November 30, 2023

### Arvin High School ESSER III Phase 1 Roofing

Kern High School District HMC # 3566002103 File No: 15-H3 A#03-122508

The following changes, additions, deletions, or corrections shall become a part of the Contract Documents for the project named above and all other conditions shall remain the same. The bidders shall be responsible for transmitting this information to all affected subcontractors and suppliers prior to the closing of bids. Acknowledge receipt of this Addendum in spaces provided on the Bid Form. Failure to acknowledge will subject Bidder to disqualification.

### **GENERAL NOTE:**

### Item No. AD-3.1:

A. No drawings change, no specification change. ADD notes to reflect RFI #Bid-4 – Insulation Clarification, RFI #Bid-5 – Building Confirmations, RFI #Bid-6 – Cant Strips, RFI #Bid-7 – Building Structured, RFI #Bid-8 – Vented Base Sheet, RFI #Bid-9 – PVC Clad Metal and Cant Strip, RFI #Bid-10 – Insulation, RFI #Bid-11 – Asbestos, and RFI #Bid-12 – Downspouts Refer to details in supporting documents.

### **SPECIFICATIONS**

Item No. AD-3.2: Reference Revised Sections

- A. The following revised specification sections are hereby issued:
- Section 07 54 19Polyvinyl-Chloride (PVC) Roofing1)DELETE item on 2.04 Auxiliary Roofing Material, item G as shown and<br/>clouded per Delta 3.

### DRAWINGS:

Item No. AD-3.3: Reference Revised Drawings

A. The following revised drawings are hereby issued:

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### A4.21 BLDG 1A/1B & 1C - ROOF PLAN - REMODEL

1.) ADD keynote 07.44 and 07.46 as shown and clouded per Delta 3.

# A4.40 BLDG 5B & 7B - ROOF PLAN - DEMO & REMODEL

1.) ADD keynote 07.44 and 07.46 as shown and clouded per Delta 3.

# A10.40 Roof Details

- 1.) DELETE cant strip as shown and clouded per Delta 3.
- MODIFY PVC Coated metal flashing to Adhered PVC Flashing Membrane on Detail 8, 9, 10, 14, 19, 21 & 23 as shown and clouded per Delta 3.

# A10.41 Roof Details

- 1.) DELETE cant strip as shown and clouded per Delta 3.
- 2.) MODIFY PVC Coated metal flashing to Adhered PVC Flashing Membrane on Detail 2, 17, 18, 21 and 22/A10.41 as shown and clouded per Delta 3.

### 30 NOVEMBER 2023

### SECTION 07 54 19 - POLYVINYL-CHLORIDE (PVC) ROOFING

### PART 1 - GENERAL

### 1.01 SUMMARY

- A. Section Includes: Polyvinyl-chloride roofing membrane assembly including the following:
  - 1. Adhered polyvinyl chloride (PVC) roofing system.
  - 2. Air barrier / vapor retarder.
  - 3. Roof insulation.
  - 4. Cover board.
  - 5. Walkways.
- B. Related Sections:
  - 1. Division 01 sustainable design requirements Section(s) for supplementary sustainable design criteria.
  - 2. Division 06 Sections for wood nailers, curbs, and blocking.
  - 3. Division 06 Sections for wood-based, structural-use roof deck panels.
  - 4. Division 22 Sections for roof drains.

### 1.02 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

### 1.03 PREINSTALLATION MEETINGS

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roofmounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 5. Review structural loading limitations of roof deck during and after roofing.
  - 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.

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### 30 NOVEMBER 2023

- 7. Review governing regulations and requirements for insurance and certificates if applicable.
- 8. Review temporary protection requirements for roofing system during and after installation.
- 9. Review roof observation and repair procedures after roofing installation.

### 1.04 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:
  - 1. Layout and thickness of insulation.
  - 2. Flashings and membrane termination details.
  - 3. Flashing details at penetrations.
  - 4. Tapered insulation layout, thickness, and slopes.
  - 5. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
- C. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.
- 1.05 INFORMATIONAL SUBMITTALS
  - A. Sustainable Design Submittals:
    - 1. Documentation for adhesives, indicating VOC content.
    - 2. Documentation indicating roofing complies with solar reflectance requirements.
  - B. Manufacturer Certificates:
    - 1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
      - a. Submit evidence of compliance with performance requirements.
    - 2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
  - C. Product Test Reports: For roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
  - D. Field Test Reports:
    - 1. Fastener-pullout test results and manufacturer's revised requirements for fastener patterns.
  - E. Field quality-control reports.
  - F. Sample Warranties: For manufacturer's special warranties.

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3566002103

### 30 NOVEMBER 2023

### 1.06 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.
- B. Certified statement from existing roof membrane manufacturer stating that existing roof warranty has not been affected by Work performed under this Section.
- 1.07 QUALITY ASSURANCE
  - A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- 1.08 DELIVERY, STORAGE, AND HANDLING
  - A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
  - B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
    - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
  - C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
  - D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

### 1.09 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- 1.10 WARRANTY
  - A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.

HMC Architects

3566002103

### 30 NOVEMBER 2023

- 1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, air barrier / vapor retarder, and other components of roofing system.
- 2. Warranty Period: 20 years from date of Substantial Completion.

### PART 2 - PRODUCTS

- 2.01 SUSTAINABLE DESIGN CRITERIA
  - A. Sustainable Design Criteria: Comply with indicated criteria for the following product categories:
    - 1. Adhesives:
      - a. VOC content limits for field applications.
    - 2. Sealants:
      - a. VOC content limits for field applications.

### 2.02 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing system and flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings shall remain watertight.
  - 1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
- C. Wind Uplift Resistance: Design roofing system to resist the following wind uplift pressures when tested according to FM Approvals 4474, UL 580, or UL 1897:
  - 1. Building 9A:
    - a. Zone 1' (Center Roof Area Field): 31 lbf/sq. ft.
    - b. Zone 1 (Roof Area Field): 53 lbf/sq. ft.
    - c. Zone 2 (Roof Area Perimeter): 70 lbf/sq. ft.
      - 1) Location: From roof edge to 0.6h inside roof edge.
    - d. Zone 3 (Roof Area Corners): 95 lbf/sq. ft.
      - 1) Location: 0.2h deep by 0.6h long in each direction from building corner.
  - 2. All Other Buildings:
    - a. Zone 1' (Center Roof Area Field): 28 lbf/sq. ft.
    - b. Zone 1 (Roof Area Field): 49 lbf/sq. ft.
    - c. Zone 2 (Roof Area Perimeter): 65 lbf/sq. ft.

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POLYVINYL-CHLORIDE (PVC) ROOFING 07 54 19 - 1

3566002103

### 30 NOVEMBER 2023

- 1) Location: From roof edge to 0.6h inside roof edge.
- d. Zone 3 (Roof Area Corners): 88 lbf/sq. ft.
  - 1) Location: 0.2h deep by 0.6h long in each direction from building corner.
- D. Solar Reflectance Index: Not less than 75 when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- E. Exterior Fire-Test Exposure: ASTM E108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- 2.03 POLYVINYL CHLORIDE (PVC) ROOFING
  - A. PVC Sheet: ASTM D4434/D4434M, Type II, glass-fiber reinforced, felt backed.
    - Manufacturers: Subject to compliance with requirements, available manufacturers and products that may be incorporated into the Work include, but are not limited to, the following:
       a. Sika Sarnafil G410.
    - 2. Thickness: 60 mils.
    - 3. Exposed Face Color: White.
  - B. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
- 2.04 AUXILIARY ROOFING MATERIALS
  - A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
    - 1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
  - B. Sheet Flashing: Manufacturer's standard unreinforced PVC sheet flashing, 55 mils thick, minimum, of same color as PVC sheet.
  - C. PVC-Coated Sheet Metal Flashing: Manufacturer's standard unreinforced PVC-coated, galvanized steel sheet flashing, 0,024 inch thick, of same color as PVC sheet.
  - D. Liquid-Applied Flashing: Manufacturer's standard reinforced flashing, 80 mils thick, minimum.
  - E. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
  - F. Bonding Adhesive: Manufacturer's standard.

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### 30 NOVEMBER 2023

- G. Vented Base Sheet: ASTM D4897/D4897M, Type II; nonperforated, asphaltimpregnated fiberglass reinforced, with mineral granular patterned surfacing on bottom surface.
  - H.<u>G.</u> Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
  - I.<u>H.</u> Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.
  - J.I. Miscellaneous Accessories: Provide preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

### 2.05 AIR BARRIER / VAPOR RETARDER

- A. Sheet Air Barrier / Vapor Retarder: Manufacturer's recommended sheet product, minimum 15-mil-total thickness; self-adhering, cold adhesive applied, or torch applied, with slip-resisting surface compatible with adhered insulation and release paper backing. Provide primer when recommended by manufacturer.
  - 1. Mastic: Type recommended by manufacturer for sealing around penetrations and at terminations in air barrier / vapor retarder.
- 2.06 ROOF INSULATION
  - A. General: Preformed roof insulation boards manufactured or approved by PVC roof membrane manufacturer.
  - B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
    - 1. Compressive Strength: 20 psi minimum.
  - C. Tapered Insulation: Provide factory-tapered insulation boards.
    - 1. Material: Match roof insulation.
    - 2. Minimum Thickness: 1/4 inch.
    - 3. Slope:
      - a. Roof Field: 1/4 inch per foot unless otherwise indicated on Drawings.
      - b. Saddles and Crickets: 1/2 inch per foot unless otherwise indicated on Drawings.

### 2.07 INSULATION ACCESSORIES

A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.

HMC Architects

3566002103

### 30 NOVEMBER 2023

- B. Fasteners: Factory-coated steel fasteners with metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
  - 1. Modified asphaltic, asbestos-free, cold-applied adhesive.
  - 2. Bead-applied, low-rise, one-component or multicomponent urethane adhesive.
  - 3. Full-spread, spray-applied, low-rise, two-component urethane adhesive.
- D. Cover Board: ASTM C1177/C1177M, glass-mat, water-resistant gypsum board or ASTM C1278/C1278M fiber-reinforced gypsum board.
  - 1. Thickness: 1/2 inch.
  - 2. Surface Finish: Factory primed or unprimed as recommended by roofing membrane manufacturer.
- 2.08 WALKWAYS
  - A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surfacetextured walkway pads or rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.
- PART 3 EXECUTION
- 3.01 EXAMINATION
  - A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
    - 1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
    - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
    - 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 05 31 00 "Steel Decking."
    - 4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
    - 5. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than [75] <Insert number> percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
      - a. Test Frequency: One test probe per each [1000 sq. ft.] <Insert area>, or portion thereof, of roof deck, with not less than three tests probes.
      - b. Submit test reports within 24 hours after performing tests.
    - 6. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.

HMC Architects

3566002103

### 30 NOVEMBER 2023

- 7. Verify that joints in precast concrete roof decks have been grouted flush with top of concrete.
- 8. Verify that minimum curing period recommended by roofing system manufacturer for lightweight insulating concrete roof decks has passed.
- 9. Verify any damaged sections of cementitious wood-fiber decks have been repaired or replaced.
- 10. Verify adjacent cementitious wood-fiber panels are vertically aligned to within 1/8 inch at top surface.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Perform fastener-pullout tests according to roof system manufacturer's written instructions.
  - 1. Submit test result within 24 hours after performing tests.
    - a. Include manufacturer's requirements for any revision to previously submitted fastener patterns required to achieve specified wind uplift requirements.
- 3.03 INSTALLATION OF ROOFING, GENERAL
  - A. Install roofing system according to roofing system manufacturer's written instructions, SPRI's Directory of Roof Assemblies listed roof assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
  - B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning Work on adjoining roofing.
  - C. Install roof membrane and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition.

HMC Architects

3566002103

### 30 NOVEMBER 2023

### 3.04 INSTALLATION OF AIR BARRIER / VAPOR RETARDER

- A. Self-Adhering-Sheet: Prime substrate if required by manufacturer. Install sheet over area to receive air barrier / vapor retarder, side and end lapping each sheet a minimum of 3-1/2 and 6 inches, respectively.
  - 1. Extend vertically up parapet walls and projections to a minimum height equal to height of insulation and cover board.
  - 2. Seal laps by rolling.
- B. Completely seal air barrier / vapor retarder at terminations, obstructions, and penetrations to prevent air movement into roofing system.
- 3.05 INSTALLATION OF INSULATION
  - A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.
  - B. Comply with roofing system and roof insulation manufacturer's written instructions for installing roof insulation.
  - C. Installation Over Wood Decking:
    - 1. Install base layer of insulation with end joints staggered not less than 12 inches in adjacent rows.
      - a. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
      - b. Make joints between adjacent insulation boards not more than 1/4 inch in width.
      - c. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
        - 1) Trim insulation so that water flow is unrestricted.
      - d. Fill gaps exceeding 1/4 inch with insulation.
      - e. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
      - f. Loosely lay base layer of insulation units over substrate.
    - 2. Mechanically attach base layer of insulation using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to wood decks.
      - a. Fasten insulation according to requirements in SPRI's Directory of Roof Assemblies for specified Wind Uplift Load Capacity.
      - b. Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.
    - 3. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.
      - a. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.

HMC Architects

POLYVINYL-CHLORIDE (PVC) ROOFING 07 54 19 - 1

3566002103

### 30 NOVEMBER 2023

- b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
- c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
- d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
  1) Trim insulation so that water flow is unrestricted.
- e. Fill gaps exceeding 1/4 inch with insulation.
- f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- g. Loosely lay each layer of insulation units over substrate.
- h. Adhere each layer of insulation to substrate using adhesive according to SPRI's Directory of Roof Assemblies listed roof assembly requirements for specified Wind Uplift Load Capacity and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
  - 1) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
- D. Installation Over Concrete Decks:
  - 1. Install base layer of insulation with end joints staggered not less than 12 inches in adjacent rows.
    - a. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
    - b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
    - c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
    - d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
      - 1) Trim insulation so that water flow is unrestricted.
    - e. Fill gaps exceeding 1/4 inch with insulation.
    - f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
    - g. Loosely lay base layer of insulation units over substrate.
    - h. Adhere base layer of insulation to vapor retarder according to SPRI's Directory of Roof Assemblies listed roof assembly requirements for specified Wind Uplift Load Capacity and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
      - 1) Set insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
  - 2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.
    - a. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.

HMC Architects

3566002103

### 30 NOVEMBER 2023

- b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
- c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
- d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
  1) Trim insulation so that water flow is unrestricted.
- e. Fill gaps exceeding 1/4 inch with insulation.
- f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- g. Loosely lay each layer of insulation units over substrate.
- h. Adhere each layer of insulation to substrate using adhesive according to SPRI's Directory of Roof Assemblies listed roof assembly requirements for specified Wind Uplift Load Capacity and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
  - 1) Set each layer of insulation in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

### 3.06 INSTALLATION OF COVER BOARDS

- A. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction.
  - 1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
  - 2. At internal roof drains, conform to slope of drain sump.
    - a. Trim cover board so that water flow is unrestricted.
  - 3. Cut and fit cover board tight to nailers, projections, and penetrations.
  - 4. Loosely lay cover board over substrate.
  - 5. Adhere cover board to substrate using adhesive according to SPRI's Directory of Roof Assemblies listed roof assembly requirements for specified Wind Uplift Load Capacity and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
    - a. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.

# 3.07 INSTALLATION OF ADHERED ROOF MEMBRANE

- A. Adhere roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
- B. Unroll roof membrane and allow to relax before installing.
- C. Start installation of roofing in presence of roofing system manufacturer's technical personnel.

HMC Architects

3566002103

### 30 NOVEMBER 2023

- D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.
- F. Fabric-Backed Roof Membrane Adhesive: Apply to substrate at rate required by manufacturer, and install fabric-backed roof membrane.
- G. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.
- H. Apply roof membrane with side laps shingled with slope of roof deck where possible.
- I. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings, to ensure a watertight seam installation.
  - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roof membrane and sheet flashings.
  - 2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
  - 3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.
- J. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.
- 3.08 INSTALLATION OF BASE FLASHING
  - A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
  - B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
  - C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
  - D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
  - E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- 3.09 INSTALLATION OF WALKWAYS
  - A. Flexible Walkways:

HMC Architects

3566002103

### 30 NOVEMBER 2023

- 1. Install flexible walkways at the following locations:
  - a. Retain one or more subparagraphs below. Revise to suit Project.
  - b. Perimeter of each rooftop unit.
  - c. Between each rooftop unit location, creating a continuous path connecting rooftop unit locations.
  - d. Between each roof hatch and each rooftop unit location or path connecting rooftop unit locations.
  - e. Top and bottom of each roof access ladder.
  - f. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.
  - g. Locations indicated on Drawings.
  - h. As required by roof membrane manufacturer's warranty requirements.
- 2. Provide 6-inch clearance between adjoining pads.
- 3. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.10 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.
- 3.11 PROTECTING AND CLEANING
  - A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
  - B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
  - C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION

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3566002103











PLEASE RECYCLE



March 19, 2024

Arvin High School ESSER III Phase 1 Roofing Kern High School District HMC # 3566002103 File No: 15-H3 A#03-123508

### DIV. OF THE STATE ARCHITECT APP: 03-123508 INC: REVIEWED FOR SS I FLS ACS DATE: 03/28/2024

APPROVED

### CCD NO. 001-A

The following changes, additions, deletions, or corrections shall become a part of the Contract Documents for the project named above and all other conditions shall remain the same. The contractor shall be responsible for transmitting this information to all affected subcontractors and suppliers.

Reference / Purpose. Due to the increase in the height of the roof insulation, the HVAC roof units, exhaust fans, pipe penetrations, and supports must be raised and readjusted to the roofing manufacturer's specified minimum 4-inch flashing requirements.

### DRAWINGS:

### Item No. CCD 001-A: DRAWINGS

The following revised Architectural and Structural drawing are hereby issued:

### **Architectural**

### A10.40 – "ROOF DETAILS"

A. ADDED, Note as shown and clouded per Delta 1.

### A10.41 – "ROOF DETAILS"

A. ADDED, Note as shown and clouded per Delta 1.

### **Structural**

### <u>S1.01 – "DETAILS"</u>

- A. ADDED, Detail 13/S1.01 "Equipment Anchorage Detail" as shown and Clouded per Delta 1.
- B. ADDED, Detail 14/S1.01 "Equipment Anchorage Detail" as shown and Clouded per Delta 1.

Attachments: Drawing Sheets A10.40, A10.41 and S1.01

### HMC ARCHITECTS

By\_

(Signature of Architect of Record or Alternate)











![](_page_22_Picture_1.jpeg)

![](_page_22_Picture_2.jpeg)

![](_page_22_Picture_6.jpeg)

06/25/2024

# Arvin High School ESSER III Phase 1 Roofing

Kern High School District HMC # 3566002103 File No: 15-H3 A#03-122508

### CCD NO. 002B

The following changes, additions, deletions, or corrections shall become a part of the Contract Documents for the project named above and all other conditions shall remain the same. The Contractor shall be responsible for transmitting this information to all affected subcontractors and suppliers.

Purpose: Replacement of specified Sloan Flush Valves. Zurn Flush Valves are the KHSD fixture standard.

### Item No.1. CCD # 002B: Narrative as follows:

The following Mechanical drawings are hereby issued: P0.00– "PLUMBING LEGENDS AND SCHEDULES" dated 2023/09/18.

### 1. P0.00 - "PLUMBING LEGENDS AND SCHEDULES"

At Plumbing Fixture Schedule **REPLACE** specified Flush Valve "Sloan Royal 111-1.28", Exposed Manual Operated Flush Valve, with Zurn Exposed Sensor Flush Valve for water closets model ZER6000AV-SM, 1.28 GPF.as shown clouded by delta 2.

### Item No.2. CCD # 002B: Narrative as follows:

The following Specification section is hereby amended: 22 40 00 - "PLUMBING FIXTURES."

### 2. 22 40 00 "PLUMBING FIXTURES"

At paragraph 2.02, **REPLACE** specified Flush Valve "Sloan Royal 111-1.28", Exposed Manual Operated Flush Valve, with Zurn Exposed Sensor Flush Valve for water closets model ZER6000AV-SM, 1.28 GPF.as shown clouded by delta 2.

### **REFERENCE ATTACHMENTS**:

Drawing sheet P0.00, specifications section 22 40 00, sheet 3, valve specifications and cut sheet for reference.

### HMC ARCHITECTS

By\_

(Signature of Architect of Record or Alternate)

### KHSD ARVIN HS ESSER III PHASE 1 ROOFING PROJECT ARVIN, CALIFORNIA DSA SUBMITTAL 25 JULY 2023

### 1.05 SUBMITTALS

- A. Section 01 30 00 Administrative Requirements: Submittal Procedures
- B. Manufacturer's Literature: Submit brochures on all materials and equipment to the Engineer.
- C. Other Submittals:
  - 1. Shop Drawings.
  - 2. Sterilization Test Report.
  - 3. Test Data.
  - 4. Operations and Maintenance Manuals.
  - 5. Record Drawings.
- 1.06 QUALITY ASSURANCE
  - A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category through one source from a single manufacturer.
    - 1. Exception: If fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for that category.
- PART 2 PRODUCTS Refer to sheet P0.00 Fixture and Equipment Schedules.
- 2.01 MANUFACTURERS
  - A. Flush Valves: As specified; refer to plumbing fixture schedule.
  - B. Plumbing Fixtures: As specified; refer to plumbing fixture schedule.
  - C. Toilet Seats: Church, Beneke, Olsonite

### 2.02 PLUMBING FIXTURES AND TRIMS

- A. Water Closet (<u>WC-1</u>): Floor mounted, ADA compliant, flush valve.
  - 1. Vitreous china, siphon jet action, elongated bowl, 1.28 gallon flush.
  - 2. American Standard 3043.001 Madera
  - 3 Solid plastic white open-front seat less cover: Olsonite 95SSCT
  - 4. Flush Valve: Zurn Exposed sensor flush valve, ZER6000AV-SM, 1.28 GPF
    - 5. Do not interfere flush valve with handle bar, see Architectural drawings.
    - 6. Flush valve handle shall be on the wide side of stall.
- PART 3 EXECUTION
- 3.01 EXAMINATION
  - A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.

tk1sc B2203326.000 PLUMBING FIXTURES 22 40 00 - 3

![](_page_25_Picture_0.jpeg)

TAG \_\_\_\_\_

### ARCHITECTURAL & ENGINEERING SPECIFICATION

Exposed, quiet diaphragm-type, chrome plated flushometer valve with a polished exterior. Complete with chloramine resistant, dual seal diaphragm with a clog resistant, triple filtered by-pass. The valve incorporates a 6VDC motor actuator, a battery powered automatic sensor, chrome plated metal cover with manual override push button and 10 degree angled sensor.

### PRODUCT FEATURES

- Control Stop has internal siphon-guard protection, sweat solder kit, wall flange with set screw.
- High back pressure Vacuum Breaker with one piece hex coupling nut
- Chloramine resistant Internal seals
- Clog resistant, triple filtered by pass
- Adjustable tailpiece
- Spud coupling and flange for top spud connection
- True mechincal override button

### COMPLIANCE AND CERTIFICATION:

- ADA Compliant
- WaterSense Compliant

![](_page_25_Picture_16.jpeg)

This product should be used with a WaterSense labeled counterpart with a compatible flow volume to ensure that the entire system meets the requirements for water efficiency and performance.

![](_page_25_Picture_18.jpeg)

### FLOW OPTIONS

# HerHerHer-ONE1.1-HET1.28-WS11.6-STANDARD3.5

### VALVE HEIGHT OPTIONS

	DIMENSION A INCH [MM]	DIMENSION B INCH [MM]	
-STANDARD	11 1/2" [292]	9 7/8" [251]	
-1	16" [406]	14 3/8" [365]	
-2	24" [610]	22 3/8" [568]	
-3	27" [686]	25 3/8" [645]	

### SUFFIX OPTIONS

-YK Solid Ring Pipe Support

### ARCHITECTURAL & ENGINEERING APPROVAL

Rev. B | Date: 09/27/23 | C.N. No. 145571 | Prod./Dwg. No. SS ZER6000AV-SM

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

by **ZUIN ELKAY** Water Solutions

![](_page_26_Picture_0.jpeg)

TAG \_\_\_\_\_

# Rough-in/Overview dimensions:

![](_page_26_Figure_4.jpeg)

Rev. B | Date: 09/27/23 | C.N. No. 145571 | Prod./Dwg. No. SS ZER6000AV-SM

July 1, 2024

# Arvin High School ESSER III Phase 1 Roofing

Kern High School District HMC # 3566002103 File No: 15-H3 A#03-122508

# CCD NO. 003B

The following changes, additions, deletions, or corrections shall become a part of the Contract Documents for the project named above and all other conditions shall remain the same. The contractor shall be responsible for transmitting this information to all affected subcontractors and suppliers.

### **DRAWINGS:**

The following revised drawings are hereby issued:

### A4.30 BUILDING 2A & 2B - ROOF PLAN - DEMO. Dated 2023.09.18

- A. At Keynotes, ADD Keynotes 2.49, 2.50, and 2.51 as noted and clouded per Delta 3.
- B. At 1/A4.30 Building 2A Roof Plan Demo, ADD Keynote References as shown and clouded per Delta 3.

### A4.31 BUILDING 2A & 2B - ROOF PLAN - REMODEL. Dated 2023.09.18

A. At 1/A4.31 – Bldg 2A – Roof Plan – Remodel, ADD Details References as shown and clouded per Delta 3.

### A10.42 ROOF DETAILS. Dated 08/28/23

A. **ADD** Details 8/A10.42 – Platform Edge and 12/10.42 – HVAC Mounting Detail to the Drawing Sheet as shown and clouded per Delta 3.

Attachments: Drawing Sheets A4.30, A4.31 and A10.42

**HMC ARCHITECTS** 

(Signature of Architect of Record or Alternate) By\_\_\_\_

Arvin High School ESSER III Phase 1 Roofing 3566002103

CCD 003B

![](_page_28_Figure_0.jpeg)

![](_page_28_Picture_1.jpeg)

![](_page_28_Picture_2.jpeg)

(E) HVAC UNIT AND CURB TO REMAIN, PROTECT IN PLACE, REPLACE CURB ROOF MEMBRANE FLASHING PER DETAILS 1/A10.41 AND 3/A10.41
(E) EXHAUST FAN AND CURB TO REMAIN, PROTECT IN PLACE; REPLACE CURB ROOF MEMBRANE FLASHING PER DETAILS 18/A10.40.
(E) METAL DECK ROOF TO REMAIN, PROTECT IN PLACE
(E) SCUPPER TO BE REMOVED, COLLECTOR HEAD TO BE REMOVED AND REMOUNTED.
(E) METAL COPING AND NAILER TO BE REMOVED.
(E) SHEET METAL EXPANSION JOINT COVER, NEOPRENE COVER AND WOOD NAILER TO BE REMOVED.
(E) BEAM TO REMAIN, PAINT.
PROTECT ALL EXISTING UTILITIES DURING ROOF

EXISTING BUILT-UP ROOFING MATERIAL TO BE REMOVED, EXISTING SHEATHING TO REMAIN, SHEATHING TO BE INSPECTED FOR DRY ROT, TERMITE, AND MOISTURE DAMAGE. NOTIFY ARCHITECT IF DAMAGE IS FOUND. <b>EXTENTS AND ANY REPAIR OF</b> <b>ROOF SHEATHING SHALL BE PERFORMED BY A</b> <b>CONSTRUCTION CHANGE DOCUMENT (CCD),</b> <b>APPROVED BY DSA.</b> PREP ROOF SHEATHING FOR NEW PVC ROOF MEMBRANE ASSEMBLY
PVC ROOF MEMBRANE ASSEMBLY.

UBMITTAL		
3	A NO.: 03-123508	
25	CLIENT PROJ NO:	3566002103

![](_page_29_Figure_0.jpeg)

![](_page_29_Figure_1.jpeg)

![](_page_29_Picture_2.jpeg)

SHEATHING TO BE INSPECTED FOR DRY ROT, TERMITE, APPROVED BY DSA. PREP ROOF SHEATHING FOR NEW PVC ROOF MEMBRANE ASSEMBLY.

UBMITTAL		
3	A NO.: 03-123508	
25	CLIENT PROJ NO:	3566002103

![](_page_30_Figure_0.jpeg)

![](_page_30_Picture_3.jpeg)

# A NO.: 03-123508 CLIENT PROJ NO: 3566002103

![](_page_30_Picture_8.jpeg)

DATE

6/20/2024

August 29, 2024

# Arvin High School ESSER III Phase 1 Roofing

Kern High School District HMC # 3566002103 File No: 15-H3 A#03-123508

![](_page_31_Picture_4.jpeg)

### CCDA-004

The following changes, additions, deletions, or corrections shall become a part of the Contract Documents for the project named above and all other conditions shall remain the same. The contractor shall be responsible for transmitting this information to all affected subcontractors and suppliers.

Purpose: Modifications of structural eave details of buildings 5B and 7B, due to field structural conditions at variance with the recorded As Built drawings, as well as support degradations occurring at the passageway between the buildings.

### **DRAWINGS:**

### Item No. CCD-4.1: Reference Revised Drawings

The following revised Structural Drawings Sheets are hereby issued:

### <u> S1.01 – DETAILS.</u>

- A. At detail 1/S1.01 **MODIFY** Detail as clouded per Delta 4.
- B. At detail 5/S1.01 ADD HSS4x4x1/4 support and MODIFY Detail as clouded per Delta 4.
- C. ADD Detail 8/S1.01 as clouded by delta 4.
- D. At detail 9/S1.01 **MODIFY** Detail as clouded per Delta 4.

### S2.11 - BUILDINGS 5B, 7B, & 8A ROOF FRAMING PLANS

A. At 14/S2.11—" Bldg 5B & 7B ROOF FRAMING PLANS", **MODIFY** Passageway framing supports as clouded per Delta 4.

Drawing Sheets: S1.01 and S2.11

### **HMC ARCHITECTS**

Bv

Virginia Marquardt, AIA Principal in Charge

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)