCHORS TO BE CAST IN CONCRETE		X	PRIOR TO AND DURING CONCRETE PLACEMENT
	INSPECT POST-INSTALLED CONCRETE ANCHORS: - HORIZONTAL AND UPWARDLY INCLINED ADHESIVE ANCHORS - OTHER ANCHORS UNLESS ICC REPORT REQUIRED CONTINUOUS INSPECTION	X	X	INSPECTION TO CONFORM TO IBC AND TO ANCHOR MANUFACTURER'S RECOMMENDATIONS AND ICC REPORTS
STRUCTURAL STEEL AND ALUMINUM	VERIFY MATERIAL OF ANCHOR BOLTS AND THREADED RODS		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIAL OF HIGH-STRENGTH BOLTS, NUTS AND WASHERS		X	CONTRACTOR TO SUBMIT MANUFACTURER'S CERTIFIED TEST REPORTS
	VERIFY MATERIALS FOR WELD FILLER MATERIALS		X	
	VERIFY WELDER QUALIFICATIONS		X	CONTRACTOR TO SUBMIT WELDERS CERTIFICATES
	VERIFY USE OF PROPER WELDING PROCEDURES		X	
	INSPECT SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"		X	VISUALLY INSPECT ALL WELDS

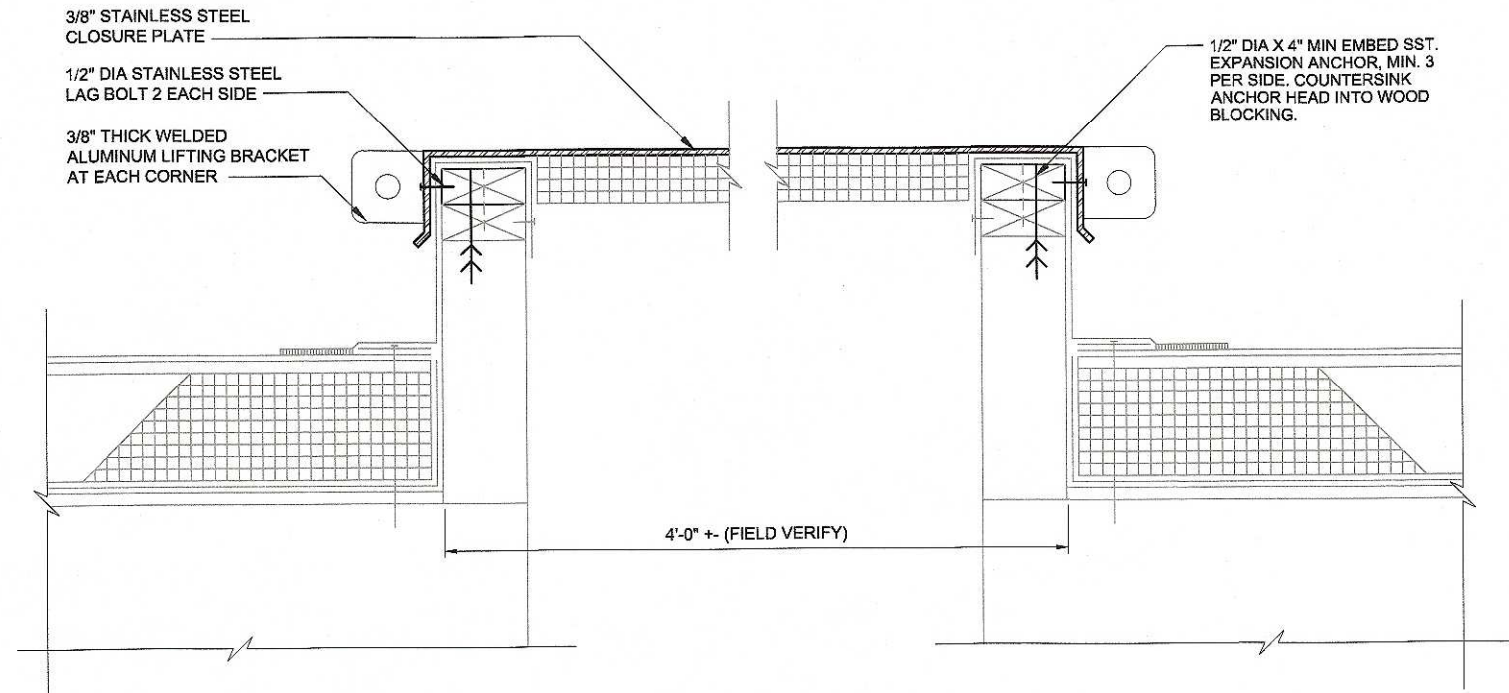
FILENAME:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>APVD</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REV	DATE	BY	DESCRIPTION	APVD	DATE																										DESIGNED JAS DRAWN BRG CHECKED WGR DATE JUNE 2018				<b>TMWRF LAB ROOF</b> <b>STRUCTURAL</b>  <b>SPECIAL INSPECTION NOTES</b>	100% SUBMITTAL VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO.  DRAWING NO. <b>S-1</b>  SHEET NO. 10 OF 13
REV	DATE	BY	DESCRIPTION	APVD	DATE																																		



**GUARDRAIL SUPPORT**

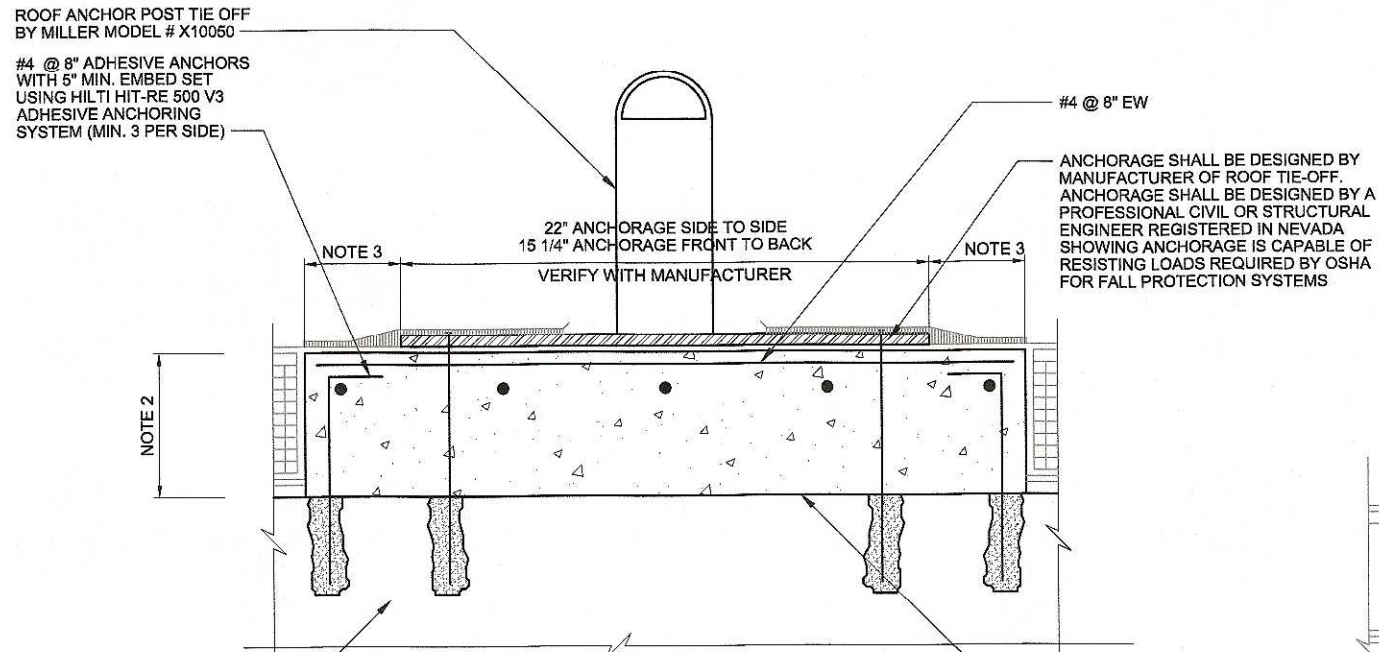
SCALE: 3" = 1'-0"

NOTE 1: REINFORCEMENT IN THE EXISTING SLAB SHALL BE LOCATED BY NON-DESTRUCTIVE METHODS (TWO WEEKS PRIOR TO GUARDRAIL INSTALLATION) BEFORE CORE DRILLING HOLES FOR EXPANSION BOLTS. EXPANSION BOLTS SHALL BE LOCATED TO AVOID EXISTING REINFORCEMENT.



**CLOSURE AT EXISTING OPENINGS (KEYNOTE 2 ON A-3)**

SCALE: 3" = 1'-0"



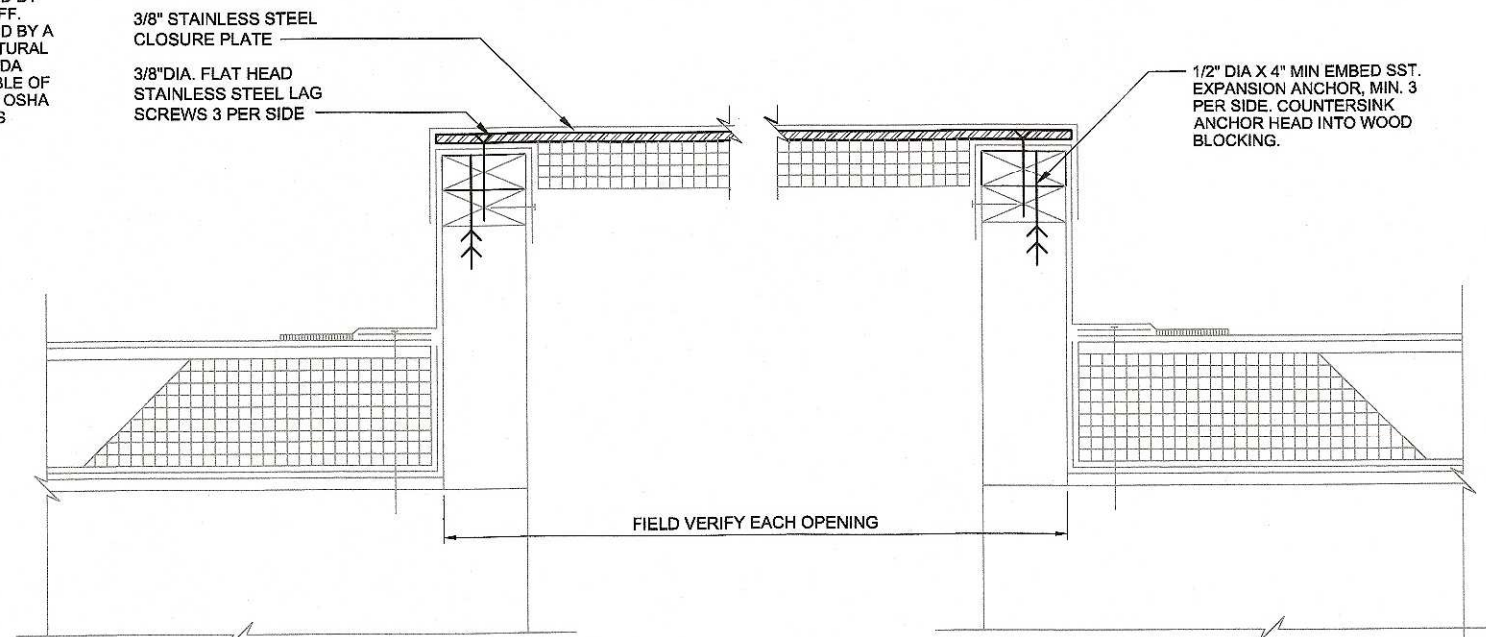
**ROOF TIE OFF (KEYNOTE 4 ON A-3)**

SCALE: 3" = 1'-0"

NOTE 1: REINFORCEMENT IN THE EXISTING SLAB SHALL BE LOCATED BY NON-DESTRUCTIVE METHODS (TWO WEEKS PRIOR TO ROOF TIE OFF INSTALLATION) BEFORE CORE DRILLING HOLES FOR EXPANSION BOLTS. EXPANSION BOLTS SHALL BE LOCATED TO AVOID EXISTING REINFORCEMENT

NOTE 2: MATCH INSULATION PLUS COVER BOARD THICKNESS. (6" MIN.)

NOTE 3: 4" MIN. INCREASE DISTANCE AS REQUIRED BASED ON MANUFACTURER'S ANCHOR BOLT CALCULATIONS



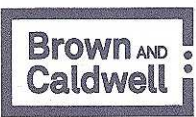
**CLOSURE AT EXISTING OPENINGS (KEYNOTE 10 ON A-3)**

SCALE: 3" = 1'-0"

REV	DATE	BY	DESCRIPTION	APVD	DATE



DESIGNED  
JAS  
DRAWN  
BRG  
CHECKED  
WGR  
DATE  
JUNE 2018



100% SUBMITTAL

TMWRF LAB ROOF  
STRUCTURAL  
MISCELLANEOUS DETAILS

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S-2
	SHEET NO. 11 OF 13

**GENERAL NOTES**

1. TRIM BOTH SIDES OF STAIRS AS REQUIRED
2. MODIFY BOTH SETS OF STAIRS, REFERENCE KEYNOTE 7 ON SHEET A-3

**KEY NOTES:**

1. REMOVE BOTTOM STAIR TREAD AND INSTALL NEW CONCRETE PAD TO MATCH EXISTING BOTTOM TREAD ELEVATION; REFERENCE SHEETS A-7 FOR CONCRETE PAD DETAIL.
2. CUT AND RE-WELD STRINGER, KICK PLATE, AND HANDRAIL.. LENGTH REMOVED SHALL BE AS REQUIRED TO SHORTEN STAIRS TO ALLOW BOTTOM OF STAIRS TO REST ON NEW RAISED PAD (REFERENCE SHEETS A-7) RE-WELD ALL CUT JOINTS AND TOUCH UP WITH PAINT TO MATCH EXISTING.



1

2

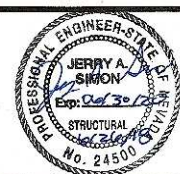
PHOTO



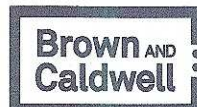
SCALE: NONE

100% SUBMITTAL

REV	DATE	BY	DESCRIPTION	APVD	DATE



DESIGNED  
JAS  
DRAWN  
BRG  
CHECKED  
WGR  
DATE  
JUNE 2018



TMWRF LAB ROOF  
STRUCTURAL  
EXISTING STAIR  
MODIFICATIONS

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
DRAWING NO.  
**S-3**  
SHEET NO.  
12 OF 13

FILENAME:

**GENERAL NOTES**

1. COORDINATE WITH THE OWNER'S LAB STAFF AND SCHEDULE ALL WORK AT A TIME WHEN THE EXHAUST FANS CAN BE REMOVED FROM SERVICE.
2. ASSUME ALL WORK MUST BE PERFORMED ON A SATURDAY OR SUNDAY WITH EXHAUST FANS OFF FOR A MAXIMUM DURATION OF 8 HOURS.
3. PHOTOGRAPH AND DOCUMENT ALL EXISTING WIRING TERMINATIONS BEFORE PERFORMING ANY WORK.

**KEY NOTES:**

1. DE-TERMINATE CONDUCTORS ON BUILDING SUPPLY END AND PULL CONDUCTORS UP TO EXISTING CONDULET.
2. EXTEND EXISTING CONDUIT 6" HIGHER ABOVE EXISTING PENETRATION TO ACCOMMODATE INCREASED ROOF INSULATION THICKNESS. RE-ROUTE CONDUIT TO SHORTEN RUN TO ACCOMMODATE EXISTING CONDUCTOR LENGTH. RE-PULL CONDUCTORS AND RE-TERMINATE TO MATCH EXISTING.
3. DE-TERMINATE CONDUCTORS FROM DISCONNECT SWITCH AND PULL DOWN TO CLOSEST JUNCTION BOX OR ENCLOSURE. EXTEND CONDUIT 6" HIGHER ABOVE EXISTING PENETRATION TO ACCOMMODATE INCREASED ROOF INSULATION THICKNESS AND ADJUST LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) ALIGNMENT ACCORDINGLY. RE-PULL CONDUCTORS AND RE-TERMINATE TO MATCH EXISTING.



1

PHOTO A  
E-01  
SCALE: NONE



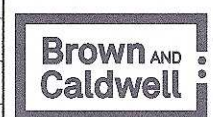
3

PHOTO B  
E-01  
SCALE: NONE

REV	DATE	BY	DESCRIPTION	APVD	DATE



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MP  
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RJ  
DATE  
JUNE 2018



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TMWRF LAB ROOF  
ELECTRICAL  
EXISTING ROOF CONDUIT  
MODIFICATIONS

100% SUBMITTAL	
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. DRAWING NO. <b>E-1</b> SHEET NO. 13 OF 13