ESCALON HS FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE. ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

ABBREVIATIONS

ABV	ABOVE	LTWT	LIGHT WEIGHT
AFF	ABOVE FINISH FLOOR	L	LONG/LENGTH
ACC	ACCESSIBLE	LV	LOUVER VENT
ACOUS	ACOUSTICAL	MB	MACHINE BOLT
ADJ	ADJUSTABLE	MH	MAN HOLE
A/C	AIR CONDITIONING		MANUFACTURER
ALT	ALTERNATE	MAS	MASONRY
ALUM	ALUMINUM	MAX	MAXIMUM
AB	ANCHOR BOLT	MECH	MECHANICAL
ANOD	ANODIZED		METAL
ARCH	ARCHITECT(URAL)	MIN	MINIMUM
AC	ASPHALT CONCRETE	MISC	MISCELLANEOUS
APL	ASSUMED PROPERTY LINE	MTD	MOUNTED
AUTO	AUTOMATIC	(N)	NEW
BM	BEAM	NRC	NOISE REDUCTION COEFF.
BET	BETWEEN	NOM	NOMINAL
BLK	BLOCK	N	NORTH
BLKG	BLOCKING	NIC	NOT IN CONTRACT
BD	BOARD	NTS	NOT TO SCALE
BOT	BOTTOM	NO/#	NUMBER
BOB	BOTTOM OF BEAM	OC	ON CENTER
BLDG	BUILDING	OPNG	OPENING
CIP	CAST IN PLACE	OD	OUTSIDE DIAMETER
CB	CATCH BASIN	O/	OVER
CLKG	CAULKING	OFOI	OWNER FURNISHED OWNER INSTALLED
CLG	CEILING		
CJ	CEILING JOIST / CONTROL JOINT	OFCI	OWNER FURSHINED CONTRACTOR INSTALLED
CEM	CEMENT		
CL	CHAIN LINK	PR	PAIR
CO	CLEAN OUT	PTD	PAPER TOWEL DISPENSER
CLR	CLEAR(ENCE)	d	PENNY
COL	COLUMN	PERF	PERFORATED
COMB	COMBINATION		PLASTER
CONC	CONCRETE	PLYWD	PLYWOOD
CMU	CONCRETE MASONRY UNIT	PT	POINT
CONST	CONSTRUCTION	POC	POINT OF CONNECTION
CONT	CONTINUOUS	PVC	POLYVINYL CHLORIDE
CTSK	COUNTER SINK	PSI	POUNDS PER SQ. INCH
DP	DEEP	PSF	POUNDS PER SQ.FT.
D	DEEP (DEPTH)	PREFAB	PREFABRICATED
DEPT	DEPARTMENT	P.T.	PRESSURE TREATED
DTL	DETAIL	PTDF	PRESSURE TREATED DOUG. FIR
DIAG	DIAGONAL	PROJ	PROJECT
DIA	DIAMETER	P.L.	PROPERTY LINE
DIM	DIMENSION	RAD	RADIUS
DISP	DISPENSER	REF	REFERENCE
DR	DOOR	REFL	REFLECTED
DBL	DOUBLE	REFR	REFRIDGERATOR
DF	DOUGLAS FIR	REINF	REINFORCE(ING)
DN	DOWN	REQ	REQUIRED
DS	DOWN SPOUT	RA	RETURN AIR
DWG	DRAWING	REV	REVISION(S)/REVISED
DF	DRINKING FOUNTAIN	ROW	RIGHT OF WAY
EA	EACH	R	RISER/RADIUS
EW	EACH WAY	RD	ROOF DRAIN
E	EAST	RM	ROOM
EWC	ELECT. WATER COOLER	RO	ROUGH OPENING
ELEC	ELECTRIC(AL)	RB	RUBBER BASE
ELEV	ELEVATION	SECT	SECTION
EMER	EMERGENCY	SHTG	SHEATHING
ENCL	ENCLOSURE	SHT	SHEET
EQ	EQUAL	SM	SHEET METAL
EXH	EXHAUST	SIM	SIMILAR
	EXISTING	SD	SOAP DISPENSER
EJ	EXPANSION JOINT	SC	SOLID CORE
EXP	EXPOSED/EXPANSION	STC	SOUND TRANSMISSION COEFF.
EXT	EXTERIOR	S	SOUTH
FOC	FACE OF CONCRETE	SPEC	SPECIFICATION
FOF	FACE OF FINISH	SQ	SQUARE
FOM	FACE OF MASONRY	SF	SQUARE FOOT
FOS	FACE OF STUD/STRUCTURE	SS	STAINLESS STEEL
FIN	FINISH	STD	STANDARD
FF	FINISH FLOOR	STL	STEEL
FA	FIRE ALARM	STOR	STORAGE
FE	FIRE EXTINGUISHER	STRUCT	STRUCTURE
FEC	FIRE EXTINGUISHER CABINET	S4S	SURFACE FOUR SIDES
FH	FIRE HYDRANT	SUSP	SUSPENDED
FLASH	FLASHING	SAT	SUSPENDED ACOUSTICAL TILE
FLR	FLOOR	SYM	SYMBOL/SYMMETRICAL
FT	FOOT / FEET	TB	TACKBOARD
FTG	FOOTING	TEL	TELEPHONE
FDN	FOUNDATION	TV	TELEVISION
GA	GAGE / GAUGE	THK	THICK
GI	GALVANIZED IRON	THRES	THRESHOLD
GL	GLASS / GLAZING	T&G	TONGUE & GROOVE
GALV	GLAVANIZED	TOB	TOP OF BEAM
GLB	GLUE LAMINATED BEAM	TOC	TOP OF CURB/CONCRETE
GB	GRAB BAR	TOP	TOP OF PLATE/PARAPET/PAVEMENT
GND	GROUND	TOS	TOP OF SHEATHING STEEL/SLAB
GYP	GYPSUM	TOW	TOP OF WALK/WALL
GYPBD	GYPSUM BOARD	T	TREAD
HDW	HARDWARE	TYP	TYPICAL
HDR	HEADER	UNO	UNLESS NOTED OTHERWISE
HVAC	HEATING/VENTILATING/AIR CONDITION	UR	URINAL
		VERT	VERTICAL
HT	HEIGHT	VCT	VINYL COMPOSITION TILE
H	HIGH	WSTC	WAINSCOT
HC	HOLLOW CORE	WC	WATER CLOSET
HM	HOLLOW METAL	WH	WATER HEATER
HSS	HOLLOW STRUCTURAL SECTION	WP	WATER PROOFING
HORIZ	HORIZONTAL	WR	WATER RESISTANCE
HB	HOSE BIB	WT	WEIGHT
HR	HOUR	WWF	WELDED WIRE FABRIC
IN	INCH	W	WEST/WIDTH/WIDE
ID	INSIDE DIAMETER	WDW	WINDOW
INSUL	INSULATION	W/	WITH
INT	INTERIOR	W/O	WITHOUT
LAB	LABORATORY	WD	WOOD
LAM	LAMINATE(D)	WWM	WOVEN WIRE MESH
LAV	LAVATORY	WI	WROUGHT IRON
LT	LIGHT		

GENERAL NOTES

GENERAL NOTES

01. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, 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 REPAIR WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR)

02. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE OWNER, ARCHITECT, AND DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.

03. THE LOCATION AND STORAGE OF CONSTRUCTION MATERIALS AND THE EFFECTS ON EXISTING OCCUPIED BUILDINGS SHALL BE APPROVED BY THE CITY OF "XYZ" FIRE DEPARTMENT.

04. TEMPORARY TOILET FACILITIES SHALL BE PROVIDED PER THE PROJECT MANUAL UNDER TEMPORARY FACILITIES.

05. ALL PENETRATIONS IN FIRE RATED ASSEMBLIES SHALL BE PROTECTED IN ACCORDANCE WITH C.B.C. CHAPTER 7.

06. TESTING OF MATERIALS SHALL BE CONDUCTED BY A TESTING LAB SELECTED BY THE OWNER & APPROVED BY THE ARCHITECT. THE OWNER SHALL PAY FOR TESTING OF MATERIALS IN ACCORDANCE WITH SECTION 01410.

07. A "DSA CERTIFIED" PROJECT INSPECTOR (CLASS 3) EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE ARCHITECT AND DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR

08. A COPY OF TITLE 24 PART ONE AND TWO SHALL BE KEPT AVAILABLE IN THE FIELD BY THE INSPECTOR AND THE CONTRACTOR DURING CONSTRUCTION.

09. ALL ITEMS ARE TO BE CONSIDERED NEW UNLESS IDENTIFIED AS (E) OR EXISTING

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AN UNDERGROUND UTILITY LOCATING SERVICE AND WILL BE RESPONSIBLE FOR REPAIRS TO ANY AND ALL UNDERGROUND UTILITIES DAMAGED IN THE TRENCHING AND/OR HORIZONTAL BORING AT THE SITE THE FIELD BY THE INSPECTOR

11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE TO BECOME FAMILIAR WITH THE PROJECT AREA AND SITE CONDITIONS

12. THE CONTRACTOR SHALL ADVISE THE OWNER AND ARCHITECT OF THE SCHEDULE AND COORDINATE WORK AS SO TO HAVE THE LEAST POSSIBLE IMPACT ON THE OWNER'S OPERATIONS

13. EXISTING IMPROVEMENTS AND UTILITIES DAMAGED DURING THE COURSE OF THE WORK SHALL BE PROMPTLY REPAIRED. EXISTING IMPROVEMENTS AND UTILITIES DAMAGED, FOR WHICH LOCATIONS WERE UNKNOWN, SHALL BE IMMEDIATELY BROUGHT TO THE ARCHITECT'S ATTENTION AND PROMPTLY REPAIRED AT HIS DIRECTION. THE WORK REQUIRED TO REPAIR DAMAGED EXISTING WILL BE REVIEWED AND TAKEN UNDER CONSIDERATION AS EXTRA WORK

14. THE CONTRACTOR WILL VERIFY EXACT CONDITIONS AND DIMENSIONS IN THE FIELD

15. ADEQUATELY PROTECT ALL PERSONNEL AND THE PUBLIC FROM HARM AND ACCIDENT DURING WORK OF THIS PROJECT, BY THE ERECTION OF PROPER BARRICADES, SIGNAGE AND LIGHTING AS MAY BE NECESSARY. ADEQUATELY PROTECT ALL EXISTING BUILDINGS AND SURFACES ADJACENT TO THE WORK OF THIS PROJECT FROM DAMAGE

16. NO INTERFERENCE OF THE USE OF FIRE LANES OR PUBLIC EGRESS AT ANY TIME SHALL BE ALLOWED UNLESS OTHERWISE AUTHORIZED IN THESE DOCUMENTS OR IN WRITING

17. ALL RUBBISH AND DEBRIS SHALL BE LEGALLY DISPOSED OF OFF THE SITE BY THE CONTRACTOR THE CONTRACTOR SHALL MAINTAIN THE PREMISES FREE OF ACCUMULATED WASTE AND MATERIALS CAUSED BY CONTRACTORS, EMPLOYEES OR WORK, OR THE EMPLOYEES OR WORK OF THE SUBCONTRACTORS

18. NO MATERIAL OR EQUIPMENT SHALL BE LEFT ON THE PROJECT SITE OVERNIGHT UNSECURED.

19. IN ACCORDANCE WITH THE GENERAL CONDITIONS OF THE CONTRACT, A FULL-TIME SUPERINTENDENT SHALL BE EMPLOYED BY THE CONTRACTOR AND SHALL BE PRESENT AT THE JOB SITE WHILE WORK IS BEING PERFORMED

20. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR EXISTING CONCRETE WALKS, LANDSCAPING, IRRIGATION SYSTEMS, ETC. WHICH MAY BE DAMAGED BY THE WORK OF THIS PROJECT, IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR

21. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.

22. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.

GENERAL DEMOLITION NOTES

01. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CORRECTION / CLARIFICATION PRIOR TO EXECUTION OF THE WORK.

02. DETAILING, MATERIALS & FINISHES ARE TYPICAL FOR ALL SIMILAR CONDITIONS.

03. THE INTENT OF THE DEMOLITION PLANS IS TO DESCRIBE THE GENERAL SCOPE OF THE DEMOLITION WORK BUT DOES NOT NECESSARILY DEPICT ALL ITEMS / CONDITIONS REQUIRED TO COMPLETE THE RELEVANT WORK AS INDICATED IN THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND ANY RELEVANT SUB-CONTRACTOR SHALL PERFORM A THOROUGH SITE INVESTIGATION PRIOR TO BIDDING AND/OR COMMENCING WITH THE WORK

04. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING ALL RELATED FEES FOR A DEMOLITION PERMIT FROM "XYZ" AIR POLLUTION CONTROL DISTRICT AND IS TO COMPLY WITH ALL "XYZ" REQUIREMENTS INCLUDING NOTIFICATIONS.

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH APPLICABLE CODES AND STANDARDS

APPLICABLE CODES - EFFECTIVE JANUARY 1, 2023

TITLE 19 CCR	PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24 CCR	PART 1 - 2022 BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR	PART 2 - 2022 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2021 IBC, AS AMENDED BY CA)
TITLE 24 CCR	PART 3 - 2022 CALIFORNIA ELECTRICAL CODE (CEC) (2020 NEC, AS AMENDED BY CA)
TITLE 24 CCR	PART 4 - 2022 CALIFORNIA MECHANICAL CODE (CMC) (2022 IAPMO UMC, AS AMENDED BY CA)
TITLE 24 CCR	PART 5 - 2022 CALIFORNIA PLUMBING CODE (CPC) (2022 IAPMO UPC, AS AMENDED BY CA)
TITLE 24 CCR	PART 6 - 2022 CALIFORNIA ENERGY CODE
TITLE 24 CCR	PART 9 - 2022 CALIFORNIA FIRE CODE (CFC) (2021 IFC, AS AMENDED BY CA)
TITLE 24 CCR	PART 11 - 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
TITLE 24 CCR	PART 12 - 2022 REFERENCED STANDARDS

APPLICABLE STANDARDS - 2022 CBC CH.35 AND 2022 CFC CH. 80

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AD.2	DETAILS - SUSPENDED CEILING - WOOD FRAMING

SHEETS - MECHANICAL

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M4.5	MECHANICAL-HOOD INFORMATION
M4.6	MECHANICAL-HOOD INFORMATION
M4.7	MECHANICAL-HOOD INFORMATION
M4.8	MECHANICAL-HOOD INFORMATION
M4.9	MECHANICAL-HOOD INFORMATION
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M4.13	MECHANICAL-HOOD INFORMATION
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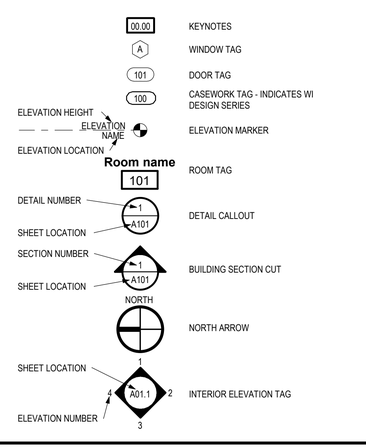
P0.0	PLUMBING-LEGEND, NOTES AND SCHEDULES
P0.1	PLUMBING-GREEN BUILDING CODE NOTES
P1.0	PLUMBING-DEMOLITION FLOOR PLAN
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P3.0	PLUMBING-DETAILS
P3.1	PLUMBING-DETAILS

SHEETS - ELECTRICAL

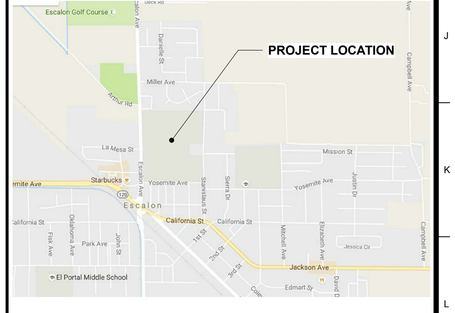
E0-1.1	GENERAL NOTES
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ET24	COMPLIANCE

78 SHEETS TOTAL

SYMBOLS LEGEND



VICINITY MAP



CLIENT

ESCALON UNIFIED SCHOOL DISTRICT
JOHN LIAL, DIRECTOR OF MAINTENANCE, OPERATIONS AND TRANSPORTATION
1528 YOSEMITE AVENUE
ESCALON, CA 95320
(209) 838-3591
(209) 838-6703

ARCHITECT

TIMOTHY P. HUFF & ASSOCIATES, INC.
DBA: TPH ARCHITECTS
TIMOTHY P. HUFF, AIA, PRINCIPAL ARCHITECT
519 McHENRY AVENUE
MODESTO, CALIFORNIA 95354
PH: (209) 571 2232
FAX: (209) 571 1936

FOOD SERVICE CONSULTANT:

AMD FOODSERVICE DESIGN LLC.
PATRICK JONES
P.O. BOX 163
GARDEN VALLEY, CA 95633
PH: (530) 333-4606

MECHANICAL ENGINEER:

NEXUS ENGINEERING
ALLEN LAYMAN, M.E.
1400 LONE PALM, SUITE A
MODESTO, CA 95354
PH: (209) 572 7399
FAX: (209) 236 1597

ELECTRICAL ENGINEER:

HCS ENGINEERING, INC.
RICHARD SMITH, E.E.
4651 QUAIL LAKES DRIVE
STOCKTON, CA 95207
PH: (209) 478 8270
FAX: (209) 478 2169

PROJECT TEAM

- RENOVATE EXISTING SHOP CLASSROOM
- NEW STOREFRONT WINDOW SYSTEM
- NEW GREASE INTERCEPTOR
- NEW NATURAL GAS LINE
- FIRE ALARM IMPROVEMENTS
- KITCHEN EQUIPMENT IS OFCI UON

SCOPE OF WORK

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 19527 REN. 5/25 STATE OF CALIFORNIA

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Consultants

ESCALON HIGH SCHOOL
FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
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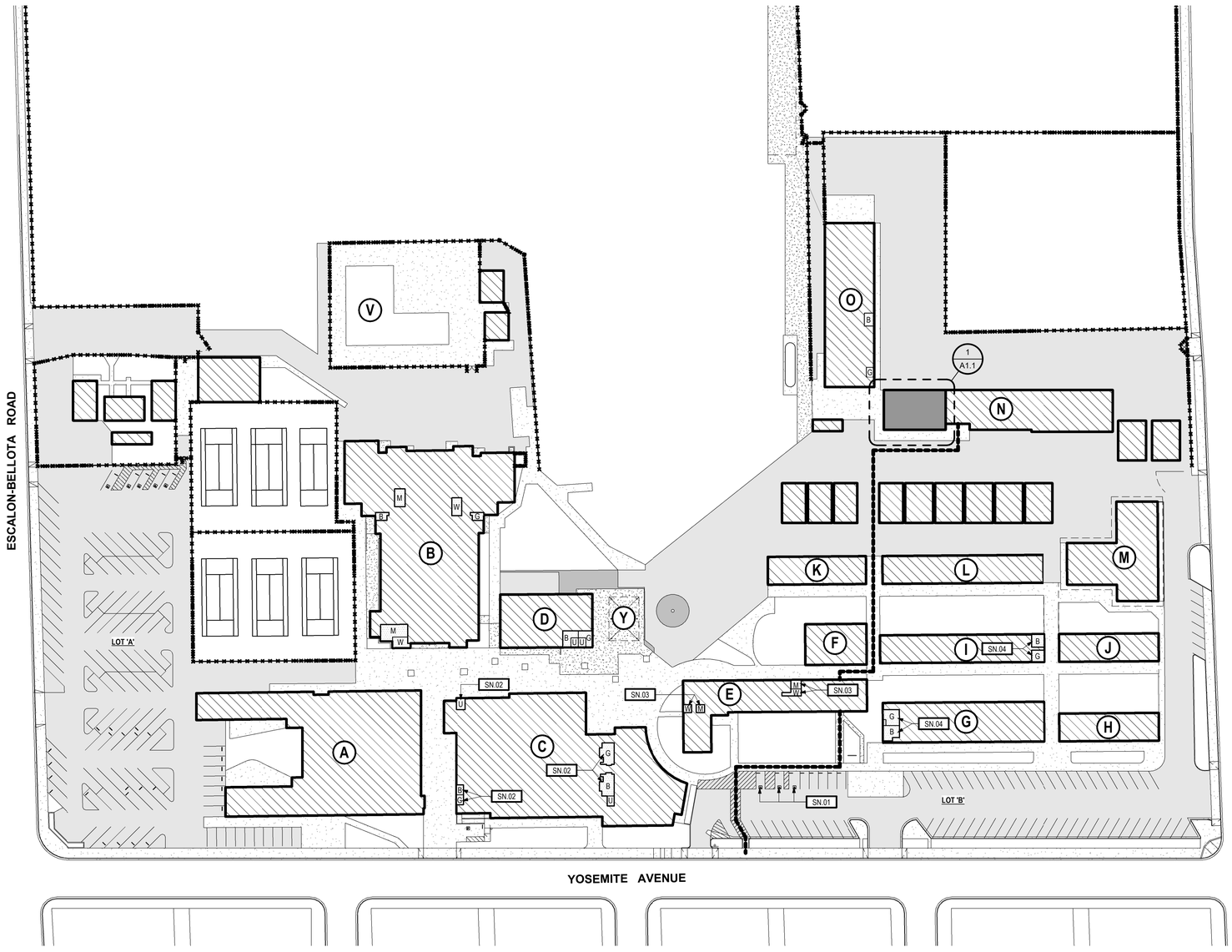
COVER SHEET

Project Number	2321
Date	OCT 2024
Drawn by	Author
Checked by	Checker

CS

Plot Date & Time 1/21/2025 5:15:45 PM

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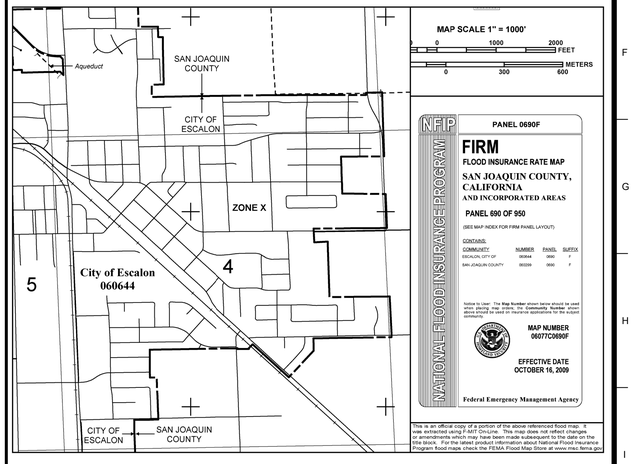
1 SITE PLAN

SCALE: 1" = 60'-0"

NORTH

BUILDING INDEX				
BUILDING ID	DESCRIPTION	DSA APPLICATION NO.	OCC. TYPE	CONST. TYPE
A	GYMNASIUM - OLD	A:8472	A-4	V-A
B	GYMNASIUM - NEW	A:44510	A-4	III-A
C	PERFORMING ARTS	A:02-105589	A-1/E/B	V-A
D	MUSIC BUILDING	A:11908	E	V-B
E	ADMINISTRATION	A:11908/47372/02-113172	B/E	V-B
F	LIBRARY	A:6834/02-113172	E	V-B
G	CLASSROOMS	A:6834/02-113172	E	V-B
H	CLASSROOMS	A:6834/02-113172	E	V-B
I	CLASSROOMS	A:6834/02-113172	E	V-B
J	CLASSROOMS	A:6834/02-113172	E	V-B
K	CLASSROOMS	A:11908/02-113172	E	V-B
L	CLASSROOMS	A:23163/02-113172	E	V-B
M	SCIENCE BUILDING	A:02-102576	E	V-B
N	AGRICULTURE BUILDING	A:11908/33607	E	V-B
O	AGRICULTURE/AUTO SHOP	A:11908/02-113172	E/S-1	V-B
P1/P2	CLASSROOM - RELOC.	A:02-101369	E	V-B
Q1/Q2	CLASSROOM - RELOC.	A:65347	E	V-B
R1/R2	CLASSROOM - RELOC.	A:02-102355	E	V-B
S1/S2	CLASSROOM - RELOC.	A:58647	E	V-B
T	CLASSROOM - RELOC.	A:57619	E	V-B
U1/U2	CLASSROOM - RELOC.	A:02-102576	E	V-B
V	SWIMMING POOL	A:02-101673	A-4	-
W	WEIGHT ROOM	A:02-106928	E	V-B
X1/X2/X3/X4	VISTA HIGH SCHOOL	A:45147	B/E	V-B
Y	SHADE STRUCTURE	A:02-115471	A-3	II-B

BUILDING INFORMATION



FLOOD MAP

SHEET NOTES	
SN.01	ACCESSIBLE PARKING STALLS WITH LOADING/UNLOADING AREAS AND STRPIED PATH OF TRAVEL 0 EXISTING (02-115471)
SN.02	STUDENT BOYS, GIRLS, AND STAFF RESTROOMS - EXISTING (02-105589)
SN.03	STAFF RESTROOMS - EXISTING (02-113172)
SN.04	STUDENT RESTROOMS - EXISTING (02-113172)

NOTES

(ACS) ACCESS COMPLIANCE

THE **PATH OF TRAVEL (P.O.T.)** IS INDICATED BY

AND IS A COMMON BARRIER FREE ACCESS ROUTE AT LEAST 48" WIDE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL. THE P.O.T. IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACES (11B-403.5.3) AT LEAST 60"X60" ARE LOCATED NOT MORE THAN 200' APART. PARTS OF P.O.T. WITH CONTINUOUS GRADIENTS HAVE 60" LEVEL AREAS (11B-403.7) NOT MORE THAN 400' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTION TO 80" MINIMUN (11B-307.4) & PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307.2). GRID OPENINGS OF GRATINGS IN THE P.O.T. SHALL NOT EXCEED 1/2" IN THE DIRECTION OF TRAFFIC FLOW.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISION FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS.** AS PART OF THE DESIGN OF THE IS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN INDENTIFIED 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 PORTION OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATION OR 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 REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

ACCESSIBLE PATH OF TRAVEL

PARKING SCHEDULE					
LOT	STANDARD STALLS	COMPACT STALLS	STANDARD ACCESSIBLE STALLS	VAN ACCESSIBLE STALLS	TOTAL STALLS
LOT 'A'	103	-	4	1	108
LOT 'B'	72	-	2	1	75

PARKING SCHEDULE

EXISTING BUILDING

EXISTING AC PAVING

PROPOSED BUILDING RENOVATION

EXISTING CONCRETE FLATWORK TO REMAIN

SITE LEGEND

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 19527 REN. 5/25 STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

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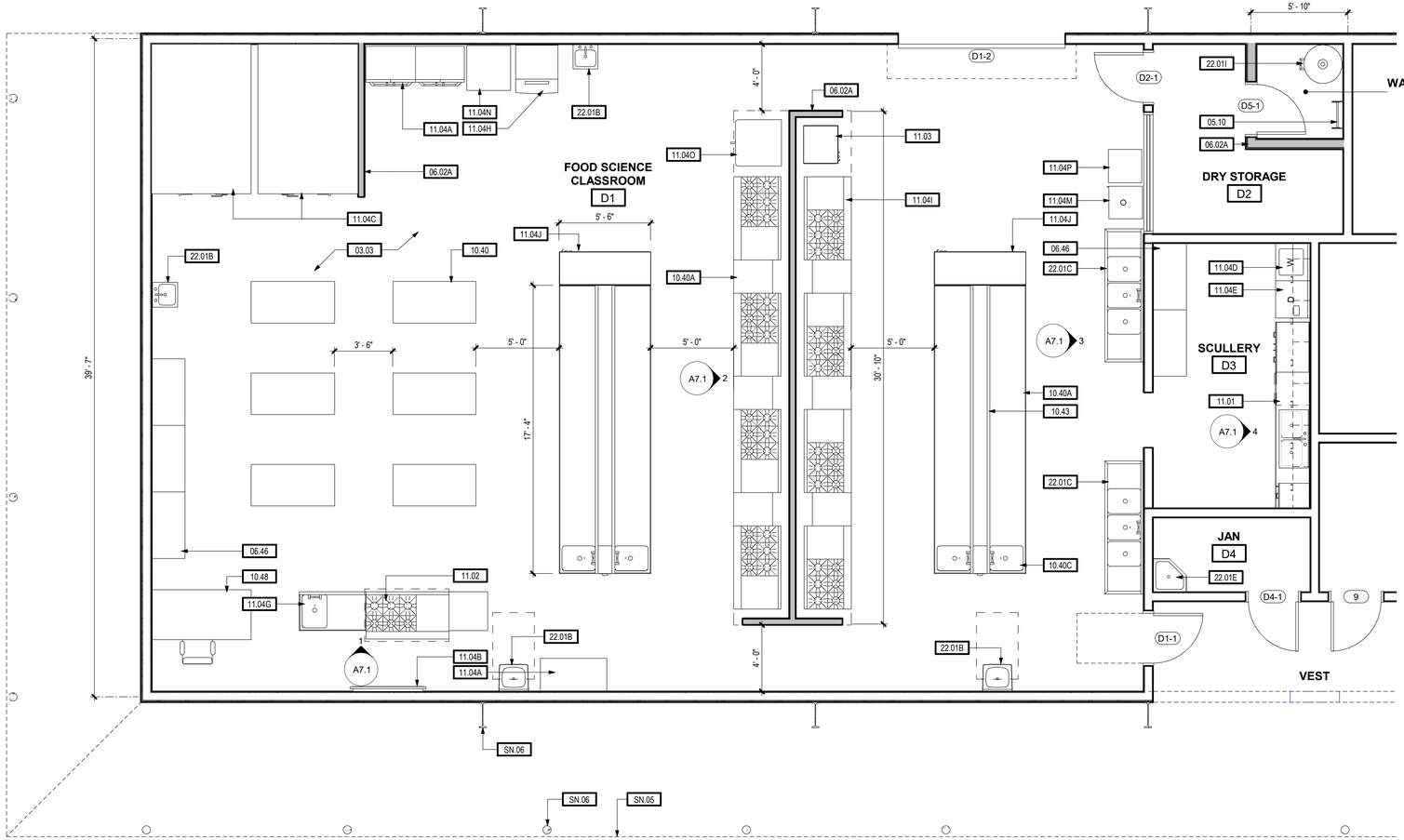
SITE PLANS

Project Number	2321
Date	OCT 2024
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Checked by	MC

AS.1

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KEYNOTES

03.03	CAST-IN-PLACE CONCRETE - EXISTING - CONCRETE RESTORATION AND CLEANING
05.10	ROOF ACCESS LADDER- SEE 19/AD.6
06.02A	NEW WALL SHOWN SHADED - WOOD STUDS AT 16" O.C.- SEE 13/AD.1
06.46	TALL CABINET
10.40	60"x 30" STAINLESS STEEL STUDENT DESK- SEE FOOD SERVICE DRAWINGS
10.40A	STAINLESS STEEL PREP TABLE- SEE FOOD SERVICE DRAWINGS
10.40C	STAINLESS STEEL PREP SINK- SEE FOOD SERVICE DRAWINGS
10.43	STAINLESS STEEL SHELVES ABOVE- SEE FOOD SERVICE DRAWINGS
10.48	TEACHING DESK- BY DISTRICT
11.01	APPLIANCES - DISHWASHER- SEE FOOD SERVICE DRAWIWNGS
11.02	APPLIANCES - EXHAUST HOOD- SEE MECHANICAL DRAWINGS
11.03	APPLIANCES - SMOKER- SEE FOOD SERVICE DRAWINGS
11.04A	APPLIANCES - REFRIGERATOR / FREEZER- SEE FOOD SERVICE DRAWINGS
11.04B	APPLIANCES - TV - BY OWNER
11.04C	APPLIANCES - WALK IN COOLER AND FREEZER- SEE FOOD SERVICE DRAWINGS
11.04D	APPLIANCES - CLOTHES WASHER- SEE FOOD SERVICE DRAWINGS
11.04E	APPLIANCES - CLOTHES DRYER- SEE FOOD SERVICE DRAWINGS
11.04G	APPLIANCES - TEACHING STATION WITH RANGE AND PREP SINK- SEE FOOD SERVICE DRAWINGS
11.04H	APPLIANCES - ICE MAKER- SEE FOOD SERVICE DRAWINGS
11.04I	APPLIANCES - RANGE- SEE FOOD SERVICE DRAWINGS
11.04J	APPLIANCES - FOOD WARMER- SEE FOOR SERVICE DRAWINGS
11.04M	APPLIANCES - DRY AGER- SEE FOOD SERVICE DRAWINGS
11.04N	APPLIANCES - BLAST FREEZER- SEE FOOD SERVICE DRAWINGS
11.04O	APPLIANCES - RATIONAL DOUBLE DECK 6 PAN HALF-SIZE NATURAL GAS COMBI OVEN WITH STAND- SEE FOOD SERVICE DRAWINGS
11.04P	APPLIANCES - DARWIN ENVIRONMENTAL CHAMBERS- SEE FOOD SERVICE DRAWINGS
22.01B	PLUMBING FIXTURE - LAVATORY
22.01C	PLUMBING FIXTURE - 3 COMPARTMENT SINK
22.01E	PLUMBING FIXTURE - MOP SINK
22.01I	WATER HEATER- SEE PLUMBING

SHEET NOTES

SN.06	EXISTNG COLUMN

NOTES

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FLOOR PLAN

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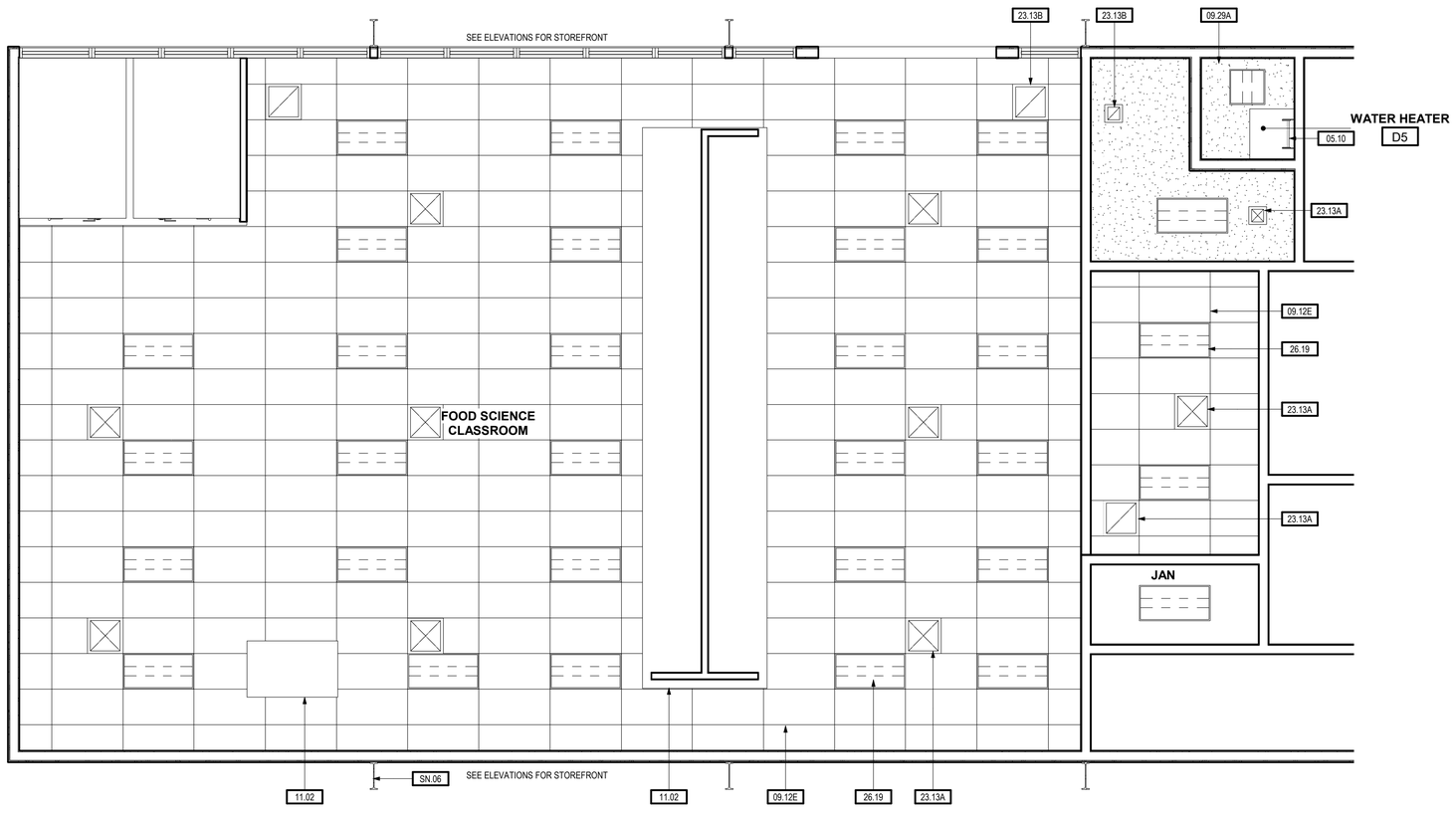
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1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

NORTH

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KEYNOTES

05.10	ROOF ACCESS LADDER- SEE 19/AD.6
09.12E	SUSPENDED CEILING SYSTEM SEE SHEET AD.2
09.29A	GYPSUM BOARD CEILING FINISH OVER EXISTING CEILING FRAMING
11.02	APPLIANCES - EXHAUST HOOD- SEE MECHANICAL DRAWINGS
23.13A	HVAC REGISTER - SUPPLY AIR - SEE MECHANICAL DRAWINGS
23.13B	HVAC REGISTER - RETURN AIR - SEE MECHANICAL DRAWINGS
26.19	LIGHT FIXTURE- SEE ELECTRICAL

SHEET NOTES

SN.06	EXISTNG COLUMN

NOTES

NORTH

1 REFLECTED CEILING PLAN

SCALE: 1/4" = 1'-0"

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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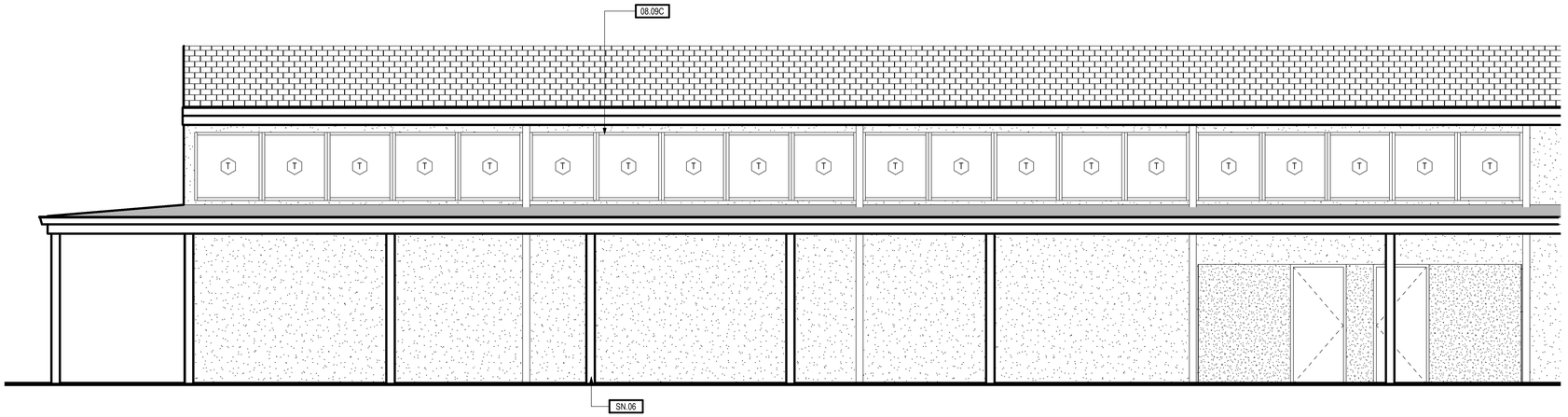
REFLECTED CEILING PLAN

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Date	OCT 2024
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Checked by	Checker

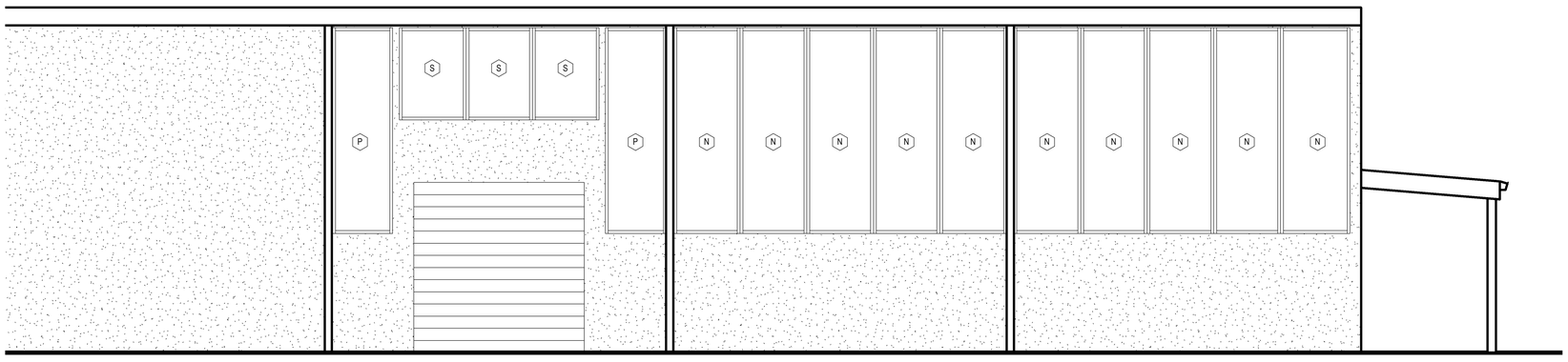
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SOUTH ELEVATION 1



NORTH ELEVATION 2

KEYNOTES

08.09C	ALUMINUM STOREFRONT- REMOVE EXISTING WINDOW SYSTEM AND REPLACE WITH NEW STOREFRONT SYSTEM- SEE STOREFRONT SCHEDULE

SHEET NOTES

SN.06	EXISTNG COLUMN

EXTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0"

NOTES

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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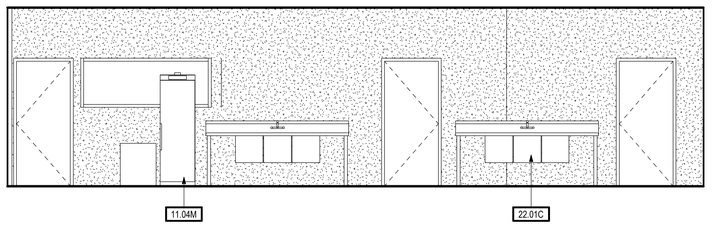
ELEVATIONS

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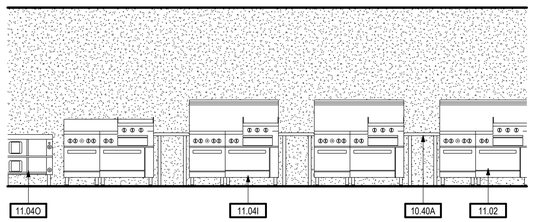
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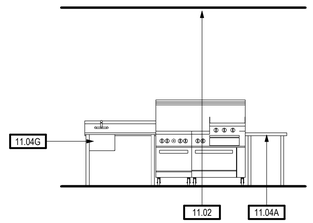
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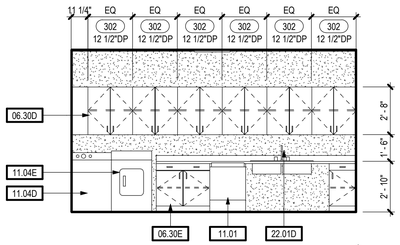
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1

FOOD SCIENCE CLASSROOM

SCALE: 1/4" = 1'-0"



4

SCULLERY

SCALE: 1/4" = 1'-0"

KEYNOTES	
06.30D	PLASTIC LAMINATE UPPER CABINET- SEE 3/AD.1
06.30E	PLASTIC LAMINATE BASE CABINET- SEE 4/AD.1
10.40A	STAINLESS STEEL PREP TABLE- SEE FOOD SERVICE DRAWINGS
11.01	APPLIANCES - DISHWASHER- SEE FOOD SERVICE DRAWIWNGS
11.02	APPLIANCES - EXHAUST HOOD- SEE MECHANICAL DRAWINGS
11.04A	APPLIANCES - REFRIGERATOR / FREEZER- SEE FOOD SERVICE DRAWINGS
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11.04M	APPLIANCES - DRY AGER- SEE FOOD SERVICE DRAWINGS
11.04O	APPLIANCES - RATIONAL DOUBLE DECK 6 PAN HALF-SIZE NATURAL GAS COMBI OVEN WITH STAND- SEE FOOD SERVICE DRAWINGS
22.01C	PLUMBING FIXTURE - 3 COMPARTMENT SINK
22.01D	PLUMBING FIXTURE - SINK

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TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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INTERIOR ELEVATION

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FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL				CEILING	CEILING HEIGHT	COMMENTS
				NORTH	EAST	SOUTH	WEST			
D1	FOOD SCIENCE CLASSROOM	F-1	B-1	W-1	W-1	W-1	W-2	ACT-1	10'-0"	
D2	DRY STORAGE	F-1	B-1	W-1	W-1	W-1	W-1	C-1	9'-0"	
D3	SCULLERY	F-1	B-1	W-1	W-1	W-1	W-1	C-1	9'-0"	
D4	JAN	(E)	(E)	(E)	(E)	(E)	(E)	(E)	(E)	
D5	WATER HEATER	F-1	B-1	W-1	W-1	W-1	W-1	C-1	9'-0"	
D6	FOOD SCIENCE CLASSROOM	F-1	B-1	W-1	W-1	W-1	W-2	ACT-1	10'-0"	
W11	WALK IN REF.	F-1	-	-	-	-	-	-	-	
W12	WALK IN FREZ.	F-1	-	-	-	-	-	-	-	

FLOORING
F-1: POLISHED CONCRETE

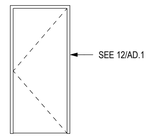
BASE
B-1: CERAMIC TILE-SLIM FOOT

WALLS
W-1: GYPSUM BOARD-PAINT
W-2: VINYL COVERED TAKBOARD / GYPSUM BOARD
W-3: STAINLESS STEEL OVER GYPSUM BOARD

CEILINGS
ACT-1: ACCOUSTICAL CEILING (2x4) - SUSPENDED
C-1: GYPSUM BOARD-PAINT

DOOR SCHEDULE

MARK	DOORS					FRAMES	DETAILS	SIGNAGE		COMMENTS
	WIDTH	HEIGHT	THICKNESS	MATERIAL	HDW. GRP.	MATERIAL	THRESHOLD	TEXT	DETAIL	
D1-1	3' - 0"	7' - 0"	1 3/4"	H.M.			9/AD.1			EXISTING TO REMAIN
D1-2	10' - 0"	10' - 0"	2"	ALUM.						EXISTING TO REMAIN
D2-1	3' - 0"	7' - 0"	1 3/4"	H.M.						EXISTING TO REMAIN
D3-1	3' - 0"	7' - 0"	1 3/4"	H.M.						EXISTING TO REMAIN
D4-1	3' - 0"	7' - 0"	1 3/4"	H.M.						EXISTING TO REMAIN
D5-1	3' - 0"	7' - 0"	1 3/4"	H.M.	1	H.M.		FOOD SCIENCE	10/AD.1	



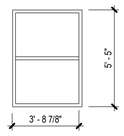
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FINISH SCHEDULE

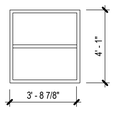
DOOR SCHEDULE

STOREFRONT SCHEDULE

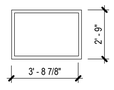
TYPE	LENGTH	HEIGHT	GLAZING	DETAIL GROUP			COMMENTS
				HEAD	JAMB	SILL	
N	3'-8 7/8"	12'-1"	CLR. GLASS				FIXED STOREFRONT
P	3'-4 7/8"	12'-1"	TEMPERED GLASS/ALUMINUM PANEL	7/AD.1	8/AD.1	7/AD.1 SIM.	FIXED STOREFRONT
S	3'-8 7/8"	5'-5"	CLR. GLASS	7/AD.1	8/AD.1	7/AD.1 SIM.	FIXED STOREFRONT
T	3'-8 7/8"	4'-1"	COLORED GLASS	7/AD.1	8/AD.1	7/AD.1 SIM.	FIXED STOREFRONT



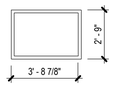
TYPE S
ALLUMINIUM STORFRONT



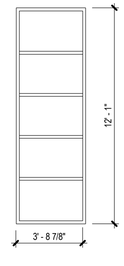
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ALLUMINIUM STORFRONT



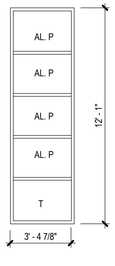
TYPE U
ALLUMINIUM STORFRONT



TYPE AC
ALLUMINIUM STORFRONT



TYPE N
ALLUMINIUM STORFRONT



TYPE P
ALLUMINIUM STORFRONT

STOREFRONT SCHEDULE

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT
TIMOTHY PAUL HUFF
No. C 19527
REN. 5/25
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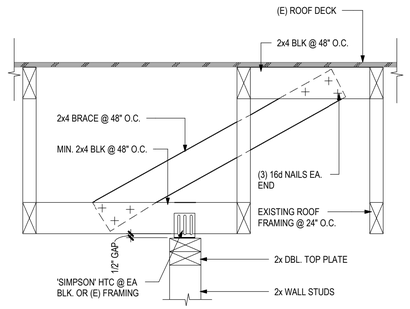
SCHEDULES

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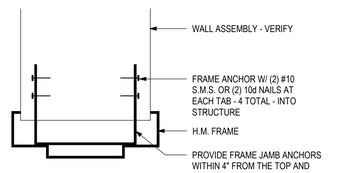
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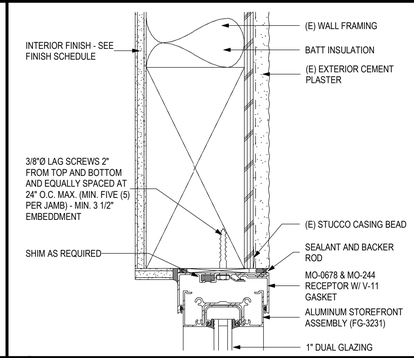
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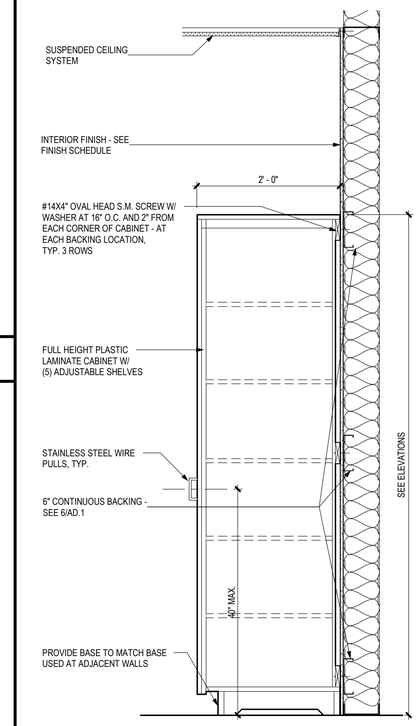
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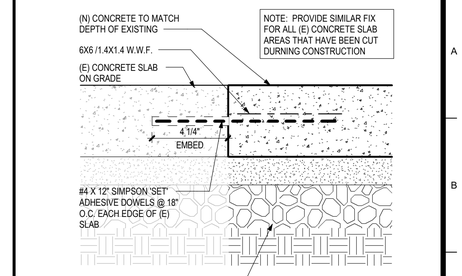
11 H.M. FRAME ATTACHMENT
SCALE: 3" = 1'-0"



7 STOREFRONT HEAD
SCALE: 3" = 1'-0"

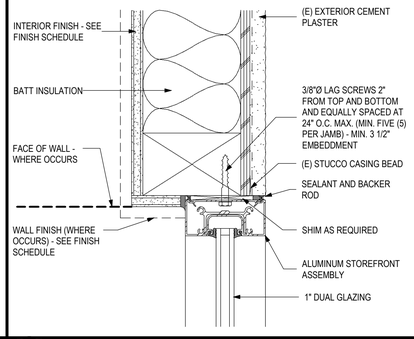


5 FULL HGHT. CAB. W/O SOFFIT
SCALE: 1" = 1'-0"

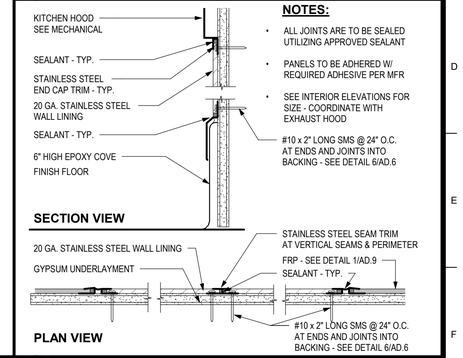


1 CONC SLAB REPLACEMENT
SCALE: 3" = 1'-0"

12 INT. DOOR JAMB (HEAD SIM.)
SCALE: 3" = 1'-0"

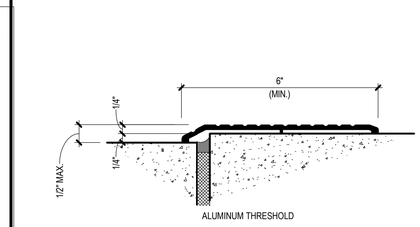


8 STOREFRONT JAMB
SCALE: 3" = 1'-0"

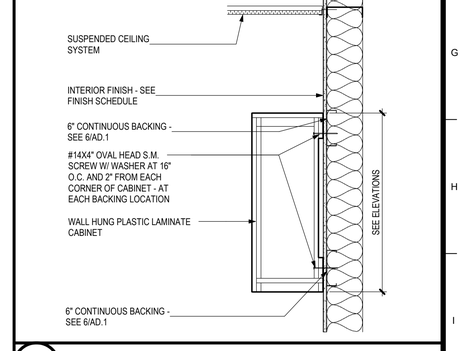


2 STAINLESS WALL COVERING
SCALE: 3" = 1'-0"

13 TYP. FRAMING - WOOD STUDS
SCALE: 3/8" = 1'-0"



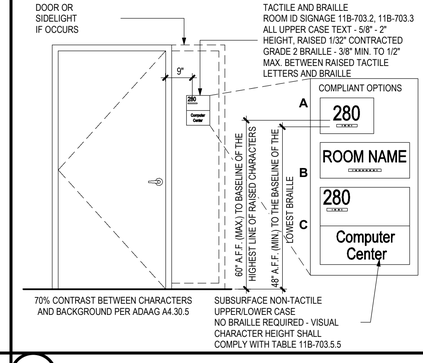
9 ALUMINUM THRESHOLD
SCALE: 6" = 1'-0"



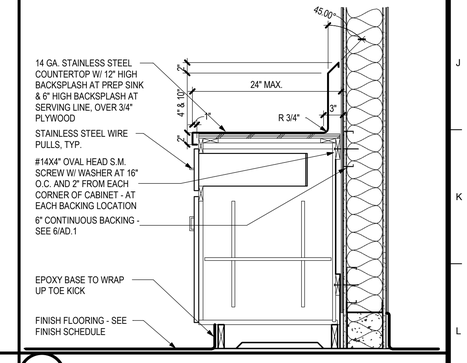
6 BACKING - WOOD STUDS
SCALE: 1" = 1'-0"

3 UPPER CAB. W/O SOFFIT
SCALE: 1" = 1'-0"

14 NON-BEARING WALL TO SLAB
SCALE: 1 1/2" = 1'-0"



10 SIGNAGE-ROOM ID
SCALE: 1/2" = 1'-0"



4 BASE CABINET SECTION
SCALE: 1" = 1'-0"

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 19527 REN. 5/25 STATE OF CALIFORNIA

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Consultants

ESCALON HIGH SCHOOL
FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

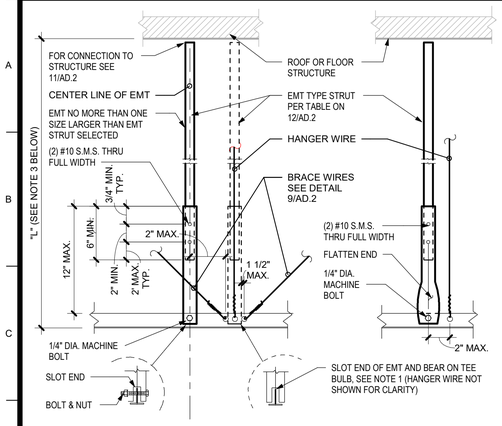
DETAILS

Project Number	2321
Date	OCT 2024
Drawn by	Author
Checked by	Checker

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OPTION 1 & 3

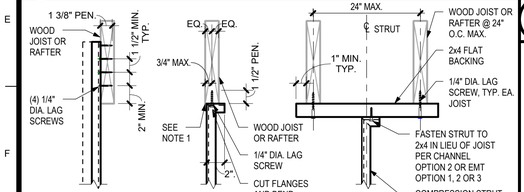
OPTION 2

FOR INFO NOT SHOWN OR NOTED, SEE OPTION 1

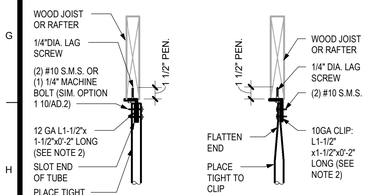
NOTES:
1. MACHINE BOLT IS NOT REQUIRED ON OPTION 3.
2. OPTION 3 IS PERMITTED ONLY WHERE THE ROOF OR FLOOR STRUCTURE IS SAWN TIMBER WITHOUT GYPSUM BOARD.
3. DIMENSION "L" SHALL NOT TO EXCEED THE ALLOWABLE LENGTH GIVEN IN THE TABLE ON 12/AD.2 FOR THE COMPRESSION STRUT USED

10 COMPRESSION STRUT - EMT TYPE

SCALE: 1 1/2" = 1'-0"



CHANNEL STRUT: OPTION 1 | **CHANNEL STRUT: OPTION 2** | **CHANNEL OR EMT STRUT: BETWEEN JOIST**



EMT STRUT: OPTION 1 | **EMT STRUT: OPTION 2**

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.

11 STRUT TO WOOD FRAMING

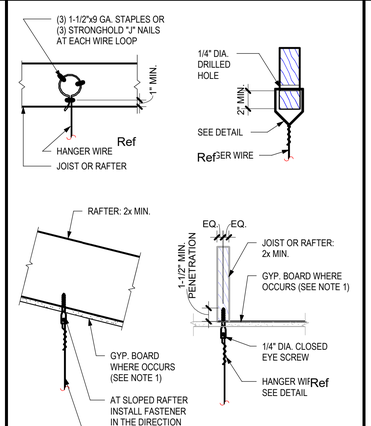
SCALE: 1 1/2" = 1'-0"

COMPRESSION STRUT EMT SECTION	MAX. 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	MAX. LENGTH
250S125-33	5' - 10"
250S137-33	6' - 10"
362S137-33	8' - 0"
250S137-43	8' - 10"
400S137-43	10' - 10"

12 STRUT SCHEDULE

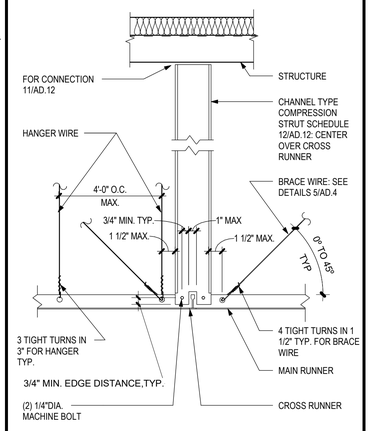
SCALE: 12" = 1'-0"



NOTES:
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.

7 HANGER WIRE

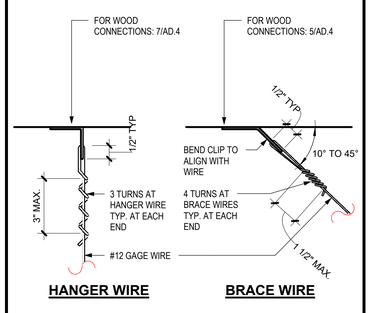
SCALE: 1" = 1'-0"



NOTES:
1. DIMENSION "L" SHALL NOT EXCEED THE ALLOWABLE LENGTH GIVEN IN THE TABLE ON 12/AD.4 FOR THE COMPRESSION STRUT SECTION USED.

8 COMPRESSION STRUT

SCALE: 1 1/2" = 1'-0"



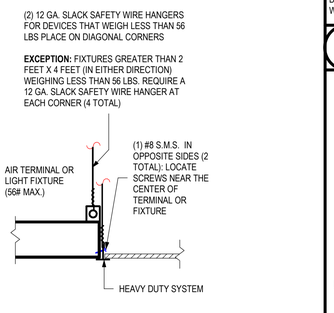
HANGER WIRE | **BRACE WIRE**

9 WIRE- TYP. WIRE TURNS

SCALE: 3" = 1'-0"

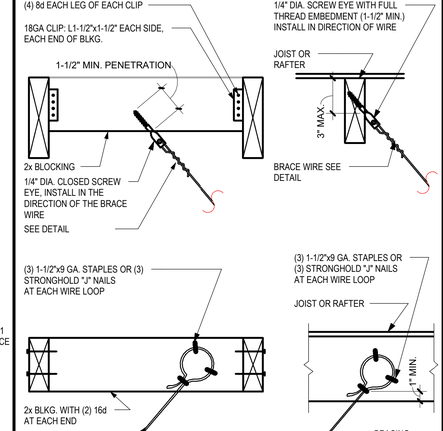
6 LUMINAIRE-AIR TERMINAL

SCALE: 1 1/2" = 1'-0"



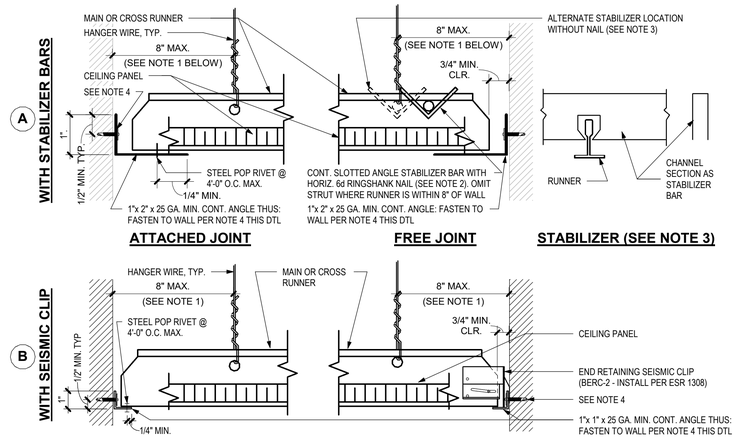
2 CEILING PERIMETER

SCALE: 3" = 1'-0"

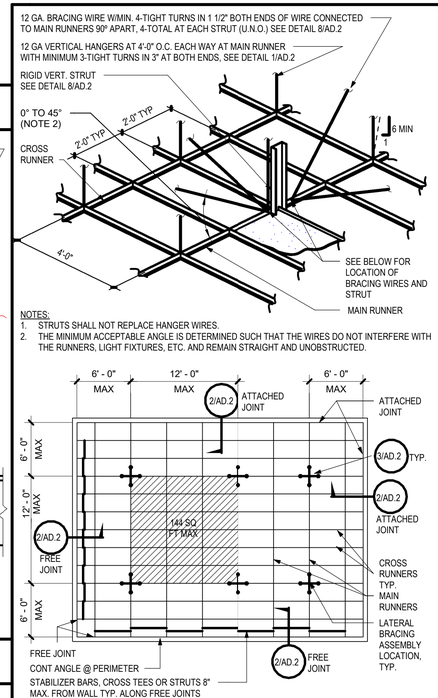


5 BRACE WIRE TO TIMBER

SCALE: 1 1/2" = 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 OR WITHIN ONE-FOURTH (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. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
4. FASTEN ANGLE TO WALL STUD OR BLOCKING AS FOLLOWS:
   1. METAL STUD (20 GA. MIN.) WALL: (1) #10 SMS AT 24" O.C. MAX.
   2. WOOD STUD WALL: #10x2" LONG WOOD SCREW AT 16" O.C. MAX.
5. WHERE BERC-2 SEISMIC CLIPS ARE USED, STABILIZER BAR MAY BE OMITTED

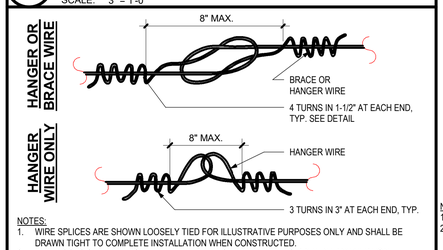


NOTES:
1. STRUTS SHALL NOT REPLACE HANGER WIRES.
2. THE MINIMUM ACCEPTABLE ANGLE IS DETERMINED SUCH THAT THE WIRES DO NOT INTERFERE WITH THE RUNNERS, LIGHT FIXTURES, ETC. AND REMAIN STRAIGHT AND UNOBSTRUCTED.

NOTES:
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT. WHERE BERC-2 SEISMIC CLIPS ARE USED, THE STABILIZER BARS MAY BE OMITTED - SEE DETAIL 2B/AD.2

3 SUSPENSION AND BRACING

SCALE: 3" = 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.

4 CEILING WIRE SPLICES

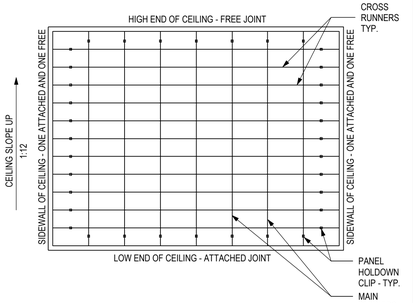
SCALE: 3" = 1'-0"

SUSPENDED ACOUSTICAL CEILING NOTES

1. 12 GA. WIRE SHALL BE 0.106" IN DIAMETER CONFORMING TO ASTM A641, 12 GA. WIRE SHALL BE SOFT ANNEALED, GALVANIZED STEEL WIRE WITH A CLASS 1 COATING.
2. 12 GA. (MIN.) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4'-0" X 4'-0" GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS. SPLICES WILL NOT BE PERMITTED IN ANY HANGER WIRES UNLESS SPECIFICALLY APPROVED BY DSA / ORS.
3. PROVIDE 12 GA. HANGER WIRES WITHIN 8" OF THE ENDS OF ALL MAIN AND CROSS RUNNERS OR AT ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS AT THE PERIMETER OF THE CEILING AREA.
4. PROVIDE SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO MAINTAIN HANGER SPACING PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREA. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB ARE TO HAVE COUNTER-SLOPING WIRES.
5. CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS PER ASTM E580. CEILING GRID MEMBERS SHOULD BE AT LEAST 3/4" FREE OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4" CLEAR OF WALL.
6. THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL BE NOT LESS THAN 2".
7. AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A 16 GA. WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNERS MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNERS IS 12" OR LESS, THIS INTERLOCK IS NOT REQUIRED.
8. PROVIDE LATERAL-FORCE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) 12 GA. SPLAYED BRACING WIRE ORIENTED 90 DEG. FROM EACH OTHER.
9. THE SPACING OF THE BRACING ASSEMBLIES MUST BE SHOWN ON THE CONSTRUCTION DOCUMENTS. (PROVIDE BRACING ASSEMBLIES AT LOCATIONS NOT MORE THAN ONE HALF (1/2) THE CALCULATED SPACING IN EACH DIRECTION DIRECTION FROM EACH PERIMETER WALL AND AT THE EDGES OF ANY CHANGE IN ELEVATION OF THE CEILING.)
   SUBSTANTIATING CALCULATIONS OF TEST REPORTS FOR THE BRACING ASSEMBLIES ARE WAIVED IF THE FOLLOWING REQUIREMENTS ARE MET:

   A. BRACING ASSEMBLIES SPACED AT A MAXIMUM OF 12' BY 12' ON CENTERS FOR SCHOOL BUILDINGS
      AND BY 8' BY 12' ON CENTERS FOR ESSENTIAL SERVICES BUILDINGS, AND
   B. THE MAXIMUM SLENDERNESS RATIO (kL/R) OF THE COMPRESSION STRUT IS 200 OR LESS.
10. THE SLOPE OF THESE WIRES SHOULD NOT EXCEED 45 DEG. FROM THE PLANE OF THE CEILING AND SHOULD BE TAUT WITHOUT CAUSING THE CEILING TO LIFT. SPLICES IN BRACING WIRES ARE NOT PERMITTED WITHOUT SPECIAL DSA APPROVAL.
11. COMPRESSION STRUTS SHALL NOT BE MORE THAN 1 IN 6 OUT OF PLUMB.
12. SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, AND FIRE RATED SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 96 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE OR WALLS INDEPENDENTLY BRACED ABOVE CEILING TO STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO TWO AJACENT WALLS.
13. PENETRATIONS THROUGH THE CEILING FOR SPRINKLER HEADS AND OTHER SIMILAR DEVICES THAT ARE NOT INTEGRAL LY TIED TO THE CEILING SYSTEM IN A LATERAL DIRECTION SHALL HAVE A TWO (2) INCH OVERSIZED RING, SLEEVE, OR ADAPTER THROUGH THE CEILING TILE TO ALLOW FREE MOVEMENT OF ONE (1) INCH IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, SWING JOINTS MAY BE PROVIDED.
14. FASTEN 12 GA. HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS IN 3". FASTEN 10 GA. OR 12 GA. BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TURNS WITHIN 1 1/2". HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE.
    NOTE: WIRE TURNS MADE BY MACHINE WHERE BOTHSTRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN WAIVE THE 1 1/2" REQUIREMENT, BUT THE NUMBER OF TURNS SHOULD BE MAINTAINED, AND AS TIGHT AS POSSIBLE.
15. SEPERATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
16. ATTACH ALL LIGHT FIXTURES AND AIR TERMINALS TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES W/ MIN. (2) #8 SCREWS.
17. FLUSH OR RECESSED LIGHT FIXTURES, WEIGHING LESS THAN 56 LBS. AND MECHANICAL TERMINALS AND SERVICES, WEIGHING LESS THAN 20 LBS. , MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM BUT IN ADDITION THEY MUST HAVE A MINIMUM OF TWO (2) 12 GA. SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 4' X 4' LIGHT FIXTURES MUST HAVE SLACK SAFETY WIRES AT EACH CORNER.
    ALL FLUSH OR RECESSED LIGHT FIXTURES WEIGHING 56 LBS. OR MORE AND MECHANICAL TERMINALS ANS SERVICES, WEIGHING 20 LBS. OR MORE, MUT BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT 12 GA. WIRES, EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE.
    THE FOUR (4) TAUT 12 GA. WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.
18. SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICE WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A 12 GA. WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE.
    PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE 8' OR LONGER. MAXIMUM SPACING BETWEEN SUPPORTS SHAL NOT EXCEED 8'.

NOTES



NOTES:
1) LATERAL FORCE BRACING ASSEMBLIES NOT SHOWN FOR CLARITY - SEE DETAIL 3/AD.4.
2) STABILIZER BARS, PERIMETER ANGLES, AND PROPRIETARY SEISMIC CLIPS NOT SHOWN FOR CALRITY - SEE DETAIL 3/AD.4

1 SLOPED CLG HOLDOWN CLIPS

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

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 19527 REN. 5/31 STATE OF CALIFORNIA

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FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
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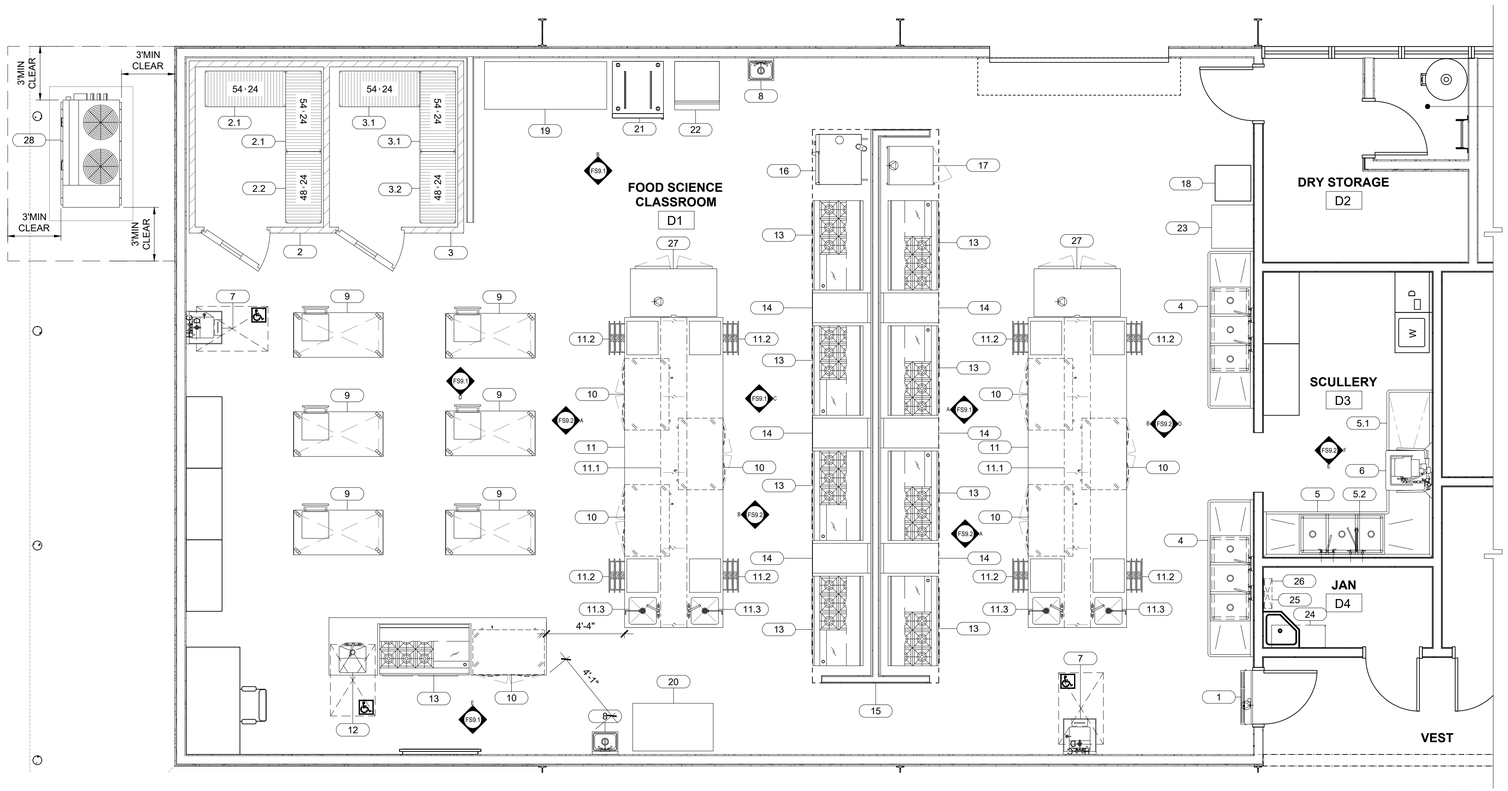
DETAILS - SUSPENDED CEILING - WOOD FRAMING

Project Number	2321
Date	OCT 2024
Drawn by	Author
Checked by	Checker

AD.2

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FOODSERVICE EQUIPMENT FLOOR PLAN

SCALE : 1/4" = 1'-0"

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FS1.1

EQUIPMENT SCHEDULE

ITEM NO	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	REMARKS	WEIGHTS	ANCHORAGE DETAILS
1	1	AIR CURTAIN, UNHEATED	BERNER	SLC07-1036A		45	C/FS8.2
2	1	WALK-IN FREEZER	RMI	FABRICATED ITEM		8.5lb PER SQ.FT. FOR 4" PANELS	1/FS4.1
2.1	2	COLD STORAGE SHELVING	METRO	A2454NK3		600	E/FS8.2
2.2	1	COLD STORAGE SHELVING	METRO	A2448NK3		800	E/FS8.2
3	1	WALK-IN REFRIGERATOR	RMI	FABRICATED ITEM		8.5lb PER SQ.FT. FOR 4" PANELS	1/FS4.1
3.1	2	COLD STORAGE SHELVING	METRO	A2454NK3		600	E/FS8.2
3.2	1	COLD STORAGE SHELVING	METRO	A2448NK3		800	E/FS8.2
4	2	SINK, SCULLERY, 3 COMPARTMENTS	EAGLE GROUP/METAL MASTERS	FFN2754-3-24-14/3		336.3	A/FS8.1
5	1	THREE COMPARTMENT SINK	CUSTOM	FABRICATED ITEM		425	A/FS8.1
5.1	1	CLEAN DISHTABLE	CUSTOM	FABRICATED ITEM			C/FS8.1
5.2	1	SPRAY RINSE WITH FAUCET	T&S BRASS	B-0133-01		18	
6	1	WAREWASHER, DOOR TYPE, HIGH TEMP	HOBART US FOODSERVICE	AM16VLT-ADV-2		100	I/FS8.2
7	2	WALL MOUNT HAND SINK	EAGLE	HSAP-14-ADA-FW		57	B/FS8.2
8	2	HAND SINK, WALL MOUNT	ADVANCE TABCO	7-PS-68		20	B/FS8.2
9	6	MOBILE WORKTABLE WITH UTENSIL DRAWER	CUSTOM	FABRICATED ITEM		45	MOBILE
10	7	REFRIGERATOR, UNDERCOUNTER	CONTINENTAL REFRIGERATOR	SW48N-U	OFCI	250	MOBILE
11	2	PREP COUNTER	CUSTOM	FABRICATED		2500	E/FS8.1
11.1	2	TABLE MOUNTED OVERSHELF	CUSTOM	FABRICATED		PART OF #11	
11.2	8	THREE STACK UTENSIL DRAWER UNIT		FABRICATED		PART OF #11	L/FS8.1
11.3	4	PREP SINK	CUSTOM	FABRICATED		PART OF #11	L/FS8.1
12	1	DEMO TABLE ADA SINK	CUSTOM	FABRICATED		385	L/FS8.1
13	9	RANGE, RESTAURANT, GAS	VULCAN	60SS-6B-24GB-N	OFCI	1045	G/FS8.2
14	6	WORK COUNTER	CUSTOM	FABRICATED		100	D/FS8.1
15	1	S/S WALL CAP / INSULATED WALL LINING	CUSTOM	FABRICATED		1000	I/FS8.1
16	1	OVEN-STEAMER, COMBINATION, ELECTRIC	RATIONAL USA	ICOMBI PRO 6-HALF SIZE/6-HS	OFCI	475	K/FS8.2
17	1	OVEN, COOK/HOLD, SMOKE/HOLD	ALTO-SHAAM	1767-SK	OFCI	530	H/FS8.2
18	1	ENVIRONMENTAL CHAMBER		KB030	OFCI		
19	1	REACH-IN REFRIGERATOR	ADVANTCO	SS-3R-HC	OFCI	715	J/FS8.2
20	1	REACH-IN FREEZER	ADVANTCO	A-49F-HC	OFCI	715	J/FS8.2
21	1	BLAST CHILLER / SHOCK FREEZER, REACH-IN	IRINOX NORTH AMERICA	EASYFRESH NEXT SL	OFCI	430	L/FS8.1
22	1	ICE MAKER W/ BIN	AVANTCO	KMC-H-530-A 30"	OFCI	500	J/FS8.2
23	1	DRY AGER	DRY AGER	UX 1500 PRO	OFCI	285	L/FS8.1
24	1	UPPER STORAGE CABINET FOR CLEANING SUPPLIES	ADVANCE TABCO	WCH-15-36		120	H/FS8.1
25	1	MOP DRAINAGE TRAY	ADVANCE TABCO	K-243		13	
26	1	MOP RACK	ADVANCE TABCO	K-242		2	
27	2	WARMING CABINET	TRAULSEN	RHF232W-FHS		670	K/FS8.2
28	1	REMOTE REFRIGERATION	COLD ZONE	MPL-2		584	1/FS4.1

HEALTH DEPARTMENT NOTES:

1. PROVIDE THERMOMETER IN ALL REFRIGERATION UNITS CONTAINING PERISHABLE FOODS.
2. PROVIDE PROBE THERMOMETER FOR CHECKING HOT AND COLD FOODS.
3. FOOD STORAGE SHELVES SHALL BE MINIMUM SIZE (6) INCHES ABOVE FLOOR.
4. ALL EQUIPMENT SHALL MEET OR BE EQUIVALENT TO "NSF" STANDARDS.
5. PROVIDE GARMENT STORAGE AREA: LOCKER, CABINET OR HANGERS FOR EMPLOYEE GARMENTS.
6. RODENT AND INSECT-PROOF ALL EXTERIOR DOORS AND WINDOWS. PROVIDE HEAVY-DUTY SELF-CLOSERS ON ALL EXTERIOR DOORS AND RESTROOM DOORS. SEAL ALL HOLES OR GAPS AROUND PIPES ENTERING BUILDING.
7. EXTERIOR DOORS SHALL BE RODENT PROOF WITH NO OPENINGS GREATER THAN 1/4 INCH.
8. PROVIDE HARDWOOD, METAL, FORMICA OR OTHER APPROVED MATERIALS, SMOOTH WITH SEALER ON ALL TABLE, COUNTERS, SHELVES, AND OTHER FOOD CONTACT SURFACES.
9. PROVIDE HAZARDOUS SUBSTANCE LOCATION: SEPARATE CABINET, ROOM OR DESIGNATED AREA FOR STORAGE OF PESTICIDE AND CLEANING COMPOUNDS.
10. INSTALL EQUIPMENT TO FACILITATE CLEANING. PLACE FLOOR MOUNTED UNITS ON CASTERS, MINIMUM SIX (6) INCHES HIGH, ROUND, METAL LEGS, OR SEAL IN POSITION ON MINIMUM FOUR (4) INCH CURB.
11. UNPACKAGED PROCESSED FOODS ON DISPLAY SHALL BE EFFECTIVELY SHIELDED OR COVERED.
12. PROVIDE SOAP AND TOWEL DISPENSERS AT ALL HAND WASHING SINKS.
13. FLOOR SINKS SHALL BE INSTALLED FLUSH WITH FLOOR AND READILY ACCESSIBLE FOR CLEANING.
14. GREASE INTERCEPTORS SHALL BE INSTALLED READILY ACCESSIBLE FOR CLEANING.
15. PROVIDE PROTECTIVE COVERS ON ALL LIGHTS IN FOOD PREPARATION, OPENED FOOD STORAGE ROOM(S), UTENSIL WASH AREAS, OR USE SHATTERPROOF BULBS.
16. LIGHTING REQUIREMENTS:
-MINIMUM 50FT. CANDLES REQUIRED IN FOOD PREP AREA
-MINIMUM 20FT. CANDLES REQUIRED IN RESTROOMS AND BARS
-MINIMUM 10FT. CANDLES REQUIRED IN REFRIGERATORS
-MINIMUM 10FT. CANDLES REQUIRED IN STORAGE AREAS
-LIGHTING SHALL BE SHATTERPROOF OR SHIELDED
17. EXISTING FIXTURES, FINISHES, AND EQUIPMENT SHALL BE IN OPERABLE CONDITION AND SUBJECT TO FIELD APPROVAL.
18. WALLS & CEILING IN THE RESTROOMS, PREPARATION, STORAGE, AND JANITORIAL AREAS SHALL BE CONSTRUCTED OF APPROVED MATERIALS SO AS TO BE SMOOTH, WASHABLE, AND EASY TO CLEAN.

APPLICABLE CODE: 2022 CBC

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 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.

2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.

3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE 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:

A. COMPONENTS WEIGHING LESS THEN 400 POUNDS AND HAVING A CENTER MASS 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.

B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOO T, 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 THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTIONS SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PRE-APPROVED 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 THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS. MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEMS (E):

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

MP [ ] MD [ ] PP [ ] E [ ] Option 2: SHALL COMPLY WITH HCAI (OSHPD) PREAPPROVED (OPM #) # _____ AS INCLUDED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS

FOODSERVICE DRAWINGS SHEET LIST

FS1.1 - FOODSERVICE EQUIPMENT FLOOR PLAN
FS2.1 - FOODSERVICE EQUIPMENT PLUMBING PLAN
FS2.2 - FOODSERVICE EQUIPMENT PLUMBING SCHEDULE
FS3.1 - FOODSERVICE EQUIPMENT ELECTRICAL PLAN
FS3.2 - FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE
FS4.1 - FOODSERVICE EQUIPMENT MECHANICAL PLAN
FS6.1 - FOODSERVICE EQUIPMENT WALK-IN DETAILS
FS7.1 - FOODSERVICE EQUIPMENT REMOTE REFRIGERATION DETAILS
FS8.1 - FOODSERVICE EQUIPMENT ANCHORAGE DETAILS
FS8.2 - FOODSERVICE EQUIPMENT ANCHORAGE DETAILS
FS9.1 - FOODSERVICE EQUIPMENT ELEVATIONS
FS9.2 - FOODSERVICE EQUIPMENT ELEVATIONS

FLOOR LEGEND

SYMBOL/ ABBR.	DESCRIPTION
OFCI	OWNER FURNISH / CONTRACTOR INSTALLED
OFOI	OWNER FURNISH / OWNER INSTALLED
FSEC	FOODSERVICE EQUIPMENT CONTRACTOR
VFVI	VENDER FURNISH / VENDER INSTALLED
(E), EXIST	EXISTING FOODSERVICE EQUIPMENT
(F)	FUTURE FOODSERVICE EQUIPMENT
	BUILDING WALLS (SEE ARCH. DWGS.)
	WALK-IN COOLER/ FREEZER INSULATED WALLS
1 1	KEY / SHEET NOTE
1	ITEM NUMBER SYMBOL (SEE EQUIPMENT SCHEDULE FOR DESCRIPTION)
KITCHEN 1	ROOM/ AREA NAME AND ROOM NUMBER
C	COLUMN GRIDS WITH COLUMN INDICATORS
48(#)18	STORAGE SHELVING SIZES (Width x Length)
30" CLR. 48" CLR.	ACCESSIBLE CLEARANCES AND SYMBOL 30"x48" MIN CLEARANCE
	OUTLINE OF FOODSERVICE EQUIPMENT
	FOODSERVICE EQUIPMENT BELOW EQUIPMENT TOP
	FOODSERVICE EQUIPMENT ABOVE EQUIPMENT TOP
	MOBILE FOODSERVICE EQUIPMENT
F.E."K"	F.E.C. (PROVIDE TYPE "K" AND 2A:10BC (MINIMUM)) FIRE EXTINGUISHER & CABINET REFER TO ARCH. DRAWINGS FOR FIRE EXTINGUISHER LOCATIONS
FS.01	SHEET NUMBER
W.H.	WATER HEATER (SEE PLUMBING ENG. DWG.)
A FS0.1 B	ELEVATION INDICATOR SYMBOL

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15827 REN: 7/31/26 STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

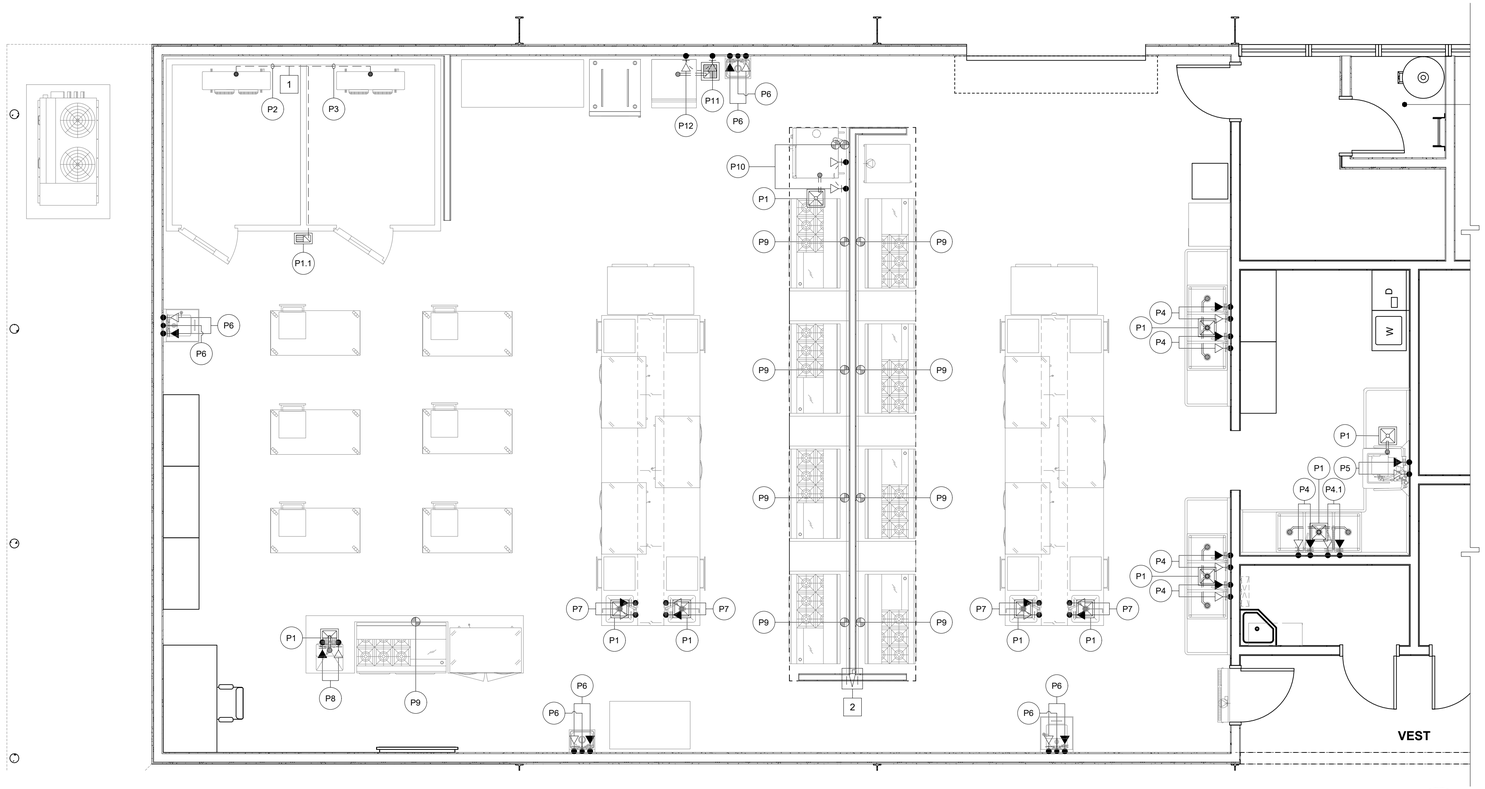
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ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT FLOOR PLAN

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

FS1.1

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FOODSERVICE EQUIPMENT PLUMBING PLAN

SCALE : 1/4" = 1'-0"

1
FS2.1

FOODSERVICE PLUMBING LEGEND

ABREV./SYMB.	DESCRIPTION
C.W.	COLD WATER
H.W.	HOT WATER
DIR.	WASTE (DIRECT CONNECTION)
INDIR.	INDIRECT WASTE (AIR GAP)
LAV.	LAVATORY
W.C.	WATER CLOSET
F.S.	FLOOR SINK
P.C.	PLUMBING CONTRACTOR
G.C.	GENERAL CONTRACTOR
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
S.O.V.	SHUT OFF VALVE
GPH	GALLONS PER HOUR
PSI	POUNDS PER SQUARE INCH
(F)	DEGREES FAHRENHEIT
CONN.	CONNECT
LOC.	LOCATE
(P1)	PLUMBING SCHEDULE REFERENCE, REFER TO FS2.1 FOR SCHEDULE
(1) [1]	SHEET AND/OR KEY NOTE
	COLD WATER INLET
	HOT WATER INLET
	SHUT OFF VALVE (S.O.V.)
	COLD WATER SHUT OFF VALVE
	GAS SHUT-OFF VALVE
	FLOOR SINK
	FLOOR DRAIN
	WASTE DOWN
	GAS INLET
	WALK-IN DRAIN LINE
	I.D. DRAIN LINE

PLUMBING PLAN SHEET NOTES

1. CONDENSATE DRAINS FROM COILS TO BE FURNISHED AND INSTALLED BY PLUMBING CONTRACTOR PROVIDE HEAT TRACE W/ INSULATION FROM COIL TO DRAIN (FREEZER)
2. MANUAL GAS SHUT-OFF VALVE FOR RANGES WITH ACCESS DOOR. REFER TO PLUMBING PLANS FOR LOCATION. PROVIDE ABILITY TO SHUT OFF GAS SUPPLY TO COOKING EQUIPMENT PILOTS WHEN CLASSROOM IS NOT IN USE

NOTE

FOR FOODSERVICE EQUIPMENT PLUMBING SCHEDULE AND DETAILS SEE SHEET FS2.2

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 6/25 STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT PLUMBING PLAN

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PLUMBING SCHEDULE

PLUM. NO.	ITEM. NO.	DESCRIPTION	QTY.	WATER CONN. SIZE C.W.	WATER CONN. SIZE H.W.	WATER HGT.@ WALL	WASTE CONN. SIZE DIR.	WASTE CONN. SIZE INDIR.	WASTE HGT.@ WALL	GAS BTU/HR (x1,000)	GAS CONN. SIZE	GAS HGT. @ WALL	REMARKS	NOTE(S)
P1	-	FLOOR SINK	11EA.	-	-	-	-	-	0"	-	-	-	INSTALL FLUSH WITH FINISH FLOOR, PROVIDE GRATE COVER W/ DOME STRAINER, REFER TO PLUMBING PLANS FOR TYPE AND SIZE.	
P1.1	-	FLOOR SINK 1/2 SIZE	1EA.	-	-	-	-	-	0"	-	-	-	INSTALL FLUSH WITH FINISH FLOOR, PROVIDE GRATE COVER W/ DOME STRAINER, REFER TO PLUMBING PLANS FOR TYPE AND SIZE.	
P2	2	WALK-IN FREEZER CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	-	1"	-	-	-	-	1" INDIRECT DRAIN TO F.S. P1. SLOPE 1/2" PER FOOT. PROVIDE 1" MIN AIR GAP AT F.S. WITH 'P' TRAP.	
P3	3	WALK-IN REFRIGERATOR CONN. DRAIN FROM COIL CONN. + 70"	1EA.	-	-	-	-	1"	-	-	-	-	1" INDIRECT DRAIN TO F.S. P1. SLOPE 1/2" PER FOOT. PROVIDE 1" MIN AIR GAP AT F.S. WITH 'P' TRAP.	
P4	4,5	POTWASH 3 COMP SINK FAUCET W/ 3/4" INLET 8" CENTER	6EA.	3/4"	3/4"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	
P4.1	5.2	PRE-RINSE FAUCET W/ 1/2" INLET 8" CENTER	1EA.	1/2"	1/2"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	
P5	6	HIGH TEMP WAREWASHER W/ RAPID FILL	1EA.	3/4"	3/4"	12"	-	1 1/2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 1 1/2" INDIRECT DRAIN TO F.S. P1. (HOT WATER MIN 110 DEGREE)	1 2 3 4
P6	7,8	WALL MOUNTED HAND SINK FAUCET W/ 1/2" INLET 4" CENTER	4EA.	1/2"	1/2"	18"	1 1/2"	-	24"	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. RUN DIRECT WASTE WITH P-TRAP.	
P7	11.3	CHEFS/PREP SINK FAUCET W/ 1/2" INLET 8" CENTER	4EA.	1/2"	1/2"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	
P8	12	ADA PREP SINK AT DEMO TABLE FAUCET W/ 1/2" INLET 8" CENTER	1EA.	1/2"	1/2"	16"	-	2"	-	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	
P9	13	GAS RANGE WITH OVEN BASE (OFCI)	9EA.	-	-	-	-	-	-	268	1"	18"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. GAS PRESSURE REGULATOR AND MANIFOLD PROVIDED BY MFG.	5
P10	16	DOUBLE DECK COMBI OVEN (OFCI) WATER AND GAS CONNECTION	2EA.	3/4"	-	18"	-	2"	-	49	-	18" / 36"	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 2" INDIRECT DRAIN TO F.S. P1. (CHROME OR PAINT SILVER)	4 5 6 7
P11	22	ICE MAKER (OFCI)	1EA.	3/8"	-	45"	-	1/2"	44"	-	-	-	PROVIDE S.O.V., RUN PIPING TO UNIT CONNECTION. PROVIDE 1/2" INDIRECT DRAIN TO F.S P1. (CHROME OR PAINT SILVER)	4 5
P12	22	ICE MAKER BIN (OFCI)	1EA.	-	-	-	-	3/4"	-	-	-	-	PROVIDE 3/4" INDIRECT DRAIN TO F.S P1. (CHROME OR PAINT SILVER)	5

PLUMBING KEY NOTE(S):

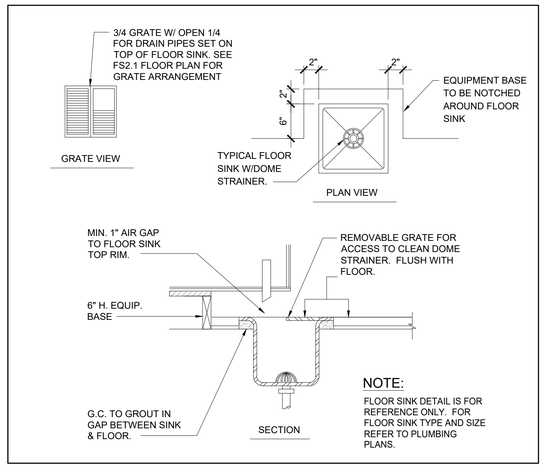
1. 110 DEGREE (F) MIN. WATER INLET HOT WATER SANITIZING 126 GPH.
2. WATER HAMMER ARRESTOR (MEETING ASSE-1010 STANDARD) BY PLUMBER IN SUPPLY LINE.
3. WATER PRESSURE 15-25 PSI- IF HIGHER, FURNISH PRESSURE REGULATOR VALVE WITH INTERNAL THERMAL EXPANSION BYPASS BY PLUMBER.
4. VERIFY WATER QUALITY MEETS MANUFACTURERS STANDARD MINIMUM REQUIREMENTS
5. CONTRACTOR TO VERIFY, COORDINATE AND PROVIDE UTILITY REQUIREMENTS WITH OWNER FURNISHED EQUIPMENT
6. CONTRACTOR TO PROVIDE WATER FILTER RECOMMENDED BY MANUFACTURER
7. CONNECTION REQUIREMENTS ARE PER DECK (1@ 18" AFF AND 1@36" AFF). WATER CONNECTION REQUIRED FROM WATER FILTER TO WATER CONNECTION ON EACH DECK.

FIRE SYSTEM NOTE:

1. FURNISH AUTOMATIC GAS SHUT-OFF VALVE INCLUDING ANY NECESSARY ACCESS PANEL. CONTRACTOR SHALL INSTALL THE AUTOMATIC SHUT-OFF VALVE IN AN ACCESSIBLE LOCATION. REFER TO PLUMBING DRAWINGS FOR GAS VALVE LOCATION.

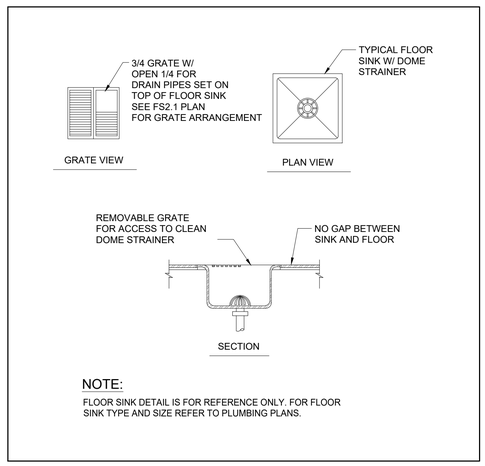
PLUMBING NOTES

1. PLUMBING CONTRACTOR TO VERIFY ALL INCOMING SERVICE AND MAKE FINAL HOOK-UPS TO ALL APPLICABLE EQUIPMENT AND TO PROVIDE ALL PIPING, TEES, ELLS, TRAPS, FILTERS, REGULATORS, FAUCETS, ETC., UNLESS SPECIFICALLY STATED OTHERWISE.
2. ALL HORIZONTAL DIMENSIONS SHOWN ON PLAN ARE FROM FINISHED FACE OF WALL TO CENTERLINE OF STUB-OUT OR FROM CENTERLINE OF STUB-OUT TO CENTERLINE OF STUB-OUT, UNLESS NOTED OTHERWISE ON PLAN OR DETAILS.
3. (VERIFY ALL DIMENSIONS)
4. SYMBOLS NOTED +24", +48", ETC., INDICATES TO STUB-OUT OF WALL AT HEIGHT INDICATED. HEIGHT IS GIVEN FROM FINISHED FLOOR (NOT FINISHED CURB) TO CENTERLINE OF STUB-OUT. SYMBOLS INDICATED "STUB-UP" AND "STUB-DOWN" ARE TO EXTEND ABOVE FINISHED FLOOR AND/OR BELOW FINISHED CEILING AT LOCATION SHOWN.
5. PLUMBING STUBS AND CONNECTIONS SHOWN ON PLANS ARE FOR EQUIPMENT FURNISHED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR.
6. FLOOR SINKS SHOWN ARE TO BE SET FLUSHED WITH TOP OF FINISHED FLOOR. FLOOR SINKS INDICATED HALF-IN AND HALF-OUT OF EQUIPMENT TO BE SET FLUSHED WITH TOP OF FINISHED FLOOR. FLOOR SINKS LOCATED COMPLETELY WITHIN EQUIPMENT AREA TO BE SET FLUSHED WITH TOP OF FINISHED FLOOR.
7. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL REMOVABLE COVERS OR GRATES FOR ALL FULLY OR PARTIALLY EXPOSED FLOOR SINKS. GRATES TO HAVE 1/2" MAX OPENINGS WHERE DRAIN IS EXPOSED TO P.O.T OR TO PEDESTRIAN WAYS TYP.
8. PLUMBING CONTRACTOR SHALL SEAL ALL PLUMBING PENETRATIONS THROUGH WALLS, FLOORS, AND CEILINGS. WATERTIGHT AND VERMIN-PROOF.
9. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL SHUT-OFF VALVES ON ALL WATER AND GAS LINES, INCLUDING VALVES IN FIXTURES, LOCATED IN SUCH A WAY AS TO BE ACCESSIBLE WITHOUT USE OF TOOLS.
10. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL FOR ALL APPLICABLE EQUIPMENT, A TRAPPED FLOOR SINK WITH A LEGAL AIR GAP DRAIN LINE (INDIRECT WASTE) TO FLOOR SINK. INSULATE ALL DRAIN LINES FROM ICE BINS, ICE MACHINES, REFRIG. EQUIP., ETC..



FLUSH FLOOR SINK DETAIL 1 FS2.2

SCALE : NONE LOCATED UNDER WORK COUNTERS



FLUSH FLOOR SINK DETAIL 2 FS2.2

SCALE : NONE

NOTE

FOR FOODSERVICE EQUIPMENT PLUMBING PLAN SEE SHEET FS2.1

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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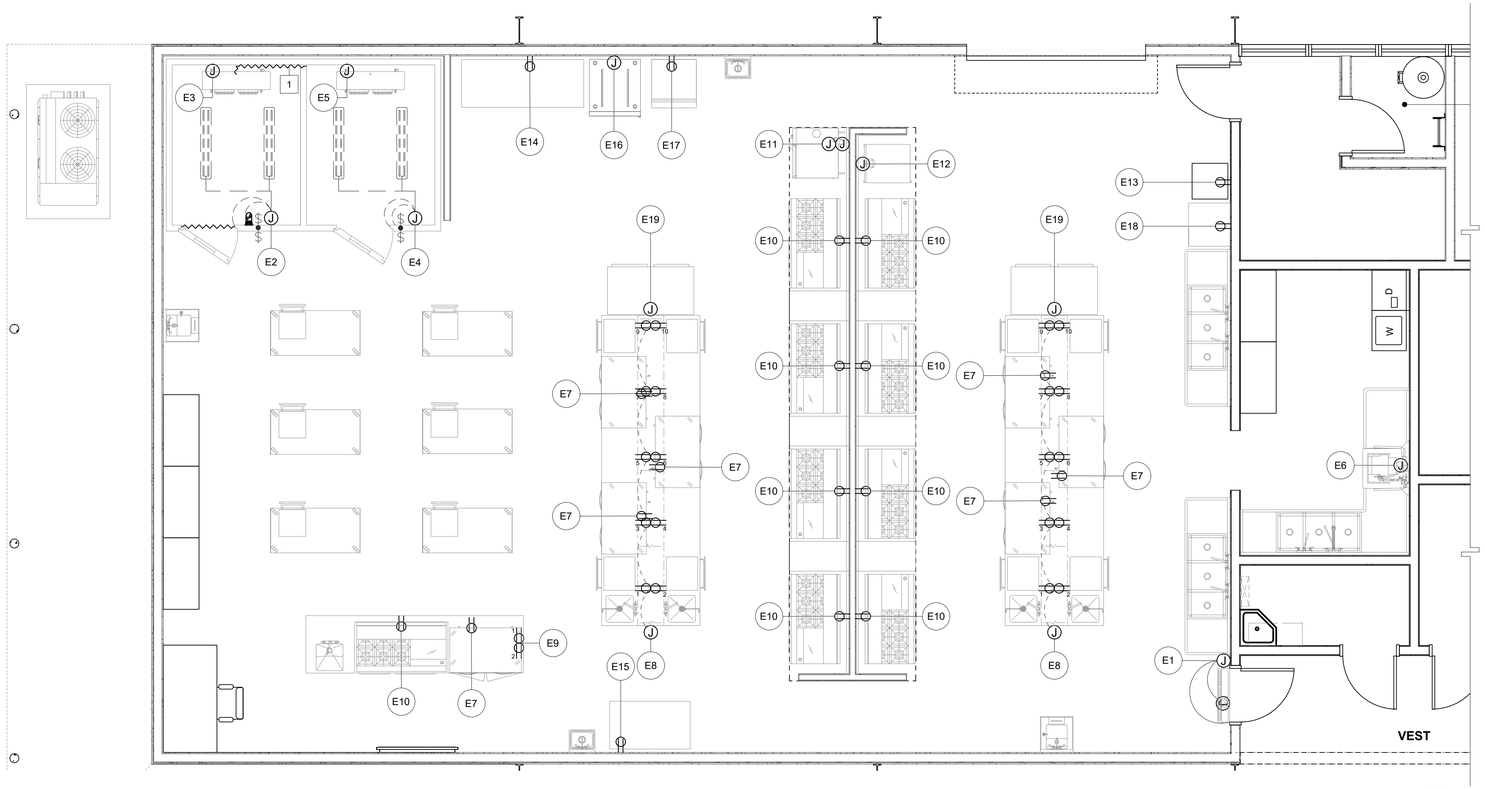
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1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT PLUMBING SCHEDULE

Project Number	2321
Date	7/5/24
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FS2.2

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FOODSERVICE EQUIPMENT ELECTRICAL PLAN

SCALE : 1/4" = 1'-0"

1
FS3.1

ELECTRICAL PLAN LEGEND	
SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
CLG.	CEILING
CONN.	CONNECT
E.C.	ELECTRICAL CONTRACTOR
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
G.C.	GENERAL CONTRACTOR
P.R.P.	PRESSURE RELIEF PORT
S.F.	STAINLESS STEEL FABRICATOR
M.C.	MECHANICAL CONTRACTOR
LOC.	LOCATE
E1	ELECTRICAL SCHEDULE REFERENCE, REFER TO FS3.2 FOR SCHEDULE
1 1	SHEET AND/OR KEY NOTE
	DUPLEX CONVENIENCE OUTLET 115V/1Ø UNLESS OTHERWISE NOTED
	SIMPLEX OUTLET SEE SCHEDULE FOR VOLTAGE
	ROOM TEMPERTURE SENSOR
J	JUNCTION BOX
	DATA OUTLET
P	EMPTY OCTAGONAL BOX W/ CONDUIT TO +2" ABOVE CEILING BY E.C
	VAPOR-PROOF LIGHT FIXTURE AT EXHAUST HOOD (PROVIDED BY F.S.E.C. WIRED BY E.C.)
J	STUBBED-UP JUNCTION BOX
	STUBBED-UP CONVENIENCE OUTLET
	STUBBED-UP SIMPLEX OUTLET
	STUBBED-UP DATA OUTLET
$	WALL MOUNTED SWITCH BY E.C
	VAPOR-PROOF LED FIXTURE PROVIDED BY F.S.E.C. INSTALLED BY E.C.)
	VAPOR-PROOF LIGHT FIXTURE AT WALK-IN PROVIDED BY F.S.E.C. INSTALLED BY E.C.)

ELECTRICAL NOTES

1 ELECTRIC HEAT TRACE SPIRALED TAPED AND INSULATED CONNECTED AT COIL BY F.S.E.C REFER FS7.1

NOTE

FOR FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE AND DETAILS SEE SHEET FS3.2

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15525 REN. 5/25 STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT ELECTRICAL PLAN

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

FS3.1

Plot Date & Time 9/25/2024 9:48:51 AM

ELECTRICAL SCHEDULE

ELEC. NO.	ITEM NO.	DESCRIPTION	QTY.	VOLT.	PH	DIRECT	PLUG	NEMA	LOAD WATT	LOAD AMPS. DRAW	OUTLET HEIGHT	REMARKS	NOTE(S)
E1	1	AIR CURTAIN, UNHEATED	1EA.	120	1	X	-	-	-	3.4	+86"	PROVIDE J-BOX IN WALL INSTALL DOOR LIMIT SWITCH FOR INSTANT ON/OFF SWITCH REFER TO C/FS8.2	
E2	2	WALK-IN FREEZER BOX	1EA.	120	1	X	-	-	-	5.0	+88"	(2) 39W LED CLG. MT'D. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P, 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	
E3	2	WALK-IN FREEZER COIL	1EA.	208	1	X	-	-	-	9.8	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL D/FS7.1	(1) (2)
E4	3	WALK-IN REFERIGERATOR BOX	1EA.	120	1	X	-	-	-	5.0	+88"	(2) 39W LED CLG. MT'D. LIGHT FIXTURES (1) 11.5W LED LIGHT FIXTURE AT DOOR. 250W DOOR HEATER, 20W P.R.P, 100W WINDOW HEATER EC. TO PROVIDE ALL INTERCONNECTIONS.	
E5	3	WALK-IN REFERIGERATOR COIL	1EA.	120	1	X	-	-	-	4.0	+74"	CONNECT TO UNIT ELECTRICAL CONNECTION AT COIL INSIDE WALK-IN FREEZER. SEE DETAIL D/FS7.1	(1)
E6	6	HIGH TEMP WARE WASHER W/ SINGLE POINT CONNNECTION	1EA.	208/240	3	X	-	-	-	53.5	+18"	PROVIDE J-BOX IN WALL/ SINGLE POINT CONNECTION OPTION	
E7	10	UNDER COUNTER REFRIGERATOR (OFCI)	7EA.	115	1	-	X	5-15P	-	2.5	+18"	PROVIDE DUPLEX RECEPTACLE UNIT PROVIDED WITH CORD AND PLUG SET	(3)
E8	11	PREP COUNTER	10EA.	115	1	X	-	-	-	15EA.	+52"	PROVIDE (10) DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MT'D. UNDER OVER SHELF (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 20 DCO OUTLETS)	(4)
E9	12	DEMO COUNTER	1EA.	115	1	-	X	5-15P	-	15EA.	+34"	PROVIDE (1) DOUBLE FACED PEDISTAL DUPLEX RECEPTACLE MT'D. UNDER OVER SHELF (COMPONENT HARDWARE NO. R58-1020)(R71-0721) (TOTAL OF 2 DCO OUTLETS)	
E10	13	RANGE W/ OVEN BASE (OFCI)	9EA.	115	1	-	X	5-15P	-	15EA.	+18"	PROVIDE DUPLEX RECEPTACLE FLUSH MOUNTED IN WALL/ COUNTER UNIT PROVIDED WITH CORD AND PLUG SET	(3) (5)
E11	16	DOUBLE DECK COMBI OVEN (OFCI)	1EA.	115	1	X	-	-	-	15EA.	+18"/+24"	PROVIDE RECEPTACLE FLUSH MOUNTED IN WALL/ COUNTER (VERIFY PLUG CONFIGURATION) UNIT PROVIDED WITH CORD AND PLUG SET (1 PER DECK)	(3) (5)
E12	17	OVEN, SMOKER (OFCI)	1EA.	208	1	X	-	-	-	31	+18"	PROVIDE J-BOX IN WALL (VERIFY EQUIPMENT CONFIGURATION)	(3) (5)
E13	18	ENVIROMENTAL CHAMBER (OFCI)	1EA.	115	1	-	X	5-15P	-	15	+80" (VERIFY)	PROVIDE DUPLEX RECEPTICAL FLUSH MOUNTED IN WALL (VERIFY EQUIPMENT CONFIG. / HEIGHT)	(3)
E14	19	REACH-IN REFRIG (OFCI)	1EA.	115	1	-	X	5-15P	-	7.2	+88"	PROVIDE DUPLEX RECEPTACLE IN WALL UNIT PROVIDED WITH CORD AND PLUG SET	(3)
E15	20	REACH-IN FREEZER (OFCI)	1EA.	115	1	-	X	5-15P	-	8.5	+88"	PROVIDE DUPLEX RECEPTACLE IN WALL UNIT PROVIDED WITH CORD AND PLUG SET	(3)
E16	21	BLAST CHILLER (OFCI)	1EA.	208	1	X	-	-	-	31	+18"	PROVIDE J-BOX IN WALL (VERIFY EQUIPMENT CONFIGURATION)	(3)
E17	22	ICE MAKER (OFCI)	1EA.	115	1	-	X	5-15P	-	8.5	+60"	PROVIDE DUPLEX RECEPTACLE IN WALL UNIT PROVIDED WITH CORD AND PLUG SET	(3)
E18	23	DRY AGER (OFCI)	1EA.	115	1	-	X	5-15P	-	2	+48"	PROVIDE DUPLEX RECEPTACLE IN WALL UNIT PROVIDED WITH CORD AND PLUG SET	(3)
E19	27	WARMING CABINET	2EA.	115/208	1	X	-	-	-	15.5	+18"	PROVIDE J-BOX @ END OF COUNTER	
E20	28	REMOTE REFRIGERATION	1EA.	120	1	-	X	5-15P	-	8.2	+89"	CONNECT TO DISCONNECT LOCATED ON REFRIGERATION RACK REFER TO FS7.1	

WALK-IN REFRIGERATION ELECTRICAL (MINIMUM REQUIREMENTS UNLESS NOTED OTHER WISE)

1. - THE ELECTRICAL CONTRACTOR SHALL INSTALL AND INTER WIRE LIGHT SWITCHES AND FIXTURES REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND MAKE FINAL CONNECTIONS.
2. - THE FOOD SERVICE EQUIPMENT CONTRACTOR SHALL INSTALL THE PRESSURE RELIEF PORT, DOOR HEATERS, DRAIN LINE HEATERS AND TEMPETURE ALARM SYSTEM. INTER WIRING AND FINAL CONNECTIONS BY THE ELECTRICAL CONTRACTOR.
3. - THE ELECTRICAL CONTRACTOR SHALL INTER WIRE THE TIME CLOCK ON THE CONDENSING UNIT TO THE DEFROST RELAY ON THE UNIT EVAPORATOR LOCATED IN THE FREEZER COMPARTMENT.
4. - THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CONDUIT AND WIRING NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM WITH ALL CONDUIT IN SO FAR AS POSSIBLE MOUNTED ON THE EXTERIOR CEILING OF THE WALK-IN ASSEMBLY. PENETRATIONS AND ESCUTCHEON PLATES SHALL BE FURNISHED AND INSTALLED BY THE FOOD SERVICE CONTRACTOR. FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR SEALING THE INSIDE OF CONDUITS WHICH PENETRATE THE CEILING OR WALL.

ELECTRICAL KEYNOTES:

(1) E.C. TO INTERCONNECT FROM REMOTE REFRIGERATION SYSTEM ITEM NO. 28

(2) DRAIN LINE HEATER CONNECTED TO COIL. F.S.E.C TO PROVIDE HEATER E.C TO WIRE TO COIL

(3) CONTRACTOR TO COORDINATE, VERIFY AND PROVIDE UNTILITY REQUIREMENTS WITH OWNER FURNISHED EQUIPMENT

(4) INTERCONNECT OUTLETS TO J-BOX AT END OF COUNTER.

(5) PROVIDE INTERLOCK WIRING FROM FIRE PROTECTION SYSTEMS TO ELEC. SHUNT TRIP BREAKERS ALL ELECTRICAL UNDER EXHAUST HOOD TO SHUT DOWN UPON FIRE SYSTEM ACTIVATION

NOTE

FOR FOODSERVICE EQUIPMENT ELECTRICAL PLAN SEE SHEET FS3.1

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

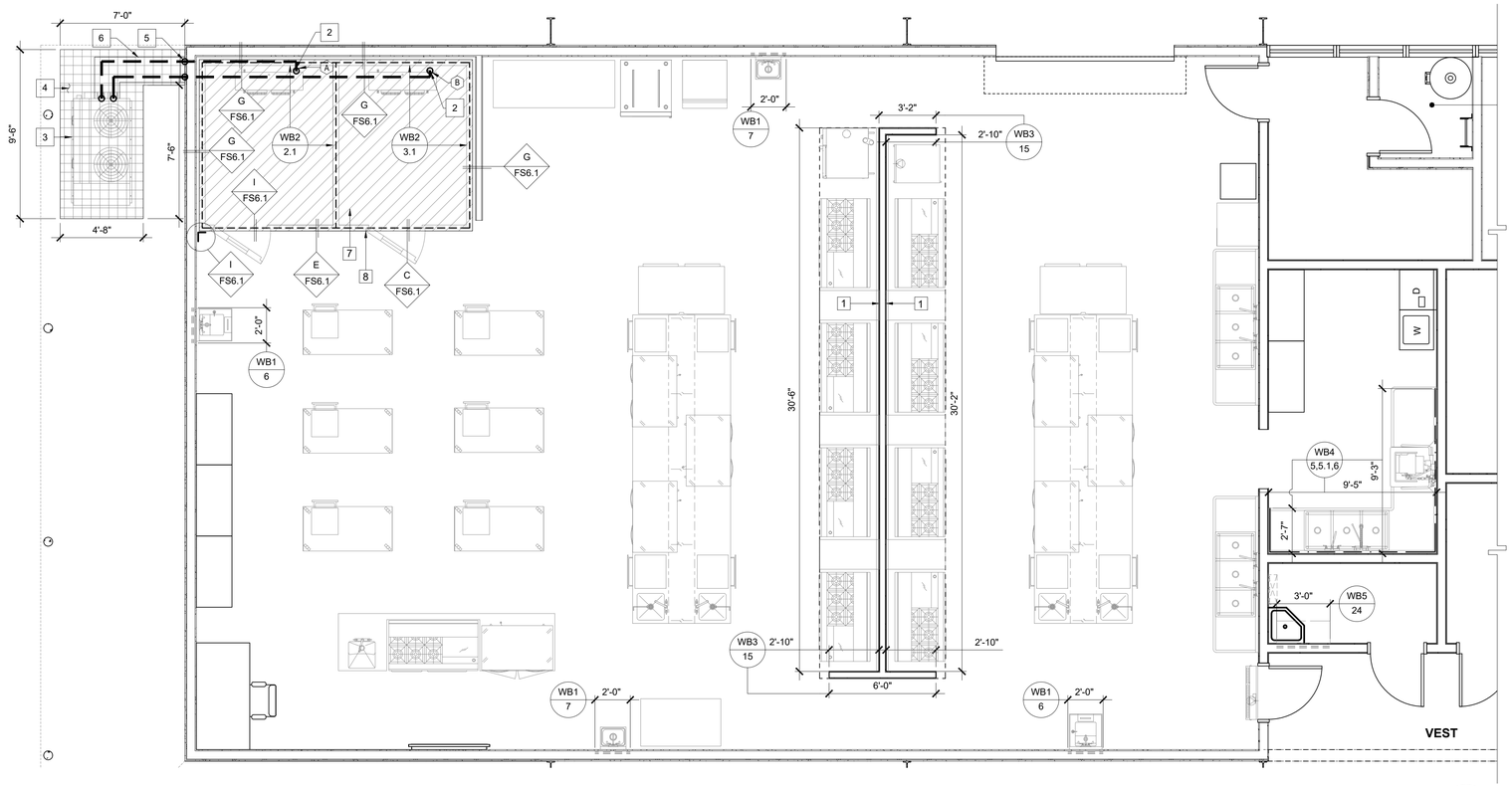
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT ELECTRICAL SCHEDULE

Project Number	2321
Date	7/5/24
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Checked by	Checker

FS3.2

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FOODSERVICE EQUIPMENT WALL BACKING AND DEPRESSION PLAN

SCALE : 1/4" = 1'-0"

1 FS4.1

MECHANICAL SHEET NOTES

1. 18 GA. STAINLESS STEEL WALL LINING PANELS (MINIMUM WIDTH TO BE 36") WITH 1" MINERAL WOOL BLANKET AND WIRE MESH BACKING OR CERAMIC FIBER BLANKET AND WIRE MESH BACKING SPACES OUT 1" ON NON-COMBUSTIBLE SPACERS WALL LINING TO MEET THE REQUIREMENTS OF NFPA-96 AND LOCAL CODES. WALL LINING SHALL BE FABRICATED WITH VERTICAL FLUTES EVERY 6" AS SHOWN, AND THE WIDTH OF THE EXHAUST HOOD INCLUDING FIRE SYSTEM CABINET
2. REFRIGERATION LINES STUB-DOWN FROM ABOVE, PENETRATE CEILING OF WALK-IN TO EVAP COIL SEE DETAIL D/FS8.2
3. REMOTE REFRIGERATION SYSTEM REFER TO A/FS7.1
4. REMOTE REFRIGERATION SYSTEM PLATFORM REFER B/FS7.1
5. REMOTE REFRIGERATION LINES WITH COVER, RUN UP EXTERIOR WALL REFER TO 3/FS4.1
6. REMOTE REFRIGERATION LINES RUN ALONG CONCRETE PAD, REFER TO 4/FS4.1
7. DEPRESS SLAB THIS AREA 4" BELOW FINISH FLOOR REFER TO DETAIL A/FS6.1
8. PROVIDE STAINLESS STEEL CLOUSER SKIRTING REFER TO DETAIL E/FS6.1

WALL BACKING SCHEDULE

	APPLICATION	BOTTOM OF BACKING	BACKING HGT.	FASTENERS PER STUD	ANCHORAGE DETAIL
WB1 7,8	HAND SINK	+16" AFF	26" HIGH	4	B/FS8.2
WB2 2,3	COLD STO. SHELVING	+69"AFF / +16"AFF	12" HIGH	2 PER POST BRACKET	E/FS8.2
WB3 15	INSULATED WALL LINING	+29"AFF / +6"AFF	4" HIGH	2	I/FS8.1
WB4 5,5.1,6	WALL SPLASH	+80"AFF / +48"AFF	4" HIGH	2	J/FS8.1
WB5 24	WALL MTD. CABINET	+60"AFF	20" HIGH	4	H/FS8.1

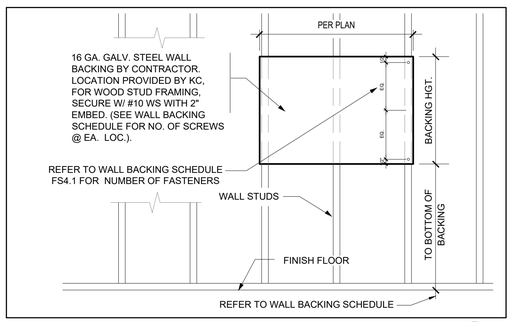
NOTES: 1. BACKING TO BE 16 GA. G.I. or C.R.S.
2. REFER TO 1/FS4.1 FOR WALL BACKING LOCATIONS
3. COLD STO. SHELVING, 16 GA G.I. STRAP FOAMED IN WALL BY MANUFACTURER. FASTEN SHELVING TO STRAP WITH #14 SMS.

WALL BACKING NOTES

1. - WALL BACKING TO BE 16 GAUGE GALV. STEEL IN LENGTH AND HEIGHT AS SHOWN ON DRAWINGS.
2. - ALL WALL BACKING TO BE IN FURNISHED AND INSTALLED BY CONTRACTOR
3. - FOOD SERVICE EQUIPMENT CONTRACTOR IS TO FURNISH CONTRACTOR WITH DETAILED DRAWINGS SHOWING ALL WALL BACKING LOCATION AND SIZE.
4. - WALL BACKING AS SHOWN IS MINIMUM, EXTEND BACKING TO NEXT STUD EACH DIRECTION AS NECESSARY

REFRIGERATION LINE NOTES

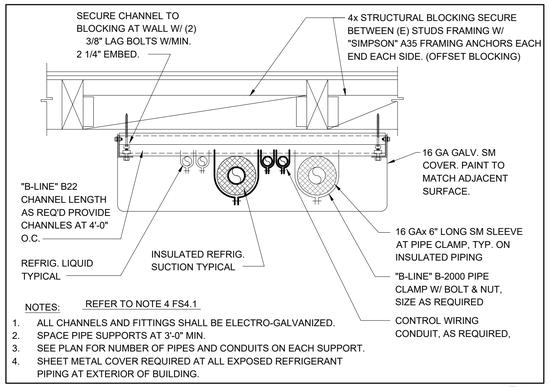
CONTRACTOR TO VERIFY REMOTE REFRIGERATION LINE RUN LENGTH IF LINES EXCEED 150FT THEN OIL SEPARATORS TO BE BE ADDED PER MANUFACTURER RECOMMENDATIONS



WALL BACKING DETAIL

SCALE : NONE

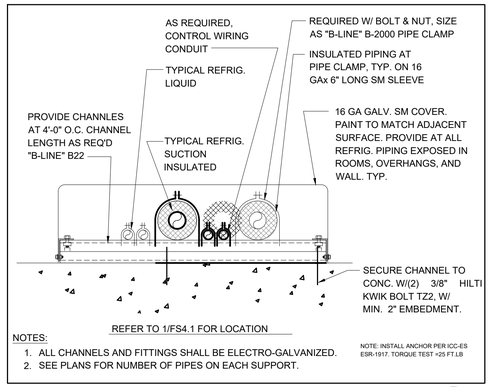
2 FS4.1



PIPE COVER AT EXTERIOR WALL

SCALE : NONE

3 FS4.1



PIPE COVER AT CONC. PAD

SCALE : NONE

4 FS4.1

FOODSERVICE MECHANICAL LEGEND

ABREV./SYMB.	DESCRIPTION
F.S.E.C	FOODSERVICE EQUIPMENT CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
S.F.	STAINLESS STEEL FABRICATOR
G.C.	GENERAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
CFM	CUBIC FEET PER MINUTE
SP	STATIC PRESSURE
	CONCRETE CURB
	CONCRETE DEPRESSION
	FOAMED-IN WALL BACKING BY WALK-IN MANUFACTURER
	INSULATED S/S WALL LINING 1/FS4.1 FOR LOC.
WB# ITEM	WALL BACKING NO. REFER 1/FS4.2 EQUIPMENT ITEM NO.
	WALL BACKING
	REMOTE COMPRESSOR (ON REFRIGERATION RACK)
A	REFRIGERATION SYSTEM (SEE SCHEDULE ON SHEETS FS7.1)
	REFRIGERATION LINE (RUN FROM REFRIGERATION RACK)
	REMOTE REFRIGERATED BASE AND/OR EQUIPMENT
	S/S WALL SPLASH REFER TO J/FS8.1

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15827 REN. 6/25 STATE OF CALIFORNIA

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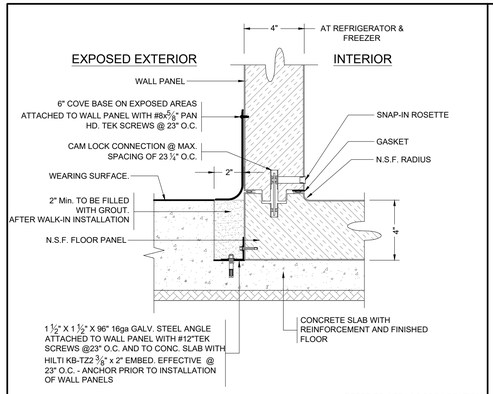
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FOODSERVICE EQUIPMENT MECHANICAL PLAN

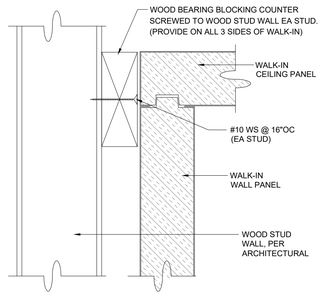
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FS4.1

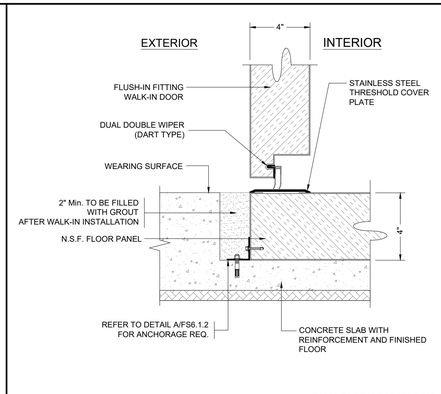
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A WALL PANEL TO RECESSED PRE-FAB FLOOR



B WALK-IN RESTRAINT



C THRESHOLD DETAIL FOR REFRIGERATOR DOOR

WALK-IN COOLER/FREEZER ANCHORAGE NOTE:

WALK-IN FREEZER SHALL HAVE SUPPLEMENTAL LATERAL BRACING ON THE DOOR SIDE, SEE E/FS6.1.2

WALK-IN COOLER/FREEZER TYPICAL NOTES:

APPLICATION - WALK-IN COOLER/FREEZER COMBO

4" HARD NOSE TONGUE & GROOVE HIGH DENSITY URETHANE PERIMETER (CFC FREE) W/ SHT. MTL. FACING FLANGED 1/2" TO 3/4" PERIMETER OF EACH SHEET. CORNERS & T-PANELS ONE-PIECE CONSTRUCTION W/ 1/2" RADIUS AT ALL INSIDE VERTICAL CORNERS. JOINT'S SEALED W/ PVC GASKET AT INT. & EXT. PERIMETER OF PANELS. PANELS RIGID CONNECTION W/ CAM-LOCK FASTENERS (WALL TO WALL: 48" O.C MAX: WALL TO CEILING: 24" O.C. MAX: WALL TO FLOOR: 24" O.C. MAX., IF APPLY)

INSULATION - 4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT. LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS SIMILAR TO ASTM E84 THE STEINER TUNNEL TEST) AND CLASS 'A' INTERIOR FINISH IN ACCORDANCE W/ NFPA 101, SECTION 6-2, AND NFPA 255. K-FACTOR NOT TO EXCEED 0.14 BTU/HOUR/SQ. FT./°F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE. UL REPORT (BLBT.R13780) FOR: SURFACE BURNING CHARACTERISTICS

FLOOR - 4" THICK FOAMED IN PLACE HIGH DENSITY URETHANE (CFC FREE) FILLED, OVER 90 PERCENT CLOSED CELL CONTENT. LESS THAN 25 FLAME SPREAD IN ACCORD W/ UBC STD. 42-1 (BASED ON UL 723 WHICH IS INTERIOR FINISH IN ACCORDANCE W/ NFPA 101, 0.14 BTU/HOUR/SQ. FT./ F PER INCH THICKNESS IN ACCORDANCE W/ ASTM C177 AT 75 F MEAN TEMPERATURE, RESULTS: FLAME SPREAD INDEX 25, SMOKE DEVELOPED INDEX: 400. FLOOR TO BE HEAVY DUTY WITH 500LBS POINT LOAD FOR CARTS AND PALLET JACKS.

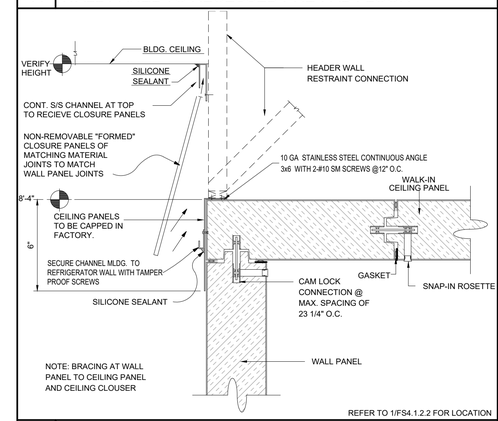
FINISH - WALL INTERIOR - .040 STUCCO EMBOSSED ALUMINUM WHITE FINISH
WALL EXTERIOR (EXPOSED TO KITCHEN) - 22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
WALL EXTERIOR (UNEXPOSED) - 26GA. STUCCO EMBOSSED GALVANIZED STEEL
CEILING INTERIOR - .040 STUCCO EMBOSSED ALUMINUM WHITE FINISH
FLOOR INTERIOR - WEARING SURFACE TO BE .1875 ALUM. TREAD PLATE W/ MIN. 1/2" RADIUS COVED UP ALL INTERIOR WALLS TO A HT. OF 6"

DOOR(S) -	1EA.	42" X 80"	COOLER, FLUSH IN-FITTING DOOR W/ MAGNETIC GASKET
		INTERIOR -	22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
		EXTERIOR -	22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
		DEAD BOLT -	NONE
		HANDLE -	K27 W/ INSIDE SAFETY RELEASE & DEAD BOLT LATCH
		HINGES -	(2) K1245 (1) K1248 -SPRING LOADED
		CLOSER -	RACK & PINION
		HEATER CABLE -	NONE
		VISION PANEL -	14" x 24" (NON-HEATED)
		INT KICKPLATES -	42" HIGH, DIAMOND TREAD PLATE ALUMINUM
		EXT KICKPLATES -	42" HIGH, DIAMOND TREAD PLATE ALUMINUM
		JAMB GUARDS -	INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM
	1EA.	42" x 80"	FREEZER, FLUSH IN-FITTING DOOR W/ MAGNETIC GASKET
		INTERIOR -	22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
		EXTERIOR -	22GA. STAINLESS STEEL - TYPE 304, #4 FINISH
		DEAD BOLT -	NONE
		HANDLE -	K27 W/ INSIDE SAFETY RELEASE & DEAD BOLT LATCH
		HINGES -	(2) K1245 (1) K1248 -SPRING LOADED
		CLOSER -	RACK & PINION
		HEATER CABLE -	(4) SIDES OF DOOR OPENING
		VISION PANEL -	14" x 24" (HEATED)
		INT KICKPLATES -	42" HIGH, DIAMOND TREAD PLATE ALUMINUM
		EXT KICKPLATES -	42" HIGH, DIAMOND TREAD PLATE ALUMINUM
		JAMB GUARDS -	INT., 48" HIGH, DIAMOND TREAD PLATE ALUMINUM
		THRESHOLD -	THRESHOLD COVER OVER HEATER WIRE

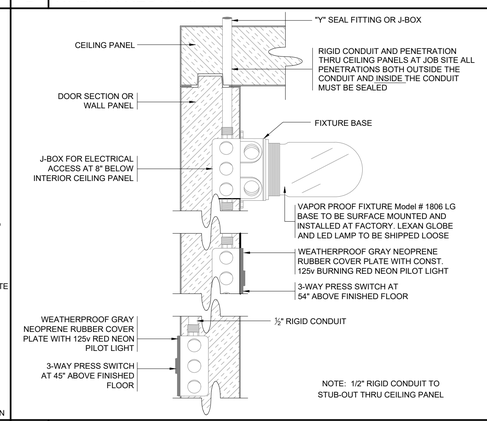
ACCESSORIES -	4 EA.	INT, EXT 3-WAY PRESS SWITCH MOTION SENSOR LIGHT SWITCH, WITH EXT. INDICATING RED LIGHT-FLUSH MTD
	2 EA.	MULTI-MONITOR & AUTOMATIC MODULARM #75LC HI/LO DIGITAL TEMP ALARM W/BATTERY LIGHT CONTROL BACK-UP, REMOTE NOTIFICATION DRY CONTACTS, AUTO LIGHT CONTROL INCLUDING INSIDE ILLUMINATED SWITCH W/PANIC ALARM FEATURE & SENOR LINE (120V, 30MA) ON WALL FACING KITCHEN, PROVIDE SIGN AT EACH FOR COOLER AND FREEZER
	2 EA.	VAPOR PROOF LIGHT FIXTURE KASON #1806 - SHIPPED LOOSE
	4 EA.	LED LIGHT FIXTURE KASON #1810L 48" LONG VAPORPROOF LED FIXTURE WITH TWO 5000K COLOR TEMP. 18W LED LAMPS (120V, 36W)
	1 EA.	HEATED AIR VENT (FREEZER ONLY) - KASON #1832 HI-FLOW 2-WAY HEATED VALVE (120VAC)
	2 EA.	VINYL STRIP CURTAINS SHALL BE OF THE NSF APPROVED KASON EASY-MOUNT SYSTEM SERIES #401SA606 #401SA606 WITH SINGLE PIECE EXTRUSION CHANNEL.
	1 EA.	ROW OF ALUMINUM HAT STYLE BUMPER RAILS ON EXPOSED EXTERIOR (SHIPPED LOOSE)
CLOSURES -	1 LOT	INT. COVED BASE - (TO MATCH INT. WALL PANEL FINISH)
	1 LOT	EXPOSED EXT. COVED BASE - (TO MATCH EXT. WALL PANEL FINISH)
	1 LOT	WALL CLOSURES - (TO MATCH EXT. WALL PANEL FINISH)
	1 LOT	CEILING ENCLOSURES - (TO MATCH EXT. WALL PANEL FINISH)

WALK-IN REFRIG/FREEZER WT=8.5LBS PER SQ.FT. FOR 4" PANELS OVERALL DIMENSIONS

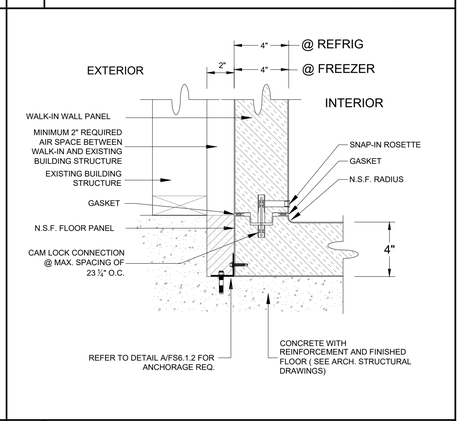
D TYPICAL SPECIFICATIONS



E SUPPLEMENTAL LATERAL BRACING TO CEILING PANEL

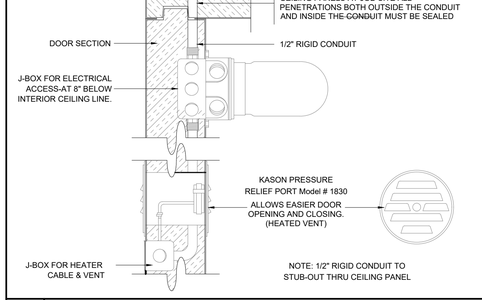


F 3 -WAY INTERIOR & EXTERIOR PRESS SWITCH

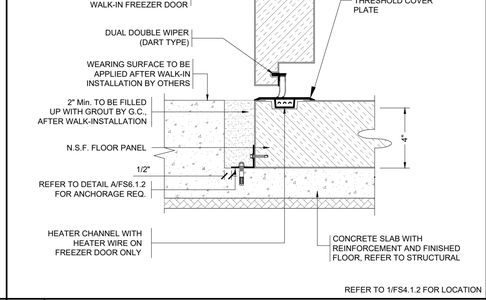


G WALL PANEL AT BUILDING WALL

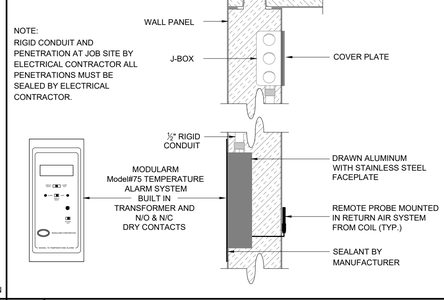
K DOOR DETAIL



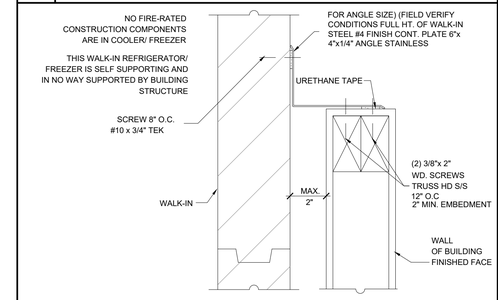
H PRESSURE RELIEF PORT MODEL # 1830 DETAIL



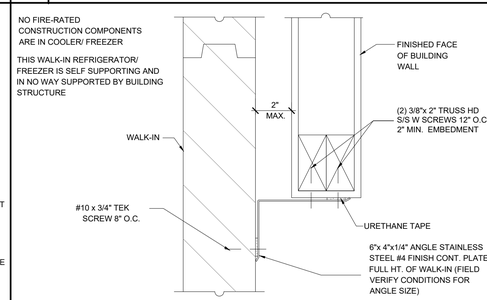
I THRESHOLD DETAIL FOR FREEZER DOOR



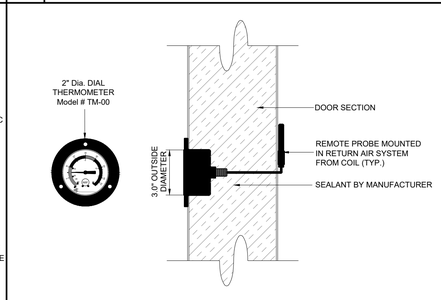
J MODULARM CORP. MODEL 75 DETAIL



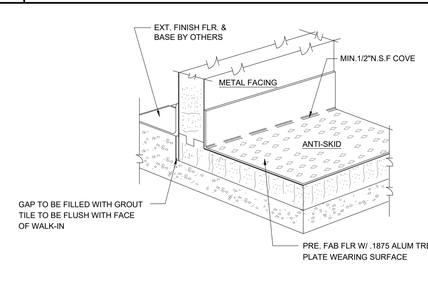
L CLOSURE TRIM



M CLOSURE TRIM



N 2" DIA. DIAL THERMOMETER



O FLOOR SECTION AT EXT. AND INT. OF REF/FREEZER

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15521 REN. 5/25 STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
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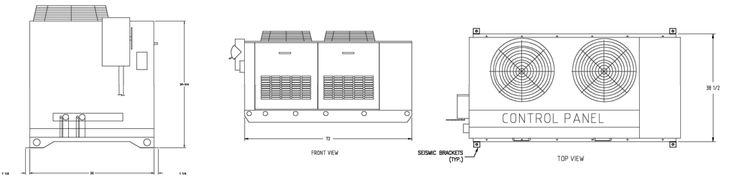
FOODSERVICE EQUIPMENT WALK-IN DETAILS

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

FS6.1

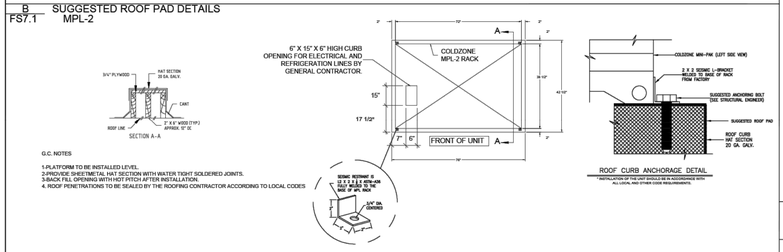
Plot Date & Time 9/25/2024 9:48:51 AM

A REFRIGERATION RACK OUTLINE DRAWING
FS7.1 MPL-2



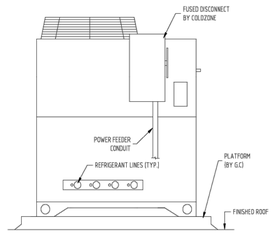
NOTE:
1. TOTAL SYSTEM WEIGHT: 584 LBS
2. INSTALLATION CLEARANCE REQUIRES 3 FT ON ALL SIDES

B SUGGESTED ROOF PAD DETAILS
FS7.1 MPL-2

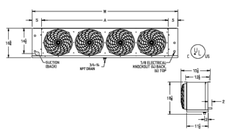


G.C. NOTES
1-PLATFORM TO BE INSTALLED LEVEL.
2-PROVIDE SHEETMETAL HAT SECTION WITH WATER TIGHT SOLDERED JOINTS.
3-BACK FILL OPENING WITH HOT PITCH AFTER INSTALLATION.
4. ROOF PENETRATIONS TO BE SEALED BY THE ROOFING CONTRACTOR ACCORDING TO LOCAL CODES

C ELECTRICAL INSTALLATION
FS7.1

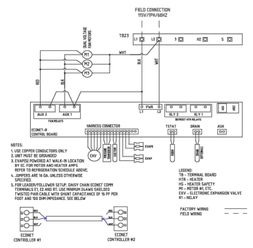


D COLDZONE EVAPRATOR COIL
FS7.1 LOW PROFILE



MODEL NUMBER	QTY	FIGURE	EVAPORAOTR COIL(S) INCHES NO. OF FANS	W	A	WEIGHT (LBS. EACH)
CL6A073ADA	1	1	2	43-5/8	43-5/8	52
CL6E090DDA	1	1	2	43-5/8	43-5/8	58

F WIRING DIAGRAM FOR W/I COOLER EVAPORATOR COIL
FS7.1

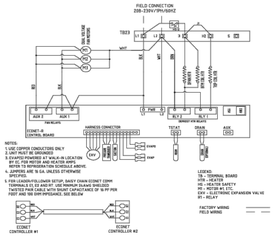


NOTES:
1. USE COPPER CONDUCTORS ONLY
2. UNIT MUST BE GROUNDED.
3. ENERGIZED WHENEVER VALVE IN LOCATION BY EC, FOR MOTOR AND HEATER AMPS REFER TO REFRIGERATION SCHEDULE ABOVE.
4. ALL WIRING ARE 16 GA. UNLESS OTHERWISE SPECIFIED.
5. FOR LEADER/FOLLOWER SETUP, DAISY CHAIN ECONET COMM TERMINALS (C1 AND C2) USE MINIMUM 22AWG SHIELDED TWISTED PAIR CABLE WITH SHUNT CAPACITANCE OF 16 PF PER FOOT AND 100 OHM IMPEDANCE. SEE BELOW

LEGEND
TB - TERMINAL BOARD
HTR - HEATER
HTR - HEATER SAFETY
HS - HOTGB #2 STC
EXV - ELECTRONIC EXPANSION VALVE
R1 - RELAY

FACTORY WIRING
FIELD WIRING

G WIRING DIAGRAM FOR W/I FREEZER EVAPORATOR COIL
FS7.1

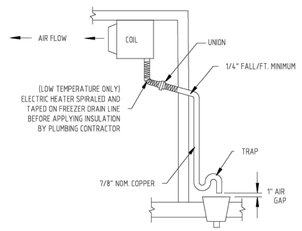


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HS - HOTGB #2 STC
EXV - ELECTRONIC EXPANSION VALVE
R1 - RELAY

FACTORY WIRING
FIELD WIRING

H DRAIN LINE DETAIL
FS7.1



COLDZONE ENGINEERING SUMMARY

POWER SUPPLY: 208-230/3/60 — MIIN CIRCUIT AMPACITY 27 A
CONNECTED LOAD 24 A — FUSE SIZE 35 A

IDENT SYSTEM	IDENT ITEM NUMBER	FIXTURES DESCRIPTION	FIXTURES FIXTURE LOAD	FIXT °F FIX T.	FIXT °F SUCT.	REFRIG. R-	COMPRESSORS COMPRESSOR MODEL NUMBER	COMPRESSORS H.P.	COMPRESSORS RQR CAPACITY LBS. (@ 25%)	COMPRESSORS % OF LOAD CAPACITY	COMPRESSOR ELECTRICAL CHARACTERISTICS RLA	V	PH	COOLING CAPACITY (BTUH) AT +10 AMBIENT	DEFROST *	QUANTITY	MODEL NO.	EVAPORATOR COILS NOMINAL CAPACITY TOTAL	MFR. REMARKS	FAN 1PH AMP	FAN 1PH V	HEATER AMP	HEATER V	HEATER PH	TOTAL SYSTEM AMPS	CONNECTION SIZES ** ROUTE	SUCTION	LIQUID	DRAIN FITTING - NPT	DEFROST OPTION	CIRCUIT WITH DEFROST TIMER CLOCK	ACCESSORIES WITH HEATED INSULATED RECEIVER	SUCTION ACCUMULATOR	SUCTION FILTER	OIL SEPARATOR	FURNISHED BY (SEE CODE) TSTAT	SNOID	EXP. VALVE	REMARKS
A	2	WALK-IN FREEZER	9431	-10	-20	448A	ZF11K4E	3-1/2	34.00	110%	10.9	208-230	3	10367	E	1	CL6E090DDA	10600	COLDZONE	1	208-230/1	9.8	208-230	1	10.9		7/8	3/8	3/4-14	ECONET	NO	NO	NO	YES	SEALED	NO	FI		FI	
B	3	WALK-IN REFRIGERATOR	6311	35	24	448A	ZB08KAE	1	10.00	107%	4.7	208-230	3	8901	A	1	CL6A073ADA	9350	COLDZONE	1.6	115/1				4.7		5/8	3/8	3/4-14	ECONET	NO	NO	NO	NO	SEALED	NO	FI		FI	

SYSTEM ITEM NO:VERIFY	CONDENSER FAN: 2 CONDENSER FAN AMPS: 0.8	LEGEND	*	A-AIR DEFROST G-GRAVITY(W/TIMER) E- ELECTRIC DEFROST DD-DEMAND DEFROST	+	S-SINGLE M-MAIN B-BRANCH	**	VERIFY LINE SIZES WITH JOB SITE CONDITIONS	MFR- FURNISH WITH FIXTURE FI- CZ TO FURNISH AND SHIP LOOSE FI- CZ TO FURNISH AND INSTALL ON UNIT	Z* - MULTIPLE EVAPORATORS TIED TO ONE COMPRESSOR TO BE BONDED BY OTHERS RC- FURNISH AND INSTALL BY REF. CONTRACTOR

NOTE:
CONDENSER SELECTED FOR 0 FEET ELEVATION AND 105°F AMBIENT TEMPERATURE
ALL COMPRESSOR CIRCUITS INDIVIDUALLY PIPED WITH SEALED LIQUID AND SUCTION FILTERS, CRANKCASE HEATERS, AND HEAD PRESSURE CONTROL VALVES
ELECTROMECHANICAL CONTROLS PER COMPRESSOR WITH HIGH/LOW PRESSURE SWITCHES
POWDER COATED STEEL CABINET PANELS

REFRIGERATION SYSTEM ELECTRICAL SCHEDULE / POWER SUPPLIED BY ELECTRICAL CONTRACTOR						
ITEM NO.	QTY.	DESCRIPTION	VOLTAGE/PH	AMPS	MCA	MOPD
VERIFY	1	MPL-2	208-230/3/60	24	27	35
A	1	CL6E090DDA	208-230/1		15	20
B	1	CL6A073ADA	115/1		15	20

ENGINEERING GUIDE TO SPECIFICATION
FOR REMOTE REFRIGERATION PACKAGE
MINI-PAK REFRIGERATION SYSTEM

THE REFRIGERATION PACKAGE SHALL BE A PRE-ENGINEERED AND FACTORY ASSEMBLED UNIT, TRADE NAME "MINI-PAK", AS MANUFACTURED BY COLDZONE, A DIVISION OF HEAT TRANSFER PRODUCTS GROUP, 1810 VINEYARD AVE. ONTARIO, CA 91761. PHONE: (800) 772-2653, FAX: (714) 529-8503.

CONTRACTOR SHALL FURNISH AND INSTALL, WHERE SHOWN ON PLANS, (1) COLDZONE U.L. APPROVED "MINI-PAK".

1. MINI-PAK REFRIGERATION SYSTEM
THE ENTIRE UNIT IS TO BE WEATHER-PROOFED AND MINIMUM OF TWO COATS OF PAINT SHALL BE APPLIED TO MAKE THE UNIT RUST-PROOF. THE UNIT SHALL BE PROVIDED WITH MULTI-CIRCUITED AIR-COOLED CONDENSER FOR COOLER, FREEZER AND ICE MACHINES. SUCTION LINE FOR LOW TEMPERATURE UNIT MUST BE INSULATED WITH ARMAFLEX.

2. REFRIGERATION UNITS
A. CRANKCASE HEATER SHALL BE PROVIDED WITH EVERY COMPRESSOR.
B. AIR-COOLED CONDENSING UNITS SHALL BE SEMI-HERMETIC, HERMETIC OR GLACIER SCROLL TYPE (COPELAND). EACH UNIT SHALL BE EQUIPPED WITH HIGH-LOW PRESSURE CONTROL, LIQUID LINE DRIER, SIGHT GLASS, SUCTION AND DISCHARGE VIBRATION ELIMINATOR, AND HEAD PRESSURE CONTROL.
C. ALL COMPRESSOR UNITS SHALL BE NEW AND FACTORY ASSEMBLED TO OPERATE WITH THE REFRIGERANT SPECIFIED IN THE ENGINEERING SUMMARY SHEET.

3. PIPE-PIPING
A. ALL COPPER TUBING TO BE REFRIGERANT GRADE A.C.R. OR TYPE "L".
B. ALL TUBING SHALL BE SECURELY SUPPORTED AND ANCHORED WITH CLAMPS.
C. ALL REFRIGERANT LINES SHALL BE EXTENDED TO ONE SIDE OF THE PACKAGE IN A NEAT AND ORDERLY MANNER.
D. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT ACCEPTABLE.
E. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAK TESTED WITH ALL VALVES OPEN.

4. CONTROL PANEL
A. THE PACKAGE SHALL HAVE FACTORY MOUNTED AND PRE-WIRED CONTROL PANEL COMPLETE WITH INTERLOCKED MAIN FUSED DISCONNECT, COMPRESSOR CIRCUIT BREAKERS, CONTACTORS AND TIME CLOCKS WIRED FOR SINGLE POINT POWER CONNECTION.
B. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL MAIN POWER LINES TO PANEL, AND USE WIRE HARNESS WIRING FOR CONTROL AND DEFROST HEATER BETWEEN THE DEFROST CLOCK AND THE REFRIGERATION FIXTURES, ALL IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.

GENERAL NOTES

1. GENERAL CONTRACTOR
A. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND COORDINATE WITH OTHER TRADES.
B. GENERAL CONTRACTOR SHALL PREPARE AND WEATHERPROOFING THE PLATFORM AND CURBED OPENINGS.

2. REFRIGERATION CONTRACTOR
A. THE COMPLETE SYSTEM SHALL BE EVACUATED WITH VACUUM PUMP.
B. ALL REFRIGERANT LINES TO BE REFRIGERANT GRADE A.C.R. OR TYPE "L".
C. CHARGE, TEST, AND ADJUST EACH UNIT TO BE IN AN OPERATIONAL SYSTEM.
D. SILVER SOLDER AND/OR SIL-FOS SHALL BE USED FOR ALL REFRIGERANT PIPING. SOFT SOLDER IS NOT.
E. ALL PIPING TO BE PRESSURE TESTED WITH NITROGEN AT 300 PSI. AFTER THE CONDENSING UNIT AND COIL HAVE BEEN CONNECTED, THE BALANCE OF THE SYSTEM SHALL BE LEAK TESTED WITH ALL VALVES OPEN.
F. REFRIGERATION CONTRACTOR TO PROVIDE AND INSTALL DRAIN LINE HEATER IN FREEZER TO BE CONNECTED BY ELECTRICAL CONTRACTOR

3. ELECTRICAL CONTRACTOR
A. ELECTRICAL CONTRACTOR TO PROVIDE POWER FROM REFRIGERATION PACKAGE AND CONNECT CONTROL AND DEFROST SYSTEM AS CALLED FOR IN THE WIRING DIAGRAM.
B. ALL ELECTRICAL WIRING AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE WIRING DIAGRAM AND LOCAL CODES.

4. PLUMBING CONTRACTOR
A. PLUMBING CONTRACTOR TO PROVIDE HARD A.C.R. OR TYPE "L" COPPER DRAIN LINES FOR WALK-IN REFRIGERATOR AND FREEZER, PITCHED 1/4" PER FOOT OF RUN IN FREEZER. UNHEATED DRAIN LINE MUST BE OUTSIDE OF FREEZER WALL TO PREVENT FREEZING. TRAP DRAIN LINE OUTSIDE OF REFRIGERATED SPACE TO AVOID ENTRANCE OF WARM AND MOIST AIR.
B. PLUMBING CONTRACTOR TO PROVIDE INDIVIDUAL DRAIN LINE FOR EACH EVAPORATOR UNLESS OTHERWISE CALLED FOR.
C. ALL PLUMBING INSTALLATION SHALL BE IN ACCORDANCE WITH LOCAL CODES.

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GENERAL NOTES

REFRIGERATION PIPE SIZES ARE BASED ON A MAXIMUM LINE RUN OF 100 EQUIVALENT FEET FOR LIQUID AND SUCTION LINES. THIS INCLUDES AN ALLOWANCE OF 40 EQUIVALENT FEET FOR VERTICAL RISERS. LINE RUNS LONGER THAN 100 EQUIVALENT FEET MAY VOID THE LINE SIZES INDICATED ON OUR SUBMITTAL DRAWING

IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO FOLLOW ALL APPLICABLE CODES AND CURRENT REFRIGERATION INDUSTRY STANDARDS AND PRACTICES WHEN DETERMINING LINE SIZES, AND INSTALLING AND STARTING UP COLDZONE EQUIPMENT

EVAPORATOR AND PIPING SERVICE / ISOLATION VALVES ARE RECOMMENDED FOR PARALLEL AND MULTIPLEX SYSTEMS. THESE VALVES ARE TO BE SUPPLIED AND INSTALLED BY THE INSTALLING CONTRACTOR.

ROOF PENETRATIONS TO BE SEALED BY THE ROOFING CONTRACTOR ACCORDING TO LOCAL CODES

REV	Description	Date
0	Initial Release	11/4/2024

ColdZone
1810 Vineyard Ave, Ontario, CA 91761 (800) 766-2606 (714) 529-8503 FAX

Project Name and Address
ESCALON HIGH SCHOOL
FOOD SCIENCE CLASSROOM
ESCALON, CA

NOT DRAWN TO SCALE

Drawing Number	Job Number
22613	25-1132
Date	Sheet Number
11/4/2024	FS7.1
Drawn By	
MF	

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
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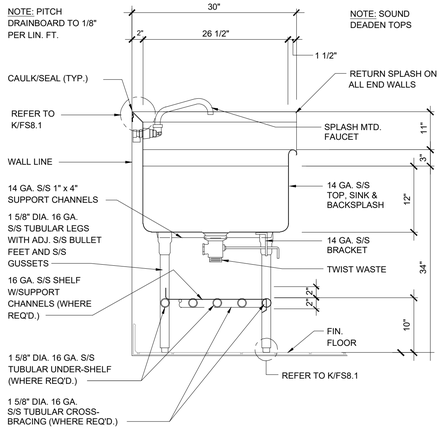
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1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT
REMOTE REFRIGERATION DETAILS

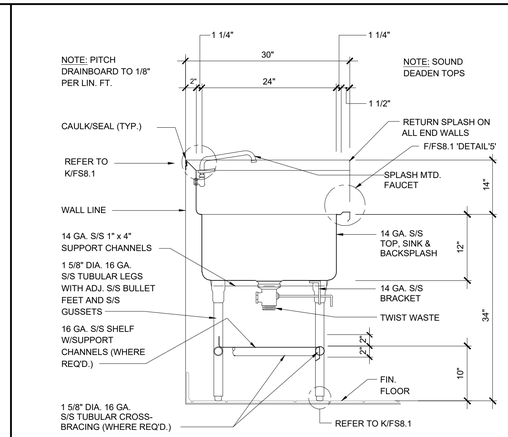
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Date	7/5/24
Drawn by	Author
Checked by	Checker

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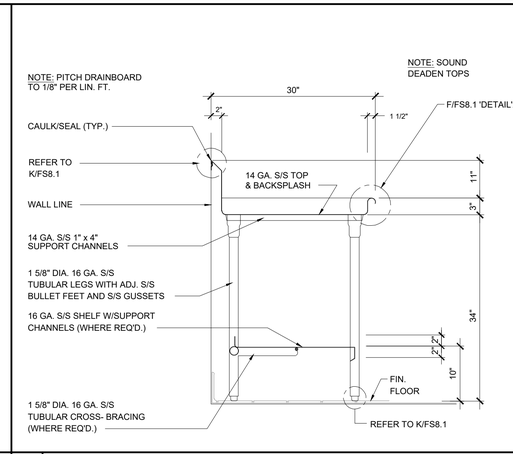
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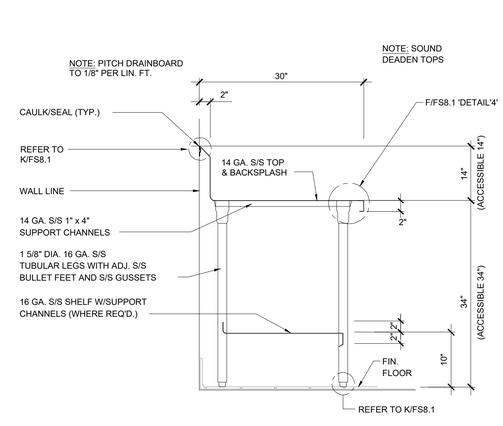
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B SECTION AT PREP SINK NTS



C SECTION AT DISHTABLE NTS



D SECTION AT WORKCOUNTER NTS

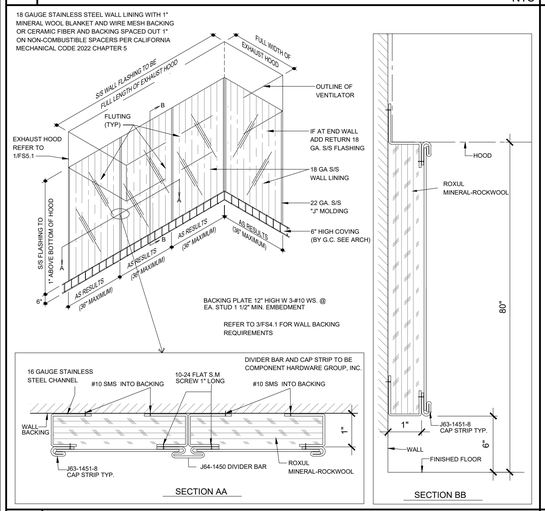
E CHEFS COUNTER & ELEC. DETAIL NTS

F EDGE/SPLASH/SHELF DETAILS NTS

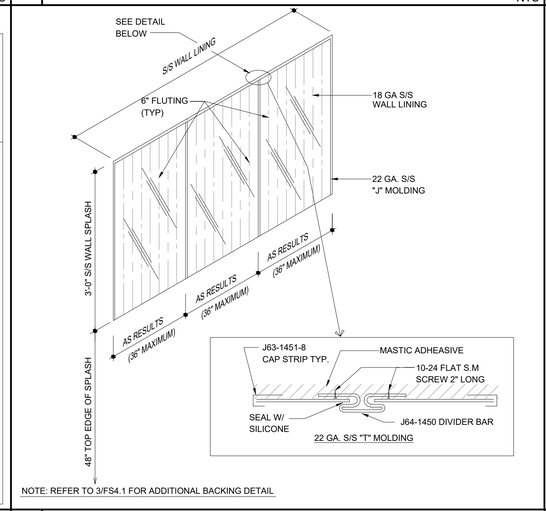
NOTE: REFER TO 2/FS4.2 FOR ADDITIONAL BACKING DETAIL

G WALL MOUNTED SHELF NTS

H WALL MOUNTED CABINET NTS

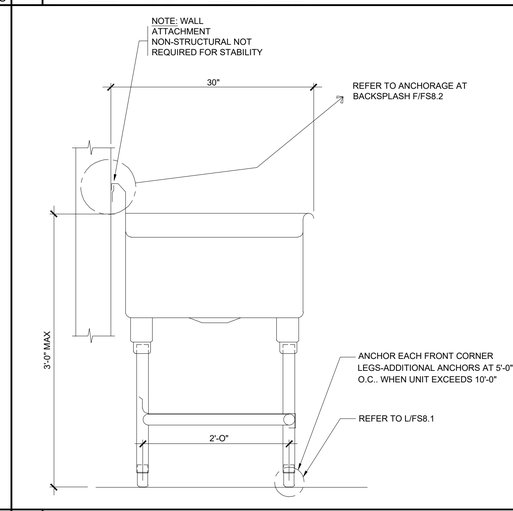


I S/S INSULATED WALL LINING DETAIL NTS

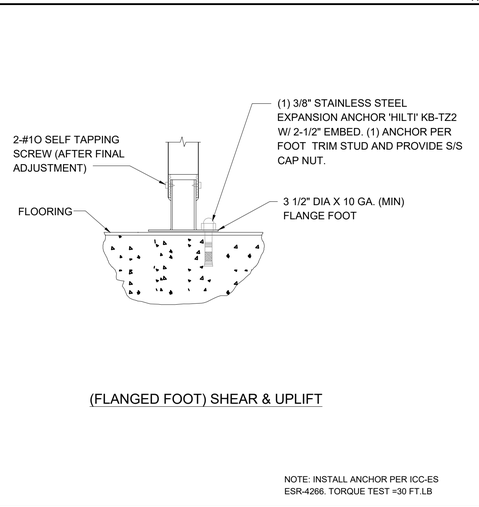


NOTE: REFER TO 3/FS4.1 FOR ADDITIONAL BACKING DETAIL

J WALL SPLASH NTS



K FLOOR MOUNTED SINK @ WALL NTS



L FOOT ANCHORAGE DETAIL NTS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15927 REN. 5/28 STATE OF CALIFORNIA

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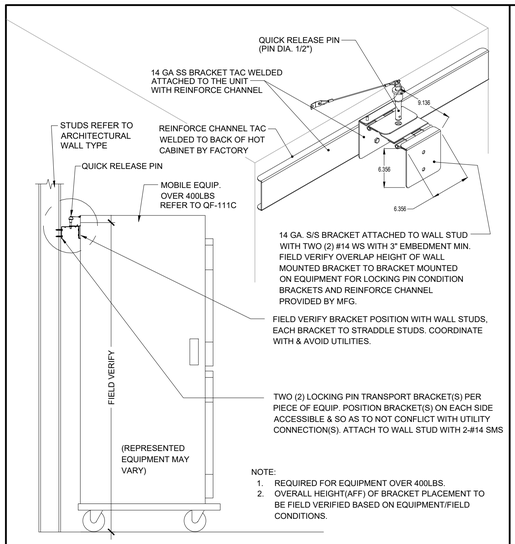
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ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT ANCHORAGE DETAILS

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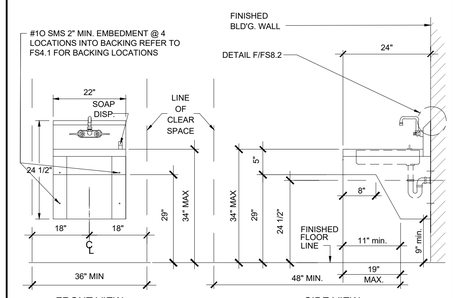
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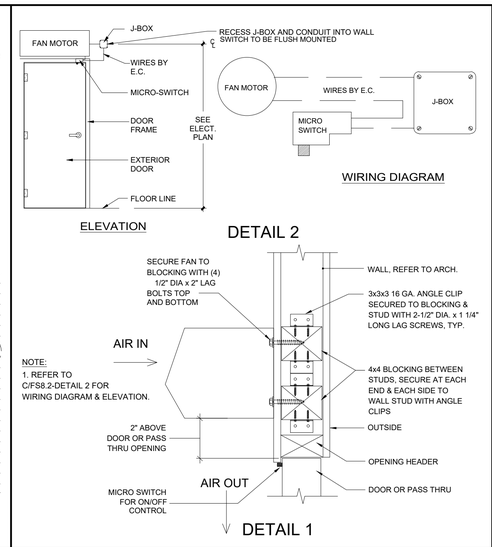
A | MOBILE EQUIP. ANCHORAGE BRACKET NTS

ACCESSIBLE HAND SINK REQUIREMENT NOTES

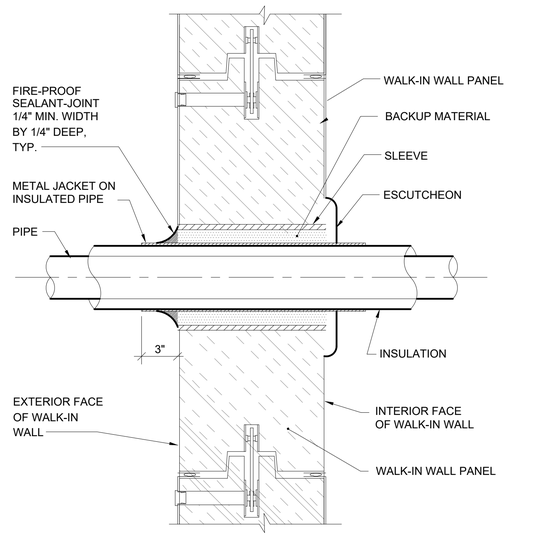
1. HOT WATER AND DRAIN PIPES UNDER ACCESSIBLE HAND SINKS SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER HAND SINKS.
2. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBF. LEVER-OPERATED, PUSH-TYPE AND MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS.
3. WHERE TOWEL, SANITARY NAPKINS, WASTE RECEPTACLES, SOAP DISPENSER AND OTHER SIMILAR DISPENSING AND DISPOSAL FIXTURES ARE PROVIDED, AT LEAST ONE OF EACH TYPE SHALL BE LOCATED WITH ALL OPERABLE PARTS WITHIN 40 INCHES FROM THE FINISHED FLOOR.
4. ALL DIMENSIONS SHOWN ARE MINIMUM CLEARANCES, UNLESS NOTED.
5. AREA BELOW HAND SINKS SHALL BE ACCESSIBLE AND CLEAR.



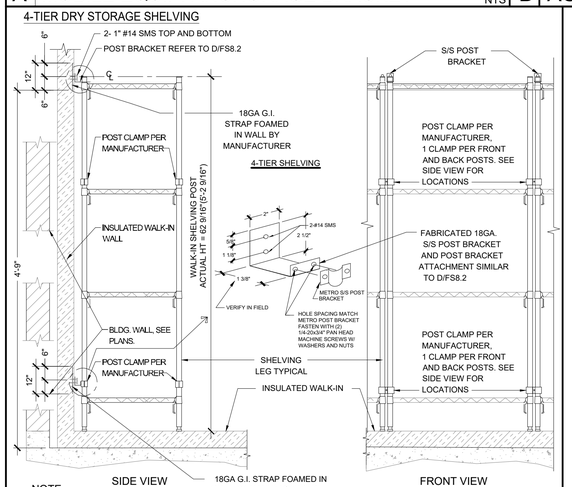
B | ACCESSIBLE HAND SINK DETAILS NTS



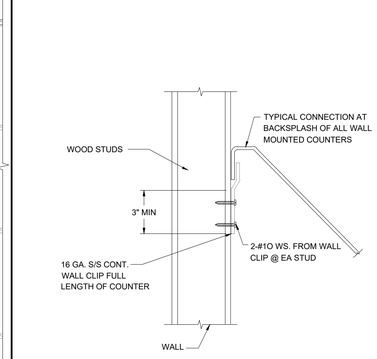
C | AIR CURTAIN MTG & MICRO SWITCH DTL NTS



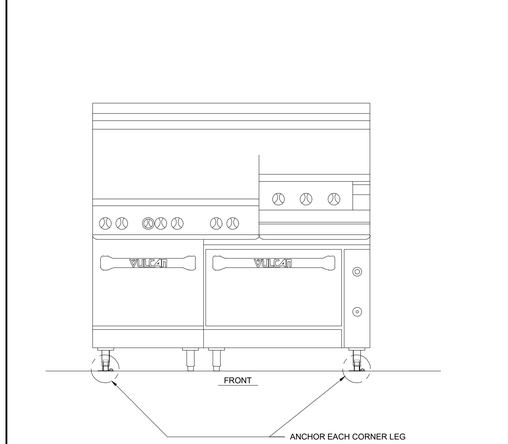
D | PIPE THROUGH WALK-IN PANEL NTS



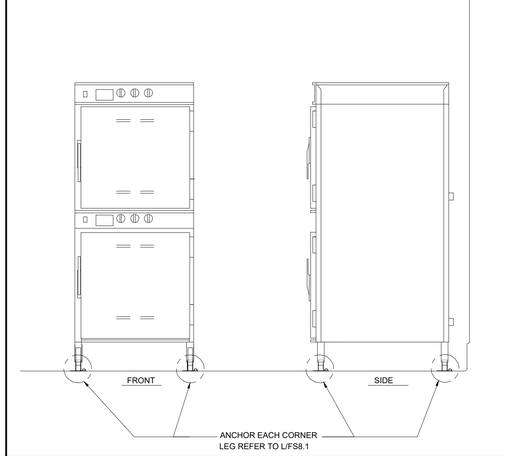
E | COLD STORAGE SHELVING ATTACHMENT NTS



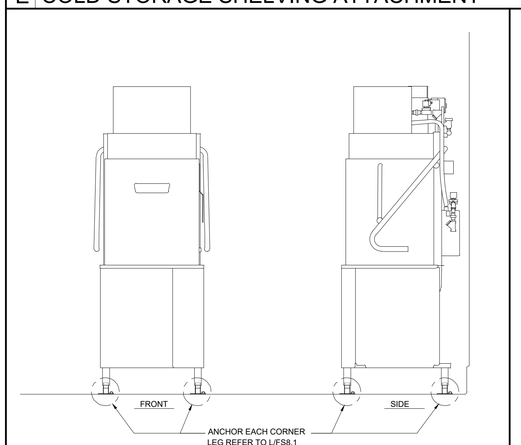
F | ANCHORAGE AT BACKSPLASH NTS



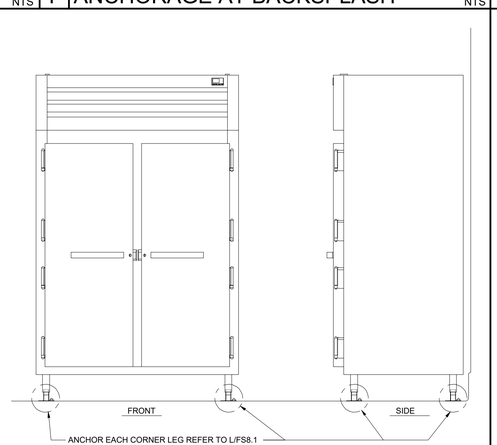
G | RANGE NTS



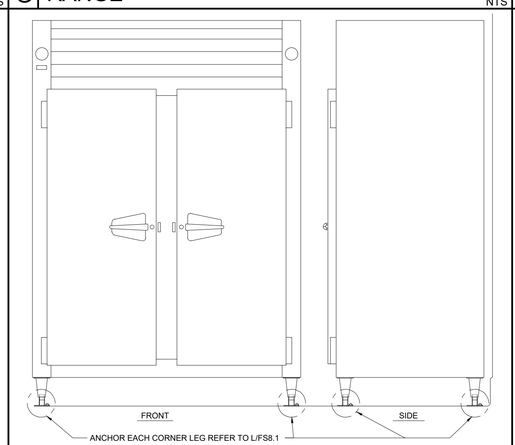
H | OVEN, COOK HOLD NTS



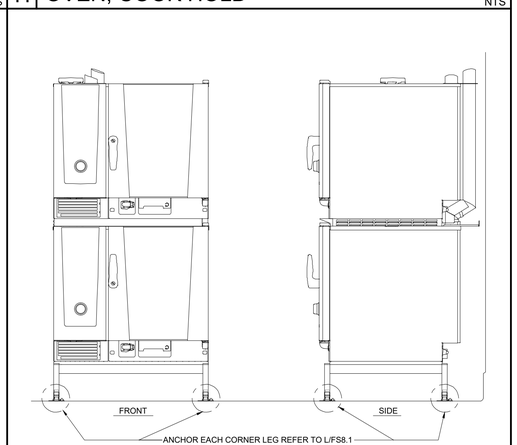
I | DISHWASHER NTS



J | REACH-IN REFRIG/FREEZER NTS



K | REACH-IN HEATED CABINET NTS



K | OVEN-STEAMER, COMBI OVEN NTS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15627 REN: 5/31 STATE OF CALIFORNIA

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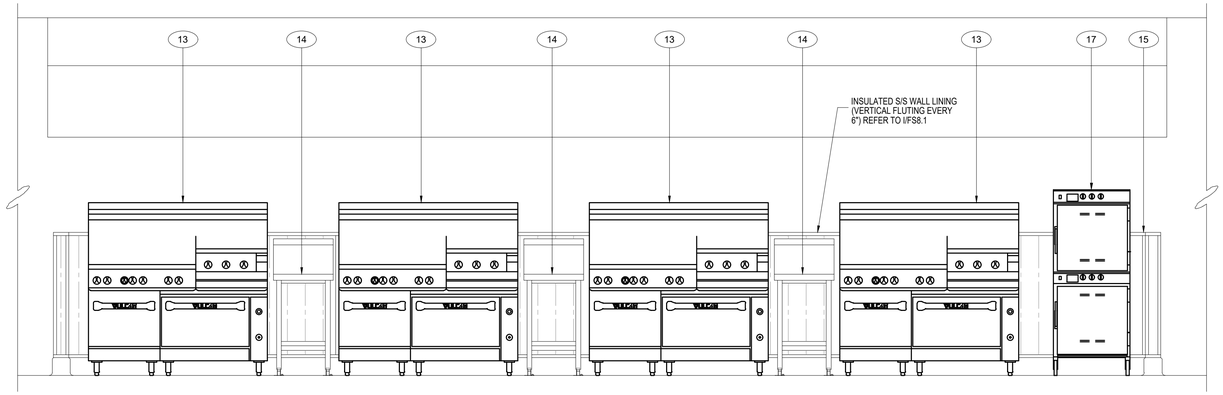
ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT ANCHORAGE DETAILS

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

FS8.2

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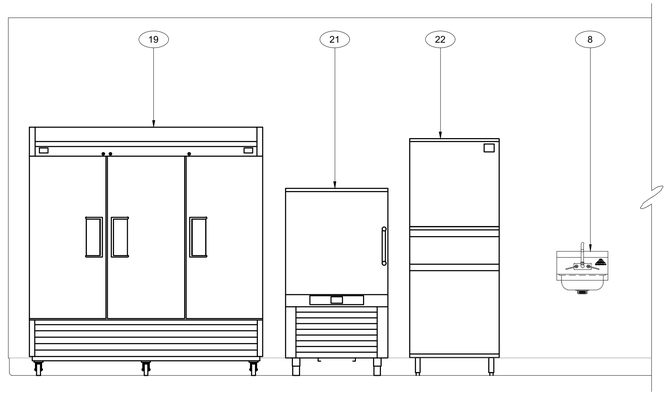


ELEVATION

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A

FS9.1

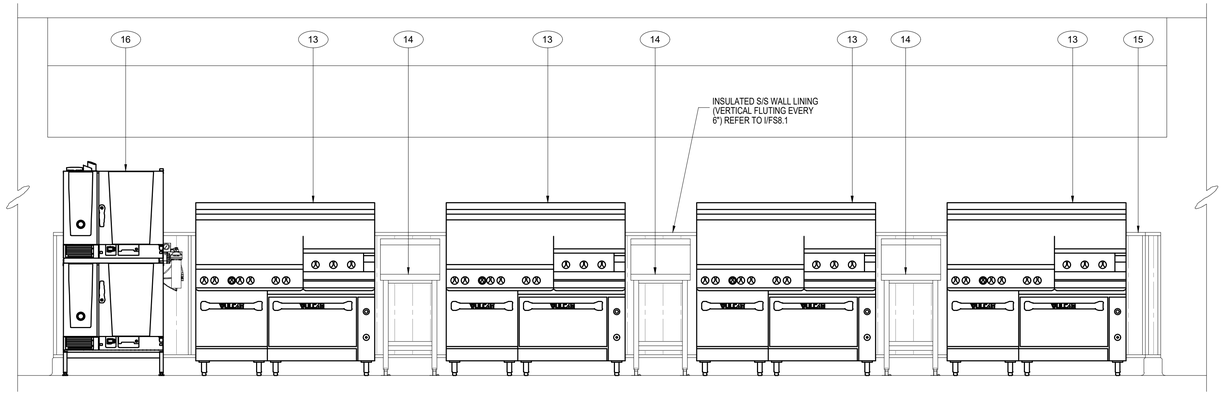


ELEVATION

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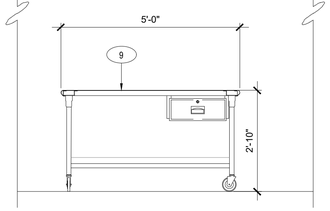


ELEVATION

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C

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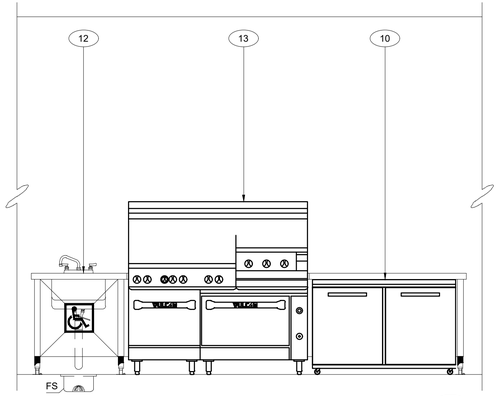


ELEVATION

SCALE : 1/2"=1'-0"

D

FS9.1



ELEVATION

SCALE : 1/2"=1'-0"

E

FS9.1

NOTE

FOR FOODSERVICE EQUIPMENT ELEVATION SCHEDULE REFER TO FS9.2

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.

Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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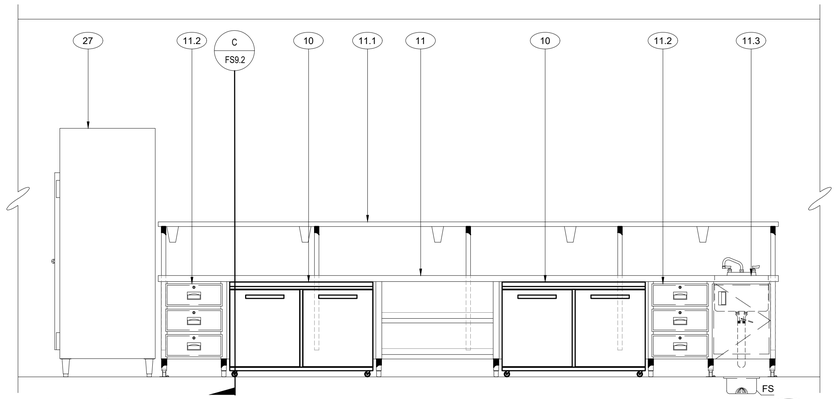
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FOODSERVICE EQUIPMENT ELEVATIONS

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

FS9.1

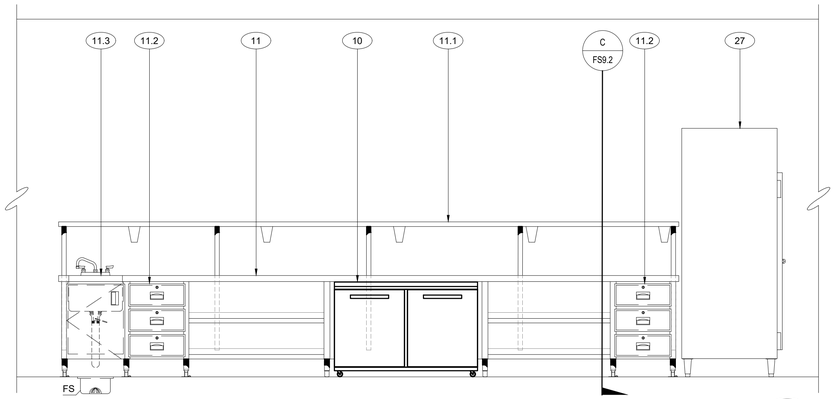
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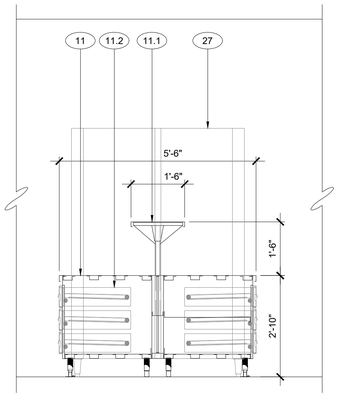
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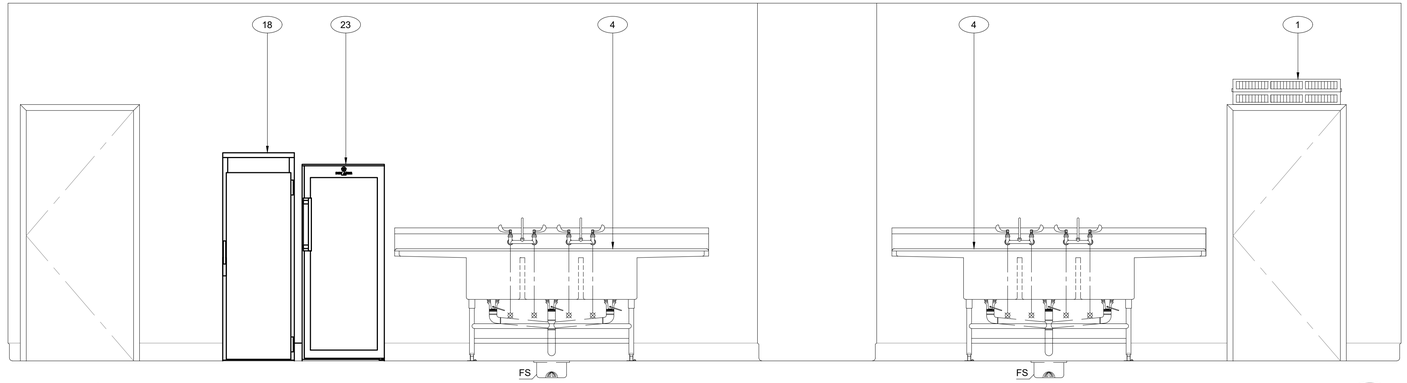
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SECTION

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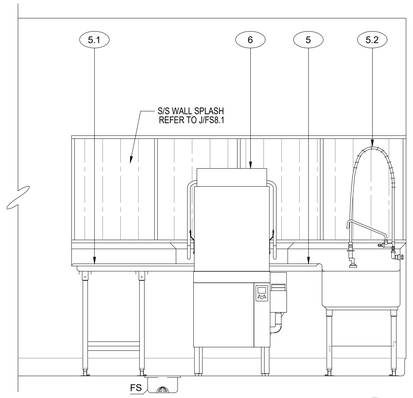
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ELEVATION

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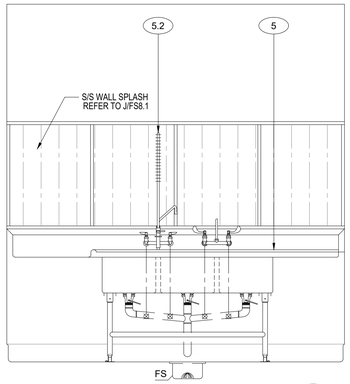
D FS9.2



ELEVATION

SCALE : 1/2"=1'-0"

E FS9.2



ELEVATION

SCALE : 1/2"=1'-0"

F FS9.2

EQUIPMENT SCHEDULE	
ITEM NO	EQUIPMENT CATEGORY
1	AIR CURTAIN, UNHEATED
4	SINK, SCULLERY, 3 COMPARTMENTS
5	THREE COMPARTMENT SINK
5.1	CLEAN DISHTABLE
5.2	SPRAY RINSE WITH FAUCET
6	WAREWASHER, DOOR TYPE, HIGH TEMP
9	MOBILE WORKTABLE WITH UTENSIL DRAWER
10	REFRIGERATOR, UNDERCOUNTER
11	PREP COUNTER
11.1	TABLE MOUNTED OVERSHELF
11.2	THREE STACK UTENSIL DRAWER UNIT
11.3	PREP SINK
12	DEMO TABLE ADA SINK
13	RANGE, RESTAURANT, GAS
14	WORK COUNTER
15	S/S WALL CAP / INSULATED WALL LINING
16	OVEN-STEAMER, COMBINATION, ELECTRIC
17	OVEN, COOK/HOLD, SMOKE/HOLD
18	ENVIRONMENTAL CHAMBER
19	REACH-IN REFRIGERATOR
21	BLAST CHILLER / SHOCK FREEZER, REACH-IN
22	ICE MAKER W/ BIN
23	DRY AGER

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT
TIMOTHY PAUL HUFF
No. C 15627
REN: 5/28
STATE OF CALIFORNIA

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
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FOODSERVICE EQUIPMENT ELEVATIONS

Project Number	2321
Date	7/5/24
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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 2022 CBC, Sections 1617A.1.18 through 1617.A.1.26 and ASCE 7-16 Chapter 13, 26 and 30.

1. All permanent equipment and components.
2. Temporary, movable or mobile equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water. "Permanently attached" shall include all electrical utility services except plugs for 110/120 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:

A. Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

The anchorage of all mechanical, electrical and plumbing components shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and acceptance by DSA. The project inspector will verify that all components and equipment have been anchored in accordance with above requirements.

Piping, Ductwork, and Electrical Distribution System Bracing Note

Piping, ductwork, and electrical distribution systems shall be braced to comply with the forces and displacements prescribed in ASCE 7-16 Section 13.3 as defined in ASCE 7-16 Section 13.6.5, 13.6.6, 13.6.7, 13.6.8 and 2022 CBC, Sections 1617A.1.24, 1617A.1.25 and 1617A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a preapproved installation guide (e.g., HCAi OPM for 2013 CBC or later), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start of and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

Mechanical Piping (MP), Mechanical Ducts (MD), Plumbing Piping (PP), Electrical Distribution Systems (E):

MP☒ MD☒ PP ☐ E ☐ - Option 1: Detailed on the approved drawings with project specific notes and details.

MP☐ MD☐ PP ☐ E ☐ - Option 2: Shall comply with the applicable HCAi Pre-Approval (OPM #) #_____

(E) PACKAGED AC UNIT SCHEDULE

MARK NO.	MANUFACTURER & MODEL #	DESCRIPTION	NOM. TONS	CFM	OSA CFM	COOLING MBH		HEATING MBH		E.S.P.	MOTOR	ELECTRICAL					OP. WT.	AFUE	EER/SEER	NOTES
						TOTAL	SENS	INPUT	OUTPUT	IN W.G.	B.H.P.	VOLTS	PH	HZ	MCA	MOCP	LBS.	%		
(E) AC-1	TRANE #YSC120H3	(E) PACKAGE UNIT	10.0	4,000	920	113.0	79.1	150	120	0.7"	1.47	208	3	60	49	60	1259	80.0	11.20/12.90	1, 2, 3, 4, 5
(E) AC-1	TRANE #YSC120H3	(E) PACKAGE UNIT	10.0	4,000	920	113.0	79.1	150	120	0.7"	1.47	208	3	60	49	60	1259	80.0	11.20/12.90	1, 2, 3, 4, 5

NOTES:
1. PROVIDE WITH MICROMETL #0543-008A-00010, 8" TALL UNIT CURB.
2. PROVIDE WITH MERV 13 RATED FILTERS.
3. THERMOSTAT:7-DAY PROGRAMABLE OCCUPANT CONTROLLED SMART THERMOSTAT (OCST) COMPLIANT WITH AUTOMATIC DEMAND RESPONSE REQUIREMENTS PER CEC 110.12 & JOINT APPENDIX 5. T-STAT SHALL BE ACCESSIBLE & MOUNT TOP @ 48" A.F.F.
4. AUTOMATIC SMOKE DETECTOR SHUT-OFF IS REQUIRED PER CMC SECTION 609.1.
5. MOUNT PER DETAIL 4/M3.1

AIR DISTRIBUTION DEVICE SCHEDULE

MK. NO.	MANUFACTURER & MODEL #	FRAME TYPE	BLOW PATTERN	OBD	REMARKS
CS-1	NAILOR #7500-L	LAY-IN	SEE PLAN	NO	WHITE FINISH, MODULAR CORE
CS-2	NAILOR #7500-S	SURFACE	SEE PLAN	NO	WHITE FINISH, MODULAR CORE
CR-1	NAILOR #4260-L	LAY-IN	---	NO	WHITE FINISH, ROUND NECK
CR-2	NAILOR #4260-S	SURFACE	---	NO	WHITE FINISH, ROUND NECK

KITCHEN EXHAUST FAN & MAKE-UP AIR SCHEDULE

MARK. NO.	
H-1	NOTE. REFER TO SHEET M4.0 FOR HOOD EQUIPMENT SCHEDULES.
H-2	
H-3	
H-4	
H-5	
H-6	
H-7	
KEF-1	NOTE. REFER TO SHEET M4.7 FOR KITCHEN EXHAUST FAN EQUIPMENT SCHEDULES.
KEF-2	
KEF-3	
KEF-4	
KEF-5	
KEF-6	
KEF-7	
MUA-1	NOTE. REFER TO SHEET M4.7 FOR MAKE-UP AIR UNIT EQUIPMENT SCHEDULES.
MUA-2	
MUA-3	

MECHANICAL GENERAL NOTES

1. SCOPE:
   A NEW COMPLETE HVAC SYSTEM, INCLUDING MECHANICAL EQUIPMENT & DUCTWORK AS GENERALLY DELINEATED ON THE DRAWINGS. EQUIPMENT SHALL COMPLY WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS.
2. CODES:
   ALL WORK MATERIAL AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY HAVING JURISDICTION. NOTHING IN THESE PLANS SHALL BE CONSTRUED TO PERMIT THE INSTALLATION OF WORK, MATERIAL OR EQUIPMENT NOT CONFORMING TO THESE OR OTHER CODES APPLICABLE TO THIS PROJECT:
   A. 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
   B. 2022 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC)
   C. 2022 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC)
   D. 2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC)
   E. 2022 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC)
   F. 2022 CALIFORNIA ENERGY CODE (CEC) PART 6, TITLE 24 CCR.
   G. 2022 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC)
   H. 2022 CALIFORNIA GREEN BUILDING STANDARDS (CGBSC) PART 11, TITLE 24, CCR
3. WORKMANSHIP:
   ALL WORKMANSHIP SHALL BE DONE IN A NEAT AND ORDERLY MANNER ACCORDING TO THE BEST TRADE PRACTICE BY THOSE SKILLED IN THE PARTICULAR TRADE. EQUIPMENT, DUCTS, GRILLES, ETC., SHALL BE PLUMB, LEVEL, SQUARE OR CENTERED ETC., TO GIVE A NEAT AND PLEASING APPEARANCE. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
4. AVAILABLE POWER:
   THE MECHANICAL CONTRACTOR SHALL CONFIRM ALL SYSTEMS VOLTAGES BEFORE BIDDING OR ORDERING EQUIPMENT, AND SHALL ALLOW FOR BUCK & BOOST TRANSFORMERS IF REQUIRED.
5. AIR BALANCE:
   THE AIR DISTRIBUTION SYSTEM SHALL BE BALANCED TO DELIVER SPECIFIED AIR QUANTITIES FOLLOWING THE PROCEDURES OF THE LATEST EDITION OF THE SMACNA PUBLICATION PROCEDURAL STANDARDS FOR TESTING ADJUSTING & BALANCING OF ENVIRONMENTAL SYSTEMS. CONTRACTOR SHALL PROVIDE ACCESSIBLE & ADJUSTABLE VOLUME DAMPERS AS REQUIRED TO BALANCE THE SYSTEMS AND MAINTAIN A NOISE CRITERIA LEVEL NOT TO EXCEED 30.
   THE AIR BALANCE TECHNICIAN SHALL BE RESPONSIBLE TO MODIFY ALL SUPPLY, RETURN, AND EXHAUST FAN SHEAVES & VFD OUTPUT FREQUENCY LIMITS AS APPLICABLE SUCH THAT THE DESIGN AIR FLOWS ARE MET. ALL SUPPLY FANS CONTROLLED FOR FILTER LOADING SHALL SIMILARLY BE MODIFIED TO ENSURE THE FULL RANGE OF MOTOR POWER IS AVAILABLE TO THE CONTROL SYSTEM. RATED MAXIMUM FAN SPEED SHALL NOT BE EXCEEDED.
6. PERMITS AND UTILITY SERVICE FEES:
   CONTRACTOR TO ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND SERVICE CHARGES REQUIRED IN THE INSTALLATION OF THE WORK.
7. EXISTING INFORMATION:
   LOCATION, SIZE, MATERIAL, ETC. OF EXISTING SYSTEMS, ETC., IS PROVIDED FROM SOURCES DEEMED TO BE RELIABLE BUT IS NOT GUARANTEED. CONTRACTOR SHALL FIELD VERIFY ALL DATA BEFORE PROCEEDING WITH ANY WORK. NO EXTRA COST WILL BE ALLOWED FOR CONDITIONS NOT AS SHOWN.
8. ACCURACY:
   PLANS ARE DIAGRAMMATIC. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND LOCATIONS OF AC UNITS, EXHAUST FANS, WALLS, PARTITIONS ETC., AGAINST ARCHITECTURAL AND STRUCTURAL DESIGN PLANS FOR LOCATION CONSISTENCY & ACCURACY PRIOR TO COMMENCING WITH ANY WORK.
9. PAINTING:
   PAINT ALL VISIBLE INTERIOR PORTIONS OF TERMINAL DEVICES & CANS WITH FLAT BLACK ENAMEL PAINT.
10. SIZES:
    DUCTWORK SIZES ON PLANS ARE INSIDE NET FREE AREA.
11. MECHANICAL EQUIPMENT:
    ALL EQUIPMENT SHALL BE LISTED BY AN APPROVED TESTING AGENCY AND INSTALLED IN ACCORDANCE WITH ITS INSTALLATION INSTRUCTIONS AND LISTING.

DUCTWORK NOTES

1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE APPLICABLE SMACNA STANDARDS AND FABRICATION GUIDELINES. ALL METAL DUCTS SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL PER CALIFORNIA MECHANICAL CODE STANDARDS, UNLESS NOTED OTHERWISE.
2. DUCT PRESSURE CLASS SHALL BE MINIMUM 2" W.C. AND SHALL EXCEED THE FAN SYSTEM DESIGN EXTERNAL STATIC PRESSURE WHERE APPLICABLE.
3. PROVIDE TURNING VANES ON ALL SQUARE THROAT ELBOWS. RADIUS ELBOWS SHALL HAVE A THROAT RADIUS EQUAL TO OR GREATER THAN THE DUCT WIDTH. (USE SMACNA ELBOW TYPES RE 1 OR RE 2 ONLY, UNLESS NOTED OTHERWISE.)
4. DIVIDED FLOW BRANCHES SHALL SPLIT WITH ELBOWS PER NOTE 3. (USE SMACNA TYPE 1, 2, OR 4A/4B UNLESS NOTED OTHERWISE.)
5. BRANCH FITTING TAKEOFFS SHALL BE WYES, 45° LEAD IN, OR CONICAL/BELLMOUTH TAPS UNLESS NOTED OTHERWISE. DO NOT USE STRAIGHT TAPS.
6. ALL SUPPLY AND RETURN DUCT SHALL BE INSULATED PER T24 THICKNESS AND R-VALUE REQUIREMENTS (CEC 120.4(a)):
   6.1. SUPPLY DUCT: MIN. R-4.2, BUT R-8 WHERE EXPOSED TO EXTERIOR OR UNCONDITIONED SPACE.
   6.2. RETURN DUCT: MIN. R-4.2, BUT R-8 WHERE EXPOSED TO EXTERIOR OR UNCONDITIONED SPACE.
   6.3. EXHAUST DUCT: NO INSULATION EXCEPT AS SHOWN.
7. EXTERNAL INSULATION EXPOSED TO WEATHER SHALL BE WEATHERPROOFED AND SHALL BE PAINTED TO MATCH ADJACENT SURFACE.
8. PROVIDE DUCT LEAKAGE TEST PER CMC 603.9.2.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND MAKE HIMSELF AWARE OF ALL EXISTING CONDITIONS WHICH CAN BE OBSERVED. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR CORRECTION OF ITEMS WHICH CAN BE OBSERVED AND THEREFORE SHOULD BE INCLUDED IN HIS BID. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED TO COMPLETE THIS PROPOSED PROJECT.
2. THE NOTES AND DRAWINGS CONTAINED ON THIS SHEET DESCRIBE IN A GENERAL SENSE THE EXTENT OF ITEMS TO BE MODIFIED, REMOVED OR INSTALLED. THIS DESCRIPTION DOES NOT NECESSARILY INCLUDE A DESCRIPTION OF ITEMS TO BE REPAIRED OR REFINISHED AS A RESULT OF THIS REMOVAL OR MODIFICATION. IN THE ABSENCE OF ANY SPECIFIC DIRECTION, THE CONTRACTOR SHALL REPAIR THE AFFECTED AREA(S) TO A CONDITION EQUAL TO THE ADJACENT AREA(S) AND/OR SIMILAR EXISTING CONDITIONS ON PROJECT.
3. THE CONTRACTOR SHALL PROVIDE DUST AND DEBRIS CONTROL THROUGHOUT THE PROJECT'S CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE BUILDING OWNER TO PROVIDE THE LEAST INTERRUPTION OF EXISTING BUILDING OPERATIONS. COORDINATE WITH THE OWNER THE LOCATION OF ON-SITE STORAGE AND STAGING.
4. NOT ALL REQUIRED PATCHING AND/OR REPAIRS ARE SPECIFICALLY NOTED ON THIS PLAN.
5. COORDINATE DEMOLITION WORK WITH NEW PROPOSED FLOOR PLANS.
6. CONTRACTOR SHALL DISCARD AND DISPOSE OF ALL DEMOLISHED ITEMS.
7. EXISTING PIPING AND ELECTRICAL OR COMMUNICATION CONDUITS WHICH INTERFERE WITH THE WORK SHALL BE RE-ROUTED BY THE CONTRACTOR.

MECHANICAL LEGEND

DESCRIPTION	SYMBOL
SUPPLY AIR DUCT CROSS SECTION	SA
RETURN AIR DUCT CROSS SECTION	RA
EXHAUST AIR DUCT CROSS SECTION	EA
SUPPLY AIR DUCT - SINGLE LINE	
RETURN AIR DUCT - SINGLE LINE	
EXHAUST AIR DUCT - SINGLE LINE	
DUCT SIZE NET INSIDE DIMENSION	12"x8" 12"x8"
FLEXIBLE DUCT CONNECTION	
DUCT DROP/RISE	
VOLUME DAMPER W/ LOCKING QUADRANT	VD VD
AUTO MOTORIZED CONTROLLED DAMPER	MD MD
FIRE DAMPER / CEILING FIRE DAMPER	FD FD/CFD
MOTORIZED FIRE / SMOKE DAMPER	FSD FSD

AIR REGISTER TAGS

1ST DIGIT - LOCATION: C-CEILING, W-WALL, F-FLOOR
2ND DIGIT - DUCT SYSTEM: S-SUPPLY, R-RETURN, E-EXHAUST
3RD DIGIT - IDENTIFIER: -1, -2, ETC. SEE SCHEDULE

EXAMPLES: CS-1 300 CFM 12x12; CS-2 300 CFM 12x12; WS-1 300 CFM 14x8

300 CFM = CUBIC FEET PER MINUTE
12"x12" = NECK/COLLAR SIZE

SMOKE DETECTOR	SD
DUCT WITH ACOUSTICAL LINING	
TO BE REMOVED	
THERMOSTAT, MOUNT TOP AT +48" AFF	T t-s
CONDENSATE DRAIN LINE	CD
EQUIPMENT TAG	X / X
ABOVE FINISHED FLOOR	A.F.F.
ACCESS DOOR / ACCESS PANEL	A.D. / A.P.
ANALOG INPUT / ANALOG OUTPUT	AI / AO
AUTOMATIC AIR VENT	AAV
CUBIC FEET PER HOUR	CFH
CUBIC FEET PER MINUTE	CFM
DIGITAL INPUT / DIGITAL OUTPUT	DI / DO
EXISTING	(E)
FLOW SWITCH	FS
GALLONS PER MINUTE	GPM
THOUSANDS OF BTU'S PER HOUR	MBH
NEW	(N)
NOT IN MECHANICAL CONTRACT	N.I.M.C.
OUTSIDE AIR	OSA
POINT OF CONNECTION	POC
REFRIGERANT LIQUID / REFRIGERANT SUCTION	RL / RS

SHEET INDEX

SHEET NO.	DESCRIPTION
M0.0	MECHANICAL - LEGEND, NOTES & SCHEDULES
M0.1	MECHANICAL - GREEN BUILDING CODE NOTES
M1.0	MECHANICAL - DEMOLITION FLOOR PLAN
M2.0	MECHANICAL - FLOOR PLAN
M3.0 THRU M3.1	MECHANICAL - DETAILS
M4.0 THRU M4.25	MECHANICAL - HOOD INFORMATION
T24.0 THRU T24.X	ENERGY COMPLIANCE

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15977 REN: 3/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration
REGISTERED PROFESSIONAL ENGINEER LEN LAMMERT MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - LEGEND, NOTES & SCHEDULES

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M0.0

Plot Date & Time

MECHANICAL GREEN BUILDING CODE NOTES

REQUIRED

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. PROVIDE READILY ACCESSIBLE AREAS THAT SERVE THE ENTIRE BUILDING AND ARE IDENTIFIED FOR THE DEPOSITING, STORAGE AND COLLECTION OF NON-HAZARDOUS MATERIALS FOR RECYCLING, INCLUDING (AT A MINIMUM) PAPER, CORRUGATED CARDBOARD, GLASS, PLASTICS, ORGANIC WASTE, AND METALS OR MEET A LAWFULLY ENACTED LOCAL RECYCLING ORDINANCE, IF MORE RESTRICTIVE.

EXCEPTION: RURAL JURISDICTIONS THAT MEET AND APPLY FOR THE EXEMPTION IN PUBLIC RESOURCES CODE 42649.82 (A)(2)(A) ET SEQ. SHALL ALSO BE EXEMPT FROM THE ORGANIC WASTE PORTION OF THIS SECTION.

5.410.1.1 ADDITIONS. ALL ADDITIONS CONDUCTED WITHIN A 12-MONTH PERIOD UNDER SINGLE OR MULTIPLE PERMITS, RESULTING IN AN INCREASE OF 30% OR MORE IN FLOOR AREA, SHALL PROVIDE RECYCLING AREAS ON SITE.

EXCEPTION: ADDITIONS WITHIN A TENANT SPACE RESULTING IN LESS THAN A 30% INCREASE IN THE TENANT SPACE FLOOR AREA.

5.410.1.2 SAMPLE ORDINANCE. SPACE ALLOCATION FOR RECYCLING AREAS SHALL COMPLY WITH CHAPTER 18, PART 3, DIVISION 30 OF THE PUBLIC RESOURCES CODE. CHAPTER 18 IS KNOWN AS THE CALIFORNIA SOLID WASTE REUSE AND RECYCLING ACCESS ACT OF 1991 (ACT).

NOTE: A SAMPLE ORDINANCE FOR USE BY LOCAL AGENCIES MAY BE FOUND IN APPENDIX A OF THE DOCUMENT AT THE CALRECYCLE'S WEB SITE.

☐ 5.410.2 COMMISSIONING. [N] FOR NEW BUILDINGS 10,000 SQUARE FEET AND OVER, BUILDING COMMISSIONING SHALL BE INCLUDED IN THE DESIGN AND CONSTRUCTION PROCESSES OF THE BUILDING PROJECT TO VERIFY THAT THE BUILDING SYSTEMS AND COMPONENTS MEET THE OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS. COMMISSIONING SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION BY TRAINED PERSONNEL WITH EXPERIENCE ON PROJECTS OF COMPARABLE SIZE AND COMPLEXITY. ALL OCCUPANCIES OTHER THAN I-OCCUPANCIES AND L-OCCUPANCIES SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE AS PRESCRIBED IN CALIFORNIA ENERGY CODE SECTION 120.8. FOR I-OCCUPANCIES THAT ARE NOT REGULATED BY OSHPD OR FOR I-OCCUPANCIES AND L-OCCUPANCIES THAT ARE NOT REGULATED BY THE CALIFORNIA ENERGY CODE SECTION 100.0 SCOPE, ALL REQUIREMENTS IN SECTIONS 5.410.2 THROUGH 5.410.2.6 SHALL APPLY.

COMMISSIONING REQUIREMENTS SHALL INCLUDE:

1. OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS.
2. BASIS OF DESIGN.
3. COMMISSIONING MEASURES SHOWN IN THE CONSTRUCTION DOCUMENTS.
4. COMMISSIONING PLAN.
5. FUNCTIONAL PERFORMANCE TESTING.
6. DOCUMENTATION AND TRAINING.
7. COMMISSIONING REPORT.

X EXCEPTIONS:

1. UNCONDITIONED WAREHOUSES OF ANY SIZE.
2. AREAS LESS THAN 10,000 SQUARE FEET USED FOR OFFICES OR OTHER CONDITIONED ACCESSORY SPACES WITHIN UNCONDITIONED WAREHOUSES.
3. TENANT IMPROVEMENTS LESS THAN 10,000 SQUARE FEET AS DESCRIBED IN SECTION 303.1.1.
4. OPEN PARKING GARAGES OF ANY SIZE, OR OPEN PARKING GARAGE AREAS, OF ANY SIZE, WITHIN A STRUCTURE.

NOTE: FOR THE PURPOSES OF THIS SECTION, UNCONDITIONED SHALL MEAN A BUILDING, AREA, OR ROOM WHICH DOES NOT PROVIDE HEATING AND OR AIR CONDITIONING.

INFORMATIONAL NOTES:

1. IAS AC 476 IS AN ACCREDITATION CRITERIA FOR ORGANIZATIONS PROVIDING TRAINING AND/OR CERTIFICATION OF COMMISSIONING PERSONNEL. AC 476 IS AVAILABLE TO THE AUTHORITY HAVING JURISDICTION AS A REFERENCE FOR QUALIFICATIONS OF COMMISSIONING PERSONNEL. AC 476 DES NOT CERTIFY INDIVIDUALS TO CONDUCT FUNCTIONAL PERFORMANCE TESTS OR TO ADJUST AND BALANCE SYSTEMS.

2. FUNCTIONAL PERFORMANCE TESTING FOR HEATING, VENTILATION, AIR CONDITIONING SYSTEMS AND LIGHTING CONTROLS MUST BE PERFORMED IN COMPLIANCE WITH THE CALIFORNIA ENERGY CODE.

5.410.2.1 OWNER'S OR OWNER REPRESENTATIVE'S PROJECT REQUIREMENTS (OPR). [N] THE EXPECTATIONS AND REQUIREMENTS OF THE BUILDING APPROPRIATE TO ITS PHASE SHALL BE DOCUMENTED BEFORE THE DESIGN PHASE OF THE PROJECT BEGINS. THIS DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

1. ENVIRONMENTAL AND SUSTAINABILITY GOALS.
2. ENERGY EFFICIENCY GOALS.
3. INDOOR ENVIRONMENTAL QUALITY REQUIREMENTS.
4. PROJECT PROGRAM, INCLUDING FACILITY FUNCTIONS AND HOURS OF OPERATION, AND NEED FOR AFTER HOURS OPERATION.
5. EQUIPMENT AND SYSTEMS EXPECTATIONS.
6. BUILDING OCCUPANT AND OPERATION AND MAINTENANCE (O&M) PERSONNEL EXPECTATIONS.

5.410.2.2 BASIS OF DESIGN (BOD). [N] A WRITTEN EXPLANATION OF HOW THE DESIGN OF THE BUILDING SYSTEMS MEETS THE OPR SHALL BE COMPLETED AT THE DESIGN PHASE OF THE BUILDING PROJECT. THE BASIS OF DESIGN DOCUMENT SHALL COVER THE FOLLOWING SYSTEMS:

1. HEATING, VENTILATION, AIR CONDITIONING (HVAC) SYSTEMS AND CONTROLS.
2. INDOOR LIGHTING SYSTEM AND CONTROLS.
3. WATER HEATING SYSTEM.
4. RENEWABLE ENERGY SYSTEMS.
6. WATER REUSE SYSTEMS.

5.410.2.3 COMMISSIONING PLAN. [N] PRIOR TO PERMIT ISSUANCE A COMMISSIONING PLAN SHALL BE COMPLETED TO DOCUMENT HOW THE PROJECT WILL BE COMMISSIONED. THE COMMISSIONING PLAN SHALL INCLUDE THE FOLLOWING:

1. GENERAL PROJECT INFORMATION.
2. COMMISSIONING GOALS.
3. SYSTEMS TO BE COMMISSIONED. PLANS TO TEST SYSTEMS AND COMPONENTS SHALL INCLUDE:
   A. AN EXPLANATION OF THE ORIGINAL DESIGN INTENT.
   B. EQUIPMENT AND SYSTEMS TO BE TESTED, INCLUDING THE EXTENT OF TESTS.
   C. FUNCTIONS TO BE TESTED.
   D. CONDITIONS UNDER WHICH THE TEST SHALL BE PERFORMED.
   E. MEASURABLE CRITERIA FOR ACCEPTABLE PERFORMANCE.
4. COMMISSIONING TEAM INFORMATION.
5. COMMISSIONING PROCESS ACTIVITIES, SCHEDULES AND RESPONSIBILITIES.

PLANS FOR THE COMPLETION OF COMMISSIONING SHALL BE INCLUDED.

5.410.2.4 FUNCTIONAL PERFORMANCE TESTING. [N] FUNCTIONAL PERFORMANCE TESTS SHALL DEMONSTRATE THE CORRECT INSTALLATION AND OPERATION OF EACH COMPONENT, SYSTEM AND SYSTEM-TO-SYSTEM INTERFACE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. FUNCTIONAL PERFORMANCE TESTING REPORTS SHALL CONTAIN INFORMATION ADDRESSING EACH OF THE BUILDING COMPONENTS TESTED, THE TESTING METHODS UTILIZED, AND INCLUDE ANY READINGS AND ADJUSTMENTS MADE.

REQUIRED

X 5.410.3 TESTING AND ADJUSTING. TESTING AND ADJUSTING OF SYSTEMS SHALL BE REQUIRED FOR BUILDINGS LESS THAN 10,000 SQUARE FEET OR NEW SYSTEMS TO SERVE AN ADDITION OR ALTERATION SUBJECT TO SECTION 303.1.

5.410.4.2 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:

1. RENEWABLE ENERGY SYSTEMS.
2. LANDSCAPE IRRIGATION SYSTEMS.
3. WATER REUSE SYSTEMS.

5.410.4.3 PROCEDURES. PERFORM TESTING AND ADJUSTING PROCEDURES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND APPLICABLE STANDARDS ON EACH SYSTEM.

X 5.410.4.3.1 HVAC BALANCING. IN ADDITION TO TESTING AND ADJUSTING, BEFORE A NEW SPACE-CONDITIONING SYSTEM SERVING A BUILDING OR SPACE IS OPERATED FOR NORMAL USE, THE SYSTEM SHALL BE BALANCED 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.

5.410.4.4 REPORTING. AFTER COMPLETION OF TESTING, ADJUSTING AND BALANCING, PROVIDE A FINAL REPORT OF TESTING SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.

X 5.410.4.5 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 REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.

X 5.410.4.5.1 INSPECTIONS AND REPORTS. INCLUDE A COPY OF ALL INSPECTION VERIFICATIONS AND REPORTS REQUIRED BY THE ENFORCING AGENCY.

5.410.2.5 DOCUMENTATION AND TRAINING. [N] A SYSTEMS MANUAL AND SYSTEMS OPERATIONS TRAINING ARE REQUIRED, INCLUDING OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) REQUIREMENTS IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.

5.410.2.5.1 SYSTEMS MANUAL. [N] DOCUMENTATION OF THE OPERATIONAL ASPECTS OF THE BUILDING SHALL BE COMPLETED WITHIN THE SYSTEMS MANUAL AND DELIVERED TO THE BUILDING OWNER OR REPRESENTATIVE. THE SYSTEMS MANUAL SHALL INCLUDE THE FOLLOWING:

1. SITE INFORMATION, INCLUDING FACILITY DESCRIPTION, HISTORY AND CURRENT REQUIREMENTS.
2. SITE CONTACT INFORMATION.
3. BASIC OPERATIONS AND MAINTENANCE, INCLUDING GENERAL SITE OPERATING PROCEDURES, BASIC TROUBLESHOOTING, RECOMMENDED MAINTENANCE REQUIREMENTS, SITE EVENTS LOG.
4. MAJOR SYSTEMS.
5. SITE EQUIPMENT INVENTORY AND MAINTENANCE NOTES.
6. A COPY OF VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.
7. OTHER RESOURCES AND DOCUMENTATION, IF APPLICABLE.

5.410.2.5.2 SYSTEMS OPERATIONS TRAINING. [N] A PROGRAM FOR TRAINING OF THE APPROPRIATE MAINTENANCE STAFF FOR EACH EQUIPMENT TYPE AND/OR SYSTEM SHALL BE DEVELOPED AND DOCUMENTED IN THE COMMISSIONING REPORT AND SHALL INCLUDE THE FOLLOWING:

1. SYSTEM/EQUIPMENT OVERVIEW (WHAT IT IS, WHAT IT DOES AND WITH WHAT OTHER SYSTEMS AND/OR EQUIPMENT IT INTERFACES).
2. REVIEW AND DEMONSTRATION OF SERVICING/PREVENTIVE MAINTENANCE.
3. REVIEW OF THE INFORMATION IN THE SYSTEMS MANUAL.
4. REVIEW OF THE RECORD DRAWINGS ON THE SYSTEM/EQUIPMENT.

5.410.2.6 COMMISSIONING REPORT. [N] A REPORT OF COMMISSIONING PROCESS ACTIVITIES UNDERTAKEN THROUGH THE DESIGN AND CONSTRUCTION PHASES OF THE BUILDING PROJECT SHALL BE COMPLETED AND PROVIDED TO THE OWNER OR REPRESENTATIVE.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 SCOPE. THE PROVISIONS OF THIS CHAPTER SHALL OUTLINE MEANS OF REDUCING THE QUANTITY OF AIR CONTAMINANTS THAT ARE ODOROUS, IRRITATING, AND/OR HARMFUL TO THE COMFORT AND WELL-BEING OF A BUILDING'S INSTALLERS, OCCUPANTS AND NEIGHBORS.

SECTION 5.502 DEFINITIONS

5.502.1 DEFINITIONS. THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2 (AND ARE INCLUDED HERE FOR REFERENCE)

ARTERIAL HIGHWAY. A GENERAL TERM DENOTING A HIGHWAY PRIMARILY FOR THROUGH TRAFFIC USUALLY ON A CONTINUOUS ROUTE.

A-WEIGHTED SOUND LEVEL (DBA). THE SOUND PRESSURE LEVEL IN DECIBELS AS MEASURED ON A SOUND LEVEL METER USING THE INTERNATIONALLY STANDARDIZED A-WEIGHTING FILTER OR AS COMPUTED FROM SOUND SPECTRAL DATA TO WHICH A-WEIGHTING ADJUSTMENTS HAVE BEEN MADE.

1 BTU/HOUR. BRITISH THERMAL UNITS PER HOUR, ALSO REFERRED TO AS BTU. THE AMOUNT OF HEAT REQUIRED TO RAISE ONE POUND OF WATER ONE DEGREE FAHRENHEIT PER HOUR, A COMMON MEASURE OF HEAT TRANSFER RATE. A TON OF REFRIGERATION IS 12,000 BTU, THE AMOUNT OF HEAT REQUIRED TO MELT A TON (2,000 POUNDS) OF ICE AT 32° FAHRENHEIT.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A METRIC SIMILAR TO THE DAY-NIGHT AVERAGE SOUND LEVEL (LDN), EXCEPT THAT A 5 DECIBEL ADJUSTMENT IS ADDED TO THE EQUIVALENT CONTINUOUS SOUND EXPOSURE LEVEL FOR EVENING HOURS (7PM TO 10PM) IN ADDITION TO THE 10 DB NIGHTTIME ADJUSTMENT USED IN THE LDN.

COMPOSITE WOOD PRODUCTS. COMPOSITE WOOD PRODUCTS INCLUDE HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD. "COMPOSITE WOOD PRODUCTS" DOES NOT INCLUDE HARDBOARD, STRUCTURAL PLYWOOD, STRUCTURAL PANELS, STRUCTURAL COMPOSITE LUMBER, ORIENTED STRAND BOARD, GLUED LAMINATED TIMBER, TIMBER, PREFABRICATED WOOD I-JOISTS OR FINGER-JOINTED LUMBER, ALL AS SPECIFIED IN CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 17, SECTION 93120.1(A).

NOTE: SEE CCR, TITLE 17, SECTION 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (LDN). THE A-WEIGHTED EQUIVALENT CONTINUOUS SOUND EXPOSURE LEVEL FOR A 24-HOUR PERIOD WITH A 10 DB ADJUSTMENT ADDED TO SOUND LEVELS OCCURRING DURING NIGHTTIME HOURS (10P.M. TO 7 A.M.).

DECIBEL (DB). A MEASURE ON A LOGARITHMIC SCALE OF THE MAGNITUDE OF A PARTICULAR QUANTITY (SUCH AS SOUND PRESSURE, SOUND POWER, SOUND INTENSITY) WITH RESPECT TO A REFERENCE QUANTITY.

ELECTRIC VEHICLE (EV). AN AUTOMOTIVE-TYPE VEHICLE FOR ON-ROAD USE, SUCH AS PASSENGER AUTOMOBILES, BUSES, TRUCKS, VANS, NEIGHBORHOOD ELECTRIC VEHICLES, ELECTRIC MOTORCYCLES, AND THE LIKE, PRIMARILY POWERED BY AN ELECTRIC MOTOR THAT DRAWS CURRENT FROM A RECHARGEABLE STORAGE BATTERY, FUEL CELL, PHOTOVOLTAIC ARRAY, OR OTHER SOURCE OF ELECTRIC CURRENT. PLUG-IN HYBRID ELECTRIC VEHICLES (PHEV) ARE CONSIDERED ELECTRIC VEHICLES. FOR PURPOSES OF THE CALIFORNIA ELECTRICAL CODE, OFF-ROAD, SELF-PROPOELLED ELECTRIC VEHICLES, SUCH AS INDUSTRIAL TRUCKS, HOISTS, LIFTS, TRANSPORTS, GOLF CARTS, AIRLINE GROUND SUPPORT EQUIPMENT, TRACTORS, BOATS, AND THE LIKE, ARE NOT INCLUDED.

REQUIRED

SECTION 5.502 DEFINITIONS (CONT)

ELECTRIC VEHICLE CHARGING STATION(S) (EVCSJ). ONE OR MORE SPACES INTENDED FOR CHARGING ELECTRIC VEHICLES.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). THE CONDUCTORS, INCLUDING THE UNGROUNDED, GROUNDED, AND EQUIPMENT GROUNDING CONDUCTORS AND THE ELECTRIC VEHICLE CONNECTORS, ATTACHMENT PLUGS, AND ALL OTHER FITTINGS, DEVICES, POWER OUTLETS, OR APPARATUS INSTALLED SPECIFICALLY FOR THE PURPOSE OF TRANSFERRING ENERGY BETWEEN THE PREMISES WIRING AND THE ELECTRIC VEHICLE.

ENERGY EQUIVALENT (NOISE) LEVEL (LEQ). THE LEVEL OF A STEADY NOISE WHICH WOULD HAVE THE SAME ENERGY AS THE FLUCTUATING NOISE LEVEL INTEGRATED OVER THE TIME OF PERIOD OF INTEREST.

EXPRESSWAY. AN ARTERIAL HIGHWAY FOR THROUGH TRAFFIC WHICH MAY HAVE PARTIAL CONTROL OF ACCESS, BUT WHICH MAY OR MAY NOT BE DIVIDED OR HAVE GRADE SEPARATIONS AT INTERSECTIONS.

FREEWAY. A DIVIDED ARTERIAL HIGHWAY WITH FULL CONTROL OF ACCESS AND WITH GRADE SEPARATIONS AT INTERSECTIONS.

GLOBAL WARMING POTENTIAL (GWP). THE RADIATIVE FORCING IMPACT OF ONE MASS-BASED UNIT OF A GIVEN GREENHOUSE GAS RELATIVE TO AN EQUIVALENT UNIT OF CARBON DIOXIDE OVER A GIVEN PERIOD OF TIME. CARBON DIOXIDE IS THE REFERENCE COMPOUND WITH A GWP OF ONE.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-YEAR GWP VALUE PUBLISHED BY THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) IN EITHER ITS SECOND ASSESSMENT REPORT (SAR) (IPCC, 1995); OR ITS FOURTH ASSESSMENT A-3 REPORT (AR4) (IPCC, 2007). THE SAR GWP VALUES ARE FOUND IN COLUMN "SAR (100-YR)" OF TABLE 2.14.; THE AR4 GWP VALUES ARE FOUND IN COLUMN "100 YR" OF TABLE 2.14.

HIGH-GWP REFRIGERANT. A COMPOUND USED AS A HEAT TRANSFER FLUID OR GAS THAT IS: (A) A CHLOROFLUOROCARBON, A HDROCHLOROFLUOROCARBON, A HYDROFLUOROCARBON, A PERFLUOROCARBON, OR ANY COMPOUND OR BLEND OF COMPOUNDS, WITH A GWP VALUE EQUAL TO OR GREATER THAN 150, OR (B) ANY OZONE DEPLETING SUBSTANCE AS DEFINED IN TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, PART 82, SEC.82.3 (AS AMENDED MARCH 10, 2009).

LONG RADIUS ELBOW. PIPE FITTING INSTALLED BETWEEN TWO LENGTHS OF PIPE OR TUBING TO ALLOW A CHANGE OF DIRECTION, WITH A RADIUS 1.5 TIMES THE PIPE DIAMETER.

LOW-GWP REFRIGERANT. A COMPOUND USED AS A HEAT TRANSFER FLUID OR GAS THAT: (A) HAS A GWP VALUE LESS THAN 150, AND (B) IS NOT AN OZONE DEPLETING SUBSTANCE AS DEFINED IN TITLE 40 OF THE CODE OF FEDERAL REGULATIONS, PART 82, SEC.82.3 (AS AMENDED MARCH 10, 2009).

MERV. FILTER MINIMUM EFFICIENCY REPORTING VALUE, BASED ON ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). THE MAXIMUM CHANGE IN WEIGHT OF OZONE FORMED BY ADDING A COMPOUND TO THE "BASE REACTIVE ORGANIC GAS (ROG) MIXTURE" PER WEIGHT OF COMPOUND ADDED, EXPRESSED TO HUNDRETHS OF A GRAM (G O³/G ROC).

PRODUCT-WEIGHTED MIR (PWMIR). THE SUM OF ALL WEIGHTED-MIR FOR ALL INGREDIENTS IN A PRODUCT SUBJECT TO THIS ARTICLE. THE PWMIR IS THE TOTAL PRODUCT REACTIVITY EXPRESSED TO HUNDREDTHS OF A GRAM OF OZONE FORMED PER GRAM OF PRODUCT (EXCLUDING CONTAINER AND PACKAGING).

PSIG. POUNDS PER SQUARE INCH, GUAGE.

REACTIVE ORGANIC COMPOUND (ROC). ANY COMPOUND THAT HAS THE POTENTIAL, ONCE EMITTED, TO CONTRIBUTE TO OZONE FORMATION IN THE TROPOSPHERE.

SCHRADER ACCESS VALVES. ACCESS FITTINGS WITH A VALVE CORE INSTALLED.

SHORT RADIUS ELBOW. PIPE FITTING INSTALLED BETWEEN TWO LENGTHS OF PIPE OR TUBING TO ALLOW A CHANGE OF DIRECTION, WITH A RADIUS 1.0 TIMES THE PIPE DIAMETER.

SUPERMARKET. FOR THE PURPOSES OF SECTION 5.508.2, A SUPERMARKET IS ANY RETAIL FOOD FACILITY WITH 8,000 SQUARE FEET OR MORE CONDITIONED AREA, AND THAT UTILIZES EITHER REFRIGERATED DISPLAY CASES, OR WALK-IN COOLERS OR FREEZERS CONNECTED TO REMOTE COMPRESSOR UNITS OR CONDENSING UNITS.

VOC. A VOLATILE ORGANIC COMPOUND BROADLY DEFINED AS A CHEMICAL COMPOUND BASED ON CARBON CHAINS OR RINGS WITH VAPOR PRESSURES GREATER THAN 0.1 MILLIMETERS OF MERCURY AT ROOM TEMPERATURE. THESE COMPOUNDS TYPICALLY CONTAIN HYDROGEN AND MAY CONTAIN OXYGEN, NITROGEN AND OTHER ELEMENTS. SEE CCR TITLE 17, SECTION 94508(A).

NOTE: WHERE SPECIFIC REGULATIONS ARE CITED FROM DIFFERENT AGENCIES SUCH AS SCAQMD, ARB, ETC., THE VOC DEFINITION INCLUDED IN THAT SPECIFIC REGULATION IS THE ONE THAT PREVAILS FOR THE SPECIFIC MEASURE IN QUESTION.

SECTION 5.503 FIREPLACES

5.503.1 FIREPLACES. INSTALL ONLY A DIRECT-VENT SEALED-COMBUSTION GAS OR SEALED WOOD-BURNING FIREPLACE, OR A SEALED WOODSTOVE OR PELLET STOVE, AND REFER TO RESIDENTIAL REQUIREMENTS IN THE CALIFORNIA ENERGY CODE, TITLE 24, PART 6, SUBCHAPTER 7, SECTION 150. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL COMPLY WITH APPLICABLE LOCAL ORDINANCES.

5.503.1.1 WOODSTOVES. WOODSTOVES AND PELLET STOVES SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS.

SECTION 5.504 POLLUTANT CONTROL

X 5.504.1 TEMPORARY VENTILATION. THE PERMANENT HVAC SYSTEM SHALL ONLY BE USED DURING CONSTRUCTION IF NECESSARY TO CONDITION THE BUILDING OR AREAS OF ADDITION OR ALTERATION 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 EFFICIENCY REPORTING VALUE (MERV) OF 8, BASED ON ASHRAE 52.2-1999, OR AN AVERAGE EFFICIENCY OF 30% BASED ON ASHRAE 52.1-1992 REPLACE ALL FILTERS IMMEDIATELY PRIOR TO OCCUPANCY, OR, IF THE BUILDING IS OCCUPIED DURING ALTERATION, AT THE CONCLUSION OF CONSTRUCTION.

X 5.504.3 COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. AT THE TIME OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY COLLECT IN THE SYSTEM.

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 5/25 STATE OF CALIFORNIA

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1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
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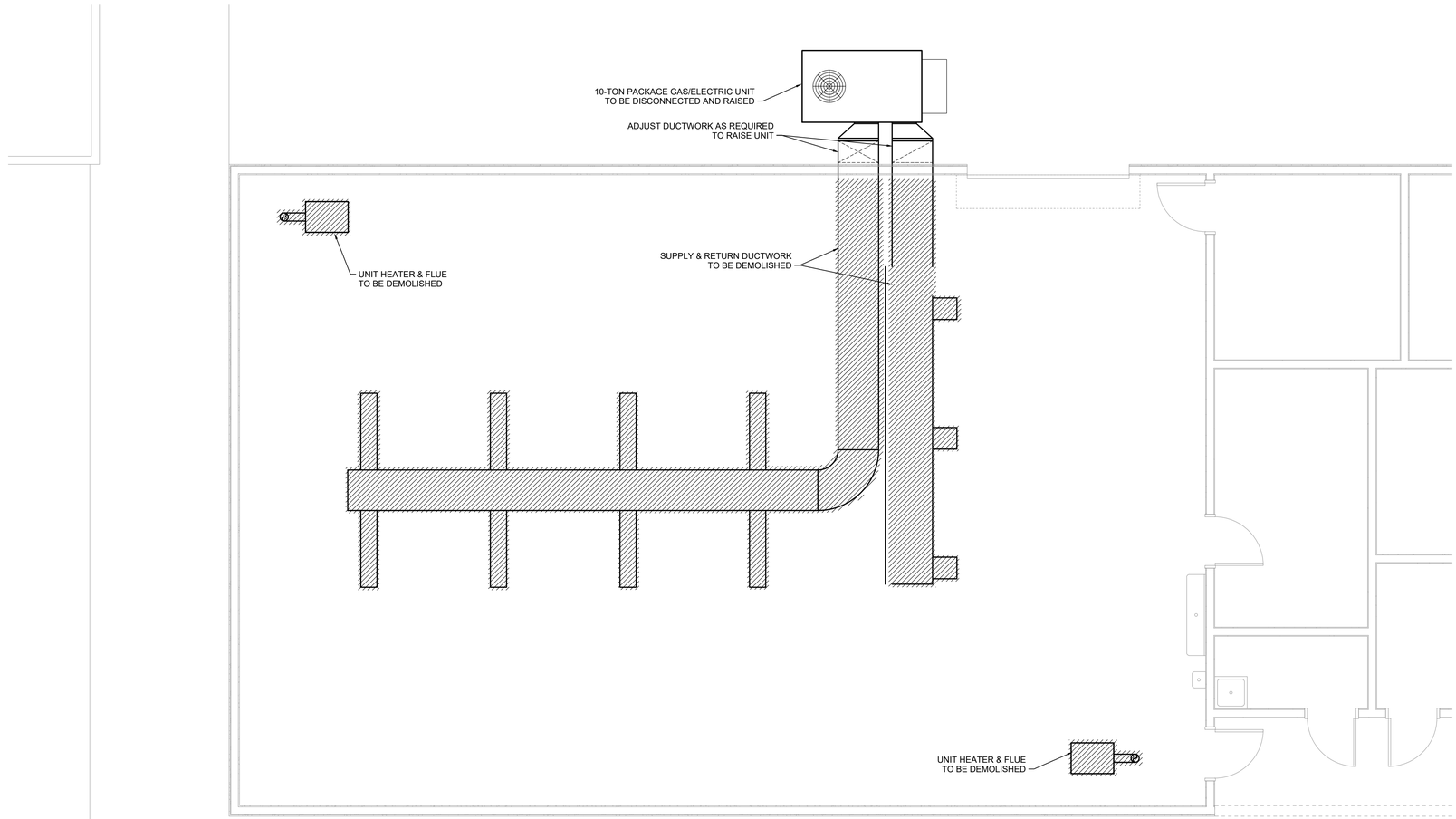
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MECHANICAL - GREEN BUILDING CODE NOTES

Project Number	2321
Date	7/5/24
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Checked by	GL

M0.1

Plot Date & Time



1 M1.0 MECHANICAL - DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0"

NORTH

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.

Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15827 REN: 5/25 STATE OF CALIFORNIA

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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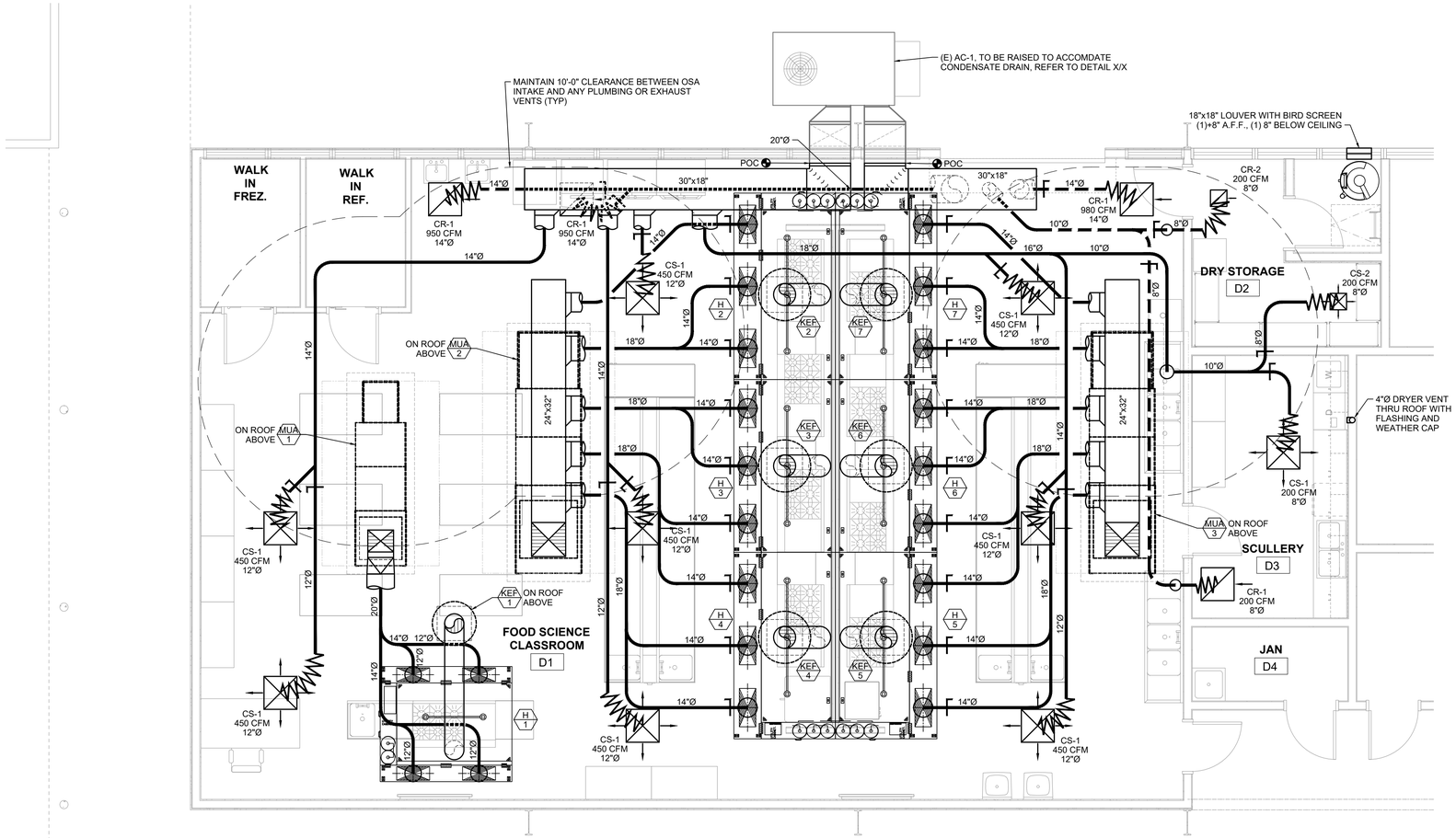
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MECHANICAL - DEMOLITION FLOOR PLAN

Project Number	2321
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M1.0

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1 M2.0 MECHANICAL - FLOOR PLAN

SCALE: 1/4" = 1'-0"

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TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.

Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN: 7/25 STATE OF CALIFORNIA

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nexus engineering

Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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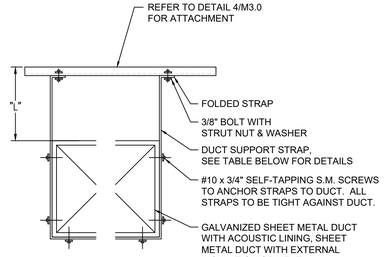
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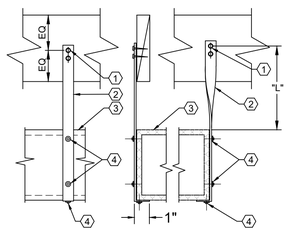
MECHANICAL - FLOOR PLAN

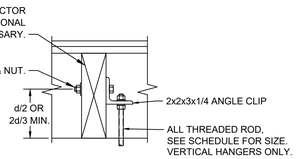
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1. (2) 8d NAILS INTO 2x BLOCKING OR ROOF FRAMING.
2. DUCT SUPPORT STRAP, WIRE OR ROD SEE TABLE BELOW FOR DETAILS.
3. GALV. SHEET METAL DUCT W/ ACOUSTIC LINING, SEE MECHANICAL PLANS FOR SIZES.
4. #10 x 3/4" SELF-TAPPING CADMIUM PLATED SHEET METAL SCREWS TO ANCHOR STRAPS TO DUCT. ALL STRAPS TO BE TIGHT AGAINST DUCT AND AND SUPPORT MEMBERS.

NOTES:
1. DUCTWORK SHALL CONFORM WITH APPENDIX A, STANDARD 6-2 OF THE CMC.
2. HANGER MUST BE POSITIVELY ATTACHED TO THE DUCT WITHIN 2" OF THE TOP OF THE DUCT WITH A MINIMUM OF TWO #10 SHEET METAL SCREWS.

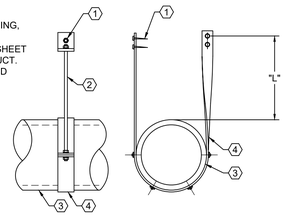
TABLE 5-1 RECTANGLE DUCT HANGERS MINIMUM SIZE

MAXIMUM HALF OF DUCT PERIMETER	PAIR @ 10'-0" SPACING		PAIR @ 8'-0" SPACING		PAIR @ 5'-0" SPACING		PAIR @ 4'-0" SPACING	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1"x0.030" (22 GA)	10 GA	1"x0.030" (22 GA)	10 GA	1"x0.030" (22 GA)	12 GA	1"x0.030" (22 GA)	12 GA
P/2 = 72"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	1/4"	1"x0.030" (22 GA)	1/4"	1"x0.030" (22 GA)	1/4"
P/2 = 96"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	3/8"	1"x0.030" (22 GA)	1/4"
P/2 = 120"	1-1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"	1"x0.036" (20 GA)	1/4"
P/2 = 168"	1-1/2"x0.058" (16 GA)	1/2"	1-1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.047" (18 GA)	3/8"
P/2 = 192"	–	1/2"	1-1/2"x0.058" (16 GA)	1/2"	1"x0.058" (16 GA)	3/8"	1"x0.058" (16 GA)	3/8"
P/2 ≥ 193"	SPECIAL ANALYSIS REQUIRED							

WHEN STRAPS ARE LAP-JOINED, USE THESE MINIMUM FASTENERS:
1"x0.047", 0.036" 0.030" - TWO NO. 10 OR ONE 1/4" BOLT
1"x0.058" - TWO 1/4" BOLT
1-1/2"x0.058" - TWO 3/8" BOLT
PLACE FASTENERS IN SERIES, NOT SIDE-BY-SIDE.

SINGLE HANGER MAXIMUM ALLOWABLE LOAD:	
STRAP	WIRE OR ROD (DIA.)
1"x0.030" - 260 LBS 1"x0.036" - 320 LBS 1"x0.047" - 420 LBS 1"x0.058" - 700 LBS 1-1/2"x0.058" - 1100 LBS	0.106" - 80 LBS 0.135" - 120 LBS 0.162" - 160 LBS 1/4" - 270 LBS 3/8" - 680 LBS 1/2" - 1250 LBS 5/8" - 2000 LBS 3/4" - 3000 LBS

NOTES:
1. DIMENSIONS OTHER THAN GAGE ARE IN INCHES.
2. TABLES ALLOW FOR DUCT WEIGHT 1 LB./SF INSULATION WEIGHT NORMAL REINFORCEMENT AND TRAPEZE WEIGHT BUT NO EXTERNAL LOADS.
3. STRAPS ARE GALVANIZED STEEL; OTHER MATERIALS ARE UNCOATED STEEL.
4. ALLOWABLE LOADS FOR P/2 ASSUME THAT DUCTS ARE 0.058" (16 GA) MAXIMUM, EXCEPT THAT WHEN MAXIMUM DUCT DIMENSION (W) IS OVER 60", THEN P/2 MAXIMUM IS 1.25W.
5. FOR TRAPEZE SIZES SEE, HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, THIRD EDITION, SMACNA - 2006, TABLE 5-3 ALLOWABLE LOADS IN POUNDS FOR TRAPEZE BARS AND FIGURE 5-6 TRAPEZE LOAD DIAGRAM.
6. 12 GA, 10 GA OR 8 GA WIRE IS STEEL OF BLACK-ANNEALED, BRIGHT BASIC OR GALVANIZED TYPE.
7. CABLE HANGING SYSTEMS WITH ADJUSTABLE MECHANICAL DEVICE.



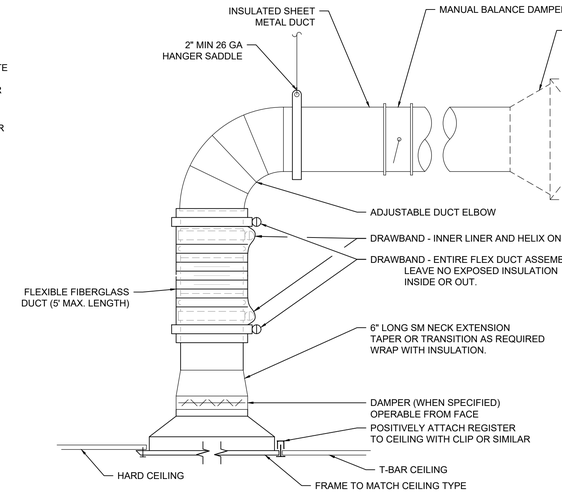
1. UPPER ATTACHMENT - SEE HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, THIRD EDITION, SMACNA - 2006, FIGURES 5-2, 5-3 AND 5-4. PROVIDE FRAMING, BLOCKING OR STRUCTURAL MEMBER AS MAY BE REQUIRE,COORDINATE STRUCTURAL COMPONENTS WITH STRUCTURAL PLANS OR STRUCTURAL ENGINEER OF RECORD.
2. HANGER ROD SEE TABLE, FOR SIZE SEE TABLE.
3. GALV. SHEET METAL DUCT W/ ACOUSTIC LINING, SHEET METAL DUCT W/ EXTERNAL INSULATION OR VENT, SEE PLANS FOR SIZE.
4. STRAP, SEE TABLE FOR SIZE.

NOTES:
1. DUCTWORK SHALL CONFORM WITH, HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, THIRD EDITION, SMACNA - 2006.

TABLE 5-2 MINIMUM HANGER SIZES FOR ROUND DUCT

DUCT DIAMETER	MAXIMUM SPACING	ROD DIAMETER	STRAP
≥ 10"	12'	1/4"	1" x 0.030" (22 GA.)
11" TO 18"	12'	1/4"	1" x 0.030" (22 GA.)
19" TO 24"	12'	1/4"	1" x 0.030" (22 GA.)
25" TOI 36"	12'	3/8"	1" x 0.036" (20 GA.)
37" TO 50"	12'	2 @ 3/8"	2 @ 1" x 0.036" (20 GA.)
51" TO 80"	12'	2 @ 3/8"	2 @ 1" x 0.037" (18 GA.)
81" TO 94"	12'	2 @ 3/8"	2 @ 1" x 0.058" (16 GA.)

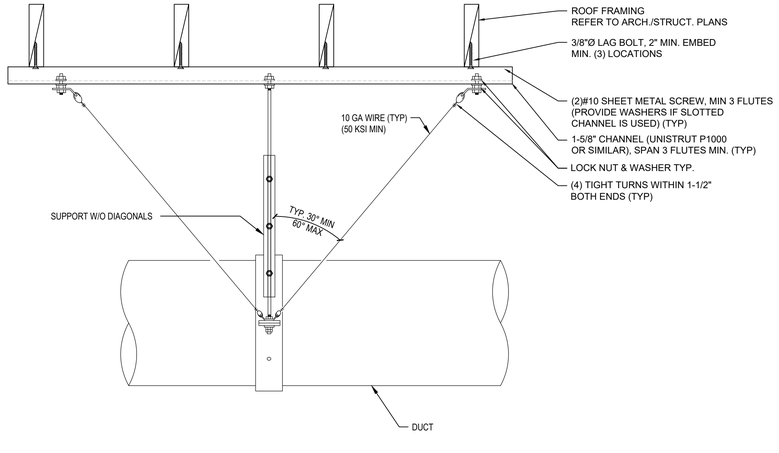
NOTES:
1. STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL. ALL ARE ALTERNATIVES.
2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS 1 LB./SF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES TO BE WITHIN THEIR LOAD LIMITS; SEE ALLOWABLE LOAD LIMITS WITH TABLE 5-1. HANGER SPACING MAY BE ADJUSTED BY SPECIAL ANALYSIS.
3. FOR INDUSTRIAL GRADE SUPPORTS, INCLUDING SADDLES, SINGLE POINT TRAPEZE LOADS, LONGER SPANS AND FLANGED JOINT LOADS, SEE SMACNA'S ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS.



FLEXIBLE DUCT NOTES:
1. FLEXIBLE DUCTS SHALL CONSIST OF AN EXTERIOR REINFORCED LAMINATED VAPOR BARRIER, FIBER GLASS INSULATION (PER CEC STANDARDS), ENCAPSULATED SPRING STEEL WIRE HELIX AND IMPERVIOUS, SMOOTH, NON-PERFORATED INTERIOR VINYL LINER.
2. INSTALLATION OF FLEXIBLE DUCTS SHALL MINIMIZE SHARP RADIUS TURNS OR OFFSETS. THE MAXIMUM LENGTH SHALL BE FIVE (5) FEET AND CAN BE USED AT THE TERMINAL ENDS ONLY, AND SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS. EXCEPT THAT FLEXIBLE DUCTS PROPERLY INSTALLED MAY BE USED TO CROSS SEISMIC JOINTS WITHOUT OFFSETS.

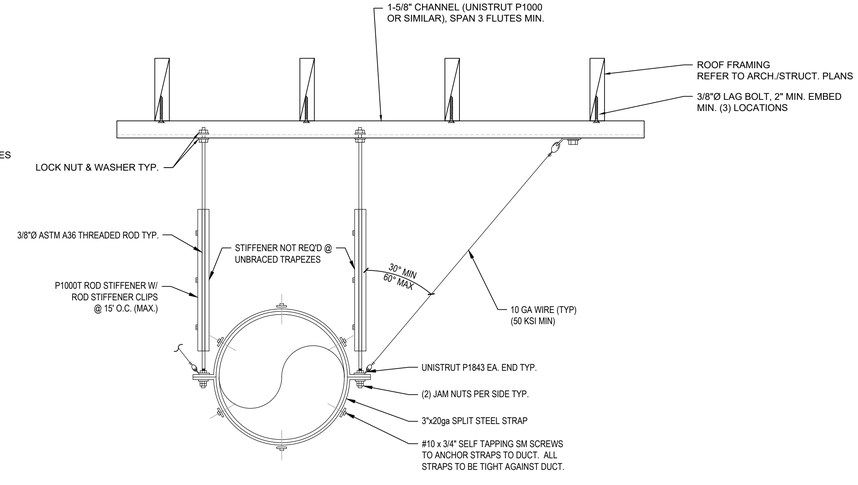
1 M3.0 DUCT HANGER DETAIL

SCALE: N/A



2 M3.0 ROUND DUCT HANGER DETAIL

SCALE: N/A



NOTES:
1. MAX. WEIGHT = 19 LB/FT
2. SEISMIC BRACING IS REQUIRED FOR DUCT OVER 30"Ø
3. PROVIDE TRAPEZE SUPPORT @ 16'-0" MAX.
4. PROVIDE TRANSVERSE SEISMIC BRACING EVERY @ 32'-0" MAX.
5. PROVIDE LONGITUDINAL SEISMIC BRACING EVERY @ 64'-0" MAX.

3 M3.0 TYPICAL REGISTER DETAIL

SCALE: N/A

4 M3.0 SEISMIC DUCT HANGER DETAIL

SCALE: N/A

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
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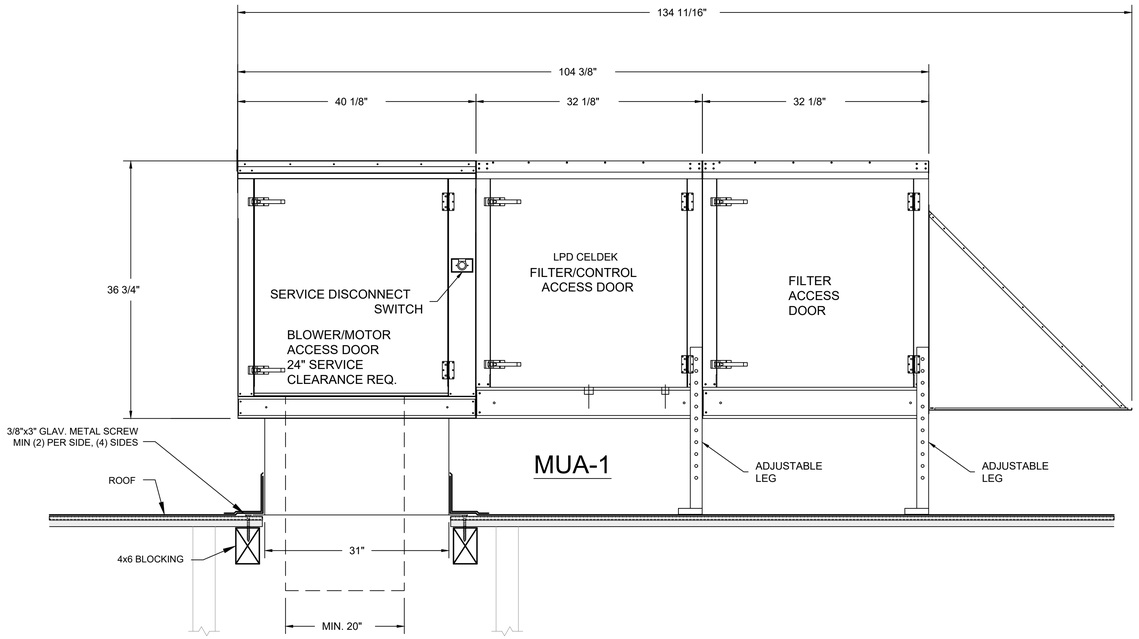
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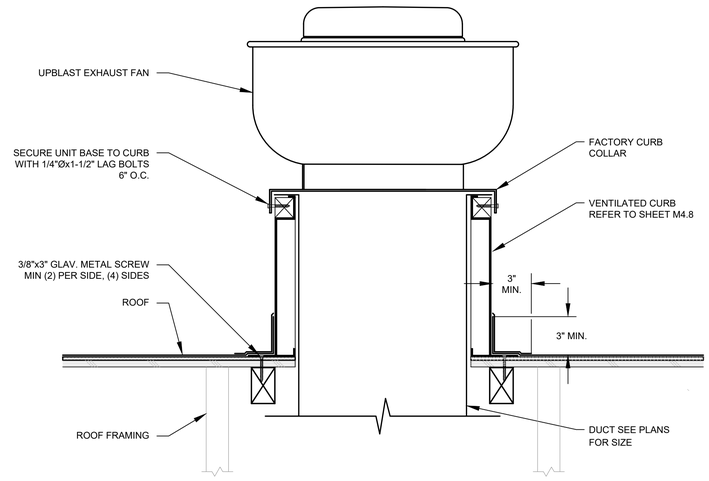
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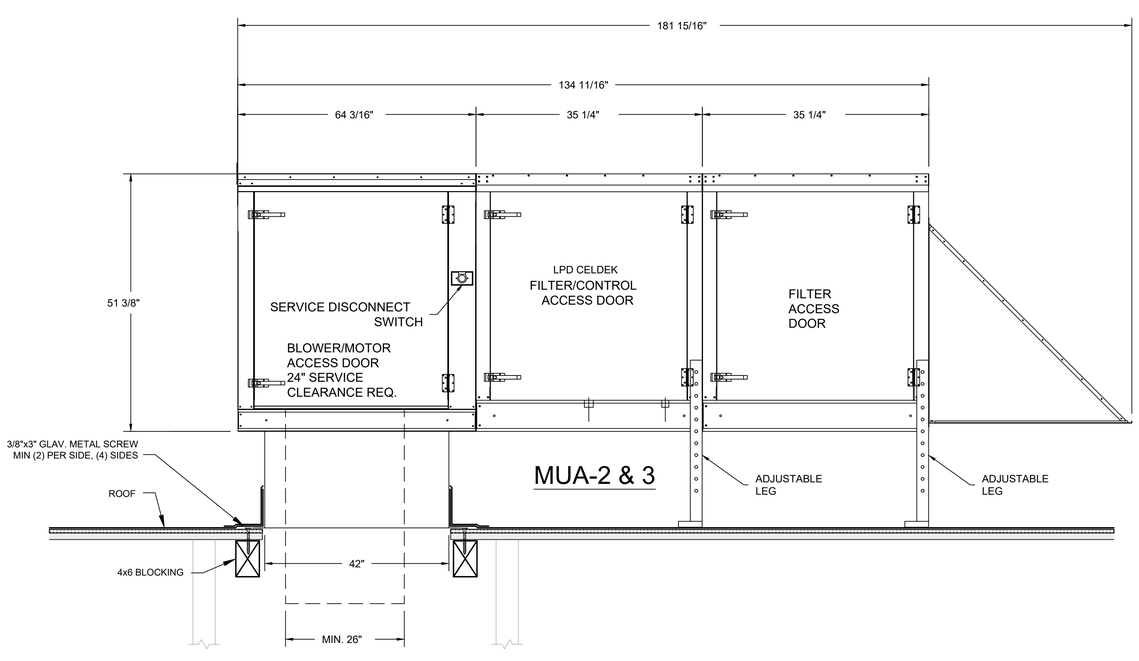
1 M3.1 MAKE-UP AIR UNIT DETAIL

SCALE: N/A



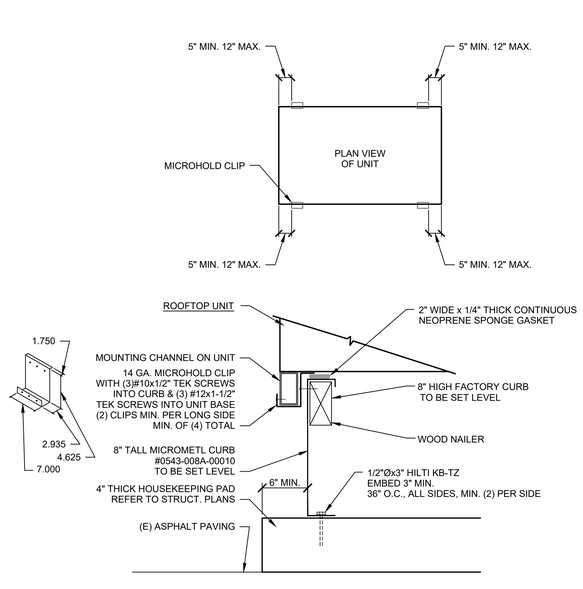
2 M3.1 ROOF EXHAUST FAN DETAIL

SCALE: N/A



3 M3.1 MAKE-UP AIR UNIT DETAIL

SCALE: N/A



4 M0.4 AC UNIT MOUNTING DETAIL

SCALE: N/A

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
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1528 YOSEMITE AVE.
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PHONE: (415) 956 - 2200
EMAIL: reg91@captiveaire.com

HOOD INFORMATION – JOB#7092302

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	MIN CFM	EXHAUST PLENUM RISER(S) WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP	TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG END TO END	ROW
1	H-1	6024 ND-2WI-PSP-FB	CAPTIVEAIRE	7' 0"	600 DEG	I	HEAVY	300	2100	1680			4"	14"	2100	1964	-1.055"	1890	430 SS WHERE EXPOSED	ALONE	ALONE
2	H-2	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 4"	600 DEG	I	HEAVY	250	2583	2066			4"	16"	2583	1850	-0.971"	2325	430 SS WHERE EXPOSED	LEFT	FRONT
3	H-3	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	250	2625	2100			4"	16"	2625	1880	-1.002"	2362	430 SS WHERE EXPOSED	MIDDLE	FRONT
4	H-4	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 4"	600 DEG	I	HEAVY	250	2583	2066			4"	16"	2583	1850	-0.971"	2325	430 SS WHERE EXPOSED	RIGHT	FRONT
5	H-5	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 4"	600 DEG	I	HEAVY	250	2583	2066			4"	16"	2583	1850	-0.971"	2325	430 SS WHERE EXPOSED	LEFT	BACK
6	H-6	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 6"	600 DEG	I	HEAVY	250	2625	2100			4"	16"	2625	1880	-1.002"	2362	430 SS WHERE EXPOSED	MIDDLE	BACK
7	H-7	5424 ND-2-PSP-F	CAPTIVEAIRE	10' 4"	600 DEG	I	HEAVY	250	2583	2066			4"	16"	2583	1850	-0.971"	2325	430 SS WHERE EXPOSED	RIGHT	BACK

HOOD INFORMATION

HOOD NO	TAG	FILTER(S) TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	LIGHT(S) QTY	TYPE	WIRE GUARD	LOCATION	SIZE	UTILITY CABINET(S) FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WEIGHT
1	H-1	CAPTRATE SOLO FILTER	5	20"	16"	85% SEE FILTER SPEC	2	RECESSED ROUND	NO	RIGHT	12"x60"x24"	TANK FS	4.0/4.0	DCV-1111	1 LIGHT 1 FAN	YES	813 LBS
2	H-2	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1014 LBS
3	H-3	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO							YES	584 LBS
4	H-4	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1014 LBS
5	H-5	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1014 LBS
6	H-6	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO							YES	584 LBS
7	H-7	CAPTRATE SOLO FILTER	7	20"	16"	85% SEE FILTER SPEC	3	RECESSED ROUND	NO	RIGHT	12"x54"x24"	TANK FS	4.0/4.0/4.0			YES	1014 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1		FIELD WRAPPER 4.00" HIGH FRONT, LEFT, RIGHT, BACK.
		FINISHED BACK- ISL/REV INSTALL 84.00" LONG, (FILTERS TO THE FRONT).
2		FIELD WRAPPER 4.00" HIGH FRONT, LEFT.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
3		FIELD WRAPPER 4.00" HIGH FRONT.
4		FIELD WRAPPER 4.00" HIGH FRONT, RIGHT.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
5		FIELD WRAPPER 4.00" HIGH FRONT, LEFT.
		LEFT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.
6		FIELD WRAPPER 4.00" HIGH FRONT.
7		FIELD WRAPPER 4.00" HIGH FRONT, RIGHT.
		RIGHT VERTICAL END PANEL 27" TOP WIDTH, 21" BOTTOM WIDTH, 80" HIGH INSULATED 430 SS.

FOR QUESTIONS, CALL THE
CAPTIVE-AIRE SYSTEMS
CENTRAL CALIFORNIA OFFICE

Region 91

8 ADRIAN COURT
BURLINGAME, CA 94010
PHONE: (415) 956-2200
EMAIL: REG91@CAPTIVEAIRE.COM

CAPTIVE-AIRE HOODS ARE
BUILT IN COMPLIANCE WITH

NFPA #96
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

CAPTRATE & KLEEN-GARD FILTERS
ARE BUILT IN COMPLIANCE WITH

NFPA #96
NSF STANDARD #2
UL STANDARD #1046
INT. MECH. CODE (IMC)

TITLE 24 COMPLIANT

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.0

Plot Date & Time

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S) WIDTH	RISER(S) LENG	RISER(S) DIA	RISER(S) CFM	RISER(S) SP
1		Back	96″	12″	6″	MUA	10″	24″		470	0.123″
						MUA	10″	24″		470	0.123″
		Front	96″	12″	6″	MUA	10″	24″		470	0.123″
						MUA	10″	24″		470	0.123″
2		Front	136″	20″	6″	MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
3		Front	126″	20″	6″	MUA	12″	28″		787	0.231″
						MUA	12″	28″		787	0.231″
						MUA	12″	28″		787	0.231″
4		Front	136″	20″	6″	MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
5		Front	136″	20″	6″	MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
6		Front	126″	20″	6″	MUA	12″	28″		787	0.231″
						MUA	12″	28″		787	0.231″
						MUA	12″	28″		787	0.231″
7		Front	136″	20″	6″	MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″
						MUA	12″	28″		775	0.224″

SPECIFICATION: CAPTRATE• GREASE-STOP• SOLO FILTER

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

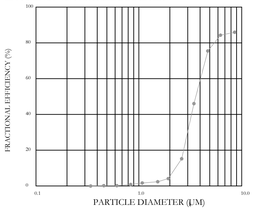
FILTER IS STAINLESS STEEL CONSTRUCTION, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

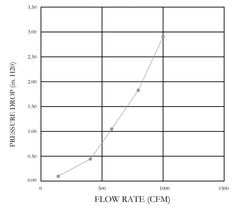
GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 85% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

THE CAPTRATE GREASE-STOP SOLO WAS TESTED TO ASTM STANDARD ASTM F2519-05. MANUFACTURER APPROVED FOR USE IN SOLID FUEL APPLICATIONS AS A SPARK ARRESTER.

EFFICIENCY VS. PARTICLE DIAMETER



PRESSURE DROP VS. FLOW RATE

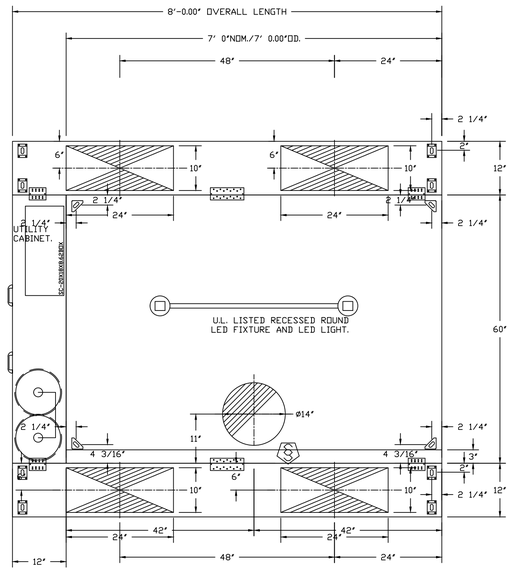


CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH:
NFPA #96.
NSF STANDARD #2.
UL STANDARD #1046.
INT. MECH. CODE (IMC).
ULC-S649.

PATENT NUMBERS

AC-PSP (UNITED STATES) - US PATENT 7963830 B2.
AC-PSP WALL (CANADA) - CA PATENT 2820509.
AC-PSP ISLAND (CANADA) - CA PATENT 2520330.

PLAN VIEW – HOOD #1
7' 0.00" LONG 6024ND-2WI-PSP-FB



GREASE DUCT & CHIMNEY SPECIFICATIONS:
PROVIDE GREASE DUCT EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW" ROUND 20 GAUGE 430 STAINLESS STEEL DUCTWORK. MODEL "DW" IS LISTED TO UL-1978 AND IS INSTALLED USING "V" CLAMP LOCKING CONNECTIONS SEALED WITH 3M FIRE BARRIER 2000 PLUS. MODEL "DW" DOES NOT REQUIRE WELDING PROVIDING IT HAS BEEN INSTALLED PER THE MANUFACTURES INSTALLATION GUIDE.
PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 12' ON CENTER. PER MANUFACTURES LISTING MODEL "DW" HORIZONTAL RUNS LESS THAN 75 FT. CAN BE SLOPED 1/16" PER 12", HORIZONTAL RUNS MORE THAN 75 FT. CAN BE SLOPED 3/16" PER 12". DUCT SHOULD BE SLOPED AS MUCH AS POSSIBLE TO REDUCE THE CHANCE OF GREASE ACCUMULATION IN HORIZONTAL RUNS.

IF THE DUCT OR CHIMNEY IS WITHIN 18 INCHES OF COMBUSTIBLE MATERIAL, PROVIDE UL-2221 OR UL-103 HT LISTED DOUBLE WALL GREASE DUCT OR DOUBLE WALL CHIMNEY EQUAL TO CAPTIVEAIRE SYSTEMS MODEL "DW- 2R, 2R TYPE HT, 3R, OR 3Z" ROUND 20 GAUGE 430 STAINLESS INNER DUCT INSULATED WITH A 24 GAUGE 430 STAINLESS OUTER SHELL.

CAPTIVEAIRE SYSTEMS RECOMMENDS THE USE OF LISTED, PRE-FABRICATED ROUND GREASE EXHAUST DUCT TO REDUCE STATIC PRESSURE IN THE SYSTEM, MINIMIZE INSTALLATION AND INSPECTION TIMES, AND ENSURE DUCT IS LIQUID TIGHT

HVAC DISTRIBUTION NOTE

HIGH VELOCITY DIFFUSERS OR HVAC RETURNS SHOULD NOT BE PLACED WITHIN TEN (10) FEET OF THE EXHAUST HOOD. PERFORATED DIFFUSERS ARE RECOMMENDED.

VERIFY CEILING HEIGHT

___' - ___"

HEIGHT REQUIRED TO VERIFY THAT HOOD FITS SPACE AND TO SIZE THE ENCLOSURE PANELS

CUSTOMER APPROVAL TO MANUFACTURE:

APPROVED AS NOTED ☐
APPROVED WITH NO EXCEPTION TAKEN ☐
REVISE AND RESUBMIT ☐
SIGNATURE _____
YOUR TITLE _____ DATE _____ _____

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
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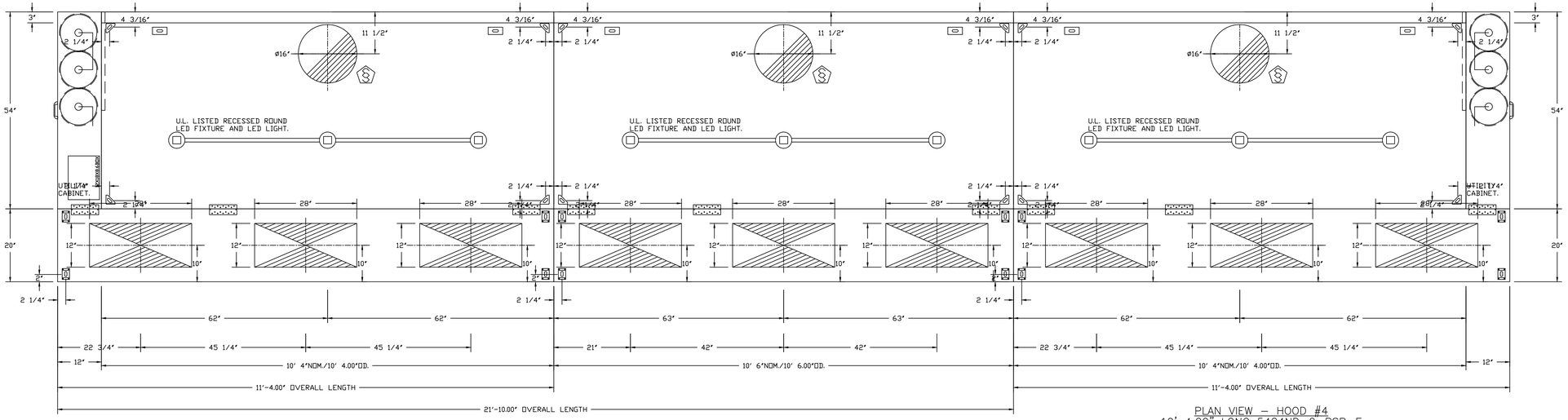
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MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.1

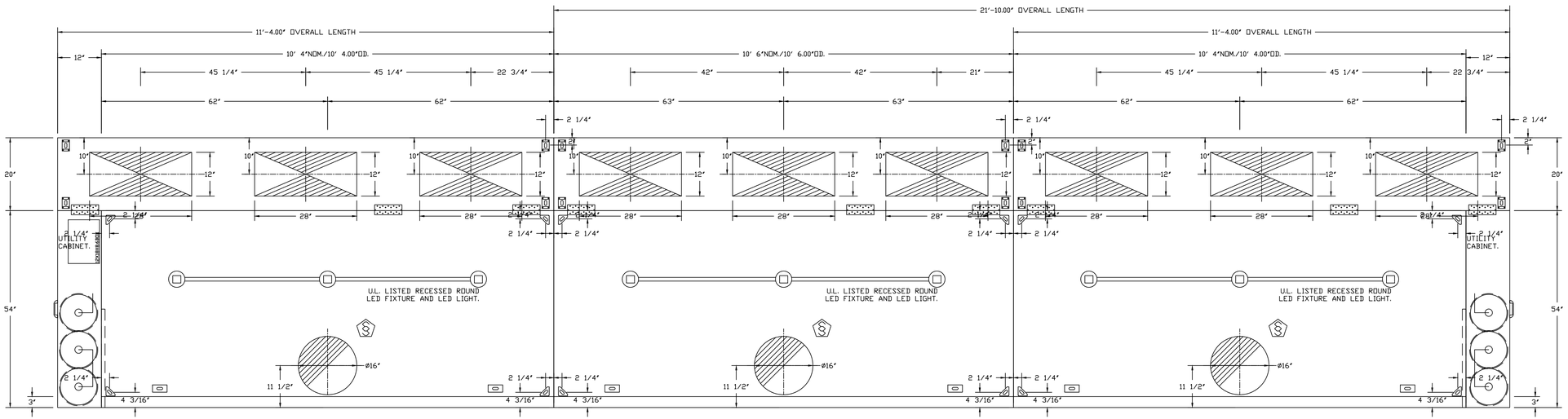
Plot Date & Time



PLAN VIEW – HOOD #2
10' 4.00" LONG 5424ND-2-PSP-F

PLAN VIEW – HOOD #3
10' 6.00" LONG 5424ND-2-PSP-F

PLAN VIEW – HOOD #4
10' 4.00" LONG 5424ND-2-PSP-F



PLAN VIEW – HOOD #7
10' 4.00" LONG 5424ND-2-PSP-F

PLAN VIEW – HOOD #6
10' 6.00" LONG 5424ND-2-PSP-F

PLAN VIEW – HOOD #5
10' 4.00" LONG 5424ND-2-PSP-F

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT
TIMOTHY PAUL HUFF
No. C 15207
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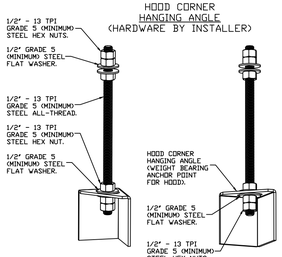
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MECHANICAL - HOOD INFORMATION

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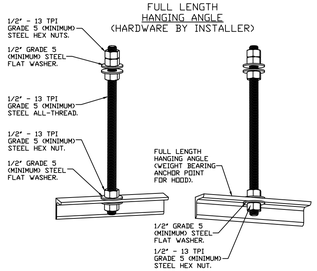
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Plot Date & Time



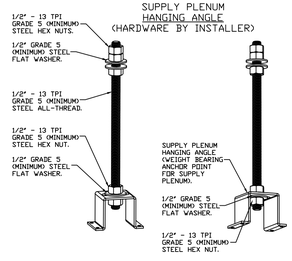
ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD. SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR FULL LENGTH HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



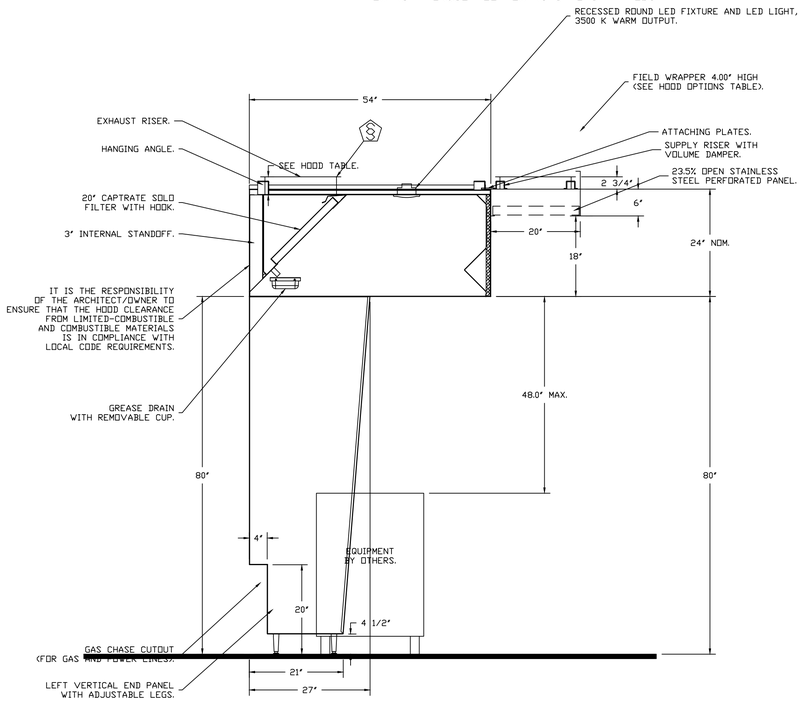
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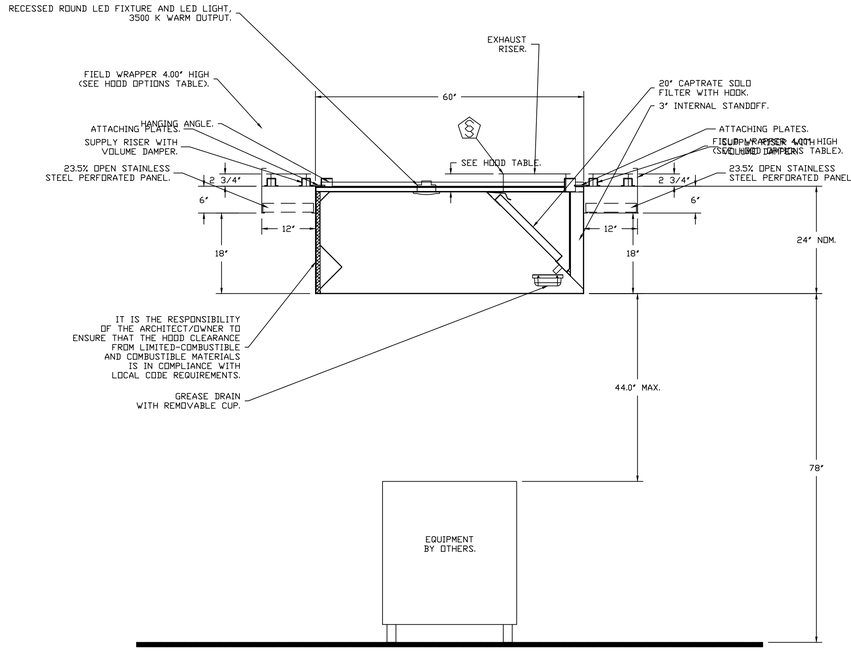
CLEARANCE TO COMBUSTIBLES

HOODS #	SURFACE	*CLEARANCE
1	TOP	18"
	FRONT	0"
	BACK	0"
	LEFT	18"
	RIGHT	0"
2,5	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	0"
	RIGHT	18"
3,6	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	18"
	RIGHT	18"
4,7	TOP	18"
	FRONT	0"
	BACK	18"
	LEFT	18"
	RIGHT	0"

- *0" CLEARANCE TO COMBUSTIBLES CONFORMS TO UL710 STANDARD.
- HOOD MOUNTED UTILITY CABINETS REQUIRE 36" SERVICE CLEARANCE.



SECTION VIEW - MODEL 5424ND-2-PSP-F
HOOD - #2



SECTION VIEW - MODEL 6024ND-2WI-PSP-FB
HOOD - #1

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15277 REN: 5/25 STATE OF CALIFORNIA

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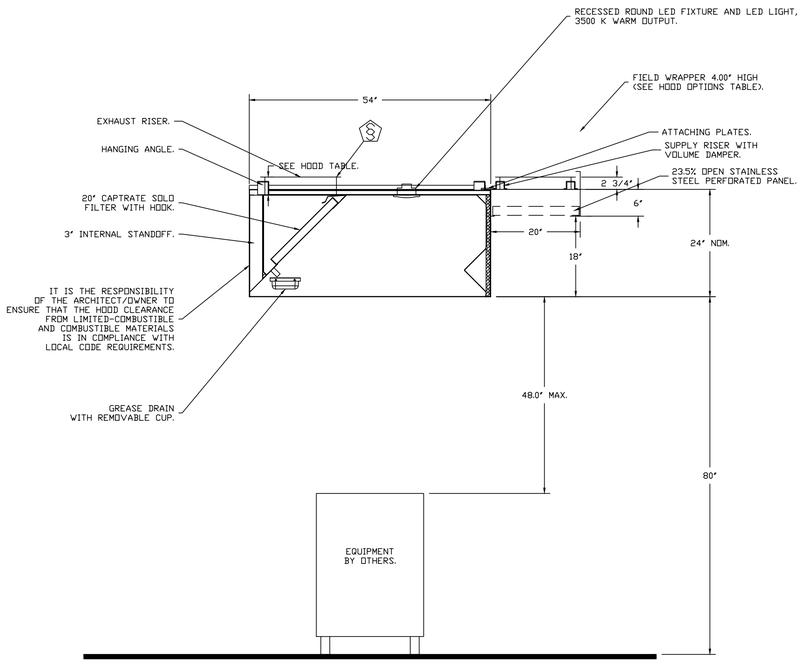
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ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

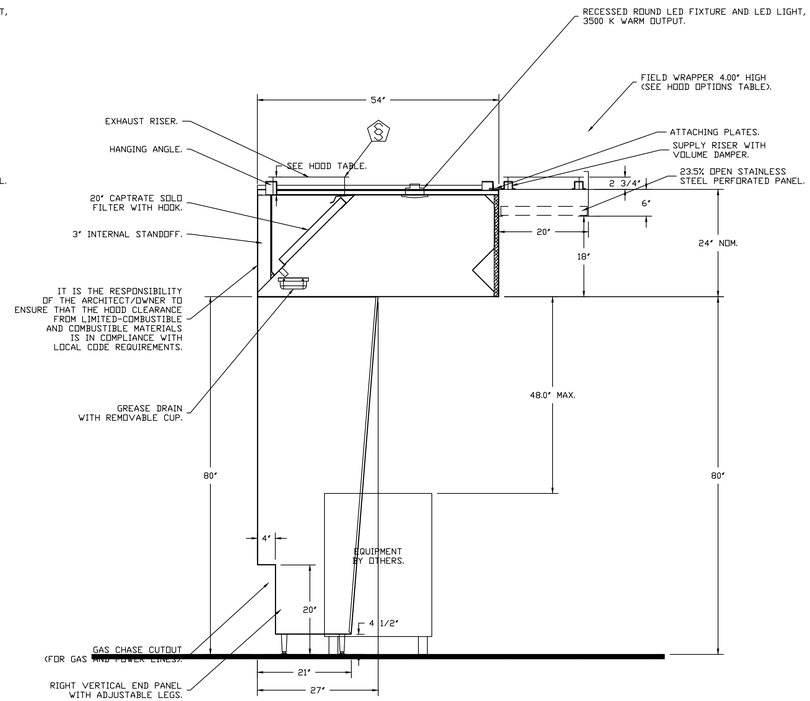
Project Number	2321
Date	7/5/24
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M4.3

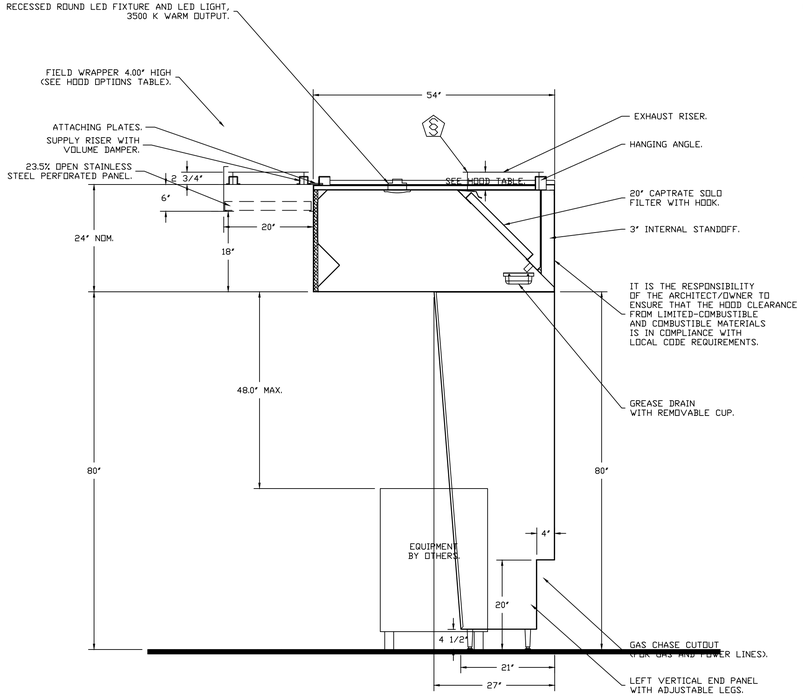
Plot Date & Time



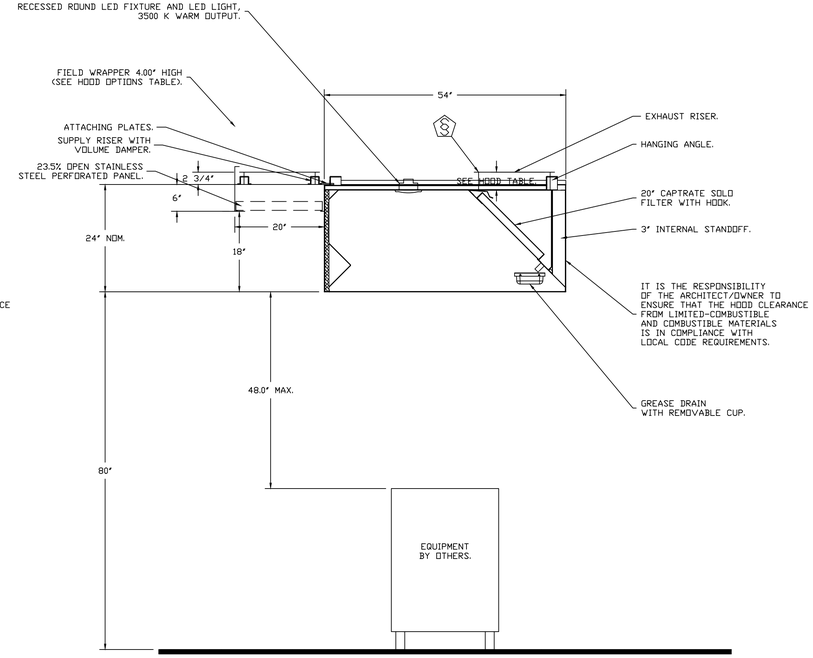
SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #3



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #4



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #5



SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #6

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
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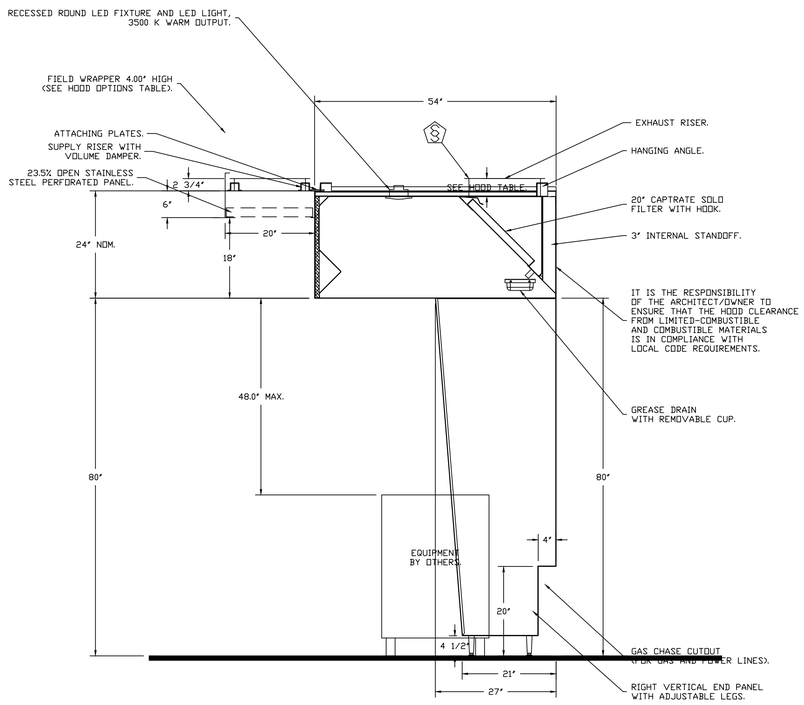
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ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
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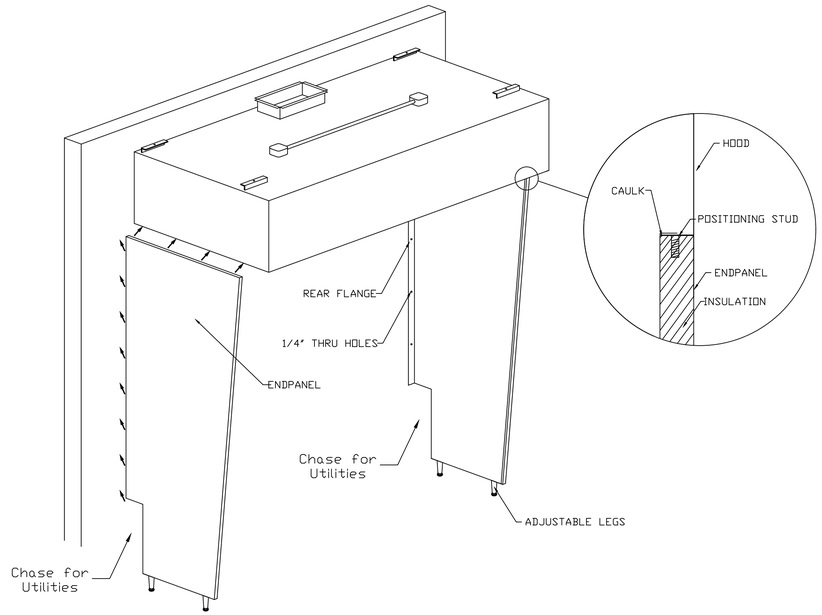
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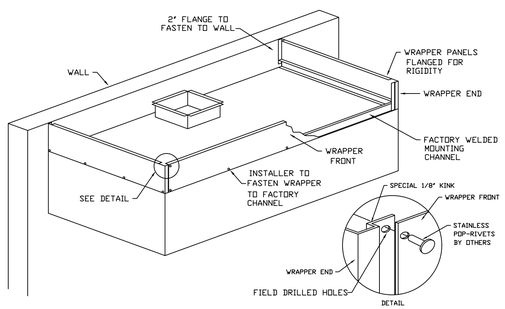
Plot Date & Time



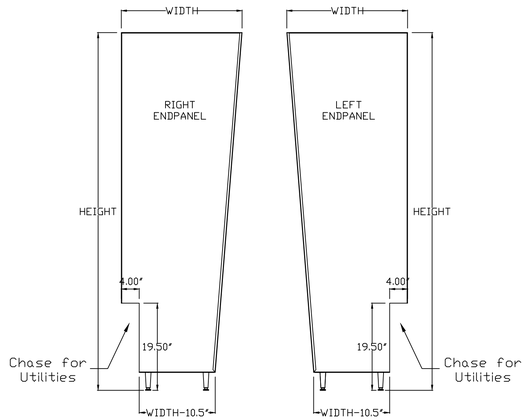
SECTION VIEW – MODEL 5424ND-2-PSP-F
HOOD – #7

ND–2 VERTICAL ENDPANEL





FIELD WRAPPER



TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.5

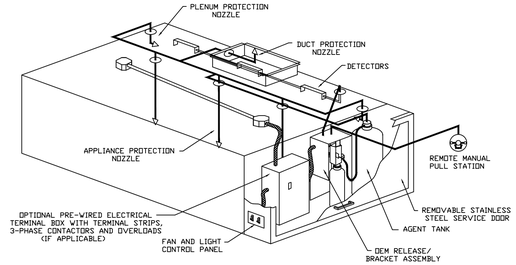
Plot Date & Time

FIRE SYSTEM INFORMATION – JOB#7092302

FIRE SYSTEM NO	TAG	TYPE	SIZE	MAX FP	DESIGN FP	INSTALLATION	
						SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	40	23	FIRE CABINET RIGHT	RIGHT, HOOD 1
2		TANK FS	4.0/4.0/4.0	60	101	FIRE CABINET LEFT	LEFT, HOOD 2
			4.0/4.0/4.0	60		FIRE CABINET RIGHT	RIGHT, HOOD 4
3		TANK FS	4.0/4.0/4.0	60	101	FIRE CABINET RIGHT	RIGHT, HOOD 7
			4.0/4.0/4.0	60		FIRE CABINET LEFT	LEFT, HOOD 5

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS
2		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS
3		SC ELECTRICAL	2.000	CAPTIVEAIRE SYSTEMS



TYPICAL ANSUL R-102 SYSTEM LAYOUT

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	1	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	2	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	1	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2"NPT FEMALE CONNECTION, VIEGA.	1	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2"NPT FEMALE CONNECTION, VIEGA.	2	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	1	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	8	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	1	0
		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	1	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	2	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	1	0
2		0 - 0 - TANK FIRE SUPPRESSION MAINTENANCE GUIDE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - TANK FIRE SUPPRESSION POST-DISCHARGE PROCEDURE UTILITY CABINET LABEL SHEET.	1	0
		0 - 0 - 12-F28021-32144-DT-360 DUCT FIRE THERMOSTAT WITH 12 FOOT WIRE LEADS. NO, CLOSE ON TEMP RISE AT 360°F. (A0034310).	3	0
		0 - 0 - 4429K153 1/2" MALE NPT TO 1/2" FEMALE NPT ELBOW, BRASS.	6	0
		0 - 0 - 4429K422 1/2" X 1/4" BRASS REDUCING BUSHING.	4	0
		0 - 0 - 79525 1/2" 90 PRO-PRESS ELBOW WITH 1/2"NPT FEMALE CONNECTION, VIEGA.	4	0
		0 - 0 - 79580 1/2" X 1/2" PRO-PRESS TEE X 1/2"NPT FEMALE CONNECTION, VIEGA.	6	0
		0 - 0 - 87-120042-001 SECONDARY ACTUATOR VALVE (SVA) - SINGLE ACTUATOR, REQUIRES PRIMARY RELEASE ACTUATOR, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - 87-120045-001 HOSE, SECONDARY ACTUATOR HOSE, 7.5' BRAIDED STAINLESS STEEL, TANK FIRE SUPPRESSION.	4	0
		0 - 0 - 87-300001-001 TANK - PRESSURIZED TANK USED FOR TANK FIRE SUPPRESSION.	6	0
		0 - 0 - 87-300030-001 PRIMARY ACTUATOR KIT (PAK) - ACTUATOR AND RELEASE SOLENOID ASSEMBLY, ONE NEEDED PER FIRE SYSTEM, SUPERVISED, TANK FIRE SUPPRESSION.	2	0
		0 - 0 - 87-300152-001 HARDWARE, SVA BOLTS, TANK FIRE SUPPRESSION.	24	0
		0 - 0 - 98694A115 HARDWARE, DATANKLOCK LOCKING BRACKET SQUARE NUTS 5/16" ZINC, TANK FIRE SUPPRESSION.	12	0
		0 - 0 - A0034332 JUNCTION BOX FOR MANUAL PULL STATION. 1.5" DEEP BACK BOX, RED COLOR.	2	0
3		0 - 0 - A31484 1/4" NPT SCHRADER VALVE AND CAP, JB INDUSTRIES. 1/4" FLARE X 1/4" MPT HALF UNION. USED ON TANK SERVICE PORT.	4	0
		0 - 0 - DATANKLOCK DISCHARGE ADAPTER TANK LOCKING PLATE FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	6	0
		0 - 0 - SLPCON-03FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 2' GAP. KIT CONTAINS 5 FEET OF BLACK MG WIRE, 5 FEET OF TAN MG WIRE, 3 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - SLPCON-05FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN END TO END HOODS WITH LESS THAN A 4' GAP. KIT CONTAINS 7 FEET OF BLACK MG WIRE, 7 FEET OF TAN MG WIRE, 5 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	2	0
		0 - 0 - SLPCON-40FT SUPERVISED LOOP CONNECTION KIT. CONTAINS THE PARTS NEEDED TO CONNECT THE SUPERVISED LOOP BETWEEN HOODS WITH UPTO 39' GAP. KIT CONTAINS 42 FEET OF BLACK MG WIRE, 42 FEET OF TAN MG WIRE, 40 FEET OF FLEXIBLE CONDUIT, AND TWO 7/8" CONNECTORS.	1	0
		0 - 0 - TANK STRAP TANK STRAP - USED FOR TANK FIRE SUPPRESSION.	18	0
		0 - 0 - TFS-UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS, TANK FIRE SUPPRESSION.	6	0
		0 - 0 - WK-283952-000 DISCHARGE ADAPTER, TANK FIRE SUPPRESSION.	6	0
		34 - 34 - A0034331 24VDC SINGLE ACTION MANUAL ACTUATION DEVICE (PUSH/PULL STATION) WITH PROTECTIVE COVER, ONE (1) NORMALLY OPEN CONTACT. RED COLOR.	2	0
		ADDITIONAL PARTS TO BE DETERMINED...		

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15827 REN. 5/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
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EXHAUST FAN INFORMATION – JOB#7092302

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	DU85HFA	CAPTIVEAIRE	2100	1.300	1575	TEAO-ECM	1.000	0.7060	1	208	6.9	665 FPM	94	16.4
2	KEF-2	1	DU180HFA	CAPTIVEAIRE	2583	1.148	1135	TEFC,PREMIUM	1.500	1.0440	3	208	6.5	597 FPM	181	13.1
3	KEF-3	1	DU180HFA	CAPTIVEAIRE	2625	1.185	1154	TEAO-ECM	2.000	1.0960	3	208	8.5	606 FPM	143	13.7
4	KEF-4	1	DU180HFA	CAPTIVEAIRE	2583	1.148	1135	TEAO-ECM	2.000	1.0440	1	208	15.5	597 FPM	143	13.1
5	KEF-5	1	DU180HFA	CAPTIVEAIRE	2583	1.148	1135	TEAO-ECM	2.000	1.0440	1	208	15.5	597 FPM	143	13.1
6	KEF-6	1	DU180HFA	CAPTIVEAIRE	2625	1.185	1154	TEFC,PREMIUM	1.500	1.0960	3	208	6.5	606 FPM	181	13.7
7	KEF-7	1	DU180HFA	CAPTIVEAIRE	2583	1.148	1135	TEAO-ECM	2.000	1.0440	1	208	15.5	597 FPM	143	13.1

MUA FAN INFORMATION – JOB#7092302

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	EVAP FLOW RATE (Gal/Hr)	EVAP COOLER ENTERING DB TEMP	EVAP COOLER ENTERING WB TEMP	EVAP COOLER LEAVING DB TEMP	EVAP COOLER LEAVING WB TEMP	WEIGHT (LBS)	SONES
8	MUA-1	1	A2-20D	20MF-2-MOD	A2	1500	1890	0.500	985	TEAO-ECM	2.000	0.4890	1	208	15.5	20A	35A	3.26	98.0°F	69.0°F	77.0°F	69.0°F	719	8.8
9	MUA-2	1	A4-30D	30MF-4-MOD	A4	6000	7012	0.500	917	ODP,PREMIUM	5.000	2.3840	3	208	15.8	19.8A	35A	6.14	98.0°F	69.0°F	79.0°F	69.0°F	1452	16
10	MUA-3	1	A4-30D	30MF-4-MOD	A4	6000	7012	0.500	917	ODP,PREMIUM	5.000	2.3840	3	208	15.8	19.8A	35A	6.14	98.0°F	69.0°F	79.0°F	69.0°F	1452	16

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
2		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
3		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
4		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
5		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
6		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	2 YEAR PARTS WARRANTY
7		1	GREASE BOX
		1	FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS
		1	ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION
		1	2 YEAR PARTS WARRANTY
8		1	SIZE 2 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	INSULATED BLOWER SECTION SIZE 1-2 COMMERCIAL
		1	INSULATION OPTION FOR V-BANK FILTER SECTION
		1	ECM WIRING PACKAGE - DD SUPPLY - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR)
		1	2 YEAR PARTS WARRANTY
9		1	SIZE 4 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	INSULATED BLOWER SECTION SIZE 4 COMMERCIAL MODULAR
		1	INSULATION OPTION FOR V-BANK FILTER SECTION
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY
10		1	SIZE 4 UNTEMPERED COMMERCIAL DOWN DISCHARGE FOR DIRECT DRIVE AHUS
		1	EVAPORATIVE COOLER WIRING HARNESS
		1	INSULATED BLOWER SECTION SIZE 4 COMMERCIAL MODULAR
		1	INSULATION OPTION FOR V-BANK FILTER SECTION
		1	SEPARATE 120V WIRING PACKAGE (REQUIRED AND USED ONLY FOR DCV OR PREWIRE WITH VFD) - THREE PHASE ONLY
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1		YES						
2		YES						
3		YES						
4		YES						
5		YES						
6		YES						
7		YES						

CURB ASSEMBLIES

NO	ON FAN	WEIGHT	ITEM	SIZE
1	# 1	36 LBS	CURB	23.000"W X 23.000"L X 20.000"H VENTED HINGED.
2	# 2	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
3	# 3	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
4	# 4	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
5	# 5	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
6	# 6	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
7	# 7	43 LBS	CURB	26.500"W X 26.500"L X 20.000"H VENTED HINGED.
8	# 8	55 LBS	CURB	31.000"W X 31.000"L X 20.000"H.
	# 8		RAIL	4.000"W X 4.000"L X 36.000"H.
	# 8		RAIL	4.000"W X 4.000"L X 36.000"H.
9	# 9	66 LBS	CURB	42.000"W X 42.000"L X 20.000"H.
	# 9		RAIL	4.000"W X 4.000"L X 36.000"H.
	# 9		RAIL	4.000"W X 4.000"L X 36.000"H.
10	# 10	66 LBS	CURB	42.000"W X 42.000"L X 20.000"H.
	# 10		RAIL	4.000"W X 4.000"L X 36.000"H.
	# 10		RAIL	4.000"W X 4.000"L X 36.000"H.

FAN SOUND DATA

FAN UNIT NO	TAG	MOTOR	SOUND DATA			OCTAVE BAND SOUND DATA								
			LWA	SONES @ 5 FT	DBA @ 5 FT	DISTANCE (FT)	63 HZ	125 HZ	250 HZ	500 HZ	1 KHZ	2 KHZ	4 KHZ	8 KHZ
1		EXHAUST	79.8	16.3627170956522	68.3	5	80.9	80.5	84.2	75.9	72.2	70.4	66.4	60.2
2		EXHAUST	76.6	13.1059914264621	65.1	5	73.5	78.5	82.9	72	66.9	64.9	59.2	53.7
3		EXHAUST	77.2	13.6628773163768	65.7	5	73.6	77.9	83.7	72.5	67.1	65.1	59.4	54
4		EXHAUST	76.6	13.1059914264621	65.1	5	73.5	78.5	82.9	72	66.9	64.9	59.2	53.7
5		EXHAUST	76.6	13.1059914264621	65.1	5	73.5	78.5	82.9	72	66.9	64.9	59.2	53.7
6		EXHAUST	77.2	13.6628773163768	65.7	5	73.6	77.9	83.7	72.5	67.1	65.1	59.4	54
7		EXHAUST	76.6	13.1059914264621	65.1	5	73.5	78.5	82.9	72	66.9	64.9	59.2	53.7
8		SUPPLY	70.9	8.82639039427919	59.4	5	70.1	74.8	71.2	68.3	64.9	62.2	58.8	54.7
9		SUPPLY	79.5	16.0257837124138	68	5	87.9	86.4	79.5	76.8	73.5	70.1	66.5	63.7
10		SUPPLY	79.5	16.0257837124138	68	5	87.9	86.4	79.5	76.8	73.5	70.1	66.5	63.7

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 5/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

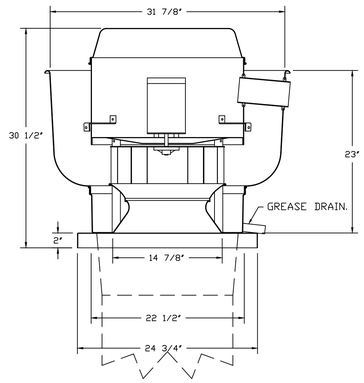
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FAN #1 DUB5HFA - EXHAUST FAN



FEATURES:

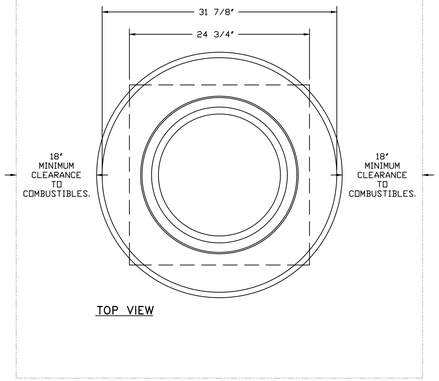
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

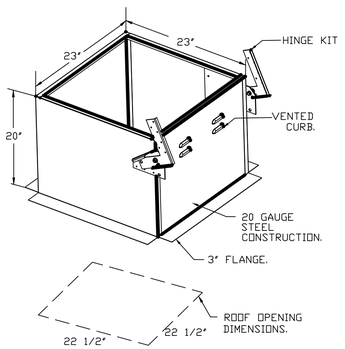
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

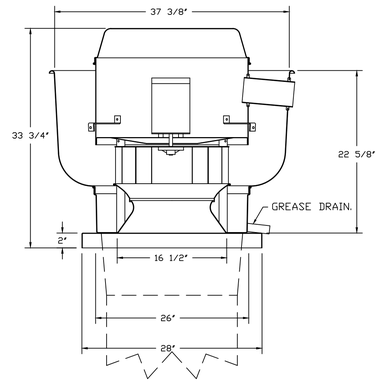
- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR85HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- ECM WIRING PACKAGE - PWM SIGNAL FROM ECPM03 PREWIRE (TELCO MOTOR), CCW ROTATION.
- 2 YEAR PARTS WARRANTY.



TOP VIEW



FANS #2 THRU #7 - DU180HFA EXHAUST FAN



FEATURES:

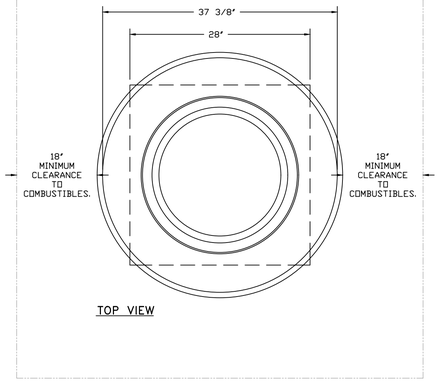
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- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

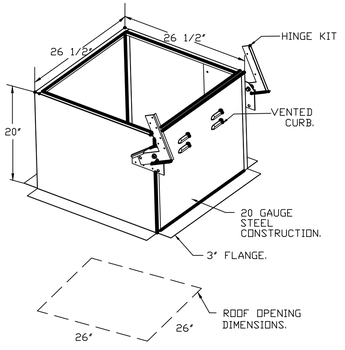
ABNORMAL FLARE-UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

- GREASE BOX.
- FAN BASE CERAMIC SEAL - DU/DR180HFA - INSTALLED AT PLANT - FOR GREASE DUCTS.
- 2 YEAR PARTS WARRANTY.



TOP VIEW



TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

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Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

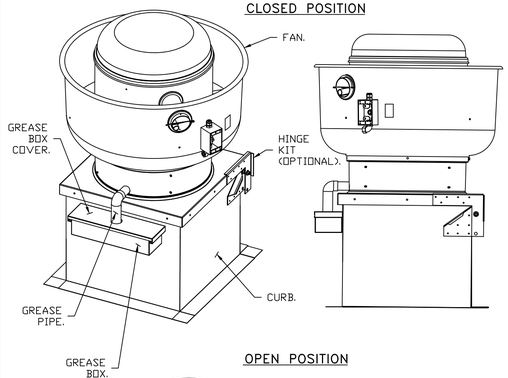
M4.8

Plot Date & Time

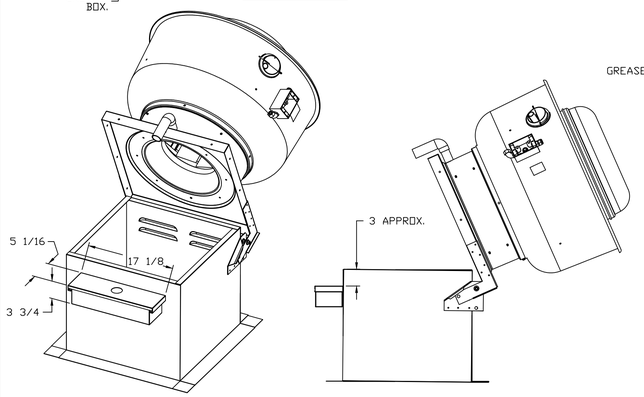
GREASEBOX
REV.#2 08/19/02

GREASE BOX INSTALLATION

CLOSED POSITION



OPEN POSITION



PARTS INCLUDED

GREASE BOX.
GREASE BOX COVER.
GREASE PIPE.

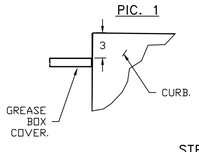
SHEET METAL SCREWS
3 - LONG (3/4" LG.).

GREASE BOX FIELD INSTALLATION

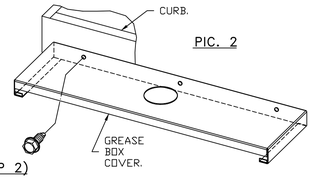
STEP 1)

ATTACH GREASE BOX COVER TO THE CURB, HOLD 3" DIMENSION AS SHOWN ON PIC. 1. SCREW GREASE BOX COVER TO CURB USING (3) LONG (3/4" LG.) SCREWS AS SHOWN ON PIC. 2.

PIC. 1



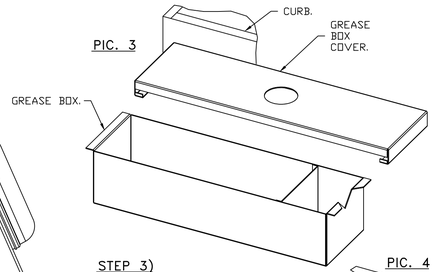
PIC. 2



STEP 2)

ATTACH GREASE BOX TO GREASE BOX COVER, SLIDE AND DROP. AS SHOWN ON PIC. 3.

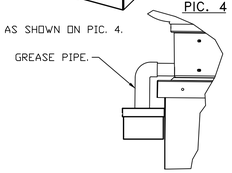
PIC. 3



STEP 3)

INSTALL GREASE PIPE AS SHOWN ON PIC. 4.

PIC. 4



*NOTE: UL 705 INSTALL.

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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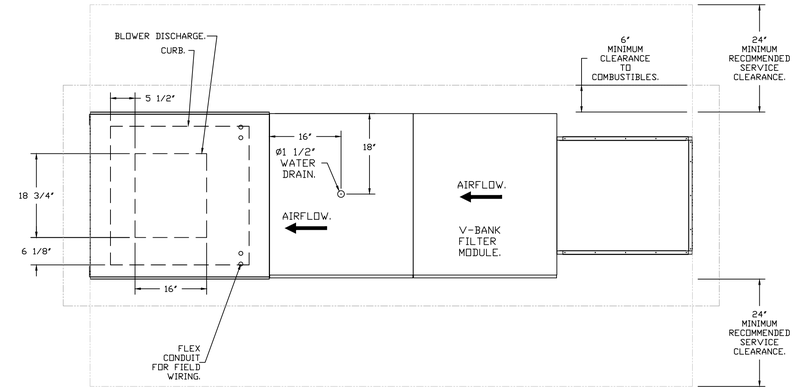
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Checked by	GL

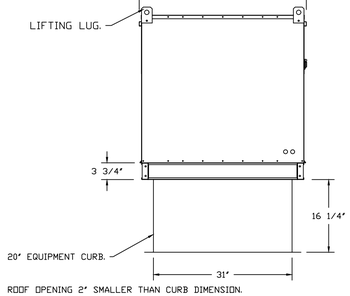
M4.9

Plot Date & Time

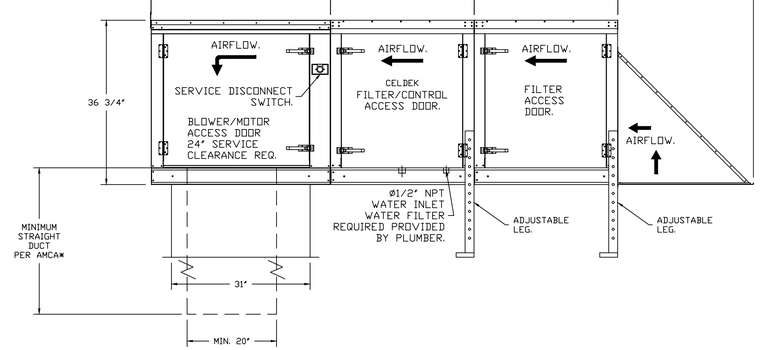
FAN #8 A2-20D - SUPPLY FAN
1. UNTEMPERED SUPPLY UNIT WITH 20" MIXED FLOW DIRECT DRIVE FAN IN SIZE #2 HOUSING.
2. EVAP COOLER (CELDEK) & V-BANK WITH 2" TA-13 FILTERS - OUTDOOR.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 2 UNTEMPERED DIRECT DRIVE AHUS.
5. 120V WIRING CONNECTION TO ENERGIZE EVAPORATIVE COOLERS FROM UNTEMPERED SUPPLY FANS.
6. INSULATED BLOWER HOUSING SIZES 1-2 COMMERCIAL MODULAR.
7. "INSULATION" FOR V-BANK INTAKE OPTION.
8. ECM WIRING PACKAGE FOR SUPPLY MOTORS WITH PWM SIGNAL FROM ECPM03 PREWIRE.
9. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTION).
10. 2 YEAR PARTS WARRANTY.

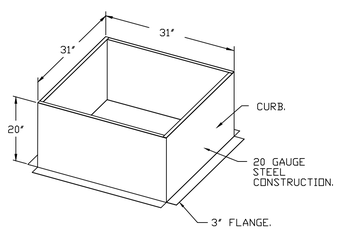
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20" x 20".





ROOF OPENING 2" SMALLER THAN CURB DIMENSION.





TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
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1400 Lone Palm Ave, Suite A
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ESCALON, CA 95320
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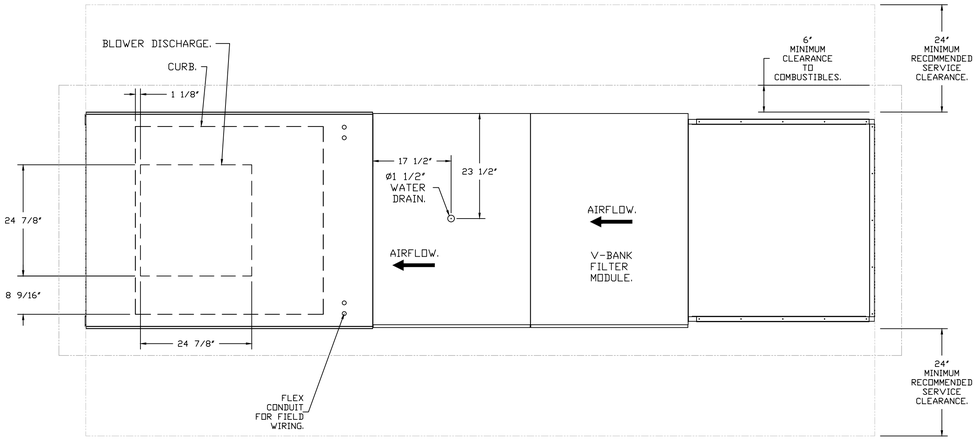
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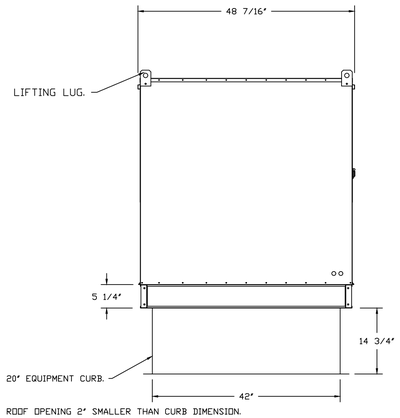
M4.10

Plot Date & Time

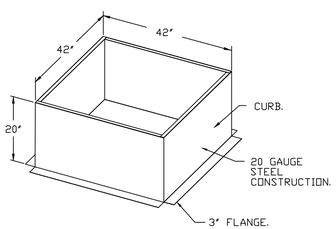
FAN #9 & #10 A4-30D - SUPPLY FAN
1. UNTEMPERED SUPPLY UNIT WITH 30" MIXED FLOW DIRECT DRIVE FAN IN SIZE #4 HOUSING.
2. EVAP COOLER (CELDEK) & V-BANK WITH 2" TA-13 FILTERS - OUTDOOR.
3. DOWN DISCHARGE - AIR FLOW RIGHT -> LEFT.
4. DOWN DISCHARGE CONSTRUCTION FOR SIZE 4 UNTEMPERED DIRECT DRIVE AHUS.
5. 120V WIRING CONNECTION TO ENERGIZE EVAPORATIVE COOLERS FROM UNTEMPERED SUPPLY FANS.
6. INSULATED BLOWER HOUSING SIZE 4 COMMERCIAL MODULAR.
7. "INSULATION" FOR V-BANK INTAKE OPTION.
8. SEPARATE 120VAC WIRING PACKAGE FOR MAKE-UP AIR UNITS. OPTION MUST BE SELECTED WHEN MOUNTING VFD IN PREWIRE PANEL OR WITH DCV PACKAGE. PROVIDES SEPARATE 120VAC INPUT TO SUPPLY FAN. THIS 120V SIGNAL MUST BE RUN BY ELECTRICIAN FROM DCV TO MUA SWITCH.
9. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER/EVAP SECTION).
10. 2 YEAR PARTS WARRANTY.

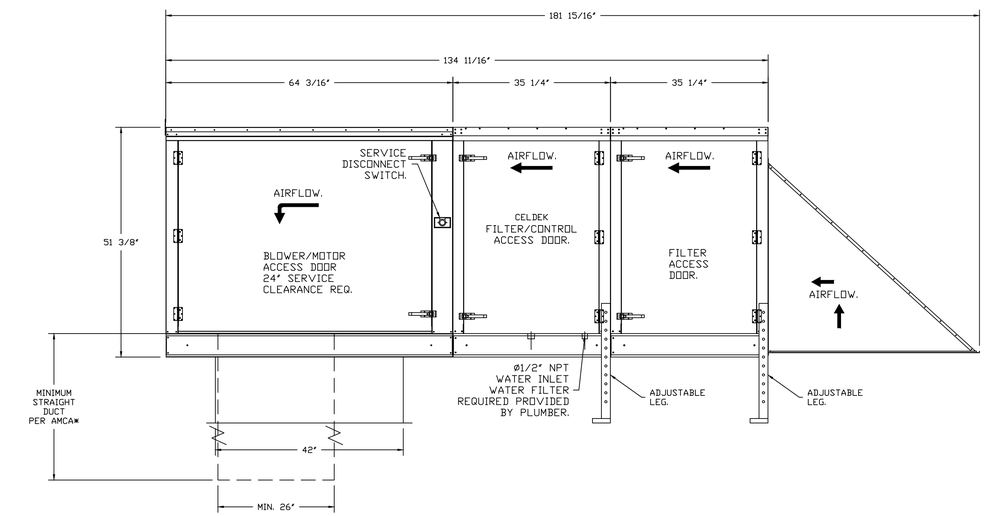
*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT.
SUGGESTED STRAIGHT DUCT SIZE IS 26" x 26".





ROOF OPENING 2" SMALLER THAN CURB DIMENSION.





TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
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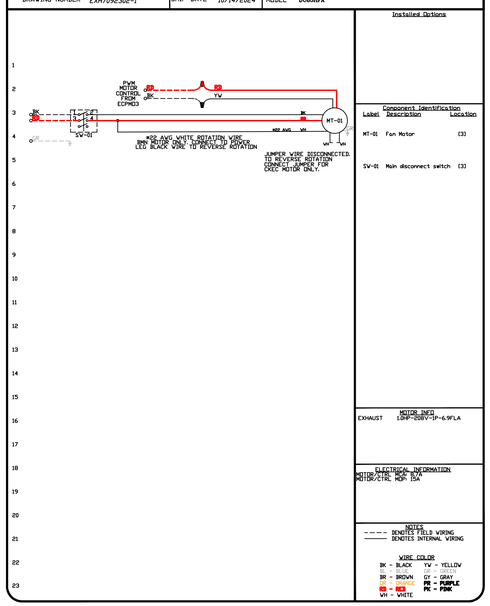
Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.11

Plot Date & Time

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-1
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-1P-6.9FLA

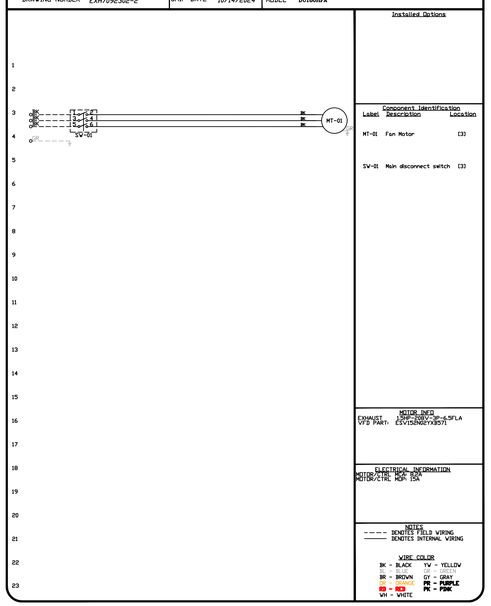
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 15A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-2
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-6.5FLA
VFB PART: ESV152N02YX857T

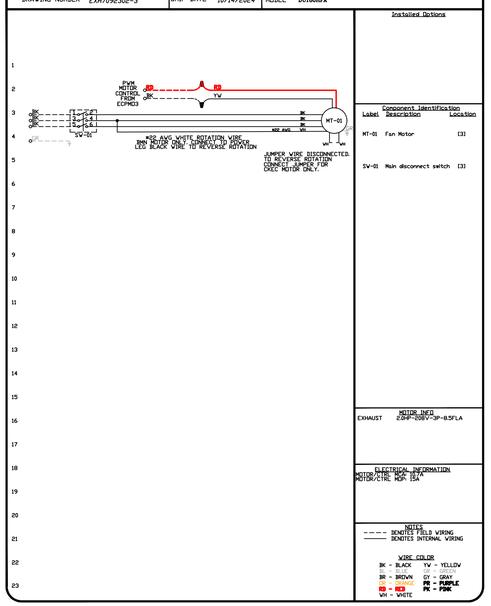
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 15A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-3
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-8.5FLA

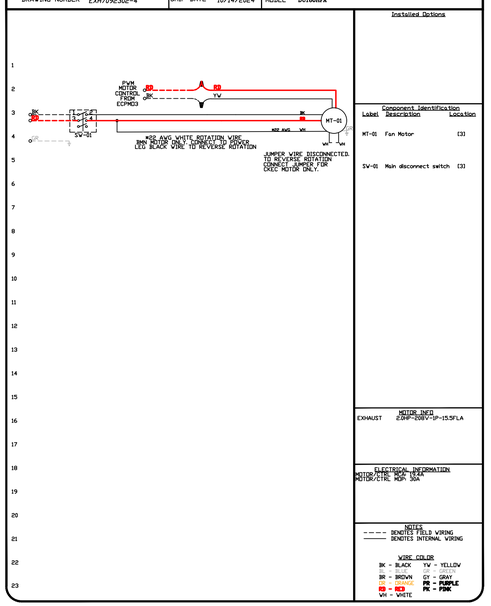
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 15A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-4
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-15.5FLA

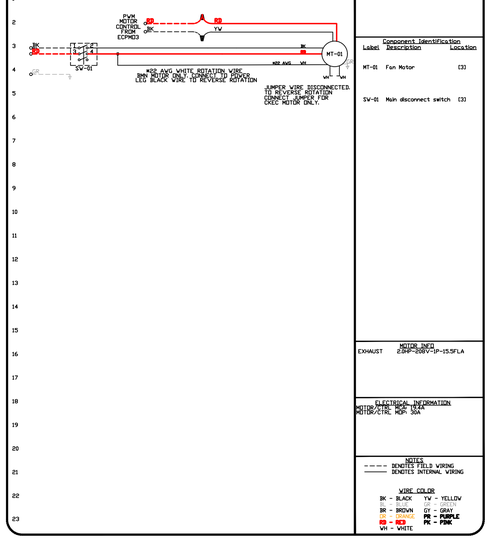
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 30A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-5
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-1P-15.5FLA

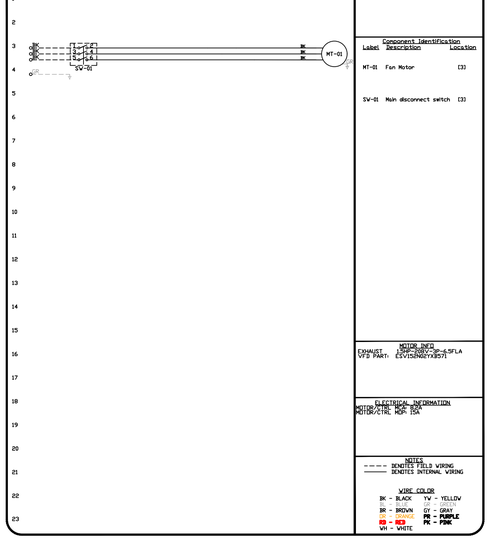
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 30A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-6
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-3P-6.5FLA
VFB PART: ESV152N02YX857T

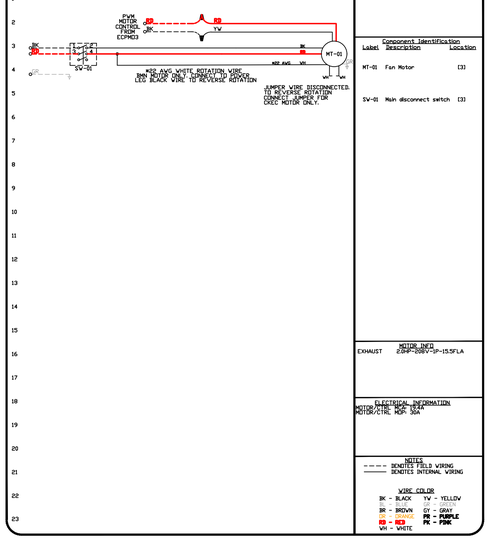
ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 15A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

Exhaust Fan Wiring

JOB 7092302 - Escalon HS Culinary Classroom
DRAWING NUMBER EXH7092302-7
SHIP DATE 10/14/2024
MODEL DU180HFA



Installed Options

Component Identification

Label	Description	Location
MT-01	Fan Motor	[3]
SV-01	Main disconnect switch	[3]

MOTOR INFO
EXHAUST 2.0HP-208V-1P-15.5FLA

ELECTRICAL INFORMATION
MOTOR/VFBS: MCP 15A
MOTOR/CTRL: MCP 30A

NOTES
---- DENOTES FIELD WIRING
—— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YV - YELLOW
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
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1528 YOSEMITE AVE.
ESCALON, CA 95320
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Drawn by	DW
Checked by	GL

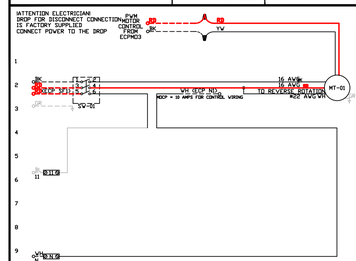
M4.12

Plot Date & Time

AirHandler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER A7092302-8 | SHIP DATE 10/14/2024 | MODEL A2-30D



Installed Options

Cooling Interlock

Component Identification

Label	Description	Location
MT-01	Supply motor	(2)
SV-01	Main disconnect switch	(2)

MOTOR INFO
SUPPLY 230P-208V-3P-15.5FLA

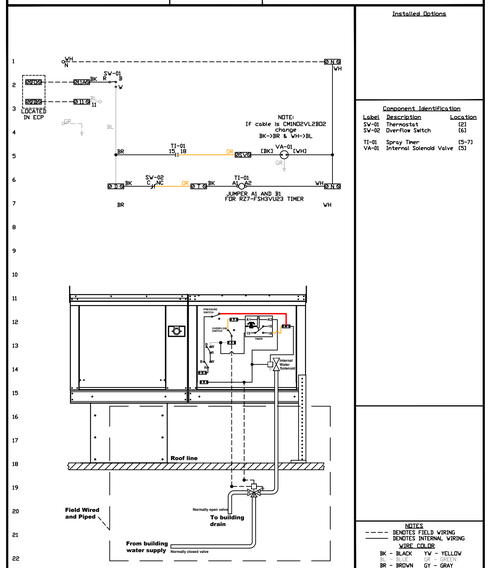
ELECTRICAL INFORMATION
MOTOR/MTRL CIRCUIT MCP 50A
MOTOR/CTRL CIRCUIT MCP 15A

NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

Evaporative Cooler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER EC7092302-8 | SHIP DATE 10/14/2024 | MODEL A2-30D



Installed Options

Component Identification

Label	Description	Location
SV-01	Thermostat	(2)
SV-02	Overflow Switch	(6)
TI-01	Spray Timer	(5-7)
VA-01	Internal Solenoid Valve	(5)

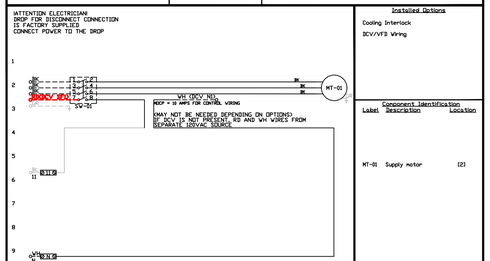
NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK
BR - BROWN
RD - RED
VH - WHITE
YL - YELLOW
GY - GRAY
PR - PURPLE
PK - PINK

AirHandler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER A7092302-9 | SHIP DATE 10/14/2024 | MODEL A4-30D



Installed Options

Cooling Interlock

DCV/VFD Wiring

Component Identification

Label	Description	Location
MT-01	Supply motor	(2)
SV-01	Main disconnect switch	(2)

MOTOR INFO
SUPPLY 230P-208V-3P-15.8FLA
VFD PART: ESV462N02TXB571

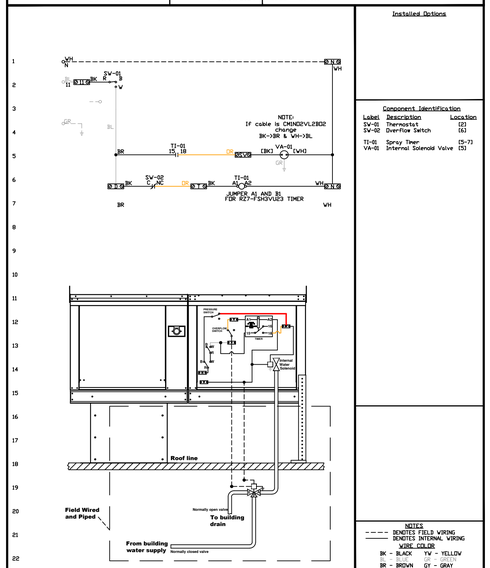
ELECTRICAL INFORMATION
MOTOR/MTRL CIRCUIT MCP 50A
MOTOR/CTRL CIRCUIT MCP 15A
CONTROL CIRCUIT MCP 15A

NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

Evaporative Cooler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER EC7092302-9 | SHIP DATE 10/14/2024 | MODEL A4-30D



Installed Options

Component Identification

Label	Description	Location
SV-01	Thermostat	(2)
SV-02	Overflow Switch	(6)
TI-01	Spray Timer	(5-7)
VA-01	Internal Solenoid Valve	(5)

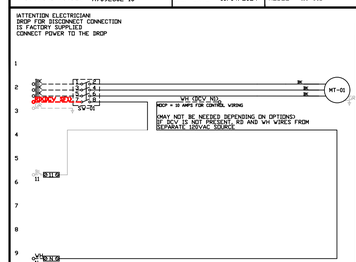
NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK
BR - BROWN
RD - RED
VH - WHITE
YL - YELLOW
GY - GRAY
PR - PURPLE
PK - PINK

AirHandler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER A7092302-10 | SHIP DATE 10/14/2024 | MODEL A4-30D



Installed Options

Cooling Interlock

DCV/VFD Wiring

Component Identification

Label	Description	Location
MT-01	Supply motor	(2)
SV-01	Main disconnect switch	(2)

MOTOR INFO
SUPPLY 230P-208V-3P-15.8FLA
VFD PART: ESV462N02TXB571

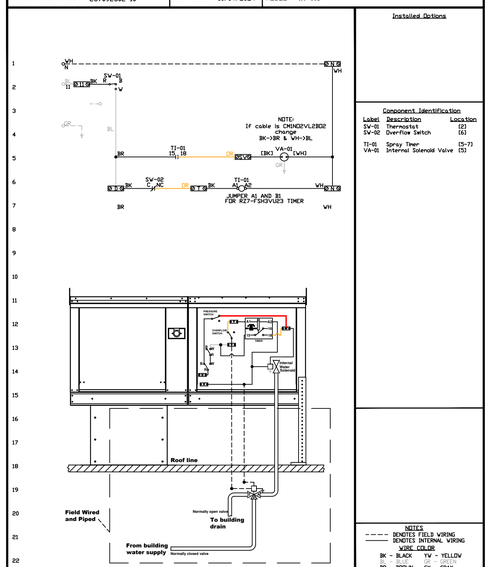
ELECTRICAL INFORMATION
MOTOR/MTRL CIRCUIT MCP 50A
MOTOR/CTRL CIRCUIT MCP 15A
CONTROL CIRCUIT MCP 15A

NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

Evaporative Cooler Wiring

JOB 7092302 - Escalon HS Culinary Classroom

DRAWING NUMBER EC7092302-10 | SHIP DATE 10/14/2024 | MODEL A4-30D



Installed Options

Component Identification

Label	Description	Location
SV-01	Thermostat	(2)
SV-02	Overflow Switch	(6)
TI-01	Spray Timer	(5-7)
VA-01	Internal Solenoid Valve	(5)

NOTES
---- DENOTES FIELD WIRING
——— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK
BR - BROWN
RD - RED
VH - WHITE
YL - YELLOW
GY - GRAY
PR - PURPLE
PK - PINK

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15997 REN 8/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

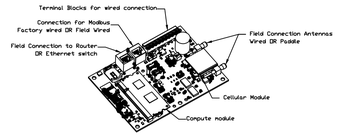
Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.13

Plot Date & Time

ELECTRICAL PACKAGE – JOB#7092302

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED				
				LOCATION	QUANTITY		TYPE	Φ	HP	VOLT	FLA
1		DCV-1111	UTILITY CABINET RIGHT	UTILITY CABINET RIGHT	1 LIGHT	SMART CONTROLS DCV	EXHAUST	1	1.000	208	6.9
				HOOD # 1	1 FAN		SUPPLY	1	2.000	208	15.5
2		DCV-6211	WALL MOUNT IN SS BOX	SS WALL MOUNT BOX	1 LIGHT 1 FAN	SMART CONTROLS DCV	EXHAUST	3	1.500	208	6.5
							EXHAUST	3	2.000	208	8.5
							EXHAUST	1	2.000	208	15.5
							EXHAUST	1	2.000	208	15.5
							EXHAUST	3	1.500	208	6.5
							EXHAUST	1	2.000	208	15.5
							SUPPLY	3	5.000	208	15.8
							SUPPLY	3	5.000	208	15.8



CASlink Monitor and Control

- *Hood control panel to support communications to cloud-based Building Management System.*
- *Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.*
- *Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.*
- *Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.*

MONITORING AND CONTROL POINTS LIST

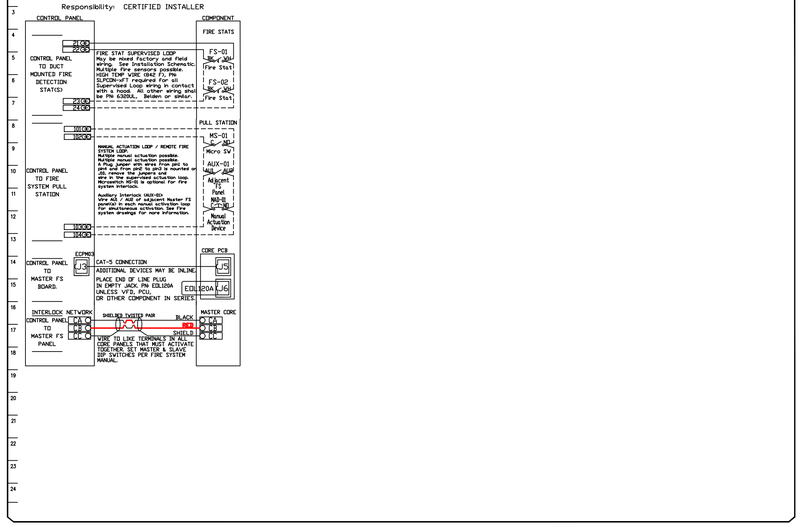
DCV Packages	*Function*
Room Temperature	*MONITOR*
Duct Temperature(s)	*MONITOR*
MUA Discharge Temperature	*MONITOR*
Kitchen RTU Discharge Temperature	*MONITOR*
Fan Speed	*MONITOR*
Fan Amperage	*MONITOR*
Fan Power	*MONITOR*
VFD Faults	*MONITOR*
Controller Faults	*MONITOR*
Fan Faults	*MONITOR*
Fan Status	*MONITOR*
PCU Faults	*MONITOR*
PCU Filter Clog Percentages	*MONITOR*
Fire Condition	*MONITOR*
CORE Fire System	*MONITOR*
Building Pressures	*MONITOR*
Prep Time Button	*MONITOR & CONTROL*
Fans Button	*MONITOR & CONTROL*
Lights Button	*MONITOR & CONTROL*
Wash Button	*MONITOR & CONTROL*

SC Packages	*Function*
Room Temperature(s)	*MONITOR*
Duct Temperature(s)	*MONITOR*
MUA Discharge Temperature	*MONITOR*
Kitchen RTU Discharge Temperature	*MONITOR*
Controller Faults	*MONITOR*
Fan Faults	*MONITOR*
Fan Status	*MONITOR*
PCU Faults	*MONITOR*
PCU Filter Clog Percentages	*MONITOR*
Fire Condition	*MONITOR*
CORE Fire System	*MONITOR*
Building Pressures	*MONITOR*
Fans Button(s)	*MONITOR & CONTROL*
Lights Button(s)	*MONITOR & CONTROL*
Wash Button	*MONITOR & CONTROL*

JOB NO 7092302 | MODEL NUMBER DCV-1111 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | SCHEMATIC TYPE INSTALL | DATE 10/14/2024 | ECN NO ECP #1-2

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature, INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation/verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

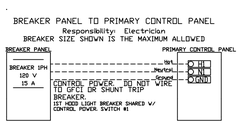
CONTROL PANEL TO FIRE SYSTEM
Responsibility: CERTIFIED INSTALLER



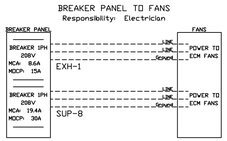
JOB NO 7092302 | MODEL NUMBER DCV-1111 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | SCHEMATIC TYPE INSTALL | DATE 10/14/2024 | ECN NO ECP #1-1

DESCRIPTION OF OPERATION:
Demand Control Ventilation, w/ control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature, INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor shipped loose for field installation/verify distance between VFD and Motor; additional cost could apply if distance exceeds 50 feet.

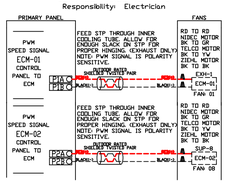
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



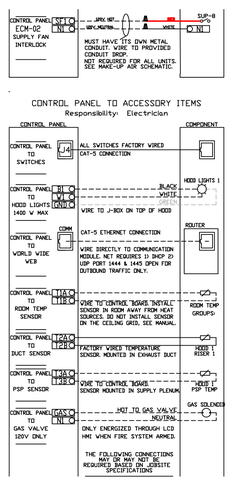
BREAKER PANEL TO FANS
Responsibility: Electrician



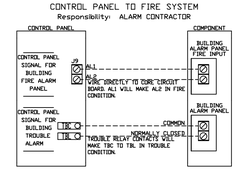
CONTROL PANEL TO FANS
Responsibility: Electrician



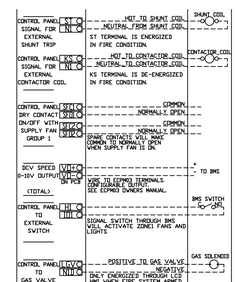
CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician



CONTROL PANEL TO FIRE SYSTEM
Responsibility: ALARM CONTRACTOR



CONTROL PANEL TO EXTERNAL EQUIPMENT



JOB NO 7092302 | MODEL NUMBER DCV-1111 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | SCHEMATIC TYPE INSTALL | DATE 10/14/2024 | ECN NO ECP #1-3

DESCRIPTION OF OPERATION:
Fire System #1 TANK FS = 48/48.

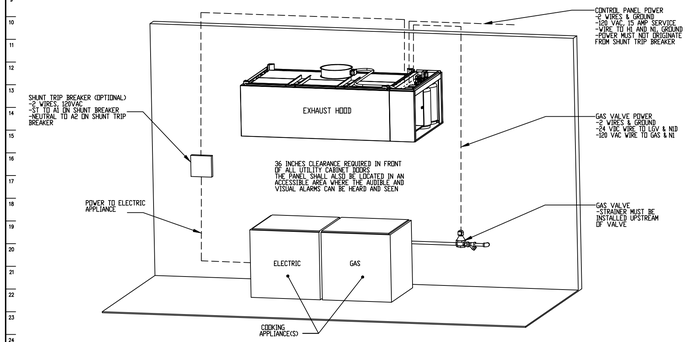
TANK PROTECTION ELECTRICAL DETAIL

02/10/2021 Rev. 2

ELECTRICIAN
1. PART MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UBS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

FS-1: MASTER

ELECTRICAL CONTRACTOR REQUIREMENT					
ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UBS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AUL, AUZ	SOLENOID	120 VAC	< 6 AMPS	120V TO AUL, AUZ TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	L6V & N1 (IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VDC – 2 WIRES & GROUND, M3 TO RED, L6V TO RED, AND GREEN TO GROUND IF 120 VAC – 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN: 9/30/25 STATE OF CALIFORNIA

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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.14

Plot Date & Time

JOB NO	MODEL NUMBER	DRAWN BY	CONTRACTOR TYPE	DESCRIPTION OF OPERATION:
7092302	DCV-1111		INSTALL	Fire System #1 TANK FS - 45/45.
JOB NAME	Escalon HS Culinary Classroom	DATE	SHEET NO	
		10/14/2024	ECP #5-4	

TANK PROTECTION LOW-VOLTAGE DETAIL

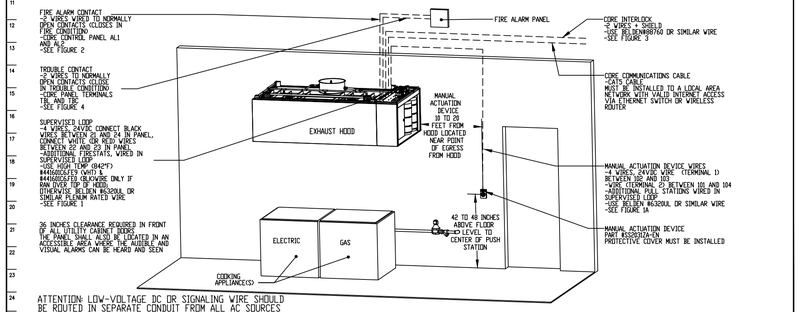
10/01/2023 Rev. 3

FS-1: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION ON DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 1.0 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-65318
REMOTE FIRESTAT SENSOR(S)	25 AND 24 25 AND 23	BLACK AND WHITE	24 VDC	< 1.0 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 25 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 25 AND 24 HIGH TEMP (94°C) #4450SG5TS (WHITE) & #4450SG5TS (BLK)WIRE OR SIMILAR ONLY IF RAN OF HOOD, OTHERWISE BELDEN #6320UL OR SIMILAR PLENUM RATED WIRE. SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX DC/AC	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA, CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDEN 88760 OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TDK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<1.0 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

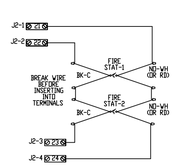
NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO	MODEL NUMBER	DRAWN BY	CONTRACTOR TYPE	DESCRIPTION OF OPERATION:
7092302	DCV-1111		INSTALL	Fire System #1 TANK FS - 45/45.
JOB NAME	Escalon HS Culinary Classroom	DATE	SHEET NO	
		10/14/2024	ECP #5-5	

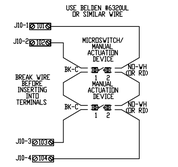
TANK PROTECTION LOW-VOLTAGE FIGURES

10/01/2023 Rev. 17

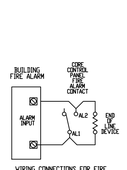
FS-1: MASTER



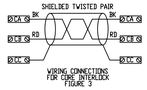
WIRING CONNECTIONS FOR FIRESTAT LOOP FIGURE 1



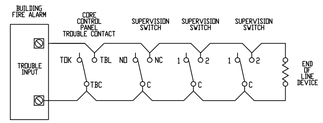
WIRING CONNECTIONS FOR MANUAL ACTUATION LOOP FIGURE 1A



WIRING CONNECTIONS FOR FIRE ALARM CONTACT FIGURE 2



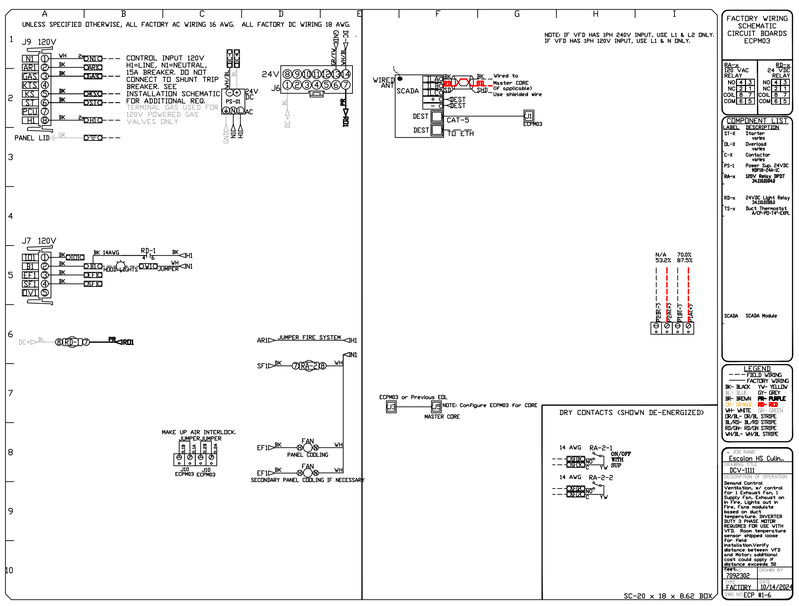
WIRING CONNECTIONS FOR CORE INTERLOCK FIGURE 3



WIRING CONNECTIONS FOR TROUBLE CONTACT FIGURE 4

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03

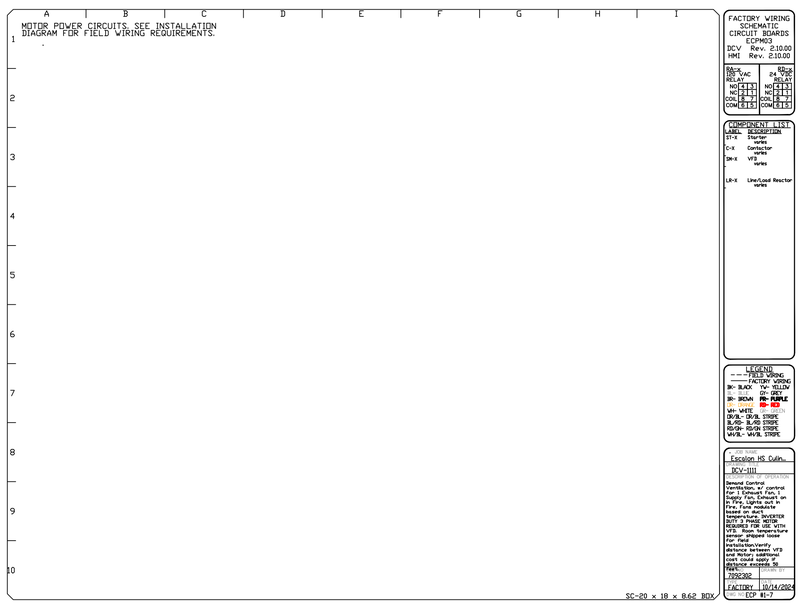
RA-x 120 VAC RELAY	RD-x 24 VDC RELAY
NO 11	NO 11
NC 21	NC 21
COM 14	COM 14

COMPONENT LIST

LABEL	DESCRIPTION
ET-x	Thermistor varies
DL-x	Dwnload varies
C-x	Contactor varies
PS-1	Power Sup. 24VDC MDR-20-24
RA-x	120V Relay SPDT ACR8RDU
RD-x	24VDC Light Relay ACR8RDU
TS-x	Duct Thermostat A/C-FD-TF-CUR
SCADA	SCADA Module

LEGEND
—— TRUE WIRING
—— FACTORY WIRING
BK- BLACK YW- YELLOW
GY- GREY
BK- BROWN PR- PURPLE
WH- WHITE
BK/YL- BK/YL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

Escalon HS Culin.
DCV-1111
Demand Control Ventilation, w/ control of Exhaust Fan, Supply Fan, Exhaust an H Fire, Lights out in Kitchen, Variable based on duct temperature. INVERTER DUTY MOTOR IS REQUIRED FOR USE WITH VFD. Room temperature set point shipped loose for field installation.Verify VFD selection. VFD and Motors additional cost could apply if distance exceeds 50 ft.
7092302
FACTORY 10/14/2024
ECP #1-6



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03
DCV Rev. 2.10.00
HMI Rev. 2.10.00

RA-x 120 VAC RELAY	RD-x 24 VDC RELAY
NO 11	NO 11
NC 21	NC 21
COM 14	COM 14

COMPONENT LIST

LABEL	DESCRIPTION
ET-x	Thermistor varies
C-x	Contactor varies
DM-x	VFD varies
LR-x	Line/Load Reactor varies

LEGEND
—— TRUE WIRING
—— FACTORY WIRING
BK- BLACK YW- YELLOW
GY- GREY
BK- BROWN PR- PURPLE
WH- WHITE
BK/YL- BK/YL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

Escalon HS Culin.
DCV-1111
Demand Control Ventilation, w/ control of Exhaust Fan, Supply Fan, Exhaust an H Fire, Lights out in Kitchen, Variable based on duct temperature. INVERTER DUTY MOTOR IS REQUIRED FOR USE WITH VFD. Room temperature set point shipped loose for field installation.Verify VFD selection. VFD and Motors additional cost could apply if distance exceeds 50 ft.
7092302
FACTORY 10/14/2024
ECP #1-7

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15927 REN. 5/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

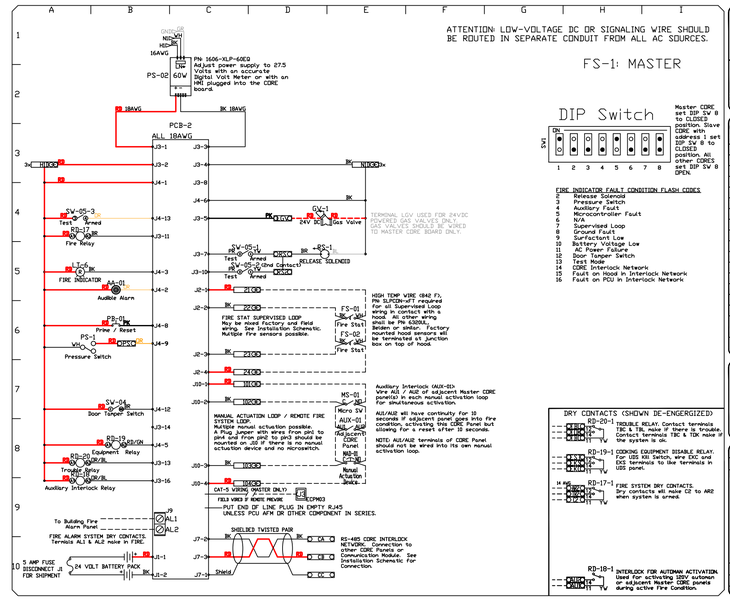
Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.15

Plot Date & Time

ATTENTION LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

FS-1: MASTER



DIP Switch

Master CORE set DIP SV 8 to CLOSED position. Slave CORE with address 1 set DIP SV 8 to OPEN position. All other CORES set DIP SV 8 OPEN.

FIRE INDICATOR FAULT CONDITION FLASH CODES

2	Release Solenoid
3	Pressure Switch
4	Auxiliary Fault
5	Microcontroller Fault
6	N/A
7	Supervised Loop
8	Duct Sensor Low
9	Surfactant Low
10	Battery Voltage Low
11	AC Power Failure
12	Door Tamper Switch
13	Test Mode
14	CORE Interlock Network
15	Fault on MOD# in Interlock Network
16	Fault on PCU in Interlock Network

FACTORY WIRING SCHEMATIC CORE FIRE PROTECTION

Relay 120 VAC RELAY: NO 13, NC 11, COM 15

Relay 24 VDC RELAY: NO 24, NC 21, COM 25

COMPONENT LIST

LABEL	DESCRIPTION
MAS-01	MANUAL ACTIVATION DEVICE
PCB-2	CORE PCB PN 1606XLP-WP
PS-02	CORE POWER SUPPLY PN 1606-XLP
SV-04	Door Tamper Switch
SP-1	Surfactant Pump 1000-SP
SV-1	24v 3C Gas Valve 1000-GV
PS-01	Remote Push/Pull Station PN 270-SSRA
PS-1	Pressure Switch CSC-PRESS####

LEGEND

FIELD WIRING
FACTORY WIRING
BK- BLACK, YE- YELLOW, GY- GREY
BR- BROWN, PR- PURPLE
WH- WHITE
BL/BK- BLUE STRIPE
BL/RD- BLUE STRIPE
RD/BK- RED/BK STRIPE
WH/BL- WHITE STRIPE

Escalon HS Culinary
DCV-1111
DESCRIPTION OF OPERATION
Fire System #1 TANK FS - 42/43
JOB NO. 7092302
DRAWN BY
FACTORY 10/14/2024
ECP #1-B

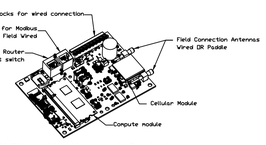
DRY CONTACTS (SHOWN DE-ENERGIZED)

RD-20-1 TROUBLE RELAY. Contact terminals TBC & TB, make if there is trouble. Contact terminals TBO & TBK make if the system is on.

RD-19-1 COOKING EQUIPMENT DISABLE RELAY. For UES MX Switch, wire ERC and ALL UES terminals to like terminals in UES panel.

RD-17-1 FIRE SYSTEM DRY CONTACTS. Dry contacts will make CZ to AR2 when system is armed.

RD-18-1 INTERLOCK FOR AUTOMAN ACTIVATION. Used for activating 120V automan or adjacent Master CORE panels during active fire condition.



CASLink Monitor and Control

-- Hood control panel to support communications to cloud-based Building Management System.
-- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
-- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
-- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

DCV Packages	Function
Room Temperature	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR
Fan Amperage	MONITOR
Fan Power	MONITOR
VFD Faults	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR & CONTROL
Fans Button	MONITOR & CONTROL
Lights Button	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

DC Packages	Function
Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR
MUA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR
Controller Faults	MONITOR
Fan Faults	MONITOR
Fan Status	MONITOR
PCU Faults	MONITOR
PCU Filter Clog Percentages	MONITOR
Fire Condition	MONITOR
CORE Fire System	MONITOR
Building Pressures	MONITOR
Fans Button(s)	MONITOR & CONTROL
Lights Button(s)	MONITOR & CONTROL
Wash Button	MONITOR & CONTROL

JOB NO. 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SUBMITTAL INSTALL | SPEC NO ECP #2-1

DESCRIPTION OF OPERATION:
Demand Control Ventilation, or control type 4 Exhaust Fans, 2 Supply Fan Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor to be mounted between VFD and Motor; additional cost could apply if distance exceeds 50 feetsor shipped loose for field installation.

BREAKER PANEL TO PRIMARY CONTROL PANEL

Responsibility: Electrician

BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED

BREAKER PANEL — PRIMARY CONTROL PANEL

CONTROL POWER - DO NOT WIRE TO GFCI OR SHUNT TRIP BREAKER. 1ST HEDD LIGHT BREAKER SHARED W/ CONTROL POWER. SWITCH #1

BREAKER 1PH 120 V 15 A	
BREAKER 3PH 208 V MCA: 8.1 A MOCP: 15 A	EXH-2 WIRE TO VFD QUICK CONNECTOR — SM-1
BREAKER 3PH 208 V MCA: 8.1 A MOCP: 15 A	EXH-6 WIRE TO VFD QUICK CONNECTOR — SM-2
BREAKER 3PH 208 V MCA: 19.8 A MOCP: 30 A	SUP-9 WIRE TO VFD QUICK CONNECTOR — SM-3
BREAKER 3PH 208 V MCA: 19.8 A MOCP: 30 A	SUP-10 WIRE TO VFD QUICK CONNECTOR — SM-4

BREAKER PANEL TO FANS

Responsibility: Electrician

BREAKER PANEL — FANS

BREAKER 3PH 208V MCA: 15.6A MOCP: 15A	EXH-3 — POWER TO ECM FANS
BREAKER 1PH 208V MCA: 19.4A MOCP: 20A	EXH-4 — POWER TO ECM FANS
BREAKER 1PH 208V MCA: 19.4A MOCP: 20A	EXH-5 — POWER TO ECM FANS

BREAKER 1PH 208V MCA: 19.4A MOCP: 30A	EXH-7 — POWER TO ECM FANS

CONTROL PANEL TO FANS

Responsibility: Electrician

PRIMARY PANEL — FANS

Loop Wiring SM-1 WIRE TO VFD QUICK CONNECTOR	FAN 02 — EXH-2 — FLA 6.5 HP 1.5HP VOLTS 208 V — WIRE TO DISCONNECT
Loop Wiring SM-2 WIRE TO VFD QUICK CONNECTOR	FAN 06 — EXH-6 — FLA 6.5 HP 1.5HP VOLTS 208 V — WIRE TO DISCONNECT

MUST HAVE ITS OWN CONDUIT DO NOT SHARE CONDUIT!

FEED STP THROUGH INNER CEILING TUBE ALLOW FOR ENOUGH SLACK ON STP FOR PROPER HINGING. (EXHAUST ONLY) NOTE: PWM SIGNAL IS POLARITY SENSITIVE.

CONTROL PANEL TO FANS

Responsibility: Electrician

PWM SPEED SIGNAL ECM-04 CONTROL PANEL TO ECM — P47-6 PWM, P48-1 GND

Loop Wiring SM-3 WIRE TO VFD QUICK CONNECTOR — U3, V3, W3, GND — 18AWG VFD-3, BLACK, WHITE, GREEN

IF VFD MOUNTED IN VAD PANEL WIRE SP SIGNAL FROM PANEL WITH ECPM03.

Loop Wiring SM-4 WIRE TO VFD QUICK CONNECTOR — U4, V4, W4, GND — 18AWG VFD-4, BLACK, WHITE, GREEN

IF VFD MOUNTED IN END PANEL WIRE SP SIGNAL FROM PANEL WITH ECPM03.

PWM SPEED SIGNAL ECM-01 CONTROL PANEL TO ECM — P1A-6 PWM, P1B-1 GND

PWM SPEED SIGNAL ECM-02 CONTROL PANEL TO ECM — P2A-6 PWM, P2B-1 GND

PWM SPEED SIGNAL ECM-03 CONTROL PANEL TO ECM — P3A-6 PWM, P3B-1 GND

Loop Wiring SM-2 WIRE TO VFD QUICK CONNECTOR — U2, V2, W2, GND — 18AWG VFD-2, BLACK, WHITE, GREEN

MUST HAVE ITS OWN CONDUIT DO NOT SHARE CONDUIT!

FEED STP THROUGH INNER CEILING TUBE ALLOW FOR ENOUGH SLACK ON STP FOR PROPER HINGING. (EXHAUST ONLY) NOTE: PWM SIGNAL IS POLARITY SENSITIVE.

RD TO RD NEMA MOTOR BK TO GR TELCO MOTOR BK TO BK

FAN 09	SUP-9 — FLA 6.5 HP 1.5HP VOLTS 208 V — EXH-7 — EXH-04 — FAN 07
FAN 10	SUP-10 — FLA 6.5 HP 1.5HP VOLTS 208 V — EXH-8 — EXH-01 — FAN 03
FAN 04	EXH-3 — EXH-02 — FAN 14
FAN 05	EXH-5 — EXH-03 — FAN 06

CONTROL PANEL TO ACCESSORY ITEMS

Responsibility: Electrician

CONTROL PANEL	COMPONENT
CONTROL PANEL TO SWITCHES — J4	ALL SWITCHES FACTORY WIRED CAT-5 CONNECTION
CONTROL PANEL TO HOOD LIGHTS 1400 V MAX — H1, V1, GND	BLACK, WHITE — HOOD LIGHTS 1 — WIRE TO J-BOX ON TOP OF HOOD
CONTROL PANEL TO WORLD WIDE WEB — COMM	CAT-5 ETHERNET CONNECTION — ROUTER — WIRE DIRECTLY TO COMMUNICATION MODULE. NOT REQUIRED IS DHCP 21 UDP PORT 1444 & 3445 OPEN FOR OUTBOUND TRAFFIC ONLY.
CONTROL PANEL TO ROOM TEMP SENSOR — T1&T2	WIRE TO CONTROL BOXES INSTALL SENSOR IN ROOM AWAY FROM HEAT SOURCES. DO NOT INSTALL SENSOR ON THE CEILING GRID. SEE MANUAL. — ROOM TEMP GROUPS

JOB NO. 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SUBMITTAL INSTALL | SPEC NO ECP #2-2

DESCRIPTION OF OPERATION:
Demand Control Ventilation, or control type 4 Exhaust Fans, 2 Supply Fan Exhaust on in Fire, Lights out in Fire, Fans modulate based on duct temperature. INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor to be mounted between VFD and Motor; additional cost could apply if distance exceeds 50 feetsor shipped loose for field installation.

CONTROL PANEL TO DUCT SENSORS

CONTROL PANEL T1&T2 TO DUCT SENSOR	WIRE TO CONTROL BOARDS SENSOR MOUNTED IN EXHAUST DUCT	HOOD 1 RISER 1
CONTROL PANEL T3&T4 TO DUCT SENSOR	WIRE TO CONTROL BOARDS SENSOR MOUNTED IN EXHAUST DUCT	HOOD 2 RISER 1
CONTROL PANEL T5&T6 TO DUCT SENSOR	WIRE TO CONTROL BOARDS SENSOR MOUNTED IN EXHAUST DUCT	HOOD 3 RISER 1
CONTROL PANEL T7&T8 TO DUCT SENSOR	WIRE TO CONTROL BOARDS SENSOR MOUNTED IN EXHAUST DUCT	HOOD 4 RISER 1
CONTROL PANEL T9&T10 TO PSP SENSOR	WIRE TO CONTROL BOARDS SENSOR MOUNTED IN SUPPLY PLENUM	HOOD 2 PSP TEMP
CONTROL PANEL GAS TO GAS VALVE 120V ONLY	HOT TO GAS VALVE — NEUTRAL — ONLY ENERGIZED THROUGH LCD HMI WHEN FIRE SYSTEM ARMED.	GAS SOLENOID

THE FOLLOWING CONNECTIONS MAY OR MAY NOT BE REQUIRED BASED ON JURISITE SPECIFICATIONS

CONTROL PANEL ST TO SHUNT COIL SIGNAL FOR EXTERNAL SHUNT TRIP	HOT TO SHUNT COIL — NEUTRAL FROM SHUNT COIL — ST TERMINAL IS ENERGIZED IN FIRE CONDITION.	SHUNT COIL
CONTROL PANEL KS TO CONTACTOR COIL SIGNAL FOR EXTERNAL CONTACTOR COIL	HOT TO CONTACTOR COIL — NEUTRAL TO CONTACTOR COIL — KS TERMINAL IS DE-ENERGIZED IN FIRE CONDITION.	CONTACTOR COIL
CONTROL PANEL SD1&2 DRY CONTACT	COMMON — NORMALLY OPEN	
CONTROL PANEL SF1&2 ON/OFF WITH SUPPLY FAN GROUP 1	COMMON — NORMALLY OPEN — SPARE CONTACTS WILL MAKE CONTINUITY WITH COMMON WHEN SUPPLY FAN IS ON	
DCV SPEED 0-10V OUTPUT (TOTAL)	VO1 — VO2 — SUM OF ALL DCV TERMINALS. SEE ECPM03 OWNERS MANUAL.	TO BMS

CONTROL PANEL TO FIRE SYSTEM

Responsibility: ALARM CONTRACTOR

CONTROL PANEL — COMPONENT

CONTROL PANEL SIGNAL FOR BUILDING FIRE ALARM PANEL — J9 — NO, NC — WIRE DIRECTLY TO CORE CIRCUIT BOARD ALL WILL MAKE ALR IN FIRE CONDITION	BUILDING ALARM PANEL FIRE INPUT
CONTROL PANEL SIGNAL FOR BUILDING TROUBLE ALARM — TBC, TB — NORMALLY CLOSED — TROUBLE RELAY CONTACTS WILL MAKE TBC TO TBL IN TROUBLE CONDITION	BUILDING ALARM PANEL

CONTROL PANEL TO FIRE SYSTEM

Responsibility: CERTIFIED INSTALLER

CONTROL PANEL — COMPONENT

CONTROL PANEL TO DUCT MOUNTED FIRE DETECTION STAT(S) — 24 VDC — FIRE SYSTEM SUPERVISED LOOP May be mixed factory and field wiring. See Installation Schematic for Connection. Multiple Fire sensors possible. HIGH TEMP WIRE (RAD FL) PN SLPCON-6FT required for all Supervised Loop wiring in contact with a heated surface. Wiring shall be PN 6300UL Belden or similar.	FIRE STATS — FS-01 — FS-02 — Fire Stat

CONTROL PANEL TO FIRE SYSTEM

CONTROL PANEL TO REMOTE FS MASTER PANEL	ECPM03 — CAT-5 CONNECTION — WIRE DIRECTLY TO CONTROL BOARD ADDITIONAL DEVICES MAY BE INLINE. PLACE END OF LINE PLUG IN EMPTY JACK PN EDLISOA UNLESS VFD, PCU, OR OTHER COMPONENT IN SERIES.	CORE PCB — J20 — EOL 120A — J16
INTERLOCK NETWORK CONTROL PANEL TO MASTER FS PANEL	SHIELDED TWISTED PAIR — RS-485 — SHIELD — CAT-5 CABLE — MASTER CORE: TA, TB, TC	
INTERLOCK NETWORK CONTROL PANEL TO OTHER REMOTE/PCU FS PANELS	SHIELDED TWISTED PAIR — RS-485 — SHIELD — CAT-5 CABLE — SLAVE FS: TA, TB, TC	
CONTROL PANEL TO EXTRA FIRE SYSTEM PRESSURE SWITCH	PRSW — WIRING DIAGRAM FOR ALL OTHER PRESSURE SWITCHES IN SERIES.	PS-X
CONTROL PANEL TO FIRE SYSTEM RELEASE SOLENOID	RSOL — WIRING DIAGRAM FOR REMOTE RELEASE SOLENOID	RS-2

JOB NO. 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SUBMITTAL INSTALL | SPEC NO ECP #2-3

DESCRIPTION OF OPERATION:
Fire System #2 TANK FS - 42/43/43 / Remote - 43/43/43.

TANK PROTECTION ELECTRICAL DETAIL

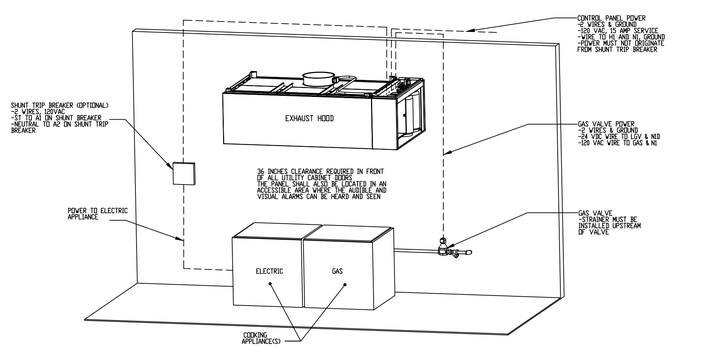
02/10/2021 Rev. 2

FS-2: MASTER

ELECTRICIAN
1. VERIFY MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & NI	BREAKER COIL (A1 & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	HI & NI + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KI1S & NI	KI1S & NI	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AUI, AUI	SOLENOID	120 VAC	< 6 AMPS	120V TO AUI, AUI2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & NGI OF 24 VDC) GAS & NI OF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 1.0 AMPS	IF 24 VAC - 2 WIRES & GROUND, NOI TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, NI TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15904 REN/2025 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.16

Plot Date & Time

JOB NO 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SCHEMATIC REF. INSTALL | DWG NO ECP #2-4

DESCRIPTION OF OPERATION: Fire System #2 TANK FS - 48/48/48 / Remote - 48/48/48.

TANK PROTECTION LOW-VOLTAGE DETAIL

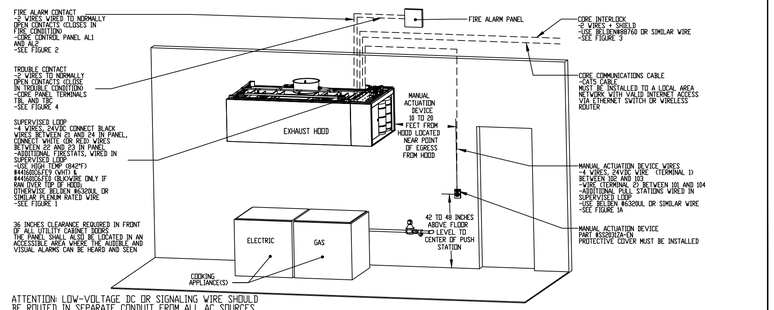
10/01/2023 Rev. 3

FS-2: MASTER

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 10 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A		MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-65318
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 10 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (840°F) #4450805473 (WHT) & #4450805473 (BLK)WIRE OR SIMILAR ONLY IF RAN OVER TOP OF HOOD, OTHERWISE BELDEN #63801, OR SIMILAR PLENUM RATED WIRE - SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA, CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDENH 8870G OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TDK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<10 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

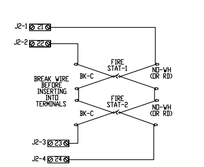
JOB NO 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SCHEMATIC REF. INSTALL | DWG NO ECP #2-5

DESCRIPTION OF OPERATION: Fire System #2 TANK FS - 48/48/48 / Remote - 48/48/48.

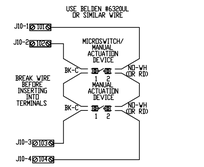
TANK PROTECTION LOW-VOLTAGE FIGURES

10/01/2023 Rev. 17

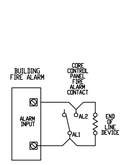
FS-2: MASTER



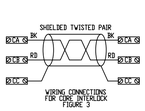
WIRING CONNECTIONS FOR FIRESTAT LOOP
FIGURE 1



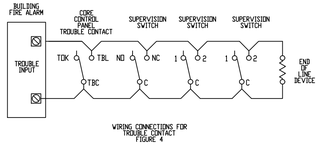
WIRING CONNECTIONS FOR MANUAL ACTUATION LOOP
FIGURE 1A



WIRING CONNECTIONS FOR FIRE ALARM CONTACT
FIGURE 2



WIRING CONNECTIONS FOR CORE INTERLOCK
FIGURE 3



WIRING CONNECTIONS FOR TROUBLE CONTACT
FIGURE 4

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

JOB NO 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SCHEMATIC REF. INSTALL | DWG NO ECP #2-6

DESCRIPTION OF OPERATION: Fire System #3 TANK FS - 48/48/48 / Remote - 48/48/48.

TANK PROTECTION ELECTRICAL DETAIL

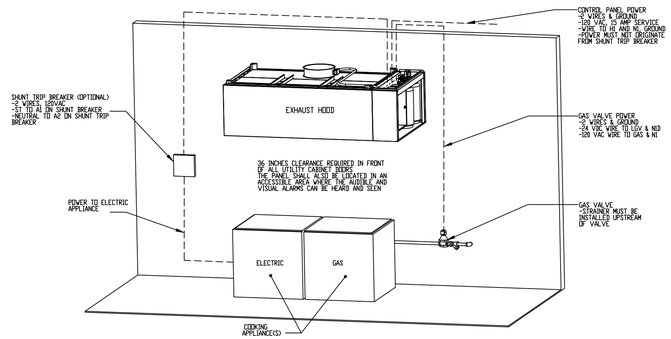
02/10/2021 Rev. 2

FS-3: SLAVE

ELECTRICIAN:
1. WIRE MAIN CONTROL PANEL PER INCLUDED SCHEMATIC
2. WIRE ALL FANS PER INCLUDED SCHEMATIC
3. WIRE SHUNT TRIP BREAKER (OPTIONAL)
4. WIRE UDS APPLIANCE KILL SWITCH, IF EQUIPPED (OPTIONAL)
5. WIRE GAS VALVE

ELECTRICAL CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
SHUNT TRIP BREAKER (OPTIONAL)	ST & N1	BREAKER COIL (ST) & A2)	120 VAC	< 4 AMPS	ST TO A1 ON SHUNT BREAKER COIL, AND NEUTRAL TO A2 ON SHUNT TRIP BREAKER COIL
CONTROL PANEL POWER	H1 & N1 + GROUND	CIRCUIT BREAKER	120 VAC	15 AMPS	CONTROL PANEL POWER MUST NOT BE RUN THROUGH SHUNT TRIP BREAKER
UDS APPLIANCE KILL SWITCH (OPTIONAL)	KTS & N1	KTS & N1	120 VAC	< 4 AMPS	KILL SWITCH TERMINALS MUST BE IN SERIES WITH OTHER KILL SWITCHES
REMOTE 120VAC ANSUL AUTOMAN (OPTIONAL)	AU1, AU2	SOLENOID	120 VAC	< 6 AMPS	120V TO AU1, AU2 TO ANSUL ELECTRIC AUTOMAN, ANSUL SOLENOID TO NEUTRAL
GAS VALVE	LGV & N1(IF 24 VDC) GAS & N1 (IF 120 VAC)	RED/RED/GREEN	24 VDC OR 120 VAC	< 10 AMPS	IF 24 VDC - 2 WIRES & GROUND, N1 TO RED, LGV TO RED, AND GREEN TO GROUND IF 120 VAC - 2 WIRES & GROUND GAS TO RED, N1 TO RED, AND GREEN TO GROUND



NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

JOB NO 7092302 | MODEL NUMBER DCV-6211 | JOB NAME Escalon HS Culinary Classroom | DRAWN BY | DATE 10/14/2024 | SCHEMATIC REF. INSTALL | DWG NO ECP #2-7

DESCRIPTION OF OPERATION: Fire System #3 TANK FS - 48/48/48 / Remote - 48/48/48.

TANK PROTECTION LOW-VOLTAGE DETAIL

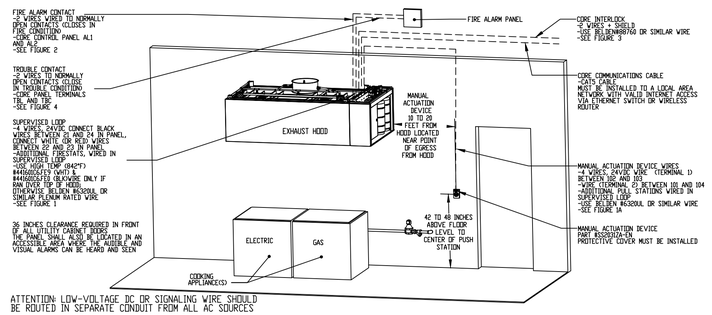
10/01/2023 Rev. 3

FS-3: SLAVE

ALARM CONTRACTOR:
1. WIRE MANUAL ACTUATION DEVICE(S), REMOTE FIRESTAT(S), CORE INTERLOCK(S), FIRE SENSOR(S) AND FIRE ALARM CONTACTS
2. COMPLETE FINAL HOOKUP OF SYSTEM
3. VERIFY FINAL FIRE SYSTEM TEST

ALARM CONTRACTOR REQUIREMENT

ITEM	CONNECTION IN PANEL	CONNECTION IN DEVICE	VOLTAGE	AMPERAGE	COMMENTS
MANUAL ACTUATION DEVICE(S)	101 AND 104 102 AND 103	1 & 2	24 VDC	< 10 AMPS	WIRE MANUAL ACTUATION DEVICE TERMINAL 1 BETWEEN CORE PANEL TERMINALS 102 AND 103 WIRE MANUAL ACTUATION DEVICE TERMINAL 2 BETWEEN CORE PANEL TERMINALS 101 AND 104 JUMPER 101 TO 104 AND 102 TO 103 IF NO MANUAL ACTUATION DEVICE IS INSTALLED
MANUAL ACTUATION DEVICE COVER	N/A	N/A	N/A	N/A	MANUAL ACTUATION DEVICE COVER MUST BE INSTALLED IF SURFACE MOUNTED, USE COVER EXTENSION STI-65318
REMOTE FIRESTAT SENSOR(S)	21 AND 24 22 AND 23	BLACK AND WHITE	24 VDC	< 10 AMPS	WIRE FIRE SENSOR WHITE WIRES BETWEEN HOOD CORE PANEL TERMINALS 22 AND 23 WIRE FIRE SENSOR BLACK WIRE BETWEEN HOOD CORE PANEL TERMINALS 21 AND 24 HIGH TEMP (840°F) #4450805473 (WHT) & #4450805473 (BLK)WIRE OR SIMILAR ONLY IF RAN OVER TOP OF HOOD, OTHERWISE BELDEN #63801, OR SIMILAR PLENUM RATED WIRE - SEE FIGURE 1
FIRE ALARM CONTACT	AL1, AL2	VARIES	50V MAX (AC/DC)	UP TO 1 AMP	FIRE ALARM RELAY CONTACTS FOR BUILDING FIRE ALARM LOCATED IN THE CORE ELECTRICAL CONTROL PANEL
CORE INTERLOCK(S)	CA, CB, CC	CA, CB, CC	RS-485 COMMUNICATIONS SIGNAL		CORE SYSTEM (1) CA, TO CORE SYSTEM (2) CA, CORE SYSTEM (1) CB, TO CORE SYSTEM (2) CB. CORE SYSTEM (1) CC, TO CORE SYSTEM (2) CC. USE BELDENH 8870G OR SIMILAR WIRE
TROUBLE CONTACT	TBC, TBL, TDK	VARIES	MAX 120 VAC	UP TO 6 AMPS	WIRE TO TBL & TBC NORMALLY OPEN CONTACT, CLOSES IN TROUBLE CONDITION
CORE COMMUNICATIONS CABLE	RJ-45 Jack	INTERNET CONNECTION	SIGNAL	<10 AMPS	TYPICAL CONNECTION CAT5 CABLE TO LOCAL AREA NETWORK VIA ETHERNET SWITCH OR WIRELESS ROUTER WITH VALID INTERNET CONNECTION



ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN: 6/30/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.17

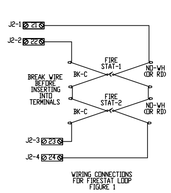
Plot Date & Time

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC FOR
7092302	DCV-6211		INSTALL
JOB NAME	DATE	DWG NO	
Escalon HS Culinary Classroom	10/14/2024	ECP #2-9	

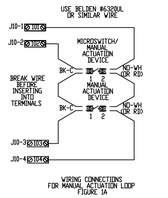
TANK PROTECTION LOW-VOLTAGE FIGURES

10/01/2023 Rev. 17

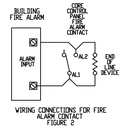
FS-3: SLAVE



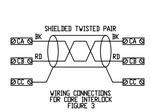
WIRING CONNECTIONS FOR FIRESTAT LOOP
FIGURE 1

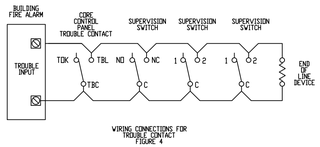


WIRING CONNECTIONS FOR MANUAL ACTUATION LOOP
FIGURE 1A



WIRING CONNECTIONS FOR FIRE ALARM CONTACT
FIGURE 2

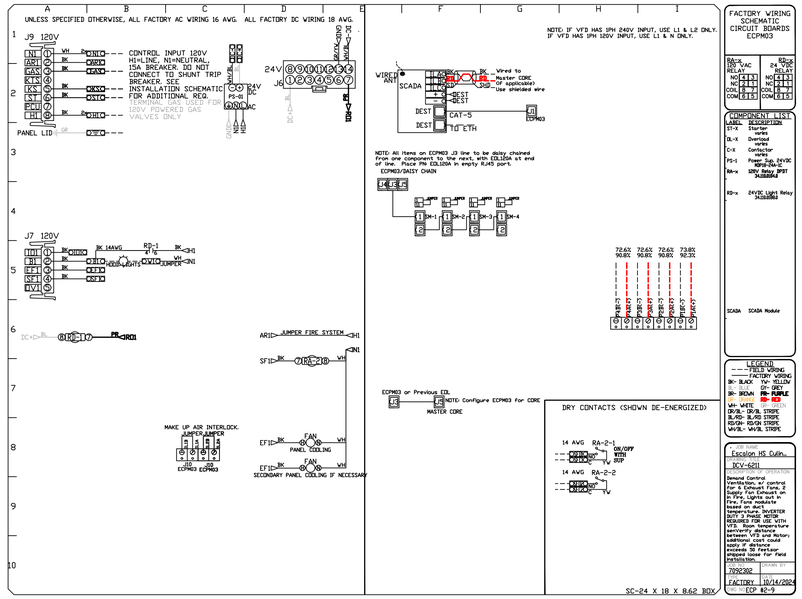




WIRING CONNECTIONS FOR TROUBLE CONTACT
FIGURE 4

NOTE: SEE INSTALLATION, OPERATION, AND MAINTENANCE MANUAL FOR FURTHER INSTRUCTIONS

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES



FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03
Main 120 VAC RELAY: NO 1, NC 2, COM 3, COIL 4 — RB-x 24 VDC RELAY: NO 1, NC 2, COM 3, COIL 4

COMPONENT LIST.	
LABEL	DESCRIPTION
ST-X	Starter varies
DL-X	Overload varies
C-X	Contactor varies
PS-1	Power Sup 24VDC 30W 1.25A
RA-x	120V Relay SPDT Schneider
RB-x	24VDC Light Relay Schneider
SCADA	SCADA Module

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK
YW- YELLOW
GY- GREY
BR- BROWN
PR- PURPLE
WH- WHITE
BK/YL- BK/YL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE
BK/WH- BK/WH STRIPE
BL/YW- BL/YW STRIPE
RD/BK- RD/BK STRIPE
WH/GN- WH/GN STRIPE
WH/BR- WH/BR STRIPE
WH/YL- WH/YL STRIPE

Escalon HS Culin.
DCV-6211
SEQUENCE OF OPERATION
Demand Control Ventilation, air control for 6 exhaust fans, 2 Supply Fan Exhaust on Fire, Lights out in Fire, Fans cycle's based on duct temperature, INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor wiring between VFD and Rotary, additional cost could apply if more than 500ft. 20 Feet shipped loose for Field installation.
DRAWN BY
7092302
FACTORY 10/14/2024
ECP #2-9

SC-24 X 18 X 8.62 BOX

FACTORY WIRING SCHEMATIC CIRCUIT BOARDS ECPM03 HMI
Rev. 2.10.00 Rev. E.10.00
Main 120 VAC RELAY: NO 1, NC 2, COM 3, COIL 4 — RB-x 24 VDC RELAY: NO 1, NC 2, COM 3, COIL 4

COMPONENT LIST.	
LABEL	DESCRIPTION
ST-x	Starter varies
C-x	Contactor varies
SM-x	VFD varies
LR-x	Line/Load Reactor varies

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK
YW- YELLOW
GY- GREY
BR- BROWN
PR- PURPLE
WH- WHITE
BK/YL- BK/YL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

Escalon HS Culin.
DCV-6211
SEQUENCE OF OPERATION
Demand Control Ventilation, air control for 6 exhaust fans, 2 Supply Fan Exhaust on Fire, Lights out in Fire, Fans cycle's based on duct temperature, INVERTER DUTY 3 PHASE MOTOR REQUIRED FOR USE WITH VFD. Room temperature sensor wiring between VFD and Rotary, additional cost could apply if more than 500ft. 20 Feet shipped loose for Field installation.
DRAWN BY
7092302
FACTORY 10/14/2024
ECP #2-10

SC-24 X 18 X 8.62 BOX

ATTENTION: LOW-VOLTAGE DC OR SIGNALING WIRE SHOULD BE ROUTED IN SEPARATE CONDUIT FROM ALL AC SOURCES.

FS-2: MASTER

FACTORY WIRING SCHEMATIC CORE FIRE PROTECTION
RA-x 120 VAC RELAY: NO 1, NC 2, COM 3, COIL 4 — RB-x 24 VDC RELAY: NO 1, NC 2, COM 3, COIL 4

COMPONENT LIST.	
LABEL	DESCRIPTION
MAS-01	MANUAL ACTIVATION SWITCH
PS-02	CORE POWER SUPPLY 30W 52.5" MEAN WELL PSC-60B-24
VS-x	Water Solenoid varies
LT-06	24V Red Ind Light XL-SMSD-24R
LL-01	Surf. Level Sensor 40068
AM-01	Audible Alarm 0110BL03PPB
PB-XX	Prime/Reset Switch 1SWNO+1SWNC
TS-01	TEST/AM Switch 1SDMZ
SW-04	Tamper Switch 1SWNO+1SWNC
SP-1	Surfactant Pump 3888-100
SV-1	24v 3C Gas Valve 36C24
TS-01	Duct Fire Sensor D-77605-00CRE
LT-05	24V TLS 3ml Light XL-SMSD-24G
PS-01	Residual Pressure Sister 551-551HB
PVS-01	24VDC Power Supply 24VDC 5W PVS05
RB-XX	24VDC Breeze Relay RLC-PRT-1VDC-SI

LEGEND
FIELD WIRING
FACTORY WIRING
BK- BLACK
YW- YELLOW
GY- GREY
BR- BROWN
PR- PURPLE
WH- WHITE
BK/YL- BK/YL STRIPE
BL/RD- BL/RD STRIPE
RD/GN- RD/GN STRIPE
WH/BL- WH/BL STRIPE

Escalon HS Culin.
DCV-6211
SEQUENCE OF OPERATION
Fire System W/ TANK FS - 4,5,6,12,13 / Remote - 4,5,7,8,9,10,12,
DRAWN BY
7092302
FACTORY 10/14/2024
ECP #2-11

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15867 REN: 5/25 STATE OF CALIFORNIA

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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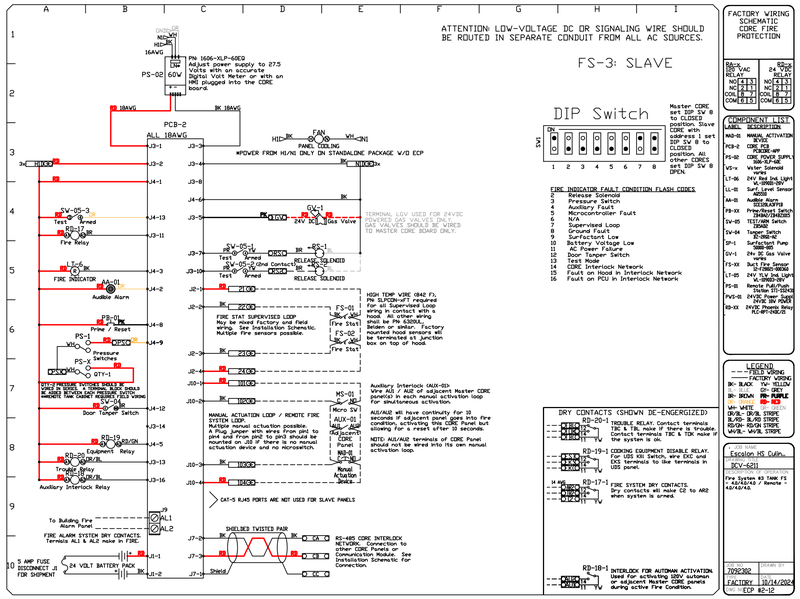
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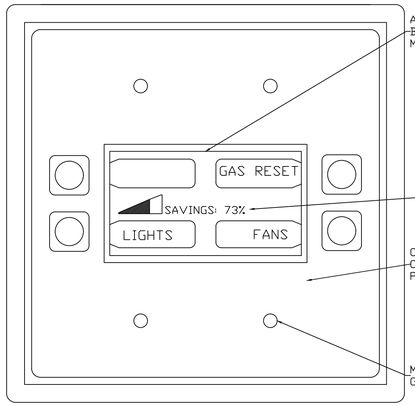
MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.18

Plot Date & Time

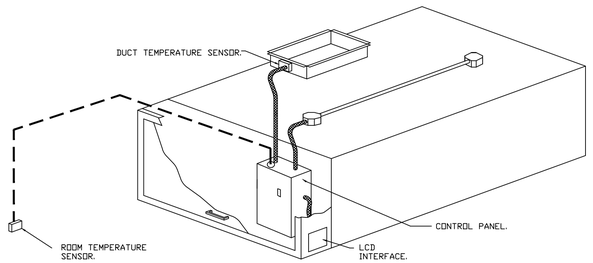




Duct Temp Sensor to be installed in every exhaust riser. All Duct Temp Sensors and Hood Lights to be wired back to SC-EMS Electrical Control Box.

DEMAND CONTROL VENTILATION HOOD CONTROL PANEL SPECIFICATIONS:

- CONTROLS SHALL BE LISTED BY ETL (UL 508A) AND SHALL COMPLY WITH DEMAND VENTILATION SYSTEM TURNDOWN REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- THE CONTROL ENCLOSURE SHALL BE NEMA 1 RATED AND LISTED FOR INSTALLATION INSIDE OF THE EXHAUST HOOD UTILITY CABINET. THE CONTROL ENCLOSURE MAY BE CONSTRUCTED OF STAINLESS STEEL OR PAINTED STEEL.
- TEMPERATURE PROBE(S) LOCATED IN THE EXHAUST DUCT RISER(S) SHALL BE CONSTRUCTED OF STAINLESS STEEL.
- A DIGITAL CONTROLLER SHALL BE PROVIDED TO ACTIVATE THE HOOD EXHAUST FANS DYNAMICALLY BASED ON A FIXED DIFFERENTIAL BETWEEN THE AMBIENT AND DUCT TEMPERATURES SENSORS. THIS FUNCTION SHALL MEET THE REQUIREMENTS OF IMC 507.1.1.
- A DIGITAL CONTROLLER SHALL PROVIDE ADJUSTABLE HYSTERESIS SETTINGS TO PREVENT CYCLING OF THE FANS AFTER THE COOKING APPLIANCES HAVE BEEN TURNED OFF AND/OR THE HEAT IN THE EXHAUST SYSTEM IS REDUCED.
- A DIGITAL CONTROLLER SHALL PROVIDE AN ADJUSTABLE MINIMUM FAN RUN-TIME SETTING TO PREVENT FAN CYCLING.
- VARIABLE FREQUENCY DRIVES (VFDS) SHALL BE PROVIDED FOR FANS AS REQUIRED. THE DIGITAL CONTROLLER SHALL MODULATE THE VFDS BETWEEN A MINIMUM SETPOINT AND A MAXIMUM SETPOINT ON DEMAND. THE DUCT TEMPERATURE SENSOR INPUT(S) TO THE DIGITAL CONTROLLER SHALL BE USED TO CALCULATE THE SPEED REFERENCE SIGNAL.
- THE VFD SPEED RANGE OF OPERATION SHALL BE FROM 0% TO 100% FOR THE SYSTEM, WITH THE ACTUAL MINIMUM SPEED SET AS REQUIRED TO MEET MINIMUM VENTILATION REQUIREMENTS.
- AN INTERNAL ALGORITHM TO THE DIGITAL CONTROLLER SHALL MODULATE SUPPLY FAN VFD SPEED PROPORTIONAL TO ALL EXHAUST FANS THAT ARE LOCATED IN THE SAME FAN GROUP AS THE SUPPLY FAN.
- THE SYSTEM SHALL OPERATE IN PREP MODE DURING LIGHT COOKING LOAD OR COOL DOWN MODE WHEN SUFFICIENT HEAT REMAINS UNDERNEATH THE HOOD SYSTEM AFTER COOKING OPERATIONS HAVE COMPLETED. OPERATION DURING EITHER OF THESE PERIODS WILL DISABLE THE SUPPLY FANS AND PROVIDE AN EXHAUST FAN SPEED THAT IS EQUAL TO THE MINIMUM VENTILATION REQUIREMENT.
- A DIGITAL CONTROLLER SHALL DISABLE THE SUPPLY FAN(S), ACTIVATE THE EXHAUST FAN(S), ACTIVATE THE APPLIANCE SHUNT TRIP, AND DISABLE AN ELECTRIC GAS VALVE AUTOMATICALLY WHEN FIRE CONDITION IS DETECTED ON A COVERED HOOD.
- A DIGITAL CONTROLLER SHALL ALLOW FOR EXTERNAL BMS FAN CONTROL VIA DRY CONTACT (EXTERNAL CONTROL SHALL NOT OVERRIDE FAN OPERATION LOGIC AS REQUIRED BY CODE).
- AN LCD INTERFACE SHALL BE PROVIDED WITH THE FOLLOWING FEATURES:
  - A. ON/OFF PUSH BUTTON FAN & LIGHT SWITCH ACTIVATION.
  - B. INTEGRATED GAS VALVE RESET FOR ELECTRONIC GAS VALVES (NO RESET RELAY REQUIRED).
  - C. VFD FAULT DISPLAY WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - D. DUCT TEMPERATURE SENSOR FAILURE DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - E. MIS-WIRED DUCT TEMPERATURE SENSOR DETECTION WITH AUDIBLE & VISUAL ALARM NOTIFICATION.
  - F. A SINGLE LOW VOLTAGE CAT-5 RJ45 WIRING CONNECTION.
  - G. AN ENERGY SAVINGS INDICATOR THAT UTILIZES MEASURED KWH FROM THE VFDS.



TYPICAL HOOD CONTROL PANEL INSTALLATION

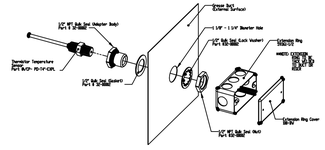
SEQUENCE OF OPERATIONS:

THE HOOD CONTROL PANEL IS CAPABLE OF OPERATING IN ONE OR MORE OF THE FOLLOWING STATES AT ANY GIVEN TIME:

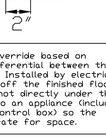
- AUTOMATIC: THE SYSTEM OPERATES BASED ON THE DIFFERENTIAL BETWEEN ROOM TEMPERATURE AND THE TEMPERATURE AT THE HOOD CAVITY OR EXHAUST DUCT COLLAR. FANS ACTIVATE AT A CONFIGURABLE TEMPERATURE DIFFERENTIAL THRESHOLD. DEPENDING ON THE JOB CONFIGURATION EACH FAN ZONE CAN BE CONFIGURED AS STATIC OR DYNAMIC. THESE TERMS REFER TO WHETHER A VARIABLE MOTOR (SUCH AS EC MOTORS OR VFD DRIVEN MOTORS) MODULATE WITH TEMPERATURE. IF THE PANEL IS EQUIPPED WITH VARIABLE SPEED FANS AND THE ZONE IS DEFINED AS 'DYNAMIC', THESE WILL MODULATE WITHIN A USER-DEFINED RANGE BASED ON THE TEMPERATURE DIFFERENTIAL. PANELS EQUIPPED WITH VARIABLE SPEED FANS AND A FAN ZONE DEFINED AS 'STATIC', FANS WILL RUN AT A SET SPEED CALCULATED FOR THE DRIVE. DEMAND CONTROL VENTILATION SYSTEMS ARE CAPABLE OF MODULATING EXHAUST AND MAKE UP AIR FAN SPEEDS PER THE REQUIREMENTS OUTLINED IN IECC 403.7.5 (2021).
- MANUAL: THE SYSTEM OPERATES BASED ON HUMAN INPUT FROM AN HMI.
- SCHEDULE: A WEEKLY SCHEDULE CAN BE SET TO RUN FANS FOR A SPECIFIED PERIOD THROUGHOUT THE DAY. THERE ARE THREE OCCUPIED TIMES PER DAY TO ALLOW FOR THE USER TO SET UP A TIME THAT IS SUITABLE TO THEIR NEEDS. ANY TIME THAT IS WITHIN THE DEFINED OCCUPIED TIME, THE SYSTEM WILL RUN AT MODULATION MODE AND FOLLOW THE FAN PROCEDURE ALGORITHM BASED ON TEMPERATURE DURING THIS TIME. DURING UNOCCUPIED TIME, THE SYSTEM WILL HAVE AN EXTRA OFFSET TO PREVENT UNINTENDED ACTIVATION OF THE SYSTEM DURING A TIME WHERE THE SYSTEM IS NOT BEING OCCUPIED.
- OTHER: THE SYSTEM OPERATES BASED ON THE INPUT FROM AN EXTERNAL SOURCE (DDC, BMS OR HARD-WIRED INTERLOCK).
- FIRE: UPON ACTIVATION OF THE HOOD FIRE SUPPRESSION SYSTEM, THE EXHAUST FAN WILL COME ON OR CONTINUE TO TO RUN, THE HOOD MAKEUP AIR WILL SHUTDOWN, AND A SIGNAL WILL BE SENT FOR ACTIVATING THE SHUNT TRIP BREAKER PROVIDED BY THE ELECTRICIAN. FUEL GAS WILL SHUT OFF VIA A MECHANICAL/ELECTRICAL GAS VALVE ACTUATED BY THE HOOD FIRE SUPPRESSION SYSTEM.

DUCT THERMISTOR SENSOR INSTALLATION

NOTE: Thermistor has 2 wires that connect to control cabinet



Room Override Thermostat



Provides room override based on temperature differential between the room and duct. Installed by electrician on a wall, 5'-6" off the finished floor, in the space but not directly under the hood or close to an appliance (including the electrical control box) so the reading is accurate for space.

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15967 REN. 5/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration
REGISTERED PROFESSIONAL ENGINEER LEN LAMPE MECHANICAL STATE OF CALIFORNIA
Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.19

Plot Date & Time

DUCTWORK #1 PARTS – JOB#7092302 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
H1-E1	DW18DWRISER-2R-S	2100				-1.0545	8.15	0.00	1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1447DWLT-2R-S	2100				-0.027	62.39	1964.43	1	DOUBLE WALL DUCT - 14" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P2	DW1447DWLT-2R-S	2100				-0.027	62.39	1964.43	1	DOUBLE WALL DUCT - 14" INNER DUCT, 47" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P3	DW1435DWLT-2R-S	2100				-0.0201	46.53	1964.43	1	DOUBLE WALL DUCT - 14" INNER DUCT, 35" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL.
P4 ASSEMBLED W/P5	DW1447DWAJDTP-2R-S	2100				-0.0149	93.06	1964.43	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 14" INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11" / MAX LENGTH = 48.5" / ADJUSTMENT = 30.5" / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL "V" CLAMPS.
P5 ASSEMBLED W/P4 D=B	DW2314TPDBEX	2100					8.00	1964.43	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 23" CURB TO 14" DUCT, 16 GA ALUMINIZED. USED ON NCA14FA & NCA14HPFA. TRANSITION PLATE OD IS 23.5" DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P5						-1.1435	0.00			
RC1	DW18DWRISER-2R-S						8.15		1	DOUBLE WALL RISER COVER - USED ON 14" INNER RISER, 4" LONG - 2 LAYERS REDUCED CLEARANCE - 18" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		1	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW14DWCLASY-2R-S						7.21		2	DUCT - 14" DUCT - 18" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							303.89			

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5'-16')	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5'-24')	10'	24'	24'
3Z (26' -36')	10'	20'	20'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN: 3/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER LEN LAMMERT MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

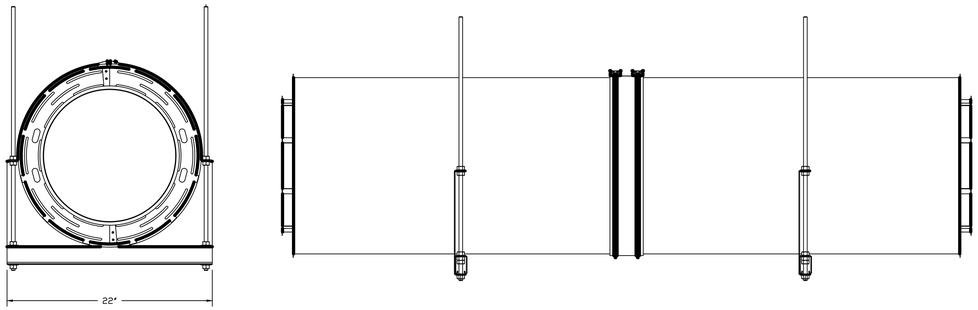
Project Number	2321
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Drawn by	DW
Checked by	GL

M4.20

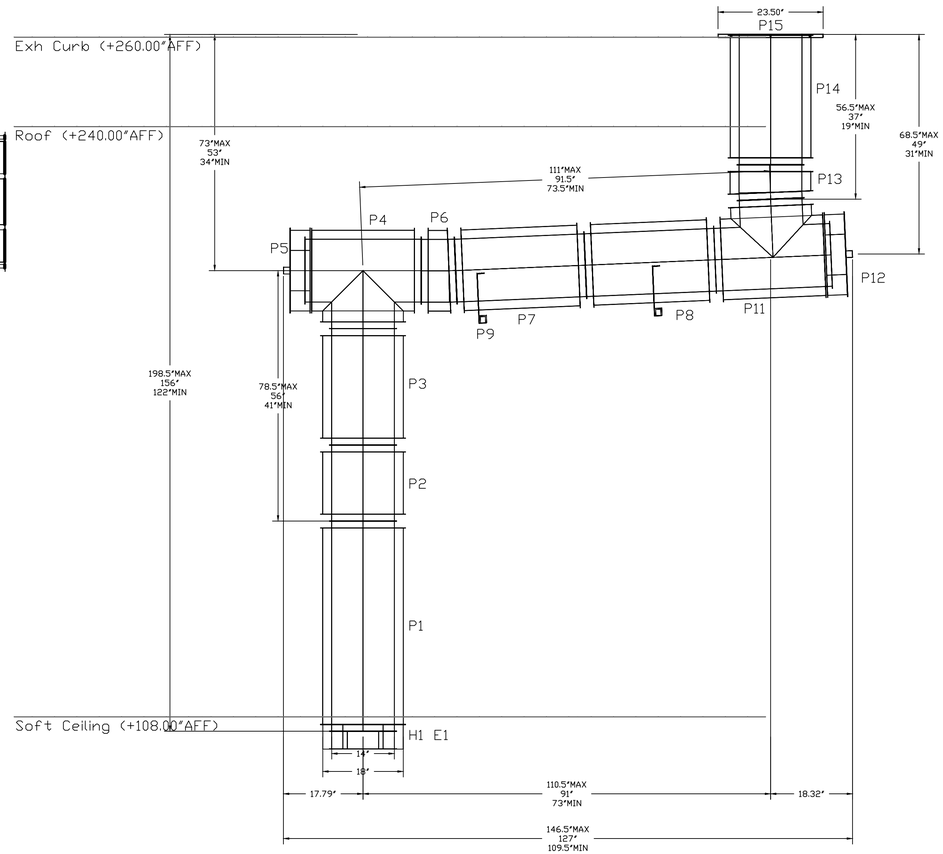
Plot Date & Time

SUPPORT SYSTEM DETAILS #1

DW1822SADKIT - HORIZONTAL SUPPORTS



DUCTWORK #1 FRONT VIEW



TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15927 REN. 5/25 STATE OF CALIFORNIA

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nexus engineering

Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER LEN LAMMERS No. 22176 MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.21

Plot Date & Time

DUCTWORK #2 PARTS – JOB#7092302 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
H2-E1	DW20DWRISER-2R-S	2583				-0.9705	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
H3-E1	DW20DWRISER-2R-S	2625				-1.002	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
H4-E1	DW20DWRISER-2R-S	2583				-0.9705	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
H5-E1	DW20DWRISER-2R-S	2583				-0.9705	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
H6-E1	DW20DWRISER-2R-S	2625				-1.002	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
H7-E1	DW20DWRISER-2R-S	2583				-0.9705	8.36	0.00	1	DOUBLE WALL RISER COVER - USED ON 16' INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
P1	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P2	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P3	DW1635DWLT-2R-S	2583				-0.0157	52.26	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P4 ASSEMBLED W/P5	DW1647DWAJDTP-2R-S	2583				-0.0112	102.54	1849.94	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P5 ASSEMBLED W/P4 O=B	DW2616TPDBEX	2583					9.00	1849.94	1	DUCT TO CURB TRANSITION 3/4' DOWN TURN, 26 1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00' DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P5						-1.0395	0.00			
P6	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P7	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P8	DW1635DWLT-2R-S	2583				-0.0157	52.26	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P9 ASSEMBLED W/P10	DW1647DWAJDTP-2R-S	2583				-0.0112	102.54	1849.94	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P10 ASSEMBLED W/P9 O=B	DW2616TPDBEX	2583					9.00	1849.94	1	DUCT TO CURB TRANSITION 3/4' DOWN TURN, 26 1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00' DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P10						-1.0395	0.00			
P11	DW1647DWLT-2R-S	2625				-0.0217	70.12	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P12	DW1647DWLT-2R-S	2625				-0.0217	70.12	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P13	DW1635DWLT-2R-S	2625				-0.0161	52.26	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P14 ASSEMBLED W/P15	DW1647DWAJDTP-2R-S	2625				-0.0115	102.54	1880.02	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P15 ASSEMBLED W/P14 O=B	DW2616TPDBEX	2625					9.00	1880.02	1	DUCT TO CURB TRANSITION 3/4' DOWN TURN, 26 1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00' DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P15						-1.073	0.00			
P16	DW1647DWLT-2R-S	2625				-0.0217	70.12	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P17	DW1647DWLT-2R-S	2625				-0.0217	70.12	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P18	DW1635DWLT-2R-S	2625				-0.0161	52.26	1880.02	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P19 ASSEMBLED W/P20	DW1647DWAJDTP-2R-S	2625				-0.0115	102.54	1880.02	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P20 ASSEMBLED W/P19 O=B	DW2616TPDBEX	2625					9.00	1880.02	1	DUCT TO CURB TRANSITION 3/4' DOWN TURN, 26 1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00' DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P20						-1.073	0.00			
P21	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P22	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P23	DW1635DWLT-2R-S	2583				-0.0157	52.26	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P24 ASSEMBLED W/P25	DW1647DWAJDTP-2R-S	2583				-0.0112	102.54	1849.94	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.
P25 ASSEMBLED W/P24 O=B	DW2616TPDBEX	2583					9.00	1849.94	1	DUCT TO CURB TRANSITION 3/4' DOWN TURN, 26 1/2' CURB TO 16' DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE DD IS 27.00' DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P25						-1.0395	0.00			
P26	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P27	DW1647DWLT-2R-S	2583				-0.0211	70.12	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 47' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P28	DW1635DWLT-2R-S	2583				-0.0157	52.26	1849.94	1	DOUBLE WALL DUCT - 16' INNER DUCT, 35' LONG - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL.
P29 ASSEMBLED W/P30	DW1647DWAJDTP-2R-S	2583				-0.0112	102.54	1849.94	1	DOUBLE WALL ADJUSTABLE DUCT TRANSITION PLATE - 16' INNER DUCT - 2 LAYERS REDUCED CLEARANCE - 20' STAINLESS STEEL OUTER SHELL. MIN LENGTH = 11' / MAX LENGTH = 48.5' / ADJUSTMENT = 30.5' / ADJUSTABLE SECTION MAY NEED TO BE CUT. INCLUDES SINGLE AND DOUBLE WALL 'V' CLAMPS.

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15827 REN: 5/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
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HVAC . Plumbing/Piping . Fire Sprinklers
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REGISTERED PROFESSIONAL ENGINEER LEN LAMMERT No. 22176 MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.22

Plot Date & Time

DUCTWORK #2 PARTS – JOB#7092302 DOUBLE WALL

TAG	PART #	CFM	GPM	ZONE	COVEREDBY	SP	WEIGHT	VELOCITY	QTY	DESCRIPTION
P30 ASSEMBLED W/P29 □=B	DW2616TPDBEX	2583					9.00	1849.94	1	DUCT TO CURB TRANSITION 3/4" DOWN TURN, 26 1/2" CURB TO 16" DUCT, 16 GA ALUMINIZED. USED ON NCA16FA / NCA16HPFA & NCA18FA / NCA18HPFA. TRANSITION PLATE OD IS 27.00" DESIGNED FOR USE WITH EXHAUST FAN.
SYSTEM AT P30						-1.0395	0.00			
RC1	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
RC2	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
RC3	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
RC4	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
RC5	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
RC6	DW20DWRISER-2R-S						8.36		1	DOUBLE WALL RISER COVER - USED ON 16" INNER RISER, 4' LONG - 2 LAYERS REDUCED CLEARANCE - 20" STAINLESS STEEL OUTER RISER SHELL ASSEMBLY. INCLUDES INSULATION & SINGLE V CLAMPS FOR INNER & OUTER CONNECTIONS.
	3M-2000PLUS						0.80		6	DUCT - 3M FIRE BARRIER 2000 PLUS SILICONE - USED AS SEALANT TO SEAL DUCT JOINTS.
	DW16DWCLASY-2R-S						7.96		12	DUCT - 16" DUCT - 20" DOUBLE "V" CLAMP - 2R INSULATION & SINGLE "V" CLAMP INCLUDED - REDUCED CLEARANCE.
TOTAL WEIGHT							2024.88			

DOUBLE WALL FACTORY BUILT DUCTWORK

- ALL DUCTWORK IS REQUIRED TO BE INSTALLED WITH THE MAXIMUM SUPPORT SPACING LISTED BELOW.
- FOR A COMPLETE LIST OF APPROVED SUPPORT METHODS, SEE THE ENTIRE INSTALLATION AND OPERATION MANUAL
- DUCTWORK SHALL SLOPE NOT LESS THAN 1/16" PER LINEAR FOOT TOWARDS THE HOOD OR AN APPROVED GREASE COLLECTION RESERVOIR.
- WHERE HORIZONTAL DUCTS EXCEED 75 FEET IN LENGTH, THE SLOPE SHALL NOT BE LESS THAN 3/16" PER LINEAR FOOT.

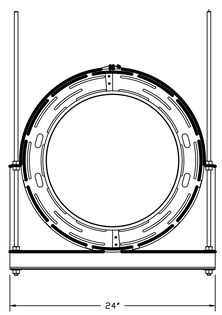
HORIZONTAL	
DUCT DIAMETER	SUPPORT SPACING (FT)
5"	7'
6"	7'
7"	7'
8"	7'
10"	7'
12"	7'
14"	7'
16"	7'
18"	5'
20"	5'
22"	5'
24"	5'
26"	5'
28"	5'
30"	5'
32"	5'
34"	5'
36"	5'

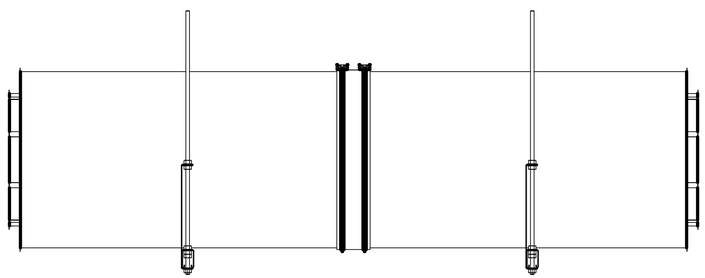
VERTICAL			
TYPE	WALL SUPPORT (FT)	CURB SUPPORT (FT)	FLOOR SUPPORT (FT)
2R & 2R HT (5"-16")	20'	24'	24'
2R (18")	18'	24'	24'
3R & 3Z (5"-24")	10'	24'	24'
3Z (26" -36")	10'	20'	20'

DO NOT LEAK TEST USING SMOKE BOMBS CONTAINING CHLORINES/CHLORIDES. CONSULT WITH CAPTIVEAIRE FOR PROPER LEAK TESTING METHODS.

SUPPORT SYSTEM DETAILS #2

DW2024SADKIT - HORIZONTAL SUPPORTS





TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15857 REN: 5/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER LEN LAMPRECHT No. M 29016 MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

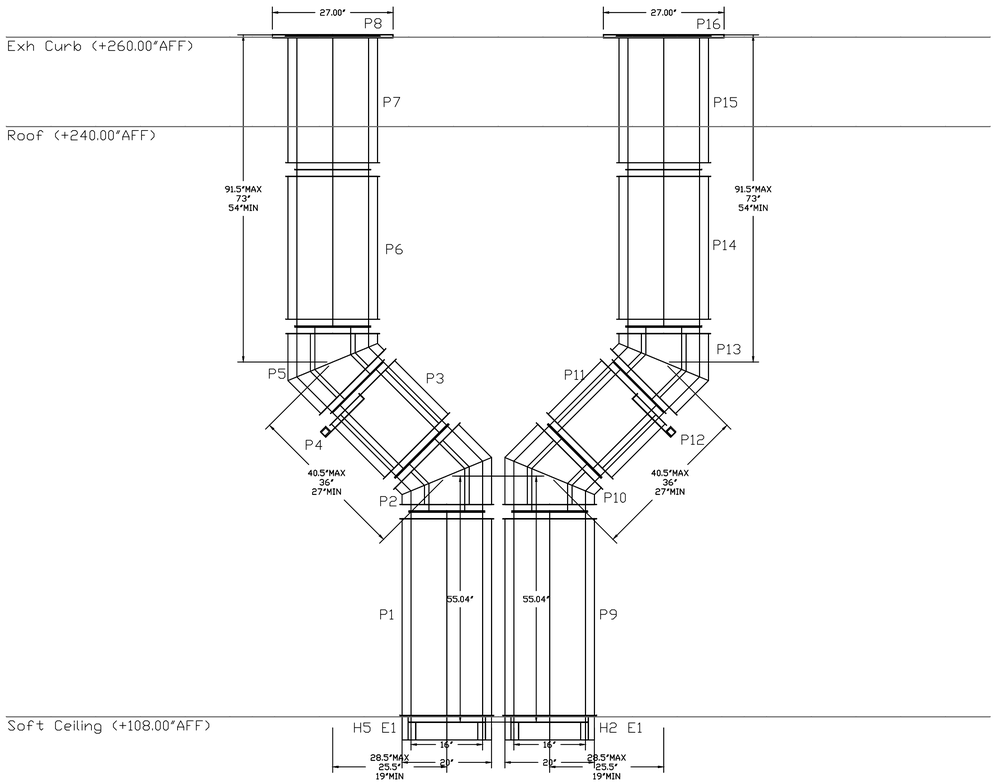
MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

M4.23

Plot Date & Time

DUCTWORK #2 SIDE VIEW



TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
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Additional information including installation manual available at www.captiveaire.com.

FACTORY BUILT DOUBLE WALL GREASE DUCT MODEL DW-2R SPECIFICATION:

FURNISH DOUBLE WALL, FACTORY BUILT GREASE DUCT FOR USE WITH TYPE I KITCHEN HOODS, WHICH CONFORMS TO THE REQUIREMENTS OF NFPA-96. PRODUCTS SHALL BE ETL LISTED TO UL-1978 AND UL-2221 FOR VENTING AIR AND GREASE VAPORS FROM COMMERCIALCOOKING OPERATION. TESTING HAS BEEN EXTENDED TO RECONGNIZE ASTM E2336 AND AC101 DUE TO SIMILAR TESTING CRITERIA. MODELS DW-2R, 3R AND 3Z ARE USED FOR GREASE DUCT APPLICATIONS WHEN INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS AND NFPA 96; STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS. DOUBLE WALL GREASE DUCTS ARE LISTED FOR A CONTINUOUS INTERNAL TEMPERATURE OF 500 DEGREES F AND INTERMITTENT TEMPERATURES OF 2000 DEGREES F.

THE DUCT SECTIONS SHALL BE CONSTRUCTED OF AN INNER DUCT WALL AND AN OUTER WALL WITH INSULATION IN BETWEEN. THE INNER DUCT WALL SHALL BE CONSTRUCTED OF .036 INCH THINK, 430 TYPE STAINLESS STEEL AND BE AVAILABLE IN DIAMETERS 8" THROUGH 24". THE OUTER WALL SHALL BE CONSTRUCTED OF STAINLESS STEEL AT A MINIMUM OF .024 INCH THICKNESS. THE DUCT, BASED ON MODEL NUMBER, SHALL INCLUDE LAYERS OF SUPER WOOL 607 PLUS INSULATION BETWEEN THE INNER AND OUTER WALL. GREASE DUCT JOINTS SHALL BE HELD TOGETHER BY MEANS OF FORMED V CLAMPS AND SEALED WITH 3M FIRE BARRIER 2000+. THE DUCT WALL ASSEMBLY SHALL BE TESTED AT 3/4" OR ZERO INCH CLEARANCE, ACCORDING TO CLASSIFICATIONS.

CLASSIFICATIONS AND CLEARANCES

UL 2221: STANDARD FOR FIRE RESISTIVE GREASE DUCT ENCLOSURE ASSEMBLIES. CHAPTER 7 OF THIS STANDARD REFERENCES A TEST LABELED INTERNAL FIRE TEST. SECTION 7.1.1 REFERENCES TWO INSTALLATION CONDITIONS, CONDITION A AND CONDITION B. CONDITION A REPRESENTS ALL INSTALLATION CONDITION EXCEPT FOR INSTALLATION WITHIN NON-VENTILATEDCOMBUSTIBLE ENCLOSURES. CONDITION B REPRESENTS INSTALLATION WITHIN A NON-VENTILATED COMBUSTIBLE ENCLOSURE.

MODEL DW-2R IS CLASSIFIED UNDER UL2221 AS AN ALTERNATE TO 2-HR FIRE RESISTIVE SHAFT ENCLOSURES WITH A REDUCED CLEARANCE TO COMBUSTIBLES (SIZES 8" TO 16" DIAMETER). MODEL 2R IS LISTED IN ACCORDANCE WITH THE REQUIREMENTS FOR DUCT ENCLOSURE CONDITION B.

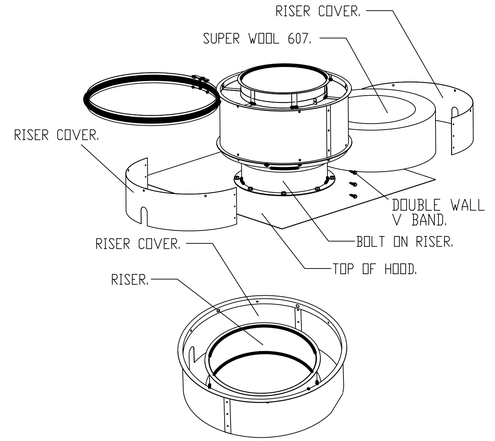
MODEL DW-2R: 3/4" CLEARANCE TO COMBUSTIBLES FROM THE SURFACE OF THE DUCT OUTER SHELL; ZEROR INCH CLEARANCE FROM COMBUSTIBLES FROM THE TIP OF THE OUTER V BAND.

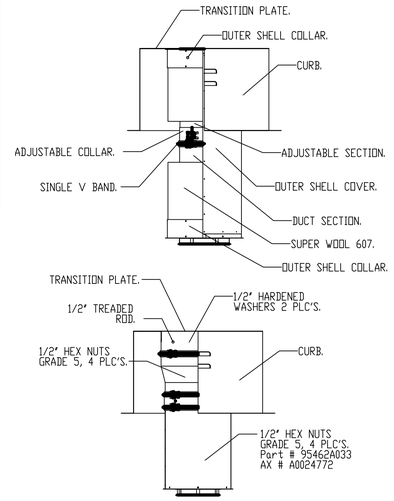
DOUBLE WALL GREASE DUCT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S "INSTALLATION, OPERATION AND MAINTENANCE MANUAL," ETL LISTING, STATE AND LOCAL CODES. FANS SHALL BE SUPPORTED INDEPENDENTLY FROM THE GREASE DUCT SECTIONS. PROTECT GREASE DUCT FROM TWISTING OR MOVEMENT CAUSED BY FAN TORQUE OR VIBRATION.

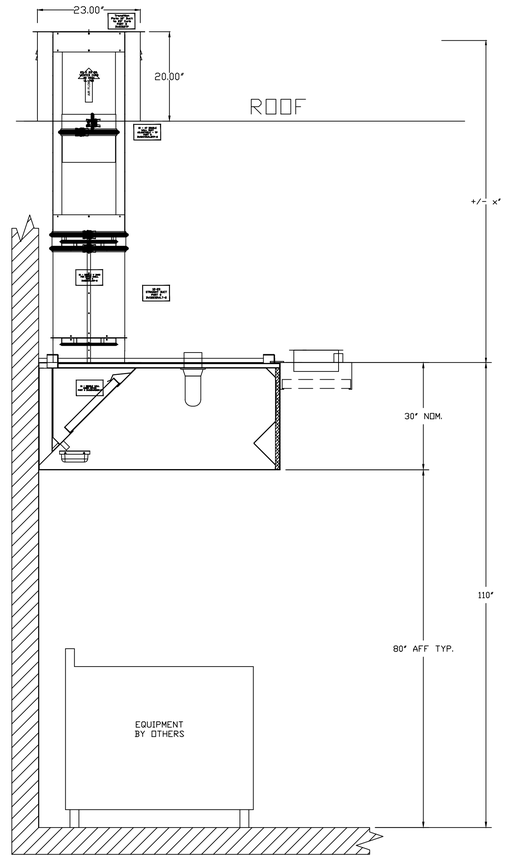
CERTIFICATIONS:

THE DW-2R SERIES HAS BEEN CERTIFIED BY ITS. THIS CERTIFICATION MARK INDICATES THAT THE PRODUCT HAS BEEN TESTED TO AND HAS MET THE MINIUM REQUIREMENTS OF A WIDELY RECOGNIZED (CONSENSUS) U.S. AND CANADIAN PRODUCTS SAFETY STANDARD, THAT THE MANUFACTURING SITE HAS BEEN AUDITED, AND THAT THE APPLICANT HAS AGRRED TO A PROGRAM OF PERIODIC FACTORY FOLLOW-UP INSPECTIONS TO VERIFY CONTINUED PERFORMANCE.

DOUBLE WALL DUCT RISER COVER

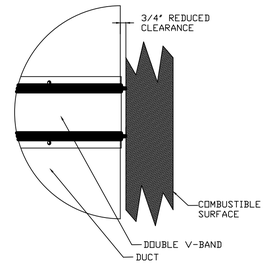






FOR REFERENCE ONLY
(ONCE DUCT RUN HAS BEEN DETERMINED, ACCURATE DUCT DESIGN WILL BE PRODUCED)

REDUCED CLEARANCE DETAIL



TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15877 REN. 5/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC , Plumbing/Piping , Fire Sprinklers
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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
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MECHANICAL - HOOD INFORMATION

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

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CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

This document is used to demonstrate compliance with mandatory requirements in 110.6(g) and 120.7(b)/ 160.1 for newly constructed nonresidential, hotel/ motel, multifamily and mixed-use buildings, and 141.0(b)1/ 180.2 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in 140.3/ 170.2 for newly constructed buildings, and 141.0/ 180.1/ 180.2 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 1 of 7)**
Project Address:	1528 Yosemite Ave.	**Date Prepared:**	11/4/2024

A. GENERAL INFORMATION

01	Project Location (city)	Escalon	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	95320	06	Total Conditioned Floor Area (ft²)	2483
03	Climate Zone	12	07	Total Unconditioned Floor Area (ft²)	120
04	Occupancy Types Within Project: (select all that apply): If one occupancy constitutes >= 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per 100.0(f).		08	☐ Project includes unconditioned enclosed space(s) > 5,000 ft² under a roof with a ceiling height of at least 15 ft.[1]	

● All Other Occupancies

[1] *FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15 ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in 140.3(c)/ 170.2(b). Compliance with 140.3(c)/ 170.2(b) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.*

B. PROJECT SCOPE

This table specifies project envelope components within the permit application demonstrating compliance using the prescriptive paths outlined in 140.3/ 170.2 and 141.0(a)1/ 180.1 and 141.0(b)1 and 2/ 180.2 for additions and alterations.

My project consists of (check all that apply)			Component Types				
			01		02		
☐	New Construction or Newly Conditioned Space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
☐	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
☐	Addition of conditioned space	☐	Roof	☐	Walls	☐	Exterior Opaque Doors
	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft			☐	Floors	☐	Fenestration/ Glazed Doors[1]
	☐ Addition is <=700 ft²						
	☐ Addition is >700 ft²						
☒	Alteration of conditioned space	☐	Roof Assembly	☒	Walls		
	☐ One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	☐	Roofing Material[2]	☐	Floors	☒	Fenestration

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CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 2 of 7)**
		Date Prepared:	11/4/2024

B. PROJECT SCOPE

[1] *FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on table K with fenestration.*
[2] *Roof recovers and replacements must also check "Roof Assembly" box and document compliance with insulation requirements in Table F. Roof recoats may document compliance with roof material only in Table G.*

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through L. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see the applicable table referenced below.

Opaque Envelope Components					Fenestration	Daylighting Spaces > 5,000ft²	Compliance Results
Roof Assembly	Roofing Materials	Walls	Floors	Doors			
01	02	03	04	05	06	07	08
(See Table F)	(See Table G)	(See Table H)	(See Table I)	(See Table J)	(See Table K)	(See Table L)	COMPLIES
Yes	Yes	Yes		Yes	Yes		

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. ROOF ASSEMBLY SCHEDULE

This section does not apply to this project.

G. RATED ROOFING MATERIAL (COOL ROOF)

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 3 of 7)**
		Date Prepared:	11/4/2024

H. WALL ASSEMBLY SCHEDULE

This table demonstrates compliance with prescriptive wall assembly requirements in 140.3(a)/ 170.2(a) for new constructions, 141.0(a)/ 180.1 for additions and 141.0(b)1B/ 180.2 for alterations.

01	Indicate wall types included in the project:[1]	☐ Framed	☐ Mass (new only)	☐ Concrete Sandwich Panel (new only)	☐ SIPS	☐ ICF (new only)
		☐ Metal Panels	☐ Metal Building	☒ Spandrel/ Curtain Wall	☐ Straw Bale	☐ Log Home (new only)

[1] *FOOTNOTES: Wall types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Spandrel & Curtain Walls

01	☒	Include Spandrel/ Curtain Walls in Area-Weighted Average U-factor Calculation[1]								
02	03	04	05	06	07	08	09	10		11
Tag/Plan Detail ID	Occupancy & Status	How Design U-factor was determined	Type	Finish	Insulation R-value	Thermal Performance Unit	Required Thermal Performance[2]	U-factor per Design		Net Area[3] ft²
S Wall infill	Nonresidential	JA4 Tables			15	U-factor	0.055	per JA4 per Software/ Other	0.051	229
N Wall infill	Nonresidential	JA4 Tables			15	U-factor	0.055	per JA4 per Software/ Other	0.051	604

[1] *FOOTNOTES: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Spandrel/ Curtain walls are combined with wood framed, SIPs, metal panel and straw bale wall types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in 141.0(b)1B4.*
[2] *Wall area minus any fenestration area*

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CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 4 of 7)**
		Date Prepared:	11/4/2024

H. WALL ASSEMBLY SCHEDULE

Area-Weighted Average U-factor Compliance Calculation for Wood Framed/ SIPs/ Spandrel/ Curtain/ Metal Panel/ Straw Bale Wall Types

01	02	03	04	05
Wall Type	Total Area of Wall Type (ft²)	Area-weighted U-factor for Wall Type		Compliance Results Using Area-Weighted Calculation Option
		Required	Designed	
Spandrel & Curtain	833	0.055	0.051	
Total for all Wall Types:	833	0.055	0.051	COMPLIES

I. FLOOR ASSEMBLY SCHEDULE

This section does not apply to this project.

J. EXTERIOR DOOR SCHEDULE

This table demonstrates compliance with prescriptive exterior door requirements in 140.3(a)7/ 170.2(a)4 for new construction or additions. Doors which are being replaced (alterations) do not need to be documented in this table because there are no Title 24, Part 6 requirements that apply. Exterior doors separate conditioned space from unconditioned space or from ambient air. Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on Table K with fenestration per Table B.

01	02	03	04	05	06	07
Tag/Plan Detail ID	Name/Description	Occupancy Type	Door Type	Door Insulation	Maximum Allowed U-factor	U-factor per Design

K. FENESTRATION AND GLAZED DOOR SCHEDULE

This table demonstrates compliance with prescriptive fenestration requirements in 140.3(a)5/ 170.2(a)3 for new constructions, 141.0(a)/ 180.1 for additions, or 141.0(b)2A/ 180.2 for alterations. Exterior doors that are more than 25% glass in area are considered Glazed Doors and should be documented on this table with fenestration.

01	Indicate fenestration types included in the project:[1]	☒ Vertical (alterations)	☐ Vertical (new)	☐ Skylights	☐ Glazed Doors (new only)

[1] *FOOTNOTES: Fenestration types indicated above as "(new only)" do not have Title 24, Part 6 requirements for alterations. New construction and additions do have requirements and should be clicked above and compliance demonstrated within this table.*

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

01	☒	Calculate Area-Weighted Average U-factor for Vertical Fenestration and Glazed Doors[1]
02	☒	Calculate Area-Weighted Average (R)SHGC for Vertical Fenestration and Glazed Doors[1]

Generated Date/Time:

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CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 5 of 7)**
		Date Prepared:	11/4/2024

K. FENESTRATION AND GLAZED DOOR SCHEDULE

03	☒	Calculate Area-Weighted Average VT for Vertical Fenestration and Glazed Doors[1]

Vertical Fenestration And Glazed Doors- U-factor, Solar Heat Gain Coefficient (RSHGC/ SHGC), Visible Transmittance (VT)

04	05	06	07	08	09		10	11	12	13
Tag/Plan Detail ID	Fenestration Type	Occupancy & Status	U-factor/ (R)SHGC Compliance Method	VT Compliance Method	Calculation Method for Performance Values per Design[2]		Product Performance Unit	Required Product Performance	Product Performance per Design	Area ft²
Window	Fixed window	Nonresidential/ Relocatable 1 CZ: : New			§110.6 Defaults		U-factor (max)	1.19	1.19	86
					☐	Overhang/ Slats used for RSHGC	(R)SHGC (max)	0.83	0.83	
							VT (min)	1	0.5	

[1] *FOOTNOTES: If any individual fenestration product is non-compliant, products may show compliance using an area-weighted calculation. Chromogenic glazing is not included in area-weighted calculations. Area-weighted calculation shown in separate area-weighted table below.*
[2] *The NA6 Default Calculation can only be used for alterations or dwelling units in buildings with <= 3 habitable stories. Alterations are limited to 200ft² of site built glazing and dwelling units are limited to 250ft² or 5% of conditioned floor area. If the fenestration does not meet these conditions, the only options for determining fenestration values are NFRC Certification or the Default Tables in 110.6.*
[3] *Overhangs must extend past the left and right window the same distance as the depth of the overhang or greater to show an affect on the RSHGC. If an overhang does not meet this requirement, the affect of the overhang will be ignored.*
[4] *Projecting includes casement and awning windows.*

Area-Weighted Average U-factor, SHGC, VT Compliance Calculation for Vertical Fenestration And Glazed Doors

01	02	03		04	05
Product Performance Unit	Total Area of Fenestration (ft²)	Area-weighted Calculation for Fenestration			Compliance Results Using Area-Weighted Calculation Option
		Required		Designed	
U-Factor	86	0		0	COMPLIES
(R)SHGC	86	0		0	COMPLIES
VT	86	0		0	COMPLIES

L. DAYLIGHT IN LARGE ENCLOSED SPACES

This section does not apply to this project.

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Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 6 of 7)**
		Date Prepared:	11/4/2024

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-ENV-01-E - Must be submitted for all buildings

N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation 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/. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section 10-103(a)4 and NA7.3.1

Form/Title	Systems/Spaces To Be Field Verified
NRCA-ENV-02-F must be submitted for all new, added or altered site built fenestration.	Fenestration;

O. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

Generated Date/Time:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance — Report Version: 2022.0.000 Schema Version: rev 20220101 — Documentation Software: EnergyPro Compliance ID: EnergyPro-4796-1124-2287 Report Generated: 2024-11-04 13:26:33

STATE OF CALIFORNIA
Envelope Component Approach
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-ENV-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 7 of 7)**
Project Address:	1528 Yosemite Ave.	**Date Prepared:**	11/4/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Dan Wilson	Documentation Author Signature:
Company: Nexus Engineering Inc.	Signature Date: 2024-11-04
Address: 1400 Lone Palm, Suite A	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Modesto CA 95351	Phone: 209-572-7399

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: Timothy P. Huff	Responsible Designer Signature:
Company: Timothy P. Huff & Associates, Inc.	Date Signed: 2024-11-04
Address: 519 McHenry Ave.	License: C-15527
City/State/Zip: Modesto CA 95354	Phone: 209-571-2232

Generated Date/Time:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance — Report Version: 2022.0.000 Schema Version: rev 20220101 — Documentation Software: EnergyPro Compliance ID: EnergyPro-4796-1124-2287 Report Generated: 2024-11-04 13:26:33

STATE OF CALIFORNIA
Mechanical Systems
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 140.4, or 141.0(b)2 for alterations.

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 1 of 11)**
Project Address:	1528 Yosemite Ave.	**Date Prepared:**	11/4/2024

A. GENERAL INFORMATION

01	Project Location (city)	Escalon	04	Total Conditioned Floor Area	2483
02	Climate Zone	12	05	Total Unconditioned Floor Area	120
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Classroom ● All Other Occupancies

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

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	☐ 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

Generated Date/Time:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance — Report Version: 2022.0.000 Schema Version: rev 20220101 — Documentation Software: EnergyPro Compliance ID: EnergyPro-4796-1124-2286 Report Generated: 2024-11-04 13:26:33

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-MCH-E**

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 2 of 11)**
		Date Prepared:	11/4/2024

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04		05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	AND	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)		(See Table J)		(See Table K)		(See Table L)		(See Table M)	
Yes	AND		AND	Yes	AND	Yes	AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)												COMPLIES			

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

Space Conditioning System Information

01	02	03	04	05	06
System Name	Quantity	System Serving	System Status	Space Type	Utilizing Recovered Heat
Classroom	1	Single zone	Alteration		☐

Generated Date/Time:

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance — Report Version: 2022.0.000 Schema Version: rev 20220101 — Documentation Software: EnergyPro Compliance ID: EnergyPro-4796-1124-2286 Report Generated: 2024-11-04 13:26:33

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 6/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration
REGISTERED PROFESSIONAL ENGINEER LEN LANDRUM MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

ENERGY COMPLIANCE

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

T24.1

Plot Date & Time

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

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

01	02	03	04	05	06	07	08	09	10	11
Name or Item Tag	Equipment Category per Tables 110.2, 140.4(a)2 and 170.2(c)3aii	Equipment Type per Tables 110.2 and Title 20	Smallest Size Available[1] 140.4(a) and 170.2(c)1	Equipment Sizing per Mechanical Schedule (kBtu/h) 140.4(a&b), 170.2(c)1 & 170.2(c)2						
				Heating Output[2,3]			Cooling Output[2,3]		Load Calculations[3,4]	
				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)
Classroom	Furnace + AC	AC, air cooled, single pkg + warm-air central furnace, gas-fired	NA: Altered per 141.0(b)2E and 180.2(b)2	120	120	0	70.84	60	109.81	121.98

[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) and 170.2(c)1. 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) and 170.2(c).

Dry System Equipment Efficiency (other than Package Terminal Air Conditioners (PTAC) and Package Terminal Heat Pumps (PTHP), DX-DOAS and Dual Fuel Heat Pumps)

01	02	03	04	05	06	07	08	09
Name or Item Tag	Size Category (Btu/h)	Heating Mode				Cooling Mode		
		Rating Condition (°F)	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency	Efficiency Unit	Minimum Efficiency Required per Tables 110.2 / Title 20	Design Efficiency
Classroom	>=65,000 and <135,000		AFUE	0.8	0.8	EER IEER	11.0 14.6	11 14

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This table is used to demonstrate compliance with prescriptive requirements found in 140.4(c), 140.4(e), 140.4(m), 170.2(c)3, and 170.2(c)4A for fan systems. Fan systems serving only process loads are exempt from these requirements and do not need to be included in Table H.

System Name	Classroom	Quantity	1	Fan System Status	Alteration	System Zoning	all other systems	Serving Dwelling Units	Not Serving Dwelling Units	Fan System Airflow (cfm)	4,000	Site Elevation	215	Economizer	Differential Temperature
01	02	03	04			05		06	07	08	09			10	11

Fan Name or Item Tag	Fan Type	Qty	Component	Airflow through Component (%)	Water Gauge (w.g)	Allowance		Design		
						Component Allowance	Fan Allowance (watt/cfm)[3]	Design Electrical Input Power Method	Motor Nameplate Horsepower	Design Electrical Input Power (kW)
SF	Supply	1	Base Allowance for system serving spaces <=6 floors away	100		928		Manufacturer provided		0.89
			MERV 13-16 Filter upstream of thermal conditioning equipment	100		556				
			Gas heat	100		232				
			Hydronic/DX cooling coil or heat pump coil	100		556				
			Economizer Return Damper	100		184				
			Supply Fan System	100		556				
Supply Fan Base Allowance (kW)			Exhaust/Return/Relief/Transfer Fan Base Allowance(kW)			Fan System Allowance (kW)[3]		3.01	Fan System Electrical Output (kW)	0.89

[1] FOOTNOTES: Fans serving spaces with design background noise goals below NC35
[2] Low-turndown single-zone VAV fan system must be capable of and configured to reduce airflow to 50 percent of design airflow and use no more than 30 percent of the design wattage at that airflow. No more than 10 percent of the design load served by the equipment shall have fixed loads.

H. FAN SYSTEMS & AIR ECONOMIZERS

[3] Fan system allowance includes fan system base allowance.
[4] Filter pressure loss can only be counted once per fan system.
[5] Complex Fan System means a fan system that combines a single cabinet fan system with other supply fans, exhaust fans, or both.
[6] Computer room economizers must meet requirements of 140.9(a) and will be documented on the NRCC-PRC-E document.

H. EXHAUST AIR HEAT RECOVERY 140.4(q), 170.2(c)4O

01	02	03	04	05	06	07	08	09	10	11
Fan System Name	Qty	Hours of Operation per Year	Design Supply Airflow Rate	Outdoor Airflow	% Outdoor Air at Full Design Airflow	Exemptions to Exhaust Air Heat Recovery Requirement per 140.4(q) & 170.2(c)4O	Exhaust Air Heat Recovery 140.4(q) & 170.2(c)4O	Type Of Heat Recovery Rating	Required Recovery Ratio	Energy Recovery Bypass

Fan Energy Index (FEI)

01	02	03
Name or Item Tag	FEI Exception	FEI
Classroom	None Applies	1

I. SYSTEM CONTROLS

This table is used to demonstrate compliance with mandatory controls in 110.2 and 120.2 and prescriptive controls in 140.4(f) and (n), 170.2(c)4D 170.2(c)4L or requirements in 141.0(b)2E 180.2(b)2 for altered space conditioning systems.

01	02	03	04	05	06	07	08	09
System Name	System Zoning	Conditioned Floor Area Being Served (ft^2)	Thermostats 110.2(b) & (c)[1], 120.2(a) 160.3(a)2A or 141.0(b)2E & 180.2(b)2	Shut-Off Controls 120.2(e) & 160.3(a)2D	Isolation Zone Controls 120.2(g) & 160.3(a)2F	Demand Response 110.12 120.2(b) & 160.3(a)2B	Supply Air Temp. Reset 140.4(f) & 170.2(c)4D	Window Interlocks per 140.4(n) & 170.2(c)4D
Classroom	Single zone	<= 25,000 ft^2	Setback	4 Hour Timer	Auto Timer Switch	EMCS	NA: Would increase energy use	Provided

I. SYSTEM CONTROLS

[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.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(a) for all nonresidential and hotel/motel and d124refrolink/1160.2, 160.3(a)3D, 170.2(e)4N, 170.2(c)4AO for high-rise residential 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 included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04	05			06			07
System Name	Classroom	System Design OA CFM Airflow[1]	913	System Design Transfer Air CFM	0		Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
							Provided
08	09	10	11	12	13	14	15	16
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)3[1] & 160.2(c)3				Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)3[6] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft^2)	# of Shower heads/ toilets	# of people[5]	Required Min CFM	Provided per Design CFM	
Classroom	Classroom (ages 5-18)	2352			893.8	0	0	DCV: NA: Not required per §120.1(d)3 Occ Sensor: NA: Not required space type

J. VENTILATION AND INDOOR AIR QUALITY

Storage	All others	131			19.6	0	0	DCV: NA: Not required per §120.1(d)3 Occ Sensor: NA: Not required space type
17	Total System Required Min OA CFM				913	18	Ventilation for this System Complies?	Yes

[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 250ft^2 or smaller, multipurpose rooms less than 1,000 ft^2, 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 to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	Classroom	**NR/ Common Use:** Duct leakage testing shall not exceed 6% per NA7.5.3 required for these systems?	No

L. DISTRIBUTION (DUCTWORK and PIPING)

		Dwelling Units: Total duct leakage of duct system shall not exceed 12% or duct system to outside shall not exceed 6% per RA3.1.4 required for systems?	No
		Duct leakage testing per CMC Section 603.10.1 required 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 ft^2 of conditioned floor area.	
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15		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		All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18		All ductwork is an extension of an existing duct system	
19		Ductwork serving individual dwelling unit	
20		< 25 ft of new or replacement space conditioning ducts installed	
21	R-8	Duct Insulation R-value	
22			
23			

M. COOLING TOWERS

This section does not apply to this project.

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

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Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	10 ton unit;
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".	10 ton unit;
NRCA-MCH-05-A - Air Economizer Controls	10 ton unit;
NRCA-MCH-11-A Automatic Demand Shed Controls	10 ton unit;
NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	10 ton unit;
NRCA-MCH-16-A Supply Air Temperature Reset Controls	10 ton unit;
NRCA-MCH-18-A Energy Management Control Systems	10 ton unit;

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01	02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	Yes	Plan sheet or construction document location: M-Sheets

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Dan Wilson	Documentation Author Signature:
Company: Nexus Engineering Inc.	Signature Date: 2024-11-04
Address: 1400 Lone Palm, Suite A	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Modesto CA 95351	Phone: 209-572-7399

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: Allen Layman	Responsible Designer Signature:
Company: Nexus Engineering	Date Signed: 2024-11-04
Address: 1400 Lone Palm, Suite A	License: M30029
City/State/Zip: Modesto CA 9531	Phone: 209-572-7399

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 6/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration
REGISTERED PROFESSIONAL ENGINEER JOSEPH LEN LAYMAN 20029 MECHANICAL STATE OF CALIFORNIA
Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT
ENERGY COMPLIANCE

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

T24.2

Plot Date & Time

STATE OF CALIFORNIA
Domestic Water Heating System
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-PLB-E**

This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.

Project Name:	Escalon H.S. Food Science Classroom	**Report Page:**	**(Page 1 of 6)**
Project Address:	1528 Yosemite Ave.	**Date Prepared:**	11/4/2024

A. GENERAL INFORMATION

01	Project Location (city)	Escalon	02	Climate Zone	12
03	Occupancy Types Within Project (select all that apply):				

● Classroom ● All Other Occupancies

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03	
My project consists of (check all that apply):	System Type[1,2]	System Components	
☒ New system (DHW system being installed for the first time)	Individual System (serving nonresidential spaces)	☒ Equipment	☒ Distribution ☒ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment	☐ Distribution ☐ Controls

[1] *FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.*
[2] *Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.*
[3] *DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies*

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with water heating requirements. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. or the table indicated as not compliant for guidance.

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	**Compliance Results**
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

F. DOMESTIC HOT WATER EQUIPMENT

This table is used to demonstrate compliance with mandatory equipment requirements in 110.1 and 110.3. Compliance with prescriptive requirements in 140.5(c) / 170.2(d) must also be demonstrated and with 141.0 / 180.1/ 180.2 for addition and alteration scopes.

Equipment Schedule: Water Heating Efficiency and Standby Loss

03	04			05		06		
System Name	100 Gallon Water Heater	Exception to 140.5(c)/ 170.2(d)3		☐	Gas Service Water Heating System >= 1MMBtu/h[1]	Capacity-weighted Average Efficiency %		
07	08	09	10	11	12	13	14	15
Name or Item Tag	Equipment Type	Volume (gal)	Rated Input Capacity (Btu/h)	Max GPM/ First Hour Rating (FHR)	Rated Efficiency	Minimum Efficiency Required	Efficiency Unit	Designed Standby Loss	Maximum Standby Loss
100 Gallon Water Heater	Commercial Package Gas Hot Water Supply Boilers (300k - <1MMBtu/h)	100	199,000	FHR >=75	0.97	0.57	UEF		

[1] *FOOTNOTE: In systems >= 1MMBtu/h with multiple units, gas water heaters with input capacity > 100,000 Btu/h may meet 90% Et requirements via an input capacity-weighted average.*

Water Heating Equipment All Occupancies

	Yes	No	Not Applicable	Requirement
18	☐	☐	☒	Unfired storage tank insulation shall have Internal + External >=R-16 OR External >=R-3.5. Label required per 110.3(c)3
19	☐	☐	☒	New state buildings 60% of energy for service water heating from site solar energy or recovered energy per 110.3(c)5
20	☐	☐	☒	Isolation valves for instantaneous water heater with input rating >6.8 kBTUH or 2 kW has been specified per 110.3(c)6
21	☐	☐	☒	School buildings < 25,000 ft^2 and < 4 stories must install a heat pump water heating system per 140.5(a)1. Water heating systems serving an individual bathroom space may be an instantaneous electric water heater.

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This table is used to demonstrate compliance for nonresidential occupancies with distribution requirements in 120.3 and 140.5. For multifamily and hotel/motel occupancies, compliance is demonstrated with requirements 110.3(c), 160.4, 170.2(d).

Mandatory Pipe Insulation All Occupancies

13	☐	For systems serving dwelling units, pipe insulation must meet the minimum insulation requirements in Table 160.4-A (see blow) except: • Piping that penetrates framing members shall not be required to have pipe insulation for the distance of the framing penetration. Piping that penetrates metal framing shall use grommets, plugs, wrapping or other insulating material to assure that no contact is made with the metal framing. Insulation shall abut securely against all framing members • Piping installed in interior or exterior walls shall not be required to have pipe insulation if all of the requirements are met for compliance with Quality Insulation Installation (QII) as specified in the Reference Residential Appendix RA3.5. • Piping surrounded with a minimum of 1 inch of wall insulation, 2 inches of crawlspace insulation, or 4 inches of attic insulation, shall not be required to have pipe insulation.
14	☒	For systems serving nonresidential spaces, pipe insulation for the following applications is specified to comply with Table 120.3-A (see below) per 120.3: • Recirculating system piping, including supply and return piping of the water heater • The first 8 ft of hot and cold outlet piping, including between storage tank and heat trap, for a nonrecirculating storage system • Pipes that are externally heated
15	☒	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service per 120.3(b) / 160.4(f). Pipe insulation buried below grade must be installed in a water proof and non-crushable casing or sleeve.

TABLE 120.3-A / 160.4-A PIPE INSULATION THICKNESS

Fluid Temperature Range (°F)	Conductivity Range (Btu-in per hour per ft^2 per °F)	Insulation Mean Rating Temp (°F)	Nominal Pipe Diameter (in)			
			< 1	1 to < 1.5	1.5 to < 4	1.5 to < 4 Multifamily & Hotel/Motel
			Minimum Insulation Required			
105-140	0.22 - 0.28	100	1.0 in or R-7.7	1.5 in or R-12.5	1.5 in or R-11	2.0 in or R-16

H. DOMESTIC HOT WATER CONTROLS

This table is used to demonstrate compliance with control requirements in 110.3 for all occupancies. For multifamily residential and hotel/motel occupancies, compliance is also demonstrated with requirements in 160.4(e) / 170.2(d).

	Yes	No	Not Applicable	Requirement
01	☒	☐	☐	Construction documents require manufacturer certification that service water-heating systems are equipped with automatic temperature controls capable of adjusting temperature settings per 110.3(a).
02	☐	☐	☒	Systems with capacity > 167,000 BTUH equipped with outlet temperature controls per 110.3(c)1 unless covered by California Plumbing Code 613.0.
03	☐	☐	☒	Controls for circulating pumps or electrical heat trace systems are capable of automatically turning off the system per §110.3(c)2 unless systems serves healthcare facility.
04	☐	☐	☒	For recirculation systems serving multiple dwelling units, design includes automatic pump controls per 170.2(d) or 180.1(b)3 for additions.
05	☐	☐	☒	For recirculation systems serving individual dwelling units, design includes manual on/off controls as specified in Reference Appendix RA4.4.9 per 170.2(d).
06	☐	☐	☒	Combustion air positive shut-off shall be provided per 160.4(3).on all newly installed commercial boilers as follows: • Boilers with input capacity >= 2.5 MMBtu/h, in which the boiler is designed to operate with a nonpositive vent static pressure • Boilers where one stack serves two or more boilers with a total combined input capacity per stack of 2.5 MMBtu/h.
07	☐	☐	☒	Boiler combustion air fans with motor >= 10 hp shall meet one of the following • The fan motor shall be driven by a variable speed drive OR • The fan motor shall include controls that limit the fan motor demand to <=30% of the total design wattage at 50% of the design air volume.
08	☐	☐	☒	Newly installed boilers with an input capacity (d:gte/] 5MMBtu/h and a steady state full-load combustion efficiency < 90% shall maintain excess (stack-gas) oxygen concentrations <= 5% by volume on a dry basis over firing rates of 20-100%. Combustion air volume shall be controlled with respect to firing rate or flue gas oxygen concentration. Use of a common gas and combustion air control linkage or jack shaft is prohibited.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-PLB-E - Must be submitted for all buildings

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Dan Wilson	Documentation Author Signature:
Company: Nexus Engineering Inc.	Signature Date: 2024-11-04
Address: 1400 Lone Palm, Suite A	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Modesto CA 95351	Phone: 209-572-7399

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: Allen Layman	Responsible Designer Signature:
Company: Nexus Engineering	Date Signed: 2024-11-04
Address: 1400 Lone Palm, Suite A	License: M30029
City/State/Zip: Modesto CA 9531	Phone: 209-572-7399

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15527 — REN. 8/25 — STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER — ALLEN LAYMAN — No. M30029 — MECHANICAL — STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

ENERGY COMPLIANCE

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

T24.3

Plot Date & Time

DOMESTIC WATER SIZING CALCULATION

WATER SIZING WORKSHEET PER 2022 CPC TABLE 610.3
AND 2022 CPC, APPENDIX A

			TABLE A-2 FIXTURE TYPE	MINIMUM BRANCH SIZE			
SOURCE DATA					QTY	FU	TOTAL
MIN. PRESSURE AVAILABLE:	30.0	PSI	BATHTUB/BATH-SHOWER COMB. (FILL)	1/2"	0	4.0	0.0
			BIDET	1/2"	0	1.0	0.0
DEMAND DATA			CLOTHESWASHER	1/2"	1	4.0	4.0
TOTAL FIXTURE UNITS:	25.5	F.U.	DENTAL UNIT, CUSPIDOR	1/2"	0	1.0	0.0
FIXTURE UNIT DEMAND:	17.0	GPM CHART A103.1	DISHWASHER	3/4"	1	3.0	3.0
CONTINUOUS DEMAND:	0.0	GPM	DRINKING FOUNTAIN OR WATERCOOLER	1/2"	0	0.5	0.0
TOTAL DEMAND:	17.0	GPM	HOSE BIBB	1/2"	1	2.5	2.5
			HOSE BIBB (EACH ADDITIONAL)	1/2"	0	1.0	0.0
SOURCE TO PUMP			LAVATORY (HAND SINK)	1/2"	4	1.0	4.0
DISTANCE:	0	FT	LAWN SPRINKLER, EACH HEAD		0	1.0	0.0
ELEVATION CHANGE:	0	FT	SINK, BAR TYPE	1/2"	0	2.0	0.0
FRICTION LOSS:	0.0	PSI	SINK, CLINIC FAUCET	1/2"	0	3.0	0.0
TOTAL LOSS:	0.0	PSI	SINK, CLINIC FLUSHOMETER VALVE	1/2"	0	1.5	0.0
			SINK, KITCHEN DOMESTIC	1/2"	8	1.5	12.0
BOOSTER PUMP:	0	PSI	SINK, LAUNDRY	1/2"	0	1.5	0.0
			SINK, SERVICE OR MOP BASIN	1/2"	0	3.0	0.0
BUILDING SYSTEM			SINK, WASHUP (EACH SET OF FAUCETS)	1/2"	0	2.0	0.0
TOTAL DEVELOPED LENGTH TO			SHOWER	1/2"	0	2.0	0.0
MOST REMOTE FIXTURE:	200	FT	URINAL, 1.0 GPF	3/4"	0	4.0	0.0
ELEVATION TO HIGHEST FIXTURE:	4	FT	URINAL, >1.0 GPF	3/4"	0	4.0	0.0
METER:	0	PSI CHART A102.2	URINAL, FLUSH TANK	1/2"	0	2.0	0.0
BACKFLOW PREVENTER:	12	PSI	WASHFOUNTAIN, CIRCULAR SPRAY	3/4"	0	4.0	0.0
SOFTENER:	0	PSI	WATER CLOSET, 1.6 GPF GRAVITY TANK	1/2"	0	2.5	0.0
FILTER:	0	PSI	WATER CLOSET, 1.6 GPF FLUSHOMETER TANK	1/2"	0	2.5	0.0
MISC:	0	PSI	WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE	1"	2	5.0	10.0
TOTAL BUILDING SYSTEM LOSS:	13.7	PSI	WATER CLOSET > 1.6 GPF GRAVITY TANK	1/2"	0	5.0	0.0
			WATER CLOSET > 1.6 GPF FLUSHOMETER VALVE	1"	0	7.0	0.0
FLUSH TANK SYSTEM (8 PSI RESID):	4.1	PSI/100'				TOTAL:	25.5
BUILDING SUPPLY PIPE SIZE:	1-1/4"	INCHES					

COLD WATER (FLUSH TANK 8 FPS MAX)

SIZE	DP/100'	GPM	F.U.	VEL IN FPS
1/2"	4.0	2.2	1	2.8
3/4"	4.0	5.8	6	3.7
1"	4.0	12.0	16	4.5
1 1/4"	3.6	19.0	28	5.2

HOT WATER (5 FPS MAX)

SIZE	DP/100'	GPM	F.U.	VEL IN FPS
1/2"	4.0	2.2	1	2.8
3/4"	4.0	5.8	6	3.7
1"	4.0	12.0	16	4.5
1 1/4"	3.6	19.0	28	5.0

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION
FD-1	FLOOR DRAIN: CAST IRON BODY, BOTTOM OUTLET, DESIGNED FOR FOOT TRAFFIC, NICKEL BRONZE STRAINER. 2" NO-HUB OUTLET, ½" TRAP PRIMER CONNECTION, SQUARE GRATE. ZURN #Z415S-DP-NH-P.
FS-1	FLOOR SINK: 12"x12"x6" DEEP CAST IRON BODY, ½ SLOTTED MEDIUM DUTY GRATE, ACID RESISTANT PORCELAIN ENAMEL COATED INTERIOR AND TOP, DOME STRAINER, NO-HUB 2" OUTLET, WATTS #FS-730.
FS-2	FLOOR SINK: 12"x12"x6" DEEP CAST IRON BODY, ½ SLOTTED MEDIUM DUTY GRATE, ACID RESISTANT PORCELAIN ENAMEL COATED INTERIOR AND TOP, DOME STRAINER, NO-HUB 3" OUTLET, WATTS #FS-730.
HB-1	HOSE BIBB: ANTI-SIPHON, WALL FAUCET IN LOCK BOX WITH VACUUM BREAKER, LOOSE KEY, WOODFORD #B24.
CWB-1	WALL BOX: WHITE, 7-5/8" x 6-5/8" x 3", HOT AND COLD WATER CONNECTIONS, 2" DRAIN CONNECTION, SOLDERED CONNECTIONS WITH 1/4 TURN BALL VALVE, LSP PRODUCTS #OB-201T.
WH-1	NATURAL GAS WATER HEATER: 100 GALLON STORAGE, 199,000 BTU, 97% THERMAL EFF., T&P RELIEF, VALVE, TEMP 120° F, A.O. SMITH #BTH-199A. OP.WT. = 1081#. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT.
CP-1	CIRCULATION PUMP: BRONZE BODY, POLYPROPYLENE IMPELLER, CERAMIC SHAFT, ¾" FLANGED CONNECTIONS, 0.5 GPM @ 8' HD, 120V/1PH, 1/40 HP, OP.WT. 3.6 lbs. B&G #NBF-12F/LW. PROVIDE WITH AUTOMATIC TIMER KIT. PROVIDE WITH AQUASTAT TO TURN ON CIRCULATOR AT LESS THAN 100 DEG. F., AND TURN OFF CIRCULATOR @ 105 DEG. F., SIZE FOR ¾" RETURN LINE.
ET-1	EXPANSION TANK: 2.1 GALLON TANK VOLUME, 1.2 ACCEPTANCE VOLUME, BUTYL DIAPHRAGM BLADDER, MAX OPERATING TEMP = 240°F, MAX WORKING PRESSURE = 125 PSI, FACTORY PRE-CHARGED TO 12 PSI, DIM = 7.9" DIA. x 12.9" LONG, WEIGHT = 6 LBS, WELDED STEEL CONSTRUCTION, AMTROL "THERM-X-TROL" #ST-12-C. ASME RATED

FIXTURE CONNECTION SCHEDULE

FIXTURE	SYM	WASTE		TRAP	VENT	COLD WATER		HOT WATER	
		BRANCH	ROUGH			BRANCH	ROUGH	BRANCH	ROUGH
SINK	S	2"	1-1/2"	1-1/2"	1-1/2"	3/4"	3/4"	3/4"	3/4"
3-COMP SINK	S	--	--	--	--	3/4"	3/4"	3/4"	3/4"
FLOOR DRAIN	FD	2"	2"	2"	2"	--	--	--	--
FLOOR SINK	FS	2"/3"	2"/3"	2"/3"	2"	--	--	--	--
CLOTHES WASHER BOX	CWB	3"	3"	3"	2"	3/4"	3/4"	3/4"	3/4"

PLUMBING GENERAL NOTES

1. SCOPE:
   A COMPLETE DOMESTIC PLUMBING SYSTEM AS GENERALLY DELINEATED ON THE PLUMBING DRAWINGS, INCLUDING SERVICE PIPING AND FINAL CONNECTIONS TO EQUIPMENT FURNISHED AND INSTALLED BY OTHER TRADES AS MAY BE SHOWN ON THE ARCHITECTURAL, ELECTRICAL OR OTHER DRAWINGS OF THE CONTRACT DOCUMENTS.
2. CALIFORNIA CODE OF REGULATIONS:
   ALL HOT WATER DISTRIBUTION AND CIRCULATION LINES SHALL BE INSULATED IN ACCORDANCE WITH SECTION 120.3 OF THE CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6, SUBCHAPTER 3.
3. ALL PLUMBING FIXTURES & EQUIPMENT USED (E.G. SHOWERHEADS, LAVATORY FAUCETS, SINK FAUCET AND WATER HEATERS) SHALL HAVE BEEN CERTIFIED TO THE CALIFORNIA ENERGY COMMISSION BY ITS MANUFACTURER TO COMPLY WITH THE EFFICIENCY STANDARDS FOR SUCH APPLIANCES.
4. CODES:
   ALL WORK, MATERIAL, AND EQUIPMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE INSPECTING AUTHORITY HAVING JURISDICTION. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT THE INSTALLATION OF WORK, MATERIAL OR EQUIPMENT NOT CONFORMING TO THESE OR OTHER CODES APPLICABLE TO THIS PROJECT.
   A. 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
   B. 2022 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC)
   C. 2022 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC)
   D. 2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC)
   E. 2022 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC)
   F. 2022 CALIFORNIA ENERGY CODE (CEC) PART 6, TITLE 24 CCR.
   G. 2022 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC)
   H. 2022 CALIFORNIA GREEN BUILDING STANDARDS (CGBSC) PART 11, TITLE 24, CCR
5. WORKMANSHIP:
   ALL WORK SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER ACCORDING TO THE BEST TRADE PRACTICE BY THOSE SKILLED IN THE PARTICULAR TRADE. EQUIPMENT, FIXTURES, PIPING, ETC., SHALL BE PLUMB, LEVEL, SQUARE AND/OR CENTERED, ETC. EQUIPMENT TO BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. EXISTING INFORMATION:
   LOCATION, SIZE, ELEVATION, MATERIAL, ETC., OF EXISTING UTILITIES IS PROVIDED FROM SOURCES DEEMED RELIABLE BUT IS NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY ALL DATA BEFORE PROCEEDING WITH ANY WORK. NO EXTRA COST WILL BE ALLOWED FOR SERVICES NOT AS SHOWN.
7. PERMITS AND UTILITY SERVICE FEES:
   THE PLUMBING CONTRACTOR SHALL ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS, AND SERVICE CHARGES REQUIRED FOR THE INSTALLATION OF THE WORK.
8. ACCURACY:
   PLANS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL CONFIRM ALL DIMENSIONS AND LOCATION OF WALLS, PARTITIONS, FIXTURES, ETC., AGAINST DESIGN PLANS FOR CONSISTENCY AND ACCURACY PRIOR TO COMMENCING WORK.
9. PROVIDE AND INSTALL CONDENSATE DRAIN WITH TRAP AT EACH A/C UNIT PER THE UPC, AT LOCATIONS SHOWN ON DRAWINGS. COORDINATE WITH MECHANICAL CONTRACTOR.
10. PROVIDE AND INSTALL ACCESS PANELS FOR ALL SHUT-OFF, ISOLATION, OR BRANCH VALVES NOT READILY ACCESSIBLE. ACCESS PANELS SHALL BE PROVIDED AND INSTALLED AT ALL TRAP PRIMER VALVES AND WATER HAMMER ARRESTORS.
11. ALL PIPING PASSING THROUGH CONCRETE FLOORS SHALL BE SLEEVED TO PROTECT PIPING AGAINST BREAKAGE.
12. HORIZONTAL DRAINAGE PIPING LESS THAN 4" IN DIAMETER SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT (2%) DRAINAGE PIPING 4" AND LARGER SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT (2%) UNLESS OTHERWISE APPROVED BY THE AHJ.
13. ALL PLUMBING FIXTURES AND PIPING SHALL BE LISTED BY AN APPROVED LISTING AND TESTING AGENCY AND PROPERLY LABELED.
14. ALL PIPES SHALL BE LABELED WITH CLASSIFICATION, COLOR SCHEME, AND SIZING PER ANSI STANDARD A13.1.

DEMOLITION NOTES

1. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND MAKE HIMSELF AWARE OF ALL EXISTING CONDITIONS WHICH CAN BE OBSERVED. ADDITIONAL COSTS WILL NOT BE ALLOWED FOR CORRECTION OF ITEMS WHICH CAN BE OBSERVED AND THEREFORE SHOULD BE INCLUDED IN HIS BID. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION WORK REQUIRED TO COMPLETE THIS PROPOSED PROJECT.
2. THE NOTES AND DRAWINGS CONTAINED ON THIS SHEET DESCRIBE IN A GENERAL SENSE THE EXTENT OF ITEMS TO BE MODIFIED, REMOVED OR INSTALLED. THIS DESCRIPTION DOES NOT NECESSARILY INCLUDE A DESCRIPTION OF ITEMS TO BE REPAIRED OR REFINISHED AS A RESULT OF THIS REMOVAL OR MODIFICATION. IN THE ABSENCE OF ANY SPECIFIC DIRECTION, THE CONTRACTOR SHALL REPAIR THE AFFECTED AREA(S) TO A CONDITION EQUAL TO THE ADJACENT AREA(S) AND/OR SIMILAR EXISTING CONDITIONS ON PROJECT.
3. THE CONTRACTOR SHALL PROVIDE DUST AND DEBRIS CONTROL THROUGHOUT THE PROJECT'S CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE BUILDING OWNER TO PROVIDE THE LEAST INTERRUPTION OF EXISTING BUILDING OPERATIONS. COORDINATE WITH THE OWNER THE LOCATION OF ON-SITE STORAGE AND STAGING.
4. NOT ALL REQUIRED PATCHING AND/OR REPAIRS ARE SPECIFICALLY NOTED ON THIS PLAN.
5. COORDINATE DEMOLITION WORK WITH NEW PROPOSED FLOOR PLANS.
6. CONTRACTOR SHALL DISCARD AND DISPOSE OF ALL DEMOLISHED ITEMS.
7. EXISTING PIPING AND ELECTRICAL OR COMMUNICATION CONDUITS WHICH INTERFERE WITH THE WORK SHALL BE RE-ROUTED BY THE CONTRACTOR.

PLUMBING MATERIAL SPECIFICATIONS

A. DWV
PIPE: SERVICE WEIGHT CAST IRON SOIL PIPE PER ASTM A-74
FITTINGS: CAST IRON "NO-HUB" PER CISPI 310

B. DOMESTIC WATER
PIPE: COPPER TYPE L PER ASTM B-88
FITTINGS: WROUGHT COPPER PER ANSI 16.22
INSULATION (3/4" DIA. PIPE AND SMALLER): INSULATE HW & HWR WITH 1" FIBERGLASS INSULATION AND ALL-SERVICE-JACKET
INSULATION (1" - 1-1/2" DIA. PIPE): INSULATE HW & HWR WITH 1-1/2" FIBERGLASS INSULATION AND ALL-SERVICE-JACKET
INSULATION (2" DIA. PIPE AND LARGER): INSULATE HW & HWR WITH 2" FIBERGLASS INSULATION AND ALL-SERVICE-JACKET

C. CONDENSATE DRAIN
PIPE: COPPER TYPE L PER ASTM B-88
FITTINGS: WROUGHT COPPER PER ANSI 16.22

D. NATURAL GAS (ABOVE GRADE - 2-1/2" & SMALLER)
PIPE: SCH 40 BLACK STEEL, THREADED PER ASTM A-53
FITTINGS: SCREWED MALLEABLE IRON PER ANSI B-16.3

E. NATURAL GAS (ABOVE GRADE - 3" & LARGER)
PIPE: SCH 40 BLACK STEEL PER ASTM A-53
FITTINGS: CARBON STEEL BUTT WELD PER ASTM A234

F. NATURAL GAS - BELOW GRADE (G)
PIPE: MEDIUM DENSITY POLYETHYLENE TUBING PER ASTM D 2513
FITTINGS: HEAT FUSION FITTINGS ASTM D 2513

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	SS	SOIL, WASTE OR SANITARY SEWER BELOW FLOOR
	SS	SOIL, WASTE OR SANITARY SEWER OVERHEAD
	V	VENT PIPING
	CW	COLD WATER
	HW (110°, 140°)	HOT WATER SUPPLY
	HWR	HOT WATER RETURN
G	G	NATURAL GAS - LOW PRESSURE
X X X X X X X X		EXISTING TO BE REMOVED
D OR IW	D OR IW	DRAIN OR INDIRECT WASTE
CD	CD	CONDENSATE DRAIN
OCD	OCD	OVERFLOW CONDENSATE DRAIN
	SD, RWL	STORM DRAIN, RAINWATER LEADER
	OFL	RAINWATER OVERFLOW LEADER (STORM)
	AD, AP	ACCESS DOOR, ACCESS PANEL
	AC	AIR CHAMBER
	ANV	ANGLE VALVE
	AQ	AQUASTAT
	AD	AREA DRAIN
	AAV	AUTOMATIC AIR VENT
	BV	BALL VALVE
		BRANCH - TOP CONNECTION
		BRANCH - BOTTOM CONNECTION
		BRANCH - SIDE CONNECTION
	BFV	BUTTERFLY VALVE
	COP	CAP ON END OF PIPE
	CBV	CALIBRATED BALANCE VALVE
	CB, RD	CATCH BASIN, ROOF DRAIN
	CKV	CHECK VALVE
	CP	CIRCULATING PUMP
CO CO	CO	CLEANOUT PLUG
	CR	CONCENTRIC REDUCER
Ø	DIA	DIAMETER
	ER	ECCENTRIC REDUCER
	FC	FLEXIBLE CONNECTOR
	FCO	FLOOR CLEANOUT
	FD	FLOOR DRAIN
FS	FS	FLOW SWITCH
	GCK	GAGE COCK
	SOV	SHUT OFF VALVE
	GSCK, PC	GAS COCK, PLUG COCK
	GPR	GAS PRESSURE REGULATOR
	GL. V.	GLOBE VALVE
	GCO	GRADE CLEANOUT
	HB	HOSE BIBB
	AN	PIPE ANCHOR
	PG	PIPE GUIDE
	POC	POINT OF CONNECTION
	PRV	PRESSURE REDUCING VALVE
	PG	PRESSURE GAUGE
OR	RV or T&P	RELIEF VALVE OR TEMPERATURE & PRESSURE RELIEF VALVE
	SV	SOLENOID VALVE
	STR	STRAINER
	TDL	TOTAL DEVELOPED LENGTH
	TH	THERMOMETER
TP	TP	TRAP PRIMER
	UN	UNION OR FLANGE
	WCO	WALL CLEANOUT

SHEET INDEX

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P0.1	PLUMBING - GREEN BUILDING CODE NOTES
P1.0	PLUMBING - DEMOLITION FLOOR PLAN
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P2.1	PLUMBING - ENLARGED FLOOR PLAN
P3.0	PLUMBING - DETAILS
P3.1	PLUMBING - DETAILS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15927 — REN: 3/25 — STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER — LEN LAMMERT — 12/31/26 — MECHANICAL — STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PLUMBING - LEGEND, NOTES & SCHEDULES

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

P0.0

Plot Date & Time

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 2022 CBC, Sections 1617A.1.18 through 1617.A.1.26 and ASCE 7-16 Chapter 13, 26 and 30.

1. All permanent equipment and components.
2. Temporary, movable or mobile equipment that is permanently attached (e.g. hard wired) to the building utility services such as electricity, gas or water. "Permanently attached" shall include all electrical utility services except plugs for 110/120 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:

A. Components weighing less than 400 pounds and have a center of mass located 4 feet or less above the adjacent floor or roof level that directly support the component.
B. Components weighing less than 20 pounds, or in the case of distributed systems, less than 5 pounds per foot, which are suspended from a roof or floor or hung from a wall.

The anchorage of all mechanical, electrical and plumbing components shall be subject to the approval of the design professional in general responsible charge or structural engineer delegated responsibility and acceptance by DSA. The project inspector will verify that all components and equipment have been anchored in accordance with above requirements.

Piping, Ductwork, and Electrical Distribution System Bracing Note

Piping, ductwork, and electrical distribution systems shall be braced to comply wth the forces and displacements prescribed in ASCE 7-16 Section 13.3 as defined in ASCE 7-16 Section 13.6.5, 13.6.6, 13.6.7, 13.6.8 and 2022 CBC, Sections 1617A.1.24, 1617A.1.25 and 1617A.1.26.

The method of showing bracing and attachments to the structure for the identified distribution system are as noted below. When bracing and attachments are based on a preapproved installation guide (e.g., HCAi OPM for 2013 CBC or later), copies of the bracing system installation guide or manual shall be available on the jobsite prior to the start of and during the hanging and bracing of the distribution systems. The Structural Engineer of Record shall verify the adequacy of the structure to support the hanger and brace loads.

Mechanical Piping (MP), Mechanical Ducts (MD), Plumbing Piping (PP), Electrical Distribution Systems (E):

MP☐ MD☐ PP ☒ E ☐ - Option 1: Detailed on the approved drawings with project specific notes and details.

MP☐ MD☐ PP ☐ E ☐ - Option 2: Shall comply with the applicable HCAi Pre-Approval (OPM #) #_____

PLUMBING GREEN BUILDING CODE NOTES

REQUIRED

SECTION 5.301 GENERAL

5.301.1 SCOPE. THE PROVISIONS OF THIS CHAPTER SHALL ESTABLISH THE MEANS OF CONSERVING WATER USE INDOORS, OUTDOORS AND IN WASTEWATER CONVEYANCE.

SECTION 5.302 DEFINITIONS

5.302.1 DEFINITIONS. THE FOLLOWING TERMS ARE DEFINED IN CHAPTER 2 (AND ARE INCLUDED HERE FOR REFERENCE)

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. AN ADJUSTMENT FACTOR WHEN APPLIED TO REFERENCE EVAPOTRANSPIRATION THAT ADJUSTS FOR PLANT FACTORS AND IRRIGATION EFFICIENCY, WHICH AE TWO MAJOR INFLUENCES ON THE AMOUNT OF WATER THAT NEEDS TO BE APPLIED TO THE LANDSCAPE.

FOOTPRINT AREA [DSA-SS]. THE TOTAL AREA OF THE FURTHEST EXTERIOR WALL OF THE STRUCTURE PROJECTED TO NATURAL GRADE, NOT INCLUDING EXTERIOR AREAS SUCH AS STAIRS, COVERED WALKWAYS, PATIOS AND DECKS.

METERING FAUCET. A SELF-CLOSING FAUCET THAT DISPENSES A SPECIFIC VOLUME OF WATER FOR EACH ACTUATION CYCLE. THE VOLUME OR CYCLE DURATION CAN BE FIXED OR ADJUSTABLE.

GRAYWATER. PURSUANT TO HEALTH AND SAFETY CODE SECTION 17922.12, "GRAYWATER" MEANS UNTREATED WASTEWATER THAT HAS NOT BEEN CONTAMINATED BY ANY TOILET DISCHARGE, HAS NOT BEEN AFFECTED BY INFECTIOUS, CONTAMINATED, OR UNHEALTHY BODILY WASTES, AND DOES NOT PRESENT A THREAT FROM CONTAMINATION BY UNHEALTHFUL PROCESSING, MANUFACTURING, OR OPERATING WASTES. "GRAYWATER" INCLUDES, BUT IS NOT LIMITED TO WASTEWATER FROM BATHTUBS, SHOWERS, BATHROOM WASHBASINS, CLOTHES WASHING MACHINES AND LAUNDRY TUBS, BUT DOES NOT INCLUDE WASTE WATER FROM KITCHEN SINKS OR DISHWASHERS.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). THE CALIFORNIA ORDINANCE REGULATING LANDSCAPE DESIGN, INSTALLATION AND MAINTENANCE PRACTICES THAT WILL ENSURE COMMERCIAL, MULTIFAMILY AND OTHER DEVELOPER INSTALLED LANDSCAPES GREATER THAN 2500 SQUARE FEET MEET AN IRRIGATION WATER BUDGET DEVELOPED BASED ON LANDSCAPED AREA AND CLIMATOLOGICAL PARAMETERS.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] THE CALIFORNIA MODEL ORDINANCE (CALIFORNIA CODE OF REGULATIONS, TITLE 23, DIVISION 2, CHAPTER 2.7), REGULATING LANDSCAPE DESIGN, INSTALLATION AND MAINTENANCE PRACTICES. LOCAL AGENCIES ARE REQUIRED TO ADOPT THE UPDATED MWELO, OR ADOPT A LOCAL ORDINANCE AT LEAST AS EFFECTIVE AS THE MWELO.

POTABLE WATER. WATER THAT IS DRINKABLE AND MEETS THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) DRINKING WATER STANDARDS. SEE DEFINITION IN THE CALIFORNIA PLUMBING CODE, PART 5.

POTABLE WATER. [HCD] WATER THAT IS SATISFACTORY FOR DRINKING, CULINARY, AND DOMESTIC PUROSES, AND MEETS THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) DRINKING WATER STANDARDS AND THE REQUIREMENTS OF THE HEALTH AUTHORITY HAVING JURISDICTION.

RECYCLED WATER. WATER WHICH, AS A RESULT OF TREATMENT OF WASTE, IS SUITABLE FOR A DIRECT BENEFICIAL USE OR A CONTROLLED USE THAT WOULD NOT OTHERWISE OCCUR [WATER CODE SECTION 13050 (N)]. SIMPLY PUT, RECYCLED WATER IS WATER TREATED TO REMOVE WASTE MATTER ATTAINING A QUALITY THAT IS SUITABLE TO USE THE WATER AGAIN.

SUBMETER. A METER INSTALLED SUBORDINATE TO A SITE METER. USUALLY USED TO MEASURE WATER INTENDED FOR ONE PURPOSE, SUCH AS LANDSCAPE IRRIGATION. FOR THE PURPOSES OF CALGREEN, A DEDICATED METER MAY BE CONSIDERED A SUBMETER.

WATER BUDGET. IS THE ESTIMATED TOTAL LANDSCAPE IRRIGATION WATER USE WHICH SHALL NOT EXCEED THE MAXIMUM APPLIED WATER ALLOWANCE CALCULATED IN ACCORDANCE WITH THE DEPARTMENT OF WATER RESOURCES MODEL EFFICIENT LANDSCAPE ORDINANCE (MWELO).

REQUIRED

☐ ☐ ☐ ☐ ☐ ☐ X

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR THE USES DESCRIBED IN SECTIONS 503.1.1 AND 503.1.2.

5.303.1.1 BUILDINGS IN EXCESS OF 50,000 SQUARE FEET. SEPARATE SUBMETERS SHALL BE INSTALLED AS FOLLOWS:

1. FOR EACH INDIVIDUAL LEASED, RENTED OR OTHER TENANT SPACE WITHIN THE BUILDING PROJECTED TO CONSUME MORE THAN 100 GAL/DAY (380 L/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. MAKEUP WATER FOR COOLING TOWERS WHERE FLOW THROUGH IS GREATER THAN 500 GPM (30 L/S).
B. MAKEUP WATER FOR EVAPORATIVE COOLERS GREATER THAN 6 GPM (0.04 L/S).
C. STEAM AND HOT WATER BOILERS WITH ENERGY INPUT MORE THAN 500,000 BTU/H (147 KW).

5.303.1.2 EXCESS CONSUMPTION. A SEPARATE SUBMETER OR METERING DEVICE SHALL BE PROVIDED FOR ANY TENANT WITHIN A NEW BUILDING OR WITHIN AN ADDITION THAT IS PROJECTED TO CONSUME MORE THAN 1,000 GAL/DAY.

5.303.3 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. THE EFFECTIVE FLUSH VOLUME OF 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 THE SHOWERHEADS AND/OR OTHER 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 THE 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 MINUTE/20 [RIM SPACE (INCHES) AT 60 PSI].

NOTE: WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS OR OTHER MEANS MAY BE USED TO ACHIEVE REDUCTION.

X 5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 FOOD WASTE DISPOSERS. DISPOSERS SHALL EITHER MODULATE THE USE OF WATER TO NO MORE THAN 1 GPM WHEN THE DISPOSER IS NOT IN USE (NOT ACTIVELY GRINDING FOOD WASTE/NO-LOAD) OR SHALL AUTOMATICALLY SHUT OFF AFTER NO MORE THAN 10 MINUTES OF INACTIVITY. DISPOSERS SHALL USE NO MORE THAN 8 GPM OF WATER.

NOTE: THIS CODE SECTION DOES NOT AFFECT LOCAL JURISDICTION AUTHORITY TO PROHIBIT OR REQUIRE DISPOSER INSTALLATION.

X 5.303.5 AREAS OF ADDITION OR ALTERATION. FOR THOSE OCCUPANCIES WITHIN THE AUTHORITY OF THE CALIFORNIA BUILDING STANDARDS COMMISSION AS SPECIFIED IN SECTION 103, THE PROVISIONS OF SECTION 5.303.3 AND 5.303.4 SHALL APPLY TO NEW FIXTURES IN ADDITIONS OR AREAS OF ALTERATION TO THE BUILDING.

X 5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1701.1 OF THE CALIFORNIA PLUMBING CODE AND IN CHAPTER 6 OF THIS CODE.

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT · TIMOTHY PAUL HUFF · No. C 15925 · REN 3/31/25 · STATE OF CALIFORNIA

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Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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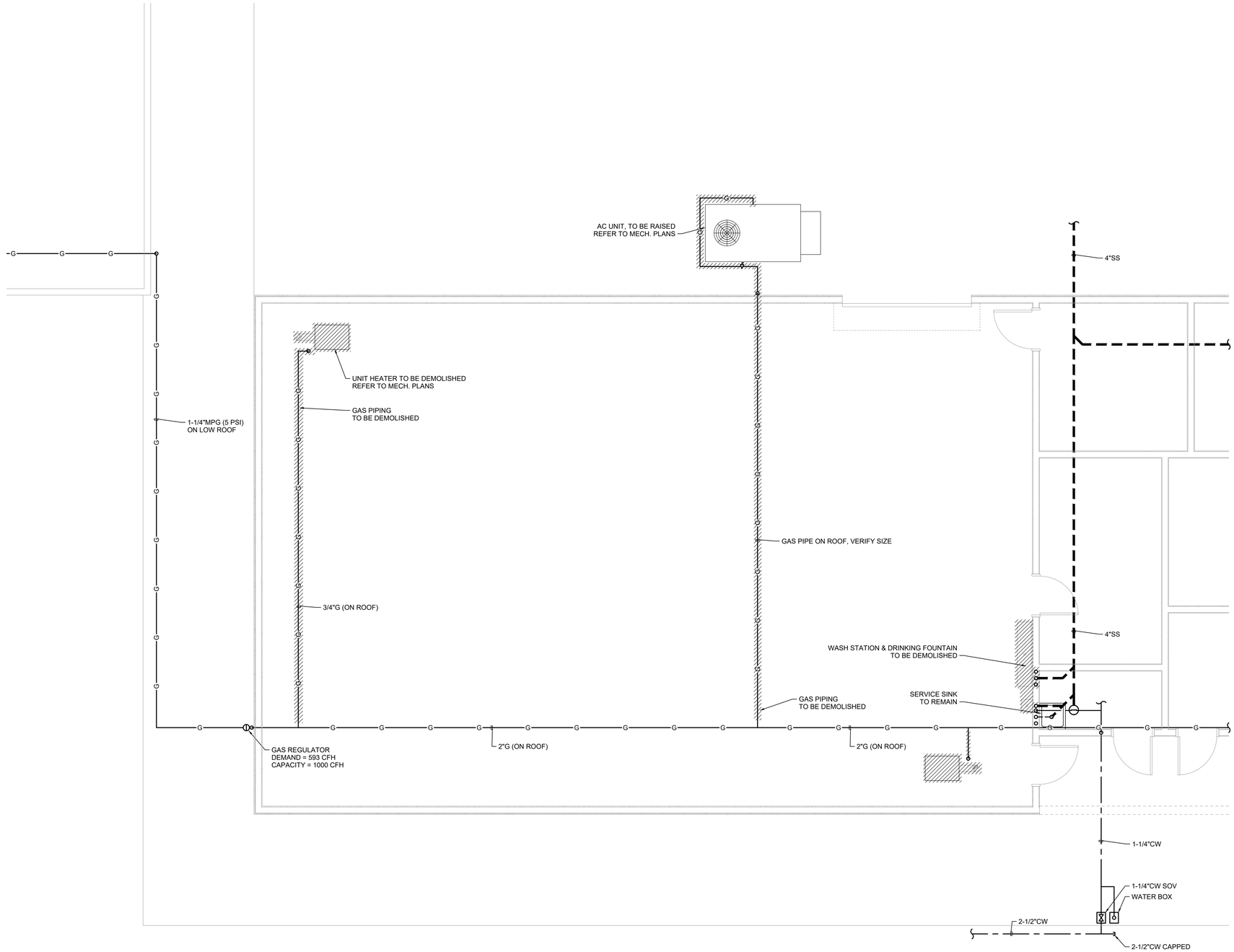
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PLUMBING - GREEN BUILDING CODE NOTES

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

P0.1

Plot Date & Time



1 P1.0 PLUMBING - DEMOLITION FLOOR PLAN

SCALE: 1/4" = 1'-0"

NORTH

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15927 REN. 5/25 — STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC , Plumbing/Piping , Fire Sprinklers
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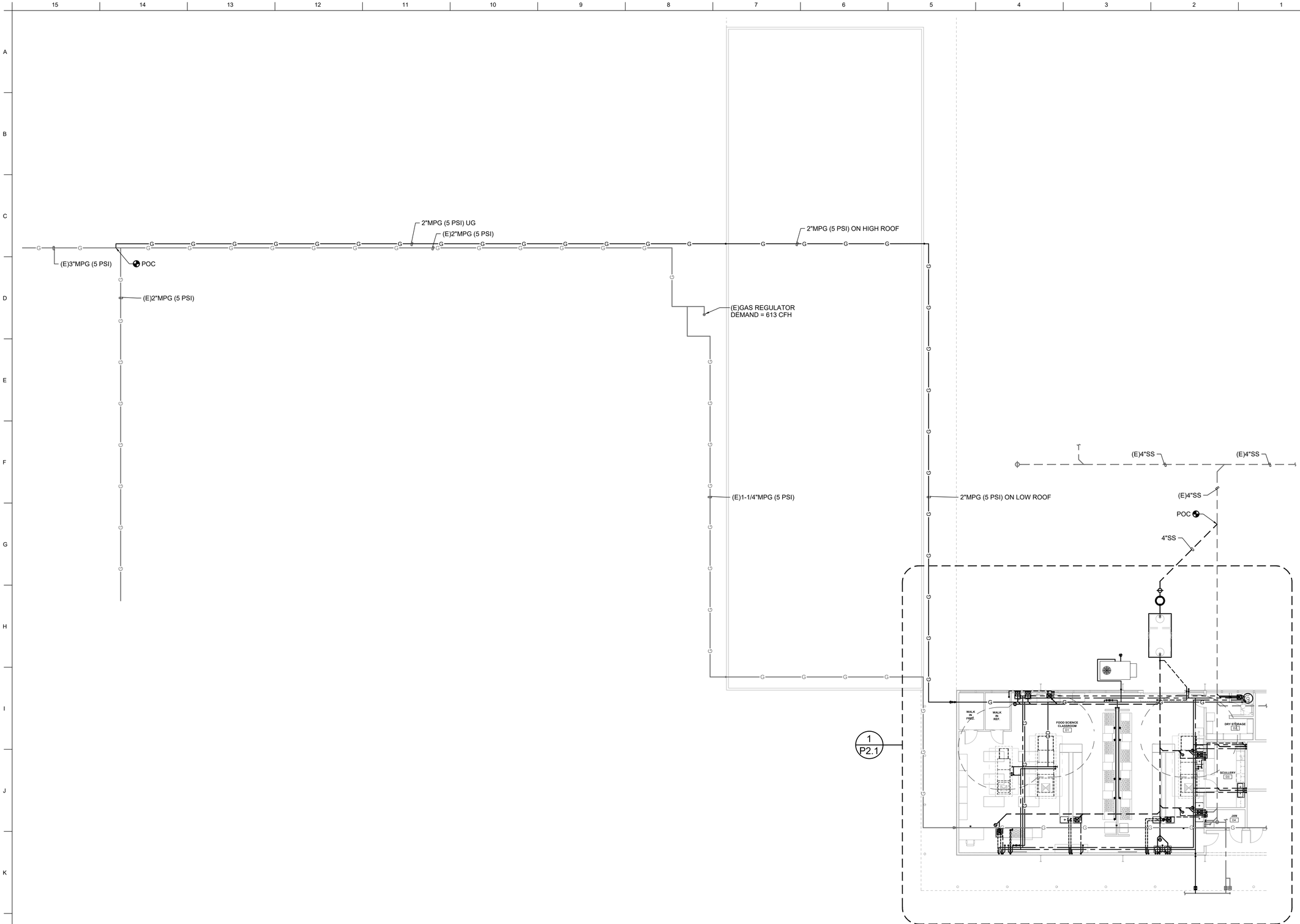
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ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PLUMBING - DEMOLITION FLOOR PLAN

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

P1.0

Plot Date & Time



1 P2.0 PLUMBING - FLOOR PLAN

SCALE: 3/32" = 1'-0"

NORTH

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.

Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN: 3/25 STATE OF CALIFORNIA

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neXus engineering

Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration

REGISTERED PROFESSIONAL ENGINEER LEN LAMPKIN No. M 29258 MECHANICAL STATE OF CALIFORNIA

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

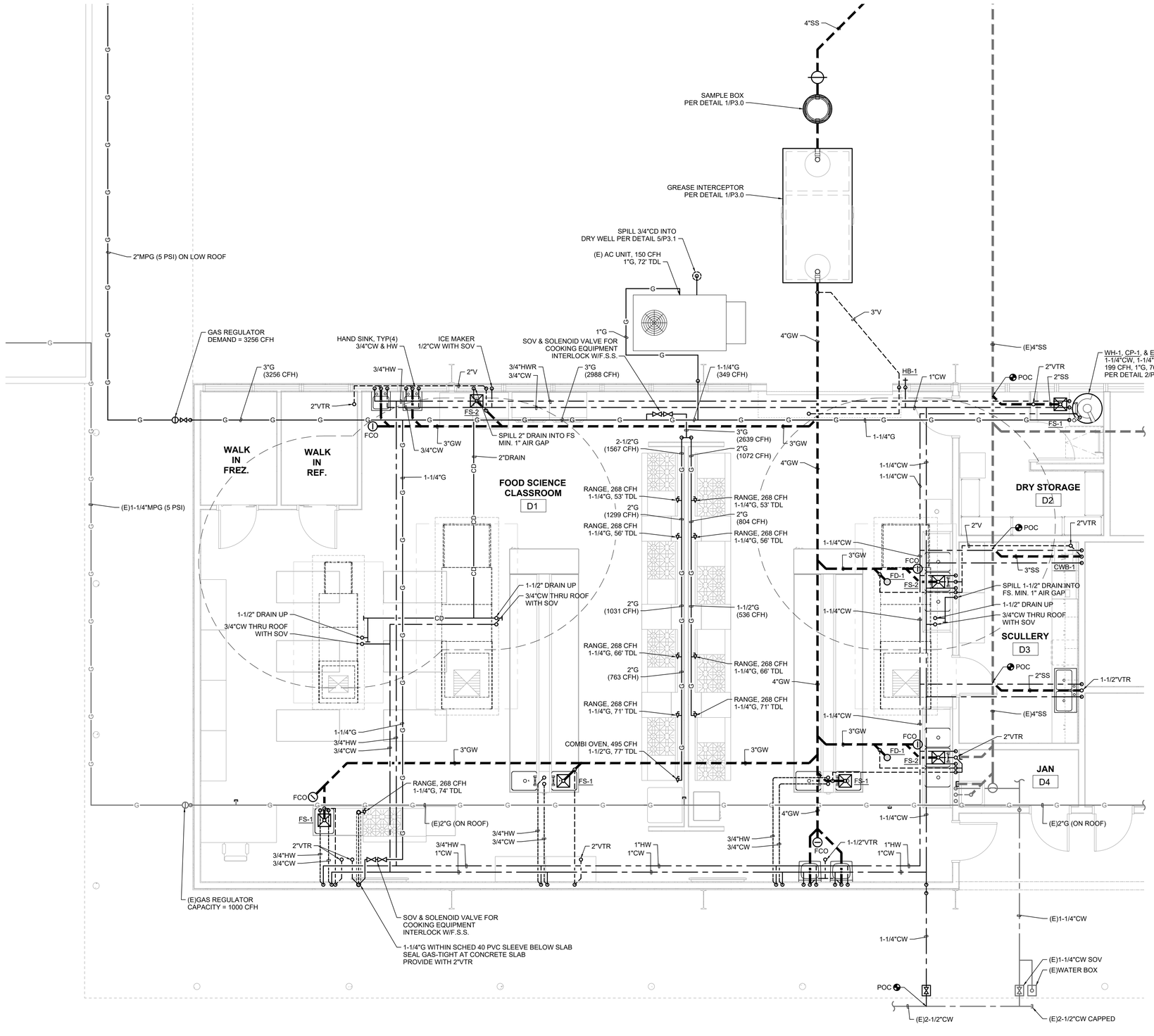
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PLUMBING - FLOOR PLAN

Project Number	2321
Date	7/5/24
Drawn by	DW
Checked by	GL

P2.0

Plot Date & Time



1 P2.1 PLUMBING - FLOOR PLAN

SCALE: 1/4" = 1'-0"

NORTH

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 5/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
Process/Plant Engineering . Refrigeration
REGISTERED PROFESSIONAL ENGINEER LEN LAMMERT 15289 MECHANICAL STATE OF CALIFORNIA

Consultants

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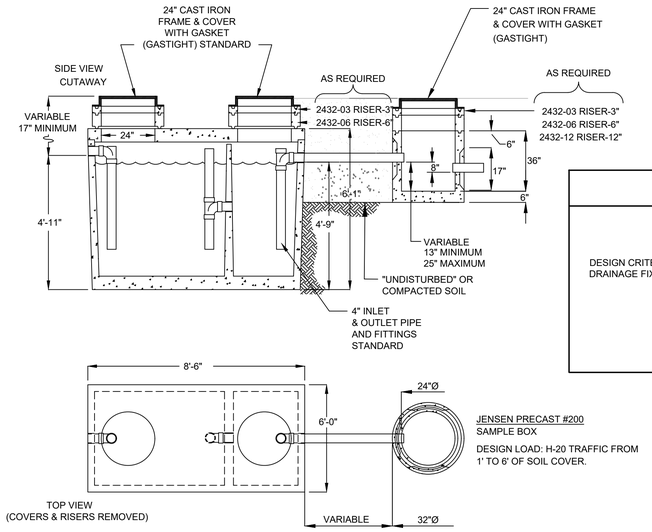
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PLUMBING - FLOOR PLAN

Project Number	2321
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JENSEN PRECAST #200
SAMPLE BOX

DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF SOIL COVER.

JENSEN PRECAST #JP1200EE-G
LIQUID CAPACITY: 1200 GALLONS.

BOX DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF SOIL COVER.

GREASE INTERCEPTOR CALCULATIONS

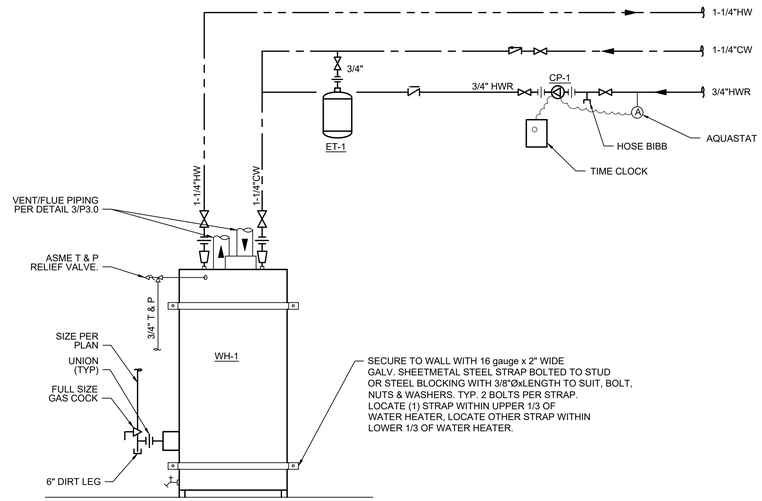
ALL SIZING PER 2022 CALIFORNIA PLUMBING CODE, TABLE 1014.3.6

GRAVITY GREASE INTERCEPTOR SIZING

DESIGN CRITERIA						
DRAINAGE FIXTURE UNITS	FLOOR DRAIN	2 FU	X	2	=	4 FU
	FLOOR SINK	3 FU	X	2	=	6 FU
	1-COMP SINK	2 FU	X	5	=	10 FU
	3-COMP SINK	3 FU	X	2	=	6 FU
	HAND SINK	2 FU	X	4	=	8 FU
					=	
					34 FU	1,200 GALLON 86 FU MAX.

1 P3.0 GREASE INTERCEPTOR DETAIL

SCALE: N/A

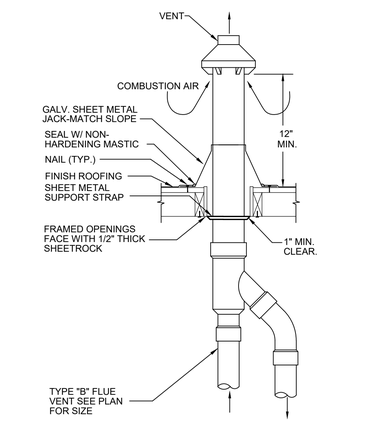


NOTES:

1. UNLESS OTHERWISE NOTED, ALL VALVES & FITTINGS SHALL BE LINE SIZE. USE BELL REDUCERS WHERE REDUCERS ARE REQUIRED. SEE PLANS FOR SIZES.
2. WATER HEATERS SHALL BE SET AT A MAXIMUM TEMPERATURE OF 120° F.

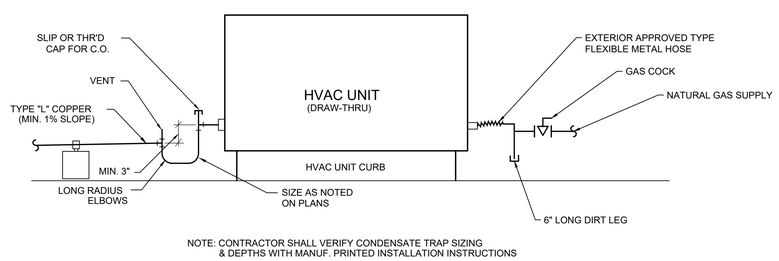
2 P3.0 WATER HEATER PIPING DIAGRAM

SCALE: N/A



3 P3.0 FLUE THRU ROOF DETAIL

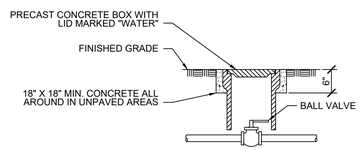
SCALE: N/A



NOTE: CONTRACTOR SHALL VERIFY CONDENSATE TRAP SIZING & DEPTHS WITH MANUF. PRINTED INSTALLATION INSTRUCTIONS

4 P3.0 AC UNIT CONDENSATE & GAS PIPING DETAIL

SCALE: N/A



5 P3.0 SHUT-OFF VALVE IN BOX DETAIL

SCALE: N/A

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN. 8/25 STATE OF CALIFORNIA

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nexus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
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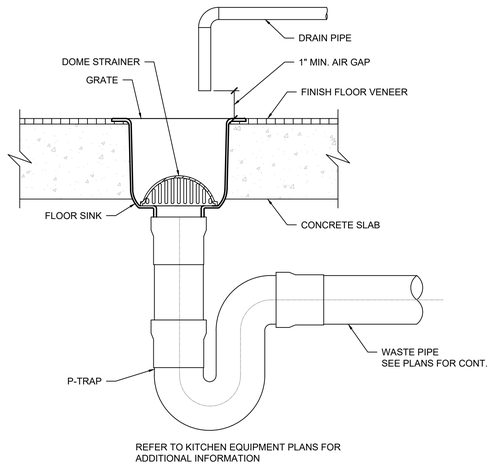
1528 YOSEMITE AVE.
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Project Number	2321
Date	7/5/24
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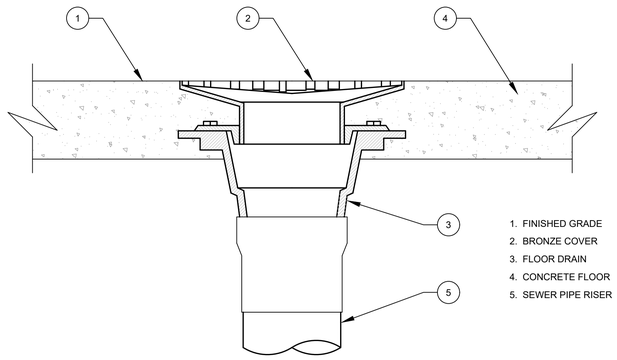
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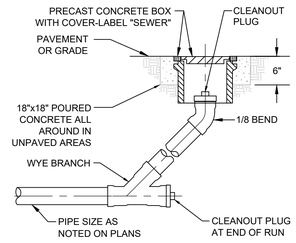
1 P3.1 FLOOR SINK DETAIL

SCALE: N/A



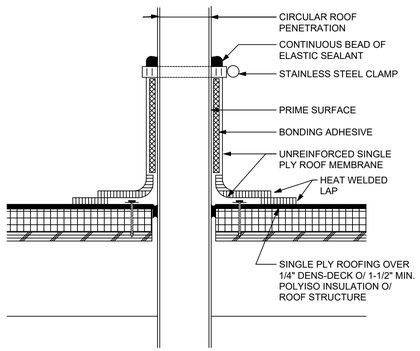
2 P3.1 FLOOR DRAIN DETAIL

SCALE: N/A



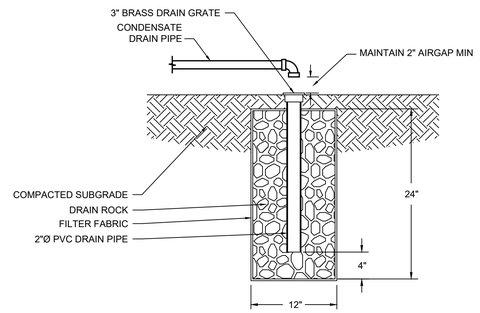
3 P3.1 CLEANOUT TO GRADE DETAIL

SCALE: NONE



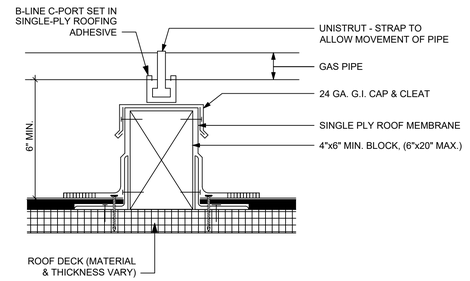
4 P3.1 VENT THRU ROOF DETAIL

SCALE: N/A



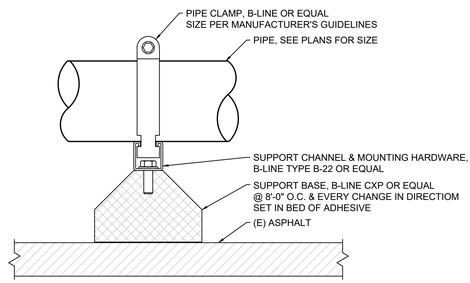
5 P3.1 DRY WELL DETAIL

SCALE: N/A



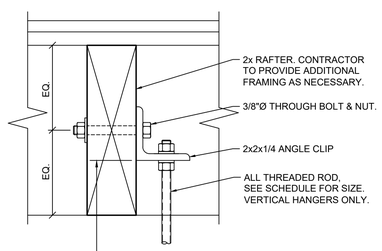
6 P3.1 ROOF PIPE SUPPORT DETAIL

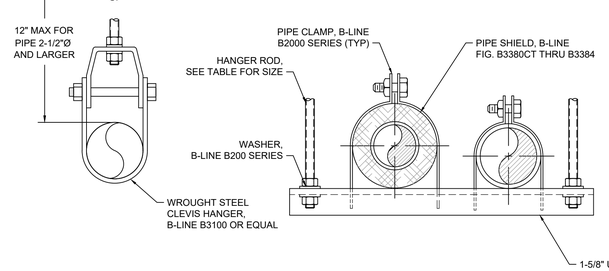
SCALE: N/A



7 P3.1 PIPE SUPPORT DETAIL

SCALE: N/A





8 P3.1 PIPE SUPPORT DETAIL

SCALE: NONE

COPPER TUBE & PIPE HANGER SCHD HORIZONTAL SUPPORT SOLDER OR BRAZED JOINTS		
PIPE SIZE	HANGER ROD	MAX HORIZONTAL SPAN
1/2"	3/8"	6'
3/4"	3/8"	6'
1"	3/8"	6'
1-1/4"	3/8"	6'
1-1/2"	3/8"	6'
2"	3/8"	10'
2-1/2"	3/8"	10'
3"	3/8"	10'
4"	3/8"	10'
6"	1/2"	10'

COPPER TUBE AND PIPE WITH SOLDER, BRAZED OR WELDED JOINTS, SIZES DEVELOPED FROM TABLE 313.1 & TABLE 313.6 OF THE 2022 CPC. ALL PIPE SHALL BE SUPPORTED WITHIN 18" OF A JOINT. PIPE 2-1/2"Ø AND LARGER, SUPPORTED GREATER THAN 12" FROM THE SUPPORT STRUCTURE TO THE TOP OF THE PIPE REQUIRE SEISMIC BRACING.

STEEL& BRASS PIPE HANGER SCHD HORIZONTAL SUPPORT PIPE W/ THREADED OR WELDED JOINTS		
PIPE SIZE	HANGER ROD	MAX HORIZONTAL SPAN
1/2"	3/8"	10'
3/4"	3/8"	12'
1"	3/8"	12'
1-1/4"	3/8"	12'
1-1/2"	3/8"	12'
2"	3/8"	12'
2-1/2"	3/8"	12'
3"	3/8"	12'
4"	3/8"	12'
6"	1/2"	12'

STEEL PIPE FOR WATER OR DWV THREADED OR WELDED JOINTS, SIZES DEVELOPED FROM TABLE 313.1 & TABLE 313.6 OF THE 2022 CPC. ALL PIPE SHALL BE SUPPORTED WITHIN 18" OF A JOINT. PIPE 2-1/2"Ø AND LARGER, SUPPORTED GREATER THAN 12" FROM THE SUPPORT STRUCTURE TO THE TOP OF THE PIPE REQUIRE SEISMIC BRACING.

STEEL PIPE HANGER SCHD HORIZONTAL SUPPORT PIPE W/ GROOVED COUPLERS		
PIPE SIZE	HANGER ROD	MAX HORIZONTAL SPAN
1/2"	3/8"	5'
3/4"	3/8"	5'
1"	3/8"	7'
1-1/4"	3/8"	7'
1-1/2"	3/8"	7'
2"	3/8"	10'
2-1/2"	3/8"	10'
3"	3/8"	10'
4"	3/8"	10'
6"	1/2"	10'

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15527 REN. 5/25 STATE OF CALIFORNIA

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neXus engineering
Consulting Mechanical Engineers
1400 Lone Palm Ave, Suite A
Modesto, CA 95351
Tel: 209.572.7399 Fax: 209.236.1579
www.nexusengineering.net
HVAC . Plumbing/Piping . Fire Sprinklers
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Consultants

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260500 ELECTRICAL WORK FOR COMMON RESULTS:

1. ELECTRICAL INSTALLATION SHALL COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, INCLUDING THE FOLLOWING:
TITLE 24, CCR, PART 2, 2022 CBC
TITLE 24, CCR, PART 3, 2022 CEC
TITLE 24, CCR, PART 4, 2022 CMC
TITLE 24, CCR, PART 9, 2022 CFC
TITLE 24, CCR, PART 6, 2022 CALIFORNIA ENERGY CODE
TITLE 24, CCR, PART 11, 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
ALL APPLICABLE LOCAL CODES

2. THE ELECTRICAL SERVICES ARE EXISTING. THE ELECTRICAL CONTRACTOR SHALL FAMILIZE THEMSELVES WITH THE EXISTING CONDITONS, DISTRIBUTION AND SIGNAL SYSTEMS PRIOR TO BID.

3. CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, LICENSES, ETC. REQUIRED TO CARRY ON AND COMPLETE THE WORK.

4. PROVIDE ALL LABOR, MATERIALS, TOOLS, PLANT EQUIPMENT, TRANSPORTATION AND PERFORM ALL OPERATIONS NECESSARY FOR ANY REASONABLE INCIDENTAL TO PROPER EXECUTION AND COMPLETION OF ALL "ELECTRICAL WORK" WHETHER SPECIFICALLY MENTIONED OR NOT; ALL AS INDICATED, SPECIFIED HEREIN, AND/OR IMPLIED THEREBY TO CARRY OUT THE APPARENT INTENT THEREOF.

5. ALL MATERIALS SHALL BE NEW AND LISTED WITH THE UNDERWRITERS' LABORATORIES, INC., SHALL MEET THEIR REQUIREMENTS AND SHALL BEAR THEIR LABEL WHEREVER STANDARDS HAVE BEEN ESTABLISHED AND LABEL SERVICE IS REGULARLY FURNISHED BY THAT AGENCY.

6. ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH THE SIZE AND LOCATIONS OF EQUIPMENT ARE SHOWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION AT THE SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR LAYING OUT AND INSTALLING HIS WORK TO AVOID INTERFERENCE WITH OTHER TRADES.

7. WORK SHOWN ON THE DRAWINGS TO BE INSTALLED UNDERGROUND SHALL BE INSTALLED AT LEAST 24" BELOW GRADE UNLESS OTHERWISE NOTED. BACKFILL IN 6" THICK, PROPERLY MOISTENED LAYERS, SOLIDLY PACKED AND IRON TAMPED TO A DENSITY NOT LESS THAN THAT OF ADJACENT, UNDISTURBED EARTH. RESTORE SURFACES, ROADWAYS, WALKS, CURBS, WALLS AND EXISTING UNDERGROUND INSTALLATIONS TO ORIGINAL CONDITION IN AN ACCEPTABLE MANNER.

8. ALL ELECTRICAL EQUIPMENT EXPOSED TO THE WEATHER SHALL BE LISTED FOR EXTERIOR USE.

9. ALL U.L. LISTED EQUIPMENT SHALL BE INSTALLED AS PER THEIR LISTING OR LABELING.

10. IN LOCATIONS WHERE ELECTRICAL EQUIPMENT WOULD BE EXPOSED TO PHYSICAL DAMAGE, ENCLOSURES OR GUARDS SHALL BE SO ARRANGED AND OF SUCH STRENGTH AS TO PREVENT SUCH DAMAGE.

11. CONFLICTS BETWEEN SPECIFICATIONS AND PLANS:

a. ANY CONFLICT BETWEEN ELECTRICAL SPECIFICATIONS AND ELECTRICAL PLANS; OR BETWEEN ELECTRICAL PLANS AND PLANS OF ANOTHER DISCIPLINE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND A RESOLUTION RECEIVED PRIOR TO PROCUREMENT OR INSTALLATION OF THE ITEM IN QUESTION.

b. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT RECEIVING ANY RESOLUTION TO THE CONFLICT HE/SHE DOES SO AT HIS/HER OWN RISK AND SHALL RECTIFY THE WORK TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER OR ENGINEER.

260500.01. HVAC SYSTEMS:

1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS OF ALL HVAC UNITS, DISCONNECTS AND DEVICES IN FIELD. COORDINATE ROOF PENETRATIONS FOR DISCONNECTS AND WEATHERPROOF OUTLETS WITH ELECTRICAL CONNECTION POINTS ON THE UNITS TO KEEP FLEXIBLE CONDUIT LENGTH TO A MINIMUM (36" MAXIMUM). VERIFY AND CONFIRM THE ACTUAL MOUNTING LOCATION ON THE HVAC UNIT FOR THE DISCONNECT. ALL SERVICING OUTLETS ON THE ROOF OR OUTDOORS FOR HVAC UNITS SHALL BE WP/GFI.

2. THE RATING OF THE DISCONNECT SHALL BE SUCH AS TO ENABLE THE LARGEST FUSE SIZE ON THE UNIT NAMEPLATE TO BE INSTALLED IN THE DISCONNECT. PROVIDE FUSES OF THIS RATING.

3. FURNISH AND INSTALL ALL LINE VOLTAGE CONDUITS AND LINE VOLTAGE WIRING (LOW VOLTAGE CONDUITS AND WIRING BY MECHANICAL) TO HVAC EQUIPMENT AND ASSOCIATED CONTROLS AND DEVICES AS SHOWN ON THE ELECTRICAL AND MECHANICAL PLANS, UNLESS OTHERWISE NOTED.

4. RUN ALL CONDUITS FOR ROOFTOP EQUIPMENT WITHIN CEILING SPACE BELOW. SURFACE CONDUIT RUNS ON THE ROOF ARE NOT PERMITTED ON THIS PROJECT.

5. DISCONNECTS SHALL NOT BE USED AS THROUGH RACEWAYS FOR WIRING NOT DIRECTLY SERVING THE DISCONNECTS. SERVICING OUTLETS SHALL NOT BE MOUNTED ON DISCONNECTS.

260500.02. SUBMITALLS:

1. PROVIDE THE FOLOWING SUBMITTALS FOR REVIEW AND APPROVAL. EACH SHALL BE SUBMITTED SEPARATELY TO AVOID DELAYS IN THE REVIEW OF ONE SUBMITTAL IN HOLDING UP REVIEW OF THE REMAINDER.

a. LIGHTING CONTROLS
b. BASIC ELECTRICAL MATERIALS
c. LIGHT FIXTURES

260500.03. WORKING CLEARANCES FOR ELECTRICAL SWITCHGEAR:

1. PROVIDE WORKING SPACES FOR ELECTRICAL PANELS AND SWITCHGEAR TO COMPLY WITH CEC 110.26.

2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES INVOLVED TO ENSURE THE CLEARANCES REQUIRED BY ITEM 1 ABOVE ARE PROVIDED.

260526. GROUNDING:

1. GROUND AND BOND ALL EQUIPMENT AS REQUIRED BY GOVERNING CODES AND SPECIFICALLY INCLUDING SWITCHBOARD, PANELBOARDS, MOTOR CASES, METAL PIPING SYSTEMS, STRUCTURAL STEEL, ETC.

2. PROVIDE GROUND WIRES IN ALL FEEDERS AND BRANCH CIRCUITS, SIZE PER CEC TABLE 250.122

3. ALL GROUND WIRES SHALL BE INSULATED GROUND WIRES.

260529. INSTALLATION OF SUPPORT SYSTEMS

1. RACEWAYS, CABLE ASSEMBLIES, BOXES, CABINETS, AND FITTINGS SHALL BE SECURELY FASTENED IN PLACE PER CEC ARTICLE 300.11. SUPPORT WIRES THAT DO NOT PROVIDE SECURE SUPPORT SHALL NOT BE PERMITTED AS THE SOLE SUPPORT. SUPPORT WIRES AND ASSOCIATED FITTINGS THAT PROVIDE SECURE SUPPORT AND THAT ARE INSTALLED IN ADDITION TO THE CEILING GRID SUPPORT WIRES SHALL BE PERMITTED AS THE SOLE SUPPORT. WHERE INDEPENDENT SUPPORT WIRE ARE USED, THEY SHALL BE SECURED AT BOTH ENDS. CABLES AND RACEWAYS SHALL NOT BE SUPPORTED BY CEILING GRIDS.

2. FURNISH ALL NECESSARY FOUNDATIONS, SUPPORTS, BACKING, ETC., FOR ALL ELECTRICAL ENCLOSURES, CONDUITS AND EQUIPMENT.

3. ATTACH ALL BOXES, CABINETS, ETC. TO WOOD WITH WOOD OR LAG SCREWS, TO METAL WITH MACHINE SCREWS OR BOLTS AND TO CONCRETE WITH EXPANSION ANCHORS AND MACHINE SCREWS OR BOLTS.

2. RIGID STEEL CONDUIT SHALL BE SUPPORTED AT INTERVALS NOT GREATER THAN 10 FT, ELECTRICAL METALLIC TUBING AT INTERVALS NOT GREATER THAN 5 FT.

3. A SUPPORT SHALL BE PROVIDED NOT MORE THAN 3 FT. FROM ANY CHANGE IN DIRECTION. ADDITIONAL SUPPORTS TO THOSE SPECIFIED ABOVE SHALL BE INSTALLED WHERE REQUIRED TO SUIT JOB CONDITIONS AND TO PROVIDE A SECURE INSTALLATION. ALL HANGERS AND SUPPORTS SHALL BE THE PRODUCTS OF ONE MANUFACTURER.

260533. PULL OR JUNCTION BOXES:

1. INSTALL WHERE INDICATED, OR AS REQUIRED BY CODE, PULL BOXES AND JUNCTION BOXES OF SUFFICIENT SIZE AND CAPACITY TO FACILITATE ALL WIRING. BOXES SHALL BE SIZED TO PROPERLY ACCOMMODATE ALL CONDUCTORS ENTERING SAME.

2. BOXES SHALL BE OF THE SHAPE AND SIZE BEST SUITED FOR THE PARTICULAR APPLICATION AND SHALL BE SUPPORTED DIRECTLY TO STRUCTURAL MEMBERS, FRAMING OR BLOCKING BY MEANS OF SCREWS, ANCHORS, BOLTS OR EMBEDDED IN MASONRY.

A. SWITCH AND RECEPTACLE BOX SHALL BE ONE PIECE DRAWN OR STAMPED STEEL BOXES MINIMUM SIZE SHALL BE FOUR INCHES (4") SQARE. BOXES SHALL BE FITTED WITH FLUSH DEVICE COVERS, PLASTER RINGS, OR TILE SWITCH RINGS IN MASONRY IN AREA WHERE EXPOSED WIRING IS PERMISSIBLE, BOXES SHALL BEFITTED WITH SURFACE TYPE COVERS.

B. LIGHTING OUTLETS SHALL BE FOUR INCHES (4")OCTAGON, MINIMUM.

C. VOICE/DATA OUTLET BOXES SHALL BE 4_11/16"SQ.x2_1/8" DEEP MINIMUM, FITTED WITH PLASTER RINGS.

D. BOXES FOR SPECIAL EQUIPMENT SHALL BE SUITABLE FOR THE PARTICULAR EQUIPMENT.

E. BOXES SHALL BE LOCATED AND PLACED ACCORDING TO ARCHITECTURAL AND STRUCTURAL REQUIREMENTS.

260550. WIRING METHODS: LINE VOLTAGE SYSTEMS (120V AND ABOVE):

1. ALL WIRING SHALL BE INSTALLED IN CONDUITS. CONDUITS SHALL BE RUN CONCEALED IN WALLS AND CEILINGS WHERE FEASIBLE. ALL CONDUITS INSTALLED SURFACE ON WALL SHALL BE PAINTED TO MATCH WALL FINISH. MOUNT EXTERIOR CONDUITS ON WALL ON GALVANIZED UNISTRUTS. ALL SURFACE CONDUIT INSTALLATION/ RUNS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.

2. ALL CONDUITS RUN WITHIN INTERIOR FINISHED SPACES SUCH AS OFFICES, BREAKROOM, RESTROOM ETC. SHALL BE RUN CONCEALED.

3. ALL CONDUITS RUN IN DEDICATED ELECTRICAL AND MECHANICAL ROOMS SHALL BE RUN EXPOSED.

4. MINIMUM CONDUIT SIZE SHALL BE 1/2" ABOVE GRADE AND 3/4" UNDERGROUND.

5. MINIMUM ACCEPTABLE CONDUITS ARE:

A. GALVANIZED RIGID STEEL - FOR USE ON:
(1) EXTERIOR WALL SURFACES.

B. GALVANISED STEEL EMT FOR USE:
(1) CONCEALED IN INDOOR FINISHED SPACES.
(2) EXPOSED INSIDE ELECTRICAL & MECHANICAL ROOMS.

C. LIQUID TIGHT STEEL FLEX:
(1) FOR FINAL CONNECTION TO OUTDOOR EQUIPMENT. LENGTH SHALL NOT EXCEED 36".

D. FLEXIBLE STEEL CONDUIT:
(1) FOR INDOOR FINAL CONNECTION TO RECESSED LIGHT FIXTURES. LENGTH SHALL NOT EXCEED 72".
(2) FOR INDOOR FINAL CONNECTION TO HVAC EQUIPMENT. LENGTH SHALL NOT EXCEED 36".

E. "PVC" SCHEDULE 40:
(1) FOR CONDUITS RUN UNDERGROUND AND FOR UNDER BUILDING SLAB.
(2) CONDUIT STUBUPS THROUGH THE FLOOR OR GRADE SHALL BE IN PVC WRAPPED RIGID STEEL CONDUIT. PVC WRAPPING SHALL EXTEND 6" ABOVE FINISHED FLOOR OR GRADE.
(3) NOT PERMITTED FOR WIRING ABOVE FINISHED FLOOR INSIDE BUILDINGS

F. ALUMINUN CONDUITS, IMC CONDUITS OR ALUMINUM FITTINGS ARE NOT APPROVED FOR USE ON THIS PROJECT.

G. ALL CONDUIT FITTINGS SHALL BE MALLEABLE IRON/STEEL.

H. COUPLING:
(1) EMT COUPLING - APPLETON TWC-CS SERIES
(2) EMT CONNECTOR - APPLETON TW-CSI SERIES
(3) FLEX CONDUIT CONNECTOR - T&B "TITE BITE", INSULATED
(4) LIQUID TIGHT FLEX CONDUIT CONNECTOR - APPLETON "STB" SERIES UP TO 2", "ST" SERIES OVER 2".

I. RIGID STEEL CONDUIT CONNECTED TO BOXES AND CABINETS SHALL BE FITTED WITH TWO LOCKNUTS AND INSULATING BUSHING, OA "A" SERIES. PROVIDE GROUNDING BUSHING OZ "BL" SERIES WHERE LOCKNUTS AND BUSHING IS NOT USED. CONDUITS CONNECTED TO BOXES EXPOSED TO WEATHER/MOISTURE SHALL BE FITTED WITH WATERTIGHT SEALING HUBS OF STEEL OR MALLEABLE IRON WITH SEALING RING AND INSULATED THREAT, T & B 370 SERIES.

J. TYPE NM AND NMC CABLES SHALL NOT BE USED ON THIS PROJECT.

K. THE PROJECT DRAWINGS ARE LAID OUT USING SOLID CONDUITS AND CABLES PULLED THROUGH SUCH CONDUITS. MC CABLES MAY BE UTILIZED AS DESCRIBED BELOW, WITH RESTRICTIONS NOTED.

(1) PRIOR APPROVAL OF OWNER/ARCHITECT REQUIRED.

(2) ALL SUPPORTS, ATTACHMENTS SPACING SHALL BE PER CEC 330.30.

(3) FOR MULTI-WIRE BRANCH CIRCUITS SUCH CABLES SHALL HAVE MULTIPLE NEUTRALS, ONE FOR EACH CIRCUIT.

6. CONDUCTORS SHALL BE COPPER CONDUCTORS TYPE THHN/THWN UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.

7. ALL DEVICES, CONDUITS, RACEWAYS AND CABLES SHOWN ARE NEW TO BE PROVIDED UNLESS OTHERWISE NOTED.

8. FLASH AND COUNTERFLASH ALL ITEMS PASSING THROUGH THE ROOF.

9. THE OWNER RESERVES THE RIGHT TO RELOCATE ALL LIGHTING, OUTLETS AND SWITCHES BEFORE THEY ARE ROUGHED IN AT NO EXTRA COST.

260551. INSTALLATION OF RACEWAYS AND FITTINGS

1. CONCEAL RACEWAYS WITHIN CEILINGS, WALLS, AND FLOORS EXCEPT WHERE EXPOSED RACEWAYS ARE SPECIFICALLY PERMITTED.

2. WHERE CONDUIT IS ALLOWED TO BE EXPOSED, INSTALL THE CONDUIT PARALLEL WITH OR AT RIGHT ANGLES TO STRUCTURAL MEMBERS, WALLS, AND LINES OF THE BUILDING.

3. INSTALL WHERE INDICATED, OR AS REQUIRED BY CODE, PULLBOXES AND JUNCTION BOXES OF SUFFICIENT SIZE TO FACILITATE WIRING. BOXES SHALL BE SIZED TO PROPERLY ACCOMMODATE ALL CONDUCTORS ENTERING SAME.

4. DO NOT INSTALL CONDUIT OR TUBING WHICH HAS BEEN CRUSHED OR DEFORMED.

5. RUN CONDUCTORS OF SAME CIRCUIT IN SAME CONDUIT. RUN CONDUCTORS OF DIFFERENT VOLTAGE SYSTEMS IN SEPARATE CONDUITS.

6. INSTALL NO CONDUCTORS UNTIL WORK WHICH MIGHT CAUSE DAMAGE TO SUCH CONDUCTORS OR THE CONDUIT HAS BEEN COMPLETED.

7. KEEP ALL CONDUITS AT LEAST SIX INCHES AWAY FROM THE COVERING ON HOT WATER OR STEAM PIPES.

8. CAP RACEWAY ENDS DURING CONSTRUCTION. CLEAN OR REPLACE CONDUITS IN WHICH WATER OR FOREIGN MATTER HAVE ACCUMULATED, TO THE SATISFACTION OF THE ARCHITECT.

9. CONDUITS SHALL BE SUPPORTED WITH STRAPS, WITH GALVANIZED MALLEABLE SPLIT RING AND ROD FOR INDIVIDUAL RUNS OR WITH KINDORF OR UNISTRUT CHANNEL SUPPORTS FOR MULTIPLE RUNS. DISTANCE BETWEEN SUPPORTS SHALL NOT EXCEED 10 FEET. CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF ONE ANOTHER.

10. CONDUITS CONNECTED TO BOXES AND CABINETS SHALL BE FITTED WITH TWO LOCKNUTS AND INSULATED BUSHING, OA "A" SERIES.

11. CONDUITS NOT CONNECTED WITH LOCKNUTS AND BUSHINGS SHALL BE FITTED WITH GROUNDING BUSHING, OZ "BL" SERIES, U. L. APPROVED AND BONDED.

12. CONDUIT STRAPS FOR INDIVIDUAL RUNS SHALL BE SECURED BY TOGGLE BOLTS ON HOLLOW MASONRY, EXPANSION ANCHORS ON SOLID CONCRETE OR MASONRY, MACHINE SCREWS OR BOLTS ON METAL SURFACES AND WOOD SCREWS ON WOOD CONSTRUCTION. THE USE OF NAILS TO ANCHOR STRAPS ON WOOD CONSTRUCTION IS PROHIBITED. STRAPS SHALL BE TWO HOLE MALLEABLE IRON OR SNAP-TYPE STEEL WITH RIBBED BACK, GALVANIZED OR CADMIUM PLATED. THE USE

13. PLACEMENT OF ALL BOXES SHALL BE GOVERNED BY APPLICABLE ARCHITECTURAL AND STRUCTURAL REQUIREMENTS.

14. CONDUIT FITTINGS: EXCEPT WHERE OTHERWISE NOTED, CONDUIT FITTINGS SHALL BE APPLETON OR APPROVED EQUAL. UNILETS SHALL BE MALLEABLE IRON AND FITTED WITH COVERS AND GASKETS.

15. TELEPHONE AND SIGNAL CONDUIT BENDS WHERE REQUIRED SHALL HAVE A RADIUS OF TEN TIMES THE CONDUIT TRADE SIZE.

16. PROVIDE PULL TAPE IN ALL EMPTY CONDUITS.

260553. NAMEPLATES & IDENTIFICATION:

1. INSTALL ENGRAVED NAMEPLATES FOR EACH PANELBOARD, CABINET, DISCONNECT, ETC. NAMEPLATES SHALL BE SECURELY FASTENED TO THE EQUIPMENT WITH #4 PHILLIPS ROUND HEAD CADMIUM PLATED SELF-TAPPING SCREWS, BRASS BOLT.

2. PROVIDE CIRCUIT LABEL INDICATING PANEL AND CIRCUIT NUMBER ON EACH COVERPLATE FOR EACH RECEPTACLE AND LIGHT SWITCH, MOTION SENSOR SWITCH. SUCH LABEL SHALL BE SELF ADHESIVE WHITE TAPE WITH BLACK LETTERS MADE ON A LABEL MAKER.

3. ALL CONTROLLED RECEPTACLES SHALL BE PERMANENTLY MARKED TO DIFFERENTIATE THEM FROM UNCONTROLLED RECEPTACLES PER CALIFORNIA ENERGY CODE SECTION 130.5(d)(3).

260573. ARC FLASH HAZARDS:

1. PROVIDE WARNING LABEL ON ELECTRICAL EQUIPMENT OF POSSIBLE ARC FLASH HAZARDS PER C.E.C. 110.16.

260800. TESTING:

1. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE FREE FROM SHORT CIRCUITS AND IMPROPER GROUNDS. TEST ALL WIRING AND CONNECTIONS FOR CONTINUITY AND GROUNDS BEFORE ANY FIXTURES OR EQUIPMENT ARE CONNECTED AND WHERE SUCH TESTS INDICATE FAULTY INSULATION OR OTHER DEFECTS, THEY SHALL BE LOCATED, REPAIRED AND RETESTED AT THE CONTRACTOR'S EXPENSE. PROVIDE ALL INSTRUMENTS TO MAKE SUCH TESTS.

2. DEMONSTRATE TO THE OWNER AND THE ARCHITECT, THAT THE ENTIRE INSTALLATION IS COMPLETE, IN PROPER OPERATING CONDITION AND THAT THE CONTRACT HAS BEEN PROPERLY AND FULLY EXECUTED.

260811. OPERATIONS AND MAINTENANCE (O&M) MANUALS:

1. PROVIDE AS-BUILT DRAWINGS.

A. UPON COMPLETION OF WORK COVERED BY THIS CONTRACT, PROVIDE AS-BUILT PLANS UPON WHICH SHALL BE SHOWN ALL CHANGES OF FEEDERS, PANELS, CIRCUITS, LIGHT FIXTURES, ETC., FOR THIS PROJECT AND INSTALLED UNDER THIS CONTRACT, WHICH ARE NOT IN ACCORD WITH THESE DRAWINGS FOR THE WORK.

B. ALL SYMBOLS AND DESIGNATIONS USED IN PREPARING "AS-BUILT" DRAWINGS SHALL MATCH THOSE USED IN CONTRACT DRAWINGS.

2. PROVIDE OF OPERATION AND MAINTENANCE MANUAL FOR POWER, AND LIGHTING SYSTEMS.

3. SCAN BOTH "AS-BUILT" PLANS AND O&M MANUAL ON TO A CD AND PROVIDE (3) COPIES OF THE CD TO OWNER PRIOR TO RELEASE OF FINAL PAYMENT.

260943. INTERIOR LIGHTING CONTROL SYSTEM:

1. PROVIDE A COMPLETE AND FULLY OPERATIONAL INTERIOR LIGHTING CONTROL SYSTEM FOR INTERIOR LIGHTING AS SPECIFIED HEREIN AND SHOWN ON THE DRAWINGS.

2. THE COMPLETE SYSTEM, INCLUDING ALL DEVICES SHALL BE IN COMPLIANCE WITH THE 2022 CALIFORNIA ENERGY CODE.

3. THE COMPLETE SYSTEM SHALL BE AS MANUFACTURED BY NLIGHT, WATTSTOPPER, OR GREENGATE CONSISTING OF:

A. LUMINAIRES WITH 0-10V DIMMING LED DRIVERS.

B. WALL DIMMER SWITCHES THAT COMMUNICATE THROUGH ROOM CONTROLLERS.

C OCCUPANCY SENSORS THAT COMMUNICATE THROUGH ROOM CONTROLLERS.

D WHERE LIGHT FIXTURES FALL UNDER THE PRIMARY AND SECONDARY DAYLIT ZONES AS DEFINED BY SECTION 130.1(d) AND THE TOTAL INSTALLED GENERAL LIGHTING POWER IN THE PRIMARY DAYLIT ZONE IS NOT LESS THAN 120W (EXCEPTION #1 TO SECTION 130.1(d)2) SUCH LIGHT FIXTURES SHALL BE PROVIDED WITH AUTOMATIC DAYLIGHITNG CONTROLS IN ACCORDANCE WITH SECTION 130.1(d)(2)(D).

E. TIME BASED GATEWAY DEVICE THAT PROVIDES TIME-BASED SIGNAL TO ROOM CONTROLLERS FOR ALL SPACES THAT CONTROLLED BY MOTION SENSORS TO AUTOMATICALLY SHUT-OFF LIGHTS AT THE END OF DAY

4. ALL SYSTEM COMPONENTS SHALL BE UL LISTED. ALL SYSTEM CONTROL COMPONENTS SHALL BE APPROVED BY THE CALIFORNIA ENERGY COMMISSION.

5. ALL EQUIPMENT AND ITEMS OF CONTROL SHALL BE INSTALLED AND WIRED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

6. PROVIDE WALL OCCUPANCY SENSOR LIGHT SWITCHES WHERE SO SHOWN ON PLANS. SUCH OCCUPANCY SENSOR SWITCHES SHALL BE SINGLE LEVEL AUTOMATIC "ON"/AUTOMATIC "OFF" AS SHOWN ON PLANS. SENSORS SHALL COMPLY WITH SECTION 110.9 OF THE ENERGY CODE.

7. THE SYSTEM SHALL AUTOMATICALLY SWITCH OFF ALL LIGHTS WHEN CONTROLLED SPACE BECOMES UNOCCUPIED AND SWITCH ON LIGHTS WHEN THE SPACE IS RE-OCCUPIED. ALL SENSORS SHALL BE PROVIDED WITH USER ADJUSTABLE TIME DELAY (15 SEC. TO 20 MINUTES) FOR "SWITCH-OFF" FUNCTION AND ADJUSTABLE SENSITIVITY.

8. LOW VOLTAGE WIRING IS NOT REQUIRED TO BE IN CONDUIT EXCEPT IN HARDLID CEILINGS WHERE SUCH WIRES SHALL BE RUN IN CONDUIT.

262417. PANELBOARDS:

1. UNITS SHALL BE FLUSH OR SURFACE MOUNTED AS INDICATED ON THE PANEL SCHEDULE, WITH THE NUMBER AND SIZE OF BREAKERS AS INDICATED ON THE PANEL SCHEDULE. SINGLE POLE, TWO POLE, AND THREE POLE BREAKERS SHALL BE BOLT-ON TYPE. MULTIPLE POLE BREAKERS SHALL HAVE COMMON INTERNAL TRIP CONNECTION. SINGLE POLE BREAKERS SHALL NOT BE TIED AT HANDLES TO FORM MULTIPLE POLE BREAKERS. THE PANEL DOORS SHALL BE DOOR-IN-DOOR CONSTRUCTION AND SHALL HAVE FLUSH TYPE LOCKS, ALL LOCKS SHALL BE KEYED ALIKE AND HAVE TYPEWRITTEN DIRECTORIES INDICATING FIXTURES, EQUIPMENT, OR OUTLETS SERVICE BY EACH BREAKER. PANELS SHALL HAVE COPPER BUSSING.

MEP COMPONENT ANCHORAGE

APPLICABLE CODE: 2022 CBC

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 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13, 26, AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.

2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G., HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.

3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE 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:

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

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

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE 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 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1617A.1.26.

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

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

MP ☐ MD ☐ PP ☐ E ☒ - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DEAILS.

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH HCAI PREAPPROVAL (OPM #)

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15207 — REN. 5/25 — STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER — RICHARD C. SMITH — No. E14305 Exp. 6-30-25 — ELECTRICAL — STATE OF CALIFORNIA

HCS Engineering inc.
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

GENERAL NOTES

Project Number	2321
Date	7/5/24
Drawn by	RCS-1
Checked by	Checker

E0-1.1

Plot Date & Time 12/20/2024 2:08:57 PM

Autodesk Docs://Escalon Food Science/EHS FoodScience Electrical.rvt

path://john/17/4

262726. WIRING DEVICES:

1. UNITS SHALL BE EQUAL TO THE DEVICES SET FORTH HEREIN, IN STANDARD COLORS (BROWN, WHITE, GREY, BEIGE OR IVORY) AS SELECTED BY THE ARCHITECT:

A. WIRING DEVICES	LEVITON #	HUBBELL #	P & S #
SINGLE POLE SWITCH, 15A	1201-2	HBL1201	PS15AC1
DOUBLE POLE SWITCH, 15A	1202-2	HBL1202	PS15AC2
THREE WAY SWITCH, 15A	1203-2	HBL1203	PS15AC3
DUPLEX CONV. OUTLET, 15A	5262	HBL5262	5262
DUPLEX CONV. OUTLET, 20A	5362	HBL5362	5362
DUPLEX CONV. GFI OUTLET, 15A	6599	GF15	1595L
DUPLEX CONV. GFI OUTLET, 20A	6899	GF15 2095L	

2. THE CONTROLLED OUTLET SHALL HAVE PERMANENT UNIQUE MARKING PROVIDED BY THE MANUFACTURER OF THE RECEPTACLE.

3. THE MOUNTING HEIGHTS OF LIGHT SWITCHES, RECEPTACLES AND CONTROLS SHALL BE MAXIMUM 48" MEASURED TO THE TOP OF BOXES OR MINIMUM 16" TO THE BOTTOM OF BOXES. SEE "LEGEND" FOR ACTUAL MOUNTING HEIGHTS OF DEVICES. VERIFY HEIGHT WITH ARCHITECT WHERE AN ACTUAL MOUNTING HEIGHT IS NOT CALLED OUT ON PLANS.

4. SINGLE RECEPTACLE SERVED BY INDIVIDUAL 20A BRANCH CIRCUIT DEDICATED TO THE OUTLET SHALL BE 20A RATED PER CEC 210.21(B)(1). ALL OTHERS SHALL BE 15A RATED.

5. ALL 15A AND 20A, 120V OUTLETS IN KITCHEN SHALL BE GFCI PER CEC 210.8(B)(2). LOCATE SUCH OUTLETS SO THAT THEY ARE ACCESSIBLE AFTER APPLIANCES THAT ARE PLUGGED INTO THE OUTLETS ARE IN PLACE.

6. ALL RECEPTACLES INSTALLED OUTDOORS SHALL BE WEATHERPROOF AND HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION.

7. 120V, 15A AND 20A RECEPTACLES ARE NOW SUBJECT TO CALIFORNIA ENERGY CODE, SECTION 130.5(d). ALL SUCH OUTLETS SHALL BE CONSIDERED AS UNCONTROLLED EXCEPT THOSE WHICH ARE SPECIFICALLY CALLED OUT ON THE PLANS AS CONTROLLED. SEE "CONTROLLED 120V RECEPTACLES" PARAGRAPH BELOW.

262726.01. CONTROLLED 120V RECEPTACLES:

1. CALIFORNIA ENERGY CODE, SECTION 130.5(d) NOW REQUIRES THAT BOTH CONTROLLED AND UNCONTROLLED 120V OUTLETS FOR PLUG LOADS BE PROVIDED IN THE FOLLOWING LOCATIONS:

A. EACH PRIVATE OFFICE.
B. EACH OPEN OFFICE AREA.
C. RECEPTION LOBBY.
D. CONFERENCE ROOM.
E. KITCHENETTE AND BREAK ROOM IN OFFICE SPACES.
F. COPY ROOM.

2. CIRCUITS SERVING CONTROLLED RECEPTACLES SHALL BE AUTOMATICALLY BE SHUT-OFF IN ACCORDANCE WITH SECTION 130.1(c)1.

3. PROVIDE A SPLITWIRED DUPLEX RECEPTACLE WITH ONE HALF CONTROLLED AND ONE HALF UNCONTROLLED DUPLEX RECEPTACLE AS SHOWN ON THE PLANS. THIS RECEPTACLE SHALL BE SPLIT DUPLEX OUTLET AS MANUFACTURED BY SAME MANUFACTURER AS THE OCCUPANCY LIGHTING SENSOR SYSTEM WITH A 15-AMP RELAY-SWITCHED OUTLET AND A 15-AMP CONSTANT POWER OUTLET.

262726.02. DEVICE PLATES:

1. ALL DEVICE PLATES FOR INDOOR USE SHALL BE STAINLESS STEEL.

2. ALL DEVICE BOXES WHICH ARE INSTALLED IN FIRE RATED WALL ASSEMBLY AND IS PROVIDED WITH A FIRE-STOPPING PUTTY PAD SHALL HAVE A BRUSHED STAINLESS STEEL COVERPLATE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PUTTY PAD.

3. DEVICE COVERS FOR SURFACE MOUNTED BOXES SHALL BE 1/2" RAISED STEEL PLATES.

4. DEVICE COVERS FOR DEVICES LOCATED IN DAMP LOCATIONS SHALL COMPLY WITH CEC 406.9(A).

5. DEVICE COVERS FOR DEVICES LOCATED IN WET LOCATIONS SHALL COMPLY WITH CEC 406.9(B).

265100. LIGHTING:

1. ALL LUMINAIRES SHALL BE CERTIFIED BY THE MANUFACTURER TO THE CALIFORNIA ENERGY COMMISSION:

A. ALL LUMINAIRES SPECIFIED ON THIS PROJECT SHALL BE AS NOTED IN THE "LIGHT FIXTURE SCHEDULE" ON THESE PLANS. NO SUBSTITUTES ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

B. ALL INTERIOR LUMINAIRES SHALL BE PROVIDES WITH 0-10V DIMMING LED DRIVERS.

C. ALL EXTERIOR LUMINAIRES SHALL BE PROVIDED WITH 0-10V DIMMING LED DRIVERS WITH INTEGRAL MOTION SENSORS WHERE SO NOTED.

265300. EXIT AND MEANS OF EGRESS EMERGENCY LIGHTING:

1. PROVIDE EXIT SIGNS IN ACCORDANCE WITH CBC SECTION 1011.1. PROVIDE MEANS OF EGRESS ILLUMINATION IN ACCORDANCE WITH CBC SECTION 1006. PROVIDE FLOOR-LEVEL EXIT SIGNS PER CBC 1011.7 IF REQUIRED

2. ELECTRICAL CONTRACTOR SHALL RE-VERIFY PLACEMENT OF ALL EXIT SIGNS AS TO ENSURE THAT THEY ARE CLEARLY VISIBLE FROM ANY DIRECTION OF APPROACH WITHIN THE PATH OF EXIT TRAVEL TO AND WITHIN EXITS INSIDE THE BUILDING. THIS VERIFICATION SHALL BE CARRIED OUT AT ROUGHIN STAGE. THEY SHALL BE LOCATED AS NECESSARY TO CLEARLY INDICATE THE DIRECTION OF EGRESS TRAVEL. NO POINT IN THE EXIT PATH SHALL BE MORE THAN 100 FT. FROM THE NEAREST VISIBLE SIGN. ALL IN ACCORDANCE WITH CBC SECTION 1011.1. RELOCATE AND/OR ADD EXIT SIGNS AS NECESSARY TO ACHIEVE THIS. PROVIDE PENDANTS TO MOUNT SIGNS AS NECESSARY TO ACHIEVE THIS.

3. THE FINAL NUMBER AND LOCATION OF EXIT SIGNS SHALL BE DETERMINED IN THE FIELD BY THE FIRE MARSHALL AND BUILDING INSPECTOR.

4. INDIVIDUAL UNIT EQUIPMENT FOR EMERGENCY ILLUMINATION SHALL COMPLY WITH CEC SECTION 700.12(F). THE BRANCH CIRCUIT FEEDING THE UNIT EQUIPMENT SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA AND CONNECTED AHEAD OF ANY LOCAL SWITCHES.

5. ALL EMERGENCY LIGHTS AND EXIT SIGNS SHALL BE PROVIDED WITH AN UNSWITCHED HOT WIRE.

6. ALL EMERGENCY LIGHT FIXTURES WITH INTEGRAL BATTERY BALLASTS SHALL BE SWITCHED AS SHOWN AND SHALL COME ON IN EMERGENCY POWER-OFF MODE UPON POWER FAILURE. TO THIS EFFECT PROVIDE AN UNSWITCHED POWER WIRE TO EACH SUCH FIXTURE FROM THE SAME CIRCUIT AS THAT FEEDING THE LIGHT FIXTURE.

283100. FIRE ALARM SYSTEM :

A. GENERAL REQUIREMENTS:

1. THE CONTRACTOR SHALL PROVIDE A NEW VOICE EVAC AUTOMATIC FIRE ALARM SYSTEM FOR THE AREA OF REMODEL.

A. THE FIRE ALARM SYSTEM SHALL CONFORM TO STATE FIRE CODES. ALL EQUIPMENT SHALL HAVE BEEN APPROVED AND LISTED BY THE STATE FIRE MARSHAL.

B. THE FIRE ALARM SYSTEM EQUIPMENT SHALL BE U.L. LISTED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL'S OFFICE.

C. ALL WIRING SHALL BE IN RACEWAYS. MINIMUM SIZE OF CONDUIT SHALL BE 1/2" INDOORS. ALL CONDUITS INSTALLED UNDERGROUND AND ON EXTERIOR OF BUILDING EXTERIOR WALLS SHALL HAVE WATER TIGHT FITTINGS.

B. FIELD INVESTIGATION:

1. THE ELECTRICAL CONTRACTOR AND HIS FIRE ALARM CONTRACTOR SHALL CARRY OUT AND INCLUDE ALL INVESTIGATIONS REQUIRED AT THE SITE FOR THE EXISTING SYSTEM PRIOR TO BID TIME AND SHALL INCLUDE IN HIS/HER BID ALL COMPONENTS, DEVICES, ETC., REQUIRED TO PRODUCE THE INTENDED RESULTS. SUBMISSION OF A BID BY THE ELECTRICAL CONTRACTOR SHALL BE CONSIDERED AS HIM/HER HAVING COMPLIED WITH THIS REQUIREMENT AND NO ADDITIONAL COMPENSATION SHALL BE PROVIDED TO THE CONTRACTOR FOR FAILING TO CARRY OUT A THOROUGH INVESTIGATION OF THE EXISTING SYSTEM.

2. THE FIRE ALARM SYSTEM CONTRACTOR SHALL VERIFY THE CURRENTNESS AND COMPATIBILITY OF THE PRODUCTS AND COMPONENT CATALOG NUMBERS CALLED OUT ON THE PLANS, TOGETHER WITH THE FACT THAT THEY ARE CONSISTENT WITH THE WIRING INDICATED ON THE PLANS, TO PRODUCE A FULLY FUNCTIONAL FIRE ALARM SYSTEM AS INTENDED. HE SHALL USE THE SERVICES OF AN AUTHORIZED, TRAINED REPRESENTATIVE OF THE SILENT KNIGHT COMPANY TO EVALUATE THIS. IN CASE OF ANY DISCREPANCY, HE SHALL INCLUDE IN HIS BID ALL REQUIRED MODIFICATIONS. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED TO THE ELECTRICAL AND FIRE ALARM CONTRACTOR AFTER THE BID FOR FAILING TO CARRYOUT THIS EXCERCISE PRIOR TO BID TIME.

C. EQUIPMENT: SCOPE OF WORK/INSTALLATION

1. PROVIDE SPEAKERS, STROBES AND SPEAKER/STROBES.

2. PROVIDE SMOKE DETECTORS AND ATTIC HEAT DETECTORS.

3. PROVIDE ALL ASSOCIATED WIRING, MODULES, ACCESSORIES, ETC., AS REQUIRED TO MAKE THIS A COMPLETE AND FULLY OPERATIONAL FIRE ALARM SYSTEM.

4. PROVIDE ALL PROGRAMING AND TESTING NECESSARY FOR THE SYSTEM. THIS WORK SHALL BE CARRIED OUT BY AUTHORIZED, SKILLED REPRESENTATIVE OF GAMEWELL.

D. WIRING:

1. SEE "FIRE ALARM SYSTEM WIRING SCHEDULE" ON THIS SHEET.

E. AUDIBLES:

1. ALL AUDIBLE DEVICES SHALL PRODUCE THE SAME BASIC SOUND AND PATTERN AUDIBLE DEVICES SHALL BE AT LEAST 15dBA ABOVE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10 FT. OR MORE THAN 110dBA IN TOTAL, THROUGHOUT.

F. VISUALS:

1. VISUAL DEVICES SHALL NOT EXCEED TWO FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN ONE FLASH EVERY SECOND.

G. INITIATION SYSTEM:

1. THE SYSTEM FOR THE BUILDINGS BEING ADDED IS AUTOMATIC.

H. OFF-SITE MONITORING:

1. AUTOMATIC FIRE ALARM SYSTEM 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 STANDARD, FM 3011. (CBC 907.6.6.3)

I. PENETRATIONS:

1. PENETRATIONS OF FIRE-RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, PART 2, CHAPTER 7, TITLE 24.

J. SUBMITTALS:

1. SUBMITTALS ARE NOT REQUIRED. SYSTEM COMPONENTS SHALL BE AS SPECIFIED. PLANS AND SYSTEM COMPONENTS HAVE ALREADY BEEN PRE APPROVED BY D.S.A.

2. PROVIDE 3 COPIES OF A CERTIFICATE TO THE ARCHITECT THAT THE FIRE ALARM SYSTEM COMPONENTS AND SYSTEM INSTALLED IS IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. SUCH A CERTIFICATE SHALL BE SIGNED BY THE D.S.A. INSPECTOR, THE OWNER'S REPRESENTATIVE, AND THE INSTALLING CONTRACTOR. SUCH A CERTIFICATE SHALL ALSO STATE THAT THE FIRE ALARM SYSTEM WAS TESTED SUCCESSFULLY.

K. TESTING:

1. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE ENFORCING AGENCY, AND BE WITNESSED BY THE LOCAL FIRE AUTHORITY WITH THE DSA INSPECTOR OF RECORD.

2. PROVIDE A CERTIFICATE OF COMPLETION PER NFPA 72.

ELECTRICAL LEGEND

LIGHTING FIXTURES

FIXTURE NOTATIONS:
A,(b).C-12 FIXTURE TYPE "A", SWITCH "b", CIRCUIT C-12

LINEAR FIXTURE
- SQUARE = RECESSED
- CIRCLE =SURFACE

(A / LED) ALTERNATE DESIGNATION FOR SITE LIGHTING FIXTURES

TASK LIGHT OR STRIP LIGHT

DOWNLIGHT, SQUARE = RECESSED, HEXAGON = INGRADE UPLIGHT

WALL MOUNT

CEILING EXHAUST FAN

POLE MOUNT AREA LIGHT

EMERGENCY LIGHTING

EXIT SIGN WITH 90 MIN BATTERY BACKUP

WALL MOUNT EMERGENCY LIGHT WITH 90 MIN BATTERY BACK

EXTERIOR LANDING EMERGENCY LIGHT. CONNECT TO INTERIOR EXIT SIGN FOR POWER.

FIXTURES WITH INTEGRAL EMERGENCY BALLAST

BASIC LIGHTING CONTROLS

LIGHT SWITCH, +48" TO TOP OF BOX
- D = DIMMER
- 3 = SWAY
- P = PILOT SWITCH
- os = LINE VOLTAGE OCCUPANCY SENSOR
- T = TIMMER
- VS = VACANCY SENSOR

WALL MOUNT OCCUPANCY SENSOR (LINE VOLTAGE)

TITLE 24 LIGHTING CONTROLS

LIGHT SWITCH

COMPONENTS OF DIMMING ROOM CONTROLLER
- US = LOW VOLTAGE OCCUPANCY SENSOR (CAT 5 OR AS REQUIRED)
- DRC = DIMMING ROOM CONTROLLER
- PE = LOW VOLTAGE DIMMING PHOTOCELL (CAT 5 OR AS REQUIRED)
- D = LOW VOLTAGE DIMMER (CAT 5 OR AS REQUIRED)
- R = PLUG LOAD CONTROLLER
- ADR = AUTOMATIC DEMAND RESPOSNE (FOR BUILDINGS OVER 10,000 SF)

NOTES:

1. FOR SUBMITTAL INCLUDE FACTORY CONTROL DRAWINGS.

2. CONDUCT A CONTROLS PRE-CONSTRUCTION MEETING WITH CONTROLS STARTUP TEAM. PROVIDE AGENDA AND ATTENDEES AS A SUBMITTAL. INCLUDE DEVICE I.D. TAGS, PROGRAMMING, CABLE ROUTING, PROGRAM AND TIME SCHEDULES AND DATE OF PROGRAMMING AND TESTING.

3. CONTRACTOR TO HAVE SYSTEM FACTORY SUPPORT FOR START UP, PROGRAMMING AND COMMISSIONING. VERIFY OPERATIONAL HOURS WITH OWNER PRIOR TO COMMISSIONING.

ELECTRICAL POWER

ALL LINE VOLTAGE WIRING IN CONDUIT, SEE GENERAL NOTES
TICKS = # OF #12 WIRE, SHORT = HOT, LONG = NEUTRAL, DOT = GROUND, UNLESS NOTED OTHERWISE

120V OUTLET, +15" TO BOTTOM OF BOX
- S = SIGN
- F = FLOOR
- GFI = GROUND FAULT INTERUPTER

COUNTER OUTLET. +44" TO TOP OF BOX.

CEILING OUTLET

QUADRUPLEX OUTLET, SQUARE FOR TV LOCATIONS

HALF SWITCHED OUTLETS

FLOOR OUTLET

JUNCTION BOX WITH MOTOR TOGGLE DISCONNECT

JUCTION BOX

MOTOR / DISCONNECT

PANELBOARD

TRANSFORMER / SWITCHBOARD AS NOTED

COMMUNICATIONS

TELEPHONE BACKBOARD, PROVIDE #8 GND TO SERVICE GROUND

PHONE ONLY OUTLET, PREWIRED WITH CAT 6 CABLE

DATA OUTLET JACK, PREWIRED WITH CAT 6 CABLE, NO # = 2 DROPS

DATA OUTLET AND CEILING PROJECTOR — SEE DETAIL 12/E0-4.2 FOR CONDUIT AND BOX MOUNTING

FLOOR DATA OUTLET JACK, PREWIRED WITH CAT 6 CABLE, NO # = 2 DROPS

IP SPEAKER (1 CAT 6)

CLOCK SPEAKER (IP BASED) (1 CAT 6)

WIRELESS ACCESS POINT (1 CAT 6)

WALL MOUNT ACCESS POINT (1 CAT 6)

EXTERIOR WIRELESS ACCESS POINT (1 CAT 6)

TEACHER STATION (SEE DETAIL 5/E0-4.2)

HMDI CONNECTOR IN FLUSH WALL PLATE

TV EXIST WITH COAX OUTLET, NEW WITH 2 DATA AND HDMI

DATA SYSTEM JUNCTION BOX

DATA SYSTEM PULLBOX

IDF/MDF RACK (SITE PLAN SYMBOL)

NOTE: GREY HATCHED SIGNAL DEVICES ARE EXISTING TO REMAIN, UNLESS OTHERWISE NOTED.

ELECTRICAL LEGEND

DRAFTING NOTATIONS

KEY NOTE, SEE SCHEDULE

EQUIPMENT TAG, SEE SCHEDULE

REFERENCE TO A DETAIL VIEW "A" ON SHEET E-2

NEW ELECTRICAL CONDUIT AND WIRE

(e) EXISTING DEVICE, TO REMAIN IN OPERATION

(r) REMOVE DEVICE, KEEP REMAINDER OF CIRCUIT IN OPERATION

(RR) REMOVE, RELOCATE AND RECONNECT DEVICE ON EXISTING CIRCUIT, EXTEND CIRCUIT

ELECTRICAL ABBREVIATIONS:

AL = ALUMINUM
A = AMPERAGE
AIC = AMPS INTERRUPTING CAPACITY
AFF = ABOVE FINISHED FLOOR
AFG = ABOVE FINISHED GRADE
CKT = CIRCUIT
CO = CONDUIT ONLY
CU = COPPER
EC = ELECTRICAL CONTRACTOR
GC = GENERAL CONTRACTOR
GFI = GROUND FAULT INTERRUPTER
GND = GROUND
KW = KILOWATT
KVA = KILO-VOLT-AMPERE
LC = LIGHTING CONTACTOR
NO = NUMBER
NL = NIGHT LIGHT
PB = PULLBOX
SP = SPACE
UG = UNDERGROUND
UON = UNLESS OTHERWISE NOTED
V = VOLT
WP = WEATHERPROOF

ONE LINE DIAGRAM

BUS / SWITCHBOARD — 50/3 — CIRCUIT BREAKER 50 AMP RATED, 3 POLE

PANEL — GFI = GROUND FAULT INTERRUPTER; AFCI = ARC FAULT CIRCUIT INTERRUPTER

GROUND — DISCONNECT, RATED TO POWER SOURCE VOLTAGE AND AMPERAGE RATING FOR FUSE OR AS NOTED

METER

CURRENT TRANSFORMER — 60 — FUSE, SIZE = 60 AMPS

POTENTIAL TRANSFORMER — AUTOMATIC TRANSFER SWITCH

DRY TYPE TRANSFORMER — 50/3

MOTOR — ENGINE DRIVEN GENERATOR RATING AS NOTED AGAINST THE UNIT.

RELAY — DRAW OUT DEVICE
CR# = CONTROL RELAY
TDR = TIME DELAY RELAY
M = MOTOR STARTER
CONTACTOR RELAY
ETM = ELAPSE TIME METER — 52 — ANSI RELAY

CONTACT (OPEN)

CONTACT (CLOSED)

VFD — VARIABLE FREQ. DRIVE

MOTOR OVERLOAD HEATER

INDICATOR LIGHT (R) RED, (W) WHITE

ANTENNA

FIRE ALARM

1A, 1X, 1Y, 1Z — TSP#16 ADDRESSIBLE INPUT CIRCUIT; 2#14 HARD WIRED NON-ADDRESSIBLE CIRCUITS; 2#12 VISUAL CIRCUIT; 2#14/SHIELDED AUDIBLE CIRCUIT

NOTE: ALL FIRE ALARM CABLES/ CONDUCTORS SHALL BE CSFM APPROVED.

FIRE ALARM CONTROL PANEL (FACP)

SMOKE DETECTOR

COMBINATION SMOKE /CO DETECTOR

DUCT SMOKE DETECTOR

HEAT DETECTOR

HEAT DETECTOR IN ATTIC (194 DEGREE)

CARBON MONOXIDE DETECTOR

STROBE

COMBINATION SPEAKER/STROBE

EXTERIOR HORN

PULL STATION

MM — INPUT MODULE

TCDR — TONE GENERATOR

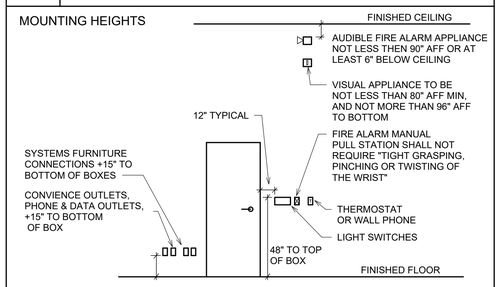
RM — RISER MONITOR MODULE

FIRE ALARM ABBREVIATIONS:

CD = CANDELLA
DSD = DUCT SMOKE DETECTOR
EOL = END OF LINE RESISTOR
NAC = NOTIFICATION POWER SUPPLY
PIV = POST INDICATOR VALVE
TS = TAMPER SWITCH
WF = WATER FLOW SWITCH
WP = WEATHERPROOF

MARKINGS:
= CIRCUIT "a" DEVICE
15CD = 15 CANDELLA VISUAL DEVICE
1/2W = 1/2 WATT AUDIBLE DEVICE

MOUNTING HEIGHTS



TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15207 — REN. 5/25 — STATE OF CALIFORNIA

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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

ELECTRICAL INFORMATION

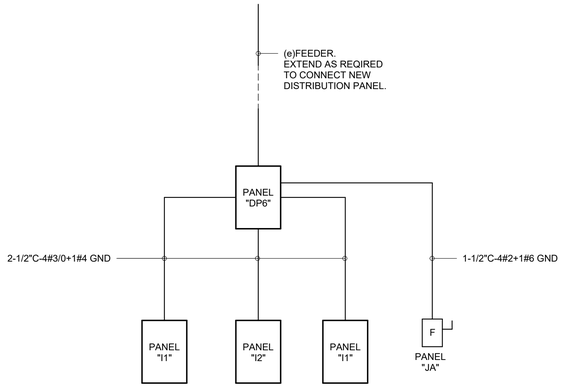
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Date	7/5/24
Drawn by	RCS-1
Checked by	Checker

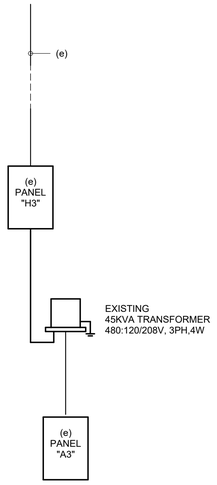
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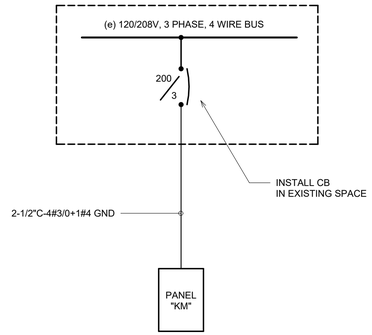
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(e)MAIN SERVICE SWITCHBOARD "MS": NEMA 3R



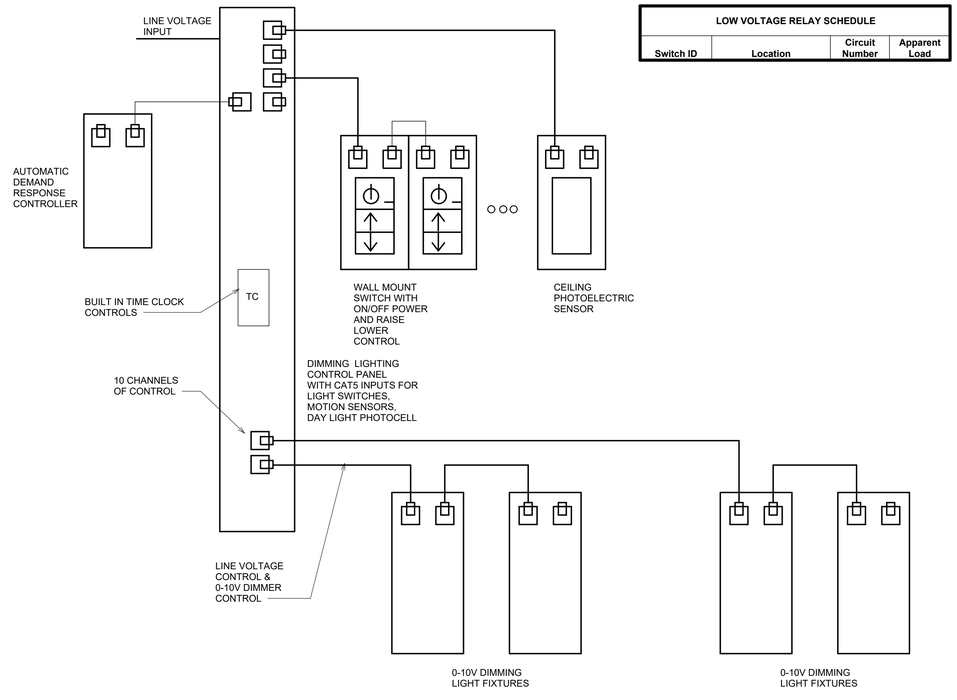
FIXTURE SCHEDULE

Type Mark	Lamp	Description	Manufacturer	Model	Apparent Load	WEIGHT	MOUNTING
EXIT	LED	COMBINATION EXIT SIGN/EGRESS LIGHT UNIT, 90 MINUTE BATTERY BACKUP, UNIVERSAL MOUNT	LITHONIA	LHQM SW1R120/277 ELN	1 VA	1	< 25 LBS
K	LED	2'x4' FLANGED 6000 LUMEN LED CENTER BASKET TROFFER WITH 0-10V DIMMING DRIVER, UNIVERSAL VOLTAGE	LITHONIA	2BLT4 60L ADP EZ1 LP840	53 VA	18	6/E0-1.3
KE	LED	SIMILAR TO "A" WITH EMERGENCY BALLAST	LITHONIA		53 VA	19	6/E0-1.3
L	LED	2'x4' FLANGED 6000 LUMEN LED CENTER BASKET TROFFER WITH 0-10V DIMMING DRIVER, UNIVERSAL VOLTAGE	LITHONIA	2BLT4 40L ADP EZ1 LP840	35 VA	18	6/E0-1.3
LE	LED	2'x4' FLANGED 4000 LUMEN LED CENTER BASKET TROFFER WITH 0-10V DIMMING DRIVER, UNIVERSAL VOLTAGE WITH EMERGENCY BALLAST	LITHONIA	2BLT4 40L ADP EZ1 LP840 ECW10	35 VA	18	6/E0-1.3
X2	LED	EXTERIOR WALL MOUNT EMERGENCY EGRESS LIGHT FIXTURES WTH INGRAL BATTERY BACKUP FOR 90 MINIUTES, CONNECTED TO INTERIOR EXIT SIGN CIRCUIT	LITHONIA	AFN EXT	1 VA		< 25 LBS

LED COLOR:
THE H BUILDING IS TO HAVE 4000K, OTHER BUILDINGS TO HAVE 3500K

1 ONE LINE DIAGRAM "MS"
SCALE: 12" = 1'-0"

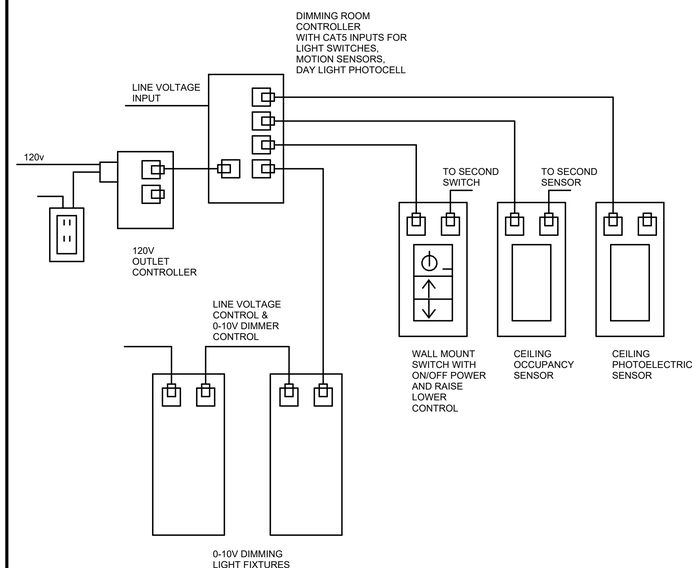
FIXTURE SCHEDULE



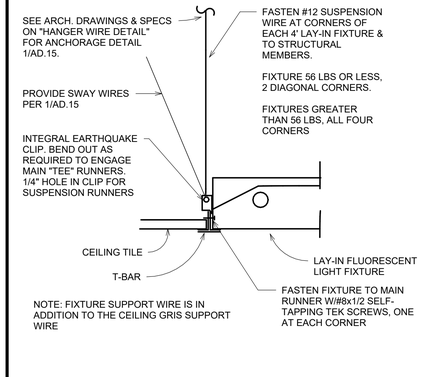
LOW VOLTAGE RELAY SCHEDULE

Switch ID	Location	Circuit Number	Apparent Load

3 LIGHTING CONTROL PANEL (OPEN OFFICE)
SCALE: NTS



4 LIGHTING CONTROLS DETAIL - SMALL ROOM
SCALE: NTS



6 TROFFER MOUNTING
SCALE: NTS

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4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

LIGHTING SCHEDULE, DETAILS, ONELINE

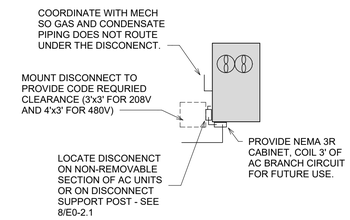
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Date	7/5/24
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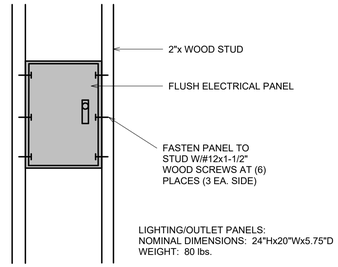
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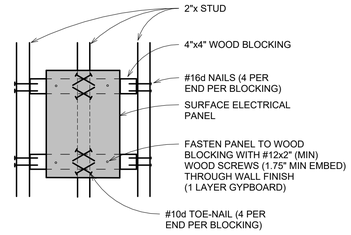
1 AC CONNECTIONS
SCALE: NTS



LIGHTING/OUTLET PANELS:
NOMINAL DIMENSIONS: 24"Hx20"Wx5.75"D
WEIGHT: 80 lbs.

DISTRIBUTION PANELS:
NOMINAL DIMESIONS: 59"Hx42"Wx9.5"D
WEIGHT: 200 lbs.

2 FLUSH PANEL IN STUD WALL
SCALE: NTS



LIGHTING/OUTLET PANELS:
NOMINAL DIMENSIONS: 24"Hx20"Wx5.75"D
WEIGHT: 80 lbs.

DISTRIBUTION PANELS:
NOMINAL DIMESIONS: 59"Hx42"Wx9.5"D
WEIGHT: 200 lbs.

3 SURFACE PANEL ON STUD WALL
SCALE: NTS

LABELS FOR FEEDERS ORIGINATING WITHIN DISTRIBUTION PANEL/SWITCHBOARDS:

NAME OF PANEL/EQUIPMENT SERVED
FEEDER WIRE SIZE

LABELS AT EQUIPMENT DISCONNECTS:

EQUIPMENT FED
FED FROM PANEL
FEEDER WIRE SIZE
VOLTS / AMPS / PHASES

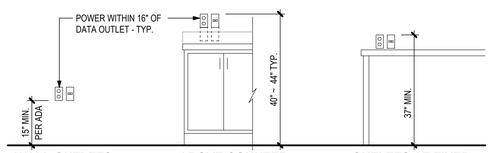
LABELS FOR SWITCHBOARD/DISTRIBUTION PANELS & BRANCH CIRCUIT PANELS:

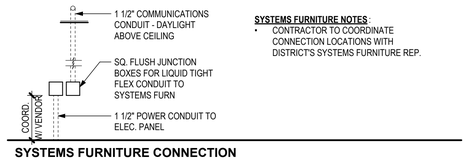
PANEL NAME
FEED FROM PANEL
FEEDER WIRE SIZE
VOLTS / AMPS / PHASES

NOTES:

1. NAMEPLATES SHALL BE CONSTRUCTED OF ENGRAVED BAKELITE - BLACK BACKGROUND WITH WHITE LETTERS.
2. MINIMUM SIZE TO BE 1"x3".
3. RIVET NAMEPLATES TO ENCLOSURE.
4. FILL-IN UNDERLINED NAMES AND VALUES FOR EACH NAMEPLATE TO INSTALLED.
5. ALL DISCONNECTS, PANELS, AND CIRCUIT BREAKERS INSTALLED UNDER THIS PROJECT SHALL HAVE A NAMEPLATE AS SHOWN HERE.
6. NAMEPLATES FOR EMERGENCY POWER FED EQUIPMENT SHALL HAVE RED BACKGROUND WITH WHITE LETTERS.

4 PANEL LABELS
SCALE: NTS





SYSTEMS FURNITURE CONNECTION

SYSTEMS FURNITURE NOTES:
- CONTRACTOR TO COORDINATE CONNECTION LOCATIONS WITH DISTRICT'S SYSTEMS FURNITURE REP.

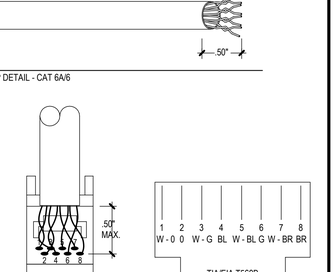
NOTES:

1.) ALL IT SYSTEMS (NEW OR ADDITIONS TO EXISTING SYSTEMS) ARE TURN-KEY INSTALLATION BY THE CONTRACTOR. REFER TO SPECIFICATIONS FOR ALL REQUIRED HARDWARE, SOFTWARE AND COMPONENTS.

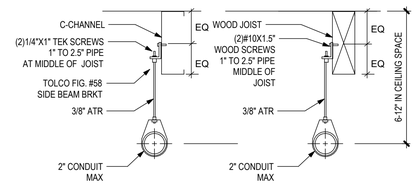
2.) DISTRICT IT STAFF WILL REVIEW PROPOSED DESIGN LOCATIONS, ATTEND THE MANDATORY PRE-CONSTRUCTION MEETING, REVIEW SUBMITTALS, AND PERFORM A PUNCH-WALK.

3.) ALL DATA CABLES IN ENCLOSED SPACES (WALLS, ATTICS, AND THE LIKE) TO BE RUN IN 1" MINIMUM CONDUIT

5 DATA & PHONE SYSTEMS
SCALE: NTS



6 UNDERFLOOR CONDUIT
SCALE: NTS



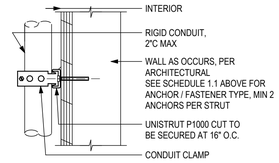
TYPICAL FOR SUSPENDED CONDUITS IN ATTIC SPACE
(FIRE ALARM, LIGHTING, POWER).

7 CONDUIT IN ATTIC SPACE
SCALE: NTS

SCHEDULE 1.1

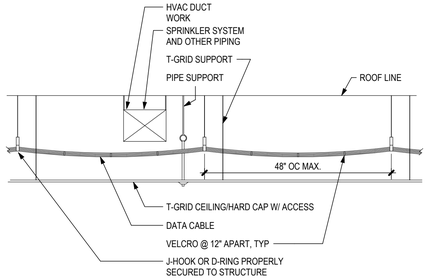
WALL TYPE	ANCHOR / FASTENER	MIN. EMBED
WOOD	#12 LAG	1-1/2"
LIGHT GAUGE	#12x1-1/2" STS	N/A
CMU-MASONRY*	5/16"	1-1/2"

EPOXY ANCHOR, WASHER AS REQ'D*

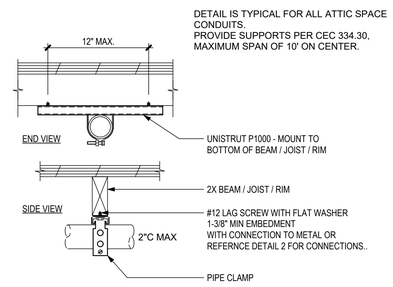


TYPICAL FOR ALL VERTICAL CONDUITS.
MAX SPACING PER CEC 334.30 (10' ON CENTER)

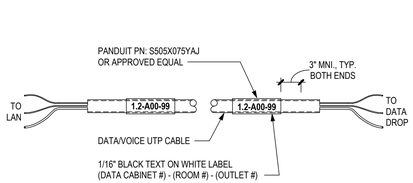
8 CONDUIT SUPPORT (VERT)
SCALE: NTS



9 J-HOOK / D-RING PATHWAY
SCALE: NTS



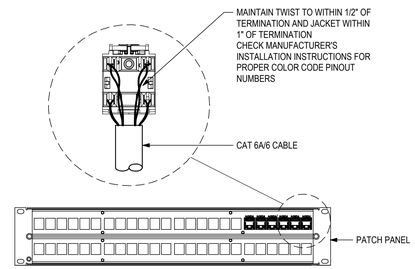
10 CONDUIT TO BEAM/JOIST/RIM
SCALE: NTS



(AT JACK AND PATCH PANEL)

11 DATA/VOICE CABLE LABELS
SCALE: NTS

12 JACK WIRING CONFIG.
SCALE: NTS



13 PATCH PANEL TERMINATION
SCALE: NTS

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TIMOTHY P. HUFF & ASSOCIATES, INC.
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COMMON ELECTRICAL DETAILS

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(e)PANEL "A3"

Location: HTR 7
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXIST
Mains Type: MLO
Mains Rating: 150 A
MCB Rating: 150 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	(e)REC ROOM 52	20 A	1	0 VA	0 VA					2	20 A	(e)FC RM #52	2
3	(e)Spare	20 A	1			0 VA	0 VA			--	--	--	4
5	(e)Spare	20 A	1					0 VA	0 VA	1	20 A	(e)FC S3A	6
7	(e)Spare	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	8
9	(e)Spare	20 A	1			0 VA	0 VA			1	20 A	(e)ROOF REC	10
11	(e)Spare	20 A	1					0 VA	0 VA	1	20 A	(e)CIRCUIT	12
13	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	14
15	(e)FU RM S1A	20 A	1			0 VA	--			1	--	Space	16
17	(e)FU RM S1B	20 A	1					0 VA	--	1	--	Space	18
19	(e)CIRCUIT	20 A	1	0 VA	--					1	--	Space	20
21	(e)CIRCUIT	20 A	1			0 VA	--			1	--	Space	22
23	(e)CIRCUIT	20 A	1					0 VA	--	1	--	Space	24
25	(e)CIRCUIT	20 A	1	0 VA	--					1	--	Space	26
27	(e)CIRCUIT	20 A	1			0 VA	--			1	--	Space	28
29	(e)FU S31	20 A	1					0 VA	--	1	--	Space	30
31	(e)FU S32	20 A	1	0 VA	--					1	--	Space	32
33	Space	--	1			--	--			1	--	Space	34
35	Space	--	1					--	--	1	--	Space	36
37	Space	--	1	--	--					1	--	Space	38
39	Space	--	1			--	--			1	--	Space	40
41	Space	--	1					--	--	1	--	Space	42
		Total Load:		0 VA		0 VA		0 VA					
		Total Amps:		0 A		0 A		0 A					

Legend:

EXISTING PANEL TO REMAIN

(e)PANEL "H3"

Location: HTR 7
Supply From:
Mounting: Surface
Enclosure: Type 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXIST
Mains Type: MCB
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
1	(e)AC RM S2	20 A	3	4160 VA	5230 VA					3	45 A	(e)TRANSFORMER 3	2
3	--	--	--			4160 VA	5230 VA			--	--	--	4
5	--	--	--					4160 VA	5230 VA	--	--	--	6
7	(e)AC RM S3A	20 A	3	4160 VA	0 VA					3	45 A	45 kVA, 277 V/480 V, Three Phase, 4 Wires,...	8
9	--	--	--			4160 VA	0 VA			--	--	--	10
11	--	--	--					4160 VA	0 VA	--	--	--	12
13	Space	--	1	--	--					1	--	Space	14
15	Space	--	1			--	--			1	--	Space	16
17	Space	--	1					--	--	1	--	Space	18
19	Space	--	1	--	--					1	--	Space	20
21	Space	--	1			--	--			1	--	Space	22
23	Space	--	1					--	--	1	--	Space	24
		Total Load:		13550 VA		13550 VA		13550 VA					
		Total Amps:		49 A		49 A		49 A					

Legend:

EXISTING PANEL TO REMAIN

(e)PANEL DP6

Location: JAN 8
Supply From:
Mounting: Surface
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MCB
Mains Rating: 350 A
MCB Rating: 350 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
DP6-1	(e)PANEL I CKTS 1-20	50 A	3	0 VA	0 VA					3	225 A	PANEL J	DP6-2
DP6-3	--	--	--			0 VA	0 VA			--	--	--	DP6-4
DP6-5	--	--	--					0 VA	0 VA	--	--	--	DP6-6
DP6-7	(e)PANEL JA	100 A	3	0 VA	0 VA					3	350 A	MAIN DISCONNECT	DP6-8
DP6-9	--	--	--			0 VA	0 VA			--	--	--	DP6-10
DP6-11	--	--	--					0 VA	0 VA	--	--	--	DP6-12
DP6-13	(e)PANEL I CKTS 21-21	125 A	3	0 VA									DP6-14
DP6-15	--	--	--			0 VA							DP6-16
DP6-17	--	--	--					0 VA					DP6-18
DP6-19													DP6-20
		Total Load:		0 VA		0 VA		0 VA					
		Total Amps:		0 A		0 A		0 A					

Legend:

EXISTING PANEL TO BE REPLACED

(e)PANEL I1

Location: SCULLERY 6
Supply From:
Mounting: Recessed
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MLO
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
I1-1	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	I1-2
I1-3	(e)CIRCUIT	20 A	1			0 VA	0 VA			1	20 A	(e)CIRCUIT	I1-4
I1-5	(e)CIRCUIT	20 A	1					0 VA	0 VA	1	20 A	(e)CIRCUIT	I1-6
I1-7	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	I1-8
I1-9	(e)CIRCUIT	20 A	1			0 VA	0 VA			1	20 A	(e)CIRCUIT	I1-10
I1-11	(e)CIRCUIT	20 A	1					0 VA	0 VA	1	20 A	(e)CIRCUIT	I1-12
I1-13	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	I1-14
I1-15	(e)CIRCUIT	20 A	1			0 VA	0 VA			1	20 A	(e)CIRCUIT	I1-16
I1-17	(e)CIRCUIT	20 A	1					0 VA	0 VA	1	20 A	(e)CIRCUIT	I1-18
I1-19	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	I1-20
		Total Load:		0 VA		0 VA		0 VA					
		Total Amps:		0 A		0 A		0 A					

Legend:

EXISTING PANEL TO BE REPLACED

(e)PANEL I2

Location: SCULLERY 6
Supply From:
Mounting: Recessed
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MLO
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
I2-1	Spare	20 A	2	0 VA	0 VA					2	20 A	Spare	I2-2
I2-3	--	--	--			0 VA	0 VA			--	--	--	I2-4
I2-5	Spare	20 A	2					0 VA	0 VA	1	20 A	Spare	I2-6
I2-7	--	--	--	0 VA	0 VA					1	20 A	Spare	I2-8
I2-9	Spare	20 A	1			0 VA	0 VA			1	20 A	Spare	I2-10
I2-11	Spare	20 A	1					0 VA	0 VA	1	20 A	Spare	I2-12
I2-13	Spare	50 A	2	0 VA	0 VA					2	20 A	Spare	I2-14
I2-15	--	--	--			0 VA	0 VA			--	--	--	I2-16
I2-17	Spare	20 A	2					0 VA	0 VA	2	20 A	Spare	I2-18
I2-19	--	--	--	0 VA	0 VA					--	--	--	I2-20
I2-21	Spare	30 A	3			0 VA	0 VA			2	20 A	Spare	I2-22
I2-23	--	--	--					0 VA	0 VA	--	--	--	I2-24
I2-25	--	--	--	0 VA	0 VA					2	20 A	Spare	I2-26
I2-27	Spare	20 A	1			0 VA	0 VA			--	--	--	I2-28
I2-29	Spare	20 A	3					0 VA	0 VA	3	20 A	Spare	I2-30
I2-31	--	--	--	0 VA	0 VA					--	--	--	I2-32
I2-33	--	--	--			0 VA	0 VA			--	--	--	I2-34
I2-35	Spare	20 A	3					0 VA	0 VA	3	20 A	Spare	I2-36
I2-37	--	--	--	0 VA	0 VA					--	--	--	I2-38
I2-39	--	--	--			0 VA	0 VA			--	--	--	I2-40
I2-41													I2-42
		Total Load:		0 VA		0 VA		0 VA					
		Total Amps:		0 A		0 A		0 A					

Legend:

EXISTING PANEL TO BE REPLACED

(E)PANEL J

Location: TOOL 5
Supply From:
Mounting: Recessed
Enclosure: NEMA 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 22,000
Mains Type: MLO
Mains Rating: 200 A
MCB Rating: 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		C		Poles	Trip	Circuit Description	CKT
J-1	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	J-2
J-3	(e)CIRCUIT	20 A	1			0 VA	0 VA			1	20 A	(e)CIRCUIT	J-4
J-5	(e)CIRCUIT	20 A	1					0 VA	0 VA	1	20 A	(e)CIRCUIT	J-6
J-7	(e)CIRCUIT	20 A	1	0 VA	0 VA					1	20 A	(e)CIRCUIT	J-8
J-9	(e)CIRCUIT	20 A	1			0 VA	0 VA			2	20 A	(e)CIRCUIT	J-10
J-11	(e)CIRCUIT	20 A	2					0 VA	0 VA	--	--	--	J-12
J-13	--	--	--	0 VA	0 VA					2	20 A	(e)CIRCUIT	J-14
J-15	(e)CIRCUIT	20 A	2			0 VA	0 VA			--	--	--	J-16
J-17	--	--	--					0 VA	0 VA	2	20 A	(e)CIRCUIT	J-18
J-19	(e)CIRCUIT	20 A	2	0 VA	0 VA					--	--	--	J-20
J-21	--	--	--			0 VA	0 VA			2	20 A	(e)CIRCUIT	J-22
J-23	(e)CIRCUIT	20 A	2					0 VA	0 VA	--	--	--	J-24
J-25	--	--	--	0 VA	0 VA					2	20 A	(e)CIRCUIT	J-26
J-27	(e)CIRCUIT	20 A	3			0 VA	0 VA			--	--	--	J-28
J-29	--	--	--					0 VA	0 VA	2	20 A	(e)CIRCUIT	J-30
J-31	--	--	--	0 VA	0 VA					--	--	--	J-32
J-33	(e)CIRCUIT	20 A	3			0 VA	0 VA			3	20 A	(e)CIRCUIT	J-34
J-35	--	--	--					0 VA	0 VA	--	--	--	J-36
J-37	--	--	--	0 VA	0 VA					--	--	--	J-38
J-39	(e)CIRCUIT	20 A	3			0 VA	0 VA			3	20 A	(e)CIRCUIT	J-40
J-41	--	--	--					0 VA	0 VA	--	--	--	J-42
J-43	--	--	--	0 VA	0 VA					--	--	--	J-44
J-45	(e)CIRCUIT	20 A	3	0 VA									J-46
J-47	--	--	--			0 VA							J-48
J-49	--	--	--	0 VA									J-50
J-51	(e)CIRCUIT	20 A	3	0 VA									J-52
J-53	--	--	--			0 VA							J-54
J-55	--	--	--	0 VA									J-56
		Total Load:		0 VA		0 VA		0 VA					
		Total Amps:		0 A		0 A		0 A					

Legend:

EXISTING PANEL TO REMAIN

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 19207 — REN. 5/25 — STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER — RICHARD C. SMITH — No. E14305 Exp. 6-30-25 — ELECTRICAL — STATE OF CALIFORNIA

HCS Engineering inc.
4512 Feather River Dr. #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PANEL SCHEDULES

Project Number	2321
Date	7/5/24
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E0-2.2

Plot Date & Time 12/20/2024 2:09:04 PM

Autodesk Docs://Escalon Food Science/EHS FoodScience Electrical.rvt

NEW PANEL DP6

Location: SCULLERY 6 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: | **Phases:** 3 | **Mains Type:** MLO
Mounting: Recessed | **Wires:** 4 | **Mains Rating:** 400 A
Enclosure: NEMA 1 | **MCB Rating:** 350 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
DP6-1	NEW PANEL "I1"	200 A	3	13183...						DP6-2
DP6-3	--	--	--		13124 VA					DP6-4
DP6-5	--	--	--			13161 VA				DP6-6
DP6-7	NEW PANEL "I2"	200 A	3	6048 VA						DP6-8
DP6-9	--	--	--		4596 VA					DP6-10
DP6-11	--	--	--			5252 VA				DP6-12
DP6-13										DP6-14
DP6-15										DP6-16
DP6-17										DP6-18
DP6-19	(e)PANEL J	225 A	3	12000...						DP6-20
DP6-21	--	--	--		12000 VA					DP6-22
DP6-23	--	--	--			12000 VA				DP6-24
DP6-25	(e)PANEL JA	100 A	3	6000 VA						DP6-26
DP6-27	--	--	--		6000 VA					DP6-28
DP6-29	--	--	--			6000 VA				DP6-30
DP6-31										DP6-32
DP6-33										DP6-34
DP6-35										DP6-36
DP6-37										DP6-38
DP6-39										DP6-40
DP6-41										DP6-42
		Total Load:		37226 VA	35720 VA	36407 VA				
		Total Amps:		311 A	298 A	304 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen Equipment - Non-Dwelling Unit	40040 VA	65.00%	26026 VA		
Lighting	1762 VA	100.00%	1762 VA	**Total Conn. Load:**	109353 VA
Other	1 VA	100.00%	1 VA	**Total Est. Demand:**	94524 VA
Power	2001 VA	100.00%	2001 VA	**Total Conn.:**	304 A
Receptacle	11629 VA	93.00%	10815 VA	**Total Est. Demand:**	262 A
Spare	54000 VA	100.00%	54000 VA		

NEW PANEL "I1"

Location: JAN 8 | **Volts:** 120/208 Wye | **A.I.C. Rating:**
Supply From: NEW PANEL DP6 | **Phases:** 3 | **Mains Type:** MLO
Mounting: Recessed | **Wires:** 4 | **Mains Rating:** 200 A
Enclosure: NEMA 1 | **MCB Rating:** 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
I1-1	SMOKER	20 A	1	180 VA	900 VA		1	20 A	STORAGE/CLASSROOM OUTLETS	I1-2
I1-3	SCULLERY COUNTER OUTLETS	20 A	1		540 VA	696 VA	1	20 A	DISHWASHER	I1-4
I1-5	GAS OVEN	20 A	1			600 VA	864 VA	1	20 A	REFRIGERATOR	I1-6
I1-7	WASHER	20 A	1	1200 VA	360 VA			1	20 A	COUNTER OUTLETS	I1-8
I1-9	DARWIN CHAMBER	20 A	1		780 VA	1128 VA		1	20 A	ICE MACHINE	I1-10
I1-11	REFRIGERATOR	20 A	1			864 VA	853 VA	2	20 A	BLAST FREEZER	I1-12
I1-13	COUNTER OUTLETS	20 A	1	360 VA	853 VA			--	--	--	I1-14
I1-15	COUNTER OUTLETS	20 A	1		360 VA	360 VA		1	20 A	COUNTER OUTLETS	I1-16
I1-17	SCULLERY OUTLETS	20 A	1			360 VA	360 VA	1	20 A	COUNTER OUTLETS	I1-18
I1-19	COUNTER OUTLETS	20 A	1	360 VA	360 VA			1	20 A	COUNTER OUTLETS	I1-20
I1-21	COUNTER OUTLETS	20 A	1		360 VA	360 VA		1	20 A	COUNTER OUTLETS	I1-22
I1-23	COUNTER OUTLETS	20 A	1			360 VA	360 VA	1	20 A	COUNTER OUTLETS	I1-24
I1-25	TEACHER OUTLETS	20 A	1	540 VA	4000 VA			2	20 A	DRYER	I1-26
I1-27	TEACHER/TV OUTLETS	20 A	1		540 VA	4000 VA		--	--	--	I1-28
I1-29	TEACHER/TV OUTLETS	20 A	1			540 VA	4000 VA	2	20 A	FOOD WARMER	I1-30
I1-31	Lighting	20 A	1	70 VA	4000 VA			--	--	--	I1-32
I1-33	FOOD WARMER	20 A	2		4000 VA						I1-34
I1-35	--	--	--			4000 VA					I1-36
I1-37											I1-38
I1-39											I1-40
I1-41											I1-42
		Total Load:		13183 VA	13124 VA	13161 VA				
		Total Amps:		110 A	109 A	110 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen Equipment - Non-Dwelling Unit	28488 VA	65.00%	18517 VA		
Lighting	70 VA	100.00%	70 VA	**Total Conn. Load:**	39467 VA
Receptacle	10909 VA	95.83%	10455 VA	**Total Est. Demand:**	29042 VA
				Total Conn.:	110 A
				Total Est. Demand:	81 A

PANEL "KM"

Location: WALK IN FREZ. 11 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: | **Phases:** 3 | **Mains Type:** MLO
Mounting: SURFACE | **Wires:** 4 | **Mains Rating:** 200 A
Enclosure: NEMA 3R | **MCB Rating:** 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
KM-1	MAU2	20 A	3	1896 VA	780 VA		3	20 A	KEF6	KM-2
KM-3	--	--	--		1896 VA	780 VA	--	--	--	KM-4
KM-5	--	--	--			1896 VA	780 VA	--	--	--	KM-6
KM-7	MAU1	20 A	2	1612 VA	1612 VA		2	20 A	KEF7	KM-8
KM-9	--	--	--		1612 VA	1612 VA	--	--	--	KM-10
KM-11	MAU3	20 A	3			1896 VA				KM-12
KM-13	--	--	--	1896 VA						KM-14
KM-15	--	--	--		1896 VA					KM-16
KM-17	KEF1	20 A	2			718 VA				KM-18
KM-19	--	--	--	718 VA						KM-20
KM-21	KEF2	20 A	3		780 VA					KM-22
KM-23	--	--	--			780 VA				KM-24
KM-25	--	--	--	780 VA						KM-26
KM-27	KEF3	20 A	3		1020 VA					KM-28
KM-29	--	--	--			1020 VA				KM-30
KM-31	--	--	--	1020 VA						KM-32
KM-33	KEF4	20 A	3		5400 VA					KM-34
KM-35	--	--	--			5400 VA				KM-36
KM-37	--	--	--	5400 VA						KM-38
KM-39	KEF5	20 A	2		1612 VA					KM-40
KM-41	--	--	--			1612 VA				KM-42
		Total Load:		15714 VA	16608 VA	14102 VA				
		Total Amps:		133 A	140 A	118 A				

Legend:

NEW PANEL "I2"

Location: JAN 8 | **Volts:** 120/208 Wye | **A.I.C. Rating:**
Supply From: NEW PANEL DP6 | **Phases:** 3 | **Mains Type:** MLO
Mounting: Recessed | **Wires:** 4 | **Mains Rating:** 200 A
Enclosure: NEMA 1 | **MCB Rating:** 200 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
I2-1	HOOD 5	20 A	1	1000 VA						I2-2
I2-3	HOOD 6	20 A	1		1000 VA					I2-4
I2-5	HOOD 7	20 A	1			1000 VA				I2-6
I2-7	HOOD 4	20 A	1	1000 VA						I2-8
I2-9	HOOD 3	20 A	1		1000 VA					I2-10
I2-11	HOOD 2	20 A	1			1000 VA				I2-12
I2-13	HOOD 1	20 A	1	1000 VA						I2-14
I2-15	COUNTER OUTLETS	20 A	1		360 VA					I2-16
I2-17	COUNTER OUTLETS	20 A	1			360 VA				I2-18
I2-19	WALKIN TEMP ALARM PANEL	20 A	1	500 VA						I2-20
I2-21	WALKIN FREEZER DOOR HEATER	20 A	1		500 VA					I2-22
I2-23	WALKIN FREEZER CONDENSOR	20 A	2			1040 VA				I2-24
I2-25	--	--	--	1040 VA						I2-26
I2-27	WALKIN REF CONDENSOR	20 A	2		1040 VA					I2-28
I2-29	--	--	--			1040 VA				I2-30
I2-31	WALKIN REF FANS	20 A	1	696 VA						I2-32
I2-33	WALKIN FREEZER FANS	20 A	1		696 VA					I2-34
I2-35	Lighting	20 A	1			848 VA				I2-36
I2-37	Lighting	20 A	1	849 VA						I2-38
I2-39										I2-40
I2-41										I2-42
		Total Load:		6048 VA	4596 VA	5252 VA				
		Total Amps:		51 A	38 A	45 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Kitchen Equipment - Non-Dwelling Unit	11552 VA	65.00%	7509 VA		
Lighting	1695 VA	100.00%	1695 VA	**Total Conn. Load:**	15893 VA
Other	1 VA	100.00%	1 VA	**Total Est. Demand:**	11853 VA
Power	2001 VA	100.00%	2001 VA	**Total Conn.:**	44 A
Receptacle	720 VA	100.00%	720 VA	**Total Est. Demand:**	33 A

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15207 — REN. 5/25 — STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER — RICHARD C. SMITH — No. E14305 Exp. 6-30-25 — ELECTRICAL — STATE OF CALIFORNIA

HCS Engineering inc.
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

PANEL SCHEDULES

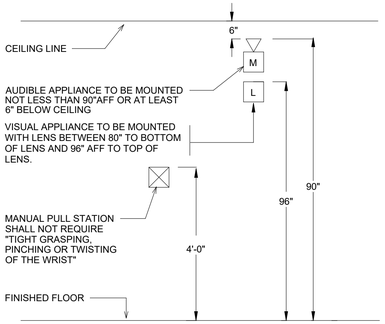
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Date	7/5/24
Drawn by	Author
Checked by	Checker

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Plot Date & Time 12/20/2024 2:09:07 PM

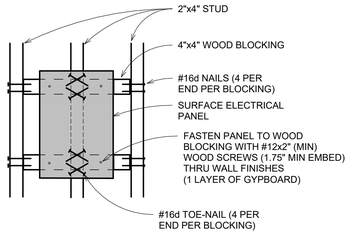
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path://john/17/4



1 FIRE ALARM ELEVATION

SCALE: NTS



FIRE ALARM PANEL
NOMINAL DIMENSIONS: 36"Hx20"Wx5.75"D
WEIGHT: 86 lbs.

SEISMIC CERTIFICATION
FACP OSP-0073
GAMEWELL CABINET E3BB-BD

2 FACP ON WOOD STUDS

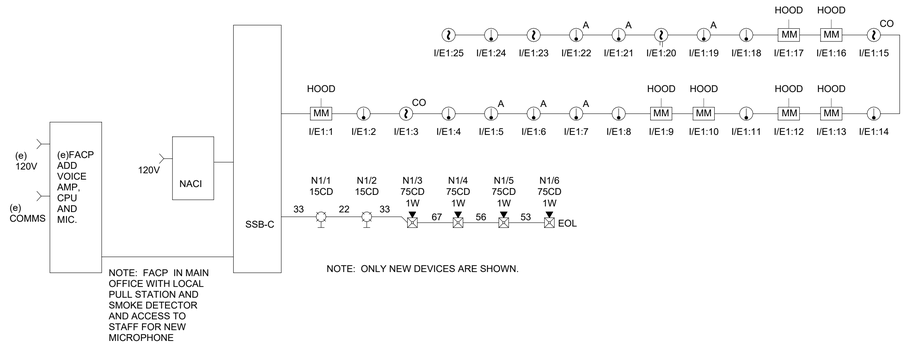
SCALE: NTS

FIRE ALARM SYSTEM OPERATION MATRIX

DEVICE / RESULTS	MANUAL PULL STATION	SMOKE & HEAT DETECTORS	POWER LOSS	GROUND FAULT, OPENS, SHORTS	REMOTE MONITOR	CO DETECTOR	TAMPER SWITCH	WATER FLOW SWITCH	PIV	DUCT SMOKE DETECTOR
ACTIVATE VOICE, SPEAKERS	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES
ACTIVATE VISUALS	YES	YES	N/A	N/A	NO	NO	NO	YES	NO	YES
ANNUNCIATE AT FACP	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
ANNUNCIATE AT REMOTE ANNUCIATOR	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
LIGHT UP "ALARM" LIGHT	YES	YES	NO	NO	NO	NO	NO	YES	NO	YES
LIGHT UP "TROUBLE" LIGHT	NO	NO	YES	YES	YES	YES	YES	NO	YES	NO
CENTRAL STATION	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
CO BASE BUZZER	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO
AC UNIT SHUTDOWN (MECH CONTRACTOR)	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES

3 FIRE ALARM MATRIX

SCALE: NTS



NOTE: FACP IN MAIN OFFICE WITH LOCAL PULL STATION AND SMOKE DETECTOR AND ACCESS TO STAFF FOR NEW MICROPHONE

NOTE: ONLY NEW DEVICES ARE SHOWN.

4 FIRE RISER DIAGRAM

SCALE: NTS

FIRE ALARM RELATED NOTES:

1) APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35

2) UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.

3) A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.

4) 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.

5) DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.

6) 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.

7) THE ENTIRE LENS OF WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL OCCUR BETWEEN +80" MINIMUM AND +96 " MAXIMUM FROM FINISHED FLOOR.

8) 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.

9) 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.

10) AUDIBLE FIRE ALARM NOTIFICATION APPLIANCES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN. CARBON MONOXIDE DETECTION / ALARM SHALL BE TEMPORAL CODE 4 PATTERN.

11) THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.

12) 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.

13) UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.

14) 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.

15) 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.

16) 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.

17) ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.

18) 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.

19) THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 7.8.2.

20) FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.

21) 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.

22) THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.

23) SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.

FIRE ALARM SYSTEM COMPONENTS

DEVICE	DESCRIPTION	MANUFACTURER	MODEL #	CSFM #
Exist	FIRE ALARM CONTROL PANEL	GAMEWELL	E3	7165-1703:125
	ILI-MB-E3 CPU CARD			
	DACT-E3 DIGITIAL COMMUNICATION			
	E3 ENCLOSURE CABINET, DOORS, PLATES,			
	PMB POWER SUPPLY			
Add	INI-VGX VOICE GATEWAY (EVAC)			
	LCD-SLP LCD TOUCH SCREEN			
Add	1100-0456 AMPLIFIER			
Add	INCC-MIC MICROPHONE			
	3-12/SIGY 12 SWITCH, 24 LED DISPLAY MOD			
a	NAC PANEL	GAMEWELL	HPFF8	7315-1637:102
b	HEAT DETECTOR	GAMEWELL	ATD-L3H	7270-1703:502
	BASE		B300-6	7300-1653:109
c	CO DETECTOR	GAMEWELL	MSC-COF	7275-1703:175
	SOUNDER BASE	GAMEWELL	B200S-LF	7300-1653:238
d	DUCT SMOKE DETECTOR	GAMEWELL	DNR	3240-1653:209
	REMOTE TEST SWITCH		RTS151	7300-1653:212
e	MODULES			
	INPUT MODULE	GAMEWELL	AMM-2F	7300-1703:102
f	SIGNALLING DEVICES			
	STROBE	SYSTEM SENSOR	SRL	7125-1653:504
	SPEAKER STROBE	SYSTEM SENSOR	SPSRL	7320-1653:505

FACP-J BATTERY CALCULATIONS

Description	Qty.	Standby Current (mA)	Total Standby (mA)	Alarm Current (mA)	Total Alarm (mA)
MAIN BOARD	1	81	81	150	150
1209V POWER SUPPLY	1	50	50	50	50
LCD DISPLAY	1	24	24	28	28
ARC NET REPEATER	0	16	0	17	0
DIGITAL COMMUNICATOR	1	18	18	18	18
REMOTE ANNUNCIATOR	0	200	0	200	0
VOICE GATEWAY	1	150	150	150	150
VOICE AMPLIFIER	2	86	172	2206	4412
OUTPUT MODULE AOM-2SF	1	2	2	6.5	6.5
NETWORK VOICE MODULE (INI-VGE)	0	150	0	150	0
ADDRESSIBLE SWITH MODULE ASM-	1	11	11	11	11
SLC (FULLY LOADED)	3	51	153	136	408
FNA	1	0	0	1223	1223
SPARE NAC CIRCUIT	1	--	0	0	899
SPARE NAC CIRCUIT	1	--	--	0	275
TOTALS	--	--	662	--	7632

* NOTE: The SIGA Device Controller is calculated with the maximum Signature addressable device load

Battery Requirement Calculation for 24 Hours Standby and 15 Minutes Alarm:
Ampere Hours = [(Standby Current x Time)+(Alarm Current x Time)] x 1.25
Ampere Hours = [(0.662A x 24 hrs)+(7.6315A x 0.25 hrs)] x 1.25
Ampere Hours = 22.2

BATTERIES SUPPLIED: (4) 12 Volts, 24 Ampere Hours (24 Volts, 48 Ampere Hours)

NACi BATTERY CALCULATION

Description	Qty.	Standby Current (mA)	Total Standby (mA)	Alarm Current (mA)	Total Alarm (mA)
Control Board	1	70	70	270	270
NAC N91	1	--	--	514	514
SPARE	1	--	--	0	0
SPARE	1	--	--	0	0
SOUNDER	1	--	--	40	40
	1	--	--	0	0
TOTALS	--	--	70	--	824

Battery Requirement Calculation for 24 Hours Standby and 15 Minutes Alarm:
Ampere Hours = [(Standby Current x Time)+(Alarm Current x Time)] x Derating Factor
Ampere Hours = [(0.07A x 24 hrs)+(0.824A x 0.25 hrs)] x 1.25
Ampere Hours = 2.4

BATTERIES SUPPLIED: (2) 12 Volts, 7 Ampere Hours (24 Volts, 7 Ampere Hours)

NAC VOLTAGE DROP CALCULATIONS

CALCULATION: dV = V - (2L x K x dI)
Where: dV = device Voltage
V = previous device voltage (Source Voltage = 20.4 VDC)
K = wire AWG constant (Ω/k') at 167ºF: #8 = 0.81, #10 = 1.29, #12 = 2.05, #14 = 3.26 (stranded)
L = wire length
dI = current

DEVICE LEGEND: S(x) = Strobe (where 'x' is candela)
SS(x) = SPEAKER/Strobe (where 'x' is candela)
H = Horn
WPH = Weatherproof Speaker
CEIL = Ceiling Mounted

CIRCUIT: N1/

DEVICE ID NO.	DEVICE TYPE	DEVICE CURRENT (mA)	SECTION CURRENT (mA)	WIRE AWG	LENGTH (ft)	DEVICE VDC	PERCENT DROP
N1/01	S15	43	514	12	33	20.33	0.34
N1/02	S15	43	471	12	22	20.29	0.55
N1/03	ss75	107	428	12	33	20.23	0.83
N1/04	ss75	107	321	12	67	20.14	1.27
N1/05	ss75	107	214	12	56	20.09	1.51
N1/06	ss75	107	107	12	53	20.07	1.62

SPEAKER NAC VOLTAGE DROP CALCULATIONS (FACP J)

CALCULATION (LUMP SUM METHOD): VD = (2L x K x I)
Where: VD = voltage drop
L = wire length
K = wire AWG constant (Ω/k') at 167ºF: #16 = 4.73, #18 = 7.51, #20 = 11.90, #22 = 19.00 (stranded)
I = total current (Note: Total current is derived by Ohm's Law, dividing the total power by the source voltage: I = P/E)

AUDIO LOSS: dB = 20 x log (Vc/Vs)
Where: dB = audio loss
Vc = calculated voltage (source voltage minus voltage drop)
Vs = source voltage

CIRCUIT NUMBER	TOTAL PWR (W)	SOURCE VOLTAGE	CURRENT (A)	WIRE AWG	LENGTH (ft)	VOLTAGE DROP	PERCENT DROP	AUDIO LOSS (dB)
N1	4	70	0.06	16	360	0.10	0.14	-0.01

FIRE ALARM CALCULATIONS

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN. 5/25 STATE OF CALIFORNIA
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HCS Engineering inc.
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com
Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

FIRE ALARM DETAILS

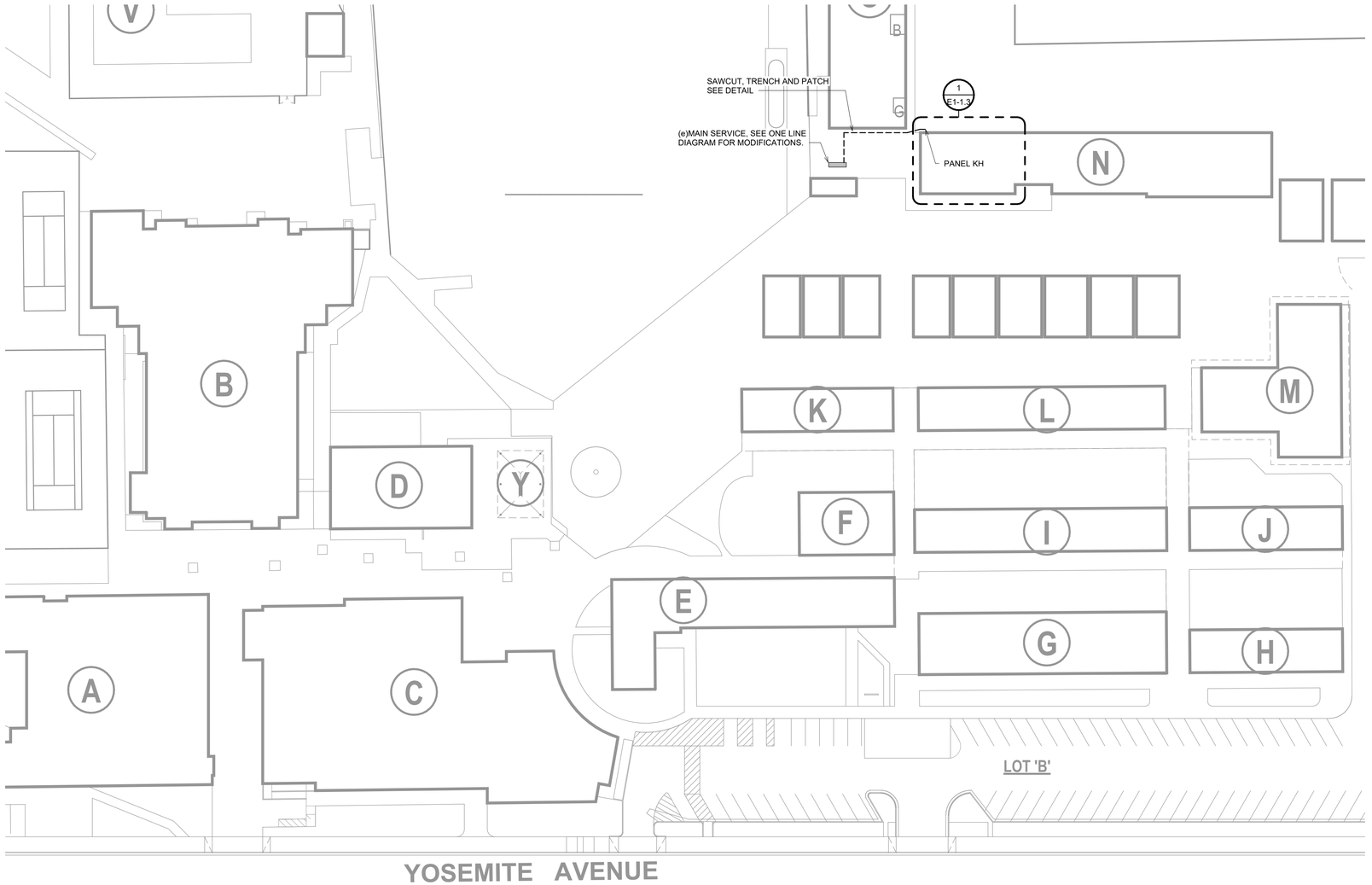
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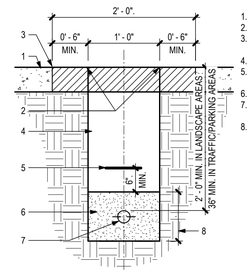
2 ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"

KEYNOTES

SHEET NOTES	
Key Value	Keynote Text

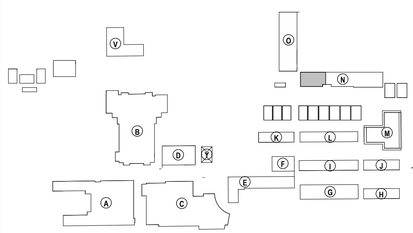
NOTES



1. (E) CONCRETE/AC SURFACE
2. INITIAL SAW CUT
3. 2ND SAW CUT PRIOR TO PATCHING, BOTH SIDES, TYP.
4. COMPACT FILL TO 95%.
5. MARKING TAPE ON THE TOP OF SAND, PE SPECIFICATIONS, TYP.
6. (N) SAND
7. REFER TO DRAWING FOR QUANTITY AND SIZE.
8. 2" BED OF SAND UNDER CONDUITS, 2" BETWEEN CONDUITS AND 2" MIN ABOVE CONDUITS.

1 TRENCH DETAIL

SCALE: NTS



NORTH

KEY PLAN

SCALE: 1" = 200'-0"

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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209-478-8270 | www.hcs-eng.com

Consultants

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ESCALON, CA 95320
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ELECTRICAL SITE PLAN

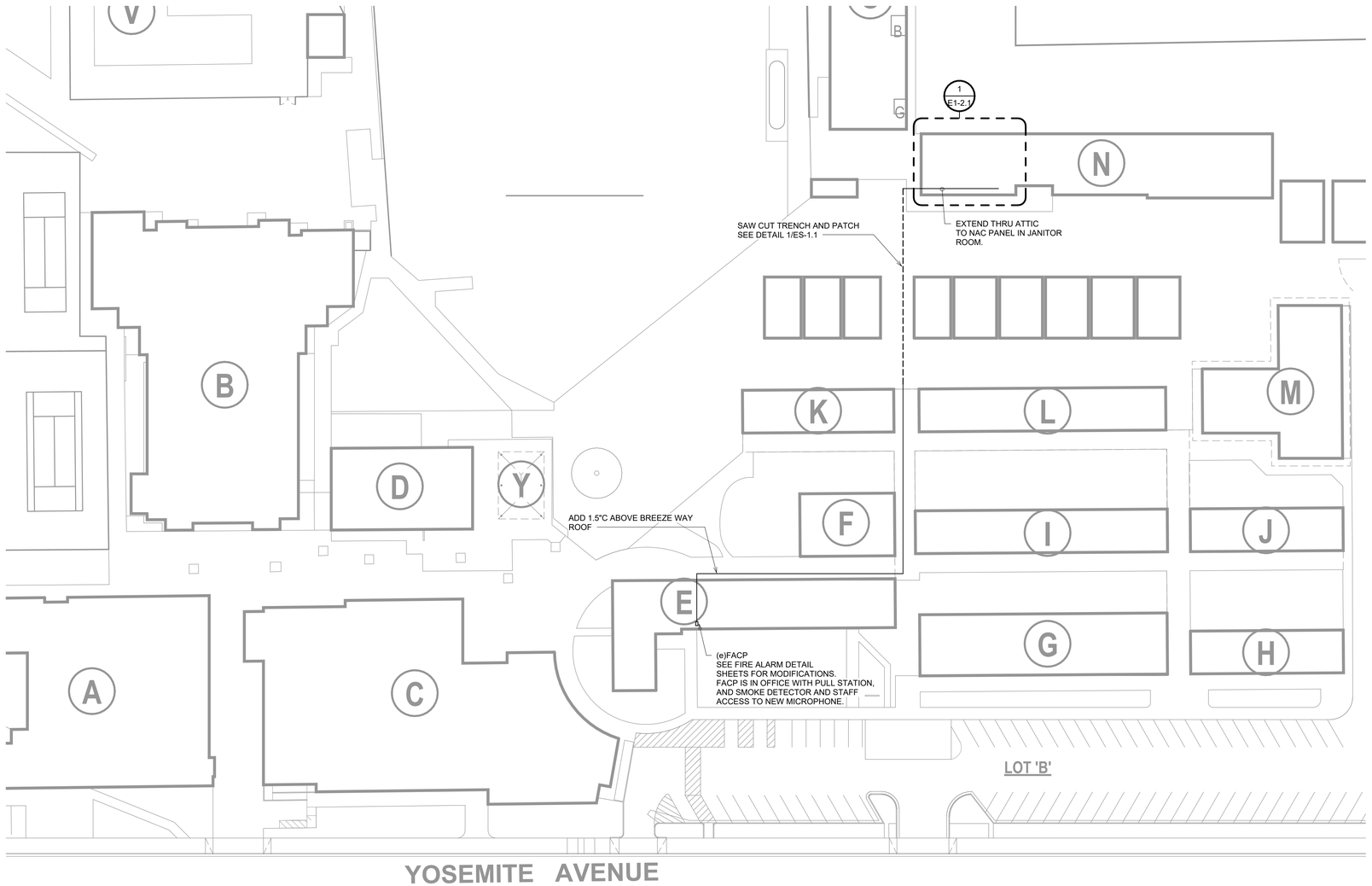
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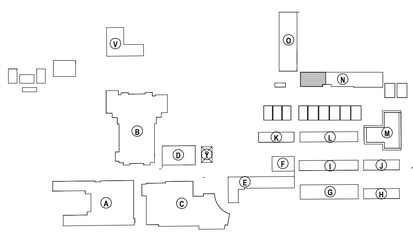
1 **FIRE ALARM SITE PLAN**
SCALE: 1" = 40'-0"

NORTH

KEYNOTES

SHEET NOTES	
Key Value	Keynote Text

NOTES



KEY PLAN
SCALE: 1" = 200'-0"

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
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FIRE ALARM SITE PLAN

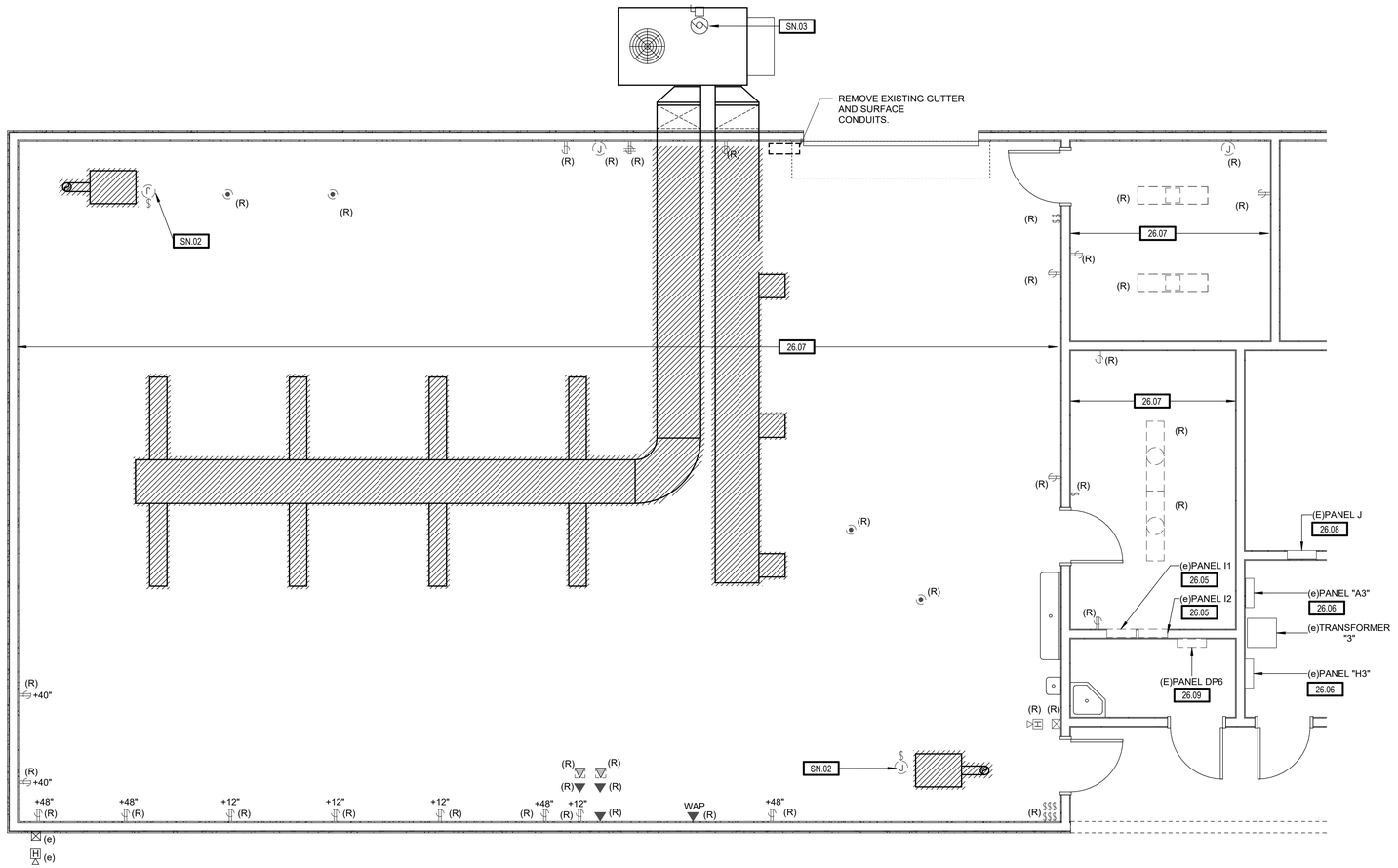
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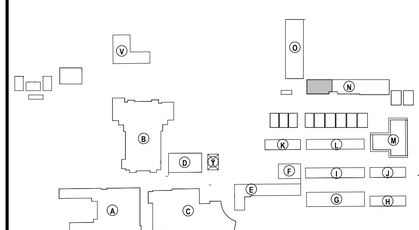


KEYNOTES

26.05	EXISTING PANEL I1 AND I2 TO BE DEMILISHED. REMOVE PANEL AND WIRING AS REQUIRED. EXTEND EXISTING CIRCUITS NOT BEING DEMOLISHED FROM REMODEL TO NEW PANELS I1,I2
26.06	EXISTING MECHANICAL PANEL TO REMAIN.
26.07	REMOVEL ALL EXISTING OUTLETS, SWITCHES, LIGHTS, WIRING AND SURFANCE MOUNTED CONDUITS IN THIS ROOM MADE REDUNDANT BY REMODLE.
26.08	EXISTING PANEL J TO REMAIN.
26.09	EXISTING DISTRIBUTION PANEL TO BE REPLACED.

SHEET NOTES	
Key Value	Keynote Text
SN.02	EXIST UNIT HEATER TO BE REMOVED, DISCONNECT AND REMOVE CONDUIT AND WIRE TO SOURCE.
SN.03	EXISTING AC UNIT TO BE REMOVE AND REINSTALLED AT A HIGHER ELEVATION. DISCONNECT POWER AND RECONNECT. EXTEND BRANCH CIRCUIT AND RECONNECT.

NOTES



NORTH

KEY PLAN
SCALE: 1" = 200'-0"

1 DEMOLITION FLOOR PLAN - BUILDING 'N'
SCALE: 1/4" = 1'-0"

TPH architects

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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ESCALON, CA 95320
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BUILDING DEMOLITION PLAN

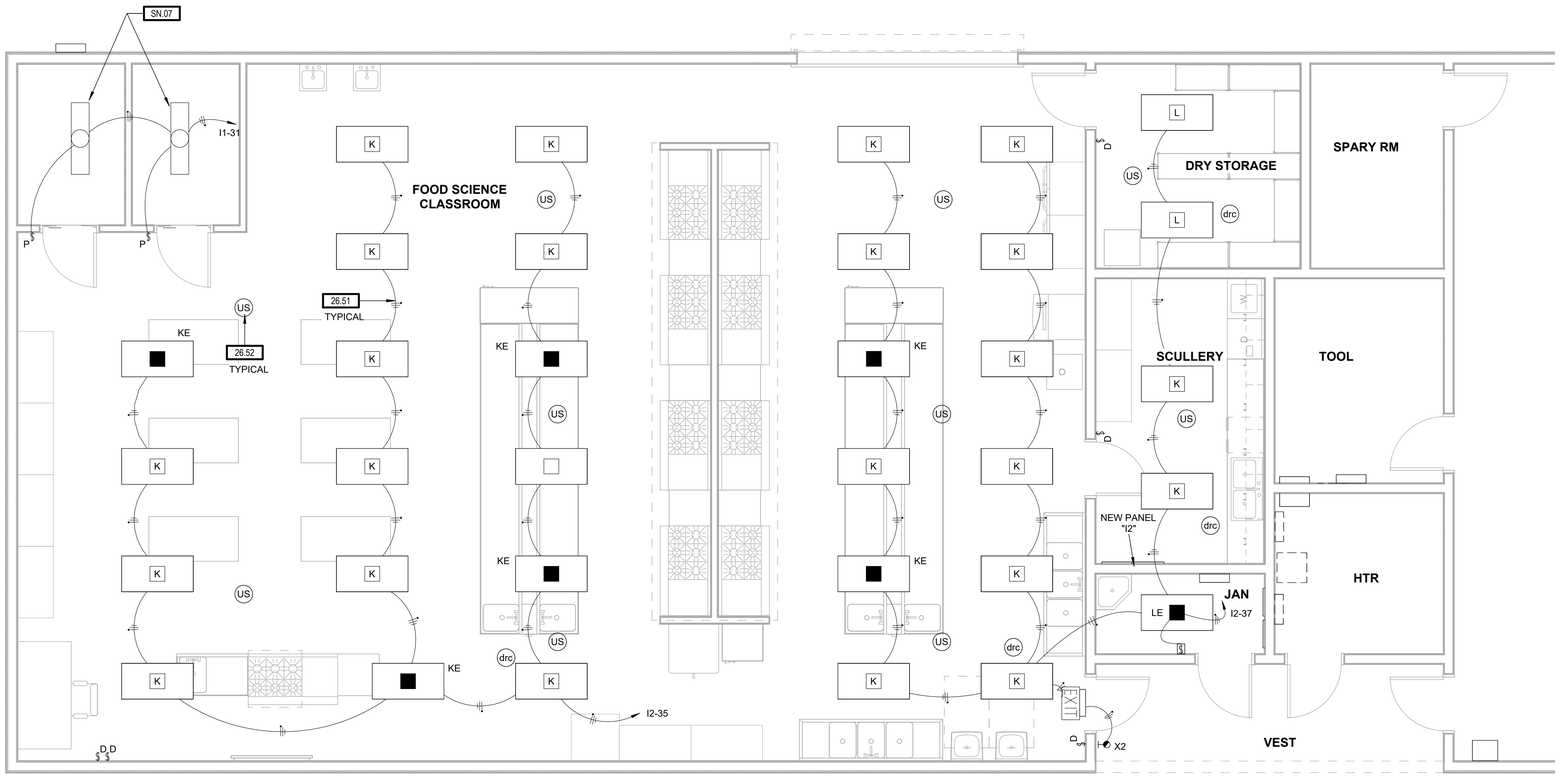
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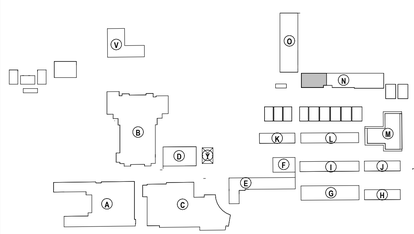
KEYNOTES

26.51	LIGHTING CIRCUIT TO CONTAIN HOT LEG, SWITCHED HOT LEG, NEUTRAL, GROUND, GREY AND VIOLET 0-10V DIMMING CONTROL.
26.52	INTERCONNECT ALL LIGHTING CONTROL DEVICES IN ROOM INCLUDING DIMMING SWICH(ES), DIMMING ROOM CONTROLLER, OCCUPANCY SENSOR, PLUG LOAD CONTROLLER (OFFICES & FANS), AND DAY LIGHT HAVESTING SENSOR (WHERE SHOWN).

SHEET NOTES

Key Value	Keynote Text
SN.07	INSTALL/CONNECT LIGHTS PROVIDED WTIH WALK-IN BOXES. SEAL ALL PENETRATIONS ENTERING WALK-IN BOX.

NOTES



KEY PLAN
SCALE: 1" = 200'-0"

1 LIGHTING FLOOR PLAN - BUILDING 'N'
SCALE: 1/4" = 1'-0"

NORTH

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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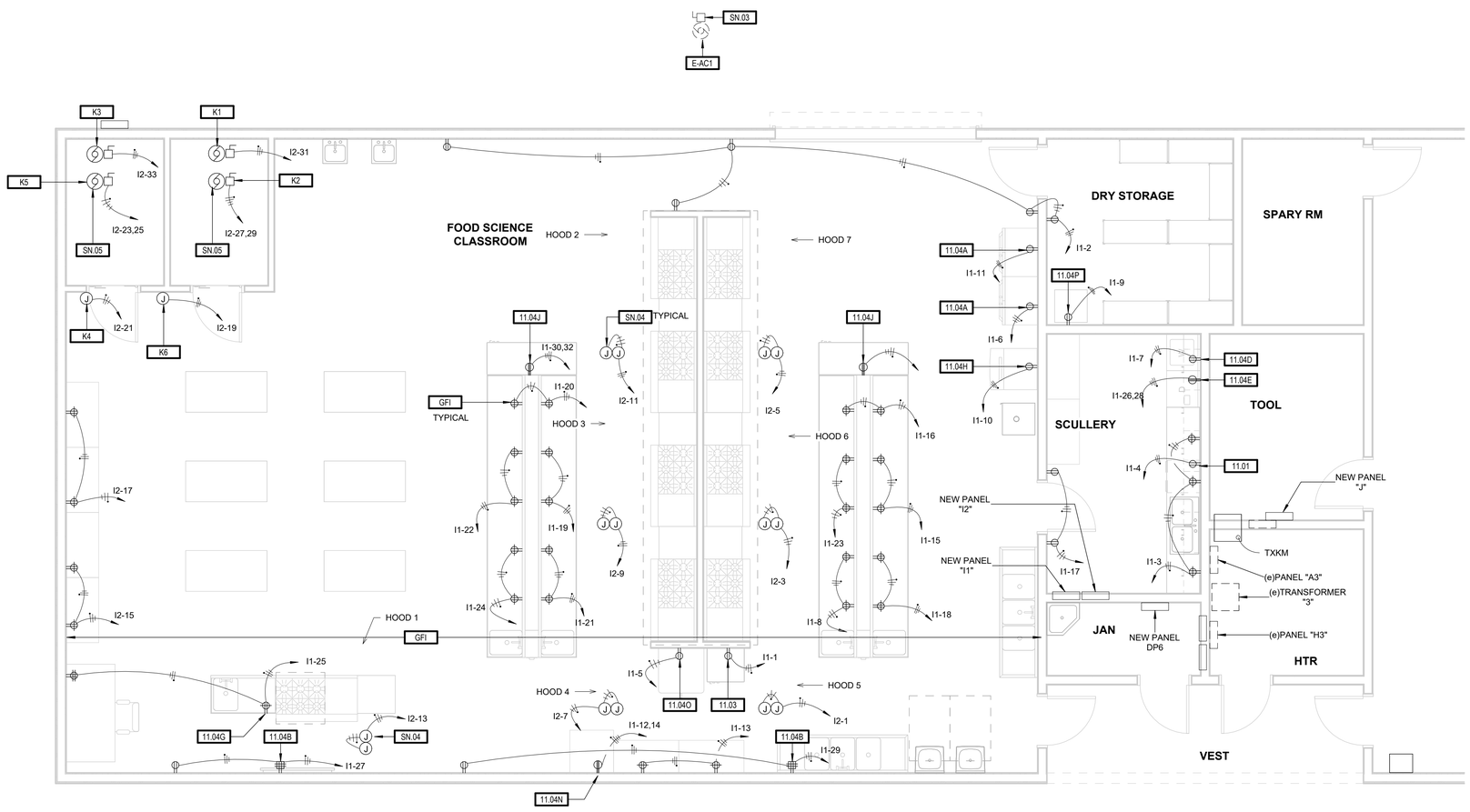
BUILDING LIGHTING PLAN

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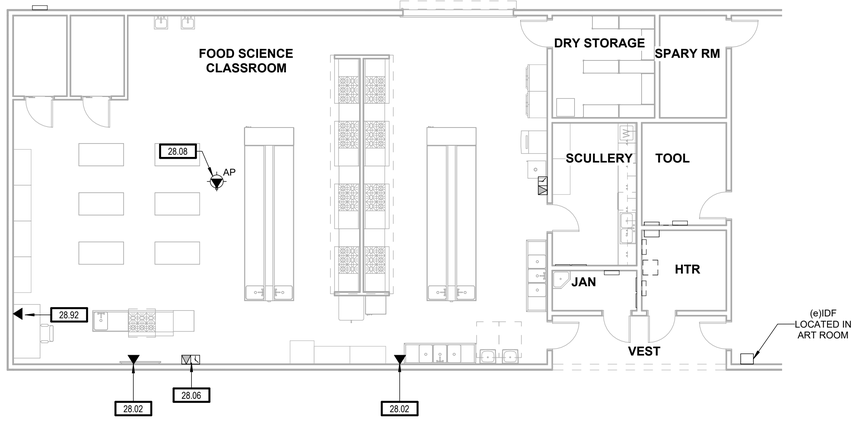
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1 ELECTRICAL FLOOR PLAN - BUILDING 'N'

SCALE: 1/4" = 1'-0"



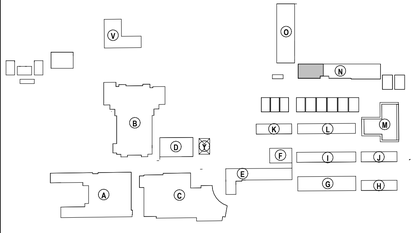
2 SIGNAL FLOOR PLAN - BUILDING 'N'

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

KEYNOTES	
11.01	DISHWASHER
11.03	SMOKER
11.04A	REFRIGERATOR, 120V, 7.2A, NEMA 5-15P PLUG, 1/2"C-2#12+1#12 GND
11.04B	TV, 120V, VERIFY HEIGHT WITH ARCHITECTURAL ELEVATIONS AND TV PROVIDED, 1/2"C-2#12+1#12 GND
11.04D	CLOTHES WASHER, 120V, 6A, NEMA 5-15P, 1/2"C-2#12+1#12 GND
11.04E	CLOTHES DRYER, 240V, 30A, RESIDENTIAL DRYER OUTLET, 3/4"C-3#10+1#10 GND
11.04G	TEACHING STATION WITH RANGE
11.04H	ICE MACHINE, 120V, 9.4A, NEMA 5-15P PLUG, 3/4"C-2#10+1#10 GND
11.04J	FOOD WARMER
11.04N	BLAST FREEZER, 208V, 8.2A, 1300W,
11.04O	GAS OVEN, 120V, 5A, 3/4"C-2#12+1#12 GND
11.04P	DARWIN CHAMBER, 120V, 6.5A, 1/2"C-2#12+1#12 GND
28.02	PROVIDE RECESSED WALL MOUNT TV OUTLET, DUPLEX, 2 DATA DROPS. ARLINGTON TVBS505 OR EQUAL. PROVIDE 1.25"C TO ACCESSIBLE CEILING SPACE FROM COMMUNICATION SIDE.
28.06	PROVIDE RECESSED IP CLOCK/SPEAKER (DETAIL 12/E0-4.3). SEE ARCHITECT INTERIOR ELEVATIONS FOR HEIGHT. PROVIDE 1 CAT6 TO IDF. CONNECT A CALL-IN BUTTON (DETAIL 9/E0-4.3) AT THE NEAREST TEACHER STATION. 1/2"C-WIRE AS REQUIRED.
28.08	PROVIDE (2)CAT6 PER DATA DROP. INSTALL IN 3/4"C IN WALL AND OPEN IN CEILING SPACE ON JHANGERS.
28.92	TEACHING STATION, SEE DETAIL 5/E0-4.2
E-AC1	EXIST AC UNIT, 208V, 3PH, 49MCA, 60/3 DISC, 60A FUSES, 1"C-3#6+1#8 GND
GFI	ALL OUTLETS TO BE GFI, ALL OUTLETS BEHIND FIXED EQUIPMENT TO HAVE GFI BREAKERS
K1	WALKIN REFRIGERATOR FANS
K2	WALKIN REFRIGERATOR CONDENSORS
K3	WALKIN FREEZER FANS
K4	WALKIN FREEZER DOOR HEATER
K5	WALKIN FREEZER CONDENSOR
K6	WALKIN TEMP ALARM PANEL

SHEET NOTES	
Key Value	Keynote Text
SN.03	EXISTING AC UNIT TO BE REMOVE AND REINSTALLED AT A HIGHER ELEVATION. DISCONNECT POWER AND RECONNECT. EXTEND BRANCH CIRCUIT AND RECONNECT.
SN.04	HOOD CONNECT LIGHT CIRCUIT AND FIRE SUPPESSION, CONNECT THE LIGHTING TO HOOD CONTROL PANEL, CONNECT POWER TO THE FIRE SUPPRESSION PANEL AND CONNECT TO THE FIRE ALARM SYSTEM THROUGH A MONITOR MODULE.
SN.05	SEAL ALL PENETRATIONS ENTERING WALK-IN BOX.

NOTES



NORTH

KEY PLAN

SCALE: 1" = 200'-0"

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

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Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

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ESCALON, CA 95320
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BUILDING ELECTRICAL & SIGNAL PLAN

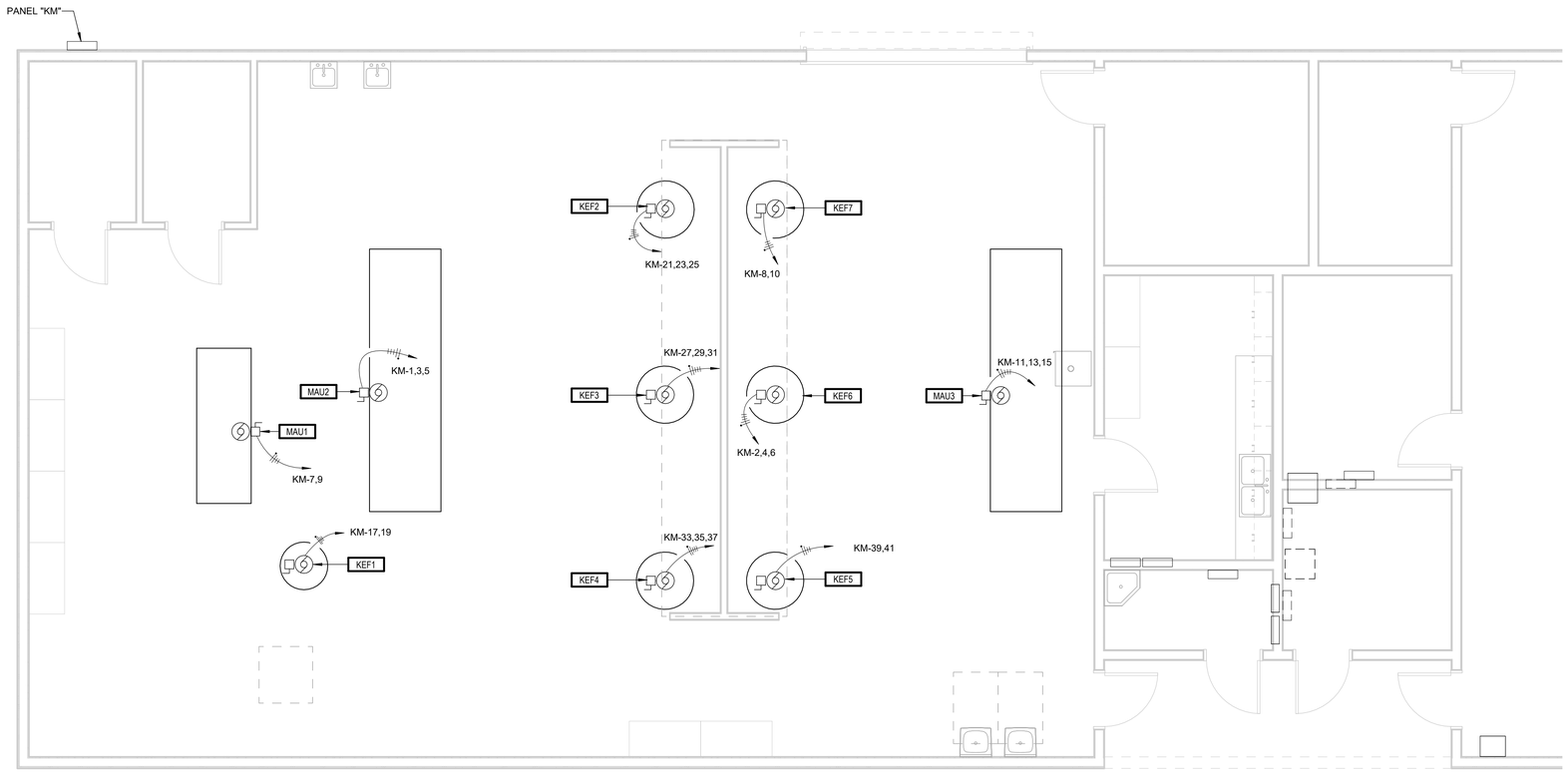
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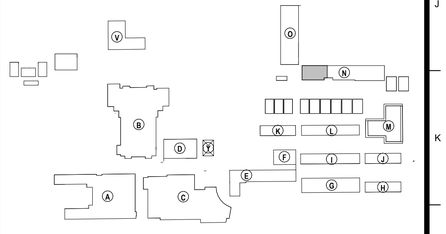
KEYNOTES

KEF1	KITCHEN HOOD EXHAUST FAN, 208V, 1PH, 6.9A, 3/4"C-2#12+1#12 GND THRU HOOD CONTROL PANEL
KEF2	KITCHEN HOOD EXHAUST FAN, 208V, 3PH, 6.5A, 3/4"C-3#12+1#12 GND THRU HOOD CONTROL PANEL
KEF3	KITCHEN HOOD EXHAUST FAN, 208V, 3PH, 8.5A, 3/4"C-3#12+1#12 GND THRU HOOD CONTROL PANEL
KEF4	KITCHEN HOOD EXHAUST FAN, 208V, 1PH, 15.5A, 3/4"C-2#10+1#10 GND THRU HOOD CONTROL PANEL
KEF5	KITCHEN HOOD EXHAUST FAN, 208V, 1PH, 15.5A, 3/4"C-2#10+1#10 GND THRU HOOD CONTROL PANEL
KEF6	KITCHEN HOOD EXHAUST FAN, 208V, 3PH, 6.5A, 3/4"C-3#12+1#12 GND THRU HOOD CONTROL PANEL
KEF7	KITCHEN HOOD EXHAUST FAN, 208V, 1PH, 15.5A, 3/4"C-2#10+1#10 GND THRU HOOD CONTROL PANEL
MAU1	KITCHEN MAKE UP FAN, 208V, 1PH, 15.5A, PROVIDE 60/2 DISC, 35A FUSES, 1"C-2#8+1#10 GND THRU HOOD CONTROL PANEL
MAU2	KITCHEN MAKE UP FAN, 208V, 3PH, 15.8A, PROVIDE 60/2 DISC, 35A FUSES, 1"C-3#8+1#10 GND THRU HOOD CONTROL PANEL
MAU3	KITCHEN MAKE UP FAN, 208V, 3PH, 15.8A, PROVIDE 60/2 DISC, 35A FUSES, 1"C-3#8+1#10 GND THRU HOOD CONTROL PANEL

SHEET NOTES

Key Value	Keynote Text

NOTES



NORTH

KEY PLAN
SCALE: 1" = 200'-0"

1 ELECTRICAL ROOF PLAN - BUILDING 'N'
SCALE: 1/4" = 1'-0"

TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT — TIMOTHY PAUL HUFF — No. C 15227 REN. 5/25 — STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER — RICHARD C. SMITH — No. E14303 Exp. 6-30-25 — ELECTRICAL — STATE OF CALIFORNIA

HCS Engineering inc.
4512 Feather River Dr #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM
1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

BUILDING ELECTRICAL ROOF PLAN

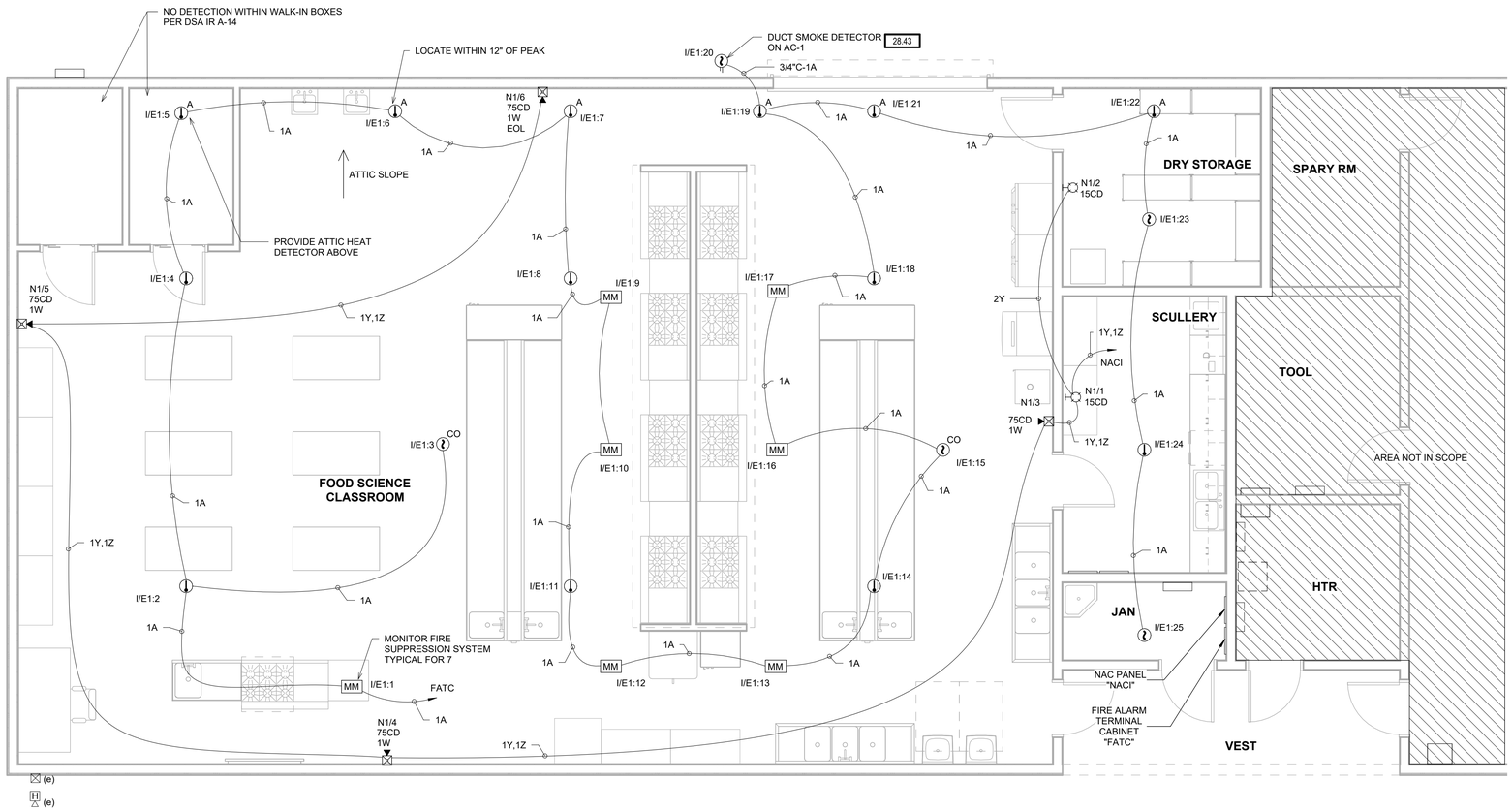
Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

E1-1.4

Plot Date & Time 12/20/2024 2:09:17 PM

Autodesk Docs://Escalon Food Science/EHS FoodScience Electrical.rvt

path://john/17/4



1 FIRE ALARM FLOOR PLAN - BUILDING 'N'

SCALE: 1/4" = 1'-0"

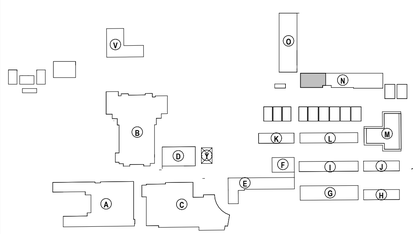
NORTH

KEYNOTES

28.43	COORDINATE DUCT SMOKE DETECTOR LOCATION WITH MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR TO TIE IN TO SHUT DOWN UNIT.

SHEET NOTES	
Key Value	Keynote Text

NOTES



NORTH

KEY PLAN

SCALE: 1" = 200'-0"

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936

LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 15207 REN. 5/25 STATE OF CALIFORNIA

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REGISTERED PROFESSIONAL ENGINEER RICHARD C. SMITH No. E14303 Exp. 6-30-25 ELECTRICAL STATE OF CALIFORNIA

HCS Engineering inc.
4512 Feather River Dr. #F, Stockton, CA 95219
209-478-8270 | www.hcs-eng.com

Consultants

ESCALON HIGH SCHOOL FOOD SCIENCE CLASSROOM

1528 YOSEMITE AVE.
ESCALON, CA 95320
ESCALON UNIFIED SCHOOL DISTRICT

BUILDING FIRE ALARM PLAN

Project Number	2321
Date	7/5/24
Drawn by	Author
Checked by	Checker

E1-2.1

Plot Date & Time 12/20/2024 2:09:19 PM

Autodesk Docs://Escalon Food Science/EHS FoodScience Electrical.rvt

path://john/17/4

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: EHS FOOD SCIENCE	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	12/18/2024

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

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 is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
K	6000 LED TROFFER	No	NA	46	Mfr. Spec	30	No	1,380	☐	☐
L	4000L LED TROFFER	No	NA	35	Mfr. Spec	3	No	105	☐	☐
							Total Designed Watts: CONDITIONED SPACES	1,485		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% 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) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C		
NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

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C. COMPLIANCE RESULTS

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 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)					Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04	05	06	07	08		09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	**Total Allowed** (Watts)	Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	**Total Adjusted** (Watts) *Includes Adjustments		**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)		(See Table F)	(See Table P)			
Conditioned	1,650				= 1,650	≥ 1,485	0	= 1485		COMPLIES
Unconditioned					=	≥		=		
Controls Compliance (See Table H for Details)										COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)										

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
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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 for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.		
Project Name: EHS FOOD SCIENCE	**Report Page:**	**(Page 1 of 7)**
Project Address: 1528 YOSEMITE AVE	**Date Prepared:**	12/18/2024

A. GENERAL INFORMATION

01	Project Location (city)	ESCALON	04	Total Conditioned Floor Area (ft²)	2,750
02	Climate Zone	12	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

● Office

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

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 Method	2750	Complete Building Method	0
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	2750		0	

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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included 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

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	SCHOOL;
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	SCHOOL;

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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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	Date Prepared:	12/18/2024

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: EHS FOOD SCIENCE	**Report Page:**	**(Page 7 of 7)**
Project Address: 1528 YOSEMITE AVE	**Date Prepared:**	12/18/2024

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Richard Smith	Documentation Author Signature:
Company: HCS Engineering, Inc.	Signature Date: 2024-12-18
Address: 4512 Feather River Drive #F	CEA/ HERS Certification Identification (if applicable): PE 14303
City/State/Zip: Stockton CA 95219	Phone: 209-478-8270

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: Richard Smith, PE	Responsible Designer Signature:
Company: HCS Engineering, Inc.	Date Signed: 2024-12-18
Address: 4512 Feather River Dr #F	License: E14303
City/State/Zip: Stockton CA 95219	Phone: 2094788270

STATE OF CALIFORNIA
Indoor Lighting
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CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
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	Date Prepared:	12/18/2024

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
SCHOOL	School or Classroom	Readily Accessible	Dimmer	Occupancy Sensor	Included	NA: General Ltg < 120W	No	☐	☐
							13		
							Plan Sheet Showing Daylit Zones:		
							E100		

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

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 Allowance / Adjustment	
					Area Category	PAF
Whole Building	School or Classroom	0.6	2,750	1,650	No	No
		TOTALS:	2,750	1,650	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

TPH architects
TIMOTHY P. HUFF & ASSOCIATES, INC.
Timothy P. Huff, AIA Architect
519 McHenry Ave., Modesto, CA 95354
Ph: (209) 571-2232 Fax: (209) 571-1936
LICENSED ARCHITECT TIMOTHY PAUL HUFF No. C 19207 REN: 5/25 STATE OF CALIFORNIA

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