

Attachment B

AC Pros Protest Letter



Air Conditioning & Heating

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Mechanical Services

LIC # 871281 DIR #1000031839

Oct. 4th, 2025

To: Peter Tauscher, P.E.
Public Works Dept.
City of Newport Beach.
Tel: 949.644.3316
Email: ptauscher@newportbeachca.gov

Project: Contract No. 9959-1 – Peninsula Fire Station No.2 HVAC Retrofit.

Re: Protest Letter

Dear Mr. Tauscher,

This is to protest the Bid submitted by MEP Fusion Inc. to the City of Newport Beach on the above-referenced project.

The bidder did not meet the requirements for the following reasons:

- Contractor did not comply with the bidding documents by not listing an approved subcontractor.

Per the bid document "Designated subcontractors' affidavit" and public code:

Designated Subcontractors Affidavit: "State law requires listing of all subcontractors who will perform work in an amount in excess of one half of one percent of the contract total bid. If a subcontractor is not listed, the contractor represents that he/she is fully qualified to and will be responsible for performing that portion of the work."

This is required by the subletting and subcontracting Fair Practice Act (Public contract code section 4100, et seq.)

Any subcontractor who receives an amount over ½ of 1% (half of one percent) of the total cost of the bid proposal must be listed on the designation of subcontractors for a bid to be responsive. Per California public works code (Subletting and Subcontracting [4100 - 4114] Ch. 195, Sec. 42.1) and per the bid documents.

In the case of Fusion MEP, any subcontracted work exceeding \$630.00 (½ of 1% of their bid total) must be listed in PlanetBids and as stated under the Designated Subcontractors' Affidavit as required by the City's bid documents.

Certified Roofing Subcontractor.

Per Pre-Bid RFI responses dated October 27 (Questions 1.7, 1.8, 1.9, and 1.12), the existing roofing is under warranty.

Technical Specification Section 07 51 00, Paragraph 1.4E states: *"Installer shall be licensed or otherwise certified by the manufacturer of the accepted roofing system to perform work requiring warranty coverage, including material and workmanship."*

(See Exhibits A & B)

Fusion MEP failed to list a C-39 licensed roofing subcontractor and does not hold the required roofing certifications.

Scope of Roofing Work

Per plan Sheet S3.1, Detail 1, a new wood platform—larger than the new DOAS unit—is required to be installed.

Sheet M0.01, Equipment Schedule, note #2 specifies a new curb for the DOAS unit.

Sheet M3.01, Detail #1, shows the roofing extending up to the top of the curb, indicating the need for new roofing over the platform, new cricket per architectural drawings, and full integration with the DOAS curb.

The value of this scope clearly exceeds 0.5% of Fusion MEP's total bid amount (see **Exhibit C**). As Fusion MEP is neither qualified nor licensed to perform this work and has not listed a C-39 subcontractor, their bid must be deemed **non-responsive** under both the Public Contract Code and the City's bid requirements.



City of Newport Beach – Protest Letter

Certified Air Balance Subcontractor/Requirement.

Per the project manual, Section 23 05 93, Paragraph 1.5A: *"TAB Contractor Qualifications: Engage a TAB entity certified by AABC."* (see **Exhibit D**).

Fusion MEP is not listed as an AABC-certified or approved member. Therefore, they were required to designate an approved and AABC-certified Air Balance subcontractor in their bid submission.

The air balance scope of work represents a significant portion of the mechanical system commissioning and testing effort, and its value clearly exceeds one-half of one percent (0.5%) of Fusion MEP's total bid amount (see **Exhibit E**).

As Fusion MEP is neither certified to perform this specialized work nor listed an AABC-certified subcontractor to perform it, their bid fails to meet both the City's bid requirements and the mandatory provisions of the California Public Contract Code §4100 et seq. Accordingly, Fusion MEP's bid must be deemed **non-responsive**.

Given the reason above and the city limited time and the complexity of this project, we believe the city should reject MEP Fusion bid as non-responsive as they did comply with the bid documents and the public code, and award the contract to the second low bidder, AC Pros Inc.

Thank you for your attention to this letter.

Sincerely,

Noam Ziv

A handwritten signature in blue ink, appearing to read 'Noam Ziv', with a checkmark at the end.

Attachment:

1. Exhibit A – Pre-bid RFI's
2. Exhibit B – Spec section 07 51 00 of the project manual.
3. Exhibit C – Certified roofer proposal.
4. Exhibit D – Spec section 23 05 93 of the project manual.
5. Exhibit E – AABC Certified air balance proposal.

**Exhibit A - Pre-bid RFI's****City of Newport Beach****Peninsula Fire Station No. 2 HVAC Retrofit 9959-1***Q&A Deadline October 24, 2025 2:00 PM (PDT)***Set 1** Released via Email 10/27/2025 1:54 PM (PDT) – 19 questions

1.1 Do we need to clean existing duct work that we are attaching to?

Answer Duct cleaning of existing ductwork is not required.

1.2 Can you provide a control schematics for this project?

Answer See detail 2, M3.01. The unit shall be controlled by an integral standalone controller to run in dehumidification mode based on outside air dewpoint with hot gas reheat to maintain a fixed supply air temperature.

1.3 General notes #3 stats to paint duct to match. However existing ductwork is not painted. Do we need to paint ductwork knowing that.

Answer Ductwork painting is not required.

1.4 What type of BMS controls does the fire station use?

Answer There is no existing EMS. The DOAS unit has integral standalone controller.

1.5 What type of fire alarm system is being used at the station?

Answer Existing equipment is from Honeywell, NFS-320 FACP. Contractor to ensure proposed equipment is compatible.

1.6 Who is the fire alarm company for the fire station?

Answer Existing equipment is from Honeywell. Contractor to ensure proposed equipment is compatible.

1.7 If roofing is under warranty do we have to use that specific roofing company?

Answer **Manufacturer's warranty is still active (20 year).** Contractor to confirm with Johns Mansville if using a different roofing company will void manufacturer's warranty.

1.8 Is the roofing under warranty and if so by who?

Answer **Manufacturer's warranty is still active (20 year).** Installer's warranty has expired.

1.9 What type of roofing is it?

Answer **Existing roof is a modified bituminous membrane roofing with acrylic coating.**

1.10 Will the existing duct(s), to be retained and reused from POC, require cleaning? Please advise.

Answer Duct cleaning of existing ductwork is not required.

1.11 Is there an existing HVAC Control system to be utilized on site?

Answer There is no existing EMS. The DOAS unit has integral standalone controller.

1.12 Is the existing Roofing under warranty? If so, what is the manufacturer, and who is the contractor maintaining the warranty.

Answer **Manufacturer's warranty is still active (20 year).** Installer's warranty has expired. Manufacturer is John Mansville.

1.13 Please clarify and/or confirm, there is no existing Energy Management System (EMS) / Building Automation System (BAS) and/or current requirement in this project bid.

Answer There is no existing EMS. The DOAS unit has integral standalone controller.

1.14 Contract Bid Documents / Drawings do not show any location for temperature control / thermostat location of the DOAS unit. Please advise.

Answer The DOAS unit is to be programmed to run in dehumidification mode based on outside air dew point with hot gas reheat to maintain a fixed supply air temperature. Refer to wiring/controls details. There is no thermostat located within the building for control of this unit. There is a field installed supply air temperature that is to be located in the supply duct.

1.15 Existing mechanical roof equipment is a Supply Fan that will be demolished and replaced by a Packaged Heat Pump Unit as a Dedicated Outside Air System (DOAS) unit. This means the new system will have conditioned air. It is presumed that the existing roof ducts are not lined nor insulated. However, Demolition and Renovation plans showing POCs do not indicate on how the new connecting duct and the existing ducts are to be provided concerning thermal insulation and/or lining, considering the new system is conditioned air. Please advise.

Answer Existing supply air ducts are internally lined. New supply duct on the roof shall also be internally lined.

1.16 Will temporary heating/cooling be required during the construction process, after the existing equipment is demo'd / removed, and prior to new/replacement equipment is started-up and put in operation?

Answer No

1.17 Project duration is (15) consecutive working days. Please elaborate considering new equipment lead time.

Answer Please review the biddign documents, 6-7, regarding Time of Completion

1.18 Project estimate is \$130,000.00. Does that include the construction allowance and close-out documents of \$12,000.00?

Answer Yes

1.19 Can a C-20 HVAC license bid this as the prime contractor?

Answer No



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SECTION 07 51 00 BUILT-UP BITUMINOUS ROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Built-up roofing membrane, conventional application.
 - 2. Insulation, tapered.
 - 3. Base flashings.
 - 4. Roofing cant strips, accessories, roofing vents, and walkways.
- B. Related Sections:
 - 1. Section 06 10 00: Rough Carpentry.
 - 2. Section 07 72 00: Roof Accessories.
- C. Reference Standards:
 - 1. ASTM International:
 - a. ASTM C177 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.
 - b. ASTM C578 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - c. ASTM D4586 Standard Specification for Asphalt Roof Cement, Asbestos-Free.
 - d. ASTM D5643 Standard Specification for Coal Tar Roof Cement, Asbestos Free.
 - e. ASTM E96/E96M Standard Test Methods for Water Vapor Transmission of Materials.
 - 2. National Roofing Contractors Association:
 - a. NRCA The NRCA Roofing and Waterproofing Manual.
 - 3. Underwriters Laboratories Inc.:
 - a. UL Fire Resistive Directory.
 - b. UL Roofing Materials and Systems Directory (RMSD).

1.3 SUBMITTALS

- A. Product Data: Provide data indicating membrane and bitumen materials, base flashing materials, insulation, and surfacing.
- B. Certifications:
 - 1. Submit the following certifications indicating:
 - a. Built-up bituminous roofing manufacturer's qualifications specified in this Section.
 - b. Built-up bituminous roofing installer's qualifications specified in this Section.
 - c. Materials to be used in manufacturer's systems compliance with standards designated. Include certificates of compliance for surface aggregate and materials delivered in hot-bulk equipment.
- C. Samples: Only as requested.
- D. Installer's Compliance:
 - 1. Submit a written statement from Contractor's installer stating that:

- a. Contract Documents have been reviewed with the primary roofing material manufacturer's representative.
 - b. Installer intends to comply with the Contract Documents.
 - c. Roofing details do not conflict with manufacturer's product/system warranty.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.4 QUALITY ASSURANCE

- A. Design Criteria:
- 1. Meet requirements of CBC Chapter 15.
 - 2. Meet requirements of Class A roof per CBC Table 1505.1a.
 - 3. Comply with recommendation of NRCA, including any condition not indicated on the Drawings.
 - 4. Prevent water or moisture from penetrating any area of roofing application.
 - 5. Flashings shall not depend solely upon mastic or sealant for primary waterproof protection.
 - 6. Meet requirements of manufacturer's specifications that are consistent with specified built-up bituminous roofing systems and construction conditions
 - 7. Provide built-up roofing system and component materials that have been tested for application and slopes indicated and that are listed by UL for Class external fire exposure.
 - 8. All materials must have been tested by UL as a completed system.
 - 9. Insulation, securement materials, and method of installation shall meet requirements of Factory Mutual Class 1. Listing of material and assembly as Class 1 Roof by Factory Mutual shall constitute proof of compliance with requirements.
- B. Comply with recommendation of NRCA, including any condition not indicated on the Drawings.
- C. Provide products that are free from asbestos and that comply with the applicable provisions of the California Volatile Organic Compound Regulations (VOC).
- D. Built-Up Bituminous Roofing Manufacturer: Obtain primary roofing from a single manufacturer. Provide secondary materials as recommended by manufacturer of primary materials.
- E. **Built-Up Bituminous Roofing Installer's Qualifications:**
- 1. **Installer shall be licensed or otherwise certified by manufacturer of accepted roofing system to do work requiring warranty, including materials and workmanship.**
 - 2. Installer shall have applied accepted roofing system on two (2) or more projects that have been completed for at least ten (10) years. Information on completed systems shall include date of installation, General Contractor, Owner, contact, and other related information that will facilitate verifications of qualifications.
 - 3. Installer's field supervision: Maintain a full-time supervisor/foreman on jobsite during all phases of bituminous sheet roofing work; at any time roofing work is in progress, proper supervision of workers shall be maintained.

1.5 WARRANTY

- A. Provide five (5) year manufacturer's material and labor warranty to cover failure to prevent penetration of water.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Labels: Clearly label materials except gravel with material name, production date or product code, and inspection agency approvals where required.
- B. Deliver, store, and handle packaged materials in manufacturer's original containers with seals unbroken and labels intact until time of use.
- C. Unload materials carefully and store off ground, deck, or surface where material could become wet or damp, at temperatures maintained above 50 degrees and below 75 degrees Fahrenheit. Protect from elements. Do not dump onto ground.
- D. Keep all moisture sensitive materials dry at all times while being transported, stored, and installed.
- E. Store materials on raised pallets. Do not double stack pallets:
 - 1. Cover top and all sides of moisture sensitive materials and allow for adequate ventilation.
 - 2. Utilize covers made from breathable materials.
- F. Handle materials in a manner to prevent damage. Store rolls in an upright position:
 - 1. Discard rolls that have been flattened or damaged.
 - 2. Remove damaged materials from the site and replace with new materials.
- G. Avoid concentrated loading of building structure with materials. When storing pallets on the roof, locate over columns.
- H. Do not store materials or debris on newly installed roof surfaces.
- I. Store liquid materials such as adhesives, thinners, and cleaners in areas away from sparks, open flames, and excessive heat:
 - 1. No smoking is to be allowed in the area where solvent, adhesives, thinners, or welding agents are being used.
 - 2. Exercise caution at all times when working with solvent-type materials and comply with the limitations as described by the solvent manufacturer.
 - 3. Obtain specific approval of Owner's representative prior to storage of flammable materials on Project site.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Sheet and Bitumen Materials:
 - 1. GAF Materials Corporation (bases of design).
 - 2. Johns Manville Roofing Systems Group.
 - 3. Or equal.
- B. Roof Insulation:
 - 1. GAF Materials Corporation.
 - 2. Johns Manville Roofing Systems Group.
 - 3. Or equal.

2.2 BUILT-UP BITUMINOUS ROOFING SYSTEMS

- A. General Requirements:
 - 1. Materials for built-up roofing systems (BURS) are composed of alternating layers of asphalt ply sheets (built-up bituminous roofing system), except roof insulation board

- and protection board, shall be products of, or recommended by, a single manufacturer.
2. Materials quantities stipulated for systems are generalized for BURS; manufacturer may vary to those listed below. Such variations are to be included in product listings and shop drawing review.
 3. Layering built-up roofing may include (refer to Drawing details):
 - a. Self-adhered products.
 - b. Cold applied.
 - c. Hot mopped.
- B. System 1 - Typical 4-Ply BURS over plywood roof deck:
1. Description:
 - a. 1/4-inch pressed fiber protection board.
 - b. Roof insulation board: Over fiber board over metal roof deck attached with roofing screws and washer per manufacturer's specifications.
 - c. Perforated venting base sheet.
 - d. First layer: 6-ply asphaltic roofing material.
 - e. Second layer: 6-ply asphaltic roofing material.
 - f. Third layer: 6-ply asphaltic roofing material.
 - g. Top flood coat and gravel.

2.3 COMPONENTS

- A. Roof Insulation Boards:
1. Description:
 - a. Closed cell polyisocyanurate core bonded in the foaming process to universal fiberglass reinforced facers.
 - b. Meet physical requirements of ASTM C1289, Type II, Class 1, Grade 2.
 - c. Thermal resistance and thickness as indicated on drawings/details for roofing systems.
 - d. Provide tapered insulation where noted or required to provide the indicated slope.
 2. Product:
 - a. Johns Manville Roofing Systems Group's Energy 3, or equal.
- B. Felts, Fabrics, and Dry Sheet:
1. Asphalt base sheet: ASTM D2626.
 2. Fiberglass base sheet: ASTM D4601. GAF Materials Corp's; GAFGLAS #75 Base Sheet, or equal.
 3. Fiberglass roofing felt: ASTM D2178. GAF Materials Corp's GAFGLAS FlexPly 6", or equal.
 4. Mineral surface cap sheet: ASTM D3909. GAF Materials Corp's GAFGLAS Mineral Surfaced Cap Sheet, or equal.
- C. Asphalt Primer:
1. ASTM D41.
 2. Topcoat membrane: Surface applied over concrete.
- D. Bitumen:
1. Asphalt: ASTM D312, type as recommended by built-up bituminous roofing manufacturer for region, climate, and slope of roof.
 2. Bituminous plastic cement: ASTM D4586, Type II, cut back asphalt type.
- E. Composition Flashing Systems: All composition flashing systems are to be modified bitumen by same manufacturer as roofing system or built-up bituminous roofing manufacturer's standard.
- F. Fabric Reinforcement: Bituminous woven glass fabric meeting requirements of ASTM

D1668.

- G. Cants: Fiberboard, minimum three-inch (3") vertical leg, four inches (4") wherever possible, 45-degree slope.
- H. Surfacing Aggregate: Clean, hard, durable river aggregate conforming to ASTM D1863, gradation size No. 7, and as recommended by built-up bituminous roofing system manufacturer.
- I. Fasteners:
 - 1. Mechanical fasteners for insulation: Meet insulation manufacturer's requirements.
 - 2. Concrete: Twin legged fastener, electro zinc plated, fastener to provide positive attachment and resistance to specified wind up-lift forces. Minimum depth per manufactures recommendations (1.8 inches long with 2.7-inch diameter plate).
 - 3. Base sheet to wood nailers: One-inch (1") square head nails in length as required to fully penetrate into substrate.
- J. Traffic Surfacing:
 - 1. Description: 3/4-inch thick panels manufactured from asphalt, reinforcing fibers, and mineral granules, thoroughly ground and molded under heat, and compressed between tops and bottoms of inert fiberglass membranes with skid-resistant mineral granules applied to top surface; color as selected from manufacturer's standard range. Refer to Drawings for location and layout.
- K. Other Accessories: As recommends by built-up bituminous roofing manufacturer.

PART 3 EXECUTION

3.1 SITE CONDITIONS

- A. Environmental Requirements:
 - 1. Proceed with roofing work when existing and forecasted weather conditions will permit work to be performed in accordance with manufacturers' recommendations and warranty requirements.
 - 2. Do not apply roofing membrane during unsuitable weather.
 - 3. Do not apply built-up bituminous roofing when ambient temperature is below 40 degrees Fahrenheit or above 95 degrees Fahrenheit.
 - 4. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring; apply built-up bituminous roofing in dry weather.

3.2 EXAMINATION

- A. Examine areas to receive built-up bituminous roofing and verify that:
 - 1. Surfaces and site conditions are ready to receive work.
 - 2. Deck is supported and secure.
 - 3. Deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped, and suitable for installation of roof system.
 - 4. Voids in substrate have been patched flush with surrounding surfaces.
 - 5. Nailing strips, blocking, reglets, other embedded items, and items to penetrate surfaces have been installed in proper locations.
 - 6. Low spots or areas where ponding water may occur have been adequately corrected.
 - 7. Roof openings, curbs, and penetrations through roof are solidly set and cant strips are in place.
 - 8. New flashings and other related items have been installed or fabricated and are onsite ready for installation when roofing work commences.

9. Conditions are otherwise satisfactory for application.
- B. Assure that related work of other trades has been completed, and that the sequence of the flashing work may proceed in accordance with good flashing practice and the intent of the Specifications.
- C. Notify District's representative immediately in writing of any discrepancy between field conditions and the ability to achieve the intent of these Specifications, and do not proceed with the work until adequate correction has been made.
- D. Do not start work until unsatisfactory conditions have been corrected. Start of work shall signify acceptance of, and responsibility for, condition of receiving surface.

3.3 PREPARATION

- A. Protection:
 1. Protect surrounding work from damage by roofing materials or operations; especially protect paving and building walls adjacent to hoists and kettles.
 2. Prevent bitumen, aggregate, and debris from entering and clogging roof drains and rainwater conductors.
 3. Protect existing fresh air intakes, doors, and windows as required to prevent entry of asphalt fumes.
 4. Be responsible for costs of repair or restoration of other work damaged by materials or operations of built-up bituminous roofing
- B. Clean roof and flashing areas thoroughly of loose materials and foreign matter to provide sound, dry, and level decks for positive attachment of roof system materials.

3.4 GENERAL APPLICATION REQUIREMENTS

- A. Apply built-up bituminous roofing and related work in accordance with materials manufacturer's specifications for systems accepted for this Project and meeting requirements of CBC Chapter 15, except where other requirements are indicated or specified (Chapter 15 for roofing and 1511 reroofing).
- B. Make attachments to metal work and accessories integral with waterproofing in accordance with accepted built-up bituminous roofing manufacturer's recommendations.
- C. Bitumen:
 1. Do not exceed temperature limitation recommend by roofing materials manufacturer for heating bitumen:
 - a. Bitumen shall be applied at its equiviscous temperature (EVT) for the method of application being used, plus or minus 25 degrees Fahrenheit.
 - b. Do not exceed the flash point.
 - c. Do not exceed the finishing blowing temperature.
 2. Provide clearly visible thermometer on each kettle or delivery truck used to heat bitumen.
 3. Remove overheated bitumen from site immediately.
 4. Do not apply hot bitumen under conditions that would cause foaming.
- D. Lay multiple-ply courses of felt and hot bitumen in shingle plies, and comply with recommendations of roofing material manufacturer:
 1. Lap felts with direction of drainage.
 2. Start installation of plies at lowest point of roof with plies perpendicular to slope of roof deck.

3. Except where spot mopping sheets, lay felt plies in bitumen while still hot and tacky and broom thoroughly for full felt width to eliminate trapped air or gases.
 4. Lay out roof areas accurately for proper lap and sequence of plies.
 5. Lay out plies accurately and broom each into hot, tacky bitumen.
 6. Ensure felts are free from fishmouths, buckles, blisters, and other faulty workmanship.
 7. Built-up bituminous roofing displaying voids will be rejected.
 8. Do not use wet, once wet, or damaged rolls.
- E. Provide cant strips where indicated, where required, and wherever feasible to prevent 90-degree bending of membrane system. Turn all membranes up on cant strip where they abut against vertical surface.
- F. Provide membrane base flashings at cant strips and other sloping and vertical surfaces, at roof edges, and at major penetrations through roof deck. Nail or provide other forms of mechanical anchorage of membrane flashing to vertical surfaces as recommended by roofing material manufacturer.
- G. Valley and Ridge Lines: Reinforce with one additional ply layer, centered on-line, set on top of the top membrane ply in full 25 pound per 100 square foot mopping of hot asphalt.
- H. Provide any other roofing accessories necessary to conform to built-up roofing manufacturer's requirements.

3.5 ROOF INSULATION

- A. Install where required by built-up bituminous roofing systems.
- B. Verify proper thickness, locations, and attachment of insulation stops.
- C. Install roof insulation boards with edges parallel to flutes of metal decking and bearing on deck surface.
- D. Install first layer of roof insulation boards on metal decks with mechanical fasteners.
- E. Install second layer of roof insulation boards in broken joint construction, so that each layer breaks joints to a minimum of six inches (6") both ways with preceding layer.
- F. Where noted, mop roof insulation boards solidly into place using hot steep asphalt; press firmly into place.
- G. Mop roof insulation boards solidly into place using hot steep asphalt and/or fasten mechanically per manufacturer's directions; press firmly into place.
- H. In addition, the first four-foot (4') width around the perimeter of the roof and all openings shall be mechanically secured.
- I. Lay boards with edges in moderate contact without forcing.
- J. Cut roof insulation boards to fit neatly around vertical surfaces and deck projections.
- K. Joint Tape: Tape joints in top layer of insulation according to manufacturer's instructions. Apply joint tape to joints between wood blocking or insulation stops and insulation boards.
- L. Do not leave installed roof insulation boards exposed to weather.

- M. Meet requirements of materials manufacturers.
- N. Tapered Insulation at Crickets:
 - 1. Apply multi-layers of tapered insulation in pattern to achieve positive slope of 1/8 inch per foot. Slope to drains.
 - 2. Stagger the joints of each layer from the preceding course by 1/2 of the board's dimension. Set boards into 30 pounds of asphalt. Bring boards into moderate uniform contact at sides and ends while asphalt is hot and fluid. Install top layer with joints continuous in both directions.
- O. Cant Strips:
 - 1. Install at intersection of vertical surfaces and where otherwise required.
 - 2. Install into hot asphalt to top of insulation.
 - 3. Mechanically fasten into nailers with square head roofing nails at 12 inches on center, minimum three (3) nails per piece. Use nails with sufficient length to achieve minimum 1-1/2-inch penetration into nailers.
 - 4. Miter corners for tight fit.
- P. Tapered Edging: Install wherever necessary to achieve smooth transitions for the roof membrane. Do not allow transitions greater than 1/4 inch.
- Q. Water Cut-Offs: Provide at exposed edges of roof insulation boards at end of day's work and whenever rain is imminent. Extend cut-offs six inches (6") on roof deck, carry up and over roof insulation boards, and extend six inches (6") on top of built-up roofing. Remove before continuing installation of roof insulation boards.

3.6 BUILT-UP BITUMINOUS ROOFING INSTALLATION

- A. Remove temporary composition flashing.
- B. Complete application of built-up bituminous roofing daily up to line of termination at end of day's work. Daily aggregate surfacing is not necessary.
- C. Apply fiberglass roofing felts in a solid, continuous asphalt mopping:
 - 1. Lay plies straight and flat.
 - 2. Apply all ply sheets so they are properly shingled to flow of water.
 - 3. Provide enough overlap so that every cross section will have required number of plies.
 - 4. Stagger all end laps at least 12 inches.
 - 5. Install one (1) extra ply sheet, 36 inches wide, at all waterways.
- D. Ensure full and continuous seal and contact between asphalt and ply sheets or base sheet, including ends, edges, and laps by applying asphalt uniformly and by brooming fully before asphalt cools:
 - 1. Use minimum 34-inch wide brooms or squeegees.
 - 2. Do not walk on membrane until asphalt cools down.
 - 3. Keep equipment off hot membrane.
- E. Do not allow sheets to contact other sheets even at roof edges or over cants and tapered edge strips:
 - 1. Cut out fishmouths or side laps not completely sealed with asphalt, and patch with ply sheet set in hot asphalt.
 - 2. Remove and replace all sheets that are fully and continuously bonded or that have inadequate mopping along end or edge laps.
- F. At Roof Edges and Openings: Provide bleed sheets (felt envelopes) to prevent bitumen

drippage.

- G. Roof Sumps and Drains:
1. Temporarily plug drains to prevent asphalt drippage; remove at end of each work day.
 2. Install tapered insulation to form a minimum 24-inch by 24-inch sump area.
 3. Bring roofing felt plies down over insulation and extend into roof drain flashing ring.
 4. Over felts in sump, apply modified bitumen flashing to extend minimum four inches (4") out of sump onto main roof deck and into roof drain flashing ring.
 5. Verify installation of gravel stops at outer edge of sump.
 6. Coordinate to embed gravel stop in plastic cement over flashing with flange stripped in with flashing.
 7. Embed aggregate surfacing in plastic cement on top of flange and stripping for six inches (6") from raised lip of gravel stop.
- H. Turn all membranes up on cant trip where they abut against vertical surface.
- I. Provide membrane base flashings at cant strips and other sloping and vertical surfaces, at roof edges, and at major penetrations through roof deck. Nail or provide other forms of mechanical anchorage of membrane flashing to vertical surfaces as recommended by roofing material manufacturer.
- J. Composition Flashing:
1. Install in accordance with manufacturer's recommendations and requirements specified.
 2. Provide at termination of roofing on curbs, vertical surfaces, and where indicated or required for complete watertight installation.
 3. Verify proper locations of nailers at top of flashing.
 4. Prime vertical and horizontal substrate surfaces to be flashed with asphaltic products with asphalt primer and allow to dry before applying flashing.
 5. Strip Flashing:
 - a. Refer to Section 07 62 00: Sheet Metal Flashing and Trim and other related Sections for flashing and similar work. Coordinate to provide a complete watertight and weatherproof roofing system:
 - 1) Prime all flanges (both sides) with asphalt primer and allow to dry.
 - 2) Set flanges in 1/8-inch thick continuous bed of plastic roofing cement.
 - 3) Fasten flange as detailed.
 - 4) Apply two (2) strip flashing sheets into 1/8-inch thick continuous bed of flashing cement extending four inches (4") and six inches (6") respectively onto completed roof membrane.
 6. Base Flashing:
 - a. Apply over cants and run up parapet walls where indicated on the Drawings (maximum 24 inches above roof line).
 - 1) Apply base sheet and modified bitumen built-up base flashing system consisting of a minimum of a base sheet, a ply sheet, and polymer modified top sheet.
 - 2) Mechanically fasten base sheet at 12 inches on center in rows eight inches (8") apart.
 - 3) Apply ply sheet over base sheet in a continuous 1/8-inch thick layer of flashing cement.
 - 4) Apply modified bitumen base flashing over ply sheet in a continuous 1/8-inch thick layer of flashing cement.
 - 5) Fasten top edge at six inches (6") on center.
 - 6) Do not seal top edge of base flashing.
- K. Sheet Metal:
1. Supervise installation of sheet metal items integral with built-up bituminous roofing and

- ensure conformity with built-up bituminous roofing manufacturer's recommendations.
- 2. Metal flashings that are an integral part of roofing shall be installed simultaneously with roofing application.
- 3. Fill bottom half pitch pockets at window washing system davits with non-shrink grout and top half with elastomeric pitch pocket filler. Crown top for slope to drain.

3.7 SURFACING

- A. Do not install surfacing until the inspection of the membrane has been performed and "punch list" repairs have been completed.
- B. Cap Sheet:
 - 1. Assure roof surface is clean, free of dust, dirt, or moisture. Light priming is required if contamination of surface or oxidation has occurred.
 - 2. Applied cap sheet to be free of buckles, wrinkles, blisters, fishmouths, or voids.
 - 3. Apply cap sheet over and parallel to the roofing plies and lapped so that the flow of water is over or parallel to, but never against the laps.
 - 4. Pre-cut cap sheet into 12-foot maximum lengths and allow to relax.
 - 5. Starting at the low point, install cap sheet surfacing over the entire roof field surface, extending above the cant strip two inches (2") into a continuous mopping of hot asphalt applied at a nominal rate of 25 pounds per 100 square feet.
 - 6. Place tension on the ends of cap sheet lengths as they are flopped into place so that the sheet lays flat in the asphalt and adheres.
 - 7. Install cap sheet with two-inch (2") side laps and six-inch (6") end laps.
 - 8. Stagger end laps not less than three feet (3') apart.
 - 9. Brooming-in may be necessary to ensure bond between asphalt and sheet.
 - 10. Sprinkle mineral granules in exposed asphalt along edges and ends of mineral cap sheets.

3.8 FIELD QUALITY CONTROL

- A. See Section 01 40 00: Quality Requirements.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of the work.

3.9 CLEANING

- A. Remove bituminous markings from adjacent finished surfaces.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section.
- C. In areas where finished surfaces are soiled by bitumen or other source of soiling caused by work of this Section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.
- D. At completion of the work of this Section, remove all excess materials, cartons, wrappings, and tools and implements from the site.

3.10 PROTECTION

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials. Provide special protection or avoid heavy traffic on completed work when ambient

temperature is above 80 degrees Fahrenheit.

END OF SECTION 07 51 00

10/29/2025

Exhibit C - Certified Roofer



GC: AC PROS

Attn: Estimating

Project: Newport Beach Peninsula Fire Station No.2 HVAC Retrofit

Roof TI Proposal

Specs: 075100 Built-Up Bituminous Roofing

Plans Dated: 08/15/2025 Mechanical Roof Plan

Scope of work:

Provide material and labor to patch back roof at one (1) new AC unit and corresponding penetrations, roof system to match existing roof to maintain existing manufacturer's warranty per plans and specs.

- Provide material and labor to install insulation cricket behind the curb only.
- Provide material and labor to install flashing membrane at new curb to tie in to existing field membrane and terminate the top per manufacturer's requirements to maintain warranty.
- Provide material and labor to seal new penetrations per manufacturer's requirements to maintain roof warranty.
- Sheet metal by others.
- Lead flashings by others. (If required)
- Prevailing wages included.

***Please note one (1) move in only, additional move ins will be an added cost.**

Total Base Bid: \$2,400

EXCLUSIONS: Roof demo, temporary roof, rigid insulation, batt insulation, carpentry, nailers, vertical sheathing, sheet metal, weekend work, OCIP, bonding, permits, roof protection after material install and any work not specifically outlined above.

Please feel free to call or email regarding any questions.

Sincerely,

Alex Garcia

Veirs Kluk Roofing, Inc

Mobile: 951-263-2999

Email: alex@vkrfg.com

CSLB #624176

DIR #2000015085

SECTION 23 05 93

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Balancing Air Systems:
 - a. Constant-volume air systems.

1.3 DEFINITIONS

- A. AABC: Associated Air Balance Council.
- B. TAB: Testing, adjusting, and balancing.
- C. TAB Specialist: An entity engaged to perform TAB Work.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Within 30 days of Contractor's Notice to Proceed, submit documentation that the TAB contractor and this Project's TAB team members meet the qualifications specified in "Quality Assurance" Article.
- B. Contract Documents Examination Report: Within 30 days of Contractor's Notice to Proceed, submit the Contract Documents review report as specified in Part 3.
- C. Strategies and Procedures Plan: Within 30 days of Contractor's Notice to Proceed, submit TAB strategies and step-by-step procedures as specified in "Preparation" Article.
- D. Certified TAB reports.
- E. Sample report forms.
- F. Instrument calibration reports, to include the following:
 - 1. Instrument type and make.
 - 2. Serial number.
 - 3. Application.
 - 4. Dates of use.
 - 5. Dates of calibration.

1.5 QUALITY ASSURANCE

- A. **TAB Contractor Qualifications: Engage a TAB entity certified by AABC.**
 - 1. **TAB Field Supervisor: Employee of the TAB contractor and certified by AABC.**
 - 2. **TAB Technician: Employee of the TAB contractor and who is certified by AABC as a TAB technician.**
- B. TAB Conference: Meet with Owner on approval of the TAB strategies and procedures plan to develop a mutual understanding of the details. Require the participation of the TAB field supervisor and technicians. Provide seven days' advance notice of scheduled meeting time and location.
 - 1. Agenda Items:
 - a. The Contract Documents examination report.
 - b. The TAB plan.
 - c. Coordination and cooperation of trades and subcontractors.
 - d. Coordination of documentation and communication flow.
- C. Certify TAB field data reports and perform the following:
 - 1. Review field data reports to validate accuracy of data and to prepare certified TAB reports.
 - 2. Certify that the TAB team complied with the approved TAB plan and the procedures specified and referenced in this Specification.
- D. TAB Report Forms: Use standard TAB contractor's forms approved by Architect.
- E. Instrumentation Type, Quantity, Accuracy, and Calibration: As described in ASHRAE 111, Section 5, "Instrumentation."
- F. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 7.2.2 - "Air Balancing."
- G. ASHRAE/IESNA Compliance: Applicable requirements in ASHRAE/IESNA 90.1, Section 6.7.2.3 - "System Balancing."

1.6 PROJECT CONDITIONS

- A. Full Owner Occupancy: Owner will occupy the site and existing building during entire TAB period. Cooperate with Owner during TAB operations to minimize conflicts with Owner's operations.

1.7 COORDINATION

- A. Notice: Provide seven days' advance notice for each test. Include scheduled test dates and times.
- B. Perform TAB after leakage and pressure tests on air and water distribution systems have been satisfactorily completed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine the Contract Documents to become familiar with Project requirements and to discover conditions in systems' designs that may preclude proper TAB of systems and equipment.
- B. Examine systems for installed balancing devices, such as test ports, gage cocks, thermometer wells, flow-control devices, balancing valves and fittings, and manual volume dampers. Verify that locations of these balancing devices are accessible.
- C. Examine the approved submittals for HVAC systems and equipment.
- D. Examine design data including HVAC system descriptions, statements of design assumptions for environmental conditions and systems' output, and statements of philosophies and assumptions about HVAC system and equipment controls.
- E. Examine ceiling plenums and underfloor air plenums used for supply, return, or relief air to verify that they meet the leakage class of connected ducts as specified in Section 233113 "Metal Ducts" and are properly separated from adjacent areas. Verify that penetrations in plenum walls are sealed and fire-stopped if required.
- F. Examine equipment performance data including fan curves.
 - 1. Relate performance data to Project conditions and requirements, including system effects that can create undesired or unpredicted conditions that cause reduced capacities in all or part of a system.
 - 2. Calculate system-effect factors to reduce performance ratings of HVAC equipment when installed under conditions different from the conditions used to rate equipment performance. To calculate system effects for air systems, use tables and charts found in AMCA 201, "Fans and Systems," or in SMACNA's "HVAC Systems - Duct Design." Compare results with the design data and installed conditions.
- G. Examine system and equipment installations and verify that field quality-control testing, cleaning, and adjusting specified in individual Sections have been performed.
- H. Examine test reports specified in individual system and equipment Sections.
- I. Examine HVAC equipment and filters and verify that bearings are greased, belts are aligned and tight, and equipment with functioning controls is ready for operation.
- J. Examine operating safety interlocks and controls on HVAC equipment.
- K. Report deficiencies discovered before and during performance of TAB procedures. Observe and record system reactions to changes in conditions. Record default set points if different from indicated values.

3.2 PREPARATION

- A. Prepare a TAB plan that includes strategies and step-by-step procedures.
- B. Complete system-readiness checks and prepare reports. Verify the following:
 - 1. Permanent electrical-power wiring is complete.
 - 2. Automatic temperature-control systems are operational.
 - 3. Equipment and duct access doors are securely closed.

4. Balance, smoke, and fire dampers are open.
5. Isolating and balancing valves are open and control valves are operational.
6. Ceilings are installed in critical areas where air-pattern adjustments are required and access to balancing devices is provided.
7. Windows and doors can be closed so indicated conditions for system operations can be met.

3.3 GENERAL PROCEDURES FOR TESTING AND BALANCING

- A. Perform testing and balancing procedures on each system according to the procedures contained in AABC's "National Standards for Total System Balance", ASHRAE 111, and SMACNA's "HVAC Systems - Testing, Adjusting, and Balancing" and in this Section.
 1. Comply with requirements in ASHRAE 62.1, Section 7.2.2 - "Air Balancing."
- B. Cut insulation, ducts, pipes, and equipment cabinets for installation of test probes to the minimum extent necessary for TAB procedures.
 1. After testing and balancing, patch probe holes in ducts with same material and thickness as used to construct ducts.
 2. After testing and balancing, install test ports and duct access doors that comply with requirements in Section 233300 "Air Duct Accessories."
 3. Install and join new insulation that matches removed materials. Restore insulation, coverings, vapor barrier, and finish according to Section 230713 "Duct Insulation" and Section 230719 "HVAC Piping Insulation."
- C. Mark equipment and balancing devices, including damper-control positions, valve position indicators, fan-speed-control levers, and similar controls and devices, with paint or other suitable, permanent identification material to show final settings.
- D. Take and report testing and balancing measurements in inch-pound (IP) units.

3.4 GENERAL PROCEDURES FOR BALANCING AIR SYSTEMS

- A. Prepare test reports for both fans and outlets. Obtain manufacturer's outlet factors and recommended testing procedures. Crosscheck the summation of required outlet volumes with required fan volumes.
- B. Prepare schematic diagrams of systems' "as-built" duct layouts.
- C. Determine the best locations in main and branch ducts for accurate duct-airflow measurements.
- D. Check airflow patterns from the outdoor-air louvers and dampers and the return- and exhaust-air dampers through the supply-fan discharge and mixing dampers.
- E. Locate start-stop and disconnect switches, electrical interlocks, and motor starters.
- F. Verify that motor starters are equipped with properly sized thermal protection.
- G. Check dampers for proper position to achieve desired airflow path.
- H. Check for airflow blockages.
- I. Check condensate drains for proper connections and functioning.
- J. Check for proper sealing of air-handling-unit components.
- K. Verify that air duct system is sealed as specified in Section 233113 "Metal Ducts."

3.5 PROCEDURES FOR CONSTANT-VOLUME AIR SYSTEMS

- A. Adjust fans to deliver total indicated airflows within the maximum allowable fan speed listed by fan manufacturer.
 - 1. Measure total airflow.
 - a. Where sufficient space in ducts is unavailable for Pitot-tube traverse measurements, measure airflow at terminal outlets and inlets and calculate the total airflow.
 - 2. Measure fan static pressures as follows to determine actual static pressure:
 - a. Measure outlet static pressure as far downstream from the fan as practical and upstream from restrictions in ducts such as elbows and transitions.
 - b. Measure static pressure directly at the fan outlet or through the flexible connection.
 - c. Measure inlet static pressure of single-inlet fans in the inlet duct as near the fan as possible, upstream from the flexible connection, and downstream from duct restrictions.
 - d. Measure inlet static pressure of double-inlet fans through the wall of the plenum that houses the fan.
 - 3. Measure static pressure across each component that makes up an air-handling unit, rooftop unit, and other air-handling and -treating equipment.
 - a. Report the cleanliness status of filters and the time static pressures are measured.
 - 4. Measure static pressures entering and leaving other devices, such as sound traps, heat-recovery equipment, and air washers, under final balanced conditions.
 - 5. Review Record Documents to determine variations in design static pressures versus actual static pressures. Calculate actual system-effect factors. Recommend adjustments to accommodate actual conditions.
 - 6. Obtain approval from Architect for adjustment of fan speed higher or lower than indicated speed. Comply with requirements in HVAC Sections for air-handling units for adjustment of fans, belts, and pulley sizes to achieve indicated air-handling-unit performance.
 - 7. Do not make fan-speed adjustments that result in motor overload. Consult equipment manufacturers about fan-speed safety factors. Modulate dampers and measure fan-motor amperage to ensure that no overload will occur. Measure amperage in full-cooling, full-heating, economizer, and any other operating mode to determine the maximum required brake horsepower.
- B. Adjust volume dampers for main duct, submain ducts, and major branch ducts to indicated airflows within specified tolerances.
 - 1. Measure airflow of submain and branch ducts.
 - a. Where sufficient space in submain and branch ducts is unavailable for Pitot-tube traverse measurements, measure airflow at terminal outlets and inlets and calculate the total airflow for that zone.
 - 2. Measure static pressure at a point downstream from the balancing damper, and adjust volume dampers until the proper static pressure is achieved.
 - 3. Remeasure each submain and branch duct after all have been adjusted. Continue to adjust submain and branch ducts to indicated airflows within specified tolerances.
- C. Measure air outlets and inlets without making adjustments.
 - 1. Measure terminal outlets using a direct-reading hood or outlet manufacturer's written instructions and calculating factors.
- D. Adjust air outlets and inlets for each space to indicated airflows within specified tolerances of indicated values. Make adjustments using branch volume dampers rather than extractors and the dampers at air terminals.

1. Adjust each outlet in same room or space to within specified tolerances of indicated quantities without generating noise levels above the limitations prescribed by the Contract Documents.
2. Adjust patterns of adjustable outlets for proper distribution without drafts.

3.6 TOLERANCES

- A. Set HVAC system's air flow rates and water flow rates within the following tolerances:
1. Supply, Return, and Exhaust Fans and Equipment with Fans: Plus or minus 10 percent.
 2. Air Outlets and Inlets: Plus or minus 10 percent.

3.7 REPORTING

- A. Initial Construction-Phase Report: Based on examination of the Contract Documents as specified in "Examination" Article, prepare a report on the adequacy of design for systems' balancing devices. Recommend changes and additions to systems' balancing devices to facilitate proper performance measuring and balancing. Recommend changes and additions to HVAC systems and general construction to allow access for performance measuring and balancing devices.

3.8 FINAL REPORT

- A. General: Prepare a certified written report; tabulate and divide the report into separate sections for tested systems and balanced systems.
1. Include a certification sheet at the front of the report's binder, signed and sealed by the certified testing and balancing engineer.
 2. Include a list of instruments used for procedures, along with proof of calibration.
- B. Final Report Contents: In addition to certified field-report data, include the following:
1. Fan curves.
 2. Manufacturers' test data.
 3. Field test reports prepared by system and equipment installers.
 4. Other information relative to equipment performance; do not include Shop Drawings and product data.
- C. General Report Data: In addition to form titles and entries, include the following data:
1. Title page.
 2. Name and address of the TAB contractor.
 3. Project name.
 4. Project location.
 5. Architect's name and address.
 6. Engineer's name and address.
 7. Contractor's name and address.
 8. Report date.
 9. Signature of TAB supervisor who certifies the report.
 10. Table of Contents with the total number of pages defined for each section of the report. Number each page in the report.
 11. Summary of contents including the following:
 - a. Indicated versus final performance.
 - b. Notable characteristics of systems.
 - c. Description of system operation sequence if it varies from the Contract Documents.
 12. Nomenclature sheets for each item of equipment.

13. Data for terminal units, including manufacturer's name, type, size, and fittings.
 14. Notes to explain why certain final data in the body of reports vary from indicated values.
 15. Test conditions for fans and pump performance forms including the following:
 - a. Settings for outdoor-, return-, and exhaust-air dampers.
 - b. Conditions of filters.
 - c. Cooling coil, wet- and dry-bulb conditions.
 - d. Face and bypass damper settings at coils.
 - e. Fan drive settings including settings and percentage of maximum pitch diameter.
 - f. Inlet vane settings for variable-air-volume systems.
 - g. Settings for supply-air, static-pressure controller.
 - h. Other system operating conditions that affect performance.
- D. System Diagrams: Include schematic layouts of air and hydronic distribution systems. Present each system with single-line diagram and include the following:
1. Quantities of outdoor, supply, return, and exhaust airflows.
 2. Water and steam flow rates.
 3. Duct, outlet, and inlet sizes.
 4. Pipe and valve sizes and locations.
 5. Terminal units.
 6. Balancing stations.
 7. Position of balancing devices.
- E. Air-Handling-Unit Test Reports: For air-handling units with coils, include the following:
1. Unit Data:
 - a. Unit identification.
 - b. Location.
 - c. Make and type.
 - d. Model number and unit size.
 - e. Manufacturer's serial number.
 - f. Unit arrangement and class.
 - g. Discharge arrangement.
 - h. Sheave make, size in inches, and bore.
 - i. Center-to-center dimensions of sheave, and amount of adjustments in inches.
 - j. Number, make, and size of belts.
 - k. Number, type, and size of filters.
 2. Motor Data:
 - a. Motor make, and frame type and size.
 - b. Horsepower and rpm.
 - c. Volts, phase, and hertz.
 - d. Full-load amperage and service factor.
 - e. Sheave make, size in inches, and bore.
 - f. Center-to-center dimensions of sheave, and amount of adjustments in inches.
 3. Test Data (Indicated and Actual Values):
 - a. Total air flow rate in cfm.
 - b. Total system static pressure in inches wg.
 - c. Fan rpm.
 - d. Discharge static pressure in inches wg.
 - e. Filter static-pressure differential in inches wg.
 - f. Preheat-coil static-pressure differential in inches wg.
 - g. Cooling-coil static-pressure differential in inches wg.
 - h. Heating-coil static-pressure differential in inches wg.
 - i. Outdoor airflow in cfm.
 - j. Return airflow in cfm.

- k. Outdoor-air damper position.
- l. Return-air damper position.
- m. Vortex damper position.

F. Round, Flat-Oval, and Rectangular Duct Traverse Reports: Include a diagram with a grid representing the duct cross-section and record the following:

1. Report Data:

- a. System and air-handling-unit number.
- b. Location and zone.
- c. Traverse air temperature in deg F.
- d. Duct static pressure in inches wg.
- e. Duct size in inches.
- f. Duct area in sq. ft..
- g. Indicated air flow rate in cfm.
- h. Indicated velocity in fpm.
- i. Actual air flow rate in cfm.
- j. Actual average velocity in fpm.
- k. Barometric pressure in psig.

G. Instrument Calibration Reports:

1. Report Data:

- a. Instrument type and make.
- b. Serial number.
- c. Application.
- d. Dates of use.
- e. Dates of calibration.

3.9 INSPECTIONS

A. Initial Inspection:

- 1. After testing and balancing are complete, operate each system and randomly check measurements to verify that the system is operating according to the final test and balance readings documented in the final report.
- 2. Check the following for each system:
 - a. Measure airflow of at least 10 percent of air outlets.
 - b. Measure room temperature at each thermostat/temperature sensor. Compare the reading to the set point.
 - c. Verify that balancing devices are marked with final balance position.
 - d. Note deviations from the Contract Documents in the final report.

B. Final Inspection:

- 1. After initial inspection is complete and documentation by random checks verifies that testing and balancing are complete and accurately documented in the final report, request that a final inspection be made by Architect.
- 2. The TAB contractor's test and balance engineer shall conduct the inspection in the presence of Owner.
- 3. Owner shall randomly select measurements, documented in the final report, to be rechecked. Rechecking shall be limited to either 10 percent of the total measurements recorded or the extent of measurements that can be accomplished in a normal 8-hour business day.
- 4. If rechecks yield measurements that differ from the measurements documented in the final report by more than the tolerances allowed, the measurements shall be noted as "FAILED."

5. If the number of "FAILED" measurements is greater than 10 percent of the total measurements checked during the final inspection, the testing and balancing shall be considered incomplete and shall be rejected.
- C. TAB Work will be considered defective if it does not pass final inspections. If TAB Work fails, proceed as follows:
 1. Recheck all measurements and make adjustments. Revise the final report and balancing device settings to include all changes; resubmit the final report and request a second final inspection.
 2. If the second final inspection also fails, Owner may contract the services of another TAB contractor to complete TAB Work according to the Contract Documents and deduct the cost of the services from the original TAB contractor's final payment.
- D. Prepare test and inspection reports.

3.10 ADDITIONAL TESTS

- A. Within 90 days of completing TAB, perform additional TAB to verify that balanced conditions are being maintained throughout and to correct unusual conditions.
- B. Seasonal Periods: If initial TAB procedures were not performed during near-peak summer and winter conditions, perform additional TAB during near-peak summer and winter conditions.

END OF SECTION 230593



LOS ANGELES AIR BALANCE CO., INC.

1848 W. 11th Street, Suite #N, Upland, CA 91786

Tel: 909-931-1114

E-mail: Sales@LAairBalance.com



License #625772 C61/D62 Expires 8/31/2027

Date: 10/30/2025

To: Miriam Mosqueda

Exhibit E - AABC Certified Air Balance

From: Monica Barela

Quotation Number: 7273978

Project Name: Newport Beach Peninsula Fire Station No. 2 HVAC Retrofit

2807 Newport Blvd

Newport Beach, CA

DESCRIPTION

For your consideration, we propose AABC Certified Testing, Adjusting and Balancing, as per the mechanical plans dated: 8/15/2025 and specification section 230593. This proposal is based on the following:

SCOPE OF WORK

Air Balance

TAB Plan

Controls Verification

AABC Member Required

1 Trip to Jobsite

Excludes any Air Distribution / EFs

QUALIFICATIONS

- ♦ All work is based on regular working hours from Monday through Friday, 6:00 am to 5:00 pm.
- ♦ Written notification that the deficiencies have been corrected is required before rescheduling our technician. If additional trips are required to retest deficiencies, the time will be billed at an hourly rate of \$250.00 per man-hour with a 4-hour minimum.
- ♦ The contractor shall provide a controls technician to operate any automated controls and/or furnish the software and onsite instruction regarding how to operate the system.

INCLUSIONS

- ♦ Work by AABC certified technicians and AABC Project National Guarantee (1 Year)
- ♦ Controls verification / Inspector witness test
- ♦ AABC Certified Report (via email) with multicolor CAD drawings
- ♦ LAAB standard insurances
- ♦ Items listed in Scope Of Work above
- ♦ 90 day / Seasonal tests at no additional cost if specified
- ♦ Any bid amounts less than \$1,800.00, includes only (1) trip to the jobsite

EXCLUSIONS

- ♦ Any item not listed in Scope Of Work above; duct testing, Title 24 acceptance testing, participation in the commissioning process, IAQ testing, pre-demo surveys
- ♦ Sheave/belt changes or sizing
- ♦ Controls software or hardware
- ♦ Lift/scaffolding
- ♦ Cleaning and/or removing strainers
- ♦ ASHRAE Standard 110 & 113
- ♦ Building envelope testing
- ♦ Additional drug testing, safety training
- ♦ Overtime/off hours
- ♦ Piping tests/plumbing systems
- ♦ Domestic water systems
- ♦ Liquidated damages
- ♦ HEPA filter testing
- ♦ Providing/installing any materials
- ♦ Performance/payment bonds
- ♦ Re-balancing/project phasing
- ♦ Equipment/systems not shown on drawings
- ♦ Hiring a controls contractor
- ♦ Cleanroom certification
- ♦ Fire life safety testing
- ♦ Smoke detector testing
- ♦ Smoke fluid/machines/testing
- ♦ Stairwell pressure testing
- ♦ Ultrasonic water testing
- ♦ Additional insurance coverages
- ♦ Installation of air filters
- ♦ Hospital ceiling opening/closing

TERMS AND CONDITIONS

- ♦ Net 30 days for all proposal amounts. (Please fax 20 day notice info before scheduling)
- ♦ This proposal is valid for 60 days from date shown above.
- ♦ Penalty clauses of any kind will not be effective unless approved in writing by a principal of this firm.
- ♦ This proposal shall be attached as an addendum to any subcontract agreement.

Los Angeles Air Balance provides you with this quotation:

BASE BID..... \$1,700.00
Alternate 1: Commissioning Assist \$1,200.00

Thank you for the opportunity to join your team...

Eddie Alejandro, Vince Alejandro, Monica Alejandro-Barela, Mitch Alejandro

Accepted By: _____

Date: _____

Title: _____

Purchase Order / Subcontract No. : _____

Accts. Payable Contact Name : _____ Email Address : _____