- GENERAL

A. THESE DRAWINGS ARE COPY RIGHTED INSTRUMENTS OF SERVICE OF HOHBACH-LEWIN, INC. FOR USE ONLY ON THIS PROJECT.

B. CONTRACTOR RESPONSIBILITY - CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, SEQUENCES AND SAFETY PRECAUTIONS, INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING.

C. DIMENSIONS - USE WRITTEN DIMENSIONS ONLY. VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES. WHERE NO DIMENSIONS ARE PROVIDED, OBTAIN CLARIFICATION PRIOR TO PROCEEDING WITH WORK.

D. COORDINATION - OPENINGS THROUGH WALLS AND FLOORS FOR MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE COORDINATED BY CONTRACTOR AND CONSTRUCTED PER TYPICAL DETAILS SHOWN IN THESE DOCUMENTS. NO MECHANICAL OR ELECTRICAL SYSTEM COMPONENTS SHALL BE EMBEDDED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED IN THESE DOCUMENTS.

E. OMISSIONS AND CONFLICTS - OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE CONSTRUCTION DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM. IF CERTAIN FEATURES ARE NOT FULLY DELINEATED IN THE CONSTRUCTION DOCUMENTS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE DELINEATED.

F. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MEP DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SUCH REQUIREMENTS INTO THEIR SHOP DRAWINGS AND WORK.

G. THERE SHALL BE NO CHANGE IN SIZE OR DIMENSION OF A STRUCTURAL MEMBER, NOR SHALL ANY OPENINGS BE MADE IN ANY STRUCTURAL MEMBER, WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

H. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON THE STRUCTURE. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE STRUCTURE AT THE TIME THE LOADS ARE IMPOSED.

I. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS.

J. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: TYPES OF FLOOR FINISH AND THEIR LOCATION, DEPRESSIONS IN FLOOR SLABS, OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, AND ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.

- EXISTING CONSTRUCTION/ CONDITIONS:

A. SHORING: THE CONTRACTOR SHALL PROVIDE SHORING WHEREVER NECESSARY TO ALLOW INSTALLATION OF THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF ALL SHORING AND TEMPORARY WORK REQUIRED THROUGHOUT THE PROGRESS OF THE WORK.

B. EXISTING CONSTRUCTION: EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS WAS OBTAINED FROM LIMITED VISUAL OBSERVATIONS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF RECORD OF ALL EXCEPTIONS AND RECEIVE DIRECTION PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.

C. DEMOLITION: THE REMOVAL, CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE AND WITH APPROPRIATE TOOLS IN ORDER TO NOT JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED DEMOLITION.

DESIGN CRITERIA	
GOVERNING CODE AUTHORITY: **CALIFORNIA BUILDING CODE 2022**	
EARTHQUAKE DESIGN DATA	
SEISMIC IMPORTANCE FACTOR, I, AND RISK CATEGORY	1.00
MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_S AND S_1	0.94 | 0.341
DESIGN SPECTRAL RESPONSE COEFFICIENTS, S_{DS} AND S_{D1}	0.752 | NA
SOIL SITE CLASS	D
SEISMIC DESIGN CATEGORY	D
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE ANALYSIS	
BASIC SEISMIC FORCE RESISTING SYSTEM(S)	INTERMEDIATE REINFORCED MASONRY SHEAR WALLS
RESPONSE MODIFICATION FACTOR(S), R	3.5
SEISMIC RESPONSE COEFFICIENT(S), C_S	0.215
REDUNDANCY FACTOR, R_O	1.0
OVERSTRENGTH FACTOR, Ω_O	2.5
DEFLECTION AMPLIFICATION FACTOR, C_d	2.25
WIND DESIGN DATA	
BASIC DESIGN WIND SPEED	94 MPH
RISK CATEGORY	II
WIND EXPOSURE CATEGORY	C
APPLICABLE INTERNAL PRESSURE COEFFICIENT	±0.18
VELOCITY WIND PRESSURE, q_z	16.3 PSF
SOIL DESIGN DATA	
SOIL ALLOWABLE VERTICAL BEARING CAPACITY	1500 PSF
GRAVITY DESIGN DATA	
ROOF DEAD LOAD	22 PSF
ROOF LIVE LOAD	20 PSF (REDUCIBLE)
WALL DESIGN DATA	
EXTERIOR WALL	
NON-BEARING PARTITION WALL GRAVITY	15 PSF
LATERAL	10 PSF
GMU 8IN WALL	78 PSF

- CONCRETE

A. CONCRETE SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ACI 318.

B. CONCRETE SHALL BE AS FOLLOWS:

CONCRETE USE	STRENGTH AT 28 DAYS U.O.N.	W/C RATIO	MAX. AGGREGATE SIZE	WEIGHT	SHRINKAGE
SLAB ON GRADE	3000 PSI	0.45 MAX.	3/4" TO 1" (LS)	145pcf	.045%
FOUNDATIONS	3000 psi	0.50 MAX.	3/4" TO 1"	145pcf	-

(LS) CRUSH LOW SHRINKAGE ROCK.
* ADD FIBER MESH TO ALL EXPOSED TOPPING SLAB, TYP. U.O.N.

C. STRENGTH: COMPRESSIVE STRENGTH IN PSI WHEN TESTED IN ACCORDANCE WITH ASTM C39

D. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II.

E. AGGREGATE FOR STONE CONCRETE SHALL CONFORM TO ASTM C-33, FOR LOW SHRINKAGE AGGREGATE; USE LIMESTONE OR GRANITE. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.

F. FLY ASH: ASTM C 618, CLASS F OR CLASS C. MINIMUM RECOMMENDED FLY ASH F. CONTENT BY MASS OF CEMENTITIOUS MATERIAL IS 20%. MAXIMUM RECOMMENDATION IS 25%. (DSA PROJECTS FLY ASH: ASTM C 618, ASTM C 311 CLASS N OR F AND DSA IR 14-3 CLASS F. RECOMMENDED FLY ASH CONTENT BY MASS OF CEMENTITIOUS MATERIAL IS 15%.)

G. ADMIXTURES: MIX SHALL CONTAIN POLYMER BASED, WATER REDUCING ADMIXTURE, THE FOLLOWING TYPES OF ADMIXTURES ARE ALLOWED AS PLASTICIZERS AND/ OR SET ACCELERATORS TO IMPROVE WORKABILITY. 1. ASTM C494, TYPES A, C, E, G. HIGH RANGE WATER REDUCERS SHALL ALSO MEET REQUIREMENTS OF ASTM C 1017. 2. THE INITIAL SLUMP OF THE CONCRETE BEFORE INTRODUCING ADMIXTURES SHOULD BE MINIMUM 2" INCHES

H. SHRINKAGE - CONTRACTOR TO PROVIDE CONCRETE MIX HISTORY DATA OR PROVIDE TESTING REPORT.

I. MINIMUM REINF. COVER FOR CAST-IN-PLACE CONCRETE:
1. CONC. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"
2. CONC. FORMED BELOW GRADE OR EXPOSED TO WEATHER:
NO. 6 AND GREATER . . . . . 2"
NO. 5 AND SMALLER . . . . . 1 1/2"
3. CONC. NOT EXPOSED TO WEATHER NOR IN CONTACT WITH GROUND:
SLABS, WALLS, AND JOISTS: NO. 11 AND SMALLER . . . . . 1"
BEAMS AND COL: PRIMARY REINF., TIES, STIRRUPS, SPIRALS . . . . . 1 1/2"

J. PLACEMENT
1. ALL REINFORCING BARS, ANCHOR BOLTS, AND ALL OTHER CONC. INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
2. CHAMFER ALL CORNERS OF CONCRETE TO PREVENT DAMAGE.
3. CONSTRUCTION TOLERANCE SHALL COMPLY TO ACI 117.
4. CONCRETE SHALL BE PLACED IN A CONTINUOUS OPERATION BETWEEN PREDETERMINED CONSTRUCTION JOINTS.
5. USE VIBRATORS TO CONSOLIDATE CONCRETE. DO NOT USE VIBRATORS TO MOVE CONCRETE.
6. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 7 DAYS AFTER PLACEMENT IN ANY APPROVED MANNER. FOOTINGS ARE EXEMPTED FROM THIS REQUIREMENT.
7. PATCHING OF CONCRETE: ALL INSERT HOLES AND OTHER IMPERFECTIONS ON THE SURFACES OF THE CONCRETE SHALL BE FILLED WITH GROUT, BRUSHED AND SACKED TO A UNIFORM FINISH.

K. CONSTRUCTION JOINTS:
1. CONSTRUCTION JOINTS SHOWN MAY BE PROVIDED AT CONTRACTORS OPTION. ANY PROPOSED CONSTRUCTION JOINTS NOT SHOWN MUST BE SUBMITTED TO THE DESIGN PROFESSIONAL OF RECORD FOR APPROVAL.
2. ROUGHENED CONSTRUCTION JOINTS (R.C.J.): WHERE NOTED ON DRAWINGS R.C.J. ROUGHEN JOINT TO MINIMUM 1/4 INCH AMPLITUDE.

L. INTERIOR SLAB ON GRADE:
1. DO NOT ALLOW WATER TO COLLECT ON OR AROUND BUILDING PAD.
2. INITIAL CURING: INITIAL CURING SHALL IMMEDIATELY FOLLOW THE FINISHING OPERATION. CONCRETE SHALL BE KEPT CONTINUOUSLY MOIST AT LEAST OVERNIGHT.
3. FINAL CURING: IMMEDIATELY FOLLOWING THE INITIAL CURING AND BEFORE THE CONCRETE HAS DRIED, SLABS TO BE CONTINUOUSLY CURED FOR 7 DAYS BY WET COVERING OR MOISTURE RETAINING COVERING TO REDUCE THE LIKELIHOOD OF SHRINKAGE OR CRACKING. LIQUID MEMBRANE CURING COMPOUNDS SHALL NOT BE PERMITTED (WITHOUT OWNER'S WRITTEN APPROVAL).
4. INTERIOR SLABS SHALL RECEIVE A LIGHT BROOM FINISH U.O.N. TOLERANCE SHALL BE 1/8" IN 10'-0". EDGES SHALL BE SMOOTH TROWELED.

M. ALL CONC. TO BE REINFORCED UNLESS SPECIFICALLY MARKED 'NOT REINFORCED'.

N. VAPOR BARRIER:
1. 15 MIL ASTM E-1745 CLASS A, TYP. U.O.N.

- WOOD

A. FRAMING LUMBER - DOUGLAS FIR U.O.N.;
1. JOISTS AND RAFTERS: NO. 1
2. POSTS, BEAMS, AND HEADERS: NO. 1
3. STUDS, PLATES, BLOCKS, LIGHT FRAMING AND MISC: NO. 2
4. ALL LUMBER IN CONTACT WITH CONCRETE OR MASONRY TO BE PRESERVATIVE TREATED
5. ALL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% PRIOR TO FINAL FRAMING INSPECTION.

B. SHEATHING:
1. ROOF SHEATHING: 23/32 INCH APA RATED 24/0 EXPOSURE 1. (4 PLY MIN.) S.A.D. WHEN RADIANT BARRIER SHEATHINGS REQUIRED.
2. WALL SHEATHING: 15/32 INCH APA C-D, INTERIOR WITH EXTERIOR GLUE. (4 PLY MIN.)

C. FRAMING HARDWARE: AS MANUFACTURED BY SIMPSON OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED.

D. NAILS: COMMON WIRE GAGE U.O.N. NAILING TO CONFORM TO CBC TABLE 2304.10.1 U.O.N.

E. BOLTS: ASTM A307. PROVIDE WASHER UNDER HEADS AND NUTS.

F. PROVIDE LATERAL SUPPORT FOR BEAMS, JOISTS AND RAFTERS AT ENDS AND POINTS OF BEARING.

G. LAG SCREWS PER ANSI/ ASME STANDARD B18.2.1 PROVIDE LEAD HOLE SAME DIAMETER AND DEPTH AS SHANK AND THEN DRILL HOLE 60% - 70% OF SHANK DIAMETER FOR THREADED PORTIONS.

H. HOLDOWNS: AS MANUFACTURED BY SIMPSON OR APPROVED EQUIVALENT

I. PRESSURE TREATED LUMBER.
1. PRESSURE TREATED D.F. SHALL BE AWPB STAMPED. AMMONIACAL COPPER QUAT (ACQ), COPPER BORON AZOLE (CBA), OR BORATE TREATED AWPA STANDARD C2, MINIMUM 0.40 NCH. PENETRATION INCISED.
2. ALL PRESERVATIVE TREATED LUMBER SHALL BE FIELD-APPLIED WITH PRESERVATIVE WHERE CUT AND DRILLED ON SITE WITH COPPER NAPHATHENATE (2% COPPER AS METAL).
3. USE HOT DIPPED GALVANIZED HARDWARE, IE. BOLTS, NAIL, ETC. FOR ALL ATTACHMENT TO ACQ OR CBA TREATED MEMBERS.
4. PLAIN CARBON STEEL FASTENERS, INCLUDING NUTS AND WASHERS, IN SBX/ DOT AND ZINC BORATE PRESSERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED PER CBC SECTION 2304.10.5.1

J. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

- REINFORCING STEEL

A. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH ACI 315 AND ACI 318.

B. REINFORCING STEEL SHALL BE AS FOLLOWS:
1. BARS: ASTM A615, GRADE 60 TYP. U.O.N.
2. WELDED BARS: ASTM A706
3. TIE WIRES AND SPIRALS: ASTM A82
4. WELDED WIRE FABRIC: ASTM A185
5. MECHANICAL BAR SPLICE: BAR LOCK OR APPROVED EQUAL.

C. DO NOT FIELD BEND OR STRAIGHTEN IN ANY MANNER THAT WILL DAMAGE REINFORCING.

D. PROVIDE SPLICES IN REINFORCING ONLY WHERE SHOWN ON DRAWINGS OR APPROVED IN WRITING BY PROFESSIONAL OF RECORD.

E. WELDING TO CONFORM TO AWS D1.4

- STEEL

A. STRUCTURAL STEEL TO BE SUPPLIED DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

B. U.O.N. STEEL SHALL BE AS FOLLOWS:
1. WIDE FLANGE SHAPES: ASTM A992
2. HOLLOW STRUCTURAL SECTIONS: ASTM A500B
3. PIPES: ASTM A53, GR. B
4. OTHER SHAPES AND PLATES: ASTM A36, ASTM A572 GR. 50 AS NOTED.
5. BOLTS: ASTM A307
6. HIGH STRENGTH BOLTS: ASTM A325, U.O.N.
7. THREADED RODS: ASTM A36, U.O.N.
8. ANCHOR RODS: F1554 GR. 36 TYP., U.O.N.
9. WELDING ELECTRODES: E-70xx U.O.N.
10. WELDED STUDS: FLUX FILLED HEADED STUDS CONFORMING TO ASTM A108 BY NELSON OR EQUAL.

C. WELDING TO CONFORM TO AWS AND TO BE PERFORMED BY CERTIFIED WELDERS.

D. BUTT WELDS ARE TO BE COMPLETE PENETRATION U.O.N. ALL FILLET WELDS SHOWN ARE MINIMUM REQUIRED BY STRESS. INCREASE WELDS TO A.I.S.C. MINIMUM SIZES BASED ON THICKNESS OF MATERIAL JOINED U.O.N.

E. STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSION POINTS OR GRID LINES, U.O.N.

F. STEEL NOT RECEIVING FIRE PROOFING SHALL BE SHOP PRIMED.

G. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIP ZINC GALVANIZED U.O.N.

H. NON SHRINK GROUT: 7500 psi COMPRESSIVE STRENGTH, NON METALLIC CONFORMING TO ASTM C1107. MASTERFLOW 928 OR EQUAL.

I. ALL WELDING SHALL HAVE CONTINUOUS INSPECTION BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY DSA

ABBREVIATIONS

&	AND	LONG.	LONGITUDINAL
@	AT	L.V.F.	LOW-VELOCITY FASTENER
A.B.	ANCHOR BOLT		
ARCH.	ARCHITECTURAL	MAX.	MAXIMUM
AYC	ALASKAN YELLOW CEDAR	M.B.	MACHINE BOLTS (UNFINISHED)
		MIN.	MINIMUM
BLDG.	BUILDING		
BLKG.	BLOCKING	(N)	NEW
BM.	BEAM	N.S.	NEAR SIDE
B.N.	BOUNDARY NAIL	NTS.	NOT TO SCALE
B.O.C.	BOTTOM OF CONCRETE		
BOT.	BOTTOM	O.C.	ON CENTER
		OPP.	OPPOSITE
℄	CENTER LINE		
C.G.S.	CENTER OF GRAVITY OF POST-TENSIONING STRAND	PL.	PLATE
		PLY.	PLYWOOD
		P/T	POST TENSIONING
C.J.	CONTROL JOINT		
CLR.	CLEAR COVER	R.C.J.	ROUGHENED CONSTRUCTION JOINT
COL.	COLUMN	REINF.	REINFORCEMENT
CONC.	CONCRETE	REQD.	REQUIRED
CONT.	CONTINUOUS		
		S.A.D.	SEE ARCHITECTURAL DRAWINGS
DBL.	DOUBLE	S.C.D.	SEE CIVIL DRAWINGS
DBO.	DRAWING BY OTHER	SCHED.	SCHEDULE
DET.	DETAIL	S.D.B.O.	SEE DRAWINGS BY OTHERS
D.C.	DEMAND CRITICAL	SIM.	SIMILAR
D.F.	DOUGLAS FIR	S.J.	SEISMIC JOINT
DWG.	DRAWING	S.L.R.S.	SEISMIC LOAD RESISTING SYSTEM
		S.M.D.	SEE MECHANICAL DRAWINGS
(E)	EXISTING	SPEC.	SPECIFICATION
EA.	EACH	SQ.	SQUARE
EL.	ELEVATION	SYM.	SYMMETRICAL
E.N.	EDGE NAIL		
E.N.	EACH WAY	T&B	TOP AND BOTTOM
EXT.	EXTERIOR	T&G	TONGUE AND GROOVE
		T.D.	TIE DOWN
FDN.	FOUNDATION	T.O.C.	TOP OF CONCRETE
F.F.	FINISH FLOOR	T.O.F.	TOP OF FOOTING
FLR.	FLOOR	T.O.S.	TOP OF STEEL FRAMING
F.N.	FIELD NAIL	T.P.	TOP OF PLATE
F.O.C.	FACE OF CONCRETE	TRAN.	TRANSVERSE
F.O.S.	FACE OF STUD	TYP.	TYPICAL
F.S.	FAR SIDE		
FTG.	FOOTING	U.O.N.	UNLESS OTHERWISE NOTED
G.C.	GENERAL CONTRACTOR	VERT.	VERTICAL
H.D.	HOLD DOWN	V.I.F.	VERIFY IN FIELD
HDR.	HEADER		
HORIZ.	HORIZONTAL	W/	WITH
HSS	HOLLOW STEEL SECTION	W/O	WITHOUT
J.H.	JOIST HANGER		

STRUCTURAL SHEET INDEX

S100	STRUCTURAL GENERAL NOTES
S101	STRUCTURAL GENERAL NOTES
S200	FOUNDATION AND CONCRETE SLAB PLAN
S201	ROOF FRAMING PLANS
S501	TYPICAL DETAILS
S502	TYPICAL DETAILS
S801	TYPICAL DETAILS
S802	TYPICAL DETAILS
S803	TYPICAL DETAILS

TOTAL SHEETS: 9

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
San Gabriel, CA 91100
(626) 441-1211

STRUCTURAL GENERAL NOTES

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

REGISTERED PROFESSIONAL ENGINEER
LESLIE TSO
S 3073
STRUCTURAL
STATE OF CALIFORNIA

DATE SIGNED: 7/31/2024

SEALS

sgh ARCHITECTS

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PROJECT NUMBER: 22-47104-00
PROJECT STATUS: Pi-Project Status
SHEET ISSUED: 07/16/22
DELTA: DATE: DESCRIPTION:
Δ 08-02-2024 BID ADDENDUM

S100

Pi-Building Name

- SPECIAL INSPECTIONS

SPECIAL INSPECTIONS AND TESTING WILL BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, THE ATTACHED "STATEMENT OF SPECIAL INSPECTION" FORM DSA-103 AND CBC SECTIONS 1704A, 1705A.

STATEMENT OF SPECIAL INSPECTIONS

THIS STATEMENT OF SPECIAL INSPECTION IS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS OF CBC SECTIONS 1704A.3, THE FOLLOWING ATTACHMENTS SUMMARIZE THE SPECIAL INSPECTIONS AND STRUCTURAL TESTS REQUIRED FOR THIS PROJECT.

THESE REQUIREMENTS HAVE ALSO BEEN MADE PART OF THE APPROVED PLANS.

THE OWNER RECOGNIZES HIS OR HER OBLIGATION TO ENSURE THAT THE CONSTRUCTION COMPLIES WITH THE APPROVED PERMIT DOCUMENTS AND TO IMPLEMENT THIS PROGRAM OF SPECIAL INSPECTIONS. IN PARTIAL FULFILLMENT OF THESE OBLIGATIONS, THE OWNER WILL RETAIN AND DIRECTLY PAY FOR THE SPECIAL INSPECTIONS AS REQUIRED IN CBC SECTION 1704A.2

SPECIAL INSPECTORS WILL REFER TO THE APPROVED PLANS AND SPECIFICATIONS, THE ABOVE REFERENCED SCHEDULES, AND THE RELEVANT CBC SECTIONS FOR DETAILED SPECIAL INSPECTION REQUIREMENTS. ANY ADDITIONAL TESTS AND INSPECTIONS REQUIRED BY THE APPROVED PLANS AND SPECIFICATIONS WILL ALSO BE PERFORMED.

INTERIM INSPECTION REPORTS SHALL BE SUBMITTED TO OWNER, ARCHITECT, DSA AND TO HOHBACH-LEWIN, INC. IN ACCORDANCE WITH CBC SECTION 1704A.2.4. A FINAL REPORT OF SPECIAL INSPECTIONS DOCUMENTING REQUIRED SPECIAL INSPECTIONS, TESTING, AND CORRECTION OF ANY DEFICIENCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED PRIOR TO ISSUANCE OF A CERTIFICATE OF USE AND OCCUPANCY.

THIS PLAN HAS BEEN DEVELOPED WITH THE UNDERSTANDING THAT THE BUILDING OFFICIAL WILL:

- REVIEW AND APPROVE THE QUALIFICATIONS OF THE SPECIAL INSPECTORS PERFORMING THE INSPECTIONS
- MONITOR SPECIAL INSPECTION ACTIVITIES TO ASSURE COMPLIANCE WITH PROJECT REQUIREMENTS
- REVIEW SUBMITTED INSPECTION REPORTS
- PERFORM INSPECTION

SCHEDULE OF SPECIAL INSPECTIONS

INSPECTION FREQUENCY

C - CONTINUOUS INSPECTION
P - PERIODIC INSPECTION
X - DENOTES INSPECTION THAT IS EITHER ONE-TIME OR AT A FREQUENCY DEFINED IN SOME OTHER MANNER
N - INSPECTION IS NOT REQUIRED

- EXPANSION ANCHORS (HILTI)

A. EXPANSION BOLTS SHALL BE HILTI KWIK-BOLT TZ2-CARBON STEEL ANCHOR (ESR-4266) OR APPROVED EQUAL PRODUCT. ALTERNATE PRODUCTS MUST BE SUBMITTED TO E.O.R. FOR SUBSTITUTION PRIOR TO INSTALLATION PER SPECIFICATIONS.

a. ANCHORS MUST BE INSTALLED IN HOLES DRILLED INTO THE CONCRETE USING CARBIDE-TIPPED MASONRY DRILL BITS COMPLYING WITH ANSI B212.15-1994, USING THE HILTI SAFESET SYSTEM WITH HILTI TE-YD OR TE-CD HOLLOW DRILL BITS COMPLYING WITH ANSI B212.15-1994 WITH A HILTI VACUUM IN ACCORDANCE WITH FIGUERE 6 AND FIGURE 7 AS SHOWN ON ICC ESR-4266 REPORT, OR USING HILTI SPX-T CORE BITS IN ACCORDANCE WITH FIGUERE 7 AS SHOWN ON ICC ESR-4266 REPORT. THE HOLLOW DRILL BITS ARE NOT PERMITTED FOR USE WITH 1/4-INCH - AND 3/8-INCH DIAMETER KB-TZ2 ANCHORS. THE HILTI SPX-T CORE BITS ARE NOT PERMITTED FOR USE WITH THE 1/4-INCH-DIAMETER KB-TZ2 ANCHORS. THE MINIMUM DRILLED HOLE DEPTH, ho, IS GIVEN IN TABLE 1. IF DUST AND DEBRIS IS REMOVED FROM THE DRILLED HOLE WITH THE HILTI TE-YD OR TE-CD HOLLOW DRILL BITS, THE DRS ATTACHEMENT SYSTEM, OR COMPRESSED AIR OR A MANUAL PUMP, hnom IS ACHIEVED AT THE SPECIFIED VALUE O ho NOTED IN TABLE.

B. INSTALLATION: INSTALL THE EXPANSION ANCHORS IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIC ANCHOR AND THE CODE APPROVAL REPORT.

C. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 1704 OF THE CBC. (1704A OF THE CBC FOR DSA PROJECTS)

D. WHEN EXPANSION ANCHORS ARE USED FOR SILL PLATE BOLTING AWAY FROM THE EDGE, 10% OF THE ANCHORS SHALL BE TENSION TESTED. FOR ALL OTHER STRUCTURAL APPLICATIONS, ALL SUCH EXPANSION ANCHOR SHALL BE TENSION TESTED. WHEN EXPANSION ANCHORS ARE USED FOR NON-STRUCTURAL APPLICATIONS, 50% OF ANCHORS SHALL BE TENSION TESTED. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS. (PER IR-19.1 FOR DSA PROJECTS ONLY)

E. CONCRETE AT TIME OF INSTALLATION SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF SPECIFIED 28 DAY STRENGTH f'c.

							TORQUE TEST VALUE (FT-LBS)	
DIA.	EFF. MIN. EMBED	NOM. EMBED	MIN. HOLE DEPTH	MIN. EDGE DISTANCE	MIN. SPACING	MIN. MEMBER THICKNESS	CARBON STEEL ANCHORS	STAINLES S STEEL ANCHORS
1/4"	1 1/2"	1 3/4"	2"	1 1/2"	1 1/2"	3 1/4"	4	6
3/8"	2"	2 1/2"	2 3/4"	2 1/2"	2 1/4"	4"	30	30
1/2"	2 1/2"	3"	3 1/4"	2 3/4"	3"	5"	50	40
5/8"	2 3/4"	3 1/4"	3 3/4"	4 1/2"	4 1/2"	5"	40	60
3/4"	3 1/4"	4"	4 1/4"	5"	4 1/2"	5 1/2"	110	125

- TESTING

REQUIRED STRUCTURAL TESTS ARE LISTED ON THE ATTACHED SCHEDULE OF STRUCTURAL TESTS. SEE FORM DSA-103 FOR ADDITIONAL REQUIREMENTS.

- STRUCTURAL OBSERVATION (BY HOHBACH-LEWIN, INC.)

OBSERVATION BY HOHBACH-LEWIN OR THEIR DESIGNATED REPRESENTATIVE IS REQUIRED AT THE PROJECT MILESTONES GIVEN BELOW. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY HOHBACH-LEWIN AT LEAST 24 HOURS IN ADVANCE OF COMPLETING MILESTONES THAT REQUIRE OBSERVATION AND ALLOW SUITABLE TIME TO MAKE ANY REQUIRED CORRECTIONS TO THE WORK PRIOR TO ENGAGING IN THE NEXT PHASE OF THE PROJECT. STRUCTURAL OBSERVATIONS WILL BE PERFORMED PER CBC 1704A.6.

- PRIOR TO PLACING CONCRETE:
  HOHBACH-LEWIN SHALL OBSERVE PLACEMENT OF REINFORCING, POST-TENSIONED STRANDS, EMBEDMENTS AND CAST-IN ANCHORAGES TO CONCRETE.

- CONTRACTOR SUBMITTALS

THE FOLLOWING IS A LISTING OF REQUIRED ITEMS TO BE SUBMITTED TO STRUCTURAL ENGINEER OF RECORD (TO BE PROVIDED IF MARKED):

SUBMITTAL	CERTIFICATE	SHOP DRAWINGS	CALCS W/ ENG. STAMP
CONCRETE REINF. STEEL	X	X	
CONCRETE MIX DESIGN		X	
CONCRETE MASONRY UNITS			
GROUT MIX DESIGN	X		
REINFORCING STEEL	X	X	
STRUCTURAL STEEL	X	X	
GLUE LAMINATED BEAMS	X	X	
PRE-FABRICATED WOOD I-JOISTS		X	X

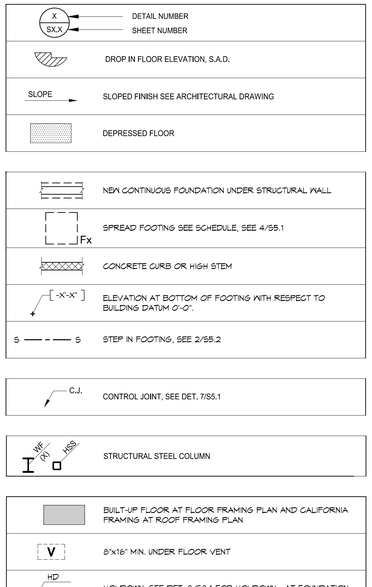
NAILING SCHEDULE (CBC TABLE 2304.10.1)

CONNECTION [1]	NAILING [2]	NAILING [2]
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below (Roof)	(3) 8d	Ea. end, toenail
2. Ceiling joist to top plate	(3) 8d	Toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions	(3) 16d	Face nail
4. Collar tie to rafter	(3) 10d	Face nail
5. Rafter or roof truss to top plate	(3) 10d	Toenail
6. Roof rafters to ridge valley or hip rafters; or roof rafter to 2 inch ridge beam.	(2) 16d	End nail
	(3) 10d	Toenail
7. Stud to stud (not a braced wall panels)	16d	24" o.c face nail
8. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d	16" o.c face nail
9. Built-up header (2" to 2" header)	16d	16" o.c each edge, face nail
10. Continuous header to stud	(4) 8d	Toenail
11. Top plate to top plate	16d	16" o.c face nail
12. Top plate to top plate, at end joists	(6) 16d	Each side of end joist
13. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d	12" o.c face nail
14. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	(2) 16d	16" o.c face nail
15. Stud to bottom plate	(4) 8d	Toenail
16. Top plate to stud	(2) 16d	End nail
17. Top plates, laps at corners and intersections	(2) 16d	Face nail
18. Joist to sill, top plate, or girder	(3) 8d	Toenail
19. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d	6" o.c toenail
20. 2" planks (plank & beam - floor & roof)	(2) 16d	Each bearing
21. Built-up girders and beams, 2" lumber layers	20d	32" o.c face nail at top and bottom staggered on sides.
	(2) 20d	Ends and at each splice, face nail
22. Ledger strip supporting joists or rafters	(3) 16d	Each joist or rafter, face nail
23. Joists to band joist or rim joist	(3) 16d	End nail
24. Bridging or blocking to joist, rafter or truss (floor)	(2) 8d	Each end toe nail

NOTES:
1. NAILING PER SCHEDULE ABOVE IS TO BE USED WHERE NAILING IS NOT SPECIFIED ON PLANS OR DETAILS. NAILING PER PLANS AND DETAILS SUPERCEDE NAILING SCHEDULE UNLESS APPROVED BY ENGINEER.
2. NAIL SPECIFIED ARE COMMON: 8d= 2 1/2"X0.131"
   10d= 3"X0.148"
   16d= 3 1/2"X0.162"
   FOR ALTERNATE NAILING AND INFORMATION NOT SHOWN, SEE COMPLETE TABLE CBC 2304.10.1

NAIL DESIGNATION AND SIZES		
NAIL	DIAMETER (in)	LENGTH (in)
16d COMMON	0.162	3.5
16d SINKER	0.148	3.25
10d COMMON	0.148	3
10d SHORT	0.148	2.5
8d COMMON	0.131	2.5

SYMBOLS



CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

STRUCTURAL GENERAL NOTES

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

LESLIE TSO
No. S 3073
REGISTERED PROFESSIONAL ENGINEER
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 7/31/2024
SEAL

sgh ARCHITECTS

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PROJECT NUMBER: 22-471(A-D)
PROJECT STATUS: PI-Project Status
SHEET ISSUED: 07/19/23
DELTA DATE: DESCRIPTION:
A 06-02-2024 BID ADDENDUM

S101

PI-Building Name

HOHBACH-LEWIN #17405

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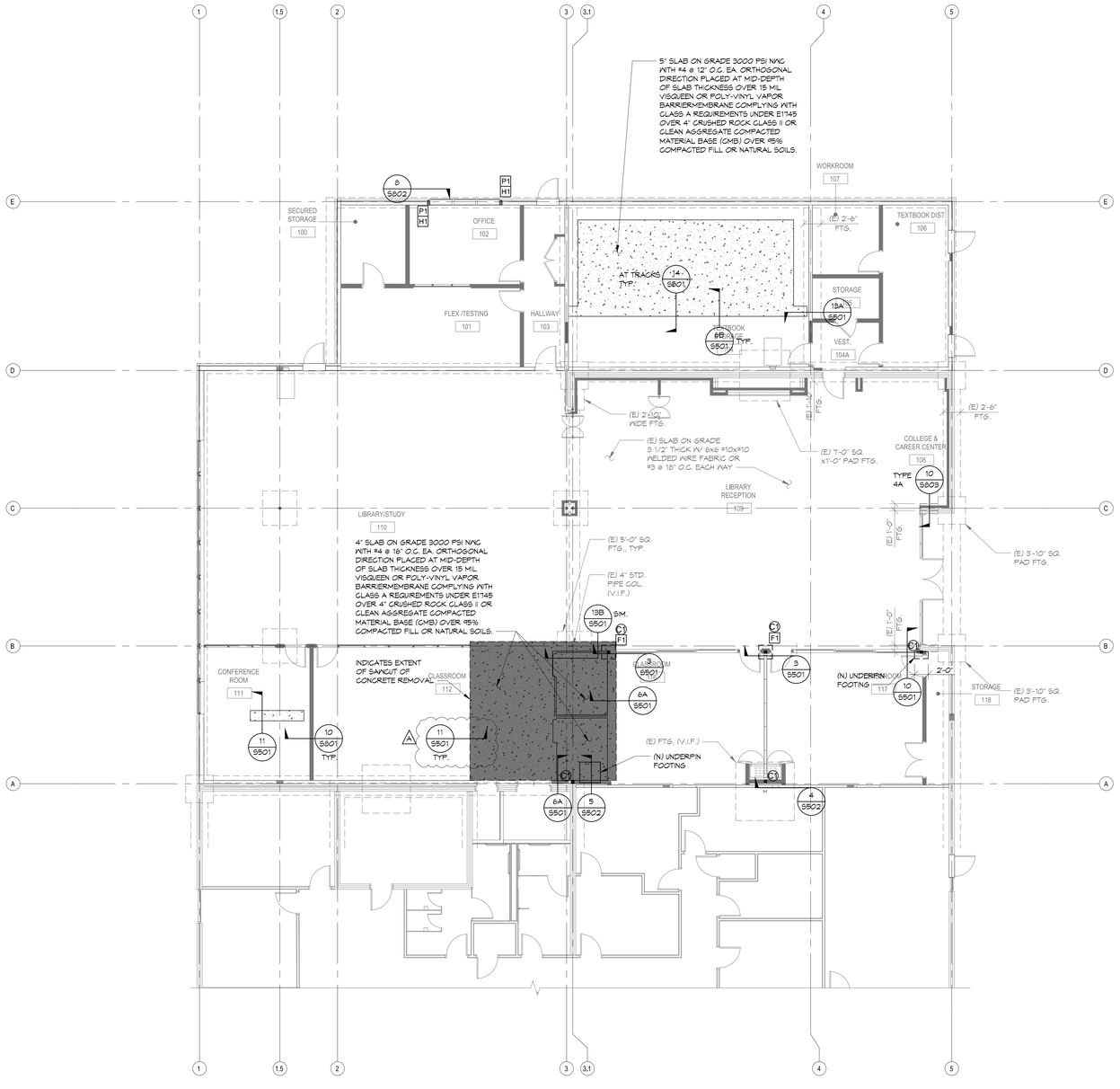
FOUNDATION PLAN NOTES:

1. SEE SHEETS S100 AND S101 FOR STRUCTURAL GENERAL NOTES.
2. VERIFY ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
3. ALL COLUMNS SHALL BE CENTERED ON GRID LINES AND ALL FOOTINGS SHALL BE CENTERED UNDER WALLS OR COLUMNS, UNO.
4. TOP OF FOOTING IS 12" BELOW FINISH FLOOR, UNO
5. OPENINGS AND PENETRATIONS HAVE TO BE COORDINATED BY THE CONTRACTOR WITH ALL OTHER DISCIPLINES.
6. FOR OPENNG IN CONCRETE SLAB, SEE DETAIL 1/S502.
7. PROVIDE THICKENED SLAB AT ALL DISCONTINUED EDGES OF SLABS, OR PERIMETER, SEE DETAIL 6/S501.
8. FOR PAD ON CONCRETE SLAB, SEE DETAIL 7/S501.
9. PROVIDE CONTROL JOINT ON SLAB ON GRADE, SEE DETAIL 2/S502.
10. FOR TYPICAL BAR BENDS, LAP SPLICE AND EMBEDMENT SCHEDULE, SEE DETAIL 4, 8, 12 / S501.
11. FOR POST-INSTALLED DOWELS, SEE DETAIL 1/S501.
12. FOR REMOVAL AND REPAIR OF EXISTING SLAB, SEE 11/S501.



FOUNDATION PLAN

1/8"=1'-0"

NORTH

LEGEND	
E1	HSS4X4X1/4
F1	2'-0"X2'-0"X16" DEEP W/ (4) #4 EACH WAY AT BOTTOM
P1	6X6 DF#1 WOOD POST
H1	HDU8
	2x6 @ 16" O.C. STUD WALL
	DEPRESSED SLAB, SEE ARCH.
	DEPRESSED SLAB FOR TILE INSTALLATION, SEE ARCH.

CONSULTANT:

HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
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FOUNDATION AND CONCRETE SLAB PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

REGISTERED PROFESSIONAL ENGINEER LESLIE TSO S 3073 STRUCTURAL STATE OF CALIFORNIA

DATE SIGNED: 7/31/2024

SEALS:

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PROJECT STATUS: PI-Project Status
SHEET ISSUED: 07/19/22

DELTA	DATE:	DESCRIPTION:
2	08-02-2024	BID ADDENDUM

S200

PI-Building Name

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HOHBACH-LEWIN #17405

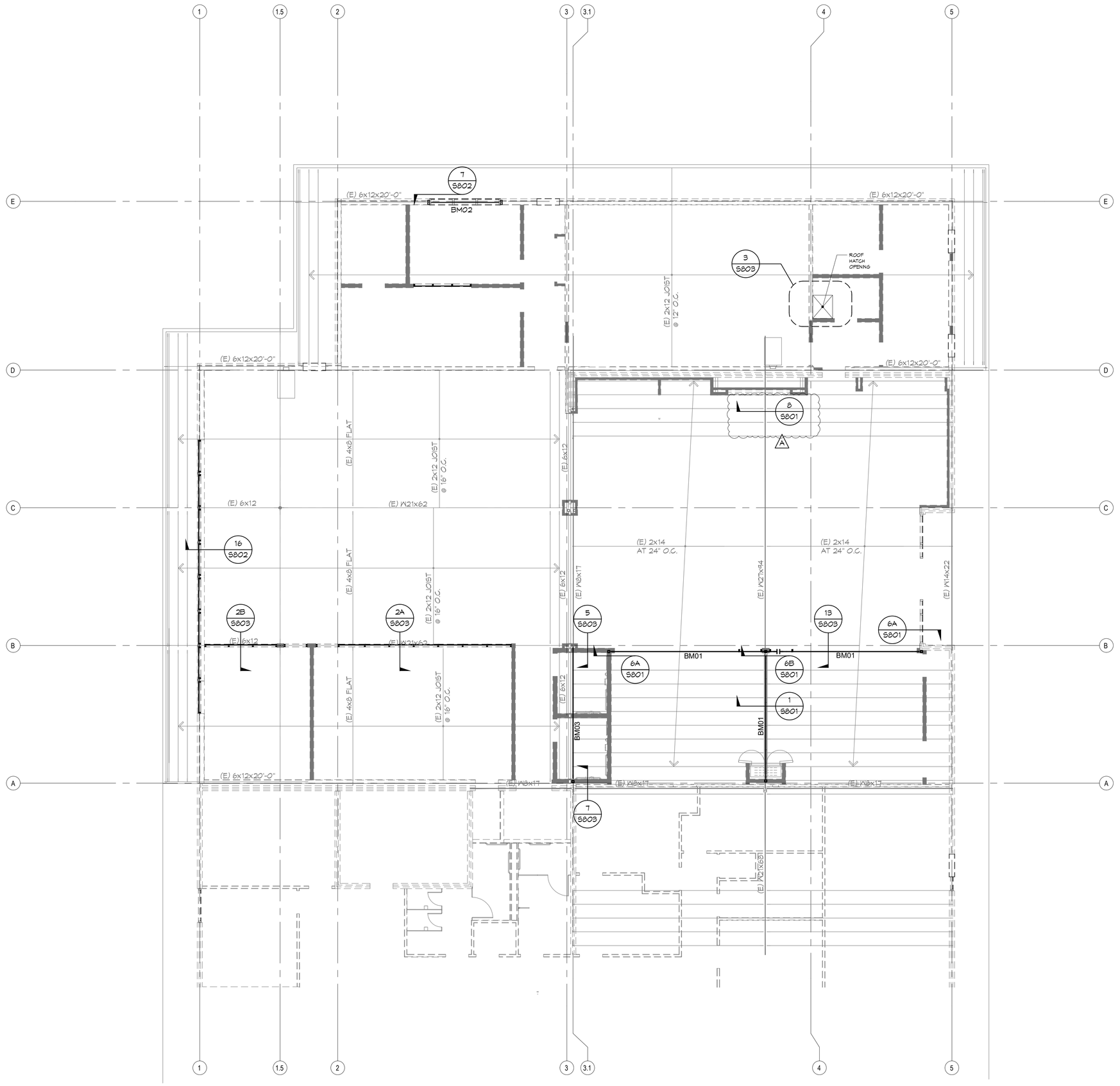
ROOF FRAMING PLAN NOTES:

1. SEE SHEETS S100 AND S101 STRUCTURAL GENERAL NOTES.
2. VERIFY ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
3. CONTRACTOR TO COORDINATE AND LOCATE ALL DUCTS, CHASES AND PIPES WITH MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
4. FOR INTERIOR NON-BEARING WALLS, NON-STRUCTURAL WALLS, SEE DETAILS 2/S801 & 4/S801.
5. FOR TYPICAL HEADER, SEE DETAIL 8/S801.
6. FOR TYPICAL TOP PLATE SPLICING, SEE DETAIL 9/S802.
7. FOR BORING AND NOTCHING OF STUDS, SEE DETAIL 4/S802.
9. FOR EQUIPMENT / ACCESSORY HANGER DETAIL, SEE DETAIL 2/S802.
9. FOR WALL MOUNTED TV's, SEE DETAIL 4/S803.
10. FOR SOFFIT DETAILS, SEE 14/S802.
11. FOR IN-FILL EXISTING OPENING, SEE DETAIL 12/S802 AND 12/S803.
12. FOR SMALL OPENING INTO EXISTING CMU WALLS SUCH AS FOR ELECTRICAL CONDUIT INSTALLATION, CONTRACTOR TO SCAN AREA BEFORE DRILLING TO AVOID DAMAGING WALL REINFORCEMENT.
13. FOR NAILER ATTACHMENT TO STEEL COLUMN, SEE DETAIL 13/S802.
14. FOR SMALL OPENING INTO EXISTING ROOF, SEE DETAIL 8/S803. (A)

LEGEND	
BM01	W10X30
BM02	6x12 DF #1
BM03	W8X24

INTERIOR NON-BEARING STUD WALL SCHEDULE

STUD SECTION	SPACING	HEIGHT LIMIT	REMARKS
2x4	16" O.C.	14'-0"	
2X6	16" O.C.	22'-0"	



ROOF FRAMING PLAN

1/8"=1'-0"

NORTH

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

ROOF FRAMING PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

LICENSED PROFESSIONAL ENGINEER
LESLIE TSO
S 3073
STRUCTURAL
STATE OF CALIFORNIA

DATE SIGNED: 7/31/2024

SEAL:

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S201

PI-Building Name

HOHBACH-LEWIN #17405

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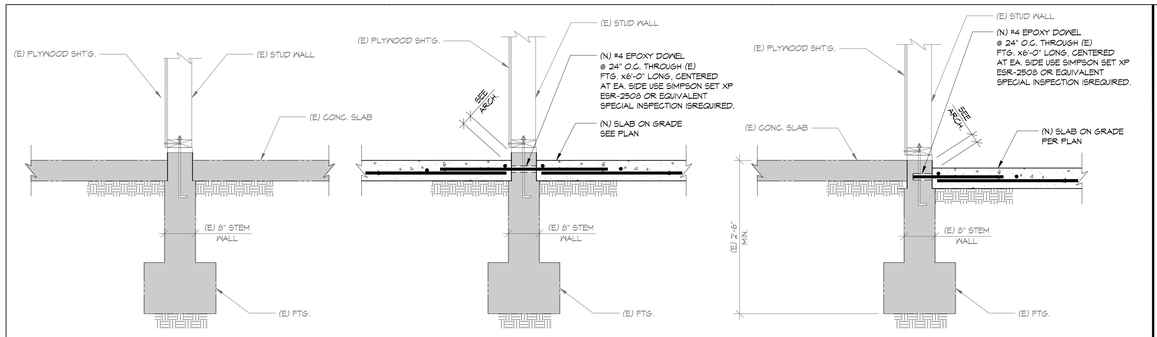
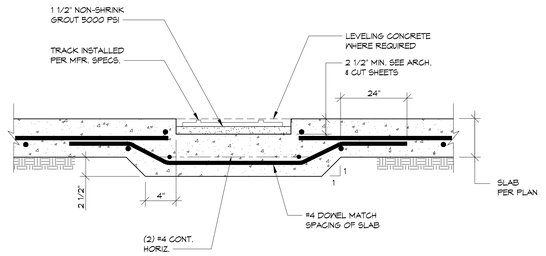


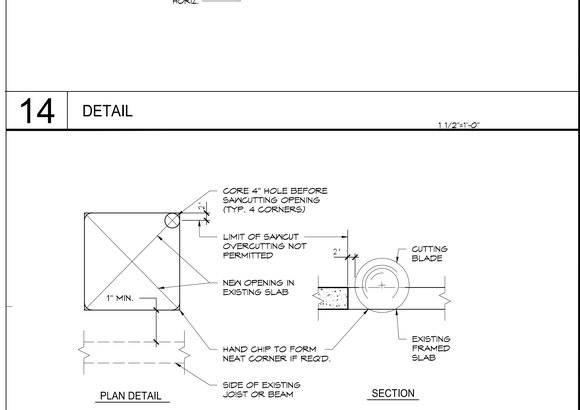
13 DETAILS

1"=1'-0"



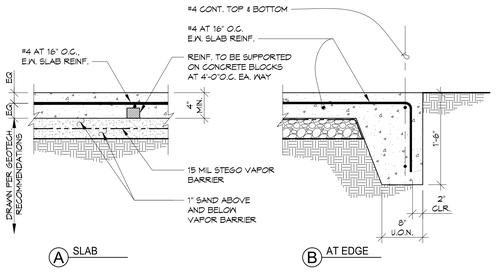
14 DETAIL

1 1/2"=1'-0"



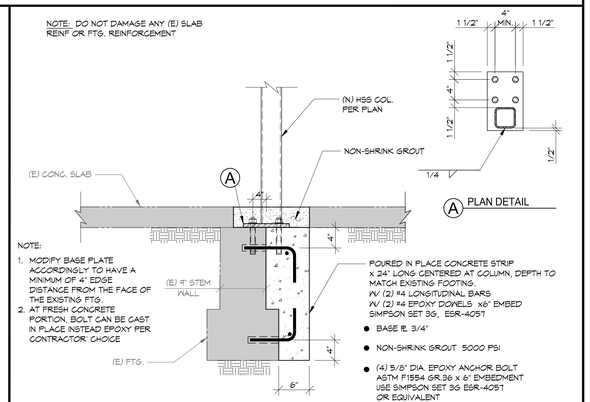
15 CONCRETE SLAB SAWCUT DETAIL

N.T.S.



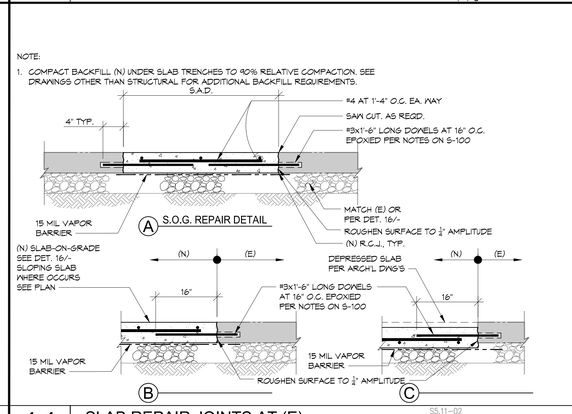
16 SLAB-ON-GRADE

1"=1'-0"



10 DETAIL

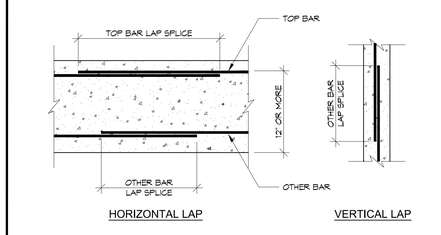
1"=1'-0"



11 SLAB REPAIR JOINTS AT (E) CONCRETE SLAB-ON-GRADE

S5.11–02

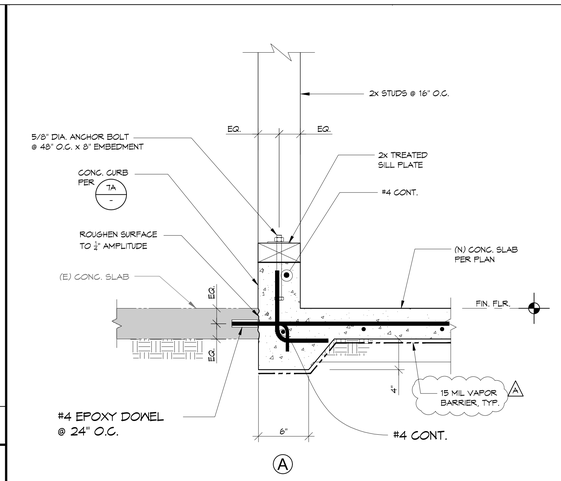
1"=1'-0"



12 TYPICAL REINFORCEMENT EMBED, LAP SPLICE AND OFFSET

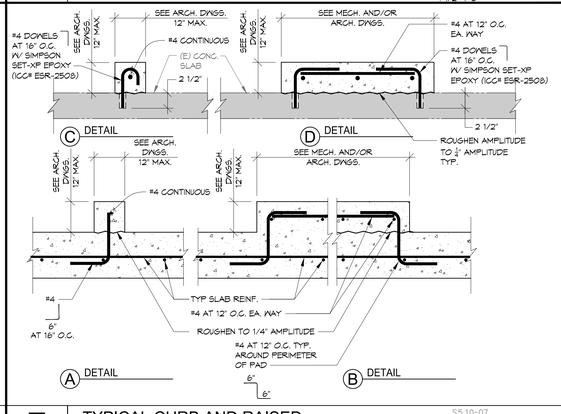
S501-03

1"=1'-0"



6 DETAILS

1 1/2"=1'-0"



7 TYPICAL CURB AND RAISED PAD DETAILS

S5.10-07

N.T.S.

CLASS B TENSION LAP SPLICE FOR GRADE 60 REINF. [4,5]

f'c	2,500		3,000		4,000		5,000	
BAR SIZE	TOP [1] (IN)	OTHER (IN)	TOP [1] (IN)	OTHER (IN)	TOP [1] (IN)	OTHER (IN)	TOP [1] (IN)	OTHER (IN)
#3	31	24	28	22	25	19	22	17
#4	41	32	38	29	33	25	29	23
#5	51	39	47	36	41	31	36	28
#6	61	47	56	43	49	37	44	34
#7	84	64	81	63	71	54	63	49
#8	102	78	93	72	81	62	72	56
#9	115	88	105	81	91	70	81	63
#10	127	98	116	90	101	78	90	69

STANDARD HOOK AND HEADED BAR EMBEDMENT GRADE 60 REINF.

f'c	2,500		3,000		4,000		5,000	
BAR SIZE	HOOKED[4] (IN)	HEADED[4, 5] (IN)	HOOKED[4] (IN)	HEADED[4, 5] (IN)	HOOKED[4] (IN)	HEADED[4, 5] (IN)	HOOKED[4] (IN)	HEADED[4, 5] (IN)
#3	6	6	6	6	6	6	6	6
#4	8	6	8	6	7	6	7	6
#5	11	8	10	8	10	7	9	7
#6	14	10	13	10	13	9	12	9
#7	18	13	17	12	16	12	15	11
#8	21	16	20	15	19	14	18	14
#9	25	19	24	18	23	17	22	16
#10	30	22	28	21	27	20	26	19

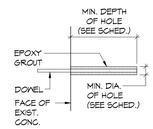
NOTES:
1. TOP BARS = HORIZONTAL BARS WITH 12" OR GREATER OF FRESH CONCRETE CAST BELOW THEM. SEE DET. 3/-.
2. LAP SPLICES ARE BASED UPON A MINIMUM CLEAR COVER GREATER THAN 1.0db AND A MINIMUM CLEAR SPACING GREATER THAN 2db. WHERE EITHER OF THESE REQUIREMENTS IS NOT MET, INCREASE THE LAP LENGTH BY 50%.
3. USE CLASS B TENSION LAP SPLICES FOR ALL BAR SPLICES U.O.N., TYP.
4. HOOKED AND HEADED BAR EMBEDMENTS ARE BASED UPON A MINIMUM CENTER-TO-CENTER SPACING OF 6db MIN. WHERE THIS REQUIREMENT IS NOT MET, INCREASE THE EMBEDMENT LENGTH BY 60%.
5. HEADED BAR SHALL HAVE A MINIMUM CLEAR COVER OF AT LEAST 2db AND NET HEAD BEARING AREA OF AT LEAST 4Ab WHERE Ab IS THE BAR AREA.
6. FOR ADDITIONAL INFORMATION, SEE DET. 3/-.

8 TYPICAL GRADE 60 REINFORCEMENT EMBED AND LAP SPLICE

S501-02A*

Pprocedure

1. DRILL HOLE OF PROPER DIAMETER AND DEPTH USING A CARBIDE TIPPED DRILL OR CORING BIT. AVOID CUTTING ANY EXISTING REINFORCING STEEL BY RELOCATING HOLE SLIGHTLY.
2. CLEAN THOROUGHLY BY VACUUM OR AIR PRESSURE.
3. MAKE SURE THAT HOLE IS DRY AND CLEAN BEFORE GROUTING.
4. PLACE EPOXY GROUT IN HOLE WITH CAULKING GUN OR SIMILAR EQUIPMENT. START AT BOTTOM, FILL HOLE APPROXIMATELY ⅓ FULL.
5. COAT DOWEL WITH SAME EPOXY AND INSERT INTO HOLE, FORCING MATERIAL AROUND THE SIDES OF THE BAR AND COMPLETELY FILLING ALL VOIDS.
6. PROVIDE SUPPORT FOR DOWEL BY TYING TO REBAR OR OTHER ELEMENT UNTIL GROUT HAS CURED.
7. EPOXY GROUT: SIMPSON SET-XP AS MANUFACTURED BY SIMPSON STRONG-TIE, INC. (ICC ESR-2508) INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

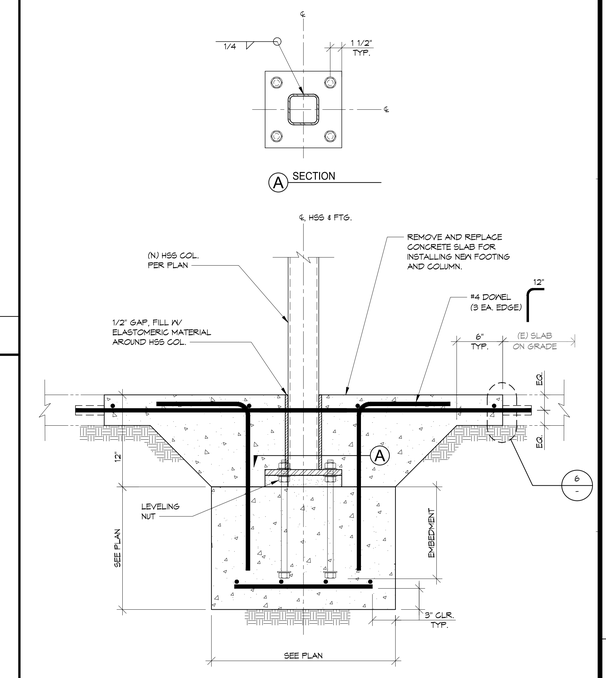


BAR SIZE	DRILL BIT DIAMETER	DRILL BIT DIAMETER	MINIMUM DEPTH
#3	5/8"	3/4"	3½"
#4	¾"	7/8"	4½"
#5	7/8"	1"	7½"
#6	1"	1¼"	10"
#7	1¼"	1"	12"
#8	1"	1½"	15"

1 EPOXY GROUT DETAIL

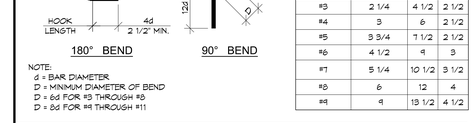
N.T.S.

- BASE PL 3/4"
- ANCHOR BOLTS: (4) 3/4"DIA x12" EMBEDMENT
- 1 1/2" NON-SHRINK GROUD 5000 PSI



3 DETAIL

1 1/2"=1'-0"

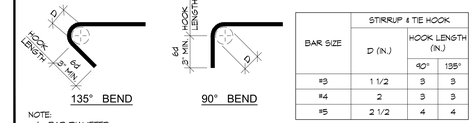


NOTE:
d = BAR DIAMETER
D = MINIMUM DIAMETER OF BEND
D = 6d FOR #3 THROUGH #8
D = 8d FOR #9 THROUGH #11

BAR SIZE	STANDARD HOOK		
	D (IN.)	HOOK LENGTH (IN.)	
		90°	180°
#3	2 1/4	4 1/2	2 1/2
#4	3	6	2 1/2
#5	3 3/4	7 1/2	2 1/2
#6	4 1/2	9	3
#7	5 1/4	10 1/2	3 1/2
#8	6	12	4
#9	9	13 1/2	4 1/2

1A STANDARD REINFORCING STEEL HOOKS

N.T.S.



NOTE:
d = BAR DIAMETER
D = MINIMUM DIAMETER OF BEND
D = 4d FOR #5 AND SMALLER

BAR SIZE	STIRRUP & TIE HOOK		
	D (IN.)	HOOK LENGTH (IN.)	
		90°	135°
#3	1 1/2	3	3
#4	2	3	3
#5	2 1/2	4	4

4 TYPICAL STIRRUP AND TIE HOOKS

S501-01

N.T.S.

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

TYPICAL DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

DATE SIGNED: 7/31/2024

SEALS

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PROJECT STATUS: PI-Project Status
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A	08-02-2024	BID ADDENDUM

S501

PI-Building Name

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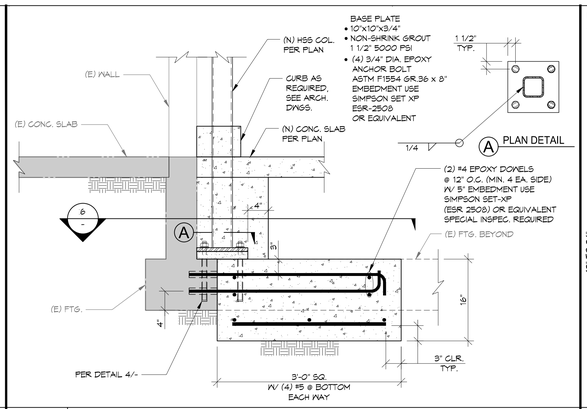
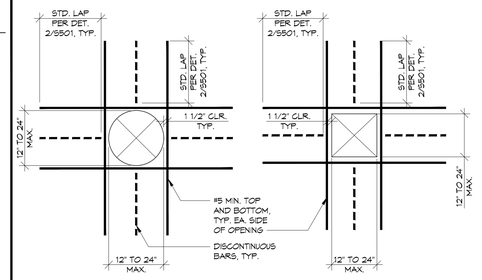
13

9



5 FOOTING EXTENSION DETAIL 1"=1'-0"

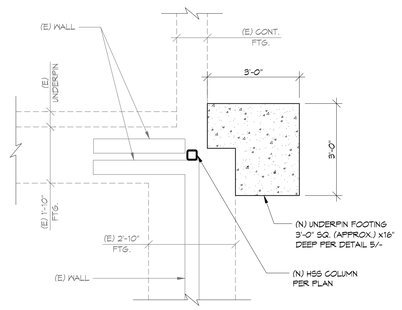
NOTE:
1. TRIM REINFORCEMENT AT THE EDGE OF THE OPENING SHALL BE LARGER OF THE AREA OF A #5 BAR OR THE EQUIVALENT OF 1/2 THE AREA OF THE DISCONTINUOUS BARS DUE TO THE OPENNG.



1 TRIM REINFORCE FOR 12" TO 24" OPENING IN SLAB S510-05A N.T.S.

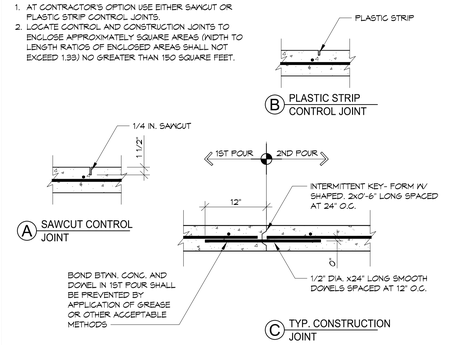
14

10



6 PARTIAL PLAN VIEW 1/2"=1'-0"

NOTE:
1. AT CONTRACTOR'S OPTION USE EITHER SAWCUT OR PLASTIC STRIP CONTROL JOINTS.
2. LOCATE CONTROL AND CONSTRUCTION JOINTS TO ENCLOSE APPROXIMATELY SQUARE AREAS (WIDTH TO LENGTH RATIOS OF ENCLOSED AREAS SHALL NOT EXCEED 1.33) NO GREATER THAN 150 SQUARE FEET.



2 TYPICAL CONSTRUCTION AND CONTROL JOINTS AT SLAB-ON-GRADE S501-05 1"=1'-0"

15

11

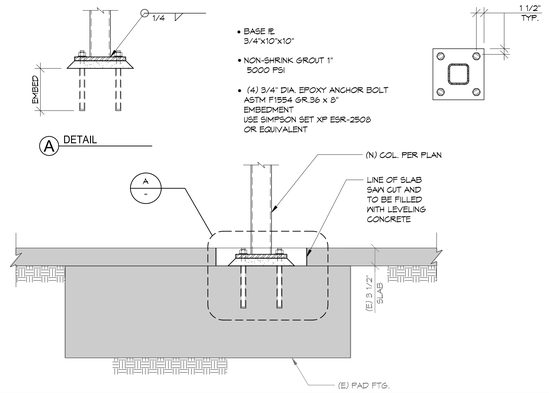
7

3

16

12

8



4 NEW COL. AT (E) PAD FOOTING 1"=1'-0"

HOHBACH-LEWIN #17405

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

TYPICAL DETAILS

DATE SIGNED: 7/31/2024
SEALS

sgh ARCHITECTS

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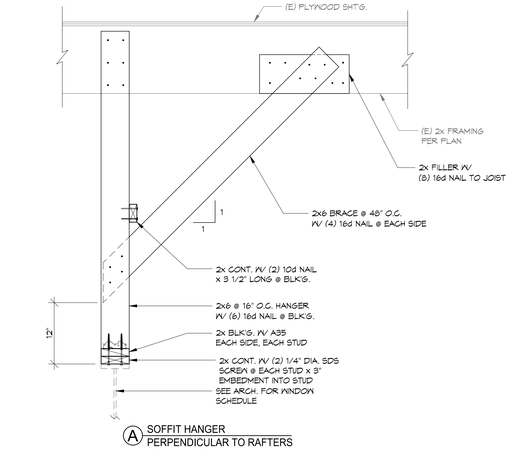
PROJECT NUMBER: 22-47104-00
PROJECT STATUS: Pi-Project Status
SHEET ISSUED: 07/16/22
DELTA: DATE: DESCRIPTION:
A 08-02-2024 BID ADDENDUM

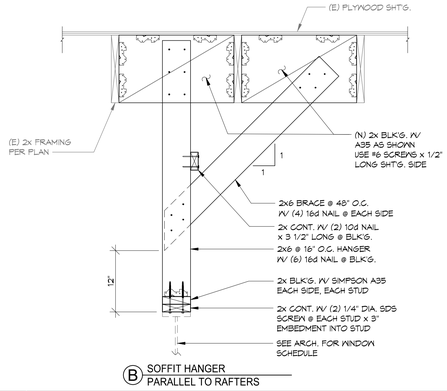
S502

Pi-Building Name

7/31/2024 1:39 PM J:\17000-17499\17405\STRUC\17405S502.DWG



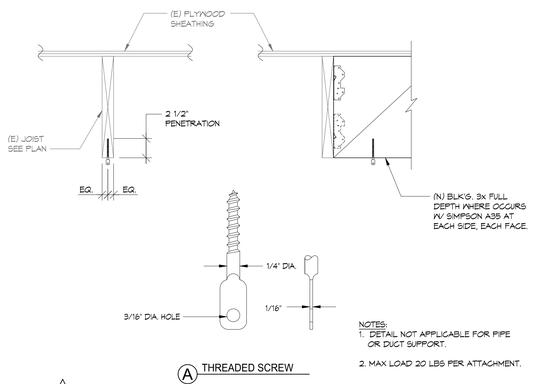
A SOFFIT HANGER PERPENDICULAR TO RAFTERS



B SOFFIT HANGER PARALLEL TO RAFTERS

14 SOFFIT DETAILS

1"=1'-0"

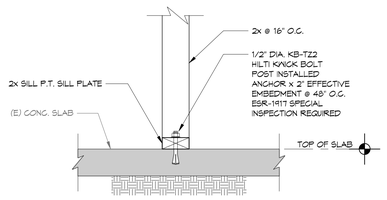


NOTES:
1. DETAIL NOT APPLICABLE FOR PIPE OR DUCT SUPPORT.
2. MAX LOAD 20 LBS PER ATTACHMENT.

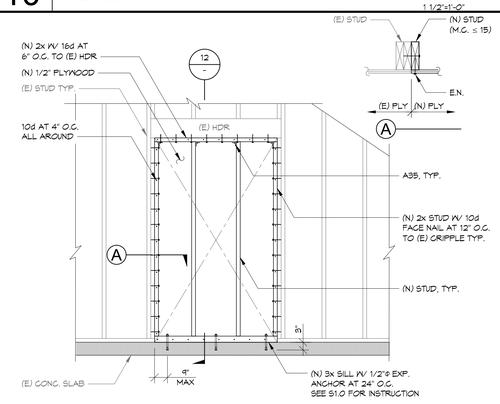
A THREADED SCREW

9 CEILING & LIGHT FIXTURE ATTACHEMENT DETAIL

N.T.S.



10 DETAIL

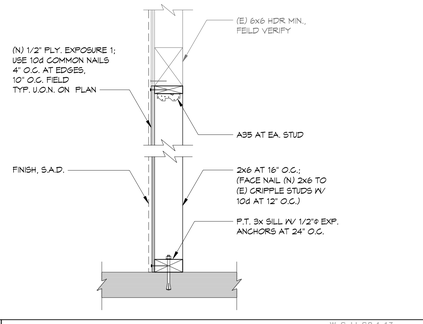


1 1/2"=1'-0"

11 INFILL AT (E) DOOR OPENING - ELEVATION

W-S-IJ-S8.4-09

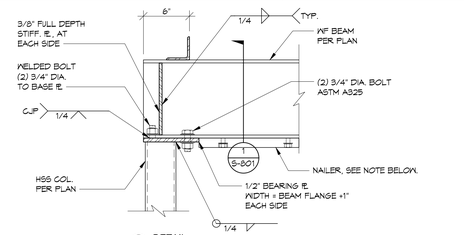
N.T.S.



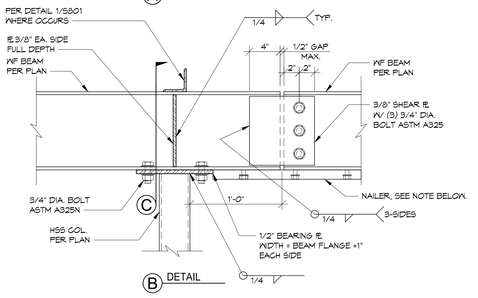
12 INFILL AT (E) DOOR OPENING

W-S-IJ-S8.4-13

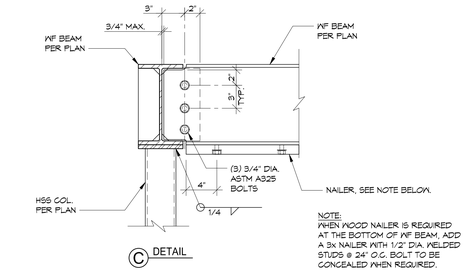
1"=1'-0"



A DETAIL



B DETAIL



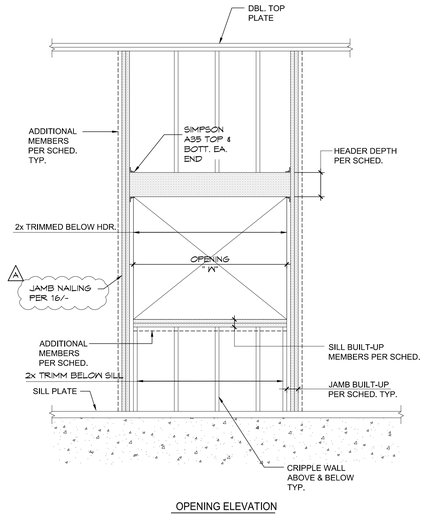
NOTE:
WHEN WOOD NAILER IS REQUIRED AT THE BOTTOM OF WF BEAM, ADD A 3x NAILER WITH 1/2" DIA. WELDED STUDS @ 24" O.C. BOLT TO BE CONCEALED WHEN REQUIRED.

C DETAIL

6 DETAILS

1"=1'-0"

OPENING FRAMING SCHEDULE						
OPENING WIDTH	PARTITION WALL			BEARING OR EXTERIOR WALL		
	HEADER DEPTH	SILL MEMBERS	JAMB MEMBERS	HEADER	SILL MEMBERS	JAMB MEMBERS
W ≤ 4'-0"	X4	(2) 2X	(2) 2X	4X6 FLAT	(2) 2X	(2) 2X6
4'-0" < W ≤ 6'-0"	X6	(2) 2X	(2) 2X	6X6	(2) 2X	(2) 2X6
6'-0" < W ≤ 8'-0"	X8	(2) 2X	(2) 2X	6X8	(2) 2X	(2) 2X6
8'-0" < W ≤ 10'-0"	X10	(3) 2X	(2) 2X	6X10	(2) 2X	(2) 2X6
10'-0" < W ≤ 12'-0"	X12	(3) 2X	(3) 2X	6X12	(3) 2X	(3) 2X6
12'-0" < W ≤ 14'-0"	X14	(3) 2X	(3) 2X	6X14	(3) 2X	(3) 2X6
14'-0" < W ≤ 20'-0"	-	-	-	5¼ x 19½ GLB	(3) 2X	(3) 2X6

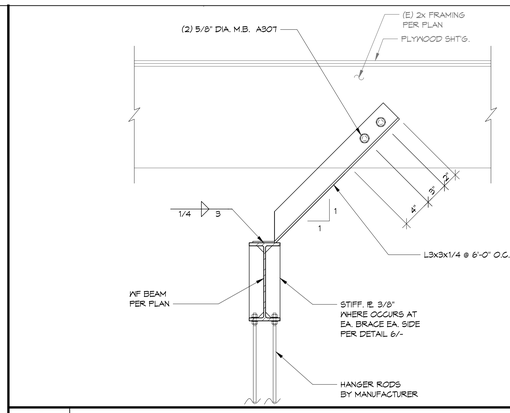


OPENING ELEVATION

NOTES:
1. HEADER, SILL, & JAMB WIDTH TO MATCH WALL WIDTH, TYP. U.N.O.
2. MULTIPLE MEMBERS MAY BE SUBSTITUTED WITH SINGLE MEMBER SO LONG AS MEMBER ACTUAL THICKNESS IS GREATER THAN OR EQUAL TO BUILT UP MEMBER THICKNESS.
3. HEADER MAY BE SUBSTITUTED WITH BUILT-UP MEMBER OF GREATER THAN OR EQUAL DEPTH, WIDTH TO MATCH WALL WIDTH.
4. FOR OPENING INTO SHEAR WALLS SEE DETAIL 15/S802.

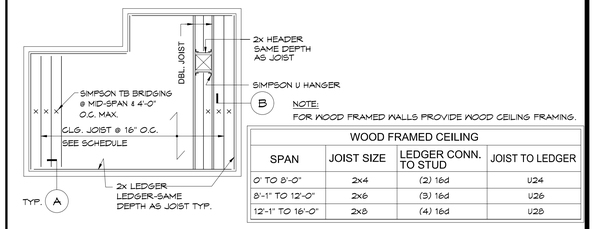
8 TYP. HEADER, SILL & JAMB SCHEDULE

N.T.S.

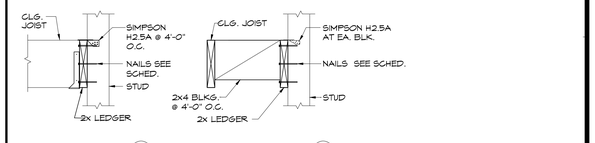


1 SECTION

1 1/2"=1'-0"

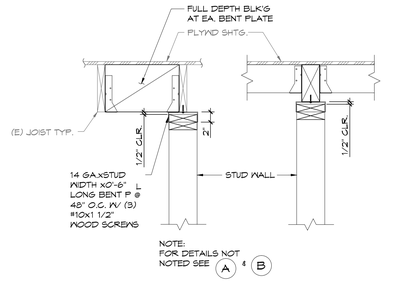


WOOD FRAMED CEILING			
SPAN	JOIST SIZE	LEDGER CONN. TO STUD	JOIST TO LEDGER
0' TO 8'-0"	2x4	(2) 16d	U24
8'-1" TO 12'-0"	2x6	(3) 16d	U26
12'-1" TO 16'-0"	2x8	(4) 16d	U28

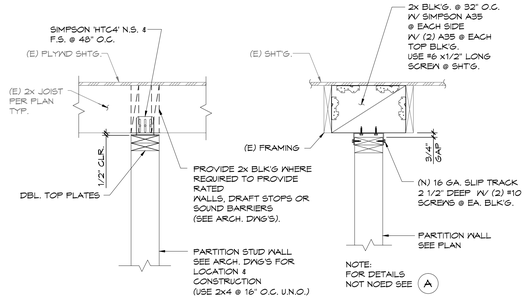


2 INTERIOR CEILING FRAMING PLAN AND SCHEDULE

N.T.S.

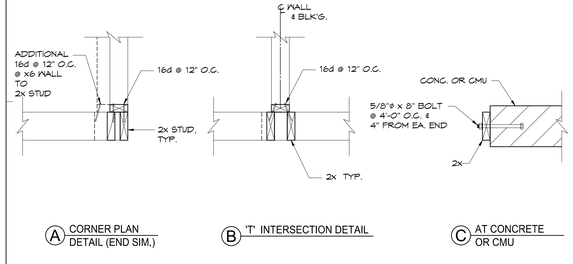


WALL AT JOIST C WALL AT BEAM D



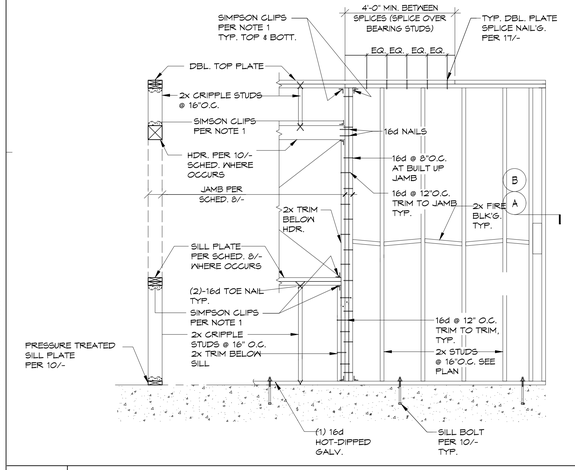
4 TYP. TOP OF PARTITION WALL BRACING

N.T.S.



A CORNER PLAN DETAIL (END SIM.) B 'T' INTERSECTION DETAIL C AT CONCRETE OR CMU

1"=1'-0"



16 TYP. STUD WALL CONSTRUCTION (NON-SHEAR WALL)

N.T.S.

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

TYPICAL DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

DATE SIGNED: 7/31/2024

SEALS

sgh ARCHITECTS

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PROJECT NUMBER: 22-4710-00
PROJECT STATUS: PI-Project Status
SHEET ISSUED: 07/19/22

DELTA	DATE:	DESCRIPTION:
A	08-02-2024	BID ADDENDUM

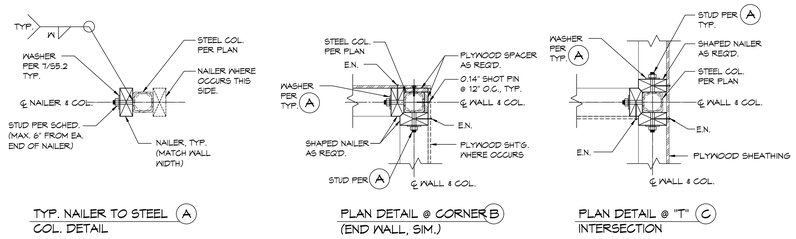
S801

PI-Building Name

HOHBACH-LEWIN #17405

7/31/2024 1:39 PM J:\17000-17499\17405\STRUCT\17405S801.DWG

NAILER SCHEDULE			
WALL TYPE	NAILER	STUD Ø & SPACING	STUD WELD "W"
SHEAR WALL	3x	3/4"Ø @ 32" O.C.	1/4" FILLET
ALL OTHERS	2x	1/2"Ø @ 48" O.C.	3/16" FILLET



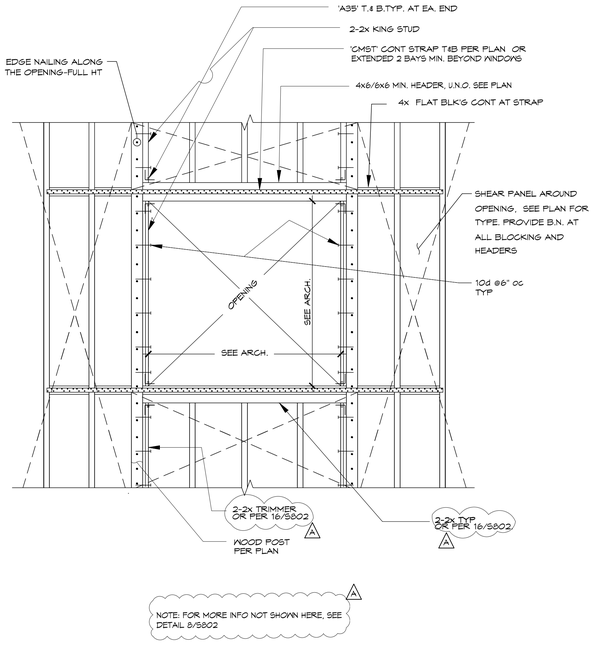
TYP. NAILER TO STEEL COL. DETAIL (A)

PLAN DETAIL @ CORNER (B) (END WALL, SIM.)

PLAN DETAIL @ "T" (C) INTERSECTION

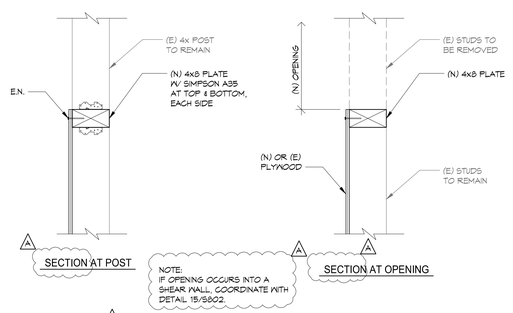
13 TYPICAL COLUMN AND NAILER PLAN DETAILS

N.T.S.



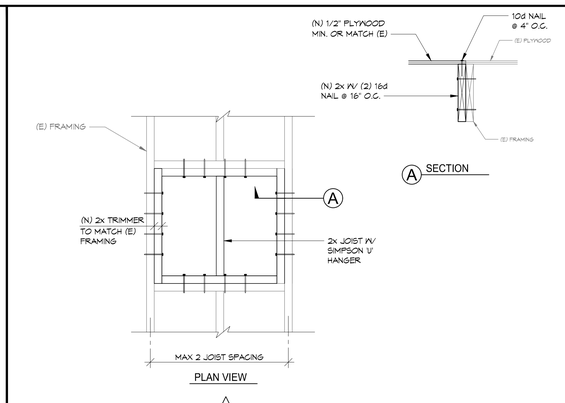
15 ELEVATION

N.T.S.



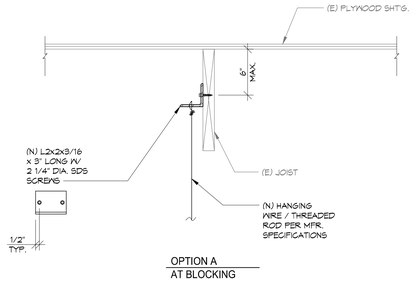
16 ENLARGED SECTION OPENING DETAIL

1"=1'-0"

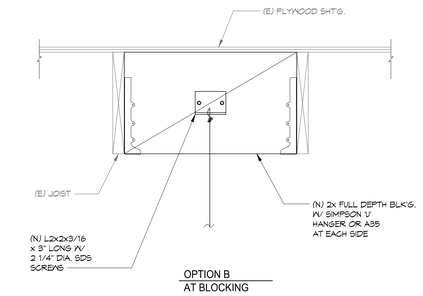


12 IN-FILL OF EXISTING LARGER OPENING

1"=1'-0"



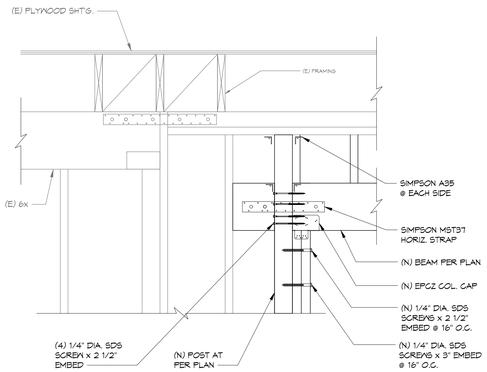
OPTION A AT BLOCKING



OPTION B AT BLOCKING

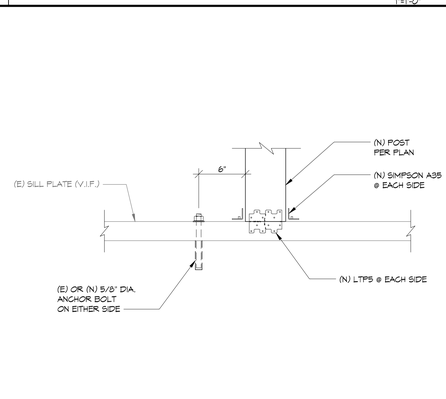
6 LIGHT FIXTURE HANGER DETAIL

1 1/2"=1'-0"



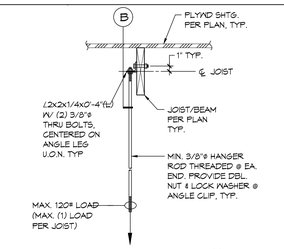
7 DETAIL

1"=1'-0"

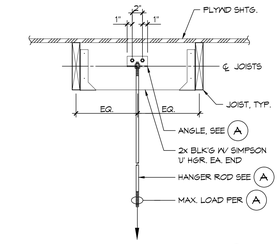


8 DETAIL

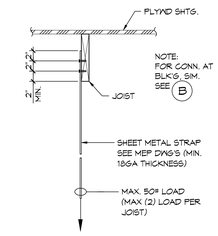
1 1/2"=1'-0"



HANGER AT JOIST (A)



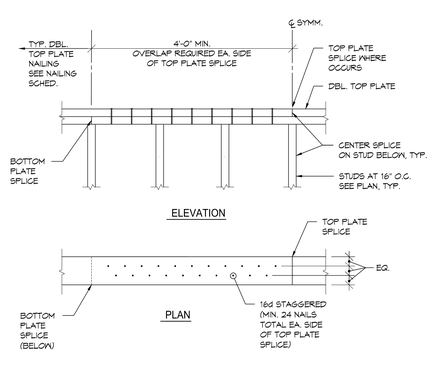
HANGER AT BLOCKING (B)



DUCT HANGER AT JOIST (C)

2 EQUIPMENT / ACCESSSORY HANGER DETAIL

N.T.S.

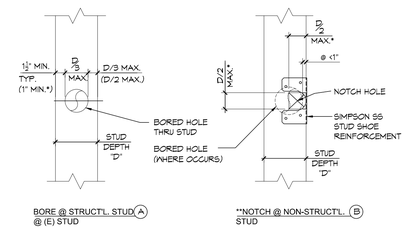


3 TYP. DBL. TOP PLATE SPLICE AT SHEAR WALL

N.S.T.

NOTES:
1. *INDICATES DIM. ALLOWED @ NON-STRUCTL. STUD ONLY.
2. BORES @ MIDDLE OF STUD SHALL BE PROVIDED USING A BORING BIT (NO SAW CUTTING EXCEPT @ NOTCH)
3. ** NO NOTCH @ ANY STRUCTL. EXTERIOR BEARING OR SHEAR WALLS.

NOTE: DO NOT NOTCH STUDS IN BEARING, SHEAR OR EXTERIOR WALLS.



BORE @ STRUCTL. STUD (A) @ (E) STUD

**NOTCH @ NON-STRUCTL. (B) STUD

4 STUD HOLE / NOTCH

N.T.S.

HOHBACH-LEWIN #17405

CONSULTANT:

HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
South Pasadena, CA 91030
(626) 441-1211

TYPICAL DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

SEALS

DATE SIGNED: 7/31/2024

sgh ARCHITECTS

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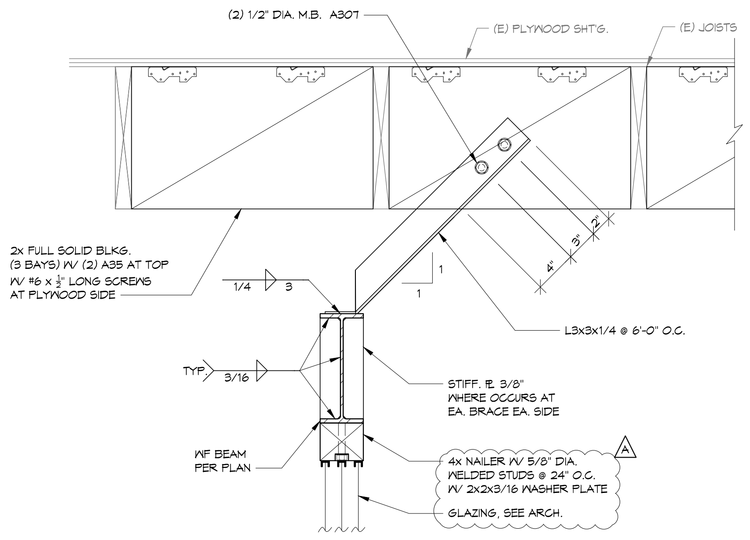
PROJECT NUMBER: 22-4704-00
PROJECT STATUS: Pi-Project Status
SHEET ISSUED: 07/16/22
DELTA: DATE: DESCRIPTION:
A 08-02-2024 BID ADDENDUM

S802

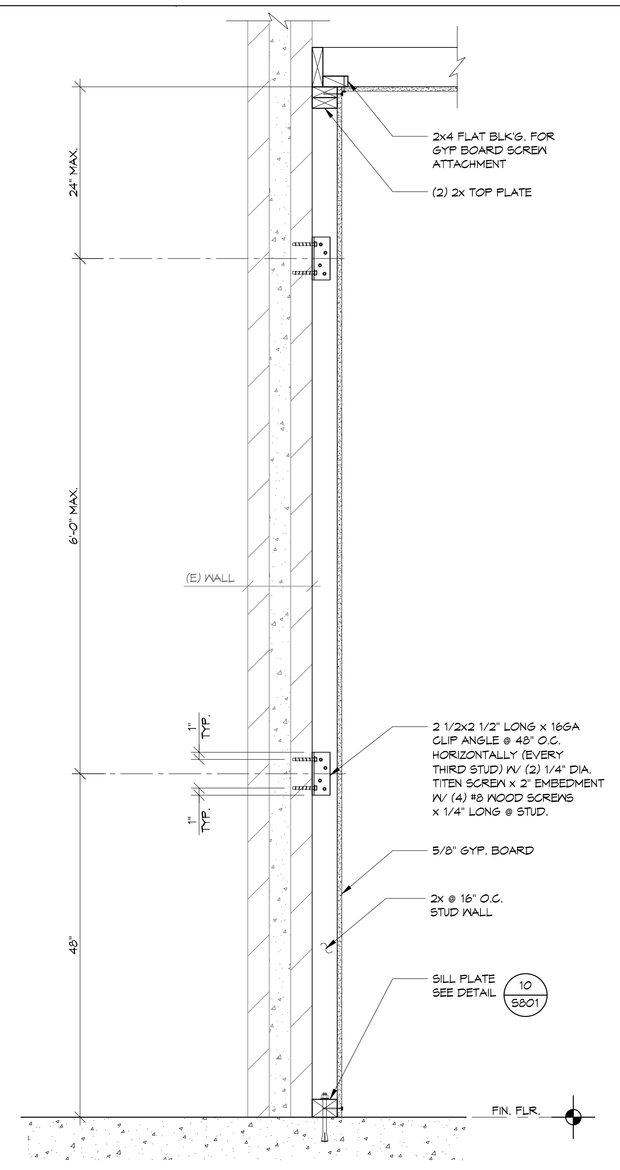
Pi-Building Name

7/31/2024 1:39 PM J:\17000-17499\17405\STRUC\17405S802.DWG



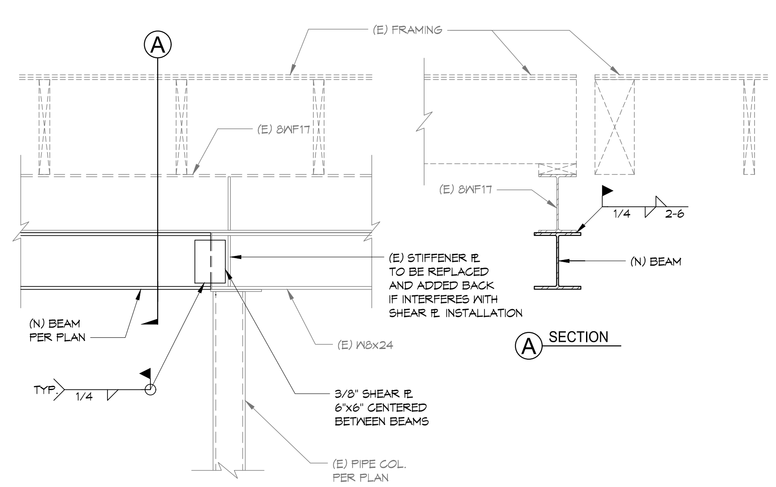
13 SECTION

1 1/2"=1'-0"



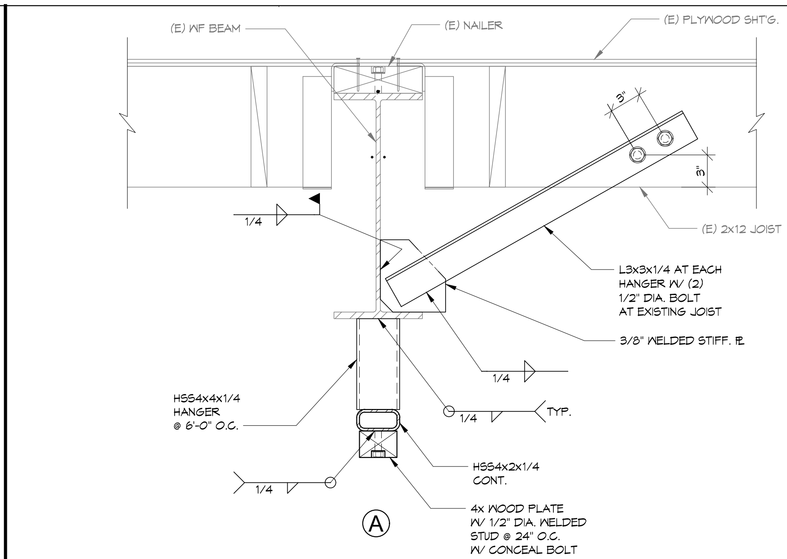
10 FURRED WALL TO EXISTING WALL

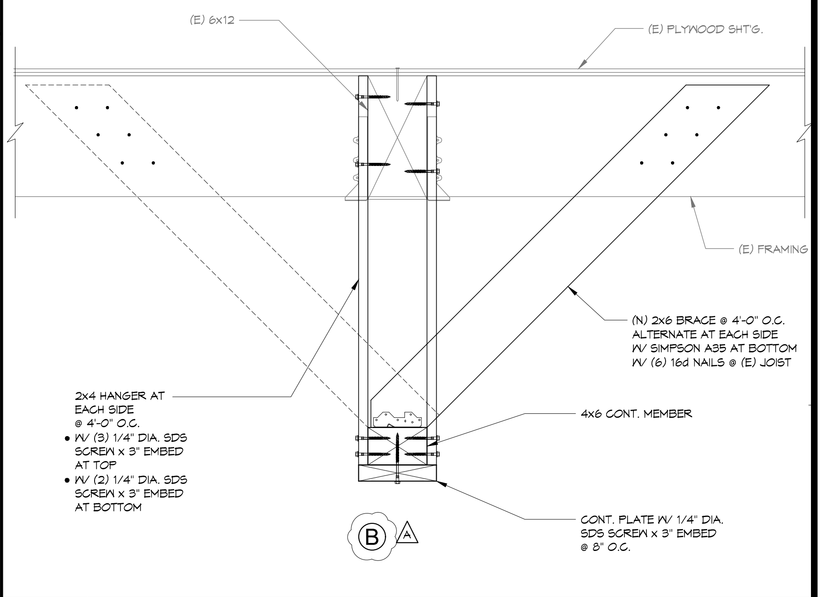
1"=1'-0"



5 STEEL BEAM TO BEAM CONNECTION

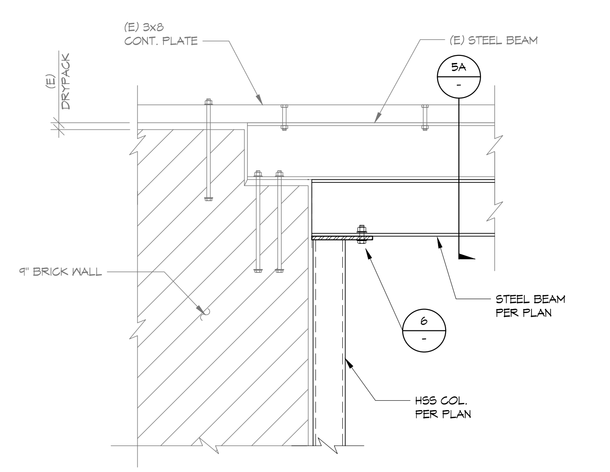
1"=1'-0"





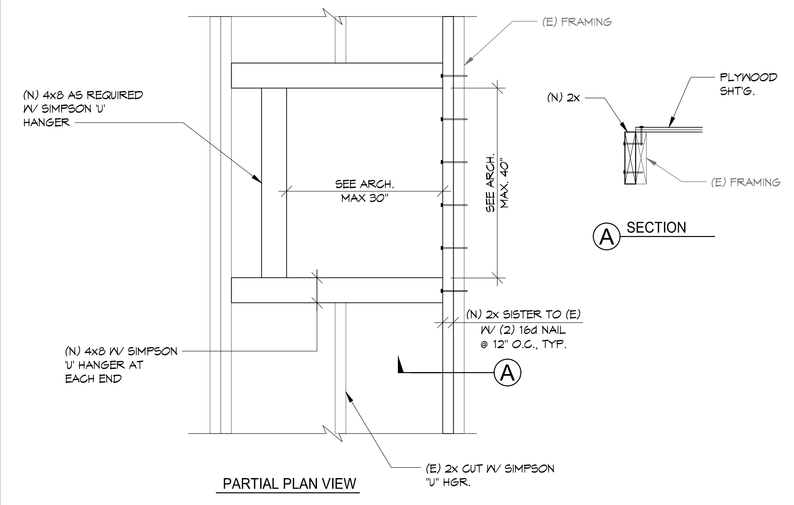
2 SOFFIT DETAIL

1 1/2"=1'-0"



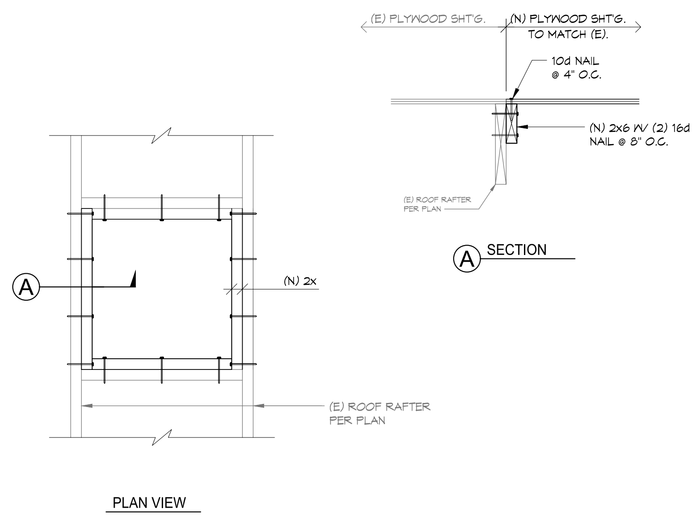
7 DETAIL

1"=1'-0"



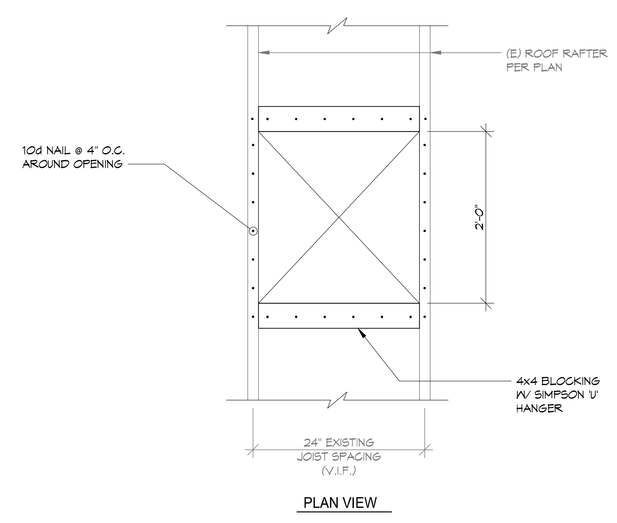
3 ROOF HATCH OPENING DETAIL

1"=1'-0"



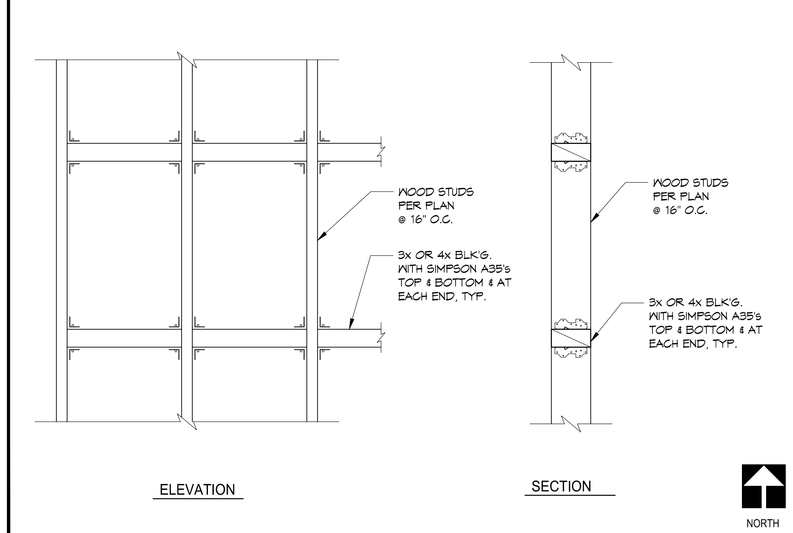
12 IN-FILL OF EXISTING SMALL OPENING

1"=1'-0"



8 NEW SMALL OPENING IN EXISTING ROOF

1"=1'-0"



4 TYPICAL WOOD BACKING DETAIL

1"=1'-0"

14 | 10 | 6 | 2

15 | 11 | 7 | 3

16 | 12 | 8 | 4

HOHBACH-LEWIN #17405

7/31/2024 1:40 PM J:\17000-17499\17405\STRUC\17405S803.DWG

CONSULTANT:
HOHBACH-LEWIN, INC.
STRUCTURAL & CIVIL ENGINEERS
517 Mission Street
San Francisco, CA 94105
(650) 441-1211

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL LIBRARY MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

TYPICAL DETAILS

REGISTERED PROFESSIONAL ENGINEER LESLIE TSO S 3073 STRUCTURAL STATE OF CALIFORNIA

DATE SIGNED: 7/31/2024

SEALS

sgh ARCHITECTS

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PROJECT NUMBER: 22-47104-00
PROJECT STATUS: Pi-Project Status
SHEET ISSUED: 07/16/22
DELTA: DATE: DESCRIPTION:
1 08-02-2024 BID ADDENDUM

S803

Pi-Building Name

MECHANICAL SYMBOLS:

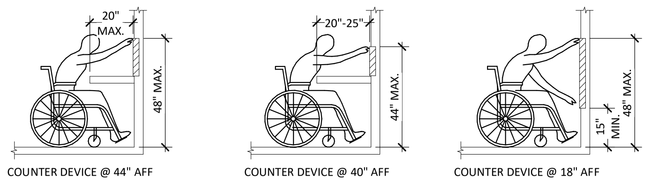
LINETYPE/SYMBOL	DESCRIPTION
	SUPPLY AIR OR OUTSIDE AIR DUCT
	RETURN AIR DUCT
	EXHAUST AIR OR RELIEF AIR DUCT
	DUCT UP
	DUCT DOWN
	DIRECTION OF AIRFLOW IN DUCT
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
DIFFUSER BLANKOFF	RECTANGULAR FOUR-WAY OUTLET, SUPPLY DIFFUSER
TAG NAME INLET (IN.)/CFM	DIFFUSER/GRILLE TAG
	DIRECTION OF AIRFLOW
T	THERMOSTAT
OS	OCCUPANCY SENSOR
CO2	CARBON DIOXIDE SENSOR
	ACCESS PANEL OR ROOF HATCH

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

MECHANICAL ABBREVIATIONS:

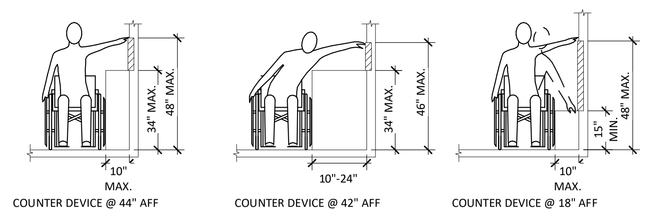
ABBREVIATION	DESCRIPTION
EA	EXHAUST AIR OR RELIEF AIR
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
TA	TRANSFER AIR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHU	AIR-HANDLING UNIT
AMB	AMBIENT TEMPERATURE
BD	BACKDRAFT DAMPER
DB	DRY-BULB TEMPERATURE
DCV	DEMAND CONTROL VENTILATION
DIA, Ø	DIAMETER
DN	DOWN
DPT	DEW-POINT TEMPERATURE
DTR	DOWN THRU ROOF
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRONICALLY COMMUTATED MOTOR
EGE	EXISTING EXHAUST AIR GRILLE
ESP	EXTERNAL STATIC PRESSURE
FD	FIRE DAMPER
FT, '	FOOT OR FEET
GA	GAGE OR GAUGE
GR	GRAINS
HD	HEAD (PRESSURE)
ID	DIAMETER, INSIDE
IN., "	INCH OR INCHES
LAT	LEAVING AIR TEMPERATURE
LF	LINEAR FOOT OR LINEAR FEET
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO., #	NUMBER
NTS	NOT TO SCALE
OD	DIAMETER, OUTSIDE
PD	PRESSURE DROP
PPM	PARTS PER MILLION
RGE	EXISTING RETURN AIR GRILLE
RH	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SDE	EXISTING SUPPLY AIR DIFFUSER
SP	STATIC PRESSURE
SPEC	SPECIFICATION
TAB	TESTING, ADJUSTING, AND BALANCING
TG	TRANSFER GRILLE
TGE	EXISTING TRANSFER GRILLE
TSP	TOTAL STATIC PRESSURE
TU	TERMINAL UNIT
TYP	TYPICAL
UTR	UP THRU ROOF
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WB	WET-BULB TEMPERATURE

NOTES:
1. NOT ALL ABBREVIATIONS MAY APPLY.
2. MECHANICAL SCHEDULES CONTAIN EQUIPMENT TAG ABBREVIATIONS THAT ARE HEREBY INCORPORATED INTO THE ABBREVIATION LIST.
3. SEE OTHER DISCIPLINE DRAWINGS WITHIN THE CONSTRUCTION DOCUMENTS FOR ABBREVIATIONS NOT DEFINED ABOVE OR IN MECHANICAL SCHEDULES.



COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 40" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - FRONT ACCESS



COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 42" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - SIDE ACCESS

DSA ANCHORAGE NOTES:

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 CHAPTER 13, 26 AND 30:
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

[ ]MP[X]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 (OSHPD) PRE-APPROVAL (OPM#) #OPM-####-##, AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

RENOVATION NOTES:

1. DEMOLITION WORK SHALL BE PERFORMED AS DESCRIBED WITHIN SPEC SECTION 23 0505 AND THE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMISSION TO VERIFY ALL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. LOCATIONS OF EXISTING MECHANICAL SYSTEMS.
   B. LOCATIONS OF ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, TECHNOLOGY, FIRE PROTECTION, AND FIRE ALARM SYSTEMS.
   C. EXISTING SURFACES WHICH REQUIRE ALTERING.
3. NOTIFY OWNER OF REQUIRED SYSTEM SHUTDOWNS AT LEAST TWO WEEKS PRIOR TO SHUTDOWN. EXACT SHUTDOWN TIME AND PROCEDURE SHALL BE COORDINATED WITH OWNER AT LEAST 96 HOURS PRIOR TO SHUTDOWN.
4. WHEN DUCTWORK, PIPING, CONTROLS, OR EQUIPMENT ARE NOTATED TO BE PERMANENTLY REMOVED THEIR ASSOCIATED COMPONENTS SHALL ALSO BE REMOVED INCLUDING HANGERS, SUPPORTS, AND ACCESSORIES.
5. COORDINATE THE DISCONNECTION AND REMOVAL OF POWERED SYSTEMS WITH THE E.C. WHEN REMOVING POWERED MECHANICAL EQUIPMENT.
6. REPAIR EXISTING FLOORS, WALLS, AND CEILINGS IN ALTERED AREAS TO MATCH EXISTING.
7. THE CONTRACTOR SHALL NEATLY SAW CUT SECTIONS OF THE CONCRETE TO ACCESS THE WORK BELOW GRADE. REMOVE PORTIONS OF DEMOLISHED CONCRETE FROM THE SITE. REPAIR THE EXISTING SLAB PER MECHANICAL/STRUCTURAL DETAILS WITHIN THE DRAWING SET.
8. PRIOR TO THE START OF DEMOLITION TAB CONTRACTOR SHALL MEASURE AND RECORD (E) MECHANICAL EQUIPMENT AND ASSOCIATED SYSTEM PERFORMANCE, INCLUDING ALL AIR INLETS AND OUTLETS, TO VERIFY OPERATION OF SYSTEMS IMPACTED BY THIS PROJECT. NO ADJUSTMENTS SHALL BE MADE AT THIS TIME. SUBMIT REPORT TO A/E FOR REVIEW. SEE SPEC SECTION 23 0593 FOR ADDITIONAL INFORMATION.
9. CONNECT TO (E)SYSTEMS/COMPONENTS FOR A COMPLETE INSTALLATION.
10. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

FIRE-RATED ASSEMBLY LEGEND:

LINETYPE/SYMBOL	DESCRIPTION
	ONE HOUR FIRE PARTITION

GENERAL NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. REVIEW ALL PROJECT DOCUMENTS INCLUDING SPECS AND DRAWINGS PERTAINING TO ALL DISCIPLINES PRIOR TO SUBMITTING A BID. SUBMIT PRE-BID REQUEST FOR INFORMATION FOR ITEMS IN QUESTION AND/OR CONFLICTS FOUND.
3. DRAWINGS SHOW THE DESIGN INTENT DIAGRAMMATICALLY. THEY DO NOT SHOW THE EXACT UTILITY ROUTING NOR EVERY ELBOW, OFFSET, ETC. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THEIR SYSTEMS TO AVOID CONFLICT WITH THE STRUCTURE AND OTHER DISCIPLINES. THE COST FOR SUCH ADJUSTMENTS SHALL BE INCLUDED IN THE BID.
4. OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR WORK PERFORMED.
5. OBTAIN UTILITY PURVEYOR REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT OR PERFORMING WORK.
6. THE G.C. TEAM SHALL LEAD THE SUBCONTRACTORS IN PROVIDING A COORDINATED SET OF SHOP DRAWINGS. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
7. PROVIDE FIRESTOPPING FOR ALL UTILITY PENETRATIONS THRU FIRE-RATED ASSEMBLIES.
8. COORDINATE FRAMING REQUIREMENTS FOR ACCESS PANELS AND EQUIPMENT/PANEL SUPPORTS WITH G.C. PRIOR TO SUBMITTING BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECTION OF CONSTRUCTION DEFICIENCIES LISTED ON THE JOB SITE OBSERVATION REPORT. RETURN THE JOB SITE OBSERVATION REPORT TO A/E WITH DEFICIENCIES SIGNED OFF. PROVIDE PHOTOGRAPHIC AND/OR VIDEO EVIDENCE OF CORRECTED DEFICIENCIES IF REQUESTED BY THE ENGINEER.
10. PROVIDE CLOSEOUT DOCUMENTATION UPON COMPLETION OF PROJECT. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
11. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH CODE. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.

MECHANICAL NOTES:

1. MECHANICAL WORK SHALL BE CONSTRUCTED IN A PROFESSIONAL MANNER. COMPONENTS SHALL BE CLEANED PRIOR TO OWNER TURNOVER.
2. THE SCHEDULED EQUIPMENT SHALL BE USED AS THE BASIS OF DESIGN. MODEL NUMBERS ARE PROVIDED FOR REFERENCE ONLY. EQUIPMENT SHALL MEET SPECIFIED PERFORMANCE. THE CONTRACTOR SHALL IDENTIFY ALL SELECTED OPTIONS IN THE SUBMITTAL.
3. IF A CONTRACTOR PROVIDES EQUIPMENT OTHER THAN THE BASIS OF DESIGN, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT. THAT INCLUDES, BUT IS NOT LIMITED TO, AGENCY FEES FOR REVIEW OF CHANGES, STRUCTURAL MODIFICATIONS FOR INCREASED WEIGHT, AND ELECTRICAL EQUIPMENT, WIRING, CONDUIT, AND BREAKER CHANGES FOR DIFFERENT ELECTRICAL REQUIREMENTS.
4. COORDINATE POWER REQUIREMENTS WITH THE E.C. PRIOR TO PROVIDING SUBMITTALS TO THE ENGINEER.
5. SEE SPEC SECTIONS 23 3100 FOR DUCT SYSTEM INSTALLATION, TESTING, AND CLEANING REQUIREMENTS.
6. INSULATION SHALL BE PROVIDED CONTINUOUS THROUGHOUT THE DUCTWORK SYSTEM INCLUDING AT HANGERS/SUPPORTS, FITTINGS, AND ACCESSORIES. OPENINGS SHALL BE PROVIDED TO ALLOW FOR DAMPER HANDLE OPERATION AND ACCESS. INSULATION THICKNESS SHALL MEET THE LISTED ENERGY CODE MINIMUM REQUIREMENTS. SEE SPEC SECTIONS 23 0713 FOR SYSTEMS REQUIRING INSULATION AND ADDITIONAL INSTALLATION REQUIREMENTS.
7. DAMPERS SHALL BE ACCESSIBLE. PROVIDE KEYED ACCESS PANELS WHERE DAMPERS HAVE BEEN LOCATED IN CONCEALED AREAS. ACCESS PANEL SIZE SHALL BE LARGE ENOUGH TO ACCESS EACH DAMPER AND FOR FULL OPERATION.
8. PROVIDE MANUAL VOLUME DAMPERS ON DUCT BRANCH TAKEOFFS TO FINAL DIFFUSER, GRILLE, OR REGISTER CONNECTION. DAMPER SHALL BE LOCATED AS CLOSE TO TAKEOFF AS POSSIBLE TO MINIMIZE NOISE.
9. PROVIDE DCV FOR HIGH-DENSITY SPACES AS REQUIRED BY ENERGY CODE.
10. TAB CONTRACTOR SHALL BALANCE MECHANICAL SYSTEMS TO VALUES SHOWN ON DRAWINGS. SUBMIT TAB REPORT TO A/E FOR REVIEW. SEE SPEC SECTION 23 0593 FOR ADDITIONAL INFORMATION.

CONTRACTOR ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.A.C.	FIRE ALARM CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROL CONTRACTOR

MECHANICAL SHEET INDEX:

Sheet Number	Sheet Name
M0.01	MECHANICAL COVER SHEET
M0.02	MECHANICAL SCHEDULES
M1.01	MECHANICAL - SITE PLAN
M2.00	MECHANICAL - FLOOR PLAN - OVERALL
M2.01	MECHANICAL - FLOOR PLAN - DEMOLITION
M2.21	MECHANICAL - FLOOR PLAN - REMODEL
M3.01	MECHANICAL - ROOF PLAN - DEMOLITION
M3.21	MECHANICAL - ROOF PLAN - REMODEL
M4.01	MECHANICAL - DETAILS
M5.01	T24 DOCUMENTATION

CODES AND STANDARDS:

EDITION	REFERENCE CODE/STANDARD
2022	CALIFORNIA ADMINISTRATIVE CODE, (CCR, TITLE 24, PART 1)
2022	CALIFORNIA BUILDING CODE, (CCR, TITLE 24, PART 2)
2022	CALIFORNIA ELECTRICAL CODE, (CCR, TITLE 24, PART 3)
2022	CALIFORNIA MECHANICAL CODE, (CCR, TITLE 24, PART 4)
2022	CALIFORNIA PLUMBING CODE, (CCR, TITLE 24, PART 5)
2022	CALIFORNIA ENERGY CODE, (CCR, TITLE 24, PART 6)
2022	CALIFORNIA HISTORICAL BUILDING CODE, (CCR, TITLE 24, PART 8)
2022	CALIFORNIA FIRE CODE, (CCR, TITLE 24, PART 9)
2022	CALIFORNIA EXISTING BUILDING CODE, (CCR, TITLE 24, PART 10)
2022	CALIFORNIA GREEN BUILDING STANDARDS, (CCR, TITLE 24, PART 11)
2022	CALIFORNIA REFERENCED STANDARDS CODE, (CCR, TITLE 24, PART 12)
2022	STANDARD FOR INSTALLATION OF FIRE SPRINKLER SYSTEMS OF CALIFORNIA, (ADOPTS NFPA 13, 2022. WITH AMENDMENTS)
2018	NFPA 54-NATIONAL FUEL GAS CODE
2022	NFPA 72-NATIONAL FIRE ALARM AND SIGNALING CODE

CCR-CALIFORNIA CODE OF REGULATIONS
NFPA-NATIONAL FIRE PROTECTION AGENCY

GENERAL LEGEND:

SYMBOL	DESCRIPTION
## / ####	DETAIL CALL-OUT SYMBOL
###-#	EQUIPMENT TAG
#	KEYNOTE SYMBOL
	POINT OF CONNECTION OR DISCONNECTION
## / ####	SECTION CUT CALL-OUT SYMBOL
## / ####	ENLARGED PLAN CALL-OUT SYMBOL

LINETYPE	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW CONSTRUCTION
	NO WORK - NOT IN SCOPE
(E)	EXISTING TO REMAIN
(X)	EXISTING TO BE REMOVED

CONSULTANT:

ASTRAL ENGINEERS, PC
PO BOX 190
RANCHO CUCAMONGA, CA 91729
909.476.3555
www.astraleng.com
PROJECT #:230337.00

MECHANICAL COVER SHEET

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
ERIC M. DeSPLINTER
38688
Exp. 12-30-25
MECHANICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-471(04.00)
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:
1 08/02/2024 ADDENDUM A

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EXISTING GAS-FIRED RTU SCHEDULE

NOTES:
1. CONTRACTOR SHALL BALANCE OUTSIDE AIR TO SCHEDULED VALUES.
2. AUTOMATIC SHUTOFF ACHIEVED VIA DUCT SMOKE DETECTORS.

TAG NAME	AREA SERVED	SUPPLY AIR (CFM)	MIN DESIGN OA (CFM)	ESP (IN. W.C.)	COOLING	HEATING		ELECTRICAL				UNIT AUTO SHUTDOWN	MANUFACTURER	MODEL	WEIGHT (LBS)	NOTES
					TOTAL CAPACITY (MBH)	INPUT CAPACITY (MBH)	TOTAL CAPACITY (MBH)	VOLTAGE	PHASES	MCA	MOCP					
(E)AC-1	110-LIBRARY/STUDY	3,500	960	1.0	118	180.0	142.2	480	3	23.9	30	YES	BRYANT	580DEV120180	1,022	1, 2
(E)AC-2	101-OFFICE 1	1,750	360	0.8	59.5	74.0	59.5	208	3	29.4	35	NO	BRYANT	580DPV060074	638	1
(E)MZAC	109-LIBRARY/RECEPTION	5,900	1,390	-	-	150.0	-	480	3	55.8	75	YES	OCTAGON	0AS-018T-0BC-0150G-MZ	-	1, 2

EXHAUST FAN SCHEDULE

NOTES:
1. SEE SPEC SECTION 23 3423 FOR ADDITIONAL INFORMATION.
2. PROVIDE WITH PLASTIC GRILLE.
3. PROVIDE WITH COOK RJ200 ROOF JACK. SEE DETAIL 10/A10.91 FOR INSTALLATION REQUIREMENTS.

TAG NAME	AREA SERVED	CFM	ESP (IN. W.C.)	DRIVE TYPE	ELECTRICAL					MAX WEIGHT (LBS)	MANUFACTURER	MODEL	ANCHORAGE DETAIL	WIRING DIAGRAM DETAIL	NOTES
					VOLTAGE	PHASE	POWER (WATTS)	DISCONNECT TYPE (NOTE B)	CONTROLLER/STARTER TYPE (NOTE C)						
EF-1	114-UNISEX RESTROOM	85	0.25	DIRECT	120	1	21	NF	FV	20	COOK	GC-222	1/M4.01	8/M4.01	1, 2, 3
EF-2	115-UNISEX RESTROOM	85	0.25	DIRECT	120	1	21	NF	FV	20	COOK	GC-222	1/M4.01	8/M4.01	1, 2, 3

LINEAR DIFFUSER SCHEDULE

NOTES:
1. SEE SPEC SECTION 23 3700 FOR ADDITIONAL INFORMATION.
2. PROVIDE INSULATED PLENUM BOX.
3. PROVIDE INTEGRAL DAMPER ADJUSTABLE THROUGH FACE OF DIFFUSER.

TAG NAME	TYPE	BAR ANGLE	NO. OF SLOTS	SLOT WIDTH (IN.)	DIMENSIONS (IN.)		PLENUM	MATERIAL	FINISH	MANUFACTURER	MODEL	NOTES
					LENGTH	WIDTH						
SD-4	LINEAR DIFFUSER	ADJUSTABLE BLADES	2	1	60	5-3/16	YES	ALUMINUM	WHITE	TITUS	FL-10	1, 2, 3

GRILLE-REGISTER-DIFFUSER SCHEDULE

NOTES:
1. SEE SPEC 23 3700 FOR ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL SELECT PROPER MOUNTING BASED ON INSTALLATION SURFACE TYPE.
3. SEE FLOOR PLANS FOR NECK SIZE.
4. PROVIDE INTEGRAL DAMPER ADJUSTABLE THROUGH FACE OF DIFFUSER/GRILLE.
5. PROVIDE ROUND TO SQUARE NECK TRANSITION.

TAG NAME	TYPE	FACE SIZE (IN.)	MATERIAL	FINISH	MANUFACTURER	MODEL	NOTES
RG-1	PERFORATED RETURN	24x24	STEEL	WHITE	TITUS	PAR	1, 2, 3
RG-2	45 DEGREE DEFLECTION	NECK + 2"	STEEL	WHITE	TITUS	350RS	1, 2, 3, 4
RG-3	PERFORATED RETURN	24x24	STEEL	WHITE	TITUS	PAR	1, 2, 3, 4
SD-1	MODULAR CORE	24x24	STEEL	WHITE	TITUS	PMC	1, 2, 3, 5
SD-2	35 DEGREE DEFLECTION	NECK + 2"	STEEL	WHITE	TITUS	301RS	1, 2, 3, 4
SD-3	MODULAR CORE	24x24	STEEL	WHITE	TITUS	PMC	1, 2, 3, 4, 5

DUCTWORK INSULATION SCHEDULE

NOTES:
1. SEE SPEC SECTION 23 0713 FOR ADDITIONAL INFORMATION ABOUT INSULATION TYPES.
2. NO INSULATION IS REQUIRED ON DUCTS LOCATED DIRECTLY IN AN OCCUPIED SPACE THAT IT SERVES UNLESS OTHERWISE NOTED ON THE FLOOR PLANS.

DUCT APPLICATION	INSULATION TYPE (NOTE 1)		INSTALLED MIN R-VALUE			NOTES
	GLASS FIBER FLEXIBLE WRAP	NONE	0	4.2	8	
INTERIOR						
SUPPLY AIR	X			X		2
RETURN AIR		X	X			
GENERAL EXHAUST AIR		X	X			

SCHEDULE GENERAL NOTES

	ABBREVIATION	DESCRIPTION
NOTE A	PROVIDED BY	
	E.C.	ELECTRICAL CONTRACTOR
	M.C.	MECHANICAL CONTRACTOR
	MFR	MANUFACTURER
NOTE B	DISCONNECT TYPE	
	F	FUSED
	NF	NON-FUSED
NOTE C	STARTER TYPE	
	ECM	ELECTRONICALLY COMMUTATED MOTOR
	FV	FULL VOLTAGE
	MS	MANUAL STARTER
	SS	SOFT STARTER
	VFD	VARIABLE FREQUENCY DRIVE
	VFD/B	VARIABLE FREQUENCY DRIVE WITH BYPASS

CONSULTANT:

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MECHANICAL SCHEDULES

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
ERIC M. DeSPLINTER
38688
Exp. 12-30-25
MECHANICAL
STATE OF CALIFORNIA

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M0.02

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N

1 MECHANICAL - SITE PLAN
1" = 60'-0"

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MECHANICAL - SITE PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
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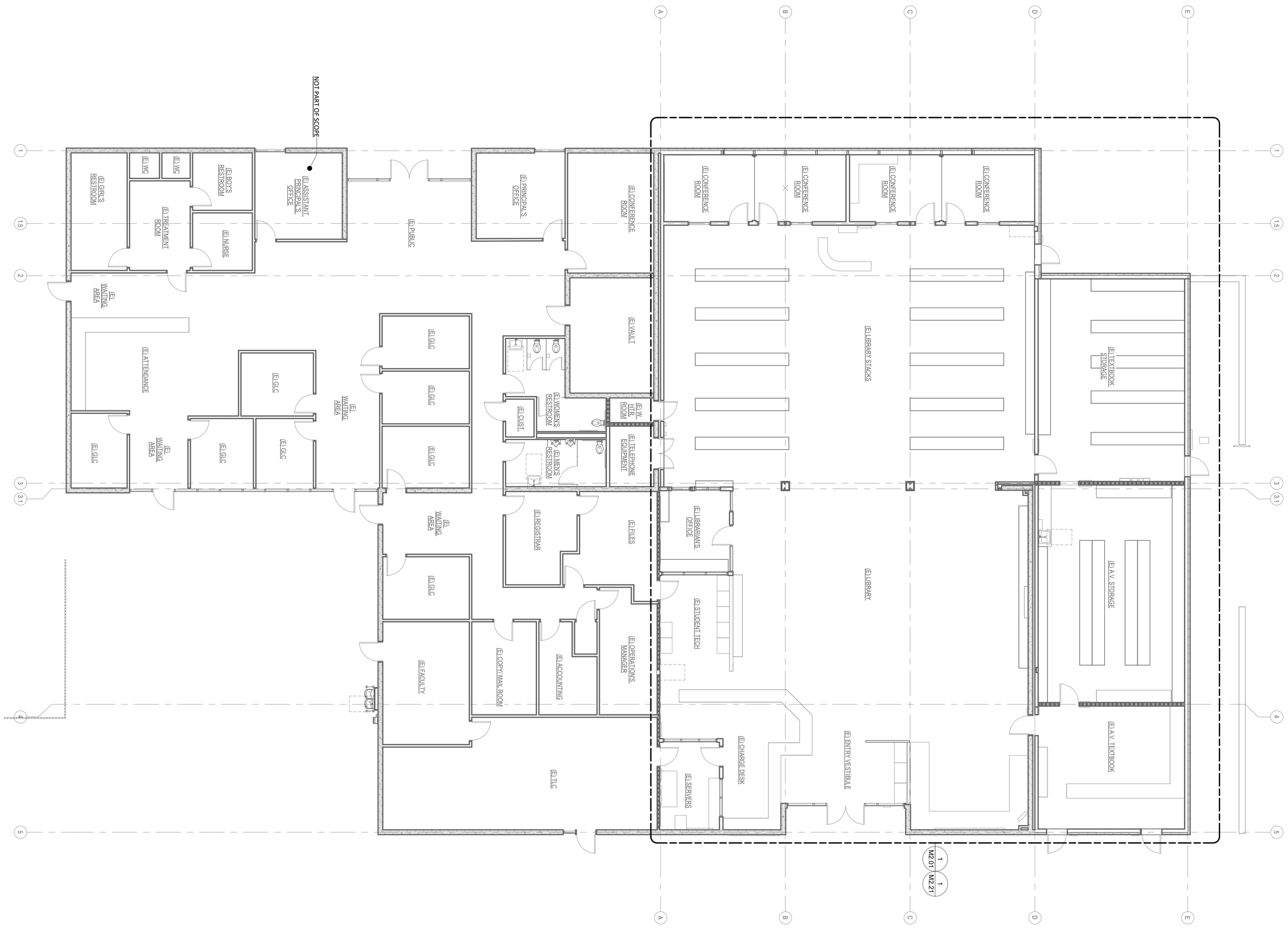

N

1 MECHANICAL - FLOOR PLAN - OVERALL
1/8" = 1'-0"

M2.00

PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
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MECHANICAL - FLOOR PLAN - OVERALL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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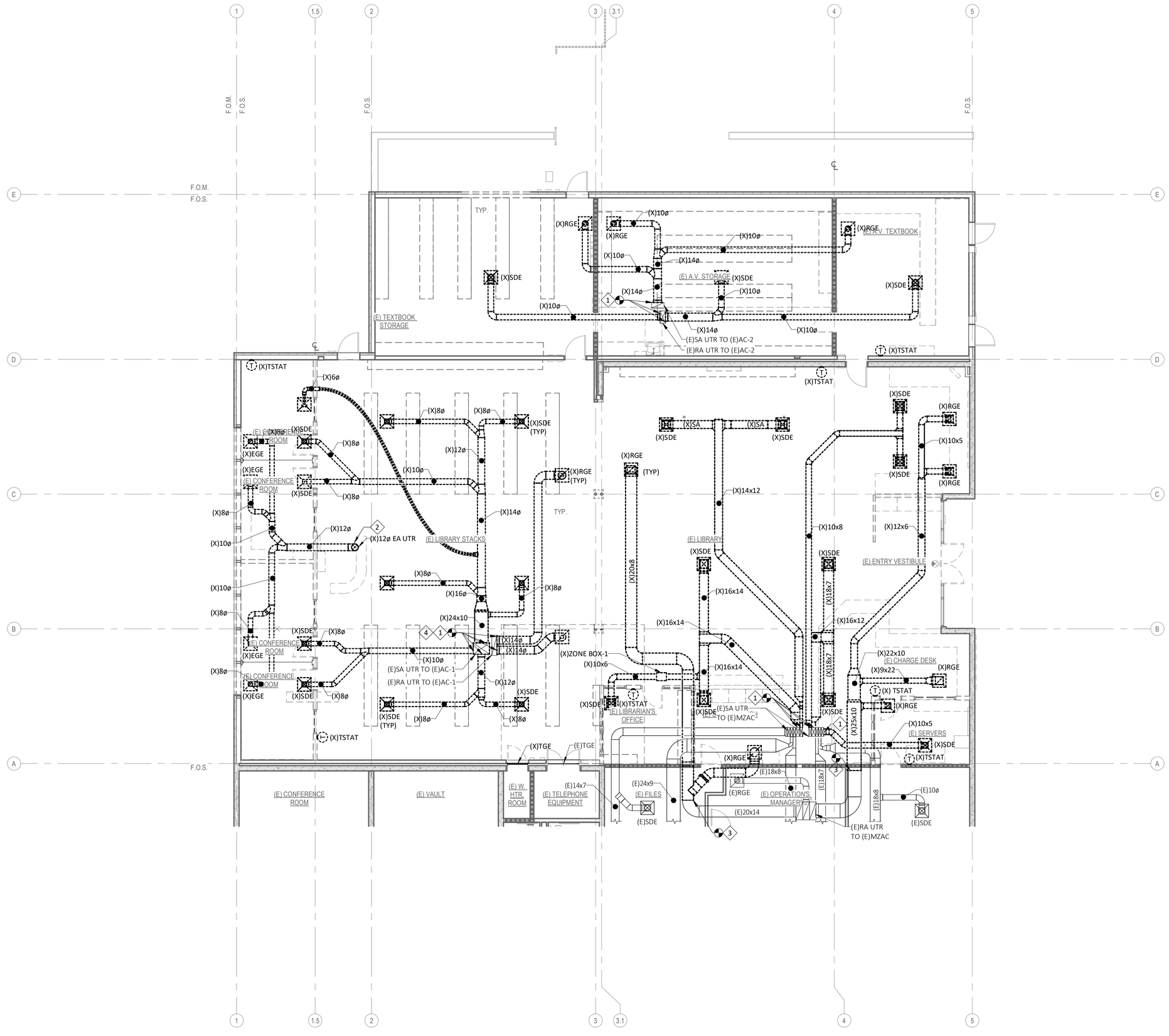

N

1 MECHANICAL - FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

#	KEYNOTES - M2.01
NUMBER	TEXT
1	REMOVE DUCTWORK BACK TO VERTICAL DUCT AS SHOWN AND PREPARE FOR NEW CONNECTION.
2	REMOVE EXHAUST DUCT SYSTEM IN ITS ENTIRETY AS SHOWN.
3	REMOVE DUCTWORK AS SHOWN AND PREPARE FOR NEW CONNECTION.
4	EXISTING DUCT DETECTORS SHALL REMAIN.

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MECHANICAL - FLOOR PLAN - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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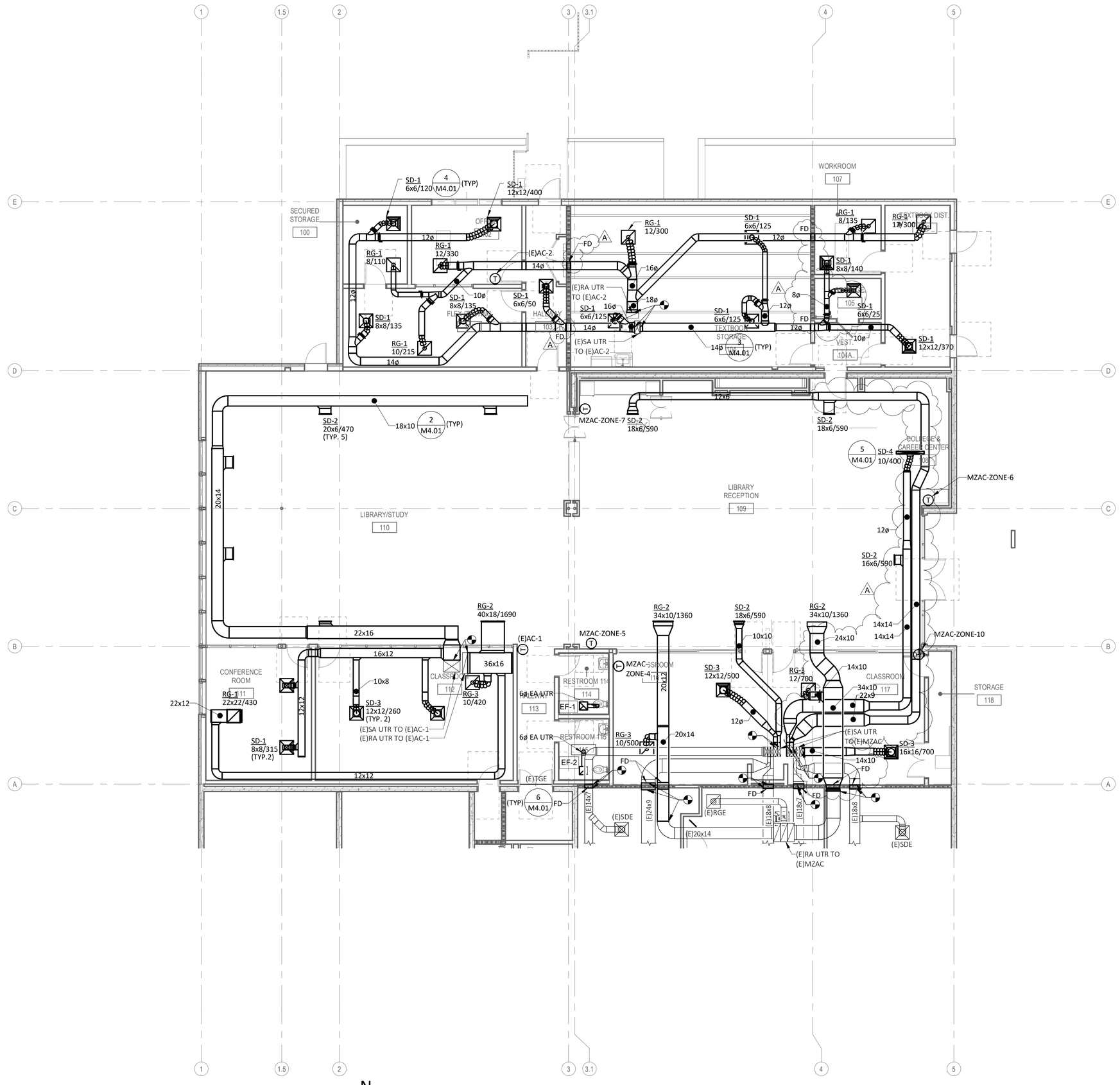

N

1 MECHANICAL - FLOOR PLAN - REMODEL
1/8" = 1'-0"

	GENERAL NOTES - M2.21
NUMBER	TEXT
1	THERMOSTATS SHALL BE PROVIDED WITH COVER TO PREVENT UNAUTHORIZED ACCESS. EXTEND THERMOSTAT WIRING TO NEW THERMOSTAT LOCATIONS.
2	NEW THERMOSTATS SHALL BE PELICAN MODEL TC3 WITH INTEGRATED CO2 SENSOR PER DISTRICT STANDARD.

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MECHANICAL - FLOOR PLAN - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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PROJECT STATUS: DSA SUBMITTAL
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DELTA	DATE:	DESCRIPTION:
1	08/02/2024	ADDENDUM A

M2.21

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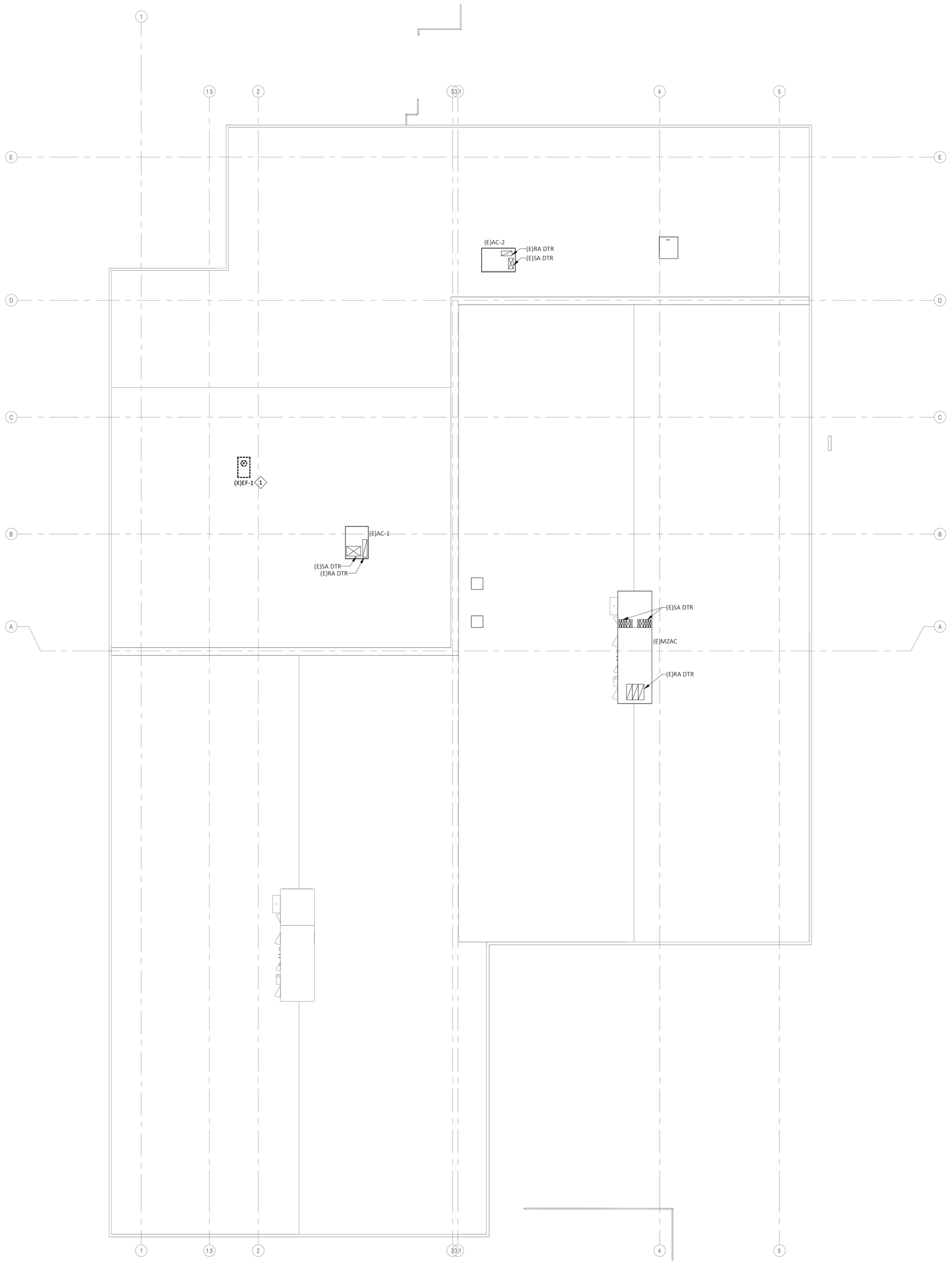
#	KEYNOTES - M3.01
NUMBER	TEXT
1	REMOVE EXHAUST FAN AND CURB. SEE STRUCTURAL PLANS FOR INFILL REQUIREMENTS.



N

1 MECHANICAL - ROOF PLAN - DEMOLITION
1/8" = 1'-0"

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MECHANICAL - ROOF PLAN - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

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M3.01

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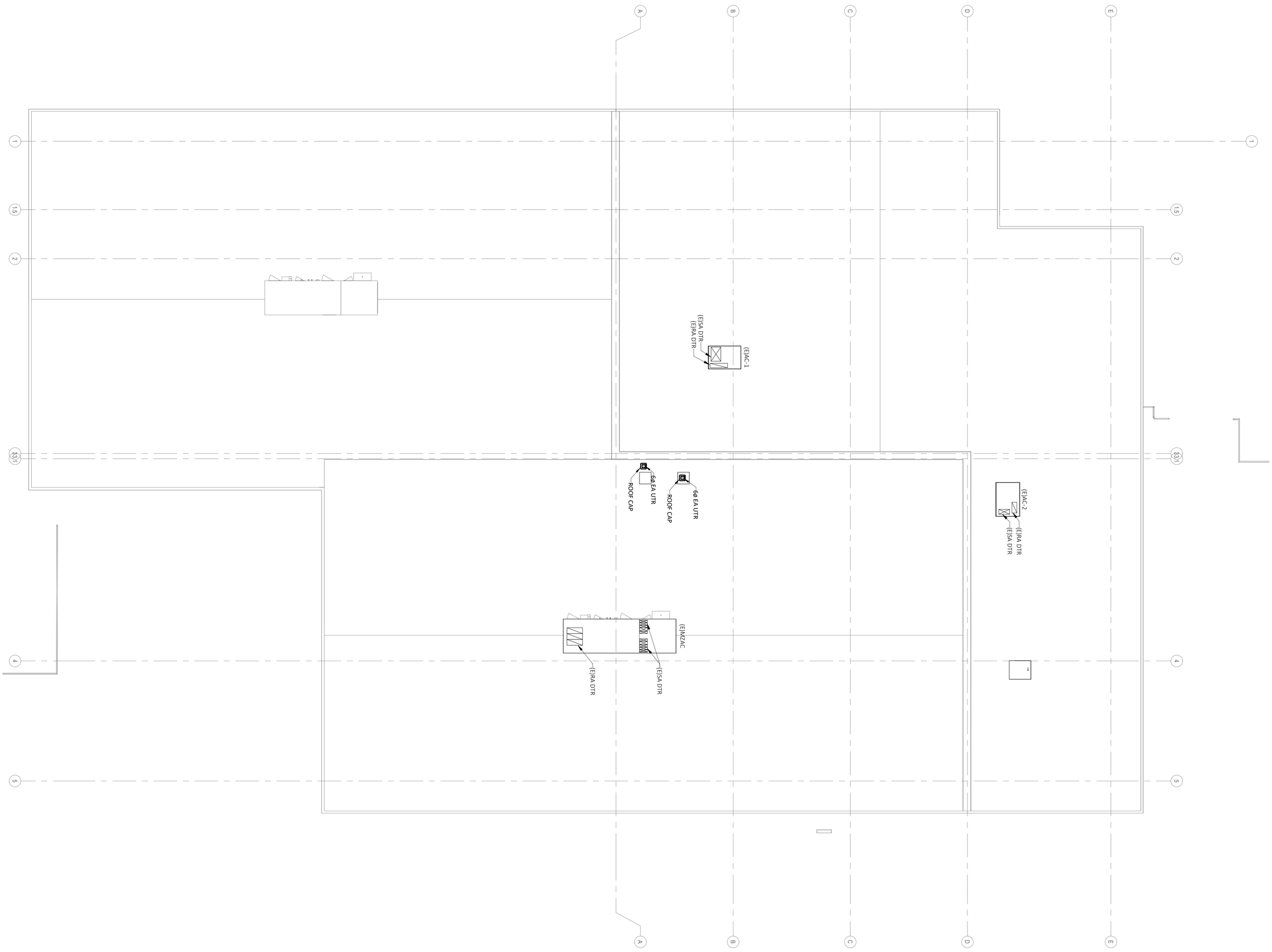

1 MECHANICAL - ROOF PLAN - REMODEL
1/8" = 1'-0"

M3.21

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MECHANICAL - ROOF PLAN - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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MECHANICAL - DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
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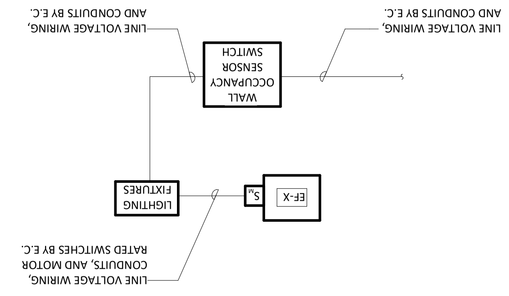
PROJECT STATUS:	DSA SUBMITTAL
SHEET ISSUED:	08/02/2024

DELTA	DATE	DESCRIPTION
1	08/02/2024	ADDENDUM A

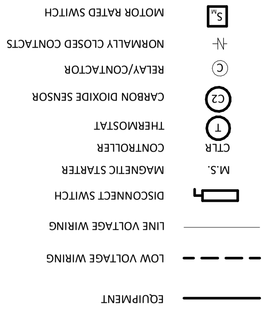
M4.01

8 EXHAUST FAN WIRING DIAGRAM — NTS

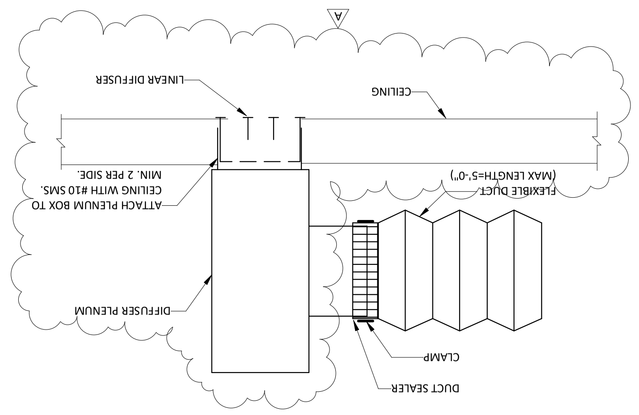
DETAIL NOTES:
1. FOR WIRING NOTES AND SYMBOLS SEE DETAIL 7/M4.01



7 WIRING NOTES AND SYMBOLS — NTS

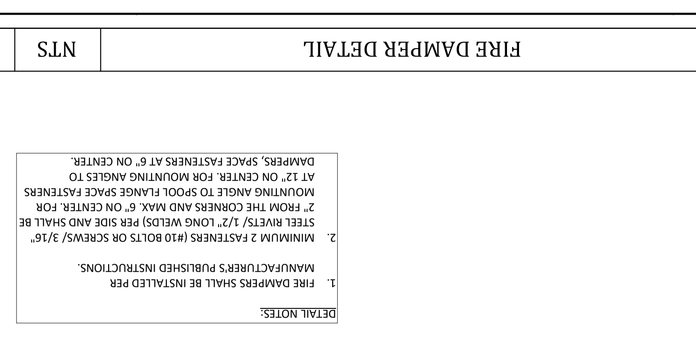


4 CEILING MOUNTED DIFFUSER DETAIL — NTS



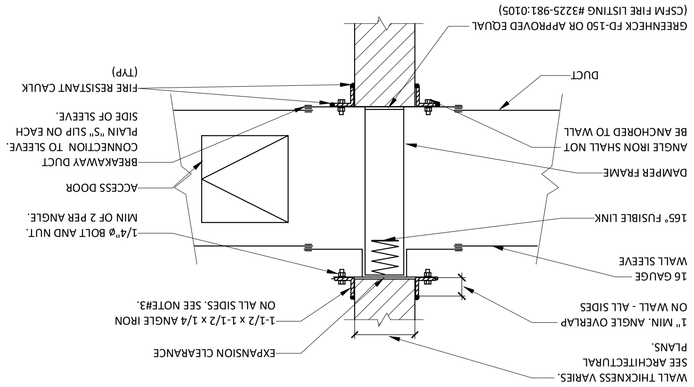
1 CEILING EXHAUST FAN MOUNTING DETAIL — NTS

5 LINEAR DIFFUSER DETAIL — NTS



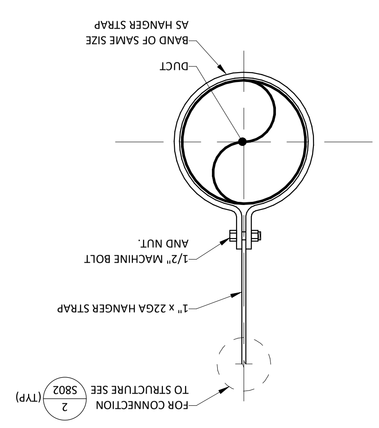
6 FIRE DAMPER DETAIL — NTS

DETAIL NOTES:
1. FIRE DAMPERS SHALL BE INSTALLED PER MANUFACTURER'S PUBLISHED INSTRUCTIONS.
2. MINIMUM 2 FASTENERS (#10 BOLTS OR SCREWS/ 3/16" STEEL RIVETS/ 1/2" LONG WELDS) PER SIDE AND SHALL BE MOUNTING ANGLE TO SPOOL FLANGE SPACE FASTENERS 2" FROM THE CORNERS AND MAX. 6" ON CENTER. FOR MOUNTING ANGLES TO DAMPERS, SPACE FASTENERS AT 6" ON CENTER.



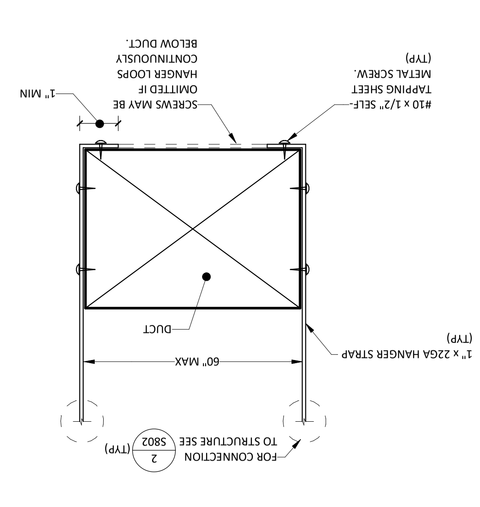
3 ROUND DUCT SUPPORT DETAIL — NTS

DETAIL NOTES:
1. PROVIDE HANGERS AT 12'-0" MAX SPACING.
2. ALL DUCTWORK IS LESS THAN 6 SQUARE FEET IN CROSS SECTIONAL AREA AND IS THEREFORE EXEMPT FROM SEISMIC BRACING PER 2022 CBC SECTION 1617A.1.25.



2 RECTANGULAR DUCT SUPPORT DETAIL — NTS

DETAIL NOTES:
1. PROVIDE HANGERS AT 12'-0" MAX SPACING.
2. ALL DUCTWORK IS LESS THAN 6 SQUARE FEET IN CROSS SECTIONAL AREA AND IS THEREFORE EXEMPT FROM SEISMIC BRACING PER 2022 CBC SECTION 1617A.1.25.



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: WVUSD Walnut HS Library Media Center Renovation	**Report Page:** (Page 1 of 11)
Project Address: 400 Pierre Rd, Walnut, CA 91789	**Date Prepared:** 2023-11-26T02:33:03-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Walnut	04	Total Conditioned Floor Area	9082
02	Climate Zone	9	05	Total Unconditioned Floor Area	0
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	1

● Library ● Office ● School or Classroom

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

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: WVUSD Walnut HS Library Media Center Renovation	**Report Page:** (Page 2 of 11)
	Date Prepared: 2023-11-26T02:33:03-05:00

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]	
	AND		AND		AND		AND	Yes	AND		AND	Yes	AND		COMPLIES
Mandatory Measures Compliance (See Table Q for Details)												DOES NOT COMPLY			

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)

This section does not apply to this project.

G. PUMPS

This section does not apply to this project.

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Mechanical Systems
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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: WVUSD Walnut HS Library Media Center Renovation	**Report Page:** (Page 3 of 11)
	Date Prepared: 2023-11-26T02:33:03-05:00

H. FAN SYSTEMS & AIR ECONOMIZERS

This section does not apply to this project.

I. SYSTEM CONTROLS

This section does not apply to this project.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(c)3& 140.4(p) and 140.4(g) for all nonresidential and hotel/motel and d:\14refnolink\1160.2_160.3(a)3D, 170.2(e)4N, 170.2(a)4O 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	(E)AC-1	System Design OA CFM Airflow[2]	980	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] & 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] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	

STATE OF CALIFORNIA
Mechanical Systems
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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: WVUSD Walnut HS Library Media Center Renovation	**Report Page:** (Page 4 of 11)
	Date Prepared: 2023-11-26T02:33:03-05:00

J. VENTILATION AND INDOOR AIR QUALITY

111-CONFERENCE ROOM	Conference/ meeting	304		8	120		DCV	Provided per §120.1(d)4
							Occ Sensor	Provided per §120.1(d)5
112-STUDIO C	Classroom (ages 5-18)	600		24	360		DCV	Provided per §120.1(d)4
							Occ Sensor	NA: Not required space type
110-LIBRARY/STUDY	Library - reading room/ stacks	2260		32	480		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				960	18	Ventilation for this System Complies?	Yes

04	05				06		07
System Name	(E)AC-2	System Design OA CFM Airflow[2]	360	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] & 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] 160.2(c)5D 160.2(c)5E 160.2(c)5D
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
104-TEXTBOOK STORAGE	All others	945			141.75		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Not required space type

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CERTIFICATE OF COMPLIANCE	NRCC-MCH-E
Project Name: WVUSD Walnut HS Library Media Center Renovation	**Report Page:** (Page 5 of 11)
	Date Prepared: 2023-11-26T02:33:03-05:00

J. VENTILATION AND INDOOR AIR QUALITY

106-TEXT BOOK DIST.	Office space	267		2	30		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	Provided per §120.1(d)5
100-SECURE STORAGE	All others	140			21		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Not required space type
102-OFFICE	Office space	186		3	45		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Alteration
101-FLEX OFFICE/TESTING	Office space	512		6	90		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Alteration
107-WORKROOM	Office space	100		1	15		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Alteration
106-STORAGE	All others	94			14.1		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				356.85	18	Ventilation for this System Complies?	Yes

04	05			06		07
System Name	(E)MZAC	System Design OA CFM Airflow[2]	980	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

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J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 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] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM	
109-LIBRARY RECEPTION	Library - reading room/ stacks	2260		35	525		DCV	NA: Not required per §120.1(d)3
							Occ Sensor	NA: Alteration
116-STUDIO ROOM B	Classroom (ages 5-18)	491		13	195		DCV	Provided per §120.1(d)4
							Occ Sensor	NA: Not required space type
117-STUDIO ROOM A	Classroom (ages 5-18)	503		16	240		DCV	Provided per §120.1(d)4
							Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				960	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 250ft² or smaller, multipurpose rooms less than 1,000 ft², 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).

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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:	SUPPLY	**NR/ Common Use:** Duct leakage testing shall not exceed 15% per NA7.5.3 required for these systems?	No

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L. DISTRIBUTION (DUCTWORK and PIPING)

		Dwelling Units: Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 10% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15	Yes	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	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18	No	All ductwork is an extension of an existing duct system	
19	No	Ductwork serving individual dwelling unit	
20		< 25 ft of new or replacement space conditioning ducts installed	
21	R-4.2	Duct Insulation R-value	
22	Yes	Ductwork Existing To Remain	
23	Yes	Duct System Connected To Altered Space Conditioning System	

M. COOLING TOWERS

This section does not apply to this project.

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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/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-4

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

O. 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, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

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.	(E)AC-1; (E)AC-2; (E)MZAC
NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to 120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO_2) concentration setpoints.	111-CONFERENCE ROOM; 112-STUDIO C; 116-STUDIO ROOM B; 117-STUDIO ROOM A

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

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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	No	Plan sheet or construction document location
03		04
Mandatory Measure		**Plan sheet or construction document location**
Duct Insulation per 120.4		M0.02
The air duct and plenum system is designed per 120.4(a)-(f)		SPEC 23 3100
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		

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Project Address: 400 Pierre Rd, Walnut, CA 91789	**Date Prepared:** 2023-11-26T02:33:03-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Tarun Buddavarapu	Documentation Author Signature: B. Buddavarapu
Company: ASTRAL ENGINEERS	Signature Date: 16-11-2023
Address: PO Box 190	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Rancho Cucamonga, CA 91729	Phone: 909.903.0015

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: ERIC DESPLINTER	Responsible Designer Signature:
Company: ASTRAL ENGINEERS	Date Signed: 16-11-2023
Address: PO Box 190	License: M 38688
City/State/Zip: Rancho Cucamonga, CA 91729	Phone: 909.903.0015

CONSULTANT:
ASTRAL ENGINEERS, PC
PO BOX 190
RANCHO CUCAMONGA, CA 91729
909.903.0015
www.astraleng.com
PROJECT #:230037.00

T24 DOCUMENTATION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
ERIC M. DeSPLINTER
38688
Exp. 12-30-25
MECHANICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:

M5.01

Autodesk Docs://230037.00_WVUSD Walnut HS Library Media Center/2MEPTITAFP_230037.00_WVUSD Walnut HS Library Media Center.rvt
12/2/2024 12:28:20 AM

PLUMBING SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
	PIPE DOWN
	PIPE UP
	BRANCH-TOP CONNECTION
	BRANCH-BOTTOM CONNECTION
	PIPE CAP
	PIPE REDUCER
	DIRECTION OF WATER/GAS FLOW
CO	CLEANOUT PLUG
FCO	FLOOR CLEANOUT
WCO	WALL CLEANOUT
	ISOLATION VALVE, NORMALLY OPEN
	ISOLATION VALVE IN VERTICAL PIPE, NO
	UNION
	STRAINER
	FLEXIBLE CONNECTOR
1/8"/1'-0"	PITCH DOWN - IN DIRECTION OF ARROW
	ACCESS PANEL OR ROOF HATCH

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

PLUMBING ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
CW	POTABLE COLD WATER
HW	POTABLE HOT WATER SUPPLY (120°F), UNLESS NOTED OTHERWISE
HWR	POTABLE HOT WATER RECIRCULATING (120°F), UNLESS NOTED OTHERWISE
V	VENT
AFF	ABOVE FINISHED FLOOR
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
CU FT	CUBIC FEET
DIA, Ø	DIAMETER
DN	DOWN
DTR	DOWN THRU ROOF
EL	ELEVATION
FPS	FEET PER SECOND
FT, '	FOOT OR FEET
FT LB	FOOT-POUND
GA	GAGE OR GAUGE
GAL	GALLONS
HD	HEAD (PRESSURE)
HT	HEIGHT
ID	DIAMETER, INSIDE
IE	INVERT ELEVATION BELOW FINISHED FLOOR
IN., "	INCH OR INCHES
LF	LINEAR FOOT OR FEET
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO., #	NUMBER
NTS	NOT TO SCALE
OD	DIAMETER, OUTSIDE
PSI	POUNDS PER SQUARE INCH
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SCFM	CFM, STANDARD CONDITIONS
SPEC	SPECIFICATION
T	TON
UTR	UP THRU ROOF

NOTES:
1. NOT ALL ABBREVIATIONS MAY APPLY.
2. PLUMBING MATERIAL LIST/PLUMBING SCHEDULES CONTAIN EQUIPMENT TAG ABBREVIATIONS THAT ARE HEREBY INCORPORATED INTO THE ABBREVIATION LIST.
3. SEE OTHER DISCIPLINE DRAWINGS WITHIN THE CONSTRUCTION DOCUMENTS FOR ABBREVIATIONS NOT DEFINED ABOVE OR IN PLUMBING MATERIAL LIST/PLUMBING SCHEDULES.

PLUMBING SYSTEMS:

LINETYPE/SYMBOL	DESCRIPTION
CD	CONDENSATE DRAIN
HPG	GAS-HIGH-PRESSURE
G	GAS-LOW-PRESSURE
MPG	GAS-MEDIUM-PRESSURE
D	INDIRECT DRAIN
	POTABLE COLD WATER
	POTABLE HOT WATER SUPPLY (120°F)A
	POTABLE HOT WATER RECIRCULATING (120°F)A
SAN	SOIL, WASTE, OR SANITARY SEWER
	VENT

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

RENOVATION NOTES:

1. DEMOLITION WORK SHALL BE PERFORMED AS DESCRIBED WITHIN SPEC SECTION 22 0505 AND THE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMISSION TO VERIFY ALL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. LOCATIONS OF EXISTING PLUMBING SYSTEMS.
   B. LOCATIONS OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, TECHNOLOGY, FIRE PROTECTION, AND FIRE ALARM SYSTEMS.
   C. EXISTING SURFACES WHICH REQUIRE ALTERING.
   D. INVERTS OF EXISTING DRAINAGE PIPING VIA CLEANOUT DEPTHS.
3. NOTIFY OWNER OF REQUIRED SYSTEM SHUTDOWNS AT LEAST TWO WEEKS PRIOR TO SHUTDOWN. EXACT SHUTDOWN TIME AND PROCEDURE SHALL BE COORDINATED WITH OWNER AT LEAST 96 HOURS PRIOR TO SHUTDOWN.
4. WHEN PIPING, EQUIPMENT, OR FIXTURES ARE NOTATED TO BE PERMANENTLY REMOVED THEIR ASSOCIATED COMPONENTS SHALL ALSO BE REMOVED INCLUDING HANGERS, SUPPORTS, AND ACCESSORIES.
5. COORDINATE THE DISCONNECTION AND REMOVAL OF POWERED SYSTEMS WITH THE E.C. WHEN REMOVING POWERED PLUMBING EQUIPMENT.
6. REPAIR EXISTING FLOORS, WALLS, AND CEILINGS IN ALTERED AREAS TO MATCH EXISTING.
7. THE CONTRACTOR SHALL NEATLY SAW CUT SECTIONS OF THE CONCRETE TO ACCESS THE WORK BELOW GRADE. REMOVE PORTIONS OF DEMOLISHED CONCRETE FROM THE SITE. REPAIR THE EXISTING SLAB PER PLUMBING/STRUCTURAL DETAILS WITHIN THE DRAWING SET.
8. CONNECT TO (E)SYSTEMS/COMPONENETS FOR A COMPLETE INSTALLATION.
9. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

DSA ANCHORAGE NOTES:

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 CHAPTER 13, 26 AND 30:
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

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

[ ]MP[ ]MD[ ]PP[ ]E-OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI (OSHPD) PRE-APPROVAL (OPM#) #OPM-#####-##, AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

CONTRACTOR ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR

GENERAL NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. REVIEW ALL PROJECT DOCUMENTS INCLUDING SPECS AND DRAWINGS PERTAINING TO ALL DISCIPLINES PRIOR TO SUBMITTING A BID. SUBMIT PRE-BID REQUEST FOR INFORMATION FOR ITEMS IN QUESTION AND/OR CONFLICTS FOUND.
3. DRAWINGS SHOW THE DESIGN INTENT DIAGRAMMATICALLY. THEY DO NOT SHOW THE EXACT UTILITY ROUTING NOR EVERY ELBOW, OFFSET, ETC. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THEIR SYSTEMS TO AVOID CONFLICT WITH THE STRUCTURE AND OTHER DISCIPLINES. THE COST FOR SUCH ADJUSTMENTS SHALL BE INCLUDED IN THE BID.
4. OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR WORK PERFORMED.
5. OBTAIN UTILITY PURVEYOR REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT OR PERFORMING WORK.
6. THE G.C. TEAM SHALL LEAD THE SUBCONTRACTORS IN PROVIDING A COORDINATED SET OF SHOP DRAWINGS. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
7. PROVIDE FIRESTOPPING FOR ALL UTILITY PENETRATIONS THRU FIRE-RATED ASSEMBLIES.
8. COORDINATE FRAMING REQUIREMENTS FOR ACCESS PANELS AND EQUIPMENT/PANEL SUPPORTS WITH G.C. PRIOR TO SUBMITTING BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECTION OF CONSTRUCTION DEFICIENCIES LISTED ON THE JOB SITE OBSERVATION REPORT. RETURN THE JOB SITE OBSERVATION REPORT TO A/E WITH DEFICIENCIES SIGNED OFF. PROVIDE PHOTOGRAPHIC AND/OR VIDEO EVIDENCE OF CORRECTED DEFICIENCIES IF REQUESTED BY THE ENGINEER.
10. PROVIDE CLOSEOUT DOCUMENTATION UPON COMPLETION OF PROJECT. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
11. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH CODE. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.

PLUMBING NOTES:

1. PLUMBING WORK SHALL BE CONSTRUCTED IN A PROFESSIONAL MANNER. ENSURE FIXTURES, EQUIPMENT, AND ASSOCIATED COMPONENTS ARE INSTALLED LEVEL AND PLUMB. SEALANT BETWEEN FIXTURES AND SURFACES SHALL BE EVEN AND NEAT. COMPONENTS SHALL BE CLEANED PRIOR TO OWNER TURNOVER.
2. THE PLUMBING MATERIAL LIST SHALL BE USED AS THE BASIS OF DESIGN. MODEL NUMBERS ARE PROVIDED FOR REFERENCE ONLY. MATERIALS SHALL MEET DESCRIPTION OF SPECIFIED ITEMS. THE CONTRACTOR SHALL IDENTIFY ALL SELECTED OPTIONS IN THE SUBMITTAL.
3. IF A CONTRACTOR PROVIDES EQUIPMENT OTHER THAN THE BASIS OF DESIGN, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT. THAT INCLUDES, BUT IS NOT LIMITED TO, AGENCY FEES FOR REVIEW OF CHANGES, STRUCTURAL MODIFICATIONS FOR INCREASED WEIGHT, AND ELECTRICAL EQUIPMENT, WIRING CONDUIT, AND BREAKER CHANGES FOR DIFFERENT ELECTRICAL REQUIREMENTS.
4. COORDINATE POWER REQUIREMENTS WITH THE E.C. PRIOR TO PROVIDING SUBMITTALS TO THE ENGINEER.
5. PLUMBING FIXTURE HEIGHTS SHALL BE OBTAINED FROM ARCHITECTURAL ELEVATION DRAWINGS. PROVIDE ROUGH-INS ACCORDINGLY.
6. SEE SPEC SECTION 221005, FOR PIPE SYSTEM INSTALLATION, TESTING, CLEANING, AND DISINFECTION REQUIREMENTS.
7. PROVIDE PIPE EXPANSION JOINT THAT ACCOMMODATES THE BUILDING MOVEMENT WHERE PIPING CROSSES BUILDING EXPANSION JOINT.
8. PIPE, PIPE FITTINGS, FIXTURES, AND EQUIPMENT INTENDED TO DISPENSE WATER FOR HUMAN CONSUMPTION SHALL MEET CA AB1953, NSF 61 LEAD FREE REQUIREMENTS, A MAX OF .25 WEIGHTED AVERAGE OF LEAD CONTENT.
9. PAINT INTERIOR EXPOSED PIPING, VALVES, AND ASSOCIATED HANGERS/SUPPORTS LOCATED IN OCCUPIED SPACES TO MATCH THE SURROUNDING ARCHITECTURAL COLOR SCHEME. PAINT EXTERIOR PIPING, VALVES, AND ASSOCIATED HANGERS/SUPPORTS ADJACENT TO EXTERIOR WALL TO MATCH WALL COLOR. FINAL COLORS SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER. SEE SPEC SECTION 220500 FOR ADDITIONAL REQUIREMENTS.
10. PROVIDE IDENTIFICATION FOR PIPING, VALVES, AND EQUIPMENT PER SPEC SECTION 220553.
11. PIPING SHALL NOT PASS THRU NOR UNDER ELECTRICAL ROOMS, DATA ROOMS, SKYLIGHTS, AND ROOF ACCESS HATCHES.
12. INSULATION SHALL BE PROVIDED CONTINUOUS THROUGHOUT THE PIPING SYSTEM INCLUDING AT HANGERS/SUPPORTS, PIPE FITTINGS, VALVES, AND ACCESSORIES. OPENINGS SHALL BE PROVIDED TO ALLOW FOR VALVE HANDLE OPERATION AND ACCESS. INSULATION THICKNESS SHALL MEET THE LISTED ENERGY CODE MINIMUM REQUIREMENTS. SEE SPEC SECTION 220719 FOR SYSTEMS REQUIRING INSULATION AND ADDITIONAL INSTALLATION REQUIREMENTS.
13. VALVES SHALL BE ACCESSIBLE. PROVIDE KEYED ACCESS PANELS WHERE VALVES HAVE BEEN LOCATED IN CONCEALED AREAS. ACCESS PANEL SIZE SHALL BE LARGE ENOUGH TO ACCESS EACH VALVE AND FOR FULL VALVE OPERATION.
14. CLEANOUTS SHALL BE PROVIDED PER PLUMBING CODE REQUIREMENTS. IN ADDITION, PROVIDE CLEANOUTS AT LAVATORIES, SINKS, AND URINALS. CLEANOUTS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
15. WATER HAMMER ARRESTORS SHALL BE PROVIDED AT QUICK-CLOSING VALVES INCLUDING FLUSH VALVES, EQUIPMENT, AND AUTOMATIC FAUCETS. PROVIDE ACCESS PANELS WHERE ARRESTORS HAVE BEEN INSTALLED IN CONCEALED SPACES. SEE DETAILS AND PLUMBING MATERIAL LIST FOR ADDITIONAL REQUIREMENTS.

PLUMBING SHEET INDEX:

Sheet Number	Sheet Name
P0.01	PLUMBING COVER SHEET
P0.02	PLUMBING SCHEDULES
P1.01	PLUMBING - SITE PLAN
P2.00	PLUMBING - FLOOR PLAN - OVERALL
P2.01	PLUMBING - FLOOR PLAN - DEMOLITION
P2.21	PLUMBING - FLOOR PLAN - REMODEL
P4.01	PLUMBING - DETAILS

CODES AND STANDARDS:

EDITION	REFERENCE CODE/STANDARD
2022	CALIFORNIA ADMINISTRATIVE CODE, (CCR, TITLE 24, PART 1)
2022	CALIFORNIA BUILDING CODE, (CCR, TITLE 24, PART 2)
2022	CALIFORNIA ELECTRICAL CODE, (CCR, TITLE 24, PART 3)
2022	CALIFORNIA MECHANICAL CODE, (CCR, TITLE 24, PART 4)
2022	CALIFORNIA PLUMBING CODE, (CCR, TITLE 24, PART 5)
2022	CALIFORNIA ENERGY CODE, (CCR, TITLE 24, PART 6)
2022	CALIFORNIA HISTORICAL BUILDING CODE, (CCR, TITLE 24, PART 8)
2022	CALIFORNIA FIRE CODE, (CCR, TITLE 24, PART 9)
2022	CALIFORNIA EXISTING BUILDING CODE, (CCR, TITLE 24, PART 10)
2022	CALIFORNIA GREEN BUILDING STANDARDS, (CCR, TITLE 24, PART 11)
2022	CALIFORNIA REFERENCED STANDARDS CODE, (CCR, TITLE 24, PART 12)
2022	STANDARD FOR INSTALLATION OF FIRE SPRINKLER SYSTEMS OF CALIFORNIA, (ADOPTS NFPA 13, 2022. WITH AMENDMENTS)
2018	NFPA 54-NATIONAL FUEL GAS CODE
2022	NFPA 72-NATIONAL FIRE ALARM AND SIGNALING CODE

CCR-CALIFORNIA CODE OF REGULATIONS
NFPA-NATIONAL FIRE PROTECTION AGENCY

GENERAL LEGEND:

SYMBOL	DESCRIPTION
## / ####	DETAIL CALL-OUT SYMBOL
###-#	EQUIPMENT TAG
#	KEYNOTE SYMBOL
	POINT OF CONNECTION OR DISCONNECTION
## / ####	SECTION CUT CALL-OUT SYMBOL
## / ####	ENLARGED PLAN CALL-OUT SYMBOL
LINETYPE	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW CONSTRUCTION
(E)	EXISTING TO REMAIN
(X)	EXISTING TO BE REMOVED

FIRE-RATED ASSEMBLY LEGEND:

LINETYPE/SYMBOL	DESCRIPTION
	ONE HOUR FIRE PARTITION

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PROJECT #:230037.00

PLUMBING COVER SHEET
WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

SEALS:

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P0.01

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COLD WATER PIPE SIZING:

TABLE BASED ON 2022 CPC, APPENDIX A, A1O5.1(1) - COPPER TUBING.

3 PSI PER 100-FOOT AVAILABLE PRESSURE. 6 FT/SEC MAX VELOCITY.

PIPE SIZE	GPM	FLUSH TANK FIXTURE UNITS	FLUSH VALVE FIXTURE UNITS
1/2"	1	1	N/A
3/4 "	4	4	N/A
1"	9	12	N/A
1 1/4"	17	24	N/A
1 1/2"	27	46	10
2"	56	155	63

HOT WATER PIPE SIZING:

TABLE BASED ON 2022 CPC, APPENDIX A, A1O5.1(1) - COPPER TUBING.

3 PSI PER 100-FOOT AVAILABLE PRESSURE. 4 FT/SEC MAX VELOCITY.

PIPE SIZE	GPM	FLUSH TANK FIXTURE UNITS	FLUSH VALVE FIXTURE UNITS
1/2"	1	1	N/A
3/4 "	4	4	N/A
1"	9	12	N/A
1 1/4"	17	24	N/A

PIPE INSULATION SCHEDULE

NOTES:
1. SEE SPEC SECTION 22 0719 FOR ADDITIONAL INFORMATION ABOUT INSULATION TYPES.
2. WHERE MULTIPLE INSULATION TYPES ARE LISTED, THE CONTRACTOR MAY CHOOSE FROM THE ACCEPTABLE OPTIONS.

		NOMINAL PIPE DIAMETER (IN.)					
		<1	1 TO <1.5	1.5 TO <4	4 TO <8	8+	
PIPE APPLICATION	ALLOWABLE TYPES (NOTES 1 & 2)	MINIMUM INSULATION THICKNESS					NOTES
PIPE CONVEYING FLUID 105°F TO 140°F	A, B, C, E	1"	1.5"	1.5"	1.5"	1.5"	1, 2
PIPE CONVEYING FLUID 40°F TO 60°F	A, B, C, E	0.5"	0.5"	1"	1"	1"	1, 2

MINIMUM ALL THREAD ROD SIZE TABLE

ANSI/MSS SP-69 & SP-58

PIPE SIZE	HORIZONTAL STEEL, DUCTILE IRON, & CAST-IRON PIPE	HORIZONTAL COPPER, GLASS, & PLASTIC PIPE
	ATR SIZE	ATR SIZE
1/2"	3/8"	3/8"
3/4"	3/8"	3/8"
1"	3/8"	3/8"
1 1/4"	3/8"	3/8"
1 1/2"	3/8"	3/8"
2"	3/8"	3/8"

PIPE HANGER AND SUPPORT SPACING SCHEDULE

NOTES:
1. SUPPORTS FOR HORIZONTAL PIPING SHALL BE ADJACENT TO JOINT, NOT TO EXCEED 18".
2. HORIZONTAL PIPE BRACES SHALL NOT EXCEED 40' INTERVALS TO PREVENT HORIZONTAL MOVEMENT.
3. HORIZONTAL PIPING SHALL BE SUPPORTED AT EACH HORIZONAL BRANCH CONNECTION.
4. HORIZONTAL PIPE HANGERS SHALL NOT BE PLACED ON THE COUPLING.

PIPE MATERIAL	PIPE SIZES	MAX HORIZONTAL SPACING	MAX VERTICAL SPACING	NOTES
CAST-IRON HUB-LESS PIPE	ALL SIZES	EVERY OTHER JOINT, UNLESS OVER 4' THEN SUPPORT EACH JOINT.	BASE AND AT EACH FLOOR NOT TO EXCEED 15'.	1, 2, 3, 4
COPPER AND COPPER ALLOY PIPE	≤ 1-1/2"	6'	EACH FLOOR, NOT TO EXCEED 10'.	
	2" - 2 1/2"	8'		
	≥ 3"	10'		

PLUMBING FIXTURE ROUGH IN SCHEDULE

NOTES:
1. DOMESTIC CW, HW, AND SANITARY DRAIN SIZES APPLY TO THE FIXTURE ROUGH-IN, VERTICAL RISER, AND HORIZONTAL BRANCH LINE CONNECTION TO THE SYSTEM MAIN OR TO WHERE THE BRANCH LINE COMBINES WITH ANOTHER FIXTURE. SEE FLOOR PLANS FOR COMBINED LINE SIZES.
2. VENT LINE SIZES APPLY TO THE VERTICAL RISER, SEE FLOOR PLANS FOR HORIZONTAL BRANCH LINE SIZES.
3. WHERE SIZES CONFLICT BETWEEN THE ROUGH-IN SCHEDULE AND FLOOR PLANS, FLOOR PLAN SIZES SHALL OVERRIDE.
4. TRAP SIZES FOR SINGLE USE/MULTI USE LAVATORY BOWLS.

PLUMBING FIXTURE:	DOMESTIC CW:	DOMESTIC HW:	SANITARY DRAIN:	TRAP/TRAP ARM:	VENT:	REMARKS:
DRINKING FOUNTAIN	1/2"	NA	2"	1-1/4"	1-1/2"	
HOSE BIBB	1/2"	NA	NA	NA	NA	
LAVATORY	1/2"	1/2"	2"	1-1/4"/1-1/2"	1-1/2"	
SINK	1/2"	1/2"	2"	1-1/2"	1-1/2"	
WATER CLOSET, FLUSH VALVE	1"	NA	4"	INTEGRAL	2"	

PLUMBING MATERIAL LIST

SYMBOL	DESCRIPTION	MANUFACTURER AND MODEL
DF-1	DRIKING FOUNTAIN: ACCESSIBLE LEAD-FREE WALL MOUNTED DUAL BASIN HI/LOW DRINKING FOUNTAIN WITH BOTTLE FILLER, INDOOR/OUTDOOR USE. STAINLESS STEEL, POLISHED CHROME-PLATED BRASS BUBBLER HEADS AND PUSH-BUTTONS, INTEGRAL TRAPS AND VALVES, LAMINAR FLOW BOTTLE FILLER. ADA & ICC A117.1, ASME A112.19.3/CSA B45.4, NSF/ANSI 61 & 372 LISTED. ELECTRICAL REQUIREMENTS: 115V - 60 HZ - 1 AMPS. 370 WATTS.	ELKAY VRCTLDDWSK OR EQUAL.
FD-1	FLOOR DRAIN: 9" CAST IRON BODY WITH FLASHING COLLAR, 6" ADJUSTABLE ROUND NICKLE BRONZE STRAINER HEAD, COMPLETE WITH TRAP PRIMER CONNECTION AND VANDAL PROOF SCREWS. 2" OUTLET.	JR SMITH 2005Y-A-P050-PB-U, ZURN Z415B-ZN-P-VP, OR EQUAL.
CB-1	WATER FILL CONNECTION BOX: BARREL-FABRICATED OF TYPE "L" HARD DRAWN COPPER CONSTRUCTION. FREE TURNING BRASS MACHINED. POLYCARBONATE DOW CALIBRE 2061-15 MFR PISTON. "O" RINGS: EPDM SEALS. OPERATING PRESSURE 35 TO 125 PSIG. MAXIMUM PRESSURE IS 250 PSIG. 32° F TO +212°F TEMPERATURE RANGE 5 3/4"W X 5 1/4" X 2 1/2" D. NSF/ANSI 61, UPC, ASSE 1010 CERTIFIED.	PPP MM-500MIMB, OR EQUAL.
L-1	LAVATORY: ACCESSIBLE WALL HUNG BASIN, WHITE VITREOUS CHINA WITH FRONT OVERFLOW DRAIN, SELF DRAINING DECK, GRID DRAIN, SINGLE CENTER FAUCET PUNCH, WALL HANGER, AND CONCEALED ARM SUPPORT. REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS. ASME A112.119.2 / CSA B45.1 LISTED. FAUCET, ANGLE STOPS, AND SUPPLIES: 0.5 GPM ACCESSIBLE DECK MOUNTED METERED FAUCET, LOW LEAD CAST BRASS WITH, CHROME PLATED FINISH, MANUAL PUSH BUTTON, SINGLE INLET, VANDAL PROOF PRESSURE COMPENSATING NON-AERATED LAMINAR FLOW RESTRICTOR, SINGLE PUNCH CENTER ROUGH-IN. LISTINGS: ASME A112.18.1 / CSA B125.1, ADA ANSI/ICC A117.1, AND NSF/ANSI 61, 372 LISTED. LEAD FREE COMMERCIAL GRADE ANGLE STOPS AND SUPPLIES, CHROME PLATED CAST BRASS WITH COMPRESSION VALVE AND VANDAL PROOF LOOSE KEY STOPS. THERMOSTATIC MIXING VALVE: POINT OF USE VALVE, LEAD FREE BRASS BODY, CORROSION RESISTANT, FACTORY PRESET AT 105°F WITH ADJUSTABLE TEMPERATURE LOCKNUT, 125°F MAX OPERATING TEMPERATURE, 120°F - 180°F INCOMING HOT WATER TEMPERATURE RANGE, 40°F - 80°F INCOMING COLD WATER TEMPERATURE RANGE. ASSE 1070 AND CUPC LISTED. MINIMUM FLOW = .25 GPM. MAXIMUM FLOW = 2.2 GPM AT 25 PSI. TRAP AND SANITARY ROUGH-IN: LA PATTERN P-TRAP, 17 GAUGE BRASS WITH ROUGH BRASS FINISH, BRASS NUTS, AND RUBBER GASKETS. PROVIDE OFFSETS AS REQUIRED. SANITARY ROUGH-IN HEIGHT SHALL ACCOMMODATE WALL CLEANOUT BELOW. ACCESSIBLE INSULATION WRAP: PROVIDE ADA COMPLIANT, FLAME AND SMOKE SAFETY LISTED (ASTM E 84-07) INSULATION WRAP AT WATER SUPPLIES AND SANITARY TRAP FITTINGS BELOW FIXTURE.	BASIN: AS 0356.921, OR EQUAL. DRAIN: AS AS 2411.015, KOHLER K-7129, OR EQUAL. FAUCET: CHICAGO 333-665E39PSHABCP OR EQUAL. ANGLE STOPS AND SUPPLIES: CHICAGO ABCP LEAD FREE SERIES OR EQUAL. THERMOSTATIC MIXING VALVE: POWERS LFG480 OR EQUAL. TRAP: DEARBORN BRASS H751-3 OR EQUAL. ACCESSIBLE INSULATION WRAP: PLUMBEREX HANDY-SHIELD MAXX 2000 SERIES OR EQUAL. CARRIER: MANUFACTURER'S WALL HANGER/PLATE OR JAY R SMITH COMMERCIAL CARRIER.
S-1	SINK: ACCESSIBLE COUNTER MOUNT SELF-RIMMING BASIN, TYPE 304, 18-8 STAINLESS STEEL, SINGLE CENTER FAUCET PUNCH. 5.5" BOWL DEPTH WITH DRAIN AT REAR CENTER. SEAL BETWEEN FIXTURE AND SURFACE. REFER TO ARCHITECTURAL ELEVATIONS FOR COUNTER HEIGHTS. CONFORMS TO ASME A112.119.3 / CSA B45.4, UPC, IPC, AND ADA STANDARDS. FAUCET, ANGLE STOPS, AND SUPPLIES: 1.5 GPM ACCESSIBLE DECK MOUNTED SENSOR OPERATED DC POWERED GOOSENECK FAUCET, LOW LEAD CAST BRASS WITH CHROME PLATED FINISH, DUAL-BEAM INFRARED SENSOR, SINGLE INLET, VANDAL PROOF PRESSURE COMPENSATING NON-AERATING LAMINAR SPRAY FLOW RESTRICTOR, SINGLE PUNCH CENTERED ROUGH-IN. COMPLETE WITH 6-VOLT LITHIUM CRP2 BATTERY. LISTINGS: A112.18.1/CSA B125.1, ADA ANSI/ICC A117.1, NSF/ANSI 61, 372. LEAD FREE COMMERCIAL GRADE ANGLE STOPS AND SUPPLIES, CHROME PLATED CAST BRASS WITH COMPRESSION VALVE AND VANDAL PROOF LOOSE KEY STOPS. THERMOSTATIC MIXING VALVE: POINT OF USE VALVE, LEAD FREE BRASS BODY, CORROSION RESISTANT, FACTORY PRESET AT 105°F WITH ADJUSTABLE TEMPERATURE LOCKNUT, 125°F MAX OPERATING TEMPERATURE, 120°F - 180°F INCOMING HOT WATER TEMPERATURE RANGE, 40°F - 80°F INCOMING COLD WATER TEMPERATURE RANGE. ASSE 1070 AND CUPC LISTED. MINIMUM FLOW = .5 GPM. MAXIMUM FLOW = 3 GPM AT 25 PSI. TRAP AND SANITARY ROUGH-IN: LA PATTERN P-TRAP, 17 GAUGE BRASS WITH ROUGH BRASS FINISH, BRASS NUTS, AND RUBBER GASKETS. PROVIDE OFFSETS AS REQUIRED. SANITARY ROUGH-IN HEIGHT SHALL ACCOMMODATE WALL CLEANOUT BELOW. ACCESSIBLE INSULATION WRAP: PROVIDE ADA COMPLIANT, FLAME AND SMOKE SAFETY LISTED (ASTM E 84-07) INSULATION WRAP AT WATER SUPPLIES AND SANITARY TRAP FITTINGS BELOW FIXTURE.	BASIN: ELKAY LRAD221955, OR EQUAL. DRAIN: ELKAY LKAD35, OR EQUAL. FAUCET: CHICAGO 116.203.AB.1 OR EQUAL. MIXING VALVE: POWERS LFE480 OR EQUAL. ANGLE STOPS AND SUPPLIES: CHICAGO ABCP LEAD FREE SERIES OR EQUAL. TRAP: DEARBORN BRASS H751-3 OR EQUAL. ACCESSIBLE INSULATION WRAP: PLUMBEREX HANDY-SHIELD MAXX 2000 SERIES OR EQUAL.
TP-1	TRAP PRIMER: NON-POWERED AUTOMATIC TRAP PRIMER, LEAD FREE BRASS BODY, EPDM O-RINGS WITH SILICONE SEALANT, STAINLESS-STEEL MESH SCREEN AND ADJUSTMENT SCREW. 20 - 80 PSI SYSTEM OPERATING RANGE, REQUIRING 10 PSI PRESSURE DROP ACROSS SYSTEM TO ACTIVATE. P2-500 SERVES UP TO TWO DRAINS WITH DU-4/DU-U DISTRIBUTION UNIT. P1-500 SERVES UP TO FOUR DRAINS WITH DU-4/DU-U DISTRIBUTION UNIT.	PRIMER: PPP P1/P2-500 SERIES, SIOX CHIEF, OR EQUAL. DISTRIBUTION UNIT: PPP DU-4/DU-U, OR EQUAL.
WC-1	WATER CLOSET: ACCESSIBLE FLOOR MOUNTED SINGLE PIECE ELONGATED BOWL, WHITE VITREOUS CHINA. ACCOMMODATES HIGH EFFICIENCY TOILET WITH 1.28 GPF FLUSH VALVES. 10" OR 12" ROUGH-IN OPTIONS. 16-1/2" SEAT HEIGHT. ASME A112.19.2 / CSA B45.1 LISTED. FLUSH VALVE: CHROME PLATED BRASS BODY, TOP SPUD CONNECTION, MANUAL OPERATION DIAPHRAGM VALVE WITH VACUUM BREAKER, 1" IPS SCREWDRIVER BACK CHECK, AND VANDAL-RESISTANT STOP CAP. 1.28 GPF. PROVIDE OFFSET TUBE WHERE THERE IS A GRAB BAR OBSTRUCTION. SEAT: WHITE ELONGATED HEAVY DUTY OPEN FRONT SEAT WITH SELF-SUSTAINING HINGE AND ANTI MICROBIAL SURFACE, PLASTIC.	BOWL: AS 3043.001, OR EQUAL. FLUSH VALVE: SLOAN 111-1.28, AS 6047.121.002, ZURN Z6000AV-HET. SEAT: CHURCH 9500CT, OR EQUAL. NOTE: AMERICAN STANDARD AND KOHLER SEATS ARE LIMITED TO THEIR CHINA BOWLS. BEMIS IS AN ACCEPTABLE ALTERNATE FOR EITHER.
WHA-1	WATER HAMMER ARRESTOR: VERTICAL PISTON STYLE ARRESTOR, BARREL-FABRICATED TYPE 'L' HARD DRAWN COPPER BODY, COPPER CAP, COMPOSITE PISTON, MACHINED BRASS THREADED ADAPTER, EPDM SEALS, DESIGNED FOR 250 PSI MAX STATIC PRESSURE, AND 400 PSI MAX SPIKE PRESSURE. NSF/ANSI 61 CERTIFIED. SIZE PER MANUFACTURER PDI SIZING TABLE. ARRESTOR SHALL BE PLACED NEAR TO THE SOURCE OF SHOCK, IN-LINE WITH THE UNOBSTRUCTED SHOCK PATH. VERTICAL AND HORIZONTAL INSTALLATIONS ARE ACCEPTABLE BUT HORIZONTAL INSTALLATIONS PROVIDE THE GREATEST SHOCK PROTECTION.	PPP SC-500A/SC2000F, SIOUX CHIEF 650 SERIES, OR EQUAL.
WCO-1	WALL CLEANOUT: TEE TYPE WALL CLEANOUT WITH CAST IRON BODY, GASKET SEALED OR TAPER THREADED BRONZE PLUG, AND STAINLESS STEEL ACCESS COVER. AVAILABLE IN 2", 3", 4", 5" NO-HUB OUTLET SIZES, AND 2", 3", 4", 5" AND 6" HUB AND SPIGOT OUTLET SIZES.	JR SMITH 4512S, OR EQUAL.

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PROJECT #:230037.00

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

PLUMBING SCHEDULES

SEALS:

REGISTERED PROFESSIONAL ENGINEER
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Exp. 12-30-25
ARCHITECT
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P0.02

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#	KEYNOTES - P1.01
NUMBER	TEXT
1	REPLACE THE EXISTING DRINKING FOUNTAIN WITH NEW. SEE ARCHITECTURAL DRAWINGS FOR REQUIRED INSTALLATION HEIGHTS. MODIFY UTILITY ROUGH-INS TO ACCOMMODATE NEW DRINKING FOUNTAIN CONNECTIONS.

N

1 PLUMBING - SITE PLAN
1" = 60'-0"

CONSULTANT:

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PLUMBING - SITE PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEAL:

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P1.01

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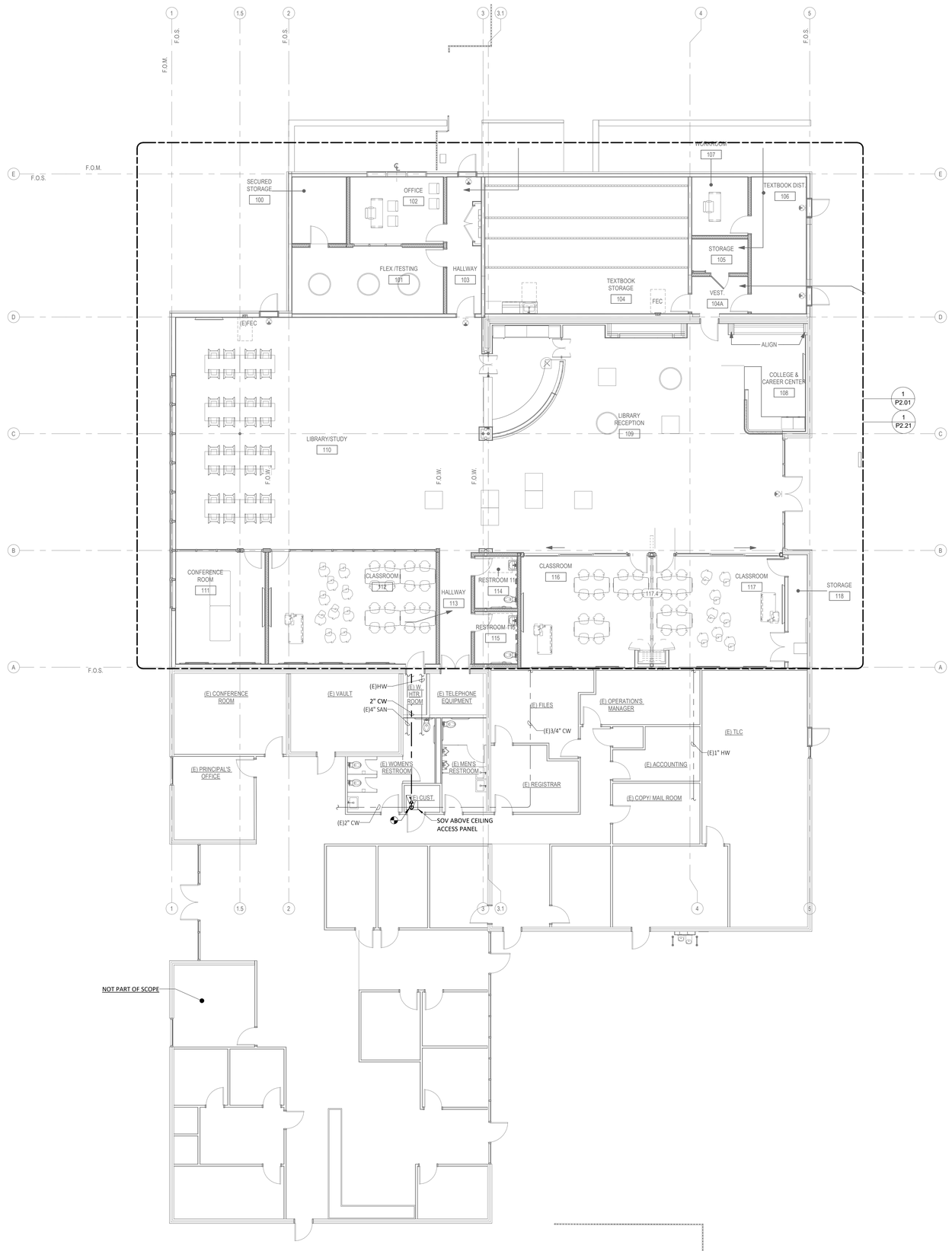

N

1 PLUMBING - FLOOR PLAN - OVERALL
1/8" = 1'-0"

CONSULTANT:

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PROJECT # 230037.00

PLUMBING - FLOOR PLAN - OVERALL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

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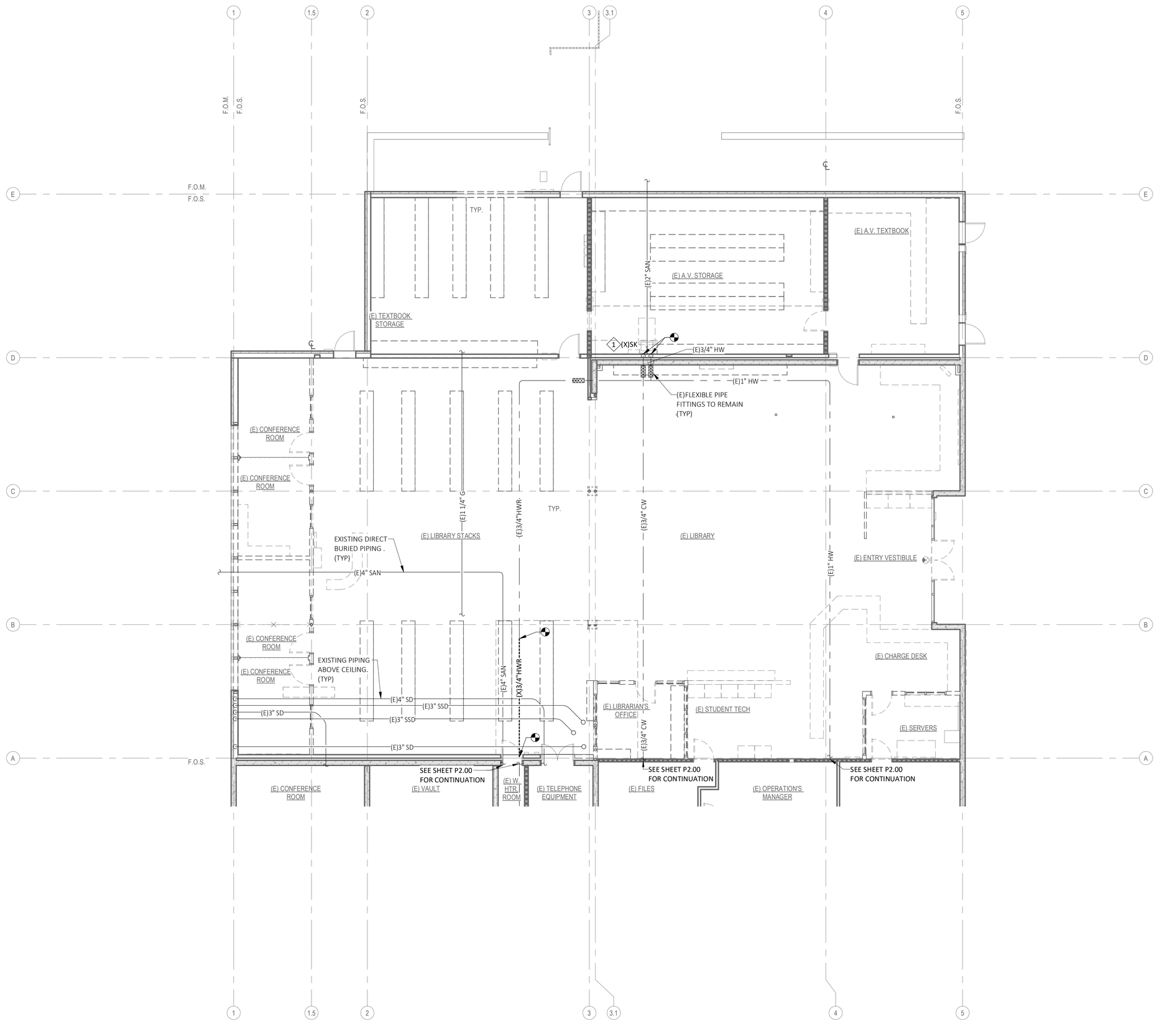
#	KEYNOTES - P2.01
NUMBER	TEXT
1	REMOVE TRAP, TRAP ARM, AND HOT AND COLD WATER SUPPLIES TO BE REPLACED WITH NEW IN REMODEL.



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1 PLUMBING - FLOOR PLAN - DEMOLITION

1/8" = 1'-0"

CONSULTANT:

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PROJECT #:230337.00

PLUMBING - FLOOR PLAN - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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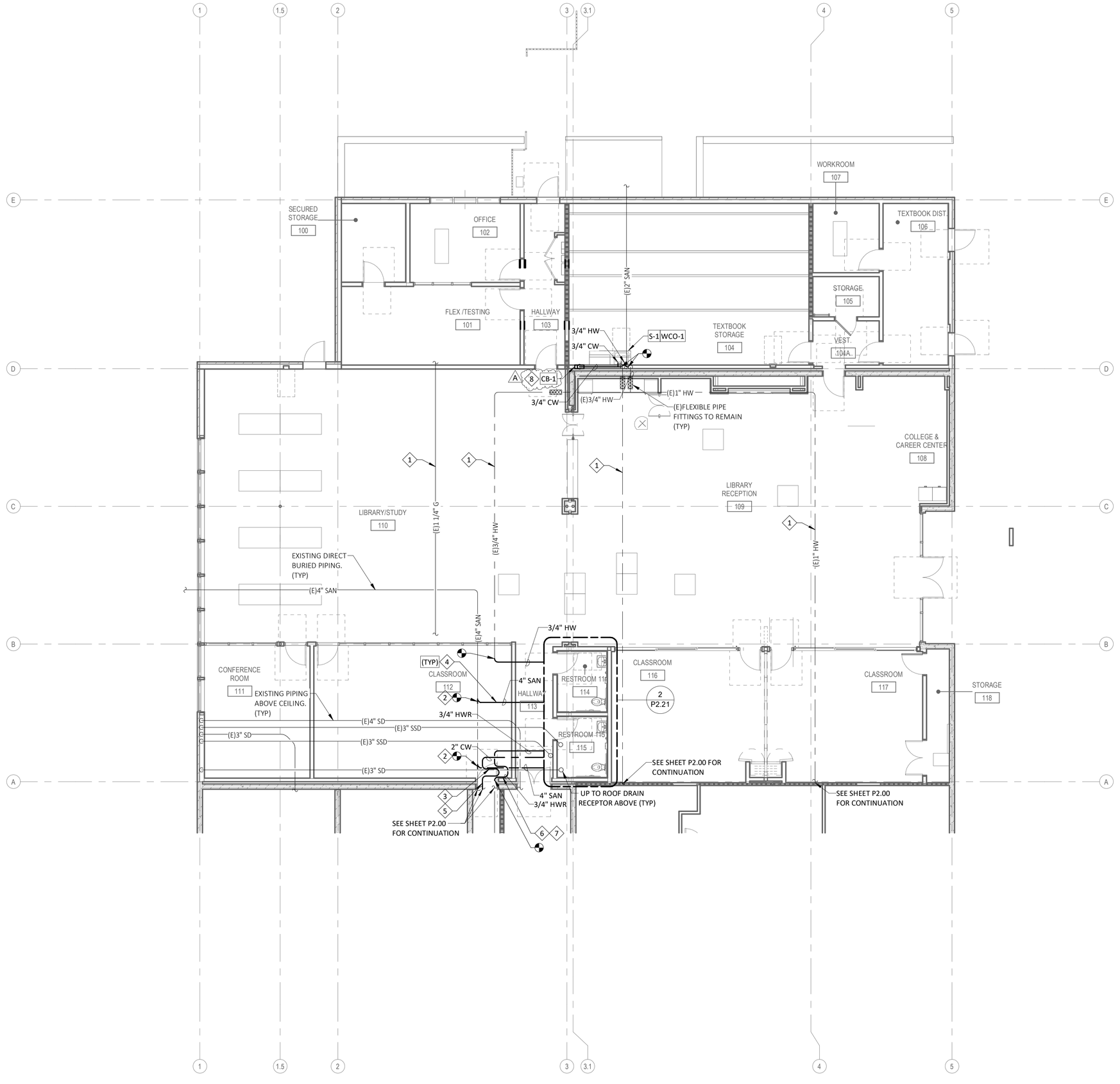

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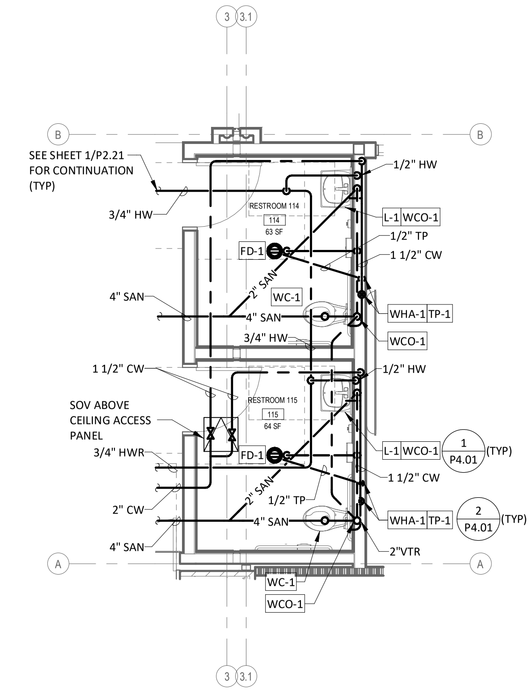
1 PLUMBING - FLOOR PLAN - REMODEL
1/8" = 1'-0"



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2 PLUMBING - ENLARGED RESTROOMS- REMODEL
1/4" = 1'-0"

#	KEYNOTES - P2.21
NUMBER	TEXT
1	PAINT/TREAT EXISTING OVERHEAD PIPING WITHIN THE EXPOSED CEILING SPACE TO MATCH ARCHITECTURAL COLOR SCHEME.
2	FIELD VERIFY EXACT LOCATION AND INVERT VIA CAMERA SCAN PRIOR EXCAVATION.
3	PROVIDE 2" COPPER SEISMIC LOOP, SEE 4/P4.01.
4	SEE A2.01 FOR CONCRETE REMOVAL LIMIT OF WORK. BACKFILL PER SPECIFICATIONS, REPAIR SLAB PER 5/P4.01. (TYP).
5	FIRE SEAL, SEE 9 & 10/P4.01.
6	PROVIDE 3/4" COPPER SEISMIC LOOP, SEE 4/P4.01.
7	FIRE SEAL, SEE 11 & 12/P4.01.
8	PROVIDE 1/4" FLEX WATER LINE FROM WATER FILL CONNECTION BOX TO OWNER FURNISHED, CONTRACTOR INSTALLED REFRIGERATOR.

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PLUMBING - FLOOR PLAN - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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DELTA	DATE:	DESCRIPTION:
1	08/02/2024	ADDENDUM A

P2.21

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System No. W-L-1290

WL 1290

3. Fill, Void or Cavity Material*-Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact and continuous point contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe/wall interface.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606 Flexible Firestop Sealant

The M Rating for the firestop system is dependent on the variables as noted in the Table 1 below.

Table 1

Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Annular Space	Movement	Sealant Depth	F Rating	L Rating
Y	2A	2 in.	Max 1 in.	5%	5/8 in.	1 hr.	N/A
Z	2A	2 in.	1 in.	0.25 in.	5/8 in.	1 hr.	N/A

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

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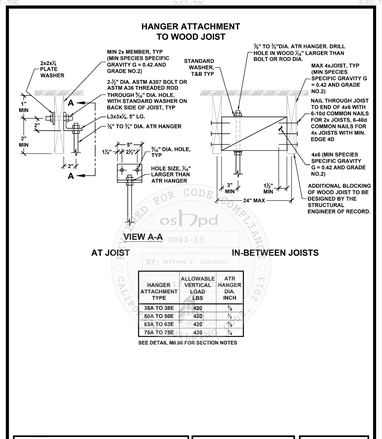
FIRE SEAL OF 1HR RATED WALL FOR NON - INSULATED PIPES (CONTINUED) | NTS | 10

HANGER ATTACHMENT TO WOOD JOIST



HANGER ATTACHMENT TYPE	ALLOWABLE VERTICAL LOAD LBS	ATR HANGER DIA. INCH
38A TO 38E	420	½
50A TO 50E	420	½
63A TO 63E	420	⅝
75A TO 75E	420	¾

SEE DETAIL M0.09 FOR SECTION NOTES

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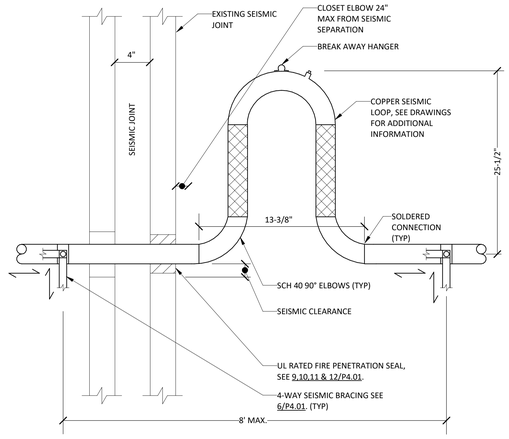
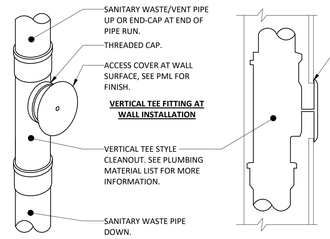
HANGER ROD ATTACHMENT TO STRUCTURE | NTS | 7

SEISMIC FLEXIBLE JOINT



SEISMIC FLEXIBLE JOINT | NTS | 4

WALL CLEANOUTS



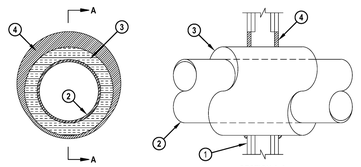
WALL CLEANOUTS | NTS | 1

System No. W-L-5029

WL 5029

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)	F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)
T Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)	FT Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
L Rating At Ambient — 4 CFM/Sq Ft	FH Ratings — 1, 2 and 3 Hr (See Items 1, 2 and 4)
L Rating At 400 F — Less Than 1 CFM/Sq Ft	FTH Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
	L Rating At Ambient — 4 CFM/Sq Ft
	L Rating At 400 F — Less Than 1 CFM/Sq Ft



SECTION A-A

1. Wall Assembly — The 1, 2 or 3 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide for 1 and 2 hr F and FH rating and 3-1/2 in. (89 mm) wide for 3 hr F and FH rating and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 18-5/8 in. (473 mm). The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through-Penetrants — One metallic pipe or tubing to be installed within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper tube shall not exceed 4 in. (102 mm).
   D. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper pipe shall not exceed 4 in. (102 mm).

Hilti Firestop Systems

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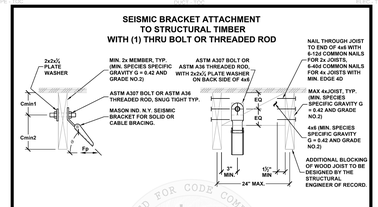
FIRE SEAL OF 1HR RATED WALLS FOR INSULATED PIPES | NTS | 11

SEISMIC BRACE ATTACHMENT TO STRUCTURE



BRACE BRACKET ATTACHMENT TYPE	ALLOWABLE LATERAL LOAD Fp LBS	MAX BRACE RANGE °	ASTM A307 BOLTS OR ASTM A36 THREADED ROD DIA. INCH	MIN. EDGE Cmin1 INCH	MIN. EDGE Cmin2 INCH
38A TO 38D	250	30° - 60°	½	1½	1½
38A TO 38B	150	46° - 60°			
50A TO 50D	300	30° - 45°	½	1½	2
50A TO 50B	170	46° - 60°			
63A TO 63D	340	30° - 45°	⅝	1½	2½
63A TO 63C	200	46° - 60°			

SEE DETAIL N0.00 FOR SECTION NOTES

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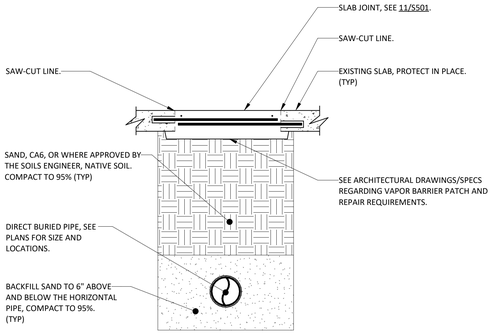
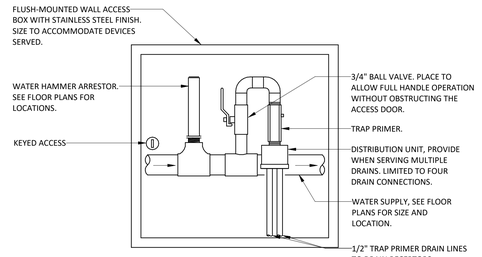
SEISMIC BRACE ATTACHMENT TO STRUCTURE | NTS | 8

CONCRETE SLAB REPAIR AND BACKFILL



CONCRETE SLAB REPAIR AND BACKFILL | NTS | 5

WATER HAMMER ARRESTOR WITHIN WALL



DETAIL NOTES:

1. PROVIDE TRAP PRIMER AND WATER HAMMER ARRESTOR PER 'PML'.
2. SIZE ARRESTOR PER PDI STANDARD.
3. PROVIDE ACCESS PANEL AS DESCRIBED ABOVE AND PER DIVISION 8.
4. ENSURE DRAIN BODIES ARE BEING PRIMED UPON INSTALLATION. REPLACE FAULTY TRAP PRIMERS PRIOR TO OWNER TURNOVER.

WATER HAMMER ARRESTOR WITHIN WALL | NTS | 2

System No. W-L-5029

WL 5029

3. Pipe Covering* — Nom 1, 1-1/2 or 2 in. (25, 38 or 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. For 1 and 2 hr F and FH Ratings, the annular space between insulated penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). For 3 hr F and FH Ratings, the annular space shall be min 0 in. (point contact) to max 1-1/4 in. (32 mm).
   See Pipe and Equipment Covering — Materials (BRGU) category in the Building Material Directory for the names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
   The hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls. For 3 hr rated walls, the hourly T, FT and FTH Ratings when steel and iron pipes are used are 1 hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).
3A. Pipe Covering* — (Not Shown) — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in Item 3 above.
   See Pipe and Equipment Covering — Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. Fill, Void or Cavity Material* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

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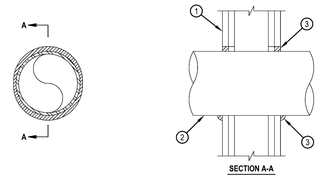
FIRE SEAL OF 1HR RATED WALLS FOR INSULATED PIPES | NTS | 12

System No. W-L-1290

WL 1290

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr
L Rating (Without Movement) at Ambient — Less than 1 CFM/Sq Ft
L Rating (Without Movement) at 400°F — Less than 1 CFM/Sq Ft
M Rating (Movement) — See Table 1



1. Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide for 1 and 2 hr F and FH rating and spaced max 24 in. (610 mm) OC. For M Rating, steel studs to be min 3-5/8 in. (92 mm) wide.
   B. Gypsum Board* — Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Design in the Fire Resistance Directory. Max diam of opening is 5 in. (127 mm). For M Rating, max diam of opening is 4-3/8 in. (111 mm).
   The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The M Rating is applicable only to 1 hr rated walls.
2. Through-Penetrant — One metallic pipe, conduit or tubing installed concentrically or eccentrically within the firestop system. Pipe, conduit or tube to be rigidly supported on both sides of wall assembly. The annular space between the pipe or tube and periphery of the opening shall be min 0 in (point contact) to max 1/2 in. (13 mm). As an option, for through penetrant types 2A, 2B and 2C only in nom diameters not exceeding 4 in. (102 mm), the penetrant can be installed with continuous point contact. As an option, for 1 hr F Rating, the annular space between pipe and opening can be max 1 in. (25 mm) for Item 2A penetrant in 2 in. (51 mm) diam (or smaller). The following types and sizes of metallic pipes, conduit or tube may be used:
   A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
   B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.
   D. Copper Tube — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.
   E. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

Hilti Firestop Systems

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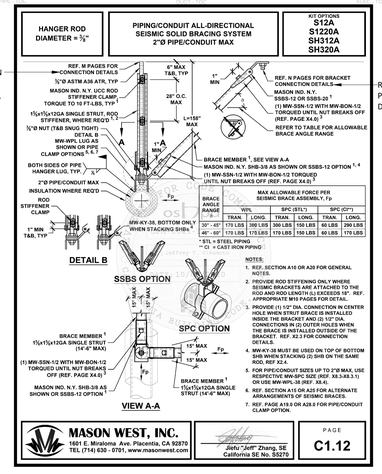
FIRE SEAL OF 1HR RATED WALL FOR NON - INSULATED PIPES | NTS | 9

ALL DIRECTION INDIVIDUAL PIPE SUPPORT



BRACE ANGLE RANGE	MAX ALLOWABLE FORCE PER SEISMIC BRACE ASSEMBLY, Fp					
	WPL	SPC (STL*)		SPC (CI**)		
		TRAN.	LONG.	TRAN.	LONG.	
30° - 45°	170 LBS	300 LBS	300 LBS	150 LBS	60 LBS	290 LBS
46° - 60°	170 LBS	170 LBS	170 LBS	150 LBS	60 LBS	170 LBS

* STL = STEEL PIPING
** CI = CAST IRON PIPING

NOTES:
1. REF. SECTION A10 OR A20 FOR GENERAL NOTES.
2. PROVIDE ROD STIFFENING ONLY WHERE SEISMIC BRACKETS ARE ATTACHED TO THE ROD AND ROD LENGTH (L) EXCEEDS 18". REF. APPROPRIATE M10 PAGES FOR DETAIL.
3. PROVIDE (1) 1/2" DIA. CONNECTION IN CENTER HOLE WHEN STRUT BRACE IS INSTALLED INSIDE THE BRACKET AND (2) 1/2" DIA. CONNECTIONS IN (2) OUTER HOLES WHEN THE BRACE IS INSTALLED OUTSIDE OF THE BRACKET. REF. X2.2 FOR CONNECTION DETAILS.
4. MW-KY-3S MUST BE USED ON TOP OF BOTTOM SHS WHEN STACKING (2) SHS ON THE SAME ROD, REF X2.4.
5. FOR PIPE/CONDUIT SIZES UP TO 2"Ø MAX, USE RESPECTIVE MW-SPC SIZE (REF. X8.3-X8.3.1) OR USE MW-WPL-38 (REF. X8.4).
6. REF. SECTION A15 OR A25 FOR ALTERNATE ARRANGEMENTS OF SEISMIC BRACES.
7. REF. PAGE A19.0 OR A28.0 FOR PIPE/CONDUIT CLAMP OPTION.

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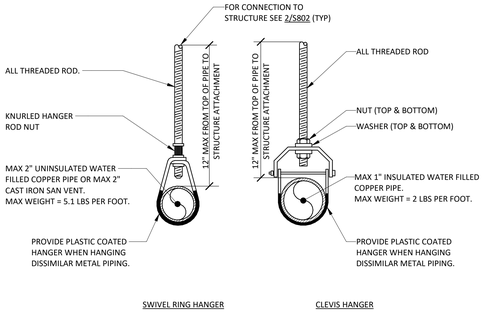
ALL DIRECTION INDIVIDUAL PIPE SUPPORT | NTS | 6

PIPE HANGER



NOTE: SEISMIC BRACING IS NOT REQUIRED PER CBC 1617.11.19 ASCE 7, EXCEPTION 1. HANGER LENGTH SHALL NOT EXCEED 12-INCHES, TOTAL SUPPORTED WEIGHT OF 50LBS FOR SINGLE PIPE SUPPORT.

DETAIL NOTES:

1. SEE SPEC SECTION 220529 FOR HANGER SELECTION BASED ON PIPE MATERIAL AND PIPE SIZES.
2. PROVIDE MINIMUM 1/2" SPACING BETWEEN FINISHED COVERING AND ADJACENT WORK.
3. SEE PIPE HANGER/SUPPORT SPACING SCHEDULE ON SHEET P0.02.
4. SEE ALL THREAD ROD SIZE TABLE ON SHEET P0.02.

PIPE HANGER | NTS | 3

CONSULTANT:

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PO BOX 150
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909.481.8888
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PROJECT # 2300317.00

PLUMBING - DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER ERIC M. DeSPLINTER 38688 Exp.12-30-25 MECHANICAL STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-471(04-0)
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:

P4.01

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ELECTRICAL SYMBOLS:

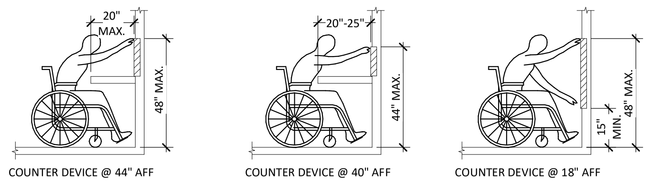
LINETYPE/SYMBOL	DESCRIPTION
#	DUPLEX CONVENIENCE RECEPTACLE 20A, 125V
#	QUAD CONVENIENCE RECEPTACLE 20A, 125V
	DUPLEX CONVENIENCE RECEPTACLE CEILING MOUNTED 20A, 125V
	DUPLEX RECEPTACLE CEILING MOUNTED 20A, 125V - HALF RECEPTACLE CONTROLLED VIA PLUG LOAD CONTROL
	QUAD RECEPTACLE CEILING MOUNTED 20A 125V
#	FLOOR DUPLEX RECEPTACLE 20A, 125V
#	FLOOR QUAD RECEPTACLE 20A, 125V
	FLUSH MOUNTED FLOOR BOX - POWER AND VOICE/DATA RECEPTACLES
J	JUNCTION BOX - FLUSH WALL MOUNT
J	JUNCTION BOX - FLUSH CEILING MOUNT/IN CEILING SPACE
J	JUNCTION BOX - FLUSH FLOOR MOUNT
	ELECTRICAL DISTRIBUTION BOARD
	ELECTRICAL SURFACE MOUNT BRANCH CIRCUIT PANELBOARD
	ELECTRICAL RECESSED MOUNT BRANCH CIRCUIT PANELBOARD
	TRANSFORMER - SEE DRAWINGS FOR EXACT TYPE & SIZE
xxA	DISCONNECT SWITCH - UNFUSED TYPE - SEE DRAWINGS FOR SIZE - (xxA) INDICATES AMPERAGE
xxAF xxAT	DISCONNECT SWITCH - FUSED TYPE - SEE DRAWINGS FOR SIZE - (yyAF) INDICATES FRAME SIZE - (xxAT) INDICATES TRIP SIZE
SM	MOTOR RATED SWITCH

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.
3. STANDARD RECEPTACLE SHALL BE 20A, 125V OTHERWISE NEMA CONFIGURATION SHALL BE NOTED ON EACH OUTLET & RECEPTACLE.
4. ALL OUTLETS & RECEPTACLES SHALL BE FLUSH MOUNT UNLESS OTHERWISE NOTED ON EACH RECEPTACLE. S=SURFACE MOUNT.
5. # = CIRCUIT NUMBER PLACED NEXT TO EACH RECEPTACLE. WP = WEATHER PROOF PLACED NEXT TO EACH RECEPTACLE ACCORDINGLY.

"x" #
A

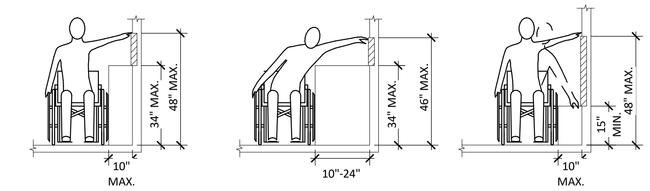
"#" =CIRCUIT NUMBER DESIGNATION
"x" = TYPE OF RECEPTACLE BASED ON ACRONYM

ACRONYMS:
"C" = CONTROLLED VIA PLUG LOAD CONTROL TYPE
"GFCI" = GROUND FAULT CIRCUIT INTERRUPTER TYPE
"TP" = TAMPERPROOF TYPE
"EG" = ELECTRONIC GRADE TYPE
"AFCI" = ARC FAULT CIRCUIT INTERRUPTER TYPE
"A" = INSTALLED ABOVE COUNTER



COUNTER DEVICE @ 44" AFF — COUNTER DEVICE @ 40" AFF — COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - FRONT ACCESS



COUNTER DEVICE @ 44" AFF — COUNTER DEVICE @ 42" AFF — COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - SIDE ACCESS

ELECTRICAL SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
	CONDUIT CONCEALED IN FINISHED AREAS OR EXPOSED IN UNFINISHED AREAS
	CONDUIT STUB - TERMINATE WITH CAP
	CONDUIT CONCEALED IN OR UNDER FLOOR SLAB
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	FLEXIBLE CONNECTION TO EQUIPMENT
WM	WIRE MOLD RACEWAY - SEE SPECS FOR EXACT TYPE
ELEC. PANEL # OF CONDUITS & SIZE # CONDUCTORS & SIZE	HOMERUN TO PANELBOARD - CONDUCTORS QUANTITY, CONDUCTORS SIZE, AND CONDUIT SIZE INDICATED ON EACH HOMERUN
MH	MANHOLE - SEE FLOOR PLANS FOR TYPE AND DIMENSIONS
HH	HANDHOLE - SEE FLOOR PLANS FOR TYPE AND DIMENSIONS
UF	UNDERGROUND ELECTRICAL FEEDER
UT	UNDERGROUND TELEPHONE FEEDER
R	ROOM CONTROLLER
S	LINE VOLTAGE LIGHT SWITCH - SINGLE POLE
S	LOW VOLTAGE LIGHT SWITCH
D	LOW VOLTAGE SWITCH - DIMMER TYPE
OS	LIGHTING OCCUPANCY SENSOR - CEILING MOUNTED
OS HC	LIGHTING OCCUPANCY SENSOR - CEILING MOUNTED - HIGH CEILING TYPE
OS	LIGHTING OCCUPANCY SENSOR - WALL MOUNTED
OS	DAYLIGHT HARVESTING SENSOR - CEILING MOUNTED
ETC	LIGHTING ELECTRONIC TIMER WITH ASTRONOMICAL TIME CLOCK FEATURE - SEE SPECS & FLOOR PLANS FOR EXACT TYPE
	TROFFER - SEE FIXTURE SCHEDULE FOR EXACT TYPE
	WRAPAROUND - SEE FIXTURE SCHEDULE FOR EXACT TYPE
	DOWNLIGHT - SEE FIXTURE SCHEDULE FOR EXACT TYPE
	LINEAR STRIP - SEE FIXTURE SCHEDULE FOR EXACT TYPE
	EMERGENCY BUG EYE - SEE FIXTURE SCHEDULE FOR EXACT TYPE
	EXIT SIGN - SEE FIXTURE SCHEDULE FOR EXACT TYPE - ARROWS, EXIT FACE, & HEIGHT AS INDICATED ON DRAWINGS
	RECESSED MOUNTED FIXTURE
	PENDANT MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
	POLE - HEAD MOUNTED WITH ARM
	POLE - HEAD MOUNTED ON TOP

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.
3. SEE LIGHTING CONTROL DIAGRAMS & SPECS FOR EXACT LIGHTING DEVICE TYPE.
4. LOWERCASE LETTER ABOVE LIGHT SWITCH SYMBOL SHALL INDICATE SWITCH LEGS REQUIRED. THIS LETTER SHALL LINK LIGHT FIXTURES TO BE CONTROLLED WITH SWITCH.

a,b..
S
"x"

"a" = SWITCH LEG/SWITCH CONTROL
"x" = TYPE OF SWITCH BASED ON ACRONYM

ACRONYMS:
"O" = INTEGRAL OCCUPANCY SENSOR
"H" = HORIZONTALLY MOUNTED, WITH ON POSITION TO THE LEFT
"K" = KEY OPERATED
"KP" = KEY OPERATED WITH PILOT LIGHT ON WHEN LIGHTS ARE ON

"T" = WITH TIMER
"PROJ" = TO CONTROL PROJECTION SCREEN
"G" = GLOWS IN OFF POSITION

1a 1a
A A

"A" = STANDARD FIXTURE TYPE. REFER TO FIXTURE SCHEDULE
"1" = CIRCUIT NUMBER
"a" = SWITCH LEG/SWITCH CONTROL
THIS LOWERCASE LETTER SHALL LINK LIGHT SWITCH CONTROLLING LIGHT FIXTURE.

+xx AFF +xx AFF

"xx" = STANDARD FIXTURE MOUNTING HEIGHT
SEE ARCHITECT DRAWINGS WHEN HEIGHT IS NOT SHOWN ON ELECTRICAL PLANS.

STANDARD LUMINAIRE PROVIDING EMERGENCY LIGHTING - FIXTURE POWERED WITH INTEGRAL BATTERY OR EXTERIOR EMERGENCY POWER SOURCE.

PROPOSED DIVISION OF RESPONSIBILITY:

1. CONTRACTOR SHALL FURNISH ALL SUPPORTING EQUIPMENT SUCH AS BACK-BOXES, CONDUIT, & SLEEVES AS REQUIRED FOR TECHNOLOGY EQUIPMENT. SEE TECHNOLOGY DRAWINGS AND SPECS FOR ADDITIONAL INFORMATION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING COST OF TECHNOLOGY ROUGH-IN IN THEIR BID.
2. ALL CONDUIT FOR TECHNOLOGY SITE SERVICE SHALL BE PROVIDED BY E.C. INCLUDING, BUT IS NOT LIMITED TO, MANHOLES & HANDHOLES.
3. ALL SLEEVES REQUIRED FOR TECHNOLOGY EQUIPMENT SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH TECHNOLOGY CONTRACTOR FOR MATCHING TYPE & COLOR OF FACEPLATES. OBTAIN ARCHITECT AND OWNER APPROVAL ON TYPE AND COLOR PRIOR TO ORDERING FACEPLATES.
5. PROVIDE CONDUIT PATHWAYS FOR FIRE ALARM DEVICE INSTALLATION.

DSA ANCHORAGE NOTES:

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 CHAPTER 13, 26 AND 30:
1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

[ ]MP[ ]MD[ ]PP[X]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 (OSHPD) PRE-APPROVAL (OPM#) #OPM-#####-##, AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

ELECTRICAL ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
AFG	ABOVE FINISHED GRADE
CM	COUNTER MOUNTED
FBO	FURNISHED BY OTHERS
FF	FINISHED FLOOR
IG	ISOLATED GROUND
PED	PEDESTAL MOUNTED
UNO	UNLESS NOTED OTHERWISE
+XX	DIMENSIONED HEIGHT ABOVE FINISHED FLOOR
-XX	DIMENSIONED HEIGHT BELOW FINISHED FLOOR
1P	ONE POLE
1W	ONE WIRE
2P	TWO POLE
2W	TWO WIRE
3P	THREE POLE
3W	THREE WIRE
AC	ALTERNATING CURRENT
ADJ	ADJUSTABLE
AF	AMP FRAME
AFC	AVAILABLE FAULT CURRENT
AFCI	AVAILABLE FAULT CURRENT INTERRUPTER
AHU	AIR-HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
AT	AMP TRIP
C.O.	CONDUIT ONLY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
D	DEDICATED DEVICE ON INDIVIDUAL BRANCH CIRCUIT. CIRCUIT CAN BE COMBINED WITH OTHER CIRCUITS FOR HOMERUNNING TO PANEL.
DISC	DISCONNECT
DN	DOWN
EM	EQUIPMENT POWERED WITH EMERGENCY SOURCE-INTERNAL OR EXTERNAL, UNLESS NOTED OTHERWISE
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FSD	FIRE SMOKE DAMPER
FT, '	FOOT OR FEET
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
IN., "	INCH OR INCHES
INV	EMERGENCY INVERTER
J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERE
KW	KILOWATT
LTG	LIGHTING
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO., #	NUMBER
NTS	NOT TO SCALE
RTU	ROOFTOP UNIT
SD	SMOKE DAMPER
SPEC	SPECIFICATION
TYP	TYPICAL
U.C.	UNDERGROUND CONDUIT
UTR	UP THRU ROOF
WP	WEATHERPROOF

NOTES:
1. NOT ALL ABBREVIATIONS MAY APPLY.
2. ELECTRICAL SCHEDULES CONTAIN EQUIPMENT TAG ABBREVIATIONS THAT ARE HEREBY INCORPORATED INTO THE ABBREVIATION LIST.
3. SEE OTHER DISCIPLINE DRAWINGS WITHIN THE CONSTRUCTION DOCUMENTS FOR ABBREVIATIONS NOT DEFINED ABOVE OR IN ELECTRICAL SCHEDULES.

GENERAL NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. REVIEW ALL PROJECT DOCUMENTS INCLUDING SPECS AND DRAWINGS PERTAINING TO ALL DISCIPLINES PRIOR TO SUBMITTING A BID. SUBMIT PRE-BID REQUEST FOR INFORMATION FOR ITEMS IN QUESTION AND/OR CONFLICTS FOUND.
3. DRAWINGS SHOW THE DESIGN INTENT DIAGRAMMATICALLY. THEY DO NOT SHOW THE EXACT UTILITY ROUTING NOR EVERY ELBOW, OFFSET, ETC. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THEIR SYSTEMS TO AVOID CONFLICT WITH THE STRUCTURE AND OTHER DISCIPLINES. THE COST FOR SUCH ADJUSTMENTS SHALL BE INCLUDED IN THE BID.
4. OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR WORK PERFORMED.
5. OBTAIN UTILITY PURVEYOR REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT OR PERFORMING WORK.
6. THE G.C. TEAM SHALL LEAD THE SUBCONTRACTORS IN PROVIDING A COORDINATED SET OF SHOP DRAWINGS. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
7. PROVIDE FIRESTOPPING FOR ALL UTILITY PENETRATIONS THRU FIRE-RATED ASSEMBLIES.
8. COORDINATE FRAMING REQUIREMENTS FOR ACCESS PANELS AND EQUIPMENT/PANEL SUPPORTS WITH G.C. PRIOR TO SUBMITTING BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECTION OF CONSTRUCTION DEFICIENCIES LISTED ON THE JOB SITE OBSERVATION REPORT. RETURN THE JOB SITE OBSERVATION REPORT TO A/E WITH DEFICIENCIES SIGNED OFF. PROVIDE PHOTOGRAPHIC AND/OR VIDEO EVIDENCE OF CORRECTED DEFICIENCIES IF REQUESTED BY THE ENGINEER.
10. PROVIDE CLOSEOUT DOCUMENTATION UPON COMPLETION OF PROJECT. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
11. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH CODE. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.

ELECTRICAL NOTES:

1. ELECTRICAL WORK SHALL BE CONSTRUCTED IN A PROFESSIONAL MANNER. COMPONENTS SHALL BE CLEANED PRIOR TO OWNER TURNOVER.
2. THE SCHEDULED EQUIPMENT SHALL BE USED AS THE BASIS OF DESIGN. MODEL NUMBERS ARE PROVIDED FOR REFERENCE ONLY. EQUIPMENT SHALL MEET SPECIFIED PERFORMANCE. THE CONTRACTOR SHALL IDENTIFY ALL SELECTED OPTIONS IN THE SUBMITTAL.
3. IF A CONTRACTOR PROVIDES EQUIPMENT OTHER THAN THE BASIS OF DESIGN, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT. THAT INCLUDES, BUT IS NOT LIMITED TO, AGENCY FEES FOR REVIEW OF CHANGES, STRUCTURAL MODIFICATIONS FOR INCREASED WEIGHT AND, ELECTRICAL EQUIPMENT, WIRING, CONDUIT, AND BREAKER CHANGES FOR DIFFERENT ELECTRICAL REQUIREMENTS.
4. PROVIDE CONCRETE EQUIPMENT PADS FOR FLOOR-MOUNTED EQUIPMENT UNLESS OTHERWISE NOTED. SEE PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
5. SEE SPEC SECTIONS 26 0533 AND FOR CONDUIT/RACEWAY SYSTEM INSTALLATION AND CLEANING REQUIREMENTS.
6. PROVIDE CONDUIT OR RACEWAY EXPANSION JOINT THAT ACCOMMODATES THE BUILDING MOVEMENT WHERE CONDUIT OR RACEWAY CROSSES BUILDING EXPANSION JOINT.
7. PAINT INTERIOR EXPOSED CONDUIT/RACEWAYS, PULL BOXES, AND ASSOCIATED HANGERS/SUPPORTS LOCATED IN OCCUPIED SPACES TO MATCH THE SURROUNDING ARCHITECTURAL COLOR SCHEME. PAINT EXTERIOR CONDUIT/RACEWAYS, PULL BOXES, AND ASSOCIATED HANGERS/SUPPORTS ADJACENT TO EXTERIOR WALL TO MATCH WALL COLOR. FINAL COLORS SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER. SEE SPEC SECTION 26 0500 FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE IDENTIFICATION FOR CONDUIT/RACEWAYS, PULL BOXES, AND EQUIPMENT PER SPEC SECTION 26 0553.
9. CONDUIT/RACEWAY SHALL NOT PASS THRU NOR UNDER DATA ROOMS, ELEVATOR MACHINE ROOMS, ELEVATOR HOISTWAYS, SKYLIGHTS, AND ROOF ACCESS HATCHES.
10. PROVIDE PULL BOXES SHALL BE ACCESSIBLE. PROVIDE KEYED ACCESS PANELS WHERE PULL BOXES HAVE BEEN LOCATED IN CONCEALED AREAS. ACCESS PANEL SIZE SHALL BE LARGE ENOUGH TO ACCESS EACH PULL BOX.
11. ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF LIGHTING FIXTURES AND LIGHTING DEVICES WITH MECHANICAL AND FIRE PROTECTION, AND FIRE ALARM DEVICES.
12. E.C. SHALL VERIFY U.L. LISTING AND PROCEED WITH FINAL CONNECTION.
13. ELECTRICAL OUTLETS INSTALLED ON OPPOSITE SIDES OF FIRE-RATED ASSEMBLIES SHALL BE SEPARATED BY 24". OPENINGS SHALL BE FIRESTOPPED WITH THE SPECIFIED MATERIAL.
14. ALL CONDUIT SERVING ROOF-MOUNTED HVAC EQUIPMENT AND MAINTENANCE RECEPTACLES SHALL BE ROUTED IN CEILING SPACE. CONDUIT SHALL PENETRATE ROOF AT EQUIPMENT LOCATIONS ONLY. NO CONDUIT SHALL BE INSTALLED HORIZONTALLY ACROSS ROOF SURFACE.
15. WHERE NEW CIRCUIT BREAKERS ARE TO BE ADDED TO EXISTING ELECTRICAL EQUIPMENT, THEY SHALL BE OF THE SAME MANUFACTURER AND DESIGN AS THE EXISTING BREAKERS AND SHALL BE OF THE SIZES INDICATED.

RENOVATION NOTES:

1. DEMOLITION WORK SHALL BE PERFORMED AS DESCRIBED WITHIN SPEC SECTION 26 0505 AND THE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMISSION TO VERIFY ALL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. LOCATIONS OF EXISTING ELECTRICAL SYSTEMS.
   B. LOCATIONS OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, TECHNOLOGY, FIRE PROTECTION, AND FIRE ALARM SYSTEMS.
   C. EXISTING SURFACES WHICH REQUIRE ALTERING.
   D. EXISTING MAIN SWITCHGEAR CONDITIONS.
3. NOTIFY OWNER OF REQUIRED SYSTEM SHUTDOWNS AT LEAST TWO WEEKS PRIOR TO SHUTDOWN. EXACT SHUTDOWN TIME AND PROCEDURE SHALL BE COORDINATED WITH OWNER AT LEAST 96 HOURS PRIOR TO SHUTDOWN.
4. WHEN ELECTRICAL CONDUIT OR EQUIPMENT ARE NOTATED TO BE PERMANENTLY REMOVED THEIR ASSOCIATED COMPONENTS SHALL ALSO BE REMOVED INCLUDING HANGERS, SUPPORTS, AND ACCESSORIES.
5. COORDINATE THE DISCONNECTION AND REMOVAL OF THE POWERED SYSTEMS WITH THE M.C., P.C., T.C., F.A.C., AND F.P.C. WHEN REMOVING POWERED EQUIPMENT.
6. REPAIR EXISTING FLOORS, WALLS, AND CEILINGS IN ALTERED AREAS TO MATCH EXISTING.
7. THE CONTRACTOR SHALL NEATLY SAW CUT SECTIONS OF THE CONCRETE TO ACCESS THE WORK BELOW GRADE, REMOVE PORTIONS OF DEMOLISHED CONCRETE FROM THE SITE. REPAIR THE EXISTING SLAB PER ELECTRICAL/STRUCTURAL DETAILS WITHIN THE DRAWING SET.
8. E.C. SHALL CONFIRM THAT ONCE POWER IS RESTORED, (E) ELECTRICAL DEVICES DOWNSTREAM OF REPLACED DEVICES ARE OPERATIONAL WITH ADEQUATE ELECTRICAL CONTINUITY.
9. CONNECT TO EXISTING UTILITIES FOR A COMPLETE INSTALLATION.
10. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

ELECTRICAL SHEET INDEX:

Sheet Number	Sheet Name
E0.01	ELECTRICAL COVER SHEET
E0.02	ELECTRICAL - SCHEDULES
E1.01	ELECTRICAL - SITE PLAN
E2.00	ELECTRICAL - FLOOR PLAN - OVERALL
E2.01	ELECTRICAL - FLOOR PLAN - LIGHTING - DEMOLITION
E2.02	ELECTRICAL - FLOOR PLAN - POWER - DEMOLITION
E2.11	ELECTRICAL - FLOOR PLAN - LIGHTING - REMODEL
E2.21	ELECTRICAL - FLOOR PLAN - POWER - REMODEL
E4.01	ELECTRICAL - DETAILS
E5.01	T24 DOCUMENTATION

CODES AND STANDARDS:

EDITION	REFERENCE CODE/STANDARD
2022	CALIFORNIA ADMINISTRATIVE CODE, (CCR, TITLE 24, PART 1)
2022	CALIFORNIA BUILDING CODE, (CCR, TITLE 24, PART 2)
2022	CALIFORNIA ELECTRICAL CODE, (CCR, TITLE 24, PART 3)
2022	CALIFORNIA MECHANICAL CODE, (CCR, TITLE 24, PART 4)
2022	CALIFORNIA PLUMBING CODE, (CCR, TITLE 24, PART 5)
2022	CALIFORNIA ENERGY CODE, (CCR, TITLE 24, PART 6)
2022	CALIFORNIA HISTORICAL BUILDING CODE, (CCR, TITLE 24, PART 8)
2022	CALIFORNIA FIRE CODE, (CCR, TITLE 24, PART 9)
2022	CALIFORNIA EXISTING BUILDING CODE, (CCR, TITLE 24, PART 10)
2022	CALIFORNIA GREEN BUILDING STANDARDS, (CCR, TITLE 24, PART 11)
2022	CALIFORNIA REFERENCED STANDARDS CODE, (CCR, TITLE 24, PART 12)
2022	STANDARD FOR INSTALLATION OF FIRE SPRINKLER SYSTEMS OF CALIFORNIA, (ADOPTS NFPA 13, 2022. WITH AMENDMENTS)
2018	NFPA 54-NATIONAL FUEL GAS CODE
2022	NFPA 72-NATIONAL FIRE ALARM AND SIGNALING CODE

CCR-CALIFORNIA CODE OF REGULATIONS
NFPA-NATIONAL FIRE PROTECTION AGENCY

GENERAL LEGEND:

SYMBOL	DESCRIPTION
## ####	DETAIL CALL-OUT SYMBOL
###-#	EQUIPMENT TAG
#	KEYNOTE SYMBOL
	POINT OF CONNECTION OR DISCONNECTION
## ####	SECTION CUT CALL-OUT SYMBOL
## ####	ENLARGED PLAN CALL-OUT SYMBOL
LINETYPE	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW CONSTRUCTION
(E)	EXISTING TO REMAIN
(X)	EXISTING TO BE REMOVED

FIRE-RATED ASSEMBLY LEGEND:

LINETYPE/SYMBOL	DESCRIPTION
	ONE HOUR FIRE PARTITION

CONTRACTOR ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.A.C.	FIRE ALARM CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROL CONTRACTOR

CONSULTANT:
ASTRAL ENGINEERS, PC
PO BOX 190
RANCHO CUCAMONGA, CA 91729
909.477.1555
www.astraleng.com
PROJECT #:230037.00

ELECTRICAL COVER SHEET
WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

SEALS:
REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-21704-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DEL'D: DATE: DESCRIPTION:
1 08/22/2024 ADDENDUM A

E0.01

Autodesk Docs://230037.00_WVUSD Walnut HS Library Media Center/2MEPTF4FP_230037.00_WVUSD Walnut HS Library Media Center.rvt
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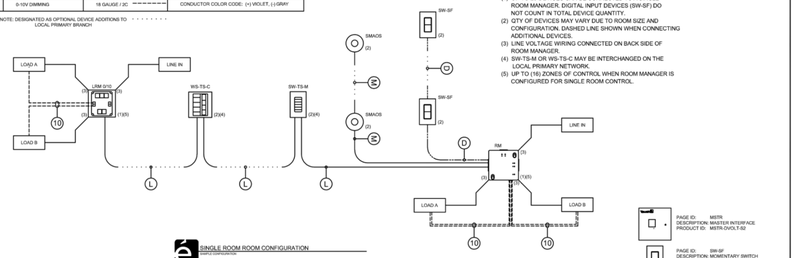
CABLE TYPE SCHEDULE

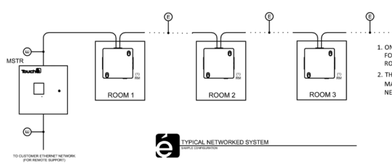
ID	DESCRIPTION	TYPE	NOTES
E	ETHERNET	CAT 5 (MIN)	MAXIMUM SEGMENT LENGTH IS 100 METERS (328').
L	LOCAL PRIMARY NETWORK	CAT 5 (MIN)	TOTAL LOCAL BRANCH LENGTH NOT TO EXCEED 1000'.
M	SMART BUS NETWORK	CAT 5 (MIN)	TOTAL SMART BUS LENGTH NOT TO EXCEED 490' (BOOSTER NOT PERMITTED)
D	DIGITAL INPUT CABLE	18 GAUGE / 2C	
10	0-10V DIMMING	18 GAUGE / 2C	CONDUCTOR COLOR CODE: (+) VIOLET, (-) GRAY

NOTE: DESIGNATED AS OPTIONAL DEVICE ADDITIONS TO LOCAL PRIMARY BRANCH



SINGLE ROOM CONFIGURATION

(1) UP TO 20 DEVICES CAN BE CONNECTED TO A SINGLE ROOM MANAGER. DIGITAL INPUT DEVICES (SW-SF) DO NOT COUNT IN TOTAL DEVICE QUANTITY.
(2) QTY OF DEVICES MAY VARY DUE TO ROOM SIZE AND CONFIGURATION. DASHED LINE SHOWN WHEN CONNECTING ADDITIONAL DEVICES.
(3) LINE VOLTAGE WIRING CONNECTED ON BACK SIDE OF ROOM MANAGER.
(4) SW-TS-M OR WS-TS-C MAY BE INTERCHANGED ON THE LOCAL PRIMARY NETWORK.
(5) UP TO (16) ZONES OF CONTROL WHEN ROOM MANAGER IS CONFIGURED FOR SINGLE ROOM CONTROL.



TYPICAL NETWORKED SYSTEM

1. ONLY SHOWS ROOM MANAGER FOR CLARITY. SEE ABOVE DETAILS FOR INFORMATION CONCERNING CONNECTIVITY OF DEVICES WITHIN ROOM.
2. THIS DETAIL IS INTENDED TO PROVIDE AN OVERVIEW OF HOW ROOM MANAGERS ARE CONNECTED IN A TOUCHÉ NETWORKED SOLUTION. NETWORKING MAY NOT BE REQUIRED FOR YOUR APPLICATION.

PAGE ID: MSTR
DESCRIPTION: MASTER INTERFACE
PRODUCT ID: MSTR-OVS-T-ED

PAGE ID: SW-SF
DESCRIPTION: MOMENTARY SWITCH
PRODUCT ID: SW-SF-XXX

PAGE ID: SW-TS-M
DESCRIPTION: MONO/CHROME TOUCH SCREEN
PRODUCT ID: SW-TS-M

PAGE ID: WS-TS-C
DESCRIPTION: COLOR WALL STATION
PRODUCT ID: WS-TS-C-XXX

PAGE ID: SMAOS
DESCRIPTION: SMAOS CEILING SENSOR
PRODUCT ID: SMAOS-(DF)-360-(LH)-(FB)-W

PAGE ID: LRM SYS
DESCRIPTION: LOCAL RELAY MODULE
PRODUCT ID: LRM-(P-1)(SW-6/10)

PAGE ID: RM
DESCRIPTION: ROOM MANAGER
PRODUCT ID: RM

ROOM MANAGER INSTALLATION INSTRUCTIONS

www.touchecontrols.com
phone: 1.888.841.4358

Touché LIGHTING CONTROL

NOTE: TOUCHE LIGHTING IS THE BASIS OF DESIGN FOR LIGHTING CONTROLS. SUBMIT TOUCHE LIGHTING OR APPROVED EQUAL.

Existing Branch Panel: AHA

Location: ELEC. ROOM
Supply From: DISTRIBUITION BOARD "DSCA"
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	EXISTING	20 A	1	2560	860		**1**	**20 A**	**Lighting**	**2**
3	EXISTING	20 A	1		2880	1366	**1**	**20 A**	**Lighting**	**4**
5	EXISTING	20 A	1			3600 3440	1	20 A	(E) ROOM #A40, A41	6
7	EXISTING	20 A	1	2240	2400		1	20 A	EXISTING	8
9	EXISTING	20 A	1		3520	2320	1	20 A	EXISTING	10
11	EXISTING EXTERIOR	20 A	1			2160 2640	1	20 A	EXISTING	12
13	EXISTING EXTERIOR	20 A	1	1080	1104		**1**	**20 A**	**Lighting**	**14**
15	SPACE	--	1		--	0	1	20 A	SPARE	16
17	SPACE	--	1			-- 0	1	20 A	SPARE	18
19				13000	18000					20
21	EXISTING A/C UNIT	40 A	3		13000	18000	3	70 A	EXISTING A/C UNIT	22
23						13000 18000				24
25				6600	986		**1**	**20 A**	**Lighting**	**26**
27	EXISTING A/C UNIT	20 A	3		6600	--	1	--	SPACE	28
29						6600 --	1	--	SPACE	30
31	SPACE	--	1	--	--		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:		48693 VA	47620 VA	49440 VA				
		Total Amps:		176 A	172 A	179 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
				Total Conn. Load: 145749 VA
				Total Est. Demand: 146729 VA
				Total Conn. Current: 175 A
				Total Est. Demand Current: 176 A

Existing Branch Panel: ELA1

Location: ELECT.RM.
Supply From: PANEL"ELA1"
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 100 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	(E) GEN. PWR.	20 A	1	1080	1440		1	20 A	(E) GEN. PWR.	2
3	(E) GEN. PWR.	20 A	1		1080	1260	1	20 A	(E) GEN. PWR.	4
5	(E) GEN. PWR.	20 A	1			1080 1260	1	20 A	(E) GEN. PWR.	6
7	(E) GEN. PWR.	20 A	1	1080	1080		1	20 A	(E) GEN. PWR.	8
9	(E) GEN. PWR.	20 A	1		1080	1080	1	20 A	(E) GEN. PWR.	10
11	(E) GEN. PWR.	20 A	1			1080 1080	1	20 A	(E) GEN. PWR.	12
13	SPACE	--	1	--	1080		1	20 A	(E) GEN. PWR.	14
15	SPACE	--	1		--	1080	1	20 A	(E) GEN. PWR.	16
17	SPACE	--	1			-- 1080	1	20 A	(E) GEN. PWR.	18
19	SPACE	--	1	--	--		1	--	SPACE	20
21	SPACE	--	1		--	--	1	--	SPACE	22
23	SPACE	--	1			-- 500	1	20 A	DRINKING WATER FOUNTAIN (DF-1)	24
		Total Load:		5760 VA	5580 VA	6080 VA				
		Total Amps:		48 A	47 A	51 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Spare	16920 VA	100.00%	16920 VA	**Total Conn. Load:** 17420 VA
Receptacle	500 VA	100.00%	500 VA	**Total Est. Demand:** 17420 VA
				Total Conn. Current: 48 A
				Total Est. Demand Current: 48 A

Existing Branch Panel: ALA

Location: (E) CUST.
Supply From: PANEL "ALB"
Mounting: SURFACE
Enclosure: TYPE 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MLO
Mains Rating: 150 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	(E) LTS-GIRLS & BOYS TLT	20 A	1	0	0		1	20 A	(E) 5 LTS GIRLS REST RM	2
3	(E) CONTROL RM DYNAAM RACK 3&4	20 A	1		0	0	1	20 A	(E) 4 RECEPTS - GIRLS & NURSE	4
5	(E) CONTROL RM DYNAAM RACK 1&2	20 A	1			0 0	1	20 A	(E) 4 RECEPTS NURSE	6
7	(E) 4 RECPTS. COUNSELORS	20 A	1	0	0		1	20 A	(E) 5 # ASST. PRINC.	8
9	(E) 4 RECPTS. WAITING & COUNSEL	20 A	1		0	0	1	20 A	(E) 2 RECPTS ASST PRINCE	10
11	(E) 4 RECEPTS.WAITING AREA	20 A	1			0 0	1	20 A	(E) 1 RECPT ASSST. PRINC.	12
13	(E) 4 RECEPTS. ATTENDANCE AREA	20 A	1	0	0		1	20 A	(E) 4 RECEPTS. PRINC. & PUBLIC	14
15	(E) 4 RECEPTS. ATTENDANCE AREA	20 A	1		0	0	1	20 A	(E) 4 RECEPTS. PRINC. & WORK RM.	16
17	(E) 4 COUNSELORS & WAITING	20 A	1			0 0	1	20 A	(E) 4 RECEPT. PUBLIC & WORK RM.	18
19	(E) 4 RECEPTS ATTENANCE AREA	20 A	1	0	0		1	20 A	(E) 1 REC. TEL. ROOM.	20
21	(E) 4 RECEPTS, MAIL & STORAG	20 A	1		0	0	1	20 A	(E) 1 REC. TEL. ROOM.	22
23	(E) 4 RECEPTS. WOMENS REST	20 A	1			0 0	1	20 A	(E) 1 REC. OUTSUDE N.WEST	24
25	(E) 4 RECEPTS. WAITING & SERVICE	20 A	1	0	0		1	20 A	(E) 1 REC. CUSTODIAN & 4 RECPT....	26
27	(E) 4 RECEPTS. ROF. LIBRARY	20 A	1		0	0	1	20 A	(E) GEN. PWR.	28
29	(E) 4 RECEPTS. WORK ROOM	20 A	1			0 0	1	20 A	(E) PLUG-IN STRIP LIBRARY	30
31	(E) 4 RECEPTS. & AUDIO	20 A	1	0	0		1	20 A	(E) LIBRARY PLUG IN STRIP. SOUTH	32
33	(E) 4 RECEPTS, AUDIO V. AREA	20 A	1		0	0	1	20 A	(E) 1 RECEPT PROF. LIBRARY	34
35	(E) 1 RECEPTS. OUTSIDE SOUTH	20 A	1			0 0	1	20 A	(E) 4 RECEPT. CONF	36
37	**MICROWAVE**	**20 A**	**1**	1000	0		1	20 A	(E) 1 RECEPT. OUTSIDE NORTH	38
39	**FRIDGE**	**20 A**	**1**		1000	0	1	20 A	(E) 4 RECEPTS, CONF, NORTH	40
41	(E) LOAD	20 A	1			0 0	1	20 A	(E) LOAD	42
43	(E) LOAD	20 A	1	0	0		1	20 A	(E) LOAD	44
45	(E) LOAD	20 A	1		0	0	1	20 A	(E) LOAD	46
47	(E) LOAD	20 A	1			0 0	1	20 A	(E) LOAD	48
49	(E) LOAD	20 A	1	0	0		1	20 A	(E) LOAD	50
51	(E) LOAD	20 A	1		0	0	1	20 A	(E) LOAD	52
53	(E) LOAD	20 A	1			0 0	2	30 A	COPY MACHINE	54
55	(E) LOAD	20 A	1	0	0					56
57	(E) LOAD	20 A	1		0	0	1	20 A	(E) LOAD	58
59	(E) LOAD	100 A	2			0 0	1	20 A	(E) LOAD	60
61				0	0		1	20 A	(E) LOAD	62
63	(E) LOAD	100 A	2		0	0	1	20 A	(E) LOAD	64
65						0 0	1	20 A	(E) LOAD	66
		Total Load:		1000 VA	1000 VA	0 VA				
		Total Amps:		10 A	10 A	0 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
Receptacle	2000 VA	100.00%	2000 VA	**Total Conn. Load:** 2000 VA
				Total Est. Demand: 2000 VA
				Total Conn. Current: 6 A
				Total Est. Demand Current: 6 A

Existing Branch Panel: ALB

Location: ROOM "A47"
Supply From: DISTRIBUION PANEL "DESA" VIA TR "TA"
Mounting: Surface
Enclosure: Type 1

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating: EXISTING
Mains Type: MCB
Mains Rating: 225 A
MCB Rating: 225 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	**Receptacle**	**20 A**	**1**	1200	3012					2
3	**Receptacle**	**20 A**	**1**		840	3012	3	40 A	(E) RM AC UNIT 02 (AC-2)	4
5	**Receptacle**	**20 A**	**1**			1080 3012				6
7	**VIDEO DISPLAY WALL**	**20 A**	**1**	720	0		1	20 A	(E) ROOF REC.	8
9	**EF-1 & EF-2**	**20 A**	**1**		1200	540	**1**	**20 A**	**Receptacle**	**10**
11	**Receptacle RM #A50**	**20 A**	**1**			1200 0	1	20 A	(E) RECEPT RM 1-47	12
13	**VIDEO DISPLAY WALL**	**20 A**	**1**	1080	540		**1**	**20 A**	**Receptacle**	**14**
15	**Receptacle**	**20 A**	**1**		1440	0	1	20 A	(E) SPRINKER CONTR.	16
17	**Receptacle**	**20 A**	**1**			1260 540	**1**	**20 A**	**Receptacle**	**18**
19	(E) FAPS	20 A	1	0	0					20
21	(E) SECURITY PANEL	20 A	1		0	0	3	40 A	(E) A/C UNIT 03	22
23	(E) COLUM OUTLETS	20 A	1			0 0				24
25	(E) LOAD	30 A	2	0	0		1	20 A	(E) POWER POLE	26
27					0	0	1	20 A	(E) OFFICE SERVER -1 RED	28
29	(E) UPS PHONE ROOM	30 A	1			0 0	1	20 A	(E) OFFICE SERVER-2 BLUE	30
31	(E) EASR WALL TECH TRAINING	20 A	1	0	840		**1**	**20 A**	**Receptacle**	**32**
33					0	0	1	20 A	(E) TECH TRAIN	34
35	(E) ALB-1	100 A	3			0 1440	**1**	**20 A**	**Receptacle**	**36**
37				0	540		**1**	**20 A**	**Receptacle**	**38**
39	SPACE	--	1		--	540	**1**	**20 A**	**Receptacle**	**40**
41	SPACE	--	1			-- --	1	--	SPACE	42
		Total Load:		7932 VA	7572 VA	8532 VA				
		Total Amps:		67 A	63 A	72 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
				Total Conn. Load: 24036 VA
				Total Est. Demand: 22136 VA
				Total Conn. Current: 67 A
				Total Est. Demand Current: 61 A

LIGHTING FIXTURE SCHEDULE

LAMP:
LED LIGHT EMITTING DIODE
FL FLUORESCENT
HL HALOGEN
HPS HIGH PRESSURE SODIUM
IN INCANDESCENT
O OTHER (SEE DESC)

BALLAST TYPE:
0-10V 0-10V DIMMING
DMX DIGITAL MULTIPLEX
EB ELECTRONIC BALLAST
EM EMERGENCY BATTERY
ELV ELECTRONIC LOW VOLTAGE

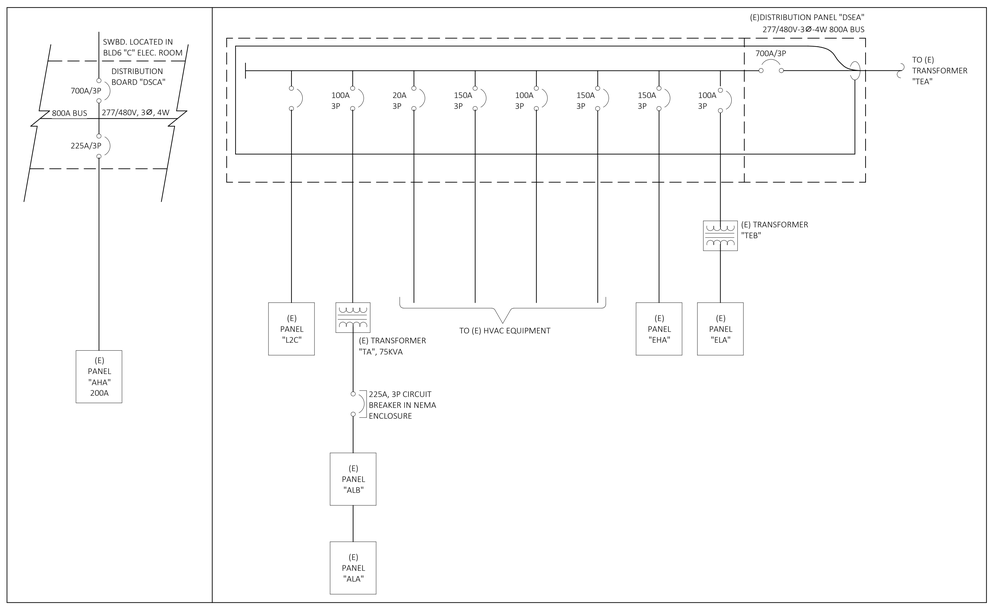
MOUNTING:
CL CEILING SURFACE
RE RECESSED
CV COVE
PL POLE
WL WALL
P PERIMETER
FR FLANGED RECESSED
SP SUSPENDED
SU SURFACE
UC UNDER CABINET
UNV UNIVERSAL

ALL FIXTURES ARE TO BE 4000K COLOR TEMPERATURE.

TAG NAME	DESCRIPTION	DIMENSIONS LENGTH	WIDTH	DEAPTH	HEIGHT	DIAMETER	ELECTRICAL LAMP	BALLAST TYPE	VOLTAGE	VA	LUMENS	COLOLR TEMPERATURE	MOUNTING	DIST./MANUF.	MOD.NO.	DETAIL REFERENCE
F1	TROFFER LIGHT FIXTURE. 90 MIN. BATTERY BACKUP WHERE INDICATED. 0-10V DIMMING.	4' - 0"	2' - 0"	0' - 3"			LED	EB	277	29 VA	4000 LM	3500K	RE	MARK LIGHTING	WHSPR LCTR QS 2X4 80CRI 40K 3500LM MIN1 MVOLT SWC ZT	SEE 1/E4.01
F2	RECESSED LINEAR LED DOWNLIGHT.	4' - 0"	0' - 2 1/2"	0' - 2 1/2"			LED	EB	277	40 VA	1400LM	4000K	RE	SPI LIGHTING	ZYNN 3" AES12383 4FT-L28W-277V 4000K DF_80 DF_REC 4FT	SEE MANUFACTURER CUTSHEET.
F3	RECESSED DOWNLIGHT 90 MIN. BATTERY BACKUP WHERE INDICATED. 0-10V DIMMING.			0' - 2"		0' - 4"	LED	EB	277	16 VA	1500 LM	4000K	RE	LITHONIA LIGHTING	LDN4 40/15 LO4AR LS MVOLT GZ10	SEE 5/E4.01
F4	PENDANT LIGHT. 90 MIN. BATTERY BACKUP WHERE INDICATED. 0-10V DIMMING.	4' - 0"	0' - 2"	0' - 2"			LED	EB	277	20 VA	3000 LM	4000K	SP	SPI LIGHTING	LYON SIP12104 L28W 277V 4000K DF_80 DF_DIM1 DF_CAA 4' C	SEE 3/E4.01
F5	DECORATIVE PENDANT LIGHT. OVERLAPPING FIXTURES, PER PLAN, WILL REQUIRE A VERTICAL SEPARATION MIN. 3 INCHES.					1' - 6"	LED	EB	277	22 VA	1300 LM	4000K	SP	SPI LIGHTING	ZYNN RING 2' AIP12094 L22-4000K	SEE 2/E4.01
F6	DECORATIVE PENDANT LIGHT.					4' - 9"	LED	EB	277	103 VA	4850 LM	3500K	SP	SPI LIGHTING	ZYNN RING AIP12097-L103W	REFER TO MANUFACTURER CUTSHEETS FOR INSTALLATION.
F7	DECORATIVE PENDANT LIGHT.					0' - 8"	LED	EB	277	16 VA	1570 LM	4000K	SP	SPI LIGHTING	SIP12065 L16W 277V 4000K DF_80 DF_DIM1 28W-SS DF_MA01 DF_PSC	SEE 3/E4.01
X1	EDGE LIT LED EXIT SIGN, UNIVERSAL MNT. 90 MIN. BATTERY BACKUP.						LED	EB	277	5 VA			UNV	BEGHELLI	BRU-SA-LR-U-M-BA-AT	SEE MANUFACTURER CUTSHEET.

KEYNOTES - E0.02

NUMBER	TEXT
1	UTILIZE EXISTING BREAKER WITHIN PANEL TO FEED NEW LIGHTING FIXTURES.
2	PROVIDE NEW CIRCUIT BREAKER, MATCH EXISTING MANUFACTURER, TYPE AND AIC RATING.



1 SINGLE LINE DIAGRAM
No Scale

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CONSULTANT:

ELECTRICAL - SCHEDULES

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEAL:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA

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PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 04/02/2024
DELTA DATE: DESCRIPTION:

E0.02

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#	KEYNOTES - E1.01
NUMBER	TEXT
1	PROVIDE NEW CIRCUIT BREAKER, MATCH EXISTING MANUFACTURER, TYPE AND AIC RATING.

N

1 ELECTRICAL - SITE PLAN
1" = 60'-0"

CONSULTANT:

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ELECTRICAL - SITE PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

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SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:

E1.01

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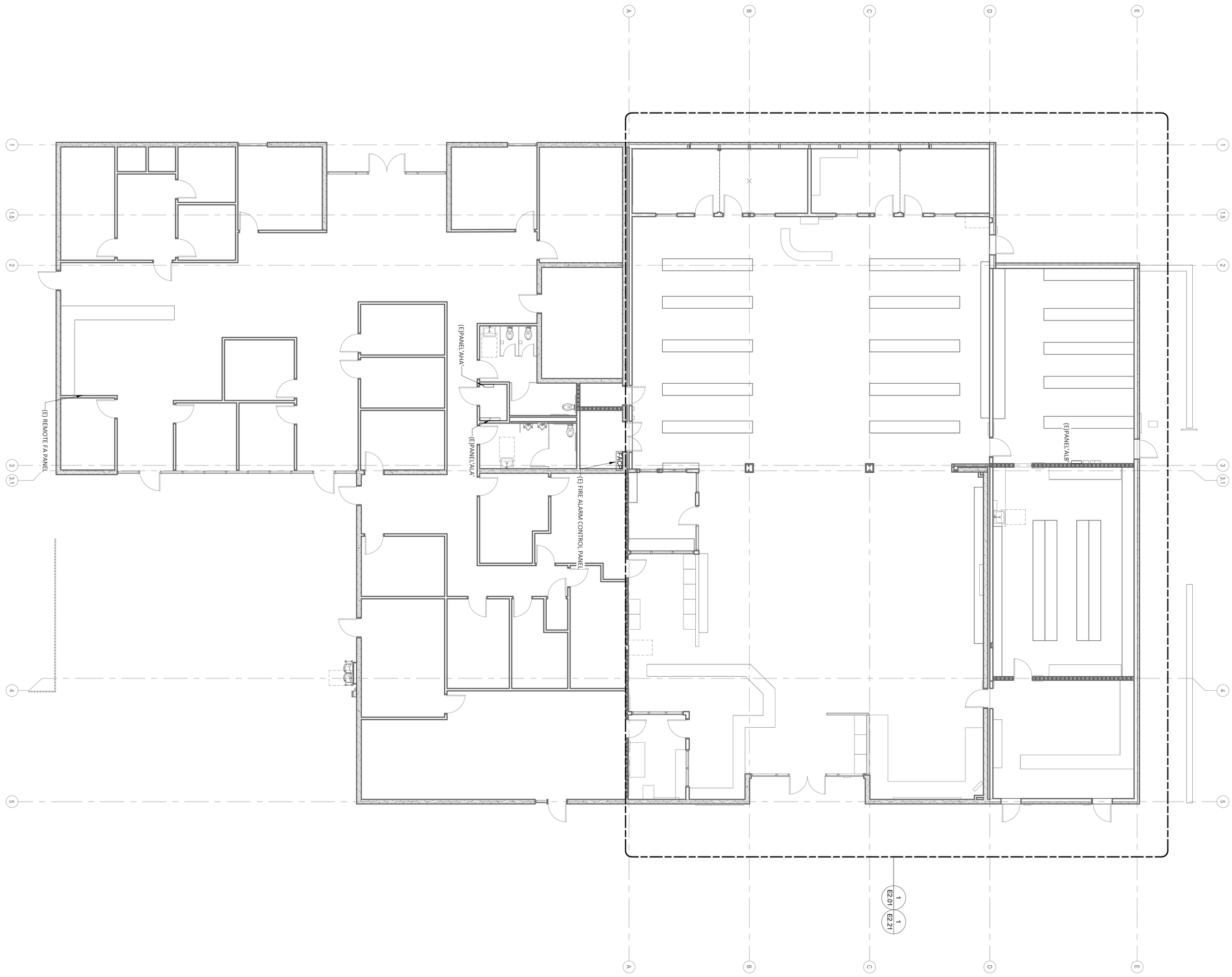

N

1 ELECTRICAL - FLOOR PLAN - OVERALL
1/8" = 1'-0"

GENERAL NOTES - E2.00

NUMBER	TEXT
1	CONTRACTOR SHALL VERIFY EXTERIOR EXISTING SOFFIT LIGHTING IS CONNECTED AND ENERGIZED AS PART OF PROJECT SCOPE OF WORK.

E2.00

PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024

DELTA:	DATE:	DESCRIPTION:
A	08/02/2024	ADDENDUM A

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ELECTRICAL

ELECTRICAL - FLOOR PLAN - OVERALL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

CONSULTANT:

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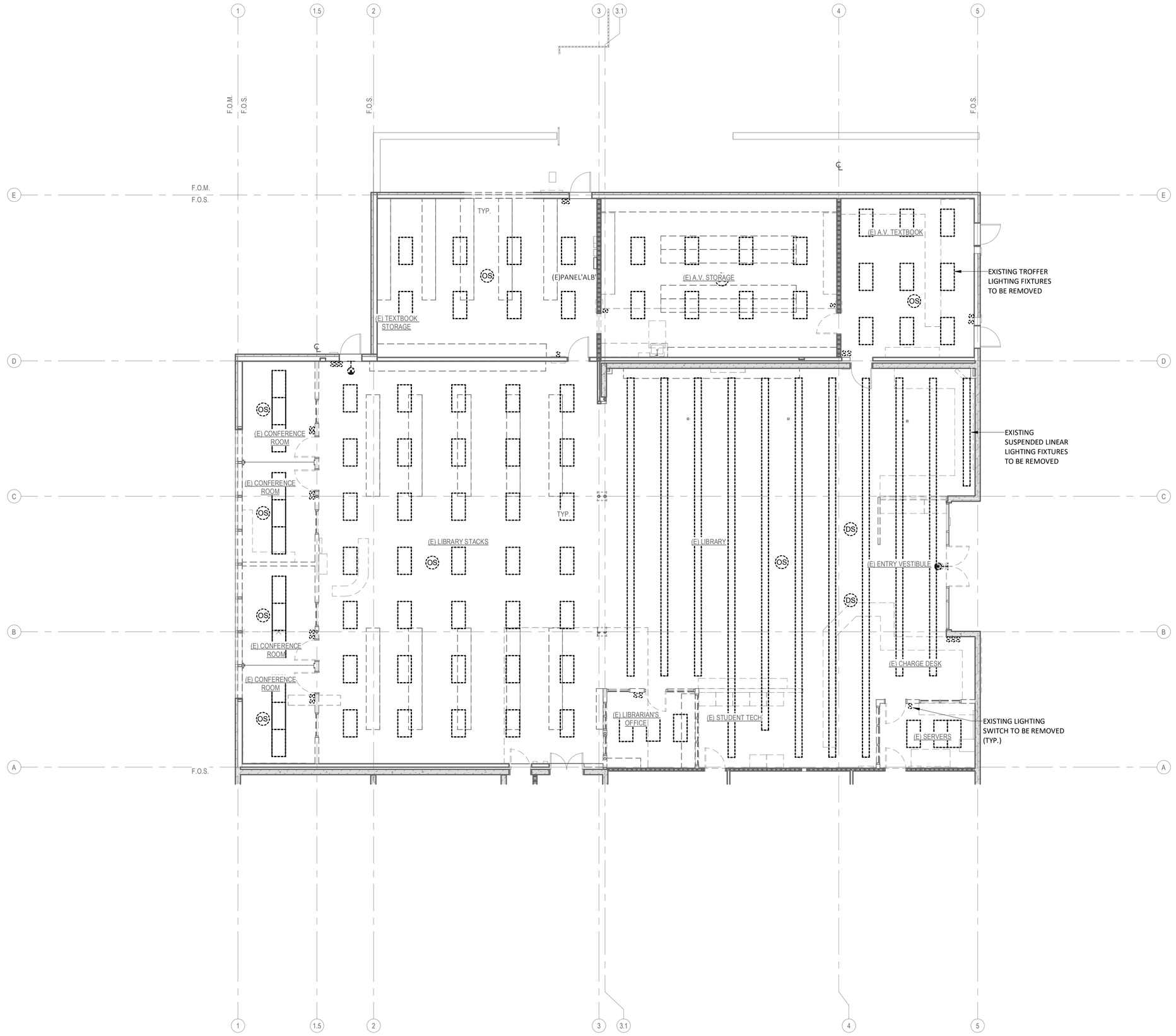

N

1 ELECTRICAL - FLOOR PLAN - LIGHTING - DEMOLITION
1/8" = 1'-0"

GENERAL NOTES

NUMBER	TEXT
1	REMOVE EXISTING, EXPOSED SURFACE MOUNTED RACEWAYS THROUGHOUT THE PROJECT AREA FOR REPLACEMENT WITH CONCEALED IN-WALL AND ABOVE-CEILING UTILITIES IN NEW WORK.

CONSULTANT:

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ELECTRICAL - FLOOR PLAN - LIGHTING - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

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E2.01

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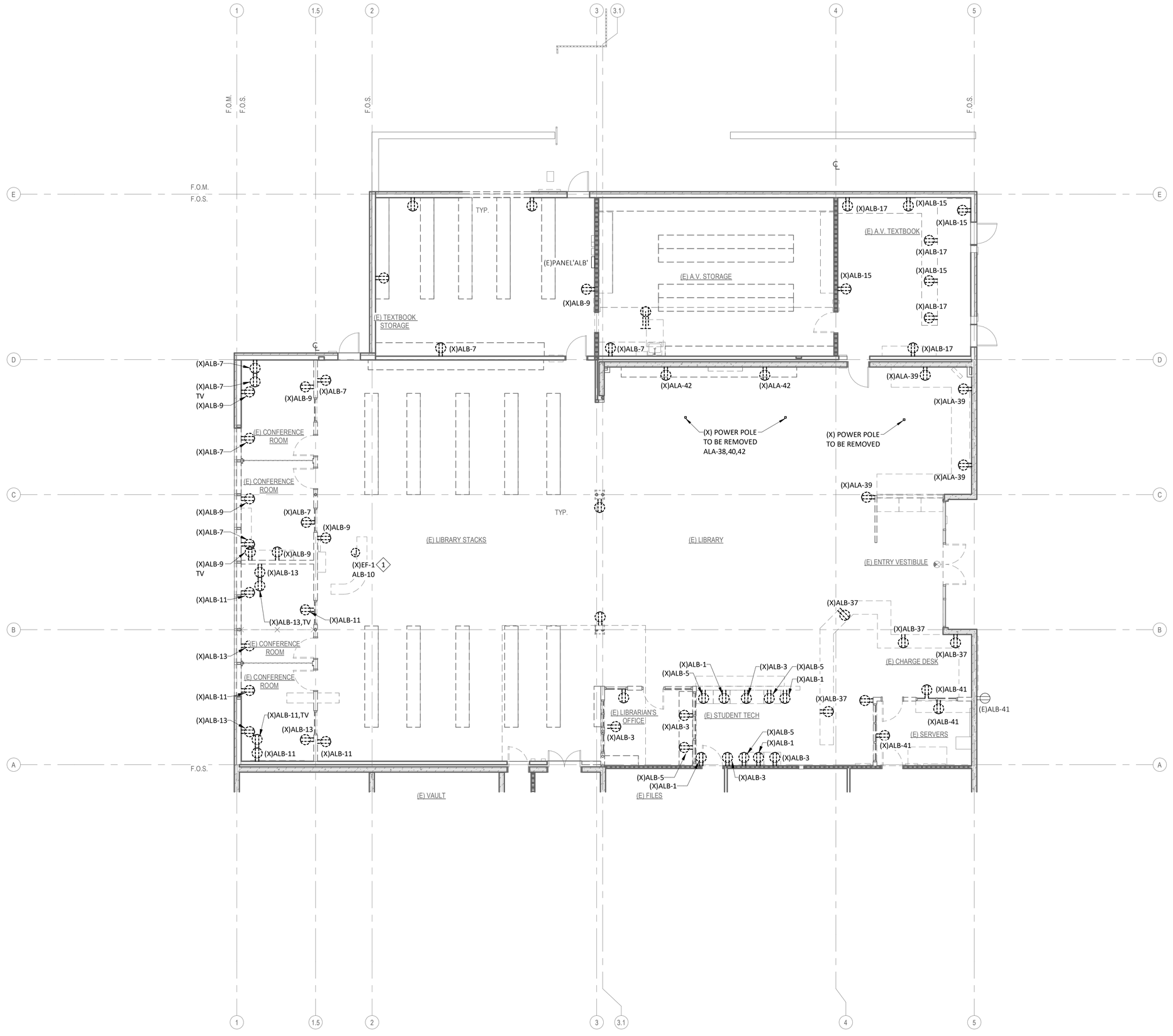
	GENERAL NOTES
NUMBER	TEXT
1	REMOVE EXISTING, EXPOSED SURFACE MOUNTED RACEWAYS THROUGHOUT THE PROJECT AREA FOR REPLACEMENT WITH CONCEALED IN-WALL AND ABOVE-CEILING UTILITIES IN NEW WORK.

◇	KEYNOTES - E2.02
NUMBER	TEXT
1	EXISTING EXHAUST FAN TO BE REMOVED. REMOVE THE CIRCUIT, CONDUIT AND CONDUCTORS BACK TO SOURCE PANEL.



N

1 ELECTRICAL - FLOOR PLAN - POWER- DEMOLITION

1/8" = 1'-0"

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ELECTRICAL - FLOOR PLAN - POWER - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT

WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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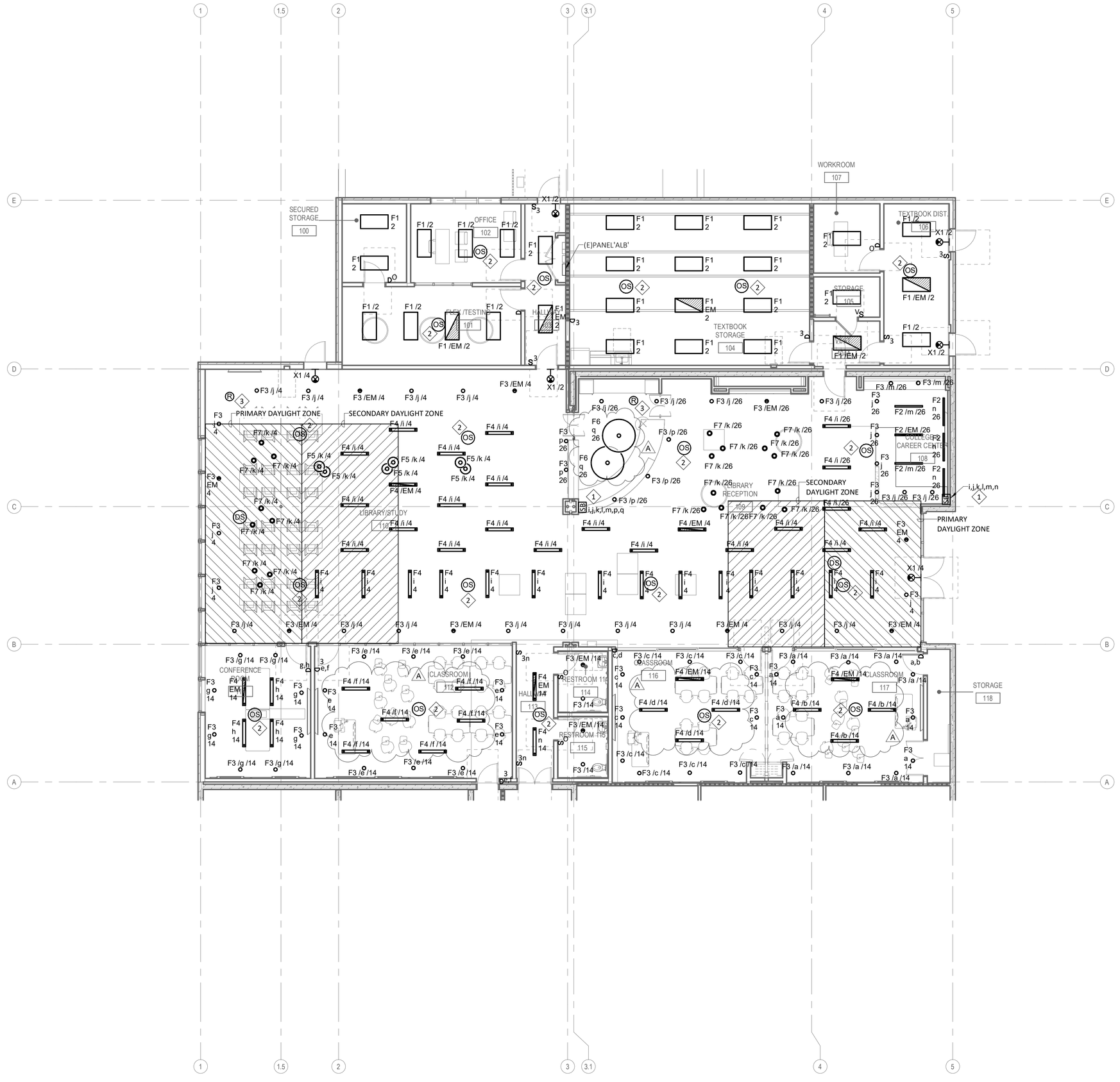

N

1 ELECTRICAL - FLOOR PLAN - LIGHTING - REMODEL

1/8" = 1'-0"

BRANCH CIRCUITING NOTES

TEXT
UNLESS NOTED OTHERWISE, CIRCUIT ALL LIGHTING FIXTURES TO PANEL"AHA", CIRCUIT ALL ELECTRICAL FIXTURES AND DEVICE TO PANEL"ALB" AND CIRCUIT ALL THE MECHANICAL AND PLUMBING EQUIPMENT TO PANEL"ALB".

GENERAL NOTES - E2.11

NUMBER	TEXT
1	ALL CIRCUITING SHALL BE ROUTING CONCEALED IN-WALL OR ABOVE CEILING TO DEVICES INDICATED ON PLAN. NO SURFACE-MOUNTED, EXPOSED RACEWAY IS PERMITTED EXCEPT IN OPEN CEILING AREAS. SEE DETAIL 6/E4.01 FOR CONDUIT...
2	MAXIMUM VOLTAGE DROP FOR BRANCH CIRCUITING SHALL BE LESS THAN 3%. CONTRACTOR TO UPSIZE CONDUCTORS AND FEEDERS ACCORDINGLY.
3	ALL RECEPTACLES, LIGHT FIXTURES, CONTROL DEVICES, ETC. THROUGHOUT (OTHER THAN ELEC, STORAGE ROOMS) SHALL BE COORDINATED WITH ARCHITECT DRAWINGS PRIOR TO ROUTING ANY CONDUITS OR INSTALLATION OF BACK BOXES.
4	VERIFY EXACT LOCATIONS FOR POINT OF CONNECTION, HARD-WIRED EQUIPMENT WITH EQUIPMENT VENDOR PRIOR TO ROUTING ANY CONDUIT AND INSTALLING BACK BOXES. PROVIDE J-BOXES WHERE CONDUIT IS RUNNING TO EQUIPMENT.
5	FOR LIGHT FIXTURES REQUIRING DIMMING INTERFACE DEVICES IN ORDER TO FUNCTION WITH THE SPECIFIED LIGHTING CONTROL SYSTEM, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE APPROPRIATE DIMMING INTERFACE DEVICES TO MEET CONTROL INTENT.
6	IN LOCATIONS WHERE WIRING DEVICES ARE ADJACENT OR NEARLY ADJACENT TO EACH OTHER, MOUNT IN MULTIPLE-GANG BOX UNDER A SINGLE COVERPLATE.
A 7	REFER TO PLAN 1/E2.00 FOR CIRCUITING LOCATION OF LIGHTING PANEL 'AHA' AND MECHANICAL EQAUIPMENT PANEL 'ALA'
8	CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR LAYOUT DESIGN REVIEW AND APPROVAL BY ARCHITECTS FOR ALL CIRCUITING CONDUIT.
9	IN EXPOSED CEILING AREAS - ALL PIPING, DUCTWORK AND LIGHTING CONDUIT PATHWAYS AND MATERIAL WORK LAYOUT SHALL BE COORDINATED AND INSTALLED PARRALLEL OR PERPENDICULAR TO WALLS AND EXPOSED STRUCTURAL MEMBERS FOR ARCHITECTS REVEIW AND APPROVAL.

KEYNOTES - E2.11

NUMBER	TEXT
1	PROVIDE LIGHTING CONTROLS SYSTEM TOUCHSCREEN WALL STATION AT THIS LOCATION.
2	PROVIDE LIGHTING CONTROLS SYSTEM OCCUPANCY SENSOR AT THIS LOCATION, CONNECTED TO THE ROOM MANAGER.
3	PROVIDE LIGHTING CONTROLS SYSTEM ROOM MANAGER IN SOFFIT AREA FOR EACH SPACE. PROVIDE SIDE-WALL ACCESS DOORS AT CONTROLLER LOCATIONS. CAREFULLY COORDINATE FINAL PLACEMENT OF ACCESS DOORS AND CONTROLLERS WITH MECHANICAL SIDE-WALL DIFFUSERS AND SUSPENDED ARCHITECTURAL ELEMENTS. CONNECT DIMMING ZONES PER THE LOWER CASE SUBSCRIPTS SHOWN ON PLANS NEXT TO CIRCUIT NUMBER. NETWORK CONTROLLERS TOGETHER.

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ELECTRICAL - FLOOR PLAN - LIGHTING - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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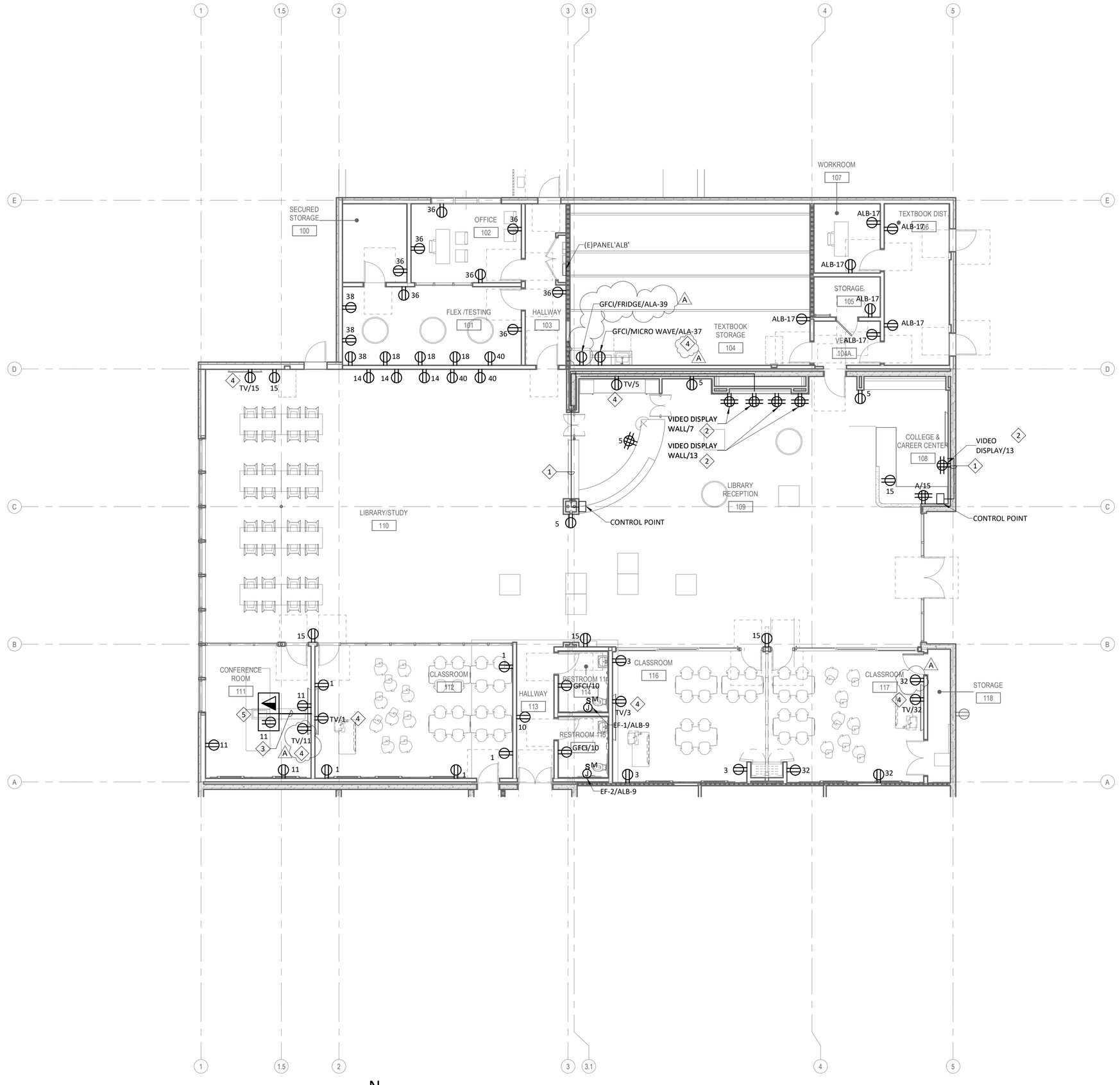
PROJECT NUMBER: 22-47/04-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA: DATE: DESCRIPTION:
1 08/22/2024 ADDENDUM A

E2.11

01-08-2024 09:35:13 PM Autodesk Docs://230037.00_WVUSD Walnut HS Library Media Center/2AMEPTF4FP_230037.00_WVUSD Walnut HS Library Media Center.rvt



N

1 ELECTRICAL - FLOOR PLAN - POWER - REMODEL
1/8" = 1'-0"

BRANCH CIRCUITING NOTES

TEXT
UNLESS NOTED OTHERWISE, CIRCUIT ALL LIGHTING FIXTURES TO PANEL"AHA", CIRCUIT ALL ELECTRICAL FIXTURES AND DEVICE TO PANEL"ALB" AND CIRCUIT ALL THE MECHANICAL AND PLUMBING EQUIPMENT TO PANEL"ALB".

GENERAL NOTES - E2.21

	NUMBER	TEXT
A	1	ALL CIRCUITING SHALL BE ROUTING CONCEALED IN-WALL OR ABOVE CEILING TO DEVICES INDICATED ON PLAN. NO SURFACE-MOUNTED, EXPOSED RACEWAY IS PERMITTED EXCEPT IN OPEN CEILING AREAS. SEE DETAIL 6/E4.01 FOR CONDUIT SUPPORT DETAIL.
	2	MAXIMUM VOLTAGE DROP FOR BRANCH CIRCUITING SHALL BE LESS THAN 3%. CONTRACTOR TO UPSIZE CONDUCTORS AND FEEDERS ACCORDINGLY.
	3	ALL RECEPTACLES, LIGHT FIXTURES, CONTROL DEVICES, ETC. THROUGHOUT (OTHER THAN ELEC, STORAGE ROOMS) SHALL BE COORDINATED WITH ARCHITECT DRAWINGS PRIOR TO ROUTING ANY CONDUITS OR INSTALLATION OF BACK BOXES.
	4	VERIFY EXACT LOCATIONS FOR POINT OF CONNECTION, HARD-WIRED EQUIPMENT WITH EQUIPMENT VENDOR PRIOR TO ROUTING ANY CONDUIT AND INSTALLING BACK BOXES. PROVIDE J-BOXES WHERE CONDUIT IS RUNNING TO EQUIPMENT.
	5	FOR LIGHT FIXTURES REQUIRING DIMMING INTERFACE DEVICES IN ORDER TO FUNCTION WITH THE SPECIFIED LIGHTING CONTROL SYSTEM, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE APPROPRIATE DIMMING INTERFACE DEVICES TO MEET CONTROL INTENT.
	6	IN LOCATIONS WHERE WIRING DEVICES ARE ADJACENT OR NEARLY ADJACENT TO EACH OTHER, MOUNT IN MULTIPLE-GANG BOX UNDER A SINGLE COVERPLATE.
	7	REFER TO PLAN 1/E2.00 FOR CIRCUITING LOCATION OF LIGHTING PANEL 'AHA' AND MECHANICAL EQAUIPMENT PANEL 'ALA'
A	8	CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR LAYOUT DESIGN REVIEW AND APPROVAL BY ARCHITECTS FOR ALL CIRCUITING CONDUIT.
	9	IN EXPOSED CEILING AREAS - ALL PIPING, DUCTWORK AND LIGHTING CONDUIT PATHWAYS AND MATERIAL WORK LAYOUT SHALL BE COORDINATED AND INSTALLED PARRALLEL OR PERPENDICULAR TO WALLS AND EXPOSED STRUCTURAL MEMBERS FOR ARCHITECTS REVEIW AND APPROVAL.

KEYNOTES - E2.21

NUMBER	TEXT
1	CONNECT DISPLAY TO CONTROL POINT AT THIS DESK, ROUTE CONDUIT AND CONDUCTORS THROUGH SOFFITS AND WALL.
2	PROVIDE RECEPTACLE AT THIS LOCATION FOR VIDEO DISPLAY WALL, CENTERED ALONG VIDEO DISPLAY WALL. COORDINATE ROUGH-IN WITH LOW-VOLTAGE.
3	ROUTE UNDER FLOOR CONDUIT TO FLOOR BOX FOR POWER/DATA/PHONE.
4	COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.
5	PROVIDE FLOOR BOX AT THIS LOCATION. SEE DETAIL 4/E4.01.

CONSULTANT:
ASTRAL ENGINEERS, PC
PO BOX 190
RANCHO CUCAMONGA, CA 91729
909.481.6555
www.astraleng.com
PROJECT #:230337.00

ELECTRICAL - FLOOR PLAN - POWER - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

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JAMES C. LESSARD
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E2.21

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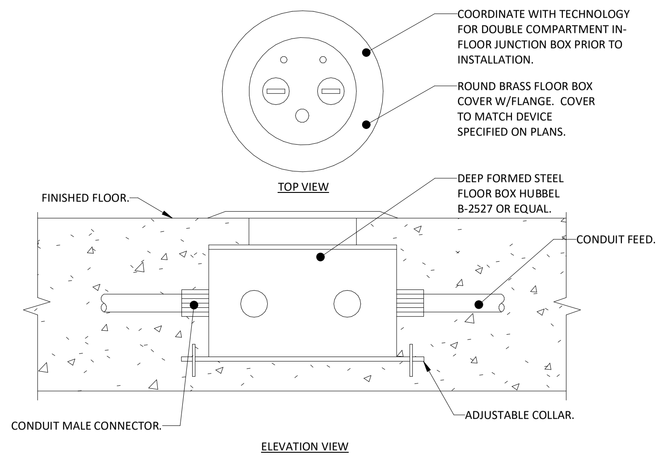
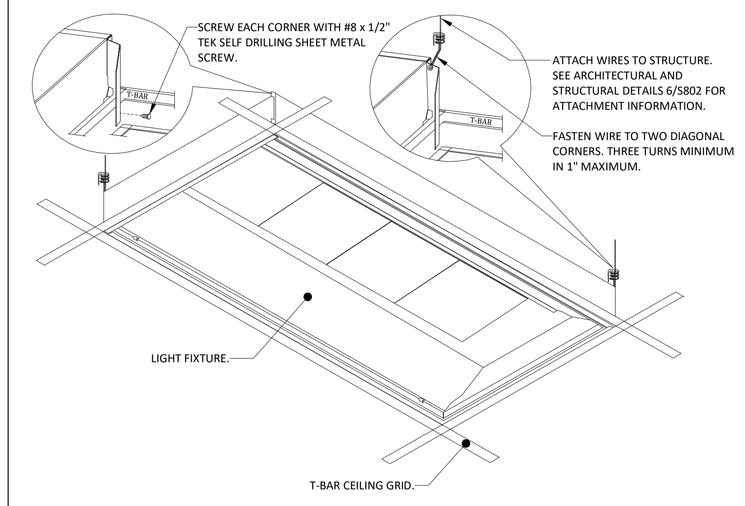
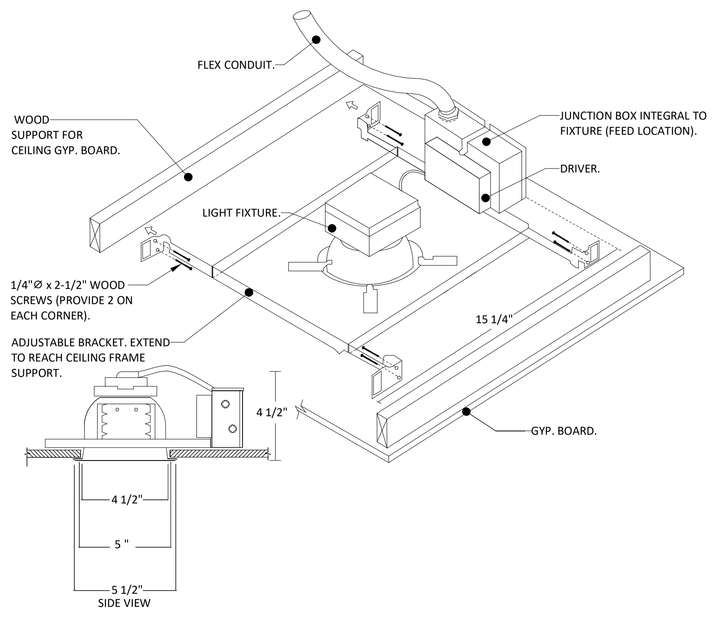


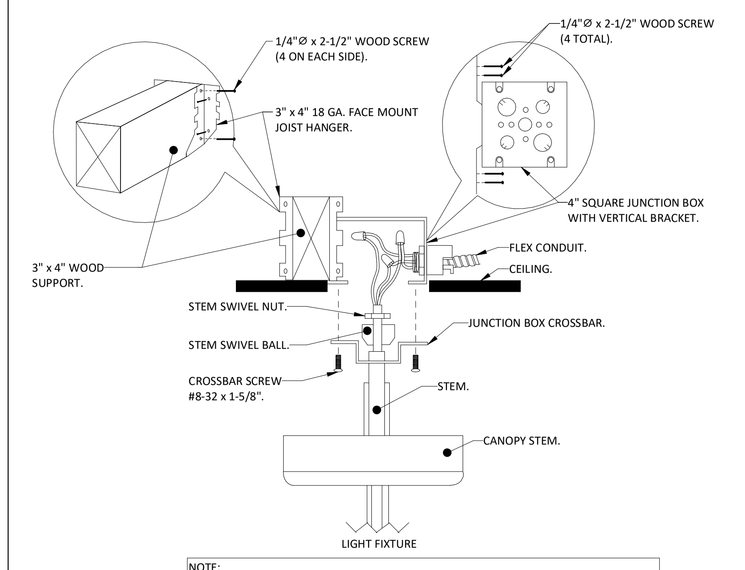
IN-FLOOR JUNCTION/ OUTLET BOX DETAIL	NTS	4



T-BAR MOUNTED TROFFER INSTALLATION T-BAR CEILING	NTS	1



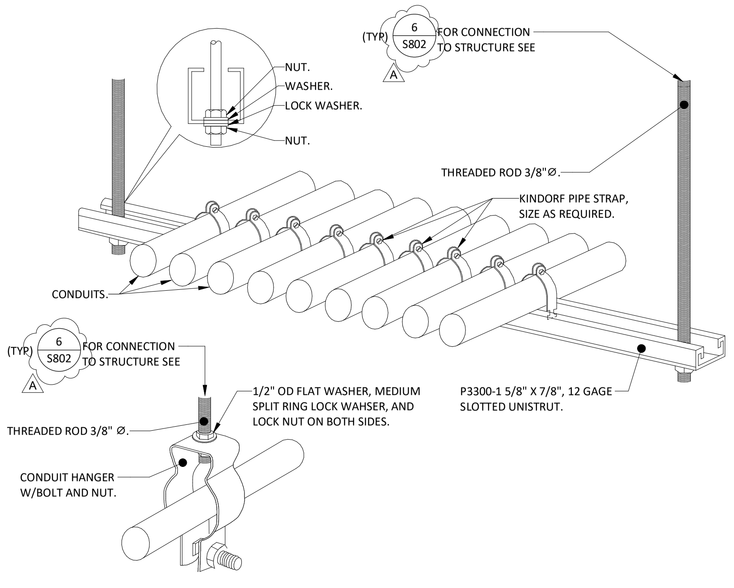
RECESSED MOUNTED DOWNLIGHT INSTALLATION WOOD FRAMING	NTS	5



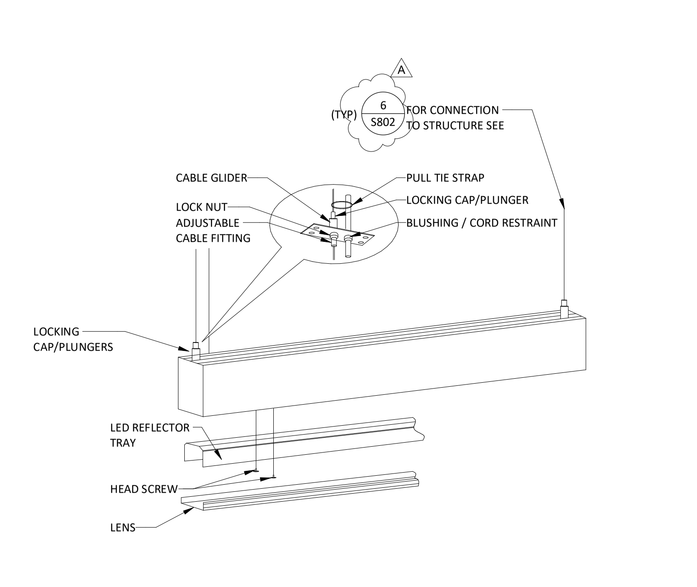
NOTE:

1. PENDANT FIXTURE SHALL BE FREE TO SWING LATERALLY AT LEAST 45 DEGREES FROM VERTICAL IN ANY DIRECTION WITHOUT CONTACTING AN OBSTRUCTION. CONTACTOR SHALL CLOSELY COORDINATE INSTALLATION OF FIXTURES WITH OTHER TRADES TO AVOID OBSTRUCTIONS.

PENDANT - MOUNTED LUMINAIRE - WOOD FRAMING	NTS	2



SINGLE CONDUIT / MULTIPLE CONDUITS SUPPORT DETAIL	NTS	6



SUSPENDED LIGHTING FIXTURE	NTS	3

CONSULTANT:
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PROJECT #:230037.00

ELECTRICAL - DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path 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: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 1 of 8)
Project Address: 400 Pierre Rd, Walnut, CA 91789	**Date Prepared:** 2023-12-07T16:41:58-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Walnut	04	Total Conditioned Floor Area (ft²)	9,000
02	Climate Zone	9	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	0
● School or Classroom					

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	N/A	0	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
☒ Altered Lighting System	Complete Building Method	9000	N/A	0
Total Area of Work (ft²)	9000			

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 2 of 8)
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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	5,400				=	5,400	≥	4,065		=	4065	COMPLIES
Unconditioned					=		≥			=		
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction 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.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 3 of 8)
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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
F1	Recessed Troffer 2 x 4	No	NA	29	Mfr. Spec	29	No	841	☐	☐
F2	Recessed linear LED Downlight	No	NA	28	Mfr. Spec	3	No	84	☐	☐
F3	Recessed 6-inch Downlight	No	NA	16	Mfr. Spec	82	No	1,312	☐	☐
F4	Pendant Linear Light Fixture	No	NA	20	Mfr. Spec	68	No	1,360	☐	☐
F5	Decorative Pendant Light	No	NA	22	Mfr. Spec	6	No	132	☐	☐
F7	Decorative Pendant Light Fixture	No	NA	16	Mfr. Spec	21	No	336	☐	☐
Total Designed Watts: CONDITIONED SPACES								4,065		

[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.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 4 of 8)
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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: <= 80 % LP (alt only)	See Area/Space Level Controls	☐	☐

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
Library	School or Classroom	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
					13				
					Plan Sheet Showing Daylit Zones:				
					E2.11				

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
Library	School or Classroom	0.6	9,000	5,400	No	No

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 5 of 8)
	Date Prepared: 2023-12-07T16:41:58-05:00

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

TOTALS:	9,000	5,400	See Tables J, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

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.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 6 of 8)
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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.

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

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 7 of 8)
	Date Prepared: 2023-12-07T16:41:58-05:00

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.	Library
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	Library

STATE OF CALIFORNIA
Indoor Lighting
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CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: Walnut High School - Renovation at Library & Media Center	**Report Page:** (Page 8 of 8)
Project Address:	**Date Prepared:** 2023-12-07T16:41:58-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: James Lessard	Documentation Author Signature:
Company: ASTRAL ENGINEERS, PC	Signature Date: 12/07/2023
Address: P.O. BOX 190	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: RANCHO CUCAMONGA, CA 91729	Phone: (314)476-0625

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: James Lessard	Responsible Designer Signature:
Company: ASTRAL ENGINEERS, PC	Date Signed: 12/07/2023
Address: P.O. BOX 190	License: E 24240
City/State/Zip: RANCHO CUCAMONGA, CA 91729	Phone: (314)476-0625

CONSULTANT:
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T24 DOCUMENTATION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

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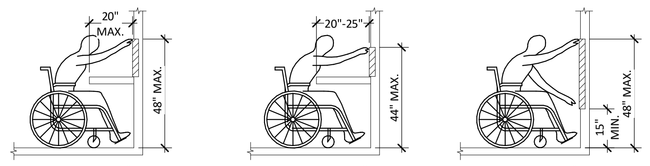
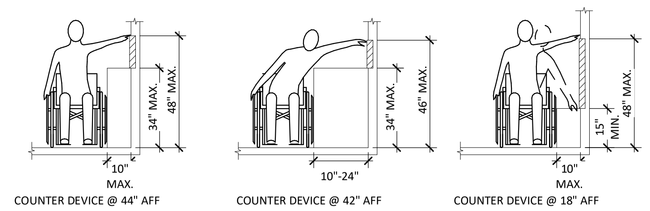


COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 40" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - FRONT ACCESS



COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 42" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - SIDE ACCESS

TECHNOLOGY DATA SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
#	DATA OUTLET - WALL MOUNTED - # INDICATES NUMBER OF DATA JACKS
WAP	WIRELESS ACCESS POINT - CEILING MOUNTED
WAP	WIRELESS ACCESS POINT - WALL MOUNTED

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

TECHNOLOGY AUDIOVISUAL SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
TV	TELEVISION OUTLET - CABLE ANTENNA SYSTEM - WALL MOUNTED
	PROJECTOR
PROJ	PROJECTOR - CEILING MOUNTED
	CLOCK - WALL MOUNTED

CABINET TYPE	DESCRIPTION
ACE	ACCESS CONTROL EQUIPMENT
SA	SECURITY ANNUNCIATOR
2CP	TWO WAY COMMUNICATION PANEL
2CC	TWO WAY COMMUNICATION CALL STATION
SECTC	SECURITY TERMINAL CABINET
TVTC	TELEVISION TERMINAL CABINET
PATC	PUBLIC ADDRESS TERMINAL CABINET
TTC	TELEPHONE TERMINAL CABINET
CCTVTC	CLOSED LOOP TELEVISION TERMINAL CABINET

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

TECHNOLOGY WIRE SCHEDULE:

ABBREVIATION	DESCRIPTION
C5	CAT5 (DATA)
C6	CAT6 (DATA)
F2	2SM FIBER OPTIC CABLE
F24	24MM/125M FIBER OPTIC CABLE
SEC	SECURITY INDOOR CABLE-WEST PENN 240
SEC-U	SECURITY OUTDOOR CABLE WEST PENN AQC 240
TC5	CAT5 (TELEPHONE)
TC6	CAT6 (TELEPHONE)
TV	CATV-RG-6
TV-U	CATV-RG-11

TECHNOLOGY-WIRE SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
	CONDUIT CONCEALED IN FINISHED AREAS, EXPOSED IN UNFINISHED AREAS
	CONDUIT SLEEVE
	CONDUIT STUB - TERMINATE WITH CAP
	CONDUIT CONCEALED IN OR UNDER FLOOR SLAB
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	FLEXIBLE CONNECTION TO EQUIPMENT
WM	WIRE MOLD RACEWAY - SEE SPECS FOR EXACT TYPE
TV	TELEVISION SYSTEM CONDUIT AND CABLE(S) - CABLE TYPE INDICATED ON FLOOR PLAN
SEC	SECURITY SYSTEM CONDUIT AND CABLE(S) - CABLE TYPE INDICATED ON FLOOR PLAN
TL	TELEPHONE SYSTEM CONDUIT AND CABLE(S) - CABLE TYPE INDICATED ON FLOOR PLAN
CL	CLOCK SYSTEM CONDUIT AND CABLE(S) - CABLE TYPE INDICATED ON FLOOR PLAN
C	COMPUTER AND DATA CONDUIT AND CABLE(S) - CABLE TYPE INDICATED ON FLOOR PLAN
CFO	COMPUTER AND DATA CONDUIT AND CABLE(S) - FIBER OPTIC CABLE TYPE INDICATED ON FLOOR PLAN

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.

DSA ANCHORAGE NOTES:

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 CHAPTER 13, 26 AND 30:

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

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

[ ]MP[ ]MD[ ]PP[X]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 (OSHPD) PRE-APPROVAL (OPM#) #OPM-#####-##, AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

CONTRACTOR ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.A.C.	FIRE ALARM CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROL CONTRACTOR

TECHNOLOGY ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
AFG	ABOVE FINISHED GRADE
CM	COUNTER MOUNTED
FBO	FURNISHED BY OTHERS
FF	FINISHED FLOOR
IG	ISOLATED GROUND
INV	EMERGENCY INVERTER
PED	PEDESTAL MOUNTED
UNO	UNLESS NOTED OTHERWISE
+XX	DIMENSIONED HEIGHT ABOVE FINISHED FLOOR
-XX	DIMENSIONED HEIGHT BELOW FINISHED FLOOR
1W	ONE WIRE
2W	TWO WIRE
3W	THREE WIRE
APA	AUTONOMOUS PUBLIC ADDRESS
C	CONDUIT
CAM	CAMERA
CATV	CABLE TELEVISION
C.O.	CONDUIT ONLY
EM	EQUIPMENT POWERED WITH EMERGENCY SOURCE INTERNAL OR EXTERNAL, UNLESS NOTED OTHERWISE
FT, '	FOOT OR FEET
IN., "	INCH OR INCHES
IC	INTERCOMMUNICATION
J-BOX	JUNCTION BOX
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO., #	NUMBER
NTS	NOT TO SCALE
SIG	SIGNAL
SPEC	SPECIFICATION
SPKR	SPEAKER
SR	DEVICE INSTALLED IN SURFACE RACEWAY BOXES
STP	SHIELDED TWISTED PAIR
TCI	TELECOMMUNICATIONS CABLING INSTALLER
TEL/DATA	TELEPHONE DATA
TERM	TERMINAL(S)
TV	TELEVISION
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SOURCE
UTIL	UTILITY
UTP	UNSHIELDED TWISTED PAIR
UTR	UP THRU ROOF
U.C.	UNDERGROUND CONDUIT
W	WIRES
WP	WEATHERPROOF

NOTES:
1. NOT ALL ABBREVIATIONS MAY APPLY.
2. TECHNOLOGY SCHEDULES CONTAIN EQUIPMENT TAG ABBREVIATIONS THAT ARE HEREBY INCORPORATED INTO THE ABBREVIATION LIST.
3. SEE OTHER DISCIPLINE DRAWINGS WITHIN THE CONSTRUCTION DOCUMENTS FOR ABBREVIATIONS NOT DEFINED ABOVE OR IN TECHNOLOGY SCHEDULES.

GENERAL NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. REVIEW ALL PROJECT DOCUMENTS INCLUDING SPECS AND DRAWINGS PERTAINING TO ALL DISCIPLINES PRIOR TO SUBMITTING A BID. SUBMIT PRE-BID REQUEST FOR INFORMATION FOR ITEMS IN QUESTION AND/OR CONFLICTS FOUND.
3. DRAWINGS SHOW THE DESIGN INTENT DIAGRAMMATICALLY. THEY DO NOT SHOW THE EXACT UTILITY ROUTING NOR EVERY ELBOW, OFFSET, ETC. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THEIR SYSTEMS TO AVOID CONFLICT WITH THE STRUCTURE AND OTHER DISCIPLINES. THE COST FOR SUCH ADJUSTMENTS SHALL BE INCLUDED IN THE BID.
4. OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR WORK PERFORMED.
5. OBTAIN UTILITY PURVEYOR REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT OR PERFORMING WORK.
6. THE G.C. TEAM SHALL LEAD THE SUBCONTRACTORS IN PROVIDING A COORDINATED SET OF SHOP DRAWINGS. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION. A
7. PROVIDE FIRESTOPPING FOR ALL UTILITY PENETRATIONS THRU FIRE-RATED ASSEMBLIES.
8. COORDINATE FRAMING REQUIREMENTS FOR ACCESS PANELS AND EQUIPMENT/PANEL SUPPORTS WITH G.C. PRIOR TO SUBMITTING BID. A
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECTION OF CONSTRUCTION DEFICIENCIES LISTED ON THE JOB SITE OBSERVATION REPORT. RETURN THE JOB SITE OBSERVATION REPORT TO A/E WITH DEFICIENCIES SIGNED OFF. PROVIDE PHOTOGRAPHIC AND/OR VIDEO EVIDENCE OF CORRECTED DEFICIENCIES IF REQUESTED BY THE ENGINEER.
10. PROVIDE CLOSEOUT DOCUMENTATION UPON COMPLETION OF PROJECT. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
11. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH CODE. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
12. CONNECT TO EXISTING SYSTEMS/COMPONENTS FOR COMPLETE INSTALLATION.

TECHNOLOGY NOTES:

1. TECHNOLOGY WORK SHALL BE CONSTRUCTED IN A PROFESSIONAL MANNER. COMPONENTS SHALL BE CLEANED PRIOR TO OWNER TURNOVER.
2. THE SCHEDULED EQUIPMENT SHALL BE USED AS THE BASIS OF DESIGN. MODEL NUMBERS ARE PROVIDED FOR REFERENCE ONLY. EQUIPMENT SHALL MEET SPECIFIED PERFORMANCE. THE CONTRACTOR SHALL IDENTIFY ALL SELECTED OPTIONS IN THE SUBMITTAL.
3. IF A CONTRACTOR PROVIDES EQUIPMENT OTHER THAN THE BASIS OF DESIGN, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT. THAT INCLUDES, BUT IS NOT LIMITED TO, AGENCY FEES FOR REVIEW OF CHANGES, STRUCTURAL MODIFICATIONS FOR INCREASED WEIGHT, AND DATA EQUIPMENT, WIRING, CONDUIT, AND BREAKER CHANGES FOR DIFFERENT ELECTRICAL REQUIREMENTS.
4. COORDINATE POWER REQUIREMENTS WITH THE E.C. PRIOR TO PROVIDING SUBMITTALS TO THE ENGINEER.
5. PROVIDE CONCRETE EQUIPMENT PADS FOR FLOOR-MOUNTED EQUIPMENT. SEE PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
6. SEE SPEC SECTIONS 26 0533 FOR CONDUIT/RACEWAY SYSTEM INSTALLATION AND CLEANING REQUIREMENTS.
7. PROVIDE CONDUIT OR RACEWAY EXPANSION JOINT THAT ACCOMMODATES THE BUILDING MOVEMENT WHERE CONDUIT OR RACEWAY CROSSES BUILDING EXPANSION JOINT.
8. PAINT INTERIOR EXPOSED CONDUIT/RACEWAY, PULL BOXES, AND ASSOCIATED HANGERS/SUPPORTS LOCATED IN OCCUPIED SPACES TO MATCH THE SURROUNDING ARCHITECTURAL COLOR SCHEME. PAINT EXTERIOR CONDUIT/RACEWAY, PULL BOXES, AND ASSOCIATED HANGERS/SUPPORTS ADJACENT TO EXTERIOR WALL TO MATCH WALL COLOR. FINAL COLORS SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER. SEE SPEC SECTION 27 0500 FOR ADDITIONAL REQUIREMENTS.
9. PROVIDE IDENTIFICATION FOR CONDUIT, PULL BOXES, AND EQUIPMENT PER SPEC SECTION 26 0553.
10. CONDUIT/RACEWAY SHALL NOT PASS THRU NOR UNDER ELECTRICAL ROOMS, ELEVATOR MACHINE ROOMS, ELEVATOR HOISTWAYS, SKYLIGHTS, AND ROOF ACCESS HATCHES.
11. PULL BOXES SHALL BE ACCESSIBLE. PROVIDE KEYED ACCESS PANELS WHERE PULL BOXES HAVE BEEN LOCATED IN CONCEALED AREAS. ACCESS PANEL SIZE SHALL BE LARGE ENOUGH TO ACCESS EACH PULL BOX.
12. A COMPLETE TEST FOR EACH SYSTEM SHALL BE PERFORMED BEFORE PROJECT IS READY FOR FINAL PUNCH WALK. THIS SHALL BE DONE IN ORDER TO VERIFY FULL FUNCTIONALITY OF EACH TECHNOLOGY SYSTEM
13. INSTALL TERMINAL CABINET NO HIGHER THAN 6'-0" ABOVE FINISHED FLOOR TO TOP OF CABINET.
14. ALL SECURITY ROUGH-IN, IF REQUIRED, SHALL BE COORDINATED WITH SECURITY VENDOR PRIOR TO ROUGH-IN. PROGRAMMING AND TERMINATIONS SHALL BE PROVIDED BY THE SECURITY VENDOR, WHERE REQUIRED.
15. PROVIDE 200LB PULL STRING FOR EMPTY RACEWAYS.

RENOVATION NOTES:

1. DEMOLITION WORK SHALL BE PERFORMED AS DESCRIBED WITHIN SPEC SECTION 27 0505 AND THE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMISSION TO VERIFY ALL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. LOCATIONS OF EXISTING TECHNOLOGY SYSTEMS.
   B. LOCATIONS OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND FIRE ALARM SYSTEMS.
   C. EXISTING SURFACES WHICH REQUIRE ALTERING.
   D. EXISTING MDF EQUIPMENT CONDITIONS.
3. THE CONTRACTOR SHALL NEATLY SAW CUT SECTIONS OF THE CONCRETE TO ACCESS THE WORK BELOW GRADE. REMOVE PORTIONS OF DEMOLISHED CONCRETE FROM THE SITE. REPAIR THE EXISTING SLAB PER PLUMBING/STRUCTURAL DETAILS WITHIN THE DRAWING SET.
4. NOTIFY OWNER OF REQUIRED SYSTEM SHUTDOWNS AT LEAST TWO WEEKS PRIOR TO SHUTDOWN. EXACT SHUTDOWN TIME AND PROCEDURE SHALL BE COORDINATED WITH OWNER AT LEAST 96 HOURS PRIOR TO SHUTDOWN.
5. WHEN ELECTRICAL CONDUIT/RACEWAY SYSTEMS OR EQUIPMENT ARE NOTATED TO BE PERMANENTLY REMOVED THEIR ASSOCIATED COMPONENTS SHALL ALSO BE REMOVED INCLUDING HANGERS, SUPPORTS, AND ACCESSORIES.
6. COORDINATE THE DISCONNECTION AND REMOVAL OF POWERED SYSTEMS WITH THE E.C. WHEN REMOVING POWERED TECHNOLOGY EQUIPMENT.
7. REPAIR EXISTING FLOORS, WALLS AND CEILINGS IN ALTERED AREAS TO MATCH EXISTING.
8. T.C. SHALL GUARANTEE AFFECTED (E) TECHNOLOGY DEVICES REMAIN OPERATIONAL WITH ADEQUATE SIGNAL CONTINUITY.
9. CONNECT TO (E)SYSTEMS/COMPONENTS FOR A COMPLETE INSTALLATION.
10. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

TECHNOLOGY SHEET INDEX:

Sheet Number	Sheet Name
T0.01	TECHNOLOGY COVER SHEET
T1.01	TECHNOLOGY - SITE PLAN
T2.00	TECHNOLOGY - FLOOR PLAN - OVERALL
T2.01	TECHNOLOGY - FLOOR PLAN - DEMOLITION
T2.21	TECHNOLOGY - FLOOR PLAN - REMODEL
T4.01	TECHNOLOGY - DETAILS

CODES AND STANDARDS:

EDITION	REFERENCE CODE/STANDARD
2022	CALIFORNIA ADMINISTRATIVE CODE, (CCR, TITLE 24, PART 1)
2022	CALIFORNIA BUILDING CODE, (CCR, TITLE 24, PART 2)
2022	CALIFORNIA ELECTRICAL CODE, (CCR, TITLE 24, PART 3)
2022	CALIFORNIA MECHANICAL CODE, (CCR, TITLE 24, PART 4)
2022	CALIFORNIA PLUMBING CODE, (CCR, TITLE 24, PART 5)
2022	CALIFORNIA ENERGY CODE, (CCR, TITLE 24, PART 6)
2022	CALIFORNIA HISTORICAL BUILDING CODE, (CCR, TITLE 24, PART 8)
2022	CALIFORNIA FIRE CODE, (CCR, TITLE 24, PART 9)
2022	CALIFORNIA EXISTING BUILDING CODE, (CCR, TITLE 24, PART 10)
2022	CALIFORNIA GREEN BUILDING STANDARDS, (CCR, TITLE 24, PART 11)
2022	CALIFORNIA REFERENCED STANDARDS CODE, (CCR, TITLE 24, PART 12)
2022	STANDARD FOR INSTALLATION OF FIRE SPRINKLER SYSTEMS OF CALIFORNIA, (ADOPTS NFPA 13, 2022. WITH AMENDMENTS)
2018	NFPA 54-NATIONAL FUEL GAS CODE
2022	NFPA 72-NATIONAL FIRE ALARM AND SIGNALING CODE

CCR-CALIFORNIA CODE OF REGULATIONS
NFPA-NATIONAL FIRE PROTECTION AGENCY

GENERAL LEGEND:

SYMBOL	DESCRIPTION
## / ####	DETAIL CALL-OUT SYMBOL
###-#	EQUIPMENT TAG
#	KEYNOTE SYMBOL
	POINT OF CONNECTION OR DISCONNECTION
## / ####	SECTION CUT CALL-OUT SYMBOL
## / ####	ENLARGED PLAN CALL-OUT SYMBOL

LINETYPE	DESCRIPTION
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW CONSTRUCTION
(E)	EXISTING TO REMAIN
(X)	EXISTING TO BE REMOVED

FIRE-RATED ASSEMBLY LEGEND:

LINETYPE/SYMBOL	DESCRIPTION
	ONE HOUR FIRE PARTITION

CONSULTANT:

ASTRAL ENGINEERS, PC
PO BOX 190
RANCHO CUCAMONGA, CA 91729
909.481.6555
www.astraleng.com
PROJECT #:230037.00

TECHNOLOGY COVER SHEET
WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-471/04-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DEL'N. DATE: DESCRIPTION:
1 08/02/2024 ADDENDUM A

T0.01

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N

1 TECHNOLOGY - SITE PLAN

1" = 60'-0"

CONSULTANT:

ASTRAL ENGINEERS, PC
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PROJECT #:230037.00

TECHNOLOGY - SITE PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
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ELECTRICAL
STATE OF CALIFORNIA

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PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:

T1.01

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NUMBER	TEXT
1	CONTRACTOR SHALL VERIFY EXTERIOR BUILDING MOUNTED EXISTING SECURITY CAMERAS ARE CONNECED AND ACTIVATED AS PART OF PROJECT SCOPE OF WORK.

GENERAL NOTES - T2.00

T2.00

PROJECT NUMBER: 22-47104-00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024
DELTA: DATE: DESCRIPTION:
A 08/02/2024 ADDENDUM A

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SEALS:

REGISTERED PROFESSIONAL ENGINEER JAMES C. LESSARD E 24240 Exp. 09-30-24 STATE OF CALIFORNIA ELECTRICAL

TECHNOLOGY - FLOOR PLAN - OVERALL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

CONSULTANT:

ASTRAL ENGINEERS, PC
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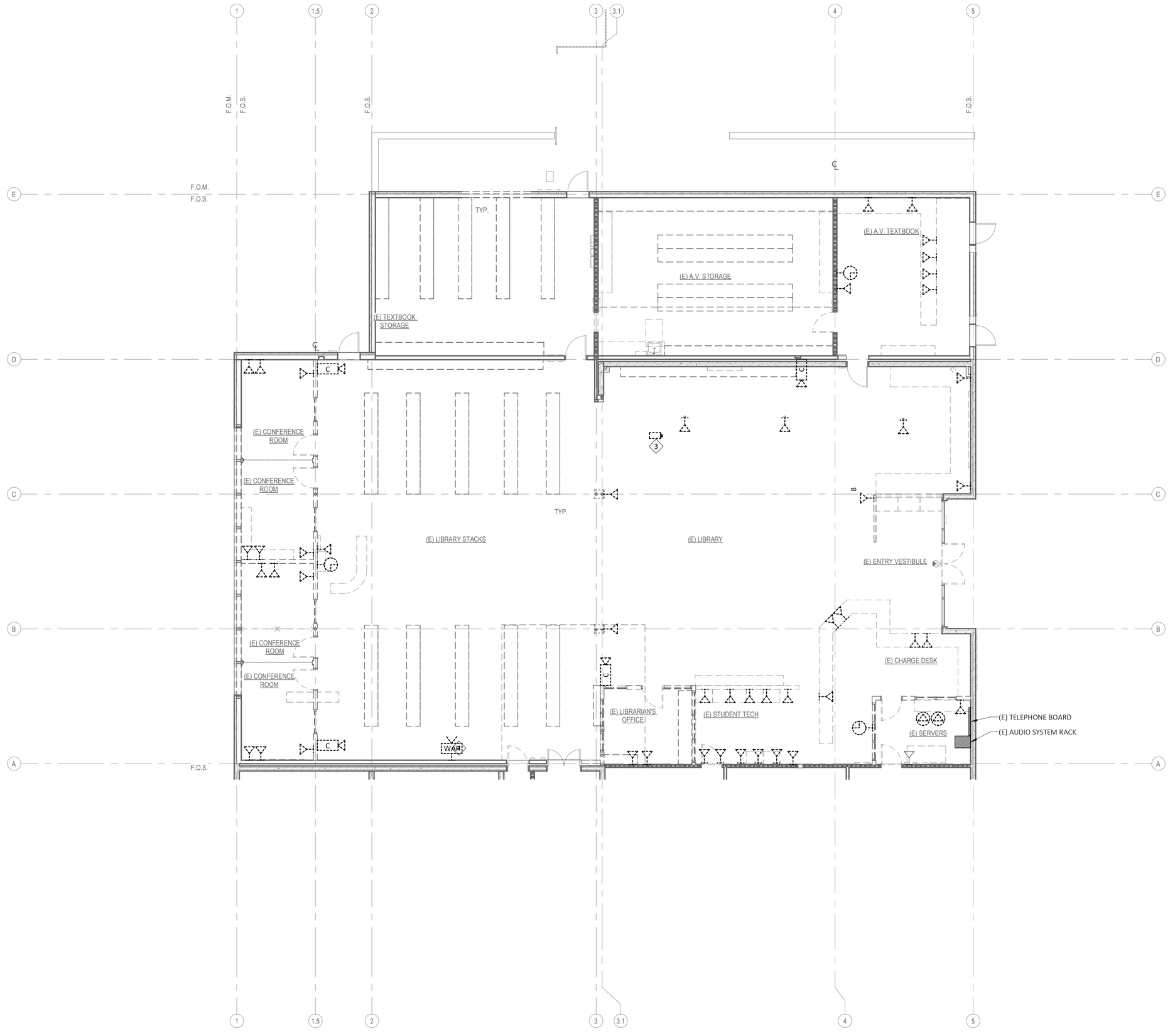
909.903.0015
www.astraleng.com
PROJECT #:230037.00

	GENERAL NOTES
NUMBER	TEXT
1	REMOVE EXISTING, EXPOSED SURFACE MOUNTED RACEWAYS THROUGHOUT THE PROJECT AREA FOR REPLACEMENT WITH CONCEALED IN-WALL AND ABOVE-CEILING UTILITIES IN NEW WORK.

◇#	KEYNOTES - T2.01
NUMBER	TEXT
1	REMOVE AND SALVAGE (RETURN TO OWNER) EXISTING OMNIPCX FLOOR CABINENTS IN THIS ROOM.
2	TEMPORARILY DISCONNECT AND SALVAGE FOR REUSE IN NEW WORK EXISTING DATA SWITCH AND COPPER TERMINATION PANEL AT THIS LOCATION. PROTECT EXISTING LOW-VOLTAGE CABLING SERVING AREAS OUTSIDE PROJECT SCOPE OF WORK AREA.
3	REMOVE EXISTING CEILING MOUNTED PROTECTOR/MOUNT AND SALVAGE BACK TO OWNER.
4	REMOVE EXISTING WALL MOUNTED WIRELESS ACCESS POINT (WAP) AND SALVAGE BACK TO OWNER.



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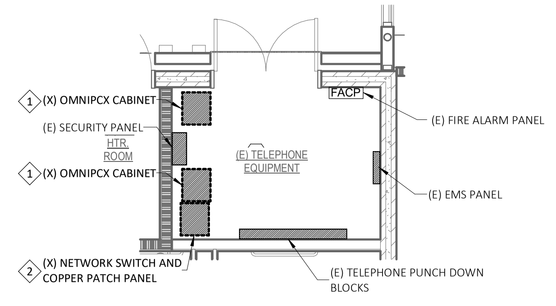
1 TECHNOLOGY - FLOOR PLAN - DEMOLITION
1/8" = 1'-0"



N

2 TELEPHONE ROOM - DEMOLITION
1/4" = 1'-0"

CONSULTANT:
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PROJECT #:230037.00

TECHNOLOGY - FLOOR PLAN - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA

sgh ARCHITECTS

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PROJECT NUMBER: 22-471(04.0)
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SHEET ISSUED: 08/02/2024
DELTA DATE: DESCRIPTION:

T2.01

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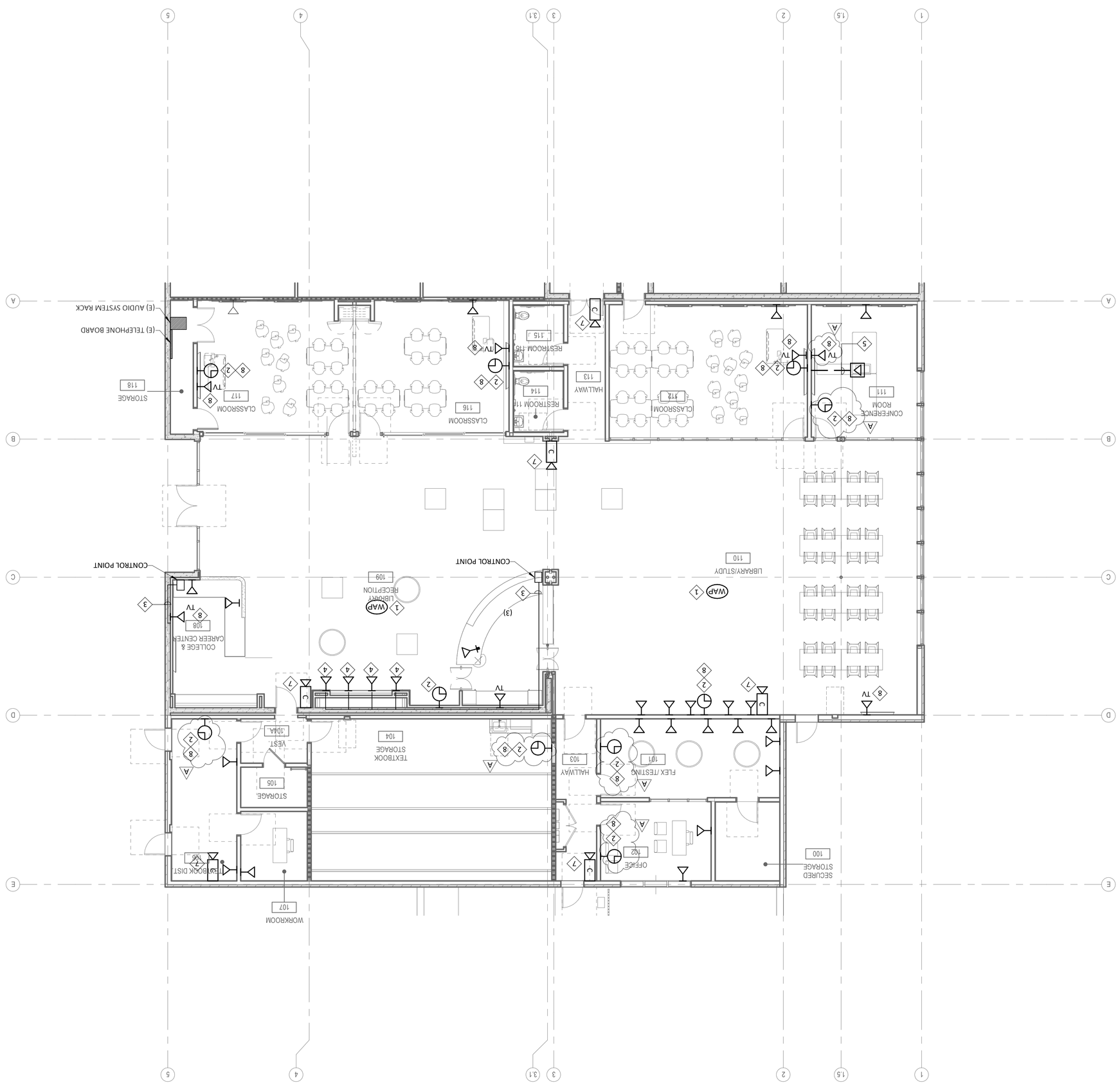
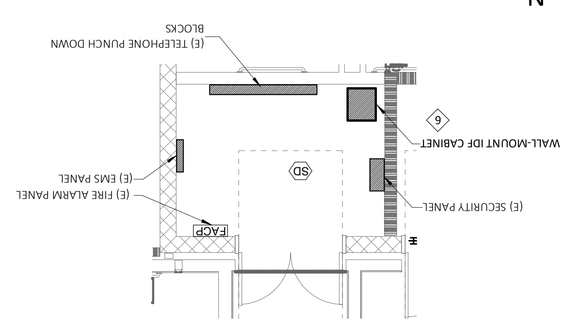
TECHNOLOGY - FLOOR PLAN - REMODEL

1 TECHNOLOGY - FLOOR PLAN - REMODEL
1/8" = 1'-0"



2 TELEPHONE ROOM - REMODEL
1/4" = 1'-0"



GENERAL NOTES

NUMBER	TEXT
1	ALL CIRCUITING SHALL BE ROUTING CONCEALED IN-WALL OR ABOVE CEILING TO DEVICES INDICATED ON PLAN. NO SURFACE-MOUNTED, EXPOSED RACEWAY IS PERMITTED.

KEYNOTES - T2.21

#	TEXT
1	PROVIDE CEILING FLUSH-MOUNTED 2-PORT DATA OUTLETS FOR WIRELESS ACCESS POINT (DISTRICT-PROVIDED). COORDINATE FINAL PLACEMENT WITH DISTRICT PRIOR TO ROUGH-IN.
2	PROVIDE COMBINATION CLOCK/PAGING SPEAKER UNIT AT THIS LOCATION. ROUTE CLOCK/PAGING SPEAKER UNIT NETWORK CABLING BACK TO IDF RACK ENCLOSURE FOR TERMINATION. SEE RISER DIAGRAM ON SHEET T4.01. SEE ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING HEIGHT.
3	CONNECT DISPLAY TO CONTROL POINT AT THIS DESK; ROUTE CONDUIT AND CONDUCTORS THROUGH SOFFITS AND WALL.
4	PROVIDE DATA & A/V OUTLET (ONE EACH PER DISPLAY - TOTAL OF TEN DISPLAYS) AT THIS LOCATION FOR VIDEO DISPLAY WALL. CENTERED ALONG VIDEO DISPLAY WALL. COORDINATE ROUGH-IN AND DATA & A/V OUTLET CONFIGURATION WITH EQUIPMENT VENDOR.
5	ROUTE UNDER FLOOR CONDUIT TO FLOOR BOX FOR POWER/DATA/PHONE.
6	PROVIDE NEW WALL-MOUNTED IDF RACK ENCLOSURE WITHIN TELEPHONE EQUIPMENT ROOM. RE-INSTALLED AND RECONNECT SALVAGED COPPER TERMINATION RACK AND NETWORK SWITCH WITHIN NEW IDF RACK ENCLOSURE. SEE DETAILS 3, 7, 8/T4.01.
7	PROVIDE WALL-MOUNTED CCTV CAMERA AT THIS LOCATION. COORDINATE FINAL PLACEMENT AND ELEVATION WITH DISTRICT PRIOR TO ROUGH-IN. SEE DETAILS 4 & 6/T4.01.
8	COORDINATE EXACT MOUNTING HEIGHT WITH ARCHITECTURAL DRAWINGS.

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PROJECT #:23037.00

CONSULTANT:

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
JAMES C. LESSARD
E 24240
Exp. 09-30-24
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STATE OF CALIFORNIA

sgh ARCHITECTS

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SHEET ISSUED: 08/02/2024

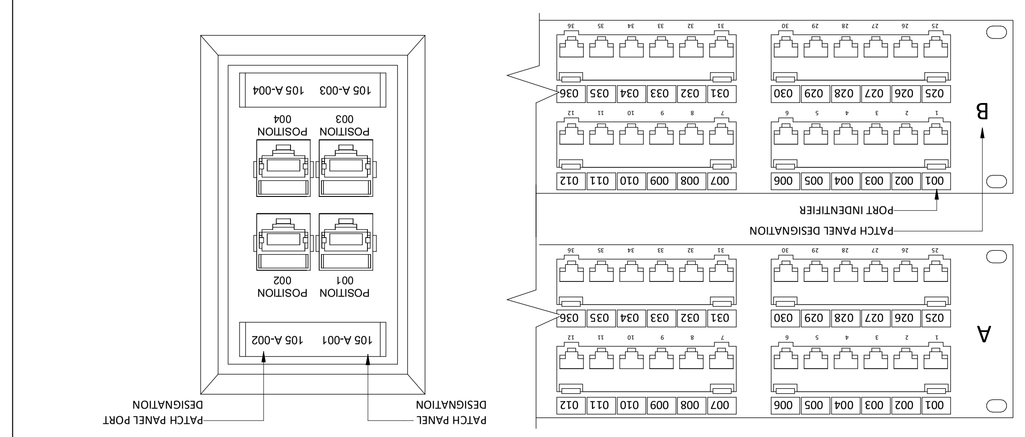
DELTA	DATE	DESCRIPTION
1	08/02/2024	ADDENDUM A

T2.21

01/08/2026 09:39:01 PM
Autodesk Docs://23037.00_WUSD Walnut HS Library Media Center/24MEPTP.RVT
23037.00_WUSD Walnut HS Library Media Center.rvt

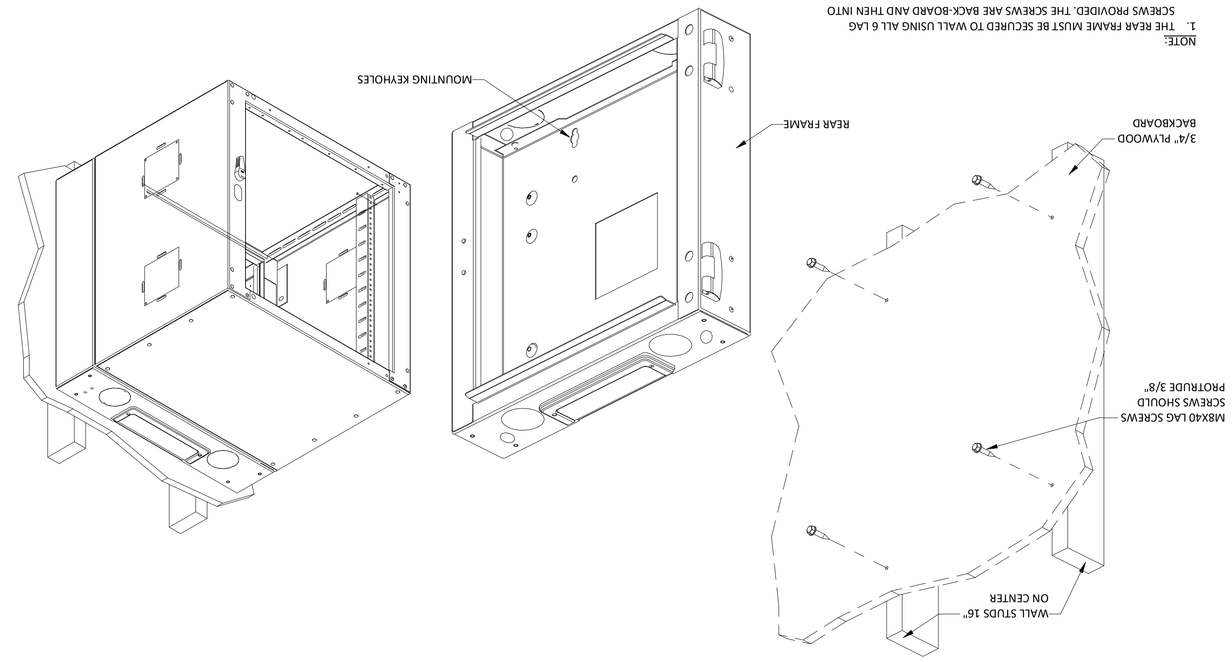
PATCH PANEL AND OUTLET LABELING

9 | NTS



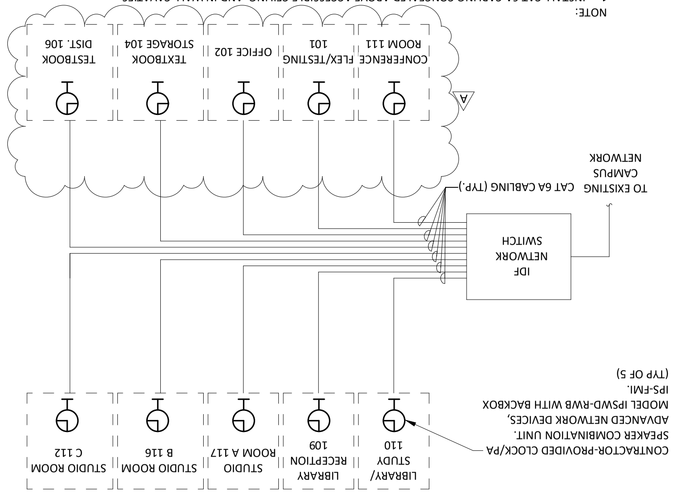
WALL MOUNT IDF RACK (WOOD FRAMED)

8 | NTS



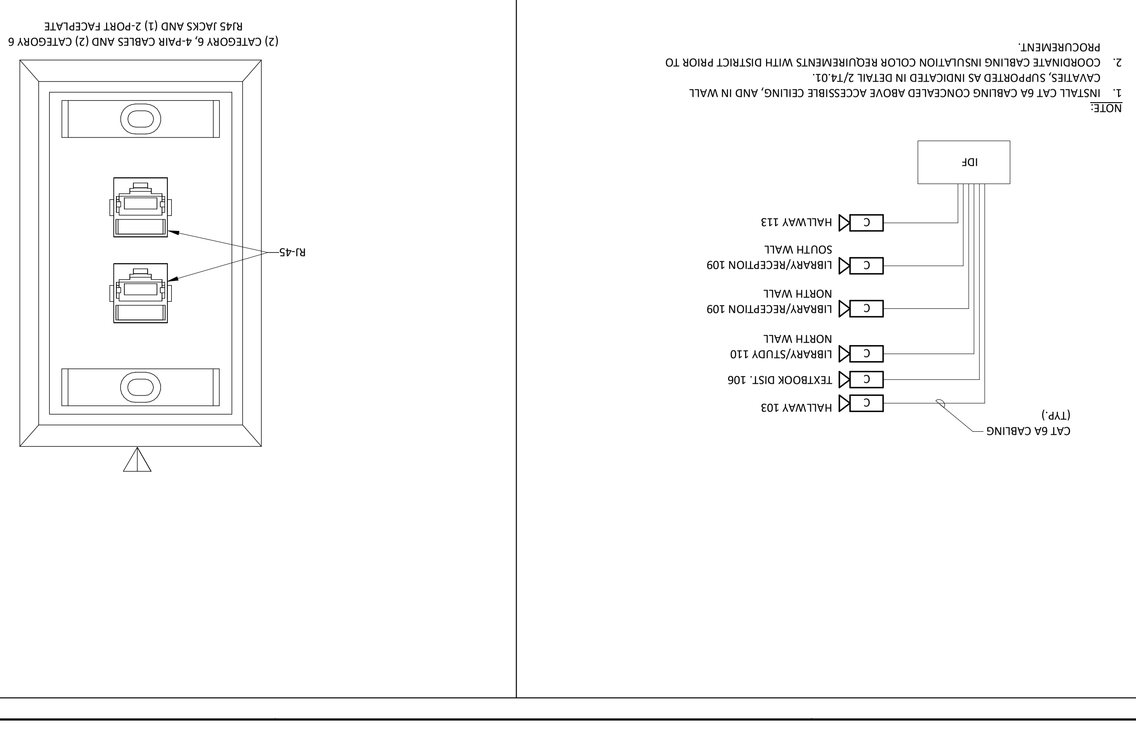
IP-BASED CLOCK AND PAGING SYSTEM RISER DIAGRAM

5 | NTS



CCTV RISER DIAGRAM

4 | NTS

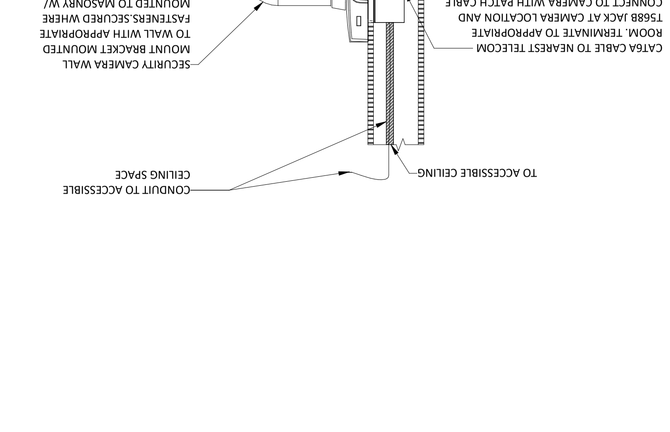


DATA OUTLET FACE PLATE

1 | NTS

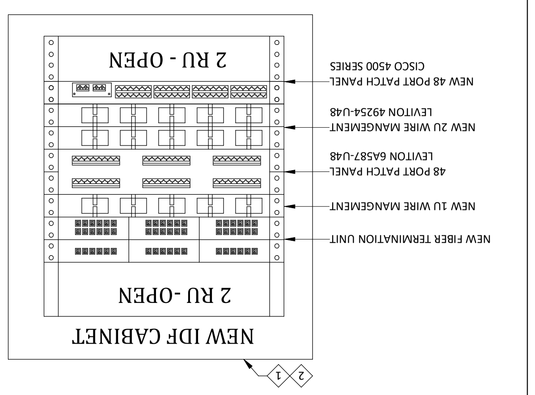
CCTV WALL MOUNTED

6 | NTS



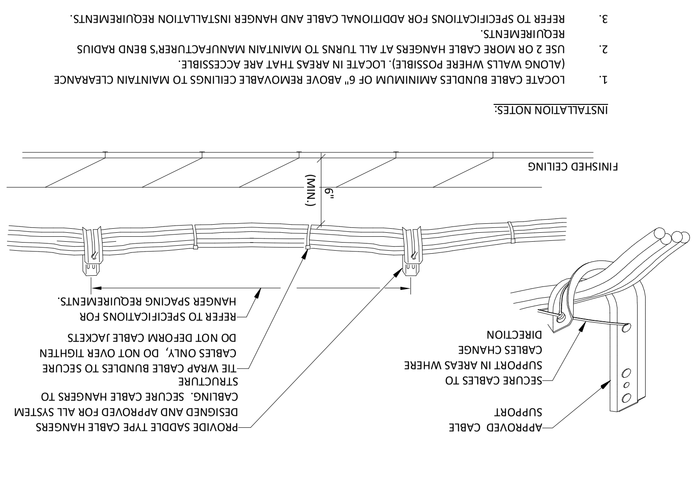
NEW IDF RACK - ELEVATION - WALL MOUNTED

3 | NTS



LOW VOLTAGE CABLING INSTALLATION WITH CABLE HANGERS

2 | NTS



NETWORK RISER DIAGRAM

7 | NTS

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SEALS:

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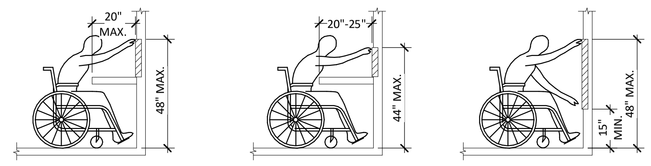
PROJECT NUMBER: 22-47104.00
PROJECT STATUS: DSA SUBMITTAL
SHEET ISSUED: 08/02/2024

DELTA	DATE	DESCRIPTION
1	08/02/2024	ADDENDUM A

TECHNOLOGY - DETAILS

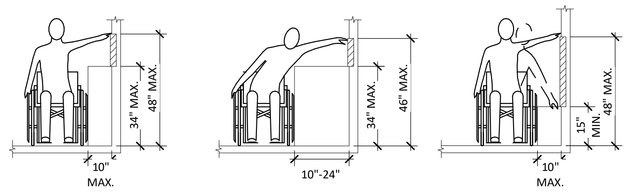
WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
400 Pierre Rd, Walnut, CA 91789

T4.01



COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 40" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - FRONT ACCESS



COUNTER DEVICE @ 44" AFF | COUNTER DEVICE @ 42" AFF | COUNTER DEVICE @ 18" AFF

CBC/ADA GUIDELINES - SIDE ACCESS

FIRE ALARM-SEQUENCE OF OPERATION:

	MANUAL PULL STATION	SMOKE/HEAT DETECTION	OPEN SHORT GROUND FAULT	LOW BATTERY	CIRCUIT SHORT POWER FAILURE
REPORT ALARM AT FACP	✓	✓			
REPORT ALARM AT ANNUNCIATOR	✓	✓			
REPORT TROUBLE AT FACP			✓	✓	✓
REPORT TROUBLE AT ANNUNCIATOR			✓	✓	✓
REPORT CONDITION AT FACP	✓	✓	✓	✓	✓
REPORT CONDITION AT ANNUNCIATOR	✓	✓	✓	✓	✓
CONTACT CENTRAL STATION	✓	✓	✓	✓	✓
MUTE BUILDING PUBLIC ADDRESS SYSTEM					
LAUNCH AUDIO AND VISUAL SIGNAL	✓	✓			
TURN-OFF BUILDING AIR-HANDLING EQUIPMENT	✓	✓			
INITIATE VOICE EVAC AND STROBES	✓	✓			

FIRE ALARM-WIRE SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION	NUMBER OF WIRES
	CONDUIT CONCEALED IN FINISHED AREAS - EXPOSED IN UNFINISHED AREAS	
	CONDUIT STUB - TERMINATE WITH CAP	
	CONDUIT CONCEALED IN OR UNDER FLOOR SLAB	
	CONDUIT TURNING UP	
	CONDUIT TURNING DOWN	
	FLEXIBLE CONNECTION TO EQUIPMENT	
WM	WIRE MOLD RACEWAY	
D	SENSOR LOOP WIRING NUMBER	ONE TWISTED PAIR PENN D990
2D	SENSOR LOOP WIRING NUMBER	TWO TWISTED PAIR WEST PENN D99
2D	UNDERGROUND SENSOR LOOP WIRING NUMBER	TWO PAIR-WEST PENN AQC225
V	NOTIFICATION LINE WIRING CIRCUIT	2 #12 WEST PENN 998
2V	NOTIFICATION LINE WIRING CIRCUIT	4 #12 WEST PENN 998
V	UNDERGROUND NOTIFICATION LINE WIRING CIRCUIT	T4 #12 WEST PENN AQC227
S	NOTIFICATION SPEAKER - AUDIO	2 #18 WEST PENN D980
S	UNDERGROUND NOTIFICATION SPEAKER-AUDIO	2 #16 WEST PENN AQC225
P	24V UN-INTERRUPTIBLE POWER	2 #14 WEST PENN 994
P	24V UN-INTERRUPTIBLE POWER	2 #14 WEST PENN AQC226
EOL	END OF THE LINE RESISTOR	

NOTES:
1. SEE SPECS AND CUTSHEET PACKAGE FOR ADDITIONAL WIRE INFORMATION.
2. ALL CONDUIT USED FOR FIRE ALARM WIRE SHALL BE MINIMUM OF 3/4".

FIRE ALARM-SYMBOLS:

LINETYPE/SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL EDWARDS - EST3 CSFM LISTING: 7165-1657:0186
AMP	FIRE ALARM AMPLIFIER EDWARDS - ANS50A CSFM LISTING: 7165-1657:0186
FAA	FIRE ALARM ANNUNCIATOR PANEL EDWARDS - 3-LED-ANN CSFM LISTING: 7120-1657:0193
RPS	REMOTE POWER SUPPLY EDWARDS - BPS10A CSFM LISTING: 7165-1657:0229
PS	MANUAL PULL STATION EDWARDS - SIGA - 278 CSFM LISTING: 7272-1657:0331
SD	SMOKE DETECTOR EDWARDS - SIGA - SB CSFM LISTING: 7300-1657:0120
SD D	EXISTING DUCT SMOKE DETECTOR WITH TWO AUXILIARY CONTACTS
H	AUTOMATIC HEAT DETECTOR - 135°F RATE OF RISE EDWARDS - SIGA-HRD CSFM LISTING: 7270-1657:0333
"#" CD	STROBE UNIT ONLY - WALL MOUNTED TYPE - INDICATES THE CANDELA SIZE FOR EACH STROBE EDWARDS GENSIS G4S SERIES CSFM LISTING: 7320-1657:0516
	HORN & STROBE UNIT - WALL MOUNTED TYPE EDWARDS EG1 SERIES CSFM LISTING: 7135-1657:0502

NOTES:
1. NOT ALL SYMBOLS MAY APPLY.
2. SEE SPECS AND DRAWINGS FOR SPECIFIC COMPONENT REQUIREMENTS.
3. INITIATING/DETECTION DEVICE CIRCUITS SHALL BE WIRED WITH CLASS "B".
4. NOTIFICATION DEVICE CIRCUITS SHALL BE WIRED WITH CLASS "B".

INITIATING DEVICE DESCRIPTION:

FSD X-#	X = DATA CIRCUIT NUMBER # = DEVICE NUMBER

NOTIFICATION DEVICE DESCRIPTION:

XX CD Y-# A-# #W	XX = CANDELA SIZE Y = FACP/RPS # = CIRCUIT NUMBER A = AMP. PANEL # = CIRCUIT NUMBER # = WATTAGE SIZE

DSA ANCHORAGE NOTES:

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 CHAPTER 13, 26 AND 30:

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

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

[ ]MP[ ]MD[ ]PP[X]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 (OSHPD) PRE-APPROVAL (OPM#) #OPM-#####-##, AS INCLUDED IN THESE DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

CONTRACTOR ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.A.C.	FIRE ALARM CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR
T.C.C.	TEMPERATURE CONTROL CONTRACTOR

FIRE ALARM ABBREVIATIONS:

ABBREVIATION	DESCRIPTION
AFG	ABOVE FINISHED GRADE
CM	COUNTER MOUNTED
FBO	FURNISHED BY OTHERS
FF	FINISHED FLOOR
IG	ISOLATED GROUND
INV	EMERGENCY INVERTER
PED	PEDESTAL MOUNTED
UNO	UNLESS OTHERWISE NOTED
+XX	DIMENSIONED HEIGHT ABOVE FINISHED FLOOR
-XX	DIMENSIONED HEIGHT BELOW FINISHED FLOOR
1W	ONE WIRE
2W	TWO WIRE
3W	THREE WIRE
A	AMPERE
AFG	ABOVE FINISH GRADE
AWG	AMERICAN WIRE GAUGE
C.O.	CONDUIT ONLY
D	DEDICATED DEVICE ON INDIVIDUAL BRANCH CIRCUIT. CIRCUIT CAN BE COMBINED WITH OTHER CIRCUITS FOR HOMERUNNING TO PANEL.
DN	DOWN
DISC	DISCONNECT
DN	DOWN
DTR	DOWN THRU ROOF
EM	EQUIPMENT POWERED WITH EMERGENCY SOURCE INTERNAL OR EXTERNAL.
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DAMPER
FL	FULL LOAD AMPS
FSD	FIRE SMOKE DAMPER
FT, '	FOOT OR FEET
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
IN., "	INCH OR INCHES
J-BOX	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATT
MAX	MAXIMUM
MIN	MINIMUM
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO., #	NUMBER
NTS	NOT TO SCALE
RPS	REMOTE POWER SUPPLY
SPEC	SPECIFICATION
SD	SMOKE DETECTOR
TYP	TYPICAL
U.C.	UNDERGROUND CONDUIT
UNO	UNLESS NOTED OTHERWISE
UTR	UP THRU ROOF
W	WIRES
WP	WEATHERPROOF

NOTES:
1. NOT ALL ABBREVIATIONS MAY APPLY.
2. FIRE ALARM SCHEDULES CONTAIN EQUIPMENT TAG ABBREVIATIONS THAT ARE HEREBY INCORPORATED INTO THE ABBREVIATION LIST.
3. SEE OTHER DISCIPLINE DRAWINGS WITHIN THE CONSTRUCTION DOCUMENTS FOR ABBREVIATIONS NOT DEFINED ABOVE OR IN FIRE ALARM SCHEDULES.

GENERAL NOTES:

1. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
2. REVIEW ALL PROJECT DOCUMENTS INCLUDING SPECS AND DRAWINGS PERTAINING TO ALL DISCIPLINES PRIOR TO SUBMITTING A BID. SUBMIT PRE-BID REQUEST FOR INFORMATION FOR ITEMS IN QUESTION AND/OR CONFLICTS FOUND.
3. DRAWINGS SHOW THE DESIGN INTENT DIAGRAMMATICALLY. THEY DO NOT SHOW THE EXACT UTILITY ROUTING NOR EVERY ELBOW, OFFSET, ETC. WHERE REQUIRED, THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO THEIR SYSTEMS TO AVOID CONFLICT WITH THE STRUCTURE AND OTHER DISCIPLINES. THE COST FOR SUCH ADJUSTMENTS SHALL BE INCLUDED IN THE BID.
4. OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR WORK PERFORMED.
5. OBTAIN UTILITY PURVEYOR REQUIREMENTS PRIOR TO PURCHASING EQUIPMENT OR PERFORMING WORK.
6. THE G.C. TEAM SHALL LEAD THE SUBCONTRACTORS IN PROVIDING A COORDINATED SET OF SHOP DRAWINGS. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
7. PROVIDE FIRESTOPPING FOR ALL UTILITY PENETRATIONS THRU FIRE-RATED ASSEMBLIES.
8. COORDINATE FRAMING REQUIREMENTS FOR ACCESS PANELS AND EQUIPMENT/PANEL SUPPORTS WITH G.C. PRIOR TO SUBMITTING BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CORRECTION OF CONSTRUCTION DEFICIENCIES LISTED ON THE JOB SITE OBSERVATION REPORT. RETURN THE JOB SITE OBSERVATION REPORT TO A/E WITH DEFICIENCIES SIGNED OFF. PROVIDE PHOTOGRAPHIC AND/OR VIDEO EVIDENCE OF CORRECTED DEFICIENCIES IF REQUESTED BY THE ENGINEER.
10. PROVIDE CLOSEOUT DOCUMENTATION UPON COMPLETION OF PROJECT. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.
11. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. UTILIZE A WASTE MANAGEMENT COMPANY THAT CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH CODE. SEE GENERAL REQUIREMENTS SPEC FOR ADDITIONAL INFORMATION.

FIRE ALARM NOTES:

1. FIRE ALARM WORK SHALL BE CONSTRUCTED IN A PROFESSIONAL MANNER. COMPONENTS SHALL BE CLEANED PRIOR TO OWNER TURNOVER.
2. THE SCHEDULED EQUIPMENT SHALL BE USED AS THE BASIS OF DESIGN. MODEL NUMBERS ARE PROVIDED FOR REFERENCE ONLY. EQUIPMENT SHALL MEET SPECIFIED PERFORMANCE. THE CONTRACTOR SHALL IDENTIFY ALL SELECTED OPTIONS IN THE SUBMITTAL.
3. IF A CONTRACTOR PROVIDES EQUIPMENT OTHER THAN THE BASIS OF DESIGN, THAT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED AS A RESULT. THAT INCLUDES, BUT IS NOT LIMITED TO, AGENCY FEES FOR REVIEW OF CHANGES, STRUCTURAL MODIFICATIONS FOR INCREASED WEIGHT, AND ELECTRICAL EQUIPMENT, WIRING, CONDUIT, AND BREAKER CHANGES FOR DIFFERENT ELECTRICAL REQUIREMENTS.
4. COORDINATE POWER REQUIREMENTS WITH THE E.C. PRIOR TO PROVIDING SUBMITTALS TO THE ENGINEER.
5. PROVIDE CONCRETE EQUIPMENT PADS FOR FLOOR-MOUNTED EQUIPMENT. SEE PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
6. SEE SPEC SECTIONS 2605 33 FOR CONDUIT/RACEWAY SYSTEM INSTALLATION, AND CLEANING REQUIREMENTS.
7. PROVIDE CONDUIT OR RACEWAY EXPANSION JOINT THAT ACCOMMODATES THE BUILDING MOVEMENT WHERE CONDUIT OR RACEWAY CROSSES BUILDING EXPANSION JOINT.
8. PAINT INTERIOR EXPOSED CONDUIT/RACEWAY, PULL BOXES, AND ASSOCIATED HANGERS/SUPPORTS LOCATED IN OCCUPIED SPACES TO MATCH THE SURROUNDING ARCHITECTURAL COLOR SCHEME. PAINT EXTERIOR CONDUIT, PULL BOXES AND ASSOCIATED HANGERS/SUPPORTS ADJACENT TO EXTERIOR WALL TO MATCH WALL COLOR. FINAL COLORS SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER. SEE SPEC SECTION 28 0500 FOR ADDITIONAL REQUIREMENTS.
9. PROVIDE IDENTIFICATION FOR CONDUIT, PULL BOXES, AND EQUIPMENT PER SPEC SECTION 26 0553.
10. CONDUIT/RACEWAY SHALL NOT PASS THRU NOR UNDER DATA ROOMS, ELEVATOR MACHINE ROOMS, ELEVATOR HOISTWAYS, SKYLIGHTS, AND ROOF ACCESS HATCHES.
11. PROVIDE PULL BOXES SHALL BE ACCESSIBLE. PROVIDE KEYED ACCESS PANELS WHERE PULL BOXES HAVE BEEN LOCATED IN CONCEALED AREAS. ACCESS PANEL SIZE SHALL BE LARGE ENOUGH TO ACCESS EACH PULL BOX.
12. ALL FIRE ALARM LANDING ON PULL BOXES SHALL LAND IN TERMINAL BLOCKS. INSTALL TERMINAL BLOCK ON THE INSIDE BACK PART OF BOX. LAND AND TERMINATE INCOMING WIRES ON THE LEFT HAND SIDE. LAND AND TERMINATE OUTGOING WIRES ON THE RIGHT HAND SIDE.
13. DEVICES SHALL NOT BE SET TO OUTPUT SIGNALS AT A MAXIMUM OF 110 dB. A VISUAL DVICE SHALL BE INCLUDED FOR DEVICES WITH AMBIENT SOUND LEVELS ABOVE 105 dB.
14. WIRING SHALL BE TERMINATED ON EACH DEVICE AND AVOID LOOPING.
15. FIRE ALARM CONTRACTOR SHALL PASS TESTS REQUIRED BY LOCAL FIRE DEPARTMENTS. CONTRACTOR IS RESPONSIBLE FOR ANY CORRECTIONS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
16. FIRE ALARM PANEL SHALL BE ACCESSIBLE TO FIRE DEPARTMENT PERSONNEL AND AUTHORIZED MAINTENANCE DEPARTMENT.
17. ANNUNCIATION AT FIRE ALARM PANEL SHALL BE DIFFERENT BETWEEN A SUPERVISORY SIGNAL & TROUBLE SIGNAL.
18. FIRE ALARM CONTROL PANEL SHALL SUPERVISE ANNUNCIATOR PANEL, FIRE ALARM INITIATING DEVICES, AND NOTIFICATION DEVICES.
19. WIRING WITHIN EQUIPMENT AND TERMINAL CABINETS SHALL BE NUMBERED IN SEQUENTIAL ORDER. THIS NUMBERING ORDER SHALL BE MAINTAINED ALL THE WAY TO DEVICE FINAL CONNECTION.
20. ALL EXISTING FIRE ALARM DEVICES SHALL BE SALVAGED AND RETURNED BACK TO THE OWNER.
21. HEAT DETECTORS ABOVE CEILING SHALL HAVE A MARKED LOCATION ON VISIBLE CEILING FOR ACCESS REQUIREMENTS.
22. INSTALL PANELS AT NO HIGHER THAN 6'-0" ABOVE FINISH FLOOR.

FIRE ALARM SHEET INDEX:

Sheet Number	Sheet Name
FA0.01	FIRE ALARM COVER SHEET
FA0.02	FIRE ALARM RISER DIAGRAMS
FA1.01	FIRE ALARM - SITE PLAN
FA2.01	FIRE ALARM - FLOOR PLAN - DEMOLITION
FA2.21	FIRE ALARM - FLOOR PLAN - REMODEL
FA4.01	FIRE ALARM - DETAILS

CODES AND STANDARDS:

EDITION	REFERENCE CODE/STANDARD
2022	CALIFORNIA ADMINISTRATIVE CODE, (CCR, TITLE 24, PART 1)
2022	CALIFORNIA BUILDING CODE, (CCR, TITLE 24, PART 2)
2022	CALIFORNIA ELECTRICAL CODE, (CCR, TITLE 24, PART 3)
2022	CALIFORNIA MECHANICAL CODE, (CCR, TITLE 24, PART 4)
2022	CALIFORNIA PLUMBING CODE, (CCR, TITLE 24, PART 5)
2022	CALIFORNIA ENERGY CODE, (CCR, TITLE 24, PART 6)
2022	CALIFORNIA HISTORICAL BUILDING CODE, (CCR, TITLE 24, PART 8)
2022	CALIFORNIA FIRE CODE, (CCR, TITLE 24, PART 9)
2022	CALIFORNIA EXISTING BUILDING CODE, (CCR, TITLE 24, PART 10)
2022	CALIFORNIA GREEN BUILDING STANDARDS, (CCR, TITLE 24, PART 11)
2022	CALIFORNIA REFERENCED STANDARDS CODE, (CCR, TITLE 24, PART 12)
2022	STANDARD FOR INSTALLATION OF FIRE SPRINKLER SYSTEMS OF CALIFORNIA, (ADOPTS NFPA 13, 2022. WITH AMENDMENTS)
2018	NFPA 54-NATIONAL FUEL GAS CODE
2022	NFPA 72-NATIONAL FIRE ALARM AND SIGNALING CODE

CCR-CALIFORNIA CODE OF REGULATIONS
NFPA-NATIONAL FIRE PROTECTION AGENCY

GENERAL LEGEND:

SYMBOL	DESCRIPTION
## / ####	DETAIL CALL-OUT SYMBOL
###-#	EQUIPMENT TAG
#	KEYNOTE SYMBOL
	POINT OF CONNECTION OR DISCONNECTION
## / ####	SECTION CUT CALL-OUT SYMBOL
## / ####	ENLARGED PLAN CALL-OUT SYMBOL
LINETYPE	**DESCRIPTION**
	EXISTING TO REMAIN
	EXISTING TO BE REMOVED
	NEW CONSTRUCTION
(E)	EXISTING TO REMAIN
(X)	EXISTING TO BE REMOVED

FIRE-RATED ASSEMBLY LEGEND:

LINETYPE/SYMBOL	DESCRIPTION
	ONE HOUR FIRE PARTITION

RENOVATION NOTES:

1. DEMOLITION WORK SHALL BE PERFORMED AS DESCRIBED WITHIN SPEC SECTION 28 0505 AND THE DRAWINGS.
2. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMISSION TO VERIFY ALL FIELD CONDITIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   A. LOCATIONS OF EXISTING FIRE ALARM SYSTEMS.
   B. LOCATIONS OF ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, TECHNOLOGY, AND FIRE PROTECTION.
   C. EXISTING SURFACES WHICH REQUIRE ALTERING.
   D. EXISTING FIRE ALARM CONTROL PANEL CONDITIONS.
3. NOTIFY OWNER & LOCAL FIRE PROTECTION JURISDICTION OF REQUIRED SYSTEM SHUTDOWNS AT LEAST TWO WEEKS PRIOR TO SHUTDOWN. EXACT SHUTDOWN TIME AND PROCEDURE SHALL BE COORDINATED WITH OWNER & LOCAL FIRE PROTECTION JURISDICTION AT LEAST 96 HOURS PRIOR TO SHUTDOWN.
4. WHEN FIRE ALARM CONDUIT/RACEWAY SYSTEMS OR EQUIPMENT ARE NOTATED TO BE PERMANENTLY REMOVED THEIR ASSOCIATED COMPONENTS SHALL ALSO BE REMOVED INCLUDING HANGERS, SUPPORTS, AND ACCESSORIES.
5. COORDINATE THE DISCONNECTION AND REMOVAL OF THE POWERED SYSTEMS WITH THE E.C. WHEN REMOVING POWERED FIRE ALARM EQUIPMENT.
6. REPAIR EXISTING FLOORS, WALLS, AND CEILINGS IN ALTERED AREAS TO MATCH EXISTING.
7. THE CONTRACTOR SHALL NEATLY SAW CUT SECTIONS OF THE CONCRETE TO ACCESS THE WORK BELOW GRADE. REMOVE PORTIONS OF DEMOLISHED CONCRETE FROM THE SITE. REPAIR THE EXISTING SLAB PER TECHNOLOGY/STRUCTURAL DETAILS WITHIN THE DRAWINGS SET.
8. F.A.C SHALL GUARANTEE AFFECTED (E) TECHNOLOGY DEVICES REMAIN OPERATIONAL WITH ADEQUATE SIGNAL CONTINUITY.
9. CONNECT TO EXISTING SYSTEMS/COMPONENTS FOR A COMPLETE INSTALLATION.
10. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

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FIRE ALARM COVER SHEET

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

REGISTERED PROFESSIONAL ENGINEER
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sgh ARCHITECTS

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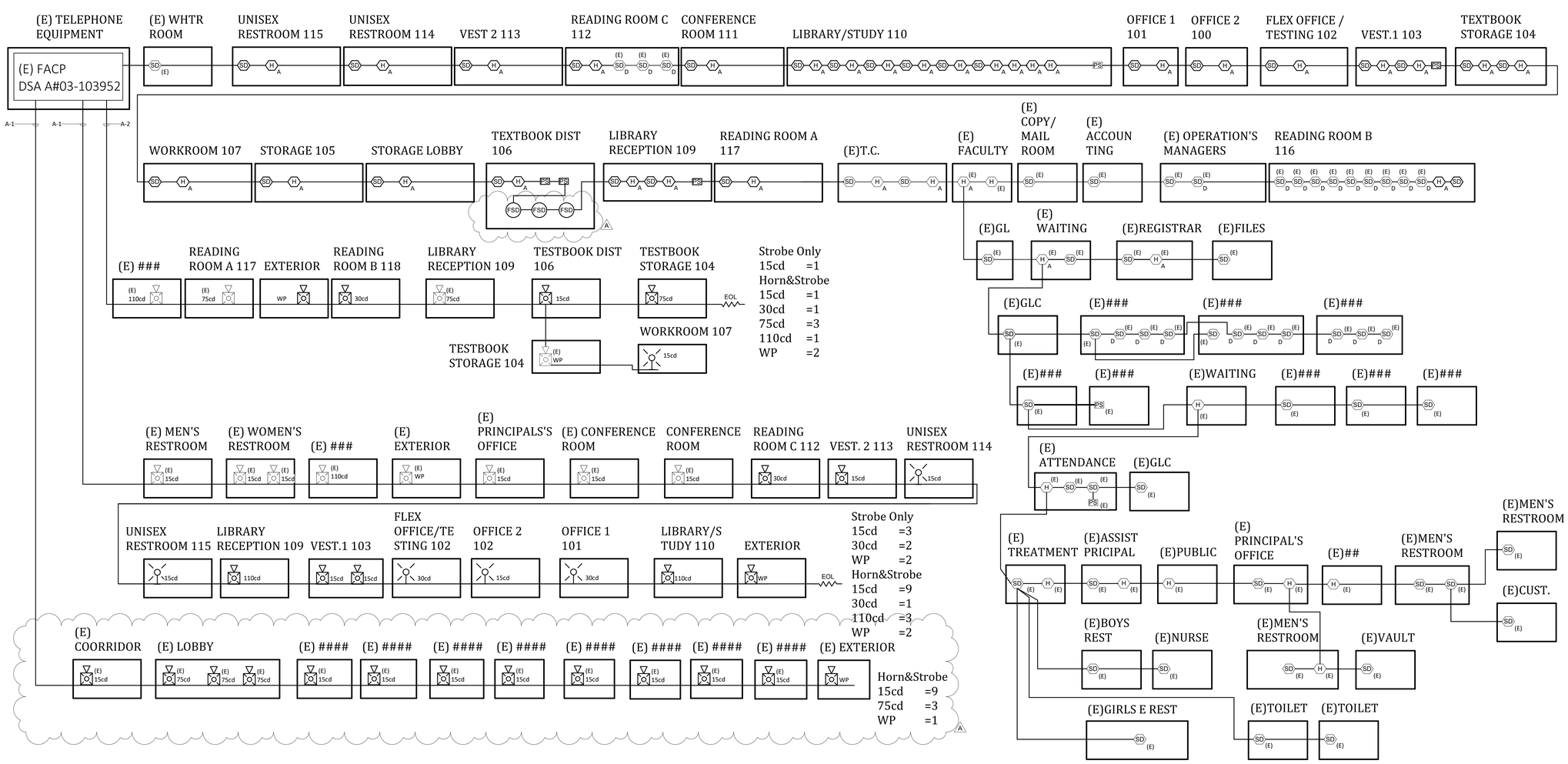

FIRE ALARM RISER DIAGRAM | NTS | 1

FIRE ALARM VOLTAGE DROP CALCULATION - FACP

Load Description			System Voltage (VDC)|24 Alarm Current (Amps)	FACP A-1	FACP A-2	FACP A-3	FACP A-4
Annunciation Devices							
Strobe	15cd	Device Quantity per Circuit	0.043	3	1	0	
		Sub-total Current (Amps)		0.129	0.043	0	
	30cd	Device Quantity per Circuit	0.063	2	0	0	
		Sub-total Current (Amps)		0.126	0	0	
	75cd	Device Quantity per Circuit	0.107	0	0	0	
		Sub-total Current (Amps)		0	0	0	
	110cd	Device Quantity per Circuit	0.121	0	0	0	
		Sub-total Current (Amps)		0	0	0	
Speaker / Strobe	15cd	Device Quantity per Circuit	0.073	9	1	9	
		Sub-total Current (Amps)		0.657	0.073	0.657	
	30cd	Device Quantity per Circuit	0.094	1	1	0	
		Sub-total Current (Amps)		0.094	0.094	0	
	75cd	Device Quantity per Circuit	0.139	0	3	3	
		Sub-total Current (Amps)		0	0.417	0.417	
	110cd	Device Quantity per Circuit	0.182	3	1	0	
		Sub-total Current (Amps)		0.546	0.182	0	
	WP	Device Quantity per Circuit	0.069	2	2	2	
	Speaker	Sub-total Current (Amps)		0.138	0.138	0.138	
	Relay	Device Quantity per Circuit	0.0065	0	0	0	
		Sub-total Current (Amps)		0.000	0.000	0.000	
Total Circuit Current (Amps)				1.690	0.947	1.212	
Wire Gauge (CU)				12	12	12	
Wire Length (Feet One-Way)				350	350	350	
Total Wire Resistance (2-Way)				1.386	1.386	1.386	
Voltage Drop (Volts)				**2.342**	**1.313**	**1.680**	
Voltage Drop (%)				**9.8%**	**5.5%**	**7.0%**	
Minimum Voltage @ EOL (>16V)				**18.058**	**19.087**	**18.720**	

FIRE ALARM BATTERY CALCULATION - NEW FACP

Load Description	Standby Current (AMPS)	Quantity	Sub-Total Standby Current (Amps)	Alarm Current (Amps)	Quantity	Sub-Total Alarm Current (Amps)
Fire Alarm Control Unit	0.165	1	0.165	0.31	1	0.31
Initiating Devices						
Smoke Detector	0.00005	83	0.00415	0.13	83	10.79
Heat Detector	0.00008	43	0.00344	0.13	43	5.59
Monitor Module	0.000375	3	0.001125	0.005	3	0.015
Annunciation Devices						
Strobe (15 CD)	0	4	0	0.043	4	0.172
Strobe (30 CD)	0	2	0	0.063	2	0.126
Strobe (75 CD)	0	0	0	0.107	0	0
Strobe (110 CD)	0	0	0	0.121	0	0
Speaker/Strobe (High, 15 CD)	0	10	0	0.073	10	0.73
Speaker/Strobe (High, 30 CD)	0	2	0	0.094	2	0.188
Speaker/Strobe (High, 75 CD)	0	3	0	0.139	3	0.417
Speaker/Strobe (High, 110 CD)	0	4	0	0.182	4	0.728
Speaker (Weatherproof)	0	3	0	0.069	3	0.207
Addressable Control Relay Module	0.00035	0	0	0.0065	0	0
	Total System Standby Current (Amps)		0.174	**Total System Alarm Current (Amps)**		19.273

Required Standby Time (Hours)	X	Sub-Total System Standby Current (Amps)	Required Standby Capacity (Amp-Hours)
24	X	0.174	4.169

Required Alarm Time (Hours)	X	Sub-Total System Standby Current (Amps)	=	Required Standby Capacity (Amp Hours)
0.083 (5 Minutes)	X	19.273	=	1.600

Required Standby Capacity (Amp-Hours)	+	Required Alarm Capcity (Amp-Hours)	=	Total Capacity (Amp-Hours)	X	Safety Factor (25%)	=	Required Battery Capacity (Amp-Hours)
4.169	+	1.600	=	5.769	X	1.25	=	**7.211**

Provided Battery (Amp-Hours)	=	18.0	Battery Remaining Spare Capacity (Amp-Hours)	=	10.789

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PROJECT # 230037.00
CONSULTANT:

FIRE ALARM RISER DIAGRAMS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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LA PUENTE ROAD

(E) RELOCATABLE BLDG.

(E) SOLAR PANELS
A# 119859

(E) BASEBALL FIELD

(E) TENNIS COURTS

(E) COURTS

(E) PARKING LOT 3

(E) FIELD

(E) SOLAR PANELS
A# 119859

PARKING LOT 3

SAFE DISPERSAL TO PUBLIC WAY

FIRE ACCESS
A# 120728

(E) SOLAR PANELS
A# 119859

(E) HOME TEAM BLDG.
A# 59323

NEW GYMNASIUM/ WEIGHT ROOM/
PHYSICAL EDUCATION CENTER
A# 120728

OCC. A-3, A-4
TYPE V-B, S

(E) TOW AWAY SIGN
A# 119859

(E) SOLAR PANELS
A# 119859

ACCESSIBLE PARKING
A# 119859

VAN

(E) PEDESTRIAN
GATE WITH
A# 120728

(E) BASKETBALL
COURTS

(E) F.H.

(E) VISITOR BLEACHERS

PROPERTY LINE

(E) F.H.

VAN

(E) FOOTBALL
FIELD

(E) F.H.

ACCESSIBLE
ROUTE SIGN PER

(E) BOY'S
ACCESSIBLE
TOILETS
A# 103952

(E) BLDG. E
A# 33630
A# 110035
A# 103952
OCC. E-1
TYPE V 1-HR, NS

(E) BLDG. F
A# 104420
A# 103952

(E) BLDG. K
A# 28574
A#33630
A# 58590
OCC. E-1/ B-1
TYPE V N, NS

(E) BLDG. L
A# 28574
A# 43743
A# 57977
A# 103952
OCC. A-2
TYPE III 1-HR, NS

(E) BLDG. 3
A# 110826

(E) BAND BLDG.
A# 112961

(E) GIRL'S
ACCESSIBLE
TOILETS
A# 103952

(E) SCOREBOARD
A# 118791

PIERRE ROAD

ACCESSIBLE
ROUTE SIGN PER

ACCESSIBLE
ROUTE SIGN PER

(E) SHADE STRUCTURES
A# 116457

(E) BLDG. R
A# 115954
A# 103952

1
FA2.01

(E) ADMIN/LIB/MEDIA
BLDG. A
A# 28574
A# 33890
A# 59080
A# 103952
OCC. A-3/B
TYPE V-1 HR, N/S

(E) BLDG. D
A# 28574
A# 103952
OCC. E-1
TYPE V N, NS

(E) BLDG. J
A# 28574
A# 33630
A# 103952
OCC. E-1
TYPE V N, NS

ACCESSIBLE
ROUTE SIGN PER

(E) POOL
A# 115954

(E) CONCESSION BLDG.
A# 59323

(E) VISITOR'S TEAM BLDG.
A# 59323

(E) BLDG. H
A# 33630
A# 59080
A# 103952
OCC. E-1
TYPE V N, NS

(E) BASEBALL
FIELD

(E) F.H.

1
FA2.21

ACCESSIBLE
ROUTE SIGN PER

(E) BLDG. S
A# 28574
A# 33630
A# 115954
A# 103952
OCC. E-1
TYPE V N, NS

(E) STAFF
ACCESSIBLE
TOILETS
A# 103952

(E) BLDG. C
A# 22865
A# 33630
A# 33890
A# 103952
OCC. E-1
TYPE V N, NS

(E) BLDG. G
A# 33630
A# 59080
A# 103952
OCC. E-1
TYPE V N, NS

(E) BLDG. Q
A# 33630
A# 103952

(E) DF TO BE
REPLACED

(E) GIRL'S & BOY'S
ACCESSIBLE TOILETS
A# 103952

ACCESSIBLE PARKING
A# 103952

VAN

(E) OLD BLDG. F
A# 28574
A# 58006

(E) F.H.

(E) BLDG. T
A# 62445

(E) BLDG. B
A# 28574
A# 103952
OCC. E-1
TYPE V 1-HR, NS

(E) BLDG. #2
A# 110035
TYPE V 1-HR, NS

F.H.
A#120728

(E) BLDG. N
A# 28574
A# 103952
OCC. A-2
TYPE V 1-HR, NS

(E) BLDG. M
A# 33630
A# 59080
A# 103952
OCC. E-1
TYPE V N, NS

(E) BLDG. U
A# 62445

(E) BLDG. V
A# 62445

(E) PARKING LOT 2

A# 63012

(E) BLDG. W
A# 62445

(E) BLDG. P
A# 63068
A# 103952

(E) BLDG. X
A# 62445

(E) BLDG. Y
A# 62445

(E) BLDG. Z
A# 62445

(E) F.H.

(E) PARKING LOT 1

(E) SOLAR PANELS
A# 119859

(E) ACCESSIBLE PARKING
A# 59080
A# 110035

VAN

(E) BASEBALL
FIELD

(E) F.H.

(E) F.H.

(E) FIRE LANE

(E) F.H.

PROPERTY LINE

N

1 FIRE ALARM - SITE PLAN
1" = 60'-0"

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PROJECT #:230337.00

FIRE ALARM - SITE PLAN

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

SEALS:

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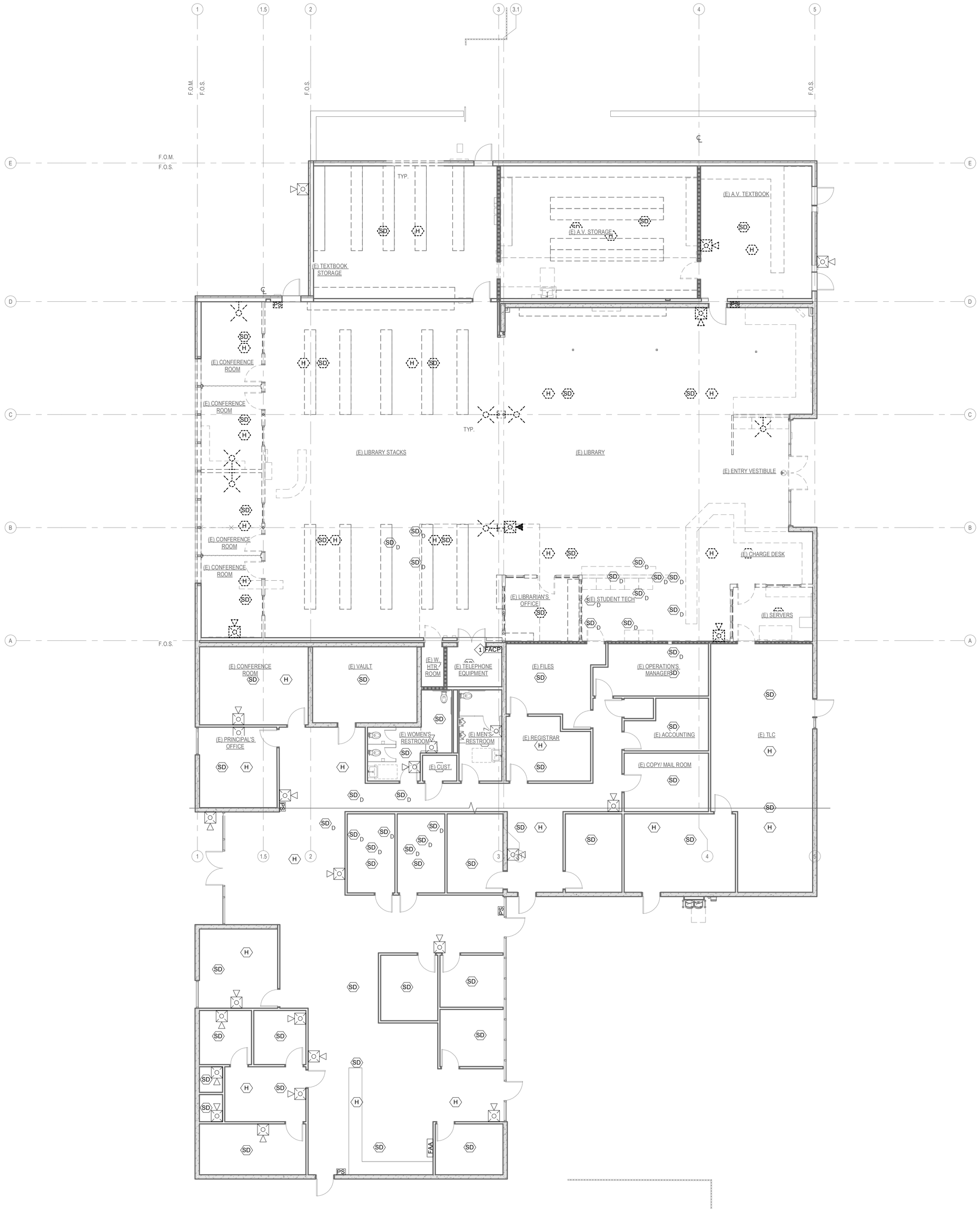

N

1 FIRE ALARM - FLOOR PLAN - DEMOLITION
1/8" = 1'-0"

#	KEYNOTES - FA2.01
NUMBER	TEXT
1	EXISTING FIRE ALARM CONTROL PANEL TO REMAIN IN-PLACE.

	GENERAL NOTES
NUMBER	TEXT
1	REMOVE EXISTING, EXPOSED SURFACE MOUNTED RACEWAYS THROUGHOUT THE PROJECT AREA FOR REPLACEMENT WITH CONCEALED IN-WALL AND ABOVE-CEILING UTILITIES IN NEW WORK.
2	EXISTING FIRE ALARM DEVICES WITHIN HATCHED AREA (OUTSIDE SCOPE OF WORK) ARE EXISTING TO REMAIN AND ARE SHOWN FOR REFERENCE ONLY.
3	WHERE EXISTING DEVICES ARE INDICATED TO BE REMOVED, ALSO REMOVE ASSOCIATED FIRE ALARM CIRCUITING BACK TO FIRE ALARM PANEL FOR REPLACEMENT IN NEW WORK.

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FIRE ALARM - FLOOR PLAN - DEMOLITION

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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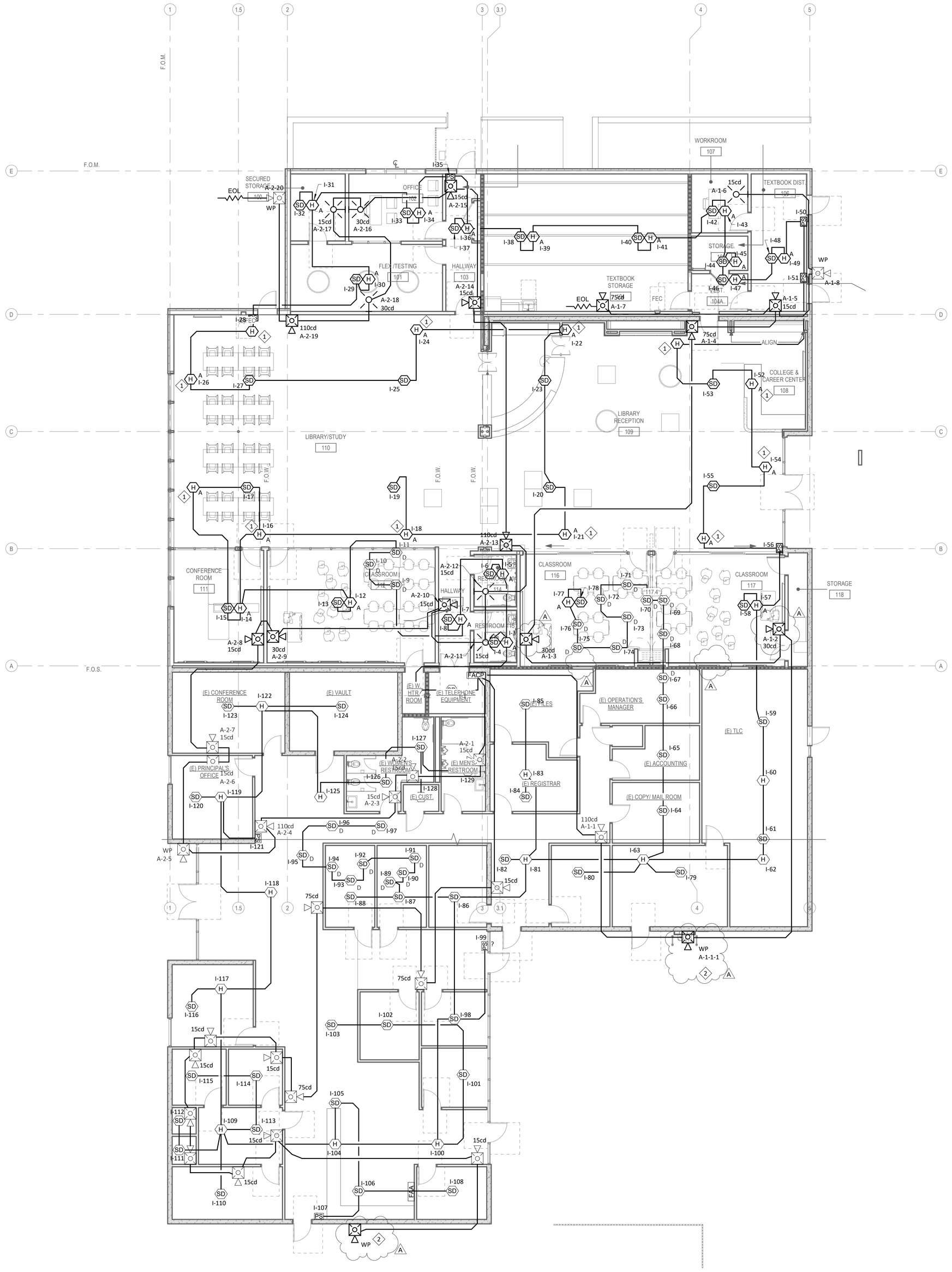

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1 FIRE ALARM - FLOOR PLAN - REMODEL
1/8" = 1'-0"

GENERAL NOTES - FA2.21

NUMBER	TEXT
1	ALL CIRCUITING SHALL BE ROUTING CONCEALED IN-WALL OR ABOVE CEILING TO DEVICES INDICATED ON PLAN. NO SURFACE-MOUNTED, EXPOSED RACEWAY IS PERMITTED.
2	HEAT DETECTORS SHALL BE MOUNTED IN ATTIC SPACE ABOVE CEILING. SMOKE DETECTORS TO BE MOUNTED TO UNDERSIDE OF CEILING. SEE DETAIL 3/FA4.01.
3	CONTRACTOR SHALL PROVIDE FIRE WATCH DURING OUTAGES (NON-OPERABLE CONDITION) OF FIRE & LIFE SAFETY SYSTEMS AS REQUIRED BY DSA IR F-2.
4	INSTALL FIRE ALARM DEVICES AT LOCATIONS SHOWN IN REMODEL PLAN. CONNECT TO EXISTING FIRE ALARM SYSTEM CABLING, EXTEND AS NECESSARY MATCHING EXISTING TYPE. RE-TEST/CERTIFY FIRE ALARM FOLLOWING INSTALLATION. REPORT ANY DAMAGED OR FAILED DEVICES TO THE OWNER/ENGINEER.
5	EXISTING FIRE ALARM DEVICES WITHIN HATCHED AREA (OUTSIDE SCOPE OF WORK) ARE EXISTING TO REMAIN AND ARE SHOWN FOR REFERENCE ONLY.

KEYNOTES - FA2.21

# NUMBER	TEXT
1	PROVIDE SIDE-WALL ACCESS DOORS AT ATTIC HEAT DETECTORS ABOVE SOFFIT. CAREFULLY COORDINATE FINAL PLACEMENT OF ACCESS DOORS AND DETECTORS WITH MECHANICAL SIDE-WALL DIFFUSERS AND SUSPENDED ARCHITECTURAL ELEMENTS. ATTACH HEAT DETECTORS TO THE BOTTOM OF NEAREST CEILING JOIST OR BEAM.
2	PROVIDE NEW EXTERIOR WEATHERPROOF HORN/STROBE ANNUNCIATION DEVICE AT THIS LOCATION, EXTEND EXISTING FIRE ALARM CIRCUIT IN THIS AREA AS INDICATED.

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FIRE ALARM - FLOOR PLAN - REMODEL

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER

400 Pierre Rd, Walnut, CA 91789

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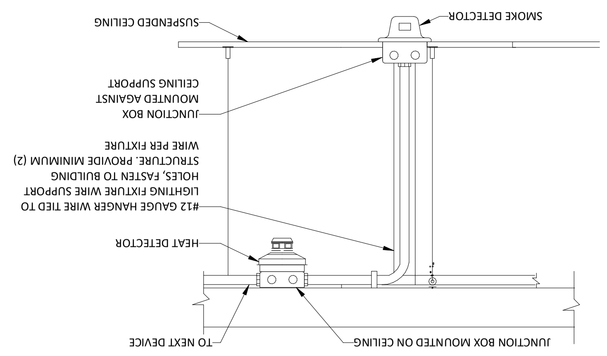
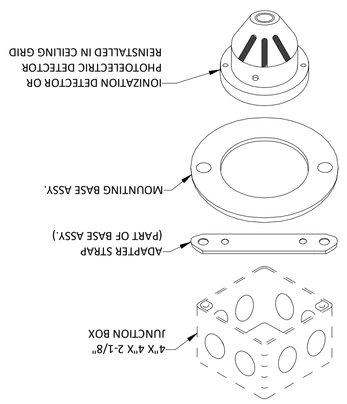
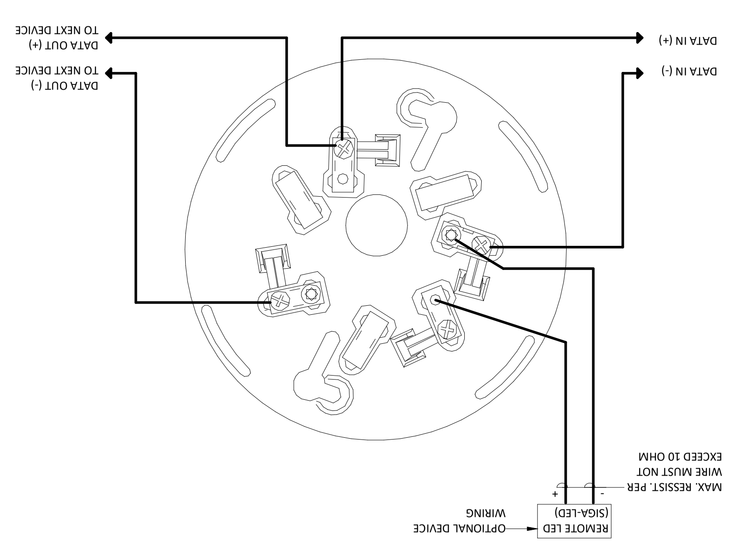
3	NTS	TYPICAL MOUNTING DETAIL FOR CEILING SMOKE DETECTOR/ATTIC HEAT DETECTOR



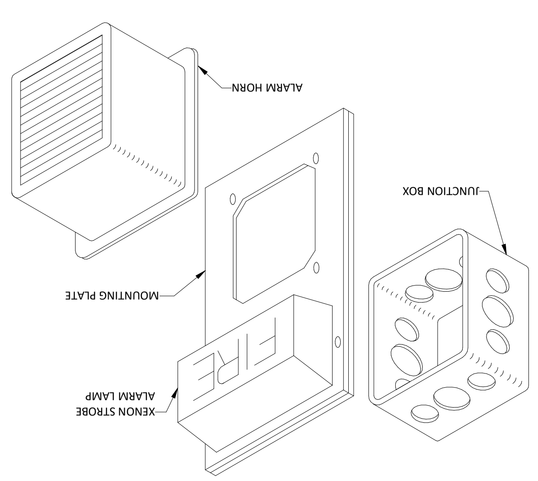
2	NTS	TYPICAL SMOKE DETECTOR MOUNTING DETAIL



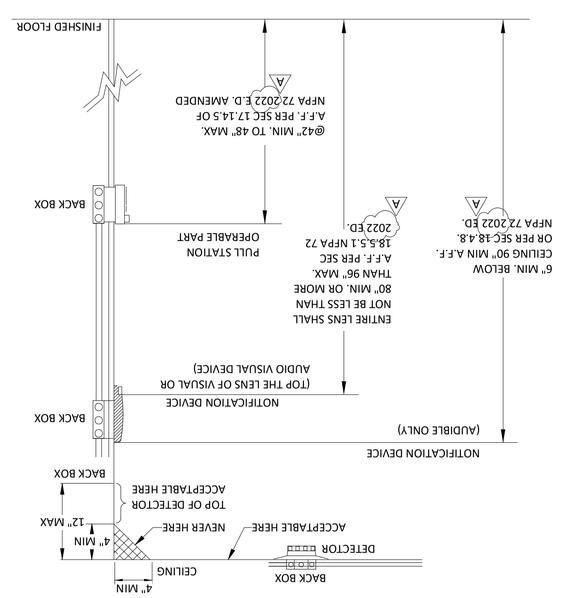
5	NTS	SMOKE DETECTOR BASE (SIGA-SB) WIRING



1	NTS	FIRE ALARM HORN/STROBE LIGHT MOUNTING DETAIL



4	NTS	STANDARD MOUNTING REQUIREMENTS



FIRE ALARM - DETAILS

WALNUT VALLEY UNIFIED SCHOOL DISTRICT
WALNUT HIGH SCHOOL - RENOVATIONS AT LIBRARY AND MEDIA CENTER
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