# ADDENDUM NO. 2

Project: Mt Diablo Unified School District
**Rio Vista Elementary School**
**Increment 1**
19six #: 23118
DSA #: 01-121440 File #:7-29
Bid #: 1940
Date: **April 24, 2024**

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To all bidders submitting proposals for the above captioned project. This Addendum is hereby included in the Contract Documents to the same extent as though it were originally included therein. The following items modify, add to, delete from, or explain the drawings and/or specifications. The contents of this Addendum shall take precedence over the original specifications and plans.

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**A.** **NEW SPECIFICATIONS**

**ITEM 1.** **01 23 00 ALTERNATES AND UNIT PRICES**
**ITEM 2.** **01 91 00 GENERAL COMMISSIONING**
**ITEM 2.** **23 08 00 COMMISSIONING OF HVAC SYSTEMS**
**ITEM 3.** **23 09 23 DIRECT DIGITAL CONTROL SYSTEM FOR HVAC**

**B.** **NEW DRAWINGS**

**ITEM 1.** **1MP-004 – SCHEMATICS – MECHANICAL**
**ITEM 2.** **1MP-302 – BLDG 2 – DEMO & NEW ROOF PLANS – MECHANICAL & PLUMBING**
**ITEM 3.** **1MP-303 – BLDG 7 – DEMO & NEW ROOF PLANS – MECHANICAL & PLUMBING**
**ITEM 4.** **1MP-501 – CONTROLS – MECHANICAL**
**ITEM 5.** **1MP-603 – DETAILS – MECHANICAL & PLUMBING**

**C.** **CHANGES TO SPECIFICATIONS**

**ITEM 1.** **08 41 00 ALUMINUM ENTRANACE AND STOREFRONT**
- Revised specification to be Arcadia Storefront

**D.** **CHANGES TO DRAWINGS**

**ITEM 1.** **1G-101 – FIRE AUTHORITY SITE PLAN**
- New exterior doors removed.
- Corrected new exterior door placement to reflect the building 7 floor plan.

**ITEM 2.** **1A-251 – BLDG 1&2 – FINISH & SIGNAGE PLAN**

- Floor Finishes (F) schedule revised:
  - Row added 1 LVT, color, and remarks.
  - LVT colors 1, 2, and 3 were removed from the table.
  - The code number for the carpet tiles has been replaced from 2 to 5. Color has also been added to read "TBD" and remarks to "TARKETT."
  - 2 LVT (MULTICOLOR) rows have been added to the table.
  - Color added and remarks revised for epoxy flooring.
- Base Finishes (B) schedule revised:
  - Color and remarks were added for the rubber base and epoxy cove base.
- Wall finishes (W) revised:
  - Remarks added on 3 ceramic wall tiles.
  - 4, 5, 6 Ceramic wall tile rows added.
- Paint (P) schedule revised:
  - For paint 1,2 and 3 colors and remarks added.
  - 7 and 8 rows added.
  - Exterior paint # has been changed to 9, and exterior paint trim has been changed to 10.
- Detail 1 revised:
  - Typical Classroom LVT Layout details have been added, including color information and tile layout.
  - The Classroom C14 finish tag has been revised.
  - The Classroom C13 finish tag has been revised.
  - The Classroom C12 finish tag has been revised.
  - The storage 218 finish tag has been revised.
  - The Office 209 finish tag has been revised.
  - The Entry Hall 206 finish tag has been revised.
  - The Office 204 finish tag has been revised.
  - The Reading Room 205 finish tag has been revised.
  - The library 200 finish tag has been revised.
  - The Office 218 finish tag has been revised.
  - Entry hall 206 finish tag has been.
  - The Office 204 finish tag has been.
  - The storage 203 finish tag has been.

**ITEM 3.** **1A-252 – BLDG 5&7 – FINISH & SIGNAGE PLAN**

- Floor Finishes (F) schedule revised:
  - Row added 1 LVT, color, and remarks.
  - LVT colors 1, 2, and 3 were removed from the table.
  - The code number for the carpet tiles has been replaced from 2 to 5. Color has also been added to read "TBD" and remarks to "TARKETT."

  - 2 LVT (MULTICOLOR) rows have been added to the table.
  - Color added and remarks revised for epoxy flooring.
- Base Finishes (B) schedule revised:
  - Color and remarks were added for the rubber base and epoxy cove base.
- Wall finishes (W) revised:
  - Remarks added on 3 ceramic wall tiles.
  - 4, 5, 6 Ceramic wall tile rows added
- Paint (P) schedule revised:
  - For paint 1,2 and 3 colors and remarks added
  - 7 and 8 rows added.
  - Exterior paint # has been changed to 9, and exterior paint trim has been changed to 10.
  - The kinder classroom 700 finish tag has been revised.
  - The breakout room 704 finish tag has been revised.
  - The kinder classroom 701 finish tag has been revised.

**ITEM 4. 1A-601 – BLDG 2 – INTERIOR ELEVATIONS**

- Detail 1 Elevation 1A revised:
  - Keynote 09.51.E added for clarification.
  - Room name revised to read "CLASSROOM."

- Detail 1 Elevation 1B revised:
  - Room name revised to read "CLASSROOM."
  - The fire extinguisher location was revised, and dimensions were added for clarification.

- Detail 1 Elevation 1C revised:
  - Location of hexagon acoustical wall panels revised with new dimensions added for clarification.
  - Casework section details added for clarification.
  - Casework under the lower sink updated to double doors cabinet.
  - Room name revised to read "CLASSROOM"

- Detail 1 Elevation 1D revised:
  - Room name revised to read "CLASSROOM."

**ITEM 5. 1A-602 – BLDG 2 – INTERIOR ELEVATIONS**

- Keynotes:
  - An empty 25.53. A note has been removed.
- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights.

- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag.
- Detail 1 elevation 1A revised:
  - The graphic has been changed to clarify the condition of the new full-height wall to the existing roof structure.
- Detail 1 elevation 1B revised:
  - The graphic has been changed to clarify the condition of the existing roof structure.
- Detail 1 elevation 1C revised:
  - The graphic has been changed to clarify the condition of the new full-height wall to the existing roof structure.
- Detail 1 elevation 1D revised:
  - Door 218 has been moved to a new location with an updated keynote.
  - Wall infills have been removed, indicating a new partition wall.
  - one light fixture has been removed to avoid conflict with existing ductwork.
  - The graphic has been changed to clarify the new wall attachment to the new structural beam.
- Detail 1 elevation 1D revised:
  - The graphic has been changed to clarify the condition of the new full-height wall to the existing roof structure.
- Detail 2 elevation 2A revised:
  - Keynote and wal base added.
- Detail 2 elevation 2B revised:
  - The existing ductwork graphic has been updated for clarification to reflect the existing condition.
  - Lines have been removed, serving no purpose to the elevation.
- Detail 2 elevation 2E revised:
  - The Fire Alarm panel has been noted, and graphics have been modified for clarification.
- Detail 2 elevation 2F revised:
  - The Fire Alarm panel section in view has been removed, having no purpose to the interior elevation.

**ITEM 6. 1A-603 – BLDG 2 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights.
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag.

- Detail 1 Elevation 1A has been revised:
  - The pendant light has been removed. Light fixtures are to be recessed mounted as shown on RCPs.
- Detail 1 Elevation 1D has been revised:
  - Door 218 has been moved to a new location with an updated keynote
  - Wall infill has been removed, indicating a new partition wall and keynote 09.22.F.
- Detail 2 Elevation 2A has been revised:
  - Casework has been removed from the scope of work, and the light fixtures graphic removed as to be recessed mounted as shown on RCPs.
  - 09.91. A and 09.62.B keynotes have been added
- Added I.2 Elevation 2B has been revised:
  - Casework has been removed from the scope of work.
- Detail 2 Elevation 2C has been revised:
  - Drawing lines were removed from elevation as they served no purpose to the view.
- Detail 2 Elevation 2D has been revised:
  - Casework has been removed from the scope of work.
- Detail 3 Elevation 3D has been revised:
  - Door keynote has been updated.
- Detail 4 Elevation 4C has been revised:
  - Drawing lines were removed from elevation as they served no purpose to the view.
- Detail 5 Elevation 5A has been revised:
  - The light switch has been updated to a new location, and the keynote has been added.

**ITEM 7. 1A-604 – BLDG 5 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag.
- Detail 1 Elevation 1A has been revised:
  - Light switch mounting dimensions have been added, and the duplicated keynote has been removed.
- Detail 1 Elevation 1b has been revised:
  - Existing door keynote has been updated.
- Detail 1 Elevation 1C has been revised:
  - Infill wall hatches have been removed, as work should only be done from inside RR 506 regarding plumbing work.

- Detail 3 Elevation 3B has been revised:
  - Existing electrical panel added, as well as keynote.
  - Keynote for the new light switch has been added.
  - Detail section for casework has been added for clarification.
- Detail 3 Elevation 3C has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling. The dimension has been removed from view.
- Detail 4 Elevation 4A has been revised:
  - The wall line of the existing portion of the closet has been added for clarification.
- Detail 4 Elevation 4B has been revised:
  - Existing portion of closet and door to be demolished.

**ITEM 8. 1A-605 – BLDG 5 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag.
- Detail 2 Elevation 2C has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
- Detail 3 Elevation 3A has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
  - 09.91. A keynote has been added for clarifclarification.ng lines were removed as they do not serve any purpose for the elevation scope of work.
- Detail 3 Elevation 3B has been revised:
  - Drawing lines were removed as they do not serve any purpose for the elevation scope of work.
- Detail 3 Elevation 3C has been revised:
  - Drawing lines were removed as they do not serve any purpose for the elevation scope of work.
- Detail 5 Elevation 5A has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
  - Keynote 09.22.B has been added to the wall infill hatch.

  - The Door tag has been added to the new door for clarification and the keynote.
- Detail 5 Elevation 5C has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
- Detail 5 Elevation 5D has been revised:
  - Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
- Detail 6 Elevation 6A has been revised:
  - Note has been updated to read "Open to reception" for clarification
  - The light switch location has been updated to a new location with keynote and dimension for clarification

**ITEM 8. 1A-606 – BLDG 5 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag
- Detail 1 Elevation 1A has been revised:
  - A detail section at the casework has been added for clarification
- Detail 1 Elevation 1B has been revised:
  - The casework view section has been removed and indicating its location
- Detail 1 Elevation 1D has been revised:
  - New Tackable wall has been extended to the corner of the room.
  - The fire extinguisher location has been modified, and the keynote has been added.
- Detail 2 Elevation 2A has been revised:
  - Existing casework and keynote has been added for clarification
- Detail 2 Elevation 2B has been revised:
  - Existing casework and keynote has been added for clarification
- Detail 2 Elevation 2C has been revised:
  - Existing casework has been added for clarification
- Detail 2 Elevation 2D has been revised:
  - Existing casework has been added for clarification

**ITEM 9. 1A-607 – BLDG 7 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:

  - Note 3 has been revised for clarification on light switches' mount heights
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag
- Detail 2 Elevation 2A has been revised:
  - The casework graphic has been removed as casework is shown on elevation 2E
- Detail 2 Elevation 2B has been revised:
  - The location of the new FRP door has been modified
- Detail 2 Elevation 2E has been revised:
  - New door 701. A keynote has been added
  - Under cabinets have been modified, and a detail section has been added
- Detail 2 Elevation 2F has been revised:
  - The casework view section has been removed and indicating its location
  - The new door has been removed from the scope and replaced with a new wall infill
  - New mounting height dimensions have been updated for the fire extinguisher and light switch.

**ITEM 10. 1A-608 – BLDG 7 – INTERIOR ELEVATIONS**

- Legend – Interior Elevation General Notes have been revised:
  - Note 3 has been revised for clarification on light switches' mount heights
- Interior Elevation Legend has been revised:
  - Reference sheet has been added to the casework tag
- Detail 1 Elevation 1B has been revised:
  - The duplicated fire extinguisher has been removed
  - New location for fire extinguisher has been provided
- Detail 1 Elevation 1C has been revised:
  - New door 701.A and keynote has been added
- Detail 2 Elevation 2A has been revised:
  - Ceiling height and shape revised. Drawing lines were removed as they do not serve any purpose for the elevation scope of work.
- Detail 2 Elevation 2C has been revised:
  - Ceiling height and shape revised. Light fixtures graphics have been removed from the view as they should be recessed mounted to the new ceiling.
- Detail 2 Elevation 2D has been revised:
  - The window type has been modified to a new one. The scope of the wall infill above the new window has been added with a note to read "WALL INFILL CONTINUES ABOVE THE CEILING LEVEL, TYP. SEE EXTERIOR ELEVATIONS"

- Detail 3 Elevation 3A has been revised:
  - Ceiling height has been modified
  - 26.51.B keynote added
  - 09.65.B Keynote and wall base have been added.
- Detail 3 Elevation 3B has been revised:
  - Ceiling height has been modified
- Detail 3 Elevation 3C has been revised:
  - Ceiling height has been modified
  - 8.11.B, 09.22.A and 09.65.B keynotes have been added for clarification
- Detail 3 Elevation 3D has been revised:
  - Ceiling height has been modified
  - 8.11.B, 09.22.A and 09.65.B keynotes have been added for clarification
- Detail 4 Elevation 4A has been revised:
  - Ceiling height has been modified
- Detail 4 Elevation 4B has been revised:
  - Ceiling height has been modified
  - New window has been added
- Detail 4 Elevation 4C has been revised:
  - Ceiling height has been modified, and drawing lines removed.
- Detail 4 Elevation 4D has been revised:
  - Ceiling height has been modified
- Detail 5 Elevation 5A has been revised:
  - Ceiling height has been modified
- Detail 5 Elevation 5B has been revised:
  - Ceiling height has been modified
- Detail 5 Elevation 5C has been revised:
  - Ceiling height has been modified
- Detail 5 Elevation 5D has been revised:
  - Ceiling height has been modified

**ITEM 11. 1A-811 – DOOR SCHEDULE**

- Legend – Door Notes have been revised:
  - Note 8 has been updated to read "EXTERIOR: FRP DOORS ON EXISTING WOOD FRAMES. NEW DOORS SHALL BE SPECIAL LITE SL-20 SANDSTONE TEXTURE FRP UNLESS OTHERWISE NOTED. SEE SPECIFICATIONS 08 17 43."
  - Note 11 has been updated to read "ALL INTERIOR STORFRONT FRAMES SHOULD PROVIDE GASKETING FOR THE FRP DOORS PER THE DETAILS."
- New door type F has been added.

**ITEM 12. 1A-811 – WINDOW SCHEDULE**

- Windows General notes have been revised:
  - Note 1 has been updated to read: "EXTERIOR STOREFRONT BASIS OF DESIGN ARCADIA AFG451T - THERMALLY BROKEN."
  - Note 1 has been updated to read: "ALL INTERIOR WINDOWS BASIS OF DESIGN ARCADIA AFG451T - THERMALLY BROKEN."

**ITEM 13.** **1MP-001 – LEGENDS & NOTES – MECHANICAL & PLUMBING**
- Line 28 and 29 added to GENERAL NOTES
- Revision to DRAWING INDEX

**ITEM 14.** **1MP-002 – SCHEDULES - MECHANICAL**
- Revise 1MP-002

**ITEM 15.** **1MP-003 – SCHEDULES & SCHEMATICS – MECH. & PLUMBING**
- Detail 1 BLDG MU HP-MU-12 SYSTEM SCHEMATIC added
- Detail 2 BLDG 2 HP-2-12A ,B, C, 204, 213 SYSTEM SCHEMATIC

**ITEM 16.** **1MP-201 – BLDG 1 MPR – DEMO & NEW FLOOR PLANS**
- Revise BLDGS 1 MPR FLOOR PLANS – NEW – MECHANICAL & PLUMBING
- Revise GENERAL NOTES
- Revise NEW SHEET NOTES AND NEW SHEET NOTES CONTINUED

**ITEM 17.** **1MP-202 – BLDG 2 – DEMO & NEW FLOOR PLANS**
- Revise GENERAL NOTES
- Revise NEW SHEET NOTES

**ITEM 18.** **1MP-203 – BLDG 5 – DEMO & NEW FLOOR PLANS**
- Revise GENERAL NOTES
- Revise DEMOLITION SHEET NOTES
- Revise NEW SHEET NOTES
- Revise BLDG 5 FLOOR PLAN – NEW – MECHANICAL
- Revise BLDG 5 FLOOR PLAN - NEW – PLUMBING

**ITEM 19.** **1MP-204 – BLDGS 7 – DEMO & NEW FLOOR PLANS**
- Revise 1MP-204

**ITEM 20.** **1MP-301 – BLDGS 1 & 5 – DEMO & NEW ROOF PLANS**
- Revise 1MP-301

**ITEM 21.** **1MP-401 – BLDGS 2 – DEMO & NEW RESTROOM PLANS**
- Revision to GENERAL NOTES
- Revision to NEW SHEET NOTES

**ITEM 22.** **1MP-402 – BLDG 5 ADMIN – DEMO & NEW RESTROOM PLANS**
- Revision to GENERAL NOTES
- Revision to NEW SHEET NOTES

**ITEM 23.** **1MP-601 – DETAILS – MECHANICAL & PLUMBING**
- Revision to detail 1, 3, 7, and 11

**ITEM 24.** **1MP-602 – DETAILS – MECHANICAL & PLUMBING**

- Revision to detail 7, 8, 11, and 15

**ITEM 25.** **1T-200 – TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**

- Revise SHEET NOTES
- Revise TECHNOLOGY INFRA. FLOOR PLAN NEW – BUILDING 2

**ITEM 26.** **1T-201 – TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**

- Revise SHEET NOTES
- Revise TECHNOLOGY INFRA. FLOOR PLAN NEW – BUILDING 5

**ITEM 27.** **1T-701 – TECHNOLOGY INFRASTRUCTURE SINGLE LINES**

- Revise detail A MDF 1.00
- Revise table EQUIPMENT INTERCOM SCHEDULE

## E. ATTACHMENTS

### A. SPECIFICATIONS

- **01 23 00 ALTERNATES AND UNIT PRICES**
- **01 91 00 GENERAL COMMISSIONING**
- **08 41 00 ALUMINUM ENTRANACE AND STOREFRONT**
- **23 08 00 COMMISSIONING OF HVAC SYSTEMS**
- **23 09 23 DIRECT DIGITAL CONTROL SYSTEM FOR HVAC**

### B. DRAWING SHEETS

- **1G-101 – FIRE AUTHORITY SITE PLAN**
- **1A-251 – BLDG 1&2 – FINISH & SIGNAGE PLAN**
- **1A-252 – BLDG 5&7 – FINISH & SIGNAGE PLAN**
- **1A-601 – BLDG 2 – INTERIOR ELEVATIONS**
- **1A-602 – BLDG 2 – INTERIOR ELEVATIONS**
- **1A-603 – BLDG 2 – INTERIOR ELEVATIONS**
- **1A-604 – BLDG 5 – INTERIOR ELEVATIONS**
- **1A-605 – BLDG 5 – INTERIOR ELEVATIONS**
- **1A-606 – BLDG 5 – INTERIOR ELEVATIONS**
- **1A-607 – BLDG 7 – INTERIOR ELEVATIONS**
- **1A-608 – BLDG 7 – INTERIOR ELEVATIONS**
- **1A-801 – DOOR SCHEDULE**
- **1A-811 – WINDOW SCHEDULE**
- **1MP-001 – LEGENDS & NOTES – MECHANICAL & PLUMBING**
- **1MP-002 – SCHEDULES – MECHANICAL**
- **1MP-003 – SCHEDULES & SCHEMATICS – MECH. & PLUMBING**
- **1MP-004 – SCHEMATICS – MECHANICAL**
- **1MP-201 – BLDG 1 MPR – DEMO & NEW FLOOR PLANS**
- **1MP-202 – BLDG 2 – DEMO & NEW FLOOR PLANS**
- **1MP-203 – BLDG 5 – DEMO & NEW FLOOR PLANS**
- **1MP-204 – BLDGS 7 – DEMO & NEW FLOOR PLANS**
- **1MP-301 – BLDGS 1 & 5 – DEMO & NEW ROOF PLANS**

- **1MP-302 – BLDG 2 – DEMO & NEW ROOF PLANS – MECHANICAL & PLUMBING**
- **1MP-303 – BLDG 7 – DEMO & NEW ROOF PLANS – MECHANICAL & PLUMBING**
- **1MP-401 – BLDGS 2 – DEMO & NEW RESTROOM PLANS**
- **1MP-402 – BLDG 5 ADMIN – DEMO & NEW RESTROOM PLANS**
- **1MP-501 – CONTROLS – MECHANICAL**
- **1MP-601 – DETAILS – MECHANICAL & PLUMBING**
- **1MP-602 – DETAILS – MECHANICAL & PLUMBING**
- **1MP-603 – DETAILS – MECHANICAL & PLUMBING**
- **1T-200 – TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**
- **1T-201 – TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**

4/24/24

Mariana Alvarez Parga C-36107

**DOCUMENT 01 23 00**

**ALTERNATES AND UNIT PRICING**

## 1. ALTERNATES AND UNIT PRICES

### 1.1. RELATED DOCUMENTS AND PROVISIONS

Contractor shall review all Contract Documents for applicable provisions related to the provisions in this document, including without limitation:

1.1.1. General Conditions;

1.1.2. Special Conditions (if any);

1.1.3. Supplemental Conditions (if any);

1.1.4. Bid Form and Proposal; and

1.1.5. Instruction to Bidders.

## 2. ALTERNATES

### 2.1. DESCRIPTION

An amount proposed by Contractor and stated in its Bid Form for certain work defined in the Instruction to Bidders, Bid Form or Contract Documents that may be added to or deducted from the Base Bid amount. The acceptance or rejection of any of the alternates is strictly at the option of the District and subject to District's acceptance of Contractor's stated prices contained in this Proposal.

The cost or credit for each alternate is the net addition to or deduction from the Contract Price to incorporate the alternate into the Work. No other adjustments are made to the Contract Price.

### 2.2. GENERAL:

2.2.1. Coordination: Contractor shall modify or adjust adjacent work as necessary to completely integrate work of the alternate into the Project.

2.2.1.1. Include as part of each alternate, miscellaneous devices, accessories and similar items incidental to or required for a complete installation whether or not indicated as part of the alternate.

2.2.1.2. Include as part of each alternate, the costs of related coordination, modification, or adjustments.

2.2.2. If District accepts an alternate, Contractor shall perform the work of the alternate under the same conditions as other Work required by Contract Documents.

2.2.3. Notification: Immediately following award of the Contract, Contractor shall notify all of its Subcontractor(s) in writing of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

2.2.4. Schedule of Alternates: A Schedule of Alternates is included at the end of this Document. Specifications referenced in the Schedule of Alternates contain requirements for materials necessary to achieve the Work described under each alternate.

## 3. UNIT PRICING

### 3.1. DESCRIPTION

An amount proposed by Contractor and stated in its Bid Form for certain work defined in the Instruction to Bidders and Bid Form that may be priced by unit. The acceptance or rejection of any of the unit prices is strictly at the option of the District and subject to District's acceptance of Contractor's stated prices contained in the Bid Form and may be subsequently negotiated prior to incorporation on Change Order(s).

### 3.2. GENERAL

Contractor shall completely state all required figures based on Unit Prices required in the Bid Form. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

### 3.3. UNIT PRICES

Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as requested and applicable. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).

## 4. EXECUTION

### 4.1. SCHEDULE OF ALTERNATES

4.1.1. Not Applicable

### 4.2. Schedule of Unit Pricing

4.2.1. **Cost per disposal unit to remove and dispose of hazardous Lead-Based Paint window frames as RCRA (estimated to be 47-4x4 and 27-4x9 Windows. 74 Total)**

END OF DOCUMENT

# SECTION 01 91 00 - GENERAL COMMISSIONING

## PART 1 – GENERAL

### 1.1 RELATED SECTIONS

A. 23 08 00 Commissioning of HVAC Systems

### 1.2 DESCRIPTION OF WORK

A. Commissioning is a systematic process of ensuring that all building systems perform interactively according to the design intent and the owner's operational needs. This is achieved by beginning in the design phase and documenting design intent and continuing through construction, acceptance with actual verification of performance. The commissioning process shall encompass and coordinate the traditionally separate functions of system documentation, equipment startup, control system calibration, testing and balancing, performance testing and training.

B. The Commissioning Authority (CA) will be directly hired by the Owner. The General Contractor that is awarded the project shall not include the cost of the Commissioning Authority in their price. The general contractor (and their sub-contractors) shall include cost for their involvement in the commissioning process as described in this section and other related commissioning sections, including completion of system readiness checklists, and demonstration of installed equipment to the commissioning team members during the functional performance testing portion of the project.

C. Commissioning during the construction phase is intended to enhance the quality of system start-up and aid in the orderly completion and transfer of systems for beneficial use by the owner. The following objectives will be documented accordingly:

1. Verify that applicable equipment and systems are installed according to the manufacturer's recommendations and to industry accepted standards, that they meet design intent, and that they receive adequate operational checkout by installing contractors.
2. Verify and document proper performance of equipment and systems.
3. Verify that O&M documentation left on site is complete.
4. Verify that the Owner's operating personnel are adequately trained.

D. The commissioning process does not take away from or reduce the responsibility of the system designers or installing contractors to provide a finished product, installed and fully functional in accordance with the contract documents.

1.3 ABBREVIATIONS

A. The following are common abbreviations used in the Specifications and in the Commissioning Plan.

| | | | |
|---|---|---|---|
| A/E- | Architect and design Engineers | GC- | General Contractor (prime) |
| CA- | Commissioning Authority (Agent) | MC- | Mechanical Contractor |
| CC | Controls Contractor | PC - | Plumbing Contractor |
| CM- | Construction Manager (the owner's representative) | PM- | Project Manager (of the Owner) |
| Cx- | Commissioning | SRC | System Readiness Checklist |
| Cx Plan- | Commissioning Plan document | Subs- | Subcontractors to General |
| EC- | Electrical Contractor | TAB- | Testing Adjusting and Balance Contractor |
| FT- | Functional Performance Test | TC- | Test Coordinator |

1.4 DEFINITIONS

A. Commissioning Plan: An overall plan that provides the structure, schedule and coordination planning for the commissioning process.

B. Deferred Functional Tests: FTs that are performed later, after substantial completion, due to partial occupancy, equipment, seasonal requirements, design or other site conditions that disallow the test from being performed.

C. Deficiency: A condition in the installation or function of a component, piece of equipment or system that is not in compliance with the Contract Documents (that is, does not perform properly or is not complying with the design intent).

D. Design Narrative: Sections of either the Design Intent or Basis Of Design which describe the systems operation and principle function

E. Functional Performance Test (FT): Test of the dynamic function and operation of equipment and systems using direct observation or monitoring methods. Functional testing is the dynamic testing in all modes of systems (rather than just components) under full operation (e.g. the chiller pump is tested interactively with the chiller functions to see if the pump ramps up and down to maintain the differential pressure set point). The systems are run through all the control system's sequences of operation and components are verified to be responding as the sequences state. Traditional air or water test and balancing (TAB) is not functional testing, in the commissioning sense of the word. The commissioning authority develops the functional test procedures in a sequential written form, coordinates, oversees and documents the actual testing, which is usually performed by the installing contractor or vendor. Functional performance tests shall demonstrate the correct installation and operation of each component, system, and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

F. Over-written Value: Writing over a sensor value in the control system to see the response of a system (e.g., changing the outside air temperature value from 50F to 75F to verify economizer operation).

G. Sampling: Functionally testing only a fraction of the total number of identical or near identical pieces of equipment.

H. Seasonal Performance Tests: FT that are deferred until the system(s) will experience conditions closer to their design conditions.

I. Simulated Condition: Condition that is created for the purpose of testing the response of a system (e.g., applying a hair blower to a space sensor to see the response in a VAV box).

J. Simulated Signal: Disconnecting a sensor and using a signal generator to send an amperage, resistance or pressure to the transducer and DDC system to simulate a sensor value.

K. Systems Manual: Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative/operator

L. System Readiness Checklist (SRC): A checklist developed by the CA and provided to the contractor for execution. Completion of this checklist verifies the system or component has been installed in accordance with design documents and IOMs. This checklist is required before commencing functional testing. The signee for a specific contractor section in a SRC will be the same throughout the project (e.g. only one person will sign for the MC).

M. Testing Coordinator (TC): Commissioning Team member appointed by GC. TC's roles include distribution of SRCs between Subs & CA, ensure execution & completion of SRCs by Subs, collect/review completeness of SRCs for final delivery to CA, coordinate scheduling of functional tests, collect all required documents (eg O&Ms, training plans, etc) and deliver to the CA. The TC must be familiar with all of the commissioned equipment and possess good organizational skills.

1.5 COMMISSIONING PROCESS

A. The following activities describe the commissioning tasks during construction and the general order in which they occur. The CA coordinates all activities.

B. Scoping Meeting: All members of the design and construction team that will be involved in the commissioning process meet and agree on the scope of work, tasks, schedules, deliverables, and responsibilities for implementation of the Commissioning Plan.

C. Commissioning Plan: The Commissioning Plan provides guidance in the execution of the commissioning process. The Specifications take precedence over the Commissioning Plan.

D. Submittals: Equipment documentation is submitted within 30 days of approval to the CA, including detailed start-up procedures.

E. Start-Up/System Readiness Checklists (SRC): The CA works with the Subcontractors to develop startup plans and documentation formats, including providing the Subcontractors with system readiness checklists to be completed during the startup process.

F. Functional Performance Testing: The CA develops specific equipment and system functional performance test procedures. The Subcontractors review the procedures. The procedures are executed by the Subcontractors, under the direction of, and documented by the CA.

G. Deficiencies and Resolution: The CA documents items of non-compliance in materials, installation or operation. The items are corrected at the Sub's expense and the equipment or systems are retested.

H. Operations and Maintenance Documentation: The CA reviews the Operation and Maintenance documentation for completeness.

I. Training: The CA reviews the training plans and agenda provided by the Subcontractors and verifies that training is completed.

J. Commissioning Report: The CA writes the commissioning report.

1.6 SCOPE OF WORK

A. The following building systems will be included in the commissioning process for the project:

1. Division 23 (Heating Ventilation and Air Conditioning)

1.7 COMMISSIONING TEAM

A. The members of the commissioning team consist of the following members:

1. Commissioning Authority (Agent) (CA)
2. Owner's Project Manager (PM)
3. General Contractor (GC or Contractor)
4. Architect and Design Engineers (particularly the mechanical and electrical engineers)
5. Mechanical Contractor (MC)
6. Test and Balance contractor (TAB)
7. Controls Contractor (CC)
8. Any other installing subcontractors or suppliers of equipment
9. Owner's maintenance personnel
10. Inspector of Record

1.8 COMMISSIONING AUTHORITY'S RESPONSIBILITIES

A. General

1. The CA, as leader of the commissioning team, directs and coordinates the commissioning activities in conjunction with the General Contractor. All members work together to fulfill their contracted responsibilities and meet the objectives of the contract documents.

2. Within 30 days prior to equipment startup, the CA will schedule and conduct a commissioning scope meeting with the entire commissioning team in attendance. Meeting minutes will be distributed to all parties by the CA. CA will revise the Commissioning Plan to its "final" version from information gathered at the meeting and will distribute to all parties.
3. The CA will work with the CM & GC according to established protocols to schedule the commissioning activities. The CA will provide sufficient notice to the CM & GC for scheduling commissioning activities. The GC will integrate all commissioning activities into the master schedule. All parties will address scheduling problems and make necessary notifications in a timely manner to expedite the commissioning process.
4. The CA will provide the initial schedule of primary commissioning events at the commissioning scope meeting. The Commissioning Plan provides a format for this schedule, as included in the Cx Plan. As construction progresses, more detailed schedules will be developed by the GC.
5. The CA is not responsible for design concept, design criteria, compliance with codes, design or general construction scheduling, cost estimating, or construction management. The CA may assist with problem-solving non-conformance or deficiencies, but ultimately that responsibility resides with the general contractor and the A/E. The primary role of the CA is to develop & coordinate the execution of a testing plan, observe & document performance—that systems are functioning in accordance with the documented design intent & in accordance with the contract documents. The Contractors will provide all tools or the use of tools to start, check-out & functionally test equipment and systems.
6. The CA will not release, revoke, alter, or enlarge on requirements of design documents.
7. The CA will not directly approve or accept any portion of construction work.

B. Construction and Acceptance Phase

1. Coordinates and directs the commissioning activities in a logical, sequential & efficient manner using consistent protocols and forms, centralized documentation, clear & regular communications & consultations with all necessary parties, frequently updated timelines & schedules and technical expertise.
2. Coordinate the commissioning work and, with the GC & CM, ensure that commissioning activities are being scheduled into the master schedule.
3. Revise the Commissioning Plan as required.

4. Plan and conduct a commissioning scoping meeting & other commissioning meetings as necessary.
5. Request and review additional information required to perform commissioning tasks, including O&M materials, contractor start-up and checkout procedures.
6. Before startup, gather & review the current control sequences & interlocks and work with contractors and design engineers until sufficient clarity has been obtained, in writing, to be able to write detailed testing procedures.
7. Write and distribute System Readiness Checklists.
8. Perform site visits to observe component & system installations as needed.
9. Approve SRCs and their completion as submitted by TC for CA's review. CA shall perform selected site observation and spot checking as needed.
10. Review TAB execution plan.
11. Approve air and water systems balancing by spot testing, reviewing completed reports and by selected site observation.
12. Create the FT procedures for equipment and systems with input & review by GC/Subs. Submit to CM for review, and for approval if required.
13. Coordinate, witness and approve manual FT performed by installing contractors. Coordinate retesting as necessary until satisfactory performance is achieved.
14. Maintain a master deficiency and resolution log. Provide the CM with written progress reports and test results with recommended actions.
15. Compile and maintain a commissioning issues log.
16. Provide a final commissioning report.
17. Throughout the commissioning process, document that equipment and systems are installed and perform in accordance with design documents.

## 1.9 DESIGN TEAM RESPONSIBILITIES

A. Construction and Acceptance Phase

1. Attend the commissioning scope meeting.
2. Attend selected commissioning team meetings.
3. Perform normal submittal review, construction observation, as-built drawing preparation, O&M manual preparation, etc., as contracted.
4. Provide any design narrative documentation requested by the CA.
5. Review construction and issue punch lists as required.

6. Provide design intent and sequence of operation documentation as required by the CA.
7. Assist and Coordinate resolution of system deficiencies identified during commissioning or review, according to the contract documents.
8. Approve TAB report prior to distribution to the CA.
9. Prepare and submit final as-built design intent documentation for inclusion in the O&M manuals.
10. Review and approve the O&M manuals.

1.10 OWNER'S REPRESENTATIVE (PM) RESPONSIBILITIES

A. Construction and Acceptance Phase

1. Manage the contract of the CA
2. Facilitate the coordination of the commissioning work by the CA.
3. Ensure with CA & GC that commissioning activities are being scheduled into the master schedule.
4. Review the final Commissioning Plan.
5. Attend commissioning scope meeting and other commissioning team meetings.
6. Furnish to CA copies of all construction documents, addenda, change orders for commissioned equipment.
7. Review and approve CA generated FT procedures prior to testing.
8. Observe SRC completion & FT's for systems to be commissioned.
9. Review commissioning progress and deficiency reports.
10. Coordinate the resolution of non-compliance and design deficiencies identified in all phases of commissioning.
11. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities.
12. Assist the GC in coordinating the training of owner personnel.
13. Provide required IP addresses to controls contractor for setting up remote access to controls systems.

1.11 GENERAL CONTRACTOR (GC) RESPONSIBILITIES

A. Construction and Acceptance Phase

1. Facilitate the coordination of the commissioning work by the CA.

2. Ensure with CA that commissioning activities are being scheduled into the master schedule.
3. Appoint TC for management of SRCs.
4. Include the cost of commissioning in the total contract price. Include all special tool and instruments (only available from vendor, specific to a piece of equipment) required for testing in base bid price.
5. Furnish a copy of all construction documents, addenda, change orders and approved submittals and shop drawings related to commissioned equipment to the CA.
6. Provide a copy of O&Ms, startup reports, TAB reports, Title 24 forms and any other necessary documents for commissioned equipment to the CA.
7. Provide submittals for systems to be commissioned to the engineer of record and the CA.
8. In each purchase order or subcontract written, include requirements for submittal data, O&M data, commissioning tasks and training.
9. Provide equipment sequences of operation and final calibration point to point reports to the CA.
10. Ensure that all Subs execute their commissioning responsibilities according to the contract documents and schedule.
11. Attend commissioning scope meeting and other necessary meetings scheduled by the CA to facilitate the Cx process.
12. Coordinate with subs on construction progress & equipment readiness for SRC completion.
13. Coordinate with CA on construction progress & system readiness for FT completion. Provide the CA ten (10) day advance notice so that system start-up and functional testing can begin.
14. Provide input on functional test scripts.
15. Pre-test all systems and equipment using functional test scripts prior to formal testing in presence of commissioning agent.
16. Coordinate with Subs to assist in and execute functional tests for verification by the CA.
17. Resolve system deficiencies identified during commissioning process.
18. Coordinate with Subs to execute re-testing of deficient systems and equipment.
19. Coordinate the training of owner personnel. Submit an owner training plan to the CA for review and approval.

20. Video record training sessions and provide to owner.
21. Provide trend logs or remote access from the controls system to the CA for review.
22. Prepare O&M manuals, according to the Contract Documents, including clarifying and updating the original sequences of operation to as-built conditions.
23. Responsible for certifying that the work is complete and systems are operational according to design documents.
24. Complete CALGreen closeout documentation as required.

1.12 EQUIPMENT SUPPLIERS

A. Provide all requested submittal data, including detailed start-up procedures and specific responsibilities of the Owner to keep warranties in force.

B. Assist in equipment testing per agreements with Subs.

C. Include all special tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment according to these Contract Documents in the base bid price to the Contractor, except for stand-alone data logging equipment that may be used by the CA.

D. Provide equipment sequence of operation and testing procedures as requested by CA.

E. Review test procedures for equipment installed (or started up) by factory representatives.

1.13 SYSTEMS TO BE COMMISSIONED

A. The following systems will be commissioned in this project:

1. HVAC System
2. TAB Verification
3. HVAC Control Systems

## 1.14 COMMISSIONING DOCUMENTATION

A. Commissioning Plan: Prior to permit issuance, a commissioning plan shall be completed to document how the project will be commissioned. Provided as part of the bid documents, is binding on the Contractor. The commissioning plan provides guidance in the execution of the commissioning process. Just after the initial commissioning scoping meeting the CA will update the plan which is then considered the "final" plan, though it will continue to evolve and expand as the project progresses. The specifications will take precedence over the Commissioning Plan. The commissioning plan shall include the following:

1. General project information
2. Commissioning goals
3. Systems to be commissioned
4. Commissioning team information
5. Commissioning process activities, schedules and responsibilities

B. The Owner Project Requirements and Basis of Design shall be incorporated into the drawings, specifications and other design documents.

C. Commissioning Report: A final summary report by the CA will be provided to Owner. The report will focus on evaluating commissioning process issues. System Readiness Checklists, functional tests and monitoring reports will not be part of the final report. For each piece of commissioned equipment, the report should contain the disposition of the commissioning authority regarding the adequacy of the equipment, documentation and training meeting the contract documents in the following areas:

1. Description of Commissioning Scope
2. System Readiness Checklists and Equipment Start-Up
3. Functional Performance Testing Results
4. Training documentation and evaluation
5. Outstanding Issues
6. Recommendations

## 1.15 SUBMITTALS

A. The CA employs the submittals and IO&Ms to develop the SRCs and FT's. The CA shall review submittals for conformance with construction documents, OPR, & BOD. Submittals provided to the CA must have been approved by the A/E.

B. The A/E will review & approve commissioned equipment submittals for conformance to the contract documents as it relates to the commissioning process, the functional performance of the equipment, & adequacy for developing test procedures. This review shall verify compliance with equipment specifications. The A/E will notify the CM or PM of items missing or areas that are not in conformance with contract documents and which require resubmission.

C. A/E or GC shall provide a complete & approved submittal package to the CA.

D. The CA may request additional design narratives from the A/E and Controls Contractor, depending on the completeness of the design intent documentation and sequences provided in the specifications.

E. Equipment submittals to the CA do not constitute compliance for O&M manual documentation. The IO&M manuals are furnished separately by the Contractor. CA shall review them for development of the SRCs and FTs. IO&M manuals shall be provided with the approved submittals.

F. Contractor shall provide/submit the following documents to the CA:

1. Revised construction schedule including commissioning tasks.
2. Equipment submittals for all commissioned equipment.
3. Sequences of operation for all commissioned equipment.
4. Control diagrams for all commissioned equipment.
5. Final testing and balancing report.
6. Energy code compliance forms – if applicable.
7. Completed SRCs.
8. Manufacturer IO&Ms for commissioned equipment.
9. Training plan for commissioned systems.
10. As-built control sequences and construction drawings.

PART 2 – PRODUCTS

2.1 TEST EQUIPMENT

A. See Schedules on Drawings for equipment data. Furnish and install all equipment in All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the Division contractor for the equipment being tested. E.G. the MC of Division 23 shall ultimately be responsible for all standard testing equipment for the HVAC system and controls system in Division 23, except for equipment specific to and used by TAB in their commissioning responsibilities.

B. Special Tools: Special equipment, tools and instruments (only available from vendor, specific to a piece of equipment) required for testing equipment, according to these Contract Documents shall be included in the base bid price to the Contractor and left on site. Stand-alone data logging equipment used by the CA shall not be subject to this requirement.

2.2 RECORDING

A. The GC shall digitally record the audio and visual of selected trainings:

1. HVAC and Controls

B. An introduction shall be made at the beginning of each recording, identifying what equipment is being illustrated, where it is located and who the trainer is.

C. Recording shall be accomplished with a tripod when possible and performed in an expert manner so that the issues being discussed are clearly illustrated and instructions clearly audible. A high quality camera shall be used and additional light provided if ambient light is insufficient.

D. Media shall be clearly labeled with the equipment, date, trainer and segment duration.

E. The digital visual and audio recording shall be bookmarked at each training with an index/table of contents provided and recorded on the DVD. The bookmarks will clearly indicate which equipment is being presented and the format will allow search and go-to functions for rapidly locating training segments.

F. An original and one copy of the recordings shall be submitted to the OWNER.

PART 3 – EXECUTION

3.1 COMMISSIONING PROCESS

A. The following narrative provides a brief overview of the typical commissioning tasks during design and construction and the general order in which they occur:

1. CA reviews updated OPR, BOD, and design documents to ensure feedback comments have been reviewed.
2. CA develops draft commissioning plan for review by the design team. After the scope meeting, the CA will update the Cx Plan and provide the final plan to the commissioning team.
3. Equipment documentation is submitted to the CA after submittal approval by the A/E.
4. The CA develops the System Readiness Checklists and provides these to the TC to be completed during the startup process.
5. In general, the checkout and performance verification proceeds from simple to complex; from component level to equipment to systems and intersystem levels with the SRCs being completed before FT's.
6. SRCs will be developed and issued after receipt of A/E approved submittals and IO&Ms by the CA.
7. Commissioning during construction begins with a scope meeting conducted by the CA where the commissioning process is reviewed with the commissioning team members.
8. TC shall deliver one set of blank SRCs to Subs. TC shall collect all completed SRCs and deliver package to CA.
9. The Subs, under their own direction, execute the system start-ups and their completion on the SRCs. The completed SRCs are returned to the TC to be returned to the CA for review.
10. The CA develops specific equipment and system FT procedures.
11. The FT procedures are executed by the Subs under the direction of the CA and documented by the CA.
12. Items of non-compliance in material, installation or setup are corrected at the Sub's expense (including the CA's time and expenses) and the system is retested. The General Contractor is responsible for collecting cost and expenses for retesting.
13. GC shall bear all costs should the CA receive any incomplete SRCs and the CA is required to complete the SRCs to support the construction schedule.

14. The CA provides functional test forms to the GC for review. Close coordination is especially required between the CA and the CC to ensure successful development of the functional tests.
15. CA witnesses all functional tests executed by the subs under the direction of the CA.
16. CA to verify control system trend capability and data storage.
17. Any required re-tests are conducted as determined by the CA. Any associated costs with re-tests, including the CA's time and expenses will be charged back to the GC and may be collected from the subs.
18. Training plans are developed and provided to the Owners representative for review.
19. Training is conducted by the Subs and verified by the CA.
20. Functional tests and training is finished before Substantial Completion.
21. Final commissioning report is written.

3.2 SYSTEM READINESS CHECKLIST

A. Procedure: The following procedures apply to all equipment to be commissioned as listed in the Commissioning Plan. Mechanical, plumbing, & electrical commissioning specification sections describe subcontractor responsibilities.

B. General: The SRC for a given system must be successfully completed prior to formal functional performance testing of equipment or subsystems of the given system. The SRC is developed as follows:

1. A/E approved submittals are provided to CA by A/E or GC.
2. IO&M manuals provided to CA by GC.
3. CA develops SRCs from IO&Ms and submittal information.

C. Execution of the SRC

1. CA provides SRC to TC.
2. Installing contractor obtains documentation from TC and any specific manufacturer start-up, including checklists from the O&M.
3. TC coordinates execution of the equipment start-up among Subs per construction schedule.
4. Subs complete start-up and complete SRCs.
5. Only individuals that have direct knowledge and witnessed the start-up shall sign and complete the SRC.

6. All completed SRCs are returned to TC to be provided to the CA for review and approval.

D. Deficiencies, Non-Conformance and Approval in Checklists and Startup

1. The Subs shall clearly list any outstanding items of the initial start-up on the SRC.

2. The SRC and any outstanding deficiencies are provided to the CA within one week of test completion.

3. The CA reviews the SRC & shall work with the Subs & vendors to correct and retest deficiencies or uncompleted items at contractor's expense (including CA's time). The installing Subs or vendors shall correct all areas that are deficient or incomplete in the checklists and tests in a timely manner. Subs shall notify the CA as items have been corrected. Start-up report shall be updated as deficiencies are resolved.

4. Items left incomplete, which later cause deficiencies or delays during functional testing may result in additional costs due to either CA interventions or construction delay liquidated damages to the responsible party. Any SRCs that required CA to complete will result in additional charges to the GC that may be collected from installing sub.

## 3.3 FUNCTIONAL PERFORMANCE TESTING

A. This sub-section applies to all commissioning functional testing for all divisions.

B. Equipment: The general list of equipment to be commissioned is found in the Commissioning Plan.

C. See Mechanical, plumbing, & electrical commissioning specification sections for Subs responsibilities.

D. Objectives and Scope.

1. The objective of FT's is to demonstrate that each system is operating according to the documented design intent and contract documents. FT's facilitate bringing the systems from a state of substantial completion to full dynamic operation. Additionally, during the testing process, areas of deficient performance are identified and corrected, improving the operation and functioning of the systems.

2. In general, each system should be operated through all modes of operation (seasonal, occupied, unoccupied, warm-up, cool-down, part- and full-load) where there is a specified system response. Verifying each sequence in the sequences of operation is required. Proper responses to such modes and conditions as power failure, freeze condition, low oil pressure, no flow, equipment failure, etc. shall also be tested.

E. Development of Test Procedures.

1. Before test procedures are written, the CA shall obtain all requested documentation and a current list of change orders affecting equipment or systems, including an updated points list, control sequences and parameters. Each Sub or vendor responsible to execute a test, shall provide assistance to the CA in developing the procedures (answering questions about equipment, operation, sequences, etc.). Prior to execution, the CA shall provide a copy of the test procedures to the Sub(s) who shall review the tests for feasibility, safety, equipment and warranty protection. The CA may submit the tests to the A/E for review, if requested.

F. Test Methods.

1. FT's and verification may be achieved by manual testing (persons manipulate the equipment and observe performance) or by monitoring the performance and analyzing the results using the control system's trend log capabilities or by stand-alone data loggers.

2. Simulated Conditions. Simulating conditions (not by an overwritten value) shall be allowed, though timing the testing to experience actual conditions is encouraged whenever practical.

3. Overwritten Values. Overwriting sensor values to simulate a condition, such as overwriting the outside air temperature reading in a control system to be something other than it really is, shall be allowed, but shall be used with caution and avoided when possible. Such testing methods often can only test a part of a system, as the interactions and responses of other systems will be erroneous or not applicable. Simulating a condition is preferable. e.g., for the above case, by heating the outside air sensor with a hair blower rather than overwriting the value or by altering the appropriate setpoint to see the desired response. Before simulating conditions or overwriting values, sensors, transducers and devices shall have been calibrated.

4. Simulated Signals. Using a signal generator which creates a simulated signal to test and calibrate transducers and DDC constants is generally recommended over using the sensor to act as the signal generator via simulated conditions or overwritten values.

5. Altering Setpoints. Rather than overwriting sensor values, and when simulating conditions is difficult, altering setpoints to test a sequence is acceptable. For example, to see the AC compressor lockout work at an outside air temperature below 55F, when the outside air temperature is above 55F, temporarily change the lockout setpoint to be 2F above the current outside air temperature.
6. Indirect Indicators. Relying on indirect indicators for responses or performance shall be allowed only after visually and directly verifying and documenting, over the range of the tested parameters, that the indirect readings through the control system represent actual conditions and responses. Much of this verification is completed during completion of the start-up plan.
7. Setup. Each function and test shall be performed under conditions that simulate actual conditions as close as is practically possible. The Sub executing the test shall provide all necessary materials, system modifications, etc. to produce the necessary flows, pressures, temperatures, etc. necessary to execute the test according to the specified conditions. At completion of the test, the Sub shall return all affected building equipment and systems, due to these temporary modifications, to their pre-test condition.
8. Sampling. Multiple identical pieces of non-life-safety or otherwise non-critical equipment may be functionally tested using a sampling strategy. No sampling by Subs is allowed for SRCs or FT's. Should frequent failures during testing require more troubleshooting than verification, the CA shall stop the testing and require the responsible Sub to perform and document a checkout of the remaining units.

G. Coordination and Scheduling

1. The Subs through the TC shall provide sufficient notice to the CA of their completion schedule for the SRCs and startup of all equipment and systems. The CA shall schedule functional tests through the CM, GC and affected Subs. The CA shall direct, witness and document the FT's of all equipment and systems. The Subs shall execute the tests.
2. In general, functional testing is conducted after completion of the start-up plan. The control system is sufficiently tested and approved by the CA before it is used for TAB or to verify performance of other components or systems. The air balancing and water balancing is completed and debugged before functional testing of air-related or water-related equipment or systems. Testing proceeds from components to subsystems to systems. When the proper performance of all interacting individual systems has been achieved, the interface or coordinated responses between systems is checked.

H. Deficiencies, Non-Conformance, and Approval in Checklists and Startup:

1. The Subcontractors shall clearly list any items of the start-up and functional procedures not successfully completed at the bottom of the form or on an attached sheet. The procedures form and any outstanding deficiencies are provided to the CA within two days of test completion.

2. The CA reviews and verifies all functional checklists and start-up reports and recommends approval to the PM. The CA assists the Subcontractors and vendors to correct and retest deficiencies or uncompleted items, involving other members of the commissioning team as necessary.

## 3.4 DEFICIENCY RESOLUTION

A. Documentation

1. The CA shall witness and document the results of all FT's using the specific procedural forms developed for that purpose. Prior to testing, these forms are provided to the GC for review and approval and to the Subs for review.

B. Non-Conformance.

1. The CA shall record the results of the FT on the procedure or test form. All deficiencies shall be noted and reported to the GC and CM on a standard non-compliance form.

2. Corrections of minor deficiencies identified may be made during the tests at the discretion of the CA. In such cases the deficiency and resolution will be documented on the procedure form.

3. Every effort will be made to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures. The CA does not have the authority to overlook deficient work or loosen acceptance criteria to satisfy scheduling or cost issues.

4. If commissioning for equipment or systems is delayed by Owner occupancy requirements or other unforeseen conditions, the CA will coordinate completion with Owner's schedule. This may involve testing conducted outside of normal occupancy hours. Contractor assistance will still be required to conduct functional testing outside of normal occupancy hours without any additional cost to the owner.

5. If a deficiency is identified, the CA shall discuss the issue with the executing contractor.

a. When there is no dispute on the deficiency and the Sub accepts responsibility to correct it:

1) The CA documents the deficiency, records the Sub's response, and proceeds with remaining FT's. The Sub corrects the deficiency and certifies that the equipment is ready to be retested and coordinates retesting with the GC and CA.

2) The CA reschedules the test and the test is repeated.

b. If there is a dispute about a deficiency, regarding whether it is a deficiency or who is responsible:

1) The deficiency shall be documented with the Sub's response and a copy given to the GC and to the Sub representative assumed to be responsible.

2) Resolutions are made at the lowest management level possible. Other parties are brought into the discussions as needed. Final interpretive authority is with the A/E. Final acceptance authority is with the Project Manager.

3) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency and certifies the equipment is ready for retesting. The CA reschedules the test and the test is repeated until satisfactory performance is achieved.

6. Cost of Retesting

a. The cost for the Sub to retest a functional test, if they are responsible for the deficiency, shall be borne by the Sub. If the Sub is not responsible, any cost recovery for retesting costs shall be negotiated with the GC.

b. The time for the CA and CM to direct any retesting required because a specific SRC, reported to have been successfully completed, but determined during functional testing to be faulty, will be backcharged to the GC, who may choose to recover costs from the party responsible for executing the faulty SRC.

7. The Contractor shall respond in writing to the CA and CM at least as often as commissioning meetings are being scheduled concerning the status of each apparent outstanding discrepancy identified during commissioning. Discussion shall cover explanations of any disagreements and proposals for their resolution.

8. The CA retains the original non-conformance forms until the end of the project.

C. Failure Due to Manufacturer Defect

1. If 10% of identical pieces (size alone does not constitute a difference) of equipment fail to perform to the contract documents (mechanically or substantively) due to manufacturing defect, not allowing it to meet its submitted performance spec, all identical units may be considered unacceptable by the CM or PM. In such case, the Contractor shall provide the Owner with the following:

    a. Within one week of notification from the CM or PM, the Contractor or manufacturer's representative shall examine all other identical units making a record of the findings. The findings shall be provided to the CM or PM within two weeks of the original notice.

    b. Within two weeks of the original notification, the Contractor or manufacturer shall provide a signed and dated, written explanation of the problem, cause of failures, etc. and all proposed solutions which shall include full equipment submittals. The proposed solutions shall not significantly exceed the specification requirements of the original installation.

    c. The CM or PM will determine whether a replacement of all identical units or a repair is acceptable.

    d. One example of the proposed repair solution will be installed by the Contractor and the CM will be allowed to test the installations for up to one week, upon which the CM or PM will decide whether to accept the solution.

    e. Upon acceptance, the Contractor and/or manufacturer shall replace or repair all identical items, at their expense and extend the warranty accordingly, if the original equipment warranty had begun. The replacement/repair work shall proceed with reasonable speed beginning within one week from when parts can be obtained.

D. Approval

1. The CA notes each satisfactorily demonstrated function on the test form. The CA recommends acceptance of each test to the Owner. The Owner gives final approval for acceptance.

## 3.5 OPERATIONS AND MAINTENANCE DOCUMENTATION

A. The contractor will provide the owner with complete operations and maintenance information. Contractor to provide at a minimum:

1. Basic operation (i.e. narratives of basic equipment operation, interfaces, interlocks, and interaction with other equipment & systems, initial maintenance provided by the contractor).
2. General site operating schedules (i.e. instructions for changes in major system operating schedules, instructions for changes in major system holiday and weekend schedules).
3. Basic troubleshooting (i.e. cite recommended troubleshooting procedures specific to major systems and equipment, manual operation procedures, standby/backup/bypass operation procedures, major system power fail resets and restarts, trend log listing).
4. Recommended maintenance events log (i.e. HVAC air filter replacement schedule and log, building control system sensor calibration schedule and log).

B. Electronic O&M manuals shall be provided for all commissioned systems. Electronic O&M manuals shall consist of all hard-copy O&M manual data in searchable pdf files in a logical folder structure with descriptive file names which make it clear what the manual includes. In all cases, this requires renaming the files from any O&M's cryptic numeric file names.

C. Where electronic data from the manufacturer contains data about other models and features not included in this project, the contractor shall mark the applicable model and features for the equipment in this job in the pdf, so the operations staff can readily identify what equipment model and features in the electronic O&M apply to this building.

3.6 TRAINING OF OWNER PERSONNEL

A. Coordination: The GC shall be responsible for training coordination and scheduling and ultimately for ensuring that training is completed.

B. A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report.

C. In addition to these general requirements, the specific training requirements of Owner personnel by Subs and vendors is specified in Division 21, 23 and 26 . Each Sub and vendor responsible for training will submit a written training plan to the CA for review and approval prior to training. The plan will cover the following elements:

1. System/equipment overview
2. Intended audience
3. Location of training

4. Objectives
5. Subject covered
6. Duration of training on each subject
7. Instructor for each subject
8. Instructor qualifications
9. Methods (lecture, video, site walk-through, written handouts, etc)
10. Review and demonstration of servicing/preventative maintenance
11. Review of record drawings on the system/equipment

D. For the primary HVAC equipment, the controls contractor shall provide a short discussion of the control of the equipment during the mechanical or electrical training conducted by others.

E. Training shall cover a review of the written O&M instructions emphasizing safe and proper operating requirements, preventative maintenance, special tools needed and spare parts inventory suggestions. The training shall include start-up, operation in all modes possible, shut-down, seasonal changeover, as applicable, and any emergency procedures.

F. The trainings will be tailored to the needs and skill-level of the trainees and be oriented to the specific system installed in this project.

G. The contractor shall record the training sessions and provide the owner with a training manual and edited DVD of the training sessions.

3.7 DEFERRED TESTING

A. Unforeseen Deferred Tests: If any check or test cannot be completed due to the building structure, required occupancy condition or other deficiency, execution of checklists and functional testing may be delayed upon approval of the PM.

B. Additional, missing or incomplete functional testing will be done by CA and will back charge to the responsible party. GC is responsible for collecting these charges and expenses from subcontractors.

3.8 FINAL REPORT

A. The final commissioning report shall include an executive summary, list of participants and roles, brief building description, overview of commissioning and testing scope and a general description of testing and verification methods. Outstanding non-compliance items shall be specifically listed.

END OF SECTION 01 91 00

SECTION 08 41 00
ALUMINUM ENTRANCE and STOREFRONT

PART 1 -GENERAL

1.01 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General Conditions, Supplementary General Conditions, and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY
A. This Section includes aluminum entrance and storefront and related work as shown and specified.

1.03 REFERENCES
A. American Architectural Manufacturers Association (AAMA)
B. American Society for Testing and Materials (ASTM)
C. Aluminum Association (AA)

1.04 SUBMITIALS
A. Product Data:
   a. Aluminum Entrance and Storefront: None required for specified products; required for alternate products.
B. Shop Drawings: Submit manufacture and installation details, including fastenings, for review.
C. Samples:
   a. Aluminum Entrance and Storefront: If specifically requested for specified products; required for alternate products. Submit manufacturer's standard colors.
D. Certificates: Storefront shall bear a permanently installed "AAMA Prime and Replacement Label" bearing the manufacturers name, product series number, grade and class designations. Do not install label in exposed location.
E. Installer Qualifications: If requested, provide evidence that installers meet the requirements of Article 1.4.
F. Closeout Submittals:
   0 & M Manuals: Maintenance instructions and installation Manual.
   Guarantee: Provide completed form per Article 1.5.

1.05 QUALITY ASSURANCE
A. Design Requirements: Aluminum frame members must span vertically to withstand 25 pounds per square foot wind load, minimum, per CBC; provide internal reinforcing as required; maximum deflection of L/175 of clear span or maximum of 3/4 inch.
B. Single Source Responsibility:
   a. Obtain entrances and storefront systems and finish through one source from a single manufacturer.
C. Installer Qualifications: Minimum of 3 years of experience on similar work; knowledge and understanding of standards referenced herein; skill necessary to perform in compliance with this specification. Installers failing to demonstrate the required experience, knowledge, or skill shall be removed from the project.

1.06 GUARANTEE

A. Aluminum Entrance and Storefront: Provide manufacturer's warranty that products are to be free from defects in materials and workmanship for 3 years beginning at date of acceptance by Owner.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect prefinished components with wrapping or strippable coating; adhesive papers and sprayed coatings are not acceptable.

1.08 PROJECT CONDITIONS

A. Do not install sealants when temperature is less than 40 degrees F.

PART 2 -PRODUCTS

2.01 ALUMINUM ENTRANCE AND STOREFRONT (ALST)

A. Acceptable Products:

1. Aluminum-Framed Storefront

a. Basis of Design:
Manufacturer: Arcadia, Inc., 2301 E Vernon, Vernon, CA.
Telephone 323/269-7300, Fax 323/269-7390.

Product: AFG451T Series, 2" x 4-1/2" **Thermally broken**; center glazed system, screw spline, shear block, compensating stick or punched opening fabrication for 1" glass.

b. Or approved thermally-broken equal products by:
Old Castle
Vistawall
U.S. Aluminum Systems
Traco Co., Inc.

B. System Description

2. General: In addition to requirements shown or specified, comply with:

a. Applicable provisions of AAMA Aluminum Storefront and Entrance Manual for design, materials, fabrication, and installation of component parts.

3. Design Requirements: Arcadia AG451T Series is a framing system that provides for flush glazing on all sides without projected stops, with glass in the center of the frame. Framing system suitable for outside or inside glazing.

4. Performance Requirements:

a. Limit air leakage through assembly to 0.06 CFM/min/sq. ft. (.00003 m3/sm2) of wall area at 6.24 PSF (300 Pa) as measured in accordance with ASTM E283.

b. Water Resistance: No water leakage when measured in accordance with ASTM E331 with a static test pressure of 8 PSF(383 Pa).

c. Limit mullion windload deflection of L/175 with full recovery of glazing materials, when measured in accordance with ASTM E 330.

d. System shall not deflect more than 1/8" at the center point, or 1/16" at the center point of a horizontal member, once deadload points have been established.

e. System shall accommodate expansion and contraction movement due to surface temperature differential of 180 degrees F.

f. Seismic testing shall conform to AAMA recommended static test method for evaluating performance of curtain walls and storefront wall systems due to horizontal displacements associated with seismic movements and building sway.
g. Thermal Performance – When tested in accordance with AAMA 1503.1 the following results should be attained: U-Maximum .63/CRF – minimum of 59.
h. National Fenestration Rating Council (NFRC) specific application evaluation.

C. Framing Materials and Accessories
   a. Framing members, transition members, mullions, adaptors, and mounting: Extruded 6063-T6 aluminum alloy (ASTM B221 – Alloy G.S. 10a T6).
   b. Screws, fastening devices, and internal components: Aluminum, stainless steel, or zinc-plated steel in accordance with ASTM.A-164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from aluminum.
   c. Glazing Gasket
   d. Compression-type design, replaceable, molded, or extruded, or ethylene propylene diene monomer (EPDM).
   e. Shall be of type that locks securely into the glazing reglet to prevent glazing gaskets from disengaging.

D. Finish: Clear Anodized, Architectural Class I.
E. Glass: As shown; refer to Section 08810 -GLASS AND GLAZING.
F. Fasteners: As recommended by manufacturer to meet wind pressures shown.
G. Protective Coatings:
   a. General: Bituminous, FS TT-C-494, Type II.
   b. Gasketing: Chromate type.
H. Sealant: Apply a high-performance, single-component, moisture-cure, ultralow modulus silicone sealant like Spectrem 1 by Tremco or approved equal and in accordance with manufacturer's written installation guidelines.

I. System Fabrication
   a. Continuous sub-sill shall be provided under sill members to collect water infiltration and divert from the interior of the system.
   b. Framing members shall be internally reinforced and secured at head and sill as necessary for structural performance requirements, for hardware attachment, and as indicated.
   c. Fasteners shall be so located as to ensure concealment from view in the final assembly.

## PART 3 -EXECUTION

### 3.1 EXAMINATION
A. Examine conditions of work in place before beginning work, report defects.
B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION
A. Take field measurements, report variance between plan and field dimensions.

### 3.3 INSTALLATION

A. Install in conformance with referenced standards, manufacturer's written directions, as shown, and as specified.

B. Storefront:
Install level, plumb, straight and aligned with adjacent surfaces, with hairline watertight joints; free of dents, buckles, twists, or other imperfections, as shown. Install flashings where shown.
Anchor to adjacent structure; permit sufficient adjustment to accommodate construction tolerances and other irregularities. Use No. 12 sheet metal screws, or wood screws at 18 inches on center with a minimum of 2 inches penetration into structure.
Tolerances: Maximum variation from plumb of 0.06 inch every 3'-0" non-cumulative or 1/16 inch per 10'-0", whichever is less. Maximum misalignment of 2 adjoining members abutting in plane of 1/32 inch.
Thermal Isolation: Provide where components penetrate or disrupt building insulation. Coordinate attachment and seal of perimeter air and vapor barrier materials.

C. Glazing:
General: As specified under Section 08810 -GLASS AND GLAZING.
Glazing Stops: Anchor glass holding assemblies with frame clips and machine screws.

E. Dissimilar Materials: Isolate from other metals, plaster, or concrete.

F. Sealant: Install per Section 079010 -JOINT SEALERS.

3.4 ADJUSTING

A. Prior to acceptance, adjust moveable parts to assure smooth operation.

3.5 CLEANING

A. Remove protective covering per manufacturer's instructions.

B. Keep premises free from accumulation of waste and debris. At completion of installation remove surplus materials and debris.

C. At completion clean exposed surfaces in a manner that will not damage finish.

END SECTION

**1995 CSI SECTION 08411 Aluminum-Framed Storefront**
**2004 CSI SECTION 08 41 13 Aluminum-Framed Entrance and Storefront**
**(Window Walls/Ribbon Walls)**

**Part 1 – General**

1.01 Summary
- A. Section includes:
  - 1. Aluminum-Framed Storefront
    - a. Arcadia, Inc., AFG451T Series, 2" x 4-1/2" Thermally broken; offset glazed system, screw spline, shear block, compensating stick or punched opening fabrication for 1" glass.
- B. Related Sections:

1.02 References
- A. American Architectural Manufacturers Association (AAMA)
- B. American Society for Testing and Materials (ASTM)
- C. Aluminum Association (AA)

1.03 System Description
- A. General: In addition to requirements shown or specified, comply with:
  - 1. Applicable provisions of AAMA Aluminum Storefront and Entrance Manual for design, materials, fabrication and installation of component parts.
- B. Design Requirements: Arcadia AFG451T Series is a framing system that provides for flush glazing on all sides without projected stops, with glass forward or inward of the frame. Framing system suitable for outside or inside glazing.
- C. Performance Requirements:
  - 1. Limit air leakage through assembly to 0.06 CFM/min/sq. ft. (.00003 $m^3/sm^2$) of wall area at 6.24 PSF (300 Pa) as measured in accordance with ASTM E283.
  - 2. Water Resistance: No water leakage when measured in accordance with ASTM E331 with a static test pressure of 8 PSF(383 Pa).
  - 3. Limit mullion windload deflection of L/175 with full recovery of glazing materials, when measured in accordance with ASTM E 330.
  - 4. System shall not deflect more than 1/8" at the center point, or 1/16" at the center point of a horizontal member, once deadload points have been established.
  - 5. System shall accommodate expansion and contraction movement due to surface temperature differential of 180 degrees F.
  - 6. Seismic testing shall conform to AAMA recommended static test method for evaluating performance of curtain walls and storefront wall systems due to horizontal displacements associated with seismic movements and building sway.
  - 7. Thermal Performance – When tested in accordance with AAMA 1503.1 and NFRC 100.
  - 8. National Fenestration Rating Council (NFRC) specific application evaluation.

1.04 Quality Assurance
- A. Single Source Responsibility:
  - 1. Obtain entrances, storefronts, ribbon walls, window walls, curtain walls, window systems, and finish through one source from a single manufacturer.
- B. Provide test reports from AAMA accredited laboratories certifying the performances as specified in 1.03.

1.05 Warranty
- A. System shall be warranted against failure and/or deterioration of metals due to manufacturing process for a period of two (2) years.

**Part 2 – Products**

2.01 Manufacturers
- A. Acceptable Manufacturers:
  - 1. Arcadia, Inc., 2301 E Vernon, Vernon, CA. Telephone 323/269-7300, Fax 323/269-7390.
- B. Acceptable Products:
  - 1. Arcadia, Inc., AFG451T Series.

2.02 Framing Materials and Accessories
- A. Framing members, transition members, mullions, adaptors, and mounting: Extruded 6063-T6 aluminum alloy (ASTM B221 – Alloy G.S. 10a T6).
- B. Screws, fastening devices, and internal components: Aluminum, stainless steel, or zinc-plated steel in accordance with ASTM.A-164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from aluminum.
- C. Glazing Gasket
  - 1. Compression-type design, replaceable, molded or extruded, or ethylene propylene diene monomer (EPDM).
  - 2. Shall be of type that locks securely into the glazing reglet to prevent glazing gaskets from disengaging.

2.03 Finish
- A. Finish all exposed areas of aluminum and components as indicated.
  - 1. An Architectural Class II or I color anodic coating conforming with AA-M12C22A34/AA-M12C22A44.
    - a. Anodized finish color shall be Colornodic _____. (AB1 Light Champagne, AB2 Champagne, AB3 Light Bronze, AB4 Medium Bronze, AB5 Standard Medium Bronze, AB6 Dark Bronze, AB7 Standard Dark Bronze, AB8 Black.)

(or)
  - 1. An Architectural Class II or I anodic coating conforming with AA-M12C22A31/AA-M12C22A41.
    - a. Anodize finish color shall be Colornodic _____ (#11 Clear)

(or)
  - 1. Fluorocarbon Coating: AAMA 2605.
    - a. Resin: 70% PVDF Kynar 500/Hylar 5000.
    - b. Substrate: cleaned and pretreated with chromium phosphate.
    - c. Primer: Manufacturer's standard resin base compatible coating. Dry film thickness.
      - (a) Extrusion: Minimum 0.20 mil.
    - d. Color Coat: 70% PVDF, dry film thickness.
      - (a) Extrusion: 1.0 mil.
    - e. Color: As selected by Architect.
    - f. Acceptable Coatings Manufacturers:
      - (a) PPG Industries, Inc.
      - (b) Sherwin Williams

2.04 System Fabrication
- A. Continuous sub-sill shall be provided under sill members to collect water infiltration and divert from the interior of the system.
- B. Framing members shall be internally reinforced and secured at head and sill as necessary for structural performance requirements, for hardware attachment, and as indicated.
- C. Fasteners shall be so located as to ensure concealment from view in the final assembly.

**Part 3 – Execution**

3.01 Examinations
- A. Examine conditions and verify substrate conditions are acceptable for product installation.

3.02 Installation
- A. Install in accordance with approved shop drawings and manufacturers installation instructions.

3.03 Field Quality Control
- A. Test the storefront for water leaks in accordance with AAMA 501.2. Conduct test in the presence of the Architect. Correct deficiencies observed as a result of this test.

**END OF SECTION**

SECTION 23 08 00 - COMMISSIONING OF HVAC SYSTEMS

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.

B. The General Conditions, any Supplementary Conditions, Section 23 05 00, Heating Ventilation and Air Conditioning, and Division 01 are hereby a part of this Section as fully as if repeated herein.

## 1.2 SCOPE OF WORK

A. Work includes performing commissioning process requirements for HVAC systems including mechanical controls, assemblies, and equipment.

B. Refer to Section 01 91 00 General Commissioning Requirements for general commissioning process requirements.

## 1.3 DEFINITIONS

A. See 01 91 00 General Commissioning Requirements for definitions.

## 1.4 CONTRACTOR'S RESPONSIBILITIES

A. See 01 91 00 General Commissioning Requirements for contractors' and subcontractors' responsibilities.

B. Provide training on each piece of commissioned equipment. See 01 91 00 for training details.

## 1.5 CA RESPONSIBILITIES

A. See 01 91 00 General Commissioning Requirements for CA responsibilities

## 1.6 COMMISSIONING DOCUMENTATION

A. Provide the following information to the CA for inclusion in the commissioning plan:

1. Identification of installed systems, assemblies, equipment, and components including design changes that occurred during the construction phase.
2. Schedule for completing construction checklists and manufacturer's prestart and startup checklists for HVAC systems, assemblies, equipment, and components to be commissioned.

B. Provide the following as discussed in Section 01 91 00, General Commissioning Requirements to General Contractor:

1. Completed system readiness checklist for each piece of commissioned equipment. Completion of system readiness checklist, O&M manual start-up checklist, and any manufacturer provided field start-up checklists.
2. Verification to GC readiness certifying that HVAC systems, subsystems, equipment, and associated controls are ready for functional testing.
3. Corrective action documents resulting from issues in the Commissioning Issues Log or deficiencies found from completing the start-up plan.

## 1.7 SUBMITTALS

A. Updated submittals: keep the CA informed of all changes to the control system documentation made during programming and setup.

B. Certificates of readiness (completion of the system readiness checklist) to General Contractor for review by CA.

C. Written training plan for review by A/E and CA prior to training. See Section 01 91 00 General Commissioning Requirements for specific items to be included in the training plan.

D. Provide O&M manuals to GC for submission to CA. These are required prior to development of the system readiness checklists.

# PART 2 – PRODUCTS

## 2.1 TEST EQUIPMENT

A. Provide all standard testing equipment required to perform startup and initial checkout and required functional performance testing.

B. Equipment-specific tools: where special testing equipment, tools and instruments are specific to a piece of equipment, are only available from the vendor, and are required in order to accomplish startup or functional testing, provide such equipment, tools, and instruments as part of the work at no extra cost to owner; such equipment, tools, and instruments are to become the property of owner.

# PART 3 – EXECUTION

## 3.1 PARTICIPATION

A. The contractor shall provide skilled technicians to startup and debug all systems. These same technicians shall be made available to assist the Commissioning Authority in completing the commissioning program. Contractor(s) shall ensure that the qualified technician(s) are available and present during the agreed upon schedules to complete the necessary tests, adjustments, and/or problem resolutions.

B. System performance problems and discrepancies may require additional technician time, Commissioning Authority time, reconstruction of systems, and/or replacement of system components. The additional technician time shall be made available for subsequent commissioning periods until the required system performance is obtained.

## 3.2 TESTING PREPARATION

A. Cooperate with the CA in development of the functional test procedures.

B. Certify that HVAC systems, subsystems, and equipment have been installed, calibrated, and started and are operating according to the Contract Documents.

C. Certify that HVAC instrumentation and control systems have been completed and calibrated, that they are operating according to the Contract Documents, and that pretest set points have been recorded.

D. Certify that testing, adjusting, and balancing procedures have been completed and that testing, adjusting, and balancing reports have been submitted, discrepancies corrected, and corrective work approved.

E. Set systems, subsystems, and equipment into operating mode to be tested (e.g., normal shutdown, normal auto position, normal manual position, unoccupied cycle, emergency power, and alarm conditions) as required in functional testing.

F. Provide test holes in ducts and plenums where directed by testing and balance subcontractor to allow air measurements and air balancing. Provide approved plugs.

G. Provide temperature and pressure taps according to contract documents for testing and balance, and commissioning tests.

H. Provide input to GC on construction schedule to include division pipe and duct system testing, flushing, and cleaning. Provide input on equipment start-up and testing and balance schedule to GC. Notify the CA when these items are scheduled.

I. Check safety cutouts, alarms, and interlocks with smoke control and life-safety systems during each mode of operation.

J. Testing Instrumentation: Install measuring instruments and logging devices to record test data as directed by the CA.

K. Certify that all related A/E punch list items are complete prior to commencing functional tests.

L. Correct deficiencies found from completing the start-up plan prior to conducting functional tests.

M. Provide full points list and keep CA informed of changes in list during programming and setup.

## 3.3 TESTING AND BALANCE VERIFICATION

A. Prior to performance of testing and balancing work, provide copies of reports, sample forms, checklists, and certificates to the CA.

B. Notify the CA at least ten (10) days in advance of testing and balancing Work, and provide access for the CA to witness testing and balancing Work.

C. Provide technicians, instrumentation, and tools to verify testing and balancing of HVAC systems at the direction of the CA.

D. Provide a qualified control system technician to operate the controls to assist the TAB technicians or provide sufficient training for the TAB technicians to operate the system without assistance.

E. The CA will notify testing and balancing Subcontractor five (5) days in advance of the date of field verification.

F. The testing and balancing subcontractor shall use the same instruments (by model and serial number) that were used when original data were collected.

G. Failure of an item includes not meeting acceptance criteria as discussed in 23 05 93 Testing, Adjusting, and Balancing for HVAC. Failure of more than 10 percent of selected items shall result in rejection of final testing, adjusting, and balancing report.

H. Remedy the deficiency and notify the CA so verification of failed portions can be performed

## 3.4 GENERAL TESTING REQUIREMENTS

A. System readiness checklists and functional test forms will be provided by CA, and executed by installing subcontractors. System readiness checklists are part of the start-up plan that will be provided by the CA to the GC. The GC will distribute the forms and ensure their completion prior to submitting back to the CA for review.

B. CA will oversee execution of the functional tests. Functional tests are provided early to obtain any comments or suggestions.

C. Provide installing technicians, instrumentation, and tools to perform commissioning test at the direction of the CA.

D. Provide skilled technicians who are familiar with this building to execute the functional tests as directed by the CA.

E. Scope of HVAC testing shall include entire HVAC installation, from central equipment for heat generation and air conditioning through distribution systems to each conditioned space. Testing shall include measuring capacities and effectiveness of operational and control functions.

F. Test all operating modes, interlocks, control responses, and responses to abnormal or emergency conditions, and verify proper response of building automation system controllers and sensors.

G. Tests will be performed using design conditions whenever possible.

H. Simulated conditions may need to be imposed using an artificial load when it is not practical to test under design conditions. Before simulating conditions, calibrate testing instruments. Provide equipment to simulate loads. Set simulated conditions as directed by the CxA and document simulated conditions and methods of simulation. After tests, return settings to normal operating conditions.

I. The CA may direct that set points be altered when simulating conditions is not practical.

J. The CA may direct that sensor values be altered when design or simulating conditions and altering set points are not practical.

K. If tests cannot be completed because of a deficiency outside the scope of the HVAC system, document the deficiency and report it to the CM and GC. After deficiencies are resolved, coordinate with CA to reschedule tests.

L. Installing subcontractor shall be present during all functional tests, whether sub-contractor's equipment is directly involved with the test or not. This is to speed the process of problem resolution as they are discovered during the testing process.

## 3.5 HVAC SYSTEMS, SUBSYSTEMS, AND EQUIPMENT TESTING PROCEDURES

A. HVAC Instrumentation and Control System Testing: Field testing plans and testing requirements are specified in mechanical drawings and functional tests (provided by CA) during construction phase.

B. HVAC Distribution System Testing: Provide technicians, instrumentation, tools, and equipment to test performance of air distribution systems; including HVAC terminal equipment and unitary equipment.

C. See 01 91 00 General Commissioning Requirements for contractor's retesting procedures.

## 3.6 CONTROL SYSTEM TESTING PROCEDURES

A. Provide a skilled technician who is familiar with this building to execute the functional tests as directed by the CA.

B. Demonstrate the following to the CA during testing of controlled equipment:

1. Setpoint changing features and functions
2. Sensor calibrations
3. Specified functions and features are set up, debugged, and fully operable

4. Graphic screens and value readouts are completed

5. Trend monitoring and data storage is completed

## 3.7 TRAINING

A. Provide training on each piece of commissioned equipment. See 01 91 00 and Division 23 for training details.

B. Trainer must be familiar with this building and equipment. Have the technicians that performed work on this building available for answering questions.

END OF SECTION 23 08 00

# SECTION 23 09 23 - DIRECT DIGITAL CONTROL SYSTEM FOR HVAC

## PART 1 – GENERAL

### 1.1 WORK INCLUDED

A. Furnish a Schneider Electric BACnet Energy Management System (EMS) as specified herein to tie into and match the Mount Diablo Unified School District's (MDUSD) current Energy Management System Standard. The operator's workstation, all building controllers, application controllers, and all input/output devices shall communicate using the protocols and network standards as defined by ANSI/ASHRAE Standard 135-2020, BACnet. In other words, all workstations and controllers, including unitary controllers, shall be native BACnet devices. No gateways shall be used for communication to controllers installed under this section. Gateways may be used for communication to existing systems or to systems installed under other sections.

B. The native BACnet EMS shall be as specified herein and consist of a high-speed, peer-to-peer local area network of DDC controllers connected to a dedicated Server PC and other client workstation PC's and Lap Top computers as specified. All HVAC and/or Electrical system points monitored and controlled by the EMS, including the building floor plans as well as all control devices, will be depicted by point-and-click graphics.

C. Provide all necessary BACnet-compliant hardware and software to meet the system's functional specifications. Provide Protocol Implementation Conformance Statement (PICS) for Windows-based control software and every controller in system, including unitary controllers. All controller devices must be BTL tested and listed by the official BACnet Testing Laboratory, having the BTL approval mark issued.

D. All devices in this new project facility location shall be accessible from a single graphical user interface.

E. Prepare individual hardware layouts, interconnection drawings, and software configuration from project design data.

F. Design, provide, and install all equipment cabinets, panels, data communication network cables needed, and all associated hardware.

G. Furnish and install the required software to produce a complete and operational native BACnet EMS as specified herein.

H. Provide complete manufacturer's specifications for all items that are supplied. Include vendor name of every item supplied.

I. Provide supervisory specialists, including a dedicated project manager, and technicians throughout the duration of the project to assist in all phases of EMS system installation, startup, and commissioning.

J. Provide a comprehensive operator and technician training program as described herein.

K. Provide as-built documentation, operator's terminal software, diagrams, and all other associated project operational documentation (such as technical manuals) on approved media, the sum total of which accurately represents the final system.

1.2 SYSTEM DESCRIPTION

A. A distributed logic control system complete with all software and hardware functions shall be provided and installed. System shall be completely based on ANSI/ASHRAE Standard 135-2020, BACnet and achieved listing under the BACnet Testing Laboratories BACnet - Advanced Workstation Software (B-AWS). This system is to control all mechanical equipment, including all unitary equipment such as heat pumps, fan-coils, AC units, and any other listed equipment using native BACnet-compliant components. Non-BACnet-compliant or proprietary equipment or systems (including gateways) shall not be acceptable and are specifically prohibited.

B. Building controllers shall include complete energy management software, including scheduling building control strategies with optimum start and logging routines. All energy management software and firmware shall be resident in field hardware and shall not be dependent on the operator's terminal. Operator's terminal software is to be used for access to field-based energy management functions only. Provide zone-by-zone direct digital logic control of space temperature, scheduling, runtime accumulation, equipment alarm reporting, and override timers for after-hours usage.

C. All application controllers for every terminal unit (HP, UV, etc.), air handler, all central plant equipment, and any other piece of controlled equipment shall be fully programmable. Application controllers shall be mounted next to controlled equipment and communicate with building controller through BACnet LAN.

D. System Architecture:

1. EMS Contractor shall utilize Owner's IT WAN for connection from BACnet Server to all Global Controllers furnished and installed as part of this project. Connection shall be by way of BACnet/IP as defined in Addendum A (Annex J) of the ANSI/ASHRAE Standard for BACnet. Connection between all Integration Level Global Controllers, the BACnet Server and any client work stations (PC's or Lap Tops) shall be high-speed, peer-to-peer Ethernet as per Standard IEEE802.3. Owner shall furnish and maintain IT WAN infrastructure.

2. EMS Contractor shall provide and install a dedicated MS/TP LAN extending from all Global Controller's to distributed field level controller BACnet devices.

3. Distributed field level controllers are responsible for directly controlling and monitoring HVAC and Electrical system points throughout the facility.

4. The BACnet Server hosts system configurations, programming databases and stores all trend log data. The Server maintains all backup files for system configuration and programming located on Global Controller's and field level controllers and is capable of directly uploading or downloading information from the controllers.

1.3 APPROVED MANUFACTURERS

A. Approved Control Manufacturers:

1. Schneider Electric - no substitution.

2. QUALITY ASSURANCE

A. The Contractor shall be regularly engaged in the manufacturing, installation and maintenance of EMS systems and shall have demonstrated technical expertise and experience in the manufacture, installation and maintenance of EMS systems similar in size and complexity to this project.

B. The EMS system shall be designed, installed, commissioned, and serviced by manufacturer-authorized and trained personnel. System provider shall have an in-place support facility within 50 miles of the site with technical staff, spare parts inventory and necessary test and diagnostic equipment.

C. To provide the level of support and response required by the Owner, the Energy Management System Contractor shall have a fully staffed service department with the following minimum personnel and service offerings:

1. Minimum of 1 (one) Dedicated Support Technician located at a fixed location with access to a network for remote access to the site.

2. Minimum of 1 (one) Dedicated Service Dispatcher to route calls and prioritize service response.

3. Minimum of 5 (five) Dedicated Field Service Technicians. To ensure that there are personnel available to respond to service requests in a timely manner, these technicians are to be dedicated to service and not used on construction projects.

4. Maintain a 24/7 Service Call Center staffed by live operators enabling immediate response to Owner's critical emergency EMS concerns.

D. The EMS Contractor shall provide an on-site, experienced project manager for this work who is responsible for direct supervision of the installation, start up and commissioning of the EMS system.

E. EMS Contractor shall have a proven record of successful native BACnet installations and maintenance of equivalent native BACnet systems for a minimum period of 5 years utilizing the same native BACnet manufacturer's product line that the Contractor proposes to use on this project.

F. Materials and equipment shall be manufacturer's latest standard design that complies with the specification requirements.

G. All BAS peer-to-peer network controllers, central system controllers and local user displays shall be UL Listed under Standard UL 916, category PAZX.

H. All electronic equipment shall conform to the requirements of FCC Regulation, Part 15, Governing Radio Frequency Electromagnetic Interference and be so labeled.

1.4 REFERENCE STANDARDS

A. The latest edition of the following standards and codes in effect and amended as of supplier's proposal date, and any applicable subsections thereof, shall govern design and selection of equipment and material supplied:

1. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).
2. ANSI/ASHRAE Standard 135-2008, BACnet.
3. Uniform Building Code (UBC), including local amendments.
4. UL 916 Underwriters Laboratories Standard for Energy Management Equipment. Canada and the US.
5. National Electrical Code (NEC).
6. FCC Part 15, Subpart J, Class A.
7. EMC Directive 89/336/EEC (European CE Mark).
8. UL-864 UUKL listing for Smoke Controls for any equipment used in smoke control sequences.

B. City, county, state, and federal regulations and codes in effect as of contract date.

C. Except as otherwise indicated, the system supplier shall secure and pay for all permits, inspections, and certifications required for his work, and arrange for necessary approvals by the governing authorities.

1.5 SUBMITTALS

A. Drawings:

1. The system supplier shall submit engineered drawings, control sequence, and bill of materials for approval.
2. Drawings shall be submitted in the following standard sizes: 11" x 17" (ANSI B).
3. Eight (8) complete sets (copies) of submittal drawings shall be provided.
4. Drawings shall be available in electronic format.

B. System Documentation - Include the following in submittal package:

1. System configuration diagrams in simplified block format.
2. All input/output object listings and an alarm point summary listing.
3. Electrical drawings that show all system internal and external connection points, terminal block layouts, and terminal identification.
4. Complete bill of materials, valve schedule and damper schedule.
5. Manufacturer's instructions and drawings for installation, maintenance, and operation of all purchased items.
6. Overall system operation and maintenance instructions—including preventive maintenance and troubleshooting instructions.
7. For all system elements—operator's workstation(s), building controller(s), application controllers, routers, and repeaters—provide BACnet Protocol Implementation Conformance Statements (PICS) as per ANSI/ASHRAE Standard 135-2020.
8. Provide complete description and documentation of any proprietary (non-BACnet) services and/or objects used in the system.
9. A list of all functions available and a sample of function block programming that shall be part of delivered system.

1.6 WARRANTY

A. Warranty shall cover all costs for parts, labor, associated travel, and expenses for a period of one (1) year from completion of system acceptance.

B. Extended Warranty – Years 2 to 5. For Characterized Control Valves (CCV), Globe Valves, Butterfly Valves, associated Valve Actuators and Damper Actuators, provide like kind replacement components for any defective material identified and returned in Years 2 to 5 from the date of system acceptance.

C. Hardware and software personnel supporting this warranty agreement shall provide on-site or off-site service in a timely manner after failure notification to the vendor.

D. This warranty shall apply equally to both hardware and software. This warranty shall apply equally to both hardware and software.

1.7 RELATED WORK IN OTHER SECTIONS

E. Refer to Division 0 and Division 1 for related contractual requirements.

F. Refer to Section 23 00 00 for General Mechanical Provisions.

G. Refer to Section 26 00 00 for General Electrical Provisions.

PART 2 – PRODUCTS

2.1 CONTROL PROGRAMMING SOFTWARE

A. All DDC programming throughout the EMS network shall adhere to the following standards:

1. Programming on all controllers must be completely operator definable and modifiable and must use a single common programming language for all control devices. Use of pre-canned, factory burned-in DDC programming on controllers is not acceptable and is grounds for rejection of EMS system.
2. Programming shall be developed in an object-oriented graphical programming environment. Line by line code programming is specifically prohibited and is not acceptable.
3. Programming must accommodate all written sequences of operations.
4. Programming shall be modifiable from any server PC, operator console PC and/or portable laptop PC workstation without requiring the burning of new chips or having to directly access the local controller. Software shall accommodate the downloading of programming via established network Ethernet or modem connections.
5. Programming must support the use of virtual software points in the same manner as all physical points are supported.
6. All programming points, virtual or real, for any specific device in the entire EMS network shall be accessible to all other network devices at any given time, regardless of physical location.
7. All programming shall adhere to the BACnet protocols for Standard Command Priorities.

8. Programming software must include a pre-developed cohesive PID (proportional-integral-derivative) algorithm whereby a user can adjust gain and anti-windup coefficients accordingly to effectively accomplish advanced sequence of operation requirements.

## 2.2 BUILDING (GLOBAL) CONTROLLER

A. General Requirements:

1. BACnet Conformance:
   a. Building Controller shall be approved by the BTL as meeting the BACnet Building Controller requirements.
   b. Please refer to section 22.2, BACnet Functional Groups, in the BACnet standard, for a complete list of the services that must be directly supported to provide each of the functional groups listed above. All proprietary services, if used in the system, shall be thoroughly documented and provided as part of the submittal data. All necessary tools shall be supplied for working with proprietary information.
2. Building controller shall be of scalable design such that the number of trunks and protocols may be selected to fit the specific requirements of a given project.
3. The controller shall be capable of panel-mounted on DIN rail and/or mounting screws.
4. The controller shall be capable of providing global control strategies for the system based on information from any objects in the system, regardless if the object is directly monitored by the building controller module or by another controller.
5. The controller shall be capable of running up to six independent control strategies simultaneously. The modification of one control strategy does not interrupt the function or runtime others.
6. The software program implementing the DDC strategies shall be completely flexible and user-definable. All software tools necessary for programming shall be provided as part of project software. Any systems utilizing factory pre-programmed global strategies that cannot be modified by field personnel on-site, using a WAN or downloaded through remote communications are not acceptable. Changing global strategies using firmware changes is also unacceptable.

7. Programming shall be object-oriented using control function blocks, and support DDC functions, All flowcharts shall be generated and automatically downloaded to controller. Programming tool shall be supplied and be resident on workstation. The same tool shall be used for all controllers.
8. Programming tool shall provide means to graphically view inputs and outputs to each program block in real-time as program is executing. This function may be performed using the operator's workstation or field computer.
9. Controller shall have 6000 Analog Values and 6000 Binary Values
10. Controller IP configuration can be done via a direct USB connect with a operator's workstation or field computer.
11. Controller shall have at a minimum a Quad Core 996Ghz processor to ensure fast processing speeds.
12. Global control algorithms and automated control functions shall execute using a 64-bit processor.
13. Controller shall have a minimum of 1 GB of DDR3 SDRAM on a 533Mhz bus to ensure high speed data recording, large data storage capacity and reliability.
14. Controller shall support two on-board EIA-485 ports capable of supporting various EIA-485 protocols including but not limited to BACnet MS/TP and Modbus.
    a. Ports are capable of supporting various EIA-485 protocols including but not limited to BACnet MS/TP and Modbus.
15. Controller shall support two gigabit speed Ethernet (10/100/1000) ports.
    a. Ports are capable of supporting various Ethernet protocols including but not limited to BACnet IP, FOX, and Modbus.
16. All ports shall be capable of having protocol(s) assigned to utilize the port's physical connection
17. The controller shall have at a minimum four onboard inputs, two universal inputs and two binary inputs.
18. Schedules:
    a. Building controller modules shall provide normal seven-day scheduling, holiday scheduling and event scheduling.
    b. Each building controller shall support a minimum of 480 BACnet Schedule Objects and 480 BACnet Calendar Objects.
19. Logging Capabilities:

a. Each building controller shall log as minimum 1920 objects at 15 min intervals. Any object in the system (real or calculated) may be logged. Sample time interval shall be adjustable at the operator's workstation.

b. Logs may be viewed both on-site or off-site using WAN or remote communication.

c. Building controller shall periodically upload trended data to networked operator's workstation for long-term archiving if desired.

d. Archived data stored in database format shall be available for use in third-party spreadsheet or database programs.

20. Alarm Generation:

a. Alarms may be generated within the system for any object change of value or state (either real or calculated). This includes things such as analog object value changes, binary object state changes, and various controller communication failures.

b. Each alarm may be dialed out as noted elsewhere.

c. Alarm log shall be provided for alarm viewing. Log may be viewed on-site at the operator's terminal or off-site using remote communications.

d. Controller must be able to handle up to 1920 alarm setups stored as BACnet event enrollment objects, with system destination and actions individually configurable.

21. Demand Limiting:

a. Demand limiting of energy shall be a built-in, user-configurable function. Each controller module shall support shedding of up to 1200 loads using a minimum of two types of shed programs.

b. Load shedding programs in building controller modules shall operate as defined in section 2.1.J of this specification.

22. Tenant Activity Logging:

a. Tenant Activity logging shall be supported by building controller module. Each independent module shall support a minimum of 480 zones.

b. Tenant Activity logging shall function as defined in section 2.1.K of this specification.

B. BACnet MS/TP:

1. BACnet MS/TP LAN must be software-configurable from 9.6 to 115.4Kbps:

a. Each BACnet MS/TP LAN shall support 64 BACnet devices at a minimum

b. All proprietary object types, if used in the system, shall be thoroughly documented and provided as part of the submittal data. All necessary tools shall be supplied for working with proprietary information.

C. BACnet IP:

1. The building controller shall comply with Annex J of the BACnet specification for IP connections. This device shall use Ethernet to connect to the IP internetwork, while using the same Ethernet LAN for non-IP communications to other BACnet devices on the LAN.
2. Must support interoperability on WANs and CANs and function as a BACnet Broadcast Management Device (BBMD).
3. Each controller shall support at a minimum 128 BBMD entries.
4. BBMD management architecture shall support 3000 subnets at a minimum.
5. Shall support BACnet Network Address Translation.
6. All proprietary object types, if used in the system, shall be thoroughly documented and provided as part of the submittal data. All necessary tools shall be supplied for working with proprietary information.

D. Expansion ports:

1. Controller shall support two expansion ports.
   a. Combining the two on-board EIA-458 ports with fully loaded expansion ports the controller shall support 6 EIA-485 trunks simultaneously.
2. Expansion cards that mate to the expansion ports shall include:
   a. Dual port EIA-485 card.

E. Power Supply:

1. Input for power shall accept between 17–30VAC, 47–63Hz.
2. Optional rechargeable battery for shutdown of controller including storage of all data in flash memory.
3. On-board capacitor will ensure continuous operation of real-time clocks for minimum of 14 days.

F. Controller shall be in compliance with the following:

1. UL 916 for open energy management.
2. FCC Class B.
3. ROHS.
4. IEC 60703.

5. C-Tick Listed.

G. Controller shall operate in the following environmental conditions:

1. -4 to 149 °F (-20 to 65 °C) without optional battery, or 32 to 122 °F (0 to 50 °C) with optional battery.

2. 0 to 95% RH, non-condensing.

## 2.3 AUXILIARY CONTROL DEVICES

A. Temperature Sensors:

1. All temperature sensors to be solid-state electronic, interchangeable with housing appropriate for application. Wall sensors to be installed as indicated on drawings. Mount 48 inches above finished floor. Duct sensors to be installed such that the sensing element is in the main air stream. Immersion sensors to be installed in wells provided by control contractor, but installed by mechanical contractor. Immersion wells shall be filled with thermal compound before installation of immersion sensors. Outside air sensors shall be installed away from exhaust or relief vents, not in an outside air intake, and in a location that is in the shade most of the day.

B. Intelligent Room Sensor with Touch Screen:

1. Hardware:

a. Room sensor shall include:

1) Backlit touch screen LCD digital display.

2) Temperature sensor.

3) Humidity Sensor.

4) Programmable Status Light indicator.

5) CO2 Sensor (as scheduled on prints).

b. Temperature sensor shall be a Uni-Cuve Type II thermstor with an accuracy of +/- 0.36 °F (0.2 °C) at calibration point over the range of 32-158 °F or better.s

c. Humidity sensor shall have an accuracy of +/-3% from 10-90% relative humidity or better.

d. The intelligent room sensor's Smart Light shall have a minimum of four colors (Blue, Red, Amber and Green) that will cast a glow onto the wall below the sensor to be used as visual indicator to the occupants of the condition of the system. The color and on/off state of smart light shall be fully programmable.

e. CO2 Sensor shall have an accuracy of +/- 30 ppm over the range of 0-5000 ppm or better.

f. CO2 sensor shall utilize Automatic Baseline Correction to maintain sensor calibration without need for manual calibration.

g. The user shall interact with the smart sensor using a touch screen, with no buttons allowed.

h. The intelligent room sensor shall have provisions for a tamper proof installation requiring tools to be removed from the wall.

i. The touch screen shall have a surface hardness of Mohs 7 or greater to prevent being easily scratched.

j. Controller shall function as room control unit and allow occupant to raise and lower setpoint, and activate terminal unit for override use—all within limits as programmed by building operator.

2. Display Content:

a. The intelligent room sensor shall simultaneously display room setpoint, room temperature, and outside temperature at each controller.

b. The intelligent room sensor shall have the ability to add or remove from the display time-of-day, room humidity, and indoor air temp to customize the view for the customer.

c. The intelligent room sensor must have the capability to show temperatures in degrees Fahrenheit or degrees Centigrade.

d. A communication loss or improper communications wiring shall be displayed on the LCD screen to aid in trouble shooting.

e. Information about the version of firmware shall be displayable on the LCD screen.

f. A cleaning mode will be provided to allow for the touch screen to be cleaned without inadvertently making changes to system parameters.

g. The intelligent room sensor shall have the ability to display the status of a lighting zone status and control the on/off state of the zone from the touch screen using a tenant accessible display page.

h. The intelligent room sensor shall have the ability to display the status of a window zone (e.g. blinds) and control the on/off state of the zone from the touch screen using a tenant accessible display page.

i. After Hours Override shall:

1) Override time may be set and viewed in 30 minute increments.

2) Override time countdown shall be automatic, but may be reset to zero by occupant from the sensor.

3) Time remaining shall be displayed.

4) Display shall show the word "OFF" in unoccupied mode unless a function button is pressed.

3. Other Modes:

a. The intelligent room sensor shall also allow service technician access to hidden functions for advanced system configuration. This functionality shall be accessed protected with a configurable pin number.

b. Field service mode shall allow access to common parameters as dictated by the application's sequence of operations. The parameters shall be viewed and set from the intelligent room sensor with no computer or other field service tool needed.

c. Balance mode shall, if intelligent room sensor is connected to VAV controller, allow a VAV box to be balanced and all air flow parameters viewed. The balancing parameters shall be viewed and set from the intelligent room sensor with no computer or other field service tool needed.

4. Intelligent Room Sensor shall be in compliance of the following:

a. UL Standard for Safety 916

b. FCC Part 15.107 & 109, Class B, CFR47-15

c. EMC Directive 89/336/EEC (European CE Mark).

C. Wall Sensor:

1. Standard wall sensor shall use solid-state sensor identical to intelligent room sensor and shall be packaged in aesthetically pleasing enclosure. Sensor shall provide override function, warmer/cooler lever for set point adjustment and port for plug-in of Field Service Tool for field adjustments. Override time shall be stored in controller and be adjustable on a zone-by-zone basis. Adjustment range for warmer/cooler lever shall also be stored in EEPROM on controller. All programmable variables shall be available to field service tool through wall sensor port.

2.4 ELECTRONIC ACTUATORS AND VALVES:

A. Quality Assurance for Actuators and Valves:

1. UL Listed Standard 873 and C.S.A. Class 4813 02 certified.

2. NEMA 2 rated enclosures for inside mounting, provide with weather shield for outside mounting.
3. Five-year manufacturer's warranty. Two-year unconditional and three-year product defect from date of installation.

B. Actuators for damper and control valves 0.5–6 inches shall be electric unless otherwise specified, provide actuators as follows:

1. UL Listed Standard 873 and Canadian Standards Association Class 481302 shall certify actuators.
2. NEMA 2 rated actuator enclosures for inside mounting. Use additional weather shield to protect actuator when mounted outside.
3. Five-year manufacturer's warranty. Two-year unconditional and three-year product defect from date of installation.
4. Mechanical spring shall be provided when specified. Capacitors or other non-mechanical forms of fail-safe are not acceptable.
5. Position indicator device shall be installed and made visible to the exposed side of the actuator. For damper short shaft mounting, a separate indicator shall be provided to the exposed side of the actuator.
6. Overload Protection: Actuators shall provide protection against actuator burnout by using an internal current limiting circuit or digital motor rotation sensing circuit. Circuit shall insure that actuators cannot burn out due to stalled damper or mechanical and electrical paralleling. End switches to deactivate the actuator at the end of rotation are acceptable only for butterfly valve actuators.
7. A pushbutton gearbox release shall be provided for all non-spring actuators.
8. Modulating actuators shall be 24 VAC and consume 10 VA power or less.
9. Conduit connectors are required when specified and when code requires it.

C. Damper Actuators:

1. Economizer actuators shall utilize analog control 0–10 VDC; floating control is not acceptable.
2. Electric damper actuators (including VAV box actuators) shall be direct shaft-mounted and use a V-bolt and toothed V-clamp causing a cold weld effect for positive gripping. Single bolt or set-screw type fasteners are not acceptable.

3. One (1) electronic actuator shall be direct shaft-mounted per damper section. No connecting rods or jackshafts shall be needed. Small outside air and return air economizer dampers may be mechanically linked together if one (1) actuator has sufficient torque to drive both and damper drive shafts are both horizontal installed.
4. Multi-section dampers with electric actuators shall be arranged so that each damper section operates individually. One (1) electronic actuator shall be direct shaft-mounted per damper section. See below execution section for more installation details.
5. Actuator mounting for damper and valve arrangements shall comply with the following:
    a. Damper actuators: Shall not be installed in the air stream.
    b. A weather shield shall be used if actuators are located outside. For damper actuators, use clear plastic enclosure.
    c. Damper or valve actuator ambient temperature shall not exceed 122 degrees F through any combination of medium temperature or surrounding air. Appropriate air gaps, thermal isolation washers or spacers, standoff legs, or insulation shall be provided as necessary.
    d. Actuator cords or conduit shall incorporate a drip leg if condensation is possible. Water shall not be allowed to contact actuator or internal parts. Location of conduits in temperatures dropping below dew point shall be avoided to prevent water from condensing in conduit and running into actuator.
    e. Damper mounting arrangements shall comply to the following:
        1) The ventilation subcontractor shall furnish and install damper channel supports and sheet metal collars.
        2) No jack shafting of damper sections shall be allowed.
        3) Multi-section dampers shall be arranged so that each damper section operates individually. One (1) electronic actuator shall be direct shaft mounted per section.
    f. Size damper sections based on actuator manufacturer's specific recommendations for face velocity, differential pressure and damper type. In general:
        1) Damper section shall not exceed 24 ft-sq. with face velocity >1500 FPM.
        2) Damper section shall not exceed 18 ft-sq. with face velocity > 2500 FPM.

3) Damper section shall not exceed 13 ft-sq. with face velocity > 3000 FPM.

g. Multiple section dampers of two or more shall be arranged to allow actuators to be direct shaft mounted on the outside of the duct.

h. Multiple section dampers of three or more sections wide shall be arranged with a 3-sided vertical channel (8 inches wide by 6 inches deep) within the duct or fan housing and between adjacent damper sections. Vertical channel shall be anchored at the top and bottom to the fan housing or building structure for support. The sides of each damper frame shall be connected to the channels. Holes in the channel shall allow damper drive blade shafts to pass through channel for direct shaft-mounting of actuators. Open side of channel shall be faced downstream of the airflow, except for exhaust air dampers.

i. Multiple section dampers to be mounted flush within a wall or housing opening shall receive either vertical channel supports as described above or sheet metal standout collars. Sheet metal collars (12-inch minimum) shall bring each damper section out of the wall to allow direct shaft-mounting of the actuator on the side of the collar.

2.5 ENCLOSURES

A. All controllers, power supplies and relays shall be mounted in enclosures.

B. Enclosures may be NEMA 1 when located in a clean, dry, indoor environment. Indoor enclosures shall be NEMA 12 when installed in other than a clean environment. Outdoor enclosures must be either NEMA 3R or NEMA 4.

C. All temperature control panels shall be fabricated in a UL-listed panel shop. Field assembled temperature control panels are not allowed.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this section may properly commence.

B. Notify the owner's representative in writing of conditions detrimental to the proper and timely completion of the work.

C. Do not begin work until all unsatisfactory conditions are resolved.

3.2 INSTALLATION (GENERAL)

A. Install in accordance with manufacturer's instructions.

B. Provide all miscellaneous devices, hardware, software, interconnections, installation, and programming required to ensure a complete operating system in accordance with the sequences of operation and point schedules.

3.3 LOCATION AND INSTALLATION OF COMPONENTS

A. Locate and install components for easy accessibility; in general, mount 48 inches above floor with minimum three (3) feet of clear access space in front of units. Obtain approval on locations from owner’s representative prior to installation.

B. All instruments, switches, transmitters, etc., shall be suitably wired and mounted to protect them from vibration, moisture, and high or low temperatures.

C. Identify all equipment and panels. Provide permanently mounted tags for all panels.

D. Provide stainless steel or brass thermowells suitable for respective application and for installation under other sections, and sized to suit pipe diameter without restricting flow.

3.4 INTERLOCKING AND CONTROL WIRING

A. Provide all interlock and control wiring associated with the EMS system. All wiring shall be installed neatly and professionally, in accordance with all national, state and local electrical codes.

B. Provide wiring as required by functions as specified and as recommended by equipment manufacturers, to serve specified control functions. Provide shielded low capacitance wire for all communications trunks.

C. Control wiring shall not be installed in power circuit raceways. Magnetic starters and disconnect switches shall not be used as junction boxes. Provide auxiliary junction boxes as required. Coordinate location and arrangement of all control equipment with the owner's representative prior to rough-in.

D. Provide auxiliary pilot duty relays on motor starters as required for control function.

E. Provide power for all control components from nearest electrical control panel or as indicated on the electrical drawings; coordinate with electrical contractor.

F. All control wiring in mechanical, electrical, telephone and boiler rooms to be installed in raceways. Exposed control wiring shall also be installed in raceways. All other control wiring to be installed without conduit neatly and inconspicuously per local code requirements.

3.5 DDC OBJECT TYPE SUMMARY

A. Provide all database generation.

B. Displays

1. System displays shall show all analog and binary object types within the system. They shall be logically laid out for easy use by the owner. Provide outside air temperature indication on all system displays associated with economizer cycles.

C. Run Time Totalization

1. At a minimum, run time totalization shall be incorporated for each monitored supply fan, return fan, exhaust fan, hot water and chilled water pumps. Warning limits for each point shall be entered for alarm and or maintenance purposes.

D. Trend Log

1. All binary and analog object types (including zones) shall have the capability to be automatically trended.

E. Alarm

1. All analog inputs (High/Low Limits) and selected binary input alarm points shall be prioritized and routed (locally or remotely) with alarm message per owner's requirements.

F. Database Save

1. Provide backup database for all standalone application controllers on disk.

3.6 FIELD SERVICES

A. Prepare and start logic control system under provisions of this section.

B. Start up and commission systems. Allow sufficient time for startup and commissioning prior to placing control systems in permanent operation.

C. Provide the capability for off-site monitoring at control contractor's local or main office. At a minimum, off-site facility shall be capable of system diagnostics and software download. Owner shall provide phone line for this service for one (1) year or as specified.

D. Provide owner's representative with spare parts list. Identify equipment critical to maintaining the integrity of the operating system.

3.7 TRAINING

A. Provide application engineer to instruct owner in operation of systems and equipment.

B. Provide system operator’s training to include (but not be limited to) such items as the following: modification of data displays, alarm and status descriptors, requesting data, execution of commands and request of logs. Provide this training to a minimum of three persons.

C. Provide on-site training above as required, up to 24 hours as part of this contract.

1. Provide first training session before occupancy, once all systems are functioning and tested.
2. Provide second training 4-5 months after occupancy.
3. Provide final training 11 months after occupancy. This training should focus on answering questions about controls system. Collect questions at least two (2) weeks before training and tailor training materials to address these questions.

3.8 DEMONSTRATION

A. Demonstrate complete operating system to owner's representative.

B. Provide certificate stating that control system has been tested and adjusted for proper operation.

END OF SECTION 23 09 23

## LEGEND - SITE PLAN

- ASSUMED PROPERTY LINE
- LIMITS OF WORK
- PROJECT BUILDING MODERNIZATION INC. 1 - THIS SET
- PROJECT BUILDING MODERNIZATION INC. 2
- (N) CONCRETE PAVING PER CIVIL DRAWINGS
- (N) ASPHALT CONCRETE PAVING PER CIVIL DRAWINGS
- (N) SAFATEY DISPERSAL AREA
- (N) CHAINLINK FENCE
- (E) ORNAMENTAL FENCE
- (E) CHAINLINK FENCE
- (E) LANDSCAPING
- (E) SOLAR PANEL
- (E) BUILDING N.I.C
- (E) FIRE ENGINE ACCESS.
- (E) FIRE HYDRANT
- (E) FIRE DEPARTMENT CONNECTION
- **PATH OF EGRESS**
- **PATH OF TRAVEL (P.O.T.)**

- AS INDICATED, IS A COMMON BARRIER FREE ACCESS ROUTE
- IS AT LEAST 48" WIDE.
- NO ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL.
- THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH.
- PASSING SPACES (11B-403.2) AT LEAST 60"x60" ARE LOCATED NOT MORE THAN 200' APART.
- PARTS OF P.O.T. WITH CONTINUOUS GRADIENTS HAVE 60" LEVEL AREAS (11B-403.7) NOT MORE THAN 400' APART.
- THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED.
- (POT) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307).
- ARCHITECT SHALL VERIFY PATH OF TRAVEL CONFORMS WITH THE ABOVE.

## LEGEND - SITE PLAN GENERAL NOTES

1. ALL NEW CONCRETE AND AC PAVING IN P.O.T. SHALL HAVE 2% MAX. SLOPE IN ALL DIRECTIONS U.N.O. AND SHALL HAVE FLUSH TRANSITIONS TO ALL ADJACENT NEW AND EXISTING WALK SURFACES IN P.O.T .
2. ALL LANDSCAPE EDGES ALONG ALL NEW OR EXISTING WALK SURFACES IN P.O.T. SHALL BE PER CIVIL DRAWINGS.
3. FOR GRATINGS OR STRAINERS LOCATED IN THE SURFACE OF ANY PEDESTRIAN WAY OR IN P.O.T., THE MAXIMUM GRATE OR STRAINER OPENINGS SHALL NOT EXCEED 1/2" IN THE DIRECTION OF TRAFFIC FLOW.
4. SAFETY DISPERSAL AREA PER CBC 1028.5:OCCUPANTS: 293+154+112+168=727. 727 X 5 SF = 3,635 SF REQUIRED
5. THE P.O.T. IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR THE PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS, AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE P.O.T. WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE P.O.T. THAT WERE DETERMINED TO BE NON-COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NON-COMPLIANT ELEMENTS, COMPONENTS, OR PORTIONS OF THE P.O.T. THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NON-CONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

## PROJECT BUILDING INFORMATION

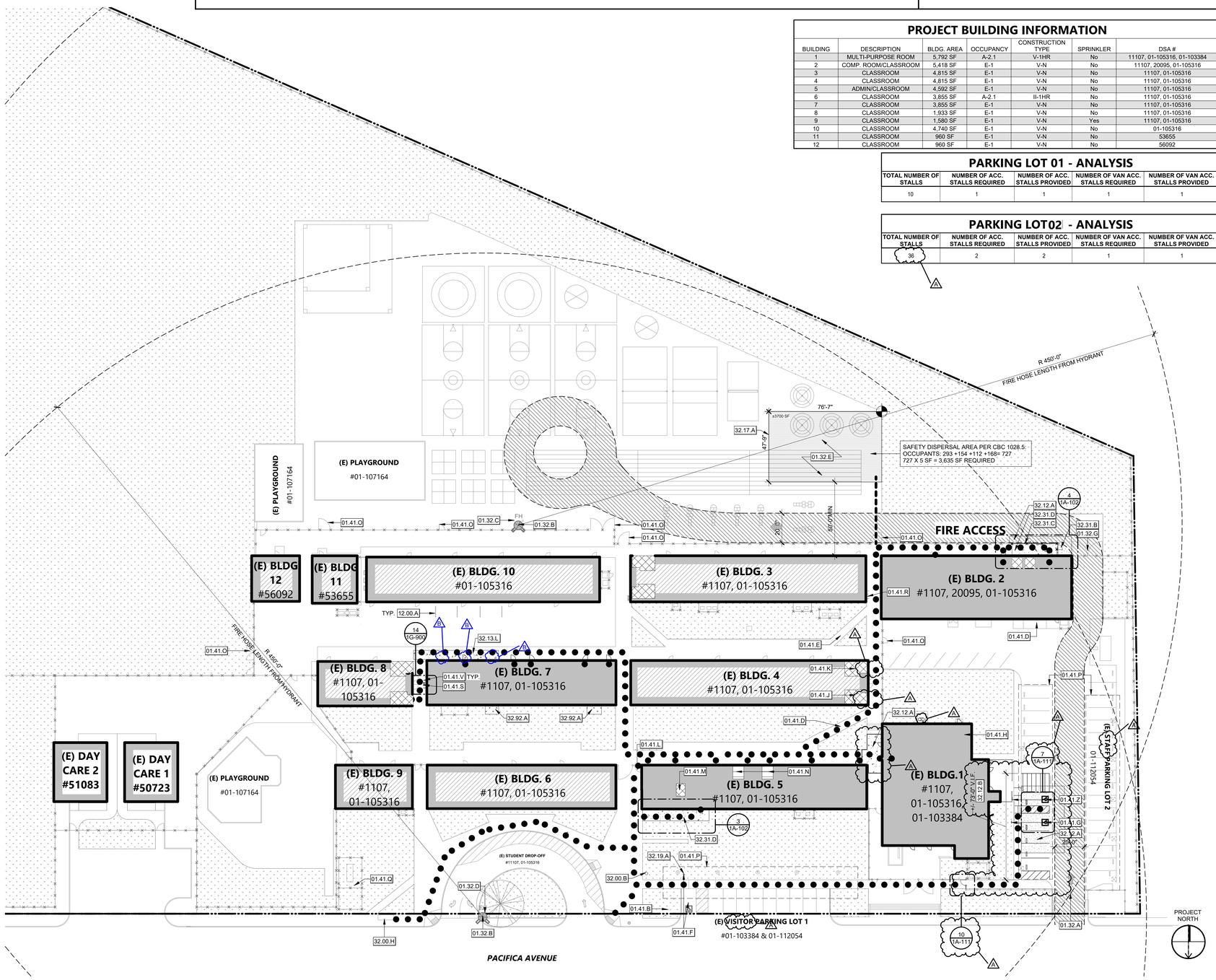
| BUILDING | DESCRIPTION | BLDG. AREA | OCCUPANCY | CONSTRUCTION TYPE | SPRINKLER | DSA # |
|---|---|---|---|---|---|---|
| 1 | MULTI-PURPOSE ROOM | 5,792 SF | A-2.1 | V-1HR | No | 11107, 01-105316, 01-103384 |
| 2 | COMP. ROOM/CLASSROOM | 5,418 SF | E-1 | V-N | No | 11107, 20095, 01-105316 |
| 3 | CLASSROOM | 4,815 SF | E-1 | V-N | No | 11107, 01-105316 |
| 4 | CLASSROOM | 4,815 SF | E-1 | V-N | No | 11107, 01-105316 |
| 5 | ADMIN/CLASSROOM | 4,592 SF | E-1 | V-N | No | 11107, 01-105316 |
| 6 | CLASSROOM | 3,855 SF | A-2.1 | II-1HR | No | 11107, 01-105316 |
| 7 | CLASSROOM | 3,855 SF | E-1 | V-N | No | 11107, 01-105316 |
| 8 | CLASSROOM | 1,933 SF | E-1 | V-N | No | 11107, 01-105316 |
| 9 | CLASSROOM | 1,580 SF | E-1 | V-N | Yes | 11107, 01-105316 |
| 10 | CLASSROOM | 4,740 SF | E-1 | V-N | No | 01-105316 |
| 11 | CLASSROOM | 960 SF | E-1 | V-N | No | 53655 |
| 12 | CLASSROOM | 960 SF | E-1 | V-N | No | 56092 |

## PARKING LOT 01 - ANALYSIS

| TOTAL NUMBER OF STALLS | NUMBER OF ACC. STALLS REQUIRED | NUMBER OF ACC. STALLS PROVIDED | NUMBER OF VAN ACC. STALLS REQUIRED | NUMBER OF VAN ACC. STALLS PROVIDED |
|---|---|---|---|---|
| 10 | 1 | 1 | 1 | 1 |

## PARKING LOT02 - ANALYSIS

| TOTAL NUMBER OF STALLS | NUMBER OF ACC. STALLS REQUIRED | NUMBER OF ACC. STALLS PROVIDED | NUMBER OF VAN ACC. STALLS REQUIRED | NUMBER OF VAN ACC. STALLS PROVIDED |
|---|---|---|---|---|
| 36 | 2 | 2 | 1 | 1 |




## KEYNOTES

| | |
|---|---|
| 01.32.A | (E) GATE W/ 20'-0" CLEAR OPENING. INSTALL (N) KNOX BOX |
| 01.32.B | (E) FIRE HYDRANT |
| 01.32.C | (E) BOLLARDS |
| 01.32.D | (E) "NO PARKING AT ANYTINE" SIGN |
| 01.32.E | (N) SAFETY DISPERSAL AREA PER CBC 1028.5. |
| 01.32.G | (E) GATE W/ 20'-0" CLEAR OPENING - WITH (E) KNOX BOX |
| 01.41.B | (E) TOW AWAY SIGN. DSA #01-112054. |
| 01.41.D | (E) ACCESSIBLE RAMP. DSA #01-105316. |
| 01.41.E | (E) ACCESSIBLE RAMP. DSA #01-104414. |
| 01.41.F | (E) VAN ACCESSIBLE PARKING STALL & SIGNAGE. DSA #01-112054. |
| 01.41.G | (E) ACCESSIBLE PARKING STALL AND SIGNAGE. DSA #01-112054. |
| 01.41.H | (E) ACCESSIBLE WHEELCHAIR LIFT. DSA #01-103384. |
| 01.41.J | (E) ACCESSIBLE BOYS RESTROOM. DSA #01-114761. |
| 01.41.K | (E) ACCESSIBLE GIRLS RESTROOM. DSA #01-114761. |
| 01.41.L | (E) ACCESSIBLE ORNAMENTAL GATE W/ (E) PANIC HARDWARE. |
| 01.41.M | (N) ACCESSIBLE STUDENT RESTROOM. |
| 01.41.N | (N) ACCESSIBLE STAFF RESTROOM. |
| 01.41.O | (E) GATE SIGN "GATES TO REMAIN LOCKED IN THE OPEN POSITION DURING SCHOOL HOURS OR DURING ANY PUBLIC FUNCTIONS". DSA 01-107164. |
| 01.41.P | (E) SOLAR PANEL. DSA #01-112054. |
| 01.41.Q | (E) PG&E SERVICE ENCLOSURE. |
| 01.41.R | (E) HI-LOW ACCESSIBLE DRINKING FOUNTAIN. DSA #01-105316. |
| 01.41.S | REPLACE (E) DF WITH (N) HI-LOW ACCESSIBLE DRINKING FOUNTAIN. |
| 01.41.V | (N) DRINKING FOUNTAIN GRAB BAR RAIL. SEE ENLARGED PLAN FOR DEMOLITION NOTES |
| 01.41.Z | (N) ACCESSIBLE PARKING STALL. INSTALL NEW SIGNAGE AT THE EXISTING WOOD FENCE. |
| 12.00.A | (E) BICYCLE RACKS |
| 32.00.B | EXISTING LIGHT POLE. PROTECT DURING CONSTRUCTION |
| 32.00.H | (E) COVERED BUS STOP |
| 32.12.A | (N) ASPHALT CONCRETE PAVING. SEE CIVIL DRAWINGS. |
| 32.12.B | APPLY SLURRY SEAL AND REPAINT PARKING STALLS |
| 32.13.L | (N) CONCRETE PATCH TO MATCH (E). AREA OF NEW UNDERGROUND PIPING. S.MP.D. |
| 32.17.A | (N) SAFETY DISPERSAL STRIPING AT (E) ASPHALT TO BE PAINTED WHITE, 4" WIDE. |
| 32.19.A | REPLACE (E) ACCESSIBLE PARKING SIGNAGE FOR NEW SIGNAGE. SEE 1A-111 SITE DETAILS. |
| 32.31.B | (N) 4' WIDE CHAINLINK GATE |
| 32.31.C | (N) 7' HIGH CHAINLINK FENCE |
| 32.31.D | (N) CONCRETE PAVING. SEE CIVIL DRAWINGS. |
| 32.92.A | PATCH LANDSCAPE WITH REMOVED DIRT. AREA OF NEW UNDERGROUND PIPING. S.MP.D. |

## DSA 810

## FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PL 09-01: Fire Flow for Buildings*.

| PROJECT INFORMATION | |
|---|---|
| School District/Owner: | Mt Diablo Unified School District |
| Project Name/School: | Rio Vista Elementary School |
| Project Address: | 611 Pacifica Ave, Bay Point, CA 94565 |

| FIRE & LIFE SAFETY INFORMATION | | | | |
|---|---|---|---|---|
| 1. | Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)* | Yes ☐ | No ☑ | |
| 2. | Was the fire hydrant water flow test performed as part of this LFA review? | Yes ☐ | No ☑ | |
| 3. | Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? *(If yes, indicate FHSZ classification below.)* | Yes ☐ | No ☑ | |
| | Refer to the following website for FHSZ locations: http://egis.fire.ca.gov/FHSZ/ | Moderate ☐ | High ☐ | Very High ☐ |
| | Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)* | | | WIFA ☐ |

| CONDITION MEANS AND METHODS RESOLUTION | | ALTERNATE ACCEPTED | | | |
|---|---|---|---|---|---|
| | | Yes | No | N/A | N/R |
| 4. | Emergency vehicle access roadways do not meet CFC requirements. | | | | ✔ |
| 4a. | **Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property. | | | | |
| 5. | **Fire Hydrants:** Number and spacing does not meet CFC requirements. | | | | ✔ |
| 5a. | **Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property. | | | | |
| 6. | **Fire Hydrants:** Water flow and pressure are less than CFC minimum. | | | | ✔ |
| 6a. | **Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property. | | | | |
| 7. | Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements. | | | | ✔ |
| 7a. | **Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property. | | | | |

**School District Acceptance of Acceptable Design Alternates**

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: _____ Title: _____

Signature: _____ Date: _____

| LOCAL FIRE AUTHORITY (LFA) INFORMATION | |
|---|---|
| LFA Agency Name: | |
| LFA Review Official: | |
| Title: | Work Phone: |
| Work Email: | |

LFA Reviewer's Signature: _____ Date: _____

AGENCY APPROVAL DSA# 01-121440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TECHNOLOGY ENGINEER
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TEL (916) 359-4000


PROFESSIONAL STAMP

LICENSED ARCHITECT · MARIANA ALVAREZ PARGA · C-36107 · REN. 01-31-25 · STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |

THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.

PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**FIRE AUTHORITY SITE PLAN**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.

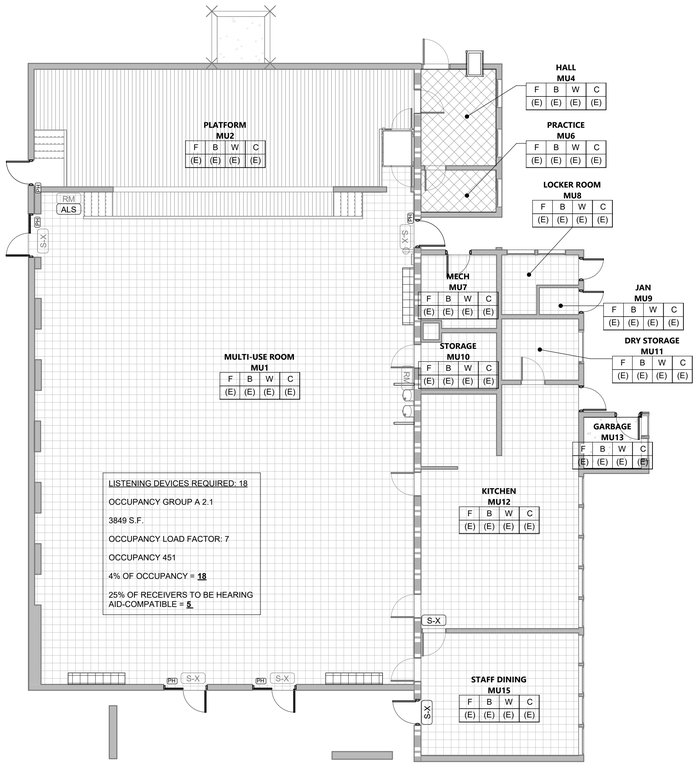
# 1G-101

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

**SITE PLAN - ACESSIBILITY - FIRE AUTHORITY** 1" = 30'-0" 1

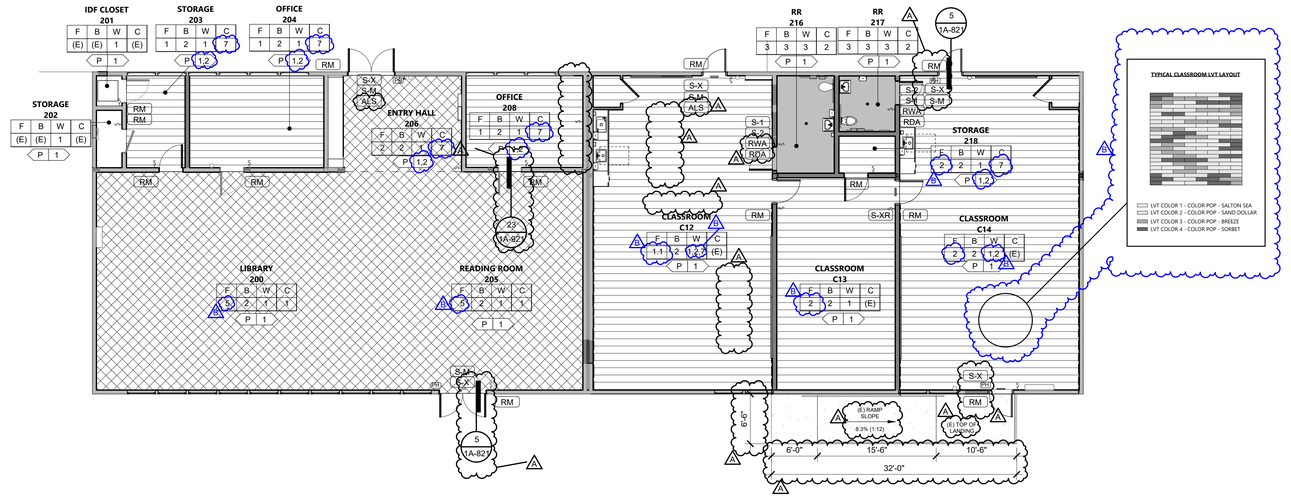

DATE PLOTTED: 4/23/2024 3:58:47 PM FILE LOCATION: Autodesk Docs://Mt Diablo USD - Modernization Projects 2023/23118_MTDIUSD_RIO VISTA ES MOD_INC01_A22.rvt




## FINISH SCHEDULE_BLDG 1

| RM# | RM NAME | FLOOR | BASE | WALL | CEILING |
|---|---|---|---|---|---|
| MU1 | MULTI-USE ROOM | (E) | (E) | (E) | (E) |
| MU2 | PLATFORM | (E) | (E) | (E) | (E) |
| MU4 | HALL | (E) | (E) | (E) | (E) |
| MU6 | PRACTICE | (E) | (E) | (E) | (E) |
| MU7 | MECH | (E) | (E) | (E) | (E) |
| MU8 | LOCKER ROOM | (E) | (E) | (E) | (E) |
| MU9 | JAN | (E) | (E) | (E) | (E) |
| MU10 | STORAGE | (E) | (E) | (E) | (E) |
| MU11 | DRY STORAGE | (E) | (E) | (E) | (E) |
| MU12 | KITCHEN | (E) | (E) | (E) | (E) |
| MU13 | GARBAGE | (E) | (E) | (E) | (E) |
| MU15 | STAFF DINING | (E) | (E) | (E) | (E) |

**BLDG. 1 - FINISH KEY PLAN** | 1/8" = 1'-0" | **2**




## FINISH SCHEDULE_BLDG 2

| RM# | RM NAME | FLOOR | BASE | WALL | CEILING |
|---|---|---|---|---|---|
| 200 | LIBRARY | 5 | 2 | 1 | 1 |
| 202 | STORAGE | (E) | (E) | 1 | (E) |
| 203 | STORAGE | 1 | 2 | 1 | 7 |
| 204 | OFFICE | 1 | 2 | 1 | 7 |
| 205 | READING ROOM | 5 | 2 | 1 | 1 |
| 206 | ENTRY HALL | 2 | 2 | 1 | 7 |
| 208 | OFFICE | 1 | 2 | 1 | 7 |
| 216 | RR | 3 | 3 | 3 | 2 |
| 217 | RR | 3 | 3 | 3 | 2 |
| 218 | STORAGE | 2 | 2 | 1 | 7 |
| C12 | CLASSROOM | 1,1 | 2 | 1,2,7 | (E) |
| C13 | CLASSROOM | 2 | 2 | 1 | (E) |
| C14 | CLASSROOM | 2 | 2 | 1,2 | (E) |

**BLDG. 2 - FINISH KEY PLAN** | 1/8" = 1'-0" | **1**

**NOTE:**
THE MINIMUM NUMBER OF RECIEVERS TO BE PROVIDED SHALL BE EQUAL TO FOUR PERCENT OF THE TOTAL NUMBER OF SEATS, BUT IN NO CASE LESS THAN TWO PER CBC 11B-219.3.
693*(.04)= **28**

TWENTY-FIVE PERCENT MINIMUM OF RECEIVERS PROVIDED, BUT NO FEWER THAN TWO, SHALL BE HEARING-AID COMPATIBLE PER CBC 11B-706.3.
28*(.25)= **7**

## FINISHES GENERAL NOTES

1. CONTRACTOR RESPONSIBLE FOR FIELD VERIFYING MATERIAL DIMENSIONS AT EACH PARTITION IN THE FIELD AS RELATED TO THE OVERALL FINAL PARTITION DIMENSION, PRIOR TO DOOR AND WINDOW SUBMITTALS.
2. FOR MATERIAL FINISHES AND LOCATION OF FINISHES, REFER TO FINISH PLAN, INTERIOR ELEVATIONS AND FINISH SCHEDULE.
3. SPECIFICATIONS SHALL SUPERCEDE DIMENSIONS IN THIS DETAIL AS NECESSARY; CONTRACTOR TO VERIFY.

## FLOOR FINISHES (F)

| (F) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING FLOOR | | | MATCH EXISTING ADJ. |
| 1 | LVT | ID LATITUDE - LAUREL OAK | | TARKETT |
| 2 | LVT (MULTICOLOR) | SEE 1/1A-251 FOR COLORS | | TARKETT - COLOR POP |
| 3 | EPOXY FLOORING | TBD | | 6" COVE BASE, DUR-A-FLEX |
| 4 | SEALED CONCRETE | | | |
| 5 | CARPET TILE 24" x 24" | TBD | | TARKETT |

## BASE FINISHES (B)

| (B) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING BASE | | | MATCH EXISTING ADJACENT |
| 2 | 4" RUBBER BASE | TBD | | JOHNSONITE |
| 3 | EPOXY COVE BASE | TBD | | 6" COVE BASE, DUR-A-FLEX |

## WALL FINISHES (W)

| (W) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING WALL | | | MATCH EXISTING ADJ. |
| 1 | GYPSUM WALL BOARD | 5/8" TYPE "X" TYPICAL - LEVEL 5 FINISH | | |
| 2 | TACKABLE WALL PANEL 7' HIGH | TBD | | CLARIDGE - TACK WALL |
| 3 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 4 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 5 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 6 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 7 | ACOUSTIC WALL PANEL | | HEXAGON | SEE 21/1A-921 |

## CEILING FINISHES (C)

| (C) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARK |
|---|---|---|---|---|
| (E#) | EXISTING CEILING | | | MATCH EXISTING ADJ. |
| 1 | DIRECT APPLY ACOUSTIC CEILING, 24" x 48" TILES | WHITE | | |
| 2 | SUSPENDED ACOUSTIC CEILING, 24" x 48" TILES | WHITE | CLEAN ROOM | |
| 3 | SUSPENDED ACOUSTIC CEILING, 24" x 48" TILES | WHITE | T-BAR | |
| 4 | WOODWORKS LINEAR CEILING | TBD | SUSPENDED | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 5 | FELT SUSPENDED ACOUSTIC PANELS | TBD | HEXAGON | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 6 | ACOUSTIC PANEL 36"X36" | TBD | STRUCTURE ATTACHED TO JOIST | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 7 | 5/8" GYP BOARD | WHITE | | |

## PAINT (P)

| (P) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARK |
|---|---|---|---|---|
| (E#) | EXISTING PAINT | | | MATCH EXISTING ADJACENT |
| 1 | INTERIOR WALL PAINT | SW7757 HIGH REFLECTIVE WHITE | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 2 | INTERIOR CLASSROOM CEILING PAINT | SW7757 HIGH REFLECTIVE WHITE | PROF. FLAT | SHERWIN WILLIAMS |
| 3 | INTERIOR RESTROOM CEILING PAINT | SW7757 HIGH REFLECTIVE WHITE | PROF. SEMIGLOSS | SHERWIN WILLIAMS |
| 7 | INTERIOR ACCENT WALL PAINT | TBD | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 8 | INTERIOR ACCENT WALL PAINT | TBD | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 9 | EXTERIOR PAINT | TBD | | |
| 10 | EXTERIOR TRIM | TBD | | |

## FINISHES PLAN

- LUXURY VINYL TILE
- CARPET
- RESINOUS FLOORING (EPOXY)

ROOM NAME — ROOM NAME
# — ROOM NUMBER
F B W C — FINISH LOCATION
- - - - — FINISH MATERIAL

## LEGEND - SIGNAGE GENERAL NOTES

1. ALL SIGNS ON GLAZING TO BE MOUNTED BACK TO BACK. SEE DETAIL 5/1A-925
2. 11B-302.2 CARPET. CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, LEVEL CUT/UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE 2 INCH (12.7 MM) MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 11B-303.

## LEGEND - SIGNAGE SYMBOLS

| (E) | (N) | | |
|---|---|---|---|
| RM | RM | ROOM NAME / NUMBER SIGN, SEE DETAILS | 2/1A-925 |
| S-1 | S-1 | TOILET ROOM DOOR SYMBOL, SEE DETAILS | 18/1A-925 |
| S-2 | S-2 | TOILET ROOM WALL SIGN, SEE DETAILS | 13/1A-925 |
| S-X | S-X | TACTILE "EXIT" SIGN (INTERIOR), SEE DETAILS | 7/1A-925 |
| S-XR | S-XR | TACTILE "EXIT ROUTE" SIGN (INTERIOR), SEE DETAILS | 10/1A-925 |
| S-M | S-M | "MAXIMUM OCCUPANCY" SIGN (INTERIOR), SEE DETAIL | 15/1A-925 |
| ALS | ALS | ASSISTIVE LISTENING SIGN, SEE DETAIL | 14/1A-925 |
| RWA | RWA | RESTROOM WALL - ALL-GENDER | 13/1A-925 |
| RDA | RDA | RESTROOM DOOR - ALL-GENDER | 18/1A-925 |

AGENCY APPROVAL DSA# 01-121440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MECHANICAL ENGINEER
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ELECTRICAL ENGINEER
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TECHNOLOGY ENGINEER
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Carmichael, CA 95608
TEL (916) 359-4000


PROFESSIONAL STAMP

LICENSED ARCHITECT
MARINA ALVAREZ PRIEGA
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| A | 04-01-2024 | BID SET |
| B | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
**BLDG 1&2 - FINISH & SIGNAGE PLAN**
INC.1

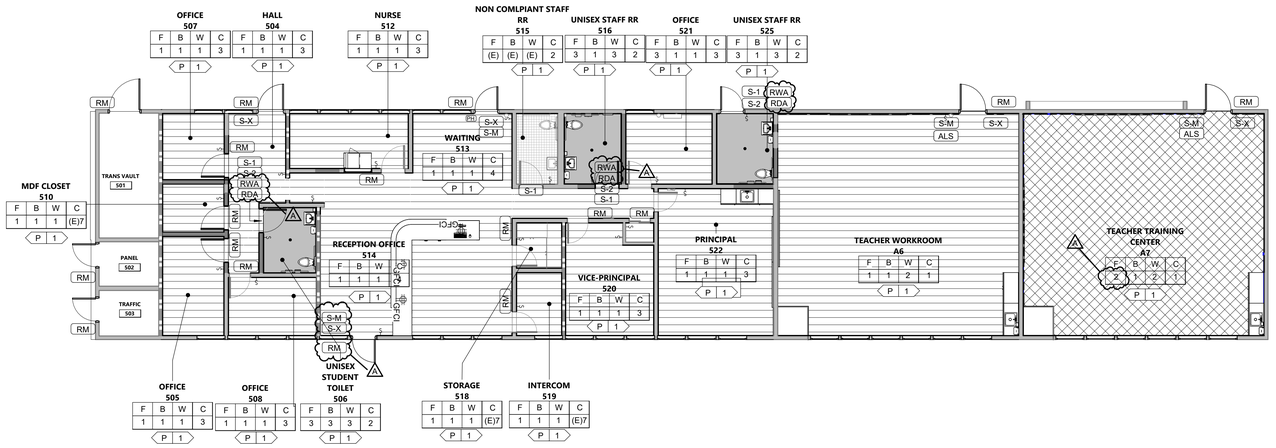
DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.
# 1A-251

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS


DATE PLOTTED: 4/23/2024 3:57:11 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt




**NOTE:**
THE MINIMUM NUMBER OF RECIEVERS TO BE PROVIDED SHALL BE EQUAL TO FOUR PERCENT OF THE TOTAL NUMBER OF SEATS, BUT IN NO CASE LESS THAN TWO PER CBC 11B-219.3.
693*(.04)= **28**

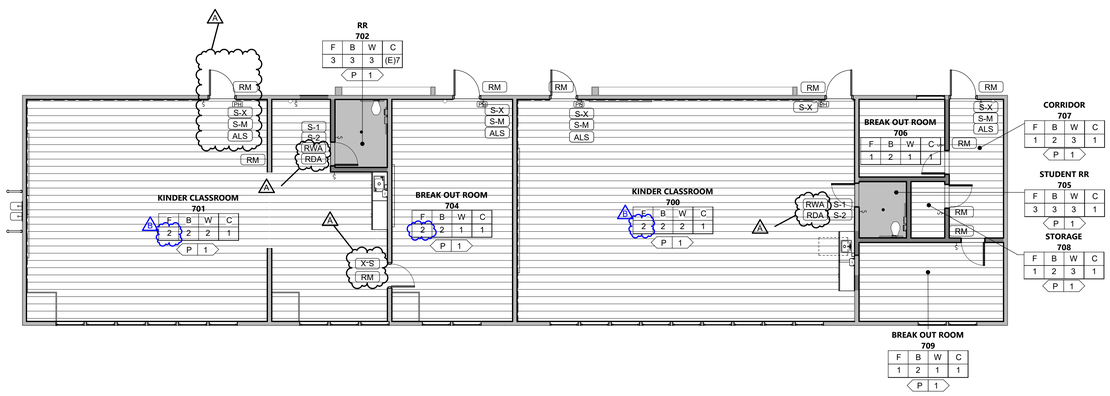
TWENTY-FIVE PERCENT MINIMUM OF RECEIVERS PROVIDED, BUT NO FEWER THAN TWO, SHALL BE HEARING-AID COMPATIBLE PER CBC 11B-706.3.
28*(.25)= **7**

## FINISH SCHEDULE_BLDG 5

| RM# | RM NAME | FLOOR | BASE | WALL | CEILING |
|---|---|---|---|---|---|
| 501 | TRANS VAULT | | | | |
| 502 | PANEL | | | | |
| 503 | TRAFFIC | | | | |
| 504 | HALL | 1 | 1 | 1 | 3 |
| 505 | OFFICE | 1 | 1 | 1 | 3 |
| 506 | UNISEX STUDENT TOILET | 3 | 3 | 3 | 2 |
| 507 | OFFICE | 1 | 1 | 1 | 3 |
| 508 | OFFICE | 1 | 1 | 1 | 3 |
| 510 | MDF CLOSET | 1 | 1 | 1 | (E)7 |
| 512 | NURSE | 1 | 1 | 1 | 3 |
| 513 | WAITING | 1 | 1 | 1 | 4 |
| 514 | RECEPTION OFFICE | 1 | 1 | 1 | 4 |
| 515 | NON COMLPIANT STAFF RR | (E) | (E) | (E) | 2 |
| 516 | UNISEX STAFF RR | 3 | 1 | 3 | 2 |
| 518 | STORAGE | 1 | 1 | 1 | (E)7 |
| 519 | INTERCOM | 1 | 1 | 1 | (E)7 |
| 520 | VICE-PRINCIPAL | 1 | 1 | 1 | 3 |
| 521 | OFFICE | 3 | 1 | 1 | 3 |
| 522 | PRINCIPAL | 1 | 1 | 1 | 3 |
| 525 | UNISEX STAFF RR | 3 | 1 | 3 | 2 |
| A6 | TEACHER WORKROOM | 1 | 1 | 2 | 1 |
| A7 | TEACHER TRAINING CENTER | 2 | 1 | 2 | 1 |

## BLDG. 5 - FINISH KEY PLAN

1/8" = 1'-0" | 1

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28*(.25)= **7**

## FINISH SCHEDULE_BLDG 7

| RM# | RM NAME | FLOOR | BASE | WALL | CEILING |
|---|---|---|---|---|---|
| 700 | KINDER CLASSROOM | 2 | 2 | 2 | 1 |
| 701 | KINDER CLASSROOM | 2 | 2 | 2 | 1 |
| 702 | RR | 3 | 3 | 3 | (E)7 |
| 704 | BREAK OUT ROOM | 2 | 2 | 1 | 1 |
| 705 | STUDENT RR | 3 | 3 | 3 | 1 |
| 706 | BREAK OUT ROOM | 1 | 2 | 1 | 1 |
| 707 | CORRIDOR | 1 | 2 | 3 | 1 |
| 709 | BREAK OUT ROOM | 1 | 2 | 1 | 1 |

## BLDG. 7 - FINISH KEY PLAN

1/8" = 1'-0" | 2

## FINISHES GENERAL NOTES

1. CONTRACTOR RESPONSIBLE FOR FIELD VERIFYING MATERIAL DIMENSIONS AT EACH PARTITION IN THE FIELD AS RELATED TO THE OVERALL FINAL PARTITION DIMENSION, PRIOR TO DOOR AND WINDOW SUBMITTALS.
2. FOR MATERIAL FINISHES AND LOCATION OF FINISHES, REFER TO FINISH PLAN, INTERIOR ELEVATIONS AND FINISH SCHEDULE.
3. SPECIFICATIONS SHALL SUPERCEDE DIMENSIONS IN THIS DETAIL AS NECESSARY; CONTRACTOR TO VERIFY.

## FLOOR FINISHES (F)

| (F) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING FLOOR | | | MATCH EXISTING ADJ. |
| 1 | LVT | ID LATITUDE - LAUREL OAK | | TARKETT |
| 2 | LVT (MULTICOLOR) | SEE 1/1A-251 FOR COLORS | | TARKETT - COLOR POP |
| 3 | EPOXY FLOORING | TBD | | 6" COVE BASE, DUR-A-FLEX |
| 4 | SEALED CONCRETE | | | |
| 5 | CARPET TILE 24" x 24" | TBD | | TARKETT |

## BASE FINISHES (B)

| (B) | DESCRIPTION | COLOR | SPECIFICATIO N SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING BASE | | | MATCH EXISTING ADJACENT |
| 2 | 4" RUBBER BASE | TBD | | JOHNSONITE |
| 3 | EPOXY COVE BASE | TBD | | 6" COVE BASE, DUR-A-FLEX |

## WALL FINISHES (W)

| (W) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARKS |
|---|---|---|---|---|
| (E#) | EXISTING WALL | | | MATCH EXISTING ADJ. |
| 1 | GYPSUM WALL BOARD | 5/8" TYPE "X" TYPICAL - LEVEL 5 FINISH | | |
| 2 | TACKABLE WALL PANEL 7' HIGH | TBD | | CLARIDGE - TACK WALL |
| 3 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 4 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 5 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 6 | CERAMIC WALL TILE | TBD | | DALTILE - COLOR WHEEL |
| 7 | ACOUSTIC WALL PANEL | | HEXAGON | SEE 21/1A-921 |

## CEILING FINISHES (C)

| (C) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARK |
|---|---|---|---|---|
| (E#) | EXISTING CEILING | | | MATCH EXISTING ADJ. |
| 1 | DIRECT APPLY ACOUSTIC CEILING, 24" x 48" TILES | WHITE | | |
| 2 | SUSPENDED ACOUSTIC CEILING, 24" x 48" TILES | WHITE | CLEAN ROOM | |
| 3 | SUSPENDED ACOUSTIC CEILING, 24" x 48" TILES | WHITE | T-BAR | |
| 4 | WOODWORKS LINEAR CEILING | TBD | SUSPENDED | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 5 | FELT SUSPENDED ACOUSTIC PANELS | TBD | HEXAGON | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 6 | ACOUSTIC PANEL 36"X36" | TBD | STRUCTURE ATTACHED TO JOIST | PAINT EXPOSED CEILING/JOISTS/BLOCKING |
| 7 | 5/8" GYP BOARD | WHITE | | |

## PAINT (P)

| (P) | DESCRIPTION | COLOR | SPECIFICATION SECTION | REMARK |
|---|---|---|---|---|
| (E#) | EXISTING PAINT | | | MATCH EXISTING ADJACENT |
| 1 | INTERIOR WALL PAINT | SW7757 HIGH REFLECTIVE WHITE | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 2 | INTERIOR CLASSROOM CEILING PAINT | SW7757 HIGH REFLECTIVE WHITE | PROF. FLAT | SHERWIN WILLIAMS |
| 3 | INTERIOR RESTROOM CEILING PAINT | SW7757 HIGH REFLECTIVE WHITE | PROF. SEMIGLOSS | SHERWIN WILLIAMS |
| 7 | INTERIOR ACCENT WALL PAINT | TBD | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 8 | INTERIOR ACCENT WALL PAINT | TBD | SHADOW SEMIGLOSS | SHERWIN WILLIAMS |
| 9 | EXTERIOR PAINT | TBD | | |
| 10 | EXTERIOR TRIM | TBD | | |

## FINISHES PLAN

- LUXURY VINYL TILE
- CARPET
- RESINOUS FLOORING (EPOXY)

ROOM NAME — ROOM NAME
# — ROOM NUMBER
F B W C — FINISH LOCATION
- - - - — FINISH MATERIAL

## LEGEND - SIGNAGE GENERAL NOTES

1. ALL SIGNS ON GLAZING TO BE MOUNTED BACK TO BACK. SEE DETAIL 5/1A-925
2. 11B-302.2 CARPET. CARPET OR CARPET TILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING OR NO CUSHION OR PAD. CARPET OR CARPET TILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, LEVEL CUT/UNCUT PILE TEXTURE. PILE HEIGHT SHALL BE 2 INCH (12.7 MM) MAXIMUM. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO FLOOR SURFACES AND SHALL HAVE TRIM ON THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 11B-303.

## LEGEND - SIGNAGE SYMBOLS

| (E) | (N) | | |
|---|---|---|---|
| RM | RM | ROOM NAME / NUMBER SIGN, SEE DETAILS | 2/1A-925 |
| S-1 | S-1 | TOILET ROOM DOOR SYMBOL, SEE DETAILS | 18/1A-925 |
| S-2 | S-2 | TOILET ROOM WALL SIGN, SEE DETAILS | 13/1A-925 |
| S-X | S-X | TACTILE "EXIT" SIGN (INTERIOR), SEE DETAILS | 7/1A-925 |
| S-XR | S-XR | TACTILE "EXIT ROUTE" SIGN (INTERIOR), SEE DETAILS | 10/1A-925 |
| S-M | S-M | "MAXIMUM OCCUPANCY" SIGN (INTERIOR), SEE DETAIL | 15/1A-925 |
| ALS | ALS | ASSISTIVE LISTENING SIGN, SEE DETAIL | 14/1A-925 |
| RWA | RWA | RESTROOM WALL - ALL-GENDER | 13/1A-925 |
| RDA | RDA | RESTROOM DOOR - ALL-GENDER | 18/1A-925 |

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PROFESSIONAL STAMP

LICENSED ARCHITECT MARINA ALVAREZ PARGA C-36107 REN. 01-31-25 STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


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**BLDG 5&7 - FINISH & SIGNAGE PLAN**

INC.1

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SHEET NO.
# 1A-252

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CONSTRUCTION DOCUMENTS


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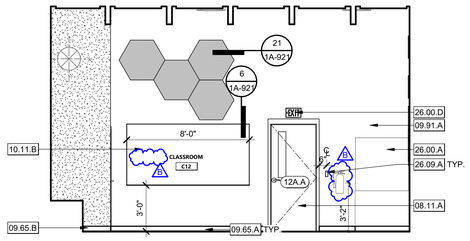


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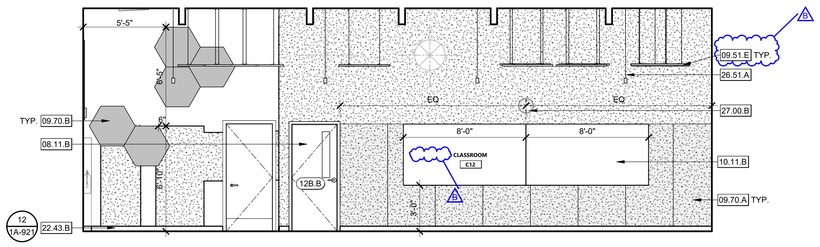


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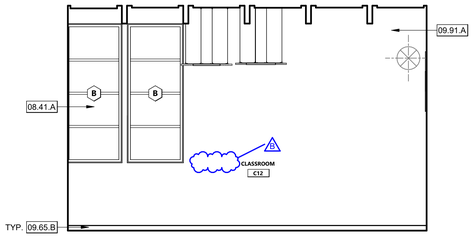


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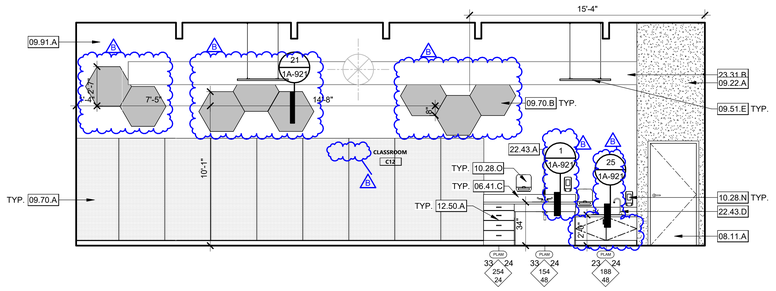


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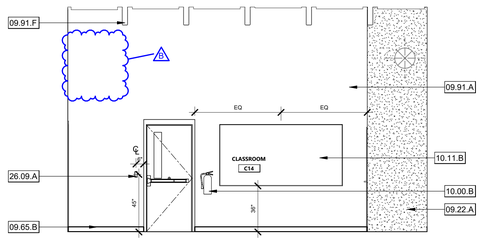
## KEYNOTES

| | |
|---|---|
| 06.41.C | PLASTIC LAMINATED COUNTERTOP 6" BACKSPLASH, TYP. |
| 06.44.A | (N) STRUCTURAL POST. S.S.D. |
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 09.22.A | (N) PARTITION WALL |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.51.E | (N) PENDANT HEXAGON ACOUSTIC CEILING PANEL |
| 09.65.A | (N) FLOORING AND WALL BASE THROUGHOUT, SEE FINISH SCHEDULE FOR FLOORING INFORMATION |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.70.A | (N) TACKABLE WALL PANELS |
| 09.70.B | (N) WALL MOUNTED HEXAGON ACOUSTIC PANEL |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED. SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION. |
| 09.91.F | (N) PAINT EXISTING AND NEW STRUCTURAL ITEMS AND UNDERSIDE OF ROOF TO MATCH DUCTWORK. SEE FINISH SCHEDULE. |
| 09.91.G | PAINT (N) I-BEAM AND BRACE |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.11.B | (N) WALL MOUNTED WHITEBOARD |
| 10.28.N | (N) SURFACE MOUNT SOAP DISPENSER, PER MOUNTING DETAILS |
| 10.28.O | (N) SURFACE MOUNT PAPER TOWEL DISPENSER. PER MOUNTING DETAILS |
| 12.50.A | (N) PLASTIC LAMINATED FACED ARCHITECTURAL CABINETS |
| 22.43.A | (N) ACCESSIBLE SINK WITH CONCEALMENT PANEL, FOR ADULT & AGES 9-12. SEE 25/A-921. |
| 22.43.B | (N) ACC. LAVATORY. PER MOUNTING DETAILS AND PLUMBING DRAWINGS |
| 22.43.D | (N) ACCESSIBLE SINK WITH BUBBLER AT THE COUNTERTOP AND CONCEALMENT PANEL, FOR AGES 4-6. SEE 25/A-921 |
| 23.31.B | (N) EXPOSED MECHANICAL DUCT PER MECHANICAL DRAWINGS. PAINTED. |
| 26.00.A | (E) ELECTRICAL PANEL TO REMAIN PROTECT DURING CONSTRUCTION. S.E.D. |
| 26.00.D | (E) EMERGENCY EXIT LIGHTING. TO BE PROTECTED IN PLACE. S.E.D. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.A | (N) LED PENDANT LIGHTS, S.E.D. |
| 27.00.B | (E) CLOCK TO BE REINSTALLED |

## LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 45" A.F.F. TO THE TOP OF SWITCH PLATE.

**BLDG. 2 - CLASSROOM - 12A** | 1/4" = 1'-0" | 1

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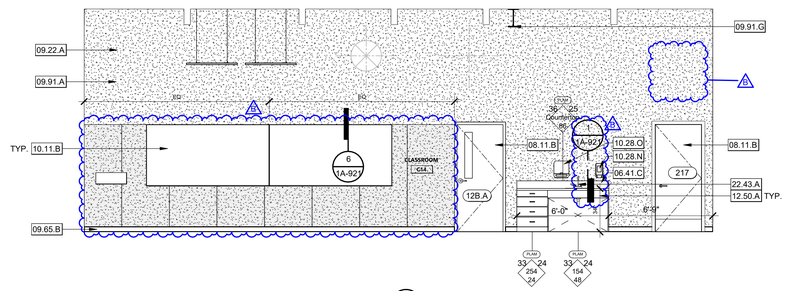


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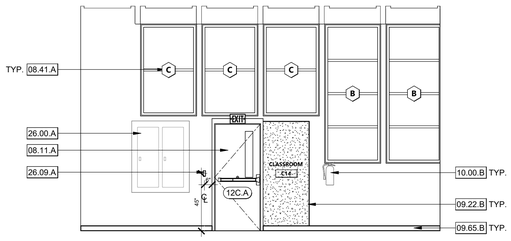


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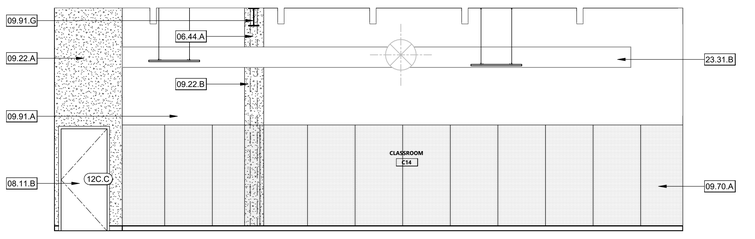


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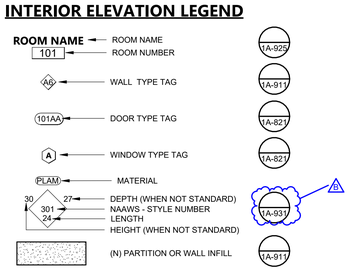
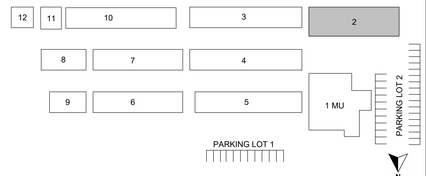
## INTERIOR ELEVATION LEGEND




## KEY PLAN

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PROFESSIONAL STAMP

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C-36107
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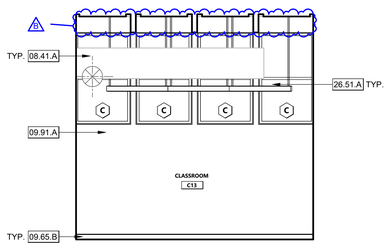


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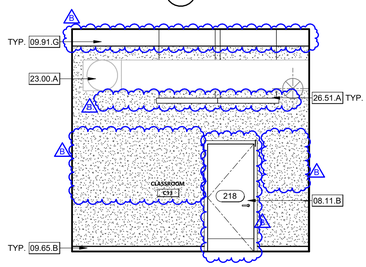


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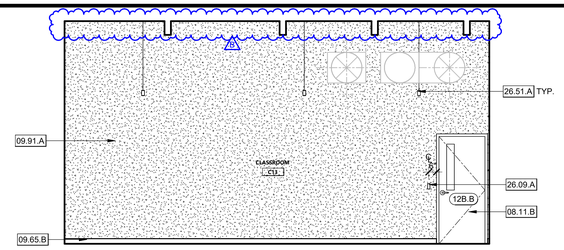


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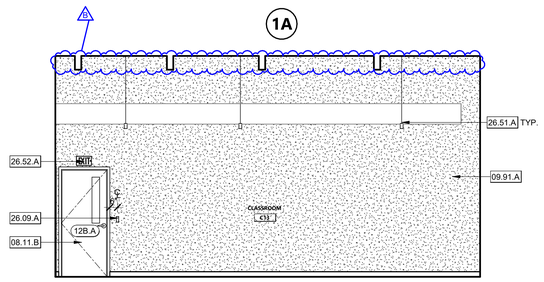


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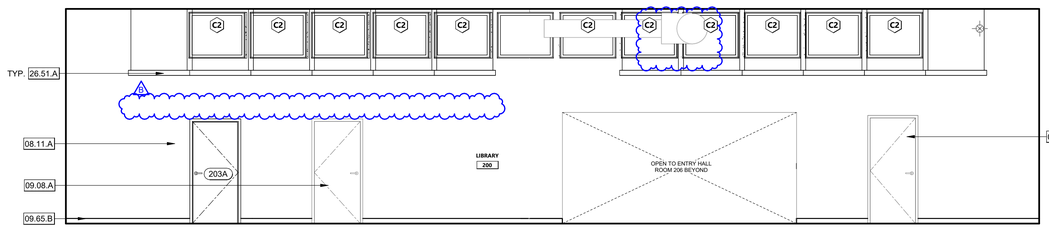


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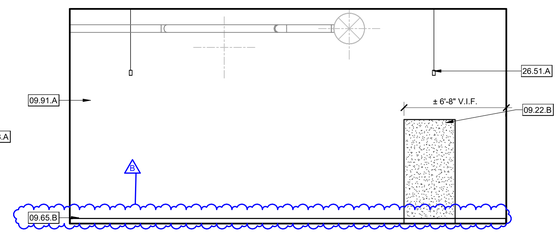


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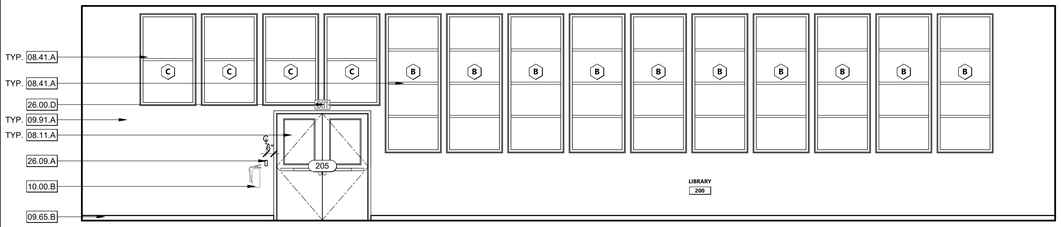


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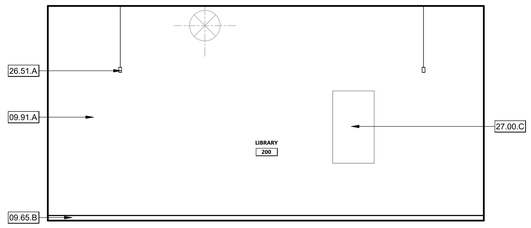


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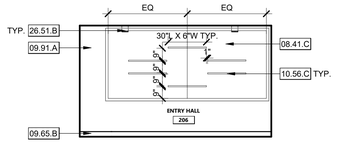


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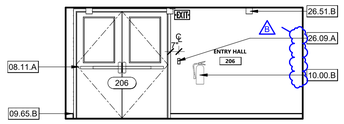


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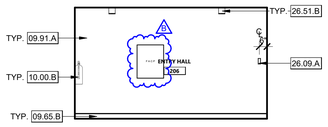



2E

**BLDG. 2 - LIBRARY & ENTRY HALL - 200, 206** | 1/4" = 1'-0" | **2**

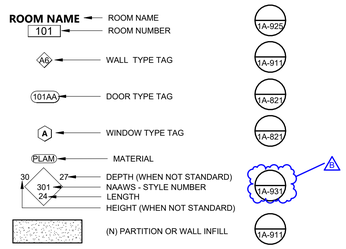
## KEYNOTES

| | |
|---|---|
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.41.C | (N) ALUMINUM FRAME WITH SLIDING SINGLE WINDOW GLAZING AT EXISTING TROPHY CASE |
| 09.08.A | (N) PAINTING AT EXISTING WOOD DOOR AND FRAME |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 09.91.G | PAINT (N) I-BEAM AND BRACE |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.56.C | (N) WALL MOUNTED STORAGE SHELVING, PLASTIC, WITH INVISIBLE BRACKETS. |
| 23.00.A | (E) HVAC HOUSING AND DUCTWORK TO BE PAINTED |
| 26.00.D | (E) EMERGENCY EXIT LIGHTING. TO BE PROTECTED IN PLACE. S.E.D. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.A | (N) LED PENDANT LIGHTS, S.E.D. |
| 26.51.B | (N) RECESSED LIGHT FIXTURE, S.E.D. |
| 26.52.A | (N) EMERGENCY EXIT LIGHTING S.E.D. |
| 27.00.C | (E) COMMUNICATIONS RACK TO BE PROTECTED IN PLACE. S.TI.D. |

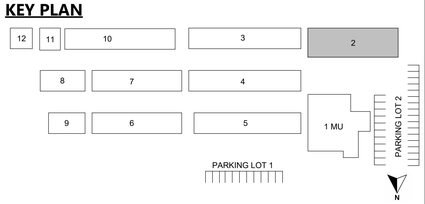
## LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 45" A.F.F. TO THE TOP OF SWITCH PLATE.

## INTERIOR ELEVATION LEGEND




## KEY PLAN




AGENCY APPROVAL DSA# 01-121440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LICENSED ARCHITECT
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STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 2 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.

# 1A-602

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS


FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDJUSD_RIO VISTA ES MOD_INC01_A22.rvt
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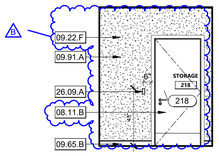


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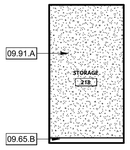


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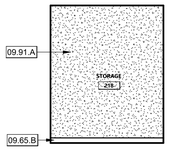


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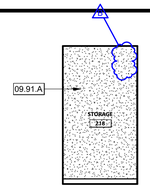
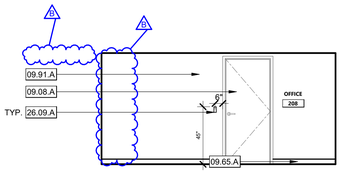



1A

**BLDG. 2 - STORAGE - 218** | 1/4" = 1'-0" | **1**

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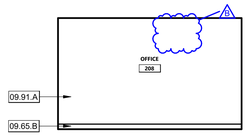


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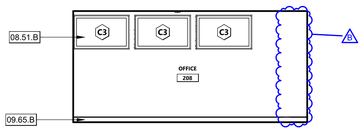


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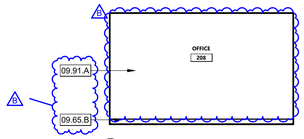
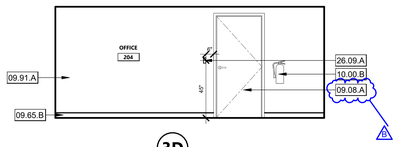



2A

**BLDG. 2 - OFFICE - 208** | 1/4" = 1'-0" | **2**

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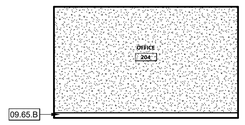


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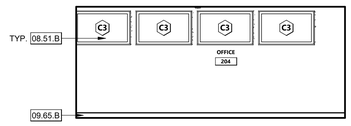


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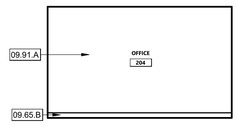
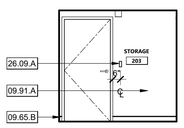
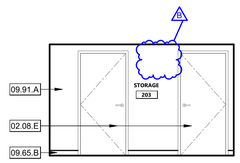



3A

**BLDG. 2 - OFFICE - 204** | 1/4" = 1'-0" | **3**




4D

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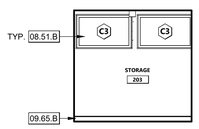


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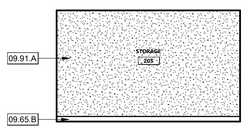
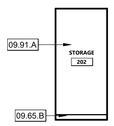
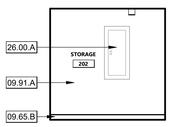



4A

**BLDG. 2 - STORAGE - 203** | 1/4" = 1'-0" | **4**




5D

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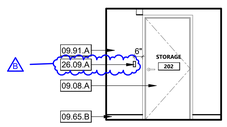


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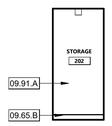



5B

**BLDG. 2 - STORAGE - 202** | 1/4" = 1'-0" | **5**

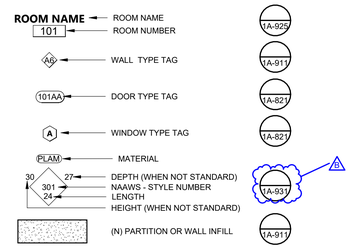
## KEYNOTES

| | |
|---|---|
| 02.08.E | (E) INTERIOR DOOR AND FRAME TO BE DEMOLISHED |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.51.B | (N) FIXED HOLLOW METAL WINDOW |
| 09.08.A | (N) PAINTING AT EXISTING WOOD DOOR AND FRAME |
| 09.22.F | (N) FULL-HEIGHT PARTITION WALL. S.S.D. |
| 09.65.A | (N) FLOORING AND WALL BASE THROUGHOUT, SEE FINISH SCHEDULE FOR FLOORING INFORMATION |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 26.00.A | (E) ELECTRICAL PANEL TO REMAIN PROTECT DURING CONSTRUCTION. S.E.D. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |

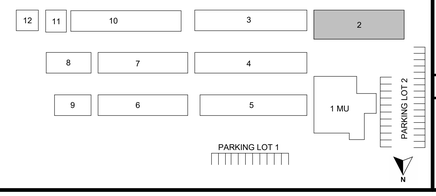
## LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 45" A.F.F. TO THE TOP OF SWITCH PLATE.

## INTERIOR ELEVATION LEGEND




## KEY PLAN

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REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 2 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

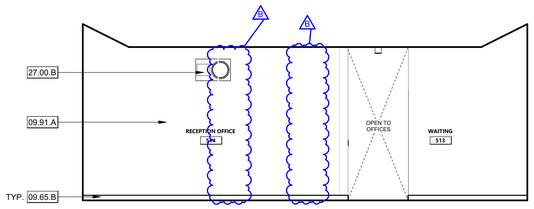
SHEET NO.

# 1A-603

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

DATE PLOTTED: 4/23/2024 3:57:42 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDIUSD_RIO VISTA ES MOD_INC01_A22.rvt

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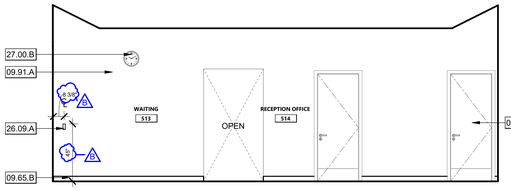


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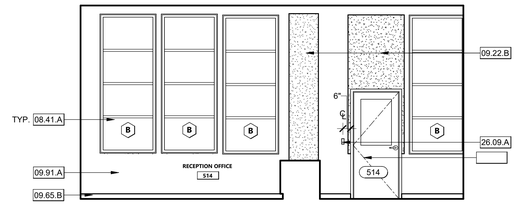


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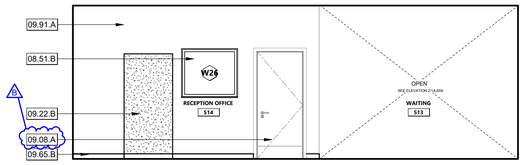
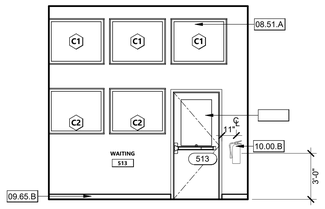


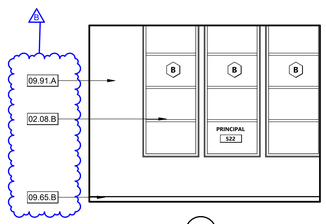

1B

## BLDG 5 - RECEPTION OFFICE - 514 | 1/4" = 1'-0" | 1




2A

## BLDG 5 - WAITING - 513 | 1/4" = 1'-0" | 2

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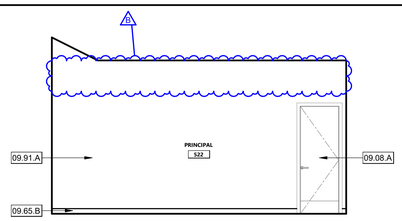


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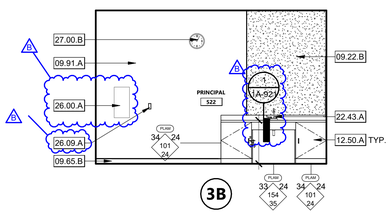


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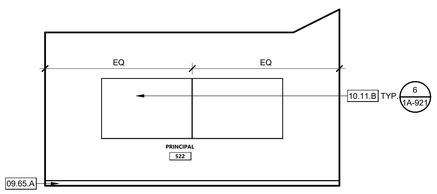
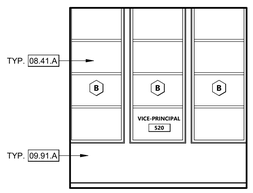



3A

## BLDG 5 - PRINCIPAL - 522 | 1/4" = 1'-0" | 3

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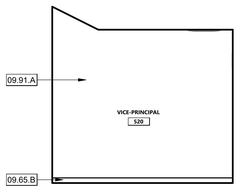


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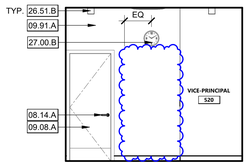


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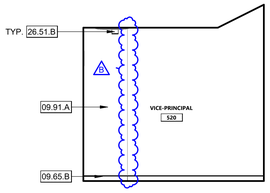



4A

## BLDG 5 - VICE PRINCIPAL - 520 | 1/4" = 1'-0" | 4

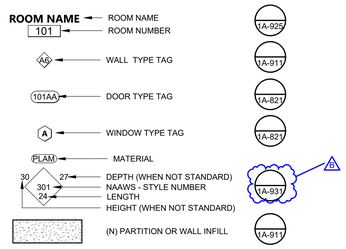
# KEYNOTES

| | |
|---|---|
| 02.08.B | (E) STOREFRONT WINDOWS AND FRAME TO BE DEMOLISHED. PROTECT EXISTING OPENING |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.51.A | (N) CLERESTORY WINDOWS |
| 08.51.B | (N) FIXED HOLLOW METAL WINDOW |
| 09.08.A | (N) PAINTING AT EXISTING WOOD DOOR AND FRAME |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.65.A | (N) FLOORING AND WALL BASE THROUGHOUT, SEE FINISH SCHEDULE FOR FLOORING INFORMATION |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.11.B | (N) WALL MOUNTED WHITEBOARD |
| 12.50.A | (N) PLASTIC LAMINATED FACED ARCHITECTURAL CABINETS |
| 22.43.A | (N) ACCESSIBLE SINK WITH CONCEALMENT PANEL. FOR ADULT & AGES 9-12. SEE 25/A-921. |
| 26.00.A | (E) ELECTRICAL PANEL TO REMAIN PROTECT DURING CONSTRUCTION. S.E.D. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.B | (N) RECESSED LIGHT FIXTURE, S.E.D. |
| 27.00.B | (E) CLOCK TO BE REINSTALLED |

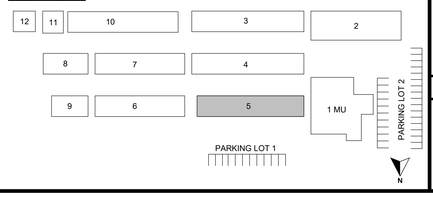
# LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 48" A.F.F. TO THE TOP OF SWITCH PLATE.

# INTERIOR ELEVATION LEGEND




# KEY PLAN




AGENCY APPROVAL DSA# 01-121440


196

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PROFESSIONAL STAMP

LICENSED ARCHITECT
MARIANA ALVAREZ PARGA
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 5 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.

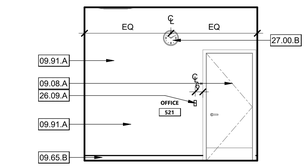
# 1A-604

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2022/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt

DATE PLOTTED: 4/23/2024 3:57:49 PM

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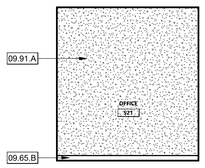


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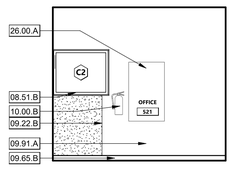


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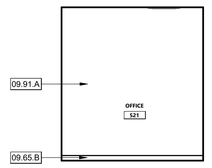
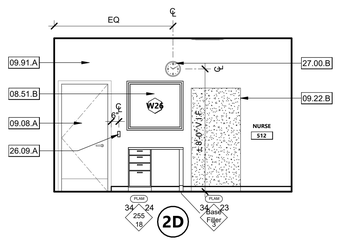



1A

**BLDG 5 - OFFICE - 521** | 1/4" = 1'-0" | 1

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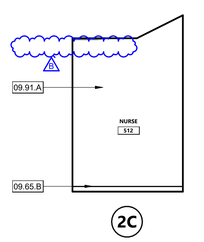


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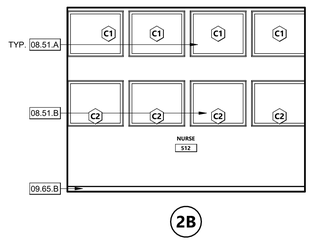


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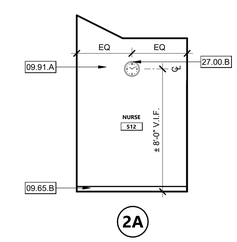
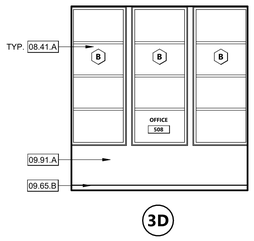



2A

**BLDG 5 - NURSE OFFICE - 512** | 1/4" = 1'-0" | 2

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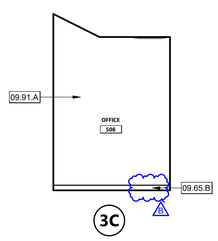


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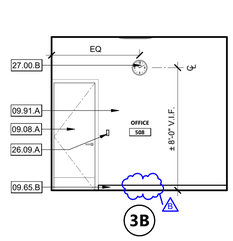


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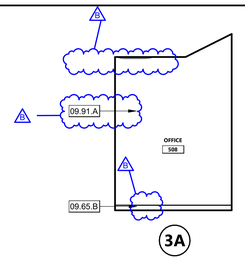
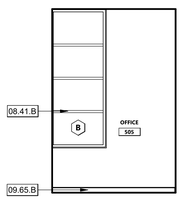



3A

**BLDG 5 - OFFICE - 508** | 1/4" = 1'-0" | 3

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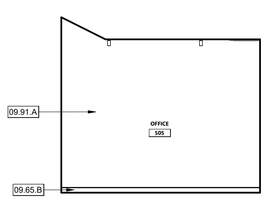


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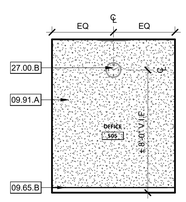


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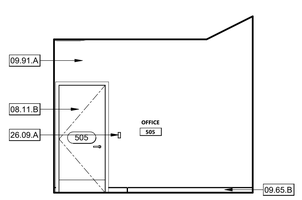
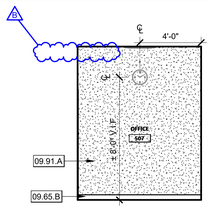



4A

**BLDG 5 - OFFICE - 505** | 1/4" = 1'-0" | 4

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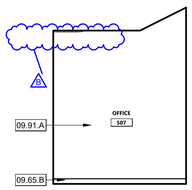


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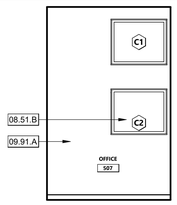


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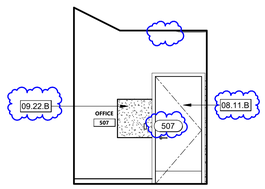
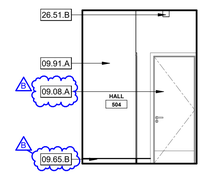



5A

**BLDG 5 -OFFICE - 507** | 1/4" = 1'-0" | 5

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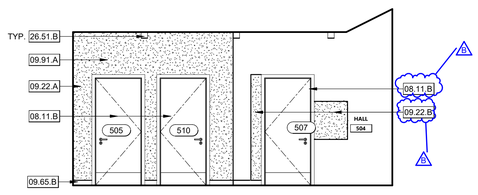


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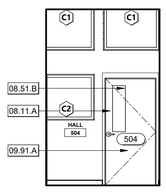


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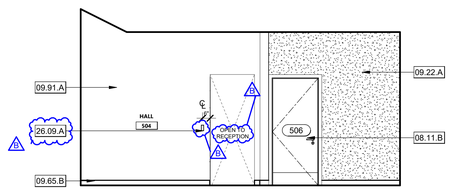



6A

**BLDG 5 - HALL - 504** | 1/4" = 1'-0" | 6

## KEYNOTES

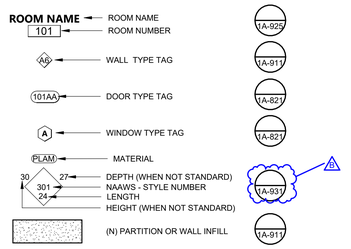
| | |
|---|---|
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.41.B | (N) STOREFRONT ALUMINUM DOOR |
| 08.51.A | (N) CLERESTORY WINDOWS |
| 08.51.B | (N) FIXED HOLLOW METAL WINDOW |
| 09.08.A | (N) PAINTING AT EXISTING WOOD DOOR AND FRAME |
| 09.22.A | (N) PARTITION WALL |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 26.00.A | (E) ELECTRICAL PANEL TO REMAIN PROTECT DURING CONSTRUCTION. S.E.D. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.B | (N) RECESSED LIGHT FIXTURE, S.E.D. |
| 27.00.B | (E) CLOCK TO BE REINSTALLED |

## LEGEND - INTERIOR ELEVATION GENERAL NOTES

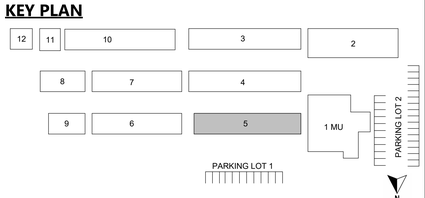
1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 48" A.F.F. TO THE TOP OF SWITCH PLATE.




## INTERIOR ELEVATION LEGEND




## KEY PLAN




AGENCY APPROVAL DSA# 01-121440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PROFESSIONAL STAMP

LICENSED ARCHITECT
MARIANA ALVAREZ PARGA
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 5 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.

# 1A-605

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS


FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt
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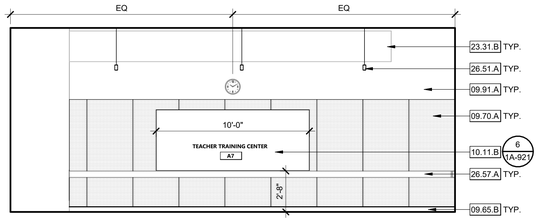


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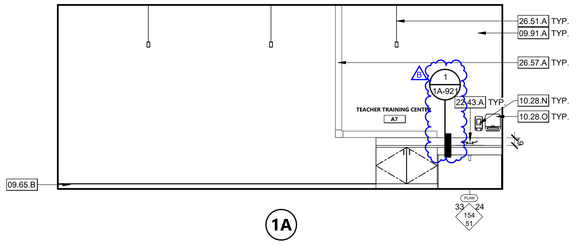


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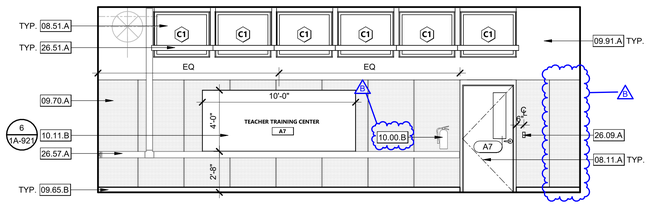


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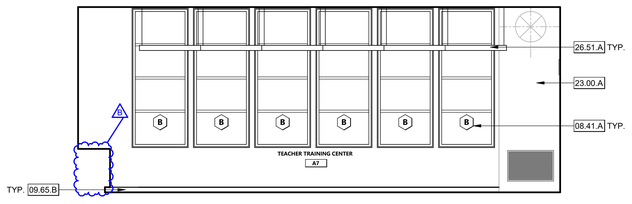
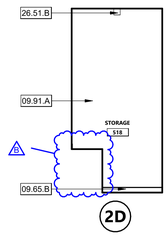



1B

## BLDG 5 - TYPICAL ROOM ELEVATION - A6, A7 | 1/4" = 1'-0" | 1

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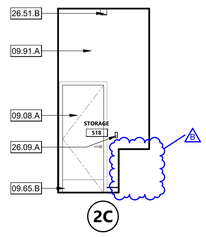


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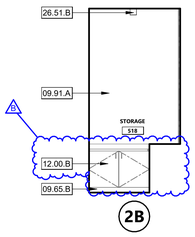


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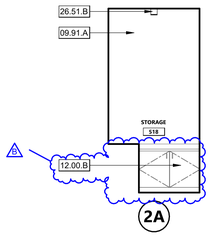
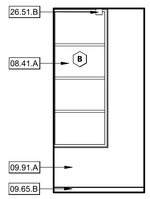



2A

## BLDG 5 - STORAGE - 518 | 1/4" = 1'-0" | 2

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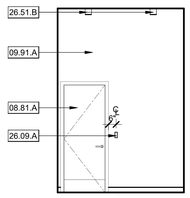


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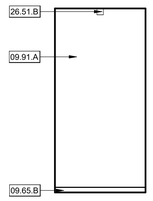


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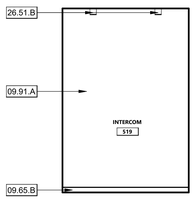



3A

## BLDG 5 - INTERCOM - 519 | 1/4" = 1'-0" | 3

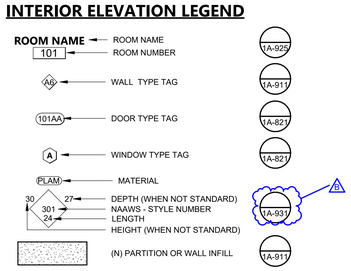
## KEYNOTES

| | |
|---|---|
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.51.A | (N) CLERESTORY WINDOWS |
| 08.81.A | (N) SINGLE WINDOW GLAZING INSTALLED AT EXISTING WINDOW FRAME |
| 09.08.A | (N) PAINTING AT EXISTING WOOD DOOR AND FRAME |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.70.A | (N) TACKABLE WALL PANELS |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.11.B | (N) WALL MOUNTED WHITEBOARD |
| 10.28.N | (N) SURFACE MOUNT SOAP DISPENSER, PER MOUNTING DETAILS |
| 10.28.O | (N) SURFACE MOUNT PAPER TOWEL DISPENSER. PER MOUNTING DETAILS |
| 12.00.B | (E) CASEWORK TO BE PROTECTED IN PLACE. |
| 22.43.A | (N) ACCESSIBLE SINK WITH CONCEALMENT PANEL, FOR ADULT & AGES 9-12. SEE 25/A-921. |
| 23.00.A | (E) HVAC HOUSING AND DUCTWORK TO BE PAINTED |
| 23.31.B | (N) EXPOSED MECHANICAL DUCT PER MECHANICAL DRAWINGS, PAINTED. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.A | (N) LED PENDANT LIGHTS, S.E.D. |
| 26.51.B | (N) RECESSED LIGHT FIXTURE, S.E.D. |
| 26.57.A | ELECTRICAL CONDUITS. REFER TO ELECTRICAL. |

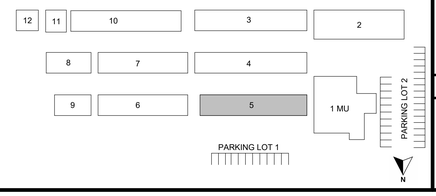
## LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 48" A.F.F. TO THE TOP OF SWITCH PLATE.

## INTERIOR ELEVATION LEGEND




## KEY PLAN




AGENCY APPROVAL DSA# 01-121440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LICENSED ARCHITECT
MARIANA ALVAREZ PIEPER
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 5 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

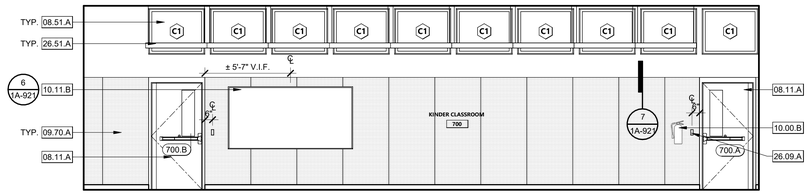
SHEET NO.

# 1A-606

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS


DATE PLOTTED: 4/23/2024 3:58:08 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDIUSD_RIO VISTA ES MOD_INC01_A22.rvt

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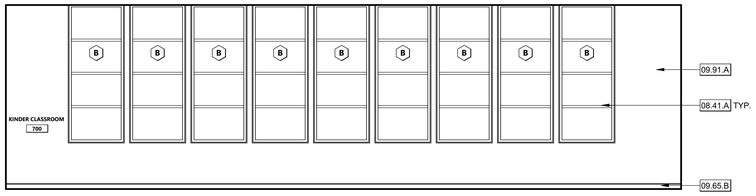


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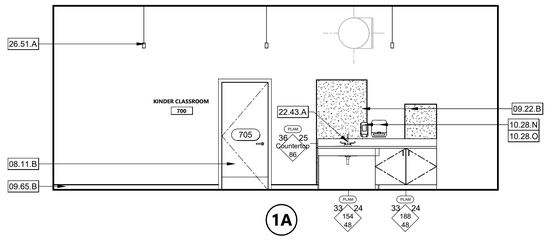


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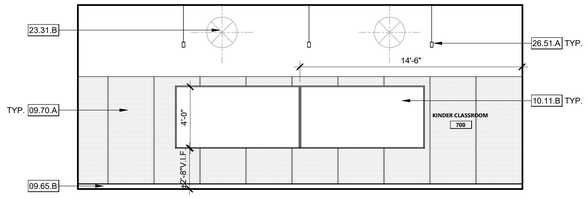



1C

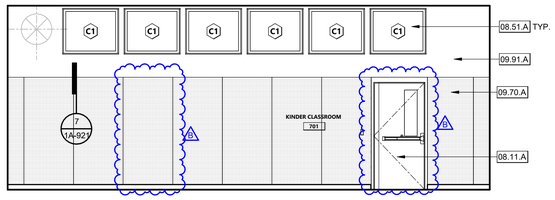
## KEYNOTES

| | |
|---|---|
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.40.A | (N) WALL OPENING. |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.51.A | (N) CLERESTORY WINDOWS |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.65.A | (N) FLOORING AND WALL BASE THROUGHOUT, SEE FINISH SCHEDULE FOR FLOORING INFORMATION |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.70.A | (N) TACKABLE WALL PANELS |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.11.B | (N) WALL MOUNTED WHITEBOARD |
| 10.28.N | (N) SURFACE MOUNT SOAP DISPENSER, PER MOUNTING DETAILS |
| 10.28.O | (N) SURFACE MOUNT PAPER TOWEL DISPENSER. PER MOUNTING DETAILS |
| 12.50.A | (N) PLASTIC LAMINATED FACED ARCHITECTURAL CABINETS |
| 22.43.A | (N) ACCESSIBLE SINK WITH CONCEALMENT PANEL, FOR ADULT & AGES 9-12. SEE 25/A-921. |
| 22.43.D | (N) ACCESSIBLE SINK WITH BUBBLER AT THE COUNTERTOP AND CONCEALMENT PANEL, FOR AGES 4-6. SEE 25/A-921. |
| 23.00.A | (E) HVAC HOUSING AND DUCTWORK TO BE PAINTED |
| 23.31.B | (N) EXPOSED MECHANICAL DUCT PER MECHANICAL DRAWINGS, PAINTED. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.A | (N) LED PENDANT LIGHTS, S.E.D. |
| 27.00.B | (E) CLOCK TO BE REINSTALLED |

## LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 48" A.F.F. TO THE TOP OF SWITCH PLATE.

**BLDG 7 - KINDER CLASSROOM - 700** | 1/4" = 1'-0" | **1**

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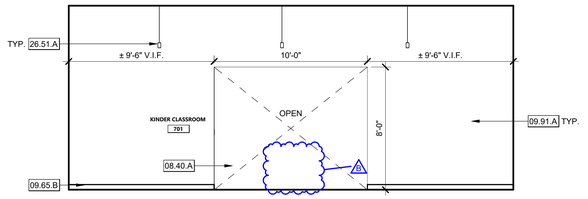


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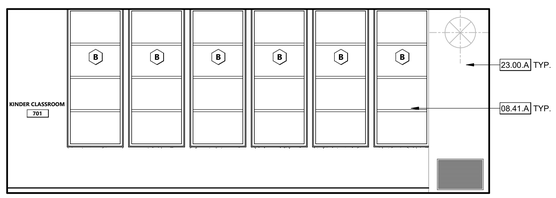


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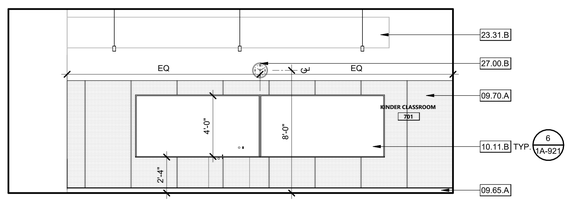


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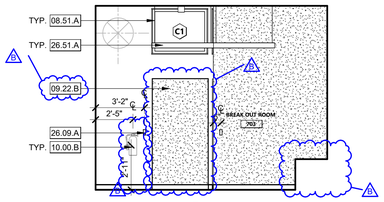


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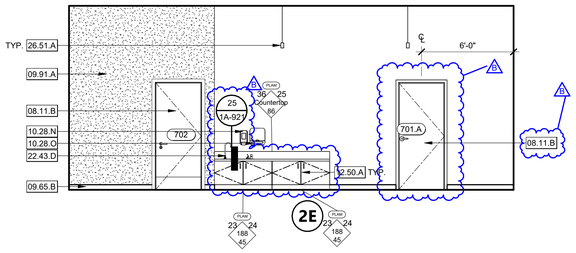


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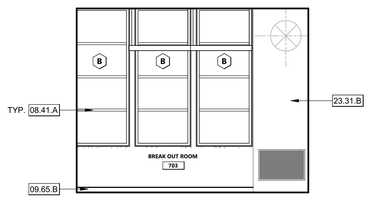


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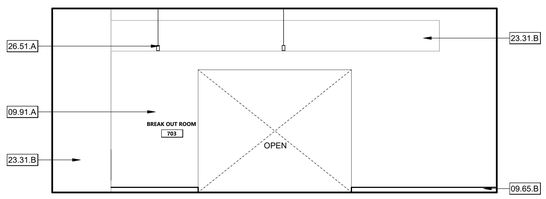
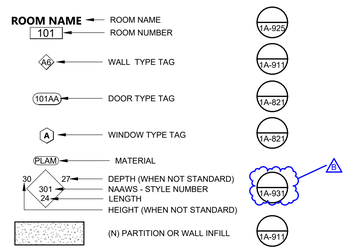


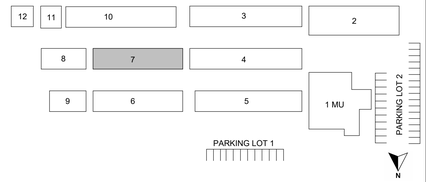

2G

**BLDG 7 - KINDER CLASSROOM & BREAK OUT ROOM - 701, 703** | 1/4" = 1'-0" | **2**

## INTERIOR ELEVATION LEGEND




## KEY PLAN

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PROFESSIONAL STAMP

LICENSED ARCHITECT
MARINA ALVAREZ PEREA
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 7 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

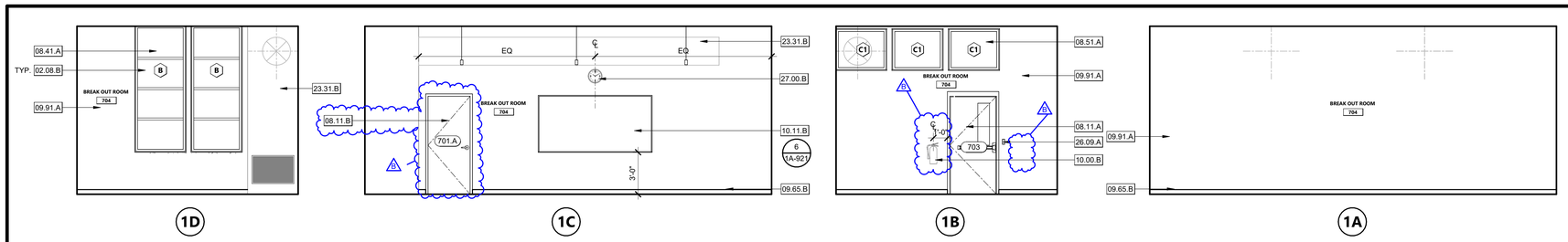
SHEET NO.

# 1A-607

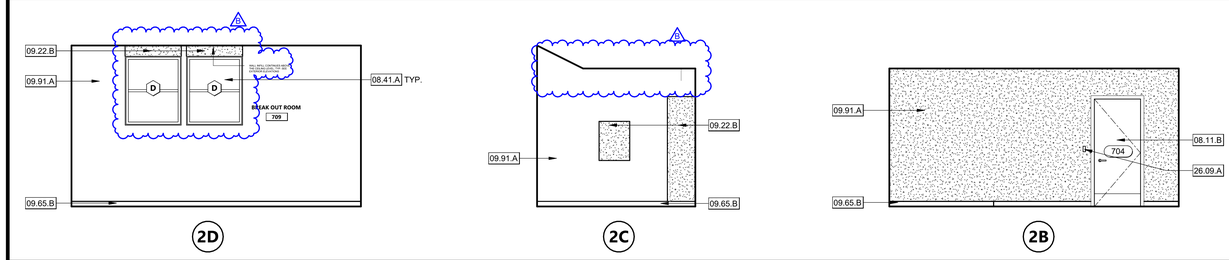
DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

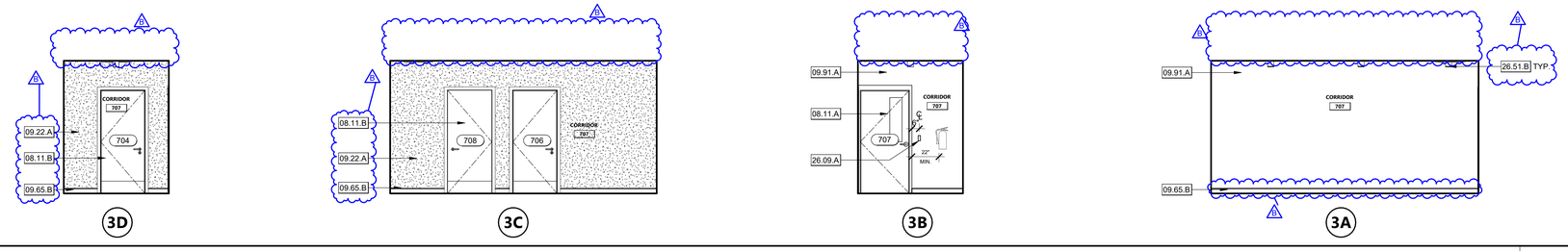
DATE PLOTTED: 4/23/2024 3:58:16 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt



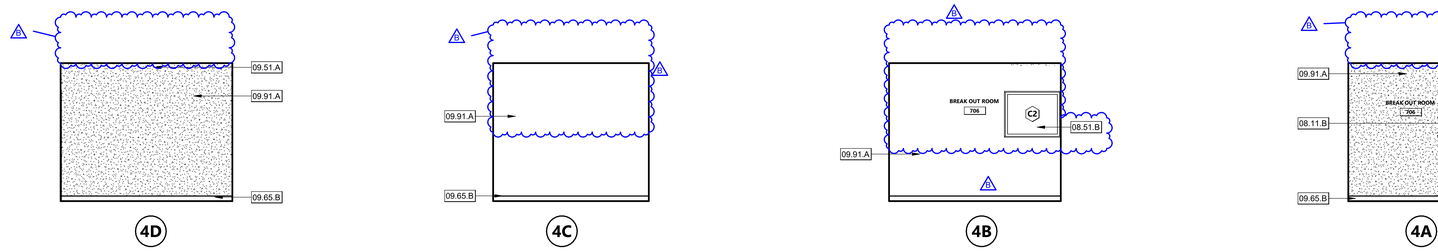

## BLDG 7 - BREAK OUT ROOM - 704 | 1/4" = 1'-0" | 1



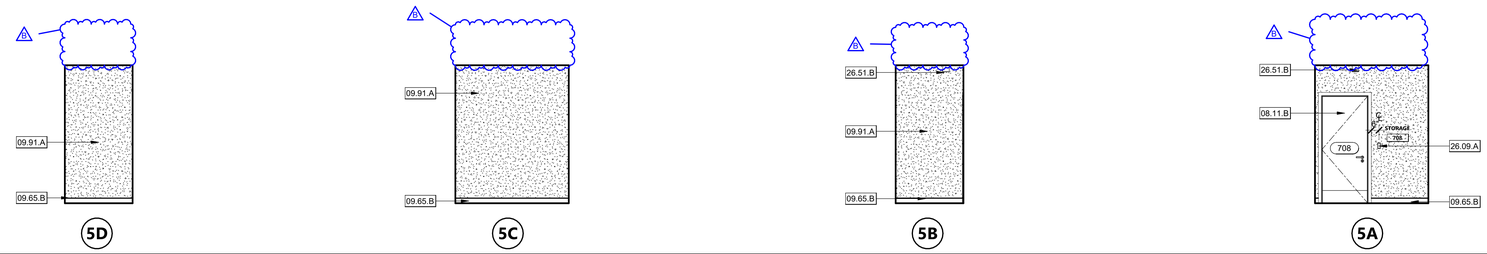

## BLDG 7 - BREAK OUT ROOM - 709 | 1/4" = 1'-0" | 2




## BLDG 7 - CORRIDOR - 707 | 1/4" = 1'-0" | 3




## BLDG 7 - BREAK OUT ROOM - 706 | 1/4" = 1'-0" | 4




## BLDG 7 - STORAGE - 708 | 1/4" = 1'-0" | 5

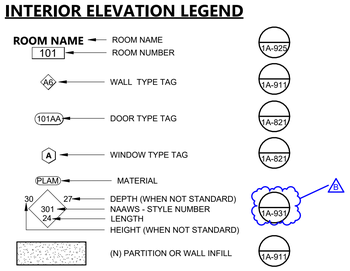
# KEYNOTES

| | |
|---|---|
| 02.08.B | (E) STOREFRONT WINDOWS AND FRAME TO BE DEMOLISHED. PROTECT EXISTING OPENING |
| 08.11.A | (N) EXTERIOR FRP FLUSH DOOR INSTALLED IN THE EXISTING WOOD FRAME |
| 08.11.B | (N) WOOD DOOR AND FRAME, PAINTED |
| 08.41.A | (N) ALUMINUM STOREFRONT WINDOW |
| 08.51.A | (N) CLERESTORY WINDOWS |
| 08.51.B | (N) FIXED HOLLOW METAL WINDOW |
| 09.22.A | (N) PARTITION WALL |
| 09.22.B | (N) INFILL WALL. PATCH AND PAINT. MATCH EXISTING PAINT WHEN SURFACE IS NOT PART OF INTERIOR PAINTING SCOPE. |
| 09.51.A | (N) 8'X4' DIRECT CEILING MOUNT PANELS WITH EXTRA-DEEP HAT CHANNEL |
| 09.65.B | (N) 4" WALL BASE. SEE FINISH SCHEDULE |
| 09.91.A | ALL INTERIOR SURFACES TO BE PAINTED, SEE FINISH SCHEDULE FOR PAINT COLOR INFORMATION |
| 10.00.B | (E) FIRE EXTINGUISHER TO BE REMOVED/PROTECTED AND REINSTALLED. SEE INTERIOR ELEVATIONS FOR LOCATION. |
| 10.11.B | (N) WALL MOUNTED WHITEBOARD |
| 23.31.B | (N) EXPOSED MECHANICAL DUCT PER MECHANICAL DRAWINGS, PAINTED. |
| 26.09.A | (N) LIGHT SWITCH. S.E.D. |
| 26.51.B | (N) RECESSED LIGHT FIXTURE, S.E.D. |
| 27.00.B | (E) CLOCK TO BE REINSTALLED |

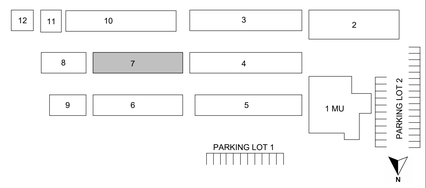
# LEGEND - INTERIOR ELEVATION GENERAL NOTES

1. FOR WINDOW AND STOREFRONT SIZES AND MOUNTING HEIGHTS SEE SHEET A-811.
2. ALL STEEL TO BE GALVANIZED AND PAINTED.
3. LIGHT SWITCHES TO BE MOUNTED AT 48" A.F.F. TO THE TOP OF SWITCH PLATE.

# INTERIOR ELEVATION LEGEND




# KEY PLAN

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San Ramon, CA 94582
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San Francisco, CA 94104
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PROFESSIONAL STAMP

LICENSED ARCHITECT
MARINA ALVAREZ PARGA
C-36107
REN. 01-31-25
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**BLDG 7 - INTERIOR ELEVATIONS**

INC.1

DRAWN BY: DV JOB NUMBER: 23118.01

SHEET NO.

# 1A-608

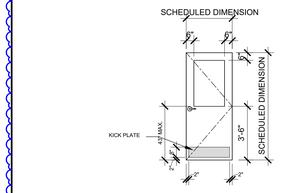
DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

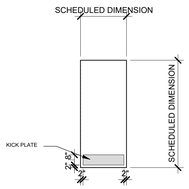

FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt
DATE PLOTTED: 4/23/2024 3:58:26 PM

# DOOR SCHEDULE - INC. 01

| MARK | ROOM | FIRE RATING | SIZE | | | DOOR | | | FRAME | | | DETAILS | | | PANIC HARDWARE | HARDWARE GROUP | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | WIDTH | HEIGHT | THICKNESS | TYPE | MATERIAL | FINISH | TYPE | MATERIAL | FINISH | HEAD | JAMB | SILL | | | |
| Building 1 | | | | | | | | | | | | | | | | | |
| MU1.A | MULTI-USE ROOM | 20MIN. | 3'-4" | 7'-0" | 1 3/4" | A | FRP | | A (E) | HM | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | EXIT ONLY. NO DOOR HADWARE OUTSIDE |
| MU1.B | MULTI-USE ROOM | 20MIN. | 4'-10" | 7'-0" | 1 3/4" | A | FRP | | BB (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | |
| MU1.C | MULTI-USE ROOM | NR | 3'-0" | 7'-0" | 1 3/4" | A | FRP | | B (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | |
| MU1.D | MULTI-USE ROOM | NR | 3'-0" | 7'-0" | 1 3/4" | A | FRP | | B (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | |
| MU2.A | PLATFORM | 20MIN. | 3'-0" | 7'-0" | 1 3/4" | C | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 02 | |
| MU7 | MECH | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 07 | |
| MU8 | LOCKER ROOM | NR | 2'-8" | 7'-0" | 1 3/4" | A | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 08 | |
| MU9 | JAN | NR | 2'-8" | 7'-0" | 1 3/4" | A | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 08 | |
| MU12 | KITCHEN | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 05 | |
| MU13 | GARBAGE | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 06 | |
| MU15 | STAFF DINING | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 04 | |
| Building 2 | | | | | | | | | | | | | | | | | |
| 12A.A | CLASSROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | FRP | P | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 03 | |
| 12A.B | CLASSROOM | NR | 3'-0" | 6'-8" | 1 3/4" | B | WD | | A | WD | | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 03 | |
| 12B.A | CLASSROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | - | 11 | |
| 12B.B | CLASSROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | - | 11 | |
| 12C.A | CLASSROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | FRP | FF | A | HM | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 03 | |
| 12C.B | CLASSROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | FRP | FF | A | HM | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 03 | |
| 12C.C | CLASSROOM | NR | 3'-0" | 6'-8" | 1 3/4" | B | WD | | A | WD | | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 12 | |
| 203A | STORAGE | NR | 3'-0" | 6'-8" | 1 3/4" | A | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 12 | |
| 205 | READING ROOM | NR | 6'-0" | 7'-0" | 1 3/4" | AA | FRP | P | AA (E) | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 01 | |
| 206 | ENTRY HALL | NR | 6'-0" | 7'-0" | 1 3/4" | AA | FRP | P | AA (E) | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 01 | |
| 216 | RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 13 | |
| 217 | RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 13 | |
| 218 | STORAGE | NR | 3'-0" | 7'-0" | 1 3/4" | A | WD | P | | WD | | | | | | | |
| Building 5 | | | | | | | | | | | | | | | | | |
| 501 | TRANS VAULT | NR | 4'-0" | 6'-6" | 1 3/4" | A | FRP | FF | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 09 | |
| 502 | PANEL | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 09 | LOUVERS |
| 503 | TRAFFIC | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 09 | LOUVERS |
| 504 | HALL | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 03 | |
| 505 | OFFICE | NR | 3'-0" | 7'-0" | 1 3/4" | A | WD | | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 15 | |
| 506 | UNISEX STUDENT TOILET | NR | 3'-0" | 7'-0" | 1 3/4" | B | WD | | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 14 | |
| 510 | MDF CLOSET | NR | 3'-0" | 7'-0" | 1 3/4" | A | WD | | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 16 | |
| 513 | WAITING | NR | 3'-0" | 7'-0" | 1 3/4" | F | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | |
| 514 | RECEPTION OFFICE | NR | 3'-0" | 7'-0" | 1 3/4" | F | FRP | FF | A | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 03 | |
| 516 | UNISEX STAFF RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | WD | | A | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 14 | |
| 525 | UNISEX STAFF RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | FRP | FF | A | HM | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | - | 10 | |
| A6 | TEACHER WORKROOM | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | P | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 04 | |
| A7 | TEACHER TRAINING CENTER | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | P | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | - | 04 | |
| Building 7 | | | | | | | | | | | | | | | | | |
| 700.A | KINDER CLASSROOM | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | | A (E) | HM | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | P.H. | 03 | |
| 700.B | KINDER CLASSROOM | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | FF | A | HM | | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 03 | |
| 701 | KINDER CLASSROOM | NR | 3'-4" | 7'-0" | 1 3/4" | C | | | A (E) | WD | | | | | P.H. | | |
| 701.A | BREAK OUT ROOM | NR | 3'-0" | 7'-0" | 1 3/4" | C | | P | B | WD | | | | | - | | |
| 702 | RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | P.H. | 17 | |
| 703 | BREAK OUT ROOM | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | | A (E) | WD | P | 6/1A-821 | 7/1A-821 | 2/1A-821 | | 04 | |
| 704 | BREAK OUT ROOM | NR | 3'-0" | 7'-0" | 1 3/4" | A | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 19 | |
| 705 | STUDENT RR | NR | 3'-0" | 7'-0" | 1 3/4" | B | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 13 | |
| 706 | BREAK OUT ROOM | NR | 3'-0" | 7'-0" | 1 3/4" | A | WD | | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 18 | |
| 707 | CORRIDOR | NR | 3'-4" | 7'-0" | 1 3/4" | C | FRP | P | A (E) | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | - | 04 | |
| 708 | CORRIDOR | NR | 3'-0" | 7'-0" | 1 3/4" | B | WD | P | A | WD | P | 13/1A-821 | 15/1A-821 | 2/1A-821 | | 04 | |




**DOOR TYPE 'F'** ⚠2

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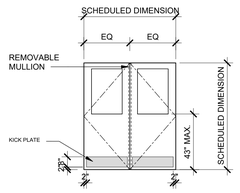


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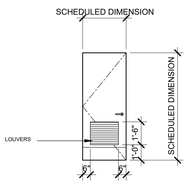


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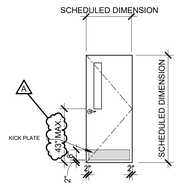


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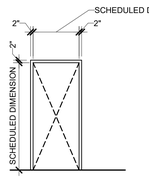
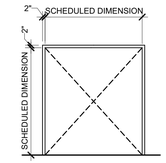



**DOOR FRAME 'A'**

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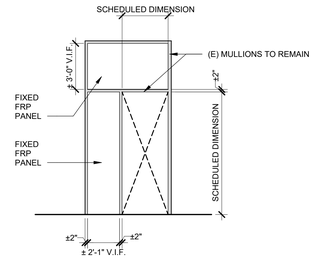


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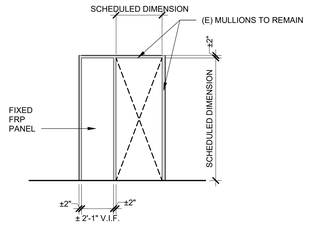


**DOOR FRAME 'BB'**

## LEGEND - DOOR NOTES

1. DOORS SHALL BE 1-3/4" THICK UNLESS NOTED OTHERWISE.
2. THE SYMBOL (P) FOLLOWING THE 'DOOR TYPE' DESIGNATION IN THE DOOR SCHEDULE INDICATES PAIR OF DOORS. BOTH LEAVES ARE THE SAME SIZE, UNLESS NOTED OTHERWISE.
3. SEE REMARKS SECTION OF DOOR SCHEDULE FOR GLASS TYPES.
4. ALL EXTERIOR DOORS IN BUILDINGS, INCLUDING, BUT NOT LIMITED TO DOORS OF TOILETS AND STORAGE ROOMS, SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
   a. EXIT DOOR SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
   b. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 30" AND 44" ABOVE FINISH FLOOR.
   c. DEAD BOLTS ARE NOT PERMITTED UNLESS OPERABLE WITH A SINGLE EFFORT LEVER TYPE HARDWARE.
   d. ALL ROOMS SERVING AN OCCUPANCY LOAD OF 50 OR GREATER AND DOORS LOCATED ON THE DISCHARGE OF EXIT CORRIDORS ARE REQUIRED TO BE PROVIDED WITH PANIC HARDWARE (CBC 1008.1.10).
   e. ALL FIRE DOOR LABELS SHALL COMPLY WITH CBC 716.2.9.
5. FIRE ASSEMBLIES REQUIRED TO HAVE A ONE-HOUR FIRE-PROTECTION RATING SHALL BE EITHER AUTOMATIC OR SELF-CLOSING FIRE ASSEMBLIES TO BE ACTIVATED BY AN INCREASE IN TEMPERATURE SHALL HAVE HEAT-ACTIVATING DEVICES INSTALLED ON EACH SIDE OF THE WALL AT THE CEILING HEIGHT WHERE THE CEILING IS MORE THAN 3 FEET ABOVE THE TOP OF THE OPENING OR BY A SINGLE FUSSIBLE LINK IN THE OPENING INCORPORATED IN THE CLOSING DEVICE.
6. ALL FIRE-RESISTIVE ASSEMBLIES FOR PROTECTED OPENING SHOULD COMPLY WITH SECTION 716 CBC.
7. SEE SPECIFICATION SECTION 08 71 00 FOR DOOR HARDWARE INDEX AND DOOR HARDWARE SETS.
8. ⚠2 EXTERIOR: FRP DOORS ON EXISTING WOOD FRAMES. NEW DOORS SHALL BE SPECIAL LITE SL-20 SANDSTONE TEXTURE FRP UNLESS OTHERWISE NOTED. SEE SPECIFICATIONS 08 17 43.
9. INTERIOR WOOD DOORS: USE EXISTING WOODEN FRAMES WHERE POSSIBLE. NEW WOOD FRAMES ON NEW DOORS. USE MINIMUM 6" WIDE STILE ON ALL STILE & RAIL TYPE DOORS TO ACCOMMODATE EXIT DEVICES.
10. ALL INTERIOR HOLLOW METAL DOOR AND FRAMES TO HAVE JAMB AND HEAD GASKETING. PEMKO 319 OR EQUAL.
11. ALL INTERIOR STORFRONT FRAMES SHOULD PROVIDE GASKETING FOR THE ⚠2 FRP DOORS PER THE DETAILS.
12. PROVIDE ACCESS CONTROL WIRING AND DOOR SWITCH WIRING PER HARDWARE SCHEDULE.
13. PROVIDE DOOR SWITCH WIRING PER HARDWARE SCHEDULE.
14. SEE SHEETS 1A-252 AND 1A-925 FOR SIGNAGE PLAN AND SIGNAGE DETAILS.
15. INTERIOR SWINGING, MANUALLY OPERATED EGRESS DOORS (OTHER THAN A FIRE DOOR): NOT TO EXCEED 5-POUNDS.
16. SWINGING, SLIDING, OR FOLDING DOORS, AND FIRE-RATED DOORS: NOT TO EXCEED 30 POUNDS TO SET THE DOOR IN MOTION, AND SHALL MOVE TO THE FULL-OPEN POSITION WITH NOT MORE THAN 15 POUNDS OF FORCE.
17. OPERABLE PARTS OF DOOR AND GATE HARWARE SHALL BE 34" MINIMUM AND 44" MAXIMUM ABOVE THE FINISHED FLOOR OR GROUND. WHERE SLIDING DOORS ARE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE FULLY EXPOSED AND USABLE FROM BOTH SIDES. CBC 11B-404.2.7
18. DOOR AND GATE CLOSERS SHALL BE ADJUSTABLE SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM. CVC 11B-404.2.1
19. DOOR AND GATE SPRING HINGES SHALL BE ADJUSTED SO THAT IN THE OPEN POSITION OF 70 DEGREES, THE DOOR AND GATE SHALL MOVE TO THE CLOSED POSITION IN 1.5 SECONDS MINIMUM.11B-404.2.8.2
20. ALL HARDWARE SHALL MEET THE REQUIREMENTS 11B-309.4
21. THRESHOLDS SHALL COMPLY WITH 11B-404.2.5.
22. FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALL PER DSA POLICY 99-08

## LEGEND - DOOR MATERIALS

**DOOR CONSTRUCTION AND MATERIAL:**
HM - HOLLOW METAL
AL - ALUMINUM
WD - WOOD
FRP - FIBERGLASS-REINFORCED POLYMER

**DOOR FACING AND FINISH:**
SP - STEEL, PAINTED
K - KYNAR FINISH ON ALUMINUM
WS - WOOD VENEER, STAINED

**FRAME MATERIAL:**
HM - HOLLOW METAL, PAINTED
AL - ALUMINUM
WD - WOOD (EXISTING)

**FRAME FINISH:**
P - PAINTED STEEL
K - KYNAR FINISH ON ALUMINUM

**FRAME TYPES:**
A, B

**GLASS:**
ALL GLASS IS TEMPERED (SG - SAFETY GLAZING)

**HARDWARE:**
P.H. - PANIC HARDWARE

## LEGEND - DOOR GLAZING NOTES

1. ALL GLAZING SHALL BE TEMPERED 1/4" CLEAR GLASS UNLESS DOOR IS FIRE-RATED. THEN SAFETY GLAZING SHALL MEET CURRENT FEDERAL STANDARDS WHERE GLAZING OCCURS IN RATED DOOR ASSEMBLY. (WIRE GLASS IS NOT ACCEPTABLE)
2. RATED GLAZING NOTES:
   A. FIRE-RESISTANCE-RATED GLAZING SHALL BE PERMITTED IN FIRE DOOR AND FIRE WINDOW ASSEMBLIES WHERE TESTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND WHERE IN COMPLIANCE WITH THE REQUIREMENTS OF CBC SECTION 716.3.
   B. CBC 716.3 MARKING FIRE-RATED GLAZING ASSEMBLIES: FIRE-RATED ASSEMBLIES SHALL BE MARKED IN ACCORDANCE WITH TABLES 716.3, 716.5, AND 716.6.
   C. CBC 716.3.1 FIRE-RATED GLAZING IDENTIFICATION: FOR FIRE-RATED GLAZING, THE LABEL SHALL BEAR THE IDENTIFICATION REQUIRED IN TABLES 716.3 AND 716.5. "D" INDICATES THAT THE GLAZING IS PERMITTED TO BE USED IN FIRE DOOR ASSEMBLIES AND THAT THE GLAZING MEETS THE FIRE PROTECTION REQUIREMENTS OF NFPA 252. "H" SHALL INDICATE THAT THE GLAZING MEETS THE HOSE STREAM REQUIREMENTS OF NFPA 252. "T" SHALL INDICATE THAT THE GLAZING MEETS THE TEMPERATURE REQUIREMENTS OF SECTION 716.5.5.1. THE PLACEHOLDER "XXX" REPRESENTS THE FIRE-RATING PERIOD IN MINUTES.
   D. CBC 716.3.2 FIRE-PROTECTION-RATED GLAZING IDENTIFICATION: FOR FIRE-PROTECTION-RATED GLAZING, THE LABEL SHALL BEAR THE FOLLOWING IDENTIFICATION REQUIRED IN TABLES 7.J 6.3 AND 716.6: "OH-XXX". "OB" INDICATES THAT THE GLAZING MEETS BOTH THE FIRE PROTECTION AND THE HOSE-STREAM REQUIREMENTS OF NFPA 257 OR UL 9 AND IS PERMITTED RO BE USED IN FIRE WINDOW OPENINGS. THE PLACEHOLDER "XXX" REPRESENTS THE FIRE-RATING PERIOD IN MINUTES.
   E. FIRE BARRIER: 3/4 HOUR GLAZING, MAX SIZE TESTED, MARKED D-H
   F. NFPA 257 OR CL 9 MEETS FIRE WINDOW ASSEMBLY CRITERIA INCLUDING THE HOSE STREAM TEST
   G. NFPA 252 OR UL 10B I OR UL 10C D = MEETS FIRE DOOR ASSEMBLY CRITERIA. H = MEETS FIRE DOOR ASSEMBLY HOSE STREAM TEST
   H. RATED GLAZING SHALL BE FIRELITE NT

## ACCESSIBLE DOORS, GATES AND HARDWARE CBC 11B-404

**DH1)** PROVIDE ACCESSIBLE DOOR OR GATE LEAF WIDTH, MINIMUM 36" WIDE AND CAPABLE OF MAXIMUM 5LB. FORCE OPERATION PER 11B-404.2.9. (NOTE THAT THE MAXIMUM ALLOWED WIDTH FOR A SWINGING EGRESS DOOR OR GATE IS 48" NOMINAL PER CBC 1010.1.1.)

**DH2)** STOREROOM OR SIMILAR HARDWARE FUNCTION TYPES REQUIRE TWO-HAND OPERATION AND DO NOT COMPLY WITH 11B-404.2.7. (NOTE THAT ACCESSIBLE HARDWARE IS NOT REQUIRED TO MECHANICAL, ELECTRICAL OR SIMILAR ROOMS AS EXCEPTED IN 11B-203.5.)

**DH3)** PROVIDE CLASSROOM SECURITY HARDWARE. ROOMS WITH FIVE OR MORE OCCUPANTS IN KINDERGARTEN THROUGH TWELFTH-GRADE FACILITIES MUST BE LOCKABLE FROM THE INSIDE PER CBC 1010.1.11.) CLARIFY ON DOOR SCHEDULE WHICH DOORS ARE REQUIRED TO MEET THIS REQUIREMENT.

**DH4)** PROVIDE HARDWARE WITH 5LB. MAXIMUM UNLATCHING FORCE PER 11B-404.2.7 AND 11B-309.4. THIS REQUIREMENT APPLIES TO ALL DOOR HARDWARE, INCLUDING EXIT DEVICES.

**DH5)** UNLATCHING OF ANY DOOR SHALL NOT REQUIRE MORE THAN ONE OPERATION. SEE CBC 1010.1.9.5 FOR EXCEPTIONS.

**DH6)** PROVIDE ACCESSIBLE THRESHOLD OR THRESHOLD CONDITION PER 11B-404.2.5.

**DH7)** ON THE PUSH-SIDE OF THE DOOR, PROVIDE SMOOTH SURFACE WITHIN 10" OF FINISH FLOOR OR GROUND, FOR FULL WIDTH OF DOOR PER 11B-404.2.10.

**DH8)** IN-DOOR GLAZING AND VISION LIGHTS SHALL HAVE BOTTOM EDGE MAXIMUM 43" ABOVE THE FINISH FLOOR OR GROUND SURFACE PER 11B-404.2.11

**DH9)** INDICATE ON PLANS AND/OR SPECIFICATIONS THAT HARDWARE COMPLIES WITH SFM STANDARD 12-10-3, SECTION 12-10-302:
-CROSS BARS FOR EXIT DEVICES SHALL EXTEND ACROSS NOT LESS THAN HALF OF THE DOOR OR GATE WIDTH.
-ENDS OF CROSS BARS SHALL BE CURVED, GUARDED OR OTHERWISE DESIGNED TO PREVENT CATCHING ON CLOTHING DURING EGRESS.

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STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM |
| B | 04-24-2024 | ADDENDUM 2 |

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
**DOOR SCHEDULE**

INC.1

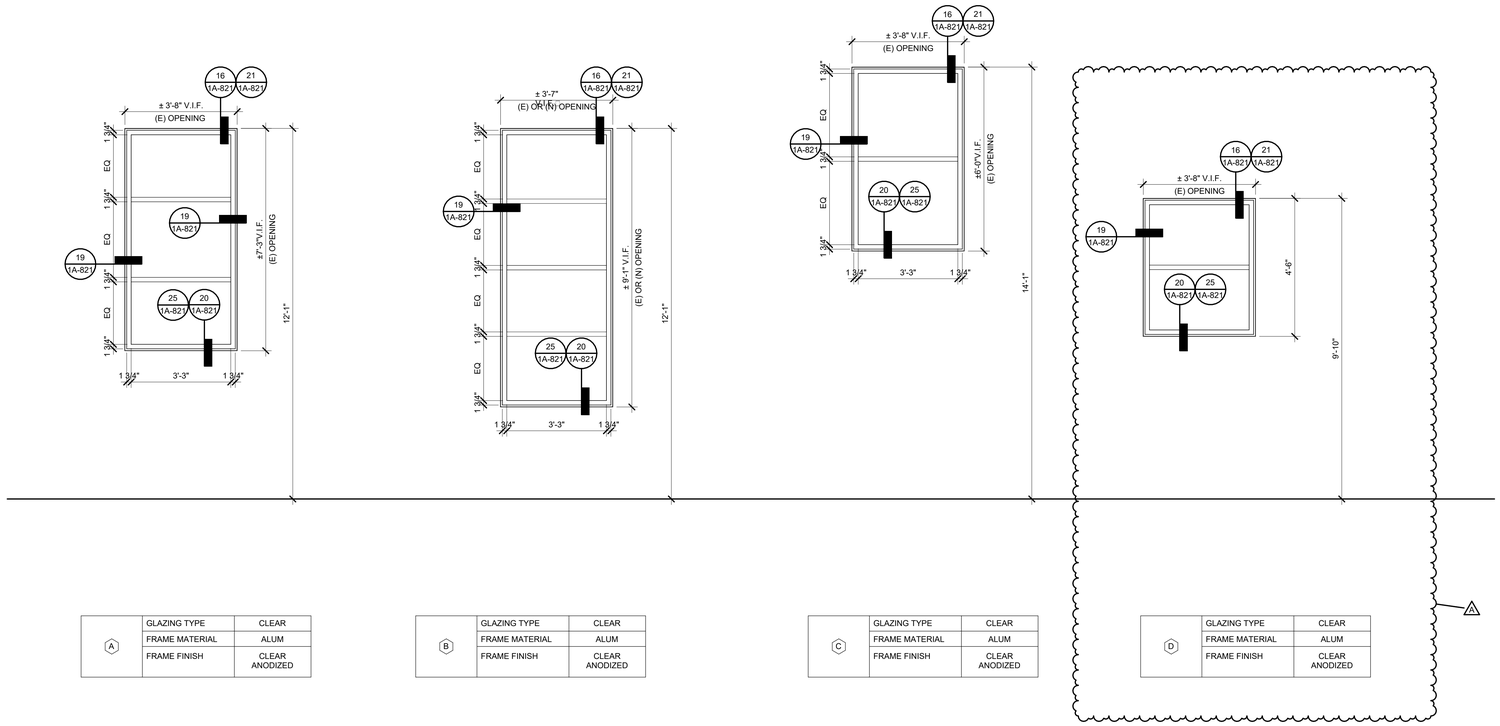
DRAWN BY: MP JOB NUMBER: 23118.01

SHEET NO.
# 1A-801

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS

DATE PLOTTED: 4/23/2024 3:58:29 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt

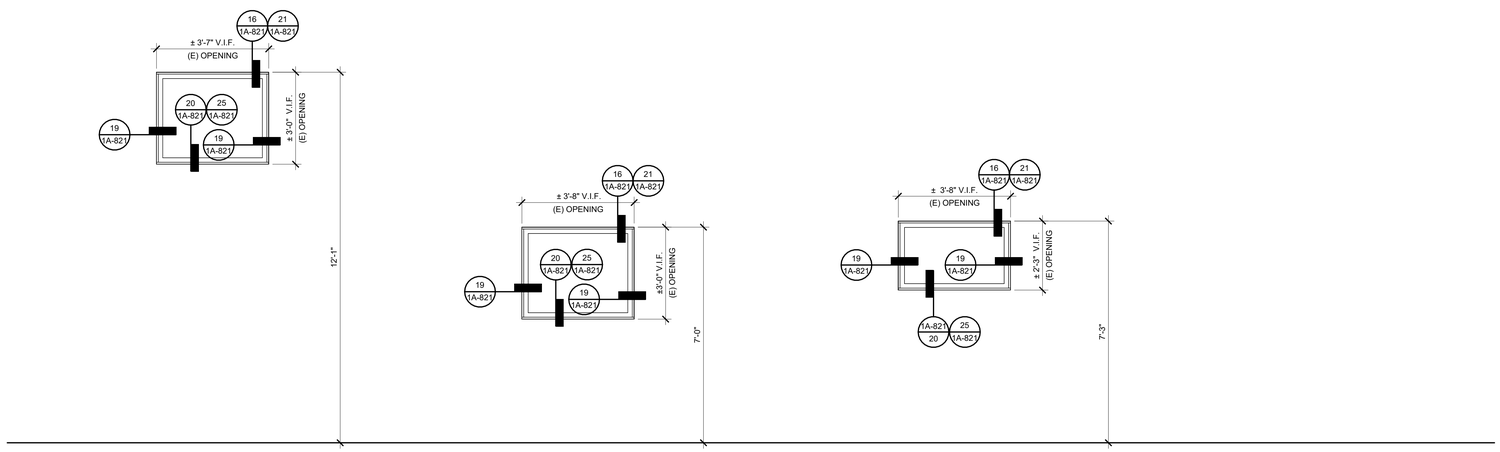



| | | |
|---|---|---|
| A | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

| | | |
|---|---|---|
| B | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

| | | |
|---|---|---|
| C | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

| | | |
|---|---|---|
| D | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |




| | | |
|---|---|---|
| C1 | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

| | | |
|---|---|---|
| C2 | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

| | | |
|---|---|---|
| C3 | GLAZING TYPE | CLEAR |
| | FRAME MATERIAL | ALUM |
| | FRAME FINISH | CLEAR ANODIZED |

## WINDOW LEGEND

## KEYNOTES

## WINDOWS GENERAL NOTES

1. EXTERIOR STOREFRONT BASIS OF DESIGN ARCADIA AFG451T - THERMALLY BROKEN. 1
2. ALL INTERIOR WINDOWS BASIS OF DESIGN ARCADIA AFG451T - THERMALLY BROKEN.
3. ALL GLASS TO BE TEMPERED PER SPECIFICATIONS.
4. ALL GLASS TO BE INSULATING, PER SPECIFICATIONS.
5. ALL EXISTING WIRE GLASS TO BE REPLACED TO TEMPERED SAFETY GLASS.

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611 Pacifica Ave
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SHEET TITLE

**WINDOW SCHEDULE**

INC.1

DRAWN BY: MP JOB NUMBER: 23118.01

SHEET NO.

# 1A-811

DATE: APRIL 18, 2024

CONSTRUCTION DOCUMENTS


DATE PLOTTED: 4/23/2024 3:58:32 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118_MTDUSD_RIO VISTA ES MOD_INC01_A22.rvt

## SYMBOL LEGEND

| SINGLE LINE SYMBOL | DOUBLE LINE SYMBOL | DESCRIPTION |
|---|---|---|
| | | LONG SWEEP 90° ELBOW - RECTANGULAR, ROUND OR OVAL |
| | | 45° ELBOW - RECTANGULAR, ROUND OR OVAL |
| | | 30° ELBOW - RECTANGULAR, ROUND OR OVAL |
| | | 90° ELBOW - RECTANGULAR DUCT WITH TURNING VANES |
| | | 45° LATERAL - ROUND TO ROUND OR OVAL TO OVAL |
| | | 90° TAKEOFF WITH 45° TAPER - RECTANGULAR TO RECTANGULAR (FOR BRANCH TAKEOFF LONGER THAN 50'-0", USE 15) |
| | | 90° TAKEOFF WITH 45° ELONGATED TEE - ROUND TO ROUND |
| | | Y BRANCH - ROUND OR OVAL DUCT |
| | | 90° RADIUS SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT |
| | | 90° RECTANGULAR SPLIT - RECTANGULAR DUCT, PROVIDE SPLITTER DAMPER, X/Y PROPORTIONAL SPLIT |
| | | TRANSITION - RECTANGULAR TO ROUND OR RECTANGULAR TO OVAL |
| | | FLEXIBLE DUCT - ROUND |
| | | FLEXIBLE DUCT - RECTANGULAR |

| SINGLE LINE SYMBOL | DOUBLE LINE SYMBOL | DESCRIPTION |
|---|---|---|
| | | SECTION AT SUPPLY AIR OR MAKE-UP AIR DUCT UP |
| | | SECTION AT RETURN AIR OR COMBUSTION AIR DUCT UP |
| | | SECTION AT EXHAUST AIR OR RELIEF AIR DUCT UP |
| | | SUPPLY AIR DUCT DOWN |
| | | RETURN AIR DUCT DOWN |
| | | EXHAUST AIR DUCT DOWN |
| | | ROUND DUCT UP - SUPPLY, RETURN OR EXHAUST |
| | | ROUND DUCT DOWN - SUPPLY, RETURN OR EXHAUST |
| | | CEILING DIFFUSER - ONE, TWO, THREE AND FOUR WAY THROW |
| | | CEILING - RETURN AND EXHAUST REGISTERS |
| | | SIDEWALL - SUPPLY DIFFUSER, RETURN AND EXHAUST REGISTERS |
| | | MANUAL BALANCE DAMPER WITH DUCT ACCESS DOOR |
| | M | MOTORIZED BALANCE DAMPER WITH DUCT ACCESS DOOR |
| FSD OR F/D | FSD OR F/D | FIRE DAMPER WITH DUCT ACCESS DOOR FIRE/SMOKE DAMPER WITH DUCT ACCESS DOOR |
| 24 x 12 | 24 x 12 | ACOUSTICALLY LINED DUCT. DIMENSIONS ARE INSIDE |
| | 12x12 CD-1 300 | REGISTER NECK SIZE AND TAG DESIGN CFM |
| | | PANEL AT T-BAR CEILING |

| SYMBOL | ABBRV. | IDENTIFICATION |
|---|---|---|
| | CW | COLD WATER (DOMESTIC) |
| | HW | HOT WATER |
| | HWR | HOT WATER RETURN |
| | V | VENT |
| TP | TP | TRAP PRIMER LINE |
| W | S OR W | SOIL OR WASTE ABOVE GRADE |
| W | S OR W | SOIL OR WASTE BELOW GRADE |
| AW | AW | ACID WASTE |
| GW | GW | GREASE WASTE |
| RWL | RWL | RAIN WATER LEADER |
| OD | OD | OVERFLOW DRAIN |
| CD | CD | CONDENSATE DRAIN |
| E | | CAP |
| CONT | | CONTINUATION |
| | | BALL VALVE |
| OR | | VALVE |
| | CKV | CHECK VALVE |
| | T&PRV | TEMP. & PRESS. RELIEF VALVE |
| | GPR | GAS PRESSURE REGULATOR |
| | | CIRCULATION PUMP (DOMESTIC) |
| | WHA | WATER HAMMER ARRESTOR |
| | TP | TRAP PRIMER ACCESS PANEL |
| | GCO/FCO | GRADE CLEAN-OUT/FLOOR CLEAN-OUT |
| | WCO | WALL CLEAN-OUT |
| | HB | HOSE BIBB |
| | | UNION |
| | AN | PIPE ANCHOR |
| | | FLEXIBLE CONNECTOR |

| SYMBOL | ABBRV. | IDENTIFICATION |
|---|---|---|
| | P.O.C. | POINT OF CONNECTION |
| | | REMOVE EXISTING |
| | | LINE BREAK |
| | | TEE DOWN |
| | | 90 DOWN |
| | | CONCENTRIC & ECCENTRIC REDUCERS |
| | AD, AP | ACCESS DOOR, ACCESS PANEL |
| | MAV | MANUAL AIR VENT |
| T | T | THERMOSTAT MOUNTED @ 48" AFF. MAX. |
| CO2 | CO2 | CARBON DIOXIDE (CO2) SENSOR |
| | AD | AREA DRAIN |
| | FD | FLOOR DRAIN |
| | FS | FLOOR SINK |
| OR | VB | VALVE IN BOX |
| | TH | THERMOMETER |
| | RPBP | REDUCED PRESSURE BACKFLOW PREVENTER |
| | DCDA | DOUBLE CHECK DETECTOR ASSEMBLY |
| FC A-1 | | EQUIPMENT DESIGNATION |
| | | TAG NUMBER |
| 1 MP2.1 | | SECTION 1 / SHEET MP2.1 |

## MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE, OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCED NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

## PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP [X] MD [X] PP [ ] E [ ] - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP [ ] MD [ ] PP [ ] E [ ] - OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI PRE-APPROVAL (OPM #)

## ABBREVIATIONS

| | | | | | |
|---|---|---|---|---|---|
| & | AND | EQUIP | EQUIPMENT | P/T | PRESSURE/TEMPERATURE |
| °F | DEGREES FAHRENHEIT | ESP | EXTERNAL STATIC PRESSURE | PD | PRESSURE DROP |
| AAV | AUTOMATIC AIR VENT | EW | ENTERING WATER | PH | PHASE |
| AC | AIR CONDITIONER | EWB | ENTERING WET BULB | PLF | POUNDS PER LINEAR FOOT |
| AD | ACCESS DOOR | EWT | ENTERING WATER TEMPERATURE | POC | POINT OF CONNECTION |
| AFF | ABOVE FINISH FLOOR | EXT | EXTERIOR | PRV | PRESSURE REDUCING VALVE |
| AFUE | ANNUAL FUEL UTILIZATION EFFICIENCY | FD | FLOOR DRAIN | PSI | POUNDS PER SQUARE INCH |
| AL | ACOUSTICALLY LINED | FFE | FINISHED FLOOR ELEVATION | PSI (G) (A) | POUNDS PER SQUARE INCH (GAUGE) (ABSOLUTE) |
| AMP | AMPERE | FLA | FULL LOAD AMPS | | |
| AN | PIPE ANCHOR | FLEX | FLEXIBLE | QTY | QUANTITY |
| AP | ACCESS PANEL | FPM | FEET PER MINUTE | RA | RETURN AIR |
| APPROX | APPROXIMATE | FS | FLOOR SINK | RAD | RETURN AIR DAMPER |
| ARCH | ARCHITECT / ARCHITECTURAL | FT | FEET | RH | RELATIVE HUMIDITY |
| AW | ACID WASTE | FT HD | FEET HEAD | RL | REFRIGERANT LIQUID |
| BDD | BACK DRAFT DAMPER | FTR | FLUE THRU ROOF | RM | ROOM |
| BFP | BACKFLOW PREVENTER | G | GAS - LOW PRESSURE | RP | REDUCED PRESSURE |
| BHP | BRAKE HORSEPOWER | GA | GAUGE | RPM | REVOLUTIONS PER MINUTE |
| BLDG | BUILDING | GAL | GALLON | RS | REFRIGERANT SUCTION |
| BOD | BOTTOM OF DUCT | GPM | GALLONS PER MINUTE | RV | RELIEF VALVE |
| BOP | BOTTOM OF PIPE | GPR | GAS PRESSURE REGULATOR | SA | SUPPLY AIR |
| BTU | BRITISH THERMAL UNIT | GW | GREASE WASTE PIPING | SC | SENSIBLE COOLING |
| BTUH | BRITISH THERMAL UNITS PER HOUR | HP | HORSEPOWER | SD | SMOKE DAMPER |
| BTWN | BETWEEN | HR | HOUR | SEER | SEASONAL ENERGY EFFICIENCY RATIO |
| CA | COMBUSTION AIR | HTG | HEATING | SM | SHEET METAL |
| CD | CONDENSATE DRAIN | HW | HOT WATER | SOV | SHUT-OFF VALVE |
| CFH | CUBIC FEET PER HOUR | HWR | HOT WATER RETURN | SP | STATIC PRESSURE |
| CFM | CUBIC FEET PER MINUTE | HZ | HERTZ | SPEC | SPECIFICATION |
| CHWR | CHILLED WATER RETURN | IE | INVERT ELEVATION | SQ | SQUARE |
| CHWS | CHILLED WATER SUPPLY | IN | INCH | SQFT, FT² | SQUARE FEET |
| CIRC | CIRCULATING | INV | INVERT | SQIN, IN² | SQUARE INCHES |
| ℄ | CENTERLINE | KW | KILOWATTS | STRUCT | STRUCTURAL |
| CLG | COOLING, CEILING | KWH | KILOWATT HOUR | T | THERMOSTAT, "X" INDICATES DEVICE |
| CLR | CLEAR | LAT | LEAVING AIR TEMPERATURE | | CONTROLLED. 48" AFF (TO TOP OF STAT) |
| CONC | CONCRETE | LBS | POUNDS | TC | TOTAL COOLING |
| CONN | CONNECTION | LVR | LOUVER | TDH | TOTAL DYNAMIC HEAD |
| CONT | CONTINUED, CONTINUATION | LWB | LEAVING WET BULB | TEMP | TEMPERATURE |
| COOL | COOLING | LWT | LEAVING WATER TEMPERATURE | TH | THERMOMETER |
| COP | COEFFICIENT OF PERFORMANCE | MAD, MD | MANUAL AIR DAMPER | THRU | THROUGH |
| CW | COLD WATER | MAV | MANUAL AIR VENT | TP | TRAP PRIMER |
| D/L | DOOR LOUVER | MAX | MAXIMUM | TSP | TOTAL STATIC PRESSURE |
| DB | DRY BULB | MBH | 1000 BTU PER HOUR | TV | TURNING VANES |
| DCV | DOUBLE CHECK VALVE | MCA | MINIMUM CIRCUIT AMPS | TW | TEMPERED WATER |
| DF | DRINKING FOUNTAIN | MCP | MECHANICAL CONTROL PANEL | TYP | TYPICAL |
| DN | DOWN | MECH | MECHANICAL | UL | UNDERWRITER'S LABORATORIES |
| DP | DIFFERENTIAL PRESSURE | MFR | MANUFACTURER | UON | UNLESS OTHERWISE NOTED |
| DWGS | DRAWINGS | MPG | GAS - MEDIUM PRESSURE | V | VOLT OR VENT |
| (E) | EXISTING | MIN | MINIMUM | VB | VALVE IN VALVE BOX |
| EA | EXHAUST AIR | MOCP | MAXIMUM OVERCURRENT PROTECTION | VFD | VARIABLE FREQUENCY DRIVE |
| EAD | EXHAUST AIR DAMPER | (N) | NEW | VTR | VENT THROUGH ROOF |
| EAT | ENTERING AIR TEMPERATURE | NC | NORMALLY CLOSED | W | WATTS OR WASTE |
| EDB | ENTERING DRY BULB | NIC | NOT IN CONTRACT | W/ | WITH |
| EER | ENERGY EFFICIENCY RATIO | NO | NORMALLY OPEN | WB | WET BULB |
| EFF | EFFICIENCY | NTS | NOT TO SCALE | WC | WATER COLUMN |
| ELEC | ELECTRICAL | OA | OUTSIDE AIR | WH | WATER HEATER |
| ELEV | ELEVATION | OAD | OUTSIDE AIR DAMPER | WT | WEIGHT |
| ENT | ENTERING | OC | ON CENTER | | |
| EQ | EQUAL | OD | OUTSIDE DIAMETER | | |

## GENERAL NOTES

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF FINAL BID TO VERIFY ALL EXISTING SITE CONDITIONS WHICH MAY AFFECT THE COMPLETION OF THE INSTALLATION. ALL METHODS AND REQUIREMENTS FOR INSTALLATION SHALL BE DETERMINED PRIOR TO BID DATE. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT REFERENCED ON THESE PLANS PRIOR TO SUBMITTING BID. SUBMITTAL OF THE CONTRACTOR'S BID DEMONSTRATES THE CONTRACTOR'S AWARENESS OF ALL SITE CONDITIONS AND REQUIRED WORK TO BE PERFORMED.
2. CONTRACTOR SHALL INCLUDE AND PROVIDE IN BID ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL INSTALLATION OF ALL SYSTEMS.
3. THE DRAWINGS INCLUDED IN THIS SET ARE DIAGRAMMATIC. THEY ARE REPRESENTATIVE OF THE ENGINEER OF RECORD'S DESIGN INTENT FOR ALL EQUIPMENT AND RELATED PIPING ETC. INDIVIDUAL POWER NEEDS, CONTROLS AND OTHER CONNECTIONS SHALL BE COORDINATED AND COMPLETED/ PROVIDED FOR COMPLETE SYSTEM OPERATION BY CONTRACTOR.
4. EQUIPMENT LOCATIONS AND PIPE ROUTING ARE NOT PRECISE AND SHALL BE COORDINATED, VERIFIED, AND DETERMINED IN THE FIELD. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ROUTE PIPING IN LOCATIONS WHICH MEET CODE REQUIREMENTS AND DO NOT INTERFERE WITH ANY BUILDING STRUCTURES, UTILITIES, OR OTHER TRADE EQUIPMENT.
5. (E) DUCTWORK AND ITEMS TO BE REMOVED ARE SHOWN HATCHED. SEE LEGEND. COORDINATE CLOSELY WITH (N) DUCTWORK AND P.O.C.'S SHOWN. ALL OTHER (E) DUCTWORK, ETC. TO REMAIN.
6. ALL EQUIPMENT, EQUIPMENT CONNECTIONS, PIPING, MOUNTING LOCATIONS ETC. ARE TO BE VERIFIED WITH OWNER'S REPRESENTATIVE AND EQUIPMENT SUPPLIER PRIOR TO BEGINNING OF THE ROUGH-IN.
7. ALL WORK SHALL BE PERFORMED TO STATE, LOCAL, NATIONAL AND DISTRICT STANDARDS AND CODES. COORDINATE SPECIFIC REQUIREMENTS WITH DISTRICT STANDARDS AND AUTHORITY HAVING JURISDICTION.
8. ALL EQUIPMENT SHALL BE NEW AND CLEARLY LABELED AND IDENTIFIED. LABELS SHALL NOT BE COVERED BY OTHER CONSTRUCTION ELEMENTS.
9. UNLESS OTHERWISE NOTED IN CONTRACT DOCUMENTS, CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND WORK FOR A PERIOD OF ONE YEAR.
10. UNLESS OTHERWISE NOTED OR REFERENCED ON THE DRAWINGS, EVERYTHING IS NEW.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAW CUTTING, CORE DRILLING, PATCHING, REFINISHING, ETC. AS REQUIRED FOR INSTALLATION OF SYSTEMS. ANY PENETRATIONS OR OPENINGS MADE IN WALLS OR STRUCTURES SHALL BE PATCHED AND/OR SEALED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE WALL OR STRUCTURE.
12. CONTRACTOR IS RESPONSIBLE FOR COMPLETING ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT AND SHALL INCLUDE THE PRICE OF INSTALLING ALL CONNECTIONS AS REQUIRED IN THEIR BIDS.
13. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE APPROVAL OF THE ENGINEER OF RECORD. ALL APPROVALS BY THE ENGINEER OF RECORD MUST BE SECURED PRIOR TO COMPLETION OF ANY PURCHASE ORDERS OR ROUGH-IN WORK.
14. THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS ARE TO BE CONSIDERED CONTRACT DOCUMENTS FOR AGENCY REVIEW/ APPROVAL AND CONTRACTOR BIDDING PURPOSES.
15. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF AS-BUILT DRAWINGS.
16. ANY AND ALL WORK THAT REQUIRES AN INTERRUPTION TO BUILDING SERVICES(S) (ELECTRICAL/ HVAC/ PLUMBING ETC.) MUST BE COORDINATED WITH THE DISTRICT A MINIMUM OF 48 HOURS IN ADVANCE. ANY SERVICE DOWNTIME SHALL NOT OCCUR DURING SCHOOL OPERATION HOURS.
17. IN INSTANCES WHERE A CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS AND INSTALLATION MANUALS FOR THE PROJECT EXISTS, THE CONTRACTOR SHALL ADHERE TO THE MORE STRINGENT REQUIREMENT.
18. ANY EXISTING BUILDING STRUCTURES OR SURFACES DAMAGED BY DEMOLITION OR DURING INSTALLATION ACTIVITIES SHALL BE REPAIRED, PATCHED, AND/OR REFINISHED TO THE SATISFACTION OF THE OWNER.
19. FURNISH AND INSTALL MANUAL AIR DAMPERS AT ALL DUCT BRANCH TAKEOFFS TO A SINGLE SUPPLY DIFFUSER.
20. FOR ALL VOLUME DAMPERS LOCATED ABOVE CEILINGS, PROVIDE 12" LONG 1/2" WIDE FLUORESCENT ORANGE TAPE TO MARK DAMPER LOCATIONS.
21. ALL DUCTWORK, CONDUITS, BOXES, SURFACE MOUNTED RACEWAYS, SUPPORT DEVICES, AND ASSOCIATED FITTINGS SHALL BE MOUNTED IN CONCEALED LOCATIONS ABOVE CEILINGS, DUCTS, TRUSSES, BEAMS, ETC. WHERE WORK HAS TO BE INSTALLED IN EXPOSED LOCATIONS, IT SHALL BE PAINTED TO MATCH THE ADJACENT SURFACES OR PER ARCHITECT'S DIRECTION.
22. CONTRACTOR SHALL PREPARE AND SUBMIT THE CALIFORNIA ENERGY COMMISSION TITLE 24 CERTIFICATE OF ACCEPTANCE FORMS RELATED TO INSTALLED EQUIPMENT AND SYSTEMS.
23. SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
24. CONTRACTOR'S EQUIPMENT: COORDINATE WITH OWNER'S REPRESENTATIVE FOR APPROVED LOCATION OF JOB SITE ACCESS, PARKING, AND LOCATION OF CONTRACTOR'S EQUIPMENT AND MATERIAL STORAGE AREA. COORDINATE WITH OWNER FOR LOCATION AND PROCEDURES.
25. ALL BUILDING MATERIALS MUST BE ASBESTOS FREE.
26. CONSTRUCTION SCHEDULING: CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING AND START OF THE WORK. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL EXISTING SPACES AND SYSTEMS WHICH ARE IN USE, ADJOINING THE PROJECT, AND NOT PART OF THE PROJECT.
27. TITLE 24 COMPLIANCE: THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS (2022 CBC). SHOULD ANY CONDITIONS BE DISCOVERED NOT COVERED BY THE CONTRACT DOCUMENTS WHERE IN THE FINISHED WORK DOES NOT COMPLY WITH 2022 CBC, A CONSTRUCTION CHANGE DOCUMENT OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK, SHALL BE SUBMITTED TO AND APPROVED BY THE DSA BEFORE PROCEEDING WITH THE WORK.
28. INSTALLER QUALIFICATIONS: EACH EMPLOYEE SHALL BE CERTIFIED BY MANUFACTURER FOR PROPER INSTALLATION OF SYSTEMS, INCLUDING, BUT NOT LIMITED TO, EQUIPMENT, PIPING, CONTROLS, AND ACCESSORIES INDICATED AND FURNISHED FOR INSTALLATION. INSTALLER CERTIFICATION SHALL BE VALID AND CURRENT FOR DURATION OF PROJECT. INSTALLER SHALL HAVE DEMONSTRATED PAST EXPERIENCE WITH PRODUCTS BEING INSTALLED FOR PERIOD WITHIN FIVE (5) CONSECUTIVE YEARS BEFORE TIME OF BID.
29. THE CALIFORNIA ENERGY CODE SECTION 10-103 REQUIRES ACCEPTANCE TESTING ON ALL NEWLY INSTALLED LIGHTING CONTROLS, MECHANICAL SYSTEMS, ENVELOPES, AND PROCESS EQUIPMENT AFTER INSTALLATION AND BEFORE PROJECT COMPLETION. AN ACCEPTANCE TEST IS A FUNCTIONAL PERFORMANCE TEST TO HELP ENSURE THAT NEWLY INSTALLED EQUIPMENT IS OPERATING AND IN COMPLIANCE WITH THE ENERGY CODE.LIGHTING CONTROLS ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED LIGHTING CONTROLS ACCEPTANCE TEST TECHNICIAN (ATT). MECHANICAL SYSTEM ACCEPTANCE TESTS MUST BE PERFORMED BY A CERTIFIED MECHANICAL ATT FOR PROJECTS SUBMITTED ON OR AFTER OCTOBER 1, 2021.ENVELOPE AND PROCESS EQUIPMENT ACCEPTANCE TESTS SHALL BE PERFORMED BY THE INSTALLING CONTRACTOR, ENGINEER/ARCHITECT OF RECORD OR THE OWNER'S AGENT.A LISTING OF CERTIFIED ATT CAN BE FOUND AT: HTTPS://WWW.ENERGY.CA.GOV/PROGRAMS-AND-TOPICS/PROGRAMS/ACCEPTANCE-TEST-TECHNICIAN-CERTIFICATION-PROVIDER-PROGRAM/ACCEPTANCE.THE ACCEPTANCE TESTING PROCEDURES MUST BE REPEATED. AND DEFICIENCIES MUST BE CORRECTED BY THE BUILDER OR INSTALLING CONTRACTOR UNTIL THE CONSTRUCTION/INSTALLATION OF THE SPECIFIED SYSTEMS CONFORM AND PASS THE REQUIRED ACCEPTANCE CRITERIA.PROJECT INSPECTORS WILL COLLECT THE FORMS TO CONFIRM THAT THE REQUIRED ACCEPTANCE TESTS HAVE BEEN COMPLETED.

## DSA GENERAL NOTES

1. THE INTENT OF THE CONTRACT DOCUMENTS IS TO MODERNIZE THE SCHOOL'S CAMPUS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
2. THE SEISMIC SUPPORT AND ANCHORAGE OF THE EQUIPMENT DESCRIBED ON THESE DRAWINGS HAVE BEEN ENGINEERED BY THE ENGINEER OF RECORD FOR CONFORMANCE WITH APPROPRIATE BUILDING CODES. THE ENGINEER OF RECORD WAS NOT RESPONSIBLE FOR THE EQUIPMENT DESIGN.
3. ALL MECHANICAL AND PLUMBING EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE CRITERIA FROM CHAPTER 16A CALIFORNIA BUILDING CODE (CBC) 2022.
4. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND THE FIELD REPRESENTATIVE OF THE DIVISION OF THE STATE ARCHITECT.
5. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

## LIST OF GOVERNING CODES

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24, C.C.R.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, C.C.R.
2022 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, C.C.R.
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, C.C.R.
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, C.C.R.
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24, C.C.R.
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, C.C.R.
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
TITLE 19, C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

ALL SECTION NUMBERS BELOW REFER TO GROUP 1, CHAPTER 4, PART 1, TITLE 24, C.C.R.
1. ADDENDA, CONSTRUCTION CHANGES PER SECTION 4-338.
2. INSPECTOR APPROVED BY DSA. INSPECTOR AND CONTINUOUS INSPECTION OF WORK PER SECTION 4-333(b) AND 4-342.
3. TESTS AND TESTING LABORATORY PER SECTION 4-335.
4. SPECIAL INSPECTION PER SECTION 4-333(c).
5. CONTRACTOR SHALL SUBMIT VERIFIED REPORTS PER SECTION 4-336 AND 4-343(c).
6. ADMINISTRATION OF CONSTRUCTION PER PART 1, TITLE 24, C.C.R. - DUTIES OF ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER PER SECTION 4-333(a) AND 4-341.
7. GOVERNING CODES: TITLE 24.
8. A COPY OF PARTS 1, 2, 3, 4, AND 5 OF TITLE 24 SHALL BE KEPT AVAILABLE IN THE FIELD DURING CONSTRUCTION.
9. DSA SHALL BE NOTIFIED OF START OF CONSTRUCTION PER SECTION 4-331.
10. SUPERVISION BY THE DIVISION OF THE STATE ARCHITECT PER SECTION 4-334.

## DRAWING INDEX


1MP-001 LEGENDS & NOTES - MECHANICAL & PLUMBING
1MP-002 SCHEDULES - MECHANICAL
1MP-003 SCHEDULES & SCHEMATICS - MECHANICAL & PLUMBING
1MP-004 SCHEMATICS - MECHANICAL
1MP-201 BLDG 1 MPR - DEMO & NEW FLOOR PLANS - MECHANICAL & PLUMBING
1MP-202 BLDG 2 - DEMO & NEW FLOOR PLANS - MECHANICAL & PLUMBING
1MP-203 BLDG 5 DEMO & NEW FLOOR PLANS - MECHANICAL & PLUMBING
1MP-204 BLDGS 7 DEMO & NEW FLOOR PLANS - MECHANICAL & PLUMBING
1MP-301 BLDGS 1 & 5 - DEMO & NEW ROOF PLANS - MECHANICAL & PLUMBING
1MP-302 BLDG 2 - DEMO & NEW ROOF PLANS - MECHANICAL & PLUMBING
1MP-303 BLDG 7 - DEMO & NEW ROOF PLANS - MECHANICAL & PLUMBING
1MP-401 BLDG 2 & 7 - DEMO & NEW RESTROOM PLANS - MECHANICAL & PLUMBING
1MP-402 BLDGS 5 ADMIN - DEMO & NEW RESTROOM PLANS - MECHANICAL & PLUMBING
1MP-501 CONTROLS - MECHANICAL
1MP-601 DETAILS - MECHANICAL & PLUMBING
1MP-602 DETAILS - MECHANICAL & PLUMBING
1MP-603 DETAILS - MECHANICAL & PLUMBING
1MP-801 T24 - MECHANICAL
1MP-802 T24 - MECHANICAL


AGENCY APPROVAL DSA# XX-XXXXXXXXX


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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEIN SERTTI — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |

THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.

PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

## POWER EXHAUST / ECONOMIZER SCHEDULE BLD-7 MP (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | MANUFACTURER | MODEL NO. | AC UNIT SERVED | AIRFLOW CFM | ESP IN. W.G. | MOTOR HP | ELECTRICAL | | | WEIGHT LBS | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | V / PH | MCA | MOCP | | |
| PE-MU-1 | CANFAB | 1124-MPE40E-R39 | AC-MU-1 | 4000 | - | 2.0 | 460 / 3 | 3.875 | 6.975 | SEE NOTE 2 | 1, 2, 3 |
| PE-MU-2 | CANFAB | 1124-MPE40E-R39 | AC-MU-2 | 4000 | - | 2.0 | 460 / 3 | 3.875 | 6.975 | SEE NOTE 2 | 1, 2, 3 |

1. CONTRACTOR SHALL PROVIDE MODULATING SPEED POWER EXHAUST DRIVE AND PRESSURE TRANSDUCER TO CONTROL TO BUILDING PRESSURE.
2. POWER EXHAUST WEIGHT INCLUDED IN AC UNIT TOTAL WEIGHT. SEE AC UNIT SCHEDULE.
3. ECONOMIZER DRY BULB OAT SENSOR & CONTROL

## PACKAGED AIR CONDITIONING UNITS SCHEDULE BLD-7 MP (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | LOCATION | MANUFACTURER | MODEL NO. | POWER EXHAUST | COOLING MBH | | GAS HEATING MBH | | AIRFLOW CFM | ESP IN. W.G. | OUTSIDE AIR MIN. CFM | OUTSIDE AIR MAX. DCV CFM | FAN RPM | MOTOR BHP | SEER | AFUE % | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | TOTAL | SENSIBLE | INPUT | OUTPUT | | | | | | | | | V / PH | MCA | MOCP | | | |
| AC-MU-1 | MU ROOF | CARRIER | 48GCEM12C3M6-0A4A0 | PE-MU-1 | 123.18 | 91.09 | 224<br>180 | 181<br>146 | 4,000 | 1.50 | 400 | 1000 | 1,877 | 3.47 | 17.2<br>IEER | 81 | 460 / 3 | 30 | 35 | 1825 | 11/1MP-601 | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| AC-MU-2 | MU ROOF | CARRIER | 48GCEM12C3M6-0A4A0 | PE-MU-2 | 123.18 | 91.09 | 224<br>180 | 181<br>146 | 4,000 | 1.50 | 400 | 1000 | 1,877 | 3.47 | 17.2<br>IEER | 81 | 460 / 3 | 30 | 35 | 1825 | 11/1MP-601 | 1, 2, 3, 4, 5, 6, 7, 8, 9 |

1. WEIGHT INCLUDES ALL OPTIONS AND ACCESSORIES.
2. FURNISHED WITH ULTRA LOW LEAK ECONOMIZER & CTONROLLERS. SEE POWER EXHAUST / ECONOMIZER SCHEDULE.
3. FURNISHED WITH LOUVERED HAIL GUARDS, UN POWERED CONVENIENCE OUTLET, AND HINGED ACCESS PANELS & COASTAL COIL COATING.
4. CONTRACTOR SHALL PROVIDE FINAL OCCUPANCY MERV 13 FILTERS.
5. VERTICAL DISCHARGE CONFIGURATION.
6. FURNISHED W/ MICRO METL CRBV-SRT34HA-1112-P70 SEISMIC ISOLATED ROOF CURB.
7. FURNISHED W/ FLUE DISCHARGE DEFLECTOR.
8. FURNISHED LOOSE W/ MANUFACTURER SMOKE DETECTOR TO BE FIELD INSTALLED IN SUPPLY DUCT, WIRED TO SHUT DOWN UPON DETECTION OF SMOKE, PER 2022 CMC 608 & COORDINATE W/ ELECTRIC CONTRACTOR.
9. CONTRACTOR SHALL PROVIDE SCHNEIDER VICONICS VT8650, SEE 1MP-501.

## MZ OUTDOOR UNIT HEAT PUMP SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | INDOOR UNIT | MANUFACTURER | MODEL NO. | LOCATION | NOMINAL CAPACITY | | REFRIGERANT PIPING | | SEER | COP | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | COOLING MBH | HEATING MBH | LIQUID | GAS | | | V / PH | MCA | MOCP | | | |
| HP-7-1 | IU-7-1 TO IU-7-3 | TRANE MITSUBISHI | NTXMSM36A142BA | BUILDING 7 ROOF | 36 | 41 | 3/8" | 5/8" | 23.0 | 4.0 | 208-230 / 1 | 29 | 40 | 275 | 8/1MP-602 | 1, 2, 3, 4, 5, 6 |

1. MOUNT ON ROOF SLEEPERS
2. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
3. COOLING CAPACITIES INDICTED AT 80°F DB / 67° WB INDOOR AND 95°F DB OUTDOOR CONDITIONS. HEATING CAPACITIES INDICATED AT 70°F DB INDOOR AND 47°F DB / 43°F WB OUTDOOR CONDITIONS.
4. OUTDOOR CONDENSING UNITS TO BE LOCATED WITH PROPER CLEARANCES AND MUST PREVENT RE-CIRCULATION OF AIR. COORDINATE WITH MANUFACTURER AND ARCHITECT.
5. FURNISHED W/ CMV-Y63-G-E BRANCH JOINTS. CONTRACTOR SHALL PROVIDE REFRIGERATION LINE SETS.
6. CONNECT TO BUILDING 7 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM, SEE 1MP-501.

## MZ INDOOR FAN COIL UNITS SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | OUTDOOR UNIT | MANUFACTURER | MODEL NO. | LOCATION | COOLING MBH | HEATING MBH | AIRFLOW CFM | ESP IN. W.G. | REFRIGERANT PIPING | | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | LIQUID | GAS | V / PH | MCA | MOCP | | | |
| IU-7-704 | VHP-7-1 | TRANE MITSUBISHI | TPLFYP008FM140A | RM 704 BREAK OUT | 8,000 | 9,000 | 315 | — | 1/4" | 1/2" | 208 / 1 | 0.28 | 15 | 30 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-7-706 | VHP-7-1 | TRANE MITSUBISHI | TPLFYP008FM140A | RM 706 BREAK OUT | 8,000 | 9,000 | 315 | — | 1/4" | 1/2" | 208 / 1 | 0.28 | 15 | 30 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-7-707 | VHP-7-1 | TRANE MITSUBISHI | TPMFYP006BM140F | RM 707 CORRIDOR | 6,000 | 6,700 | 307 | — | 1/4" | 1/2" | 208 / 1 | 0.25 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTUER PRIOR TO INSTALLATION.
2. FURNISHED W/ TAR-40MAAU DELUXE MA REMOTE CONTROLLER, SEE 1MP-501.
3. WITH BUILT-IN CONDENSATE LIFT.
4. COOLING CAPACITIES INDICTED AT 80°F DB / 67° WB INDOOR AND 95°F DB OUTDOOR CONDITIONS. HEATING CAPACITIES INDICATED AT 70°F DB INDOOR AND 47°F DB / 43°F WB OUTDOOR CONDITIONS.
5. FURNISHED W/ BUILDING 7 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM & SCHEDULE FOR OCCUPIED HOURS & INTERLOCK TO ERV-7-1, SEE 1MP-501.

## EXHAUST FANS SCHEDULE

| TAG | MANUFACTURER | MODEL NO. | AREA SERVED | AIRFLOW CFM | ESP IN. W.G. | FAN RPM | SOUND POWER SONES | MOTOR | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | WATTS | V / PH | | | |
| EF-7-702 | GREENHECK | SP-B150 | RESTROOM 702 | 120 | 0.25 | 829 | 1.3 | 128 | 115 / 1 | 20 | 4 OR 5 /1MP-601 | 1, 2, 3, 4, 5 |

1. WEIGHT INCLUDES ACCESSORIES.
2. PROVIDE WITH UL LISTING, FAN MOUNTED SPEED CONTROL, AND BACKDRAFT DAMPER.
3. PROVIDE WITH FACTORY ISOLATION KIT.
4. SWITCH WITH LIGHTS.
5. PROVIDE W/ ROOF CURB CAP, INSTALL SIMILAR TO SEE DETAIL 13/1MP-601.

## ROOF HOOD SCHEDULE

| TAG | MANUFACTURER | MODEL NO. | TYPE | HOOD SIZE (IN) | | | THROAT SIZE (IN) | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | W | L | H | W | L | | | |
| RH-2-1 | GREENHECK | GRSI- 18 | INTAKE | 36 Ø | — | 12 | 20 Ø | — | 50 | 13/1MP-601 | 1, 2, 3, 4 |
| RH-2-2 | GREENHECK | GRSR- 18 | RELIEF | 36 Ø | — | 12 | 20 Ø | — | 50 | 13/1MP-601 | 1, 2, 3, 4 |
| RH-5-1 | GREENHECK | GRSI- 15 | INTAKE | 29 Ø | — | 12 | 14 Ø | — | 35 | 13/1MP-601 | 1, 2, 3, 4 |
| RH-5-2 | GREENHECK | GRSR- 15 | RELIEF | 29 Ø | — | 12 | 14 Ø | — | 35 | 13/1MP-601 | 1, 2, 3, 4 |
| RH-7-1 | GREENHECK | GRSI- 10 | INTAKE | 20 Ø | — | 10 | 10 Ø | — | 25 | 13/1MP-601 | 1, 2, 3, 4 |
| RH-7-2 | GREENHECK | GRSR- 10 | RELIEF | 20 Ø | — | 10 | 10 Ø | — | 25 | 13/1MP-601 | 1, 2, 3, 4 |

1. WEIGHT INCLUDES ACCESSORIES.
2. PROVIDE WITH BACKDRAFT DAMPER & BIRD SCREEN.
3. PROVIDE W/ ROOF CURB.
4. SEE ARCH DRAWINGS FOR PAINTING

## SPLIT SYSTEM SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | MANUFACTURER | MODEL | LOCATION | COOLING | HEATING | AIRFLOW CFM | REFRIGERANT PIPING | | SEER | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TOTAL MBH | TOTAL MBH | | LIQUID | GAS | | V / PH | MCA | MOCP | | | |
| IU-5-510 | TRANE MITSUBISHI ELECRIC | TPKA0A0121LA10A | MDF 510 | 12.0 | 14.0 | 385 | 1 / 4" | 1 / 2" | 21.3 | 208 / 1 | — | — | 30 | 9/1MP-602 | 1, 2, 3, 7 |
| OU-5-510 | TRANE MITSUBISHI ELECRIC | TRUZA0121KA70NA | ROOF | | | — | | | | 208 / 1 | 11 | 28 | 95 | 8/1MP-602 | 4, 5, 6 |

1. WALL MOUNTED PER MANFC. DIRECTIONS. INDOOR UNIT POWERED BY OUTDOOR UNIT.
2. FURNISHED W/ TAR-40MAAU DELUXE MA REMOTE CONTROLLER. SEE 1MP-501.
3. FURNISHED W/ CONDENSATE PUMP
4. MOUNT ON ROOF SLEEPERS.
5. OUTDOOR CONDENSING UNITS TO BE LOCATED WITH PROPER CLEARANCES AND MUST PREVENT RE-CIRCULATION OF AIR. COORDINATE WITH MANUFACTURER AND ARCHITECT.
6. CONTRACTOR SHALL PROVIDE REFRIGERATION LINE SET. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
7. CONNECT TO BUILDING 5 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM & SCHEDULE FOR OCCUPIED HOURS, SEE 1MP-501.

## AIR DISTRIBUTION SCHEDULE

| TAG | MANUFACTURER | MODEL NO. | DESCRIPTION | BORDER TYPE | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|
| CD-1 | TITUS | MCD | CEILING DIFFUSER | SURFACE MOUNT | 10/1MP-601 | 1 |
| CD-2 | TITUS | MCD | CEILING DIFFUSER | LAY-IN MOUNT | 10/1MP-601 | 1 |
| EG-1 | TITUS | 8R | EXHAUST GRILLE | SURFACE MOUNT | 10/1MP-601 | 1 |
| EG-2 | TITUS | 8R | EXHAUST GRILLE | LAY-IN MOUNT | 10/1MP-601 | 1 |
| LSD-1 | TITUS | FTBI-20 | LINEAR SLOT DIFFUSER | SURFACE MOUNT | — | 1 |
| RG-1 | TITUS | 8R | RETURN GRILLE | SURFACE MOUNT | 10/1MP-601 | 1 |
| RG-2 | TITUS | 8R | RETURN GRILLE | LAY-IN MOUNT | 10/1MP-601 | 1 |
| SG-1 | TITUS | 8R | SUPPLY GRILLE | SURFACE MOUNT | 10/1MP-601 | 1 |
| SWR-1 | TITUS | 350 RL | SIDE WALL RETURN | SURFACE MOUNT | 13/1MP-602 | 1 |
| SWS-1 | TITUS | 300 RL | SIDE WALL SUPPLY | SURFACE MOUNT | 13/1MP-602 | 1, 2 |
| TG-2 | TITUS | 8R | TRANSFER GRILLE | LAY-IN MOUNT | 10/1MP-601 | 1 |

1. PRIME AND PAINT PER ARCHITECT'S INSTRUCTIONS.
2. PROVIDE W/ OPPOSED BLADE DAMPER.

## DOOR LOUVER SCHEDULE

| TAG | MANUFACTURER | MODEL NO. | SIZE | NOTES |
|---|---|---|---|---|
| DL-1 | TITUS | T-700L | SEE PLANS | 1, 2 |

1. BORDER TYPE 1, SURFACE MOUNT.
2. PRIME AND PAINT TO MATCH DOOR COLOR OR PER ARCHITECT'S INSTRUCTIONS.

## VRF OUTDOOR UNIT HEAT PUMP SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | INDOOR UNIT | MANUFACTURER | MODEL NO. | LOCATION | NOMINAL CAPACITY | | REFRIGERANT PIPING | | IEER | COP | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | COOLING MBH | HEATING MBH | LIQUID HP | GAS LP | | | V / PH | MCA | MOCP | | | |
| VHP-5-1 | IU-5-1 TO IU-5-9 | TRANE MITSUBISHI | TURYP1203AN40AB | OUTSIDE MU (SERVES BLD 5) | 120 | 135 | 3/4" | 1⅛" | 23.3 | 3.61 | 208-230 / 3 | 43 | 70 | 600 | 3/1MP-601 | 1, 2, 3, 4, 5, 6 |

1. MOUNT ON 4" CONC. HOUSE KEEPING PAD
2. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
3. COOLING CAPACITIES INDICTED AT 80°F DB / 67° WB INDOOR AND 95°F DB OUTDOOR CONDITIONS. HEATING CAPACITIES INDICATED AT 70°F DB INDOOR AND 47°F DB / 43°F WB OUTDOOR CONDITIONS.
4. OUTDOOR CONDENSING UNITS TO BE LOCATED WITH PROPER CLEARANCES AND MUST PREVENT RE-CIRCULATION OF AIR. COORDINATE WITH MANUFACTURER AND ARCHITECT.
5. PROVIDE W/ REFRIGERATION LINE SET. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
6. CONNECT TO BUILDING 5 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM, SEE 1MP-501.

## VRF BRANCH CONTROLLER SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | MANUFACTURER | MODEL NO. | HEAT PUMP | REFRIG PIPING TO ODU / OTHER MCUs | | REFRIG PIPING TO INDOOR UNITS | | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | LIQUID HP | GAS LP | LIQUID | GAS | V / PH | MCA | MOCP | | | |
| BC-5-1 | TRANE MITSUBISHI | TCMBM1012JA11N4 | VHP-5-1 | 1⅜" | 1⅛" | 3/8" | 5/8" | 208 / 1 | 1.57 | 20 | 135 | 1/1MP-603 | 1, 2, 3 |

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
2. PROVIDE AND INSTALL BALL VALVES AT EACH PORT.
3. FAN COIL UNITS IN SAME ROOM SHALL BE CONNECTED (TWINNED) TO SINGLE PORT.

## VRF INDOOR FAN COIL UNITS SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | OUTDOOR UNIT | MANUFACTURER | MODEL NO. | LOCATION | COOLING MBH | HEATING MBH | AIRFLOW CFM | ESP IN. W.G. | REFRIGERANT PIPING | | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | LIQUID | GAS | V / PH | MCA | MOCP | | | |
| IU-5-521 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP008BM140F | RM 521 OFFICE | 8,000 | 9,000 | 328 | — | 1/4" | 1/2" | 208 / 1 | 0.25 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-522 | VHP-5-1 | TRANE MITSUBISHI | TPLFYP015FM140A | RM 522 PRINCIPAL | 15,000 | 17,000 | 390 | — | 1/4" | 1/2" | 208 / 1 | 0.35 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-520 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP015BM140F | RM 520 VICE PRINCIPAL | 15,000 | 17,000 | 378 | — | 1/4" | 1/2" | 208 / 1 | 0.33 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-513 | VHP-5-1 | TRANE MITSUBISHI | TPEFYP012MA144A | RM 513 WAITING | 12,000 | 13,500 | 370 | — | 1/4" | 1/2" | 208 / 1 | 2.13 | 15 | 50 | 2/1MP-603 | 1, 2, 3, 4, 5, 6 |
| IU-5-514 | VHP-5-1 | TRANE MITSUBISHI | TPEFYP024MA144A | RM 514 RECEPTION OFFICE | 24,000 | 27,000 | 880 | — | 3/8" | 5/8" | 208 / 1 | 2.88 | 15 | 70 | 2/1MP-603 | 1, 2, 3, 4, 5, 6 |
| IU-5-512 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP015BM140F | RM 512 NURSE | 15,000 | 17,000 | 378 | — | 1/4" | 1/2" | 208 / 1 | 0.33 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-508 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP008BM140F | RM 508 OFFICE | 8,000 | 9,000 | 328 | — | 1/4" | 1/2" | 208 / 1 | 0.25 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-505 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP008BM140F | RM 505 OFFICE | 8,000 | 9,000 | 328 | — | 1/4" | 1/2" | 208 / 1 | 0.25 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |
| IU-5-507 | VHP-5-1 | TRANE MITSUBISHI | TPMFYP008BM140F | RM 507 OFFICE | 8,000 | 9,000 | 328 | — | 1/4" | 1/2" | 208 / 1 | 0.25 | 15 | 35 | 12/1MP-601 | 1, 2, 3, 4, 5 |

1. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTUER PRIOR TO INSTALLATION.
2. FURNISHED W/ TAR-40MAAU DELUXE MA REMOTE CONTROLLER, SEE 1MP-501.
3. WITH BUILT-IN CONDENSATE LIFT.
4. COOLING CAPACITIES INDICTED AT 80°F DB / 67° WB INDOOR AND 95°F DB OUTDOOR CONDITIONS. HEATING CAPACITIES INDICATED AT 70°F DB INDOOR AND 47°F DB / 43°F WB OUTDOOR CONDITIONS.
5. FURNISHED W/ BUILDING 5 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM, SCHEDULE FOR OCCUPANCY HOURS, & INTERLOCK TO ERV-5-1. SEE 1MP-501.
6. FURNISHED W/ TRANE-MITSUBISHI FMB MERV 13 FILTER BOX.

## ENERGY RECOVERY VENTILATOR SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | MANUFACTURER | MODEL NO. | LOCATION | SUPPLY | | | | EXHAUST | | | | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | AIRFLOW CFM | ESP IN. W.G. | FAN SPEED | WATTS | AIRFLOW CFM | ESP IN. W.G. | FAN RPM | WATTS | V / PH | MCA | MOCP | | | |
| ERV-2-1 | TRANE LOSSNAY | TLGHF1200RVX02A | BUILDING 2 | 1200 | 0.86 | 100% | 1030 | 1200 | 0.86 | 100% | 1030 | 208 / 1 | 10.4 | 15 | 255 | 5/1MP-601 | 1, 2, 3, 4 |
| ERV-5-1 | TRANE LOSSNAY | TLGHF0600RVX02A | BUILDING 5 | 450 | 0.48 | 75% | 515 | 600 | 0.86 | 100% | 515 | 208 / 1 | 5.2 | 15 | 125 | 5/1MP-601 | 1, 2, 3, 4 |
| ERV-7-1 | TRANE LOSSNAY | TLGHF0300RVX02A | BUILDING 7 | 300 | 1.0 | 100% | 235 | 150 | 0.25 | 50% | 235 | 208 / 1 | 4.3 | 15 | 75 | 5/1MP-601 | 1, 2, 3, 4 |

1. UNIT TO OPERATE ON BUILDING SCHEDULE BY EMS, SEE 1MP-501.
2. FURNISHED WITH MERV 14 OUTDOOR AIR FILTER AND MERV 8 EXHAUST AIR FILTER.
3. 4 FAN SPEEDS (25%, 50%, 75%, 100%)
4. FURNISHED W/ TZ-62DR-EA LOSSNAY CONTROLLER. SEE 1MP-501 FOR CONTROL DIAGRAM.

## SPLIT SYSTEM HP UNIT SCHEDULE (OWNER FURNISHED CONTRACTOR INSTALLED)

| TAG | MANUFACTURER | MODEL | LOCATION | COOLING | HEATING | AIRFLOW CFM | REFRIGERANT PIPING | | SEER | ELECTRICAL | | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TOTAL MBH | TOTAL MBH | | LIQUID | GAS | | V / PH | MCA | MOCP | | | |
| AH-2-12A | TRANE MITSUBISHI ELECTRIC | TPVFYP048AM141A | CLASSROOM 12 | 48.0 | 54.0 | 1190 | 3 / 8" | 5 / 8" | 16.0 | 208 / 1 | 5.63 | 15 | 175 | 1/1MP-601 | 1, 2, 8, 9 |
| HP-2-12A | TRANE MITSUBISHI ELECTRIC | NTXMSM48A182BA | ROOF | | | — | | | | 208 / 1 | 29 | 40 | 275 | 8/1MP-602 | 3, 4, 5 |
| AH-2-12B | TRANE MITSUBISHI ELECTRIC | TPVFYP036AM141A | CLASSROOM 13 | 36.0 | 41.0 | 930 | 3 / 8" | 5 / 8" | 18.5 | 208 / 1 | 4.13 | 15 | 145 | 7/1MP-602 | 1, 2, 8, 9 |
| HP-2-12B | TRANE MITSUBISHI ELECTRIC | NTXMSM36A142BA | ROOF | | | — | | | | 208 / 1 | 29 | 40 | 275 | 8/1MP-602 | 3, 4, 5 |
| AH-2-12C | TRANE MITSUBISHI ELECTRIC | TPVFYP048AM141A | CLASSROOM 14 | 48.0 | 54.0 | 1190 | 3 / 8" | 5 / 8" | 16.0 | 208 / 1 | 5.63 | 15 | 175 | 1/1MP-601 | 1, 2, 8, 9 |
| HP-2-12C | TRANE MITSUBISHI ELECTRIC | NTXMSM48A182BA | ROOF | | | — | | | | 208 / 1 | 29 | 40 | 275 | 8/1MP-602 | 3, 4, 5 |
| FC-2-213 | TRANE MITSUBISHI ELECTRIC | TPKA0A0121LA10A | OFFICE 213 | 12.0 | 14.0 | 385 | 1 / 4" | 1 / 2" | 21.3 | — | — | — | 30 | 9/1MP-602 | 1, 2, 6, 7, 9 |
| HP-2-213 | TRANE MITSUBISHI ELECTRIC | TRUZA0121KA70NA | ROOF | | | — | | | | 208 / 1 | 11 | 28 | 95 | 8/1MP-602 | 3, 4, 5 |
| FC-2-204 | TRANE MITSUBISHI ELECTRIC | TPKA0A0121LA10A | OFFICE 204 | 12.0 | 14.0 | 385 | 1 / 4" | 1 / 2" | 21.3 | — | — | — | 30 | 9/1MP-602 | 1, 2, 6, 7, 9 |
| HP-2-204 | TRANE MITSUBISHI ELECTRIC | TRUZA0121KA70NA | ROOF | | | — | | | | 208 / 1 | 11 | 28 | 95 | 8/1MP-602 | 3, 4, 5 |
| FC-MU-12 | TRANE MITSUBISHI ELECTRIC | TPKA0A0361KA80A | MU12 | 36.0 | 38.0 | 920 | 3 / 8" | 5 / 8" | 19.4 | — | — | — | 50 | 9/1MP-602 | 1, 2, 6, 7, 10 |
| HP-MU-12 | TRANE MITSUBISHI ELECTRIC | TRUZA0361KA70NA | ROOF | | | — | | | | 208 / 1 | 25 | 31 | 215 | 8/1MP-602 | 3, 4, 5 |

1. FURNISHED W/ TAR-40MAAU DELUXE MA REMOTE CONTROLLER. SEE 1MP-501.
2. FURNISHED W/ CONDENSATE PUMP.
3. MOUNT ON ROOF SLEEPERS.
4. OUTDOOR CONDENSING UNITS TO BE LOCATED WITH PROPER CLEARANCES AND MUST PREVENT RE-CIRCULATION OF AIR. COORDINATE WITH MANUFACTURER AND ARCHITECT.
5. CONTRACTOR SHALL PROVIDE W/ REFRIGERATION LINE SET. VERIFY REFRIGERANT PIPE SIZES AND ROUTING LIMITATIONS WITH MANUFACTURER PRIOR TO INSTALLATION.
6. INDOOR UNIT POWERED BY OUTDOOR UNIT.
7. PROVIDE W/ WALL MOUNTING BRACKET.
8. PROVIDE W/ TOOL ESS FILTER RACK FOR 2" MERV 13 FILTERS.
9. FURNISHED W/ BUILDING 2 TRANE- MITSUBISHI BUILDING SYSTEM CONTROLLER TW-50A FOR CONNECTION TO SCHOOL CONTROL SYSTEM & SCHEDULE FOR OCCUPIED HOURS, SEE 1MP-501.
10. FURNISHED W/ PAC-UKPRC001-CN-1 BACNET ADAPTER FOR CONNECTION TO SCHOOL CONTROL SYSTEM & SCHEDULE FOR OCCUPIED HOURS, SEE 1MP-501.

AGENCY APPROVAL DSA# XX-XXXXXXXXX


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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEYIN SERT LYNG — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## SCHEDULES - MECHANICAL

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
# 1MP-002

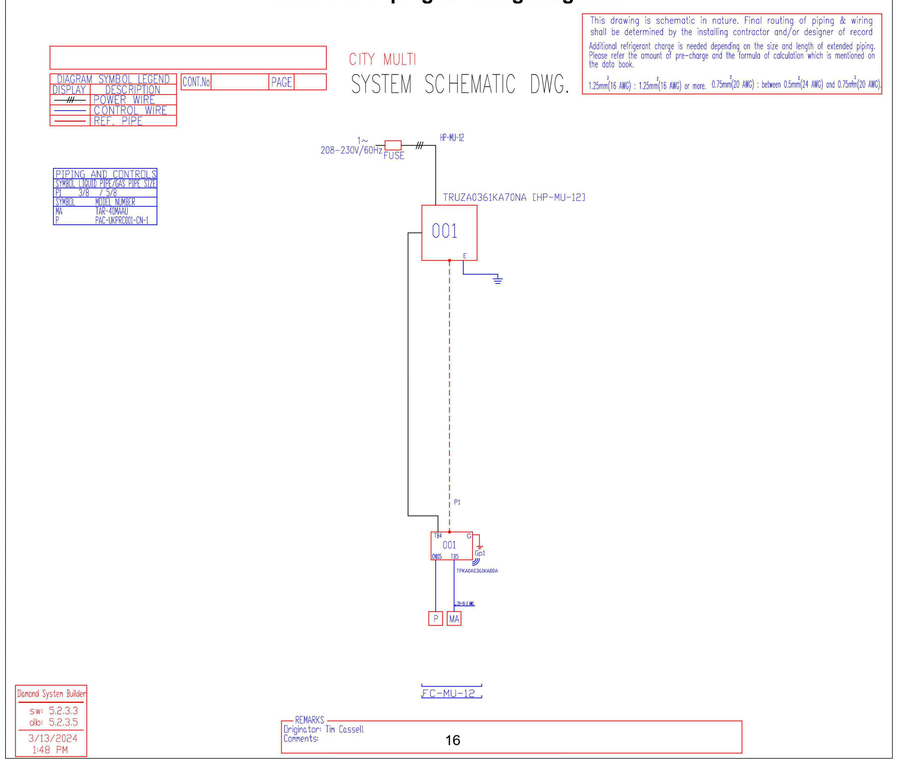
DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

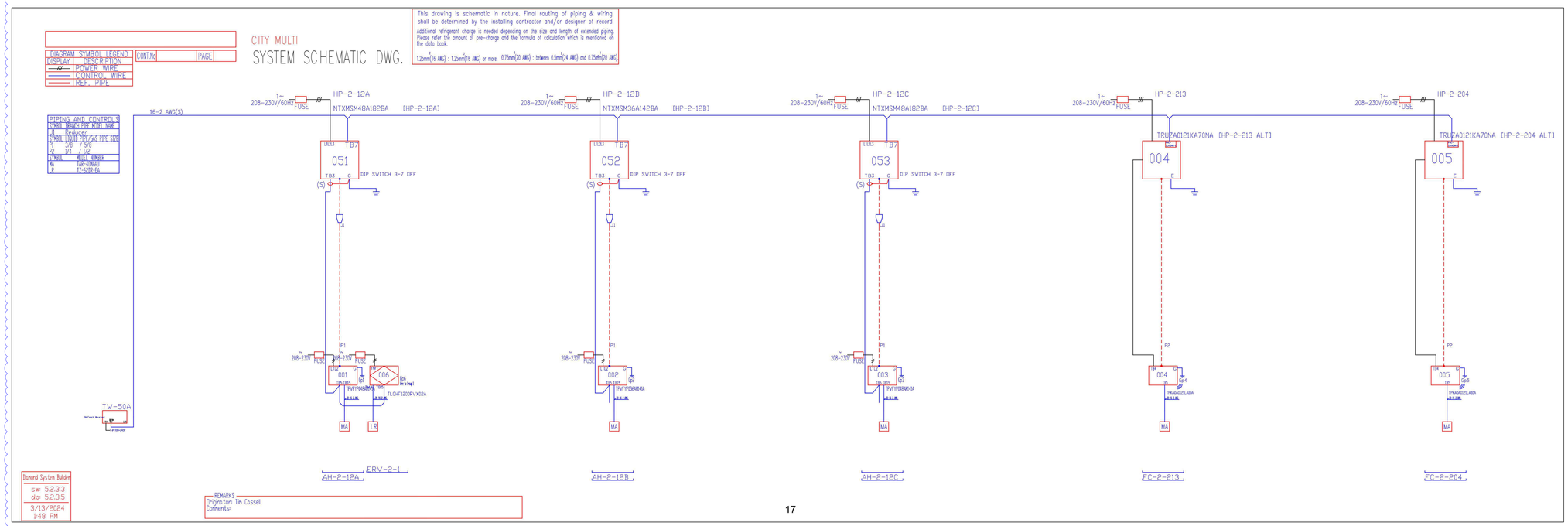
DATE PLOTTED: 4/17/2024 9:14 PM

# AutoCAD Piping & Wiring Diagrams




1 1MP-003 **BLDG MU HP-MU-12 SYSTEM SCHEMATIC**

SCALE: NTS




2 1MP-003 **BLDG 2 HP-2-12A, B ,C, 204, 213 SYSTEM SCHEMATIC**

SCALE: NTS

## PLUMBING FIXTURES SCHEDULE

| ITEM | DESCRIPTION | MANUFACTURER | MODEL NO. | ROUGH-IN CONNECTIONS (IN.) | | | | | FLUSH VALVE | SEAT | FAUCET | CARRIER | DRAIN ASSEMBLY | P-TRAP | STOP / SUPPLY | INSULATION KIT | ADA (Y/N) | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | TRAP | W | V | CW | HW | | | | | | | | | | |
| CS-1 | CLASSROOM SINK | ELKAY | DRKADQ222065-2LM (6½" DEEP) | 1-1/2" | 2" | 1-1/2" | 1/2" | — | — | — | MOEN 8103 (W/ 1.5 GPM AERATOR) | — | ELKAY LKAD35 | DEARBORN BRASS 710-1 | BRASSCRAFT SCR19X C | TRUEBRO LAV GUARD 2 | Y | 4 |
| DF-1 | DRINKING FOUNTAIN | HAWS | 1117L | 1-1/2" | 2" | 1-1/2" | 1/2" | — | — | — | — | HAWS 6717 | — | HAWS SUPPLIED W/ DF | BRASSCRAFT SCR19X C | — | Y | 5, 6 |
| FD-1 | FLOOR DRAIN | JR SMITH | 2005Y | 2" | 2" | 1½" | — | — | — | — | — | — | — | — | — | — | — | 7 |
| L-1 | WALL HUNG LAVATORY | AMERICAN STANDARD | LUCERNE 0356.421 | 1-1/2" | 2" | 1-1/2" | 1/2" | — | — | — | MOEN 8884 | JAY R. SMITH 0722 | MCGUIRE 155WC | DEARBORN BRASS 710-1 | BRASSCRAFT SCR19X C | TRUEBRO LAV GUARD 2 | Y | 1, 2, 5, 6 |
| L-2 | WALL HUNG LAVATORY | AMERICAN STANDARD | LUCERNE 0356.421 | 1-1/2" | 2" | 1-1/2" | 1/2" | 1/2" | — | — | MOEN 8884 W/ 104451 TMV | JAY R. SMITH 0722 | MCGUIRE 155WC | DEARBORN BRASS 710-1 | BRASSCRAFT SCR19X C | TRUEBRO LAV GUARD 2 | Y | 1, 2, 5, 6 |
| S-1 | SINGLE COMPARTMENT SINK | ELKAY | LRAD221965 (6½" DEEP) | 1-1/2" | 2" | 1-1/2" | 1/2" | 1/2" | — | — | MOEN 8278 | — | ELKAY LKAD35 | DEARBORN BRASS 710-1 | BRASSCRAFT SCR19X C | TRUEBRO LAV GUARD 2 | Y | 5, 6 |
| S-2 | SINGLE COMPARTMENT SINK | ELKAY | LRAD221965 (6½" DEEP) | 1-1/2" | 2" | 1-1/2" | 1/2" | — | — | — | MOEN 8103 (W/ 1.5 GPM AERATOR) | — | ELKAY LKAD35 | DEARBORN BRASS 710-1 | BRASSCRAFT SCR19X C | TRUEBRO LAV GUARD 2 | Y | 5, 6 |
| TP-1 | TRAP PRIMER | PRECISION PLUMBING PRODUCTS | P2-500 | — | — | — | 1/2" | — | — | — | — | — | — | — | — | — | — | |
| WC-1 | FLOOR MOUNT WATER CLOSET (ADA HT.) | AMERICAN STANDARD | MADERA FLOWISE 3461.001 | INT | 4" | 2" | 1-1/2" | — | MOEN 8310M128 (1.28 GPF) | BEMIS 1955SSCT | — | — | — | — | — | — | Y | 5, 6 |
| WC-2 | FLOOR MOUNT WATER CLOSET (STD. / ELEM. HT.) | AMERICAN STANDARD | MADERA FLOWISE 3451.001 | INT | 4" | 2" | 1-1/2" | — | MOEN 8310M128 (1.28 GPF) | BEMIS 1955SSCT | — | — | — | — | — | — | N | 5, 6 |
| WC-3 | FLOOR MOUNT WATER CLOSET (KINDER. HT.) | AMERICAN STANDARD | BABY DEVORO FLOWISE 2282.001 | INT | 4" | 2" | 1-1/2" | — | MOEN 8310M128 (1.28 GPF) | AMERICAN STANDARD 5001C.055 | — | — | — | — | — | — | N | 5, 6 |

1. 0.5 GPM ECONO-FLOW VANDAL PROOF NON-AERATING WATER SUPPLY.
2. PROVIDE WITH LOOSE KEY AND B3-16A SUPPLY.
3. DURA-COATED CAST IRON BODY, TYPE B POLISHED NICKEL BRONZE WITH 1/2" TRAP PRIMER CONNECTION.
4. PROVIDE WITH ELKAY FAUCET LK1141A BUBBLER.
5. FOR RESTROOM PLUMBING FIXTURE HEIGHTS REFER TO ARCHITECT DETAILS.
6. FOR ADA FIXTURE LOCATIONS SEE ARCHITECT PLANS.
7. PROVIDE W/ TRAP PRIMER CONNECTIONS & NICKEL BRONZE FINISH

## WATER HEATERS SCHEDULE

| TAG | TYPE | MANUFACTURER | MODEL NO. | LOCATION | CAPACITY GAL | RECOVERY GPH | ELECTRICAL | | WEIGHT LBS | MOUNTING DETAIL | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | KW | V / PH | | | |
| WH-5-506 | ELECTRIC TANKLESS POINT OF USE | CHRONOMITE | CM-15L/208 | RESTROOM 506 | — | — | 3.1 | 208 / 1 | 5 | — | 1, 2 |
| WH-5-516 | ELECTRIC TANKLESS POINT OF USE | CHRONOMITE | CM-15L/208 | RESTROOM 516 | — | — | 3.1 | 208 / 1 | 5 | — | 1, 2 |
| WH-5-522 | ELECTRIC TANKLESS POINT OF USE | CHRONOMITE | CM-15L/208 | PRINCIPAL 522 | — | — | 3.1 | 208 / 1 | 5 | — | 1, 2 |
| WH-5-525 | ELECTRIC TANKLESS POINT OF USE | CHRONOMITE | CM-15L/208 | RESTROOM 525 | — | — | 3.1 | 208 / 1 | 5 | — | 1, 2 |

1. PROVIDE WITH ALL FAUCET CONTROLS, WATER CONNECTIONS, AND FITTINGS. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE WITH FIELD ADJUSTABLE TEMPERATURE. SET TO 105°F.

AGENCY APPROVAL DSA# XX-XXXXXXXXX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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEYIN SERT LING — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
**SCHEDULES & SCHEMATICS - MECH. & PLUMBING**
INCREMENT: INC.1

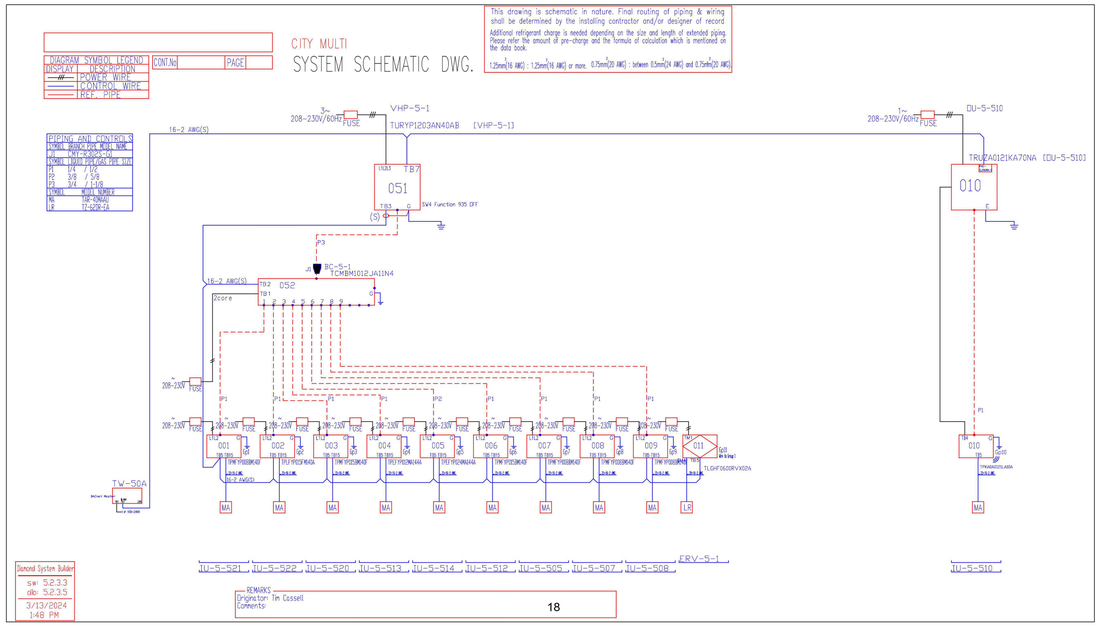
DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
**1MP-003**
DATE: APRIL 17, 2024

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

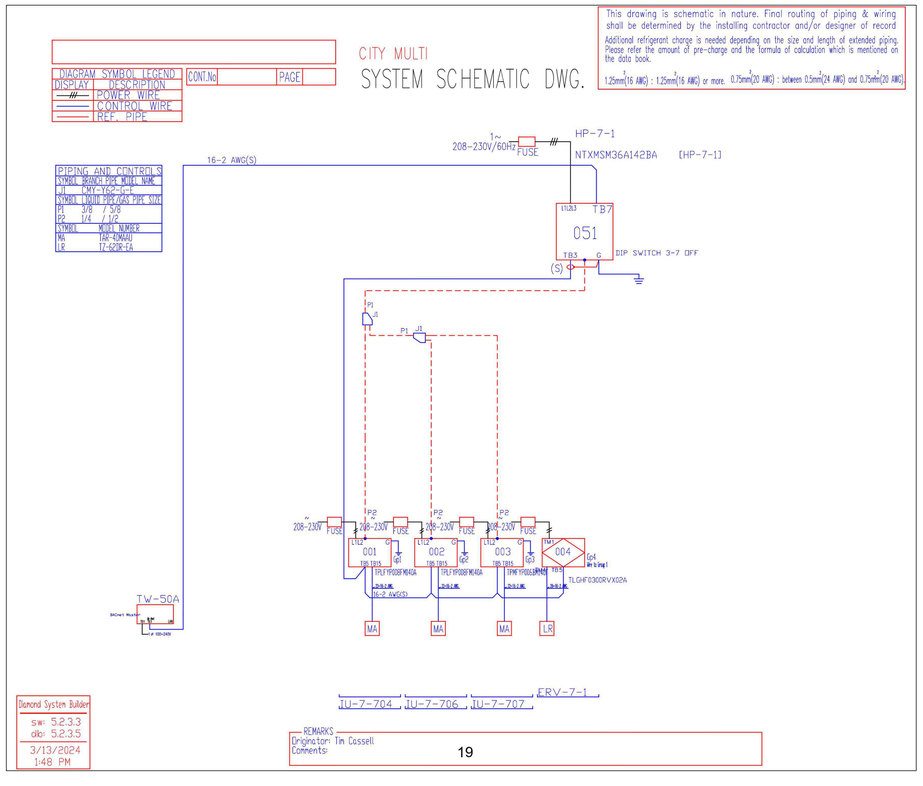
DATE PLOTTED: 4/17/2024 9:15 PM

CONSTRUCTION DOCUMENTS




1 1MP-004 **BLDG 5 VHP-5-1 VRF SYSTEM & HP-5-510 SCHEMATIC**

SCALE: NTS




2 1MP-003 **BLDG 7 HP-7-1 SYSTEM SCHEMATIC**

SCALE: NTS

AGENCY APPROVAL DSA# XX-XXXXXXXXX


196

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CEG JOB NO: 23146

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TEL (916) 359-4000


PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MEFFIN SERT LIVING
No. M31059
EXP. JUNE 30, 2025
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

## SCHEMATICS - MECHANICAL

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.

# 1MP-004

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS


FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg
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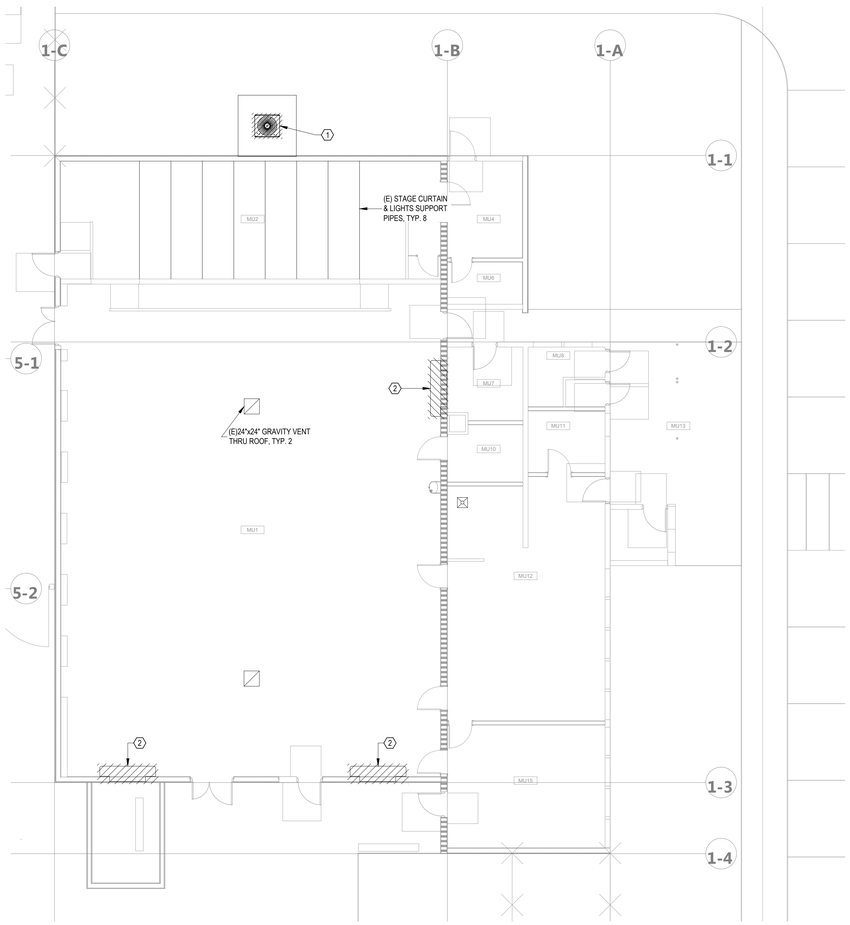
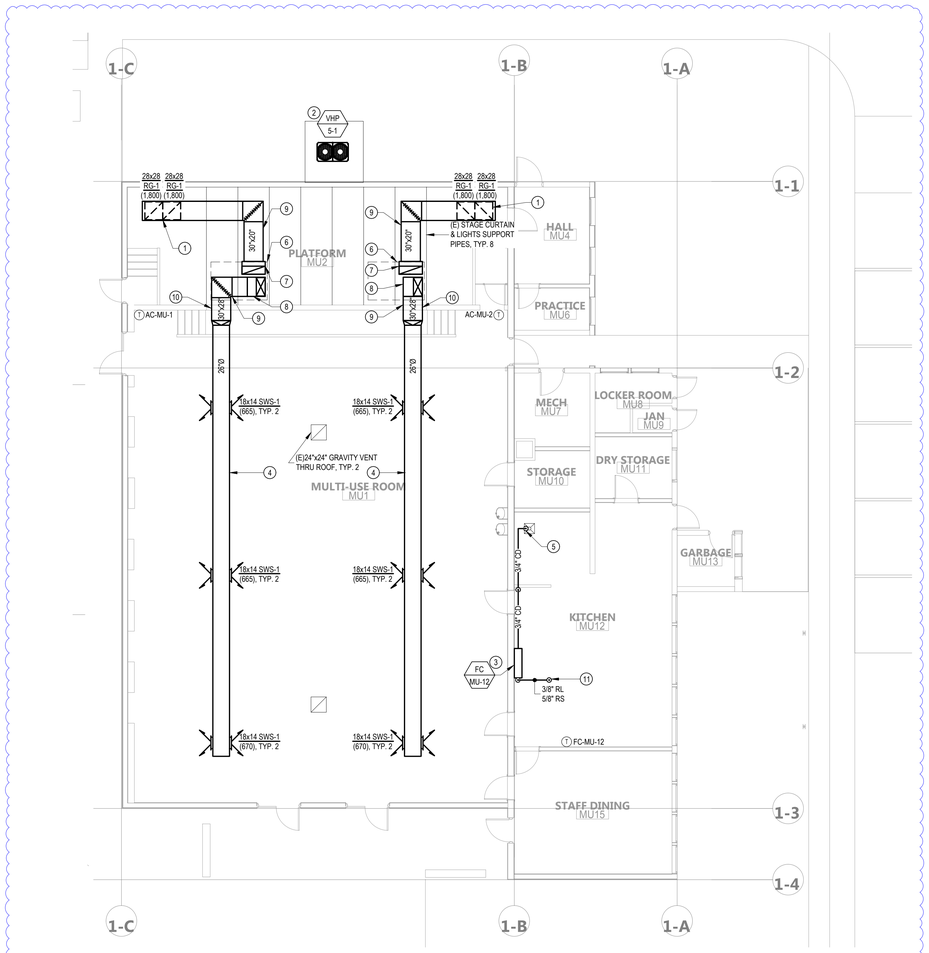
B




1 1MP-201 BLDG 1 MPR FLOOR PLANS - DEMO - MECHANICAL & PLUMBING

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

NORTH




2 1MP-201 BLDGS 1 MPR FLOOR PLANS - NEW - MECHANICAL & PLUMBING

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

NORTH

### (#) NEW SHEET NOTES CONTINUED

10. SEE ARCHITECT / STRUCTURAL DRAWINGS TO DUCT PENETRATIONS THRU (E) STAGE UPPER CURTAIN WALL.
11. RS/RL RISER THRU ROOF TO HP ON ROOF, SEE 2/1MP-301 ROOF PLAN.

### (#) NEW SHEET NOTES

1. INSTALL RETURN DUCT UP HIGH W/ RETURN REGISTERS MOUNTED ON THE BOTTOM OF THE DUCT.
2. INSTALL VRF HEAT PUMP UNIT ON (E) HOUSE KEEPING PAD W/ REFRIGERANT LINE SET TO ADMIN BUILDING 5 BRANCH CONTROLLER. SEE ROOF PLAN 2/1MP-301 FOR REFRIGERANT PIPING TO BUILDING 5.
3. SPLIT HEAT PUMP SYSTEM W/ HEAT PUMP ON ROOF & FAN COIL MOUNTED TO WALL.
4. EXPOSED DUCTS SUPPORTED UP HIGH.
5. CD SLOPED TO (E) FLOOR SINK W/ MIN. 1" AIR GAP, FIELD VERIFY FLOOR SINK LOCATION.
6. LOCATE RTU FOR DUCT DROP TO AVOID CONFLICTS WITH (E) STAGE SUPPORT PIPES @ STAGE CEILING
7. 36"x20" RETURN UP & TRANSITION TO 36⅝" x 12⅝" RTU RETURN CONNECTION @ ROOF.
8. 30"x28" SUPPLY UP & TRANSITION TO 28⅝" x 14" RTU SUPPLY CONNECTION @ ROOF.
9. DUCTWORK ROUTING SHOWN IS NOT EXACT. PRIOR TO CONSTRUCTION FIELD VERIFY (E) CONFLICTS WITH DUCT ROUTING INCLUDING CURTAINS, LIGHTING, CONDUITS, ECT & ROUTE DUCTWORK TO AVOIDS THESE CONFLICTS WHERE POSSIBLE. NOTIFY ARCHITECT / ENGINEER OF CONFLICTS THAT ARE NOT AVOIDABLE AND CHANGES FROM THE DRAWINGS THAT NEED TO BE DONE.

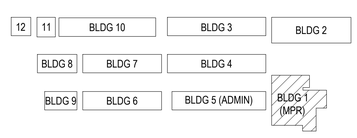
### (#) DEMOLITION SHEET NOTES

1. REMOVE (E) VRF HEAT PUMP UNIT & REFRIGERANT PIPING TO BRANCH CONTROLLER SERVING ADMIN OFFICE..
2. REMOVE (E) UNIT VENTILATOR HEATER AND CAP (E) HYDRONIC PIPING IN WALL. FOR WALL PATCHING / FINISH SEE ARCHITECT DRAWINGS.

### GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.
6. FOR DUCT SUPPORT SEE DETAILS 7/1MP-601 & 3/1MP-603.

KEY PLAN




AGENCY APPROVAL DSA# XX-XXXXXXXXX

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PROFESSIONAL STAMP

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
**BLDG 1 MPR - DEMO & NEW FLOOR PLANS**
INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
**1MP-201**
DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

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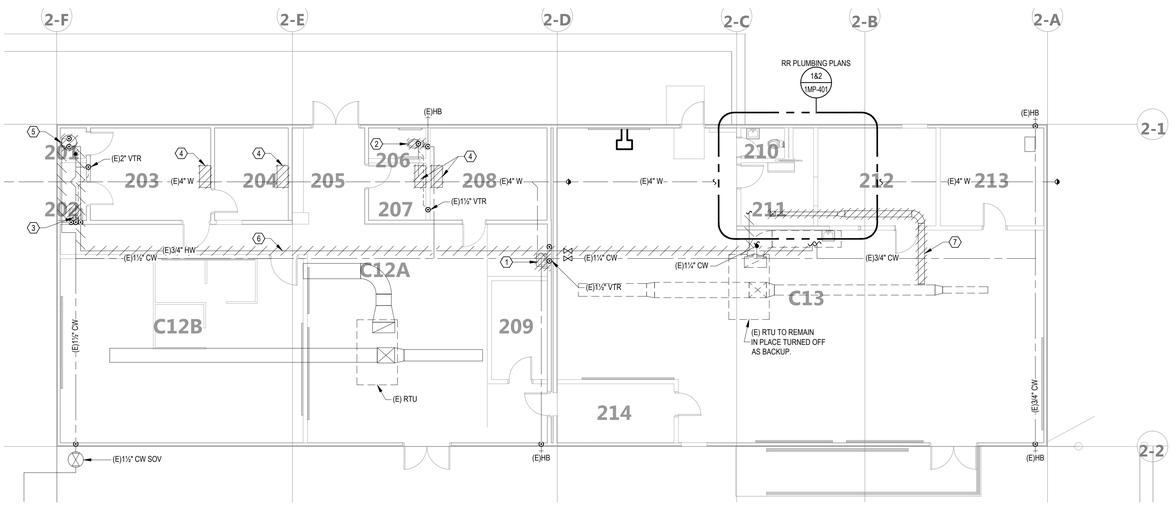
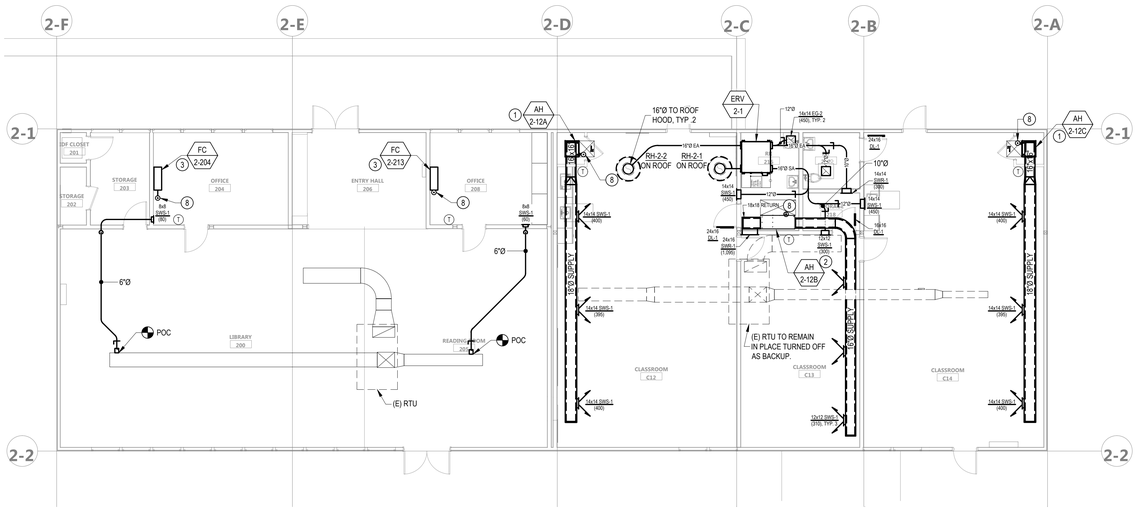



1 / 1MP-202 BLDG 2 FLOOR PLAN - DEMO - MECHANICAL & PLUMBING

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

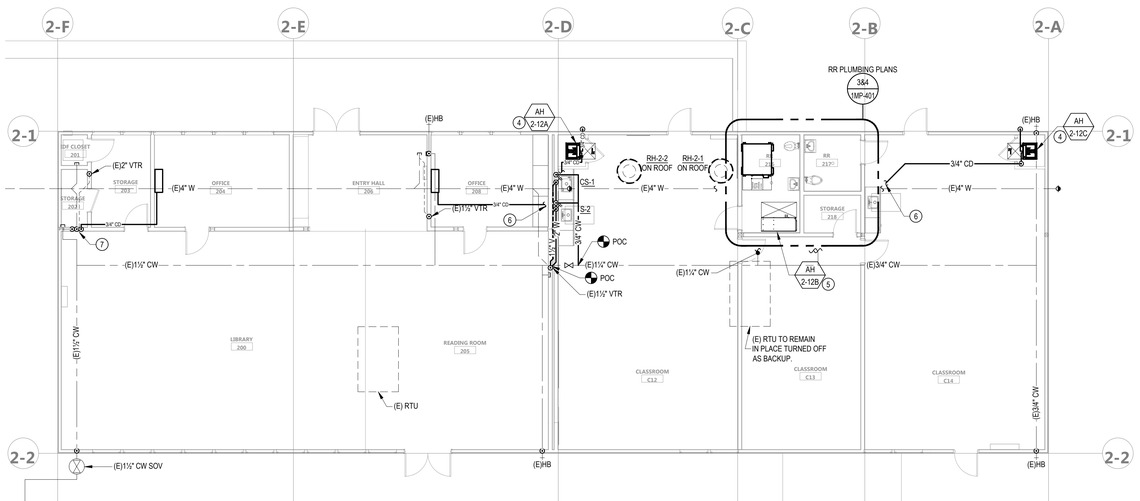
NORTH




2 / 1MP-202 BLDG 2 FLOOR PLAN - NEW - MECHANICAL

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

NORTH




3 / 1MP-202 BLDG 2 FLOOR PLAN - NEW - PLUMBING

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

NORTH

## GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.

B 6. FOR DUCT SUPPORT SEE DETAILS 7/1MP-601 & 3/1MP-603.

20. SAW CUT AND TRENCH THE EXISTING RESTROOM FLOORS WITHIN THE WORKSPACE AS REQUIRED TO INSTALL THE NEW WASTE, VENT, TRAP PRIMER LINES BELOW THE SLABS BACK TO THE POC'S. CHIP AND PATCH BACK (E) CONC. CURBS AS REQUIRED FOR (N) WASTE / VENT / TP CONNECTIONS IN (E) WALLS W/ CURBS. TRENCHING SHALL NOT DAMAGE ANY STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO THE SPREAD FOOTINGS, GRADE BEAMS, WALLS, ECT. TRENCHING SHALL NOT UNDERMINE (E) FOOTINGS. REFER TO ARCHITECT PLANS & DETAILS FOR FLOOR PATCHING & REPAIR WORK.
21. EXISTING SLAB SHALL BE DEMOLISHED AS REQUIRED FOR NEW WORK.
22. PROVIDE FLOOR CLEAN OUTS & WALL CLEANOUTS AS NEEDED FOR NEW PLUMBING FIXTURE LAYOUTS.
23. FOR VTR SEE DETAIL 1/1MP-602.
24. FOR FLOOR CLEAN OUTS SEE DETAIL 4/1MP-602.
25. FOR FLOOR DRAINS SEE DETAIL 12/1MP-602.
26. FOR UTILITY PIPING THRU (E) FOOTERS, REFER TO STRUCTURAL DETAILS INCLUDING 6/1S-501 & 4/1S-502. PROVIDE PIPE SLEEVES SIZED AS REQUIRED TO FIT UTILITY PIPE WITH IN IT.
27. FOR CD CONNECTIONS TO AIR HANDLERS, SEE DETAIL 5/1MP-602.

## (#) DEMOLITION SHEET NOTES

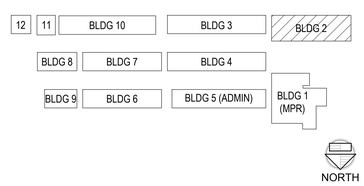
1. REMOVE (E) SINK & CAP (E) UTILITIES IN WALL.
2. REMOVE (E) WC AND CAP (E) UTILIES BELOW SLAB AND IN WALL.
3. REMOVE (E) UTILITY SINK AND CAP (E) UTILITIES IN WALL FOR NEW INDIRECT DRAIN CONNECTION. SEE NEW PLUMBING FLOOR PLAN FOR INDIRECT DRAIN NOTE.
4. REMOVE (E) SPLIT SYSTEM FAN COIL, CONDENSING UNIT, REFRIGERANT LINES, & CONTROLS COMPLETE.
5. REMOVE (E) WATER HEATER, WATER PIPING, GAS PIPING, & FLUE COMPLETE. CAP (E) WATER & GAS PIPING IN WALL OR IN CEILING SPACE. SEE ARCHITECT DRAWINGS FOR PATCHING FLUE PENETRATION @ ROOF.
6. REMOVE (E) HW LINE & BRANCH LINES COMPLETE. FOR (E) WALLS W/ (E) GYP. TO REMAIN, DRAIN, CAP, & ABANDON IN PLACE (E) UTILITY PIPES.
7. REMOVE (E) SD BRANCH & REGISTERS COMPLETE. CAP @ (E) SD MAIN.

## (#) NEW SHEET NOTES

1. INSTALL SPLIT HEAT PUMP SYSTEM W/ HEAT PUMP ON ROOF & AIR HANDLER IN ENCLOSURE.
2. INSTALL SPLIT HEAT PUMP SYSTEM W/ HEAT PUMP ON ROOF & AIR HANDLER HUNG IN CEILING SPACE
3. INSTALL SPLIT HEAT PUMP SYSTEM W/ HEAT PUMP ON ROOF & FAN COIL MOUNTED TO WALL.
4. 3/4" CD PRIMARY DRAIN SLOPED TO NEAREST SINK TAIL PIECE. 3/4" CD SECONDARY DRAIN THRU WALL & DAYLIGHT LOW ON WALL OUTSIDE.
5. 3/4" CD PRIMARY DRAIN SLOPED TO NEAREST SINK TAIL PIECE. 3/4" CD SECONDARY DRAIN THRU CEILING W/ ESCUTCHEON & DAYLIGHT HIGH IN RESTROOM.
6. 3/4" CD DRAIN PUMPED TO NEAREST SINK TAIL PIECE.
7. 3/4" CD PUMP TO INDIRECT DRAIN IN WALL ACCESS PANEL. PROVIDE INDIRECT DRAIN IN WALL UTILIZING THE (E) UTILITIES FROM THE REMOVED SINK, SEE DETAIL 3/1MP-603.

B 8. RS/RL RISER THRU ROOF TO HP ON ROOF, SEE 1MP-302 ROOF PLAN.

KEY PLAN

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEHTIN SERTTAS — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

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1936 Carlotta Dr. Concord
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# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

## BLDG 2 - DEMO & NEW FLOOR PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.

# 1MP-202

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

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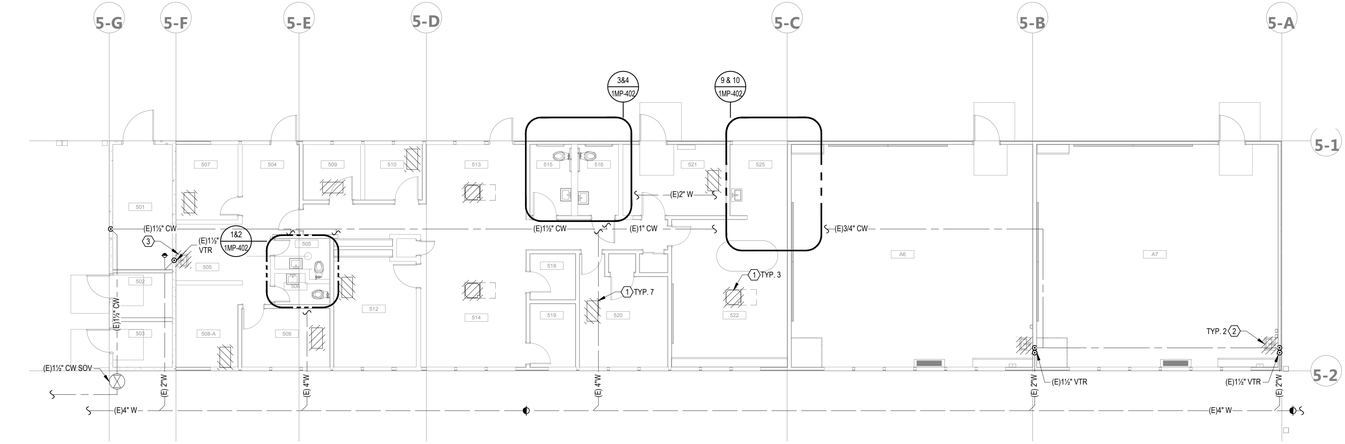
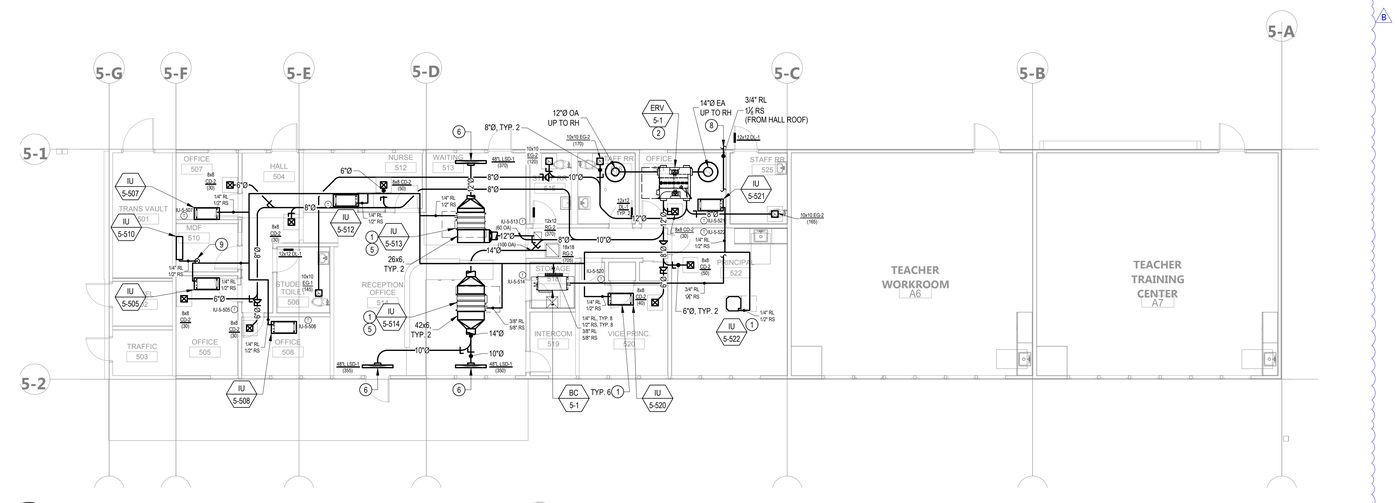



1 / 1MP-203 BLDG 5 FLOOR PLAN - DEMO - MECHANICAL & PLUMBING

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

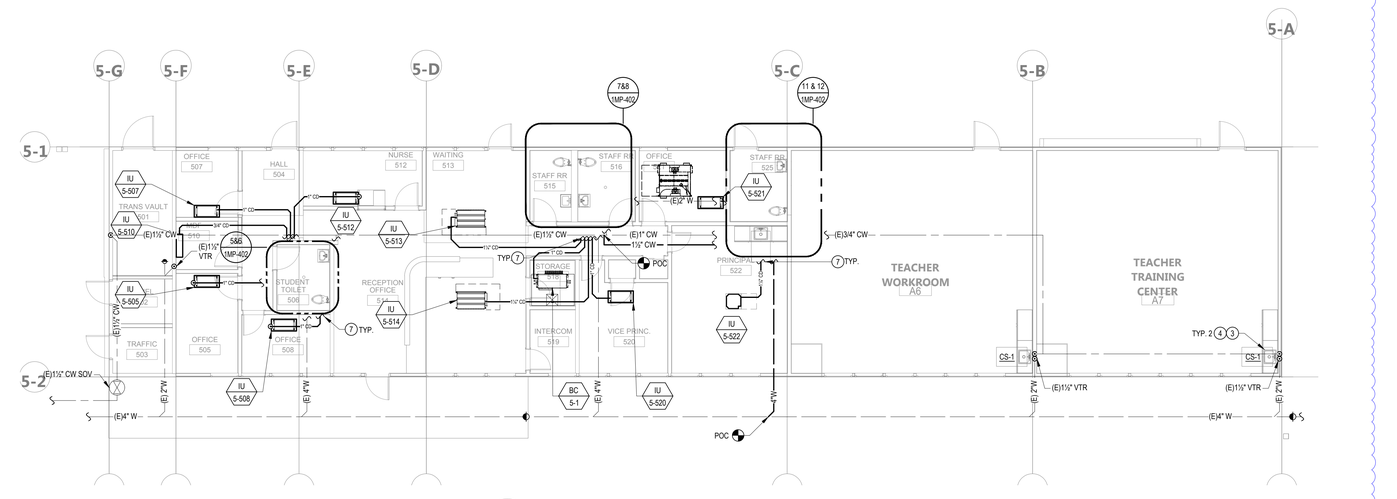
NORTH




2 / 1MP-203 BLDG 5 FLOOR PLAN - NEW - MECHANICAL

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

NORTH




3 / 1MP-203 BLDG 5 FLOOR PLAN - NEW - PLUMBING

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

NORTH

## GENERAL NOTES

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3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.
6. FOR DUCT SUPPORT SEE DETAILS 7/1MP-601 & 3/1MP-603.
20. SAW CUT AND TRENCH THE EXISTING RESTROOM FLOORS WITHIN THE WORKSPACE AS REQUIRED TO INSTALL THE NEW WASTE, VENT, TRAP PRIMER LINES BELOW THE SLABS BACK TO THE POC'S. CHIP AND PATCH BACK (E) CONC. CURBS AS REQUIRED FOR (N) WASTE / VENT / TP CONNECTIONS IN (E) WALLS W/ CURBS. TRENCHING SHALL NOT DAMAGE ANY STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO THE SPREAD FOOTINGS, GRADE BEAMS, WALLS, ECT. TRENCHING SHALL NOT UNDERMINE (E) FOOTINGS. REFER TO ARCHITECT PLANS & DETAILS FOR FLOOR PATCHING & REPAIR WORK.
21. EXISTING SLAB SHALL BE DEMOLISHED AS REQUIRED FOR NEW WORK.
22. PROVIDE FLOOR CLEAN OUTS & WALL CLEANOUTS AS NEEDED FOR NEW PLUMBING FIXTURE LAYOUTS.
23. FOR VTR SEE DETAIL 1/1MP-602.
24. FOR FLOOR CLEAN OUTS SEE DETAIL 4/1MP-602.
25. FOR FLOOR DRAINS SEE DETAIL 12/1MP-602.
26. FOR UTILITY PIPING THRU (E) FOOTERS, REFER TO STRUCTURAL DETAILS INCLUDING 6/1S-501 & 4/1S-502. PROVIDE PIPE SLEEVES SIZED AS REQUIRED TO FIT UTILITY PIPE WITH IN IT.
27. NOTE # NOT USED.

## (#) DEMOLITION SHEET NOTES

1. REMOVE COMPLETE (E) VRF INDOOR UNITS, CONTROLS, & REFRIGERANT PIPING TO BRANCH CONTROLLER.
2. REMOVE (E) SINK, PROTECT (E) UTILITIES IN WALL FOR CONNECTION TO NEW SINK.
3. REMOVE (E) SINK & CAP (E) UTILITIES IN WALL.

## (#) NEW SHEET NOTES

1. INSTALL CEILING VRF INDOOR UNIT W/ REFRIGERANT LINE SET TO BRANCH CONTROLLER.
2. INSTALL ERV-1 HUNG IN CEILING SPACE W/ DUCTWORK.
3. CONNECT SINK TO (E) PLUMBING CONNECTIONS, EXTEND PLUMBING AS REQUIRED.
4. CS-1 CLASSROOM SINKS SHALL HAVE NEW PIPES, TRAPS, & FITTINGS FROM THE WALL CONNECTIONS TO THE SINK.
5. INSTALL INDOOR UNIT ABOVE WOOD PANEL CEILING W/ ACCESS FOR SERVICE.
6. INSTALL LINEAR SLOT DIFFUSERS INTEGRATED W/ WOOD PANEL CEILINGS. COORDINATE INTEGRATION W/ WOOD PANEL CONTRACTOR / MANUFACTURER.
7. IU-5-# & BC-5-1 CD DRAINS SLOPED TO INDIRECT DRAIN COLLECTOR W/ TRAP PRIMER IN WALL ACCESS PANEL IN RESTROOMS, SEE DETAIL 11/1MP-602. SEE RESTROOM PLANS ON SHEET 1MP-402 FOR LOCATIONS.
8. RS/RL FROM VHP-5-1 ON HALL ROOF, SEE 2/1MP-301 ROOF PLAN FOR CONTINUATION.
9. RS/RL RISERS THRU ROOF TO OU ON ROOF, SEE 2/1MP-301 ROOF PLAN FOR CONTINUATION.

KEY PLAN

| | | | | |
|---|---|---|---|---|
| 12 | 11 | BLDG 10 | BLDG 3 | BLDG 2 |
| BLDG 8 | | BLDG 7 | BLDG 4 | |
| BLDG 9 | | BLDG 6 | BLDG 5 (ADMIN) | BLDG 1 (MPR) |

NORTH

AGENCY APPROVAL DSA# XX-XXXXXXXXX


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TECHNOLOGY ENGINEER
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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEIN SERTTUNG — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## BLDG 5 - DEMO & NEW FLOOR PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

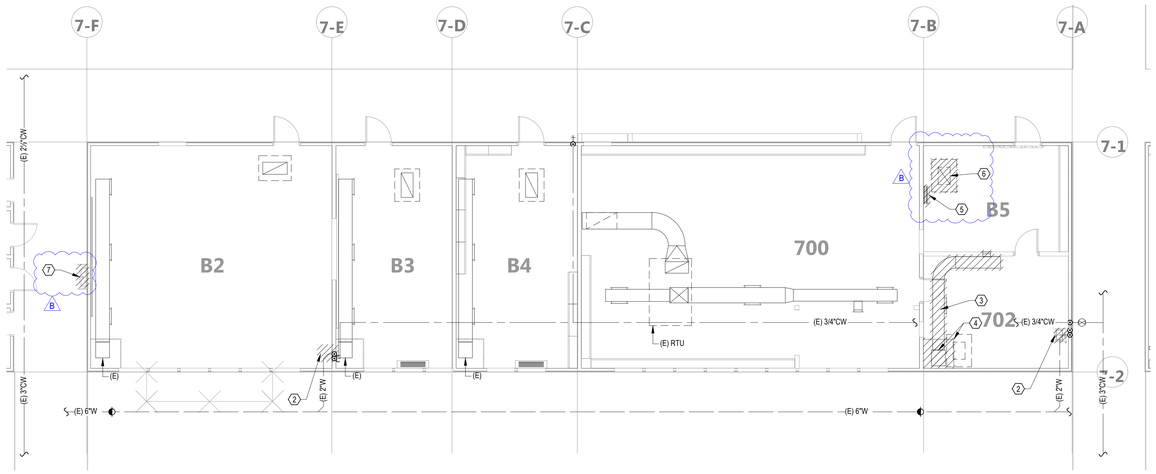
SHEET NO.
# 1MP-203

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

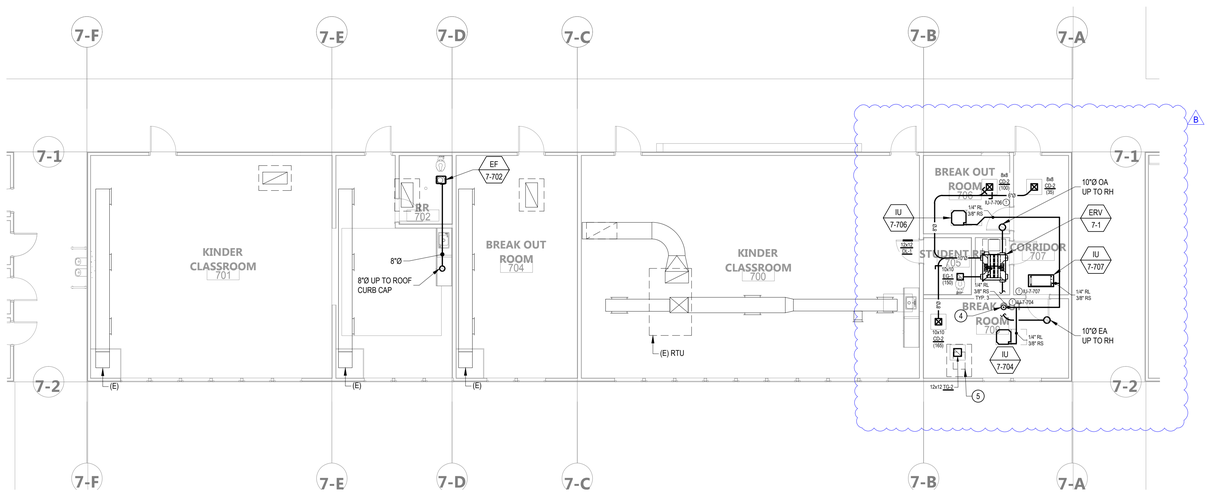
DATE PLOTTED: 4/17/2024 9:15 PM




1 / 1MP-204 BLDG 7 FLOOR PLAN - DEMO - MECHANICAL & PLUMBING

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

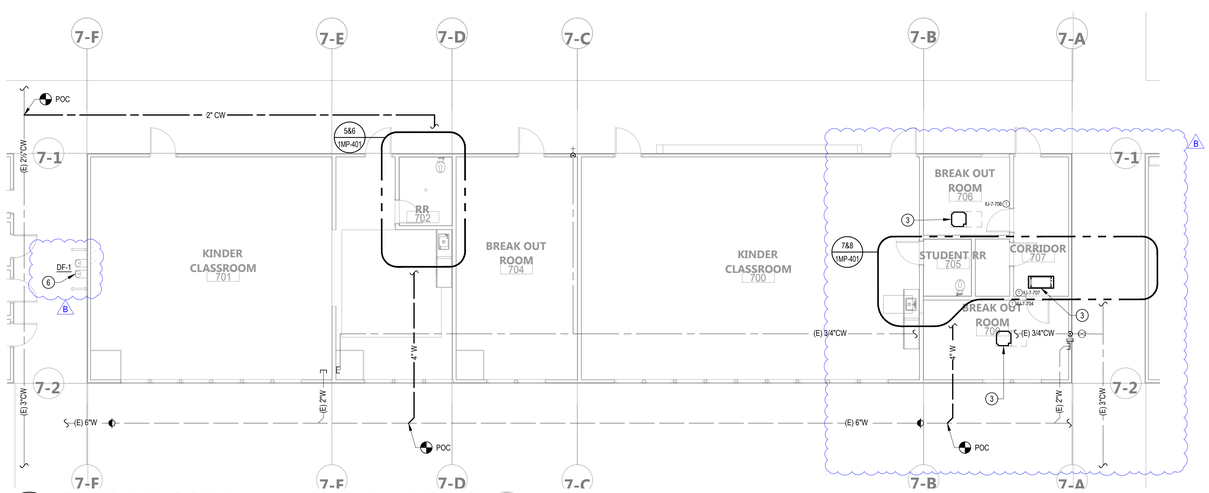
NORTH




2 / 1MP-204 BLDG 7 FLOOR PLAN - NEW - MECHANICAL

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

NORTH




3 / 1MP-204 BLDG 7 FLOOR PLAN - NEW - PLUMBING

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

NORTH

## GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.
6. FOR DUCT SUPPORT SEE DETAILS 7/1MP-601 & 3/1MP-603.
20. SAW CUT AND TRENCH THE EXISTING RESTROOM FLOORS WITHIN THE WORKSPACE AS REQUIRED TO INSTALL THE NEW WASTE, VENT, TRAP PRIMER LINES BELOW THE SLABS BACK TO THE POC'S. CHIP AND PATCH BACK (E) CONC. CURBS AS REQUIRED FOR (N) WASTE / VENT / TP CONNECTIONS IN (E) WALLS W/ CURBS. TRENCHING SHALL NOT DAMAGE ANY STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO THE SPREAD FOOTINGS, GRADE BEAMS, WALLS, ECT. TRENCHING SHALL NOT UNDERMINE (E) FOOTINGS. REFER TO ARCHITECT PLANS & DETAILS FOR FLOOR PATCHING & REPAIR WORK.
21. EXISTING SLAB SHALL BE DEMOLISHED AS REQUIRED FOR NEW WORK.
22. PROVIDE FLOOR CLEAN OUTS & WALL CLEANOUTS AS NEEDED FOR NEW PLUMBING FIXTURE LAYOUTS.
23. FOR VTR SEE DETAIL 1/1MP-602.
24. FOR FLOOR CLEAN OUTS SEE DETAIL 4/1MP-602.
25. FOR FLOOR DRAINS SEE DETAIL 12/1MP-602.
26. FOR UTILITY PIPING THRU (E) FOOTERS, REFER TO STRUCTURAL DETAILS INCLUDING 6/1S-501 & 4/1S-502. PROVIDE PIPE SLEEVES SIZED AS REQUIRED TO FIT UTILITY PIPE WITH IN IT.
27. NOTE # NOT USED.

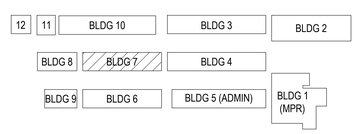
## (#) DEMOLITION SHEET NOTES

1. NOTE # NOT USED.
2. REMOVE (E) SINK & CAP (E) UTILITIES IN WALL.
3. REMOVE (E) SUPPLY DUCTWORK & REGISTERS COMPLETE.
4. REMOVE (E) FURNACE & ENCLOSURE COMPLETE.
5. REMOVE (E) WALL HEATER & CONTROLS COMPLETE.
6. REMOVE (E) ROOF HOOD / REGISTERS COMPLETE.
7. REMOVE (E) DRINKING FOUNTAIN COMPLETE, PROTECT (E) UTILITIES IN WALL FOR CONNECTION TO REPLACEMENT DRINKING FOUNTAIN.

## (#) NEW SHEET NOTES

1. NOTE # NOT USED.
2. NOTE # NOT USED.
3. INSTALL IU-7-# CD DRAINS SLOPED TO NEAREST SINK TAIL PIECE.
4. RS/RL RISERS THRU ROOF TO HP ON ROOF, SEE 2/1MP-303 ROOF PLAN FOR CONTINUATION.
5. (E) ROOF HOOD. ADD LOW PRESSURE DROP BACK DRAFT DAMPER, FIELD VERIFY SIZE.
6. CONNECT DRINKING FOUNTAIN TO (E) PLUMBING CONNECTIONS, EXTEND PLUMBING AS REQUIRED.

KEY PLAN




NORTH

AGENCY APPROVAL DSA# XX-XXXXXXXXX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PROFESSIONAL STAMP




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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

## BLDGS 7 - DEMO & NEW FLOOR PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.

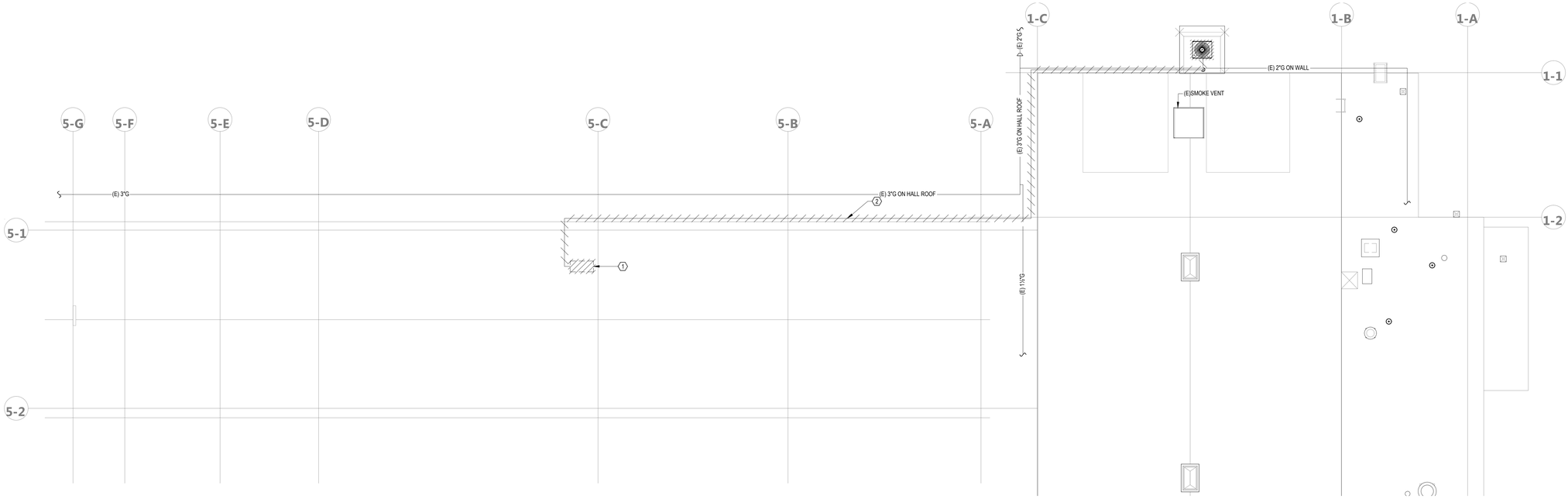
# 1MP-204

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

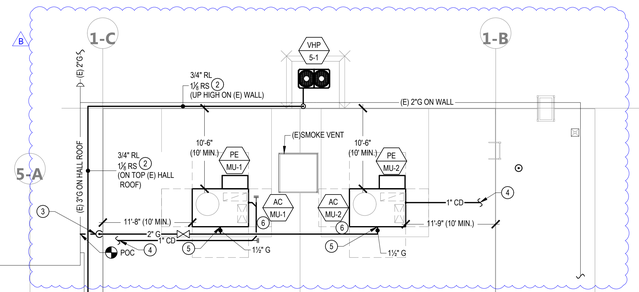
DATE PLOTTED: 4/17/2024 9:16 PM

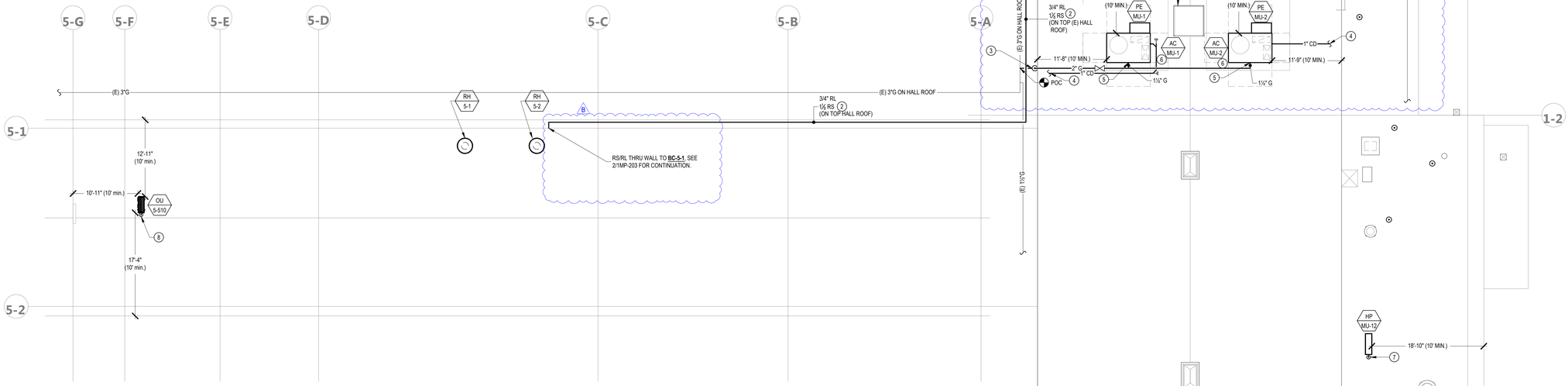



1 1MP-301 BLDGS 1 & 5 ADMIN ROOF PLAN - DEMO - MECHANICAL & PLUMBING

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

NORTH



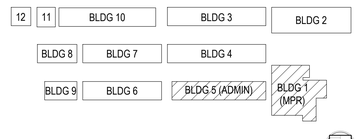




2 1MP-301 BLDGS 1 & 5 ADMIN ROOF PLAN - NEW - MECHANICAL & PLUMBING

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

NORTH

KEY PLAN




### (#) NEW SHEET NOTES

1. NOTE # NOT USED.
2. INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO BRANCH CONTROLLER INSIDE BUILDING. (E) PIPES SUPPORTS & SM COVERS TO BE REUSED. PROVIDE (N) SUPPORTS & COVERS AS REQUIRED FOR NEW ROUTING.
3. INSTALL GAS LINE TO ROOF FOR CONNECTIONS TO **AC-MU-1&2**.
4. INSTALL CD SLOPED TO (E) ROOF GUTTER W/ MIN. 1" AIR GAP, FIELD VERIFY GUTTER LOCATION.
5. FOR GAS & CD CONNECTION TO AC UNITS, SEE DETAIL 5/1MP-602.
6. AIR CONDITIONING UNITS MOUNTED TO ROOF CURBS, SEE DETAIL 11/1MP-601.
7. REFRIGERANT PIPES THRU ROOF TO INDOOR UNIT, SEE SHEET 2/1MP-201 FOR CONTINUATION. SEE DETAILS 1/1MP-602 & 5/1A-701 FOR PIPE PENETRATIONS THRU ROOF.
8. REFRIGERANT PIPES THRU ROOF TO INDOOR UNIT, SEE SHEET 2/1MP-203 FOR CONTINUATION. SEE DETAILS 1/1MP-602 & 5/1A-701 FOR PIPE PENETRATIONS THRU ROOF.

### (#) DEMOLITION SHEET NOTES

1. REMOVE (E) BRANCH CONTROLLER , REFRIGERANT PIPING ON ROOF, & (E) SUPPORT STAND COMPLETE.
2. REMOVE COMPLETE (E) REFRIGERANT PIPING FROM (E) HEAT PUMP TO (E) BRANCH CONTROLLER. (E) SUPPORTS & SM COVERS TO BE REUSED FOR (N) REFRIGERANT LINES.

### GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.

AGENCY APPROVAL DSA# XX-XXXXXXXXX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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MELISSA R. SMITH
No. M31059
EXP. JUNE 30, 2025
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## BLDGS 1 & 5 - DEMO & NEW ROOF PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

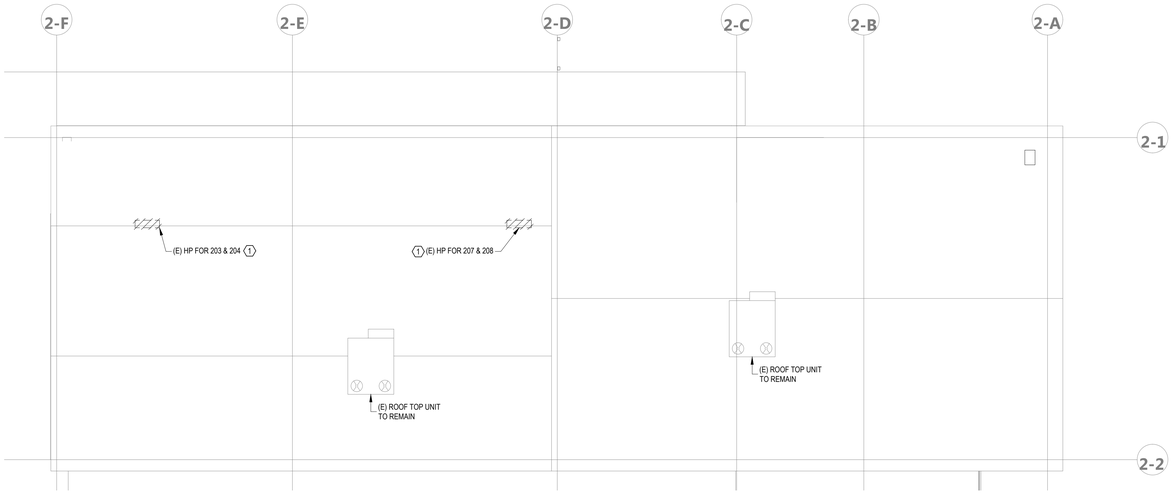
SHEET NO.
# 1MP-301

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

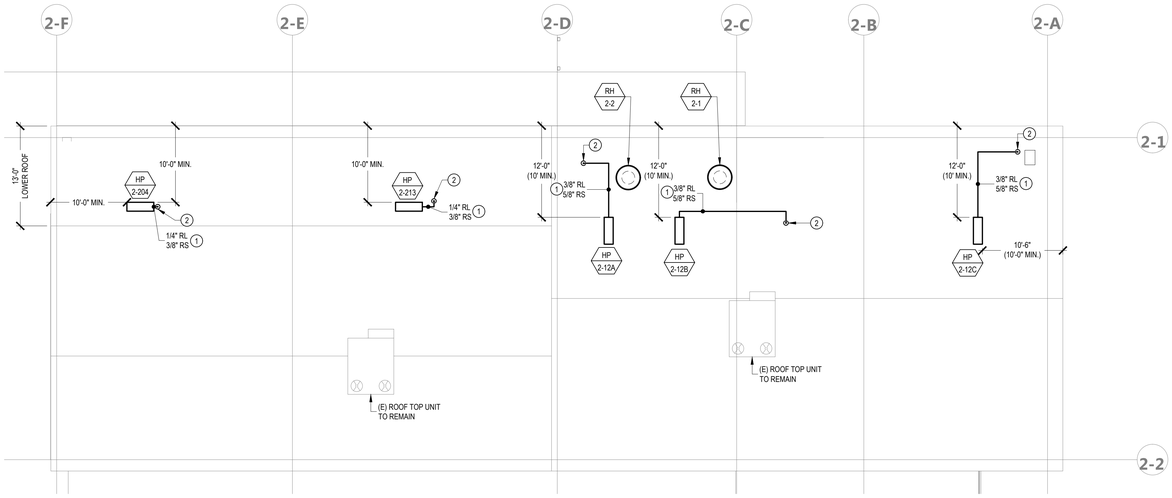
DATE PLOTTED: 4/17/2024 9:16 PM




## 1 / 1MP-202 BLDG 2 ROOF PLAN - DEMO - MECHANICAL & PLUMBING

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

NORTH




## 2 / 1MP-202 BLDG 2 ROOF PLAN - NEW - MECHANICAL

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

NORTH

### GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.

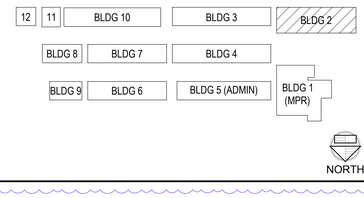
### (#) DEMOLITION SHEET NOTES

1. REMOVE (E) HEAT PUMP, REFRIGERANT PIPING, & SUPPORTS ON ROOF COMPLETE.

### (#) NEW SHEET NOTES

1. INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO INDOOR UNITS. SEE DETAIL 6/1MP-602 FOR PIPE SUPPORT ON ROOF.
2. REFRIGERANT PIPES THRU ROOF TO INDOOR UNIT, SEE SHEET 2/1MP-202 FOR CONTINUATION. SEE DETAILS 1/1MP-602 & 5/1A-701 FOR PIPE PENETRATIONS THRU ROOF.

KEY PLAN




AGENCY APPROVAL DSA# XX-XXXXXXXXX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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MARTIN SERTTAS
No. M31059
EXP. JUNE 30, 2025
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## BLDG 2 - DEMO & NEW ROOF PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

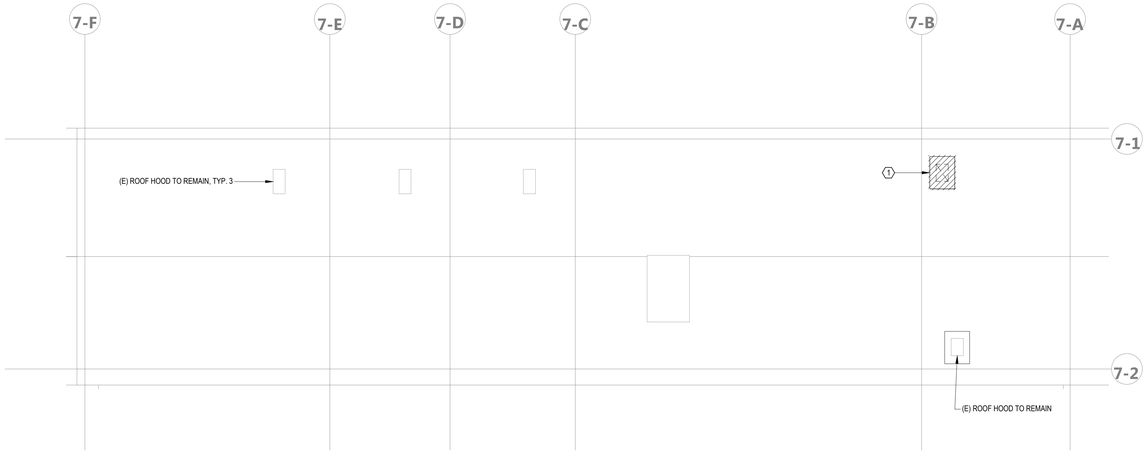
SHEET NO.
# 1MP-302

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS


DATE PLOTTED: 4/17/2024 9:16 PM FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

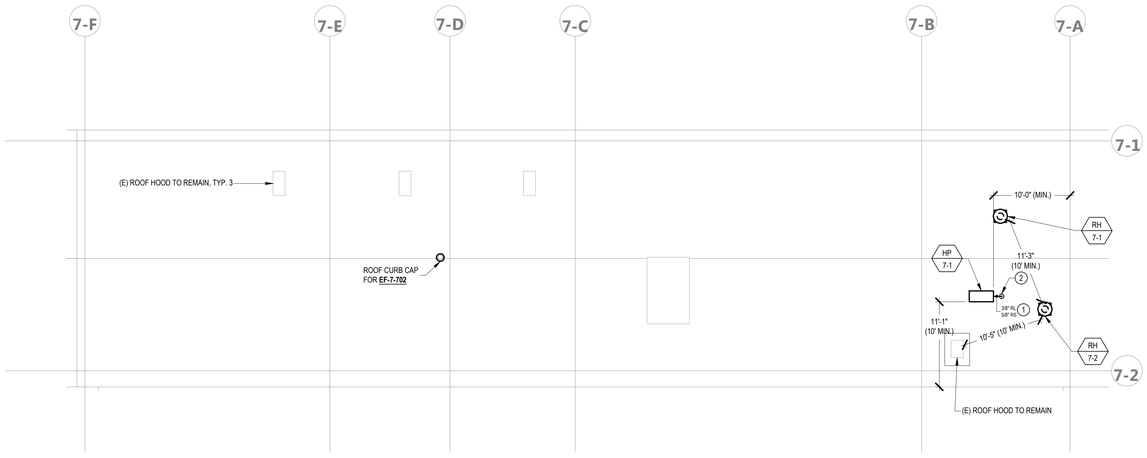

B




1 / 1MP-303 BLDG 7 ROOF PLAN - DEMO - MECHANICAL & PLUMBING

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

NORTH




2 / 1MP-303 BLDG 7 ROOF PLAN - NEW - MECHANICAL

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

NORTH

## GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.

## (E) DEMOLITION SHEET NOTES

1. REMOVE (E) ROOF HOOD COMPLETE.

## (#) NEW SHEET NOTES

1. INSTALL REFRIGERANT PIPING FROM HEAT PUMP TO INDOOR UNITS. SEE DETAIL 6/1MP-602 FOR PIPE SUPPORT ON ROOF.
2. REFRIGERANT PIPES THRU ROOF TO INDOOR UNITS, SEE SHEET 2/1MP-204 FOR CONTINUATION. SEE DETAILS 1/1MP-602 & 5/1A-701 FOR PIPE PENETRATIONS THRU ROOF.

KEY PLAN




AGENCY APPROVAL DSA# XX-XXXXXXXXX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CEG JOB NO: 23146

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER
MEIN SERTTUM
No. M31059
EXP. JUNE 30, 2025
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

## BLDGS 7 - DEMO & NEW ROOF PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.

# 1MP-303

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS


FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg
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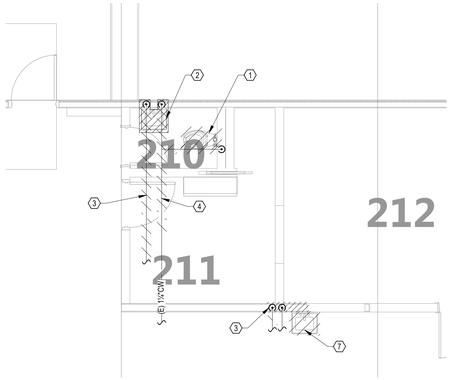
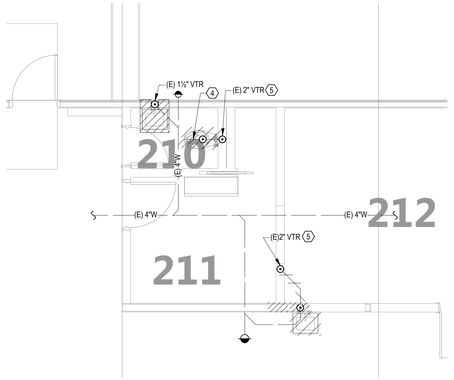
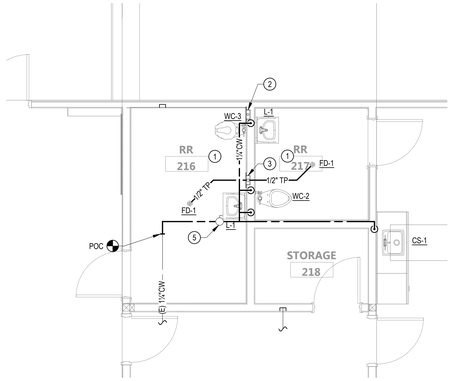


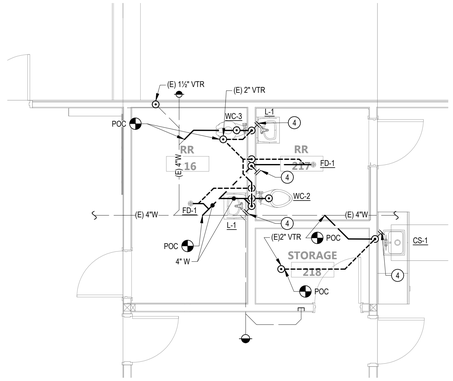

1 / 1MP-401 WATER PIPING
BLDG 2 RESTROOM PARTIAL DEMO PLAN
SCALE: 1/4" = 1'-0"




2 / 1MP-401 WASTE & VENT PIPING
BLDG 2 RESTROOM PARTIAL DEMO PLAN
SCALE: 1/4" = 1'-0"




3 / 1MP-401 WATER PIPING
BLDG 2 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"




4 / 1MP-401 WASTE & VENT PIPING
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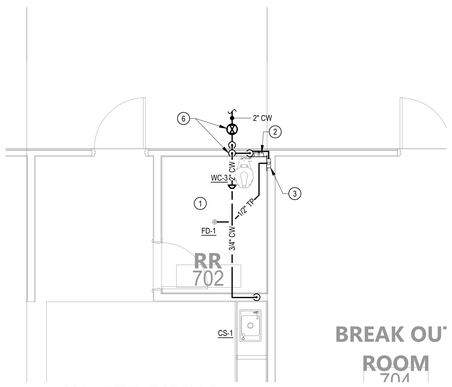
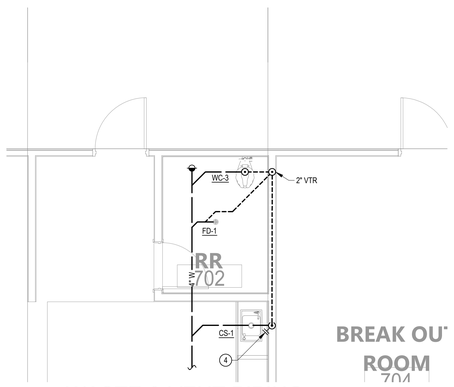
SCALE: 1/4" = 1'-0"




5 / 1MP-401 WATER PIPING
BLDG 7 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"




6 / 1MP-401 WASTE & VENT PIPING
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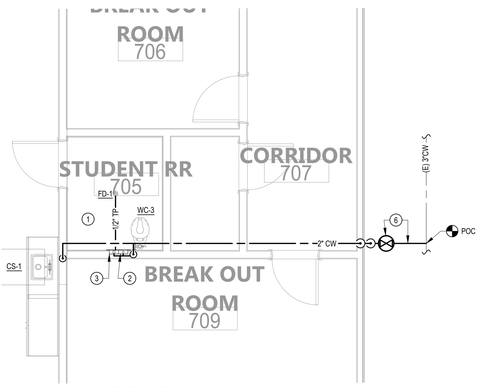
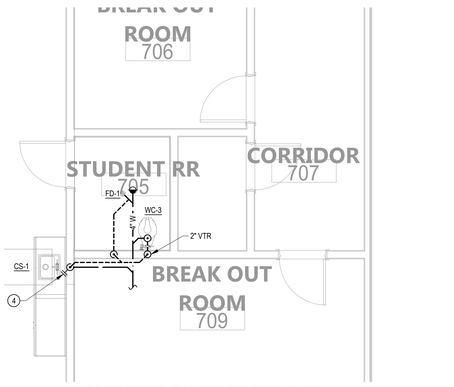
SCALE: 1/4" = 1'-0"




7 / 1MP-401 WATER PIPING
BLDG 7 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"




8 / 1MP-401 WASTE & VENT PIPING
BLDG 7 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"

### # NEW SHEET NOTES

1. INSTALL RESTROOM PLUMBING FIXTURES.
2. WHA IN WALL ACCESS PANEL, SEE DETAIL 2/1MP-602.
3. TP IN WALL ACCESS PANEL, SEE DETAIL 10/1MP-602.
4. WALL CLEAN OUT, SEE DETAIL 3/1MP-602.
5. CW SOV. PROVIDE ACCESS PANEL IF LOCATED IN NON ACCESSIBLE LOCATIONS.
6. 2" CW SOV & CW PIPING FOR RESTROOMS & PLUMBING FIXTURES. SOV SHALL BE IN UTILITY VALVE BOX LABELED WATER VALVE. SAW CUT, TRENCH, & PATCH BACK (E) PAVEMENT AS REQUIRED FOR WORK.

B

### # DEMOLITION SHEET NOTES

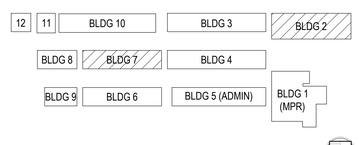
1. REMOVE (E) FLOOR MOUNT WATER CLOSET COMPLETE. CAP UTILITIES AS REQUIRED FOR INSTALLATION OF (N) FIXTURES.
2. REMOVE (E) LAVATORY & SUPPORTS COMPLETE. CAP UTILITIES AS REQUIRED FOR INSTALLATION OF (N) FIXTURES.
3. REMOVE (E) HW LINES & BRANCH LINES COMPLETE.
4. REMOVE (E) UTILITY LINES & BRANCH LINES COMPLETE BACK TO POC. REFER TO NEW PLANS FOR POC'S.
5. (E) VTR ROOF PENETRATION & VERTICAL RISER PIPING RIGHT BELOW THE ROOF LEVEL TO REMAIN AND BE REUSED. SEE NEW PLANS FOR NEW VENT PIPING TO (E) VTR LOCATIONS.
6. NOTE # NOT USED.
7. REMOVE (E) SINK & CAP (E) UTILITIES IN WALL.

### GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.
20. SAW CUT AND TRENCH THE EXISTING RESTROOM FLOORS WITHIN THE RESTROOMS AS REQUIRED TO INSTALL THE NEW WASTE, VENT, TRAP PRIMER LINES BELOW THE SLABS BACK TO THE POC'S. CHIP AND PATCH BACK (E) CONC. CURBS AS REQUIRED FOR (N) WASTE / VENT / TP CONNECTIONS IN (E) WALLS W/ CURBS. TRENCHING SHALL NOT DAMAGE ANY STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO THE SPREAD FOOTINGS, GRADE BEAMS, WALLS, ECT. TRENCHING SHALL NOT UNDERMINE (E) FOOTINGS. REFER TO ARCHITECT PLANS & DETAILS FOR FLOOR PATCHING & REPAIR WORK.
21. EXISTING SLAB SHALL BE DEMOLISHED AS REQUIRED FOR NEW WORK.
22. PROVIDE FLOOR CLEAN OUTS & WALL CLEANOUTS AS NEEDED FOR NEW PLUMBING FIXTURE LAYOUTS.
23. FOR VTR SEE DETAIL 1/1MP-602.
24. FOR FLOOR CLEAN OUTS SEE DETAIL 4/1MP-602.
25. FOR FLOOR DRAINS SEE DETAIL 12/1MP-602.
26. FOR UTILITY PIPING THRU (E) FOOTERS, REFER TO STRUCTURAL DETAILS INCLUDING 6/1S-501 & 4/1S-502. PROVIDE PIPE SLEEVES SIZED AS REQUIRED TO FIT UTILITY PIPE WITH IN IT.

B

KEY PLAN




AGENCY APPROVAL DSA# XX-XXXXXXXXX

196

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEITH SERT TJADEN — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| # | NO. | DATE | DESCRIPTION |
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**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
# BLDG 2 - DEMO & NEW RESTROOM PLANS

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

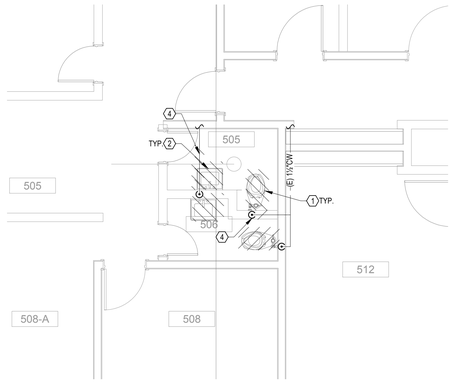
SHEET NO.
# 1MP-401

DATE: APRIL 17, 2024

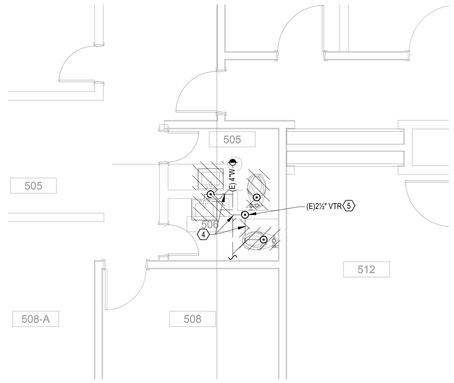
FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

DATE PLOTTED: 4/17/2024 9:17 PM

CONSTRUCTION DOCUMENTS




1 1MP-402 WATER PIPING
BLDG 5 RESTROOM PARTIAL DEMO PLAN
SCALE: 1/4" = 1'-0"




2 1MP-402 WASTE & VENT PIPING
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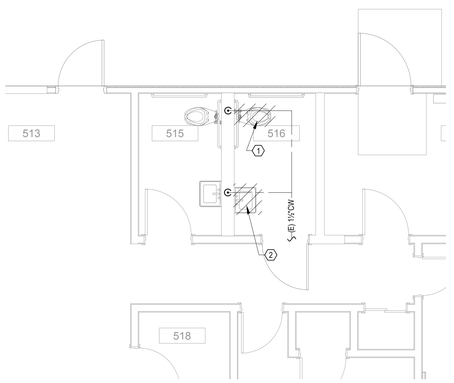
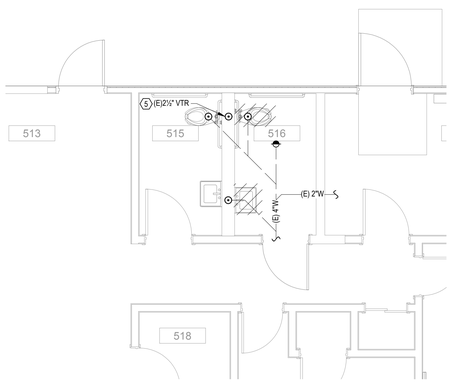



3 1MP-402 WATER PIPING
BLDG 5 RESTROOM PARTIAL DEMO PLAN
SCALE: 1/4" = 1'-0"




4 1MP-402 WASTE & VENT PIPING
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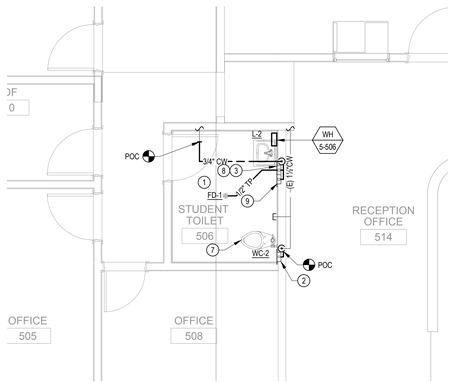
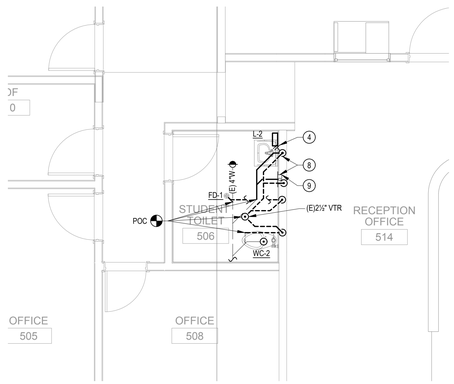
SCALE: 1/4" = 1'-0"




5 1MP-402 WATER PIPING
BLDG 5 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"




6 1MP-402 WASTE & VENT PIPING
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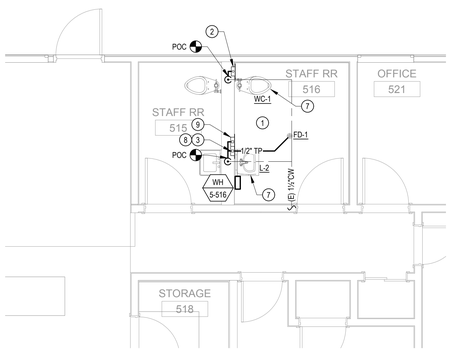
SCALE: 1/4" = 1'-0"




7 1MP-402 WATER PIPING
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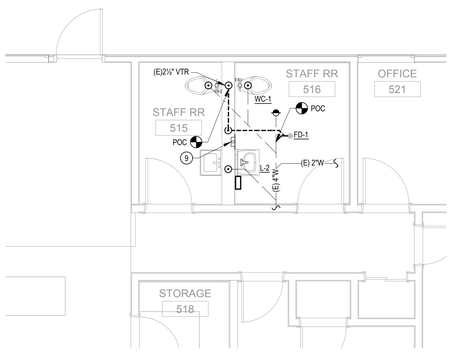


8 1MP-402 WASTE & VENT PIPING
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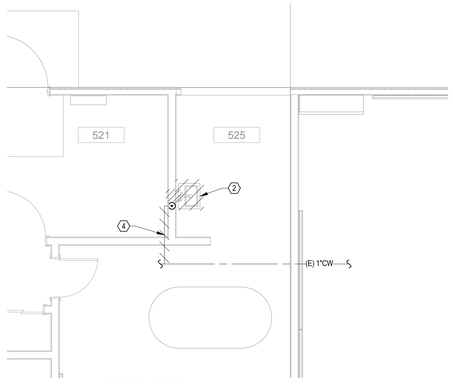
SCALE: 1/4" = 1'-0"




9 1MP-402 WATER PIPING
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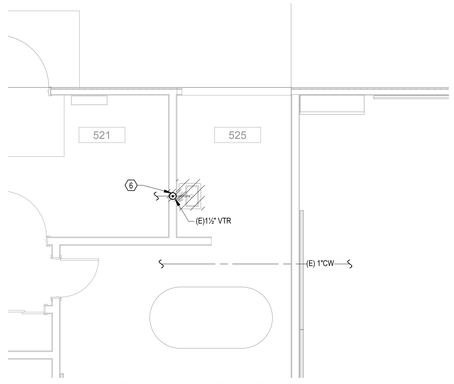


10 1MP-402 WASTE & VENT PIPING
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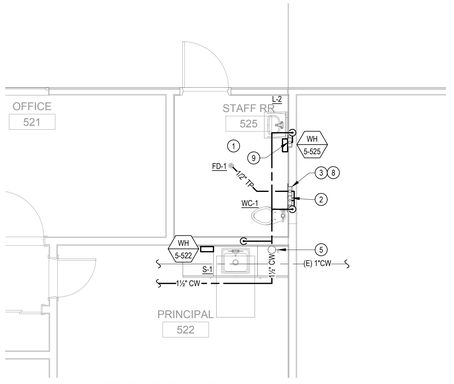


11 1MP-402 WATER PIPING
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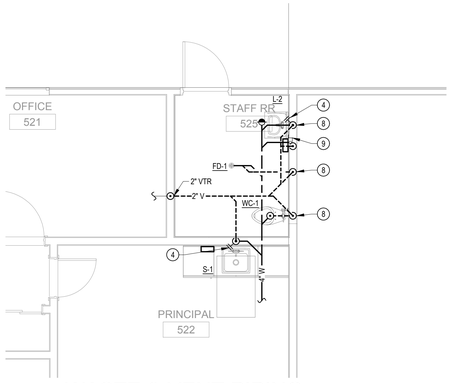



12 1MP-402 WASTE & VENT PIPING
BLDG 5 RESTROOM PARTIAL NEW PLAN
SCALE: 1/4" = 1'-0"

### # NEW SHEET NOTES

1. INSTALL RESTROOM PLUMBING FIXTURES.
2. WHA IN WALL ACCESS PANEL, SEE DETAIL 2/1MP-602.
3. TP IN WALL ACCESS PANEL, SEE DETAIL 10/1MP-602.
4. WALL CLEAN OUT, SEE DETAIL 3/1MP-602.
5. CW SOV. PROVIDE ACCESS PANEL IF LOCATED IN NON ACCESSIBLE LOCATIONS.
6. NOTE # NOT USED.
7. INSTALL FIXTURES PIPED TO (E) UTILITY CONNECTIONS AS SHOWN. EXTEND (E) PLUMBING AS REQUIRED.
8. UTILITY PIPING THRU (E) FOOTERS, OTHER LOCATIONS NOT LOCATED MAY OCCUR. SEE GENERAL NOTE # 26.

B
9. INDIRECT DRAIN COLLECTOR W/ TRAP PRIMER FOR MECH. EQUIPMENT CD DRAINS, SEE DETAIL 11/1MP-602. CONNECT TO UTILITIES NEAR RESTROOM LAVATORY SINK.

### # DEMOLITION SHEET NOTES

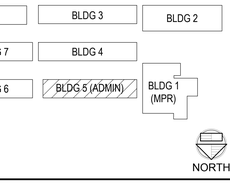
1. REMOVE (E) FLOOR MOUNT WATER CLOSET COMPLETE. CAP UTILITIES AS REQUIRED FOR INSTALLATION OF (N) FIXTURES.
2. REMOVE (E) LAVATORY & SUPPORTS COMPLETE. CAP UTILITIES AS REQUIRED FOR INSTALLATION OF (N) FIXTURES.
3. REMOVE (E) HW LINES & BRANCH LINES COMPLETE.
4. REMOVE (E) UTILITY LINES & BRANCH LINES COMPLETE BACK TO POC. REFER TO NEW PLANS FOR POC'S.
5. (E) VTR ROOF PENETRATION & VERTICAL RISER PIPING RIGHT BELOW THE ROOF LEVEL TO REMAIN AND BE REUSED. SEE NEW PLANS FOR NEW VENT PIPING TO (E) VTR LOCATIONS.
6. (E) VTR TO BE REMOVED, PRESERVE ROOF HOLE FOR LARGER NEW VTR, SEE NEW PLANS.

### GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING AND NEW BUILDING STRUCTURES, SERVICES, AND OWNER'S PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION.
2. COORDINATE THE LOCATIONS OF ROOF/WALL OPENINGS, PENETRATIONS, DUCTWORK, PIPING, AND ALL MECHANICAL AND PLUMBING EQUIPMENT WITH RESPECT TO BUILDING STRUCTURE AND OTHER BUILDING SERVICES TO AVOID CONFLICT.
3. SEE ARCHITECT'S DRAWINGS FOR PATCHING AND REPAIR OF ROOF, WALL, AND FLOOR PENETRATIONS.
4. INFORMATION SHOWN IS BASED ON AVAILABLE AS-BUILTS AND THE LOCATION OF ALL EQUIPMENT, DUCTS, PENETRATIONS, PIPING, AND OTHER PROJECTIONS SHOWN ON THE PLANS IS APPROXIMATE. NOT ALL EXISTING ITEMS ARE IDENTIFIED OR SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, INCLUDING ALL RELEVANT DIMENSION,S EQUIPMENT COUNTS, AND LOCATIONS PRIOR TO SUBMITTING A BID.
5. SEE PLANS AND SPECIFICATIONS FOR ALL OTHER DISCIPLINES FOR ADDITIONAL SCOPE OF WORK THAT MAY NOT BE SHOWN HERE. COORDINATE WITH GENERAL CONTRACTOR TO CONFIRM ENTIRE SCOPE OF WORK HAS BEEN INCLUDED.
20. SAW CUT AND TRENCH THE EXISTING RESTROOM FLOORS WITHIN THE RESTROOMS AS REQUIRED TO INSTALL THE NEW WASTE, VENT, TRAP PRIMER LINES BELOW THE SLABS BACK TO THE POC'S. CHIP AND PATCH BACK (E) CONC. CURBS AS REQUIRED FOR (N) WASTE / VENT / TP CONNECTIONS IN (E) WALLS W/ CURBS. TRENCHING SHALL NOT DAMAGE ANY STRUCTURAL MEMBERS INCLUDING BUT NOT LIMITED TO THE SPREAD FOOTINGS, GRADE BEAMS, WALLS, ECT. TRENCHING SHALL NOT UNDERMINE (E) FOOTINGS. REFER TO ARCHITECT PLANS & DETAILS FOR FLOOR PATCHING & REPAIR WORK.
21. EXISTING SLAB SHALL BE DEMOLISHED AS REQUIRED FOR NEW WORK.
22. PROVIDE FLOOR CLEAN OUTS & WALL CLEANOUTS AS NEEDED FOR NEW PLUMBING FIXTURE LAYOUTS.
23. FOR VTR SEE DETAIL 1/1MP-602.
24. FOR FLOOR CLEAN OUTS SEE DETAIL 4/1MP-602.
25. FOR FLOOR DRAINS SEE DETAIL 12/1MP-602.

B
26. FOR UTILITY PIPING THRU (E) FOOTERS, REFER TO STRUCTURAL DETAILS INCLUDING 6/1S-501 & 4/1S-502. PROVIDE PIPE SLEEVES SIZED AS REQUIRED TO FIT UTILITY PIPE WITH IN IT.

KEY PLAN

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REGISTERED PROFESSIONAL ENGINEER
METIN SERT UYSAL
No. M31059
EXP. JUNE 30, 2025
MECHANICAL
STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## BLDG 5 ADMIN - DEMO & NEW RESTROOM PLANS
INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
# 1MP-402
DATE: APRIL 17, 2024

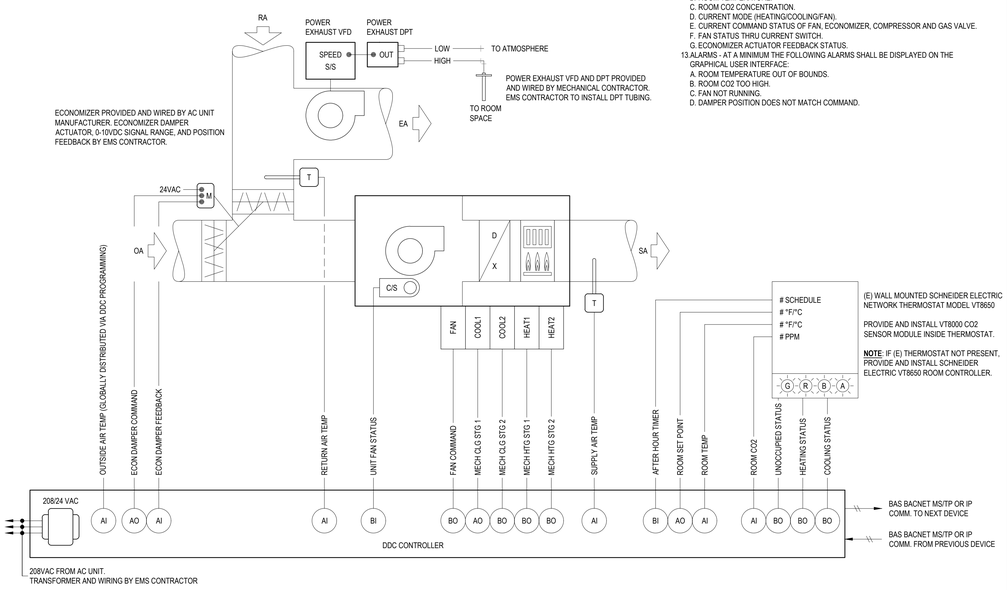
CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

DATE PLOTTED: 4/17/2024 9:18 PM

## SEQUENCE OF OPERATION

1. SYSTEM OVERVIEW
   A. AC UNIT WILL BE DIRECTLY CONTROLLED BY ITS OWN DEDICATED EMS (ENERGY MANAGEMENT SYSTEM) UNITARY CONTROLLER.
   B. EMS UNITARY CONTROLLER WILL BE CONNECTED TO A WALL MOUNTED ELECTRONIC ZONE TEMPERATURE SENSOR WITH INTEGRAL CO2 SENSOR.
   C. ELECTRONIC ZONE TEMPERATURE SENSOR SHALL HAVE A TOUCH SCREEN LCD INTERFACE WHICH INCLUDES: 1) PUSHBUTTONS FOR WARMER/COOLER SETPOINT CONTROL; 2) VISUAL DISPLAY OF ROOM TEMPERATURE, ROOM CO2 AND AMBIENT OSA TEMPERATURE; AND 3) PUSHBUTTON AFTER-HOURS OVERRIDE TIMER, WITH USER ADJUSTABLE DURATION. THE AFTER-HOURS OVERRIDE DURATION SHALL HAVE THE ABILITY TO BE LIMITED FROM THE FRONT-END.
2. UNIT FAN OPERATION
   A. WHEN THE ZONE IS IN OCCUPIED MODE OR IN AFTER-HOURS MODE, THE FAN SHALL RUN CONTINUOUSLY.
   B. DURING THE UNOCCUPIED MODE AS DETERMINED BY EMS TIME SCHEDULE, THE UNIT FAN CYCLES WITH DEMAND AND THE TEMPERATURE IS CONTROLLED BY THE UNOCCUPIED SPACE TEMPERATURE HEATING AND COOLING SETPOINTS.
3. MINIMUM OUTDOOR AIR VENTILATION
   A. WITH REFERENCE TO MECHANICAL EQUIPMENT SCHEDULE OSA DESIGN REQUIREMENTS, THE AIR BALANCER SHALL PROVIDE THE EMS SYSTEM WITH INFORMATION FOR TWO (2) SEPARATE MINIMUM OUTDOOR AIR (DESIGN OA CFM) DAMPER SETPOINTS: ONE FOR LOW FAN SPEED AND ANOTHER FOR HIGH FAN SPEED. DESIGN OSA CFM IS LISTED ON EQUIPMENT SCHEDULE.
4. DEMAND CONTROL VENTILATION
   A. EMS UNITARY CONTROLLER WILL BE CONNECTED TO A WALL MOUNTED CO2 SENSOR TO MONITOR ZONE CO2 CONCENTRATION.
   B. DURING OCCUPIED MODE A PROPORTIONAL CONTROL LOOP SHALL BE USED TO MAINTAIN THE CO2 CONCENTRATION BELOW 1,000 PPM (ADJUSTABLE). AS CO2 CONCENTRATION VARIES BETWEEN 800 PPM (ADJUSTABLE) AND 1,000 PPM (ADJUSTABLE), THE OUTSIDE AIR DAMPER SHALL MODULATE BETWEEN MINIMUM OSA SETPOINT AND FULLY OPEN.
   C. SHOULD THE CO2 SENSOR FAIL TO OPERATE WITHIN ACCEPTABLE RANGE, THE OUTSIDE AIR DAMPER SHALL BE SET TO 30% (ADJUSTABLE) MORE THAN MINIMUM OUTSIDE AIR SETPOINT.
5. AUTOMATIC DEMAND SHED CONTROLS
   A. EMS SHALL BE PROGRAMMED WITH CAPABILITY TO IMPLEMENT CENTRALIZED DEMAND SHED FOR ALL NON-CRITICAL ZONES. CRITICAL ZONES SHALL NOT BE IMPACTED BY DEMAND SHED CONSERVATION MEASURES.
   B. UPON THE ACTIVATION OF A DEMAND SHED COMMAND FROM THE EMS SERVER, THE THERMOSTAT'S OCCUPIED COOLING AND HEATING SETPOINTS SHALL BE OFFSET UP AND DOWN BY 4°F OR MORE.
   C. IN ADDITION TO THE IMPLEMENTATION OF AUTOMATIC DEMAND SHED CONTROL STRATEGIES, THE EMS SHALL ALLOW FOR SYSTEM-WIDE GLOBAL ADJUSTMENT TO ALL COOLING AND HEATING SETPOINTS FROM MAIN EMS SERVER APART FROM DEMAND SHED CONSERVATION MEASURES AND SHALL ALLOW FOR ALL GLOBAL SETPOINT CHANGE COMMANDS TO BE DEACTIVATED.
6. ZONE PRE-OCCUPANCY PURGE
   A. THE EMS SHALL SCHEDULE THE ZONE TO BE IN OCCUPIED MODE ONE HOUR PRIOR TO THE ACTUAL TIME OF ANTICIPATED OCCUPANCY.
7. ECONOMIZER CONTROL
   A. EMS UNITARY CONTROLLER SHALL BE DIRECTLY CONNECTED TO DISCHARGE AIR AND RETURN AIR TEMPERATURE SENSORS. GLOBAL DDC PROGRAMMING SHALL BE USED TO BROADCAST CENTRALIZED AMBIENT OUTSIDE AIR TEMPERATURE.
   B. EMS UNITARY CONTROLLER SHALL ALSO BE DIRECTLY CONNECTED TO ECONOMIZER (OUTSIDE/RETURN AIR) DAMPER ACTUATOR, INCLUDING POSITION FEEDBACK SIGNAL.
   C. SEE MINIMUM OUTDOOR AIR VENTILATION FOR OUTSIDE AIR DAMPER MINIMUM CFM SETPOINT.
   D. THE EMS UNITARY CONTROLLER SHALL CONTINUOUSLY COMPARE THE CURRENT OSA TEMPERATURE TO THE ESTABLISHED AIR ECONOMIZER HIGH LIMIT SHUT OFF (ECON LOCK OUT) TEMPERATURE SET POINT (ADJUSTABLE) AND RETURN AIR TEMPERATURE.
   E. WHEN CURRENT OSA TEMP IS LESS THAN OR EQUAL TO ECON LOCK OUT TEMP AND THE RETURN AIR TEMPERATURE, EMS UNITARY CONTROLLER SHALL USE THE OUTSIDE AIR FOR FREE COOLING.
   F. WHEN THE OUTDOOR AIR DAMPER IS OPEN 100% FOR MORE THAN 5 MINUTES (ADJUSTABLE) AND THE NEED-COOLING SIGNAL CONTINUES TO INCREASE OR REACHES A MAXIMUM OF 100%, MECHANICAL COOLING WILL BE ACTIVATED.
   G. THE ECONOMIZER WILL REMAIN IN USE DURING MECHANICAL COOLING AS LONG AS DISCHARGE AIR TEMPERATURE REMAINS ABOVE 55°F (ADJUSTABLE) AND CURRENT OSA TEMP IS LESS THAN ECON LOCK OUT TEMP AND RETURN AIR TEMP.
   H. WHEN OSA TEMP IS ABOVE ECON LOCK OUT TEMP OR RETURN AIR TEMP, ECONOMIZER WILL BE DEACTIVATED AND ECONOMIZER SHALL BE COMMANDED TO MINIMUM CFM SETPOINT.
   I. ECONOMIZER WILL BE COMMANDED TO MINIMUM CFM SETPOINT WHEN UNIT IS IN HEATING MODE.
   J. WHEN UNIT FAN IS NOT OPERATING, OUTSIDE AIR DAMPER SHALL BE COMMANDED CLOSED.
   K. NOTE: ALL POWER EXHAUST FAN OPERATIONS SHALL BE CONTROLLED BY SEPARATE NON-EMS EXTERNAL DEVICES AS PROVIDED BY MANUFACTURER.
   L. POWER EXHAUST (PE) SHALL MONITOR BUILDING PRESSURE INSIDE ROOM.
   M. PE FAN SHALL MODULATE TO MAINTAIN ROOM PRESSURE SETPOINT OF 0.03" (ADJ.).
8. HEATING OPERATION
   A. THE CONTROLLER COMPARES THE HEATING SETPOINT WITH THE SPACE TEMPERATURE AND DETERMINES A NEED-HEATING CONTROL SIGNAL TO STAGE A GAS REGULATING VALVE ON THE UNIT.
   B. ECONOMIZER SHALL BE COMMANDED TO MINIMUM CFM SETPOINT AND MECHANICAL COOLING SHALL BE LOCKED OUT DURING HEATING MODE.
9. COOLING OPERATION
   A. THE CONTROLLER COMPARES THE COOLING SETPOINT WITH THE SPACE TEMPERATURE AND DETERMINES A NEED-COOLING SIGNAL
   B. THE FIRST STAGE OF COOLING WILL ENABLE THE ECONOMIZER TO PROVIDE FREE COOLING FOR AS LONG AS POSSIBLE.
   C. THE SECOND STAGE WILL ENABLE THE COMPRESSOR(S).
   D. MECHANICAL HEATING SHALL BE LOCKED OUT DURING COOLING MODE.
10. FAULT DETECTION DIAGNOSTICS
   A. THE EMS DDC CONTROLLER SHALL MONITOR FAULT STATUS OF THE FOLLOWING FAULT DETECTION DIAGNOSTIC CONDITIONS AND BROADCAST RESULTS VIA EMS NETWORK.
   B. UNIT NOT ECONOMIZING WHEN ENABLED - IF ECONOMIZER DAMPER ACTUATOR FEEDBACK STATUS DOES NOT MATCH THE COMMANDED ECONOMIZER SETPOINT WHEN THE ECONOMIZER IS ENABLED FOR MORE THAN 3 MINUTES (ADJUSTABLE), AN ALARM SHALL BE GENERATED AND BROADCAST.
   C. UNIT ECONOMIZING WHEN DISABLED - IF ECONOMIZER DAMPER ACTUATOR FEEDBACK STATUS INDICATES THAT THE ECONOMIZER DAMPER IS OPEN BEYOND THE MIN CFM SETPOINT WHEN THE ECONOMIZER IS NOT ENABLED FOR MORE THAN 3 MINUTES (ADJUSTABLE), AN ALARM SHALL BE GENERATED AND BROADCAST.
   D. DAMPER MODULATION FAULT - IF ECONOMIZER DAMPER ACTUATOR FEEDBACK PERCENT DOES NOT MATCH THE COMMANDED ECONOMIZER DAMPER PERCENT FOR MORE THAN 3 MINUTES (ADJUSTABLE), AN ALARM SHALL BE GENERATED AND BROADCAST.
   E. EXCESS OUTDOOR AIR - IF ECONOMIZER DAMPER ACTUATOR FEEDBACK STATUS INDICATES THAT THE ECONOMIZER DAMPER IS OPEN BEYOND MIN CFM SETPOINT IN HEATING MODE, AN ALARM SHALL BE GENERATED AND BROADCAST.
11. SETPOINTS
   A. OCCUPIED HOURS SETPOINTS SHALL BE 68°F TO 74°F. (USER ADJUSTABLE AT THERMOSTAT WITHIN THIS RANGE).
   B. UNOCCUPIED HOURS SETPOINTS SHALL BE 60°F HEATING AND 90°F COOLING.
   C. DEADBAND SHALL BE 2°F.
12. MONITORING - THE FOLLOWING CONDITIONS SHALL BE MONITORED AND DISPLAYED AT BMS OPERATOR WORKSTATION/GRAPHICAL USER INTERFACE:
   A. SUPPLY, RETURN AND OUTSIDE AIR TEMPERATURES.
   B. ROOM TEMPERATURE.
   C. ROOM CO2 CONCENTRATION.
   D. CURRENT MODE (HEATING/COOLING/FAN).
   E. CURRENT COMMAND STATUS OF FAN, ECONOMIZER, COMPRESSOR AND GAS VALVE.
   F. FAN STATUS THRU CURRENT SWITCH.
   G. ECONOMIZER ACTUATOR FEEDBACK STATUS.
13. ALARMS - AT A MINIMUM THE FOLLOWING ALARMS SHALL BE DISPLAYED ON THE GRAPHICAL USER INTERFACE:
   A. ROOM TEMPERATURE OUT OF BOUNDS.
   B. ROOM CO2 TOO HIGH.
   C. FAN NOT RUNNING.
   D. DAMPER POSITION DOES NOT MATCH COMMAND.

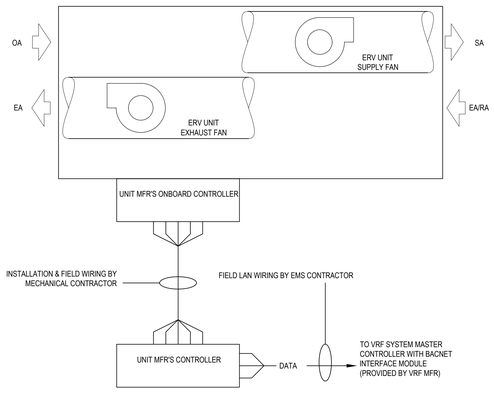



4 PACKAGED AC UNIT CONTROL SCHEMATIC

## SEQUENCE OF OPERATION

1. THE ERV UNIT SHALL OPERATE DURING NORMAL BUILDING OCCUPANCY HOURS BY EMS TIMECLOCK.
2. MONITORING - THE FOLLOWING CONDITIONS SHALL BE MONITORED BY THE EMS VIA BACNET INTERFACE:
   A. SUPPLY FAN STATUS
   B. EXHAUST FAN STATUS
3. ALARM - IF THE FAN RUNS WHILE COMMANDED OFF OR DOES NOT RUN WHEN COMMANDED ON, AN ALARM SHALL BE DISPLAYED AND ANNUNCIATED AT OPERATOR'S CONSOLE

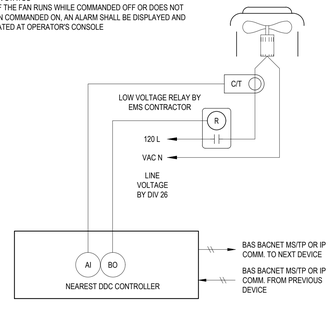
| MINIMUM BACNET POINT INTEGRATION POINTS PER ZONE |
|---|
| ON/OFF STATUS |
| ON/OFF COMMAND |
| MODE STATUS |
| MODE COMMAND |
| FAN STATUS |
| FAN COMMAND |
| SET POINT STATUS |
| SET POINT COMMAND |



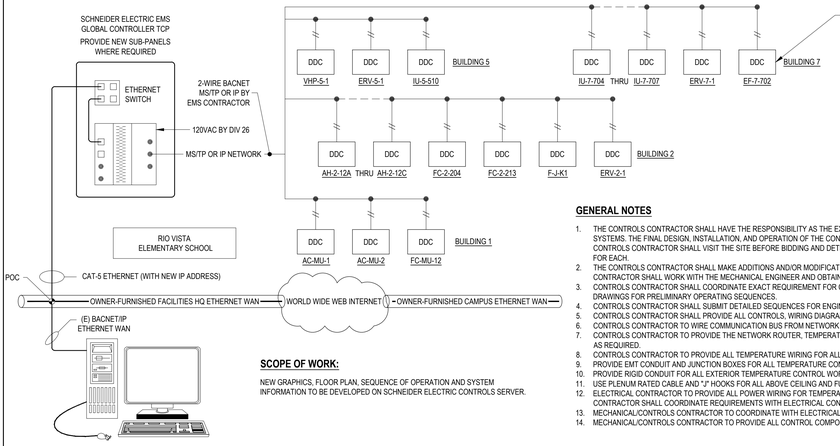

5 ERV CONTROL SCHEMATIC

## SEQUENCE OF OPERATION

1. THE EXHAUST FAN SHALL OPERATE DURING NORMAL BUILDING OCCUPANCY HOURS BY EMS TIMECLOCK.
2. MONITORING - THE FOLLOWING CONDITIONS SHALL BE MONITORED BY THE EMS VIA BACNET INTERFACE:
   A. FAN STATUS
3. ALARM - IF THE FAN RUNS WHILE COMMANDED OFF OR DOES NOT RUN WHEN COMMANDED ON, AN ALARM SHALL BE DISPLAYED AND ANNUNCIATED AT OPERATOR'S CONSOLE




6 EXHAUST FAN CONTROL SCHEMATIC




## SCOPE OF WORK:

NEW GRAPHICS, FLOOR PLAN, SEQUENCE OF OPERATION AND SYSTEM INFORMATION TO BE DEVELOPED ON SCHNEIDER ELECTRIC CONTROLS SERVER.

## GENERAL NOTES

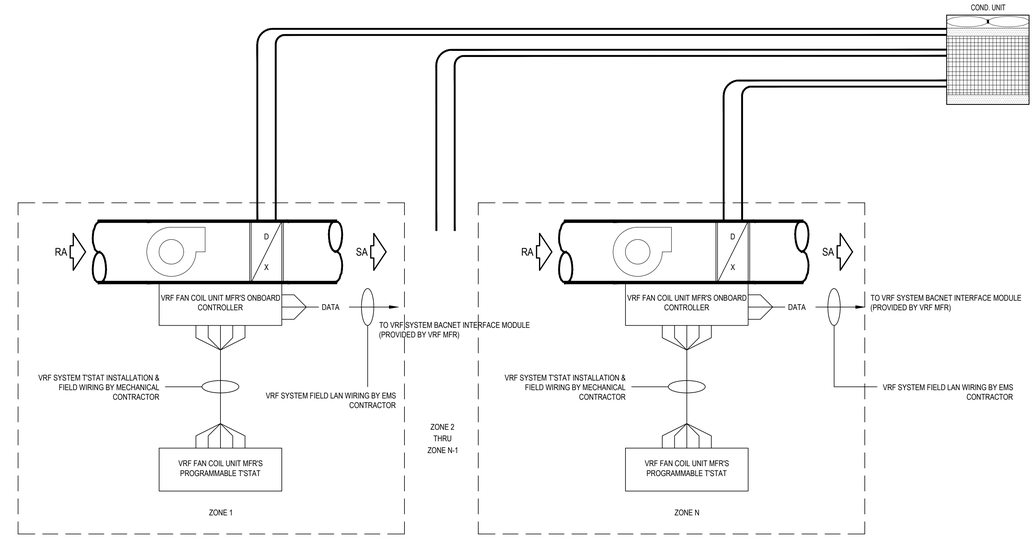
1. THE CONTROLS CONTRACTOR SHALL HAVE THE RESPONSIBILITY AS THE EXPERT IN THE PROPER APPLICATION OF CONTROL COMPONENTS AND DDC SYSTEMS. THE FINAL DESIGN, INSTALLATION, AND OPERATION OF THE CONTROL SYSTEM IS THE RESPONSIBILITY OF THE CONTROLS CONTRACTOR. CONTROLS CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING AND DETERMINE THE REQUIRED NUMBER OF CONTROL PANELS AND OPTIMAL LOCATION FOR EACH.
2. THE CONTROLS CONTRACTOR SHALL MAKE ADDITIONS AND/OR MODIFICATIONS TO THE DESIGN AS REQUIRED AT NO ADDITIONAL COST. CONTROLS CONTRACTOR SHALL WORK WITH THE MECHANICAL ENGINEER AND OBTAIN APPROVAL FOR ANY NECESSARY REVISIONS.
3. CONTROLS CONTRACTOR SHALL COORDINATE EXACT REQUIREMENT FOR CONTROL HARDWARE WITH ALL ASSOCIATED TRADES AND OWNER. REFER TO DRAWINGS FOR PRELIMINARY OPERATING SEQUENCES.
4. CONTROLS CONTRACTOR SHALL SUBMIT DETAILED SEQUENCES FOR ENGINEER'S REVIEW AND APPROVAL.
5. CONTROLS CONTRACTOR SHALL PROVIDE ALL CONTROLS, WIRING DIAGRAMS, "AS-BUILT" DRAWINGS, SYSTEM START-UP, AND PROGRAMMING.
6. CONTROLS CONTRACTOR TO WIRE COMMUNICATION BUS FROM NETWORK ROUTER TO ALL LOCAL BACNET CONTROLLERS.
7. CONTROLS CONTRACTOR TO PROVIDE THE NETWORK ROUTER, TEMPERATURE CONTROL PANELS, AND ALL LOCAL CONTROL PANELS FOR ALL EQUIPMENT AS REQUIRED.
8. CONTROLS CONTRACTOR TO PROVIDE ALL TEMPERATURE WIRING FOR ALL TEMPERATURE CONTROL WORK.
9. PROVIDE EMT CONDUIT AND JUNCTION BOXES FOR ALL TEMPERATURE CONTROL WORK RUNNING IN WALL SPACES.
10. PROVIDE RIGID CONDUIT FOR ALL EXTERIOR TEMPERATURE CONTROL WORK.
11. USE PLENUM RATED CABLE AND "J" HOOKS FOR ALL ABOVE CEILING AND FURRED SPACE TEMPERATURE CONTROL WORK.
12. ELECTRICAL CONTRACTOR TO PROVIDE ALL POWER WIRING FOR TEMPERATURE CONTROL PANELS AND LINE VOLTAGE THERMOSTATS. CONTROLS CONTRACTOR SHALL COORDINATE REQUIREMENTS WITH ELECTRICAL CONTRACTOR
13. MECHANICAL/CONTROLS CONTRACTOR TO COORDINATE WITH ELECTRICAL AND VERIFY CIRCUITS ARE CORRECT BEFORE WIRING CONTROLS.
14. MECHANICAL/CONTROLS CONTRACTOR TO PROVIDE ALL CONTROL COMPONENTS NECESSARY TO FULFILL THE DESIGN INTENT OF THE DRAWINGS.

1 EMS SYSTEM ARCHITECTURE

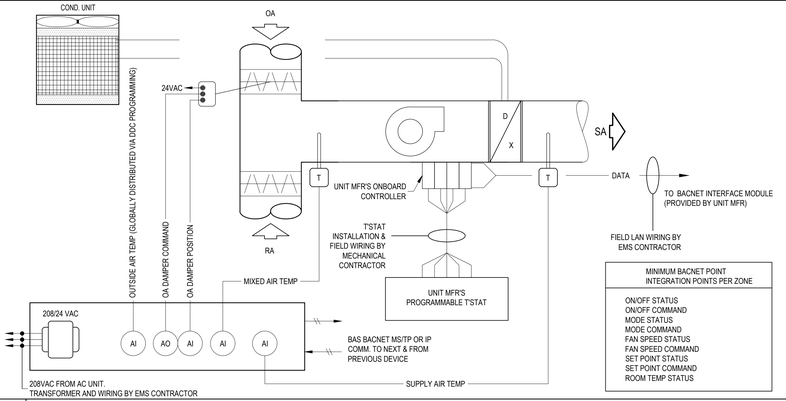
SEQUENCE OF OPERATION:

1. EACH INDOOR FAN COIL SHALL BE CONTROLLED BY MANUFACTURER'S WALL MOUNTED THERMOSTAT AND OPERATE UNDER OWN INTERNAL CONTROL TO MAINTAIN ROOM SETPOINT.
2. EACH FAN COIL SHALL BE CONNECTED TO SCHNEIDER ELECTRIC EMS THROUGH BACNET INTEGRATION CARD.
3. FAN COIL OCCUPANCY SCHEDULES, OCCUPIED SETPOINTS, AND UNOCCUPIED SETPOINTS SHALL BE SET BY THE EMS. COORDINATE SCHEDULES AND SETPOINTS WITH DISTRICT REPRESENTATIVE.
4. EMS SYSTEM SHALL DISPLAY FAN COIL GRAPHIC AND AS A MINIMUM SHALL DISPLAY STATUS OF POINTS LISTED IN INTEGRATION TABLE BELOW.
5. THERMOSTATS SHALL ALLOW MANUAL LOCAL OVERRIDE AFTER-HOURS.
6. THERMOSTATS SHALL BE PROGRAMMED TO RESTRICT RANGE OF HEATING AND COOLING SETPOINT ADJUSTABLE AT THE THERMOSTAT. COORDINATE ALLOWABLE RANGE WITH DISTRICT REPRESENTATIVE.

| MINIMUM BACNET POINT INTEGRATION POINTS PER ZONE |
|---|
| ON/OFF STATUS |
| ON/OFF COMMAND |
| MODE STATUS |
| MODE COMMAND |
| FAN SPEED STATUS |
| FAN SPEED COMMAND |
| SET POINT STATUS |
| SET POINT COMMAND |
| ROOM TEMP STATUS |




2 VRF FAN COIL CONTROL DIAGRAM




| MINIMUM BACNET POINT INTEGRATION POINTS PER ZONE |
|---|
| ON/OFF STATUS |
| ON/OFF COMMAND |
| MODE STATUS |
| MODE COMMAND |
| FAN SPEED STATUS |
| FAN SPEED COMMAND |
| SET POINT STATUS |
| SET POINT COMMAND |
| ROOM TEMP STATUS |

SEQUENCE OF OPERATION:

1. EACH INDOOR FAN COIL SHALL BE CONTROLLED BY MANUFACTURER'S WALL MOUNTED THERMOSTAT AND OPERATE UNDER OWN INTERNAL CONTROL TO MAINTAIN ROOM SETPOINT.
2. EACH FAN COIL SHALL BE CONNECTED TO SCHNEIDER ELECTRIC EMS THROUGH BACNET INTEGRATION CARD.
3. FAN COIL OCCUPANCY SCHEDULES, OCCUPIED SETPOINTS, AND UNOCCUPIED SETPOINTS SHALL BE SET BY THE EMS. COORDINATE SCHEDULES AND SETPOINTS WITH DISTRICT REPRESENTATIVE.
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5. THERMOSTATS SHALL ALLOW MANUAL LOCAL OVERRIDE AFTER-HOURS.
6. THERMOSTATS SHALL BE PROGRAMMED TO RESTRICT RANGE OF HEATING AND COOLING SETPOINT ADJUSTABLE AT THE THERMOSTAT. COORDINATE ALLOWABLE RANGE WITH DISTRICT REPRESENTATIVE.
7. FOR DUCTED UNITS, FAN SHALL BE ALWAYS ON DURING OCCUPIED HOURS. OA DAMPER SHALL BE OPEN TO MINIMUM POSITION. WHEN UNIT IS OFF, DAMPER SHALL BE CLOSED.
8. ECONOMIZER CONTROL (FOR DUCTED UNITS)
   A. THE EMS UNITARY CONTROLLER SHALL CONTINUOUSLY COMPARE THE CURRENT OSA TEMPERATURE TO THE ESTABLISHED AIR ECONOMIZER HIGH LIMIT SHUT OFF (ECON LOCK OUT) TEMPERATURE SET POINT (ADJUSTABLE) AND RETURN AIR TEMPERATURE.
   B. WHEN CURRENT OSA TEMP IS LESS THAN OR EQUAL TO ECON LOCK OUT TEMP AND THE RA TEMPERATURE, EMS UNITARY CONTROLLER SHALL USE THE OUTSIDE AIR FOR FREE COOLING.
   C. WHEN THE OUTDOOR AIR DAMPER IS OPEN 100% FOR MORE THAN 5 MINUTES (ADJ.) AND THE NEED-COOLING SIGNAL CONTINUES TO INCREASE OR REACHES A MAXIMUM OF 100%, MECHANICAL COOLING WILL BE ACTIVATED.
   D. THE ECONOMIZER WILL REMAIN IN USE DURING MECHANICAL COOLING AS LONG AS DISCHARGE AIR TEMPERATURE REMAINS ABOVE 55°F (ADJ.) AND CURRENT OSA TEMP IS LESS THAN ECON LOCK OUT TEMP AND RETURN AIR TEMP.
   E. WHEN OSA TEMP IS ABOVE ECON LOCK OUT TEMP OR RETURN AIR TEMP, ECONOMIZER WILL BE DEACTIVATED AND ECONOMIZER SHALL BE COMMANDED TO MINIMUM CFM SETPOINT.
   I. ECONOMIZER WILL BE COMMANDED TO MINIMUM CFM WHEN UNIT IS IN HEATING MODE.

3 SPLIT SYSTEM CONTROL SCHEMATIC


AGENCY APPROVAL DSA# XX-XXXXXXXXX

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — MEIN SERTTUN — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

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| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## CONTROLS - MECHANICAL

INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
# 1MP-501

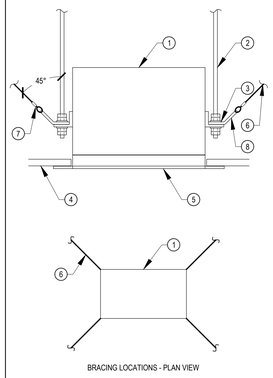
DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

DATE PLOTTED: 4/17/2024 9:18 PM

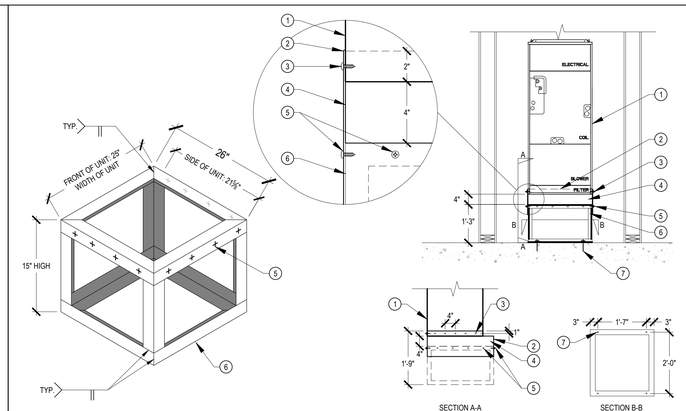
B




DETAIL NOTES:

1. CEILING CASSETTE UNIT. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). ATTACH TO STRUCTURE. MAX. LENGTH 19" W/O ROD STIFFENER. PROVIDE ROD STIFFNER WHERE ROD LENGTH FOR SEISMIC BRACING TO UPPER ATTACHMENT EXCEEDS 18", SEE DETAIL 6/1MP-601. BRACING & NOTES #6 - 8 ONLY APPLY IF ROD IS > 12".
3. FACTORY-INTEGRAL BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF BRACKET. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. CEILING ASSEMBLY. SEE ARCHITECT'S DRAWINGS.
5. FACTORY GRILLE.
6. 3/16"Ø AIRCRAFT CABLE, PRETENSIONED AT 5 LBS, TYP. ATTACH TO STRUCTURE. SEE TOP CONNECTION DETAIL 9/1MP-601.
7. CABLE CLAMP, EACH END.
8. UNISTRUT LS500 PIVOT FITTING, TYP.
9. FOR TOP CONNECTIONS REFER TO TOP CONNECTION DETAIL 9/1MP-601.

12 CEILING FAN COIL MOUNTING N.T.S.



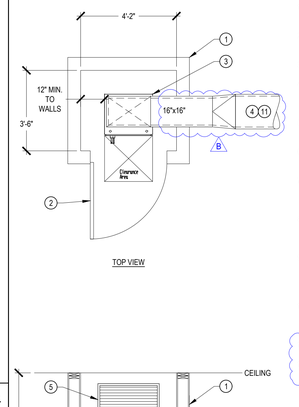

DETAIL NOTES:

1. AIR HANDLER. SEE PLANS FOR LOCATIONS.
2. 20 GA SHEET METAL FROM AIR HANDLER STAND EXTENDED 2" ABOVE FILTER BOX ON REAR, LEFT, AND RIGHT SIDES.
3. SECURE AIR HANDLER TO STAND W/ #14x3/4" SM SCREWS AT 4" O.C ON (3) SIDES (BACK, LEFT, AND RIGHT SIDES). FILTER BOX ACCESS (FRONT OF UNIT) TO REMAIN OPEN. ENSURE REFRIGERANT AND CONDENSATE PIPES DO NOT BLOCK FILTER BOX ACCESS.
4. 4" FILTER BOX WITH TOOL-LESS ENTRY HINGED ACCESS PANEL.
5. ATTACH 20 GA SHEET METAL TO STAND W/ #14x3/4" SMS AT 6" O.C. ALL AROUND ALL SIDES.
6. AIR HANDLER STAND W/ 1-1/2"x1-1/2"x1/4" ANGLE IRON FRAME, ALL WELDED, MITERED CORNERS.
7. SECURE STAND TO CONCRETE FLOOR WITH (4) HILTI KB-TZ2 SS 3/8"Øx2-1/2", 2" MIN EMBEDMENT, ESR-4266, (2) ON FRONT AND BACK SIDES.

NOTE:

1. AH-2-12A & C HAVE A WIDTH OF 25" AND A DEPTH OF 21½".

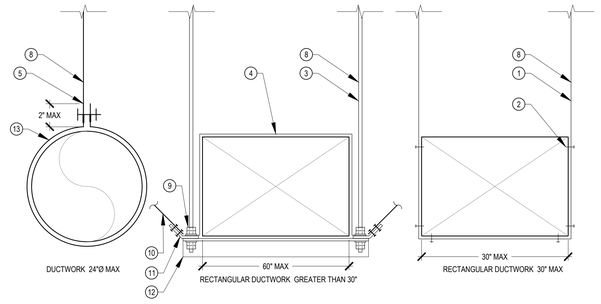
2 AIR HANDLER AND STAND MOUNTING N.T.S.




DETAIL NOTES:

1. CLOSET ENCLOSURE, SEE ARCHITECT DRAWINGS.
2. 3'W x 6'-8"H DOOR. SEE ARCHITECT DRAWINGS.
3. AIR HANDLER, SEE PLANS.
4. EXPOSED SUPPLY DUCT, SEE PLANS FOR SIZES. SEE ARCHITECT DRAWINGS FOR PAINTING.
5. RETURN REGISTER UP HIGH ABOVE DOOR, SEE PLANS FOR SIZES.
6. PROVIDE FLEX CONNECTOR AT DUCT CONNECTION.
7. 4" FILTER RACK W/ TOOL LESS HINGED ACCESS FOR 2" MERV 13 FILTERS.
8. REFRIGERANT PIPING TO HEAT PUMP UNIT ON ROOF, SEE PLANS FOR ROUTING.
9. PRIMARY CD PIPING TO NEAREST SINK TAIL PIECE, SECONDARY CD PIPING THRU EXTERIOR WALL & DAYLIGHT LOW ON WALL OUTSIDE.
10. ANGLE IRON FRAME STAND. FOR FRAME STAND & MOUNTING DETAILS SEE 2/1MP-601.
11. ACOUSTIC LINED DUCTS.
12. FOR VERTICAL DUCT SUPPORT SEE DETAIL 15/1MP-602.

1 AIR HANDLER IN CLOSET ENCLOSURE N.T.S.

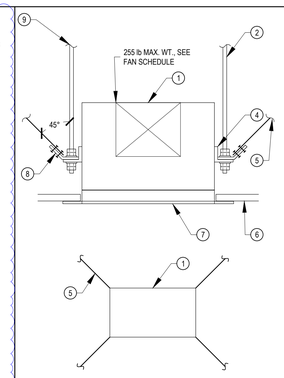



DETAIL NOTES:

1. 1"x16 GA HANGER STRAP. LENGTH AS REQUIRED, TYP. 100 LBS MAX PER STRAP.
2. #10 SMS, TYP
3. 3/8"Ø HANGER ROD
4. 1"x18 GA STRAP OVER DUCT.
5. 1-1/2"x 16GA HANGER STRAP W/ 3/8"Ø BOLT, NUT AND STAR WASHER, TYP. 100 LBS MAX PER STRAP.
6. NOTE # NOT USED.
7. NOTE # NOT USED.
8. SEE 8/1MP-601 AND 9/1MP-601 FOR TOP CONNECTION
9. DOUBLE NUTS WITH LOCKWASHER, TOP AND BOTTOM.
10. 3/16 Ø GALV. PRETENSIONED AIRCRAFT BRACING CABLE, ASTM A1023, TYP. SEE 9/1MP-601 FOR TOP CONNECTION.
11. TOLCO FIG 991 CABLE SWAY BRACE ATTACHMENT W/ CABLE CLAMP, EACH END.
12. 2" x 2" x 1/4" ANGLE.
13. 1" x 16 GAUGE CONTINUOUS COLLAR DRAWN STRAP TIGHT AROUND DUCT.

NOTE:
1. HANGER SHALL BE LOCATED AT 8'-0" O.C. MAX AND AT ALL CHANGES IN DIRECTION.
2. DUCT SUPPORTS SHOWN W/O BRACING SHALL HAVE A CROSS SECTIONAL AREA LESS THAN 6 SQFT & MAX. WEIGHT OF 20 LB /FT.

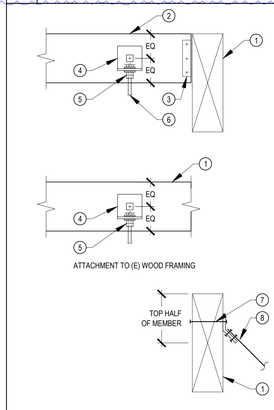
7 DUCT HANGER N.T.S.




DETAIL NOTES:

1. CEILING EXHAUST FAN. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). ATTACH TO STRUCTURE. MAX. LENGTH 19" W/O ROD STIFFENER. PROVIDE ROD STIFFNER WHERE ROD LENGTH FOR SEISMIC BRACING TO UPPER ATTACHMENT EXCEEDS 18", SEE DETAIL 6/1MP-601.
3. NOTE # NOT USED
4. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
5. 3/16"Ø AIRCRAFT CABLE, PRETENSIONED AT 5 LBS, TYP. ATTACH TO STRUCTURE, SEE TOP CONNECTION DETAIL 9/1MP-601.
6. CEILING ASSEMBLY. SEE ARCHITECTS DRAWINGS.
7. FACTORY GRILLE.
8. TOLCO FIG 991 CABLE SWAY BRACE ATTACHMENT W/ CABLE CLAMP, EACH END.
9. FOR TOP CONNECTIONS REFER TO TOP CONNECTION DETAIL 9/1MP-601.

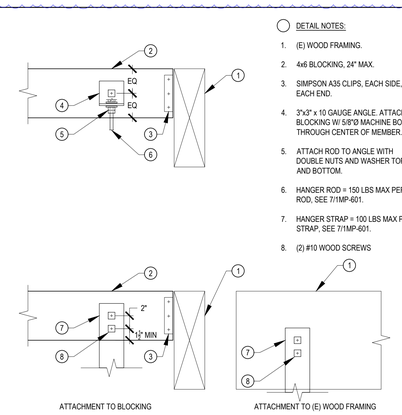
5 CEILING EXHAUST FAN OR ERV DETAIL (HANGING OPTION 2) N.T.S.




DETAIL NOTES:

1. (E) WOOD FRAMING.
2. 4x6 BLOCKING, 24" MAX.
3. SIMPSON A35 CLIP, EACH SIDE, EACH END.
4. 3"x3" x 10 GAUGE ANGLE. ATTACH TO BLOCKING W/ 5/8"Ø MACHINE BOLT THROUGH CENTER OF MEMBER.
5. ATTACH ROD TO ANGLE WITH DOUBLE NUTS AND WASHER TOP AND BOTTOM.
6. HANGER ROD = 150 LBS MAX PER ROD, SEE 7/1MP-601.
7. 5/8"Ø THROUGH BOLT .
8. TOLCO FIG 991 CABLE SWAY BRACE ATTACHMENT W/ CABLE CLAMP, EA END.

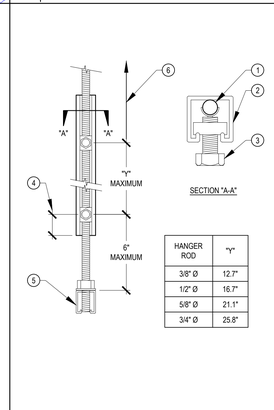
9 TOP CONNECTION N.T.S.




DETAIL NOTES:

1. (E) WOOD FRAMING.
2. 4x6 BLOCKING, 24" MAX.
3. SIMPSON A35 CLIPS, EACH SIDE, EACH END.
4. 3"x3" x 10 GAUGE ANGLE. ATTACH TO BLOCKING W/ 5/8"Ø MACHINE BOLT THROUGH CENTER OF MEMBER.
5. ATTACH ROD TO ANGLE WITH DOUBLE NUTS AND WASHER TOP AND BOTTOM.
6. HANGER ROD = 150 LBS MAX PER ROD, SEE 7/1MP-601.
7. HANGER STRAP = 100 LBS MAX PER STRAP, SEE 7/1MP-601.
8. (2) #10 WOOD SCREWS

8 TOP CONNECTION N.T.S.




| HANGER ROD | "Y" |
|---|---|
| 3/8" Ø | 12.7" |
| 1/2" Ø | 16.7" |
| 5/8" Ø | 21.1" |
| 3/4" Ø | 25.8" |

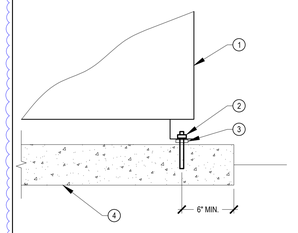
DETAIL NOTES:

1. HANGER ROD
2. UNISTRUT P1000 VERTICAL STIFFENER
3. UNISTRUT P2486 VERTICAL STIFFENER
4. 2" MAXIMUM FROM END, TYP.
5. TRAPEZE OR HANGER, TYP.
6. 6" MAXIMUM TO TOP CONNECTION.

NOTE:

1. VERTICAL STIFFENER NOT REQUIRED IF TOTAL TOD LENGTH DOES NOT EXCEED THE "Y" DIMENSION.
2. MINIMUM OF STIFFENER ASSEMBLY CLAMPS AS REQUIRED BY MANUFACTURER.

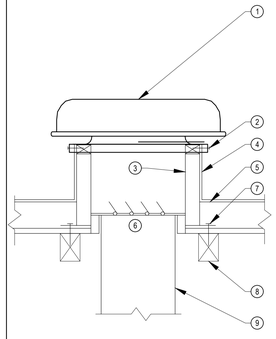
6 ROD STIFFENER N.T.S.




DETAIL NOTES:

1. HEAT PUMP/CONDENSING UNIT. FOR LOCATION, SEE PLANS. ENSURE UNIT IS LEVEL.
2. PRE-INSTALLED 3/8"Ø SS HILTI KWIK BOLT TZ2 WEDGE ANCHOR. MINIMUM 2" EMBEDMENT. TYP OF 4.
3. 3/8" THICK NEOPRENE ISOLATOR PAD, TYP. OF 4.
4. (E) CONCRETE HOUSEKEEPING PAD. PROVIDE (N) HOUSEKEEPING PADS IF REQUIRED TO ACCOMMODATE (N) EQUIPMENT.

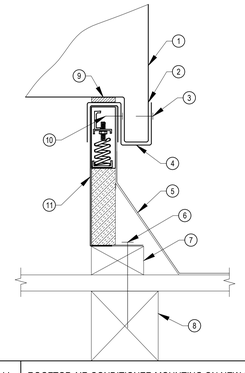
3 SPLIT SYSTEM HEAT PUMP/CONDENSING UNIT MOUNTING ON SLAB N.T.S.




DETAIL NOTES:

1. ROOF HOOD.
2. SECURE TO ROOF CURB WITH #12 SELF TAPPING SCREWS AT 12" ON CENTER. MINIMUM 2 PER SIDE.
3. FACTORY CURB WITH NAILER.
4. FOR ROOFING AND FLASHING, SEE ARCHITECT'S DRAWINGS.
5. ROOF DECK.
6. BACKDRAFT DAMPER.
7. 3/8"Ø LAG BOLT THRU CURB AND ROOF WITH 3" MINIMUM EMBEDMENT INTO BLOCKING.
8. 4x BLOCKING. SECURE TO STRUCTURE WITH SIMPSON A35 CLIPS, EACH SIDE & EACH END.
9. DUCT SIZE PER PLANS.

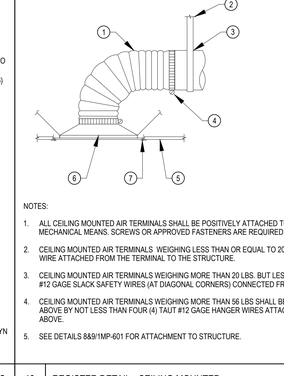
13 ROOF HOOD MOUNTING N.T.S.



DETAIL NOTES:

1. UNIT. FOR LOCATION, SEE PLANS
2. UNIT BASE RAIL, 14 GAUGE STEEL
3. 14 GA. x 7"L HOLD DOWNS SECURED TO UNIT BASE RAIL WITH (4) #10 x1/2" TEK SCREWS, TYP. (2) @ SHORT SIDES & (3) @ LONG SIDES. SPACE EVENLY W/ 5" TO CORNER DISTANCES.
4. UNIT HOLD DOWNS AROUND CURB W/ 16" MAX. SPACING BETWEEN HOLD DOWNS. MIN. 3 PER A SIDE.
5. FOR FLASHING, SEE ARCHITECT'S DRAWINGS
6. SEE STRUCTURAL DETAILS FOR ANCHORAGE INFORMATION.
7. PRESSURE TREATED DOUGLAS FIR LEVELING RAIL
8. BLOCKING, SEE STRUCTURAL DRAWINGS.
9. SEALING GASKET
10. SECURE HOLD DOWN TO UNIT CURB WITH (4) #10 x 1/2" TEK SCREWS, TYP.
11. VIBRATION ISOLATION CURB BY UNIT MFR. 2" DEFLECTION ISOLATOR CALDYN CQA TYPE (SEE OPM-0401-13 REPORT FOR DETAILS)

11 ROOFTOP AIR CONDITIONER MOUNTING ON NEW CURB N.T.S.



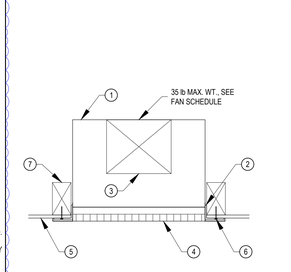
NOTES:

1. ALL CEILING MOUNTED AIR TERMINALS SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEM BY MECHANICAL MEANS. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED.
2. CEILING MOUNTED AIR TERMINALS WEIGHING LESS THAN OR EQUAL TO 20 LBS. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL TO THE STRUCTURE.
3. CEILING MOUNTED AIR TERMINALS WEIGHING MORE THAN 20 LBS. BUT LESS THAN OR EQUAL TO 56 LBS SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL TO THE STRUCTURE ABOVE.
4. CEILING MOUNTED AIR TERMINALS WEIGHING MORE THAN 56 LBS SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL TO THE STRUCTURE ABOVE.
5. SEE DETAILS 8&9/1MP-601 FOR ATTACHMENT TO STRUCTURE.

DETAIL NOTES:

1. FLEX DUCT @ CEILINGS (5'-0" MAX LENGTH).
2. SEE 8/1MP-601 FOR HANGER STRAP AND TOP CONNECTION.
3. METAL DUCT.
4. 3/8" BAND ON DUCT COLLARS, (TYP.).
5. CEILING, SEE ARCHITECT'S DRAWINGS.
6. REGISTER.
7. #10-1-1/4" SMS ATTACHED TO T-BAR AND AIR TERMINAL FRAME. MIN 4 ATTACHMENTS.

10 REGISTER DETAIL - CEILING MOUNTED N.T.S.




DETAIL NOTES:

1. EXHAUST FAN. FOR LOCATION, SEE PLANS.
2. FACTORY-SUPPLIED BRACKETS. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
3. DUCTWORK. CONNECT TO FAN WITH FLEX CONNECTOR. FOR SIZES, SEE FLOOR PLANS.
4. FACTORY GRILLE ATTACHED TO FAN HOUSING PER MANUFACTURES RECOMMENDED INSTALLATION INSTRUCTIONS.
5. CEILING ASSEMBLY. SEE ARCHITECT'S DRAWINGS.
6. FACTORY MOUNTING BRACKET ATTACHED TO 2x6 BLOCK W/ (4) - #10x2" WOOD SCREW, ONE AT EA CORNER.
7. 2x6 BLOCKING ATTACHED TO (E) FRAMING W/ SIMPSON A35 EA END.

4 CEILING EXHAUST FAN DETAIL (MOUNTING OPTION 1) N.T.S.

AGENCY APPROVAL DSA# XX-XXXXXXXXX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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — WEIN SER TYUN — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |


THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.


PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

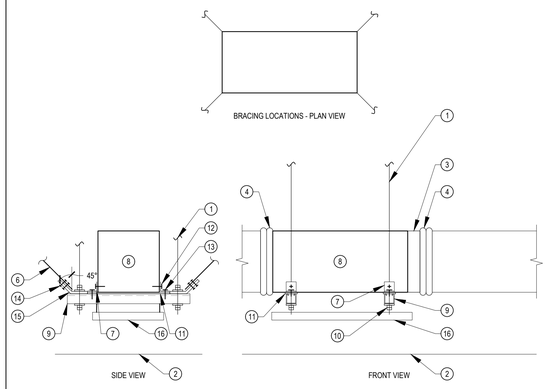
SHEET TITLE
## DETAILS - MECHANICAL & PLUMBING
INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
# 1MP-601
DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

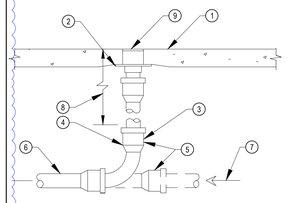

DATE PLOTTED: 4/17/2024 9:18 PM FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg




DETAIL NOTES:

1. 3/8"Ø THREADED ROD HUNG FROM CEILING, TYP. OF 4. SEE 9/1MP-601 FOR TOP CONNECTION. SEE DETAIL 6/1MP-601 FOR ROD STIFFENER.
2. DROP CEILING.
3. AT AIR HANDLER RETURN, INSTALL NEW 4" FILTER BOX THAT CAN FIT EITHER 2" OR 4" FILTER. PROVIDE WITH TOOL-LESS HINGED FILTER ACCESS PANEL.
4. PROVIDE FLEX CONNECTOR AT CONNECTION TO DUCT.
5. NOTE # NOT USED.
6. 3/16" DIA. GALV PRETENSIONED AIRCRAFT BRACING CABLE, ASTM A1023. SEE 9/1MP-601 FOR TOP CONNECTION.
7. 1-1/2" x 1-1/2" x 1-1/2" WIDE x 1/8" THICK ANGLE BRACKET, TYP. OF 4.
8. AIR HANDLER. SEE PLANS FOR LOCATION.
9. UNISTRUT P1000 CHANNEL, TYP OF 2.
10. SECURE THREADED ROD TO CHANNEL USING DOUBLE NUT AND WASHER.
11. NEOPRENE ISOLATION PAD BETWEEN AIR HANDLER AND STRUT CHANNEL.
12. ATTACH AIR HANDLER TO ANGLE BRACKET WITH #10 SHEET METAL SCREW. TYP. OF 4 LOCATIONS.
13. ATTACH ANGLE BRACKET TO STRUT CHANNEL WITH CHANNEL NUT AND WASHER. TYP. OF 4 LOCATIONS.
14. CABLE CLAMP, TYP. OF 4.
15. TOLCO FIG 990 CABLE SWAY BRACE ATTACHMENT, EACH END.
16. PROVIDE DRAIN PAN.

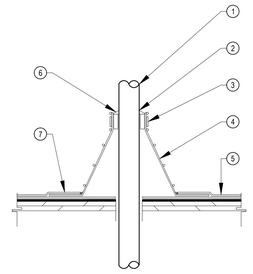
7 AIR HANDLER - HORIZONTAL N.T.S.



DETAIL NOTES:

1. (E) FLOOR SLAB ON GRADE
2. MEMBRANE CLAMP
3. LONG SWEEP ELBOW AT END OR TURN OF RUN
4. HUB AND SPIGOT CAST IRON PIPE BELOW FLOOR
5. COMBINED WYE AND EIGHT BEND IN RUN ENTER TOP OF PIPE.
6. SANITARY SEWER LINE
7. DIRECTION OF FLOW
8. AS REQUIRED DEPTH OF SEWER
9. ADJUSTABLE FLOOR GRATE. PROVIDE FINAL ADJUSTMENT AND GROUT FINISH AS REQUIRED AFTER FLOOR FINISHES ARE COMPLETE.

4 FLOOR CLEANOUT DETAIL N.T.S.



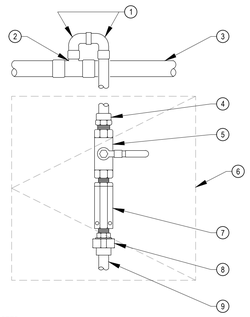
DETAIL NOTES:

1. PIPE. SEE DWGS FOR SIZE.
2. SEAL WATERTIGHT WITH MASTIC.
3. STAINLESS STEEL CLAMPING RING.
4. PRE-MOLDED PIPE FLASHING.
5. (E) ROOF. SEE ARCH DWGS.
6. PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.
7. SEAL FLASHING WATERTIGHT TO ROOF PER ROOFING MANUFACTURER'S INSTRUCTIONS.

NOTE:

1. FIELD VERIFY ACTUAL ROOFING MATERIAL.

1 PIPE PENETRATION N.T.S.



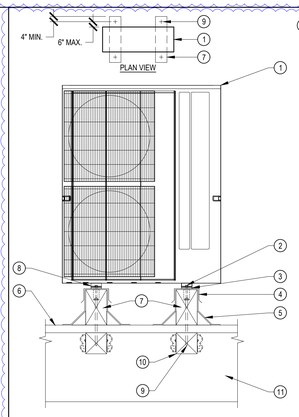
DETAIL NOTES:

1. 1/2" 90° STREET ELLS OFF TOP OF CW SUPPLY LINE TO PREVENT DEBRIS FROM ENTERING TRAP PRIMER.
2. TEE.
3. CW SUPPLY LINE.
4. ADAPTER.
5. 1/2" BALL VALVE.
6. WALL ACCESS PANEL.
7. TRAP PRIMER WITH INTEGRAL BACKFLOW PREVENTER AND VACUUM BREAKER, PPP PR-500 PRIME-RITE OR EQUAL. MOUNT TRAP PRIMER MIN 12" AFF FOR EVERY 20' OF PRIMER LINE.
8. UNION.
9. RUN 1/2" CW DOWN TO BELOW GRADE. THEN EXTEND TO FLOOR DRAIN.

NOTES:

1. UP TO FOUR (4) FLOOR DRAINS MAY BE SERVED BY ONE (1) TRAP PRIMER. INSTALL DISTRIBUTION UNIT PPP SERIES "DU" OR EQUAL, DOWNSTREAM OF UNION. DISTRIBUTION UNIT TO ALSO BE ACCESSIBLE FROM WALL ACCESS PANEL.
2. COMBINE SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTORS BEHIND SINGLE WALL ACCESS PANEL WHERE POSSIBLE.

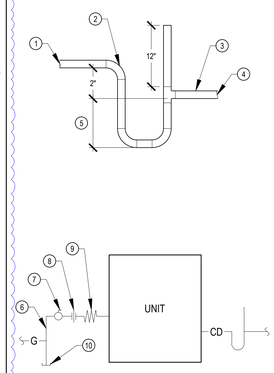
10 TRAP PRIMER N.T.S.




DETAIL NOTES:

1. HP / CU UNIT. FOR LOCATION SEE PLANS. MAX. WT. = 275 lb.
2. 3/8"Ø x 2"L LAG SCREW THRU UNIT MOUNTING FOOT INTO SLEEPER, TYP. 4.
3. 3/8" THICK NEOPRENE ISOLATOR PAD FULL LENGTH OF UNIT MOUNTING BASE FEET / RAILS, TYP.
4. 22 GA. SHEET METAL CAP OVER SLEEPER.
5. FOR FLASHING, SEE ARCHITECT'S DRAWINGS.
6. (E) ROOF DECK, SEE ARCHITECT DRAWINGS.
7. 6x10 PRESSURE TREATED SLEEPER (2 REQUIRED) TOP TO BE FLAT.
8. FACTORY MOUNTING INTEGRAL BASE FOOT / RAIL.
9. COUNTER BORE (2"L MAX.) SLEEPER & ATTACH TO BLOCKING W/ 1/2"Ø x 12"L LAG SCREW WITH 3" MIN. PENETRATION INTO BLOCKING BELOW. MIN. (2) PER SLEEPER @ EACH END.
10. 6x6 BLOCKING W/ A35 EACH SIDE EACH END.
11. (E) ROOF JOIST.

8 HP / CU MOUNTING ON SLEEPER N.T.S.



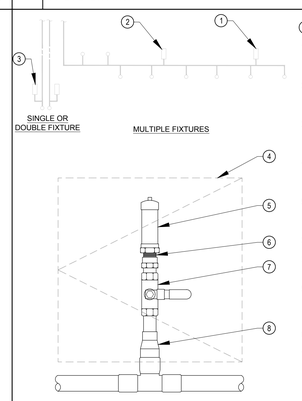
DETAIL NOTES:

1. CONNECT CD TO UNIT PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. LONG RADIUS ELBOW, TYP.
3. PITCH MINIMUM 1/8" PER FOOT.
4. ROUTE TO POC. SEE PLANS.
5. UNIT TOTAL INCHES STATIC PRESSURE ±2".
6. NATURAL GAS PIPE.
7. GAS SHUTOFF VALVE TYP AT EACH UNIT.
8. UNION.
9. FLEXIBLE CONNECTOR.
10. DIRT LEG.

NOTES:

1. CD PIPE SIZE SHALL NOT BE SMALLER THAN UNIT DRAIN CONNECTION SIZE.
2. FOR PIPE SIZES AND LOCATIONS, SEE PLANS.

5 GAS AND CONDENSATE DRAIN CONNECTION TO EQUIPMENT N.T.S.



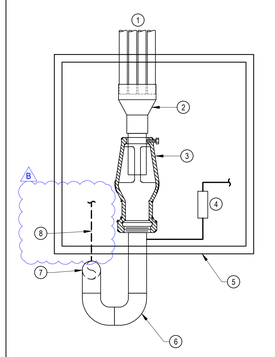

DETAIL NOTES:

1. INSTALL WATER HAMMER ARRESTOR JUST BEFORE LAST FIXTURE ON BRANCH LINE.
2. INSTALL AN ADDITIONAL WATER HAMMER ARRESTOR IF THE BRANCH LINE IS GREATER THAN 20' LONG.
3. INSTALL WATER HAMMER ARRESTOR ON ALL FIXTURES WITH QUICK CLOSING VALVES.
4. WALL ACCESS PANEL. LABEL PANEL "WATER HAMMER ARRESTOR" W/ PHENOLIC PLASTIC ENGRAVED LABEL.
5. WATTS SERIES 15 OR EQUAL WATER HAMMER ARRESTOR. SIZE PER MANUFACTURER'S INSTRUCTIONS.
6. FITTING ADAPTER.
7. BALL VALVE. SIZE TO EQUAL WATER HAMMER ARRESTOR SIZE.
8. FITTING REDUCER (IF REQUIRED).

NOTES:

1. COMBINE SHUT-OFF VALVES, TRAP PRIMERS AND WATER HAMMER ARRESTORS BEHIND SINGLE WALL ACCESS PANEL WHERE POSSIBLE.

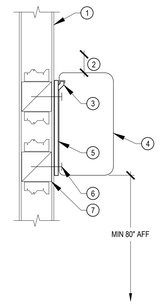
2 WATER HAMMER ARRESTOR DETAIL N.T.S.



DETAIL NOTES:

1. CONDENSATE DRAIN(S)SEE PLANS FOR LOCATIONS & SIZES
2. REDUCER FITTING IF THERE ARE MULTIPLE CONDENSATE DRAINS. SIZE TO FIT THE MULTIPLE DRAINS.
3. JR SMITH 3951T FIXED AIR GAP
4. TRAP PRIMER
5. STAINLESS STEEL WALL ACCESS PANEL
6. P-TRAP
7. TO SANITARY SEWER. SEE PLANS FOR CONTINUATION & SIZES
8. VENT

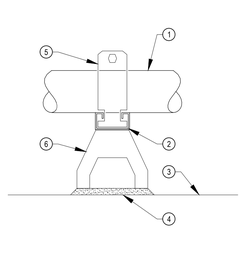
11 INDIRECT DRAIN W/ AIR GAP & TRAP PRIMER FOR CD'S N.T.S.




DETAIL NOTES:

1. (E) FULL HEIGHT WALL.
2. MAINTAIN 6" MIN FACTORY REQUIRED CLEARANCES ALL AROUND UNIT.
3. HOOK AND SNAP INDOOR UNIT ONTO THE PROVIDED MOUNTING PLATE.
4. INDOOR UNIT, SEE PLANS FOR LOCATIONS.
5. MANUFACTURER'S MOUNTING PLATE.
6. #10 X 3" MIN. WOOD SCREW INTO CENTER OF BLOCKING, TYP. OF 4 LOCATIONS.
7. 4x4 BLOCKING WITH A34 CLIPS EA SIDE EA END.

9 SPLIT SYSTEM FAN COIL MOUNTING N.T.S.



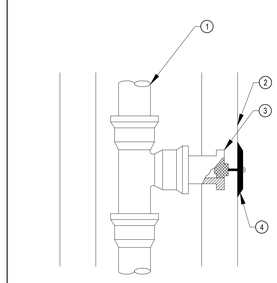
DETAIL NOTES:

1. FOR PIPE SIZES AND TYPES, SEE PLANS.
2. PROVIDE GAP BETWEEN INTEGRAL STRUT CHANNEL AND HARDWARE USED TO SECURE PIPE TO ALLOW FOR MOVEMENT OF SYSTEM.
3. ROOF DECK.
4. SET SUPPORT IN MASTIC COMPATIBLE WITH ROOF SURFACE.
5. PROVIDE STANDARD STRUT CLAMPS.
6. B-LINE DURA-BLOCK WITH INTEGRAL CHANNEL AND PIPE BRACKETS, WIDTH AS REQUIRED FOR NUMBER OF PIPES.

NOTES:

1. REFER TO SPECIFICATIONS FOR SPACING BETWEEN SUPPORT BLOCKS. ADDITIONALLY PROVIDE BLOCK WITHIN 2'-0" OF ANY CHANGE OF DIRECTION.

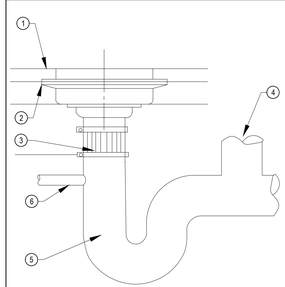
6 PIPE SUPPORT ON ROOF N.T.S.



DETAIL NOTES:

1. VENT, SOIL/WASTE OR LEADER STACK
2. WALL
3. WALL CLEANOUT
4. WALL PLATE AS SPECIFIED

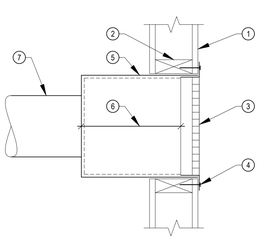
3 WALL CLEANOUT DETAIL N.T.S.



DETAIL NOTES:

1. (E) CONC. FLOOR SLAB ON GRADE. CUT & PATCH (E) FLOOR AS REQUIRED FOR INSTALLATION OF (N) FLOOR DRAIN.
2. WATERPROOF MEMBRANE
3. NO-HUB CLAMP
4. TO VENT
5. P-TRAP
6. 1/4" TRAP PRIMER SUPPLY

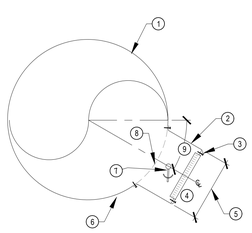
12 FLOOR DRAIN DETAIL



DETAIL NOTES:

1. WALL.
2. 2x BLOCKING ALL AROUND.
3. REGISTER.
4. #8 WOOD SCREWS, TYP. OF 4.
5. SHEET METAL BOX WITH 1/2" ACOUSTIC LINING.
6. DUCT DIAMETER PLUS 3" MINIMUM.
7. METAL DUCT.

13 REGISTER DETAIL - SIDEWALL MOUNTED N.T.S.



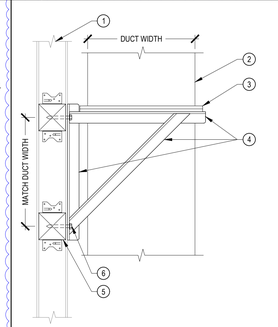
DETAIL NOTES:

1. EXPOSED METAL DUCT.
2. REGISTER BOX.
3. SELF TAPPING SHEET METAL SCREWS. 12" ON CENTER MAX. (TYP.).
4. REGISTER.
5. REGISTER BOX SHALL BE 1/4" WIDER THAN OUTSIDE EDGE OF REGISTER MOUNTING FRAME.
6. POP RIVET AT 6" ON CENTER ALL AROUND. CAULK AND SEAL FOR FINISH (TYP.).
7. LOCKING VOLUME DAMPER.
8. CUT SIDE OF REGISTER BOX TO MATCH DUCT RADIUS.
9. 0° ANGLE FOR CLASSROOMS.

NOTES:

1. PRIME AND PAINT EXPOSED DUCTS, SUPPORTS, AND REGISTERS.

14 REGISTER DETAIL - DUCT MOUNTED N.T.S.




DETAIL NOTES:

1. WOOD FRAMED WALL, SEE ARCHITECT DRAWINGS.
2. DUCT, SEE PLANS.
3. SUPPORT DUCT @ FLANGED JOINT
4. ∠1¼" x 1¼" x 1/4" FRAME SUPPORT BRACKET, WELD ALL AROUND @ ALL JOINTS. ROUND CORNERS. PRIME & PAINT SUPPORT PER ARCHITECT SPECIFICATIONS. TYP. 2 SUPPORT BRACKETS ON OPPOSITE SIDES OF DUCT.
5. 4"x4" BLOCKING W/ A34 CLIPS T&B BOTH ENDS CONNECTING TO WALL STUDS, TYP.
6. 3/8"Ø LAG SCREWS W/ WASHERS CENTERED INTO 4"x4" BLOCKING W/ MIN. 3" PENETRATION, TYP.

NOTE:

1. 12'-0" MAX DUCT LENGTH PER SUPPORT BRACKET.

15 VERTICAL DUCT SUPPORT BRACKET @ WALL N.T.S.

AGENCY APPROVAL DSA# XX-XXXXXXXXX

196

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PROFESSIONAL STAMP

REGISTERED PROFESSIONAL ENGINEER — RICHARD W. SETTLEMIRE — No. M31059 — EXP. JUNE 30, 2025 — MECHANICAL — STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |

THE ARCHITECT DOES NOT REPRESENT THAT THESE PLANS OR THE SPECIFICATIONS ARE SUITABLE FOR ANY SITE OTHER THAN THE ONE FOR WHICH THEY WERE SPECIFICALLY PREPARED. THE ARCHITECT DISCLAIMS RESPONSIBILITY FOR THESE PLANS AND SPECIFICATIONS IF THEY ARE USED IN WHOLE OR IN PART AT ANY OTHER SITE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.

PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
## DETAILS - MECHANICAL & PLUMBING
INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

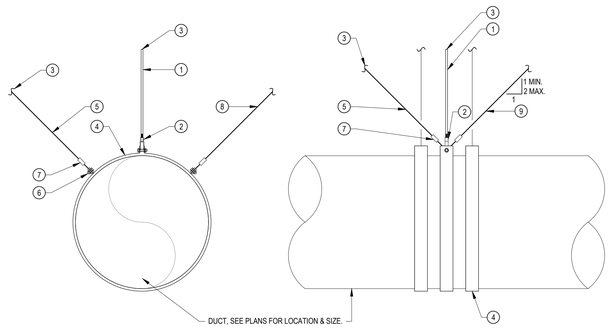
SHEET NO.
# 1MP-602

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

DATE PLOTTED: 4/17/2024 9:18 PM

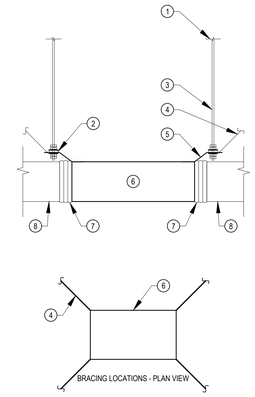



DETAIL NOTES:

1. 3/8"Ø ROD, TYP. 150 LBS MAX PER ROD.
2. GRINNELL FORGED STEEL CLEVIS END W/ 3/8"Ø BOLT, WASHER, NUT AND STAR WASHER.
3. SEE 9/1MP-601 FOR TOP CONNECTION.
4. 2½" x 12 GAUGE CONTINUOUS COLLAR DRAWN METAL STRAP TIGHT AROUND DUCT, TYP. 3
5. 3/16" DIA. GALV. PRETENSIONED AIRCRAFT BRACING CABLE, ASTM A1023, TYP.
6. 3/8"Ø BOLT, WASHER, NUT AND STAR WASHER, TYP.
7. KWIK BKC CABLE CLAMP, TYP.
8. TRANSVERSE CABLE BRACES EVERY 30'-0" MAX. SPACING.
9. LONGITUDINAL CABLE BRACES EVERY 60'-0" MAX. SPACING.

NOTE:
1. HANGER SHALL BE LOCATED AT 8'-0" O.C. MAX AND AT ALL CHANGES IN DIRECTION.

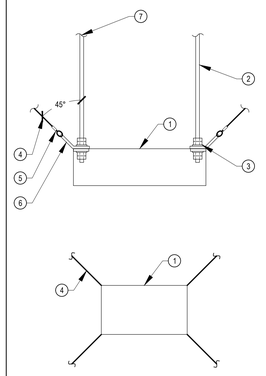
3 DUCT SUPPORT FOR DUCTWORK GREATER THAN 24"Ø N.T.S.




DETAIL NOTES:

1. FOR TOP CONNECTIONS REFER TO TOP CONNECTION DETAIL 9/1MP-601.
2. 3/8" NEOPRENE ISOLATION PAD.
3. 3/8" THREADED ROD ATTACH TO CLIP WITH DOUBLE NUTS AND LOCKING WASHER, (TYP. OF 4). ATTACH TO STRUCTURE. MAX. LENGTH 19" W/O ROD STIFFENER. PROVIDE ROD STIFFNER WHERE ROD LENGTH FOR SEISMIC BRACING TO UPPER ATTACHMENT EXCEEDS 18", SEE DETAIL 6/1MP-601. BRACING & NOTES #4 ONLY APPLY IF ROD IS > 12".
4. 3/16"Ø GALV PRETENSIONED AIRCRAFT BRACING CABLE, ASTM A1023. SEE 9/1MP-601 FOR TOP CONNECTION.
5. FACTORY INTEGRAL HANGING ROD MOUNT @ EAC CORNER. TYP. OF 4.
6. FAN COIL, SEE PLANS.
7. FLEX CONNECTOR.
8. DUCT.

1 FAN COIL MOUNTING N.T.S.




DETAIL NOTES:

1. BRANCH CONTROLLER. FOR LOCATION, SEE PLANS.
2. 3/8" THREADED ROD, (TYP. OF 4). ATTACH TO STRUCTURE. MAX. LENGTH 19" W/O ROD STIFFENER. PROVIDE ROD STIFFNER WHERE ROD LENGTH FOR SEISMIC BRACING TO UPPER ATTACHMENT EXCEEDS 18", SEE DETAIL 6/1MP-601. BRACING & NOTES #4 - 6 ONLY APPLY IF ROD IS > 12".
3. FACTORY-SUPPLIED BRACKETS. PROVIDE DOUBLE NUTS WITH LOCKWASHER AT TOP AND BOTTOM OF FLANGE. REFER TO AND FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS AND PROVIDE ALL NECESSARY HARDWARE.
4. 3/16"Ø GALV PRETENSIONED AIRCRAFT BRACING CABLE, ASTM A1023. SEE 9/1MP-601 FOR TOP CONNECTION.
5. CABLE CLAMP, EACH END.
6. UNISTRUT LS500 PIVOT FITTING, TYP.
7. FOR TOP CONNECTIONS REFER TO TOP CONNECTION DETAIL 9/1MP-601.

2 BRANCH CONTROLLER MOUNTING N.T.S.

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SHEET TITLE
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INCREMENT: INC.1

DRAWN BY: RR JOB NUMBER: 23118.01

SHEET NO.
# 1MP-603

DATE: APRIL 17, 2024

CONSTRUCTION DOCUMENTS

DATE PLOTTED: 4/17/2024 8:18 PM FILE LOCATION: E:\Shared Drives\HVAC\19-6 Nineteen Six\23146 - Rio Vista ES Mod\03 Dwgs\Rio Vista ES Mod Inc 1.dwg

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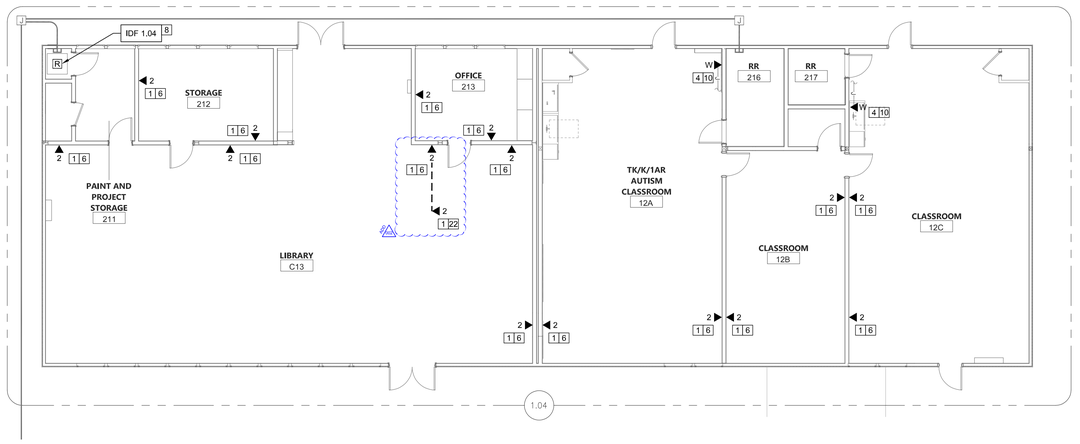


# TECHNOLOGY INFRA. FLOOR PLAN NEW - BUILDING 2

SCALE: 1/8"=1'

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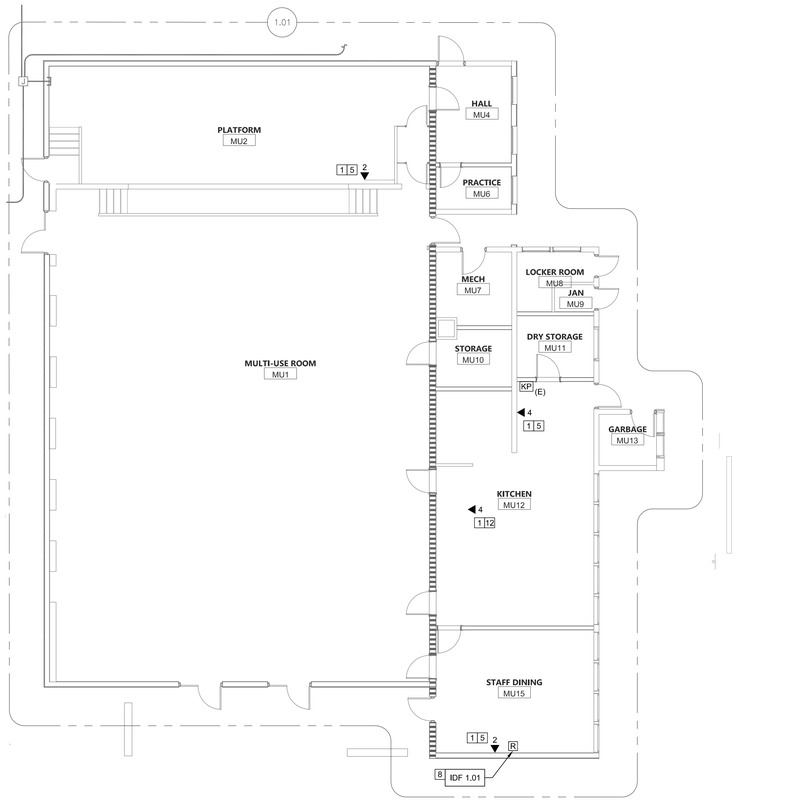


# TECHNOLOGY INFRA. FLOOR PLAN NEW - BUILDING 1

SCALE: 1/8"=1'

0 4 8 12 16

## GENERAL NOTES:

1. CONTRACTOR TO FURNISH AND INSTALL ALL PATHWAY, CABLING, ENCLOSURES, MOUNTS, TERMINATIONS, AND ACCESSORIES REQUIRED FOR COMPLETE AND FULLY OPERATIONAL TECHNOLOGY SYSTEMS.
2. CONTRACTOR TO INSTALL AND MAKE OPERATIONAL ALL OWNER-FURNISHED ACTIVE EQUIPMENT AS NOTED IN THE PLANS AND SPECIFICATIONS.
3. ALL ACTIVE EQUIPMENT FURNISHED BY THE OWNER WILL BE PROGRAMMED BY THE OWNER.
4. EXTERIOR BACKBONE CONDUIT WALL PENETRATIONS ARE EXISTING OR NEW AT AT 11'0", TYP. NO STRUCTURAL BEAMS SHALL BE ALTERED OR PENETRATED.

## SHEET NOTES:

1. PROVIDE (N) CAT6A DATA DROP, QUANTITY INDICATED.
2. ROUTE (N) CABLING VIA (N) SURFACE RACEWAY (BY ELEC.) TO EXTERIOR BACKBONE. PROVIDE (N) DATA PLATES AND DATA PLATE RACEWAY ADAPTERS.
3. PROVIDE (N) BACKBOX AND 1" CONDUIT STUB FROM DEVICE LOCATION TO NEAREST ACCESSIBLE CEILING.
4. PROVIDE (N) CUT IN BOX AND FISH CABLE TO ACCESSIBLE CEILING.
5. PROVIDE (N) WIREMOLD SURFACE BOX AND WIREMOLD SURFACE RACEWAY, AS PER PLAN. PROVIDE (N) DATA PLATES.
6. PROVIDE (N) FLUSH BACKBOX AND 1" CONDUIT STUB FROM DEVICE LOCATION TO NEAREST DATA J-BOX.
7. PROVIDE (N) CUT IN BOX AND FISH CABLE TO (N) SURFACE RACEWAY ON OPPOSITE FACE OF WALL.
8. PROVIDE (N) IDF ENCLOSURE. SEE SINGLE LINE FOR DETAILS.
9. PROVIDE (N) MDF RACK, (N) LADDER RACKING, AND OTHER MDF EQUIPMENT AS REQUIRED. SEE SINGLE LINE FOR DETAILS.
10. PROVIDE (N) 1 EA. CAT6A DATA DROP FOR WALL MOUNTED VOIP PHONE WITH PHONE HANGER WALL PLATE.
11. PROVIDE (N) CUT IN BOX AT WALL PHONE LOCATION, FISH CABLE BETWEEN (N) CUT IN BOX AND WM5400.
12. PROVIDE (N) WIREMOLD VERTICAL DROP ALUMINUM POLE BETWEEN CEILING AND SERVING COUNTER COMPUTER LOCATION.
13. MOUNT OWNER-PROVIDED VOIP PHONE HANDSET ON WALL HANGER PLATE,UTILIZE MFG. PROVIDED WALL MOUNT HARDWARE AND PATCH CABLE.
14. INSTALL OWNER-PROVIDED INTERCOM CONSOLE PHONE AT ADMIN DESK.
15. PROVIDE (N) CAT6A DATA DROP AT (E) FACP PANEL.
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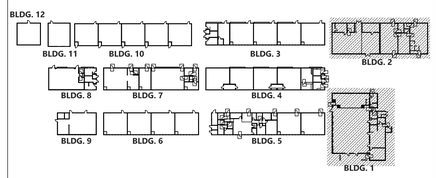
17. PROVIDE (N) 4 PAIR COPPER FEEDER TO MPOE.
18. PROVIDE (N) CAT6A DATA DROP AT (E) BMS PANEL.
19. PROVIDE 2 EA. (N) CAT6A DATA DROP AT (E) BOGEN INTERCOM HEADEND.
20. PROVIDE 1 EA. (N) CAT6A DATA DROP AT (E) VIDEO INTERCOM.
21. PROVIDE 1 EA. (N) CAT6A DATA DROP AT (E) MARQUEE ON WALL.
22. ROUTE TO (N) FLOOR BOX VIA (N) UNDER-CARPET RACEWAY (BY ELEC.)
23. PROVIDE (N) 12 PAIR COPPER FEEDER BETWEEN MPOE AND MDF. PROVIDE AND TERMINATE IN (N) 66 BLOCK AT MPOE END, AND ON CENTER PAIRS OF INDIVIDUAL KEYSTONES AT MDF END.

## KEY PLAN




AGENCY APPROVAL DSA#


196

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JOHNNY KASSTROM
EXPIRES 12/31/24
Regis. No.163629


PROFESSIONAL STAMP

LICENSED ARCHITECT MARIANA ALVAREZ ZARAGA C-36107 REN. 01-31-25 STATE OF CALIFORNIA

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| | 04-01-2024 | BID SET |
| A | 04-15-2024 | ADDENDUM 1 |
| B | 04-24-2024 | ADDENDUM 2 |

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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**
INCREMENT: INC.1

DRAWN BY: CC/JG JOB NUMBER: 23118.01

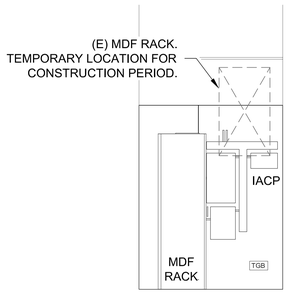
SHEET NO.

# 1T-200

DATE: JANUARY 10, 2024

CONSTRUCTION DOCUMENTS

DATE PLOTTED: 12/6/2023 5:51:28 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2022/23118_MTDUSD_RIO VISTA ES MOD_A23.rvt

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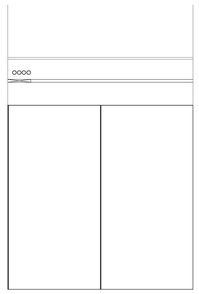

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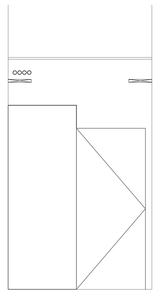

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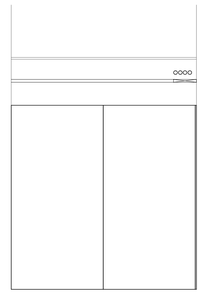
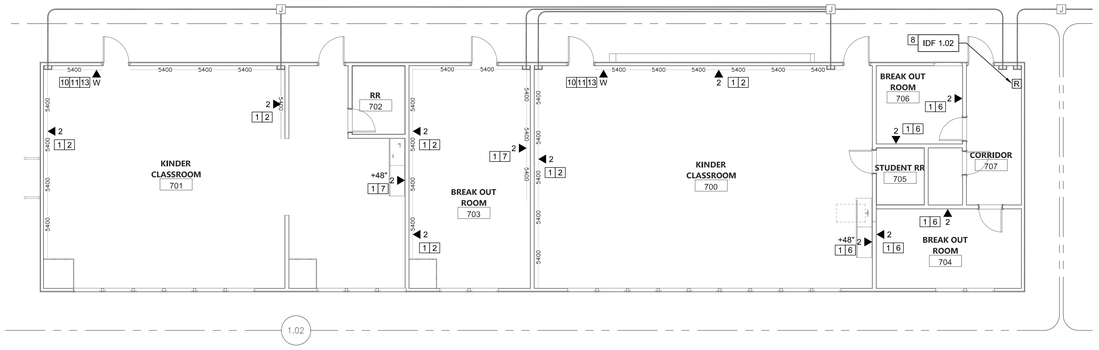


4 SOUTH INTERIOR ELEVATION

# MDF 1.00 INTERIOR ELEVATIONS

SCALE: 3/8"=1'

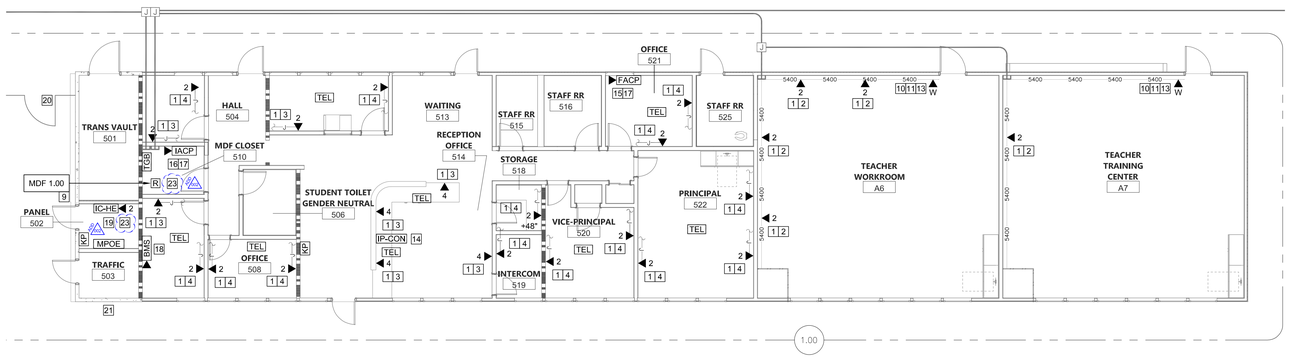
0 2 4




# TECHNOLOGY INFRA. FLOOR PLAN NEW - BUILDING 7

SCALE: 1/8"=1'

0 4 8 12 16




# TECHNOLOGY INFRA. FLOOR PLAN NEW - BUILDING 5

SCALE: 1/8"=1'

0 4 8 12 16

## GENERAL NOTES:

1. CONTRACTOR TO FURNISH AND INSTALL ALL PATHWAY, CABLING, ENCLOSURES, MOUNTS, TERMINATIONS, AND ACCESSORIES REQUIRED FOR COMPLETE AND FULLY OPERATIONAL TECHNOLOGY SYSTEMS.
2. CONTRACTOR TO INSTALL AND MAKE OPERATIONAL ALL OWNER-FURNISHED ACTIVE EQUIPMENT AS NOTED IN THE PLANS AND SPECIFICATIONS.
3. ALL ACTIVE EQUIPMENT FURNISHED BY THE OWNER WILL BE PROGRAMMED BY THE OWNER.
4. EXTERIOR BACKBONE CONDUIT WALL PENETRATIONS ARE EXISTING OR NEW AT AT 11'0", TYP. NO STRUCTURAL BEAMS SHALL BE ALTERED OR PENETRATED.

## SHEET NOTES:

1. PROVIDE (N) CAT6A DATA DROP, QUANTITY INDICATED.
2. ROUTE (N) CABLING VIA (N) SURFACE RACEWAY (BY ELEC.) TO EXTERIOR BACKBONE. PROVIDE (N) DATA PLATES AND DATA PLATE RACEWAY ADAPTERS.
3. PROVIDE (N) BACKBOX AND 1" CONDUIT STUB FROM DEVICE LOCATION TO NEAREST ACCESSIBLE CEILING.
4. PROVIDE (N) CUT IN BOX AND FISH CABLE TO ACCESSIBLE CEILING.
5. PROVIDE (N) WIREMOLD SURFACE BOX AND WIREMOLD SURFACE RACEWAY, AS PER PLAN. PROVIDE (N) DATA PLATES.
6. PROVIDE (N) FLUSH BACKBOX AND 1" CONDUIT STUB FROM DEVICE LOCATION TO NEAREST DATA J-BOX.
7. PROVIDE (N) CUT IN BOX AND FISH CABLE TO (N) SURFACE RACEWAY ON OPPOSITE FACE OF WALL.
8. PROVIDE (N) IDF ENCLOSURE. SEE SINGLE LINE FOR DETAILS.
9. PROVIDE (N) MDF RACK, (N) LADDER RACKING, AND OTHER MDF EQUIPMENT AS REQUIRED. SEE SINGLE LINE FOR DETAILS.
10. PROVIDE (N) 1 EA. CAT6A DATA DROP FOR WALL MOUNTED VOIP PHONE WITH PHONE HANGER WALL PLATE.
11. PROVIDE (N) CUT IN BOX AT WALL PHONE LOCATION, FISH CABLE BETWEEN (N) CUT IN BOX AND WM5400.
12. PROVIDE (N) WIREMOLD VERTICAL DROP ALUMINUM POLE BETWEEN CEILING AND SERVING COUNTER COMPUTER LOCATION.
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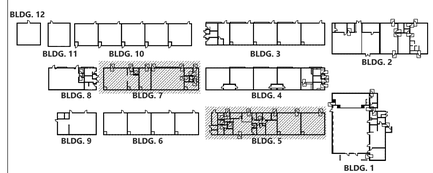
## KEY PLAN

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REVISIONS

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PROJECT OWNER & TITLE
**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**
611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE
**TECHNOLOGY INFRASTRUCTURE FLOOR PLANS NEW**
INCREMENT: INC.1

DRAWN BY: CC/JG JOB NUMBER: 23118.01

SHEET NO.
**1T-201**
DATE: JANUARY 10, 2024

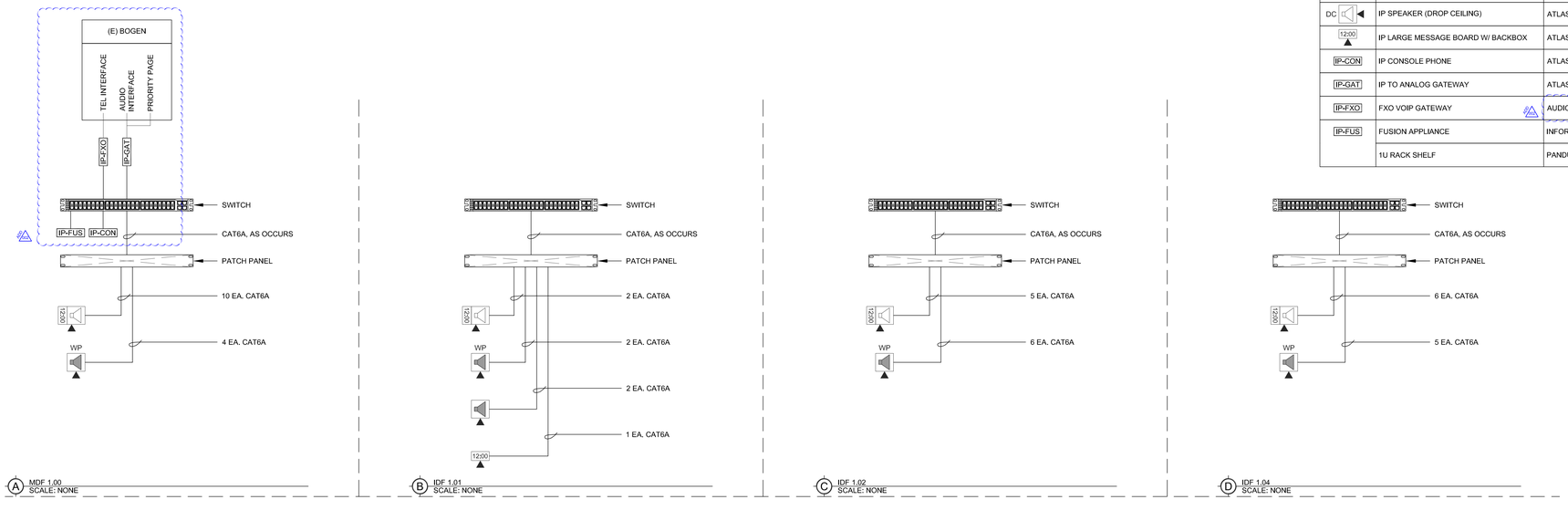
CONSTRUCTION DOCUMENTS


DATE PLOTTED: 12/6/2023 5:51:28 PM FILE LOCATION: Autodesk Docs://Mt. Diablo USD - Modernization Projects 2023/23118 _MTDUSD_RIO VISTA ES MOD_A23.rvt

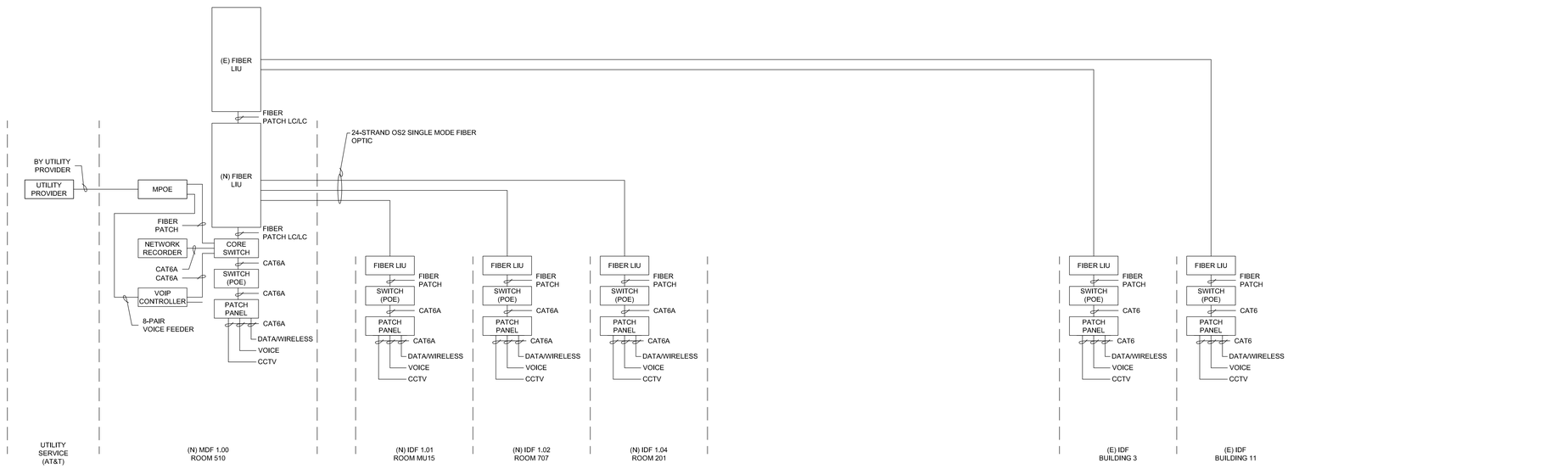
## EQUIPMENT INTERCOM SCHEDULE:

ALL EQUIPMENT AND MATERIALS ARE CONTRACTOR FURNISHED, INSTALLED AND CONFIGURED (UNO)

| SYMBOL | DESCRIPTION | MODEL | PART NUMBER | NOTES / DETAIL REFERENCES |
|---|---|---|---|---|
| 12X21 | IP CLOCK/SPEAKER COMBO | ATLAS | IP-SDMF | OFCI |
| | SURFACE BACKBOX | | IP-SEST-SD | N/A |
| WP | IP SPEAKER (EXTERIOR) | ATLAS | IP-HVP | OFCI |
| | SURFACE BACKBOX | | IP-SEST-HVP | N/A |
| | IP SPEAKER | ATLAS | IP-SM | OFCI |
| | SURFACE BACKBOX | | IP-SEST-SD | N/A |
| DC | IP SPEAKER (DROP CEILING) | ATLAS | IP-22SYSM | OFCI |
| 12:00 | IP LARGE MESSAGE BOARD W/ BACKBOX | ATLAS | IP-DM / IP-SEC-DM | OFCI |
| IP-CON | IP CONSOLE PHONE | ATLAS | IP-CONSOLE-GH | OFCI |
| IP-GAT | IP TO ANALOG GATEWAY | ATLAS | IP-ZCM1RMK | OFCI |
| IP-FXO | FXO VOIP GATEWAY | AUDIOCODES | MP114/4O/SIP | N/A |
| IP-FUS | FUSION APPLIANCE | INFORMACAST | IPTA-IFS | OFCI |
| | 1U RACK SHELF | PANDUIT | SRM19FM1 | N/A |




2 INTERCOM NETWORK SINGLE LINE DIAGRAM
SCALE: NONE




1 DATA/VOICE/CCTV NETWORK SINGLE LINE DIAGRAM
SCALE: NONE

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PROJECT OWNER & TITLE

**MOUNT DIABLO UNIFIED SCHOOL DISTRICT**
1936 Carlotta Dr. Concord
Concord, CA 94519

# RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS

611 Pacifica Ave
Bay Point, CA 94565

SHEET TITLE

**TECHNOLOGY INFRASTRUCTURE SINGLE LINES**
INCREMENT: INC.1

DRAWN BY: CC/JG JOB NUMBER: 23118.01

SHEET NO.

# 1T-701

DATE: JANUARY 10, 2024

CONSTRUCTION DOCUMENTS

NOT IN SCOPE

ABATEMENT REQUIRED

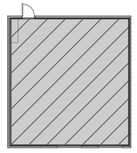
NO ABATEMENT REQUIRED

**APPENDIX**

196

560 HIGUERA STREET, SUITE C
SAN LUIS OBISPO, CA 93401
TEL (805) 476-0399

**(E) BLDG 11**



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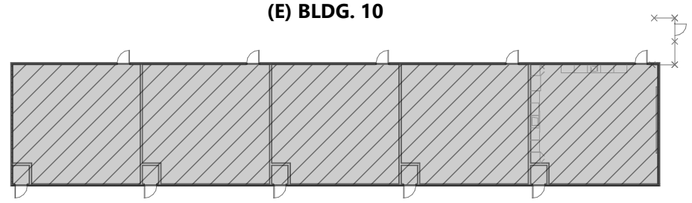

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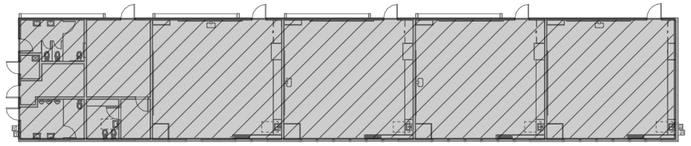

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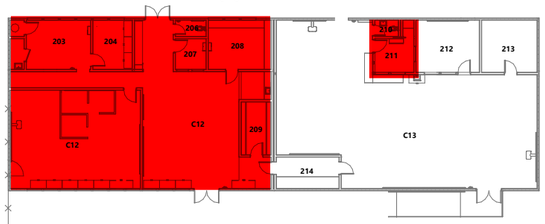


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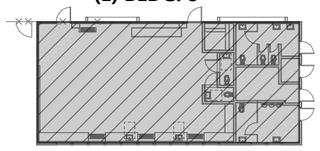

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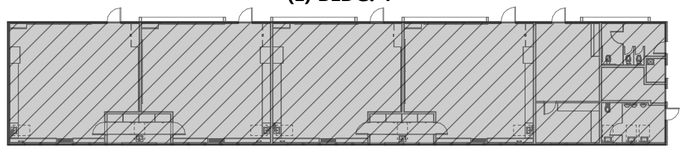

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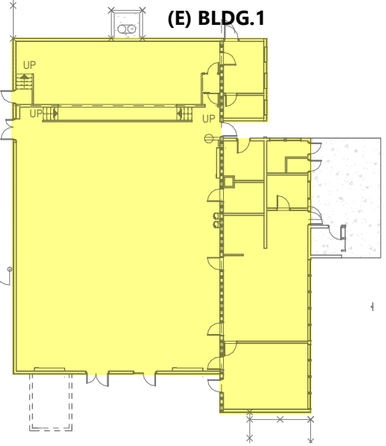


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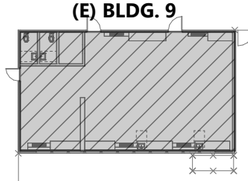

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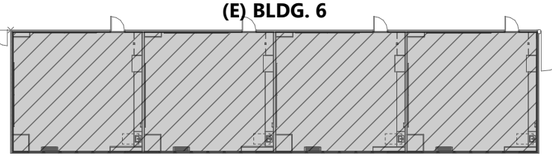

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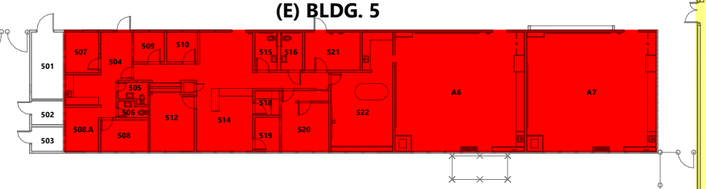


FOR FULL SCOPE OF WORK SEE ASBESTOS & LEAD IN PAINT SURVEY REPORT PREPARED BY ENVIRO-S.T.A.R. FOR MT DIABLO ELEMENTARY SCHOOL, ISSUED ON SEPTEMBER 5, 2023. THIS EXHIBIT IS MEANT TO OUTLINE SCOPE BUT FOR FULL SCOPE OF WORK SEE FULL REPORT.

# RIO VISTA ELEMENTARY SCHOOL - HAZARDOUS MATERIALS EXHIBIT: ASBESTOS ABATEMENT

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**

NOT IN SCOPE

ABATEMENT REQUIRED

NO ABATEMENT REQUIRED

**APPENDIX**

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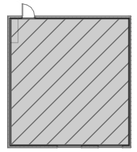

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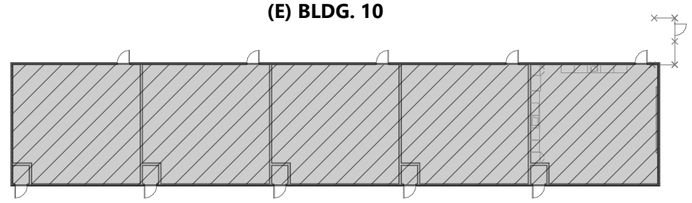
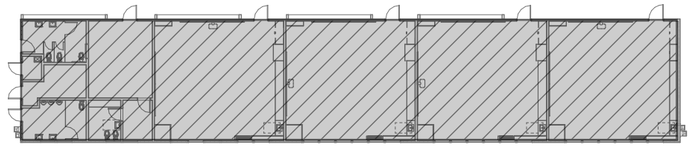
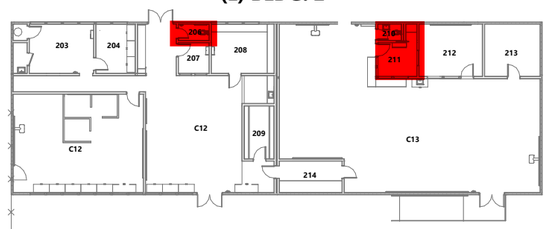


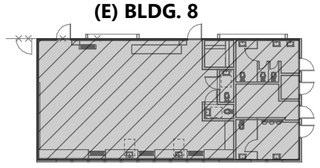
**(E) BLDG. 3**



**(E) BLDG. 2**



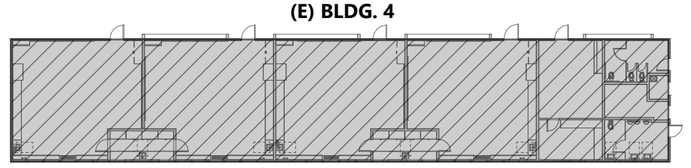

**(E) BLDG. 8**



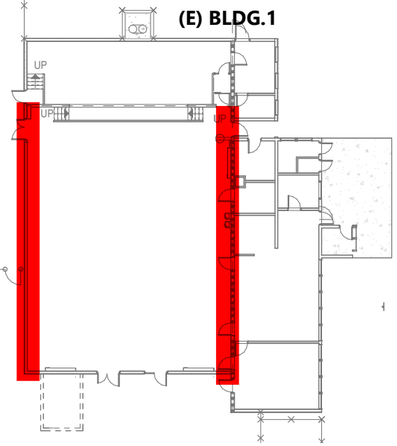
**(E) BLDG. 7**



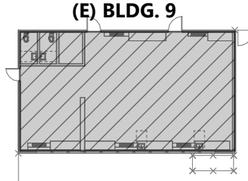

**(E) BLDG. 4**



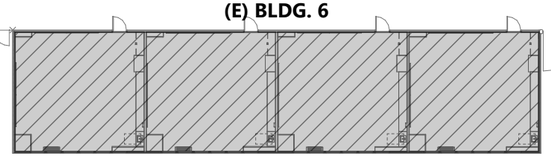
**(E) BLDG.1**




**(E) BLDG. 9**



**(E) BLDG. 6**



**(E) BLDG. 5**




FOR FULL SCOPE OF WORK SEE ASBESTOS & LEAD IN PAINT SURVEY REPORT PREPARED BY ENVIRO-S.T.A.R. FOR MT DIABLO ELEMENTARY SCHOOL, ISSUED ON SEPTEMBER 5, 2023. THIS EXHIBIT IS MEANT TO OUTLINE SCOPE BUT FOR FULL SCOPE OF WORK SEE FULL REPORT.

# RIO VISTA ELEMENTARY SCHOOL - HAZARDOUS MATERIALS EXHIBIT: LEAD ABATEMENT

**RIO VISTA ES MODERNIZATION & SITE IMPROVEMENTS**