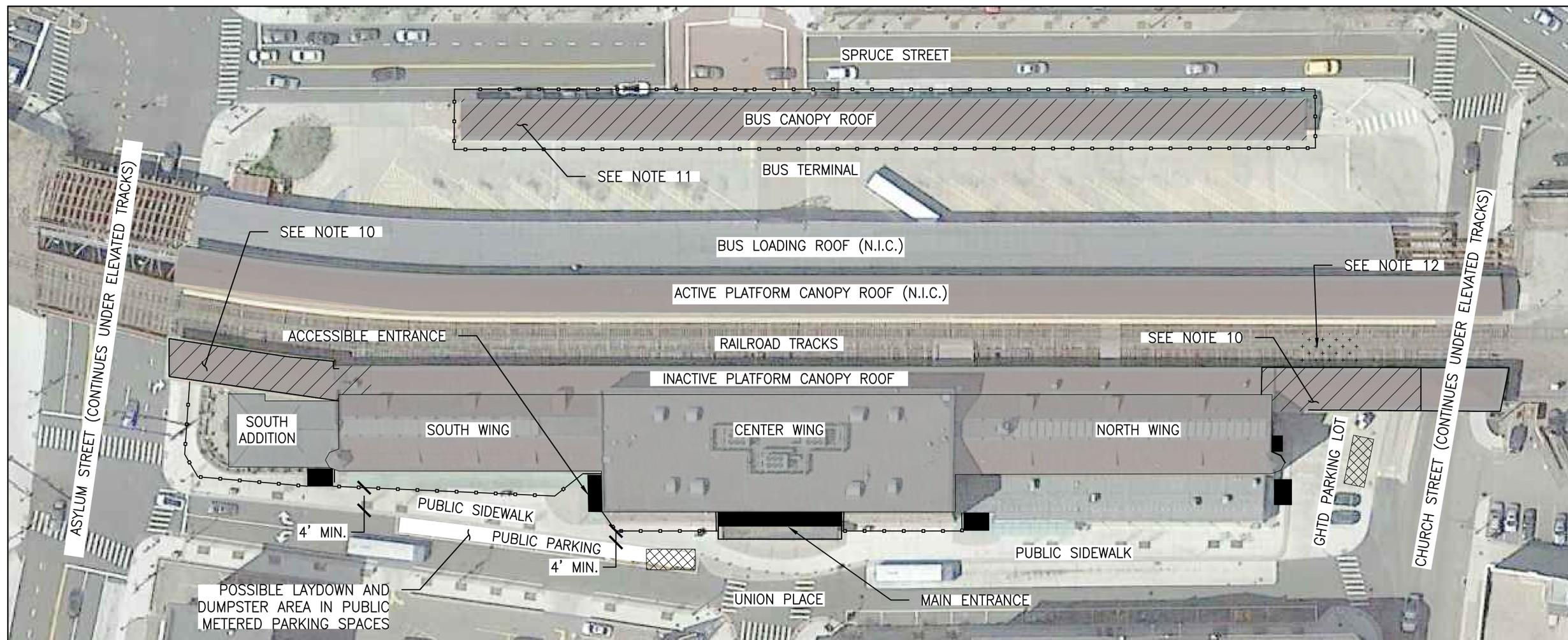


SITE USAGE AND LOGISTICS

1. Provide construction fence as shown and as additionally required to fully cordon off areas when work is occurring. Maintain minimum 4' width of public sidewalk.
2. Coordinate lay down areas and location of site fencing with GHDT and provide shop drawings confirming locations prior to start of construction.
3. Protect all existing landscaping from damage. Provide protection around all trees.
4. Maintain access/egress from all building entrances at all times throughout the project. Provide overhead protection when work is occurring above.
5. Sidewalk to remain open to pedestrians throughout construction.
6. Maintain vehicular drive lanes and parking spaces throughout construction. Coordinate any temporary closures with GHDT.
7. Limited Contractor laydown areas available. Possible Contractor laydown sites as noted on the site plan below.
8. Assume no Contractor parking provided by owner.
9. Businesses within the building will remain open throughout construction. Access to and from the building must be unobstructed at all times.
10. Proposed laydown area is on an elevated structure, not on grade, and is provided as-is. Contractor is responsible for verifying capacity of structure to support loads if used as a laydown area.
11. Proposed laydown area is on-grade beneath the Bus Canopy Roof (not on the Canopy Roof).
12. Proposed location of storage trailer beneath tracks.

LEGEND	
	(E) BUILDING ROOF OVERHANG, CANOPY OUTLINE, OR OTHER AREA OUT OF SCOPE
	(E) BUILDING ENTRANCE OR EMERGENCY EGRESS TO REMAIN OPEN AND UNOBSTRUCTED - PROVIDE OVERHEAD PROTECTION WHEN WORK IS OCCURRING ABOVE
	PROPOSED CONTRACTOR LAYDOWN AREA
	PROPOSED CONTRACTOR CONSTRUCTION FENCING
	PROPOSED CONTRACTOR STORAGE TRAILER
	PROPOSED CONTRACTOR DUMPSTER



1 SITE PLAN

SCALE: NTS

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Washington, DC



GHTD PROJECT NO. 02-021

Consultant

No.				Date				Description				By			
<p>BID SET - NOT FOR CONSTRUCTION</p>															

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

SITE PLAN

Project No. 191971.00	Checked JCD/KSW	Date 08/03/2020
Drawn RML	Approved MBB	Scale AS NOTED

Seal

Drawing No.
R-0.1

No.	Date	Description	By

**UNION STATION
TRANSPORTATION
CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT**

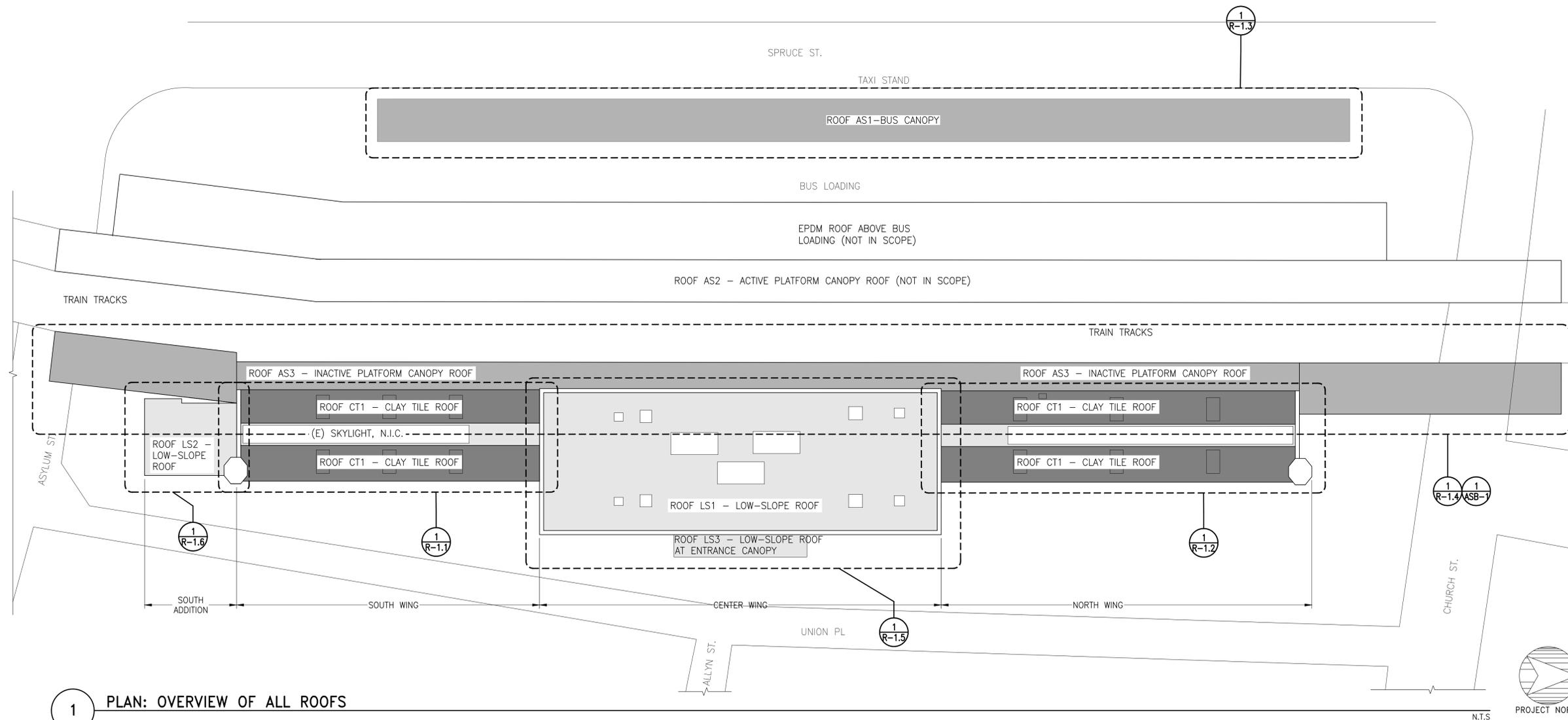
Project

OVERALL ROOF PLAN

Drawing Title

Project No. 191971.00	Checked RML	Date 08/03/2020
Drawn SKW	Approved MBB	Scale AS NOTED

Seal	Drawing No. R-1.0
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1 PLAN: OVERVIEW OF ALL ROOFS

GENERAL NOTES

1. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT SERVICES, AND ACCESSORIES NECESSARY TO FURNISH AND INSTALL WORK ON THIS SECTION, COMPLETE AND FUNCTIONAL AS INDICATED IN THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
2. WORK WILL BE PERFORMED AT UNION STATION, ONE UNION PLACE, HARTFORD, CONNECTICUT.
3. THE BUILDING WILL REMAIN OCCUPIED AT ALL TIMES. COORDINATE WITH THE GREATER HARTFORD TRANSIT DISTRICT (GHTD) TO MAINTAIN OCCUPANT ACCESS TO THE BUILDING AT ALL TIMES, INCLUDING HANDICAPPED ACCESS. MAINTAIN ENTRANCE THROUGH THE MAIN ENTRANCES AT ALL TIMES BY PERMANENT OR SUFFICIENT TEMPORARY MEANS.
4. PROVIDE THE ENGINEER WITH ASSISTANCE AND ACCESS TO ALL AREAS OF THE BUILDING WHERE THE WORK WILL BE PERFORMED, INCLUDING INCIDENTAL LABOR AND FACILITIES.
5. ALL WORK IS TO BE DONE IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
6. FIELD VERIFICATION OF EXISTING CONDITIONS: VERIFY ALL SITE CONDITIONS AND DIMENSIONS BY FIELD MEASUREMENT IN CONSIDERATION OF THE SPECIAL CONDITIONS ASSOCIATED WITH ALTERATIONS OF AN EXISTING AND OPERATING BUILDING.

OVERVIEW OUTLINE SCOPE OF WORK

NOTE: THIS OVERVIEW SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY, REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

CLAY TILE ROOFING (ROOF CT1)

- A. BASE BID: PERFORM REPAIRS AT CLAY TILE ROOFS. REPAIRS CONSIST OF:
1. REMOVING AND REINSTALLING EXISTING CLAY TILE AND NEW ROOFING UNDERLAYMENT AND FLASHING AT PERIMETER, DORMERS, AND TRANSITIONS
 2. REPLACING BROKEN, LOOSE, OR MISSING CLAY TILE
 3. PROVIDING NEW ASSOCIATED SHEET METAL FLASHINGS

ASPHALT SHINGLE ROOFING (ROOFS AS1 AND AS3)

- A. BASE BID: REMOVE AND REPLACE EXISTING ROOFING SYSTEM WITH 30-YEAR NEW ASPHALT SHINGLE ROOFING SYSTEM. PROVIDE NEW GUTTERS AND SUPPLEMENTAL DOWNLEADERS.
- B. ADD ALTERNATES AS1 AND AS3: PROVIDE ARCHITECTURAL ASPHALT SHINGLES 50-YEAR IN LIEU OF 30-YEAR ARCHITECTURAL ASPHALT SHINGLES AT RESPECTIVE ROOFS. PROVIDE NEW GUTTERS AND SUPPLEMENTAL DOWNLEADERS.

LOW-SLOPED ROOFING

- A. ROOFS LS1, LS1A, LS1B:
1. BASE BID: REMOVE EXISTING BALLASTED EPDM ROOFING SYSTEM AND REPLACE WITH NEW PVC ROOFING SYSTEM, INCLUDING ASSOCIATED FLASHINGS.
- B. ROOF LS2:
1. BASE BID: REMOVE AND REPLACE EXISTING FLAT-SEAM COPPER ROOFING WITH NEW PVC ROOFING SYSTEM, INCLUDING ASSOCIATED FLASHINGS.
 2. ADD ALTERNATE LS2: REMOVE AND REPLACE EXISTING FLAT-SEAM COPPER ROOFING WITH NEW COPPER ROOFING SYSTEM. AT LOW-SLOPE AREAS OF THE ROOF, PROVIDE FLAT-SEAM COPPER ROOF PANELS WITH FULLY SOLDERED JOINTS AND EXPANSION JOINTS. AT STEEP-SLOPE AREAS OF THE ROOF, PROVIDE STANDING-SEAM COPPER ROOF PANELS.
- C. ROOF LS3:
1. REMOVE EXISTING EPDM ROOFING SYSTEM AND REPLACE WITH NEW PVC ROOFING SYSTEM, INCLUDING ASSOCIATED FLASHINGS.

LEGEND

XX #	ROOF NAME
	CLAY TILE ROOF
	ASPHALT SHINGLE ROOF
	LOW SLOPE ROOF

LEGEND

-  AREA OF WORK, SEE DETAIL 1/R-2.0 FOR ROOFING SYSTEM AND 2/R-2.0 FOR TRANSITION BETWEEN NEW AND EXISTING ROOFING SYSTEMS
-  (E) VENT PENETRATION, SEE DETAIL 5/R-2.0
-  (E) SNOW FENCE TO REMAIN
-  REMOVE AND REINSTALL (E) SNOW FENCE, SEE DETAIL 8/R-2.1
-  (E) RISING MASONRY WALL
-  (E) DOWNLEADER, TO REMAIN
-  (E) EXPANSION JOINT IN COPPER GUTTER
-  (E) SNOW CLEATS, PROVIDE NEW AT AREAS OF NEW CLAY TILE ROOFING, SEE DETAIL 7/R-2.1
-  ROOF WORK NOT DESCRIBED ON THIS SHEET, REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK.

NOTE: SURVEY THE EXISTING CLAY TILE ROOFING TO REMAIN TO IDENTIFY ALL CRACKED, CHIPPED, LOOSE, OR MISSING CLAY ROOF TILE. REMOVE AND REPLACE ALL ROOF TILE THAT ARE LOOSE OR MISSING, OR ROOF TILE WITH CRACKS GREATER THAN 2 IN. LONG OR CHIPS GREATER THAN 4 SQ. IN. REFER TO DETAIL 3/R-2.0 FOR INDIVIDUAL CLAY ROOF TILE REPLACEMENT.

SUMMARY SCOPE OF WORK - CLAY TILE ROOFING

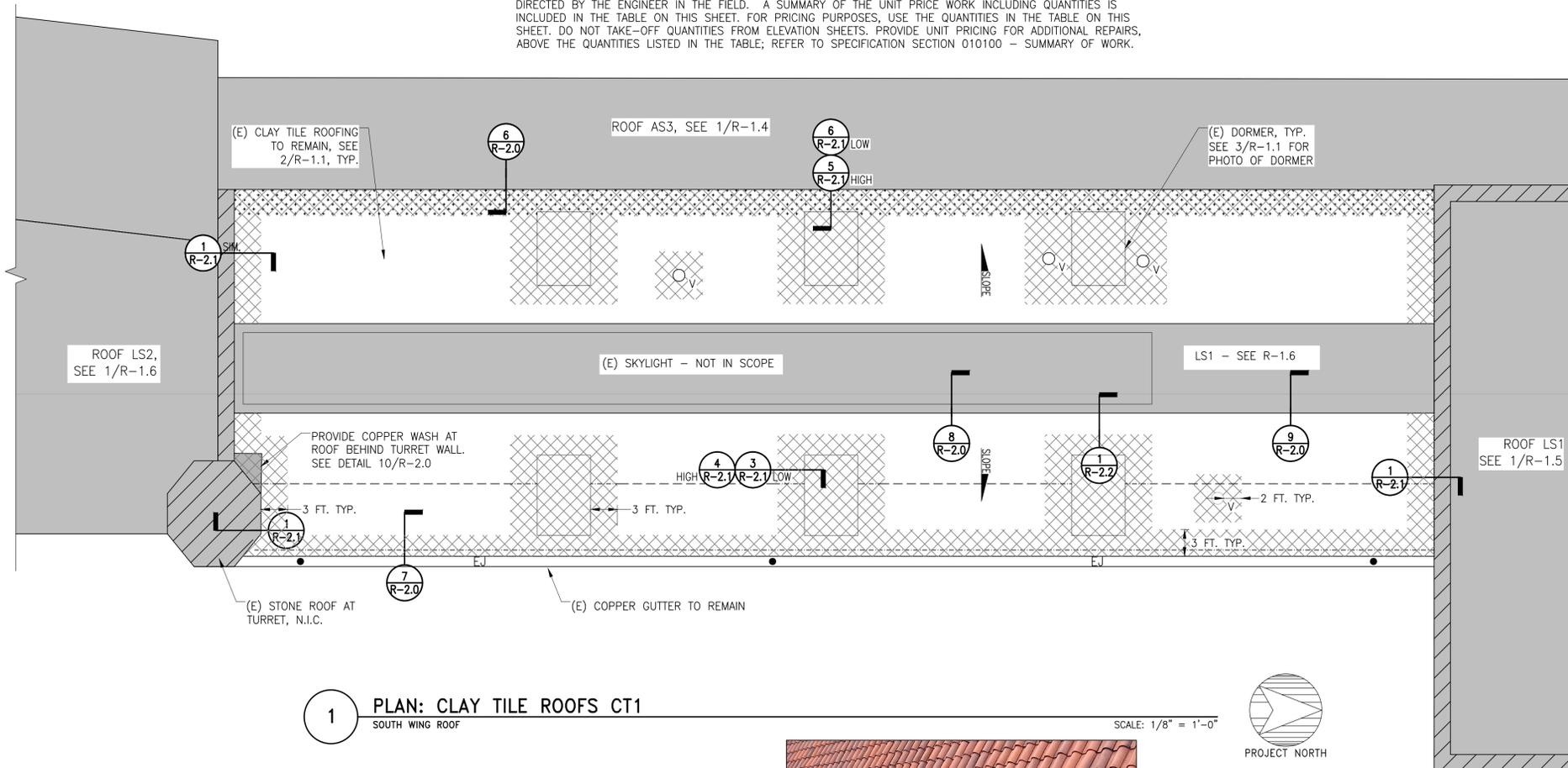
NOTE: THIS SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY, REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

BASE BID

- A. ROOF CT1: STEEP-SLOPED ROOFS AT NORTH AND SOUTH WINGS
1. REMOVE THE EXISTING CLAY TILE ROOFING AT THE LOCATIONS SHOWN ON THE DRAWINGS, INCLUDING AT THE PERIMETER OF THE ROOF, AT AND AROUND THE ROOF DORMERS, AND AT ROOF PENETRATIONS. REMOVE EXISTING ROOFING DOWN TO PLYWOOD ROOF SHEATHING (TO REMAIN). REMOVE THE CLAY ROOF TILES, FELT UNDERLAYMENT, AND METAL FLASHINGS. SALVAGE THE EXISTING, UNDAMAGED, CLAY ROOF TILES FOR REINSTALLATION.
 2. REMOVE AND REPLACE INDIVIDUAL EXISTING DAMAGED ROOF TILE AT AREAS OF CLAY TILE ROOFING TO REMAIN.
 3. PROVIDE NEW SELF-ADHERED MEMBRANE UNDERLAYMENT AT THE PERIMETER OF THE ROOF, AT AND AROUND DORMERS, AND AT ROOF PENETRATIONS, AS SHOWN ON THE DRAWINGS. PROVIDE NEW FELT PROTECTION LAYER OVER SELF-ADHERED MEMBRANE. INTEGRATE SELF-ADHERED MEMBRANE UNDERLAYMENT WITH EXISTING FELT UNDERLAYMENT TO REMAIN.
 4. PROVIDE NEW COPPER FLASHING AT THE CLAY TILE ROOFING INCLUDING: COPPER CLADDING AT DORMER SIDE WALLS, STEP FLASHING AT RISING WALLS (AT DORMERS AND RAKES), RIDGE FLASHING, PIPE PENETRATION FLASHING, FLASHING AT DORMER ROOFS, AND EAVE FLASHING. INTEGRATE METAL FLASHING WITH THE NEW SELF-ADHERED MEMBRANE UNDERLAYMENT.
 5. REINSTALL EXISTING CLAY ROOF TILES, REPLACE DAMAGED ROOF TILES IN-KIND.
 6. REMOVE AND REINSTALL THE EXISTING SNOW FENCE AT THE SOUTH WING EAST ELEVATION. RE-USE EXISTING BASE PLATES AND PROVIDE NEW RAILS.
 7. PROVIDE NEW SNOW CLEATS AT THE NORTH WING EAST ELEVATION, AND AT THE WEST ELEVATION OF THE NORTH AND SOUTH WINGS.
- B. ON A UNIT PRICE BASIS, UNDERTAKE LOCALIZED ROOFING REPAIRS AT EACH ROOFING LOCATION, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. A SUMMARY OF THE UNIT PRICE WORK INCLUDING QUANTITIES IS INCLUDED IN THE TABLE ON THIS SHEET. FOR PRICING PURPOSES, USE THE QUANTITIES IN THE TABLE ON THIS SHEET. DO NOT TAKE-OFF QUANTITIES FROM ELEVATION SHEETS. PROVIDE UNIT PRICING FOR ADDITIONAL REPAIRS, ABOVE THE QUANTITIES LISTED IN THE TABLE; REFER TO SPECIFICATION SECTION 010100 - SUMMARY OF WORK.

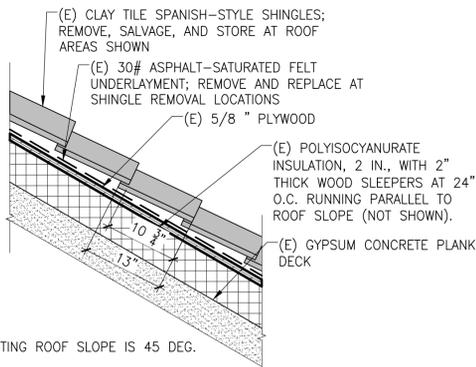
UNIT PRICE QUANTITIES FOR CLAY TILE ROOFING TO BE INCLUDED IN THE BASE BID (TOTAL FOR ALL CLAY TILE ROOF AREAS)

ITEM	QUANTITY	UNIT
REMOVE AND REPLACE DETERIORATED PLYWOOD ROOF SHEATHING AND ROOF INSULATION	80	SF
REPLACE INDIVIDUAL LOOSE, MISSING, OR DAMAGED CLAY ROOF TILES IN THE FIELD OF THE ROOF (NOT INCLUDING ROOF TILES DAMAGED FROM REMOVAL)	60	EA
REPAIR CRACKED SOLDER JOINTS IN THE EXISTING COPPER GUTTERS TO REMAIN BY REMOVING THE EXISTING SOLDER AND RESOLDERING	10	LF
REPAIR HOLES IN THE EXISTING COPPER GUTTERS TO REMAIN BY SOLDERING A COPPER PATCH OVER THE EXISTING HOLE OR TEAR	5	EA



1 PLAN: CLAY TILE ROOFS CT1
SOUTH WING ROOF

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



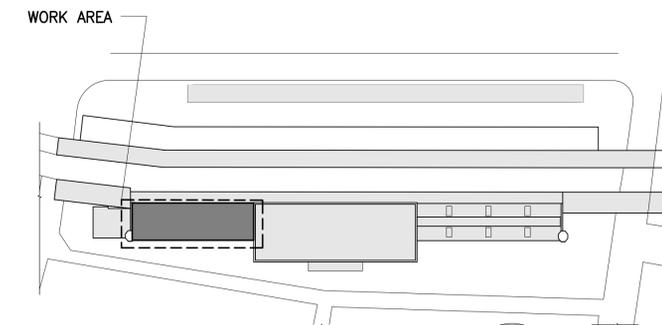
2 EXISTING ROOFING SYSTEM

N.T.S.



3 PHOTO OF (E) DORMER

N.T.S.



KEY PLAN



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GHTD PROJECT NO. 02-021

Consultant

BID SET - NOT FOR CONSTRUCTION

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

Project

CLAY TILE ROOF PLANS: SOUTH WING

Drawing Title

Project No. 191971.00	Checked JCD/KSW	Date 08/03/2020
Drawn RML	Approved MBB	Scale AS NOTED

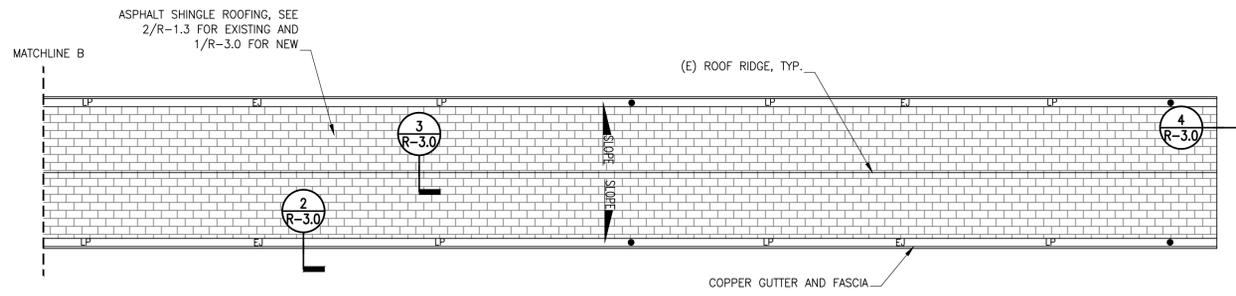
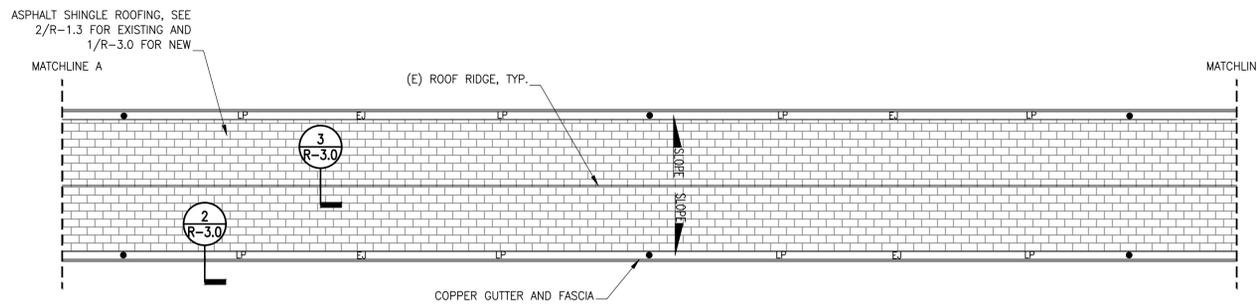
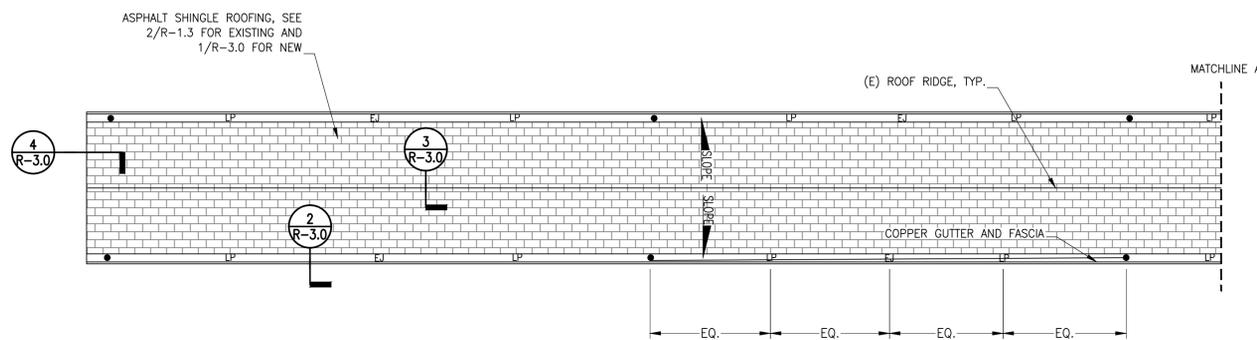
Drawing No.

R1.1

Seal

LEGEND

- (E) DOWNLEADER, TO REMAIN
- (E) DUCT. SEE DETAIL 10/R-3.0
- EJ EXPANSION JOINT IN COPPER GUTTER. SEE DETAIL 1/R-3.1
- LP LOW-PROFILE EXPANSION JOINT IN COPPER GUTTER, SEE DETAIL 2/R-3.1
- ▨ (E) RISING MASONRY WALL
- ROOF WORK NOT DESCRIBED ON THIS SHEET. REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK.



NOTE: BIRD NETTING NOT PRESENT AT THIS ROOF

1 PLAN: ASPHALT SHINGLE ROOF – ADD ALTERNATE AS1
BUS CANOPY ROOF SCALE: 3/32" = 1'-0"



SUMMARY SCOPE OF WORK - ADD ALTERNATE AS1 AND AS3:

NOTE: THIS SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY. REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

BASE BID: NO WORK

ADD ALTERNATE AS1:

- A. ROOF AS1: BUS CANOPY ROOF
1. REMOVE THE EXISTING ASPHALT SHINGLE ROOFING INCLUDING: ASPHALT SHINGLES, FELT UNDERLAYMENT, AND ASSOCIATED METAL FLASHINGS, DOWN TO EXISTING WOOD DECK BOARDS (TO REMAIN).
 2. PROVIDE NEW ASPHALT SHINGLE ROOFING CONSISTING OF NEW COPPER FLASHINGS, SELF-ADHERED MEMBRANE UNDERLAYMENT AT THE PERIMETER AND TRANSITIONS IN THE ROOF, NEW FELT UNDERLAYMENT IN THE FIELD OF THE ROOF, AND NEW ASPHALT SHINGLES.
 3. REMOVE AND REPLACE THE COPPER SHEET METAL GUTTERS AND FASCIA.

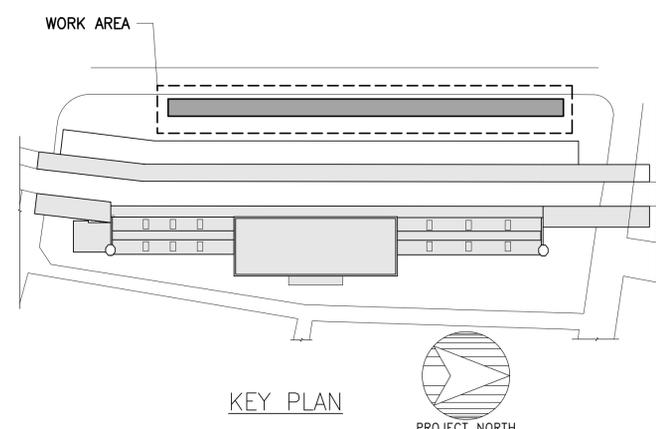
ADD ALTERNATE AS3:

- B. ROOF AS3: INACTIVE PLATFORM CANOPY ROOF
1. REMOVE THE EXISTING ASPHALT SHINGLE ROOFING INCLUDING: ASPHALT SHINGLES, FELT UNDERLAYMENT, AND ASSOCIATED METAL FLASHINGS, DOWN TO EXISTING WOOD DECK BOARDS (TO REMAIN).

2. PROVIDE NEW ASPHALT SHINGLE ROOFING CONSISTING OF NEW COPPER FLASHINGS, SELF-ADHERED MEMBRANE UNDERLAYMENT AT THE PERIMETER AND TRANSITIONS IN THE ROOF, NEW FELT UNDERLAYMENT IN THE FIELD OF THE ROOF, AND NEW ASPHALT SHINGLES.
3. ABATE AND PROPERLY DISPOSE OF THE EXISTING ROOFING CEMENT IDENTIFIED AS CONTAINING ASBESTOS IN ACCORDANCE WITH THE SPECIFICATIONS.
4. REMOVE AND REPLACE THE COPPER SHEET METAL GUTTERS AND FASCIA.
5. REMOVE AND REPLACE THE BIRD NETTING IN PLACE BELOW THE CANOPY.

UNIT PRICE WORK:
C. ON A UNIT PRICE BASIS, UNDERTAKE LOCALIZED ROOFING REPAIRS AT EACH ROOFING LOCATION, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. A SUMMARY OF THE UNIT PRICE WORK INCLUDING QUANTITIES IS INCLUDED IN THE TABLE ON THIS SHEET. FOR PRICING PURPOSES, USE THE QUANTITIES IN THE TABLE ON THIS SHEET. DO NOT TAKE-OFF QUANTITIES FROM ELEVATION SHEETS. PROVIDE UNIT PRICING FOR ADDITIONAL REPAIRS, ABOVE THE QUANTITIES LISTED IN THE TABLE; REFER TO SPECIFICATION SECTION 010100 - SUMMARY OF WORK.

UNIT PRICE QUANTITIES FOR ASPHALT ROOFING TO BE INCLUDED IN THE BASE BID (TOTAL FOR ALL ADD ALTS.)		
ITEM	QUANTITY	UNIT
ROOF AS1 (ADD ALT. AS1)		
REMOVE AND REPLACE DETERIORATED ROOF DECK BOARDS	20	SF
REMOVE AND REPLACE DETERIORATED WOOD SOFFIT BOARDS	80	LF
REATTACH EXISTING SOUND, LOOSE SOFFIT BOARDS	10	EA
ROOF AS3 (ADD ALT. AS3)		
REMOVE AND REPLACE DETERIORATED ROOF DECK BOARDS	20	SF
REMOVE AND REPLACE DETERIORATED WOOD SOFFIT BOARDS	360	LF
REATTACH EXISTING SOUND, LOOSE SOFFIT BOARDS	20	EA
EXTEND EXISTING DOWNLEADERS TO DISCHARGE AT GRADE	4	EA



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GHTD PROJECT NO. 02-021

Consultant

BID SET - NOT FOR CONSTRUCTION

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER
ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

ASPHALT SHINGLE ROOF PLANS ADD ALTERNATE #AS1

Drawing Title

Project No. 191971.00	Checked JCD/KSW	Date 08/03/2020
Drawn RML	Approved MBB	Scale AS NOTED

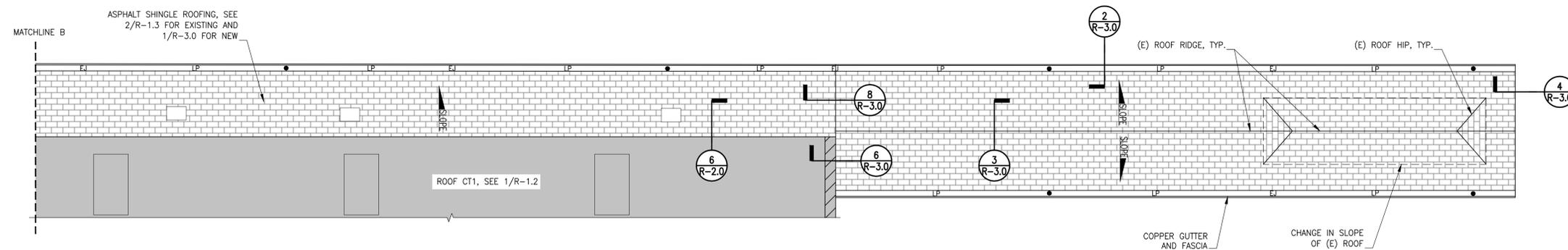
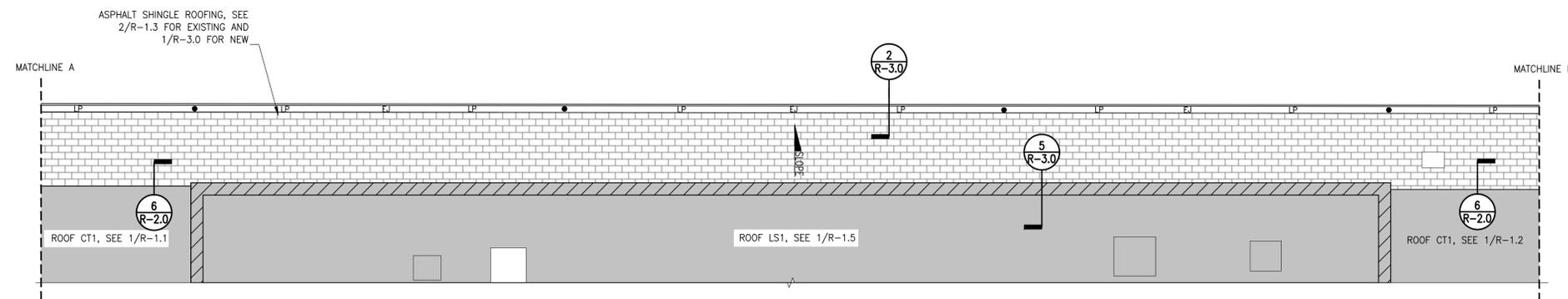
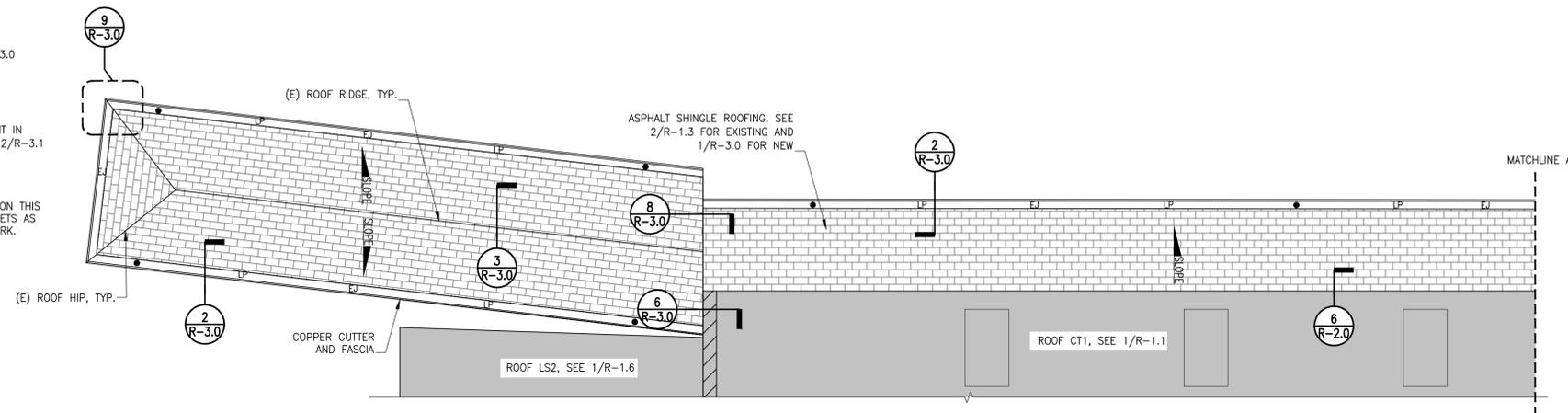
Seal

Drawing No.
R-1.3

LEGEND

- (E) DOWNLEADER, TO REMAIN
- (E) DUCT, SEE DETAIL 10/R-3.0
- EJ EXPANSION JOINT IN COPPER GUTTER, SEE DETAIL 1/R-3.1
- LP LOW-PROFILE EXPANTION JOINT IN COPPER GUTTER, SEE DETAIL 2/R-3.1
- ▨ (E) RISING MASONRY WALL
- ROOF WORK NOT DESCRIBED ON THIS SHEET. REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK.

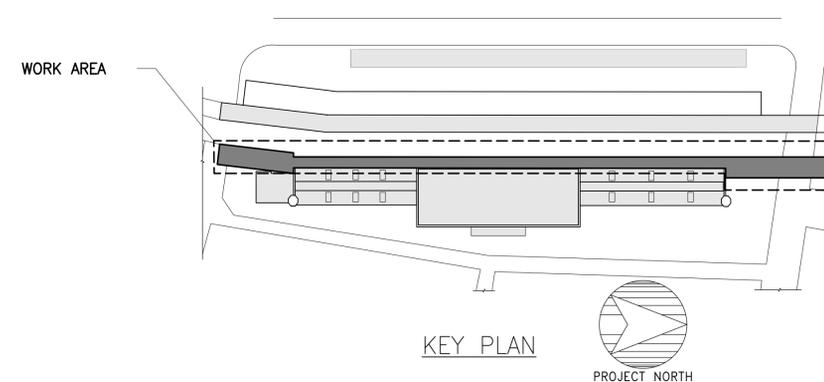
NOTE: SEE R-1.3 FOR SUMMARY SCOPE OF WORK



NOTE: REMOVE AND REPLACE (E) BIRD NETTING AT THE UNDERSIDE OF THE ENTIRE CANOPY ROOF

1 PLAN: ASPHALT SHINGLE ROOF – ADD ALTERNATE AS3
INACTIVE PLATFORM CANOPY ROOF

SCALE: 3/32" = 1'-0"



BID SET - NOT FOR CONSTRUCTION

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

Project

ASPHALT SHINGLE ROOF PLANS ADD ALTERNATE #AS3

Drawing Title

Project No. 191971.00	Checked JCD/KSW	Date 08/03/2020
Drawn RML	Approved MBB	Scale AS NOTED

Drawing No.

R-1.4

Seal

BID SET - NOT FOR CONSTRUCTION

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
 1 UNION PLACE, HARTFORD, CT

LOW SLOPE ROOF PLAN AT SOUTH ADDITION

Drawing Title

Project No. 191971.00	Checked JCD/KSW	Date 08/03/2020
Drawn RML	Approved MBB	Scale AS NOTED
Seal		Drawing No. R-1.6

SUMMARY SCOPE OF WORK - PVC ROOFING

NOTE: THIS OVERVIEW SUMMARY SCOPE OF WORK IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AS AN OVERVIEW INTRODUCTION TO THE SCOPE OF WORK INCLUDED IN THE DRAWINGS AND SPECIFICATIONS, WHICH SUPERSEDE THIS OVERVIEW SUMMARY, REVIEW THE DRAWINGS AND SPECIFICATIONS THOROUGHLY FOR THE FULL SCOPE OF WORK.

- BASE BID**
- ROOF LS2: LOW-SLOPE ROOF AT SOUTH ADDITION
 - REMOVE THE EXISTING FLAT-SEAM COPPER ROOFING INCLUDING COPPER ROOFING AND FLASHING, AND FELT UNDERLAYMENT, DOWN TO THE EXISTING WOOD DECK BOARDS (TO REMAIN).
 - PROVIDE NEW PVC MEMBRANE ROOFING SYSTEM CONSISTING OF (FROM BOTTOM TO TOP): PLYWOOD ROOF SHEATHING FASTENED TO THE EXISTING WOOD ROOF DECK, ADHERED VAPOR RETARDER MEMBRANE, INSULATION, COVER BOARD FASTENED TO THE PLYWOOD SHEATHING, PVC ROOFING MEMBRANE ADHERED WITH HEAT-WELDED SEAMS. PROVIDE PVC FLASHING MEMBRANE AT ROOF PENETRATIONS. PROVIDE CUSTOM-COLOR PVC MEMBRANE.
 - PROVIDE PLYWOOD AND WOOD BLOCKING ASSOCIATED WITH REPLACEMENT ROOFING SYSTEM, AT LOCATIONS SHOWN ON THE DRAWINGS AND WHERE REQUIRED BY THE ROOFING SYSTEM MANUFACTURER.
 - PROVIDE ROOF WALKWAY PADS AT LOCATIONS INDICATED ON THE DRAWINGS.
 - PROVIDE COPPER FLASHINGS AT ROOF PENETRATIONS, EAVES, AND AT RISING WALLS.
 - REMOVE EXISTING COPPER GUTTER AND PROVIDE NEW COPPER GUTTER WITH NEW ZINC-TIN COATED COPPER DOWNLEADERS.
- B.** ON A UNIT PRICE BASIS, UNDERTAKE OF LOCALIZED ROOFING REPAIRS AT EACH ROOFING LOCATION, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. A SUMMARY OF THE UNIT PRICE WORK INCLUDING QUANTITIES IS INCLUDED IN THE TABLE ON THIS SHEET. FOR PRICING PURPOSES, USE THE QUANTITIES IN THE TABLE ON THIS SHEET. DO NOT TAKE-OFF QUANTITIES FROM ELEVATION SHEETS. PROVIDE UNIT PRICING FOR ADDITIONAL REPAIRS, ABOVE THE QUANTITIES LISTED IN THE TABLE; REFER TO SPECIFICATION SECTION 010100 - SUMMARY OF WORK.

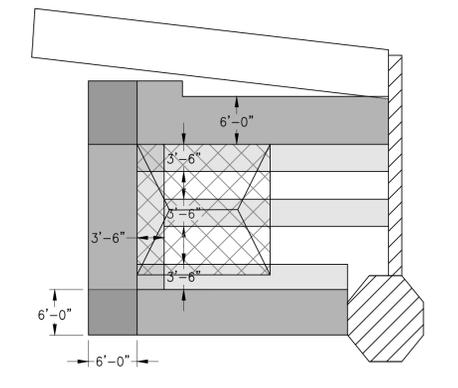
UNIT PRICE QUANTITIES FOR PVC ROOFING TO BE INCLUDED IN THE BASE BID TOTAL FOR LS3

ITEM	QUANTITY	UNIT
ROOF LS2: REMOVE AND REPLACE DETERIORATED WOOD ROOF BOARDS	20	SF

- ADD ALTERNATE**
- ADD ALTERNATE #LS2: IN LIEU OF NEW PVC ROOFING, PROVIDE NEW COPPER ROOFING CONSISTING OF (FROM BOTTOM TO TOP): PLYWOOD SHEATHING, SELF-ADHERED HIGH TEMPERATURE MEMBRANE UNDERLAYMENT, ROSIN PAPER SLIP SHEET, AND COPPER ROOFING AS FOLLOWS:
 - AT LOW-SLOPE AREAS OF THE ROOF PROVIDE FLAT-SEAM COPPER ROOF PANELS WITH FULLY SOLDERED JOINTS EXCEPT AT EXPANSION JOINTS DESIGNED TO ACCOMMODATE THERMAL MOVEMENT.
 - AT STEEP-SLOPE AREAS OF THE ROOF PROVIDE STANDING-SEAM COPPER ROOF PANELS.

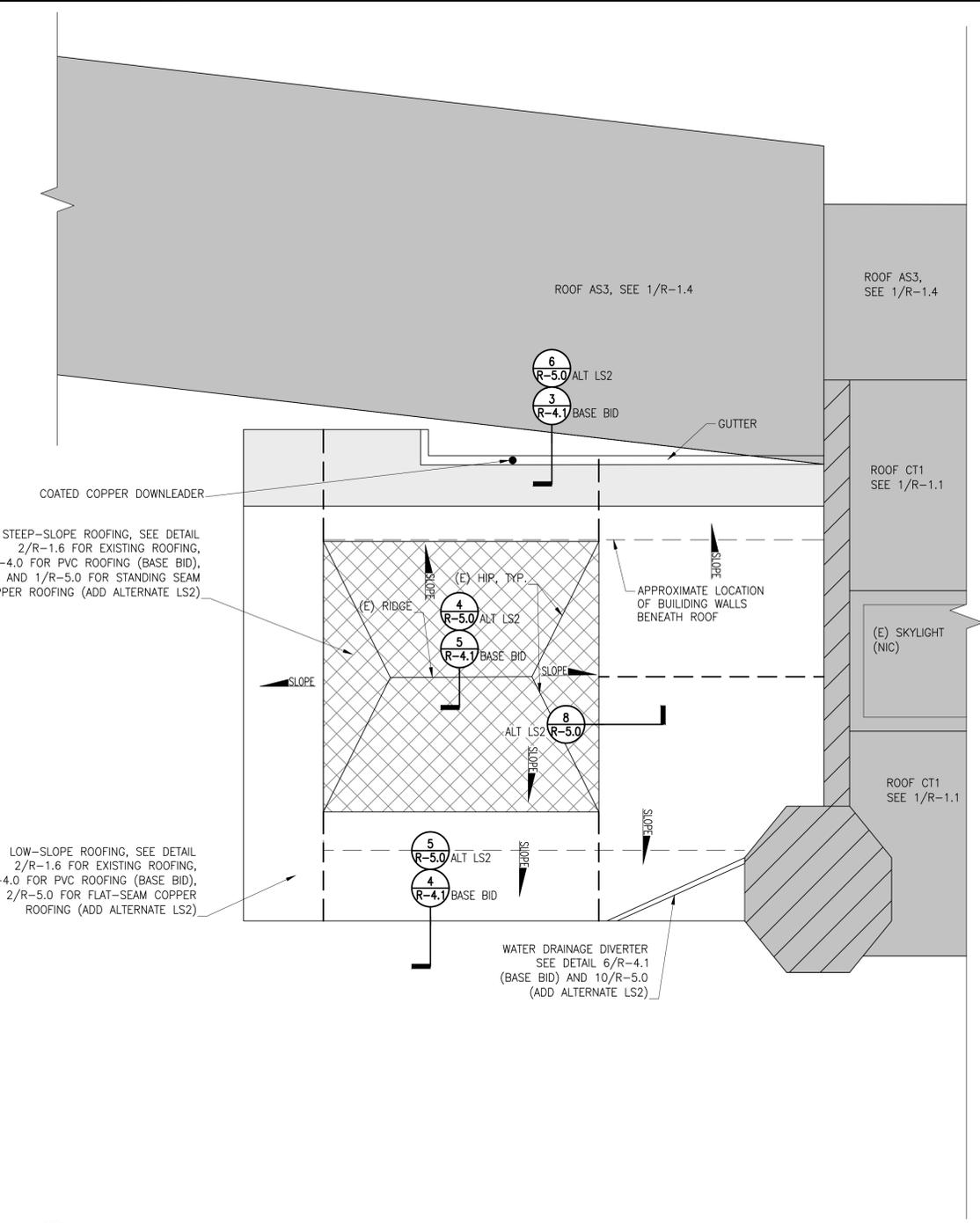
- LEGEND**
- (E) MASONRY RISING WALL, SEE DETAIL 2/R-4.1 BASE BID AND DETAIL 7/R-5.0 ADD ALT. #LS2
 - STEEP-SLOPE AREA OF THE ROOF, SEE DETAIL 2/R-4.0 BASE BID AND DETAIL 1/R-5.0 ADD ALT. #LS2
 - ADD ALTERNATE #LS2: EXPANSION JOINT IN FLAT-SEAM COPPER ROOFING. SEE DETAIL 9/R-5.0
 - ROOF WORK NOT DESCRIBED ON THIS SHEET, REFER TO OTHER SHEETS AS INDICATED FOR SCOPE OF WORK
 - WALKWAY PADS - BASE BID ONLY

- LEGEND**
- ZONE 3 OH: OVERHANG CORNER UPLIFT ZONE
 - ZONE 2 OH: OVERHANG PERIMETER UPLIFT ZONE
 - ZONE 3: CORNER UPLIFT ZONE
 - ZONE 2: PERIMETER UPLIFT ZONE
 - ZONE 1: FIELD UPLIFT ZONE

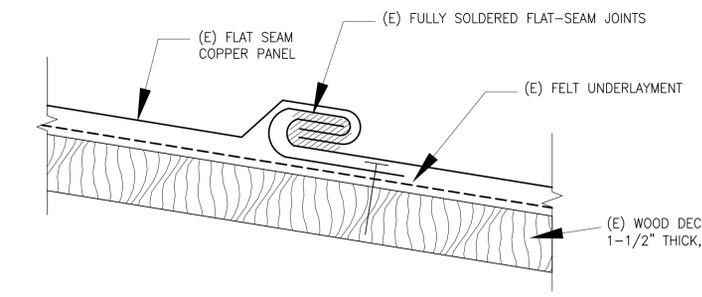
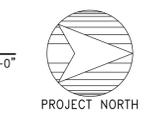


NOTE: REFER TO THE SPECIFICATIONS FOR WIND UPLIFT PRESSURES.

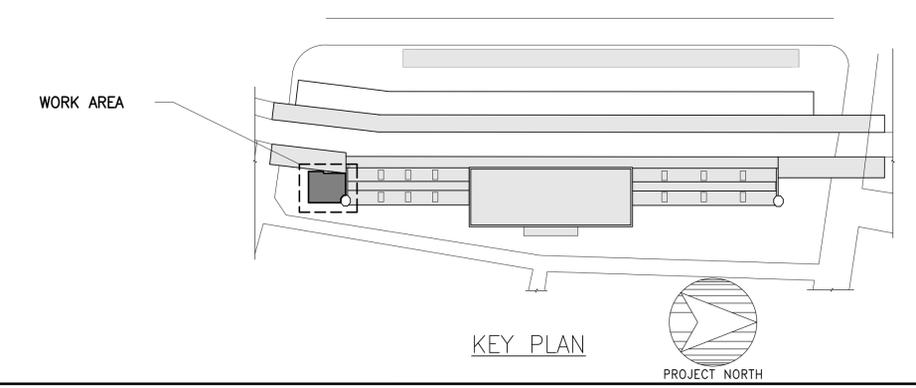
3 PLAN: WIND UPLIFT ZONES N.T.S.



1 PLAN: LOW-SLOPE ROOF LS2
 SOUTH ADDITION
 SCALE: 3/16" = 1'-0"



2 SECTION: (E) ROOFING SYSTEM AT ROOF LS2
 N.T.S.



KEY PLAN
 PROJECT NORTH

No.	Date	Description	By

**UNION STATION
TRANSPORTATION
CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT**

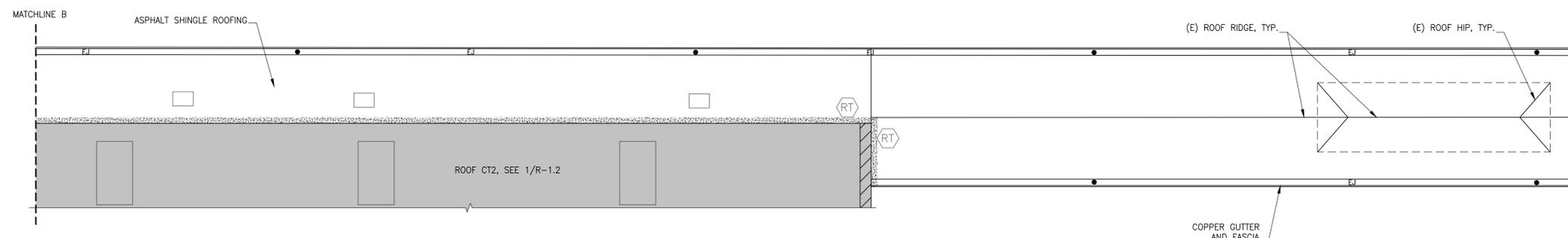
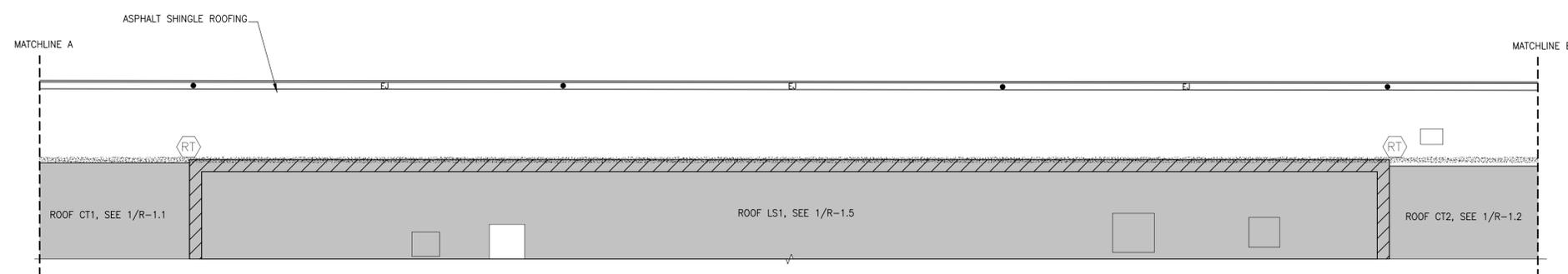
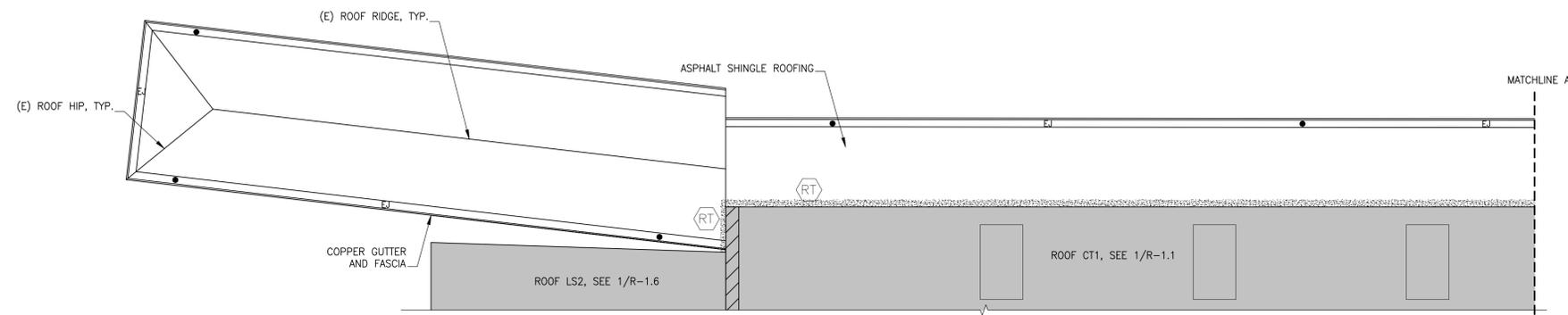
Project

**ACM ASPHALT
SHINGLE ROOF PLAN**

Drawing Title

Project No. 191971.00	Checked SSJ	Date 08/03/2020
Drawn	Approved SSJ	Scale AS NOTED

Seal	Drawing No. ASB-1
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1 PLAN: ASPHALT SHINGLE ROOF - ADD ALTERNATE AS3
INACTIVE PLATFORM CANOPY ROOF

SCALE: 3/32" = 1'-0"



HAZMAT NOTES

- COORDINATE ALL HAZMAT WORK WITH DEMO WORK INCLUDED ON OTHER CONTRACT DRAWINGS AND THE PROJECT SPECIFICATIONS.
- ESTABLISH ENGINEERING CONTROLS PRIOR TO ANY REMOVAL, DEMOLITION OR ABATEMENT ACTIVITIES THAT MAY DISTURB ACM.
- VERIFY IN FIELD ALL ASBESTOS MATERIAL THAT WILL BE DISTURBED AND VERIFY LOCATIONS.

GENERAL LEGEND

- XX# ROOF NAME
- (E) DOWNLEADER
- (E) DUCT. SEE DETAIL 10/R-3.0
- (N) (N) DOWNLEADER
- EJ EXPANSION JOINT IN COPPER GUTTER. SEE DETAIL X/RXX
- ▨ (E) RISING MASONRY WALL

HAZMAT LEGEND

- ▨ ACM BLACK ROOFING MASTIC/TAR (ROOF PERIMETER)
- ⬡ ACM BLACK MASTIC/TAR ON STONE

BID SET - NOT FOR CONSTRUCTION

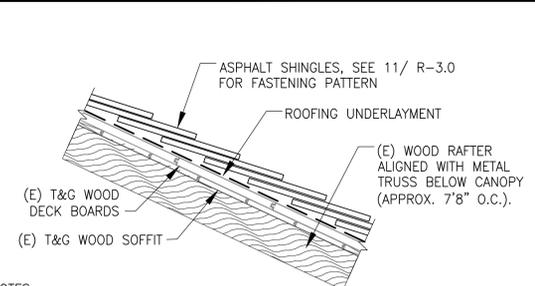
No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
 1 UNION PLACE, HARTFORD, CT

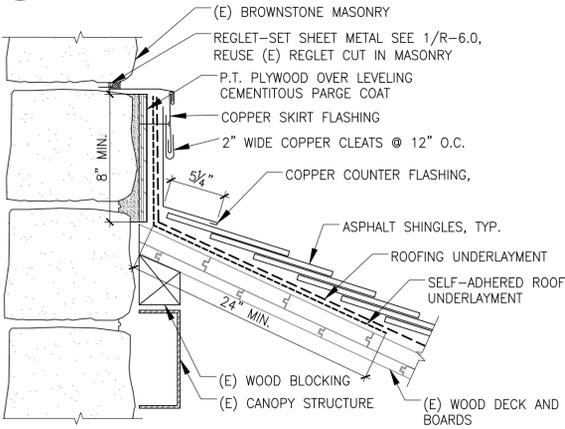
ASPHALT SHINGLES ROOFING DETAILS ADD ALTERNATE #AS1 AND #AS3

Project No. 191971.00	Checked RML	Date 08/03/2020
Drawn SKW	Approved MBB	Scale AS NOTED

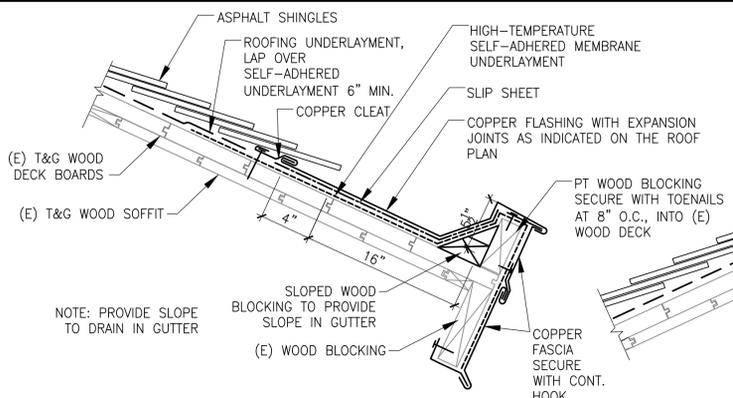
Project	Drawing No.
	R-3.0



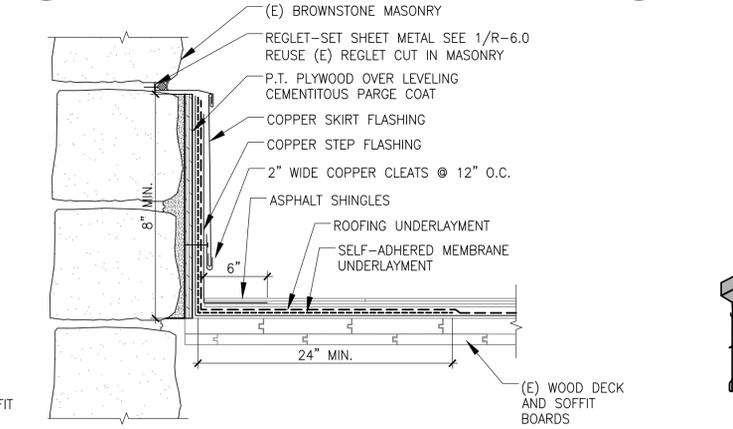
1 SECTION: NEW ASPHALT SHINGLE ROOFING SYSTEM AT FIELD OF ROOF
 ADD ALTERNATE AS1 & AS3 N.T.S.



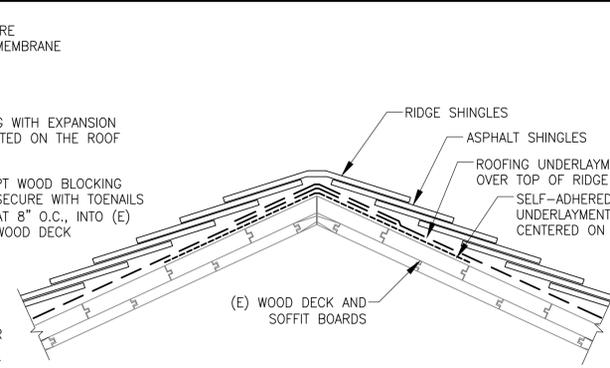
5 SECTION: DETAIL AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



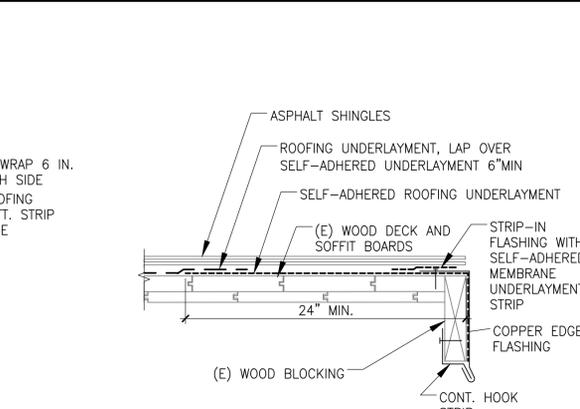
2 SECTION: FLASHING AT EAVE
 ADD ALTERNATE AS1 & AS3 N.T.S.



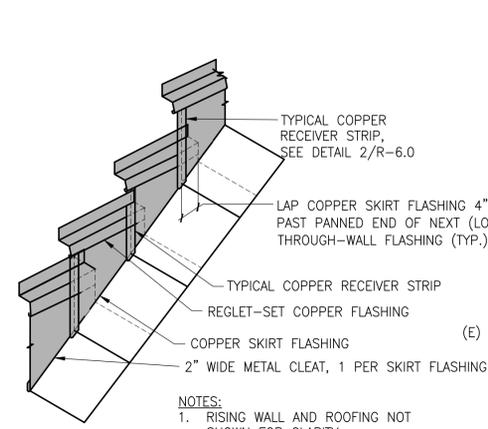
6 SECTION: CONFINED RAKE AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



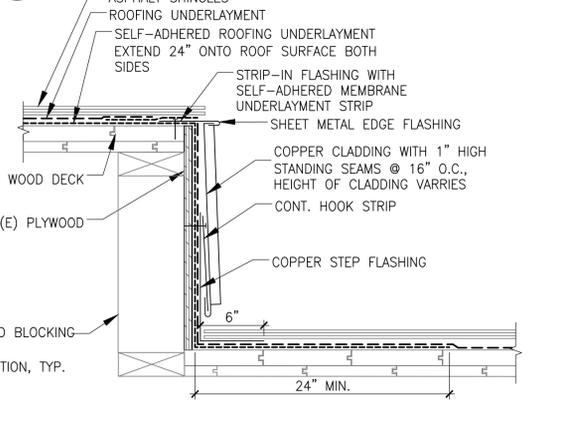
3 SECTION: DETAIL AT RIDGE
 ADD ALTERNATE AS1 & AS3 N.T.S.



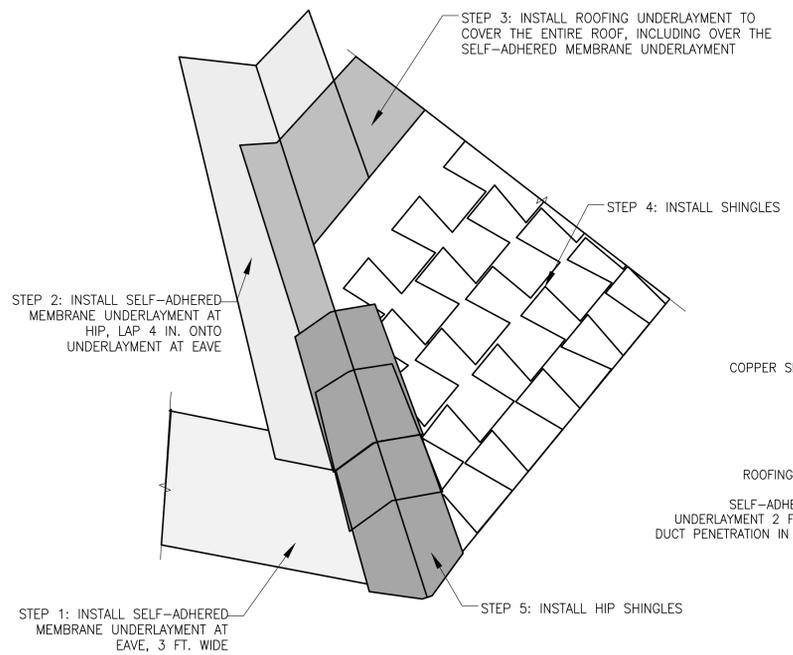
4 SECTION: DETAIL AT RAKE
 ADD ALTERNATE AS1 & AS3 N.T.S.



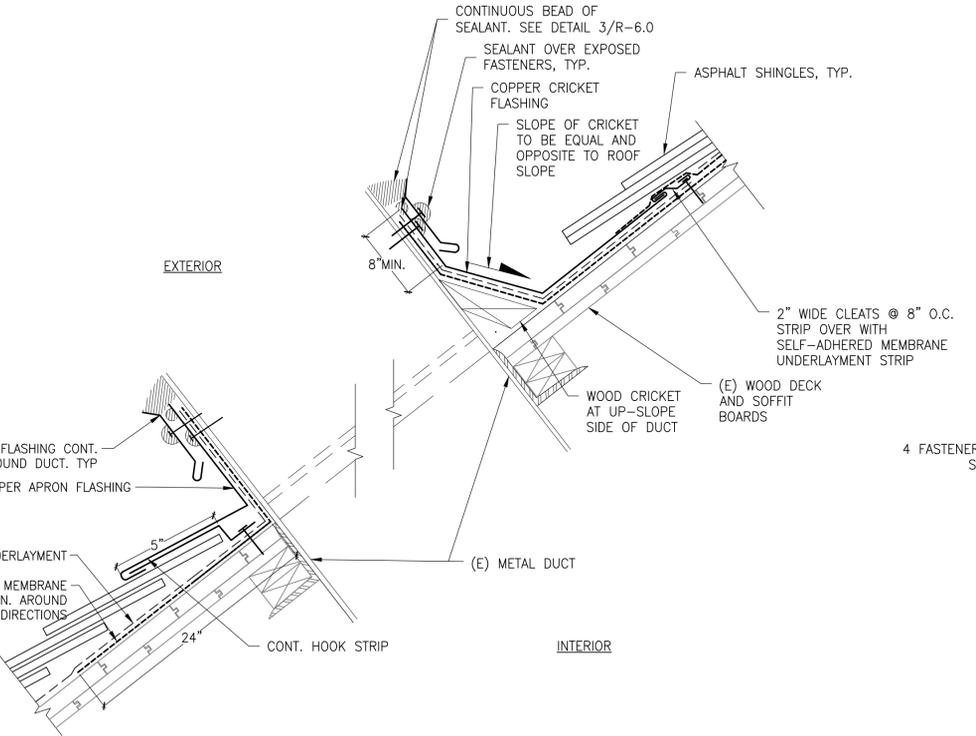
7 ISOMETRIC: STEP FLASHING AT RISING WALL
 ADD ALTERNATE AS3 N.T.S.



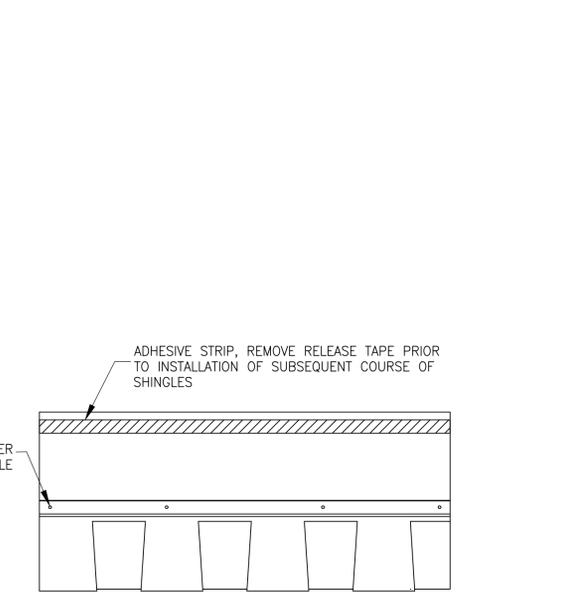
8 SECTION: DETAIL AT STEP IN ROOF
 ADD ALTERNATE AS3 N.T.S.



9 ISOMETRIC: STEP-BY-STEP INSTALLATION DETAIL AT HIP
 ADD ALTERNATE AS3 N.T.S.



10 SECTION: FLASHING AT DUCT PENETRATION
 ADD ALTERNATE AS3 N.T.S.



11 PLAN: TYPICAL FASTENING PATTERNS FOR SHINGLES
 ADD ALTERNATE AS1 & AS3 N.T.S.

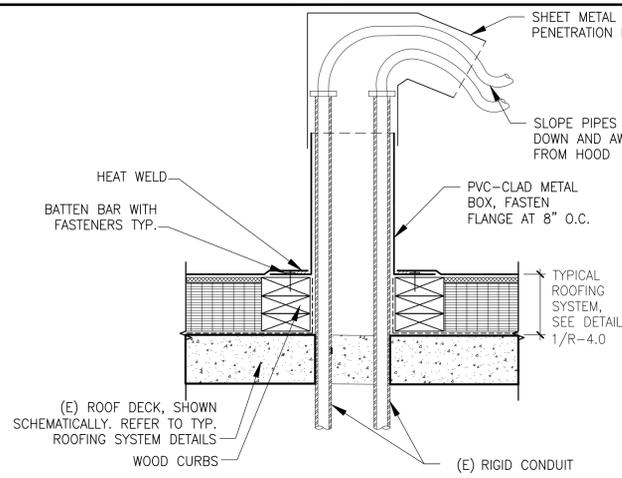
No.	Date	Description	By

**UNION STATION TRANSPORTATION CENTER
ROOFING REPAIR/
REPLACEMENT
1 UNION PLACE,
HARTFORD, CT**

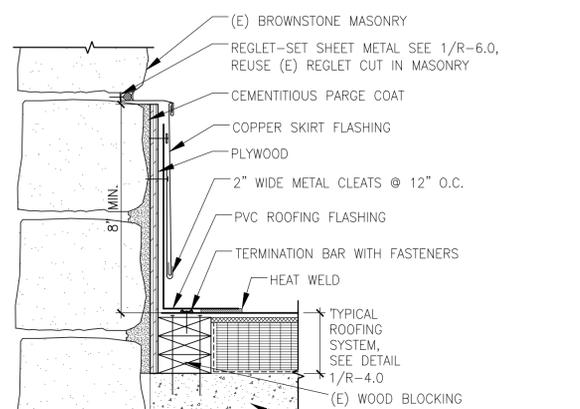
**PVC ROOFING
DETAILS**

Project No. 191971.00	Checked RML	Date 08/03/2020
Drawn SKW	Approved MBB	Scale AS NOTED

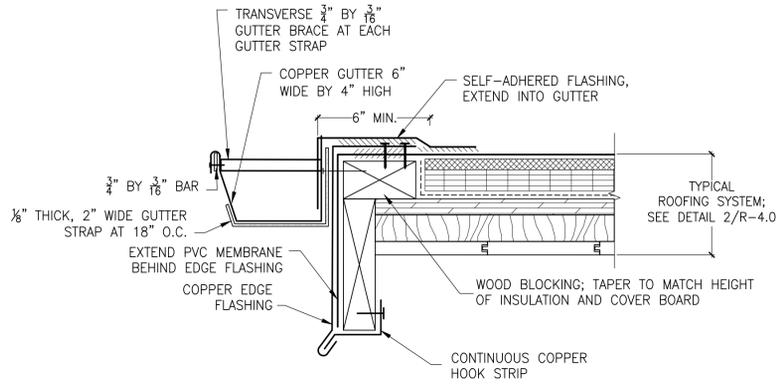
Drawing Title
R-4.1



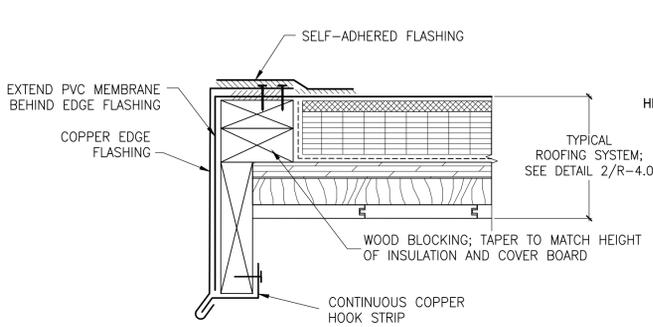
1 SECTION: MULTIPLE PENETRATIONS N.T.S.



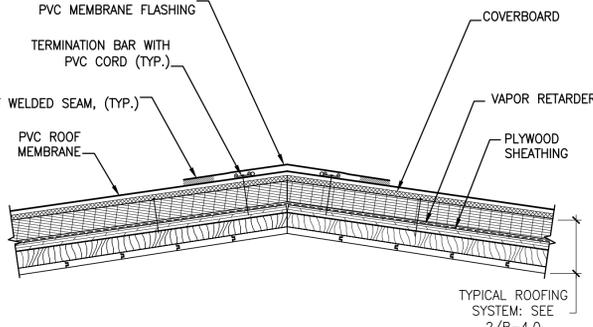
2 SECTION: PVC TRANSITION AT RISING WALL N.T.S.



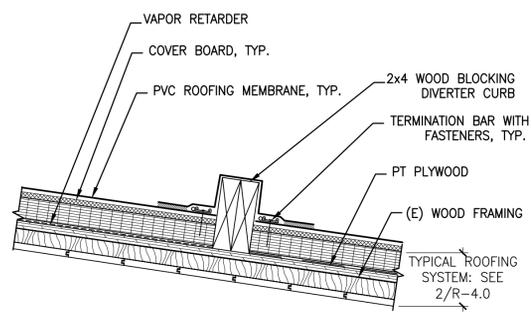
3 SECTION: ROOFING EAVE WITH GUTTER N.T.S.



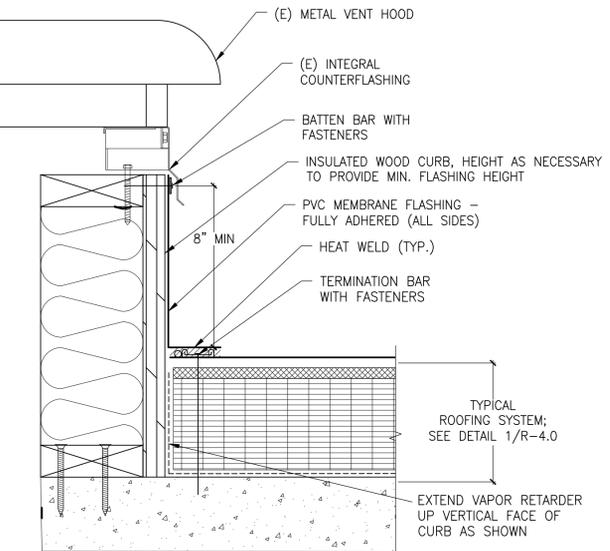
4 SECTION: ROOF EAVE N.T.S.



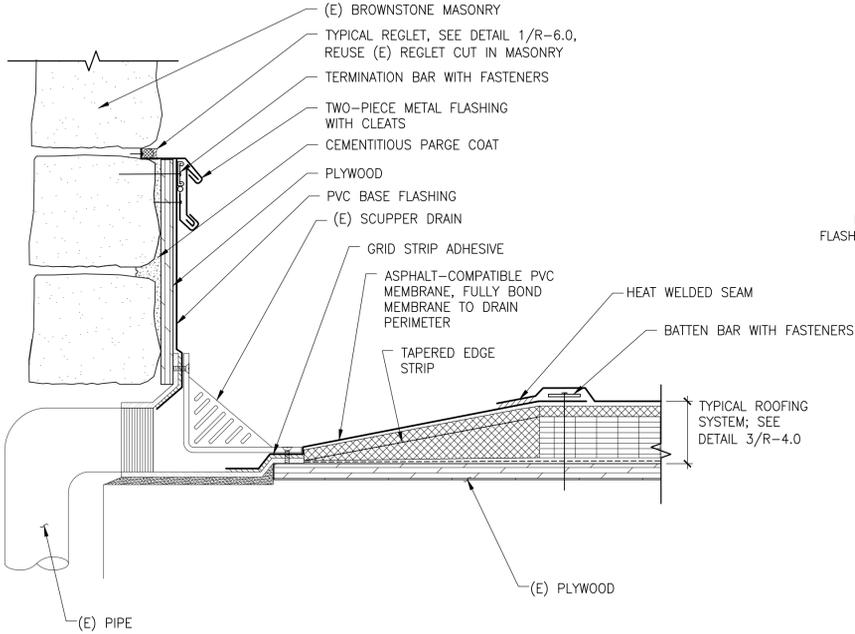
5 SECTION: RIDGE AT STEEP-SLOPE ROOF N.T.S.



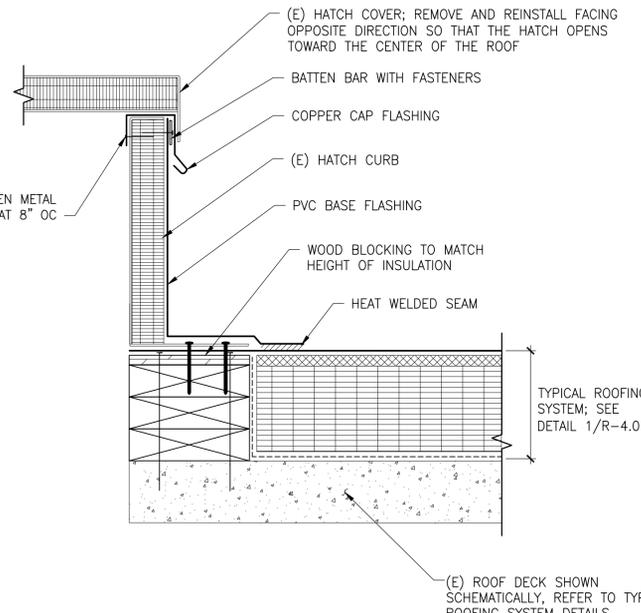
6 SECTION: RAIN DIVERTER CURB N.T.S.



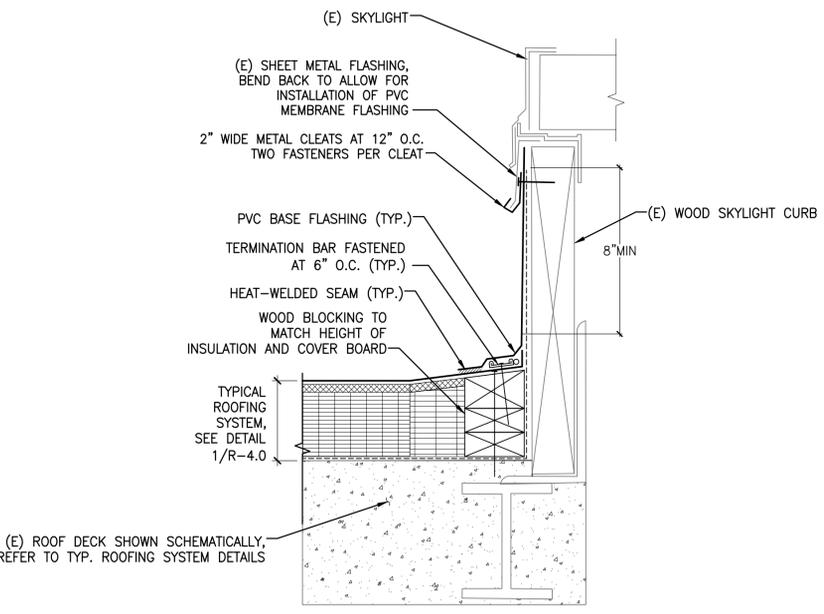
7 SECTION: FLASHING AT FAN N.T.S.



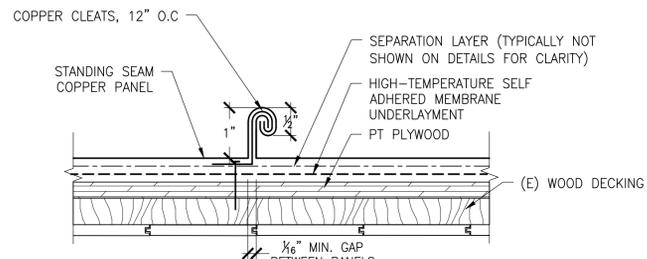
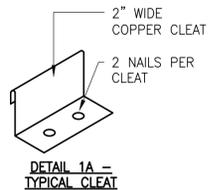
8 SECTION: ROOFING AT WALL DRAIN N.T.S.
ADD ALTERNATE L53



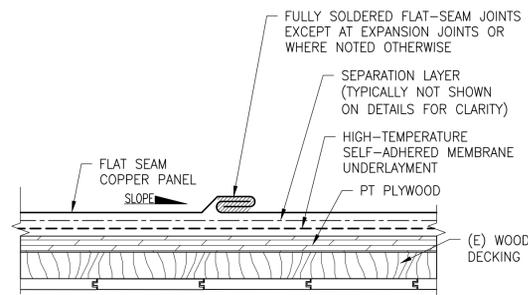
9 SECTION: ROOFING AT ROOF HATCH N.T.S.



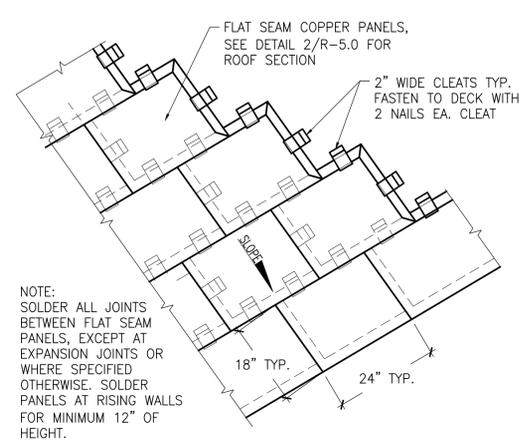
10 SECTION: ROOFING AT BASE OF SKYLIGHT N.T.S.



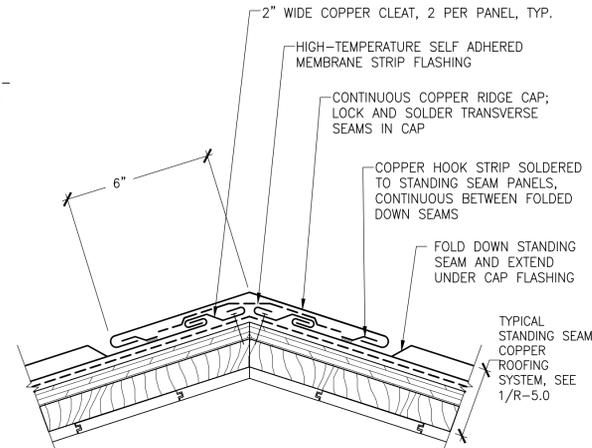
1 SECTION: TYPICAL STANDING SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



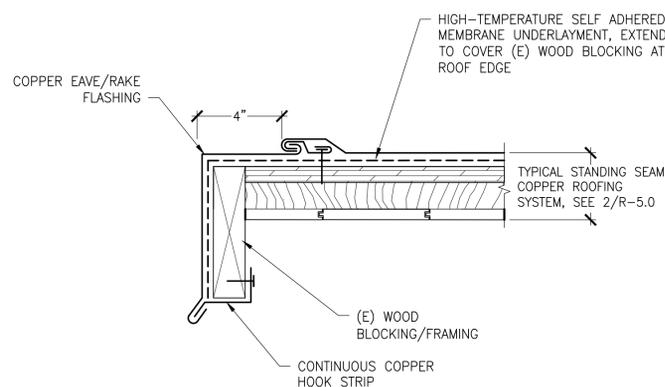
2 SECTION: TYPICAL FLAT SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



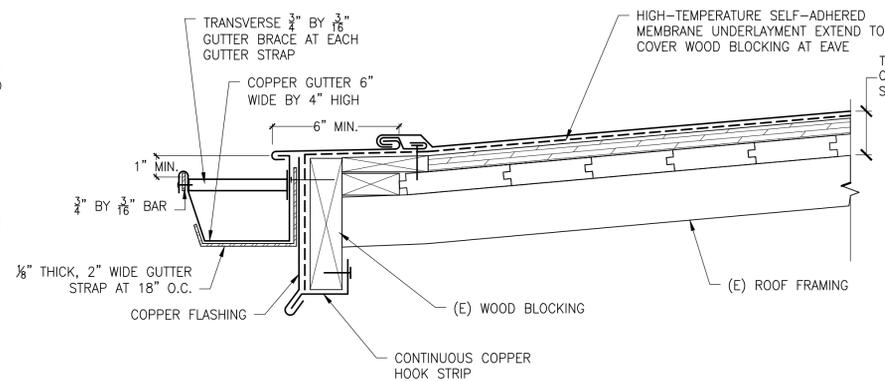
3 ISOMETRIC: TYPICAL FLAT SEAM COPPER PANEL LAYOUT
ADD ALTERNATE #LS2 N.T.S.



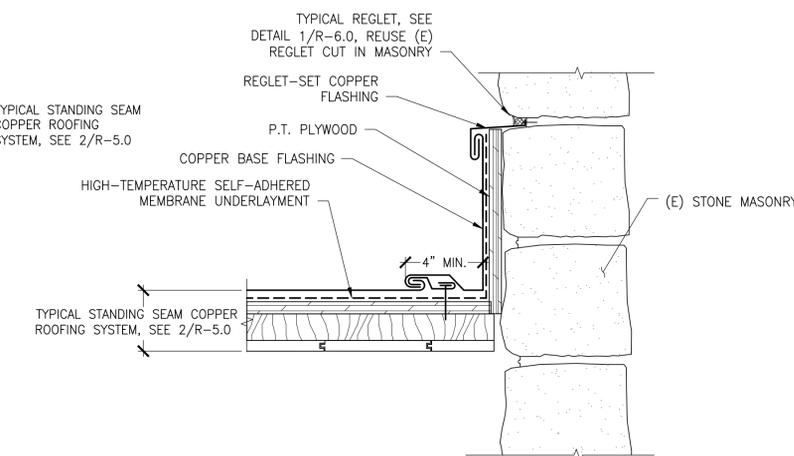
4 SECTION: TYPICAL RIDGE AT COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



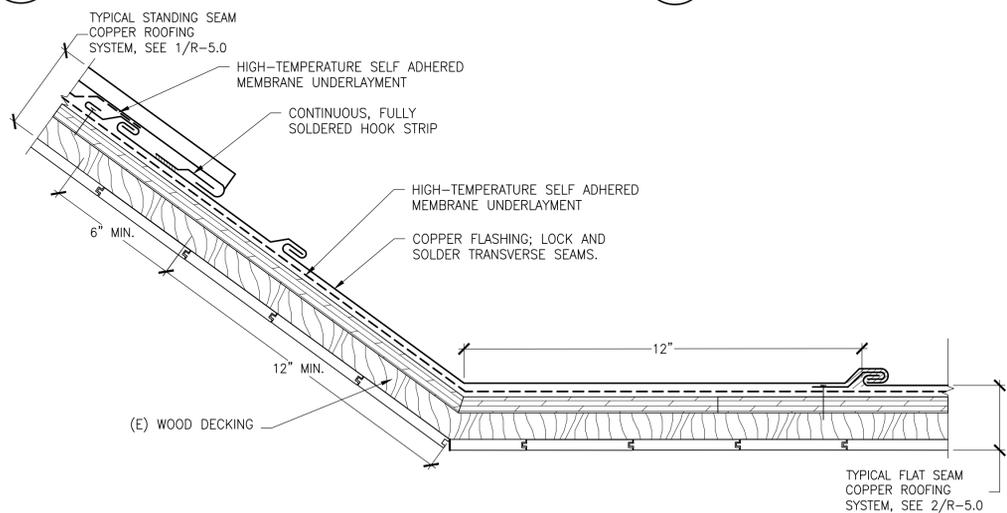
5 SECTION: COPPER ROOFING EAVE
ADD ALTERNATE #LS2 N.T.S.



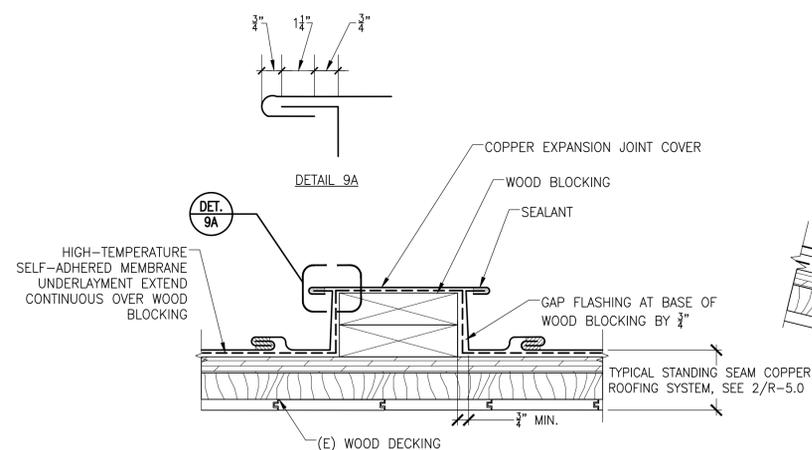
6 SECTION: COPPER ROOFING EAVE WITH GUTTER
ADD ALTERNATE #LS2 N.T.S.



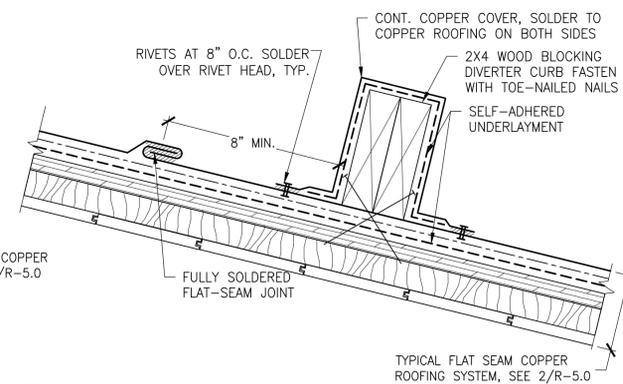
7 SECTION: RISING WALL OF COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



8 SECTION: TRANSITION STANDING SEAM TO FLAT SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



9 SECTION: EXPANSION JOINT IN FLAT-SEAM COPPER ROOFING
ADD ALTERNATE #LS2 N.T.S.



10 SECTION: RAIN DIVERTER CURB
ADD ALTERNATE #LS2 N.T.S.

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Greater Hartford Transit District

GHTD PROJECT NO. 02-021
Consultant

No.	Date	Description	By

UNION STATION TRANSPORTATION CENTER ROOFING REPAIR/REPLACEMENT
1 UNION PLACE, HARTFORD, CT

COPPER ROOFING DETAILS
ADD ALTERNATE #LS2

Project No. 191971.00	Checked RML	Date 08/03/2020
Drawn RCW	Approved MBB	Scale AS NOTED

Drawing No. **R-5.0**

BID SET - NOT FOR CONSTRUCTION

