IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

WESTMINSTER SCHOOL DISTRICT

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

WEBBER ELEMENTARY
HVAC UPGRADE &
MODERNIZATION
14142 Hoover St
Westminster, CA 92683
DSA SUBMITTAL

DSA SUBMITTAL

12-29-2022

LICENSED ARCHITECT
Tong You
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

OWNER

WESTMINSTER SCHOOL DISTRICT
CONTACT: Brian Johnson
14121 Cedarwood Avenue
Westminster, CA 92683
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bkjohnson@wsdk8.us

ARCHITECT

PBK Architects
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MEP ENGINEER

LEAF Engineers
CONTACT: Ronald De La Cruz
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Rancho Cucamonga, CA 91730
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STRUCTURAL

NIC STRUCTURAL ENGINEERING CONSULTANTS
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teimani@nic-eng.com

G1 - SHEET INDEX, DRAWING CONVENTIONS, AND LOCATION MAP

0" 1"

ABBREVIATIONS

A	A.D.	AREA DRAIN	M	MEP	MECHANICAL, ELECTRICAL, PLUMBING
A	A.D.A.	AMERICANS WITH DISABILITIES ACT	M	MEPT	MECHANICAL, ELECTRICAL, PLUMBING, TECHNOLOGY
A	A.D.A.	2010 ADA STANDARDS FOR ACCESSIBLE DESIGN	M	MEZZ.	MEZZANINE
A	A.D.A.A.G.	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES	M	MFR. / MANUF.	MANUFACTURE (R)
A	A.F.F.	ABOVE FINISH FLOOR	M	MH.	MANHOLE
A	A.F.G.	ABOVE FINISH GRADE	M	MIN.	MINIMUM
A	A.H.J.	ATHORITY HAVING JURISDICTION	M	MISC.	MISCELLANEOUS
			M	MOD	MODULAR
A	A/C	AIR CONDITIONING	M	MTL	METAL
A	ACC.	ACCESSIBLE, ACCESSIBILITY	M	MTP.	METAL TOILET PARTITION
A	ACP.	ACOUSTICAL PANEL	N	N.D.	NAPKIN DISPOSAL
A	ACT.	ACOUSTICAL TILE	N	N.I.C.	NOT IN CONTRACT
A	ADJ.	ABADJUSTABLE	N	N.T.S.	NOT TO SCALE
A	ALT.	ALTERNATE	N	N.V.	NAPKIN VENDOR
A	ALUM.	ALUMINUM	N	NO.	NUMBER
A	ASPH.	ASPHALT	N	NOM.	NOMINAL
A	∠.	ANGLE			
			O	O.C.	ON CENTER (S)
B	B.O.D.	BOTTOM OF DECK	O	O.C.E.W.	ON CENTER EACH WAY
B	B.U.R.	BUILT-UP ROOF	O	O.D.	OUTSIDE DIAMETER
B	BD.	BOARD	O	O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
B	BLDG.	BUILDING			
B	BLK.	BLOCK	O	O.H.	OPPOSITE HAND
B	BM.	BEAM	O	OPNG.	OPENING
			O	OPP.	OPPOSITE
C	C	CHANNEL			
C	C.J.	CONTROL JOINT	P	P, LAM. / PLAM	PLASTIC LAMINATE
C	C.M.U.	CONCRETE MASONRY UNIT			
C	C.W.	COLD WATER	P	P.C.	PRECAST
C	CAB, CABT	CABINET	P	P.H.	PAPER HOLDER
C	CFMF	COLD-FORMED METAL FRAMING	P	P.L.	PROPERTY LINE
			P	P.P.	POWER POLE
C	CFSF	COLD-FORMED STEEL FRAMING	P	P.W.B.	PREFINISHED WALL BOARD
C	CL	CENTERLINE	P	PL.	PLATE
C	CLG.	CEILING	P	PLUMB.	PLUMBING
C	CLR	CLEAR	P	PLYWD.	PLYWOOD
C	COL.	COLUMN	P	POL.	POLISHED
C	COMP.	COMPRESSIBLE	P	PR	PAIR
C	CONC.	CONCRETE	P	PREFIN.	PRE-FINISHED
C	COND.	CONDITION	P	PT	PRESSURE-TREATED
C	CONT.	CONTINUOUS	P	PT.	POINT
C	CORR.	CORRIDOR	P	PTD.	PAINTED
C	CPT.	CARPET (ED)			
C	CT.	CERAMIC TILE	Q	Q.T.	QUARRY TILE
C	CTSK.	COUNTER SINK			
			R	R / RAD	RADIUS
D	D	DRYER	R	RCP	REFLECTED CEILING PLAN
D	D.F.	DRINKING FOUNTAIN	R	RD	ROOF DRAIN
D	D.P.	DAMPPROOFING	R	RE. , REF.	REFER TO / REFERENCE / SEE
D	D.S.	DOWN SPOUT	R	RECP.	RECEPTACLE
D	DIA.	DIAMETER	R	REINF.	REINFORCE (D), (ING)
D	DIM.	DIMENSION	R	REQD.	REQUIRED
D	DTL.	DETAIL	R	RES.	RESILIENT
D	DWG.	DRAWING	R	REV.	REVISION (S), REVISED
			R	RF	RECREATIONAL RESILIENT FLOORING
E	E.J.	EXPANSION JOINT			
E	E.Q.	EQUAL	R	RPG.	RELOCATABLE PAINTED GYPSUM BOARD
E	EA.	EACH			
E	EDF	ELECTRIC DRINKING FOUNTAIN	R	RSS.	ROD STOCK AND SEALANT
E	EL.	ELEVATION (HEIGHT)			
E	ELEC.	ELECTRICAL	S	S.C.	SEALED CONCRETE
E	ELECT.	ELECTRICAL	S	S.D.	SOAP DISPENSER
E	ELEV	ELEVATION (DRAWING)	S	S.N.D.	SANITARY NAPKIN DISPOSAL
E	EQUIP	EQUIPMENT	S	SCHED	SCHEDULE
E	EXIST	EXISTING	S	SCPL	SOLID CORE PLASTIC LAMINATE
E	EXP	EXPANSION			
E	EXT	EXTERIOR	S	SECT	SECTION
			S	SHT	SHEET
F	F.E.	FIRE EXTINGUISHER	S	SIM	SIMILAR
F	F.E.C.	FIRE EXTINGUISHER CABINET	S	SPC	SPECIAL COATING SYSTEM
F	F.H.C.	FIRE HOSE CABINET	S	SPEC	SPECIFICATION (S)
F	FB.	FACE BRICK	S	SQ.	SQUARE
F	FD.	FLOOR DRAIN	S	SS / SS. STL.	STAINLESS STEEL
F	FIN.	FINISH (ED)			
F	FIXT.	FIXTURE	S	STL	STEEL
F	FLR.	FLOOR (ING)	S	STRUC / STRUCT	STRUCTURAL
F	FLSHG.	FLASHING			
F	FLUOR	FLUORESCENT	S	SUSP	SUSPENDED
F	FRP	FIBER REINFORCED PLASTIC	S	SVDF	SHEET VINYL DANCE FLOORING
			S	SVF	SHEET VINYL FLOORING
G	G.B.	GRAB BAR			
G	G.I.	GALVANIZED IRON	T	T.A.S.	TEXAS ACCESSIBILITY STANDARDS (2012)
G	GA.	GAUGE	T	T.B.	TACK BOARD
G	GALV.	GALVANIZED	T	T.D.R.	TOWEL DISPENSER AND RECEPTACL
G	GCMU	GLAZED CONCRETE MASONRY UNIT	T	T.O.	TOP OF
G	GEN.	GENERAL	T	T.O.B.	TOP OF (WOOD) BLOCKING
G	GEN.	GENERAL	T	T.O.M.	TOP OF MASONRY
G	GL.	GLASS / GLAZING	T	T.O.P.	TOP OF PARAPET
G	GL.	GLASS	T	T.O.S.	TOP OF STEEL
G	GR.	GRADE	T	T.T.D.	TOILET TISSUE DISPENSER
G	GTP.	GLAZED TILE PAVER	T	TEL	TELEPHONE
G	GYP.	GYPSUM DRYWALL	T	TERR	TERRAZZO
			T	THK	THICK (NESS)
H	H.W.	HOT WATER	T	TYP	TYPICAL
H	HM	HOLLOW METAL FRAME			
H	HORIZ.	HORIZONTAL	U	U.N.O.	UNLESS NOTED OTHERWISE
H	HT.	HEIGHT	U	UR.	URINAL
I	I.D.	INSIDE DIAMETER	V	V	VENT
I	I.P.S.	IRON PIPE SIZE	V	V.C.T.	VINYL COMPOSITION TILE
I	INSUL	INSULATE (ED), (ION)	V	V.I.F.	VERIFY IN FIELD
I	INT.	INTERIOR	V	VENT.	VENTILATING, VENTILATED
			V	VER.	VERIFY
J	JT.	JOINT	V	VERT.	VERTICAL
			V	VGB	(PREFINISHED) VINYL CLAD GYPSUM BOARD
L	L.P.	LIGHT POLE			
L	LAM.	LAMINATE (D)	V	VWC	VINYL WALL COVERING
L	LAV.	LAVATORY			
L	LT.	LIGHT	W	W	WASHING MACHINE
L	LT. WT.	LIGHTWEIGHT	W	W.P.	WATER PROOFING
			W	W.S.	WEATHERSTRIP
M	M.O.	MASONRY OPENING	W	W.W.	WATER WELL
M	MAS.	MASONRY	W	W.W.F.	WELDED WIRE FABRIC
M	MATL	MATERIAL (S)	W	W.W.M.	WOVEN WIRE MESH
M	MAX.	MAXIMUM	W	W/	WITH
M	MB.	MARKER BOARD	W	WC	WATER CLOSET
M	MECH.	MECHANICAL	W	WD	WOOD
M	MEM	MEMBRANE	W	WDW	WINDOW
M	MEM. WP.	MEMBRANE WATERPROOFING	W	WT	WEIGHT

STATEMENT OF GENERAL CONFORMANCE

Statement of General Conformance

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. O4-121818 **File No.** 30-43**)**

[X] The drawings or sheets listed on the cover or index sheet (see asterisk *)
[ ] This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and

2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. *(Title 24, Part 1, Section 4-317 (b))*

I find that: [X] The drawings or sheets listed on the cover or index sheet [ ] This drawing or page

[X] is/are in general conformance with the project design intent, and [X] has/have been coordinated with the project plans and specifications.	[ ] is/are in general conformance with the project design intent, and [ ] have been coordinated with the project plans and specifications.
Signature:	Signature:
Date: 6-20-23	Date:
Architect or Engineer designated to be in general responsible charge	Architect or Engineer deligated responsibility for this portion of the work
Print Name: YONG YOO	Print Name:
License Number: C-31162	License Number:
Expiration Date: 10/31/2023	Expiration Date:

CODES & STANDARDS

PARTIAL LIST OF APPLICABLE CODES

2022 Building Standards Administrative Code	**(Part 1, Title 24, CCR)**
2019 California Building Code (CBC) (2018 International Building Code with 2019 California Ammendments)	**(Part 2, Title 24, CCR)**
2019 California Electrical Code (CEC) (2017 National Electrical Code and 2019 California Amendments)	**(Part 3, Title 24, CCR)**
2019 California Mechanical Code (CMC) (2018 IAMPO Uniform Mechanical Code and 2019 California Amendments)	**(Part 4, Title 24, CCR)**
2019 California Plumbing Code (CPC) (2018 IAMPO Uniform Plumbing Code and 2019 California Amendments)	**(Part 5, Title 24, CCR)**
2019 California Energy Code (CEC)	**(Part 6, Title 24, CCR)**
2019 California Fire Code (CFC) (2018 International Fire Code and 2019 California Amendments)	**(Part 9, Title 24, CCR)**
2019 California Existing Building Code (CEBC) (2018 International Existing Building Code and 2019 California Amendments)	**(Part 10, Title 24, CCR)**
2019 California Green Building Standards Code	**(Part 11, Title 24, CCR)**
2019 California Referenced Standards Code	**(Part 12, Title 24, CCR)**
Regulations of the State Fire Marshall	**(Title 19, CCR)**
2016 ASME A17.1/CSA B44-16 Safety Code for Elevators and Escalators	**(per 2019 CBC Part 2 Ch 35)**

PARTIAL LIST OF FIRE LIFE SAFETY APPLICABLE STANDARDS

NFPA 13 Automatic Fire Sprinkler Systems	**(2016 Edition, CA Amended)**
NFPA 14 Standpipe and Hose Systems	**(2016 Edition, CA Amended)**
NFPA 17 Dry Chemical Extinquishing Systems	**(2017 Edition)**
NFPA 17A Wet Chemical Extinguishing Systems	**(2017 Edition)**
NFPA 20 Stationary Pumps for Fire Protection	**(2016 Edition)**
NFPA 22 Standard for the Installation of Private Fire Service Mains and Their Appurtenances	**(2013 Edition)**
NFPA 24 Private Fire Mains & their Appurtenances	**(2016 Edition, CA Amended)**
NFPA 72 National Fire Alarm & Signaling Code	**(2016 Edition, CA Amended)**
NFPA 80 Fire Doors and Other Opening Protectives	**(2016 Edition)**
NFPA 2001 Clean Agent Fire Extinguishing Systems	**(2015 Edition)**
UL 300 Standard Fire Extinguishing Systems For Protection of Commercial Cooking Equipment	**(2005, R2010)**
UL 464 Audible Signal Appliances	**(2018 Edition)**
UL 521 Standard for Heat Detectors for Fire Protective Signaling Systems	**(1999 Edition)**
UL 1971 Standard for Signaling Devices for the Hearing Impared	**(2002, R2012)**
ICC 300 Standard for Bleachers, Folding and Telescopic Seating, and Grandstands	**(2017 Edition)**

For a complete list of all applicable NFPA standards refer to 2019 CBC (SFM) Chapter 35 and California Fire Code (CFC) Chapter 80.
See California Building Code, Chapter 35, for State of California ammendments to the NFPA Standards

DRAWING CONVENTIONS

- PROPERTY LINE
- AREA DRAIN
- NORTH / TRUE NORTH — NORTH SYMBOL
- COLUMN LINE
- Name / Elevation — FLOOR LINE
- MATCH LINE
- 1 / A101 — SECTION CALLOUT SYMBOL
- A1.01 / 12 — EXTERIOR ELEVATION SYMBOL
- 2 / 3 / A1.01 / 1 / 4 — INTERIOR ELEVATION SYMBOL
- 101 — DOOR DESIGNATION
- A — WINDOW DESIGNATION
- 1i — PARTITION TYPE
- EXISTING PARTITION
- NEW PARTITION
- 1 — REVISION NUMBER
- 1 / A-100 — DETAIL ENLARGED
- 1 / A-100 — PLAN OR DETAIL ENLARGED
- 1 / A101 — DETAIL SECTIONS AND VERTICAL SECTIONS
- 6'-0" / 4'-0" / 10'-0" — DIMENSIONS
  NOTE: all dimensions to face of wall unless otherwise noted
- SPOT ELEVATION
- MATCH LINE / SEE XX/X-XXX — SHEET NUMBER ON WHICH CONTINUATION IS FOUND
- FENCING (WITH POSTS)
- BREAK LINE
- 12.34 — KEY NOTE
- Room name / 101 / 150 SF — ROOM NAME AND NUMBER
- FHC / FHC — FIRE HOSE CABINET (RECESSED AND SURFACE MOUNTED)
- FEC / FEC — FIRE EXTINGUISHER CABINET (RECESSED AND SURFACE MOUNTED)
- TA1 — TOILET ACCESSORY SYMBOL
- F.D. — FLOOR DRAIN

GENERAL NOTES

1. CONSTRUCTION DOCUMENTS DESCRIBE THE PRODUCTS, SYSTEMS, QUANTITIES, CONFIGURATION AND PERFORMANCE SPECIFICATIONS THAT DELIVER THE OVERALL DESIGN INTENT OF THE PROJECT.
2. THE CONSTRUCTION DOCUMENT DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY BOTH.
3. PERFORMANCE BY THE CONSTRUCTION TEAM SHALL BE CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS AS NECESSARY TO DELIVER THE INDICATED RESULTS OF THE DESIGN INTENT.
4. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL GOVERNING CODES, ORDINANCES, REGULATIONS AND LAWS.
5. THE DESIGN ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
6. WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
7. ENACT ALL MEASURES TO PROTECT AND SAFEGUARD ALL EXISTING ELEMENTS TO REMAIN FROM BEING DAMAGED. REPLACE OR REPAIR EXISTING ELEMENTS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO EQUAL OR BETTER CONDITION.
8. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE EXISTING OR NEW STRUCTURAL ELEMENTS SHALL NOT BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, AND STRUCTURAL ENGINEER OF RECORD.
9. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
10. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
11. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
12. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
13. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.
14. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE.
15. ALL SPACES WITH FLOOR DRAINS TO HAVE FINISHED FLOORS SLOPED TO DRAIN NOT TO EXCEED ONE IN FIFTY.
16. ALL FLOORS FINISH CHANGES SHALL OCCUR AT THE CENTERLINE OF DOORS UNLESS NOTED OTHERWISE. ALL FLOOR FINISH CHANGES SHALL HAVE THRESHOLDS OR REDUCER STRIPS.
17. COORDINATE HOUSEKEEPING PAD DIMENSIONS AND LOCATIONS WITH EQUIPMENT TO BE INSTALLED.
18. ALL DOORS IN INTERIOR GYP. BD STUD WALLS SHALL BE SET 4" OFF THE PERP. ADJ. WALL ON THE HINGE SIDE OF THE DOOR UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL CONTACT THE ARCHITECT IF ANY CONFLICTS OCCUR.
19. ALUM. THRESHOLDS TO BE SET IN FULL BED OF SEALANT AT ALL EXT. DOORS.
20. UNLESS OTHERWISE NOTED, ALL ELECTRICAL AND MECHANICAL OPERABLE DEVICES SHALL BE MOUNTED WITH THE HIGHEST OPERABLE CONTROL AT MAX. OF 42" AFF.
21. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK, PER CAC, 2013, 4-317(c)

DSA NOTES

1. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY A CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART I, TITLE 24, CCR
2. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR; CLASS 3
3. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
4. ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
5. THE SCOPE OF WORK - CLEARLY INDICATE THE SCOPE OF WORK ON THE COVER SHEET OR GENERAL NOTE SHEET OF THE DRAWINGS.
6. FABRICATION AND INSTALLATION OF DEFERRED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTURAL ENGINEER AND APPROVED BY DSA. LIST DEFERRED SUBMITTAL ITEMS FOR THIS PROJECT.
7. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERNATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR, SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).
8. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

***__NOTE:__ DSA APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED AS THE CERTIFICATION OF COMPLIANCE FOR THE FOLLOWING BUILDING(S) AS REQUIRED BY THE FIELD ACT, EDUCATION CODE SECTION 17280-17316 AND SECTIONS 81130-81147:

RELOCATABLE CLASSROOM BUILDINGS: **F1, F2, F3, & F4**
KINDERGARTEN BUILDING: **PSI**

DRAWING INDEX

TOTAL SHEET: 82

DEFERRED APPROVAL ITEMS

NOTE:
NONE

SCOPE OF WORK

BUILDING IMPROVEMENTS INCLUDE, BUT ARE NOT LIMITED TO;

FIRE ALARM UPGRADE ONLY
- EXISTING RELOCATABLES F1 & F2

FIRE ALARM AND ROOFING UPGRADE ONLY
- EXISTING RELOCATABLE CLASSROOMS C/# E1, E2, E3, E4, D1, D2, D3, D4/LIBRARY, KINDER/PSI
- EXISTING MULTI PURPOSE

ADMIN BUILDING (EXISTING ADMINISTRATION BUILDING)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- TOILET MODERNIZATION
- FIRE ALARM UPGRADE

BUILDING K (EXISTING KINDERGARTEN CLASSROOM)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- TOILET MODERNIZATION
- FIRE ALARM UPGRADE

BUILDING A, B, C (EXISTING CLASSROOMS)
- (N) HVAC, CEILINGS, WINDOWS, LIGHTS, FINISHES
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE
- FIRE ALARM UPGRADE

EXISTING COVERED WALKWAYS
- (N) BUILT-UP ROOFING MEMBRANE & ASSOCIATED ACCESSORIES ON (E) ROOF STRUCTURE

NEW INTERIOR AND EXTERIOR PAINT IN ALL BUILDINGS AND STRUCTURES INCLUDING LUNCH SHELTER AND ALL RELOCATABLES.

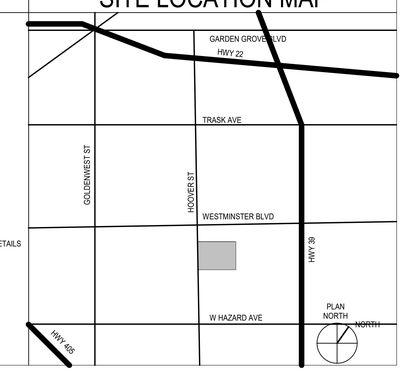
SHEET NUMBERING

A2.01A
- **SHEET NUMBER**
- **BUILDING AREA**
- **SEQUENCE (.01 - .99.....etc.)**
- **SHEET DISCIPLINE TYPE**

DISCIPLINE

G	GENERAL	0 - GENERAL
C	CIVIL	0 - SITE PLANS & DETAILS
L	LANDSCAPE	1 - FLOOR PLANS
CA	SPORTS	2 - REFLECTED CEILING PLANS & DETAILS
S	STRUCTURAL	3 - ROOF PLANS & DETAILS
D	DEMOLITION	4 - BUILDING SECTIONS
A	ARCHITECTURAL	5 - ADA & ENLARGED PLANS
M	MECHANICAL	6 - ENLARGED PLAN DETAILS
E	ELECTRICAL	7 - ENLARGED MILLWORK & DETAILS
P	PLUMBING	8 - PARTITION TYPES & WALL SECTIONS
T	TECHNOLOGY	9 - WINDOWS, DOORS, FRAME ELEVATIONS & DETAILS
FS	FOOD SERVICE	10 - FINISH SCHEDULES
AV	ACOUSTICAL	11 - ELEVATIONS (EXTERIOR & INTERIOR)
TH	THEATRICAL	12 - CASEWORK ELEVATIONS

SITE LOCATION MAP



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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ANAHEIM
2400 E. Katella Ave. #950
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P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horser St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1 / D4 D3 D2 D1 / F1 F2 F3 F4 — C, B, A, MP, AD, PSI, K

KEY PLAN — NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT — Yong Yoo — No. C-31162 — REN. 10-31-2023 — STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

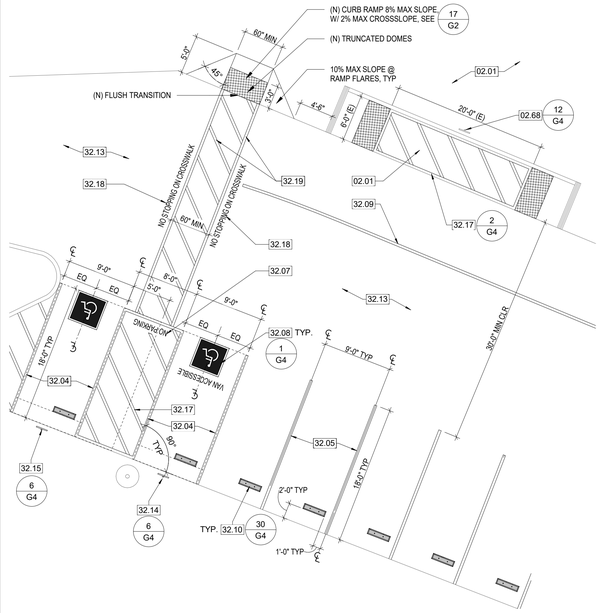
SHEET INDEX, DRAWING CONVENTIONS, AND LOCATION MAP

G1

FILE PATH: Z:\Projects\...
6/20/2023 8:17:27 AM

G2 - ACCESSIBILITY SITE PLAN

0" 1"



24 ENLARGED ADA PARKING PLAN - LOT 1

1/8" = 1'-0"

17 ACCESSIBLE CURB RAMP

1/4" = 1'-0"

12 ENLARGED ADA PARKING PLAN

1/8" = 1'-0"

11 CURB "NOT A DROP OFF" MARKING

1/2" = 1'-0"

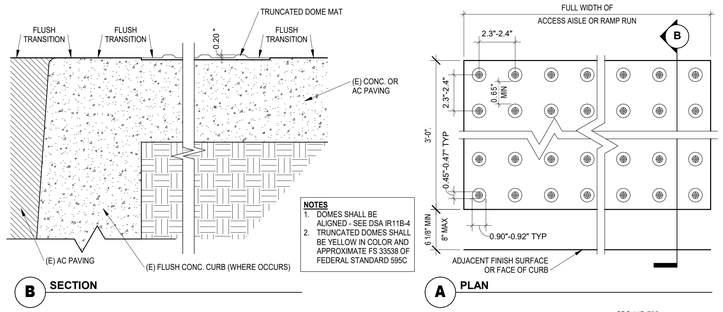
6 ENLARGED (N) P.O.T. TO PUBLIC RIGHT OF WAY

1" = 30'-0"

(5) 5/16 DIA HOLES AT MANUFACTURERS HANGER MOUNTING BRACKET FOR FASTENING UNIT TO WALL . TYP.
(5) #10 SMS TO BACKING BAR. TYP.
(3) #10 SMS TO BACKING BAR. TYP.
(3) 5/16 DIA HOLES AT MANUFACTURERS HANGER MOUNTING BRACKET FOR FASTENING UNIT TO WALL . TYP.
NOTE: INSTALLATION INSTRUCTIONS PER ELKAY MODEL VRCTLR8WSK
(3) #10 SMS TO BACKING BAR. TYP.
(3) 7/16 DIA BOLT HOLES FOR FASTENING UNIT TO WALL. TYP.
(5) #10 SMS TO BACKING BAR
(5) 5/16 DIA HOLES AT MANUFACTURERS HANGER MO`UNTING BRACKET FOR FASTENING UNIT TO WALL . TYP.
(3) 7/16 DIA BOLT HOLES FOR FASTENING UNIT TO WALL. TYP.
(3) #10 SMS TO BACKING BAR. TYP.

29 D.F. ANCHORAGE DETAIL

1/4" = 1'-0"



28 TRUNCATED DOME MAT

3" = 1'-0"

5 SITE PLAN

1" = 30'-0"

ACCESSIBLITY KEYED NOTES

02.00 (E) TURF TO REMAIN
02.01 (E) CONCRETE TO REMAIN
02.03 (E) CHAIN LINK FENCE TO REMAIN
02.06 (E) ASPHALT TO REMAIN
02.10 (E) TOW AWAY SIGN
02.12 (E) ACCESSIBLE PARKING PER A#04-118379
02.14 (E) PASSENGER DROP OFF ZONE
02.15 (E) ACCESSIBLE GATE TO REMAIN, SEE A# 04-100713. GATES SHALL HAVE AN OPENING FORCE OF 5 POUNDS MAX PER CBC 11B-404.2.9, HARDWARE SHALL UNLATCH WITH 5 POUNDS MAX FORCE PER CBC 11B-309.4
02.49 (E) METAL FENCE AND POSTS TO REMAIN
02.59 (E) SLIDING CHAINLINK GATE
02.63 (E) NON-ACCESSIBLE DRINKING FOUNTAIN TO REMAIN
02.64 (E) SINGLE-LEAF CHAIN LINK PEDESTRIAN GATE TO REMAIN
02.65 (E) DOUBLE-LEAF CHAIN LINK SERVICE GATE TO REMAIN
02.66 (E) SIGN MOUNTED ON CHAIN LINK GATE READING "TOW AWAY NO PARKING FIRE LANE" TO REMAIN
02.67 (E) ACCESSIBLE SINGLE-LEAF CHAIN LINK PEDESTRIAN GATE W/ PANIC HARDWARE & KICK PLATE TO REMAIN
02.68 (E) PASSENGER LOADING ZONE SIGN TO REMAIN
02.69 (E) ACCESSIBLE CURB RAMP TO REMAIN
02.70 (E) VEHICULAR ACCESS GATE TO REMAIN
02.71 (E) ACCESSIBLE DRINKING FOUNTAIN TO REMAIN
02.74 (E) INTERNATIONAL SYMBOL OF ACCESSIBILITY TO REMAIN
02.76 (E) CONCRETE WHEELSTOP TO REMAIN
02.77 (E) 'NO PARKING' PAINTED LETTERING TO REMAIN - 12" HIGH MIN, WHITE PAINT. NO DIAGONAL STRIPING THROUGH TEXT
02.78 (E) 4" WIDE PAINTED ACCESS AISLE STRIPING TO REMAIN - BLUE BORDER W/ WHITE HATCH LINES @ 36"OC
02.79 (E) TRUNCATED DOME DETECTABLE WARNINGS TO REMAIN, SEE A#04-118379
02.80 (E) 4" WIDE BLUE PAINTED ACCESSIBLE PARKING STRIPING TO REMAIN
02.81 (E) 4" WIDE WHITE PAINTED STANDARD PARKING STRIPING TO REMAIN
02.82 (E) VAN ACCESSIBLE SIGN, PER A#04-118379
32.04 4" WIDE BLUE STRIPING
32.05 4" WIDE WHITE STRIPING
32.07 'NO PARKING' - 12" HIGH MIN. LETTERS, WHITE PAINT. NO DIAGONAL STRIPING THROUGH TEXT, TYP.
32.08 INTERNATIONAL SYMBOL OF ACCESSIBILITY PER DETAIL 1/G4
32.09 4" YELLOW STRIPING
32.10 CONCRETE WHEELSTOP PER DETAIL 30/G4
32.11 DOUBLE-LEAF ORNAMENTAL METAL GATES W/ PANIC HARDWARE PER DETAIL 15/G4
32.13 (N) ASPHALT SLURRY COAT
32.14 (N) VAN ACCESSIBLE PARKING SIGN PER DETAIL 6/G4
32.15 (N) ACCESSIBLE PARKING SIGN PER DETAIL 6/G4
32.17 (N) ACCESSIBLE ACCESS AISLE PER DETAIL 2/G4
32.18 (N) "NO STOPPING ON CROSSWALK", 12" HIGH MIN. LETTERS, YELLOW PAINT, CENTERED ON ROAD PARALLEL WITH THE ACCESSIBLE CROSSWALK PATH OF TRAVEL. LETTERS OFFSET 4" AWAY FROM CROSSWALK STRIPING.
32.19 (N) 4" WIDE PAINTED WHITE BORDER & HATCH LINES AT 36" OC

ACCESSIBILITY LEGEND

- (E) PATH OF TRAVEL PER A#04-107095
- (E) PATH OF TRAVEL PER A#04-118379
- PATH OF TRAVEL
- PROPERTY LINE
- (E) BUILDING FIRE ALARM SCOPE ONLY
- (E) BUILDING FIRE ALARM & ROOFING SCOPE ONLY
- (E) BUILDING NIC, NO SCOPE OF WORK
- BUILDING TO BE REMODELED
- ACCESSIBLE RESTROOM TO BE PROVIDED AS PART OF THE CONTRACT
  RR = GENDER NEUTRAL RESTROOM
  B = BOYS
  G = GIRLS
  S = STAFF
- AREA OF (N) ASPHALT SLURRY COAT
- SLOPE IN DIRECTION OF TRAVEL
- 0.0% (E) SLOPES PER SMART LEVEL, VERIFIED IN FIELD. NOTE: SLOPE MEASUREMENTS SPACED 10'-0" O.C. MAX, TYP
- 0.0% CROSS SLOPE

PATH OF TRAVEL

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE POT INDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRCUTURAL REPAIRS.** AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND RESONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

GENERAL NOTES

1. REFER TO CIVIL DRAWINGS FOR NEW PAVING AREAS AND DETAILS.

DSA CERTIFICATION LIST

CERTIFIED DSA PROJECTS:

(NOTE: ALL DSA A NUMBERS ARE BASED ON DISTRICT'S AS BUILT DRAWINGS AND DOCUMENTS - NOT ALL A#'S RECORDS WERE ACCESSIBLE VIA DSA WEBSITE)

1. THE FOLLOWING PROJECT... **A# 04-53920** CLOSED WITH DSA CERTIFICATION ON 07/06/1995.
2. THE FOLLOWING PROJECT... **A# 04-58170** CLOSED WITH DSA CERTIFICATION ON 02/13/1998.
3. THE FOLLOWING PROJECT... **A# 04-65963** CLOSED WITH DSA CERTIFICATION ON 10/07/2009.
4. THE FOLLOWING PROJECT... **A# 04-100713** CLOSED WITH DSA CERTIFICATION ON 06/12/2007.
5. THE FOLLOWING PROJECT... **A# 04-102578** CANCELED ON 04/03/2002.
6. THE FOLLOWING PROJECT... **A# 04-103227** CLOSED WITH DSA CERTIFICATION ON 04/26/2018.
7. THE FOLLOWING PROJECT... **A# 04-107095** CLOSED WITH DSA CERTIFICATION ON 07/03/2007.
8. THE FOLLOWING PROJECT... **A# 04-108377** CANCELED ON 01/09/2012.
9. THE FOLLOWING PROJECT... **A# 04-109105** VOID / CANCEL ON 07/31/2008.
10. THE FOLLOWING PROJECT... **A# 04-118192** THIS PROJECT IS CANCELED.
11. THE FOLLOWING PROJECT... **A# 04-118379** CLOSED WITH DSA CERTIFICATION ON 08/06/2020.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

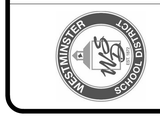
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT



Consultant

Architect

LICENSED ARCHITECT
Tong You
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ACCESSIBILITY SITE PLAN

G2

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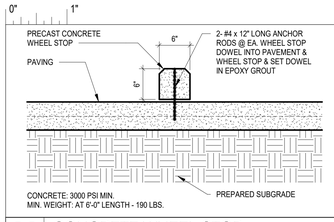
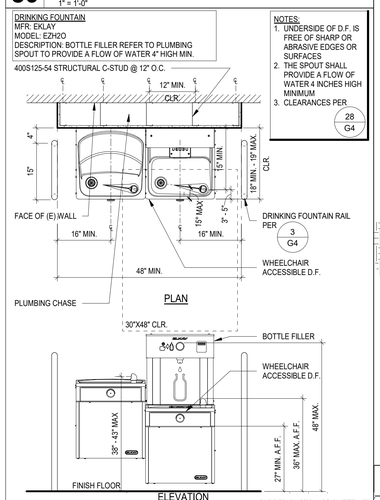
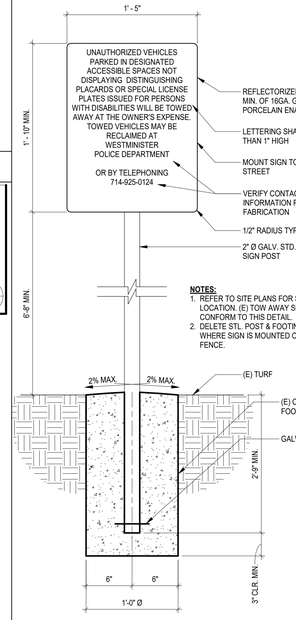
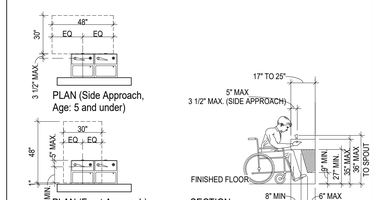


30 CONCRETE WHEEL STOP
1" = 1'-0"





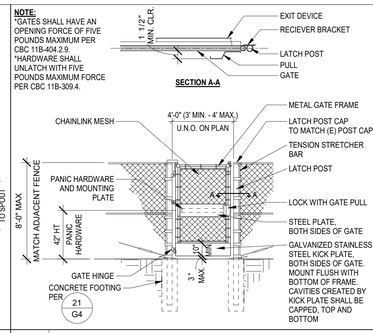
23 EXISTING TOW AWAY SIGN
1 1/2" = 1'-0"



28 DRINKING FOUNTAIN GUIDELINE
1/4" = 1'-0"

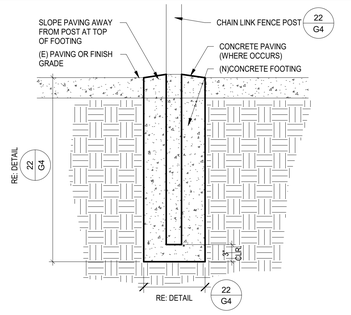
Item	Height	Nominal Pipe Size (Inches)	Outside Diameter (Inches)	Weight (pounds per foot)	Conc.Footings f'c=3000 psi min. Diameter (Inches)	Depth (Inches)
Top Rail, Brace Rails and Transom Rails	Up to 10'-0"	1-1/4	1.660	2.27	N/A	N/A
	10'-1" to 16'-0"	1-1/2	1.900	2.72	N/A	N/A
Line Posts	Up to 6'-0"	2	2.375	2.65	12	30
	6'-1" to 8'-0"	2	2.375	2.65	12	36
	8'-1" to 10'-0"	2-1/2	2.875	5.79	12	42
	10'-1" to 16'-0"	3	3.500	7.58	14	60
Terminal, Corner, Angle & Pull Posts	Up to 8'-0"	2-1/2	2.875	5.79	12	36
	8'-1" to 10'-0"	2-1/2	2.875	5.79	14	42
	10'-1" to 16'-0"	3	3.500	7.58	14	60
Pedestrian Gate Posts	Up to 8'-0"	2-1/2	2.875	5.79	14	36
Gate Frames	Up to 8'-0"	1-1/2	1.900	2.72	N/A	N/A
Driveway Double-Leaf Swing Gate Posts: Opening						
Up to 17' - 3-1/2"	Up to 8'-0"	3-1/2	4.000	9.11	16	42
17'-4" to 20'- 3 1/2"	Up to 8'-0"	3-1/2	4.000	9.11	16	42

27 CHAINLINK GATE W/ PANIC HARDWARE
1/4" = 1'-0"

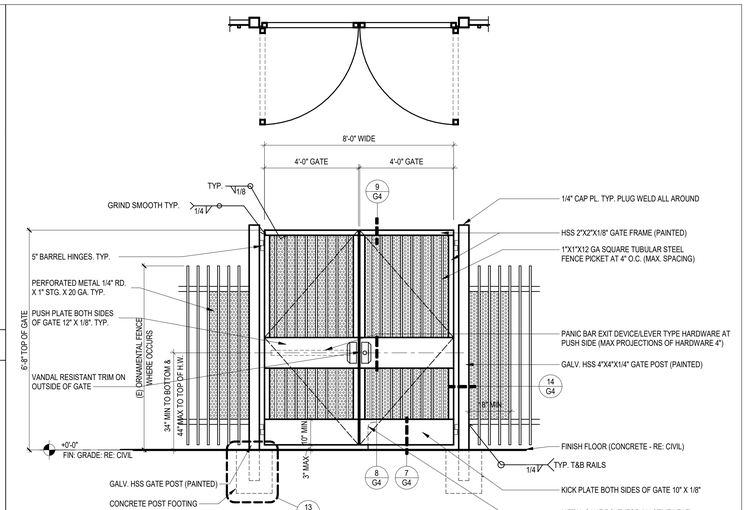


22 (E) CHAINLINK & FENCE SCHEDULE
3/" = 1'-0"

21 CHAIN LINK FENCE POST FOOTING
1" = 1'-0"



15 ORNAMENTAL FENCE - DOUBLE GATE CUSTOM
1/2" = 1'-0"



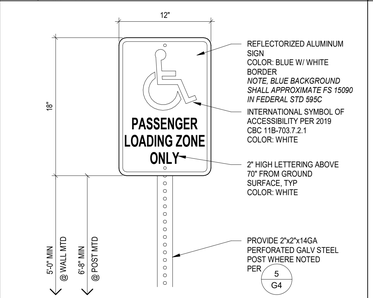
HARDWARE GROUP (EMERGENCY EGRESS PANIC HARDWARE)
- 3 HINGE (HEAVY WEIGHT): T4A3386 4-1/2" X 4-1/2" NRP
- EXIT HARDWARE: VON DUPRIN AXPA-98EO-US26D - 3 OR 4 FT LENGTH DEPENDING ON GATE SIZE (PUSH BAR EXIT DEVICE) VON DUPRIN 996L-NL-R/V-US26D (OUTSIDE TRIM FOR PUSH BAR NIGHT LATCH FUNCTION)
- EXIT PULL DEVICE: IVES PULL VR9TON-DT
- FORMAT IC CORE (KEYED PER DISTRICT REQUIREMENT)
- CLOSURE: LOCINOX PART # MAMMOTH 180-ZILV (HYDRAULIC GATE CLOSER)
- KICK PLATE: 10 GA. GALV.
- HARDWARE BACKING-PLATE: 24" TALL X WIDTH OF GATE 16 GA GALV.
- CLOSURE BACKING PLATE: SIZED FIT ITEM C. CLOSURE.
- FLAT MOUNTED GORILLA WELD ON HINGES.

***DOOR CLOSERS AND GATE CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM.
*** THE FORCE REQUIRED TO ACTIVATE GATE OPERABLE PARTS (SWING & UNLATCHING) SHALL BE 5 LBS. MAXIMUM.

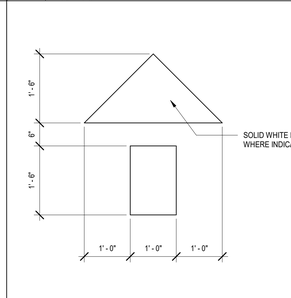
PROVIDE NEW SECURITY GATES WITH POWDER COATED PAINTS.

NOTE:
*GATES SHALL HAVE AN OPENING FORCE OF FIVE POUNDS MAXIMUM PER CBC 11B-404.2.9.
*HARDWARE SHALL UNLATCH WITH FIVE POUNDS MAXIMUM FORCE PER CBC 11B-309.4.

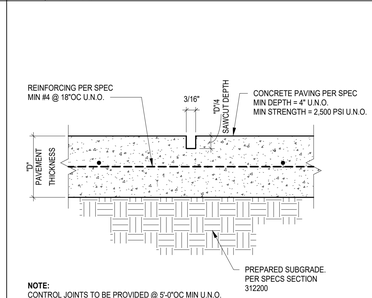
18 ACCESSIBLE DRINKING FOUNTAIN
3/4" = 1'-0"



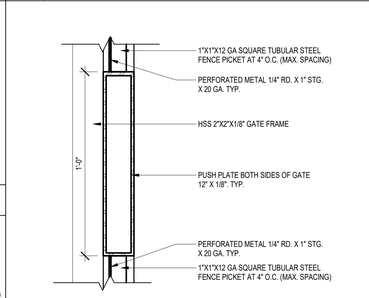
17 GUARD POST/ BOLLARD
1/2" = 1'-0"



16 (E) CHAINLINK VEHICLE ACCESS GATE
3/8" = 1'-0"

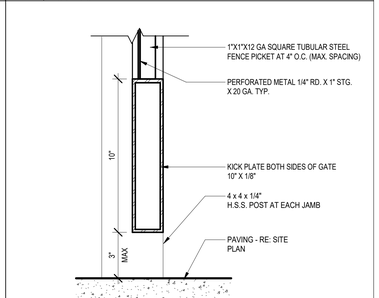


14 HM GATE JAMB DETAIL
3" = 1'-0"

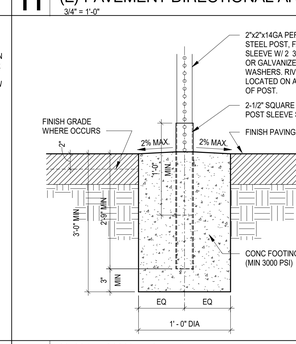


9 HM GATE HEAD DETAIL
3" = 1'-0"

8 HM GATE PUSH PLATE DETAIL
3" = 1'-0"

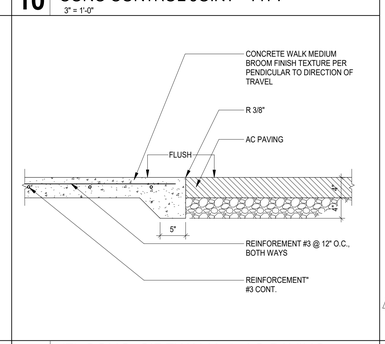


7 HM GATE SILL DETAIL
3" = 1'-0"

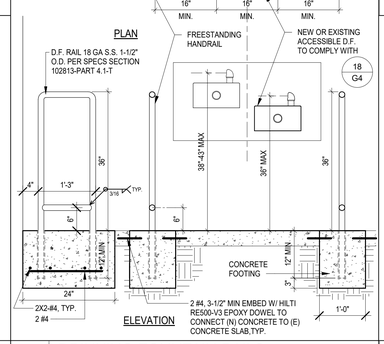


12 PASSENGER LOADING ZONE SIGN
1 1/2" = 1'-0"

11 (E) PAVEMENT DIRECTIONAL ARROW
3/4" = 1'-0"



10 CONC CONTROL JOINT - TYP.
3" = 1'-0"

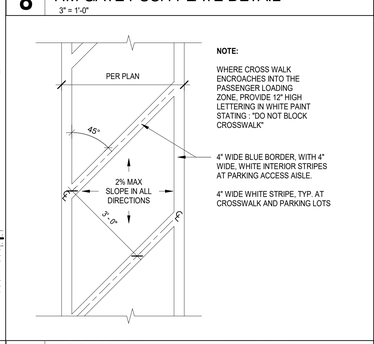


6 ACCESSIBLE PARKING SIGN
1 1/2" = 1'-0"

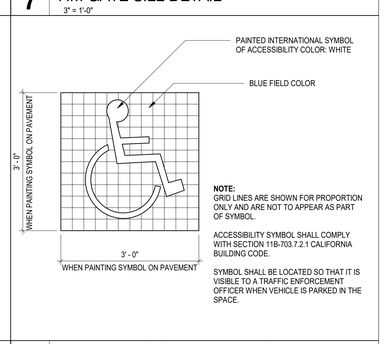
5 SIGN POST DETAIL
1 1/2" = 1'-0"

4 (E) CONC. SIDEWALK @ AC PAVING
1" = 1'-0"

3 DRINKING FOUNTAIN RAILS
3/4" = 1'-0"



2 ACCESSIBLE PEDESTRIAN PATH
1/2" = 1'-0"



1 ACCESSIBLE PARKING SYMBOL
3/4" = 1'-0"

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6/20/2023 8:17:32 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT
PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
AD PSI
MP K
KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

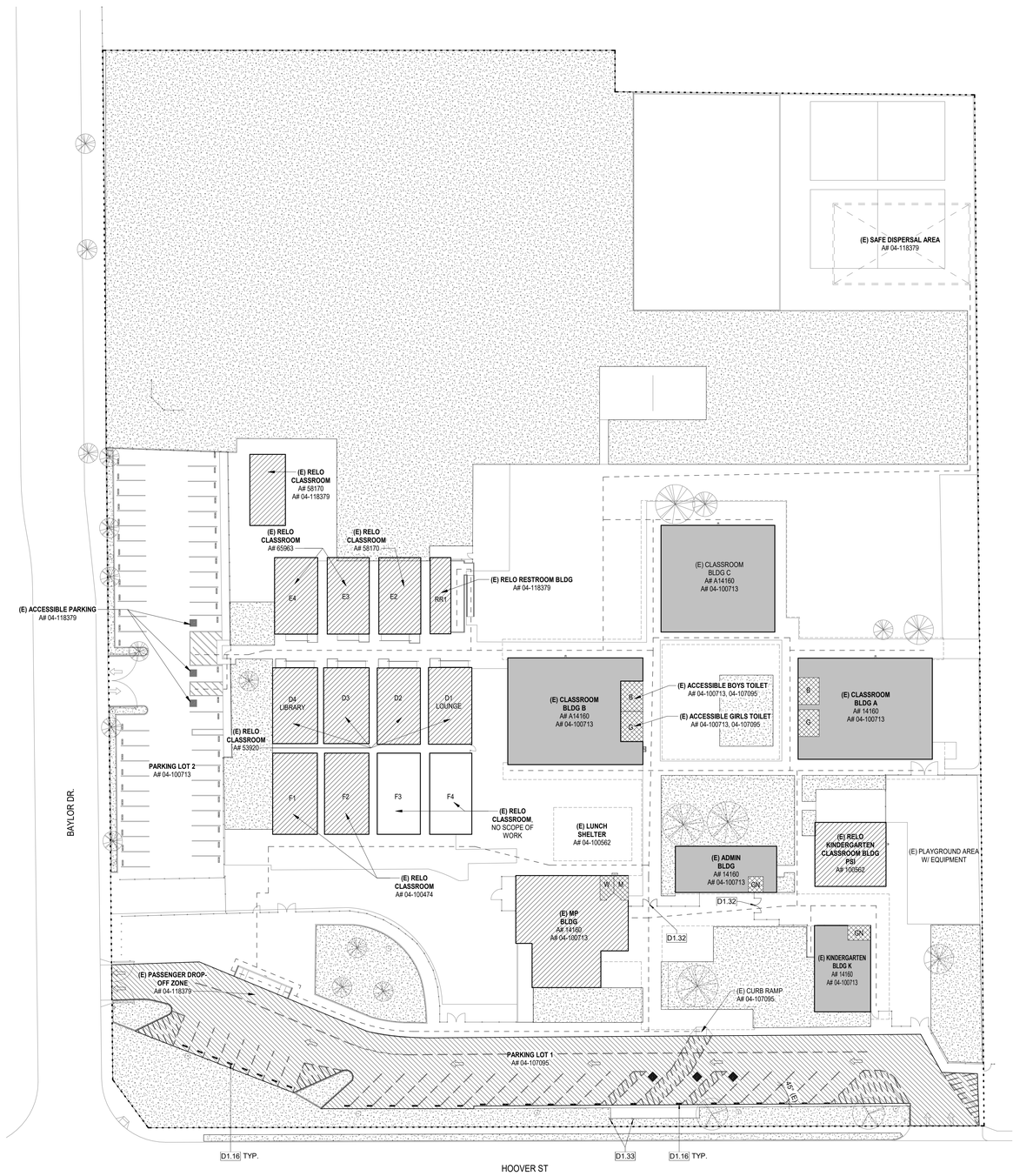
DSA SUBMITTAL

SITE DETAILS

G4

D0.1 - SITE DEMOLITION PLAN

0" 1"



NORTH

5 DEMOLITION SITE PLAN

1" = 30'-0"

SITE DEMOLITION KEYED NOTES

#	DESCRIPTION
D1.16	REMOVE (E) CONCRETE WHEEL STOP
D1.32	REMOVE (E) DOUBLE-LEAF ORNAMENTAL METAL GATES & PREPARE FOR (N) DOUBLE-LEAF ORNAMENTAL METAL GATES W/ PANIC HARDWARE PER ACCESSIBILITY SITE PLAN
D1.33	REMOVE (E) ACCESSIBLE PARKING SIGNAGE

SITE DEMOLITION LEGEND

- (E) PATH OF TRAVEL PER A# 53919, 65233, 04-100879, 04-102560, 04-107165, 04-110234, 04-114892,
- PROPERTY LINE
- (E) BUILDING FIRE ALARM SCOPE ONLY
- (E) BUILDING TO BE REMODELED
- (E) BUILDING NIC, NO SCOPE OF WORK
- ACCESSIBLE RESTROOM TO BE PROVIDED AS PART OF THE CONTRACT
  RR = GENDER NEUTRAL RESTROOM
  B = BOYS
  G = GIRLS
  S = STAFF
- AREAS OF MODIFICATION
- AREA OF (E) ASPHALT TO BE PREPARED FOR (N) SLURRY COAT

BUILDING MPE NOTES

1. EXISTING GAS AND WATER PIPES: REMOVE AND REPLACE ANY RUSTED OR DETERIORATED PIPES, VALVES AND YARD BOXES TO REMAIN.
2. RELOCATE / RE-ROUTE ANY ELECTRICAL CONDUITS AND LOW VOLTAGE RACEWAYS AND WIRING ABOVE & BELOW CEILING TO ACCOMMODATE NEW WORK.
3. RELOCATE / RE-ROUTE ANY VENT PIPES INTERFERING WITH NEW WORK.
4. REMOVE AND DISPOSE OLD CLOCK AND SPEAKERS NO LONGER IN USE.
5. REMOVE AND DISPOSE ELECTRICAL CABLING AND DEVICES NOT IN USE.
6. REMOVE AND DISPOSE FAU HEATING UNITS IN EACH ROOM AND ALL ASSOCIATED DUCTWORK, REGISTERS, CONDUITS AND WIRING.
7. REMOVE PROJECTORS IN WORKROOM AND LIBRARY ROOMS RETURN TO DISTRICT

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APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
ANAHEIM PBK.com
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

KEY PLAN

NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Tong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

SITE DEMOLITION PLAN

D0.1

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D1.1 - DEMO FLOOR PLAN BLDG ADMIN, A,B,C&K

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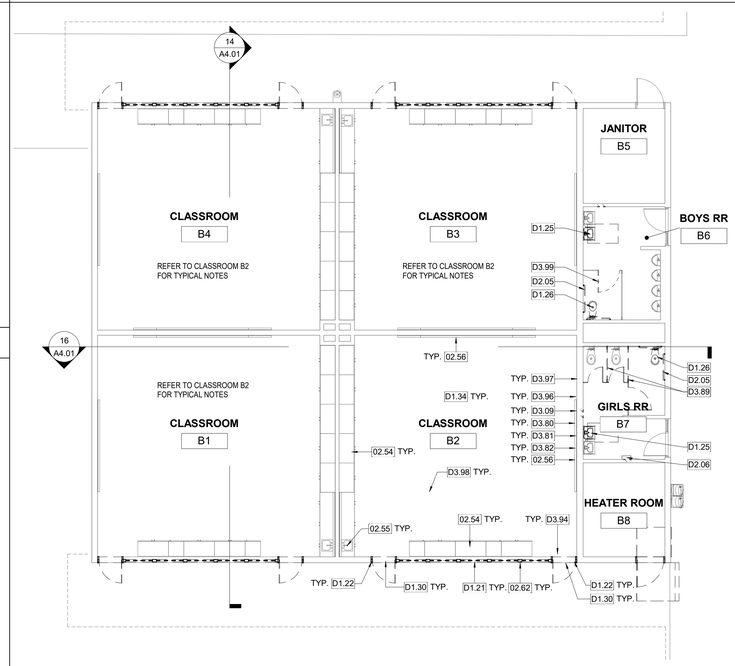
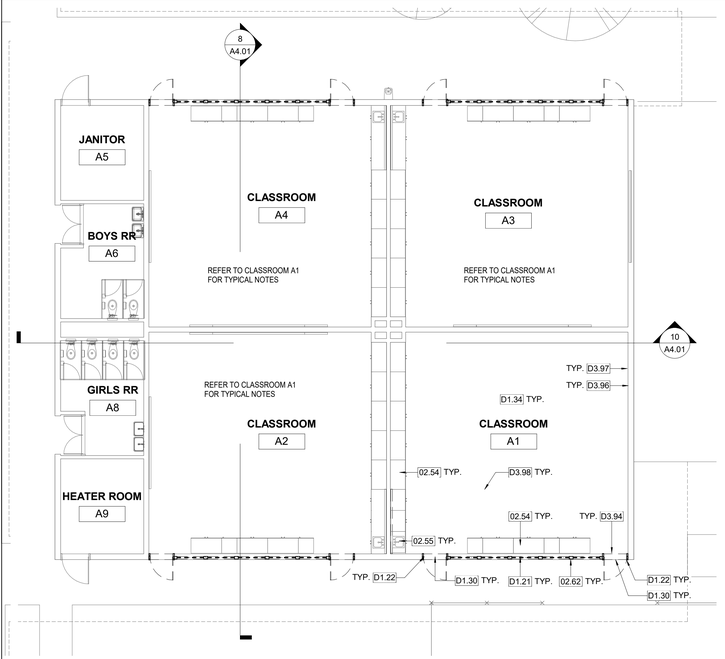


17 DEMO FLOOR PLAN BLDG B
1/8" = 1'-0"



15 DEMO FLOOR PLAN BLDG A
1/8" = 1'-0"

KEYNOTE LEGEND

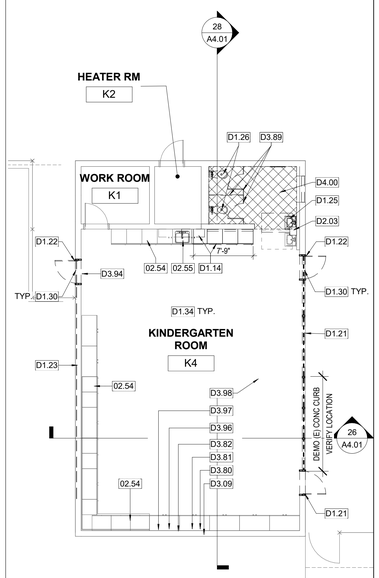
#	DESCRIPTION
02.54	(E) CASEWORK TO REMAIN, RE-PAINT & PROTECT IN PLACE.
02.55	(E) ACCESSIBLE SINK TO REMAIN. PROTECT IN PLACE
02.56	(E) MARKERTACKBOARD TO BE REMOVED & REPLACED WITH NEW.
02.62	(E) WINDOW MULLION/COLUMN TUBE STEEL TO REMAIN, PROTECT IN PLACE, WHERE OCCURS

DEMOLITION KEYNOTES

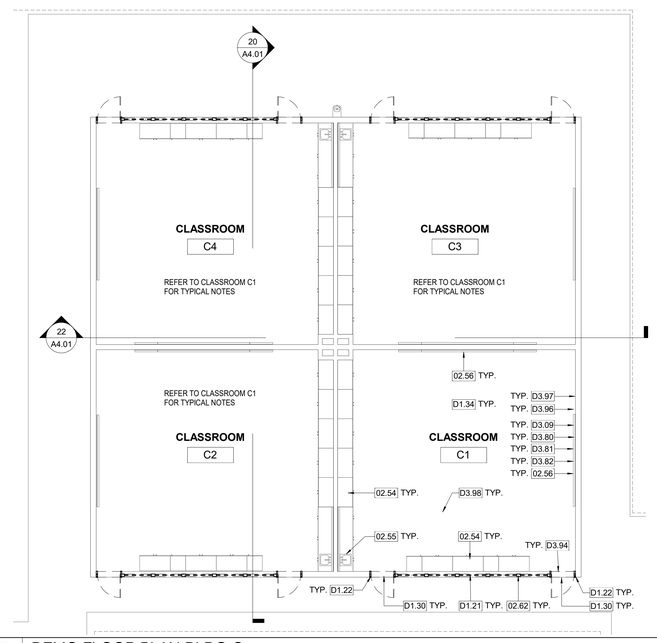
#	DESCRIPTION
D1.07	(E) DOOR AND FRAME TO BE REMOVED AND DISPOSED
D1.14	(E) CASEWORK TO BE REMOVED AND DISPOSED.
D1.21	(E) ALUMINUM FRAME & GLAZING STOREFRONT SYSTEM TO BE REMOVED AND DISPOSED
D1.22	(E) HM DOOR FRAME & (E) DOOR PANEL TO BE REMOVED AND DISPOSED.
D1.23	(E) ALUMINUM FRAME & GLAZING WINDOW SYSTEM TO BE REMOVED AND DISPOSED
D1.25	(E) LAVATORY TO BE REMOVED AND DISPOSED, PATCH AND REPLACE FINISH MATERIALS TO MATCH EXISTING
D1.26	(E) WATER CLOSET TO BE REMOVED AND DISPOSED
D1.30	(E) TRANSOM WINDOW TO BE REMOVED AND DISPOSED
D1.34	(E) MARKER BOARD TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D2.03	REMOVE (E) PAPER TOWEL DISPENSER, PATCH AND REPLACE FINISH MATERIALS TO MATCH EXISTING
D2.05	REMOVE (E) RESTROOM ACCESSORIES, PATCH AND REPLACE FINISH MATERIALS TO MATCH EXISTING
D2.06	REMOVE (E) SANITARY NAPKIN DISPENSER, PATCH AND REPLACE FINISH MATERIALS TO MATCH EXISTING
D3.09	(E) GLUE-ON/STAPLED ACOUSTIC TILE TO BE DEMOLISHED AND DISPOSED, INCLUDING SUBSTRATES AND (E) 2"X3" WOOD STRIPPING. WHERE OCCURS
D3.74	REMOVE (E) TOILET PAPER DISPENSER, PATCH AND REPAIR AS REQUIRED
D3.80	(E) TELEVISION, PROJECTOR & BRACKET TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D3.81	(E) ANALOG WALL CLOCK TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D3.82	(E) AUDIO SPEAKER TO BE REMOVED AND DISPOSED. WHERE OCCURS.
D3.84	REMOVE (E) LAVATORIES AND PLUMBING FIXTURES, PREPARE FOR NEW LAVATORIES
D3.89	REMOVE (E) SOLID PLASTIC TOILET PARTITION, PREPARE FOR NEW TOILET PARTITION
D3.94	(E) EXIT SIGNAGE TO BE REMOVED, DISPOSED AND REPLACE
D3.96	(E) ELECTRICAL OUTLETS, WIREMOLDS & RACEWAYS TO BE REMOVED, PER ELECTRICAL PLAN, WHERE OCCURS.
D3.97	REMOVE (E) WALL PANELS AND REPLACE WITH NEW PER SPEC SECTION 101100, WHERE OCCURS
D3.98	REMOVE & DISPOSE OF EXISTING ABOVE CEILING ROOF INSULATION WHERE OCCURS
D3.99	REMOVE (E) SOLID PLASTIC TOILET PARTITION DOOR
D4.00	REMOVE (E) RESTROOM ACCESSORIES AND DISPOSE

DEMOLITION LEGEND

- EXISTING NON-BEARING WALL TO BE REMOVED
- DOOR TO BE REMOVED
- WINDOW TO BE REMOVED (SEE SCHEDULE)
- DEMO ALL (E) WALL FINISH, FLOOR SLAB, DUCTS, PIPES, CONDUITS & FIXTURES, U.N.O.
- (E) DUCT OPENINGS IN SLAB TO BE REMOVED AND IN-FILLED WITH CONCRETE WHERE OCCURS, PER DETAIL 2/SD1



6 DEMO FLOOR PLAN BLDG K
1/8" = 1'-0"



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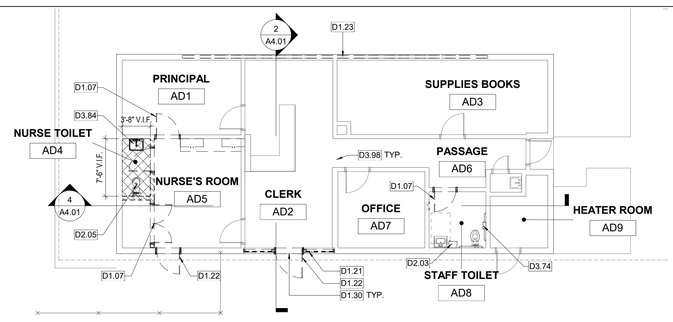
1/8" = 1'-0"



3 DEMO FLOOR PLAN ADMIN
1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. DEMOLITION PLANS INDICATE SOME OF THE SCOPE-OF-WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL REVIEW ALL SHEETS FOR ADDITIONAL DEMOLITION SCOPE.
2. CONTRACTOR SHALL VERIFY EXISTING SITE AND BUILDING CONDITIONS AND DIMENSIONS IN THE FIELD PRIOR TO DEMOLITION ACTIVITIES AND WORK.
3. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES IN WRITING, PRIOR TO COMMENCING WITH WORK.
4. CONTRACTOR SHALL NOTIFY ARCHITECT AND OWNER OF ANY POSSIBLE ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK. PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.
5. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS BEFORE COMMENCING WORK.
6. AFTER AWARD OF THE CONTRACT, CHANGE ORDER REQUESTS FOR ADDITIONAL MONEY WILL NOT BE APPROVED IF THE WORK COULD HAVE BEEN ANTICIPATED DURING A SITE VISIT BY THE CONTRACTOR.
7. CONTRACTOR SHALL NOT SCALE DRAWINGS.
8. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY SHORING, TEMPORARY BRACING, AND OR TEMPORARY SUPPORTS AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY OF EXISTING STRUCTURE TO REMAIN AND OR EXISTING BUILDING ELEMENTS TO REMAIN.
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12. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND OR SOUND PARTITION BETWEEN CONSTRUCTION AREA AND AREAS NOT IN SCOPE AS NECESSARY. DEMOLITION ACTIVITIES SHALL BE PERFORMED SO AS TO PRODUCE MINIMAL DISTURBANCE TO EXISTING FACILITY AND OCCUPANTS (I.E. MINIMIZE EXCESSIVE AND PROLONGED NOISE LEVELS AND DUST).
13. CONTRACTOR SHALL REPAIR, REPLACE, OR PATCH EXISTING BUILDINGS, DRIVEWAYS, SIDEWALKS, CANOPIES, AND OR PARKING AREAS DAMAGED, MODIFIED, AND OR DISTURBED BY DEMOLITION WORK AT NO COST TO THE OWNER.
14. ALL EXISTING EQUIPMENT THAT REMAINS SHALL BE PROTECTED DURING DEMOLITION AND OR CONSTRUCTION TO PREVENT DAMAGE. ANY DAMAGE TO REMAINING EXISTING EQUIPMENT SUSTAINED DURING DEMOLITION AND OR CONSTRUCTION SHALL BE EQUIVALENTLY REPLACED OR EQUIVALENTLY REPAIRED AT NO COST TO THE OWNER.
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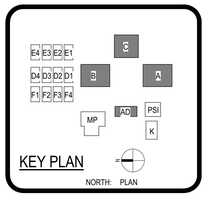
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT



Consultant

Architect
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Yong Yoo
No. C-31162
RENEW: 10-31-2023
STATE OF CALIFORNIA

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DATE	PROJECT NUMBER
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REVISIONS

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DSA SUBMITTAL

DEMO FLOOR PLAN
BLDG ADMIN. A,B,C&K

D1.1

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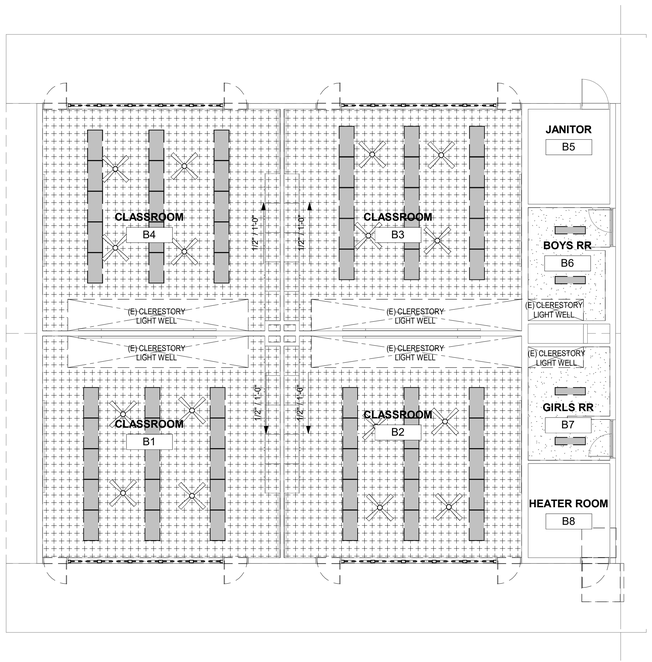
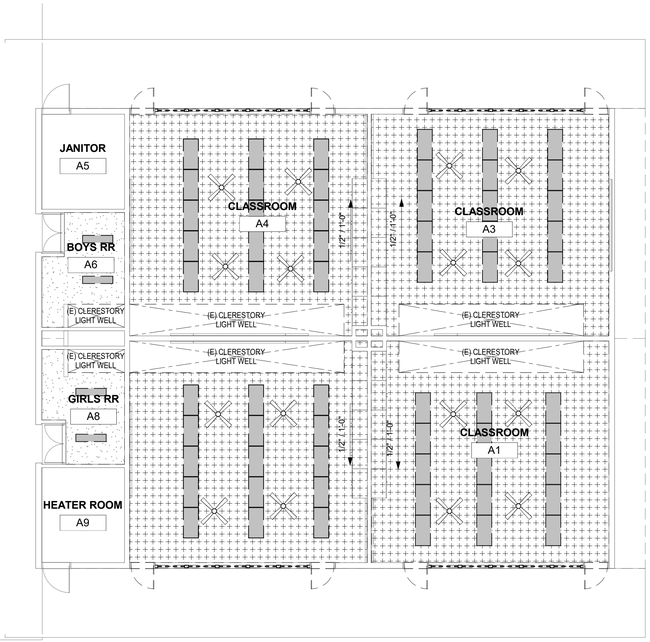


17 DEMO RCP BLDG B
1/8" = 1'-0"



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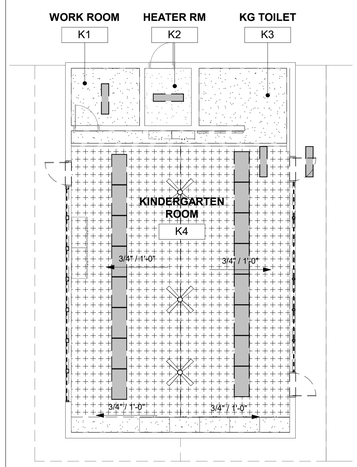
1/8" = 1'-0"



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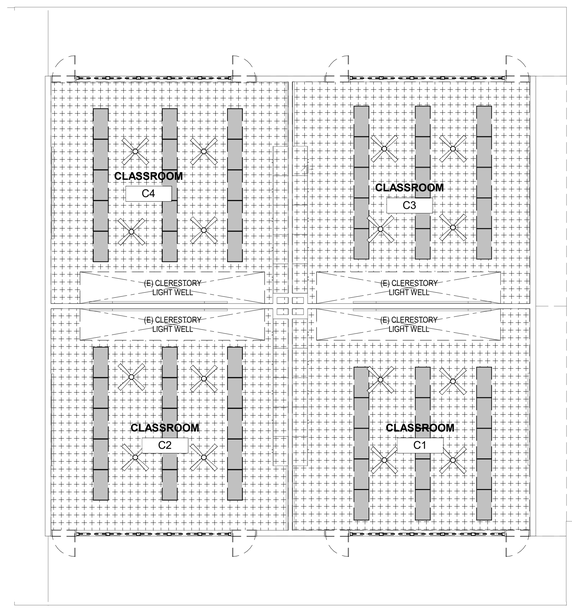

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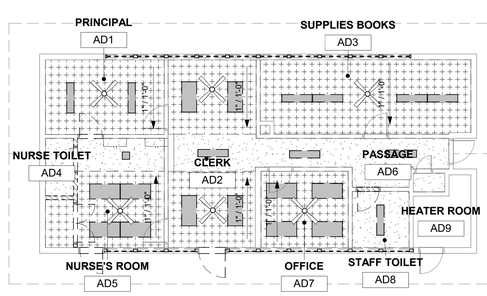

3 DEMO RCP BLDG ADMIN
1/8" = 1'-0"

DEMOLITION RCP LEGEND

- EXISTING PLASTER CEILING TO REMAIN
- EXISTING PLASTER /GYP.BD. CEILING & SUBSTRATE TO BE REMOVED AND DISPOSED.
- EXISTING NON-BEARING WALL TO BE REMOVED
- EXISTING 12"x12" GLUE UP / STAPLED ACOUSTIC TILE AND (E) SUBSTRATES TO BE REMOVED AND DISPOSED.
- REMOVE AND DISPOSE (E) LIGHT FIXTURES AND WIRING
- MECHANICAL GRILLES, REFER TO MECHANICAL DRAWINGS (REMOVE WHEN SHOWN DASHED)
- (E) CEILING FAN AND ACCESSORIES TO BE REMOVED BY G.C. AND RETURNED TO THE DISTRICT.
- (E) ACCESS PANEL TO BE REMOVED & DISPOSED, WHERE OCCURS.

NOTE:
1. REMOVE & DISPOSE OF EXISTING ABOVE CEILING ROOF INSULATION. WHERE OCCURS.

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BUILDING MPE NOTES

1. EXISTING GAS AND WATER PIPES: REMOVE AND REPLACE ANY RUSTED OR DETERIORATED PIPES, VALVES AND YARD BOXES TO REMAIN.
2. RELOCATE / RE-ROUTE ANY ELECTRICAL CONDUITS AND LOW VOLTAGE RACEWAYS AND WIRING ABOVE & BELOW CEILING TO ACCOMMODATE NEW WORK.
3. RELOCATE / RE-ROUTE ANY VENT PIPES INTERFERING WITH NEW WORK.
4. REMOVE AND DISPOSE OLD CLOCK AND SPEAKERS NO LONGER IN USE.
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7. REMOVE PROJECTORS IN WORKROOM AND LIBRARY ROOMS RETURN TO DISTRICT

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DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
C
B
A
MP
AD
PSI
K

KEY PLAN
NORTH: PLAN

Consultant

Architect

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Tong You
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DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

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DSA SUBMITTAL

DEMO REFLECTED CEILING PLAN BLDG ADMIN. A,B,C&K

D2.1

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A1.01 - FLOOR PLANS BLDG ADMIN, A,B,C&K

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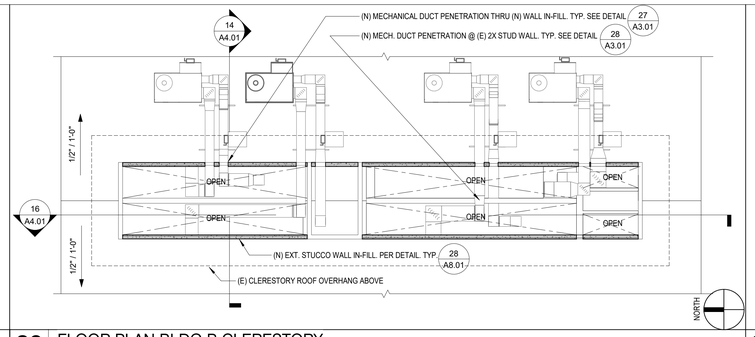
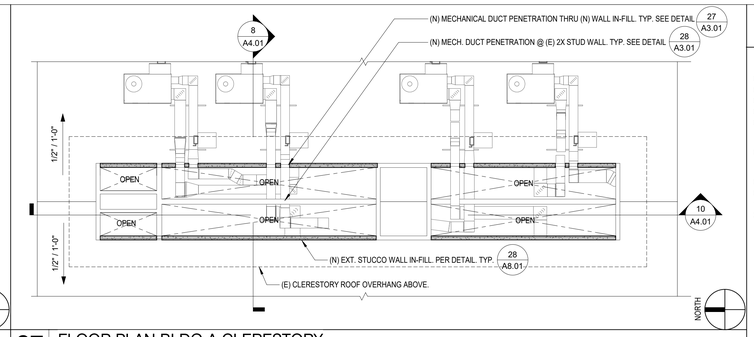


29 FLOOR PLAN BLDG B CLERESTORY
1/8" = 1'-0"



27 FLOOR PLAN BLDG A CLERESTORY
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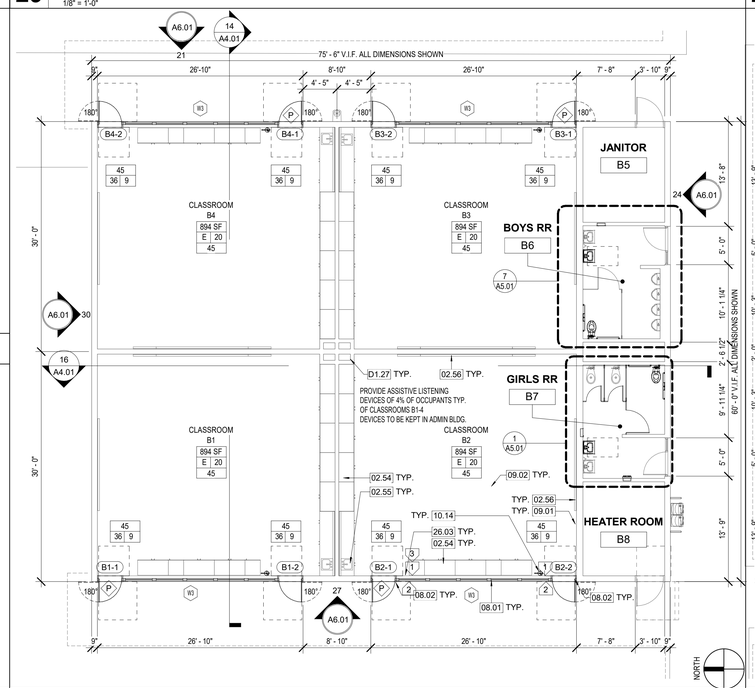

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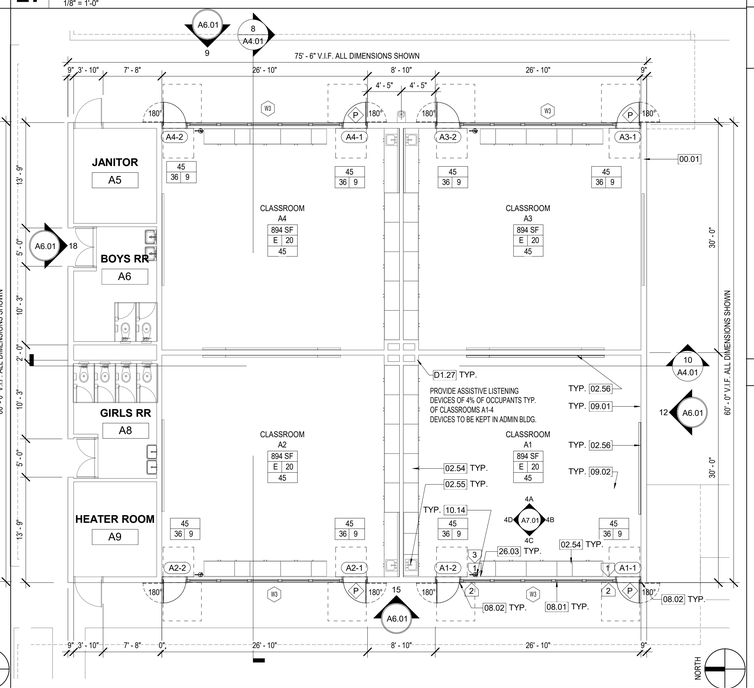
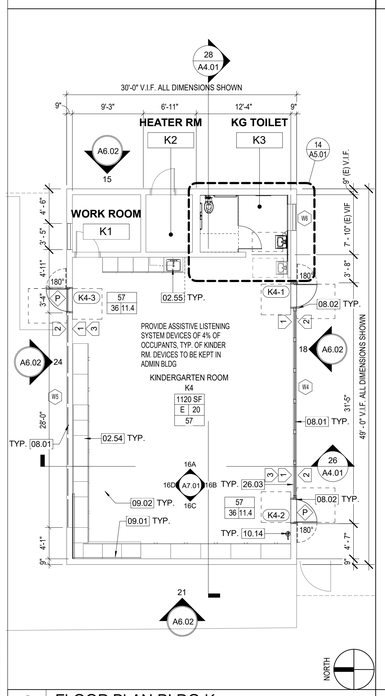


15 FLOOR PLAN BLDG A
1/8" = 1'-0"



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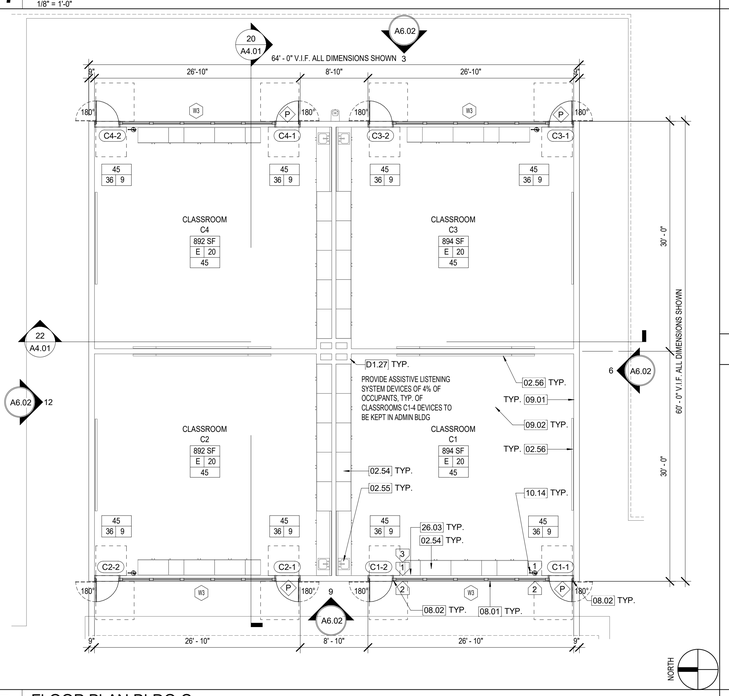
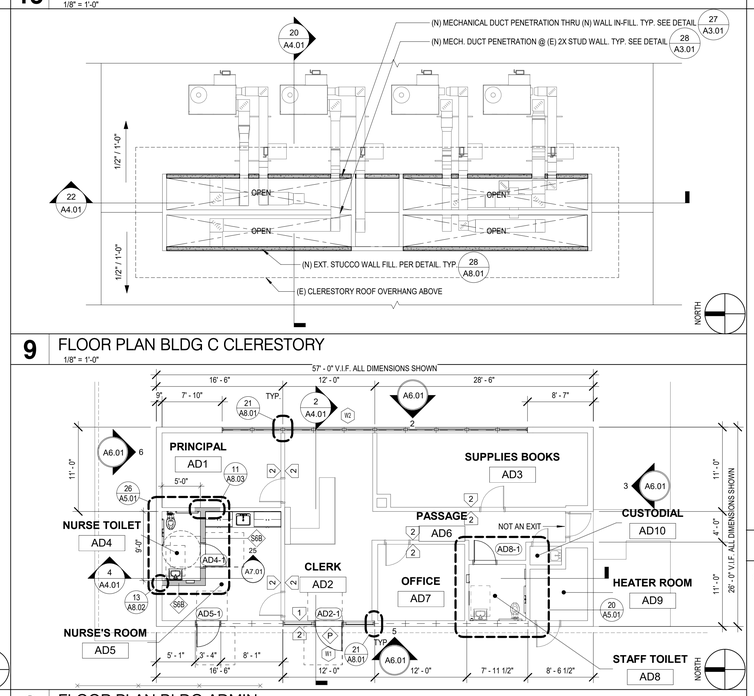
1/8" = 1'-0"



5 FLOOR PLAN BLDG C
1/8" = 1'-0"



9 FLOOR PLAN BLDG C CLERESTORY
1/8" = 1'-0"

3 FLOOR PLAN BLDG ADMIN
1/8" = 1'-0"

CONSTRUCTION KEYED NOTES

00.01	INSERT TEXT
02.54	(E) CASEWORK TO REMAIN, RE-PAINT & PROTECT IN PLACE.
02.55	(E) ACCESSIBLE SINK TO REMAIN. PROTECT IN PLACE
02.56	(E) MARKER/TACKBOARD TO BE REMOVED & REPLACED WITH NEW
08.01	(N) ALUMINUM FRAME & GLAZING WINDOW SYSTEM.SEE WINDOWS FRAMING ELEVATION A9.01, PER ALUMINUM-FRAMED STOREFRONT & ALUMINUM WINDOWS & GLAZING SPEC SECTIONS 084143, 085100, & 088000 RESPECTIVELY.
08.02	(N) INTEGRAL ALUMINUM FRAME DOOR SYSTEM.SEE FRAMING ELEVATION A9.01 & DOOR SCHEDULE, PER ALUMINUM-FRAMED STOREFRONT & DOOR SPEC SECTIONS 084143 & 087100 RESPECTIVELY.
09.01	(N) INTERIOR PAINT FINISH, SEE FINISH SCHEDULE
09.02	(N) FLOOR FINISH AND BASEBOARD, SEE FINISH SCHEDULE
10.14	(N) FIRE EXTINGUISHER, SURFACE MOUNTED TO (E) WALL. SEE DETAIL 18/A8.02
26.03	NEW EXIT SIGN, PER ELEC DWGS. SEE DETAIL 16/A8.02

EXTERIOR & INTERIOR PAINT SCOPE OF WORK

1. CONTRACTOR SHALL PAINT ALL EXTERIOR AND INTERIOR SURFACES OF ALL BUILDINGS INCLUDING PORTABLES PER SPECIFICATION. THIS WORK INCLUDES ALL FLASHING, FASCIA, PLASTER, LOUVER, DRYWALL, DOORS AND FRAMES WITH THE EXCEPTION OF BRICK SURFACES. MINIMUM OF 4 COLORS TO BE SELECTED BY THE ARCHITECTS.
2. GENERAL CONTRACTOR TO NOTIFY AND DOCUMENT ANY AREAS WITH DRYROT AND / OR TERMITE DAMAGE IN WRITTEN FORMAT PRIOR TO BID.
3. PROVIDE APPROPRIATE PREPARATION , CLEANING AND BASE MATERIAL AT EXISTING EXTERIOR FINISHES BEFORE RECEIVING NEW FINISHES. PER FINISH SPECIFICATION.

GENERAL ARCH PLAN NOTES

1. REFER TO CIVIL DOCUMENTS
2. COORDINATE ALL SPOT ELEVATIONS AND DIMENSIONS WITH CIVIL, LANDSCAPE, AND OR STRUCTURAL DOCUMENTS
3. PROVIDE AND INSTALL POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS OF 1 % MINIMUM, 2 % MAXIMUM AT ALL EXTERIOR PAVED PEDESTRIAN AREAS, INCLUDING BUT NOT LIMITED TO, SIDEWALKS, PATIOS, STAIRS, PAVING. U.N.O.
4. PROVIDE AND INSTALL POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS OF 5 % FOR A HORIZ. DISTANCE OF 10 FEET AT ALL EXTERIOR NON-PAVED AREAS U.N.O
5. REFER TO CIVIL DOCUMENTS FOR CONCRETE SIDEWALK EXPANSION JOINTS AND CONCRETE SIDEWALK CONTROL JOINTS
6. VERIFY AND CONFIRM ALL JOINT LAYOUTS AT ALL CONCRETE SIDEWALKS WITH ARCH. PRIOR TO POURING OF CONCRETE
7. PROVIDE AND INSTALL CONCRETE SIDEWALK EXPANSION JOINTS AT AREAS NOT SPECIFICALLY INDICATED AT 50 FEET ON-CENTER MAX. U.N.O.
8. PROVIDE AND INSTALL CONCRETE SIDEWALK CONTROL JOINTS AT AREAS NOT SPECIFICALLY INDICATED AT DISTANCES EQUIVALENT TO SIDEWALK WIDTH, BUT NOT TO EXCEED 10 FEET ON-CENTER MAX.
9. VERIFY ALL SITE SIGNAGE LOCATIONS WITH ARCH. PRIOR TO INSTALLATION OF SITE SIGNAGE.
10. CONTRACTOR SHALL COMPLY WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

REMODEL PLAN LEGEND

- EXISTING WALL TO REMAIN
- NEW NON-BEARING WALL TO BE PROVIDED, SEE 3 SD1 / 5 SD1
- (N) DOOR MARK
- (N) WINDOWLOCATION (N) WINDOW NUMBER REFER TO **A8.10** FOR WINDOW FRAMES AND GLAZING TYPES
- (N) DOOR TO BE PROVIDED. REFER TO A9.01 FOR DOOR SCHEDULE AND TYPES
- (N) WINDOW (SEE WINDOW FRAMING ELEVATION ON SHEET A9.01)
- WALL PARTITIONS TAG
  - LETTER INDICATES PARTITION TYPE, REF. DETAIL - 1 A8.02 / 2 A8.02
  - # INDICATES CORE WIDTH
  - LETTER INDICATES CORE TYPE (S=STUD)
- CLASSROOM — ROOM NAME
- 400 — ROOM NUMBER
- 960 — ROOM AREA (SQ. FT.)
- E 20 — OCCUPANT LOAD FACTOR
- 48 — ROOM OCCUPANT
- OCCUPANCY TYPE
- 100 — COMBINED EXIT LOAD
- 32 / 20 — REQUIRED CLEAR EXIT WIDTH (IN INCHES)
- PROVIDED CLEAR EXIT WIDTH (IN INCHES)

NOTE: 1. ALL EXTERIOR CLASSROOM/ADMIN WINDOW FRAMES AND GLAZING TO BE REPLACED. PATCH AND REPAIR WALLS, AS NEEDED, FOLLOWING WINDOW INSTALLATION.

2. FIELD VERIFY ALL DIMENSIONS.

SIGNAGE LEGEND

ALL SIGNAGE IS (E) TO REMAIN. WHERE (E) SIGNAGE IS MISSING OR DAMAGED PROVIDE NEW SIGNAGE TO MATCH EXISTING PER DETAIL REFERENCES BELOW...

SIGNAGE TAG #

1. TACTILE EXIT SIGNAGE, SEE DETAIL 16 / A8.02 AND/OR SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
2. ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 19 / A8.02. (VERIFY ROOM NAME & NUMBER w/ OWNER). WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL, TYP. ALL ROOMS
3. ASSISTIVE LISTENING SIGNAGE, SEE DETAIL 23 / A8.02

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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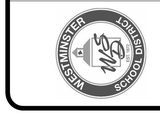
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

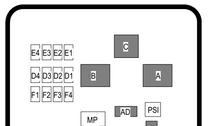
PROJECT ADDRESS:
14142 Horner St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT





Consultant

Architect

LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

FLOOR PLANS BLDG ADMIN. A,B,C&K

A1.01

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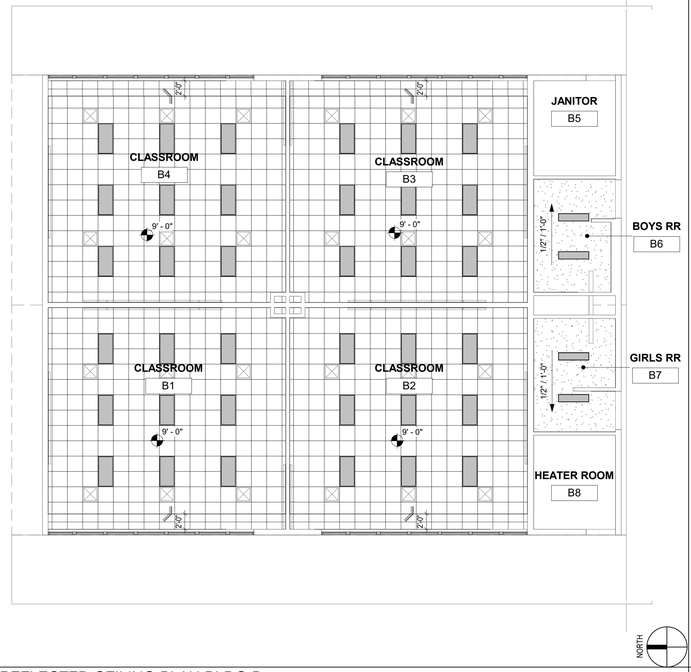
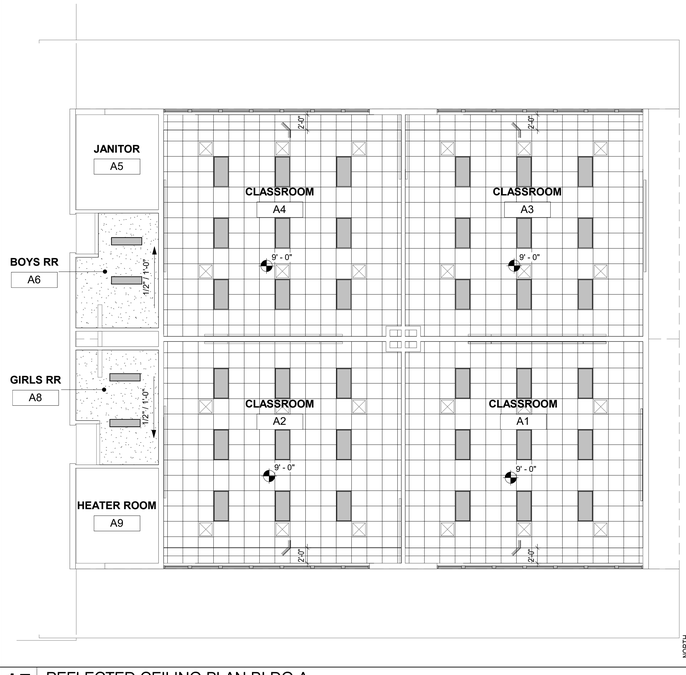
A2.01 - REFLECTED CEILING PLANS BLDG ADMIN, A,B,C&K

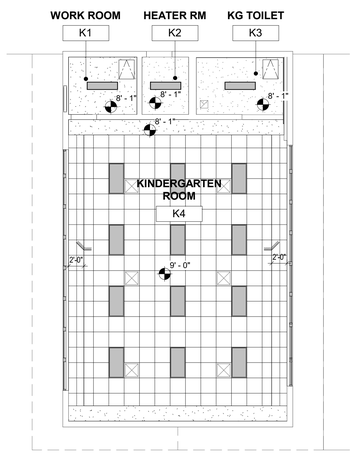
0" 1"



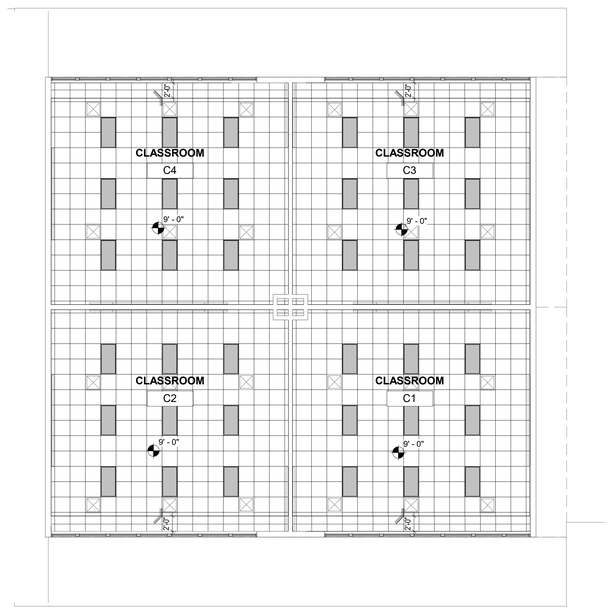
17 REFLECTED CEILING PLAN BLDG B
1/8" = 1'-0"



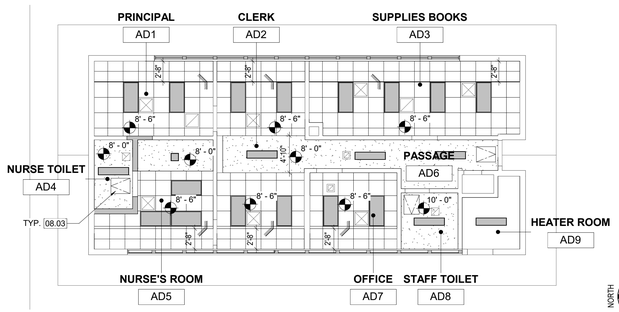
15 REFLECTED CEILING PLAN BLDG A
1/8" = 1'-0"



6 REFLECTED CEILING PLAN BLDG K
1/8" = 1'-0"



5 REFLECTED CEILING PLAN BLDG C
1/8" = 1'-0"



3 REFLECTED CEILING PLAN BLDG ADMIN
1/8" = 1'-0"

-CONSTRUCTION KEYED NOTES

#	Description
08.03	(N) CEILING ACCESS PANEL AS REQUIRED PER CODE. TO ACCESS HEAT DETECTOR AND RELATED MECH/ELEC SYSTEMS. MATCH CEILING FINISH

REFLECTED CEILING PLAN LEGEND

- EXISTING PLASTER / GYP. BD. CEILING TO REMAIN. RE-PAINT TO MATCH EXISTING.
- NEW GYPSUM BOARD CEILING ATTACHED TO (E) CEILING JOIST. SEE DETAIL 5 / A8.03
- NEW 24" x 24" SUSPENDED ACOUSTIC CEILING TILE. SEE DETAIL 7 / A8.03
- NEW LIGHT FIXTURE(S). SEE ELECTRICAL DRAWINGS.
- MECHANICAL GRILLES, REFER TO MECHANICAL DRAWINGS
- ACCESS PANEL, 20" X 30" MIN OPENING, SEE DETAIL 4 / A8.03
- CEILING SLOPE TRANSITION.
- CEILING HEIGHT

NOTE:
ALL (E) BLDGS ARE NON-SPRINKLERED

GENERAL CEILING PLAN NOTES

1. REFER TO AND COORD. WITH ROOM FINISH SCHEDULES FOR SPECIFIC CEILING TYPES.
2. ALL SCHEDULED CEILING HEIGHTS ARE FROM THE MAIN FLOOR LEVEL WITHIN THE ROOM AND OR SPACE, AND ARE NOT FROM AN ELEVATED FLOOR LEVEL, AND ARE NOT FROM A RECESSED FLOOR LEVEL.
3. NO FIRE SPRINKLER HEADS ARE SHOWN ON ARCH. CEILING PLANS. ALL SPRINKLER HEADS SHALL BE CENTERED WITHIN CEILING TILES U.N.O.
4. ONLY CEILING MOUNTED FIXTURES AND EQUIP. IS SHOWN ON ARCH. CEILING PLANS. REFER TO INTERIOR ELEVATIONS FOR WALL MOUNTED FIXTURES. REFER TO MEPT DOCUMENTS FOR ADDITIONAL INFORMATION CONCERNING CEILING MOUNTED FIXTURES AND OR WALL MOUNTED FIXTURES.
5. CEILING MOUNTED LIGHT FIXTURES ARE SHOWN FOR LOCATION PURPOSES ONLY. COORD. WITH ELEC. DOCUMENTS FOR LIGHT FIXTURE DESIGNATIONS.
6. CEILING MOUNTED LIGHT FIXTURES WITHIN FIRE RATED CEILING ASSEMBLIES SHALL HAVE LIGHT FIXTURE PROTECTION AND BE TENTED OR OTHERWISE FIRE RATED TO MATCH CEILING ASSEMBLY FIRE RATING.
7. VERIFY LOCATIONS OF ALL CEILING ACCESS PANELS WITH MEPT DOCUMENTS. COORD. LOCATIONS OF CEILING ACCESS PANELS WITH ARCH. PRIOR TO INSTALLATION. CEILING ACCESS PANEL FIRE RATINGS SHALL MATCH CEILING ASSEMBLY FIRE RATINGS.
8. REFER TO WALL SECTIONS FOR WALL-CEILING INTERFACE
9. EXISTING CEILING ACCESS PANEL TO REMAIN.
10. PROVIDE NEW CEILING ACCESS PANEL WHERE REQUIRED PER CODE.
11. CONTRACTOR SHALL COMPLY WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
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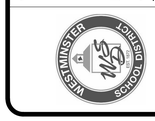
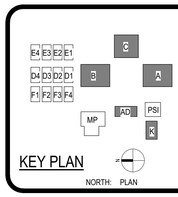
DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43





Consultant

Architect

LICENSED ARCHITECT
Seong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

REFLECTED CEILING PLANS BLDG ADMIN. A,B,C&K

A2.01

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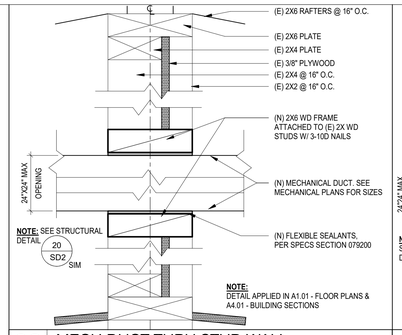
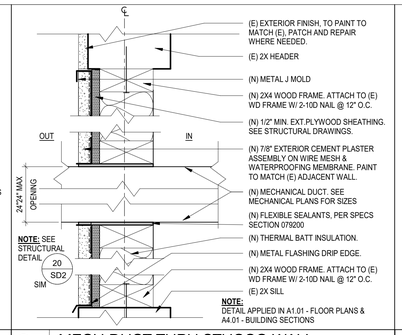
A3.01 - OVERALL ROOF PLAN AND DETAIL

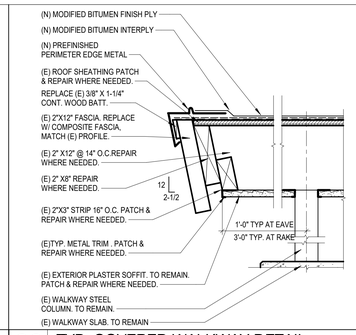
0" 1"



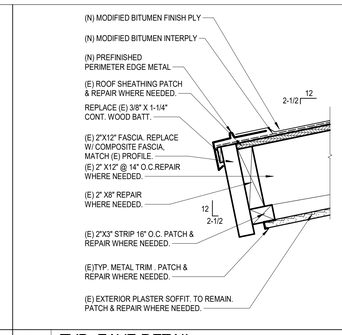
28 MECH DUCT THRU STUD WALL
3" = 1'-0"



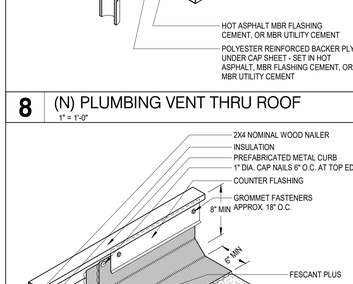
27 MECH DUCT THRU STUCCO WALL
3" = 1'-0"



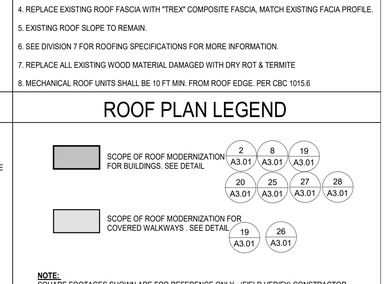
26 TYP. COVERED WALKWAY DETAIL
1 1/2" = 1'-0"



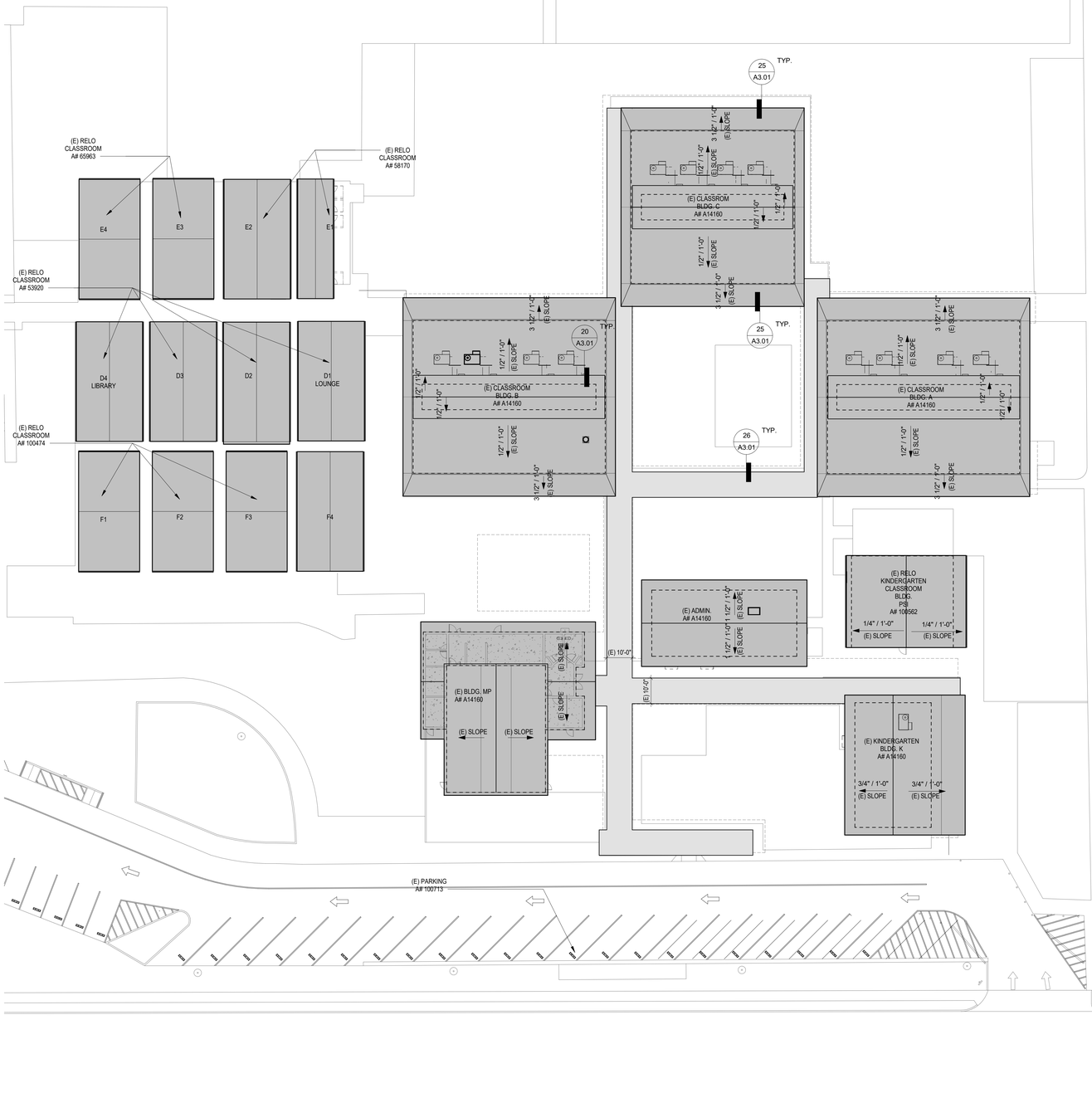
25 TYP. EAVE DETAIL
1 1/2" = 1'-0"



20 TYP. EAVE AT CLERESTORY DETAIL
1 1/2" = 1'-0"

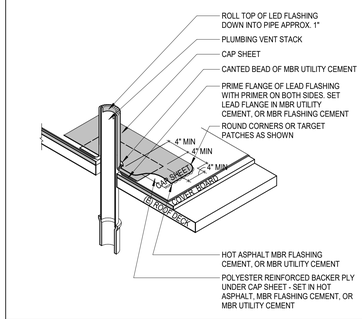


19 NEW ROOFING SYSTEM DETAIL
3" = 1'-0"



6 OVERALL ROOF PLAN
1" = 20'-0"

14 (N) PARAPET BASE & CAP
1" = 1'-0"



8 (N) PLUMBING VENT THRU ROOF
1" = 1'-0"

2 (N) PREFABRICATED CURB
1" = 1'-0"

ROOF SCHEDULE

ROOF AREA	APPROX. SQ.FT.	EXISTING ROOF	NEW ROOF PER 19/A3.01	REMARKS
ADMIN	2227 SF	WD/SS/BUR-A	A	
BLDG A	4478 SF	WD/SS/BUR-A	A	
BLDG A CLERESTORY ROOF	1282 SF	WD/SS/BUR-A	A	
BLDG A EAST OVERHANG	783 SF	WD/SS/BUR-A	A	
BLDG A WEST OVERHANG	783 SF	WD/SS/BUR-A	A	
BLDG B	4488 SF	WD/SS/BUR-A	A	
BLDG B CLERESTORY ROOF	1282 SF	WD/SS/BUR-A	A	
BLDG B EAST OVERHANG	783 SF	WD/SS/BUR-A	A	
BLDG B WEST OVERHANG	783 SF	WD/SS/BUR-A	A	
BLDG C	3894 SF	WD/SS/BUR-A	A	
BLDG C CLERESTORY ROOF	1072 SF	WD/SS/BUR-A	A	
BLDG C EAST OVERHANG	675 SF	WD/SS/BUR-A	A	
BLDG C WEST OVERHANG	675 SF	WD/SS/BUR-A	A	
BLDG K	2094 SF	WD/SS/BUR-A	A	
BLDG K SOUTH OVERHANG	514 SF	WD/SS/BUR-A	A	
COVERED WALKWAY	6305 SF	WD/SS/BUR-A	A	
MPR 1	1937 SF	WD/SS/BUR-A	A	
MPR 2	1963 SF	WD/SS/BUR-A	A	
RELO CLASSROOM KINDER PSI	1700 SF	WD/SS/BUR-A	A	
RELO D1	1223 SF	WD/SS/BUR-A	A	
RELO D2	1223 SF	WD/SS/BUR-A	A	
RELO D3	1223 SF	WD/SS/BUR-A	A	
RELO D4	1223 SF	WD/SS/BUR-A	A	
RELO E2	1223 SF	WD/SS/BUR-A	A	
RELO E3	1128 SF	WD/SS/BUR-A	A	
RELO E4	1128 SF	WD/SS/BUR-A	A	
RELO F1	1128 SF	WD/SS/BUR-A	A	
RELO F2	1128 SF	WD/SS/BUR-A	A	
RELO F3	1128 SF	WD/SS/BUR-A	A	
RELO F4	1223 SF	WD/SS/BUR-A	A	
RELO RESTROOM	659 SF	WD/SS/BUR-A	A	

ROOFING SCOPE OF WORK

1.REMOVE AND PROPERLY DISPOSE OF EXISTING ROOFING (WEIGHING APPROXIMATELY 8 LBS/SF) / INSULATION (RE: 3/A4.11) DOWN TO EXISTING ROOF DECK AT ROOF AREAS ADMIN, KINDERGARTEN, BLDG A,B,C, MPR & ALL RELOCATABLES. PREPARE / REPAIR EXISTING VERTICAL FASCIA NAILER (INCLUDE 100 IN FT OF REPLACEMENT) FOR INSTALLATION OF NEW CLASS "A" ROOF SYSTEM. PREPARE / REPAIR EXISTING ROOF DECK WITH LIKE KIND MATERIAL AND ATTACHMENT. MECHANICALLY ATTACH NEW BASE SHEET, HEAT WELD MODIFIED BITUMEN BASE PLY ROOF MEMBRANE, ENSURE IS WATER TIGHT PRIOR TO COVERING UP. HEAT WELD MODIFIED BITUMEN TITLE 24 FINISH PLY ROOF MEMBRANE WITH ASSOCIATED ROOF RELATED SHEET METAL, GUTTERS, DOWNSPOUTS, EDGE METALS AND TRIM. THE TOTAL WEIGHT OF THE NEW COMPLETED ROOF IS NOT TO EXCEED 5 LBS/SF.

2. PROVIDE R-30 BATT INSULATION UNDER ROOF DECK PER SPEC SECTION 07 21 00.

3. REPLACE OR REPAIR ALL EXISTING ROOF DAMAGE.

4. REPLACE EXISTING ROOF FASCIA WITH "TREX" COMPOSITE FASCIA, MATCH EXISTING FACIA PROFILE.

5. EXISTING ROOF SLOPE TO REMAIN.

6. SEE DIVISION 7 FOR ROOFING SPECIFICATIONS FOR MORE INFORMATION.

7. REPLACE ALL EXISTING WOOD MATERIAL DAMAGED WITH DRY ROT & TERMITE

8. MECHANICAL ROOF UNITS SHALL BE 10 FT MIN. FROM ROOF EDGE. PER CBC 1015.6

ROOF PLAN LEGEND

SCOPE OF ROOF MODERNIZATION FOR BUILDINGS. SEE DETAIL 2 A3.01, 8 A3.01, 19 A3.01, 20 A3.01, 25 A3.01, 27 A3.01, 28 A3.01

SCOPE OF ROOF MODERNIZATION FOR COVERED WALKWAYS . SEE DETAIL 19 A3.01, 26 A3.01

NOTE:
SQUARE FOOTAGES SHOWN ARE FOR REFERENCE ONLY - (FIELD VERIFY) CONSTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND FOR ENSURING NEW CONDITIONS ADHERE TO ALL LOCAL AND FEDERAL CODES ALONG WITH INDUSTRY STANDARD GUIDELINES AND REMAIN IN A WATERTIGHT CONDITION.

*SEE SPECIFICATION DIVISION 7 FOR OTHER ROOF RELATED COMPONENTS.

**CONTRACTOR SHALL COMPLY WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

ABBREVIATIONS:

WD: WOOD ROOF DECK
SS: SLIP SHEET
BUR-A: MULTI-PLY BUILT-UP OOF SYSTEM W/ ALUMINUM COATING

IDENTIFICATION STAMP
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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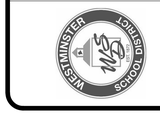
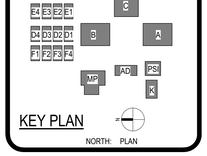
DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43





KEY PLAN
NORTH: PLAN

Consultant

BEAM PROFESSIONALS

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

OVERALL ROOF PLAN AND DETAIL

A3.01

FILE PATH: Z:\Projects\...
6/20/2023 8:16:38 AM

A3 02 - ROOF PLAN

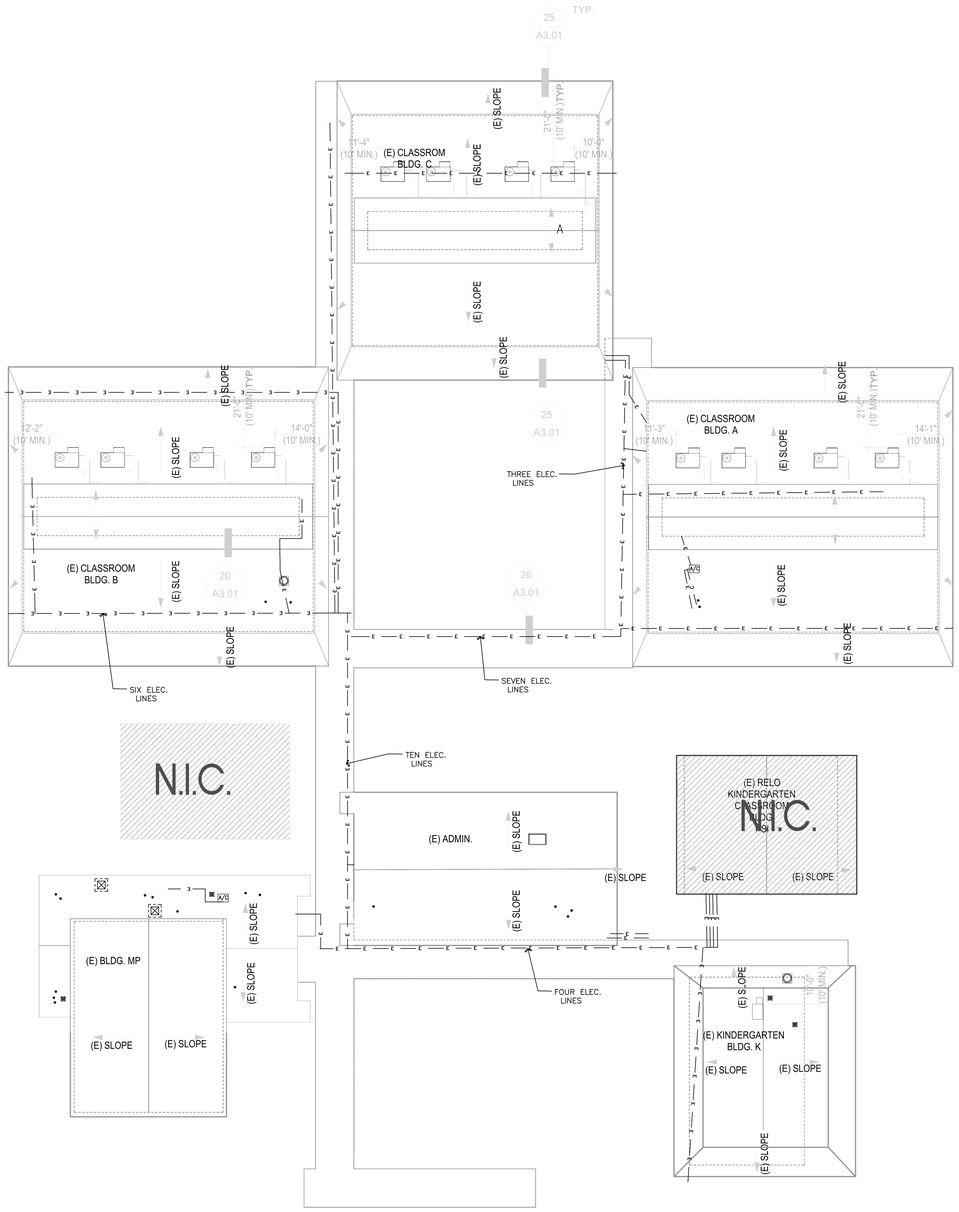
0" 1"

N.I.C.

E4 N.I.C. E3 N.I.C. E2 N.I.C. N.I.C. E1

D4 LIBRARY N.I.C. D3 N.I.C. D2 N.I.C. D1 LOUNGE N.I.C.

F1 N.I.C. F2 N.I.C. F3 N.I.C. F4 N.I.C.



6 ENLARGED ROOF PLAN
1/16" = 1'-0"

PLUMBING VENT	GOOSE NECK VENT	PB	PIPE BOX
FLANGE VENT	A/C	CURB MOUNTED A/C	RIDGE LINE
PITCH PAN		SPLASH BLOCK	EXISTING AREAS TO REMAIN – NIC
NEW ROOF DRAIN		SPLASH PAN	NEW TAPERED INSULATION / CRICKET
EXIST. ROOF DRAIN		A/C ON POSTS	A1 ROOF AREA DESIGNATION
OVERFLOW DRAIN		ROOF HATCH	TAPERED LIGHTWEIGHT CONCRETE
WALL DRAIN	SL	SKYLIGHT	SCREEN WALL
CURB MOUNTED VENT		ANTENNA	DESIGNATES EXTENTS OF WORK IDENTIFIED BY KEYED NOTES
ABANDONED CURB TO BE REMOVED/PATCHED	SC	SATELLITE DISH	EXPANSION JOINT
GUY WIRE	G	SCUPPER	CONDINSATE LINE
POWER VENT	DS	GUTTER	WATER LINE
HEATER VENT		DOWNSPOUT	
BOILER VENT		WALL LADDER	
TURBINE VENT	G	SWING LADDER	
A ABANDON EQUIP.	E	GAS LINE	
		ELEC. LINE	

1 GENERAL LEGEND
NTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

BEAM PROFESSIONALS

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ROOF PLAN

A3 02

FILE PATH: Z:\Projects\...
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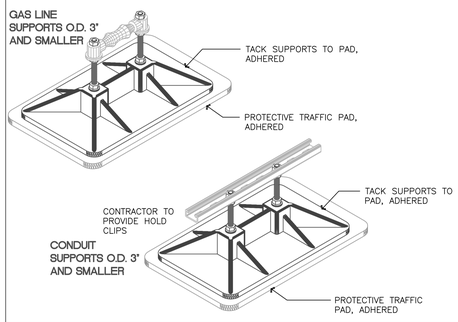
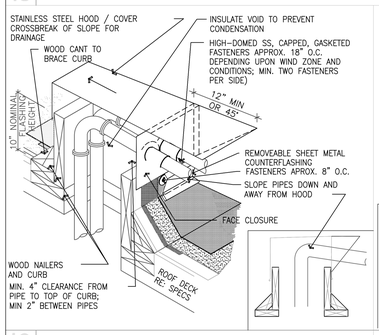
A3.03 - ROOF DETAILS - MOD. BIT.

0" 1"



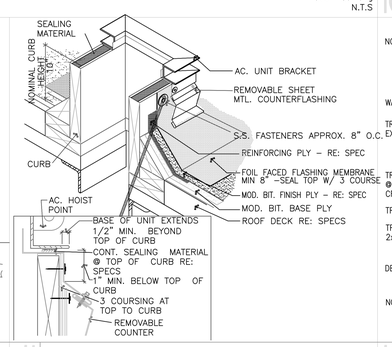
18 PIPE SUPPORT

07M-PS01.dwg
N.T.S



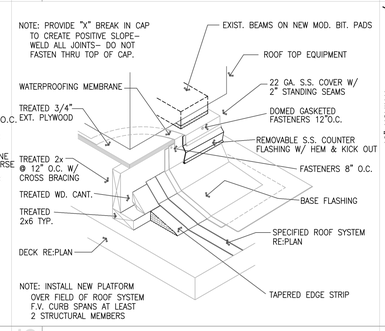
12 HOODED CURB

07M-CF02.dwg
NTS



11 AC CURB

07M-CF12.dwg
NTS



10 CURBED PLATFORM –

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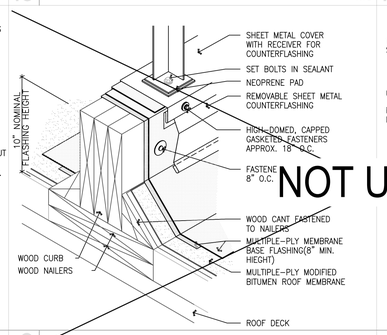
NTS



9 EQUIP. SUPPORT CURB

07M-CF04.dwg
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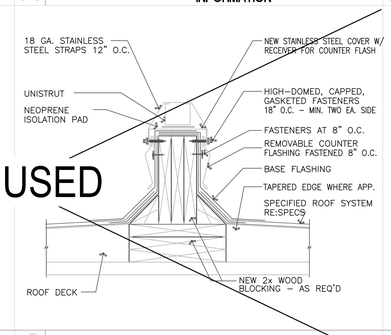
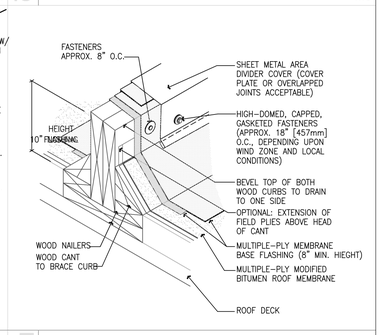


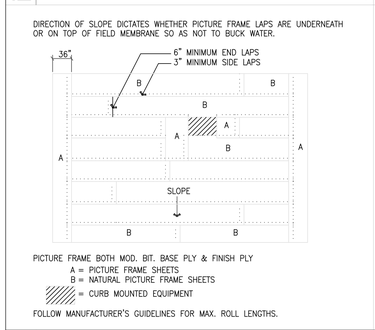
8 EQUIPMENT SUPPORT CURB

07M-CF06

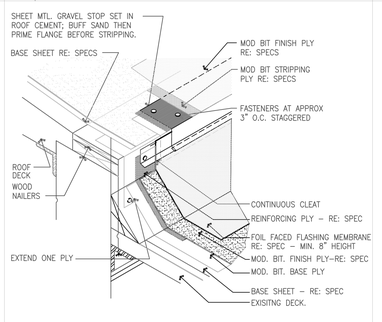


7 AREA DIVIDER

07M-EJ05.dwg
NTS

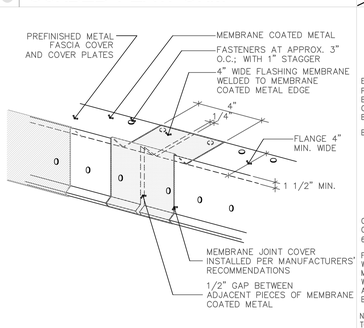


6 PICTURE FRAME DETAIL



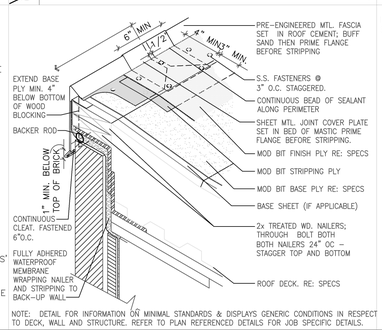
5 ROOF HIGH/LOW

NTS



4 COVER PLATE

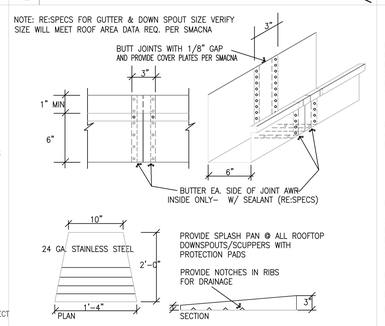
NTS



NOTE: DETAIL FOR INFORMATION ON MINIMAL STANDARDS & DISPLAYS GENERIC CONDITIONS IN RESPECT TO DECK, WALL AND STRUCTURE. REFER TO PLAN REFERENCED DETAILS FOR JOB SPECIFIC DETAILS.

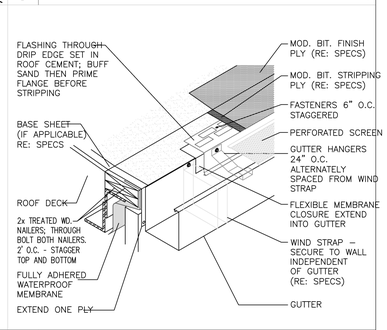
3 ROOF EDGE

07M-PE01.dwg
NTS



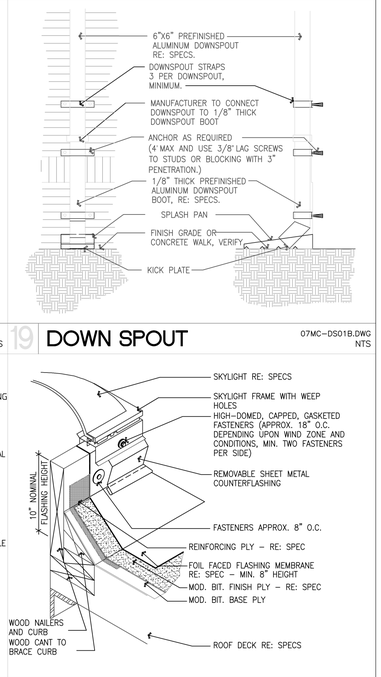
2 GUTTER JOINT

07MC-GJ01.dwg
N.T.S.



1 ROOF EDGE

07M-PE01.dwg
NTS



20 WALK PADS AT RTU

NTS

19 DOWN SPOUT

07MC-DS01B.DWG
NTS

NOT USED

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6/20/2023 8:16:34 AM

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APP: 04-121818 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Homer St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
AD PSI
MP K

KEY PLAN
NORTH: PLAN

Consultant
BEAM PROFESSIONALS

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

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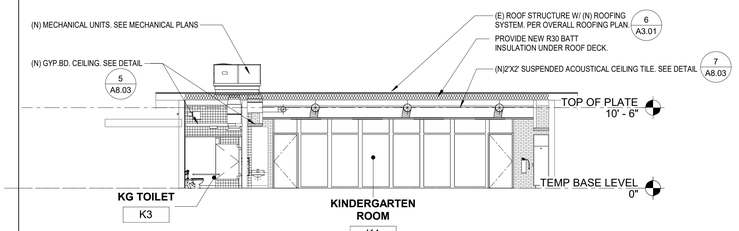
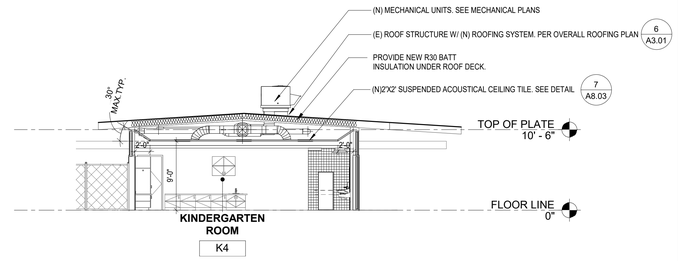
ROOF DETAILS - MOD. BIT.

A3 03

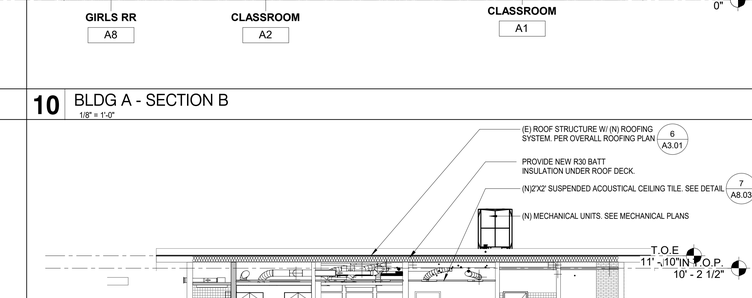
A4.01 - BUILDING SECTIONS

0" 1"

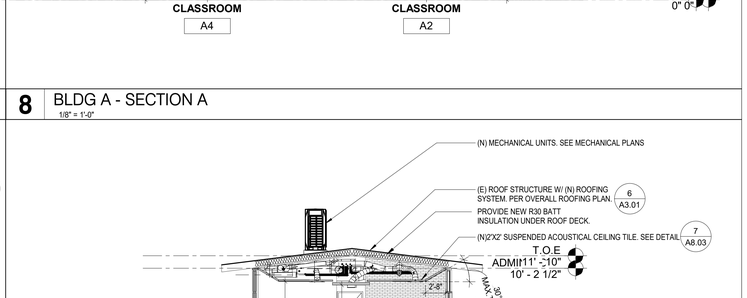




28 BLDG K SECTION B
1/8" = 1'-0"



26 BLG K SECTION A
1/8" = 1'-0"



22 BLDG C - SECTION B
1/8" = 1'-0"

20 BLDG C - SECTION A
1/8" = 1'-0"

16 BLDG B - SECTION B
1/8" = 1'-0"

14 BLDG B - SECTION A
1/8" = 1'-0"

10 BLDG A - SECTION B
1/8" = 1'-0"

8 BLDG A - SECTION A
1/8" = 1'-0"

4 BLDG ADMIN - SECTION B
1/8" = 1'-0"

2 BLDG ADMIN - SECTION A
1/8" = 1'-0"

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6/20/2023 8:16:46 AM

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PBK

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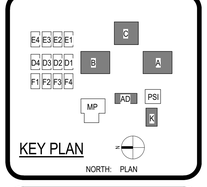
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN

Consultant

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

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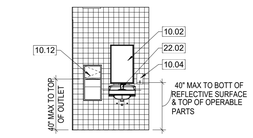
DSA SUBMITTAL

BUILDING SECTIONS

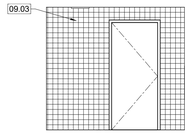
A4.01

A5.01 - ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS

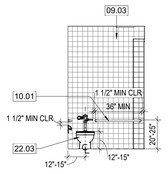
0" 1"



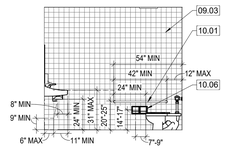
30D WEST 1/4" = 1'-0"



30C SOUTH 1/4" = 1'-0"



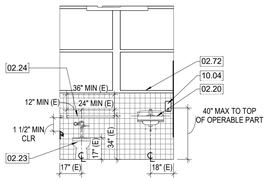
30B EAST 1/4" = 1'-0"



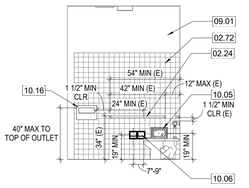
30A NORTH 1/4" = 1'-0"

30 ELEVATIONS - AD4 NURSE TOILET (AGES 5-8)

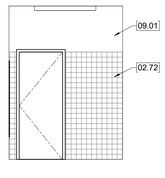
1/4" = 1' - 0"



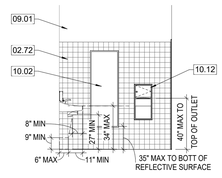
24D WEST 1/4" = 1'-0"



24C SOUTH 1/4" = 1'-0"



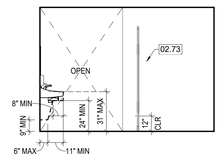
24B EAST 1/4" = 1'-0"



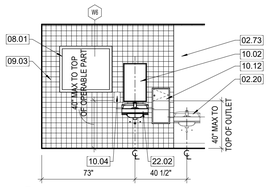
24A NORTH 1/4" = 1'-0"

24 ELEVATIONS - AD8 STAFF TOILET (ADULT)

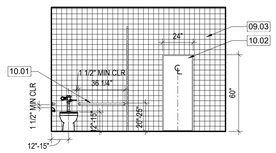
1/4" = 1' - 0"



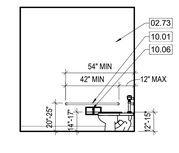
18D WEST 1/4" = 1'-0"



18C SOUTH 1/4" = 1'-0"



18B EAST 1/4" = 1'-0"

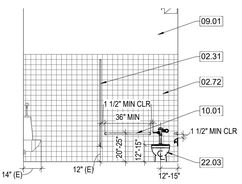


18A NORTH 1/4" = 1'-0"

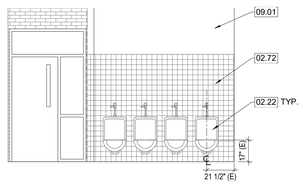
NOTE
KEYNOTES & DIMENSIONS, ALL TYPICAL AT 2 RESTROOMS

18 ELEVATIONS - KINDERGARTEN TOILET 1 & 2 (AGES 5-8)

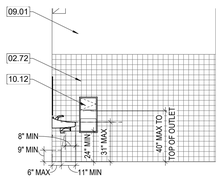
1/4" = 1' - 0"



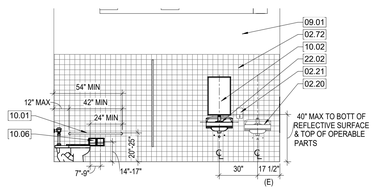
12D WEST 1/4" = 1'-0"



12C SOUTH 1/4" = 1'-0"



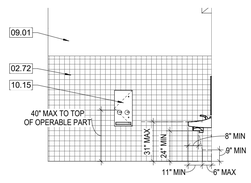
12B EAST 1/4" = 1'-0"



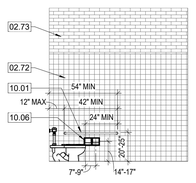
12A NORTH 1/4" = 1'-0"

12 ELEVATIONS - B6 BOYS RR (AGES 5-8)

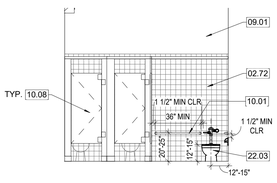
1/4" = 1' - 0"



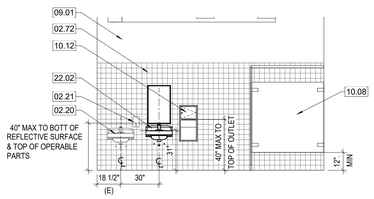
6D WEST 1/4" = 1'-0"



6C SOUTH 1/4" = 1'-0"



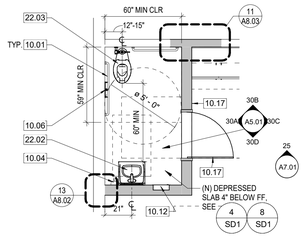
6B EAST 1/4" = 1'-0"



6A NORTH 1/4" = 1'-0"

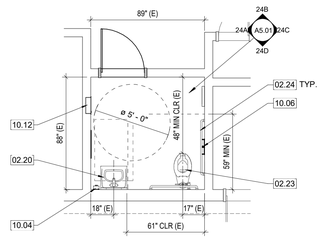
6 ELEVATIONS - B7 GIRLS RR (AGES 5-8)

1/4" = 1' - 0"



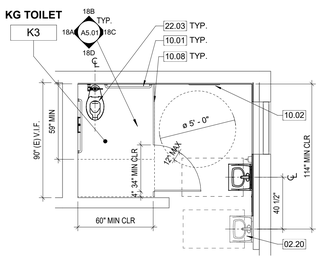
26 PLAN - AD4 NURSE TOILET (AGES 5-8)

1/4" = 1'-0"



20 PLAN - AD8 STAFF TOILET (ADULT)

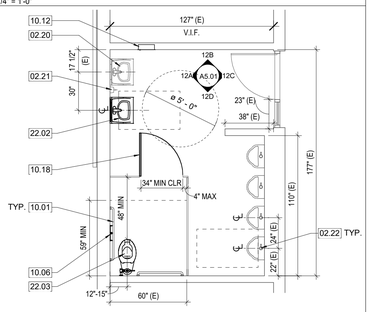
1/4" = 1'-0"



NOTE
KEYNOTES & DIMENSIONS, ALL TYPICAL AT 2 RESTROOMS

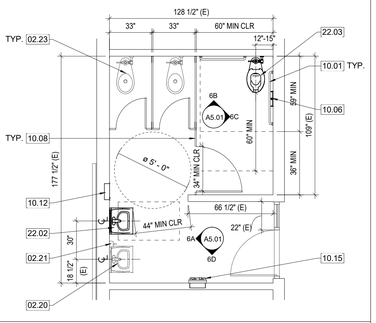
14 PLAN - KINDERGARTEN TOILET 1 & 2 (AGES 5-8)

1/4" = 1'-0"



7 PLAN - B6 BOYS RR (AGES 5-8)

1/4" = 1'-0"



1 PLAN - B7 GIRLS RR (AGES 5-8)

1/4" = 1'-0"

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CONSTRUCTION KEYED NOTES

02.20	(E) LAVATORY TO REMAIN
02.21	(E) SOAP DISPENSER TO REMAIN
02.22	(E) URINAL TO REMAIN
02.23	(E) TOILET FIXTURE TO REMAIN
02.24	(E) GRAB BAR TO REMAIN
02.31	(E) FLOOR MOUNTED OVERHEAD BRACED SOLID PLASTIC TOILET PARTITION TO REMAIN
02.72	(E) CERAMIC TILE FINISH TO REMAIN, PROTECT IN PLACE
02.73	(E) WALL FINISH TO REMAIN, PROTECT IN PLACE
08.01	(N) ALUMINUM FRAME & GLAZING WINDOW SYSTEM.SEE WINDOWS FRAMING ELEVATION A9.01, PER ALUMINUM-FRAMED STOREFRONT & ALUMINUM WINDOWS & GLAZING SPEC SECTIONS 084143, 085100, & 088000 RESPECTIVELY.
09.01	(N) INTERIOR PAINT FINISH, SEE FINISH SCHEDULE
09.03	(N) 4X4 CERAMIC TILE. PROVIDE GREENBOARD SUBSTRATE AT (E) BRICK SURFACES
10.01	(N) WALL MOUNTED GRAB BAR, MOUNT PER DETAIL 27/A8.02
10.02	(N) WALL MOUNTED MIRROR
10.04	(N) WALL MOUNTED HAND SOAP DISPENSER
10.05	(N) RECESSED SANITARY NAPKIN DISPOSAL
10.06	(N) SEMI-RECESSED TOILET PAPER DISPENSER, 4" MAX PROTRUSION
10.08	(N) SOLID PLASTIC TOILET PARTITION
10.12	(N) COMBO PAPER TOWEL DISPENSER & WASTE RECEPTACLE, 4" MAX PROTRUSION
10.15	(N) SEMI-RECESSED SANITARY NAPKIN DISPENSER
10.16	(N) TOILET SEAT COVER DISPENSER
10.17	(N) TACTILE RESTROOM DOOR & WALL SIGN, REF DETAIL 24/A8.02
10.18	(N) SOLID PLASTIC TOILET PARTITION DOOR
22.02	(N) WALL MOUNTED LAVATORY
22.03	(N) FLOOR MOUNTED ACCESSIBLE WATER CLOSET

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

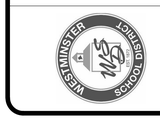
ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

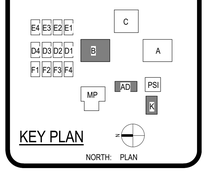
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

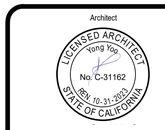
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43





Consultant

Architect



CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

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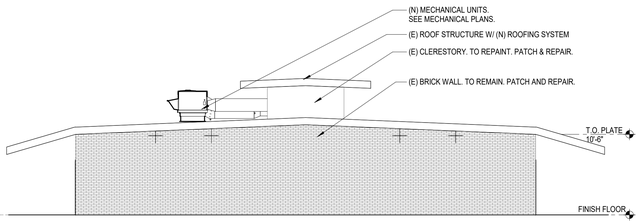
ENLARGED RESTROOM PLANS & INTERIOR ELEVATIONS

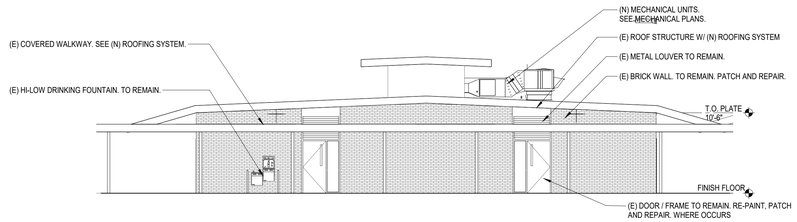
A5.01

0" 1"



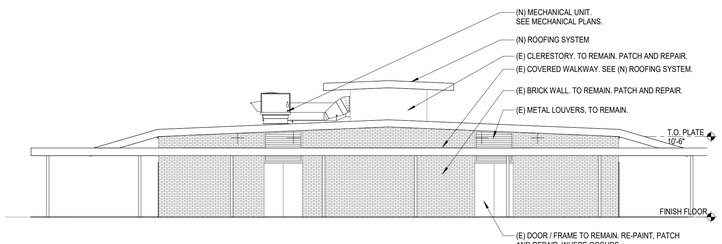
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

30 BLDG B NORTH ELEVATION
1/8" = 1'-0"



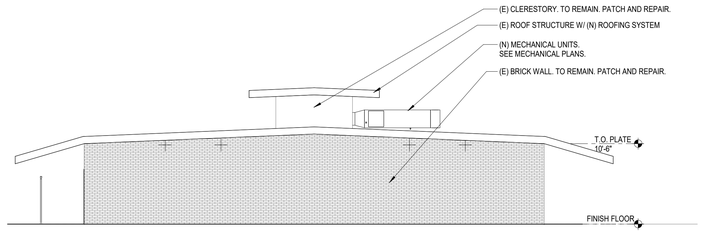
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

24 BLDG B SOUTHT ELEVATION
1/8" = 1'-0"



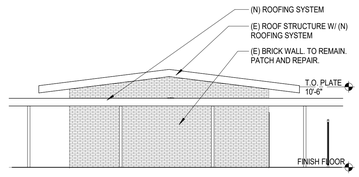
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

18 BLDG A NORTH ELEVATION
1/8" = 1'-0"



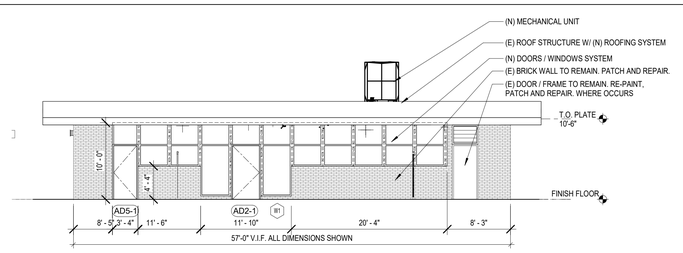
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

12 BLDG A SOUTH ELEVATION
1/8" = 1'-0"



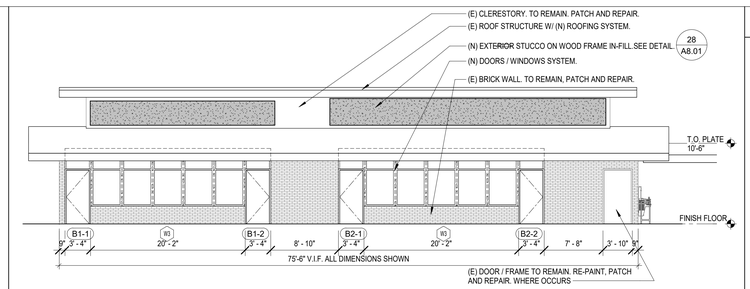
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

6 BLDG ADMIN NORTH ELEVATION
1/8" = 1'-0"



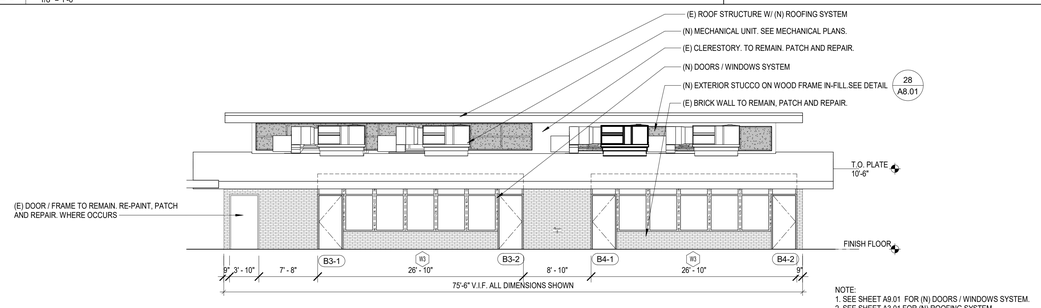
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

5 BLDG ADMIN WEST ELEVATION
1/8" = 1'-0"



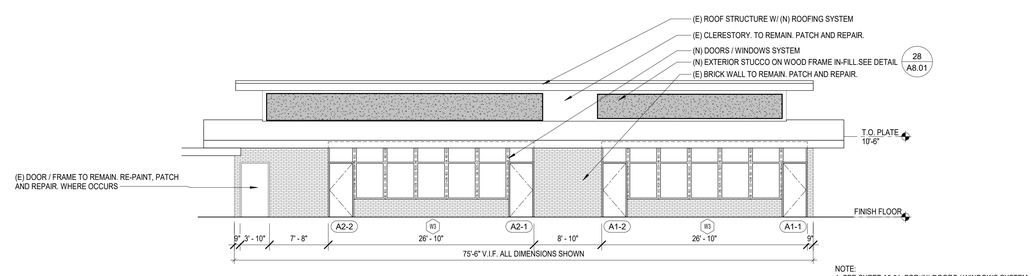
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

27 BLDG B WEST ELEVATION
1/8" = 1'-0"



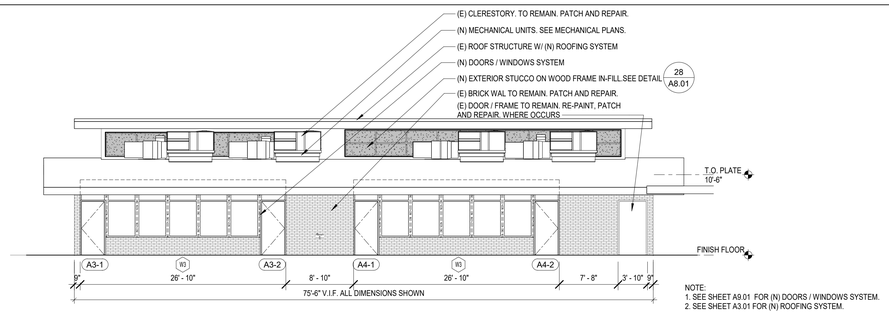
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

21 BLDG B EAST ELEVATION
1/8" = 1'-0"



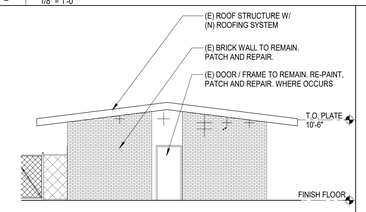
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

15 BLDG A WEST ELEVATION
1/8" = 1'-0"



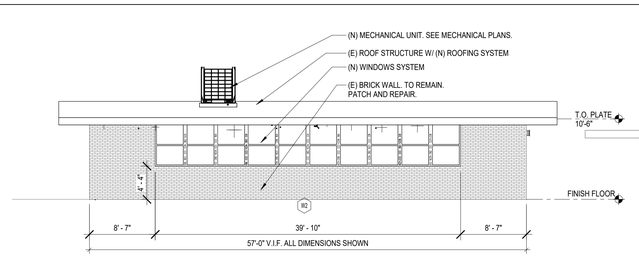
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

9 BLDG A EAST ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

3 BLDG ADMIN SOUTH ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

2 BLDG ADMIN EAST ELEVATION
1/8" = 1'-0"

EXTERIOR & INTERIOR PAINT SCOPE OF WORK

1. CONTRACTOR SHALL PAINT ALL EXTERIOR AND INTERIOR SURFACES OF ALL BUILDINGS INCLUDING PORTABLES PER SPECIFICATION, THIS WORK INCLUDES ALL FLASHING, FASCIA, PLASTER, LOUVER, DRYWALL DOORS AND FRAMES WITH THE EXCEPTION OF BRICK SURFACES. MINIMUM OF 4 COLORS TO BE SELECTED BY THE ARCHITECTS.
2. GENERAL CONTRACTOR TO NOTIFY AND DOCUMENT ANY AREAS WITH DRYROT AND / OR TERMITE DAMAGE IN WRITTEN FORMAT PRIOR TO BID.
3. PROVIDE APPROPRIATE PREPARATION , CLEANING AND BASE MATERIAL AT EXISTING EXTERIOR FINISHES BEFORE RECEIVING NEW FINISHES. PER FINISH SPECIFICATION.

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
C
B
A
AD
PSI
MP
K

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

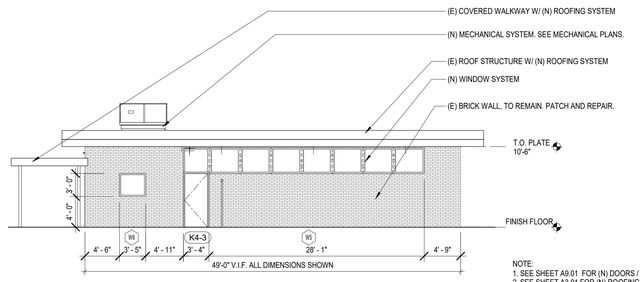
No.	Description	Date

DSA SUBMITTAL

EXTERIOR ELEVATIONS

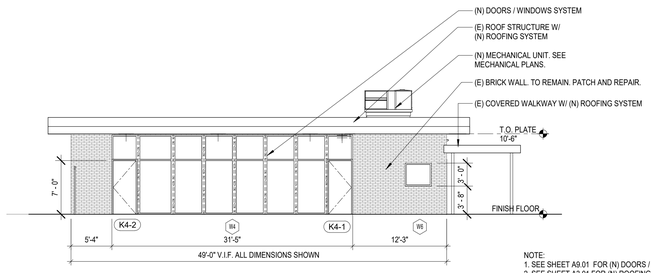
A6.01

0" 1"



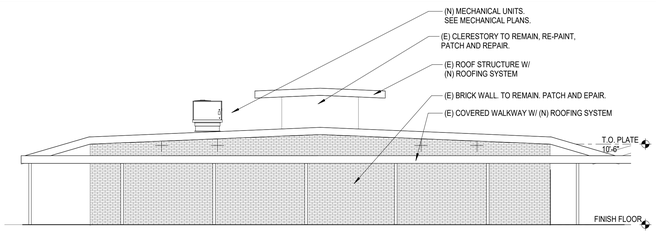
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

24 BLDG K NORTH ELEVATION
1/8" = 1'-0"



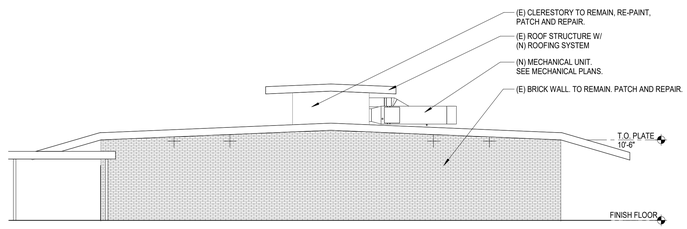
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

18 BLDG K SOUTH ELEVATION
1/8" = 1'-0"



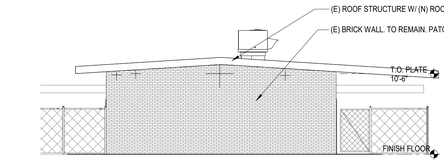
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

12 BLDG C NORTH ELEVATION
1/8" = 1'-0"



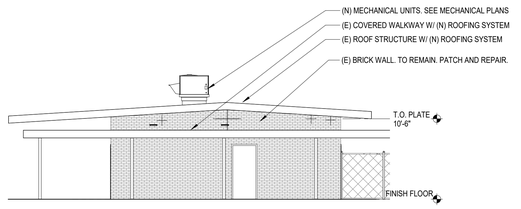
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

6 BLDG C SOUTH ELEVATION
1/8" = 1'-0"



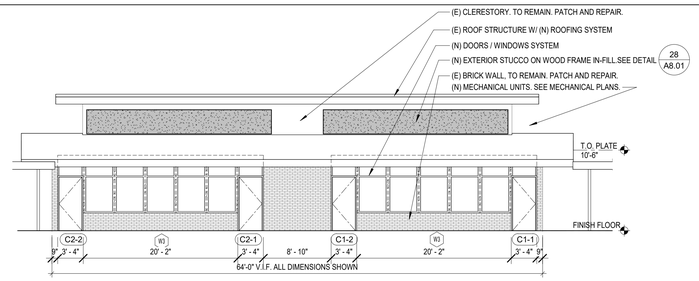
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

21 BLDG K WEST ELEVATION
1/8" = 1'-0"



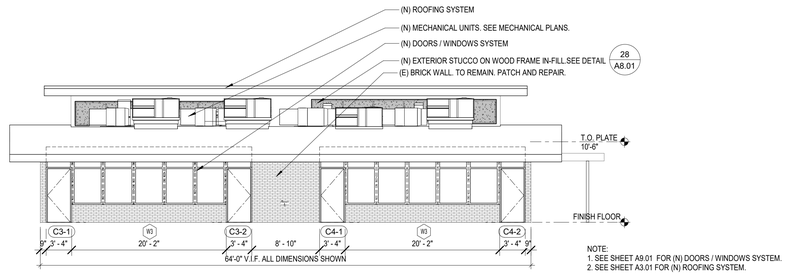
NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

15 BLDG K EAST ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

9 BLDG C WEST ELEVATION
1/8" = 1'-0"



NOTE:
1. SEE SHEET A9.01 FOR (N) DOORS / WINDOWS SYSTEM.
2. SEE SHEET A3.01 FOR (N) ROOFING SYSTEM.

3 BLDG C EAST ELEVATION
1/8" = 1'-0"

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
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DATE: 08/11/2023

PBK

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ANAHEIM
2400 E. Katella Ave. #950
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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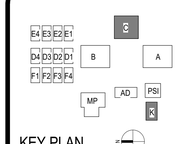
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT



Consultant

Architect

LICENSED ARCHITECT
Tong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

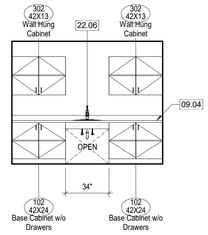
DSA SUBMITTAL

EXTERIOR ELEVATIONS

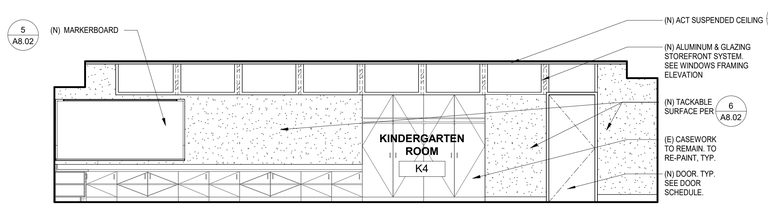
A6.02

A7.01 - INTERIOR ELEVATIONS

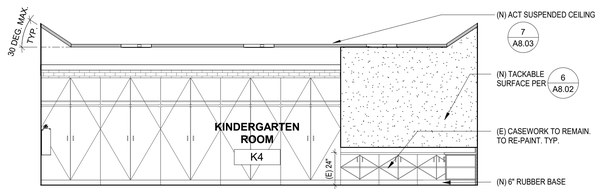
0" 1"



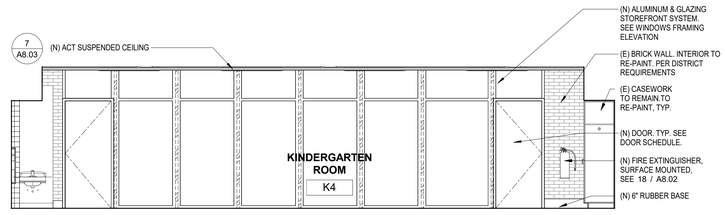
25 NURSE CASEWORK ELEVATION
1/4" = 1'-0"



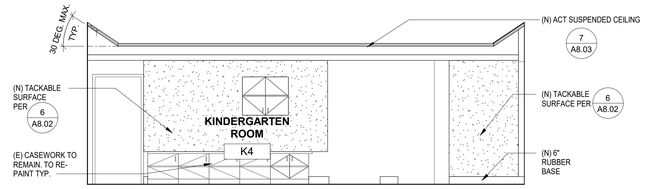
16D K4 - NORTH INTERIOR ELEVATION
1/4" = 1'-0"



16C K4 - WEST INTERIOR ELEVATION
1/4" = 1'-0"

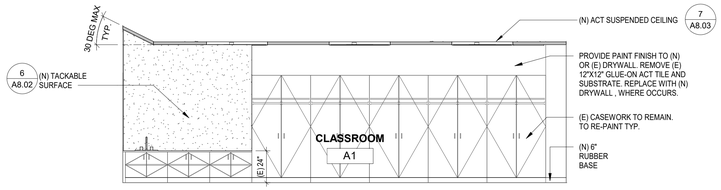


16B K4 - SOUTH INTERIOR ELEVATION
1/4" = 1'-0"

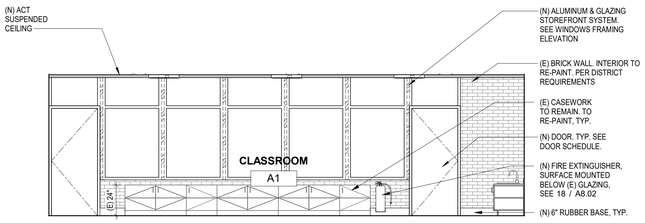


16A K4 - EAST INTERIOR ELEVATION
1/4" = 1'-0"

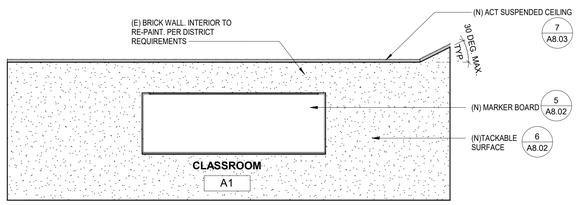
16 KINDERGARTEN K4 - INTERIOR ELEVATIONS
1/4" = 1'-0"



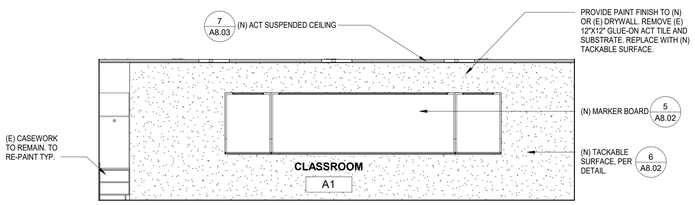
4D TYP. CLASSROOM - NORTH INTERIOR ELEVATION
1/4" = 1'-0"



4C TYP. CLASSROOM - WEST INTERIOR ELEVATION
1/4" = 1'-0"



4B TYP. CLASSROOM - SOUTH INTERIOR ELEVATION
1/4" = 1'-0"



4A TYP. CLASSROOM - EAST INTERIOR ELEVATION
1/4" = 1'-0"

4 TYPICAL CLASSROOM BLDG A, B, C - INTERIOR ELEVATIONS
1/4" = 1'-0"

FILE PATH: Z:\Projects\...
6/20/2023 8:17:03 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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2400 E. Katella Ave. #950
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P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
C
B
A
MP
AD
PSI
K

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Tong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

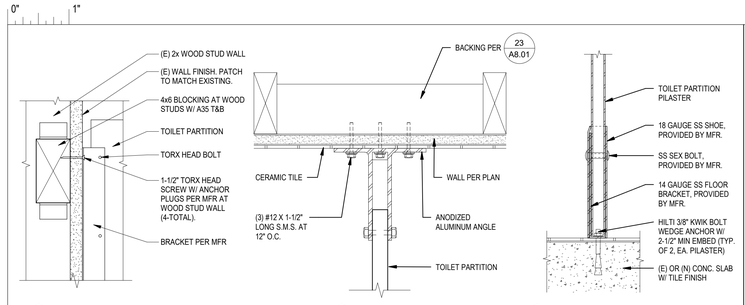
DSA SUBMITTAL

INTERIOR ELEVATIONS

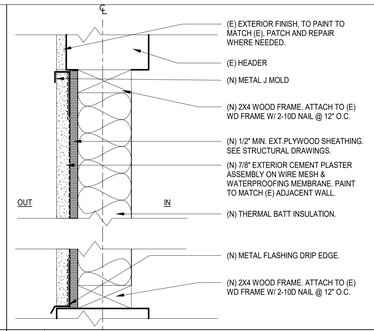
A7.01

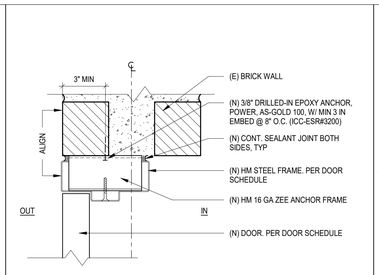
A8.01 - DOORS, WINDOW FRAME DETAILS

0" 1"

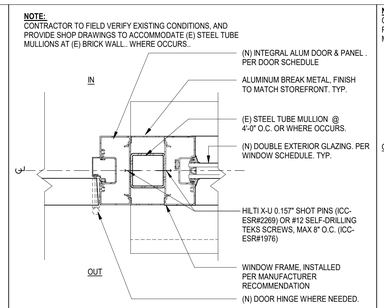


(A) WOOD STUD WALL, SECTION (B) WOOD STUD WALL, PLAN (C) CONCRETE FLOOR W/ TILE FINISH

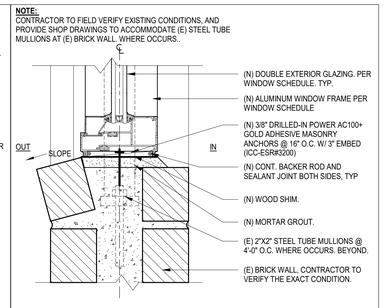




NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL. WHERE OCCURS..

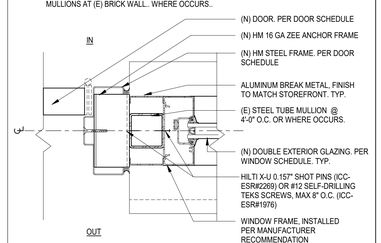


NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL. WHERE OCCURS..



30 TOILET PARTITION MOUNTING
3" = 1'-0"

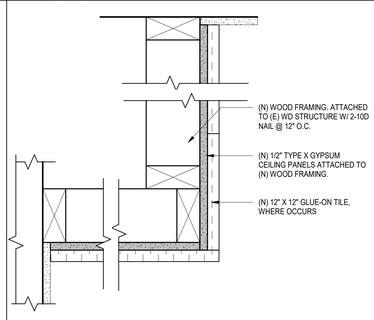
NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



29
4X4 OR 4X6 BACKING W/(2) SIMPSON A-34 FRAMING CLIPS EA END TOP AND BOT OF BLOCK W/(3) 10d NAILS @ EA LEG OF EA CLIP
TOILET ROOM ACCESSORY AS OCCURS. INSTALL PER MFR RECOMMENDATION.
WALL FINISH
CEMENTITIOUS BACKER BOARD, U.N.O.

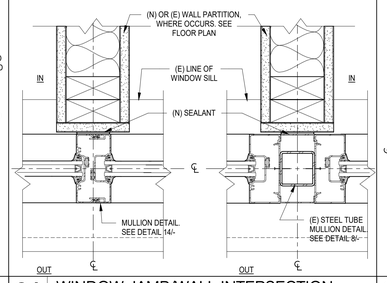
(A) WOOD STUD WALL

28 WINDOW INFILL
3" = 1'-0"

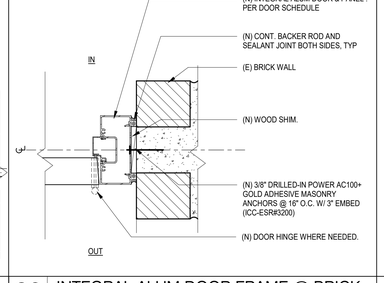


27 HM DOOR JAMB/HEAD @ BRICK
3" = 1'-0"

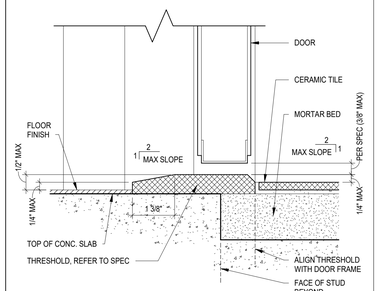
NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..



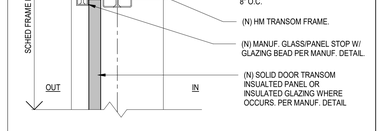
26 WINDOW/DOOR (E) MULLION ATTACHMENT
3" = 1'-0"



25 WINDOW SILL @ BRICK WALL
3" = 1'-0"

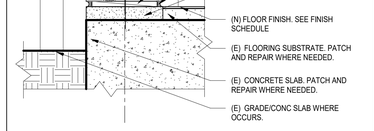


24 HM DOOR FRAME (E) MULLION ATTACH
3" = 1'-0"

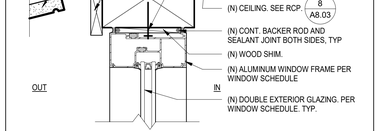


23 ACCESSORY BACKING DETAIL
3" = 1'-0"

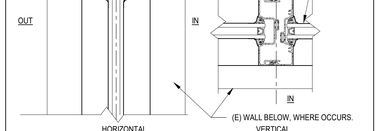
22 DROP SOFFIT
3" = 1'-0"



21 WINDOW JAMB/WALL INTERSECTION
3" = 1'-0"

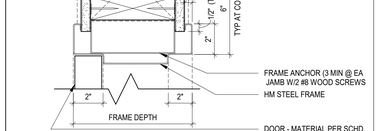


20 INTEGRAL ALUM DOOR FRAME @ BRICK
3" = 1'-0"



19 INT SILL AT CERAMIC TILE
6" = 1'-0"

NOTES:
1. FRAME DEPTH TO BE DETERMINED BY OVERALL WALL THICKNESS (TYP.)



18 HM TRANSOM @ (E) HEADER BEAM
3" = 1'-0"

17
(A)
FRAME DEPTH
EXTERIOR
INTERIOR
(N) DOOR
(N) THRESHOLD
(E) INTERIOR CONC. SLAB
(N) FLOOR FINISH (WHERE OCCURS). TYP
1/2" MAX
1/4" MAX
1/4" MAX
2
1
(E)
(E) METAL DIVIDER STRIP TO BE REMOVED.
(E) CONCRETE SLAB

NOTE:
WHERE INTERIOR FLOOR FINISH IS LESS THAN OR EQUAL TO 1/2" MAX ABOVE EXTERIOR FLOOR FINISH @ EXTERIOR DOOR LANDINGS, USE DETAIL **(A)** ABOVE, TYP.

16 WINDOW SILL @ (E) CONC SLAB
3" = 1'-0"

(B)
FRAME DEPTH
EXTERIOR
INTERIOR
(N) DOOR
(N) THRESHOLD
(E) INTERIOR CONC. SLAB
(N) FLOOR FINISH (WHERE OCCURS). TYP
1/2" MAX
1/4" MAX
1/4" MAX
2
1
(E)
(E) METAL DIVIDER STRIP TO BE REMOVED.
(E) CONCRETE SLAB
PROVIDE (N) CONCRETE SLOPING 2% MAX AWAY FROM BUILDING, WITH A 2% MAX CROSS-SLOPE @ DOOR CLEARANCE LANDINGS. PROVIDE SMOOTH TRANSITION BETWEEN (N) & (E) CONCRETE.

NOTE:
WHERE INTERIOR FLOOR FINISH IS HIGHER THAN 1/2" MAX ABOVE EXTERIOR FLOOR FINISH @ EXTERIOR DOOR LANDINGS, USE DETAIL **(B)** ABOVE, TYP.

15 WINDOW HEADER
3" = 1'-0"

14 WINDOW MULLION VERT/HORIZ
3" = 1'-0"

NOTE:
CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS, AND PROVIDE SHOP DRAWINGS TO ACCOMMODATE (E) STEEL TUBE MULLIONS AT (E) BRICK WALL.. WHERE OCCURS..

13 HM FRAME INT JAMB/HEAD @ (N) WALL
3" = 1'-0"

NOTE:
WHERE EXTERIOR & INTERIOR FINISH FLOOR ELEVATIONS ARE NOT ALIGNED, SEE DETAIL 11 A8.01

12 HM DOOR W/ TRANSOM FRAME & PANEL
3" = 1'-0"

11 EXT DOOR SILL THRESHOLD RAMP
6" = 1'-0"

10
(E) BRICK WALL
(N) 3/8" DRILLED-IN POWER AC100+ GOLD ADHESIVE MASONRY ANCHORS @ 16" O.C. W/ 3" MIN EMBED (ICC-ESR#3200)
(N) CONT. BACKER ROD AND SEALANT JOINT BOTH SIDES, TYP
(N) WOOD SHIM.
(N) ALUMINUM WINDOW FRAME PER WINDOW SCHEDULE
(N) DOUBLE EXTERIOR GLAZING. PER WINDOW SCHEDULE. TYP.
OUT
IN

9 WINDOW/DOOR INTEGRAL ALUM HEADER
3" = 1'-0"

8 WINDOW MULLION ATTACHMENT
3" = 1'-0"

7 EXT SILL @ (E) DOOR
6" = 1'-0"

6
(E) BRICK WALL
(N) 3/8" DRILLED-IN POWER AC100+ GOLD ADHESIVE MASONRY ANCHORS @ 16" O.C. W/ 3" MIN EMBED (ICC-ESR#3200)
(N) CONT. BACKER ROD AND SEALANT JOINT BOTH SIDES, TYP
(N) WOOD SHIM.
(N) ALUMINUM WINDOW FRAME PER WINDOW SCHEDULE
(N) DOUBLE EXTERIOR GLAZING. PER WINDOW SCHEDULE. TYP.
OUT
IN

5
(E) EXTERIOR PLASTER SOFFIT. TO REMAIN. PATCH & REPAIR WHERE NEEDED.
(N) CONT. 3/4" X 3-1/2" WINDOW TRIM, FASTENED W/ 18 GA BRAD NAILER 1-1/2" EMBED @ 12" O.C. WHERE OCCURS.
(E) WINDOW HEADER.
(N) 3/8" LAG SCREW INTO WOOD MEMBER W/ MIN. EMBED - 2-1/2", MAX 8" O.C., 2" MIN EDGE DISTANCE.
(N) CEILING. SEE RCP.
8 A8.03
(N) CONT. BACKER ROD AND SEALANT JOINT BOTH SIDES, TYP
(N) WOOD SHIM.
(N) ALUMINUM WINDOW FRAME PER WINDOW SCHEDULE
(N) DOUBLE EXTERIOR GLAZING. PER WINDOW SCHEDULE. TYP.
OUT
IN

4 WINDOW HEADER @ KINDER
3" = 1'-0"

3 WINDOW/DOOR MULLION ATTACHMENT
3" = 1'-0"

2 WINDOW JAMB @ BRICK WALL
3" = 1'-0"

1 (N) DOOR OPENING
1/2" = 1'-0"

FILE PATH: Z:\Projects\...
6/20/2023 8:17:06 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
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ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

DOORS, WINDOW FRAME DETAILS

A8.01

0" 1"

BACKGROUND COLOR SHALL CONTRAST 70% MIN. WITH DOOR COLOR, TYP.
1/4" THICK CIRCLE
SUB-SURFACE IMAGE CENTERED ON SIGN, TYP.
CIRCLE COLOR TO CONTRAST DOOR AND TRIANGLE COLOR.
12"
8" TYP.
12"
EQUAL SIDES, TYP
BOYS
GIRLS
GENDER NEUTRAL RESTROOM
1/4" THICK TRIANGLE
1/4" THICK TRIANGLE OVER 1/4" THICK CIRCLE
VERTICES SHALL BE RADIUSES 1/8" MIN. - 1/4" MAX., TYP
EDGE SHALL BE ROUNDED @ 1/16" MIN. OR CHAMFERED @ 1/8" MIN., TYP

(B) DOOR SIGNAGE

8" TYP
EQ. (1/2" MIN)
6" TYP.
10" TYP
1"
3/8"
+60" * MAX. AFF
+48" * MIN. AFF
GIRLS
BOYS
CORNERS SHALL HAVE 3/8" RADIUS, TYP.
FONT = HELVETICA NARROW CHARACTER FONT HEIGHT = 1"

PROVIDE AT SINGLE OCCUPANT TOILET ROOMS
+60" * MAX. AFF
+48" * MIN. AFF
RESTROOM
8"
2"
4 1/64"
4"
GENDER NEUTRAL RESTROOM

(A) WALL SIGNAGE

* 60" MAX A.F.F. TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. A.F.F. TO THE BASELINE OF THE LOWEST BRAILLE CELLS

NOTE:
FOR CHARACTER TYPE AND BRAILLE REQUIREMENTS SEE DETAILS 12 A8.02 11 A8.02

24 RESTROOM DOOR & WALL SIGNS
1 1/2" = 1'-0"

MOUNTING BRACKET REFER TO SPECIFICATION & VERIFY WITH MANUFACTURER FOR SPECIFIC SIZES OF HOLES & TYPES OF SCREWS. PROVIDE BACKING AS REQUIRED.
+48" MAX TO FIRE EXT. HANDLE OR CABINET HANDLE
FIRE EXTINGUISHER PER PLAN
WALL PER PLAN
TYPE 'X' GYP BOARD, WO. FINISH FLOOR
4" MAX.

18 WALL MOUNT FIRE EXTINGUISHER
3" = 1'-0"

CHARACTER REQUIREMENTS:

A. CHARACTER REQUIREMENTS FOR ALL SIGNS PER 2019 CBC 11B-703:
1. 3 CHARACTERS SHALL BE UPPERSHASE.
2. CHARACTERS SHALL BE SANS SERIF. CHARTERS SHALL NOT BE ITALLIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
3. CHARACTER SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
4. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MINIMUM AND 170 PERCENT MAXIMUM OF THE CHARACTER HEIGHT.
5. TEXT SHALL BE IN HORIZONTAL FORMAT.
6. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH AND CONTRAST WITH ONE ANOTHER

B. RAISED CHARACTER REQUIREMENTS FOR SIGNS WITH BRAILLE PER 2019 CBC 11B-703.2:
1. RAISED CHARACTERS SHALL COMPLY WITH REQUIREMENTS NOTED IN PARAGRAPH 'A' ABOVE
2. RAISED CHARACTERS SHALL BE 1/32 INCH MIN ABOVE BACKGROUND.
3. RAISED CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".
4. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.
5. CHARACTER SPACING BETWEEN INDIVIDUAL RAISED LETTERS SHALL BE 1/8 INCH MINIMUM AND FOUR (4) TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM.

C. VISUAL CHARACTER REQUIREMENTS FOR SIGNS WITHOUT BRAILLE PER 2019 CBC 11B-703.5:
1. VISUAL CHARACTERS SHALL COMPLY WITH REQUIREMENTS NOTED IN PARAGRAPH 'A' ABOVE
2. MINIMUM CHARACTER HEIGHT SHALL CONFORM TO 2019 CBC TABLE 11B-703.5.5 BUT IN NO CASE SHALL BE LESS THAN 5/8 INCH.
3. HEIGHT FROM FINISH FLOOR SHALL BE NO LESS THAN 40 INCHES.
4. STROKE THICKNESS OF THE UPPERCASE LETTER 'I' SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.
5. SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 10 PERCENT MINIMUM AND 35 PERCENT MAXIMUM OF CHARACTER HEIGHT.
6. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF CHARACTERS WITHIN A MESSAGE SHALL BE 135% MIN. AND 170% MAX. OF THE CHARACTER HEIGHT.

CHARACTER AND STROKE WIDTH TO HEIGHT PROPORTIONS.

1:1:1 MAX 110%	3:5 MIN 60%	3:20 MAX 15% (TACTILE)	1:5 MAX 20% (NON-TACTILE)	1:10 MIN 10%
CHARACTER WIDTH (UPPERCASE LETTER "O")		STROKE THICKNESS(UPPERCASE LETTER "I")		

12 CHARACTER REQ. FOR SIGNAGE
1" = 1'-0"

CEILING HEIGHT /TRANSOM WINDOW SILL
(N) / (E) WOOD STUD WALL
(N) / (E) 5/8" GYP BOARD
ADHESIVELY SECURED. PER MANUFACTURERS DETAIL
VINYL FABRIC COVER 1/4" CORK BOARD
FLOOR LEVEL
TACKBOARD ON GYP BD WOOD FRAMING WALL

CEILING HEIGHT /TRANSOM WINDOW SILL
(E) BRICK WALL
ADHESIVELY SECURED. PER MANUFACTURERS DETAIL
VINYL FABRIC COVER 1/4" CORK BOARD
FLOOR LEVEL
TACKBOARD ON (E) BRICK WALL

6 TACKBOARD DETAIL
3" = 1'-0"

6"
5/8" MIN. CHARACTER HEIGHT, HELVETICA NARROW, SEE ALSO 4 --
ACCESSIBLE
8"
BRAILLE PER 11 --
48" MIN.AFF *
60" MAX.AFF *

* 60" MAX A.F.F. TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. A.F.F. TO THE BASELINE OF THE LOWEST BRAILLE CELLS

101400.15-S Rev 10/17

29 ACCESSIBLE ROUTE SIGN
6" = 1'-0"

9"
EQ 6" EQ
2"
6"
10"
EQ
ASSISTIVE LISTENING SYSTEM AVAILABLE
CORNERS SHALL HAVE 3/8" RADIUS, TYP
INTERNATIONAL SYMBOL OF ACCESS FOR HEARING LOSS
+60" AFF
PICTOGRAM SHALL CONTRAST WITH BACKGROUND AND HAVE A NON-GLARE FINISH
5/8" MIN CHARACTER HEIGHT. HELVETICA NARROW. SEE ALSO

NOTES:
1. SIGN MATERIAL SHALL BE 1/4" THICK PLASTIC W/ 1/32" RAISED LETTERS
2. MOUNT W/ VANDAL RESISTANT FASTENERS

101400.13-S CBC 2016 - Rev 3/17

23 ASSISTIVE LISTENING SIGNAGE
3" = 1'-0"

9"
EQ EQ
6"
EQ
MAXIMUM OCCUPANCY 200
0.94" MIN. - 1.06" MAX.
+84" AFF
5/8" MIN CHARACTER HEIGHT. HELVETICA NARROW. SEE ALSO
VERIFY # PER PLAN
CORNERS SHALL HAVE 3/8" RADIUS, TYP

NOTES:
1. SIGN MATERIAL SHALL BE 1/4" THICK PLASTIC
2. MOUNT W/ VANDAL RESISTANT FASTENERS

101400.14-S CBC 2016 - Rev 7/17

17 OCCUPANT LOAD SIGN
3" = 1'-0"

BRAILLE REQUIREMENTS PER 2019 CBC 11B-703.3:
1. CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL COMPLY WITH SECTIONS 11B-703.3 AND 11B-703.4
2. BRAILLE DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND COMPLY WITH TABLE 11B-703.3.1
3. DOT BASE DIAMETER = 0.059 TO 0.063 INCHES
4. DISTANCE BETWEEN TWO DOTS IN THE SAME CELL = 0.100 INCHES
5. DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS = 0.300 INCHES
6. DOT HEIGHT = 0.025 TO 0.037 INCHES
7. DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW = 0.395 TO 0.400 INCHES
8. SPACING BETWEEN DOTS AND CELLS PER BELOW, MEASURED CENTER TO CENTER...

5. SPACING BETWEEN CELLS
SINGLE BRAILLE CELL
RAISED DOT
NO RAISED DOT
BLANK CELL SPACE BETWEEN WORDS
4. SPACING BETWEEN DOTS (VERTICAL OR HORIZONTAL)
7. DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW

9. BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" (9.5MM) MIN. AND 1/2 INCH (12.7MM) MAXIMUM FROM ANY OTHER TACTILE CHARACTERS AND 3/8" MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS.

11 BRAILLE STANDARDS FOR SIGNAGE
6" = 1'-0"

5/8" GYP BOARD
#12 WOOD SCREW @ 16" O.C. @ 1-1/2" MIN. EMBED.
VARIES TO FIN. FLR
CORK INSERT
MAP RAIL
MARKERBOARD TRIM AS SPECIFIED
SOLID BLOCKING W/ A34 TOP & BOTTOM AT EA. END
MARKER TRAY W/ END PLATES EACH END
4" MAX
WOOD STUDS BEHIND
MARKERBOARD ON GYP BD WOOD FRAMING WALL

VARIES TO FIN. FLR
CORK INSERT
MAP RAIL
MARKERBOARD TRIM AS SPECIFIED
1/2" SIMPSON TITEN HD @ 16" O.C. 2-1/2" MIN. EMBED . ICC ESR 1056
MARKER TRAY W/ END PLATES EACH END
4" MAX
(E) BRICK WALL BEHIND
MARKERBOARD ON (E) BRICK WALL

5 MARKERBOARD DETAIL
3" = 1'-0"

28 RESTROOM SIGNAGE
1/2" = 1'-0"

CORNERS SHALL HAVE 3/8" RADIUS, TYP
ATTACH WITH VANDALL RESISTANT SCREWS PER SPEC, TYP
FONT = HELVETICA NARROW CHARACTER HEIGHT = 1"
9"
CONFERENCE 100-A
4"
EQ
+60" * MAX AFF
1.35" MIN. - 1.7" MAX.
3/8"
+48" * MIN AFF
VERIFY ROOM NAME AND NUMBER WITH OWNER PRIOR TO FABRICATION

* 60" MAX A.F.F. TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. A.F.F. TO THE BASELINE OF THE LOWEST BRAILLE CELLS

101400.11-S CBC 2019- Rev 09/19

22 TYP. ROOM ID SIGN
6" = 1'-0"

CORNERS SHALL HAVE 3/8" RADIUS, TYP
FONT = HELVETICA NARROW CHARACTER HEIGHT = 1". SEE ALSO SPEC AND 12 A8.02 TYP
6"
4"
1.35" MIN. - 1.7" MAX.
EXIT ROUTE
EXIT
3/8"
BRAILLE PER 11 A8.02 TYP
(A)
(B)
48" MIN.AFF *
60" MAX.AFF *

* 60" MAX A.F.F. TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. A.F.F. TO THE BASELINE OF THE LOWEST BRAILLE CELLS

101400.12-S CBC 2019 - Rev 10/19

16 TACTILE EXIT SIGNS
3" = 1'-0"

NOTE:
PROVIDE SPACES AS NEEDED SO SIGNAGE IS WITHIN 3" OF WINDOW FRAME

MOUNTING AT DBL. GLAZING
WINDOW FRAME
SAME HEIGHT, WIDTH, CORNER RADIUSES- MIRROR BACK TO BACK
3" TYP.
GLAZING
BLANK PLATE/ SIGNAGE, AS OCCURS. PROVIDE BLANK IF NO SIGNAGE OCCURS. MOUNTED WITH CLEAR ADHESIVE SILICONE.
ALIGN EACH END, TYP.
SIGNAGE MOUNTED WITH CLEAR SILICONE ADHESIVE

MOUNTING AT SGL. GLAZING
WINDOW FRAME
SAME HEIGHT, WIDTH, CORNER RADIUSES- MIRROR BACK TO BACK
3" TYP.
BLANK PLATE/ SIGNAGE, AS OCCURS. PROVIDE BLANK IF NO SIGNAGE OCCURS. MOUNTED WITH CLEAR ADHESIVE SILICONE.
GLAZING
ALIGN EACH END, TYP.
SIGNAGE MOUNTED WITH CLEAR SILICONE ADHESIVE

MOUNTING AT C.M.U WALL
C.M.U WALL
AT SPLIT FACE WALL GRIND SMOOTH HIGH POINTS AS NEEDED TO ALLOW PLUMB INSTALLATION
SIGNAGE MOUNTED TO MATERIAL/SURFACE WITH MECHANICAL FASTENERS & CLEAR SILICONE ADHESIVE.

4 ROOM IDENTIFICATION SIGN MOUNTING
3" = 1'-0"

27 GRAB BAR MOUNT
3" = 1'-0"

MORTAR BED TO BE USED IN MULTI - OCCUPANT RESTROOMS
THIN - SET TO BE USED IN SINGLE - OCCUPANT RESTROOMS

5/8" GYPSUM WATER RESISTANT BACKER
WALL TILE - REFER TO FINISH SCHEDULE
WATERPROOF MEMBRANE TO EXTEND 24" UP FACE OF WALL
COVE TILE BASE - REFER TO FINISH PLAN
FLOOR TILE. PER SPECS SECTION 093000
WATERPROOF FLOOR MEMBRANE
MORTAR BED PER OR THIN SET PER
NOTE: PROVIDE HOT MOP AT RESTROOM WALLS WITH NO CURB OR SINGLE OCCUPANT RESTROOMS

21 TYPICAL TILE WALL BASE
6" = 1'-0"

7'-2" WHERE APPLIES
BULLNOSE COLOR: WHITE SIZE: 4-1/4" X 4-1/4"
ACCENT TILE A COLOR: SEE SPEC # 09 30 00 SIZE: 4-1/4" X 4-1/4"
WALL TILE - FIELD COLOR: WHITE SIZE: 4-1/4" X 4-1/4"
COVE BASE COLOR: WHITE SIZE/ 4-1/4" X 4-1/4"
21 A8.02

NOTE:
SEE WOOD FRAMING AT STRUCTURAL DWGS SN1

15 TILE FINISH ELEVATION
1/2" = 1'-0"

(E) BRICK WALL
TOP PLATE BRACING. SEE DETAIL 14 A8.02 20 A8.02
CLNG FRAMING, WHERE OCCURS. SEE DETAIL 23 A8.03
6" MIN ABOVE FINNISH CLNG HT.
HEAD
1/2" TYPE X GYP BD CEILING
5/8" TYPE X GYP BD CEILING OR BACKER BD WHERE TILE OCCURS
SEE RCP FOR (N) CLNG HT.
2X WOOD STUD PER ARCH PLAN & STRUCT DETL 15/SD1
SOUND ATTENUATION BLANKET (FULL HEIGHT) - REFER TO TYP. NOTES. ONLY AT RESTROOMS
PLAN
TILE W/ BACKER BOARD WHERE OCCURS PER FINISH SCHEDULE
2X CONT BACKING PER STRUCT DETL 15/SD1
2X WOOD BLOCKING PER STRUCT DETL 15/SD1
ANCHOR SCREW PER STRUCT DETL 15/SD1
2X PTDF SILL PLATE
BASE
(2) #4 CONT REBAR
6" HIGH CONC CURB
#4 DOWELS @ 18"OC
(N) CONC SLAB PER STRUCT DETL 15/SD1
FINISH FLOOR
3" MIN
9"
7"
5"
12"

3 C- PARTITION TYPE (WALL FURRING)
3" = 1'-0"

26 DOOR INFILL DETAIL
1/2" = 1'-0"

(E) HEADER TO REMAIN
REMOVE (E) WALL FINISH AS REQUIRED TO ALLOW INFILL FRAMING
2X STUD FRAMING INFILL PER STRUCT DETL 6/SD1
(E) F.F./F.S.
INTERIOR DRYWALL TO MATCH EXISTING AND ALIGN WITH EXISTING ADJACENT DRYWALL SURFACES. PAINT TO MATCH EXISTING
SIDE OF TOP PLATE AND NAIL TO (E) HOR.
2X STUD TO MATCH EXISTING PER STRUCT DETL 6/SD1
FOR VERTICAL STUD ATTACHMENT REFER TO STRUCTURAL DETAIL 6/SD1
2X P.T. SILL PER STRUCT DETL 6/SD1

20 TOP CONNECTION PERPENDICULAR
1 1/2" = 1'-0"

(E) GLB 5-1/4"X 20-1/2" V.O.S.
(E) 2X12 @24" O.C. ROOF JOIST V.O.S.
(N) 2x BLKG EVERY 4'-0"
1" GAP
CONT. 3x6 FLAT
1" GAP
DOUBLE TOP PLATE
NON-BEARING PARTITION
10d NAIL @ 6" O.C. INTO VERT. BLKG
2-10d NAIL INTO ROOF JOISTS

14 TOP CONNECTION - PARALLEL
1 1/2" = 1'-0"

(E) ROOF FRAMING PER PLAN V.O.S.
(E) 2X12 @24" O.C. ROOF JOIST V.O.S.
(N) 3-10D NAIL
(N) 2x BLKG
(N) 2X4 BRACE @ 32" O.C. MAX. TYP.
(N) 2X BLKG W/ (2) SIMPSON A-35 FRAMING CLIPS EA END, EA SIDE OF BLKG W/ (3) 10d NAILS @ EA LEG OF EA CLIP
PERPENDICULAR FRAMING
PARALLEL FRAMING
CEILING LINE
(N) 3-10D NAIL
SEE STRUCTURAL DETAIL 5/SD1
(N) STUD WALL

2 B- PARTITION TYPE
3" = 1'-0"

HEAD
(E) STRUCTURE
TOP PLATE - REFER TO PARTITION PLATE 14 A8.02 20 A8.02
SOUND ATTENUATION BLANKET (FULL HEIGHT) - REFER TO TYP. NOTES. ONLY AT RESTROOMS
2X BLOCKING @ 8'-0" O.C. SEE FLOOR PLAN FOR PARTITION TYPE & CORE WIDTH WALL TAG.
PLAN
2X VERTICAL WOOD STUDS @ 16" O.C. SEE FLOOR PLAN FOR PARTITION TYPE & CORE WIDTH WALL TAG.
5/8" TYPE "X" GYPSUM BOARD
SCHEDULED TILE W/ BACKER BOARD WHERE OCCURS - REFER TO FINISH SCHEDULE
BASE
5/8" DIA THREADED ROD @ 4'-0" O.C. INSTALL W/ HILTI HIT-HY 200 (ICC-ES ESR-3187) PULL TEST = 2,000)
7'-2" TILE FINISH WHERE OCCURS
2X PTDF SILL PLATE
REST ROOM SIDE
2 #4 CONT REBAR
6" CONC BASE
F.F.
CLEAN & ROUGHEN (E) SLAB. 1/4" MIN CONCRETE DEPTH.
3" MIN
ACOUSTICAL SEALANT AT NON-RATED WALLS
FOR TOILET CONDITION

19 ROOM IDENTIFICATION SIGNAGE
1 1/2" = 1'-0"

9" MIN.
ROOM SIGN PER 22 A8.02
9" MIN.
ROOM SIGN PER 22 A8.02
SCHED FRAME WIDTH
ROOM SIGN PER 22 A8.02
DET. 22/A.02
DET. 22/A.02
EQ EQ
9" MIN
56" AFF TO CENTER OF DOOR SIGN
ELEVATION
9" MIN.
ROOM SIGN PER 22 A8.02
DET. 22/A.02
DET. 22/A.02
MOUNT DETAILS
ROOM EXIT SIDE
MOUNT DETAILS
ROOM ENTRY SIDE
ELEVATION
(B) ROOM SIGN C.B.C. FIGURE 11B-703.4.1
REFER TO MOUNTING DETAILS 4 A8.02
CLASSROOM
4"
4"
OPTION 2 SIGN PLACEMENT
OPTION 1 SIGN PLACEMENT
ROOM SIGNAGE PER 22 A8.02
(A) BUILDING ENTRY ROOM SIGN
COLOR TO BE SELECTED BY ARCHITECT (LIGHT TEXT / DARK BACKGROUND)

NOTES:
1. FOR CHARACTER TYPE & BRAILLE, SEE ALSO DETAIL 12 A8.02 11 A8.02
2. SIGN MATERIAL SHALL BE PAINTED, 1/8" THICK ES PLASTIC USING GRAPHIC PROCESS SAND-CARVED W/ 3/32" RAISED GRAPHIC AND LETTERS. PROVIDE MECHANICAL MOUNTING W/ COUNTERSUNK, VANDAL RESISTANT #8 FASTENERS. MOUNT ON GLAZING WITH CLEAR SILICONE ADHESIVE AND A SECOND SIGN OR BLANK ALIGNED ON THE OTHER SIDE OF GLAZING TO MASK THE ADHESIVE.
3. PROVIDE ONE SIGN WHERE INDICATED ON PLANS OR SCHEDULE.
4. SIGNS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR, WHERE THERE IS NO WALL SPACE ON THE LATCH SIDE, INCLUDING DOUBLE LEAF DOORS, SIGNS SHALL BE PLACED ON THE NEAREST ADJACENT WALL, PREFERABLY ON THE RIGHT. MOUNTING LOCATION SHALL BE DETERMINED SO THAT A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE SWING OF A DOOR. FOR PAIRS OF DOORS WHERE DOOR SWING IS LIMITED TO 90 DEGREES, MOUNT SIGN 9" FROM EDGE OF DOOR. FOR PAIRS OF DOORS WHERE DOOR SWING ECCEEDS 90 DEGREES, MOUNT SIGN DOOR WIDTH PLUS 9" FROM EDGE OF DOOR.

13 (N) WALL TO (E) BRICK WALL
3" = 1'-0"

(E) BRICK WALL TO REMAIN
(N) 4x4 TILE FINISH
(N) WATERPROOFING MEMBRANE
(N) 5/8" GYPSUM BOARD
SEE STRUCTURAL POST-INSTALLED ANCHOR BOLTS STRUCTURAL SHEET SN1
1/2" DIA. SIMPSON HY270 EPOXY ANCHORS (ICC-ESR # 4143)
(N) 2x6 STUD WALL

HEAD
(E) STRUCTURE
TOP PLATE - REFER TO PARTITION PLATE 14 A8.02 20 A8.02
SOUND ATTENUATION BLANKET (FULL HEIGHT) - REFER TO TYP. NOTES. ONLY AT RESTROOMS
2X BLOCKING @ 8'-0" O.C. SEE FLOOR PLAN FOR PARTITION TYPE & CORE WIDTH WALL TAG.
PLAN
2X VERTICAL WOOD STUDS @ 16" O.C. SEE FLOOR PLAN FOR PARTITION TYPE & CORE WIDTH WALL TAG.
5/8" TYPE "X" GYPSUM BOARD
BASE
(N) SHOT PINS (HILTI X-U 0.157 WITH EMBED=1-1/2" INTO (E) SLAB-ON-GRADE AT 16-IN O.C. (ICC-ESR#2269), OR 3/8-IN HILTI EXPANSION BOLT KWIK BOLT-TZ2 (ICC-ESR#4266) AT 32-IN O.C.
SCHEDULED BASE WHERE OCCURS
2X PTDF SILL PLATE
F.F.

1 A- PARTITION TYPE
3" = 1'-0"

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6/20/2023 8:17:09 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
B C A
MP AD PSI K
KEY PLAN
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Tong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

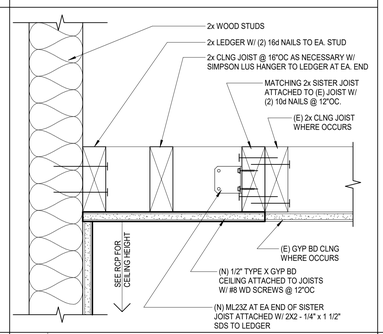
No.	Description	Date

DSA SUBMITTAL

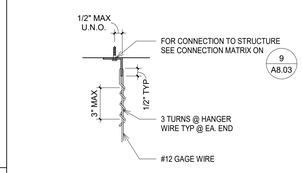
PARTITION TYPES AND MISC. DETAILS

A8.02

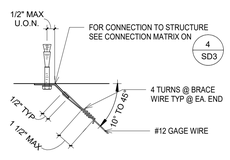
0" 1"



23 (N) HARD LID CLNG FRAMING
3" = 1'-0"

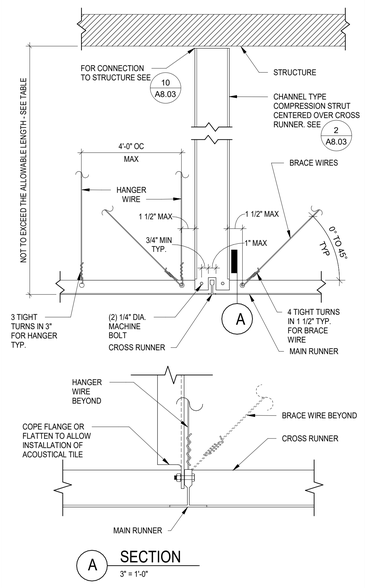


HANGER WIRE



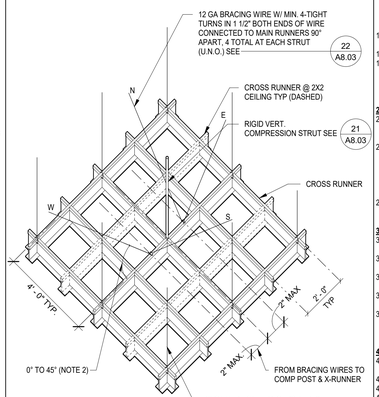
BRACING WIRE

22 TYPICAL WIRE TURNS
3" = 1'-0"



095100.3.10-S — DSA IR 25-2 #3.10 - Rev 03/18/22

21 COMPRESSION STRUT - CHANNEL
1 1/2" = 1'-0"



NOTES:
1. SUSPENDED CEILING SHALL COMPLY WITH DSA IR 25-2.13
2. STRUTS SHALL NOT REPLACE HANGER WIRES
3. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.
4. FOR TYPICAL SUSPENDED CEILING NOTES, SEE 13 A8.03
5. FOR TYPICAL CEILING PLAN & COMPRESSION STRUT LAYOUT, SEE 7 A8.03
6. FOR HANGER AND/OR BRACING WIRE SPLICING, SEE 3 A8.03

095100.2.35-S — DSA IR 25-2 #2.35 - Rev 03/18/22

20 SUSPENDED CEILING SYSTEM
3/8" = 1'-0"

1. CEILING SYSTEM GENERAL NOTES: PER IR 25-2 REV 3/18/22
1.01 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 AND SECTION 5.1 OF ASTM E580-10a.
1.02 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08.
1.03 CEILING SYSTEMS. THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT:
MANUFACTURER'S NAME ARMSTRONG WORLD INDUSTRIES, INC.
PRODUCT EVALUATION REPORT TYPE AND NUMBER ICC ESR-1308
MANUFACTURER'S MODEL NUMBER - MAIN RUNNER ARMSTRONG HEAVY DUTY PRELUDE XL 7301
MANUFACTURER'S CATALOG NUMBER - CROSS RUNNER ARMSTRONG XL7328
1.04 SEISMIC WALL CLIP:
MANUFACTURER'S MODEL BERC2
1.05 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
1.06 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE 3/4" CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE 3/4" CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE TO SLIP.

2. MATERIALS:
2.01 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVINIZED) CARBON STEEL CONFORMING TO ASTM A641-09a. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.
2.02 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A6453-11, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/S2-10). MATERIAL 43 MIL (18 GAGE) AND LIGHTER SHALL HAVE A MINIMUM YIELD STRENGTH OF 32 KSI. MATERIAL 54 MIL (16 GAGE) AND HEAVIER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.
2.03 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH (Fy) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (Fu) OF 48 KSI.

3. ATTACHMENT OF HANGER AND BRACING WIRES:
3.01 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
3.02 HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, DUCTWORK, CONDUIT AND EQUIPMENT.
3.03 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.
3.04 SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.
3.05 HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.)

4. FASTENERS AND WELDING:
4.01 SHEET METAL SCREWS SHALL COMPLY WITH ASTM C1513-10, ASME B18.6.4-89 (R2005). PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN THREE EXPOSED THREADS.
4.02 EXPANSION ANCHORS SHALL BE: NA
4.03 POWER-ACTUATED FASTENERS SHALL BE: NA
4.04 IF NOT OTHERWISE SPECIFIED IN THE EVALUATION REPORT, POWER-ACTUATED FASTENERS INSTALLED IN STEEL SHALL BE INSTALLED SO THE ENTIRE POINTED END OF THE FASTENER IS DRIVEN THROUGH THE STEEL MEMBER.
4.05 POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.
4.06 CONCRETE REINFORCEMENT AND PRESTRESSING TENDONS SHALL BE LOCATED BY NON DESTRUCTIVE MEANS PRIOR TO INSTALLING POST - INSTALLED ANCHOR.
4.07 WELDING SHALL BE IN ACCORDANCE WITH AWS D1.3 USING E60XX SERIES ELECTRODES.

5. TESTING: ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR.
5.01 POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER ACTUATED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 LBS. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1913A.7.
5.02 POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1913A.7.

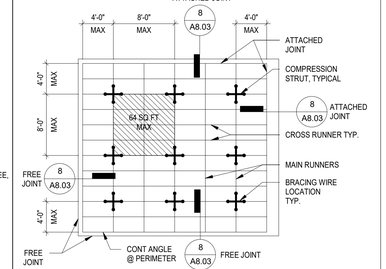
6. LIGHT FIXTURES:
6.01 ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURES, PER ASTM E580, SECTION 5.3.1.
6.02 SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.
6.03 LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
6.04 LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE.
EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.
6.05 ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.

7. SERVICES WITHIN THE CEILING:
7.01 ALL FLEXIBLE SPRINKLER HOSE FIRRING MOUNTING BRACKETS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.
7.02 CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.03 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.04 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS.

8. OTHER DEVICES WITHIN THE CEILING:
8.01 ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE. DEVICES WEIGHING MORE THAN 20 LB. SHALL BE SUPPORTED INDEPENDENTLY FROM THE STRUCTURE ABOVE.

095100.1.00-S — DSA IR 25-2 #1.00 - Rev 03/18/22

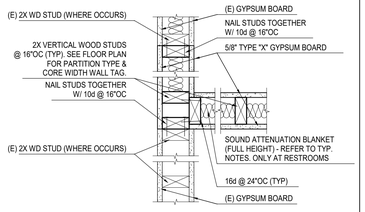
13 SUSPENDED CEILING NOTES
1/2" = 1'-0"



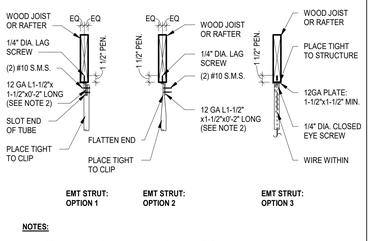
NOTE: BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 64 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

095100.2.10-S — DSA IR 25-2 #2.10 - Rev 03/18/22

11 (N) STUD WALL TO (E) STUD WALL
1 1/2" = 1'-0"



10 STRUT TO WOOD FRAMING
1" = 1'-0"

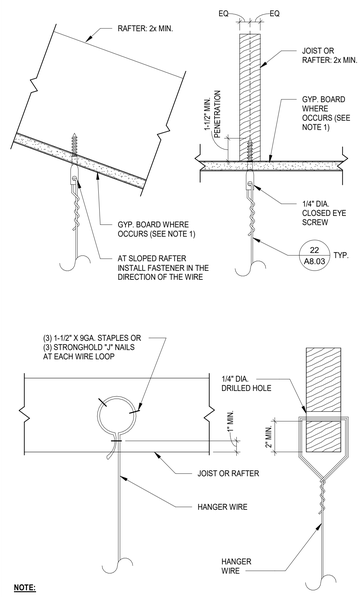


EMT STRUT: OPTION 1 **EMT STRUT: OPTION 2** **EMT STRUT: OPTION 3**

NOTES:
1. WEB OF CHANNEL TO BEAR WITHIN WIDTH OF WOOD MEMBER.
2. VERTICAL LEG OF MEMBER TO FALL WITHIN THE WIDTH OF THE WOOD MEMBER.
3. PEN. = MINIMUM PENETRATION OF LAG SCREW THREADS INTO THE WOOD MEMBER.
4. NO. 14 WOOD SCREW MAY BE USED IN LIEU OF 1/4" LAG SCREW.

095100.5.60-S — DSA IR 25-2 #5.51 - Rev 03/18/22

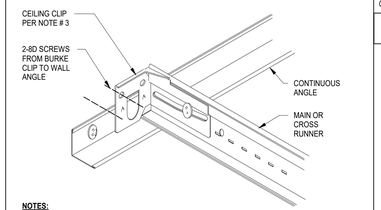
9 HANGER WIRE TO WOOD
3" = 1'-0"



NOTE:
1. WHEN FIRE RATED GYP. BOARD IS INSTALLED ON THE BOTTOM FLANGES, USE SCREW EYES W/ SUFFICIENT LENGTH TO AVOID DAMAGING THE FIRE RATED GYP. BOARD AND MEET MIN. PENETRATION.

095100.4.25-S — DSA IR 25-2 #4.25 - Rev 03/18/22

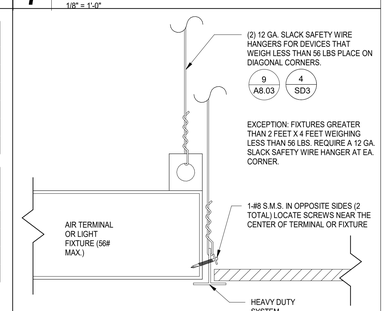
8 SUSPENDED CEILING PERIMETER JOINTS
6" = 1'-0"



NOTES:
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OF WITHIN ONE-FORTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. AT METAL STUD FRAMING: (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 24" O.C. AT WOOD STUD FRAMING: (1) #10 WOOD SCREW TO 2X MIN. WALL STUD @ 24" O.C.
3. CEILING CLIP: ARMSTRONG BERC2 CLIP, OR EQUAL
4. SLOPED CEILING: USE ACCEPTABLE SUSPENSION SYSTEM & ACCESSORIES. WALL ANGLE ARE PAINTED AND WALL SHIMMED TO ACHIEVE THE CORRECT ANGLE. 7/8" WALL ANGLE ITEM 7800 SHOULD BE USED.

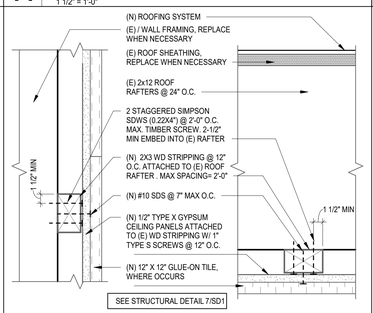
095100.2.60-S — DSA IR 25-2 #2.60 - Rev 03/18/22

7 TYP CEILING PLAN
1/8" = 1'-0"

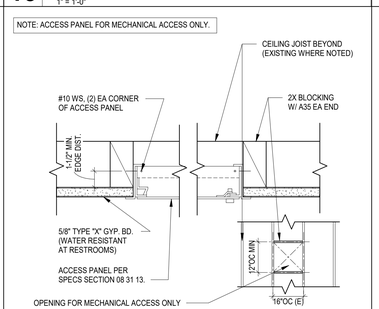


095100.2.80-S — DSA IR 25-2 #2.80 - Rev 03/18/22

5 GYP. BD. WALL / CEILING
3" = 1'-0"

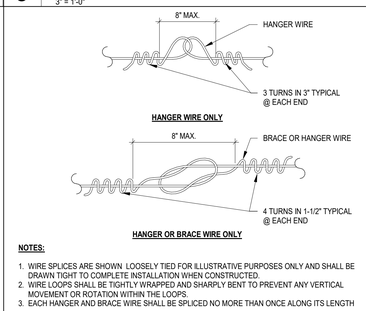


4 ACCESS PANEL
3" = 1'-0"



095000.12-S

3 CEILING WIRE SPLICES
6" = 1'-0"



NOTES:
1. WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.
2. WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION WITHIN THE LOOPS.
3. EACH HANGER AND BRACE WIRE SHALL BE SPLICED NO MORE THAN ONCE ALONG ITS LENGTH

095100.6.10-S — DSA IR 25-2 #6.10 - Rev 03/18/22

2 COMPRESSION STRUT TABLE
1/2" = 1'-0"

COMPRESSION STRUT EMT SECTION	MAXIMUM LENGTH
1/2" DIAMETER EMT (0.042" WALL THICKNESS)	3'-11"
3/4" DIAMETER EMT (0.049" WALL THICKNESS)	6'-4"
1" DIAMETER EMT (0.057" WALL THICKNESS)	9'-9"
1 1/4" DIAMETER EMT (0.065" WALL THICKNESS)	12'-9"
1 1/2" DIAMETER EMT (0.065" WALL THICKNESS)	14'-9"
2" DIAMETER EMT (0.065" WALL THICKNESS)	18'-10"

COMPRESSION STRUT CHANNEL SECTION	MAXIMUM LENGTH
250S125-33	5'-10"
250S137-33	6'-10"
362S137-33	8'-0"
250S137-43	8'-10"
400S137-43	10'-10"

095100.3.21-S — DSA IR 25-2 #3.21 - Rev 03/18/22

1 SUSPENDED LIGHT FIXT./AIR TERMINALS
3" = 1'-0"

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
2400 E. Katella Ave. #950
Anaheim, CA 92806
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horner St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

WESTMINSTER SCHOOL DISTRICT

KEY PLAN
E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K
NORTH: PLAN

Consultant

Architect
LICENSED ARCHITECT Yong Yoo No. C-31162 REN. 10-31-2023 STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

CEILING & MISC DETAILS

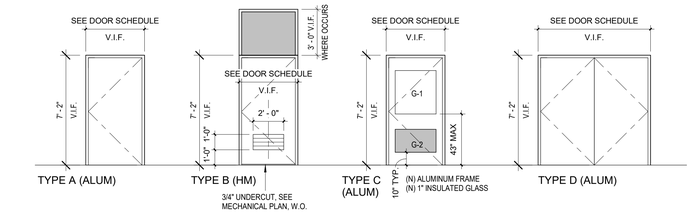
A8.03

A9.01 - DOORS SCHEDULE & WINDOWS FRAMING ELEVATION

0" 1"

DOOR SCHEDULE

DOOR #	ROOM NAME	BUILDING NAME	DOOR					FRAME			DETAILS			HARDWARE	Fire Rating	Panic Hardware	Security Hardware	COMMENTS
			Pair/Single	SIZE W x H WIDTH	SIZE W x H HEIGHT	MATL	FINISH	TYPE	MATL	FINISH	SILL	JAMB	HEAD					
A1-1	CLASSROOM A1	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
A1-2	CLASSROOM A1	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
A2-1	CLASSROOM A2	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
A2-2	CLASSROOM A2	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
A3-1	CLASSROOM A3	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
A3-2	CLASSROOM A3	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
A4-1	CLASSROOM A4	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
A4-2	CLASSROOM A4	BLDG A	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
AD2-1	CLERK AD2	ADMIN	SINGLE	3' - 6"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	26/A8.01	9/A8.01	1		Yes	Yes	
AD4-1	NURSE TOILET	ADMIN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	HM	PTD	19/A8.01	13/A8.01	13/A8.01	2		No	No	
AD5-1	NURSE AD5	ADMIN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	HM	PTD	19/A8.01	13/A8.01	13/A8.01	3		No	Yes	
AD8-1	STAFF RR	ADMIN	SINGLE	2' - 10"	7' - 0"	WOOD	PTD	A	HM	PTD	19/A8.01	13/A8.01	13/A8.01	2		No	No	
B1-1	CLASSROOM B1	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
B1-2	CLASSROOM B1	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
B2-1	CLASSROOM B2	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
B2-2	CLASSROOM B2	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
B3-1	CLASSROOM B3	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
B3-2	CLASSROOM B3	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
B4-1	CLASSROOM B4	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
B4-2	CLASSROOM B4	BLDG B	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
C1-1	CLASSROOM C1	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
C1-2	CLASSROOM C1	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
C2-1	CLASSROOM C2	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
C2-2	CLASSROOM C2	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
C3-1	CLASSROOM C3	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
C3-2	CLASSROOM C3	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
C4-1	CLASSROOM C4	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
C4-2	CLASSROOM C4	BLDG C	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
K4-1	KINDERGARTEN K4	KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		No	Yes	
K4-2	KINDERGARTEN K4	KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20&26/A8.01	9/A8.01	1		Yes	Yes	
K4-3	KINDERGARTEN K4	KINDERGARTEN	SINGLE	3' - 0"	7' - 0"	WOOD	PTD	A	ALUM	PTD	7/A8.01	20/A8.01	9/A8.01	1		Yes	Yes	



NOTE:

G-1 = TG (TEMPERED GLASS)
G-2 = TG/TINT (TEMPERED GLASS/TINTED GLASS
REFERENCE SCHEDULE ABBREVIATIONS

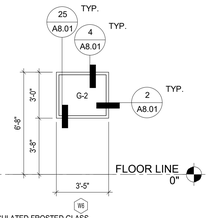
GLASS COLOR TO BE VERIFIED BY THE DISTRICT

DOOR TYPE LEGEND

1/4" = 1'-0"

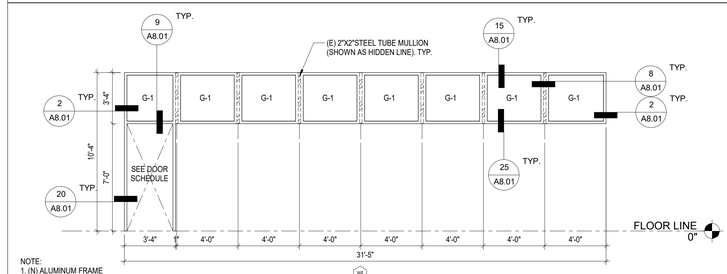
DOOR & WINDOW SCHEDULE ABBREVIATIONS

ALUM	ALUMINUM
FF	FACTORY FINISH
HM	HOLLOW METAL
N/A	NOT APPLICABLE
P	PAINT
ST	STAIN
WD	WOOD



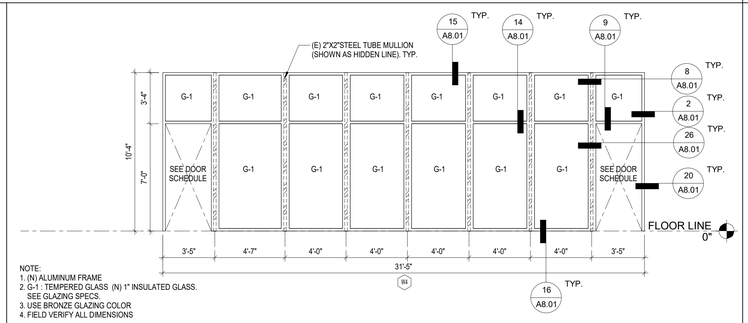
NOTE:
1. (N) ALUMINUM FRAME
2. G-2 : PRIVACY GLASS (N) 1" INSULATED FROSTED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

13 WINDOW FRAMING ELEVATION - W6
1/4" = 1'-0"



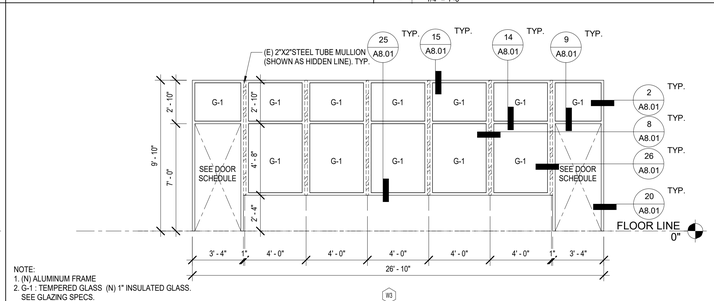
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

12 WINDOW FRAMING ELEVATION - W5
1/4" = 1'-0"



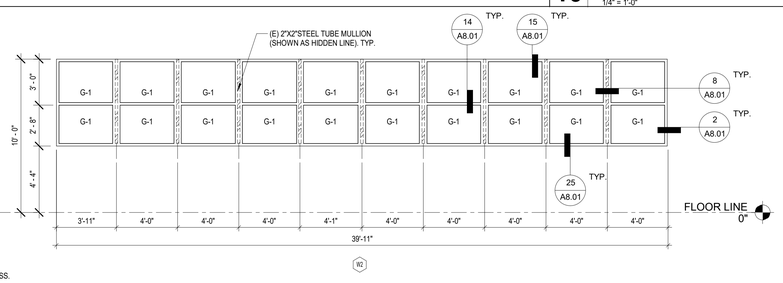
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

10 WINDOW FRAMING ELEVATION - W4
1/4" = 1'-0"



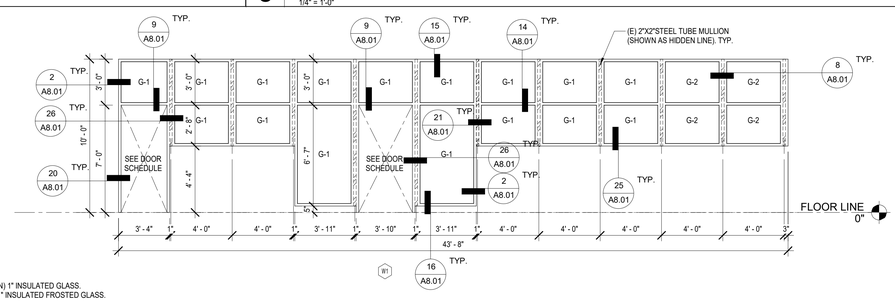
NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

8 WINDOW FRAMING ELEVATION - W3
1/4" = 1'-0"



NOTE:
1. (N) ALUMINUM FRAME
2. G-1: TEMPERED GLASS (N) 1" INSULATED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

6 WINDOW FRAMING ELEVATION - W2
1/4" = 1'-0"



NOTE:
1. (N) ALUMINUM FRAME
2. G-1 : TEMPERED GLASS (N) 1" INSULATED GLASS.
G-2 : PRIVACY GLASS (N) 1" INSULATED FROSTED GLASS. SEE GLAZING SPECS.
3. USE BRONZE GLAZING COLOR
4. FIELD VERIFY ALL DIMENSIONS

3 WINDOW FRAMING ELEVATION - W1
1/4" = 1'-0"

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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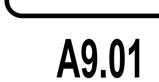
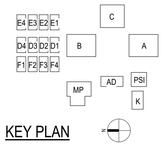
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43





KEY PLAN

NORTH: PLAN

Consultant

Architect

LICENSED ARCHITECT
Yong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

DOORS SCHEDULE & WINDOWS FRAMING ELEVATION

A9.01

A10.01 - FINISH PLAN & SCHEDULES

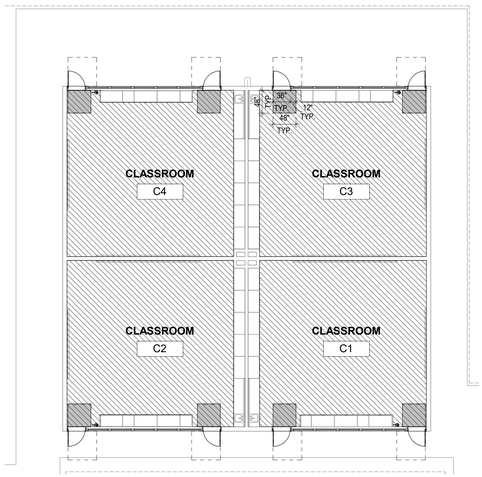
0" 1"

FINISH SCHEDULE

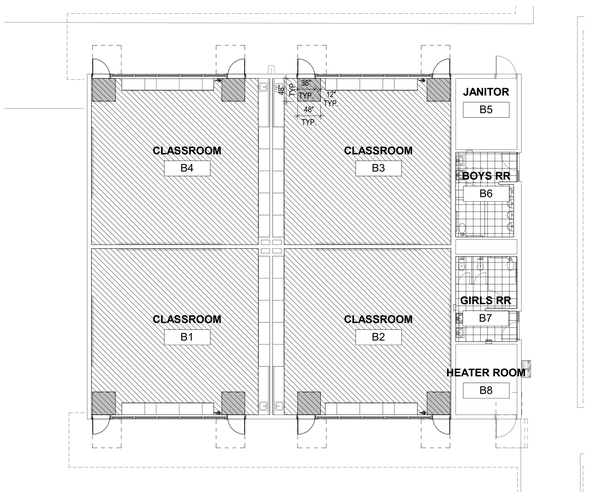
ROOM NUMBER	ROOM NAME	(E) FLOOR MATERIAL	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING	
			MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH
A1	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) GYP	TS1	(E) BRICK	TS1	(E) BRICK	P1	ACP	ACP1
A2	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) GYP	TS1	(E) GYP	P1 / TS1	(E) BRICK	P1	ACP	ACP1
A3	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) BRICK	P1	(E) BRICK	TS1	(E) GYP	TS1	ACP	ACP1
A4	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	TS1	(E) BRICK	P1	(E) GYP	P1 / TS1	(E) GYP	TS1	ACP	ACP1
A6	BOYS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
A8	GIRLS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
AD1	PRINCIPAL	CPT	(E)	(E)	RB	RB1	(E) BRICK	P1	(E) BRICK	P3	(E) GYP	P3	(E) BRICK	P1	ACP	ACP1
AD2	CLERK	VCT	(E)	(E)	RB	RB1	(E) GYP	P1	(E) BRICK	P3	(E) GYP	P3	(E) BRICK	P1	ACP	ACP1
AD3	SUPPLIES BOOKS	CPT	(E)	(E)	RB	RB1	(E) GYP	P1	(E) BRICK	P3	(E) BRICK	P3	(E) GYP	P1	ACP	ACP1
AD4	NURSE TOILET	CT	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
AD5	NURSE'S ROOM	VCT	(E)	(E)	RB	RB1	(E) / (N) GYP	P1	(E) BRICK	P1	(E) GYP	P3	(E) / (N) GYP	P1	ACP / GYP	ACP1 / P1
AD6	PASSAGE	VCT	(E)	(E)	RB	RB1	-	-	(E) GYP	P1	(E) BRICK	P3	(E) GYP	P1	GYP	P1
AD7	OFFICE	VCT	(E)	(E)	RB	RB1	(E) GYP	P1	(E) BRICK	P1	(E) GYP	P3	(E) GYP	P1	ACP	ACP1
AD8	STAFF TOILET	CT	(E)	(E)	RB	RB1	(E) CT / GYP	(E)	(E) CT / GYP	(E)	(E) CT / GYP	(E)	(E) CT / BRICK	(E)	GYP	P1
AD10	CUSTODIAL	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)
B1	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	TS1	(E) GYP	TS1	(E) GYP	P1 / TS1	(E) BRICK	P1	ACP	ACP1
B2	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) GYP	TS1	(E) BRICK	TS1	(E) BRICK	P1	ACP	ACP1
B3	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) GYP	P1	(E) BRICK	TS1	(E) BRICK	TS1	ACP	ACP1
B4	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	TS1	(E) GYP	P1	(E) GYP	P1 / TS1	(E) BRICK	TS1	ACP	ACP1
B6	BOYS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
B7	GIRLS RR	CT	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	GYP	P1
C1	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) GYP	TS1	(E) BRICK	TS1	(E) BRICK	P1	ACP	ACP1
C2	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	TS1	(E) GYP	TS1	(E) GYP	P1 / TS1	(E) BRICK	P1	ACP	ACP1
C3	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) GYP	P1 / TS1	(E) BRICK	P1	(E) BRICK	TS1	(E) GYP	TS1	ACP	ACP1
C4	CLASSROOM	CPT	CPT	CPT1	RB	RB1	(E) BRICK	TS1	(E) BRICK	P1	(E) GYP	P1 / TS1	(E) GYP	TS1	ACP	ACP1
K1	WORK ROOM	VCT	VCT	VCT1	RB	RB1	(E) BRICK	P1	(E) GYP	P1	(E) BRICK	P1	(E) GYP	P1	ACP	ACP1
K3	KG TOILET	CT	(E)	(E)	CT	CT1	CT	CT1	CT	CT1	CT	CT1	CT	CT1	GYP	P1
K4	KINDERGARTEN ROOM	VCT / CPT	VCT / CPT	VCT1 / CPT1	RB	RB1	(E) BRICK	P1 / TS1	(E) GYP	P1 / TS1	(E) BRICK	P1	(E) GYP	P1 / TS1	ACP	ACP1

GENERAL FINISH LEGEND NOTES

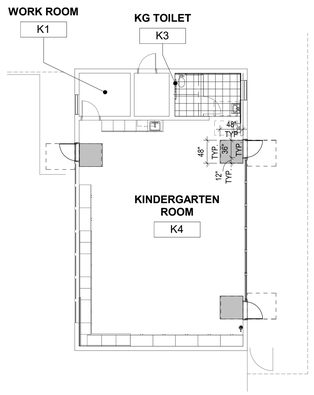
1. ALL FINISH MATERIALS SHALL MEET THE FLAME SPREAD RATINGS PER THE BUILDING CODE.
2. REFER TO INTERIOR ELEVATIONS FOR SPECIFIC MATERIAL LOCATIONS.
3. PAINT ALL EXPOSED STRUCT. MEMBERS, STRUCT. DECK, DUCTWORK, DIFFUSERS, PIPING, CONDUIT, EQUIP. HOUSINGS, LIGHT FIXTURE HOUSINGS, CABLE SUPPORTS, CABLE TRAYS, EQUIP. SUPPORTS, HANGERS, ETC. TO MATCH ADJACENT SURFACES.
4. PAINT ALL NON-FACTORY FINISHED EXPOSED METAL.
5. REFER TO TYPICAL FLOORING TRANSITION DETAILS FOR FLOORING MATERIAL TRANSITIONS.
6. ALL FLOORING TRANSITIONS AT DOORS SHALL BE LOCATED UNDER THE DOOR IN THE CLOSED POSITION, U.N.O.
7. PROTECT ALL FINISHED FLOORING SURFACES FROM DAMAGE DURING ALL CONSTRUCTION PHASES.
8. PROVIDE AND INSTALL BULLNOSE TRIM AT ALL TRANSITIONS FROM CERAMIC WALL TILE TO OTHER MATERIAL U.N.O.
9. REFER TO REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
10. ALL ELECTRICAL DEVICE COVERS ARE TO BE WHITE U.N.O.
11. ALL CARPET PATTERNS TO RUN PARALLEL TO CORRIDOR, U.N.O.
12. PAINT ALL HOLLOW METAL DOOR FRAMES TO MATCH ADJACENT WALL COLOR U.N.O.
13. REMOVE EXISTING PAINT AT EXISTING BRICK WALL. PREPARE BRICK WALL SMOOTH TO RECEIVE NEW PAINT FINISH. WHERE OCCURS.
14. RE-PAINT ALL EXISTING CASEWORK (EXCLUDE PLAM/STONE COUNTERTOPS).
15. PROVIDE APPROPRIATE PREPARATION, CLEANING AND BASE MATERIAL TO EXISTING INTERIOR SURFACES TO RECEIVE NEW FINISHES PER FINISH SPECS.
16. PROVIDE APPROPRIATE PREPARATION, CLEANING AND BASE MATERIALTO EXISTING BRICK WALL BEFORE RECEIVING NEW FINISH MATERIAL. PER FINISH SPECIFICATION.
17. PROVIDE CONSISTENT FLAT SURFACE USING CEMENT FLOAT AND APPROPRIATE BASE MATERIAL AT EXISTING BRICK WALL TO RECEIVE NEW TILE FINISH, PER FINISH SPECIFICATIONS.



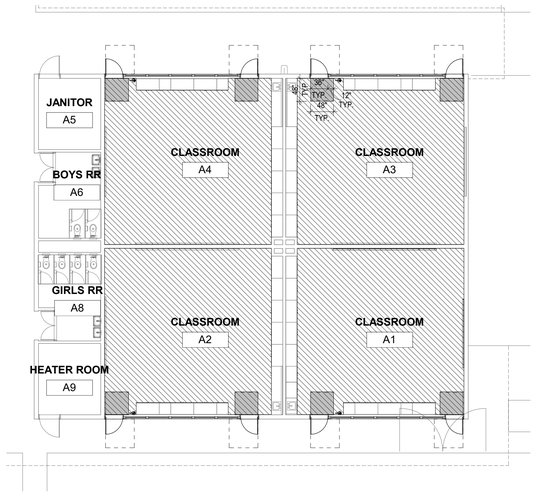
17 FINISH FLOOR PLAN BLDG C
3/32" = 1'-0"



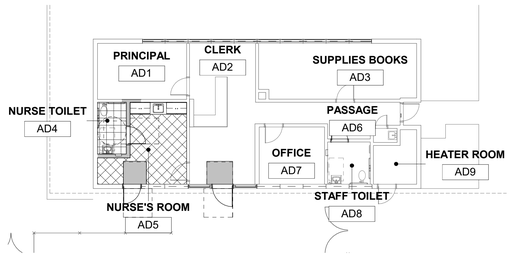
9 FINISH FLOOR PLAN BLDG B
3/32" = 1'-0"



6 FINISH FLOOR PLAN BLDG K
3/32" = 1'-0"



5 FINISH FLOOR PLAN BLDG A
3/32" = 1'-0"



3 FINISH FLOOR PLAN BLDG ADMIN
3/32" = 1'-0"

FINISH FLOOR MATERIALS LEGEND

- (E) FINISHES TO REMAIN
- CPT-1, CARPET FLOORING TYPE 1
  RE: FINISH SCHEDULE
- VCT-1, VINYL COMPOSITION TILE
  RE: FINISH SCHEDULE
- CT-1 CERAMIC TILE FLOORING
  RE: FINISH SCHEDULE
- WALK-OFF MAT, RE: FLOOR FINISH PLAN & DETL 15/AX4.1
  48" DEPTH, 12" EXTEND ON PUSH SIDE, UNLESS SHOWN AS FLUSH TO DOOR WIDTH OR EDGE OF WALL

MATERIAL FINISH ABBREVIATIONS

ACP1	2'X2' ACOUSTICAL CEILING PANEL , SEE SPECIFICATIONS
CPT1	CARPET TYPE 1 , SEE SPECIFICATIONS
CT1	CERAMIC TILE 1, SEE SPECIFICATIONS
CTB1	CERAMIC TILE BASE 1, SEE SPECIFICATIONS
VCT1	VINYL COMPOSITE TILE 1, SEE SPECIFICATIONS
P1	PAINT TO BE SELECTED BY OWNER, SEE SPECIFICATIONS
RB1	RUBBER BASE , SEE SPECIFICATIONS
(E)	(E) FINISH TO REMAIN
MF	MANUFACTURERS FINISH, SEE SPECIFICATIONS
TS1	TACKABLE SURFACE, SEE SPECIFICATIONS

MATERIAL ABBREVIATIONS

ACP	ACOUSTIC CEILING PANEL
CONC	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
GUT	GLUE UP TILE
GYP	GYPSUM BOARD
P	PAINT
RB	RUBBER BASE
VCT	VINYL COMPOSITE TILE
(E)	(E) FINISH TO REMAIN

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
PBK.com
ANAHEIM
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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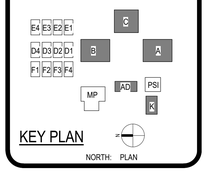
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



Consultant

Architect

LICENSED ARCHITECT
Tong Yoo
No. C-31162
REN. 10-31-2023
STATE OF CALIFORNIA

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

FINISH PLAN & SCHEDULES

A10.01

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GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH TITLE 24 CALIFORNIA BUILDING CODE, 2019 EDITION.
2. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE EOR, THE ARCHITECT AND THE OWNER REPRESENTATIVE. PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY THE EOR AND THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
4. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE OWNER SHALL BE NOTIFIED FOR CLARIFICATION.
5. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF NEW WORK.
6. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL.
7. TYPICAL DETAILS SHALL APPLY IN GENERAL CONSTRUCTION UNLESS SPECIFICALLY DETAILED. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK & PER TYP DETAILS.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THESE DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE CITY OR STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE.
9. FOR TRENCHES OR EXCAVATIONS (5) FIVE FEET OR MORE IN DEPTH INTO WHICH A PERSON IS REQUIRED TO DESCEND, THE CONTRACTOR IS TO OBTAIN THE NECESSARY PERMIT FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY, PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
10. NO HOLES, NOTCHES, BLOCKOUTS, ETC. ARE ALLOWED IN STRUCTURAL ELEMENTS UNLESS DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER AND OWNER.
11. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE FROM PLANS SUPPLIED BY THE OWNER, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE UNIVERSITY REPRESENTATIVE OR ENGINEER SO THAT PROPER CLARIFICATION MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF STRUCTURAL ENGINEER AND OWNER.
12. IN CASE OF DISCREPANCIES BETWEEN NOTES ON THIS SHEET & PROJECT SPECIFICATIONS, THE PROVIDED NOTES SHALL TAKE PRECEDENCE OVER SPECS.
13. CUTTING, BORING, SAW CUTTING OR DRILLING INTO (E) OR (NEW) STRUCTURAL ELEMENTS SHALL BE SPECIFICALLY DETAILED OR OTHERWISE APPROVED BY STRUCTURAL EOR.

QUALITY ASSURANCE PROGRAM

A) STRUCTURAL TESTS AND SPECIAL INSPECTION PROGRAM.

PER SECTION 4-335 OF CALIFORNIA ADMINISTRATION CODE, THE ARCHITECT OR REGISTERED ENGINEER IN GENERAL RESPONSIBLE CHARGE OF THE PROJECT, OR WITHIN THEIR DELEGATED PORTION OF THE WORK, SHALL ESTABLISH THE EXTENT OF THE STRUCTURAL TESTS AND SPECIAL INSPECTION PROGRAM CONSISTENT WITH THE NEEDS OF THE PROJECT, AND SIGN DSA-103.

THE ARCHITECT OR REGISTERED ENGINEER SHALL RECEIVE VERIFIED REPORTS FROM THE PROJECT INSPECTOR, SPECIAL INSPECTORS, TESTING FACILITY, THE GEOTECHNICAL ENGINEER, CONTRACTORS AND THE OTHER ARCHITECTS AND ENGINEERS ARE SUBMITTED AS REQUIRED. THE RESPONSIBLE PARTY SHALL NOTIFY DSA AS TO THE DISPOSITION OF MATERIALS NOTED ON LABORATORY TESTING, AND/ OR SPECIAL INSPECTION, REPORTS AS NOT CONFORMING TO THE DSA APPROVED DOCUMENTS.

B) STRUCTURAL OBSERVATION

PERIODIC STRUCTURAL OBSERVATION SHALL BE CONDUCTED, PER SECTION 1710 OF THE CALIFORNIA BUILDING CODE AND SECTION 4-341(F) OF THE CALIFORNIA ADMINISTRATION CODE, TO ASSURE CONFORMANCE WITH THE DESIGN INTENT AND THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE REQUIREMENT ANS/OR RESPONSIBILITY FOR THE INSPECTION BY IOR.

A REGISTERED PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OF THE PROJECT, INCLUDING LICENSED ARCHITECT OR STRUCTURAL ENGINEER, SHALL OBSERVE HIS/HER PORTION OF WORK DURING THE CONSTRUCTION OF THE PROJECT.

OBSERVATION SHOULD INCLUDE VISITS TO THE PROJECT SITE BY THE ARCHITECT AND/OR ENGINEER OR THEIR QUALIFIED REPRESENTATIVES IN COORDINATION WITH THE DISTRICT AND DSA. PRIOR NOTIFICATION SHALL BE MADE TO REQUEST THE REQUIRED OBSERVATIONS. ELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERING MATERIAL TO FACILITATE OBSERVATION.

STRUCTURAL OBSERVATIONS MAY CONSIST OF VISUAL OBSERVATION OF MAJOR STRUCTURAL MEMBERS, AND THEIR IMMEDIATE CONNECTIONS, AT SIGNIFICANT CONSTRUCTION STAGES. THE FREQUENCY OF SUCH OBSERVATION SHALL BE COORDINATED WITH THE DISTRICT ENGINEER OR ASSIGNED IOR PER SECTION 4-336.

AT THE COMPLETION OF THE PROJECT, A FINAL VERIFIED REPORT (DSA-6) MUST BE SUBMITTED WHICH SHOWS THAT THE STRUCTURAL SYSTEM IS COMPLETE AND GENERALLY CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.

DEMOLITION

1. REFER TO MECH. SHEETS FOR DEMOLITION NOTES. SEE DEMOLITION PLANS ON SHEET MD2 SERIES
2. ALL (E) UTILITIES, DUCTS, CONDUITS, PIPES, SIGNS, JOINTS, ELEC PANELS & BOXES, DOOR, WINDOW, CHAIN FRAME CEILINGS & OTHER ARCH'L TREATMENTS SHALL BE REMOVED TEMPORARILY AS NEEDED & REINSTALLED TO IT'S ORIGINAL CONDITION & IN AGREEMENT WITH CODE STANDARDS. SUPPORTS & BRACES FOR DUCT WORK SHALL BE IN ACCORDANCE WITH SMACNA GUIDELINES.
3. DEMOLITION WORK SHALL BE FULLY COORDINATED WITH THE DISTRICT & DSA 'S REPRESENTATIVES FOR SEQUENCE AND TIME FRAME.
4. CONTRACTOR TO PROVIDE TEMP. SHORING, AS REQUIRED.
5. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

CONCRETE AND REINFORCEMENT

1. ALL CEMENT SHALL CONFORM AT ASTM C-150, TYPE II OR V
2. FINE AND COARSE AGGREGATE SHALL CONFORM TO ASTM C-33.
3. AGGREGATE GRADATION FOR CONCRETE SHALL CONFORM TO ASTM C-33 AND CBC 2019. AGGREGATE FOR ELEMENT WITH 4 HOURS RATING SHALL BE SILICEOUS.
4. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTH:
   - ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI, UNLESS NOTED OTHERWISE.
   - CAST IN DRILLED-HOLE PILES - 4000 PSI.
   - CONCRETE SLAB ON GRADE/HOUSEKEEPING PAD - 3000 PSI.
   - EXTERIOR CONCRETE WALKS, CURBS, ETC. AND MISC. CONCRETE - 2500 PSI STONE.
5. LIGHTWEIGHT CONCRETE . (NOT APPLICABLE)
6. CONCRETE DESIGN MIXES SHALL CONFORM TO THE STANDARD SPECIFICATIONS. MIX DESIGNS SHALL BE SIGNED BY A CALIFORNIA LICENSED ENGINEER & SUBMITTED FOR REVIEW & APPROVAL. SUPPORTING DATA SHALL BE PROVIDED PER CBC 1903A. THE TEST DATA SHALL BE REPORTED BY AN INDEPENDENT TESTING AGENCY.
7. PLACING OF ALL CONCRETE SHALL BE INSPECTED BY THE JOB INSPECTOR TO VERIFY THAT REINFORCING STEEL IS SECURELY SUPPORTED IN PLACE DURING THE POUR. CONTRACTOR TO PROVIDE NECESSARY MEASURE TO PROTECT REINFORCING AND TENDONS DURING PLACEMENT USING TIES AND SUPPORTS. USE TREMY FOR PLACEMENT OF CONCRETE FOR POURS DEEPER THAN 6'-0". USE OF BUCKET OR DROPPING IS NOT ALLOWED TO AVOID SEGREGATION.
8. LOCATION OF CONSTRUCTION JOINTS OR POUR JOINTS SHALL BE AS SHOWN ON PLANS OR AS APPROVED BY THE ENGINEER OR THE ARCHITECT PRIOR TO POURING CONCRETE. SEE NOTE 19 BELOW.
9. ANCHOR BOLTS, DOWELS, REINFORCING STEEL, INSERTS, ETC., SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE. CONCRETE BLOCKS ONLY SHALL BE USED TO SUPPORT REINFORCING OFF GRADE.
10. CONCRETE SLABS SHALL BE CURED BY KEEPING CONTINUOUSLY WET FOR 7 DAYS. FORMS FOR CONCRETE WALLS SHALL BE LEFT IN PLACE FOR 7 DAYS OR THEY MAY BE STRIPPED AFTER 3 DAYS AND THEN COVERED WITH BURLAP WHICH SHALL BE KEPT WET FOR AN ADDITIONAL 7 DAYS. IN LIEU OF BURLAP, CURING COMPOUNDS MAY BE USED IF APPROVED BY THE STRUCTURAL ENGINEER. FORMS FOR CONCRETE COLUMNS SHALL BE LEFT IN PLACE FOR 3 DAYS. IF STRIPPED EARLY, THEN SHALL BE COVERED FOR ANOTHER 3 DAYS. OR BE PROTECTED BY CURRING COMPONDS CONTRACTOR SELECTS TO DEVIATE FROM THESE INSTRUCTIONS, ALL CRACKS AND OTHER DEFECTS SHALL BE REPAIRED PER EOR RECOMMENDATIONS AT CONTRACTORS EXPENSE.
11. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS MINIMUM PRIOR TO ALL POURS.
12. PROVIDE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
13. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL COMPLY WITH CBC SECTION TABLE 1808A.8.2
14. ALL CONCRETE SHALL BE VIBRATED IN PLACE DURING PLACING OF CONCRETE.
15. THE STRUCTURAL STEEL AND STEEL FORM WILL DEFLECT WHILE CONCRETE IS BEING PLACED ON IT. THIS WILL RESULT IN THE NEED TO ADJUST THE SCREEDS AFTER THE CONCRETE HAS BEEN PLACED TO PRODUCE A LEVEL CONCRETE SURFACE. ALSO, THERE WILL BE ADDITIONAL CONCRETE REQUIRED, WHICH IS TO BE ANTICIPATED, AND NO REQUEST FOR EXTRA COST WILL BE CONSIDERED.
16. NO STAKES, STEEL OR WOOD, SHALL BE PERMITTED IN ANY CONCRETE POUR. SUSPEND FORMS FROM ABOVE GRADE.
17. DRYPACK SHALL BE 1:3-1/2 PORTLAND CEMENT TO SAND WITH A MINIMUM 28 DAY STRENGTH OF 4500 PSI. OR SET GROUT BY AN APPROVED EOR.
18. NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 7000 PSI.
19. CONSTRUCTION JOINTS: CONSTRUCTION JOINTS SHALL HAVE ENTIRE SURFACE REMOVED TO MIN ~4" TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE. PER TYP. DETAILS PROVIDED IN THIS SET, CONSTRUCTION JOINTS SHALL BE PROVIDED TO LIMIT SHRINKAGE CRACKS. A MAX DISTANCE OF 50 FEET SHALL BE CONSIDERED IF NO CONSTRUCTION JOINTS IS CALLED ON PLANS. THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL OF CONSTRUCTION & CONTROL JOINT LOCATION IN SLABS, WALLS AND BEAMS.
20. TEMPERATURE AND SHRINKAGE REINFORCEMENT: SHALL HAVE A LAP OF THIRTY (30) BAR DIAMETERS, BUT NOT LESS THAN 18 IN. AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN FIVE (5) FEET APART.
21. REBAR GRADES: **ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:**
   - ALL SIZES NOT SUBJECT TO WELDING......................................GRADE 60.

   ALL REINFORCING BARS TO BE WELDED SHOULD CONFORM TO ASTM A706.
22. TYP. REBAR COVER: MINIMUM REBAR COVER FOR REINFORCED CONCRETE SHALL BE AS SHOWN IN THIS TABLE:
23. MAX W/C RATIO = 0.45

EXPOSURE CONDITION	COVER	TOLERANCE (-)
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"	3/8 INCH
EXPOSED TO EARTH OR WEATHER:		
NO. 5 AND SMALLER BARS	1-1/2"	1/4 INCH
NO. 6 AND LARGER BARS	2"	1/4 INCH
NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:		
ROOF SLAB	1"	1/8 INCH
STRUCTURAL SLABS & WALLS	1"	1/8 INCH
BEAMS AND COLUMNS (PRIMARY REINFORCEMENT, TIES, STIRRUPS & SPIRALS)	1-1/2"	1/4 INCH
SLABS ON GRADE	1-1/2"	1/4 INCH

NON-SHRINK GROUT

"NON-SHRINK GROUT" SHALL BE DEFINED AS A HIGH-STRENGTH MORTAR OR GROUT WHICH DOES NOT SHRINK IN THE PLASTIC STATE, IS DIMENSIONALLY STABLE IN THE HARDENED STATE, AND BONDS PERMANENTLY TO CLEAN METAL SURFACES AND CONCRETE SUBSTRATE.

DRY PACK OR NON-SHRINK GROUT SHALL CONFORM TO THE ASTM C1107, SPECIFICATION FOR PACKAGED DRY, HYDRAULIC-CEMENT GROUT (NON-SHRINKABLE). NO SHRINKAGE BEFORE HARDENING (0.00 SHRINKAGE WHEN TESTED IN ACCORDANCE WITH ASTM C827), IS ALLOWED

COMPRESSIVE STRENGTH, SHALL REACH THE FOLLOWING COMPRESSIVE STRENGTH

a. AT ONE DAY: 1000 PSI
b. AT THREE DAYS: 2500 PSI
c. AT SEVEN DAYS: 4000 PSI
d. AT 28 DAYS: 7000 PSI

A MANUFACTURER'S PRODUCT DATA SHALL BE SUBMITTED PRIOR TO THE INSTALLATION, SHOWING THE MATERIAL MEET SPECIFIED SHRINKAGE AND COMPRESSIVE STRENGTH REQUIREMENTS, ABOVE.

SHOP DRAWINGS:

1. SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
2. SHOP DRAWINGS SHALL BE SUBMITTED BY CONTRACTOR TO ENGINEER OF RECORD (EOR) FOR REVIEW AND APPROVAL, AND IF REUIRED TO THE BUILDING OFFICIALS FOR THEIR REVIEW AND APPROVAL, ALSO SEE SUBMITTALS AND DEFERRED APPROVAL.
3. A SET OF APPROVED SHOP DRAWINGS SHALL BE MAINTAINED @ THE JOB SITE & PRESENTED TO THE INSPECTOR PRIOR TO PLACEMENT OF THE REINFORCEMENT.

STRUCTURAL STEEL AND MISC. IRON

1. WELDING SHALL BE DONE IN CONFORMANCE WITH AWS-D1.1 & OTHER APPLICABLE CODES & STANDARDS USE ELECTRIC SHIELDED ARC PROCESS USING E-70XX ELECTRODES. ALL WELDS SHALL BE UNIFORM IN SIZE AND APPEARANCE, AND FREE OF PINHOLES, POROSITY, UNDERCUTTING, OR OTHER DEFECTS. ALL BUTT WELDS SHALL BE FULL PENETRATION.
2. WELDS SHALL BE DONE IN THE SHOP OF AN ICC OR ASCE APPROVED FABRICATOR UNLESS OTHERWISE NOTED ON PLANS. ALL FIELD WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS APPROVED BY THE BUILDING OFFICIAL.
3. CONTINUOUS INSPECTION BY AN APPROVED DEPUTY INSPECTOR IS REQUIRED FOR ALL ON SITE WELDING, U.N.O.
4. STRUCTURAL STEEL NOT ENCASED IN CONCRETE OR MASONRY SHALL BE SHOP PAINTED AS SPECIFIED. ANY ABRASIONS SHALL BE TOUCHED UP AFTER ERECTION.
5. FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO STRUCTURAL ENGINEER FOR REVIEW PRIOR TO START OF FABRICATION. FABRICATION SHALL CONFORM TO A.I.S.C. SPECIFICATION.
6. ALL FULL PENETRATION WELDS IN FIELD AND SHOP SHALL BE ULTRASONICALLY TESTED AND APPROVED.
7. CONTINUOUS INSPECTION IS REQUIRED FOR ALL HIGH STRENGTH BOLTING CONNECTIONS.
8. SPLICE MEMBERS ONLY WHERE INDICATED.
9. BOLT HOLES IN STEEL SHALL BE STANDARD HOLES, 1/16 INCH LARGER IN DIAMETER THAN NORMAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE. BOLT HOLES IN BASE PLATES MAY BE OVERSIZED PER AISC TABLE 14-2 IF WASHERS ARE PROVIDED IN ACCORDANCE WITH THIS TABLE.
10. STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION AS INDICATED BELOW UNLESS NOTED OTHERWISE:
    - ALL WIDE FLANGE AND WT SHAPES — A992, GRADE 50
    - STEEL ANGLES AND CHANNELS — A36 U.N.O.
    - BEAM SHEAR PLATES, STIFFENER PLATES, ALL OTHER PLATES — A572, GRADE 50 U.N.O.
    - MACHINE BOLTS USE ONLY WHERE INDICATED) — A307
    - THREADED AND SMOOTH ROD — F1554, GR50
    - NUTS FOR BOLTS AND MACHINE BOLTS — A563
    - HARDENED WASHERS — F436
    - UNHARDENED WASHERS — F844
    - PLAIN WASHERS — ANSI B18.22.1
    - STRUCTURAL TUBES — A-500, GRADE C
    - STRUCTURAL PIPES — A-53, TYPE E OR S, GRADE B
12. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIP ZINC GALVANIZED

WOOD FRAMING

1. ALL SAWN LUMBER SHALL BE DOUGLAS FIR OR WESTERN LARCH, U.N.O.
2. GRADE MARKED BY A RECOGNIZED GRADING AGENCY (WWPA OR WCLIB). WOOD GRADES ARE TO BE AS FOLLOWS U.N.O.:
   - BEAMS____________________LSL OR PRL OR GLB UNO
   - HEADERS____________________SEE SCHEDULE (4/SD5.2)
   - POSTS AND TIMBERS____________________NO.1
   - PLATES____________________NO.2
   - STUDS @ NON-BEARING WALLS____________________NO.2
   - STUDS @ BEARING/SHEAR WALLS NO.2 U.N.O.___SEE SCHEDULE (8/SD5.2)
   - RAFTERS AND ROOF JOISTS____________________NO.2
   - FLOOR JOIST____________________NO.1
   - SILL PLATES PRESSURE TREATED FOR MOISTURE RESISTANCE (SEE NOTE #23.)____NO.1
   - TJI____________________PER PLAN OR EQ.
   - OPEN WEB TRUSSES____________________PER PLAN & APPROVED MANUF.
   - ROOF TRUSSES____________________PER PLAN & APPROVED MANUF.
3. WHERE WOOD IS IN CONTACT WITH CONCRETE OR MASONRY USE FOUNDATION REDWOOD OR DOUGLAS FIR PRESSURE TREATED FOR MOISTURE RESISTANCE. CORROSION RESISTANCE BOLTS ARE REQUIRED FOR "CHEMICALLY THREATED SILLS".
4. PLYWOOD SHALL BE DOUGLAS FIR CONFORMING TO U.S. PRODUCT STANDARDS PS 1-83, WITH EXTERIOR GLUE AND SHALL BE GRADE MARKED BY APA. PLYWOOD AT EXPOSED EAVES SHALL BE EXPOSURE I GRADE PLYWOOD. PLYWOOD SHALL BE STRUCTURAL- I FOR FLOOR DIAPHRAGMS & SHEAR WALLS. OSB PANELS MAY BE USED IF HAVE EQUIVALENT PROPERTIES.
5. U.N.O. ALL DAMAGED OR DETERIORATED LUMBER SHALL BE REPLACED WITH EQUAL SECTION AND EQUAL OR BETTER GRADE AS SPECIFIED ON THESE DRAWINGS.
6. ALL BOLTS FOR WOOD CONNECTIONS SHALL BE A307, GRADE A. WHERE WOOD IS BOLTED TO STEEL, USE A LOCK WASHER UNDER THE NUT ON THE STEEL SIDE.
7. ALL BOLT HEADS AND NUTS THAT BEAR AGAINST THE FACE OF WOOD MEMBERS SHALL BE PROVIDED WITH METAL SQUARE WASHERS AS INDICATED ON PLANS.
8. ALL STUD WALLS SHALL HAVE FIRE BLOCKING AT 5'-0" O.C. MAXIMUM, VERTICAL UNLESS ALLOWED BY CODE.
9. BLOCKING SHALL BE INSTALLED AT THE TOP OF ALL BEARING AND SHEAR WALLS.
10. PROVIDE DOUBLE FLOOR JOISTS UNDER PARALLEL PARTITIONS.
11. PROVIDE 2X3 CROSS-BRIDGING OR 2X SOLID BLOCKING AT A MINIMUM OF 8'-0" O.C. FOR FLOOR JOISTS (CONTACT METAL BRIDGING OR EQUAL MAY BE USED).
12. HOLES AND NOTCHES IN STRUCTURAL MEMBERS FOR PIPES AND CONDUIT SHALL COMPLY WITH THE BUILDING CODE & PROVIDED TYP. DETAILS.
13. ALL BOLT HOLES SHALL BE DRILLED A MIN. OF 1/32" TO A MAX. OF 1/16" LARGER IN DIAMETER THAN THE NOMINAL SIZE OF BOLT USED.
14. EACH SHEET OF PLYWOOD SHALL HAVE 2' MIN. SHEET DIMENSION UNLESS ALL EDGES OF THE UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR BLOCKING.
15. THREADED PORTION OF LAG SCREWS SHALL BE TURNED NOT DRIVEN INTO THE PRE-DRILLED HOLE.
16. ALL NAILS SHALL BE COMMON WIRE NAILS U.N.O.
17. IF GUN NAILING IS USED, REDUCE THE SPECIFIED NAIL SPACING BY 20% UNLESS THE HEADS DO NOT PENETRATE INTO THE SHT'G..
18. ALL NAILS SHALL BE GALVANIZED WHERE EXPOSED TO WEATHER.
19. EXCEPT WHERE TOE NAIL IS REQUIRED, NAILS SHALL BE DRIVEN PERPENDICULAR. PRE-DRILL FOR ALL NAILS 20d OR LARGER.
20. TJI, PARALLAM, AND TIMBER STRANDS SHALL BE ICC APPROVED PER SPECIFICATIONS. ALSO SEE SPECIAL INSPECTION & SHOP DRAWING NOTES ON THIS SHEET.
21. USE SIMPSON OR OTHER EQUIVALENT ICC APPROVED HARDWARE FOR ALL CONNECTION PER PLAN NOTES AND SPECIFICATIONS.
22. ROOF TRUSSES SHALL BE DESIGNED & STAMPED BY MANUFACTURE'S ENGINEER. SHOP DRAWING SHALL BE PREPARED PER NOTES ON THIS SHEET.
23. FASTENERS AND ANCHOR BOLTS INSTALLED IN CHEMICALLY OR PRESSURE TREATED LUMBERS SHALL BE CORROSION RESISTANT USING HOT-DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL PER CBC SECTION 2304A.3
24. EDGE OF SHEATHING PLYWOOD PANELS SHALL BE BLOCKED OR T&G AS SPECIFIED ON PLANS.
25. PARTICLE PANELS (OSB) MAY BE USED IN LIEU OF PLYWOOD, IF IT IS PROVED TO BE EQUIVALENT TO CDX-STRUCT-I, AND MEETS UL-FIRE-RATED ASSEMBLY FOR THE FLOOR SYSTEM, AS SPECIFIED ON THE PROJECT REQUIREMENTS. PLYWOOD SHEATHING PANELS SHALL HAVE TONGUE & GROOVE EDGES FOR INTERLOCKING OR BE SUPPORTED BY 3X BLOCKING ALONG THE PANEL WITH SQUARE EDGES. PLACING DECK CLIPS FOR SUPPORT OF PANELS IS NOT ACCEPTABLE AS ALTERNATIVE SUPPORT METHODS ALONG FREE EDGES.

POST-INSTALLED ANCHOR BOLTS

ANCHOR BOLTS SHALL BE ONE OF THE FOLLOWING ACCEPTABLE PRODUCTS, OR AN EQUIVALENT. NO DRILLED-IN ANCHOR IS ALLOWED IN POST TENSIONED SLABS TO AVOID DAMAGING/CUTTING TENDONS & REINFORCEMENT, UNLESS THE LOCATION IS CLEARED BY NONDESTRUCTIVE TESTING OF UNDERGROUND PENETRATING RADAROR X-RAY. (PACHOMETER READING IS NOT ACCEPTABLE)

- EXPANSION-TYPE ANCHORS
  HILTI -TZ2 (ESR#4266) (FOR CONCRETE)
  HILTI -TZ2 (ESR#4561) (FOR MASONRY)
  (FOR INSTALLATION SEE TABLE A)
- EPOXY/ADHESIVE ANCHORS
  HILTI RESD500-V3 ADHESIVE SYSTEM, ESR#3814
  (FOR TEST FREQUENCY SEE NOTES BELOW AND FOR TESTING LOADS SEE TABLE B)
- SIMPSON HY270 EPOXY ANCHORS (ICC-ESR # 4143) FOR USE IN BRICK
- SCREW TYPE ANCHORS
  SIMPSON TITEN HD (ESR#1056) (FOR MASONRY)

1. EQUIVALENT PRODUCTS, WITH VALID & CURRENT ICC REPORTS WHICH ALLOW APPLICATION FOR SEISMIC LOADING, ARE ACCEPTABLE.
2. FOR MIN. EMBEDMENT AND OTHER INFO., REFER TO DETAILS.
3. FOR REPRESSION AND INSTALLATION, REFER TO MANUFACTURES' RECOMMENDATIONS & NOTE/TABLES BELOW

POST-INSTALLED EXPANSIVE ANCHOR BOLTS

TABLE A

SETTING INFORMATION	SYM.	UNITS	NOMINAL ANCHOR DIAMETER (IN.)													
			1/4	3/8			1/2				5/8			3/4		
NOMINAL BIT DIAMETER	d_0	IN	1/4	3/8			1/2				5/8			3/4		
EFFECTIVE MIN. EMBEDMENT	h_{ef}	IN	1½	1½	2	2½	1½	2	2½	3¼	2¾	3¼	4	3¼	3¾	4¾
NOMINAL EMBEDMENT	h_{nom}	IN	1¾	1⅞	2½	3	2	2½	3	3¾	3¼	3¾	4½	4	4½	5½
MIN. HOLE DEPTH	h_o	IN	2	2	2¾	3¼	2¼	2¾	3¼	4¼	3¾	4¼	4¾	4¼	4¾	5¾
INSTALLATION TORQUE C.S.	T_{inst}	FT-LB	4	30			50				40			110		
INSTALLATION TORQUE S.S.	T_{inst}	FT-LB	6	30			40				60			125		
FIXTURE HOLE DIAMTER	d_h	IN	5/16	7/16			9/16				11/16			13/16		

ADHESIVE ANCHOR BOLTS AND DOWELS:

1. MANUFACTURER'S FIELD REPRESENTATIVE SHALL PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED PRIOR TO COMMENCEMENT OF WORK; INSTALLATION.
2. INSTALLATION OF ADHESIVE ANCHORS IN HORIZONTAL TO VERTICAL ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH THE CURRENT EDITION OF ACI 318.
3. EMBEDMENT DEPTH FOR ANCHORS AND DOWELS IS AS FOLLOWS, UNLESS OTHERWISE NOTED THE TESTING LABORATORY WILL PERFORM TENSION TESTS ON 25% OF ANCHORS AND DOWELS TO THE SPECIFIED TEST LOADS:

TABLE B

ROD DIA. OR BAR SIZE	EMBEDMENT	TEST LOAD	BASE MATERIAL
3/8"	4"	3,000#	CONCRETE
1/2"	5"	4,500#	CONCRETE
5/8"	6"	6,500#	CONCRETE
3/4"	7"	9,000#	CONCRETE
7/8"	9"	11,000#	CONCRETE
1"	11"	15,000#	CONCRETE
1-1/4"	14"	20,000#	CONCRETE
#3	5"	3,500#	CONCRETE
#4	6-1/2"	5,500#	CONCRETE
#5	8"	8,500#	CONCRETE
#6	10"	12,000#	CONCRETE
#7	12"	16,500#	CONCRETE
#8	14"	12,500#	CONCRETE
#9	16"	23,000#	CONCRETE
#10	19"	26,000#	CONCRETE

4. ANCHORS SHALL CONFIRM WITH ASTM A193 GRADE B7 THREADED RODS USING ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F436 WASHERS U.N.O..
5. REPLACE ANCHORS AND DOWELS THAT FAIL DURING TESTING AND RETEST. IF MORE THAN 10% OF THE TESTED DOWELS AND ANCHORS FAIL TO ACHIEVE THE SPECIFIED TEST LOAD, TEST 100% OF THE DOWELS AND ANCHORS INSTALLED IN THE LAST 2 DAYS OF ANCHOR INSTALLATION.
6. CENTER BAR IN THE HOLE AND WEDGE TIGHT WITH WOODEN WEDGES TO HOLD IT IN PLACE UNTIL THE ADHESIVE SETS.
7. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE. THE ENGINEER WILL DETERMINE A NEW LOCATION.
8. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLES ATTACHED WITH ADHESIVE ANCHORS.
9. BOLTS SET IN EXPOSED SURFACE SHALL BE STAINLESS STEEL OR CORROSION RESISTANT
10. **TEST REQUIRMENT:**
    - A. **FREQUENCY** 50% OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.
    - B. **TEST LOADS:** TEST LOADS SHALL BE TWICE THE MAXIMUM ALLOWABLE TENSION LOAD OR ONE AND A QUARTER (1¼) TIMES THE MAXIMUM DESIGN STRENGTH OF ANCHORS AS PROVIDED IN THE APPROVED ICC REPORT TENSION TEST LOAD NEED NOT EXCEED 80% OF THE NOMINAL YIELD STRENGTH OF THE ANCHOR ELEMENT.

11. TEST LOADS FOR EPOXY ANCHOR IN BRICK USE SIMPSON HY 270 UP TO 1/2" DIA. USE 450 LBS. FOR TESTING LOAD. TEST 1 OUT OF 5. IN CASE OF FAILURE TEST ANOTHER 20% , 2 OUT OF 5.

STRUCTURAL INDEX OF DRAWINGS

DESIGN LOADS:

LATITUDE: 33.757131° N
LONGITUDE: -117.997061° W

S_S = 1.4 Fa=1.2 S_{DS}= 1.12
S_1=0.449 Fv=N/A S_{D1} = N/A

SITE CLASS "DEFAULT"
SEISMIC DESIGN CATEGORY "D"
I_e =1.25 RISK CATEGORY: III

WIND CRITERIA:
BASIC WIND SPEED 101 MPH
EXPOSURE "C"
I_W = 1.00

STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS	FRMG.	FRAMING
CL	CENTER LINE	FLR.	FLOOR
BM.	BEAM	MTL.	METAL
BEAM	BEAM	PL.	PLATE
DET.	DETAIL	REINF.	REINFORCING
CLR.	CLEAR	PLCS.	PLACES
CONT.	CONTINUOUS	P.H.	PENTHOUSE
CONC.	CONCRETE	O.C.	ON CENTER
COL.	COLUMN	NO.	NUMBER
BTWN.	BETWEEN	PSF	POUNDS PGR SQ.FT.
BOTT.	BOTTOM	N.T.S.	NOT TO SCALE
B.O.F.	BOTTOM OF FOOTING	N.I.C.	NOT IN CONTRACT
ANCH.	ANCHOR	SIM.	SIMILAR
A.B.	ANCHOR BOLT	SIMP.	SIMPSON
DWG.	DRAWING	SEPN.	SEPARATION
DIM.	DIMENSION	SECT.	SECTION
-3"	SLAB DEPRESSION	S.W.S.	SHEAR WALL
EA.	EACH	SCHL.	SCHEDULE
FIN.	FINISH	S.	FOOTING STEP
EXP.	EXPANSION	MIN.	MINIMUM
EXIST.	EXISTING	STL.	STEEL
ELECTL.	ELECTRICAL	THK.	THICK
EL	ELEVATION	STIFF.	STIFFENER
E.W.	EACH WAY	T.O.W.	TOP OF WALL
E.F.	EACH FACE	T.O.S.	TOP OF STEEL
EXTR.	EXTERIOR	T.O.	TOP OF DRAWINGS
F.O.W.	FACE OF WALL	S.O.G.	SLAB ON GRADE
F.O.S.	FACE OF STUD	S.A.D.	SEE ARCHITECTURAL
F.O.C.	FACE OF CONCRETE	SYM.	SYMMETRICAL
FDN.	FOUNDATION	SUPPT.	SUPPORT
ELEV.	ELEVATOR OR ELEVATION	STD.	STANDARD
GA.	GAUGE	SQ.	SQUARE
JT.	JOINT	V.O.S.	VERIFY ON SITE
INTR.	INTERIOR	V.O.J.	VERIFY ON JOB
MFR.	MANUFACTURER	TYP.	TYPICAL
MECHL.	MECHANICAL	SPEC.	SPECIFICATION
MAX.	MAXIMUM	U.N.O.	UNLESS NOTED OTHERWISE
M.B.	MACHINE BOLT	DWL.	DOWEL
LT.	WT. LIGHTWEIGHT	W/	WITH
HORIZ.	HORIZONTAL	WT.	WEIGHT
H.S.B.	HIGH STRENGTH BOLT	WJ.	WALL JOINT
GR. BM.	GRADE BEAM	VERT.	VERTICAL
FRT.	FIRE RETARDANT		

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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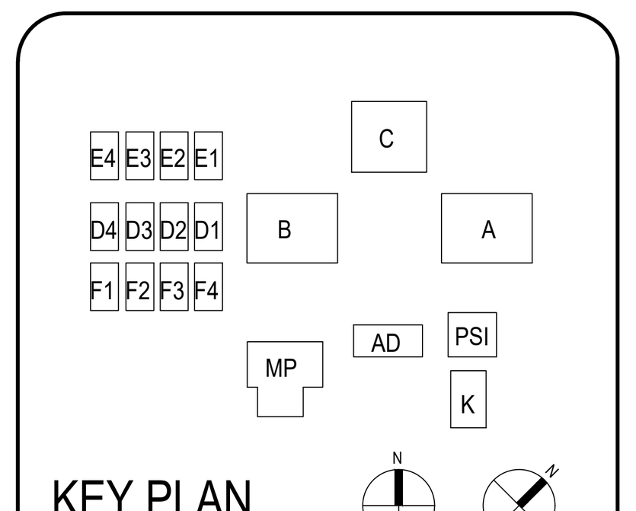
PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##-##### DSA FILE NO.: ##-##



KEY PLAN
NORTH: PLAN TRUE

Consultant

STRUCTURAL ENGINEERING CONSULTANTS
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NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07

REGISTERED PROFESSIONAL ENGINEER
TOURAJ EIMANI
No. S4302
Exp. 09/30/23
STRUCTURAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
__-__-____	000000

REVISIONS

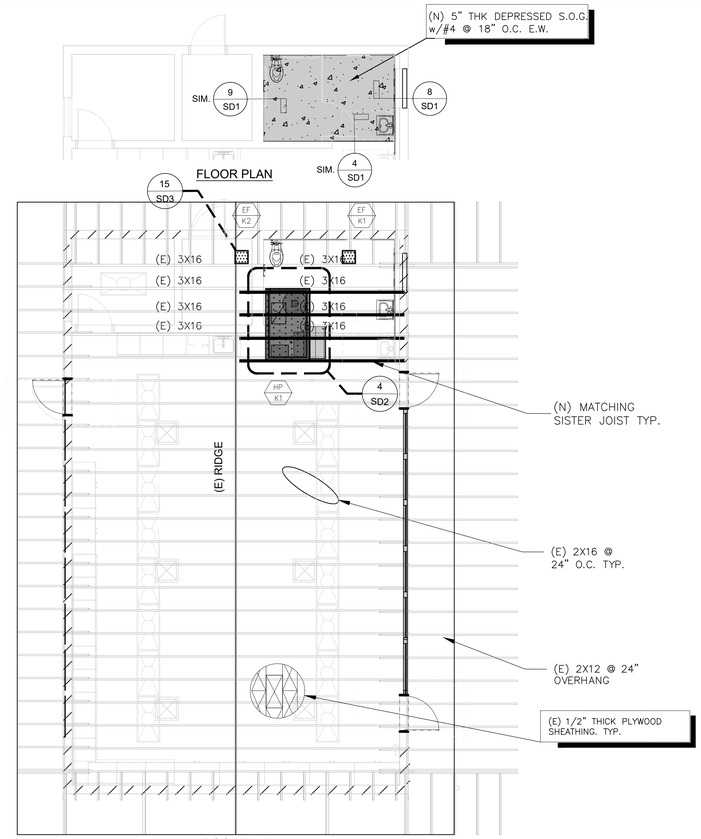
No.	Description	Date

DSA SUBMITTAL

GENERAL NOTES

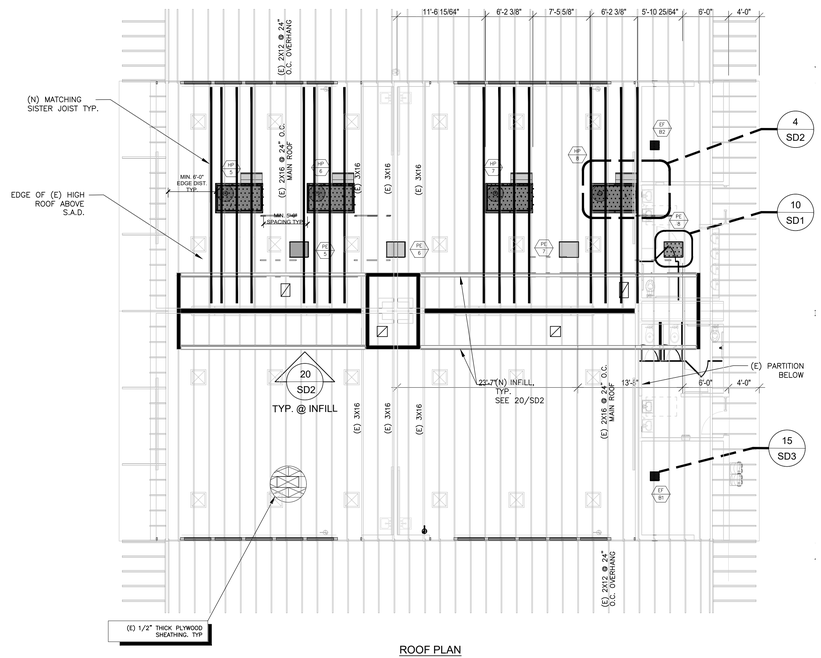
SN1

FILE PATH: Z:\Projects\...



ROOF PLAN

FLOOR PLAN/ROOF PLAN - BLDG K
3/16" = 1'-0"
3



ROOF PLAN

(*) FOR (E) HIGH ROOF OVER CLEARSTORY SEE 1A/--

FLOOR PLAN/ROOF PLAN- BLDG B
1/8" = 1'-0"
2

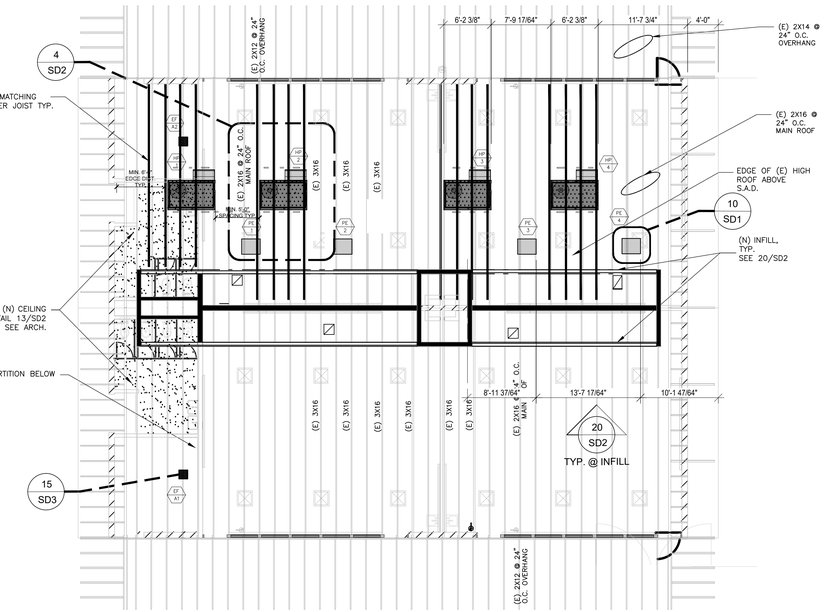
1. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 18/SD2. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
2. THE OPERATABLE WEIGHT OF UNITS SHALL BE LESS OR EQUAL TO THE VALUES SHOWN, CONTRACTOR SHALL NOTIFY SEoR ABOUT HEAVIER UNITS.
(MORE THAN 5% OF LISTED VALUES)
3. UNIT DIMENSION SHOWN HERE REPRESENT THE BEST ESTIMATE BASED ON THE AVAILABLE DATA.
4. MINOR ADJUSTMENTS IN UNIT POSITION WITH RESPECT TO EXISTING ROOF FRAMING MAY BE NECESSARY TO MISS CONFLICT, ALIGN NEW BLOCKINGS TO MATCH THE EXACT UNIT LOCATION/DIMENSIONS.
5. FINAL CONFIGURATION OF EACH UNIT, WITH RESPECT TO THE EXISTING ROOF FRAMING, SHALL BE FIELD VERIFY TO AVOID CONFLICT.
6. THE EXACT LOCATION AND SIZE OF MECH. UNIT SHALL BE VERIFIED BY VENDOR/INSTALLER IN COORDINATION WITH THE LATEST MECH. DRAWING/ CUT SHEETS.

A. PRIOR TO DEMOLITION WORK, SEE GENERAL NOTES ON SN1. FOR EXACT EXTENT OF DEMOLITION WORK REFER TO THE ARCH. DWG'S.

B. ALL EXISTING FRAMING MEMBERS THAT ARE BEING CUT/NOTCHED/TRIMMED SHALL BE PROPERLY SECURED BY SHORING.

C. SIZES SPACING LOCATIONS OF ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED & ANY DISCREPANCIES BE REPORTED TO SEoR.

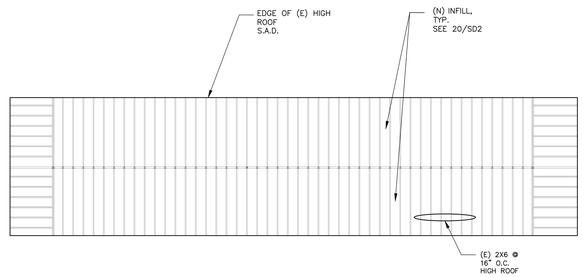
D. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO



ROOF PLAN

(*) FOR (E) HIGH ROOF OVER CLEARSTORY SEE 1A/--

FLOOR PLAN/ROOF PLAN - BLDG A
1/8" = 1'-0"
1



HIGHROOF PLAN

HIGH ROOF PLAN - BLDG A, B, C
1/8" = 1'-0"
1A

LEGEND

	(E) BEAM, V.O.S., PER PLAN SEE NOTE A-D
	(E) HEADER, V.O.S., PER PLAN, SEE NOTES A-D
	(E) ROOF FRAMING, PER PLAN, SEE NOTES A-D
	(E) STL POST, V.O.S.
	(N) MATCHING SISTER JOIST, PER PLAN FOR EXACT LOCATION, SEE DETAIL 4/SD2
	(N) CONC. SLAB-ON-GRADE
	(N) ROOFTOP UNIT, PER PLAN, SEE 4/SD2 SEE NOTE 1-7
	(N) SUSPENDED UNIT, PER PLAN, SEE 4/SD3 SEE NOTE 1-7
	(N) HVAC UNIT, PER MECH. PLANS SEE NOTE 1-7
	DUCT THROUGH ROOF PENETRATION PER MECH.

EQUIPMENT SCHEDULE (*)

UNIT DESCRIPTION	(+) OVERALL WEIGHT(LBS)	DIMENSIONS	DETAIL REF.
HEAT PUMP (ON ROOF)	930	74"L x 44"W x 41"H	4/SD2
HEAT PUMP (ON ROOF)	990	74"L x 44"W x 41"H	4/SD2
EXHAUST FAN	15		
ECONOMIZER	45		10/SD1

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. SEE NOTES 1-7

(+) OVERALL WEIGHT INCLUDES THE SELF WEIGHT OF (N) RTU ONLY

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT
PBK Architects, Inc.
PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Homer St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##-###### DSA FILE NO.: ###

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN
NORTH: PLAN TRUE

Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07

REGISTERED PROFESSIONAL ENGINEER
CLIDAY, EMAD, EMEEN
No. 84302
Exp. 09/30/23
STRUCTURAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
--/--/----	000000

REVISIONS

No.	Description	Date

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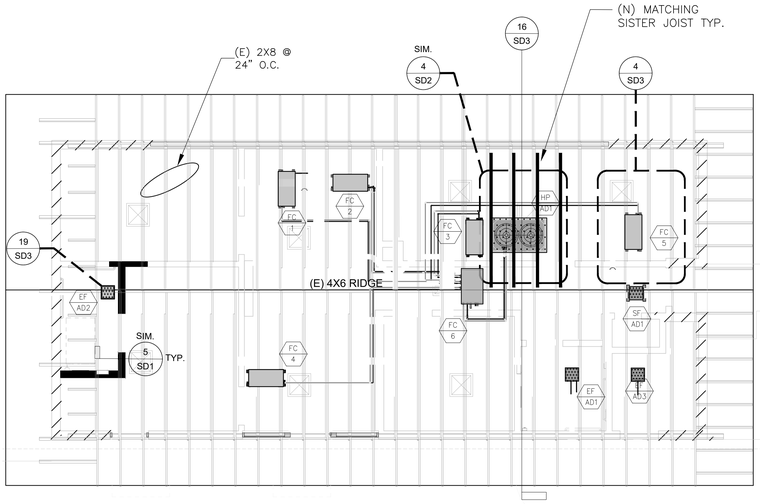
FLOOR/ROOF PLANS - BLDG A, B & K

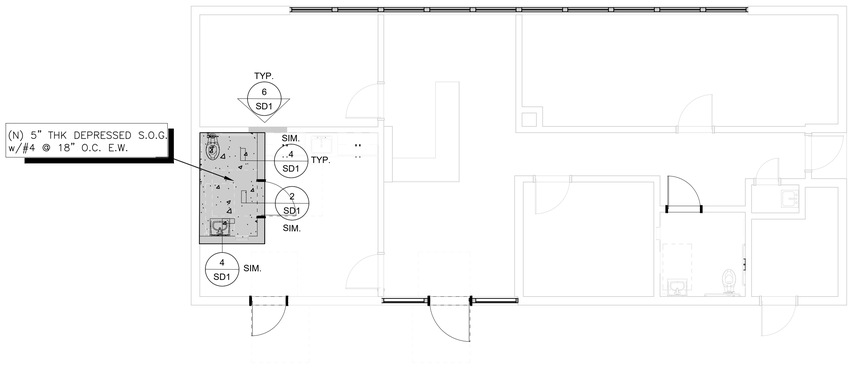
S1

FILE PATH: Z:\Projects\...

0" 1"

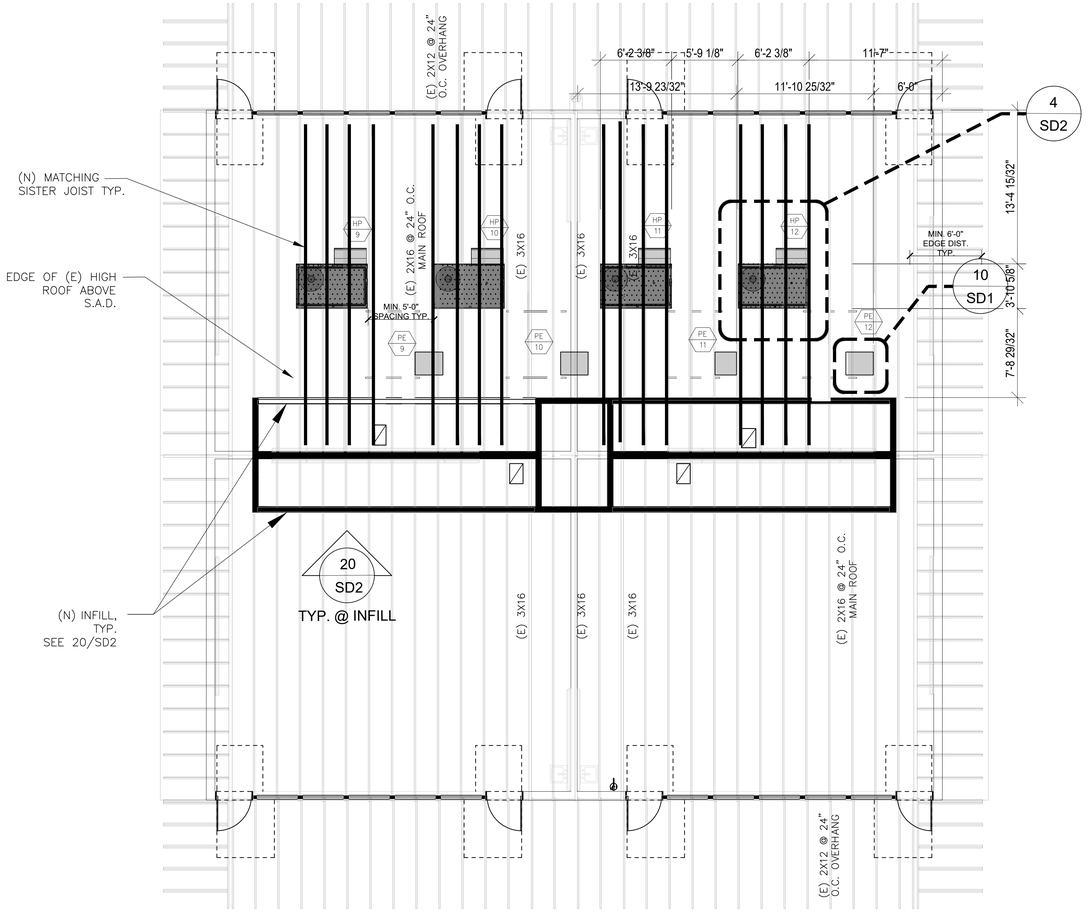


ROOF PLAN



FLOOR PLAN

FLOOR PLAN/ROOF PLAN- ADMINISTRATION BUILDING
3/16" = 1'-0" | 2



(*) FOR (E) HIGH ROOF OVER CLEARSTORY SEE 1A/S1

ROOF PLAN - BLDG C
3/16" = 1'-0" | 1

1. THE MAXIMUM OPERATIONAL WEIGHTS OF NEW UNITS ARE LISTED IN THE ANCHORAGE SCHEDULE IN DETAIL 18/SD2. EXACT SIZE AND WEIGHT OF UNITS MAY SLIGHTLY DIFFER FROM THE ONES SPECIFIED ON THESE DRAWINGS/SCHEDULE. SHOULD THE ACTUAL WEIGHT OF ANY UNITS EXCEED MORE THAN 10% OF THE LISTED WEIGHTS, IMMEDIATELY NOTIFY SE OR AND DSA DISTRICT ENGINEER FOR FURTHER INSTRUCTION.
2. THE OPERATABLE WEIGHT OF UNITS SHALL BE LESS OR EQUAL TO THE VALUES SHOWN, CONTRACTOR SHALL NOTIFY SEoR ABOUT HEAVIER UNITS. (MORE THAN 5% OF LISTED VALUES)
3. UNIT DIMENSION SHOWN HERE REPRESENT THE BEST ESTIMATE BASED ON THE AVAILABLE DATA.
4. MINOR ADJUSTMENTS IN UNIT POSITION WITH RESPECT TO EXISTING ROOF FRAMING MAY BE NECESSARY TO MISS CONFLICT, ALIGN NEW BLOCKINGS TO MATCH THE EXACT UNIT LOCATION/DIMENSIONS.
5. FINAL CONFIGURATION OF EACH UNIT, WITH RESPECT TO THE EXISTING ROOF FRAMING, SHALL BE FIELD VERIFY TO AVOID CONFLICT.
6. THE EXACT LOCATION AND SIZE OF MECH. UNIT SHALL BE VERIFIED BY VENDOR/INSTALLER IN COORDINATION WITH THE LATEST MECH. DRAWING/ CUT SHEETS.

A. PRIOR TO DEMOLITION WORK, SEE GENERAL NOTES ON SN1. FOR EXACT EXTENT OF DEMOLITION WORK REFER TO THE ARCH. DWG'S.
B. ALL EXISTING FRAMING MEMBERS THAT ARE BEING CUT/NOTCHED/TRIMMED SHALL BE PROPERLY SECURED BY SHORING.
C. SIZES SPACING LOCATIONS OF ALL EXISTING STRUCTURAL ELEMENTS SHALL BE FIELD VERIFIED & ANY DISCREPANCIES BE REPORTED TO SEoR.
D. IF EXISTING MEMBERS ARE SMALLER THAN WHAT IS SHOWN IN DRAWINGS AND CONSIDERED IN CALCULATIONS, PLEASE NOTICE SEOR FOR DETAIL OR FURTHER INFO

LEGEND

	(E) BEAM, V.O.S., PER PLAN SEE NOTE A-D
	(E) HEADER, V.O.S., PER PLAN, SEE NOTES A-D
	(E) ROOF FRAMING, PER PLAN, SEE NOTES A-D
	(E) STL POST, V.O.S.
	(N) MATCHING SISTER JOIST, PER PLAN FOR EXACT LOCATION, SEE DETAIL 4/SD2
	(N) CONC. SLAB-ON-GRADE
	(N) ROOFTOP UNIT, PER PLAN, SEE 4/SD2 SEE NOTE 1-7
	(N) SUSPENDED UNIT, PER PLAN, SEE 4/SD3 SEE NOTE 1-7
	(N) HVAC UNIT, PER MECH. PLANS SEE NOTE 1-7
	DUCT THROUGH ROOF PENETRATION PER MECH.

EQUIPMENT SCHEDULE (*)

UNIT DESCRIPTION	(+) OVERALL WEIGHT(LBS)	DIMENSIONS	DETAIL REF.
		UP 1 UP 10 UP 11 UP 12 HP 10	
HEAT PUMP (ON ROOF)	930	74"L x 44"W x 41"H	4/SD2
		FC 1 FC 2 FC 3 FC 4 FC 5 FC 6	
FAN COIL	100		4/SD3
		EF AD1 EF AD2 EF AD3	
EXHAUST FAN	24		
		PE 9 PE 10 PE 11 PE 12	
ECONOMIZER	45		10/SD1

(*) SUBJECT TO CHANGE REFER TO LATEST MECHANICAL PACKAGE. SEE NOTES 1-7

(+) OVERALL WEIGHT INCLUDES THE SELF WEIGHT OF (N) RTU ONLY

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COSTA MESA
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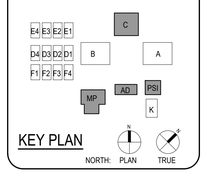
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##/##### DSA FILE NO.: ##-##



KEY PLAN

Consultant

STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07

REGISTERED PROFESSIONAL ENGINEER TUBAJ EMAD No. S4302 Exp. 09/30/23 STRUCTURAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE _-_-_ PROJECT NUMBER 000000

REVISIONS

No.	Description	Date

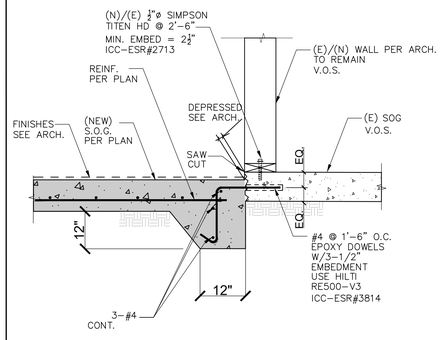
DSA SUBMITTAL

FLOOR/ROOF PLANS - BLDG C, ADMIN

S2

FILE PATH: Z:\Projects\...

0" 1"

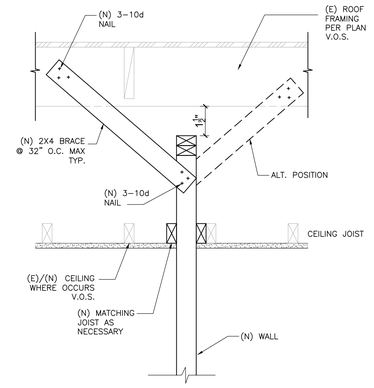


17

13

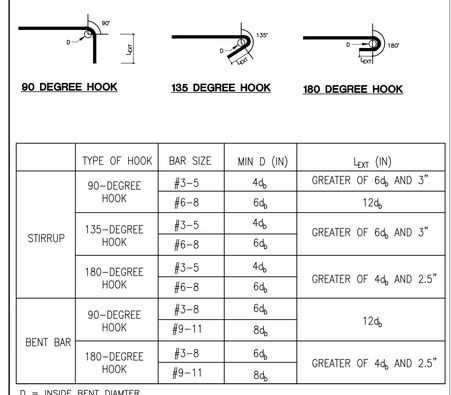
NEW DEPRESSED SLAB @ INT. WALL

9



TYP. TOP CONN. @ (N) PARTN.

5



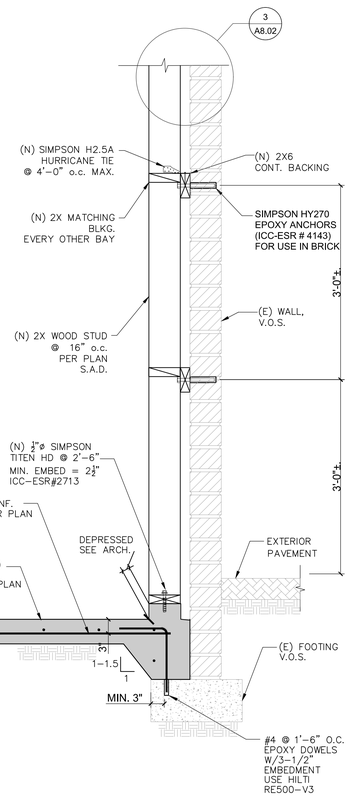
	TYPE OF HOOK	BAR SIZE	MIN D (IN)	l_{EXT} (IN)
STIRRUP	90-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $6d_b$ AND 3"
		#6-8	$6d_b$	$12d_b$
	135-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $6d_b$ AND 3"
		#6-8	$6d_b$	
	180-DEGREE HOOK	#3-5	$4d_b$	GREATER OF $4d_b$ AND 2.5"
		#6-8	$6d_b$	
BENT BAR	90-DEGREE HOOK	#3-8	$6d_b$	$12d_b$
		#9-11	$8d_b$	
	180-DEGREE HOOK	#3-8	$6d_b$	GREATER OF $4d_b$ AND 2.5"
		#9-11	$8d_b$	

D = INSIDE BENT DIAMTER

BAR BENDING & STIRRUPS

1

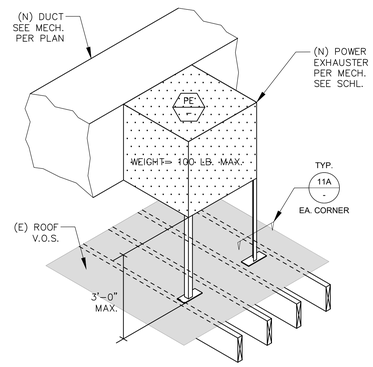
18



19

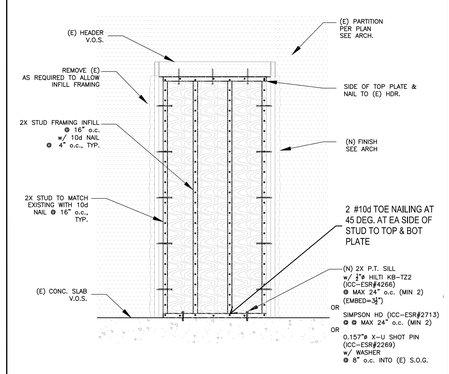
TYP. FURRING WALL SUPPORT

15



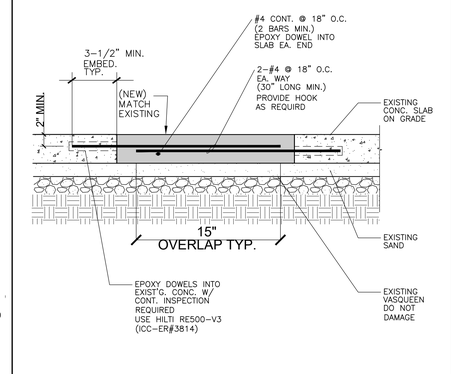
TYP. BLKG. SUPPORT

10



TYP. INFILL @ DOOR OPNG.

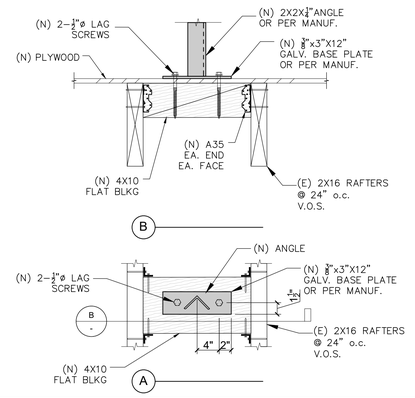
6



TYPICAL REPAIR AT SLAB ON GRADE

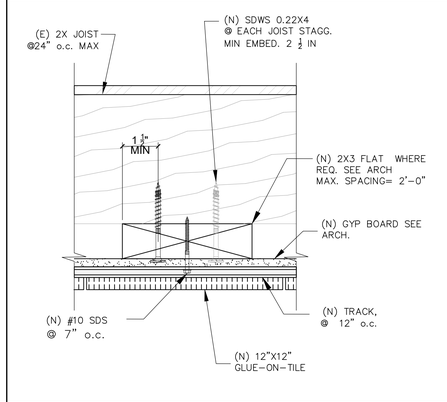
2

20



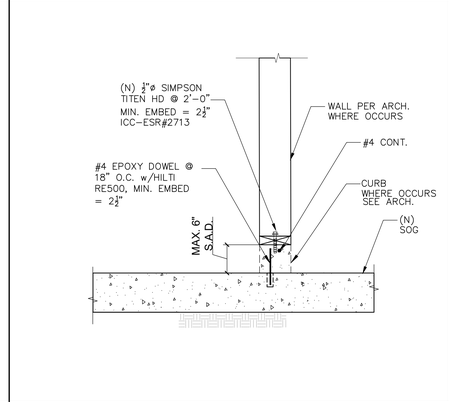
TYP. BLKG. SUPPORT

11



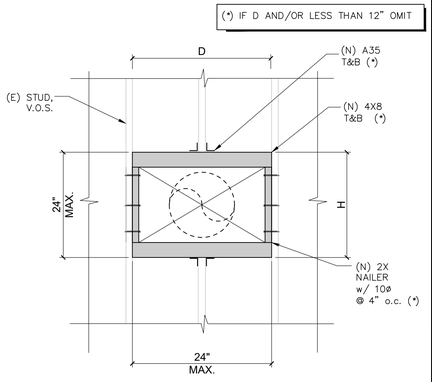
CEILING JOIST DETAIL

7



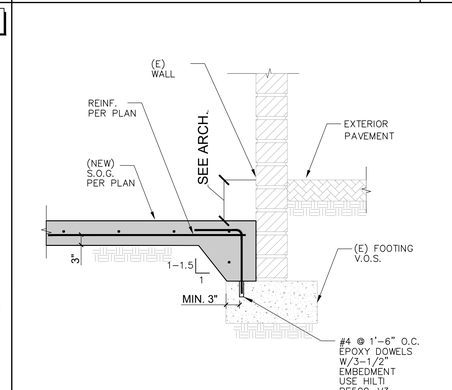
TYP. BOT. CONN. @ PARTN. WALL

3



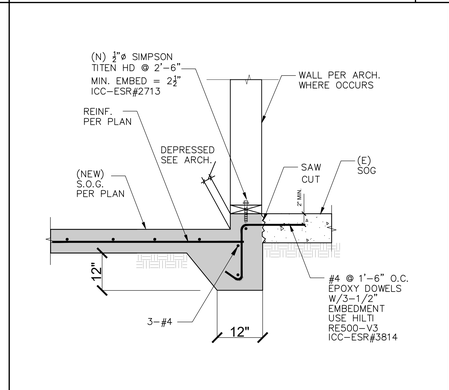
NEW OPENING

12



NEW DEPRESSED SLAB @ EXT. WALL

8



NEW DEPRESSED SLAB @ INT. WALL

4

FILE PATH: Z:\Projects\...

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PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

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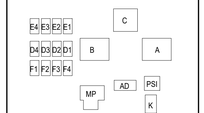
DSA APPL NO.: ##-###### DSA FILE NO.: ###

KEY PLAN



Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07

REGISTERED PROFESSIONAL ENGINEER TONAJ EMAMI No. 84302 Exp. 09/30/23 STRUCTURAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE: -/-/-
PROJECT NUMBER 000000

REVISIONS

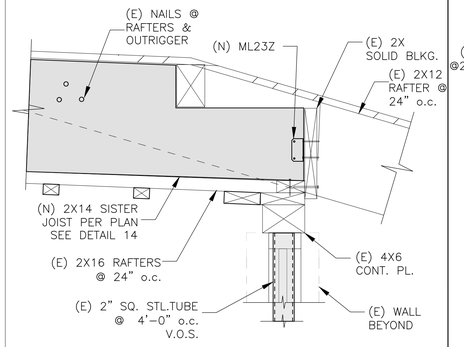
No.	Description	Date

DSA SUBMITTAL

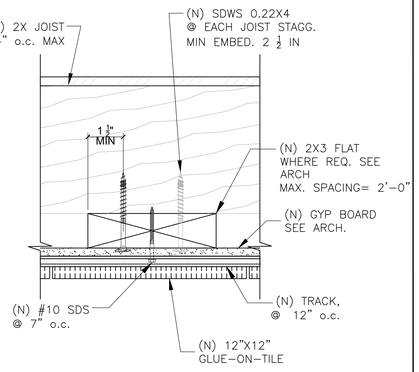
CONCRETE DETAILS

SD1

0" 1"



DETAIL 17

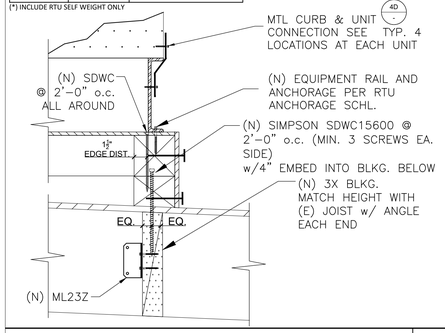


CEILING JOIST DETAIL 13

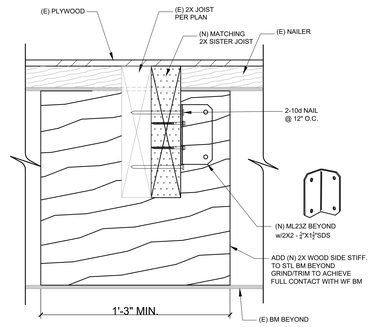
RTU ANCHORAGE SCHEDULE

UNIT SYMBOL	(*)MAX. WEIGHT	FASTENER
	640 LB	(3)-3/8ø LAG SCREW LONG SIDE (2)-3/8ø LAG SCREW SHORT SIDE MIN PENETRATION = 3½"

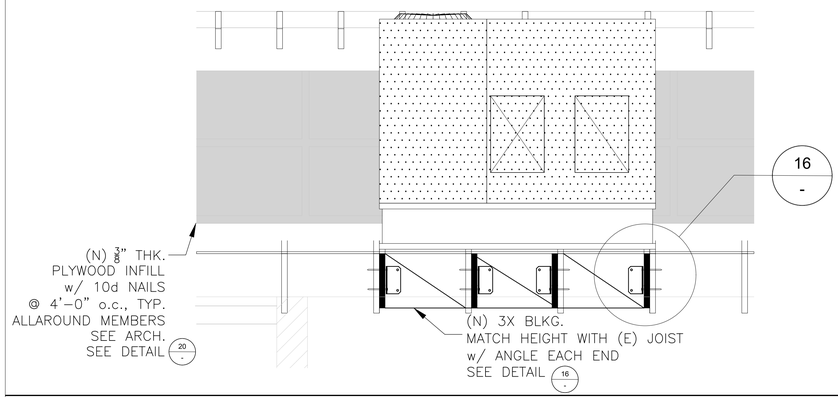
(*) INCLUDE RTU SELF WEIGHT ONLY



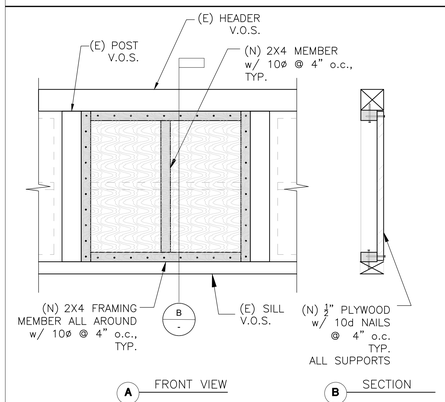
DETAIL 18



REINFORCED SUBPURLINE @ ROOF 14



SECTION 15



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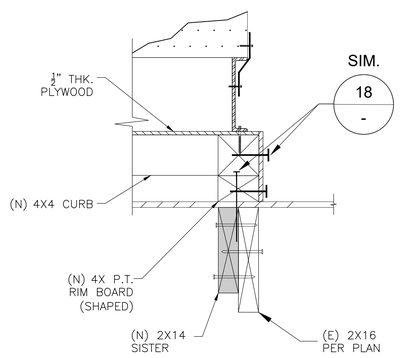


DETAIL 16

(N) 3X6 BLKG

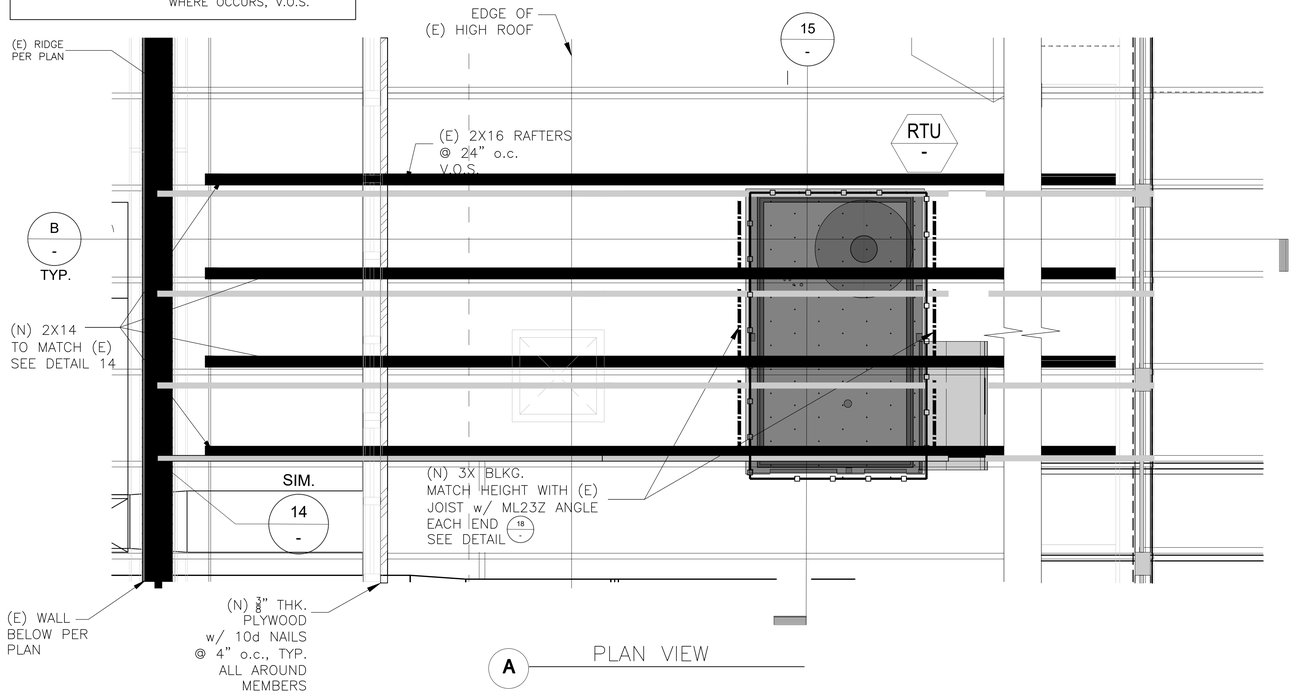
(N) 4X4 CURB

(N) 4X RIM BOARD (SHAPED)

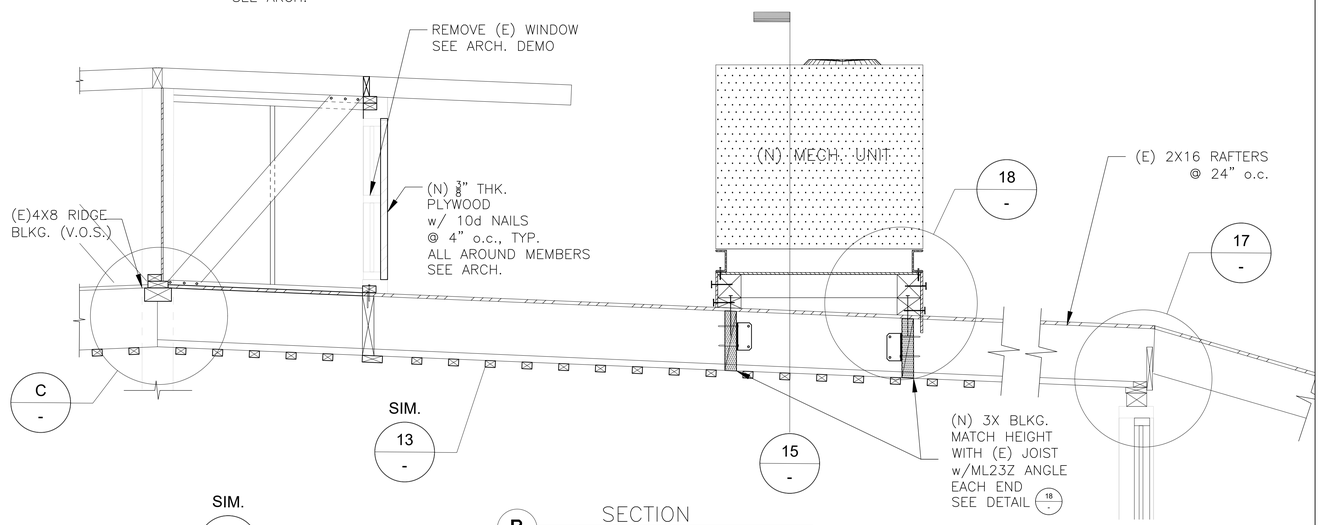
(E) WF STEEL BEAM, WHERE OCCURS, V.O.S.

(*)EXACT FRAMING CONFIGURATION AND SIZES MAY VARY ON DIFFERENT AREAS SEE CONFIG./OPTIONS BELOW

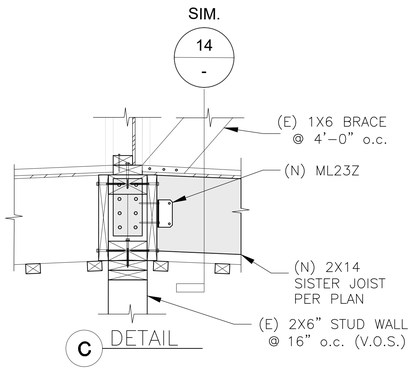
(**)FOR DIMENSION/LOCATION OF NEW UNITS, SEE NOTE 1-7 ON ROOF PLANS



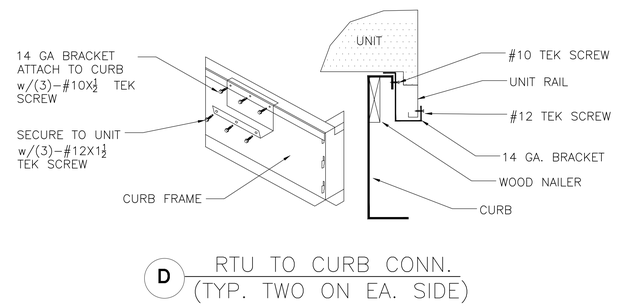
A PLAN VIEW



B SECTION



C DETAIL



D RTU TO CURB CONN. (TYP. TWO ON EA. SIDE)

NEW MECH. UNIT @ CLASSROOM 4

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PBK

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Costa Mesa, CA 92626
P 949-548-9000
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##-###### DSA FILE NO.: ##-##

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN
NORTH: PLAN TRUE

Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07

REGISTERED PROFESSIONAL ENGINEER JOSHUA EMAN No. 84302 Exp. 08/30/23 STRUCTURAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE - - PROJECT NUMBER 000000

REVISIONS

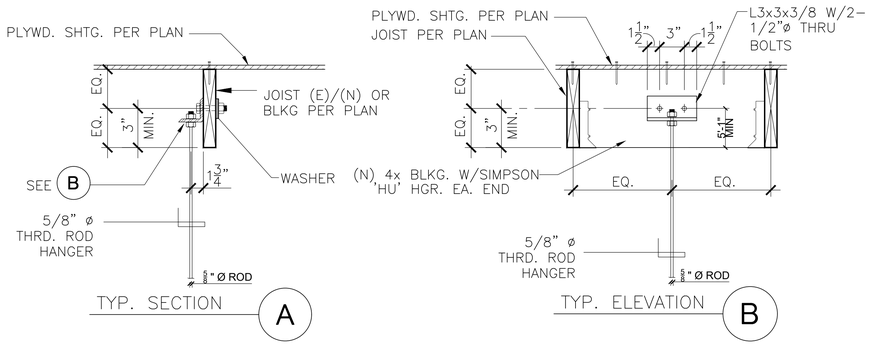
No.	Description	Date

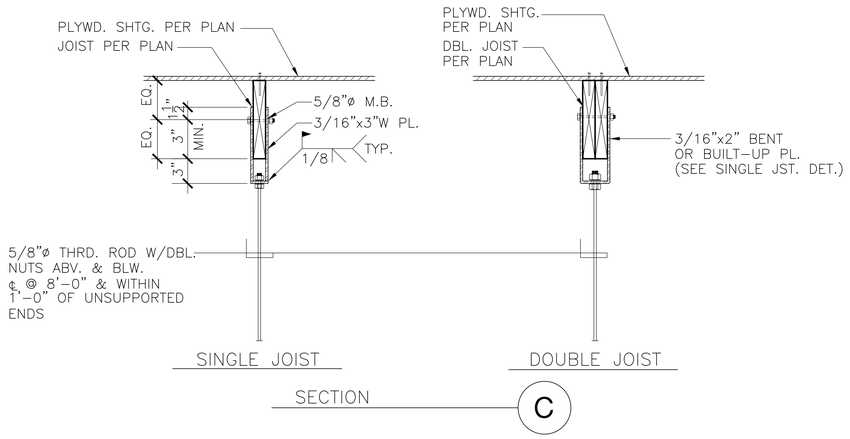
DSA SUBMITTAL

RTU DETAILS

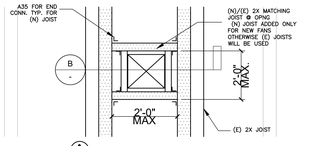
SD2

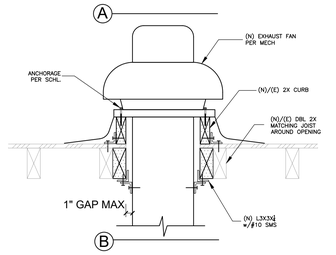
FILE PATH: Z:\Projects\...



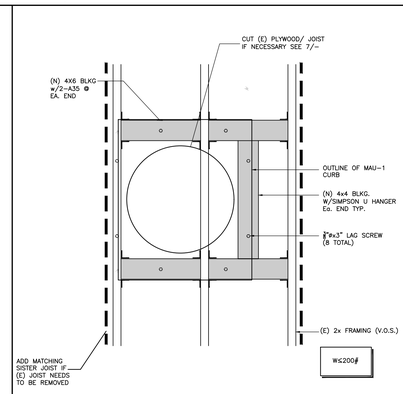


HANGER FOR SAWN LUMBER (UP TO 250 LB) | 14

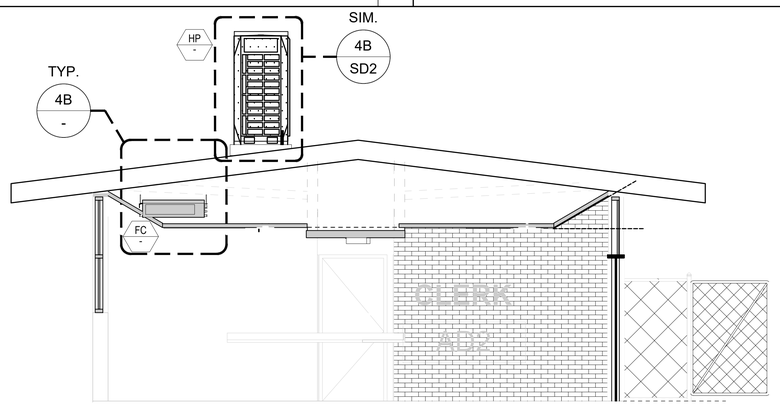




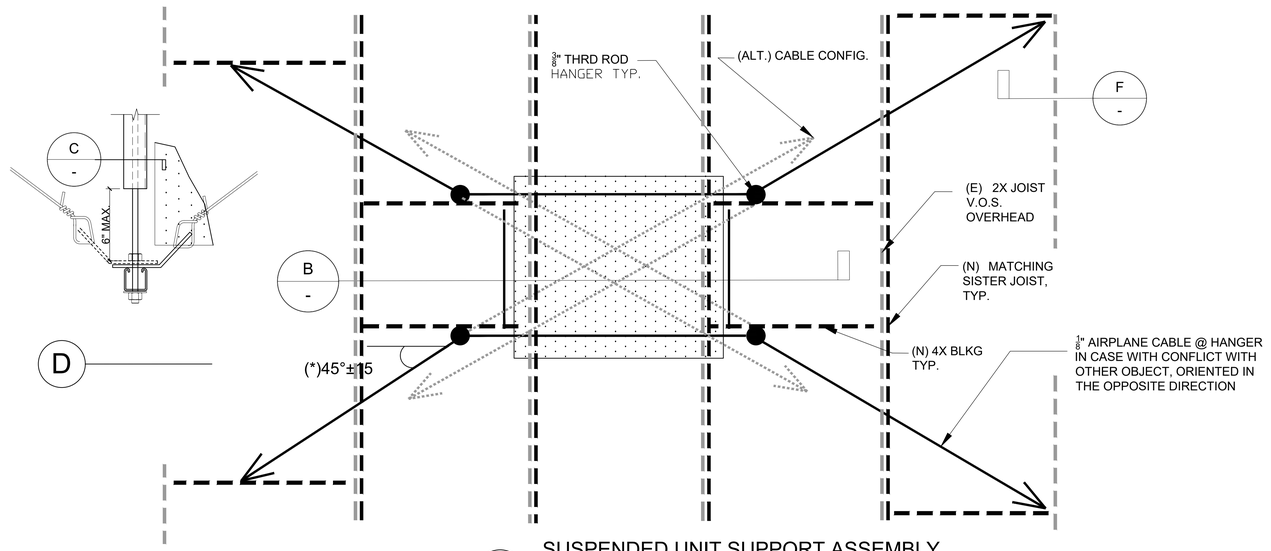
DETAIL | 19



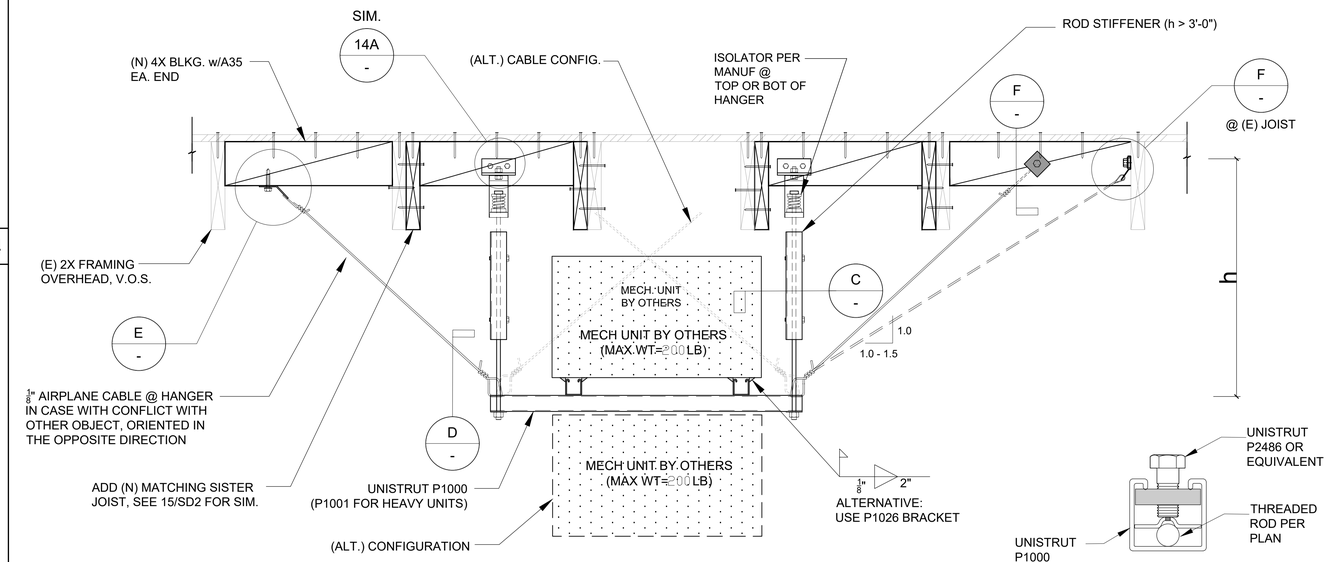
LIGHT WT EQUIP. SUPPORT FRAMING | 15



SECTION | 16

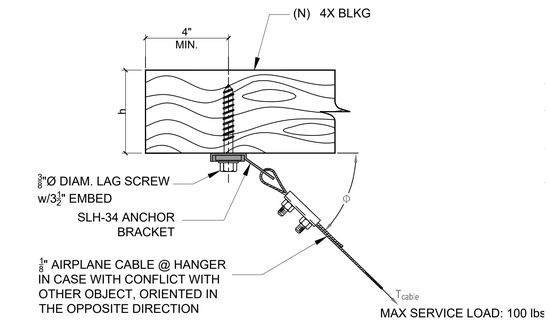


A SUSPENDED UNIT SUPPORT ASSEMBLY
PARTIAL PLAN

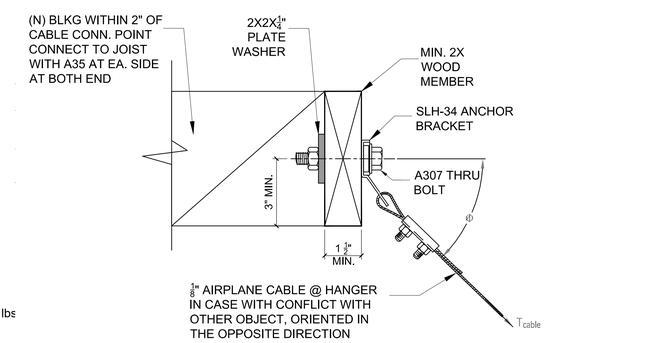


B SECTION

C ROD STIFFENER ("h">3'-0")



E LAG BOLT TO WOOD MEMBER



F THRU BOLT PERPENDICULAR TO WOOD MEMBER

HANGER SUPPORT/ SEISMIC BRACING @ HUNG UNITS (MAX 400-lbs) | 4

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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Costa Mesa, CA 92626
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PBK.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: ##/##### DSA FILE NO.: ###

KEY PLAN
E4 E3 E2 E1 | D4 D3 D2 D1 | F1 F2 F3 F4 | B | C | A | MP | AD | PSI | K
NORTH: PLAN TRUE

Consultant
STRUCTURAL ENGINEERING CONSULTANTS
23 CORPORATE PLAZA DR. SUITE 150
NEWPORT BEACH, CA 92660
NIC PROJECT NO.2226.07
REGISTERED PROFESSIONAL ENGINEER TOMAJ EMAMI No. S43302 Exp. 09/30/23 STRUCTURAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE PROJECT NUMBER
-/-/- 000000

REVISIONS

No.	Description	Date

DSA SUBMITTAL

HUNG UNITS DETAILS

SD3

M0.00 - MECHANICAL SYMBOLS, LEGENDS AND NOTES

TITLE 24 NOTES

THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:

1. EQUIPMENT SHALL MEET EFFICIENCY REQUIREMENTS OF TABLES 110.2-A THROUGH 110.2-K.
2. ALL AIR-COOLED, UNITARY, DX UNITS (PACKAGED, SPLIT-SYSTEM, HEAT PUMPS AND VRF) WITH ECONOMIZERS SHALL BE EQUIPPED WITH FAULT DETECTION AND DIAGNOSTICS SYSTEMS.
3. PIPE INSULATION FOR SPACE CONDITIONING AND SERVICE WATER-HEATING WITH FLUID TEMPERATURES LISTED IN TABLE 120.3-A SHALL HAVE INSULATION LEVELS AS SPECIFIED IN SUBSECTION (A) AND (B).
4. MECHANICAL HEATING AND COOLING EQUIPMENT SHALL BE THE SMALLEST SIZE, WITHIN THE AVAILABLE OPTIONS OF THE DESIRED EQUIPMENT LINE, NECESSARY TO MEET THE DESIGN HEATING AND COOLING LOADS OF THE BUILDING, AS CALCULATED ACCORDING TO THE REQUIREMENTS OF SECTION 140.4(B).
5. HVAC MOTORS FOR FANS THAT ARE LESS THAN 1 HP AND 1/12 HP OR GREATER SHALL BE ECM OR HAVE A MINIMUM MOTOR EFFICIENCY OF 70%. MOTORS SHALL ALSO HAVE MEANS TO ADJUST MOTOR SPEED FOR BALANCING OR REMOTE CONTROL.
6. ELECTRIC RESISTANCE HEATING SYSTEMS ARE NOT PROVIDED FOR SPACE HEATING.
7. IN DRIER CLIMATES AND WHEN LARGE OUTDOOR AIR FRACTIONS ARE REQUIRED, EVAPORATIVE PRE-COOLING PACKAGES WERE EVALUATED TO PRE-COOL OUTSIDE AIR AND COOL THE AIR FLOWING OVER THE DX CONDENSING UNIT.
8. ZONE EACH AIR HANDLER TO SERVE ONLY AREAS WITH COMMON LOADS TO ALLOW MORE AGGRESSIVE CONTROL STRATEGIES AND IMPROVE COMFORT. HAVE DIFFERENT AHU'S SERVING CORE VS. PERIMETER AREAS.
9. THE DESIGN ACCOMMODATES PARTIAL OCCUPANCY ENERGY SAVINGS WHEN THE OWNER'S REQUIREMENTS OR NARRATIVE DESCRIBE ANY POSSIBLITY OF PARTIAL OCCUPANCY, BY ZONING AIR HANDLERS BY FLOOR OR BY PART OF A FLOOR, OR BY INCORPORATING CONTROLLED FLOOR DAMPERS, OR VAV AIR TERMINALS GOING TOTALLY SHUT WHEN NOT OCCUPIED, ETC.
10. EACH ZONE IS CONTROLLED BY AN INDIVIDUAL THERMOSTATIC CONTROL. CONTROLS SHALL BE CAPABLE OF SETTING TEMPERATURES TO 55 DEG F FOR HEATING AND 85 DEG F FOR COOLING AND PROVIDE A TEMPERATURE DEADBAND OF AT LEAST 5 DEG F IF CONTROLLING BOTH HEATING AND COOLING.
11. EACH SPACE CONDITIONING SYSTEM SHALL BE EQUIPPED WITH CONTROLS TO SHUT THE SYSTEM OFF DURING PERIODS OF NONUSE AND WILL TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN SETBACK AND SETUP TEMPERATURES WHILE KEEPING VENTILATION DAMPERS CLOSED.
12. SYSTEMS SERVING MULTIPURPOSE ROOMS LESS THAN 100 SF AND CLASSROOMS, CONFERENCE, AUDITORIUM OR MEETING CENTER ROOMS GREATER THAN 750 SF SHALL HAVE OCCUPANCY SENSORS THAT INTERFACE WITH HVAC CONTROLS TO AUTOMATICALLY SETUP THE COOLING SETPOINT BY 2F OR MORE AND AUTOMATICALLY RESET THE MINIMUM REQUIRED VENTILATION RATE. THESE OCCUPANT SENSOR VENTILATION CONTROL DEVICES MUST MEET THE REQUIREMENTS OF SECTION 120.1(C)5.
13. OUTDOOR AIR SUPPLY AND EXHAUST EQUIPMENT SHALL BE INSTALLED WITH DAMPERS THAT AUTOMATICALLY CLOSE UPON EF FAN SHUTDOWN.
14. HVAC SYSTEMS WITH DDC TO THE ZONE LEVEL SHALL BE PROGRAMMED TO ALLOW CENTRALIZED DEMAND SHED FOR NON-CRITICAL ZONES.
15. ZONE CONTROLS PREVENT REHEATING, RECOOLING AND SIMULTANEOUS PROVISIONS OF HEATING AND COOLING TO THE SAME ZONE.
16. EACH WALL MOUNTED THRMOSTAT SHALL BE LOCATED AWAY FROM POTENTIAL SOURCES THAT WOULD ADVERSELY AFFECT THE READING (CLOSE TO COPIERS, DIRECT SUNLIGHT, BELOW OR ABOVE A SUPPLY AIR DIFFUSER OR CONVECTOR, ETC.). ANY THERMOSTATS MOUNTED ON EXTERIOR WALLS SHALL BE INSTALLED IN SEALED AND INSULATED JUNCTION BOXES.
17. CORNER OFFICE SHALL ALWAYS HAVE THEIR OWN THERMOSTATS, AIR TERMINAL BOXES OR FIN-TUBE RADIATORS.
18. CONTROL SEQUENCES SHALL BE LISTED FOR EQUIPMENT OPERATED BY STAND-ALONE PACKAGED CONTROLS. UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
19. CONTROL SEQUENCES SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT LISTED IN THE EQUIPMENT SCHEDULE THAT IS MONITORED OR CONTROLLED BY THE BUILDING AUTOMATION SYSTEM (BAS). UNOCCUPIED SEQUENCES SHALL BE INCLUDED.
20. OUTSIDE AIR TEMPERATURE SENSORS SHALL BE IN A COMMERCIALLY DESIGNED SOLAR SHIELD LOCATED ON A NORTH WALL OR SOME OTHER LOCATION OUT OF DIRECT SUNLIGHT AND AWAY FROM BUILDING EXHAUST OR HEAT REJECTION EQUIPMENT.
21. THE OUTDOOR AIR-VENTILATION RATE AND AIR-DISTRIBUTION ASSUMPTIONS MADE IN THE DESIGN OF THE VENTILATING SYSTEM ARE CLEARLY IDENTIFIED ON THE PLANS.
22. EACH SPACE IS DESIGNED TO HAVE NATURAL VENTILATION OR MECHANICAL VENTILATION THAT IS NO LESS THAN THE LARGER OF CONDITIONED FLOOR AREA TIMES THE REQUIREMENTS IN TABLE 120.1-A OR 15 CFM TIMES THE EXPECTED NUMBER OF OCCUPANTS.
23. THE MINIMUM AND MAXIMUM OUTDOOR AIR RATES FOR EACH AIR HANDLER ARE LISTED ON THE EQUIPMENT SCHEDULES.
24. THE OUTDOOR AIR-VENTILATION RATES ARE BASED ON PLANNED OWNER OCCUPANCY AS DEFINED IN OWNER'S DESIGN INTENT AND ARE NOT BASED ON MAXIMUM EGRESS OCCUPANCY RATES.
25. HVAC SYSTEMS THAT HAVE AN ECONOMIZER, SERVE A SPACE WITH A DESIGN OCCUPANT DENSITY GREATER THAN OR EQUAL TO 25 PEOPLE PER 1000 SF, AND ARE EITHER A SINGLE ZONE SYSTEM WITH ANY CONTROLS OR MULTIPLE ZONE SYSTEM WITH DDC CONTROLS TO THE ZONE LEVEL MUST HAVE DEMAND CONTROL VENTILATION CONTROLS. THE FOLLOWING MUST BE MET:
   A. CO2 SENSORS INSTALLED IN EACH ROOM SERVED BY SYSTEMS WITH DCV CONTROLS.
   B. CO2 SENSORS ARE LOCATED BETWEEN 3 FT AND 6 FT ABOVE THE FLOOR.
   C. CO2 CONCENTRATIONS MAINTAINED AT LESS THAN OR EQUAL TO 600 PPM PLUS OUTDOOR PPM.
   D. DURING HOURS OF EXPECTED OCCUPANCY, CONTROLS MAINTAIN THE SYSTEM VENTILATION RATE.
26. EACH COOLING FAN SYSTEM THAT HAS A DESIGN MECHANICAL COOLING CAPACITY OVER 54,000 BTU/H SHALL HAVE AN AIR ECONOMIZER OR A WATER ECONOMIZER. AIR ECONOMIZERS MUST COMPLY WITH THE HIGH LIMIT SHUTOFF CONTROLS SHOWN IN TABLE 140.4-B.
27. INTEGRATED ECONOMIZER CONTROLS SHALL BE SET UP SUCH THAT PARTIAL COOLING IS PROVIDED BY THE ECONOMIZER EVEN WHEN ADDITIONAL MECHANICAL COOLING ID REQUIRED.
28. ECONOMIZER DAMPERS SHALL BE DRIVEN BY DIRECT DRIVE ACTUATORS RATHER THAN ROD LINKAGES, WHICH CAN BE A MAJOR CAUSE OF ECONOMIZER MALFUNCTION.
29. BAROMETRIC RELIEF IS USED, IF POSSIBLE. IF NOT, RELIEF FANS (RATHER THAN RETURN FANS) SHALL BE USED IN MOST CASES.
30. OUTDOOR AND RETURN AIR SENSORS SHALL BE PROPERLY SELECTED, PROPERLY LOCATED TO PROVIDE ACCURATE AND REPEATABLE MEASUREMENTS FOR CONTROLLING ECONOMIZER OPERATION. AVERAGING SENSORS COVER THE ENTIRE DUCT OR COIL FACE AREAS.
31. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST BE INSTALLED, SEALED AND INSULATED AS REQUIRED BY 120.4(A).
32. DUCT SEALING LEAKAGE RATES SHALL BE NO MORE THAN 6% OF AIR FLOW FOR NEW DUCT SYSTEMS AND NO MORE THAN 15% OF AIR FLOW FOR ALTERED EXISTING DUCT SYSTEMS.
33. DUCT SHALL UTILIZE LOW STATIC PRESSURE DESIGN. IDENTIFY THE MOST RESTRICTIVE BRANCH FROM THE FAN TO THE LAST AIR TERMINAL UNIT. IDENTIFY POSSIBLE MEANS OF SIGNIFICANTLY REDUCING THE PRESSURE DROP. BRANCH DUCT SYSTEMS SHALL DESIGNED FOR EQUAL PRESSURE DROP, WHEN POSSIBLE.
34. DUCT BRANCHES WITH SIGNIFICANTLY DIFFERING STATIC PRESSURE REQUIREMENTS SHALL HAVE VOLUME CONTROL STRATEGICALLY PLACED TO AID IN TAB WORK.
35. FAN SHALL DISCHARGE INTO DUCT SECTIONS THAT REMAIN STRAIGHT FOR AS LONG AS POSSIBLE (IDEALLY 10 DUCT DIAMETERS) TO REDUCE FAN INEFFICIENCIES FROM SYSTEM EFFECTS.
36. DUCT VELOCITIES SHALL GENERALLY BE BELOW 2,000 FPM FOR DUCTS IN CEILING PLENUMS, 1500 FPM FOR EXPOSED DUCTS AND 3500 FPM IN MECHANICAL ROOMS AND NON-NOISE SENSITIVE SHAFTS AND DO NOT REDUCE ANY DUCT SIZES LISTED ON PLANS.
37. DUCT FRICTION RATES SHALL GENERALLY BE LESS THAN O.25" WC PER 100 LINEAL FEET NEARER THE FAN, 0.15 TO 0.20" IN THE MAIN DUCTS AND 0.08 TO 0.12" WC/100' NEARER THE END OF THE SYSTEM. DESIGNS OVER THESE RATES SHALL BE QUESTIONED. VERY ENERGY EFFICIENT DESIGN CAN LOWER THESE VALUES BY UP TO 40%.
38. CONTRACTOR SHOP DRAWINGS SHALL BE SUFFICIENTLY DETAILED TO ENSURE THAT DISTRIBUTION SYSTEM DESIGN INTENT IS ADEQUATELY CONVEYED TO MATCH PLANS. IF SUFFICIENT DETAIL IS NOT INCLUDED IN DRAWINGS, INSTALLATIONS MAY RESULT IN SIGNIFICANTLY HIGHER PRESSURE DROPS AND HENCE HIGHER ENERGY CONSUMPTION AND OTHER OPERATING ISSUES.
39. ACCEPTANCE REQUIREMENTS ARE CLEARLY IDENTIFIED IN CONSTRUCTION DOCUMENTS.
40. COMMISSIONING MEASURES OR REQUIREMENTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
41. REQUIREMENTS FOR FUNCTIONAL PERFORMANCE TESTS ARE REFLECTED IN THE CONSTRUCTION DOCUMENTS.
42. COOLING SYSTEMS IDENTIFIED IN TABLE 140.4-D SHALL HAVE FAN CONTROLS TO VARY THE INDOOR FAN AIRFLOW AS A FUNCTION OF LOAD:
   A. DX AND CHILLED WATER COOLING SYSTEMS THAT CONTROL CAPACITY BASED ON OCCUPIED SPACE TEMPERATURE SHALL HAVE A MINIMUM OF 2 STAGES OF CONTROL.
   B. SYSTEMS THAT CONTROL SPACE TEMPERATURE BY MODULATING AIRFLOW TO THE SPACE SHALL HAVE PROPORTIONAL FAN CONTROL.
   C. SYSTEMS WITH AIR SIDE ECONOMIZER SHALL HAVE A MINIMUM OF 2 SPEEDS OF FAN CONTROL DURING ECONOMIZER OPERATION.
43. FAN CABINET ENCLOSURE AND INTERNAL COMPONENTS SHALL BE ELECTED TO MINIMIZE PRESSURE DROP, E.G. FACE VELOCITY IS LESS THAN 500 FPM, LOW PRESSURE DROP COILS, FILTERS, ETC.
44. FAN WHEEL SHALL BE SELECTED FOR EFFICIENT OPERATION, E.G. LARGER DIAMETER ROTATING AT LOWER SPEED.
45. SYSTEMS THAT SERVE MULTIPLE ZONES SHALL HAVE CONTROLS THAT AUTOMATICALLY RESET SUPPLY AIR TEMPERATURE. ZONES WITH HIGH INTERNAL LOADS WITH NEAR CONSTANT AIRFLOW SHALL BE DESIGNED FOR THE ELEVATED RESET SUPPLY AIR TEMPERATURE. RESET CONTROLS SHALL BE IN RESPONSE TO BUILDING LOADS OR TO OUTDOOR AIT TEMPERATURE AND SHALL BE AT LEAST 25% OF THE DIFFERENCE BETWEEN SUPPLY AIR AND DESIGN ROOM AIR TEMPERATURE. CONTROL SEQUENCES ARE IDENTIFIED IN CONSTRUCTION DOCUMENTS.
46. SAT RESET SHALL BE ESTABLISHED WITH AN AGGRESSIVE RESET SCHEDULE OF 10F, E.G. 55F DURING WARM WEATHER AND 65F DURING COOL WEATHER.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH CURRENT CALIFORNIA CODE OF REGULATIONS TITLE 24, ALL OTHER APPLICABLE CODES AND REGULATIONS, SMACNA AND ASHRAE GUIDELINES, AND LOCAL CODES.
2. ALL HVAC EQUIPMENT SHALL BE COMPLIANT WITH EFFICIENCY STANDARDS PER TITLE-24, PART 6.
3. ALL FRESH AIR INTAKES SHALL BE AT LEAST 10 FEET IN A HORIZONTAL DIRECTION FROM ALL EXHAUST, FLUE, FUEL BURNING APPLIANCE AND PLUMBING VENT OUTLETS. FOR GAS/ELECTRIC AIR CONDITIONING UNITS WHERE THE CODE REQUIRED CLEARANCES ARE NOT MET, A FACTORY FLUE GAS DEFLECTOR AND EXTENSION SHALL BE USED TO MINIMIZE THESE CLEARANCES. CONTRACTOR SHALL DETERMINE LOCATIONS WHERE REQUIRED PRIOR TO BID. THIS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. AIR FILTERS SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED. PREFORMED FILTERS HAVING COMBUSTIBLE FRAMING SHALL BE TESTED AS A COMPLETE ASSEMBLY. AIR FILTERS IN ALL OCCUPANCIES SHALL BE PER TITLE-24 PART 6 AND APPLICABLE ASHRAE REQUIREMENTS. FILTERS SHALL BE ACCESSIBLE
5. REVIEW THESE PLANS AND SPECIFICATIONS PRIOR TO BID. REVIEW PLANS AND SPECIFICATIONS OF OTHER RELATED TRADES INCLUDING ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND FIRE PROTECTION.
6. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AS THESE ARE PART OF THE CONTRACT DOCUMENTS. WHERE A CONFLICT OCCURS BETWEEN THIS SPECIFICATION AND OTHER SPECIFICATIONS ISSUED AS A PART OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SUPERCEDES.
7. THESE DRAWINGS ARE DIAGRAMMATIC ONLY AND NOT INTENDED TO INDICATE ALL REQUIRED OFFSETS, BENDS, ELBOWS, TRANSITIONS, FITTINGS AS REQUIRED TO CONFORM TO THE BUILDING STRUCTURE, CLEARANCE INSIDE CEILINGS, AVOIDANCE OF OBSTRUCTIONS, AND MAINTAINING HEAD CLEARANCE.
8. COORDINATE INSTALLATION WITH ALL OTHER TRADES PRIOR TO INSTALLATION OF EQUIPMENT OR MATERIALS, INCLUDING BUT NOT LIMITED TO, STRUCTURAL, ARCHITECTURAL, ELECTRICAL, AND PLUMBING.
9. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTIVE CEILING PLANS, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ROOM ELEVATIONS. THE ARCHITECT AND ENGINEER SHALL BE IMMEDIATELY NOTIFIED OF ANY CONFLICTS PRIOR TO FABRICATION AND INSTALLATION.
10. COORDINATE THE LOCATION OF ALL ROOF OPENINGS AND THE LOCATIONS OF ALL ROOF MOUNTED EQUIPMENT WITH THE STRUCTURAL AND ARCHITECTURAL WEIGHTS FOR PLATFORM AND CURB SIZES, FOR ROOF AND WALL PENETRATION DETAILS AND REQUIREMENTS, SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS. REQUIRED PLATFORMS AND FLASHINGS FOR MECHANICAL EQUIPMENT SHALL BE AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL PLANS, UNLESS NOTED OTHERWISE.
11. HIRE A TEST AND BALANCE AGENCY TO PERFORM THE TESTING PROCEDURES, REQUIRED BY THE MECH-2A THROUGH MECH-11A CERTIFICATE OF ACCEPTANCE FORMS, AS APPLICABLE FOR ALL NEWLY INSTALLED HEATING AND COOLING SYSTEMS. THE CONTRACTOR AND TEST AND BALANCE AGENCY ARE RESPONSIBLE FOR OBTAINING THE CERTIFICATE OF ACCEPTANCE FORMS REQUIRED BY THE IOR. THE TEST AND BALANCE AGENCY SHALL BE WELL VERSED WITH ALL THE REQUIREMENTS OF THESE CERTIFICATE OF ACCEPTANCE FORMS, AND SHALL COORDINATE AND WORK WITH THE EQUIPMENT AND CONTROLS INSTALLERS TO COMPLY WITH THESE REQUIREMENTS IN A TIMELY MANNER WITHIN THE PROJECT SCHEDULE. THE AIR BALANCE CONTRACTOR SHALL BE A MEMBER OF AABC (ASSOCIATED AIR BALANCE COUNCIL).
12. PAINT ALL EXPOSED DUCTWORK, DUCT SUPPORTS, ACCESSORIES, REGISTERS, GRILLES, DIFFUSERS, AND APPURTENANCES, WHETHER OR NOT COLORS ARE DESIGNATED IN SCHEDULES, EXCEPT WHERE A SURFACE OR MATERIAL IS SPECIFICALLY INDICATED NOT TO BE PAINTED OR IS TO REMAIN NATURAL. WHERE AN ITEM OR SURFACE IS NOT SPECIFICALLY MENTIONED, PAINT THE SAME AS SIMILAR ADJACENT MATERIALS OR SURFACES. IF COLOR OR FINISH IS NOT DESIGNATED, THE ARCHITECT WILL SELECT FROM STANDARD COLORS OR FINISHES AVAILABLE. PAINTING INCLUDES FIELD PAINTING EXPOSED BARE AND COVERED PIPES AND DUCTS (INCLUDING COLOR CODING), HANGERS, EXPOSED STEEL AND IRON WORK, AND PRIMED METAL SURFACES OF MECHANICAL EQUIPMENT.
13. PROVIDE ALL LABOR, MATERIAL, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, AND OTHER WORK AS REQUIRED. FOR A COMPLETE AND PROPERLY OPERATING MECHANICAL SYSTEM.
14. ALL MATERIALS SHALL BE NEW AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. EQUIPMENT SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY THE LATEST EDITION OF CMC, CBC U.L., SMACNA AND ASHRAE GUIDELINES. INSTALL PER MANUFACTURERS' RECOMMENDATIONS, AND INSTALLATION INSTRUCTIONS.
15. OBTAIN AND PAY FOR ALL NECESSARY BUILDING PERMITS AND VARIANCES. COORDINATE TEMPORARY CONSTRUCTION REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION. INCLUDE ALL COSTS IN THE BID.
16. IF THE CONTRACTOR PROPOSES ALTERNATE EQUIPMENT OR MATERIAL, THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL DSA APPROVALS, PAY ALL RELATED FEES AND OBTAIN APPROVAL FROM OWNER & ENGINEER OF RECORD. PROVIDE TITLE-24 COMPLIANCE CERTIFICATION AND ALL ASSOCIATED FEES REQUIRED. COORDINATE SUBMITTED EQUIPMENT WITH OTHER TRADES. INCLUDE IN THE SHOP DRAWINGS THE EQUIPMENT SUBMITTED FOR APPROVAL WITH A DIFFERENT PHYSICAL SIZE OR ARRANGEMENT FROM THAT SHOWN.
17. PROVIDE SHOP DRAWINGS PER PROJECT SCHEDULE, SEE 23 00 00 SPECIFICATIONS FOR REQUIREMENTS. IF SHOP DRAWINGS ARE NOT PROVIDED TO THE ENGINEER FOR REVIEW, AND ANY CONFLICTS OCCUR BETWEEN TRADES, DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO RESOLVE THE CONFLICT AND BEAR ALL COSTS INCURRED FOR ALL REVISIONS, AT NO ADDITIONAL COST TO THE DISTRICT. THE DISTRICT AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY PRIOR TO FABRICATION AND INSTALLATION OF ALL WORK THAT CAUSES CONFLICTS BETWEEN TRADES.
18. PROVIDE ALL MANUFACTURER'S PRODUCT DATA CLEARLY INDICATING MODEL NUMBERS, CAPACITIES, CONSTRUCTION, ELECTRICAL INFORMATION, AND OPTIONAL ACCESSORIES, PER PROJECT SCHEDULE AND PRIOR TO THE START OF WORK. THESE SHALL BE REVIEWED BY THE MECHANICAL ENGINEER PRIOR TO PURCHASING.
19. SUBMIT TO THE OWNER ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, "AS-BUILTS", ETC. AT THE COMPLETION OF THE JOB. PROVIDE THE OWNER WITH COMPLETE MECHANICAL "AS-BUILTS" INDICATING FINAL EQUIPMENT LOCATIONS, DUCTWORK AND PIPE ROUTING, ETC.
20. OBTAIN APPROVAL FROM THE OWNER ON ALL ADDENDA AND CONSTRUCTION CHANGE DOCUMENT (CCD) PRIOR TO DOING THE WORK.
21. INSTALL ALL EQUIPMENT, ACCESSORIES, AND MATERIAL IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
22. PROVIDE FIRESTOPPING FOR PIPE AND DUCT PENETRATIONS THROUGH RATED WALLS. CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS NECESSARY PRIOR TO INSTALLATION.
23. ANY MATERIAL EXPOSED WITHIN A PLENUM OR DUCT MUST HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25, AND A SMOKE DEVELOPED RATING OF NOT MORE THAN 50, AND A MOLD/HUMIDITY RESISTANCE PER U.L. 181.
24. ALL EQUIPMENT, DUCTS, PIPING, AND OTHER DEVICES AND MATERIALS OUTSIDE OF THE BUILDING OR OTHERWISE EXPOSED TO THE WEATHER SHALL BE COMPLETELY WEATHERPROOFED.
25. LOCATE ALL EQUIPMENT SUCH THAT CODE REQUIRED ACCESS IS MAINTAINED, INCLUDING N.E.C. REQUIREMENTS. ACCESS PANELS WHERE REQUIRED, SHALL BE COORDINATED WITH ARCHITECT, AND PROVIDED BY FACTORY OR BE FIELD-PROVIDED. FOR ATTIC EQUIPMENT, G.C. TO PROVIDE A CATWALK & LIGHT PER CMC FOR ATTIC EQUIPMENT.
26. FOR INACCESSIBLE AREAS THE CONTRACTOR SHALL PROVIDE ACCESS PANELS FOR ALL DAMPERS, EQUIPMENT, SMOKE DETECTORS, AND CONTROL DEVICES. THESE PANELS SHALL MATCH THE RATING OF THE WALL AND/OR CEILING WHERE THEY ARE LOCATED IN. MINIMUM ACCESS PANEL SIZES SHALL BE AS FOLLOWS:
   1) HAND ACCESS: 12"x12" MIN.
   2) BODY ACCESS: 30"x30" MIN.
27. ALL EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH FLEXIBLE DUCT AND PIPE CONNECTIONS.
28. LABEL ALL EQUIPMENT AS TO THE SPACE IT SERVES. SEE SPECIFICATIONS FOR IDENTIFICATION STANDARDS. LABEL DUCT SMOKE DETECTOR LOCATIONS (AT CEILING) AS TO THE EQUIPMENT IT SERVES.
29. A/C UNITS PROVIDED WITH ECONOMIZER CYCLE DAMPERS SHALL HAVE OSA DAMPERS SET UP TO CLOSE AUTOMATICALLY ON FAN SHUT DOWN.
30. PROVIDE MANUAL VOLUME DAMPERS AND BACKDRAFT DAMPERS FOR FRESH AIR INTAKES ON ALL AIR HANDLING EQUIPMENT AND EXHAUST FANS SERVING CONDITIONED SPACES. EXCEPTION: EQUIPMENT WITH FACTORY-ECONOMIZERS.
31. DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITION PRIOR TO BID DATE.
32. OWNER RETAINS SALVAGE RIGHTS, PROVIDE A MINIMUM OF 72 HOURS NOTICE PRIOR TO REMOVAL OF ROOF TOP UNITS AND EXHAUST FANS.
33. PATCH AND SEAL ALL SLAB, ROOF AND WALL OPENINGS WITH LIKE MATERIAL WHERE MECHANICAL EQUIPMENT ONCE PENETRATED.
34. REMOVE EXISTING AND PROVIDE ALL NEW DUCT AND PIPE HANGER SUPPORTS WHERE DUCT AND PIPE IS BEING REPLACED.
35. PROVIDE ALL NEW PIPE SUPPORTS WHERE PIPING IS SCHEDULED TO BE REPLACED.
36. OUTDOOR REFRIGERANT PIPING TO BE INSULATED AND ALUMINUM WRAPPED.
37. CONTRACTOR IS RESPONSIBLE FOR COMPLETE AND OPERABLE SYSTEM.
38. ALL MECHANICAL EQUIPMENT, PIPES AND DUCTS SHALL BE SUPPORTED AND BRACED PER THE CURRENT CALIFORNIA BUILDING CODE. ALL MECHANICAL COMPONENTS SHALL BE ABLE TO RESIST THE EFFECTS OF SEISMIC FORCES.
39. MECHANICAL WORK SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES AND REGULATIONS.
40. CONTRACTOR SHALL PROTECT EXISTING BUILDING INFRASTRUCTURE DURING CONSTRUCTION FROM OUTDOOR ELEMENT. IF DAMAGED, CONTRACTOR SHALL REPLACE DAMAGED BUILDING COMPONENTS WITH NEW AT NO ADDITIONAL COST TO THE OWNER.
41. ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.
42. ALL DUCT JOINTS SHALL BE MADE WITH MASTIC SEALANT, SHEET METAL SCREWS AND TAPED AIR TIGHT WITH HARDCAST OR EQUIV., MINIMUM 2-1/2" WIDTH.
43. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND DSA FIELD ENGINEER.
44. A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.
45. CONTRACTOR SHALL COORDINATE ALL DUCTWORK ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSET AS REQUIRED TO AVOID CONFLICT WITH PIPING, LIGHT FIXTURES, TRUSSES, ETC.
46. COORDINATE ALL EQUIPMENT VOLTAGES WITH ELECTRICAL PRIOR TO ORDERING ANY EQUIPMENT.
47. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

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

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

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

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

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

MP ☐ MD ☐ PP ☐ E ☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES & DETAILS.

MP ☒ MD ☒ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) # 0203-13.

CAL GREEN NOTES

1. TESTING AND ADJUSTING. TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR NEW BUILDING LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO SECTION 303.1
2. SYSTEMS. DEVELOP A WRITTEN PLAN OF PROCEDURES FOR TESTING AND ADJUSTING SYSTEMS. SYSTEMS TO BE INCLUDED FOR TESTING AND ADJUSTING SHALL INCLUDE, AS APPLICABLE TO THE PROJECT:
   A. HVAC SYSTEMS AND CONTROLS.
   B. INDOOR AND OUTDOOR LIGHTING AND CONTROLS.
   C. WATER HEATING SYSTEMS.
   D. RENEWABLE ENERGY SYSTEMS.
   E. LANDSCAPE IRRIGATION SYSTEMS.
   F. WATER REUSE SYSTEMS.
3. PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.
   A. HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, BALANCE THE SYSTEM IN ACCORDANCE WITH THE PROCEDURES DEFINED BY THE TESTING ADJUSTING AND BALANCING BUREAU NATIONAL STANDARDS; THE NATIONAL ENVIRONMENTAL BALANCING BUREAU PROCEDURAL STANDARDS; ASSOCIATED AIR BALANCE COUNCIL NATIONAL STANDARDS OR AS APPROVED BY THE ENFORCING AGENCY.
4. REPORTING. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
5. OPERATION AND MAINTENANCE (O & M) MANUAL. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O & M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.
   A. INSPECTIONS AND REPORTS. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.
6. TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING WITHIN THE REQUIRED TEMPERATURE RANGE FOR MATERIAL AND EQUIPMENT INSTALLATION. IF THE HVAC SYSTEM IS USED DURING CONSTRUCTION, USE RETURN AIR FILTERS WITH A MINIMUM REPORTING VALUE (MERV 13) OF 13, BASED ON ASHRAE 52.2-1999 OR AN AVERAGE EFFICIENCY OF 30 PERCENT BASED ON ASHRAE 52.1-1992. REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATIONS, AT THE CONCLUSION OF CONSTRUCTION.
7. COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATION EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH WRAP, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.
8. FILTERS. IN MECHANICALLY VENTILATED BUILDINGS, PROVIDE REGULARLY OCCUPIED AREAS OF THE BUILDING WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR PRIOR TO OCCUPANCY THAT PROVIDE AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV 13) OF 13. MERV 13 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY AND RECOMMENDATIONS FOR MAINTENANCE WITH FILTERS OF THE SAME VALUE SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUAL.

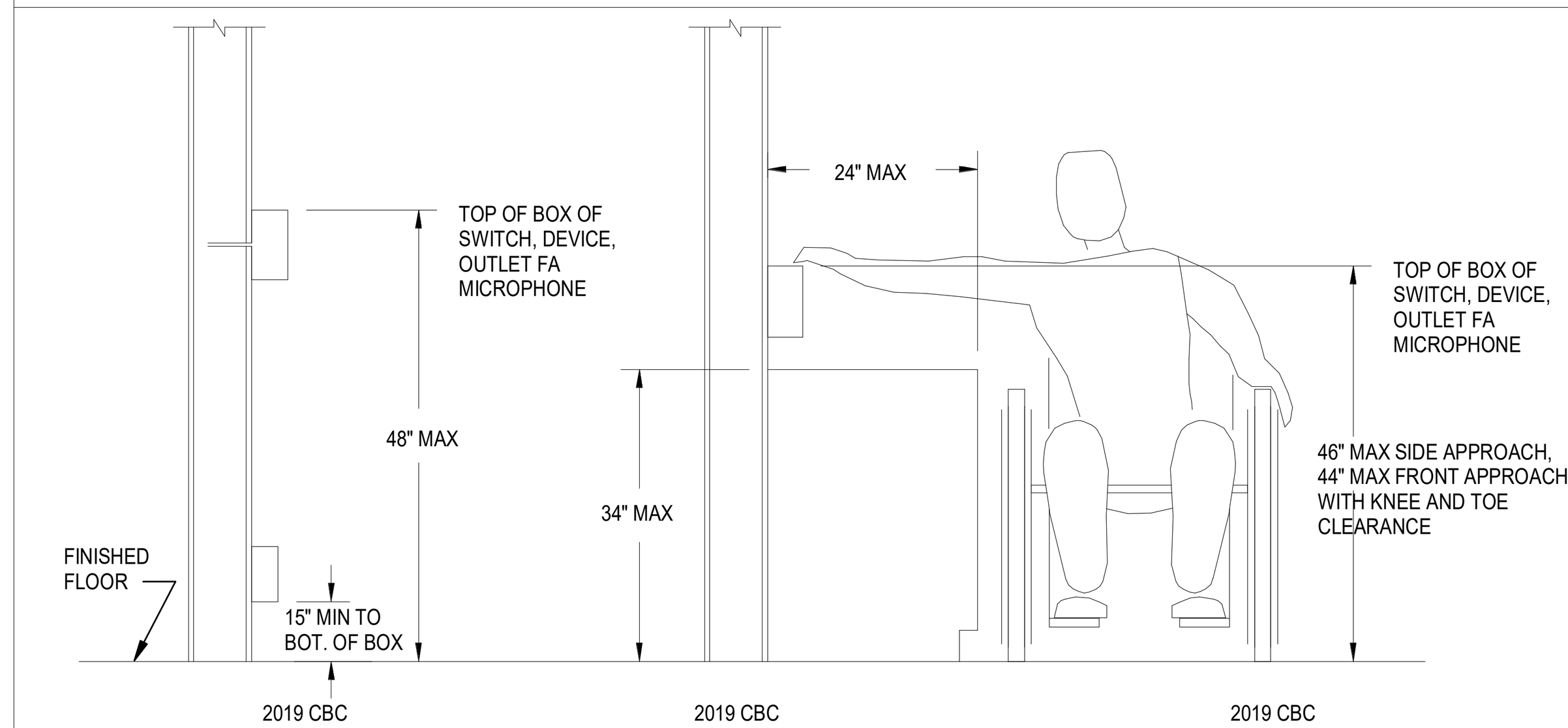
   EXCEPTIONS:
   A. AN ASHRAE 10-PERCENT TO 15-PERCENT EFFICIENCY FILTER SHALL BE PERMITTED FOR AN HVAC UNIT MEETING THE 2019 CALIFORNIA ENERGY CODE HAVING 60,000 BTU/H OR LESS CAPACITY PER FAN COIL, IF THE ENERGY USE OF THE AIR DELIVERY SYSTEM IS 0.4 W/CFM OR LESS AT DESIGN AIR FLOW.
   B. EXISTING MECHANICAL EQUIPMENT.
9. OZONE DEPLETION AND GREENHOUSE GAS REDUCTIONS. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT SHALL COMPLY WITH SECTIONS 5.508.1.1 AND 5.508.1.2.
   A. CHLOROFLOUROCARBONS (CFCS). INSTALL HVAC, REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN CFCS.
   B. HALONS. INSTALL HVAC REFRIGERATION AND FIRE SUPPRESSION EQUIPMENT THAT DO NOT CONTAIN HALONS.
10. ADHESIVES, ADHESIVE BONDING PRIMERS, ADHESIVE PRIMERS, SEALANTS, SEALANT PRIMERS AND CAULKS SHALL COMPLY WITH LOCAL OR REGIONAL AIR POLLUTION CONTROL OR AIR QUALITY MANAGEMENT DISTRICT RULES WHERE APPLICABLE, OR SCAQMD RULE 1168 VOC LIMITS, AS SHOWN IN TABLES 5.504.4.1.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
-	KEY NOTES
-	DEMOLITION KEY NOTES
01 / M-2	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN
AC / 1	EQUIPMENT DESIGNATION UNIT ABBREVIATION NUMBER
10X10-3 / 120 F/S	GRILLE DESIGNATION NECK SIZE & BLOW FIRE/SMOKE DAMPER WHERE REQ'D CFM
- / -	SECTION CALLOUT
	POINT OF CONNECTION
	POINT OF DISCONNECTION
	NEW LINEWORK
	EXISTING LINEWORK
	DEMOLITION LINEWORK
16"x12"	SHEET METAL DUCT
16"x12"	HIDDEN SHEET METAL DUCT
16"x12"	INTERNALLY INSULATED SHEET METAL DUCT
	DIRECTION OF FLOW
	STANDARD BRANCH FOR SUPPLY AND RETURN
	ROUND ELBOW DOWN
	ROUND ELBOW UP
	RECTANGULAR TO ROUND TRANSITION
8"	FLEXIBLE DUCT
FC	FLEX CONNECTION
BDD	BACK DRAFT DAMPER
FD	FIRE DAMPER
F/S	COMBINATION FIRE AND SMOKE DAMPER
M	MOTORIZED DAMPER
	SUPPLY DIFFUSER: 2-WAY/3-WAY/4-WAY
	GRILLE: RETURN/EXHAUST
	1'x2' RETURN AIR GRILLE
	2'x2' RETURN AIR GRILLE
UP / DN	SUPPLY AIR DUCT SECTION
UP / DN	RETURN AIR DUCT SECTION
UP / DN	EXHAUST AIR DUCT SECTION
	POWER OR GRAVITY ROOF VENTILATOR - EXHAUST
	POWER OR GRAVITY ROOF VENTILATOR - SUPPLY
UC	UNDERCUT DOOR
TG	TRANSFER GRILLE OR LOUVER
DG	DOOR GRILLE OR LOUVER

SYMBOL	DESCRIPTION
D / X	DX COOLING COIL
H / C	HEATING COIL
	DAMPER, OPPOSED BLADE
	DAMPER, PARALLEL BLADE
	FILTER
	HUMIDIFIER
	LOUVER
AD	ACCESS DOOR OR ACCESS PANEL (AP) IN DUCTWORK
1" 2"	STATIC PRESSURE CHANGE TAG
2"	STATIC PRESSURE TAG
	TURNING VANES (RECTANGULAR)
	DRAIN, FUNNEL
	CENTRIFUGAL FAN
	ANALOG SIGNAL
	DIGITAL SIGNAL
	ELECTRIC LEAD
	INSTRUMENT CAPILLARY TUBING
	ELECTRONIC 3-WAY VALVE
	ELECTRONIC 2-WAY VALVE
	DDC INPUT
	DDC OUTPUT
	LOCALLY MOUNTED INSTRUMENT
C02	CARBON DIOXIDE SENSOR
DPS	DIFFERENTIAL PRESSURE SENSOR
FM	FLOW METER
FS	AIRFLOW SENSOR
HS	RELATIVE HUMIDITY SENSOR
TS	TEMPERATURE SENSOR
TS	AVERAGING TEMPERATURE SENSOR
	METAL DUCT
R	EMS CO2 SENSOR
T	THERMOSTAT
PS	PRESSURE SWITCH
SD	SMOKE DETECTOR
SP	STATIC PRESSURE SENSOR
RS	REFRIGERANT SENSOR
D	DEW POINT SENSOR
H	SPACE HUMIDITY SENSOR
S	SWITCH
▲	FIRE WALL PENETRATION
(E)	EXISTING
(N)	NEW

MOUNTING OVER OBSTRUCTION DETAIL



2019 CBC FIG. 11B-308.2.1

2019 CBC FIG. 11B-308.2.2

2019 CBC FIG. 11B-308.3.2

NOTE:
1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

DRAWING INDEX

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AC	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
ALUM	ALUMINUM
AO	ANALOG OUTPUT
AP	ACCESS PANEL
B	BOILER
BDD	BACK DRAFT DAMPER
BEL	BELOW
BFC	BELOW FINISHED CEILING
BFP	BACK FLOW PREVENTER
BG	BLAST GATE
BHP	BREAK HORSEPOWER
BLDG	BUILDING
BOB	BOTTOM OF BEAM
BOP	BOTTOM OF PIPE
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CL	CENTER LINE
CLG	CEILING
CO	CLEANOUT
COL	COLUMN
CP	CONDENSATE PUMP
CT	COOLING TOWER
CU	CONDENSING UNIT
CV	CONSTANT VOLUME BOX
D	DRAIN
DB	DRY BULB
DEG	DEGREES
DI	DIGITAL INPUT
DIA	DIAMETER
DL	DOOR LOUVER
DN	DOWN
DO	DIGITAL OUTPUT
DP	DIFFERENATIAL PRESSURE
DS	DUCT SILENCER
DX	DIRECT EXPANSION
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EFF	EFFICIENCY
EGC	EGGCRATE GRILLE
EJ	EXPANSION JOINT
EL	ELEVATION
EQ	EQUAL
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EXIST / (E)	EXISTING
°F	DEGREES FAHRENHEIT
FA	FREE AREA
FC	FAN COIL UNIT
FD	FIRE DAMPER
FG	FILTER GRILLE
FLA	FULL LOAD AMPS
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIRE PUMP
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FT	FEET / FOOT
FX	FLEXIBLE CONNECTION
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HEAD
HOA	HANDS OFF AUTO
HP	HEAT PUMP
HP	HORSEPOWER
HT	HEIGHT
HV	HEATING AND VENTILATING UNIT
HWC	HOT WATER CONVERTER
HWP	HEATING HOT WATER RETURN
HWR	HOT WATER PUMP
HWS	HEATING HOT WATER SUPPLY
HZ	HERTZ
IC	MOTOR STATUS
ICW	INDUSTRIAL COLD WATER
ID	INSIDE DIAMETER
IN	INCHES
IW	INDIRECT WASTE
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERLOAD CIRCUIT PROTECTION
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
(N)	NEW
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OAT	OUTSIDE AIR TEMPERATURE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSA	OUTSIDE AIR
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PERF	PERFORATED
PH	PHASE
PR	PRESSURE RELIEF
PS	PRESSURE SWITCH
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	PRESSURE TRANSMITTER
PTAC	PACKAGED TERMINAL AIR CONDITIONER
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	ROOF DRAIN
RF	RETURN FAN
RG	RETURN AIR GRILLE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SAR	SUPPLY AIR REGISTER
SAV	STAGED AIR VOLUME
SD	SMOKE DAMPER
SF	SUPPLY FAN
SI	SPEED INDICATOR
SK	SPEED CONTROL
SMBH	SENSIBLE MBH
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
TAD	TRANSFER AIR DUCT
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TI	TEMPERATURE INDICATOR
TMBH	TOTAL MBH
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UC	UNDERCUT
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
V	VOLTS
VA	DAMPER/VALVE ACTUATOR
VAV	VARIABLE AIR VOLUME UNIT
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
VP	VELOCITY PRESSURE
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WT	WEIGHT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL SYMBOLS, LEGENDS AND NOTES

M0.00

FILE PATH: Z:\Projects\...
5/11/2023 6:12:04 PM

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.		
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 1 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminister, CA	04	Total Conditioned Floor Area	1,169
02	Climate Zone	9	05	Total Unconditioned Floor Area	59
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

- ☑ Office (B)
- ☐ Hotel/ Motel Guest Rooms (R-1)
- ☐ High-Rise Residential (R-2/R-3)
- ☐ Retail (M)
- ☑ School (E)
- ☐ Relocatable Class Bldg (E)
- ☐ Non-refrigerated Warehouse (S)
- ☐ Healthcare Facility (I)
- ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.4 (See Table F)	AND	Pumps §140.4(i) (See Table G)	AND	Fans/ Economizers §140.4(k), §140.4(e) (See Table H)	AND	System Controls §110.2, §120.2, §140.4(f) (See Table I)	AND	Ventilation §120.1 (See Table J)	AND	Terminal Box Controls §140.4(d) (See Table K)	AND	Distribution §120.3, §140.4(l) (See Table L)	AND	Cooling Towers §110.2(e)2 (See Table M)		**Compliance Results**
Yes	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND			**COMPLIES**
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 2 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table D have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-A1	Variable Refrigerant Flow	VRF heat pump, air cooled	Yes	35.9	63.1	0	43.3	63.7	35.9	56.8

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Table Continued

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 3 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
	<65,000							

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(f) and (h) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1] §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-A1	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d). EXCEPTION 1 to §140.4(f)

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 4 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B.*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft², or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	Yes	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	

Table Continued

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 5 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Table Continued

		☑	Outdoors
		☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces
		☐	In an unconditioned crawlspace
		☑	In other unconditioned spaces
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17		Duct system shall be sealed in accordance with the California Mechanical Code.	

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	VRV Heat Pump w S fan coils	☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 6 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
○	◉	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
◉	○	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls		☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3 can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 7 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 8 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 9 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

	01	02
		Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	Dwgs. M4.01 & M4.02 Schedules

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminister, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REZ DAVID REZVANI
No.M36155
Exp.09-30-2024
CIVIL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - ADMINISTRATION

M0.01

M0.01 - MECHANICAL - TITLE 24 - ADMINISTRATION

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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Administration Bldg.	Report Page:	Page 10 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	John Matteotti, P.E.	Documentation Author Signature:	John Matteotti Digitally signed by John Matteotti Date: 2022.12.15 13:59:40 -08'00'
Company:	Leaf Engineers	Signature Date:	December 15, 2022
Address:	8163 Rochester Avenue, Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Rancho Cucamonga, CA 91730	Phone:	415-710-4045

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Rex Wang, P.E.	Responsible Designer Signature:	Rex Wang Digitally signed by Rex Wang Date: 2022.12.15 10:25:29 -08'00'
Company :	Leaf Engineers	Date Signed:	December 23, 2022
Address:	8163 Rochester Avenue, Suite 100	License:	M 36155
City/State/Zip:	Rancho Cucamonga	Phone:	909-987-0909

ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
CIVIL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - ADMINISTRATION

M0.02

M0.02 - MECHANICAL - TITLE 24 - ADMINISTRATION

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CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 1 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminster, CA	04	Total Conditioned Floor Area	3,584
02	Climate Zone	9	05	Total Unconditioned Floor Area	557
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.4 (See Table F)	AND	Pumps §140.4(k) (See Table G)	AND	Fans/ Economizers §140.4(c), §140.4(e) (See Table H)	AND	System Controls §110.2, §120.2, §140.4(f) (See Table I)	AND	Ventilation §120.1 (See Table J)	AND	Terminal Box Controls §140.4(d) (See Table K)	AND	Distribution §120.3, §140.4(l) (See Table L)	AND	Cooling Towers §110.2(e)2 (See Table M)		**Compliance Results**
Yes	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND			**COMPLIES**
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 2 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table D have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-1	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30	56.8	0	44.4	52.5	30	43.6
HP-2	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30	56.8	0	45.3	52.5	30	44.8
HP-3	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30.4	46.1	0	44.6	40.2	30.4	44.4
HP-4	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	31.4	46.1	0	46	40.2	31.4	46

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 3 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Table Continued

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP-1	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-2	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-3	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-4	<65,000		HSPF	8	8.2	SEER	14	14.3

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(l) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 4 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-1	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-2	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-3	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	KA: No thermostatic control
HP-4	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)1B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 5 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.
[2] Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
[4] See Standards Tables 120.1-A and 120.1-B
[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
[6] §120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):			Duct leakage testing triggered for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities.		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	Yes	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☑ Outdoors		
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces		
		☐ In an unconditioned crawlspace		
		☑ In other unconditioned spaces		
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 6 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Table Continued

17	Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector Pass	Field inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	Heat Pumps	☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 7 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector Pass	Field inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
◉	○	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
◉	○	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls		☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO_2) concentration setpoints.		☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 8 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementery School Modernization - Classroom Bldg. A	Report Page:	Page 9 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field inspector Pass	Field inspector Fail
◉	○	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX "DAYTO" WATTS No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. A

M0.03

M0.03 - MECHANICAL - TITLE 24 - CLASSROOM BLDG. A

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CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. A	Report Page:	Page 10 of 11
Project Address: 14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01		02
		Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	Dwgs. M4.01 & M4.02 Schedules

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION
NRCC-MCH-E

CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. A	Report Page:	Page 11 of 11
Project Address: 14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	John Matteotti, P.E.	Documentation Author Signature:	John Matteotti (Digitally signed by John Matteotti Date: 2022.12.15 10:37:40 -08'00')
Company:	Leaf Engineers	Signature Date:	December 15, 2022
Address:	8163 Rochester Avenue, Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Rancho Cucamonga, CA, 91730	Phone:	909.987.0909

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Rex Wang, P.E.	Responsible Designer Signature:	Rex Wang (Digitally signed by Rex Wang Date: 2022.12.23 10:25:12 -08'00')
Company :	Leaf Engineers	Date Signed:	December 23, 2022
Address:	8163 Rochester Avenue, Suite 100	License:	M 36155
City/State/Zip:	Rancho Cucamonga, CA, 91730	Phone:	909.987.0909

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020

PBK
ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG No.M36155 Exp.09-30-2024 CIVIL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. A

M0.04

CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 1 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminster, CA	04	Total Conditioned Floor Area	3,594
02	Climate Zone	9	05	Total Unconditioned Floor Area	557
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.4 (See Table F)	AND	Pumps §140.4(k) (See Table G)	AND	Fans/ Economizers §140.4(c), §140.4(e) (See Table H)	AND	System Controls §110.2, §120.2, §140.4(f) (See Table I)	AND	Ventilation §120.1 (See Table J)	AND	Terminal Box Controls §140.4(d) (See Table K)	AND	Distribution §120.3, §140.4(l) (See Table L)	AND	Cooling Towers §110.2(e)2 (See Table M)		**Compliance Results**
Yes	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND			**COMPLIES**
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 2 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table D have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-5	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	32	46.1	0	45.8	40.2	32	45.8
HP-6	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30.7	46.1	0	45.6	40.2	30.7	45.6
HP-7	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30	56.8	0	46.7	52.5	30	46.4
HP-8	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30.3	56.8	40.7	30.3	52.5	28.2	41.3

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 3 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Table Continued

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP-5	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-6	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-7	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-8	<65,000		HSPF	8	8.2	SEER	14	14.3

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(l) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 4 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-5	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-6	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-7	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	KA: No thermostatic control
HP-8	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)1B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 5 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

[1] FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.
[2] Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.
[3] Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.
[4] See Standards Tables 120.1-A and 120.1-B
[5] For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.
[6] §120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	Yes	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	
		☑ Outdoors	
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
		☐ In an unconditioned crawlspace	
		☑ In other unconditioned spaces	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	

Table Continued

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 6 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Table Continued

17	Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector Pass	Field inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	Rooftop Heat Pumps	☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 7 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector Pass	Field inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
◉	○	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
◉	○	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls		☐	☐
◉	○	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 8 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CERTIFICATE OF COMPLIANCE

Project Name:	Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 9 of 11
Project Address:	14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field inspector Pass	Field inspector Fail
◉	○	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX "DAYTO" WATTS No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. B

M0.05

M0.05 - MECHANICAL - TITLE 24 - CLASSROOM BLDG. B

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CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 10 of 11
Project Address: 14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	Dwgs. M4.01 & M4.02 Schedules

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020)
CALIFORNIA ENERGY COMMISSION
NRCC-MCH-E

CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. B	Report Page:	Page 11 of 11
Project Address: 14142 Hoover Street, Westminster, CA 92683	Date Prepared:	December 15, 2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	John Matteotti, P.E.	Documentation Author Signature:	John Matteotti (Digitally signed by John Matteotti Date: 2022.12.15 02:08:22 -08'00')
Company:	Leaf Engineers	Signature Date:	December 15, 2022
Address:	8163 Rochester Avenue, Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Rancho Cucamonga, CA, 91730	Phone:	909.987.0909

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Rex Wang, P.E.	Responsible Designer Signature:	Rex Wang (Digitally signed by Rex Wang Date: 2022.12.23 17:17:23 -08'00')
Company :	Leaf Engineers	Date Signed:	December 23, 2022
Address:	8163 Rochester Avenue, Suite 100	License:	M 36155
City/State/Zip:	Rancho Cucamonga, CA, 91730	Phone:	909.987.0909

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance: http://www.energy.ca.gov/title24/2019standards September 2020

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
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PBK
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
CIVIL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. B

M0.06

M0.06 - MECHANICAL - TITLE 24 - CLASSROOM BLDG. B

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CERTIFICATE OF COMPLIANCE

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 1 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminister, CA	04	Total Conditioned Floor Area	3,840
02	Climate Zone	9	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write In):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.4, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01	02	03
Air System(s)	Wet System Components	Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☑ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.4 (See Table F)	AND	Pumps §140.4(k) (See Table G)	AND	Fans/ Economizers §140.4(c), §140.4(e) (See Table H)	AND	System Controls §110.2, §120.2, §140.4(f) (See Table I)	AND	Ventilation §120.1 (See Table J)	AND	Terminal Box Controls §140.4(d) (See Table K)	AND	Distribution §120.3, §140.4(l) (See Table L)	AND	Cooling Towers §110.2(e)2 (See Table M)		**Compliance Results**
Yes	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND			**COMPLIES**
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 2 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table D have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-9	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30.3	46.1	0	42.8	40.2	30.4	42.9
HP-10	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	30.3	46.1	0	42.8	40.2	30.3	42.8
HP-11	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	29.6	46.1	0	43.6	40.2	30.3	43.6
HP-12	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	29.5	46.1	0	42.1	40.2	29.6	41.6

Table Continued

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 3 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

Table Continued

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode				Cooling Mode		
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP-9	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-10	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-11	<65,000		HSPF	8	8.2	SEER	14	14.3
HP-12	<65,000		HSPF	8	8.2	SEER	14	14.3

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(l) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

Table Continued

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 4 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-9	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-10	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-11	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control
HP-12	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
** NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)1B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 5 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):			Duct leakage testing triggered for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities.		
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.		
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.		
14	Yes	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:		
		☑ Outdoors		
		☐ In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces		
		☐ In an unconditioned crawlspace		
		☑ In other unconditioned spaces		
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.		
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.		

Table Continued

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 6 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

Table Continued

17	Duct system shall be sealed in accordance with the California Mechanical Code.

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector	
				Pass	Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	Rooftop Units HP-9, 10, 11 & 12	☐	☐

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 7 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

YES	NO	Form/Title	Systems To Be Field Verified	Field inspector	
				Pass	Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
○	◉	NRCA-MCH-03-A Constant Volume Single Zone HVAC *NOTE: This form does not automatically move to "Yes". If Constant Volume Single Zone HVAC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
◉	○	NRCA-MCH-04-A Air Distribution Duct Leakage		☐	☐
○	◉	NRCA-MCH-05-A Air Economizer Controls		☐	☐
○	◉	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.		☐	☐
○	◉	NRCA-MCH-07-A Supply Fan Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-08-A Valve Leakage Test		☐	☐
○	◉	NRCA-MCH-09-A Supply Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-10-A Hydronic System Variable Flow Controls		☐	☐
○	◉	NRCA-MCH-11-A Automatic Demand Shed Controls		☐	☐

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 8 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
○	◉	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance		☐	☐
○	◉	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance *NOTE: This form does not automatically move to "Yes". If Distributed Energy Storage DX AC Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance *NOTE: This form does not automatically move to "Yes". If Chilled Water Storage, Ice-on-Coil Internal Melt, Ice-on-Coil External Melt, Ice Harvester, Brine, Ice-Slurry, Eutectic Salt, Clathrate Hydrate Slurry (CHS), Cryogenic or Encapsulated (Ice Ball) Systems are included in the scope, permit applicant should move this form to "Yes".*		☐	☐
○	◉	NRCA-MCH-16-A Supply Air Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-17-A Condenser Water Temperature Reset Controls		☐	☐
○	◉	NRCA-MCH-18 Energy Management Control Systems		☐	☐
○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

CERTIFICATE OF COMPLIANCE			NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Classroom Bldg. C		Report Page:	Page 9 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683		Date Prepared:	December 15, 2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field inspector	
			Pass	Fail
◉	○	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminister, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX "DAYTO" WANTE No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. C

M0.07

M0.07 - MECHANICAL - TITLE 24 - CLASSROOM BLDG. C

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CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. C	Report Page:	Page 10 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block: Yes	Dwgs. M4.01 & M4.02 Schedules

CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. C	Report Page:	Page 11 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

CERTIFICATE OF COMPLIANCE		
Project Name: Webber Elementary School Modernization - Classroom Bldg. C	Report Page:	Page 12 of 12
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	John Matteotti, P.E.	Documentation Author Signature:	John Matteotti (Digitally signed by John Matteotti Date: 2022.12.15 12:14:05 -08'00')
Company:	Leaf Engineers	Signature Date:	December 15, 2022
Address:	8163 Rochester Avenue, Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Rancho Cucamonga, CA 91730	Phone:	415-710-4045

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Rex Wang, P.E.	Responsible Designer Signature:	Rex Wang (Digitally signed by Rex Wang Date: 2022.12.16 10:27:50 -08'00')
Company :	Leaf Engineers	Date Signed:	December 23, 2022
Address:	8163 Rochester Avenue, Suite 100	License:	M 36155
City/State/Zip:	Rancho Cucamonga	Phone:	909-987-0909

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - CLASSROOM BLDG. C

M0.08

M0.08 - MECHANICAL - TITLE 24 - CLASSROOM BLDG. C

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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6, or §141.0(b)1f for alterations.

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 1 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

A. GENERAL INFORMATION

01	Project Location (city)	Westminister, CA	04	Total Conditioned Floor Area	1,276
02	Climate Zone	9	05	Total Unconditioned Floor Area	46
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

☐ Office (B) ☐ Retail (M) ☐ Non-refrigerated Warehouse (S)
☐ Hotel/ Motel Guest Rooms (R-1) ☑ School (E) ☐ Healthcare Facility (I)
☐ High-Rise Residential (R-2/R-3) ☐ Relocatable Class Bldg (E) ☐ Other (Write in):

[1] *FOOTNOTES: Climate zone can be determined on the California Energy Commission's website at http://www.energy.ca.gov/maps/renewable/building_climate_zones.html*

B. PROJECT SCOPE

Table Instructions: Include any mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6, or §141.0(b)2 for alterations.

My project consists of (check all that apply)

01 Air System(s)	02 Wet System Components	03 Dry System Components
☑ Heating Air System	☐ Water Economizer	☐ Air Economizer
☑ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ Hydronic System Piping	☐ Fan Systems
☐ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☑ Ductwork (existing to remain, altered or new)
	☐ Chillers	☑ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

01		02		03		04		05		06		07		08		09
System Summary §110.1, §110.2, §140.2 (See Table F)	AND	Pumps §140.4(k) (See Table G)	AND	Fans/ Economizers §140.4(c), §140.4(e) (See Table H)	AND	System Controls §110.2, §120.2, §140.4(f) (See Table I)	AND	Ventilation §120.1 (See Table J)	AND	Terminal Box Controls §140.4(d) (See Table K)	AND	Distribution §120.3, §140.4(l) (See Table L)	AND	Cooling Towers §110.2(e)2 (See Table M)		**Compliance Results**
Yes	AND		AND		AND	Yes	AND	Yes	AND		AND	Yes	AND			**COMPLIES**
																Mandatory Measures Compliance (See Table Q for Details)	**COMPLIES**

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 2 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Selections made in Table O have been changed by the permit applicant. See Table E. Additional Remarks for permit applicant's explanation.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Table Instructions: Complete the following equipment schedules to show compliance with mandatory requirements found in §110.1 and §110.2(a) and prescriptive requirements found in §140.4(a), §140.4(b) and §140.4(k) or §141.0(b)2 for alterations.

Dry System Equipment Sizing (includes air conditioners, condensers, heat pumps, VRF, furnaces and unit heaters)

01	02	03	04	05	06	07	08	09	10	11
				Equipment Sizing per Mechanical Schedule (kBtu/h) §140.4 (a&b)						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
Name or Item Tag	Equipment Category per Tables 110.2	Equipment Type per Tables 110.2 & Title 20	Smallest Size Available[1] §140.4(a)	Per Design (kBtu/h)	Rated (kBtu/h)	Supp. Heating Output (kBtu/h)	Sensible Per Design (kBtu/h)	Rated (kBtu/h)	Total Heating Load (kBtu/h)	Total Sensible Cooling Load (kBtu/h)
HP-K1	Unitary heat pumps (no elec. resistance)	Air cooled, package (3 phase)	Yes	35.9	65.1	0	43.3	63.7	35.9	56.8

[1] *FOOTNOTES: Equipment shall be the smallest size, within the available options of the desired equipment line, necessary to meet the design heating and cooling loads of the building per §140.4(a). Healthcare facilities are excepted.*
[2] *It is common practice to show rated output capacity on the equipment schedule. Sensible cooling output comes from specification sheet tables.*
[3] *If equipment is heating only, leave cooling output and load blank. If equipment is cooling only, leave heating output and load blank.*
[4] *Authority Having Jurisdiction may ask for load calculations used for compliance per §140.4(b).*
Table Continued

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 3 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP))

01	02	03	04	05	06	07	08	09
		Heating Mode					Cooling Mode	
Name or Item Tag	Size Category (Btu/h)	Rating Condition (°F)	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency	Efficiency Unit	Min Efficiency Required per Tables 110.2/ Title 20	Design Efficiency
HP-K1	≥65,000 and <135,000	47°Fdb/43°Fwb OSA	COP	3.3	3.6	EER	10.8	11.2
						IEER	12	15

G. PUMPS

This Section Does Not Apply

H. FAN SYSTEMS & AIR ECONOMIZERS

This Section Does Not Apply

I. SYSTEM CONTROLS

Table Instructions: Complete the following Table to demonstrate compliance with mandatory controls in §110.2 and §120.2 and prescriptive controls in §140.4(l) and (n) or requirements in §141.0(b)2E for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft²)	Thermostats §110.2(b) & (c)[1], §120.2(a) or §141.0(b)2E	Shut-Off Controls §120.2(e)	Isolation Zone Controls §120.2(g)	Demand Response §110.12 and §120.2(b)	Supply Air Temp. Reset §140.4(f)	Window Interlocks per §140.4(n)
HP-K1	single zone	≤ 25,000 ft²	Setback Thermostat	Auto Timeswitch	NA: Single Zone	NA: PTAC, PTHP, Rm AC, HP	NA: Single Zone	NA: No thermostatic control

[1] *FOOTNOTES: Gravity gas wall heaters, gravity floor heaters, gravity room heaters, non-central electric heaters, fireplaces or decorative gas appliances, wood stoves are not required to have setback thermostats.*
* *NOTES: Controls with a "* require a note in the space below explaining how compliance is achieved.*
EX: System 1: SA Temp Reset: Exempt because zones compliant with §140.4(d); EXCEPTION 1 to §140.4(f)

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 4 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

J. VENTILATION AND INDOOR AIR QUALITY

Table Instructions: Complete the following Table to demonstrate compliance with mandatory ventilation requirements in §120.1 and §120.2(e)3B for all nonresidential, high-rise residential and hotel/motel occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☑	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☐	Check this box if the project includes Nonresidential or Hotel/Motel spaces
	☐	Check this box if the project includes new or altered high-rise residential dwelling units
03	☐	Check the box if the project is using natural ventilation in any spaces to meet required ventilation rates per §120.1(c)2.

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system.*
[2] *Air filtration requirements apply to the following three system types per §120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*
[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*
[4] *See Standards Tables 120.1-A and 120.1-B*
[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*
[6] *§120.2(e)3 requires systems serving rooms that are required by §130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by §130.1(c).*

K. TERMINAL BOX CONTROLS

This Section Does Not Apply

L. DISTRIBUTION (DUCTWORK AND PIPING)

Table Instructions: Complete the following tables to show compliance with mandatory pipe insulation requirements found in §120.3 and prescriptive requirements found in §140.4(l) for duct leakage testing.

Duct Leakage Sealing

The answers to the questions below apply to the following duct system(s):		Duct leakage testing triggered for these systems?	Yes
11	No	The scope of the project includes only duct systems serving healthcare facilities.	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	Yes	The combined surface area of the ducts in the following locations is more than 25% of the total surface area of the entire duct system:	

Table Continued

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 5 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Table Continued

	☑	Outdoors	
	☐	In a space directly under a roof that has a U-factor greater than the U-factor of the ceiling, or if the roof does not meet the requirements of §140.3(a)1B or if the roof has fixed vents or openings to the outside/ unconditioned spaces	
	☐	In an unconditioned crawlspace	
	☑	In other unconditioned spaces	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17		Duct system shall be sealed in accordance with the California Mechanical Code.	

M. COOLING TOWERS

This Section Does Not Apply

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉		NRCI-MCH-01-E - Must be submitted for all buildings.	Rooftop Heat Pump HP-K1	☐	☐

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 6 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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YES	NO	Form/Title	Systems To Be Field Verified	Field Inspector Pass	Field Inspector Fail
◉	○	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. *Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.*		☐	☐
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STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 7 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

○	◉	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units		☐	☐
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○	◉	NRCA-MCH-19 Occupancy Sensor Controls		☐	☐
○	◉	NRCA-MCH-20 Multi-Family Ventilation		☐	☐
○	◉	NRCA-MCH-21 Multi-Family Envelope Leakage		☐	☐

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 8 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be completed by a HERS Rater and provided to the building inspector during construction. The final documents must be created by a HERS Providers registry, but drafts can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

YES	NO	Form/Title	Field Inspector Pass	Field Inspector Fail
◉	○	NRCV-MCH-04-H Duct Leakage Test *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-24 Enclosure Air Leakage Worksheet *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-27 High-rise Residential *NOTE: Must be completed by a HERS Rater*	☐	☐
○	◉	NRCV-MCH-32 Local Mechanical Exhaust *NOTE: Must be completed by a HERS Rater*	☐	☐

STATE OF CALIFORNIA
Mechanical Systems
NRCC-MCH-E (Created 09/2020) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-MCH-E

Project Name:	Webber Elementary School Modernization - Kindergarten	Report Page:	Page 9 of 10
Project Address:	14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

Table Instructions: Indicate where mandatory measures are documented in the plan set or construction documentation. For any mandatory measures that do not apply, mark the plan sheet or construction document location as "N/A", any active cells that are left blank will result in non-compliance in Table C.

01	02
	Plan sheet or construction document location
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block:	Yes	Dwgs. M4.01 & M4.02 Schedules

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REE - DAVID LEANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - KINDERGARTEN

M0.09

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STATE OF CALIFORNIA
Mechanical Systems
MECH-MCH-E (Enabled)
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: Webber Elementary School Modernization - Kindergarten	Report Page:	Page 10 of 10
Project Address: 14142 Hoover Street, Westminister, CA 92683	Date Prepared:	December 15, 2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	John Matteotti, P.E.	Documentation Author Signature:	John Matteotti (Digitally signed by John Matteotti Date: 2022.12.13 13:18:20 -08'00')
Company:	Leaf Engineers	Signature Date:	December 15, 2022
Address:	8163 Rochester Avenue, Suite 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	Rancho Cucamonga, CA 91730	Phone:	415-710-4045

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. **The information provided on this Certificate of Compliance is true and correct.**
2. **I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)**
3. **The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.**
4. **The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.**
5. **I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.**

Responsible Designer Name:	Rex Wang, P.E.	Responsible Designer Signature:	Rex Wang (Digitally signed by Rex Wang Date: 2022.12.15 15:29:51 -08'00')
Company :	Leaf Engineers	Date Signed:	December 23, 2022
Address:	8163 Rochester Avenue, Suite 100	License:	M 36155
City/State/Zip:	Rancho Cucamonga	Phone:	909-987-0909

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REX DAVID WANG
No.M36155
Exp.09-30-2024
CIVIL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL - TITLE 24 - KINDERGARTEN

M0.10

M0.10 - MECHANICAL - TITLE 24 - KINDERGARTEN

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M1.01 - MECHANICAL SITE PLAN

0" 1"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING MECHANICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING OPERATIONS SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. MECHANICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS, AND A FIELD VISIT OF THE MECHANICAL SYSTEM.S IN CASE OF ANY DISCREPANCIES WITH EXISTING FIELD CONDITIONS, MECHANICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE MECHANICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING BUILDING OR SYSTEMS CAUSED BY INSTALLATION OF NEW WORK.

KEY NOTES

1 SCOPE OF WORK.

1 SITE PLAN
1" = 30'-0"

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REGISTERED PROFESSIONAL ENGINEER
REZ DAVID ARIAS
No.M36155
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STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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DSA SUBMITTAL

MECHANICAL SITE PLAN

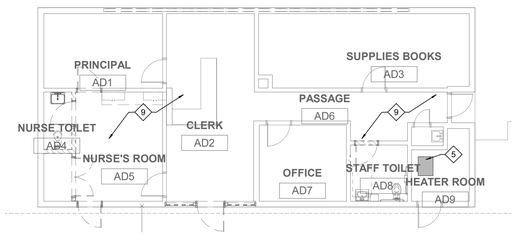
M1.01

MD2.01 - MECHANICAL FLOOR PLANS - DEMO

0" 1"

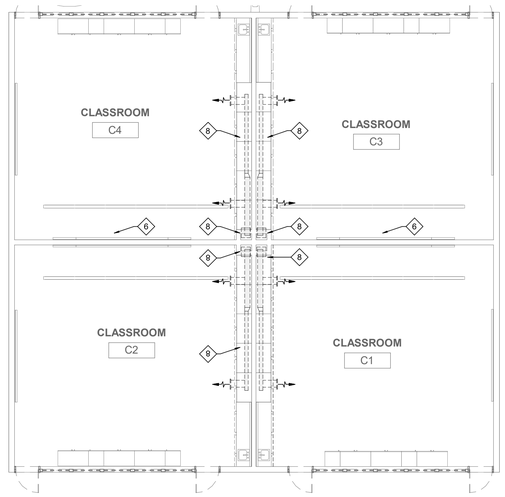
KEY NOTES

1. EXISTING CONDENSING UNIT AND PIPING ON ROOF TO BE REMOVED.
2. EXISTING INSIDE WALL MOUNTED SPLIT AC UNIT AND PIPING TO BE REMOVED.
3. REMOVE EXISTING ROOFTOP FAN TO ALLOW FOR REPLACEMENT WITH NEW ROOF FAN.
4. REMOVE EXISTING CABINET FAN IN JANITORS ROOM AND REPLACE WITH NEW FAN AND DUCT TO NEW EXTERIOR LOUVER.
5. REMOVE EXISTING FURNACE/BOILER AND ALL SUPPLY AND RETURN AIR DUCTWORK, PIPING, PUMPS AND ALL HYDRONIC & DUCT WORK IN HEATER ROOM. CAP EXISTING DUCT WHERE IT PENETRATES THE FURNACE ROOM WALLS. DO NOT REMOVE GAS PIPING SERVING THE EXISTING WATER HEATER. REMOVE AND CAP UNUSED GAS PIPING INSIDE THE FURNACE ROOM. CAP ANY CONCEALED PIPING OR DUCTWORK LEAVING THE FURNACE/BOILER ROOM
6. REMOVE ALL EXISTING DUCTWORK IN THE CLERSTORY AREA AND CAP REMAINING DUCTS THAT ARE CONCEALED OR INACCESSIBLE.
7. REMOVE HYDRONIC PIPING IN CLEARSTORY AREA THAT IS UNUSED. CAP THE REMAINING PIPING AS IT BECOMES INACCESSIBLE.
8. REMOVE EXISTING FAN COILS, PIPING AND DUCTWORK IN THE DROPPED SOFFIT SPACE, INCLUDING THE DUCT DOWN TO THE RETURN AIR GRILLE NEAR THE FLOOR.
9. REMOVE ALL EXISTING DUCTS, FANS, AIR HANDLERS, HVAC PIPING AND HVAC EQUIPMENT IN BUILDING.



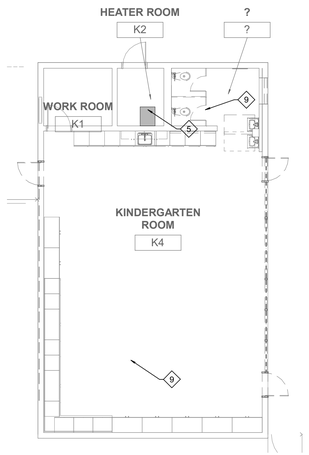
NORTH

5 BLDG ADMIN - FLOOR PLAN - DEMO
1/8" = 1'-0"



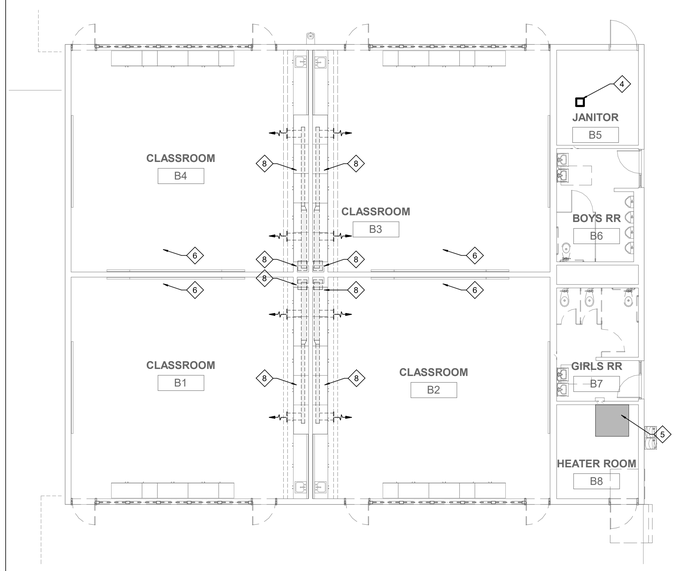
NORTH

4 BLDG C - FLOOR PLAN - DEMO
1/8" = 1'-0"



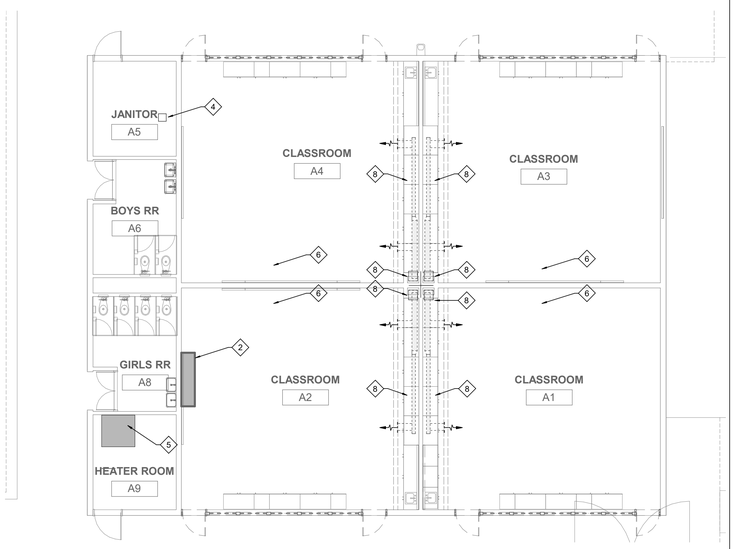
NORTH

3 BLDG K - FLOOR PLAN - DEMO
1/8" = 1'-0"



NORTH

2 BLDG B - FLOOR PLAN - DEMO
1/8" = 1'-0"



NORTH

1 BLDG A - FLOOR PLAN - DEMO
1/8" = 1'-0"

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PROJECT ADDRESS:
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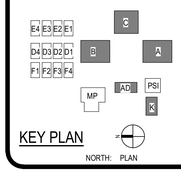
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



Consultant

REGISTERED PROFESSIONAL ENGINEER
REX DAVID IRWIN
No.M36155
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MECHANICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

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DSA SUBMITTAL

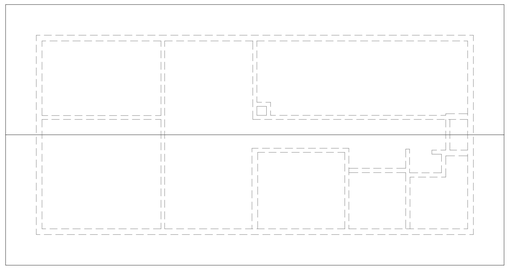
MECHANICAL FLOOR PLANS - DEMO

MD2.01

0" 1"

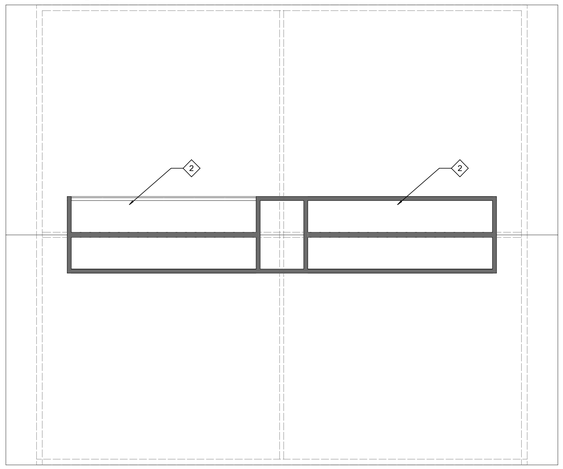
KEY NOTES

1. REMOVE EXISTING CONDENSING UNIT.
2. REMOVE DUCTS IN CLERSTORY AREA THAT ARE UNUSED TO MAKE WAY FOR NEW DUCTWORK.



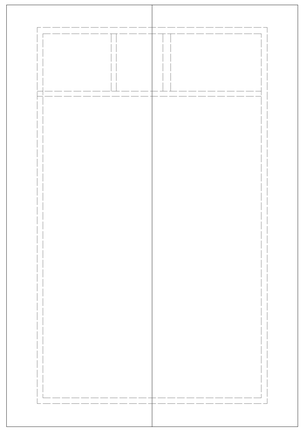
NORTH

5 BLDG ADMIN - ROOF PLAN - DEMO
1/8" = 1'-0"



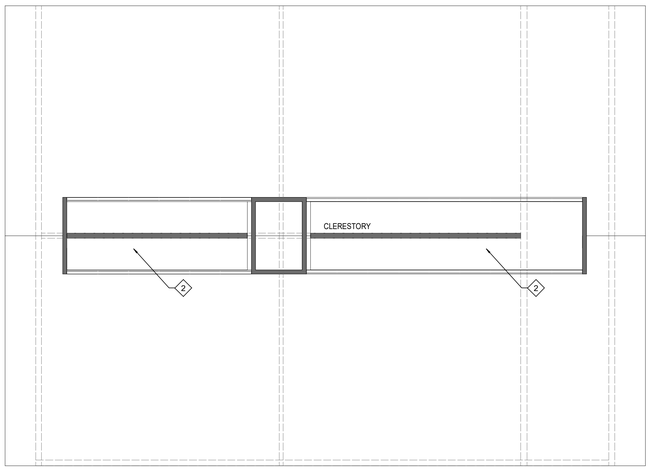
NORTH

4 BLDG C - ROOF & CLERESTORY PLAN - DEMO
1/8" = 1'-0"



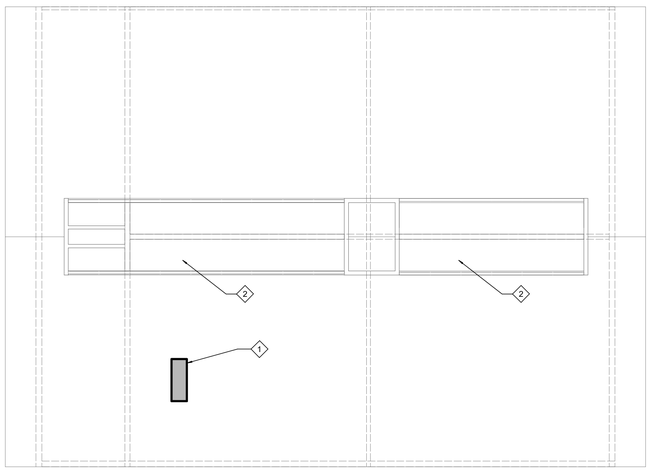
NORTH

3 KINDERGARTEN ROOF
1/8" = 1'-0"



NORTH

2 BLDG B - ROOF & CLERESTORY PLAN - DEMO
1/8" = 1'-0"



NORTH

1 BLDG A - ROOF & CLERESTORY PLAN - DEMO
1/8" = 1'-0"

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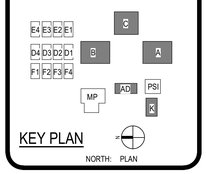
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horner St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
REZ DAVID NAVAS
No.M36155
Exp.09-30-2024
MECHANICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

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DSA SUBMITTAL

MECHANICAL ROOF PLANS - DEMO

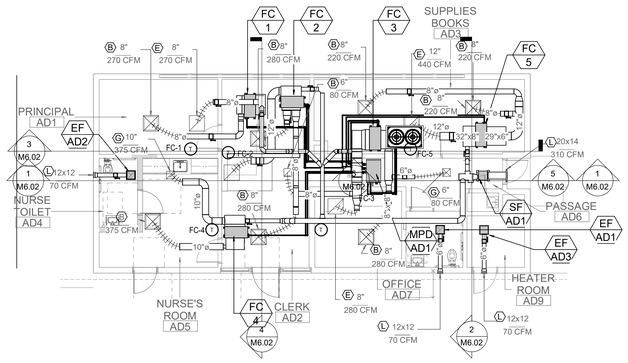
MD3.01

M2.01 - MECHANICAL FLOOR PLANS

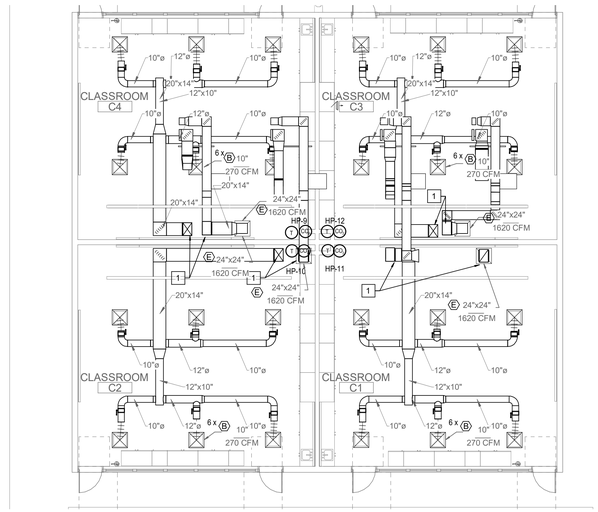
0" 1"

KEY NOTES

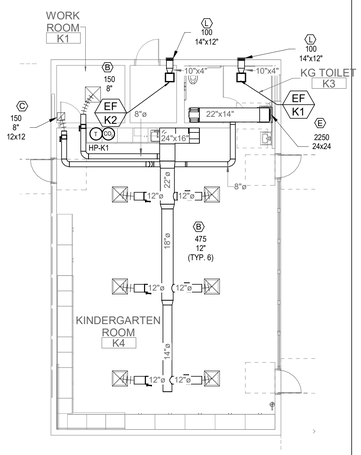
1. RUN DUCTWORK DOWN THROUGH NEW FLOOR OF CLERSTORY. RUN ALL DUCTS BETWEEN 24" O.C. JOISTS SO THAT NO STRUCTURAL MEMBERS ARE CUT. PROVIDE FRAMING AROUND OPENING SIMILAR TO DETAIL 19A ON SD3.
2. THERMOSTATS SHALL BE LOCATED ON AN INTERIOR WALL. PROVIDE CO2 SENSORS IN EACH CLASSROOM AS SHOWN. REFER TO DETAIL ON M0.00.
3. PROVIDE 14"x 8" SIDEWALL TRANSFER AIR GRILLE AND DUCTWORK IN RESTROOMS FOR MAKEUP AIR AND RESIDUAL COOLING OF RESTROOMS. DUCTWORK SHALL BE ACOUSTICALLY LINED. LOCATE DUCT SO THAT NO STUDS ARE CUT.



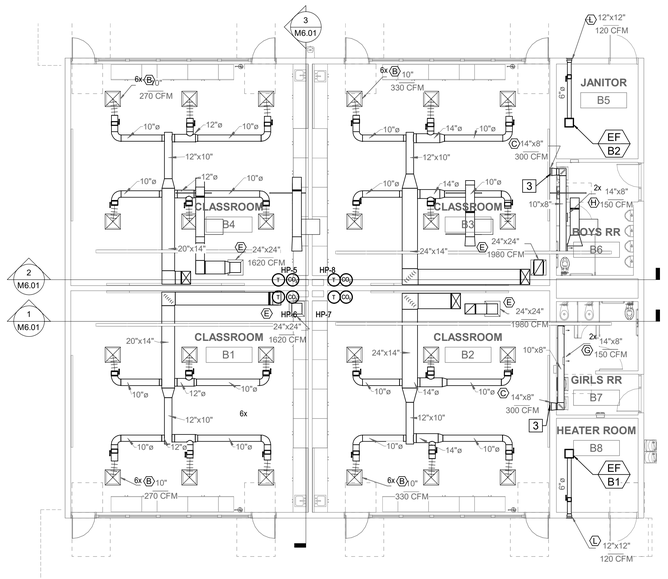
5 BLDG ADMIN - FLOOR PLAN
1/8" = 1'-0"



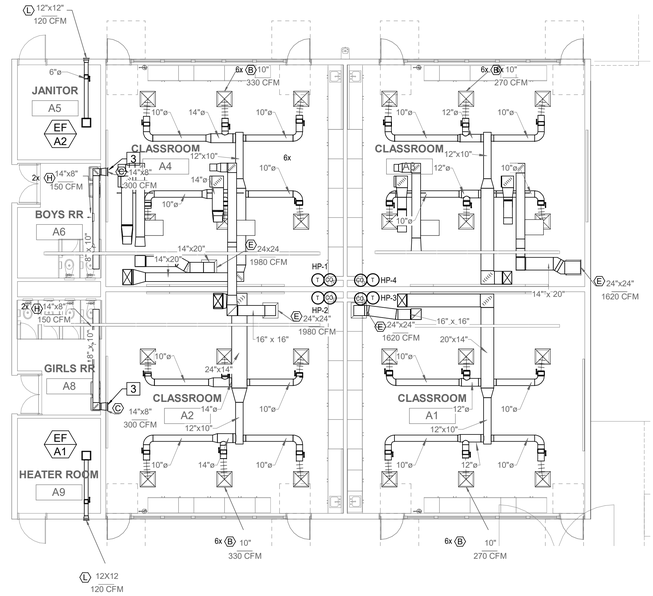
4 BLDG C - FLOOR PLAN
1/8" = 1'-0"



3 BLDG K - FLOOR PLAN
1/8" = 1'-0"



2 BLDG B - FLOOR PLAN
1/8" = 1'-0"



1 BLDG A - FLOOR PLAN
1/8" = 1'-0"

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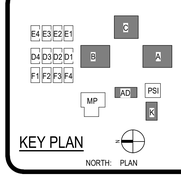

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER REZ DAVID WANG No.M36155 Exp.09-30-2024 STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
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MECHANICAL FLOOR PLANS

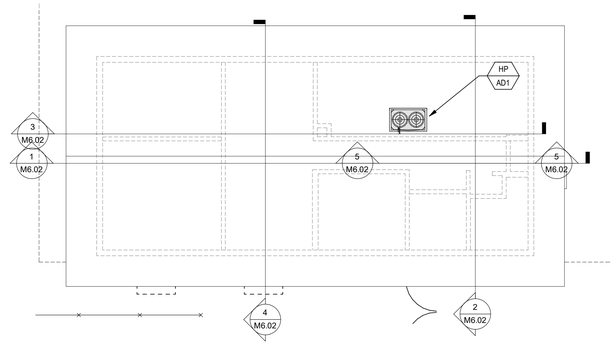
M2.01

M3.01 - MECHANICAL ROOF & CLERESTORY PLANS

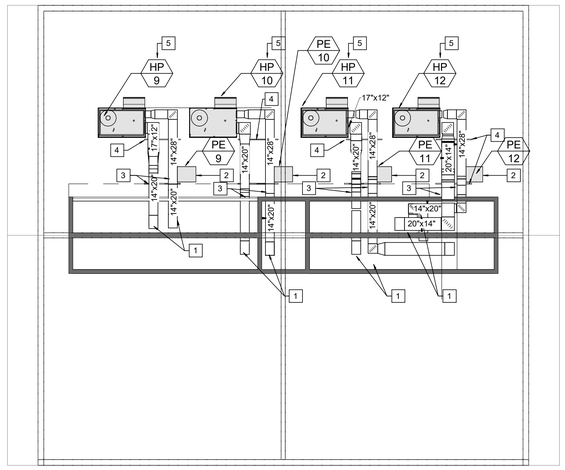
0" 1"

KEY NOTES

1. RUN DUCTWORK DOWN THROUGH NEW FLOOR OF CLERSTORY. RUN ALL DUCTS BETWEEN 24" O.C. JOISTS SO THAT NO STRUCTURAL MEMBERS ARE CUT. PROVIDE FRAMING AROUND OPENING SIMILAR TO DETAIL 19A ON SD3.
2. PROVIDE SUPPORT LEGS UNDER SUPPORT LEGS OF THE POWER EXHAUSTERS. REFER TO DETAIL 17 ON SHEET M5.01 & DETAIL 15 ON SHEET SD2.
3. ALL SUPPLY AND RETURN DUCT ABOVE THE ROOF SHALL HAVE 2" INTERNAL INSULATION.
4. DUCT SUPPORTS. REFER TO DETAIL 1 ON SHEET M5.05. (TYP.)
5. ROOFTOP HEAT PUMP UNITS ON MICROMETL SEISMIC CURBS. REFER TO STRUCTURAL DWGS. FOR ATTACHMENT DETAILS.

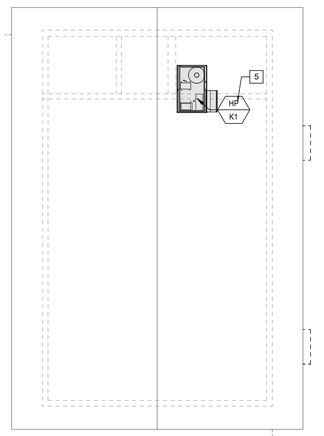


5 BLDG ADMIN - ROOF PLAN
1/8" = 1'-0"

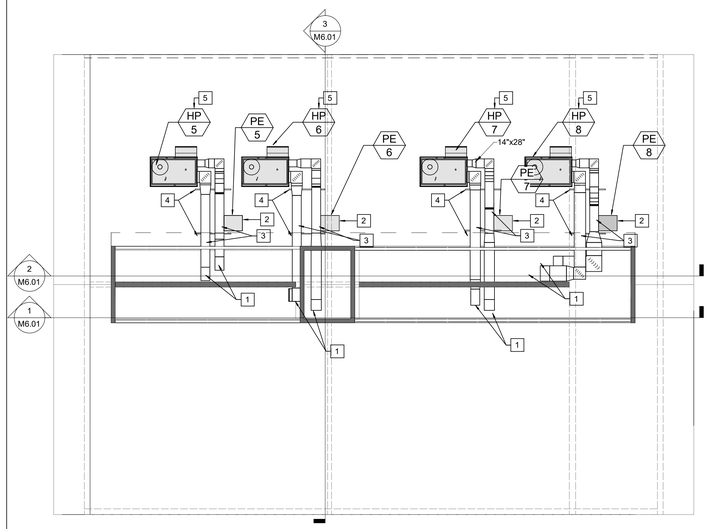


4 BLDG C - ROOF & CLERESTORY PLAN
1/8" = 1'-0"

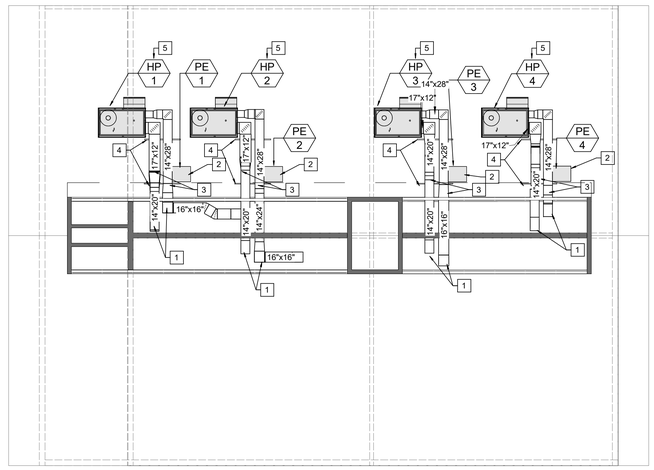
NORTH



3 BLDG K - ROOF PLAN
1/8" = 1'-0"



2 BLDG B - ROOF & CLERESTORY PLAN
1/8" = 1'-0"



1 BLDG A - ROOF & CLERESTORY PLAN
1/8" = 1'-0"

NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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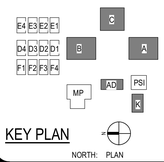
DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
REZ DAVID NAVAS
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL ROOF & CLERESTORY PLANS

M3.01

FILE PATH: Z:\Projects\...
5/11/2023 6:13:14 PM

ROOFTOP PACKAGED AIR CONDITIONING (HEAT PUMP) UNIT SCHEDULE

UNIT	MANUFACTURER & MODEL NO.	CFM	NOMINAL COOLING TONS	TYPE	ESP (IN. WG)	COOLING CAP (MBH) TOTAL	COOLING CAP (MBH) SENS.	EVAP. ENT. AIR TEMP. (°F) DB	EVAP. ENT. AIR TEMP. (°F) WB	EVAP. LEAV. AIR TEMP. (°F) DB	EVAP. LEAV. AIR TEMP. (°F) WB	ENT. COND. TEMP. (°F) SUMMER DB	ENT. COND. TEMP. (°F) SUMMER WB	ENT. COND. TEMP. (°F) WINTER DB	EER SEER	HEATING CAPACITIES (MBH) TOTAL	HEATING CAPACITIES (MBH) INTEGRATED	COP HIGH TEMP.	COP LOW TEMP.	HSPF	INDOOR FAN NO.	INDOOR FAN RPM	INDOOR FAN HP/ BHP	INDOOR FAN FAN MOTOR FLA.	COMPRESSOR NO.	COMPRESSOR RLA	COMPRESSOR LRA	UNIT	MAKE & MODEL	POWER EXHAUST CFM	POWER EXHAUST HP	POWER EXHAUST FLA	POWER EXHAUST MCA	POWER EXHAUST MOCP	POWER EXHAUST V/PHASE/HZ	FILTERS (IN.) MERV 13	ROOFTOP UNIT ELECTRICAL MCA	ROOFTOP UNIT ELECTRICAL IFM (FLA)	ROOFTOP UNIT ELECTRICAL FLA	ROOFTOP UNIT ELECTRICAL LRA	ROOFTOP UNIT ELECTRICAL POWER (KW)HZ	ROOFTOP UNIT ELECTRICAL UNIT MCA	ROOFTOP UNIT ELECTRICAL UNIT MCOP	ROOFTOP HP WT. LBS.	POWER EXH. & ECONOMIZER BASE WT (LBS)	SEISMIC CURB BASE WT (LBS)	ACCES SORIES OPER. WT. (LBS)	TOTAL WT. ALL COMPONENTS LBS	OSA CFM	REMARKS	STRUCTURAL ANCHORAGE DETAIL
CLASSROOM BLDG A																																																			
HP 1	CARRIER 50FCQA06	1980	5.0	HORIZONTAL	0.75	63.2	52.5	80	67.0	57.6	56.5	98.0	80.0	39.0	14.3/ 11.8	56.8	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	16	110	PE 1	MICROMETL 50FCQ A06	1980	1.0	6.4	8.0	14.4	208V/3PH/60HZ	2 in.	29.0	7.2	28.0	124	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 2	CARRIER 50FCQA06	1980	5.0	HORIZONTAL	0.75	63.2	52.5	80	67.0	57.6	56.5	98.0	80.0	39.0	14.3/ 11.8	56.8	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	16	110	PE 2	MICROMETL 50FCQ A06	1980	1.0	6.4	8.0	14.4	208V/3PH/60HZ	2 in.	29.0	7.2	28.0	124	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 3	CARRIER 50FCQA05	1620	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.0	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 3	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 4	CARRIER 50FCQA05	1620	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 4	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
CLASSROOM BLDG B																																																		
HP 5	CARRIER 50FCQA05	1620	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 5	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 6	CARRIER 50FCQA05	1620	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 6	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 7	CARRIER 50FCQA06	1980	5.0	HORIZONTAL	0.75	63.2	52.5	80	67.0	57.6	56.5	98.0	80.0	39.0	14.3/ 11.8	56.8	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	16	110	PE 7	MICROMETL 50FCQ A06	1980	1.0	6.4	8.0	14.4	208V/3PH/60HZ	2 in.	29.0	7.2	28.0	124	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 8	CARRIER 50FCQA06	1980	5.0	HORIZONTAL	0.75	63.2	52.5	80	67.0	57.6	56.5	98.0	80.0	39.0	**14.3/ 11.8**	56.8	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	16	110	PE 8	MICROMETL 50FCQ A06	1980	1.0	6.4	8.0	14.4	208V/3PH/60HZ	2 in.	29.0	7.2	28.0	124	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
CLASSROOM BLDG C																																																		
HP 9	CARRIER 50FCQA05	1600	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 9	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 10	CARRIER 50FCQA05	1600	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 10	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 11	CARRIER 50FCQA05	1600	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 11	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
HP 12	CARRIER 50FCQA05	1600	4.0	HORIZONTAL	0.75	50.8	40.2	80.0	67.0	57.6	57.5	98.0	80.0	39.0	14.3/ 11.8	46.1	50.0	3.8	2.3	8.2	1	1838	1.0/0.66	7.2	1	13.7	83	PE 12	MICROMETL 50FCQ A05	1600	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	29.0	5.0	29.0	99.0	208V/3PH/60HZ	29.0	40 A	473	225 TOTAL	18 M5.01	17 M5.01	95	215	1008	400	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2
KINDERGARTEN																																																		
HP K1	CARRIER 50FCQM07	2400	6.0	VERTICAL	0.75	76.2	63.7	80.0	67.0	57.2	57.2	98.0	80.0	39.0	11.2 EER 15.0 IEER	65.1	56.6	3.6	2.4	NA	1	1838	-/0.66	7.8	1	18	136	PE K1	MICROMETL 50FCQ A05	2400	0.5	3.9	4.9	8.8	208V/3PH/60HZ	2 in.	37.0	7.8	37.0	156	208V/3PH/60HZ	37.0	50 A	~~623~~	225 TOTAL	1 M5.05	2 M5.05	95	215	1124	690	SEE NOTES 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 15, 16	4 SD2 / 15 SD2 / 16 SD2

NOTES:
za
1. SCHEDULED LOADS INCLUDE FAN AND MOTOR HEAT.
2. PROVIDE ANTI-RECYCLE TIMER, CRANKCASE HEATER, LOW AMBIENT KIT AND HIGH CAPACITY FILTER RACK.
3. PROVIDE "MICROMETL" MODULATING ECONOMIZER WITH POWER EXHAUST MOUNTED ON HP-K1. HP UNIT SHALL HAVE DCV CONTROLLED BY C02 SENSORS. PROVIDE WITH LOCKING MESH COVER. POWER EXHAUST SHALL BE PROVIDED WITH A SEPARATE DISCONNECT SWITCH, FIELD WIRED BY ELECTRICAL.
4. PROVIDE VIBRATION ISOLATORS.
5. BYPASS UNIT ANTI-RECYCLE TIMER WHEN ANTI-RECYCLE FUNCTION IS INCLUDED IN THE THERMOSTAT.
6. PROVIDE WITH FACTORY MOUNTED NON-FUSED DISCONNECT SWITCH.
7. PROVIDE FACTORY CONDENSER COIL GUARDS.
8. PROVIDE T-24 COMPLIANT INTERNET PROGRAMMABLE THERMOSTAT "NT" MODEL X7C WITH DEMAND CONTROL VENTILATION (DCV), C02 SENSORS AND CONNECT TO EXISTING EMS.
9. UNITS SHALL HAVE DUCT FLEX CONNECTIONS INSTALLED WITHIN ROOF CURB.
10. ALL HP UNITS SHALL HAVE R-410A REFRIGERANT.
11. PROVIDE WITH FACTORY MOUNTED NON-POWERED CONVENIENCE OUTLET.
12. UNIT SHALL BE INSTALLED ON A LEVELED PLATFORM.
13. UNITS SHALL BE INSTALLED ON LEVEL MICROMETL SEISMIC CURBS. REFER TO DETAILS 2 ON SHEET M5.05 AND DETAIL 18 ON SHEET M5.01.
14. UNIT SHALL HAVE DUCT FLEX CONNECTIONS INSTALLED ON THE DISCHARGE AND INTAKE SIDES OF HTE UNIT.
15. PROVIDE "MICROMETL" POWER EXHAUST TO BE INSTALLED ON RETURN AIR DUCT. POWER EXHAUST SHALL BE PROVIDED WITH A SEPARATE DISCONNECT SWITCH, FIELD WIRED BY ELECTRICAL.
16. PROVIDE FACTORY MODULATING ECONOMIZER. HP UNIT SHALL HAVE C02 CONTROL. PROVIDE WITH LOCKING MESH COVER.

VRF SYSTEM OUTDOOR HEAT RECOVERY UNIT SCHEDULE

UNIT	MANUFACTURER AND MODEL NO.	TYPE	COOLING CAP. (MBH) COOLING (TOTAL/SENSIBLE) MBH	COOLING CAP. (MBH) HEATING MBH	COP	AMB. TEMP.(°F) SUMMER (DB/WB)	AMB. TEMP.(°F) WINTER (DB)	SCHE	E.E.R. I.E.E.R.	ELECTRICAL COMPRESSOR QTY.	ELECTRICAL COMPRESSOR RLA	ELECTRICAL OUTDOOR FAN QTY.	ELECTRICAL MCA	ELECTRICAL MOCP	ELECTRICAL VOLTAGE	OPER WT. (LBS)	REMARKS	STRUCTURAL ANCHORAGE DETAIL
HP A1	TOSHIBA/CARRIER 38VMA072HDS5-1	ROOF MOUNTED	96.0	108.0	3.63	88.0/68.0	41.0	27.7	12.4 24.3	1	-	2	45	50	230V / 3Ø / 60HZ	672	NOTES 1, 2, 3, 4, 5, 6, 7, 8, 9, & 10	16 SD3 / 4B SD2

NOTES:
1. PROVIDE CRANKCASE HEATER, HIGH & LOW PRESSURE SWITCHES.
2. PROVIDE LOW AMBIENT KIT.
3. PROVIDE 3/4" EXPAND METAL CONDENSING COIL GUARD.
4. PROVIDE MINIMUM CLEARANCE AROUND EACH UNIT PER THE MANUFACTURER'S RECOMMENDATIONS.
5. SIZE REFRIGERANT (R410A) LINES PER MANUFACTURERS RECOMMENDATIONS. PROVIDE LONG LINE KIT IF REQUIRED.
6. PROVIDE HAIL-GUARD.
7. PROVIDE WITH HOUSEKEEPING PAD.
8. ALL HEAT PUMP UNITS ARE ROOF MOUNTED.
9. PROVIDE UNIT WITH HEAT RECOVERY.
10. PROVIDE A VRF MULTIPORT DISTRIBUTION CONTROLLER MODEL 40VMD006M--3, 208/1/60, 0.73 MCA, 15 A MOCP,

VRF SYSTEM INDOOR FAN COIL UNIT SCHEDULE

UNIT	MANUFACTURER AND MODEL NO.	SERVICE/ LOCATION	TYPE	CAPACITY (MBH) TOTAL COOLING	CAPACITY (MBH) HEATING	OSA TEMP. (°F) SUMMER (DB/WB)	OSA TEMP. (°F) WINTER (DB)	EAT. (°F) (DB/WB)	LAT. (°F) (DB/WB)	SUPPLY FAN CFM (H/M/L)	SUPPLY FAN E.S.P. (IN.)	OUTSIDE AIR CFM	ELECTRICAL VOLTAGE	ELECTRICAL UNIT FLA	ELECTRICAL UNIT MCA	ELECTRICAL MOCP	OPER. WT. (LBS.)	NOTES	STRUCTURAL ANCHORAGE DETAIL
FC 1	TOSHIBA/CARRIER 40VMM012----	PRINCIPAL AD1	CONCEALED DUCT	12.0	13.5	98	39	77.9/64.5	59.2/57.9	270	0.6	28	230V/1ø/60HZ	2.5	3.13	15	76	1, 2, 3, 4, 5, 6, 7 & 8	3 M5.01 / 4 SD3
FC 2	TOSHIBA/CARRIER 40VMM018----	RECEPTION / CLERK AD2	CONCEALED DUCT	19.0	21.0	98	39	77.9/64.5	59.2/57.9	570	0.6	27	230V/1ø/60HZ	2.5	3.13	15	97	1, 2, 3, 4, 5, 6, 7 & 8	3 M5.01 / 4 SD3
FC 3	TOSHIBA/CARRIER 40VMM015----	OFFICE / CORRIDOR/ TOILET AREA AD7	CONCEALED DUCT	15.0	17.0	98	39	77.9/64.5	59.2/57.9	360	0.6	186	230V/1ø/60HZ	2.5	3.13	15	97	1, 2, 3, 4, 5, 6, 7 & 8	3 M5.01 / 4 SD3
FC 4	TOSHIBA/CARRIER 40VMM012----	NURSES RM AD5	CONCEALED DUCT	12.0	13.5	98	39	77.9/64.5	59.2/57.9	380	0.6	23	230V/1ø/60HZ	2.5	3.13	15	76	1, 2, 3, 4, 5, 6, 7 & 8	3 M5.01 / 4 SD3
FC 5	TOSHIBA/CARRIER 40VMM015----	SUPPLIES BOOKS AD3	CONCEALED DUCT	15.0	17.0	98	39	77.9/64.5	59.2/57.9	440	0.6	42	230V/1ø/60HZ	2.5	3.13	15	76	1, 2, 3, 4, 5, 6, 7 & 8	3 M5.01 / 4 SD3

NOTES:
1. PROVIDE WITH CONDENSATE DRAIN PAN (PRIMARY AND SECONDARY) FOR FAN COIL UNIT AND ASSOCIATED PIPING.
2. PROVIDE WITH FACTORY FURNISHED & INSTALLED CONDENSATE DRAIN LIFT PUMP (CONDENSATE PUMP SHALL BE POWERED THRU INDOOR FAN COIL UNIT).
3. SIZE REFRIGERANT LINES PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE T-24 COMPLIANT INTERNET PROGRAMMABLE THERMOSTAT "NT" MODEL X7C AND CONNECT TO EXISTING EMS.
5. CONCEALED/DUCTED FAN COIL UNIT.
6. PROVIDE DISCONNECT SWITCH.
7. PROVIDE WITH HIGH STATIC MOTOR.
8. PROVIDE WITH FILTER BOX.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID WANG No.M36155 Exp.09-30-2024 STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 04-17-2023
PROJECT NUMBER 220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL SCHEDULES

M4.01

AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	MAKE & MODEL	DESCRIPTION	REMARKS
Ⓐ	CEILING SUPPLY	PRICE MODEL SPD	SQUARE PLAQUE DIFFUSER WITH FRAME FOR SURFACE MOUNTING IN HARD CEILING. FLUSH FACE MOUNTING.	NOTES 1, 2, 3,
Ⓑ	CEILING SUPPLY	PRICE MODEL SPD	SQUARE PLAQUE DIFFUSER. T-BAR MOUNTING. FLUSH FACE MOUNTING.	NOTES 1, 2, 3,
Ⓒ	SIDEWALL RETURN	PRICE MODEL 535L	LOUVERED RETURN GRILL WITH FIXED BLADES AT 45 DEGREES, RAPID MOUNT FRAME MODEL TRIM FOR SURFACE MOUNTING.	NOTES 1, 3
Ⓓ	CEILING EXHAUST	PRICE MODEL 535L	LOUVERED EXHAUST GRILL WITH FIXED BLADES AT 45 DEGREES, RAPID MOUNT FRAME MODEL TRIM FOR SURFACE MOUNTING.	NOTES 1, 3
Ⓔ	CEILING RETURN	PRICE MODEL 535L	LOUVERED RETURN GRILL WITH FIXED BLADES AT 45 DEGREES, RAPID MOUNT FRAME MODEL TRIM FOR T-BAR MOUNTING.	NOTES 1, 3
Ⓕ	DUCT MOUNTED SUPPLY	PRICE MODEL SDG	SPIRAL DUCT SUPPLY GRILLE, MOUNTED DIRECTLY ON ROUND OR SPIRAL DUCTS. AT 45 DEGREES FROM HORIZONTAL. DOUBLE DEFLECTION WITH FRONT BLADES HORIZONTAL TO THE FLOOR.	NOTES 1, 2, 3,
Ⓖ	CEILING RETURN	PRICE MODEL 535L	LOUVERED RETURN GRILL WITH FIXED BLADES AT 45 DEGREES, RAPID MOUNT FRAME MODEL TRIM FOR SURFACE MOUNTING.	NOTES 1, 3
Ⓗ	SIDEWALL SUPPLY	PRICE MODEL	DOUBLE DEFECTION SUPPLY, SURFACE MOUNTING. FLUSH FACE MOUNTING.	NOTES 1, 3
Ⓛ	EXHAUST LOUVER	PRICE MODEL	LOUVERED EXHAUST GRILL WITH FIXED BLADES, BIRD SCREEN, SURFACE MOUNT, 50% MIN. FREE AREA. 4" THICK.	NOTES 1, 3
Ⓛ	LOUVER	GREENHECK MODEL ESD-435	EXTRUDED ALUMINUM LOUVER, C/W BIRDSCREEN, MOUNTING FLANGES, PRIME COATED.	NOTES 1, 3, 4

NOTES:
1. REFER TO THE FLOOR PLANS FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN AND FIRE/DAMPER, IF REQUIRED.
2. PROVIDE AIR CONTROL GRID FOR ALL CEILING SUPPLY DIFFUSERS SET AT 90°.
3. ARCHITECT TO SELECT COLOR ON SUBMITTALS.
4. PROVIDE 2" FILTERS (MERV 13) IN INLET LOUVER TO SF-A1 IN ADMINISTRATION BLDG.

FAN SCHEDULE

UNIT	MANUFACTURER & MODEL NO.	SERVICE	TYPE	CFM	SP IN W.G.	FAN RPM	MOTOR					SONES	OPER WT. (LBS)	REMARKS
							WATTS	FLA	VOLT	PH	HZ			
EF A1	GREENHECK SP-A90-130-VG	CLASSROOM BLDG A HEATER ROOM	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 2, 4, 6
EF A2	GREENHECK SP-A90-130-VG	CLASSROOM BLDG A JANITOR ROOM	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 1, 2, 4, 8
EF B1	GREENHECK SP-A90-130-VG	CLASSROOM BLDG B HEATER ROOM	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 2, 4, 6
EF B2	GREENHECK SP-A90-130-VG	CLASSROOM BLDG B JANITOR ROOM	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 1, 2, 4, 8
EF K-1	GREENHECK SP-A90-130-VG	KINDERGARTEN BOYS & GIRLS RR	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 1, 2, 4
EF K-2	GREENHECK SP-A90-130-VG	KINDERGARTEN MECHANICAL RM.	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 2, 4, 6
EF AD1	GREENHECK SP-A90	ADMINISTRATION TOILET ROOM	CEILING/SUSPENDED	70	0.25	900	12	0.17	115	1	60	0.5	15	NOTES 2, 4, 6, 7
EF AD2	GREENHECK SP-A90	ADMINISTRATION NURSE RR	CEILING/SUSPENDED	70	0.25	900	12	0.17	115	1	60	0.5	15	NOTES 2, 4, 6, 7
EF AD3	GREENHECK SP-A90-130-VG	ADMINISTRATION HEATER ROOM	CEILING/SUSPENDED	120	0.25	1091	15	0.29	115	1	60	2.0	15	NOTES 1, 2, 3, 4, 5, 8
SF AD1	GREENHECK SP-A90-130-VG	ADMINISTRATION VENTILATION FAN	CEILING/SUSPENDED	310	0.65	1498	86	1.5	115	1	60	2.5	24	NOTES 1, 2, 3, 4, 5

NOTES:
1. FAN SHALL OPERATE ON A TIME CLOCK SCHEDULE PROVIDED BY THE SCHOOL DISTRICT.
2. PROVIDE BACKDRAFT DAMPER FOR ALL FANS.
3. INTERLOCK SUPPLY FAN WITH ALL FAN COIL UNITS SERVING ADMIN. AREA.
4. PROVIDED FACTORY SOLID STATE CONTROLLER MOUNTED WITHIN THE FAN'S CASING.
5. PROVIDE WITH MERV 13 FILTERS.
6. OPERATED BY COOLING THERMOSTAT WITH A TIMED OVERDIE.
7. CONTROLLED BY LIGHT SWITCH WITH TIME DELAY SWITCH GREENHECK PRODUCT #874214
8. CONTROLLED BY ON/OFF WALL SWITCH.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
REZ DAVID NIANG
No.M36155
Exp.09-30-2024
MECHANICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

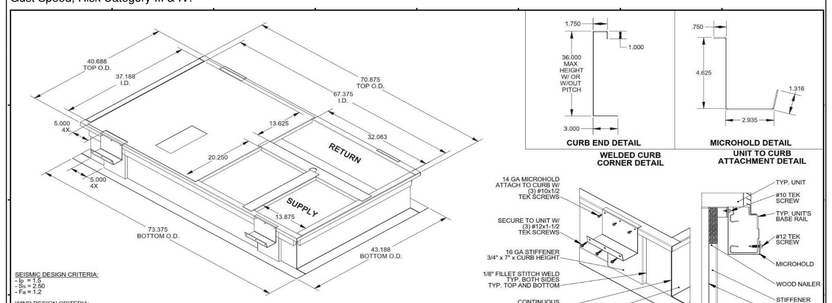
MECHANICAL SCHEDULES

M4.02

0" 1"

MicroMetl	Date:	Weight: 95lbs (US) 43.09kg (Metric)	Part Number: CRBW-SRT12HA-1141
	RTU:		
Submitted to:	Approved by:	Notes:	

Welded Structurally Calculated Curb - 11 Inches Tall Insulated Full Perimeter Welded Structurally Calculated Curb Curb, California State Standard, Standard Seismic Criteria, "Structurally" Stamped By A Professional Engineer, Without Pitch, Insulated Deck Pan If Applicable, Includes Wood Nailer & Hold Down Brackets. Meets Seismic Requirements for 2022 CBC & 2021 IBC. Wind Design Criteria: 60 Foot Tall Building Maimum, Exposure C, 155 MPH - 3 Second Gust Speed, Risk Category III & IV.



SEISMIC DESIGN CRITERIA:
- Ip = 1.5
- Sa = 2.50
- Fa = 1.2

WIND DESIGN CRITERIA:
- 1000 FT. TALL BUILDING MAX.
- EXPOSURE C
- 155 MPH, 3-SECOND GUST WIND SPEED
- RISK CATEGORY III & IV

CURB STIFFENER REQUIREMENTS:
- STIFFENERS ARE REQUIRED ON ALL CURBS OVER 16" TALL
- (2) STIFFENERS, (2) MICROHOLDS PER LONG SIDE
- (0) STIFFENERS, (0) MICROHOLDS PER SHORT SIDE

SEE STANDARD PRODUCT DOES NOT INCLUDE THROUGH THE SIDE SERVICE HOLES

MicroMetl Corporation

CRBW-SRT12HA-08 Series	08" TALL	84 LBS.
CRBW-SRT12HA-11 Series	11" TALL	95 LBS.
CRBW-SRT12HA-14 Series	14" TALL	160 LBS.
CRBW-SRT12HA-24 Series	24" TALL	153 LBS.
CRBW-SRT12HA-36 Series	36" TALL	202 LBS.

STRUCTURALLY CALCULATED WELDED CURB
MAX UNIT WEIGHT 1000 lbs.

ANCHORAGE DETAILS TO ROOF: ALL DETAILS ARE CALCULATED USING THE SEISMIC DESIGN CRITERIA INDICATED ABOVE. CURB MAY UTILIZE TYPE OF ANCHORAGE THE EOR HAS THE OPTION TO CALCULATE THE ANCHORAGE USING SITE SPECIFIC EXPANSION ANCHORS

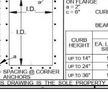
Indianapolis, IN : (800) 682-4822
Sparks, NV: (800) 884-4662
Longview, TX: (903) 248-4800

DRAWN BY: IR DATE: 08/24/2022

MEETS SEISMIC REQUIREMENTS FOR 2022 CBC & 2021 IBC

MEETS REQUIREMENTS FOR 155 MPH 60' BUILDING HEIGHT MAX. 3 SEC. GUST, EXP C

TYPICAL PLAN VIEW



STEEL ATTACHMENT: (BEAM BY OTHERS) USE A307 1/2" DIA. BOLTS, ONE WASHER CENTERED ON FLANGE. a = 2" c = 6"

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	1	1	2	12
UP TO 24"	1	1	2	12
UP TO 36"	1	1	4	20

WELD DETAIL (BEAM BY OTHERS) WELDS ARE PERMITTED TO BE USED IN PLACE OF BOLTS AS INDICATED BY THE STEEL ATTACHMENT DETAIL EQUALLY SPACED

WOOD ATTACHMENT: (BEAM BY OTHERS) USE 1/4" x 3" SIMPSON SDS SCREWS, CENTERED ON CURB FLANGE. a = 2" c = 3"

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	6	2	4	32
UP TO 24"	6	3	4	34
UP TO 36"	8	3	5	46

CONCRETE ATTACHMENT: (CONCRETE BY OTHERS) 4" MINIMUM THICKNESS) USE 1/2" SIMPSON STRONG-TIE 3-3/4" EMBEDSSD37A USE 1/2" SIMPSON TITEH HD CENTERED O.H CURB FLANGE. a = 3" SPACING s = 6" c = 6"

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	1	1	2	12
UP TO 24"	1	1	2	12
UP TO 36"	1	1	2	14

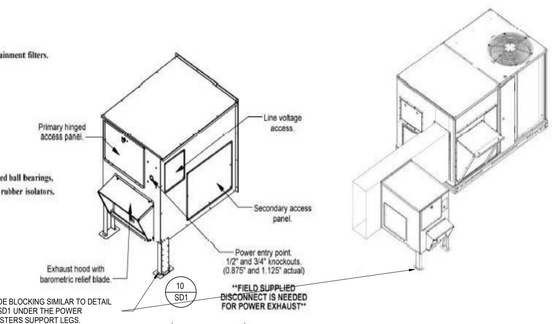
BJG# 20220039

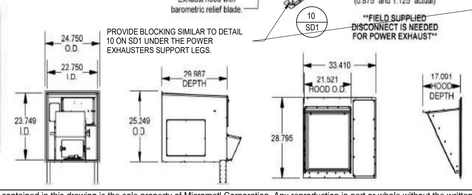
Master Revision 0001A
Page Revision 0001A

MicroMetl	Date: 4/12/2023	Weights: 225lbs/102.06kg	Units: 50FCQ A05	Part Number: PECH-SRT12CB-D2EH-2L1
Submitted To: guest@micrometl.com		Job:	Notes:	

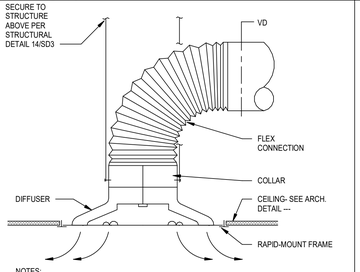
Economizer & Power Exhaust Combination Package, Genesis Ultra Low Leak Horizontal with Honeywell Jade W7220 Single/Multiple Speed Electromechanical Controller, Honeywell Actuator, Enthalpy Sensor, 208-230 Volt Three Phase, Modulating, Designed To Operate At 2675 CFM @ 1/2" - 1 HP. Power Exhaust Painted To Match RTU, All Necessary Panels And Hardware Included. Electrical junction box provided. High voltage cable to be field supplied and installed. Power Exhaust VFD is BacNet Compatible. For Differential sensor please order 9901-2022-DIFF JC2..

FEATURES:
- **Includes ECH-SRT12CB series economizer.**
- **External gear driven dampers with roll formed blades.**
- **Designed for horizontal applications only.**
- **Factory assembled rain hood, with aluminum water entrainment filters.**
- **Filter access door supplied with RTU.**
- **Hinged filter access door is NOT currently available.**
- **Rain hood is sloped for water run off.**
- **All harnesses and plugs needed are supplied.**
- **Economizer is class 1A & AMCA certified.**
- **Relief blades are AMCA certified.**
- **Uses filter rack with unit.**
- **Field supplied and installed disconnect is required.**
- **Blower is forward curved, double inlet, with pre-lubricated ball bearings, have a dynamically balanced wheel, and are mounted on rubber isolators.**
- **Thermally protected motors.**
- **Adjustable motor pulleys.**
- **Ships with adjustable legs - 8" - 14".**
- **See page 2 for PE performance and electrical data.**



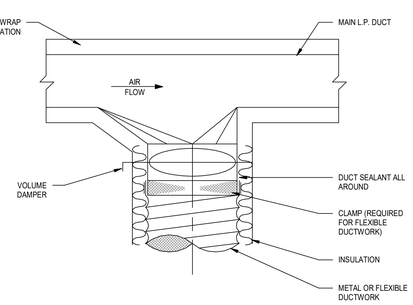


18 ROOF CURB DETAIL FOR 4 TON PACKAGED HP UNITS
1 1/2" = 1'-0"



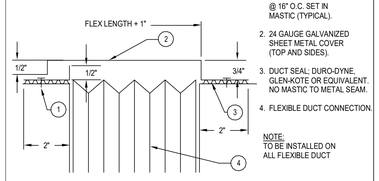
NOTES:
1. REFER TO DETAIL #14/M6.01 FOR FLEXIBLE DUCTWORK DETAIL.
2. LOCATE VOLUME DAMPER AS FAR AWAY FROM DIFFUSER OR GRILLE AS POSSIBLE.

ROUND DUCT SIZE	BUCKLEY TAKE-OFF SIZE	MINIMUM MAIN DUCT DEPTH
6"	6"X12"	8"
8"	6"X12"	8"
9"	6"X14"	8"
10"	6 1/2" X16"	8 1/2"
12"	7 3/4"X18"	9 3/4"
14"	9"X20"	11"
16"	10"X20"	12"



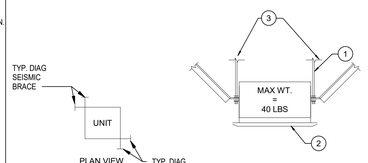
17 POWER EXHAUSTER DETAIL FOR 4 TON PACKAGED HP UNITS
1 1/2" = 1'-0"

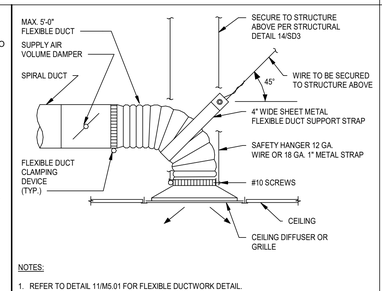
14 HARD LID DIFFUSER CONNECTION DETAIL.
12" = 1'-0"



13 RECTANGULAR TO ROUND TRANSITION TAKE-OFF DETAIL.
NOT TO SCALE

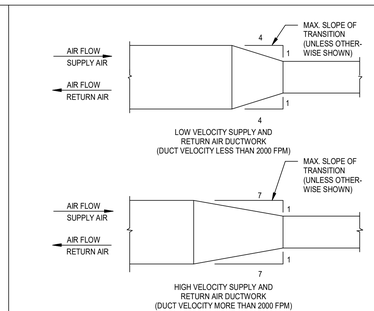
1. 3/8"Ø THREADED ROD, (1) EACH CORNER.
2. CEILING SUSPENDED EF., SEE MECH. SCHEDULE FOR MAKE & MODEL.
3. REFER TO DETAIL 4 ON STRUCTURAL SHEET SD-3 FOR ATTACHMENT TO STRUCTURE



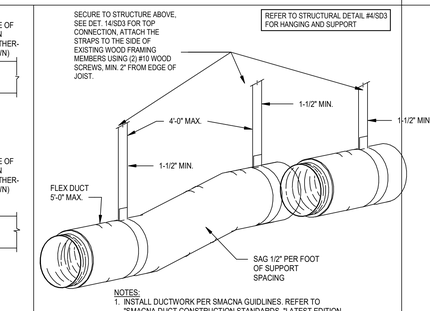


NOTES:
1. REFER TO DETAIL 11/M5.01 FOR FLEXIBLE DUCTWORK DETAIL.
2. LOCATE VOLUME DAMPER AS FAR AWAY FROM DIFFUSER OR GRILLE AS POSSIBLE.

12 RECTANGULAR DUCT TRANSITION DETAIL.
NOT TO SCALE

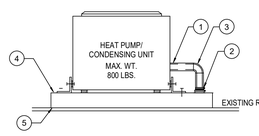


11 FLEXIBLE DUCTWORK HANGER DETAIL.
NOT TO SCALE



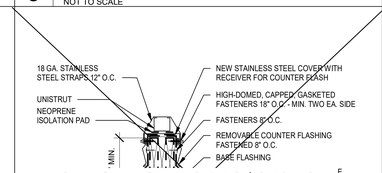
NOTES:
1. INSTALL DUCTWORK PER SMACNA GUIDLINES. REFER TO "SMACNA DUCT CONSTRUCTION STANDARDS, "LATEST EDITION.

10 FLEX CONNECTOR DETAIL.
NOT TO SCALE



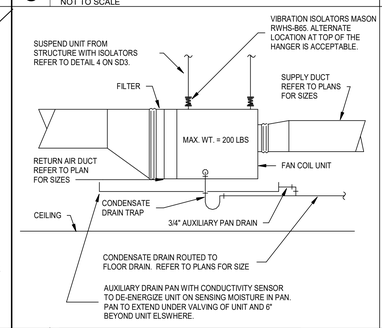
NOTES:
1. INSULATED REFRIGERANT PIPES THRU CURB. PIPES, THRU CURB.
2. PROVIDE GRADUALATED STEP BOOT WITH STSAINLESS STEEL CLAMPS BY THE PATE COMPANY. BOOT JOINT AT CURB, SHALL BE MADE WATER TIGHT.
3. INSULATED, ALUMINUM WRAP REFRIGERANT PIPES, THRU CURB.
4. HEAT PUMP/CONDENSING UNIT'S PLATFORM WITH NEOPRENE PAD.
5. SEE STRUCTURAL DETAIL 12/SD1 FOR ATTACHEMENT TO STRUCTURE.

9 SUSPENDED EXHAUST FAN DETAIL..
NOT TO SCALE

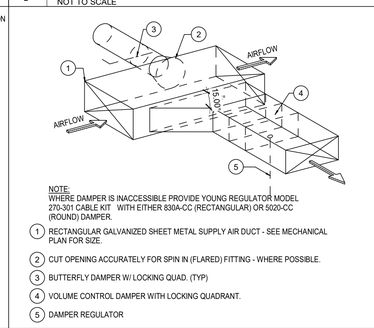


NOTES:
1. REFER TO STRUCTURAL DETAILS 4A & 4B ON SD2 FOR ATTACHMENT TO STRUCTURE.

8 LAY IN DIFFUSER CONNECTION DETAIL.
NOT TO SCALE

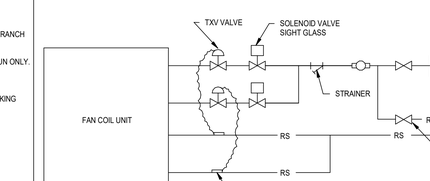


7 BRANCH DUCT DAMPER DETAIL.
NOT TO SCALE



NOTE:
WHERE DAMPER IS INACCESSIBLE PROVIDE YOUNG REGULATOR MODEL 270-301 CABLE KIT WITH EITHER 830A-CC (RECTANGULAR) OR 5020-CC (ROUND) DAMPER.
1. RECTANGULAR GALVANIZED SHEET METAL SUPPLY AIR DUCT - SEE MECHANICAL PLAN FOR SIZE.
2. CUT OPENING ACCURATELY FOR SPIN IN (FLARED) FITTING - WHERE POSSIBLE.
3. BUTTERFLY DAMPER W/ LOCKING QUAD. (TYP)
4. VOLUME CONTROL DAMPER WITH LOCKING QUADRANT.
5. DAMPER REGULATOR

6 REFRIGERANT PIPING SCHEMATIC DETAIL.
NOT TO SCALE



NOTE:
1. TYPICAL OF 2 INDEPENDENT CIRCUITS.
2. ALL REFRIGERANT PIPING TO BE SIZED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

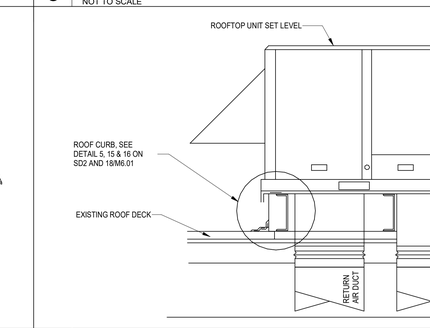
5 HP/CU ROOF MOUNTING DETAIL.
NOT TO SCALE

4 EQUIPMENT ROOF CURB DETAIL ...
NOT TO SCALE

3 DUCTED FAN COIL UNIT DETAIL.
NOT TO SCALE

2 BRANCH DUCT TAKE-OFF & DMP. DETAIL.
NOT TO SCALE

1 ROOF TOP UNIT DETAIL.
NOT TO SCALE



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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER
ALEX DAVID WAGNER
No.M36155
Exp.09-30-2024
MECHANICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 04-17-2023
PROJECT NUMBER 220309

REVISIONS

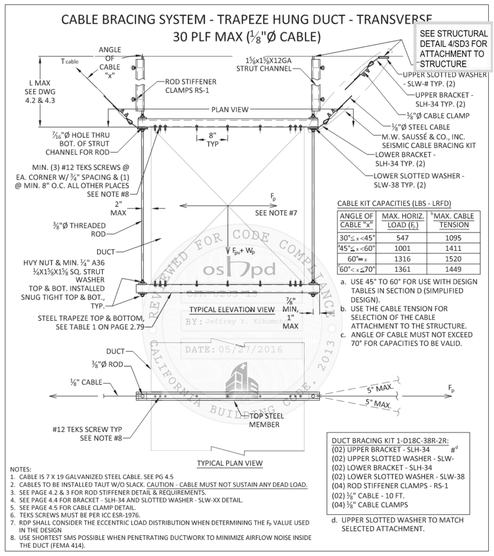
No.	Description	Date

DSA SUBMITTAL

MECHANICAL DETAILS

M5.01

CABLE BRACING SYSTEM - TRAPEZE HUNG DUCT - TRANSVERSE 30 PLF MAX ($\frac{1}{8}$"Ø CABLE)



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_x)	[a]MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

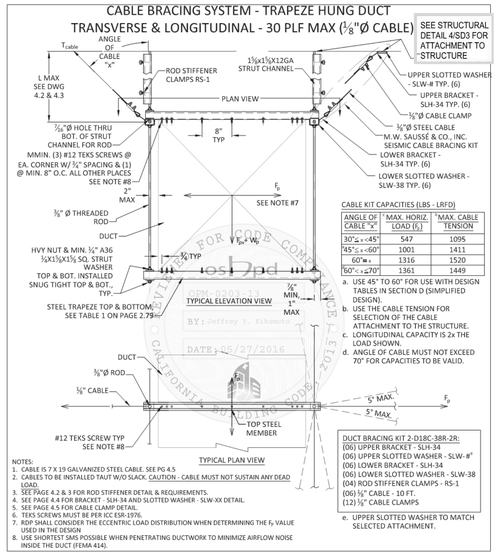
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.

DUCT BRACING KIT 1-D18C-38R-2R:
(02) UPPER BRACKET - SLH-34
(02) UPPER SLOTTED WASHER - SLW-#"
(02) LOWER BRACKET - SLH-34
(02) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(02) ⅜" CABLE - 10 FT.
(04) ⅜" CABLE CLAMPS

d. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PG 4.5
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. RDP SHALL CONSIDER THE ECCENTRIC LOAD DISTRIBUTION WHEN DETERMINING THE F_x VALUE USED IN THE DESIGN
8. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - TRAPEZE HUNG DUCT TRANSVERSE & LONGITUDINAL - 30 PLF MAX ($\frac{1}{8}$"Ø CABLE)



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_x)	[a]MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

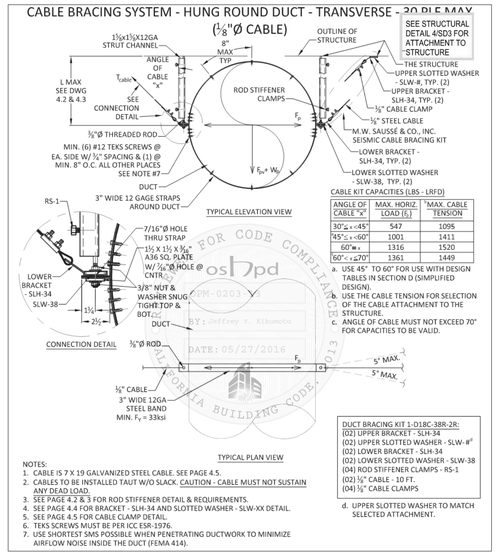
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. LONGITUDINAL CAPACITY IS 2x THE LOAD SHOWN.
d. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.

DUCT BRACING KIT 2-D18C-38R-2R:
(06) UPPER BRACKET - SLH-34
(06) UPPER SLOTTED WASHER - SLW-#"
(06) LOWER BRACKET - SLH-34
(06) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(12) ⅜" CABLE - 10 FT.
(12) ⅜" CABLE CLAMPS

e. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PG 4.5.
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. RDP SHALL CONSIDER THE ECCENTRIC LOAD DISTRIBUTION WHEN DETERMINING THE F_x VALUE USED IN THE DESIGN
8. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - HUNG ROUND DUCT - TRANSVERSE - 30 PLF MAX ($\frac{1}{8}$"Ø CABLE)



CABLE KIT CAPACITIES (LBS - LRFD)

ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_x)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

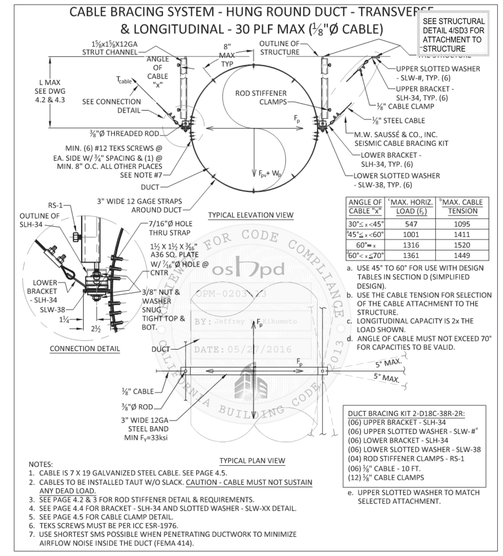
a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.

DUCT BRACING KIT 1-D18C-38R-2R:
(02) UPPER BRACKET - SLH-34
(02) UPPER SLOTTED WASHER - SLW-#"
(02) LOWER BRACKET - SLH-34
(02) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(02) ⅜" CABLE - 10 FT.
(04) ⅜" CABLE CLAMPS

d. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PAGE 4.5.
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

CABLE BRACING SYSTEM - HUNG ROUND DUCT - TRANSVERSE & LONGITUDINAL - 30 PLF MAX ($\frac{1}{8}$"Ø CABLE)



ANGLE OF CABLE "x"	MAX. HORIZ. LOAD (F_x)	MAX. CABLE TENSION
30°≤ x <45°	547	1095
45°≤ x <60°	1001	1411
60°= x	1316	1520
60° < x ≤70°	1361	1449

a. USE 45° TO 60° FOR USE WITH DESIGN TABLES IN SECTION D (SIMPLIFIED DESIGN).
b. USE THE CABLE TENSION FOR SELECTION OF THE CABLE ATTACHMENT TO THE STRUCTURE.
c. LONGITUDINAL CAPACITY IS 2x THE LOAD SHOWN.
d. ANGLE OF CABLE MUST NOT EXCEED 70° FOR CAPACITIES TO BE VALID.

DUCT BRACING KIT 2-D18C-38R-2R:
(06) UPPER BRACKET - SLH-34
(06) UPPER SLOTTED WASHER - SLW-#"
(06) LOWER BRACKET - SLH-34
(06) LOWER SLOTTED WASHER - SLW-38
(04) ROD STIFFENER CLAMPS - RS-1
(06) ⅜" CABLE - 10 FT.
(12) ⅜" CABLE CLAMPS

e. UPPER SLOTTED WASHER TO MATCH SELECTED ATTACHMENT.

NOTES:
1. CABLE IS 7 X 19 GALVANIZED STEEL CABLE. SEE PAGE 4.5.
2. CABLES TO BE INSTALLED TAUT W/O SLACK. CAUTION - CABLE MUST NOT SUSTAIN ANY DEAD LOAD.
3. SEE PAGE 4.2 & 3 FOR ROD STIFFENER DETAIL & REQUIREMENTS.
4. SEE PAGE 4.4 FOR BRACKET - SLH-34 AND SLOTTED WASHER - SLW-XX DETAIL.
5. SEE PAGE 4.5 FOR CABLE CLAMP DETAIL.
6. TEKS SCREWS MUST BE PER ICC ESR-1976.
7. USE SHORTEST SMS POSSIBLE WHEN PENETRATING DUCTWORK TO MINIMIZE AIRFLOW NOISE INSIDE THE DUCT (FEMA 414).

RS-1 - ROD STIFFENER DETAILS & REQUIREMENTS

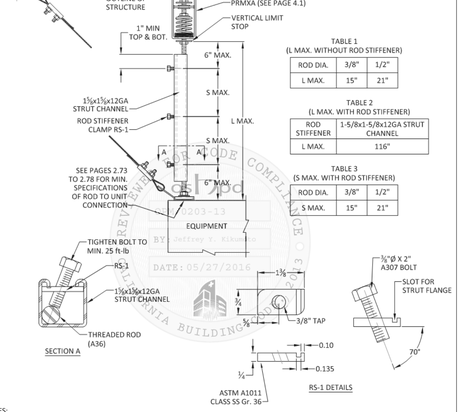


TABLE 1 (L MAX. WITHOUT ROD STIFFENER)

ROD DIA.	3/8"	1/2"
L MAX.	15"	21"

TABLE 2 (L MAX. WITH ROD STIFFENER)

ROD STIFFENER	1-5/8x1-5/8x12GA STRUT CHANNEL
L MAX.	116"

TABLE 3 (S MAX. WITH ROD STIFFENER)

ROD DIA.	3/8"	1/2"
S MAX.	15"	21"

NOTES:
1. SEE TABLE 1 FOR MAXIMUM LENGTH OF ⅜" THRU ⅜"Ø RODS WITHOUT ROD STIFFENER.
2. SEE TABLE 2 FOR MAXIMUM LENGTH OF ⅜" THRU ½"Ø RODS WITH ROD STIFFENER.
3. SEE TABLE 3 TO DETERMINE NUMBER OF ROD STIFFENER CLIPS REQUIRED.
4. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD.
5. SEE SECTION 3 FOR STRUCTURAL ATTACHMENTS FOR HANGER BOX AND CABLE BRACING

RS-1 - ROD STIFFENER DETAILS & REQUIREMENTS

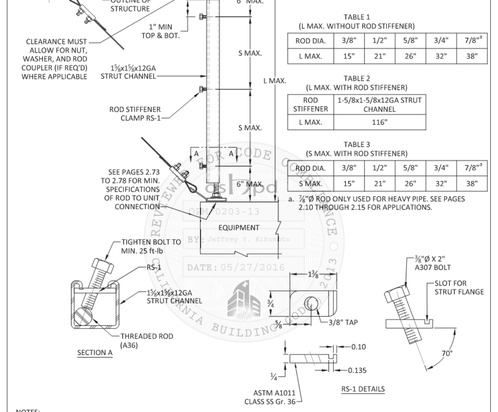


TABLE 1 (L MAX. WITHOUT ROD STIFFENER)

ROD DIA.	3/8"	1/2"	5/8"	3/4"	7/8"
L MAX.	15"	21"	26"	32"	38"

TABLE 2 (L MAX. WITH ROD STIFFENER)

ROD STIFFENER	1-5/8x1-5/8x12GA STRUT CHANNEL
L MAX.	116"

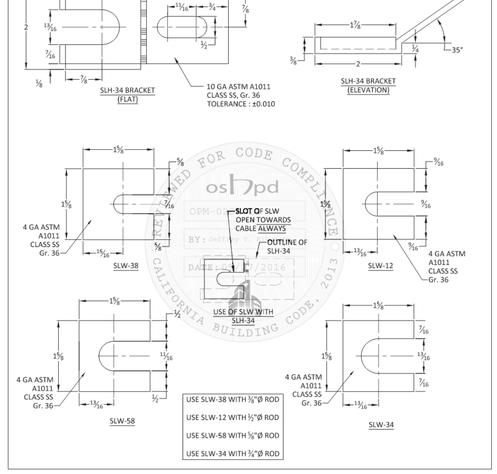
TABLE 3 (S MAX. WITH ROD STIFFENER)

ROD DIA.	3/8"	1/2"	5/8"	3/4"	7/8"
S MAX.	15"	21"	26"	32"	38"

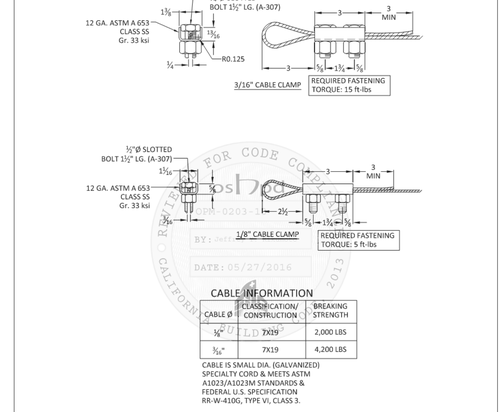
a. ¾"Ø ROD ONLY USED FOR HEAVY PIPE. SEE PAGES 2.10 THROUGH 2.15 FOR APPLICATIONS.

NOTES:
1. SEE TABLE 1 FOR MAXIMUM LENGTH OF ⅜" THRU ⅞"Ø RODS WITHOUT ROD STIFFENER.
2. SEE TABLE 2 FOR MAXIMUM LENGTH OF ⅜" THRU ½"Ø RODS WITH ROD STIFFENER.
3. SEE TABLE 3 TO DETERMINE NUMBER OF ROD STIFFENER CLIPS REQUIRED.
4. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD.
5. SEE SECTION 3 FOR STRUCTURAL ATTACHMENTS FOR HANGER BOX AND CABLE BRACING

SLH-34 & SLW-38, 12, 58, & 34 DETAILS



CABLE CLAMP DETAILS



CABLE INFORMATION

CABLE Ø	CLASSIFICATION/ CONSTRUCTION	BREAKING STRENGTH
¼"	7X19	2,000 LBS
⅜"	7X19	4,200 LBS

CABLE IS SMALL DIA. (GALVANIZED)
SPECIALTY CORD & MEETS ASTM A1023/A1023M STANDARDS & FEDERAL U.S. SPECIFICATION RR-W-410G, TYPE VI, CLASS 3.

1 PRE-APPROVED OPM HANGER DETAILS ..
NOT TO SCALE

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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P 949-548-5000

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Rancho Cucamonga, CA 91730
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER ALEX DAVID WANG No.M36155 Exp.09-30-2024 STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL DETAILS

M5.02

0" 1"

VRF Indoor Unit
40VMM015A--3—Medium Static Duct

Carrier — United Technologies

Submittal Data

Job Data _____ Location _____
Buyer _____ Buyer PO # _____ Carrier # _____
Unit Number _____ Model Number _____
Performance Data Certified By _____ _____

STANDARD FEATURES
- Rear Return Air Opening is Standard and Bottom Return is Optional
- Three Fan Speeds - High, Medium, and Low
- Knockout for Outside Air
- Built-in Condensate Lift Mechanism
- Built in EXV (Electronic Expansion Valve) for Installation

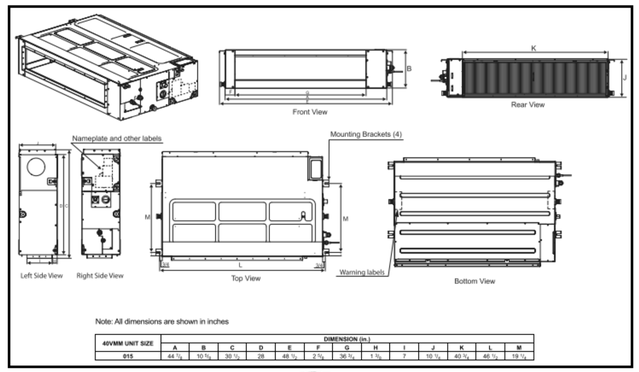
INDOOR UNIT MODEL		40VMM015A--3
PERFORMANCE		
Cooling Rated Capacity	Btu/h	15,000
Heating Rated Capacity	Btu/h	17,000
Airflow (H / M / L)	CFM	535 / 450 / 400
Sound Pressure (H / M / L)	dBA	35.9 / 32.7 / 31.4
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Indoor Fan Motor Power Consumption (Input)	W	145
Minimum Circuit Amps (MCA)	A	3.13
Maximum Overcurrent Protection	A	15
Motor Type		DC

PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	1/4 (OD)
Pipe Connection Size - Suction	in.	1/2 (OD)
Pipe Connection Size - Drain	in.	3/4 NPT
Maximum External Static Pressure (ESP)	in. wg	0.6
Refrigerant		R-410A
Unit Width	in.	48-1/2
Unit Height	in.	10-5/8
Unit Depth	in.	30-1/2
Net Unit Weight	lb	99.2

ACCESSORIES

- ☐ Wireless Remote Controller 40VM900001
- ☐ Wired Remote Controller - Non-Prog. 40VM900002
- ☐ Wired Remote Controller - Prog. 40VM900003
- ☐ Touch Screen Wired Controller 40VM900005
- ☐ Touch Screen Central Controller 40VM900006

DIMENSIONAL DRAWING
INDOOR UNIT MEDIUM STATIC DUCT 40VMM015A--3



Note: All dimensions are shown in inches

40VMM UNIT SIZE	DIMENSION (in.)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
015	44 1/4	10 5/8	30 1/2	28	48 1/2	2 3/4	36 3/4	1 5/8	7	10 1/2	40 3/4	46 1/2	19 1/4

1 FAN COIL - 1.25 TON UNIT
NOT TO SCALE

VRF Indoor Unit
40VMM018A--3—Medium Static Duct

Carrier — United Technologies

Submittal Data

Job Data _____ Location _____
Buyer _____ Buyer PO # _____ Carrier # _____
Unit Number _____ Model Number _____
Performance Data Certified By _____ Date _____

STANDARD FEATURES
- Rear Return Air Opening is Standard and Bottom Return is Optional
- Three Fan Speeds - High, Medium, and Low
- Knockout for Outside Air
- Built-in Condensate Lift Mechanism
- Built in EXV (Electronic Expansion Valve) for Installation

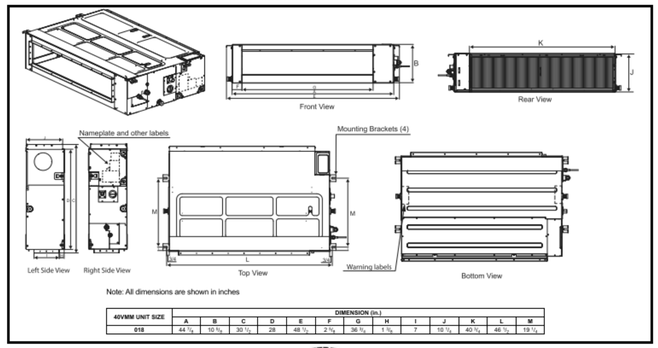
INDOOR UNIT MODEL		40VMM018A--3
PERFORMANCE		
Cooling Rated Capacity	Btu/h	18,000
Heating Rated Capacity	Btu/h	21,000
Airflow (H / M / L)	CFM	640 / 540 / 480
Sound Pressure (H / M / L)	dBA	38.6 / 33.6 / 31.9
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Indoor Fan Motor Power Consumption (Input)	W	185
Minimum Circuit Amps (MCA)	A	3.13
Maximum Overcurrent Protection	A	15
Motor Type		DC

PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (OD)
Pipe Connection Size - Suction	in.	5/8 (OD)
Pipe Connection Size - Drain	in.	3/4 NPT
Maximum External Static Pressure (ESP)	in. wg	0.6
Refrigerant		R-410A
Unit Width	in.	48-1/2
Unit Height	in.	10-5/8
Unit Depth	in.	30-1/2
Net Unit Weight	lb	99.2

ACCESSORIES

- ☐ Wireless Remote Controller 40VM900001
- ☐ Wired Remote Controller - Non-Prog. 40VM900002
- ☐ Wired Remote Controller - Prog. 40VM900003
- ☐ Touch Screen Wired Controller 40VM900005
- ☐ Touch Screen Central Controller 40VM900006

DIMENSIONAL DRAWING
INDOOR UNIT MEDIUM STATIC DUCT 40VMM018A--3



Note: All dimensions are shown in inches

40VMM UNIT SIZE	DIMENSION (in.)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
018	44 1/4	10 5/8	30 1/2	28	48 1/2	2 3/4	36 3/4	1 5/8	7	10 1/2	40 3/4	46 1/2	19 1/4

2 FAN COIL - 1.5 TON UNIT
NOT TO SCALE

VRF Indoor Unit
40VMM024A--3—Medium Static Duct

Carrier — United Technologies

Submittal Data

Job Data _____ Location _____
Buyer _____ Buyer PO # _____ Carrier # _____
Unit Number _____ Model Number _____
Performance Data Certified By _____ Date _____

STANDARD FEATURES
- Rear Return Air Opening is Standard and Bottom Return is Optional
- Three Fan Speeds - High, Medium, and Low
- Knockout for Outside Air
- Built-in Condensate Lift Mechanism
- Built in EXV (Electronic Expansion Valve) for Installation

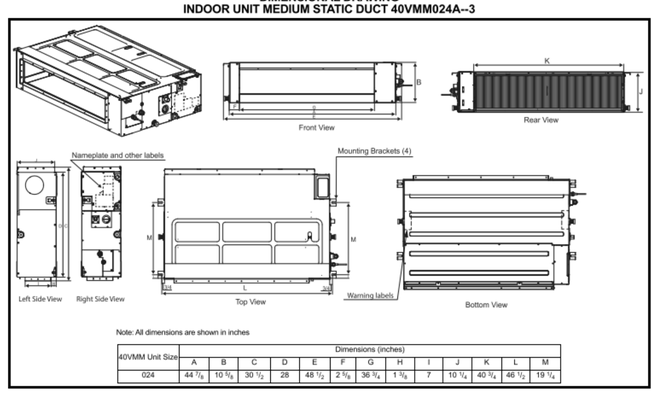
INDOOR UNIT MODEL		40VMM024A--3
PERFORMANCE		
Cooling Rated Capacity	Btu/h	24,000
Heating Rated Capacity	Btu/h	27,000
Airflow (H / M / L)	CFM	800 / 640 / 570
Sound Pressure (H / M / L)	dBA	42.0 / 36.3 / 34.2
ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/1/60
Indoor Fan Motor Power Consumption (Input)	W	230
Minimum Circuit Amps (MCA)	A	3.13
Maximum Overcurrent Protection	A	15
Motor Type		DC

PHYSICAL DATA		
Pipe Connection Size - Liquid	in.	3/8 (OD)
Pipe Connection Size - Suction	in.	5/8 (OD)
Pipe Connection Size - Drain	in.	3/4 NPT
Maximum External Static Pressure (ESP)	in. wg	0.6
Refrigerant		R-410A
Unit Width	in.	48-1/2
Unit Height	in.	10-5/8
Unit Depth	in.	30-1/2
Net Unit Weight	lb	99.2

ACCESSORIES

- ☐ Wireless Remote Controller 40VM900001
- ☐ Wired Remote Controller - Non-Prog. 40VM900002
- ☐ Wired Remote Controller - Prog. 40VM900003
- ☐ Touch Screen Wired Controller 40VM900005
- ☐ Touch Screen Central Controller 40VM900006

DIMENSIONAL DRAWING
INDOOR UNIT MEDIUM STATIC DUCT 40VMM024A--3



Note: All dimensions are shown in inches

40VMM Unit Size	Dimensions (inches)											
	A	B	C	D	E	F	G	H	I	J	K	L	M
024	44 7/8	10 5/8	30 1/2	28	48 1/2	2 3/8	36 3/4	1 5/8	7	10 1/4	40 3/4	46 1/2	19 1/4

3 FAN COIL - 2.0 TON UNIT
NOT TO SCALE

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER ALEX DAVID WANG No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL DETAILS - VARIABLE REFRIGERANT SYSTEM

M5.03

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Indoor Units:		5 / 1 to 20	
Capacity:		90 / 48 to 144 (93.8%)	
Total Pipe Length:		100.0 / 1900.0	feet
Furthest Actual:		40.0 / 541.0	feet
Furthest Equiv.:		45.7 / 623.0	feet
After 1st Branch Actual:		25.0 / 182.3	feet
After 1st Branch Equiv.:		28.4 / 182.3	feet
Max Height Between IDU/IDU:		0.0 / 98.0	feet
Max Height Between IDU/ODU (Above):		15.0 / 164.0	feet
Max Height Between IDU/ODU (Below):		0.0 / 131.2	feet

Correction Factors

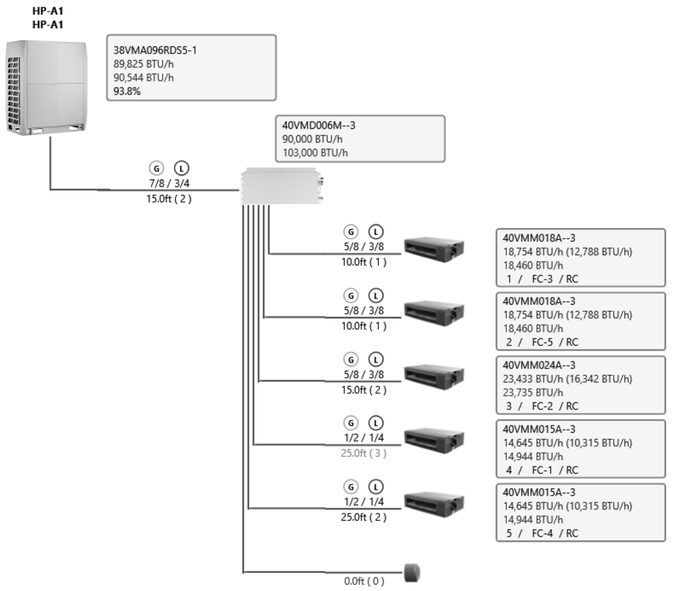
System Capacity:	0.94	0.84
Temperature:	0.94	0.94
Piping Length:	1.00	1.00
Altitude:	1.00	1.00
Defrosting:	-	0.90
Additional Derates:	1.00	1.00

Additional Refrigerant:	14.53	lb
Total Refrigerant Amount:	40.98	lb
Min Allowable Room Volume(cuft):	1576.16	

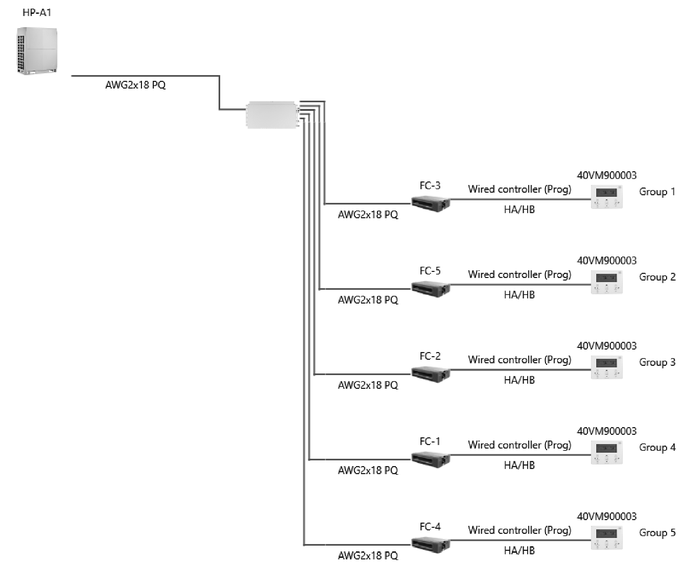
Design Temperatures (°F)

Cooling:
Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
Outdoor DB 98.0

Heating:
Indoor DB 70.0
Outdoor DB 41.0 Humidity 75.0% Outdoor WB 37.8



2 VRF REFRIGERANT PIPING DIAGRAM
12" = 1'-0"



1 VRF CONTROL WIRING DIAGRAM
12" = 1'-0"

VRF Outdoor Unit
38VMA096RDS5-1 - Heat Recovery

Carrier — United Technologies

Submittal Data

Job Data _____ Location _____
Buyer _____ Buyer PO # _____ Carrier # _____
Unit Number _____ Model Number _____
Performance Data Certified By _____ Date _____

Heat Recovery Features
- Modules available from 6 to 28 tons
- Modules have inverter-driven scroll compressors
- Direct-drive, inverter-driven outdoor motor
- Up to 3280 ft (1000 m) actual total system piping (liquid line)
- 656 ft (200 m) actual piping length from outdoor unit to furthest fan coil
- Up to 3937 ft (1200 m) control wiring between the outdoor units and indoor units
- Operating temperature range Cooling (db): 5° to 125°F (–15° to 52°C) Heating (wb): –13° to 64°F (–25° to 18°C)
- Protection: high pressure sensor and switch, low pressure sensor and switch, process controller board fuse, inverter overload protection
- 7-year compressor limited warranty
- 5-year parts limited warranty

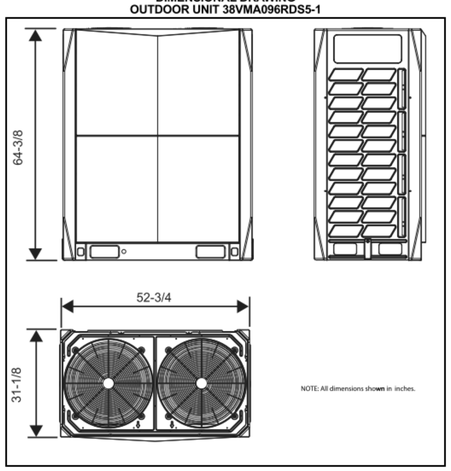
Header Unit Model		38VMA096RDS5-1
PERFORMANCE		
Nominal Cooling Capacity	Btu/h	96,000
Nominal Heating Capacity	Btu/h	108,000
Maximum Total Connected Indoor Unit Capacity		50% to 150%
SIMULTANEOUS COOLING AND HEATING EFFICIENCY†		
SCHE, Ducted FCUs		27.70
SCHE, Ductless FCUs		30.00
COOLING EFFICIENCY†		
EER/IEER, Ducted FCUs	Btu/Wh	12.40/24.30
Power Consumption, Ducted FCUs	kW	7.10
EER/IEER, Ductless FCUs	Btu/Wh	13.20/23.70
Power Consumption, Ductless FCUs	kW	6.20
HEATING EFFICIENCY†		
COP at 47°F, Ducted FCUs		3.63
Power Consumption, Ducted FCUs	kW	8.00
COP at 47°F, Ductless FCUs		3.82
Power Consumption, Ductless FCUs	kW	7.20
Fan Type (Qty)		Propeller (2)
Airflow, Standard Range	CFM	7600
Sound Pressure	dBA	61.7
External Static Pressure*	in. wg	0.24

ELECTRICAL		
Power Supply	V/Ph/Hz	208-230/3/60
Minimum Circuit Amps (MCA)	A	45
Recommended Fuse Size	A	50
COMPRESSORS		
Type (Number)		Inverter Hermetic Scroll (1)
FAN MOTOR		
Motor Type (Steps)		Inverter Direct Driven (13)
Motor Output	kW	2 x 0.21
PHYSICAL DATA		
Pipe Connection Size - Liquid (High Pressure)	in.	3/4 (Brazed)
Pipe Connection Size - Gas (Low Pressure)	in.	7/8 (Brazed)
Refrigerant		R-410A
Factory Charge††	lb	26.5
Unit Width	in.	52-3/4
Unit Height	in.	64-3/8
Unit Depth	in.	31-1/8
Net Weight	lb	672

LEGEND
db — Dry Bulb
COP — Coefficient of Performance
EER — Energy Efficiency Ratio
FCU — Fan Coil Unit
IEER — Integrated Energy Efficiency Ratio
wb — Wet Bulb
SCHE — Simultaneous Cooling and Heating Efficiency

†Rated per AHRI (Air-Conditioning, Heating and Refrigeration Institute) 1230 Standard.
Cooling: Indoor 80°F (27°C) db/67°F (20°C) wb; Outdoor 95°F (35°C) db
Heating: Indoor 70°F (21°C) db; Outdoor 47°F (8°C) db/43°F (6°C) wb
*Requires setting by menu functions.
††Additional charge required.
NOTE: Unit cabinet and coil slab shall be capable of withstanding 500-hour salt spray test.

DIMENSIONAL DRAWING
OUTDOOR UNIT 38VMA096RDS5-1



NOTE: All dimensions shown in inches.

4 VRF OUTDOOR HEAT PUMP
12" = 1'-0"

VRF Controls and Accessories
40VM900003 - Wired Remote Controller (Programmable)

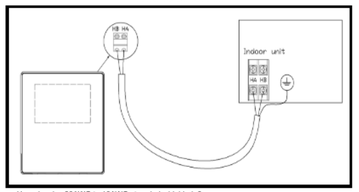
Carrier — United Technologies

Submittal Data

Job Data _____ Location _____
Buyer _____ Buyer PO # _____ Carrier # _____
Unit Number _____ Model Number _____
Performance Data Certified By _____ Date _____

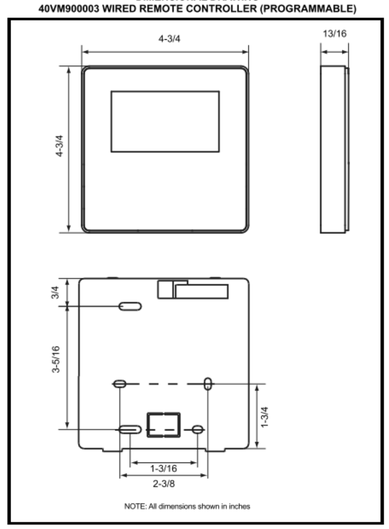
40VM900003 - Wired Remote Controller (Programmable) Features
- Back lit easy to read
- ON/OFF
- Unit addressing capability
- Mode setting: cool, heat, dry, fan, and auto
- Room temperature display
- Fan speed setting
- Louver swing operation
- Weekly scheduling
- Temperature display in 1°F
- Set temperature range limiting (62°F to 88°F)
- Dual set-point control
- Error display
- Group Control (Max 16 IDU)
- Touch Buttons
- Clock

WIRING DIAGRAM



- Use wire size 20AWG to 16AWG stranded, shielded, 2-core.

DIMENSIONAL DRAWING
40VM900003 WIRED REMOTE CONTROLLER (PROGRAMMABLE)



NOTE: All dimensions shown in inches

3 VRF CONTROL COMPONENTS
12" = 1'-0"

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER REZ DAVID WANG No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
04-17-2023	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

MECHANICAL DETAILS - VARIABLE REFRIGERANT SYSTEM

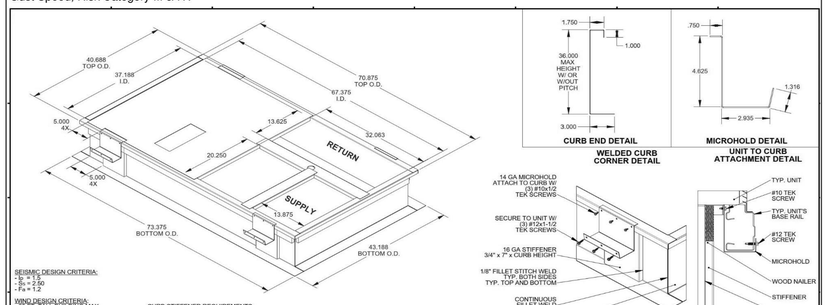
M5.04

FILE PATH: Z:\Projects\...
5/11/2023 6:13:23 PM

0" 1"

MicroMetl | Date: | Weight: 95lbs (US) 43.09kg (Metric) | Part Number: CRBW-SRT12HA-1141
RTU:
Submitted to: | Approved by: | Notes:

Welded Structurally Calculated Curb - 11 Inches Tall Insulated Full Perimeter Welded Structurally Calculated Curb Curb, California State Standard, Standard Seismic Criteria, "Structurally" Stamped By A Professional Engineer, Without Pitch, Insulated Deck Pan If Applicable, Includes Wood Nailer & Hold Down Brackets. Meets Seismic Requirements for 2022 CBC & 2021 IBC. Wind Design Criteria: 60 Foot Tall Building Maimum, Exposure C, 155 MPH - 3 Second Gust Speed, Risk Category III & IV.



SEISMIC DESIGN CRITERIA:
- Ss = 1.50
- Sds = 2.50
- Fa = 1.0

WIND DESIGN CRITERIA:
- 60 FT. TALL BUILDING MAX.
- EXPOSURE C
- 155 MPH, 3-SECOND GUST WIND SPEED
- RISK CATEGORY III & IV

CURB STIFFENER REQUIREMENTS:
- STIFFENERS ARE REQUIRED ON ALL CURBS OVER 16" TALL
- (2) STIFFENERS, (2) MICROHOLDS PER LONG SIDE
- (0) STIFFENERS, (0) MICROHOLDS PER SHORT SIDE

CURB AND PRODUCT DOES NOT INCLUDE THROUGH THE SIDE SERVICE HOLES

MicroMetl Corporation

CRBW-SRT12HA-08 Series 08" TALL 84 LBS.
CRBW-SRT12HA-11 Series 11" TALL 95 LBS.
CRBW-SRT12HA-14 Series 14" TALL 105 LBS.
CRBW-SRT12HA-24 Series 24" TALL 153 LBS.
CRBW-SRT12HA-36 Series 36" TALL 202 LBS.

STRUCTURALLY CALCULATED WELDED CURB
MAX UNIT WEIGHT 1000 lbs.

Indianapolis, IN. : (800) 662-4822
Sparks, NV. (800) 804-4662
Longview, TX. (903) 248-4800

DRAWN BY: IR | DATE 06/24/2022

MEETS SEISMIC REQUIREMENTS FOR 2022 CBC & 2021 IBC

MEETS REQUIREMENTS FOR 155 MPH, 60' BUILDING HEIGHT MAX. 3 SEC. GUST, EXP C

ANCHORAGE DETAILS TO ROOF: (ALL DETAILS AND CALCULATIONS USING THE SEISMIC DESIGN CRITERIA FOUND IN THE TABLE ABOVE) THE CONTRACTOR IS RESPONSIBLE FOR THE TYPE OF ANCHORAGE THE EOR HAS THE OPTION TO CALCULATE THE ANCHORAGE USING SITE SPECIFIC SEISMIC FORCES FROM THEIR ENGINEER

TYPICAL PLAN VIEW

STEEL ATTACHMENT: (SEE NEXT COLUMN FOR ANCHOR BOLT OPTIONS) W/ WASHER CENTERED ON FLANGE

WOOD ATTACHMENT: (SEE NEXT COLUMN FOR ANCHOR BOLT OPTIONS) W/ WASHER CENTERED ON CURB FLANGE

CONCRETE ATTACHMENT: (SEE NEXT COLUMN FOR ANCHOR BOLT OPTIONS) 4" MIN EMBEDMENT 3-3/4" EMBEDDED USE 1/2" SIMPSON TITEN HD W/ 2" MIN EDGE DISTANCE ON CURB FLANGE, 8" MIN. SPACING

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	1	1	2	12
UP TO 24"	1	1	2	12
UP TO 36"	1	1	4	20

(WELD OPTION) 3/16" CONTINUOUS FILLET WELDS ARE PERMITTED TO BE USED IN PLACE OF THE BOLTS INDICATED BY THE STEEL ATTACHMENT EQUALLY SPACED

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	6	2	4	32
UP TO 24"	6	3	4	34
UP TO 36"	9	3	6	48

CURB HEIGHT	QTY OF ANCHORS EA. LONG SIDE	EA. SHORT SIDE	EA. CORNER	TOTL
UP TO 14"	1	1	2	12
UP TO 24"	1	1	2	12
UP TO 36"	2	1	2	14

c = SPACING @ CORNERS (INCHORS)

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REGISTERED PROFESSIONAL ENGINEER IAN JAMES HOLLAND No. 2602 Exp 6/30/23 STRUCTURAL STATE OF CALIFORNIA 8/24/22

BJG# 20220539

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Master Revision 0001A
Page Revision 0001A

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2 ROOF CURB DETAIL FOR 6 TON PACKAGED HP UNITS .
1 1/2" = 1'-0"

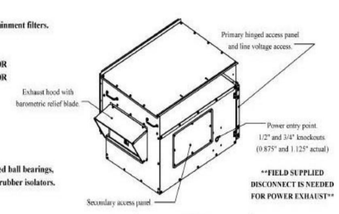
MicroMetl | Date: 4/12/2023 | Weights: 191lbs/86.64kg | Units: 50FCQ A07 | Part Number: PECD-SRT12CB-D2EH-2L1

Submitted To: guest@micrometl.com | Job: | Notes:

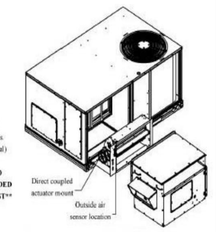
Economizer & Power Exhaust Combination Package, Genesis Ultra Low Leak Vertical with Honeywell Jade W7220 Single/Multiple Speed Electromechanical Controller, Honeywell Actuator, Enthalpy Sensor, 208-230 Volt Three Phase, Modulating, Designed To Operate At 2675 CFM @ 1/2" - 1 HP. Power Exhaust Painted To Match RTU, All Necessary Panels And Hardware Included. Electrical junction box provided. High voltage cable to be field supplied and installed. Power Exhaust VFD is BacNet Compatible. For Differential sensor please order 9901-2022-DIFF JC2..

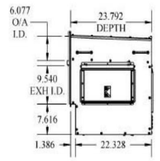
FEATURES:

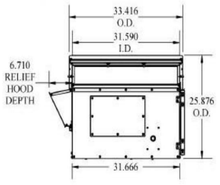
- **Includes ECD-SRT12CB series economizer.**
- **External gear driven dampers with roll formed blades.**
- **Designed for vertical applications only.**
- **Factory assembled rain hood, with aluminum water entrainment filters.**
- **Filter access door supplied with RTU.**
- **Hinged filter access door is ordered separately.**
  - **MMC P/# for Chassis 1 - ECD-SRT1CA-HDOOR**
  - **MMC P/# for Chassis 2 - ECD-SRT2CA-HDOOR**
- **Rain hood is sloped for water run off.**
- **All harnesses and plugs needed are supplied.**
- **Economizer is class 1A & AMCA certified.**
- **Relief blades are AMCA certified.**
- **Uses filter rack with unit.**
- **Field supplied and installed disconnect is required.**
- **Blower is forward curved, double inlet, with pre-lubricated ball bearings, have a dynamically balanced wheel, and are mounted on rubber isolators.**
- **Thermally protected motors.**
- **Adjustable motor pulleys**
- **See page 2 for PE performance and electrical data.**

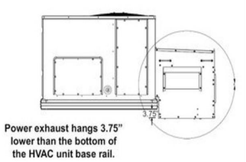


****FIELD SUPPLIED DISCONNECT IS NEEDED FOR POWER EXHAUST****









Power exhaust hangs 3.75" lower than the bottom of the HVAC unit base rail.

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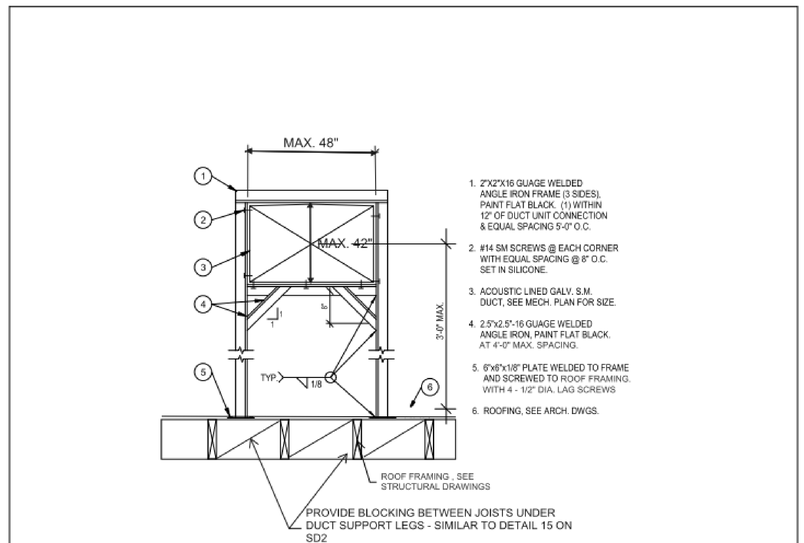
3 POWER EXHAUSTER DETAIL FOR 6 TON PACKAGED HP UNITS
1 1/2" = 1'-0"



#159

1 ROOF DUCT SUPPORT DETAIL
NOT TO SCALE

1 ROOF DUCT SUPPORT DETAIL - WOOD FRAMING
12" = 1'-0"

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

Consultant

REGISTERED PROFESSIONAL ENGINEER IAN DAVID MAING No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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MECHANICAL DETAILS

M5.05

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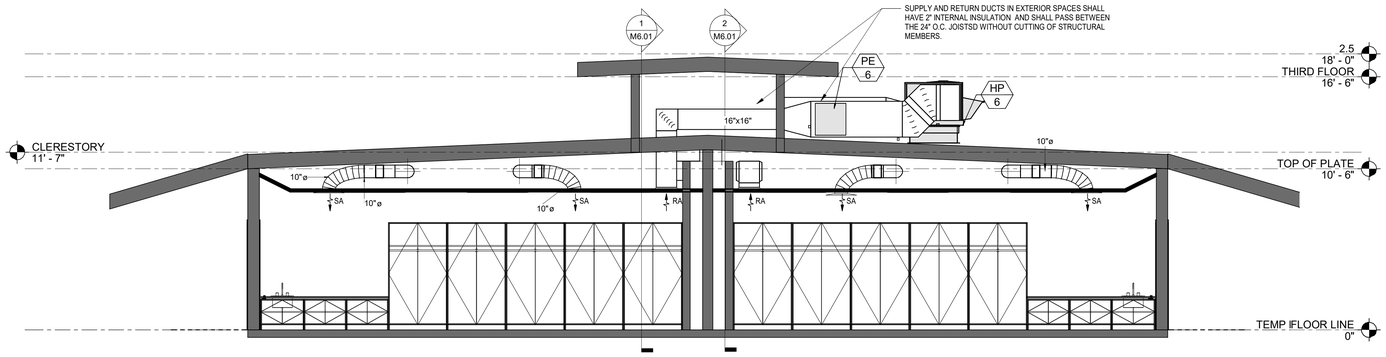
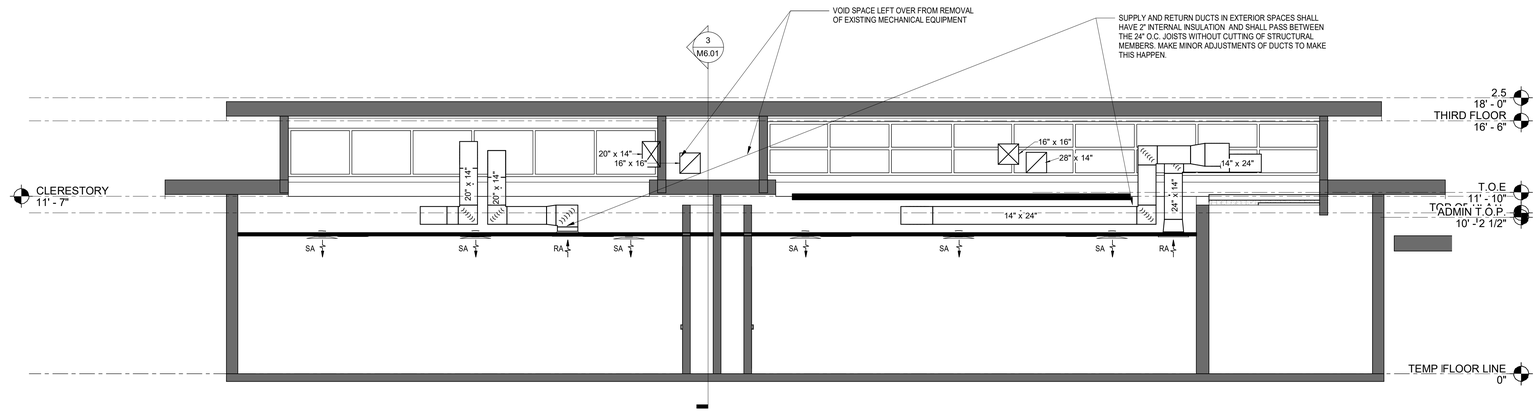
M6.01 - SECTIONS - CLASSROOM BLDG. B - (TYPICAL)

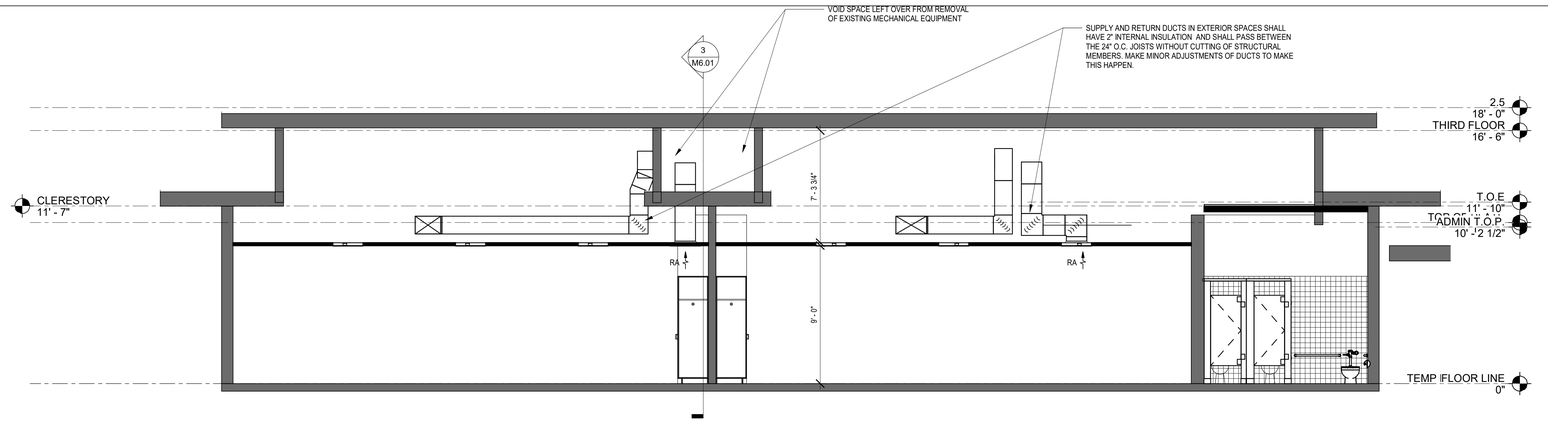
0" 1"



3 SECTION - CLASSROOM BLDG B
1/4" = 1'-0"



2 SECTION - CLASSROOM BUILDING B
1/4" = 1'-0"



1 SECTION - CLASSROOM BLDG
1/4" = 1'-0"

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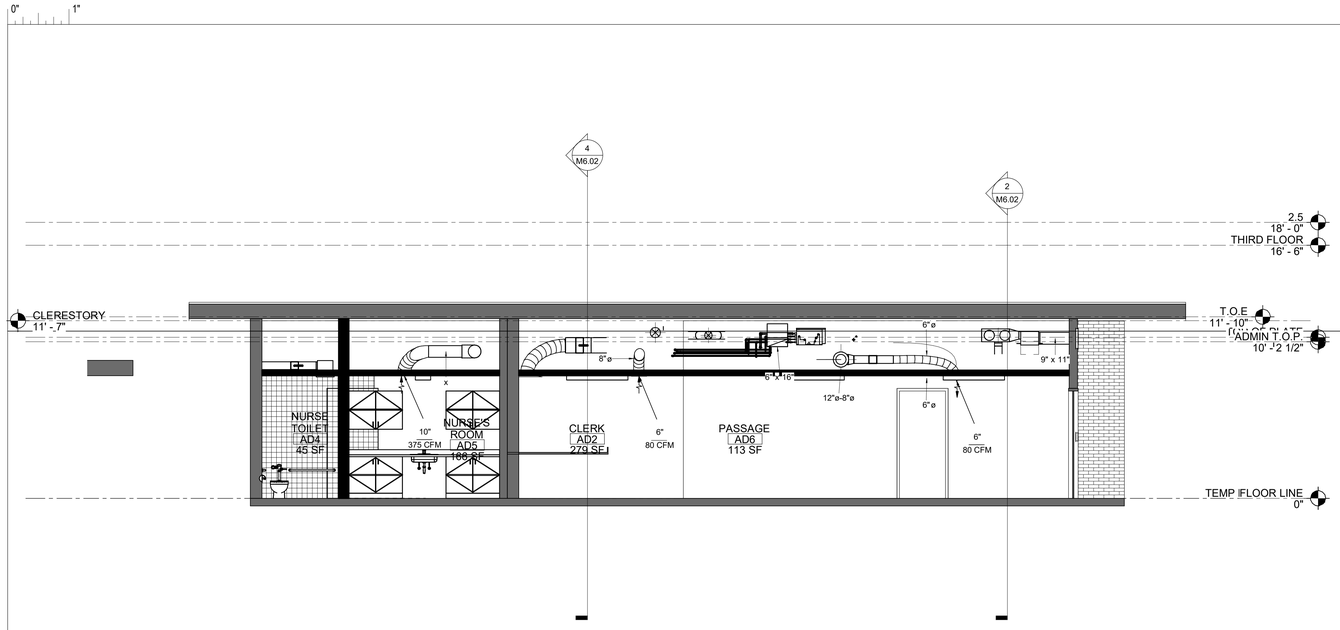
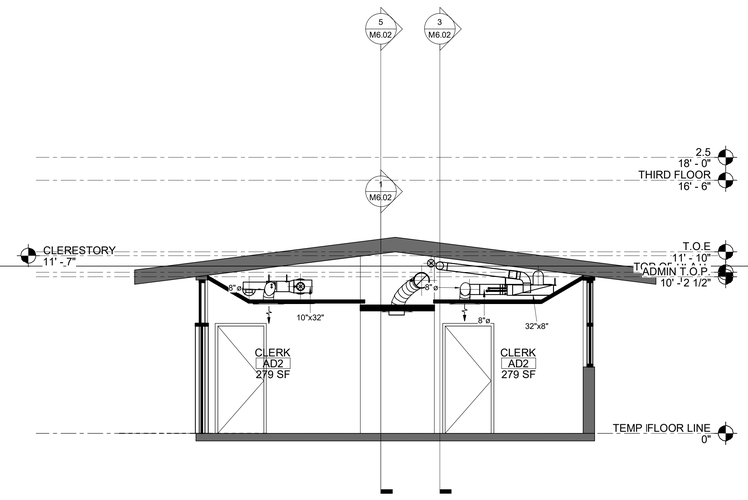
SECTIONS - CLASSROOM BLDG. B - (TYPICAL)

M6.01



5 SECTION ADMINISTRATION
1/4" = 1'-0"



4 SECTION - ADMINISTRATIVE BLDG.
1/4" = 1'-0"

3 SECTION - ADMINISTRATION
1/4" = 1'-0"

2 SECTION ADMINISTRATION BLDG.
1/4" = 1'-0"

1 SECTION - ADMINISTRATION BLDG - THROUGH VRV DISTIBUTION BOX
1/4" = 1'-0"

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SECTIONS - ADMINISTRATION BLDG.

M6.02

E0.00 - ELECTRICAL SYMBOLS, LEGENDS AND NOTES

0" 1"

ELECTRICAL SYMBOL LEGEND

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. DASHED ELEECTRICAL EQUIPMENT GENERALLY INDICATES EXISTING EQUIPMENT.
3. LONG-SHORT-SHORT-LONG DASHING GENERALLY INDICATES MATCH LINE OR DEFINES AREA FOR SPECIAL NOTE.

CIRCUIT RELATED:

LIGHTING OR POWER CIRCUIT(S). ARROW INDICATES HOME RUN, LONGER TICK(S) INDICATE NEUTRAL WIRE(S), SHORTER STRAIGHT TICK(S) INDICATE PHASE WIRE(S), SLANTED SHORTER TICK(S) INDICATE SWITCH LEG(S), DOT(S) INDICATE GROUNDING CONDUCTOR(S), DASHED WIRING (LONG-SHORT-LONG DASHES) INDICATES WIRING BELOW SLAB OR GRADE, DASHED WIRING (SERIES OF SHORT DASHES) INDICATES EXISTING WIRING, SLASH THROUGH ARROW INDICATES PARTIAL CIRCUIT, "D" ON HOMERUN ARROW INDICATES DEDICATED CIRCUIT: PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR FOR ENTIRE LENGTH OF CIRCUIT FROM PANEL TO OUTLET; COUNT EACH NEUTRAL AS CURRENT-CARRYING AND GROUP A MAXIMUM OF SIX THHN/THWN CONDUCTORS IN A SINGLE RACEWAY; GROUNDING CONDUCTOR IS NOT COUNTED.
NOTE: HOMERUN INDICATES INSTALLATION OF NEW WIRE AND CONDUIT (#12 WIRE, 3/4"C, UNLESS OTHERWISE NOTED) FROM SOURCE PANELBOARD TO LOAD. HOMERUN INDICATES CONNECTION OF NEW LOADS TO EXISTING CIRCUITS IN LIEU OF PANELBOARD WHERE NOTED ON PLANS.

JUNCTION BOX

GROUNDING FIXTURE

LIGHTING:

LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, CROSS HATCHING INDICATES FIXTURE ON EMERGENCY SYSTEM, FOR SOLID CIRCLE WITHIN FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

STRIP TYPE LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE ATTACHED TO FIXTURE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

LED LIGHTING FIXTURE. LETTER INDICATES TYPE, SMALL LETTER INDICATES SWITCH CONTROL, NUMBER INDICATES CIRCUIT, FOR SOLID CIRCLE REFERENCE APPROPRIATE CATEGORY "A" CIRCUIT RELATED SYMBOL

DESIGNATES FIXTURE ON EMERGENCY POWER. RE: LIGHTING PLAN NOTES AND FIXTURE SCHEDULE NOTES FOR ADDITIONAL INFORMATION

WALL OR BRACKET MOUNTED FIXTURE OR DEVICE

EXIT LIGHT FIXTURE. LETTER INDICATES TYPE, NUMBER INDICATES CIRCUIT, NUMBER AND LOCATION OF SHADED TRIANGLE SECTIONS INDICATE NUMBER OF EXIT SIGN FACES AND DIRECTION OF EACH FACE. PROVIDE CHEVRON DIRECTIONAL INDICATORS AS SHOWN ON DRAWINGS

CONTROL:

$ — SWITCH. SMALL LETTER INDICATES FIXTURES CONTROLLED, "P" INDICATES PILOT LIGHT, "WP" INDICATES WEATHERPROOF, "K" INDICATES KEY POERATED, "MO" INDICATES SPDT MOMENTARY CONTACT, "2" INDICATES DPDT, "3" INDICATES 3-WAY, "4" INDICATES 4-WAY, "M" INDICATES MANUAL MOTOR STARTER, CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER

$D — WALL BOX DIMMER SWITCH. "MARK" INDICATES WATTAGE IF OTHER THAN 600, "3D" INDICATES 3-WAY DIMMER

$$ — MULTI-LEVEL SWITCH. CIRCUIT DESIGNATION NEXT TO SWITCH INDICATES BRANCH CIRCUIT NUMBER

$T — DIGITAL TIME SWITCH

PC — PHOTOELECTRIC CONTROL

EMERGENCY POWER OFF (EPO) PUSHBUTTON

PUSH BUTTON

$OC — WALL MOUNT OCCUPANCY SENSOR

$OC/D — WALL MOUNT OCCUPANCY SENSOR WITH DIMMING CONTROLS

DUAL TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR

R — CEILING MOUNTED RESTROOM OCCUPANCY SENSOR

C — CEILING MOUNTED CORRIDOR OCCUPANCY SENSOR

HB — CEILING MOUNTED HIGH CEILING OCCUPANCY SENSOR

POWER OUTLETS:

20A-125V DUPLEX RECEPTACLE

20A-125V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE. "WP" INDICATES WEATHER PROOF DEVICE

20A-125V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP. REFER TO ARCHITECT FOR EXACT HEIGHT ABOVE COUNTER

C — 20A-125V CONTROLLED DUPLEX RECEPTACLE

20A-125V ISOLATED GROUND TYPE DUPLEX RECEPTACLE

CH — 20A-125V DUPLEX TAMPER RESISTANT RECEPTACLE WITH (2) USB CHARGING PORTS

20A-125V FOURPLEX RECEPTACLE. SAME SYMBOLOGY AS DUPLEX RECEPTACLE

SPECIAL PURPOSE SINGLE POWER RECEPTACLE. RATED AS INDICATED (IF NO RATING INDICATED, RECEPTACLE RATING SHALL MATCH BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE AND SHALL MEET REQUIREMENTS OF EQUIPMENT BEING CONNECTED), "C" INDICATES CLOCK OUTLET

20A-125V FLUSH FLOOR DUPLEX RECEPTACLE. 20A WHEN INDICATED OR IF BRANCH CIRCUIT SERVES ONLY SINGLE DUPLEX. PROVIDE CARPED FLANGE WHERE APPLICABLE

LC1-X — CIRCUIT DESIGNATION NEXT TO RECEPTACLE DEVICES INDICATES BRANCH CIRCUIT NUMBER. SEE PANEL SCHEDULES FOR INFORMATION.

TELEPHONE/DATA:

FLUSH FLOOR TELEPHONE OUTLET WITH CARPET FLANGE WHERE APPLICABLE

WALL COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS

FLUSH FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

SURFACE FLOOR COMMUNICATIONS OR DATA OUTLET. REFER TO 'TS' SERIES SHEETS FOR EXACT BOX / CONDUIT REQUIREMENTS. PROVIDE CARPET FLANGE WHERE APPLICABLE

EQUIPMENT:

+42" — A NOTATION INDICATING THE MOUNTING HEIGHT OF A DEVICE AS MEASURED FROM FINISHED FLOOR OR GRADE TO CENTER LINE OF DEVICE

MOTOR

DISCONNECT SWITCH. FRAME SIZE/FUSE SIZE/POLES AS INDICATED, "NF" INDICATES NON-FUSIBLE. NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED. PROVIDE FUSED BUSWAY PLUG WHEN SWITCH IS INDICATED ON BUSWAY. ALL DISCONNECT SWITCHES SHALL BE 30/NF/3 UNLESS OTHERWISE NOTED

SINGLE CIRCUIT BREAKER IN INDIVIDUAL ENCLOSURE

MAGNETIC MOTOR CONTROLLER. NUMBER INDICATES NEMA SIZE. STARTER NEMA SIZE SHALL BE "NEMA 1" UNLESS OTHERWISE NOTED

COMBINATION DISCONNECT SWITCH / MOTOR CONTROLLER

CONTACTOR

PANELBOARD

SWITCHBOARD / DP

T — TRANSFORMER

GROUNDING CONNECTION TO GROUNDING ELECTRODE AS DEFINED IN CEC ARTICLE 250

B — BELL. "WP" INDICATED OUTDOOR RATED

REMODEL:

(E) — EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.

(R) — EXISTING EQUIPMENT WITH "R" ADJACENT IS TO BE COMPLETELY DISCONNECTED AND REMOVED.

(RR) — EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.

(ER) — EQUIPMENT WITH "ER" ADJACENT IS RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.

NO TAG INDICATES NEW EQUIPMENT.

(E) PNL-CKT — CIRCUIT DESIGNATION WITH PREFIX "(E)" DENOTES EXISTING CIRCUIT AND EQUIPMENT IS TO REMAIN.

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS AND ADDENDA (DRAWINGS AND SPECIFICATIONS.) HE SHALL CHECK THE CONTRACT DOCUMENTS OF THE OTHER TRADES AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM COMPLETING ALL RESPONSIBLE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
4. ALL ELECTRICAL WORK REFERENCED HEREIN SHALL BE COORDINATED WITH OTHER TRADES AND SITE CONDITIONS. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE CONTRACT DOCUMENTS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
5. PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS, BRANCH CIRCUITS OR SIGNAL AND COMMUNICATIONS SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION.
6. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ENGINEER 14 DAYS PRIOR TO THE OUTAGE AND OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANEL BOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.
7. AFTER ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS HAVE BEEN FULLY COMPLETED. REPRESENTATIVES OF THE OWNERS WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCETANCE FROM EACH REPRESENTATIVE.
8. FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF PUNCH LIST COMPLETION.
9. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
10. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE OR MASONARY WALLS, GRADEBEAMS, FLOORS OR STRUCTURAL STEEL MEMBER SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL. FLOOR OR CEILING EXACT METHOD AND LOCATION OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL APPROVED.
11. FINAL CONNECTIONS TO VIBRATING EQUIPMENT AND AT SEISMIC SEPARATIONS SHALL BE FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS, AND LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS.
12. EQUIPMENT OUTLETS, LIGHTING FIXTURES, CONDUIT, WIRE AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE.
13. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING, ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.
14. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED WALLS, OR 24" MINIMUM BELOW SLAB ON GRADE UNLESS NOTED OTHERWISE.
15. LOCATE ELECTRICAL EQUIPMENT AND BOXES IN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS. ACCESS DOORS SHALL BE A MINIMUM DIMENSION OF 24" x 24" ACCESS DOOR LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
16. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILING TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED.
17. WHENEVER A DISCREPANCY OF ANY SYSTEM AND/OR EQUIPMENT ARISES ON THE CONTRACT DOCUMENTS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.
18. STRAIGHT FEEDER BRANCH CIRCUIT AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS.
19. PANEL SCHEDULES SHALL BE REVISED TO REFLECT FINAL ROOM NAMES AND NUMBERS USING OWNER'S ROOM NAMES AND NUMBERS DESIGNATIONS. CONTRACTOR TO PROVIDE FINAL PANEL SCHEDULE TO EEOR AT COMPLETION OF PROJECT.
20. WHERE OUTLETS OCCUR AT TACKABLE WALL PANELS OR OTHER WALL FINISHES. PROVIDE EXTENSION RINGS AS REQUIRED SO THAT NO SPACE WILL EXIST BETWEEN DEVICE PLATE AND BACKBOX PER CALIFORNIA ELECTRICAL CODE 314.20 SEE ARCHITECTURAL ELEVATIONS FOR WALL FINISHES AND LOCATIONS.
21. COORDINATE LOCATIONS OF ALL SEISMIC SEPARATIONS.
22. ALL 120V POWER REQUIRED FOR THE FUNCTIONALITY OF ALL LOW VOLTAGE / TECHNOLOGY SYSTEMS SHALL BE A DEDICATED CIRCUIT AND ON EMERGENCY POWER WHEN AVAILABLE. CABLING CONTRACTOR SHALL COORDINATE ALL 120V POWER REQUIREMENTS AND LOCATIONS WITH ELECTRICAL CONTRACTOR FOR ALL EQUIPMENT.
23. SYSTEM WIRING AND EQUIPMENT INSTALLATION SHALL BE IN ACCORDANCE WITH GOOD ENGINEERING PRACTICES AS ESTABLISHED BY THE EIA AND THE CEC.
24. ALL AC POWER CABLES ARE TO BE INSTALLED WITH A MINIMUM OF 12 INCHES OF SEPARATION FROM TECHNOLOGY LOW VOLTAGE CABLES, INTERCOM, FIRE ALARM, SECURITY CABLES IN ANY PARALLEL OPEN WIRE RUN.
25. CONTRACTOR SHALL PROVIDE AND INSTALL ALL SLEEVES REQUIRED TO INSTALL COMMUNICATION CABLING THROUGH RATED WALLS. ALL TECHNOLOGY SYSTEM CONDUIT SLEEVES SHALL HAVE PROTECTIVE BUSHING ON BOTH ENDS, BE DEDICATED FOR TECHNOLOGY SYSTEMS ONLY AND SHALL NOT SHARE WITH OTHER BUILDING TRADES.
26. CONTRACTOR SHALL MAINTAIN WALL RATING WITH PROPER FIRE BLOCKING METHODS.
27. ALL CONDUCTORS SHALL BE UL LISTED, COPPER #12 MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY, UNLESS NOTED OTHERWISE.
28. ALL CABLING SHALL BE ROUTED IN CONDUIT. SIZE CONDUIT AS REQUIRED TO ROUTE SYSTEMS WITH MAXIMUM 40% CABLE FILL. MINIMUM CONDUIT SIZE SHALL BE 3/4" INTERIOR & 1" EXTERIOR.
29. ALL CONDUIT STUB OUTS AND SLEEVES SHALL HAVE PROTECTIVE BUSHINGS TO PREVENT CABLE DAMAGE. BUSHING TO BE INSTALLED PRIOR TO CABLE INSTALLATION. CUTTING BUSHING AND INSTALLING AFTER CABLE IS INSTALLED WILL NOT BE ACCEPTED.

DRAWING INDEX

DIAGRAMMATIC NOTE

DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE DETAILED CONDUIT ROUTING OR LENGTHS REQUIRED FOR COMPLETE INSTALLATION. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR BUT SHALL BE IN STRICT COMPLIANCE WITH STRUCTURAL REQUIREMENTS, CONTRACT DOCUMENTS AND SPECS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL AND/OR MECHANICAL ITEMS OR FEATURES. REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR FEATURES, REFER TO ARCHITECTURAL AND STRUCTURAL CONTRACT DOCUMENTS FOR DIMENSIONS.

DEVICE LOCATIONS NOTE

THE LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN, UNLESS OTHERWISE NOTED. ELECTRICAL DEVICES SHALL BE MOUNTED PER "ACCESSIBLE DEVICE MOUNTING HEIGHT" DETAIL.

COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT, DISCONNECT SWITCHES, STARTERS, WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS.. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.

UTILITY PENETRATIONS NOTE

UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED UL LISTED SYSTEM OR MATERIAL.

STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILING, OR AREA SEPARATION UNLESS THEY:

1. OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER IN THIS CASE , ONLY ONE OUTLET BOX NEEDS TO BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO CORRECT THIS CONDITION.
2. OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED TO BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

FIRESTOPPING MATERIAL:
MPP-1 MOLDABLE PUTTY PADS

3M CONTRACTOR PRODUCTS MINNEAPOLIS, MN 3M TEST REPORT NO. 1167 DATED AUGUST 21, 1987	FLAMESAFE FSP 1077 FIRESTOP PADS INTERNATIONAL PROTECTIVE COATINGS OAKHURST, NJ

FSP FIRESTOP PUTTY PADS
HEVI-DUTY NELSON PRODUCTS
TULSA, OK

STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT.

UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED SEALANT.

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020 *
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR *
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
(2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
2016 ASME A17.1(CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35)
NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

EQUIPMENT ANCHORAGE NOTES

MEP COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

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

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

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

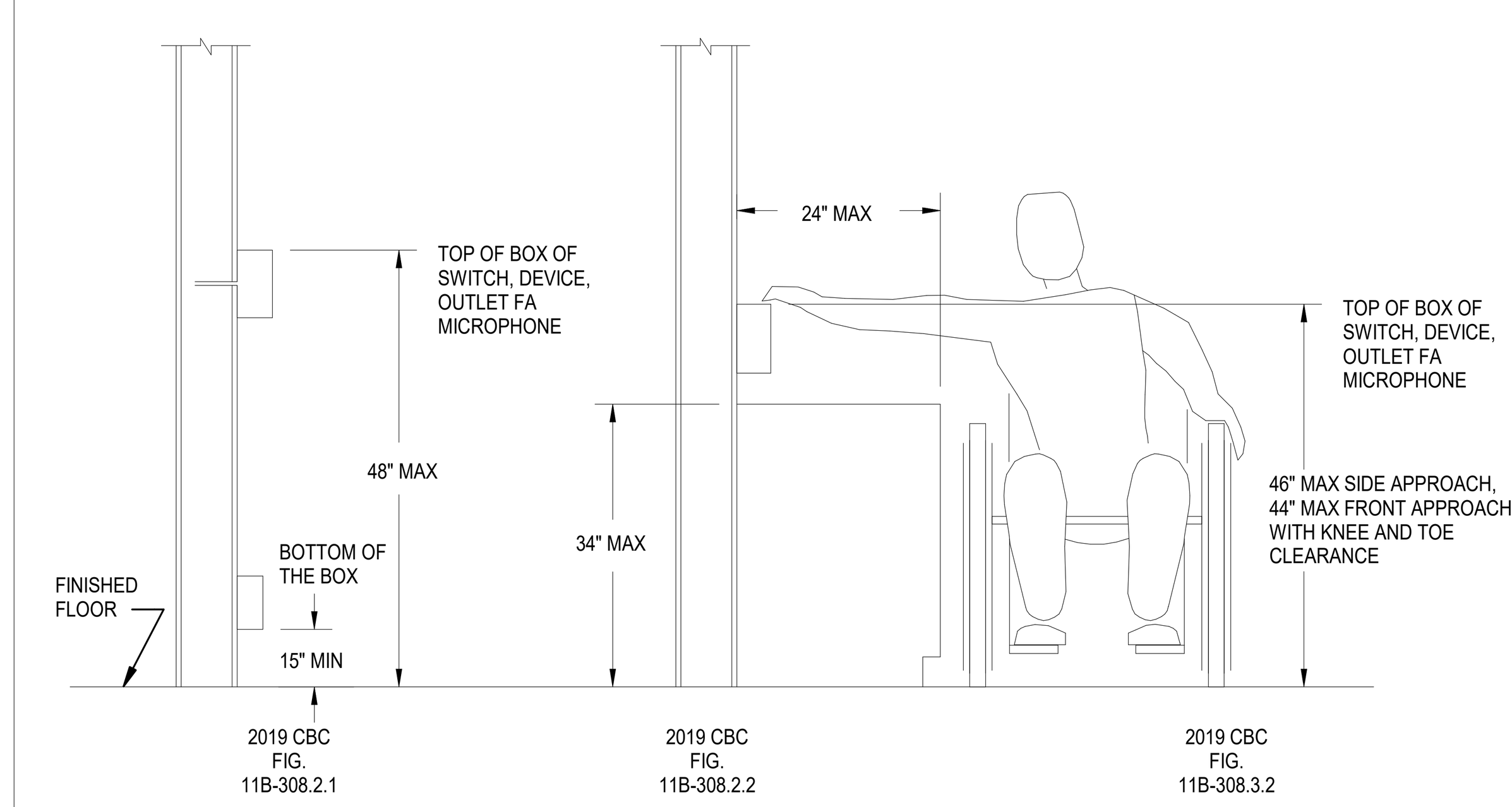
MP ☐ MD ☐ PP ☐ E ☒ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES & DETAILS.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #____________.

STRUCTURAL NOTE

UNLESS SPECIFICALLY SHOWN ON THESE PLANS, STRUCTURAL MEMBERS SHALL NOT BE CUT, DRILLED, OR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

MOUNTING OVER OBSTRUCTION DETAIL



NOTE:

1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).

UL LISTINGS NOTE

ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATIES (UL) AND BEAR THEIR LABEL OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY.

ALL EQUIPMENT/DEVICES INSTALLED RECESSED IN FIRE RATED CEILINGS OR WALLS SHALL BE ENCLOSED WITH AN APPROVED UL LISTED ENCLOSURE CARRYING THE SAME FIRE RATING AS THE CEILING OR WALL.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT — PBK Architects, Inc.
COSTA MESA
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Costa Mesa, CA 92626
P 949-548-5000
PBK.com

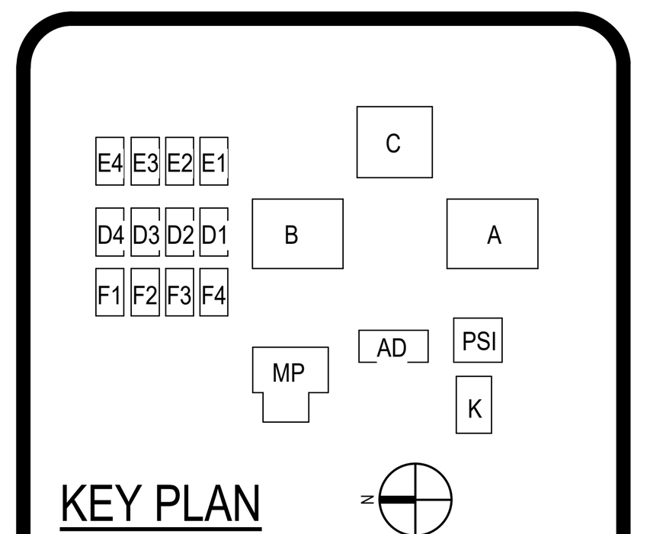
CONSULTANT — LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN

Consultant

Architect

CLIENT	
WESTMINSTER SCHOOL DISTRICT	
DATE 12-29-2022	PROJECT NUMBER 220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL SYMBOLS, LEGENDS AND NOTES

E0.00

FILE PATH: Z:\Projects\...
5/11/2023 10:33:58 AM

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §130.0, §130.1, §140.6, and §141.0(b)2 for indoor lighting scopes using the prescriptive path.	
Project Name: WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION	Report Page: Page 1 of 7
Project Address: 14142 HOOVER ST WESTMINSTER, CA 92683	Date Prepared: 09/15/2022

A. GENERAL INFORMATION

01	Project Location (city)	WESTMINSTER	04	Total Conditioned Floor Area (ft²)	12,835.76
02	Climate Zone	6	05	Total Unconditioned Floor Area (ft²)	
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	

☐ Office ☐ Retail ☐ Warehouse ☐ Hotel/Motel ☑ School ☐ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (write in):

B. PROJECT SCOPE

Table Instructions: Include any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations. WARNING: Changing the Calculation Method in this table will result in the deletion of data previously input. If you need to change the calculation method, please open a new form or use "Save As".

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☑ New Lighting System	Complete Building	12,835.76		
☐ Altered Lighting System				
Total Area of Work (ft²)	**12,835.76**			

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1.	Allowed Lighting Power per §140.6(b) (Watts)						Adjusted Lighting Power per §140.6(a) (Watts)				Compliance Results
	01	02	03	04		05		06	07	08	09
	Complete Building §140.6(c)1	Area Category §140.6(c)2	Area Category Additional §140.6(c)2G (+)	Tailored §140.6(c)3 (+)	=	**Total Allowed** (Watts)	≥	Total Designed (Watts)	Adjustments PAF Control Credits §140.6(a)2 (-)	= **Total Adjusted** (Watts) *Includes Adjustments	**05 Must be ≥ 08** §140.6
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)		
Conditioned:	8,343.64				=	**8,343.64**	≥	7,617		= **7,617**	**COMPLIES**
Unconditioned:					=		≥			=	

Table Continued

STATE OF CALIFORNIA
Indoor Lighting
NRCC-LTI-E (Created 04/21) CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION	Report Page: Page 2 of 7
Project Address: 14142 HOOVER ST WESTMINSTER, CA 92683	Date Prepared: 09/15/2022

Controls Compliance (See Table H for Details)	**COMPLIES**
Rated Power Reduction Compliance (See Table Q for Details)	**Not Applicable**

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. INDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: Include all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How Wattage is determined	Total number luminaires	Exempt per §140.6(a)3	Design Watts	Field Inspector Pass	Fail
A	2X4	☐	☐	55	Mfr. Spec[2]	135	☐	7,425	☐	☐
F	1X4	☐	☐	32	Mfr. Spec[2]	6	☐	192	☐	☐
					Total Designed Watts CONDITIONED SPACES:			**7,617**		

[1] *FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*
[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c) Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This Section Does Not Apply

H. INDOOR LIGHTING CONTROLS (Not Including PAFs)

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Indoor Lighting
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*Table Instructions: Please include lighting controls for conditioned and unconditioned spaces in this table. When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Building Level Controls

01	02	03	
Mandatory Demand Response §110.12(c)	Shut-Off Controls §130.1(c)	Field Inspector	
		Pass	Fail
		☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Area Controls §130.1(a)	Multi-Level Controls §130.1(b)	Shut-Off Controls §130.1(c)	Primary/Skylit Daylighting §130.1(d)	Secondary Daylighting §140.6(d)	Interlocked Systems §140.6(a)1	Field Inspector Pass	Fail
BLDG K	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
BLDG B	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
BLDG A	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
BLDG ADMIN	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐
BLDG C	School Building	Manual ON/ OFF	Dimmer	Occ. Sensor	NA	NA	☐	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting; EXCEPTION 1 to §130.1(d)2

13
Plan Sheet Showing Daylit Zones:

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Table Instructions: Complete the table for each area complying using the Complete Building or Area Category Methods per §140.6(b). Indicate if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

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01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowances / Adjustment	
					Area Category	PAF
BLDG K	School Building	0.65	1,006.76	654.39	☐	☐
BLDG B	School Building	0.65	3,580	2,327	☐	☐
BLDG A	School Building	0.65	3,580	2,327	☐	☐
BLDG ADMIN	School Building	0.65	1,089.62	708.25	☐	☐
BLDG C	School Building	0.65	3,580	2,327	☐	☐
		TOTAL:	**12,836.38**	**8,343.64**	See Tables J or P for detail	

J. ADDITIONAL LIGHTING ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This Section Does Not Apply

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This Section Does Not Apply

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This Section Does Not Apply

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This Section Does Not Apply

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS

This Section Does Not Apply

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This Section Does Not Apply

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This Section Does Not Apply

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Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS

This Section Does Not Apply

R. 80% LIGHTING POWER FOR ALTERATIONS - CONTROLS EXCEPTIONS

This Section Does Not Apply

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This Section Does Not Apply

T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://ww2.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector Pass	Fail
◉	○	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
○	◉	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance.	☐	☐
○	◉	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance.	☐	☐

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U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector Pass	Fail
◉	○	NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	☐	☐
○	◉	NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	☐	☐
○	◉	NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	☐	☐
○	◉	NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF).	☐	☐
○	◉	NRCA-ENV-03-F - Must be submitted for daylighting design power adjustment factors (PAF).	☐	☐

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	DIEGO HERRERA	Documentation Author Signature:	Diego Herrera
Company:	LEAF ENGINEERS	Signature Date:	09/15/2022
Address:	8163 ROCHESTER AVENUE, SUITE 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	RANCHO CUCAMONGA, CALIFORNIA 91730	Phone:	909.987.0909

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	RONALD DE LA CRUZ	Responsible Designer Signature:	
Company :	LEAF ENGINEERS	Date Signed:	09/15/2022
Address:	8163 ROCHESTER AVENUE, SUITE 100	License:	E-23576
City/State/Zip:	RANCHO CUCAMONGA, CALIFORNIA 91730	Phone:	909.987.0909

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987.0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL TITLE 24

E0.01

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E (Created 01/21) — CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTO-E
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This document is used to demonstrate compliance with requirements in §110.9, §130.0, §130.2, §140.7, and §141.0(b)2L for outdoor lighting scopes using the prescriptive path.

A. GENERAL INFORMATION

01	Project Location (city)	WESTMINSTER	04	Total illuminated Hardscape Area (ft²)	7,462.43
02	Climate Zone	6			
03	Outdoor Lighting Zone per Title 24, Part 1 §10-114 or as designated by Authority Having Jurisdiction (AHJ):				

☐ LZ-0: Very Low - Undeveloped Parkland ☑ LZ-2: Moderate - Rural Areas ☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval
☐ LZ-1: Low - Developed Parkland ☐ LZ-3: Moderately High - Urban Areas

B. PROJECT SCOPE

Table Instructions: Include any outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My project consists of:

01	02
☑ New Lighting System	Must Comply with Allowances from §140.7.
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ◉ Yes ○ No

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100*

C. COMPLIANCE RESULTS

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Calculation of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L												Compliance Results		
01		02		03		04		05	OR	06	=	07		08	09
General Hardscape Allowance §140.7(d)1	+	Per Application §140.7(d)2	+	Sales Frontage §140.7(d)2	+	Ornamental §140.7(d)2	+	Per Specific Area §140.7(d)2	OR	Existing Power §141.0(b)2L	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 Must be ≥ 08**
(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)		(See Table N)				(See Table F)	
	+		+		+		+	612.882	OR		=	612.882	≥	600	**COMPLIES**
Cutoff Compliance (See Table G for Details)												**Not Applicable**			
Controls Compliance (See Table H for Details)												**COMPLIES**			

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D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

Table Instructions: For new or altered lighting systems demonstrating compliance with §140.7 (ie Table I has expanded for input), include all luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L (ie Table N has expanded for input), include only new luminaires being installed and replacement luminaires being installed as part of the project scope (ie, do not include existing luminaires remaining or existing luminaires being moved).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1,2]	How Wattage is determined	Total number luminaires[2]	Luminaire Status[3]	Excluded per §140.7(a)	Design Watts	Cutoff Req. ≥ 6,200 initial lumen output §130.2(b)[4]	Field Inspector	
										Pass	Fail
w	wall pack	☐ Linear	15	Mfr. Spec[1]	40	New	☐	600	NA: <6,200 lumens	☐	☐
							Total Designed Watts:	**600**			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b).

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope*
[4] *Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output ≥ 6,200 unless exempted by §130.2(b).*

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G. CUTOFF REQUIREMENTS (BUG)

This Section Does Not Apply

H. OUTDOOR LIGHTING CONTROLS

Table Instructions: Complete this table demonstrating compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank. For each requirement in columns 02 through 04, do not leave the field blank, instead select NA or Exempt* from the dropdown list to indicate not applicable or an exemption.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector	
				Pass	Fail
BLDG K	Photocontrol	Yes	NA: Wall ≥ 24ft	☐	☐
BLDG B	Photocontrol	Yes	NA: Wall ≥ 24ft	☐	☐
BLDG A	Photocontrol	Yes	NA: Wall ≥ 24ft	☐	☐
BLDG ADMIN	Photocontrol	Yes	NA: Wall ≥ 24ft	☐	☐
BLDG C	Photocontrol	Yes	NA: Wall ≥ 24ft	☐	☐

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c).*

I. LIGHTING POWER ALLOWANCE (per §140.7)

Table Instructions: Please complete this table for areas using the allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lost it" Allowances are per Table 140.7-B. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

	01				
	"Use it or lose it" Allowances (select all that apply)				
☐ General Hardscape Allowance	☐ Per Application	☐ Sales Frontage	☐ Ornamental	☑ Per Specific Area	
Table I (below)	Table J	Table K	Table L	Table M	

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J. LIGHTING ALLOWANCE: PER APPLICATION

This Section Does Not Apply

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This Section Does Not Apply

L. LIGHTING ALLOWANCE: ORNAMENTAL

This Section Does Not Apply

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

Table Instructions: Please complete this table for areas using the wattage allowance per specific area type from Table 140.7-B. More than one specific area allowance may be taken in a single project, if applicable. However, multiple specific area allowances may not be taken for the exact same area on the site.

01	02	03	04	05	06	07	08	09	10
		CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				
Area Description	Specific Area Type per Table 140.7-B	Specific Area (ft²)[1]	Allowed Density (W/ft²)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire[2]	# of Luminaires[2]	Design Watts	Additional Allowance (Watts)
BLDG K	Bldg Façade	772.78	0.1	77.278	w	15	5	75	
							Total Design Watts for this Area:	75	75
BLDG B	Bldg Façade	2,135.24	0.1	213.524	w	15	13	195	
							Total Design Watts for this Area:	195	195
BLDG A	Bldg Façade	2,031.81	0.1	203.181	w	15	10	150	
							Total Design Watts for this Area:	150	150
BLDG ADMIN	Bldg Façade	728.82	0.1	72.882	w	15	5	75	

Table Continued

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01	02	03	04	05	06	07	08	09	10
		CALCULATED ALLOWANCE (Watts)			DESIGN WATTS				
Area Description	Specific Area Type per Table 140.7-B	Specific Area (ft²)[1]	Allowed Density (W/ft²)	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire[2]	# of Luminaires[2]	Design Watts	Additional Allowance (Watts)
							Total Design Watts for this Area:	75	72.882
BLDG C	Bldg Façade	1,797.78	0.1	179.778	w	15	8	120	
							Total Design Watts for this Area:	120	120
							Total Allowance (Watts) All Areas:		**612.882**

[1] *FOOTNOTES: See Table 140.7-B for the rules for calculating the specific areas (ft²) for these additional lighting allowances.*
[2] *For luminaires indicated in Table F as linear, wattage in column 07 is W/lf instead of Watts/luminaire. Total linear feet for the luminaire should be indicated in column 08 instead of number of luminaires.*

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This Section Does Not Apply

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCI-LTO-01-E - Must be submitted for all buildings.	☐	☐
◉	○	NRCI-LTO-02-E - Must be submitted for a lighting control system; or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

STATE OF CALIFORNIA
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P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
◉	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls area added to ≤ 20 luminaires.	☐	☐

STATE OF CALIFORNIA
Outdoor Lighting
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete

Documentation Author Name:	DIEGO HERRERA	Documentation Author Signature:	Diego Herrera
Company:	LEAF ENGINEERS	Signature Date:	09/15/2022
Address:	8163 ROCHESTER AVENUE, SUITE 100	CEA/ HERS Certification Identification (if applicable):	
City/State/Zip:	RANCHO CUCAMONGA, CALIFORNIA	Phone:	909.987.0909

RESPONSIBLE PERSON'S DECLARATION STATEMENT
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	RONALD DE LA CRUZ	Responsible Designer Signature:	
Company :	LEAF ENGINEERS	Date Signed:	09/15/2022
Address:	8163 ROCHESTER AVENUE, SUITE 100	License:	E-23576
City/State/Zip:	RANCHO CUCAMONGA, CALIFORNIA	Phone:	909.987.0909

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc. PBK.com
COSTA MESA
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN N

NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23576 Exp. 08-31-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL TITLE 24

E0.02

FILE PATH: Z:\Projects\...
5/11/2023 10:33:59 AM

E1.00 - ELECTRICAL SITE PLAN

0" 1"

1 SITE PLAN
1" = 30'-0"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ELECTRICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS, AND A FIELD VISIT OF THE ELECTRICAL SYSTEM. IN CASE OF ANY DISCREPANCIES WITH EXISTING FIELD CONDITIONS, ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE ELECTRICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.
3. COORDINATE ROUTING FOR ALL UNDERGROUND ELECTRICAL BRANCH CIRCUITS AND FEEDERS WITH OTHER DISCIPLINES PRIOR TO TRENCHING.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY INSTALLATION OF NEW WORK.
5. CONTRACTORS SHALL BE RESPONSIBLE TO DEMOLISH TEMPORARY INFRASCTRUCTURE SERVING THE INTERIM HOUSING AND BRING IT BACK TO ORIGINAL CONDITION, UPON COMPLETION OF THE MODERNIZATION PROJECT.

KEY NOTES

1. SCOPE OF WORK.
2. EXISTING MAIN SWITCHBOARD 120/208V, 3PH, 4W - 1200A
3. EXISTING PANEL 'C3' TO BE REPLACED WITH NEW PANEL 'A1' SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR FURTHER DETAILS.
4. PROVIDE NEW PANEL 'B1'. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR FURTHER DETAILS.
5. EXISTING PANEL 'C2' TO BE REPLACED WITH NEW PANEL 'C1'. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR FURTHER DETAILS.
6. EXISTING PANEL 'K1' TO BE REPLACED WITH NEW PANEL 'K1'. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR FURTHER DETAILS.
7. EXISTING PANEL 'A' TO BE REPLACED WITH NEW PANEL 'AD1'. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR FURTHER DETAILS.
8. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR ALL CONDUIT AND WIRE SIZING.
9. TRENCH AND EXCAVATE AS REQUIRED TO INSTALL CONDUITS AND FEEDERS AS INDICATED. STUB UP INTO EXTERIOR ABOVE GROUND AND INTO JUNCTION BOX. REFER TO DETAIL 1/E6.1 FOR FURTHER CONDUIT TRENCHING REQUIREMENTS.

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DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23570 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

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DSA SUBMITTAL

ELECTRICAL SITE PLAN

E1.00

FILE PATH: Z:\Projects\...
5/11/2023 10:34:01 AM

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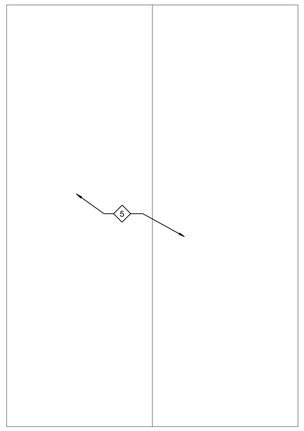
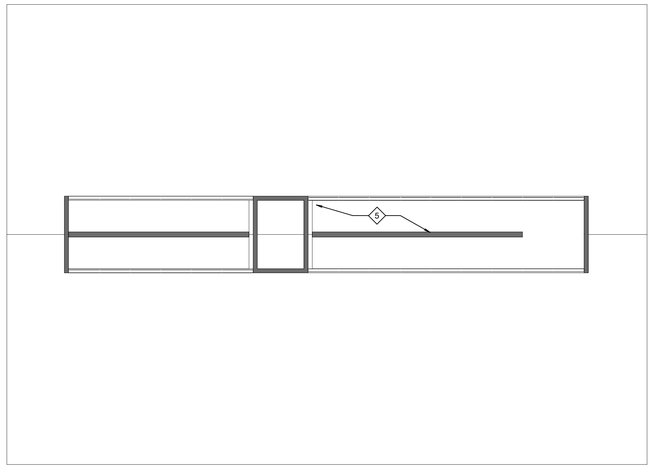
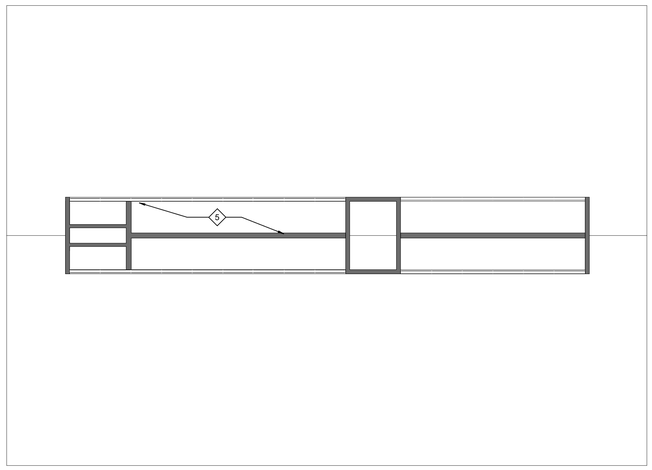


6 BLDG K - ROOF PLAN -DEMO
1/8" = 1'-0"



5 BLDG B - CLERESTORY PLAN - DEMO
1/8" = 1'-0"



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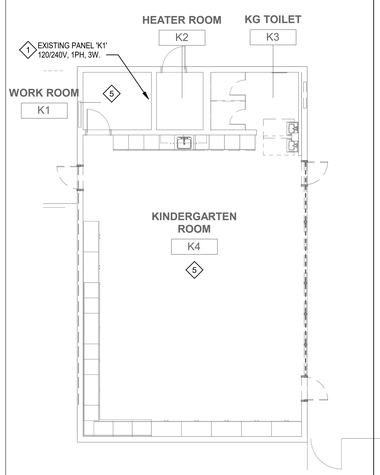
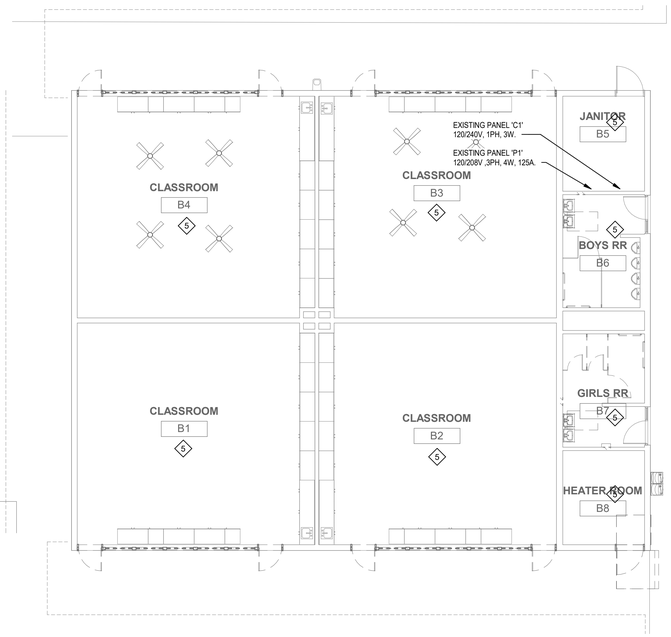
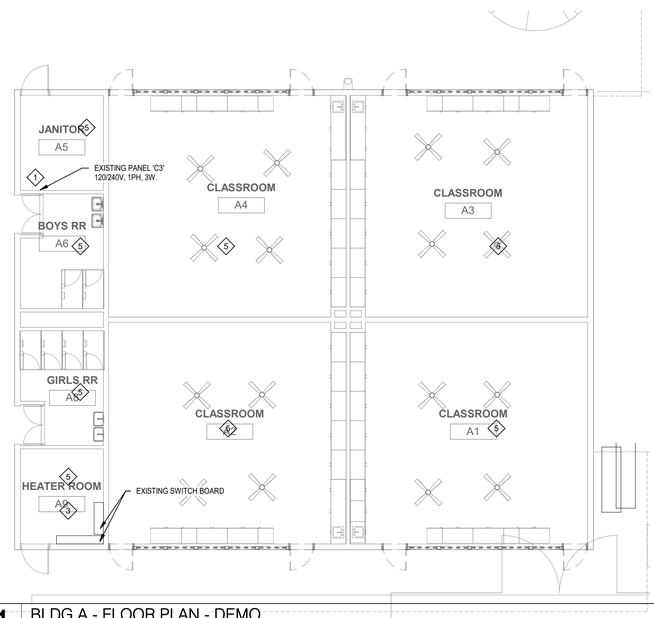
1/8" = 1'-0"



3 BLDG K - FLOOR PLAN - DEMO
1/8" = 1'-0"



2 BLDG B - FLOOR PLAN - DEMO
1/8" = 1'-0"



1 BLDG A - FLOOR PLAN - DEMO
1/8" = 1'-0"

GENERAL NOTES

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2. UNLESS OTHERWISE NOTED ALL EXISTING RECEPTACLES SHALL REMIAN IN PLACE.

KEY NOTES

1. EXISTING PANEL TO BE REMOVED, AND REPLACED. ALL EXISTING BRANCH CIRCUITS SHALL BE INTERCEPTED AND RELOCATED TO THE NEW PANEL.
2. NOT USED.
3. EXISTING SWITCH BOARD TO REMAIN.
4. EXISTING PANEL TO REMIAN.
5. CONTRACTOR TO DEMOLISH EXISTING HVAC UNITS AND ALL ASSOCIATED CONDUIT/DEVICES. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

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PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 08-31-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

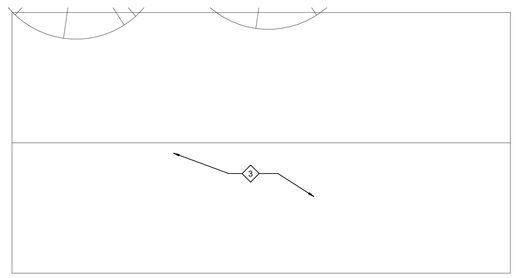
DSA SUBMITTAL

ELECTRICAL DEMOLITION FLOOR PLANS

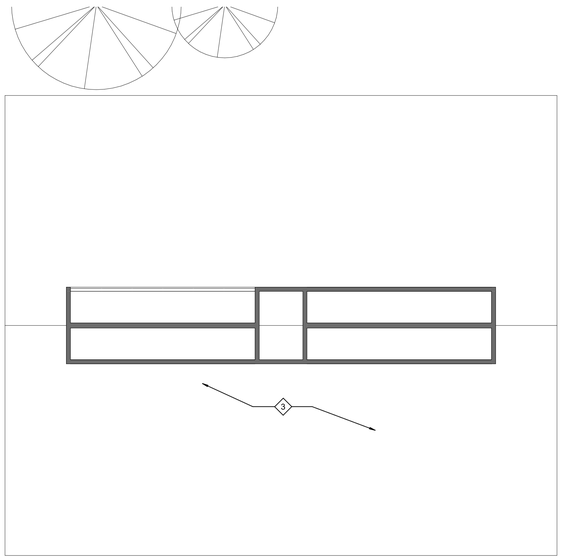
ED2.01

FILE PATH: Z:\Projects\...
5/11/2023 10:34:16 AM

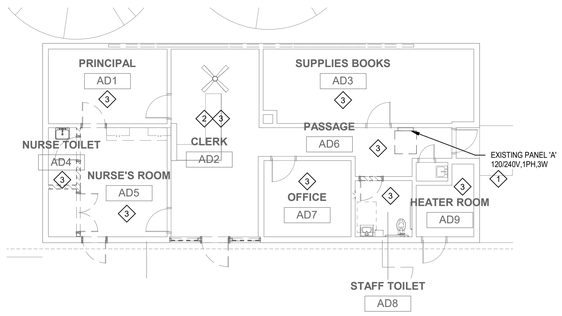
0" 1"



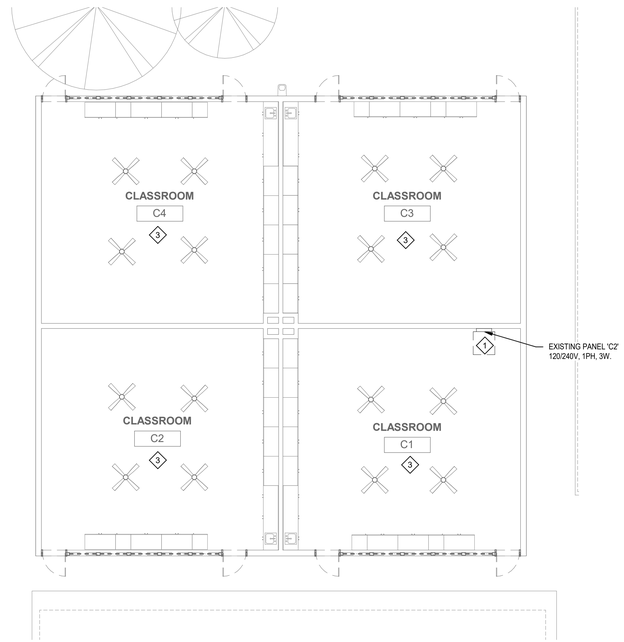
4 BLDG ADMIN - ROOF PLAN - DEMO
1/8" = 1'-0"



3 BLDG C - CLERESTORY PLAN - DEMO
1/8" = 1'-0"



2 BLDG ADMIN - FLOOR PLAN - DEMO
1/8" = 1'-0"



1 BLDG C - FLOOR PLAN - DEMO
1/8" = 1'-0"

GENERAL NOTES

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 08-31-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL DEMOLITION FLOOR PLANS

ED2.02

FILE PATH: Z:\Projects\...
5/11/2023 10:34:18 AM

ED3.01 - ELECTRICAL DEMOLITION LIGHTING PLANS

0" 1"

GENERAL NOTES

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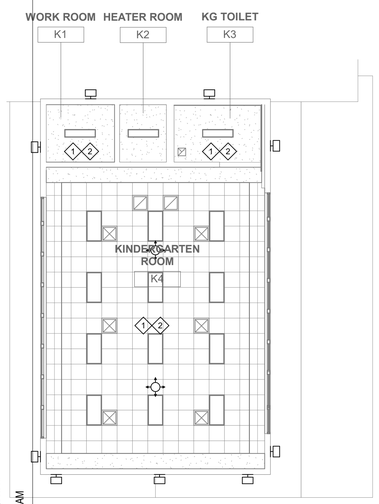
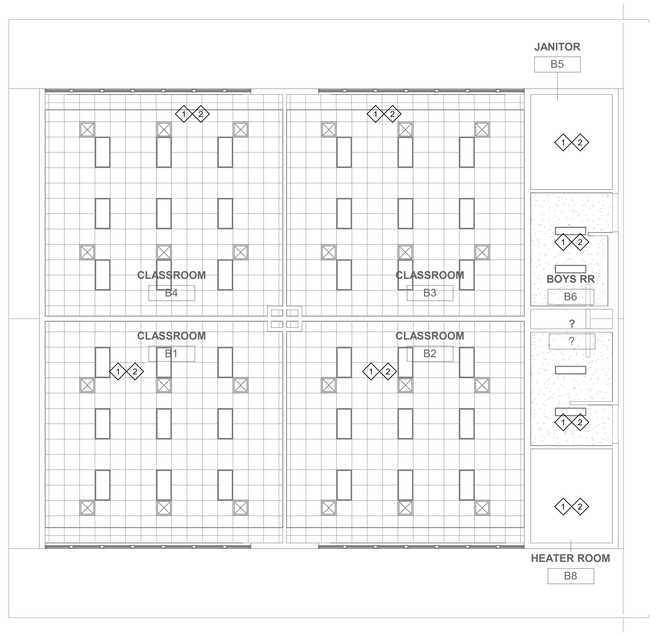
2. FOR ALL EXISTING CEILING MOUNTED DEVICES THAT WILL BE AFFECTED BY DEMOLITION OF EXISTING CEILINGS, INCLUDING BUT NOT LIMITED TO SECURITY MOTION DETECTORS, ETC, CONTRACTOR TO CAREFULLY DISCONNECT AND RE-INSTALL DEVICES ONTO THE NEW CEILINGS. DOCUMENT EXISTING LOCATIONS PRIOR TO DEMOLITION AND RE-INSTALL TO MATCH LOCATIONS. EXTEND EXISTING WIRING AS NEEDED.

KEY NOTES

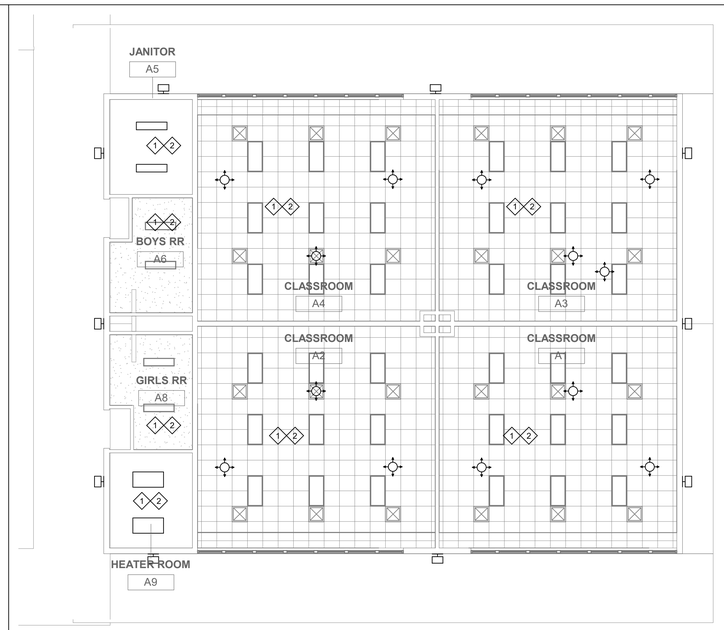
1. EXISTING LIGHT FIXTURES IN THE SCOPE OF WORK AREA SHALL BE REMOVED. ALL CONDUITS,MC CABLES, AND WIRES SHALL BE DEMOLISHED BACK TO PANEL BOARD SOURCE. CONTRACTOR TO DEMOLISH AND PROVIDE CIRCUIT CONTINUITY TO DOWNSTREAM DEVICES/EQUIPMENT WHICH REMAIN. VERIFY EXACT SCOPE OF DEMOLITION WITH ARCHITECTURAL PLANS.
2. REMOVE ANY UNUSED CONDUITS AND RELOCATE EXISTING TO ALLOW SPACE FOR NEW DUCTS AND CONDUITS.



3 BLDG K - LIGHTING PLAN DEMO
1/8" = 1'-0"



2 BLDG B - LIGHTING PLAN DEMO
1/8" = 1'-0"



1 BLDG A - LIGHTING PLAN DEMO
1/8" = 1'-0"

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5/11/2023 10:34:20 AM

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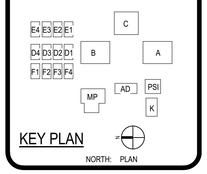
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
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DSA SUBMITTAL

ELECTRICAL DEMOLITION LIGHTING PLANS

ED3.01

ED3.02 - ELECTRICAL DEMOLITION LIGHTING PLANS

0" 1"

GENERAL NOTES

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KEY NOTES

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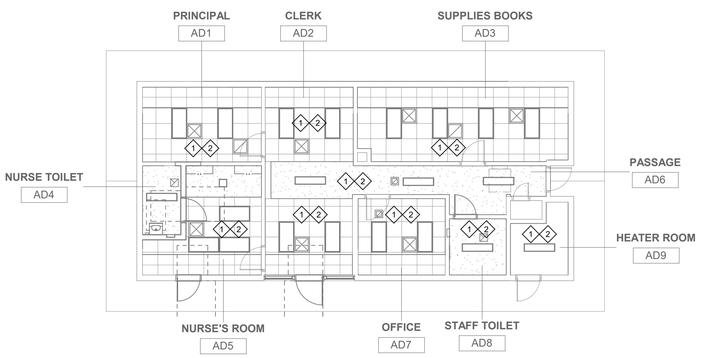
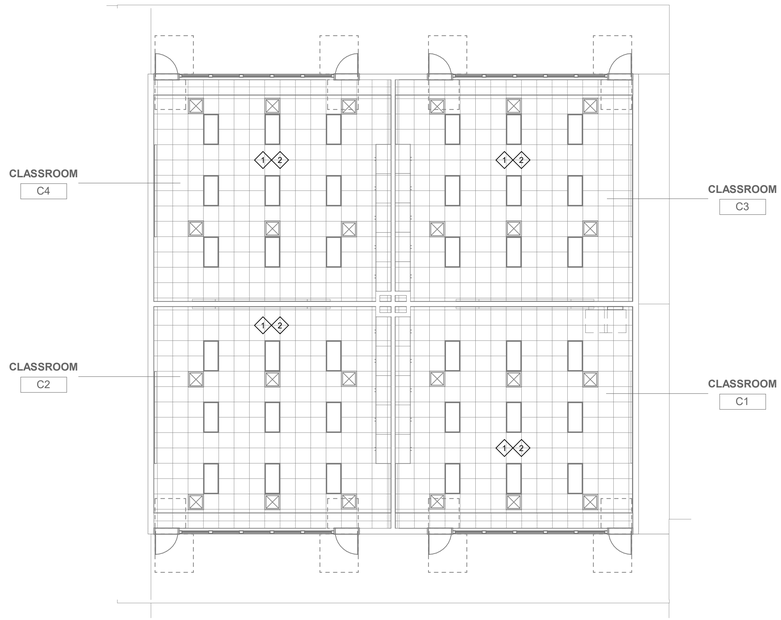


2 BLDG ADMIN - LIGHTING PLAN DEMO
1/8" = 1'-0"



1 BLDG C - LIGHTING PLAN DEMO
1/8" = 1'-0"

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KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
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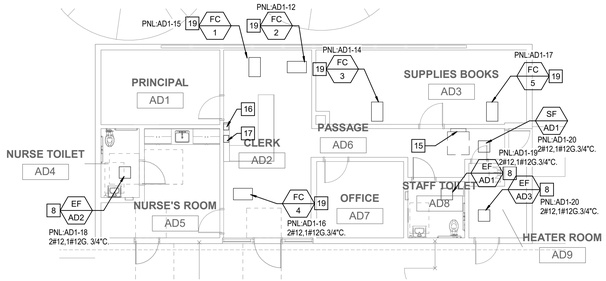
ELECTRICAL DEMOLITION LIGHTING PLANS

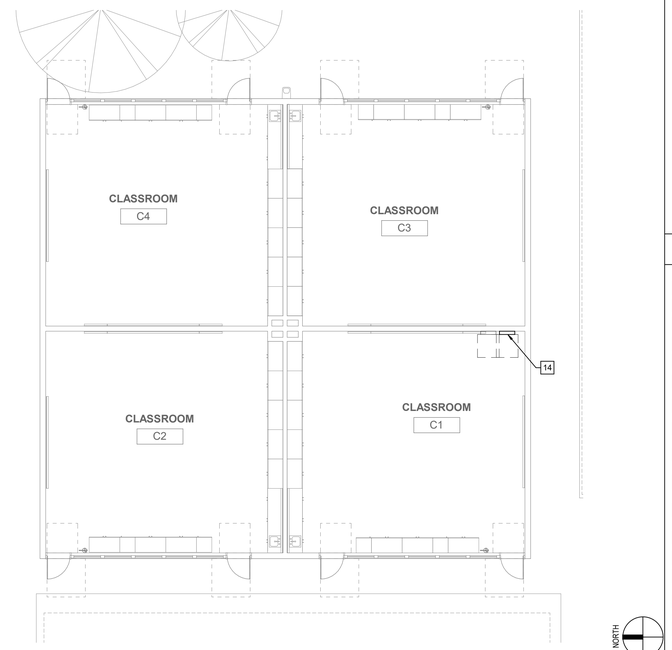
ED3.02

FILE PATH: Z:\Projects\...
5/11/2023 10:34:21 AM

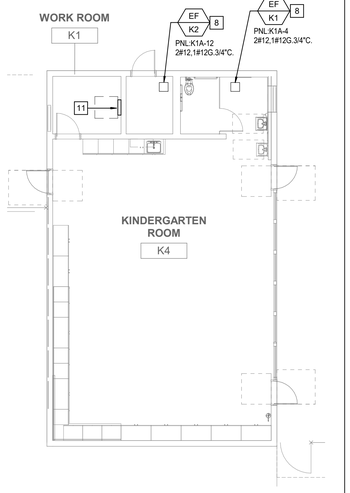
0" 1"



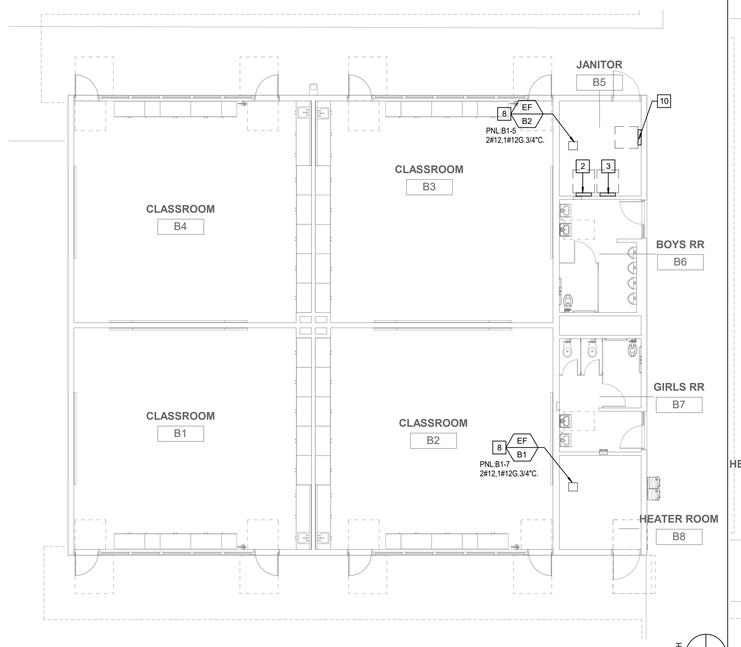
5 BLDG ADMIN - FLOOR PLAN
1/8" = 1'-0"



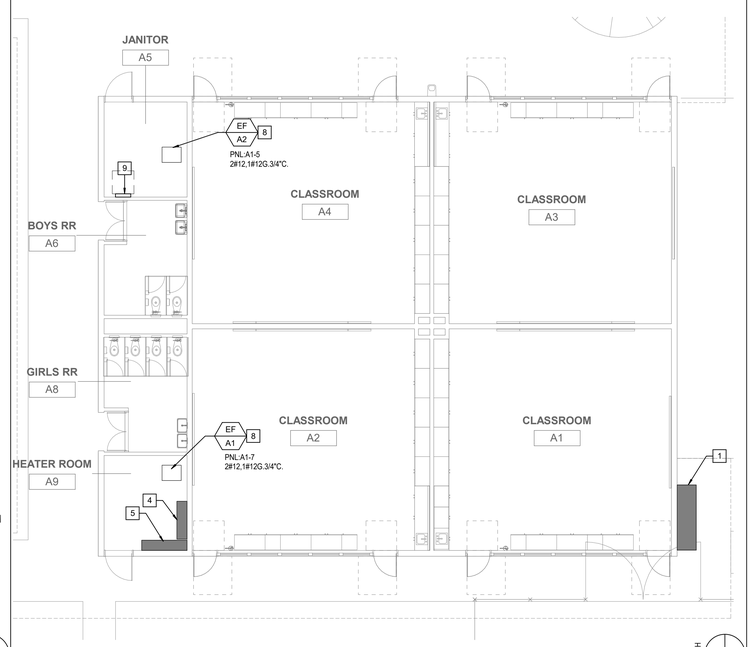
4 BLDG C - FLOOR PLAN
1/8" = 1'-0"



3 BLDG K - FLOOR PLAN
1/8" = 1'-0"



2 BLDG B - FLOOR PLAN
1/8" = 1'-0"



1 BLDG A - FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES

1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ALL RECEPTACLE DEVICES AND ASSOCIATED HARDWARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.
3. FOR ALL EXISTING CIRCUITS AND DEVICES THAT ARE TO REMAIN, CONTRACTOR TO INCLUDE IN THEIR BID TO REMOVE AND REPLACE ALL MC CABLES ABOVE CEILING SPACES. INTERCEPT ALL CONDUITS ABOVE THE CEILING, PROVIDE NEW HOMERUNS WITH MINIMUM 3/4" EMT AND NEW WIRING THAT MATCHES THE EXISTING, BACK TO THE PANEL SOURCE.

KEY NOTES

1. EXISTING TO REMAIN MAIN SWITCHBAORD 120/208V, 3PH, 4W - 1200A.
2. EXISTING TO REMAIN PANEL 'P1' 120/208V, 3PH, 4W - 125A.
3. EXISTING TO REMAIN PANEL 'C1' 120/240V, 1PH, 3W.
4. EXISTING TO REMAIN PANEL BOARD 'A'
5. EXISTING TO REMAIN PANEL BOARD 'B'
6. PROVIDE LOCAL DISCONNECT SWITCH FOR MECHANICAL INDOOR UNIT. DISCONNECT SWITCH SHALL BE MOUNTED IN CEILING SPACE.
7. NOT USED.
8. ROUTE EXHAUST FAN THROUGH LIGHTING CIRCUIT AND SWITCH. SEE MECHANICAL SCHEDULE FOR ADDITIONAL INFORMATION.
9. PROVIDE NEW PANEL 'A1' 120/208V, 3PH, 4W - 225A. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR CONDUIT AND FEEDER SIZE. SEE DETAIL 2/E6.01 FOR FURTHER INFOMRATION.
10. PROVIDE NEW PANEL 'B1' 120/208V, 3PH, 4W - 225A. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR CONDUIT AND FEEDER SIZE. SEE DETAIL 2/E6.01 FOR FURTHER INFOMRATION.
11. PROVIDE NEW PANEL 'K1A' 120/208V, 3PH, 4W - 225A. SEE SINGLE LINE DIAGRAM E6.02 FOR CONDUIT AND FEEDER SIZE. SEE DETAIL 2/E6.01 FOR FURTHER INFORMATION.
12. NOT USED.
13. NOT USED.
14. PROVIDE NEW PANEL 'C1A' 120/208V, 3PH, 4W - 225A. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR CONDUIT AND FEEDER SIZE. SEE DETAIL 2/E6.01 FOR FURTHER INFOMRATION.
15. PROVIDE NEW PANEL 'AD1' 120/208V, 3PH, 4W - 225A. SEE SINGLE LINE DIAGRAM ON SHEET E6.02 FOR CONDUIT AND FEEDER SIZE. SEE DETAIL 2/E6.01 FOR FURTHER INFOMRATION.
16. EXTEND EXISTING CIRCUIT FROM EXISTING FIRE ALARM PANEL TO NEW FIRE ALARM PANEL.
17. EXISTING SECURITY PANEL TO BE PROTECTED IN PLACE.
18. NOT USED.
19. PROVIDE 208V 1 PHASE, 2#12, 1 #12G..3/4"C. POWER CONNECTION TO INDOOR FAN COIL. SEE MECHANICAL SCHEDULE ON M5.01 FOR FURTHER DETAILS.

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DATE: 08/11/2023

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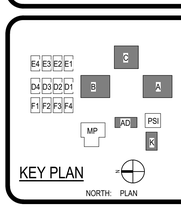
WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL FLOOR PLANS

E2.01

FILE PATH: Z:\Projects\...
5/11/2023 10:34:03 AM

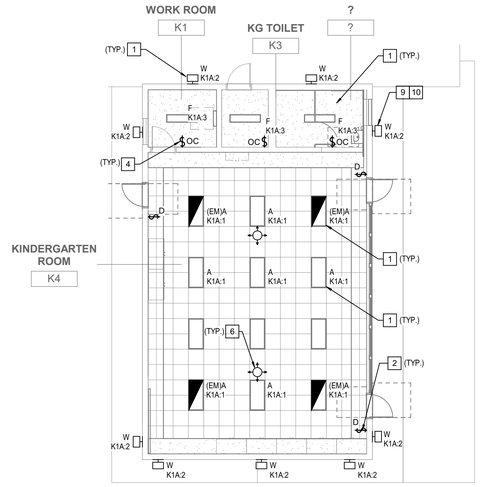
0" 1"

GENERAL NOTES

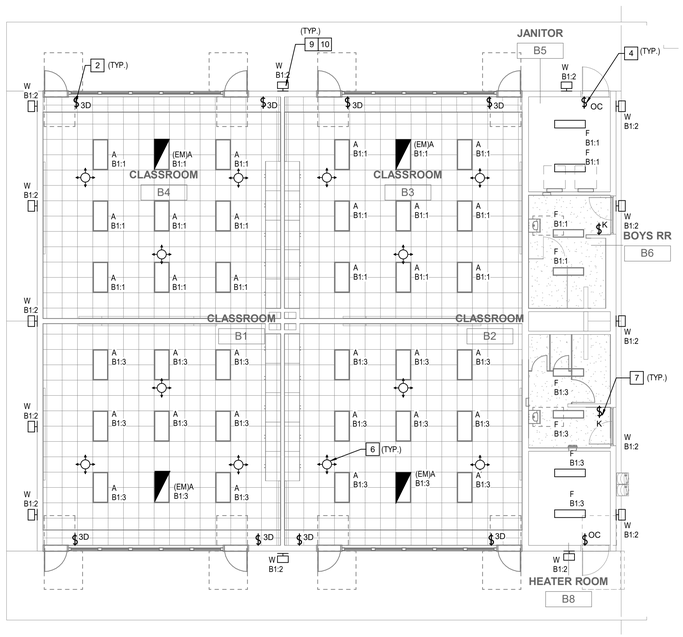
1. REFER TO ARCHITECT'S REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES.
2. UNLESS OTHERWISE NOTED, ALL EXITS SIGNS ARE TYPE "X".
3. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM OF OCCUPANCY SENSOR FOR ON/OFF CONTROL OF ALL LIGHT FIXTURES INCLUDING BUT NOT LIMITED TO POWER PACKS, WIRING, ETC. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE EMERGENCY BATTERY PACKS FOR ALL LIGHTING FIXTURES DESIGNATED TO BE ON EMERGENCY POWER AND EXIT SIGNS. PROVIDE UNSWITCHED HOT TO BATTERY SO THAT LAMPS CAN BE SWITCHED OFF AND ON WITHOUT DRAINING BATTERY. RE: DIVISOIN 26 SPECIFIACTIONS FOR ADDITIONAL INFORMATION. PROVIDE 20A UNSWITCHED BRANCH CIRCUIT (2#12,1#12G, 3/4"C.) FROM LIGHTING PANEL TO ALL EXIT SIGNS IN THIS AREA.
5. FOR ALL EXISTINGCIRCUITS AND DEVICES THAT ARE TO REMAIN, CONTRACTOR TO INCLUDE IN THEIR BID TO REMOVE AND REPLACE ALL MC CABLES ABOVE CEILING SPACES. INTERCEPT ALL CONDUITS ABOVE THE CEILING, PROVIDE NEW HOMERUNS WITH MINIMUM 3/4" EMT AND NEW WIRING THAT MATCHES THE EXISTING, BACK TO THE PANEL.

KEY NOTES

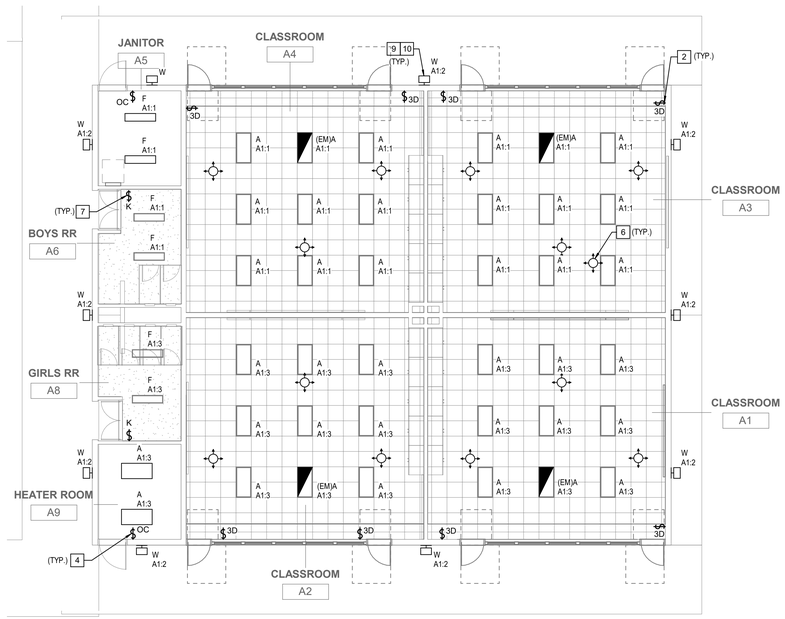
1. PROVIDE NEW LED LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE ON SHEET E5.01 FOR ADDITIONAL INFOMRATION. RE-USE EXISTING CIRCUIT AND EXTEND CONDUIT AND WIRING AS NEEDED.
2. LOW VOLTAGE WALL ON/OFF SWITCH WITH DIMMING, LUTRON MAESTRO SERIES
3. LOW VOLTAGE WALL ON/OFF MANUAL SWITCH, LUTRON MAESTRO SERIES
4. LOW VOLTAGE WALL ON/OFF SWITCH WITH DIMMING AND OCCUPANCY SENSOR, LUTRON MAESTRO SERIES
5. LUTRON POWER PACK MODULE. PROVIDE AS REQUIRED, EVEN IF NOT SHOWN ON PLANS. LOCATE ABOVE ACESSIBLE CEILING. WHERE OCCUPANCY SENSOR IS UTILIZED ON ROOMS WITH HARD CEILINGS (I.E. RESTROOMS, ETC.), INSTALL POWERPACKS ABOVE NEAREST ACCESSIBLE CEILING (I.E. CORRIDOR, ETC.).
6. LOW VOLTAGE CEILING MOUNTED WIRELESS OCCUPANCY SENSOR, RADIO PWR SAVR SERIES
7. PROVIDE KEYSWITCH LIGHT SWITCH, LUTRON QSWS2-KSN3MOC-WH.
8. PROVIDE NEW EXTERIOR LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE ON SHEET E5.01
9. PROVIDE NEW PHOTOCELL TIME CLOCK ON ROOF FACING NORTH, CIRCUIT THROUGH NEW TIME CLOCK. PROVIDE TIME CLOCK ADJECENT TO PANEL BOARD.



3 BLDG K - LIGHTING PLAN
1/8" = 1'-0"



2 BLDG B - LIGHTING PLAN
1/8" = 1'-0"



1 BLDG A - LIGHTING PLAN
1/8" = 1'-0"

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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C. DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

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DSA SUBMITTAL

ELECTRICAL LIGHTING PLANS

E3.01

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E3.02 - ELECTRICAL LIGHTING PLANS

0" 1"

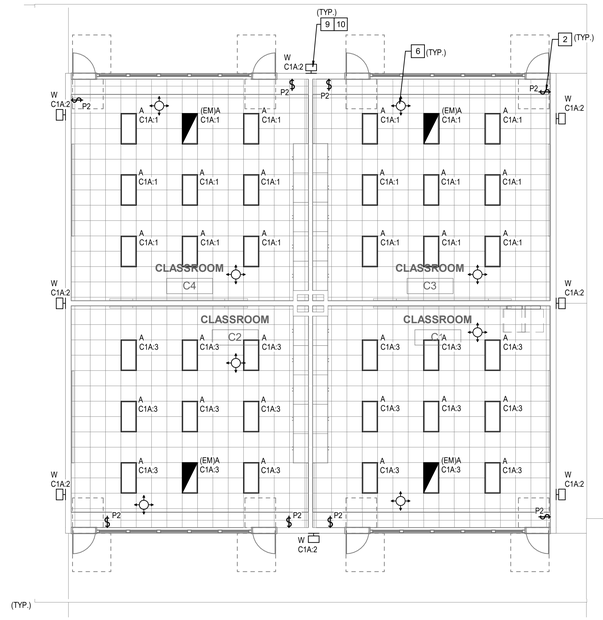
GENERAL NOTES

1. REFER TO ARCHITECT'S REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF ALL LIGHTING FIXTURES.
2. UNLESS OTHERWISE NOTED, ALL EXITS SIGNS ARE TYPE "X".
3. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM OF OCCUPANCY SENSOR FOR ON/OFF CONTROL OF ALL LIGHT FIXTURES INCLUDING BUT NOT LIMITED TO POWER PACKS, WIRING, ETC. RE: DIVISION 26 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE EMERGENCY BATTERY PACKS FOR ALL LIGHTING FIXTURES DESIGNATED TO BE ON EMERGENCY POWER AND EXIT SIGNS. PROVIDE UNSWITCHED HOT TO BATTERY SO THAT LAMPS CAN BE SWITCHED OFF AND ON WITHOUT DRAINING BATTERY. RE: DIVISOIN 26 SPECIFIACTIONS FOR ADDITIONAL INFORMATION. PROVIDE 20A UNSWITCHED BRANCH CIRCUIT (2#12, 1#12G, 3/4"C.) FROM LIGHTING PANEL TO ALL EXIT SIGNS IN THIS AREA.
5. FOR ALL EXISTING CIRCUITS AND DEVICES THAT ARE TO REMAIN, CONTRACTOR TO INCLUDE IN THEIR BID TO REMOVE AND REPLACE ALL MC CABLES ABOVE CEILING SPACES. INTERCEPT ALL CONDUITS ABOVE THE CEILING, PROVIDE NEW HOMERUNS WITH MINIMUM 3/4" EMT AND NEW WIRING THAT MATCHES THE EXISTING, BACK TO THE PANEL.

KEY NOTES

1. PROVIDE NEW LED LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE ON SHEET E5.01 FOR ADDITIONAL INFOMRATION. RE-USE EXISTING CIRCUIT AND EXTEND CONDUIT AND WIRING AS NEEDED.
2. LUTRON "PICO" WIRELESS SWITCH. "P1" INDICATES 2-BUTTON ON/OFF NON-DIMMED, "P2" INDICATES 3-BUTTON ON/OFF/DIM, "P3" INDICATES 3-BUTTON ON/OFF.DIM/PRE-SET SCENE.
3. NOT USED.
4. LUTRON LOW VOLTAGE WALL MOUNT VACANCY.SWITCH, NON-DIMMED.
5. LUTRON POWERPACK MODULE. PROVIDE AS REQUIRED, EVEN IF NOT SHOWN ON PLANS. LOCATE ABOVE ACESSIBLE CEILING. WHERE OCCUPANCY SENSOR IS UTILIZED ON ROOMS WITH HARD CEILINGS (I.E. RESTROOMS, ETC.), INSTALL POWERPACKS ABOVE NEAREST ACCESSIBLE CEILING (I.E. CORRIDOR, ETC.).
6. LUTRON WIRELESS CEILING MOUNTED OCCUPANCY SENSOR.
7. REGULAR TOGGLE LINE VOLTAGE SWITCH (NONE-LUTRON SWITCH). "K" INDICATED KEY OPERATED.
8. LUTRON WIRELESS DAYLIGHT SENSOR.
9. PROVIDE NEW EXTERIOR LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE ON SHEET E5.01
10. PROVIDE NEW PHOTOCELL TIME CLOCK ON ROOF FACING NORTH, CIRCUIT THROUGH NEW TIME CLOCK. PROVIDE TIME CLOCK ADJECENT TO PANEL BOARD.

2 BLDG ADMIN - LIGHTING PLAN
1/8" = 1'-0"



1 BLDG C - LIGHTING PLAN
1/8" = 1'-0"

IDENTIFICATION STAMP
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23576 Exp. 8-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

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ELECTRICAL LIGHTING PLANS

E3.02

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5/11/2023 10:34:08 AM

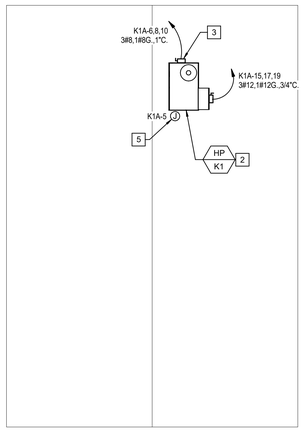
0" 1"

GENERAL NOTES

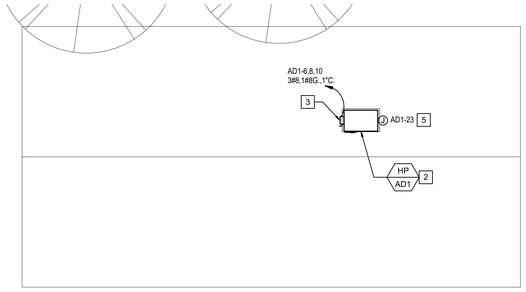
1. THE EXISTING BUILDING INCLUDING PORTIONS OF THE RENOVATED AREA SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PHASE OF THIS PROJECT. ANY MODIFICATIONS TO THE EXISTING ELECTRICAL SYSTEMS THAT MAY REQUIRE THE TEMPORARY INTERRUPTION OF EXISTING SERVICES SHALL BE COORDINATED AND PRE-SCHEDULED WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY WORK.
2. ELECTRICAL ENGINEERING FOR THIS PROJECT IS BASED ON EXISTING DRAWINGS, AND A FIELD VISIT OF THE ELECTRICAL SYSTEM. IN CASE OF ANY DISCREPANCIES WITH EXISTING FIELD CONDITIONS, ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT DIFFERENCES AND NOTIFY THE ELECTRICAL ENGINEER FOR POSSIBLE REVISION TO THESE DOCUMENTS.
3. ALL ELCTRICAL EQUIPMENT/DEVICES ON THE ROOF SHALL BE WEATHER PROOF, NEMA 3R AND +8" ABOVE FINISHED ROOF LEVEL AND ROOF PENETRATIONS SHALL BE FLASHED.

KEY NOTES

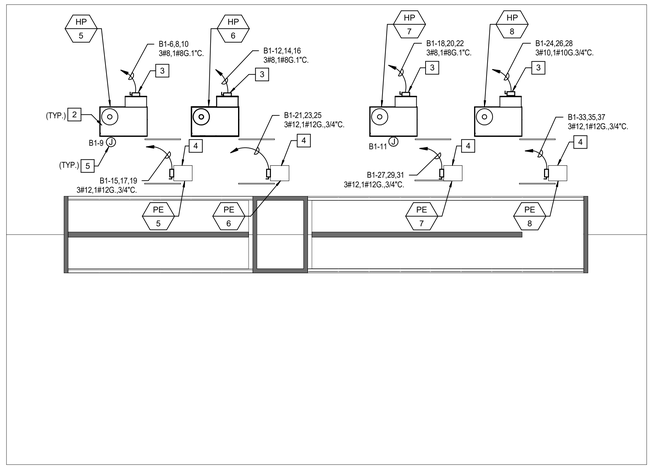
1. PROVIDE LOCAL DISCONNECT SWITCH FOR MECHANICAL INDOOR UNIT. DISCONNECT SWITCH SHALL BE MOUNTED IN CEILING SPACE.
2. PROVIDE 208V 3 PHASE POWER CONNECTION TO NEW MECHANICAL UNIT.
3. 60A NON-FUSIBLE DISCONNECT SWITCH SHALL BE PRE-INSTALLED FROM MANUFACTURER IN NEMA-3R ENCLOSURE AND CONNECT TO CIRCUIT AS SHOWN. MANUFACTURER'S RECOMMENDED FUSE SIZE SHALL SUPERSEDE DESIGN VALUE.
4. CONFIRM EXACT LOCATION OF ALL CONDUIT RISERS AT CONDENSING UNITS WITH MECHANICAL DRAWINGS/CONTRACTOR, PRIOR TO INSTALLATION
5. PROVIDE 120V 2#12,1#12G.,3/4"C. POWER CONNECTION TO CONVENIENCE OUTLET PROVIDED IN MECHANICAL UNIT.



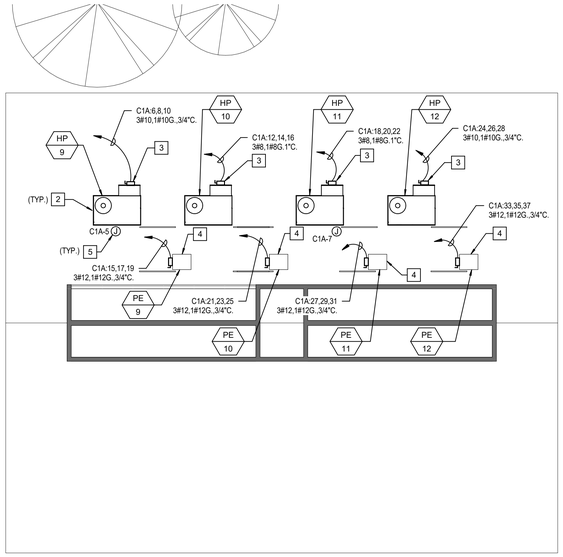
3 BLDG K - ROOF PLAN
1/8" = 1'-0"



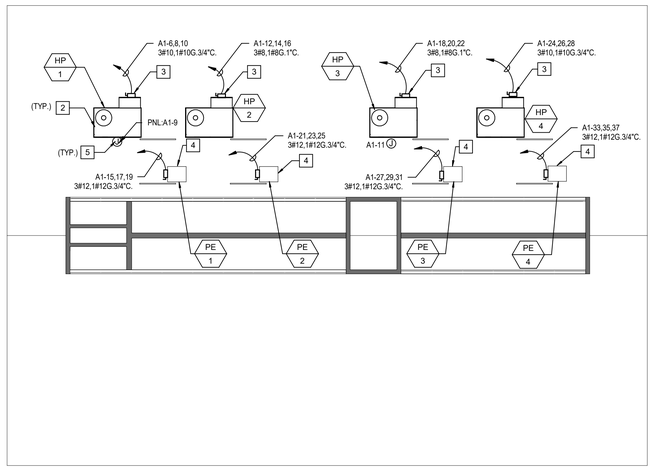
5 BLDG ADMIN - ROOF PLAN
1/8" = 1'-0"



2 BLDG B - CLERESTORY PLAN
1/8" = 1'-0"



4 BLDG C - CLERESTORY PLAN
1/8" = 1'-0"



1 BLDG A - CLERESTORY PLAN
1/8" = 1'-0"

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E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
C
B
A
MP
AD
PSI
K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

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DSA SUBMITTAL

ELECTRICAL ROOF PLANS

E4.01

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5/11/2023 10:34:11 AM

E5.01 - ELECTRICAL SCHEDULES

0" 1"

Job:WEBBER HVAC UPGRADE & MODERNIZATION — Job No. 220309AR

Mounting: **SURFACE** | Main Type: **MCB (225A)** | Neutral: **100%** | Voltage: **208Y/120V-3PH 4W** | Main Size: **225 AMPS** | AIC Rating: **14000** | Ground: **Equipment Ground** | Lugs: **SINGLE**

PANEL: **K1A**

ALL LOADS IN VA																											
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
495								CLASS LIGHTING	20/1	12	1	A	2	EXT	20/1	BLDG K WALL PCK	195							0.00
128								BLDG K LIGHTING	20/1	12	3	B	4	12	20/1	EF-K1			600					1.00
	180							ROOFTOP RECEPT.	20/1	12	5	C	6	8	30/3	HP-K1 ROOFTOP			3358					0.00
								SPARE			7	A	8	-	-	-			3358					0.00
								SPARE			9	B	10	-	-	-			3358					0.00
								SPARE			11	C	12	12	20/1	EF-K2			600					0.00
								SPARE			13	A	14			SPARE								1.00
		960						HP-K1- EXHAUST	20/1	12	15	B	16			SPARE								1.00
		960						-	-	-	17	C	18			SPARE								1.00
		960						-	-	-	19	A	20			SPARE								1.00
								SPARE			21	B	22			SPARE								1.00
								SPARE			23	C	24			SPARE								1.00
								SPARE			25	A	26			SPARE								1.00
								SPARE			27	B	28			SPARE								1.00
								SPARE			29	C	30			SPARE								1.00
								SPARE			31	A	32			SPARE								1.00
								SPARE			33	B	34			SPARE								1.00
								SPARE			35	C	36			SPARE								1.00
								SPARE			37	A	38			SPARE								1.00
								SPARE			39	B	40			SPARE								1.00
								SPARE			41	C	42			SPARE								1.00
623	180	2879	0	0	0	0	0.00	**TOTALS**								**TOTALS**	195	0	11274	0	0	0	0	15.00

LOAD SUMMARY

Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description
0.8	0.2	14.2	0.0	0.0	0.0	0.0	15.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
1.0	0.2	14.2	0.0	0.0	0.0	0.0	7.5	Design KVA

Phase Load

Ph	KVA
A	5.0
B	5.0
C	5.1

Panel Remarks:

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	30.2	83.7		22.9	63.4

PANEL: **K1A**

Date: 4/14/2023 | By: Designer

10/22/03

Job: WEBBER HVAC UPGRADE &... — Job No. 220309AR

Mounting: **SURFACE** | Main Type: **MCB (225A)** | Neutral: **100%** | Voltage: **208Y/120V-3PH 4W** | Main Size: **225 AMPS** | AIC Rating: **14000** | Ground: **Equipment Ground** | Lugs: **SINGLE**

PANEL: **A1**

ALL LOADS IN VA																											
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
1008								CLASS LIGHTING	20/1	12	1	A	2	12	20/1	BLDG A WALL PCK	315							0.00
1008								CLASS LIGHTING	20/1	12	3	B	4			SPARE								1.00
		46						EF-A2	20/1	12	5	C	6	10	30/3	HP-1 ROOFTOP			3358					0.00
		46						EF-A1	20/1	12	7	A	8	-	-	-			3358					0.00
	180							ROOF TOP RECEPT.	20/1	12	9	B	10	-	-	-			3358					0.00
	180							ROOF TOP RECEPT.	20/1	12	11	C	12	8	40/3	HP-2 ROOFTOP			3358					0.00
								SPARE			13	A	14	-	-	-			3358					0.00
		468						HP1- EXHAUST	20/1	12	15	B	16	-	-	-			3358					0.00
		468						-	-	-	17	C	18	8	40/3	HP-3 ROOFTOP			3358					0.00
		468						-	-	-	19	A	20	-	-	-			3358					0.00
		960						HP2- EXHAUST	20/1	12	21	B	22	-	-	-			3358					0.00
		960						-	-	-	23	C	24	10	30/3	HP-4 ROOFTOP			3358					0.00
		960						-	-	-	25	A	26	-	-	-			3358					0.00
		768						HP3- EXHAUST	20/1	12	27	B	28	-	-	-			3358					0.00
		768						-	-	-	29	C	30	12	20/1	EF-A1 ROOFTOP			600					0.00
		768						-	-	-	31	A	32			SPARE								1.00
		468						HP4- EXHAUST	20/1	12	33	B	34			SPARE								1.00
		468						-	-	-	35	C	36			SPARE								1.00
		468						-	-	-	37	A	38			SPARE								1.00
								SPARE			39	B	40			SPARE								1.00
								SPARE			41	C	42			SPARE								1.00
2012	360	8079	0	0	0	0	0.00	**TOTALS**								**TOTALS**	315	0	40896	0	0	0	0	7.00

LOAD SUMMARY

Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description
2.3	0.4	49.0	0.0	0.0	0.0	0.0	7.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
2.9	0.4	49.0	0.0	0.0	0.0	0.0	3.5	Design KVA

Phase Load

Ph	KVA
A	17.5
B	17.3
C	16.9

Panel Remarks:

*Input d...
**100% ...

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	58.7	162.8		55.7	154.7

PANEL: **A1**

Date: 4/14/2023 | By: Designer

Job:WEBBER HVAC UPGRADE & MODERNIZATION — Job No. 220309AR

Mounting: **SURFACE** | Main Type: **MCB (225A)** | Neutral: **100%** | Voltage: **208Y/120V-3PH 4W** | Main Size: **225 AMPS** | AIC Rating: **14000** | Ground: **Equipment Ground** | Lugs: **SINGLE**

PANEL: **AD1**

ALL LOADS IN VA																											
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
509								BLDG LIGHTING	20/1	12	1	A	2	12	20/1	BLDG ADM WALL PCK	150							0.00
458								BLDG LIGHTING	20/1	12	3	B	4			SPARE								1.00
								SPARE			5	C	6	8	40/3	HP-AD1 ROOFTOP			3358					0.00
								SPARE			7	A	8	-	-	-			3358					0.00
								SPARE			9	B	10	-	-	-			3358					0.00
								SPARE	20/1		11	C	12	12	20/1	FAN COIL 2			520					0.00
								SPARE	20/1		13	A	14	12	20/1	FAN COIL 3			520					0.00
		520						FAN COIL 1	20/1	12	15	B	16	12	20/1	FAN COIL 4			520					0.00
								FAN COIL 5	20/1	12	17	C	18	12	20/1	EF-AD2			46					0.00
		46						EF-AD1	20/1	12	19	A	20	12	20/1	EF-AD3			46					0.00
		46						SF-AD1	20/1	12	21	B	22			SPARE								1.00
	180							ROOF RECEPT.	20/1	12	23	C	24			SPARE								1.00
								SPARE			25	A	26			SPARE								1.00
								SPARE			27	B	28			SPARE								1.00
								SPARE			29	C	30			SPARE								1.00
								SPARE			31	A	32			SPARE								1.00
								SPARE			33	B	34			SPARE								1.00
								SPARE			35	C	36			SPARE								1.00
								SPARE			37	A	38			SPARE								1.00
								SPARE			39	B	40			SPARE								1.00
								SPARE			41	C	42			SPARE								1.00
1017	180	612	0	0	0	0	0.00	**TOTALS**								**TOTALS**	150	0	11726	0	0	0	0	12.00

LOAD SUMMARY

Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description
1.2	0.2	12.3	0.0	0.0	0.0	0.0	12.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
1.5	0.2	12.3	0.0	0.0	0.0	0.0	6.0	Design KVA

Phase Load

Ph	KVA
A	4.7
B	4.9
C	4.1

Panel Remarks:

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	25.7	71.3		20.0	55.4

PANEL: **AD1**

Date: 4/14/2023 | By: Designer

10/22/03

Job:WEBBER HVAC UPGRADE & MODERNIZATION — Job No. 220309AR

Mounting: **SURFACE** | Main Type: **MCB (225A)** | Neutral: **100%** | Voltage: **208Y/120V-3PH 4W** | Main Size: **225 AMPS** | AIC Rating: **14000** | Ground: **Equipment Ground** | Lugs: **SINGLE**

PANEL: **B1**

ALL LOADS IN VA																											
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
1050								CLASS LIGHTING	20/1	12	1	A	2			SPARE								1.00
1050								CLASS LIGHTING	20/1	12	3	B	4	EXT		SPARE	360							1.00
		46						EF-B2	20/1	12	5	C	6	8	40/3	HP-5 ROOFTOP			3358					0.00
		46						EF-B1	20/1	12	7	A	8	-	-	-			3358					0.00
	180							ROOF RECEPT	20/1	12	9	B	10	-	-	-			3358					0.00
	180							ROOF RECEPT	20/1	12	11	C	12	8	40/3	HP-6 ROOFTOP			3358					0.00
								SPARE			13	A	14	-	-	-			3358					0.00
		768						HP5- EXHAUST	20/1	12	15	B	16	-	-	-			3358					0.00
		768						-	-	-	17	C	18	8	40/3	HP-7 ROOFTOP			3358					0.00
		768						-	-	-	19	A	20	-	-	-			3358					0.00
		960						HP6- EXHAUST	20/1	12	21	B	22	-	-	-			3358					0.00
		960						-	-	-	23	C	24	10	30/3	HP-8 ROOFTOP			3358					0.00
		960						-	-	-	25	A	26	-	-	-			3358					0.00
		960						HP7- EXHAUST	20/1	12	27	B	28	-	-	-			3358					0.00
		960						-	-	-	29	C	30	12	20/1	EF-B1 ROOFTOP			600					0.00
		960						-	-	-	31	A	32			SPARE								1.00
		468						HP8- EXHAUST	20/1	12	33	B	34			SPARE								1.00
		468						-	-	-	35	C	36			SPARE								1.00
		468						-	-	-	37	A	38			SPARE								1.00
								SPARE			39	B	40			SPARE								1.00
								SPARE			41	C	42			SPARE								1.00
2100	360	9555	0	0	0	0	0.00	**TOTALS**								**TOTALS**	360	360	40896	0	0	0	0	7.00

LOAD SUMMARY

Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description
2.5	0.7	50.5	0.0	0.0	0.0	0.0	7.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
3.1	0.7	50.5	0.0	0.0	0.0	0.0	3.5	Design KVA

Phase Load

Ph	KVA
A	18.0
B	18.2
C	17.4

Panel Remarks:

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	60.6	168.3		57.7	160.3

PANEL: **B1**

Date: 4/14/2023 | By: Designer

10/22/03

WEBBER ELEMENTARY LUMINAIRE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	MOUNTING	LAMPS NO./TYPE	VOLTS	WATTS	KELVIN	DESCRIPTION	LOCATION
A	LITHONIA	CPANL-2X4-AL06-SWW7-M2	RECESSED	LED 0-10V	120-277	55W	3500K	2X4 FULLY SWITCHABLE FLAT PANEL	OFFICES/CLASSROOMS
F	LITHONIA	SBL4-LP840(CI-254RKU)	RECESSED	LED 0-10V	120-277	32W	3500K	1X4 LED	OFFICES/CLASSROOMS
W	LITHONIA	WDGE1LED-P2-40K-90CRI-VF-MVOLT-SRM-PE	WALL	LED 0-10V	120-277	15W	4000K	WALL PACK SCONCE LED	OUTSIDE BUILDING

ANY PROPOSED EQUAL FIXTURE OR CONTROL SUBSTITUTIONS SHALL BE SUBMITTED 14 DAYS PRIOR TO BID DAY, ACCOMPANIED BY DETAILED SPECIFICATION CUT SHEETS AND PHOTOMETRIC CALCULATIONS OF EVERY AREA WHERE THE PROPOSED SUBSTITUTION FIXTURE IS LOCATED, INCLUDING MAX-MIN, AVG-MIN, MAX-MIN, FOOT-CANDLE LEVELS & RATIOS CALCULATED AT A 30" WORK PLANE. ANY MISSING DATA SHALL DEEM THE PROPOSED ALTERNATE / SUBSTITUTE FIXTURE OR CONTROLS, UNACCEPTABLE AND REJECTED WITHOUT FURTHER CONSIDERATION. ANY SUBSTITUTED FIXTURES CANNOT BE ASSURED TO PERFORM WITH EQUAL PHOTOMETRIC PERFORMANCE WITHOUT PHOTOMETRIC CALCULATIONS.

Job:WEBBER HVAC UPGRADE & MODERNIZATION — Job No. 220309AR

Mounting: **SURFACE** | Main Type: **MCB (225A)** | Neutral: **100%** | Voltage: **208Y/120V-3PH 4W** | Main Size: **225 AMPS** | AIC Rating: **14000** | Ground: **Equipment Ground** | Lugs: **SINGLE**

PANEL: **C1A**

ALL LOADS IN VA																											
Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description	Amp/P	Wire	Cir. No.	Ph	Cir. No.	Wire	Amp/P	Description	Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S
990								CLASS LIGHTING	20/1	12	1	A	2	12	20/1	BLDG C WALL PCK	150							0.00
990								CLASS LIGHTING	20/1	12	3	B	4			SPARE								1.00
	180							ROOF RECEPT	20/1	12	5	C	6	10	30/3	HP-9 ROOFTOP			3358					0.00
	180							ROOF RECEPT	20/1	12	7	A	8	-	-	-			3358					0.00
								SPARE			9	B	10	-	-	-			3358					0.00
								SPARE			11	C	12	8	40/3	HP-10 ROOFTOP			3358					0.00
								SPARE			13	A	14	-	-	-			3358					0.00
								HP9- EXHAUST	20/1	12	15	B	16	-	-	-			3358					0.00
								-	-	-	17	C	18	8	40/3	HP-11 ROOFTOP			3358					0.00
								-	-	-	19	A	20	-	-	-			3358					0.00
		468						HP10- EXHAUST	20/1	12	21	B	22	-	-	-			3358					0.00
		468						-	-	-	23	C	24	10	30/3	HP-12 ROOFTOP			3358					0.00
		468						-	-	-	25	A	26	-	-	-			3358					0.00
		768						HP11- EXHAUST	20/1	12	27	B	28	-	-	-			3358					0.00
		768						-	-	-	29	C	30			SPARE								1.00
		768						-	-	-	31	A	32			SPARE								1.00
		468						HP12- EXHAUST	20/1	12	33	B	34			SPARE								1.00
		468						-	-	-	35	C	36			SPARE								1.00
		468						-	-	-	37	A	38			SPARE								1.00
								SPARE			39	B	40			SPARE								1.00
								SPARE			41	C	42			SPARE								1.00
1980	360	5109	0	0	0	0	0.00	**TOTALS**								**TOTALS**	150	0	40296	0	0	0	0	8.00

LOAD SUMMARY

Ltg.	Recept	Motor	Heat	Cool	Other	Kitchen	S/S	Description
2.1	0.4	45.4	0.0	0.0	0.0	0.0	8.0	Connected KVA
1.25	**	1.00	1.00	1.00	1.00	0.65	0.50	*Design Factors
2.7	0.4	45.4	0.0	0.0	0.0	0.0	4.0	Design KVA

Phase Load

Ph	KVA
A	16.5
B	16.1
C	15.3

Panel Remarks:

*Input div. factor per descriptions as required for calculations.
**100% of 1st 10 KVA, 50% of remaining.

	Con. KVA	Con. Amps		Des. KVA	Des. Amps
TOTAL	55.9	155.1		52.4	145.5

PANEL: **C1A**

Date: 4/14/2023 | By: Designer

10/22/03

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

ARCHITECT PBK Architects, Inc.
COSTA MESA PBK.com
600 Anton Boulevard, Suite 1375
Costa Mesa, CA 92626
P 949-548-5000

CONSULTANT LEAF ENGINEERS
LEAF ENGINEERS
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909.987-0909
leafengineers.com

WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN N

NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL SCHEDULES

E5.01

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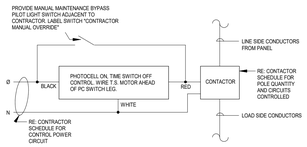
5/11/2023 10:34:13 AM

0" 1"

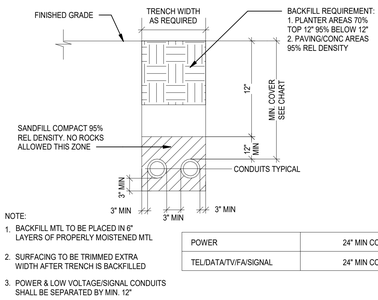


5 CONTACTOR CONTROL DIAGRAM
N.T.S.

KEY NOTES:

1. ATTACH WIRE TO FIXTURE (3 TIGHT TURNS MIN. IN 1½" MAX.)
2. MIN #8 "TEK" SCREW GRID TO FIXTURE @ EACH CORNER.
3. ATTACH HANGER WIRES TO STRUCTURE AS PER ARCHITECTURAL DETAIL 1/A8.03.

4 RECESSED FIXTURE IN LAY-IN GRID DETAIL
N.T.S.

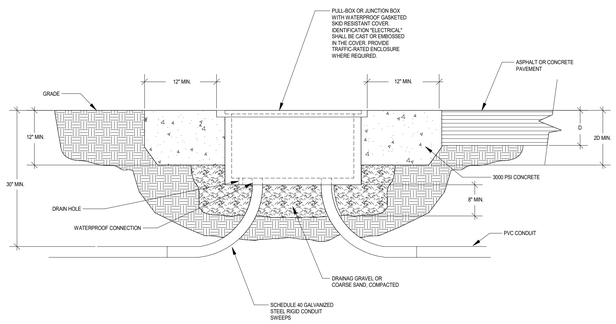


NOTE:

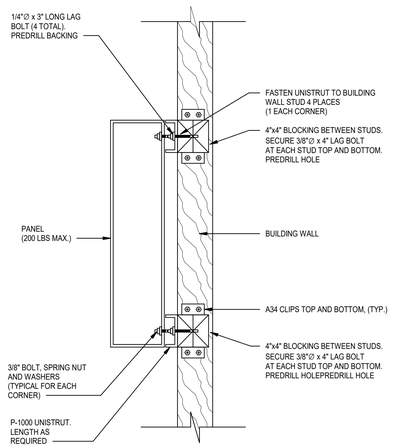
1. BACKFILL MTL TO BE PLACED IN 6" LAYERS OF PROPERLY MOISTENED MTL
2. SURFACING TO BE TRIMMED EXTRA WIDTH AFTER TRENCH IS BACKFILLED
3. POWER & LOW VOLTAGE/SIGNAL CONDUITS SHALL BE SEPARATED BY MIN. 12"

POWER	24" MIN COVER UNO
TEL/DATA/TV/FA/SIGNAL	24" MIN COVER UNO

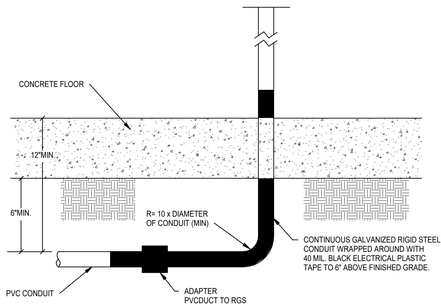
3 TRENCH DETAIL
N.T.S.



6 EXTERIOR JUNCTION BOX
N.T.S.



2 SURFACE MOUNTED PANEL/CABINET AT WOOD FRAMING DETAIL
N.T.S.



1 CONDUIT RISER DETAIL
12" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horner St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

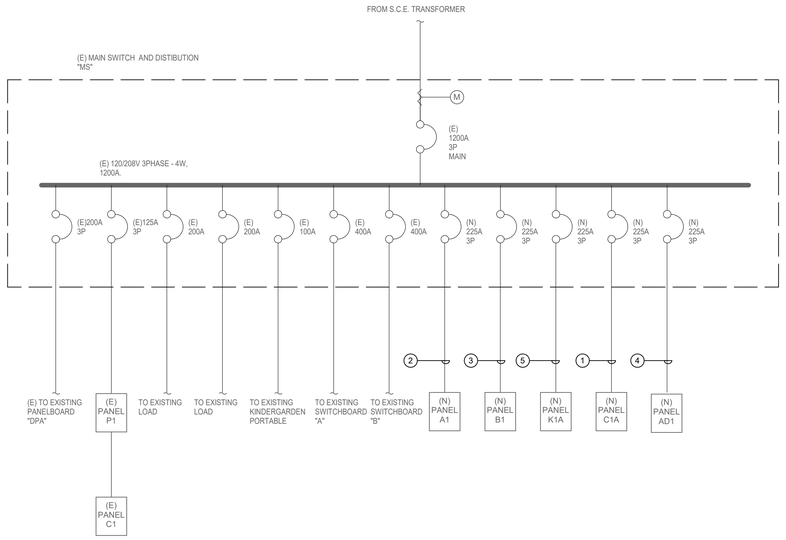
REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL DETAILS

E6.01



LEGEND:

(N) NEW

(E) EXISTING

KEY NOTES

1. 4#4/0, 1#2G, 2-1/2"C. V.D.=1.89%
2. 4#4/0, 1#2G, 2-1/2"C. V.D.=0.81%
3. 4#4/0, 1#2G, 2-1/2"C. V.D.=2.74%
4. 4#4/0, 1#2G, 2-1/2"C. V.D.=1.24%
5. 4#4/0, 1#2G, 2-1/2"C. V.D.=1.33%

1 SINGLE LINE DIAGRAM - NEW
N.T.S.

FILE PATH: Z:\Projects\...
5/11/2023 10:34:14 AM

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

ARCHITECT PBK Architects, Inc.
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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Horner St.
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

ELECTRICAL SINGLE LINE DIAGRAM

E6.02

P0.00 - PLUMBING SYMBOLS, LEGENDS AND NOTES

0" 1"

PLUMBING LEGEND

NOTE: NOT ALL SYMBOLS TABULATED BELOW ARE NECESSARILY USED ON THE DRAWINGS.

SYMBOL	ITEM	ABBR.
S / 1	FIXTURE DESIGNATION UNIT ABBREVIATION NUMBER	
01 / P-1	DETAIL DESIGNATION DETAIL NUMBER SHEET NO. WHERE SHOWN	
	DOMESTIC COLD WATER	CW
	DOMESTIC HOT WATER	HW
	DOMESTIC HW RETURN	HWR
	EXISTING PIPING	
X	POINT OF CONNECTION	POC
C	CONDENSATE DRAIN	
	SHUT-OFF VALVE IN BOX	SOV
	PIPING RISE	
	PIPING DROP	
S W	SOIL OR WASTE	S OR W
V	VENT	V
	VENT THRU ROOF	VTR
FCO	FLOOR CLEANOUT	FCO
COTG	CLEANOUT TO GRADE	COTG
	WALL CLEANOUT	WCO
	HOSE BIBB	HB
RD	ROOF DRAIN	RD
OD	OVERFLOW DRAIN	OD
	DOWN SPOUT	DS
	UNDERGROUND	UG
TP	TRAP PRIMER	TP
SD	STORM DRAIN	SD
(E)	EXISTING	EXIST.
(N)	NEW	NEW
	UNDERFLOOR	UF
	OVERHEAD	OH
R	RELIEF	
D	DRAIN	
	CONDENSATE DRAIN CLEAN OUT	CO
SC	SECONDARY CONDENSATE DRAIN	
FC	FURNACE CONDENSATE	
	GAS SHUT OFF VALVE	GSOV
	CONDENSATE DRAIN TRAP	CDT
LPG	LIQUIFIED PETROLEUM GAS	LPG
G	NATURAL GAS	G
	FIRE SPRINKLER RISER	FSR
FSL	FIRE SPRINKLER LINE	FSL
	FIRE DEPARTMENT CONNECTION	FDC
	FINISHED FLOOR	FF
	FLOW LINE	FL
▲	FIRE RATED PENETRATION	
	POINT OF DISCONNECTION	POD
	POINT OF CONNECTION	POC

CALIFORNIA GREEN BUILDING STANDARDS

THE FOLLOWING SHALL BE REQUIRED WHETHER OR NOT SPECIFICALLY SHOWN OR MENTIONED IN DRAWINGS AND/OR SPECIFICATIONS:

5.303.1 METERS: SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR USES DESCRIBED IN SECTIONS
5.303.1.1 AND 5.303.1.2.

5.303.1.1 NEW BUILDINGS OR ADDITIONS IN EXCESS OF 50,000 SQUARE FEET:
1. FOR EACH INDIVIDUAL LEASED, RENTED, OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTEED TO CONSUME MORE THAN 100 GAL/DAY, INCLUDING, BUT NOT LIMITED TO, SPACES USED FOR LAUNDRY OR CLEANERS, RESTAURANT OR FOOD SERVICE, MEDICAL OR DENTAL OFFICE, LABORATORY, OR BEAUTY SALON OR BARBER SHOP.
2. WHERE SEPARATE SUBMETERS FOR INDIVIDUAL BUILDING TENANTS ARE UNFEASIBLE, FOR WATER SUPPLIED TO THE FOLLOWING SUBSYSTEMS.
   a. MAKE-UP WATER FOR COOLING TOWERS WHERE FLOW THROUGH IS GREATER THAN 500 GPM.
   b. MAKE-UP WATER FOR EVAPORATIVE COOLERS GREATER THAN 6 GPM.
   c. STEAM AND HOT-WATER BOILERS WITH ENERGY INPUT MORE THAN 500,000 BTUH/H.

5.303.1.2 EXCESS CONSUMPTION: A SEPARATE SUBMETER OR BE PROVIDED FOR ANY TENANT WITHIN A NEW BUILDING OR WITHIN AN ADDITION THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY.

5.303.2 RESERVED

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS: PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL COMPLY WITH THE FOLLOWING:

5.303.3.1 WATER CLOSETS: THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS. NOTE: THE EFFECTIVE FLUSH VOLUME OF DUAL FLUSH TOILETS IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

5.303.3.2 URINALS:

5.303.3.2.1 WALL-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.

5.303.3.2.2 FLOOR-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

5.303.3.2.1 WALL-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF WALL-MOUNTED URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.

5.303.3.2.2 FLOOR-MOUNTED URINALS: THE EFFECTIVE FLUSH VOLUME OF FLOOR-MOUNTED URINALS SHALL NOT EXCEED 0.5 GALLONS PER FLUSH.

5.303.3.3 SHOWERHEADS:

5.303.3.3.1 SINGLE SHOWERHEAD: SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 2.0 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.

5.303.3.3.2 MULTIPLE SHOWERHEADS SERVING ONE SHOWER: WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWERHEADS AND/OR SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 2.0 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. NOTE: A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.

5.303.3.4 FAUCETS AND FOUNTAINS:

5.303.3.4.1 NONRESIDENTIAL LAVATORY FAUCETS: LAVATORY FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.5 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.2 KITCHEN FAUCETS: KITCHEN FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

5.303.3.4.3 WASH FOUNTAINS: WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE/20 [RIM SPACE (INCHES) AT 60 PSI].

5.303.3.4.4 METERING FAUCETS: METERING FAUCETS SHALL NOT DELIVER MORE THAN 0.20 GALLONS PER CYCLE.

5.303.3.4.5 METERING FAUCETS FOR WASH FOUNTAINS: METERING FAUCETS FOR WASH FOUNTAINS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 0.20 GALLONS PER CYCLE/20 [RIM SPACE (INCHES) AT 60 PSI]. NOTE: WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

PLUMBING TESTING

1. ALL EQUIPMENT AND/OR SYSTEMS NOTED ON THE DRAWINGS "TO REMAIN" SHALL BE INSPECTED AND TESTED ON SITE TO CERTIFY WORKING CONDITION. A WRITTEN REPORT ON THE CONDITION OF ALL EQUIPMENT TO REMAIN, INCLUDING A COPY OF THE TEST RESULTS AND RECOMMENDED REMEDIAL ACTIONS AND COSTS SHALL BE MADE BY THIS CONTRACTOR TO THE ARCHITECT/ENGINEER FOR REVIEW.

2. PIPE COVER AND BACKFILLING:
   A. AFTER HYDROSTATIC TEST, EVENLY BACKFILL ENTIRE TRENCH WIDTH BY HAND PLACING BACKFILL MATERIAL AND HAND TAMPING IN FOUR (4) ICHES COMPACTED LAYERS TO 12 INCHES MINIMUM COVER OVER TOP OF JACKET. COMPACT TO 95 PERCENT MAXIMUM DENSITY.
   B. EVENLY AND CONTINUOUSLY BACKFILL REMAINING TRENCH DEPTH IN
   C. UNIFORM LAYERS WITH BACKFILL MATERIAL
   D. DO NOT USE WHEELED OR TRACKED VEHICLES FOR TAMPING.

3. PRESSURE TEST ALL DOMESTIC WATER PIPING. AFTER INSTALLATION AND PRIOR TO BACKFILL OR COVER-UP, RINSE PIPING SYSTEM OF PARTICULATE CONTAMINANTS, CAP AND SUBJECT TO STATIC WATER PRESSURE OF 125 PSIG FOR FOUR (4) HOURS. REPAIR LEAKS AND DEFECTS AND RE-TEST ANY PORTION OF PIPING SYSTEM THAT FAILS. PROVIDE WRITTEN TEST REPORT INCLUDING DATE AND TIME OF TEST, PASS OR FAIL INDICATION, SUMMARY OF REMEDIAL WORK REQUIRED AND DATE AND TIME OF EACH RE-TEST.

4. PRIOR TO COVER UP, WATER PIPE, SANITARY PIPE, AND GAS PIPING SHALL BE PRESSURE TESTED. TESTS SHALL BE WITNESSED BY CONSULTANT AND OWNER. NOTIFY OWNER 48 HOURS PRIOR TO TEST. TEST SHALL BEWITNESSED BY CLIENT PLUMBING TECHNICIAN.

5. UPON COMPLETION OF THE SANITARY PIPING SYSTEM, THE CONTRACTOR SHALL NOTIFY ENGINEER AND OWNER TO OBSERVE A SMOKE TEST OF THE SYSTEM. SMOKE TESTING SHALL BE PERFORMED ON SANITARY PIPING SYSTEM TWICE DURING CONSTRUCTION.

6. PRESSURE TEST NATURAL GAS PIPING IN ACCORDANCE WITH NFPA 54. CA PLUMBING CODE SECTION 1213

GENERAL PLUMBING NOTES

1. ALL BRACING OF PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES, HAZARD LEVEL 'A'.
2. WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT, MECHANICAL ENGINEER AND FIELD INSPECTOR.
3. SUPPORT AND BRACING OF ALL PIPING SHALL BE IN ACCORDANCE WITH THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF PLUMBING PIPING SYSTEMS", OR THE "SUPERSTRUT SEISMIC RESTRAINT SYSTEM" FOR PIPING ONLY.
4. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL PIPE ROUTING WITH WORK OF OTHER TRADES AND MAKE ANY OFFSETS AS REQUIRED TO AVOID CONFLICT WITH DUCTWORK, LIGHT FIXTURES, SKYLIGHTS, ETC.
6. PLUMBING CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL CONDENSATE DRAIN CONNECTIONS TO MECHANICAL EQUIPMENT.
7. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING PLUMBING CONDITIONS PRIOR TO PROCEEDING WITH INSTALLATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ ENGINEER OF ANY EXISTING CONDITIONS WHICH CONFLICT WITH INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS.
8. FOR PLUMBING FIXTURE MOUNTING HEIGHTS AND LOCATIONS, REFER TO THE ARCHITECTURAL DRAWINGS.
9. ALL PLUMBING CONVEYING OR DISPENSING WATER FOR HUMAN CONSUMPTION SHALL COMPLY WITH AB 1953 FOR LEAD CONTENT.
10. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATIONS OF FIXTURES, EQUIPMENT, ETC. DO NOT SCALE FROM PLUMBING DRAWINGS.
11. ALL WALL CLEAN-OUTS SHALL BE ACCESSIBLE BY AN ACCESS PANEL.
12. PROVIDE A DOUBLE EXTERIOR CLEAN-OUT (DFCO) ON ALL SANITARY LINES EXITING THE BUILDING.
13. ALL FLOOR DRAINS AND FLOOR SINKS SHALL BE PROVIDED WITH A TRAP PRIMER.
14. FIXTURES DESIGNATED AS ADA ACCESSIBLE BY ARCHITECT SHALL BE INSTALLED AT ADA ACCESSIBLE HEIGHT PER ARCHITECTURAL DETAILS.
15. ALL DOMESTIC COLD AND HOT WATER TAKE-OFFS SHALL HAVE AN ISOLATION SHUT-OFF VALVE.
16. CONTRACTOR SHALL DEWATER ANY AREA AT OR BELOW GRADE PRIOR TO SETTING EQUIPMENT.
17. ANY AND ALL WATER PIPING EXPOSED TO OUTSIDE ELEMENTS SHALL BE INSULATED TO PREVENT FREEZING.
18. ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED BY THE INSPECTION AUTHORITY. NOTHING IN THESE PLANS IS TO BE CONSTUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHER APPLICABLE PROJECT SPECIFICATIONS:

LIST OF APPLICABLE CODES
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARD CODE (CALGREEN), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCE STANDARDS CODE (CBC), PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS
FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

19. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE FACILITY, UTILITIES AND APPURTENANCE CAUSED BY THE WORK IN THEIR SCOPE. CONTRACTOR SHALL RESTORE AND REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO THE OWNERS BY INSTALLATION THE FACILITY OF NEW WORK.
20. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

MEP COMPONENT ANCHORAGE NOTES:

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30:

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

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

1. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
2. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUND PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTION 1617A.1.24, 1617A.1.25, AND 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO START OF AND DURING THE HANGING AND BRACING OF DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

MP☐ MD☐ PP☒ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES & DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #) #_____.

DRAWING INDEX

ABBREVIATIONS

NOTE: 1. ALL ABBREVIATIONS MAY NOT BE USED ON THESE DRAWINGS.

AAP	AREA ALARM PANEL	MH	MANHOLE
AAV	AUTOMATIC AIR VENT	MS	MOP SINK
A.F.F.	ABOVE FINISHED FLOOR	N.C.	NORMALLY CLOSED
AP	ACCESS PANEL	NIC	NOT IN CONTRACT
B.F.F.	BELOW FINISHED FLOOR	N.O.	NORMALLY OPEN
BFP	BACKFLOW PREVENTER	O.F./C.I.	OWNER FURNISHED/CONTRACTOR INSTALLED
BOB	BOTTOM OF BEAM	O.F./O.I.	OWNER FURNISHED/OWNER INSTALLED
BOP	BOTTOM OF PIPE	OFD	OVERFLOW DRAIN
BTUH	BRITISH THERMAL UNITS PER HOUR	PH	PHASE
CA	COMPRESSED AIR	PIV	POST INDICATOR VALVE
C/C	CUT AND CAP	PRV	PRESSURE REDUCING VALVE
CFH	CUBIC FEET PER HOUR	RD	ROOF DRAIN
CFS	CUBIC FEET PER SECOND	RE:	REFER TO
CI	CAST IRON	R.I.C.	ROUGH-IN AND CONNECT
CLG	CEILING	RO	REVERSE OSMOSIS
CO	CLEANOUT	RPBFP	REDUCED PRESSURE BACKFLOW PREVENTER
CONN	CONNECTION	RPM	REVOLUTIONS PER MINUTE
CONT.	CONTINUATION	RVB	REFRIGERATOR VALVE BOX
DF	DRINKING FOUNTAIN	SD	STORM DRAIN
DPV	DRY PIPE VALVE	S.F.	SQUARE FEET
DWG.	DRAWING	SIA.	SIAMESE
EA	EACH	SK	SINK
EL.	ELEVATION	T.O.P.	TOP OF PIPE
EDF	ELECTRIC DRINKING FOUNTAIN	TP	TRAP PRIMER
FCO	FLOOR CLEANOUT	TYP	TYPICAL
FD	FLOOR DRAIN	U	URINAL
FDV	FIRE DEPARTMENT VALVE	U/F	UNDERFLOOR
F.F.	FINISHED FLOOR	U/S	UNDERSLAB
FHC	FIRE HOSE CABINET	VAC. BRKR.	VACUUM BREAKER
F.L.	FLOW LINE	VIF	VERIFY IN FIELD
FS	FLOOR SINK	VTR	VENT THRU ROOF
FT	FEET	WC	WATER CLOSET
FU	FIXTURE UNITS	WCO	WALL CLEANOUT
GC	GENERAL CONTRACTOR	WH	WALL HYDRANT
GPH	GALLONS PER HOUR	WMB	WASHING MACHINE BOX
GPM	GALLONS PER MINUTE	YH	YARD HYDRANT
HB	HOSE BIBB	ZV	ZONE VALVE
HP	HORSEPOWER	(A)	ITEM NOTED TO BE ABANDONED
I.E.	INVERT ELEVATION	(D)	ITEM NOTED TO BE DEMOLISHED
KW	KILOWATTS	(E)	EXISTING ITEM
LAV	LAVATORY	(N)	NEW ITEM
MAP	MASTER ALARM PANEL	(R)	ZFITEM NOTED TO RELOCATED
MECH	MECHANICAL		

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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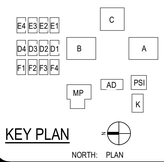
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

KEY PLAN



Consultant

REGISTERED PROFESSIONAL ENGINEER REX DAVID TRANT No.M36155 Exp.09-30-2024 MECHANICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

PLUMBING SYMBOLS, LEGENDS AND NOTES

P0.00

FILE PATH: Z:\Projects\...
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P1.00 - PLUMBING SITE PLAN

0" 1"

KEY NOTES

1 SCOPE OF WORK.

NORTH

1 SITE PLAN
1" = 30'-0"

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DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

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WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

No.	Description	Date

DSA SUBMITTAL

PLUMBING SITE PLAN

P1.00

PD2.01 - PLUMBING FLOOR PLANS - DEMO

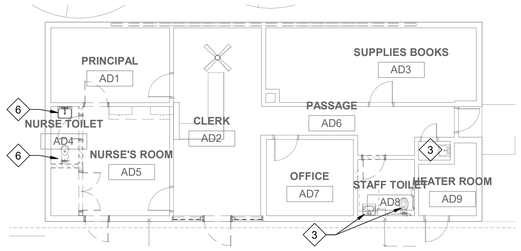
0" 1"

DEMO KEY NOTES

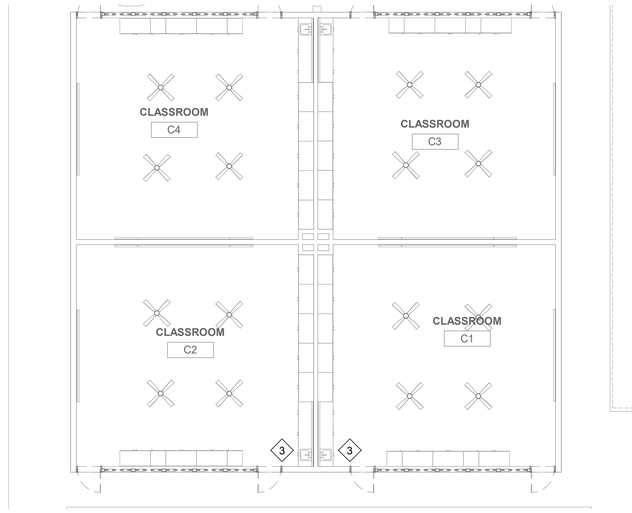
1. EXISTING WATER CLOSET TO BE REMOVED AND REPLACED . CAP EXISTING UTILITIES TEMPORARILY FOR REPLACEMENT WATER CLOSET.
2. EXISTING LAVATORY TO BE REMOVED AND REPLACED . CAP EXISTING UTILITIES TEMPORARILY FOR REPLACEMENT LAVATORY.
3. EXISTING PLUMBING FIXTURE TO REMAIN
4. MECHANICAL EQUIPMENT TO BE DEMOLISHED. REFER TO HVAC PLANS. CAP EXISTING 1 1/2" GAS AND 2" MAKE UP WATER TO MECHANICAL BOILER
5. EXISTING RESTROOMS FIXTURES TO BE RE-CONFIGURED. EXISTING PLUMBING FIXTURE TO BE REMOVED AND ALL APPURTENANCES. CAP EXISTING 4" SANITARY BELOW GRADE WITHIN SCOPE OF WORK. TEMPORARILY CAP EXISITNG VENT AND WATER LINES ABOVE IN CEILING SPACE BACK TO THE MAIN BRANCH.
6. EXISTING RESTROOMS FIXTURES TO BE RE-CONFIGURED. EXISTING PLUMBING FIXTURE TO BE REMOVED AND ALL APPURTENANCES. CAP EXISTING SANITARY BELOW GRADE WITHIN SCOPE OF WORK. TEMPORARILY CAP EXISITNG VENT AND WATER LINES ABOVE IN CEILING SPACE BACK TO THE MAIN BRANCH.

CONSTRUCTION NOTES

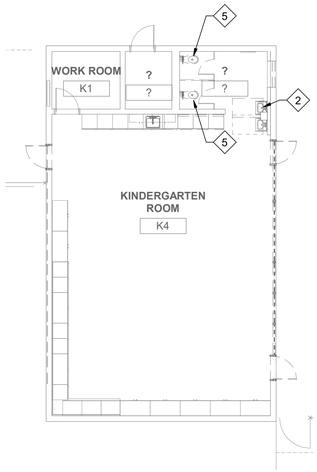
1. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILTS
2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTIONS PRIOR TO BIDDING THE PROJECT.
4. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND OR EXTEND EXISTING PIPING OR ROUGH INS AS REQUIRED TO SUIT THE NEW FIXTURE.



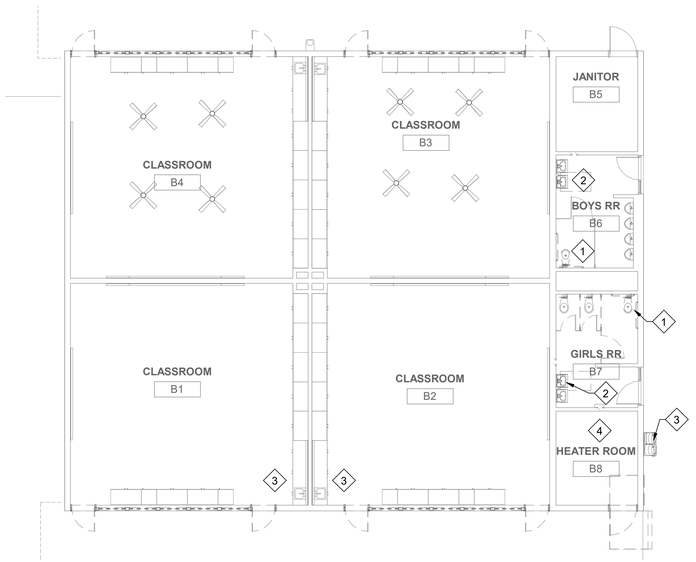
5 BLDG ADMIN - FLOOR PLAN - DEMO
1/8" = 1'-0"



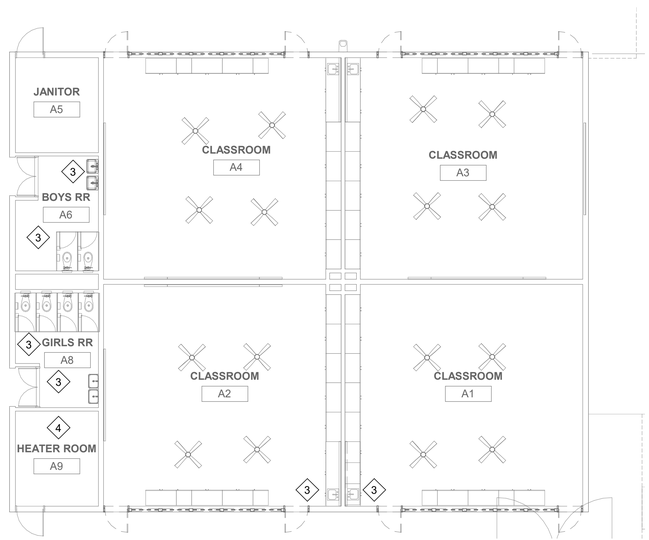
4 BLDG C - FLOOR PLAN - DEMO
1/8" = 1'-0"



3 BLDG K - FLOOR PLAN - DEMO
1/8" = 1'-0"



2 BLDG B - FLOOR PLAN - DEMO
1/8" = 1'-0"



1 BLDG A - FLOOR PLAN - DEMO
1/8" = 1'-0"

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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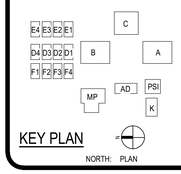
DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



Consultant

REGISTERED PROFESSIONAL ENGINEER
RAJ DAVID MANG
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

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PLUMBING FLOOR PLANS - DEMO

PD2.01

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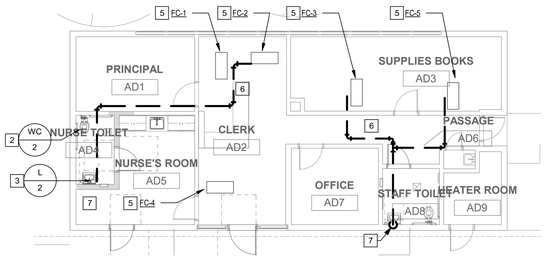
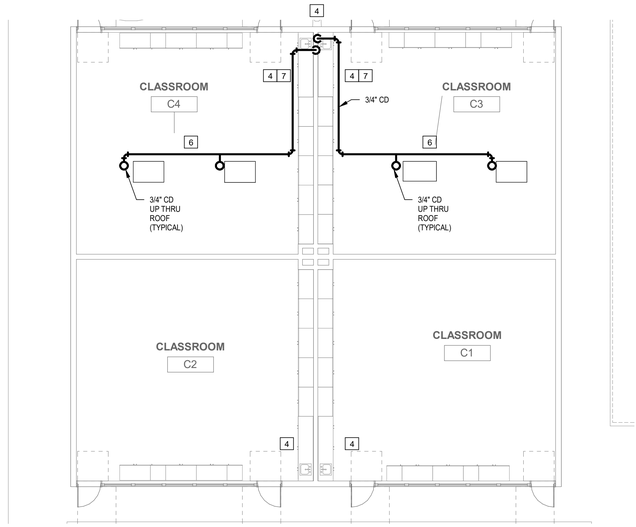
5/11/2023 6:20:51 PM

0" 1"



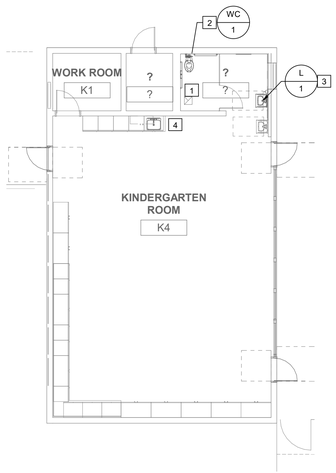
5 BLDG ADMIN - FLOOR PLAN
1/8" = 1'-0"

NORTH



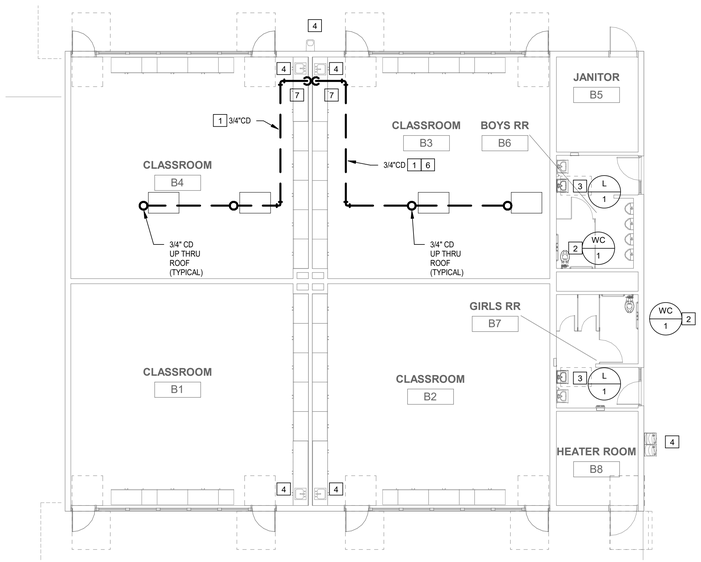
4 BLDG C - FLOOR PLAN
1/8" = 1'-0"

NORTH



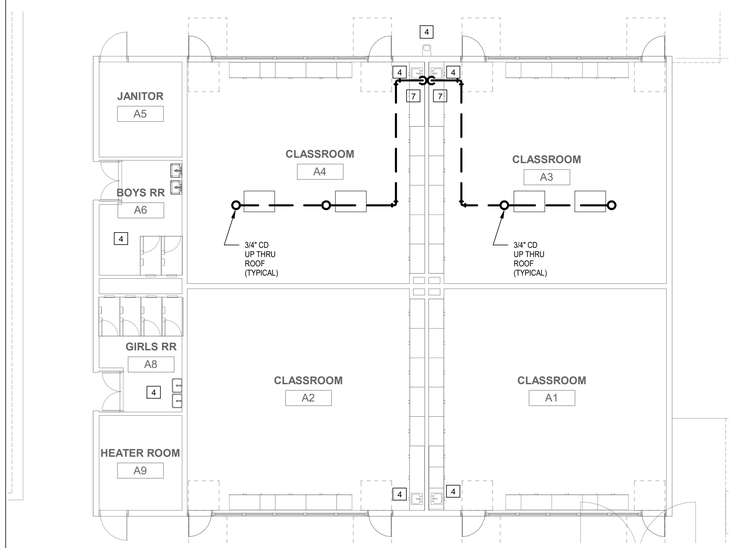
3 BLDG K - FLOOR PLAN
1/8" = 1'-0"

NORTH



2 BLDG B - FLOOR PLAN
1/8" = 1'-0"

NORTH



1 BLDG A - FLOOR PLAN
1/8" = 1'-0"

NORTH

KEY NOTES

1. PIPING ABOVE IN ATTIC SPACE
2. ROUGH IN AND CONNECT 4" SANITARY SEWER , 2" VENT AND 1 -1/4" CW TO WATER CLOSET. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND/OR EXTEND EXISTING PIPING OR ROUGH-INS AS REQUIRED TO SUIT THE NEW FIXTURE.
3. LAVATORY AND FAUCET TO BE INSTALLED ADA COMPLIANT. PLUMBING CONTRACTOR TO SUPPLY & INSTALL NEW ANGLE STOP, SINK SUPPLY, COMPLETE WITH LOOSE KEY. CHROME ESCUTCHEON PLATE COMPRESSION INLET, HEAVY DUTY OUTLET RISER. ROUGH IN AND CONNECT 2" SANITARY SEWER , 2" VENT AND 1/2" H/ CW. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND/OR EXTEND EXISTING PIPING OR ROUGH-INS AS REQUIRED TO SUIT THE NEW FIXTURE.
4. EXISTING PLUMBING FIXTURE
5. NEW FAN COIL UNITS (BY MECHANICAL) PROVIDE CONDENSATE TRAP AND VENT AS REQUIRED SEE DETAIL 01 / P6.01
6. 3/4" CONDENSATE IN ATTIC SPACE SLOPE @ 1%
7. 3/4" CONDENSATE FROM ABOVE. DROP DN. IN WALL TO LAV TAIL PIECE SEE DETAIL 02/ P6.01

CONSTRUCTION NOTES

1. FOR CONTINUATION OF ALL UTILITIES SEE BUILDING AS-BUILTS
2. BEFORE COMMENCEMENT OF WORK , THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING BY PHYSICAL EXCAVATION AND SHALL IMMEDIATLEY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AND POINTS OF CONNECTIONS PRIOR TO BIDDING THE PROJECT.
4. WHERE PLANS INDICATE NEW FIXTURES OR EQUIPMENT CONNECTING TO EXISTING SERVICES, PLUMBING CONTRACTOR SHALL MODIFY AND OR EXTEND EXISTING PIPING OR ROUGH INS AS REQUIRED TO SUIT THE NEW FIXTURE.

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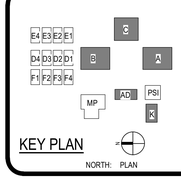

Consultant

REGISTERED PROFESSIONAL ENGINEER
REF. DAVID PRATT
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STATE OF CALIFORNIA

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CLIENT
WESTMINSTER SCHOOL DISTRICT

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PLUMBING FLOOR PLANS

P2.01

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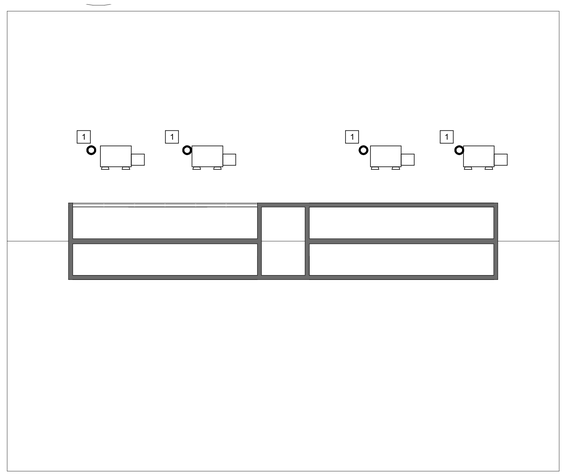
0" 1"

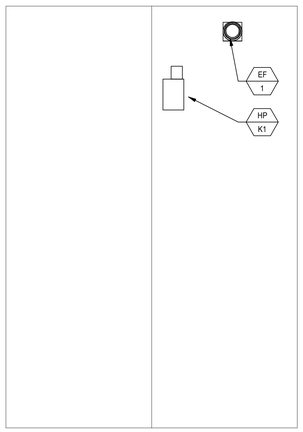
KEY NOTES

1 NEW A/C UNITS (BY MECHANICAL) PROVIDE 3/4" CONDENSATE LINE, TRAP AND VENT AS REQUIRED. ROUTE 3/4" CONDENSATE DOWN THROUGH ROOF (3/P6.01)

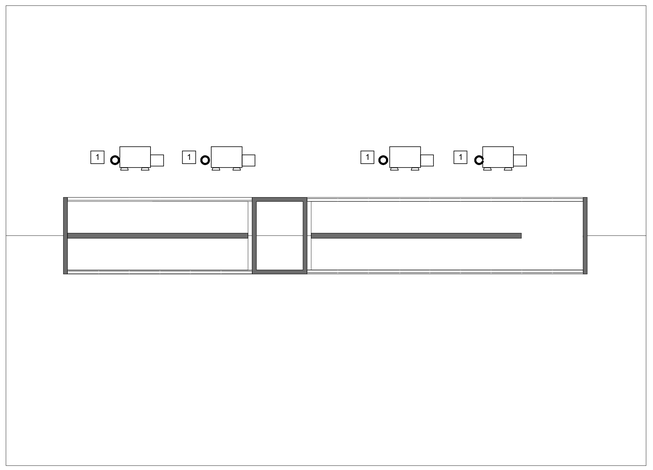
5 BLDG ADMIN - ROOF PLAN
1/8" = 1'-0"



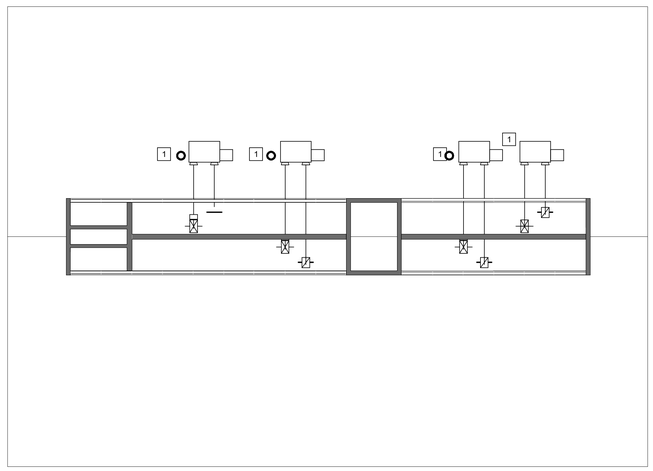
4 BLDG C - ROOF PLAN
1/8" = 1'-0"



3 BLDG K - ROOF PLAN
1/8" = 1'-0"



2 BLDG B - ROOF PLAN
1/8" = 1'-0"



1 BLDG A - ROOF PLAN
1/8" = 1'-0"

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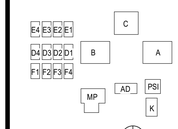

KEY PLAN NORTH: PLAN

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REZ DAVID RAHAD
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WESTMINSTER SCHOOL DISTRICT

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PLUMBING ROOF & CLERESTORY PLANS

P3.01

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0" 1"

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	S or W	V	CW	HW	DESCRIPTION
WC 1	WATER CLOSET (KINDER)	4"	2"	1-1/2"	---	AMERICAN STANDARD MADERA YOUTHWISE # 2599.001.128 FLOOR MOUNTED TOILET SYSTEM WITH 6047.161.002 MANUAL FLUSH VALVE WITH METAL COVER AND 5901.100 HEAVY DUTY OPEN FRONT ADJUSTABLE SEAT. FLUSH VALVE HANDLE TO BE MOUNTED ON WIDE SIDE OF STALL , CBC COMPLIANT
WC 2	WATER CLOSET (ADA)	4"	2"	1-1/2"	---	AMERICAN STANDARD MADERA FLOWISE # 2854.128 FLOOR MOUNTED TOILET SYSTEM WITH SLOAN ROYAL 111-1.28 MANUAL FLUSH VALVE WITH METAL COVER AND 5901.100 HEAVY DUTY OPEN FRONT ADJUSTABLE SEAT. FLUSH VALVE HANDLE TO BE MOUNTED ON WIDE SIDE OF STALL . (ACCESSIBLE) CBC COMPLIANT
L 1	LAVATORY (KINDER GARTEN)	2"	1-1/2"	1/2"	1/2"	AMERICAN STANDARD NO. 0356.041"LUCERNE WALL HUNG LAVATORY" 20"X18" WALL HUNG, COMPLETE WITH FAUCET WITH 0.5 GPM AERATOR AND VANDAL RESISTANT COVER PLATE, MCGUIRE NO. 155A 1-1/4" OUTLET "OPEN GRID P.O. PLUG" MCGUIRE NO. PW8080NCO 1-1/4" L.A. PATTERN P-TRAP WITH TRAP AND SUPPLYCOVERS, GALVANIZED NIPPLE AND CHROMIUM PLATED BRASS CASING, CHICAGO NO. 1017 -ABCP LOOSE KEY STOPSWITH RIGID SUPPLIES, AND ZURN NO. Z-1231CARRIER WITH STEEL PLATE, MOUNT AT ADA ACCESIBLE HEIGHT.
L 2	LAVATORY (STAFF)	2"	1-1/2"	1/2"	1/2"	SAME AS L-1 MOUNT AT ACCESSIBLE HEIGHT
WHA 1	WATER HAMMER ARRESTER	---	---	VARIES	VARIES	PPP SC SERIES HYDRA-RESTER, SEAMLESS COPPER CHAMBER SUITABLE FOR CONCEALED INSTALLATION, SIZE INDICATED ON PLANS. INSTALL PER MANUFACTURER RECOMMENDATION.

NOTES:

1. REFER TO ARCHITECHTURAL DRAWINGS FOR EXACT SPECIFICATIONS AND LOCATIONS OF ALL APPLIANCES, PLUMBING FIXTURES AND FAUCETS. WHERE THERE IS A DISCREPANCY BETWEEN THE ENGINEERING AND ARCHITECTURAL DRAWINGS OF APPLIANCES AND FIXTURE SPECIFICATIONS, NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
2. ALL FIXTURES AND APPLIANCES SHALL BE APPROVED BY THE LOCAL AUTHORITIES HAVING JURISDICTION.
3. PLUMBING CONTRACTOR TO COORDINATE NUMBER OF REQUIRED HOLES FOR ALL SINKS BASED ON EQUIPMENT / ACCESSORIES SPECIFIED. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
4. ALL FITTINGS AND FAUCETS TO BE USED SHALL BE IN COMLIANCE WITH STATE ASSEMBLY BILL AB1953 (LEAD FREE)

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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E4 E3 E2 E1
D4 D3 D2 D1
F1 F2 F3 F4
C
B
A
MP
AD
PSI
K

KEY PLAN

NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
REZ - DAVID IMANO
No.M36155
Exp.09-30-2024
STATE OF CALIFORNIA

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CLIENT
WESTMINSTER SCHOOL DISTRICT

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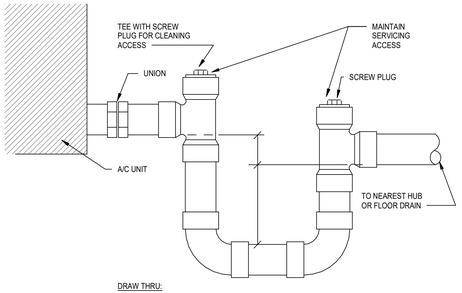
PLUMBING SCHEDULES

P5.01

0" 1"



DRAW THRU:

DIMENSION TO BE 1" GREATER THAN SUCTION PRESSRE OF OF UNIT (IN. W.G.).

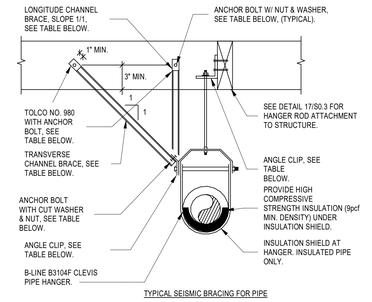
DIMENSION TO BE 1/2 TOTAL PRESSURE OF UNIT (IN. W.G.)

BLOW THRU:

DIMENSION TO BE 1"

DIMENSION TO BE EQUAL TO TOTAL PRESSURE OF UNIT (IN. W.G.)

3 CONDENSATE TRAP PIPING DETAIL
12" = 1'-0"

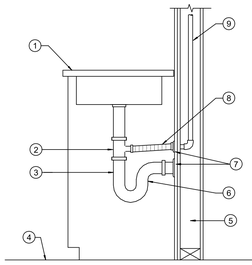


TYPICAL SEISMIC BRACING FOR PIPE

PIPE SIZE	* CHANNEL BRACE	RO D SIZ E	MAX. VERT. SUPPORT SPACING	MAX. TRANS./ LONGITUDE SUPPORT SPACING	ANCHOR BOLT SIZE	ANGLE CLIP
1/2"	1-5/8"x1-5/8"x12 GA	1/4"	5'	10'	1/4"	2"x2"x1/8"x0'-2"
3/4"	1-5/8"x1-5/8"x12 GA	1/4"	6'	12'	3/8"	2"x2"x1/8"x0'-2"
1"	1-5/8"x1-5/8"x12 GA	3/8"	7'	14'	3/8"	3"x3"x1/4"x0'-3"
1-1/4"	1-5/8"x1-5/8"x12 GA	3/8"	8'	16'	3/8"	3"x3"x1/4"x0'-3"
1-1/2"	1-5/8"x1-5/8"x12 GA	3/8"	9'	18'	3/8"	3"x3"x1/4"x0'-3"
2"	1-5/8"x1-5/8"x12 GA	3/8"	10'	20'	3/8"	3"x3"x1/4"x0'-3"
2-1/2"	1-5/8"x1-5/8"x12 GA	3/8"	10'	22'	3/8"	3"x3"x1/4"x0'-3"
3", 4"	1-5/8"x1-5/8"x12 GA	3/8"	11'	24'	1/2"	3"x3"x1/4"x0'-3"

* CHANNEL MAX. 5'-0" LENGTH

2 PIPE SUPPORT DETAIL (WOOD STRUCTURE)
12" = 1'-0"



DETAIL NOTES:

1. SINK IN CABINET.
2. SLIP-JOINT FITTING.
3. TRAP.
4. FINISHED FLOOR.
5. WALL.
6. INSULATE SUPPLY AND DRAIN PER SPECIFICATIONS.
7. ESCUTCHEON PLATE.
8. NEOPRENE HOSE & CLAMPS.
9. 3/4" CONDENSATE DRAIN IN WALL.

NOTE:
SEE ARCHITECT'S DRAWINGS FOR ACCESSIBLE REQUIREMENTS.

1 CONDENSATE TO TAILPIECE DETAIL
12" = 1'-0"

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E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
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PLUMBING DETAILS

P6.01

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0" 1"

DEVICE SCHEDULE

SYM.	MODEL	MANUFACTURER	DESCRIPTION	MOUNTING	CSFM #
FACP	IFP-2100ECS	FARENHYT	EMERGENCY VOICE/ALARM COMMUNICATION PANEL ECS-INT50W, INTERNAL 50 WATT AMPLIFIER 6815, SLC EXPANDER	WALL MOUNTED	7165-0559:0505 7300-0559:0176
	HWF2V-COM	HONEYWELL/ADEMCO	CELLULAR FIRE ALARM COMMUNICATOR	WALL MOUNTED	7300-1645:0511
	SSU00672	SAE	FIRE DOCUMENT BOX-RED	WALL MOUNT @ FACP	UL LISTED
AMP	ECS-50W	FARENHYT	SINGLE CHANNEL 50W, 25/70V AMPLIFIER	WALL MOUNTED	7165-0559:0505
FAPS	RPS-1000	FARENHYT	INTELLIGENT 6 AMP NAC POWER SUPPLY	WALL MOUNTED	7165-0559:0505
FATC	SSU00636	SAE	FIRE ALARM TERMINAL CABINET	WALL MOUNTED	UL & NEMA LISTED
CR	IDP-RELAY	FARENHYT	ADDRESSABLE RELAY MODULE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7300-0559:0155
S P	IDP-PHOTO-W B210LP	FARENHYT	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR HEAD 6" DETECTOR BASE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7272-0559:0149 7300-1653:0109
! A / ! C	IDP-HEAT-W B210LP	FARENHYT	ADDRESSABLE FIXED (135°F) HEAT SENSOR HEAD (F = FIXED, A = ATTIC) 6" DETECTOR BASE	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7270-0559:0147 7300-1653:0109
F	IDP-PULL-DA	FARENHYT	ADDRESSABLE DOUBLE ACTION MANUAL PULL STATION	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7150-0559:0157
	SRL	SYSTEM SENSOR	MULTI CANDELA STROBE, CEILING MOUNT-RED	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7125-1653:0504
	SPSRL	SYSTEM SENSOR	MULTI CANDELA TEMPORAL SPEAKER STROBE, CEILING MOUNT-RED	4-11/16" SQUARE BOX 2-1/8" MIN. DEPTH	7320-1653:0505
WP	SPRK	SYSTEM SENSOR	WEATHER PROOF SPEAKER, WALL MOUNT-RED	WBB BACK BOX IS INCLUDED	7320-1653:0201
JB	TBD	TBD	ELECTRICAL JUNCTION BOX (SIZES WILL VARY)	TBD	UL LISTED
ANN	RA-2000	FARENHYT	FIRE ALARM REMOTE ANNUNCIATOR	4-11/16" SQUARE BOX	7165-0559:0505
****	PS-12260VdS	POWER SONIC	12VDC, 26AH RECHARGEABLE SEALED LEAD ACID BATTERY	INSTALL IN EVAC ENCLOSURE	UL LISTED
****	PS-1270	POWER SONIC	12VDC, 7AH RECHARGEABLE SEALED LEAD ACID BATTERY	INSTALL IN POWER SUPPLY, AMPLIFIER & FAC ENCLOSURES	UL LISTED

NOTES:
1. INSTALL TWO 12VDC, 26Ah BATTERIES IN EVAC ENCLOSURE.
2. INSTALL TWO 12VDC, 7AH BATTERIES IN EACH NAC POWER SUPPLY & AMPLIFIER ENCLOSURES.
3. INSTALL ONE 12VDC, 7AH BATTERY IN COMMUNICATOR ENCLOSURE.

LEGENDS

ABBREVIATION	DESCRIPTION	ABBREVIATION	DESCRIPTION
A OR AMP	AMPERES	NIC	NOT IN CONTRACT
AFF	ABOVE FINISHED FLOOR	NO.	NUMBER
AIC	AMPERES INTERRUPTING CAPACITY	PH. OR Ø	PHASE
ARCH.	ARCHITECT; ARCHITECTURAL	PNL	PANEL
AWG	AMERICAN WIRE GAUGE	PWR	POWER
C	CONDUIT	REC/RECEPT	RECEPTACLE
CKT	CIRCUIT	REQ'D	REQUIRED
CL.	CEILING MOUNTED DEVICE	RM	ROOM
C.O.	CONDUIT ONLY WITH PULL WIRE	SF	SQUARE FEET
CU	COPPER	SHT	SHEET
DWG	DRAWING	SP	SINGLE POLE
ER	EXISTING DEVICE TO BE REMOVED	SPECS	SPECIFICATIONS
EMT	ELECTRICAL METALLIC TUBING	SW	SWITCH
EQUIP	EQUIPMENT	TYP	TYPICAL
EXIST / (E)	EXISTING	UG	UNDERGROUND
FIN.	FINISH	U.O.N.	UNLESS OTHERWISE NOTED
FLR	FLOOR	V	VOLTS
FT	FEET	V-A	VOLT-AMPERES
GFI	GROUND FAULT INTERRUPTER	W	WATTS
GND	GROUND	W/	WITH
LTG.	LIGHTING	W/O	WITHOUT
MTG	MOUNTING	WP	WEATHERPROOF
N	NEW	CEC	CALIFORNIA ELECTRICAL CODE
FS	FLOW SWITCH		
JB	JUNCTION BOX		
PIV	POST INDICATOR VALVE		
TS	TEMPER SWITCH		
	PULL BOX (WEATHERPROOF)		
##	RISER UP AND DOWN		

APPLICABLE CODES

PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020 *
2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR *
2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
(2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR
(2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
(2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

PARTIAL LIST OF APPLICABLE STANDARDS
NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED): 2016 EDITION
NFPA 720 STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE DETECTION AND WARNING EQUIPMENT; 2016 EDITION
NFPA 80 STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES; 2016 EDITION
UL 464 AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES; 2003 EDITION
UL 521 STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS; 1999 EDITION
UL 1971 STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED; 2002 EDITION (R2010)
ICC 300 STANDARD FOR BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRANDSTANDS; 2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

DRAWING INDEX

FIRE WATCH NOTE

A FIRE WATCH SHALL BE ESTABLISHED AND THE FIRE DEPARTMENT & FIRE CODE OFFICIAL SHALL BE NOTIFIED IMMEDIATELY WHENEVER THE FIRE PROTECTION / ALARM SYSTEM IS RENDERED OUT OF SERVICE. A FIRE WATCH SHALL BE STAGED WHENEVER THE BUILDING IS OCCUPIED (PARTIAL OR WHOLE) PER DSA IR F-2 AND CFC 901.7.

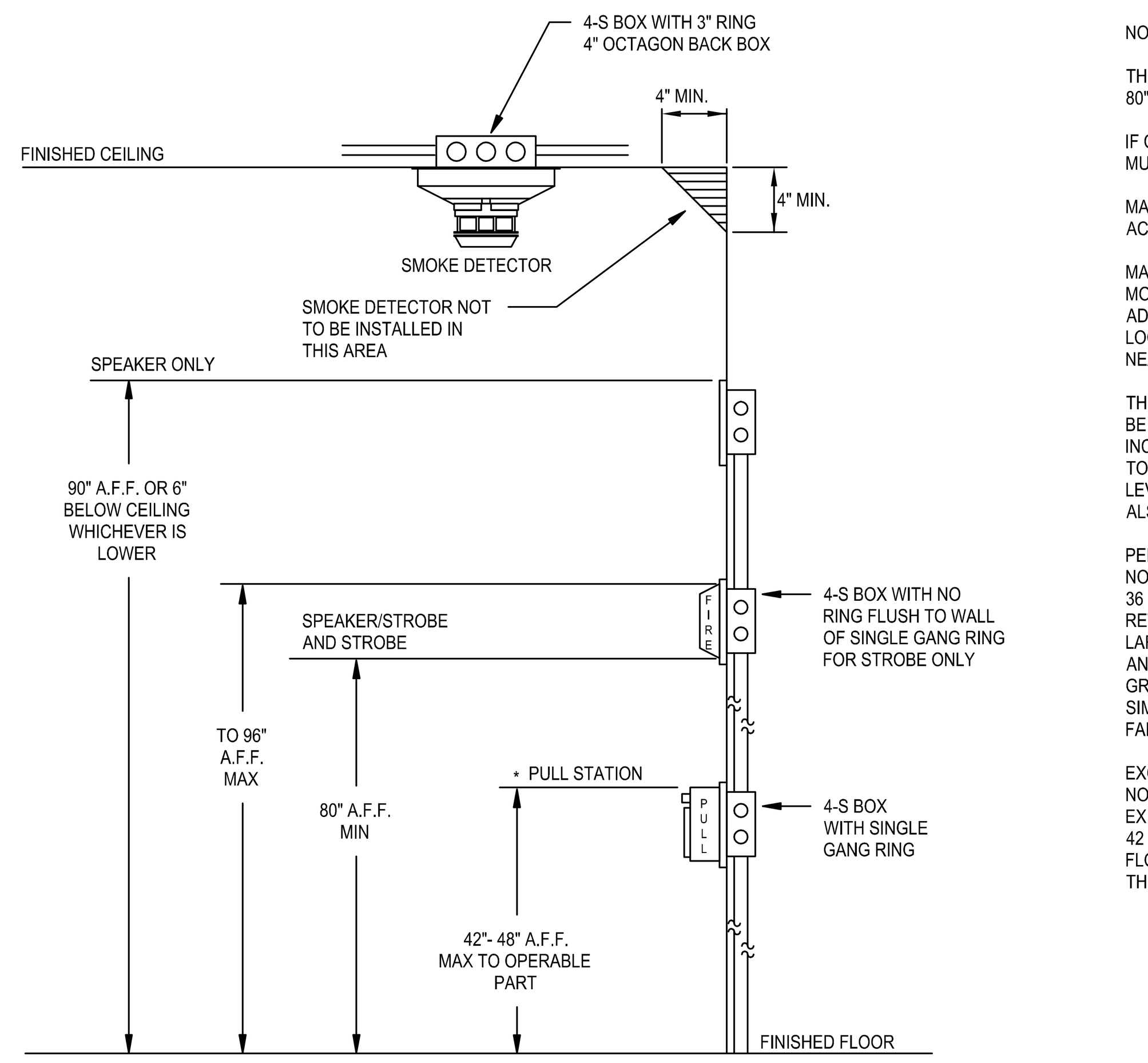
SCOPE OF WORK

PROVIDE COMPLETE FULL AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITHIN THE AREA OF WORK. PROVIDE FIRE ALARM SYSTEM DEVICES AS SHOWN IN EQUIPMENT LEGEND, FLOOR PLANS, AND SPECIFICATIONS IN THIS CONSTRUCTION DOCUMENT SET. USE NEW FIRE ALARM CONTROL PANEL TO CONNECT NEW FIRE ALARM SYSTEM DEVICES SHOWN PER DRAWING AND SPECIFICATION DOCUMENT. UPON COMPLETION, A COMPLETE PRE TEST SHALL BE PERFORMED TO VERIFY FUNCTIONALITY, IF FUNCTIONALITY IS COMPLETE THEN THE PROPER DOCUMENTATION SHALL BE SUBMITTED TO THE AUTHORITY HAVING JURISDICTION PRIOR TO SCHEDULING A FINAL INSPECTION.

GENERAL NOTES

1. APPLICABLE STANDARD 2016, NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35
2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
10. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (DBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
11. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
15. ALL FIRE ALARM WIRING SHALL BE FPLOR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
16. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
17. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM, DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS.
19. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
20. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
21. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL." CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
22. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 7.8.2.
23. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
24. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
25. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
26. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
27. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
28. ALL CARBON MONOXIDE SIGNALS SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.8.6.5.1.
29. ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
30. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE ACCESS FOR ATTIC HEAT DETECTOR, SERVICING, TROUBLESHOOTING, ETC.
31. DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC., THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
32. ALL FAN SHUTDOWN FUNCTIONS, DAMPER CLOSURES, AND ASSOCIATED MECHANICAL SYSTEM FIRE ALARM I NTERFACE SHALL BE BY MECHANICAL CONTRACTOR.
34. ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
35. ALL FIRE ALARM DEVICE BACKBOXES, FIRE ALARM TERMINAL CABINETS, GUTTERS, JUNCTION BOXES, AND ASSOCIATED CONDUITS SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED. REFER TO FIRE ALARM SYMBOL LIST AND/OR MOUNTING DETAILS FOR ADDITIONAL INFORMATION. SYSTEM SUPPLIER PROVIDED BACKBOXES SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
36. SMOKE DETECTOR TESTING SHALL BE ACCOMPLISHED PER THE MANUFACTURER'S INSTRUCTIONS.
37. ALL WIRING, INITIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
38. ALL WIRING SHALL BE CUT FOR IN AND OUT. WIRING SHALL NOT BE LOOPED THROUGH DEVICES.
39. POINT, COMMON ANNUNCIATION, AND T-TAPPING ARE PROHIBITED.
40. PROVIDE 3/4" CONDUIT FROM FIRE ALARM CONTROL PANEL TO TELEPHONE BACKBOARD FOR OWNER PROVIDED CENTRAL STATION MONITORING.
41. ALL CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED.
42. ALL FLOW SWITCHES SHALL BE 2 WIRE WITH NON-ELECTRONIC RETARD TYPE SIMILAR TO THE SYSTEM SENSOR MODEL "WFD SERIES" ONLY.
43. ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
44. FIRE ALARM SYSTEM SHALL BE UL LISTED (UUJS).
45. CBC 907.6.5.3 (SFM AMENDMENT) REQUIRES FIRE ALARM TO... "TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISORY STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISORY STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE AND PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD, FM 3011)."
46. SUBSTITUTION OF SYSTEM COMPONENTS OR MANUFACTURER WILL REQUIRE THE CONTRACTOR TO SEPARATELY OBTAIN APPROVAL WITH THE DSA AT CONTRACTOR'S EXPENSE AND SHALL MEET ALL REQUIREMENTS OF THE SYSTEM AS DESIGNED AND PRE-APPROVED. ALL PROPOSED SUBSTITUTIONS SHALL BE LISTED WITH THE CALIFORNIA STATE FIRE MARSHAL.
47. FINAL ACCEPTANCE TEST TO INCLUDE TESTING THE CONNECTION BETWEEN THE FIRE ALARM PANEL AND THE SUPERVISING STATION.
48. COORDINATE WITH THE ENGINEER FOR USE OF EXISTING CONDUIT ON A CASE BY CASE BASIS.
49. PRIOR TO DEMOLITION, CONTRACTOR SHALL TEST THE INTERCOM SYSTEM TO ENSURE FULL FUNCTIONALITY. GENERATE A LIST OF FAULTY EQUIPMENT AND PROVIDE TO THE OWNER AND THE ARCHITECT. PROVIDE PRICING FOR ANY REQUIRED EQUIPMENT REPAIRS OR REPLACEMENT.
50. CONTRACTOR SHALL DISCONNECT EXISTING FIRE ALARM SYSTEM FROM THE EXISTING INTERCOM SYSTEM. ENSURE THE INTERCOM SYSTEM IS COMPLETELY FUNCTIONAL AFTER DISCONNECTION.
51. CONTRACTOR SHALL CLEARLY MARK THE ABANDON SECTION OF PUBLIC ADDRESS SYSTEM.
52. PROVIDE A FIRE ALARM DOCUMENTATION CABINET PER NFPA72,7.7.
53. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH CBC CHAPTER 33 AND CFC CHAPTER 33.
54. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APRROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATION CHANGE DOCUMENT, OR A SEPERATE SET OF PLANS AND SPECIFICATIONS,DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK (CAC 4-317(C)).
55. CHANGES TO THE DIVISION OF THE STATE ARCHITECT APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENTS FOR CHANGES TO THE STRUCTURAL, ACCESSIBILITY OR FIRE -SAFETY PORTIONS OF THE PROJECT. CHANGES SHALL BE SUBMITTED TO AND APPROVED BY DSA PRIOR TO COMMENCEMENT OF THE WORK SHOWN THEREON CAC 4-338(C)).
56. PROJECT INSPECTOR TO APPROVE SYSTEM VOICE-EVACUATION INTELLIGIBILITY DURING TESTING PHASE.
57. CONTRACTOR SHALL PROVIDE ALL CABLING, RELAYS, MOUNTING HARDWARE AND ANY OTHER DEVICES (FIRE ALARM SYSTEM DEVICES) TO PROVIDE A FULLY FUNCTIONING FIRE ALARM OVERRIDE SYSTEM. WHEN FIRE ALARM CEASES, EACH LOCAL SOUND SYSTEM SHALL AUTOMATICALLY REVERT TO NORMAL OPERATION. FIRE ALARM MODULES AND CABLING BY FIRE ALARM CONTRACTOR.
58. FOR ALL HEAT DETECTORS THAT ARE LOCATED ABOVE CEILING/ATTIC SPACES, CONTRACTOR SHALL PROVIDE STICKER AND LABEL "HD" AT THE REFLECTED CEILING DIRECTLY BELOW THE DEVICE TO INDICATE LOCATION.
59. NOTIFICATION APPLIANCES USED FOR SIGNALING OTHER THAN FIRE SHALL NOT HAVE THE WORD "FIRE" OR ANY FIRE SYMBOL, IN ANY FORM (I.E., STAMPED, IMPRINTED, ETC.) ON THE APPLIANCE VISIBLE TO THE PUBLIC. NOTIFICATION APPLIANCES WITH MULTIPLE VISIBLE ELEMENTS SHALL BE PERMITTED TO HAVE FIRE MARKING ONLY ON THOSE VISIBLE ELEMENTS USED FOR FIRE SIGNALING. PER NFPA 72, 18.3.3.2/ NFPA 720, 6.3.3.2/ IR 9-2, 5.4.4 & 5.4.5.
60. AUTOMATIC FIRE ALARM SYSTEMS SHALL BE MONITORED AND SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX (CENTRAL STATION) OR UUJS (REMOTE & PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTING AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF FM 3011. TERMINATION OF MONITORING SERVICES SHALL BE IN ACCORDANCE WITH SECTION 907.6.6.2.
61. THE NEW PROJECT SUBMITTAL TO INCLUDE DIRECTION THAT FIRE ALARM SYSTEM RECORD OF COMPLETION AND FIRE ALARM SYSTEM RECORD OF INSPECTION AND TESTING FORM THESE TWO DOCUMENTS FROM NFPA 72 ARE TO BE COMPLETED AND SUBMITTED PRIOR TO CLOSE OUT OF THE PROJECT. A COPY OF COMPLETED AND SIGNED FORM SHALL BE GIVEN TO THE ARCHITECT OR ENGINEER OF RECORD, THE PROJECT INSPECTOR, THE OWNER (SCHOOL DISTRICT) AND LOCAL FIRE AUTHORITY.
62. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

ELEVATION MOUNTING DETAIL



NOTES:

THE ENTIRE LENS OF STROBE LIGHTS MUST BE BETWEEN 80" AND 96" ABOVE FLOOR FINISH (AFF)

IF CEILING HEIGHTS EXCEED 30 FEET, STROBE LIGHTS MUST BE SUSPENDED AT OR BELOW 30 FEET

MANUAL FIRE ALARM BOXES SHALL BE INSTALLED IN ACCORDANCE WITH SECTIONS 907.3.1 THROUGH 907.3.5

MANUAL FIRE ALARM BOXES SHALL BE LOCATED NOT MORE THAN 5 FEET FROM THE ENTRANCE TO EACH EXIT. ADDITIONAL MANUAL FIRE ALARM BOXES SHALL BE LOCATED SO THAT THE TRAVEL DISTANCE TO THE NEAREST BOX DOES NOT EXCEED 200 FEET.

THE HEIGHT OF THE MANUAL FIRE ALARM BOXES SHALL BE A MINIMUM OF 42 INCHES AND A MAXIMUM OF 48 INCHES, MEASURED VERTICALLY, FROM THE FLOOR LEVEL TO THE HIGHEST POINT OF THE ACTIVATING HANDLE OR LEVER OF THE BOX. MANUAL FIRE ALARM BOXES SHALL ALSO COMPLY WITH 2019 CBC SECTION 11B-309.4.

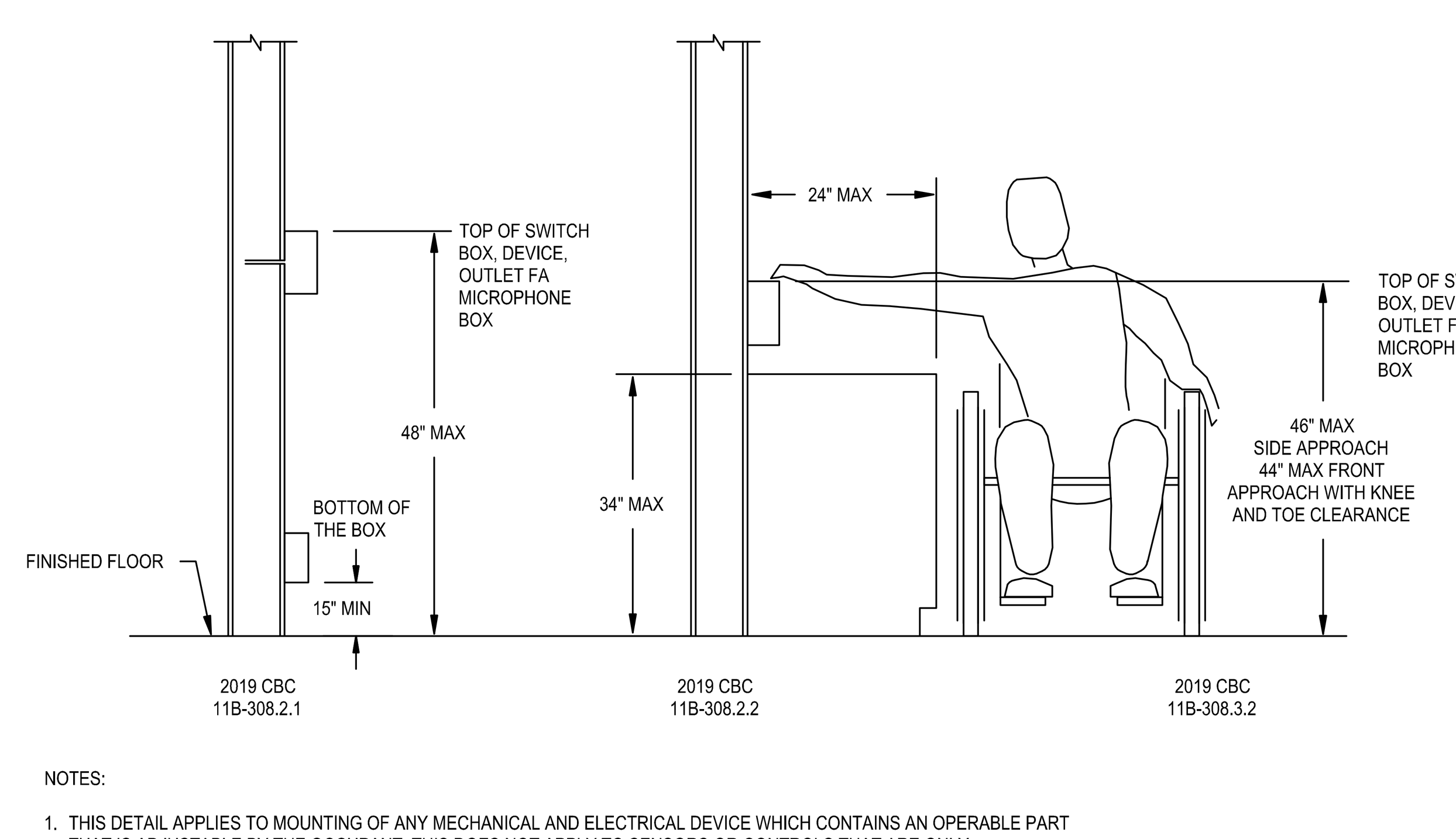
PER NFPA 72 CHAPTER A.17.7.4.1 DETECTORS SHOULD NOT BE LOCATED IN ADIRECT AIRFLOW OR CLOSER THAN 36 IN. (910 MM) FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING. SUPPLY OR RETURN SOURCES LARGER THAN THOSE COMMONLY FOUND IN RESIDENTIAL AND SMALL COMMERCIAL ESTABLISHMENT CAN REQUIRE GREATER CLEARANCE TO SMOKE DETECTORS. SIMILARLY, SMOKE DETECTORS SHOULD BE LOCATED FARTHER AWAY FROM HIGH VELOCITY AIR SUPPLIES.

EXCEPTIONS: [DSA-AC] IN EXISTING BUILDINGS THERE IS NO REQUIREMENT TO RETROACTIVELY RELOCATE EXISTING MANUAL FIRE ALARM BOXES TO A MINIMUM OF 42 INCHES AND A MAXIMUM OF 48 INCHES FROM THE FLOOR LEVEL TO THE ACTIVATING HANDLE OR LEVER OF THE BOX.

SEQUENCE OF OPERATIONS

ACTION \ DEVICE	MANUAL PULL STATION	AREA SMOKE DETECTOR	HEAT DETECTOR	120VAC POWER FAILURE	SHORT CIRCUIT	GROUND FAULT	BATTERY FAILURE
SOUND ALARM AT "FACP"	**YES**	**YES**	**YES**	NO	NO	NO	NO
SOUND TROUBLE BUZZER AT "FACP"	NO	NO	NO	**YES**	**YES**	**YES**	**YES**
ANNUNCIATE AT "FACP" AND THE REMOTE ANNUNCIATOR (ALARM OR TROUBLE)	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
ACTIVATE AUDIBLE / VISUAL ALARM SIGNAL THROUGHOUT BUILDING	**YES**	**YES**	**YES**	NO	NO	NO	NO
ACTIVATE SIGNAL FOR OFF-SITE MONITORING	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
MUTE AUTONOMOUS LOCAL SOUND SYSTEM	**YES**	**YES**	**YES**	NO	NO	NO	NO

MOUNTING OVER OBSTRUCTION DETAIL



NOTES:
1. THIS DETAIL APPLIES TO MOUNTING OF ANY MECHANICAL AND ELECTRICAL DEVICE WHICH CONTAINS AN OPERABLE PART THAT IS ADJUSTABLE BY THE OCCUPANT. THIS DOES NOT APPLY TO SENSORS OR CONTROLS THAT ARE ONLY ADJUSTABLE THROUGH THE BUILDING AUTOMATION SYSTEM (IE: TEMPERATURE AND HUMIDITY SENSORS).
2. FORWARD OR FRONT APPROACH FOR DEVICES MOUNTED ABOVE COUNTERS ASSUMES THAT DIRECTLY BELOW THE DEVICE, THE COUNTER HAS A 30"MIN. WIDTH x27" HIGH x19" MIN. DEEP CLEAR OPENING. CBC SECTIONS 11B-306 & 11B-308.

WIRE SCHEDULE

WIRE DESIGNATION	WIRE IN CONDUIT	WIRE IN CONDUIT UNDERGROUND/WET LOC.	UNDERGROUND/WET WIRE DESIGNATION
INIT. LOOP Z	2 CONDUCTOR #16 FPL TWISTED/ SHIELDED WEST PENN #D991	2 CONDUCTOR #16 FPLP SHIELDED WEST PENN #AQ-294	INIT. LOOP Z
SBUS B	4 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	4 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	SBUS B
VBUS C	2 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	2 CONDUCTOR #18 TWISTED SHIELDED PAIR CABLE	VBUS C
SPEAKER CKT. S	2 CONDUCTOR #14 THHN/THWN STRANDED	2 CONDUCTOR #14 THHN/THWN STRANDED	SPEAKER CKT. S
VISUAL CKT. V	2 CONDUCTOR #12 THHN/THWN STRANDED	2 CONDUCTOR #12 THHN/THWN STRANDED	VISUAL CKT. V
POWER CKT. P	2 CONDUCTOR #12 THHN/THWN STRANDED	2 CONDUCTOR #12 THHN/THWN STRANDED	POWER CKT. P

NOTE:

ALL WIRE MODEL NUMBERS ARE WEST PENN.
EQUIVALENT BY OTHER MANUFACTURER IS ACCEPTABLE.

FIRE ALARM REQUIREMENTS

THE CONTRACTOR SHALL PROVIDE AND SUBMIT THE FIRE ALARM SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE FIRE ALARM SYSTEM. THE SUBMITTAL SHALL CONTAIN THE FOLLOWING:

A. SHOP DRAWINGS: COMPLETE 1/8" SCALE FLOOR PLANS SHOWING ALL DEVICES, COMPONENTS, CONDUIT AND WIRING INDICATING A COMPLETE AND OPERABLE SYSTEM AS DESIGNED AND SPECIFIED. REPRODUCED COPIES OF BID SET FIRE ALARM PLANS ARE NOT ACCEPTABLE AS SHOP DRAWINGS. SHOP DRAWINGS MUST ALSO INDICATE DEVICE MOUNTING HEIGHTS, ROOM NAMES AND NUMBERS AND THE LOCATION OF ALL FIRE RATED WALLS.
B. ELECTRICAL CONTRACTOR'S AND FIRE ALARM SYSTEM INSTALLER'S NAME, ADDRESS, PHONE NUMBER AND C-10 LICENSE NUMBER.
C. LIST OF SYSTEM COMPONENTS, EQUIPMENT AND DEVICES, INCLUDING MANUFACTURERS' MODEL NUMBER(S) AND CALIFORNIA STATE FIRE MARSHALL LISTING NUMBERS.
D. ORIGINAL COPIERS OF MANUFACTURERS' SPECIFICATION SHEETS FOR ALL EQUIPMENT AND DEVICES INDICATED.
E. VOLTAGE DROP CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION FOR THE WORST CASE:
   1. POINT-TO-POINT OR OHMS LAW CALCULATIONS.
   2. IDENTIFICATION OF ZONE USED IN CALCULATIONS.
   3. VOLTAGE DROP PERCENT (NOT TO EXCEED MANUFACTURERS' REQUIREMENTS).
      a. NOTE: IF VOLTAGE DROP EXCEEDS 10%, INDICATE MANUFACTURERS' LISTED OPERATING RANGE(S) OR EQUIPMENT AND DEVICES.
   4. NOTE CIRCUIT NUMBER FOR WORST CASE CALCULATION.
F. BATTERY TYPE(S), AMPS HOURS AND LOAD CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION:
   1. NORMAL OPERATION: 100% OF APPLICABLE DEVICES FOR 24 HOURS = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.:
      a. ZONE MODULES
      b. DETECTORS
      c. OTHER DEVICES (IDENTIFY)
   2. ALARM CONDITION: 100% OF APPLICABLE DEVICES FOR 15 MINUTES = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER -- I.E.:
      a. ZONE MODULES
      b. SIGNAL MODULES
      c. DETECTORS
      d. SIGNAL DEVICES
      e. ANNUNCIATOR
      f. OTHER DEVICES (IDENTIFY)
   3. NORMAL OPERATION + ALARM OPERATION
      a. TOTAL AMP HOURS REQUIRED.
      b. TOTAL AMP HOURS PROVIDED.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-121818 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/11/2023

PBK

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

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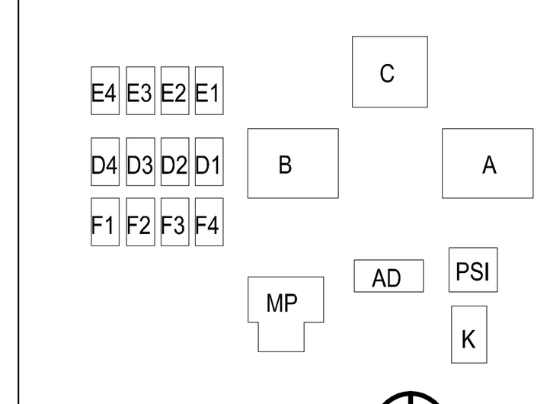
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43



Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
12-29-2022	220309

REVISIONS

	Description	Date

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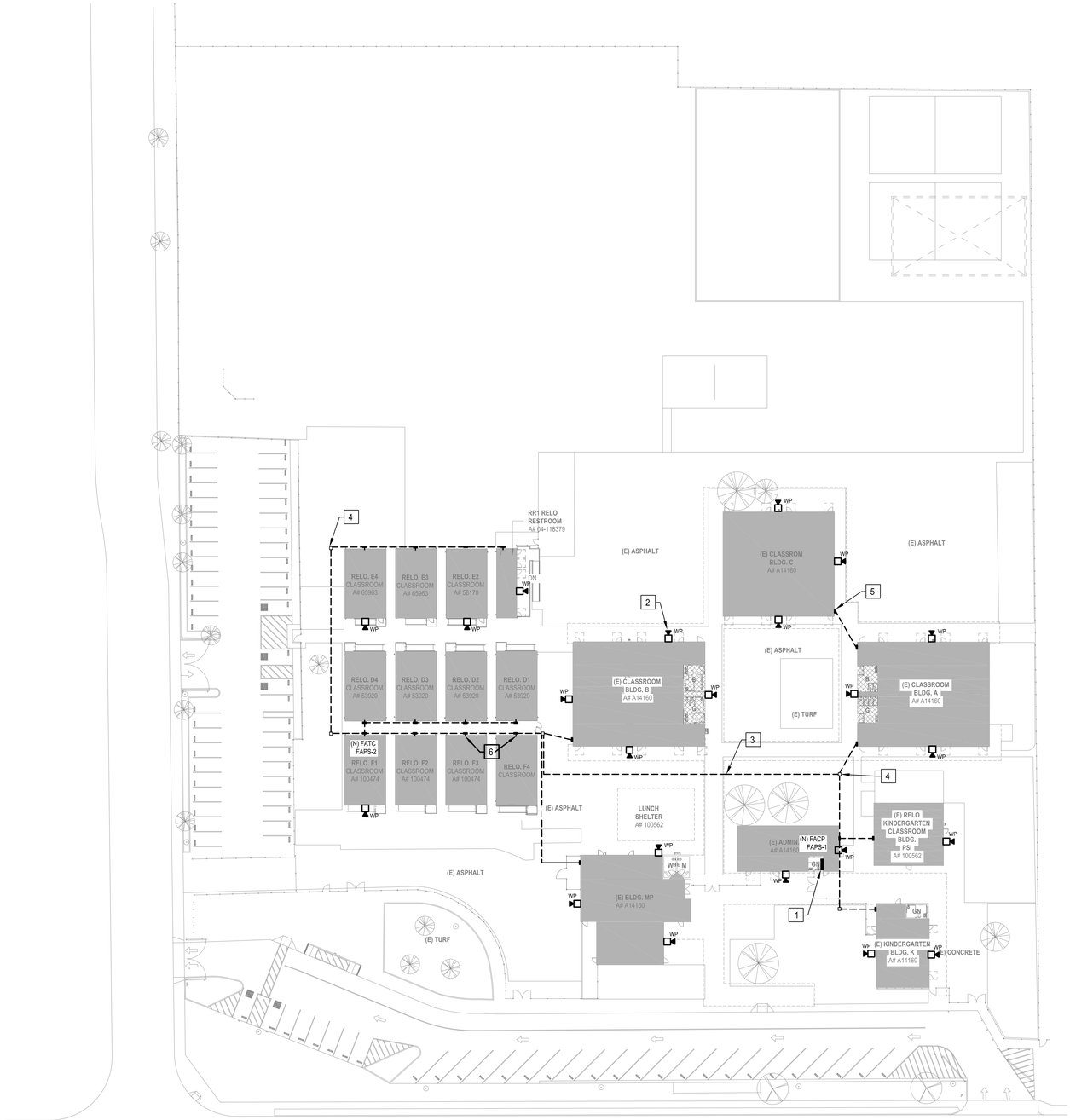
FIRE ALARM SYMBOLS, LEGENDS AND NOTES

FA0.0

0" 1"



GENERAL NOTES

1. ALL SPEAKER TAP SETTING SHALL BE SET AT 1/2 WATT FOR INTERIOR SPEAKER AND 2 WATT FOR EXTERIOR SPEAKERS UNLESS NOTED OTHERWISE (U.N.O.)
2. RUN FIRE ALARM CABLES IN CONDUIT CONCEALED IN WALLS AND CEILING WHEN POSSIBLE. EXPOSED CONDUITS ARE NOT ACCEPTABLE.

KEY NOTES

1. NEW VOICE EVAC FIRE ALARM CONTROL PANEL AS SHOWN. FIELD VERIFY THE EXACT LOCATION.
2. PROVIDE WEATHERPROOF WALL MOUNTED SPEAKER AS SHOWN (TYPICAL). REFERENCE DETAIL 8/ SHEET FA6.1.
3. PROVIDE (2) 2" UNDERGROUND CONDUIT (PVC, SCHEDULE 40, 24" BELOW GRADE),ONE CONDUIT IS FOR SPARE AND FIRE ALARM CABLE AS INDICATED, BACK FILL TO MATCH EXISTING SURFACES. RUN CONDUIT IN DIRT/PLANNER AREA AS MUCH AS POSSIBLE.
4. PROVIDE CONCRETE UNDERGROUND PULL BOXES AS 11" X 17" X 18" DEEP ON A 6" DEEP GRAVEL BASE (TYP).
5. PROVIDE NEMA 3R WEATHERPROOF PULLBOX 18"X18"X6" FOR FIRE-ALARM (TYP). REFERENCE DETAIL 7/ SHEET FA6.1.
6. SPARE CIRCUITS FOR FUTURE USE.

1 FIRE ALARM OVERALL SITE PLAN
1" = 30'-0"

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DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
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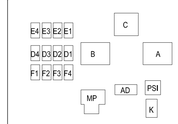

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 23578
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

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WESTMINSTER SCHOOL DISTRICT

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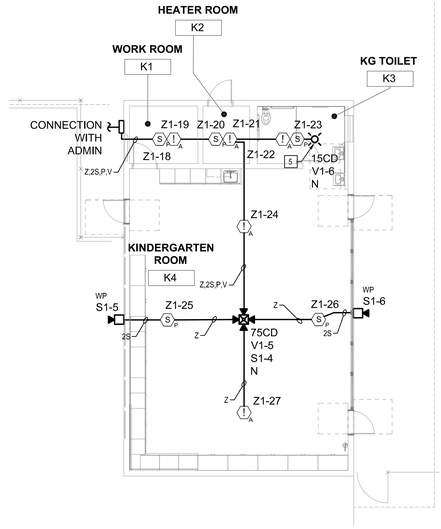
FIRE ALARM OVERALL SITE PLAN

FA1.0

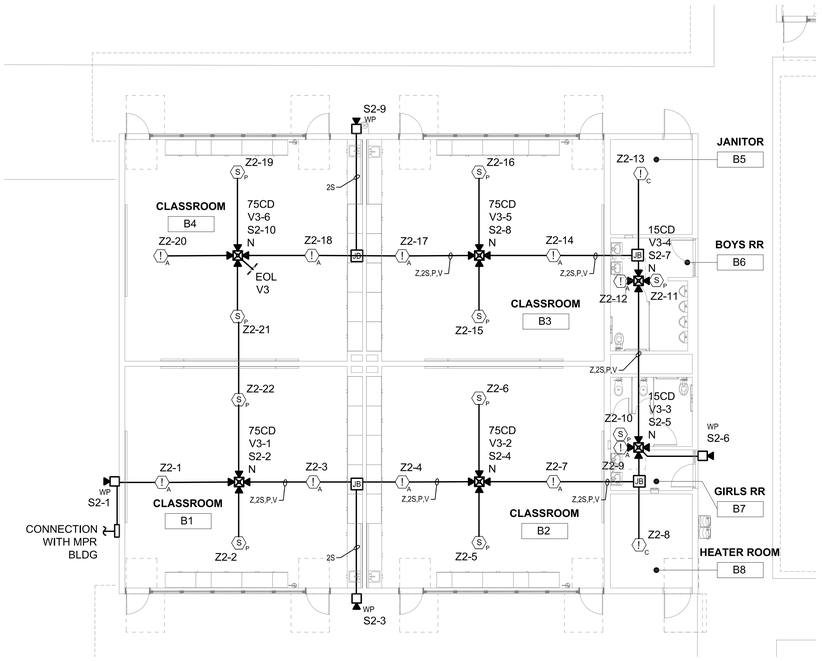
0" 1"



3 BLDG K - FLOOR PLAN

1/8" = 1'-0"

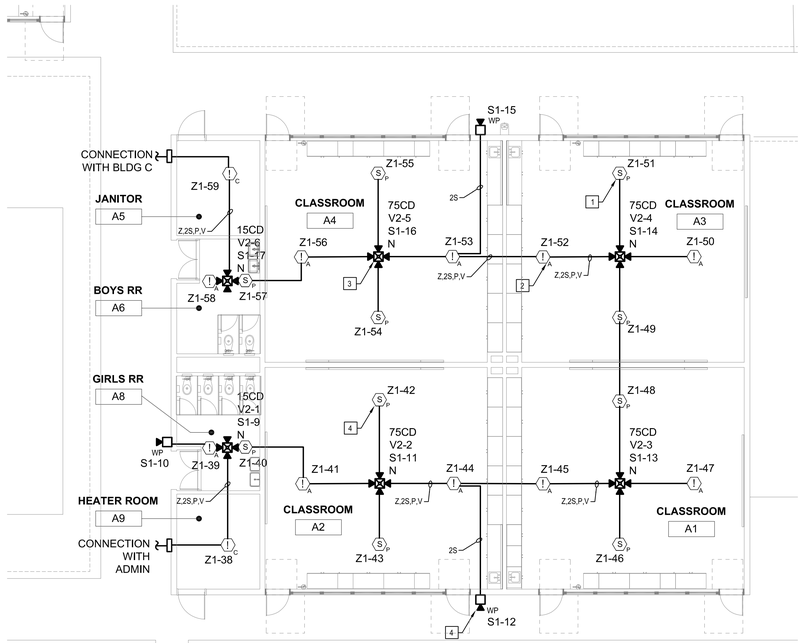
NORTH



NORTH

2 BLDG B - FLOOR PLAN

1/8" = 1'-0"



NORTH

1 BLDG A - FLOOR PLAN

1/8" = 1'-0"

GENERAL NOTES

1. ALL SPEAKER TAP SETTING SHALL BE SET AT 1/2 WATT FOR INTERIOR SPEAKER AND 2 WATT FOR EXTERIOR SPEAKERS UNLESS NOTED OTHERWISE (U.N.O.)
2. PROVIDE 24 VDC POWER FROM FACP TO ALL CO DETECTOR BASES.
3. RUN FIRE ALARM CABLES IN CONDUIT CONCEALED IN WALLS AND CEILING WHEN POSSIBLE. EXPOSED CONDUITS ARE NOT ACCEPTABLE.
4. SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36 IN. (910 MM) HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW FROM THOSE REGISTERS PER CBC 907.2.11.8.
5. DEMOLISH AND REMOVE ALL THE EXISTING FIRE ALARM DEVICES WHETHER SHOWN ON THE PLAN OR NOT AND REPLACE WITH BLANK COVER PLATES IF NECESSARY. DISCONNECT AND REMOVE ALL THE EXISTING CABLES BACK TO CONTROL PANEL.
6. EXISTING FIRE ALARM SYSTEM SHALL BE OPERTIONAL UNTIL NEW SYSTEMS ARE FULLY FUNCTIONAL.
7. FOR ALL HEAT DETECTORS THAT ARE LOCATED ABOVE CEILING/ATTIC SPACES, CONTRACTOR SHALL PROVIDE STICKER AND LABEL "HD" AT THE REFLECTED CEILING DIRECTLY BELOW THE DEVICE TO INDICATE LOCATION.
8. NOTIFICATION APPLIANCES USED FOR SIGNALING OTHER THAN FIRE SHALL NOT HAVE THE WORD "FIRE" OR ANY FIRE SYMBOL, IN ANY FORM (I.E., STAMPED, IMPRINTED, ETC.) ON THE APPLIANCE VISIBLE TO THE PUBLIC. NOTIFICATION APPLIANCES WITH MULTIPLE VISIBLE ELEMENTS SHALL BE PERMITTED TO HAVE FIRE MARKING ONLY ON THOSE VISIBLE ELEMENTS USED FOR FIRE SIGNALING. PER NFPA 72, 18.3.3.2/ NFPA 720, 6.3.3.2/ IR 9-2, 5.4.4 & 5.4.5.
9. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE ACCESS FOR ATTIC HEAT DETECTOR, SERVICING, TROUBLESHOOTING, ETC.

KEY NOTES

1. PROVIDE FIRE ALARM ADDRESSABLE SMOKE DETECTOR AS SHOWN (TYP).
2. PROVIDE FIRE ALARM ADDRESSABLE ATTIC/ CEILING MOUNTED HEAT DETECTOR AS SHOWN (TYP).
3. PROVIDE FIRE ALARM CEILING MOUNTED SPEAKER STROBE AS SHOWN (TYP).
4. PROVIDE FIRE ALARM WEATHERPROOF SPEAKER AS SHOWN (TYP).
5. PROVIDE FIRE ALARM CEILING MOUNTED STROBE AS SHOWN (TYP).

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DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C D4 D3 D2 D1 B A F1 F2 F3 F4 MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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FIRE ALARM FLOOR PLANS

FA2.1

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FA2.02 - FIRE ALARM FLOOR PLANS

0" 1"

GENERAL NOTES

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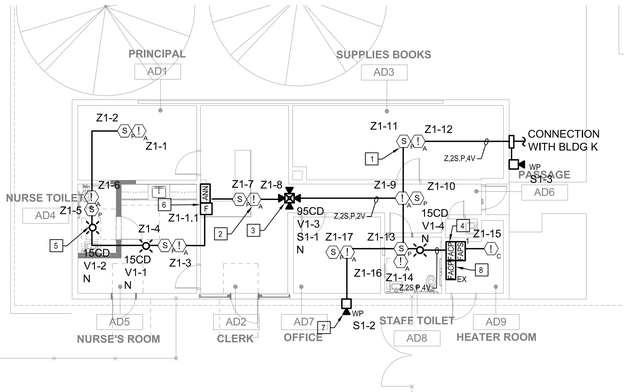
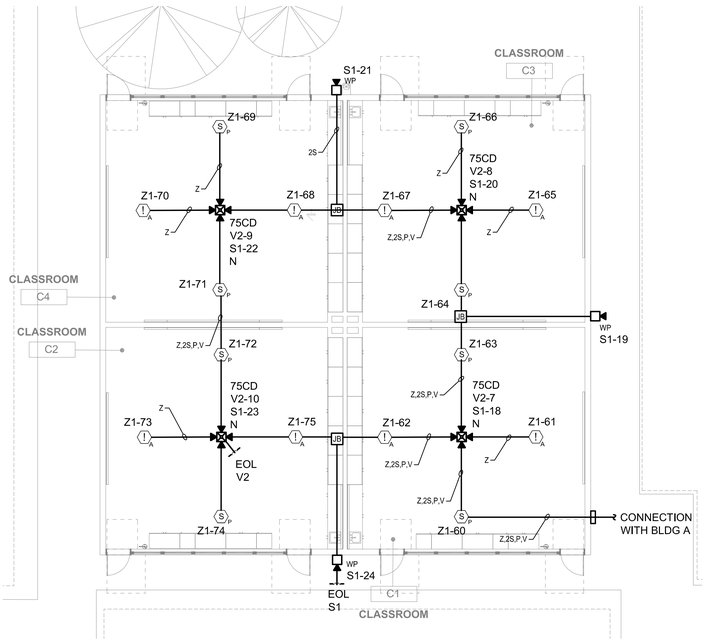
4. SMOKE ALARMS AND SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36 IN. (910 MM) HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW FROM THOSE REGISTERS PER CBC 907.2.11.8.
5. DEMOLISH AND REMOVE ALL THE EXISTING FIRE ALARM DEVICES WHETHER SHOWN ON THE PLAN OR NOT AND REPLACE WITH BLANK COVER PLATES IF NECESSARY. DISCONNECT AND REMOVE ALL THE EXISTING CABLES BACK TO CONTROL PANEL.
6. EXISTING FACP WILL BE REMOVED AND REPLACED WITH NEW FACP. EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL UNTIL NEW SYSTEMS ARE FULLY FUNCTIONAL.
7. FOR ALL HEAT DETECTORS THAT ARE LOCATED ABOVE CEILING/ATTIC SPACES, CONTRACTOR SHALL PROVIDE STICKER AND LABEL "HD" AT THE REFLECTED CEILING DIRECTLY BELOW THE DEVICE TO INDICATE LOCATION.
8. ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE ACCESS FOR ATTIC HEAT DETECTOR, SERVICING, TROUBLESHOOTING, ETC.

KEY NOTES

1. PROVIDE FIRE ALARM ADDRESSABLE SMOKE DETECTOR AS SHOWN (TYP).
2. PROVIDE FIRE ALARM ADDRESSABLE ATTIC/CEILING MOUNTED HEAT DETECTOR AS SHOWN (TYP).
3. PROVIDE FIRE ALARM CEILING MOUNTED SPEAKER STROBE AS SHOWN (TYP).
4. NEW VOICE EVC FIRE ALARM CONTROL PANEL AND FIRE ALARM POWER SUPPLY .
5. PROVIDE FIRE ALARM CEILING MOUNTED STROBE AS SHOWN.
6. PROVIDE FIRE ALARM MANUAL PULL STATION RIGHT NEXT TO THE REMOTE ANNUNCIATOR PANEL.
7. PROVIDE FIRE ALARM WEATHERPROOF SPEAKER AS SHOWN (TYP).
8. LOCATION OF EXISTING FIRE ALARM CONTROL PANEL (A#04-100713). EXISTING FACP WILL BE REMOVED AND REPLACED WITH NEW FACP. EXISTING FIRE ALARM SYSTEM SHALL BE OPERATIONAL UNTIL NEW SYSTEMS ARE FULLY FUNCTIONAL.



2 BLDG ADMIN - FLOOR PLAN
1/8" = 1'-0"



1 BLDG C - FLOOR PLAN
1/8" = 1'-0"

NORTH

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DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DE LA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220309

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FIRE ALARM FLOOR PLANS

FA2.2

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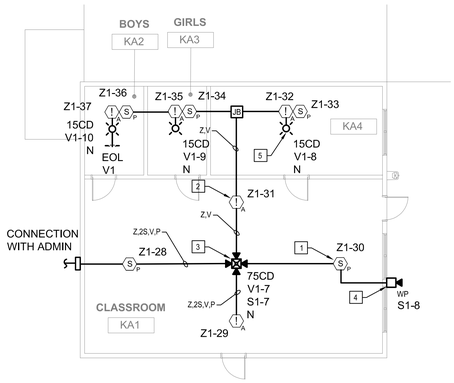
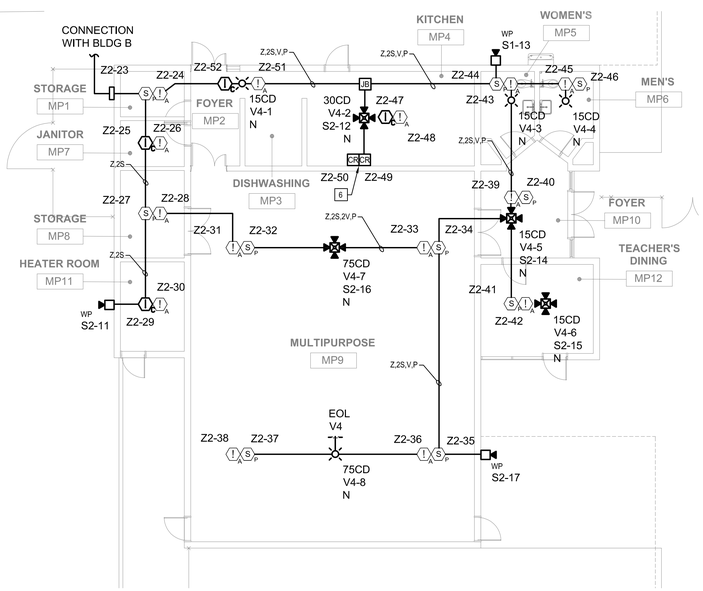
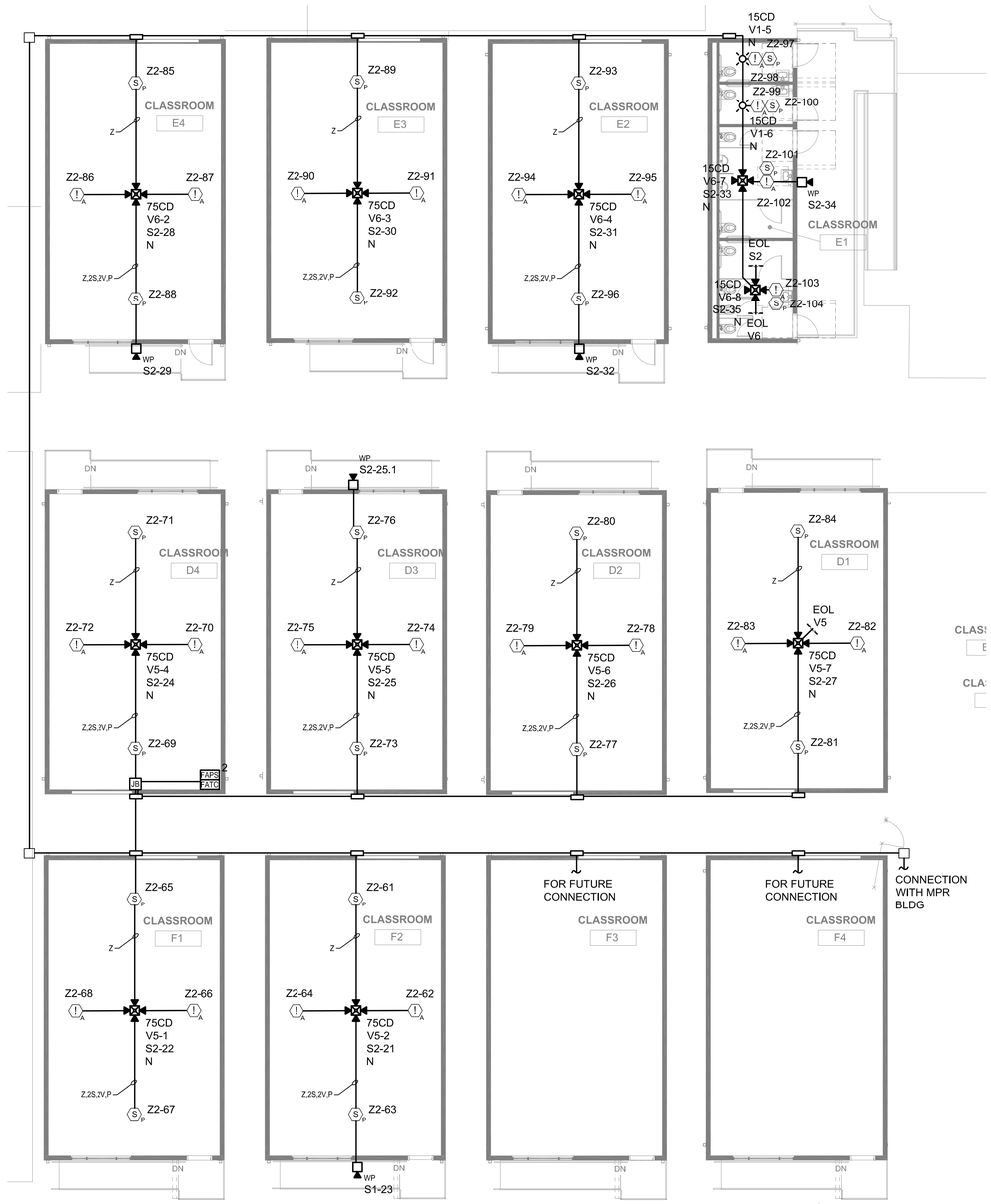


3 RELO-KINDERGARTEN - FLOOR PLAN
1/8" = 1'-0"



2 MULTIPURPOSE BUILDING - FLOOR PLAN
1/8" = 1'-0"



1 RELO-BUILDINGS - FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES

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KEY NOTES

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3. PROVIDE FIRE ALARM CEILING MOUNTED SPEAKER STROBE AS SHOWN (TYP).
4. PROVIDE FIRE ALARM WEATHERPROOF SPEAKER AS SHOWN (TYP).
5. PROVIDE FIRE ALARM CEILING MOUNTED STROBE AS SHOWN (TYP).
6. PROVIDE FIRE ALARM CONTROL RELAY/MULTI VOLTAGE RELAYS TO SHUT DOWN THE MECHANICAL UNITS LOCATED AT THE ROOF PER 2019 CMC (CALIFORNIA MECHANICAL CODE), SECTION 608 (TYP). CONTRACTOR TO FIELD VERIFY THE EXACT UNIT LOCATION.
7. NEW FIRE ALARM POWER SUPPLY AND TERMINAL CABINET AS SHOWN.

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E4 E3 E2 E1 | C
D4 D3 D2 D1 | B | A
F1 F2 F3 F4 | MP | AD | PSI | K

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DE LA CRUZ
No. E 23570
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

DATE	PROJECT NUMBER
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Description	Date

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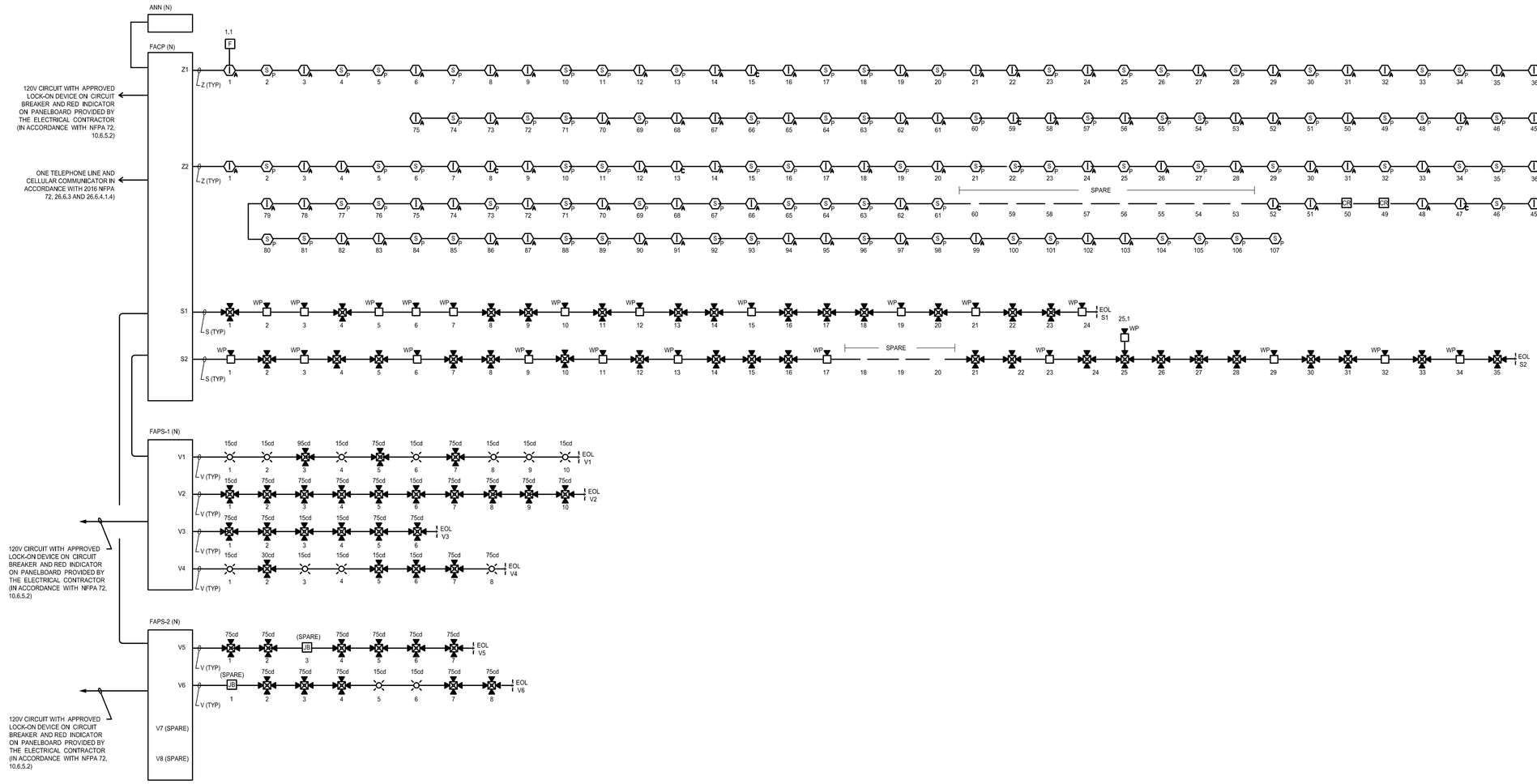
FIRE ALARM FLOOR PLANS

FA2.3



2 FIRE ALARM RISER DIAGRAM

NOT TO SCALE

BATTERY CAPACITY CALCULATION SHEET

FAPS-2
LOCATION: RELO D4

QUANTITY	Description	Unit Standby Current(A)	Total Standby Current(A)	Unit Alarm Current(A)	Total Alarm Current(A)
1	NAC TRIP	0.075	0.075	0.175	0.175
2	15cd ceiling strobes	0.000	0.000	0.071	0.142
0	15cd ceiling speaker/strobe	0.000	0.000	0.071	0.000
11	75cd ceiling speaker/strobe	0.000	0.000	0.153	1.683
	Sub Total		0.075		2.000
	A - Battery Backup - Standby (Hour)	24			
	B - Battery Backup (minutes)	15			
	C - Allowable Error (%)	25			
	D - Total Standby Backup (Amp-Hour)	1.800			
	E - Total Alarm Backup (Amp-Hour)	0.500			
	F - Allowable Error (C x (D + E))	0.575			
	Total Amp-Hour Required (D + E + F)	2.875			
	Battery Submitted	7 Amp-Hour			

BATTERY CAPACITY CALCULATION SHEET

FAPS-1
LOCATION: ADMIN

QUANTITY	Description	Unit Standby Current(A)	Total Standby Current(A)	Unit Alarm Current(A)	Total Alarm Current(A)
1	NAC TRIP	0.075	0.075	0.175	0.175
10	15cd ceiling strobes	0.000	0.000	0.071	0.710
1	75cd ceiling strobes	0.000	0.000	0.153	0.153
6	15cd ceiling speaker/strobe	0.000	0.000	0.071	0.426
1	30cd ceiling speaker/strobe	0.000	0.000	0.096	0.096
15	75cd ceiling speaker/strobe	0.000	0.000	0.153	2.295
1	95cd ceiling speaker/strobe	0.000	0.000	0.176	0.176
	Sub Total		0.075		4.031
	A - Battery Backup - Standby (Hour)	24			
	B - Battery Backup (minutes)	15			
	C - Allowable Error (%)	25			
	D - Total Standby Backup (Amp-Hour)	1.800			
	E - Total Alarm Backup (Amp-Hour)	1.008			
	F - Allowable Error (C x (D + E))	0.702			
	Total Amp-Hour Required (D + E + F)	3.510			
	Battery Submitted	7 Amp-Hour			

FACP BATTERY CALCULATION SHEET

FACP WITH VOICE EVAC
LOCATION: ADMIN

QUANTITY		UNIT STANDBY CURRENT(A)	TOTAL STANDBY CURRENT(A)	UNIT ALARM CURRENT(A)	TOTAL ALARM CURRENT(A)
1	MAIN BOARD	0.08100	0.08100	0.15000	0.15000
1	SUPPLEMENT BOARD	0.08100	0.08100	0.15000	0.15000
1	INTERFACE MAIN BOARD	0.05000	0.05000	0.09100	0.09100
1	INTERFACE SUPPLEMENT BOARD	0.05000	0.05000	0.09100	0.09100
0	1 SLC W/ DACT	0.07500	0.00000	0.09500	0.00000
0	2 SLC W/ DACT	0.08500	0.00000	0.10500	0.00000
1	120V POWER SUPPLY SUB-ASSEMPLY	0.05000	0.05000	0.05000	0.05000
1	DIGITAL COMMUNICATOR (DACT-E3)	0.01800	0.01800	0.01800	0.01800
1	ANNUNCIATOR	0.20000	0.20000	0.20000	0.20000
1	AMPLIFIER KIT	0.10300	0.10300	0.14000	0.14000
1	FIRE PHONE CARD	0.05300	0.05300	0.07500	0.07500
1	AMPLIFIER CARD	0.05200	0.05200	0.31500	0.31500
84	SMOKE DETECTOR	0.00020	0.01672	0.00200	0.16800
88	HEAT DETECTOR	0.00020	0.01751	0.00200	0.17600
1	PULL STATION	0.00000	0.00000	0.00300	0.00300
2	RELAY MODULE	0.00000	0.00000	0.00650	0.01300
	SUB TOTAL		0.772		1.640
	STANDBY CURRENT x 24 Hrs. (AH)		18.533 AH		
	ALARM CURRENT x 15 MINUTES (AH)		0.410 AH		
	TOTAL (AH)		18.943 AH		
	25% DERATING		4.736 AH		
	TOTAL DEMAND (AH)		23.679 AH		
	BATTERY REQUIRED		55 AH		

BATTERY CALCULATION SHEET

FACP
LOCATION: ADMIN. BUILDING

QUANTITY		UNIT STANDBY CURRENT(A)	TOTAL STANDBY CURRENT(A)	UNIT ALARM CURRENT(A)	TOTAL ALARM CURRENT(A)
1	50 WATT AMPLIFIER	0.110	0.110	0.5810	0.5810
34	SPEAKER (1/2 W)	0.000	0.000	0.0071	0.2414
23	WP SPEAKER (2W)	0.000	0.000	0.0283	0.6509
	SUB TOTAL		0.110		1.473
	STANDBY CURRENT x 24 Hrs. (AH)		2.640 AH		
	ALARM CURRENT x 15 MINUTES (AH)		0.368 AH		
	TOTAL (AH)		3.008 AH		
	25% DERATING		0.752 AH		
	TOTAL DEMAND (AH)		3.760 AH		
	BATTERY REQUIRED		7 AH		

STROBES WORST CASE VOLTAGE DROP

PANEL NAME	CIRCUIT NUMBER	CEILING STROBE 15cd 0.071	30cd 0.096	75cd 0.153	95cd 0.176	CEILING SPEAKER/STROBE 15cd 0.071	30cd 0.096	75cd 0.153	95cd 0.176	TOTAL CURRENT (AMPS)	TOTAL DISTANCE (FEET)	TOTAL VOLTAGE DROP (%)	TOTAL DEVICES
FAPS-1	V1	7						2	1	0.979	560	7.56%	10
	V2					2		8		1.366	465	8.75%	10
	V3					2		4		0.754	470	4.88%	6
	V4	3		1		2	1	1		0.757	500	5.22%	8
TOTAL		10	0	1	0	6	1	15	1				
FAPS-2	V5							6		0.918	600	7.59%	6
	V6	2						5		0.907	650	8.13%	7
	V7 (SPARE)									0.000		0.00%	0
	V8 (SPARE)									0.000		0.00%	0
TOTAL		2	0	0	0	0	0	11	0				

SPEAKER CIRCUIT LOAD CALCULATION

MFG. REC. MAXIMUM LOSS IS: -0.5dB

AMPLIFIER#	CIRCUIT LOCATION	PANEL CIRCUIT NUMBER	WIRE GAUGE (18, 16, 14 12)	CIRCUIT VOLTAGE (25 OR 70 VRMS)	QUANTITIES / TAP VALUES SPEAKER TAPPED AT 0.25 WATTS	SPEAKER TAPPED AT 0.5 WATTS	SPEAKER TAPPED AT 1 WATTS	SPEAKER TAPPED AT 2 WATTS	TOTAL CIRCUIT LOAD (WATT)	ESTIMATED CIRCUIT LENGTH (FEET)	ACTUAL WIRE/LOSS (dB)	MAXIMUM ALLOWABLE CKT, LENGTH (FEET)	TOTAL CIRCUIT RESISTANCE (OHMS)
AMP	BLDG B,C, ADMIN, K, RELO	S1	14 AWG	70		13		11	28.50	1600	-0.44	1,830	8.24
	PORTABLE, bldg B, MPR	S2	14 AWG	70		21		12	34.50	1000	-0.33	1,480	5.15
TOTAL									63.00				

1 FIRE ALARM VOLTAGE DROP AND BATTERY CALCULATIONS

NOT TO SCALE

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APP: 04-121818 INC:
REVIEWED FOR
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DATE: 08/11/2023

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WEBBER ELEMENTARY HVAC UPGRADE & MODERNIZATION

PROJECT ADDRESS:
14142 Hoover St
Westminster, CA 92683

DSA SUBMITTAL

DSA APPL NO.: 04-121818 DSA FILE NO.: 30-43

E4 E3 E2 E1 C
D4 D3 D2 D1 B A
F1 F2 F3 F4
MP AD PSI K

KEY PLAN
NORTH: PLAN

Consultant

REGISTERED PROFESSIONAL ENGINEER RONALD C DELA CRUZ No. E 23576 Exp. 09-30-2023 ELECTRICAL STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT
DATE 12-29-2022
PROJECT NUMBER 220309

REVISIONS

Description	Date

DSA SUBMITTAL

FIRE ALARM RISER & CALCULATIONS

FA5.1

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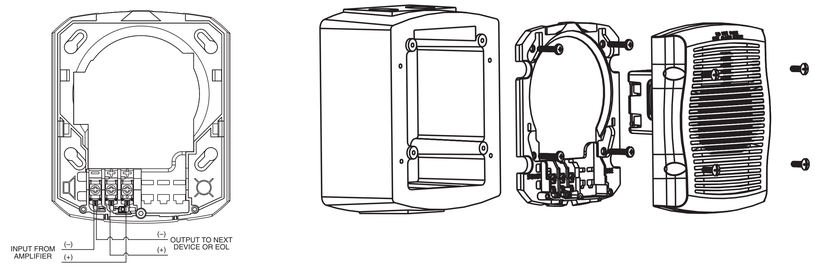
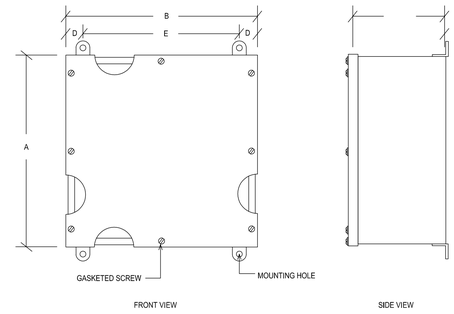


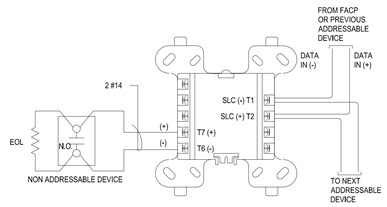
* PER UNIT MAXIMUM WEIGHT APPROXIMATELY 1.8 LBS. THIS WEIGHT IS SUBJECT TO VARY DEPENDING ON THE MODEL NUMBER AND MANUFACTURER.

8 WEATHERPROOF SPEAKER DETAIL (TYPICAL)
NOT TO SCALE

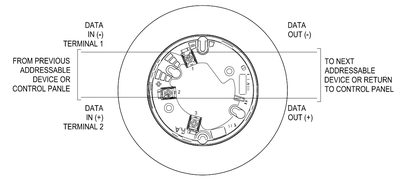


HEIGHT (A) X WIDTH (B) X DEPTH (C)	D	E
18" X 18" X 6"	1"	10"

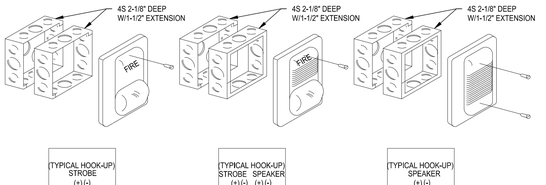
7 TYPICAL PULL BOX DETAIL
NOT TO SCALE



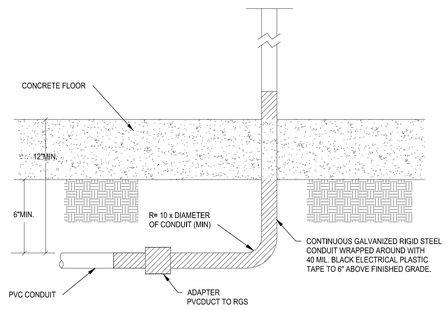
6 MONITOR MODULE DETAIL
NOT TO SCALE



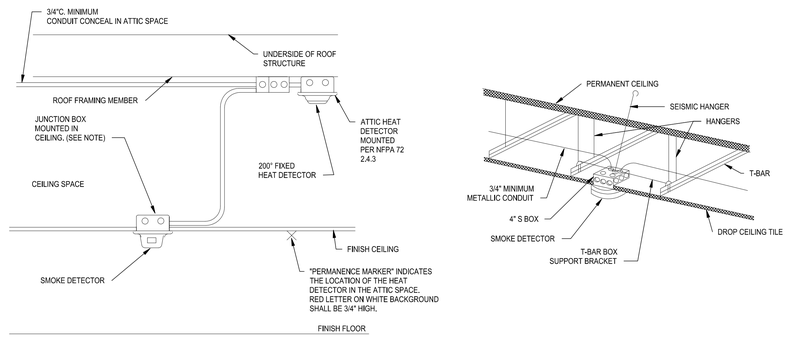
5 SMOKE/HEAT DETECTOR DETAIL
NOT TO SCALE



4 SPEAKER/STROBE DETAIL
NOT TO SCALE



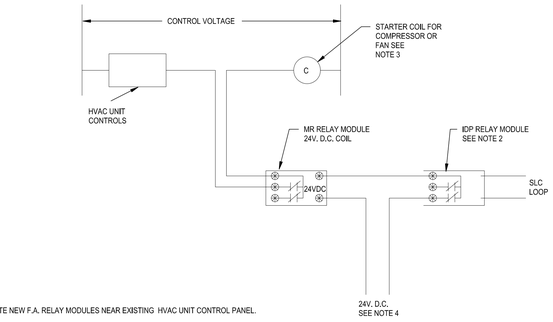
9 CONDUIT RISER DETAIL
NOT TO SCALE



NOTE:

MOUNT MONITOR MODULE INSIDE BOX FOR THE HEAT DETECTOR. SEE WIRING DETAIL ON THIS SHEET.

2 DROP CEILING DEVICE INSTALLATION DETAIL
NOT TO SCALE



NOTES:

1. LOCATE NEW F.A. RELAY MODULES NEAR EXISTING HVAC UNIT CONTROL PANEL.
2. IDP RELAY IS ACTIVATED BY THE AREA SMOKE/HEAT DETECTORS VIA SLC LOOP.
3. VERIFY NUMBER OF STARTER COILS AT EACH HVAC UNIT. SOME UNITS REQUIRE 2 OR MORE RELAYS FOR SHUTDOWN OF COMPRESSORS AND FANS.
4. PROVIDE 24V. D.C. SOURCE (LOW VOLTAGE TRANSFORMER) FROM POWER SUPPLY UNIT.
5. A LISTED RELAY TO THE FIRE ALARM SYSTEM SHALL BE LOCATED WITHIN 3 FEET OF THE CONTROLLED CIRCUIT PER 2010 NFPA 6.16.2.2.

1 HVAC UNIT SHUT-DOWN DETAIL
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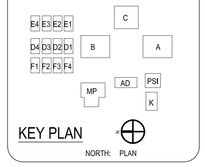

Consultant

REGISTERED PROFESSIONAL ENGINEER
RONALD C DELA CRUZ
No. E 22576
Exp. 09-30-2023
ELECTRICAL
STATE OF CALIFORNIA

Architect

CLIENT
WESTMINSTER SCHOOL DISTRICT

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FIRE ALARM DETAILS

FA6.1

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