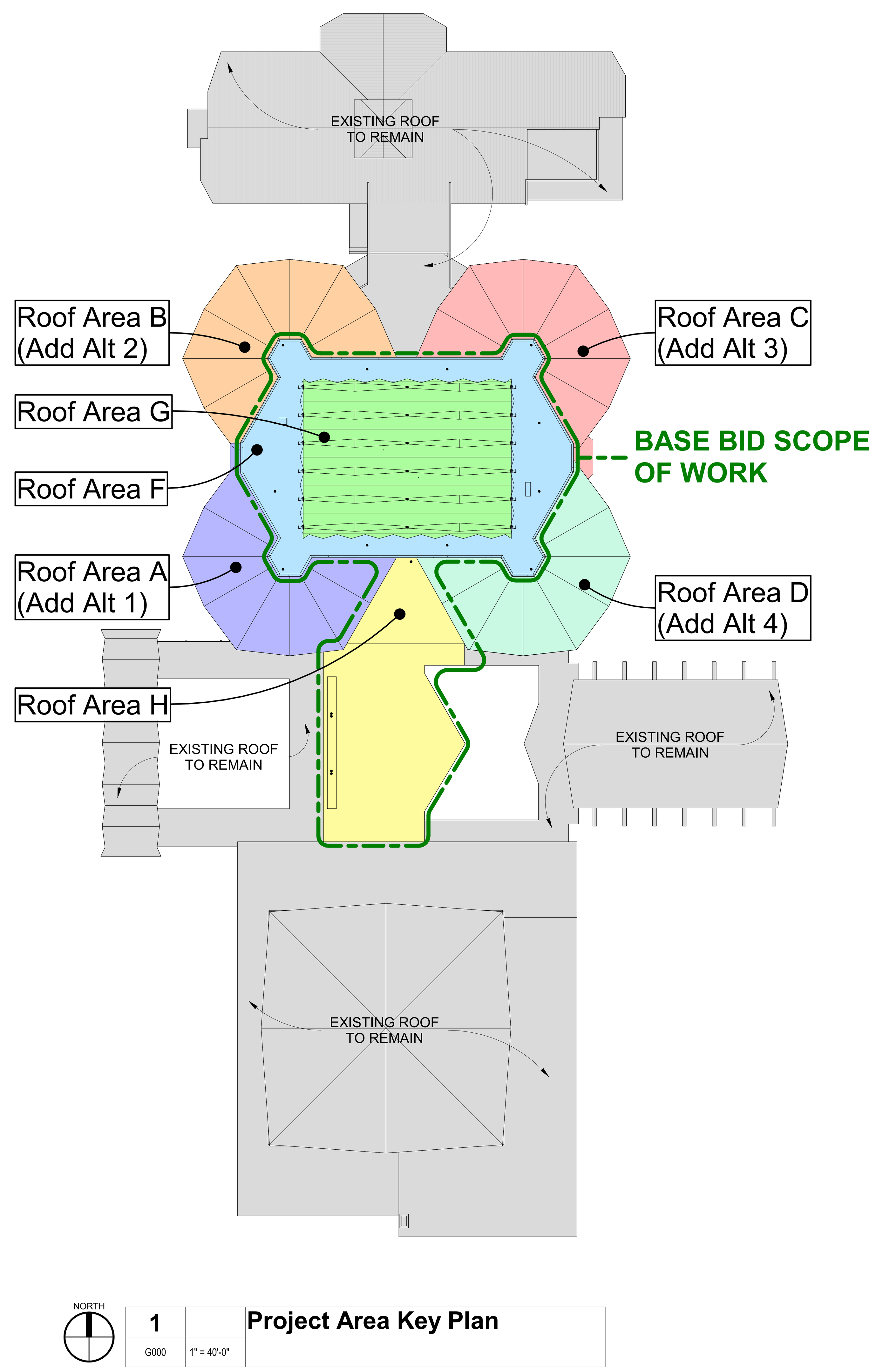
Dalewood Middle School Roof Replacement (Phase 1)
1300 Shallowford Road
Chattanooga, Tennessee 37411

Derthick, Henley & Wilkerson Architects   1001 Carter Street   Chattanooga, Tennessee 37402   423-266-4816   FAX 423-267-8830

Location Map of Dalewood Middle School

Aerial View of Dalewood Middle School



1 Project Area Key Plan
G000 1" = 40'-0"

GENERAL ROOF REPLACEMENT NOTES

1. Contractor shall field verify all dimensions, elevations, and locations of existing conditions affecting this project, prior to fabrication or installation of new work. Notify architect of any discrepancies from dimensions shown, noted, or required. Adjust dimensions of new construction at direction of architect to allow for actual field conditions.

2. Where a detail is shown or note is described for one condition, it shall apply for all like or similar conditions even though not specifically noted on the drawings.

3. Provide continuous separation between dissimilar materials as required to prevent galvanic corrosion.

4. Extend duct work as required for connection of roof top equipment scheduled to be removed and reinstalled on new taller curbs. Duct extensions to match size & materials of existing. Field verify ducts sizes and locations requiring modifications.

5. Extend wiring as required for connection of roof top equipment scheduled to be removed and reinstalled on new taller curbs. Electrical extension wiring to match sizes and materials of existing (unless prescribed as otherwise by applicable codes). Provide code compliant junction boxes at all electrical connections. Field verify existing wiring configurations and locations requiring modifications.

6. Extend plumbing vents pipes (VTR's) as required to maintain 8" min. above the adjacent finished roof surface. Extension pipes shall be of schedule 80 PVC with same diameter as existing pipe. Pipe connections shall be watertight & consist of no hub couplings (neoprene with stainless steel clamp rings & rigid stainless steel shield). Existing pipes shall be modified so that new connections occur below the pipe boot. Field verify pipe sizes and locations requiring modifications.

7. Provide new galvanized cast iron roof drain baskets at each existing roof drain. Field coordinate compatible manufacturers, configurations, and sizes required.

8. Existing roof drains and compression rings are to be cleaned per SSPC-SP2 - Hand Tool Cleaning. After cleaning apply one coat oil/alkyd enamel primer & two coats oil/alkyd enamel paint.

9. Protect VTR from demo & roof replacement debris by securing 1/4" mesh x 23 gauge hardware cloth across top of plumbing vent pipes. Remove hardware cloth at Substantial Completion.

10. Existing roof top equipment is to be removed and reinstalled on new equipment curbs as specified. Reconnect & recommission units once reinstalled.

11. All edge metal to be ANSI-SPRI ES-1 tested and approved.

12. All roof copings to be ANSI-SPRI ES-1 tested and approved with factory mitered, welded, & finished corners.

13. All wood blocking to be kiln dried after preservative treatment (KDAT) installed to meet 200 lbs. per linear foot applied in any direction per FM1-49 and ANSI-SPRI ES-1.

14. Where work or access to work areas occur over new and existing roofing, provide minimum roof protection consisting of loose laid 5/8" plywood sheathing over loose laid 3/4" XPS insulation boards over 6 mil polyethylene

15. Replace all liquid-tight flexible metal conduit (LFMC) with new LFMC and weathertight j-box assemblies. Provide drip loop so that LFMC slopes down & away from connection points.

GAS PIPING REPLACEMENT NOTES

A. Mechanical equipment is shown for reference only. Refer to field conditions for exact locations.

B. Coordinate pipe routing with existing equipment and confirm all pipe sizes prior to purchase/fabrication.

C. All existing fixtures/equipment not being removed under this contract shall remain in operation.

D. Coordinate utility interruptions with owner a minimum of 72 hours before interruption.

E. Gas piping sized for 2 PSI delivered gas pressure with a pressure drop of 1.0 PSIG, 0.6 specific gravity and schedule 40 pipe; notify designer if that gas pressure cannot be delivered. Provide new regulators and other fittings if required to match equipment to delivered gas pressure. Every regulator installed inside the building shall be equipped with leak-limiting devices. Prior to installation, contractor shall determine the delivered pressure at the site and compare with the design pressure of the proposed system. Advise designer if resizing of pipes is necessary. Provide regulators if required.

F. Provide gas cock, drip leg, regulator, and dielectric union at each unit where pipe is being replaced. See detail.

G. Gas service connection locations shown are based on the best available information. Gas contractor shall confirm the gas service connection location with the gas provider prior to construction. Contractor shall determine the delivered pressure at the site and compare with the design pressure of the proposed system. Advise designer if resizing of pipes is necessary. Provide regulators if required.

H. Portions of fuel gas piping installed in concealed locations shall not have unions, tubing fittings, right and left couplings, bushings, compression couplings and swing joints made by combinations of fittings or otherwise the fuel gas piping must be sleeved and the sleeve must vent to atmosphere. Venting of the sleeve shall be accomplished to prevent the entrance of water, vermin, and insects.

I. All fuel gas piping installed outdoors shall be elevated not lessthan 3 1/2" above ground and where installed across roof surfaces, shall be elevated not less than 3 1/2" above the roof surface.

J. Gas piping to be cleaned per SSPC-SP2 - Hand Tool Cleaning. After cleaning apply one coat oil/alkyd enamel primer & two coats oil/alkyd enamel paint (Safety Yellow).

K. The contractor shall furnish all labor, obtain all required permits, inspections, and pay all fees required, install all material and equipment and include services and incidentals to the installation of work involved for a complete and operating facility.

CONTACTS

DERTHICK, HENLEY AND WILKERSON, ARCHITECTS
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Phone: 423-266-4816

SHEET LIST

Sheet Number	Sheet Name	Current Revision Description	Current Revision Date
General			
G000	Cover Sheet		
Architecture			
A100	Roof Plan		
A300	Roof Details		
A301	Roof Details		
A302	Soffit Plans & Details		

PROJECT SUMMARY

This project consist of: full tear-off and replacement of Roof Areas F, G, and H; installation of metal wall panel at existing above roof masonry walls adjoining Roof Areas F & H; and resealing the existing clerestory window system below Roof Area G. Scope also includes: mechanical curb replacement; gas piping replacement; abatement/replacement of the soffit panels; infill of the existing light well; removal of abandoned roof to equipment; and infill of unused roof openings.

Roof replacement & soffit work at Roof Areas A, B, C, & D is to be priced as Additive Alternates.

All metal wall panel work shown in to be included in the Base Bid

GENERAL NOTES

1. Contractor shall field verify all dimensions, elevations, and locations of existing conditions affecting this project, prior to fabrication or installation of new work. Notify architect of any discrepancies from dimensions shown, noted, or required. Adjust dimensions of new construction at direction of architect to allow for actual field conditions.

2. Drawings are based on Owner provided record drawings from 1962, selective roof cores, and casual field observations. Actual quantities and dimensions may vary and are to be field verified by the Contractor prior to bid submisson.

3. Where a detail is shown or note is described for one condition, it shall apply for all like or similar conditions even though not specifically noted on the drawings.

4. Provide continuous separation between dissimilar materials as required to prevent galvanic corrosion.

Note: Detailing shown within these documents is specific to 20 Year Warranty.

Additive Alternates include 30 year warranty.

Contractor to submit Roof Manufacturer's detailing for 30 year Warranty if Alternates are Accepted by Owner.

CODE SUMMARY

Code Analysis

Applicable Codes:
2012 International Building Code
2012 International Plumbing Code
2012 International Mechanical Code
2012 International Fuel Code
2012 International Fire Code
2011 National Electrical Code
2009 International Energy Conservation Code
2009 ANSI (National Standard) Accessibility Code

Climate Zone 4A

Occupancy Type:
Occupancy Group E

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HAMILTON COUNTY SCHOOLS

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Drawn: Oakley
File: 82211-B

Revisions

Daniel S. Oakley
IIBEC 0814
Registered Roof Consultant
11-15-22

BID ISSUE

Title:
Cover Sheet

Scale:

Sheet No.
G000

Existing Roof Core Schedule

RC-1:
Modified Bitumen
1" Perlite
2 1/2" Wood Fiber Board
Vapor Barrier
Concrete Deck (Sloped)

RC-2:
Modified Bitumen
1" Perlite
2" Expanded Polystyrene
Vapor Barrier
2 1/2" Lightweight Concrete (No Slope)
Metal Deck (No Slope)

RC-3:
Modified Bitumen
1" Perlite
2" Expanded Polystyrene
Vapor Barrier
2 1/2" Lightweight Concrete (No Slope)
Metal Deck (No Slope)

RC-4:
Modified Bitumen
1 1/2" Perlite
Vapor Barrier
2 1/2" Lightweight Concrete (No Slope)
Metal Deck (No Slope)

RC-5:
Modified Bitumen
1" Perlite
2" Expanded Polystyrene
2 " Wood Fiber Board
Vapor Barrier
6" Metal Deck (No Slope)

RC-6:
Modified Bitumen
2" Perlite
Vapor Barrier
6" Metal Deck (No Slope)

RC-7:
Modified Bitumen
2" Perlite
2" Expanded Polystyrene
2 1/2" Wood Fiber Board
Vapor Barrier
6" Metal Deck (No Slope)

RC-8:
Modified Bitumen
1" Perlite
1/4" Expanded Polystyrene
2 1/2" Wood Fiber Board
Vapor Barrier
6" Metal Deck (No Slope)

RC-9:
Modified Bitumen
1" Perlite
2 1/2" Expanded Polystyrene
2 1/2" Wood Fiber Board
Vapor Barrier
6" Metal Deck (No Slope)

RC-10:
Modified Bitumen
2 1/2" Perlite
1 1/4" EPS
1 3/4" Perlite
Vapor Barrier
6" Metal Deck (No Slope)

RC-11:
Modified Bitumen
1" Perlite
2" Expanded Polystyrene
2" Wood Fiber Board
Vapor Barrier
6" Metal Deck (No Slope)

RC-12:
Modified Bitumen
1" Perlite
4" Expanded Polystyrene
Vapor Barrier
6" Metal Deck (No Slope)

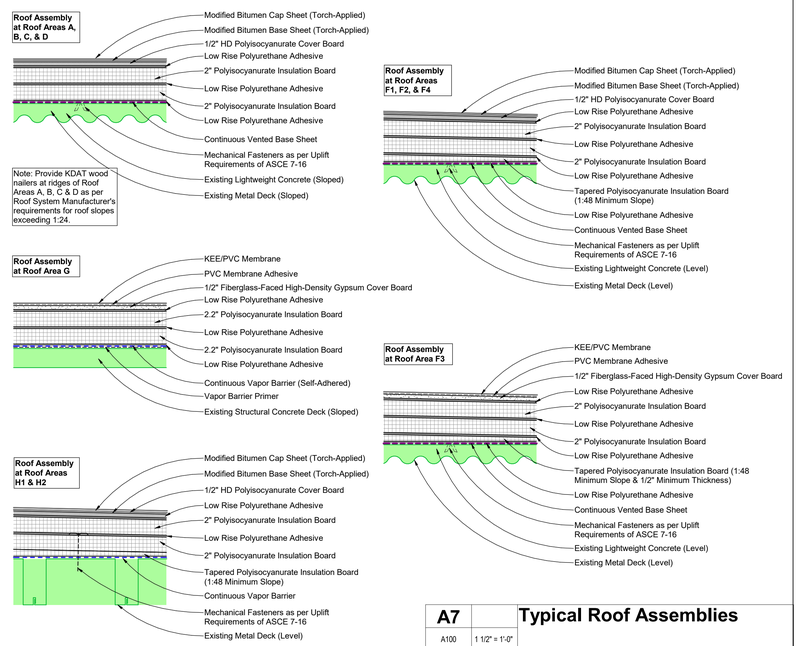
RC-13:
Modified Bitumen
3/4" Wood Fiber Board
2 1/2" Lightweight Concrete
1 1/2" Metal Deck (1:12 Slope)

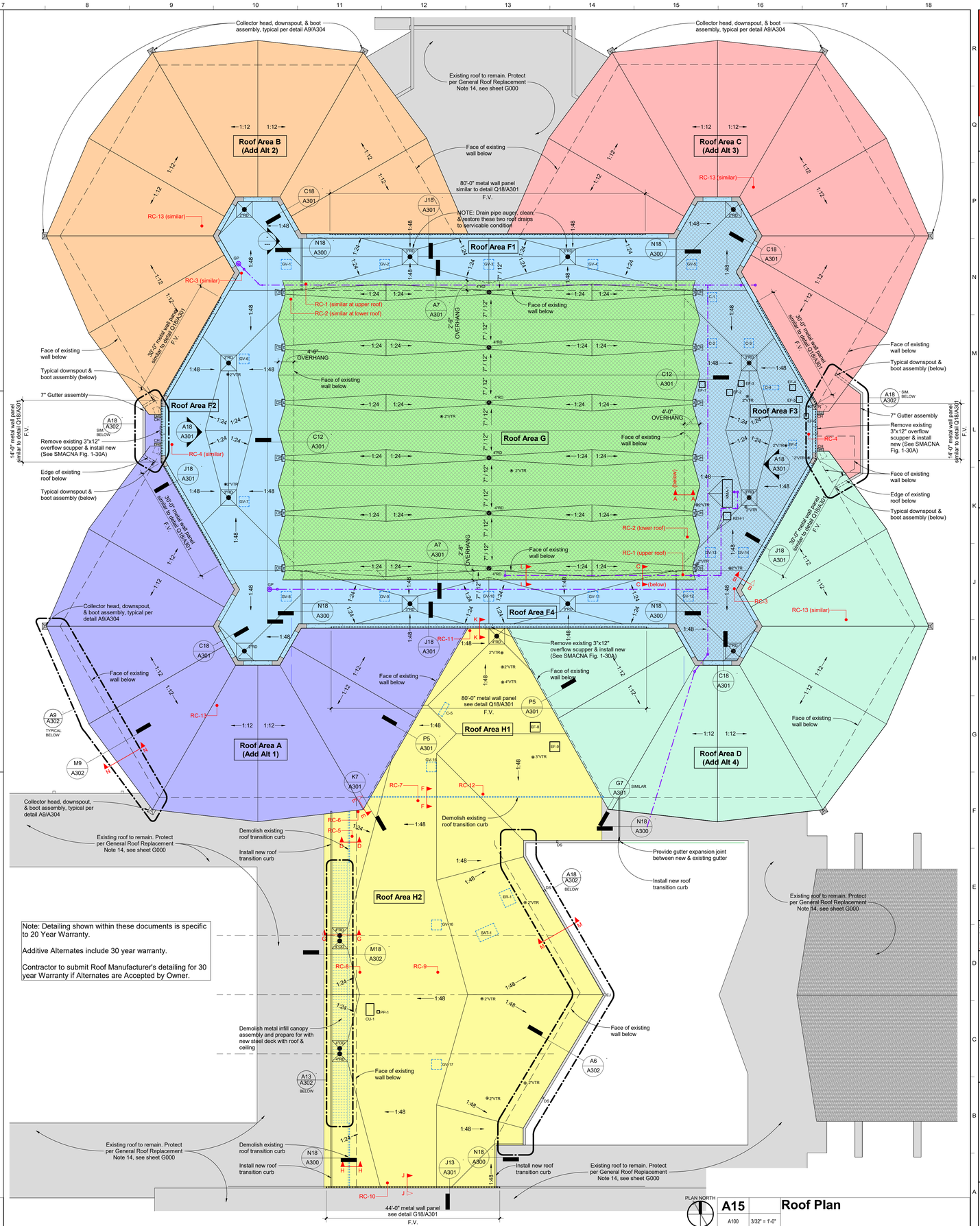
Roof Plan Legend

- Existing roof transtion detail callouts (see sheet A300)
- Existing roof core callout
- RC-8 — Approximate core location
- 4'x4' target sump (1:12 slope) coat sump area with liquid-applied flashing membrane system, typical (Liquid-applied flashing membrane system is not required for roof drains at Roof Areas G & F3)
- Roof drain (See detail H18/A300)
- New 3/4" gas piping to replace existing (See detail L13/A300)
- Elbow
- Tee
- Vertical transition
- Roof penetration (See detail E18/A300)
- 4"VTR — Plumbing vent pipe penetration (See detail A18/A300)
- EF-1 — Curb mounted mechanical equipment to remain (See Roof Top Equipment Schedule for callouts & requirements)(See detail H13/A300)
- GV-1 — Abandoned curb mounted mechanical equipment & roof curb to be removed (See detail A13/A300 for deck repair)
- 1:48 — Slope of new roof assembly
- Extent of PVC roof system (See Roof Area G & F3)
- 14"L x 10"W x10"H Conductor head with 5x5 downspout (See SMACNA Figure 1-25F)
- Metal splash pan adhered to walkway pad (See SMACNA Figure 1-36) (Direct towards closest drain and adhere walkway pad to roof.
- Factory mitered, welded, & finished coping corner
- 7" gutter with straps at 36" o.c. & brackets at 36" o.c. centered between straps (See SMACNA Figure 1-2 Style D)
- Gutter expansion joint (See SMACNA Figure 1-7)
- 5"x5" Downspout (See SMACNA Figure 1-32B)

ROOF TOP EQUIPMENT SCHEDULE

Callout	Description	Existing Curb Size (Field Verify) Length (inches)	Width (inches)	Height (inches above existing roof surface)	Equipment & Curb to be Demolished	Existing Equipment to be Installed on New Curb	New Curb Height (inches above roof deck)	Typical Roof Detail
GV-1	Gravity Vent	30	30	8	X		NA	A13/A300
GV-2	Gravity Vent	30	30	8	X		NA	A13/A300
GV-3	Gravity Vent	30	30	8	X		NA	A13/A300
GV-4	Gravity Vent	30	30	8	X		NA	A13/A300
GV-5	Gravity Vent	30	30	8	X		NA	A13/A300
GV-6	Gravity Vent	30	30	8	X		NA	A13/A300
GV-7	Gravity Vent	30	30	8	X		NA	A13/A300
GV-8	Gravity Vent	30	30	8	X		NA	A13/A300
GV-9	Gravity Vent	30	30	8	X		NA	A13/A300
GV-10	Gravity Vent	30	30	8	X		NA	A13/A300
GV-11	Gravity Vent	30	30	8	X		NA	A13/A300
GV-12	Gravity Vent	30	30	8	X		NA	A13/A300
GV-13	Gravity Vent	30	30	8	X		NA	A13/A300
GV-14	Gravity Vent	30	30	8	X		NA	A13/A300
GV-15	Gravity Vent	30	30	8	X		NA	A13/A300
GV-16	Gravity Vent	30	30	8	X		NA	A13/A300
GV-17	Gravity Vent	30	30	8	X		NA	A13/A300
EF-1	Exhaust Fan	18	18	8		X	19	H13/A300
EF-2	Exhaust Fan	18	18	10		X	19	H13/A300
EF-3	Exhaust Fan	18	18	8		X	19	H13/A300
EF-4	Exhaust Fan	18	18	8		X	19	H13/A300
EF-5	Exhaust Fan	18	18	8		X	19	H13/A300
EF-6	Exhaust Fan	14	14	8		X	19	H13/A300
EF-7	Exhaust Fan	24	24	8	X		NA	A13/A300
EF-8	Exhaust Fan	30	30	6		X	19	H13/A300
EF-9	Exhaust Fan	30	30	4		X	19	H13/A300
C-1	Roof Curb	28	28	8	X		NA	A13/A300
C-2	Roof Curb	28	28	8	X		NA	A13/A300
C-3	Roof Curb	28	28	8	X		NA	A13/A300
C-4	Roof Curb	14	46	8	X		NA	A13/A300
C-5	Roof Curb	14	42	8	X		NA	A13/A300
KMA-1	Kitchen Make-up Air	32	81	8		X	19	H13/A300
KEH-1	Kitchen Exhaust Hood	27	27	7		X	19	H13/A300
ER-1	Equipment Rail	34	48	NA	X		NA	A7/100
SAT-1	Satellite	36	72	NA	X		NA	A7/100
PP-1	Pitch Pocket	8	8	8		X	NA	E18/A300
CU-1	Condenser Unit	25	25	10		X	19	N18/A300





A7 | A100 | 1 1/2" = 1'-0" — **Typical Roof Assemblies**

A15 | A100 | 3/32" = 1'-0" — **Roof Plan**

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HAMILTON COUNTY SCHOOLS

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November 15, 2022
Drawn: Oakley
File: 82211-B

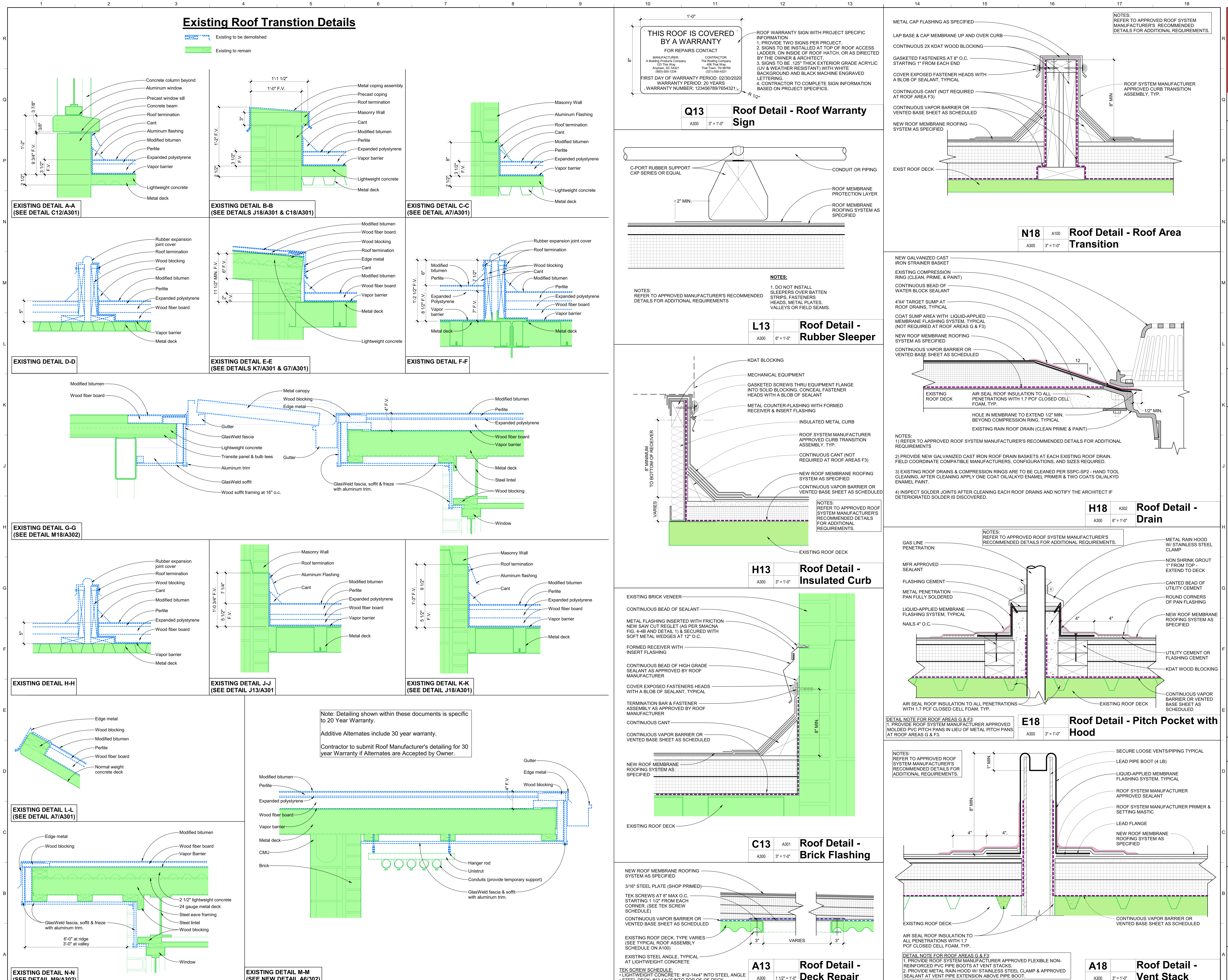
Revisions

BID ISSUE

Title: Roof Plan

Scale:

Sheet No. A100



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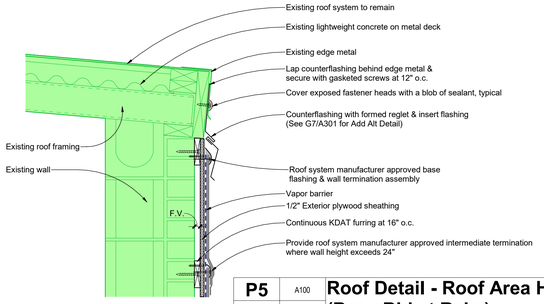
Revisions

BID ISSUE

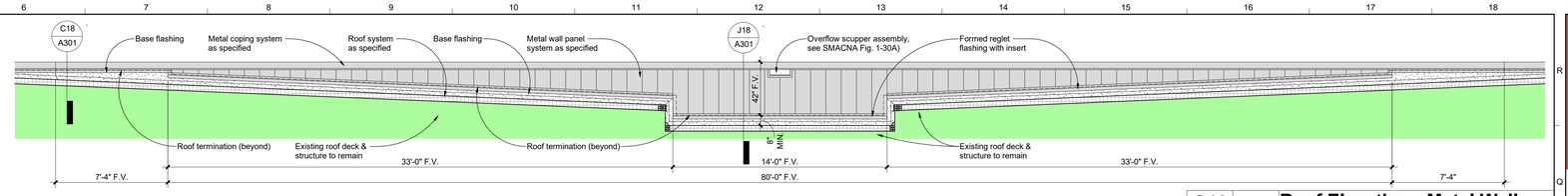
Title:
Roof Details

Scale:

Sheet No.
A300



P5	A100	Roof Detail - Roof Area H (Base Bid at Rake)
A301	1 1/2" = 1'-0"	

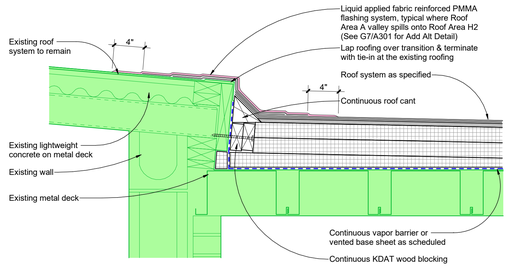


Q18		Roof Elevation - Metal Wall Panel (Roof Area F)
A301	1/4" = 1'-0"	

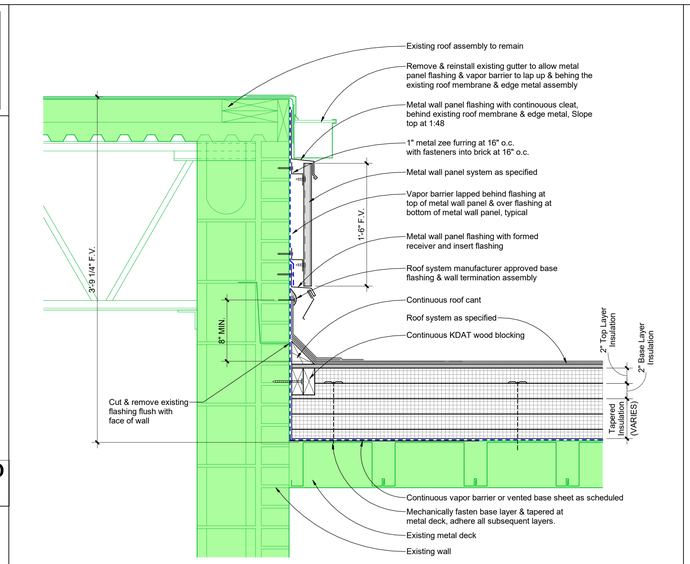
Note: Detailing shown within these documents is specific to 20 Year Warranty.

Additive Alternates include 30 year warranty.

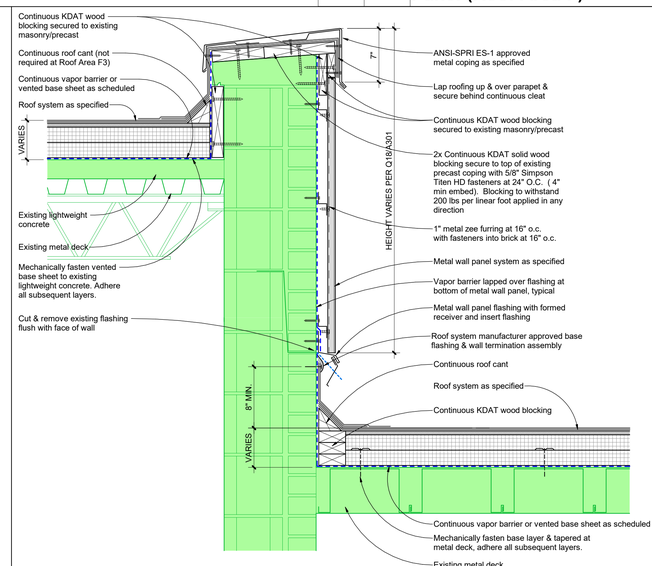
Contractor to submit Roof Manufacturer's detailing for 30 year Warranty if Alternates are Accepted by Owner.



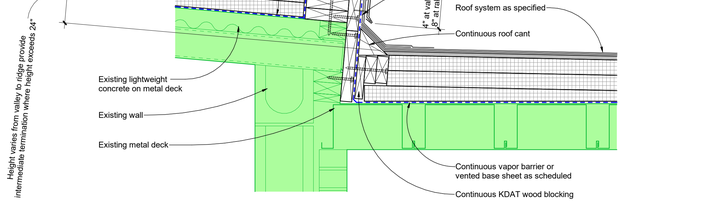
K7	A100	Roof Detail - Roof Areas A & D to H (Base Bid at Valley)
A301	1 1/2" = 1'-0"	



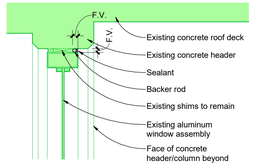
J13	A100	Roof Detail - Metal Wall Panel (Roof Area H2)
A301	1 1/2" = 1'-0"	



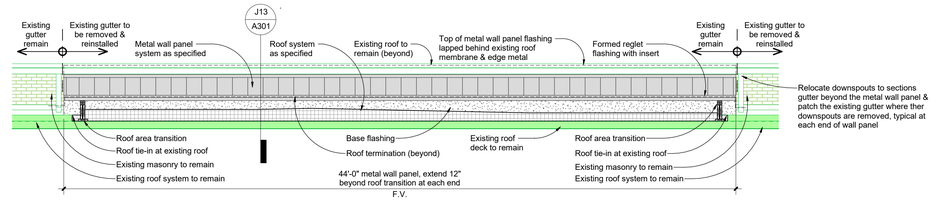
J18	A100	Roof Detail - Metal Wall Panel (Roof Area F)
A301	1 1/2" = 1'-0"	



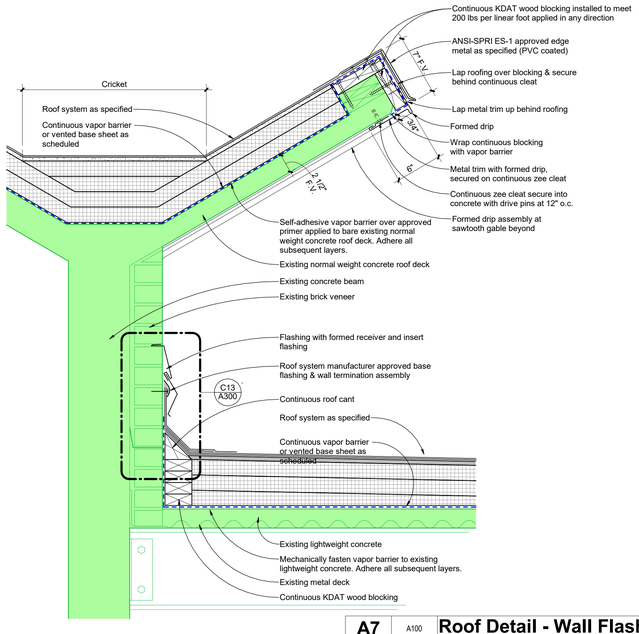
G7	A100	Roof Detail - Roof Areas A & D to H) (Add Alternate)
A301	1 1/2" = 1'-0"	



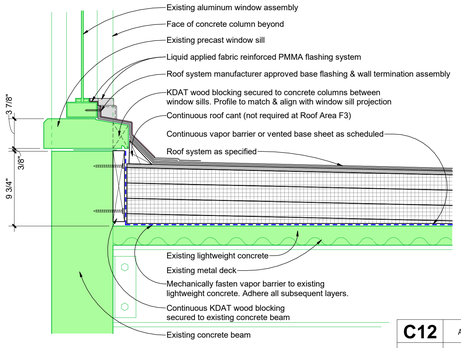
G8	A301	Roof Detail - Clerestory Head
A301	1 1/2" = 1'-0"	



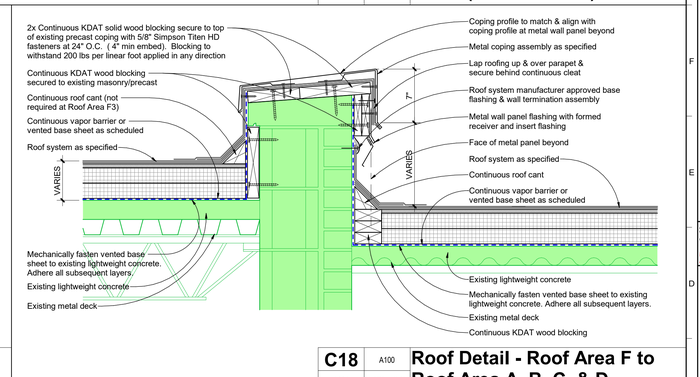
G18		Roof Elevation - Metal Wall Panel (Roof Area H2)
A301	1/4" = 1'-0"	



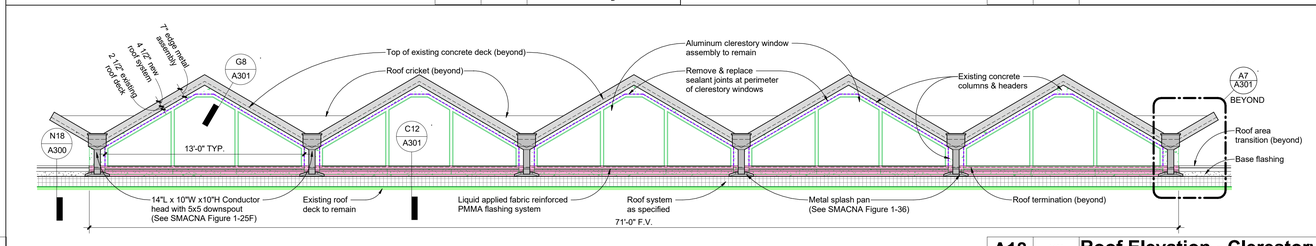
A7	A100	Roof Detail - Wall Flashing (Roof Area G)
A301	1 1/2" = 1'-0"	



C12	A100	Roof Detail - Clerestory Sill
A301	1 1/2" = 1'-0"	



C18	A100	Roof Detail - Roof Area F to Roof Area A, B, C, & D
A301	1 1/2" = 1'-0"	



A18	A100	Roof Elevation - Clerestory (Roof Area F)
A301	1/4" = 1'-0"	

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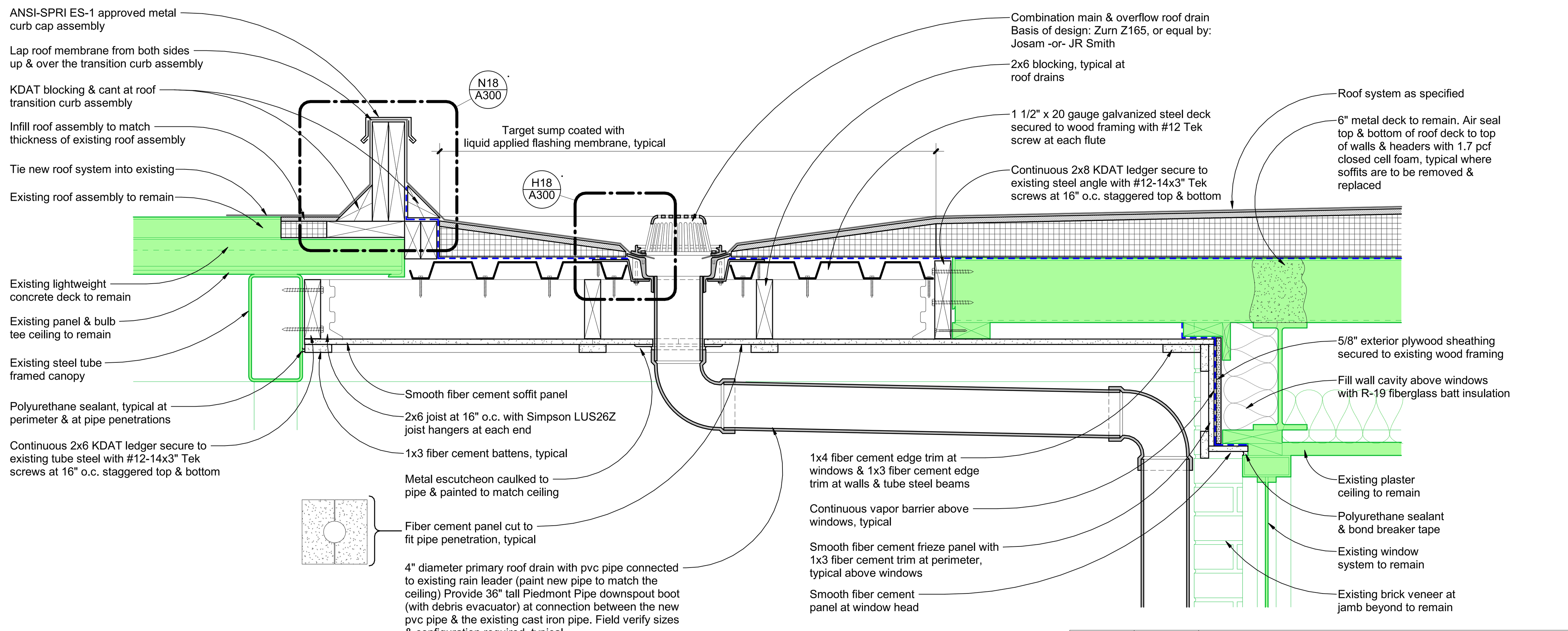
Revisions

BID ISSUE

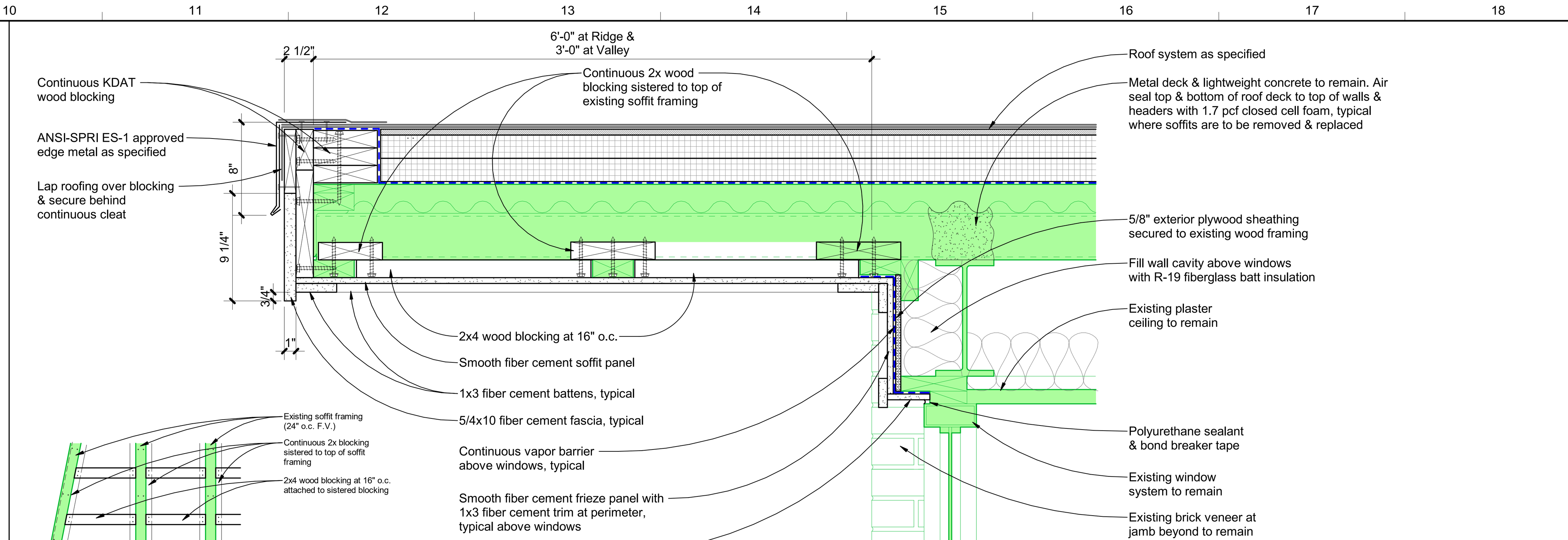
Title:
Roof Details

Scale:

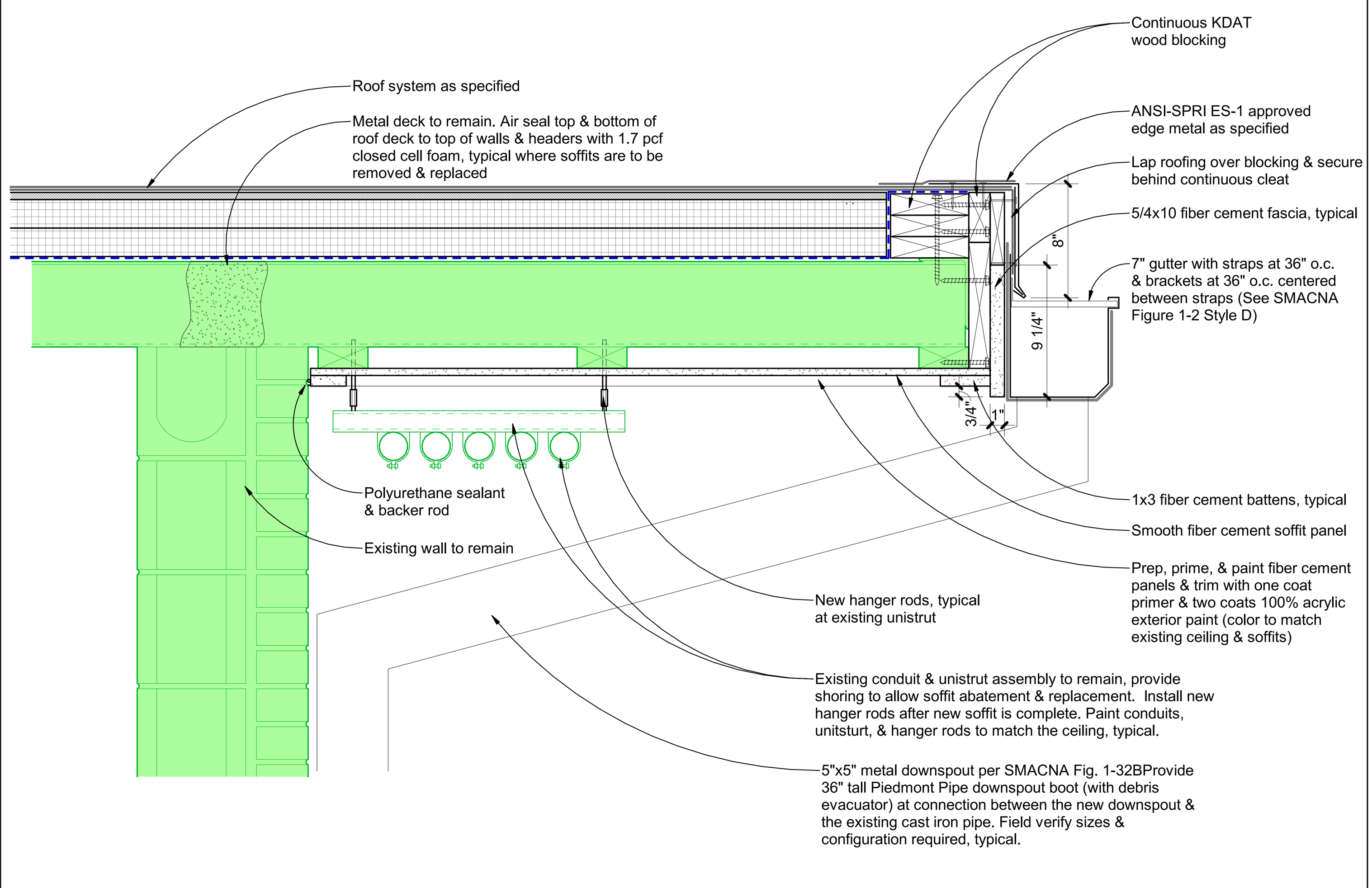
Sheet No.
A301



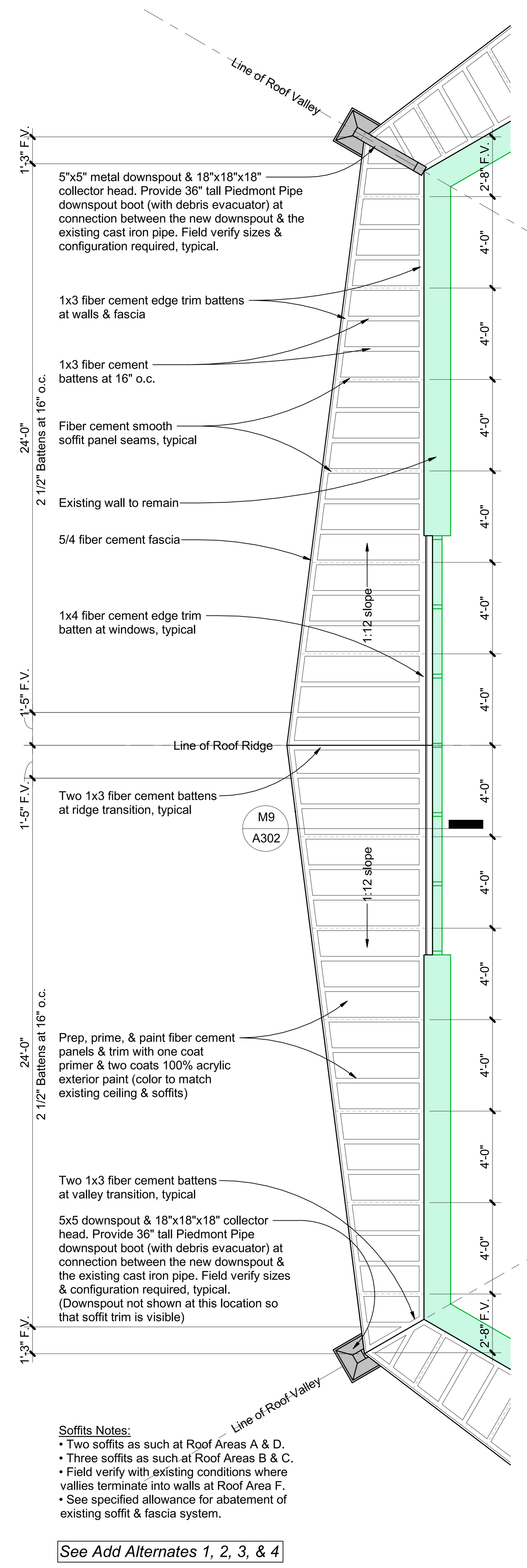
M18 | A100 | A302 | 1 1/2" = 1'-0" | **Roof Detail - Entry Canopy In-Fill**



M9 | A100 | A302 | 1 1/2" = 1'-0" | **Roof Detail - Roof Area A, B, C, & D Soffit**



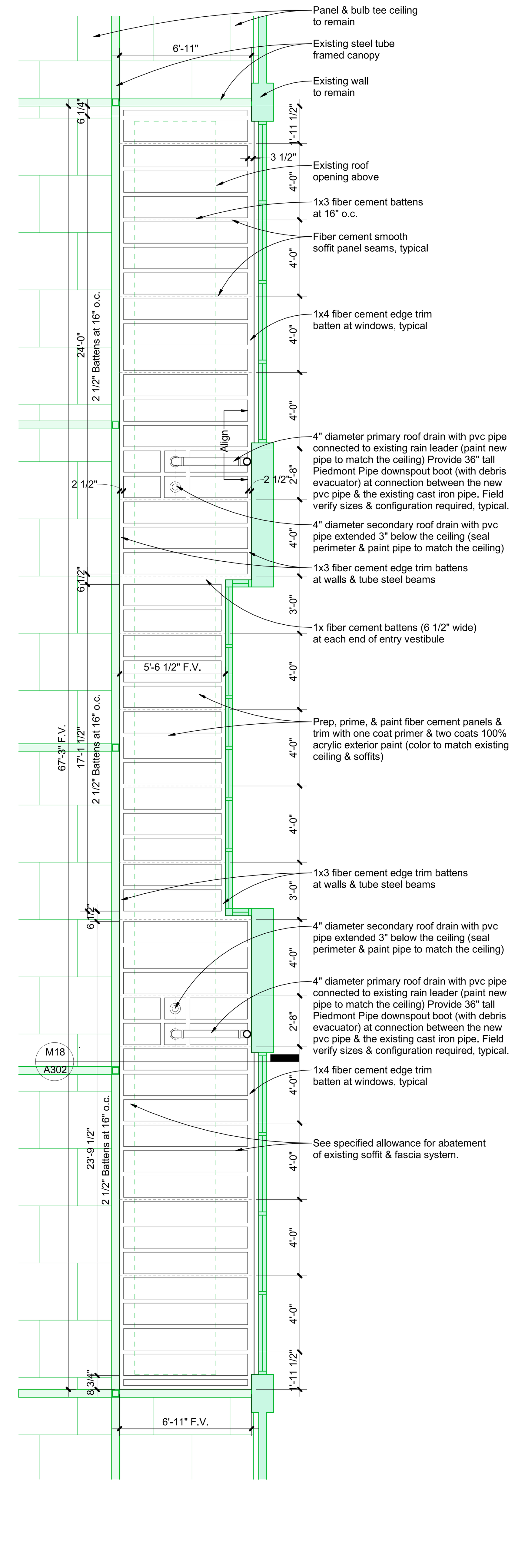
A6 | A100 | A302 | 1 1/2" = 1'-0" | **Roof Detail - Courtyard Soffit**



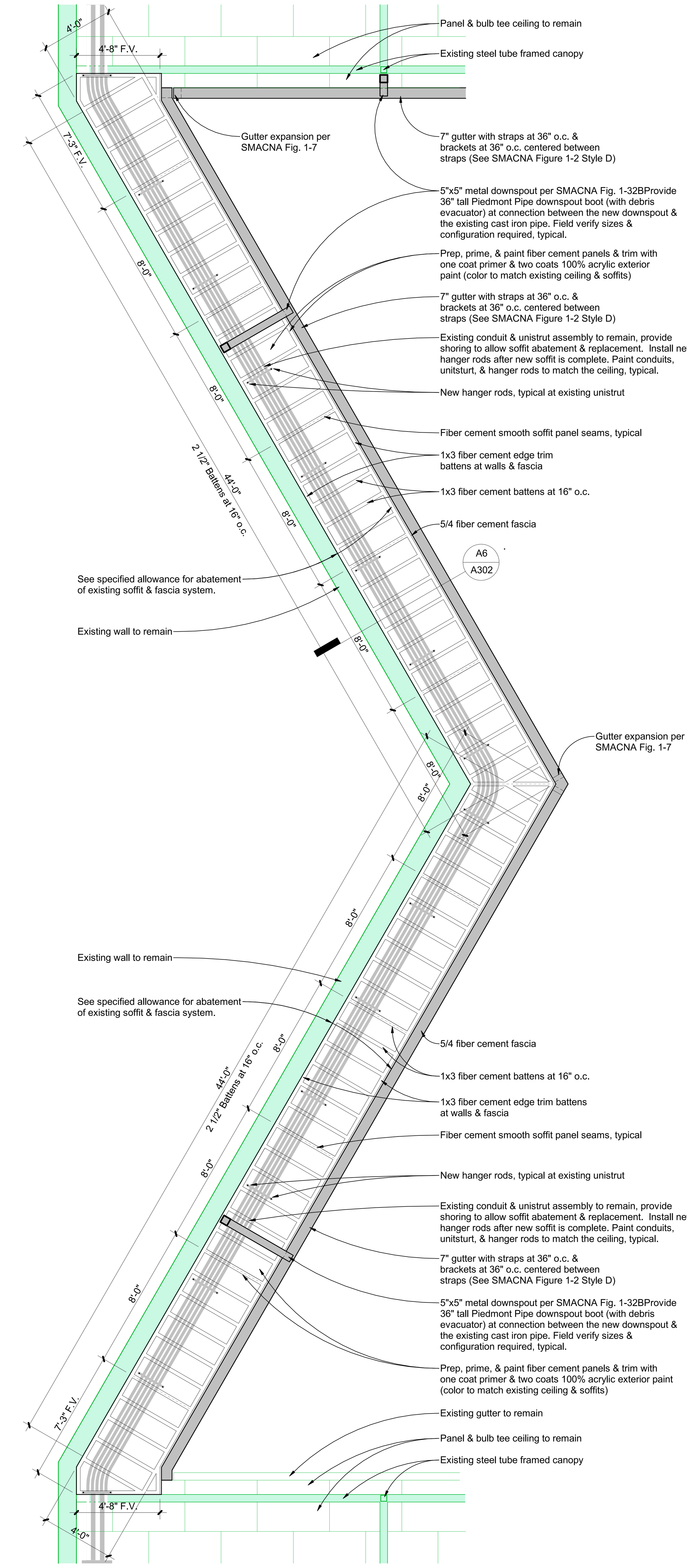
Soffits Notes:
- Two soffits as such at Roof Areas A & D.
- Three soffits as such at Roof Areas B & C.
- Field verify with existing conditions where vallies terminate into walls at Roof Area F.
- See specified allowance for abatement of existing soffit & fascia system.

See Add Alternates 1, 2, 3, & 4

A9 | A100 | A302 | 1/4" = 1'-0" | **Soffit Plan - Roof Area A, B, C, & D**



A13 | A100 | A302 | 1/4" = 1'-0" | **Soffit Plan - Entry Canopy**



A18 | A100 | A302 | 1/4" = 1'-0" | **Soffit Plan - Courtyard**

DH&W
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HAMILTON COUNTY SCHOOLS

HCDE BID 23-15

Dalewood Middle School Roof Replacement (Phase 1)

1300 Shallowford Road
Chattanooga, Tennessee 37411

November 15, 2022
Drawn: Oakley
File: 82211-B

Revisions

BID ISSUE

Title:
Soffit Plans & Details

Scale:

Sheet No.
A302