darden
architects

6790 N. West Avenue
Fresno, California 93711
Tel: 559.448.8051
Fax: 559.446.1765
www.dardenarchitects.com

ADDENDUM NO. 4 DATE: 03/03/23

PROJECT:
McKinley/ Fowler Elementary School- Increment 2
Fresno, CA
CUSD Bid No.: 2923

OWNER:
Clovis Unified School District
1450 E. Herndon Ave.
Clovis, CA 93611

ARCHITECT:
DARDEN ARCHITECTS, INC.
Attention: Andrew Corral/ Mike Fennacy
6790 N. West Avenue
Fresno, California 93711
T. (559) 448-8051
F. (559) 446-1765

DARDEN PROJECT NO. 2116
DSA File Nos. 10-48
DSA APPL. NO. 02-120543

NOTE: **Increment #1 drawings are to be found at the end of the current plan set for increment #2. These drawings are required for Primes to submit complete Bid Package pricing on bid day**

It will be the responsibility of the General Contractor to submit the information contained in this addendum to all its subcontractors and suppliers. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

The following additions, deletions, and revisions to the SHEETS and Project Manual are hereby made and do become a part of these Contract Documents.

PROJECT: McKinley/ Fowler Elementary School- Increment 2

INDEX OF ADDENDA TRANSMITTED HEREWITH

PROJECT MANUAL:

SPECIFICATIONS:

CHANGES TO SPECIFICATIONS ..... AD4-SP01 THRU AD4-SP05

SHEETS:

CHANGES TO SHEETS:

ARCHITECTURAL..... AD4-A01 THRU AD4-A27
STRUCTURAL ..... AD4-S01 THRU AD4-S04
MECHANICAL..... AD4-M01 THRU AD4-M04
PLUMBING ..... AD4-P01 THRU AD4-P14
ELECTRICAL ..... AD4-E01 THRU AD4-E13
OFFSITES ..... AD4-OF01 THRU AD4-OF02

ATTACHMENTS:

DOCUMENTS OR SPECIFICATIONS:

BID SUMMARY PACKAGE ..... (Pages 1 thru 91)
01 91 13 – GENERAL COMMISSIONING REQUIREMENTS ..... (Pages 1 thru 10)
23 42 23 – HVAC POWER VENTILATORS ..... (Pages 1 thru 07)
23 73 00 – AIR-TO-AIR ENERGY RECOVERY EQUIPMENT ..... (Pages 1 thru 05)
23 74 13 – PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS ..... (Pages 1 thru 10)
23 74 33 – PACKAGED, OUTDOOR, HEATING & COOLING MAKEUP AIR UNITS (Pages 1 thru 08)

SHEETS:

ARCHITECTURAL ..... AD 4-AX01 thru AD4 -AX23.
STRUCTURAL ..... AD4-SX01 thru AD4-SX04.
MECHANICAL ..... AD4-MX01 thru AD4-MX04.
PLUMBING ..... AD4-PX01 thru AD-PX14.
ELECTRICAL ..... AD4-EX01 thru AD4-EX13.

PROJECT MANUAL:

BIDDING AND CONTRACT REQUIREMENTS:

SPECIFICATIONS:

CHANGES TO SPECIFICATIONS:

AD4-SP01 01 11 13 – SUMMARY OF WORK:

1. Remove and replace the summary of work with the attached as indicated with an AD-4 in the upper right-hand corner.

AD4-SP02 01 91 13 – GENERAL COMMISSIONING REQUIREMENTS:

1. Insert section 01 91 13 – GENERAL COMMISSIONING REQUIREMENTS with the attached as indicated with an AD-4 in the upper right-hand corner.
2. The District will be Commissioning this project.

AD4-SP03 Refer to Specification Section 07 21 00- INSULATION:

1. Refer to 2.1 Manufacturer, a.6 Specified Rigid Roof Board insulation Product Manufacturer, insert the following manufacturer:
   a. Hunter Panels

AD4-SP04 Refer to Specification Section 08 80 00 – GLASS:

1. Refer to section 3.6 Schedules, G- Gray tinted Glass:
   a. Types G-1 and G-1T shall not b used.
   b. Door Glass currently indicated to be G-1T on Opening Schedules on Sheets X/A401 and X/A402 shall be G2-2T.

AD4-SP05 Refer to Specification Section 10 11 00- VISUAL DISPLAY BOARDS:

1. Refer to section 2.2 Materials and insert the following:

C. Exterior Marker Board Panels (Add Alternate #2)
1. 3form Laminated Glass Markerboard
a. Provide flush finish.
b. Color: Chalk
c. Matte Finish
2. Size: 7/16" Gauge glass and height and width as indicated on drawings

3. *Orientation: As indicated on the drawings*
4. *Provide hardware for a complete and seamless installation.*

AD4-SP06 Refer to Specification Section 23 42 23 – HVAC POWER VENTILATORS:

3. Remove and replace section 23 42 23 – HVAC POWER VENTILATORS with the attached as indicated with an AD-4 in the upper right-hand corner.

AD4-SP07 Refer to Specification Section 23 73 00 – AIR-TO-AIR ENERGY RECOVERY EQUIPMENT:

1. Remove and replace section 23 73 00 – AIR-TO-AIR ENERGY RECOVERY EQUIPMENT with the attached as indicated with an AD-4 in the upper right-hand corner.

AD4-SP08 Refer to Specification Section 23 74 13 – PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS:

1. Remove and replace section 23 74 13 – PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS with the attached as indicated with an AD-4 in the upper right-hand corner.

AD4-SP09 Refer to Specification Section 23 74 33 PACKAGED, OUTDOOR, HEATING & COOLING MAKEUP AIR UNITS:

1. Remove and replace section 23 74 33 – PACKAGED, OUTDOOR, HEATING & COOLING MAKEUP AIR UNITS with the attached as indicated with an AD-4 in the upper right-hand corner.

AD4-SP10 Refer to Specification Section 27 80 00 – VIDEO SURVEILLANCE:

1. Cameras shall be Owner Furnished and Contractor Installed.

SHEETS:

CHANGES TO SHEETS:

ARCHITECTURAL:

AD4-A01 Refer to All Sink/ Lav Locations:

1. All sink locations are to have OWNER FURNISHED ITEMS, Soap Dispenser and OWNER FURNISHED ITEMS, Paper Towel Dispenser, and Contractor Installed unless otherwise noted.

AD4-A02 Refer to All Building Restrooms:

2. At Staff Restrooms or where tile flooring occurs provide concrete curbs at interior walls per Detail N7-X/A101.

3. At all other restroom and Kitchen areas or where Epoxy Flooring occurs provide concrete curbs at interior walls per Detail J7-X/A101.

AD4-A03 Refer to All Building Exteriors:

1. Cement Plaster locations indicated to have Graphics or building supergraphic Lettering with Radial color changes shall be painted on over the elastomeric cement plaster system.

AD4-A04 Refer to Sheet X/A401 - OPENING SCHEDULES- DOORS- BUILDINGS A-E:

1. Refer to K9- Opening Schedule, Doors- Building D, refer to opening numbers 115b & 115c:
    a. Column indicated "Model No" Strike out SDO-A10-2M and replace with CD10-2M.
    b. Service Windows: Design is based on aluminum (SW) series, sliding service window manufactured by C.R. Laurence Co., Inc. (800) 421-614 CRL Satin Anodized Horizontal Sliding Service Window XO or OX Format with 1/4" Glass Only, Self- Closing- No Screen, With Speak Hole
2. Refer to A9- Opening Schedule, Doors- Building E, refer to opening numbers 118a a &119 b:
    a. Column indicated "Model No" Strike out FD10-2 and replace with FDO-A10-2M.
    b. Refer to Column indicated "Frame Type" strikeout HM-4 and replace with HM-4i.
    c. Service Windows are not required at these openings.
3. Refer to Specification section 08 33 00 COILING DOORS, Section 3.8 Schedules for Additional information on Model Numbers indicated.

AD4-A05 Refer to Sheet X/A201 –INTERIOR FINISH SCHEDULE:

1. Remove and Replace X/A201 - INTERIOR FINISH SCHEDULE, with the attached sheet indicated as AD4-AX01.

AD4-A06 Refer to Sheet X/A202 –INTERIOR FINISH SCHEDULE:

1. Remove and Replace X/A202 - INTERIOR FINISH SCHEDULE, with the attached sheet indicated as AD4-AX02.

AD4-A07 Refer to Sheet X/A405 –DOOR AND WINDOW FRAME ELEVATION:

1. Remove and Replace X/A405 - DOOR AND WINDOW FRAME ELEVATION, with the attached sheet indicated as AD4-AX03.

AD4-A08 Refer to Sheet X/A411 –OPENING DETAILS – HOLLOW METAL DOORS AND FRAMES:

1. Remove and Replace X/A411 - OPENING DETAILS – HOLLOW METAL DOORS AND FRAMES with the attached sheet indicated as AD4-AX04.

AD4-A09 **Refer to Sheet X/A421 - OPENING DETAILS- STOREFRONT:**

1. Remove and Replace X/A421 - OPENING DETAILS- STOREFRONT with the attached sheet indicated as AD4-AX05.

AD4-A10 **Refer to Sheet X/A511 – TYPICAL INFORMATION - EXTERIOR DETAILS – METAL WALL PANELS:**

1. Remove and Replace X/A511 - TYPICAL INFORMATION - EXTERIOR DETAILS – METAL WALL PANELS with the attached sheet indicated as AD4-AX06.

AD4-A11 **Refer to Sheet X/A512 – EXTERIOR DETAILS – METAL WALL PANELS:**

1. Remove and Replace X/A512 - EXTERIOR DETAILS – METAL WALL PANELS with the attached sheet indicated as AD4-AX07.

AD4-A12 **Refer to Sheet X/A513 – TYPICAL INFORMATION - EXTERIOR DETAILS – STANDING SEAM ROOF:**

1. Remove and Replace X/A513 – TYPICAL INFORMATION - EXTERIOR DETAILS – STANDING SEAM ROOF with the attached sheet indicated as AD4-AX08.

AD4-A13 **Refer to Sheet A/A501 - BUILDING SECTIONS:**

1. Remove and Replace A/A501 - BUILDING SECTIONS with the attached sheet indicated as AD4-AX09.

AD4-A14 **Refer to Sheet A/A504 - WALL SECTIONS:**

2. Remove and Replace A/A504 - WALL SECTIONS with the attached sheet indicated as AD4-AX10.

AD4-A15 **Refer to Sheet B/A502 –CLASSROOMS – BUILDING SECTIONS:**

1. Remove and Replace B/A502 –BUILDING SECTIONS with the attached sheet indicated as AD4-AX11.

AD4-A16 **Refer to Sheet C/A501 –BUILDING SECTIONS:**

1. Remove and Replace C/A501 –BUILDING SECTIONS with the attached sheet indicated as AD4-AX12.

AD4-A17 **Refer to Sheet D/A501 – D/A501 - BUILDING SECTIONS**

1. Remove and Replace D/A501 - BUILDING SECTIONS with the attached sheet indicated as AD4-AX13.

AD4-A18 **Refer to Sheet D/A502 -BUILDING SECTIONS AND WALL SECTIONS:**

1. Remove and Replace D/A502 –BUILDING SECTIONS AND WALL SECTIONS with the attached sheet indicated as AD4-AX14.

AD4-A19 **Refer to Sheet E/A101 –FLOOR PLAN:**

1. Remove and Replace E/A101 –FLOOR PLAN with the attached sheet indicated as AD4-AX15.

AD4-A20 **Refer to Sheet E/A102 –ENLARGED KITCHEN FLOOR PLAN AND EQUIPMENT SCHEDULE:**

1. Remove and Replace E/A102 –ENLARGED KITCHEN FLOOR PLAN AND EQUIPMENT SCHEDULE with the attached sheet indicated as AD4-AX16.

AD4-A21 **Refer to Sheet E/A104 - ENLARGED STAGE FLOOR PLAN AND DETAILS:**

1. Remove and Replace E/A104 - ENLARGED STAGE FLOOR PLAN AND DETAILS with the attached sheet indicated as AD4-AX17.

AD4-A22 **Refer to Sheet E/A105 - ENLARGED STAGE FLOOR PLANS:**

1. Remove and Replace E/A105 - ENLARGED FLOOR PLANS with the attached sheet indicated as AD4-AX18.

AD4-A23 **Refer to Sheet E/A201 - REFLECTED CEILING PLAN:**

1. Remove and Replace E/A201 - REFLECTED CEILING PLAN with the attached sheet indicated as AD4-AX19.

AD4-A24 **Refer to Sheet E/A301 - ROOF PLAN:**

1. Remove and Replace E/A301 - ROOF PLAN with the attached sheet indicated as AD4-AX20.

AD4-A25 **Refer to Sheet E/A501 - BUILDING SECTIONS:**

1. Remove and Replace E/A501 - BUILDING SECTIONS with the attached sheet indicated as AD4-AX21.

AD4-A26 **Refer to Sheet E/A504 - WALL SECTIONS:**

1. Remove and Replace E/A504 - WALL SECTIONS with the attached sheet indicated as AD4-AX22.

AD4-A27 **Refer to Sheet E/A801 –INTERIOR DESIGN – FLOOR PATTERN PLAN AND ACCENT PAINT PLAN:**

1. Remove and Replace E/A801 – BUILDING E – MPR – INTERIOR DESIGN – FLOOR PATTERN PLAN AND ACCENT PAINT PLAN with the attached sheet indicated as AD4-AX23.

STRUCTURAL:

AD4-S01 **Refer to Sheet X/S104 – TYPICAL INFORMATION TYPICAL STEEL NOTES & DETAILS:**

1. Refer to Detail J14- Steel Notes, Omit Note 18, do not provide a Steel allowance in your bid.

AD4-S02 **Refer to Sheet B/S201- FOUNDATION PLAN:**

1. Remove and Replace B/S201- FOUNDATION PLAN with the attached Sheet AD4-SX01.

AD4-S03 **Refer to Sheet B/S301- LOW ROOF FRAMING PLAN:**

1. Remove and Replace B/S301- LOW ROOF FRAMING PLAN with the attached Sheet AD4-SX02.

AD4-S04 **Refer to Sheet B/S302- HIGH ROOF FRAMING PLAN:**

1. Remove and Replace B/S302- HIGH ROOF FRAMING PLAN with the attached Sheet AD4-SX03.

AD4-S05 **Refer to Sheet B/S404- WALL SECTIONS:**

1. Remove and Replace B/S404- WALL SECTIONS with the attached Sheet AD4-SX04.

AD4-S06 **Refer to Sheet E/S201- FOUNDATION PLAN:**

1. Remove and Replace E/S201- FOUNDATION PLAN with the attached Sheet AD4-SX05.

AD4-S07 **Refer to Sheet E/S301- 2ND FLOOR, LOW ROOF & CANOPY FRAMING PLAN:**

1. Remove and Replace E/S301- 2ND FLOOR, LOW ROOF & CANOPY FRAMING PLAN with the attached Sheet AD4-SX06.

MECHANICAL:

AD4-M01 **Refer to Sheet X/M102 - MECHANICAL SCHEDULES**

1. Remove and Replace X/M102 - MECHANICAL SCHEDULES with the attached Sheet AD4-MX01.

AD4-M02 **Refer to Sheet X-M103 - MECHANICAL SCHEDULES:**

1. Remove and Replace X-M103 - MECHANICAL SCHEDULES with the attached Sheet AD4-MX02.

AD4-M03 **Refer to Sheet X-M110 - MECHANICAL SCHEDULE OF POINTS:**

1. Remove and Replace X-M110 - MECHANICAL SCHEDULE OF POINTS with the attached Sheet AD4-MX03.

AD4-M04 **Refer to Sheet X-M111 - EMS SYSTEM ARCHITECTURE:**

1. Remove and Replace X-M111 - EMS SYSTEM ARCHITECTURE with the attached Sheet AD4-MX04.

PLUMBING:

AD4-P01 **Refer to Sheet A/P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace A/P101- PLUMBING FLOOR PLAN with the attached Sheet AD4-PX01.

AD4-P02 **Refer to Sheet B-P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace B-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX02.

AD4-P03 **Refer to Sheet B-P102 - ENLARGED PLUMBING PLANS:**

1. Remove and Replace B-P102 - ENLARGED PLUMBING PLANS with the attached Sheet AD4-PX03.

AD4-P04 **Refer to Sheet C-P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace C-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX04.

AD4-P05 **Refer to Sheet C-P102 – ENLARGED PLUMBING FLOOR PLANS:**

1. Remove and Replace C-P102 – ENLARGED PLUMBING FLOOR PLANS with the attached Sheet AD4-PX05.

AD4-P06 **Refer to Sheet D-P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace D-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX06.

AD4-P07 **Refer to Sheet D-P102 - ENLARGED PLUMBING PLAN:**

1. Remove and Replace D-P102 - ENLARGED PLUMBING PLAN with the attached Sheet AD4-PX07.

AD4-P08 **Refer to Sheet E-P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace E-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX08.

AD4-P09 **Refer to Sheet E-P102 - ENLARGED PLUMBING PLANS - KITCHEN:**

1. Remove and Replace E-P102 - ENLARGED PLUMBING PLANS – KITCHEN with the attached Sheet AD4-PX09.

AD4-P10 **Refer to Sheet E-P103 - ENLARGED PLUMBING PLANS - RESTROOMS:**

1. Remove and Replace E-P103 - ENLARGED PLUMBING PLANS – RESTROOMS with the attached Sheet AD4-PX10.

AD4-P11 **Refer to Sheet K1-P101 - PLUMBING FLOOR PLAN:**

1. Remove and Replace K1-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX11.

AD4-P12 **Refer to Sheet K2-P101 - PLUMBING FLOOR PLAN:**

2. Remove and Replace K2-P101 - PLUMBING FLOOR PLAN with the attached Sheet AD4-PX12.

AD4-P13 **Refer to Sheet X-P102 - PLUMBING SCHEDULES:**

1. Remove and Replace X-P102 - PLUMBING SCHEDULES with the attached Sheet AD4-PX13.

AD4-P14 **Refer to Sheet X-P801 - PLUMBING DETAILS:**

1. Remove and Replace X-P801 - PLUMBING DETAILS with the attached Sheet AD4-PX14.

ELECTRICAL:

AD4-E01 **Refer to Sheet X/E302 – POWER SYSTEMS – PANEL SCHEDULES, DETAILS:**

1. Remove and Replace X/E302 - POWER SYSTEMS – PANEL SCHEDULES, DETAILS with the attached Sheet AD4-EX01.

AD4-E02 **Refer to Sheet X/E303 – POWER SYSTEMS – PANEL SCHEDULES:**

1. Remove and Replace X/E303 - POWER SYSTEMS – PANEL SCHEDULES with the attached Sheet AD4-EX02.

AD4-E03 **Refer to Sheet X/E304 - POWER SYSTEMS - PANEL SCHEDULES:**

1. Remove and Replace X/E304 - POWER SYSTEMS - PANEL SCHEDULES with the attached Sheet AD4-EX03.

AD4-E04 **Refer to Sheet A/E201 – BUILDING A – POWER PLAN:**

1. Remove and Replace A/E201 - BUILDING A – POWER PLAN the attached Sheet AD4-EX04.

AD4-E05 **Refer to Sheet A/E401 – BUILDING A – LOW VOLTAGE PLAN:**

1. Remove and Replace A/E401 - BUILDING A – LOW VOLTAGE PLAN the attached Sheet AD4-EX05.

AD4-E06 **Refer to Sheet B/E201 – BUILDING B – POWER PLAN:**

1. Remove and Replace B/E201 - BUILDING B – POWER PLAN the attached Sheet AD4-EX06.

AD4-E07 **Refer to Sheet B/E401 – BUILDING B – LOW VOLTAGE PLAN:**

1. Remove and Replace B/E401 - BUILDING B – LOW VOLTAGE PLAN the attached Sheet AD4-EX07.

AD4-E08 **Refer to Sheet C/E201 – BUILDING C – POWER PLAN:**

1. Remove and Replace C/E201 - BUILDING C – POWER PLAN the attached Sheet AD4-EX08.

AD4-E09 **Refer to Sheet D/E101 – BUILDING D – LIGHTING PLAN:**

1. Remove and Replace D/E101 - BUILDING D – LIGHTING PLAN the attached Sheet AD4-EX09.

AD4-E10 **Refer to Sheet D/E201 – BUILDING D – POWER PLAN:**

1. Remove and Replace D/E201 - BUILDING D – POWER PLAN the attached Sheet AD4-EX10.

AD4-E11 **Refer to Sheet E/E201 – BUILDING E – POWER PLAN:**

1. Remove and Replace E/E201 - BUILDING E – POWER PLAN the attached Sheet AD4-EX11.
2. Regarding the Additive Alternate for Building K2:
    i. If K2 is not selected, the electrical panels, transformer, and IT equipment shown in K2 will be redesigned into K1, and the equipment in K1 will be omitted.

AD4-E12 **Refer to Sheet K/E201 – BUILDING K – POWER PLAN:**

1. Remove and Replace K/E201 - BUILDING K – POWER PLAN the attached Sheet AD4-EX12.
2. Regarding the Additive Alternate for Building K2:
   i. If K2 is not selected, the electrical panels, transformer, and IT equipment shown in K2 will be redesigned into K1, and the equipment in K1 will be omitted.

AD4-E13 Refer to Sheet P/E101 – BUILDING P – ELECTRICAL PLAN AND FIRE ALARM PLAN:

1. Remove and Replace P/E101 - BUILDING P – ELECTRICAL PLAN AND FIRE ALARM PLAN the attached Sheet AD4-EX13.

OFFSITES:

AD4-OF01 Refer to the Attached Preliminary Rule-20 Drawings:

1. Insert the Preliminary Rule-20 sheets as indicated with an AD-4 in the Upper Right-hand corner.

AD4-OF02 Refer to the Attached Preliminary Gas Drawing and Material List:

1. Insert the Gas Main Drawing and Material List as indicated with an AD-4 in the Upper Right-hand corner.

END OF ADDENDUM NO. 4

INCREMENT NO. 1

Bid Package #	Bid Package Description	Contractor License Requirement (, = or)
CES-01	EARTHWORK, CONCRETE, & CMU	A, B, C-8, C-12
CES-02	SITE UTILITIES PLUMBING: DOMESTIC, SANITARY, STORM, FIRE, & GAS	A, C-36
CES-03	SITE ELECTRICAL & LOW VOLTAGE	C-10
CES-04	LANDSCAPE	C-27

INCREMENT NO. 2

Bid Package #	Bid Package Description	Contractor License Requirement (, = or)
CES-05	BUILDING CONCRETE & REBAR	B, C-8
CES-06	STRUCTURAL STEEL	C-51
CES-07	METAL PANELS, ROOFING, & SHEET METAL	C-39, C-43
CES-08	FINISH CARPENTRY	B, C-6
CES-09	METAL FRAMING, PLASTER, AND GYPSUM BOARD	C-9, C-35
CES-10	WALL MATERIALS AND ACOUSTICAL CEILINGS	C-2
CES-11	PAINTING	C-33
CES-12	GENERAL SPECIALTIES	B
CES-13	FIRE SPRINKLERS	C-16
CES-14	BUILDING PLUMBING & HVAC	C-36, C-20
CES-15	BUILDING ELECTRICAL	C-10
CES-16	OFF-SITE IMPROVEMENTS	A

B · U · S · H
CONSTRUCTION

FOWLER MCKINLEY ELEMENTARY SCHOOL

BID PACKAGES CES-01, CES-02, CES-03, & CES-04 PREVIOUSLY BID IN INCREMENT #1

CES-01 EARTHWORK, SITE CONCRETE, & CMU

Section 01 57 23 Storm Water Pollution Prevention Plan
Section 03 11 01 Concrete Formwork
Section 03 15 14 Drilled Anchors
Section 03 20 00 Reinforcement
Section 03 30 00 Cast-In-Place Concrete
Section 04 22 00 Concrete Masonry Units (CMU)
Section 07 14 16 Fluid-Applied Waterproofing
Section 07 92 00 Sealants
Section 08 70 00 Hardware
Section 08 70 00.01 Hardware schedule
Section 10 05 00 Miscellaneous Specialties (Stair Striping)
Section 10 14 53 Road and Parking Signage
Section 10 75 00 Flagpoles
Section 11 68 13 Play Equipment
Section 12 93 13 Bicycle Racks
Section 31 00 00 Offsite Development
Section 31 10 00 Site Clearing
Section 31 11 00 Clearing and Demolition
Section 31 20 00 Earthwork
Section 31 22 22 Soil Materials
Section 31 23 33 Trench Excavation and Backfill
Section 32 12 00 Pavement
Section 32 12 16 Soil Sterilization (Weed Control)
Section 32 18 16 Playground Surfacing
Section 32 19 19 Ornamental Metal
Section 32 31 13 Chain Link

CES-02 SITE UTILITIES PLUMBING: DOMESTIC, SANITARY, STORM, FIRE, & GAS

Section 03 30 00 Cast in place Concrete (As applicable to storm, sewer, manholes, thrust blocks, etc.)
Section 21 05 23 General Duty Valves for Fire Protection
Section 21 05 53 Identification for Fire Protection
Section 21 11 00 Facility Fire Suppression Water Service Piping
Section 21 11 19 Fire Department Connections
Section 22 00 00 General Plumbing Provisions (Gas, Water, Fire Water, Storm, Sewer)
Section 22 00 50 Plumbing (Gas, Water, Fire Water, Storm, Sewer)
Section 23 01 00 General Mechanical Provisions (As Applicable)
Section 31 23 33 Trench Excavation and Backfill
Section 33 12 00 Water Utilities
Section 33 30 00 Site Sewer Systems
Section 33 40 00 Storm Drainage

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CONSTRUCTION

CES-03 SITE ELECTRICAL & LOW VOLTAGE
Section 03 15 14 Drilled Anchors
Section 03 30 00 Cast in place Concrete (As applicable to slurry, and light pole bases, and grouting)
Section 26 05 00 Common Work Results for Electrical
Section 26 05 26 Grounding
Section 26 05 53 Electrical Identification
Section 26 20 00 Low Voltage Electrical Transmission
Section 27 00 00 Telecommunication Systems
Section 27 05 28 Communications Infrastructure System
Section 27 10 00 Structured Cabling System

CES-04 LANDSCAPE
Section 03 15 14 Drilled Anchors
Section 32 84 00 Landscape Irrigation System
Section 32 90 00 Landscape Construction

CES-05 BUILDING CONCRETE AND REBAR
Section 03 11 01 Concrete Formwork
Section 03 15 14 Drilled Anchors
Section 03 20 00 Reinforcement
Section 03 30 00 Cast-In-Place Concrete
Section 07 14 16 Fluid Applied Waterproofing
Section 07 92 00 Sealants

CES-06 STRUCTURAL STEEL
Section 05 12 00 Steel and Fabrications
Section 05 30 00 Metal Deck

CES-07 SHEET METALS, MEMBRANE ROOFS, WALL AND ROOF PANEL SYSTEMS
Section 07 21 00 Insulation (As applicable to roof systems)
Section 07 40 00 Metal Panels
Section 07 54 19 Elastomeric Membrane Roofing
Section 07 60 00 Sheet Metal
Section 07 92 00 Sealants

CES-08 FINISH CARPENTRY
Section 06 22 00 Millwork
Section 06 41 23 Modular Casework

CES-09 METAL FRAMING, PLASTER, AND GYPSUM BOARD
Section 03 15 14 Drilled Anchors
Section 07 21 00 Insulation (as applicable to all exterior wall rigid insulation)
Section 09 22 16 Metal Framing
Section 09 24 00 Cement Plaster
Section 09 29 00 Gypsum Board

B · U · S · H
CONSTRUCTION

CES-10 WALL MATERIALS AND ACOUSTICAL CEILINGS
Section 09 50 00 Acoustical Ceilings
Section 09 72 00 Wall Coverings
Section 10 26 00 Wall and Corner Guards

CES-11 PAINTING
Section 03 35 10 Polished Concrete Finishing
Section 07 92 00 Sealants
Section 09 67 23 Resinous Flooring
Section 09 91 00 Painting

CES-12 GENERAL SPECIALTIES
Section 01 64 00 Owner Furnished Items (ADDENDA #2)
Section 01 74 19 Waste Management
Section 03 15 14 Drilled Anchors
Section 06 10 00 Rough Carpentry
Section 07 18 50 Vapor-Alkalinity Control
Section 07 21 00 Insulation
Section 07 72 00 Roof Accessories
Section 07 92 00 Sealants
Section 08 11 00 Metal Doors and Frames
Section 08 15 13 Laminate-Faced Wood Doors
Section 08 31 13 Access Doors and Frames
Section 08 33 00 Coiling Doors
Section 08 41 00 Storefronts
Section 08 41 13 Folding Door System (ADDENDA #2)
Section 08 56 59 Service Windows
Section 08 70 00 Hardware
Section 08 70 00.1 Hardware Schedule
Section 08 80 00 Glass
Section 09 30 00 Tile
Section 09 64 66 Resilient Wood Floor
Section 09 65 10 Resilient Base and Accessories
Section 09 65 16 Resilient Sheet
Section 09 68 40 Carpet
Section 10 05 00 Miscellaneous Specialties (Building Plaque, Dimensional Letters, **Cubicle Curtain System, Folding Partitions, Lock Box, Stair Stripping, Safe, Book Cart, Projection Screen) (ADDENDA #2)**
Section 10 11 00 Visual Display Boards
Section 10 14 00 Identifying Devices
Section 10 21 13 Toilet Partitions
Section 10 28 13 Toilet Accessories
Section 10 44 00 Fire Protection Specialties
Section 10 51 13 Metal Lockers
~~Section 11 16 16 Safes~~ **(ADDENDA #4)**
Section 11 40 00.01 Food Service Equipment
Section 11 61 43 ~~Platform~~ **Stage** Curtains **(ADDENDA #4)**

B · U · S · H
CONSTRUCTION

CES-12 GENERAL SPECIALTIES - CONTINUED

Section 11 68 13 Play Equipment
Section 14 42 00 Wheelchair Lifts

CES-13 FIRE SPRINKLERS

Section 03 15 14 Drilled Anchors
Section 07 92 00 Sealants
Section 21 05 17 Sleeves and Sleeve Seals for Fire-Suppression Piping
Section 21 05 18 Escutcheons for Fire-Suppression Piping
Section 21 05 23 General-Duty Valves for Fire Protection Piping
Section 21 05 29 Hangers and Supports for Fire Suppression Piping and Equipment
Section 21 05 48 Vibration & Seismic Controls for Fire-Suppression Piping & Equipment
Section 21 05 53 Identification for Fire-Suppression Piping and Equipment
Section 21 11 00 Facility Fire-Suppression Water-Service Piping
Section 21 11 19 Fire Department Connections
Section 21 13 13 Wet-Pipe Sprinkler Systems

CES-14 BUILDING PLUMBING and HVAC

Section 03 15 14 Drilled Anchors
Section 05 12 00 Steel and Fabrications (For downspouts/RWL's and support attachments)
Section 07 92 00 Sealants
Section 08 91 00 Louvers
Section 22 00 00 General Plumbing Provisions
Section 22 00 50 Plumbing
Section 23 01 00 General Mechanical Provisions
Section 23 01 00 General Mechanical Provisions
Section 23 05 00 Common Work Results for HVAC
Section 23 05 13 Common Motor Requirements for HVAC Equipment
Section 23 05 29 Hangers and Supports for HVAC Piping and Equipment
Section 23 05 48 Vibration and Seismic Controls for HVAC Piping and Equipment
Section 23 05 53 Identification for HVAC Piping and Equipment
Section 23 05 93 Testing, Adjusting, and Balancing for HVAC
Section 23 07 00 HVAC Insulation
Section 23 08 00 Commissioning of HVAC
Section 23 17 10 Variable Frequency Drives
Section 23 23 00 Refrigerant Piping
Section 23 31 13 Metal Ducts
Section 23 31 16 Nonmetal Ducts
Section 23 33 00 Air Duct Accessories
Section 23 34 23 HVAC Power Ventilators
Section 23 34 33 Air Curtains
Section 23 38 13 Commercial Kitchen Hoods
Section 23 72 00 Air to Air Energy Recovery Equipment
Section 23 74 13 Package Outdoor Central Station Air Handling Units
Section 23 74 33 Packaged Outdoor Heat and Cool Makeup Air Units
Section 23 81 50 Variable Refrigerant Flow Air Conditioners
Section 25 50 00 Direct Digital Control and Energy Management Systems

B · U · S · H
CONSTRUCTION

CES-15 BUILDING ELECTRICAL

Section 03 15 14 Drilled Anchors
Section 07 92 00 Sealants
Section 10 05 00 Miscellaneous Specialties (Projector Support Panel)
Section 26 05 00 Common Work Results for Electrical
Section 26 05 26 Grounding
Section 26 05 53 Electrical Identification
Section 26 20 00 Low Voltage Electrical Transmission
Section 26 50 00 Lighting Fixtures
Section 27 00 00 Telecommunication Systems
Section 27 05 28 Communications Infrastructure System
Section 27 10 00 Structured Cabling System
Section 27 20 10 Uninterruptible Power Supply
Section 27 42 00 Classroom Audio-Visual Systems
Section 27 53 13 Analog Synchronous Clocks
Section 27 70 00 Intercom Clock Public Address System
Section 27 80 00 Video Surveillance
Section 28 31 00 Fire Alarm and Detection

CES-16 OFF SITE IMPROVEMENTS

Section 32 84 00 Landscape Irrigation System (For Backflow Preventor and installation)

SUMMARY OF WORK FOR FOWLER MCKINLEY ELEMENTARY SCHOOL

PART 1 – GENERAL

As the Construction Manager (CM) for this project, David A Bush, Inc. (CM) reserves the right to publish Contractor Information Memos (CIM) prior to bid modifying the contract documents, as necessary. Please acknowledge all CIM on your proposal.

The following bidding instructions shall be adhered to by ALL BIDDERS and all bids shall include cost and time to incorporate all of the instructions noted below.

Please note this is a CM Multiple Prime project with all trades contracted to Clovis Unified School District as in a normal lump sum public works contract. All normal aspects of school construction will apply. All Prime Contracts shall be on the District's form which is included in the Contract Documents. Failure to adhere to these contract requirements and instructions may be grounds for rejection of proposal.

1. All bidders must submit proposals on the form provided in the contract documents.
2. All prime contractors will be responsible for paying the non-refundable fees associated with the use of the Architects project CAD files. Fees, forms, and limitations can be found in the project specifications, 01 33 00.
3. In all cases where the plans and specifications are unclear or conflicting it shall be the responsibility of those submitting a bid to EITHER provide a proposal which includes the greater scope or most expensive option or choice at the time of bid OR provide a timely pre-bid RFI that addresses the question in detail.
4. All salvaged items shall be relocated per the contract documents direction and in the absence of direction to the Owners main yard.
5. Any and all miscellaneous or incidental materials or work normally provided by industry standard shall be provided by the Prime Contractor for their Bid Package.
6. Each Prime Contractor shall be responsible for the Safe performance of all of their work and adhere to all safety requirements required by the contract documents and by law.
7. Proposals will be evaluated first on their conformance to the contract documents as a complete bid. Proposals may be rejected as non-responsive if determined to be inconsistent with the bid documents requirements.
8. All Prime Contractors shall provide insurance in a form and limits as required by the contract documents. Prime Contractors shall require their Subcontractors of every tier to carry insurance in a form and limits as required by the contract documents.
9. If a tentative project construction schedule is published prior to bid, it shall become part of the contract documents.
10. If a RFI LOG and/or responses are published prior to bid it shall become part of the contract documents.
11. If a soils report is published prior to bid it shall become part of the contract documents with limitations as stated therein.
12. If a SWPPP is published prior to bid it shall become part of the project and each Prime Contractor, whose work is affected by the implementation shall be responsible for that cost.
13. Each Prime Contractor shall be responsible for locating roof jacks for their scope of work.
14. Any repairs (if required, due to damage by a Prime Contractor) to existing finishes such as plaster, sheetrock, paint, or concrete must be done between natural breaks such as corner to corner or score line to score line.

15. All Prime Contractors shall provide a contact cell phone number to the Construction Manager for contact.
16. Fire watch, if required, shall be provided by the Electrical Bid Package Prime Contractor.

1.01 SUMMARY

A. General: Construction of BASE BID and Alternate portions of the work for this project, **Clovis Unified School District, Elementary School #35, Increment 1 and 2.** BASE BID and Alternate portions of the work is defined as all material, labor, equipment, and services necessary to do all work shown on the drawings and called for in the Specifications. The following specific trade requirements shall not be excluded from their proposal. Exclusion of any required scope specified shall be grounds for rejection. The scope of work for each trade shall remain as required by the Contract Documents. The specific list of scope herein shall be minimum and shall not limit the scope of that trade where required otherwise.

General Summary of the Project
The following information applies to all Bid Packages and shall be reviewed carefully for inclusion in each bid. Following are critical logistics related to the Project:

1. Hazardous Abatement is required if Hazardous Abatement Report is included in Contract Documents.
2. All work for the project will be performed during the hours of 7:00 a.m. to 3:30 p.m.
3. Submittals and material procurement shall begin immediately upon award or letter of intent from the CM.
4. Material procurement is critical and shall be diligently pursued to meet the contract schedule.
5. Prime Contractors shall review the project completely prior to bidding the work.
6. Coordination of work during the preconstruction period is equally as critical to resolving all issues prior to the start of work. Prime Contractor shall review the project, coordinate, and question any issues to allow resolution prior to the start of work.

In addition to the work noted in each package, the following will apply and become a part of the contract with each respective Prime Contractor.

Contract
All successful bidders will be required to enter into a Prime Contract Agreement with Clovis Unified School District.

Contractor Information Memos
All Addendums and Contractor Information Memo's issued during bidding will be incorporated into the Contract Documents by reference. Submission of proposal shall acknowledge that Prime Contractor has reviewed and accepts these documents as part of the Contract Documents.

Submittals and Material Procurement
1. Submittals and material procurement shall begin immediately upon award or letter of intent from the District.
2. Material procurement is critical and shall be diligently pursued to meet the contract schedule.
3. Substitutions must be noted in each bid with all costs for the specified product included in the bid and the substitution cost noted separately.

Alternates

Additive Alternates for the work are as follows. Please provide a base bid for the project then list all alternates:

1. As shown in the plans and specifications and clarified in any Addendum.

Crew Sizes

Given the tight schedule for the project, it will be necessary to have larger than normal crew sizes to meet the schedule. This is inclusive of all trades. All Prime Contractors shall review the schedule and confirm that they can crew the project accordingly prior to submitting a bid. Include with each bid minimum and maximum crew sizes projected for the project.

Schedule

1. Prime Contractors shall review the project and schedule completely prior to bidding the work.
2. Prime Contractor will be required to provide a schedule and crew sizing showing how the work will be accomplished within the given time frame.

State Agency Requirements

1. Work under each contract shall comply with the Storm Water Pollution Prevention Plan (SWPPP) standards and as set forth in the Contract Documents.
2. All work under each contract shall comply with San Joaquin Air Pollution Control District standards. Provide dust control for own work.
3. All work shall comply with OSHA requirements.

Access Plan

If an access and site logistics plan is included in the Contract Documents, access and restriction shall be enforced as a part of the project. Please advise of any questions regarding the plan prior to bid.

Site Logistics, Work and Coordination (applies to each Prime Contractor):

1. Fingerprinting will be required as called for in the contract documents when contact with students may occur.
2. Review and verify all existing conditions.
3. Power will be provided to within 100’-0” of all buildings. Each Prime will be required to provide all necessary temporary utility distribution from services provided.
4. All Prime Contractors shall attend coordination meetings and provide coordination drawings for underground and above ceiling work for work related to its Bid Package and scope for coordination of utilities, openings and other areas that require interface between trades. Coordinate all drawings with the drawings of this bid package. Note conflicts and provide potential solutions to the CM for Architect review. Coordination and drawing approval must occur prior to excavation and/or overhead work. Prime Contractors shall attend a pre-installation meeting prior to the start of its work onsite. All Prime contractors shall be available for pre-installation meetings of other Bid Packages for coordination of related work.
5. Only company vehicles are allowed onsite. Personal vehicles will not be allowed on-site except for in identified locations shown in contract documents. Prime Contractor to make provisions for transport or tool distribution needs.
6. Lunch and breaks shall be at designated areas. No other areas will be allowed.
7. Protect all work, new and existing from damage until acceptance by owner.

8. Storage areas will be confined to the areas designated by CM. Staging areas around the building shall be coordinated with the CM.
9. Provide written request for information through the CM for layout information from related Bid Packages for all rough-in, embedded items, openings, and block-outs, etc.
10. Request and review all associated shop drawings for coordination and layout purposes prior to installation of related materials.
11. Furnish and install all trims, escutcheons, and sealant for own work abutting other materials.
12. Furnish and install protection of all roofing for own work.
13. Furnish and install all physical layout for own work.
14. There will be one wash out area as designated by the CM. Each Prime Contractor will be responsible for removal from the site of all debris and spoils generated by their scope. All spoils are to be moved to the dedicated location on site.
15. Coordinate all work with mechanical, plumbing, fire sprinkler, and electrical Bid Packages for shut down of services as needed. 48-hour notice is required prior to all shut down activities.
16. Review as-builts and underground locator survey and pothole utilities prior to starting work.
17. All Bid Packages are responsible for cleaning of the street, due to tracking out excess dirt or mud, should the preventative measures set in place in accordance with the SWPPP and Dust Control Plans fail to stop all spoils from escaping the site.
18. Secure all ladders and lifts each evening.
19. Provide caution tape and/or barriers for open area work and traffic control.
20. Protect all work, new and existing, from damage until acceptance by owner.
21. Provide water and shade for own crews.
22. Furnish access to roof for own work. Ladders are to be removed and secured at the end of each shift.
23. Provide fall protection for own work in own Bid Package unless specifically noted otherwise in each Bid Package.
24. Provide caution tape and/or barriers for open area work and traffic control. In accordance with all applicable Federal, State, Local, and District standards.
25. Provide layout and coordinate all demolition and ceiling removal required for your scope of work.
26. Coordinate extent of all demolition with related Prime Contractors prior to starting work.
27. Patch Fireproofing at all utilities for own work.
28. Protect all countertops as required by each trade.
29. Furnish and install fire stop for all required through penetrations for own work.
30. Core penetrations through walls as required for installation of own work and patch as noted on the plans.
31. Furnish and install all access doors necessary to provide access to work included in your respective scope of work.
32. Any deviation from the contract documents resulting in additional design will be at the cost of the Prime Contractor responsible for the additional design, as well as any associated cost for delay of schedule.
33. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
34. Monthly payment applications will not be approved if as-builts are not up to date.
35. Adequate manpower is required by Prime Contractor to maintain the posted construction schedule.
36. Prime Contractor consents to execute District's Prime Contractor Agreement as provided in the Contract documents, without modification.

37. Furnish daily cleanup of all debris generated by your respective scope of work. Prime Contractor must abide by the Waste Management Specification.
38. Water Hydrants are located in development around site. Prime Contractors are responsible for own water meters for construction water needs throughout the project. Methods of delivery and use of water for the work of each trade are the responsibility of the Prime contractor.
39. Coordinate all work to provide access to buildings for other trades as scheduled. Provide a breakout schedule of where and when work will be performed that has been coordinated with other activities in the schedule for other trades.
40. Furnish and install own floor protection (i.e., tarps, plastic, plywood, etc.)
41. Furnish and install covers at all holes in elevated decks created by your work in which debris may fall to the level below, per CAL OSHA regulations.
42. All construction equipment shall meet the requirements of the SJVAPCD ISR report (Air Impact Assessment – AIA) under the Construction Clean Fleet Summary. This shall include reporting requirement as defined within the Monitoring and Reporting Schedule within the ISR for this project.

General Items to be Provided by the CM

1. Toilet and hand wash facilities.
2. Temporary site fencing.

Drawings and Specifications

Drawings and general provisions of Contract, including General and Supplementary Conditions, and Division 00 Bidding and Contract Requirements, and Division 01 General Requirements, apply to the work of each Bid Package. The work under each Bid Package shall include the furnishing and installation of all material, equipment, procedures, methods, items, and labor as required to complete the work described in each Bid Package. The work shall be completed as shown on the Drawings and Specified in any and all applicable Specification Sections.

Completion of Work

The work of each Bid Package must be completed according to the construction schedule included with the Contract Documents.

Note: The term “provide” means to “furnish and install, complete and ready for the intended use.”

The work includes, but is not limited to, the items numerically listed in each Bid Package and in accordance with the applicable Drawings and Specification Section(s). Provide all work specified within each Bid Package and applicable Specification Section(s) with the exception of items listed as “work by others.”

While the ways, means, and methods will be the responsibility of the Prime Contractor, the items in the Bid Package Summary of Work are presented for construction clarifications.

General Items – All Prime Contractors

Furnish and install all work specifically required throughout the project documents to complete the work of this Prime Contractor that specifically includes, but is not limited to the following:

Specification Sections
Division 01
Division 00

Refer to additional related specifications sections for work specifically included in this bid package noted below.

1.03 WORK UNDER OTHER CONTRACTS:

A. General Requirements:
    1. Work under separate contracts may occur throughout the duration of the project. The work being installed under separate contracts will occur adjacent to the Contract project site including offsite work.
    2. Prime Contractor shall be responsible for coordinating access to and from the site throughout the duration of the project. Access points to and from the site may vary, based upon timing and duration of separate contracts.
    3. Prime Contractor shall cooperate and coordinate all work under this Contract with all work under separate contracts.
    4. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
    5. Prior to the installation of the Work, coordinate the work installed or to be installed by separate contracts relative to own work.
B. Separate Contracts by Owner:
    1. Coordinate as awarded.
C. Separate Contracts by Others:
    1. Adjacent Properties: Residential.
D. Phasing:
    1. Phasing is projected to be as shown on the Bid Schedule. However, the owner reserves the right to revise start times pending the review and award of bids.

1.04 BID PACKAGE'S DUTIES:

A. Except as specifically noted, provide, and pay for:
    1. Labor, material, and equipment. All bid packages will be required to provide full time, qualified, knowledgeable supervision for their self-performed, and sub contracted labor. See General Conditions for Contractors specification 00 07 00, and specifics of Article 4 in this reference.
    2. Tools, construction equipment and machinery
    3. Other facilities and services necessary for proper execution and completion of Work.
    4. Water: See Specification Section – TEMPORARY FACILITIES AND CONTROLS.
B. Pay legally required sales, consumer and use taxes.
C. Give required notices.
D. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of Work.
    1. Prime Contractor shall certify in writing that no materials containing Asbestos are incorporated in the work, in accordance with the Asbestos Hazard Emergency Regulations Act.
E. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.

1. Appropriate modifications to Contract Documents will adjust necessary changes.
2. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.

F. Enforce strict discipline and good order among employees. Do not employ on Work:
1. Unfit persons.
2. Persons not skilled in assigned task.

G. Provide material, equipment, and manpower to meet Construction Schedule provided in Contract Documents.

H. All Prime Contractors will be responsible for paying the non-refundable fees associated with the use of the Architects project CAD files. Fees, forms, and limitations can be found in the project specifications, 01 33 00.

1.05 BID PACKAGE USE OF PREMISES:

A. Confine operations at sites to areas permitted by:
1. Laws.
2. Ordinances.
3. Permits.
4. Contract Documents.

B. Do not unreasonably encumber site with materials or equipment.

C. Do not load structure with weight that will endanger structure.

D. Assume full responsibility for protection and safekeeping of Prime Contractor's and Owner's material stored on premises and keep the site and building secure at all times.

E. Obtain and pay for use of additional storage or Work areas needed for operations.

F. Limit use of site for work and storage.

End of Section

BID PACKAGES CES-01, CES-02, CES-03, AND CES-04 PREVIOUSLY BID IN INCREMENT #1

CES-01 – EARTHWORK, SITE CONCRETE & CMU

Earthwork, Grading, Paving, Soil Treatment, Site Concrete, Rebar, Misc. Specialties (Stair Stripping), Flag Pole, CMU, Fencing, Playground Equipment, Site Furnishings.

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 01 57 23 Storm Water Pollution Prevention Plan
Section 03 11 01 Concrete Formwork
Section 03 15 14 Drilled Anchors
Section 03 20 00 Reinforcement
Section 03 30 00 Cast-In-Place Concrete
Section 04 22 00 Concrete Masonry Units (CMU)
Section 07 14 16 Fluid-Applied Waterproofing
Section 07 92 00 Sealants
Section 08 70 00 Hardware
Section 08 70 00.01 Hardware schedule
Section 10 05 00 Miscellaneous Specialties (Stair Striping)
Section 10 14 53 Road and Parking Signage
Section 10 75 00 Flagpoles
Section 11 68 13 Play Equipment
Section 12 93 13 Bicycle Racks
Section 31 00 00 Offsite Development
Section 31 10 00 Site Clearing
Section 31 11 00 Clearing and Demolition
Section 31 20 00 Earthwork
Section 31 22 22 Soil Materials
Section 31 23 33 Trench Excavation and Backfill
Section 32 12 00 Pavement
Section 32 12 16 Soil Sterilization (Weed Control)
Section 32 18 16 Playground Surfacing
Section 32 19 19 Ornamental Metal
Section 32 31 13 Chain Link

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.

2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. Provide daily cleanup to keep site clean and orderly.
18. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
19. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
20. This contract is to provide temporary power for own work until such time as building temporary power is established.

Coordination with Other Trades

1. This Prime Contractor will be responsible for the initial setup of SWPPP BMP's, as shown in the SWPPP plan drawings, including but not limited to, silt fencing, track outs and fiber rolls surrounding existing drain inlets.
2. Allow for two additional mobilizations for movement or relocation of track outs as required during construction.
3. Hold all turf areas down 2" at concrete walks and mow strips for turf, 1" at planters.
4. Location for trades to stockpile their spoils will be established with CM, and this CES-01 Prime Contractor.
5. Any survey requests require a minimum of 48-hour notice.
6. Coordinate dimensions with other related Prime Contractors of all equipment and housekeeping pads. Pad sizes shall be provided by other Prime Contractors and physically laid out and installed by this contract.
7. Coordinate installation of all sleeves for work passing through concrete work with respective Prime Contractors prior to excavation.
8. Electrical and site utility Prime Contractors shall furnish and install all concrete required for installation of thrust blocks, manholes, vaults, boxes, underground structures for work related to their contract. This contract shall furnish and install all other concrete shown including aprons mow strips and collars.
9. Install and coordinate block-outs at the site concrete to facilitate installation of fine grading by Earthwork Prime contractor and to protect concrete until fine grading is complete. Complete site concrete block-outs once fine grading is complete. Backfill and fine grade once block-outs have been poured.
10. Install and physically layout all embedded items (as provided by other Prime Contractors), holes, sleeves and block outs in concrete as shown in the contract documents, related shop drawings or provided written layout. Coordinate locations with related Prime Contractors prior to installation.
11. Provide layout drawings for all site concrete joints for approval prior to installation of site concrete.
12. Review as-builts prior to starting work.

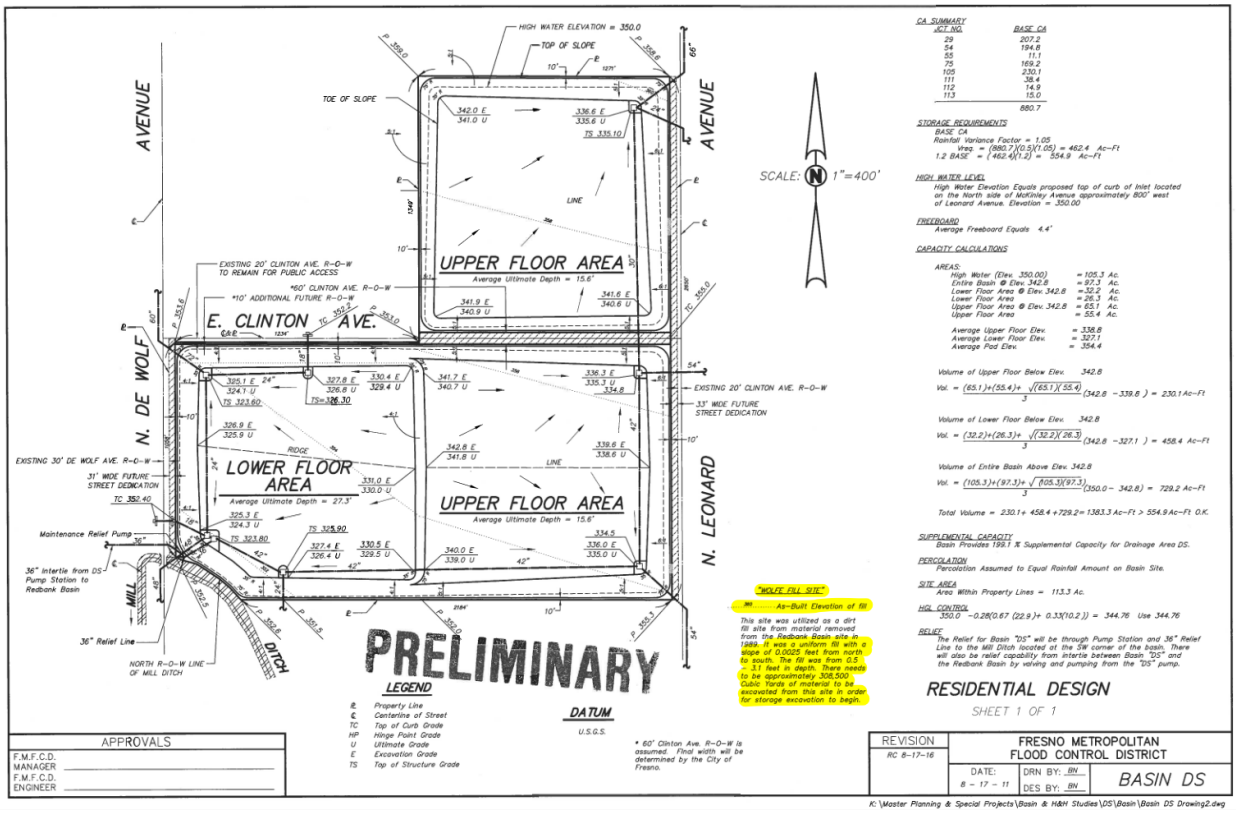
Furnish and Install Items

DEMOLITION – SITE CLEARING

1. Provide all cut, demolition, removal, and off-haul of all items noted to be removed as shown on contract documents.
2. For site clearing and demolition follow recommendations as outlined within the soils report prepared by RMA Geoscience included in the project documents, in association with the contract documents.
3. Investigate and remove the existing 3" steel post that stands approx. 100 feet south of Weldon, and 300 feet east of Fowler. It is believed to be an abandoned fence post.
4. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.

EARTHWORK AND GRADING

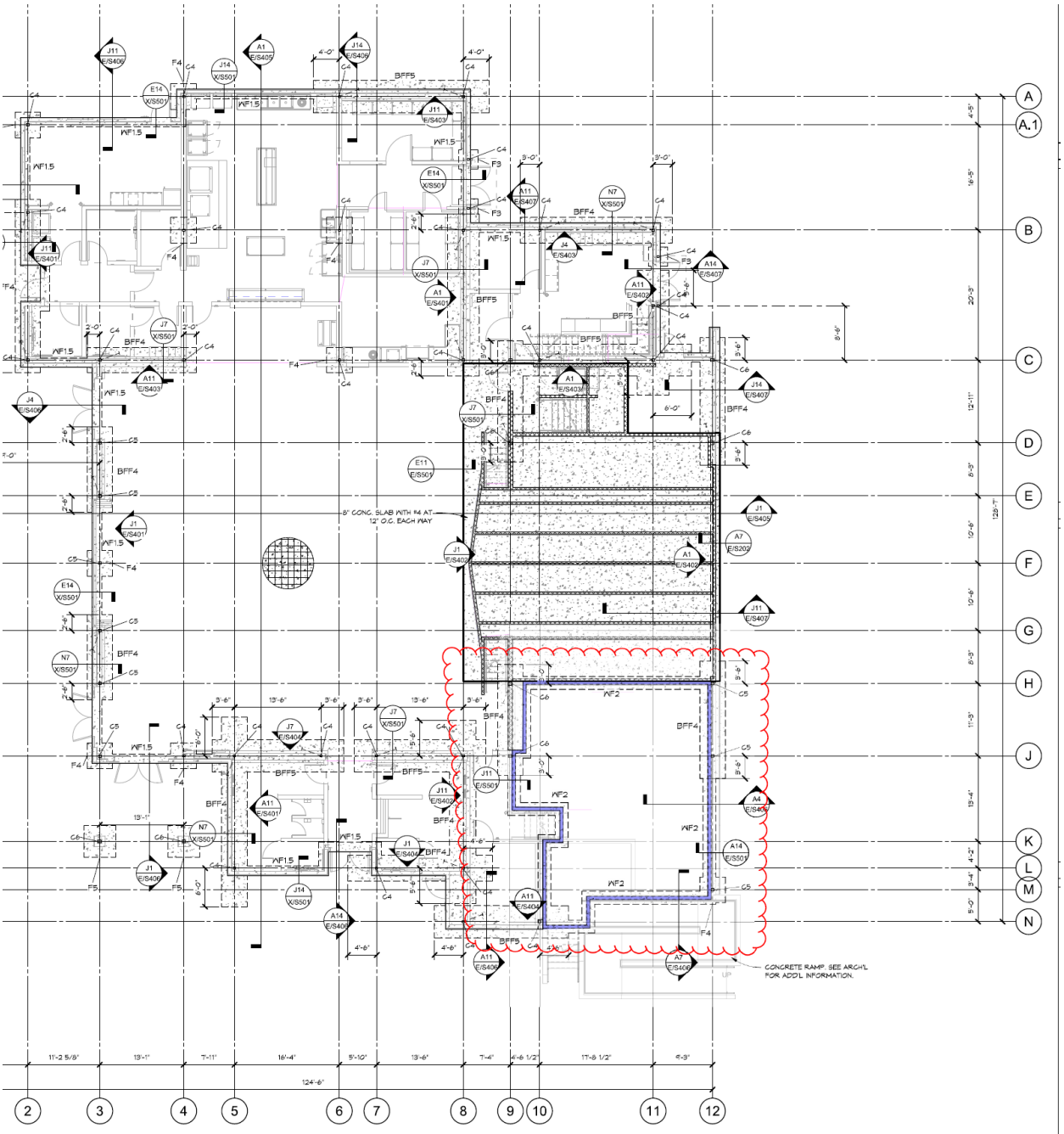
1. Grade all earthwork to within +/-0.05’ from a planned elevation.
2. Furnish and install all cut and fill necessary to perform work. Sand to be furnished and installed by the concrete bid package at the buildings only. All other materials shall be provided by this bid package.
3. Clarification: This will be an “Import” project. This bid package will provide and incorporate approximately 35,000 cu yds of soil to the site. The material will be obtained from the CUSD Terry Bradly Ed Center ponding basin, located between DeWolf and Leonard Ave, at East Clinton Ave, where the soils has been previously tested for toxicity and suitability. Provide a per cubic yard Schedule of Values for these import soils, should additional soils, or a reduction of soils be required, other than the estimated 35,000 cu yds. Provide for All loading, hauling, street cleaning, dust controls, or traffic managements required will be provided under this CES-01 Earthwork and Grading bid package. Prior to starting this scope, there will be a required coordination meeting with CES-01 contractor, CUSD, RMA, and Bush Construction to discuss plan, routing, and execution.
4. All areas of planters, or turf are to have a minimum top layer of 1’ from existing native soil.



5. Furnish and install all grading of the site on separate move-ins (as scheduled by the CM) to accommodate the site concrete and mow strips installation. Coordinate backfill and final fine grading activities to eliminate damage to new site concrete. Consult, and coordinate all elevations with the Landscape bid package where applicable.
6. Furnish and install over excavations and building pads.
7. Specific to building E, from grid lines H to N, and 9 to 12, the slab is 3’-7” higher than the overall building slab. The earthwork Prime Contractor will build this up as required, then cut the material back to allow adequate work space for the structural concrete bid package to install footings, pour

footings, build formwork, pour walls, strip, clean, and install fluid applied waterproofing. Once cured, the earthwork Prime Contractor will return to backfill and compact up against new walls and fine grade in preparation for elevated slab pour. See plan detail at end of this section for additional reference.

8. Furnish and install temporary ag base roadway on site for construction use, including base at laydown area. After the threat of rain, towards the end of the project, the base will need to be scraped off, final grading established per plans, and the base is to be hauled off under this contract bid package. (See temporary access and yard plan for extent) CLARIFICATION: The depth of the ag base may vary but must be thick enough to hold up during the rains and site traffic. If repairs need to be made to maintain an adequate roadway, it will be performed under this bid package. Spray on dust control/soil stabilizer will also be a suitable alternative for the roadways but may require more frequent maintenance and product applications.
9. Maintain and protect building pads to within tolerance, elevation, moisture, weed free and compaction until accepted/received by the concrete contractor as noted in the schedule.
10. Furnish and install all soil Sterilization as per the contract documents.
11. Furnish and install backfill of mow strips, walks, curb, curb & gutter, planter, and turf areas.
12. Furnish, install, and maintain traffic control for work included in this bid package.
13. Furnish and install engineered shoring at all locations as required.
14. For excavation, backfill and compaction efforts, follow recommendations as outlined within the soils report prepared by RMA Geoscience included in the project documents, in association with the contract documents.
15. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.
16. Furnish and install all SWPPP items as outlined in the SWPPP plan and in spec section 01 50 00. CLARIFICATION: SWPPP installation is to be at and within the perimeter of the project site. All “Off Site” SWPPP to and along the west side of Fowler, and south of McKinley will be bid separately.
17. This package is responsible for setup and implementation of SWPPP plan. This package is also responsible for monitoring, documentation, reporting, teardown, and final cleanup of SWPPP items at completion of the project.



PAVING

1. Furnish and install all On Site paving base rock as identified on plans, including but not limited to under parking areas, basketball courts and drives. CLARIFICATION: All grading, paving associated with the Off-Site improvements will be furnished and installed with that bid package.
2. Furnish and install all compacted base rock as identified in contract documents.
3. Furnish and install parking bumpers and wheel stops where shown.
4. Furnish and install parking striping and/or accessible symbols as shown on contract documents.
5. Furnish and install all parking and road signage as indicated in contract documents, including concrete at posts where indicated.

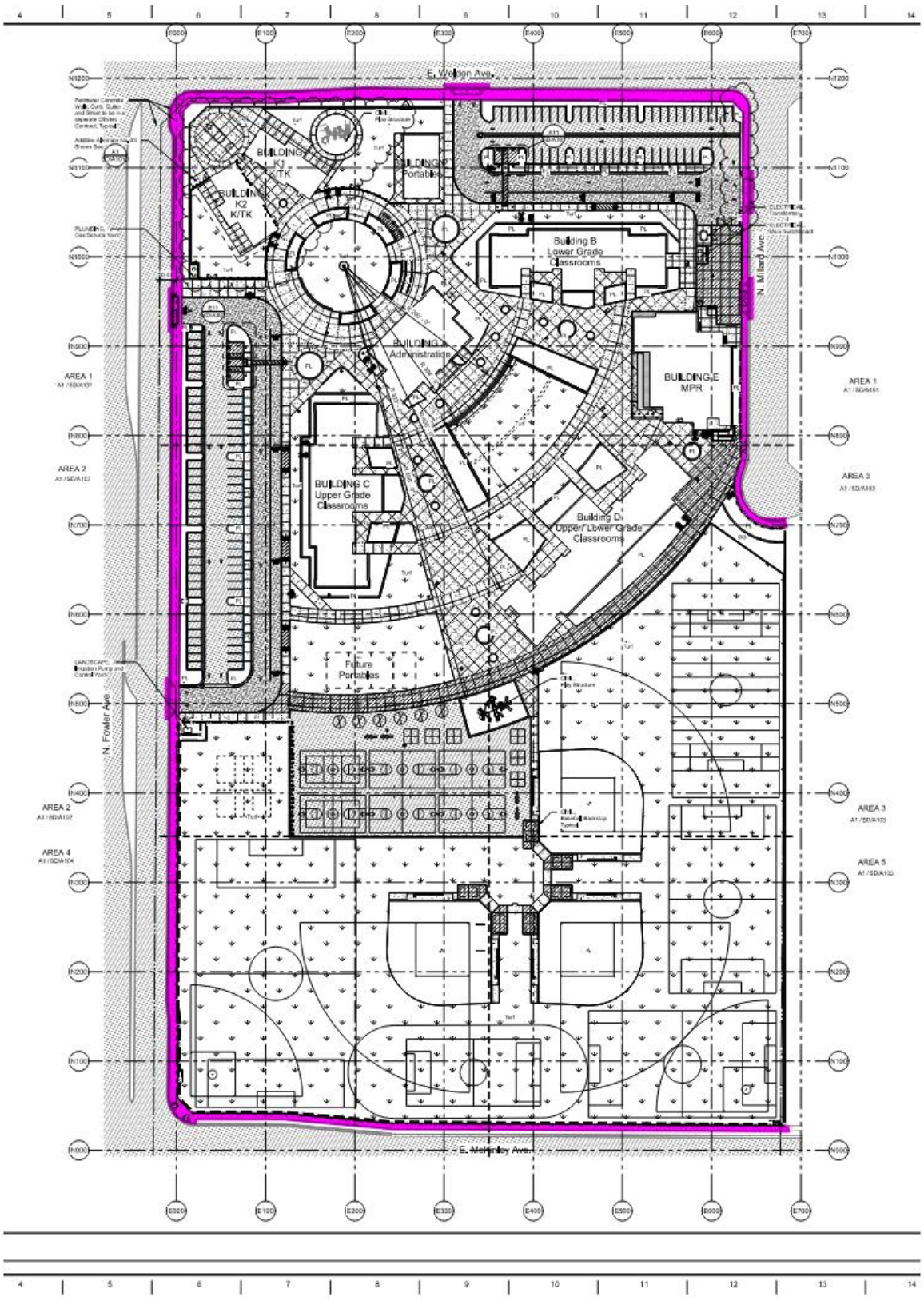
6. Furnish and install all asphalt paving and patch backs.
7. All parking areas are to be scheduled for two separate mobilizations, as the first 1 ½" lift will be placed, and the areas utilized for parking and staging during construction. At a later scheduled time in the project, this package will clean, prep, install tack, remobilize, and place the final finish section of the parking lots and entrance access points.
8. Furnish and install all slurry seal.
9. Furnish and install all play court striping as indicated in the contract documents.
10. Furnish and install pressure treated/redwood 2x4 header form at asphalt edge where unsupported unless noted otherwise.
11. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.

SITE CONCRETE

1. Furnish and install all site concrete, including but not limited to, flatwork, curbs, curb and gutter, planter curbs, planter walls, gutters, valley gutters, mow strips, seat walls, all CMU footings (Site & Maintenance Yard), and amphitheater walls. Clarification of scope limits of work boundaries. See attached sketch at the end of this section.
2. Furnish and install all reinforcing as required for all site concrete per contract documents. Including but not limited to CMU footings, seat walls, fire lane, etc.
3. Furnish and install rebar caps per OSHA for all rebar associated with this contract's scope of work, installed by the reinforcement contractor. Furnish and install concrete stake caps associated with this contract's scope of work. Maintaining of Caps is the responsibility of this Prime Contractor. Safety walks at end of day required to ensure caps are in place, and any missing caps replaced.
4. Furnish any and all excavation necessary for work included in this contract.
5. Furnish and install all mow strips in site and around buildings, including at chain link, and ornamental fencing.
6. Furnish and install all sealants at all site concrete. This includes all sealant where site concrete abuts all buildings and structural concrete or CMU.
7. Furnish and install amphitheater steps, with reinforcing and stair nosing. (N1/SD/A302 & P11/SD/A302)
8. Install bollards (a.k.a. drinking fountain rails - furnished by others) in concrete footing. (J7/X/A531)
9. Furnish and install all parking and walkway accessible concrete ramps per contract documents.
10. Furnish and install all truncated domes.
11. Furnish and install all play access and play access perimeter curbs (B/SD/X107, C/SD/X107)
12. Install steel anchor plates, steel keeper plates and welded straps at thickened concrete walk at cane bolt locations. (N13/SD/A402) – Steel anchor plates, keeper plates and welded straps to be provided by fencing contractor F.O.B.
13. Install Flagpole in concrete base with reinforcing – see detail (A1/SD/A301)
14. Furnish and Install Concrete Monument Sign with reinforcing, V groove, chamfer, etc. Refer to details.
15. Furnish and install footings and sleeves/inserts for volleyball, tetherball, and basketball posts.
16. Furnish and install footings and sleeves/inserts for bicycle racks and any hand railing. Rails and racks to be supplied by others. Note: Bike racks provided by this bid package, Bike Lockers are owner furnished, owner installed.
17. Furnish and install fibrous expansion joint, and sealant where required.
18. Install three sets of handrails at amphitheater.
19. Furnish and install concrete for all site housekeeping pads. Including but not limited to,

transformer, and electrical pads. Coordinate dimensions and layout with Prime Contractors.

20. Furnish and install concrete for all irrigation equipment/devices. Including, but not limited to, backflow pad, and booster pump pad. Coordinate dimensions and layout with site plumber and site landscape Prime Contractors.
21. Physically layout and install all block outs, openings, backing, etc. from written layout provided by other Prime Contractors for installation of their work.
22. This contract is to provide temporary power for own work until such time as building temporary power is established.
23. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.
24. Install steel angles, and vent grating at portables, as supplied by Struct Steel bid package. See P/a101
25. CLARIFICATION: The perimeter sidewalks, including all drive access approaches are to be furnished and installed by the “Off-Site” bid package as highlighted site sketch below. Sidewalks will pour to the CMU, and chain link fence mow strip poured within this CES-01 bid package.
26. Furnish and install removable bollards for vehicular access per plans.


E. Weldon Ave.
N. Millard Ave.
N. Fowler Ave.
E. Mehrdy Ave.
BUILDING K1 K/TK
BUILDING K2 K/TK
BUILDING Portables
Building B Lower Grade Classrooms
BUILDING A Administration
BUILDING E MPR
BUILDING C Upper Grade Classrooms
Building D Upper/ Lower Grade Classrooms
Future Portables
AREA 1
AREA 2
AREA 3
AREA 4
AREA 5

FENCING

1. Furnish and install all chain link fences, gates, and hardware, including those embedded or attached to CMU. Include new padlocks as noted in site drawings.
2. Furnish and install all backstop fencing including any horizontal backboards.
3. Furnish and install all ornamental iron fence, gates, and hardware, including those embedded or attached to CMU.
4. Provide Steel Anchor Plate, Steel Welded Straps and Steel Keeper plate F.O.B. jobsite (N13/SD/A402) for placement with site concrete.
5. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.

CONCRETE MASONRY UNIT (CMU)

1. Provide and install all CMU block walls as identified in contract documents.
2. Furnish and install all rebar associated and shown to be installed in CMU, with exception of the rebar which is to be installed with the CMU footings.
3. Provide and install all smooth dowels, or other reinforcement and expansion components associated with CMU installation.
4. Coordinate and confirm reinforcement layout in footings with concrete contractor.
5. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.

PLAY EQUIPMENT AND SITE FURNISHINGS

1. Bike lockers are Owner Furnished, Owner Installed.
2. Provide and install all playfield and court equipment as shown in contract documents. Including, but not limited to; basketball backboards (single & double), volleyball posts, volleyball nets, tether balls and tetherball posts, dugout benches etc. Furnish all sleeves as required for proper installation of equipment.
3. Provide and install EPDM wearing surface and SBR Rubber over concrete at play structure basins.
4. Provide and install loose engineered wood fiber at play structure basins.
5. Furnish and install bicycle racks per contract documents (six total).
6. Furnish and install flagpole per detail A1/SD/A301.
7. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.
8. Furnish and install all drainage fabric, felt, and drainage matrix material, to storm drain pipe stub, that will be coordinated and provided by the site utilities contractor.

FOB Items

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

1. Install all items embedded in concrete provided FOB Jobsite by other Prime Contractors from written layout provided by those Prime Contractors.
2. Install all bolt templates provided by other trades.
3. Install angle iron embeds at rolling gates.

End of Bid Package

BID PACKAGES CES-01, CES-02, CES-03, AND CES-04 PREVIOUSLY BID IN INCREMENT #1

CES-02 SITE UTILITIES PLUMBING: DOMESTIC, SANITARY, STORM, FIRE, & GAS

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 03 30 00 Cast in place Concrete (As applicable to storm, sewer, manholes, thrust blocks, etc.)
Section 21 05 23 General Duty Valves for Fire Protection
Section 21 05 53 Identification for Fire Protection
Section 21 11 00 Facility Fire Suppression Water Service Piping
Section 21 11 19 Fire Department Connections
Section 22 00 00 General Plumbing Provisions (Gas, Water, Fire Water, Storm, Sewer)
Section 22 00 50 Plumbing (Gas, Water, Fire Water, Storm, Sewer)
Section 23 01 00 General Mechanical Provisions (As Applicable)
Section 31 23 33 Trench Excavation and Backfill
Section 33 12 00 Water Utilities
Section 33 30 00 Site Sewer Systems
Section 33 40 00 Storm Drainage

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.

10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. Provide daily cleanup to keep site clean and orderly.
18. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
19. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
20. This contract is to provide temporary power for own work until such time as building temporary power is established.

Coordination with Other Trades

1. Provide coordination drawings for underground work related to this bid package. Coordinate all drawings (Plumbing, Electrical, site, Off Site, and Landscape) with the drawings of this bid package. Note conflicts and provide potential solutions to the architect for review. Coordination must occur prior to excavation and/or installation of the work. Attend all coordination meetings required to coordinate all underground.
2. Coordinate routing of underground utilities miss foundations.
3. Coordinate alignment of all utilities between plumbing and civil drawings prior to excavation.
4. All underground utilities (Gas/DCW/Fire) are to be a minimum of 3' below finish grade.

Furnish and Install Items

1. Furnish and install all site utilities and fixtures complete. Water, Fire, Sewer, Storm.
2. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.

3. Provide all backfill of excavations to original subgrade for work included in this bid package.
4. Stockpile extra spoils from excavations in location to be determined by CM.
5. Furnish and install all attachment of all equipment related to this scope of work.
6. Furnish and install all excavation for own work.
7. Furnish and install all concrete required for installation of thrust blocks, manholes, vaults, boxes, underground structures, mow strips and collars for work related to this bid package.
8. Furnish and install asphalt patch back related to own work as required.
9. Adjust all utility boxes to finish grade.
10. Clean and disinfect all site piping required for this project to subsequent point of connection.
11. Furnish and install all piping required to accommodate new work.
12. Furnish, install, and maintain traffic control for work included in this package.
13. Furnish and install all site fire water, sewer systems, storm systems, domestic water & gas.
14. Furnish and install all dry wells, drainage, water and drinking fountains. Clarification: see G/SD/X102 for dry well at ball fields.
15. Furnish and install all site trench drains and piping (If shown)
16. Furnish and install all site Fire, all fire line piping, and stub in to building per plans to above finished floor with a capped flanged fitting, as the POC for the fire sprinkler contractor. Furnish and install all site check valves, Christy vaults, PIV's, FDC's, Hydrants, Backflow Preventors, and Bollards per plans at fire equipment per plans. CLARIFICATION: See note # 6 on site plans, and J7/SD/A302
17. Furnish and install all site domestic water complete from POC at back flow preventors, check valves, SOV's, etc. to within 5' of buildings.
18. F&I complete storm to within 5'.
19. F&I complete gas to within 5' of where pressure regulators are shown for each building.

FOB Items

1. None

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

1. Not Applicable.

End of Bid package

BID PACKAGES CES-01, CES-02, CES-03, AND CES-04 PREVIOUSLY BID IN INCREMENT #1

CES-03 SITE ELECTRICAL & LOW VOLTAGE

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 03 30 00 Cast in place Concrete (As applicable to slurry, and light pole bases, and grouting)
Section 26 05 00 Common Work Results for Electrical
Section 26 05 26 Grounding
Section 26 05 53 Electrical Identification
Section 26 20 00 Low Voltage Electrical Transmission
Section 27 00 00 Telecommunication Systems
Section 27 05 28 Communications Infrastructure System
Section 27 10 00 Structured Cabling System

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.

11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. Provide daily cleanup to keep site clean and orderly.
18. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
19. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
20. This contract is to provide temporary power for own work until such time as building temporary power is established.

Coordination with Other Trades

1. Provide coordination drawings for underground work for work related to this bid package. Coordination must occur prior to excavation and/or installation of the work. Attend all coordination meetings required to coordinate all underground.
2. Coordinate all work to provide access to buildings for other trades as scheduled. Provide an underground utility schedule of where and when piping operations will be performed.
3. Coordinate location of UG utilities to be out of angle of repose of foundations.
4. Poured in place housekeeping and equipment pads to be supplied by concrete team. Precast housekeeping and equipment pads to be supplied and installed by this package
5. Review as-builts and pothole existing utilities prior to starting work.
6. Verify continuity of electrical and low voltage conduits for work in this contract.
7. Provide shop drawings for equipment layout in electrical rooms & yards to confirm that dimensions are adequate prior to rough in and pouring of footings and curbs.
8. Coordinate all underground utilities to miss foundation.
9. Provide Safe off of all electrical equipment as required for trade work.
10. Provide an underground utility schedule of where and when piping operations will be Installed.

Furnish and Install Items

CLARIFICATION:
Several pieces of equipment were added in the electrical drawing revisions that were included in (Increment #1 Addendum # 3), and are not to be furnished or installed within this bid package. The conduit, Christy's/ underground pathways for these items are to be included in this bid package. Mini Substation, PV disconnect, Transformer, IDF, and back stop PA will all be provided and installed with the

Inc 2 electrical bid package, with the exception of the Owner Supplied Switchgear, that will be installed under this CES-03 package, and previously addressed.

1. Furnish and install all site utilities conduit and infrastructure complete for all Power, Data, Fire Alarm, Security, Irrigation line voltage (pumps/time clocks), and EMS**.** See SD/M101 for EMS site conduit clarification. All conduits are to be brought to within 10' of the buildings. All stopping points are to be flagged, swing tied if possible, and recorded on the As-Builts for Increment 2 continuation. Conduits are to stop within 5' of pumps and time clocks if specific layout cannot be determined during the time of installation., and 5' for fire sprinkler components where alarm is required. CLARIFICATION: This includes power conduit for "Coach control switches", as described in the Landscape plans. Building electrical contractor will provide and install the housing, wiring, receptacle.
2. Site lighting conduit is to stop approximately 5' from the flagpole, all light pole bases, and first light of radiused (T-2's) at the concrete monument wall. Clarifications: 1. The in-ground T-2 lighting was removed from the site at the flag pole area. Disregard reference. 2. (Increment #1 Addendum 3) added lights at the CMU service yard. Install conduits to the footing alignment where each light is shown. Inc 2 electrician will coordinate and install the continuation conduit up in CMU.
3. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.
4. Furnish and install physical layouts for all deepened foundations at utilities prior to excavation.
5. All excavation spoils to be deposited at one location on site as determined by CM.
6. Furnish and install all sleeves for work passing through masonry and concrete work. Coordinate with respective bid packages.
7. Provide all backfill of excavations to original subgrade for work included in this bid package.
8. Furnish and install fire stopping and fire caulking of own penetrations for own work.
9. Furnish and install pull strings/rope in all empty or future conduits.
10. Furnish and install all concrete required for installation of vaults, boxes, underground structures for work related to this bid package.
11. Furnish and install all site conduit required for Owner furnished equipment hook up as required.
12. Furnish and install all rough-in for all equipment of other bid packages as required by the related specification sections and drawings. Connect and or stub as described.
13. Furnish and install all conduit and sleeves for future low voltage and telecommunications wiring. Install fire stopping as required.
14. Furnish and install all attachment of all equipment related to this scope of work.
15. Furnish and install all supports and bracing required for electrical work.
16. Furnish and install all identification and lettering called for in the contract documents related to the work of this bid package.
17. Adjust all electrical and low voltage boxes in new landscape and concrete areas as needed.
18. Furnish and install all physical layout for your own work.
19. Furnish and install all site conduits, including vaults and boxes for all electrical and low voltage systems.
20. Provide all power/Breaker testing for own work.
21. Chase and prove all electrical site pathways as required to complete work.

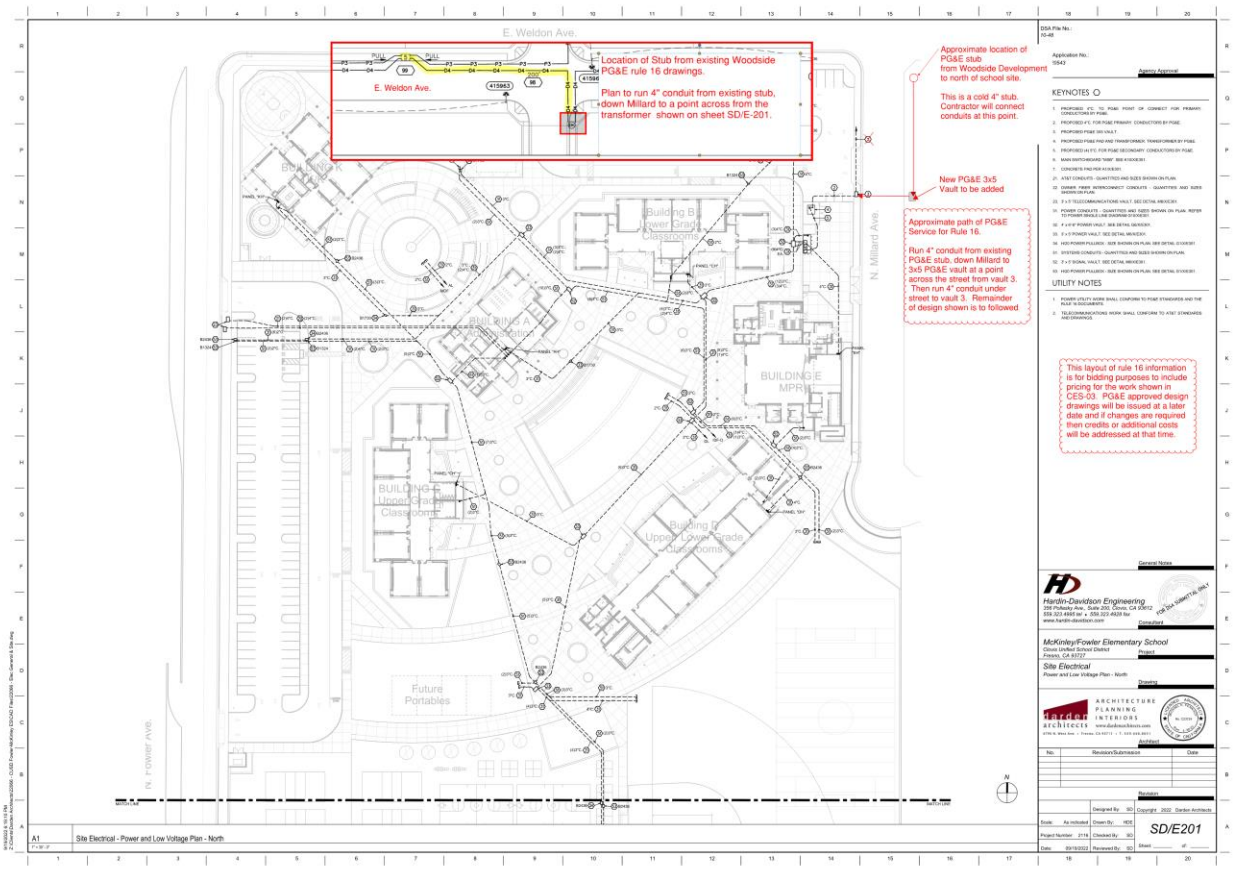
22. Furnish and install electrical equipment, conduit, pre cast pads required for the utility provider (Rule 16 and similar for site power connections). Switchgear will be Owner Furnished, Contractor Installed.
23. Furnish and install all site rough-in conduit for all equipment of other trade as required by the related specification sections and drawings. Connect and or stub as described.
24. Furnish and install all site lighting conduits including vaults / boxes. Bring all conduits to withing 5' of light pole locations and buildings. Cap and flag each end, (swing tie if possible) for subsequent connection by the building electrical contractor. Coordinate the location of the conduit at the building end to the point of entry established by the building electrician.
25. Furnish and install disconnects and associated supports as applicable to increment 1.
26. Furnish and install sealant system as required to provide watertight condition at devices mounted on masonry units.
27. Furnish and install PG&E, ATT, and Comcast conduit for onsite as shown on the drawings.
28. Furnish and install all colored concrete cap over all required duct banks.
29. Furnish and install conduits for all landscape equipment such as controllers, pumps, etc. as required by the landscape drawings.
30. Furnish and install all backfill of excavations to original subgrade for work included in this contract.
31. Provide Dust Control for own work.
32. This contract will adhere to guidelines for all work per the requirements of the Dust Control Plan and SWPPP Plan.
33. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
34. Electrical Prime Contractor responsible for any and all patch back and finishing for any trenching made in roadways, for work performed under this bid package.
35. All excavation spoils to be deposited at one location on site as determined by CM.
36. Furnish and install all sleeves for work passing through masonry and concrete work. Coordinate with respective bid packages.
37. Provide all backfill of excavations to original subgrade for work included in this bid package.
38. Furnish and install drilling of holes for work performed in this bid package.
39. Furnish and install pull strings/rope in all empty or future conduits.
40. Furnish and install all concrete required for installation of vaults, boxes, underground structures for work related to this bid package.
41. Furnish and install all conduit and sleeves for future low voltage and telecommunications wiring. Install fire stopping as required.
42. Furnish and install all attachment of all equipment related to this scope of work.
43. Furnish and install all identification and lettering called for in the contract documents related to the work of this bid package.
44. Furnish and install all physical layout for your own work. Same as 18
45. This contract shall be responsible for holes at metal deck for installation of hanger wires for own work.

For Rule 16, and associated PG&E work.

1. This contract will provide all PG&E electrical requirements as outlined for connection to/for PG&E Rule 16 work in conjunction with the project drawings. This Prime Contractor will run all conduits,

proof, and mandrel all conduits for the new PG&E feeders from the POC shown in the attached marked up site plan for reference, then to the transformer, then to the Switchgear.

2. Coordinate all meetings with PG&E, obtain permits, and provide all services required to facilitate and install the main power distribution on to the site.
3. Furnish and install all work relating to PG&E rule drawings, off-site plans of existing conduit pathway, to connect to new conduit and vault on site, and leading to the switchgear.
4. Furnish and install all excavations, and patch back to road crossing. CLARIFICATION: Millard street is not currently paved, nor have the sidewalks been installed on either side. The curbs and gutters are already installed. If damaged during installation, these repairs would also be included in this package responsibility.



FOB Items

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

BID PACKAGES CES-01, CES-02, CES-03, AND CES-04 PREVIOUSLY BID IN INCREMENT #1

CES-04 LANDSCAPE

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 32 84 00 Landscape Irrigation System
Section 32 90 00 Landscape Construction

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.

14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. Provide daily cleanup to keep site clean and orderly.
18. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
19. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
20. This contract is to provide temporary power for own work until such time as building temporary power is established.

Coordination with Other Trades

1. Coordinate sleeve installations with site concrete.
2. Coordinate pump location, house pad, layout, and elevation with electrical, plumbing, and concrete packages.
3. Coordinate all valve boxes, quick connects, with concrete, planters, and elevations.

Furnish and Install Items

1. Furnish and install all irrigation and landscaping complete. Connect to existing power, wiring and controls where required at existing landscape areas.
2. Make provisions to obtain water for own work. Dust control, excavations, backfills, compactions, etc. There are fire hydrants on two sides of the project. Make necessary arrangements with the city of Fresno to acquire a meter and pay for own water usages until such time that the site water has been installed and approved for site usage.
3. Provide and install new irrigation, controls, wiring, pumps, premanufactured concrete pads, etc. for own work. Main power supply and connection to pumps or equipment (Line voltage), will be supplied by the electrical Prime Contractor.
4. Furnish and install all thrust blocks for own work.
5. Furnish and install grading and top soil.
6. Provide water test of turf and planter areas prior to planting to confirm proper drainage and coverage.
7. Furnish and install all irrigation sleeves.
8. Furnish and install backfill all planters.
9. Furnish and install all fine grading of planter areas prior to planting.
10. Furnish and install all irrigation pipe system from POC at main backflow preventor, installed by the site plumbing Prime Contractor per spec.
11. Furnish and install irrigation pump(s), controls, secondary backflow preventer if applicable, valves, etc. associated with the irrigation system, complete ready for electrical connection where applicable.
12. Furnish and install all new irrigation and drip irrigation complete.

13. Furnish and install all new planter dressings, bark, mulches, and all landscape materials. CLARIFICATION: This Landscape package will be responsible to supply and install all materials as noted within the landscape plans, including screened infield top soil materials, DG, sod, Stolens, Mulches, etc. unless specifically noted otherwise.
14. Furnish and install all baseball bases and pitching blocks per plans.
15. Furnish and provide weed control and clean up of grasses/weeds for the project site, and associated off site locations for the duration of the project, until such time that the district takes possession and acceptance of the new facility.
16. This Landscape contractor is responsible for all the final elevations of Turf, infields, including pitchers mounds, DG, planters, tree wells, and mulches. Coordinate subgrades with Earthwork Contractor, as they will be responsible for the subgrades.
17. Furnish and install all coaches boxes/switches as shown in the Landscape plans, including valves, conduit, control wiring and connections. Coordinate locations with the Site electrical contractor for AC power conduit. Building electrical contractor to install wiring, housing for controller, and receptacle.

FOB Items

1. Provide remote controllers and extra materials to the district through close out procedures with CM Construction Management process.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-05 BUILDING CONCRETE AND REBAR

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Division 00
Division 01
Section 03 11 01 Concrete Formwork
Section 03 15 14 Drilled Anchors
Section 03 20 00 Reinforcement
Section 03 30 00 Cast-In-Place Concrete
Section 07 14 16 Fluid Applied Waterproofing
Section 07 92 00 Sealants
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

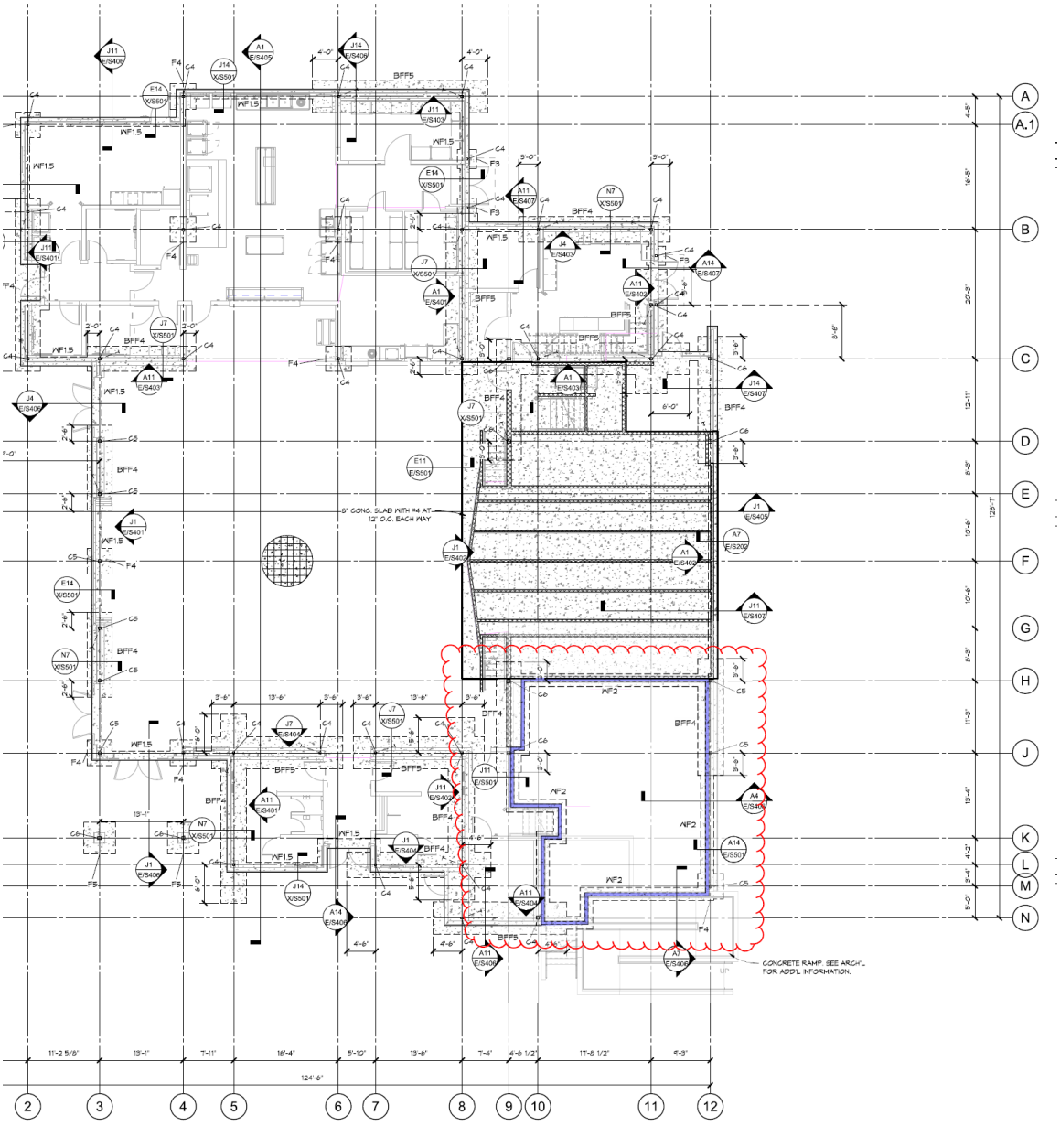
1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.

14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. SUBMITTALS: Provide Rebar reinforcement shop drawings for all footings, curbs, and building columns for buildings E and A will be the first order of business, and due within 30 days of NTP. Bar needs to be pulled for initial tagging at the earliest lab availability following approved review, to expedite production. Following in order will be buildings B, C, D, and K, no later than one week each, after the initial 30 day start for buildings E and A. All subsequent building reinforcement steel drawings are due for submittal no later than 30 days of their scheduled start, noted above.
21. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Location for trades to stockpile their spoils will be established with David A. Bush, and the CES-01 Bid Package contractor.
2. Any survey requests require a minimum of 48-hour notice.
3. Coordinate dimensions with other related contractors of all equipment and housekeeping pads. Pad sizes shall be provided by other contractors and physically laid out and installed by this contract.
4. Coordinate installation of all sleeves for work passing through concrete work with respective contractors prior to excavation.
5. Install and physically layout all embedded items (as provided by other contractors), holes, sleeves and block outs in concrete as shown in the contract documents, related shop drawings or provided written layout. Coordinate locations with related contractors prior to installation.
6. Provide layout drawings for all slab concrete joints for approval prior to installation of site concrete.
7. Review as-builts prior to starting work.
8. This bid package will received all building pads at +/-0.05'and will be responsible for all cut and fill necessary to complete the work of this bid package.
9. Maintain building slab subgrade moisture content per soils report once building pad is received from the earthwork bid package.
10. Coordinate all work to provide access to buildings for other trades as scheduled.
11. Coordinate the location of depressions, block outs, slopes and drains prior to pour.
12. Coordinate concrete curbs relative to framing and door jambs prior to pour.
13. Review as-builts and underground locator survey and pothole utilities prior to starting work.

14. Work must be coordinated to accommodate staff and other trade access.
15. Once all steel embed templates and bolts have been formed and set in place by this bid package, the contractor will schedule with the surveyor to survey the templates for accuracy. Modification and fine tuning to be done under the building concrete bid package, prior to pouring footings. Once footings have been poured, and this bid package has stripped forms and templates, the concrete contractor will set a minimum of one leveling nut to the planned elevation at each column or tube frame.
16. Clean all footings, furnish dewatering and protection of all embed bolts until turned over to structural steel for erection.
17. Set a minimum of one leveling nut, to the planned finish elevation, at each steel column location, interior and exterior.
18. For reference, the following note is in CES-01, Increment 1 for the earthwork contractor, and the coordination with this CES-05 Structural building Concrete package. Specific to building E, from grid lines H to N, and 9 to 12, the slab is 3'-7" higher than the overall building slab. The earthwork contractor will build this up as required, then cut the material back to allow adequate work space for the structural concrete Bid Package to build footings. The structural concrete contractor will pour footings, build formwork, pour walls, strip, clean, and install fluid applied waterproofing. Once cured, the earthwork contractor will return to backfill and compact up against new walls, and fine grade in preparation for elevated slab pour. See plan detail below for additional reference.


8" CONC. SLAB WITH #4 AT 12" O.C. EACH WAY
CONCRETE RAMP. SEE ARCH'L FOR ADD'L INFORMATION.
A
A.1
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Furnish and Install Items

1. Furnish and install all building concrete. Buildings A, B, C, D, E, K, and Portable building P with associated access, vents, 2-inch rat slab, stem walls and piers. Furnish and install ADA ramps, stairs, and stem walls associated with Building E. Flatwork surrounding these areas to be provided with the site concrete package CES-01, in Increment 1.
2. **Furnish and install all curbs as identified for typical restrooms and kitchen areas, in addition to those shown on the plans. See details N7 and J7 on X/A101 from Addendum 1 drawings. (ADDENDA #2)**
3. ~~Furnish and install 22 gauge flashing at Building P below grade as required. Reference Detail 3/S1.4.~~ **(ADDENDA #2)**
4. Furnish and install all rebar complete. including ties to existing slab, footings, or stem walls where applicable.
5. Furnish and install all surface saw cutting and sealer per the contract documents.
6. Furnish and install all expansion joints and sealant complete required by the contract documents in concrete.
7. Furnish and install all fluid applied waterproofing at formed walls for elevated slab. Bldg. E
8. Furnish and install all sand, gravel, crushed rock, etc. as detailed at building concrete. All other fill material shall be furnished and installed by the earthwork bid package.
9. Furnish and install any and all excavations and backfill of excavations at all foundations, to the required grade. Excavations to include layout and digging of all building and CMU footings, spread footings, grade beams, etc.
10. Physically layout and install all blockouts, openings, etc.… in concrete from written layout provided by other bid packages for installation of their work.
11. Protect all slab blockouts for other trades working in the area.
12. Furnish and install all building anchor bolts. Coordinate layout with respective primes.
13. Furnish installation of all steel column templates, including bolts, as provided by Steel Contractor. Once installed, schedule a request for survey to have the bolt layouts confirmed with the steel shop drawings layout. Fine tune and adjust as necessary prior to pour.
14. Furnish & install all floor prep for floors out of tolerance poured by this contract, except at LVT.
15. Furnish & install all concrete equipment and housekeeping pads within the buildings.
16. All minor depressions for tile(if applicable) and slopes to drain shall be performed by this Concrete Bid package.
17. Furnish and install all patch and infill at slab as required for all work.
18. Furnish and install redwood nailers in concrete curbs the attachment of finishes as detailed.
19. Furnish and install all drilling of holes for work performed in this contract.
20. Furnish & install all building concrete sealant. Exterior walk sealant to be provided and installed by CES-01, Inc 1 package.
21. Furnish and install all grouting under handrails and at sleeves within the buildings.
22. Furnish and install steel channels for knee wall supports, as provided by the steel bid package, and coordinate layout and quantities with the framing bid package.
23. Provide for architect and engineer's review, saw cutting and expansion joint plan, prior to pouring any interior building concrete.
24. At all exposed concrete floors, pay special attention to obtain a uniform finish, and flatness per specifications. Areas found to be out of tolerance may be required to be removed in their entirety/ or from joint to joint, at the owner/Architect's discretion.
25. Provide and install rebar and concrete at the stairs and landings to the second floor of Building E.
26. Furnish and install rebar caps per OSHA for all rebar associated with this contract's scope of

work, installed by the reinforcement contractor. Furnish and install concrete stake caps associated with this contract's scope of work. Maintaining of Caps is the responsibility of this Prime Contractor. Safety walks at end of day required to ensure caps are in place, and any missing caps replaced.

FOB Items

1. None.

Installation of FOB Items

Note. Unload, inventory, store and notify of deficiencies for all items delivered to the jobsite FOB, to be installed by this bid package.

1. Physically layout and install all items embedded in concrete within the building and structural footings. (i.e. plates, angles, non-bolted tube steel, rails, sleeves, pipe rail, handrails, stair nosing, etc.…) as provided FOB jobsite by other bid packages from written layout provided by those bid packages. Install and grout all items installed in sleeves.
2. Install and remove when complete all bolt templates provided by other bid packages except for sill plate bolts.
3. Furnish and install templates from layout provided by the framing and steel bid package.

CES-06 STRUCTURAL STEEL

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 05 12 00 Steel and Fabrications
Section 05 30 00 Metal Deck
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.

14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. SUBMITTALS: Provide erection, bolt templates and shop drawings for all structural steel columns. Buildings are all to be submitted separately, site FOB items can be as one. Anchor bolt drawings, along with actual templates with the anchor bolts installed, for buildings E and A will be the first order of business, and due within 30 days of NTP. Following in order will be buildings B, C, D, and K, no later than one week each, after the initial 30 day start for buildings E and A. All subsequent building steel drawings are due for submittal no later than 30 days of their scheduled start.
21. ~~Safe off for existing electrical equipment to be demolished will be the responsibility of this bid package.~~ **(ADDENDA #2)**
22. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Provide coordination drawings for work related to this bid package. Coordinate all drawings with the drawings of other bid packages. Note conflicts and provide potential solutions to CM for review. Coordination must occur prior to installation of work. A representative from your company must be in attendance at all coordination meetings.
2. Field measure all guardrails and handrails.
3. Provide erection and shop drawings for all handrails, stair rails and guard rails.
4. All steel shall be detailed, ordered, fabricated, and erected per the project schedule.
5. All miscellaneous iron shall be detailed, ordered, fabricated, and erected per the project schedule.
6. Provide erection, bolt templates and shop drawings for all structural steel columns. Buildings are all to be submitted separately, site FOB items can be as one. Anchor bolt drawings, along with actual templates with the anchor bolts installed, for buildings E and A will be the first order of business, and due within 30 days of NTP. Following in order will be buildings B, C, D, and K, no later than one week each, after the initial 30 day start for buildings E and A. All subsequent building steel drawings are due for submittal no later than 30 days of their scheduled start.
7. Provide shop drawings for all steel fabrications.
8. Coordinate structural steel embeds.
9. Coordinate steel gate sizes with plans and CMU contractor for embed components/frame. Install frame in conjunction with the CMU installation process.
10. Request and Receive layout (prior to detailing and fabrication) from other Prime Contractors for all items which require holes, openings, reinforcing and bracing related to this Prime Contractor's

scope of work, including but not limited to, bolt holes for attachments, roof openings, HVAC supports, reinforcing steel, etc. Allow 10 days for return of dimensions. Provide coordination drawings for dimension mark ups by other Prime Contractors.

11. Provide a written crane access plan, laydown areas, and movement schedule for coordination with other Prime Contractors.
12. Coordinate vent frames and grating with plans for Portables, and see P/A101 for additional information.

Furnish and Install Items

1. Furnish and install all steel and fabrications, metal deck, and railing systems complete per plans and specifications.
2. Furnish and install all structural steel, miscellaneous iron, metal decking and closures at buildings and canopies, tube steel, channel, and outriggers.
3. **Furnish and install all steel stairs, and associated support and anchorage. See Building E, specifically E/A901. (ADDENDA #2)**
4. Physically layout and install all block outs, openings, reinforcing, bracing and holes in steel & metal deck from written layout provided by other Prime Contractors.
5. Furnish and install deck supports, steel beams, angles, "C" channel reinforcing at all deck penetrations and openings shown on the architectural, mechanical, electrical, plumbing, structural drawings & coordination drawings.
6. Furnish and install all deck support plates required on parallel to deck spanning beams.
7. Furnish and install all metal deck closures, profile closures, closures strips, penetration closures, and neoprene closures at metal deck, exterior canopies, and head of walls. Framing Prime Contractor to furnish and install closures where closure mounts to deck and stud with no concrete.
8. Furnish and install painted markings as required to identify yield lines on brace frames and similar.
9. Furnish and install all primer touch up at welding, structural steel, nuts and bolts, and metal deck.
10. Set leveling nuts at anchor bolts to the proper elevation for structural steel installation after one nut has been set to elevation by the concrete contractor. Assume protection of block outs in slab on grade once structural steel erection begins.
11. Furnish and install covers at all holes in elevated decks created by your own work in which debris may fall to the level below, per Cal OSHA regulations.
12. Furnish all roof access ladders. Coordinated blocking as required.
13. Furnish and install all rebar welded to structural steel, angle iron, and misc. iron.
14. Furnish and install all tube steel assemblies and angles for roof screens.
15. Furnish and install all steel canopies complete.
16. Furnish and install all pipe rails, handrails, drinking fountain guard rails/bollards, hold open posts / rails, and guard rails directly embedded in concrete or masonry.
17. Furnish and install all misc. iron & angles attached to concrete and masonry.
18. Furnish and install all components of the steel gate assemblies at CMU. Coordinate the channel attachment with plans and CMU contractor. Install channels during the CMU installations. See SD/A303 for example.
19. Furnished and install all attachment devices for handrails / guard rails.
20. Furnish and install all compressible material at structural steel.
21. Furnish and install all steel stairs and rails complete. Schedule installation with steel erection to allow for use by the project for access.
22. Furnish and install all beams and rails for stage curtain systems, including all holes if required for installation of material.

23. Furnish and install all tube steel and angles for roll up doors, if required.
24. Furnish and install steel closure plates for attachment of clips by framing Prime Contractor.
25. Furnish and install all AESS (Architecturally Exposed Structural Steel) as called for on the contract documents.
26. This contract will complete all work per the requirements of the Dust Control Plan and SWPPP Plan.
27. Provide Dust Control for own work.
28. Furnish / Install / Maintain safety cables, posts, temporary guardrails, and / or covers at all floor opening (per OSHA requirements) and for all leading edges throughout the project. Posts are not to be installed in a manner which would cause them to be embedded within exposed concrete. **Clarification: Rails and cables are to be removed by this CES-06 Bid Package, only after all structural roof work has been completed, signed off, and coordinated with the CM and Roofing contractor. (ADDENDA #2)**
29. Furnish and install own floor protection.
30. Furnish and install all miscellaneous iron required for framing.
31. Furnish and install all structural steel support in roof framing for all HVAC equipment. HVAC Prime Contractor to provide and install support rods, angle iron, and diagonal bracing as shown in mechanical.
32. Furnish and install all structural support as required for electrical or plumbing items to be suspended or mounted to structural steel members.
33. Provide all Galvanizing of steel and deck components as required by contract documents.
34. Provide All Deck and deck closures per plan.
35. Provide all gage metal associated with structural steel or deck.
36. Furnish and install any and all steel framing for architectural, mechanical, plumbing, and electrical openings.
37. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.

FOB Items

1. All structural steel anchor bolts and templates.
2. Furnish FOB jobsite all bolt templates for all patterns (made 10ga or thicker of steel one of each column) for use by the concrete contractor. Include (4) punched ¼" holes on each plate as directed by the building concrete contractor.
3. Furnish FOB jobsite all associated sleeves for handrails, and guard rails, etc. for installation by this contract.
4. FOB all counter support brackets, Structural steel / iron that attaches to framing/casework and equipment support. Count and handing to be confirmed with plans and casework. See X/A 310, and Similar at counter roll up's, see A7, A11/ X/A411.
5. Furnish embed plates and angles with rebar/nelson studs per contract documents FOB Jobsite for installation by others.
6. Furnish threshold / slab edge angles FOB jobsite. See slab edge angles A1/X/A411 as an example.
7. Access ladders
8. Steel tube wall supports at low walls. See N1/E/A104.
9. Furnish steel angles and grating for venting of the portable buildings. See plans for size and quantities. Grates and frames to be installed by site concrete bid package.
10. Furnish steel stand for the safe. See details.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

1. Not Applicable.

End of Bid package

CES-07 SHEET METALS, MEMBRANE ROOFS, WALL AND ROOF PANEL SYSTEMS

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 07 21 00 Insulation (As applicable to roof systems)
Section 07 40 00 Metal Panels
Section 07 54 19 Elastomeric Membrane Roofing
Section 07 60 00 Sheet Metal
Section 07 92 00 Sealants
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.

13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Provide coordination drawings for work related to this bid package. Coordinate all drawings with the drawings of other bid packages. Note conflicts and provide potential solutions to CM for review. Coordination must occur prior to installation of work. A representative from your company must be in attendance of all coordination meetings.
2. Coordinate all work to provide access to buildings for other trades as scheduled. Coordinate other activities in the schedule for other trades and confirm with construction schedule.
3. Provide shop drawings for all fabrications.
4. Coordinate downspouts with steel, Framing, and Site Plumbing package.
5. Provide written lay-out for all backing required.
6. Coordinate backing and reglet elevations with metal framing contractor.

Furnish and Install Items

1. Furnish and install all flashing and sheet metal including prefinished, for metal panels.
2. Furnish and install parapet cap at all locations and all other flashing and sheet metal on the project.
3. Furnish and install reglet flashing where stucco or wall panels meet roofs or other surfaces.
4. Furnish and install gutters.
5. Furnish and install all hangers, supports and bracing necessary for installation of work included in this contract.
6. Physically layout for own work.
7. Furnish and install all boot flashings.
8. **Provide sheet metal cap and associated flashings for electrical and mechanical equipment platforms as shown. (ADDENDA #2)**
9. Furnish and install Door and Window Flashings.
10. Furnish and install all sheet metal window sill flashings. Coordinate sizes, depths, and configurations with Storefront/window prime contractor and all plans.

11. Furnish and install all sleeves for all utilities passing through exterior finishes where applicable.
12. Furnish and install wall penetration flashings.
13. Furnish and install all wall opening flashings.
14. Furnish and install all metal wall, roof, and ceiling panel systems complete. Install Z furring as indicated. All wall rigid Insulation included in Bid Package CES-09. **Clarification: This CES-07 bid package will furnish and install vapor/weather barrier and flexible flashings over insulation at areas for own work/metal panels. Extend weather barrier a minimum of one stud bay beyond limits of metal panels to ensure proper lap where materials will be continued by plaster contractor. (ADDENDA #2)**
15. Furnish and install all items noted in the drawings and spec's associated with metal roof and wall panels as a complete system.
16. Furnish and install prefinished, color matched sheet metal for all conditions shown.
17. Furnish and install all sealants as noted above, in addition to the following is a list of specific items:
    a. Furnish and install all sealants associated with the prefinished roof or wall systems, including where prefinished materials abut an adjoining finished material, as shown in specific details.
18. Furnish and install all panels, and clip systems complete, including Z furring/hat channels as detailed.
19. Furnish and install all exterior rigid insulation at roof and under metal roof panels per plans.
20. Furnish and install all flashings and trim at ductwork penetrations through exterior walls or roof.
21. Furnish and install all flashing and trim at exterior wall to slab transitions.
22. Furnish and install metal and roof panels including all closure and flashings complete.
23. Furnish and install all sealant between metal panels and plaster.
24. Furnish and install all field cutting of metal roof and wall panels, as required, to meet construction schedule.
25. Furnish and install sealant at louvers and hollow metal frames.
26. Furnish and install drip edge, flashings, and counter flashings at roof.
27. Furnish and install watertight closures, (pre flashings) at all gang and individual pipe penetration through exterior walls.
28. This contract will adhere to the requirements of the Dust Control Plan and SWPPP Plan.
29. Provide Dust Control for Own Work.
30. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
31. Furnish and install all roof jacks. Coordinate sizes and quantities with other Primes and plans.
32. Furnish and install all sheet metal window sill flashings. Coordinate sizes, depths, and configurations with Storefront/window Prime Contractor and all plans.
33. Furnish and install all sleeves for all utilities passing through exterior finishes where applicable.
34. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.

FOB Items

1. Color match touch up paint.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-08 FINISH CARPENTRY

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 06 22 00 Millwork
Section 06 41 23 Modular Casework
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.

14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. Provide daily cleanup to keep site clean and orderly.
18. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
19. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
20. This contract is to provide temporary power for own work until such time as building temporary power is established.
21. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

Furnish and Install Items

1. Coordinate and install counter brackets mounted to studs furnished by building steel bid package.
2. Furnish and install all casework shown on the contract documents.
3. Furnish and install all drilling of holes for work performed in this bid package.
4. Furnish and install all openings in casework and tops for other trades as well as cable holes and grommets as laid out by District.
5. Furnish & install all sleepers, shims, floor anchorage devices, angles, and floor blocking for attachment of casework. Backing in wall to be provided by the framing bid package.
6. Furnish and install wood rough carpentry framing incorporated into casework including utility chases.
7. Furnish and install all supports and bracing necessary for installation of work included in this bid package. Including surface mounted counter support brackets, and those built into reception counter areas. Structural steel counter brackets by others.
8. Furnish and install casework accessories as noted in specification.
9. Furnish and install shims and wood supports.
10. Install all counter support brackets, Structural steel / iron that attaches to framing/casework support.
11. Furnish and install all counter tops.
12. Furnish and install all solid surface window sills.
13. Furnish and install all casework/Millwork, doors, trims, nosing, skirting, railings, etc. at stage. Steps to be flooring contractor.
14. **Furnish and install all millwork accent wall/ceiling components. Trees and accent laminate, see X/A 316 and other specific conditions listed within the casework schedule documents. (ADDENDA #2)**
15. Furnish and install all Wood framing incorporated into casework and laminated walls.

16. Furnish and install angle connectors.
17. Furnish and install trim.
18. Provide casework submittals and shop drawings within 14 days of Notice to Proceed.
19. Provide all accessory items normally required by this trades standard of care.
20. Furnish and install upholstery where shown. **Clarification: Furnish and install all associated upholstery with Modular Casework. See J7 on X/A315 for an example. (ADDENDA #2)**

FOB Items

1. None

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-09 METAL FRAMING, PLASTER, AND GYPSUM BOARD

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 07 21 00 Insulation (as applicable to all exterior wall rigid insulation)
Section 09 22 16 Metal Framing
Section 09 24 00 Cement Plaster
Section 09 29 00 Gypsum Board
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.

13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all general trash debris generated by this contract to the bins provided by CES-12. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.

Coordination with Other Trades

1. Provide coordination drawings for above ceiling work for work related to this bid package. Coordinate all drawings with the drawings of other bid packages. Note conflicts and provide potential solutions to the CM architect for review. Coordination must occur prior to installation of work. Attend all coordination meetings required to coordinate all above ceiling work.
2. Coordinate installation of blocking, backing, etc. for other bid packages from written/physical layout provided.
3. Provide review and verification of space for ADA requirements prior to framing. Report any discrepancies.
4. Confirm backing is installed to satisfaction of toilet accessory and toilet partition contractor prior to installation of ceramic tile.
5. Coordinate stud layout where applicable for the installation of counter support brackets.
6. Coordinate the installation of fire safing/insulation with the insulation contractor. Insulation contractor to provide insulating materials for all areas that would be concealed during the framing, making post framing installation not practical or possible. Framing package to install insulation in headers, trimmers, channels, and heads of walls.
7. Provide a plaster control and expansion joint layout for architect approval prior to installation.
8. Plaster Bid package shall coordinate with Painting Bid Package the application of the cement plaster painting system, and provide written report of the cement plaster pH prior to the painting application.
9. Install and bolt metal studs to Steel tube wall supports at low walls. See N1/E/A104.

Furnish and Install Items

1. Furnish and install all exterior rigid insulation at walls, including weather barrier over framing and insulation if assembly required per specs. “All exterior” is to include areas behind all wall finishes, stucco, metal panels, columns, when applicable, etc. Coordinate with metal panel contractor for specifics as necessary.
2. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
3. Furnish and install all drywall systems as called for in the contract documents.
4. Furnish and install all fire rated top of wall systems. Insulation contractor to “Stuff and Spray” appropriate materials per plans.
5. Furnish and install all cement board/green board including skim coat prep for finishes.
6. Furnish and install all tape and texture systems. Provide adequate heating to ensure that tape/textured areas that are worked on any given day, are dry enough to resume work for the following coat, texture, priming, or paint, the following day, start of work.
7. Furnish and install all sound board.
8. Furnish and install all gypsum suspended ceilings.
9. Furnish and install all insulation and fire safing as required in concealed and framing entrapped areas.
10. Furnish and install acoustical caulking where applicable.
11. Furnish and install all lath, plaster, drywall, and metal stud framing complete.
12. Install insulation at metal deck voids at top of wall in entrapment conditions.
13. Furnish and install all metal stud or flat backing for all trades, including backing for plumbing downspouts, Casework, railings, signage, electrical, restroom accessories, kitchen equipment, etc.
14. Furnish and install all fire rated assemblies wrapped in drywall as called for throughout the documents.
15. Furnish, install, remove scaffolding for all work included in this trade.
16. Furnish and install all gauge plate to install studs at metal deck.
17. Furnish and install all gauge closure plate to connect deck to studs.
18. Furnish and install all gauge material for attachment for metal studs and braces.
19. Furnish and install all insulation draft / fire stops framing and drywall per plans.
20. Furnish and install all items noted in contract documents as cement plaster. This includes but is not limited to the following: Flexible flashings and water/air barrier specified as part of the system.
21. Furnish and install all Flexible Penetration Flashing Sheets around all items that penetrate ~~the Cement Plaster~~ **all building exterior walls (stucco, metal panels, etc.)** including but not limited to doorframes, window frames, structural steel, piping etc. as required for a complete water/airtight assembly as designed. **Extend weather barrier a minimum of one stud bay beyond limits of stucco to ensure proper lap where materials will be continued by metal panels contractor. (ADDENDA #2)**
22. Furnish and install all metal framing attachments to Structural Steel & metal deck.
23. Furnish and install metal stud/flat strap backing for all electrical mechanical and plumbing shown on those drawings.
24. Furnish and install backing for plaster expansion joints and moldings as required for proper installation.
25. Furnish and install framing and sheetrock for fire rated assemblies at electrical, plumbing, and mechanical utilities and fixtures.
26. Furnish and install gypsum board exterior sheathing.
27. Furnish and install primer / surface coat at gypsum board as called for in the specifications.

28. Furnish, install and physically layout all openings, block-outs, metal backing, blocking, blocking for utility and fixture supports. Coordinated locations with related trades prior to installation of metal framing.
29. Protect adjacent products during plaster operations.
30. All means of temporary heat/cooling for installation of work (taping/texture) will be provided by this bid package.
31. This contract will complete all work per the requirements of the Dust Control Plan and SWPPP Plan.
32. Provide Dust Control for Own Work.
33. This bid package is to provide a washout for cleanup after construction activities, reference SWPPP plan for details and requirements. Location of washout should be in a location so as to not obstruct or impede work by other trades.
34. This bid package is to off haul all metal stud/framing scrap. All weight and recycle tags are to be delivered to the Waste Management Coordinator (CES-12).
35. This bid package is to provide all haul off of drywall gyp scrap. All weight tags to be delivered to the Waste Management coordinator.
36. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
37. Provide all scaffolding for own work, including all permits for scaffolding as required. Daily inspections before start of work are mandatory. Provide daily safety inspection reports to CM (CM).
38. Furnish and install all hangers, supports and bracing necessary for installation of work included in this Contract.
39. Prime Contractor is responsible for all work referenced throughout the project documents related to this Prime Contractor's scope of work.
40. Provide complete mockups as required by the specifications.
41. Furnish and install protection of all roofing when work under this contract requires access on the roofing systems.
42. Furnish and install self-furring lath and smooth wall/Parged wall material over CMU for chalk board paint. See N4/SD-A304

FOB Items

1. Provide the concrete bid package with physical layout and all bolts if required for this package, that embed into concrete and masonry for sill, wall, cap, and ceiling framing related to this scope of work. A concrete sign-off will be acknowledge prior to concrete placement.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-10 WALL MATERIALS AND ACOUSTICAL CEILINGS

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 09 50 00 Acoustical Ceilings
Section 09 72 00 Wall Coverings
Section 10 26 00 Wall and Corner Guards
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.

14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

Furnish and Install Items

1. Furnish and install all acoustical ceiling complete.
2. Furnish and install all FRP.
3. Furnish and install all vinyl covered tack board.
4. Furnish and install all hangers, supports and bracing necessary for installation of work included in this bid package.
5. Furnish and install all Acoustical caulking and sealant at all locations where tack board meets other materials.
6. Furnish and install tile at electrical and low voltage devices prior to dropping of tile activity.
7. Furnish and install all "hanger wires" for work in this bid package and light fixtures, cable trays, projector mounts and air terminals per detail. Electrical and mechanical bid packages will make final connections to devices.
8. Furnish and install all compression struts.
9. Furnish and install all protective wall coverings (FRP) and corner guards complete.
10. Furnish and install all tack board and associated trims.
11. Furnish and install all corner guards.
12. Provide daily clean-up and off-haul of own debris.

FOB Items

1. None

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-11 PAINTING

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 03 35 10 Polished Concrete Finishing
Section 07 92 00 Sealants
Section 09 67 23 Resinous Flooring
Section 09 91 00 Painting
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.

13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Schedule paint coats so as to allow for completion of work with minimal damage with final coat being installed with majority of work completed. Touch up as required.
2. Plaster Bid package shall coordinate with Painting Bid Package the application of the cement plaster painting system, and provide written report of the cement plaster pH prior to the painting application.
3. Coordinate the painting of mechanical Prime Contractor provided louvers or vents, light fixture escutcheons, and other similar items designated to be painted to match at accent walls and ceilings.

Furnish and Install Items

1. Furnish and install all painting and sealing complete for the project.
2. Furnish and install finish as specified for trim, doors, and millwork.
3. Furnish and install all surface preparation and finish of all flashing to be painted.
4. Furnish and install touch-up painting.
5. Furnish and install all painting of mechanical, plumbing, and electrical utilities and equipment as required. HVAC grilles & registers as required.
6. Furnish and install painting at all new doors as required.
7. Furnish and install all accent, murals, Logo’s, and signage painting.
8. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
9. Furnish and install CFS Concrete Floor Sealers on floors as specified.
10. Furnish and install all resinous floor systems complete. Prep as required. Grind concrete at openings. Coordinate with door hardware installer. (Thresholds for extent)
11. Furnish and install painting of door frames as shown on the drawings and in the openings schedule.
12. Furnish and install Caulking and sealants of new hollow metal frames, interior and exterior.
13. Furnish and install Paint at all flashings, caps, trims, steel, steel downspouts, etc., where not noted to have “Factory Finish”.

14. Furnish and install painting of all site items noted or scheduled. See fire equipment for example SD/X102.
15. Furnish and install Chalk Board Paint at CMU. Coordinate with CMU and Plaster. See N4/SD/A304 for reference.

FOB Items

1. None

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-12 GENERAL SPECIALTIES

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 01 64 00 Owner Furnished Items (ADDENDA #2)
Section 01 74 19 Waste Management
Section 03 15 14 Drilled Anchors
Section 06 10 00 Rough Carpentry
Section 07 18 50 Vapor-Alkalinity Control
Section 07 21 00 Insulation
Section 07 72 00 Roof Accessories
Section 07 92 00 Sealants
Section 08 11 00 Metal Doors and Frames
Section 08 15 13 Laminate-Faced Wood Doors
Section 08 31 13 Access Doors and Frames
Section 08 33 00 Coiling Doors
Section 08 41 00 Storefronts
Section 08 41 13 Folding Door System (ADDENDA #2)
Section 08 56 59 Service Windows
Section 08 70 00 Hardware
Section 08 70 00.1 Hardware Schedule
Section 08 80 00 Glass
Section 09 30 00 Tile
Section 09 64 66 Resilient Wood Floor
Section 09 65 10 Resilient Base and Accessories
Section 09 65 16 Resilient Sheet
Section 09 68 40 Carpet
Section 10 05 00 Miscellaneous Specialties (Building Plaque, Dimensional Letters**, Cubicle Curtain System, Folding Partitions, Lock Box, Stair Stripping, Safe, Book Cart, Projection Screen) (ADDENDA #2)**
Section 10 11 00 Visual Display Boards
Section 10 14 00 Identifying Devices
Section 10 21 13 Toilet Partitions
Section 10 28 13 Toilet Accessories
Section 10 44 00 Fire Protection Specialties
Section 10 51 13 Metal Lockers
~~Section 11 16 16 Safes~~ **(ADDENDA #4)**
Section 11 40 00.01 Food Service Equipment
Section 11 61 43 ~~Platform~~ **Stage** Curtains **(ADDENDA #4)**
Section 11 68 13 Play Equipment
Section 14 42 00 Wheelchair Lifts
Appendix "B" Interior Color Schedule Plus Drawings

Appendix “C” Exterior Color Schedule
Geotechnical Engineering Report

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting

requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.

19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.

Coordination with Other Trades

1. Provide coordination drawings for above ceiling work for work related to this bid package. Coordinate all drawings with the drawings of other bid packages. Note conflicts and provide potential solutions to the architect for review. Coordination must occur prior to installation of work. Attend all coordination meetings required to coordinate all underground and above ceiling work.
2. Confirm that backing by framer is installed to satisfaction of toilet accessory and toilet partitions installer prior to installation of ceramic tile.
3. Coordinate ceramic tile installation with mirror locations at toilets.
4. Provide written layout for all backing required for this bid package.
5. Coordinate at the jobsite all plumbing and electrical locations during rough-in activities to assure proper fit at time of casework and equipment installation.
6. Due to schedule constraints field measuring should be considered at framing stage in lieu of after all drywall and finishes are complete. Review the schedule to determine necessity relative to fabrication times. If measurement is required at the framing stage, provide measurement to meet the schedule and figure all associated finishes.
7. Coordinate hollow metal and storefront openings with framing Prime Contractor. Verify all openings after framing, and before exterior finishes to ensure proper fitment.
8. Coordinate size, shape and profiles of sheet metal pans and head flashings with sheet metal package. Installations and phasing to be coordinated for best time management of multiple trades with CM.
9. Coordinate electrical and FA with coiling doors as required.

Furnish and Install Items

1. Furnish and install all hangers, supports and bracing necessary for installation of work included in this bid package.
2. Provide daily clean-up and off-haul of own debris.
3. Furnish and install own floor protection.
4. Furnish and install fire-stopping/safing complete.
5. Furnish and install layout for your own work.
6. Furnish and install Scaffold for own work.
7. Protect existing surfaces to remain from damage from your work.
8. Furnish and install all interior insulation complete.
9. Furnish and install all fire safing and insulation at underside of roof decks at head of walls, beam pockets, and structural steel.
10. Furnish and install all fire rated top of wall systems complete. Safe, stuff, spray, etc.
11. Furnish and install floor prep for flooring. Level concrete within tolerance as required.

12. Furnish and install all flooring prep per manufacturers requirements, including filling, patching, crack control, leveling as required.
13. Furnish and install all flooring, with the exception of polished or resinous materials.
14. Furnish and install all wood steps, nosing's, and coordinate with Finish Contractor trims. **Clarification: Flooring contractor to include installation of all contrasting color stripes at steps per code and as called for per plans. (ADDENDA #2)**
15. Furnish and install all walk off materials.
16. Furnish and install all sheet flooring.
17. Furnish and install all carpet. Clarification: All carpet specified as "Clovis Blue" and "Walk off" will be provided by the district, and installed by this bid package. Any other carpet types or colors will be furnished and installed under this bid package.
18. The flooring contractor is to include all flooring installations at the portables. This ~~might~~ include**s** "Furnish Mondo and install". New portables drawings indicates that carpet, sheet flooring, and rubber base are all by others. **(ADDENDA #2)**
19. Furnish and install all rubber base at all floor systems throughout the project per plans and finish schedules.
20. Furnish and install all tile. Walls, floors, base, and grouts.
21. Furnish and install all exterior signage shown on architectural drawings complete except for parking and street signage.
22. Furnish and install all access signage on walls and fencing. Earthwork to provide all parking lot signage.
23. Furnish and install all building lettering and signage.
24. Furnish and install all dimensional letters complete.
25. Furnish and install all interior graphics.
26. Furnish and install building plaque.
27. Furnish and install all toilet accessories and mirrors.
28. Install all owner provided Soap and paper towel dispensers.
29. Furnish and install all mop/broom/rag holders.
30. Furnish and install all new toilet partitions.
31. Furnish and install firefighting devices.
32. **Furnish and** Install ~~Owner supplied~~ Knox boxes. **(ADDENDA #2)**
33. Furnish and install access doors shown on the reflected ceiling plan.
34. Furnish and install all wood framing. Steps, plywood backer boards, and in electrical/data rooms per finish schedule
35. **Furnish and install all plywood, including stage subfloor, and including under stage on walls listed as rough carpentry, fire rated sheathing, etc. (ADDENDA #2)**
36. **F&I all rough carpentry, in all locations as shown in plans, including those, but not limited to those associated with the furring/shim space at storefront and similar conditions. See X/A421 for examples. (ADDENDA #2)**
37. Project final cleaning.
38. Provide project final cleaning. All buildings, inside and out, windows, doors, walls, floors, cabinets, tops, restrooms, sidewalks, parking areas, etc.
39. Furnish, install, manage, trash and waste management.
40. Provide project trash/recyclable materials dumpsters, per spec section 01 74 19. Provide for the haul off and disposal of all trash and recyclables during the course of the project. Provide Reports per specifications. Drywall and metal stud scrap will be disposed/recycled by the metal stud framing contractor, and all tags will be provided to this general Specialties contractor for tracking

and waste management reporting.

41. Furnish and install all roof accessories. Hatches, ladder ups, railings, stage roof vent, etc.
42. Furnish and install all stage roof vent rigging, pulleys, winch, proposed installation layout plan, etc. for manual testing. Coordinate all backings and blockings with metal framing, and manufacturers recommendations. Any materials thicker than the 16 ga stud materials required for backing (if applicable) will be provided and installed under this Misc. Specialties package.
43. Furnish and install all doors. Wood, aluminum, laminate faced, hollow metal, steel, roll up, etc.
44. Furnish and install all electronic access controls. Connect to power supplied by Electrical contractor. Test and confirm operations.
45. Furnish and install all hardware and doors complete.
46. Furnish and install all Storefront systems complete, including all testing, glazing, hardware, etc.
47. Furnish and install door hold opens at concrete including coring of existing concrete as needed.
48. Furnish and install all wood doors and plastic laminate faced wood doors.
49. ~~Furnish and install all bituminous penetration flashing around all items that penetrate the building envelope including but not limited to door frames, window frames, structural steel, piping, etc.~~ **(ADDENDA #2)**
50. ~~Furnish and install building paper, moisture barrier / Tyvek, flexible flashings, and sealants per plans and manufacturer's instructions at installations.~~ **(ADDENDA #2)**
51. All and any aluminum closures, break metals, trims, flashings, sill pans, for any storefront is to be provided and installed under this package.
52. Furnish and install all glass/glazing, and associated sealants.
53. Furnish and install all hollow metal frames, doors, and windows.
54. Furnish and install all louvers and door lights as shown and per schedule.
55. Furnish and install all coiling doors.
56. Furnish and install all service windows.
57. Furnish and install all hardware. Gate and decorative fence hardware to be provided and installed under the site concrete and fence package.
58. Furnish and install all visual display/dry erase markerboards. Coordinate and confirm backing with framing, and coordinate placement with electrical and low voltage.
59. Furnish and install all lockers, including the installation of the owner furnished Bike Lockers.
60. Furnish and install all bike racks.
61. Furnish and install Flagpole assembly complete. Coordinate location, excavation, sleeve installations with Site Concrete plan and Prime Contractor.
62. Furnish and Install Safe. Coordinate installation with casework and metal stand in tall storage cabinet. **Clarification: Provide AMSEC safe model UL1812E, as listed in Addendum 1 new detail N11. AD1 AX04. Disregard safe reference in both the safe specification, and the one listed in the General Specialties specification. (ADDENDA #2)**
63. Furnish and install all food service equipment per plans, including custom fabrications, and all stainless wall panels at cooking line. Coordinate Food Service Shop drawings with plans and Framing. **Clarification: Furnish and install food service equipment is to include all equipment on the Food Service Equipment Schedule, on E/A102. The faucet and drain components will be supplied under this bid package, and provided to the plumbing contractor for installation on the sinks, hose reels, dishwasher, disposal, etc. (ADDENDA #4)**
64. **Furnish and install all SS counters including pass throughs. Example A7, A11, on X/A411. (ADDENDA #4)**
65. Provide all factory start ups for supplied equipment.

66. **Furnish and install stage curtain track and all associated support items. i.e. Unistrut, bolts, angle iron, etc. This includes angle noted as "Steel And Fabrication" in detail P11 on X/A603 from Addendum 2, as item AD2-AX10. (ADDENDA #4)**
67. Furnish and install sneeze guards. Coordinate size with plans, framing, and Hollow metal Primes and shop drawings.
68. Furnish and install cubicle curtains and stage curtain.
69. Furnish all playground Play structures. Coordinate delivery of the structures to the site to be installed by the CES-01 contractor.
70. Furnish and install all bleachers. (6-five row sets) at ball fields. See plans and detail E on SD/X107. Dugout benches are provided and installed under CES-01 bid package.
71. Furnish and install wheelchair lift. Coordinate layout and installation with building concrete, Framing, electrical, and low voltage.
72. Install all roof access ladders, as furnished by Struct Steel bid package. Coordinate bolting and backing with struct steel, framing, backing, drywall, etc. This may require installing ladder to establish bolting locations, tack weld nuts, then remove ladder for drywall and finishes, then reinstall ladder at finish.
73. Furnish and install all projection screens. Coordinate with framing and electrical.
74. Furnish and install operable wall/folding partition**/Folding door system**. Coordinate with structural steel, metal framing, and finishes. **(ADDENDA #2)**
75. **Furnish and install book cart. (ADDENDA #2)**

FOB Items

1. Deliver insulation to the metal framing Prime Contractor as needed for installations at concealed, entrapped conditions.
2. **Furnish and provide playground play structures (x2) to CES-01 Bid Package for final installation. (ADDENDA #2)**

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-13 FIRE SPRINKLERS

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 07 92 00 Sealants
Section 21 05 17 Sleeves and Sleeve Seals for Fire-Suppression Piping
Section 21 05 18 Escutcheons for Fire-Suppression Piping
Section 21 05 23 General-Duty Valves for Fire Protection Piping
Section 21 05 29 Hangers and Supports for Fire Suppression Piping and Equipment
Section 21 05 48 Vibration & Seismic Controls for Fire-Suppression Piping & Equipment
Section 21 05 53 Identification for Fire-Suppression Piping and Equipment
Section 21 11 00 Facility Fire-Suppression Water-Service Piping
Section 21 11 19 Fire Department Connections
Section 21 13 13 Wet-Pipe Sprinkler Systems
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

Refer to additional related specifications sections for work specifically included in this bid package noted below.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.

10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

Furnish and Install Items

1. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
2. Furnish and install all supports and bracing necessary for installation of work included in this bid package.
3. Furnish and install fire sprinkler system complete from the point of connection provided from the underground utilities Prime Contractor. (See site plumbing SOW for clarity)
4. Test and flush system per specifications
5. Coordinate the installation of the fire alarm safety devices with the electrical, low voltage Prime Contractor for devices associated with the sprinkler system.
6. Provide and install all signage, and ID tags as required.

FOB Items

1. Tools, keys, and extra heads per plans/spec.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

End of Bid package

CES-14 BUILDING PLUMBING and HVAC

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 05 12 00 Steel and Fabrications (For downspouts/RWL's and support attachments)
Section 07 92 00 Sealants
Section 08 91 00 Louvers
Section 22 00 00 General Plumbing Provisions
Section 22 00 50 Plumbing
Section 23 01 00 General Mechanical Provisions
Section 23 01 00 General Mechanical Provisions
Section 23 05 00 Common Work Results for HVAC
Section 23 05 13 Common Motor Requirements for HVAC Equipment
Section 23 05 29 Hangers and Supports for HVAC Piping and Equipment
Section 23 05 48 Vibration and Seismic Controls for HVAC Piping and Equipment
Section 23 05 53 Identification for HVAC Piping and Equipment
Section 23 05 93 Testing, Adjusting, and Balancing for HVAC
Section 23 07 00 HVAC Insulation
Section 23 08 00 Commissioning of HVAC
Section 23 17 10 Variable Frequency Drives
Section 23 23 00 Refrigerant Piping
Section 23 31 13 Metal Ducts
Section 23 31 16 Nonmetal Ducts
Section 23 33 00 Air Duct Accessories
Section 23 34 23 HVAC Power Ventilators
Section 23 34 33 Air Curtains
Section 23 38 13 Commercial Kitchen Hoods
Section 23 72 00 Air to Air Energy Recovery Equipment
Section 23 74 13 Package Outdoor Central Station Air Handling Units
Section 23 74 33 Packaged Outdoor Heat and Cool Makeup Air Units
Section 23 81 50 Variable Refrigerant Flow Air Conditioners
Section 25 50 00 Direct Digital Control and Energy Management Systems
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5’ per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor’s work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Provide coordination drawings for work related to this bid package. Coordinate all drawings with the drawings of other bid package. Note conflicts and provide potential solutions to ~~DABI~~ **Construction Manager** for review. Coordination must occur prior to installation of work. A representative from your company must be in attendance of all coordination meetings. **(ADDENDA #2)**
2. Coordinate locations of all openings, block-outs, backing, and blocking for utility and fixture supports with related trades prior to installation of framing.
3. Any holes made through materials to allow installation of utilities not called for in the contract documents shall be installed and reinforced by this bid package.
4. Coordinate all work to provide access to buildings for other trades as scheduled. Provide a breakout schedule of where and when piping operations will be performed that has been coordinated with other activities in the schedule for other trades.
5. Coordinate routing of plumbing to miss foundations.
6. Coordinate the location of depressions, block outs, slopes, and drains with the drawings prior to pour.
7. Housekeeping and equipment pads will be furnished and installed by the concrete bid package. Provide dimensions for pads.
8. Coordinate alignment of all utilities between plumbing and civil drawings prior to excavation.
9. Coordinate at the jobsite all plumbing and electrical locations during rough-in activities to assure proper fit at time of casework and equipment installation. In addition, contractor to confirm all piping will fit in walls.
10. Coordinate individual building tie-ins or cut over with ~~DABI~~ **Construction Manager**. Provide a written testing plan for all systems prior to start of service. **(ADDENDA #2)**
11. Coordinate with other trades that will interface with plumbing equipment and material.
12. Clean and disinfect all building piping and portables with water piping. Phased construction will necessitate a specific schedule of disinfection coordinated with the other building & site contractors. Create disinfection plan and coordinate with building & site contractors to allow for complete and maintained disinfection of the entire system until acceptance by Owner.
13. Coordinate water, gas, condensate, and sewer with plans, and food service shop drawings prior to rough in.
14. Provide dimensions for structural steel openings within 30 days of NTP.
15. Review as-built drawings for POC prior to starting work.
16. Layout blocking as required for hangers and supports for own work. Structural steel contractor will provide and install additional structural steel in roof framing as required and shown. Mechanical to provide and install all suspension rods, angle iron, and bracing as shown in mechanical plans.
17. Provide all necessary openings and/or connection points for EMS and fire alarm wiring and devices.
18. Housekeeping and equipment pads will be furnished and installed by the concrete bid package. Provide dimensions for pads.
19. Coordinate heights of all roof curbs to confirm with roofing requirements prior to ordering curbs.
20. Coordinate location of rough-in prior to ordering HVAC units for electrical mechanical and plumbing utilities.
21. Physically layout all coring, drilling, block outs, openings, holes, backing, etc.
22. All sheet metal as required for HVAC scope, whether noted or not, used on this project shall be furnished and installed under this bid package.

23. Provide all equipment ready for hook up by Electrical bid package. Coordinate utilities and connections with related trades.
24. Coordinate HVAC ductwork and equipment with structural steel, fire sprinkler, electrical, and plumbing.
25. Coordinate all work to provide access to buildings for other trades as scheduled. Provide a breakout schedule of where and when rough-in operations will be performed in the building that has been coordinated with other activities in the schedule for other trades.
26. Provide all necessary openings and/or connection points for EMS and fire alarm wiring and devices. Fire Alarms Systems will be provided under separate contracts. EMS by this contract.
27. Coordinate locations of all openings, block-outs backing blocking and blocking for utility and fixture supports with related trades prior to installation of framing.
28. Layout blocking as required for hangers and supports for own work.
29. Coordinate all utilities with food service prior to rough in of any materials.
30. Provide dimensions for structural steel openings within 30 days of NTP.

Furnish and Install Items (Plumbing)

1. Furnish and install all building fixtures and plumbing utilities to the POC provided by the Site Plumbing bid package, approximately 5'-0" outside of building.
2. Furnish and install all two-way building sewer clean outs as close to the building as possible. This is a district request. Coordinate with building concrete package to avoid footing conflicts.
3. Furnish and install water valves and boxes after POC from site utilities contractor's pipe.
4. Reference building Architectural sheets for all building downspout connections and details. See sheet XA531 for more information.
5. Furnish and install all drinking fountains, interior, exterior, and site.
6. This bid package will be responsible for all final points of connection to all site utilities.
7. Furnish and install physical layout for all deepened foundations at utilities prior to excavation by the concrete bid package.
8. Provide Furnish and install all access Panels required for your work.
9. Provide all backfill of excavations to original subgrade for work included in this bid package.
10. Furnish off-haul of all excavation spoils for work included in this bid package to one location as determined by ~~DABI~~ **Construction Manager**. **(ADDENDA #2)**
11. Furnish and install all attachments of equipment related to this scope of work.
12. **The Food service contractor in CES-12 will furnish and install food service equipment to include all equipment on the Food Service Equipment Schedule, on E/A102. The faucet and drain components will be supplied under that bid package, and provided to the plumbing contractor for installation on the sinks, hose reels, dishwasher, disposal, etc. (ADDENDA #4)**
13. Furnish and install all sleeves in foundations prior to the installation of concrete and reinforcing steel. Coordinate location with other related trades prior to excavation.
14. Furnish and install all excavations for own work.
15. Furnish and install all concrete required for installation of work in this bid package.
16. Furnish and install all drilling of holes for work performed in this bid package.
17. Furnish and install drilling of wood and metal as needed for pipes and supports.
18. Furnish and install all rough-in for equipment supplied under other bid packages(Kitchen equipment, hvac,…) as required by the related specification sections and drawings. Connect to equipment.
19. Furnish and install all required utilities for Owner Furnished Equipment, capped and ready for connection. Make connection when installed.

20. Furnish and install watertight closures at all gang and individual pipe penetration through exterior walls or through roof.
21. Provide testing of floor and roof drains during installation and at completion of project.
22. Clean and disinfect all building piping and portables with water piping. Phased construction will necessitate a specific schedule of disinfection coordinated with the other building & site contractors. Create disinfection plan and coordinate with building & site contractors to allow for complete and maintained disinfection of the entire system until acceptance by Owner. Building contractors will be responsible for cleaning and disinfection of building and portable piping.
23. Furnish and install all identification or lettering noted for the project required for this scope of work.
24. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
25. Furnish and install all flues associated with own work.
26. Furnish and install water heater, strapping and platforms complete including steel stand if specified.
27. Furnish & install drain & overflow piping.
28. Furnish & install all trap primers and access panels as needed.
29. Furnish and install protection of existing finishes and roofing for own work.
30. Insulate hot water and drain pipes under sinks per ADA/code.
31. Furnish and install all trench drains.
32. Furnish and install all sand/oil separators complete.
33. Drill all holes required for curb attachment through steel.
34. Furnish and install all fire stopping and acoustical/sound sealant assemblies complete for this scope of work.
35. Furnish and install all condensate piping complete including hook up.
36. Furnish and install all coring or place sleeves for utilities through masonry and concrete. Sleeves are to be installed prior to rebar and concrete. Coordinate with other contractors prior to excavation.
37. Furnish and install all fabrication and installation of steel downspouts and brackets. Coordinate fabrication with steel specifications for reference where applicable.
38. Furnish and install all downspouts and related support bracket assemblies as outlined in Detail A1 on X/A531. Coordinate all backing layout with metal stud framing package, and roofing contractor.
39. Connect steel downspouts to all rain gutters and storm drains, per all disciplines of drawings.
40. This contract is to provide temporary power for own work through completion of steel erection as required. Once temporary power has been established by ~~DABI~~ **Construction Manager**, each contractor will only need to provide temporary utility distribution from services provided. Contractors are responsible for own distribution of power and lighting. **(ADDENDA #2)**
41. Furnish and install all plumbing identified in the plumbing notes, food service documents, and plumbing drawings.
42. Furnish and install covers at all holes in elevated decks created by your own work in which debris may fall to the level below, per Cal OSHA regulations.
43. Furnish and install all roof accessories relative to this contractor's work.
44. Furnish and install all shut off valves, and pressure regulator for the gas systems. Connect gas lines from building to gas POC.
45. Furnish and install all floor drains.
46. Furnish and install all Unistrut, angles, clips, fasteners, etc. to bottom of deck, beams, etc. for hanging of utilities. Means and methods meeting detailed attachment, code, and approved manufacturers methods.

47. Furnish and install all gas regulators. And their security cages as noted “General Specialties” see SD/A302
48. Furnish and install all toilet and sink sensors complete.
49. This contract will complete all work per the requirements of the Dust Control Plan and SWPPP Plan.
50. Provide Dust Control for own work.
51. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
52. Provide early startup/use of plumbing equipment as required by the ~~DABI~~ **Construction Manager**/Owner for construction or building systems testing, prior to final acceptance, which will not initiate the warranty period until the filing notice of completion. **(ADDENDA #2)**
53. The Plumbing Contractor shall include all of the following in its bid and coordinate with each of its own sub trade for a complete project. Each contractor shall submit, at time of the bid, their crewing and bid package plan as to who will be performing what scopes of work and the crew size planned for each.
54. Any deviation from the contract documents resulting in additional design will be at the cost of this bid package.
55. This contract shall be responsible for all fireproofing/caulking/assemblies for own work.
56. Furnish and install all building clean outs approximately 2’ from the building, or as close to the footing as possible at wide footings. Coordinate layout and installation with structural concrete bid package. All clean outs are to be two-way clean outs, per district standards.

Furnish and Install Items (HVAC)

1. Furnish and install all HVAC equipment, duct, hangers, backing, bracing, supports, and piping supports and curbs necessary for installation of work included in this bid package.
2. Furnish and install EMS system complete.
3. Furnish and install all access doors necessary to provide access to work included in this bid package.
4. Furnish and install all drilling of holes for work performed in this bid package.
5. Furnish and install all attachment of all equipment related to this scope of work.
6. Furnish and install all fire stopping related to this bid package.
7. This contract shall be responsible for all fireproofing/caulking/assemblies for own work.
8. Furnish and install all identification and lettering called for in the contract documents related to this bid package.
9. Provide for testing of fire smoke dampers resettable link coordinate with Fire Alarm bid package. Provide fire smoke dampers ready for power hook up.
10. Provide start up and run equipment for acclimation and allow use of HVAC systems without effecting official start date of Warranty period upon Owner acceptance of project. Provide early startup and maintenance of HVAC equipment as required by CM, for acclimatization of buildings prior to final acceptance, which will not initiate the warranty period until the filing notice of completion. Provide for 2 filter changes for all required equipment throughout the building. If filter replacement is not required, then filters are to be turned over to the district during close out procedures.
11. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
12. Furnish and install all pre-manufactured roof curbs at the roof.

13. Furnish and install all roof curb adapters as required.
14. Furnish and install transfer air grilles as noted.
15. Furnish and install fusible links for equipment testing if applicable.
16. Provide all controls unless specifically called for in electrical drawings.
17. Furnish and install all duct work and flues complete associated with own work.
18. Furnish and install all metal louvers and screens. Provide associated attachment accessories.
19. Furnish and install louvers at walls complete. Coordinate with exterior envelope flashing contractor/ installer.
20. Furnish and install all fire and fire smoke dampers ready for device hook up by electrical.
21. Furnish and install all fans.
22. Furnish and install all exhaust systems.
23. Furnish and install sealant as related to this package.
24. Furnish and install Unistrut & pipe support assembly for own work.
25. Provide all necessary openings and/or connection points for EMS and fire alarm. Provide conduit and wiring as required for unit shut down controls.
26. Provide daily clean up. Haul off own debris.
27. ~~Provide sheet metal cap and associated flashings for electrical and mechanical equipment platforms as shown.~~ **(ADDENDA #2)**
28. Furnish and install all unit anchorage complete as noted.
29. Furnish and install control conduit and conductors.
30. Install communicating smoke detector unit shutdown at the air handler as noted.
31. Furnish and install all refrigeration piping for all HVAC equipment shown on the plans per manufacturer's instructions, engineered calculations and Specifications.
32. Furnish and install all HVAC and Sheet metal (as applies to mechanical equipment) work complete per plans and specs.
33. Furnish and install all control panels and support.
34. This contract is to provide temporary power for own work through completion of steel erection as required. Once temporary power has been established each contractor will only need to provide temporary utility distribution from services provided at the building. Contractors are responsible for own distribution of power and lighting.
35. Furnish and install all drilling of holes, including through metal, for work performed in this contract.
36. Furnish and install all galvanized steel supports for ductwork at roof if required.
37. Furnish and install fire duct wrap.
38. Furnish and install all equipment anchorage.
39. Furnish and install all flashings associated with ductwork, fans, and hoods, through walls, decks, and roof.
40. Furnish and install all louver assemblies complete including all clips, screws, and angles necessary to attach louvers except for hollow metal frame to be provided by other Prime Contractors
41. Furnish and install all mechanical noted in the mechanical notes throughout the food service documents complete.
42. Furnish and install all Ansul system complete. Provide gas valve to plumber for installation.
43. Furnish and install all Roof Accessories and/or Curbs/Platforms/Stands/Supports/Steel Backing/Bolts/Angles (wood/ steel / pre-manufactured / framed) for all Mechanical equipment provided under this contract.
44. Furnish and install all roof mounted pipe supports when required.
45. Furnish and install covers at all holes in elevated decks created by your own work in which debris may fall to the level below, per Cal OSHA regulations.

46. Install all duct mounted smoke detector housings provided by the fire alarm Prime Contractor.
47. Provide all equipment ready for hook up by EMS and Electrical Prime Contractors. Coordinate utilities and connections with related trades.
48. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
49. Furnish and install EMS system complete including all conduit, wire, controls, and control panels.
50. Furnish Air Balancing with report (to include modular buildings).
51. This contract will complete all work per the requirements of the Dust Control Plan and SWPPP Plan.
52. Provide Dust Control for own work.
53. The Mechanical Prime Contractor shall include all of the following in its bid and coordinate with each of its own sub trade for a complete project. Each Prime Contractor shall submit, at time of bid, their crewing and bid package plan as to who will be performing what scopes of work and the crew size planned for each.
54. This contract shall be responsible for all fireproofing patch back as a result of own work.
55. Furnish and Install sealant for HVAC work included in this contract abutting other materials.
56. Furnish and install all sleeves for work passing through masonry and concrete work where required. Coordinate with Respective Prime Contractors.
57. Furnish and install protection of all roofing when work under this contract requires access on the roofing systems.
58. Furnish and install all hangers, supports, Unistrut and bracing necessary for installation of work included in this contract.
59. Furnish and install all sleeves in foundations prior to the installation of concrete and reinforcing steel. Coordinate location with other related Prime Contractors prior to excavation.
60. All Prime Contractors will provide their own temporary and task lighting needed for this scope of work.
61. This contract is responsible for holes through metal deck and installation of hanger wires for own work where applicable and approved.
62. All work will need to be completed as per the supplied bid schedule.
63. Coordination must occur prior to installation of work. A representative from your company must be in attendance at all coordination meetings.

FOB Items

1. Furnish all starters at HVAC units. Electrical connections shall be made by Electrical bid package.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

1. Install Duct Detectors provided by Fire Alarm Prime Contractor. Wiring to be completed by electrical Prime Contractor.

End of Bid package

CES-15 BUILDING ELECTRICAL

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

Specification Sections

Refer to additional related specifications sections for work specifically included in this bid package noted below.

Division 00
Division 01
Section 03 15 14 Drilled Anchors
Section 07 92 00 Sealants
Section 10 05 00 Miscellaneous Specialties (Projector Support Panel)
Section 26 05 00 Common Work Results for Electrical
Section 26 05 26 Grounding
Section 26 05 53 Electrical Identification
Section 26 20 00 Low Voltage Electrical Transmission
Section 26 50 00 Lighting Fixtures
Section 27 00 00 Telecommunication Systems
Section 27 05 28 Communications Infrastructure System
Section 27 10 00 Structured Cabling System
Section 27 20 10 Uninterruptible Power Supply
Section 27 42 00 Classroom Audio-Visual Systems
Section 27 53 13 Analog Synchronous Clocks
Section 27 70 00 Intercom Clock Public Address System
Section 27 80 00 Video Surveillance
Section 28 31 00 Fire Alarm and Detection
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order.
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.

6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. This contract is to provide temporary power for own work until such time as building temporary power is established.
20. Furnish clean up daily and off-haul of all debris generated by this contract to disposal bins provided under CES-12. Prime Contractor must abide by the Waste Management specification.

Coordination with Other Trades

1. Provide coordination drawings for underground and above ceiling work for work related to this bid package. Coordination must occur prior to excavation and/or installation of the work. Attend all coordination meetings required to coordinate all underground and above ceiling work.
2. Provide use and maintenance of electrical equipment and devices as required by the District/or CM for construction and testing of other equipment prior to final acceptance, which will not initiate the warranty period until filing of notice of completion.
3. Coordinate all work to provide access to buildings for other trades as scheduled. Provide an underground utility schedule of where and when piping operations will be performed.
4. Coordinate locations of all openings, block-outs, backing, and blocking for utility and fixture supports with related trades prior to installation of framing.
5. Coordinate location of UG utilities to be out of angle of repose of foundations.

6. Poured in place housekeeping and equipment pads to be supplied by the concrete contractor.
7. Review as-builts and pothole existing utilities prior to starting work.
8. Verify continuity of electrical and low voltage conduits for work in this contract.
9. Provide shop drawings for equipment layout in electrical rooms to confirm that dimensions are adequate prior to rough in and pouring of footings and curbs.
10. Connect “hanger wires” provided by the Acoustical Prime Contractor to hang light fixtures.
11. Coordinate all locations of kitchen equipment for the kitchen and electrical drawings.
12. Provide dimensions for structural steel openings within 30 days of NTP.
13. Coordinate all utilities with food service prior to rough in of any materials.
14. Coordinate wall sizes with pipe sizes prior to installation to confirm all piping will fit in walls.
15. Coordinate locations of all openings, block-outs, backing and blocking for utility and fixture supports with related trades prior to installation of framing.
16. Layout above ceiling blockings/backings as required for hangers and support of own work.
17. Coordinate all underground utilities to miss foundation.
18. Provide Safe off of all electrical equipment as required for trade work.

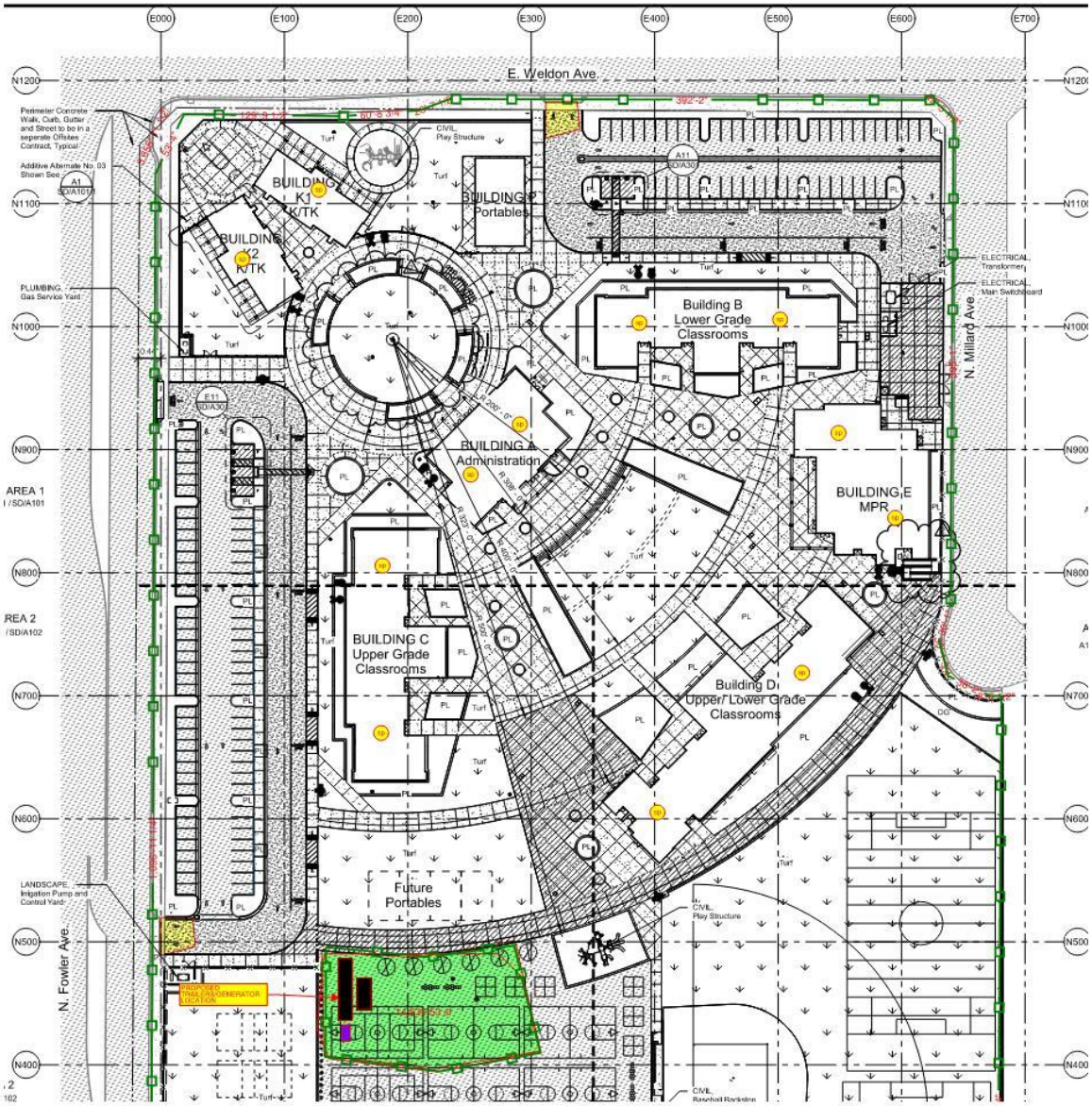
Furnish and Install Items

1. Furnish and install all building and site electrical, wiring and equipment complete, with exception to that being provided in Inc #1, Site Electrical conduit, Rule 16 conduit, switchgear pad, and the installation of the owner supplied switchgear. This bid package CES-15 will provide and install all transformers, disconnects, panels, IDF cabinets, Environmental exterior cabinets, mini unit substation, etc., including concrete footings, equipment pedestal, precast pads, etc.
2. Furnish and install all conduit from the POC where the Inc 1 electrical Prime Contractors installations stop. Continue all conduits to their final installations into the buildings per plans. Continue all fire conduit to fire sprinkler systems for all fire alarm completion in this package.
3. Continue all site lighting conduits to all lights and light poles.
4. Furnish and install all light poles, bases, templates, bolts, forms, groundings, and concrete to complete the site lighting.
5. Provide installation of final conduit and all connections to pump(s), and irrigation controllers. The site electrical contractor will provide conduit to within 5’ of “Coaches switches” locations. This contract will connect and finish conduit and provided and install a housing box per plan, provide receptacle, wiring and all connections for coaches switches controller to plug in to.
6. Furnish and install all wiring. Power, lighting, low voltage, data, Fire. EMS and Irrigation to be provided under those prime packages.
7. Furnish/install/disconnect job site temporary power as required.
8. **Furnish and install temp power cords and connections to the CM office trailer, and the inspector’s trailer, from the CM rented generator. (ADDENDA #2)**
9. **Furnish and install temp power from CM rented generator to each building. Install two spider boxes in each building, evenly distributed within the space for maximum accessibility. (ADDENDA #2)**
10. **Furnish and install temp power from CM rented generator to the 480 3-phase irrigation booster pump. (ADDENDA #2)**
11. **See attached Site Plan Sketch at the end of this section for Temp Power Plan for clarification. (ADDENDA #2)**
12. Furnish and install temporary lighting in the main areas of each building equal to a minimum of a continuous temp light stringer the long length of each building, or equal. Connect temp lighting to temp power distribution box, and power, also provided under this package.
13. Furnish and install physical layouts for all deepened foundations at utilities prior to excavation.

14. All excavation spoils to be deposited at one location on site as determined by CM.
15. Furnish and install all sleeves in foundation prior to the installation of reinforcing steel and concrete. Coordinate layout and location with other related bid package trades prior to excavation.
16. Furnish and install all sleeves for work passing through masonry and concrete work. Coordinate with respective bid packages.
17. Provide all backfill of excavations to original subgrade for work included in this bid package.
18. Furnish and install all floor boxes solid for install of slab on grade.
19. Furnish and install drilling of holes for work performed in this bid package.
20. Furnish and install fire stopping and fire caulking of own penetrations for own work.
21. Furnish and install pull strings/rope in all empty or future conduits **for own work**. **(ADDENDA #2)**
22. Furnish and install all concrete required for installation of vaults, boxes, underground structures for work related to this bid package.
23. Provide conduit path/raceway for reception panic button, and dedicated principals phone if required by the district.
24. Furnish and install all access panels and doors necessary to provide access to work included in this bid package.
25. Furnish and install all required utilities for Owner furnished equipment hook up as required.
26. Furnish and install all rough-in for all equipment of other bid packages as required by the related specification sections and drawings. Connect and or stub as described.
27. Furnish and install all conduit and sleeves for future low voltage and telecommunications wiring. Install fire stopping as required.
28. Furnish and install disconnects and associated supports not provided on factory equipment installed by other bid packages.
29. Furnish and install all supports and bracing required for electrical work except for ceiling hanger wires to lights in new ceilings.
30. Provide connection of “Hanger Wires” to light fixtures, layout of wires will be by this bid package. Connect “Hanger Wires” provided by the Acoustical Bid package to light fixtures, cable trays and projector mounts.
31. Furnish and install watertight closures and sealants at all gang and individual pipe penetration thru exterior walls.
32. Furnish and install all identification and lettering called for in the contract documents related to the work of this bid package.
33. Furnish and install all roof accessories relative to this bid package’s work.
34. Furnish and install own floor protection (i.e., Tarps, plastic, plywood, etc.).
35. Furnish and install all clocks and speakers.
36. Furnish and install all power and fire alarm to smoke and fire dampers as called for in the documents.
37. ~~Adjust all electrical and low voltage boxes in new landscape and concrete areas as needed.~~ **(ADDENDA #2)**
38. Furnish and install all physical layout for your own work.
39. Core penetrations through CMU wall as required for conduit installation.
40. Furnish and install all power requirements for owner supplied equipment **per plans and specs**. **(ADDENDA #2)**
41. Furnish and install all anchor bolts and templates for light poles and equipment. Form and pour all light pole bases.
42. Furnish and install electrical to HVAC units **per plans and specs**. **(ADDENDA #2)**

43. Furnish and install protection of all roofing when work under this bid package requires access on the roofing systems.
44. Provide all power testing for own work.
45. Furnish duct detector for fan shut-down and signal to fire alarm system at noted Air Handlers, AC Units, Makeup Air Units and Supply, and exhaust Fans.
46. Furnish and install all lighting and controls as required.
47. Furnish communicating smoke detector unit shutdown at the air handler and furnish and install fire alarm monitoring as noted.
48. Furnish and install all power and low-voltage systems complete except for EMS controls. This includes but is not limited to all buildings and site wiring, cable trays and conduit for power clock and speaker, data, fire alarm, lighting controls, security, etc.
49. Furnish and install all rough in conduit, and power for security and electronic access control **per plans and specs**. **(ADDENDA #2)**
50. Furnish and install all Unistrut for electrical work and lighting fixture supports. This includes Unistrut for projector support.
51. Furnish and install all chain mounted fixtures complete.
52. Furnish and install all electrical panel mounting complete at roofs except flashing.
53. Furnish and install all electrical required for kitchen hoods complete including hook up.
54. Furnish and install all electrical, data, and fire alarm connections required for the stage elevator including testing.
55. Furnish and install covers at all holes in elevated decks created by your own work in which debris may fall to the level below, per Cal OSHA regulations.
56. Furnish layout and Unistrut as necessary for backing and supports required for pendent light fixtures.
57. Furnish and install all power and fire alarm conduit and wiring complete to rollup doors including connections and testing.
58. Furnish and install all conduit, wiring, and connections for all powered roll up doors.
59. Furnish and install all power to water heaters, recirculating pumps, and thermo switch complete, in collaboration with the plumbing Prime Contractors installations.
60. Furnish and install all projectors, projector mounts. **Clarification: See specification section 01 64 00 for Owner supplied Contractor installed items. This electrical package will be responsible for the installation and programming of the Owner supplied projectors to interface with the AV equipment supplied and installed within this package. (ADDENDA #2)**
61. Furnish and install all required utilities for Owner Furnished Equipment, capped and ready for connection. Make connections as required upon arrival **per plans and specs**. **(ADDENDA #2)**
62. Furnish and install all roof curbs associated with electrical work.
63. Furnish and install all rough-in for all equipment of other trade as required by the related specification sections and drawings. Connect and or stub as described.
64. Furnish and install all site lighting including bases, poles, and fixtures.
65. Furnish and install data infrastructure, wiring and cabling per plans and specifications.
66. Furnish and install disconnects and associated supports.
67. Furnish and install fire alarm including connection to all fire sprinkler devices.
68. Furnish and install sealant system as required to provide watertight condition at all exterior devices.
69. Furnish, install, and coordinate all conduit and wiring within casework. Coordinate with casework Prime Contractor for chase requirements.
70. Furnish and install all speakers and associated brackets.
71. Proved power and make connections to owner furnished equipment.

72. Provide for any and all electrical testing for modular buildings.
73. Provide low voltage work at modular buildings. including but not limited to, pulling of wire, fire alarm system, security system.
74. Provide Dust Control for own work.
75. This contract will complete all work per the requirements of the Dust Control Plan and SWPPP Plan.
76. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this Project.
77. All excavation spoils to be deposited at one location on site as determined by CM.
78. Furnish and install all sleeves for work passing through masonry and concrete work. Coordinate with respective bid packages.
79. Provide all backfill of excavations to original subgrade for work included in this bid package.
80. Furnish and install drilling of holes for work performed in this bid package.
81. Furnish and install pull strings/rope in all empty or future conduits.
82. Furnish and install all attachment of all equipment related to this scope of work.
83. Furnish and install all identification and lettering called for in the contract documents related to the work of this bid package.
84. Furnish and install all physical layout for your own work.
85. This contract shall be responsible for holes at metal deck for installation of hanger wires for own work.
86. Furnish and install all conduit, wiring, and connections for all powered roll up doors **per plans and specs**. **(ADDENDA #2)**
87. **Installation of Owner provided television and mount in Building A. (ADDENDA #2)**
88. **Installation of Owner provided laptop charging towers in Buildings B, C, and D. (ADDENDA #2)**



	Spider Boxes for Temp Power
	Temp Fence 4,820 lft
	Possible fence early removal 1,900 lft
	GENERATOR
	TRAILERS

FOB Items

1. Duct Detector Work: These items are provided by Fire Alarm, to be installed by Mechanical Prime Contractors and wired by this contract. Provide additional circuits as needed for mechanical equipment, coordinate with mechanical Prime Contractor.

Installation of FOB Items

Note: Coordinate all deliveries to jobsite with CM. Prime Contractor to Unload, inventory, store and notify CM of any deficiencies for all items delivered to the jobsite FOB.

1. Install all switches for equipment provided by others i.e., coiling doors, fly fans, exhaust fans, etc.
2. Install all Owner furnished Electrical equipment and switches where applicable.

End of Bid package

CES-16 OFF SITE IMPROVEMENTS

Furnish and install all work specifically required throughout the project documents to complete the work of this bid package that specifically includes, but is not limited to the following:

PG&E drawings and specifications
City of Fresno codes, and requirements for all utility and street improvements.
Refer to additional related specifications sections for work specifically included in this bid package noted below.

Specification Sections

Division 00
Division 01
City Of Fresno Off Site Street Improvement Plans and Specifications
City of Fresno Street Lighting Plans and specifications
City of Fresno Off Site Water Main Improvements Plans and Specifications
City of Fresno Off Site Landscape improvements Plans and Specifications
PG&E Gas and Electrical Off-Site Plans
Section 32 84 00 Landscape Irrigation System (For Backflow Preventor and installation)
Appendix "B" Interior Color Schedule Plus Drawings
Appendix "C" Exterior Color Schedule
Geotechnical Engineering Report

City of Fresno specification for sidewalks, curbs, gutters, drive approaches, asphalt paving, sewer, storm, water, patch backs, etc. for all work associated with the Off-Site Improvements.

General Items

1. See General Notes at the beginning of the Summary of Work Specification Section for other items to be included in this Bid Package.
2. Furnish and install all layout for own work from survey provided **within this Bid Package**. Prime Contractor will be responsible for all additional layout not performed by the survey contractor. Prime Contractors are responsible for protection of all requested survey. Any needed re-staking of already provided points will be subject to deductive change order. **(ADDENDA #4)**
3. Provide all backfill of excavations to original sub-grade for work included in this bid package.
4. Obtain all permits required to perform the work specified in the bid package. CM will submit the Dust Control plan to the Air Board. Prime Contractor will be responsible for all other permits required to perform the work identified. Prime Contractor will be responsible for dust control for their own work.
5. Provide daily cleanup to keep site clean and orderly.
6. Protect identified improvements to remain on civil plan sheets.
7. Should the Prime Contractor damage and/or otherwise alter work installed under separate contracts, Prime Contractor shall be responsible for the correction/repair of work installed under separate contracts.
8. Prime Contractor is required to attend all coordination meetings as required by CM.
9. Phasing is projected to be as shown on the Bid Schedule. However, the Construction Manager reserves the right to revise the schedule, as necessary.

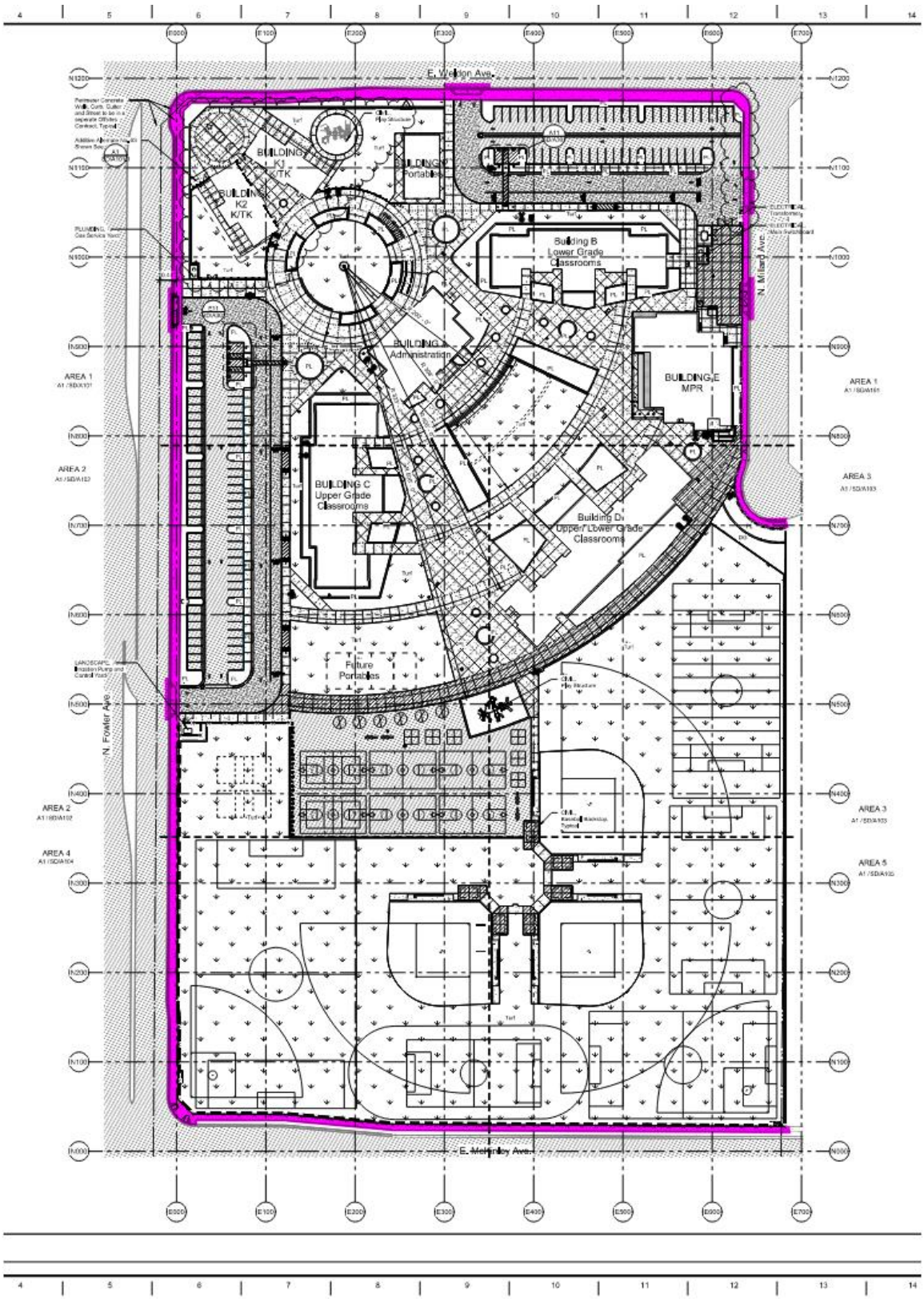
10. Promptly submit written notice to CM of observed variance of Contract Documents from legal requirements.
    a. Appropriate modifications to Contract Documents will adjust necessary changes.
    b. Assume responsibility for work known to be contrary to such requirements and without written notice to Architect of observed variance.
11. Provide material, equipment, mobilizations, and manpower to meet Construction Schedule provided in Contract Documents.
12. Each bid package is responsible for dewatering as it pertains to their scope of work.
13. Provide trenching plan and permits for excavations over 5' per OSHA requirements to the Construction Manager.
14. Each Prime Contractor is to provide all equipment and manpower as necessary to offload all materials required to complete their respective scope of work.
15. Monthly pay apps will not be approved if as-builts are not updated monthly.
16. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
17. There will be one wash out area as designated by CM. Bid package will be responsible for removal from the site of all construction debris generated by Prime Contractor's work. Extra spoils to be stockpiled at the direction of CM.
18. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
19. Furnish clean up daily and off-haul of all debris generated by this contract. Prime Contractor must abide by the Waste Management specification. This includes, but is not limited to, providing recycling tags for each haul off removed from the project site.
20. All construction equipment shall meet the requirements of the SJVAPCD ISR Report (Air Impact Assessment- AIA) under the Construction Fleet Summary. This shall include reporting requirements as defined within the Monitoring and Reporting Schedule within the ISR for this project.
21. This contract is to provide temporary power for own work.

Coordination with Other Trades

1. This Prime Contractor will be responsible for the setup of SWPPP BMP's, as shown in the SWPPP plan drawings for all Off-Site work areas including but not limited to, silt fencing, track outs and fiber rolls surrounding existing drain inlets.
2. Allow for two additional mobilizations for movement or relocation of track outs as required during construction.
3. Any survey requests require a minimum of 48-hour notice.
4. Coordinate dimensions with other related Prime Contractors.
5. Coordinate installation of all sleeves for work passing through concrete work with respective Prime Contractors prior to excavation.
6. Review as-builts prior to starting work.

Furnish and install items

1. Furnish and install all off-site improvements for water, sewer, storm. All utilities will be brought on to the site as shown for connection by site utilities contractor, or to the location provided by the site utilities contractor, should that scope of work be installed prior.
2. Furnish and install all Surveying for all Off Site improvements.
3. Furnish and install all back flow and Detector Check Valves for fire and domestic water entering the site.
4. Furnish and install all Off-Site irrigation back flow preventors.
5. Furnish and install all Off-Site Fire Hydrants.
6. Furnish and install all offsite piping and connections for water, sewer, storm, and gas.
7. Furnish and install all gas on to site, ready for meter assembly.
8. Furnish and install all PG&E utilities work per plans.
9. Furnish and install all street lighting, traffic lighting, controls, connections, complete.
10. Furnish and install all trail and lighting complete.
11. Furnish and install all cut, patch back, grading and paving of roadways per Off-Site improvement plans, and for water tie-in along Weldon Ave for Fire Water, including back flow device.
12. Furnish and install all curb, gutter, sidewalks, trail, lighting, per Off-Site drawings, including those shown in the attached highlighted site plan sketch, to help show separation from project Site Concrete Bid Package.
13. Furnish and install all off-site landscape irrigation and planting complete.


E. Weldon Ave.
N. Millard Ave.
N. Fowler Ave.
E. Mehrmley Ave.
BUILDING K1 K/TK
BUILDING K2 K/TK
BUILDING Portables
Building B Lower Grade Classrooms
BUILDING A Administration
BUILDING E MPR
BUILDING C Upper Grade Classrooms
Building D Upper/ Lower Grade Classrooms
Future Portables
AREA 1
AREA 2
AREA 3
AREA 4
AREA 5

SECTION 019113
GENERAL COMMISSIONING REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Building commissioning of the following systems:

a. HVAC components and equipment.
b. HVAC system: interaction of cooling, heating, and comfort delivery systems.
c. Building Automation System (BAS): control hardware and software, sequence of operations, and integration of factory controls with BAS.
d. Lighting Control System and interface with daylighting.
e. Domestic hot water systems.

2. Monitoring of the following procedures:

a. Building flush out as described in Section 230500 Common Work Results for HVAC.

B. The Owner, Architect/Engineer, and Commissioning Agent are not responsible for construction means, methods, job safety, or management function related to commissioning on the job site.

C. Related Sections:

1. Division 23 Section "Commissioning of HVAC" for commissioning process activities for HVAC systems, assemblies, equipment, and components
2. Division 26 Section "Lighting Commissioning" for commissioning process activities for lighting systems.

1.2 DEFINITIONS

A. Basis of Design - The basis of design is the documentation of the primary thought processes and assumptions behind design decisions that were made to meet the Owner's Project Requirements. The basis of design describes the systems, components, conditions and methods chosen to meet the intent. Some reiterating of the Owner's Project Requirements may be included.

B. Commissioning – Commissioning is a comprehensive and systematic process to verify that the building systems perform as designed to meet the Owner's requirements. Commissioning during the construction, acceptance, and warranty phases is intended to achieve the following specific objectives:

1. Verify and document that equipment is installed and started per manufacturer's recommendations, industry accepted minimum standards, and the Contract Documents.
2. Verify and document that equipment and systems receive complete operational checkout by installing contractors.
3. Verify and document equipment and system performance.
4. Verify the completeness of operations and maintenance materials.
5. Ensure that the Owner's operating personnel are adequately trained on the operation and maintenance of building equipment.

The commissioning process does not take away from or reduce the responsibility of the system designers or installing contractors to provide a finished and fully functioning product.

C. Commissioning Plan - an overall plan that provides the structure, schedule and coordination planning for the commissioning process.

D. 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, does not perform properly or is not complying with the Owner's Project Requirements.

E. Owner's Project Requirements - a dynamic document that provides the explanation of the ideas, concepts and criteria that are considered to be very important to the Owner. It is initially the outcome of the programming and conceptual design phases.

F. Functional Performance Test - test of the dynamic function and operation of equipment and systems using manual (direct observation) or monitoring methods. Functional testing is the dynamic testing 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 setpoint). Systems are tested under various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, fire alarm, power failure, etc. 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. TAB's primary work is setting up the system flows and pressures as specified, while functional testing is verifying that which has already been set up. The Commissioning Agent 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 are performed after prefunctional checklists and startup are complete.

G. Manual Test - using hand-held instruments, immediate control system readouts or direct observation to verify performance (contrasted to analyzing monitored data taken over time to make the "observation").

H. Monitoring - the recording of parameters (flow, current, status, pressure, etc.) of equipment operation using dataloggers or the trending capabilities of control systems.

I. Non-Compliance - see Deficiency.

J. Non-Conformance - see Deficiency.

K. Prefunctional Checklist - a list of items to inspect and elementary component tests to conduct to verify proper installation of equipment, provided by the Commissioning Agent to the contractor. Prefunctional checklists are primarily static inspections and procedures to prepare the equipment or system for initial operation (e.g., belt tension, oil levels OK, labels affixed, gages in place, sensors calibrated, etc.). However, some prefunctional checklist items entail simple testing of the function of a component, a piece of equipment or system (such as measuring the voltage imbalance on a three-phase pump motor of a chiller system). The word "prefunctional" refers to before functional testing. Prefunctional checklists augment and are combined with the manufacturer's start-up checklist.

L. Seasonal Performance Tests - Functional Performance Test that are deferred until the system(s) will experience conditions closer to their design conditions.

M. Warranty Period - warranty period for entire project, including equipment components. Warranty begins at Substantial Completion and extends for at least one year, unless specifically noted otherwise in the Contract Documents and accepted submittals.

1.3 COORDINATION

A. Perform commissioning services to expedite the testing process and minimize unnecessary delays, while not compromising the integrity of the procedures.

B. Commissioning Agent shall provide overall coordination and management of the commissioning program as specified herein.

C. Commissioning Team: The commissioning process will require cooperation of the Contractor, subcontractors, vendors, Architect/Engineer, Commissioning Agent, and Owner. The commissioning team shall be comprised of the following.

1. Contractor
    a. Project Manager
    b. Test Engineer
2. Subcontractors: As appropriate to product or system being commissioned.
3. Commissioning Agent
    a. Project Manager
    b. Project Engineers
4. Owner Representative(s).
5. Architect/Engineer
    a. Architect
    b. MEP engineers

D. Progress Meetings: Attend construction job-site meetings, as necessary, to monitor construction and commissioning progress. Coordinate with contractor to address coordination, deficiency resolution and planning issues.

1. Plan and coordinate additional meetings as required to progress the work.

E. Site Observations: Perform site visits, as necessary, to observe component and system installations.

F. Functional Testing Coordination:

1. Equipment shall not be "temporarily" started for commissioning.
2. Functional performance testing shall not begin until pre-functional, start-up and TAB is completed for a given system.
3. The controls system and equipment it controls shall not be functionally tested until all points have been calibrated and pre-functional checklists are completed.

1.4 QUALITY CONTROL

A. Qualifications for Commissioning Agents: Engage commissioning service personnel, that specialize in the types of inspections and tests to be performed.

1. Inspection and testing service agencies must satisfy the qualifications of, and perform in accordance with the requirements of the Building Commissioning Association (BCA).

1.5 SUBMITTALS

A. Commissioning Agent shall submit the following:

1. Basis of Design and Owner's Project Requirements.

a. Update as necessary during the work to reflect the progress on the components and systems. Submit to the Architect for distribution to the project team.

2. Commissioning Plan: Submit within 30 calendar days of authorization to proceed.

a. Update as necessary during the work to reflect the progress on the components and systems. Forward updates to the Architect for distribution to the project team.

3. Commissioning Schedule: Submit with Commissioning Plan.

a. Update as necessary during the work to reflect the progress on the components and systems. Architect for distribution to the project team.

4. Functional performance test forms: Submit minimum 30 calendar days prior to testing.

5. Deficiency Report and Resolution Record: Document items of non-compliance in materials, installation or operation. Document the results from start-up/pre-functional checklists, functional performance testing, and short-term diagnostic monitoring. Include details of the components or systems found to be non-compliant with the drawings and specifications. Identify adjustments and alterations required to correct the system operation, and identify who is responsible for making the corrective changes.

   a. Update as necessary during the work to reflect the progress on the components and systems. Forward updates to the Green Consultant in a timely manner.

6. Final Commissioning Report: Compile a final Commissioning Report. Summarize all of the tasks, findings, conclusions, and recommendations of the commissioning process. Indicate the actual performance of the building systems in reference to the Owner's Project Requirements and contract documents. Include completed pre-functional inspection checklists, functional performance testing records, diagnostic monitoring results, identified deficiencies, recommendations, and a summary of commissioning activities.
7. O&M Submittals:

   a. Training plan: Training plan shall include for each training session:

      1) Dates, start and finish times, and locations;
      2) Outline of the information to be presented;
      3) Names and qualifications of the presenters;
      4) List of texts and other materials required to support training.

   b. Systems Manual.

PART 2 PRODUCTS

2.1 TEST EQUIPMENT

A. Instrumentation shall meet the following standards:

1. Be of sufficient quality and accuracy to test and measure system performance within the tolerances required to determine adequate performance.
2. Be calibrated on the manufacturer's recommended intervals with calibration tags permanently affixed to the instrument being used.
3. Be maintained in good repair and operation condition throughout the duration of use on this project.

B. All standard testing equipment required to perform startup and initial checkout and required functional performance testing shall be provided by the contractor for the equipment being tested.

C. Datalogging equipment or software required to test equipment will be provided by the Commissioning Agent, but shall not become the property of the Owner.

PART 3 EXECUTION

3.1 COMMISSIONING PROCESS

A. The following activities outline the commissioning tasks and the general order in which they occur. The Commissioning Agent shall coordinate all activities.

1. Design Review and Documentation.
    a. Construction Document Review.
2. Commissioning Scoping Meeting.
3. Commissioning Plan.
4. Submittals Review.
5. Start-Up/Pre-Functional Checklists.
6. Functional Performance Testing.
7. Deficiency Report and Resolution Record.
8. Operations and Maintenance Training.
    a. O&M Manual Review
    b. Training.
9. Final Commissioning Report
10. Deferred Testing (if required).
    a. Unforeseen Deferred Tests.
    b. Seasonal Testing.
    c. One-year Warranty Review.

3.2 DESIGN REVIEW AND DOCUMENTATION

A. Documentation of Basis of Design and Owner's Project Requirements: Document basis of design and Owner's Project Requirements as they relate to environmentally responsive characteristics, including: functionality, energy performance, water efficiency, maintainability, system cost, indoor environmental quality and local environmental impacts.

B. Construction Document Review: Review construction documents to verify that commissioning is adequately specified, that each commissioned system can be commissioned and is likely to meet the Owner's Project Requirements.

3.3 COMMISSIONING SCOPING MEETING

A. Commissioning Scoping Meeting:

1. Schedule, coordinate, and facilitate a scoping meeting.
2. Review each building system to be commissioned, including its intended operation, commissioning requirements, and completion and start-up schedules.
3. Establish the scope of work, tasks, schedules, deliverables, and responsibilities for implementation of the Commissioning Plan.

B. Attendance: Commissioning Team members.

3.4 COMMISSIONING PLAN

A. Commissioning Plan: Develop a commissioning plan to identify how commissioning activities will be integrated into general construction and trade activities. The commissioning plan shall identify how commissioning responsibilities are distributed. The intent of this plan is to evoke questions, expose issues, and resolve them with input from the entire commissioning team early in construction.

1 Identify who will be responsible for producing the various procedures, reports, Owner notifications and forms.
2. Include the commissioning schedule.
3. Describe the test/acceptance procedure.

3.5 SUBMITTALS REVIEW

A. Submittal Review: Review the contractor submittals to verify that the equipment and systems provided meet the requirements of the Contract Documents and Owner's Project Requirements.

3.6 START-UP/PRE-FUNCTIONAL CHECKLISTS

A. Start-Up/Pre-Functional Checklists: Coordinate start-up plans and documentation formats, including providing contractor with pre-functional checklists to be completed during the startup process.

1. Manufacturer's start-up checklists and other technical documentation guidelines may be used as the basis for pre-functional checklists.

B. Start-Up/Pre-Functional Checklist shall help verify that the systems are complete and operational, so that the functional performance testing can be scheduled.

3.7 FUNCTIONAL PERFORMANCE TESTING

A. Functional Performance Testing: Test procedures shall fully describe system configuration and steps required for each test; appropriately documented so that another party can repeat the tests with virtually identical results.

1. Test Methods; Functional performance testing and verification may be achieved by direct manipulation of system inputs (i.e. heating or cooling sensors), manipulation of system inputs with the building automation system (i.e. software override of sensor inputs), trend logs of system inputs and outputs using the building automation system, or short-term monitoring of system inputs and outputs using stand alone data loggers. A combination of methods may be required to completely test the complete sequence of operations. The Commissioning Agent shall determine which method, or combination, is most appropriate.
2. Setup: Each test procedure shall be performed under conditions that simulate normal operating conditions as closely as possible. Where equipment requires integral safety devices to stop/prevent equipment operation unless minimum safety standards or conditions are met,

functional performance test procedures shall demonstrate the actual performance of safety shutoffs in a real or closely-simulated conditions of failure.

3. Sampling: Multiple identical pieces of non-life-safety or non-critical equipment may be functionally tested using a sampling strategy. The sampling strategy shall be developed by the Commissioning Agent. If, after three attempts at testing the specified sample percentage, failures are still present, then all remaining units shall be tested at the contractors' expense.

B. Develop functional performance test procedures for equipment and systems. Identify specific test procedures and forms to verify and document proper operation of each piece of equipment and system. Coordinate test procedures with the contractor for feasibility, safety, equipment and warranty protection. Functional performance test forms shall include the following information:

1. System and equipment or component name(s).
2. Equipment location and ID number.
3. Date.
4. Project name.
5. Participating parties.
6. Instructions for setting up the test, including special cautions, alarm limits, etc.
7. Specific step-by-step procedures to execute the test.
8. Acceptance criteria of proper performance with a Yes / No check box.
9. A section for comments.

C. Coordinate, observe and record the results of contractor's functional performance testing.

1. Coordinate retesting as necessary until satisfactory performance is verified.
2. Verify the intended operation of individual components and system interactions under various conditions and modes of operation.

3.8 BUILDING FLUSH-OUT

A. After construction ends, monitor the building flush-out procedures for removal of pollutants prior to occupancy. Building flush-out may take place before or after occupancy of the building subject to compliance with the requirements in Section 230500 Common Work Results for HVAC.

3.9 DEFICIENCY REPORT AND RESOLUTION RECORD

A. Deficiency Report and Resolution Record: Document items of non-compliance in materials, installation or operation.

B. Non-Conformance. Non-conformance and deficiencies observed shall be addressed immediately, in terms of notification to responsible parties, and providing recommended actions to correct deficiencies.

1. Corrections of minor deficiencies identified may be made during the tests at the discretion of the Commissioning Agent. In such cases the deficiency and resolution shall be documented on the procedure form.
2. For identified deficiencies:
    a. If there is no dispute on the deficiency and the responsibility to correct it:
        1) The Commissioning Agent documents the deficiency and the adjustments or alterations required to correct it. The contractor corrects the deficiency and notifies the Commissioning Agent that the equipment is ready to be retested.
        2) The Commissioning Agent reschedules the test and the test is repeated.
    b. If there is a dispute about a deficiency or who is responsible:
        1) The deficiency is documented on the non-compliance form and a copy given to the Architect
        2) Resolutions are made at the lowest management level possible. Additional parties are brought into the discussions as needed. Contractor shall have responsibility for resolving construction deficiencies. If a design revision is deemed necessary and approved by Owner, Architect/Engineer shall have responsibility for providing design revision.
        3) The Commissioning Agent documents the resolution process.
        4) Once the interpretation and resolution have been decided, the appropriate party corrects the deficiency and notifies the Commissioning Agent that the equipment is ready to be retested. The Commissioning Agent reschedules the test and the test is repeated until satisfactory performance is achieved.
3. Cost of Retesting: Costs for retesting shall be charged to the Contractor.

3.10 OPERATIONS AND MAINTENANCE TRAINING

A. O&M Manual: Review the operation and maintenance manuals compiled by the contractor for completeness and for adherence to the requirements of the specifications.

1. Obtain additional materials from contractor as necessary to stress and enhance the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation.

B. Training: Develop a Training Plan. Coordinate and review the training programs for Owner's personnel.

1. Obtain additional materials from contractor as necessary to stress and enhance the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation.

2. Provide a short introduction for all school staff explaining how classrooms systems work such as lighting and temperature controls and features a special workshop for facility personnel.

3.13 FINAL COMMISSIONING REPORT

A. Final Commissioning Report: Compile final commissioning report. Summarize all of the tasks, findings, conclusions, and recommendations of the commissioning process.

3.14 DEFERRED TESTING

A. Unforeseen Deferred Tests: If a test cannot be completed due to the building structure, required occupancy condition, or other deficiency, the functional testing may be delayed upon recommendation of the Commissioning Agent and the approval of the Owner. These tests are conducted in the same manner as the seasonal tests as soon as possible.

B. One-year-Warranty Review: Conduct warranty review of all commissioned systems one year after project completion. Review the current building operation with the facility maintenance staff. The review shall include outstanding issues from original or seasonal testing. Interview facility staff to identify concerns with building operation. Provide suggestions for improvements and assist owner in developing reports or documentation to remedy problems.

1. Update O&M manuals as necessary due to the testing.

3.14 EQUIPMENT & SYSTEM SCHEDULE

A. The following equipment shall be commissioned in this project.

System	Equipment	Check
HVAC System	Air handlers	
	Packaged AC units	
	Supply fans/Evaporative Coolers	
Lighting Controls	Lighting controls	
	Lighting occupancy sensors	
BAS System		
Domestic Hot Water		

END OF SECTION

SECTION 23 34 23 – HVAC POWER VENTILATORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Utility set fans.
2. Centrifugal roof ventilators.
3. Upblast propeller roof exhaust fans.
4. In-line centrifugal fans.

1.3 PERFORMANCE REQUIREMENTS

A. Project Altitude: Base fan-performance ratings on sea level.

B. Operating Limits: Classify according to AMCA 99.

1.4 SUBMITTALS

A. Product Data: Include rated capacities, furnished specialties, and accessories for each type of product indicated and include the following:

1. Certified fan performance curves with system operating conditions indicated.
2. Certified fan sound-power ratings.
3. Motor ratings and electrical characteristics, plus motor and electrical accessories.
4. Material thickness and finishes, including color charts.
5. Dampers, including housings, linkages, and operators.
6. Fan speed controllers.

B. Operation and Maintenance Data: For power ventilators to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. AMCA Compliance: Products shall comply with performance requirements and shall be licensed to use the AMCA-Certified Ratings Seal.

C. NEMA Compliance: Motors and electrical accessories shall comply with NEMA standards.

D. UL Standard: Power ventilators shall comply with UL 705.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver fans as factory-assembled unit, to the extent allowable by shipping limitations, with protective crating and covering.

B. Disassemble and reassemble units, as required for moving to final location, according to manufacturer's written instructions.

C. Lift and support units with manufacturer's designated lifting or supporting points.

1.7 COORDINATION

A. Coordinate size and location of structural-steel support members.

B. Coordinate roof penetrations as detailed on plans

PART 2 - PRODUCTS

2.1 UTILITY SET FANS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Greenheck.
2. CaptiveAire
3. Carnes Company HVAC.
4. Loren Cook Company.
5. Penn Ventilation.

B. Description: Direct or Belt-driven centrifugal fans consisting of housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, and accessories.

C. Housing: Fabricated of galvanized steel with side sheets fastened with a deep lock seam or welded to scroll sheets.

1. Housing Discharge Arrangement: Adjustable to eight standard positions.

D. Fan Wheels: Single-width, single inlet; welded to cast-iron or cast-steel hub and spun-steel inlet cone, with hub keyed to shaft.

1. Blade Materials: Aluminum.
2. Blade Type: Backward inclined.

E. Fan Shaft: Turned, ground, and polished steel; keyed to wheel hub.

F. Shaft Bearings: Prelubricated and sealed, self-aligning, pillow-block-type ball bearings with ABMA 9, L_{10} of 100,000 hours.

G. Belt Drives: Factory mounted, with final alignment and belt adjustment made after installation.

1. Service Factor Based on Fan Motor Size: 1.5.
2. Motor Pulleys: Adjustable pitch for use with motors through 5 hp; fixed pitch for use with larger motors. Select pulley so pitch adjustment is at the middle of adjustment range at fan design conditions.
3. Belts: Oil resistant, nonsparking, and nonstatic; matched sets for multiple belt drives.
4. Belt Guards: Fabricate of steel for motors mounted on outside of fan cabinet.

H. Direct Drive Motors:
1. Open type motor enclosure with DC electronic commutation type motor (ECM) specifically designed for fan applications.
2. Motors are permanently lubricated heavy duty ball bearing type to match with the fan load.
3. Motor speed controllable down to 20% of full speed, controlled by either a potentiometer dial mounted at the motor or by a 0-10 VDC signal
4. Motor shall be a minimum 85% efficient at all speeds.

I. Accessories:

1. Inlet and Outlet: Flanged.
2. Companion Flanges: Rolled flanges for duct connections of same material as housing.
3. Backdraft Dampers: Gravity actuated with counterweight and interlocking aluminum blades with felt edges in steel frame installed on fan discharge.
4. Access Door: Gasketed door in scroll with latch-type handles.
5. Drain Connections: NPS 3/4 threaded coupling drain connection installed at lowest point of housing.

J. Coatings: Powder-baked enamel.

2.2 CENTRIFUGAL ROOF VENTILATORS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Acme Engineering & Mfg. Corp.
2. Greenheck.
3. Loren Cook Company.
4. Penn Ventilation.

B. Description: Direct-driven centrifugal fans consisting of housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, curb base, and accessories.

C. Housing: Removable, spun-aluminum, dome top and outlet baffle; square, one-piece, aluminum base with venturi inlet cone.

1. Upblast Units: Provide spun-aluminum discharge baffle to direct discharge air upward, with rain and snow drains.
2. Hinged Subbase: Galvanized-steel hinged arrangement permitting service and maintenance.

D. Fan Wheels: Aluminum hub and wheel with backward-inclined blades.

E. Direct Drive Motors:
1. Open type motor enclosure with DC electronic commutation type motor (ECM) specifically designed for fan applications.
2. Motors are permanently lubricated heavy duty ball bearing type to match with the fan load.
3. Motor speed controllable down to 20% of full speed, controlled by either a potentiometer dial mounted at the motor or by a 0-10 VDC signal
4. Motor shall be a minimum 85% efficient at all speeds.

F. Accessories:
1. Disconnect Switch: Nonfusible type, with thermal-overload protection mounted inside fan housing, factory wired through an internal aluminum conduit.
2. Bird Screens: Removable, 1/2-inch mesh, aluminum or brass wire.
3. Dampers: Counterbalanced, parallel-blade, backdraft dampers mounted in curb base; factory set to close when fan stops.

2.3 IN-LINE CENTRIFUGAL FANS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Greenheck
2. Loren Cook Company.
3. Carnes Company HVAC.
4. Penn Ventilation.

B. Description: In-line, direct-driven centrifugal fans consisting of housing, wheel, outlet guide vanes, fan shaft, bearings, motor and disconnect switch, drive assembly, mounting brackets, and accessories.

C. Housing: Split, spun aluminum with aluminum straightening vanes, inlet and outlet flanges, and support bracket adaptable to floor, side wall, or ceiling mounting.

D. Direct-Driven Units: Motor mounted in airstream, factory wired to disconnect switch located on outside of fan housing.

E. Direct Drive Motors:
1. Open type motor enclosure with DC electronic commutation type motor (ECM) specifically designed for fan applications.
2. Motors are permanently lubricated heavy duty ball bearing type to match with the fan load.

3. Motor speed controllable down to 20% of full speed, controlled by either a potentiometer dial mounted at the motor or by a 0-10 VDC signal
4. Motor shall be a minimum 85% efficient at all speeds.

F. Fan Wheels: Aluminum, airfoil blades welded to aluminum hub.

G. Accessories:

1. Companion Flanges: For inlet and outlet duct connections.

2.4 MOTORS

A. Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."

2.5 SOURCE QUALITY CONTROL

A. Sound-Power Level Ratings: Comply with AMCA 301, "Methods for Calculating Fan Sound Ratings from Laboratory Test Data." Factory test fans according to AMCA 300, "Reverberant Room Method for Sound Testing of Fans." Label fans with the AMCA-Certified Ratings Seal.

B. Fan Performance Ratings: Establish flow rate, pressure, power, air density, speed of rotation, and efficiency by factory tests and ratings according to AMCA 210, "Laboratory Methods of Testing Fans for Rating."

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install power ventilators level and plumb.

B. Support units using elastomeric mounts, spring isolators, or restrained spring isolators as indicated on plans, having a static deflection of 1 inch. Vibration- and seismic-control devices are specified in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment."

C. Secure roof-mounting fans to roof curbs with cadmium-plated hardware. Refer to architectural plans for installation of roof curbs.

D. Support suspended units from structure using threaded steel rods and elastomeric hangers or spring hangers as indicated on plans having a static deflection of 1 inch. Vibration-control devices are specified in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment."

E. Install units with clearances for service and maintenance.

F. Label units according to requirements specified in Division 23 Section "Identification for HVAC Piping and Equipment."

3.2 CONNECTIONS

A. Duct installation and connection requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of ducts and duct accessories. Make final duct connections with flexible connectors. Flexible connectors are specified in Division 23 Section "Air Duct Accessories."

B. Install ducts adjacent to power ventilators to allow service and maintenance.

C. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

D. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.3 FIELD QUALITY CONTROL

A. Perform the following field tests and inspections and prepare test reports:

1. Verify that shipping, blocking, and bracing are removed.
2. Verify that unit is secure on mountings and supporting devices and that connections to ducts and electrical components are complete. Verify that proper thermal-overload protection is installed in motors, starters, and disconnect switches.
3. Verify that cleaning and adjusting are complete.
4. Disconnect fan drive from motor, verify proper motor rotation direction, and verify fan wheel free rotation and smooth bearing operation. Reconnect fan drive system, align and adjust belts, and install belt guards.
5. Adjust belt tension.
6. Adjust damper linkages for proper damper operation.
7. Verify lubrication for bearings and other moving parts.
8. Verify that manual and automatic volume control and fire and smoke dampers in connected ductwork systems are in fully open position.
9. Disable automatic temperature-control operators, energize motor and adjust fan to indicated rpm, and measure and record motor voltage and amperage.
10. Shut unit down and reconnect automatic temperature-control operators.
11. Remove and replace malfunctioning units and retest as specified above.

B. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.4 ADJUSTING

A. Adjust damper linkages for proper damper operation.

B. Adjust belt tension.

C. Refer to Division 23 Section "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing procedures.

D. Replace fan and motor pulleys as required to achieve design airflow.

E. Lubricate bearings.

END OF SECTION

SECTION 23 72 00 - AIR-TO-AIR ENERGY RECOVERY EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Heat wheels.
2. Packaged energy recovery units.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, furnished specialties, and accessories.

B. Field quality-control reports.

C. Operation and Maintenance Data: For air-to-air energy recovery equipment to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. ARI Compliance:

1. Capacity ratings for air-to-air energy recovery equipment shall comply with ARI 1060, "Performance Rating of Air-to-Air Heat Exchangers for Energy Recovery Ventilation Equipment."

C. ASHRAE Compliance:

1. Applicable requirements in ASHRAE 62.1-2004, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."
2. Capacity ratings for air-to-air energy recovery equipment shall comply with ASHRAE 84, "Method of Testing Air-to-Air Heat Exchangers."

D. UL/ETL Compliance:

1. Packaged heat recovery ventilators shall UL or ETL listed and labeled.

1.5 COORDINATION

A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of air-to-air energy recovery equipment that fail in materials or workmanship within specified warranty period.

1. Warranty Period for Packaged Energy Recovery Units: Two years.

PART 2 - PRODUCTS

2.1 HEAT WHEELS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings, SEMCO Incoporated, or comparable product by one of the following:

1. SEMCO Incorporated.
2. Greenheck
3. Renewaire
4. Munters

B. Casing:

1. Steel with standard factory-painted finish.
2. Integral purge section limiting carryover of exhaust air to between 0.05 percent at 1.6-inch wg and 0.20 percent at 4-inch wg differential pressure.
3. Casing seals on periphery of rotor and on duct divider and purge section.
4. Support vertical rotors on grease-lubricated ball bearings having extended grease fittings or permanently lubricated bearings. Support horizontal rotors on tapered roller bearing.

C. Rotor: Aluminum segmented wheel strengthened with radial spokes, with nontoxic, noncorrosive, silica-gel desiccant coating.

1. Maximum Solid Size for Media to Pass: 600 micrometer.

D. Drive: Fractional horsepower motor and gear reducer,with speed changed by variable frequency controller and self-adjusting multilink belt around outside of rotor.

1. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
2. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.

E. Controls:

1. Starting relay, factory mounted and wired, and manual motor starter for field wiring.
2. Variable frequency controller, factory mounted and wired, permitting input of field connected 4-20 mA or 1-10-V control signal.
3. Pilot-Light Indicator: Display rotor rotation and speed.
4. Speed Settings: Adjustable settings for maximum and minimum rotor speed limits.

2.2 PACKAGED ENERGY RECOVERY UNITS

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings, SEMCO Incorporated, or comparable product by one of the following:

1. SEMCO Incorporated.
2. Greenheck Fan Corporation.
3. Mitsubishi Electric & Electronics USA, Inc.; HVAC Advanced Products Division.
4. Mitsubishi Electric Sales Canada Inc.
5. RenewAire LLC.

B. Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2004.

C. Housing: Manufacturer's standard double wall 20 gauge galvanized steel construction with corrosion-protection coating and exterior finish, 22 gauge interior skin, gasketed and calked weathertight, hinged access doors with neoprene gaskets for inspection and access to internal parts, minimum 1/2-inch- thick closed-cell neoprene thermal insulation wash down capability, knockouts for electrical and piping connections, exterior drain connection, and lifting lugs.

1. Inlet: Weatherproof hood, with dampers for exhaust and supply.

a. Exhaust: Two-position, motor-operated damper.
b. Supply: Two-position, motor-operated damper.

2. Roof Curb: Refer to Division 07 Section "Roof Accessories" for roof curbs and equipment supports.

D. Heat Recovery Device: Heat wheel.

E. Supply and Exhaust Fans: Forward-curved, DWDI centrifugal fan with restrained, spring isolators flexible duct connections.

1. Motor and Drive: Direct driven.
2. Comply with NEMA designation, temperature rating, service factor, enclosure type, and efficiency requirements for motors specified in Division 23 Section "Common Motor Requirements for HVAC Equipment."
3. Motor Sizes: Minimum size as indicated. If not indicated, large enough so driven load will not require motor to operate in service factor range above 1.0.
4. Controllers, Electrical Devices, and Wiring: Comply with requirements for electrical devices and connections specified in Division 26 Sections.
5. Spring isolators on each fan having [1-inch] static deflection.

F. Extended-Surface, Disposable Panel Filters:

1. Comply with NFPA 90A.
2. Filter Holding Frames: Arranged for flat or angular orientation, with access doors on both sides of unit. Filters shall be removable from one side or lift out from access plenum.
3. Factory-fabricated, dry, extended-surface type.
4. Thickness: 2 inches.
5. Minimum Merv: [8], according to ASHRAE 52.2.
6. Media: Fibrous material formed into deep-V-shaped pleats with antimicrobial agent and held by self-supporting wire grid.
7. Media-Grid Frame: Nonflammable cardboard.
8. Mounting Frames: Welded, galvanized steel with gaskets and fasteners, suitable for bolting together into built-up filter banks.

G. Wiring: Fabricate units with space within housing for electrical conduits. Wire motors and controls so only external connections are required during installation.

1. Outdoor Enclosure: NEMA 250, Type 3R enclosure contains relays, starters, and terminal strip.
2. Include non-fused disconnect switches.

H. Accessories:

1. Intake weather hood with 1-inch-thick aluminum washable filters.
2. Inlet and Exhaust weather hoods with birdscreen.
3. Duct flanges.
4. Hinged access doors with quarter-turn latches.
5. Stop/Jog Economizer wheel control.
6. Rotation Detector with alarm.
7. Factory mounted motor starters.
8. AQflow airflow measurement station.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine casing insulation materials and filter media before air-to-air energy recovery equipment installation. Reject insulation materials and filter media that are wet, moisture damaged, or mold damaged.

C. Examine roughing-in for electrical services to verify actual locations of connections before installation.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Roof Curb: Install air-to-air energy recovery equipment on curbs and coordinate roof penetrations and flashing with roof construction specified in Division 07 Section "Roof Accessories." Secure air-to-air energy recovery equipment to upper curb rail, and secure curb base to roof framing or concrete base with anchor bolts.

B. Install units with clearances for service and maintenance.

C. Install new filters at completion of equipment installation and before testing, adjusting, and balancing.

3.3 CONNECTIONS

A. Comply with requirements for ductwork specified in Division 23 Section "Metal Ducts."

B. Electrical Connections: Comply with applicable requirements in Division 26 Sections.

1. Install electrical devices furnished with units but not factory mounted.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.

B. Tests and Inspections:

1. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
2. Adjust seals and purge.
3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
4. Set initial temperature and humidity set points.
5. Set field-adjustable switches and circuit-breaker trip ranges as indicated.

C. Air-to-air energy recovery equipment will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain air-to-air energy recovery units.

END OF SECTION

SECTION 23 74 13 – PACKAGED, OUTDOOR, CENTRAL-STATION AIR-HANDLING UNITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes packaged, outdoor, central-station air-handling units (rooftop units) with the following components and accessories:

1. Direct-expansion cooling.
2. Hot-gas reheat.
3. Gas furnace.
4. Economizer outdoor- and return-air damper section.
5. Integral, space temperature controls.

1.3 DEFINITIONS

A. DDC: Direct-digital controls.

B. ECM: Electrically commutated motor.

C. Outdoor-Air Refrigerant Coil: Refrigerant coil in the outdoor-air stream to reject heat during cooling operations and to absorb heat during heating operations. "Outdoor air" is defined as the air outside the building or taken from outdoors and not previously circulated through the system.

D. Outdoor-Air Refrigerant-Coil Fan: The outdoor-air refrigerant-coil fan in RTUs. "Outdoor air" is defined as the air outside the building or taken from outdoors and not previously circulated through the system.

E. RTU: Rooftop unit. As used in this Section, this abbreviation means packaged, outdoor, central-station air-handling units. This abbreviation is used regardless of whether the unit is mounted on the roof or on a concrete base on ground.

F. Supply-Air Fan: The fan providing supply air to conditioned space. "Supply air" is defined as the air entering a space from air-conditioning, heating, or ventilating apparatus.

G. Supply-Air Refrigerant Coil: Refrigerant coil in the supply-air stream to absorb heat (provide cooling) during cooling operations and to reject heat (provide heating) during heating operations. "Supply air" is defined as the air entering a space from air-conditioning, heating, or ventilating apparatus.

H. VVT: Variable-air volume and temperature.

I. SZ VAV: Single-zone variable-air volume.

1.4 SUBMITTALS

A. Product Data: Include manufacturer's technical data for each RTU, including rated capacities, dimensions, required clearances, characteristics, furnished specialties, and accessories.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1. Wiring Diagrams: Power, signal, and control wiring.

C. Coordination Drawings: Plans and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

1. Structural members to which RTUs will be attached.
2. Roof openings

D. Field quality-control test reports.

E. Operation and Maintenance Data: For RTUs to include in emergency, operation, and maintenance manuals.

F. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. ARI Compliance:

1. Comply with ARI 210/240 and ARI 340/360 for testing and rating energy efficiencies for RTUs.
2. Comply with ARI 270 for testing and rating sound performance for RTUs.

B. NFPA Compliance: Comply with NFPA 90A and NFPA 90B.

C. UL Compliance: Comply with UL 1995.

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to replace components of RTUs that fail in materials or workmanship within specified warranty period.

1. Warranty Period for Compressors: Manufacturer's standard, but not less than 5 years from date of Substantial Completion.

2. Warranty Period for Gas Furnace Heat Exchangers: Manufacturer's standard, but not less than 10 years from date of Substantial Completion.
3. Warranty Period for parts: Manufacturer's standard, but not less than 1 year from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide Trane package units or a comparable product by one of the following:

1. Carrier Corporation.
2. Daikin/McQuay.

2.2 CASING

A. General Fabrication Requirements for Casings: Formed and reinforced insulated panels, fabricated to allow removal for access to internal parts and components, with joints between sections sealed. Casing top covers shall be one piece construction or where seams exist, shall be double-hemmed gasket sealed.

B. Exterior Casing Material: Galvanized steel, phosphatized, and finished with factory-painted finish, with pitched roof panels and knockouts with grommet seals for electrical and piping connections and lifting lugs. Structural members shall be minimum 18 gauge for units up to 10-Ton capacity, 16 gauge for 12.5-Ton capacity or greater. Access doors and removable panels shall be minimum 20 gauge. Cabinet surface shall be tested 1000 hours in salt spray test in compliance with ASTM B117.

C. Access Panels: Water and air-tight panels with handles shall provide access to filters, heating section, supply air fan section, evaporator coil section and unit control section.

D. Base Pans: Unit base pan shall have a raised 1” high minimum lip around supply and return air openings.

E. Casing Insulation and Adhesive: Comply with NFPA 90A or NFPA 90B.

1. Materials: ASTM C 1071, Type I.
2. Thickness: 1/2 inch.
3. Liner materials shall have air-stream surface coated with an erosion- and temperature-resistant coating, foil faced, or faced with a plain or coated fibrous mat or fabric. All insulation edges shall be either captured or sealed.
4. Liner Adhesive: Comply with ASTM C 916, Type I.

F. Condensate Drain Pans: Formed sections of galvanized-steel sheet, a minimum of 2 inches deep, and complying with ASHRAE 62.1-2004.

1. Double-sloped.

2. Drain Connections: Threaded nipple both sides of drain pan or one side with reversible drain pan.
3. Pan-Top Surface Coating: Corrosion-resistant compound.

G. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2004.

2.3 FANS

A. Direct-Driven Supply-Air Fans: Plenum fans, backward curved, centrifugal; with self-aligning, grease lubricated, ball or sleeve bearings with permanent lubrication fittings. Variable speed motor resiliently mounted in the fan inlet. Aluminum or painted-steel wheels, and galvanized- or painted-steel fan scrolls.

B. Belt-Driven Supply-Air Fans: Double width, forward curved, centrifugal; with self-aligning, grease lubricated, ball or sleeve bearings with permanent lubrication fittings. Variable speed motor installed on an adjustable fan base resiliently mounted in the casing. Aluminum or painted-steel wheels, and galvanized- or painted-steel fan scrolls. Provide shaft grounding rings for electrical protection.

C. Condenser-Coil Fan: Direct drive, statically and dynamically balanced, draw through, vertical discharge propeller, mounted on shaft of permanently lubricated motor.

D. Fan Motor: Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."

2.4 COILS

A. Supply-Air Refrigerant Coil:

1. Aluminum-plate fin and seamless internally finned copper tube in steel casing with equalizing-type vertical distributor.
2. Polymer strip shall prevent all copper coil from contacting steel coil frame or condensate pan.
3. Coil Split: Interlaced.

B. Outdoor-Air Refrigerant Coil:

1. Aluminum-plate fin and seamless internally grooved copper tube or all aluminum microchannel type in steel casing with equalizing-type vertical distributor.
2. Polymer strip shall prevent all copper coil from contacting steel coil frame or condensate pan.

2.5 REFRIGERANT CIRCUIT COMPONENTS

A. Number of Refrigerant Circuits: One or Two.

B. Compressor: Hermetic, scroll, mounted on vibration isolators; with internal overcurrent and high-temperature protection, internal pressure relief, and crankcase heater.

C. Refrigeration Specialties:

1. Refrigerant: R-410A or R-407C.
2. Independent Expansion valve with replaceable thermostatic element for each circuit.
3. Refrigerant liquid line filter/dryer.
4. Manual-reset high-pressure safety switch.
5. Automatic-reset low-pressure safety switch.
6. Minimum off-time relay.
7. Automatic-reset compressor motor thermal overload.
8. Brass service valves installed in compressor suction and liquid lines.
9. Cooling capabilities down to 0 deg F standard.

2.6 AIR FILTRATION

A. Minimum arrestance according to ASHRAE 52.1, and a minimum efficiency reporting value (MERV) according to ASHRAE 52.2.
1. Pleated: Minimum 85 percent arrestance, and MERV 13.

2.7 GAS FURNACE

A. Description: Factory assembled, piped, and wired; complying with ANSI Z21.47 and NFPA 54.

1. UL or CSA Approved specifically for outdoor installations downstream from refrigerant cooling coils.

B. Burners: Stainless steel.

1. Fuel: Natural gas.
2. Ignition: Electronically controlled electric spark or hot-surface igniter with flame sensor.

C. Heat-Exchanger and Drain Pan: Stainless steel.

D. Venting: Gravity vented.

E. Safety Controls:

1. Gas Control Valve: Two stage for units less than 12.5 Ton cooling capacity. Modulating for units equal or greater than 12.5 Ton cooling capacity.
2. Gas Train: Single-body, regulated, redundant, main gas valve assembly, proof of combustion air prior to ignition, continuous flame supervision, flame rollout switches, high temperature limit controls and manual shutoff.

2.8 ECONOMIZER

A. Outdoor- and Return-Air Mixing Dampers: Parallel- or opposed-blade galvanized-steel low leakage dampers. Gear driven so dampers operate simultaneously.

1. Actuator and controls shall be compliant with 2016 T24 California Energy Code.
2. Damper Motor: 0-100% Modulating with adjustable minimum position.
3. Dry bulb temperature control.
4. 2016 T24 California Energy Code compliant Fault Detection Diagnostics, FDD.
5. Relief-Air Damper: Gravity actuated or motorized, as required by ASHRAE/IESNA 90.1-2004, with bird screen and hood.

2.9 ELECTRICAL POWER CONNECTION

A. Provide for single connection of power to unit with unit-mounted disconnect switch accessible from outside unit and control-circuit transformer with built-in overcurrent protection.

2.10 CONTROLS

A. Coordinate control equipment and sequence of operations with schedules on plans and Division 25.

B. DDC Controller:

1. Microprocessor unit-mounted DDC controller to provide proportional integral room control. Controller shall perform all unit functions by making all heating, cooling and ventilation decisions through resident software logic. Unit shall control staging of compressors, modulating of Single-Zone VAV fan speed, Economizer modulation and CO2 Demand Ventilation Control.

2. Coordinate electronic room temperature sensor with Div. 25.

3. Controller shall have volatile-memory backup.

4. Safety Control Operation:

   a. Smoke Detection Contacts: Stop fan and close outdoor-air damper upon signal from smoke detector/fire alarm system.
   b. Fire Alarm Control Panel Interface: Provide control interface to coordinate with operating sequence described in Division 28 Section "Fire Detection and Alarm."
   c. Low-Discharge Temperature: Stop fan and close outdoor-air damper if supply air temperature is less than 40 deg F.

5. Sequence of Operations: Refer to and coordinate with Div. 25 specifications for sequence of operations.

C. Interface Requirements for HVAC Instrumentation and Control System:

1. Interface relay for scheduled operation.

2. Interface relay to provide indication of fault at the central workstation and diagnostic code storage.
3. Provide BACnet or LonWorks compatible interface to campus EMS/DDC system for the following:

    a. Adjusting set points.
    b. Adjusting occupied and unoccupied scheduling.
    c. Monitoring supply fan start, stop, speed and operation status.
    d. Inquiring data to include economizer damper position, supply- and room-air temperature.
    e. Monitoring occupied and unoccupied operations.
    f. Monitoring variable-frequency drive operation.
    g. Monitoring compressor status.
    h. Monitoring unit alarm status.
    i. Monitoring heating/cooling mode status.
    j. Monitoring heating stage.

2.11 ACCESSORIES

A. Unpowered Duplex, 115-V, ground-fault-interrupter convenience outlet with 15-A overcurrent protection. Include transformer if required.

B. Filter differential pressure switch with sensor tubing on either side of filter. Set for final filter pressure loss.

C. Coil guards of painted, galvanized-steel wire.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of RTUs.

B. Examine roughing-in for RTUs to verify actual locations of piping and duct connections before equipment installation.

C. Examine roofs for suitable conditions where RTUs will be installed.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CONNECTIONS

A. Install condensate drain, minimum connection size, with trap. Route to drain per plans.

B. Install piping adjacent to RTUs to allow service and maintenance.

1. Gas Piping: Comply with applicable requirements in Division 22 Connect gas piping to burner, full size of gas train inlet, and connect with union and shutoff valve with sufficient clearance for burner removal and service.

C. Duct installation requirements are specified in other Division 23 Sections. Drawings indicate the general arrangement of ducts. The following are specific connection requirements:

1. Install ducts to termination at top of roof curb.
2. Remove roof decking only as required for passage of ducts. Do not cut out decking under entire roof curb.
3. Connect supply and return ducts to RTUs with flexible duct connectors specified in Division 23 Section "Air Duct Accessories."

3.3 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.

B. Perform tests and inspections and prepare test reports.

1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing. Report results in writing.

C. Tests and Inspections:

1. After installing RTUs and after electrical circuitry has been energized, test units for compliance with requirements.
2. Inspect for and remove shipping bolts, blocks, and tie-down straps.
3. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Remove and replace malfunctioning units and retest as specified above.

3.4 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

B. Complete installation and startup checks according to manufacturer's written instructions and do the following:

1. Inspect for visible damage to unit casing.
2. Inspect for visible damage to furnace combustion chamber.
3. Inspect for visible damage to compressor, coils, and fans.
4. Inspect internal insulation.

5. Verify that labels are clearly visible.
6. Verify that clearances have been provided for servicing.
7. Verify that controls are connected and operable.
8. Verify that filters are installed.
9. Clean condenser coil and inspect for construction debris.
10. Clean furnace flue and inspect for construction debris.
11. Connect and purge gas line.
12. Remove packing from vibration isolators.
13. Inspect operation of barometric relief dampers.
14. Verify lubrication on fan and motor bearings.
15. Inspect fan-wheel rotation for movement in correct direction without vibration and binding.
16. Adjust fan belts to proper alignment and tension.
17. Start unit according to manufacturer's written instructions.

    a. Start refrigeration system.
    b. Do not operate below recommended low-ambient temperature.
    c. Complete startup sheets and attach copy with Contractor's startup report.

18. Inspect and record performance of interlocks and protective devices; verify sequences.
19. Operate unit for an initial period as recommended or required by manufacturer.
20. Perform the following operations for both minimum and maximum firing. Adjust burner for peak efficiency.

    a. Measure gas pressure on manifold.
    b. Inspect operation of power vents.
    c. Measure combustion-air temperature at inlet to combustion chamber.
    d. Measure flue-gas temperature at furnace discharge.
    e. Perform flue-gas analysis. Measure and record flue-gas carbon dioxide and oxygen concentration.

21. Adjust and inspect high-temperature limits.
22. Inspect economizer and relief dampers for proper operation.
23. Start refrigeration system and measure and record the following when ambient is a minimum of 15 deg F above return-air temperature:

    a. Coil leaving-air, dry- and wet-bulb temperatures.
    b. Coil entering-air, dry- and wet-bulb temperatures.
    c. Outdoor-air, dry-bulb temperature.
    d. Outdoor-air-coil, discharge-air, dry-bulb temperature.

24. Inspect controls for correct sequencing of heating, economizer dampers, refrigeration, and normal and emergency shutdown.

25. After startup and performance testing and prior to Substantial Completion, replace existing filters with new filters.

3.5 CLEANING AND ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting system to suit actual occupied conditions. Provide up to two visits to site during other-than-normal occupancy hours for this purpose.

B. After completing system installation and testing, adjusting, and balancing RTU and air-distribution systems, clean filter housings and install new filters.

END OF SECTION

SECTION 23 74 33 – PACKAGED, OUTDOOR, HEATING & COOLING MAKEUP AIR UNITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes evaporative cooling and indirect gas-fired heating rooftop makeup-air units.

1.3 DEFINITIONS

A. DDC: Direct-digital controls.

1.4 SUBMITTALS

A. Product Data: For each type or model include the following:
   1. Complete fan performance curves for supply air, with system operating conditions indicated, as tested on an AMCA Certified Chamber.
   2. Sound performance data for Supply Air, as tested on an AMCA Certified Chamber.
   3. Motor ratings, electrical characteristics and motor and fan accessories.
   4. Gas heater capacities and performance at design conditions.
   5. Dimensioned drawings to include location of attached ductwork and service clearance requirements.
   6. Gross installed operating weight.
   7. Installation, Operation and Maintenance manual.
   8. Include furnished specialties, controls interfaces, and accessories.

B. Startup service reports.

C. Operation and Maintenance Data: For rooftop makeup-air units to include in emergency, operation, and maintenance manuals.

D. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

A. Product Options: Drawings indicate size, profiles, and dimensional requirements of rooftop makeup-air units and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

C. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1-2004, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."

D. ASHRAE/IESNA 90.1-2004 Compliance: Applicable requirements in ASHRAE/IESNA 90.1-2004, Section 6 - "Heating, Ventilating, and Air-Conditioning."

1.6 COORDINATION

A. Coordinate size, installation, and structural capacity of roof curbs, equipment supports, and roof penetrations. These items are specified in Division 07 Section "Roof Accessories."

B. Coordinate size, location, and installation of rooftop makeup-air unit manufacturer's roof curbs and equipment supports with roof Installer.

1.7 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to replace components listed below that fail in materials or workmanship within specified warranty period.
   1. Warranty Period for Heat Exchangers: Not less than **10** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

   1. Greenheck
   2. AAON, Inc.
   3. Reznor-Thomas & Betts Corporation; Mechanical Products Division.

2.2 CABINET

A. Construction: **Double** wall.

B. Exterior Casing: **Galvanized (G60) steel 18 gauge, with polyester urethane paint finish** with lifting lugs and knockouts for electrical and piping connections.

C. Interior Casing: **Galvanized** steel.

D. Base Rails: Galvanized-steel 12 gauge rails for mounting on roof curb.

E. Service Doors: Hinged access doors with neoprene gaskets.

F. Internal Insulation: Fibrous-glass duct lining complying with ASTM C 1071, Type II.

1. Thickness: 1 inch.
2. Insulation Adhesive: Comply with ASTM C 916, Type I.
3. Mechanical Fasteners: Galvanized steel, suitable for adhesive attachment, mechanical attachment, or welding attachment to casing without damaging liner and without causing air leakage when applied as recommended by manufacturer.

G. Airstream Surfaces: Surfaces in contact with the airstream shall comply with requirements in ASHRAE 62.1-2004.

2.3 SUPPLY-AIR FAN

A. Fan: Forward-curved centrifugal; statically and dynamically balanced, **galvanized** steel, mounted on solid-steel shaft with **self-aligning, permanently lubricated ball bearings**.

B. Motor: **Open drip proof single**-speed motor.

C. Drive: V-belt drive with matching fan pulley and adjustable motor sheaves and belt assembly with minimum 1.4 service factor.

D. Mounting: Fan wheel, motor, and drives shall be mounted in fan casing with **spring** isolators.

2.4 EVAPORATIVE COOLER SYSTEM

A. Evaporative cooler module: Media holder and sump pan shall be fabricated of stainless steel. Gutter and sump shall be sized to supply the system with enough water to operate at its maximum flow rate and not overflow with the system is shut down.

B. Media: CELdek.

C. Water Control: Module shall be equipped with circulating pump, solenoid valves and controls for auto drain and flush cycling.

2.5 INDIRECT-FIRED GAS FURNACE

A. Description: Factory assembled, piped, and wired; complying with NFPA 54, "National Fuel Gas Code," and ANSI Z21.47, "Gas-Fired Central Furnaces."

1. ELT Certified as a component of the unit.

B. Burners: 409 **Stainless steel**.
1. Minimum Thermal Efficiency: 80 percent.
2. Fuel: **Natural** gas.
3. Ignition: Electronically controlled electric spark with flame sensor.

C. Heat-Exchanger Drain Pan: Stainless steel.

D. Venting: Gravity vented.

E. Burner Controls:

1. Gas Control Valve: 4:1 **Electronic modulating**.

2. Fault sensors to provide fault conditions to digital controller or building controls.

2.6 OUTDOOR-AIR INTAKE AND DAMPERS

A. Dampers: Leakage rate, according to AMCA 500, shall not exceed 2 percent of air quantity at face velocity of 2000 fpm through damper and pressure differential of 4-inch wg.

B. Damper Operators: Electric.

C. Outdoor-Air Intake Louvers: **Galvanized** steel, with bird screen complying with ASHRAE 62.1-2004 and finish to match cabinet.

2.7 FILTERS

A. Comply with NFPA 90A.

B. Cleanable Filters: 2-inch-thick, cleanable metal mesh.

2.8 CONTROLS

A. Control equipment and sequence of operation are specified in Division 23 Section "Instrumentation and Control for HVAC."

B. Factory-wire connection for controls' power supply.

C. Control devices, including sensors, transmitters, relays, switches, thermostats, humidistats, detectors, operators, actuators, and valves, shall be manufacturer's standard items to accomplish indicated control functions.

D. Unit Controls: Solid-state control board and components with field-adjustable control parameters.

E. Supply-Fan Control: Units shall be electrically interlocked with corresponding exhaust fans, to operate continuously when exhaust fans are running.
1. Electrically interlock kitchen hood fire-extinguishing system to de-energize makeup-air unit when fire-extinguishing system discharges.

F. **Remote**-Mounted Status Panel:

1. Cooling/Off/Heating Controls: Control operational mode.

2. Status Lights:

    a. Filter dirty.
    b. Fan operating.
    c. Cooling operating.
    d. Heating operating.

G. Heating Controls:
1. Wall-mounting, space-temperature sensor with **temperature adjustment** that modulates gas furnace burner to maintain space temperature.
2. Electromechanical or Electronic Burner Control: 4 to 1 modulation of the firing rate.

H. Damper Controls:
1. When fans stop, set outdoor-air damper to fully closed. When fans start, fully open outdoor-air damper.

I. DDC Temperature Control: Stand-alone control module for link between unit controls and DDC temperature-control system. Control module shall be compatible with temperature-control system specified in Division 25. Links shall include the following:

1. Start/stop interface relay, and relay to notify DDC temperature-control system alarm condition.
2. Hardware interface or additional sensors for the following:

    a. Room temperature.
    b. Discharge air temperature.
    c. Inlet air sensor
    d. Dirty Filter Switch
    e. Inlet Damper position end switch.
    f. Furnace operating.

2.9 MOTORS

A. Comply with requirements in Division 23 Section "Common Motor Requirements for HVAC Equipment."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting installation of rooftop makeup-air units.

B. Examine roughing-in for piping, ducts, and electrical systems to verify actual locations of connections before equipment installation.

C. Examine roof curbs and equipment supports for suitable conditions where rooftop makeup-air units will be installed.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install and secure rooftop makeup-air units on curbs and coordinate roof penetrations and flashing with roof construction.

B. Install wall- and duct-mounting sensors, thermostats, and humidistats furnished by manufacturers for field installation. Install control wiring and make final connections to control devices and unit control panel.

3.3 CONNECTIONS

A. Piping installation requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of piping, fittings, and specialties.

B. Install piping adjacent to machine to allow service and maintenance.

1. Gas Burner Connections: Comply with requirements in Division 22 Section "Plumbing." Connect gas piping to burner, full size of gas train inlet, and connect with union, dirt leg and shutoff valve with sufficient clearance for burner removal and service.

C. Duct Connections: Duct installation requirements are specified in Division 23 Section "Metal Ducts." Drawings indicate the general arrangement of ducts. Connect supply ducts to rooftop makeup-air units with flexible duct connectors. Flexible duct connectors are specified in Division 23 Section "Air Duct Accessories."

D. Electrical Connections: Comply with requirements in Division 26 Sections for power wiring, switches, and motor controls.

E. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

3.4 STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service.

B. Complete installation and startup checks according to manufacturer's written instructions and perform the following:

1. Inspect for visible damage to furnace combustion chamber.
2. Inspect for visible damage to compressor, air-cooled outside coil, and fans.
3. Inspect casing insulation for integrity, moisture content, and adhesion.
4. Verify that clearances have been provided for servicing.
5. Verify that controls are connected and operable.

6. Verify that filters are installed.
7. Clean outside coil and inspect for construction debris.
8. Clean furnace flue and inspect for construction debris.
9. Inspect operation of power vents.
10. Purge gas line.
11. Inspect and adjust vibration isolators and seismic restraints.
12. Verify bearing lubrication.
13. Inspect fan-wheel rotation for movement in correct direction without vibration and binding.
14. Adjust fan belts to proper alignment and tension.
15. Start unit.
16. Start evaporative cooler system and verify operation of circulating pump, water distribution and operation of auto drain and flush solenoids.
17. Inspect and record performance of interlocks and protective devices including response to smoke detectors by fan controls and fire alarm.
18. Operate unit for run-in period.
19. Perform the following operations for both minimum and maximum firing and adjust burner for peak efficiency:

    a. Measure gas pressure at manifold.
    b. Measure combustion-air temperature at inlet to combustion chamber.
    c. Measure flue-gas temperature at furnace discharge.
    d. Perform flue-gas analysis. Measure and record flue-gas carbon dioxide and oxygen concentration.
    e. Measure supply-air temperature and volume when burner is at maximum firing rate and when burner is off. Calculate useful heat to supply air.

20. Calibrate thermostats.
21. Adjust and inspect high-temperature limits.
22. Inspect outdoor-air dampers for proper stroke.
23. Retain first subparagraph and associated subparagraphs below for units with refrigeration.
24. Verify operational sequence of controls.
25. Measure and record the following airflows. Plot fan volumes on fan curve.

    a. Supply-air volume.

26. Verify operation of remote panel including pilot-light operation and failure modes. Inspect the following:

    a. High-limit heat exchanger.
    b. Alarms.

C. After startup and performance testing, clean filters, verify bearing lubrication, and adjust belt tension.

D. Remove and replace components that do not pass tests and inspections and retest as specified above.

E. Prepare written report of the results of startup services.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain rooftop makeup-air units. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION

Interior Finish Schedule- Building A

Building	Room Number	Room Name	Floor Finishes						Base Finishes			Wall Finishes						Ceiling Finishes				Miscellaneous Finishes		Remarks
			CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Modular (MT-1, MT-2, MT-3 & MT-4)	CARPET, Walk-off	TILE, Ceramic Tile, SYS-IFA (Conc Sub Floor - Thin Set)	RESINOUS FLOORING, Resinous Floor	RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set)	RESINOUS FLOORING, Base	GYPSUM BOARD, Wallboard, (Texture GB-2)	GYPSUM BOARD, Water Resistant, (Texture GB-2)	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set),	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood Sheathing over Gypsum Board	ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	METAL DECK, Acoustical Metal Deck,	METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	
A	100	Main Office	PC	-	FF	FF	-	-	FF	-	-	DW-5	-	-	FF	-	-	FF	DW-1	-	M-1	M-2	FF	1, 3
A	101	Office	-	FF	-	-	-	-	FF	-	-	-	-	-	FF	-	-	FF	-	-	-	M-2	FF	1
A	102	Office	-	FF	-	-	-	-	FF	-	-	-	-	-	FF	-	-	FF	-	-	-	M-2	FF	1
A	103	Conference	-	-	FF	-	-	-	FF	-	-	DW-5	-	-	FF	-	-	FF	-	-	-	-	FF	1
A	104	Telecom Room	CFS	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	W-2	-	-	M-1	-	M-2	FF	
A	105	Principal's Office	-	FF	-	FF	-	-	FF	-	-	DW-5	-	-	FF	-	-	FF	DW-1	-	-	M-2	FF	1
A	106	Staff Restroom	-	-	-	-	CT-1	-	-	CT-1	-	-	DW-5	CT-2, CT-3	-	-	-	-	DW-5	-	-	M-2	FF	
A	107	Custodial	CFS	-	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	DW-5	-	-	M-2	FF	
A	108	Staff Restroom	-	-	-	-	CT-1	-	-	CT-1	-	-	DW-5	CT-2, CT-3	-	-	-	-	DW-5	-	-	M-2	FF	
A	109	Storage (4)	PC	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	-	-	-	M-2	FF	
A	110	Workroom	PC	-	-	-	-	-	FF	-	-	-	-	-	FF	-	-	FF	DW-1	-	-	M-2	FF	3
A	111	GIS Office	-	FF	-	-	-	-	FF	-	-	-	-	-	FF	-	-	FF	DW-1	-	-	M-2	FF	1
A	112	Nurse	PC	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	DW-1	-	-	M-2	FF	3
A	112a	Toilet	-	-	-	-	-	RF-1	-	-	RF-1	-	-	-	-	FF	-	-	DW-5	-	-	M-2	FF	
A	113	Library Open Area	-	-	FF	FF	-	-	FF	-	-	DW-5	-	-	FF	-	-	FF	DW-1	-	M-1	M-2	FF	1
A	113a	Reading	-	-	FF	-	-	-	FF	-	-	DW-5	-	-	-	-	-	-	-	-	M-1	-	-	1
A	114	Library Classroom	-	FF	-	FF	-	-	FF	-	-	-	-	-	FF	-	-	FF	-	-	-	M-2	FF	1
A	114a	Roof Access	CFS	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	-	-	-	M-1	M-2	FF	
A	115	Library Storage (4)	PC	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	-	-	-	M-2	FF	1
A	116	Hallway	PC	-	-	FF	-	-	FF	CT-2	-	DW-5	-	CT-2, CT-3	-	-	-	-	DW-1	-	M-1	M-2	FF	1, 2, 3
A	117	Hallway	PC	-	-	FF	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	-	-	-	M-2	FF	1, 3
A	118	Hallway	PC	-	-	FF	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	-	-	-	M-2	FF	1, 3
A	119	Fire Riser	CFS	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	-	-	M-1	-	M-2	-	
A	120	Electrical Room	CFS	-	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	FF	-	-	-	M-2	FF	

J1 Interior Finish Schedule- Building A

No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building B

Building	Room Number	Room Name	Floor Finishes					Base Finishes		Wainscot Finishes	Wall Finishes					Ceiling Finishes		Miscellaneous Finishes			Remarks
			CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Modular (MT-1, MT-2, MT-3 & MT-4)	CARPET, Walk-off	RESINOUS FLOORING, Resinous Floor	RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	RESINOUS FLOORING, Base	WALL AND CORNER GUARDS, Impact Resistant Wall Coverings	GYPSUM BOARD, Wallboard, (Texture GB-2)	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	WALL COVERINGS, Custom Printed Tackable Panels	ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	WALL AND CORNER GUARDS, Corner Guard	
B	100	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	101	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	102	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	103	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	104	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	105	Classroom- Lower Grade	PC	FF	-	-	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	106	Classroom- Lower Grade	PC	FF	-	FF	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	106a	Restroom	-	-	-	-	RF-1	-	RF-1	-	-	-	FF	-	-	-	DW-5	M-2	FF	-	
B	107	Classroom- Lower Grade	PC	FF	-	FF	-	FF	-	-	-	FF	-	-	-	FF	DW-1	M-2	FF	-	1, 3
B	108	Corridor	PC	-	-	FF	-	FF	-	FF	DW-5	FF	-	-	FF	FF	DW-1	M-2	FF	FF	1, 3
B	109	Student Restroom	-	-	-	-	RF-1	-	RF-1	-	-	-	FF	-	-	-	DW-5	M-2	FF	-	
B	110	Student Restroom	-	-	-	-	RF-1	-	RF-1	-	-	-	FF	-	-	-	DW-5	M-2	FF	-	
B	111	Telecom Room	CFS	-	-	-	-	FF	-	-	DW-5	-	-	W-2	-	-	DW-1	M-2	-	-	
B	112	Electrical Room	CFS	-	-	-	-	FF	-	-	DW-5	-	-	-	-	-	DW-1	M-2	-	-	
B	113	Fire Riser/ Custodial Closet	CFS	-	-	-	-	FF	-	-	-	-	FF	-	-	-	DW-5	M-2	FF	-	

J9 Interior Finish Schedule- Building B

No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building C

Building	Room Number	Room Name	Floor Finishes					Base Finishes			Wainscot Finishes		Wall Finishes						Ceiling Finishes			Miscellaneous Finishes		Remarks
			CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Walk-off	TILE, Ceramic Tile, SYS-IFA (Conc Sub Floor - Thin Set)	RESINOUS FLOORING, Resinous Floor	RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	TILE, Ceramic Tile, SYS-IWD (WR Gyp Bd - Thin Set)	RESINOUS FLOORING, Integral Base	WALL AND CORNER GUARDS, Impact Resistant Wall Coverings		GYPSUM BOARD, Wallboard, (Texture GB-2)	TILE, Ceramic Tile, SYS-IWD (WR Gyp Bd - Thin Set),	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	WALL COVERINGS, Custom Printed Tackable Panels	ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	
C	100	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	101	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	102	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	103	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	104	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	105	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	106	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	107	Classroom- Upper Grade	PC	FF	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-1	-	M-2	FF	1, 3
C	108	Corridor	PC	-	FF	-	-	FF	-	-	FF	-	DW-5	-	FF	-	-	FF	FF	DW-1	-	M-2	FF	1, 3
C	109	Student Restroom	-	-	-	-	RF-1	-	-	RF-1	-	-	-	-	-	FF	-	-	-	DW-5	-	M-2	FF	
C	110	Student Restroom	-	-	-	-	RF-1	-	-	RF-1	-	-	-	-	-	FF	-	-	-	DW-5	-	M-2	FF	
C	111	Staff Restroom	-	-	-	CT-1	-	FF	CT-1	-	-	-	DW-5	CT-2, CT-3	-	-	-	-	-	DW-5	-	M-2	-	
C	112	Telecom Room	CFS	-	-	-	-	FF	-	-	-	-	DW-5	-	-	-	W-2	-	-	-	M-1	M-2	-	
C	113	Fire Riser/Custodial	CFS	-	-	-	-	FF	-	-	-	-	-	-	-	FF	-	-	-	DW-5	-	M-2	FF	
C	114	Electrical Room	CFS	-	-	-	-	FF	-	-	-		DW-5	-	-	-	-	-	-	-	M-1	M-2	FF	

A1 Interior Finish Schedule- Building C

No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building D

Building	Room Number	Room Name	Floor Finishes						Base Finishes			Wainscot Finishes	Wall Finishes							Ceiling Finishes				Miscellaneous Finishes		Remarks
			CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Modular (MT-1, MT-2, MT-3 & MT-4)	CARPET, Walk-off	TILE, Ceramic Tile, SYS-IFA (Conc Sub Floor - Thin Set)	RESINOUS FLOORING, Resinous Floor	RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set)	RESINOUS FLOORING, Base	WALL AND CORNER GUARDS, Impact Resistant Wall Coverings	GYPSUM BOARD, Wallboard, (Texture GB-2)	GYPSUM BOARD, Water Resistant, (Texture GB-2)	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set),	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	WALL COVERINGS, Custom Printed Tackable Panels	ACOUSTICAL CEILINGS, Suspension System,	CEMENT PLASTER, System	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	
D	100	Classroom- Lower Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	101	Classroom- Lower Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	102	Classroom- Lower Grade	PC	FF	-	FF	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	103	Classroom- Lower Grade	PC	FF	-	FF	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	104	Classroom- Lower Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	105	Classroom- Lower Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	106	Classroom- Lower Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	107	Classroom- Upper Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	108	Classroom- Upper Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	109	Classroom- Upper Grade	PC	FF	-	-	-	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	-	DW-1	-	M-2	FF	1, 3
D	110	Corridor	PC	-	-	FF	-	-	FF	-	-	FF	DW-5	-	-	FF	-	-	FF	FF	-	DW-1	-	M-2	FF	1, 3
D	112	Hallway	PC	-	-	FF	-	-	FF	-	-	FF	DW-5	-	-	-	-	-	-	-	-	DW-1	-	M-2	-	1, 3
D	113	Telecom Room	CFS	-	-	-	-	-	FF	-	-	-	DW-5	-	-	-	-	W-2	-	-	-	-	M-1	M-2	FF	
D	114	Electrical Room	CFS	-	-	-	-	-	FF	-	-	-	DW-5	-	-	-	-	-	-	-	-	-	M-1	M-2	FF	
D	114a	Fire Riser	CFS	-	-	-	-	-	FF (4)	-	-	-	DW-5	-	-	-	-	-	-	-	-	-	M-1	M-2	-	
D	115	Concession	CFS	-	-	-	-	-	-	CT-1	-	-	-	-	-	-	FF	-	-	-	P-1	-	-	M-2	FF	
D	115a	Storage	CFS	-	-	-	-	-	-	CT-1	-	-	-	-	-	-	FF	-	-	-	P-1	-	-	M-2	FF	
D	116	Field Storage	CFS	-	-	-	-	-	FF	-	-	-	DW-5	-	-	-	-	W-2	-	-	-	-	M-1	M-2	-	
D	117	Student Restroom	-	-	-	-	-	RF-1	-	-	RF-1	-	-	-	-	-	FF	-	-	-	P-2	-	-	M-2	-	
D	118	Student Restroom	-	-	-	-	-	RF-1	-	-	RF-1	-	-	-	-	-	FF	-	-	-	P-2	-	-	M-2	-	
D	119	Custodial	CFS	-	-	-	-	-	FF	-	-	-	-	-	-	-	FF	-	-	-	P-2	-	-	M-2	-	
D	120	Staff/Adult Restrooms	-	-	-	-	CT-1	-	-	CT-1	-	-	-	DW-5	CT-2, CT-3	-	-	-	-	-	P-2	-	-	M-2	-	
D	121	Staff/Adult Restrooms	-	-	-	-	CT-1	-	-	CT-1	-	-	-	DW-5	CT-2, CT-3	-	-	-	-	-	P-2	-	-	M-2	-	

A9 Interior Finish Schedule- Building D

No Scale — Refer to H18 for Abbreviations, Notes and Remarks

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

ABBREVIATIONS

- AESS = Architectural Exposed Structural Steel
- AFP = Acrylic Floor Finish
- CCC = Clear Curing Compound
- CFS = Clear Floor Sealer
- CFH = Clear Floor Hardener
- CWR = Colored Water Resistant Finish
- CT# = Ceramic Tile Type
- FF = Factory Finish
- GS = Grout Sealer
- HF = Refer to HARDWOOD FLOOR specification section
- PC = Polished Concrete
- ACT# = Acoustic Ceiling Tile Type
- RWF = Resilient Wood Floor
- RF# = Resinous Floor Type
- * = Refer To Remarks

Interior Paint Finishes:

Refer To Specification Section - PAINTING
- CB# = Concrete or Concrete Masonry Units
- DW# = Gypsum Board Finish
- P# = Cement Plaster, Veneer Plaster or Gypsum Plaster Finish
- M# = Metal Finish
- W# = Woodwork Finish
- X# = Special Finishes

NOTES

1. Refer to appropriate Specification Sections for Materials, Systems and Types.
2. All Details, Materials and Finishes shall be considered "Typical" for all similar conditions, Unless Otherwise Noted.
3. Do not paint Fire Rated Door and Frame Rating Plates.
4. Where changes in Floor Materials occur, refer to detail K11-X/A603
5. Refer to Interior Elevations for additional information.
6. This Schedule is provided for the convenience of the Contractor. Field verify all conditions and dimensions prior to fabrication, installation or application.
7. See Interior Color Schedule for Finish / Material Colors.
8. Gypsum Board Textures indicated are for areas exposed to view. Areas above ceilings shall be GB5, Unless Otherwise Noted. Refer to Specifications for appropriate locations of other textures.
9. VAPOR-ALKALINITY CONTROL: Apply Vapor-Alkalinity Control Membrane System at all concrete slab areas scheduled to receive applied floor covering that are sensitive to and have requirements for limits of vapor transmission and pH levels."
10. MECHANICAL, ELECTRICAL and PLUMBING: All items exposed to view to be M-2, UNO.
11. Refer to Reflected Ceiling Plan for Acoustical Ceiling Tile Type.
12. STEEL AND FABRICATION and SHEET METAL: All items exposed to view to be M-2, UNO.

REMARKS

1. CARPET, Broadloom, Modular and Walk-Off to be OFCI. See specification section CARPET and OWNER- FURNISHED ITEMS.
2. TILE, Wall Tile and Base at drinking fountain, see interior elevations.
3. CAST-IN- PLACE CONCRETE, Polished Concrete to be determined upon mockup, see specifications section POLISHED CONCRETE FLOOR FINISHING.
4. Refer to specification section HARDWOOD FLOOR for complete installation and finishing.

H18 Interior Finish Schedule Legend

No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

TYPICAL INFORMATION
INTERIOR FINISH SCHEDULE- BUILDING A, B, C & D
Drawing

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www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051
LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed: Designer	Copyright 2022 Darden Architects
Scale: 1/8" = 1'-0"	Drawn By: Author	X/A201
Project Number: 2116	Checked: Checker	
Date: 02/15/23	Reviewer: Approver	

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Interior Finish Schedule- Building E

Room Number	Room Name	Floor Finishes: CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Walk-off	RESILIENT BASE AND ACCESSORIES, Rubber Tread and Risers	TILE, Ceramic Tile, SYS-IFA (Conc Sub Floor - Thin Set)	HARDWOOD FLOOR, Stage System	RESINOUS FLOORING, Resinous Floor	RESILIENT SHEET, Vinyl Sheet over Plywood	MILLWORK, Wood Stair, Treads, Risers	Base Finishes: RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set)	MILLWORK, Wood Base, 4"	RESINOUS FLOORING, Base	RESILIENT SHEET, Integral Base	Wainscot Finishes: WALL AND CORNER GUARDS, Impact-Resistant Wall Coverings	Wall Finishes: GYPSUM BOARD, Wallboard, (Texture GB-2)	GYPSUM BOARD, Water Resistant, (Texture GB-2)	TILE, Ceramic Tile, SYS-IWD (Cement Board - Thin Set),	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	Ceiling Finishes: ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	METAL DECK, Acoustical Metal Deck,	Miscellanous Finishes: METAL DOORS AND FRAMES, Doors, Panels and Frames	ACCESS DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	WALL AND CORNER GUARDS, Corner Guard	Remarks
100	MPR Open Area	PC	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-5	-	-	FF	-	-	-	M-1	M-2	-	FF	-	1, 3
101	Stage Stairs	PC	-	-	-	-	-	-	W-7	-	FF	-	W-7	-	-	DW-5	-	-	-	-	-	-	M-1	M-2	-	-	FF	3, 4
102	Electrical Room	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	-	-	-	-	M-1	M-2	-	FF	-	-
103	Stage	-	-	-	-	-	HF	-	W-7	-	-	-	W-7	-	-	DW-5	-	-	FF	-	-	-	-	M-2	-	-	FF	4
104	Music Office	-	FF	-	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	FF	-	-	-	-	M-2	-	-	-	1
105	Music Storage	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	FF	-	-	-	-	M-2	-	FF	-	-
106	Control Room	-	FF	-	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	FF	-	-	-	-	M-2	-	-	-	1
107	Hallway	PC	-	FF	-	-	-	-	-	-	FF	-	W-7	-	-	DW-5	-	-	FF	-	-	-	-	M-2	-	FF	FF	1, 3
108	FS Riser	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	-	-	-	-	-	-	-	-	M-1	M-2	-	-	-	-
109	Student Restrooms	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	FF	-	DW-5	-	M-2	-	FF	-	-
110	Vestibule	PC	-	FF	-	-	-	-	-	-	FF	CT-2	-	-	FF	DW-5	-	-	CT-2, CT-3	-	-	FF	DW-1	-	-	M-2	-	1, 3
111	Student Restrooms	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	FF	-	DW-5	-	M-2	-	FF	-	-
112	Open Work Area	CFS	-	-	FF	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	-	-	-	-	DW-1	M-2	-	-	-	-
112a	Storage	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	-	-	-	FF	-	M-2	-	-	-	-
113	Office	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	-	-	-	-	-	FF	-	FF	-	M-2	-	-	-	-
114	Receiving Area	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	-	FF	-	FF	-	M-2	-	-	-	-
115a	Refrigerator	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
115b	Freezer	-	-	-	-	-	-	RF-2	-	-	-	-	-	RF-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
116	Office and Dry Storage	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	FF	-	FF	-	M-2	-	-	-	-	-
118	Preparation Area	-	-	-	-	-	-	RF-1	-	-	-	-	-	RF-1	-	-	-	-	-	FF	-	FF	-	M-2	-	FF	-	-	-
118a	Dish Washing	-	-	-	-	-	-	RF-1	-	-	-	4	-	RF-1	-	-	-	-	-	FF	-	FF	-	-	-	-	-	-	-
119	Serving Area	PC	-	-	-	-	-	-	-	-	FF	-	-	-	FF	DW-5	-	-	-	FF	-	-	-	M-2	-	FF	-	3	
120	Custodian	CFS	-	-	-	-	-	-	-	-	-	CT-1	-	-	-	-	-	-	FF	-	-	DW-5	-	M-2	-	-	-	-	
121	Staff Restroom	-	-	-	-	CT-1	-	-	-	-	-	CT-1	-	-	-	-	DW-5	CT-2, CT-3	-	-	-	DW-5	-	M-2	-	FF	-	-	
122	Hallway	PC	-	FF	-	-	-	-	-	-	FF	-	-	-	-	DW-5	-	-	-	-	-	FF	-	M-2	-	FF	-	1, 3	
123	Staff Restroom	-	-	-	-	CT-1	-	-	-	-	-	CT-1	-	-	-	-	DW-5	CT-2, CT-3	-	-	-	DW-5	-	M-2	-	FF	-	-	
124	Staff Dining	PC	-	FF	-	-	-	-	-	-	FF	CT-1	-	-	-	HF	DW-5	-	-	FF	-	FF	-	M-2	-	FF	FF	1, 3	
125	Lockers	-	-	-	-	-	-	RF-1	-	-	-	4	-	RF-1	-	-	-	-	-	FF	-	DW-5	-	M-2	-	FF	-	-	
125a	Restroom	-	-	-	-	-	-	RF-1	-	-	-	4	-	RF-1	-	-	-	-	-	FF	-	DW-5	-	M-2	-	FF	-	-	
126	Telecom Room	CFS	-	-	-	-	-	-	-	-	FF	-	-	-	W-2	DW-5	-	-	-	-	FF	-	-	M-2	-	-	-	-	
127	Custodial	CFS	-	-	-	-	-	-	-	-	-	CT-1	-	-	-	-	-	-	FF	-	-	DW-5	-	M-2	-	-	-	-	
128	Vending	PC	-	FF	-	-	-	-	-	-	FF	-	-	-	FF	DW-5	-	-	FF	-	-	FF	-	M-2	-	FF	FF	1, 3	
201	Storage Above Office	-	-	-	-	-	-	-	FF	-	FF	-	-	FF	-	DW-5	-	-	-	-	-	-	M-1	-	M-2	-	-	

J1 — Interior Finish Schedule- Building E
No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building K1

Room Number	Room Name	Floor Finishes: CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Walk-off	RESINOUS FLOORING, Resinous Floor	Base Finishes: RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	RESINOUS FLOORING, Base	Wall Finishes: GYPSUM BOARD, Wallboard, (Texture GB-2)	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	Ceiling Finishes: ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	Miscellanous Finishes: METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	STOREFRONT, Clear Anodized	Remarks
101	Classroom	PC	FF	FF	-	FF	-	DW-5	FF	-	-	FF	DW-1	-	M-2	FF	FF	1, 3
102	Classroom	PC	FF	FF	-	FF	-	DW-5	FF	-	-	FF	DW-1	-	M-2	FF	FF	1, 3
112	Staff Workroom	PC	-	-	-	FF	-	-	-	-	-	FF	-	-	M-2	FF	-	3
113	Storage	PC	-	-	-	FF	-	-	-	-	-	FF	-	-	-	-	-	3
114	Restroom	-	-	-	RF-1	-	RF-1	-	-	-	FF	-	-	-	M-2	FF	-	
115	Restroom	-	-	-	RF-1	-	RF-1	-	-	-	FF	-	-	-	M-2	FF	-	
116	Storage	CFS	-	-	-	FF	-	-	DW-5	FF	-	-	-	-	-	-	-	
117	Electrical	CFS	-	-	-	FF	-	-	DW-5	FF	-	-	-	-	M-2	-	-	
119	Data	CFS	-	-	-	FF	-	-	-	-	W-2	FF	-	-	M-2	-	-	

K1 — Interior Finish Schedule- Building K1
No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building K2 (Add Alternate #1)

Room Number	Room Name	Floor Finishes: CAST-IN-PLACE CONCRETE, Concrete Slab,	CARPET, Broadloom	CARPET, Walk-off	RESINOUS FLOORING, Resinous Floor	Base Finishes: RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	RESINOUS FLOORING, Base	Wall Finishes: GYPSUM BOARD, Wallboard, (Texture GB-2)	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	ROUGH CARPENTRY, 3/4" Fire Resistant Plywood over Gypsum Board	Ceiling Finishes: ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	Miscellanous Finishes: METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	Remarks
103	Classroom	PC	FF	FF	-	FF	-	DW-2	FF	-	-	FF	DW-1	-	M-2	FF	1, 3
104	Classroom	PC	FF	FF	-	FF	-	DW-2	FF	-	-	FF	DW-1	-	M-2	FF	1, 3
105	Telecom	CFS	-	-	-	FF	-	DW-2	-	-	W-2	FF	-	-	M-2	-	
106	Electrical	CFS	-	-	-	FF	-	DW-2	-	-	-	-	-	M-1	M-2	-	
107	Staff Workroom	PC	-	-	-	FF	-	-	FF	-	-	FF	-	-	M-2	FF	3
108	Storage	PC	-	-	-	FF	-	-	FF	-	-	FF	-	-	-	-	3
109	Restroom	-	-	-	RF-1	-	RF-1	-	-	FF	-	-	DW-5	-	M-2	FF	
110	Restroom	-	-	-	RF-1	-	RF-1	-	-	FF	-	-	DW-5	-	M-2	FF	
118	Custodial/ Fire Riser	CFS	-	-	-	FF	-	-	-	FF	-	-	DW-5	-	M-2	-	

A1 — Interior Finish Schedule- Building K2 (Add Alternate #1)
No Scale — Refer to H18 for Abbreviations, Notes and Remarks

Interior Finish Schedule- Building P

Room Number	Room Name	Floor Finishes: CARPET, Broadloom	CARPET, Walk-off	RESILIENT SHEET, Rubber Sheet	Base Finishes: RESILIENT BASE AND ACCESSORIES, Rubber Wall Base, 4"	RESILIENT SHEET, Integral Base	Wall Finishes: GYPSUM BOARD, Wallboard, (Texture GB-2)	WALL COVERINGS, Vinyl Covered Tackboard over Gypsum Board (GB-3)	FRP Panels over Gypsum Board, Water Resistant (GB-3)	Ceiling Finishes: ACOUSTICAL CEILINGS, Suspension System,	GYPSUM BOARD, Wallboard (Texture GB-2),	METAL DECK, Metal Deck and Steel Beams,	METAL DECK, Acoustical Metal Deck,	Miscellanous Finishes: METAL DOORS AND FRAMES, Doors, Panels and Frames	LAMINATE-FACED WOOD DOORS	STOREFRONT, Clear Anodized	Remarks
100	Classroom	FF	FF	FF	FF	-	-	-	-	-	-	-	-	-	-	-	1
101	Restroom	-	-	FF	FF	-	-	-	-	-	-	-	-	-	-	-	
102	Restroom	-	-	FF	FF	-	-	-	-	-	-	-	-	-	-	-	
103	Classroom	FF	FF	FF	FF	-	-	-	-	-	-	-	-	-	-	-	1
104	Restroom	-	-	FF	FF	-	-	-	-	-	-	-	-	-	-	-	
105	Restroom	-	-	FF	FF	-	-	-	-	-	-	-	-	-	-	-	

P1 — Interior Finish Schedule- Building P
No Scale — Refer to H18 for Abbreviations, Notes and Remarks

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

ABBREVIATIONS

AESS	=	Architectural Exposed Structural Steel
AFP	=	Acrylic Floor Finish
CCC	=	Clear Curing Compound
CFS	=	Clear Floor Sealer
CFH	=	Clear Floor Hardener
CWR	=	Colored Water Resistant Finish
CT#	=	Ceramic Tile Type
FF	=	Factory Finish
GS	=	Grout Sealer
HF	=	Refer to HARDWOOD FLOOR specification section
PC	=	Polished Concrete
ACT#	=	Acoustic Ceiling Tile Type
RWF	=	Resilient Wood Floor
RF#	=	Resinous Floor Type
*	=	Refer To Remarks

Interior Paint Finishes:

Refer To Specification Section - PAINTING

CB#	=	Concrete or Concrete Masonry Units
DW#	=	Gypsum Board Finish
P#	=	Cement Plaster, Veneer Plaster or Gypsum Plaster Finish
M#	=	Metal Finish
W#	=	Woodwork Finish
X#	=	Special Finishes

NOTES

1. Refer to appropriate Specification Sections for Materials, Systems and Types.
2. All Details, Materials and Finishes shall be considered "Typical" for all similar conditions, Unless Otherwise Noted.
3. Do not paint Fire Rated Door and Frame Rating Plates.
4. Where changes in Floor Materials occur, refer to detail K11-X/A603
5. Refer to Interior Elevations for additional information.
6. This Schedule is provided for the convenience of the Contractor. Field verify all conditions and dimensions prior to fabrication, installation or application.
7. See Interior Color Schedule for Finish / Material Colors.
8. Gypsum Board Textures indicated are for areas exposed to view. Areas above ceilings shall be GB5, Unless Otherwise Noted. Refer to Specifications for appropriate locations of other textures.
9. VAPOR-ALKALINITY CONTROL: Apply Vapor-Alkalinity Control Membrane System at all concrete slab areas scheduled to receive applied floor covering that are sensitive to and have requirements for limits of vapor transmission and pH levels."
10. MECHANICAL, ELECTRICAL and PLUMBING: All items exposed to view to be M-2, UNO.
11. Refer to Reflected Ceiling Plan for Acoustical Ceiling Tile Type.
12. STEEL AND FABRICATION and SHEET METAL: All items exposed to view to be M-2, UNO.

REMARKS

1. CARPET, Broadloom, Modular and Walk-Off to be OFCI. See specification section CARPET and OWNER- FURNISHED ITEMS.
2. TILE, Wall Tile and Base at drinking fountain, see interior elevations.
3. CAST-IN- PLACE CONCRETE, Polished Concrete to be determined upon mockup, see specifications section POLISHED CONCRETE FLOOR FINISHING.
4. Refer to specification section HARDWOOD FLOOR for complete installation and finishing.

H18 — Interior Finish Schedule Legend
No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

TYPICAL INFORMATION
INTERIOR FINISH SCHEDULE- BUILDING E, K1, K2 & P
Drawing

darden architects
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PLANNING
INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT — ANDREW A. CORNEJO — No. C37102 — REG. 11-30-23 — STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
2	Addendum 2	07/24/23
4	Addendum 4	03/03/23

Revision

Scale: 1/8" = 1'-0" — Drawn By: Author
Project Number: 2116 — Checked IChecker
Date: 02/15/23 — Reviewed Approver

X/A202

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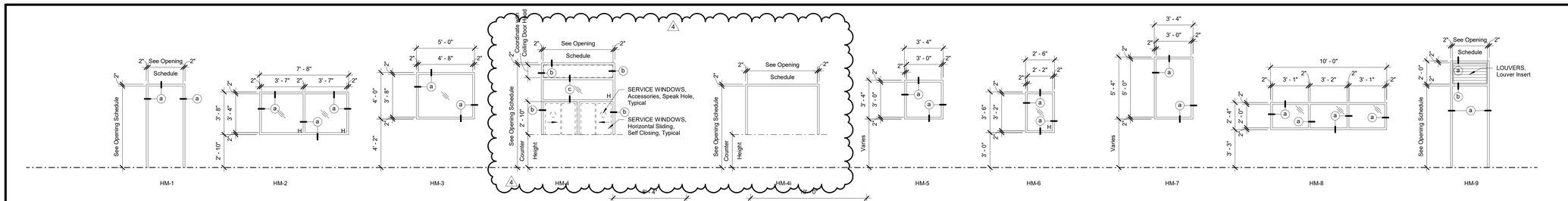

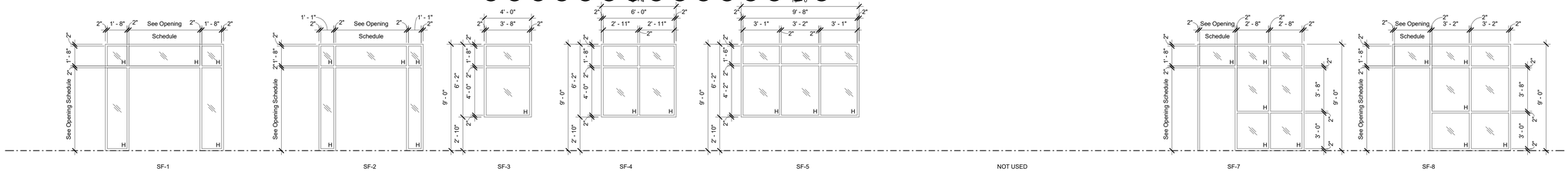

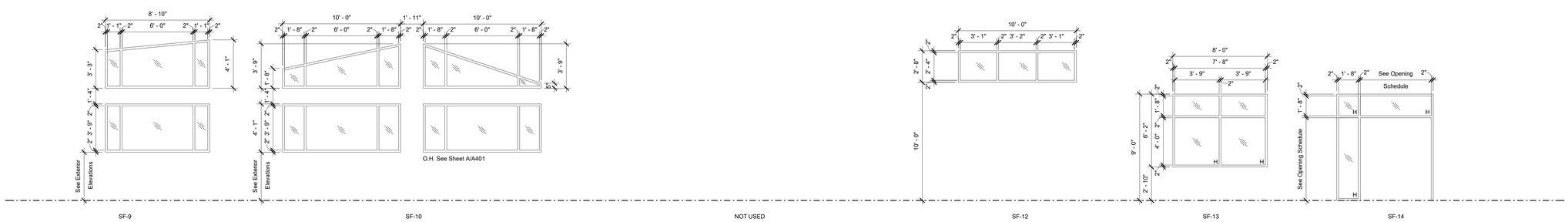

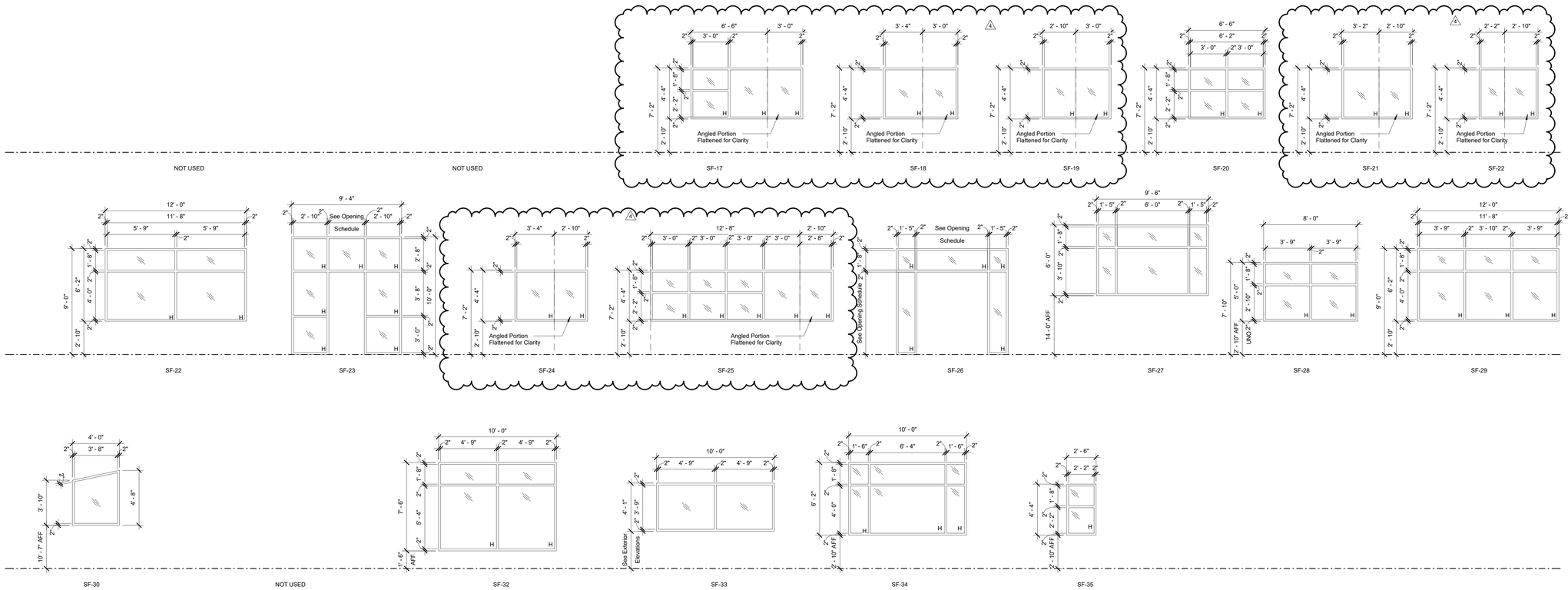

NOTE:
H= Hazard Class 1 Glazing (CBC) Tempered or Laminated Glass. See Opening Schedule for Type.

A1
1/4" = 1'-0"

Frame Elevations

3/3/2023 9:54:54 AM
C:\Users\andrewc\Documents\2116_CUSD ES '35_MASTER_and_SITE_V18_Increment_2_Addenda_andrew@dardenarchitects.com.rvt

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

TYPICAL INFORMATION
DOOR AND WINDOW FRAME ELEVATION
Drawing

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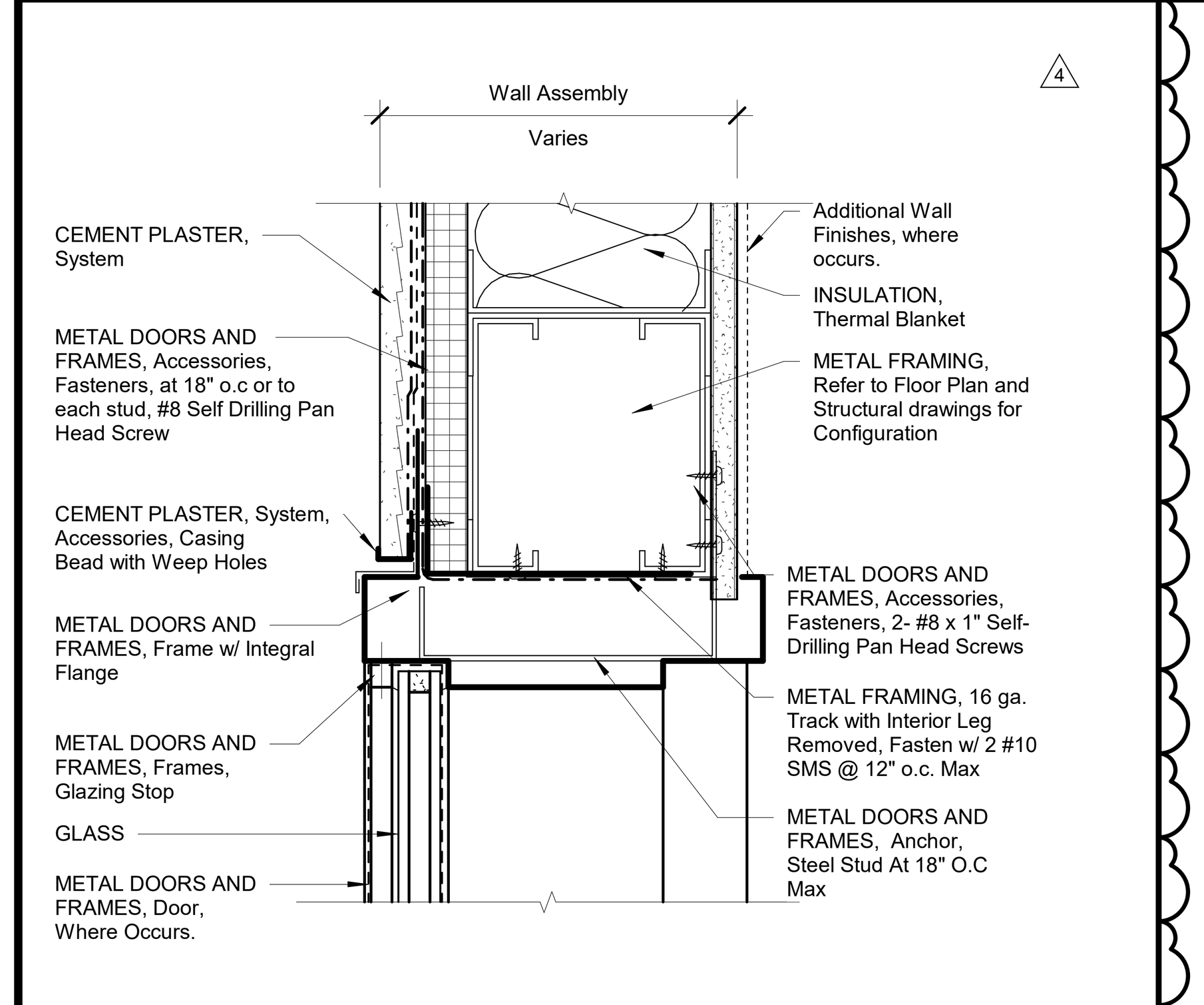
LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

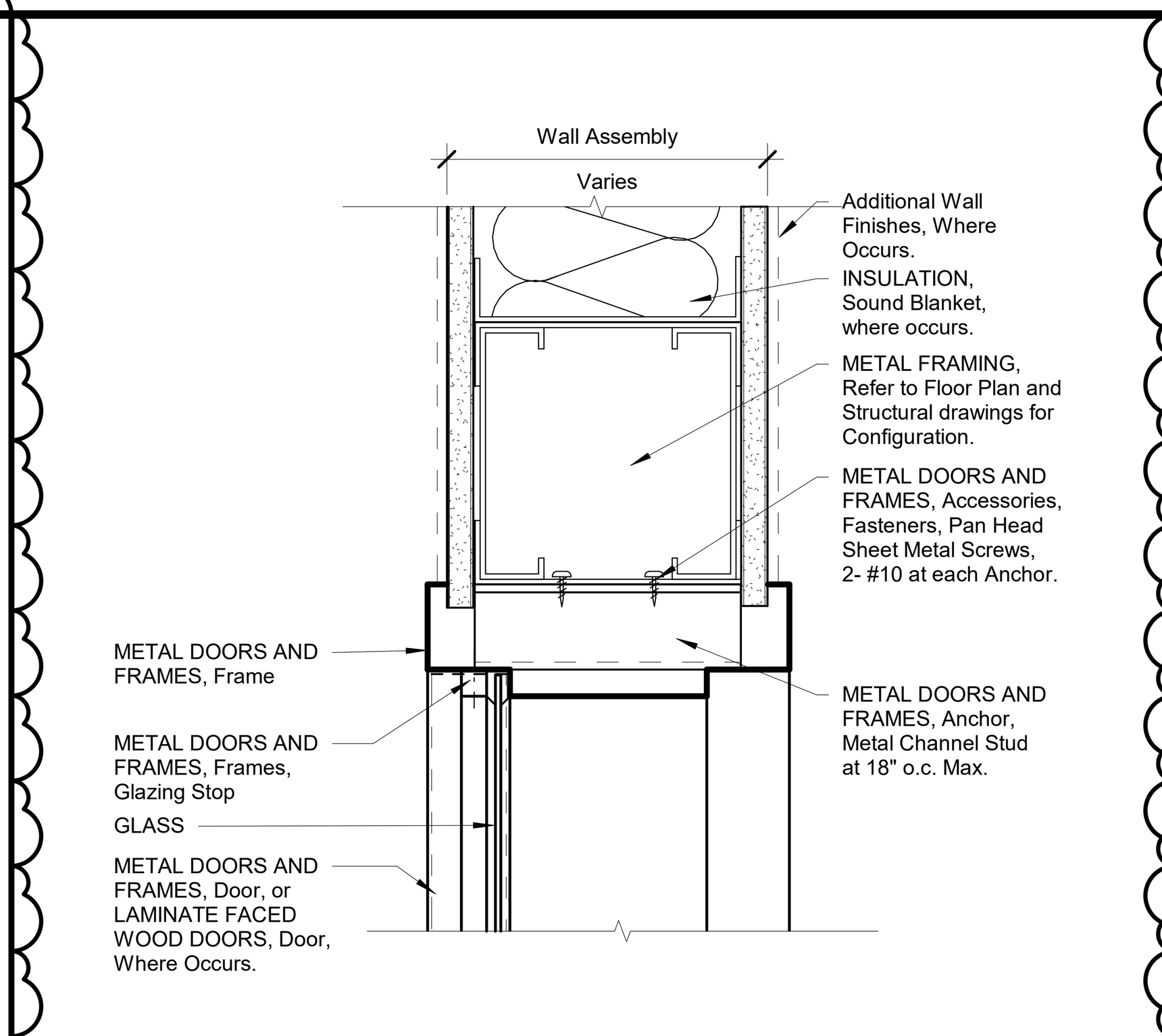
Revision

	Designed Designer	
Scale: 1/4" = 1'-0"	Drawn By: Author	X/A405
Project Number: 2116	Checked Checker	
Date: 02/15/23	Reviewed Approver	

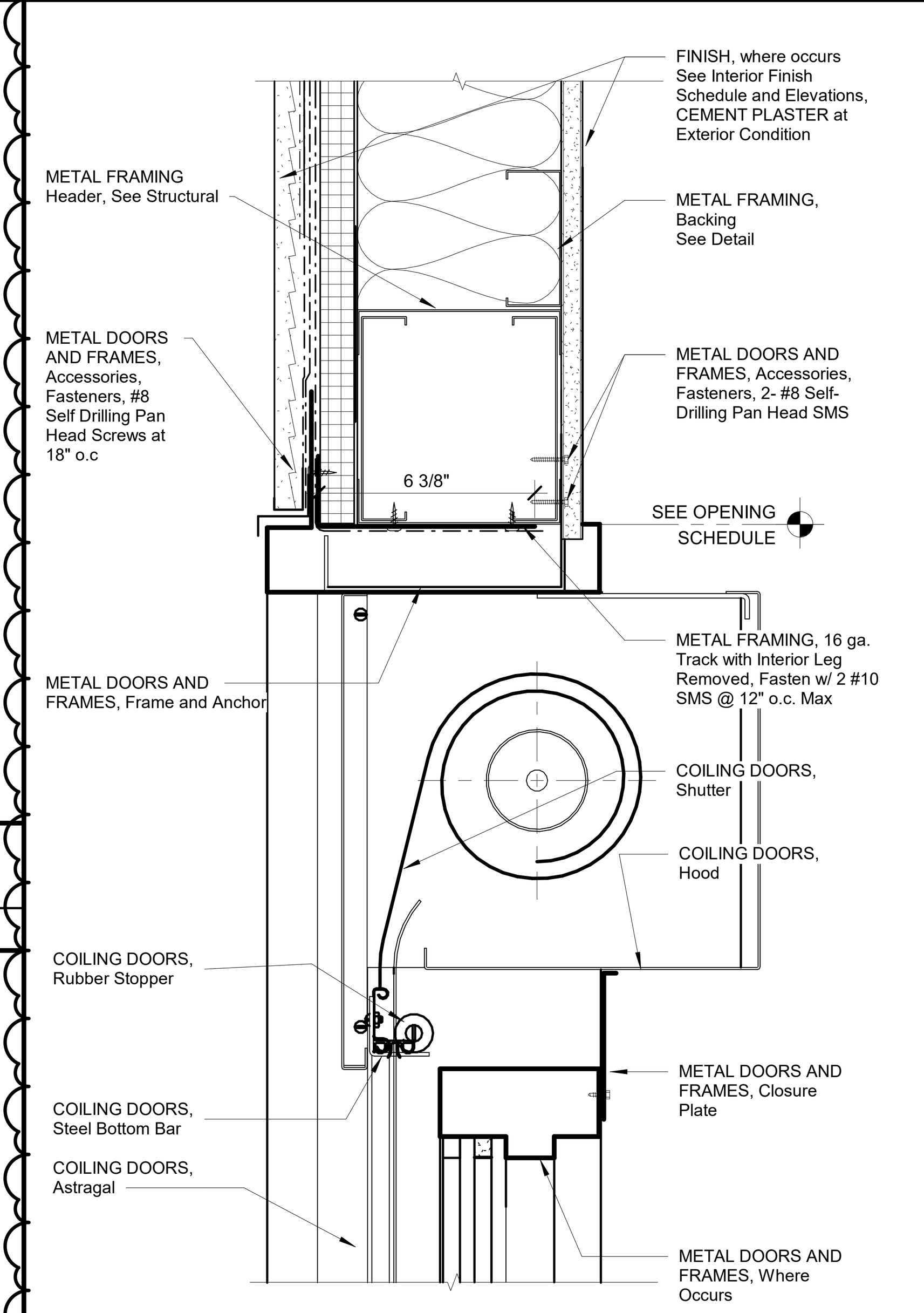
AD4-AX03



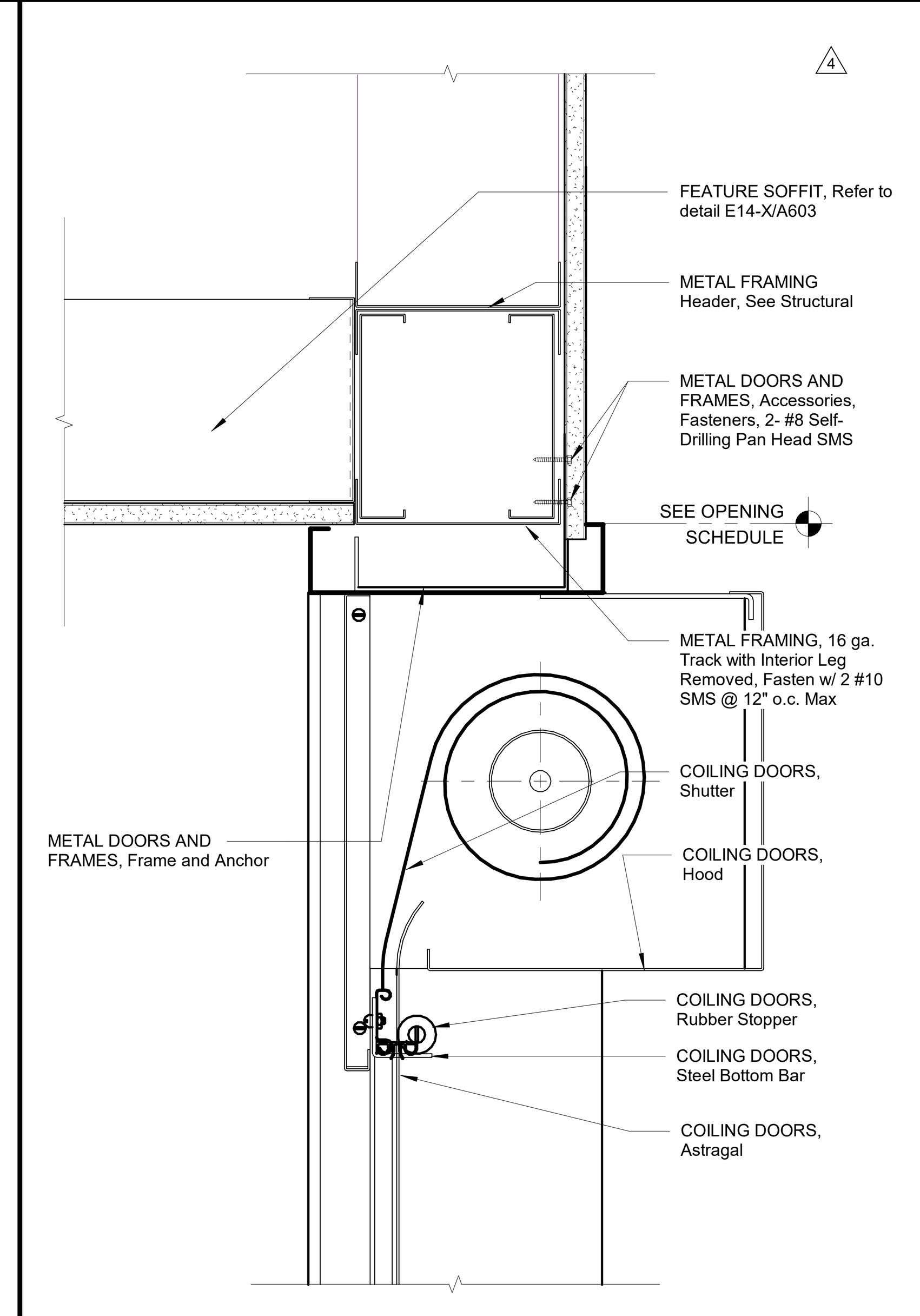
N1 METAL DOORS AND FRAMES, Head at Exterior
3" = 1'-0"



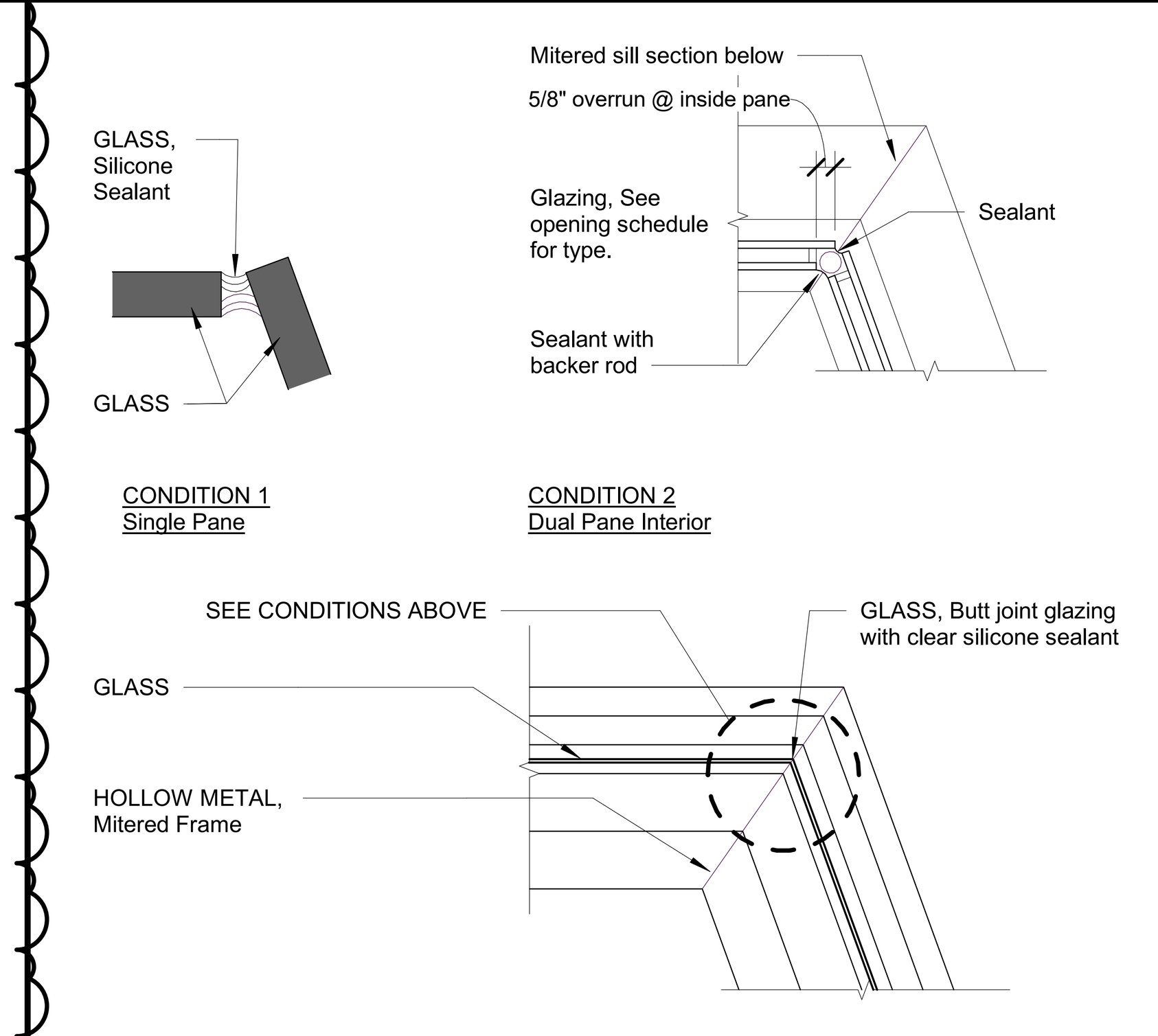
N4 METAL DOORS AND FRAMES, Head at Interior
3" = 1'-0"



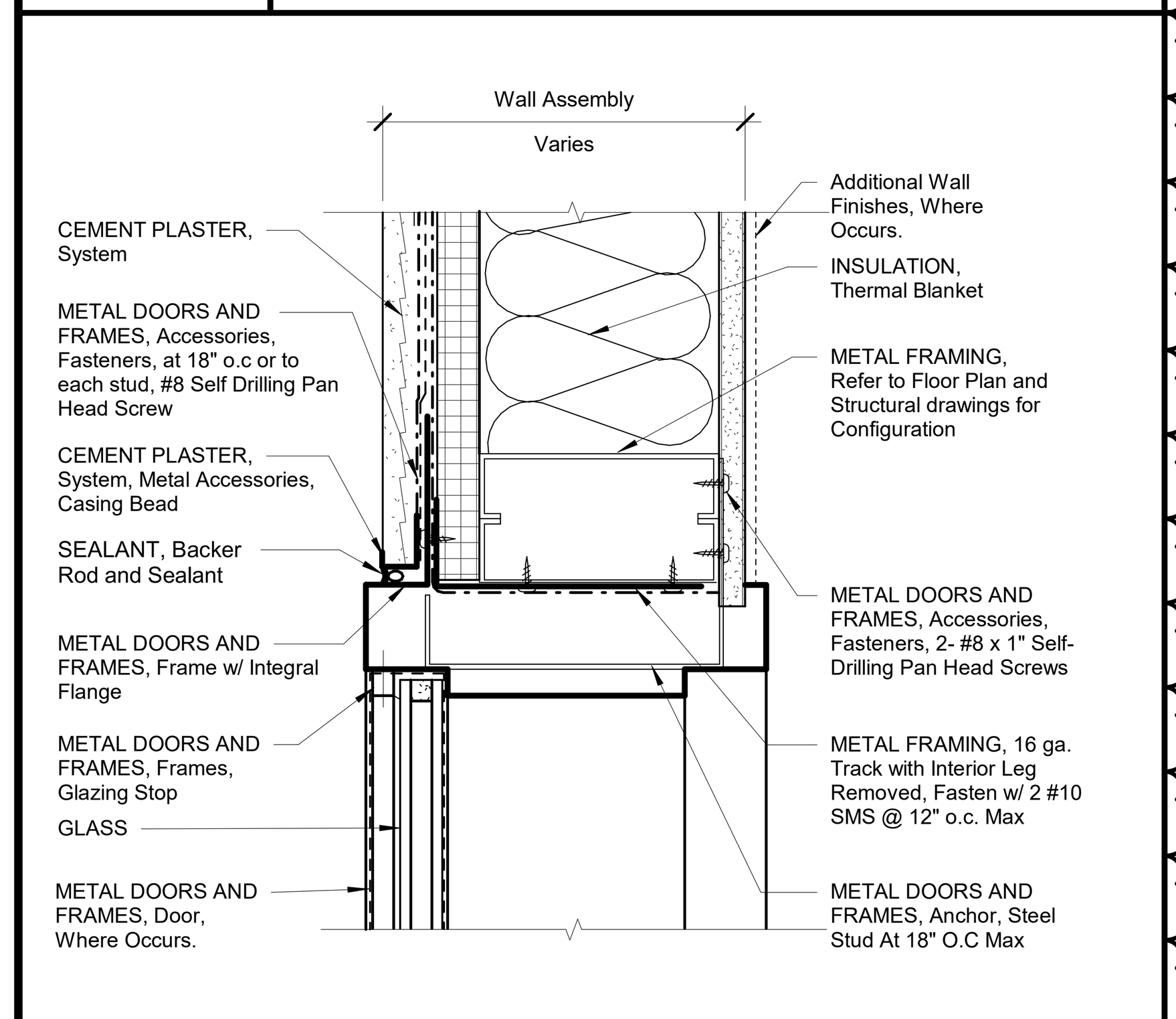
L7 METAL DOORS AND FRAMES, Exterior, Counter Shutter, Head.
3" = 1'-0"



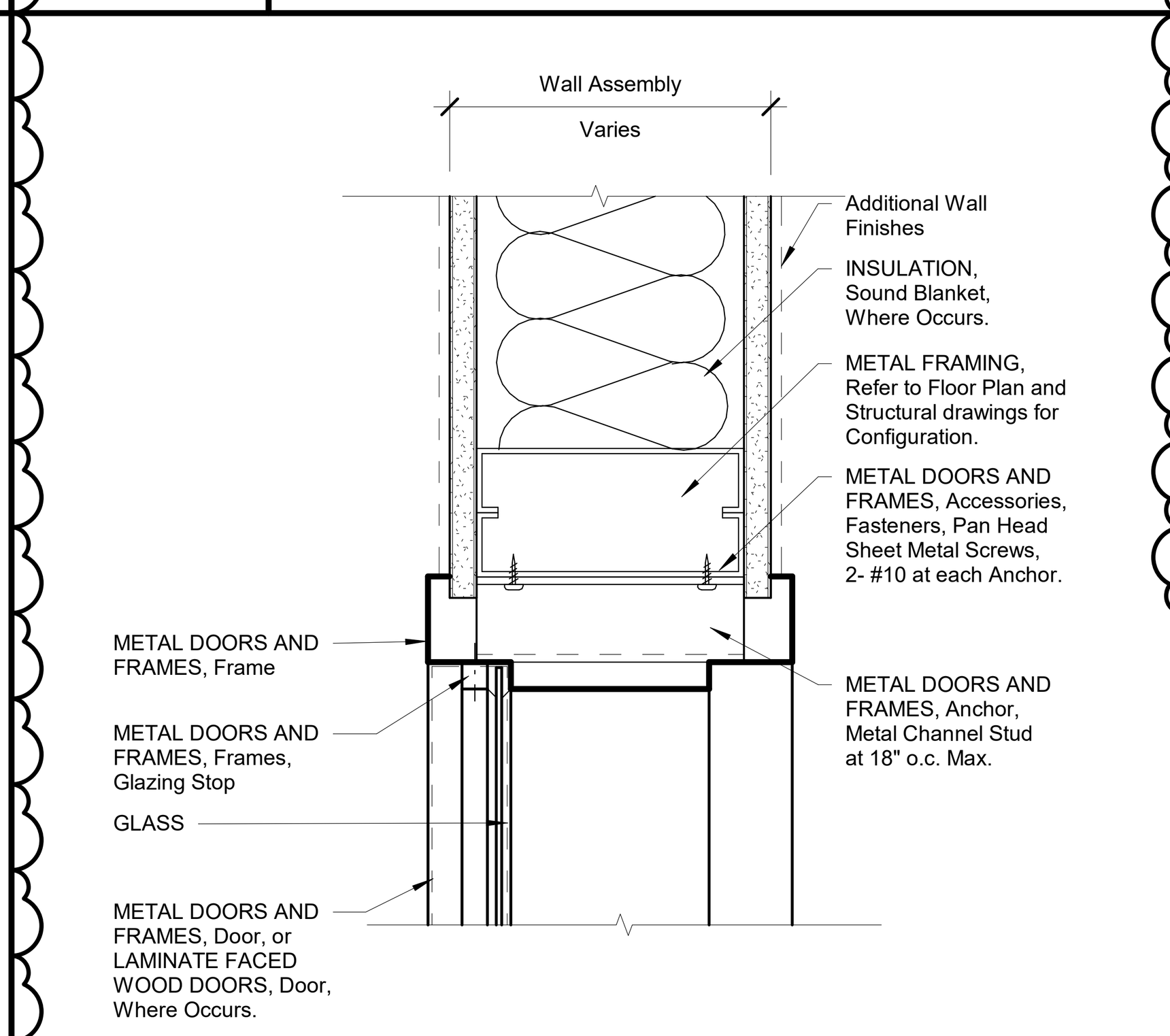
L11 METAL DOORS AND FRAMES, Interior, Counter Shutter, Head.
3" = 1'-0"



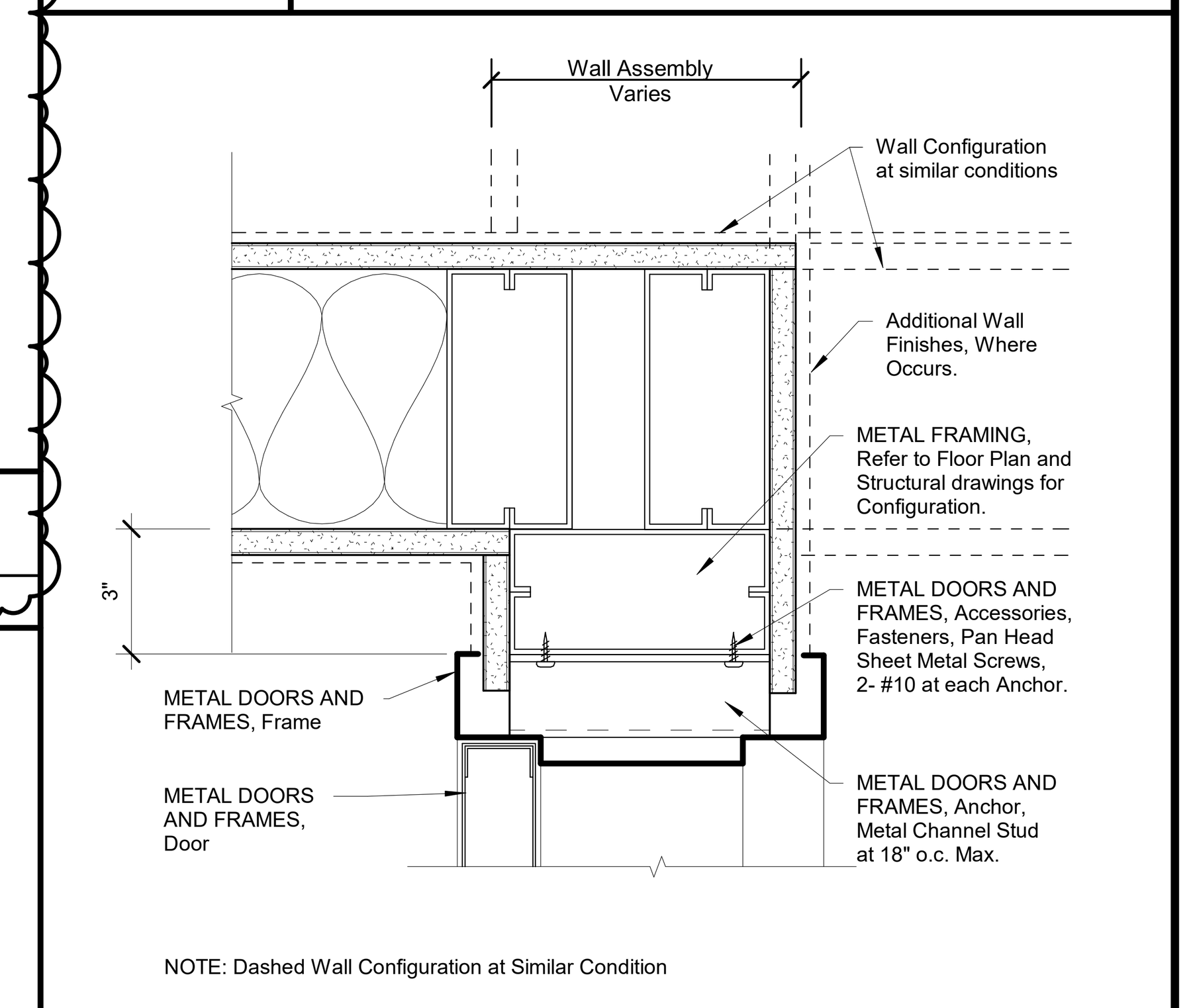
N14 GLASS, Mitered Corner
1" = 1'-0"



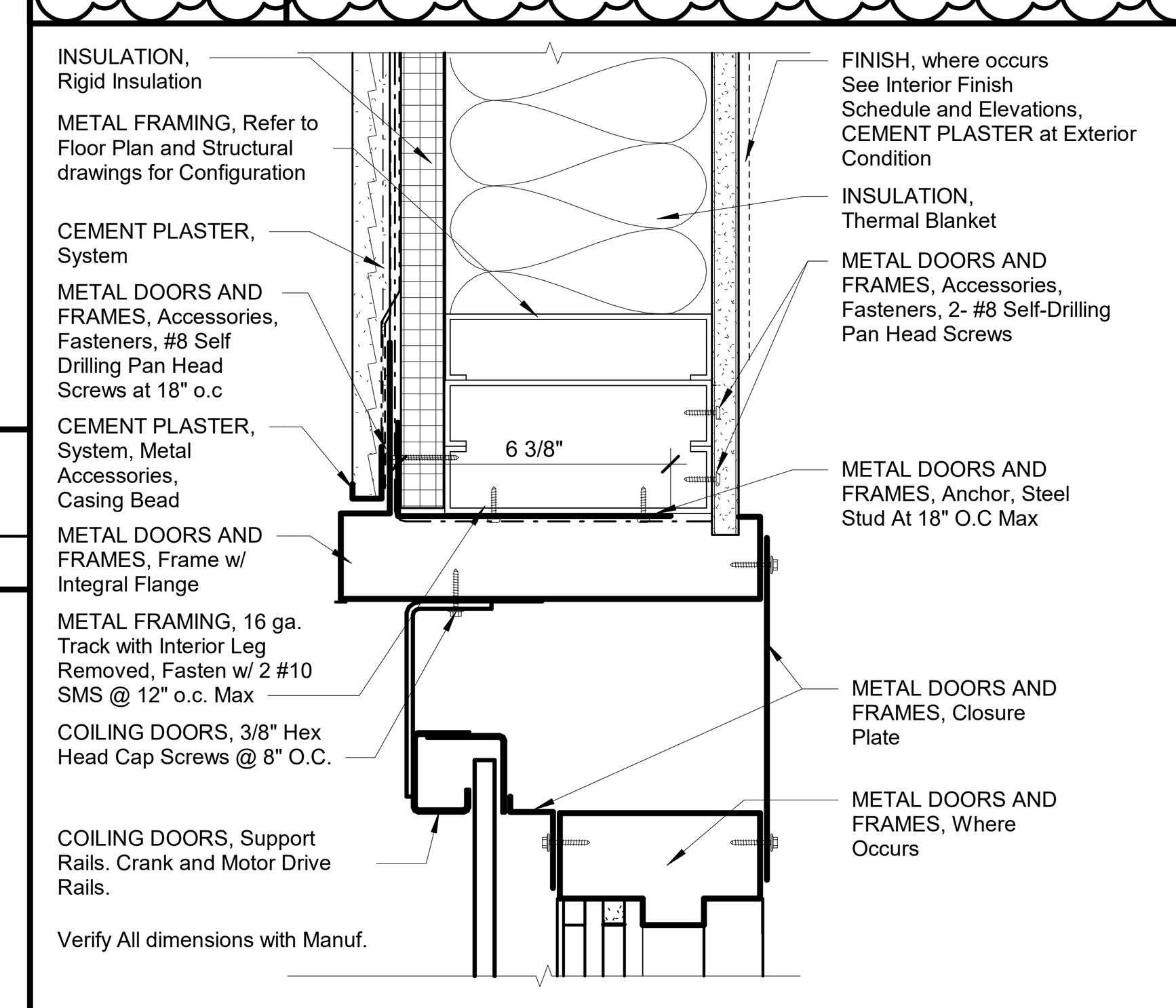
J1 METAL DOORS AND FRAMES, Jamb at Exterior
3" = 1'-0"



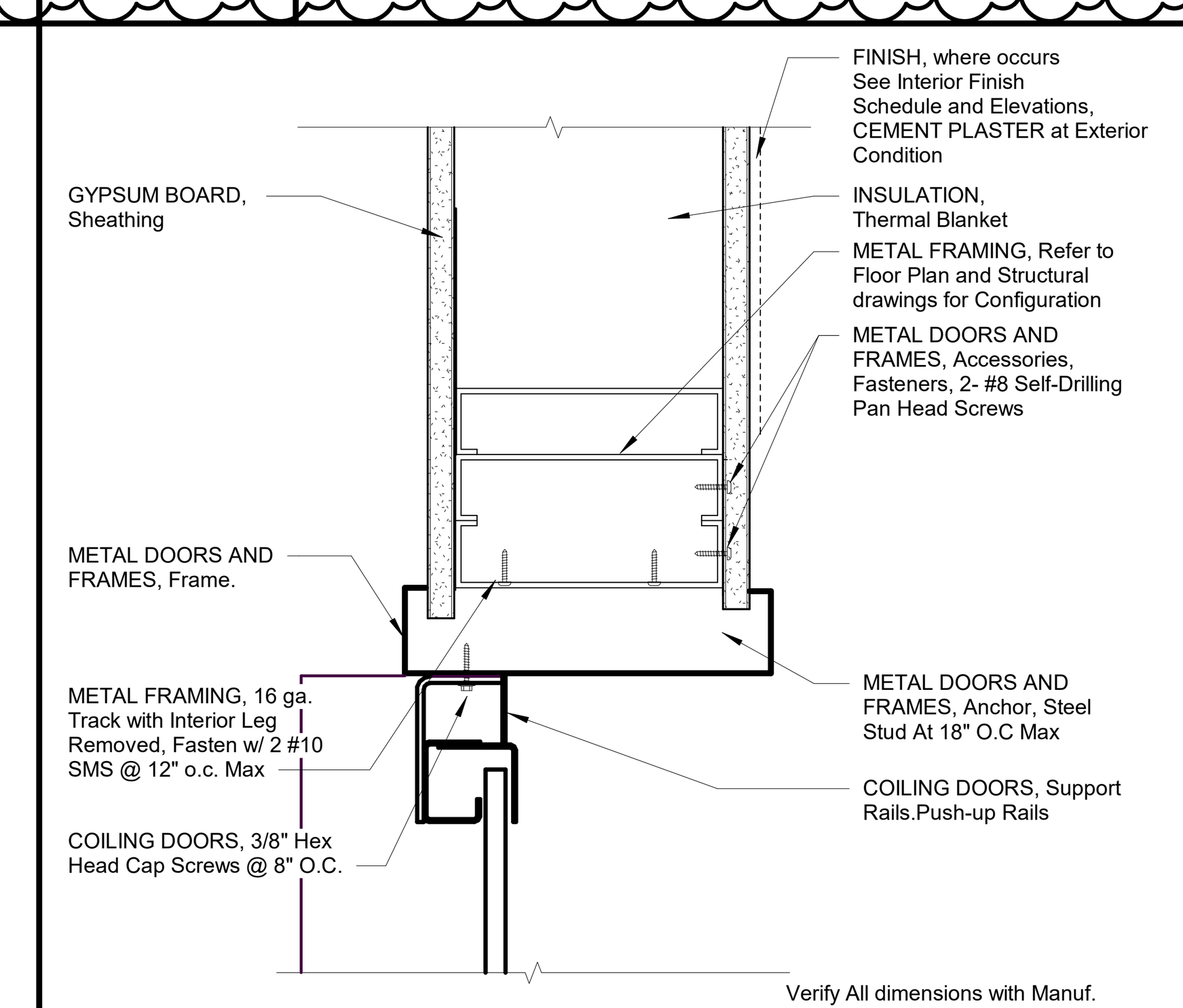
J4 METAL DOORS AND FRAMES, Jamb at Interior
3" = 1'-0"



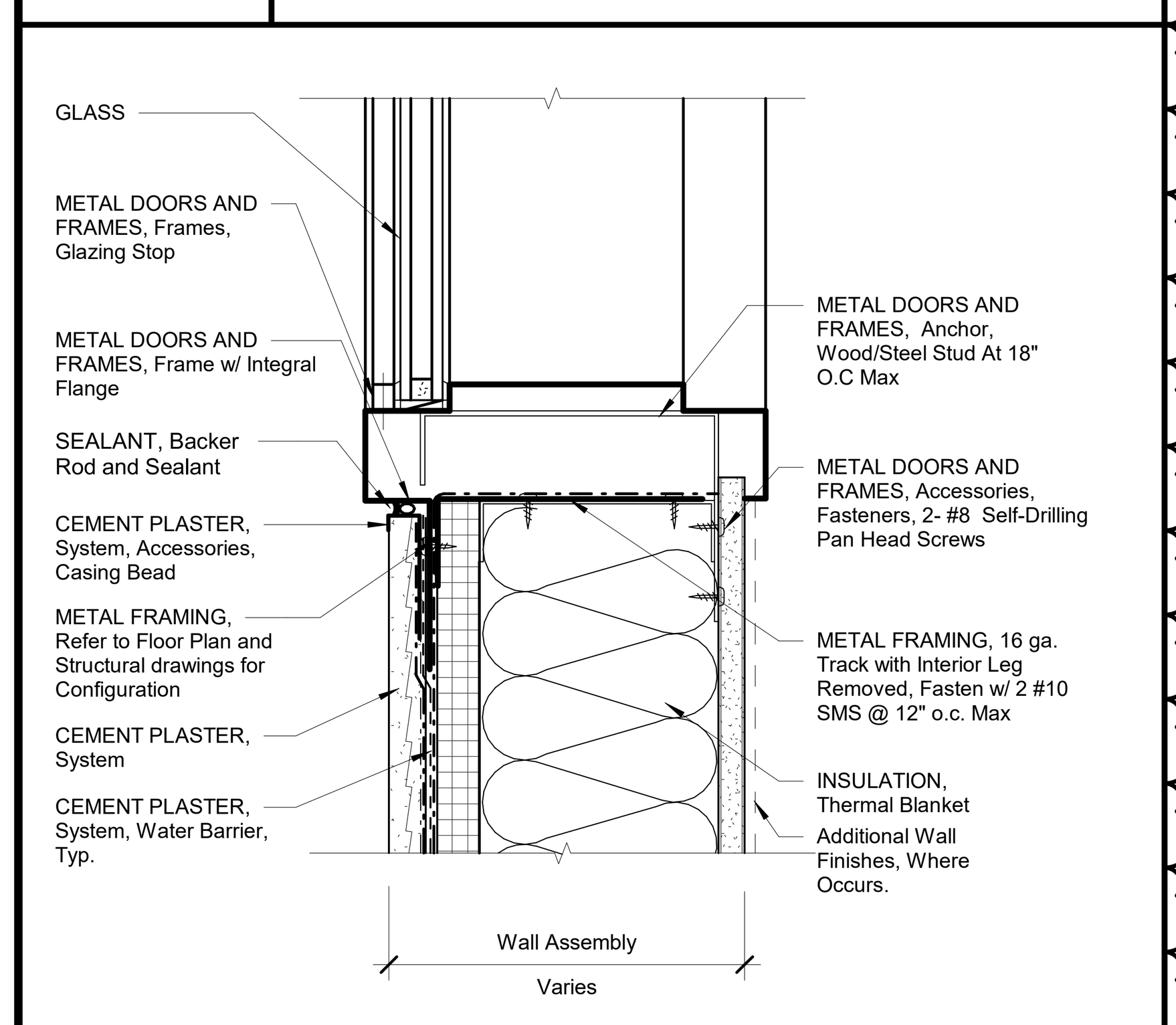
J14 METAL DOORS AND FRAMES, Jamb at Interior 90 Door Swing
3" = 1'-0"



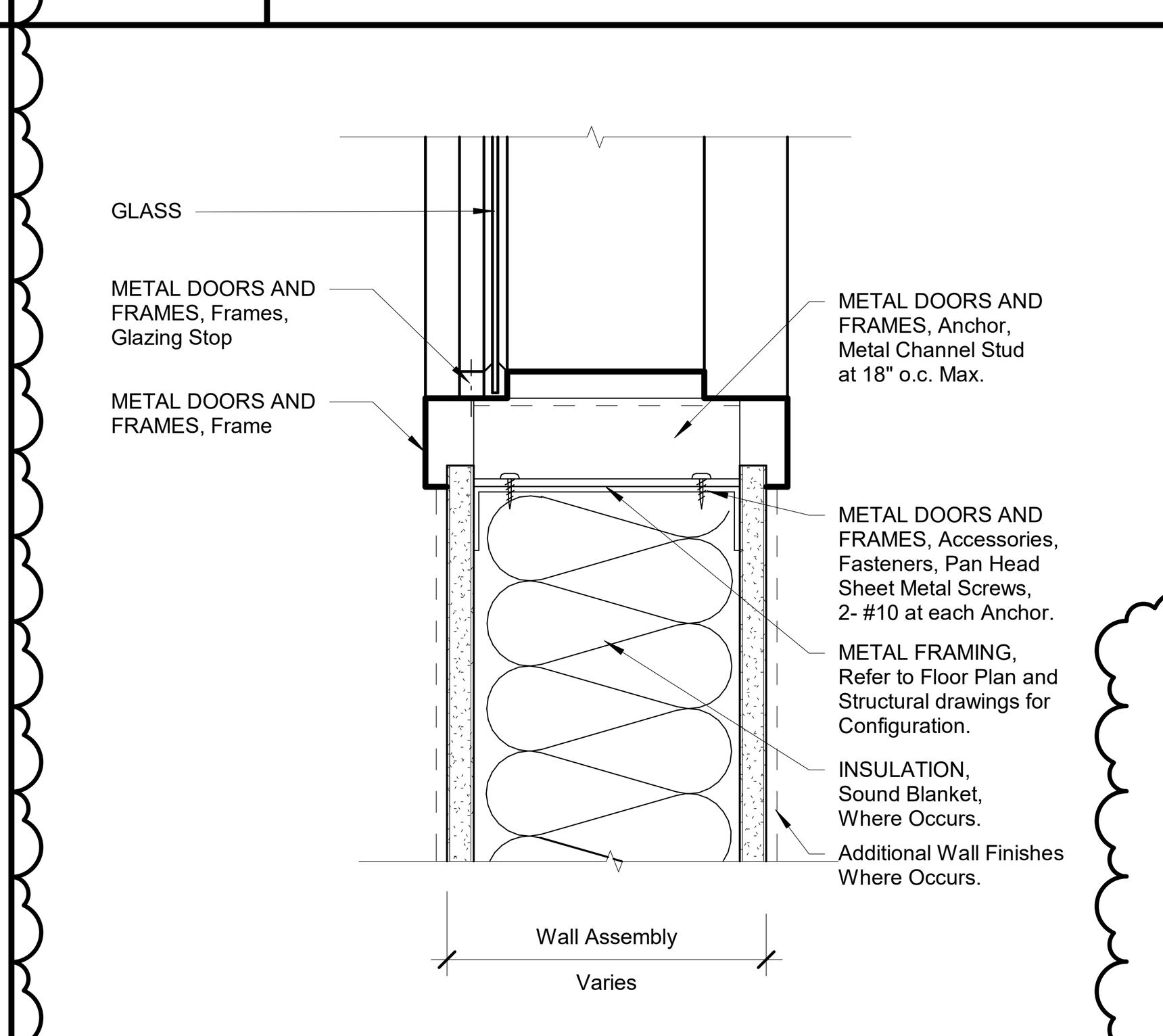
G7 METAL DOORS AND FRAMES, Exterior, Counter Shutter, Jamb.
3" = 1'-0"



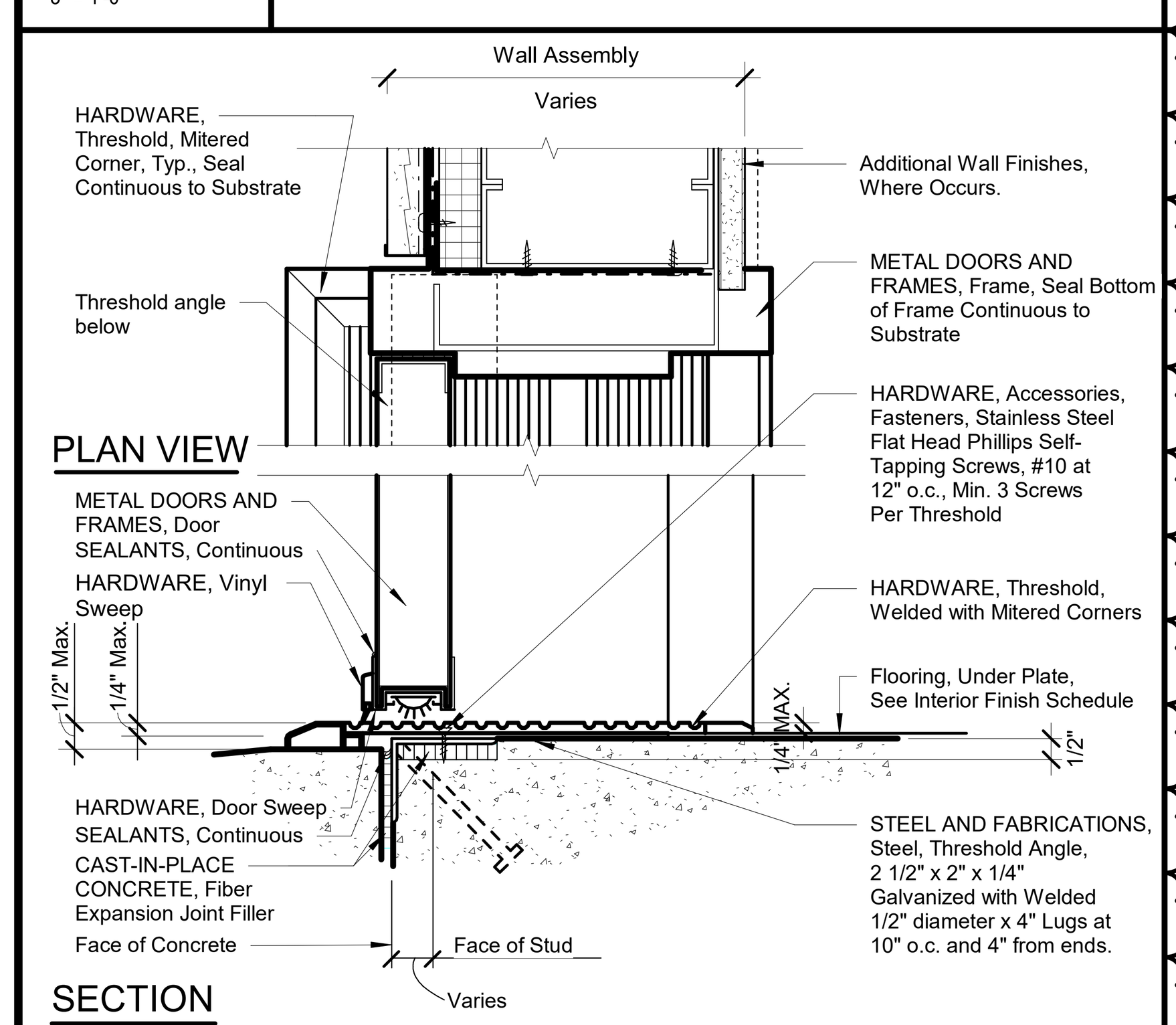
G11 METAL DOORS AND FRAMES, Interior, Counter Shutter, Jamb.
3" = 1'-0"



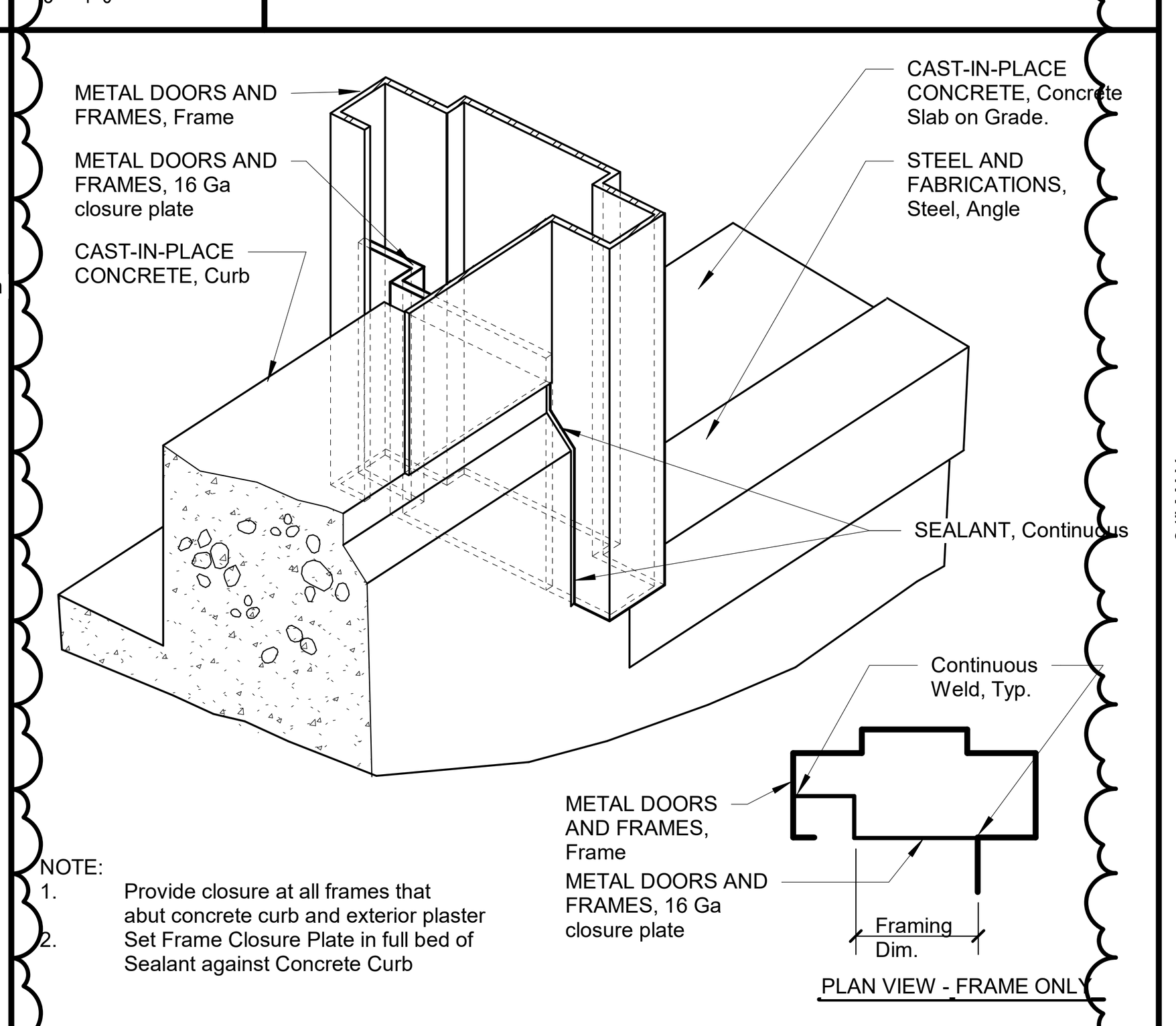
E1 METAL DOORS AND FRAMES, Sill at Exterior
3" = 1'-0"



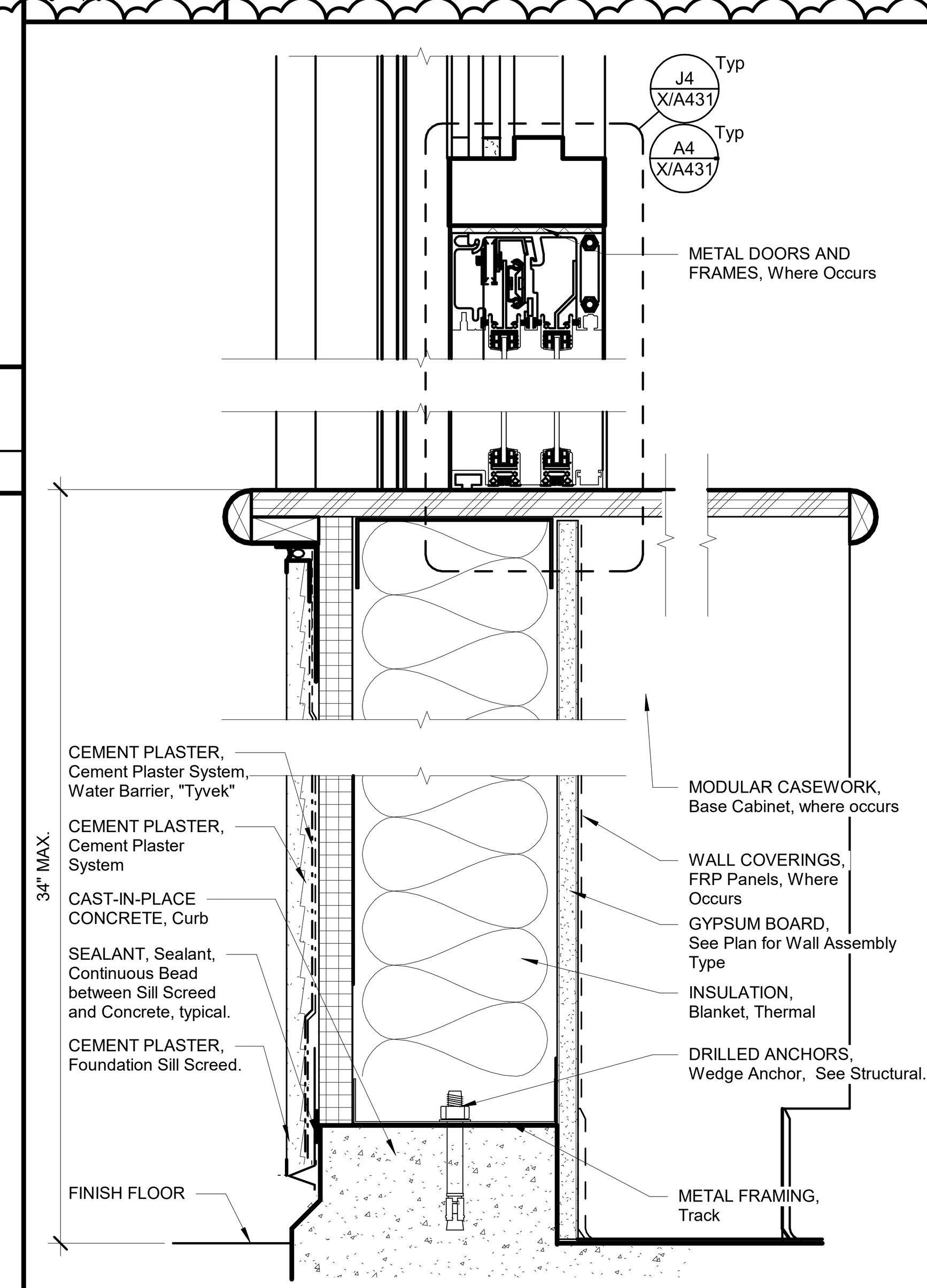
E4 METAL DOORS AND FRAMES, Sill at Interior
3" = 1'-0"



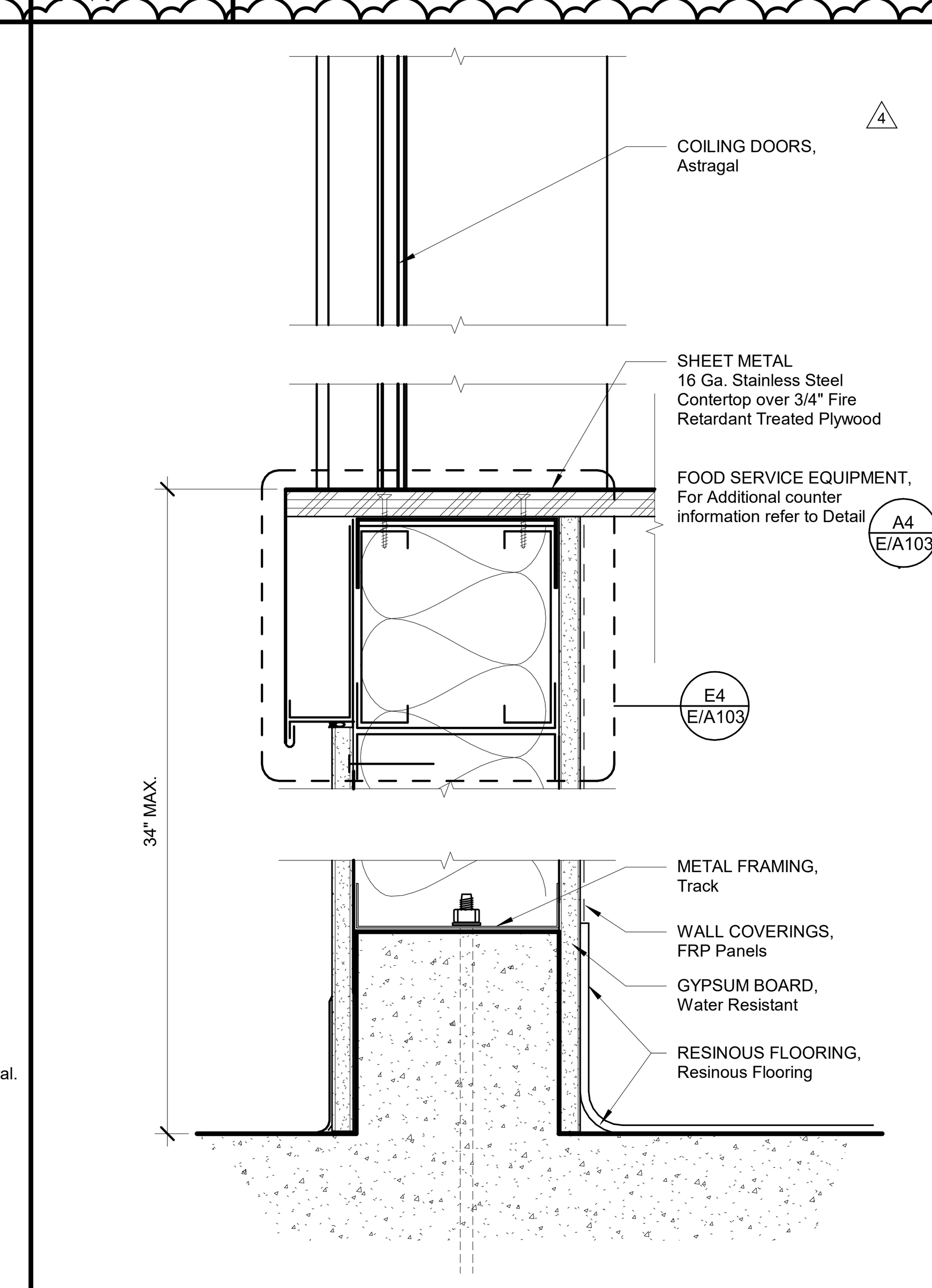
A1 HARDWARE, Threshold, Exterior
3" = 1'-0"



A4 METAL DOORS AND FRAMES, Closure Plate at Concrete Curb
3" = 1'-0"



A7 METAL DOORS AND FRAMES, Exterior, Counter Shutter, Sill.
3" = 1'-0"



A11 METAL DOORS AND FRAMES, Interior, Counter, Shutter, Sill.
3" = 1'-0"

DSA File No.: 10-48

DSA Application No.: 02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
OPENING DETAILS- HOLLOW METAL DOORS AND FRAMES

Drawing

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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer | Copyright 2022 Darden Architects

Scale: As indicated | Drawn By: Author

Project Number: 2116 | Checked I Checker

Date: 02/15/23 | Reviewer Approver

X/A411

AD4-AX04

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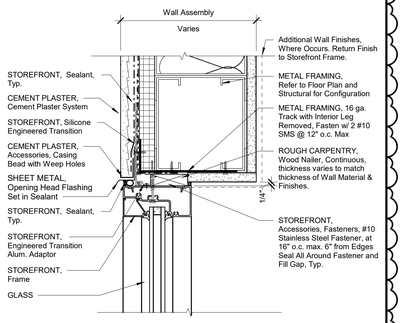
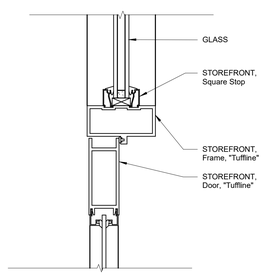


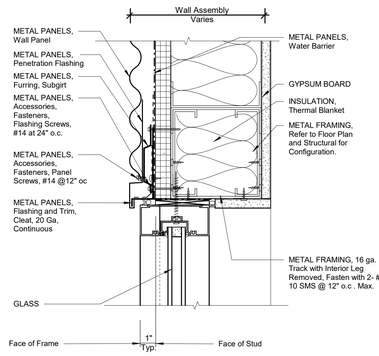
N1
3" = 1'-0"

STOREFRONT, Head at Exterior Window



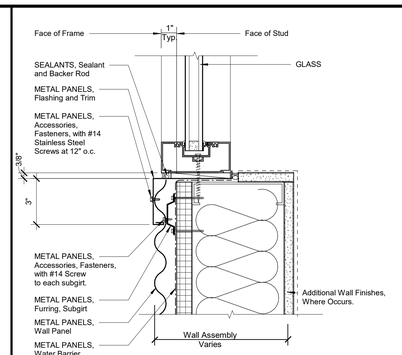
N4
3" = 1'-0"

STOREFRONT, Head at Exterior Door /Transom



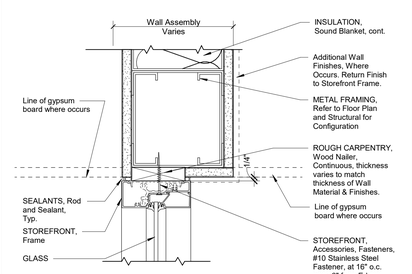
N7
3" = 1'-0"

STOREFRONT, Head at Metal Panel



N11
3" = 1'-0"

STOREFRONT, Sill at Metal Panel



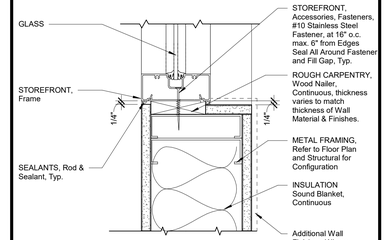
N14
3" = 1'-0"

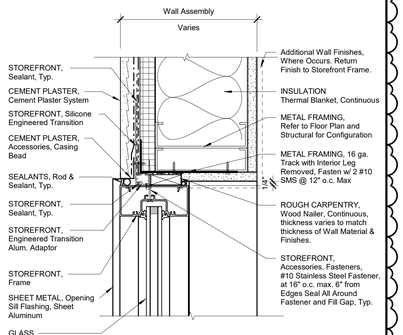
STOREFRONT, Head at Interior Window

DSA File No.:
10-48

DSA Application No.:
02-120543

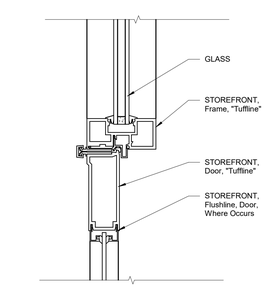
Agency Approval





J1
3" = 1'-0"

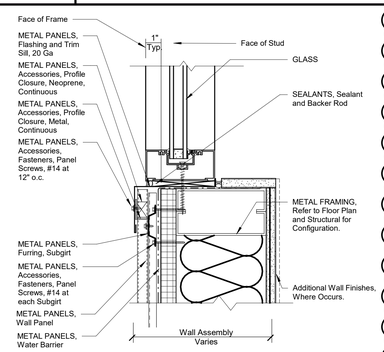
STOREFRONT, Jamb at Exterior Window



NOTE: Jamb Similar at Strike Side

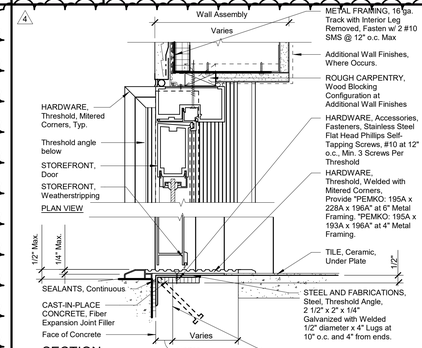
J4
3" = 1'-0"

STOREFRONT, Jamb at Exterior Door/ Sidelite Side



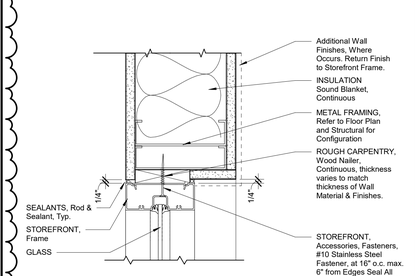
J7
3" = 1'-0"

STOREFRONT, Jamb at Metal Panel



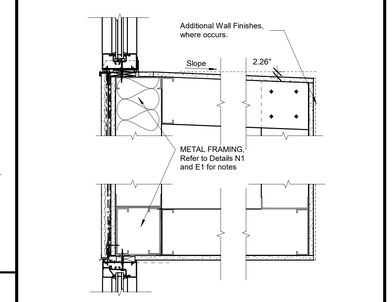
N18
3" = 1'-0"

STOREFRONT, Sill at Interior Window



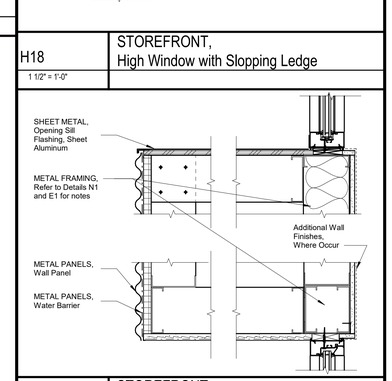
J14
3" = 1'-0"

STOREFRONT, Jamb at Interior Window



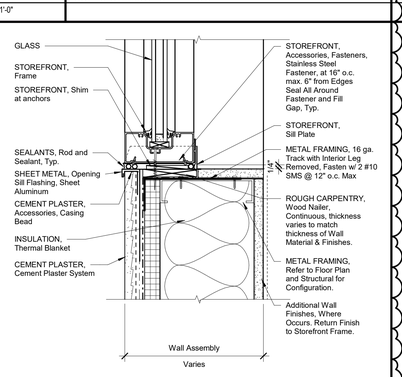
H18
1 1/2" = 1'-0"

STOREFRONT, High Window with Slopping Ledge



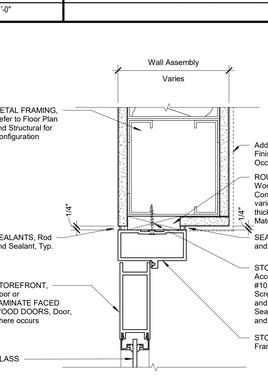
E18
1 1/2" = 1'-0"

STOREFRONT, High Window at Metal Panel Soffit



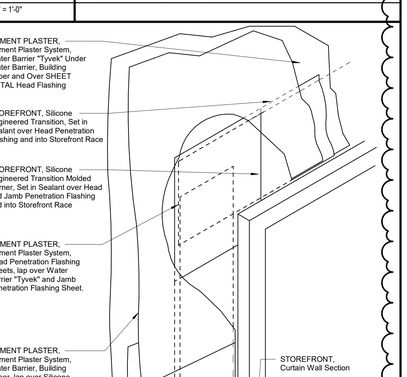
E1
3" = 1'-0"

STOREFRONT, Sill at Exterior Window



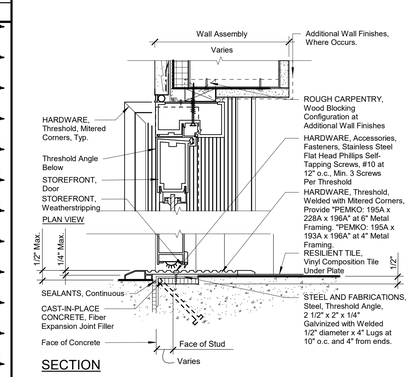
E4
3" = 1'-0"

STOREFRONT, Head at Interior Door



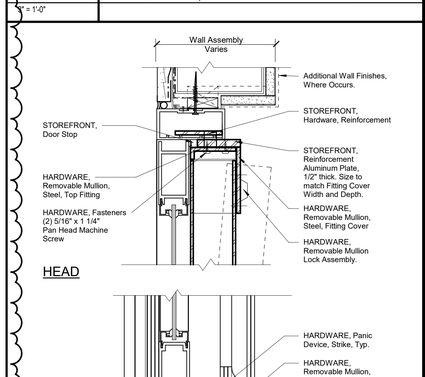
A7
3" = 1'-0"

STOREFRONT, Opening Head, Jamb, & Sill Flashing, Exterior Cement Plaster



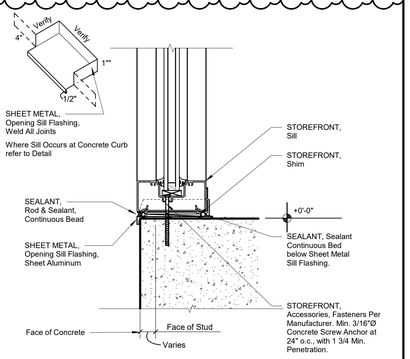
A11
3" = 1'-0"

HARDWARE, Threshold at Exterior Storefront Door



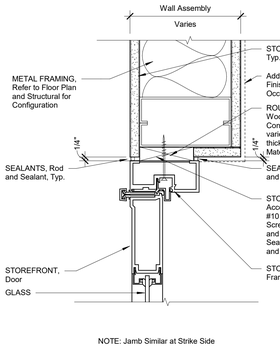
A14
3" = 1'-0"

HARDWARE, Removable Mullion at Exterior Storefront Door



A1
3" = 1'-0"

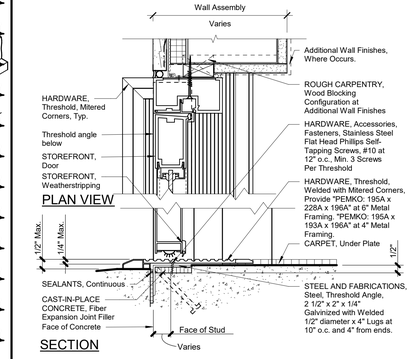
STOREFRONT, Curtain Wall, Sill at Exterior Window



NOTE: Jamb Similar at Strike Side

A4
3" = 1'-0"

STOREFRONT, Jamb at Interior Door Hinge Side



A11
3" = 1'-0"

HARDWARE, Threshold at Exterior Storefront Door

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

TYPICAL INFORMATION
OPENING DETAILS- STOREFRONT
Drawing

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LICENSED ARCHITECT ANDREW A. CORBETT No. C37102 Rev. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer | Copyright 2022 Darden Architects
Scale: As indicated | Drawn By: Author
Project Number: 2116 | Checked Checker
Date: 02/15/23 | Reviewed Approver

X/A421

3/3/2023 10:09:07 AM
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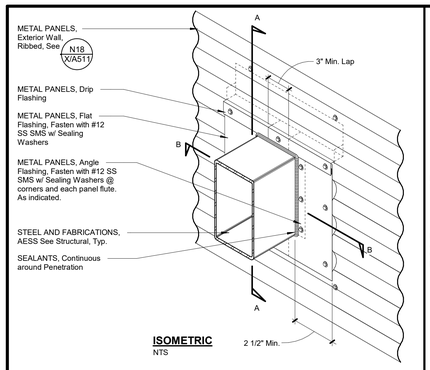
AD4-AX05



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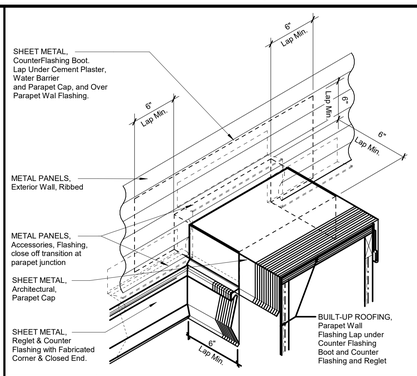
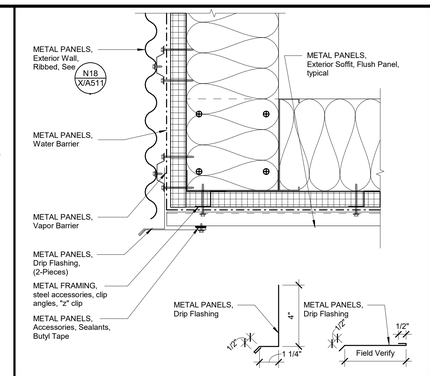
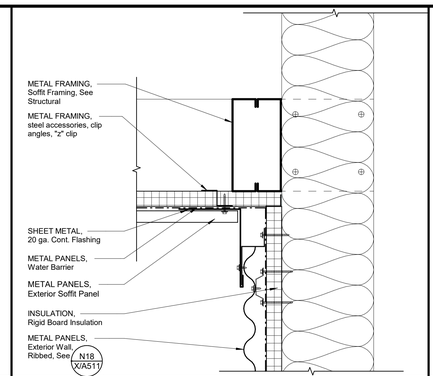
NTS



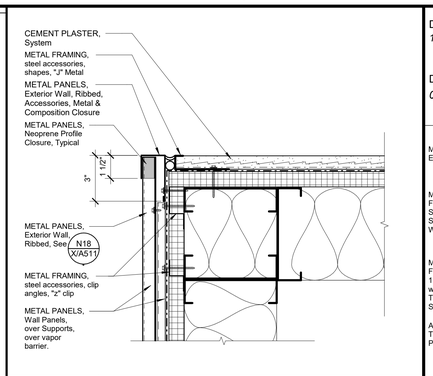
N4	SHEET METAL,Counter Flashing Boot Low Parapet to High Wall
3" = 1'-0"	



N7	METAL PANEL, Soffit Trim, Section
3" = 1'-0"	



N11	METAL PANEL, Soffit to Wall
3" = 1'-0"	

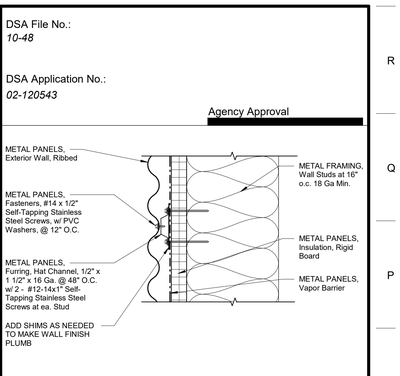


N14	METAL PANEL, Plan, Vertical Joint at Cement Plaster
3" = 1'-0"	

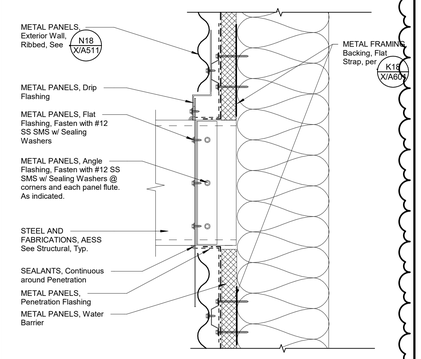
DSA File No.:
10-48

DSA Application No.:
02-120543

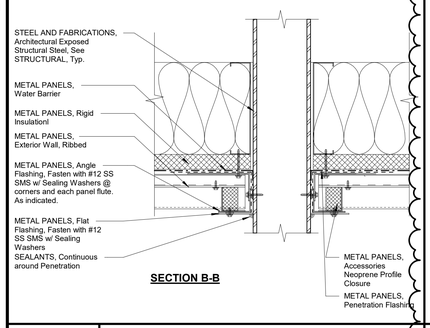
Agency Approval



N18	METAL PANELS, Typical Wall Attachment, Section
3" = 1'-0"	

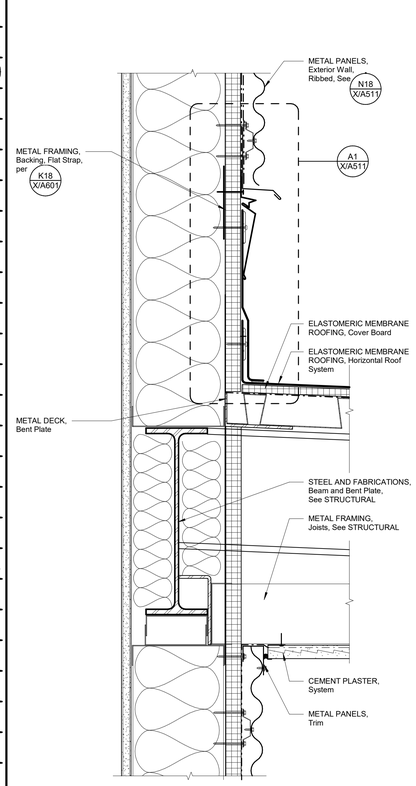


SECTION A-A

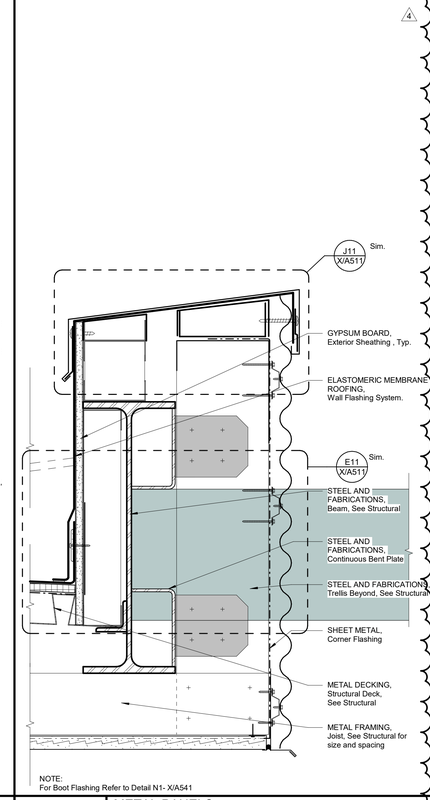


SECTION B-B

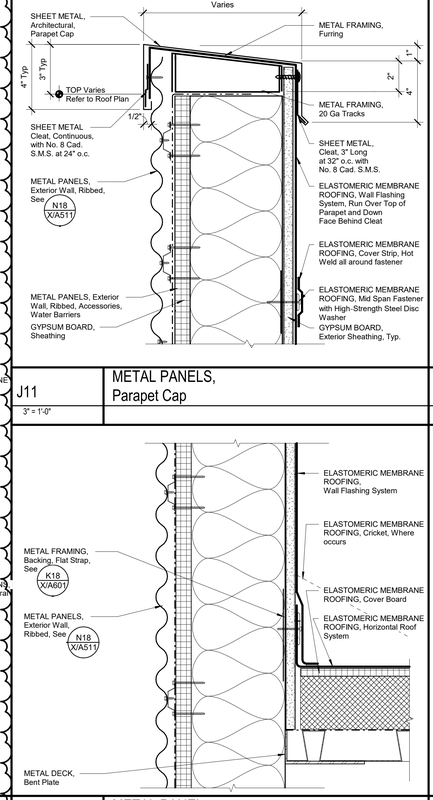
E1	METAL PANELS, Steel Penetration
3" = 1'-0"	



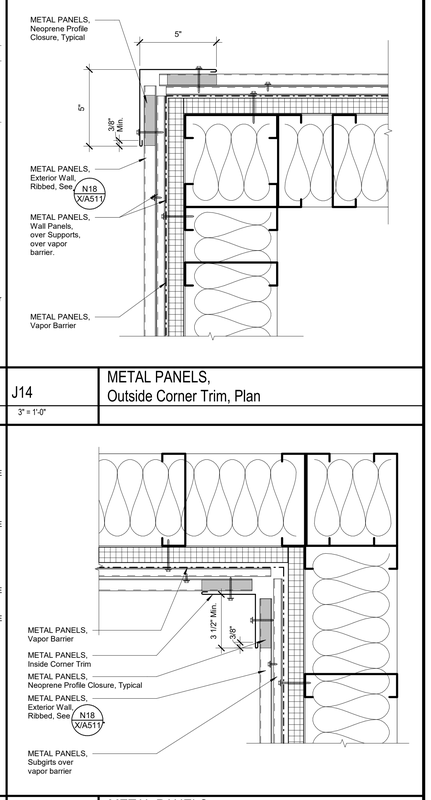
E4	METAL PANEL, Reglet & Counter Flashing at Exterior Overhang
3" = 1'-0"	



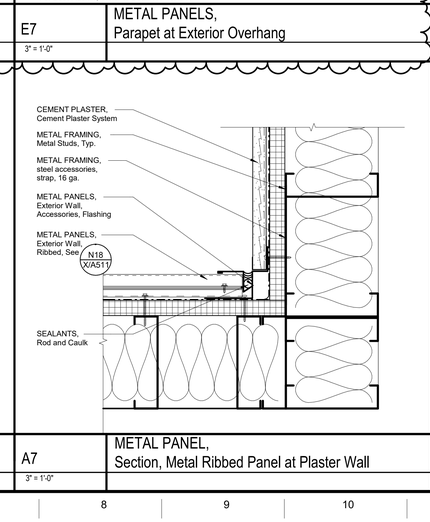
E7	METAL PANELS, Parapet at Exterior Overhang
3" = 1'-0"	



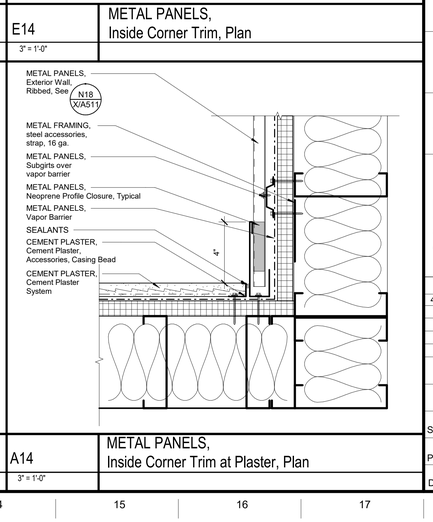
J11	METAL PANELS, Parapet Cap
3" = 1'-0"	



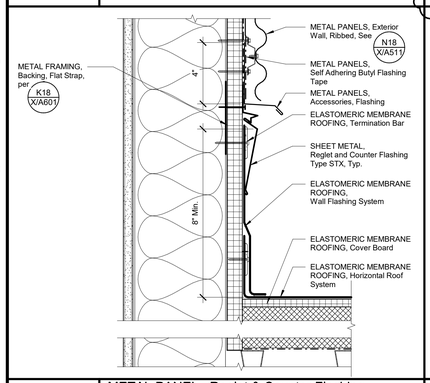
J14	METAL PANELS, Outside Corner Trim, Plan
3" = 1'-0"	



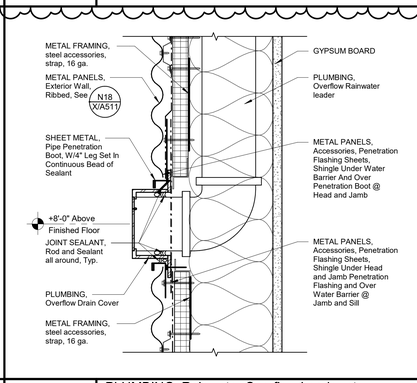
E11	METAL PANEL, Metal Panel System at Roof
3" = 1'-0"	



E14	METAL PANELS, Inside Corner Trim, Plan
3" = 1'-0"	

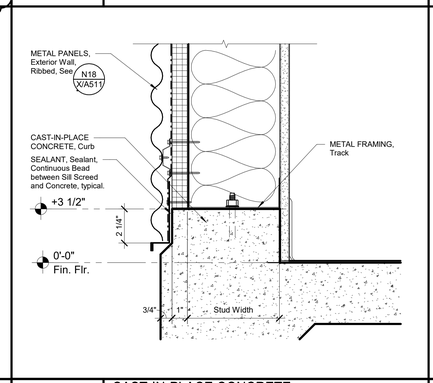


A1	METAL PANEL, Reglet & Counter Flashing at Elastomeric Membrane Roofing
3" = 1'-0"	



A4	PLUMBING, Rainwater Overflow Leader at Metal Panel
3" = 1'-0"	

A7	METAL PANEL, Section, Metal Ribbed Panel at Plaster Wall
3" = 1'-0"	



A11	CAST-IN-PLACE CONCRETE, Exterior Wall at Concrete Curb
3" = 1'-0"	

A14	METAL PANELS, Inside Corner Trim at Plaster, Plan
3" = 1'-0"	

McKinley/Fowler Elementary School- Increment 2
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TYPICAL INFORMATION
EXTERIOR DETAILS- METAL WALL PANELS
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Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed By: JGM
Drawn By: JGM
Checked By: AC
Reviewed By: MF

Scale: 3" = 1'-0"
Project Number: 2116
Date: 02/15/23

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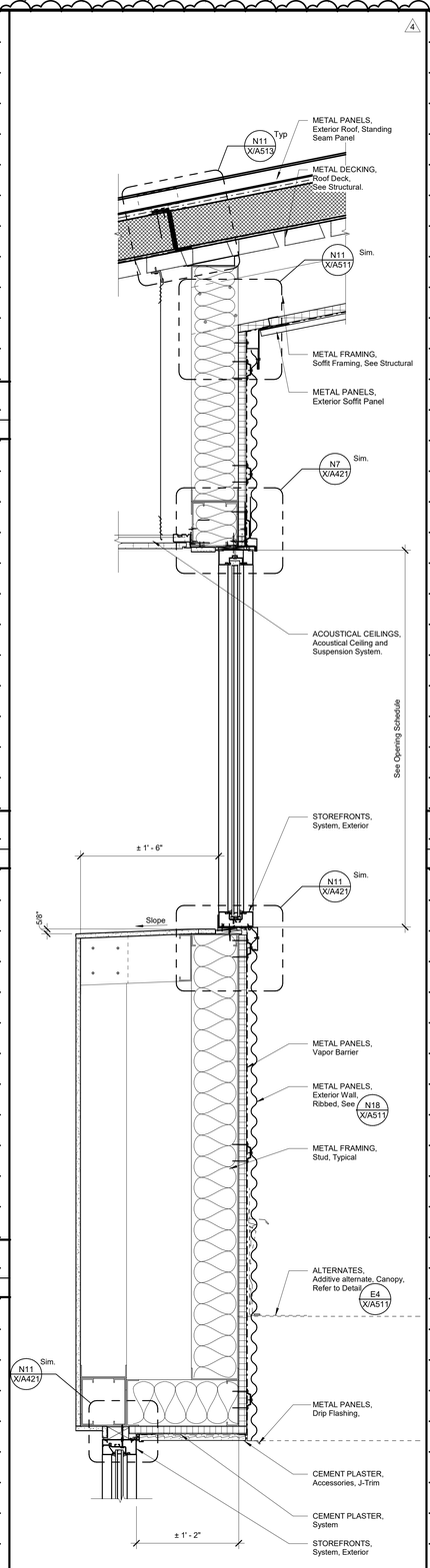
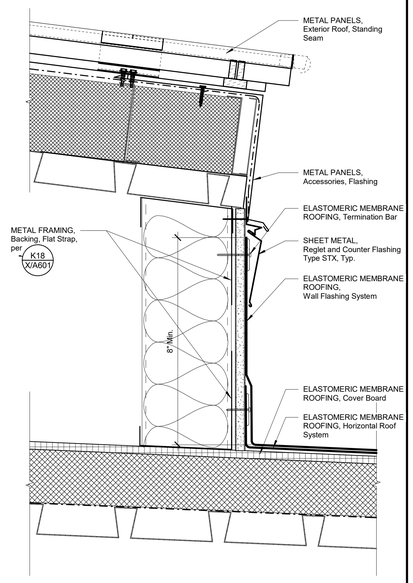
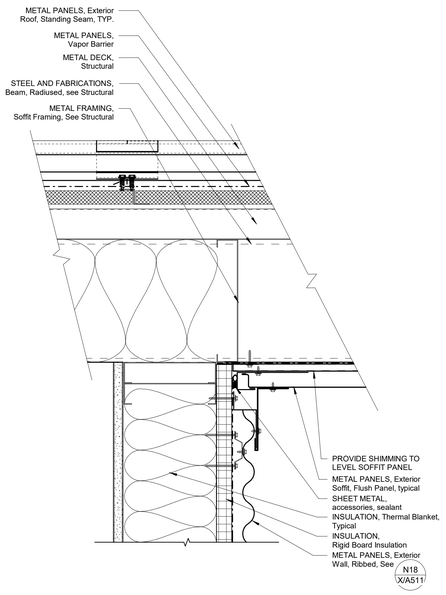


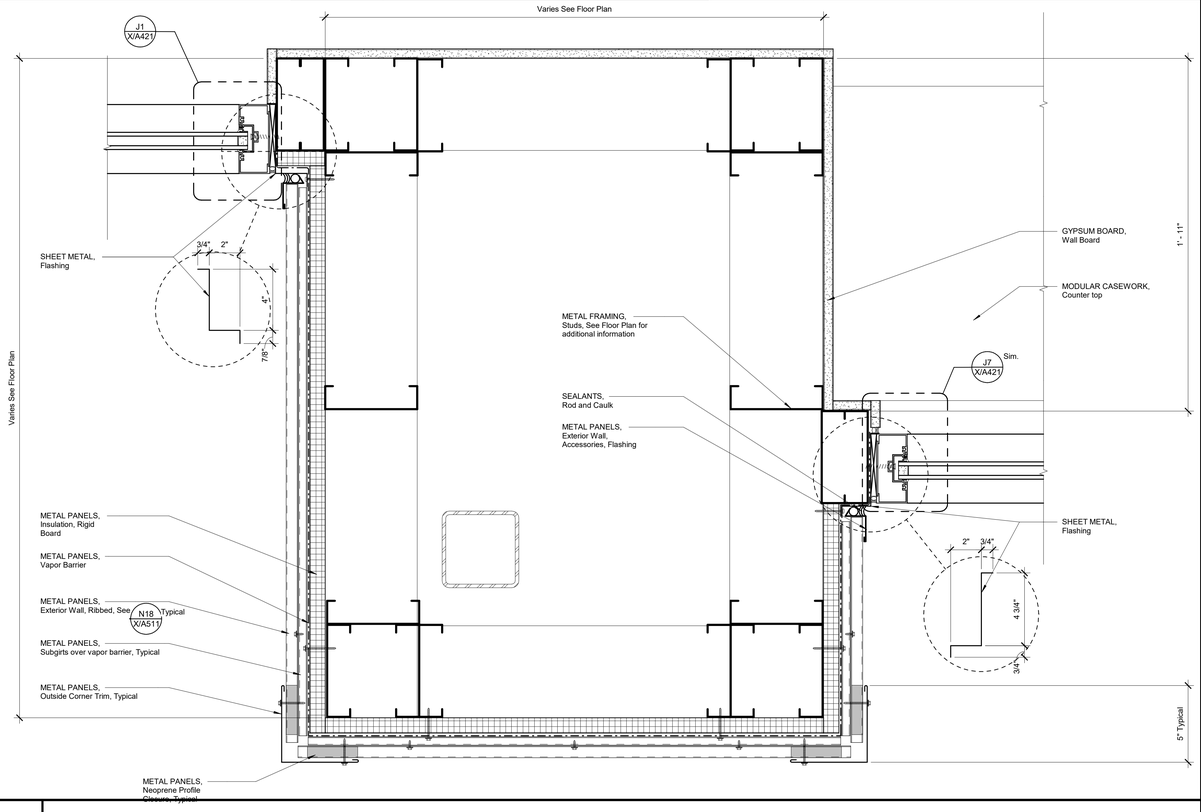
A4
1 1/2" = 1'-0"
Typical Wall Section at High Windows



J10
3" = 1'-0"
ELASTOMERIC MEMBRANE ROOFING, Transition to Metal Panel Roof



J14
3" = 1'-0"
METAL PANELS, Metal Panel System to Standing Seam Roof



A7
1 1/2" = 1'-0"
METAL FRAMING, Wall Bumpout at Bench

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

General Notes

Consultant

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

EXTERIOR DETAILS- METAL WALL PANELS
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Revision

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Scale: As indicated	Drawn By: Author	X/A512
Project Number: 2116	Checked IChecker	
Date: 02/15/23	Reviewed Approver	

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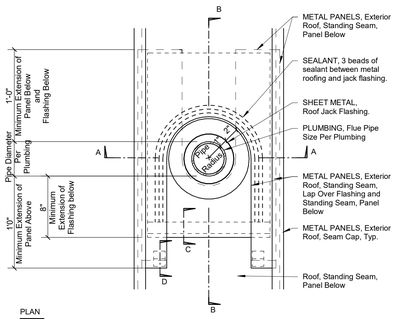
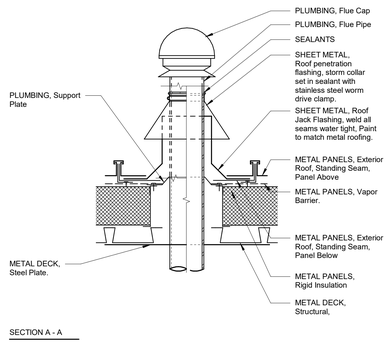
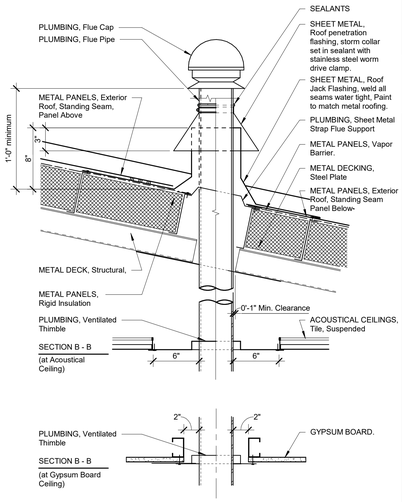


PLAN

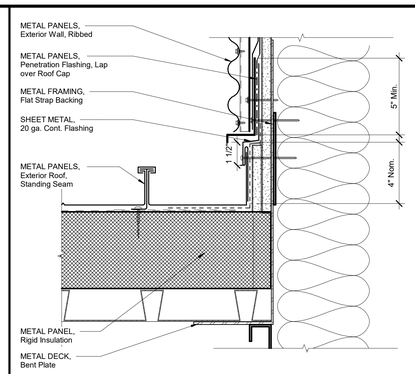


SECTION A - A



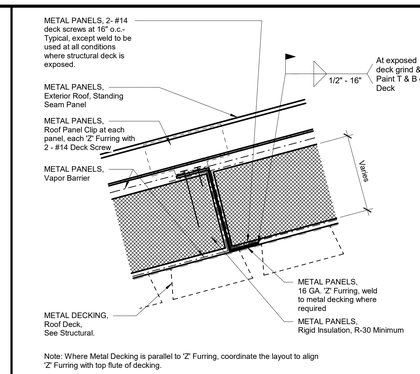
G1 — METAL PANELS, Roof Penetration Flashing, Flue

1 1/2" = 1'-0"



N7 — SHEET METAL, Metal Panel System to Sheet Metal at Standing Seam Roof

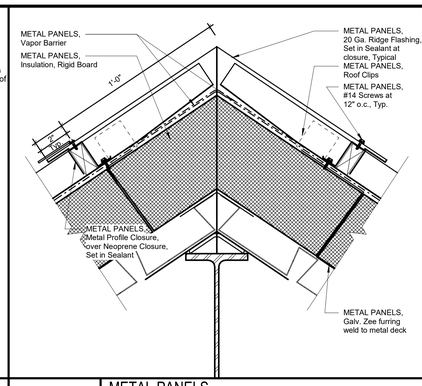
3" = 1'-0"



Note: Where Metal Decking is parallel to 'Z' Furring, coordinate the layout to align 'Z' Furring with top flute of decking.

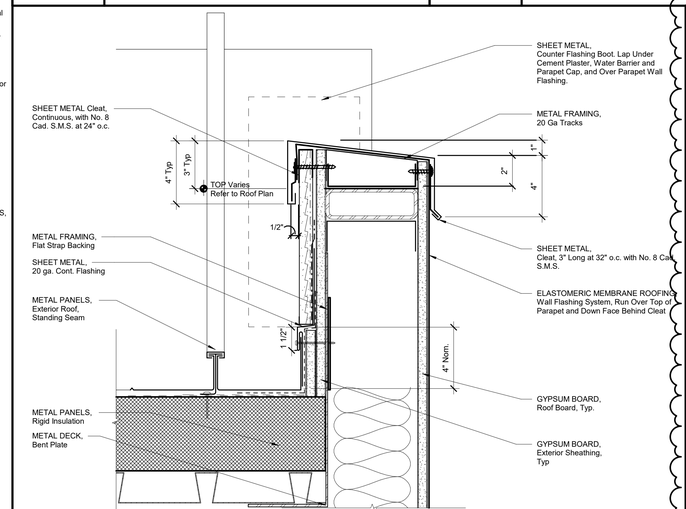
N11 — METAL PANELS, Typical Roof Attachment

3" = 1'-0"



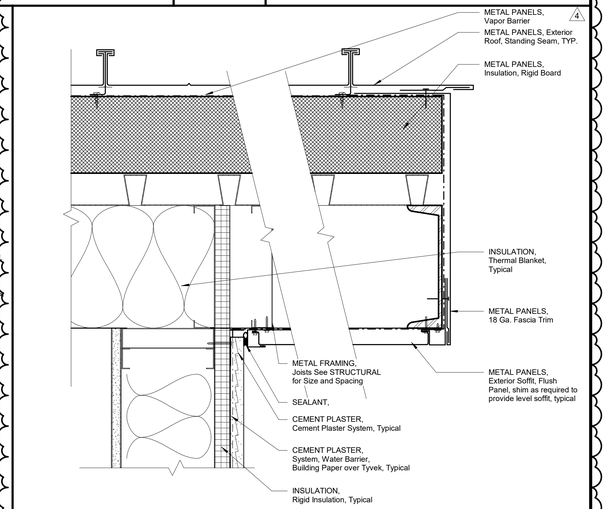
N14 — METAL PANELS, Ridge

3" = 1'-0"



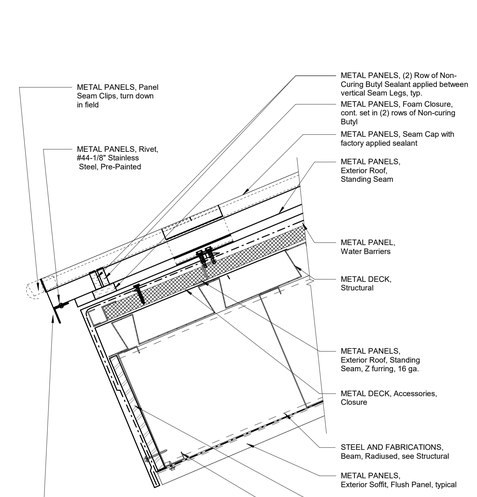
G7 — SHEET METAL, Parapet Cap at Cement Plaster & Standing Seam Roofing

3" = 1'-0"



G13 — METAL PANELS, Roof @ Rake

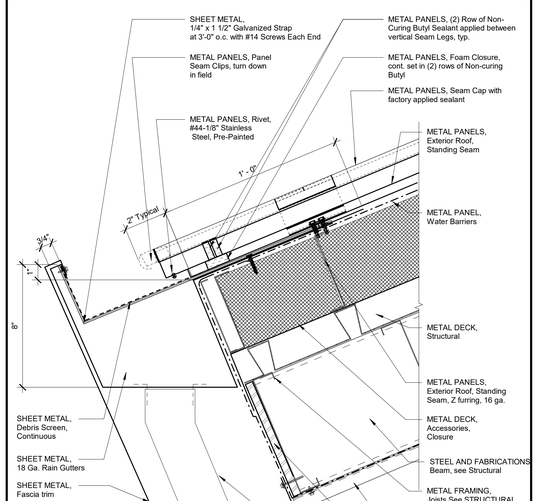
3" = 1'-0"



Note: Where Metal Decking is parallel to 'Z' Furring coordinate the layout to align 'Z' Furring with top flute of decking.

A1 — METAL PANELS, Exterior Roof, Standing Seam @ Eave

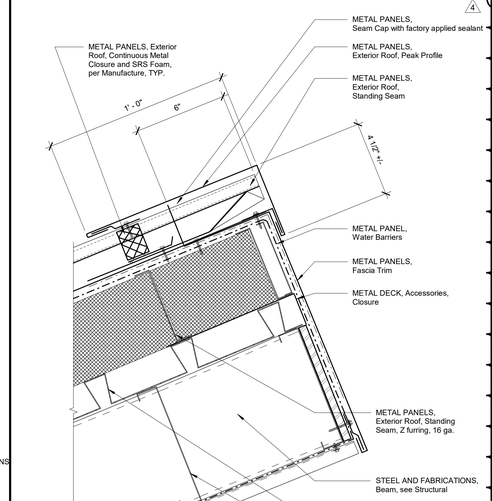
3" = 1'-0"



Note: Where Metal Decking is parallel to 'Z' Furring coordinate the layout to align 'Z' Furring with top flute of decking.

A5 — METAL PANELS, Exterior Roof, Standing Seam @ Eave w/ Gutter

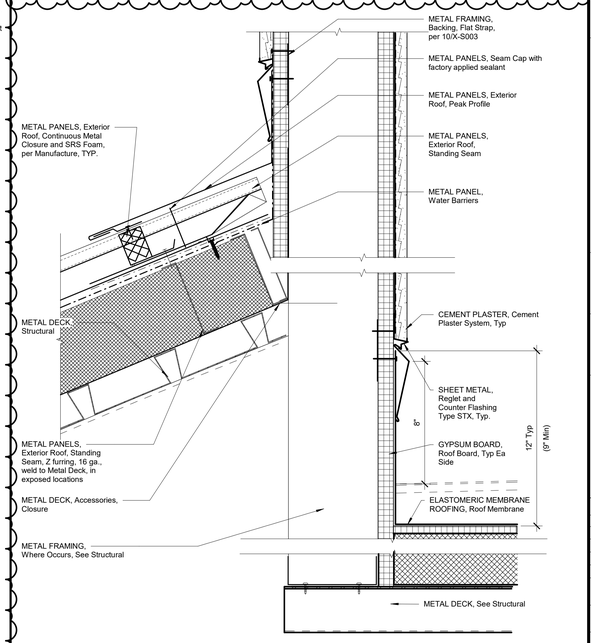
3" = 1'-0"



Note: Where Metal Decking is parallel to 'Z' Furring coordinate the layout to align 'Z' Furring with top flute of decking.

A9 — METAL PANEL, Exterior Roof, Standing Seam Fascia @ Peak

3" = 1'-0"



A13 — METAL PANELS, Roof @ Ridge To Wall Condition

3" = 1'-0"

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

General Notes

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
EXTERIOR DETAILS- STANDING SEAM ROOF

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Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

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Scale:	As indicated	Drawn By:	JGM
Project Number:	2116	Checked By:	AC
Date:	02/15/23	Reviewed By:	RP

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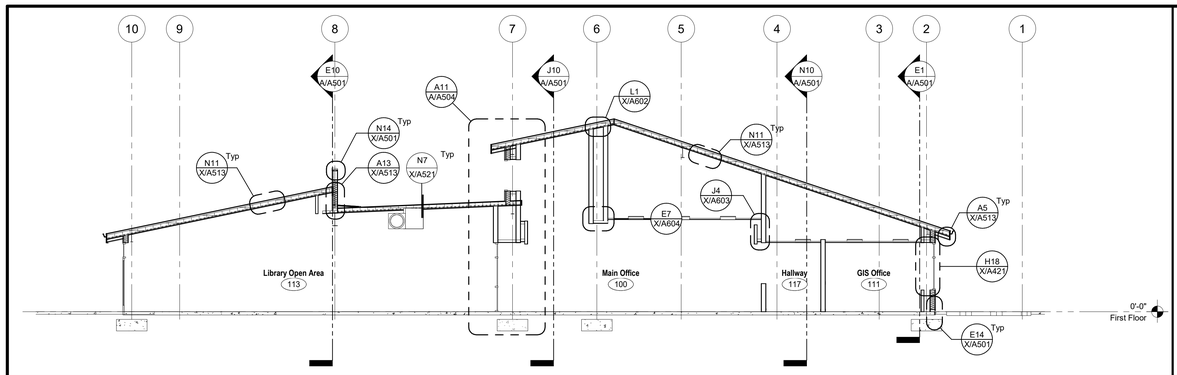
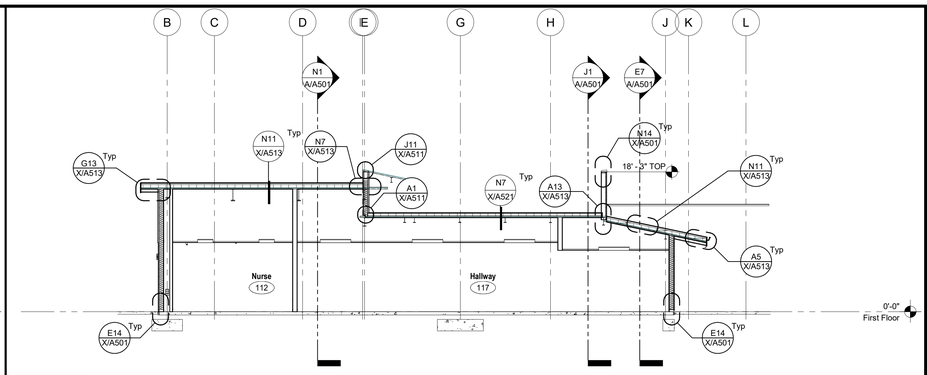


N1
1/8" = 1'-0"

Building Section



N10
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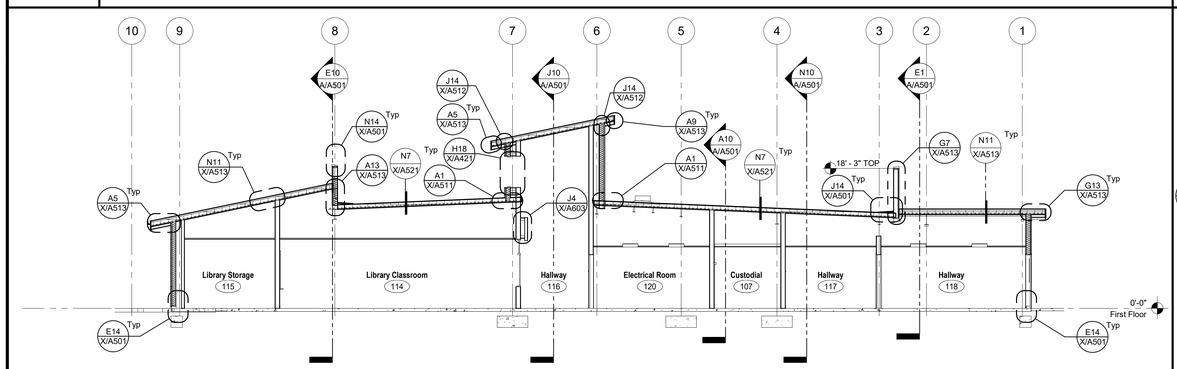
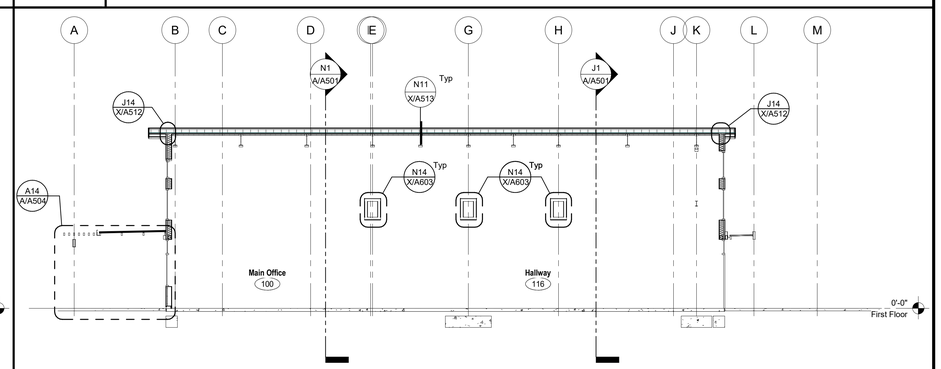
Building Section



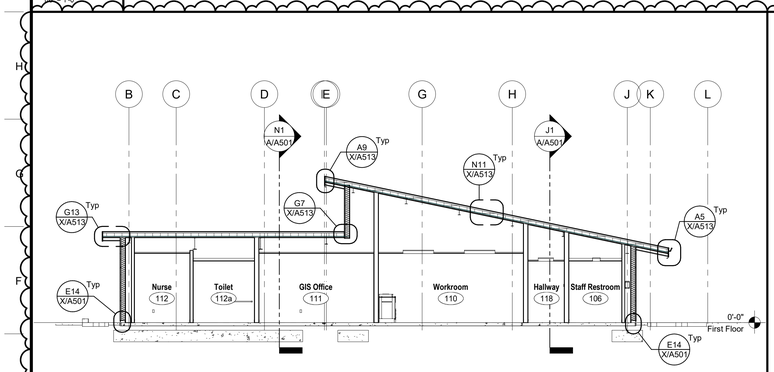
J1
1/8" = 1'-0"

Building Section



J10
1/8" = 1'-0"

Building Section



E1
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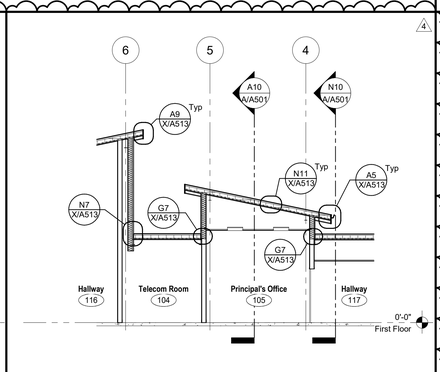
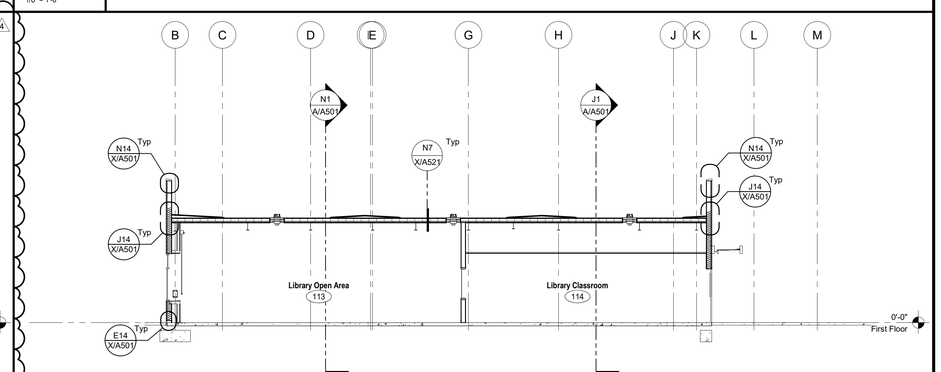
Building Section



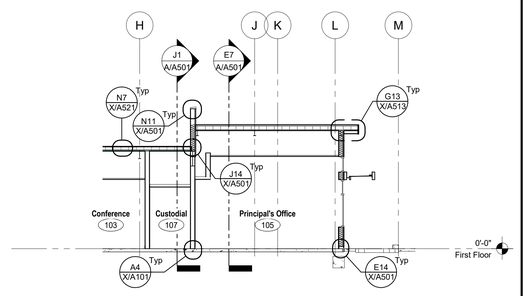
E7
1/8" = 1'-0"

Building Section



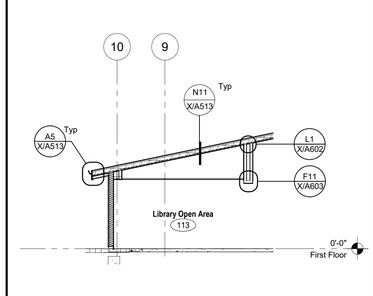
E10
1/8" = 1'-0"

Building Section



A10
1/8" = 1'-0"

Building Section



A15
1/8" = 1'-0"

Building Section

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
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Fresno, CA 93727

Project

BUILDING A- ADMINISTRATION
BUILDING SECTIONS

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Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed Designer	Copyright 2022 Darden Architects
Scale: 1/8" = 1'-0"	Drawn By: Author	A/A501
Project Number: 2116	Checked Checker	
Date: 02/15/23	Reviewed Approver	

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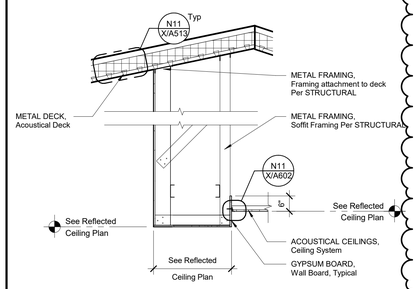
AD4-AX09



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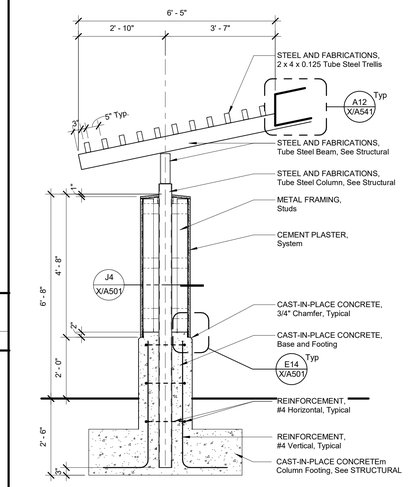
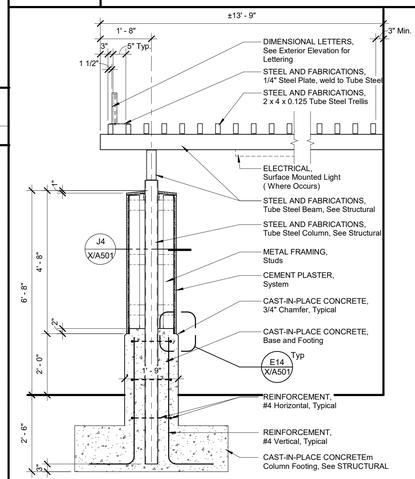
Wall Section at Hallway Soffit



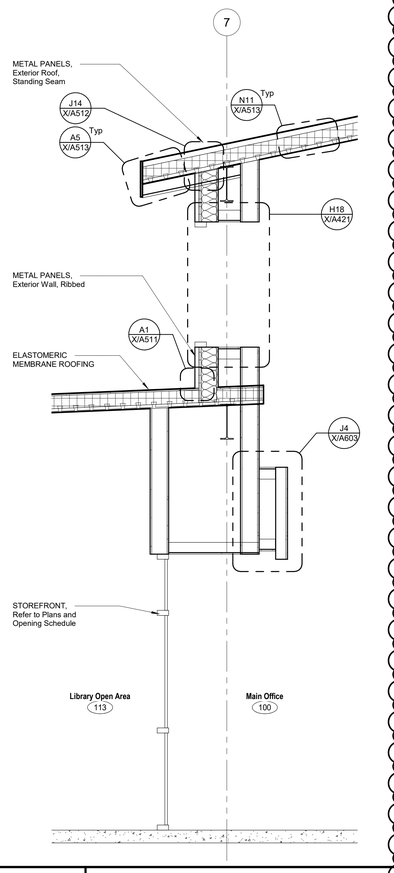
L14
1/2" = 1'-0"

Section Library Trellis



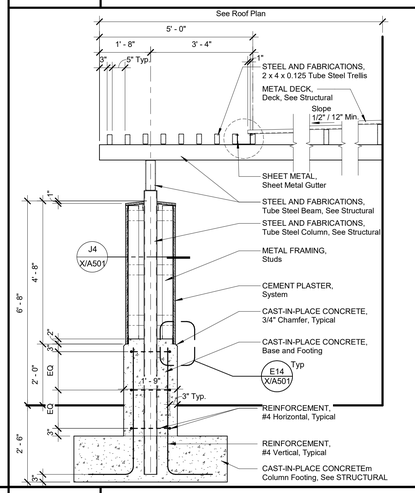
F14
1/2" = 1'-0"

Section at Admin Entrance- Trellis



A11
1/2" = 1'-0"

Wall Section



A14
1/2" = 1'-0"

Section at Admin Entrance

DSA File No.:
10-48

DSA Application No.:
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Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING A- ADMINISTRATION
WALL SECTIONS

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No. C37102
Exp. 11-30-23
STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
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Revision

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Project Number: 2116	Checked Checker	
Date: 02/15/23	Reviewed Approver	

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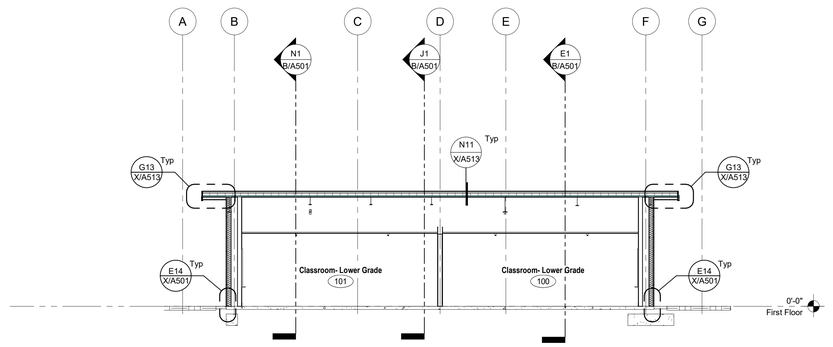
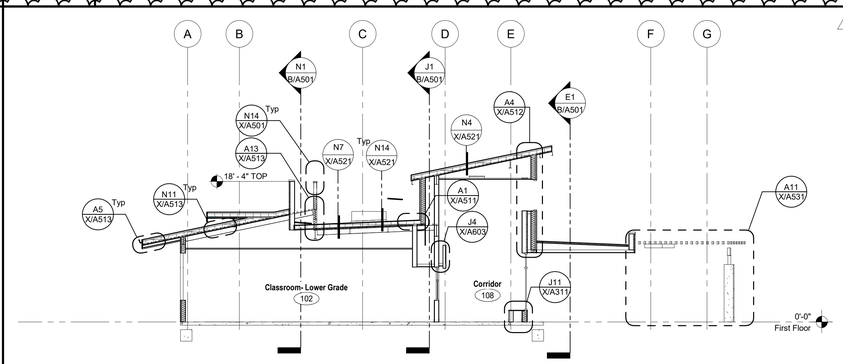
3S_MASTER_and_SITE_V18_Increment_2_Addenda_andrewc@dardenarchitects.com.rvt

AD4-AX10



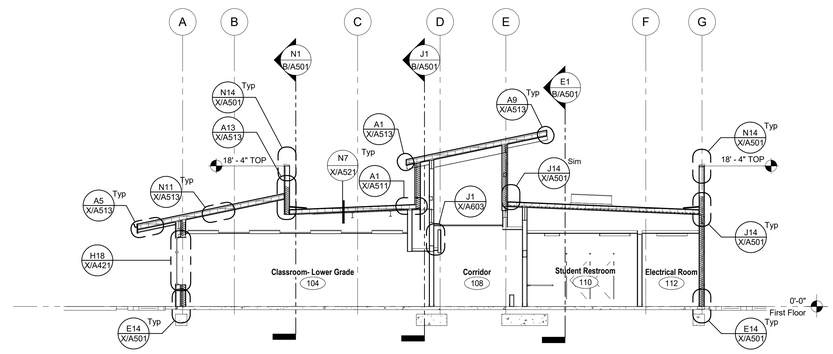
N11 — Building Section

1/8" = 1'-0"



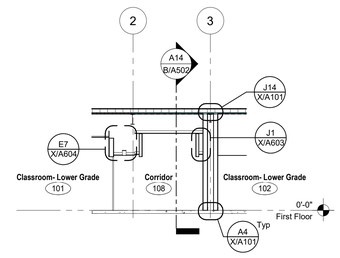
J11 — Building Section

1/8" = 1'-0"



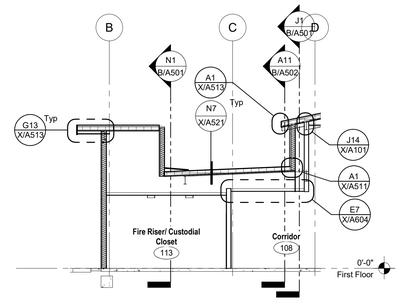
E11 — Building Section

1/8" = 1'-0"



A11 — Building Section

1/8" = 1'-0"



A14 — Building Section

1/8" = 1'-0"

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING B- CLASSROOMS
BUILDING SECTIONS

Drawing

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LICENSED ARCHITECT — ANDREW A. CORDI — No. C37102 — Exp. 11-30-23 — STATE OF CALIFORNIA

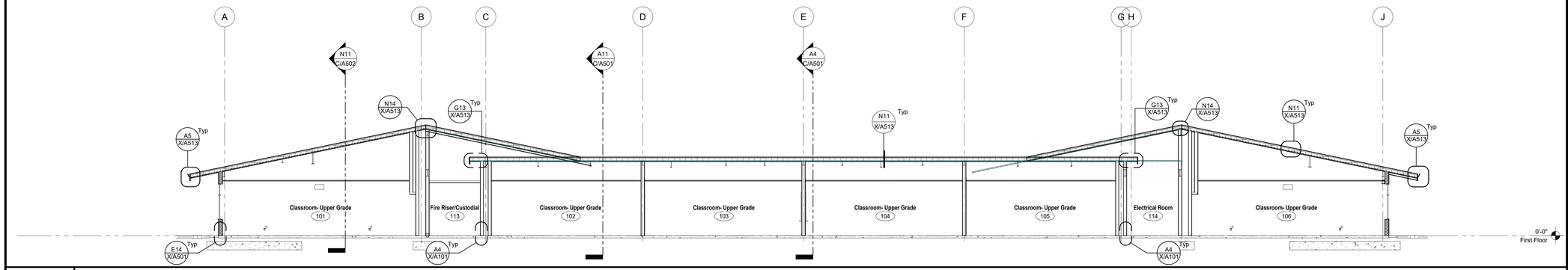
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed Designer	Copyright 2022 Darden Architects
Scale: 1/8" = 1'-0"	Drawn By: Author	B/A502
Project Number: 2116	Checked By Checker	
Date: 02/15/23	Reviewed Approver	

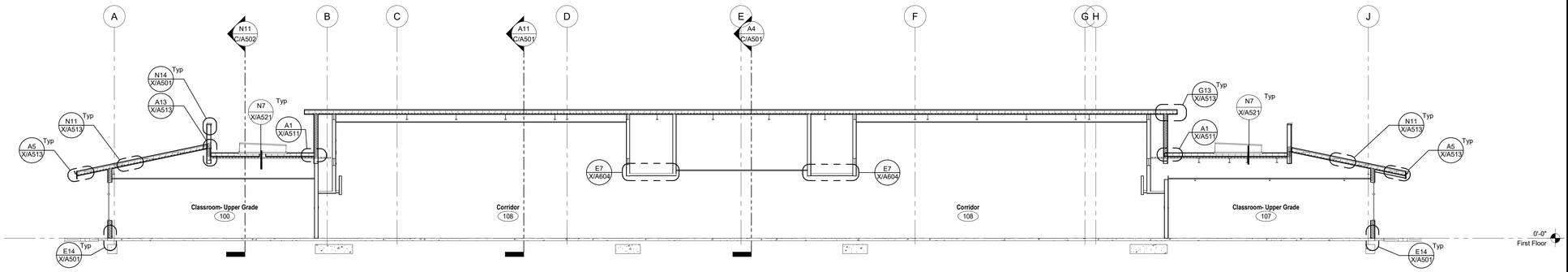
3/3/2023 9:53:08 AM
C:\Users\andrewc\Documents\2116_CUSD ES 35_MASTER_and_SITE_V18_Increment_2_Addenda_andrewc@dardenarchitects.com.rvt



N1

1/8" = 1'-0"

Building Section



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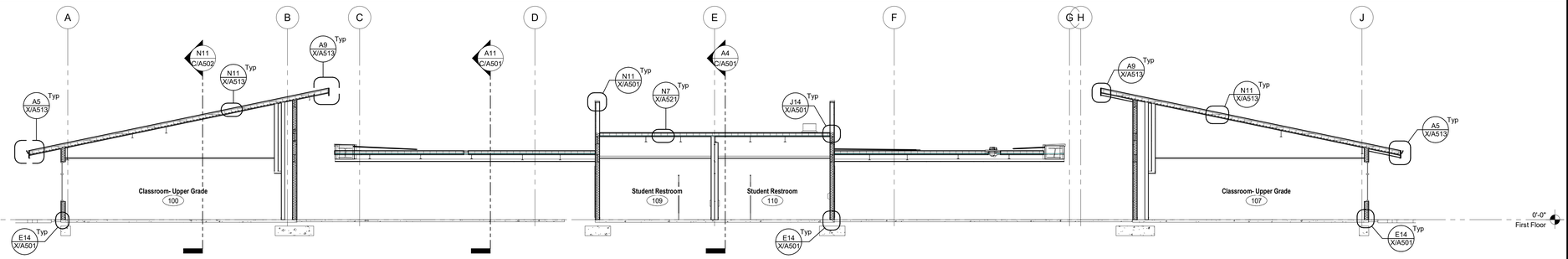
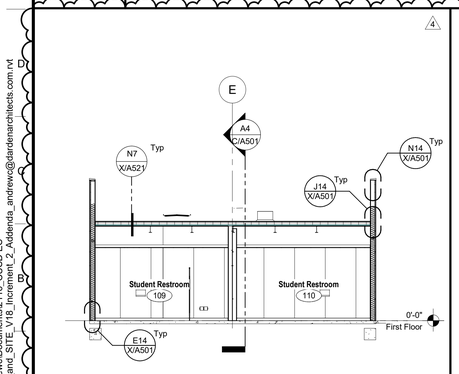


E1

1/8" = 1'-0"

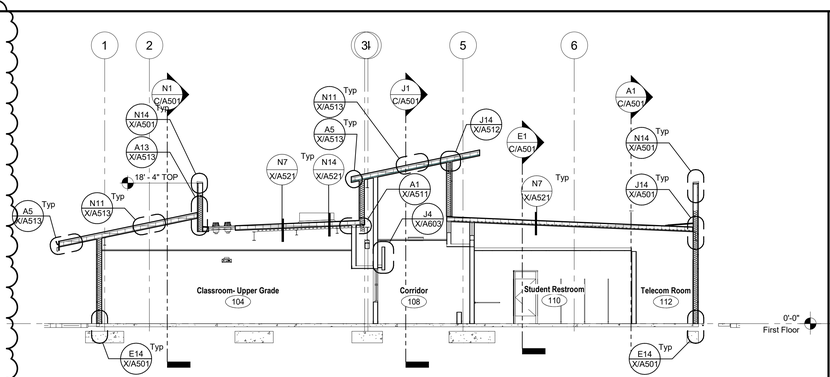
Building Section



A1

1/8" = 1'-0"

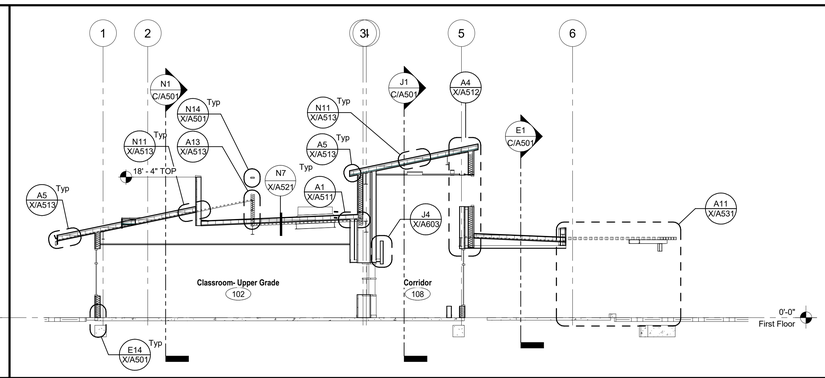
Building Section



A4

1/8" = 1'-0"

Building Section



A11

1/8" = 1'-0"

Building Section

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING C- CLASSROOMS
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LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Exp. 11-30-24 STATE OF CALIFORNIA

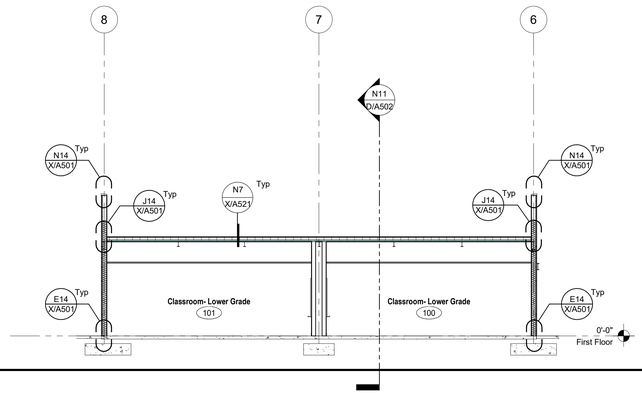
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Scale: 1/8" = 1'-0"
Drawn By: Author
Project Number: 2116
Checked IChecker
Date: 02/15/23
Reviewed Approver

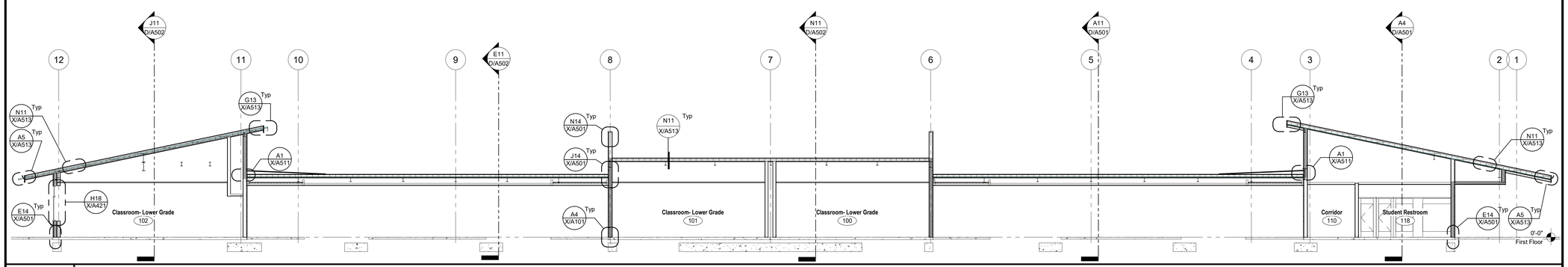
C/A501



N1

1/8" = 1'-0"

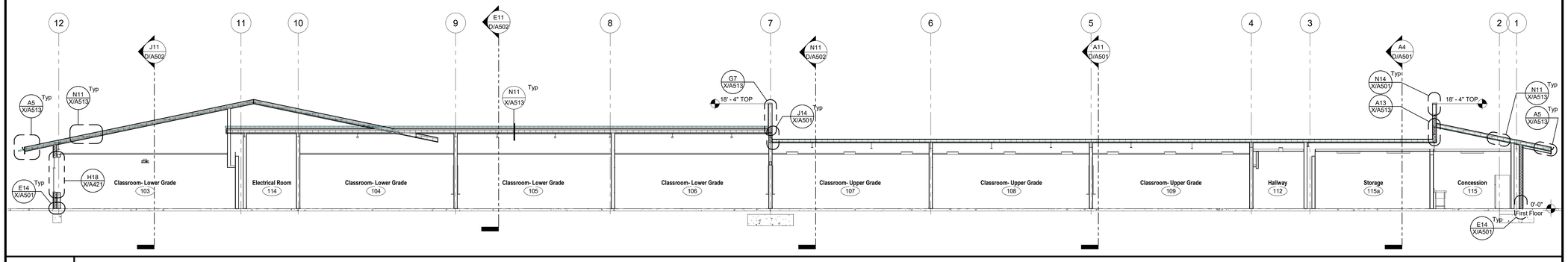
Building Section



J1

1/8" = 1'-0"

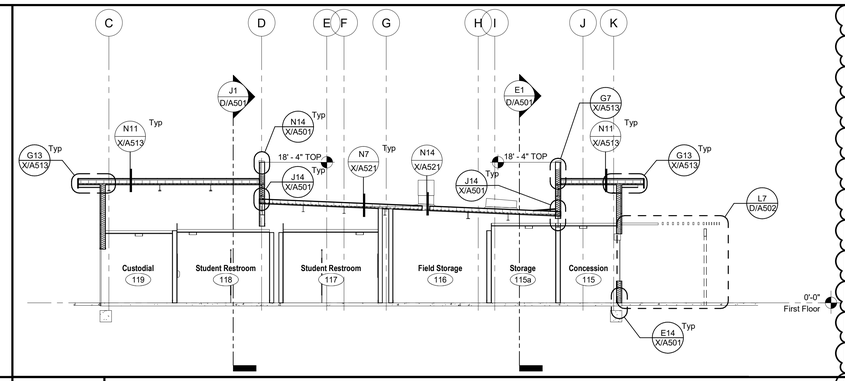
Building Section



E1

1/8" = 1'-0"

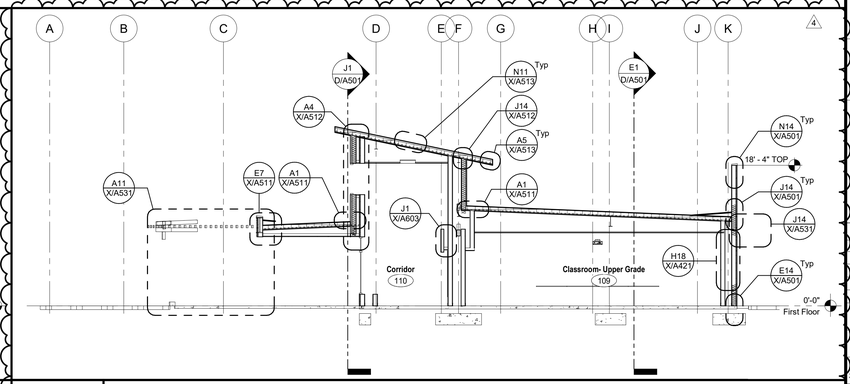
Building Section



A4

1/8" = 1'-0"

Building Section



A11

1/8" = 1'-0"

Building Section

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING D- CLASSROOMS
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LICENSED ARCHITECT ANDREW A. CORDT No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed	Designer	
Scale: 1/8" = 1'-0"	Drawn By: Author	
Project Number: 2116	Checked By: Checker	
Date: 02/15/23	Reviewed By: Approver	

D/A501

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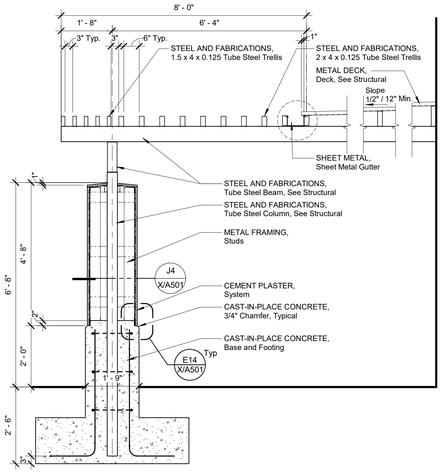
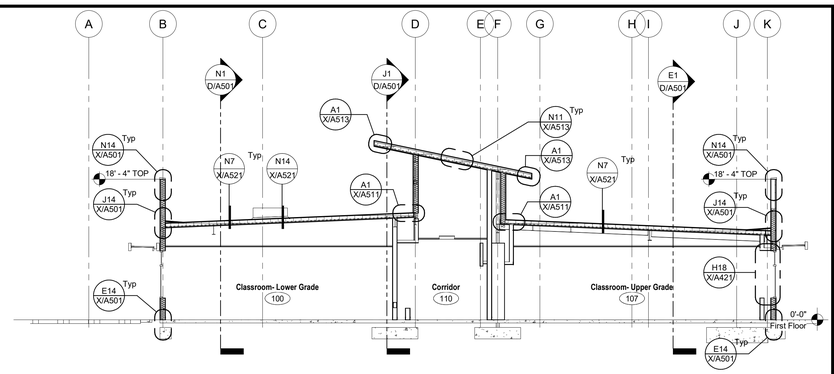
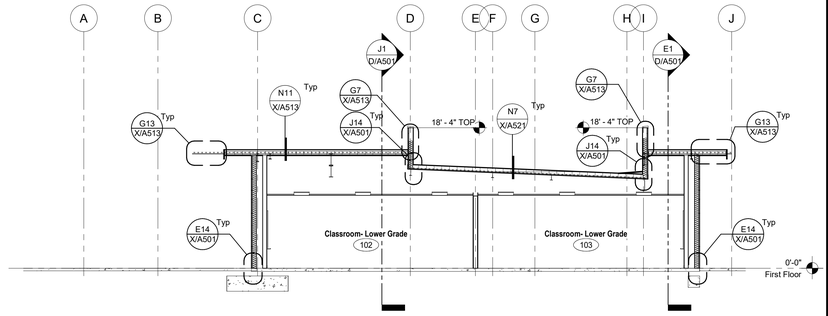
AD4-AX13



L7
1/2" = 1'-0"
Section at Concession Trellis



J11
1/8" = 1'-0"
Building Section



J11
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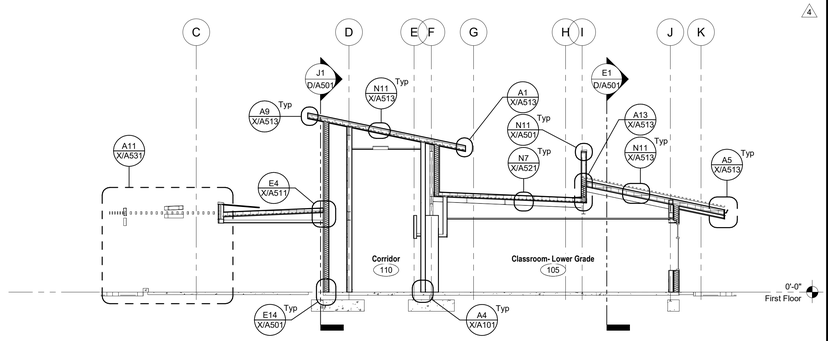
Building Section



E11
1/8" = 1'-0"
Building Section

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING D- CLASSROOMS
BUILDING SECTIONS AND WALL SECTIONS
Drawing

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 REG. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed Designer	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: Author	D/A502
Project Number: 2116	Checked IChecker	
Date: 02/15/23	Reviewed Approver	

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AD4-AX14

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

SYMBOLS

- Concrete Masonry Unit Wall. 8" wide unless otherwise noted.
- Concrete Wall, or Column. Size as indicated.
- Stud Wall, Studs and Interior Wall materials continuous from floor to underside of floor or roof deck. Studs at 16" o.c. unless otherwise noted. Interior Wall material shall include Batt Insulation, Sound Deadening Board, Plywood Sheathing, Gypsum Board, and Cement Plaster/ Ceramic Tile setting bed where occurs.
- Stud Wall. Studs and finish material continuous from floor to minimum 6" above ceiling. Studs to be braced to underside of roof framing or deck if not required to be continuous to roof framing or deck. Studs at 16"o.c. Unless Otherwise Noted. See Structural for bracing and extent of Structural Sheathing.
- 1 Hr. Corridor Wall - Fire Partition (1 Hr. Fire Resistive Construction, 20 Min. Door Assemblies, 45 Min. Window Assemblies)
- 1 Hr. Fire Barrier - (1 Hr. Fire Resistive Construction, 60 Min. Door Assemblies)
- 1 Hr. Occupancy Separation / Fire Barrier - (1 Hr. Fire Resistive Construction, 45 Min. Door Assemblies, 45 Min. Window Assemblies)
- 2 Hr. Fire Wall (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 2 Hr. Fire Barrier (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 0 — Reference Grid
- 101 a — Opening Group No. Refer to Door or Window Opening Schedules
- Room name 101 — Room Designation
- # # a — Wall Assembly Symbols. Refer to Sheet X/A101
- Reference Point
- WALL AND CORNER GUARDS, Corner Guard
- a ### — Cabinet Group No. Refer to Modular Casework Schedule and Lab Casework Schedule.

ABBREVIATIONS

FEBC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher/Blanket Cabinet, Type FEBC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls. Provide Surface Mounted Cabinet at Rated Walls Where Stud Depth is Less than 6" and at Masonry Walls, See A1 X/A603
FEC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher Cabinet, Type FEC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls, See A1 X/A603
FF	Face of Finish
FOC	Face of Concrete
FD	Floor Drain
FOM	Face of Masonry
FOS	Face of Stud
FS	Floor Sink
HB	Hose Bib
MO	Masonry Opening
UNO	Unless Noted Otherwise
RO	Rough Opening
VCT	RESILIENT FLOORING, Vinyl Composition Tile
Typ.	Typical
Sim.	Similar
OH	Opposite Hand

NOTES

1. All Exterior Walls shall be Wall Assembly Type 6.B E.M Unless Noted Otherwise.
2. All Interior Walls shall be Wall Assembly Type 6.D I.M Unless Noted Otherwise.
3. All Dimensions are to Face of Stud (FOS) or Center Line, Unless Noted Otherwise.
4. All Elevation Dimensions are above Finish Floor at each floor level, Unless Noted Otherwise.
5. Dimensions noted as "+/-" are nominal.
6. Floor Drains (FD) and Floor Sinks (FS) shall be set -3/4" and a min. of 3'-0" from nearest wall, Unless Noted Otherwise. Floors must be sloped at a min. of 1:50 to the floor drains.
7. IDENTIFYING DEVICES, For Room Signage refer to E11 X/A601 and Specifications
8. FIRE RESISTIVE ASSEMBLIES:
   a. All Through Penetrations and Wall Membrane Penetrations through Walls of Fire Resistive Construction shall be protected in accordance with their Fire Resistive Ratings.
   b. All Walls of Fire and/or Smoke Resistive Construction Shall Be Permanently Identified with Signs or Stenciling in lettering not less than 3 inches (76 mm) in. height with a minimum 3/8 inch (9.5 mm) stroke in a contrasting color incorporating the following wording: FIRE AND/OR SMOKE BARRIER "#" HOUR RATED. PROTECT ALL OPENINGS, Signs or Stenciling shall be located above ceilings on both sides of the wall, located 15'-0" from ends of wall and at intervals not to exceed 30'-0" horizontally along the wall or partition. Note: "#" indicates the hourly rating of the wall or partition.

F18 — Floor Plan Legend
No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E- MPR
FLOOR PLAN
Drawing

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LICENSED ARCHITECT ANDREW A. GORMAN No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer
Drawn By: Author
Checked Checker
Reviewed Approver

Scale: 1/8" = 1'-0"
Project Number: 2116
Date: 02/15/23

E/A101

A1 — Floor Plan
1/8" = 1'-0"
Refer to F18 for Legend Symbols, Abbreviations and Notes

A14 — Floor Plan- Second Floor
1/8" = 1'-0"

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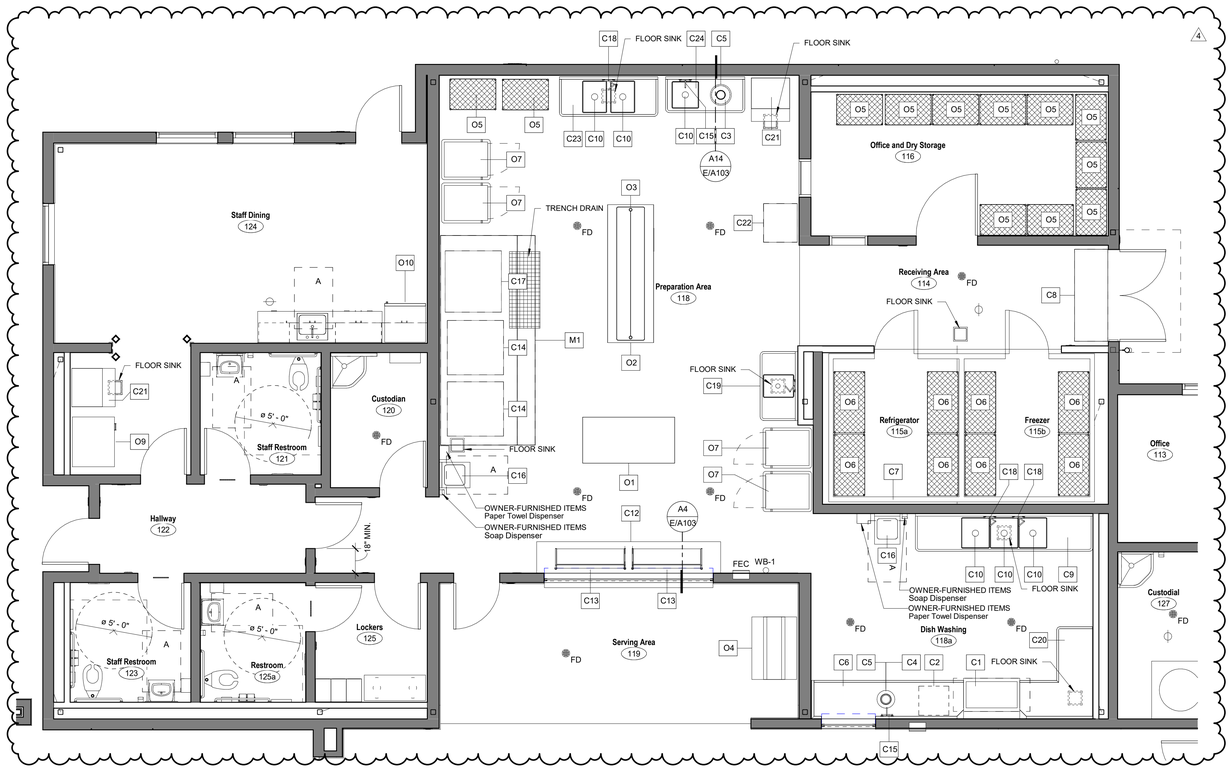
AD4-AX15

Kitchen Equipment Schedule

Eq Mark	Description	Manufacturer	Model	Quantity	CFCI	OFCI	OFOI	OFVI	New	Relocate	Equip-Location	Depth	Width	Height	Weight	ELECTRICAL					GAS			WASTE		WATER			Detail Ref	Remarks
																Volts	Load	HP	Phase	Conn	Gas MBTU	Gas Size	Gas Stub Ht	Waste Conn	Waste Size	Water Cold	Water Hot	Water Stub Ht		
C1	Dishwashing Machine	Champion	44 DR	1	X	-	-	-	X	-		2' - 2"	3' - 8"	5' - 6"	600	208	70 Amp	-	3	-	-	-	-	-	1 1/2"	-	3/4"	-	A11- E/A103	120V Exhaust Fan Interlock
C2	Booster Water Heater	Hatco	S-24	1	X	-	-	-	X	-		1' - 10 25/32"	1' - 11 17/32"	2' - 7"	214	208	75 Amp	-	3	-	-	-	-	-	-	-	-	-	-	-
C3	Insinkerator Disposal	Insinkerator	SS-500	1	X	-	-	-	X	-		1' - 4 1/2"	1' - 4 1/2"	1' - 11 3/4"	124	208	8.8 Amp	-	3	-	-	-	-	-	-	-	-	-	-	-
C4	Insinkerator Disposal	Insinkerator	SS-150	1	X	-	-	-	X	-		1' - 4 1/2"	1' - 4 1/2"	1' - 11 3/4"	66	208	4.6 Amp	-	3	-	-	-	-	-	-	-	-	-	-	-
C5	Insinkerator Bowl Sink	Insinkerator	15"	2	X	-	-	-	X	-	118	1' - 4 1/2"	1' - 4 1/2"	1' - 11 3/4"	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C6	Dishwahser Table	Advanced Tabco	Custom	1	X	-	-	-	X	-		2' - 6"	9' - 11"	3' - 1"	0	-	-	-	-	-	-	-	-	-	-	-	-	-	A11- E/A103	-
C7	Freezer/Cooler	Dura Cool	Custom	1	X	-	-	-	X	-		9' - 8"	17' - 4"	9' - 0"	0	TBD	TBD	-	TBD	-	-	-	-	-	-	-	-	-	A11, E11, J11 & N11- X/A604	Provide Roof top Condensers for Freezer and Cooler
C8	Fly Fan	Mars	PH1272-2U*-PW	1	X	-	-	-	X	-		2' - 2"	6' - 0"	1' - 3 1/2"	155	120	18 Amp	-	1	-	-	-	-	-	-	-	-	-	-	-
C9	Ware Wash 3 Compartment Sink	Advanced Tabco	94-83-60-36RL	1	X	-	-	-	-	-		2' - 5 1/2"	11' - 7"	3' - 1"	451	-	-	-	-	-	-	-	-	-	-	-	-	-	E14 & J14- E/A102	-
C10	Sink Drain	Fisher	22349 w/ Locking Basket Strainer	6	X	-	-	-	X	-		6"	6"	4"	5	5	-	-	-	-	-	-	-	-	3"	-	-	-	-	-
C11	Wall Shelf	Advanced Tabco	WS-18-108	1	X	-	-	-	X	-		1' - 6"	9' - 0"	2"	48	48	-	-	-	-	-	-	-	-	-	-	-	-	X#-X/A###	-
C12	Service Counter	Advanced Tabco	Custom	1	X	-	-	-	X	-		3' - 0"	12' - 0"	2' - 10"	0	-	-	-	-	-	-	-	-	-	-	-	-	-	A4- E/A103	-
C13	Sneeeze Guard	ADM Sneezeguards	EP-21	2	X	-	-	-	X	-		1' - 6"	4' - 6"	1' - 8"	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C14	Full Size Self Cooking Center	Rational	ICP20 Full NG	2	X	-	-	-	X	-		3' - 8"	3' - 6 19/32"	6' - 1 3/4"	835	208	200 Amp	-	3	-	168	3/4"	-	-	2"	3/4"	-	-	-	-
C15	Pre-Rinse Faucet	Chicago	923-XKCAB	2	X	-	-	-	X	-		10"	10"	5"	12.25	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
C16	Hand Sink	Advanced Tabco	7-PS-46	2	X	-	-	-	-	-		2' - 0"	1' - 8"	3' - 1"	65	-	-	-	-	-	-	-	-	-	-	-	-	-	See PLUMBING	-
C17	Electric Tilting Skillet	Cleveland	SEL-40TR_PT1	1	X	-	-	-	X	-		3' - 8"	4' - 0"	4' - 7"	503	208	50 Amp	-	3	-	-	-	-	-	-	X	-	-	-	Provide the following Option: Power tilt with Hand tilt override (PT1)
C18	Kitchen Faucet	Chicago	4445-DJ13	2	X	-	-	-	X	-		10"	10"	5"	4.25	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
C19	Food Prep Sink	Advanced Tabco	FS-1-1824-18RL	1	X	-	-	-	X	-		2' - 5 1/2"	4' - 6"	3' - 1"	175	-	-	-	-	-	-	-	-	-	-	-	-	-	E14 & J14- E/A102	-
C20	Stainless Steel Work Counter	Advanced Tabco	Custom	1	X	-	-	-	X	-		6' - 0"	4' - 11"	3' - 1"	0	-	-	-	-	-	-	-	-	-	-	-	-	-	A11- E/A103	-
C21	Ice Machine with Bin	Scotsman	CB0330 / B530S	2	X	-	-	-	X	-		2' - 10"	2' - 8"	6' - 1"	310	120	6.3 Amp	-	1	-	-	-	-	-	-	-	-	-	-	-
C22	Standing Mixer	Hobart	HL400-1	1	X	-	-	-	X	-		2' - 6 1/4"	2' - 2 3/8"	4' - 1 7/8"	421	240	5.6 Amp	-	3	-	-	-	-	-	-	-	-	-	-	-
C23	Food Prep 2 Compartment Sink	Advanced Tabco	94-62-36-18RL	1	X	-	-	-	-	-		2' - 7"	6' - 5"	3' - 1"	206	-	-	-	-	-	-	-	-	-	-	-	-	-	E14 & J14- E/A102	-
C24	Pre-Rinse 1 Compartment Sink	Advanced Tabco	94-21-20-36R	1	X	-	-	-	-	-		2' - 4"	5' - 2"	3' - 1"	127	-	-	-	-	-	-	-	-	-	-	-	-	-	E14 & J14- E/A102	-
M1	Kitchen Hood	See Mechanical	Custom	1	X	-	-	-	X	-		6' - 2"	13' - 8"	2' - 0"	900	-	-	-	-	-	-	-	-	-	-	-	-	-	See MECHANICAL	-
O1	Wood Top Table	Advanced Tabco	H2S-366	1	-	X	-	-	X	-		3' - 0"	6' - 0"	2' - 10"	75	-	-	-	-	-	-	-	-	-	-	-	-	-	A11- E/A103	For dough preparation only
O2	SS Work Table	Advanced Tabco	SS-369 - 36" x 108"	1	-	X	-	-	X	-		3' - 0"	9' - 0"	2' - 10"	190	-	-	-	-	-	-	-	-	-	-	-	-	-	A11- E/A103	w/ 1-SS-2015
O3	Pot and Utensil Rack	Advanced Tabco	SSWT-108 / AUR-108	1	-	X	-	-	X	-		3' - 0"	9' - 0"	2' - 10"	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	w/ 1-SS-2015
O4	Milk Cooler	True	TMC-49-SS-HC	1	-	-	X	-	X	-		2' - 11"	4' - 1"	3' - 11"	395	120	2.7 Amp	-	1	Plug	-	-	-	-	-	-	-	-	-	-
O5	Wire shelving	Metro	Super Erecta 24 x 36 EZ2436BR-4	12	-	-	X	-	X	-		2' - 0"	3' - 0"	6' - 11"	66	-	-	-	-	-	-	-	-	-	-	-	-	-	A7- E/A103	-
O6	Wire shelving	Metro	Super Erecta 24 x 48 EZ2448BR-4	8	-	-	X	-	X	-		2' - 0"	4' - 0"	6' - 11"	76	-	-	-	-	-	-	-	-	-	-	-	-	-	A7- E/A103	-
O7	Warming Cabinet	CARTER-HOFFMANN	PH 1840	4	-	-	X	-	X	-		3' - 2"	2' - 7 1/2"	6' - 4"	500	120	12.5 Amp	-	1	-	-	-	-	-	-	-	-	-	-	-
O9	Vending Machine	TBD	TBD	1	-	-	X	-	-	-		2' - 9"	3' - 3"	6' - 0"	0	120	Verify	-	1	-	-	-	-	-	-	-	-	-	-	-
O10	Refrigerator	TBD	TBD	1	-	-	X	-	X	-		1' - 0"	1' - 0"	1' - 0"	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

K1 — Kitchen Equipment Schedule

N.T.S.



A1 — Kitchen Equipment Floor Plan

1/4" = 1'-0"

N

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

SYMBOLS

- Concrete Masonry Unit Wall. 8" wide unless otherwise noted.
- Concrete Wall, or Column. Size as indicated.
- Stud Wall, Studs and Interior Wall materials continuous from floor to underside of floor or roof deck. Studs at 16" o.c. unless otherwise noted. Interior Wall material shall include Batt Insulation, Sound Deadening Board, Plywood Sheathing, Gypsum Board, and Cement Plaster/ Ceramic Tile setting bed where occurs.
- Stud Wall. Studs and finish material continuous from floor to minimum 6" above ceiling. Studs to be braced to underside of roof framing or deck if not required to be continuous to roof framing or deck. Studs at 16"o.c. Unless Otherwise Noted. See Structural for bracing and extent of Structural Sheathing.
- 1 Hr. Corridor Wall - Fire Partition (1 Hr. Fire Resistive Construction, 20 Min. Door Assemblies, 45 Min. Window Assemblies)
- 1 Hr. Fire Barrier - (1 Hr. Fire Resistive Construction, 60 Min. Door Assemblies)
- 1 Hr. Occupancy Separation / Fire Barrier - (1 Hr. Fire Resistive Construction, 45 Min. Door Assemblies, 45 Min. Window Assemblies)
- 2 Hr. Fire Wall (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 2 Hr. Fire Barrier (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 0 — Reference Grid
- 101 a — Opening Group No. Refer to Door or Window Opening Schedules
- Room name 101 — Room Designation
- # # — Wall Assembly Symbols. Refer to Sheet X/A101
- Reference Point
- WALL AND CORNER GUARDS, Corner Guard
- a ### — Cabinet Group No, Refer to Modular Casework Schedule and Lab Casework Schedule.

ABBREVIATIONS

FEBC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher/Blanket Cabinet, Type FEBC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls. Provide Surface Mounted Cabinet at Rated Walls Where Stud Depth is Less than 6" and at Masonry Walls, See A1 X/A603
FEC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher Cabinet, Type FEC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls, See A1 X/A603
FF	Face of Finish
FOC	Face of Concrete
FD	Floor Drain
FOM	Face of Masonry
FOS	Face of Stud
FS	Floor Sink
HB	Hose Bib
MO	Masonry Opening
UNO	Unless Noted Otherwise
RO	Rough Opening
VCT	RESILIENT FLOORING, Vinyl Composition Tile
Typ.	Typical
Sim.	Similar
OH	Opposite Hand

NOTES

1. All Exterior Walls shall be Wall Assembly Type 6.B E.M Unless Noted Otherwise.
2. All Interior Walls shall be Wall Assembly Type 6.D I.M Unless Noted Otherwise.
3. All Dimensions are to Face of Stud (FOS) or Center Line, Unless Noted Otherwise.
4. All Elevation Dimensions are above Finish Floor at each floor level, Unless Noted Otherwise.
5. Dimensions noted as "+/-" are nominal.
6. Floor Drains (FD) and Floor Sinks (FS) shall be set -3/4" and a min. of 3'-0" from nearest wall, Unless Noted Otherwise. Floors must be sloped at a min. of 1:50 to the floor drains.
7. IDENTIFYING DEVICES, For Room Signage refer to E11 X/A601 and Specifications
8. FIRE RESISTIVE ASSEMBLIES:
   a. All Through Penetrations and Wall Membrane Penetrations through Walls of Fire Resistive Construction shall be protected in accordance with their Fire Resistive Ratings.
   b. All Walls of Fire and/or Smoke Resistive Construction Shall Be Permanently Identified with Signs or Stenciling in lettering not less than 3 inches (76 mm) in. height with a minimum 3/8 inch (9.5 mm) stroke in a contrasting color incorporating the following wording: FIRE AND/OR SMOKE BARRIER "#" HOUR RATED, PROTECT ALL OPENINGS, Signs or Stenciling shall be located above ceilings on both sides of the wall, located 15'-0" from ends of wall and at intervals not to exceed 30'-0" horizontally along the wall or partition. Note: "#" indicates the hourly rating of the wall or partition.

F18 — Floor Plan Legend

No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E- MPR
ENLARGED KITCHEN FLOOR PLAN AND EQUIPMENT SCHEDULE
Drawing

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer
Drawn By: Author
Checked Checker
Reviewed Approver

Scale: As indicated
Project Number: 2116
Date: 02/15/23

E/A102

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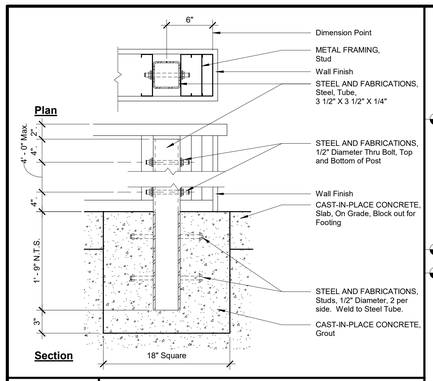
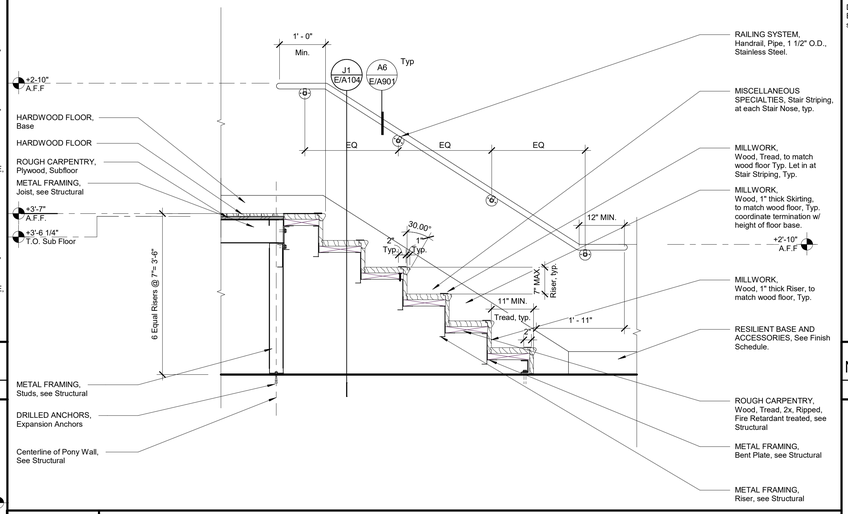
AD4-AX16



N1

STEEL AND FABRICATIONS, Steel Tube at Low Wall

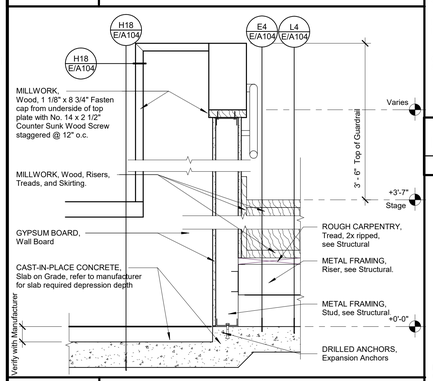
1 1/2" = 1'-0"



L4

METAL FRAMING, Stage Stair Section

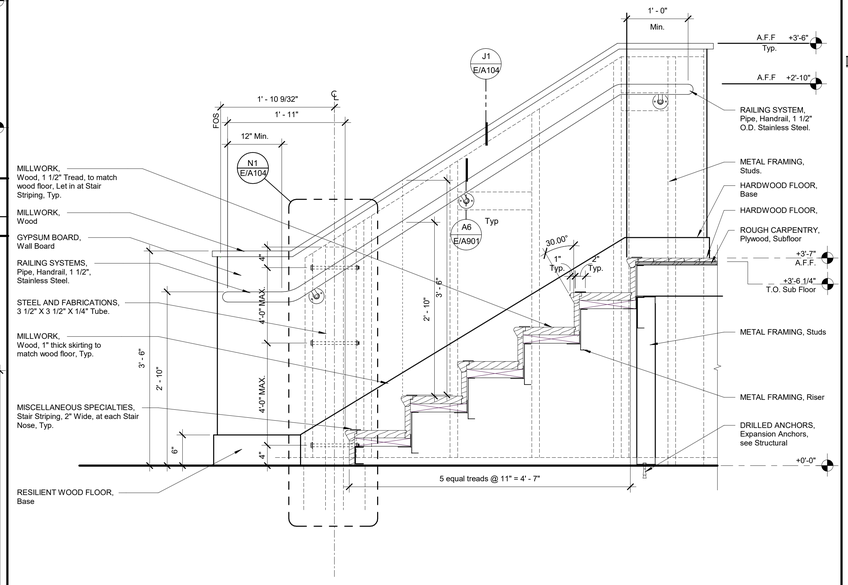
3/4" = 1'-0"



J1

METAL FRAMING, Stage, Section at Stair

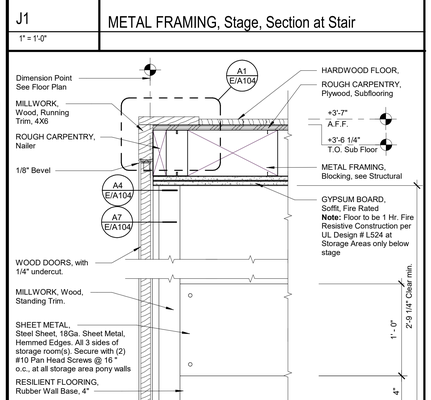
1" = 1'-0"



E1

METAL FRAMING, Stage Section

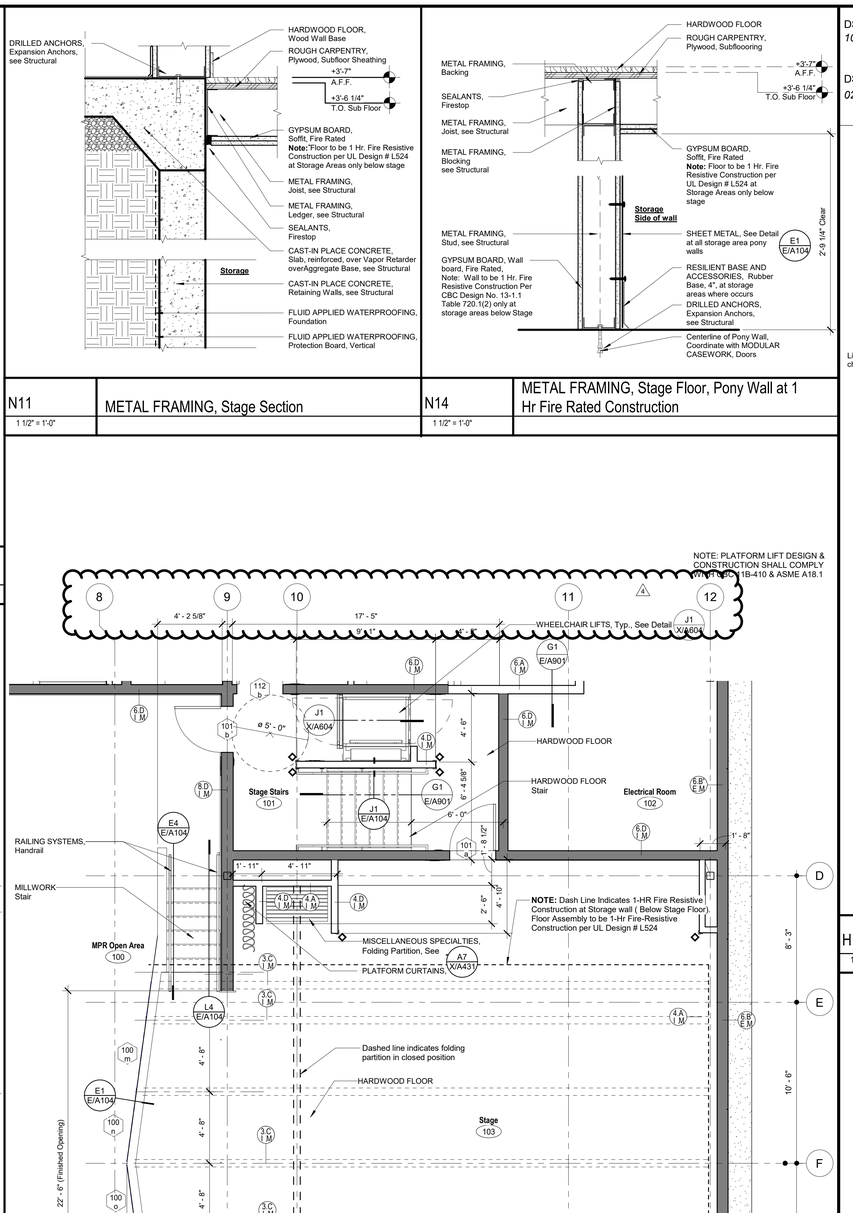
1 1/2" = 1'-0"



E4

METAL FRAMING, Stage Stair Section

1" = 1'-0"



N11

METAL FRAMING, Stage Section

1 1/2" = 1'-0"

N14

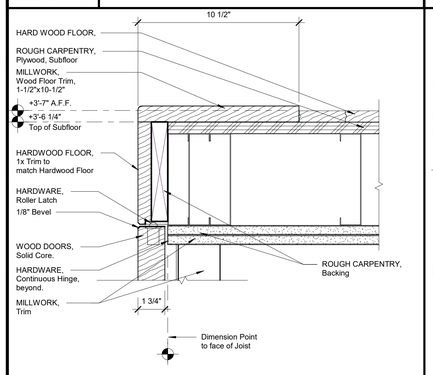
METAL FRAMING, Stage Floor, Pony Wall at 1 Hr Fire Rated Construction

1 1/2" = 1'-0"

A1

MILLWORK, Detail at Stage Nosing

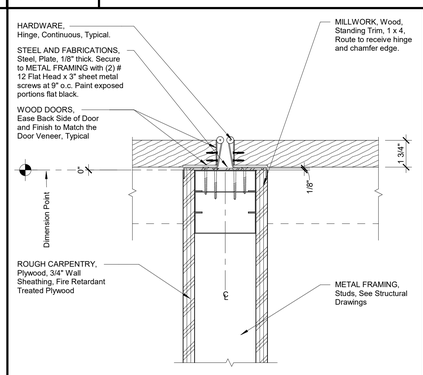
3" = 1'-0"



A4

WOOD DOORS, Jamb at Two Doors

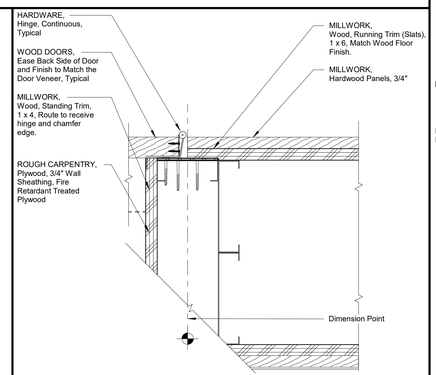
3" = 1'-0"



A7

WOOD DOORS, Jamb at single door

3" = 1'-0"



A11

Enlarged Stage Floor Plan

1/4" = 1'-0"

H18

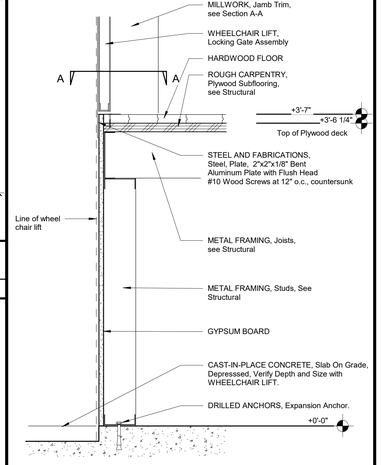
ROUGH CARPENTRY, Wood Stage Sections

1 1/2" = 1'-0"

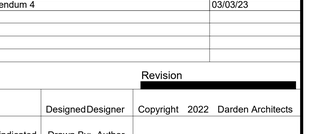
DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval



SILL DETAIL @ WHEELCHAIR LIFT



A-A JAMB DETAIL @ WHEELCHAIR LIFT

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING E- MPR
ENLARGED STAGE FLOOR PLAN AND DETAILS

Drawing

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LICENSED ARCHITECT ★ ANDREW A. CORNEJO ★ No. C37102 ★ REG. 11-30-23 ★ STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed Designer	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: Author	*E/A104*
Project Number: 2116	Checked IChecker	
Date: 02/15/23	ReviewedApprover	

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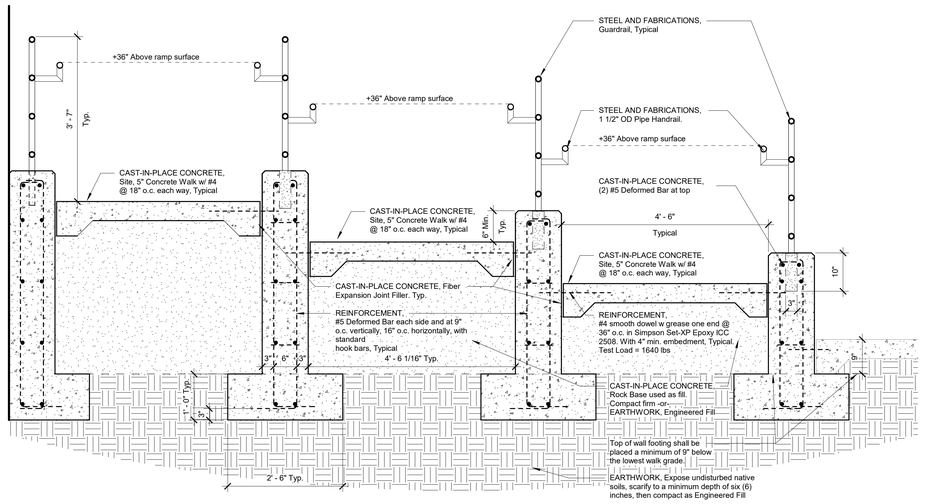
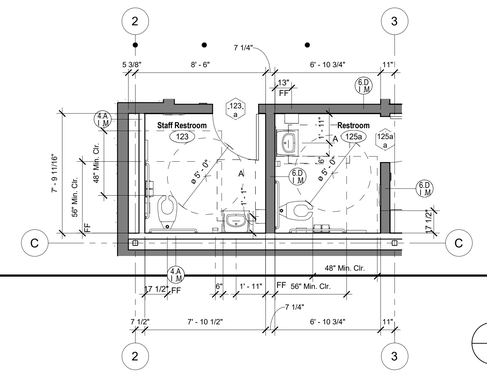


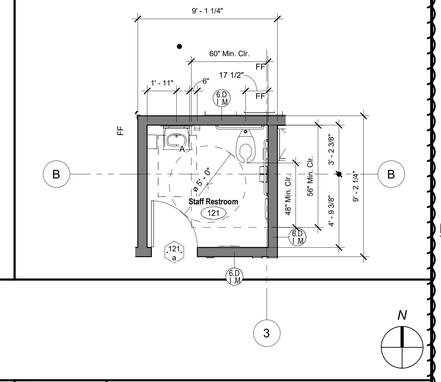
L10 — CAST-IN-PLACE CONCRETE, Ramp Detail at MPR

3/4" = 1'-0"



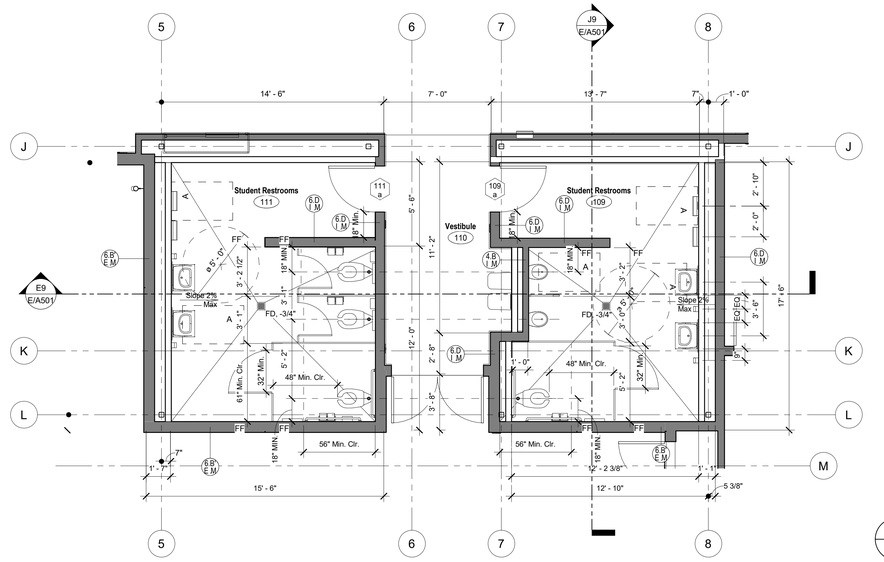
H10 — Building E Enlarged Floor Plan - 123 and 125a

1/4" = 1'-0"



H14 — Building E Enlarged Floor Plan - 121

1/4" = 1'-0"



A10 — Building E Enlarged Floor Plan - 109 and 111

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

SYMBOLS

- Concrete Masonry Unit Wall. 8" wide unless otherwise noted.
- Concrete Wall, or Column. Size as indicated.
- Stud Wall, Studs and Interior Wall materials continuous from floor to underside of floor or roof deck. Studs at 16" o.c. unless otherwise noted. Interior Wall material shall include Batt Insulation, Sound Deadening Board, Plywood Sheathing, Gypsum Board, and Cement Plaster/ Ceramic Tile setting bed where occurs.
- Stud Wall. Studs and finish material continuous from floor to minimum 6" above ceiling. Studs to be braced to underside of roof framing or deck if not required to be continuous to roof framing or deck. Studs at 16"o.c. Unless Otherwise Noted. See Structural for bracing and extent of Structural Sheathing.
- 1 Hr. Corridor Wall - Fire Partition (1 Hr. Fire Resistive Construction, 20 Min. Door Assemblies, 45 Min. Window Assemblies)
- 1 Hr. Fire Barrier - (1 Hr. Fire Resistive Construction, 60 Min. Door Assemblies)
- 1 Hr. Occupancy Separation / Fire Barrier - (1 Hr. Fire Resistive Construction, 45 Min. Door Assemblies, 45 Min. Window Assemblies)
- 2 Hr. Fire Wall (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 2 Hr. Fire Barrier (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Door Assemblies)
- 0 — Reference Grid
- 101 / a — Opening Group No. Refer to Door or Window Opening Schedules
- Room name / 101 — Room Designation
- 9 # 8 — Wall Assembly Symbols. Refer to Sheet X/A101
- Reference Point
- WALL AND CORNER GUARDS, Corner Guard
- a / #### — Cabinet Group No. Refer to Modular Casework Schedule and Lab Casework Schedule.

ABBREVIATIONS

FEBC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher/Blanket Cabinet, Type FEBC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls. Provide Surface Mounted Cabinet at Rated Walls Where Stud Depth is Less than 6" and at Masonry Walls, See A1 X/A603
FEC	FIRE PROTECTION SPECIALTIES, Fire Extinguisher Cabinet, Type FEC-1, Unless Noted Otherwise. Provide Fire Rated Cabinet at Rated Walls, See A1 X/A603
FF	Face of Finish
FOC	Face of Concrete
FD	Floor Drain
FOM	Face of Masonry
FOS	Face of Stud
FS	Floor Sink
HB	Hose Bib
MO	Masonry Opening
UNO	Unless Noted Otherwise
RO	Rough Opening
VCT	RESILIENT FLOORING, Vinyl Composition Tile
Typ.	Typical
Sim.	Similar
OH	Opposite Hand

NOTES

1. All Exterior Walls shall be Wall Assembly Type 6.B E.M Unless Noted Otherwise.
2. All Interior Walls shall be Wall Assembly Type 6.D I.M Unless Noted Otherwise.
3. All Dimensions are to Face of Stud (FOS) or Center Line, Unless Noted Otherwise.
4. All Elevation Dimensions are above Finish Floor at each floor level, Unless Noted Otherwise.
5. Dimensions noted as "+/-" are nominal.
6. Floor Drains (FD) and Floor Sinks (FS) shall be set -3/4" and a min. of 3'-0" from nearest wall, Unless Noted Otherwise. Floors must be sloped at a min. of 1:50 to the floor drains.
7. IDENTIFYING DEVICES, For Room Signage refer to E11 X/A601 and Specifications
8. FIRE RESISTIVE ASSEMBLIES:
   a. All Through Penetrations and Wall Membrane Penetrations through Walls of Fire Resistive Construction shall be protected in accordance with their Fire Resistive Ratings.
   b. All Walls of Fire and/or Smoke Resistive Construction Shall Be Permanently Identified with Signs or Stenciling in lettering not less than 3 inches (76 mm) in. height with a minimum 3/8 inch (9.5 mm) stroke in a contrasting color incorporating the following wording: FIRE AND/OR SMOKE BARRIER "#" HOUR RATED, PROTECT ALL OPENINGS, Signs or Stenciling shall be located above ceilings on both sides of the wall, located 15'-0" from ends of wall and at intervals not to exceed 30'-0" horizontally along the wall or partition. Note: "#" indicates the hourly rating of the wall or partition.

F18 — Floor Plan Legend

No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING E- MPR
ENLARGED FLOOR PLANS

Drawing

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ARCHITECTURE
PLANNING
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LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer | Copyright 2022 Darden Architects
Scale: As indicated | Drawn By: Author
Project Number: 2116 | Checked Checker
Date: 02/15/23 | Reviewed Approver

E/A105

3/3/2023 9:53:53 AM
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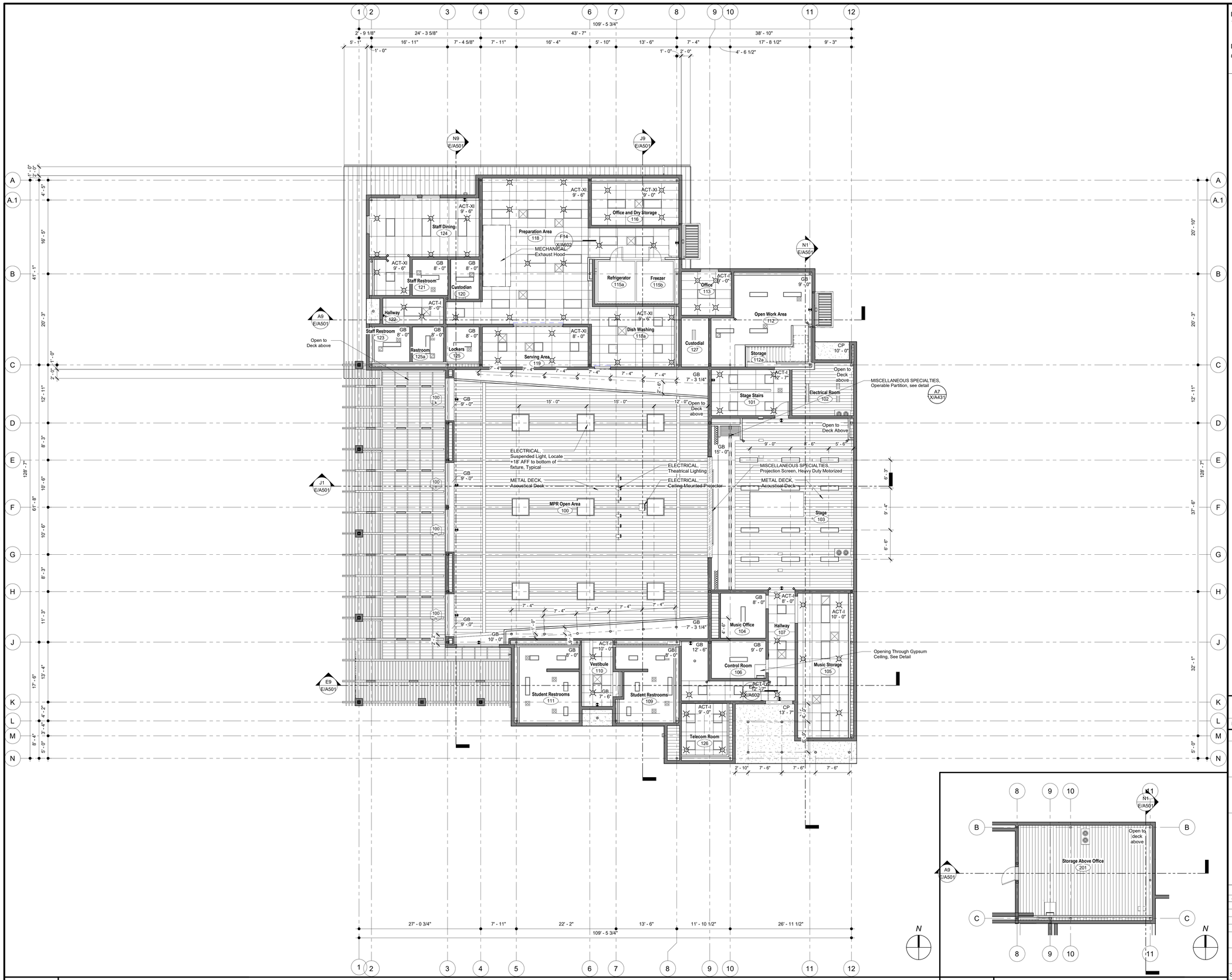

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

SYMBOLS

- MECHANICAL, Air Supply Grill
- MECHANICAL, Air Return Grill
- MECHANICAL, Strip Grill
- MECHANICAL, Exhaust Fan
- FIRE PROTECTION, Fire Sprinkler Head
- OD — PLUMBING, Overflow Drain
- ACOUSTICAL CEILINGS, Suspended Ceiling Compression Strut/ Splay Wire location
- (RA) — ROOF ACCESSORIES, Roof Hatch
- ELECTRICAL, Light Fixture, Recessed. Unless Noted Otherwise. (p) = Pendant Mounted (s) = Surface Mounted
- ELECTRICAL, Light Fixture, Exit Sign
- HD — ELECTRICAL, Fire Alarm Device, Heat Detector
- SD — ELECTRICAL, Fire Alarm Device, Smoke Detector
- S — ELECTRICAL, Speaker
- CEMENT PLASTER, Cement Plaster System
- GYPSUM BOARD, Refer to Interior Finish Schedule
- ACOUSTICAL CEILINGS, Refer to Plan for Type.
- ACOUSTICAL CEILINGS, Refer to Plan for Type.
- Metal Deck
- PLUMBING, Roof Drain, Refer to Plumbing.
- ACCESS DOORS AND FRAMES, Access Doors, Ceiling (20" X 30"), UNO
- 1 Hr. Corridor Wall - (1 Hr. Fire Resistive Construction, 20 Min. Door Assemblies, 45 Min. Window Assemblies)
- 1 Hr. Fire Barrier - (1 Hr. Fire Resistive Construction, 60 Min. Door Assemblies)
- 1 Hr. Occupancy Separation / Fire Partition - (1 Hr. Fire Resistive Construction, 45 Min. Door Assemblies, 45 Min. Window Assemblies)
- 2 Hr. Fire Wall (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Opening Assemblies)
- 2 Hr. Fire Barrier (2 Hr. Fire Resistive Construction, 1-1/2 Hr. Opening Assemblies)
- Reference Point

ABBREVIATIONS

ACT	ACOUSTICAL CEILINGS, Tile, Suspended, Unless Noted Otherwise.
CLG	Ceiling
CP	CEMENT PLASTER, System
(E)	Existing
GB	GYPSUM BOARD, Type "X", Unless Noted Otherwise.
GLB	GLUE-LAMINATED CONSTRUCTION, Beam
HT	Height
MD	METAL DECK
TYP	Typical
SIM	Similar
OH	Opposite hand
DS	Downspout
OD	Overflow Drain
UNO	Unless Noted Otherwise

NOTES

1. ACOUSTICAL CEILINGS, For typical suspended ceiling support and bracing, Refer to A11 X/A602 and A7 X/A602
2. Gypsum Board Ceilings Noted As "CLG HT Varies", Gypsum Board is attached to bottom side of framing/ joists, UNO
3. Ceiling Heights indicated are above Finish Floor at each floor level, UNO.
4. Where Fire Sprinklers occur at Acoustic Tile, Sprinkler Heads shall be centered in the Tile.
5. Not all fire Sprinkler Head locations are shown to provide code required coverage. But locations shown are intended to convey design intent. Coordinate with FIRE PROTECTION.
6. See Structural for framing of soffits and ceilings
7. Single Lights or Single Rows of Lights at Soffits/ Ceilings shall be centered, UNO.

E18 — Reflected Ceiling Plan Legend

No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E- MPR
REFLECTED CEILING PLAN
Drawing

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 Rnw. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Scale: 1/8" = 1'-0" | Drawn By: Author
Project Number: 2116 | Checked ICheckerI
Date: 02/15/23 | ReviewedApprover

E/A201

A1 — Reflected Ceiling Plan
1/8" = 1'-0"
Refer to E18 for Legend Symbols, Abbreviations and Notes

A14 — Reflected Ceiling Plan- Second Floor
1/8" = 1'-0"
Refer to E18 for Legend Symbols, Abbreviations and Notes

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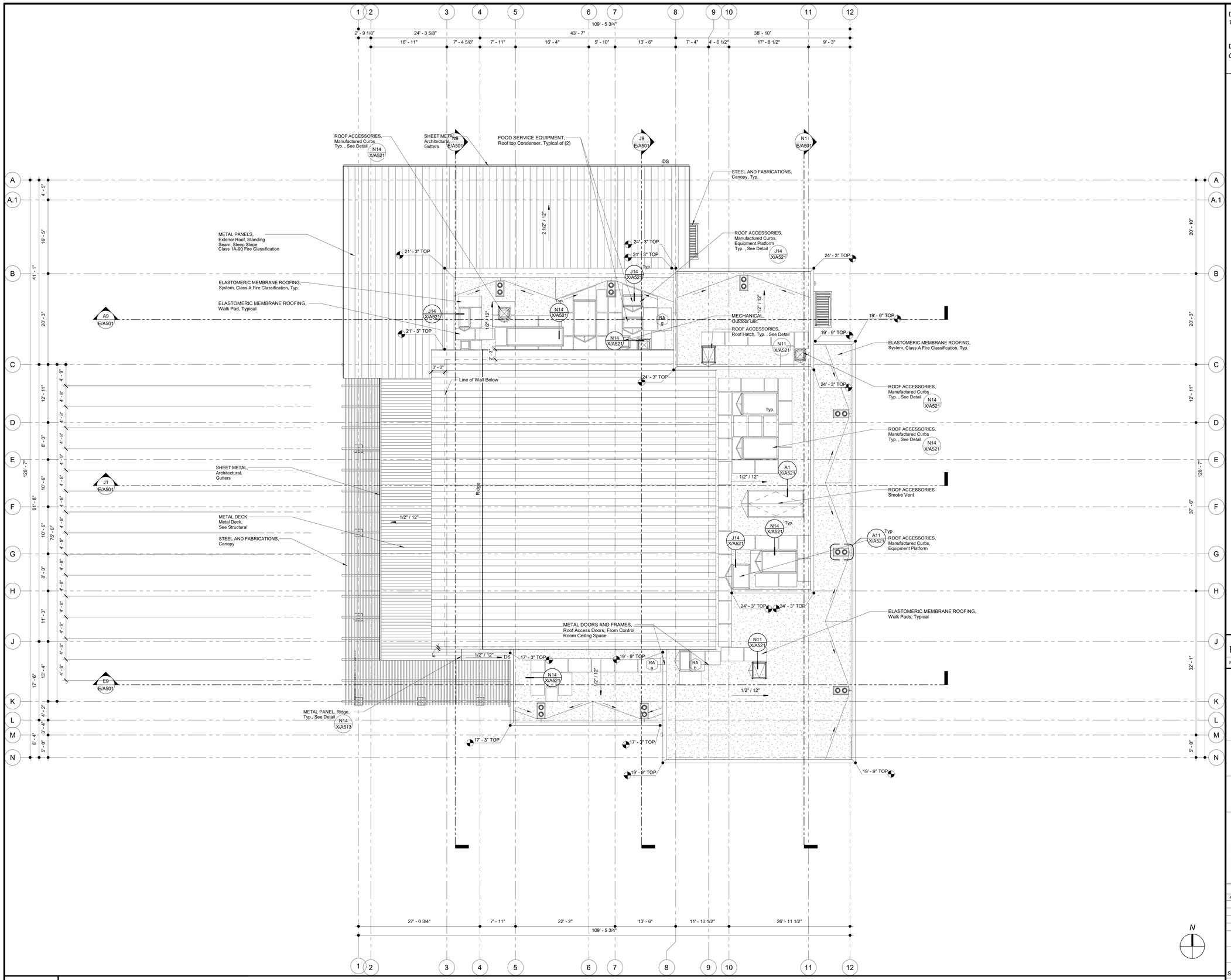
AD4-AX19



DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

SYMBOLS

- PLUMBING, Roof Drain and Overflow, See Detail — A11 X/A521 Typ
- ROOF ACCESSORIES, Roof Hatch, See Detail — N11 X/A521
- PV — PLUMBING, Vent, See Detail — A7 X/A521 Typ
- +14'-6" TOP — Elevation above finish floor
- Slope (DN) — Direction of slope
- Line of Wall below
- Reference Point
- LOUVERS
- 101 a — Opening Group No. Refer to Door or Window Opening Schedules

ABBREVIATIONS

TOP	Top of Parapet Framing
FO	Face of Framing
OD	PLUMBING, Overflow Drain
TOB	Top of Parapet Brace Framing
TOF	Top of Framing
RD	PLUMBING, Roof Drain
TOM	Top of Masonry
OH	Opposite Hand
DS	Downspout, See A1 X/A531 Typ
FOS	Face of Stud
TOS	Top of Steel
Sim.	Similar
Typ.	Typical

NOTES

1. Refer to Plumbing, Mechanical, Telecommunications, Food Service, and Electrical for all roof penetrations and roof mounted equipment. For appropriate details, Refer to, Unless Otherwise Noted. E7 X/A521, N14 X/A521, J7 X/A521, J11 X/A521, J14 X/A521
2. Roof Slope and Crickets shall be constructed with tapered insulation to achieve slope as required.
3. When indicated, SHEET METAL, Reglet and Counter Flashing occurs at the Back Side and/or the Front Side of Parapet Walls. At each roof level such Reglet elevations shall be determined based upon the details of construction, and be installed at the same horizontal level.
4. SHEET METAL, Counter Flashing Boots shall be installed at all intersecting parapets that have different parapet heights. for conditions requiring such boots, refer to Details A1 X/A501, E1 X/A501, J1 X/A501, N1 X/A501

F18 — Roof Plan Legend
No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E- MPR
ROOF PLAN
Drawing

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Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

Designed Designer | Drawn Drawn | Checked Checker | Reviewed Approver

Scale: 1/8" = 1'-0"
Project Number: 2116
Date: 02/15/23

E/A301

A1 — Roof Plan
1/8" = 1'-0"
Refer to F18 for Legend Symbols, Abbreviations and Notes

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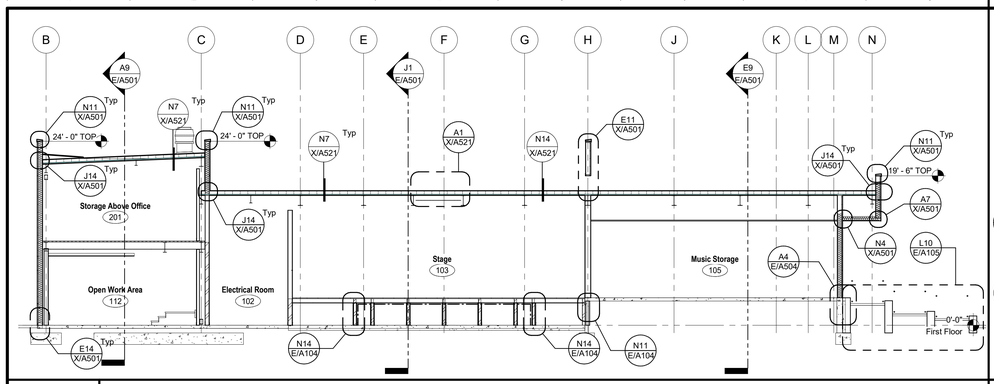
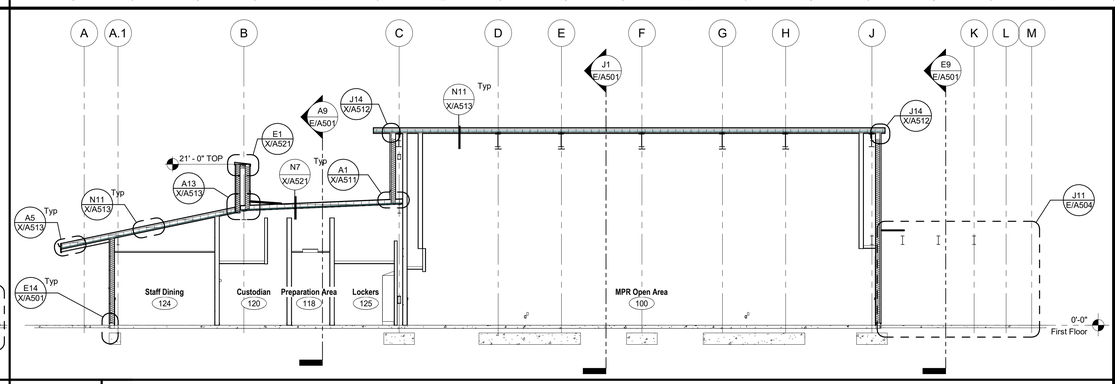
AD4-AX20



N1

1/8" = 1'-0"

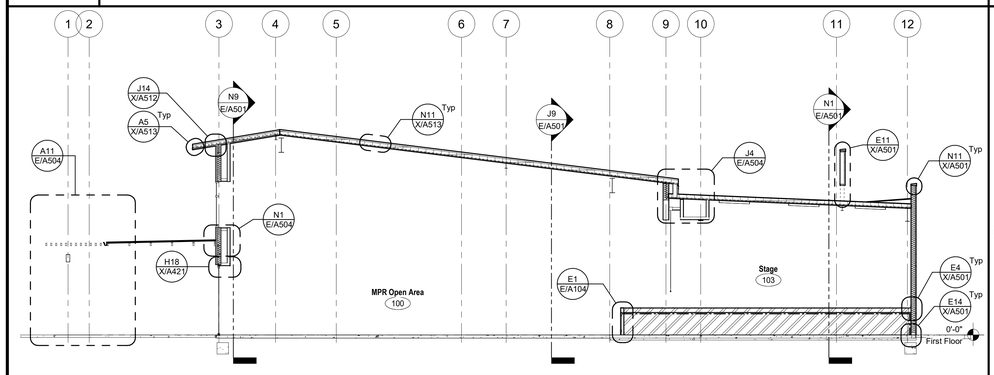
Building Section



N9

1/8" = 1'-0"

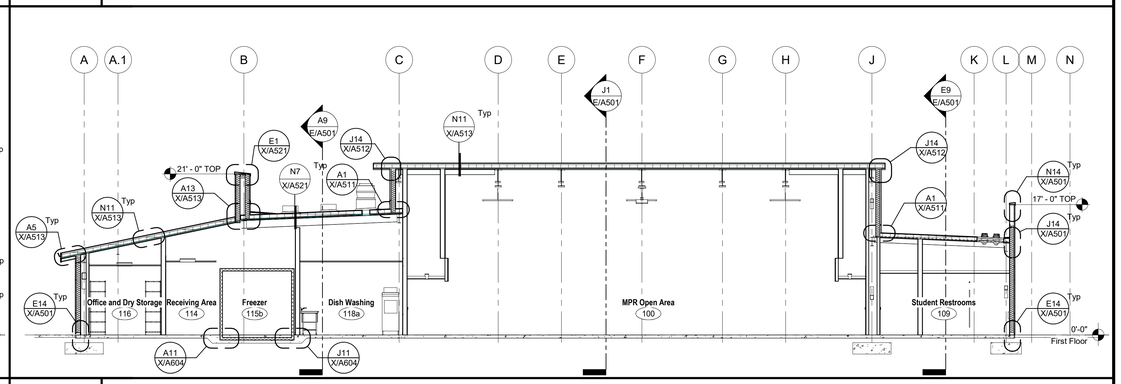
Building Section



J1

1/8" = 1'-0"

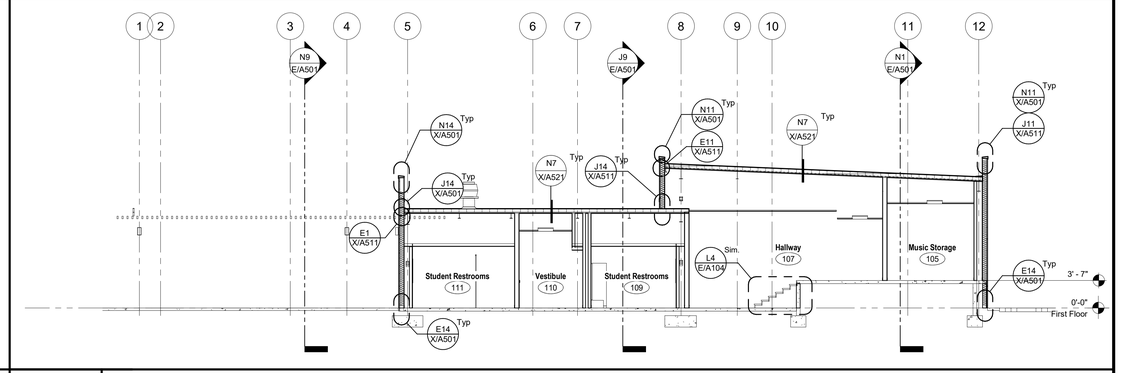
Building Section



J9

1/8" = 1'-0"

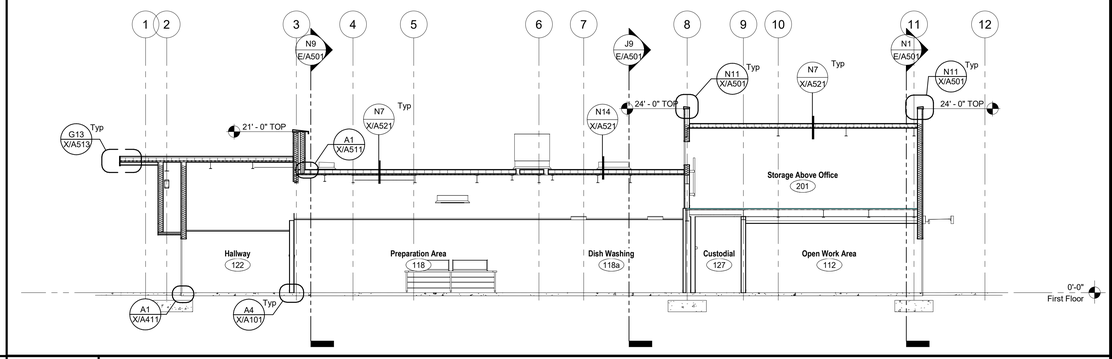
Building Section



E9

1/8" = 1'-0"

Building Section



A9

1/8" = 1'-0"

Section 7

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING E- MPR
BUILDING SECTIONS

Drawing

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Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

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Scale: 1/8" = 1'-0" | Drawn By: Author

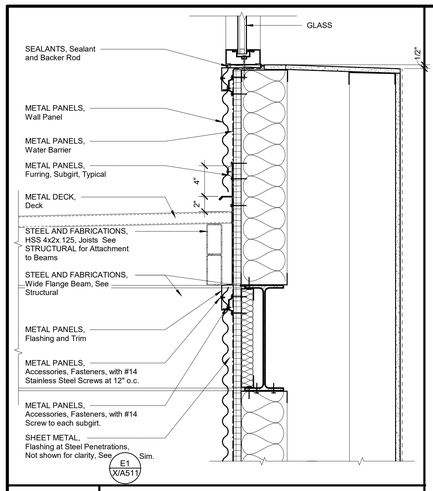
Project Number: 2116 | Checked By: Checker

Date: 02/15/23 | Reviewed Approver

4

E/A501

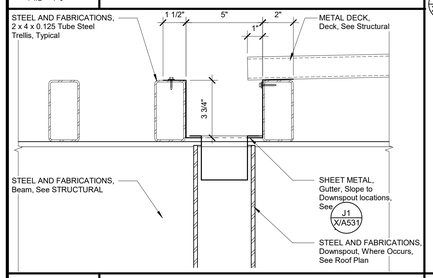
AD4-AX21



N1

1 1/2" = 1'-0"

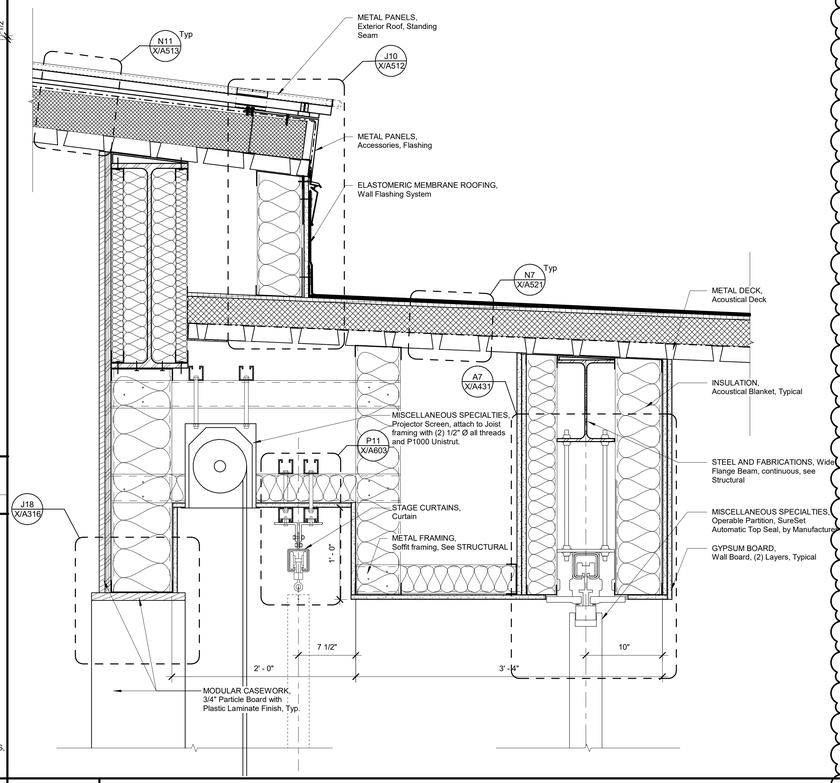
METAL DECK, Section at Metal Panels



J1

3" = 1'-0"

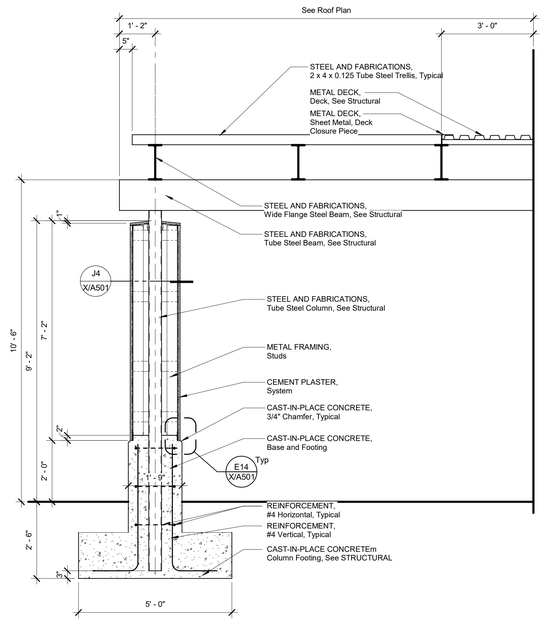
SHEET METAL, Gutter at Trellis



J4

1 1/2" = 1'-0"

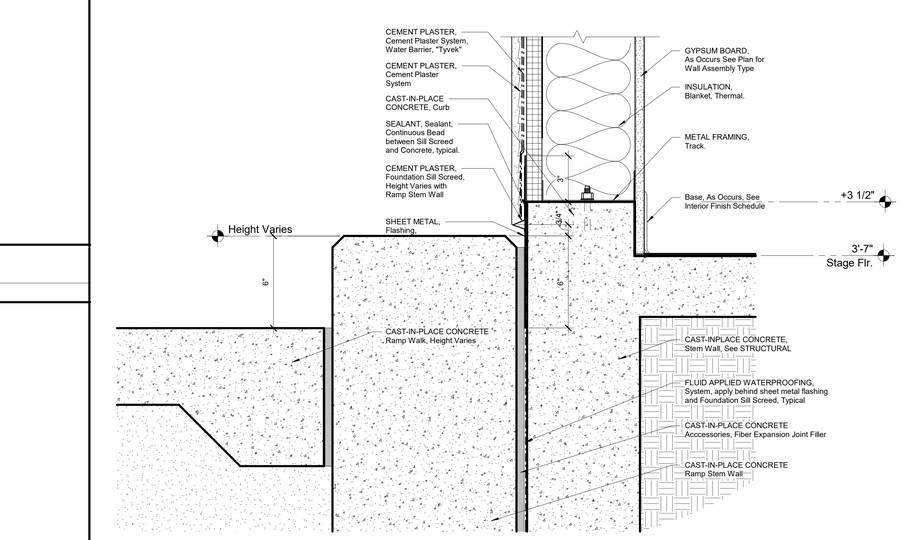
Section at Proscenium



J11

1/2" = 1'-0"

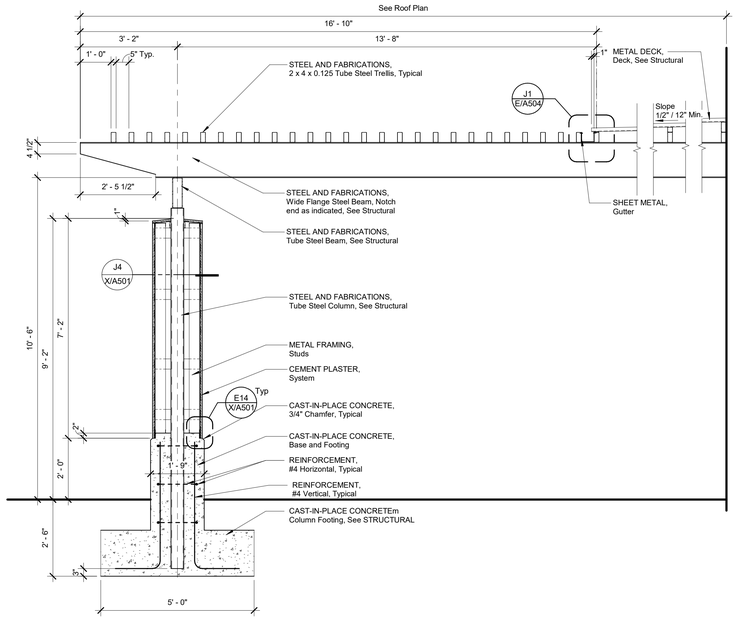
Section at MPR SideTrellis



A4

3" = 1'-0"

CAST-IN-PLACE CONCRETE, Stem wall at Exterior Ramp



A11

1/2" = 1'-0"

Section at MPR Entrance Trellis

DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING E- MPR
WALL SECTIONS

Drawing

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Architect

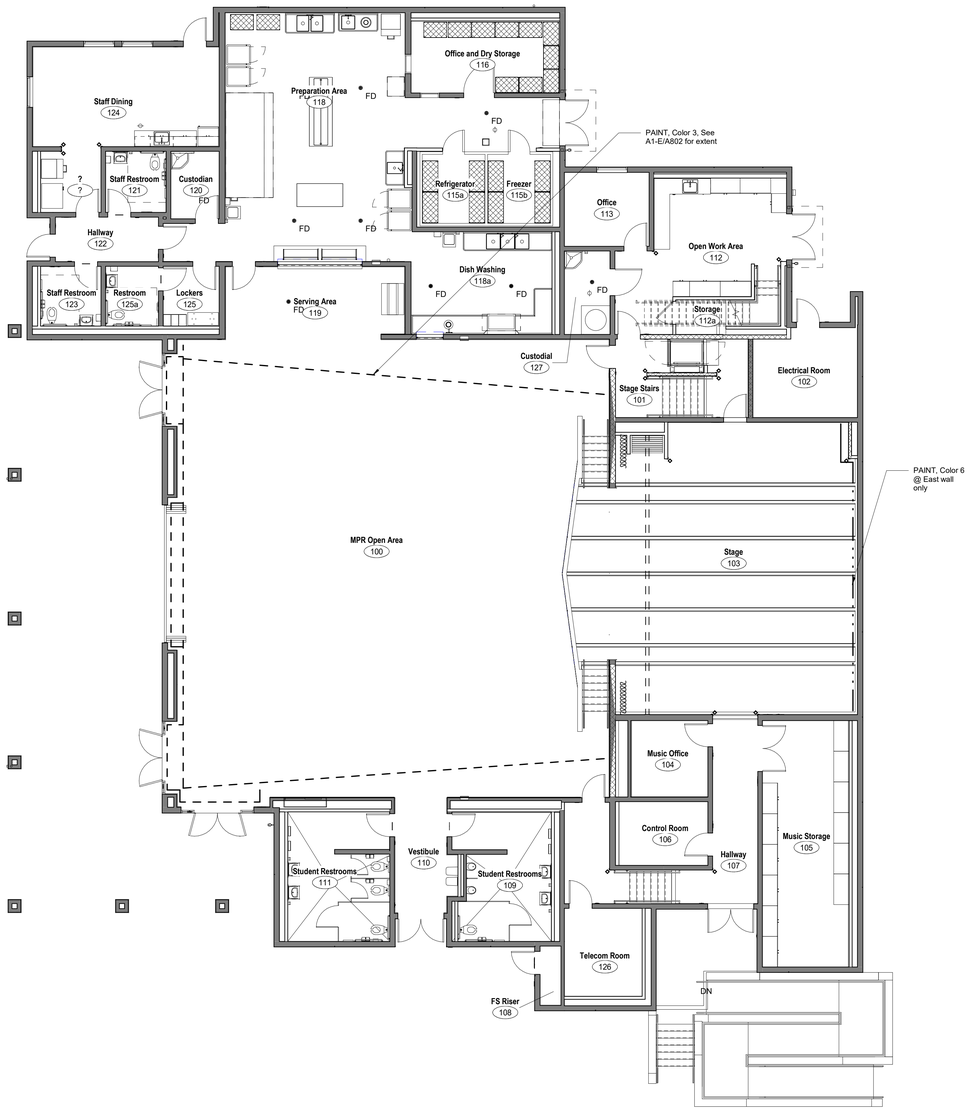
No.	Revision/Submission	Date
4	Addendum 4	03/03/23

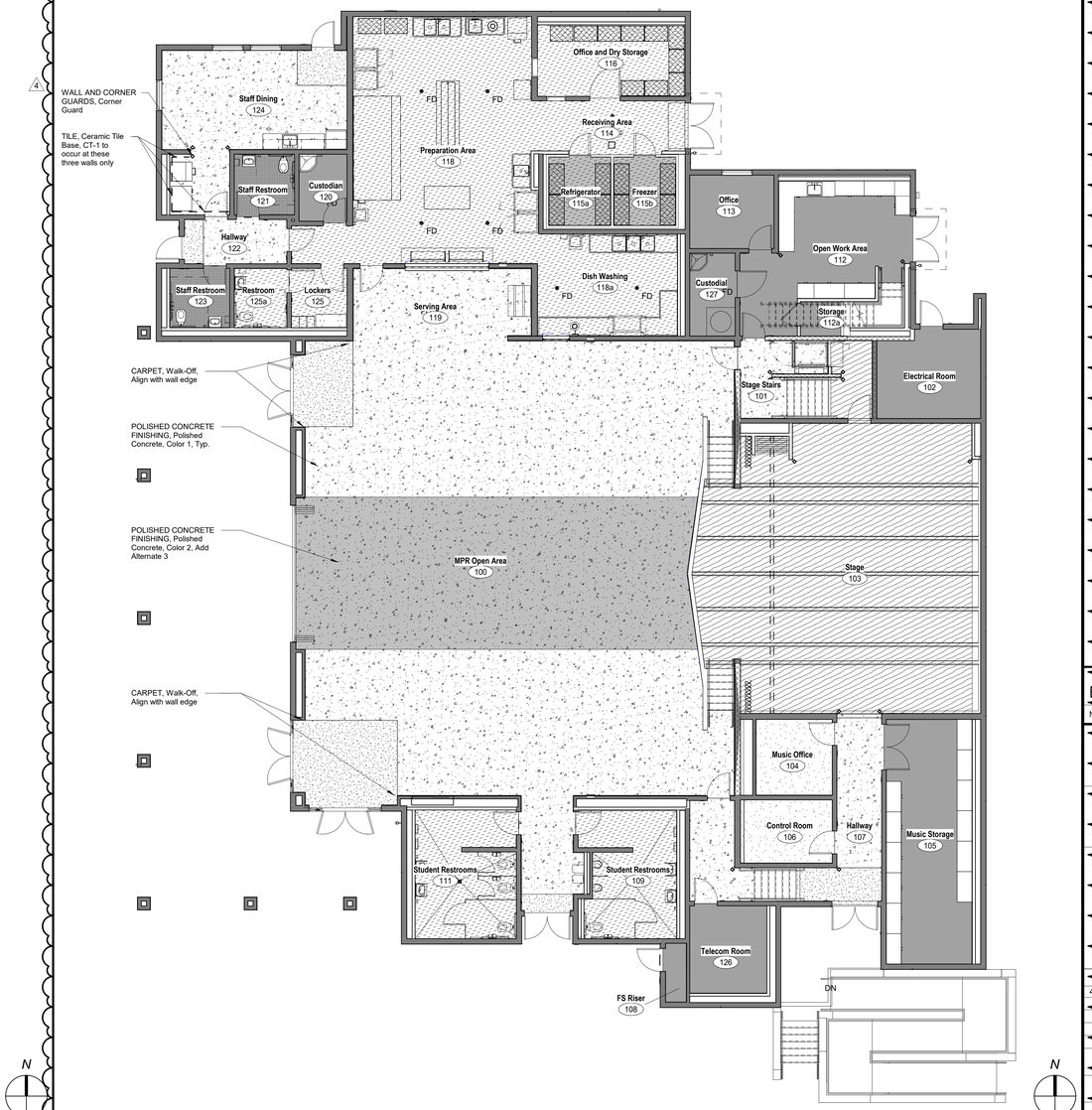
Revision

Designed Designer
Drawn By: Author
Checked IChecker
Reviewed Approver

Scale: As indicated
Project Number: 2116
Date: 02/15/23

E/A504





DSA File No.:
10-48

DSA Application No.:
02-120543

Agency Approval

FLOOR PATTERN LEGEND

- CAST-IN-PLACE CONCRETE, Clear Floor Sealer
- POLISHED CONCRETE FINISHING, Polished Concrete, Color 1
- POLISHED CONCRETE FINISHING, Polished Concrete, Color 2
- TILE, Interior Floor Tile, CT-1
- RESILIENT WOOD FLOOR, Platform
- RESINOUS FLOORING, Resinous, RF-1
- RESINOUS FLOORING, Resinous, RF-2
- CARPET, Broadloom
- CARPET, Modular, MT-1, Installed Brick Ashlar
- CARPET, Modular, MT-2, Installed Brick Ashlar
- CARPET, Modular, MT-3, Installed Brick Ashlar
- CARPET, Modular, MT-4, Installed Brick Ashlar
- CARPET, Walk-Off
- RESILIENT SHEET, Rubber Sheet, RS-1

ACCENT PAINT LEGEND

All Gypsum Board to be PAINT, Color 1, unless noted otherwise.

All painted school logos, quotes and words to be coordinated with owner prior to commencement of work.

- PAINT, Color 2 — PAINT, Color 2 (Elevation and Plan View)
- PAINT, Color 3 — PAINT, Color 3 (Elevation and Plan View)
- PAINT, Color 4 — PAINT, Color 4 (Elevation and Plan View)
- PAINT, Color 5 Indicates School Logo Mural to be determined
- PAINT, Color 6

TILE PATTERN LEGEND

- TILE, Ceramic, CT-2
- TILE, Ceramic, CT-3, Color 1
- TILE, Ceramic, CT-3, Color 2

NOTES

1. The intent of this drawing is to clarify and detail the color and patterns of finishes. All information regarding contruction conditions, casework, framing and ceiling details, etc. shall be per Architectural plans, unless otherwise noted.
2. This drawing is provided for the convenience of the Contractor. Field verify all conditions and dimensions prior to fabrication, installation or application.
3. Refer to appropriate Specification Sections for Materials, Systems and Types.
4. Refer to Interior Finish Schedule for Paint Finish.
5. Refer to Interior Color Schedule for additional information on Manufacturer, Pattern and Color.
6. All painted school logos, quotes and words to be coordinated with owner prior to commencement of work.

E18 — Interior Design Legend
No Scale

McKinley/Fowler Elementary School- Increment 2
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E- MPR
INTERIOR DESIGN- FLOOR PATTERN PLAN AND ACCENT PAINT PLAN
Drawing

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LICENSED ARCHITECT ANDREW A. GORO No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum 4	03/03/23

Revision

	Designed Designer	Copyright 2022 Darden Architects
Scale: 1/8" = 1'-0"	Drawn By: Author	
Project Number: 2116	Checked fChecker	
Date: 02/15/23	ReviewedApprover	

E/A801

A1 — Accent Paint Plan
1/8" = 1'-0"
See E18 for Interior Design Legend

A9 — Floor Pattern Plan
1/8" = 1'-0"
See E18 for Interior Design Legend

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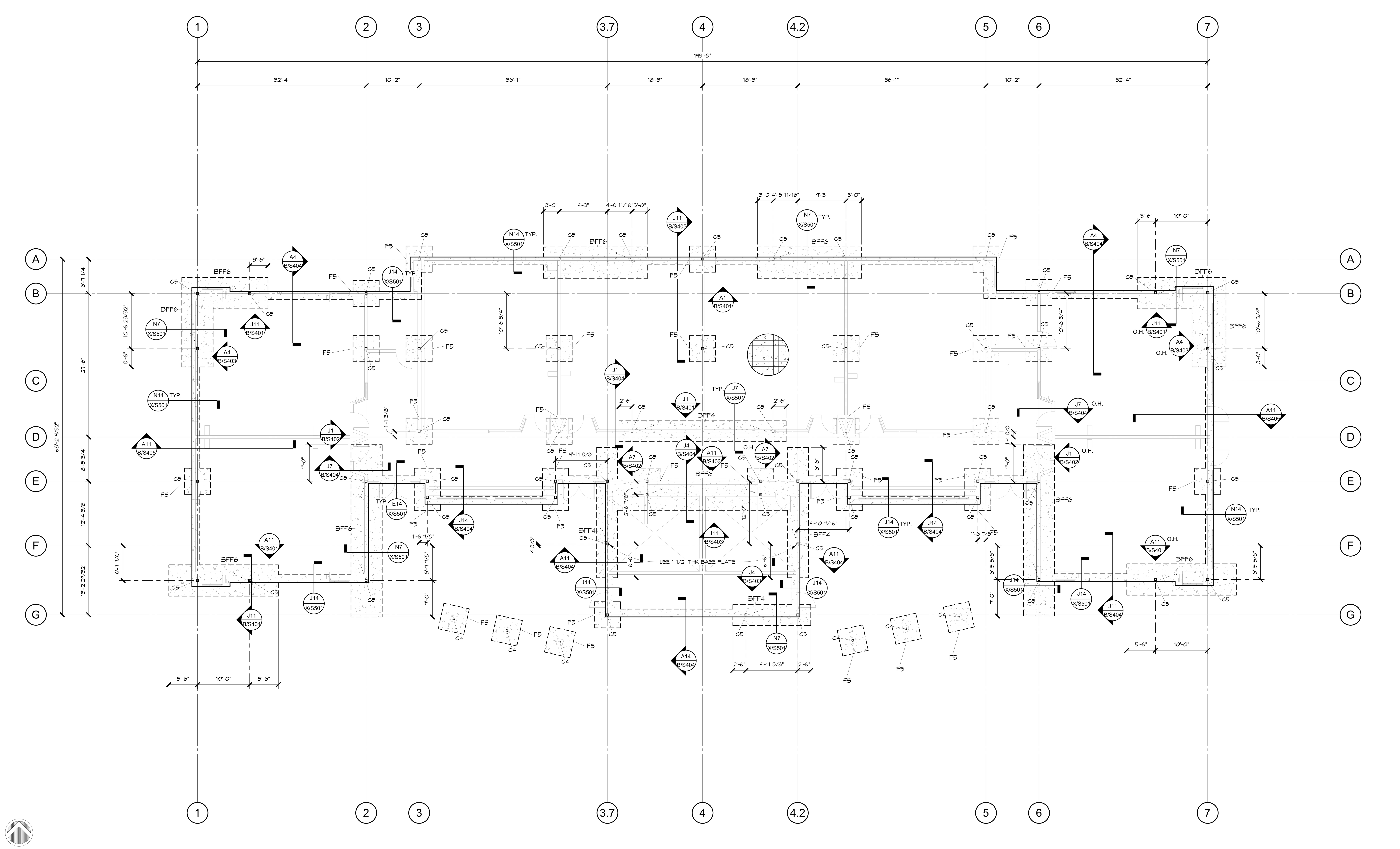
AD4-AX23



E1 FOUNDATION PLAN

B/S401 | B/S201 | 1/8" = 1'-0"

1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF EXTERIOR WALLS, CENTER OF COLUMN OR CENTER OF INTERIOR WALLS UNLESS NOTED OTHERWISE. EDGE OF SLAB AT PERIMETER OF BUILDING SHALL BE INDICATED IN SPECIFIC DETAILS AND ARCHITECTURAL. VERIFY ALL BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. NOTIFY THE ARCHITECT IMMEDIATELY IF THERE ARE ANY CONFLICTS WITH THE DIMENSIONS SHOWN.
3. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
4. ALL PAD AND CONTINUOUS FOOTINGS ARE TO BE CENTERED ON WALLS AND COLUMNS ABOVE UNLESS NOTED OTHERWISE.
5. SEE CIVIL AND/OR ARCHITECTURAL SITE PLAN FOR LOCATION AND DIMENSIONS OF SIDEWALKS, MOW STRIPS, PLANTERS AND OTHER LANDSCAPING FEATURES.
6. SEE ARCHITECTURAL AND PLUMBING PLANS FOR LOCATION OF ALL PIPING AND DRAINS. SEE TYPICAL DETAILS FOR STRUCTURAL REQUIREMENTS AT LOCATIONS WHERE PIPES INTERSECT OR ALIGN NEXT TO FOOTINGS AND SLABS.
7. ALL EMBEDDED ITEMS SHALL BE IN PLACE AND SECURED PRIOR TO POURING OF CONCRETE.
8. ALL SILL PLATE ANCHOR BOLTS SHALL BE SIZED, SPACED, PLACED, AND HAVE THE WASHER AND MATERIAL FINISH AS SPECIFIED IN THE **LIGHT GAUGE STEEL NOTES**.
9. CONTRACTOR SHALL SUBMIT CONTROL JOINT PLAN FOR APPROVAL PRIOR TO POURING SLAB. SEE TYPICAL **CONTROL JOINT** DETAIL FOR ADDITIONAL INFORMATION.
10. ALL TOP OF FOOTINGS SHALL BE 1'-0" BELOW FINISH SLAB, UNLESS NOTED OTHERWISE.
11. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

A1 STEEL FOUNDATION NOTES

B/S201 | NOT TO SCALE

STEEL STUDS. AT EXTERIOR WALL LOCATIONS, PROVIDE 600S162-54 @ 16" O.C., U.N.O. SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL. AT INTERIOR WALL LOCATIONS, SEE ARCHITECTURAL AND TYPICAL **INTERIOR NON-BEARING WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

INTERIOR STUD WALL. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
- C# - COLUMN SCHEDULE
- P# - PILASTER SCHEDULE
- W# - WALL SCHEDULE
- F# - FOUNDATION SCHEDULE

T.O.F. +X'-X"

TOP OF FOOTING (T.O.F.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

BRACE. SEE ELEVATION FOR SIZE AND ORIENTATION

CONCRETE SLAB. PROVIDE 5" THICK MINIMUM SLAB WITH #4 @ 18" O.C. EACH WAY, U.N.O. ON 2" OF SAND THAT IS PLACED ON A MINIMUM 10 MIL THICK MOISTURE VAPOR BARRIER. SEE TYPICAL **CONCRETE NOTES** FOR ADDITIONAL INFORMATION.

A4 FOUNDATION LEGEND

NOT TO SCALE

STRUCTURAL COLUMN SCHEDULE

MARK	TYPE	COMMENTS
C4	HSS4X4X1/4	UNLESS DETAILED OTHERWISE. SEE DETAIL A14/X/S104 FOR BASE PLATE INFORMATION
C5	HSS5X5X1/4	UNLESS DETAILED OTHERWISE. SEE DETAIL A14/X/S104 FOR BASE PLATE INFORMATION
P5	HSS5X5X5/16	UNLESS DETAILED OTHERWISE. SEE DETAIL A11/X/S601

A7 COLUMN SCHEDULE

NOT TO SCALE

STRUCTURAL FOUNDATION SCHEDULE

MARK	TYPE	REINFORCEMENT
BFF4	4'-0" WIDE x 1'-6" THICK CONT.	(6) #5 LONG. BARS T&B WITH 90° EACH END. #5 TIES @ 8" O.C.
BFF6	6'-0" WIDE x 1'-6" THICK CONT.	(8) #5 LONG. BARS T&B WITH 90° EACH END. #5 TIES @ 8" O.C.
F5	5'-0"SQ. x 18" THICK	(9) #5 BARS BOTTOM EACH WAY
WF1.5	1'-6" WIDE x 1'-6" DEEP CONT.	(2) #5 LONG. BARS TOP AND BOTTOM

A11 FOUNDATION SCHEDULE

NOT TO SCALE

DSA File No.:

DSA Application No.:

Agency Approval

BrooksRansom ASSOCIATES
7415 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX

22203

REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 EXPIRES 3-31-24 STRUCTURAL STATE OF CALIFORNIA

McKinley/Fowler Elementary School
CLOVIS UNIFIED SCHOOL DISTRICT
FRESNO, CA 93727

Project

BUILDING B - CLASSROOMS
FOUNDATION PLAN

Drawing

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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: RP	
Scale: As indicated	Drawn By: RP	
Project Number: 2116	Checked By: ESB	B/S201
Date: 09/27/22	Reviewed By: SOC	4

AD4-SX01

3/3/2023 8:24:49 AM
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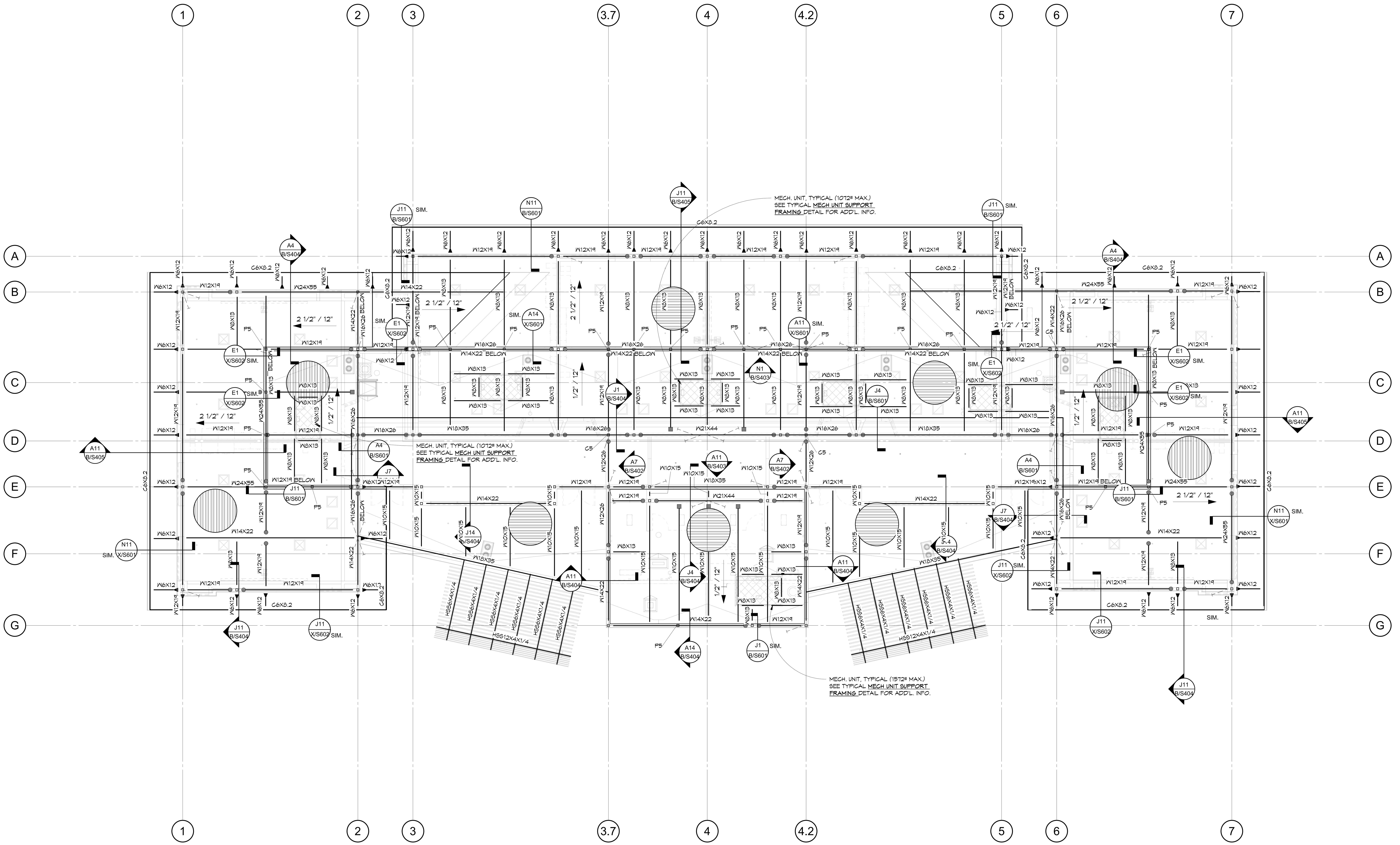
DSA File No.:

DSA Application No.:

Agency Approval



E1 LOW ROOF FRAMING PLAN

B/S301 1/8" = 1'-0"

A1 STEEL FRAMING NOTES

B/S301 NOT TO SCALE

1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL TOP OF FRAMING ABOVE FINISH SLAB VARIES, SEE PLAN FOR INFORMATION.
4. VERIFY ROOF SLOPE(S) WITH ARCHITECTURAL PLANS.
5. SEE TYPICAL **MECHANICAL UNIT ATTACHMENT** DETAIL FOR ROOF MOUNTED EQUIPMENT. CONTRACTOR SHALL VERIFY AND COORDINATE WEIGHTS AND LOCATIONS OF ALL ROOF SUPPORTED MECHANICAL AND ELECTRICAL UNITS, AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF ANY DISCREPANCIES ARE DETERMINED.
6. AT OPENINGS IN DECKING SEE TYPICAL **OPENINGS IN STEEL DECK** DETAILS FOR INFORMATION, UNLESS NOTED OTHERWISE. VERIFY OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. FOR FRAMING AT DRAINS, SEE TYPICAL **LARGE OPENINGS IN STEEL DECK** DETAIL AND INFORMATION ON PLANS.
8. FOR ALL STEEL TO STEEL CONNECTIONS SEE TYPICAL **BEAM-TO-COLUMN CONNECTION** AND **BEAM-TO-GIRDER CONNECTION** SCHEDULES.
9. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO CHORDS, COLLECTORS AND BRACED FRAME LINES (BOTH SIDES IF APPLICABLE) SHALL BE A FULL WIDTH SHEET. PROVIDE 2 ROWS OF PUDDLE WELDS AT ALL INTERIOR LATERAL RESISTING FRAME LINES.
10. ALL CHORD & COLLECTOR BEAMS TO BE INSTALLED PRIOR TO WELDING OF METAL DECKING.
11. BEAMS ARE EQUALLY SPACED BETWEEN MAIN BEAMS OR COLUMNS, U.N.O.
12. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

A4 FRAMING LEGEND

NOT TO SCALE

STEEL STUDS. AT EXTERIOR WALL LOCATIONS, PROVIDE 600S162-54 @ 16" O.C., U.N.O. SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

INTERIOR WALL STUDS. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.

WALL BELOW. SEE FRAMING PLAN AT LEVEL BELOW.

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
- C# - COLUMN SCHEDULE
- P# - PILASTER SCHEDULE
- W# - WALL SCHEDULE
- F# - FOUNDATION SCHEDULE

T.O.S. +X'-X" — TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

SIZE (STUDS) / CAMBER — STEEL BEAM.

STEEL FRAME. SEE ELEVATIONS AS INDICATED FOR FRAMING SIZES AND ORIENTATION.

BRACE. SEE ELEVATION AS INDICATED FOR BRACE SIZE

MOMENT FRAME CONNECTION. SEE TYPICAL **MOMENT FRAME CONNECTION** DETAILS.

COLLECTOR CONNECTION. SEE TYPICAL **COLLECTOR BEAM TO GIRDER CONNECTION SCHEDULE** AND **COLLECTOR BEAM TO COLUMN CONNECTION SCHEDULE**. PROVIDE ASTM A490 SLIP CRITICAL BOLTS IN LIEU OF BOLT TYPE NOTED IN SCHEDULE.

BRACING BEAM CONNECTION. SEE TYPICAL **CONNECTION AT BRACING BEAM** FOR ADDITIONAL INFORMATION.

STEEL DECK. INDICATES DIRECTION OF DECKING. SEE TYPICAL **STEEL ROOF DECK NOTES** AND TYPICAL **DECK ATTACHMENT LAYOUT** DETAILS.

A11 COLUMN SCHEDULE

NOT TO SCALE

STRUCTURAL COLUMN SCHEDULE

MARK	TYPE	COMMENTS
C4	HSS4X4X1/4	UNLESS DETAILED OTHERWISE, SEE DETAIL A14/X/S104 FOR BASE PLATE INFORMATION
C5	HSS5X5X1/4	UNLESS DETAILED OTHERWISE, SEE DETAIL A14/X/S104 FOR BASE PLATE INFORMATION
P5	HSS5X5X5/16	UNLESS DETAILED OTHERWISE, SEE DETAIL A11/X/S601

BrooksRansom ASSOCIATES
7415 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
22203

No. S2386 EXPIRES 3-31-24 STRUCTURAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
CLOVIS UNIFIED SCHOOL DISTRICT
FRESNO, CA 93727

Project

BUILDING B - CLASSROOMS
LOW ROOF FRAMING PLAN

Drawing

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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: RP	Copyright Darden Architects
Scale: As indicated	Drawn By: RP	
Project Number: 2116	Checked By: ESB	B/S301
Date: 09/27/22	Reviewed By: SOC	4

AD4-SX02

3/3/2023 8:24:52 AM
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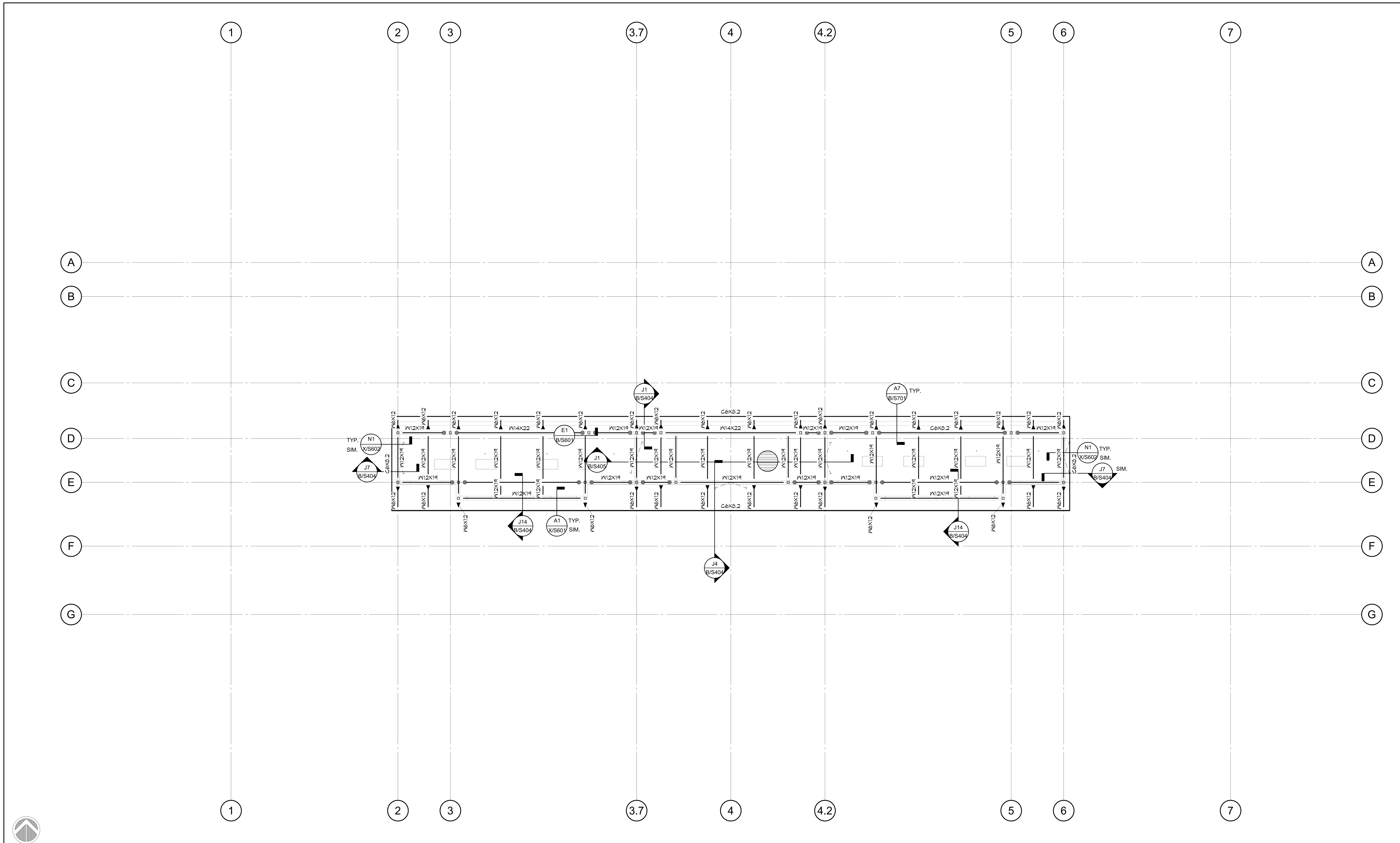
DSA File No.:

DSA Application No.:

Agency Approval



E1 HIGH ROOF FRAMING PLAN

B/S402 | B/S302 | 1/8" = 1'-0"

1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL TOP OF FRAMING ABOVE FINISH SLAB VARIES, SEE PLAN FOR INFORMATION.
4. VERIFY ROOF SLOPE(S) WITH ARCHITECTURAL PLANS.
5. SEE TYPICAL **MECHANICAL UNIT ATTACHMENT** DETAIL FOR ROOF MOUNTED EQUIPMENT. CONTRACTOR SHALL VERIFY AND COORDINATE WEIGHTS AND LOCATIONS OF ALL ROOF SUPPORTED MECHANICAL AND ELECTRICAL UNITS, AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF ANY DISCREPANCIES ARE DETERMINED.
6. AT OPENINGS IN DECKING SEE TYPICAL **OPENINGS IN STEEL DECK** DETAILS FOR INFORMATION, UNLESS NOTED OTHERWISE. VERIFY OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. FOR FRAMING AT DRAINS, SEE TYPICAL **LARGE OPENINGS IN STEEL DECK** DETAIL AND INFORMATION ON PLANS.
8. FOR ALL STEEL TO STEEL CONNECTIONS SEE TYPICAL **BEAM-TO-COLUMN CONNECTION** AND **BEAM-TO-GIRDER CONNECTION** SCHEDULES.
9. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO CHORDS, COLLECTORS AND BRACED FRAME LINES (BOTH SIDES IF APPLICABLE) SHALL BE A FULL WIDTH SHEET. PROVIDE 2 ROWS OF PUDDLE WELDS AT ALL INTERIOR LATERAL RESISTING FRAME LINES.
10. ALL CHORD & COLLECTOR BEAMS TO BE INSTALLED PRIOR TO WELDING OF METAL DECKING.
11. BEAMS ARE EQUALLY SPACED BETWEEN MAIN BEAMS OR COLUMNS, U.N.O.
12. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

A1 STEEL FRAMING NOTES

B/S302 | NOT TO SCALE

STEEL STUDS. AT EXTERIOR WALL LOCATIONS, PROVIDE 600S162-54 @ 16" O.C., U.N.O. SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

INTERIOR WALL STUDS. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.

WALL BELOW. SEE FRAMING PLAN AT LEVEL BELOW.

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
- C# - COLUMN SCHEDULE
- P# - PILASTER SCHEDULE
- W# - WALL SCHEDULE
- F# - FOUNDATION SCHEDULE

T.O.S. / +X'-X" — TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

SIZE (STUDS) / CAMBER — STEEL BEAM.

STEEL FRAME. SEE ELEVATIONS AS INDICATED FOR FRAMING SIZES AND ORIENTATION.

BRACE. SEE ELEVATION AS INDICATED FOR BRACE SIZE

MOMENT FRAME CONNECTION. SEE TYPICAL **MOMENT FRAME CONNECTION** DETAILS.

COLLECTOR CONNECTION. SEE TYPICAL **COLLECTOR BEAM TO GIRDER CONNECTION SCHEDULE** AND **COLLECTOR BEAM TO COLUMN CONNECTION SCHEDULE**. PROVIDE ASTM A490 SLIP CRITICAL BOLTS IN LIEU OF BOLT TYPE NOTED IN SCHEDULE.

BRACING BEAM CONNECTION. SEE TYPICAL **CONNECTION AT BRACING BEAM** FOR ADDITIONAL INFORMATION.

STEEL DECK. INDICATES DIRECTION OF DECKING. SEE TYPICAL **STEEL ROOF DECK NOTES** AND TYPICAL **DECK ATTACHMENT LAYOUT** DETAILS.

A4 FRAMING LEGEND

NOT TO SCALE

BrooksRansom ASSOCIATES
7415 N. PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
22203
REGISTERED PROFESSIONAL ENGINEER GAYLORD R. RANSOM No. S2386 EXPIRES 3-31-24 STRUCTURAL STATE OF CALIFORNIA
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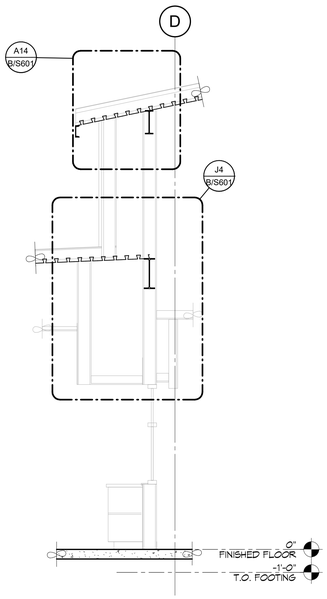
LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

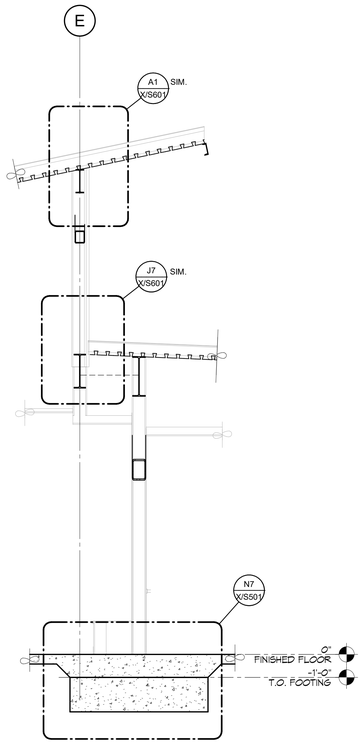
Revision

	Designed By: RP	Copyright Darden Architects
Scale: As indicated	Drawn By: RP	B/S302
Project Number: 2116	Checked By: ESB	
Date: 09/27/22	Reviewed By: SOC	

AD4-SX03



J1 SECTION
B/S201 B/S404 3/8" = 1'-0"



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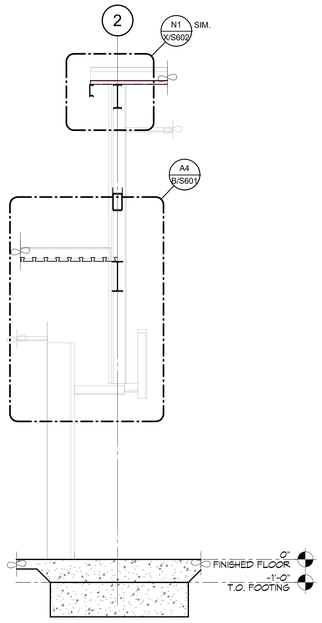
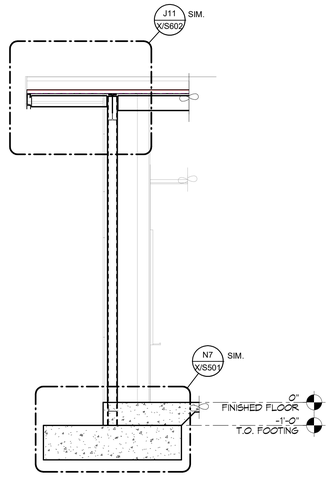
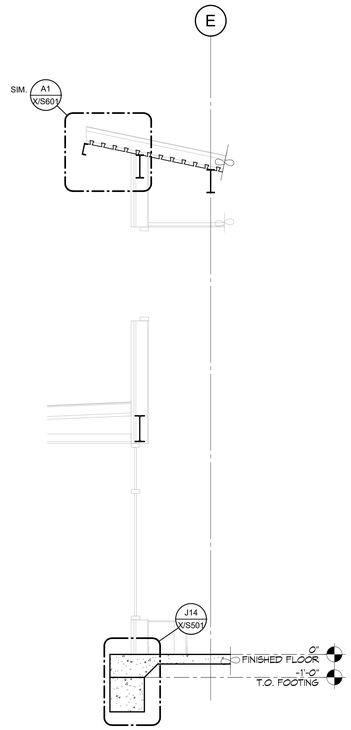
B/S201 B/S404 3/8" = 1'-0"



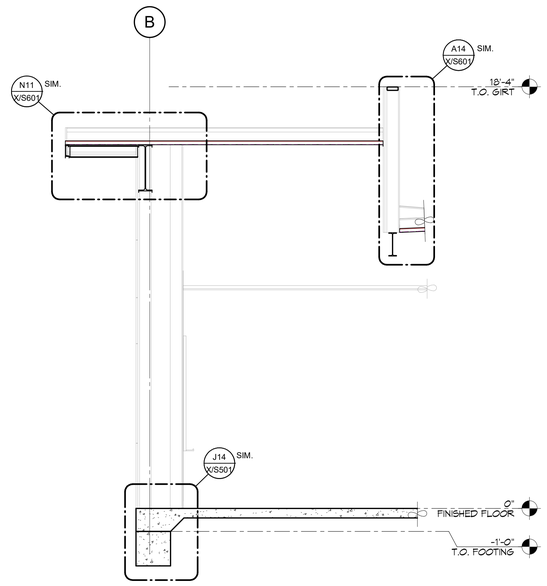
J7 SECTION
B/S201 B/S404 3/8" = 1'-0"



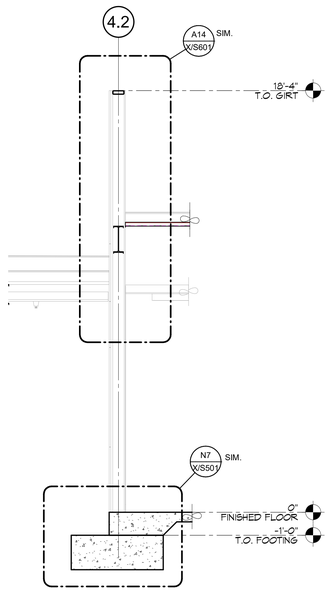
J11 SECTION
B/S201 B/S404 3/8" = 1'-0"



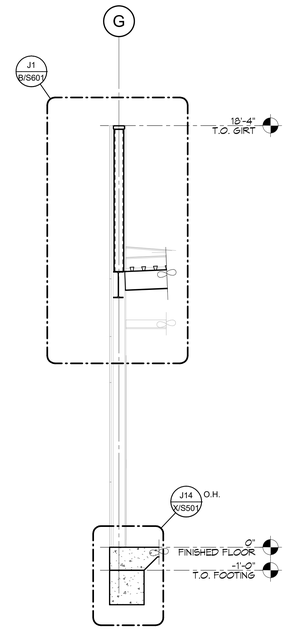
J14 SECTION
B/S201 B/S404 3/8" = 1'-0"



A4 SECTION
B/S201 B/S404 3/8" = 1'-0"



A11 SECTION
B/S201 B/S404 3/8" = 1'-0"



A14 SECTION
B/S201 B/S404 3/8" = 1'-0"

DSA File No.:

DSA Application No.:

Agency Approval

BrooksRansom ASSOCIATES
1405 N PALM AVE STE 101 | FRESNO, CA 93703
(559) 449-0444 OFFICE | (559) 449-0404 FAX

22203

REGISTERED PROFESSIONAL ENGINEER
RAYLOND R. RANSOM
No. 52386
EXPIRES 9-30-24
CIVIL
STATE OF CALIFORNIA

McKinley/Fowler Elementary School
CLOVIS UNIFIED SCHOOL DISTRICT
FRESNO, CA 93727
Project

BUILDING B - CLASSROOMS
WALL SECTIONS
Drawing

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LICENSED ARCHITECT
ANDREW A. CORBETT
No. C37102
Exp. 11-30-23
STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: RP | Drawn By: [illegible] | Checked By: [illegible]

Scale: 3/8" = 1'-0"
Drawn By: RP
Project Number: 2116
Checked By: ESB
Date: 09/27/22
Reviewed By SOG

B/S404

AD4-SX04

3/3/2023 8:24:55 AM
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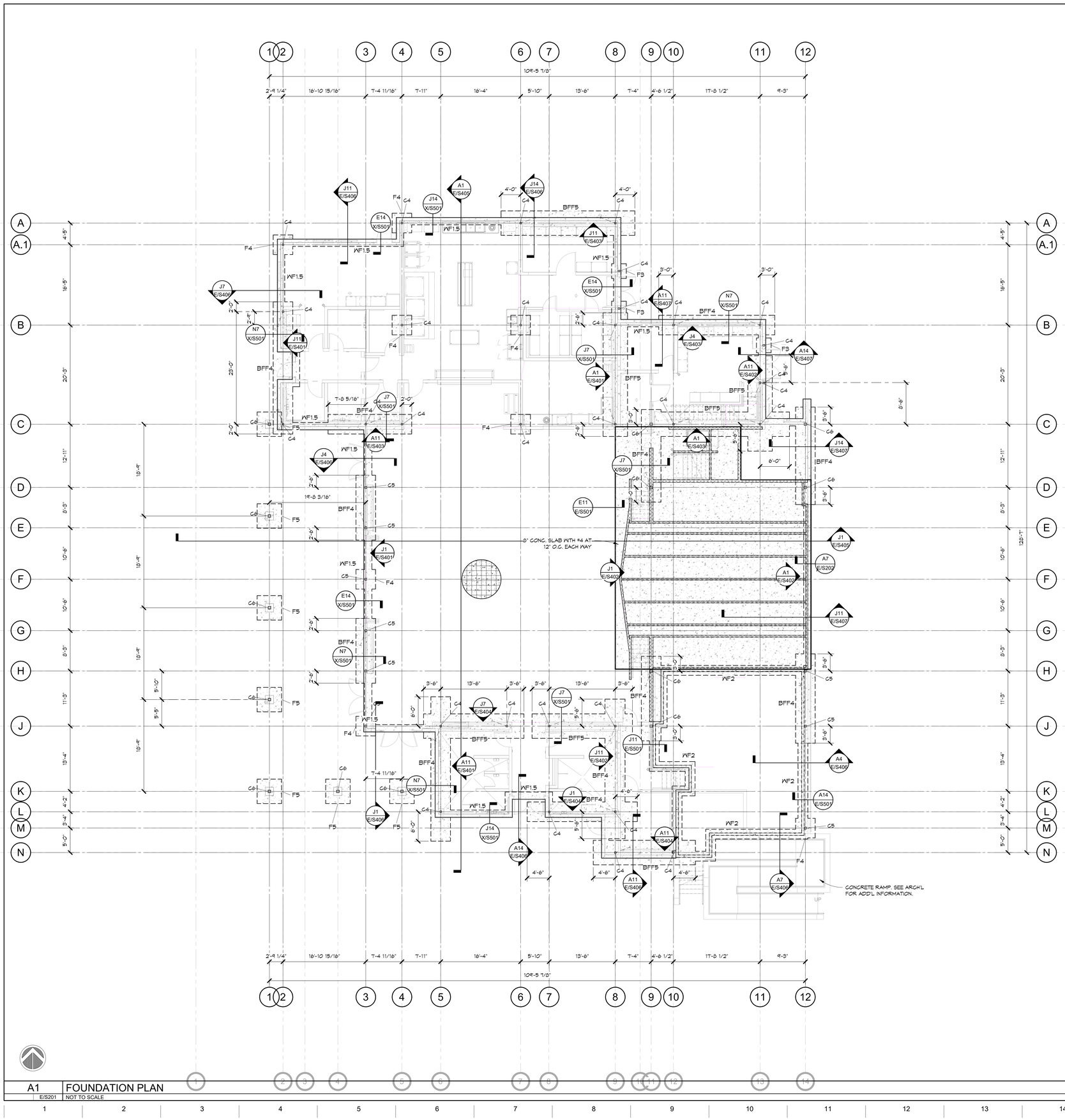

1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF EXTERIOR WALLS, CENTER OF COLUMN OR CENTER OF INTERIOR WALLS UNLESS NOTED OTHERWISE. EDGE OF SLAB AT PERIMETER OF BUILDING SHALL BE INDICATED IN SPECIFIC DETAILS AND ARCHITECTURAL. VERIFY ALL BUILDING DIMENSIONS WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. NOTIFY THE ARCHITECT IMMEDIATELY IF THERE ARE ANY CONFLICTS WITH THE DIMENSIONS SHOWN.
3. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
4. ALL PAD AND CONTINUOUS FOOTINGS ARE TO BE CENTERED ON WALLS AND COLUMNS ABOVE UNLESS NOTED OTHERWISE.
5. SEE CIVIL AND/OR ARCHITECTURAL SITE PLAN FOR LOCATION AND DIMENSIONS OF SIDEWALKS, MOW STRIPS, PLANTERS AND OTHER LANDSCAPING FEATURES.
6. SEE ARCHITECTURAL AND PLUMBING PLANS FOR LOCATION OF ALL PIPING AND DRAINS. SEE TYPICAL DETAILS FOR STRUCTURAL REQUIREMENTS AT LOCATIONS WHERE PIPES INTERSECT OR ALIGN NEXT TO FOOTINGS AND SLABS.
7. ALL EMBEDDED ITEMS SHALL BE IN PLACE AND SECURED PRIOR TO POURING OF CONCRETE.
8. ALL SILL PLATE ANCHOR BOLTS SHALL BE SIZED, SPACED, PLACED, AND HAVE THE WASHER AND MATERIAL FINISH AS SPECIFIED IN THE **LIGHT GAUGE STEEL NOTES**.
9. CONTRACTOR SHALL SUBMIT CONTROL JOINT PLAN FOR APPROVAL PRIOR TO POURING SLAB. SEE TYPICAL **CONTROL JOINT** DETAIL FOR ADDITIONAL INFORMATION.
10. ALL TOP OF FOOTINGS SHALL BE 1'-0" BELOW FINISH SLAB, UNLESS NOTED OTHERWISE.
11. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

N14 FOUNDATION NOTES
E/S201 NOT TO SCALE

STEEL STUDS ON CONCRETE CURB. AT EXTERIOR WALL LOCATIONS, PROVIDE 600S162-54 @ 16" O.C. U.N.O. SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

INTERIOR STUD WALL. SEE ARCHITECTURAL FOR ADDITIONAL INFORMATION.

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
C# - COLUMN SCHEDULE
P# - PLASTER SCHEDULE
W# - WALL SCHEDULE
F# - FOUNDATION SCHEDULE

T.O.F. +X'-X" TOP OF FOOTING (T.O.F.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

BRACE. SEE ELEVATION FOR SIZE AND ORIENTATION

CONCRETE SLAB. PROVIDE 5" THICK MINIMUM SLAB WITH #4 @ 18" O.C. EACH WAY, U.N.O. ON 2" OF SAND THAT IS PLACED ON A MINIMUM 10 MIL THICK MOISTURE VAPOR BARRIER. SEE TYPICAL **CONCRETE NOTES** FOR ADDITIONAL INFORMATION.

J14 FOUNDATION LEGEND
E/S201 NOT TO SCALE

STRUCTURAL FOUNDATION SCHEDULE

MARK	TYPE	REINFORCEMENT
BFF4	4'-0" WIDE X 18" THICK CONT.	(4) #6 BARS T&B W/ 90° HOOKS AT END. #5 TIES AT 6" O.C.
BFF5	5'-0" WIDE X 18" THICK CONT.	(5) #6 BARS T&B W/ 90° HOOKS AT END. #5 TIES AT 6" O.C.
F3	3'-0"SQ. X 1'-6"THICK	(5) #5 BARS BOTTOM EACH WAY
F4	4'-0"SQ. X 18" THICK	(4) #5 BARS BOTTOM EACH WAY
F5	5'-0"SQ. X 18" THICK	(9) #5 BARS T&B EACH WAY
WF1.5	1'-6" WIDE X 18" THICK CONT.	(2) #5 LONG. BARS BOTTOM
WF2	2'-0" WIDE X 18" THICK CONT.	(2) #5 BARS LONG. TOP & BOTTOM

E14 FOUNDATION SCHEDULE
NOT TO SCALE

STRUCTURAL COLUMN SCHEDULE

MARK	TYPE	COMMENTS
	HSS4X4X1/4	
C4	HSS4X4X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION. U.N.O.
C5	HSS5X5X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION. U.N.O.
C6	HSS6X6X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION. U.N.O.
C6	HSS6X6X5/16	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION. U.N.O.
P5	HSS5X5X5/16	SEE SPECIFIC DETAIL FOR ADD'L INFORMATION.

A14 COLUMN SCHEDULE
NOT TO SCALE

A1 FOUNDATION PLAN
E/S201 NOT TO SCALE

DSA File No.:

DSA Application No.:

Agency Approval

BrooksRansom ASSOCIATES
1405 N. Palm Ave. STE 103 | Fresno, CA 93711
(559) 449-8444 OFFICE | (559) 449-8404 FAX
22203

REGISTERED PROFESSIONAL ENGINEER — GAYLORD R. RANSOM — No. 52186 — EXPIRES 11-30-24 — STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E - MPR
FOUNDATION PLAN
Drawing

darden architects
ARCHITECTURE PLANNING INTERIORS
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6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT — ANDREW A. CORREA — No. C37102 — Exp. 11-30-23 — STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: ESB | Drawn By: | Checked By:

Scale: As indicated | Drawn By: ESB
Project Number: 2116 | Checked By: ESB
Date: 09/27/22 | Reviewed By: ESB

E/S201

3/3/2023 8:30:34 AM
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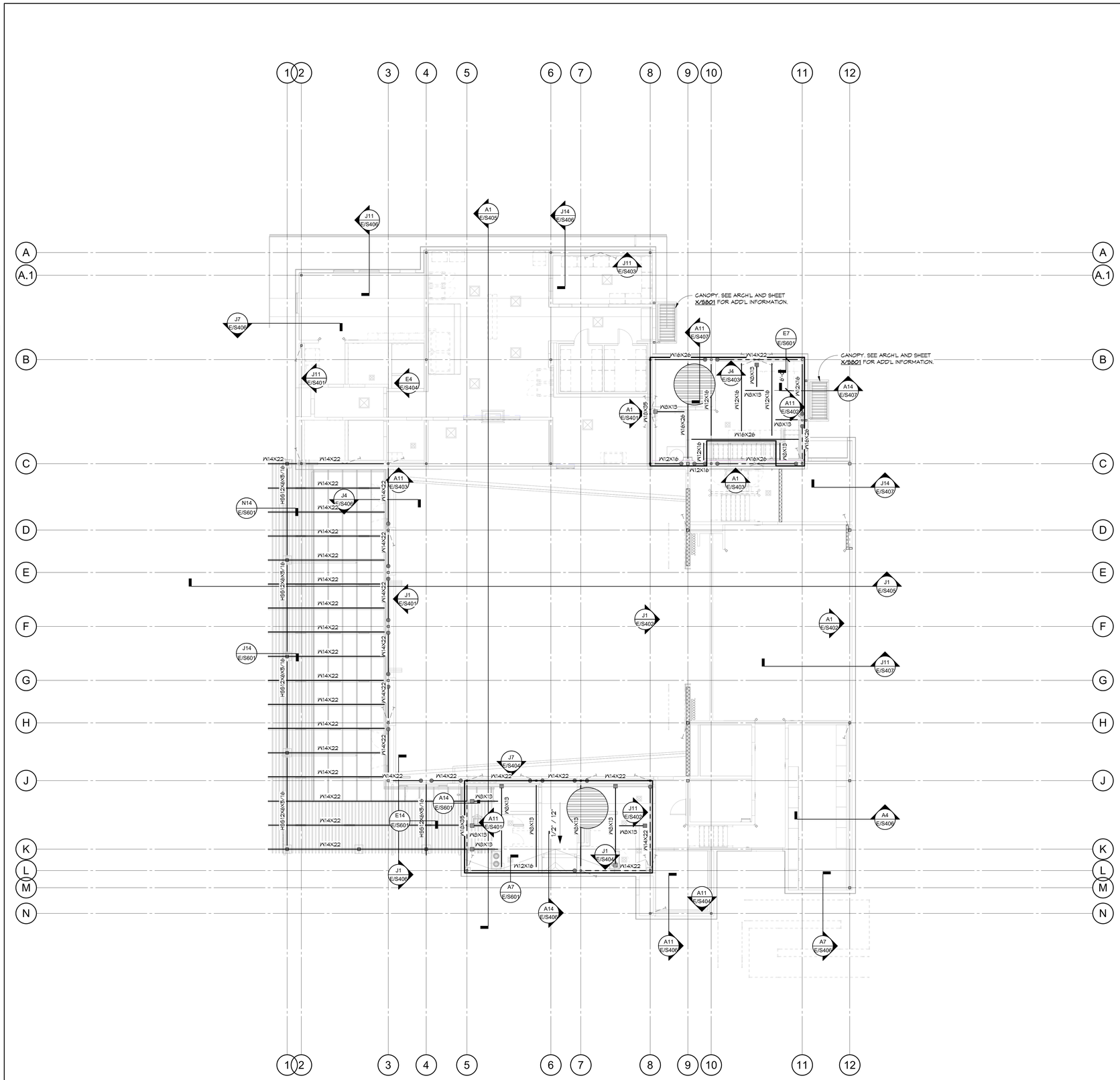
AD4-SX05



1. SEE TYPICAL SHEETS FOR ALL GENERAL AND MATERIAL NOTES, AND ALL TYPICAL SCHEDULES AND DETAILS. THE INFORMATION ON THE TYPICAL SHEETS APPLY TO THE PROJECT AND ARE NOT SPECIFICALLY REFERENCED ON PLAN WORK, UNLESS NOTED OTHERWISE. IF TYPICAL DETAILS ARE SPECIFIED ON PLANS OR NOTES, THEY WILL BE REFERENCED WITH THE WORD "TYPICAL" FOLLOWED BY **BOLD AND UNDERLINED** TEXT STATING THE TITLE OF THE TYPICAL DETAIL OR NOTE.
2. ALL UNCLEAR AND/OR MISSING DETAILS SHALL BE BROUGHT TO THE STRUCTURAL ENGINEER'S ATTENTION BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL TOP OF FRAMING ABOVE FINISH SLAB VARIES, SEE PLAN FOR INFORMATION.
4. VERIFY ROOF SLOPE(S) WITH ARCHITECTURAL PLANS.
5. SEE TYPICAL **MECHANICAL UNIT ATTACHMENT** DETAIL FOR ROOF MOUNTED EQUIPMENT. CONTRACTOR SHALL VERIFY AND COORDINATE WEIGHTS AND LOCATIONS OF ALL ROOF SUPPORTED MECHANICAL AND ELECTRICAL UNITS, AND NOTIFY THE STRUCTURAL ENGINEER OF RECORD IF ANY DISCREPANCIES ARE DETERMINED.
6. AT OPENINGS IN DECKING SEE TYPICAL **OPENINGS IN STEEL DECK** DETAILS FOR INFORMATION, UNLESS NOTED OTHERWISE. VERIFY OPENING SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
7. FOR FRAMING AT DRAINS, SEE TYPICAL **LARGE OPENINGS IN STEEL DECK** DETAIL AND INFORMATION ON PLANS.
8. FOR ALL STEEL TO STEEL CONNECTIONS SEE TYPICAL **BEAM-TO-COLUMN CONNECTION** AND **BEAM-TO-GIRDER CONNECTION** SCHEDULES.
9. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO CHORDS, COLLECTORS AND BRACED FRAME LINES (BOTH SIDES IF APPLICABLE) SHALL BE A FULL WIDTH SHEET. PROVIDE 2 ROWS OF PUDDLE WELDS AT ALL INTERIOR LATERAL RESISTING FRAME LINES.
10. ALL CHORD & COLLECTOR BEAMS TO BE INSTALLED PRIOR TO WELDING OF METAL DECKING.
11. BEAMS ARE EQUALLY SPACED BETWEEN MAIN BEAMS OR COLUMNS, U.N.O.
12. ALL ITEMS ARE NEW UNLESS NOTED OTHERWISE.

N14 FRAMING NOTES
E/S301 NOT TO SCALE

STEEL STUDS. AT EXTERIOR WALL LOCATIONS, PROVIDE 600S162-54 @ 16" O.C., U.N.O. SEE TYPICAL **BEARING AND EXTERIOR WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL. AT INTERIOR WALL LOCATIONS, SEE ARCHITECTURAL AND TYPICAL **INTERIOR NON-BEARING WALL FRAMING AT OPENINGS FOR LIGHT GAUGE STEEL** DETAIL.

WALL BELOW. SEE FRAMING PLAN AT LEVEL BELOW.

"XX" AS INDICATED ON PLAN. SEE TYPICAL **SCHEDULES** AS FOLLOWS:
C# - COLUMN SCHEDULE
P# - PILASTER SCHEDULE
W# - WALL SCHEDULE
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T.O.S. +X'-X" — TOP OF STEEL (T.O.S.) OR BOTTOM OF STEEL (B.O.S.). +X'-X" IS THE DISTANCE FROM FINISHED FIRST FLOOR, UNLESS NOTED OTHERWISE.

SIZE (STUDS) / CAMBER — STEEL BEAM.

STEEL FRAME. SEE ELEVATIONS AS INDICATED FOR FRAMING SIZES AND ORIENTATION.

BRACE. SEE ELEVATION AS INDICATED FOR BRACE SIZE

MOMENT FRAME CONNECTION. SEE TYPICAL **MOMENT FRAME CONNECTION** DETAILS.

COLLECTOR CONNECTION. SEE TYPICAL **COLLECTOR BEAM TO GIRDER CONNECTION SCHEDULE** AND **COLLECTOR BEAM TO COLUMN CONNECTION SCHEDULE**. PROVIDE ASTM A490 SLIP CRITICAL BOLTS IN LIEU OF BOLT TYPE NOTED IN SCHEDULE.

BEAM SPLICE. SEE TYPICAL **BEAM SPLICE** DETAIL.

BRACING BEAM CONNECTION. SEE TYPICAL **CONNECTION AT BRACING BEAM** FOR ADDITIONAL INFORMATION.

STEEL DECK. INDICATES DIRECTION OF DECKING. SEE TYPICAL **STEEL ROOF DECK NOTES** AND TYPICAL **DECK ATTACHMENT LAYOUT** DETAILS.

E14 FRAMING LEGEND
E/S301 NOT TO SCALE

STRUCTURAL COLUMN SCHEDULE

MARK	TYPE	COMMENTS
	HSS4X4X1/4	
C4	HSS4X4X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION, U.N.O.
C5	HSS5X5X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION, U.N.O.
C6	HSS6X6X1/4	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION, U.N.O.
C6	HSS6X6X5/16	SEE TYPICAL A14-X/S104 FOD ADD'L INFORMATION, U.N.O.
P5	HSS5X5X5/16	SEE SPECIFIC DETAIL FOR ADD'L INFORMATION.

A14 COLUMN SCHEDULE
NOT TO SCALE

DSA File No.:

DSA Application No.:

Agency Approval

BrooksRansom ASSOCIATES
7485 N PALM AVE. STE 100 | FRESNO, CA 93711
(559) 449-8444 OFFICE | (559) 449-8454 FAX
22203

REGISTERED PROFESSIONAL ENGINEER — STANFORD R. RANSOM — No. 52186 — EXPIRES 12-31-24 — STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
Project

BUILDING E - MPR
2ND FLOOR, LOW ROOF & CANOPY FRAMING PLAN
Drawing

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LICENSED ARCHITECT — ANDREW A. CORNEJO — No. C37102 — Exp. 11-30-23 — STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: ESB | Drawn By: ESB | Checked By: ESB | Reviewed By: ESB

Scale: As indicated
Project Number: 2116
Date: 09/27/22

E/S301

A1 2ND FLOOR, LOW ROOF & CANOPY FRAMING PLAN
E/S401 E/S301 1/8" = 1'-0"

3/3/2023 8:30:37 AM
C:\Users\eric\Documents\22203 McKinley-Fowler Bldg E_AD1 - R18_EricBain2011.rvt

AD4-SX06

MECHANICAL SCHEDULES

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING A)

	DESIGNATION	HC-A1	HC-A2
	VOLTS / PHASE	460 / 3	460 / 3
	F.L.A.		
	MCA / MOCP (AMPS)	18 / 20	14 / 20
	EER / SEER @ ARI	11 / 14.6	13 / 17.5
BLOWER	SUPPLY AIR (CFM)	2,400	1,400
BLOWER	EXT. SP (IN. WC)	1.0	1.0
BLOWER	DCV MIN. O.S.A. (CFM)	260	125
BLOWER	MAX. O.S.A. (CFM)	1,420	725
BLOWER	HP / BHP	2.75 / 0.96	1 / 0.64
BLOWER	RPM	1,116	974
BLOWER	DRIVE	DIRECT	DIRECT
COOLING	NOMINAL TONS	6.0	4.0
COOLING	SENSIBLE (MBH)	56.4	37.3
COOLING	TOTAL (MBH)	64.3	43.9
COOLING	REFRIGERANT TYPE	R-410A	R-410A
COOLING	EADB / EAWB (°F)	79.5 / 64.3	83.4 / 65.4
COOLING	AMBIENT AIR (°F)	105	105
HEATING	INPUT CAP. (MBH)	80.0	60.0
HEATING	OUTPUT CAP. (MBH)	64.8	48.6
HEATING	FUEL	NATURAL GAS	NATURAL GAS
HEATING	AFUE (%)	81	81
FILTERS	QTY / SIZE	4 / 20"x25"x2"	4 / 16"x25"x2"
FILTERS	TYPE	MERV-13	MERV-13
	MANUFACTURER	TRANE	TRANE
	TYPE	GAS/ELEC	GAS/ELEC
	MODEL NUMBER	YHC074	YHC047
	SERVICE	LIBRARY 112E, STORAGE 112G	LIBRARY CLASSROOM 112F
	*OPER. WT (LBS)	1,319	1,072
	ACCESSORIES	1,3,4,5,6,7,8	1,3,4,5,6,7

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4L1R OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1 HP, 2.8 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4LHR OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1/2 HP, 1.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DDC THERMOSTAT.
4. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
5. STAINLESS STEEL GAS HEAT EXCHANGER.
6. HAIL GUARDS.
7. FACTORY-INSTALLED PHASE MONITOR.
8. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING B)

	DESIGNATION	HC-B1	HC-B2	HC-B3	HC-B4	HC-B5	HC-B6	HC-B7	HC-B8	HC-B9
	VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
	F.L.A.									
	MCA / MOCP (AMPS)	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	21/ 25
	EER / SEER @ ARI	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	12.1 / 16.6
BLOWER	SUPPLY AIR (CFM)	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	3,540
BLOWER	EXT. SP (IN. WC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5
BLOWER	DCV MIN. O.S.A. (CFM)	110	110	110	110	110	110	115	110	170
BLOWER	MAX. O.S.A. (CFM)	470	470	470	465	465	470	485	470	450
BLOWER	HP / BHP	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	3.1 / 1.976
BLOWER	RPM	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,424
BLOWER	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	NOMINAL TONS	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.5
COOLING	SENSIBLE (MBH)	39.3	39.3	39.3	39.3	39.3	39.3	39.3	39.3	74.66
COOLING	TOTAL (MBH)	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	79.36
COOLING	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
COOLING	EADB / EAWB (°F)	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	83.7 / 65.5	81.6 / 64.9
COOLING	AMBIENT AIR (°F)	105	105	105	105	105	105	105	105	105
HEATING	INPUT CAP. (MBH)	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	120.0
HEATING	OUTPUT CAP. (MBH)	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	97.20
HEATING	FUEL	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS
HEATING	AFUE (%)	81	81	81	81	81	81	81	81	81
FILTERS	QTY / SIZE	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	2 / 18"x24"x2" 3 / 24"x16"x2"
FILTERS	TYPE	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
	TYPE	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC
	MODEL NUMBER	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHJ090
	SERVICE	LOWER GRADE CLASSROOM 100	LOWER GRADE CLASSROOM 101	LOWER GRADE CLASSROOM 102	LOWER GRADE CLASSROOM 103	LOWER GRADE CLASSROOM 104	LOWER GRADE CLASSROOM 105	LOWER GRADE CLASSROOM 106	LOWER GRADE CLASSROOM 107	CORRIDOR, RESTROOMS 404-405
	*OPER. WT (LBS)	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1385
	ACCESSORIES	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	2,3,4,5,6,7,8

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4LHR OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4L2 OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DDC THERMOSTAT.
4. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
5. STAINLESS STEEL GAS HEAT EXCHANGER.
6. HAIL GUARDS.
7. FACTORY-INSTALLED PHASE MONITOR.
8. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING C)

	DESIGNATION	HC-C1	HC-C2	HC-C3	HC-C4	HC-C5	HC-C6	HC-C7	HC-C8	HC-C9
	VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
	F.L.A.									
	MCA / MOCP (AMPS)	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	21 / 25
	EER / SEER @ ARI	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	13.0 / 17.5	12.1 / 16.6
BLOWER	SUPPLY AIR (CFM)	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	3,140
BLOWER	EXT. SP (IN. WC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1
BLOWER	DCV MIN. O.S.A. (CFM)	130	130	130	130	130	130	130	130	190
BLOWER	MAX. O.S.A. (CFM)	530	530	530	530	530	530	530	530	500
BLOWER	HP / BHP	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	1 / 0.74	3.1 / 1.325
BLOWER	RPM	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,245
BLOWER	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	NOMINAL TONS	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	7.5
COOLING	SENSIBLE (MBH)	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	71.11
COOLING	TOTAL (MBH)	46.0	46.0	46.0	46.0	46.0	46.0	46.0	46.0	79.22
COOLING	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
COOLING	EADB / EAWB (°F)	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	84.9 / 65.8	80.7 / 64.6
COOLING	AMBIENT AIR (°F)	105	105	105	105	105	105	105	105	105
HEATING	INPUT CAP. (MBH)	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	120.0
HEATING	OUTPUT CAP. (MBH)	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	97.2
HEATING	FUEL	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS
HEATING	AFUE (%)	81	81	81	81	81	81	81	81	81
FILTERS	QTY / SIZE	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	2 / 18"x24"x2" 3 / 24"x16"x2"
FILTERS	TYPE	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
	TYPE	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC
	MODEL NUMBER	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHJ090
	SERVICE	UPPER GRADE CLASSROOM 100	UPPER GRADE CLASSROOM 101	UPPER GRADE CLASSROOM 102	UPPER GRADE CLASSROOM 103	UPPER GRADE CLASSROOM 104	UPPER GRADE CLASSROOM 105	UPPER GRADE CLASSROOM 106	UPPER GRADE CLASSROOM 107	CORRIDOR, RESTROOMS 109-110
	*OPER. WT (LBS)	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1,294
	ACCESSORIES	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	2,3,4,5,6,7,8

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4LHR OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PR2BCCA-DT0B-4L2 OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DDC THERMOSTAT.
4. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
5. STAINLESS STEEL GAS HEAT EXCHANGER.
6. HAIL GUARDS.
7. FACTORY-INSTALLED PHASE MONITOR.
8. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING D)

	DESIGNATION	HC-D1	HC-D2	HC-D3	HC-D4	HC-D5	HC-D6	HC-D7	HC-D8	HC-D9	HC-D10	HC-D11
	VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
	F.L.A.											
	MCA / MOCP (AMPS)	29 / 40	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	14 / 20	12 / 15
	EER / SEER @ ARI	11.4 / 15.1	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5	13 / 17.5
BLOWER	SUPPLY AIR (CFM)	4,270	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,200
BLOWER	EXT. SP (IN. WC)	1.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
BLOWER	MIN. O.S.A. (CFM)	338	125	125	125	125	125	125	125	125	125	250
BLOWER	DCV MAX. O.S.A. (CFM)	620	505	505	505	505	505	505	505	505	505	845
BLOWER	HP / BHP	3.1 / 2.87	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67	1 / 0.67
BLOWER	RPM	1,618	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007	1,007
BLOWER	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	NOMINAL TONS	10.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
COOLING	SENSIBLE (MBH)	97.65	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	23.6
COOLING	TOTAL (MBH)	104.56	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	31.9
COOLING	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
COOLING	EADB / EAWB (°F)	83.1 / 65.3	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5	84.0 / 65.5
COOLING	AMBIENT AIR (°F)	105	105	105	105	105	105	105	105	105	105	105
HEATING	INPUT CAP. (MBH)	150.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	55.0
HEATING	OUTPUT CAP. (MBH)	121.5	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	45.0
HEATING	FUEL	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS
HEATING	AFUE (%)	81	81	81	81	81	81	81	81	81	81	81
FILTERS	QTY / SIZE	2 / 18"x24"x2" 3 / 24"x16"x2"	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	4 / 16x25x2	2 / 20x30x2
FILTERS	TYPE	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
	TYPE	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC
	MODEL NUMBER	YHJ120	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC047	YHC037
	SERVICE	CORRIDOR & LOWER GRADE CLASSROOM 100	LOWER GRADE CLASSROOM 101	LOWER GRADE CLASSROOM 102	LOWER GRADE CLASSROOM 103	LOWER GRADE CLASSROOM 104	LOWER GRADE CLASSROOM 105	LOWER GRADE CLASSROOM 106	UPPER GRADE CLASSROOM 107	UPPER GRADE CLASSROOM 108	UPPER GRADE CLASSROOM 109	CONCESSIONS 115
	*OPER. WT (LBS)	1,426	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1,072	1,072	692
	ACCESSORIES	2,3,4,5,6,7,8	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	1,3,4,5,6,7	3,4,9

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PR2BCCA-DT0B-4L2 OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1/2 HP, 1.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECE-PRCCECB-DYDB-4L2R OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DDC THERMOSTAT.
4. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
5. STAINLESS STEEL GAS HEAT EXCHANGER.
6. HAIL GUARDS.
7. FACTORY-INSTALLED PHASE MONITOR.
8. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.
9. MANUFACTURER'S MANUAL VOLUME DAMPER.

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER
HANNAH G. BIRTCHER
M39064
EXP. 09-30-24
MECHANICAL
STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
MECHANICAL SCHEDULES

Drawing

darden architects
ARCHITECTURE PLANNING INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT
ANDREW A. CORBETT
No. C37102
Exp. 11-30-25
STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: 12" = 1'-0"
Project Number: 2116
Date: 02/06/2023

X/M102

AD4-MX01

3/2/2023 10:37:31 AM

MECHANICAL SCHEDULES

SINGLE ZONE OUTDOOR UNIT SCHEDULE

DESIGNATION	ODU-A1	ODU-B1	ODU-C1	ODU-D1	ODU-E1	ODU-E2	ODU-E3	ODU-E4	ODU-E5	ODU-E6	ODU-K2, K2
NAMEPLATE AMPS	-	-	-	-	-	-	-	-	-	-	-
VOLTS / PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
MCA / MOCP	19 / 26	19 / 26	19 / 26	19 / 26	17 / 27	9 / 15	9 / 15	19 / 26	19 / 26	14 / 24	19 / 26
EER / SEER	12.2 / 21.4	12.2 / 21.4	12.2 / 21.4	12.2 / 21.4	- / 16	15.4 / 24.6	15.4 / 24.6	12.2 / 21.4	12.2 / 21.4	- / 19	12.2 / 21.4
COOLING CAP. (MBH)	24.0	24.0	24.0	24.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0
HEATING CAP. (MBH)	-	-	-	-	28.0	10.9	10.9	-	-	18.0	-
AMBIENT (°F)	105	105	105	105	105	105	105	105	105	105	105
MANUFACTURER	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI
TYPE	COOLING ONLY	COOLING ONLY	COOLING ONLY	COOLING ONLY	HEAT PUMP	HEAT PUMP	HEAT PUMP	COOLING ONLY	COOLING ONLY	HEAT PUMP	COOLING ONLY
MODEL NUMBER	TRUYA0241HA70A	TRUYA0241HA70A	TRUYA0241HA70A	TRUYA0241HA70A	NTXSKH24A112AA	NTXSST09A112AA	NTXSST09A112AA	TRUYA0241HA70A	TRUYA0241HA70A	NTXSKH12A112AA	TRUYA0241HA70A
BUILDING	BUILDING A	BUILDING B	BUILDING C	BUILDING D	BUILDING E	BUILDING E	BUILDING E	BUILDING E	BUILDING E	BUILDING K	BUILDING K1/K2
OPER. WT. (LBS)	151	151	151	151	190	81	81	151	151	129	151
ACCESSORIES	-	-	-	-	-	-	-	-	-	-	-

SINGLE ZONE INDOOR UNIT SCHEDULE

DESIGNATION		IDU-A1	IDU-B1	IDU-C1	IDU-D1	IDU-E1	IDU-E2	IDU-E3	IDU-E4	IDU-E5	IDU-E6	IDU-K1, K2
BLOWER	SUPPLY AIR (CFM)	705	705	705	705	735	395	395	705	705	440	705
	EXT. SP (IN. WC)	-	-	-	-	-	-	-	-	-	-	-
	MIN. O.S.A. (CFM)	-	-	-	-	60	15	15	-	-	75	-
	VOLTS / PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
	MCA / MOCP	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3	NOTE 3
	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	SENSIBLE (MBH)	15.4	15.4	15.4	15.4	18.72	9.84	9.84	15.4	15.4	11.04	15.4
	TOTAL (MBH)	24.0	24.0	24.0	24.0	24.0	12.0	12.0	24.0	24.0	12.0	24.0
	EADB / EAWB (°F)	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
HEATING	CAP. (MBH) @ 25°F	-	-	-	-	28.8	10.9	10.9	-	-	18.0	-
	KW	-	-	-	-	-	-	-	-	-	-	-
	STAGES	-	-	-	-	-	-	-	-	-	-	-
FILTERS	QUANTITY / SIZE	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -	1 / -
	TYPE	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY	FACTORY
	PD (IN. WC)	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURER		TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI
TYPE		HIGH WALL	HIGH WALL	HIGH WALL	HIGH WALL	AIR HANDLER	HIGH WALL	HIGH WALL	HIGH WALL	HIGH WALL	AIR HANDLER	HIGH WALL
MODEL NUMBER		TPKA0A0241KA70A	TPKA0A0241KA70A	TPKA0A0241KA70A	TPKA0A0241KA70A	NTXAMT24A112AA	NTXWST09A112A	NTXWST09A112A	TPKA0A0241KA70A	TPKA0A0241KA70A	NTXAMT12A112AA	TPKA0A0241KA70A
LOCATION		TELECOM 112T	TELECOM 406	TELECOM 112	TELECOM 112T	STAFF DINING 124	OFFICE 113	MUSIC OFFICE 104	CONTROL 106	TELECOM 126	OPEN WORK AREA	TELECOM 112
BUILDING		BUILDING A	BUILDING B	BUILDING C	BUILDING D	BUILDING E	BUILDING E	BUILDING E	BUILDING E	BUILDING E	BUILDING E	BUILDING K1/K2
CONNECTED ODU		ODU-A1	ODU-B1	ODU-C1	ODU-D1	ODU-E1	ODU-E2	ODU-E3	ODU-E4	ODU-E5	ODU-E6	ODU-K1, K2
OPER. WT (LBS)		46	46	46	46	93	22	22	46	46	93	46
ACCESSORIES		1,2,3	1,2,3	1,2,3	1,2,3	1,3,4	1,3,4	1,3,4	1,2,3	1,2,3	1,2,3	1,2,3

1. WIRED WALL MOUNTED THERMOSTAT.
2. EXTERNAL CONDENSATE PUMP. (BLUE DIAMOND MINI CONDENSATE PUMP W/ RESERVOIR & SENSOR MODEL #X87-721)
3. IDU POWERED THRU ODU.
4. INTERNAL CONDENSATE LIFT MECHANISM.

VRF INDOOR UNIT SCHEDULE

DESIGNATION		IDU 1-1A	IDU 1-2A	IDU 1-3A	IDU 1-4A	IDU 1-5A	IDU 1-6A	IDU 1-7A	IDU 1-8A
BLOWER	SUPPLY AIR (CFM)	1,300	300	300	300	370	1,270	300	370
	EXT. SP (IN. WC)	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
	MIN. O.S.A. (CFM)	230	35	35	100	60	380	50	70
	VOLTS / PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
	MCA / MOCP	4.38 / 15	1.75 / 15	1.75 / 15	1.75 / 15	2.88 / 15	2.88 / 15	1.75 / 15	2.13 / 15
	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	SENSIBLE (MBH)	33.8	5.3	5.3	6.6	11.4	28.0	5.3	7.9
	TOTAL (MBH)	46.6	5.3	5.3	7.8	14.6	31.5	5.3	10.5
	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
	EADB / EAWB (°F)	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0	80.0 / 67.0
HEATING	CAP. (MBH) @ 25°F	51.9	5.6	5.6	8.7	16.3	34.0	5.7	11.4
FILTERS	TYPE	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4	SEE NOTE 4
	EFFICIENCY	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
MANUFACTURER		TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI	TRANE-MITSUBISHI
TYPE		MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED	MEDIUM STATIC DUCTED
MODEL NUMBER		TPEFYP048MA	TPEFYP006MA	TPEFYP006MA	TPEFYP008MA	TPEFYP008MA	TPEFYP015MA	TPEFYP024MA	TPEFYP006MA	TPEFYP012MA
LOCATION/SERVICE		MAIN OFFICE 112D, CORRIDORS	OFFICE 112I	OFFICE 112J	CONFERENCE 112K	PRINCIPAL'S OFFICE 112H	WORKROOM 112Q, STOR 112P & RESTROOMS 112L-M	GIS OFFICE 112B	NURSE 112C
CONNECTED ODU		ODU-1A	ODU-1A	ODU-1A	ODU-1A	ODU-1A	ODU-1A	ODU-1A	ODU-1A
OPER. WT (LBS)		91	47	47	47	58	84	47	47
ACCESSORIES		1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6

1. WIRED WALL-MOUNTED THERMOSTAT.
2. FIELD-INSTALLED FACTORY APPROVED CONDENSATE PUMP.
3. OUTSIDE AIR PROVIDED BY ENERGY RECOVERY VENTILATOR, ERV-1.
4. MERV-13 FILTER PROVIDED AT RETURN GRILLE, MARK C. SEE GRILLE SCHEDULE FOR ADDITIONAL INFORMATION.
5. MANUFACTURER'S DRAIN PAN LEVEL SENSOR/CONTROL. SENSOR POWERED BY INDOOR UNIT.
6. INSULATED BALL VALVES ON ALL REFRIGERANT PIPE CONNECTIONS.

NOTE FROM MANUFACTURER: COORDINATE FINAL PIPE LENGTHS WITH UNIT MANUFACTURER PRIOR TO INSTALLATION; PIPE SIZES MAY VARY.

VRF OUTDOOR UNIT SCHEDULE

DESIGNATION	ODU 1-1
VOLTS / PHASE	460 / 3
MCA / MOCP	18 / 25
EER / IEER	12.1 / 23.3
COP @ 47°F	3.61
NOM. COOLING CAP. (MBH)	120.0
NOM. HEATING CAP. (MBH)	135.0
AMBIENT (°F)	105
MANUFACTURER	TRANE-MITSUBISHI
TYPE	HEAT RECOVERY
MODEL NUMBER	TURYP1204AN40AN
LOCATION	BUILDING A ROOF
OPER. WT. (LBS)	633
ACCESSORIES	-

BRANCH CIRCUIT CONTROLLER SCHEDULE

DESIGNATION	BCC 1-1
VOLTS / PHASE	208-230 / 1
MCA	- / -
MANUFACTURER	TRANE-MITSUBISHI
MODEL NUMBER	TCMBM0108JA11N4
PORTS	8
LOCATION	BUILDING A
CONNECTED IDUs	1-1 THRU 1-8
OPER. WT. (LBS)	106
ACCESSORIES	1,2

1. INSULATED BALL VALVES ON ALL PORTS.
2. RS/RL FITTINGS AND REDUCERS AS REQUIRED PER MANUFACTURER'S SIZING.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING E)

DESIGNATION		HC-E1	HC-E2	HC-E3	HC-E4
VOLTS / PHASE		460 / 3	460 / 3	460 / 3	460 / 3
F.L.A.					
MCA / MOCP (AMPS)		29 / 40	29 / 40	15 / 20	15 / 20
EER / SEER @ ARI		11 / 14.6	11 / 14.6	13 / 17.2	13 / 17.2
BLOWER	SUPPLY AIR (CFM)	3,200	3,200	1,800	1,750
	EXT. SP (IN. WC)	1.0	1.0	1.0	1.0
	MIN. O.S.A. (CFM)	0	0	0	0
	DCV MIN. O.S.A. (CFM)	0	0	0	0
	HP / BHP	2.75 / 0.74	2.75 / 0.74	1 / 0.76	1 / 0.73
	RPM	1,227	1,227	1,033	1,023
	DRIVE	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	NOMINAL TONS	10.0	10.0	5.0	5.0
	SENSIBLE (MBH)	93.9	93.9	41.1	42.1
	TOTAL (MBH)	102.2	102.2	50.5	50.7
	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A
	EADB / EAWB (°F)	84.0 / 65.6	84.0 / 65.6	79.2 / 64.2	80.4 / 64.5
	AMBIENT AIR (°F)	105	105	105	105
HEATING	INPUT CAP. (MBH)	150.0	150.0	60.0	60.0
	OUTPUT CAP. (MBH)	120.0	120.0	48.6	48.6
	FUEL	NATURAL GAS	NATURAL GAS	NATURAL GAS	NATURAL GAS
	AFUE (%)	80	80	81	81
FILTERS	QTY / SIZE	0 / 0	0 / 0	0 / 0	0 / 0
	TYPE	MERV-13	MERV-13	MERV-13	MERV-13
MANUFACTURER		TRANE	TRANE	TRANE	TRANE
TYPE		GAS/ELEC	GAS/ELEC	GAS/ELEC	GAS/ELEC
MODEL NUMBER		YSJ120	YSJ120	YHC067	YHC067
SERVICE		MPR	MPR	STAGE	KITCHEN
*OPER. WT (LBS)		1,572	1,572	1,131	1,131
ACCESSORIES		2,3,4,5,6,7,8	2,3,4,5,6,7,8	1,3,4,5,6,7	1,3,4,5,6,7

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4LHR OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1/2 HP, 1.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-DYDB-4L2R OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 2 HP, 4.5 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. DDC THERMOSTAT.
4. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
5. STAINLESS STEEL GAS HEAT EXCHANGER.
6. HAIL GUARDS.
7. FACTORY-INSTALLED PHASE MONITOR.
8. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING K1)

DESIGNATION		HC-K1	HC-K2
VOLTS / PHASE		460 / 3	460 / 3
F.L.A.			
MCA / MOCP (AMPS)		21 / 25	18 / 20
EER / SEER @ ARI		12.1 / 16.6	12. / 15.9
BLOWER	SUPPLY AIR (CFM)	2,570	1920
	EXT. SP (IN. WC)	1.26	1.1
	MIN. O.S.A. (CFM)	215	145
	DCV MAX. O.S.A. (CFM)	880	615
	HP / BHP	3.1 / 1.138	3.1 / 0.764
	RPM	1186	1374
	DRIVE	DIRECT	DIRECT
COOLING	NOMINAL TONS	7.5	6.0
	SENSIBLE (MBH)	67.02	54.37
	TOTAL (MBH)	79.25	63.41
	REFRIGERANT TYPE	R-410A	R-410A
	EADB / EAWB (°F)	81.6 / 64.9	82.5 / 65.1
	AMBIENT AIR (°F)	105	105
HEATING	INPUT CAP. (MBH)	120.0	80.0
	OUTPUT CAP. (MBH)	97.2	64.8
	FUEL	NATURAL GAS	NATURAL GAS
	AFUE (%)	81	81
FILTERS	QTY / SIZE	2 / 18"x24"x2" 3 / 24"x16"x2"	2 / 18"x24"x2" 3 / 24"x16"x2"
	TYPE	MERV-13	MERV-13
MANUFACTURER		TRANE	TRANE
TYPE		GAS/ELEC	GAS/ELEC
MODEL NUMBER		YHJ090	YHJ072
SERVICE		CLASSROOM 101	CLASSROOM 102
*OPER. WT (LBS)		1,385	1,385
ACCESSORIES		2,3,4,5,6,7	2,3,4,5,6,7,8

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PR2BCCA-DT0B-4L1 OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1 HP, 2.8 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. DDC THERMOSTAT.
3. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
4. STAINLESS STEEL GAS HEAT EXCHANGER.
5. HAIL GUARDS.
6. FACTORY-INSTALLED PHASE MONITOR.
7. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.
8. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PR2BCCA-DT0B-4LH OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1 HP, 2.8 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

PACKAGE AIR CONDITIONING SCHEDULE (BUILDING K2)

DESIGNATION		HC-K3	HC-K4
VOLTS / PHASE		460 / 3	460 / 3
F.L.A.			
MCA / MOCP (AMPS)		21 / 25	15 / 20
EER / SEER @ ARI		11 / 14.6	13 / 17.2
BLOWER	SUPPLY AIR (CFM)	2430	1880
	EXT. SP (IN. WC)	1.234	1.0
	MIN. O.S.A. (CFM)	210	160
	DCV MAX. O.S.A. (CFM)	855	700
	HP / BHP	3.1 / 1.043	1.0 / 0.81
	RPM	1154	1048
	DRIVE	DIRECT	DIRECT
COOLING	NOMINAL TONS	7.5	5.0
	SENSIBLE (MBH)	62.97	44.9
	TOTAL (MBH)	78.75	52.46
	REFRIGERANT TYPE	R-410A	R-410A
	EADB / EAWB (°F)	81.6 / 64.9	82.5 / 65.1
	AMBIENT AIR (°F)	105	105
HEATING	INPUT CAP. (MBH)	120.0	-
	OUTPUT CAP. (MBH)	97.2	48.60
	FUEL	NATURAL GAS	NATURAL GAS
	AFUE (%)	81	81
FILTERS	QTY / SIZE	2 / 18"x24"x2" 3 / 24"x16"x2"	0 / 0
	TYPE	MERV-13	MERV-13
MANUFACTURER		TRANE	TRANE
TYPE		GAS/ELEC	GAS/ELEC
MODEL NUMBER		YHJ090	YHC067
SERVICE		CLASSROOM 103	CLASSROOM 104
*OPER. WT (LBS)		1,385	1,328
ACCESSORIES		1,2,3,4,5,6,7	2,3,4,5,6,7,8

*OPERATING WEIGHT INCLUDES BASE UNIT AND ACCESSORIES. CURB BY OTHERS.
1. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PR2BCCA-DT0B-4L1 OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1 HP, 2.8 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. DDC THERMOSTAT.
3. CO2 SENSOR FOR DEMAND CONTROL VENTILATION.
4. STAINLESS STEEL GAS HEAT EXCHANGER.
5. HAIL GUARDS.
6. FACTORY-INSTALLED PHASE MONITOR.
7. SUPPLY DUCT SMOKE DETECTOR. (SYSTEM SENSOR D4120) PROVIDE CONDUIT AND CONDUCTORS AS REQUIRED FOR UNIT SHUTDOWN UPON DETECTION OF SMOKE. FURNISH REMOTE TEST SWITCH (RTS451KEY) TO ELECTRICAL FOR INSTALLATION.
8. TITLE 24 COMPLIANT 0-100% MODULATING ECONOMIZER WITH POWER EXHAUST, MICROMETL #PECD-PRCCECB-D00B-4LH OR APPROVED EQUAL. PROVIDE SEPARATE POWER CONNECTION FOR POWER EXHAUST (460V / 3 PH, 1 HP, 2.8 FLA). SEE ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER
TRAMMAR G. BRYDON
M39064
EXP. 09-30-24
MECHANICAL
STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
MECHANICAL SCHEDULES

Drawing

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LICENSED ARCHITECT
ANDREW A. CORNEJO
No. C37102
REG. 11-30-23
STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
1	Revision 1	Date 1

Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: 12" = 1'-0"
Project Number: 2116
Date: 02/06/2023

X/M103

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AD4-MX02

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
MAKE-UP AIR UNIT	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
OCCUPIED / SHUTDOWN COMMAND				X	X	X							X	
OCCUPIED / SHUTDOWN STATUS			X			X								
FAN START / STOP				X	X	X							X	SEE NOTE 1.
FAN STATUS			X			X		X	X			X		
PUMP START / STOP			X			X		X	X			X		
PUMP STATUS			X			X			X				X	
SUPPLY AIR TEMPERATURE			X			X		X	X				X	
GAS HEAT ENABLE			X			X			X				X	
GAS HEAT STATUS	X					X			X	X			X	PROVIDE STATUS FOR EACH STAGE.

NOTES:
1. ON/OFF/AUTO OVERRIDE SWITCH PROVIDED IN SPACE.

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
ENERGY RECOVERY VENTILATOR	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
OCCUPIED / SHUTDOWN COMMAND					X	X							X	
OCCUPIED / SHUTDOWN STATUS						X								
START / STOP				X	X	X							X	
SUPPLY FAN STATUS			X			X			X			X		
EXHAUST FAN STATUS			X			X			X			X		
SUPPLY TEMP	X					X			X				X	
FILTER DIFFERENTIAL PRESSURE STATUS			X			X		X	X				X	
ERV STOP/JOG WHEEL ECONOMIZER				X		X			X				X	
ERV WHEEL ROTATION DETECTOR			X			X		X	X				X	

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
SINGLE ZONE SPLIT SYSTEM	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
START/STOP				X	X	X							X	
IDU STATUS			X			X			X				X	
ODU STATUS			X			X			X				X	
ROOM TEMP	X					X			X				X	

NOTES:
1. PROVIDE BACNET INTERFACE (TRANE-MITSUBISHI PAC-UKPRC001-CN-1) FOR INTEGRATION OF SINGLE ZONE SPLIT SYSTEM INTO CAMPUS EMS/DDC SYSTEM.

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
EXHAUST FAN	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
START / STOP				X	X	X							X	
FAN STATUS			X			X			X			X		
ROOM TEMP	X					X			X				X	SEE NOTE 1.

NOTES:
1. PROVIDE ROOM TEMPERATURE SENSOR IF SERVING AN EQUIPMENT ROOM OR STORAGE ROOM.

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
EVAPORATIVE COOLER	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
OCCUPIED / SHUTDOWN COMMAND					X	X							X	
OCCUPIED / SHUTDOWN STATUS						X								
START / STOP				X	X	X							X	
FAN STATUS			X			X		X	X			X		
PUMP STATUS			X			X		X	X			X		
ROOM TEMP	X					X			X				X	

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
GENERAL INPUTS	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
AMBIENT LIGHT			X			X			X			X		
OUTDOOR TEMPERATURE	X					X			X	X			X	
EXTERIOR LIGHTING				X	X	X							X	
DOMESTIC WATER HEATER CIRC PUMP				X	X	X							X	
ELECTRIC UTILITY METER	X					X			X	X			X	
GAS UTILITY METER	X					X			X	X			X	
AUTOMATIC DEMAND SHED SIGNAL			X			X		X	X	X			X	
AUTOMATIC DEMAND SHED CONTROL				X		X		X	X	X			X	

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
PACKAGE UNIT	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
OCCUPIED / SHUTDOWN COMMAND				X	X	X							X	
OCCUPIED / SHUTDOWN STATUS			X			X								
FAN START / STOP				X	X	X							X	
FAN STATUS			X			X		X	X			X		
FAN VARIABLE FREQUENCY DRIVE	X					X	X		X				X	
COMPRESSOR(S)			X			X			X				X	PROVIDE STATUS FOR EACH COMPRESSOR.
GAS HEAT STAGE(S)			X			X			X				X	PROVIDE STATUS FOR EACH STAGE.
ROOM TEMP	X					X			X	X			X	
ROOM TEMP - SET POINT	X					X	X		X	X			X	
SUPPLY AIR TEMP	X					X		X	X	X			X	SET POINT ADJUSTABLE BY OCCUPANT.
ECONOMIZER				X		X			X				X	
CO2 SENSOR	X					X			X				X	
FILTER DIFFERENTIAL PRESSURE STATUS	X					X		X	X				X	

SCHEDULE OF POINTS

EQUIPMENT TYPE	POINT DESCRIPTION													
	HARDWARE				SOFTWARE							GRAPHICS		
VRF SYSTEM EMS INTERFACE	ANALOG INPUT	ANALOG OUTPUT	DIGITAL INPUT	DIGITAL OUTPUT	SCHEDULE	TEXT DISPLAY	MODIFY VALUE	ALARM	LOG	TREND		ANIMATED	DISPLAY	
POINT DESCRIPTION	AI	AO	DI	DO	S	T	M	A	L	T		A	D	COMMENTS
SCHEDULE INPUT				X	X	X							X	
SCHEDULE STATUS			X			X								
START / STOP				X	X	X							X	
IDU STATUS			X			X		X	X			X		
ODU STATUS			X			X		X	X			X		
HEATING / COOLING MODE STATUS			X			X			X				X	
ALARM / ERROR CODES			X			X		X	X				X	
COMPRESSOR(S)			X			X			X				X	PROVIDE STATUS FOR EACH COMPRESSOR.
ROOM TEMP	X					X			X	X			X	
ROOM TEMP - SET POINT		X				X	X							
ROOM TEMP - SET POINT STATUS	X					X			X	X			X	SET POINT ADJUSTABLE BY OCCUPANT.
ROOM TEMP - UPPER SET POINT LIMIT		X				X								
ROOM TEMP - LOWER SET POINT LIMIT		X				X								
IDU FAN SPEED STATUS			X			X							X	
IDU ROOM CONTROLLER LOCK SETTING				X		X								
IDU ROOM CONTROLLER LOCK STATUS			X			X			X	X			X	
SUPPLY AIR TEMP	X					X			X	X			X	
RETURN AIR TEMP	X					X			X	X			X	

NOTES:
1. PROVIDE VRF SYSTEM BACNET GATEWAY (MITSUBISHI BAC-HD 150) FOR INTEGRATION OF VRF SYSTEM INTO CAMPUS EMS/DDC SYSTEM AND DIDO BOARD TO INTERFACE WITH ERV-1.

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General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER
HANNAH G. BRYDOON
M39064
EXP. 09-30-24
MECHANICAL
STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
MECHANICAL SCHEDULE OF POINTS

Drawing

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LICENSED ARCHITECT
ANDREW A. CORREA
No. C37102
Exp. 11-30-23
STATE OF CALIFORNIA

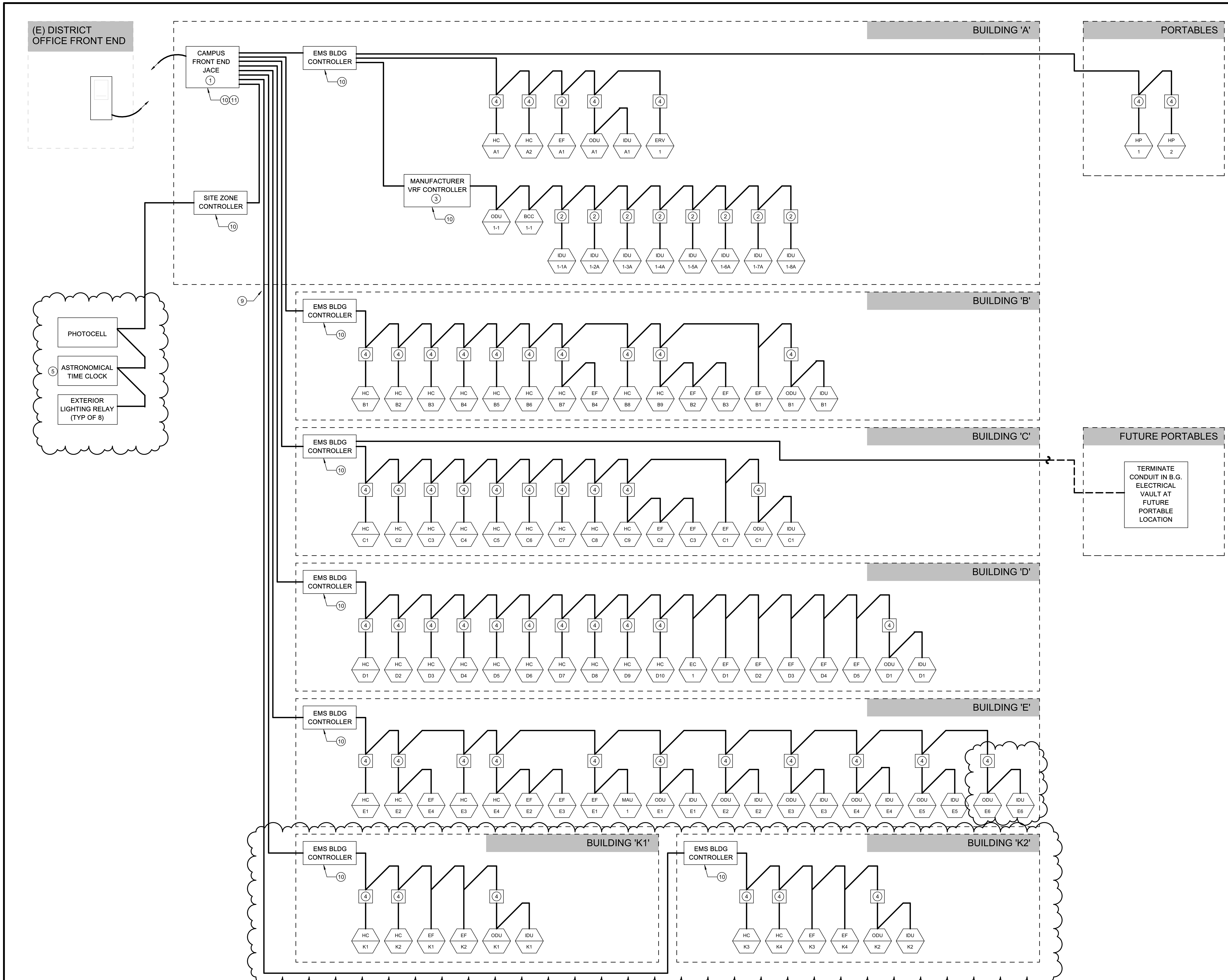
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	
Scale: 12" = 1'-0"	Drawn By: HB	X/M110
Project Number: 2116	Checked By: JCS	
Date: 02/06/2023	Reviewed By: HB	

3/2/2023 11:07:23 AM



A1 EMS SYSTEM ARCHITECTURE

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KEYNOTES

1. EMS CONTROLLER, MAIN COMPONENTS, AND CONTROL BOX(ES) TO BE LOCATED IN BLDG A TELECOM ROOM 120.
2. ZONE CONTROLLER MODEL PAR-32MAAJ WITH T-STAT MODEL TAC-YT53CRAU. INCLUDE CO2 SENSORS FOR IDU ZONES WHERE SHOWN ON PLAN.
3. VRF CONTROL DEVICES PROVIDED BY VRF MANUFACTURER, INSTALLED BY EMS CONTRACTOR. WIRE SUPPLIED AND INSTALLED BY EMS.
4. ZONE CONTROLLER.
5. TIME CLOCK SHALL BE PROGRAMMED PER OWNER'S REQUIREMENTS. PROVIDE ONE HOUR BYPASS SWITCH.
6. NOT USED.
7. NOT USED.
8. EMPTY 2" CONDUIT ROUTED FROM BUILDING TO FUTURE PORTABLE LOCATION.
9. ALL EMS COMMUNICATIONS BETWEEN BUILDINGS AND CONTROLLES SHALL BE HARD-WIRED. WIRELESS IS NOT ACCEPTABLE. FIELD COORDINATE BELOW GRADE CONDUIT WITH SIMILAR PATHS AS ELECTRICAL. (TYP)
10. POWER TO CONTROLLER PROVIDED BY DIV. 26. STEP DOWN TRANSOFMER PROVIDED BY EMS.
11. DATA TO CONTROLLER PROVIDED BY DIV. 26.

General Notes

NET POSITIVE consulting engineers
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Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

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TYPICAL INFORMATION
EMS SYSTEM ARCHITECTURE

Drawing

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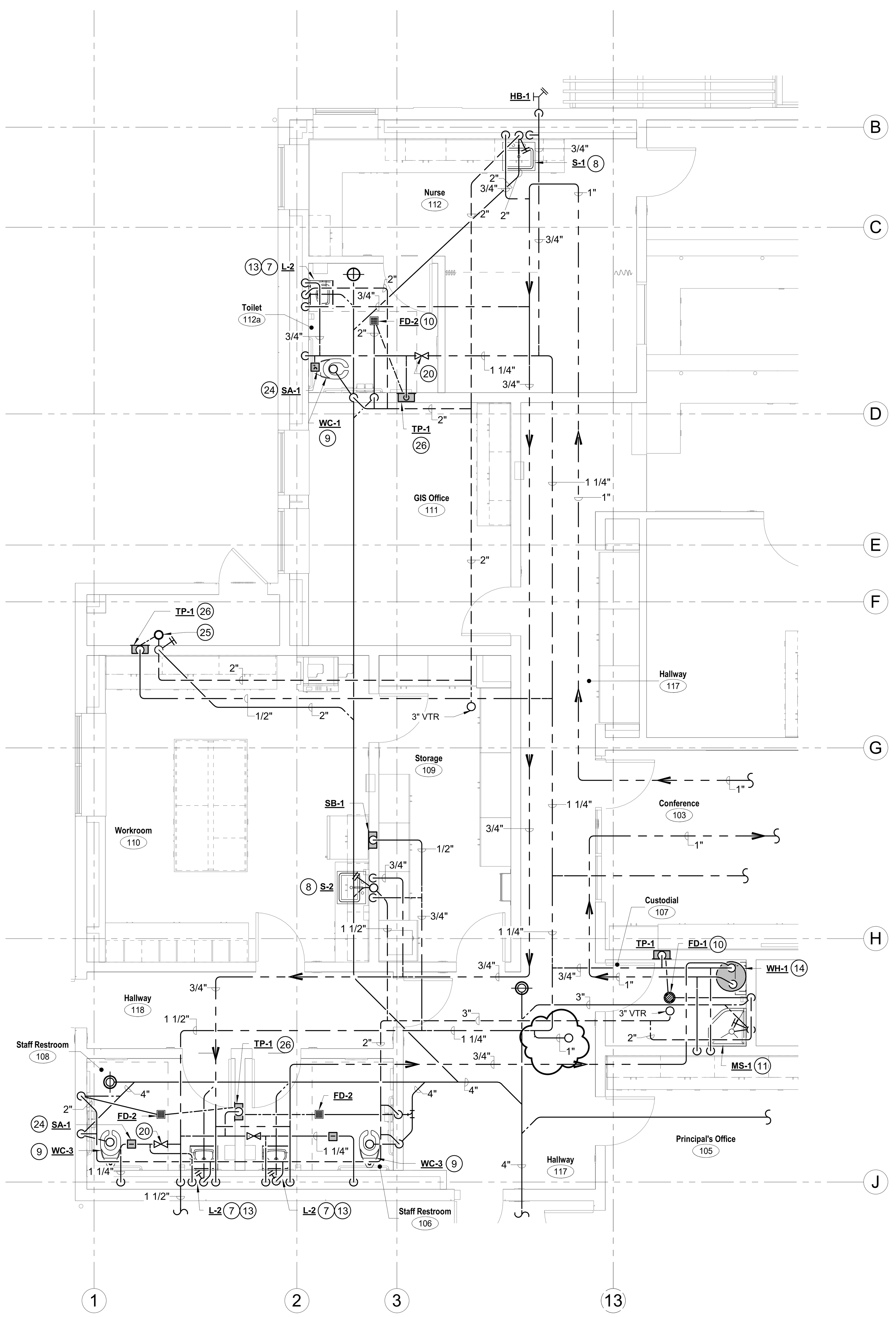
No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	
Scale: 12" = 1'-0"	Drawn By: HB	X/M111
Project Number: 2116	Checked By: JCS	
Date: 02/06/2023	Reviewed By: HB	

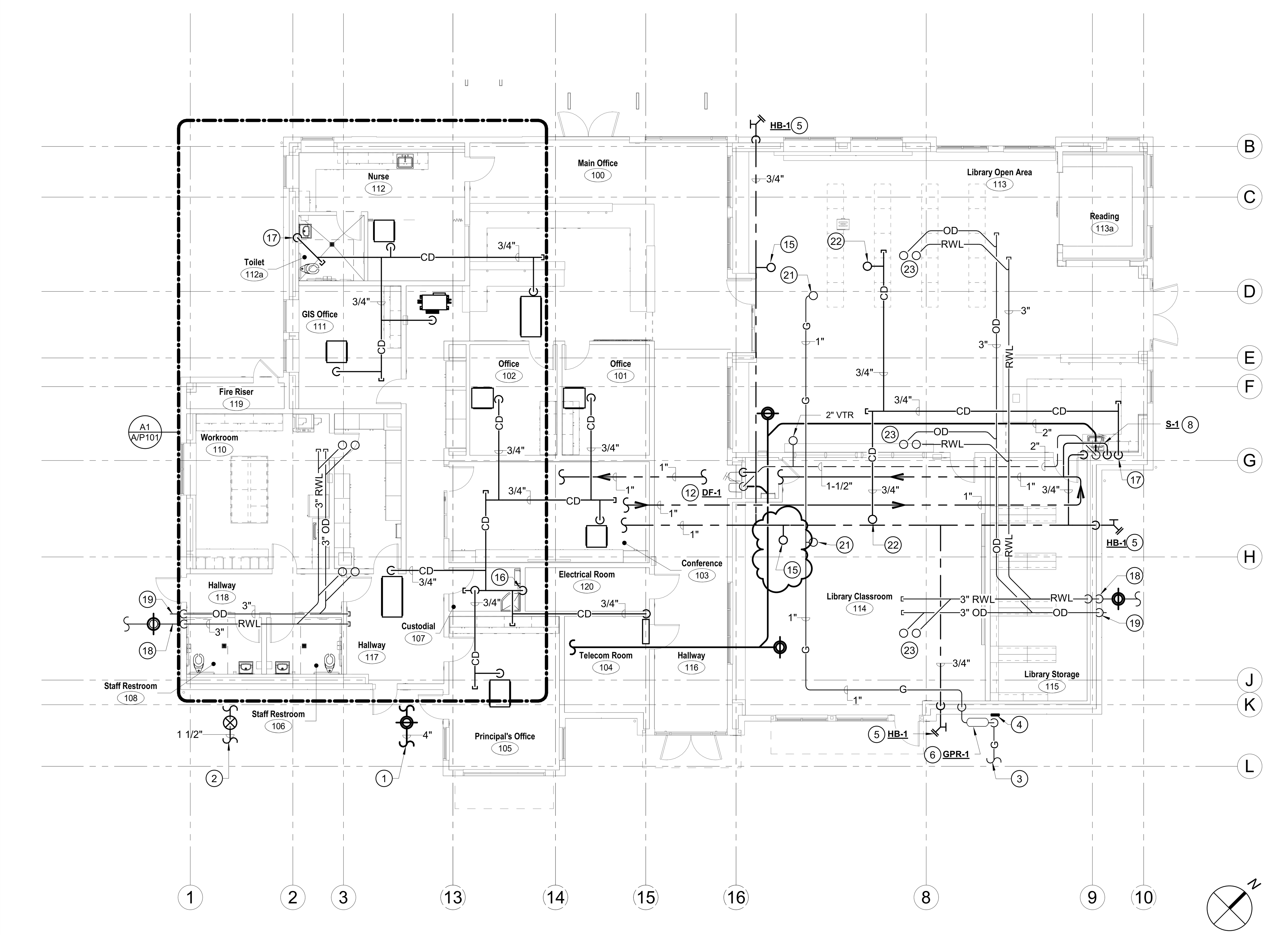
AD4-MX04

3/2/2023 4:20:44 PM



A1 ENLARGED PLUMBING PLAN

1/4" = 1'-0"



A8 PLUMBING FLOOR PLAN

1/8" = 1'-0"

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KEYNOTES

1. 4" SEWER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
2. 1-1/2" COLD WATER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
3. MEDIUM PRESSURE GAS CONNECTION FOR BUILDING. SEE SHEET SD/P101 FOR CONTINUATION.
4. GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
5. 3/4" CW DN AT +1'-6" AFF.
6. BUILDING GAS SHUT-OFF VALVE & GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
7. COORDINATE SEWER ROUTING FOR PLUMBING FIXTURE ABOVE STRUCTURAL GRADE BEAM.
8. 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN TO SINK.
9. 4" S, 2" V, 1" CW DN TO WATER CLOSET.
10. 2" S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
11. 3" S W/ TRAP, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR MOP SINK.
12. 2" S, 1-1/2" V & 3/4" CW DN FOR DRINKING FOUNTAIN.
13. 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR LAVATORY.
14. WATER HEATER ON PLATFORM. SEE DETAIL J7 ON SHEET X/P800.
15. 1" CW UP TO ROOF HYDRANT. SEE SHEET A/P301 FOR CONTINUATION.
16. CONDENSATE DRAIN DN IN WALL. TERMINATE IN MOP SINK W/ 90° ELL DN @ +2" ABV. SINK RIM.
17. CONDENSATE DRAIN PIPING DN IN WALL. CONNECT TO SINK TAILPIECE PER DETAIL A11 ON SHEET X/P800.
18. RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
19. OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
20. CW ISOLATION VALVE ABOVE CEILING. COORDINATE VERIFY AND COORDINATE LOCATION WITH CEILING ACCESS PANEL.
21. GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET A/P301 FOR CONTINUATION.
22. CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET A/P301 FOR CONTINUATION.
23. ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET A/P301 FOR CONTINUATION.
24. SHOCK ABSORBER. (TYP)
25. HUB DRAIN PER DETAIL N1 ON SHEET X/P800
26. 1/2" CW DN TO TRAP PRIMER.

GENERAL NOTES

A. SEE DETAIL N1 ON SHEET X/P800 FOR TYPICAL CLEANOUT TO GRADE.

B. SEE DETAIL J14 ON SHEET X/P800 FOR TYPICAL SHUT-OFF VALVE INYARD BOX.

C. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER HANNAH G. BRIGDON M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

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PLUMBING FLOOR PLAN

Drawing

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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HB	A/P101
Project Number: 2116	Checked By: JCS	
Date: 09/13/22	Reviewed By: HB	

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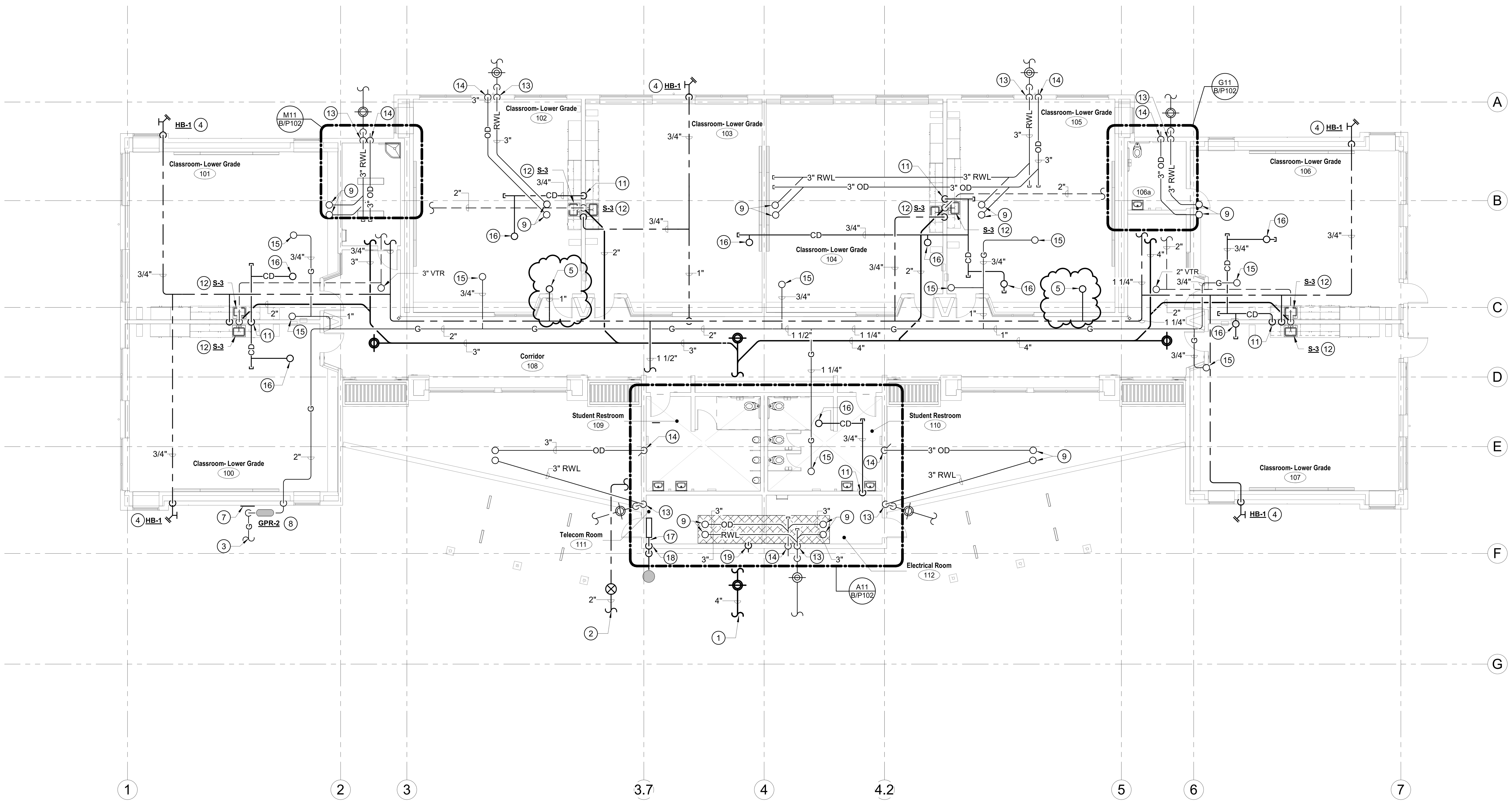

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KEYNOTES (#)

1 4" SEWER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
2 2" COLD WATER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
3 MEDIUM PRESSURE GAS CONNECTION FOR BUILDING. SEE SHEET SD/P101 FOR CONTINUATION.
4 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
5 1" CW UP TO ROOF HYDRANT. SEE SHEET B/P301 FOR CONTINUATION.
6 SHOCK ABSORBER. (TYP.)
7 GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
8 BUILDING GAS SHUT-OFF VALVE & GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
9 ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET B/P301 FOR CONTINUATION.
10 CONDENSATE DRAIN DN IN WALL. TERMINATE IN MOP SINK W/ 90° ELL DN @ +2" ABV. SINK RIM.
11 CONDENSATE DRAIN PIPING DN IN WALL. CONNECT TO SINK TAILPIECE PER DETAIL A11 ON SHEET X/P800.
12 2" S, 1-1/2" V & 3/4" CW DN TO CLASSROOM SINK.
13 RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
14 OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
15 GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET B/P301 FOR CONTINUATION.
16 CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET B/P301 FOR CONTINUATION.
17 CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
18 3/4" CD FROM MECHANICAL EQUIPMENT DN WALL TO DRYWELL PER DETAIL E14 ON SHEET X/P801.
19 PROTECTIVE DRAIN PAN TO BE PLACED DIRECTLY BELOW OD/RWL PIPING IN ATTIC SPACE, REFER TO DETAIL J14 ON SHEET X/P801. 3/4" DRAIN LINE DN IN WALL TO DAYLIGHT 12" ABV FINISHED GRADE.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

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REGISTERED PROFESSIONAL ENGINEER HANNAH G. BRIGDON M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	
Scale: As indicated	Drawn By: HB	B/P101
Project Number: 2116	Checked By: JCS	
Date: 09/13/22	Reviewed By: HB	

A1 PLUMBING FLOOR PLAN
1/8" = 1'-0"

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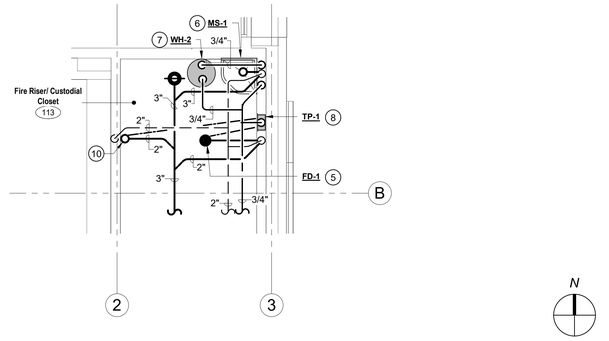
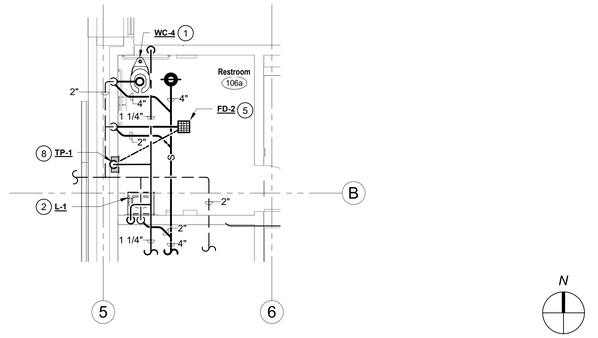


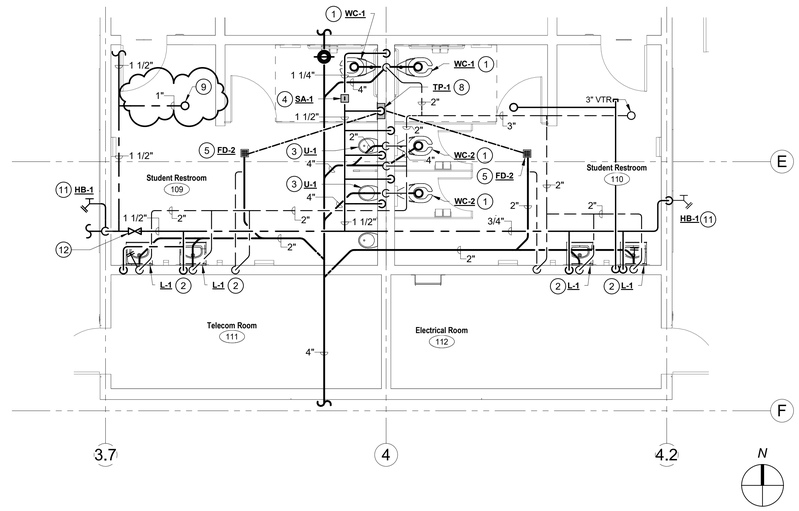
M11
1/4" = 1'-0"

ENLARGED PLUMBING PLAN



G11
1/4" = 1'-0"

ENLARGED PLUMBING PLAN



A11
1/4" = 1'-0"

ENLARGED PLUMBING FLOOR PLAN

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KEYNOTES (#)

1 4" S, 2" V, 1" CW DN TO WATER CLOSET.
2 2" S, 1-1/2" V & 3/4" CW DN FOR LAVATORY.
3 3" S, 1-1/2" V, 3/4" CW DN FOR URINAL.
4 SHOCKER ABSORBER. (TYP.)
5 2" S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
6 3" S W/ TRAP, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR MOP SINK.
7 WATER HEATER ON PLATFORM. SEE DETAIL J7 ON SHEET X/P800.
8 1/2" CW DN TO TRAP PRIMER IN WALL WITH ACCESS PANEL.
9 1" CW UP TO ROOF HYDRANT. SEE SHEET B/P301 FOR CONTINUATION.
10 HUB DRAIN PER DETAIL N1 ON SHEET X/P800.
11 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
12 CW ISOLATION VALVE ABOVE CEILING. COORDINATE VERIFY AND COORDINATE LOCATION WITH CEILING ACCESS PANEL.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

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project no. 1138

Consultant

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Clovis Unified School District
Fresno, CA 93727

Project

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No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

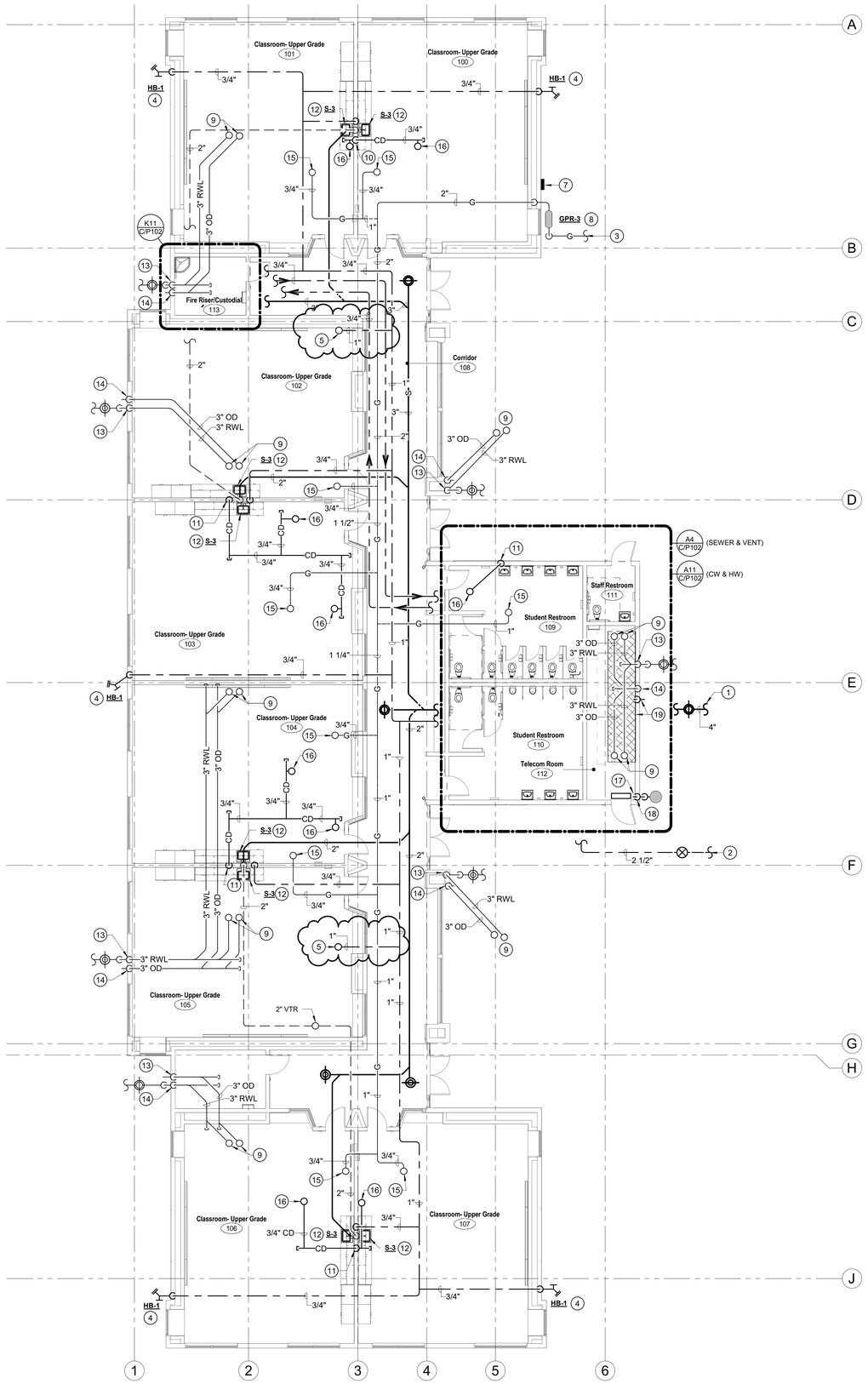
Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: As indicated
Project Number: 2116
Date: 09/13/22

B/P102

3/2/2023 2:16:23 PM

AD4-PX03



KEYNOTES (#)

1. 4" SEWER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
2. 2-1/2' COLD WATER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
3. MEDIUM PRESSURE GAS CONNECTION FOR BUILDING. SEE SHEET SD/P101 FOR CONTINUATION.
4. 3/4" CW DN TO EXTERIOR HOSE BIBBAT +1'-6" AFF.
5. 1" CW UP TO ROOF HYDRANT. SEE SHEET C/P301 FOR CONTINUATION.
6. SHOCK ABSORBER (TYP.)
7. GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
8. BUILDING GAS SHUT-OFF VALVE & GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
9. ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET C/P301 FOR CONTINUATION.
10. CONDENSATE DRAIN DN IN WALL. TERMINATE IN MOP SINK W/ 90° ELL DN @ +2" ABV. SINK RIM.
11. CONDENSATE DRAIN PIPING DN IN WALL. CONNECT TO SINK TAILPIECE PER DETAIL A11 ON SHEET X/P800.
12. 2" S, 1-1/2" V & 3/4" CW DN TO CLASSROOM SINK.
13. RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
14. OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
15. GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET C/P301 FOR CONTINUATION.
16. CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET C/P301 FOR CONTINUATION.
17. CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
18. 3/4" CD FROM MECHANICAL EQUIPMENT TO DRYWELL PER DETAIL E14 ON SHEET X/P801.
19. PROTECTIVE DRAIN PAN TO BE PLACED DIRECTLY BELOW OD/RW LINES IN ATTIC SPACE. REFER TO DETAIL J14 ON SHEET X/P801. 3/4" DRAIN LINE DN IN WALL TO DAYLIGHT 12" ABV FINISHED GRADE.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

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REGISTERED PROFESSIONAL ENGINEER
THANNAY C. BRYDON
M39064
EXP. 09-30-24
MECHANICAL
STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING C
PLUMBING FLOOR PLAN

Drawing

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LICENSED ARCHITECT
ANDREW A. GORNY
No. C37102
Rev. 11-30-23
STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

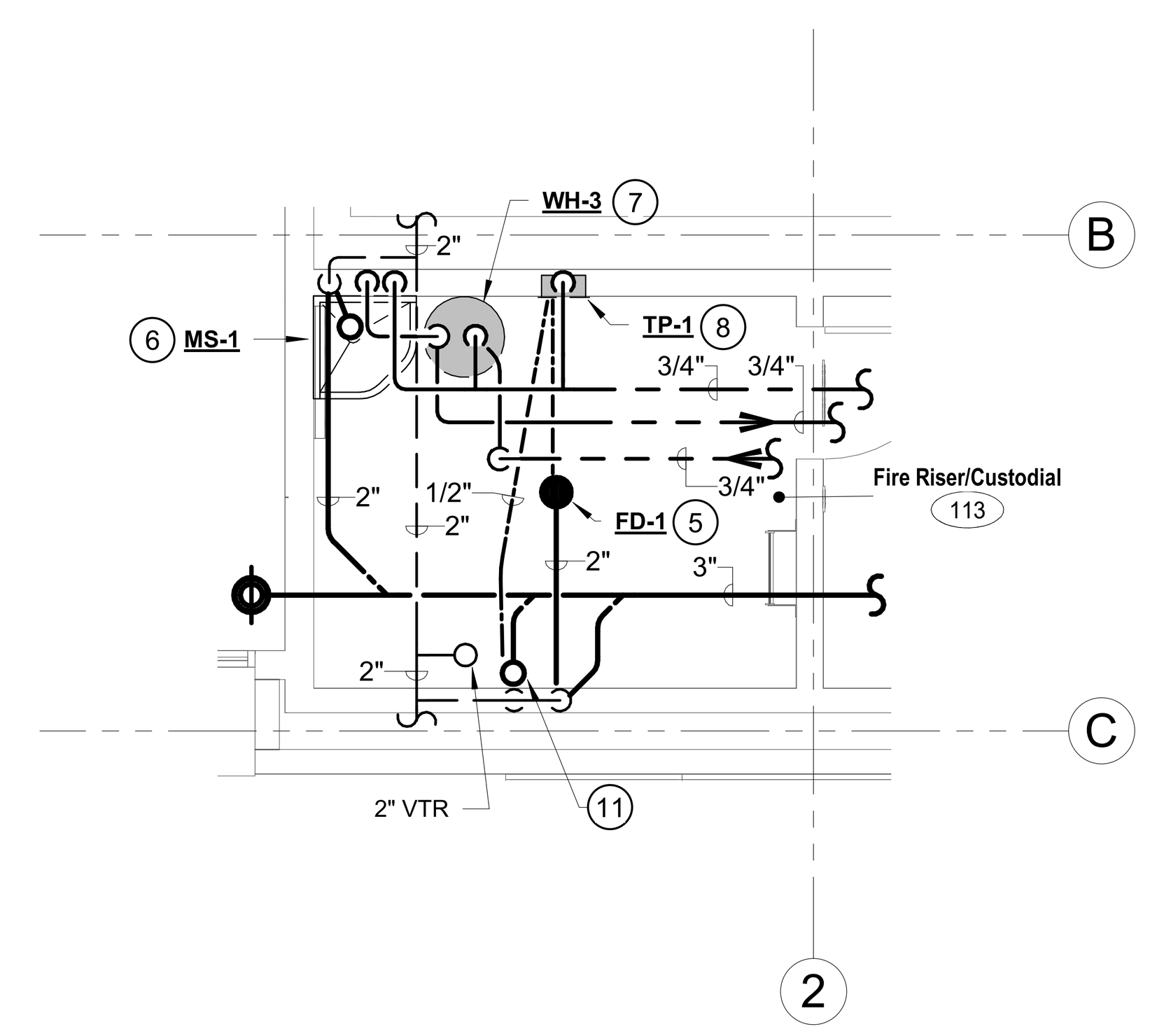
	Designed By: HB	
Scale: As indicated	Drawn By: HB	C/P101
Project Number: 2116	Checked By: JCS	
Date: 09/13/22	Reviewed By: HB	

A1
1/8" = 1'-0"

PLUMBING FLOOR PLAN

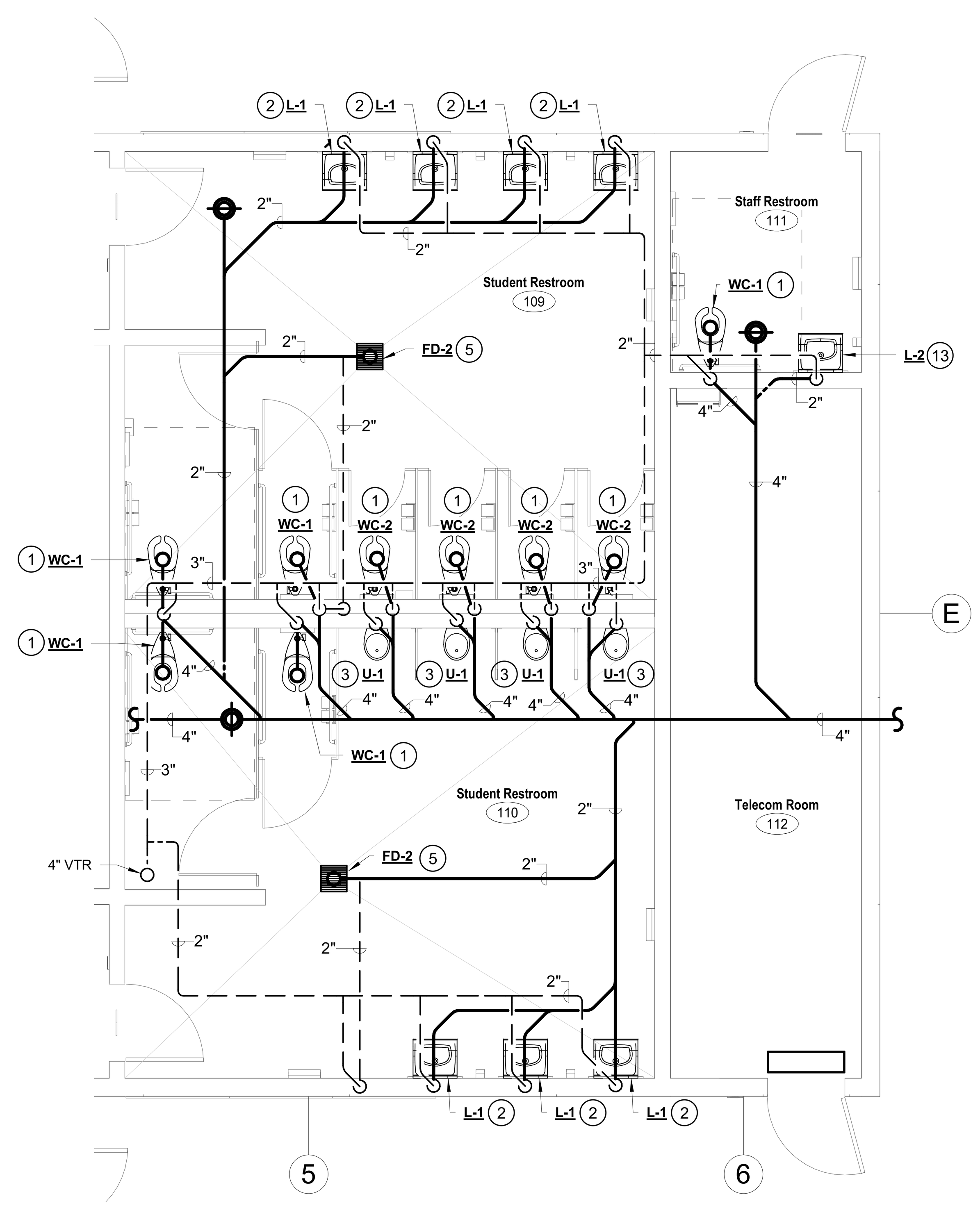
3/2/2023 2:48:04 PM

AD4-PX04



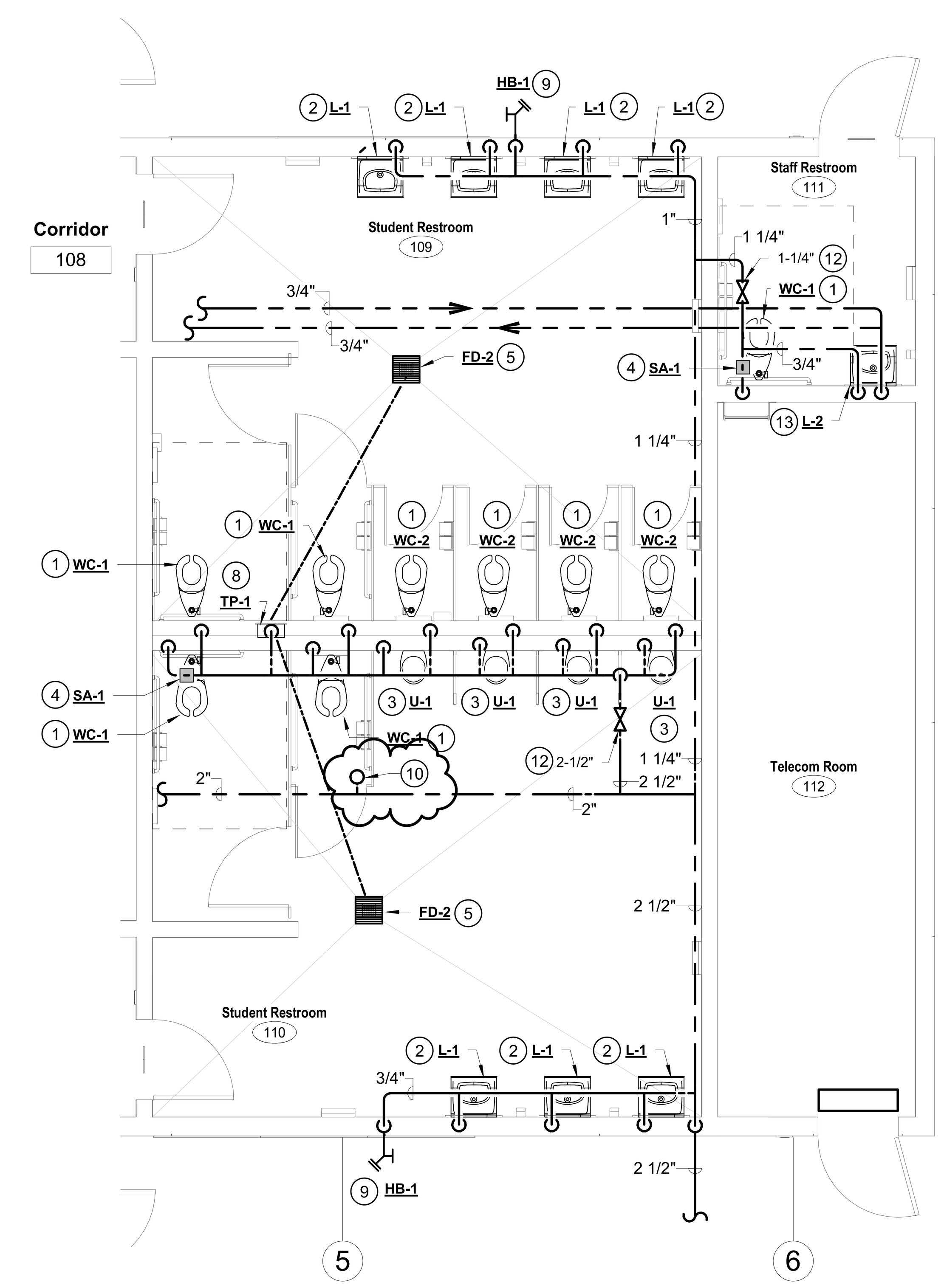
K11 ENLARGED PLUMBING PLAN

1/4" = 1'-0"



A4 ENLARGED PLUMBING PLAN - RESTROOMS - S & V

1/4" = 1'-0"



A11 ENLARGED PLUMBING PLAN - RESTROOMS - CW & HW

1/4" = 1'-0"

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Agency Approval

KEYNOTES

1 4" S, 2" V, 1" CW DN TO WATER CLOSET.
2 2" S, 1-1/2" V & 3/4" CW DN FOR LAVATORY.
3 3" S, 1-1/2" V, 3/4" CW DN FOR URINAL.
4 SHOCK ABSORBER. (TYP)
5 2" S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
6 3" S W/ TRAP, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR MOP SINK.
7 WATER HEATER ON PLATFORM. SEE DETAIL J7 ON SHEET X/P800.
8 1/2" CW DN TO TRAP PRIMER IN WALL WITH ACCESS PANEL.
9 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
10 1" CW UP TO ROOF HYDRANT. SEE SHEET C/P301 FOR CONTINUATION.
11 HUB DRAIN PER DETAIL N1 ON SHEET X/800.
12 CW ISOLATION VALVE ABOVE CEILING. COORDINATE AND VERIFY LOCATION WITH CEILING ACCESS PANEL.
13 2" S, 1-1/2" V & 3/4" CW/HW DN FOR LAVATORY IN FACULTY RESTROOM.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

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Consultant

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No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HB	C/P102
Project Number: 2116	Checked By: JCS	
Date: 09/13/22	Reviewed By: HB	

3/2/2023 2:48:07 PM

AD4-PX05

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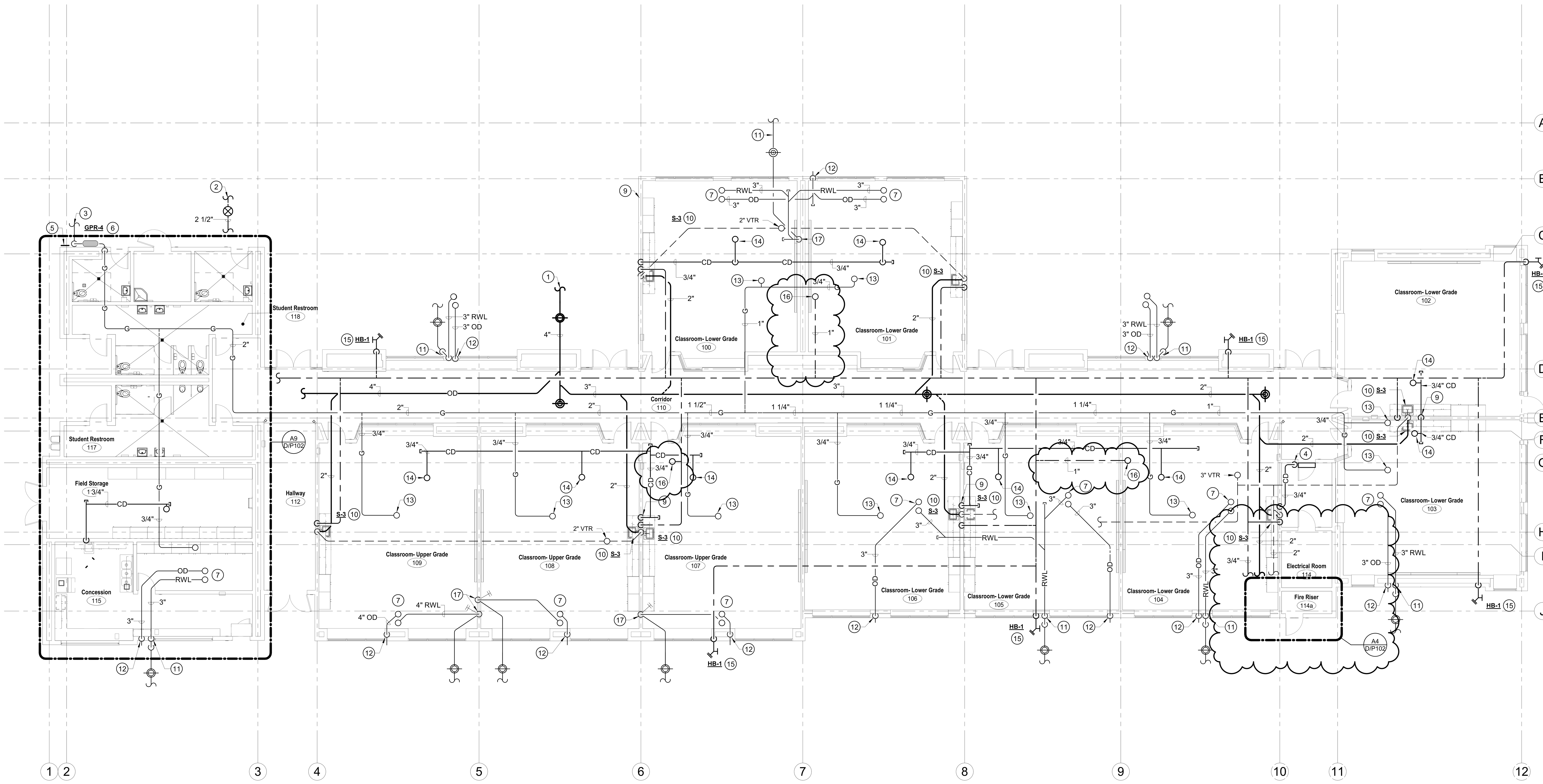

KEYNOTES (#)

1 4" SEWER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
2 2-1/2" COLD WATER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
3 GAS CONNECTION FOR BUILDING. SEE SHEET SD/P101 FOR CONTINUATION.
4 CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
5 GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
6 BUILDING GAS SHUT-OFF VALVE & GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
7 ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET D/P301 FOR CONTINUATION.
8 CONDENSATE DRAIN DN IN WALL. TERMINATE IN MOP SINK W/ 90° ELL DN @ +2" ABV. SINK RIM.
9 CONDENSATE DRAIN PIPING DN IN WALL. CONNECT TO SINK TAILPIECE PER DETAIL A11 ON SHEET X/P800.
10 2" S, 1-1/2" V & 3/4" CW DN TO CLASSROOM SINK.
11 RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
12 OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS
13 GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET D/P301 FOR CONTINUATION.
14 CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET D/P301 FOR CONTINUATION.
15 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
16 1" CW UP TO ROOF HYDRANT. SEE SHEET D/P301 FOR CONTINUATION.
17 RAINWATER LEADER DN IN INTERIOR WALL WITH WALL CLEANOUT. DN TO BELOW GRADE TO CONNECT TO STORM DRAIN. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

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REGISTERED PROFESSIONAL ENGINEER HANNAH G. BRIGDON M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA
Consultant

McKinley/Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727
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LICENSED ARCHITECT ANDREW A. CORRAL No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

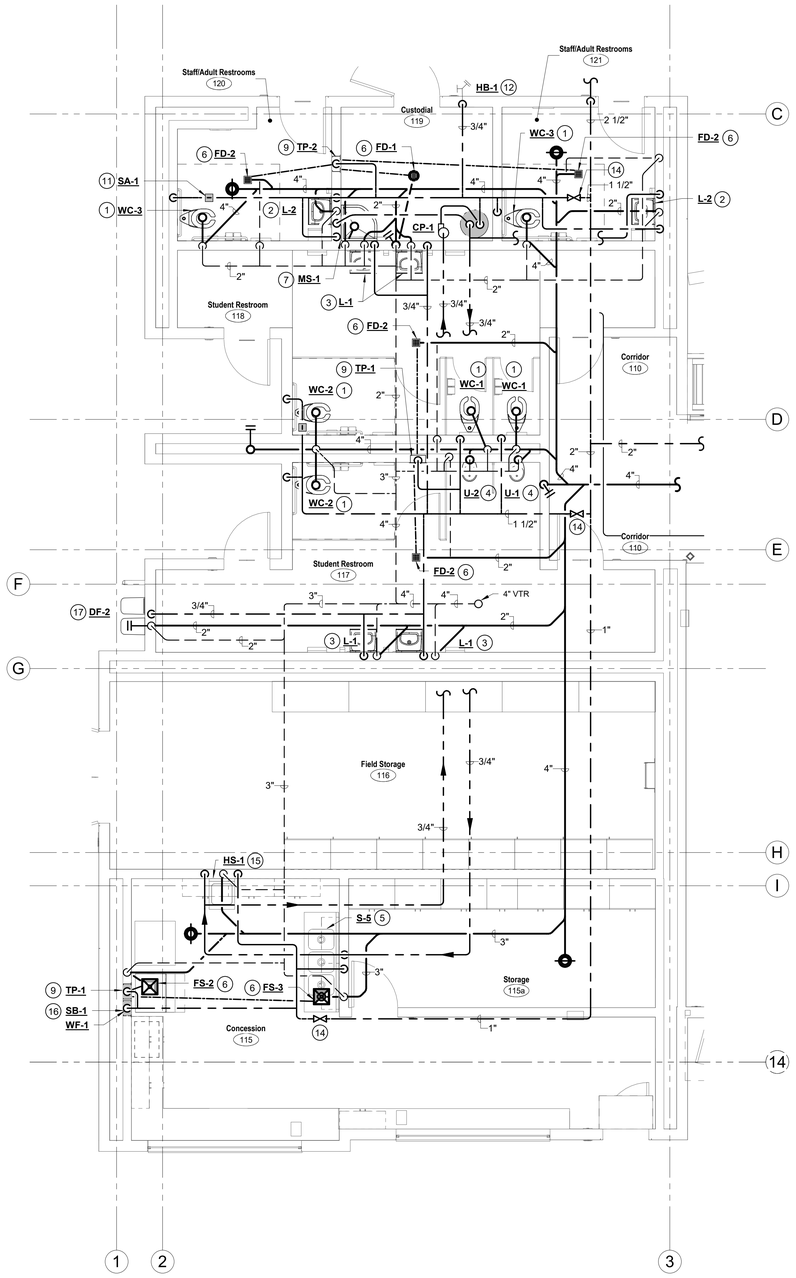
Revision

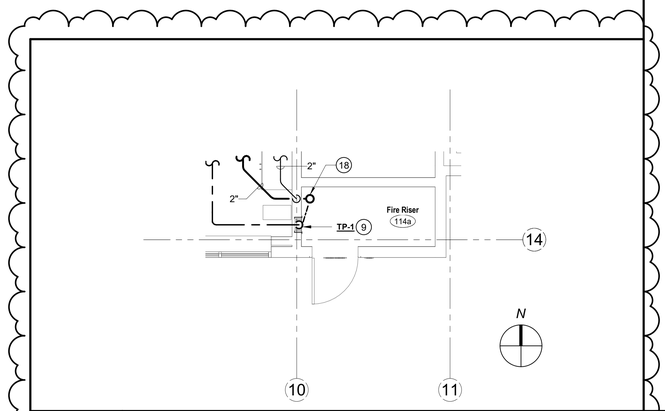
	Designed By: HB	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HB	D/P101
Project Number: 2116	Checked By: JCS	
Date: 02/06/2023	Reviewed By: HB	

A1 PLUMBING FLOOR PLAN - BUILDING D
1/8" = 1'-0"

3/2/2023 3:03:10 PM

AD4-PX06





A4
1/4" = 1'-0"

ENLARGED PLUMBING PLAN - FIRE RISER

A9
1/4" = 1'-0"

ENLARGED PLUMBING PLAN

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KEYNOTES (#)

1 4" S, 2" V, 1" CW DN TO WATER CLOSET.
2 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR STAFF LAVATORY.
3 2" S, 1-1/2" V & 3/4" CW DN FOR STUDENT LAVATORY.
4 3" S, 1-1/2" V, 3/4" CW DN FOR URINAL.
5 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN TO SINK.
6 2" S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
7 3" S W/ TRAP, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR MOP SINK.
8 WATER HEATER ON PLATFORM. SEE DETAIL J7 ON SHEET X/P800.
9 1/2" CW DN TO TRAP PRIMER IN WALL WITH ACCESS PANEL.
10 NOT USED.
11 SHOCK ABSORBER. (TYP)
12 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
13 NOT USED.
14 CW ISOLATION VALVE ABOVE CEILING. COORDINATE VERIFY AND COORDINATE LOCATION WITH CEILING ACCESS PANEL.
15 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN TO HANDWASH SINK.
16 3/4" CW DN TO WATER SUPPLY BOX WITH INLINE WATER FILTER FOR ICE MAKER.
17 2" S, 1-1/2" V & 3/4" CW DN FOR DRINKING FOUNTAIN.
18 HUB DRAIN PER DETAIL N1 ON SHEET X/P800.

GENERAL NOTES

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General Notes

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REGISTERED PROFESSIONAL ENGINEER HARMAN G. BRYDOON M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

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Clovis Unified School District
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LICENSED ARCHITECT ANDREW A. GORDON No. C37102 Rev. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: As indicated
Project Number: 2116
Date: 02/06/2023

D/P102

3/2/2023 3:03:12 PM

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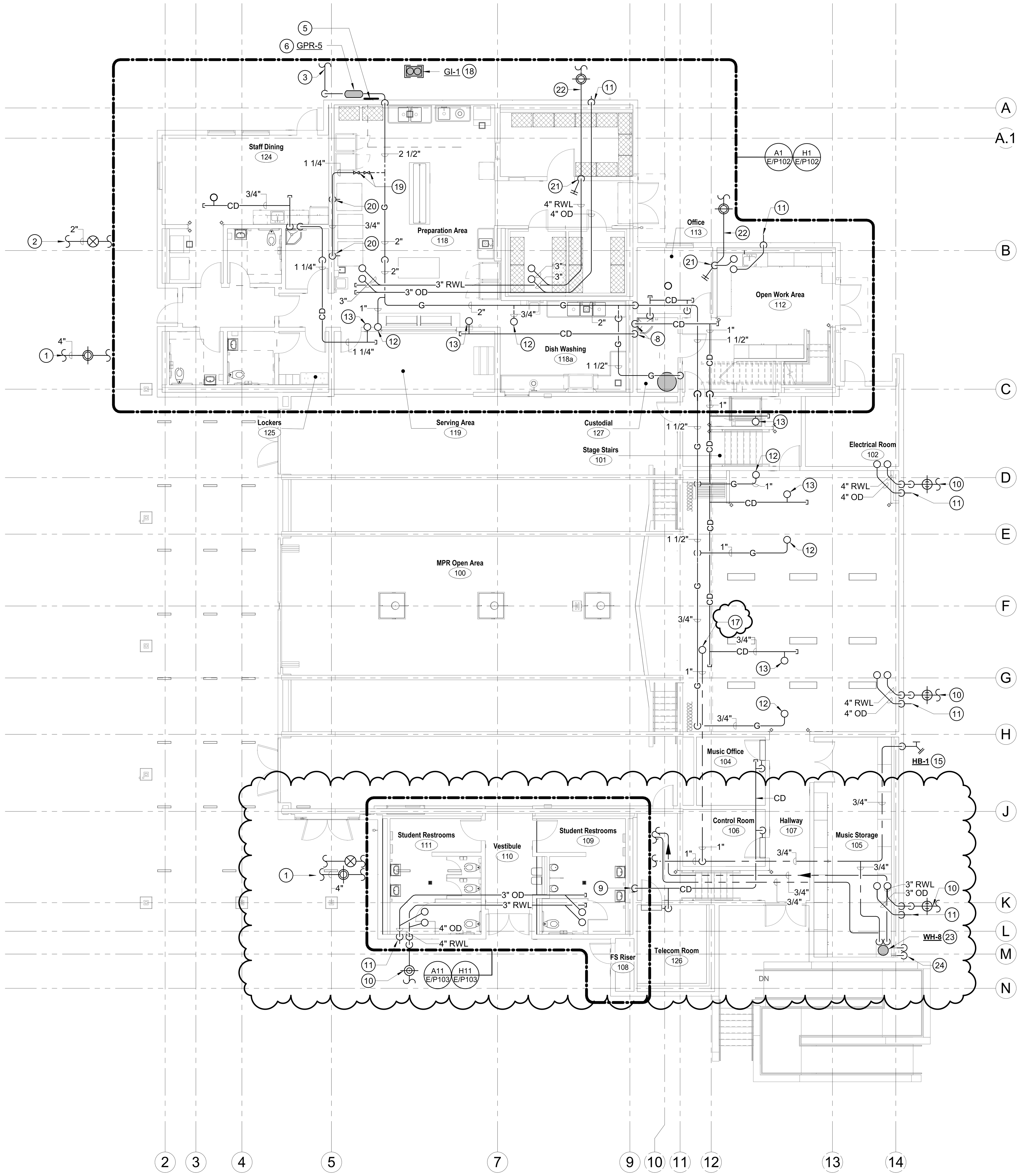

KEYNOTES

1 4" SEWER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
2 2" COLD WATER CONNECTION FOR BUILDING. COORDINATE WITH CIVIL.
3 MEDIUM PRESSURE GAS CONNECTION FOR BUILDING. SEE SHEET SD/P101 FOR CONTINUATION.
4 GAS ISOLATION VALVE FOR KITCHEN EQUIPMENT ABOVE CEILING. VERIFY AND COORDINATE LOCATION WITH CEILING ACCESS PANEL.
5 GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
6 BUILDING GAS SHUT-OFF VALVE & GAS PRESSURE REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
7 ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET E/P301 FOR CONTINUATION.
8 CONDENSATE DRAIN DN IN WALL. TERMINATE IN MOP SINK W/ 90° ELL DN @ +2" ABV. SINK RIM.
9 CONDENSATE DRAIN PIPING DN IN WALL. CONNECT TO SINK TAILPIECE PER DETAIL A11 ON SHEET X/P800
10 RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
11 OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
12 GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET E/P301 FOR CONTINUATION.
13 CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET E/P301 FOR CONTINUATION.
14 CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
15 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
16 3/4" CW UP THRU ROOF TO HOSE BIBB. SEE SHEET E/P301 FOR CONTINUATION
17 1" CW UP TO HOSE BIBB ON ROOF.
18 GREASE INTERCEPTOR, REFER TO DETAIL N14 ON SHEET X/P801.
19 EMERGENCY MECHANICAL GAS SHUT-OFF VALVE.
20 GAS TO KITCHEN EQUIPMENT w/ GAS DIRT LEG CONN PER DETAIL J11 ON SHEET P800.
21 RAINWATER LEADER DN IN EXTERIOR WALL WITH WALL CLEANOUT DN TO BELOW GRADE TO CONNECT TO STORM DRAIN. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL FOR CONTINUATION.
22 RAIN WATER LEADER TO BE ROUTED BELOW STRUCTURAL GRADE BEAM.
23 WATER HEATER ON PLATFORM MOUNTED AT 11'-0" AFF. SEE DETAIL J7 ON SHEET X/P800.
24 ROUTE T&P AND DRAIN PAN PIPING DN IN WALL TO DAYLIGHT 12" ABV. FINISHED GRADE.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

NET POSITIVE consulting engineers
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project no. 1138

Consultant

McKinley / Fowler Elementary School - Inc 2
Clovis Unified School District
Fresno, CA 93727

Project

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Drawing

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Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

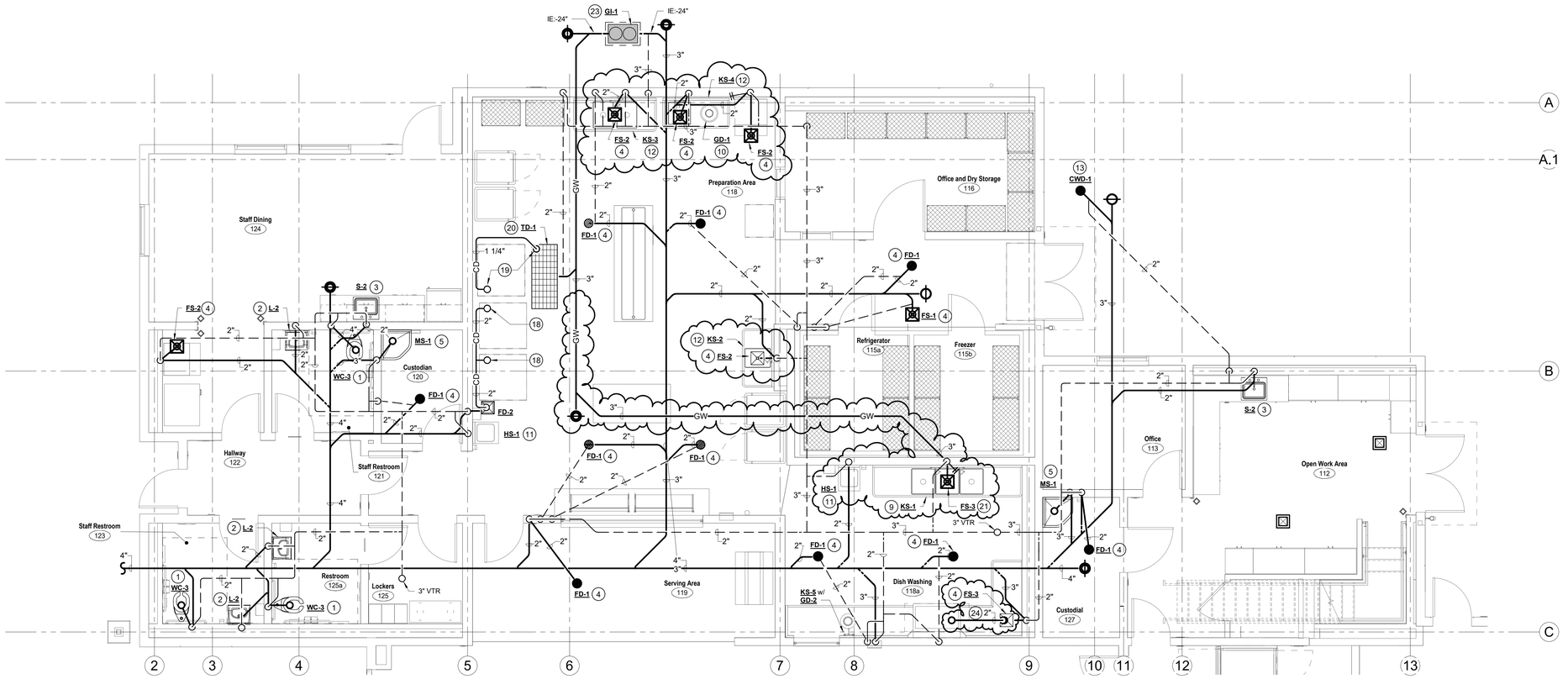
Designed By: HB	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HB
Project Number: 2116	Checked By: JCS
Date: 02/08/23	Reviewed By: HB

E/P101

A1 PLUMBING FLOOR PLAN
1/8" = 1'-0"

3/2/2023 4:27:21 PM

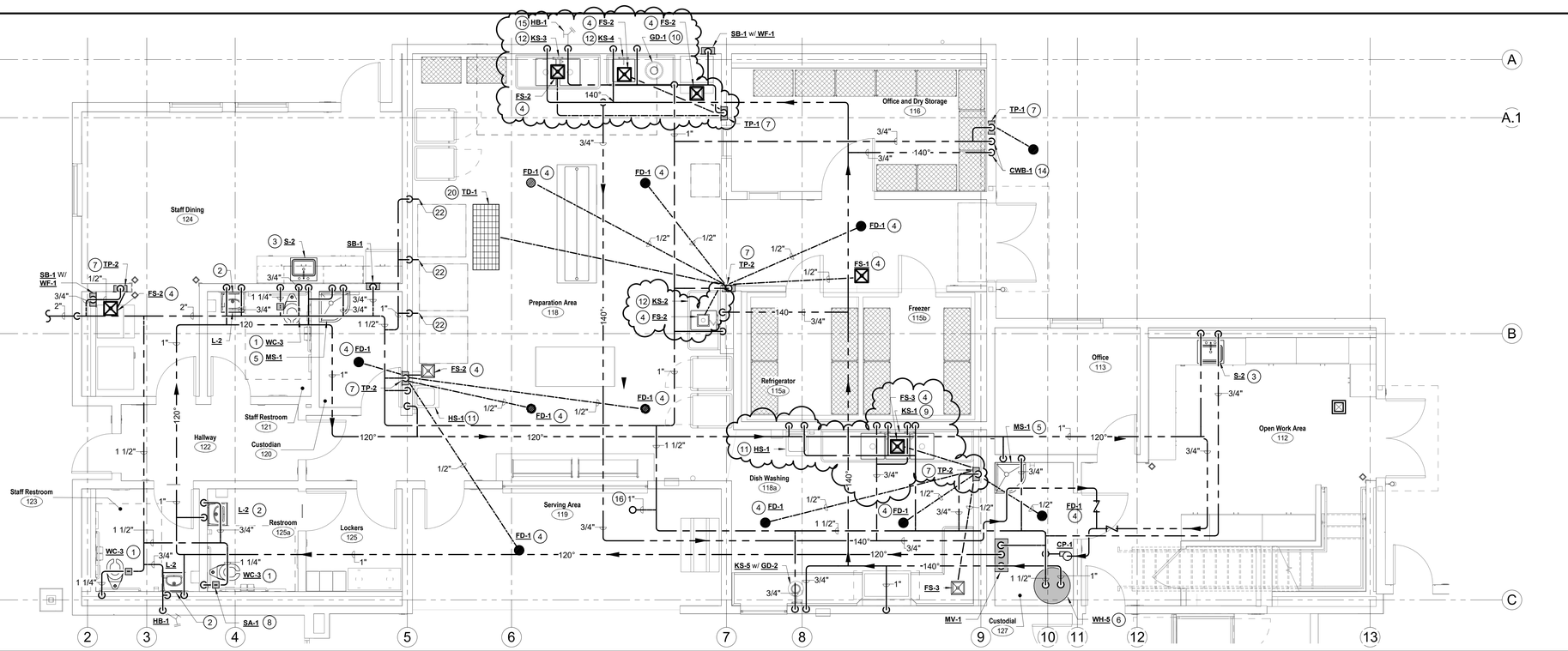
AD4-PX08



H1

1/4" = 1'-0"

ENLARGED PLUMBING PLAN - KITCHEN - S & V



A1

1/4" = 1'-0"

ENLARGED PLUMBING PLAN - KITCHEN - CW & HW

3/2/2023 4:27:23 PM

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KEYNOTES (#)

1 4" S, 2" V, 1" CW DN TO WATER CLOSET.
2 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR STAFF LAVATORY.
3 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN TO SINK.
4 S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
5 3" S W/ TRAP, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR MOP SINK.
6 WATER HEATER ON PLATFORM. SEE DETAIL A4 ON SHEET A4/P800.
7 1/2" CW DN TO TRAP PRIMER IN WALL WITH ACCESS PANEL.
8 SHOCK ABSORBER. (TYP)
9 (2) 3/4" CW & (2) 3/4" HW DN IN WALL TO (2) SINK FAUCETS FOR THREE COMPARTMENT SINK. COMBINE (2) SINK DRAINS BELOW AND ROUTE TO FLOOR SINK. TERMINATE WITH 2" AIR GAP.
10 GARBAGE DISPOSER BELOW SINK. PROVIDE 2" TRAP ARM FROM DISPOSER OUTLET BACK TO 2" SEWER CONNECTION WITHIN WALL.
11 2" S, 1-1/2" V, 3/4" CW & 3/4" HW TO HANDWASH SINK.
12 3/4" CW & 3/4" HW TO KITCHEN SINK.
13 3" S & 2" V TO EXTERIOR CAN WASH DRAIN.
14 3/4" CW & 3/4" HW DN TO CAN WASH FAUCET BOX ON EXTERIOR WALL.
15 3/4" CW DN TO EXTERIOR HOSE BIBB AT +1'-6" AFF.
16 1" CW UP THRU ROOF TO HOSE BIBB. SEE SHEET E/P301 FOR CONTINUATION
17 CW DN TO SUPPLY BOX FOR STEAM FOOD WARMER CONN.
18 2" CONSENSATE FROM KITHCEN EQUIPMENT TO TERMINATE AT FLOOR SINK W/ AIR GAP.
19 1-1/4" DRAIN FROM KITHCEN EQUIPMENT TO TERMINATE AT TROUGH DRAIN W/ 1" AIR GAP.
20 3" GREASE WASTE w/ TRAP, 2" V & 1/2" TRAP PRIMER CONNECTION FOR TROUGH DRAIN.
21 3" GREASE WASTE w/ TRAP, 2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR SINK.
22 3/4" CW DN TO ANGLE STOP FOR KITCHEN EQUIPMENT.
23 GREASE INTERCEPTOR, REFER TO DETAIL N/14 ON SHEET X/P801.
24 2" CAST IRON DRAIN FROM DISH WASHER TO SPILL INTO FLOOR SINK WITH 1" AIR GAP.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

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REGISTERED PROFESSIONAL ENGINEER HANNAH G. BRYDON M39064 EXP. 09-30-22 MECHANICAL STATE OF CALIFORNIA

Consultant

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Clovis Unified School District
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LICENSED ARCHITECT ANDREW A. DARDEN No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

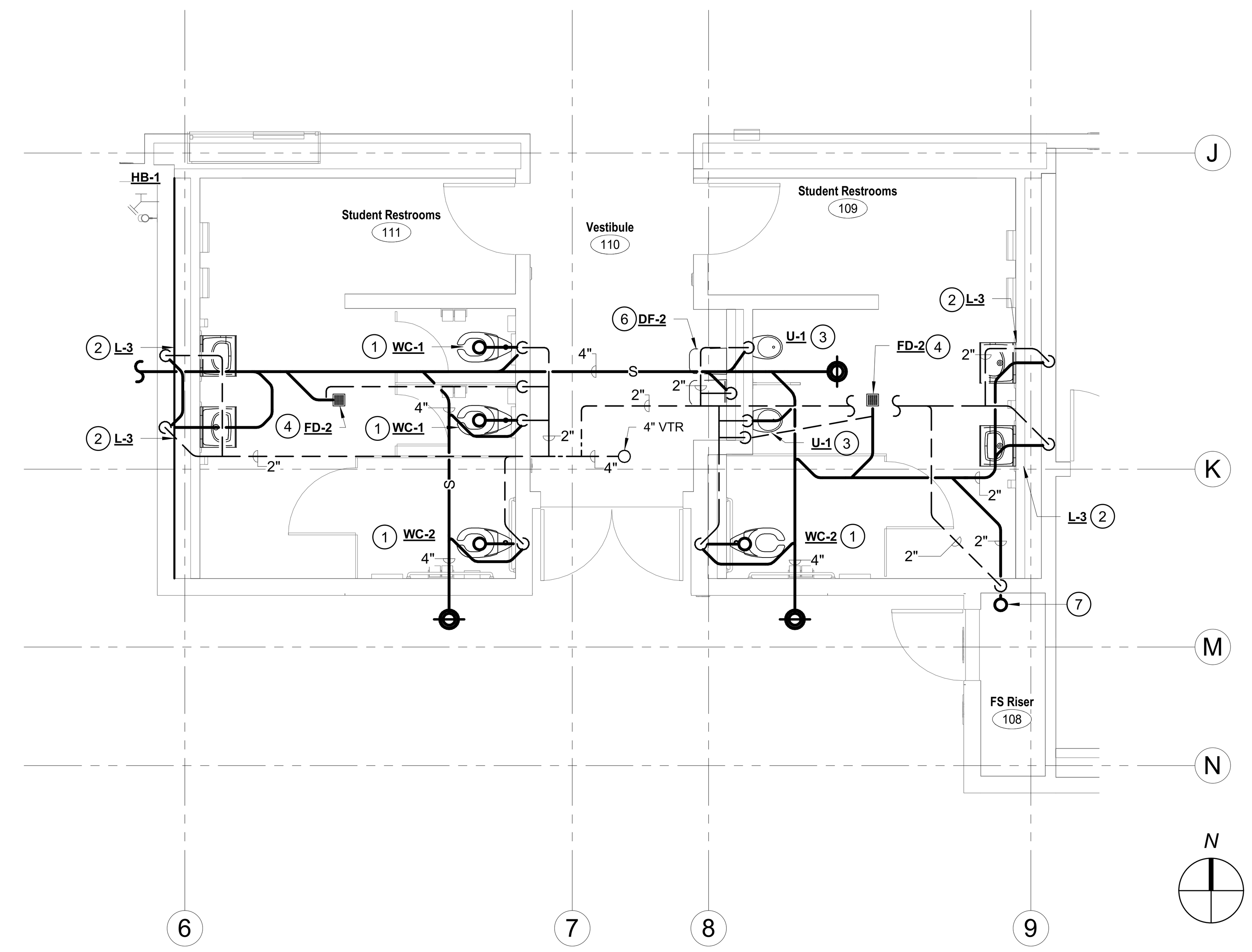
Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: As indicated
Project Number: 2116
Date: 02/08/23

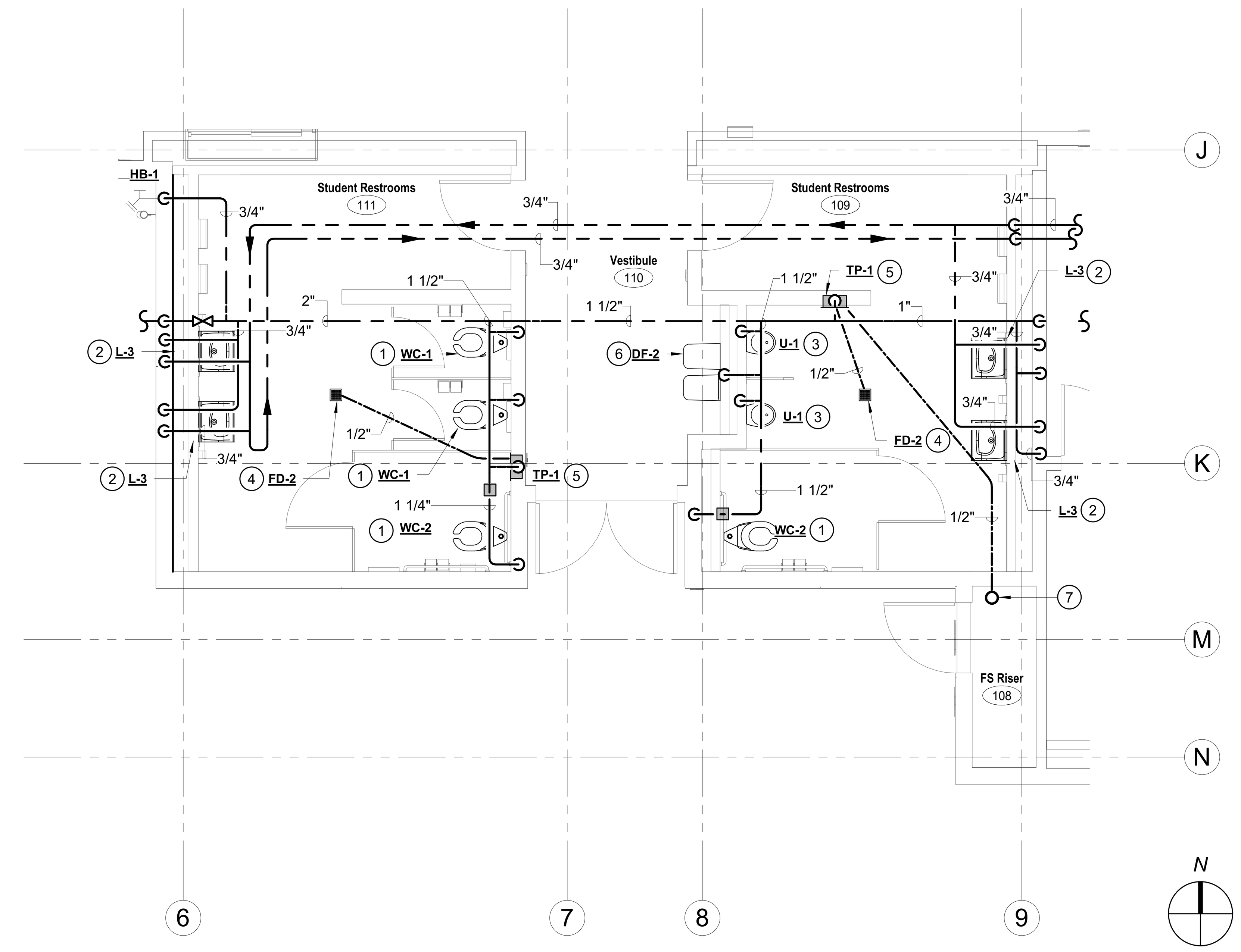
E/P102

AD4-PX09



H11 ENLARGED PLUMBING FLOOR PLAN - RESTROOMS - S & V

1/4" = 1'-0"



A11 ENLARGED PLUMBING FLOOR PLAN - RESTROOMS - CW & HW

1/4" = 1'-0"

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KEYNOTES

1. 4" S, 2" V, 1" CW DN TO WATER CLOSET.
2. 2" S, 1-1/2" V, 3/4" CW & 3/4" HW DN FOR STUDENT LAVATORY
3. 3" S, 1-1/2" V, 3/4" CW DN FOR URINAL.
4. 2" S W/ TRAP, 1-1/2" V & 1/2" TRAP PRIMER CONNECTION FOR FLOOR DRAIN/FLOOR SINK.
5. 1/2" CW DN TO TRAP PRIMER IN WALL WITH ACCESS PANEL.
6. 2" S, 1-1/2" V & 3/4" CW DN TO DRINKING FOUNTAIN.
7. HUB DRAIN PER DETAIL N1 ON SHEET X/P800.

GENERAL NOTES

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General Notes

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Consultant

McKinley / Fowler Elementary School - Inc 2
Clovis Unified School District
Fresno, CA 93727

Project

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ENLARGED PLUMBING PLANS - RESTROOMS

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Architect

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4	Addendum #4	03/03/23

Revision

	Designed By: HB	
Scale: As indicated	Drawn By: HB	E/P103
Project Number: 2116	Checked By: JCS	
Date: 02/08/23	Reviewed By: HB	

AD4-PX10

3/2/2023 4:27:26 PM

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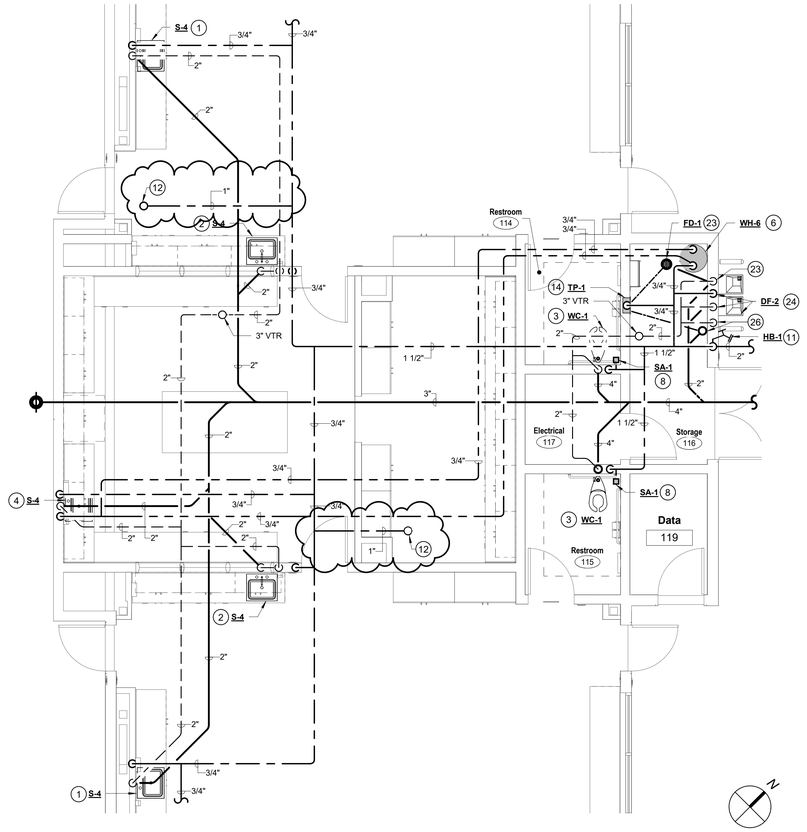
Agency Approval

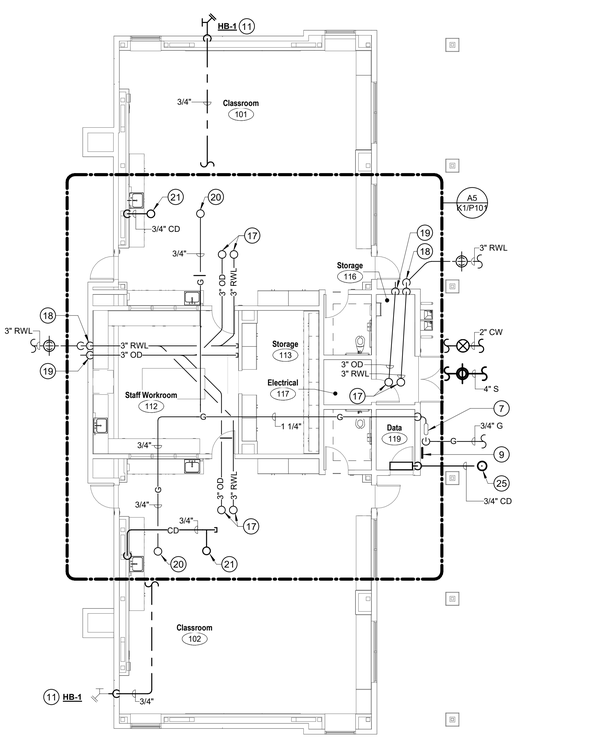
KEYNOTES (#)

1 2" S W/ WCO, 1-1/2" V & 3/4" CW DN FOR CLASSROOM SINK.
2 2" S W/ WCO, 1-1/2" V & 3/4" CW DN OFFSET FOR CLASSROOM SINK. ROUTE PIPING TO SINK BELOW WINDOW.
3 4" S, 2" V & 1" CW FOR WATER CLOSET.
4 2" S W/ WCO, 1-1/2" V, 3/4" CW & 3/4" HW FOR WORKROOM SINK.
5 NOT USED.
6 WATER HEATER ON PLATFORM. SEE DETAIL J7 ON SHEET X/P800.
7 BUILDING GAS SHUT-OFF VALVE GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
8 SHOCK ABSORBER. (TYP)
9 GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
11 3/4" CW DN TO EXTERIOR HOSE BIBB @ +1'-6" ABV. GR.
12 1" CW UP TO ROOF HYDRANT. SEE SHEET K1/P301 FOR CONTINUATION.
13 2" S W/ WCO, 1-1/2" V & 3/4" CW DN FOR DRINKING FOUNTAIN.
14 1/2" CW DN IN WALL TO TRAP PRIMER W/ BALL VALVE & ACCESS PANEL.
15 CD DN IN WALL. TERMINATE AT TAILPIECE OF SINK PER DETAIL A11 ON SHEET X/P800.
16 CD DN IN WALL.TERMINATE AT MOP SINK WITH 90° ELL DN AT 2" ABOVE SINK RIM.
17 ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET K1/P301 FOR CONTINUATION.
18 RAINWATER LEADER DN IN EXTERIOR WALL AND CONNECT TO STORM DRAIN BELOW GRADE. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL CONTINUATION.
19 OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
20 GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET K1/P301 FOR CONTINUATION.
21 CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET K1/P301 FOR CONTINUATION.
22 CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
23 2"S W/ TRAP, 1-1/2"V & 1/2" TRAP PRIMER CONNECTIONS FOR FLOOR DRAIN/FLOOR SINK.
24 2"S, 1-1/2"V & 3/4"CW DN FOR DRINKING FOUNTAIN.
25 3/4" CD FROM MECHANICAL EQUIPMENT TO DRWELL PER DETAIL E14 ON SHEET X/P801.
26 2"S W/ TRAP, 1-1/2"V & 1/2" TRAP PRIMER CONNECTIONS FOR FIRE SPRINKLER HUB DRAIN. .

General Notes



A5 — ENLARGED PLUMBING PLAN
1/4" = 1'-0"



A12 — PLUMBING FLOOR PLAN
1/8" = 1'-0"

NET POSITIVE consulting engineers
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REGISTERED PROFESSIONAL ENGINEER HANNAH G. BIRTCHER M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING K1
PLUMBING PLAN

Drawing

darden architects
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6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT ANDREW A. CORBETT No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

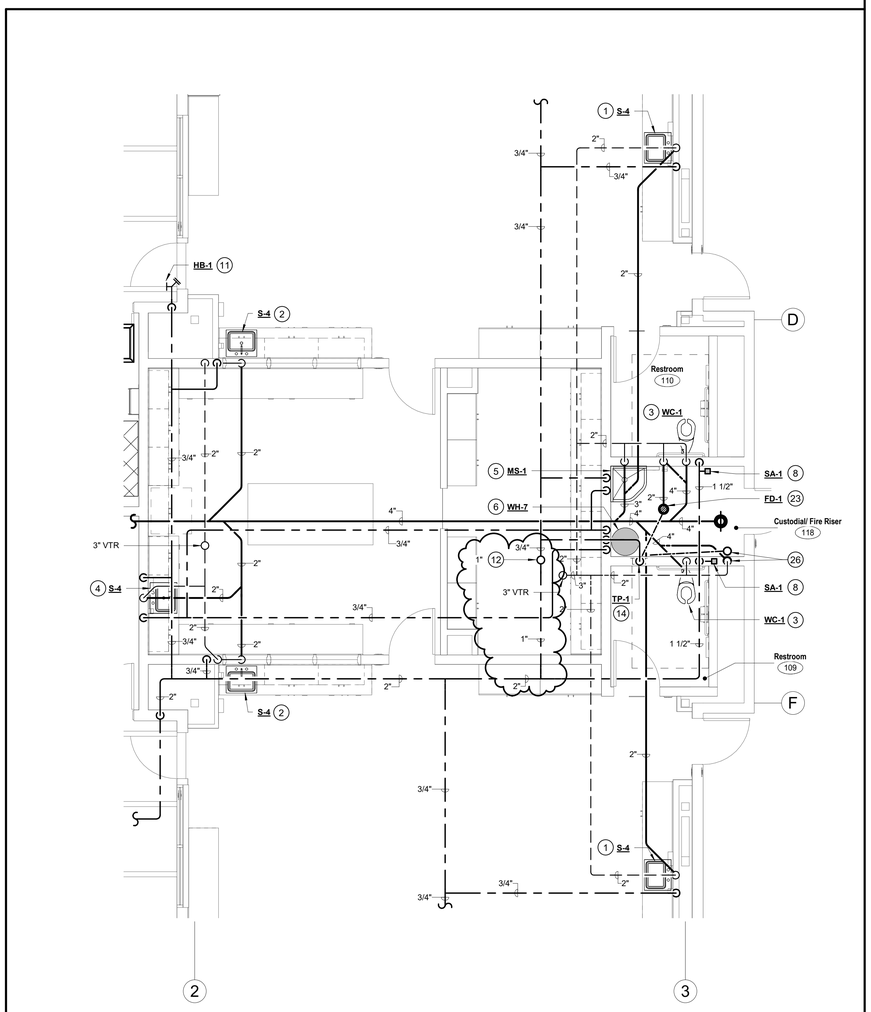
Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

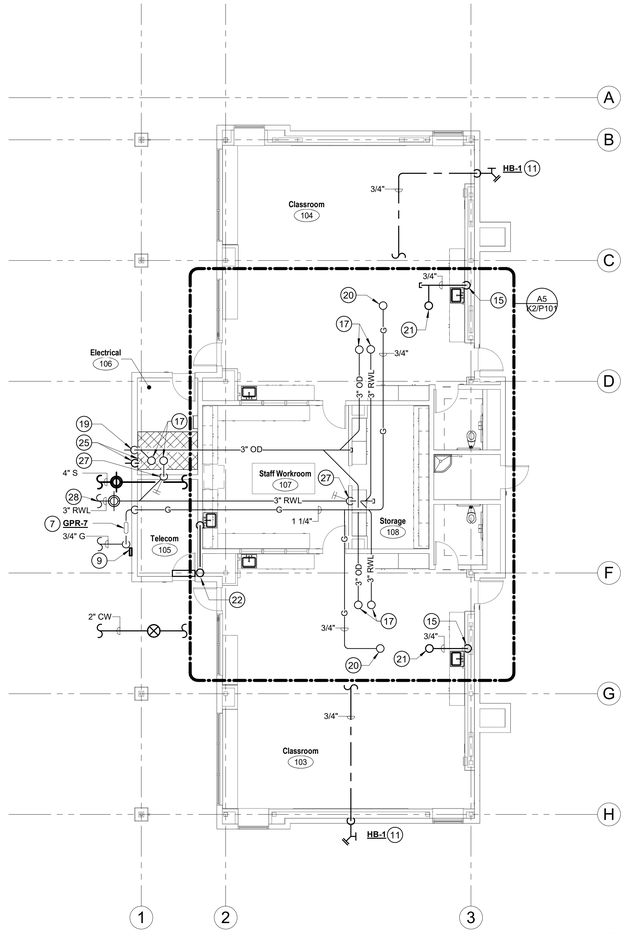
Scale: As indicated
Project Number: 2116
Date: 09/13/22

K1/P101

3/2/2023 3:08:20 PM

AD4-PX11





FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

KEYNOTES (#)

1 2" S W/ WCO, 1-1/2" V & 3/4" CW DN FOR CLASSROOM SINK.
2 2" S W/ WCO, 1-1/2" V & 3/4" CW DN OFFSET FOR CLASSROOM SINK. ROUTE PIPING TO SINK BELOW WINDOW.
3 4" S, 2" V & 1" CW FOR WATER CLOSET.
4 2" S W/ WCO, 1-1/2" V, 3/4" CW & 3/4" HW FOR WORKROOM SINK.
5 3" S, 1-1/2" V, 3/4" CW & 3/4" HW FOR MOP SINK.
6 WATER HEATER ON PLATFORM MOUNTED AT +6'-6" AFF. SEE DETAIL J7 ON SHEET X/P800.
7 BUILDING GAS SHUT-OFF VALVE & GAS REGULATOR ABOVE GRADE IN LOCKABLE CAGE. SEE DETAIL E14 ON SHEET X/P800 FOR PIPING INSTALLATION DETAIL.
8 SHOCK ABSORBER. (TYP)
9 GAS SHUT-OFF VALVE SIGN MOUNTED ON WALL. SEE DETAIL A14 ON SHEET X/P800.
10 NOT USED.
11 3/4" CW DN TO EXTERIOR HOSE BIBB @ +1'-6" ABV. GR.
12 1" CW UP TO ROOF HYDRANT. SEE SHEET K2/P301 FOR CONTINUATION.
13 NOT USED.
14 1/2" CW DN IN WALL TO TRAP PRIMER W/ BALL VALVE & ACCESS PANEL.
15 CD DN IN WALL. TERMINATE AT TAILPIECE OF SINK PER DETAIL A11 ON SHEET X/P800.
16 NOT USED.
17 ROOF & OVERFLOW DRAIN DN THRU ROOF. SEE SHEET K2/P301 FOR CONTINUATION.
18 NOT USED.
19 OVERFLOW DRAIN TO DAYLIGHT AT EXTERIOR WALL W/ DOWNSPOUT NOZZLE, DS-1. SEE ARCHITECTURAL EXTERIOR ELEVATIONS.
20 GAS UP THRU ROOF TO MECHANICAL UNIT. SEE SHEET K2/P301 FOR CONTINUATION.
21 CD DN THRU ROOF FROM MECHANICAL UNIT. SEE SHEET K2/P301 FOR CONTINUATION.
22 CONDENSATE DRAIN CONNECTION AT INDOOR UNIT PER DETAIL E11 ON SHEET X/P800.
23 2"S W/ TRAP, 1-1/2"V & 1/2" TRAP PRIMER CONNECTIONS FOR FLOOR DRAIN/FLOOR SINK.
24 NOT USED.
25 PROTECTIVE DRAIN PAN TO BE PLACED DIRECTLY BELOW OD/RWL PIPING IN ATTIC SPACE, REFER TO DETAIL J14 ON SHEET X/P801, 3/4" DRAIN LINE DN IN WALL TO DAYLIGHT 12" ABV FINISHED GRADE.
26 2"S W/ TRAP, 1-1/2"V & 1/2" TRAP PRIMER CONNECTIONS FOR FIRE SPRINKLER HUB DRAIN..
27 RAINWATER LEADER DN IN INTERIOR WALL WITH WALL CLEANOUT DN TO BELOW GRADE TO CONNECT TO STORM DRAIN. PROVIDE 2-WAY SURFACE CLEANOUT PER DETAIL N11 ON SHEET X/P800. SEE CIVIL CONTINUATION.
28 RAINWATER LEADER TO BE ROUTED BELOW STRUCTURAL GRADE BEAM.

GENERAL NOTES

A. PLUMBING CONTRACTOR TO COORDINATE ALL SEWER RISERS WITHIN BUILDING AVOIDING PENTRATIONS THRU STRUCTURAL FOOTINGS AND GRADE BEAMS. ALL CONFLICTS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER OF RECORD PRIOR TO THE INSTALLATION OF ANY WORK.

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER HANNAH G. BERTODEN M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School - Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

BUILDING K2
PLUMBING FLOOR PLAN

Drawing

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LICENSED ARCHITECT ANDREW A. CORRO No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB
Scale: As indicated
Project Number: 2116
Date: 09/13/22

K2/P101

A5 — ENLARGED PLUMBING FLOOR PLAN — 1/4" = 1'-0"

A12 — PLUMBING FLOOR PLAN — 1/8" = 1'-0"

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AD4-PX12

PLUMBING SCHEDULE

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	S OR W	V	CW	HW	DESCRIPTION
WC-1	STUDENT WATER CLOSET	4"	2"	1"	-	KOHLER "WELCOMME ULTRA" MODEL K-96053, 1.28 GPF, FLOOR MOUNT, ELONGATED BOWL. ZURN Z6000AV-HET "AQUA ADVANTAGE" WITH TRIPLE FILTERED DIAPHRAGM, 1.28 GPF FLUSH VALVE WITH MANUAL LEVER HANDLE. CHURCH 9500SSCT SOLID PLASTIC OPEN FRONT SEAT WITH STAINLESS STEEL HINGE POSTS, SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING SYSTEM.
WC-2	STUDENT WATER CLOSET ADA	4"	2"	1"	-	KOHLER "WELCOMME ULTRA" MODEL K-96053, 1.28 GPF, FLOOR MOUNT, ELONGATED BOWL, 16-1/2" TOP OF SEAT HEIGHT. ZURN Z6000AV-HET "AQUA ADVANTAGE" WITH TRIPLE FILTERED DIAPHRAGM, 1.28 GPF FLUSH VALVE WITH MANUAL LEVER HANDLE. CHURCH 9500SSCT SOLID PLASTIC OPEN FRONT SEAT WITH STAINLESS STEEL HINGE POSTS, SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING SYSTEM. FLUSH VALVE HANDLE SHALL POINT TOWARDS WIDE SIDE OF STALL OR ROOM FOR ACCESS COMPLIANCE.
WC-3	ADULT WATER CLOSET ADA	4"	2"	1"	-	KOHLER "HIGHCLIFF ULTRA" MODEL K-96057, 1.28 GPF, FLOOR MOUNT, ELONGATED BOWL, 18" TOP OF SEAT HEIGHT. ZURN Z6000-HET "AQUA ADVANTAGE" WITH TRIPLE FILTERED DIAPHRAGM, 1.28 GPF FLUSH VALVE WITH MANUAL LEVER HANDLE. CHURCH 9500SSCT SOLID PLASTIC OPEN FRONT SEAT WITH STAINLESS STEEL HINGE POSTS, SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING SYSTEM. FLUSH VALVE HANDLE SHALL POINT TOWARDS WIDE SIDE OF STALL OR ROOM FOR ACCESS COMPLIANCE.
WC-4	SPECIAL EDUCATION WATER CLOSET ADA	4"	2"	1"	-	KOHLER "WELCOMME ULTRA" MODEL K-96053, 1.28 GPF, FLOOR MOUNT, ELONGATED BOWL, 16-1/2" TOP OF SEAT HEIGHT. ZURN ZER6000AV-CPM-HET "AQUA ADVANTAGE" SENSOR-OPERATED, BATTERY-POWERED, 1.28 GPF FLUSH VALVE WITH MANUAL OVERRIDE BUTTON. CHURCH 9500SSCT SOLID PLASTIC OPEN FRONT SEAT WITH STAINLESS STEEL HINGE POSTS, SELF-SUSTAINING CHECK HINGES, AND STA-TITE FASTENING SYSTEM. FLUSH VALVE HANDLE SHALL POINT TOWARDS WIDE SIDE OF STALL OR ROOM FOR ACCESS COMPLIANCE.
U-1	STUDENT URINAL	2"	1-1/2"	3/4"	-	KOHLER "DEXTER" MODEL K-5452-ET, 0.125 GPF, WALL HUNG, WASHOUT URINAL WITH STRAINER. ZURN Z6003AV-ULF "AQUA ADVANTAGE" WITH TRIPLE FILTERED DIAPHRAGM, 0.125 GPF FLUSH VALVE WITH MANUAL LEVER HANDLE. JAY R. SMITH 637 FLOOR MOUNTED SUPPORT CARRIER WITH BOTTOM BEARING PLATE. A WALL CLEANOUT SHALL BE INSTALLED ABOVE THE FIXTURE CONNECTION FITTING SERVING EACH URINAL. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS.
U-2	STUDENT URINAL ADA	2"	1-1/2"	3/4"	-	KOHLER "DEXTER" MODEL K-5452-ET, 0.125 GPF, WALL-HUNG, WASHOUT URINAL WITH STRAINER, ZURN Z6003AV-ULF "AQUA ADVANTAGE" WITH TRIPLE FILTERED DIAPHRAGM, 0.125 GPF FLUSH VALVE WITH MANUAL LEVER HANDLE. JAY R. SMITH 637 FLOOR MOUNTED SUPPORT CARRIER WITH BOTTOM BEARING PLATE. A WALL CLEANOUT SHALL BE INSTALLED ABOVE THE FIXTURE CONNECTION FITTING SERVING EACH URINAL. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS.
L-1	STUDENT LAVATORY ADA	2"	1-1/2"	1/2"	-	KOHLER "KINGSTON" MODEL K-2005-0, WALL HUNG, 20"x18" VITREOUS CHINA WITH BACKSPLASH AND WALL BRACKET, 4" CENTER FAUCET HOLES. CHICAGO 3400-ABCP VANDAL PROOF METERING FAUCET WITH PUSH KNOB HANDLE AND 0.5 GPM VANDAL PROOF AERATOR. ADJUST FAUCET CYCLE TIME TO 10 SECOND MINIMUM / 30 SECOND MAXIMUM. McGUIRE 155WC OFFSET GRID DRAIN AND JAY R. SMITH 700-Z SUPPORT CARRIER WITH CONCEALED ARMS. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS.
L-2	STAFF LAVATORY ADA	2"	1-1/2"	1/2"	1/2"	KOHLER "KINGSTON" MODEL K-2005-0, WALL HUNG, 20"x18" VITREOUS CHINA WITH BACKSPLASH AND WALL BRACKET, 4" CENTER FAUCET HOLES. MOEN MODEL # 8413F05 SINGLE LEVER FAUCET WITH 0.5 GPM SPRAY OUTLET AND CERAMIC DISK CARTRIDGE WITH TEMPERATURE LIMIT STOP. McGUIRE 155WC OFFSET GRID DRAIN AND JAY R. SMITH 700-Z SUPPORT CARRIER WITH CONCEALED ARMS. PROVIDE WILKINS ZW3870XLT-4P POINT-OF-USE THERMOSTATIC MIXING VALVE BELOW LAV. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS.
L-3	STUDENT LAVATORY ADA	2"	1-1/2"	1/2"	1/2"	KOHLER "KINGSTON" MODEL K-2005-0, WALL HUNG, 20"x18" VITREOUS CHINA WITH BACKSPLASH AND WALL BRACKET, 4" CENTER FAUCET HOLES. CHICAGO 3400-ABCP VANDAL PROOF METERING FAUCET WITH PUSH KNOB HANDLE AND 0.5 GPM VANDAL PROOF AERATOR. ADJUST FAUCET CYCLE TIME TO 10 SECOND MINIMUM / 30 SECOND MAXIMUM. McGUIRE 155WC OFFSET GRID DRAIN AND JAY R. SMITH 700-Z SUPPORT CARRIER WITH CONCEALED ARMS. PROVIDE WILKINS ZW3870XLT-4P POINT-OF-USE THERMOSTATIC MIXING VALVE BELOW LAV. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS.
S-1	NURSE'S SINK ADA	2"	1-1/2"	1/2"	1/2"	JUST SL-ADA-2125-A-GR, 22"x16"x6" DEEP BOWL SIZE, SINGLE COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL WITH CENTER REAR DRAIN LOCATION, SELF RIMMING LEDGE, J-35GS STAINLESS STEEL BASKET STRAINER, CHICAGO 50-GN8AE35-317XKE36AB FAUCET WITH GOOSENECK SWING SPOUT, 1.5 GPM VANDAL PROOF OUTLET, AND MODIFIED WITH WRIST BLADE HANDLES IN LIEU OF 369 HANDLES. PROVIDE ADDITIONAL FAUCET HOLE AT RIGHT SIDE OF LEDGE FOR EYEWASH INSTALLATION. FURNISH AND INSTALL GUARDIAN #GBF1849LH-R-TMV BARRIER-FREE, DECK MOUNT, EYEWASH WITH SWING DOWN DESIGN INTO SINK TO ACTIVATE WATER FLOW, AND WITH OPTIONAL #G3600 THERMOSTATIC MIXING VALVE. PROVIDE WILKINS ZW3870XLT-4P POINT-OF-USE THERMOSTATIC MIXING VALVE FOR SINK FAUCET.
S-2	WORKROOM SINK ADA	2"	1-1/2"	1/2"	1/2"	JUST MANUFACTURING MODEL #SL-ADA-2125-A-GR, 22"x16"x6" DEEP BOWL SIZE, SINGLE COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL WITH CENTER REAR DRAIN LOCATION, SELF RIMMING SINK LEDGE, J-35GS STAINLESS STEEL BASKET STRAINER. CHICAGO #1100-GN8AE35-317AB FAUCET WITH GOOSENECK SWING SPOUT, 1.5 GPM VANDAL PROOF AERATOR AND WRIST BLADE LEVER HANDLES. PROVIDE WILKINS #ZW3870XLT-4P POINT-OF-USE THERMOSTATIC MIXING VALVE BELOW SINK.
S-3	CLASSROOM SINK ADA	2"	1-1/2"	1/2"	-	JUST MANUFACTURING MODEL #CRA-ADA-1931-A-GR, 22"x16"x6" DEEP BOWL SIZE, SINGLE COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL WITH CENTER REAR DRAIN LOCATION, LEFT AND RIGHT SELF RIMMING SINK LEDGES, J-35GS STAINLESS STEEL BASKET STRAINER, CHICAGO #350-LHE35ABCP COLD WATER FAUCET WITH LEFT HAND LEVER HANDLE, GOOSENECK SWING SPOUT, AND MODIFIED WITH #E65VPJKABCP 1.0 GPM VANDAL PROOF, LAMINAR FLOW OUTLET, AND CHICAGO #748-665ABCP DRINKING BUBBLER. MOUNT FAUCET IN CENTER OF LEFT SINK LEDGE. MOUNT BUBBLER IN FRONT OF RIGHT LEDGE.
S-4	KINDERGARTEN CLASSROOM SINK ADA	2"	1-1/2"	1/2"	-	JUST MANUFACTURING MODEL #CRA-ADA-1931-A-GR, 22"x16"x5" DEEP BOWL SIZE, SINGLE COMPARTMENT, 18 GAUGE TYPE 304 STAINLESS STEEL WITH CENTER REAR DRAIN LOCATION, LEFT AND RIGHT SELF RIMMING LEDGES, J-35GS STAINLESS STEEL BASKET STRAINER, CHICAGO #350-LHE35ABCP COLD WATER FAUCET WITH LEFT HAND LEVER HANDLE, GOOSENECK SWING SPOUT, AND MODIFIED WITH #E65VPJKABCP 1.0 GPM VANDAL PROOF, LAMINAR FLOW OUTLET, AND CHICAGO #748-665ABCP DRINKING BUBBLER. MOUNT FAUCET IN CENTER OF LEFT SINK LEDGE. MOUNT BUBBLER IN FRONT OF RIGHT LEDGE.
S-5	THREE COMPARTMENT SINK (CONCESSIONS)	2"	1-1/2"	3/4"	3/4"	ADVANCE TABCO MODEL MODEL #94-83-60-36RL, 16 GA TYPE 304 STAINLESS STEEL, TRIPLE COMPARTMENT SINK WITH 8" HIGH BACKSPLASH. OVERALL DIMENSIONS: 107" LONG x 36" DEEP. EACH SINK COMPARTMENT SHALL BE 20"x28" WITH 36" DRAIN BOARDS ON RIGHT AND LEFT. EACH COMPARTMENT SHALL BE 12" DEEP. 1-5/8" O.D. STAINLESS STEEL TUBULAR LEGS WITH BULLET FEET FOR ANCHORING, (3) JUST J35 STAINLESS STEEL CUP STRAINERS. (2) TWO T&S BRASS B-0133-14CRQJST PRE-RINSE UNIT, 8" CENTERS, WALL MOUNT FAUCET WITH 2.2 GPM 14" SWING SPOUT AND 1.07 GPM SPRAY PRE-RINSE VALVE WITH FLEXIBLE HOSE AND WALL MOUNT. LEONARD 270-LF-REC THERMOSTATIC MIXING VALVE IN STAINLESS STEEL RECESSED CABINET WITH KEY LOCK. P-TRAP WITH ESCUTCHEON AND SPEEDWAY COMPRESSION WALL STOPS AND TUBING.
MS-1	MOP SINK	3"	2"	1/2"	1/2"	KOHLER "WHITBY" #K-6710 CORNER STYLE, FLOOR MOUNT, 28"x28"x12" DEEP ENAMELED CAST IRON WITH #K-8940 RIM GUARD, #K-9146 DRAIN STRAINER. CHICAGO MODEL #897-CCP WALL MOUNT, POLISHED CHROME FAUCET WITH HOSE THREAD OUTLET, VACUUM BREAKER, INTEGRAL STOPS, INTEGRAL CHECK VALVES, AND WALL BRACE. FLORESTONE MODEL #MR-370 HOSE WITH HOOK AND #MR-372 MOP HANGER.
HS-1	KITCHEN HAND SINK ADA	2"	1-1/2"	1/2"	1/2"	ADVANCE TABCO MODEL #7-PS-46 WALL HUNG, 20"x24" SINK, 18 GAUGE TYPE 304 STAINLESS STEEL WITH BACKSPLASH AND WALL BRACKET, STAINLESS STEEL GRID DRAIN, BACKSPLASH MOUNTED GOOSENECK FAUCET WITH WRIST BLADE HANDLES, DECK MOUNT SOAP DISPENSER, AND FRONT LOADING PAPER TOWEL DISPENSER. PROVIDE WILKINS #ZW3870XLT-4P POINT-OF-USE THERMOSTATIC MIXING VALVE BELOW SINK. PROVIDE A STEEL SUPPORT PLATE FOR MOUNTING FIXTURE PER DETAIL ON DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHT.
DF-1	ADMIN DRINKING FOUNTAIN ADA	2"	1-1/2"	1/2"	-	HAWS MODEL #H1011.8 ELECTRIC HI-LO DRINKING FOUNTAINS, WALL MOUNT, 14 GAUGE STAINLESS STEEL, BARRIER FREE, REFRIGERATED (#HCR8) AND FILTERED FOUNTAIN, RECESSED MOUNTED STAINLESS STEEL DUAL FOUNTAINS WITH INTEGRATED SWIRL DESIGN AND BACK PANEL, POLISHED CHROME PLATED BRASS VANDAL RESISTANT BUBBLER HEADS, FRONT MOUNTED PUSH BUTTON VALVES, VANDAL RESISTANT BOTTOM PLATE, NPT TRAP, SCREWDRIVER STOP, LOUVERED INTRUSION-PROOF GRILLE. CHILLER TO PROVIDE 8.0 GPH OF 50°F REFRIGERATED WATER. HAWS #MTGFR.LG MOUNTING FRAME AND HAWS #1920 BOTTLE FILLER WITH HAWS #BP-32 POLISHED CHROME BACK PANEL. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS. ELECTRICAL REQUIRED FOR CHILLER: 120V, 370 WATTS.
DF-2	DRINKING FOUNTAIN ADA	2"	1-1/2"	1/2"	-	HAWS MODEL #H1011.8 ELECTRIC HI-LO DRINKING FOUNTAINS, WALL MOUNT, 14 GAUGE STAINLESS STEEL, BARRIER FREE, REFRIGERATED (#HCR8) AND FILTERED FOUNTAIN, RECESSED MOUNTED STAINLESS STEEL DUAL FOUNTAINS WITH INTEGRATED SWIRL DESIGN AND BACK PANEL, POLISHED CHROME PLATED BRASS VANDAL RESISTANT BUBBLER HEADS, FRONT MOUNTED PUSH BUTTON VALVES, VANDAL RESISTANT BOTTOM PLATE, NPT TRAP, SCREWDRIVER STOP, LOUVERED INTRUSION-PROOF GRILLE. CHILLER TO PROVIDE 8.0 GPH OF 50°F REFRIGERATED WATER. HAWS #MTGFR.LG MOUNTING FRAME AND HAWS #1920 BOTTLE FILLER WITH HAWS #BP-32 POLISHED CHROME BACK PANEL. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS. ELECTRICAL REQUIRED FOR CHILLER: 120V, 370 WATTS.
DF-3	EXTERIOR DRINKING FOUNTAIN ADA	2"	1-1/2"	1/2"	-	HAWS MODEL #1119.14-1920 HI-LO DRINKING FOUNTAINS W/ BOTTLE FILLER, WALL MOUNT, 14 GAUGE STAINLESS STEEL, BARRIER FREE, BACK PANEL, POLISHED CHROME PLATED BRASS VANDAL RESISTANT BUBBLER HEADS, FRONT MOUNTED PUSH BUTTON VALVES, VANDAL RESISTANT BOTTOM PLATE, NPT TRAP, AND SCREWDRIVER STOP. HAWS #6700.4 MOUNTING PLATE WITH HAWS #6800 SUPPORT CARRIER. HAWS #1920 BOTTLE FILLER WITH HAWS #BP-32 POLISHED CHROME BACK PANEL AND HAWS #6469 BOTTLE STAND SET ON TOP OF LO FOUNTAIN. SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE MOUNTING HEIGHTS.

PLUMBING FIXTURE SCHEDULE (CONTINUED)

MARK	FIXTURE	S OR W	V	CW	HW	DESCRIPTION
HB-1	HOSE BIBB	-	-	3/4"	-	WOODFORD MODEL #24P 3/4" INLET BRASS WALL HOSE FAUCET WITH LOCKSHIELD, NON-REMOVABLE VACUUM BREAKER, AND OPTIONAL LOOSE TEE KEY HANDLE. PROVIDE POLISHED CHROME FINISH FOR INDOORS, ROUGH CHROME FINISH FOR OUTDOORS.
HB-2	ROOF HYDRANT	-	-	1"	-	WOODFORD MODEL #RHMC-MS ROOF HYDRANT WITH MOUNTING SYSTEM, 1" GALVANIZED STEEL PIPE INLET, BRASS HOSE FAUCET WITH 3/4" HOSE THREAD, WHEEL HANDLE AND BACKFLOW PREVENTER, UNDERDECK CLAMP, MOUNTING BOLTS, AND CLAMP SCREWS. REFER TO DETAIL N11 ON SHEET X/P801.
FD-1	FLOOR DRAIN	2"	1-1/2"	TP	-	JAY R. SMITH 2005Y-A05-HP-P050 COATED CAST IRON WITH 5" DIAMETER ROUND NICKEL BRONZE HEEL PROOF GRATE, DOUBLE DRAINAGE FLANGE, NO HUB OUTLET AND TRAP PRIMER CONNECTION.
FD-2	FLOOR DRAIN	2"	1-1/2"	TP	-	JAY R. SMITH 2005Y-B05-HP-P050 COATED CAST IRON WITH 5" SQUARE NICKEL BRONZE HEEL PROOF GRATE, DOUBLE DRAINAGE FLANGE, NO HUB OUTLET AND TRAP PRIMER CONNECTION.
FS-1	FLOOR SINK	2"	1-1/2"	TP	-	JAY R. SMITH 3100Y-12-C, 8"x8"x6" DEEP COATED CAST IRON FLOOR SINK WITH NICKEL BRONZE RIM WITH HALF GRATE, DOME BOTTOM STRAINER, DOUBLE DRAINAGE FLANGE, NO HUB OUTLET AND #2695Y-2 TRAP PRIMER CONNECTION FITTING WHERE APPLICABLE.
FS-2	FLOOR SINK	2"	1-1/2"	TP	-	JAY R. SMITH 3140Y-12-C, 12"x12"x6" DEEP COATED CAST IRON FLOOR SINK WITH NICKEL BRONZE RIM WITH HALF GRATE, DOME BOTTOM STRAINER, DOUBLE DRAINAGE FLANGE, NO HUB OUTLET AND #2695Y-2 TRAP PRIMER CONNECTION FITTING WHERE APPLICABLE.
FS-3	FLOOR SINK	3"	2"	TP	-	JAY R. SMITH 3200Y-14-C, 16"x16"x12" DEEP COATED CAST IRON FLOOR SINK WITH NICKEL BRONZE RIM WITH 7" SQUARE OPENING IN CENTER, DOME BOTTOM STRAINER, DOUBLE DRAINAGE FLANGE, NO HUB OUTLET AND #2695Y-2 TRAP PRIMER CONNECTION FITTING WHERE APPLICABLE.
CWD-1	CAN WASH DRAIN	3"	2"	-	1/2"	JAY R. SMITH MODEL #3370-F-C-Y, 12"x12"x10" DEEP COATED CAST IRON, ACID RESISTANT PAINTED INTERIOR, WITH DOUBLE DRAINAGE FLANGE, NICKEL BRONZE RIM AND GRATE, DOME STRAINER, BRONZE ADJUSTABLE SPRAY NOZZLE, SEDIMENT BUCKET, AND 3" NO-HUB OUTLET.
CWB-1	CAN WASH BOX	-	-	1/2"	1/2"	JAY R. SMITH MODEL #3385 SURFACE MOUNTED STAINLESS STEEL WATER SUPPLY CONTROL BOX WITH KEY CYLINDER LOCK, HINGED COVER, CONTROL VALVES, INTEGRAL VACUUM BREAKER, AND INTEGRAL STOPS.
KS-1	KITCHEN SINK (THREE COMPARTMENT)	3"	2"	3/4"	3/4"	ADVANCE TABCO MODEL MODEL #94-83-60-36RL, 16 GA TYPE 304 STAINLESS STEEL, TRIPLE COMPARTMENT SINK WITH 8" HIGH BACKSPLASH. OVERALL DIMENSIONS: 139" LONG x 36" DEEP. WEIGHT = 451 LBS. EACH SINK COMPARTMENT SHALL BE 20"x28" WITH 36" DRAIN BOARDS ON RIGHT AND LEFT. EACH COMPARTMENT SHALL BE 14" DEEP. 1-5/8" O.D. STAINLESS STEEL TUBULAR LEGS WITH BULLET FEET FOR ANCHORING, (3) JUST J35 STAINLESS STEEL CUP STRAINERS. (1) T&S BRASS B-0133-14CRQJST PRE-RINSE UNIT, 8" CENTERS, WALL MOUNT FAUCET WITH 2.2 GPM 14" SWING SPOUT AND 1.07 GPM SPRAY PRE-RINSE VALVE WITH FLEXIBLE HOSE AND WALL MOUNT. LEONARD 270-LF-REC THERMOSTATIC MIXING VALVE IN STAINLESS STEEL RECESSED CABINET WITH KEY LOCK. P-TRAP WITH ESCUTCHEON AND SPEEDWAY COMPRESSION WALL STOPS AND TUBING.
KS-2	KITCHEN SINK (SINGLE COMPARTMENT)	2"	1-1/2"	1/2"	1/2"	ADVANCE TABCO MODEL #FS-1-1824-18RL, 14 GA TYPE 304 STAINLESS STEEL, SINGLE COMPARTMENT SINK WITH 8" HIGH BACKSPLASH. OVERALL DIMENSIONS: 54" LONG x 30" DEEP. WEIGHT = 175 LBS. SINK COMPARTMENT SHALL BE 18"x24" x 14" DEEP BOWL SIZE WITH 18" DRAIN BOARDS ON RIGHT AND LEFT. 1-5/8" O.D. STAINLESS STEEL TUBULAR LEGS WITH BULLET FEET FOR ANCHORING, (1) JUST J35 STAINLESS STEEL CUP STRAINERS. (1) ZURN Z843G1-XL-19F WALL MOUNT FAUCET WITH 1.5 GPM 8" SWING SPOUT, AND 8" CENTER FAUCET HOLES.
KS-3	KITCHEN SINK (FOOD PREP 2-COMPARTMENT)	2"	1-1/2"	1/2"	1/2"	ADVANCE TABCO MODEL #94-62-36-18RL, 14 GA TYPE 304 STAINLESS STEEL, SINGLE COMPARTMENT SINK WITH 11" HIGH BACKSPLASH. OVERALL DIMENSIONS: 77" LONG x 31" DEEP. WEIGHT = 247 LBS. SINK COMPARTMENTS SHALL BE 18"x24" x 14" DEEP BOWL SIZE WITH 18" DRAIN BOARDS ON RIGHT AND LEFT. 1-5/8" O.D. STAINLESS STEEL TUBULAR LEGS WITH BULLET FEET FOR ANCHORING, (2) JUST J35 STAINLESS STEEL CUP STRAINERS. (1) ZURN Z843G1-XL-19F WALL MOUNT FAUCET WITH 1.5 GPM 8" SWING SPOUT, AND 8" CENTER FAUCET HOLES.
KS-4	KITCHEN SINK (PRE-RINSE 1-COMPARTMENT)	2"	1-1/2"	1/2"	1/2"	ADVANCE TABCO MODEL #94-21-20-36R, 14 GA TYPE 304 STAINLESS STEEL, SINGLE COMPARTMENT SINK WITH 11" HIGH BACKSPLASH. OVERALL DIMENSIONS: 62" LONG x 27" DEEP. WEIGHT = 127 LBS. SINK COMPARTMENT SHALL BE 20"x20" x 14" DEEP BOWL SIZE WITH 36" RIGHT DRAIN BOARD. 1-5/8" O.D. STAINLESS STEEL TUBULAR LEGS WITH BULLET FEET FOR ANCHORING, (1) JUST J35 STAINLESS STEEL CUP STRAINERS. (1) ZURN Z843G1-XL-19F WALL MOUNT FAUCET WITH 1.5 GPM 8" SWING SPOUT, AND 8" CENTER FAUCET HOLES.
KS-5	KITCHEN SINK (GARBAGE DISPOSER SINK BOWL)	2"	1-1/2"	1/2"	1/2"	INSINKERATOR 15" TYPE A BOWL SINK DISPOSER MOUNTING ASSEMBLY WITH STAINLESS BOWL COVER AND REMOVABLE SPLASH BAFFLE. PROVIDE WITH CHICAGO MODEL #923-XKCAB PRE-RINSE FAUCET MOUNTED ON WALL.
SB-1	SUPPLY BOX	-	-	1/2"	-	SPECIALTY PRODUCTS MODEL #OB-609-LL, LEAD-FREE RECESSED METAL ICE MAKER WATER SUPPLY BOX WITH WHITE FINISH, INTEGRAL SHUT-OFF VALVE AND MINI WATER HAMMER ARRESTOR.
WF-1	WATER FILTER (ICE MACHINE)	-	-	3/8"	-	EVERPURE "INSURICE SINGLE i2000" MODEL #EV9324-01 ICE MACHINE WATER FILTER SYSTEM WITH #EV9612-22 0.5 MICRON CARTRIDGE, 1.67 GPM MAXIMUM FLOW RATE, 9,000 GALLONS RATED CAPACITY, WALL MOUNTING BRACKET. PROVIDE (2) ADDITIONAL REPLACEMENT CARTIDGES, MODEL #EV9612-22. OVERALL DIMENSIONS: 29.64" HIGH x 8.04" WIDE x 5.25" DEEP. WEIGHT = 9 LBS.
TP-1	TRAP PRIMER	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS "PRIME-RITE" MODEL #PR-500 PRESSURE-DROP ACTIVATED WITH #DU-U DISTRIBUTION UNIT FOR UP TO (2) FLOOR DRAINS. PROVIDE 14"x14" STAINLESS STEEL ACCESS DOOR WITH CYLINDER LOCK. PROVIDE SOV UPSTREAM OF TRAP PRIMER.
TP-2	TRAP PRIMER	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS MODEL #P1-500 PRESSURE-DROP ACTIVATED WITH #DU-U DISTRIBUTION UNIT FOR UP TO (4) FLOOR DRAINS. PROVIDE 14"x14" STAINLESS STEEL ACCESS DOOR WITH CYLINDER LOCK. PROVIDE SOV UPSTREAM OF TRAP PRIMER.
SA-1	SHOCK ABSORBER	-	-	1"	-	SIOUX CHIEF "HYDRA-RESTER" MODEL #654-CS SEAMLESS COPPER CHAMBER APPROVED FOR CONCEALED INSTALLATION. PDI SYMBOL "C". INSTALL IN UPWARD POSITION.
RO-1	COMBINATION ROOF & OVERFLOW DRAIN	-	-	-	-	ZURN MODEL #Z165 8-3/8" DIAMETER ROOF AND OVERFLOW DRAIN, DURA-COATED CAST IRON BODIES WITH COMINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, DOUBLE TOP-SET DECK PLATE AND LOW SILHOUETTE CAST IRON DOMES. USED FOR 2", 3" OR 4" PIPE.
DS-1	DOWNSPOUT	-	-	-	-	JAY R. SMITH #1775 SERIES DOWNSPOUT OUTLET, TYPE 304 STAINLESS STEEL WITH HINGED PERFORATED COVER FOR OVERFLOW DRAINS.
GD-1	GARBAGE DISPOSER	-	-	-	-	IN-SINK-ERATOR "SS SERIES" SHORT-BODY MODEL #22-500 WITH MULTI-GRIND STAINLESS STEEL CHAMBER, AS-101 AQUASAVER CONTROL CENTER, DISPOSER MOUNTING ASSEMBLY, STANDARD WARRANTY, 5 HORSE POWER, 208V / 3 PH, 8.8 AMPS.
GD-2	GARBAGE DISPOSER	-	-	-	-	IN-SINK-ERATOR "SS SERIES" SHORT-BODY MODEL #SS-200 WITH MULTI-GRIND STAINLESS STEEL CHAMBER, #AS-101 AQUASAVER CONTROL CENTER, DISPOSER MOUNTING ASSEMBLY, STANDARD WARRANTY, 2 HORSE POWER, 208V / 3 PH, 4.4 AMPS.
WH-1	WATER HEATER (BUILDING A)	-	-	3/4"	3/4"	A.O. SMITH DEL-20 DURAPOWER COMMERCIAL ELECTRIC, 20 GALLON STORAGE CAPACITY GLASS LINED TANK, 2500 WATTS, 208V / 1 PHASE, 13 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 22-1/4" HIGH. OPERATING WEIGHT = 240 LBS.
WH-2	WATER HEATER (BUILDING B)	-	-	3/4"	3/4"	A.O. SMITH DEL-20 DURAPOWER COMMERCIAL ELECTRIC, 20 GALLON STORAGE CAPACITY GLASS LINED TANK, 2500 WATTS, 208V / 1 PHASE, 13 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 22-1/4" HIGH. OPERATING WEIGHT = 240 LBS.
WH-3	WATER HEATER (BUILDING C)	-	-	3/4"	3/4"	A.O. SMITH DEL-20 DURAPOWER COMMERCIAL ELECTRIC, 20 GALLON STORAGE CAPACITY GLASS LINED TANK, 2500 WATTS, 208V / 1 PHASE, 13 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 22-1/4" HIGH. OPERATING WEIGHT = 240 LBS.
WH-4	WATER HEATER (BUILDING D)	-	-	3/4"	3/4"	A.O. SMITH DEL-30 DURAPOWER COMMERCIAL ELECTRIC, 30 GALLON STORAGE CAPACITY GLASS LINED TANK, 4500 WATTS, 208V / 1 PHASE, 23 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 31" HIGH. OPERATING WEIGHT = 350 LBS.

WH-5	WATER HEATER (BUILDING E)	-	-	1-1/2"	1-1/2"	A.O. SMITH CYCLONE MXi MODULATING MODEL #BTH-300A, DIRECT VENT CONDENSING, LOW NOx, ASME RATED, 119 GALLON STORAGE CAPACITY GLASS LINED TANK, 300,000 BTUH INPUT, 346 GPH RECOVERY RATE AT 100°F TEMPERATURE RISE, 96% THERMAL EFFICIENCY, BUILT-IN CONTROL DIAGNOSTICS, ELECTRICAL CHARACTERISTICS 120V / 1 PHASE, 5.0 AMPS. OPTIONAL POLYPROPYLENE CONCENTRIC VENT KIT #9009226005, OPTIONAL CONDENSATE NEUTRALIZATION KIT #9007960005, AND 3/4" P&T RELIEF VALVE.
						DIMENSIONS = 33-1/8"Ø x 75-3/4" HIGH.
						OPERATING WEIGHT = 1,850 LBS.

WH-6	WATER HEATER (BUILDING K1)	-	-	3/4"	3/4"	A.O. SMITH DEL-20 DURAPOWER COMMERCIAL ELECTRIC, 20 GALLON STORAGE CAPACITY GLASS LINED TANK, 2500 WATTS, 208V / 1 PHASE, 13 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 22-1/4" HIGH. OPERATING WEIGHT = 240 LBS.

PLUMBING FIXTURE SCHEDULE (CONTINUED)

MARK	FIXTURE	S OR W	V	CW	HW	DESCRIPTION
WH-7	WATER HEATER (BUILDING K2)	-	-	3/4"	3/4"	A.O. SMITH DEL-20 DURAPOWER COMMERCIAL ELECTRIC, 20 GALLON STORAGE CAPACITY, GLASS-LINED TANK, 2500 WATTS, 208V / 1 PHASE 13 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 21-3/4"Ø x 22-1/4" HIGH. OPERATING WEIGHT = 240 LBS.
WH-8	WATER HEATER (BUILDING E)	-	-	3/4"	3/4"	A.O. SMITH DEL-10 DURAPOWER COMMERCIAL ELECTRIC, 10 GALLON STORAGE CAPACITY, GLASS-LINED TANK, 2000 WATTS, 208V / 1 PHASE 10 GPH RECOVERY RATE AT 80°F TEMPERATURE RISE, AND 3/4" P&T RELIEF VALVE. DIMENSIONS = 18"Ø x 18-1/4" HIGH. OPERATING WEIGHT = 118 LBS.
CP-1	CIRCULATING PUMP	-	-	-	3/4"	GRUNDFOS MODEL #UPS15-55SFC STAINLESS STEEL DOMESTIC HOT WATER IN-LINE CIRCULATING PUMP, WITH FLANGED CONNECTIONS, 3-SPEED MOTOR, INTEGRAL CHECK VALVE, 5 GPM AT 13 FT. TDH. 1/12 HP, 120V / 1 PH. (CONTROL THRU "HONEYWELL" AQUASTAT AND DIGITAL 365 DAY TIME CLOCK OR EMS CONTACTS)
MV-1	MIXING VALVE	-	-	1"	1" 1-1/4"	WATTS "INTELLISTATION JR." #LFIS100VL ELECTRONIC MIXING VALVE, 1" INLETS, 1-1/4" RETURN, PROGRAMMABLE SET POINT RANGE, LEAD FREE CONSTRUCTION, FULL-COLOR TOUCH SCREEN INTERFACE, INTEGRAL CHECK VALVES AND STRAINERS ON INLETS, INTEGRATE WITH BUILDING EMS. 39 GPM AT 5 PSI PD. ELECTRICAL: 120V, 1 PH. WEIGHT: 17 LBS.
TET-1	THERMAL EXPANSION TANK	-	-	1/2"	-	WILKINS XT-8, 1 GALLON CAPACITY ASME RATED EXPANSION TANK WITH IN-LINE CONNECTIONS, LEAD-FREE, AND FDA APPROVED BLADDER FOR POTABLE WATER USE.
GI-1	GREASE INTERCEPTOR	3"	3"	-	-	ZURN MODEL #GT2700-25 GREASE INTERCEPTOR CONSTRUCTED OF STEEL W/ WHITE ACID RESISTING EPOXY (A.R.C.), RECESSED INSTALLATION WITH FACTORY INSTALLED BUILT-IN FLOW CONTROL AT INLET, GAS AND WATER TIGHT COVER, AND WITH RISER EXTENSIONS FOR EXTENDING COVER TO GRADE (HEIGHT AS REQUIRED), 25 GPM FLOW RATE, 50 LBS. MAXIMUM GREASE CAPACITY. LIFETIME GUARANTEED. INSTALL INSIDE CONCRETE VAULT WITH H-20 RATED LID PER DETAIL N14 ON X/P801.
GPR-1	GAS PRESSURE REGULATOR (BUILDING A)	-	-	-	-	NORGAS REGULATOR SERIES N5A DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 3/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 140 CFH (DESIGN), 358 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-2	GAS PRESSURE REGULATOR (BUILDING B)	-	-	-	-	NORGAS REGULATOR SERIES N5C DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 1-1/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 750 CFH (DESIGN), 1710 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-3	GAS PRESSURE REGULATOR (BUILDING C)	-	-	-	-	NORGAS REGULATOR SERIES N5C DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 1-1/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC. 600 CFH (DESIGN), 1710 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-4	GAS PRESSURE REGULATOR (BUILDING D)	-	-	-	-	NORGAS REGULATOR SERIES N5C DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 1-1/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 690 CFH (DESIGN), 1710 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-5	GAS PRESSURE REGULATOR (BUILDING E)	-	-	-	-	NORGAS REGULATOR SERIES N5C DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 1-1/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 951 CFH (DESIGN), 1710 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-6	GAS PRESSURE REGULATOR (BUILDING K1)	-	-	-	-	NORGAS REGULATOR SERIES N5A DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 3/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 200 CFH (DESIGN), 358 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
GPR-7	GAS PRESSURE REGULATOR (BUILDING K2)	-	-	-	-	NORGAS REGULATOR SERIES N5A DIECAST ALUMINUM REGULATOR WITH CAST IRON PIPE SECTION. FULL CAPACITY INTERNAL RELIEF VALVE, 3/4" SCREWED INLET AND OUTLET SIZE, AND SILVER PRESSURE SPRING FOR 7-11" WC OUTLET PRESSURE. 134 CFH (DESIGN), 358 CFH (MAX) CAPACITY AT 2 PSIG INLET AND 7" WC OUTLET GAS PRESSURE. CERTIFIED ANSI Z21.80.
TD-1	TOUGH DRIAN	3"	2"	TP	-	CUSTOM FABRICATED PER DETAIL A14 ON SHEET X/P801. STAINLESS STEEL GRATE.

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

HANNAH G. BRIGDON
M39064
EXP. 09-30-24
MECHANICAL

Consultant

McKinley / Fowler Elementary School- Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
PLUMBING SCHEDULES

Drawing

darden architects
ARCHITECTURE
PLANNING
INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

ANDREW A. CORRAL
No. C37102
Ren. 11-30-23

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: HB	
Scale: 12" = 1'-0"	Drawn By: HB	X/P102
Project Number: 2116	Checked By: JCS	
Date: 02/03/2023	Reviewed By: HB	

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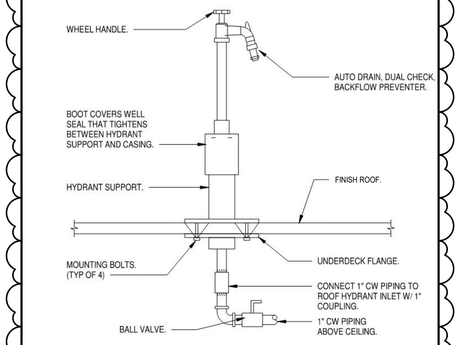
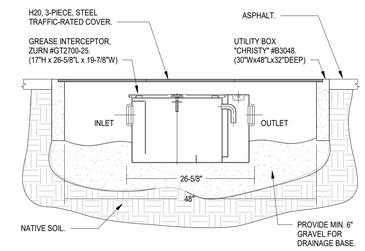


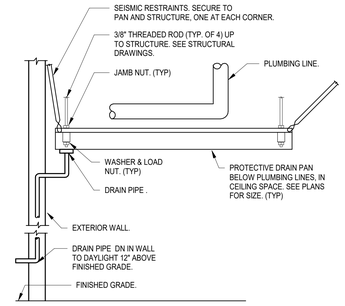
N11
NTS

ROOF HYDRANT



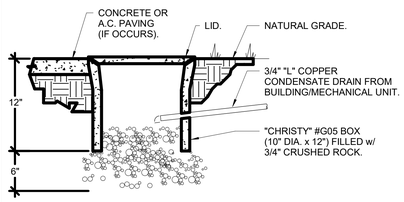
N14
NTS

GREASE INTERCEPTOR



J14
NTS

DRAIN PAN



E14
NTS

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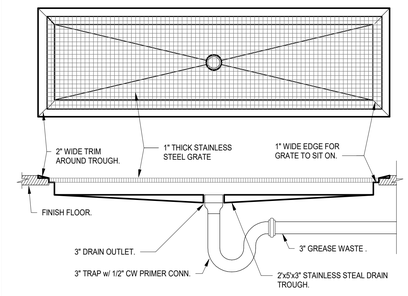

A14
NTS

GREASE WASTE TROUGH DRAIN

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

NET POSITIVE consulting engineers
www.NPCeng.com
project no. 1138

REGISTERED PROFESSIONAL ENGINEER HANNAH G. BIETOOSEN M39064 EXP. 09-30-24 MECHANICAL STATE OF CALIFORNIA

Consultant

McKinley / Fowler Elementary School- Inc. 2
Clovis Unified School District
Fresno, CA 93727

Project

TYPICAL INFORMATION
PLUMBING DETAILS

Drawing

darden architects
ARCHITECTURE
PLANNING
INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: HB
Drawn By: HB
Checked By: JCS
Reviewed By: HB

Scale: As indicated
Project Number: 2116
Date: 02/03/2023

X/P801

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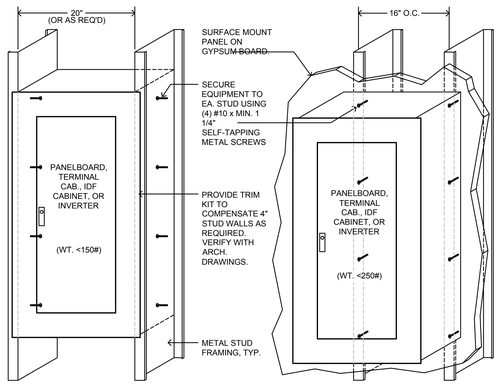
AD4-PX14



RECESSED MOUNT

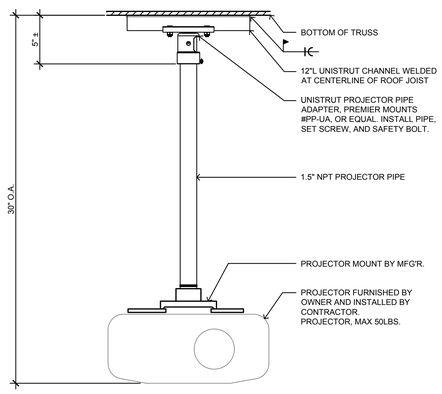
THIS DETAIL APPLIES TO NEW WALL CONSTRUCTION WHERE STUD SPACING CAN BE ADJUSTED. AT EXISTING WALLS, RECESSED INSTALLATION MAY REQUIRE FIELD INSPECTION AND DETAILING, SUBJECT TO APPROVAL BY ON-SITE DSA INSPECTOR.

SURFACE MOUNT

THIS DETAIL APPLIES TO EITHER NEW OR EXISTING WALL CONSTRUCTION. PANEL SHALL BE CENTERED OVER EXISTING STUD FRAMING. WHERE THIS IS NOT POSSIBLE, METALLIC HORIZONTAL BRACING SHALL BE ATTACHED ACROSS (3) WALL STUDS AND LINED UP WITH TOP, CENTER, AND BOTTOM OF PANEL.

L1 — Electrical Panel Mounting Detail

No Scale



F1 — Projector Mounting Detail

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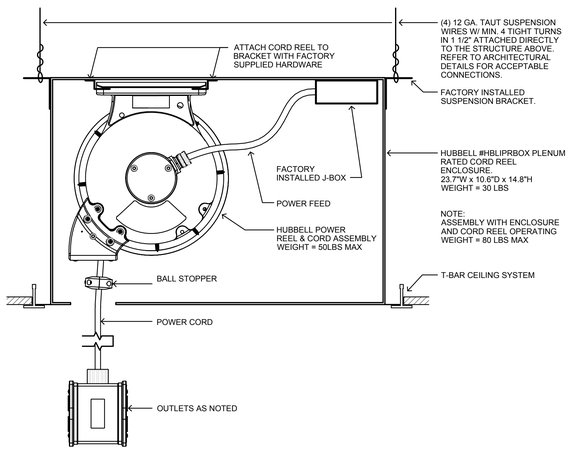

A1 — Cord Reel & Enclosure Detail

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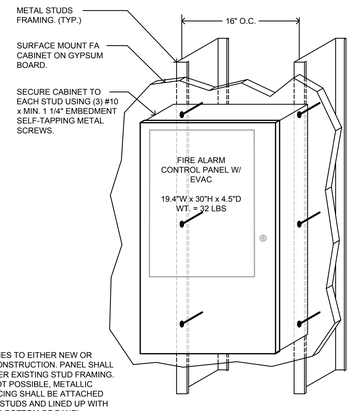

THIS DETAIL APPLIES TO EITHER NEW OR EXISTING WALL CONSTRUCTION. PANEL SHALL BE CENTERED OVER EXISTING STUD FRAMING. WHERE THIS IS NOT POSSIBLE, METALLIC HORIZONTAL BRACING SHALL BE ATTACHED ACROSS (3) WALL STUDS AND LINED UP WITH TOP, CENTER, AND BOTTOM OF PANEL.

A6 — Fire Alarm Control Panel Mounting Detail

No Scale

PANEL "AH" SCHEDULE

277/480V 3Φ 4W 42kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	HVAC UNIT HC-A1	30	3	5457	A	1600	15	1	LIGHTS	2
3	-----	--	--	5457	B	887	15	1	LIGHTS	4
5	-----	--	--	5457	C	2220	15	1	LIGHTS	6
7	HVAC UNIT HC-A2	35	3	5235	A	1550	15	1	LCP, INVERTER, EXTERIOR LIGHTS	8
9	-----	--	--	5235	B	688	15	1	PEDESTRIAN POLE LIGHTS	10
11	-----	--	--	5235	C		20	1	SPARE	12
13	HVAC UNIT VRF ODU 1-1	25	3	4986	A				SPACE ONLY	14
15	-----	--	--	4986	B				SPACE ONLY	16
17	-----	--	--	4986	C				SPACE ONLY	18
19	HVAC UNIT ERV-1	15	3	1302	A				SPACE ONLY	20
21	-----	--	--	1302	B				SPACE ONLY	22
23	-----	--	--	1302	C				SPACE ONLY	24
25	SPACE ONLY				A	18576	125	3	XFMR "TAL" / PANEL "AL"	26
27	SPACE ONLY				B	15582	--	--	-----	28
29	SPACE ONLY				C	14085	--	--	-----	30

LOAD SUMMARY: ΦA 38706 VA; ΦB 34138 VA; ΦC 33285 VA
CONNECTED LOAD: 106.1 kVA
MAX CURRENT: 140 A
BUSING: 250A
MAIN: 250A

PANEL "AL" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - MAIN OFFICE 100	20	1	720	A	720	20	1	OUTLETS - LIBRARY OPEN AREA 113	2
3	OUTLETS - MAIN OFFICE 100	20	1	720	B	900	20	1	OUTLETS - LIBRARY OPEN AREA 113	4
5	OUTLETS - MAIN OFFICE 100	20	1	540	C	900	20	1	OUTLETS - LIBRARY OPEN AREA 113	6
7	OUTLETS - MAIN OFFICE 100	20	1	900	A	720	20	1	OUTLETS - LIBRARY OPEN AREA 113	8
9	OUTLETS - OFFICE 101	20	1	900	B	720	20	1	OUTLETS - LIBRARY CLASSRM 114	10
11	OUTLETS - OFFICE 102	20	1	900	C	720	20	1	OUTLETS - LIBRARY CLASSRM 114	12
13	OUTLETS - CONF. 103	20	1	540	A	900	20	1	OUTLETS - LIBRARY CLASSRM 114, STOR 115	14
15	OUTLETS - CONF. 103	20	1	540	B	900	20	1	OUTLETS - LIBRARY CLASSRM 114, STOR 115	16
17	OUTLETS - PRINCIPAL'S OFFICE 105	20	1	1080	C	720	20	1	PROJECTOR & SCREEN - LIBRARY OPEN 113	18
19	OUTLETS - WORKROOM 110	20	1	900	A		20	1	SPARE	20
21	REFRIGERATOR - WORKROOM 110	20	1	1000	B		20	1	SPARE	22
23	COPIER - WORKROOM 110	20	1	500	C		20	1	SPARE	24
25	OUTLETS - GIS OFFICE 111	20	1	900	A				SPACE ONLY	26
27	OUTLETS - NURSE 112	20	1	720	B				SPACE ONLY	28
29	OUTLETS - NURSE 112, TOILET 112A	20	1	900	C				SPACE ONLY	30
31	OUTLETS - ELEC. RM 120, HALLWAY 116	20	1	900	A	1250	20	2	WATER HEATER WH-1	32
33	DRINKING FOUNTAIN - HALLWAY 116	20	1	600	B	1250	--	--	-----	34
35	OUTLETS - CUST 107, RR 106,108, STOR 109	20	1	900	C	93	15	1	EXHAUST FAN EF-A1	36
37	OUTLETS - HALLWAY 117, 118	20	1	900	A	931	25	2	HVAC ODU/IDU-A1	38
39	OUTLET - ELEC. RM 120	20	1	360	B	931	--	--	-----	40
41	AUTO DOOR OPERATOR - MAIN OFFICE 100	20	1	180	C	1115	20	2	HVAC VRF IDU 1-1A, 7A, 8A, & BCC	42
43	SPARE	20	1		A	1115	--	--		44
45	SPARE	20	1		B	1321	20	2	HVAC VRF IDU 1-2A to 4A, 5A, 6A	46
47	SPARE	20	1		C	1277	--	--		48
49	EXTERIOR DOORS ACCESS CONTROL	20	1	600	A	6580	125	3	PANEL "AL-IT"	50
51	OUTLETS - ROOF	20	1	540	B	4180	--	--	-----	52
53	FA SPRINKLER RISER BELL *	20	1	180	C	4080	--	--	-----	54

LOAD SUMMARY: ΦA 18576 VA; ΦB 15582 VA; ΦC 14085 VA
CONNECTED LOAD: 48.2 kVA
MAX CURRENT: 155 A
BUSING: 250A
MAIN: 250A

PANEL "ALIT" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	SERVER RACK OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	2500	30	2	SERVER RACK UPS OUTLET	6
7	CONVENIENCE OUTLETS	20	1	360	A	2500	--	--	-----	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	EMS PANEL	10
11	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	SECURITY PANEL	12
13	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	FA ALARM PANEL *	14
15	CONVENIENCE OUTLETS	20	1	360	B	100	20	1	LIGHTING GATEWAY	16
17	AT&T MPOE OUTLETS	20	1	360	C		20	1	SPARE	18
19	SPARE	20	1		A		20	1	SPARE	20
21	SPARE	20	1		B		20	1	SPARE	22
23	SPARE	20	1		C		20	1	SPARE	24
25	SPARE	20	1		A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPARE	20	1		B		--	--	-----	28
29	SPARE	20	1		C		--	--	-----	30

LOAD SUMMARY: ΦA 6580 VA; ΦB 4180 VA; ΦC 4080 VA
CONNECTED LOAD: 14.8 kVA
MAX CURRENT: 55 A
BUSING: 125A
MAIN: 125A
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "BH" SCHEDULE

277/480V 3Φ 4W 42kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	HVAC UNIT HC-B1	35	3	5235	A	1527	15	1	LIGHTS	2
3	-----	--	--	5235	B	1066	15	1	LIGHTS	4
5	-----	--	--	5235	C	1920	15	1	LIGHTS	6
7	HVAC UNIT HC-B2	35	3	5235	A	1012	15	1	LIGHTS	8
9	-----	--	--	5235	B	1360	15	1	LCP, INVERTER, EXTERIOR LIGHTS	10
11	-----	--	--	5235	C	516	15	1	PEDESTRIAN LIGHTS	12
13	HVAC UNIT HC-B3	35	3	5235	A	549	15	1	PARKING LOT LIGHTS	14
15	-----	--	--	5235	B		20	1	SPARE	16
17	-----	--	--	5235	C		20	1	SPARE	18
19	HVAC UNIT HC-B4	35	3	5235	A				SPACE ONLY	20
21	-----	--	--	5235	B				SPACE ONLY	22
23	-----	--	--	5235	C				SPACE ONLY	24
25	HVAC UNIT HC-B5	35	3	5235	A				SPACE ONLY	26
27	-----	--	--	5235	B				SPACE ONLY	28
29	-----	--	--	5235	C				SPACE ONLY	30
31	HVAC UNIT HC-B6	35	3	5235	A				SPACE ONLY	32
33	-----	--	--	5235	B				SPACE ONLY	34
35	-----	--	--	5235	C				SPACE ONLY	36
37	HVAC UNIT HC-B7	35	3	5235	A				SPACE ONLY	38
39	-----	--	--	5235	B				SPACE ONLY	40
41	-----	--	--	5235	C				SPACE ONLY	42
43	HVAC UNIT HC-B8	35	3	5235	A				SPACE ONLY	44
45	-----	--	--	5235	B				SPACE ONLY	46
47	-----	--	--	5235	C				SPACE ONLY	48
49	HVAC UNIT HC-B9	35	3	6601	A	21347	175	3	XFMR "TBL" / PANEL "BL"	50
51	-----	--	--	6601	B	20718	--	--	-----	52
53	-----	--	--	6601	C	14656	--	--	-----	54

LOAD SUMMARY: ΦA 72919 VA; ΦB 71628 VA; ΦC 65575 VA
CONNECTED LOAD: 210.1 kVA
MAX CURRENT: 263 A
BUSING: 400A
MAIN: 400A

PANEL "BL" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - CLASSROOM 100	20	1	720	A	720	20	1	OUTLETS - TELE 111, CORR. 108, CP-1	2
3	OUTLETS - CLASSROOM 100	20	1	900	B	540	20	1	OUTLETS - CORR. 108, R.R. 109, CUST. 113	4
5	OUTLETS - CLASSROOM 100	20	1	720	C	2000	20	1	HAND DRYER - STUDENT R.R. 109	6
7	CHARGING STAT. - CLASSROOM 100	20	1	720	A	2000	20	1	HAND DRYER - STUDENT R.R. 109	8
9	OUTLETS - CLASSROOM 101	20	1	720	B	2000	20	1	HAND DRYER - STUDENT R.R. 110	10
11	OUTLETS - CLASSROOM 101	20	1	900	C	2000	20	1	HAND DRYER - STUDENT R.R. 110	12
13	OUTLETS - CLASSROOM 101	20	1	720	A	720	20	1	OUTLETS - ELEC 112	14
15	CHARGING STAT. - CLASSROOM 101	20	1	720	B	360	20	1	OUTLETS - EXTERIOR	16
17	OUTLETS - CLASSROOM 102	20	1	720	C	900	20	1	EXTERIOR DOORS ACCESS CONTROL	18
19	OUTLETS - CLASSROOM 102	20	1	900	A		20	1	SPARE	20
21	OUTLETS - CLASSROOM 102	20	1	720	B		20	1	SPARE	22
23	CHARGING STAT. - CLASSROOM 102	20	1	720	C		20	1	SPARE	24
25	OUTLETS - CLASSROOM 103	20	1	720	A		20	1	SPARE	26
27	OUTLETS - CLASSROOM 103	20	1	900	B	1250	20	2	WATER HEATER WH-2	28
29	OUTLETS - CLASSROOM 103	20	1	720	C	1250	--	--	-----	30
31	CHARGING STAT. - CLASSROOM 103	20	1	720	A	6607	200	3	PANEL "BL1"	32
33	SPARE	20	1		B	5828	--	--	-----	34
35	SPARE	20	1		C	4686	--	--	-----	36
37	IRRIGATION CONTROL - SITE	20	1	180	A	4080	100	3	PANEL "BL-IT"	38
39	OUTLETS - ROOF	20	1	1260	B	4080	--	--	-----	40
41	FA SPRINKLER RISER BELL *	20	1	180	C	1320	--	--	-----	42

LOAD SUMMARY: ΦA 18807 VA; ΦB 19278 VA; ΦC 15816 VA
CONNECTED LOAD: 53.9 kVA
MAX CURRENT: 161 A
BUSING: 400A
MAIN: 400A
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "BL1" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - CLASSROOM 104	20	1	720	A	931	25	2	HVAC ODU/IDU-B1	2
3	OUTLETS - CLASSROOM 104	20	1	900	B	931	--	--	-----	4
5	OUTLETS - CLASSROOM 104	20	1	720	C	93	15	1	EXHAUST FAN EF-B1	6
7	CHARGING STAT. - CLASSROOM 104	20	1	720	A	1176	15	1	EXHAUST FAN EF-B2	8
9	OUTLETS - CLASSROOM 105	20	1	720	B	37	15	1	EXHAUST FAN EF-B3	10
11	OUTLETS - CLASSROOM 105	20	1	900	C	93	15	1	EXHAUST FAN EF-B4	12
13	OUTLETS - CLASSROOM 105	20	1	720	A		20	1	SPARE	14
15	CHARGING STAT. - CLASSROOM 105	20	1	720	B		20	1	SPARE	16
17	OUTLETS - CLASSROOM 106	20	1	720	C		20	1	SPARE	18
19	OUTLETS - CLASSROOM 106	20	1	900	A		20	1	SPARE	20
21	OUTLETS - CLASSROOM 106	20	1	720	B		20	1	SPARE	22
23	CHARGING STAT. - CLASSROOM 106	20	1	720	C		20	1	SPARE	24
25	OUTLETS - CLASSROOM 107	20	1	720	A				SPACE ONLY	26
27	OUTLETS - CLASSROOM 107	20	1	900	B				SPACE ONLY	28
29	OUTLETS - CLASSROOM 107	20	1	720	C				SPACE ONLY	30
31	CHARGING STAT. - CLASSROOM 107	20	1	720	A				SPACE ONLY	32
33	OUTLETS - ELEC 112, CORR 108, R.R. 106A	20	1	900	B				SPACE ONLY	34
35	OUTLETS - CORR 108, R.R. 110	20	1	720	C				FUTURE EV CHARGER	36
37	SPARE	20	1		A				-----	38
39	SPARE	20	1		B				FUTURE EV CHARGER	40
41	SPARE	20	1		C				-----	42

LOAD SUMMARY: ΦA 6607 VA; ΦB 5828 VA; ΦC 4686 VA
CONNECTED LOAD: 17.1 kVA
MAX CURRENT: 55 A
BUSING: 200A
MAIN: 200A

PANEL "BLIT" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	CONVENIENCE OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	EMS PANEL	6
7	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	SECURITY PANEL	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	FA ALARM PANEL *	10
11	CONVENIENCE OUTLETS	20	1	360	C	100	20	1	LIGHTING GATEWAY	12
13	CONVENIENCE OUTLETS	20	1	360	A				SPACE ONLY	14
15	CONVENIENCE OUTLETS	20	1	360	B				SPACE ONLY	16
17	SPARE	20	1		C				SPACE ONLY	18
19	SPARE	20	1		A				SPACE ONLY	20
21	SPARE	20	1		B				SPACE ONLY	22
23	SPARE	20	1		C				SPACE ONLY	24
25	SPACE ONLY				A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPACE ONLY				B		--	--	-----	28
29	SPACE ONLY				C		--	--	-----	30

LOAD SUMMARY: ΦA 4080 VA; ΦB 4080 VA; ΦC 1320 VA
CONNECTED LOAD: 9.5 kVA
MAX CURRENT: 34 A
BUSING: 100A
MAIN: 100A
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com
REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA
Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
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LICENSED ARCHITECT ANDREW A. COSENS No. C37102 REG. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: SD	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HDE	X/E302
Project Number: 2116	Checked By: SD	
Date: 09/19/2022	Reviewed By: SD	Sheet: _____ of: _____

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AD4-EX01

PANEL "CH" SCHEDULE

277/480V 3Φ 4W 42kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	HVAC UNIT HC-C1	35	3	5235	A	1450	15	1	LIGHTS	2
3	-----	--	--	5235	B	960	15	1	LIGHTS	4
5	-----	--	--	5235	C	1920	15	1	LIGHTS	6
7	HVAC UNIT HC-C2	35	3	5235	A	1013	15	1	LIGHTS	8
9	-----	--	--	5235	B	1330	15	1	LCP, INVERTER, EXTERIOR LIGHTS	10
11	-----	--	--	5235	C	732	15	1	PEDESTRIAN LIGHTS	12
13	HVAC UNIT HC-C3	35	3	5235	A	688	15	1	PARKING LOT LIGHTS	14
15	-----	--	--	5235	B		20	1	SPARE	16
17	-----	--	--	5235	C		20	1	SPARE	18
19	HVAC UNIT HC-C4	35	3	5235	A				SPACE ONLY	20
21	-----	--	--	5235	B				SPACE ONLY	22
23	-----	--	--	5235	C				SPACE ONLY	24
25	HVAC UNIT HC-C5	35	3	5235	A				SPACE ONLY	26
27	-----	--	--	5235	B				SPACE ONLY	28
29	-----	--	--	5235	C				SPACE ONLY	30
31	HVAC UNIT HC-C6	35	3	5235	A				SPACE ONLY	32
33	-----	--	--	5235	B				SPACE ONLY	34
35	-----	--	--	5235	C				SPACE ONLY	36
37	HVAC UNIT HC-C7	35	3	5235	A				SPACE ONLY	38
39	-----	--	--	5235	B				SPACE ONLY	40
41	-----	--	--	5235	C				SPACE ONLY	42
43	HVAC UNIT HC-C8	35	3	5235	A				SPACE ONLY	44
45	-----	--	--	5235	B				SPACE ONLY	46
47	-----	--	--	5235	C				SPACE ONLY	48
49	HVAC UNIT HC-C9	35	3	6601	A	18606	175	3	XFMR "TCL" / PANEL "CL"	50
51	-----	--	--	6601	B	20130	--	--	-----	52
53	-----	--	--	6601	C	15344	--	--	-----	54

LOAD SUMMARY: Φ A 70240 VA
Φ B 70903 VA
Φ C 66479 VA
CONNECTED LOAD: 207.6 kVA
MAX CURRENT: 256 A

BUSING: 400A
MAIN: 400A

PANEL "CL" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - CLASSROOM 107	20	1	720	A	540	20	1	OUTLETS - ELEC 114, CORR. 108, R.R. 110	2
3	OUTLETS - CLASSROOM 107	20	1	720	B	540	20	1	OUTLETS - TELE 112, CORR. 108	4
5	OUTLETS - CLASSROOM 107	20	1	720	C	2000	20	1	HAND DRYER - STUDENT R.R. 110	6
7	CHARGING STAT. - CLASSROOM 107	20	1	720	A	2000	20	1	HAND DRYER - STUDENT R.R. 110	8
9	OUTLETS - CLASSROOM 106	20	1	720	B	2000	20	1	HAND DRYER - STUDENT R.R. 109	10
11	OUTLETS - CLASSROOM 106	20	1	720	C	2000	20	1	HAND DRYER - STUDENT R.R. 109	12
13	OUTLETS - CLASSROOM 106	20	1	720	A	720	20	1	OUTLETS - ELEC 111	14
15	CHARGING STAT. - CLASSROOM 106	20	1	720	B	360	20	1	OUTLETS - EXTERIOR	16
17	OUTLETS - CLASSROOM 105	20	1	720	C	200	20	1	EXTERIOR DOORS ACCESS CONTROL	18
19	OUTLETS - CLASSROOM 105	20	1	720	A		20	1	SPARE	20
21	OUTLETS - CLASSROOM 105	20	1	540	B		20	1	SPARE	22
23	CHARGING STAT. - CLASSROOM 105	20	1	720	C		20	1	SPARE	24
25	OUTLETS - CLASSROOM 104	20	1	720	A		20	1	SPARE	26
27	OUTLETS - CLASSROOM 104	20	1	720	B		20	1	SPARE	28
29	OUTLETS - CLASSROOM 104	20	1	540	C		20	1	SPARE	30
31	CHARGING STAT. - CLASSROOM 104	20	1	720	A	8357	200	3	PANEL "CL1"	32
33	SPARE	20	1		B	5884	--	--	-----	34
35	MARQUEE SIGN - SITE	20	1	180	C	5843	--	--	-----	36
37	IRRIGATION CONTROL - SITE	20	1	180	A	4080	100	3	PANEL "CL-IT"	38
39	OUTLETS - ROOF	20	1	360	B	4080	--	--	-----	40
41	EXHAUST FAN EF-4	15	1	93	C	1320	--	--	-----	42

LOAD SUMMARY: Φ A 20197 VA
Φ B 16644 VA
Φ C 15056 VA
CONNECTED LOAD: 51.9 kVA
MAX CURRENT: 168 A

BUSING: 400A
MAIN: 400A

PANEL "CL1" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - CLASSROOM 100	20	1	720	A	931	25	2	HVAC ODU/IDU-C1	2
3	OUTLETS - CLASSROOM 100	20	1	720	B	931	--	--	-----	4
5	OUTLETS - CLASSROOM 100	20	1	720	C	93	15	1	EXHAUST FAN EF-C1	6
7	CHARGING STAT. - CLASSROOM 100	20	1	720	A	1656	25	1	EXHAUST FAN EF-C2	8
9	OUTLETS - CLASSROOM 101	20	1	720	B	93	15	1	EXHAUST FAN EF-C3	10
11	OUTLETS - CLASSROOM 101	20	1	720	C	1250	20	2	WATER HEATER WH-3	12
13	OUTLETS - CLASSROOM 101	20	1	720	A	1250	--	--	-----	14
15	CHARGING STAT. - CLASSROOM 101	20	1	720	B		20	1	SPARE	16
17	OUTLETS - CLASSROOM 102	20	1	720	C		20	1	SPARE	18
19	OUTLETS - CLASSROOM 102	20	1	720	A		20	1	SPARE	20
21	OUTLETS - CLASSROOM 102	20	1	540	B		20	1	SPARE	22
23	CHARGING STAT. - CLASSROOM 102	20	1	720	C		20	1	SPARE	24
25	OUTLETS - CLASSROOM 103	20	1	720	A		20	1	SPARE	26
27	OUTLETS - CLASSROOM 103	20	1	720	B				FUTURE EV CHARGER	28
29	OUTLETS - CLASSROOM 103	20	1	540	C				-----	30
31	CHARGING STAT. - CLASSROOM 103	20	1	720	A				FUTURE EV CHARGER	32
33	OUTLETS - CUST. 113, CORR. 108, R.R. 109	20	1	900	B				-----	34
35	OUTLETS - CORR. 108, STAFF R.R. 111, CP-1	20	1	900	C				FUTURE EV CHARGER	36
37	EXTERIOR DOORS ACCESS CONTROL	20	1	200	A				-----	38
39	OUTLETS - ROOF	20	1	540	B				FUTURE EV CHARGER	40
41	FA SPRINKLER RISER BELL *	20	1	180	C				-----	42

LOAD SUMMARY: Φ A 8357 VA
Φ B 5884 VA
Φ C 5843 VA
CONNECTED LOAD: 20.1 kVA
MAX CURRENT: 70 A

BUSING: 200A
MAIN: 200A

* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "CLIT" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	CONVENIENCE OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	EMS PANEL	6
7	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	SECURITY PANEL	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	FA ALARM PANEL *	10
11	CONVENIENCE OUTLETS	20	1	360	C	100	20	1	LIGHTING GATEWAY	12
16	CONVENIENCE OUTLETS	20	1	360	A				SPACE ONLY	14
15	CONVENIENCE OUTLETS	20	1	360	B				SPACE ONLY	16
17	SPARE	20	1		C				SPACE ONLY	18
19	SPARE	20	1		A				SPACE ONLY	20
21	SPARE	20	1		B				SPACE ONLY	22
23	SPARE	20	1		C				SPACE ONLY	24
25	SPACE ONLY				A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPACE ONLY				B		--	--	-----	28
29	SPACE ONLY				C		--	--	-----	30

LOAD SUMMARY: Φ A 4080 VA
Φ B 4080 VA
Φ C 1320 VA
CONNECTED LOAD: 9.5 kVA
MAX CURRENT: 34 A

BUSING: 100A
MAIN: 100A

* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "DH" SCHEDULE

277/480V 3Φ 4W 42kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	HVAC UNIT HC-D1	50	3	8282	A	2000	15	1	LIGHTS	2
3	-----	--	--	8282	B	1920	15	1	LIGHTS	4
5	-----	--	--	8282	C	1762	15	1	LIGHTS	6
7	HVAC UNIT HC-D2	35	3	5235	A	1474	15	1	LIGHTS	8
9	-----	--	--	5235	B	2080	15	1	LCP, INVERTER, EXTERIOR LIGHTS	10
11	-----	--	--	5235	C		15	1	PEDESTRIAN LIGHTS	12
13	HVAC UNIT HC-D3	35	3	5235	A		20	1	SPARE	14
15	-----	--	--	5235	B		20	1	SPARE	16
17	-----	--	--	5235	C				SPACE ONLY	18
19	HVAC UNIT HC-D4	35	3	5235	A				SPACE ONLY	20
21	-----	--	--	5235	B				SPACE ONLY	22
23	-----	--	--	5235	C				SPACE ONLY	24
25	HVAC UNIT HC-D5	35	3	5235	A				SPACE ONLY	26
27	-----	--	--	5235	B				SPACE ONLY	28
29	-----	--	--	5235	C				SPACE ONLY	30
31	HVAC UNIT HC-D6	35	3	5235	A				SPACE ONLY	32
33	-----	--	--	5235	B				SPACE ONLY	34
35	-----	--	--	5235	C				SPACE ONLY	36
37	HVAC UNIT HC-D7	35	3	5235	A	5235	35	3	HVAC UNIT HC-D10	38
39	-----	--	--	5235	B	5235	--	--	-----	40
41	-----	--	--	5235	C	5235	--	--	-----	42
43	HVAC UNIT HC-D8	35	3	5235	A	3933	15	3	HVAC UNIT HC-D11	44
45	-----	--	--	5235	B	3933	--	--	-----	46
47	-----	--	--	5235	C	3933	--	--	-----	48
49	HVAC UNIT HC-D9	35	3	5235	A	24200	175	3	XFMR "TDL" / PANEL "DL"	50
51	-----	--	--	5235	B	22550	--	--	-----	52
53	-----	--	--	5235	C	21962	--	--	-----	54

LOAD SUMMARY: Φ A 87007 VA
Φ B 85883 VA
Φ C 83057 VA
CONNECTED LOAD: 255.9 kVA
MAX CURRENT: 314 A

BUSING: 400A
MAIN: 400A

PANEL "DL" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - CLASSROOM 102	20	1	720	A	720	20	1	OUTLETS - CLASSROOM 101	2
3	OUTLETS - CLASSROOM 102	20	1	720	B	720	20	1	OUTLETS - CLASSROOM 101	4
5	OUTLETS - CLASSROOM 102	20	1	720	C	720	20	1	OUTLETS - CLASSROOM 101	6
7	CHARGING STAT. - CLASSROOM 102	20	1	720	A	720	20	1	CHARGING STAT. - CLASSROOM 101	8
9	OUTLETS - CLASSROOM 103	20	1	720	B	720	20	1	OUTLETS - CLASSROOM 100	10
11	OUTLETS - CLASSROOM 103	20	1	720	C	720	20	1	OUTLETS - CLASSROOM 100	12
13	OUTLETS - CLASSROOM 103	20	1	720	A	720	20	1	OUTLETS - CLASSROOM 100	14
15	CHARGING STAT. - CLASSROOM 103	20	1	720	B	720	20	1	CHARGING STAT. - CLASSROOM 100	16
17	OUTLETS - CLASSROOM 104	20	1	720	C	900	20	1	OUTLETS - ELEC 114, CORR. 110	18
19	OUTLETS - CLASSROOM 104	20	1	540	A	720	20	1	OUTLETS - TELE 113, CORR. 110	20
21	OUTLETS - CLASSROOM 104	20	1	720	B	720	20	1	OUTLETS - ELEC 114	22
23	CHARGING STAT. - CLASSROOM 104	20	1	720	C	360	20	1	OUTLETS - EXTERIOR	24
25	OUTLETS - CLASSROOM 105	20	1	720	A	400	20	1	EXTERIOR DOORS ACCESS CONTROL	26
27	OUTLETS - CLASSROOM 105	20	1	540	B		20	1	SPARE	28
29	OUTLETS - CLASSROOM 105	20	1	720	C		20	1	SPARE	30
31	CHARGING STAT. - CLASSROOM 105	20	1	720	A				SPACE ONLY	32
33	OUTLETS - CLASSROOM 106	20	1	720	B				SPACE ONLY	34
35	OUTLETS - CLASSROOM 106	20	1	540	C				SPACE ONLY	36
37	OUTLETS - CLASSROOM 106	20	1	720	A	528	15	1	EXHAUST FAN EF-D3	38
39	CHARGING STAT. - CLASSROOM 106	20	1	720	B	931	25	2	HVAC ODU/IDU-D1	40
41	SPARE	20	1		C	931	--	--	-----	42
43	SPARE	20	1		A	10232	200	3	PANEL "DL1"	44
45	SPARE	20	1		B	10010	--	--	-----	46
47	SPARE	20	1		C	12362	--	--	-----	48
49	IRRIGATION CONTROL - SITE	20	1	180	A	4080	100	3	PANEL "DL-IT"	50
51	OUTLETS - ROOF	20	1	540	B	3720	--	--	-----	52
53	FA SPRINKLER RISER BELL *	20	1	180	C	1320	--	--	-----	54

LOAD SUMMARY: Φ A 23160 VA
Φ B 22941 VA
Φ C 21633 VA
CONNECTED LOAD: 67.7 kVA
MAX CURRENT: 193 A

BUSING: 400A
MAIN: 400A

* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "DL1" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - CONCESSON 115	20	1	360	A	720	20	1	OUTLETS - CLASSROOM 109	2
3	OUTLETS - CONCESSON 115	20	1	360	B	720	20	1	OUTLETS - CLASSROOM 109	4
5	OUTLETS - CONCESSON 115	20	1	360	C	540	20	1	OUTLETS - CLASSROOM 109	6
7	REFRIGERATOR - CONCESSON 115	20	1	1000	A	720	20	1	CHARGING STAT. - CLASSROOM 109	8
9	ICE MARKER - CONCESSON 115	20	1	756	B	720	20	1	OUTLETS - CLASSROOM 108	10
11	OUTLETS - CONCESSON 115, STOR 115A	20	1	720	C	720	20	1	OUTLETS - CLASSROOM 108	12
13	OUTLETS - CONCESSION 115, STOR 116	20	1	900	A	540	20	1	OUTLETS - CLASSROOM 108	14
15	OUTLETS - RR 117,118,121, CUST 119, CORR 110	20	1	1080	B	720	20	1	CHARGING STAT. - CLASSROOM 108	16
17	OUTLETS - RR 117,118,120, HALL 112, CORR 110	20	1	1080	C	720	20	1	OUTLETS - CLASSROOM 107	18
19	HAND DRYER - STUDENT R.R. 117	20	1	2000	A	720	20	1	OUTLETS - CLASSROOM 107	20
21	HAND DRYER - STUDENT R.R. 117	20	1	2000	B	540	20	1	OUTLETS - CLASSROOM 107	22
23	HAND DRYER - STUDENT R.R. 118	20	1	2000	C	720	20	1	CHARGING STAT. - CLASSROOM 107	24
25	HAND DRYER - STUDENT R.R. 118	20	1	2000	A	600	20	1	EXTERIOR DOORS ACCESS CONTROL	26
27	ROLL-UP DOOR - CONCESSION 115	20	1	720	B		20	1	SPARE	28
29	ROLL-UP DOOR - CONCESSION 115	20	1	720	C		20	1	SPARE	30
31	FLY-FAN FF-1E - CONCESSION 115	20	2	144	A		20	1	SPARE	32
33	-----	--	--	144	B		20	1	SPARE	34
35	DRINKING FOUNTAIN - EXTERIOR	20	1	600	C	1392	20	1	EXHAUST FAN EF-D1 & EF-D2	36
37	SPARE	20	1		A	528	20	1	EXHAUST FAN EF-D4	38
39	SPARE	20	1		B	2250	30	2	WATER HEATER WH-4	40
41	OUTLETS - ROOF	20	1	540	C	2250	--	--	-----	42

LOAD SUMMARY: Φ A 10232 VA
Φ B 10010 VA
Φ C 12362 VA
CONNECTED LOAD: 32.6 kVA
MAX CURRENT: 103 A

BUSING: 200A
MAIN: 200A

PANEL "DLIT" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	CONVENIENCE OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	EMS PANEL	6
7	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	SECURITY PANEL	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	FA ALARM PANEL *	10
11	CONVENIENCE OUTLETS	20	1	360	C	100	20	1	LIGHTING GATEWAY	12
13	CONVENIENCE OUTLETS	20	1	360	A				SPACE ONLY	14
15	SPARE	20	1		B				SPACE ONLY	16
17	SPARE	20	1		C				SPACE ONLY	18
19	SPARE	20	1		A				SPACE ONLY	20
21	SPARE	20	1		B				SPACE ONLY	22
23	SPARE	20	1		C				SPACE ONLY	24
25	SPACE ONLY				A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPACE ONLY				B		--	--	-----	28
29	SPACE ONLY				C		--	--	-----	30

LOAD SUMMARY: Φ A 4080 VA
Φ B 3720 VA
Φ C 1320 VA
CONNECTED LOAD: 9.1 kVA
MAX CURRENT: 34 A

BUSING: 100A
MAIN: 100A

* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "EH" SCHEDULE

277/480V 3Φ 4W 42kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	HVAC UNIT HC-E1	50	3	8282	A	1000	15	1	LIGHTS	2
3	-----	--	--	8282	B	1317	15	1	LIGHTS	4
5	-----	--	--	8282	C	770	15	1	LIGHTS	6
7	HVAC UNIT HC-E2	50	3	8282	A	1384	15	1	LIGHTS	8
9	-----	--	--	8282	B	2331	15	1	LCP, INVERTER, EXTERIOR LIGHTS	10
11	-----	--	--	8282	C		20	1	SPARE	12
13	HVAC UNIT HC-E3	35	3	5568	A				SPACE ONLY	14
15	-----	--	--	5568	B				SPACE ONLY	16
17	-----	--	--	5568	C				SPACE ONLY	18
19	HVAC UNIT HC-E4	35	3	5568	A				SPACE ONLY	20
21	-----	--	--	5568	B				SPACE ONLY	22
23	-----	--	--	5568	C				SPACE ONLY	24
25	SPACE ONLY				A				SPACE ONLY	26
27	SPACE ONLY				B				SPACE ONLY	28
29	SPACE ONLY				C				SPACE ONLY	30
31	SPACE ONLY				A				SPACE ONLY	32
33	SPACE ONLY				B				SPACE ONLY	34
35	SPACE ONLY				C				SPACE ONLY	36
37	SPACE ONLY				A	52390	225	3	XFMR "TDL" / PANEL "DL"	38
39	SPACE ONLY				B	53243	--	--	-----	40
41	SPACE ONLY				C	52820	--	--	-----	42

LOAD SUMMARY: Φ A 82474 VA
Φ B 84591 VA
Φ C 81290 VA
CONNECTED LOAD: 248.4 kVA
MAX CURRENT: 305 A

BUSING: 600A
MAIN: 500A

PANEL "EL" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - 2ND FLOOR STOR. 201	20	1	540	A	540	20	1	OUTLETS - MPR 100	2
3	OUTLETS - OFFICE 113	20	1	720	B	540	20	1	OUTLETS - MPR 100	4
5	OUTLETS - ELEC 102, WORK 112, CUST 127	20	1	900	C	540	20	1	OUTLETS - MPR 100	6
7	OUTLETS - STAGE 103	20	1	540	A	324	20	1	MILK COOLER - SERVING AREA 119	8
9	OUTLETS - STAGE 103	20	1	720	B	600	20	1	WHEELCHAIR LIFT - MPR 100	10
11	OUTLETS - STAGE STAIR 101, MUSIC STOR 105	20	1	900	C	500	20	1	PROJECTOR - MPR 100	12
13	OUTLETS - MUSIC OFFICE 104	20	1	720	A	500	20	1	MOTORIZED SCREEN - MPR 100	14
15	OUTLETS - CONTROL RM 106	20	1	540	B	900	20	1	OUTLETS - FLOOR	16
17	SOUND RACK - CONTROL RM 106	20	1	500	C		20	1	SPARE	18
19	OUTLETS - TELE 126, RR 109,111, VEST 110	20	1	900	A				SPACE ONLY	20
21	DRINKING FOUNTAIN - VEST 110	20	1	600	B				SPACE ONLY	22
23	HAND DRYER - STUDENT R.R. 109	20	1	2000	C				SPACE ONLY	24
25	HAND DRYER - STUDENT R.R. 109	20	1	2000	A	6506	200	3	PANEL "EL1"	26
27	HAND DRYER - STUDENT R.R. 111	20	1	2000	B	6471	--	--	-----	28
29	HAND DRYER - STUDENT R.R. 111	20	1	2000	C	6503	--	--	-----	30
31	SPARE	20	1		A	32740	200	3	PANEL "EL-K"	32
33	SPARE	20	1		B	35252	--	--	-----	34
35	SPARE	20	1		C	34717	--	--	-----	36
37	EXTERIOR DOORS ACCESS CONTROL	20	1	500	A	6580	125	3	PANEL "EL-IT"	38
39	OUTLETS - ROOF	20	1	720	B	4180	--	--	-----	40
41	FA SPRINKLER RISER BELL *	20	1	180	C	4080	--	--	-----	42

LOAD SUMMARY: Φ A 52390 VA
Φ B 53243 VA
Φ C 52820 VA
CONNECTED LOAD: 158.5 kVA
MAX CURRENT: 444 A

BUSING: 600A
MAIN: 600A

PANEL "EL1" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	OUTLETS - STAFF DINING 124	20	1	720	A		20	1	SPARE	2
3	OUTLETS - STAFF DINING 124	20	1	720	B		20	1	SPARE	4
5	REFRIGERATOR - STAFF DINING 124	20	1	1000	C		20	1	SPARE	6
7	VENDING MACHINE - STAFF DINING 124	20	1	1000	A				SPACE ONLY	8
9	ICE MACHINE - STAFF DINING 124	20	1	780	B				SPACE ONLY	10
11	OUTLETS - CUST 120, HALL 122, HALL 125, 124	20	1	720	C				SPACE ONLY	12
13	OUTLETS - HALL 122, RR 123, 125A,	20	1	540	A				SPACE ONLY	14
15	EXTERIOR DOORS ACCESS CONTROL	20	1	400	B	662	20	1	WATER HEATER WH-5 & CIRC. PUMP CP-1	16
17	SPARE	20	1		C	93	15	1	EXHAUST FAN EF-E3	18
19	SPARE	20	1		A	864	15	1	EXHAUST FAN EF-E4	20
21	SPARE	20	1		B	93	15	1	EXHAUST FAN EF-E5	22
23	SPARE	20	1		C	947	25	2	HVAC ODU/IDU-E1	24
25	SPACE ONLY				A	947	--	--	-----	26
27	SPACE ONLY				B	931	15	2	HVAC ODU/IDU-E2	28
29	SPACE ONLY				C	931	--	--	-----	30
31	SPACE ONLY				A	931	15	2	HVAC ODU/IDU-E3	32
33	THEATRICAL LIGHTS, STAGE FRONT	20	1	450	B	931	--	--	-----	34
35	THEATRICAL LIGHTS, STAGE BACK	20	1	450	C	931	25	2	HVAC ODU/IDU-E4	36
37	THEATRICAL LIGHTS, LEFT	20	1	572	A	931	--	--	-----	38
39	THEATRICAL LIGHTS, RIGHT	20	1	572	B	931	25	2	HVAC ODU/IDU-E5	40
41	THEATRICAL LIGHTING CONTROLLERS	20	1	500	C	931	--	--	-----	42

LOAD SUMMARY: Φ A 6506 VA
Φ B 6471 VA
Φ C 6503 VA
CONNECTED LOAD: 19.5 kVA
MAX CURRENT: 54 A

BUSING: 600A
MAIN: 600A

PANEL "ELIT" SCHEDULE

120/208V 3Φ 4W 22kAIC

INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER		VA	Φ	VA	BREAKER		DESCRIPTION	CKT. NO.
		AMPS	POLE(S)				AMPS	POLE(S)		
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	CONVENIENCE OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	2500	30	2	SERVER RACK UPS OUTLET	6
7	CONVENIENCE OUTLETS	20	1	360	A	2500	--	--	-----	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	EMS PANEL	10
11	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	SECURITY PANEL	12
13	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	FA ALARM PANEL *	14
15	CONVENIENCE OUTLETS	20	1	360	B	100	20	1	LIGHTING GATEWAY	16
17	AT&T MPOE OUTLETS	20	1	360	C		20	1	SPARE	18
19	SPARE	20	1		A		20	1	SPARE	20
21	SPARE	20	1		B		20	1	SPARE	22
23	SPARE	20	1		C		20	1	SPARE	24
25	SPARE	20	1		A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPARE	20	1		B		--	--	-----	28
29	SPARE	20	1		C		--	--	-----	30

LOAD SUMMARY: Φ A 6580 VA
Φ B 4180 VA
Φ C 4080 VA
CONNECTED LOAD: 14.8 kVA
MAX CURRENT: 55 A

BUSING: 125A
MAIN: 125A

* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com

C. SCOTT DAVIDSON
E17850

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

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ANDREW A. CORRAL
No. C37102
Ren. 11-30-23

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: SD

Scale: As indicated
Drawn By: HDE

Project Number: 2116
Checked By: SD

Date: 09/19/2022
Reviewed By: SD

X/E303

Sheet: ________ of: ________

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PANEL "ELK" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	GARBAGE DISPOSAL - PREP AREA 118	20	3	1056	A	8400	90	3	DISHWASHING MACHINE - DISH 118A	2
3	-----	--	--	1056	B	8400	--	--	-----	4
5	-----	--	--	1056	C	8400	--	--	-----	6
7	MIXER - PREP AREA 118	20	3	672	A	8124	90	3	BOOSTER WATER HEATER - DISH 118A	8
9	-----	--	--	672	B	8124	--	--	-----	10
11	-----	--	--	672	C	8124	--	--	-----	12
13	ICE MACHINE - PERP AREA 118	20	1	780	A	528	20	3	GARBAGE DISPOSAL - DISH 118A	14
15	WARMING CABINET - PERP AREA 118	20	1	1500	B	528	--	--	-----	16
17	WARMING CABINET - PERP AREA 118	20	1	1500	C	528	--	--	-----	18
19	WARMING CABINET - PERP AREA 118	20	1	1500	A	360	20	1	OUTLETS - DISH 118A	20
21	WARMING CABINET - PERP AREA 118	20	1	1500	B	1000	20	1	MOTORIZED DOOR - PREP AREA 118	22
23	OUTLETS - PREP AREA 118	20	1	720	C	1000	20	1	MOTORIZED DOOR - PREP AREA 118	24
25	OUTLETS - RECEIVING 114, STOR 116	20	1	540	A		20	1	SPARE	26
27	CORD REEL - PREP AREA 118	20	1	500	B		20	1	SPARE	28
29	CORD REEL - PREP AREA 118	20	1	500	C		20	1	SPARE	30
31	HOOD CONTROL PANEL - PREP AREA 118	20	1	180	A	168	15	2	FLY FAN FF-2E	32
33	HOOD LIGHTS - PREP AREA 118	20	1	180	B	168	--	--	-----	34
35	SPARE	20	1		C	93	15	1	EXHAUST FAN EF-E2	36
37	SPARE	20	1		A	828	15	3	EXHAUST FAN EF-E1	38
39	SPARE	20	1		B	828	--	--	-----	40
41	COOLER & FREEZER HEAT TRACE CABLE & LTG	20	1	500	C	828	--	--	-----	42
43	WALK-IN FREEZER EVAPORATOR	20	1	414	A	576	15	3	MAKEUP AIR UNIT MUA-1	44
45	WALK-IN FREEZER CONDENSER	25	2	1768	B	576	--	--	-----	46
47	-----	--	--	1768	C	576	--	--	-----	48
49	WALK-IN COOLER EVAPORATOR	20	1	414	A	8200	70	3	PANEL "EL-KH"	50
51	WALK-IN COOLER CONDENSER	20	2	1352	B	7100	--	--	-----	52
53	-----	--	--	1352	C	7100	--	--	-----	54

LOAD SUMMARY: ΦA 32740 VA; ΦB 35252 VA; ΦC 34717 VA
CONNECTED LOAD: 102.7 kVA
MAX CURRENT: 294 A
BUSING: 400A
MAIN: 400A

PANEL "ELKH" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	COMBI OVEN	15	2	1100	A	6000	70	3	TILTING SKILLET	2
3	-----	--	--	1100	B	6000	--	--	-----	4
5	COMBI OVEN	15	2	1100	C	6000	--	--	-----	6
7	-----	--	--	1100	A				SPACE ONLT	8
9	SPARE	20	1		B				SPACE ONLT	10
11	SPARE	20	1		C				SPACE ONLT	12
13	SPACE ONLT				A				SPACE ONLT	14
15	SPACE ONLT				B				SPACE ONLT	16
17	SPACE ONLT				C				SPACE ONLT	18

LOAD SUMMARY: ΦA 8200 VA; ΦB 7100 VA; ΦC 7100 VA
CONNECTED LOAD: 22.4 kVA
MAX CURRENT: 68 A
BUSING: 100A
MAIN: 100A SHUNT TRIP

PANEL "KH1" SCHEDULE

277/480V 3Φ 4W 42kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	HVAC UNIT HC-K1	35	3	6122	A	1579	15	1	LIGHTS	2
3	-----	--	--	6122	B	289	15	1	LCP, INVERTER, EXTERIOR LIGHTS	4
5	-----	--	--	6122	C		20	1	SPARE	6
7	HVAC UNIT HC-K2	30	3	5457	A				SPACE ONLY	8
9	-----	--	--	5457	B				SPACE ONLY	10
11	-----	--	--	5457	C				SPACE ONLY	12
13	SPACE ONLY				A				SPACE ONLY	14
15	SPACE ONLY				B				SPACE ONLY	16
17	SPACE ONLY				C				SPACE ONLY	18
19	SPACE ONLY				A				SPACE ONLY	20
21	SPACE ONLY				B				SPACE ONLY	22
23	SPACE ONLY				C				SPACE ONLY	24
25	SPACE ONLY				A				SPACE ONLY	26
27	SPACE ONLY				B				SPACE ONLY	28
29	SPACE ONLY				C				SPACE ONLY	30

LOAD SUMMARY: ΦA 13158 VA; ΦB 11867 VA; ΦC 11579 VA
CONNECTED LOAD: 36.6 kVA
MAX CURRENT: 48 A
BUSING: 125A
MAIN: 80A

PANEL "KL1" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - CLASSROOM 101	20	1	540	A	900	20	1	IDF CABINET OUTLET - DATA 119	2
3	OUTLETS - CLASSROOM 101	20	1	540	B	500	20	1	EMS PANEL - DATA 119	4
5	OUTLETS - CLASSROOM 101	20	1	540	C	500	20	1	SECURITY PANEL - DATA 119	6
7	CHARGING STAT. - CLASSROOM 101	20	1	720	A	500	20	1	FA ALARM PANEL * - DATA 119	8
9	OUTLETS - CLASSROOM 102	20	1	540	B	100	20	1	LIGHTING GATEWAY - DATA 119	10
11	OUTLETS - CLASSROOM 102	20	1	540	C	360	20	1	CONVENIENCE OUTLETS - DATA 119	12
13	OUTLETS - CLASSROOM 102	20	1	540	A	360	20	1	CONVENIENCE OUTLETS - DATA 119	14
15	CHARGING STAT. - CLASSROOM 102	20	1	720	B	360	20	1	CONVENIENCE OUTLETS - DATA 119	16
17	OUTLETS - STAFF WORKROOM 112	20	1	720	C	360	20	1	OUTLET - ELEC 117	18
19	OUTLETS - STAFF WORKROOM 112	20	1	720	A		20	1	SPARE	20
21	OUTLETS - STAFF WORKROOM 112	20	1	540	B		20	1	SPARE	22
23	OUTLETS - STOR 113, RR 115	20	1	540	C				SPACE ONLY	24
25	OUTLETS - STOR 113, RR 114	20	1	540	A				SPACE ONLY	26
27	OUTLETS - ELEC 117, DATA 119, STOR 116	20	1	540	B				SPACE ONLY	28
29	OUTLETS - ROOF	20	1	360	C				SPACE ONLY	30
31	DRINKING FOUNTAIN - EXTERIOR	20	1	600	A				SPACE ONLY	32
33	EXTERIOR DOORS ACCESS CONTROL	20	1	500	B	1250	20	2	WATER HEATER WH-6	34
35	SPARE	20	1		C	1250	--	--	-----	36
37	SPARE	20	1		A	130	15	1	EXHAUST FAN EF-K1, EF-K2	38
39	SPARE	20	1		B	931	30	2	HVAC ODU/IDU-K2	40
41	SPARE	20	1		C	931	--	--	-----	42

LOAD SUMMARY: ΦA 5550 VA; ΦB 6521 VA; ΦC 6101 VA
CONNECTED LOAD: 18.2 kVA
MAX CURRENT: 54 A
BUSING: 200A
MAIN: 125A

PANEL "KH" SCHEDULE

277/480V 3Φ 4W 42kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	HVAC UNIT HC-K3	35	3	6122	A	1527	15	1	LIGHTS	2
3	-----	--	--	6122	B	289	15	1	LCP, INVERTER, EXTERIOR LIGHTS	4
5	-----	--	--	6122	C		20	1	SPARE	6
7	HVAC UNIT HC-K4	35	3	5928	A				SPACE ONLY	8
9	-----	--	--	5928	B				SPACE ONLY	10
11	-----	--	--	5928	C				SPACE ONLY	12
13	SPACE ONLY				A				SPACE ONLY	14
15	SPACE ONLY				B				SPACE ONLY	16
17	SPACE ONLY				C				SPACE ONLY	18
19	SPACE ONLY				A	13158	100	3	PANEL "KH1"	20
21	SPACE ONLY				B	11867	--	--	-----	22
23	SPACE ONLY				C	11579	--	--	-----	24
25	SPACE ONLY				A	13276	125	3	XFMR "TKL" / PANEL "KL"	26
27	SPACE ONLY				B	15842	--	--	-----	28
29	SPACE ONLY				C	12842	--	--	-----	30

LOAD SUMMARY: ΦA 40010 VA; ΦB 40048 VA; ΦC 36471 VA
CONNECTED LOAD: 116.5 kVA
MAX CURRENT: 145 A
BUSING: 200A
MAIN: 200A

PANEL "KL" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	OUTLETS - CLASSROOM 104	20	1	540	A		20	1	SPARE	2
3	OUTLETS - CLASSROOM 104	20	1	540	B		20	1	SPARE	4
5	OUTLETS - CLASSROOM 104	20	1	540	C		20	1	SPARE	6
7	CHARGING STAT. - CLASSROOM 104	20	1	720	A				SPACE ONLY	8
9	OUTLETS - CLASSROOM 103	20	1	540	B				SPACE ONLY	10
11	OUTLETS - CLASSROOM 103	20	1	540	C				SPACE ONLY	12
13	OUTLETS - CLASSROOM 103	20	1	540	A				SPACE ONLY	14
15	CHARGING STAT. - CLASSROOM 103	20	1	540	B				SPACE ONLY	16
17	OUTLETS - STAFF WORKROOM 107	20	1	540	C				SPACE ONLY	18
19	OUTLETS - STAFF WORKROOM 107	20	1	720	A				SPACE ONLY	20
21	OUTLETS - STAFF WORKROOM 107	20	1	720	B	1250	20	2	WATER HEATER WH-7	22
23	OUTLETS - STOR 108, RR 110, CUST 118	20	1	720	C	1250	--	--	-----	24
25	OUTLETS - STOR 108, RR 109	20	1	540	A	186	15	1	EXHAUST FAN EF-K1, EF-K4	26
27	OUTLETS - ELEC 106, DATA 105	20	1	360	B	931	30	2	HVAC ODU/IDU-K1	28
29	OUTLETS - ELEC 106	20	1	720	C	931	--	--	-----	30
31	SPARE	20	1		A	5550	100	3	PANEL "KL1"	32
33	SPARE	20	1		B	6521	--	--	-----	34
35	SPARE	20	1		C	6101	--	--	-----	36
37	EXTERIOR DOORS ACCESS CONTROL	20	1	400	A	4080	100	3	PANEL "KL-IT"	38
39	OUTLETS - ROOF	20	1	360	B	4080	--	--	-----	40
41	FA SPRINKLER RISER BELL *	20	1	180	C	1320	--	--	-----	42

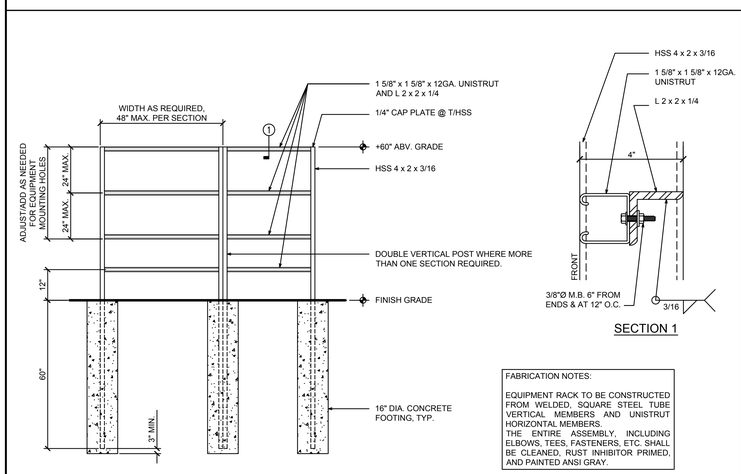
LOAD SUMMARY: ΦA 13276 VA; ΦB 15842 VA; ΦC 12842 VA
CONNECTED LOAD: 42.0 kVA
MAX CURRENT: 132 A
BUSING: 250A
MAIN: 250A
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

PANEL "KLIT" SCHEDULE

120/208V 3Φ 4W 22kAIC — INDOOR / SURFACE

CKT. NO.	DESCRIPTION	BREAKER AMPS	BREAKER POLE(S)	VA	Φ	VA	BREAKER AMPS	BREAKER POLE(S)	DESCRIPTION	CKT. NO.
1	SERVER RACK OUTLETS	20	1	360	A	2500	30	2	SERVER RACK UPS OUTLET	2
3	CONVENIENCE OUTLETS	20	1	360	B	2500	--	--	-----	4
5	CONVENIENCE OUTLETS	20	1	360	C	500	20	1	EMS PANEL	6
7	CONVENIENCE OUTLETS	20	1	360	A	500	20	1	SECURITY PANEL	8
9	CONVENIENCE OUTLETS	20	1	360	B	500	20	1	* FA ALARM PANEL	10
11	CONVENIENCE OUTLETS	20	1	360	C	100	20	1	LIGHTING GATEWAY	12
16	CONVENIENCE OUTLETS	20	1	360	A				SPACE ONLY	14
15	CONVENIENCE OUTLETS	20	1	360	B				SPACE ONLY	16
17	SPARE	20	1		C				SPACE ONLY	18
19	SPARE	20	1		A				SPACE ONLY	20
21	SPARE	20	1		B				SPACE ONLY	22
23	SPARE	20	1		C				SPACE ONLY	24
25	SPACE ONLY				A		--	--	SURGE PROTECTIVE DEVICE	26
27	SPACE ONLY				B		--	--	-----	28
29	SPACE ONLY				C		--	--	-----	30

LOAD SUMMARY: ΦA 4080 VA; ΦB 4080 VA; ΦC 1320 VA
CONNECTED LOAD: 9.5 kVA
MAX CURRENT: 34 A
BUSING: 125A
MAIN: 100A
* PROVIDE RED HANDLE C.B. W/ INTEGRAL LOCK-ON DEVICE

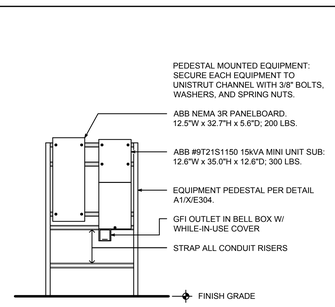


SECTION 1

FABRICATION NOTES:

EQUIPMENT RACK TO BE CONSTRUCTED FROM WELDED, SQUARE STEEL TUBE VERTICAL MEMBERS AND UNISTRUT HORIZONTAL MEMBERS.
THE ENTIRE ASSEMBLY, INCLUDING ELBOWS, TEES, FASTENERS, ETC, SHALL BE CLEANED, RUST INHIBITOR PRIMED, AND PAINTED ANSI GRAY.

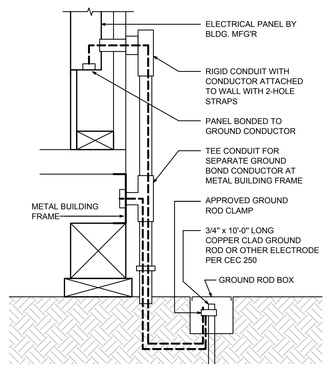
A1 — Free Standing Equipment Pedestal Detail
No Scale



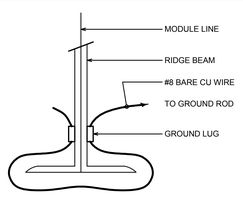
A7 — Equipment Attachment Detail
No Scale

NOTES:

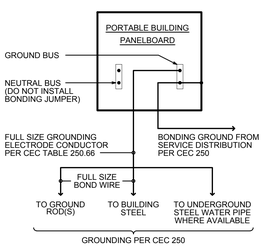
1. ALL GROUNDING SHALL COMPLY WITH CEC 250.
2. GROUNDING ELECTRODE CONDUCTOR SIZE SHALL COMPLY WITH CEC TABLE 250.66.
3. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL AND TO METAL BUILDING FRAME. IN ADDITION TO THE WORK SHOWN IN THE DETAIL ABOVE, BOND THE ELECTRICAL GROUND TO METAL WATER PIPES EMBEDDED AT LEAST 10' INTO THE SOIL, IF AVAILABLE.
4. ALL MODULES OF THE METAL FRAME BUILDINGS SHALL BE ELECTRICALLY BONDED. BOLTING ALONE IS NOT ACCEPTABLE AS BONDING.
5. CHECK RESISTANCE TO GROUND. IF THE RESISTANCE AT ANY POINT EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS UNTIL READING IS LESS THAN 25 OHMS.
6. THE SITE INSPECTOR IS TO VERIFY GROUNDING TESTS. THE CONTRACTOR SHALL SUBMIT A WRITTEN REPORT OF FINDINGS TO D.S.A., SIGNED BY THE INSPECTOR.



A10 — Ground Rod in Well Detail
No Scale



D15 — Building Module Bonding Detail
No Scale



A15 — Portable Building Panel Grounding Detail
No Scale

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com
REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA
Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
Project

Power Systems
Panel Schedules
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www.dardenarchitects.com
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LICENSED ARCHITECT ANDREW A. CORRO No. C37102 Ren. 11-30-23 STATE OF CALIFORNIA
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: SD
Drawn By: HDE
Checked By: SD
Reviewed By: SD
Scale: As indicated
Project Number: 2116
Date: 09/19/2022

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Sheet: _____ of: _____

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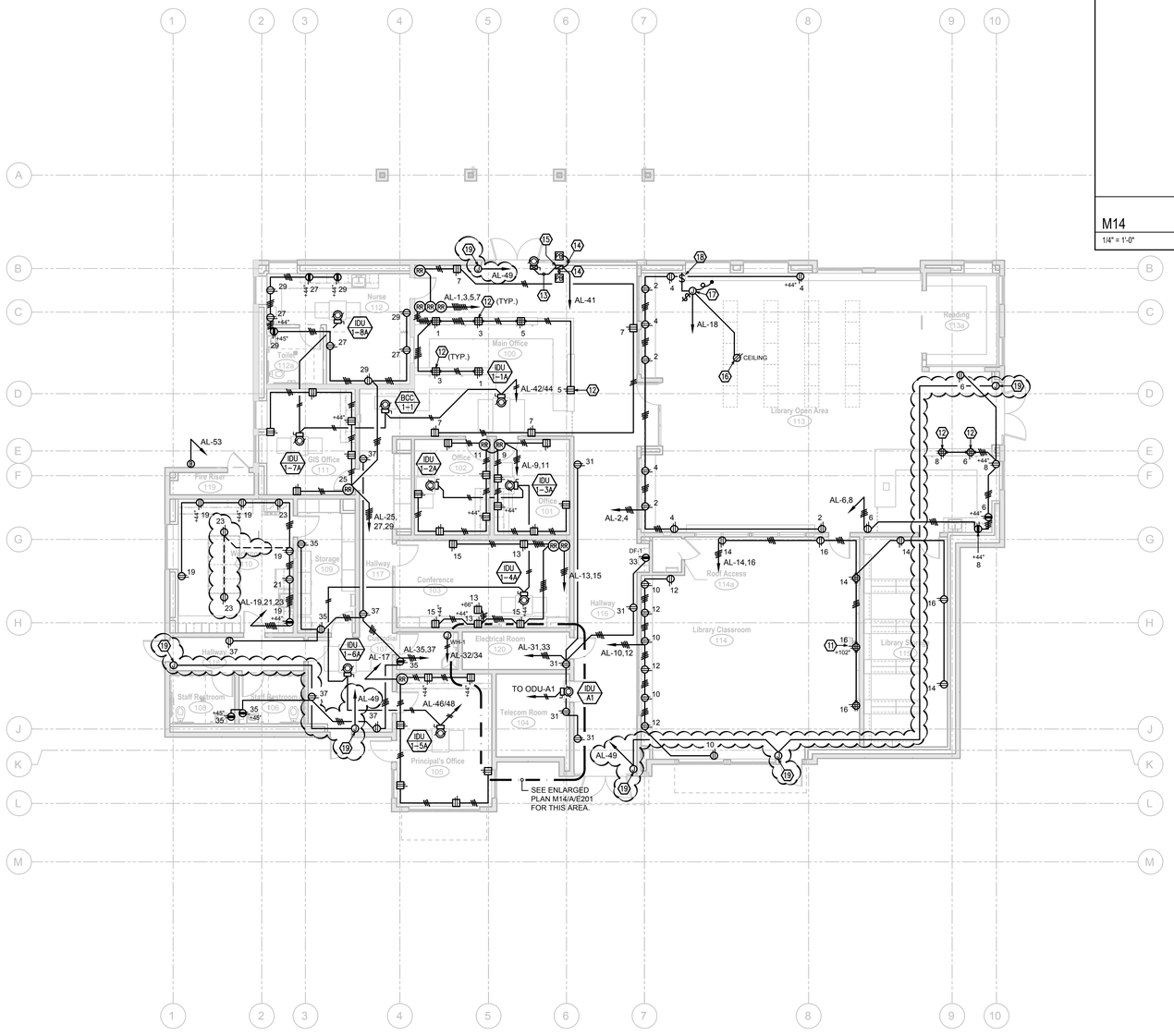

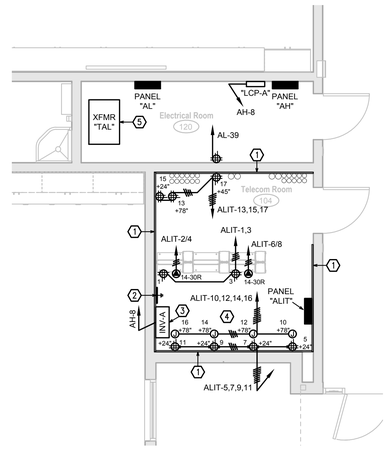

M14 | Building A - Enlarged Power Plan
1/4" = 1'-0"

A1 | Building A - Power Plan
1/8" = 1'-0"

FOR BIDDING ONLY
-NOT FOR CONSTRUCTION-

Agency Approval

KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS. WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H14/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. MOUNT DEVICE(S) INSIDE CASEWORK. SEE ARCHITECTURAL FOR EXACT LOCATION AND ADDITIONAL DETAIL.
13. 12/3 MC POWER AND 16/2 MC CONTROL. SNAKE THROUGH WINDOW SYSTEM TO DOOR OPENER/ CONTROLLER. VERIFY REQUIREMENT WITH VENDOR PRIOR TO ROUGH-IN.
14. 1/2"C. 16/2 TO DOOR PUSH BUTTON. VERIFY DOOR PUSH BUTTON LOCATION WITH ARCHITECT. VERIFY REQUIREMENT WITH VENDER PRIOR TO ROUGH-IN.
15. POWER SUPPLY CABINET WITH HINGED CONSOLE AND LOCK HASP AT +96" TO BOTTOM. VERIFY REQUIREMENT WITH VENDER PRIOR TO ROUGH-IN.
16. POWER OUTLET FOR PROJECTOR. VERIFY LOCATION OF PROJECTORMOUNT WITH FACTORY DATA IN RELATION TO SCREEN PRIOR TO ROUGH-IN. MOUNT PROJECTOR PER DETAIL F1/X/E302.
17. PROVIDE L5-20R TWIST-LOCK POWER OUTLET AND CONNECT MOTORIZED SCREEN. VERIFY LOCATION PRIOR TO ROUGH-IN.
18. MOTORIZED SCREEN FACTORY WALL CONTROLLER. VERIFY LOCATION PRIOR TO ROUGH-IN. VERIFY ALL REQUIREMENT PER MANUFACTURER.
19. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE, (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com

Consultant

REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

McKinley/Fowler Elementary School
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Project

Building A
Power Plan

Drawing

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ARCHITECTURE
PLANNING
INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051

LICENSED ARCHITECT RUDOLF K. PENROD No. C23724 Exp. 4-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date

Revision

Designed By: SD
Drawn By: HDE
Checked By: SD
Reviewed By: SD

Scale: As indicated
Project Number: 2116
Date: 09/19/2022

A/E201

Sheet: _____ of: _____

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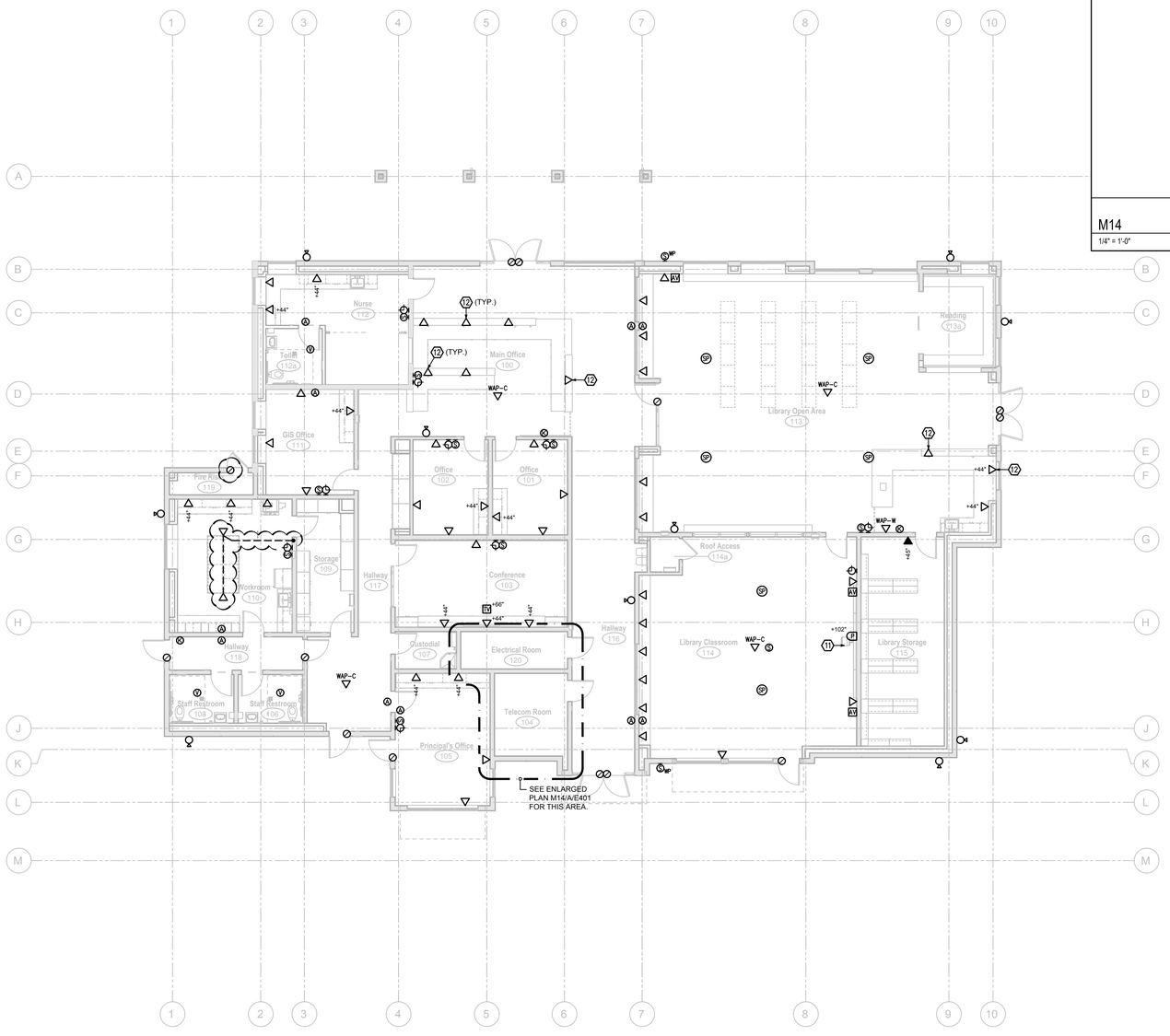

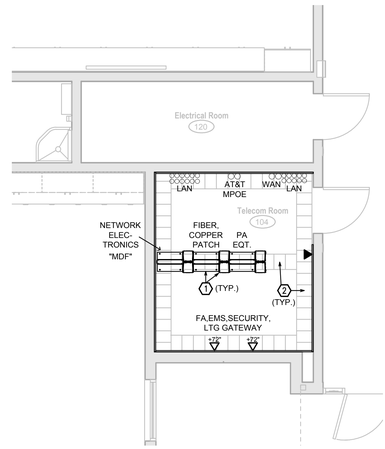

M14 — Building A - Enlarged Low Voltage Plan
1/4" = 1'-0"

A1 — Building A - Low Voltage Plan
1/8" = 1'-0"

KEYNOTES

1. 2-POST RACK(S), CABLE MANAGEMENT SECTION, AND APPURTENANCES PER SPECS. SEE DETAIL A13/X/E401 FOR MOUNTING.
2. CHATSWORTH 11252-71X 12" LADDER RACK SYSTEM PER SPECIFICATIONS AND DETAIL A1/X/E401.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. MOUNT DEVICE(S) INSIDE CASEWORK. SEE ARCHITECTURAL FOR EXACT LOCATION AND ADDITIONAL DETAIL.

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Agency Approval

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com

Consultant

REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
Project

Building A
Low Voltage Plan
Drawing

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Architect

LICENSED ARCHITECT MICHAEL K. PENNOYER No. C23724 Exp. 4-30-23 STATE OF CALIFORNIA

No.	Revision/Submission	Date

Revision

Designed By: SD
Drawn By: HDE
Checked By: SD
Reviewed By: SD
Scale: As indicated
Project Number: 2116
Date: 09/19/2022

A/E401
Sheet: _____ of: _____

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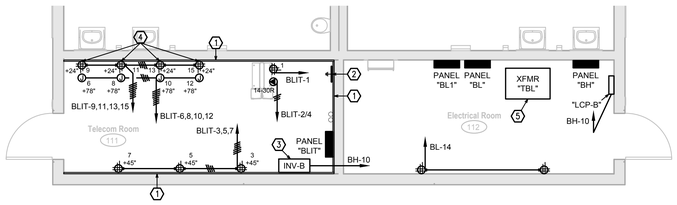
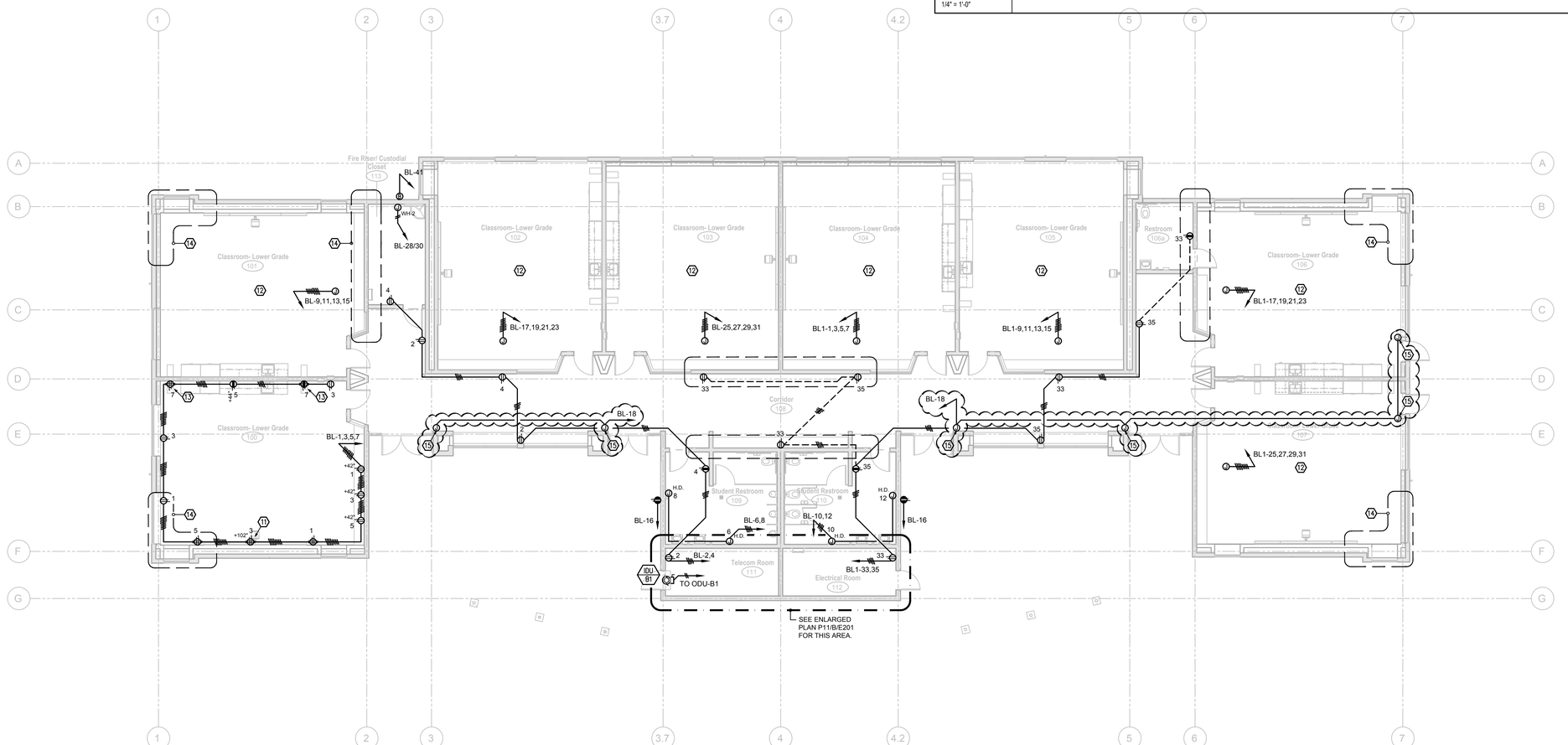
AD4-EX05



P11	Building B - Enlarged Power Plan
1/4" = 1'-0"	



A1	Building B - Power Plan
1/8" = 1'-0"	

N

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Agency Approval

KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS, WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H14/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 100.
13. LAPTOP CHARGING STATION POWER OUTLET. VERIFY LOCATION AND REQUIREMENT PRIOR TO ROUGH-IN.
14. INDICATED WALL HAS CONCEALED STRUCTURAL BRACING. PROVIDE UNDERGROUND RACEWAYS AS REQUIRED TO ENTER CONCEALED INTO WALL SPACE.
15. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE, (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

General Notes

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REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

Project

Building B
Power Plan

Drawing

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

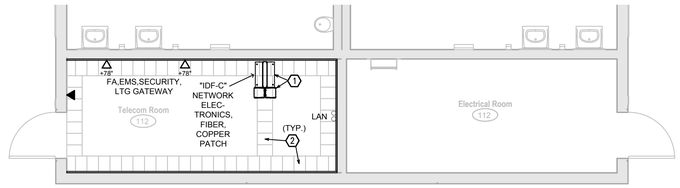
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

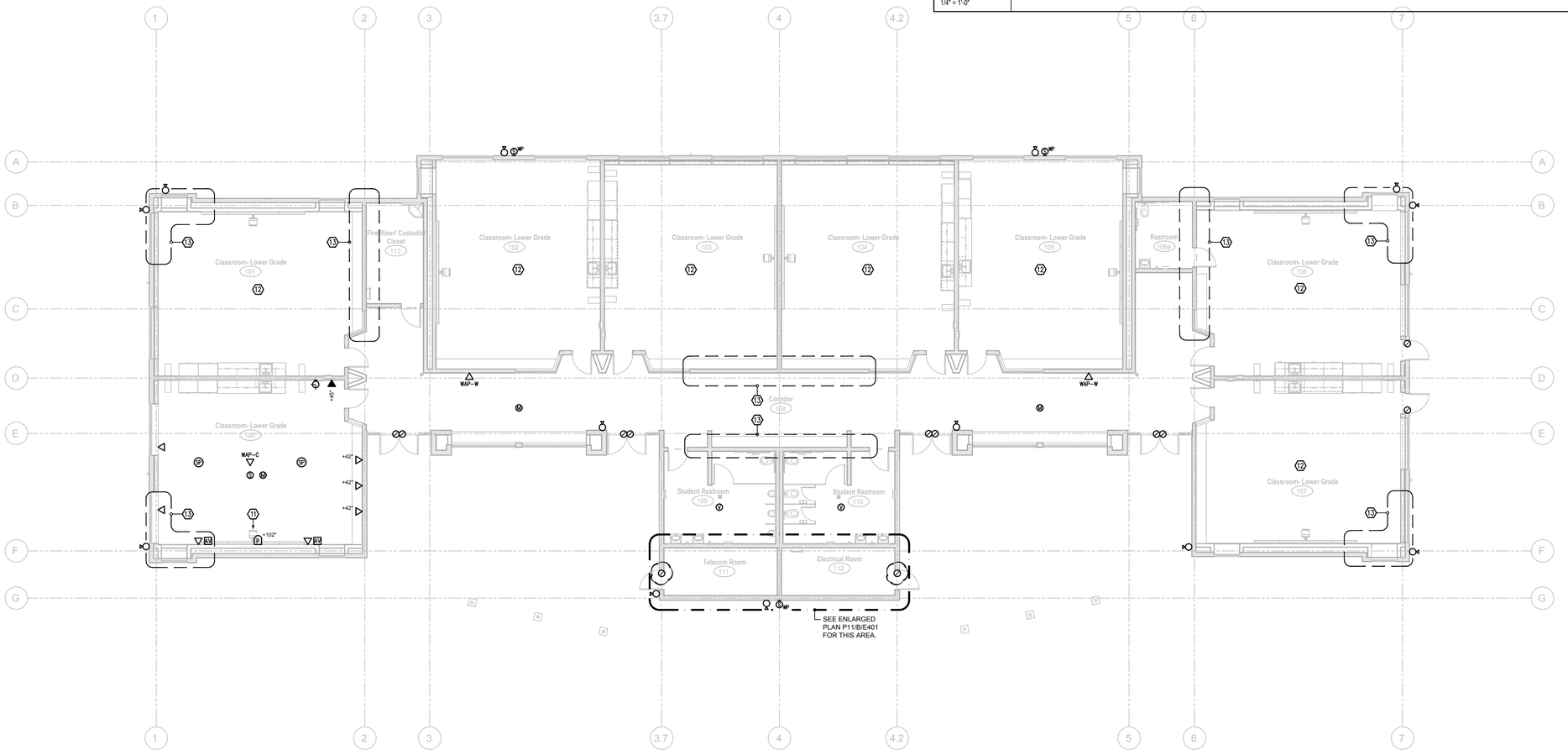
Revision

	Designed By: SD	
Scale: As indicated	Drawn By: HDE	B/E201
Project Number: 2116	Checked By: SD	
Date: 09/19/2022	Reviewed By: SD	Sheet: _____ of: _____

AD4-EX06



P11	Building B - Enlarged Low Voltage Plan
1/4" = 1'-0"	



A1	Building B - Low Voltage Plan
1/8" = 1'-0"	

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Agency Approval

KEYNOTES

1. 2-POST RACK(S), CABLE MANAGEMENT SECTION, AND APPURTENANCES PER SPECS. SEE DETAIL A13/X/E401 FOR MOUNTING.
2. CHATSWORTH 11252-71X 12" LADDER RACK SYSTEM PER SPECIFICATIONS AND DETAIL A1/X/E401.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 100.
13. INDICATED WALL HAS CONCEALED STRUCTURAL BRACING. PROVIDE UNDERGROUND RACEWAYS AS REQUIRED TO ENTER CONCEALED INTO WALL SPACE.

General Notes

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559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com

REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON ELECTRICAL E17850 STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

Project

Building B
Low Voltage Plan

Drawing

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

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Project Number: 2116	Checked By: SD	Sheet: _____ of: _____
Date: 09/19/2022	Reviewed By: SD	

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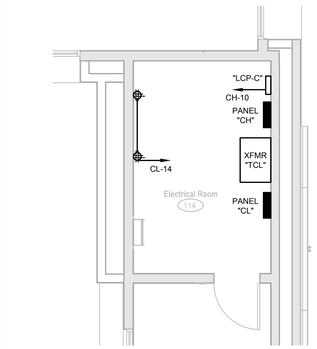
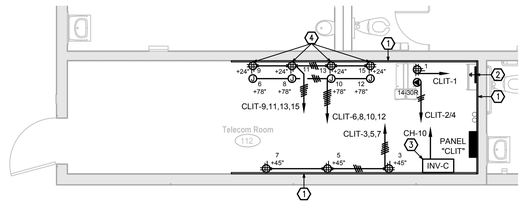
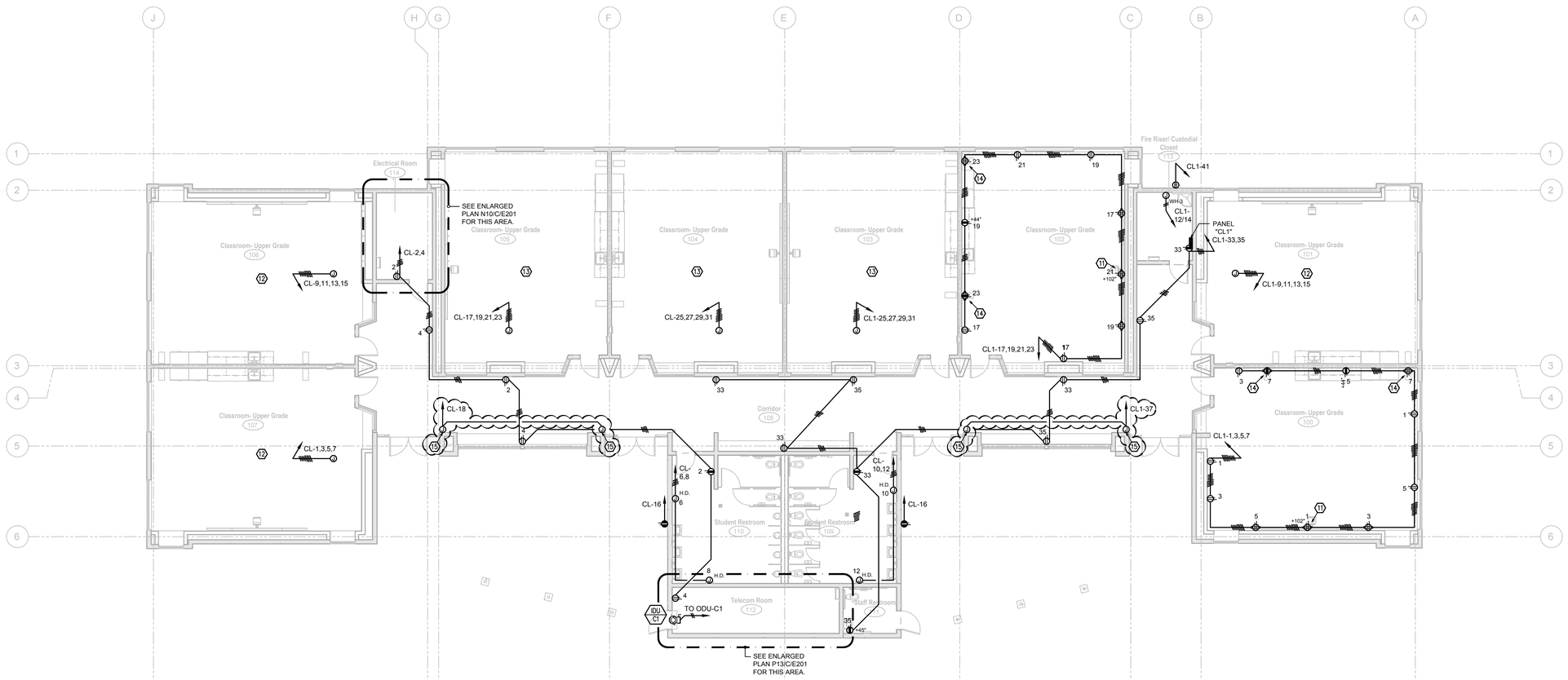
AD4-EX07



N10	Building C - Enlarged Power Plan
1/4" = 1'-0"	



P13	Building C - Enlarged Power Plan
1/4" = 1'-0"	



N

A1	Building C - Power Plan
1/8" = 1'-0"	

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Agency Approval

KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS. WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H14/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 100.
13. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 102.
14. LAPTOP CHARGING STATION POWER OUTLET. VERIFY LOCATION AND REQUIREMENT PRIOR TO ROUGH-IN.
15. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE. (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

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Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

Project

Building C
Power Plan

Drawing

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LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

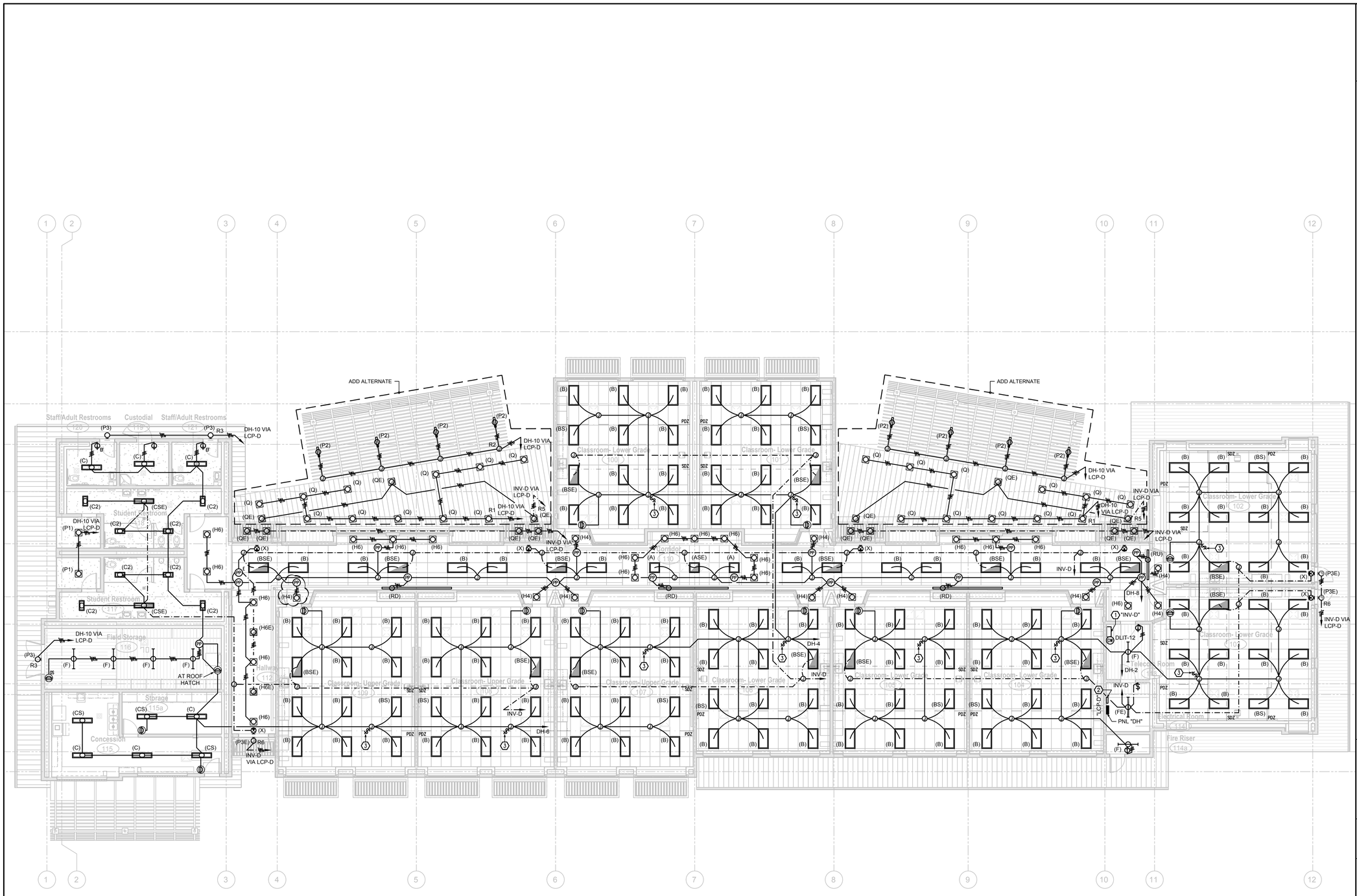
Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: SD	
Scale: As indicated	Drawn By: HDE	C/E201
Project Number: 2116	Checked By: SD	
Date: 09/19/2022	Reviewed By: SD	Sheet: _____ of: _____

AD4-EX08



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Agency Approval

KEYNOTES

1. EMERGENCY LIGHTING INVERTER "INV-D", 90 MINUTES RUNTIME. IOTA #IISC-2800-277IN-277OUT-BYPASS-OB6/1P277/16AMP/ON. WHEN POWER FAILS, EMERGENCY LIGHTS AUTOMATICALLY SWITCH ON. SEE DETAIL H14/XIE202 FOR MOUNTING. SEE ENLARGED ELECTRICAL PLAN M15/D/E201 FOR CIRCUIT.
2. LIGHTING CONTROL PANEL "LCP-D". LITHONIA #ARP-INTENC16NLT-8FCR-MVOLT-1VB-HLK-SM-DTC. SEE ENLARGED ELECTRICAL PLAN M15/D/E201 FOR CIRCUIT.
3. PROVIDE MAINTENANCE SWITCH IN ATTIC SPACE FOR LIGHTS.

General Notes

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REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

Project

Building D
Lighting Plan

Drawing

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LICENSED ARCHITECT ANDREW A. CORREA No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: SD	Copyright 2022 Darden Architects
Scale: As indicated	Drawn By: HDE	D/E101
Project Number: 2116	Checked By: SD	Sheet: _____ of: _____
Date: 09/19/2022	Reviewed By: SD	

A1 — Building D - Lighting Plan
1/8" = 1'-0"

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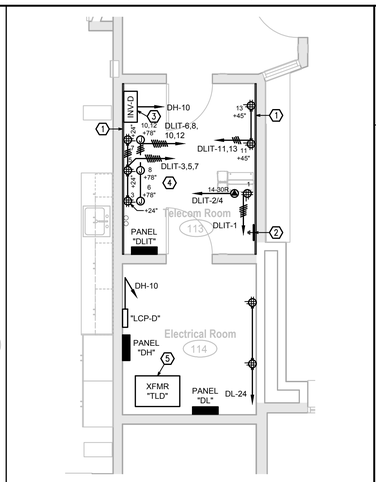
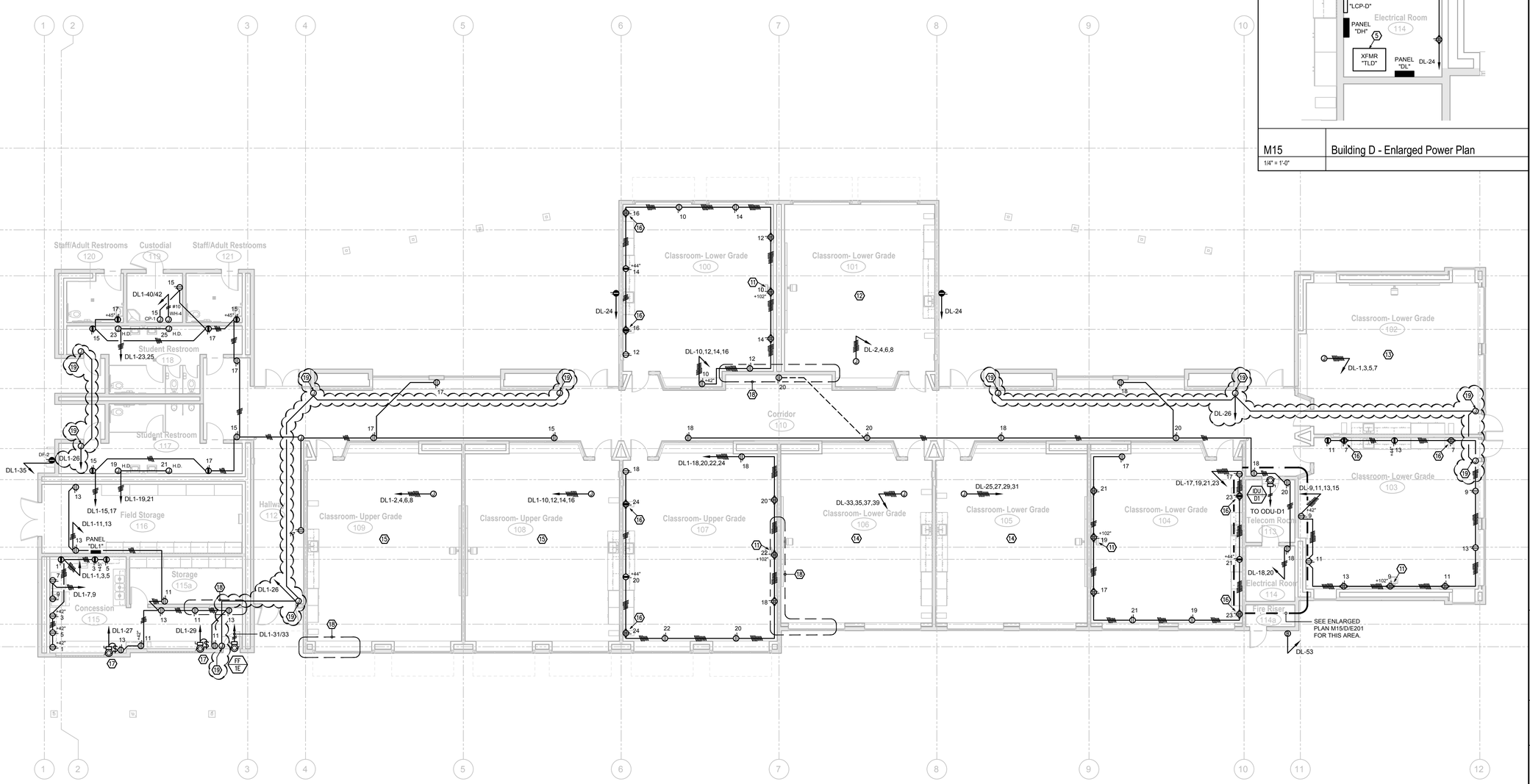
AD4-EX09



M15 — Building D - Enlarged Power Plan

1/4" = 1'-0"



A1 — Building D - Power Plan

1/8" = 1'-0"

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Agency Approval

KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS. WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H14/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 100.
13. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 103.
14. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 104.
15. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 107.
16. LAPTOP CHARGING STATION POWER OUTLET. VERIFY LOCATION AND REQUIREMENT PRIOR TO ROUGH-IN.
17. CONNECT TO MOTORIZED ROLL-UP DOOR AND CONTROLS PER MANUFACTURER. VERIFY LOCATION AND HEIGHT WITH MANUFACTURER INFORMATION PRIOR TO ROUGH-IN. PROVIDE ALL REQUIREMENT PER MANUFACTURER.
18. INDICATED WALL HAS CONCEALED STRUCTURAL BRACING. PROVIDE UNDERGROUND RACEWAYS AS REQUIRED TO ENTER CONCEALED INTO WALL SPACE.
19. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE. (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

General Notes

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REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA

Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727

Project

Building D
Power Plan

Drawing

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LICENSED ARCHITECT ASHLEE A. DARDEN No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: SD
Drawn By: HDE
Checked By: SD
Reviewed By: SD

Scale: As indicated
Project Number: 2116
Date: 09/19/2022

D/E201

Sheet: _____ of: _____

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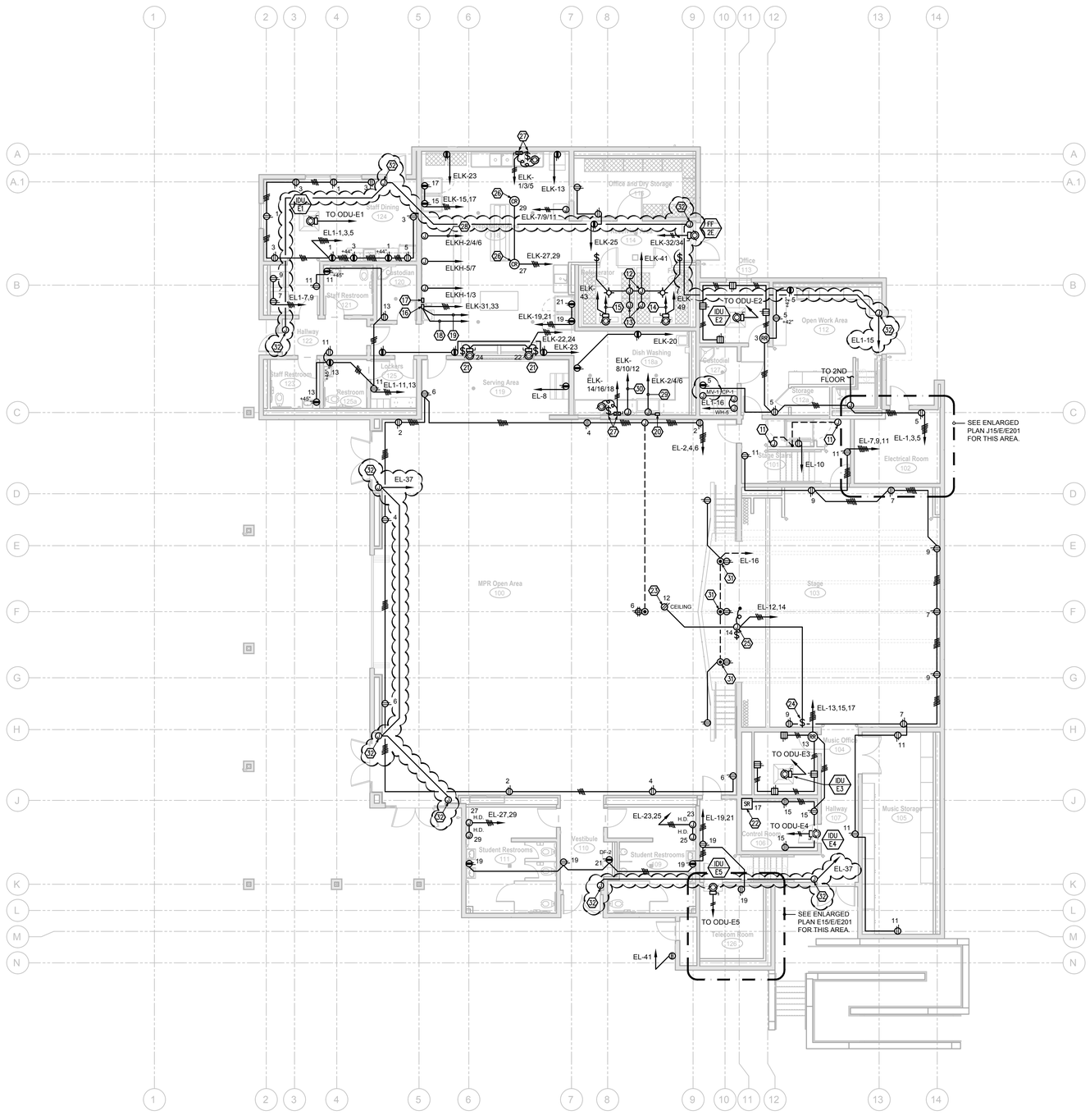
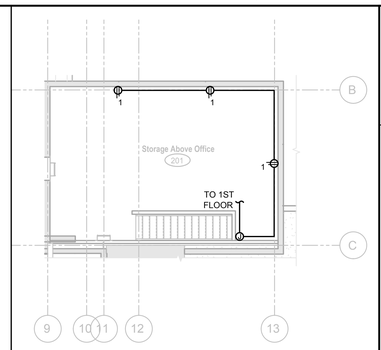
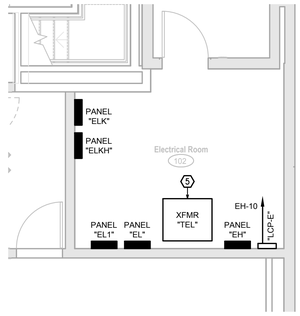
AD4-EX10

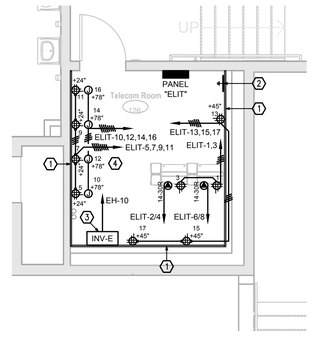




N15 | Building E - 2nd Floor Power Plan
1/8" = 1'-0"



J15 | Building E - Enlarged Power Plan
1/4" = 1'-0"



E15 | Building E - Enlarged Power Plan
1/4" = 1'-0"

A1 | Building E - Power Plan
1/8" = 1'-0"

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KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS, WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H14/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
11. PROVIDE J-BOX FOR CALL BUTTONS AND STUD 3/4"C. INTO CONTROL COMPARTMENT OF LIFT.
12. MAKE CONNECTIONS TO COLD BOX LIGHTS AND HEAT TRACE CABLE. INSTALL AND CONNECT LIGHTS AND SWITCHES PROVIDED BY MANUFACTURER.
13. CONNECT TO SELF-REGULATING HEAT TRACE CABLE.
14. CONNECT WALK-IN FREEZER EVAPORATOR TO CONDENSER ON ROOF. PROVIDE CONDUIT AND WIRING PER MANUFACTURER.
15. CONNECT WALK-IN REFRIGERATOR EVAPORATOR TO CONDENSER ON ROOF. PROVIDE CONDUIT AND WIRING PER MANUFACTURER.
16. HOOD EXHAUST SYSTEM WITH HOOD CONTROLS AND EXHAUST FAN CONTROLS. VERIFY LOCATION. CONNECT ALL ELECTRICAL PORTIONS, INCLUDING OUTLETS, LIGHTS, GAS SOLENOID, EXHAUST FAN, MAKE-UP AIR UNIT, TEMPERATURE SENSOR, AND CONTROLS. REFER TO MANUFACTURER DRAWINGS.
17. FIRE SUPPRESSION SYSTEM. VERIFY LOCATION. 3/4"C. 2#14 TO FIRE SYSTEM MICROSWITCH IN HOOD CONTROL PANEL.
18. CONNECT GAS SOLENOID.
19. CONNECT TO FIRE SUPPRESSION SYSTEM.
20. DISHWASHER HOOD EXHAUST FAN CONTACTOR KIT. CONNECT TO ROOF EXHAUST FAN AND INTERLOCK WITH DISHWASHER CONTROLS PER MECHANICAL.
21. CONNECT TO MOTORIZED ROLL-UP DOOR AND CONTROLS PER MANUFACTURER. VERIFY LOCATION AND HEIGHT WITH MANUFACTURER INFORMATION PRIOR TO ROUGH-IN. PROVIDE ALL REQUIREMENT PER MANUFACTURER.
22. PROVIDE AUDIO-VIDEO CABINET PER SPECS. MOUNT QUAD OUTLET INSIDE CABINET. SEE DETAIL E6/X/E402. VERIFY LOCATION PRIOR TO ROUGH-IN.
23. POWER OUTLET FOR PROJECTOR. VERIFY LOCATION OF PROJECTOR/MOUNT WITH FACTORY DATA IN RELATION TO SCREEN PRIOR TO ROUGH-IN. MOUNT PROJECTOR PER DETAIL F1/X/E302.
24. MOTORIZED SCREEN FACTORY WALL CONTROLLER. VERIFY LOCATION PRIOR TO ROUGH-IN. VERIFY ALL REQUIREMENT PER MANUFACTURER.
25. PROVIDE L5-20R TWIST-LOCK POWER OUTLET AND CONNECT MOTORIZED SCREEN. VERIFY LOCATION PRIOR TO ROUGH-IN.
26. RETRACTABLE CORD REEL WITH QUAD GFI OUTLET IN RECESSED CEILING ENCLOSURE. VERIFY LOCATION PRIOR TO ROUGH-IN. SEE DETAIL A1/X/E302.
27. CONNECT TO SINK DISPOSAL AND CONTROLS PER MANUFACTURER. VERIFY LOCATION PRIOR TO ROUGH-IN.
28. 1 1/4"C. 3#4, 1#8G.
29. 1 1/4"C. 3#2, 1#6G.
30. 1 1/4"C. 3#3, 1#8G.
31. PROVIDE FLOOR BOX WITH POWER, DATA, A/V INPUTS, AND MICROPHONE INPUTS. SEE LOW VOLTAGE PLAN A1E/E401 FOR LOW VOLTAGE SYSTEMS INFORMATION. VERIFY LOCATION PRIOR TO ROUGH-IN.
32. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE. (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

General Notes

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LICENSED ARCHITECT ANDREW A. CORNEJO No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA

Architect

No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

Designed By: SD
Drawn By: HDE
Checked By: SD
Reviewed By: SD

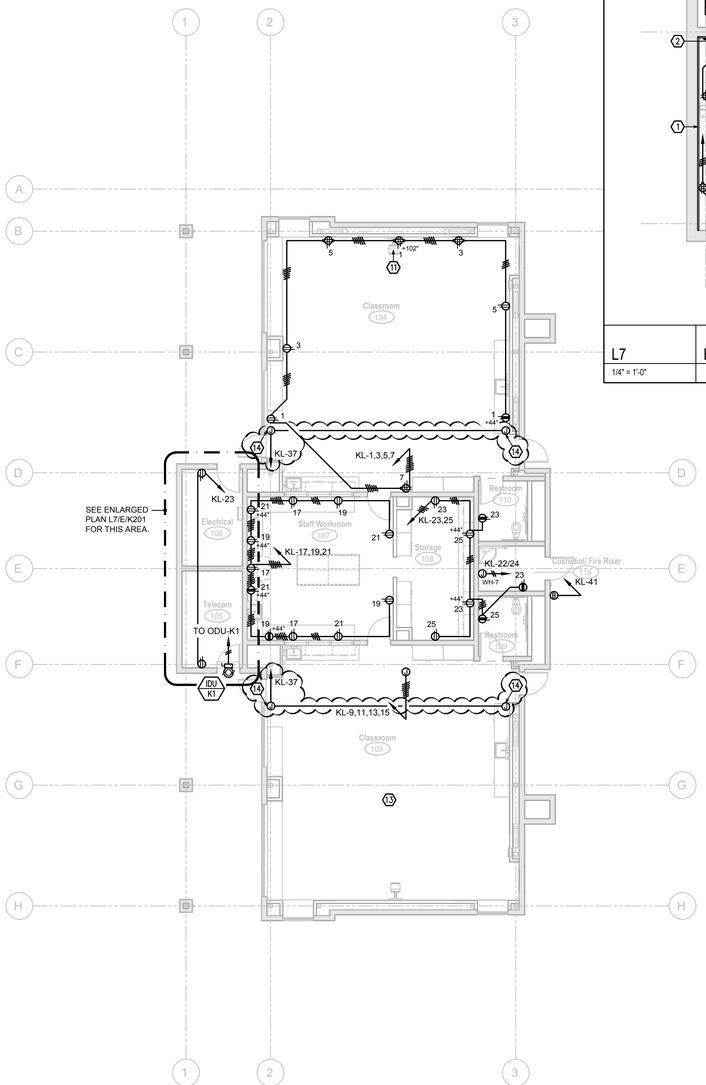
Scale: As indicated
Project Number: 2116
Date: 09/19/2022

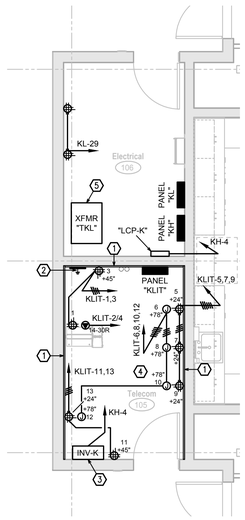
E/E201

Sheet: _____ of: _____

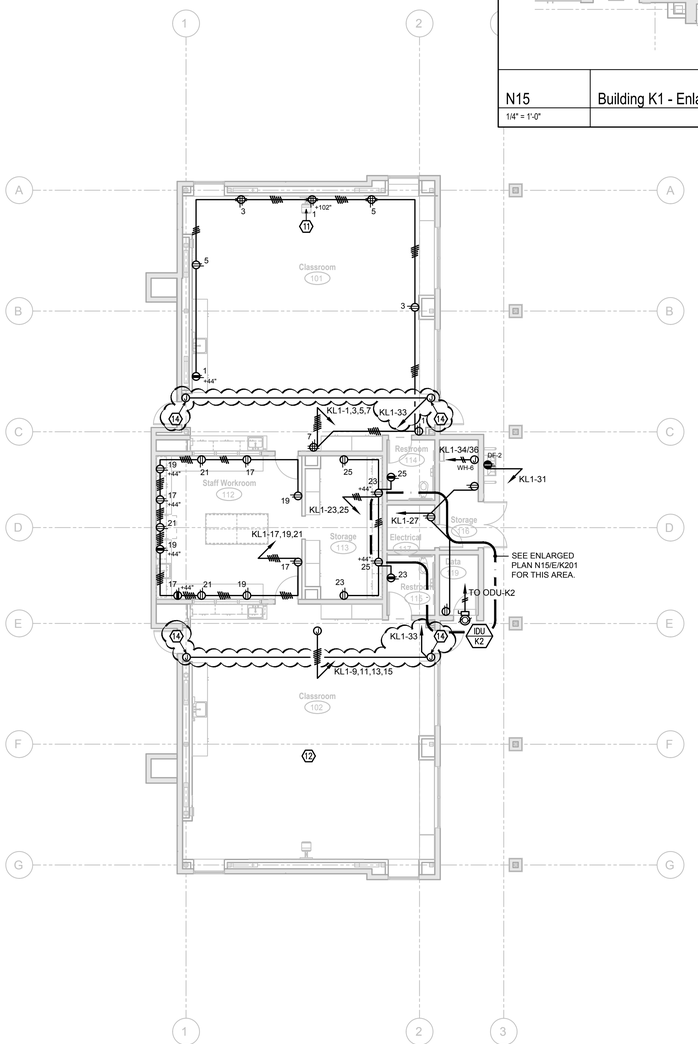
2/27/2023 6:06:16 PM
Z:\Clients\Darden Architects\22066 - CUSD Fowler-McKinley ES\CAD Files\22066 - Elec Buildings Backcheck.dwg

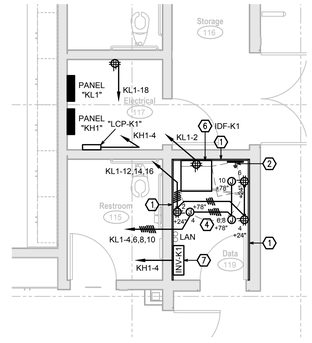
AD4-EX11





L7	Building K2 - Enlarged Power Plan
1/4" = 1'-0"	





N15	Building K1 - Enlarged Power Plan
1/4" = 1'-0"	

A1	Building K2 - Power Plan
1/8" = 1'-0"	

A9	Building K1 - Power Plan
1/8" = 1'-0"	

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Agency Approval

KEYNOTES

1. 3/4" THICK x 8' HIGH, FIRE-RESISTANT PLYWOOD BACKBOARD. PAINTED WITH FIRE RESISTANT PAINT. SECURE PLYWOOD TO (2) METAL STUDS WITH #10 x 4" GALVANIZED FLAT HEAD SMS AT 8" CENTERS, WITH MIN. (4) SCREWS AT 6" CENTERS AT EACH WALL STUD. WITH MIN. 2 1/2" EMBEDMENT INTO WALL STUD.
2. PROVIDE TELECOM GROUND BUS PER DETAIL N8/X/E401 AND J8/X/E401.
3. EMERGENCY LIGHTING INVERTER PER DETAIL H10/X/E202.
4. CONNECT POWER TO FA, EMS, SECURITY SYSTEMS AND LIGHTING GATEWAY.
5. PAD MOUNTED TRANSFORMER. SEE DETAIL D10/X/E301 FOR MOUNTING. SEE POWER SINGLE LINE DIAGRAM G10/X/E301.
6. PROVIDE 36"H IDF CABINET PER SPECS AT +60" AFF. TO BOTTOM OF CABINET. MOUNT POWER OUTLET INSIDE CABINET. SEE DETAIL E6/X/E402 FOR MOUNTING.
7. EMERGENCY LIGHTING INVERTER PER DETAIL H10/X/E202.
11. SEE TEACHING WALL ELEVATION DETAIL K1/X/E402.
12. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 101.
13. PROVIDE ELECTRICAL INSTALLATION PER CLASSROOM 104.
14. PROVIDE ROUGH-IN AT THIS ENTRANCE FOR FUTURE ACCESS CONTROL SYSTEM. PROVIDE CARD READER J-BOX AT +45" AFF WITH 1/2" CONDUIT TO ATTIC SPACE FOR A DOOR CONTACTOR AND AN ELECTRIC STRIKE. (4) TOTAL FOR DOUBLE DOORS. PROVIDE DATA OUTLET AND J-BOX WITH 120V POWER WIRING IN ATTIC SPACE NEAR DOOR FOR FUTURE CONNECTION TO A DOOR CONTROLLER.

General Notes

Hardin-Davidson Engineering
356 Pollasky Ave., Suite 200, Clovis, CA 93612
559.323.4995 tel • 559.323.4928 fax
www.hardin-davidson.com
REGISTERED PROFESSIONAL ENGINEER C. SCOTT DAVIDSON E17850 ELECTRICAL STATE OF CALIFORNIA
Consultant

McKinley/Fowler Elementary School
Clovis Unified School District
Fresno, CA 93727
Project

Building K
Power Plan
Drawing

darden architects
ARCHITECTURE
PLANNING
INTERIORS
www.dardenarchitects.com
6790 N. West Ave. • Fresno, CA 93711 • T. 559.448.8051
LICENSED ARCHITECT ASHLEY A. DARDEN No. C37102 Exp. 11-30-23 STATE OF CALIFORNIA
Architect

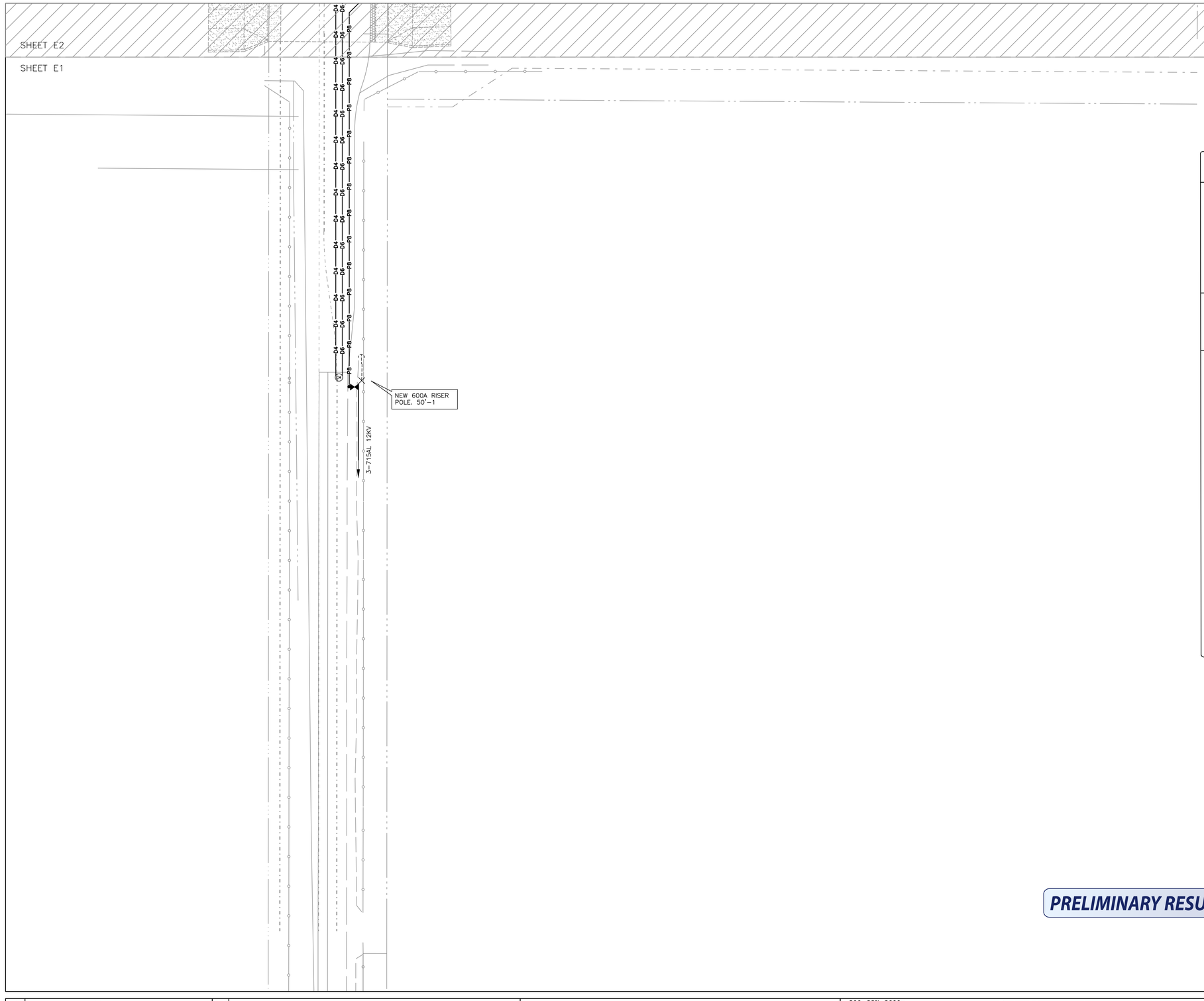
No.	Revision/Submission	Date
4	Addendum #4	03/03/23

Revision

	Designed By: SD	
Scale: As indicated	Drawn By: HDE	K/E201
Project Number: 2116	Checked By: SD	
Date: 09/19/2022	Reviewed By: SD	Sheet: _____ of: _____

SHEET E2

SHEET E1



LEGEND

INSTALL	DESCRIPTION
D4 D4 D4	VACANT DUCT 4"
D6 D6 D6	VACANT DUCT 6"
P3 P3 P3	PRIMARY CABLE – 3-1/0AL EPR ENCAP IN NEW 1-4" CONDUIT
P8 P8 P8	PRIMARY CABLE – 3-1100AL EPR ENCAP IN NEW 1-6" CONDUIT
P9 P9 P9	PRIMARY CABLE – 3-1100AL EPR ENCAP IN EXISTING 1-6" CONDUIT
S S S S	SECONDARY CABLE – 1/0AL TPX IN NEW 1-3" CONDUIT
SV SV SV	SERVICE CABLE – 3-1100AL QPX IN NEW 5-5" CONDUITS (4 BLANK)
	STREETLIGHT CABLE

EXISTING	DESCRIPTION
	3 PHASE PRIMARY CABLE/CONDUCTOR – SIZE AS SHOWN
	1 PHASE PRIMARY CABLE/CONDUCTOR – SIZE AS SHOWN
	VACANT CONDUIT (PRIMARY) – SIZE AS SHOWN

INSTALL	EXISTING	DESCRIPTION
2	2	17" x 30" x 18" SECONDARY BOX
	5	3' x 5' x 3'6" PRIMARY ENCLOSURE (EXTERNAL DIMENSION 3'-9"W X 5'-9"L X 5'-1"D)
7	7	4'6" x 8'6" x 6' PRIMARY ENCLOSURE (EXTERNAL DIMENSION 5'-6"W X 9'-6"L X 6'-7"D)
FRONT		PM TRANSFORMER, DF-LB, SIZE AS SHOWN
		LS2A STREET LIGHT
EM		END OF CONDUIT – BALL MARKER
POS		
		SOLELY OWNED ANCHOR
		JOINTLY OWNED POLE
		AIR SWITCH
		RISER
		CUTOUT – FUSED AS SHOWN
SB		DISCONNECT
		PMI-9 PADMOUNT SWITCH / INTERRUPTER

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APPROVED FOR SUBMITTAL
CLIFFORD LOPES
QUALIFIED APPLICANT DESIGN ENGINEER

PRELIMINARY RESULTS

RAPTOR ZONE (YES)
AIRWAYS 1103
CIR MAP BF129-102
PLAT BF129-102
INS DIST: B
CLIMATE ZONE: R
S.S.D. = SW-1628
VOLT CLASS: 2
LOADING DIST: R
LIGHTNING DIST: 2
NON-CORROSIVE AREA
FIRE TIER AREA 1
LIGHT SNOW LOADING

N

SCALE: 1"=40' SCALE
40' 0' 40' 80'

NO.	REVISION	BY
1		
2		
3		
4		
5		

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Office (559) 575 8221
Cell (559) 760 9464

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Clovis, California 93619

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CUSD ELEMENTARY SCHOOL
FOWER AVE & McKINLEY AVE
FRESNO CALIFORNIA

800-227-2600 CALL BEFORE YOU DIG UNDERGROUND SERVICE ALERT

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7591 N Ingram Ave. Suite 103
Fresno, CA 93711
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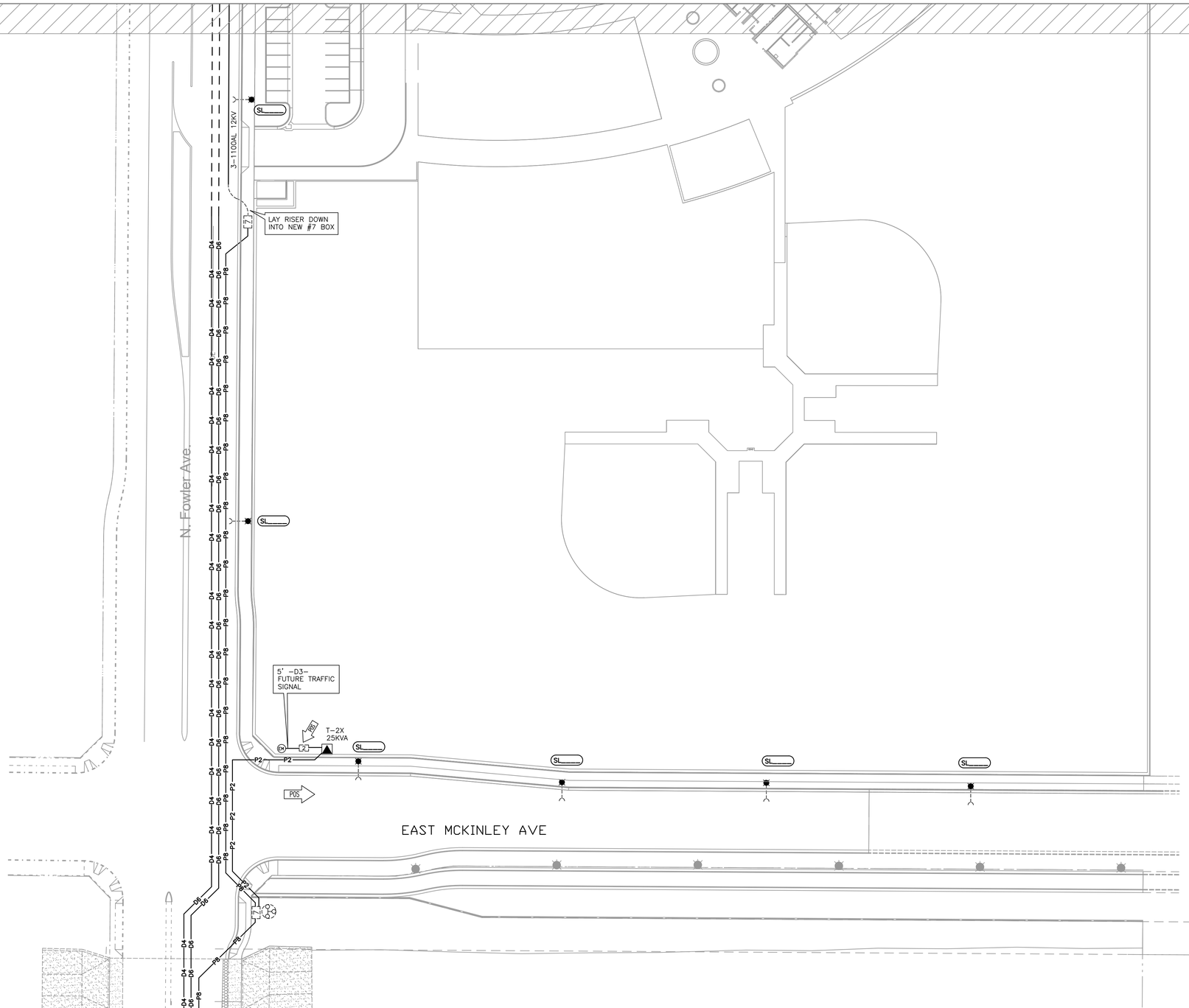
DATE	3-1-2023
SCALE	AS SHOWN
DESIGNER	Cliff Lopes
DRAFTER	Cliff Lopes
JOB	

SHEET E1
OF E3 SHEETS

SHEET E2



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SHEET E2
SHEET E1

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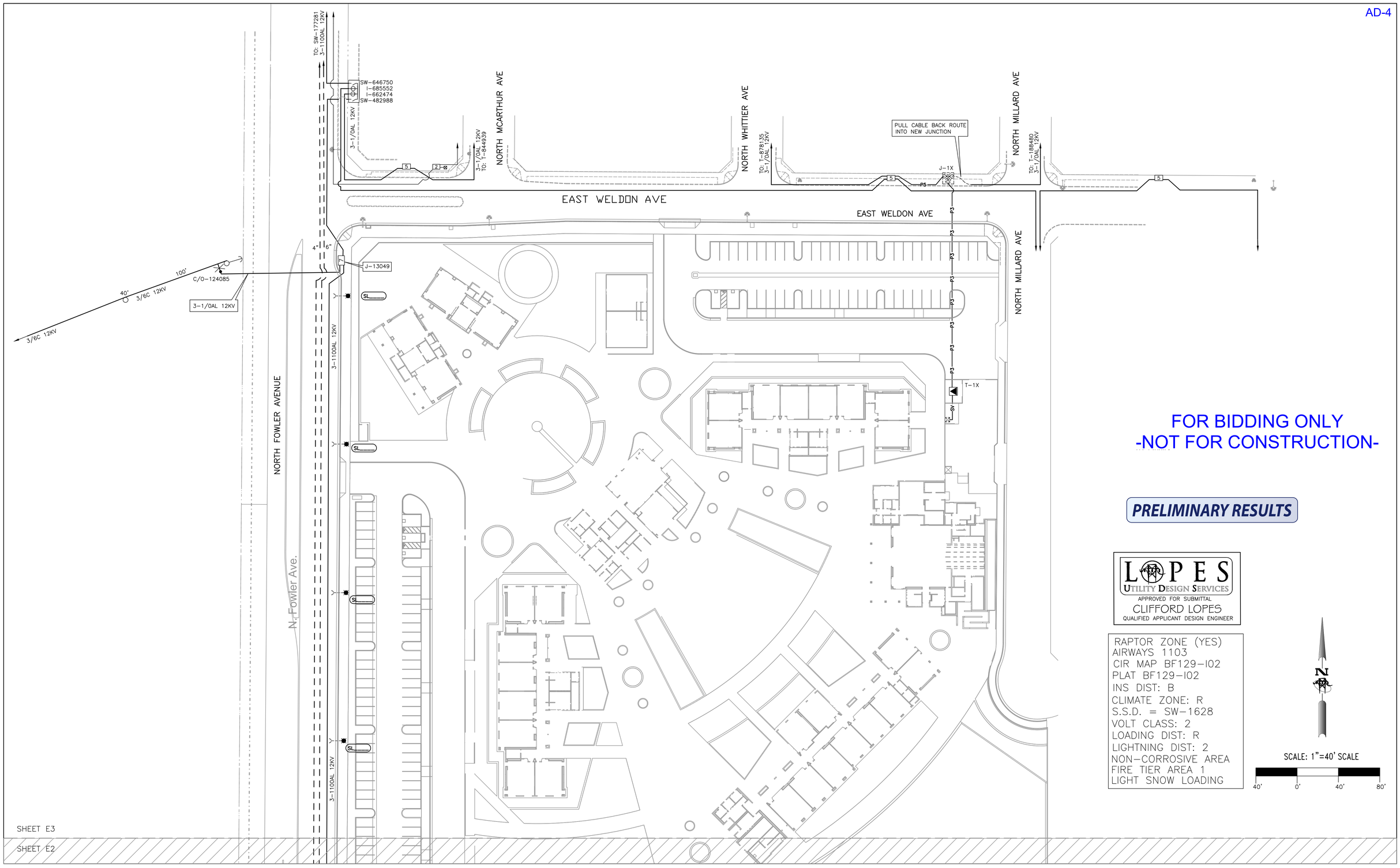
SHEET E2
OF E3 SHEETS



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N

SCALE: 1"=40' SCALE
40' 0' 40' 80'

SHEET E3
SHEET E2

NO.	REVISION	BY
1		
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JOB	

SHEET E3 OF E3 SHEETS

AD-4

PM# 35418107 CSUD FOWLER MCKINLEY SCHOOL @ APD (After)

Facilities Color By
Pressure (Primary Only) (psig)
- 10.00 - 12.00 (0)
- 12.00 - 14.00 (0)
- 14.00 - 16.00 (0)
- 16.00 - 18.00 (0)
- 18.00 - 20.00 (0)
- 20.00 - 30.00 (0)
- 30.00 - 40.00 (1520)
- 40.00 - 50.00 (37521)
- 50.00 - 60.00 (1294)
- > 60.00 (24)

Facilities Color By
Pipe Internal Diameter (in)
- < 1.9169
- 1.9169 - 2.8509 (2in)
- 2.8509 - 3.6190 (3in)
- 3.6190 - 5.4000 (4in)
- 5.4000 - 7.1200 (6in)
- 7.1200 - 10.1190 (8in)
- 10.1190 - 12.1879
- 12.1879 - 15.2490
- > 15.2490

Internal

GAS MATERIAL LIST

Item	Qty	Code
TIE-IN (MATERIALS BY PGE)		
4" Electrofusion Coupling	1	02-6352
4" x 1" Electrofusion Tapping Tee	2	65-0205
1" Electrofusion Coupling	2	02-6348
1" x 6" LG. Plastic Pup	2	01-6083
1" CTS Socket Fusion Cap	2	02-9770
Split Sleeve Connector	1	30-1333
MAIN		
4" Plastic HP Main	1,300'	01-1827
4" Plastic Purge Cap (1 at tie-in)	2	02-5583
1" Socket Fusion Cap (1 at tie-in)	2	02-9770
Valve Box Body	2	04-3498
Valve Box Lid - ETS	2	04-3497
EM Marker	2	37-4944
5# Zinc Anode	2	56-9145
Split Sleeve Connector	2	30-1333
AWG #10 Copper Wire	1,320'	29-4414
Electrician's Tape	2 Rolls	38-4095
Gas Warning Tape	1,300'	37-9947
FULL SERVICE COMPLETION		
4" x 1-1/4" Saddle-Fusion Tapping Tee	1	03-5619
1-1/4" IPS Service	20'	01-6078
1-1/4" EFV 5500	1	02-6962
1-1/4" Plastic Curb Valve	1	03-5278
Valve Box Body	1	04-3498
Valve Box Lid - "Gas Valve"	1	04-3039
EM Marker	1	37-4944
PE Valve Extension	1	03-3948
1-1/4" Socket Fusion Coupling	2	02-9753
1-1/4" x 1-1/4" IPS Riser Assembly w/ 1-1/4" Bypass	1	04-0883
Split Sleeve Connector	1	30-1333
AWG #10 Copper Wire	26'	29-4414
Electrician's Tape	1 Roll	38-4095
Gas Warning Tape	20'	37-9947