

ROOF REPLACEMENT

SCHOOL OF SOCIAL WORK BUILDING

5447 WOODWARD AVENUE

DETROIT, MICHIGAN 48202

WSU PROJECT NUMBER: 063-304298

ALTERNATES:

- ALTERNATE NO. 1: NEW ROOF — REFER TO SPECIFICATION SECTION 075216—STYRENE—BUTADIENE—STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING, AND DRAWINGS.

  1. BASE BID: 2-PLY STYRENE—BUTADIENE—STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING, 2-INCH MINERAL WOOL ROOF INSULATION (R-8), 3.8-INCH POLYISOCYANURATE ROOF INSULATION (R-22), 2-PLY VAPOR BARRIER (APPROXIMATELY 6-1/2 INCHES).
  2. ALTERNATE BID: 2-PLY STYRENE—BUTADIENE—STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING, 5/8-INCH COVER BOARD, 2.6-INCH POLYISOCYANURATE ROOF INSULATION (R15), BASE LAYER OF 2.6-INCH POLYISOCYANURATE ROOF INSULATION (R15), 2-PLY VAPOR BARRIER (APPROXIMATELY 6-1/8 INCHES).
- ALTERNATE NO. 2: INCREASE SBS ROOF MANUFACTURER'S WARRANTY FROM 20 TO 25 YEARS — REFER TO SPECIFICATION SECTION 075216—STYRENE—BUTADIENE—STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING, AND DRAWINGS.

  1. BASE BID: ONE BASE LAYER MOPPED-IN BASE SHEET. (2-PLY SYSTEM)
  2. ALTERNATE BID: 2 LAYERS BASE SHEET, MOPPED-IN INDIVIDUALLY. (3-PLY SYSTEM)
- ALTERNATE NO. 3: REMOVE GAS PIPE COMPLETE AND REPLACE WITH NEW. REFER TO SPECIFICATION SECTION 231123—FACILITY NATURAL—GAS PIPING, AND DRAWINGS

  1. BASE BID: REMOVE GAS PIPE FOR REINSTALLATION.
  2. ALTERNATE BID: REMOVE GAS PIPE COMPLETE. REPLACE GAS PIPE WITH NEW MATERIALS.
- ALTERNATE NO. 4: GUARD RAIL. REFER TO SPECIFICATION SECTION 055000—METAL FABRICATIONS, AND DRAWINGS

  1. BASE BID: REMOVE GALVANIZED STEEL TUBE GUARD RAIL AND PERFORATED STAINLESS STEEL METAL PANELS, STORE TO BE REUSED PER DETAIL 2/A-501.
  2. ALTERNATE BID: REMOVE GALVANIZED STEEL TUBE GUARD RAIL AND PERFORATED STAINLESS STEEL METAL PANELS COMPLETE. FABRICATE ALL NEW ELEMENTS PER REQUIREMENTS OF DETAIL 3/A-501.
- ALTERNATE NO. 5: PERIMETER COPING. REFER TO SPECIFICATION SECTION 076200—SHEET METAL FLASHING AND TRIM, AND DRAWINGS

  1. BASE BID: 24 GAUGE STAINLESS STEEL COPING.
  2. ALTERNATE BID: 24 GAUGE GALVANIZED SHEET STEEL WITH THREE-COAT FLUOROPOLYMER COIL-COATED FINISH. FINISH COLOR TO MATCH COLOR OF EXISTING GUARD RAIL.



BIDS

CLIENT:  
WAYNE STATE UNIVERSITY  
FACILITIES PLANNING & MANAGEMENT  
5454 CASS AVENUE  
DETROIT, MICHIGAN 48202

ARCHITECT:  
NSA ARCHITECTS, ENGINEERS, PLANNERS  
23761 RESEARCH DRIVE,  
FARMINGTON HILLS, MICHIGAN 48335  
(248) 477-2444

DRAWING LIST

GENERAL

G-100    DRAWING LIST / LOCATION PLAN

ARCHITECTURAL

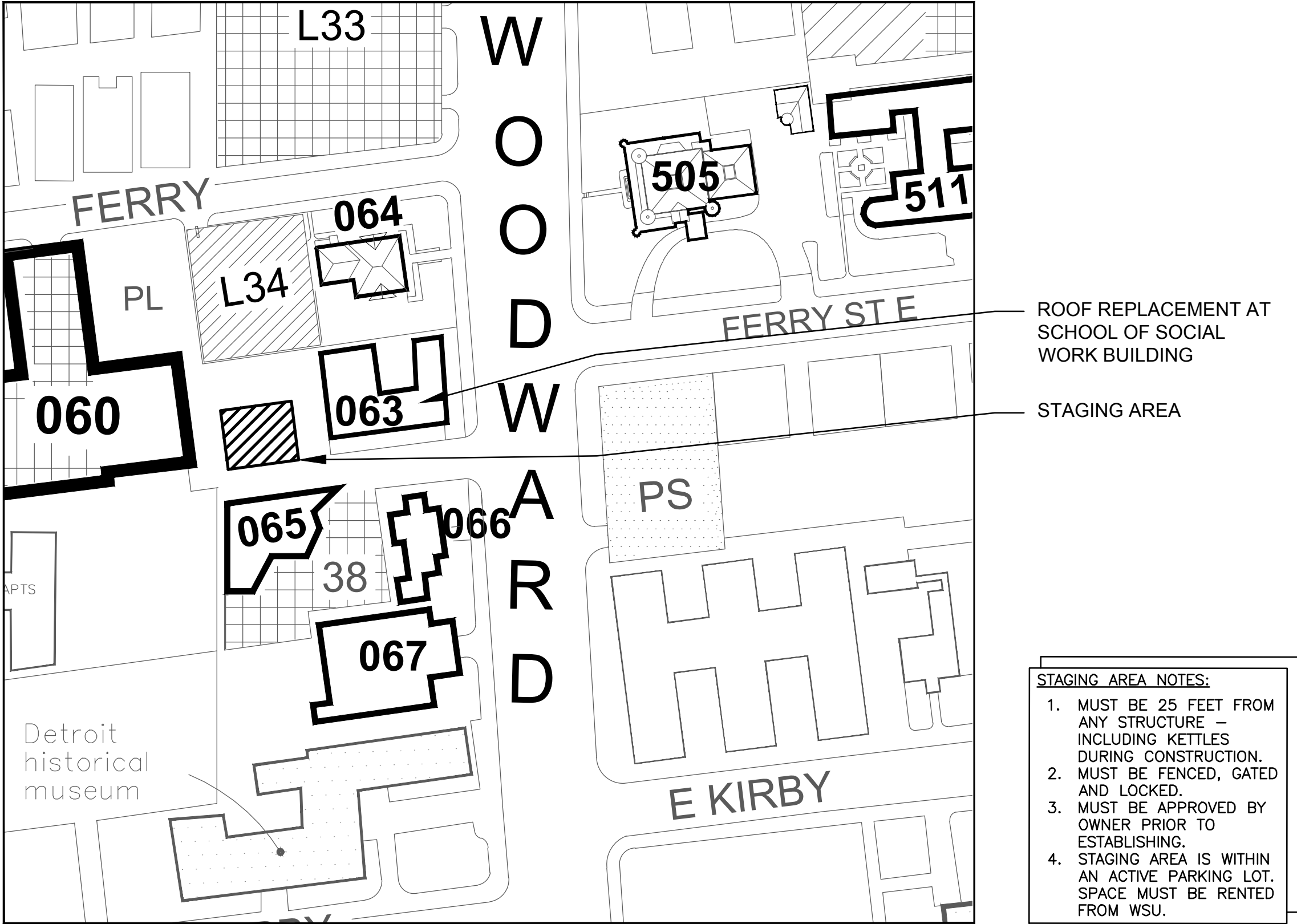
A-120    DEMOLITION ROOF PLAN  
A-121    ROOF PLAN  
A-500    DETAILS  
A-501    DETAILS

MECHANICAL

M-120    MECHANICAL ROOF PLAN - DEMOLITION  
M-121    MECHANICAL ROOF PLAN - NEW WORK

ELECTRICAL

E-000    ELECTRICAL SYMBOLS LIST  
E-001    ELECTRICAL DEMOLITION ROOF PLAN  
E-101    ELECTRICAL NEW ROOF PLAN



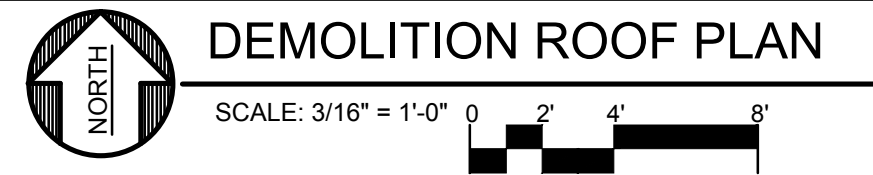
LOCATION PLAN  
NO SCALE

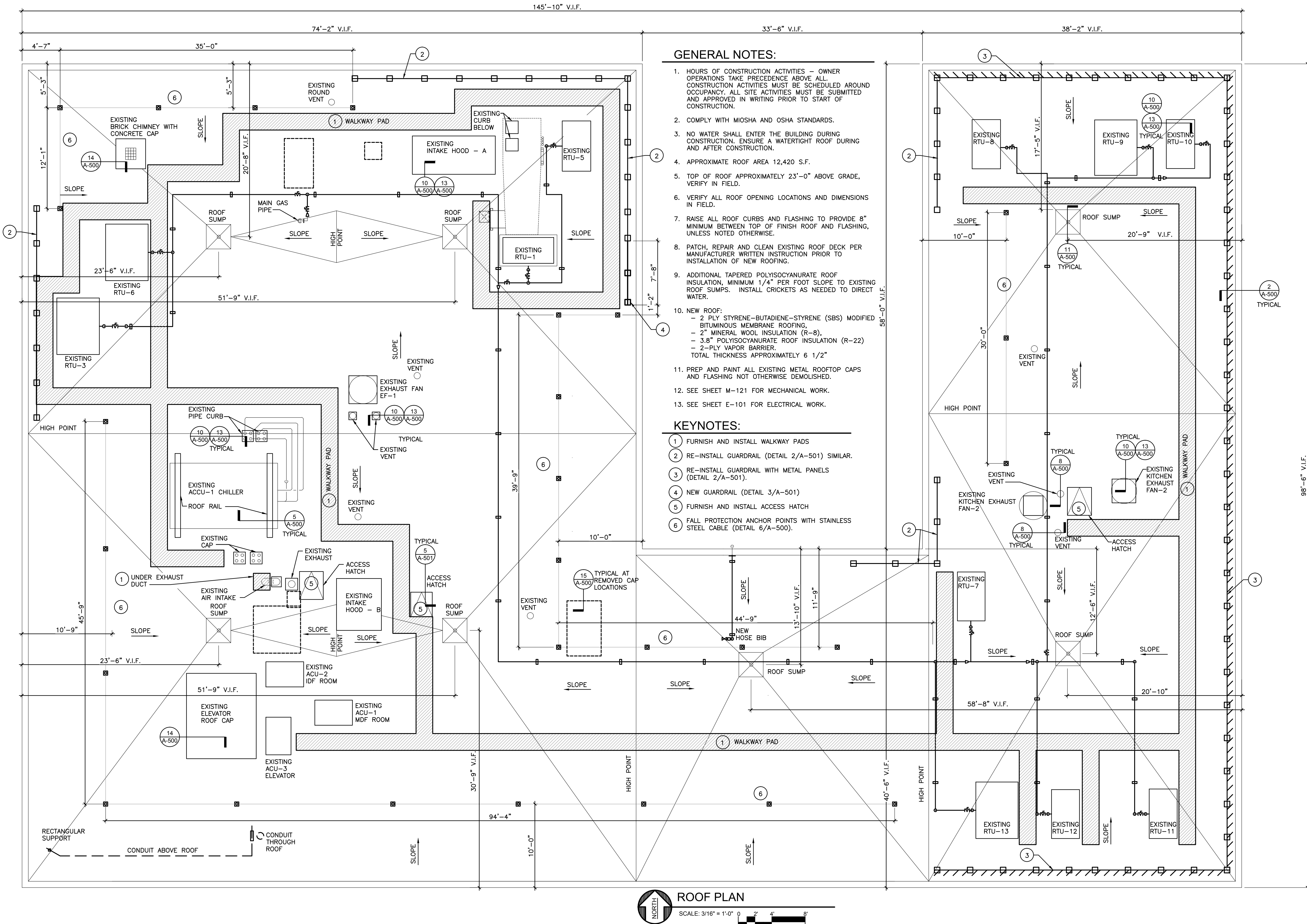
WAYNE STATE UNIVERSITY, FACILITIES PLANNING & MANAGEMENT  
ROOF REPLACEMENT  
ISSUED FOR: BIDS  
DATE: 07-24-2016

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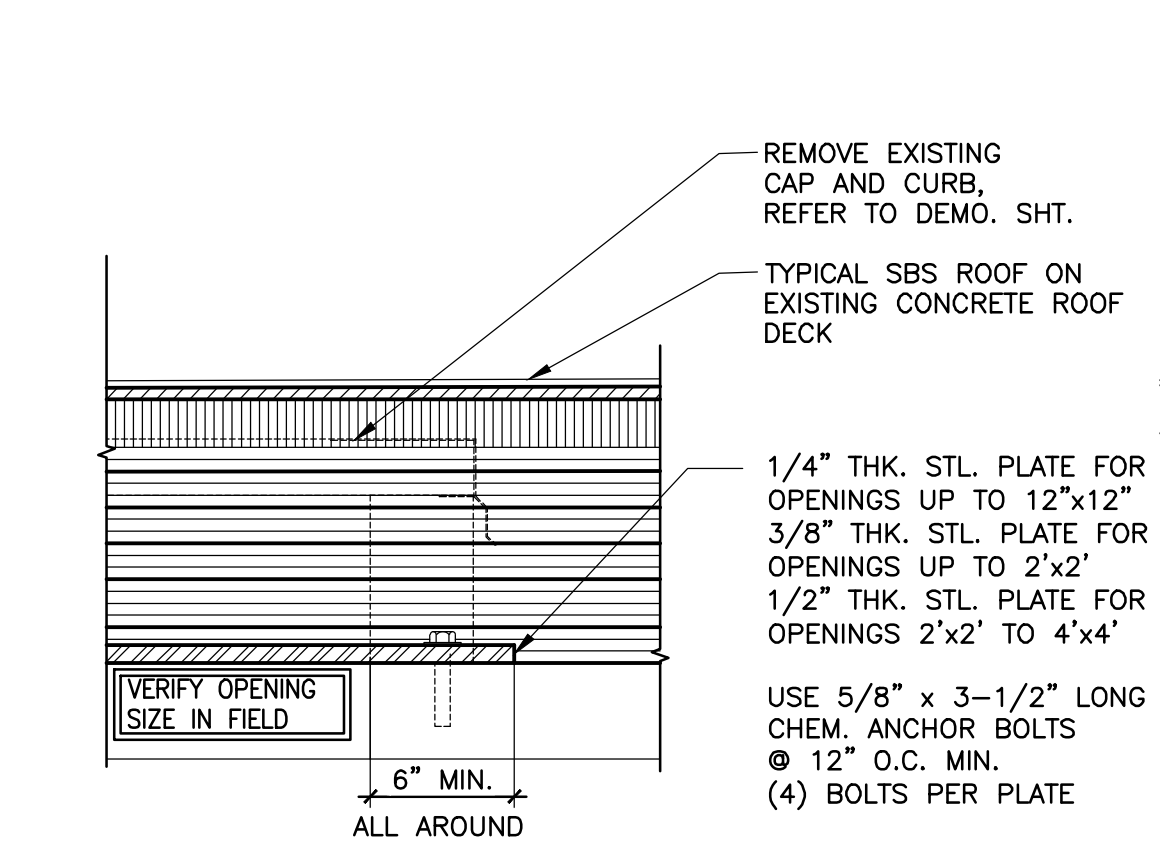
PROJECT NO.  
217031.00

SHEET  
G-100

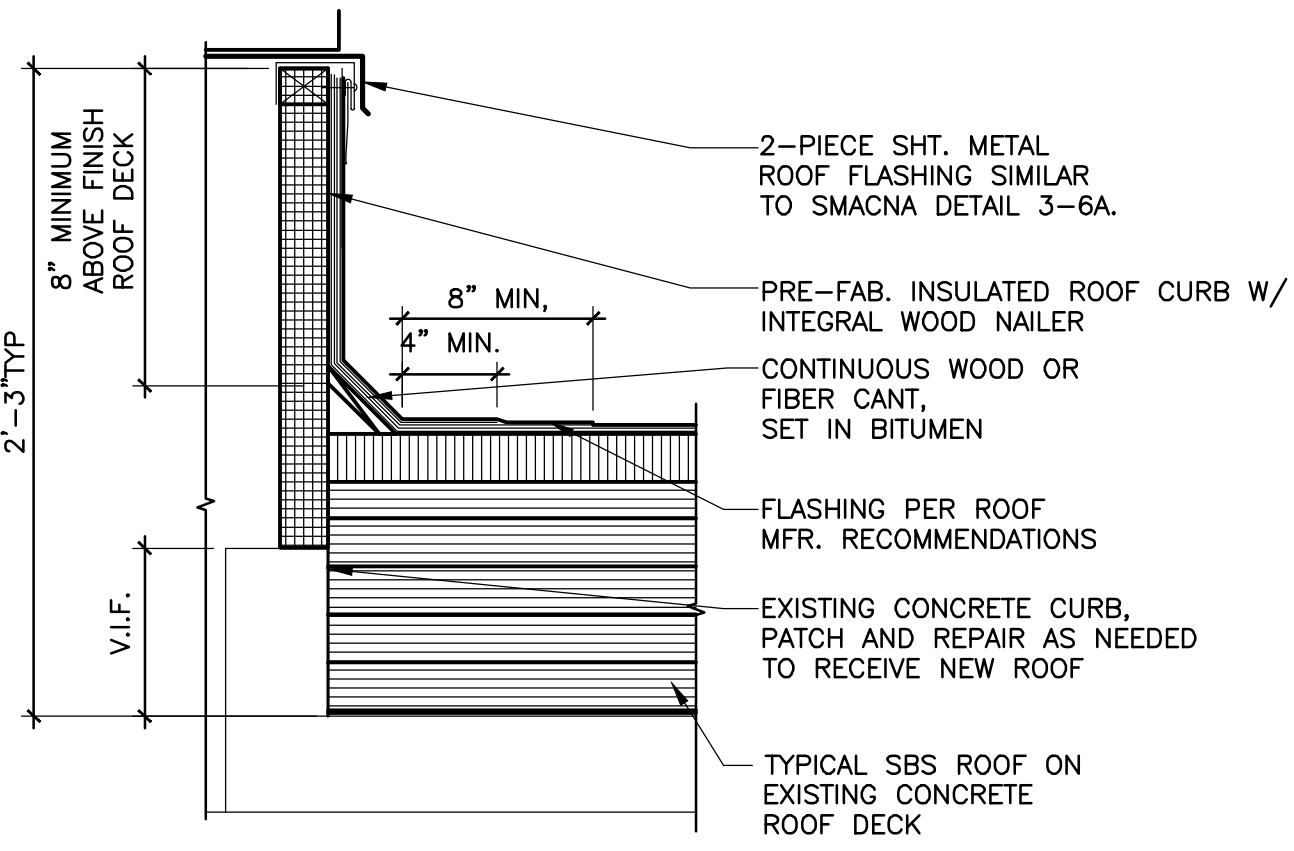




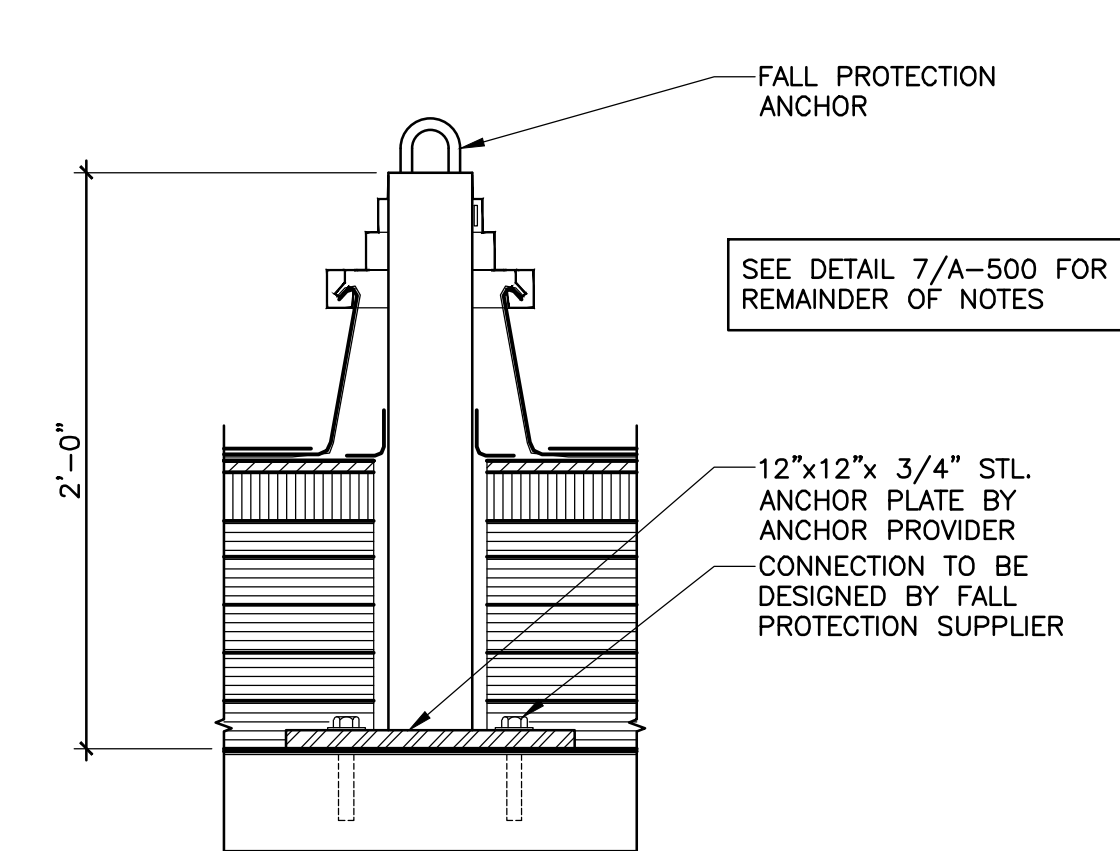




15 INFILL DETAIL  
A-121 SCALE: 1 1/2" = 1'-0"



10 ROOF CURB FLASHING TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



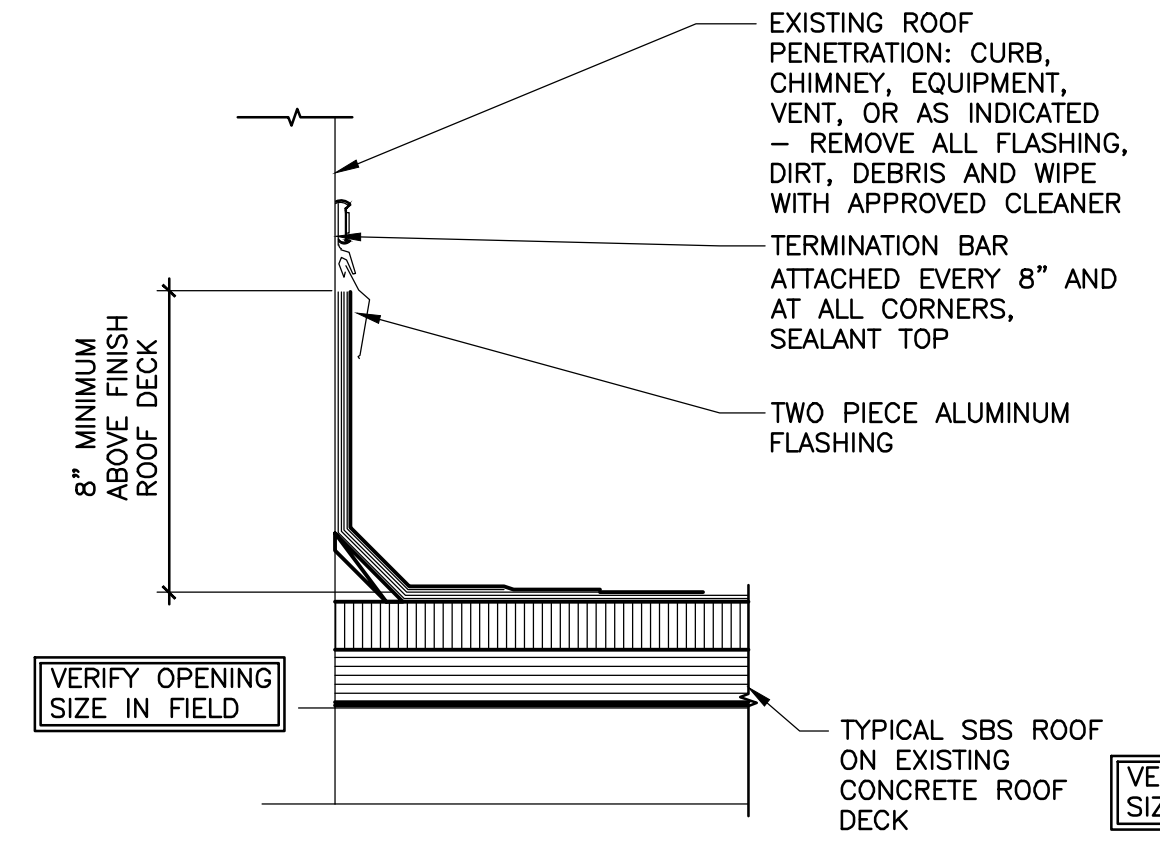
6 FALL PROTECTION DETAIL  
A-121 SCALE: 1 1/2" = 1'-0"



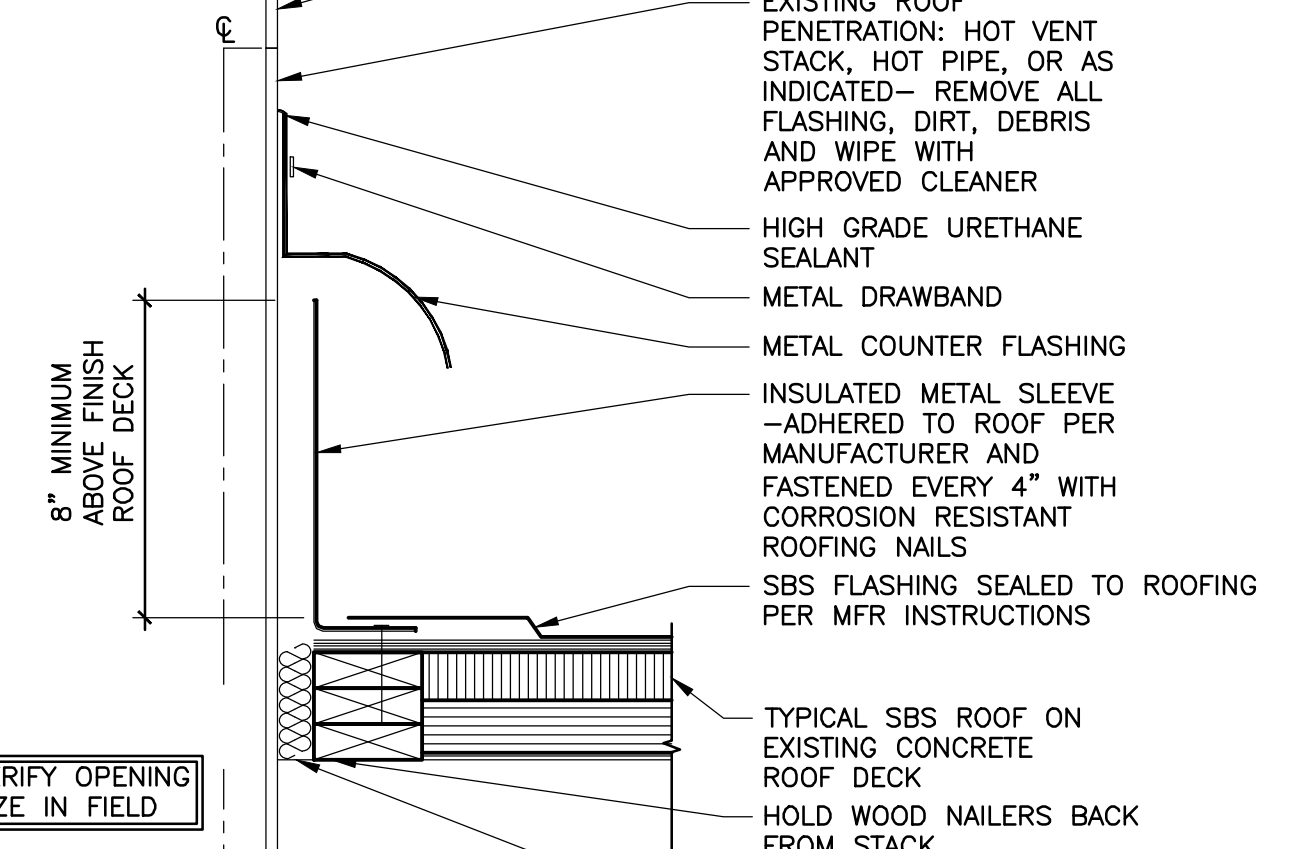
3b EXISTING GUARD RAIL WITH PANELS  
A-500 SCALE: 1 1/2" = 1'-0"



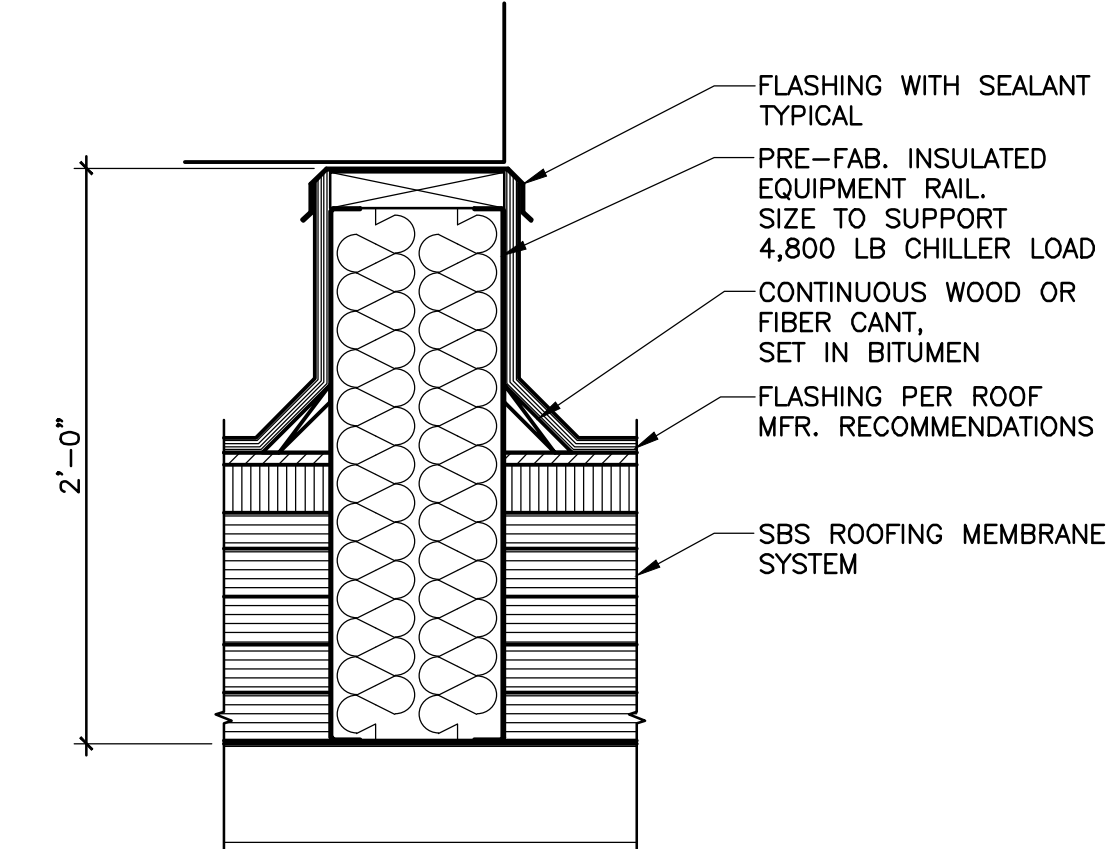
3a TYPICAL EXISTING GUARD RAIL  
A-500 SCALE: 1 1/2" = 1'-0"



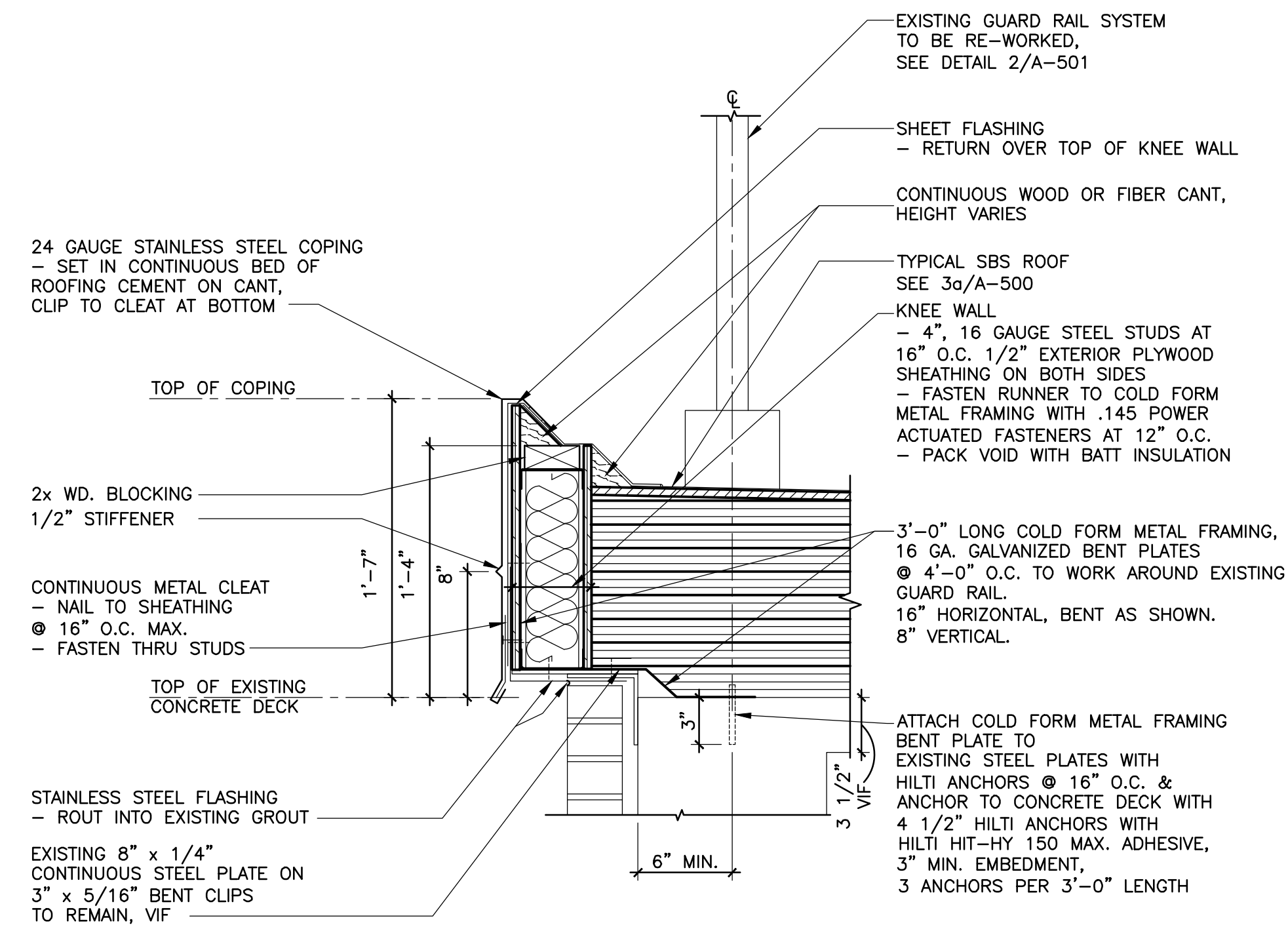
14 ROOF CURB WITH TERMINATION BAR TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



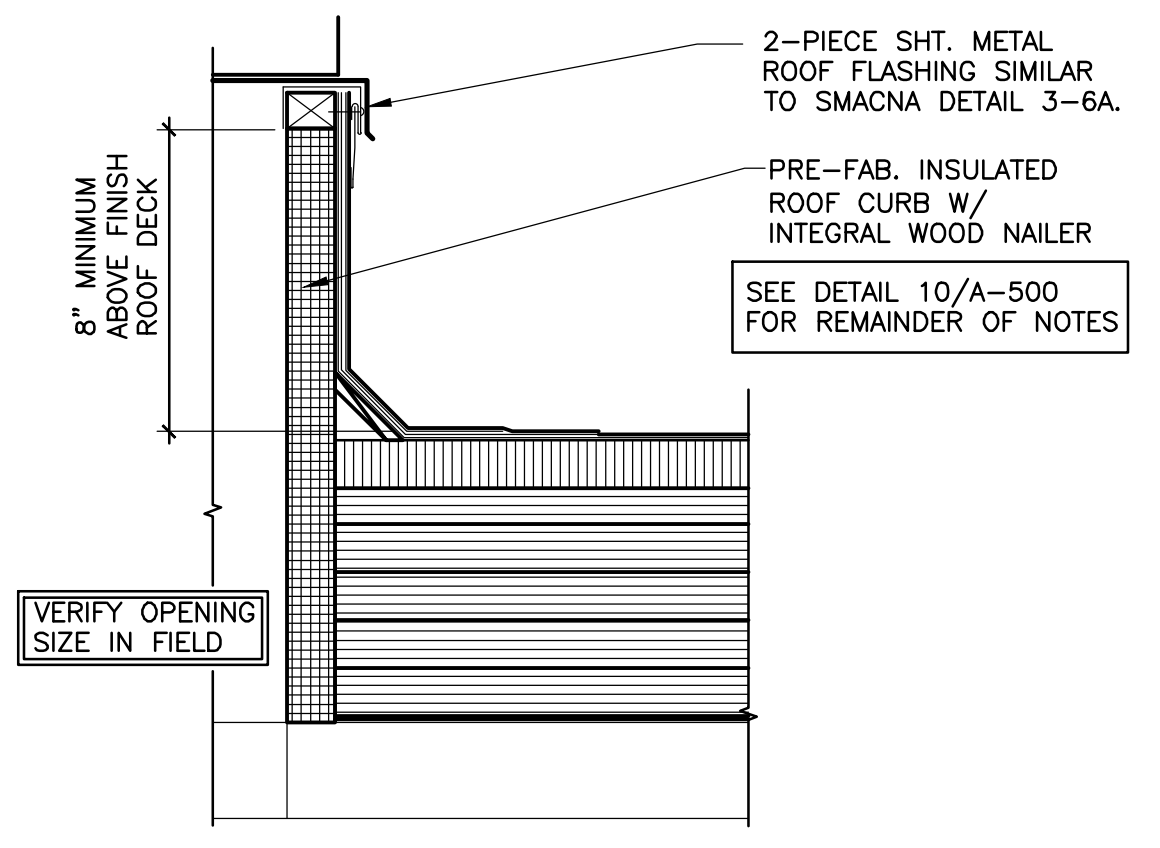
9 HOT STACK FLASHING TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



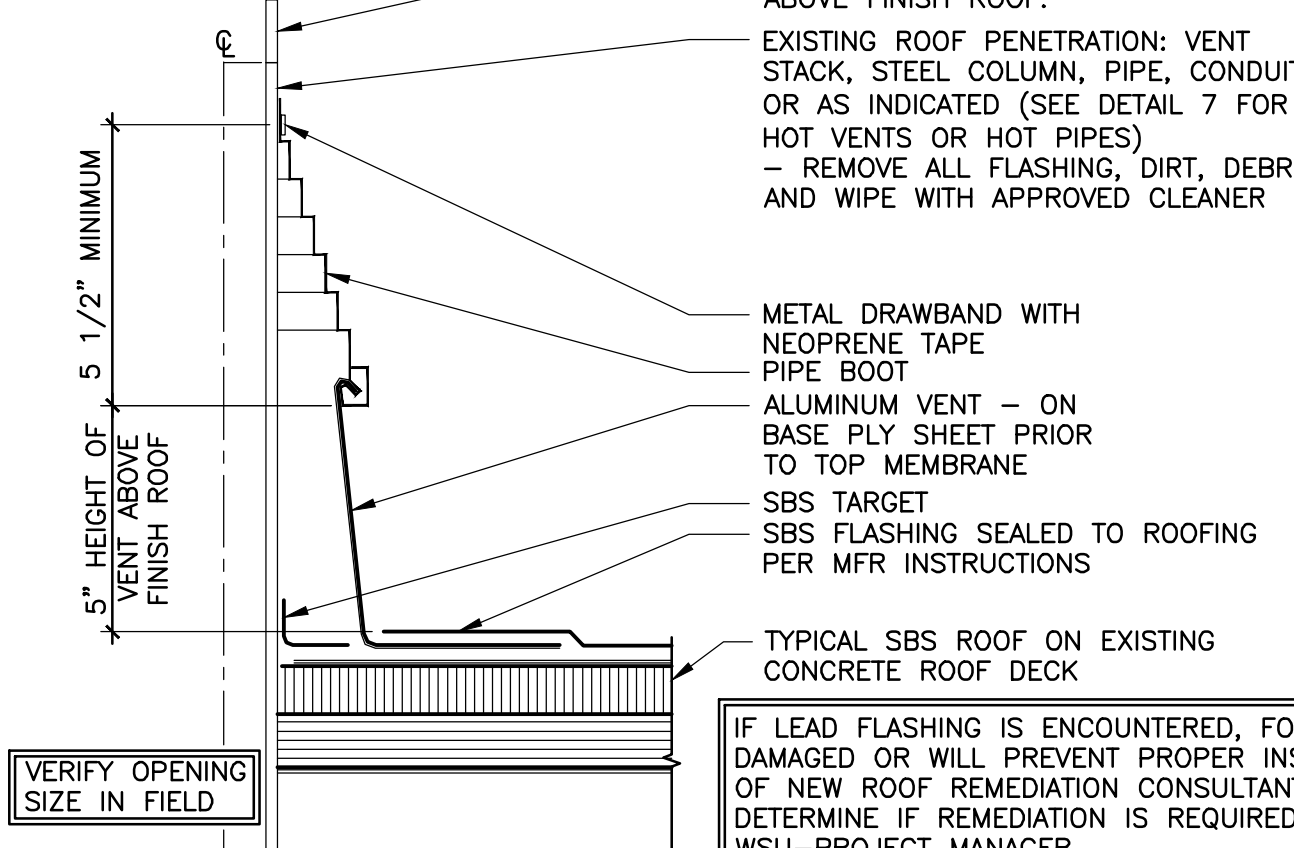
5 EQUIPMENT RAIL DETAIL  
A-121 SCALE: 1 1/2" = 1'-0"



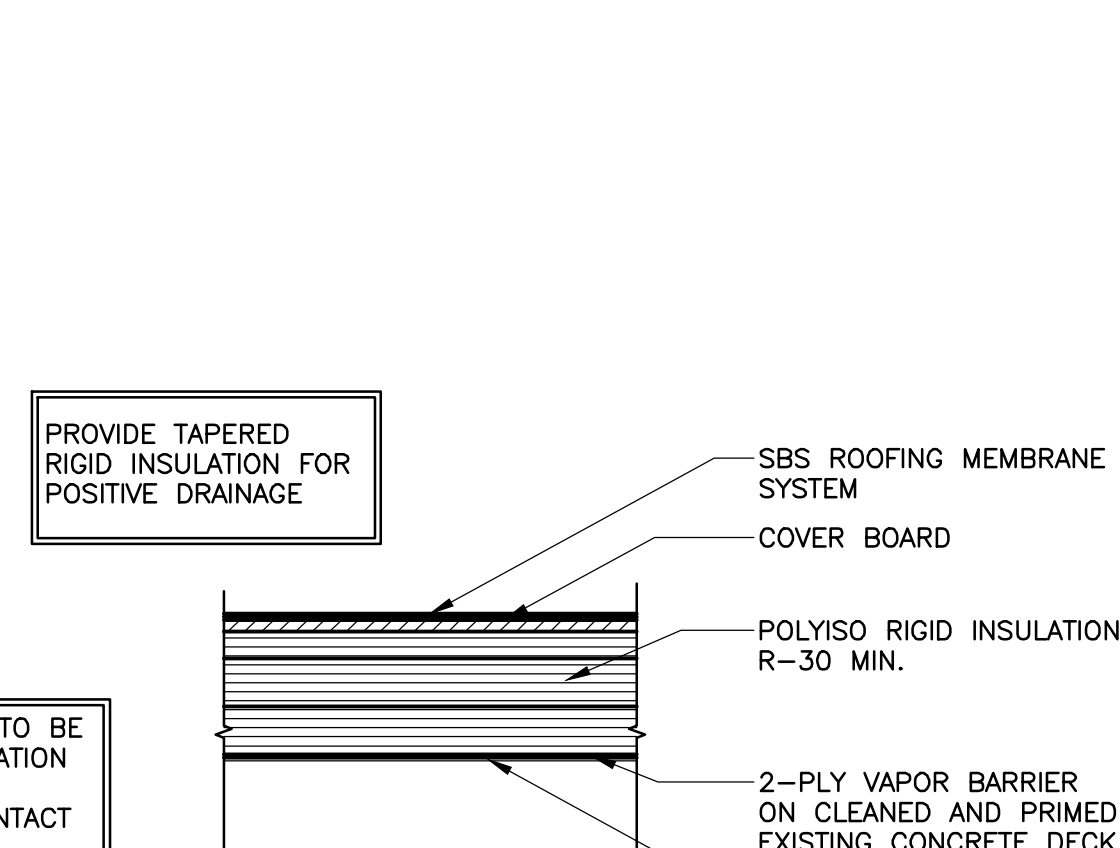
2 ROOF EDGE DETAIL  
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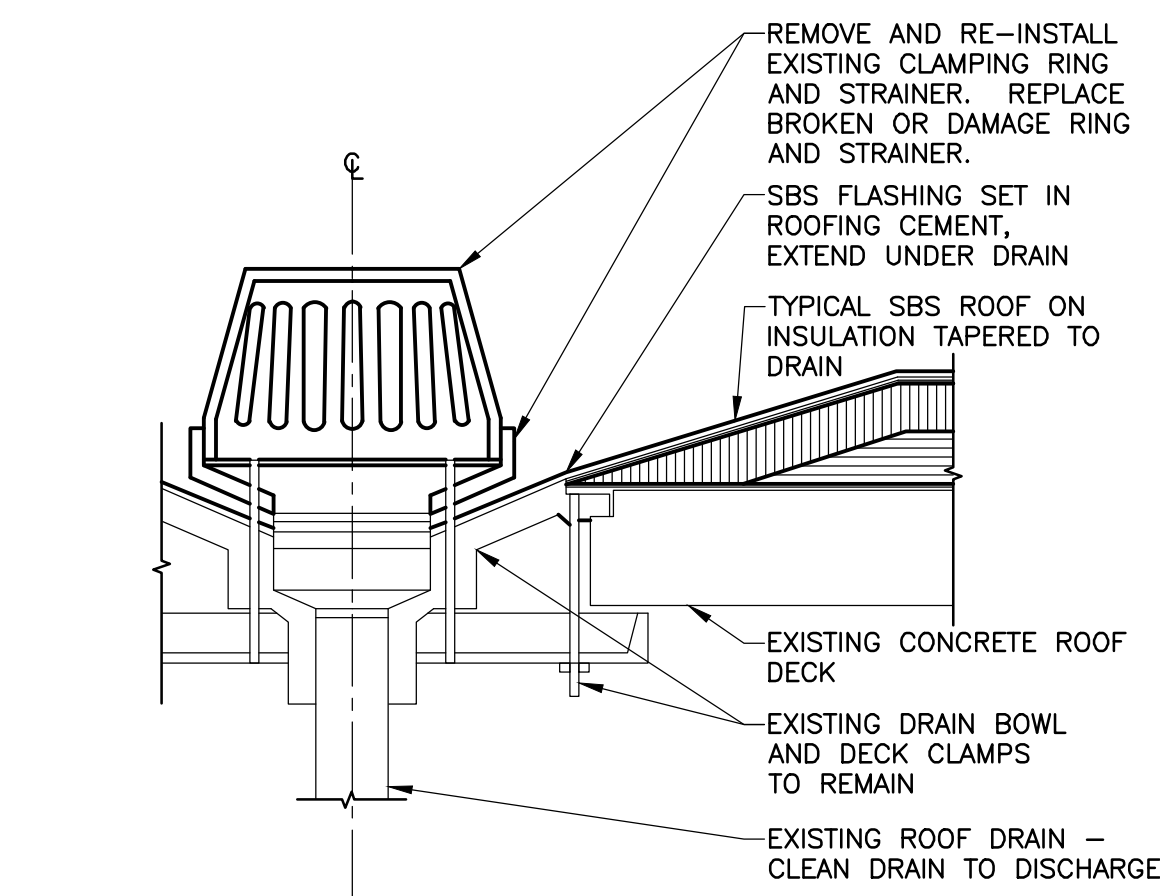
13 ROOF CURB FLASHING TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



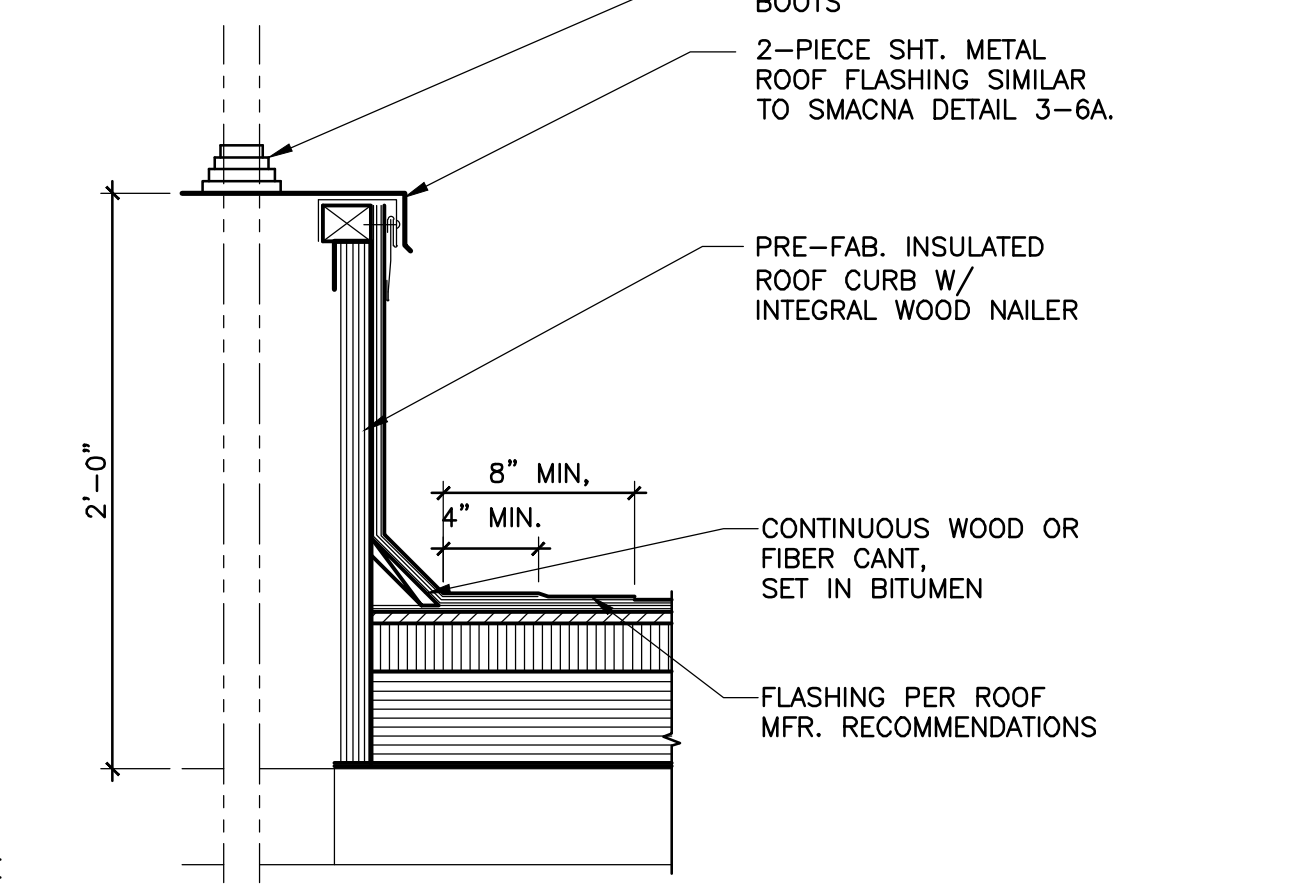
8 ROUND ROOF PENETRATION TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



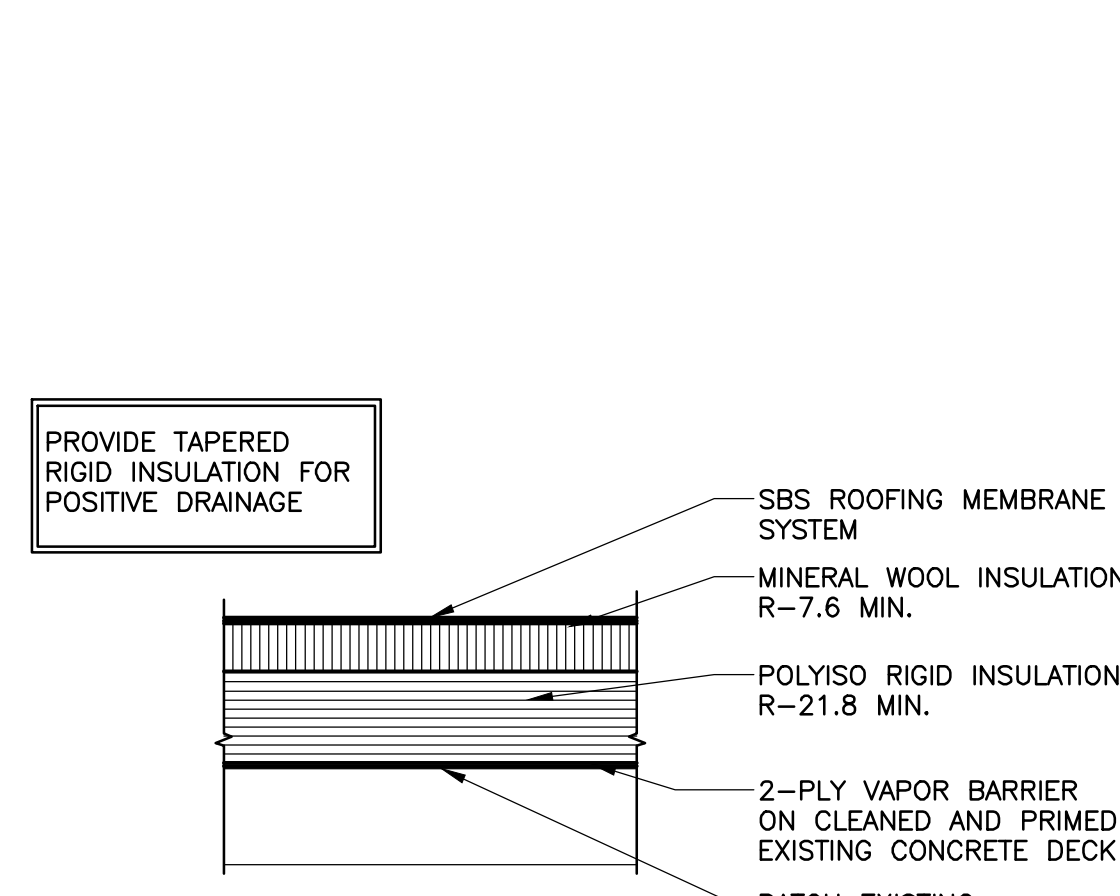
4b SBS ROOF ALT. #1  
A-500 SCALE: 1 1/2" = 1'-0"



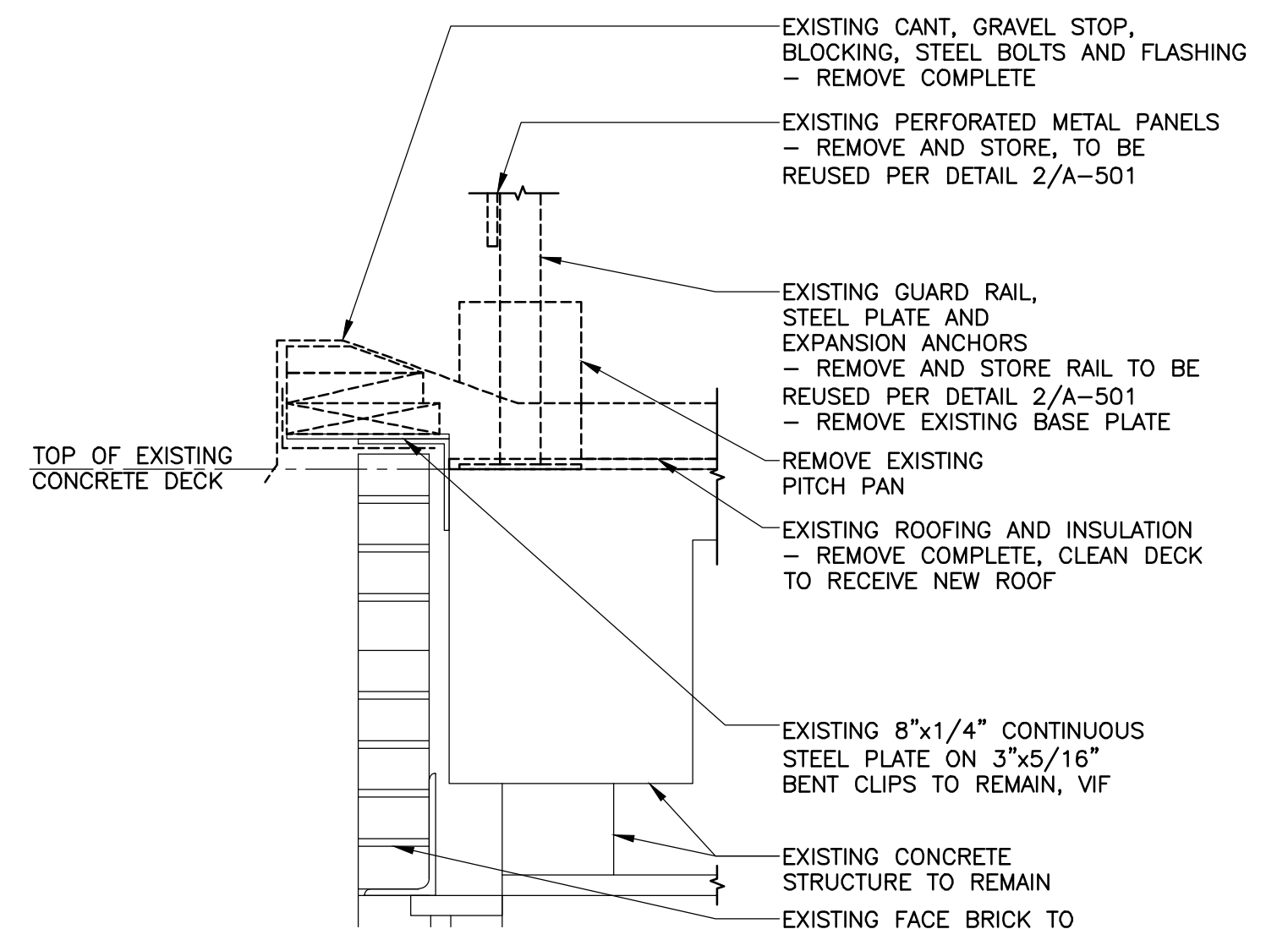
11 SUMP ROOF DRAIN TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"



7 SBS ROOF TYPICAL  
A-121 SCALE: 1 1/2" = 1'-0"

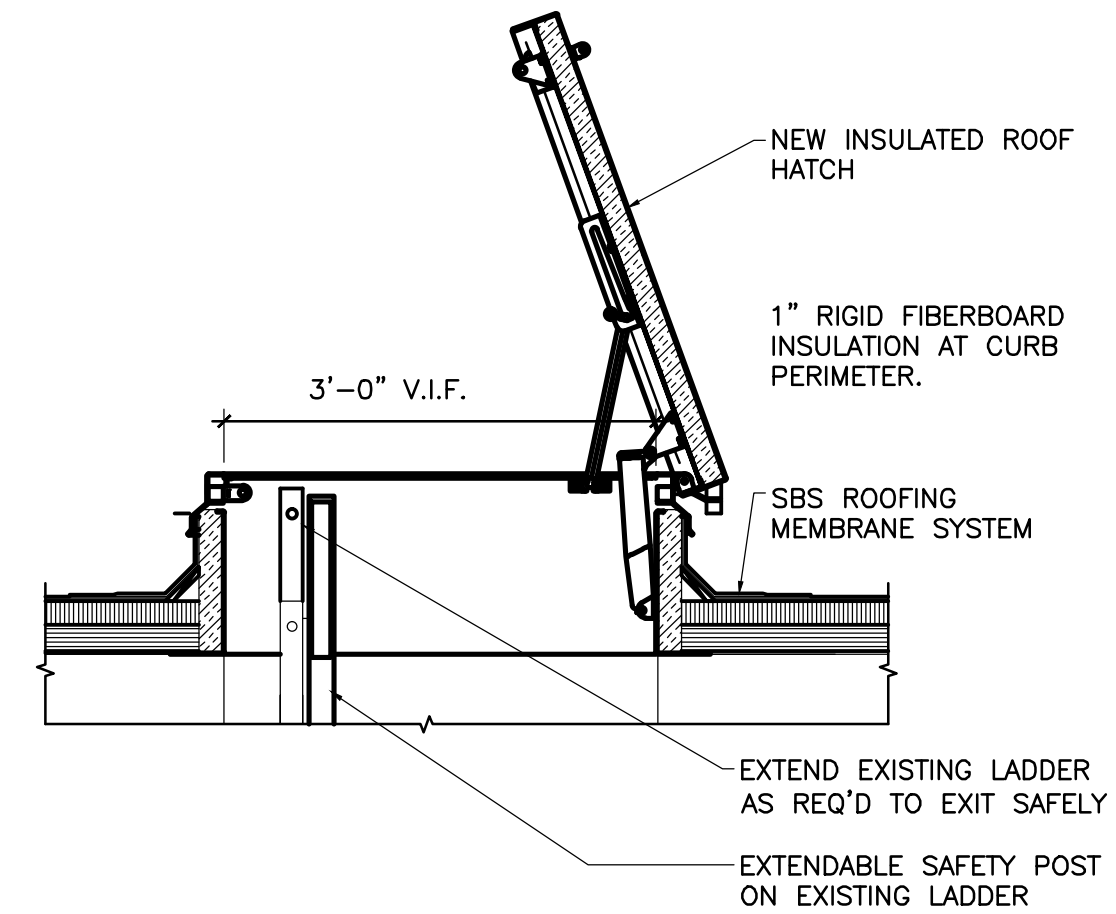


4a SBS ROOF TYPICAL  
A-500 SCALE: 1 1/2" = 1'-0"

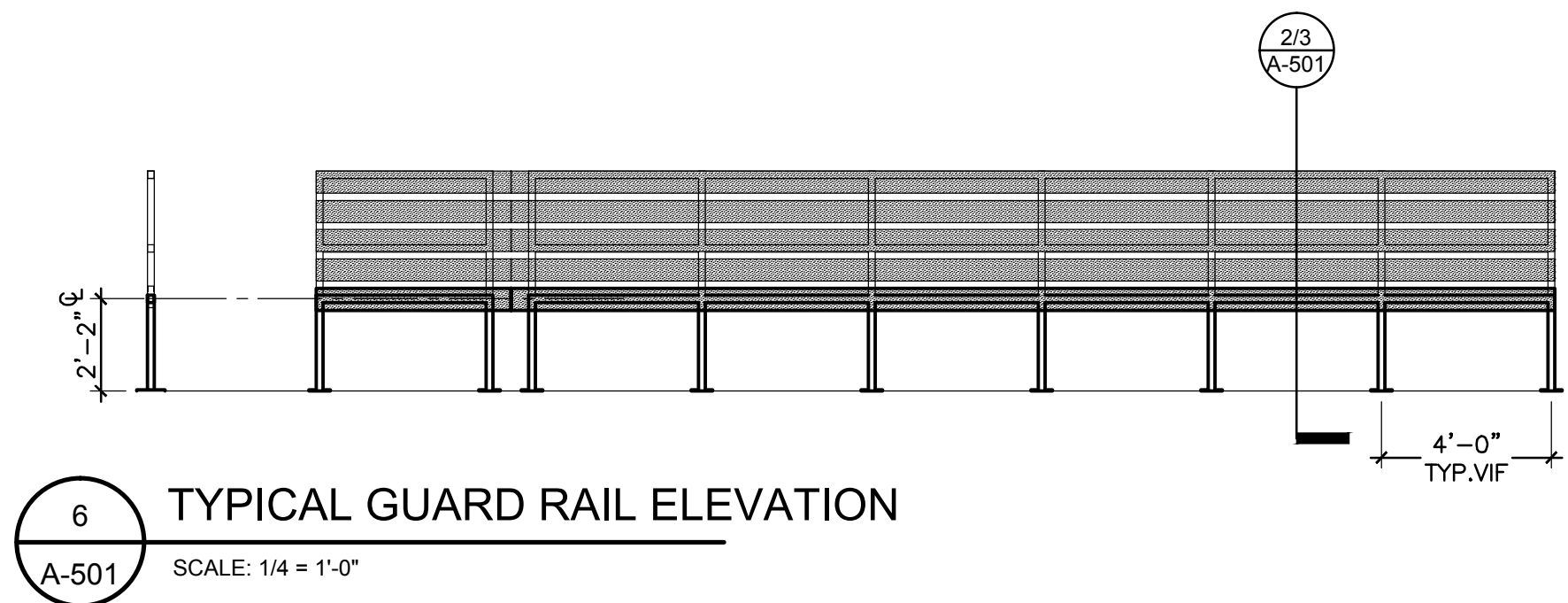


1 DEMO DETAIL  
A-120 SCALE: 1 1/2" = 1'-0"

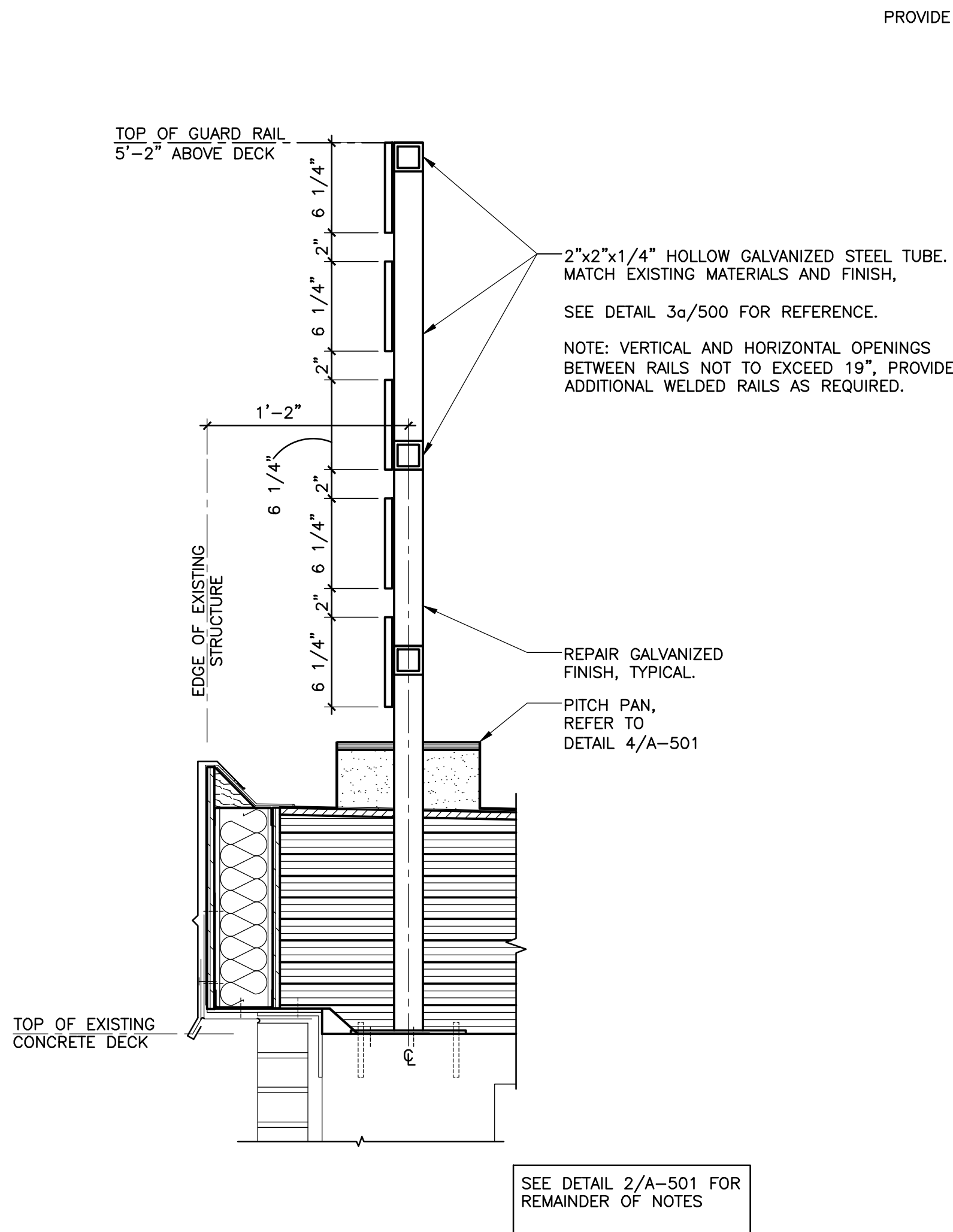




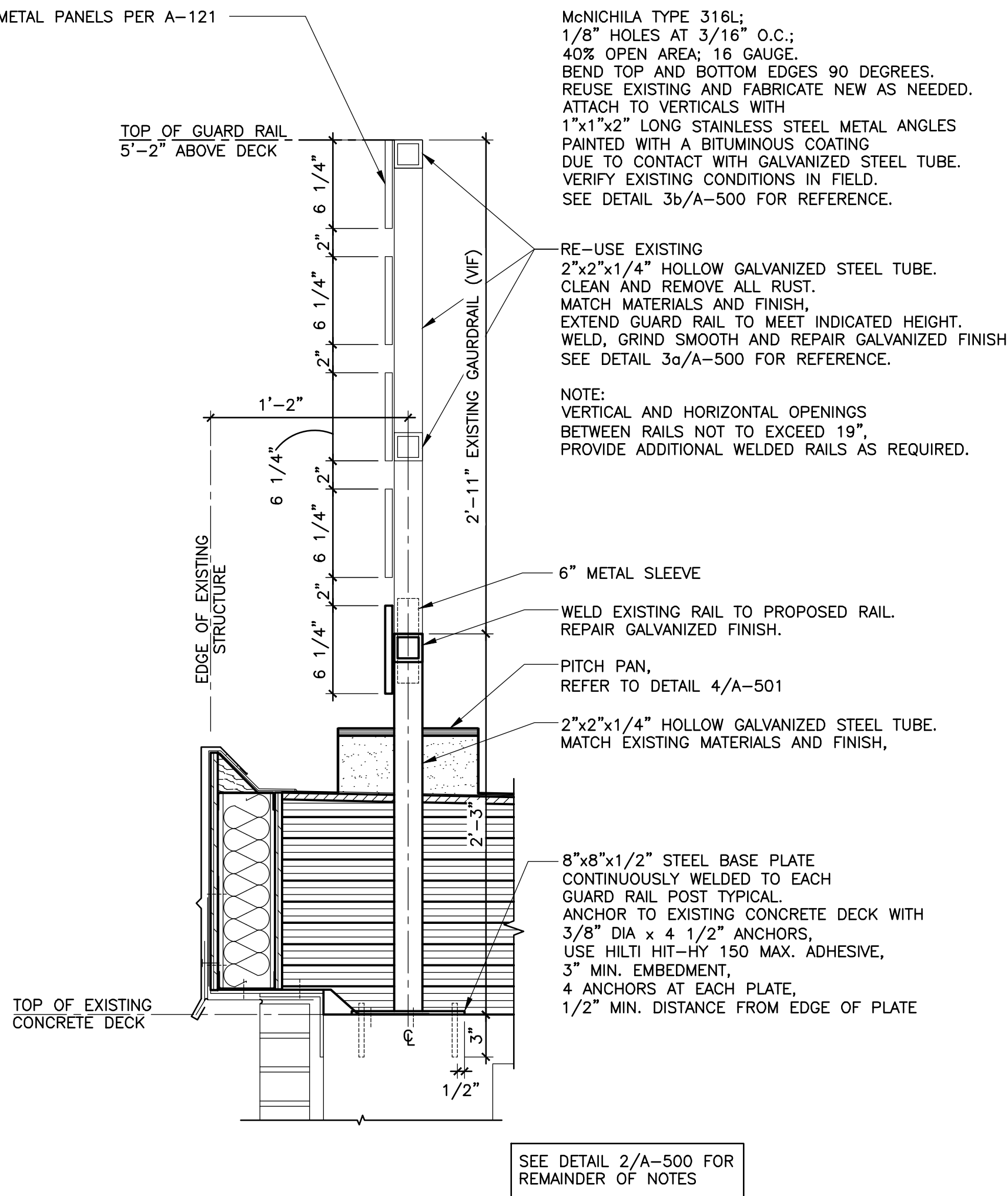
5 LADDER AND HATCH DETAIL  
SCALE: 3/4" = 1'-0"



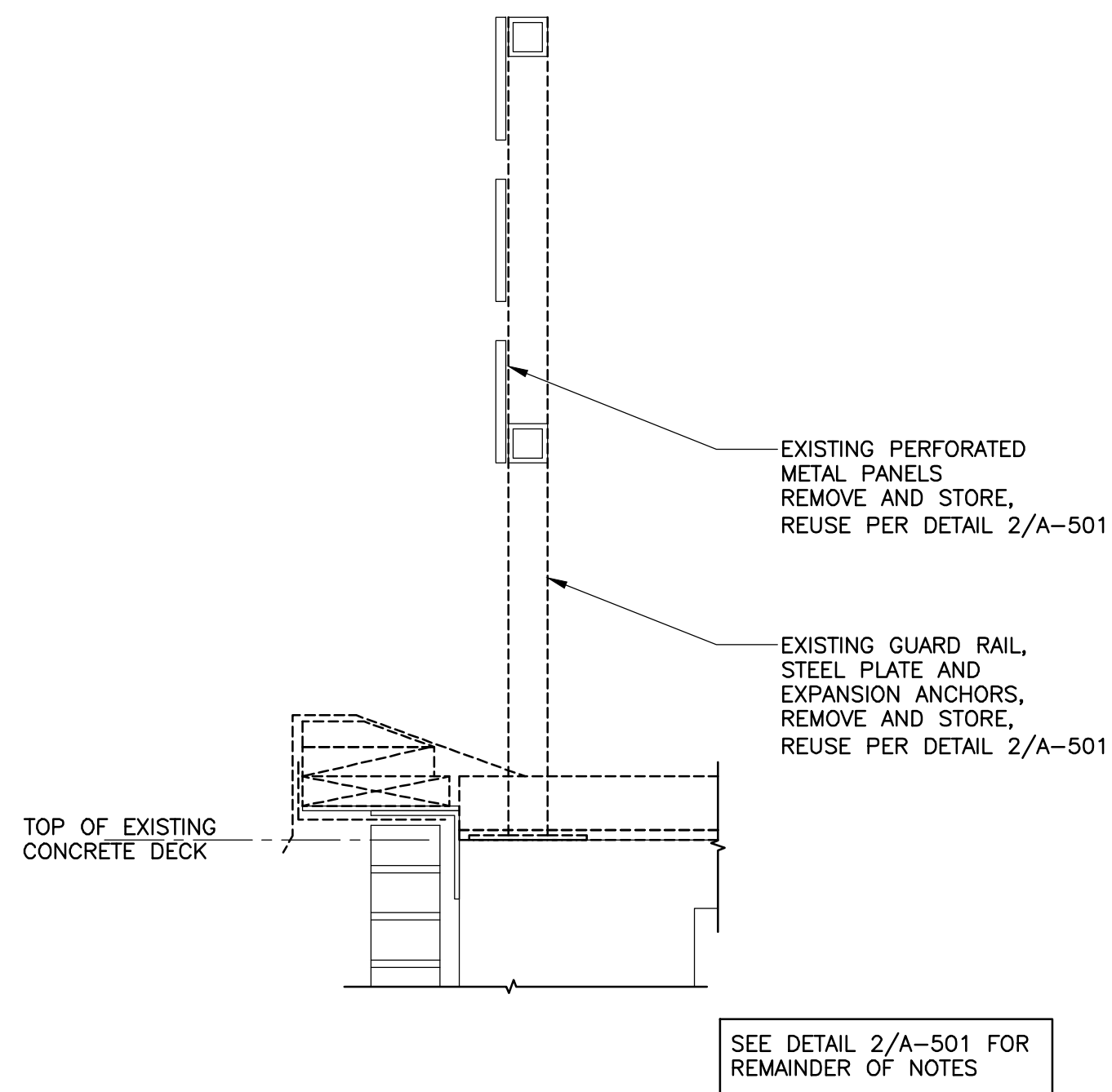
6 TYPICAL GUARD RAIL ELEVATION  
SCALE: 1/4" = 1'-0"



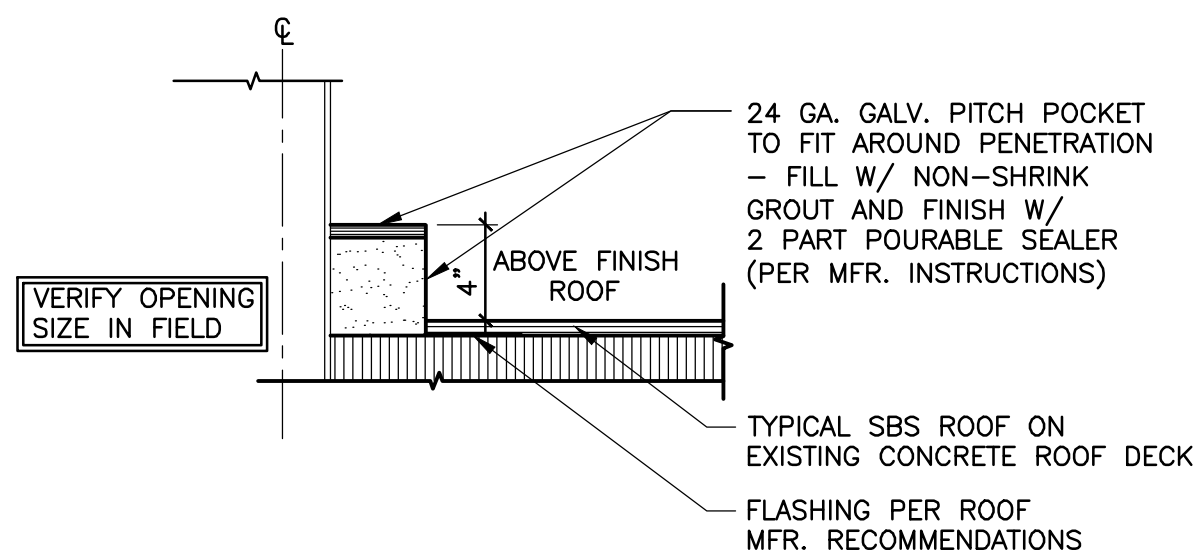
3 GUARD RAIL (ALT. #4)  
SCALE: 1 1/2" = 1'-0"



2 GUARD RAIL  
SCALE: 1 1/2" = 1'-0"



1 DEMO GUARD RAIL  
SCALE: 1 1/2" = 1'-0"



4 PITCH POCKET TYPICAL  
SCALE: 1 1/2" = 1'-0"

**CONTROLS SCOPE OF WORK**

WAYNE STATE UNIVERSITY HAS RETAINED SIEMENS UNDER A SEPARATE CONTRACT TO PROVIDE HVAC CONTROLS PROGRAMMING SERVICES. THIS SCOPE WILL BE COORDINATED BY CONTRACTOR. PAYMENTS WILL BE MADE DIRECTLY FROM WAYNE STATE TO SIEMENS.

THE SCOPE OF WORK BY SIEMENS INCLUDES ALL CONTROLS PROGRAMMING SERVICES FOR ALL DDC-CONTROLLED EQUIPMENT. THIS INCLUDES:

1. ROOF TOP UNITS 1, 3, 5, AND 6 INCLUDED WITHIN DDC PXCC-2 AND PXCC-3 SCOPE OF WORK ONLY
2. EXHAUST FANS (ONLY THOSE CONTROLLED BY DDC) WILL BE DETERMINED INTO PXCC CONTROLLERS
3. CONDENSER UNITS (ONLY THOSE CONTROLLED BY DDC) WILL BE DETERMINED INTO PXCC CONTROLLERS

THE ELECTRICAL SCOPE OF WORK RELATED TO THE RTUS, EXHAUST FAN, AND CONDENSER SHALL BE THE CONTRACTORS RESPONSIBILITY:

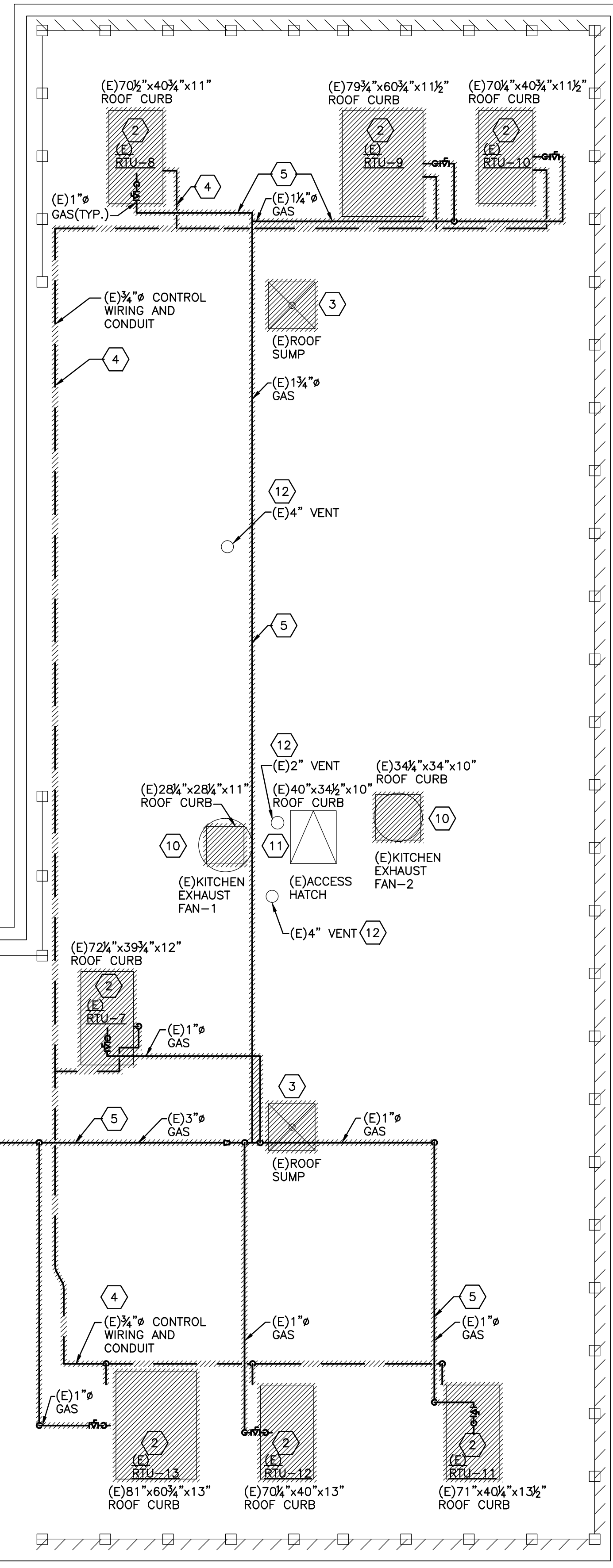
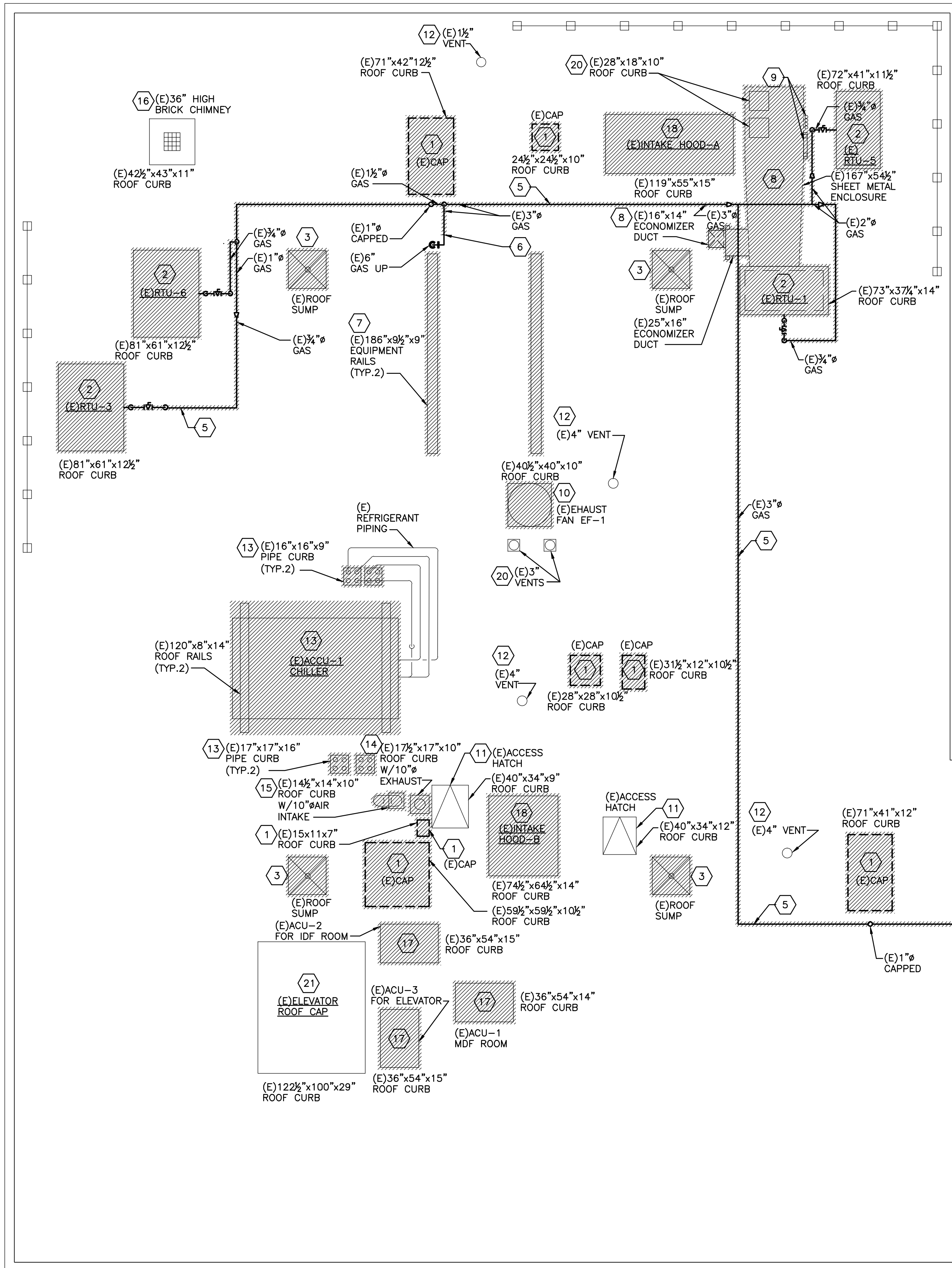
- A. ALL DISCONNECTING AND RE-CONNECTING OF POWER AND CONTROL WIRING FOR ALL ROOF TOP EQUIPMENT
- B. REMOVAL AND RE-INSTALLATION OF ENCLOSURE, (2) PXCC CONTROL UNITS AND RELATED NEMA ENCLOSURES
- C. CONDENSER INTERLOCK CONTROL WIRING RECONNECTIONS ON PXCC-2&3 CONTROLLED UNITS
- D. IP DROPS TO BE PULLED BACK, SECURE AND RE-TERMINATE.
- E. RE-PROGRAMMING OF ALL NON-DDC CONTROLS AND THERMOSTATS.

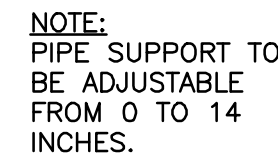
**DEMOLITION KEY NOTES**

- 1 REMOVE ROOF CAP AND EXISTING CURB AND PREPARE ROOF SURFACE FOR COVERING OF OPENING. SEE ARCHITECTURAL DWG'S. FOR DETAIL 15/A-500.
- 2 EVACUATE REFRIGERANT PIPING AND DISCONNECT ALL SERVICES INCLUDING GAS, ELECTRICAL, REFRIGERANT, CONTROL WIRING, PIPING AND DUCT CONNECTIONS TO EXISTING ROOF TOP UNIT (RTU). REMOVE RTU AND ROOF CURB AND PREPARE ROOF SURFACE FOR NEW ROOF CURB. PREPARE DUCT ENDS FOR NEW CONNECTION AND REPLACE RTU AFTER COMPLETION OF WORK.
- 3 DISCONNECT STORM WATER PIPING AND REMOVE EXISTING ROOF SUMPS FOR INSTALLATION OF NEW ROOF. PREPARE ENDS OF STORM WATER PIPING FOR NEW CONNECTION AND RECONNECT AND REPLACE ROOF SUMPS AFTER COMPLETION OF WORK. SEE ARCHITECTURAL DWG'S. FOR DETAIL 11/A-500.
- 4 REMOVE ALL EXISTING CONTROL WIRING BACK TO SOURCE.
- 5 REMOVE ALL EXISTING GAS PIPING AND PIPE SUPPORTS BACK TO 6" GAS MAIN AND CAP. PREPARE GAS PIPE FOR NEW CONNECTION.
- 6 REMOVE GAS PIPING BACK TO THIS POINT AND CAP. GAS MAIN, AND GAS TO BOILER TO REMAIN ACTIVE THROUGH OUT DEMOLITION PHASE.
- 7 EXISTING CONCRETE RAILS TO BE REMOVED.
- 8 REMOVE EXISTING SHEET METAL DUCT ENCLOSURE, DUCTWORK AND DUCT SUPPORTS. PREPARE DUCT ENDS FOR NEW CONNECTION. REINSTALL ENCLOSURE AND DUCTWORK AFTER ROOF WORK IS COMPLETE. ENSURE ALL COMPONENTS ARE WATERTIGHT DURING AND AFTER CONSTRUCTION.
- 9 REMOVE EXISTING ELECTRICAL PANEL AND ELECTRICAL CONNECTIONS. REINSTALL AFTER ROOF WORK IS COMPLETE.
- 10 REMOVE EXHAUST FAN AND CURB. DISCONNECT ALL ELECTRICAL CONNECTIONS AND DUCTWORK. PREPARE ROOF SURFACE FOR NEW ROOF CURB AND PREPARE DUCT ENDS FOR NEW CONNECTION. REINSTALL FAN AND DUCTWORK AND RECONNECT ALL ELECTRICAL AFTER ROOF WORK IS COMPLETE.
- 11 ROOF HATCH BY ARCHITECTURAL TRADES.
- 12 REMOVE FLASHING AROUND ALL ROOF VENTS AND PREPARE PIPE ENDS FOR NEW CONNECTION.
- 13 DISCONNECT ELECTRICAL AND CONDENSATE PIPING. EVACUATE REFRIGERANT PIPING SERVING CHILLER CONDENSING UNIT AND DISCONNECT. REMOVE ROOF RAILS AND PREPARE ROOF FOR NEW ROOF RAILS AND PIPE CURBS. REINSTALL CONDENSING UNIT AND RECONNECT ALL SERVICES AFTER NEW ROOF WORK IS COMPLETE.
- 14 REMOVE ROOF CURB AND DISCONNECT 10"Ø FLUE DUCT. PREPARE DUCT END FOR NEW CONNECTION AND REPLACE FLUE DUCT AFTER NEW ROOF WORK IS COMPLETE.
- 15 REMOVE ROOF CURB AND DISCONNECT EXISTING 10"Ø VENT. PREPARE DUCT END FOR NEW CONNECTION. REPLACE VENT AFTER ROOF WORK IS COMPLETE.
- 16 LEAVE EXISTING FLASHING IN TACK ON BRICK CHIMNEY AND RE-FLASH AROUND EXISTING CHIMNEY AFTER NEW ROOF WORK IS COMPLETE.
- 17 REMOVE ROOF CURB AND DISCONNECT EXISTING CONDENSING UNIT AND ELECTRICAL. EVACUATE ALL REFRIGERANT PIPING AND DISCONNECT. PREPARE PIPING FOR NEW CONNECTION AND PREPARE ROOF FOR NEW ROOF CURB. REPLACE CONDENSING UNIT AFTER COMPLETION OF WORK.
- 18 REMOVE ROOF CURB AND DISCONNECT AIR INTAKE AND DUCTWORK. PREPARE DUCT ENDS FOR NEW CONNECTION AND PREPARE ROOF FOR NEW ROOF CURB. REPLACE AIR INTAKE AND RECONNECT DUCTWORK AFTER COMPLETION OF WORK.
- 19 REMOVE ¾" HOSE BIBB AND PIPING BACK TO WHERE SHOWN AND PREPARE PIPING FOR NEW CONNECTION.
- 20 REMOVE EXISTING CURB AND PREPARE ROOF SURFACE FOR NEW ROOF CURB.
- 21 REMOVE ELEVATOR ROOF CURB AND CAP. PREPARE ROOF SURFACE FOR FOR NEW ROOF CURB AND CAP.

**GENERAL NOTES:**

1. WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, ACTS AND ORDINANCES AND ALL AUTHORITIES HAVING JURISDICTION.
2. THE OWNER RESERVES THE RIGHT TO SALVAGE ON ALL MATERIALS/ITEMS REMOVED. ANY ITEMS REJECTED BY THE OWNER SHALL THEN BECOME THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF IN AN ENVIRONMENTALLY ACCEPTABLE MANNER.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY PROBLEMS THAT MIGHT OCCUR PER SIGNED CONTRACT DURING THE DEMOLITION WORK.
4. PRIOR TO DEMOLITION START, DEMOLITION CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND INSPECT ALL AREAS TO BE CUT OR DEMOLISHED FOR ACTIVE UTILITIES OR WIRING.
5. THE DEMOLITION CONTRACTOR SHALL REPAIR DAMAGES MADE TO THE EXISTING HVAC EQUIPMENT AND THE INSULATION OF THE EXISTING MAIN DUCTWORK.
6. **ALL MECHANICAL UNITS WILL NEED TO BE DISCONNECTED, REMOVED AND REINSTALLED IN ORDER TO PERFORM THE WORK. ALL MECHANICAL UNITS CANNOT BE REMOVED AT ONCE DUE TO THE FACT THAT THE BUILDING WILL BE OCCUPIED DURING CONSTRUCTION. THE CONTRACTOR IS TO WORK WITH THE OWNER TO PRODUCE AN EFFECTIVE SCHEDULE FOR THE ROOF REPLACEMENT THAT LIMITS THE AMOUNT OF TIME THE OCCUPANTS OF THE BUILDING ARE WITHOUT HEATING AND COOLING. THIS WORK IS TO BE COMPLETED DURING REGULAR BUSINESS HOURS.**





NOE SCALE



SCALE: 3/16" = 1'-0"

- 1 NEW ROOF CURB AND CAP.
- 2 NEW ROOF CURB. REPLACE EXISTING RTU AND EXTEND ALL SERVICES TO TOP OF ROOF CURB INCLUDING GAS, REFRIGERANT, ELECTRICAL CONDUIT AND PIPING. PUMP NEW REFRIGERANT BACK INTO SYSTEM.
- 3 EXTEND STORM WATER PIPING AND RECONNECT ROOF SUMPS TO EXISTING PIPING AT NEW ROOF ELEVATION. REINSTALL ALL EXISTING ROOF SUMP STRAINERS.
- 4 NEW GAS PIPING AND PIPE SUPPORTS (SEE PIPE SUPPLEMENT DETAIL). RECONNECT TO ALL ROOF TOP UNITS WITH NEW ISOLATION VALVE.
- 5 REMOVE TEMPORARY PIPE CAP AND PROVIDE NEW 2½" REDUCER & 2½" GAS ISOLATION VALVE. PROVIDE LIVE TAP TO INSTALL GAS MAIN TO REMAIN ACTIVE DURING CONSTRUCTION.
- 6 NEW PATE PIPE CURB.
- 7 NEW ROOF CURB. RECONNECT EXISTING DUCTWORK AND INSULATE BEFORE SHEET METAL ENCLOSURE IS REINSTALLED. EXTEND DUCTWORK AS REQUIRED TO TOP OF NEW CURB.
- 8 REINSTALL EXISTING SHEET METAL DUCT ENCLOSURE AND DUCTWORK WITH NON-PENETRATING SUPPORTS.
- 9 RECONNECT ELECTRICAL CONDUITS AND PANEL. EXTEND TO CONDUIT AS REQUIRED TO MEET NEW ROOF ELEVATION.
- 10 NEW ROOF CURB. RECONNECT ALL ELECTRICAL CONNECTIONS AND EXISTING DUCTWORK AND EXTEND TO TOP OF NEW ROOF CURB. REINSTALL EXISTING EXHAUST FAN.
- 11 ROOF HATCH BY ARCHITECTURAL TRADES.
- 12 EXTEND EXISTING ROOF VENT A MINIMUM OF 12" ABOVE NEW ROOF ELEVATION AND REFLASH.
- 13 NEW ROOF RAILS. RECONNECT ALL ELECTRICAL, CONDENSATE AND REFRIGERANT PIPING. EXTEND ALL SERVICES AS REQUIRED TO NEW ROOF ELEVATION. REINSTALL EXISTING CHILLER CONDENSING UNIT. PUMP NEW REFRIGERANT BACK INTO SYSTEM.
- 14 NEW ROOF CURB. EXTEND EXISTING 10" Ø FLUE DUCT TO TOP OF NEW CURB AND RECONNECT TO EXISTING FLUE. MAINTAIN FLUE DUCT OPENING A MINIMUM OF 60 INCHES ABOVE NEW ROOF.
- 15 NEW ROOF CURB. EXTEND EXISTING 10" Ø AIR INTAKE TO TOP OF NEW CURB AND RECONNECT TO EXISTING AIR INTAKE. MAINTAIN INTAKE OPENING A MINIMUM OF 36 INCHES ABOVE NEW ROOF.
- 16 REFLASH AROUND EXISTING CHIMNEY AT NEW ROOF ELEVATION.
- 17 NEW ROOF CURB. REINSTALL EXISTING CONDENSING UNIT AND EXTEND ALL SERVICES TO TOP OF ROOF CURB INCLUDING, REFRIGERANT PIPING AND ELECTRICAL. PUMP NEW REFRIGERANT BACK INTO SYSTEM.
- 18 NEW ROOF CURB. REINSTALL EXISTING AIR INTAKE AND EXTEND EXISTING DUCTWORK TO TOP OF NEW ROOF CURB.
- 19 EXTEND EXISTING ¾" DOMESTIC COLD WATER AROUND EXISTING 10" - 10" FROM ROOF EDGE. RE-CONNECT ¾" HOSE BIBB AND INSTALL ¾" VACUUM BREAKER. EXTEND EXISTING ROOF SUPPORTS AS REQUIRED. MOUNT HOSE BIBB A MINIMUM OF 12" ABOVE NEW ROOF ELEVATION.
- 20 NEW ROOF CURB. REPLACE EXISTING VENT PIPES AND EXTEND EXISTING VENT PIPING TO TOP OF NEW ROOF CURB.

REFER TO SHEET M-120 FOR "CONTROLS  
SCOPE OF WORK"



*Founded 1960*

**WAYNE STATE  
UNIVERSITY**

OWNER REVIEW  
OWNER REVIEW  
BIDS  
BIDS

Sheet Title:

MECHANICAL  
ROOF PLAN -  
NEW WORK

M-121

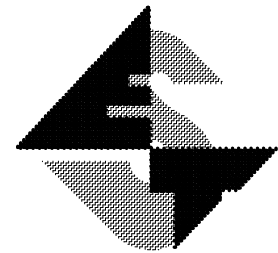
ELECTRICAL SHEET INDEX

SHEET DESCRIPTION

E-000 SYMBOLS AND LEGENDS

E-001 ELECTRICAL ROOF DEMOLTION PLAN

E-101 ELECTRICAL ROOF NEW WORK



ETS ENGINEERING, INC.  
ENERGY / TECHNOLOGY SOLUTIONS  
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P.O. Box 1116  
ROYAL OAK, MI 48068-1116

OFF: 248/744-0360  
FAX: 248/744-0367  
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Farmington Hills  
Michigan 48335

248.477.2444  
248.477.2445 fax

www.nsa-ae.com

Founded 1960



Client:

WSU - FACILITIES  
PLANNING &  
MANAGEMENT

DETROIT

MICHIGAN

Project Title:

ROOF REPLACEMENT  
SCHOOL OF SOCIAL  
WORK BUILDING

Date:

03-22-18  
05-01-2018  
07-24-2018

Issued for:

OWNER REVIEW  
BIDS  
BIDS

Drawn:

KS

Designed:

SL

Checked:

SL

Approved:

SL

CAD Drawing File:

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NSA Architects, Engineers, Planners

Project Number:

217031.00

Sheet Title:

ELECTRICAL  
SYMBOLS LIST

Sheet Number:

E-000

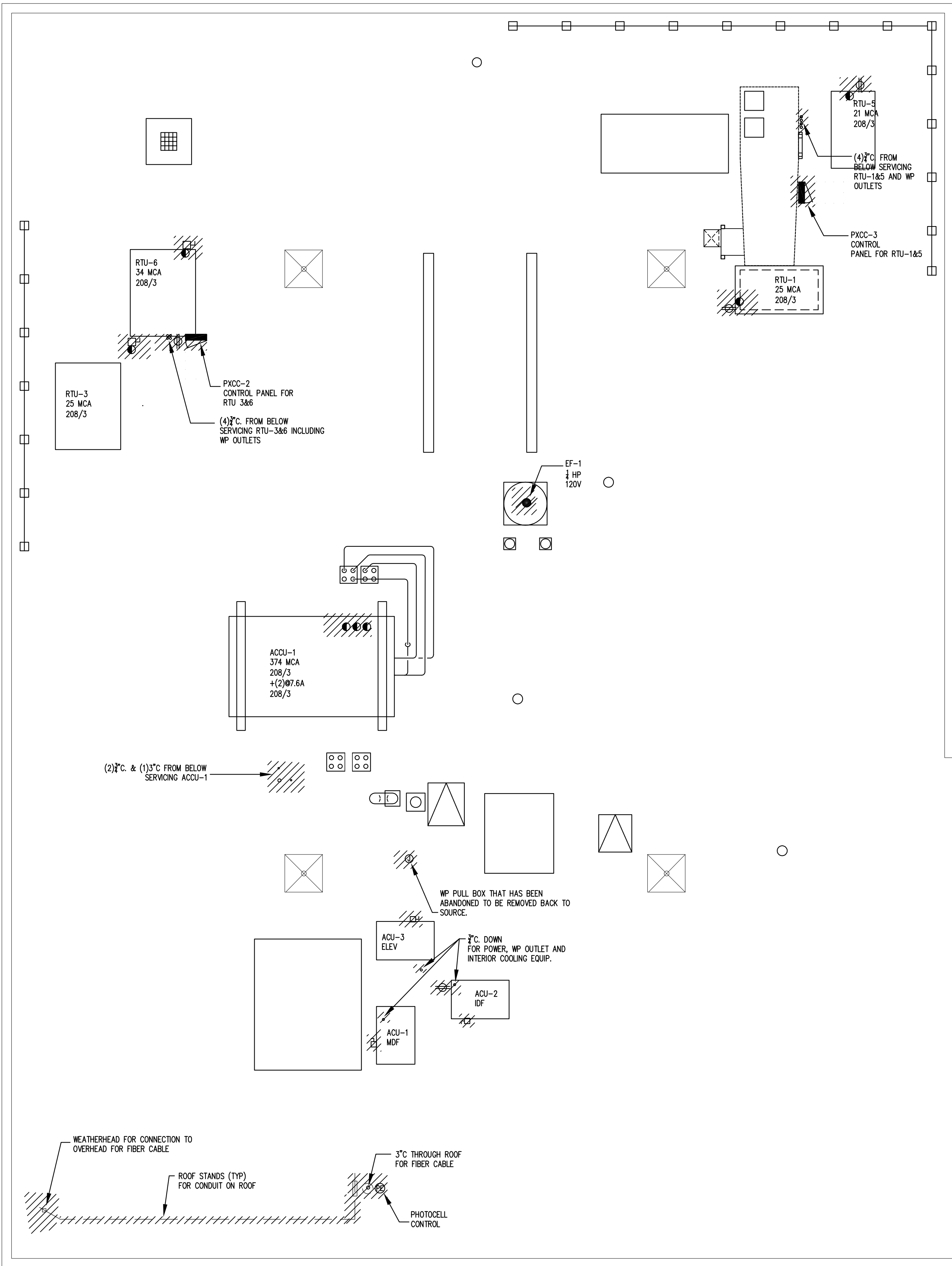
ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	PHOTOELECTRIC CONTROLLER
	DUPLEX RECEPTACLE
	PANEL
	ELECTRIC MOTOR
	DISCONNECT
	JUNCTION BOX
	HARD WIRE POWER CONNECTION

ELECTRICAL ABBREVIATION LIST

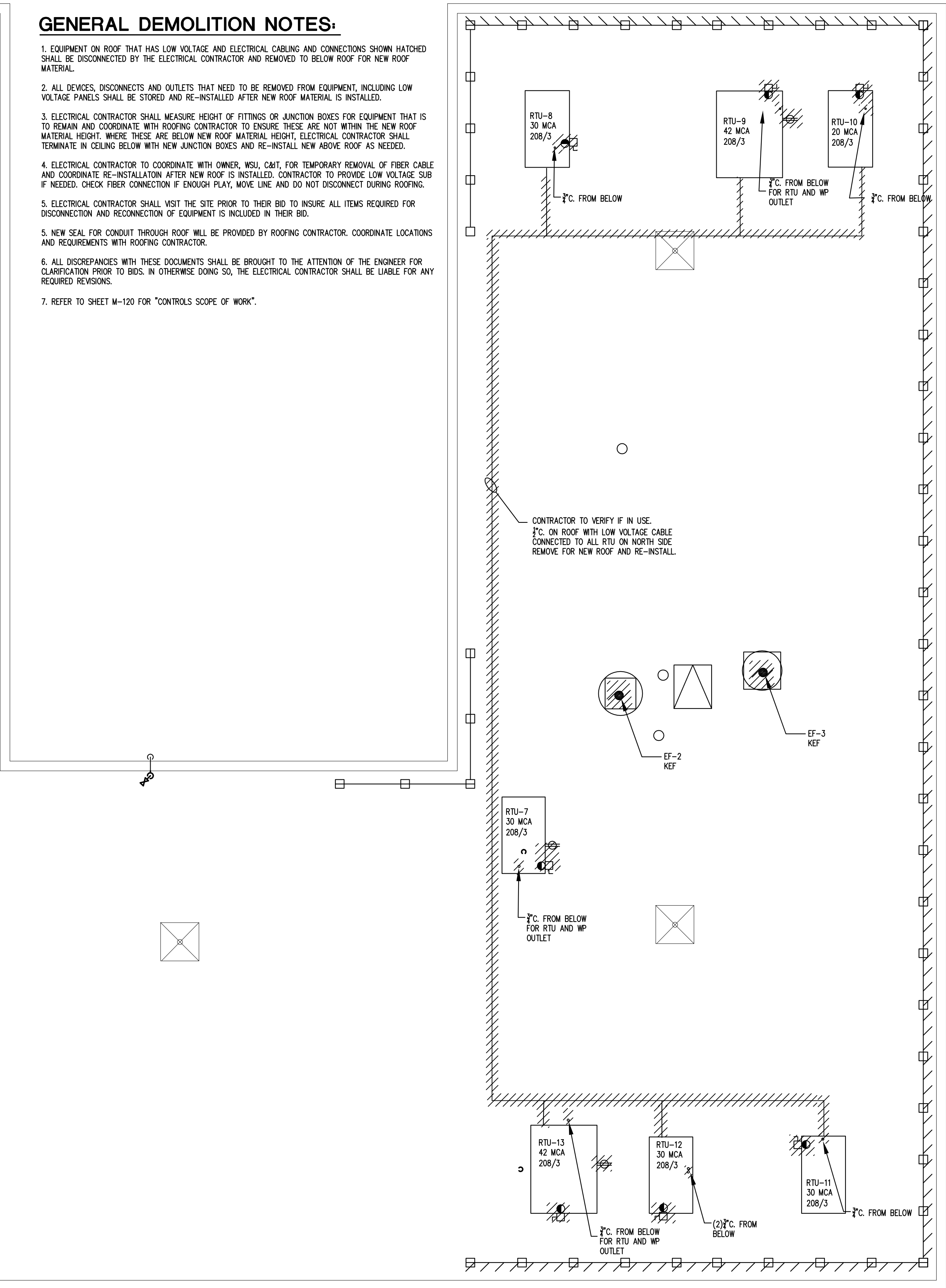
ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A	AMPHERE	GFI	GROUND FAULT INTERRUPTER	NC	NORMALLY CLOSED
AFF	ABOVE FINISH FLOOR	GRD	GROUND	NF	NON-FUSIBLE
AFG	ABOVE FINISH GRADE	GRC	GALVANIZED RIGID CONDUIT	NIC	NOT IN CONTRACT
AHU	AIR HANDLING UNIT	HOA	HAND-OFF-AUTO	NL	NIGHT LIGHT
AIC	AMPS INTERRUPTING CAPACITY	HP	HORSEPOWER	NO	NORMALLY OPEN
BKR	BREAKER	HZ	HERTZ	NTS	NOT TO SCALE
BPS	BOLTED PRESSURE SWITCH	IG	ISOLATED GROUND	RECEPT.	RECEPTACLE
CB	CIRCUIT BREAKER	JB	JUNCTION BOX	RP	RECEPTACLE PANEL
CR/CKT	CIRCUIT			RTU	ROOF TOP UNIT
CLG	CEILING	KW	KILOWATT	SD	SMOKE DETECTOR
CP	CIRCULATION PUMP	KWH	KILOWATT - HOURS	SPEC	SPECIFICATION
CUH	CABINET UNIT HEATER	KVA	KILO VOLT-AMPERES	TELCOM	TELECOMMUNICATIONS
DED	DEDICATED	LP	LIGHTING PANEL	TYP	TYPICAL
DISC	DISCONNECT	LO	LOCK-ON	UH	UNIT HEATER
DP	DISTRIBUTION PANEL			U.O.N.	UNLESS OTHERWISE NOTED
DWG	DRAWING	MCA	MINIMUM CIRCUIT AMPACITY		
EBU	EMERGENCY BATTERY UNIT	MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
EF	EXHAUST FAN	MCC	MOTOR CONTROL CENTER	WG	WIRE GUARD
EM	EMERGENCY	MDP	MAIN DISTRIBUTION PANEL		
EM/NL	EMERGENCY/NIGHT LIGHT	MLO	MAIN LUGS ONLY	T#	TRANSFORMER
EUH	ELECTRIC UNIT HEATER	MSB	MAIN SWITCHBOARD	(E)	EXISTING
EW	ELECTRIC WATER COOLER	MTD	MOUNTED	(R)	RELOCATED
EWI	ELECTRIC WATER HEATER	MUA	MAKE-UP AIR UNIT	(N)	NEW
FLA	FULL LOAD AMPS				
F	FUSE				

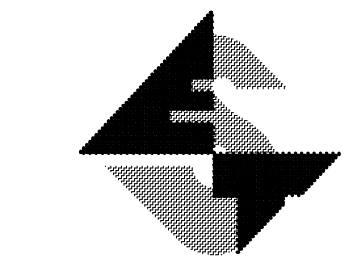




GENERAL DEMOLITION NOTES:

- EQUIPMENT ON ROOF THAT HAS LOW VOLTAGE AND ELECTRICAL CABLING AND CONNECTIONS SHOWN HATCHED SHALL BE DISCONNECTED BY THE ELECTRICAL CONTRACTOR AND REMOVED TO BELOW ROOF FOR NEW ROOF MATERIAL.
- ALL DEVICES, DISCONNECTS AND OUTLETS THAT NEED TO BE REMOVED FROM EQUIPMENT, INCLUDING LOW VOLTAGE PANELS SHALL BE STORED AND RE-INSTALLED AFTER NEW ROOF MATERIAL IS INSTALLED.
- ELECTRICAL CONTRACTOR SHALL MEASURE HEIGHT OF FITTINGS OR JUNCTION BOXES FOR EQUIPMENT THAT IS TO REMAIN AND COORDINATE WITH ROOFING CONTRACTOR TO ENSURE THESE ARE NOT WITHIN THE NEW ROOF MATERIAL HEIGHT; WHERE THESE ARE BELOW NEW ROOF MATERIAL HEIGHT, ELECTRICAL CONTRACTOR SHALL TERMINATE IN CEILING BELOW WITH NEW JUNCTION BOXES AND RE-INSTALL NEW ABOVE ROOF AS NEEDED.
- ELECTRICAL CONTRACTOR TO COORDINATE WITH OWNER, WSU, C&T, FOR TEMPORARY REMOVAL OF FIBER CABLE AND COORDINATE RE-INSTALLATION AFTER NEW ROOF IS INSTALLED. CONTRACTOR TO PROVIDE LOW VOLTAGE SUB IF NEEDED, CHECK FIBER CONNECTION IF ENOUGH PLAY, MOVE LINE AND DO NOT DISCONNECT DURING ROOFING.
- ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO THEIR BID TO INSURE ALL ITEMS REQUIRED FOR DISCONNECTION AND RECONNECTION OF EQUIPMENT IS INCLUDED IN THEIR BID.
- NEW SEAL FOR CONDUIT THROUGH ROOF WILL BE PROVIDED BY ROOFING CONTRACTOR. COORDINATE LOCATIONS AND REQUIREMENTS WITH ROOFING CONTRACTOR.
- ALL DISCREPANCIES WITH THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION PRIOR TO BIDS. IN OTHERWISE DOING SO, THE ELECTRICAL CONTRACTOR SHALL BE LIABLE FOR ANY REQUIRED REVISIONS.
- REFER TO SHEET M-120 FOR "CONTROLS SCOPE OF WORK".





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WSU - FACILITIES  
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MANAGEMENT

DETROIT

MICHIGAN

Project Title:

ROOF REPLACEMENT  
SCHOOL OF SOCIAL  
WORK BUILDING

Date:  
03-22-18  
05-01-2018  
07-24-2018

Issued for:  
OWNER REVIEW  
BIDS  
BIDS

Drawn:	KS	Designed:	SL
Checked:	SL	Approved:	SL

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Project Number: 217031.00

Sheet Title:

ELECTRICAL  
NEW ROOF  
PLAN

Sheet Number:

E-101

