

May 15, 2020

SOLICITATION ADDENDUM NO. 2
ITB 19-00-0051
Barnes Elementary Roof Replacement

THE FOLLOWING CHANGES/ADDITIONS TO THE ABOVE CITED SOLICITATION ARE ANNOUNCED:

This Addendum modifies the Invitation to Bid (ITB) document(s) only to the extent indicated herein. All other areas not changed or otherwise modified by this Addendum shall remain in full force and effect. This Addendum is hereby made an integral part of the ITB document. Bidder must be responsive to any requirements of this Addendum as if the requirements were set forth in the ITB. Failure to do so may result in Bid rejection. See the ITB regarding requests for clarification or change and protests of this Addendum, and the deadlines for the foregoing.

This addendum is to be acknowledged in the space provided on the Bidder Certification form supplied in the solicitation document. Failure to acknowledge receipt of this addendum may be cause to reject your offer.

The closing date **REMAINS UNCHANGED: May 19, 2020 at 2:00 PM Pacific Time**

CHANGES:

- 1) The attached Bid Schedule replaces the Bid Schedule in the original ITB. Bidders shall complete and submit the Bid Schedule that is attached to this Addendum No. 2. The Bid Schedule and Specifications are changed according to the below:**
 - Estimated quantities have been added to the unit pricing found in Attachment L Specifications/Project Manual have been added to the Bid Schedule. The Unit Pricing will be considered in evaluating bids in accordance with the Instructions to Bidders. The Unit Price amounts shall not be included in the Base Bid amount on the Bid Schedule, rather the district will calculate and add to that amount as a part of the Bid Evaluation process.
 - Deductive Alternate 1 has been added to the Bid Schedule. Deductive Alternate 1 is optional and provides Bidders the opportunity to include any available lower cost aluminum fabricated ladders and guard rails. As such, the Metal Fabrications spec Section 055000 refers to the structural drawings, and sheet number S000, which call out galvanized steel as the metals material to fabricate the new ladders and guardrails, are updated to include aluminum fabricated materials in accordance with all other applicable specifications to be an optional Deductive Alternate. Because Aluminum fabricated ladders and guardrails are a deductive alternate, the specified galvanized steel fabricated materials must be included in the Base Bid Amount. Bidders that offer a Deductive Alternate must include as a negative number the net cost savings from the specified galvanized steel materials that the aluminum fabricated materials would represent. If the District selects Alternat 1 prior to Contract Award, then that amount will be reduced from the sum of the total Base Bid and Unit Price calculations.
- 2) Attachment L Specifications/Project Manual are changed to include the following where applicable:**

Separate ½-inch HD cover board adhered in low rise urethane foam adhesive is an acceptable alternative to HD Composite Board, 90ml. Bidders may choose which to include in their Total Base Bid.

- 3) Call out for perimeter plywood nailer was missing from details. Replace Drawing sheets R200 and R201 with the revised R200 and R201 sheets Attached to this Addendum 2.
- 4) Call out for perimeter plywood nailer was missing from details. Replace Drawing sheets R200 and R201 with the revised R200 and R201 sheets provided with Addendum #2.
- 5) Replace Drawing sheets R101, S100, S201 with revised sheets attached to this Addendum #2. Reference detail 12/S201 for information on covering existing openings at existing penetrations to demo.
- 6) The Attached Sample Contract Exhibits are added to the Sample Contract that is attached to the ITB. Exhibit E includes the Insurance Requirements.

CLARIFICATIONS:

Question: Is there any work related to the mechanical components that is a part of this bid?

Answer: While the contractor resulting from this bid will be required to coordinate with the mechanical (e.g., HVAC, etc.) contractor, all work related to the planned mechanical upgrades will be a part of a separate ITB/project that should be released in the near future. Any references to mechanical components in the bid documents, other than as included in Note #5, are solely for the purpose of providing information to help bidders prepare bids for the roofing Work. Please reference General Note #5 on Drawing Sheet R101, which describes the extent of the roofing Contractor's scope of work related to raising of mechanical units onto the new or extended curbs and related structural engineering.

Question: Suggested Alternative?

Answer: HD composite board is what's in the spec but if Bidders may also choose to do a separate 2" layer with a half inch cover board that's HD composite, 90ml. Please see change number 2 listed above.

Question: Were the bid documents published with the mechanical drawings.

Answer: No, those will come out later in another solicitation that has not yet been published.

Question: Mechanical will be a separate contract, separate bid?

Answer: Yes, but mechanical will need to coordinate with the Roofing contractor. Also, please reference General Note #5 on Drawing Sheet R101, which describes the extent of the roofing Contractor's scope of work related to raising of mechanical units onto the new or extended curbs and related structural engineering.

Question: Have you done asbestos testing on the roof?

Answer: Yes, the asbestos report is attached to this Addendum.

Question: Fall Protection?

Answer: Please reference structural drawings for fall protection scope of work. As a general summary, which does not change the specifications, such scope mostly includes extensions, as well as single point anchors in gravel areas. The 3-12 pitch area will have lifeline.

Question: RFI for Fall Protection Devices scope (072270).The spec only calls out – Reference Structural Drawings Are we to assume that there no there are no requirements in regards to System Description (Design Requirements, Performance Requirements), Submittals, Quality Assurance, or Warranty?

Answer: Reference Specifications on structural sheet S000, which provides the necessary information for the fall protection system.

Question: Also Detail 8 and Detail 9 on structural plan S202 call out a Guardian CB-18 Wood Deck anchor. Are equivalent anchors from other manufactures acceptable or would a Substitution Request form to get submitted?

Answer: Reference Specifications on structural sheet S000, which provides the necessary information for fall protection systems.

Question: The Metal Fabrications spec Section 055000 refers to the structural drawings, and sheet number S000 calls out galvanized steel as the metals material to fabricate the new ladders and guardrails. Would it be acceptable to use aluminum as the material for metal fabrication to meet the same structural requirements specified, as it does not require weather resistant coating and is more light weight than steel?

Answer: Please reference Change 1, which provides an optional Alternate for aluminum.

Question: Due to the COVID-19 pandemic and the ITB 19-0051 bid process being conducted electronically, please confirm if it is acceptable to submit the required Bid Security Bond with electronic seals and signatures so that process may also be conducted electronically.

Answer: This is acceptable in terms of Responsiveness, so long as the Bid Security Bond is submitted in a form that is equally legally binding and enforceable by the District.

Question: Will all of the roof top units, vents, fans, ECT. be removed by the districted hired mechanical sub-contractor? If so will all of the units be removed at once?

Answer: There are two roof top units that will be removed and reinstalled by the Mechanical Contractor. It is assumed that the two will be removed and reinstalled at the same time.

Question: We will need a list of all weights and unit info such as length, width and height for the existing roof top units for the curb engineering. Also we will need the current connection details of the existing curbs to the roof for the engineering.

Answer: Bidders may obtain look into this using information from the nameplate on the unit. A photo of the nameplate is attached for convenience. The District received a conservative ballpark estimate of 800 – 1,000 lbs., not including curbs. However, the District cannot confirm the accuracy of this estimate.

Question: Will all of the electrical and gas be disconnected and reconnected with the district hired mechanical contractor?

Answer: Yes

Question: We will need info on the size of timber that is required from the RTU manufacture to mount to.

Answer: This is where the coordination with the Mechanical Contractor noted in the bid will be required. Bidders may be able to calculate such information from information included in the Drawings Project Manual/Specifications.

Question: Do we need to be aware of any mechanical unit screening requirements since we are raising up the units?

Answer: : BSD has not been made aware of any additional screening requirements.

Question: Please provide details for infilling the deck where there are abandon penetrations.

Answer: Please reference Change 5.

503-998-6372

-END of Addendum

Peter Madaus
Contract Specialist

BID SCHEDULE

(Contractor)

TOTAL BASE BID: including the Work as defined in the Solicitation Documents (e.g., the Specifications/Project Manual, Drawings Addenda, etc.), the TOTAL SUM OF:

_____ DOLLARS (\$ _____)

- Deductive Alternate #1: As described under Changes in Addendum 2, this is an optional Alternate to include lower cost aluminum fabricated ladders and guardrails. The amount should be a negative value that represents the net cost savings from the Specified galvanized steel fabricated ladders and guard rails that must be included in the Total Base Bid.

_____ DOLLARS (\$ _____)

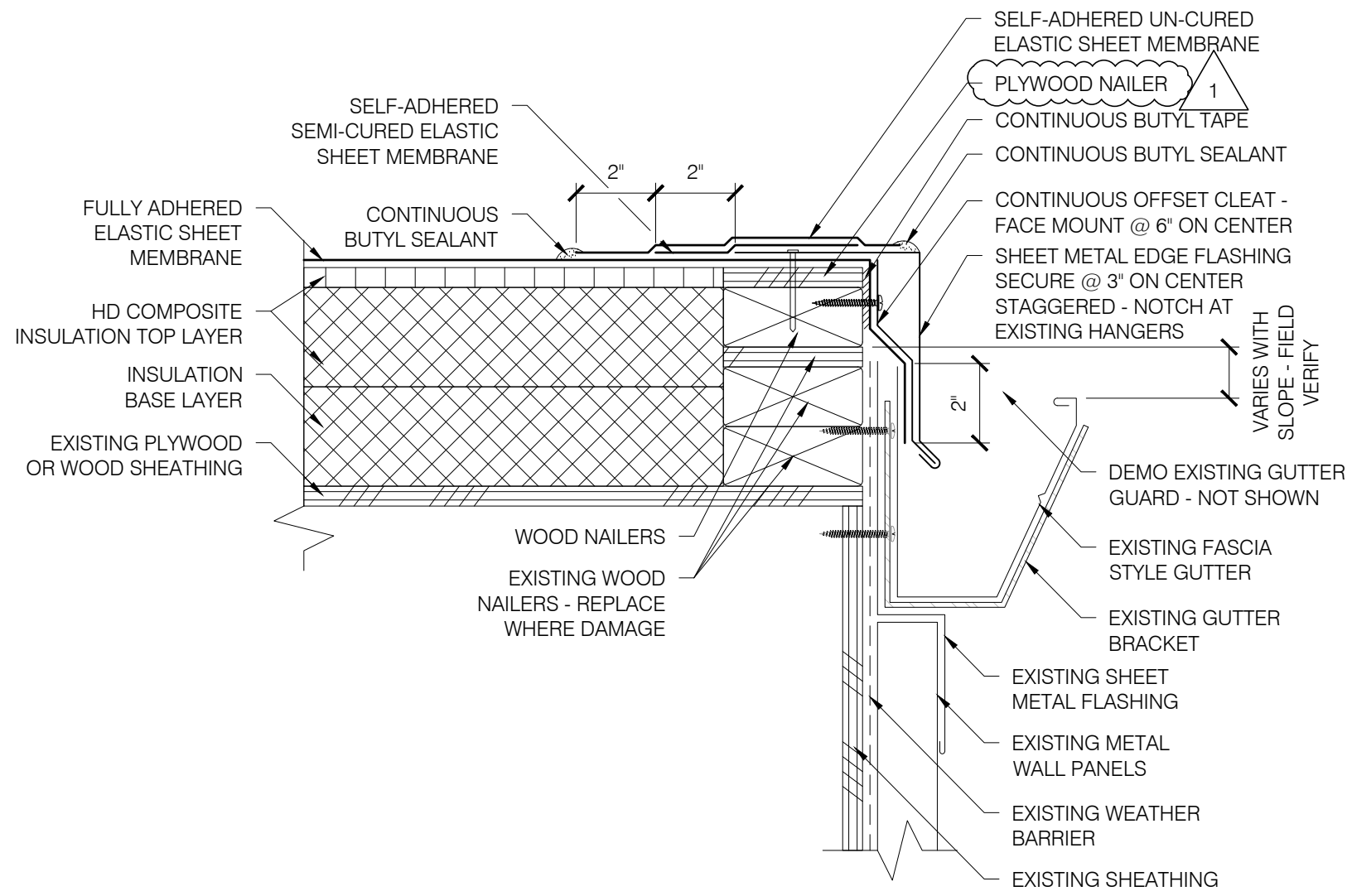
- Unit Prices:

Unit Price No. 1: Remove & replace existing damaged 1/2" plywood roof sheathing. Est. Qty: 100 Price per S.F. _____
Unit Price No. 2: Remove & replace existing damaged 5/8" plywood roof sheathing. Est. Qty: 100 Price per S.F. _____
Unit Price No. 3: Remove & replace existing damaged 2" x 4"-dimensional lumber. Est. Qty: 100 Price per L.F. _____
Unit Price No. 4: Remove & replace existing damaged 2" x 6"-dimensional lumber. Est. Qty: 100 Price per L.F. _____

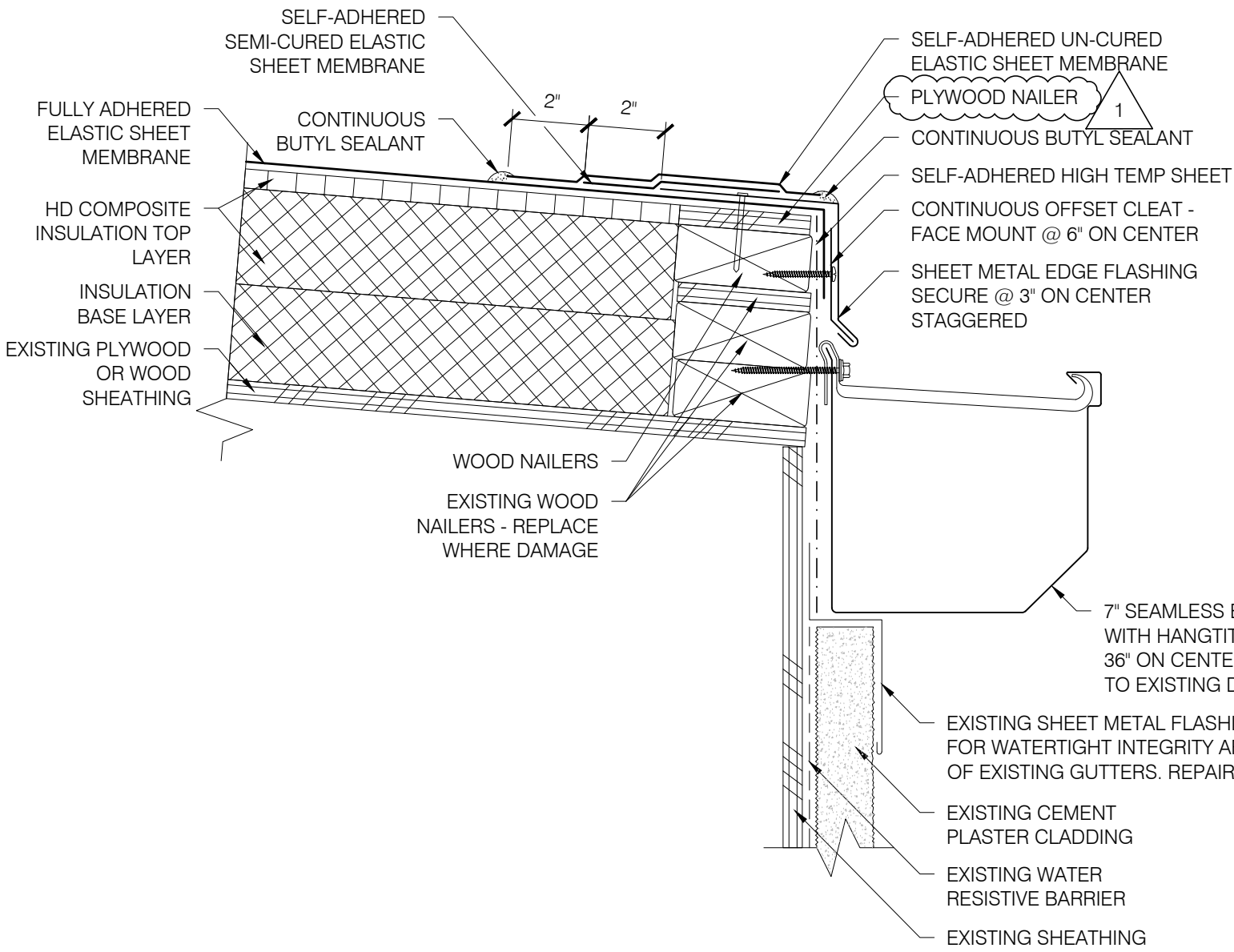
NOTES:

- Contractor will be required to develop a schedule of values for payment and accounting purposes prior to the initial request for payment in a form acceptable to the District.
- If any information submitted on this form is contradictory, words prevail over numbers.

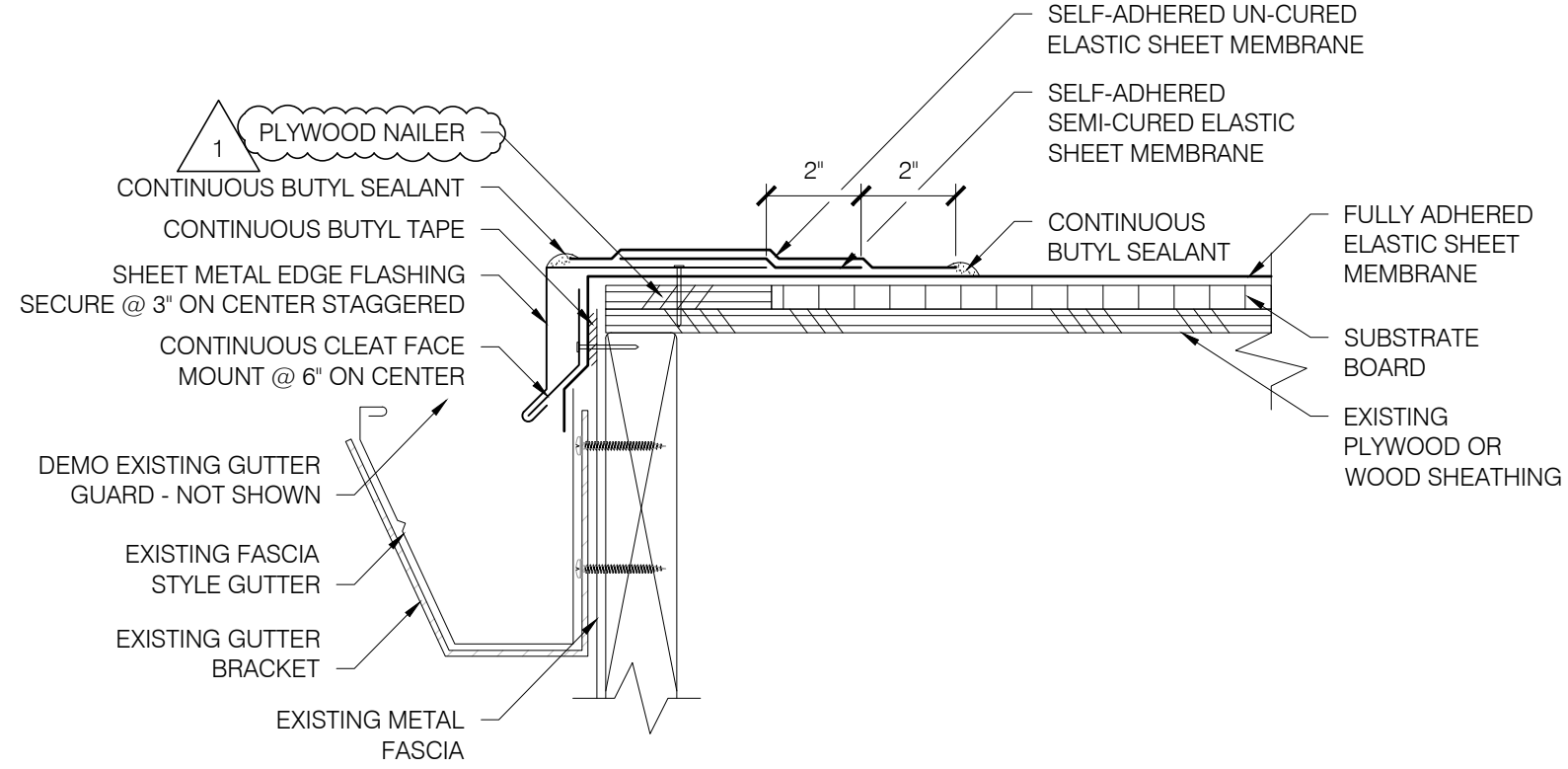
The Contract is intended to be awarded to a single Contractor



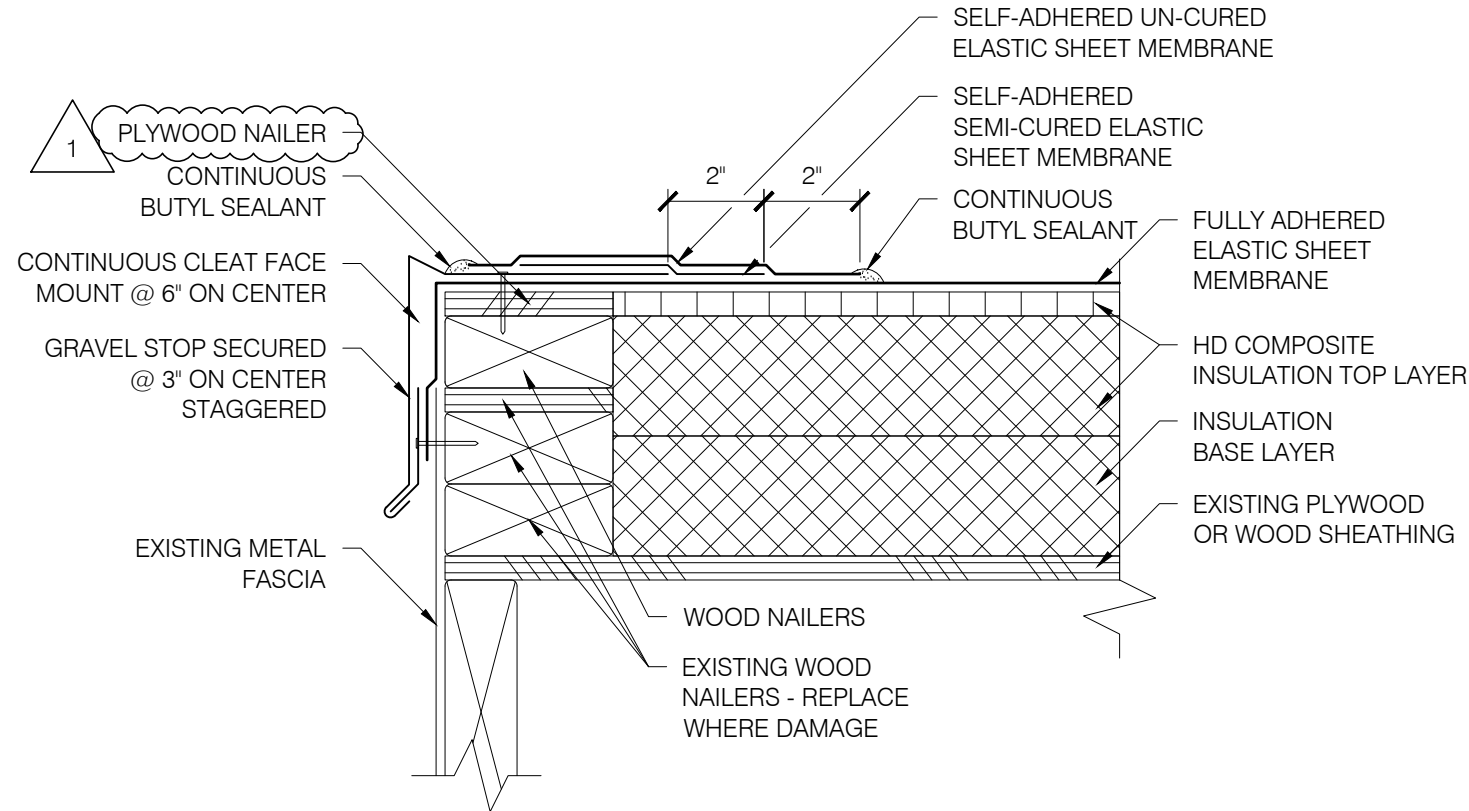
1 GUTTER EDGE
R200 SCALE: 3" = 1'-0"



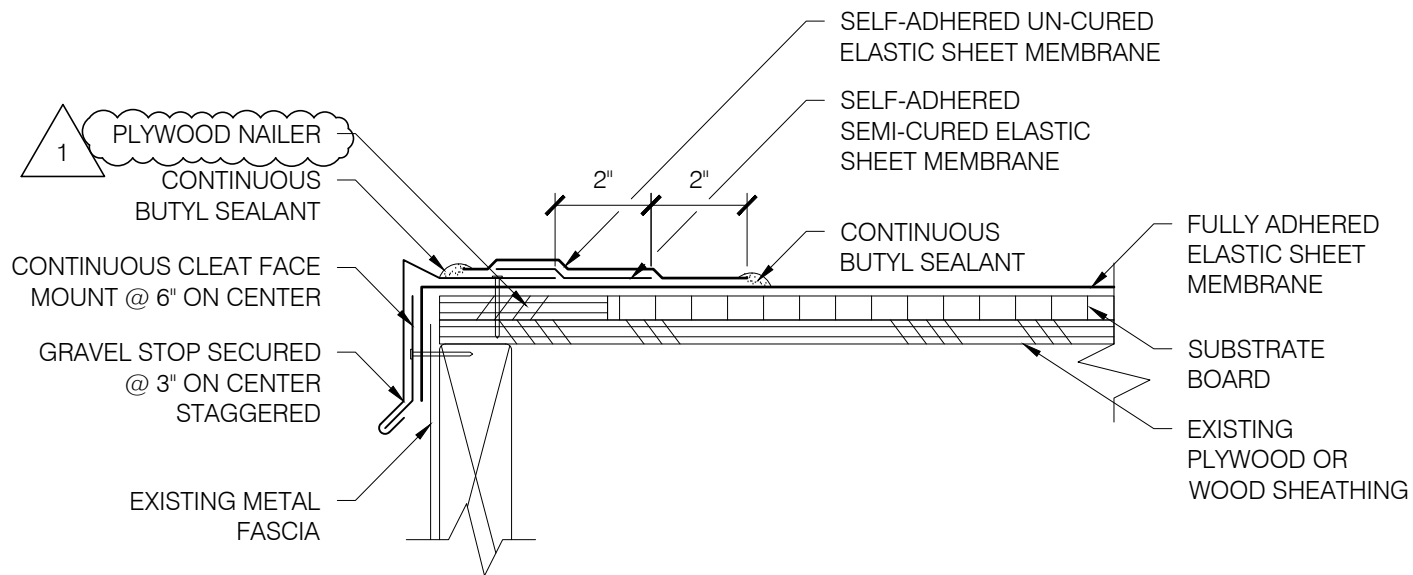
2 GUTTER EDGE
R200 SCALE: 3" = 1'-0"



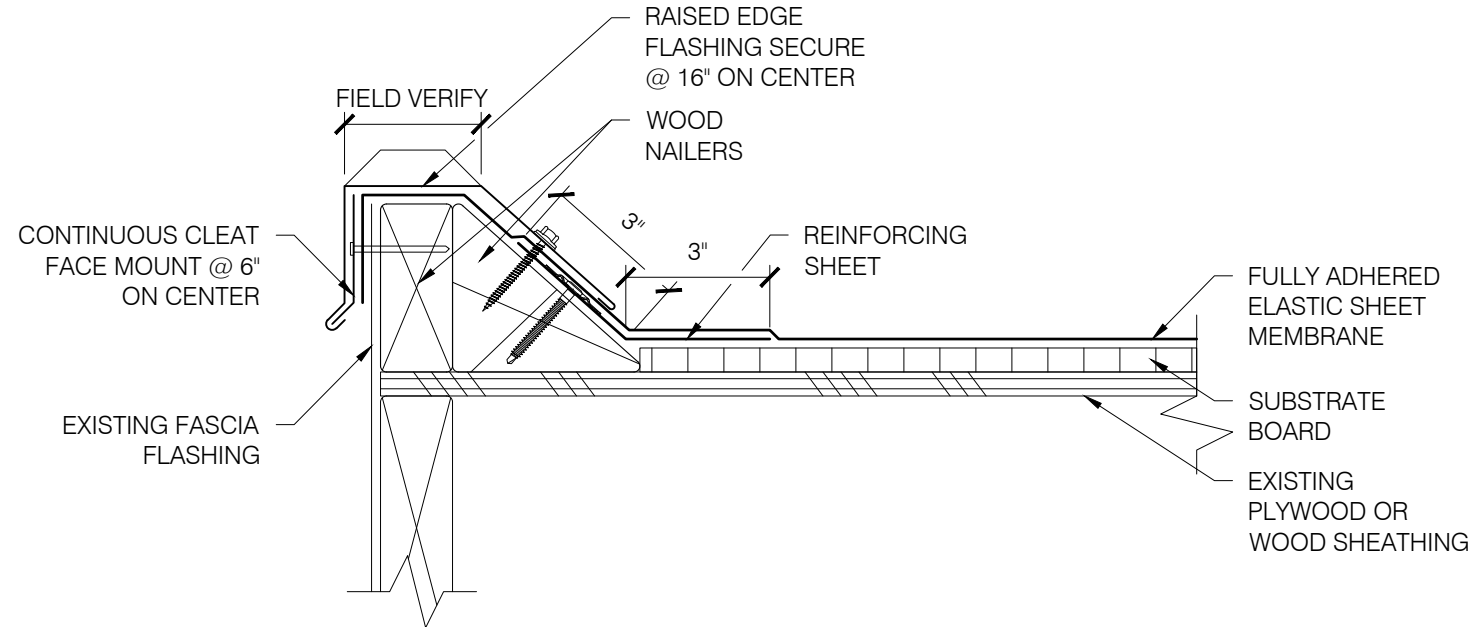
3 GUTTER EDGE
R200 SCALE: 3" = 1'-0"



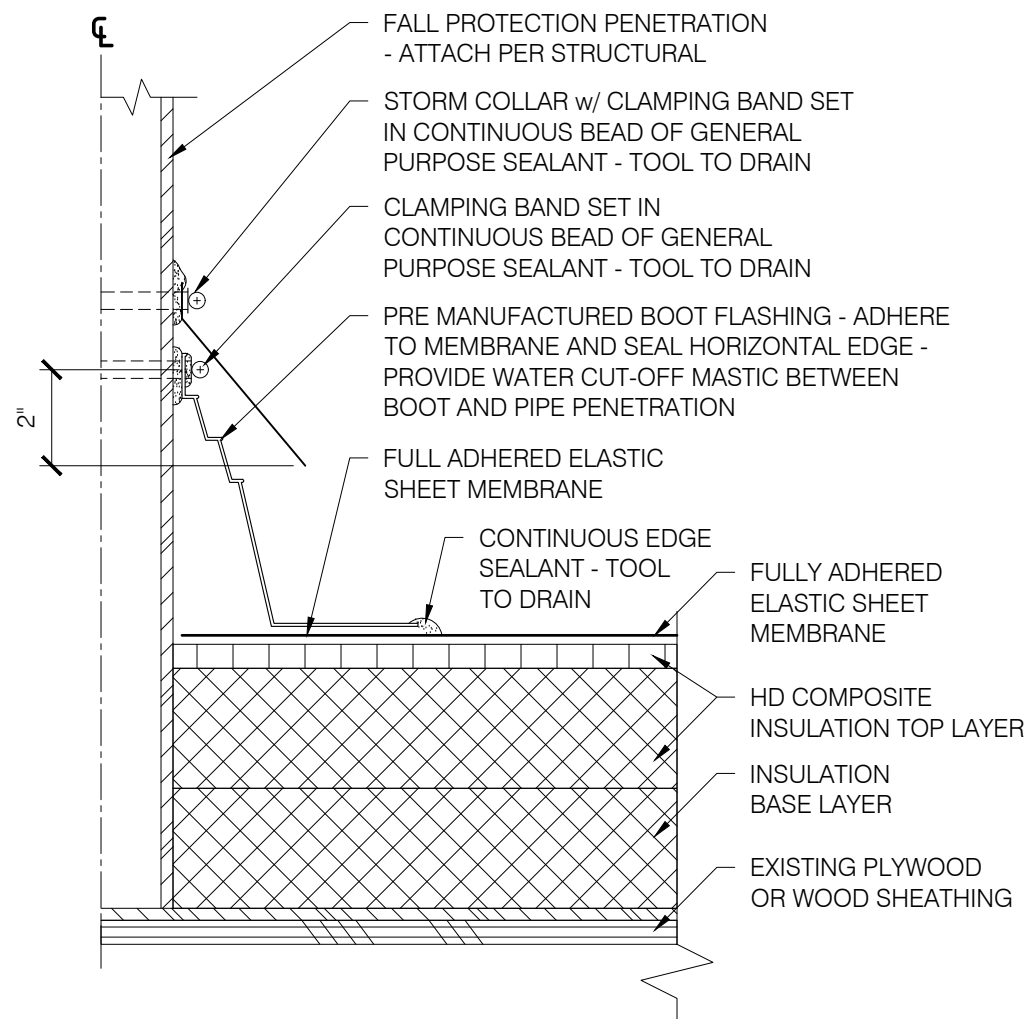
4 RAKE EDGE
R200 SCALE: 3" = 1'-0"



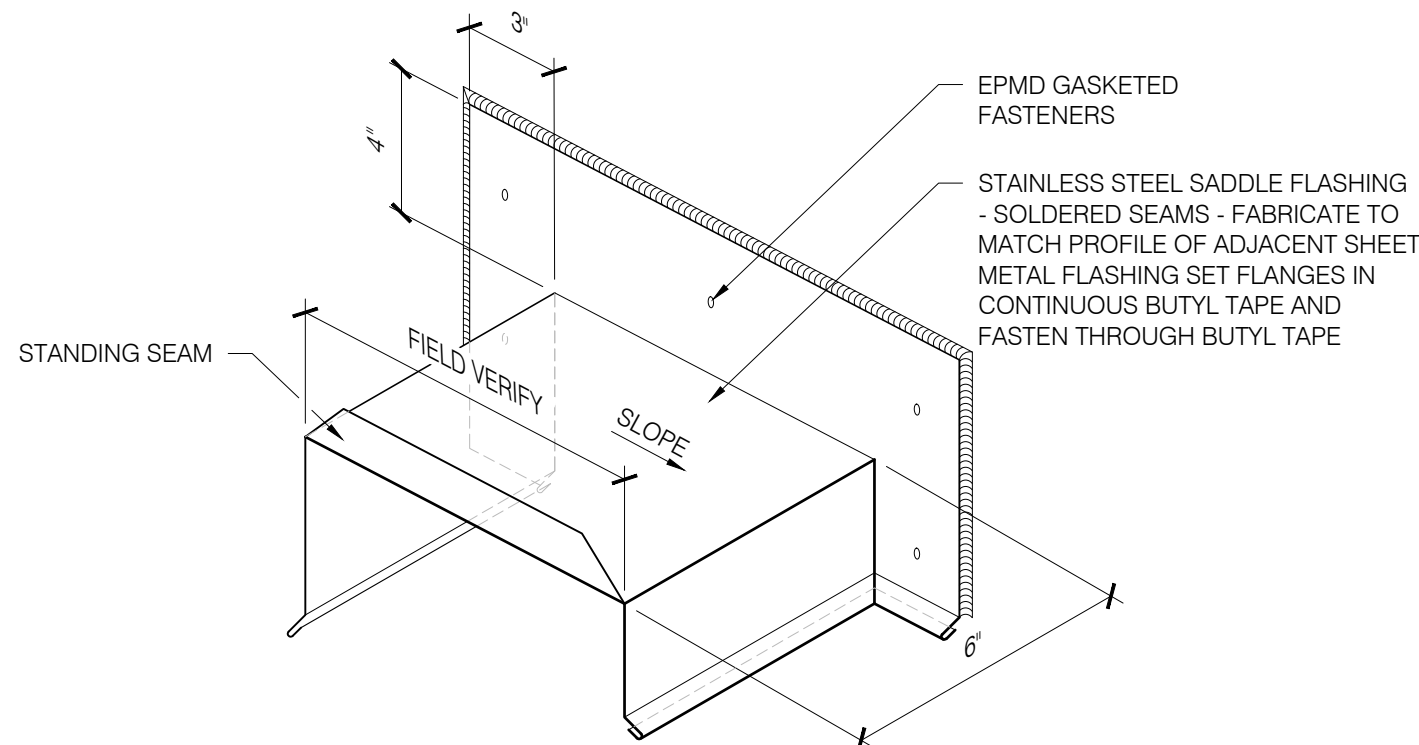
5 RAKE EDGE
R200 SCALE: 3" = 1'-0"



6 RAKE EDGE
R200 SCALE: 3" = 1'-0"



7 STRUCTURAL PENETRATION
R200 SCALE: 3" = 1'-0"



8 END WALL SADDLE FLASHING
R200 SCALE: NOT TO SCALE

**BEAVERTON SCHOOL DISTRICT
BARNES ELEMENTARY SCHOOL
ROOF REPLACEMENT**

SHEET TITLE:

DETAILS

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THE BAR SCALE IS 2 INCHES IN LENGTH. IF THE BAR IS NOT 2 INCHES LONG, THIS DRAWING IS NOT TO THE SCALE INDICATED.

Date:	FEB 11, 2020
Revisions:	

Drawn:	C.G.
Check:	J.F.P.
File:	R200:Details
Job:	R3055.20

SHEET NUMBER:
R200

BID SET

**BEAVERTON SCHOOL DISTRICT
BARNES ELEMENTARY SCHOOL
ROOF REPLACEMENT**

SHEET TITLE:
DETAILS
REVISIONS

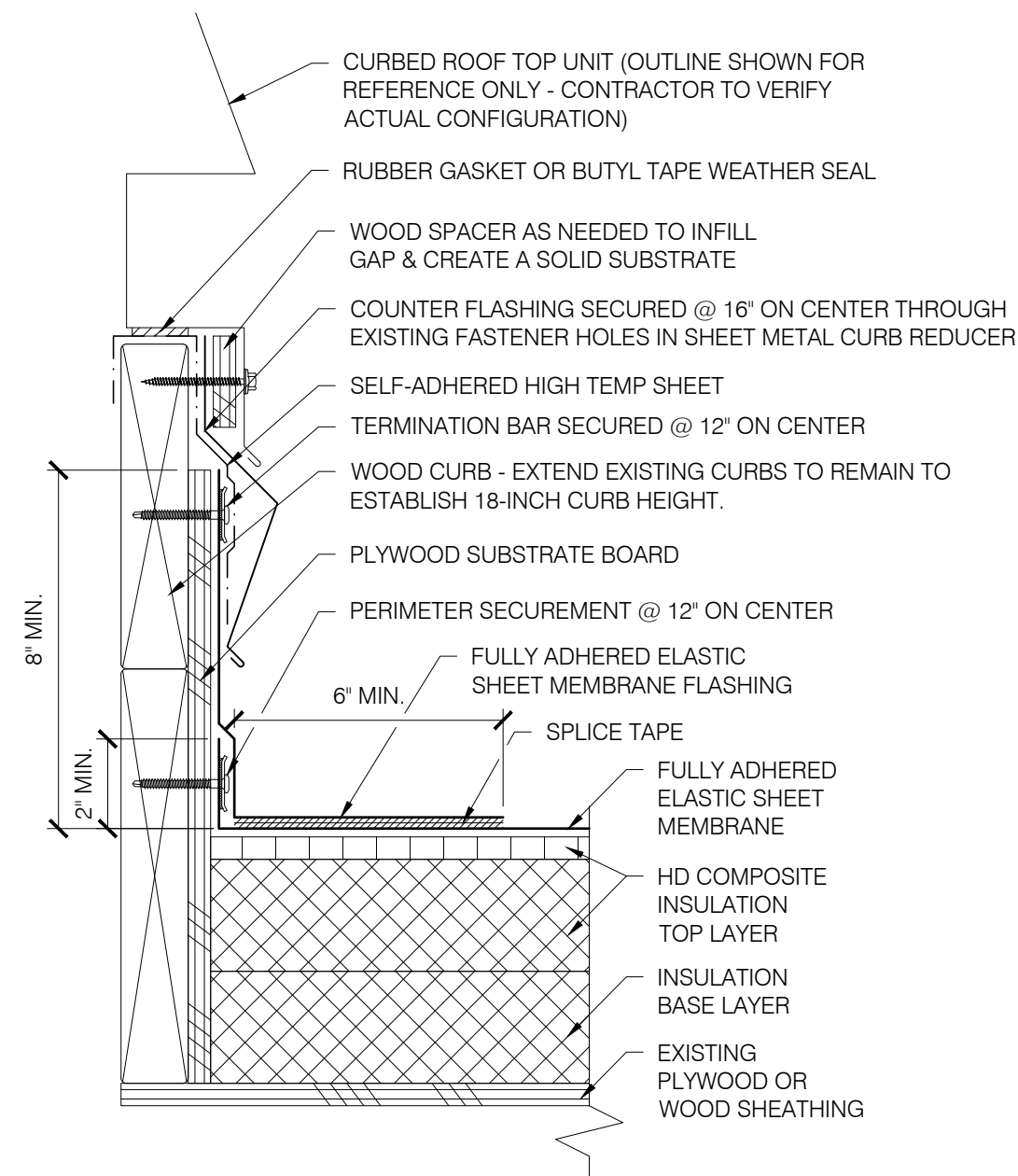
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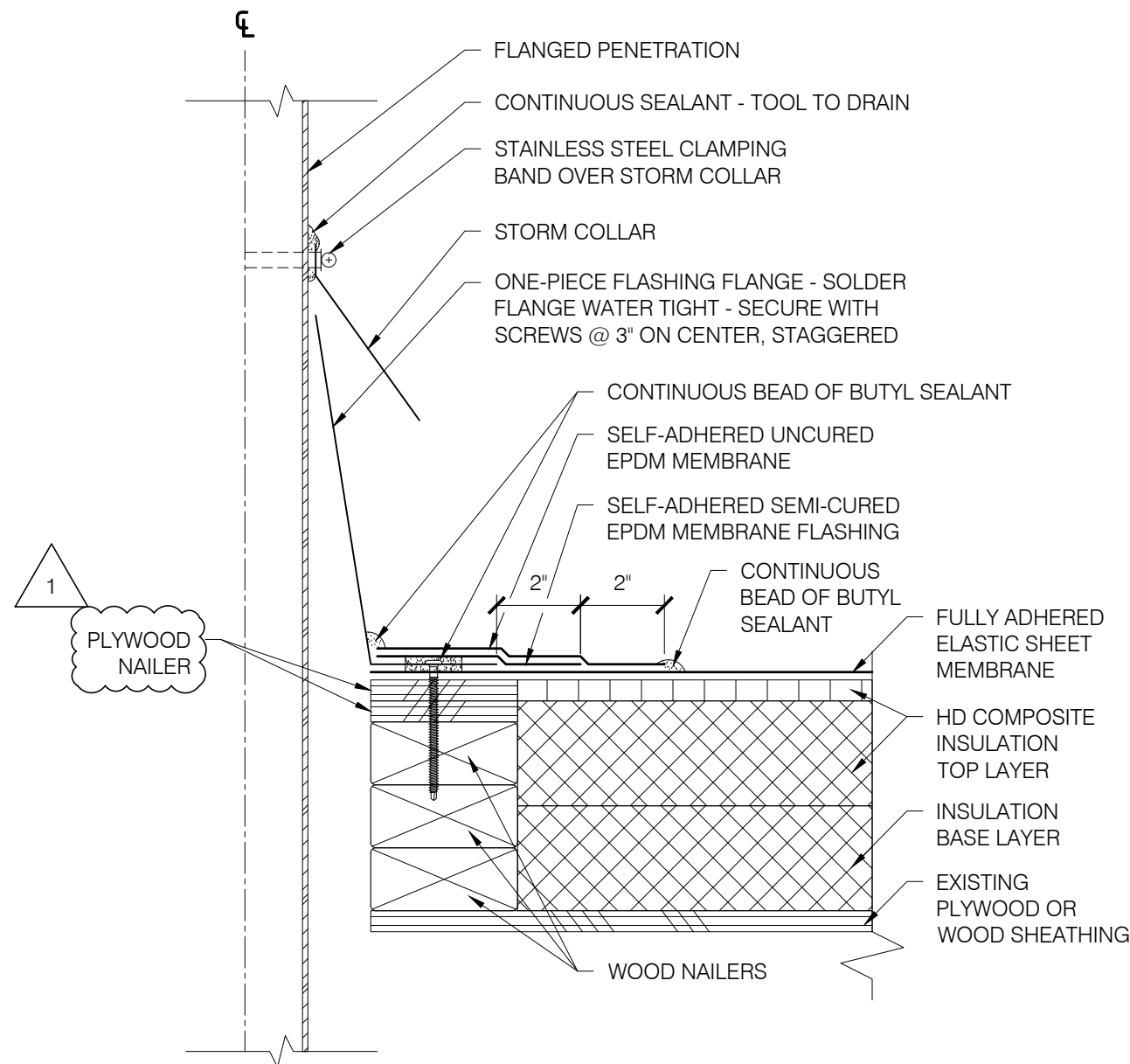
Date: FEB 11, 2020
Revisions:
MAY 13, 2020
Drawn: C.G.
Check: J.F.P.
File: R200-Details
Job: R3055.20

SHEET NUMBER:
R202

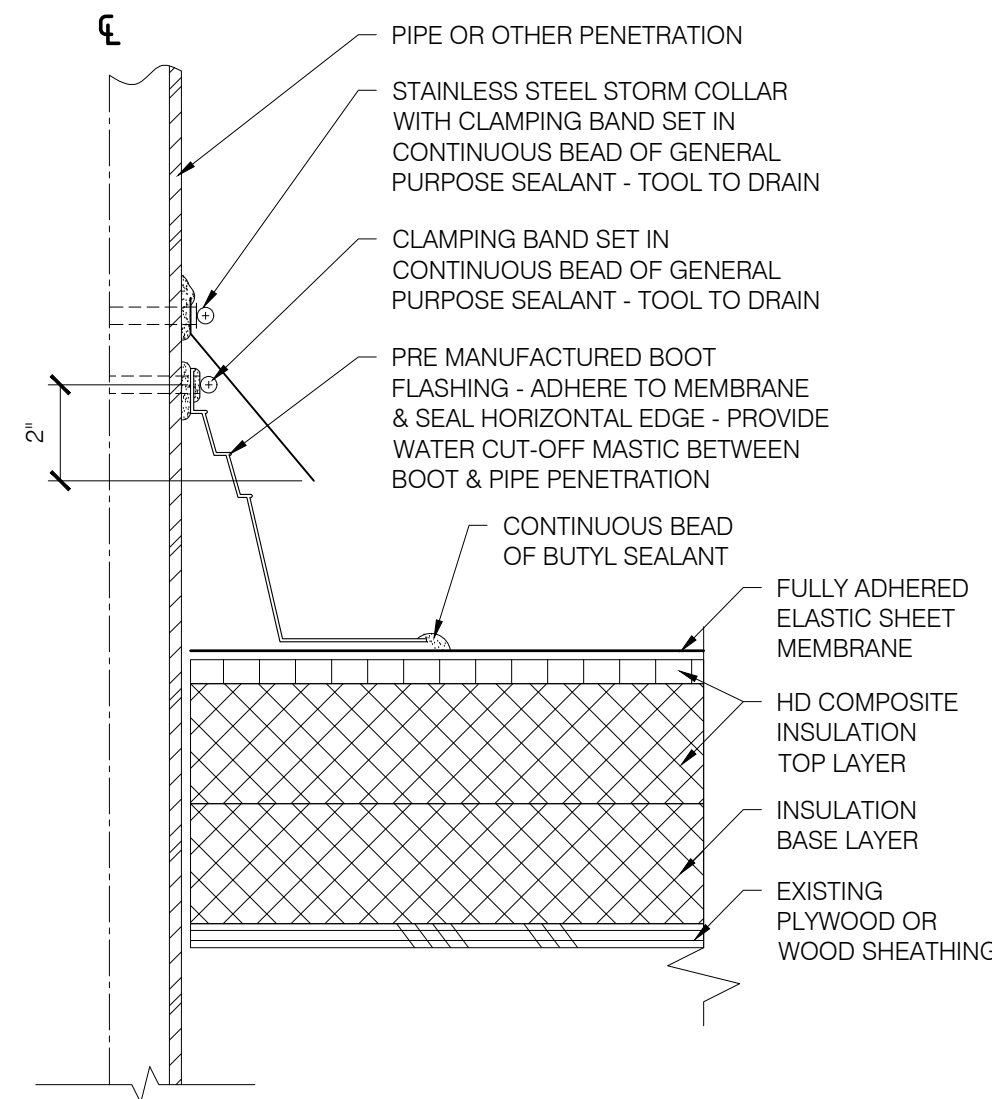
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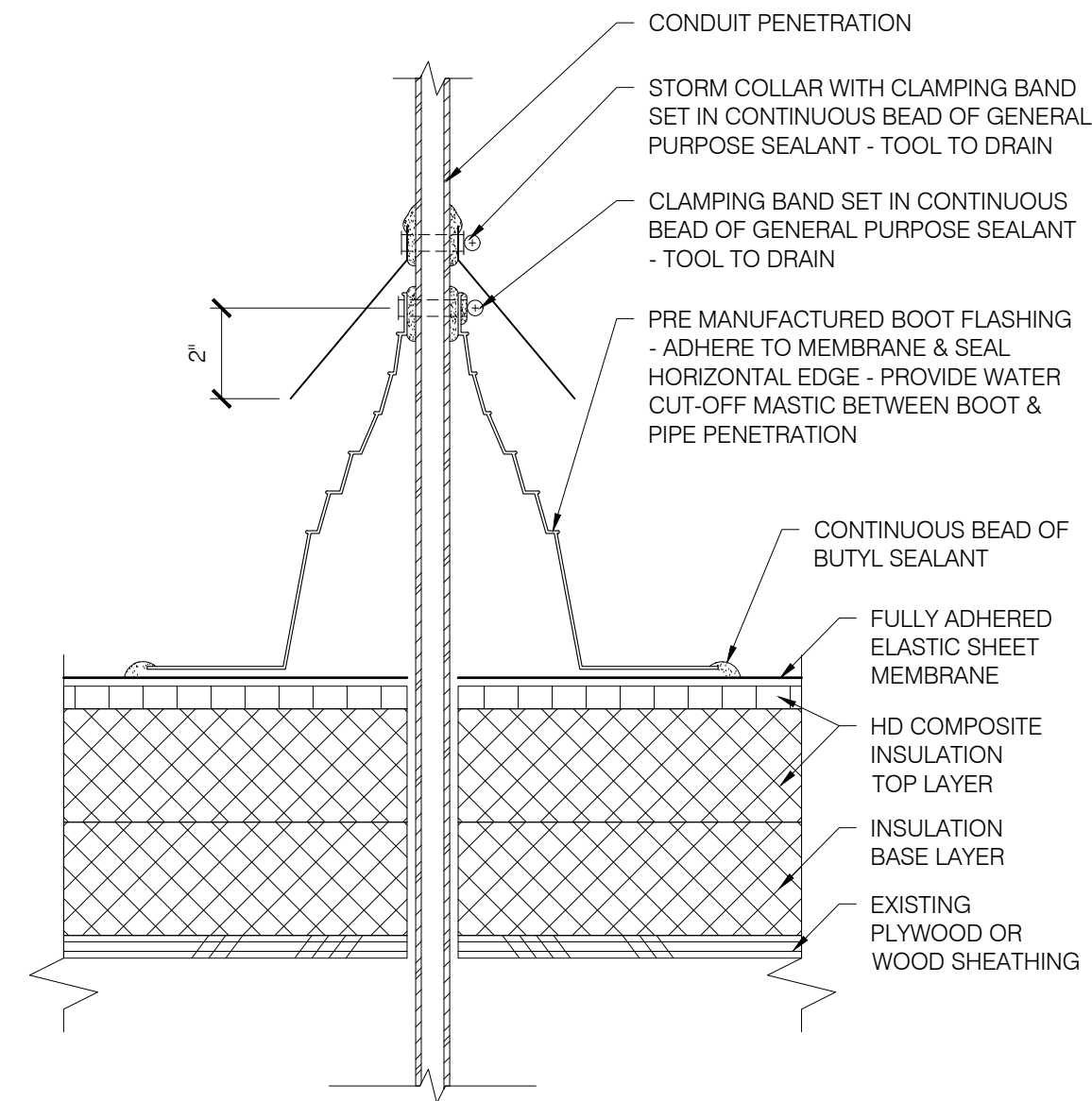
1 CURB MOUNTED ROOF TOP UNIT
SCALE: 3" = 1'-0"



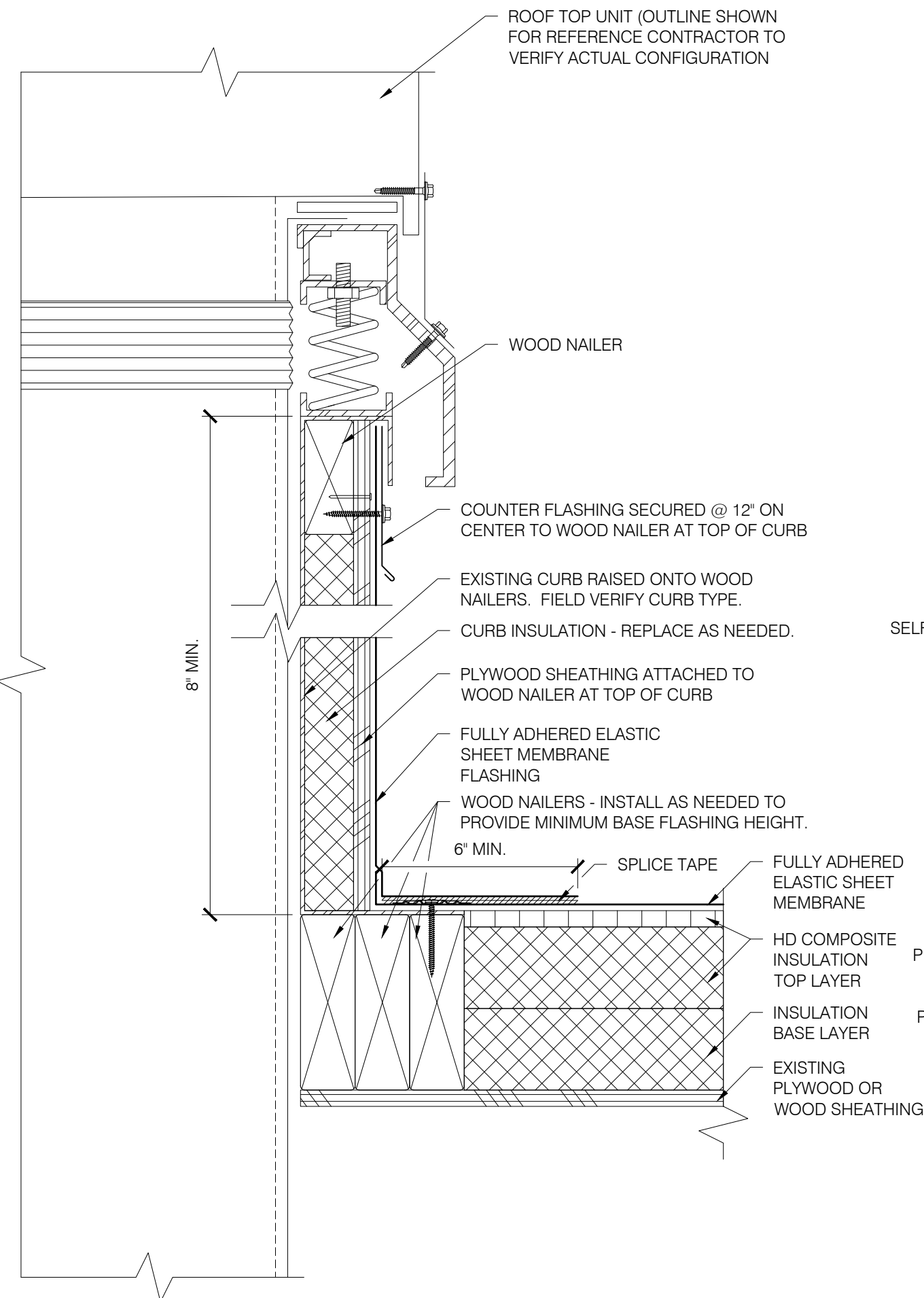
2 HOT PIPE PENETRATION FLASHING
SCALE: 3" = 1'-0"



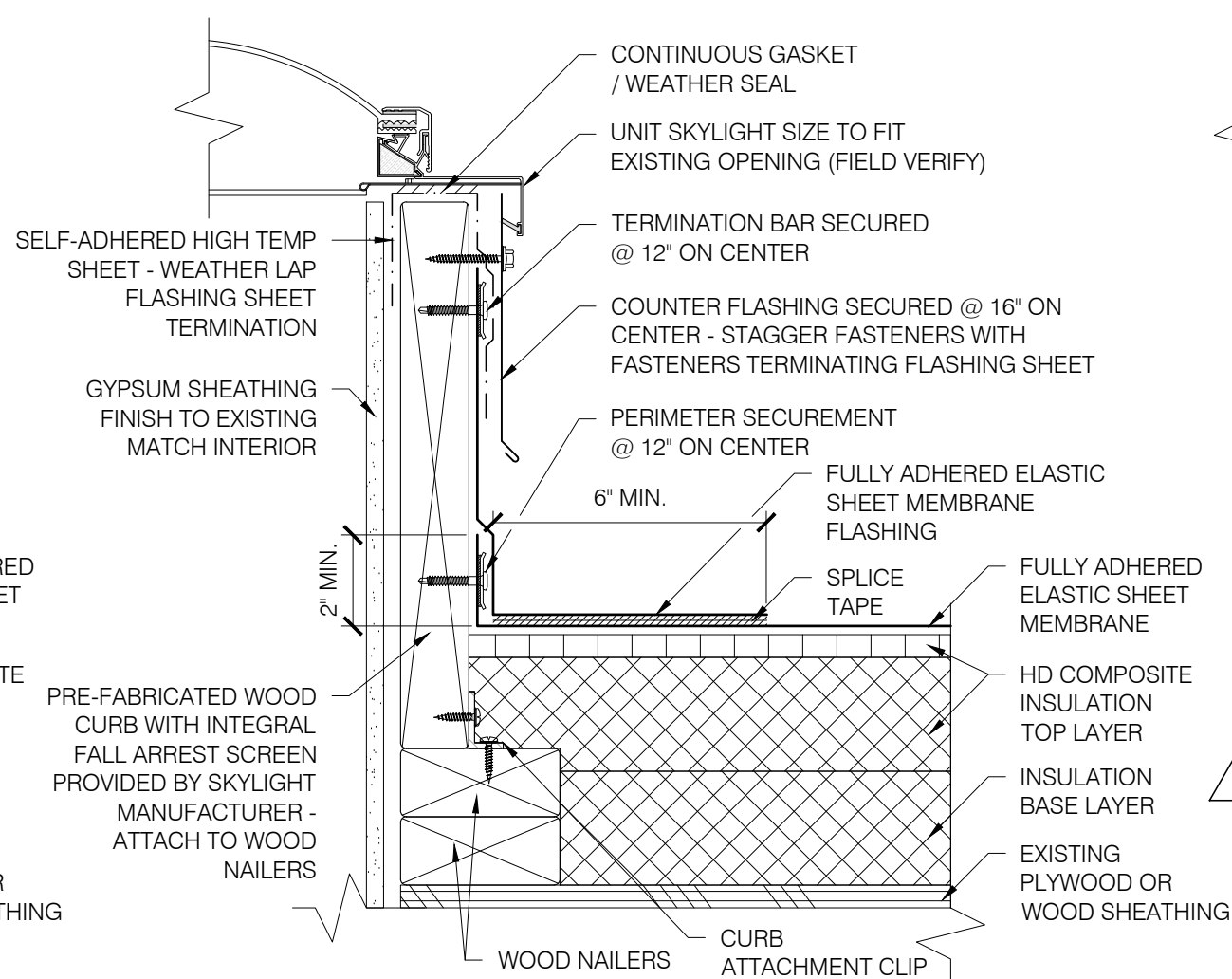
3 PRE-FORMED PENETRATION FLASHING
SCALE: 3" = 1'-0"



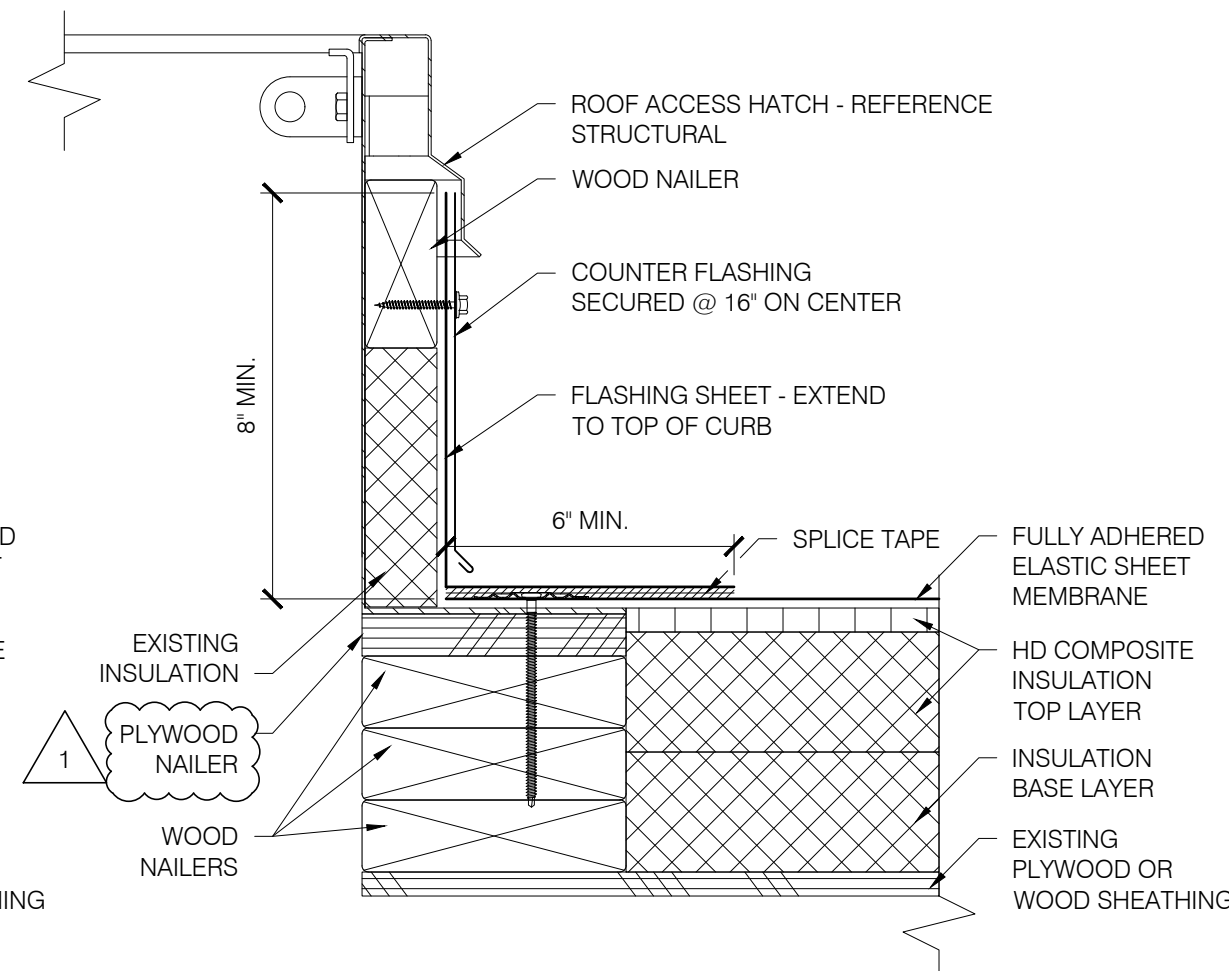
4 ELECTRICAL PENETRATION
SCALE: 3" = 1'-0"



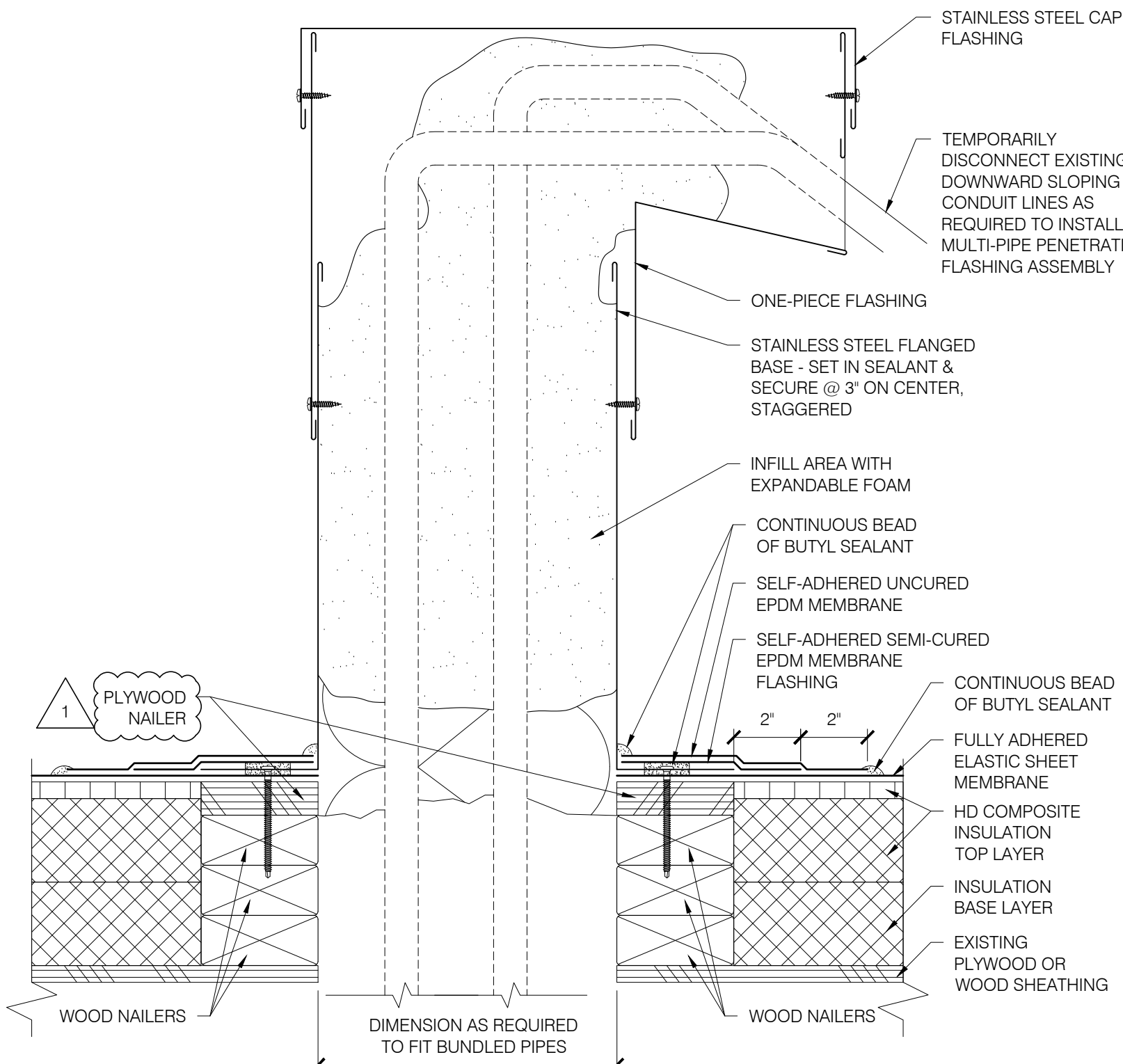
5 CURB MOUNTED ROOF TOP UNIT
SCALE: 3" = 1'-0"



6 CURBED SKYLIGHT
SCALE: 3" = 1'-0"



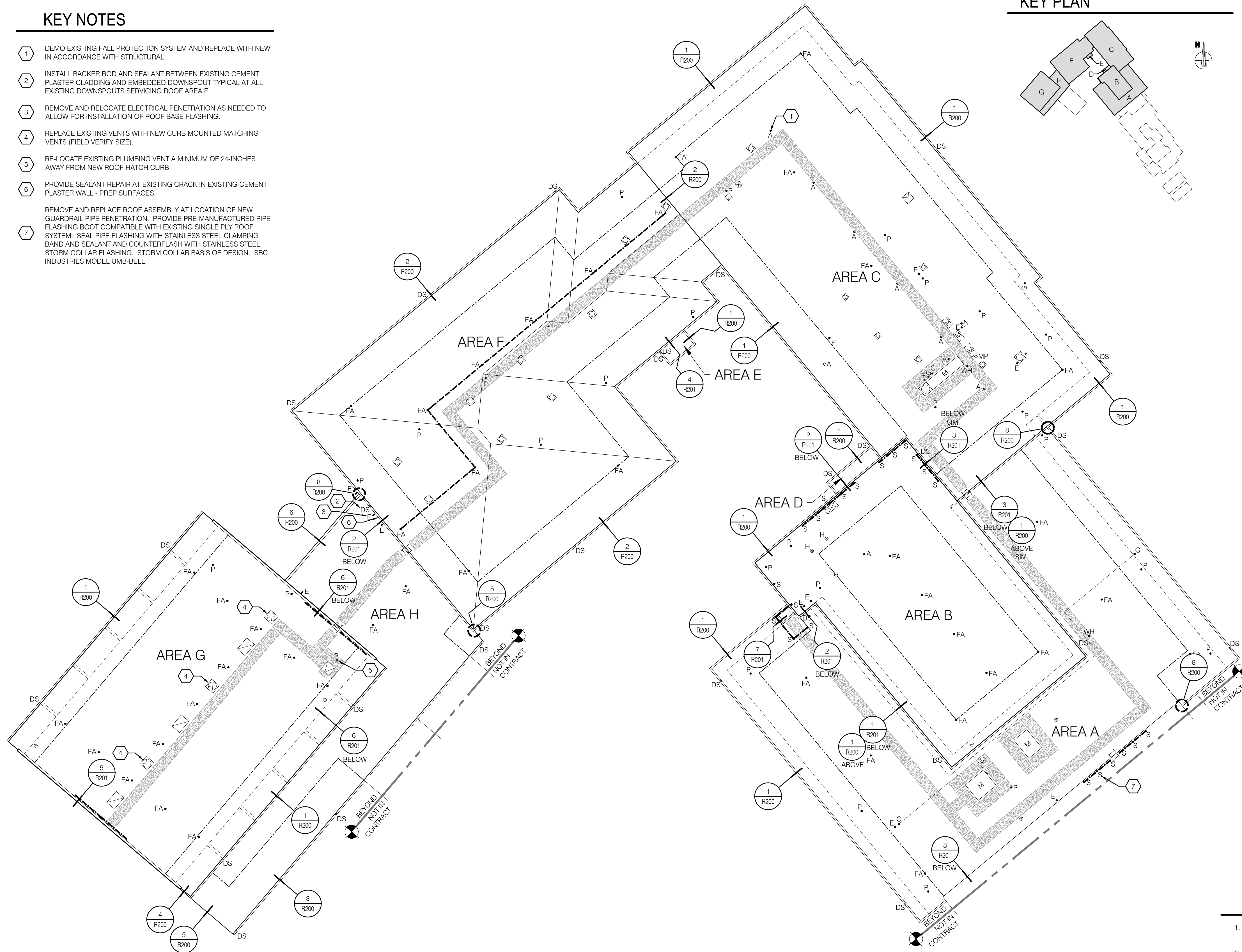
7 ROOF HATCH
SCALE: 3" = 1'-0"



8 MULTI-LINE PENETRATION
SCALE: 3" = 1'-0"

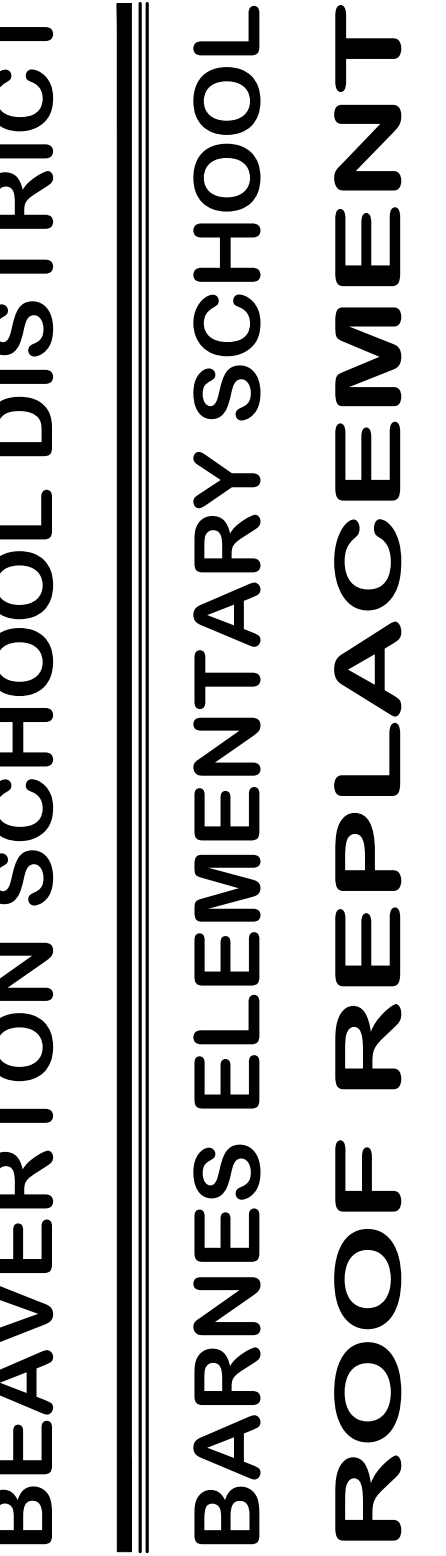
BID SET

- 1 DEMO EXISTING FALL PROTECTION SYSTEM AND REPLACE WITH NEW IN ACCORDANCE WITH STRUCTURAL.
- 2 INSTALL BACKER ROD AND SEALANT BETWEEN EXISTING CEMENT PLASTER CLADDING AND EMBEDDED DOWNSPOUT TYPICAL AT ALL EXISTING DOWNSPOUTS SERVICING ROOF AREA F.
- 3 REMOVE AND RELOCATE ELECTRICAL PENETRATION AS NEEDED TO ALLOW FOR INSTALLATION OF ROOF BASE FLASHING.
- 4 REPLACE EXISTING VENTS WITH NEW CURB MOUNTED MATCHING VENTS (FIELD VERIFY SIZE).
- 5 RE-LOCATE EXISTING PLUMBING VENT A MINIMUM OF 24-INCHES AWAY FROM NEW ROOF HATCH CURB.
- 6 PROVIDE SEALANT REPAIR AT EXISTING CRACK IN EXISTING CEMENT PLASTER WALL - PREP SURFACES.
- 7 REMOVE AND REPLACE ROOF ASSEMBLY AT LOCATION OF NEW GUARDRAIL PIPE PENETRATION. PROVIDE PRE-FABRICATED PIPE FLASHING BOOT COMPATIBLE WITH EXISTING SINGLE PLY ROOF SYSTEM. SEAL PIPE FLASHING WITH STAINLESS STEEL CLAMPING BAND AND SEALANT AND COUNTERFLASH WITH STAINLESS STEEL STORM COLLAR FLASHING. STORM COLLAR BASIS OF DESIGN: SBC INDUSTRIES MODEL UMB-BELL.

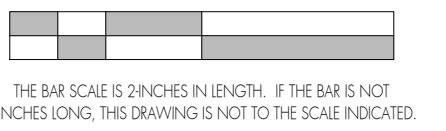


	P•	VENT PIPE PENETRATION- RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT.
	- E •	EXISTING ELECTRICAL PENETRATION - RAISE HEIGHT / RELOCATE AS NECESSARY TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT.
	WH•	EXISTING WEATHER HEAD
	G•	EXISTING GAS PENETRATION - RAISE HEIGHT AS NECESSARY TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT.
	FA•	FALL PROTECTION ANCHOR - PER STRUCTURAL
	MP ◻	MULTI-PIPE PENETRATION
	S — S	FALL RESTRAINT RAILING - PER STRUCTURAL
		CURBED SKYLIGHT - REMOVE AND REPLACE EXISTING PER 086200 - UNIT SKYLIGHTS
		EXISTING CURBED VENT - RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT
		EXISTING CURBED FAN UNIT - RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT
		CURBED VENT - REPLACE EXISTING WITH NEW OF MATCHING SIZE PER 077200 - ROOF ACCESSORIES
	H ◊	EXISTING FLANGED PENETRATION (HOT) - RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY
	◊	EXISTING FLANGED VENT - RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY
		EXISTING CURBED MECHANICAL UNIT - RAISE HEIGHT TO ACCOMMODATE NEW ROOF ASSEMBLY MINIMUM FLASHING HEIGHT
		CURBED ROOF ACCESS HATCH WITH LADDER UP SAFETY POST AND NON-PENETRATING GUARDRAIL PER 077200 ROOF ACCESSORIES

1. ALL ITEMS TRANSPORTED TO ROOF SHALL BE TRANSPORTED USING APPROVED AND SAFE METHODS OF LOADING.
2. CONTRACTOR SHALL EMPLOY MEANS OF PROTECTING BUILDING OCCUPANTS AND GENERAL PUBLIC AT ALL TIMES DURING THE COURSE OF CONSTRUCTION.
3. PROTECT ADJACENT DECKS, VEGETATION, FURNITURE, AND OTHER PROPERTY DURING DEMOLITION ACTIVITIES.
4. ALL PERMITTING, INCLUDING ROAD CLOSURES, PARKING STALLS, SIDEWALK CLOSURES, SCAFFOLD ERECTION, ETC. SHALL BE COORDINATED, OBTAINED, AND PAID FOR BY CONTRACTOR.
5. CONTRACTOR IS RESPONSIBLE FOR RAISING UNITS ONTO NEW OR EXTENDED CURBS AND ANY RELATED STRUCTURAL ENGINEERING. COORDINATE WORK ASSOCIATED WITH RAISING OF ROOF TOP MECHANICAL UNITS AND PENETRATIONS WITH MECHANICAL CONTRACTOR HIRED BY THE DISTRICT UNDER SEPARATE CONTRACT. MECHANICAL SHUT DOWN, DISCONNECT, RE-CONNECT, RE-WIRING, CONTROLS WORK, ETC. TO BE PERFORMED BY OTHERS. MAINTAIN WATERTIGHT CONDITIONS DURING PERFORMANCE OF WORK.



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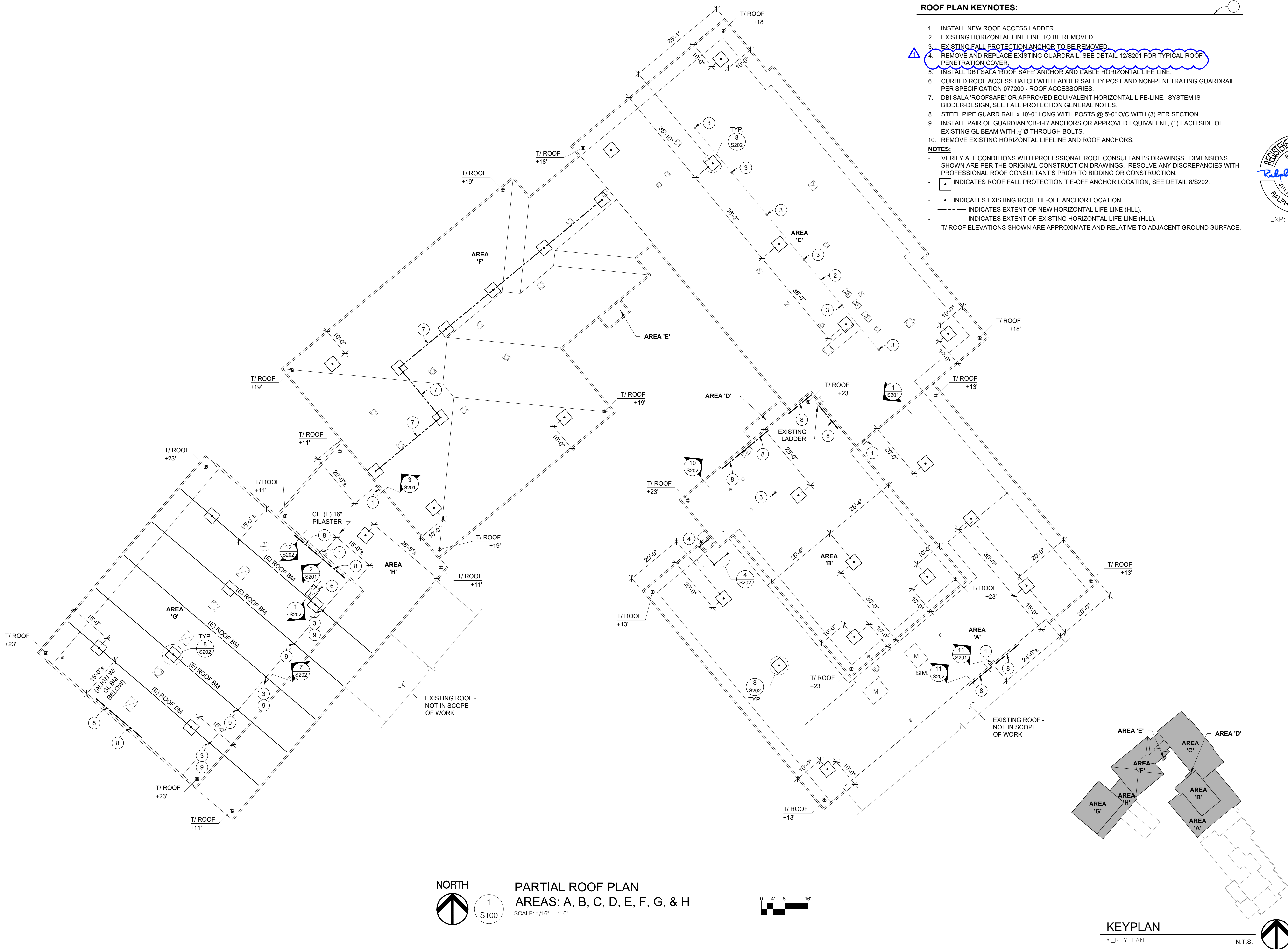
Drawn:	C.G.
Check:	J.F.P.
File:	R100-Roof_Plans
Job:	R3055.20

SHEET NUMBER:
R101

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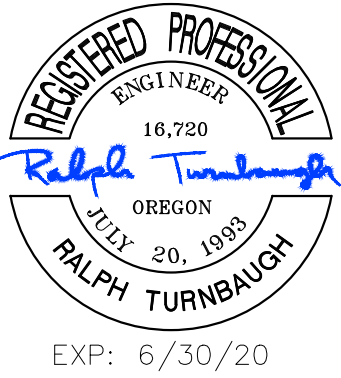
1 PARTIAL ROOF PLAN AREAS A, B, C, D, E, F, G & H
R101 SCALE: 1/16" = 1'-0"

BID SET



ROOF PLAN KEYNOTES:

1. INSTALL NEW ROOF ACCESS LADDER.
 2. EXISTING HORIZONTAL LINE LINE TO BE REMOVED.
 3. EXISTING FALL PROTECTION ANCHOR TO BE REMOVED.
 4. REMOVE AND REPLACE EXISTING GUARDRAIL. SEE DETAIL 12/S201 FOR TYPICAL ROOF PENETRATION COVER.
 5. INSTALL DB1 SALA 'ROOF SAFE' ANCHOR AND CABLE HORIZONTAL LIFE LINE.
 6. CURBED ROOF ACCESS HATCH WITH LADDER SAFETY POST AND NON-PENETRATING GUARDRAIL PER SPECIFICATION 077200 - ROOF ACCESSORIES.
 7. DBI SALA 'ROOFSAFE' OR APPROVED EQUIVALENT HORIZONTAL LIFE-LINE. SYSTEM IS BIDDER-DESIGN. SEE FALL PROTECTION GENERAL NOTES.
 8. STEEL PIPE GUARD RAIL x 10'-0" LONG WITH POSTS @ 5'-0" O/C WITH (3) PER SECTION.
 9. INSTALL PAIR OF GUARDIAN 'CB-1-B' ANCHORS OR APPROVED EQUIVALENT, (1) EACH SIDE OF EXISTING GL BEAM WITH 1/2"Ø THROUGH BOLTS.
 10. REMOVE EXISTING HORIZONTAL LIFELINE AND ROOF ANCHORS.
- NOTES:**
- VERIFY ALL CONDITIONS WITH PROFESSIONAL ROOF CONSULTANT'S DRAWINGS. DIMENSIONS SHOWN ARE PER THE ORIGINAL CONSTRUCTION DRAWINGS. RESOLVE ANY DISCREPANCIES WITH PROFESSIONAL ROOF CONSULTANT'S PRIOR TO BIDDING OR CONSTRUCTION.
 - [Symbol] INDICATES ROOF FALL PROTECTION TIE-OFF ANCHOR LOCATION, SEE DETAIL 8/S202.
 - [Symbol] INDICATES EXISTING ROOF TIE-OFF ANCHOR LOCATION.
 - --- INDICATES EXTENT OF NEW HORIZONTAL LIFE LINE (HLL).
 - --- INDICATES EXTENT OF EXISTING HORIZONTAL LIFE LINE (HLL).
 - T/I ROOF ELEVATIONS SHOWN ARE APPROXIMATE AND RELATIVE TO ADJACENT GROUND SURFACE.



EXP: 6/30/20

7650 SW Beaverton, Suite 100
Tigard, Oregon 97223
Phone: (503) 443-3900
Fax: (503) 443-3780

TMR
T.M. RIPPY
CONSULTING ENGINEERS

**PROFESSIONAL
ROOF
CONSULTANTS INC.**
1108 SE GRAND AVENUE, SUITE 300
PORTLAND, OREGON 97214
PH. 503 280 8759 FAX: 503 280 8866

BEAVERTON SCHOOL DISTRICT BARNES ELEMENTARY SCHOOL ROOF REPLACEMENT

SHEET TITLE:
PARTIAL ROOF PLAN

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THE BAR SCALE IS 2 INCHES IN LENGTH. IF THE BAR IS NOT 2 INCHES LONG, THIS DRAWING IS NOT TO THE SCALE INDICATED.

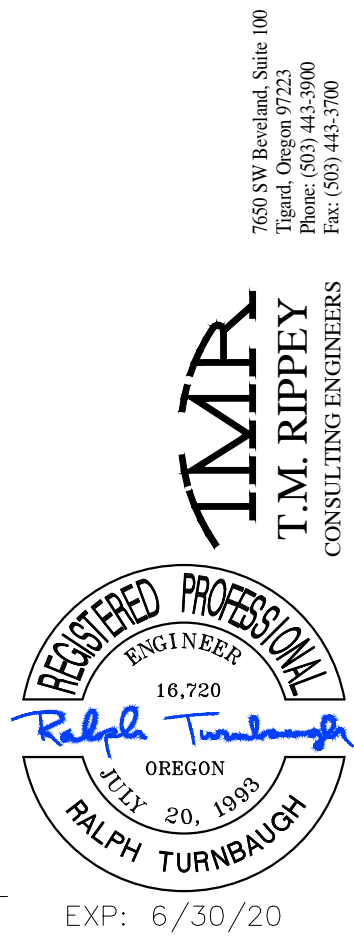
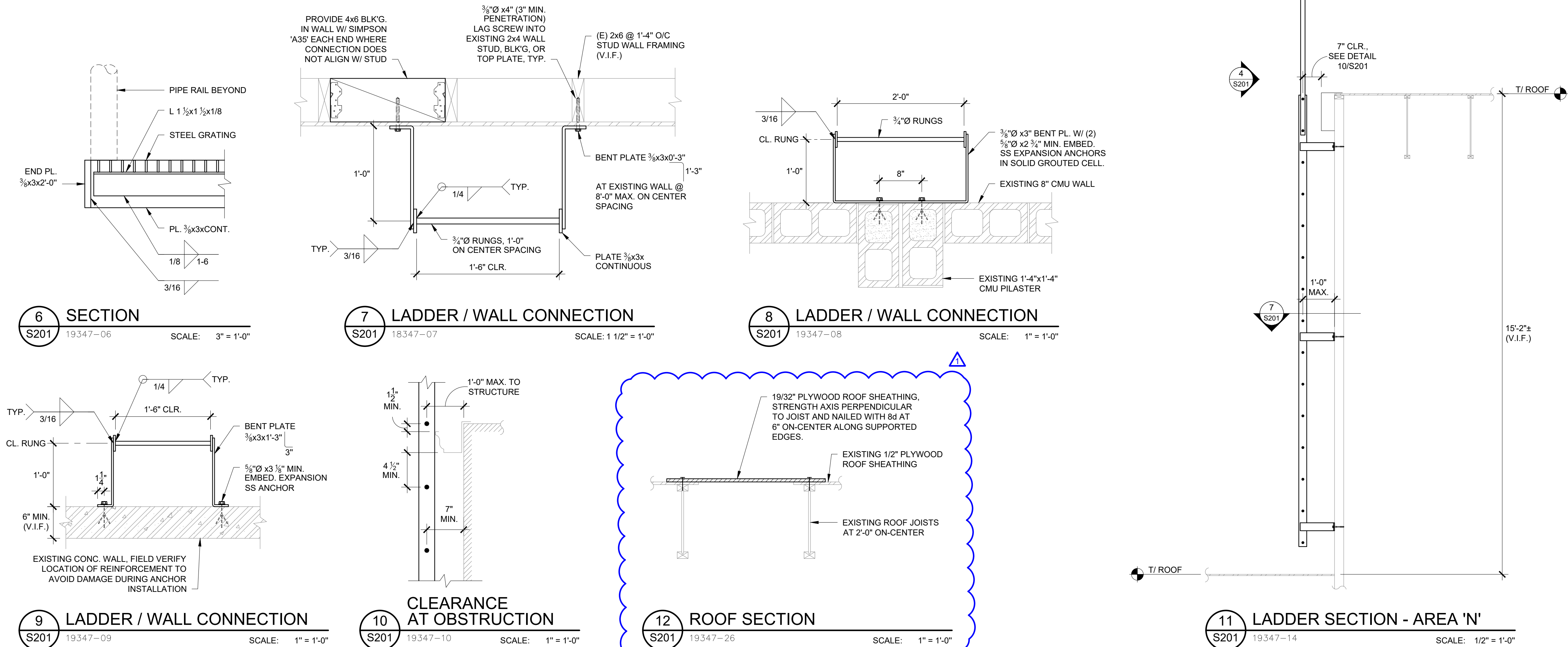
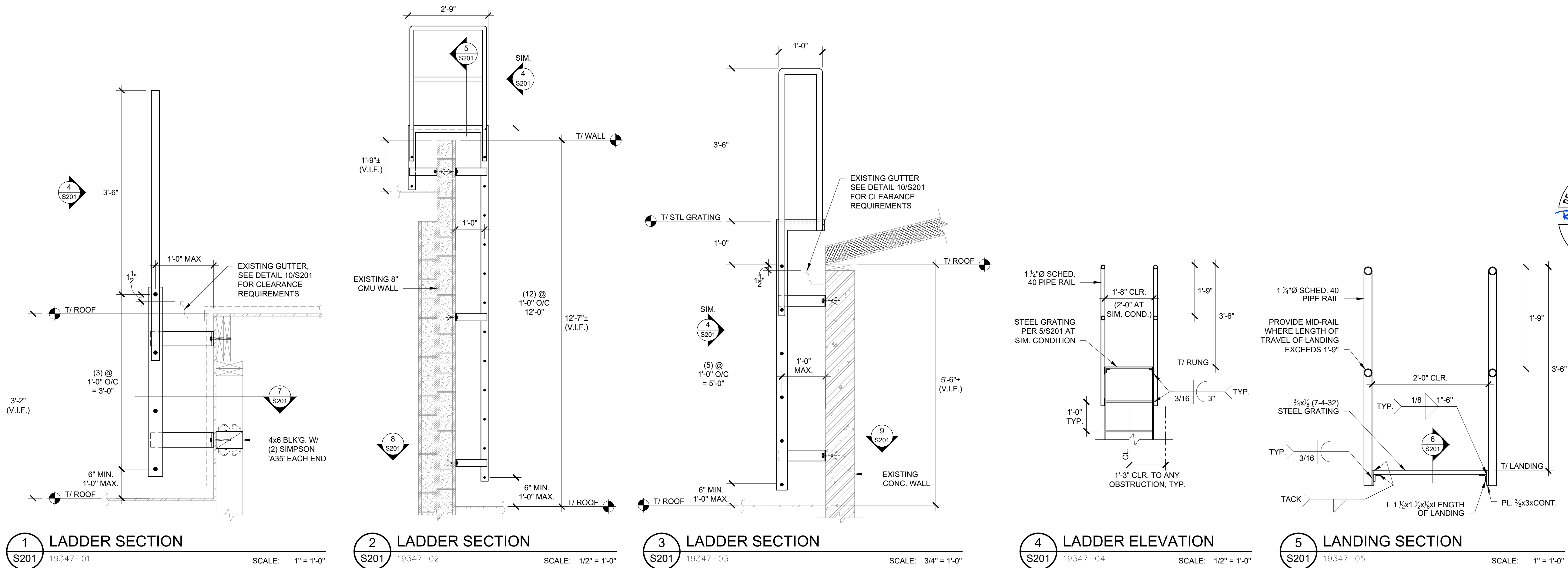
Date: FEB. 11, 2020

Revisions:
ADDENDUM #2 05-13-2020

Drawn: JSC, CTT
Check: RNT
File:
TMR Job Number: 19347

SHEET NUMBER:
S100

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**BEAVERTON SCHOOL DISTRICT
BARNES ELEMENTARY SCHOOL
ROOF REPLACEMENT**

SHEET TITLE:
DETAILS

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Date: FEB. 11, 2020
Revisions:
ADDENDUM #2 05-13-2020

Drawn: JSC, CTT
Check: RNT
File:
TMR Job Number: 19347

SHEET NUMBER:
S201

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LOGICAIRE™ AIR HANDLING UNITS

MODEL NUMBER

GRT-1-4050-80-DG-0-2T-
MSD

SERIAL NUMBER

98154401MAU-1/EF-1

SUITABLE FOR USE WITH CONTROL
MODEL NO. 0-250

FOR EITHER INDOOR OR
OUTDOOR INSTALLATION



LISTED
2K45

DIRECT GAS FIRED
VENTILATING UNIT

M
2
VO
20
MIN.
MAX.
MAX. E
EXTERNA
MIN. CIR
MAX. FUS
MINIMUM CL
TOP - 6" CO
THIN SIDE
SPECIAL BAS
AND TO NON
WARNING:
SHOCK. CA
DEATH DISC

Limited Asbestos

Survey Report

Barnes Elementary School

13730 Walker Road

Beaverton, OR

Prepared for:

Beaverton School District 48J

General Information	1.1
Inspection Summary	1.2
Sample Inventories	2.1
Laboratory Data	Not Numbered
AHERA Certificates	Not Numbered



January 2020

Project No.: 23816.018 Phase No.: 0001

4412 SW Corbett Avenue, Portland, OR 97239

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GENERAL INFORMATION

BUILDING DATA

Barnes Elementary School
13730 Walker Road
Beaverton, OR

CLIENT DATA

Beaverton School District 48J
16550 SW Merlo Rd.
Beaverton, OR 97003
(503) 591-4560

BACKGROUND INFORMATION

Two story elementary school with modern south addition and original construction north building.

SURVEY SCOPE

PBS Engineering and Environmental Inc. (PBS) has performed a limited general asbestos survey of roofing areas in accordance with OSHA in 29 CFR 1910.1001 and compiled a report with the following information:

- The type, location, and approximate quantity of suspect asbestos-containing materials
- Bulk sampling of selected suspect building materials
- Inspection summary
- Laboratory analytical data of bulk material sampled

With regard to asbestos, PBS endeavored to locate all the suspect asbestos-containing materials in the roof inspection area; however, suspect asbestos-containing materials may be present and concealed. If suspect materials are uncovered during demolition activities that are not identified in this report, testing should be performed prior to impact. Asbestos-containing materials are known to exist within the building outside of the scope of this inspection.

PBS has conducted a physical inspection of the building, compiled this report consistent with the survey scope, and certifies that the information is correct and accurate within the standards of professional quality and contractual obligations.

James Mastanduno
Project Manager/Prime Inspector
Accreditation #: IMR-20-4993B

Signature _____ Date _____

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INSPECTION SUMMARY

DATES	SURVEYED BY	ACTIVITY
1/9/2020	James Mastanduno	Roofing Survey

PBS has investigated accessible areas within the scope of inspection to locate suspect asbestos-containing building materials (ACBM). Suspect materials may be present in concealed areas (e.g., behind walls and under carpet). The findings are listed below.

ASBESTOS MATERIALS

The following materials either tested positive, or, based on the experience of PBS field personnel, were not tested and should be considered asbestos-containing. Materials that had mixed results are considered positive. Materials not sampled may contain asbestos and should be tested to verify asbestos content prior to impact through demolition, renovation, etc.
(+) Tested Positive, (M) Mixed Results, (P) Presumed Positive, (T) Previously Tested Positive.

See sample inventory for specific results.

No asbestos-containing building materials were identified within the scope of this survey.

MATERIALS THAT TESTED NEGATIVE FOR ASBESTOS

The following materials tested negative based on ASHARA sampling minimums and testing by NVLAP participating laboratories. Although no asbestos was detected, it is possible that further sampling could indicate asbestos content. It may be prudent to test prior to impact through demolition, renovation, etc.

<u>Material (type)</u>	<u>Location</u>
Gravel built-up roofing field layers on wood decking	Roof areas B, C, G, and H
Flashing caulk	Throughout roofing scope of inspection
Silver paint and built up roofing field layers on wood decking	Roof area F
Silver paint and roof penetration sealants	Throughout roofing scope of inspection

INSPECTION SUMMARY

BACKGROUND

On January 9, 2020, PBS performed a limited pre-renovation asbestos survey of portions of Barnes Elementary School in Beaverton, Oregon. The survey was requested by Beaverton School District in anticipation of roof replacement or rehabilitation of the north portions of the building. This survey was limited to roofing materials in those locations.

The purpose of the survey was to locate, identify, and quantify accessible friable and non-friable asbestos-containing building materials for removal prior to roof work.

The survey is also intended to satisfy Occupational Safety and Health Administration (OSHA) hazard communication requirements as well as requirements by the Department of Environmental Quality (DEQ) to perform an asbestos inspection prior to renovation or demolition activities under Oregon Administrative Rule (OAR) 340-248-0270.

ASBESTOS SUMMARY

The roof areas were inspected by a PBS Asbestos Hazard Emergency Response Act (AHERA) accredited inspector to determine the presence, location, and approximate quantity of asbestos-containing materials (ACM). Eleven bulk samples of building materials, suspected of containing asbestos, were collected and submitted under chain of custody to Lab/Cor Portland Inc. of Portland, Oregon, for polarized light microscopy (PLM) analysis.

No materials were found to contain asbestos within the scope of inspection. Asbestos-containing materials are known to exist in the building outside the scope of this survey.

Please refer to the asbestos bulk sample inventory for more sample details.

Asbestos Regulations

Oregon DEQ, Environmental Protection Agency (EPA), and OSHA regulations require proper removal and handling of ACM by licensed and trained asbestos abatement contractors prior to building renovations or demolition.

The EPA, DEQ, and OSHA all define ACM as any material containing more than 1% asbestos. Although materials equal to or less than 1% are not considered by regulatory agencies to be an ACM, they still have some asbestos content, and Oregon OSHA has specific requirements for situations in which workers may encounter, disturb, or remove materials containing any level of asbestos. For the sake of hazard communication, these materials are included in the asbestos-containing materials section of this report.

In 1995, Oregon OSHA adopted 29 Code of Federal Regulations (CFR) Part 1926.1101 governing asbestos under OAR 437-003-1926.1101. The regulation has made significant changes in work procedures and how asbestos materials are managed. OSHA believes that the single biggest risk of asbestos exposure is to workers who unknowingly or improperly disturb ACM. Hazard communication, training, personal protection, work practices, exposure monitoring, and recordkeeping are all major components of the regulation.

DEQ's OAR 340, Division 248 also covers asbestos abatement requirements, removal notifications, licensing, and certifications for contractors.

For more information regarding the removal of asbestos-containing materials, please refer to the following:

1. Oregon Occupational Safety and Health Administration, OAR 437-003-1926.1101

INSPECTION SUMMARY

2. Department of Environmental Quality, OAR-340, Division 248

This report is not suitable as a bid document or an asbestos abatement design. The purpose of this report is risk hazard communication only.

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
23816.018-0001	Built-up Roofing (01)	Area B; east, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	rocky fibrous tar, black/gray	No Asbestos Detected	
	Layer 02	woven fibers, white with tar, black	No Asbestos Detected	
	Layer 03	woven fibers, white with tar, black	No Asbestos Detected	
	Layer 04	woven fibers, white with tar, black	No Asbestos Detected	
	Layer 05	woven fibers, white with tar, black	No Asbestos Detected	
	Layer 06	woven fibers, white with tar, black	No Asbestos Detected	
	Layer 07	compressed fibers, dark brown	No Asbestos Detected	
	Layer 08	compressed fibers, light brown	No Asbestos Detected	
	Layer 09	foam material, yellow	No Asbestos Detected	
	Layer 10	fibrous backing, black	No Asbestos Detected	
	Layer 11	compressed fibers, black	No Asbestos Detected	
	Layer 12	thick tar, black	No Asbestos Detected	
23816.018-0002	Built-up Roofing (01)	Area B; west, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	fibrous tar, black	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	fibrous tar, black	No Asbestos Detected	
	Layer 04	fibrous tar, black	No Asbestos Detected	
	Layer 05	fibrous material, brown/black, with tar	No Asbestos Detected	
	Layer 06	fibrous material, light brown	No Asbestos Detected	
	Layer 07	foam material, yellow, with paper	No Asbestos Detected	
	Layer 08	rocky fibrous tar, black	No Asbestos Detected	
	Layer 09	fibrous tar, black	No Asbestos Detected	
	Layer 10	fibrous tar, black	No Asbestos Detected	
	Layer 11	fibrous tar, black	No Asbestos Detected	
	Layer 12	fibrous tar, black	No Asbestos Detected	
23816.018-0003	Roof Penetration Sealant (01)	Area B; south, silver paint and black sealant on penetrations		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 1	paint, silver	No Asbestos Detected	
	Layer 2	tar, dark brown	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
23816.018-0004	Built-up Roofing (01)	Area B; north upper section, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	fibrous tar, black	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	fibrous tar, black	No Asbestos Detected	
	Layer 04	compressed fibers, brown	No Asbestos Detected	
	Layer 05	fibrous backing, dark gray	No Asbestos Detected	
	Layer 06	foam, yellow	No Asbestos Detected	
	Layer 07	rocky fibrous tar, black	No Asbestos Detected	
	Layer 08	fibrous tar, black	No Asbestos Detected	
	Layer 09	fibrous tar, black	No Asbestos Detected	
	Layer 10	fibrous tar, black	No Asbestos Detected	
23816.018-0005	Built-up Roofing (01)	Area C; south, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	fibrous tar, black	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	fibrous tar, black	No Asbestos Detected	
	Layer 04	fibrous tar, black	No Asbestos Detected	
	Layer 05	fibrous tar, black	No Asbestos Detected	
	Layer 06	compressed fibers, black	No Asbestos Detected	
	Layer 07	compressed fibers, brown	No Asbestos Detected	
	Layer 08	fibrous backing, dark gray	No Asbestos Detected	
	Layer 09	foam, yellow	No Asbestos Detected	
	Layer 10	rocky fibrous tar, black	No Asbestos Detected	
	Layer 11	fibrous tar, black	No Asbestos Detected	
	Layer 12	fibrous tar, black	No Asbestos Detected	
	Layer 13	fibrous tar, black	No Asbestos Detected	
	Layer 14	fibrous tar, black	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
23816.018-0006	Built-up Roofing (01)	Area C; north, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	fibrous tar, black	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	fibrous tar, black	No Asbestos Detected	
	Layer 04	fibrous tar, black	No Asbestos Detected	
	Layer 05	fibrous tar, black	No Asbestos Detected	
	Layer 06	fibrous material, light brown/black	No Asbestos Detected	
	Layer 07	foam material, yellow, with fibrous backing, black	No Asbestos Detected	
	Layer 08	rocky fibrous tar, black	No Asbestos Detected	
	Layer 09	fibrous tar, black	No Asbestos Detected	
	Layer 10	fibrous tar, black	No Asbestos Detected	
	Layer 11	fibrous tar, black	No Asbestos Detected	
	Layer 12	fibrous tar, black	No Asbestos Detected	
	Layer 13	fibrous tar, black	No Asbestos Detected	
23816.018-0007	Roof Penetration Sealant (01)	Area C; north, silver paint and black sealant		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 1	paint, silver	No Asbestos Detected	
	Layer 2	rubbery material, black with woven fibers, white	No Asbestos Detected	
23816.018-0008	Built-up Roofing (02)	Area F; east, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	coating, silver	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	tar, black	No Asbestos Detected	
	Layer 04	fibrous tar, black	No Asbestos Detected	
	Layer 05	tar, black	No Asbestos Detected	
	Layer 06	fibrous tar, black, with tar, black	No Asbestos Detected	
	Layer 07	compressed fibers, black	No Asbestos Detected	
	Layer 08	compressed fibers, brown	No Asbestos Detected	
	Layer 09	foam, off-white	No Asbestos Detected	
	Layer 10	fibrous material, gray/black	No Asbestos Detected	

<u>Code</u>	<u>Material</u>	<u>Location</u>	<u>Results</u>	<u>Lab</u>
23816.018-0009	Built-up Roofing (02)	Area F; west, built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	coating, silver	No Asbestos Detected	
	Layer 02	fibrous tar, black	No Asbestos Detected	
	Layer 03	tar, black	No Asbestos Detected	
	Layer 04	tar, black	No Asbestos Detected	
	Layer 05	tar, black	No Asbestos Detected	
	Layer 06	fibrous tar, black	No Asbestos Detected	
	Layer 07	compressed fibers, black	No Asbestos Detected	
	Layer 08	compressed fibers, brown	No Asbestos Detected	
	Layer 09	foam, off-white	No Asbestos Detected	
	Layer 10	fibrous material, gray/black	No Asbestos Detected	
23816.018-0010	Built-up Roofing (03)	Area H; built-up roofing		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 01	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 02	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 03	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 04	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 05	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 06	compressed fibers, black	No Asbestos Detected	
	Layer 07	compressed fibers, brown	No Asbestos Detected	
	Layer 08	rocky fibrous tar, black/gray	No Asbestos Detected	
	Layer 09	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 10	tar, black with woven fibers, white	No Asbestos Detected	
	Layer 11	tar, black with woven fibers, white	No Asbestos Detected	
23816.018-0011	Roof Penetration Sealant (02)	Area H; flashing caulk		Lab Cor
	Layer:	Description:	Analysis:	
	Layer 1	rubbery material, gray/tan	No Asbestos Detected	

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS***Asbestos and Environmental Analysis*Phone: (503) 224-5055
<http://www.labcorpdx.net>**Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0001		Sample ID: S1			Date Analyzed: 01/15/2020	
Client Sample Description:					Analyst: Danielle de Montigny	
<u>Asbestos Mineral Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
compressed fibers, black	4 %	-	-	-		NAD
Layer 02						
woven fibers, white with tar, black	5 %	-	-	-		NAD
Layer 03						
woven fibers, white with tar, black	5 %	-	-	-		NAD
Layer 04						
woven fibers, white with tar, black	5 %	-	-	-		NAD
Layer 05						
woven fibers, white with tar, black	5 %	-	-	-		NAD
Layer 06						
woven fibers, white with tar, black	5 %	-	-	-		NAD
Layer 07						
compressed fibers, dark brown	10 %	-	-	-		NAD
Layer 08						
compressed fibers, light brown	15 %	-	-	-		NAD
Layer 09						
foam material, yellow	20 %	-	-	-		NAD
Layer 10						
fibrous backing, black	1 %	-	-	-		NAD
Layer 11						
rocky fibrous tar, black/gray	5 %	-	-	-		NAD
Layer 12						
thick tar, black	20 %	-	-	-		NAD
<u>Other Fibers</u>	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	60 %	-	-	-	40 %
Layer 02	-	-	-	15 %	-	85 %
Layer 03	2 %	Trace	-	15 %	-	83 %



Lab/Cor Portland, Inc.

4321 SW Corbett Ave., Ste A
Portland, OR 97239

BULK SAMPLE ASBESTOS ANALYSIS

Phone: (503) 224-5055
<http://www.labcorpdx.net>

Asbestos and Environmental Analysis

Client: PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239

Report Number: 200134R01
Report Date: 01/16/2020

Job Number: 200134

P.O. No: n/a

Project Name:

Project Number: 23816.018 Phase 0001

Project Notes:

Layer 04	10 %	Trace	-	5 %	-	-	85 %
Layer 05	10 %	Trace	-	8 %	-	-	82 %
Layer 06	10 %	-	-	10 %	-	-	80 %
Layer 07	-	80 %	-	-	-	-	20 %
Layer 08	-	95 %	-	-	-	-	5 %
Layer 09	-	-	-	-	-	-	100 %
Layer 10	10 %	85 %	-	-	-	-	5 %
Layer 11	5 %	Trace	-	-	-	-	95 %
Layer 12	3 %	-	-	-	-	-	97 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0002		Sample ID: S2			Date Analyzed: 01/15/2020	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 02						
fibrous tar, black	6 %	-	-	-	NAD	
Layer 03						
fibrous tar, black	10 %	-	-	-	NAD	
Layer 04						
fibrous tar, black	6 %	-	-	-	NAD	
Layer 05						
fibrous material, brown/black, with tar	10 %	-	-	-	NAD	
Layer 06						
fibrous material, light brown	20 %	-	-	-	NAD	
Layer 07						
foam material, yellow, with paper	10 %	-	-	-	NAD	
Layer 08						
rocky fibrous tar, black	10 %	-	-	-	NAD	
Layer 09						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 10						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 11						
fibrous tar, black	7 %	-	-	-	NAD	
Layer 12						
fibrous tar, black	6 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	10 %	-	-	10 %	-	80 %
Layer 02	10 %	-	-	10 %	-	80 %
Layer 03	10 %	5 %	-	10 %	-	75 %
Layer 04	-	20 %	-	-	-	80 %
Layer 05	-	80 %	-	-	-	20 %
Layer 06	2 %	70 %	-	-	-	28 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Layer 07	-	8 %	-	2 %	-	-	90 %
Layer 08	6 %	-	-	2 %	-	-	92 %
Layer 09	6 %	2 %	-	-	-	-	92 %
Layer 10	8 %	-	-	-	-	-	92 %
Layer 11	8 %	-	-	-	-	-	92 %
Layer 12	10 %	10 %	-	-	-	-	80 %

Client Sample ID: 23816.018-0003**Sample ID:** S3**Date Analyzed:** 01/16/2020**Client Sample Description:****Analyst:** Danielle de Montigny**Asbestos Mineral Fibers**Layer
Percent: Chrysotile Amosite Crocidolite**Percent
Asbestos:****Layer 01**

paint, silver

1 % - - -

NAD**Layer 02**

tar, dark brown

99 % - - -

NAD**Other Fibers**Fibrous
Glass Cellulose Mineral
Wool Synthetic Other

Matrix

Layer 01

- 1 % - - - - 99 %

Layer 02

- 2 % - - - - 98 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0004		Sample ID: S4			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Ryan Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite		Percent Asbestos:
Layer 01						
fibrous tar, black	8 %	-	-	-		NAD
Layer 02						
fibrous tar, black	8 %	-	-	-		NAD
Layer 03						
fibrous tar, black	8 %	-	-	-		NAD
Layer 04						
compressed fibers, brown	32 %	-	-	-		NAD
Layer 05						
fibrous backing, dark gray	4 %	-	-	-		NAD
Layer 06						
foam, yellow	6 %	-	-	-		NAD
Layer 07						
rocky fibrous tar, black	9 %	-	-	-		NAD
Layer 08						
fibrous tar, black	9 %	-	-	-		NAD
Layer 09						
fibrous tar, black	9 %	-	-	-		NAD
Layer 10						
fibrous tar, black	7 %	-	-	-		NAD
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	4 %	-	-	5 %	-	91 %
Layer 02	8 %	-	-	5 %	-	87 %
Layer 03	3 %	-	-	-	-	97 %
Layer 04	-	100 %	-	-	-	0 %
Layer 05	15 %	15 %	-	-	-	70 %
Layer 06	-	-	-	-	-	100 %
Layer 07	5 %	-	-	-	-	95 %
Layer 08	5 %	-	-	-	-	95 %
Layer 09	5 %	-	-	-	-	95 %
Layer 10	5 %	-	-	-	-	95 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0005		Sample ID: S5			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Ryan Brown	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 02						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 03						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 04						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 05						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 06						
compressed fibers, black	21 %	-	-	-	NAD	
Layer 07						
compressed fibers, brown	21 %	-	-	-	NAD	
Layer 08						
fibrous backing, dark gray	2 %	-	-	-	NAD	
Layer 09						
foam, yellow	6 %	-	-	-	NAD	
Layer 10						
rocky fibrous tar, black	5 %	-	-	-	NAD	
Layer 11						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 12						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 13						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 14						
fibrous tar, black	5 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	5 %	-	-	8 %	-	87 %
Layer 02	5 %	8 %	-	5 %	-	82 %
Layer 03	5 %	8 %	-	5 %	-	82 %



Lab/Cor Portland, Inc.

4321 SW Corbett Ave., Ste A
Portland, OR 97239

BULK SAMPLE ASBESTOS ANALYSIS

Phone: (503) 224-5055
<http://www.labcorpdx.net>

Asbestos and Environmental Analysis

Client: PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239

Report Number: 200134R01
Report Date: 01/16/2020

Job Number: 200134

P.O. No: n/a

Project Name:

Project Number: 23816.018 Phase 0001

Project Notes:

Layer 04	8 %	5 %	-	-	-	-	87 %
Layer 05	5 %	-	-	8 %	-	-	87 %
Layer 06	-	85 %	-	-	-	-	15 %
Layer 07	-	100 %	-	-	-	-	0 %
Layer 08	15 %	15 %	-	-	-	-	70 %
Layer 09	-	-	-	-	-	-	100 %
Layer 10	8 %	-	-	-	-	-	92 %
Layer 11	8 %	-	-	-	-	-	92 %
Layer 12	8 %	-	-	-	-	-	92 %
Layer 13	8 %	-	-	-	-	-	92 %
Layer 14	8 %	-	-	-	-	-	92 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0006		Sample ID: S6			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Mia Gaines	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 02						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 03						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 04						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 05						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 06						
fibrous material, light brown/black	30 %	-	-	-	NAD	
Layer 07						
foam material, yellow, with fibrous backing, black	15 %	-	-	-	NAD	
Layer 08						
rocky fibrous tar, black	5 %	-	-	-	NAD	
Layer 09						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 10						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 11						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 12						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 13						
fibrous tar, black	5 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	10 %	-	-	8 %	-	82 %
Layer 02	10 %	4 %	-	8 %	-	78 %
Layer 03	14 %	-	-	10 %	-	76 %
Layer 04	-	20 %	-	-	-	80 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Layer 05	6 %	14 %	-	-	-	-	80 %
Layer 06	-	90 %	-	-	-	-	10 %
Layer 07	-	6 %	-	-	-	-	94 %
Layer 08	8 %	-	-	-	-	-	92 %
Layer 09	4 %	-	-	-	-	-	96 %
Layer 10	6 %	2 %	-	-	-	-	92 %
Layer 11	8 %	-	-	-	-	-	92 %
Layer 12	8 %	-	-	-	-	-	92 %
Layer 13	8 %	2 %	-	-	-	-	90 %

Client Sample ID: 23816.018-0007**Sample ID:** S7**Date Analyzed:** 01/16/2020**Client Sample Description:****Analyst:** Danielle de Montigny**Asbestos Mineral Fibers**

Layer	Percent:	Chrysotile	Amosite	Crocidolite
-------	----------	------------	---------	-------------

**Percent
Asbestos:****Layer 01**

paint, silver

40 % - - -

NAD**Layer 02**rubbery material, black
with woven fibers, white

60 % - - -

NAD**Other Fibers**

Fibrous	Mineral				
Glass	Cellulose	Wool	Synthetic	Other	Matrix

Layer 01

- 2 % - - - 98 %

Layer 02

- - - 3 % - - 97 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0008		Sample ID: S8			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
coating, silver	5 %	-	-	-	NAD	
Layer 02						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 03						
tar, black	8 %	-	-	-	NAD	
Layer 04						
fibrous tar, black	9 %	-	-	-	NAD	
Layer 05						
tar, black	9 %	-	-	-	NAD	
Layer 06						
fibrous tar, black, with tar, black	10 %	-	-	-	NAD	
Layer 07						
compressed fibers, black	5 %	-	-	-	NAD	
Layer 08						
compressed fibers, brown	20 %	-	-	-	NAD	
Layer 09						
foam, off-white	20 %	-	-	-	NAD	
Layer 10						
fibrous material, gray/black	9 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	Trace	-	-	-	100 %
Layer 02	10 %	-	-	10 %	-	80 %
Layer 03	-	-	-	-	-	100 %
Layer 04	10 %	-	-	15 %	-	75 %
Layer 05	-	25 %	-	-	-	75 %
Layer 06	10 %	10 %	-	10 %	-	70 %
Layer 07	-	75 %	-	-	-	25 %
Layer 08	-	100 %	-	-	-	0 %
Layer 09	-	-	-	-	-	100 %
Layer 10	-	90 %	-	-	-	10 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0009		Sample ID: S9			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Tim Cammann	
Asbestos Mineral Fibers	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
coating, silver	5 %	-	-	-	NAD	
Layer 02						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 03						
tar, black	5 %	-	-	-	NAD	
Layer 04						
tar, black	5 %	-	-	-	NAD	
Layer 05						
tar, black	5 %	-	-	-	NAD	
Layer 06						
fibrous tar, black	5 %	-	-	-	NAD	
Layer 07						
compressed fibers, black	25 %	-	-	-	NAD	
Layer 08						
compressed fibers, brown	15 %	-	-	-	NAD	
Layer 09						
foam, off-white	25 %	-	-	-	NAD	
Layer 10						
fibrous material, gray/black	5 %	-	-	-	NAD	
Other Fibers	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	-	-	-	-	-	100 %
Layer 02	10 %	-	-	15 %	-	75 %
Layer 03	-	Trace	-	-	-	100 %
Layer 04	-	Trace	-	-	-	100 %
Layer 05	-	3 %	-	-	-	97 %
Layer 06	15 %	-	-	20 %	-	65 %
Layer 07	-	95 %	-	-	-	5 %
Layer 08	-	100 %	-	-	-	0 %
Layer 09	-	-	-	-	-	100 %
Layer 10	5 %	75 %	-	-	-	20 %

**Lab/Cor Portland, Inc.**4321 SW Corbett Ave., Ste A
Portland, OR 97239**BULK SAMPLE ASBESTOS ANALYSIS**Phone: (503) 224-5055
<http://www.labcorpdx.net>*Asbestos and Environmental Analysis***Client:** PBS Engineering and Environmental
4412 SW Corbett Avenue
Portland, OR 97239**Report Number:** 200134R01
Report Date: 01/16/2020**Job Number:** 200134**P.O. No:** n/a**Project Name:****Project Number:** 23816.018 Phase 0001**Project Notes:**

Client Sample ID: 23816.018-0010		Sample ID: S10			Date Analyzed: 01/16/2020	
Client Sample Description:					Analyst: Danielle de Montigny	
<u>Asbestos Mineral Fibers</u>	Layer Percent:	Chrysotile	Amosite	Crocidolite	Percent Asbestos:	
Layer 01						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 02						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 03						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 04						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 05						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 06						
compressed fibers, black	15 %	-	-	-	NAD	
Layer 07						
compressed fibers, brown	40 %	-	-	-	NAD	
Layer 08						
rocky fibrous tar, black/gray	5 %	-	-	-	NAD	
Layer 09						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 10						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
Layer 11						
tar, black with woven fibers, white	5 %	-	-	-	NAD	
<u>Other Fibers</u>	Fibrous Glass	Cellulose	Mineral Wool	Synthetic	Other	Matrix
Layer 01	5 %	8 %	-	10 %	-	77 %
Layer 02	8 %	3 %	-	4 %	-	85 %
Layer 03	5 %	2 %	-	10 %	-	83 %



PBS

200134 1/2

TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

Project No.: 23816.018 Phase 0001

Individuals signing this form warrant that the information provided is correct and complete. The Sender should keep a copy and send the original. The Receiver should complete the form, keep a copy and return the original to the Sender. Receiver shall report damage of package immediately to Sender.

SENDER

Date Sent: January 10, 2020

PBS Engineering and Environmental Inc.
4412 SW Corbett Avenue
Portland, OR 97239
503.248.1939, Fax: 866.727.0140

R Conroy
Name

[Signature] 1.10.20 900
Authorized Signature Date Time

RECEIVER

Date Received: 1/10/2020

Company: Lab Cor
Address: 4321 SW Corbett Ave Ste A
Portland, OR 97239
503-224-5055

Katie Schultz
Name

[Signature] 1/10/20 9:09am
Authorized Signature Date Time

Sender's ID No.

Brief Description

Receiver's ID No.

23816.018-0001	
23816.018-0002	
23816.018-0003	
23816.018-0004	
23816.018-0005	
23816.018-0006	
23816.018-0007	
23816.018-0008	
23816.018-0009	
23816.018-0010	
23816.018-0011	



200134 2 1/2

TRANSMITTAL AND CHAIN OF CUSTODY FOR ASBESTOS BULK SAMPLES

Please analyze the enclosed 11 sample(s) for asbestos content using PLM with dispersion staining. PBS requests prior notification if samples will be disposed.

Request verbal results by: _____ AM/PM _____ Date.

Please fax and mail the results to the above address.

TURNAROUND DESIRED: **72 Hour**

SPECIAL INSTRUCTIONS:

James M

THIS IS TO CERTIFY THAT

JAMES MASTANDUNO

HAS SUCCESSFULLY COMPLETED THE TRAINING COURSE

for

**ASBESTOS INSPECTOR / MANAGEMENT
PLANNER REFRESHER**

In accordance with TSCA Title II, Part 763, Subpart E, Appendix C of 40 CFR

Course Date: 01/10/2020

Course Location: Portland, OR

Certificate: IMR-20-4993B



AHERA is the Asbestos Hazard
Emergency Response Act enacting Title II
of Toxic Substance Control Act (TSCA)

Expiration Date: 01/10/2021

For verification of the authenticity of this
certificate contact:
PBS Environmental
4412 SW Corbett Avenue
Portland, OR 97239
(503) 248-1939

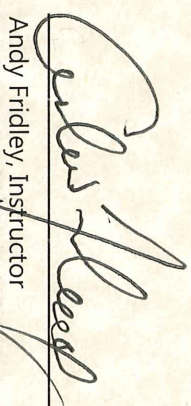

Andy Fridley, Instructor

EXHIBIT B

FORMS OF WAIVERS AND RELEASES

CONDITIONAL RELEASE ON PROGRESS PAYMENT	UNCONDITIONAL RELEASE ON PROGRESS PAYMENT
<p>The undersigned does hereby acknowledge that upon receipt by the undersigned of a check from _____ in the sum of \$_____ for labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims through _____ (Date) only and does not cover unpaid retention or items furnished after that date.</p> <p>Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.</p> <p>I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.</p> <p>SIGNATURE: _____</p> <p>_____ (Authorized Corporate Officer/Partner/Owner)</p> <p>(Title) _____</p> <p>Company Name: _____</p> <p>Dated this ____ day of _____, 20__</p> <p>Project Name: _____</p> <p>Project Address: _____</p>	<p>The undersigned does hereby acknowledge that the undersigned has been paid and has received a progress payment in the sum of \$_____ for labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and does hereby release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims through _____ (Date) only and does not cover unpaid retention or items furnished after that date.</p> <p>NOTICE: THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.</p> <p>I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.</p> <p>SIGNATURE: _____</p> <p>_____ (Authorized Corporate Officer/Partner/Owner)</p> <p>(Title) _____</p> <p>Company Name: _____</p> <p>Dated this ____ day of _____, 20__</p> <p>Project Name: _____</p> <p>Project Address: _____</p>

CONDITIONAL RELEASE ON FINAL PAYMENT	UNCONDITIONAL RELEASE ON FINAL PAYMENT
---	---

The undersigned does hereby acknowledge that upon receipt by the undersigned of a final payment check from _____ in the sum of \$_____ (representing the agreed full and final payment) for all labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and when the check has been properly endorsed and has been paid by the bank upon which it was drawn, this document shall become effective to release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full and final payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims, including but not limited to all retention, through Final Completion of the Work and for the entire project.

Before any recipient of this document relies on it, said party should verify evidence of payment to the undersigned.

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

SIGNATURE:

(Authorized Corporate Officer/Partner/Owner)

(Title) _____

Company Name: _____

Dated this ____ day of _____, 20__

Project Name: _____

Project Address: _____

The undersigned does hereby acknowledge that the undersigned has been paid and has received final payment in the sum of \$_____ (representing the agreed full and final payment) for all labor, services, equipment and materials, and covering all events, conditions and occurrences, on the above-referenced job, and does hereby release any and all rights of lien and claims of lien, and any and all other claims, including but not limited to, negligence, breach of contract, delay and impact claims, or any other claims, which the undersigned has or may have, whether known or unknown, on the above-referenced job ("Claims"). This release covers full and final payment for all labor, services, equipment, materials, events, conditions, occurrences and Claims, including but not limited to all retention, through Final Completion of the Work and for the entire project.

NOTICE: THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

I CERTIFY UNDER PENALTY OF PERJURY UNDER LAWS OF THE STATE OF OREGON THAT THE ABOVE IS A TRUE AND CORRECT STATEMENT.

SIGNATURE:

(Authorized Corporate Officer/Partner/Owner)

(Title) _____

Company Name: _____

Dated this ____ day of _____, 20__

Project Name: _____

Project Address: _____

EXHIBIT C

PROVISIONS FROM THE OREGON PUBLIC CONTRACTING CODE AND PUBLIC CONTRACTING RULES

1. GENERAL

1.1 **INCORPORATION OF ALL CONTRACT PROVISIONS.** The Contract hereby incorporates all contract provisions that are required to be incorporated into contracts with public entities pursuant to (a) the Public Contracting Code (ORS Chapters 279A, 279B and 279C), (b) the Attorney General Model Public Contracting Rules (which are referred to in this Exhibit as the “Rules”) or (c) other applicable law. The provisions incorporated into the Contract under the preceding sentence include, without limitation, any provisions or amendments to provisions that become required after the Contract is executed.

1.2 **DISCLAIMER REGARDING ANY UNLISTED CONTRACT PROVISIONS.** The provisions listed in this Exhibit are not necessarily an exhaustive list of provisions that are required under the Public Contracting Code, the Rules or other applicable law, and the fact that this Exhibit does not list a provision that is required by the Public Contracting Code, the Rules or other applicable law will not (i) prevent or otherwise diminish the incorporation of that unlisted provision into the Contract or (ii) negate or otherwise diminish Contractor’s obligation to comply with applicable laws.

2. PAYMENT.

2.1 **PROMPT PAYMENT.** Contractor shall promptly pay all of its obligations arising out of or in connection with the Work, including, but not limited to, payments (1) to all persons, as due, supplying to Contractor labor, equipment, services or material for the performance of the Work, (2) of all contributions or amounts due the Industrial Accident Fund from Contractor or the Subcontractors incurred in the performance of the Work, and (3) to the Department of Revenue of all sums withheld from employees under ORS 316.167.

2.2 **CONTRACTOR’S OBLIGATIONS TO FIRST-TIER SUBCONTRACTOR.** Contractor shall pay each first-tier Subcontractor for satisfactory performance under its subcontract within 10 days out of amounts the Owner pays to the Contractor under the Contract. Contractor shall provide a first-tier Subcontractor with a standard form that the first-tier Subcontractor may use as an application for payment or as another method by which the Subcontractor may claim a payment due from the Contractor. Contractor shall use this same form and regular administrative procedures for processing payments during the entire term of the Subcontract. Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor notifies the Subcontractor in writing at least 45 days before the date on which the Contractor makes the change and includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

2.3 **PROMPT PAYMENT POLICY.** It is the policy of the State of Oregon that all payments due on a public improvement contract and owed by a contracting agency shall be paid promptly. No public contracting agency is exempt from the provisions of ORS 279C.570.

2.4 **CONTRACTOR’S FAILURE TO MAKE PROMPT PAYMENT.** If the Contractor has failed, neglected or refused to pay promptly a person’s claim for labor, equipment, services or materials that the person provides to the Contractor or a Subcontractor in connection with the Project as such claim becomes due, the Owner may pay such claim to the person that provides the labor, equipment, services or materials and charge the amount of the payment against funds due or to become due the Contractor under the Contract. Owner reserves the right to make payments directly or by multiple-payee check and Contractor hereby consents to such direct and multiple-payee check payments. Upon Owner’s request, Contractor

shall furnish to Owner the information required to facilitate such payments with each application for payment, including (1) names, addresses, and telephone numbers of persons making any such claim for labor, equipment, services or material, and (2) a complete listing of outstanding amounts owed to all such persons.

2.5 CONTRACTOR'S AND FIRST-TIER SUBCONTRACTOR'S FAILURE TO MAKE PAYMENT AFTER PAYMENT FROM OWNER; INTEREST PENALTY. If the Contractor or a first-tier Subcontractor fails, neglects or refuses to pay a person that provides labor, equipment, services or materials in connection the Contract within thirty (30) days after receiving payment from the Owner or the Contractor, the Contractor or first-tier Subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-day period that payment is due under ORS 279C.580(4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.

2.6 CONSTRUCTION CONTRACTORS BOARD COMPLAINT. If the Contractor or a Subcontractor fails, neglects or refuses to make payment to a person that provides labor, equipment, services or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.

2.7 CONTINUING LIABILITY OF CONTRACTOR AND SURETY. Payment by the Owner of a claim in the manner authorized in this Section 2 does not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

2.8 RETAINAGE. Retainage shall be subject to the applicable requirements of ORS 279C.550 through 279C.570C.570. The Owner may elect to make early release of some or any portion of the retainage as allowed therein. The Contractor may withhold payment of not more than 5% from the moneys earned by any Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Owner, the Contractor shall specify the amount of the retainage and interest due a Subcontractor.

3. PUBLIC WORKS PROJECT.

3.1 PREVAILING RATE OF WAGE. The Project is a public works project subject to the prevailing wage rate requirements in ORS 279C.800 to 279C.870. Contractor and the Subcontractors shall comply with ORS 279C.840. Workers in each trade or occupation required for the Work of the Project shall not be paid less than the minimum hourly rate of wage for such workers as detailed in the Specifications for the Contract. For CM/GC contracts, the "prevailing rate of wage" shall mean the prevailing wage rate in effect at the time the CM/GC contract "becomes a public works contract" as defined in OAR 839-025-0020(6), which prevailing rates shall be incorporated by attachment or reference in Guaranteed Maximum Price Amendment or, if applicable, the Early Work Amendment to the CM/GC contract. Pursuant to ORS 279C.840, the Contractor shall keep the prevailing wage rate for the Project posted in a conspicuous and accessible place in or about the Project. Copies of these wage rates are available from the Commissioner of the Bureau of Labor and Industries without charge. The Contractor shall also post a description of provided health and welfare and/or pension plans in the same place. In addition to the description of the plans, the notice shall contain information on how and where to make claims and where to obtain further information. The Contractor shall, and shall cause all subcontractors at all tiers to, timely comply with the requirements of ORS 279C.845. Contractor shall indemnify, defend, protect and hold harmless the Owner from any violation of or noncompliance with the prevailing wage laws (ORS 279C.800 et seq) by Contractor or any subcontractor at any tier.

3.2 PUBLIC WORKS BOND. Before starting the Work, Contractor and every Subcontractor shall file with the Construction Contractors Board a public works bond in accordance with ORS 279C.836, unless the Contractor or Subcontractor has elected not to file a public works bond under ORS 279C.836(7) or (8) or is exempt under ORS 279C.836(4) or (9). Before permitting a Subcontractor to start the Work, Contractor shall verify that the Subcontractor has filed a public works bond as required by ORS 279C.836, has elected not to file a public works bond under ORS 279C.836(7) or (8) or is exempt under ORS

279C.836(4) or (9). Contractor shall also ensure that each subcontract entered into by a Subcontractor for the Project shall include a clause obligating each Subcontractor to comply with the requirements of this Section 3.2, such that all subcontracts at all tiers include a requirement to comply with this Section 3.2.

4. **COMPLIANCE WITH LAWS/TAX LAWS.** Contractor shall comply with all applicable federal, state, and local laws, statutes, codes, regulations, rules, orders and rulings as well as all applicable construction industry standards, including without limitation those governing labor, materials, equipment, construction procedures, safety, health, sanitation and the environment. Contractor agrees to indemnify, hold harmless, reimburse, and defend Owner from and against any penalties or liabilities arising out of violations of such obligations by Contractor or its Subcontractors at any tier. Contractor must also comply with all Oregon tax laws and shall submit a certification of such compliance in accordance with ORS 305.385(6).

5. **CONTRACTOR'S EMPLOYEES AND SUBCONTRACTORS.**

5.1 **EMPLOYEE DRUG TESTING PROGRAM.** The Contractor shall demonstrate to the Owner, in a manner acceptable to the Owner, that the Contractor has initiated, and shall maintain through the completion of the Work of the Project, an employee drug testing program.

5.2 **WORK DAY/WORK WEEK.** No person shall be required or permitted to labor more than 10 hours in any one day, or 40 hours in any one week, except in cases of necessity or emergency or when the public policy absolutely requires it, in which event, the person so employed for excessive hours shall receive at least time and a half pay for (1) all overtime in excess of eight hours in any one day or 40 hours in any one week when the work week is five consecutive days, Monday through Friday; or (2) all overtime in excess of 10 hours in any one day or 40 hours in any one week when the work week is four consecutive days, Monday through Friday; and (3) all work performed on Saturday and on any legal holiday specified in ORS 279C.540.

5.3 **NOTICE OF REQUIRED WORK HOURS.** The Contractor and each Subcontractor must give notice to its employees in writing, either at the time of hire or before commencement of Work, or by posting a notice in a location frequented by its employees, of the number of hours per day and days per week that the employees may be required to work.

5.4 **CLAIMS FOR OVERTIME.** Any worker employed by the Contractor shall be foreclosed from the right to collect for any overtime provided in ORS 279C.540 unless a claim for payment is filed with the Contractor within 90 days from the completion of the Contract, provided the Contractor has: (1) caused a circular clearly printed in boldfaced 12-point type and containing a copy of this Section 5.4 to be posted in a prominent place alongside the door of the timekeeper's office or in a similar place that is readily available and freely visible to any or all workers employed on the Work; and (2) maintained such circular continuously posted from the inception to the completion of the contract on which workers are or have been employed.

5.5 **WORKERS' COMPENSATION.** All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

5.6 **PROMPT PAYMENT FOR MEDICAL SERVICES.** The Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care services or other needed care and attention, incident to sickness or injury, to the employees of the Contractor, of all sums that the Contractor agrees to pay for the services and all moneys and sums that the Contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

5.7 **PROMPT PAYMENT BY SUBCONTRACTORS; INTEREST PENALTY.** Contractor shall include in each subcontract entered into by the Contractor (including contracts with material suppliers) the following:

(a) A payment clause that obligates the Contractor to pay the first-tier subcontractor for satisfactory performance under the subcontract within 10 days out of amounts the Owner pays to the Contractor under the Contract.

(b) A clause that requires the Contractor to provide a first-tier subcontractor with a standard form that the first-tier subcontractor may use as an application for payment or as another method by which the subcontractor may claim a payment due from the Contractor.

(c) A clause that requires the Contractor, except as otherwise provided in this paragraph, to use the same form and regular administrative procedures for processing payments during the entire term of the subcontract. The Contractor may change the form or the regular administrative procedures the Contractor uses for processing payments if the Contractor:

(A) Notifies the subcontractor in writing at least 45 days before the date on which the Contractor makes the change; and

(B) Includes with the written notice a copy of the new or changed form or a description of the new or changed procedure.

(d) An interest penalty clause that obligates the Contractor, if the Contractor does not pay the first-tier subcontractor within 30 days after receiving payment from the Owner, to pay the first-tier subcontractor an interest penalty on amounts due in each payment the Contractor does not make in accordance with the payment clause included in the subcontract under paragraph (a) of this Section. The Contractor or first-tier subcontractor is not obligated to pay an interest penalty if the only reason that the Contractor or first-tier subcontractor did not make payment when payment was due is that the Contractor or first-tier subcontractor did not receive payment from the Owner or Contractor when payment was due. The interest penalty:

(A) Applies to the period that begins on the day after the required payment date and that ends on the date on which the amount due is paid; and

(B) Is computed at the rate specified in ORS 279C.515 (Conditions concerning payment of claims by public officers, payment to persons furnishing labor or materials and complaints).

(e) a clause requiring the first-tier subcontractor to include a payment clause and an interest penalty clause that conforms to the standards of this section in each of the first-tier subcontractor's subcontracts and to require each of the first-tier subcontractor's subcontractors to include such clauses in the first-tier subcontractors' subcontracts with each lower-tier subcontractor or supplier.

5.8 LICENSING WITH CONSTRUCTION CONTRACTORS BOARD AND LANDSCAPE CONTRACTORS BOARD. Before commencing the Work, Contractor shall ensure that the Subcontractors are duly registered with the Oregon State Construction Contractors Board (and the State Landscape Contractors Board, if applicable), and that no Subcontractor has been declared ineligible to work on a public contract.

5.9 FIRST-TIER SUBCONTRACTORS. the Contractor may only engage and substitute first tier subcontractors as permitted by ORS 279C.370, 279C.585, and 279C.590.

5.10 NO DISCRIMINATION. Pursuant to ORS 279A.100 to ORS 279A.110, the Contractor shall not discriminate against minority, women, or emerging small business enterprises in the awarding of subcontracts. The Contractor covenants and agrees not to discriminate against any qualified employee or qualified applicant for employment because of race, creed, color, sex or national origin, and that similar provisions shall also be included by said party in any subcontract. The Contractor shall comply with the prohibition set forth in ORS 652.220 (Prohibition of discriminatory wage rates based on sex). Compliance is a material element of the Contract and a failure to comply is a breach that entitles the Owner to terminate the contract for cause.

5.11 NO PROHIBITION. The Contractor may not prohibit any of the Contractor's employees from discussing the employee's rate of wage, salary, benefits or other compensation with another employee or another person and may not retaliate against an employee who discusses the employee's rate of wage, salary, benefits or other compensation with another employee or another person.

6. MATERIAL SALVAGE. To the extent the scope of the Work for the Contract requires demolition, Contractor must salvage or recycle construction and demolition debris, if feasible and cost-effective.

7. COMPOSTING. To the extent the scope of the Work for the Contract requires lawn and landscape maintenance, the Contractor must compost or mulch yard waste material at an approved site, if feasible and cost-effective.

8. RECYCLED MATERIALS. The Contractor, in performance of the Work, shall give preference to the procurement of goods manufactured from recycled materials.

9. ENVIRONMENTAL AND NATURAL RESOURCES LAWS. Pursuant to ORS 279C.525, the following is a list of Federal, State, and Local agencies that have enacted ordinances, rules or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that may affect the performance of the Contract. The following list may not include all such agencies that have enacted ordinances, rules or regulations relating to the environmental pollution and preservation of natural resources.

Federal Agencies:

Agriculture, Dept. of
Forest Service
Natural Resource Conservation Service
Defense, Dept. of
Army Corps of Engineers
Coast Guard
Environmental Protection Agency
Interior, Dept. of
U.S. Fish and Wildlife Service
Bureau of Land Management
Bureau of Indian Affairs
Bureau of Reclamation
Labor, Dept. of
Occupational Safety and Health Administration
Transportation, Dept. of
Federal Highway Administration

State Agencies:

Agriculture, Dept. of
Consumer and Business Services Dept.
Oregon Occupational Safety and Health Division
Environmental Quality, Dept. of
Fish and Wildlife, Dept. of
Forestry, Dept. of
Geology and Mineral Industries, Dept. of
Human Services, Dept. of
Land Conservation and Development, Dept. of
Natural Resources, Dept. of
State Fire Marshall
State Lands, Dept. of
Water Resources Department

Local Agencies:

City Councils
Circuit Courts
County Commissioners, Boards of
Fire Districts
Planning Commissions

10. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

Contractor shall comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970 (42 U.S.C. 1867 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.) as amended. Violations shall be reported as required by law.

11. RETAINAGE. The withholding of retainage by the Contractor or Subcontractor shall be in accordance with ORS 279C.550 to ORS 279C.570.

12. LIENS. The Contractor shall not permit any lien or claim to be filed or prosecuted against the state, county, school district, municipality, municipal corporation or subdivision thereof, on account of any labor or material furnished.

13. NONRESIDENT. If the Contractor is a "nonresident bidder" as defined in ORS 279A.120, the Contractor shall comply with the reporting requirements of that statute.

14. NOTICE OF CLAIM ON BOND. The notice of claim required by ORS 279C.600 must be sent by registered or certified mail or hand delivered no later than 180 days after the day the person last provided labor or furnished materials or 180 days after the worker listed in the notice of claim by the Commissioner of the Bureau of Labor and Industries last provided labor. The notice may be sent or delivered to the Contractor or Subcontractor at any place the Contractor or Subcontractor maintains an office or conducts business or at the residence of the Contractor or Subcontractor. If the claim is for a required contribution to a fund of any employee benefit plan, the notice required by ORS 279C.600 must be sent or delivered within 200 days after the employee last provided labor or materials. The notice shall be in writing substantially as follows:

To (here insert the name of the Contractor or Subcontractor and the name of the Owner):

Notice hereby is given that the undersigned (here insert the name of the claimant) has a claim for (here insert a brief description of the labor or materials performed or furnished and the person by whom performed or furnished; if the claim is for other than labor or materials, insert a brief description of the claim) in the sum of (here insert the amount) dollars against the (here insert public works bond or payment bond, as applicable) taken from (here insert the name of the principal and, if known, the surety or sureties upon the public works bond or payment bond) for the work of (here insert a brief description of the work concerning which the public works bond or payment bond was taken). Such material or labor was supplied to (here insert the name of the Contractor or Subcontractor).

_____(here to be signed)

[15. ADD ANY NECESSARY CONTRACTOR COMPLIANCE/REPORTING PROVISIONS FOR AGENCY'S WMBE GOALS PROGRAM UNDER ORS 200.090]

EXHIBIT E

INSURANCE REQUIREMENTS

1. Insurance Coverages. The Contractor shall procure and maintain (and, unless the Owner permits otherwise in writing, shall cause all Subcontractors to procure and maintain) at the Contractor's expense during the period of performance and thereafter as required below the following insurance from one or more companies authorized to do business in the State of Oregon with a policyholder's rating of not less than A-IX in the most recent edition of *Best's Rating Guide*. Except as approved otherwise by the Owner in advance, such insurance shall protect against claims which arise out of or relate to all of the Contractor's (and such Subcontractors') services under the Agreement, whether performed by the Contractor or a Subcontractor or consultant or a person or entity for which either of them may be responsible. The insurance coverages required by this Paragraph 1 shall be written on an occurrence basis, except the Professional Liability Insurance.

1.1 Workers' Compensation Insurance, if required by law, with statutory limits.

1.2. Employer's Liability Insurance, if employees are employed for other than secretarial or bookkeeping services, with a limit of not less than \$500,000.

1.3. Commercial General Liability Insurance, applicable to all premises and operations, including Bodily Injury, Property Damage, Personal Injury, Contractual Liability, Independent Contractors, Products and Completed Operations, Broad Form Property Damage (including Completed Operations), Pollution Liability (coverage shall apply to both sudden and gradual pollution conditions), and coverage for explosion, collapse and underground hazards, with limits of not less than \$1,000,000 per occurrence, \$2,000,000 aggregate applicable specifically to the Project, \$1,000,000 personal and advertising injury and \$1,000,000 Products and Completed Operations.

1.4. Business Automobile Liability Insurance, applicable to owned, non-owned and hired automobiles, with a limit of not less than \$1,000,000 combined single limit each accident; .

1.5. Professional Liability Insurance, covering performance of professional services by the Contractor or any Subcontractor or professional firm at any tier (e.g. for bidder-design or design-build components), whether or not performed by a licensed architect or engineer, with policy limits of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate.

1.6 Pollution Liability Insurance, covering the Contractor's liability for a third-party bodily injury and property damage arising from pollution conditions caused by the Contractor while performing their operations under the contract. The insurance coverage shall apply to sudden and accidental pollution events. Any coverage restriction as to time limit for discovery of a pollution incident and/or a time limit for notice to the insurer must be accepted by the Owner. The insurance coverage shall also respond to cleanup cost. This coverage may be written in combination with the commercial general liability insurance or professional liability insurance. The policy's limits shall not be less than \$1,000,000 each loss / \$1,000,000 aggregate. The policy shall be endorsed to state that the general aggregate limit of liability shall apply separately to this contract. Any self- insured retention / deductible amount shall be submitted to the Owner for review and approval.

1.7 Asbestos/hazardous materials Abatement (only applicable to Asbestos/hazardous materials abatement Contractors): General Liability policy shall be written on a form that meets the following criteria, and must be ASBESTOS SPECIFIC as follows:

- (a) A full occurrence form, or
- (b) A limited occurrence form with at least a three (3) year tail, or
- (c) A claims made form with a three (3) year tail.

1.8 True Umbrella Policy, which provides excess limits over the primary layer, in an amount not less than \$5,000,000.

1.9 Subcontractors: The Contractor shall require all subcontractors to provide and maintain General Liability, Auto Liability, Professional Liability (as applicable), and Workers' Compensation insurance with coverage's equivalent to those required of the General Contractor in this Agreement. The Contractor shall require certificates of insurance from all subcontractors as evidence of coverage.

1.10 Exceptions or Waivers: Any exception of waiver of these requirements shall be subject to review and written approval from the Owner.

2. Deductibles. The Contractor shall pay all deductibles on all policies required by Paragraph 1.

3. Waivers of Subrogation Re Liability Insurance. The Workers' Compensation and Employer's Liability policies shall be subject to a waiver of subrogation in favor of Owner and its members, partners, officers, directors, agents and employees, and the successors in interest of the foregoing.

4. Cross-Liability Coverages. The Commercial General Liability and Automobile Liability policies shall provide cross-liability coverages as would be achieved under the standard International Organization for Standardization ("ISO") separations of insureds clause.

5. Additional Insureds. The Commercial General Liability and Automobile Liability policies shall name the Owner and its officers, directors, agents and employees, and the successors in interest of the foregoing, as additional insureds, using ISO additional insureds endorsement CG 20 10 11 85 or a substitute providing equivalent coverages. Such coverages provided to the additional insureds shall (a) be primary and noncontributory with respect to any insurance or self-insurance retention of the additional insureds, including but not limited to any Excess Liability coverage maintained by the additional insureds, (b) provide the same types and extents of coverages as the coverages provided to the primary insured, and shall not be limited to the "vicarious liability" of the additional insureds, (c) waive all rights of subrogation against the additional insureds, (d) cover all additional insureds that are a partnership or joint venture, if any, as "Named Insureds" as expressly stated in endorsements and (e) be maintained for the same durations as the coverages provided to the primary insured, including but not limited to the continuation of the Products and Completed Operations coverage until three (3) years after final payment to the Owner's prime contractor on the Project, and shall not be limited to "ongoing operations". Notwithstanding the foregoing, this Paragraph shall not be construed to require the Contractor to provide insurance coverage of the additional insureds in a way or to an extent that results in a violation of ORS § 30.140.

6. Duration of Coverages. The insurance coverages required by Paragraph 1 shall be written on an occurrence basis, except the Professional Liability Insurance. The Professional Liability policy shall provide for a retroactive date of placement prior to or coinciding with the date of commencement under the Agreement. All other policies shall be in effect as of the date of commencement of the Contractor's services under the Agreement. All policies shall be maintained and remain in effect until one (1) year after Final Completion and thereafter when the Contractor is assisting or advising the Owner regarding the correction of defective or nonconforming Work; provided that the Products and Completed Operations policy and the Professional Liability policy shall remain in effect until three (3) years after final payment to the Owner's prime contractor on the Project. The Contractor shall notify the Owner of any claims against the Professional Liability policy, in which event the Owner shall have the right to require the Contractor at its expense to obtain additional Professional Liability Insurance in order to restore the required coverage available for the Project.

7. Builder's Risk Insurance.

The Contractor shall obtain Builder's Risk Insurance as described below:

(1) The Contractor shall purchase and maintain in force during the term of this Contract, at its own expense, Builder's Risk insurance in an amount equal to the Contract Amount, including any subsequent modifications for the entire project at the site on a replacement cost basis, including covering all costs needed to repair the structure or work based on the value figured at the time of rebuilding or repairing, not at the time of loss. Such coverage shall be maintained, unless otherwise provided in the Contract Documents, or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final

payment has been made or until no person or entity other than the Owner has insurable interest in the property to be covered, whichever is earlier. The Builder's Risk insurance shall include interests of the Owner, the Contractor, Subcontractors and sub-tier contractors in the project.

(2) **Special Covered Cause of Loss Form.** The Contractor's Builder's Risk Coverage shall be on a special covered cause of loss form and shall include theft, vandalism, malicious mischief, collapse, false-work, temporary buildings and debris removal including demolition, increased cost of construction, architect's fees and expenses, flood and earthquake coverage, materials and equipment in transit, and all below and above ground structures, water and sewer mains. Other coverage may be required if provided in contract documents. Coverage shall be written for 100% of the completed value (replacement cost basis) of the work being performed.

(3) **Amendments and Provisions.** The Contractor's Builder's Risk shall also include the following amendments and provisions.

a. **Waiver of Subrogation.** Waiver of subrogation against all parties named as insured, to the extent the loss is covered;

b. **Beneficial Occupancy Clause.** The policy shall specifically permit partial or beneficial occupancy at or before substantial completion or final acceptance of the entire work. The Contractor shall take reasonable steps to obtain any necessary consent of the insurance company or companies and agrees to take no action, other than upon mutual written consent, with respect to occupancy or use of the work that could lead to cancellation, lapse or reduction of insurance;

c. **Equipment Breakdown Coverage.** Equipment breakdown coverage (aka boiler & machinery coverage) shall be provided that specifically covers insured equipment during installation and testing;

d. **Interior Damage.** Any clause that excludes recovery of damage to the interior of building shall be deleted. The Builder's Risk policy shall provide for recovery for damage to the interior of a building if caused by perils insured against in the Builder's Risk Policy;

e. **Design Error.** The Builder's Risk policy shall not exclude coverage of damages caused by design error;

f. **Settlement, Cracking, Etc.** The Builder's Risk policy shall cover settling, cracking, shrinking or expansion (including coverage for loss resulting from settling, cracking, shrinking or expansion) of foundation walls, floors and other parts of the structure; and

g. **Deductible.** Any deductible shall not exceed \$50,000 for each loss.

(4) **Builder's Risk Installation Floater.** If approved in writing by the Owner's Risk Manager, the Contractor may obtain a Builder's Risk Installation Floater in lieu of Builder's Risk Insurance at the Contractor's expense. The Contractor shall keep the Builder's Risk Installation Floater in effect during the term of this Contract for the value of materials and equipment, on a replacement cost basis, including covering all costs needed to repair the structure or Work (including overhead and profit) based on the values figured at the time of rebuilding or repairing, not at the time of loss. Such coverage shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed to in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Owner has an insurable interest in the property to be covered, whichever is earlier. The Builders' Risk Installation Floater shall include interest of the Owner, The Contractor, Subcontractors and sub-tier Contractors in the project. The Builders' Risk Installation Floater shall be on a Special Covered Cause of Loss Form and shall include theft, vandalism, malicious mischief, faulty workmanship, labor, materials and equipment to be installed. Other coverages may be required if provided in the Contract Documents. The Builders' Risk Installation Floater shall also provide a Waiver of Subrogation against all parties named as insured, but only to the extent the loss is covered. Coverages shall be written for 100% of the completed value (replacement cost basis including labor and materials) of the work being performed or other limit as specified in the Contract Documents. Coverage shall extend to when project materials are in off-site storage and while in transit.

(5) **Insured Loss.** The owner shall have sole power and authority to adjust and settle a loss with insurers. A loss insured under the Builder's Risk Insurance or Builder's Risk Installation Floater shall be adjusted by the Owner and any payments or settlements shall be made payable to the Owner for the insureds, as their interests may appear. The Owner shall be entitled to full payment of its loss from the insurance proceeds before payment of the remainder to any other beneficiaries of the policy. The Contractor shall pay Subcontractors their just share of remaining insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors make payments to the Sub-subcontractors in similar manner.

(6) **Deductible.** Payment of the deductible on the Builders Risk policy claims is the responsibility of the Contractor and is not subject to reimbursement by the Owner. The Contractor promptly shall pay the deductible (or if the claim is less than the deductible, the amount of the claim) promptly and without offset or deduction. If the Contractor does not do so, the Owner may, in addition to other remedies, deduct and offset the amount of the deductible from the Contract Sum.

8. **Proof of Insurance.** The Contractor shall file with Owner, upon execution of the Agreement, certificates of insurance acceptable to the Owner as well as copies of all insurance policies, with all riders and endorsements, all separate exclusions, conditions and waivers, and all other amendatory documents attached, evidencing the insurance required of the Contractor by this Exhibit E. No progress payment will be due until all such Certificates and policies are furnished. All policies and certificates must be signed copies and shall contain a provision that coverages afforded under the policies cannot be materially altered (i.e., the coverage's reduced, the limits decreased, or the additional insured removed), allowed to expire, or cancelled without first giving 30 days' prior written notice to the Owner. The Contractor shall furnish to the Owner copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage of limits. Furthermore, such policies or certificates shall verify that the policy contains coverage for blanket contractual liability including both oral and written contracts and acknowledge the indemnification provisions and liability coverages called for by this Agreement. If any of the required coverages are to renew during the period when such coverage is to remain in effect, or are required to remain in force after final payment to the Owner's prime contractor on the Project, an additional certificate evidencing continuation of such coverage shall be submitted upon renewal or with the Contractor's final invoice.

9. **Effect of No or Insufficient Insurance.** The Contractor's failure to comply with the requirements of this Exhibit E shall constitute a material breach of the Agreement entitling the Owner to terminate the Agreement for cause. In the alternative, the Owner in its sole discretion may purchase the insurance required of, but not obtained or maintained, by the Contractor pursuant to this Exhibit E and charge such costs thereof to the Contractor or deduct the costs thereof from the Contract Sum. The Owner's rights under this Paragraph shall be in addition to, and without waiver of, its other rights and remedies under the Agreement or applicable law.

10. **Waivers of Subrogation.** The Owner and the Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or the Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, the Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

1. **Limitation of This Exhibit E.** Nothing in this Exhibit E shall negate, abridge or reduce the Contractor's responsibilities or liabilities under the Agreement or applicable law, the meaning and effect of the provisions of this Exhibit E being limited to setting out the Contractor's express obligations with respect to

insurance. By requiring insurance, the Owner does not guarantee that the insurance is sufficient to cover all the risks the Contractor may face. The Contractor's liability is not limited to insurance.

2. The Contractor shall obtain, at its own expense, the minimum insurance coverage described in this Exhibit and maintain that coverage until final acceptance of the entire Project, and through the stated completed operations period as applicable. By requiring such minimum insurance, the Owner does not guarantee that the insurance is sufficient to cover all the risks the Contractor may face. The Contractor's liability is not limited to insurance. The insurance carried by the Contractor shall be the primary coverage and non-contributory, and any insurance maintained by the Owner is excess and in any event solely for damages or losses for which the Owner is responsible.

3. The Owner's specification or approval of the insurance in this Contract or of its amount shall not relieve or decrease the liability of the Contractor under the Contract documents or otherwise. Coverage's are the minimum to be provided and are not limitations of liability under the Contract, indemnification, or applicable law provisions. The Contractor may, at its expense, purchase larger coverage amounts.

4. Contract Sum. The Contract Sum includes the cost of any insurance required by the Contract Documents.