WILL ROGERS MIDDLE SCHOOL



OCTOBER 7TH , 2024
DSA A#: 03-123867

NEW 2-STORY CLASSROOM BUILDING

LAWNDALE ELEMENTARY SCHOOL DISTRICT

10/8/2024 11:03:57 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MG/AV/GC
CHECK: JG/GC
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
COVER SHEET

SHEET NO:

G000

CHAPTER 4, PART 1, TITLE 24, C.C.R., ADMINISTRATIVE REQUIREMENTS (PARTIAL LISTING ONLY)

1. A COPY OF PARTS 1 AND 5, TITLE 24, C.C.R. SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
2. ALL CHANGE ORDERS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1 TITLE 24
3. ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE 24, AND APPROVED T AND I SHEET
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
5. TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335 OF PART 1, TITLE 24 AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.
6. DSA WILL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24.
7. A "DSA CERTIFIED" CLASS 1 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. INSPECTION WILL BE IN ACCORDANCE WITH SECTION 4-333(B). THE DUTY OF THE INSPECTOR WILL BE IN ACCORDANCE WITH SECTION 4-342, PART 1, TITLE 24.
8. SUPERVISION OF THE CONSTRUCTION BY DSA WILL BE IN ACCORDANCE WITH SECTION 4-334, PART 1, TITLE 24.
9. CONTRACTOR, INSPECTOR, ARCHITECT, AND ENGINEERS WILL SUBMIT VERIFIED REPORTS (FORM DSA-6 BY INSPECTORS AND DSA-6A/E BY ARCHITECTS AND ENGINEERS) IN ACCORDANCE WITH SECTION 4-336 AND 4-334, PART 1, TITLE 24.
10. THE ARCHITECT AND THE STRUCTURAL ENGINEER WILL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-333(A) AND 4-341, PART 1, TITLE 24.
11. THE CONTRACTOR WILL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART 1, TITLE 24.

APPLICABLE CODES AS OF JUNE 15, 2023

PART 1	2022	BUILDING STANDARDS ADMINISTRATIVE CODE. TITLE 24, C.C.R.
PART 2	2022	CALIFORNIA BUILDING CODE (C.B.C.), TITLE 24, C.C.R. (2015 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA AMMENDMENTS)
PART 3	2022	CALIFORNIA ELECTRICAL CODE (C.E.C.), 2001, TITLE 24, C.C.R. (2014 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION AGENCY, NFPA)
PART 4	2022	CALIFORNIA MECHANICAL CODE (C.M.C.), TITLE 24, C.C.R. (2015 UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
PART 5	2022	CALIFORNIA PLUMBING CODE (C.P.C.), TITLE 24, C.C.R. (2015 UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
PART 6	2022	CALIFORNIA ENERGY CODE (C.P.C.), TITLE 24, C.C.R.
PART 9	2022	CALIFORNIA FIRE CODE (C.F.C.), TITLE 24, C.C.R. (2015 INTERNATIONAL FIRE CODE OF THE IN'L CODE COUNCIL)
PART 10	2022	CALIFORNIA EXISTING BUILDING CODE, TITLE 24, C.C.R. (2015 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL WITH AMMENDMENTS)
PART 11	2022	CALIFORNIA GREEN BUILDING STANARDS CODE, TITLE 24, C.C.R.
PART 12	2022	CALIFORNIA REFERENCED STANDARDS CODE, TITLE 24, C.C.R.
2010 ADA		AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS

PARTIAL LIST OF APPLICABLE STANDARDS

2022 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCE STANDARDS CHAPTER 35
2022 CALIFORNIA FIRE CODE CHAPTER 80

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS (CALIFORNIA AMENDED) - 2022 EDITION
NFPA 14	STANDPIPE SYSTEMS - 2019 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS - 2021 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS - 2021 EDITION
NFPA 20	STATIONARY PUMPS - 2019 EDITION
NFPA 24	PRIVATE FIRE SERVICE MAINS - 2019 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDED) (NOTE: SEE UL STANDARD 1971 FOR 'VISUAL DEVICES') - 2022 EDITION
NFPA 80	FIRE DOOR AND OTHER OPENING PROTECTIVES - 2019 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS - 2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS - 2018 EDITION
ICC 300	STANDARDS FOR BLEACHERS, FOLDING/TELESCOPING SEATING & GRANDSTANDS 2017

APPLICABLE CODES

STATEMENT OF GENERAL CONFORMANCE

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

(APPLICATION NO. 03-123867 FILE NO. 19-57)

☒ THE DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET INDICATED WITH AN '*'

☐ THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

2) COORDINATION WITH MY PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THIS STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17302 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341 AND 4-344"
OF TITLE 24, PART 1. (TITLE 24, PART 1, SECTION 4-317 [b])

I FIND THAT: ☒ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
☐ THIS DRAWING OR PAGE

☒ IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN, AND	☐ IS/ARE IN GENERAL CONFORMANCE WITH THE PROJECT DESIGN INTENT, AND
☒ HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.	☐ HAS/HAVE BEEN COORDINATED WITH THE PROJECT PLANS AND SPECIFICATIONS.
12/21/2023	
SIGNATURE DATE	SIGNATURE DATE
ARCHITECT OR ENGINEER DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE	ARCHITECT OR ENGINEER DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK
Paul D. Westberg	
PRINT NAME	PRINT NAME
C11045 SEPTEMBER, 2025	
LICENSE NUMBER EXPIRATION DATE	LICENSE NUMBER EXPIRATION DATE

DSA 1R A-18

STATEMENT OF GENERAL CONFORMANCE

1. WHERE NO SPECIFIC DETAIL IS SHOWN, THE FRAMING, CONSTRUCTION OR FINISHING SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OR IN THE ABSENCE OF SAME SHALL BE TREATED ACCORDING TO STANDARD PROCEDURES AS APPROVED BY THE ARCHITECT OR ACCORDING TO MANUFACTURERS STANDARDS.
2. VERIFY ALL CONDITIONS AND DIMENSIONS AT SITE.
3. MINOR ITEMS USED IN THE CONSTRUCTION OF THIS PROJECT MAY BE INDICATED ON THE DRAWINGS BUT NOT NECESSARILY IN THE SPECIFICATIONS. SUCH MINOR ITEMS ARE GENERALLY REFERENCED TO A MANUFACTURER INCLUDING A MODEL NUMBER, WHERE APPLICABLE. HOWEVER, ALL SUCH MINOR ITEMS SHALL BE GOVERNED BY ALL ASPECTS OF THE SPECIFICATIONS AS IF WRITTEN THEREIN.
4. THE CONTRACTOR SHALL MAKE ALL EFFORTS NOT TO DISTURB THE OPERATION OF THE EXISTING PREMISES INCLUDING ACCESS THERETO; PROVIDE ALL REQUIRED CONSTRUCTION FENCING, BARRICADES, WARNING SIGNS AND LIGHTS; PROTECT AGAINST ANY POTENTIAL FLOOD HAZARDS OR AIR POLLUTION AND SHALL EXERCISE ANY AND ALL REQUIRED SAFETY MEASURES TO PROTECT AND RENDER SAFE THE PREMISES TO ALL OCCUPANTS.
5. CONTRACTOR SHALL ALSO ABIDE BY CBC 2022 CHAPTER 33 SECTION 3303.2: PROTECTION OF PEDESTRIANS DURING CONSTRUCTION OR DEMOLITION.
6. WHERE EXISTING FEATURES HAVE TO BE DISTURBED TO EXECUTE THE WORK SHOWN ON ANY OF THE DRAWINGS OR CALLED FOR IN SPECIFICATIONS INCLUDING BUT NOT NECESSARILY LIMITED TO THE REMOVAL OF CONCRETE SLABS, ELEMENTS OF WALL AND CEILING SECTIONS, FLOOR, WALL AND CEILING FINISHES AND ELEMENTS OF ROOFING, SUCH FEATURES MUST BE REPLACED TO MATCH EXISTING CONDITIONS, SURFACES AND FINISHES. WHILE FINISHES SUCH AS CARPET MAY BE REMOVED AND REPLACED AFTER WORK IS COMPLETE. FINISHES THAT CANNOT BE REPLACED IN THIS MANNER MUST BE REPLACED WITH NEW MATERIALS MATCHING EXISTING AS CLOSE AS POSSIBLE.
7. WHERE EXECUTING THE WORK SHOWN ON ANY OF THESE DRAWINGS OR CALLED FOR IN SPECIFICATIONS REQUIRES PENETRATION OF EXTERIOR WALLS OR ROOFS, SUCH WORK SHALL BE FLASHED, SEALED OR OTHERWISE MADE TIGHT AGAINST THE ENTRANCE OF AIR OR WATER
8. WHILE DRAWINGS INDICATE ITEMS TO BE REMOVED, REPLACED OR REWORKED, THEY MAY NOT NECESSARILY INDICATE ALL ASPECTS OF WORK REQUIRED IN THE REMOVAL, REPLACEMENT OR REWORK OF SUCH ITEMS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH AND INSTALL ALL WORK NECESSARY TO COMPLETE AND FINISH ALL AREAS IN AND AROUND SUCH ITEMS.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE BY HIM TO THE DISTRICT'S PREMISES OR OTHERWISE, AND SHALL REPAIR SAME AT HIS OWN EXPENSE. NOTE THAT HEAVY EQUIPMENT DRIVEN OVER ASPHALT CONCRETE PAVEMENT IN THE SCHOOL YARD MAY CAUSE DAMAGE TO SUCH PAVEMENT.
10. TOILET ROOM ACCESSORIES ARE CALLED OUT IN SPECIFICATIONS. WHERE NOT LOCATED ON DRAWINGS THEY SHALL BE MOUNTED PER DIRECTIONS FROM THE ARCHITECT.
11. WHERE INTERIOR OR EXTERIOR TRENCHING REQUIRES REMOVAL OF CONCRETE OR A.C. PAVING, SUCH PAVING MUST BE REMOVED BY SAW CUTTING AND REPLACED AFTER WORK IS COMPLETE - TO MATCH EXISTING.
12. WORK REQUIRED SHALL INCLUDE BUT NOT BE NECESSARILY BE LIMITED TO WORK CALLED FOR BY NOTES ON BUILDING FLOOR PLANS.
13. GENERAL CONTRACTOR MUST CAREFULLY SCRUTINIZE ALL DRAWINGS TO ASCERTAIN ALL REQUIRED WORK ARISING OUT OF WORK DONE BY MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SUB-CONTRACTORS.
14. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE CONTRACT IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITION SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHERE IN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT (C.C.D.) OR AN ADDITIONAL SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(C), PART 1, TITLE 24, CCR).
15. ALL PROPOSED BUILDING ENTRIES / EXITS TO BE BARRIER FREE.
16. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CONSTRUCTION CHANGE DOCUMENT (C.C.D.) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
17. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH STRUCTURAL ELEMENTS IS NOT TO BE STARTED UNTIL THE DETAILS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT, STRUCTURAL ENGINEER AND THE DSA FIELD ENGINEER IF DETAILS DO NOT SHOW OR CONFORM TO THE APPROVED DRAWINGS.
18. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION WHICH HAS BEEN CONCEALED AND IS NOT COVERED BY THE CONSTRUCTION DOCUMENTS, WHEREIN THE FINISH WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE REGULATIONS, A CHANGE ORDER OR SEPARATE SET OF PLANS/SPECIFICATIONS DETAILING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK (SECTION 4-137(C), PART 1, TITLE 24, CCR).
19. CONTRACTOR TO NOTE: WHERE EXISTING ROOM SIGNAGE IS BEING REMOVED AND REPLACED, ALL ROOM SIGNAGE VERBAIGE MUST MATCH THE EXISTING ROOM SIGN VERBAIGE IN-KIND. CONTRACTOR TO DOCUMENT THE EXISTING ROOM SIGNAGE VERBAIGE PRIOR TO DISPOSING OF THE EXISTING SIGNAGE.
20. WHERE EXISTING UTILITIES ARE INDICATED IN THE GENERAL VICINITY OF NEW WORK, VERIFY EXACT LOCATION BY POT-HOLING, METAL DETECTION, OR ELECTRICAL CURRENT DETECTION, PRIOR TO STARTING WORK. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
21. ALL WORK SHALL CONFORM TO 2022 TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

GENERAL NOTES

GENERAL (9 Sheets)

G000	COVER SHEET
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G003	SIGNAGE DETAILS
G004	GENERAL MOUNTING HEIGHTS
G101	BUILDING EGRESS AND SIGNAGE PLAN - FIRST FLOOR PLAN
G102	BUILDING EGRESS AND SIGNAGE - SECOND FLOOR PLAN
F001	FIRE ACCESS PLAN

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CD-1.0	SITE DEMOLITION PLAN
CD-1.1	SITE DEMOLITION PLAN
C-2.0	SITE CONTROL PLAN
C-2.1	SITE CONTROL PLAN
C-3.0	SITE GRADING PLAN
C-3.1	SITE GRADING PLAN
C-3.2	ENLARGED SITE GRADING PLAN
C-3.3	SITE GRADING SECTION
C-4.0	SITE UTILITY PLAN
C-4.1	SITE UTILITY PLAN
C-4.2	STORMDRAIN PROFILE
C-5.0	MISCELLANEOUS DETAILS
C-5.1	MISCELLANEOUS DETAILS
C-5.2	MISCELLANEOUS DETAILS
C-5.3	MISCELLANEOUS DETAILS
C-5.4	MISCELLANEOUS DETAILS
C-6.0	EROSION CONTROL PLAN
C-6.1	EROSION CONTROL PLAN
C-6.2	EROSION CONTROL PLAN
C-7.0	OVEREXCAVATION PLAN
C-7.1	OVEREXCAVATION PLAN

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A001	SITE PLAN
A002	SITE DETAILS
A003	ENLARGED SITE PLAN
A004	SITE DETAILS
A005	SITE DETAILS
A006	SITE DETAILS
A007	TRASH ENCLOSURE AND MISC. SITE DETAILS
A008	BASKETBALL COURTS PLANS & DETAILS
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A102	SECOND FLOOR PLAN
A201	FIRST FLOOR REFLECTED CEILING PLANS
A202	SECOND REFLECTED CEILING PLANS
A301	ROOF PLAN
A401	EXTERIOR ELEVATION
A500	BUILDING SECTIONS
A501	WALL SECTIONS
A502	WALL SECTIONS
A503	WALL SECTIONS
A601	ENLARGED TOILET PLANS & INTERIOR ELEVATIONS
A602	INTERIOR ELEVATIONS
A603	INTERIOR ELEVATIONS
A604	INTERIOR ELEVATIONS
A605	ENLARGED TOILET PLANS & INTERIOR ELEVATION
A660	STAIR #1 ENLARGED PLAN AND SECTIONS
A661	STAIR #2 ENLARGED PLAN AND SECTIONS
A670	ELEVATOR PLANS AND SECTIONS
A671	ELEVATOR PLANS AND SECTIONS
A700	DOOR, WINDOW AND ROOM FINISH SCHEDULE
A720	COLOR SCHEDULE
A831	COLUMN DETAILS
A833	BALCONY DETAILS
A840	INTERIOR WALL AND PARTITION DETAILS
A841	WALL TYPES AND DETALS
A842	WALL TYPES AND DETAILS
A850	CEILING NOTES
A851	CEILING DETAILS AND NOTES
A852	CEILING DETAILS
A853	CEILING DETAILS
A860	CASEWORK DETAILS
A870	ROOF DETAILS (CONCRETE OVER METAL DECK)
A871	ROOF DETAILS (METAL DECK ONLY)
A880	DOOR AND ALUMINUM WINDOW DETAILS
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S1-3	TYPICAL FOUNDATION DETAILS
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S1-6	TYPICAL METAL STUD DETAILS
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S1-8	TYPICAL METAL STUD DETAILS
S1-9	TYPICAL STEEL DETAILS
S1-10	TYPICAL STEEL DETAILS
S1-11	TYPICAL STEEL DETAILS
S1-12	TYPICAL STEEL DETAILS
S1-13	TYPICAL MECHANICAL EQUIPMENT DETAILS
S1-14	TYPICAL BRACE FRAME DETAILS
S1-15	TYPICAL BRACE FRAME DETAILS
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S2-2	SOLAR SHADE CANOPY FOUNDATION AND ROOF FRAMING PLANS
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S3-2	ROOF FRAMING PLAN
S3-3	HIGH ROOF FRAMING PLAN
S4-1	FOUNDATION DETAILS
S5-1	FRAMING DETAILS
S5-2	FRAMING DETAILS
S5-3	FRAMING DETAILS
S6-1	WALL ELEVATIONS

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M011	MECHANICAL SCHEDULES
M020	MECHANICAL DETAILS
M021	MECHANICAL DETAILS
M022	MECHANICAL DETAILS
M030	TITLE 24 CALCULATIONS
M031	TITLE 24 CALCULATIONS
M101	MECHANICAL FIRST FLOOR PLAN
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P301	PLUMBING ENLARGED TOILET PLANS

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E004	LIGHTING FIXTURE SCHEDULE
E005	PANEL SCHEDULES
E006	PANEL SCHEDULES
E007	TITLE 24 -INDOOR
E008	TITLE 24 -OUTDOOR
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E101	SITE PLAN -ELECTRICAL REMODEL
E101P	SITE PLAN - ELECTRICAL REMODEL EGRESS PHOTOMETRIC
E201	FIRST FLOORPLAN -LIGHTING
E201P	FIRST FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC
E202	SECOND FLOOR PLAN -LIGHTING
E202P	SECOND FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC
E301	FIRST FLOOR PLAN -POWER
E302	SECOND FLOOR PLAN -POWER
E303	ROOF PLAN -POWER
E501	ELECTRICAL DETAILS
E502	ELECTRICAL DETAILS

***TECHNOLOGY** (9 Sheets)

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T201	FIRST FLOOR PLAN -TECHNOLOGY
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***FIRE ALARM** (7 Sheets)

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FA101	SITE PLAN -FIRE ALARM REMODEL
FA201	FIRST FLOOR PLAN -FIRE ALARM
FA202	SECOND FLOOR PLAN -FIRE ALARM
FA501	FIRE ALARM DETAILS

***FIRE PROTECTION** (6 Sheets)

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FP102	FIRE PROTECTION SECOND FLOOR REFLECTED CEILING PLAN
FP201	FIRE PROTECTION FIRST FLOOR PIPING PLAN
FP202	FIRE PROTECTION SECOND FLOOR PIPING PLAN
FP301	FIRE PROTECTION BUILDING SECTIONS AND SEISMIC BRACING

COMPLETE SET (163 Sheets)

SHEET INDEX

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CONTACT: JON GOMER, SR. PROJECT MGR./ ARCHITECT
GANG CHEN, PROJECT ARCHITECT, LEED AP BD+C

CIVIL
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SENIOR PROJECT ENGINEER, ASSOCIATE
YOUNG NAM, PE SE

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CONTACT: MATTHEW M. PEZESHKI, PE, LEED AP, PRINCIPAL
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VICTORIO O. MENOR

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T: 714-293-5912
CONTACT: SAK CHANSAMONE

CONTACT

THIS PROJECT CONSISTS OF BUT NOT LIMITED TO:

- NEW CONSTRUCTION OF 2-STORY CLASSROOM BUILDING.
- AN APPROXIMATELY 29'-4" X 54'-8" SOLAR SHADE STRUCTURE
- NEW TRASH ENCLOSURE

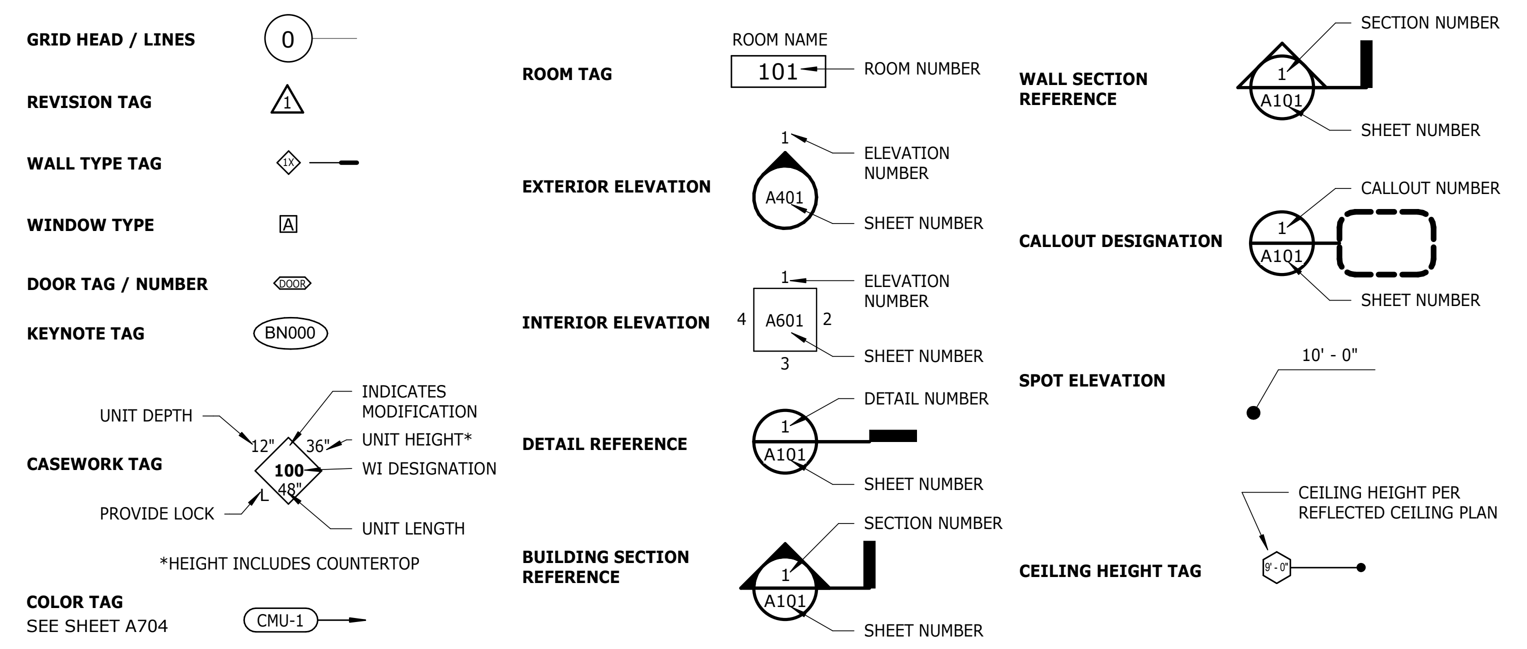
SCOPE OF WORK

FABRICATION AND INSTALLATION OF DEFFERED SUBMITTAL ITEMS SHALL NOT BE STARTED UNTIL CONTRACTOR'S DRAWINGS, SPECIFICATIONS, AND ENGINEERING CALCULATIONS FOR THE ACTUAL SYSTEMS TO BE INSTALLED HAVE BEEN ACCEPTED AND SIGNED BY THE ARCHITECT OR STRUCTUAL ENGINEER AND APPROVED BY THE DSA. LIST OF DEFFERED SUBMITTAL ITEMS FOR THIS PROJECT:

1. ELEVATOR GUIDE RAILS AND SUPPORT BRACKETS

2. PRE-MANUFACTURED PHOTOVOLTAIC SOLAR PANELS AT NEW LUNCH SHELTER.

DEFERRED APPROVALS

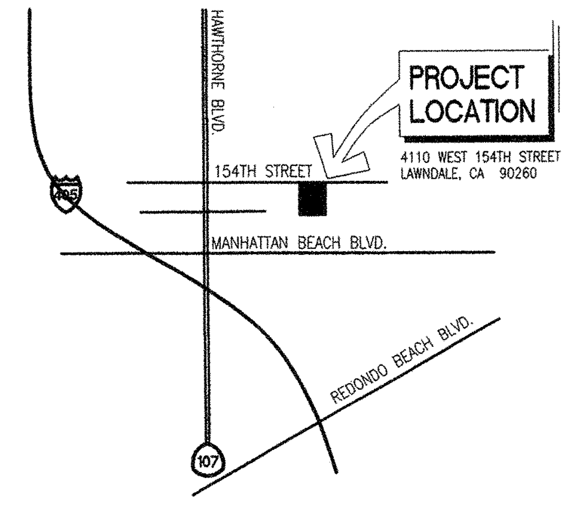


TYPICAL SYMBOLS

℄	CENTERLINE	C.J.	CEILING JOIST OR CONTROL JOINT	E.O.S.	EDGE OF SLAB	I.D.	INSIDE DIAMETER / DIMENSION	NOM.	NOMINAL	SHT.	SHEET
PL	PLATE	CLG.	CEILING	EQ.	EQUAL	IDF	INTERMEDIATE DISTRUBUTION FRAME	N.T.S.	NOT TO SCALE	SHTG.	SHEATHING
&	AND	CLR.	CLEAR	EXH.	EXHAUST	IN.	INCH	O/	OVER	SIM.	SIMILAR
@	AT OR ABOUT	C.M.U.	CONCRETE MASONRY UNIT	EXIST.	EXISTING	INT.	INTERIOR	O.A.	OVERALL / OUTSIDE AIR	SPEC.	SPECIFICATION
'	FOOT	COL.	COLUMN	EXP.	EXPANSION	INV.	INVERT	O.C.	ON CENTER	SQ.	SQUARE
"	INCH OR REPEAT	CONC.	CONCRETE	F.D.	FLOOR DRAIN	JAN.	JANITOR	O.D.	OUTSIDE DIAMETER / DIMENSION	S.S.	STAINLESS STEEL
#	POUND OR NUMBER	CONN.	CONNECTION	F.O.C.	FACE OF CONCRETE/CURB	JT.	JOINT	PH	PANIC HARDWARE	S/S	SERVICE SINK
+/-	VERIFY IN FIELD	CONT.	CONTINUOUS	F.O.F.	FACE OF FINISH	JST.	JOIST	P.I.V.	PRESSURE INDICATOR VALVE	STD.	STANDARD
		C.T.	CERAMIC TILE	F.O.M.	FACE OF MASONRY	LAM.	LAMINATE	PL.	PLATE	STL.	STEEL
A.B.	ANCHOR BOLT	DBL.	DOUBLE	F.O.S.	FACE OF STUDS	LAV.	LAVATORY	P. LAM.	PLASTIC LAMINATE	STOR.	STORAGE
A.C.	ASPHALTIC CONCRETE	DEPT.	DEPARTMENT	F.R.P.	FIBERGLASS REINFORCED PANEL	LB.	POUND	PLAS.	PLASTER	STRUCT.	STRUCTURAL
A/C	AIR CONDITIONING	DET.	DETAIL	F.S.	FULL SIZE / FINISH SURFACE	L.F.	LINEAL FEET	PLUMB.	PLUMBING	SUSP.	SUSPENDED
ACC.	ACCESSIBLE	D.F.	DRINKING FOUNTAIN	FT.	FOOT OR FEET	L.P.	LOW POINT	PLWD.	PLYWOOD	T.	TREAD / TEMPERED
ADJ.	ADJUSTABLE / ADJACENT	DF	DOUGLAS FIR	FTG.	FOOTING	LT.	LIGHT	PR.	PAIR	T.B.	TOP OF BEAM
A.F.F.	ABOVE FINISH FLOOR	DG	DECOMPOSTED GRANITE	GA.	GUAGE / GAGE	LT. WT.	LIGHT WEIGHT	PREFAB.	PREFABRICATED	T.C.	TOP OF CURB OR CONCRETE
ALUM.	ALUMINUM	DIA.	DIAMETER	GALV.	GALVANIZED IRON	MAT.	MATERIAL	PT.	POINT	TEL.	TELEPHONE
APPROX.	APPROXIMATE	DIAG.	DIAGONAL	G.B.	GRAB BAR	MAX.	MAXIMUM	Q.T.	QUARRY TILE	TEMP.	TEMPERED / TEMPORARY
ARCH.	ARCHITECTURAL	DIM.	DIMENSION	G.I.	GALVANIZED IRON	M.B.	MACHINE BOLT	R.	RISER / RADIUS	TERR.	TERRAZZO
ASPH.	ASPHALT	DISP.	DISPENSER / DISPOSAL	GLU-LAM	GLUE LAMINATE BEAM	MDF	MAIN DISTRIBUTION FRAME	R.A.	RETURN AIR	TEXT.	TEXTURED
ACT.	ACOUSTICAL TILE	DN.	DOWN	GR.	GRADE	MECH.	MECHANICAL	RAD.	RADIUS	T&G	TONGUE AND GROOVE
BD.	BOARD	DR.	DOOR	GYP.	GYPSUM	MED.	MEDIUM	RECPT.	RECEPTACLE	THK.	THICK
BLDG.	BUILDING	D.S.	DOWN SPOUT	GYP. BD.	GYPSUM BOARD	MET.	METAL	REF.	REFERENCE	T.L.	TOP OF LEDGER
BLK.	BLOCK	DWG.	DRAWING	H.B.	HOSE BIBB	MEZZ.	MEZZANINE	REFR.	REFRIGERATOR	T.O.P.	TOP OF PARAPET
BLKG.	BLOCKING	(E)	EXISTING	HDR.	HEADER	MFR.	MANUFACTURER	REG.	REGISTER / REGULAR	T.O.D.	TOP OF METAL DECK
BM.	BEAM	E.	EAST / ENAMEL	HDWD.	HARDWOOD	MH.	MANHOLE	REINF.	REINFORCED	T.S.	TOP OF STEEL
B.M.	BENCHMARK	EA.	EACH	HDWR.	HARDWARE	MIN.	MINIMUM / MINUTE	REQ.	REQUIRED	T.O.W.	TOP OF WALL
BOT.	BOTTOM	E.G.	EXISTING GRADE	HGT.	HEIGHT	MISC.	MISCELLANEOUS	RESIL.	RESILIENT	TYP.	TYPICAL
C.B.	CATCH BASIN	E.J.	EXPANSION JOINT	H.M.	HOLLOW METAL	M.O.	MASONARY OPENING	R.O.	ROUGH OPENING		
CEM.	CEMENT	ELEC.	ELECTRICAL	HORIZ.	HORIZONTAL	MTD.	MOUNTED	S.	SOUTH / SPANDREL		
CER.	CERAMIC	ELEV.	ELEVATOR / ELEVATION	H.P.	HIGH POINT	(N)	NEW	SCHED.	SCHEDULE		
C.F.M.	CUBIC FEET PER MINUTE	EMER.	EMERGENCY	HR.	HOUR	N.I.C.	NOT IN CONTRACT	SECT.	SECTION		
C.I.	CAST IRON	ENCL.	ENCLOSURE	HVAC.	HEATING, VENT, AIR CONDITIONING	NO.	NUMBER	S.F.	SQUARE FOOT		

KEYNOTES SPECIFIC TO BUILDING WORK		**KEYNOTES SPECIFIC TO SITE WORK**	
BE	BUILDING EXISTING	SE	SITE EXISTING
BD	BUILDING DEMOLITION	SD	SITE DEMOLITION
BN	BUILDING NEW	SN	SITE NEW

ABBREVIATION



VICINITY MAP

BUILDING (NEW CONSTRUCTION)

CONSTRUCTION TYPE:	II-B (FULLY SPRINKLERED)	
OCCUPANCY:	E	
	ALLOWED	ACTUAL
NUMBER OF STORY (TABLE 504.4)	3	2
BUILDING HEIGHT (TABLE 504.3)	55'	43'
BASIC ALLOWABLE AREA (TABLE 506.2)		43,500 S.F.
FRONTAGE INCREASE -		NOT USED
ALLOWABLE AREA PER STORY -		43,500 S.F.
TOTAL ALLOWABLE AREA -		**87,000 S.F.**
ACTUAL BUILDING AREA		
FIRST FLOOR -	E:	9,369 S.F.
	BALCONY & STAIRS:	5,613 S.F.
	TOTAL:	**14,982 S.F.**
SECOND FLOOR -	E:	8,884 S.F.
	BALCONY:	4,292 S.F.
	TOTAL:	**13,175 S.F.**
TOTAL BUILDING AREA:		**28,157 S.F. O.K.**

FIRE RESISTANCE RATING REQUIREMENTS (PER TABLE 601)

STRUCTURAL FRAME:	0 HR
EXTERIOR NON-BEARING WALLS	TABLE 602
INTERIOR NON-BEARING PARTITIONS	0HR
FLOOR CONSTRUCTION	0HR
ROOF CONSTRUCTION	0HR
SHAFT ENCLOSURE PER 713.4	1 HR

FIRE RESISTANCEOF EXTERIOR WALLS (PER TABLE 705.5)

TYPICAL, ALL WALLS	
FIRE SEPERATION DISTANCE > 10'	0 HR

MAX. AREA OF EXTERIOR WALL OPENINGS (PER TABLE 705.8)

PORTION OF NORTH WALL	
FIRE SEPERATION DISTANCE > 15'	75%
OTHER LOCATIONS	
FIRE SEPERATION DISTANCE > 20'	NO LIMIT

CODE ANALYSIS

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

PAUL DENNIS WESTBERG
C-11045
EXP.9-2025

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

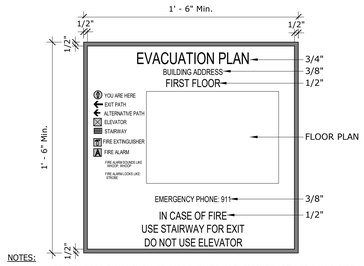
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	2/27/2024
DRAWN:	MG/AV/GC
CHECK:	JG/GC
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
SHEET INDEX, SYMBOLS, ABBREVIATIONS, AND NOTES

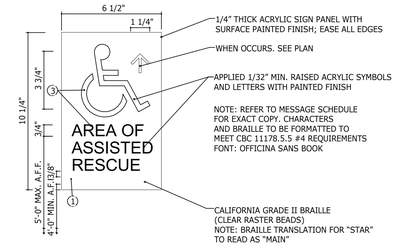
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NOTES:

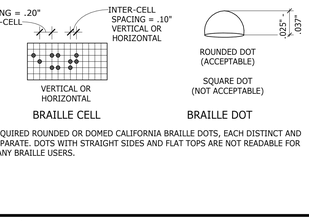
1. CONTRACTOR SHALL INCLUDE SITE SURVEY, CREATION OF ARTWORK, AND FIRE AUTHORITY APPROVAL
2. PLACE ONE SIGN AT EACH HALL / CORRIDOR ENTRANCE DOOR TO EACH STAIRWELL ON EVERY FLOOR
3. PLACE ONE SIGN AT EACH ELEVATOR LOBBY ON EVERY FLOOR
4. PATH OF TRAVEL TO BE APPROVED BY FIRE AUTHORITY & OWNER

EVACUATION PLAN SIGN 3" = 1'-0" | 20



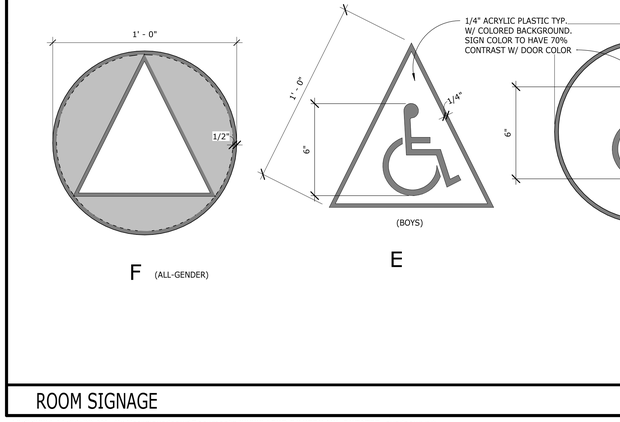
DIRECTIONAL SIGNAGE 3" = 1'-0" | 16

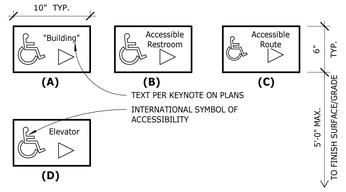
1. CHARACTER TYPE: CHARACTERS ON SIGNS SHALL BE RAISED 1/32 INCH MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE.
2. CHARACTER HEIGHT: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH AND A MAXIMUN OF 2 INCHES HIGH.
3. FINISH AND CONTRAST: CONTRAST BETWEEN CHARACTERS, SYMBOLS AND THEIR BACKGROUND MUST BE 70% MINIMUM AND HAVE A NON-GLARE FINISH. (11B-703.5.1)
4. BRAILLE: CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL BE USED WHENEVER BRAILLE IS REQUIRED IN OTHER PORTIONS OF THESE STANDARDS. DOTS SHALL BE 1/10 INCH ON CENTERS IN EACH CELL WITH 2/10 INCH SPACE BETWEEN CELLS, MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40 INCH ABOVE THE BACKGROUND. (11B-703.3).



REQUIRED ROUNDED OR DOMED CALIFORNIA BRAILLE DOTS, EACH DISTINCT AND SEPARATE. DOTS WITH STRAIGHT SIDES AND FLAT TOPS ARE NOT READABLE FOR MANY BRAILLE USERS.

TACTILE / BRAILLE NOTES 3" = 1'-0" | 4



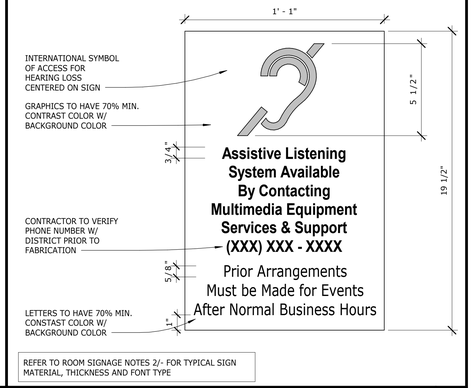


NOTES:

1. PROVIDE WHITE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON A BLUE IN BACKGROUND. THE BLUE COLOR SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595B.

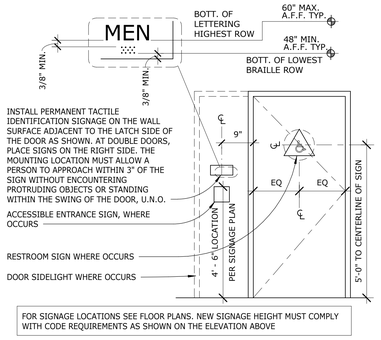
   SEE SIGN PLACEMENT AND DIRECTION OF ARROW ON SIGN ON SITE ACCESSIBILITY PLAN AND
2. BUILDING EGRESS AND SIGNAGES PLAN(S).

ACC. DIRECTIONAL SIGNAGE 1 1/2" = 1'-0" | 11



REFER TO ROOM SIGNAGE NOTES 2/- FOR TYPICAL SIGN MATERIAL, THICKNESS AND FONT TYPE

ASSISTIVE LISTENING SIGN 3" = 1'-0" | 7

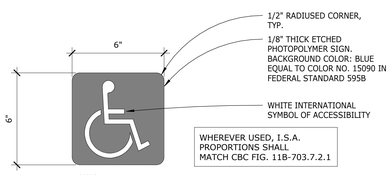


FOR SIGNAGE LOCATIONS SEE FLOOR PLANS. NEW SIGNAGE HEIGHT MUST COMPLY WITH CODE REQUIREMENTS AS SHOWN ON THE ELEVATION ABOVE

NOTES:

1. SIGN MATERIAL SHALL BE MIN. 1/4" THICK ACRYLIC PLASTIC WITH SURFACE PAINTED FINISH. SIGN GRAPHICS, NUMBERS AND LETTERS SHALL BE RAISED 1/32" .
2. LETTERS SHALL BE UPPER CASE, OFFICINA SANS BOOK FONT TYPE. AT TACTILE SIGN LOCATIONS SIGN SHALL BE ACCOMPANIED BY CALIF. CONTRACTED GRADE 2 BRAILLE WITH CHARACTER TYPE AND HEIGHT PER DETAIL ON THIS SHEET.
3. INSTALL ALL ROOM NAME/NUMBER SIGNAGE ON WALL AT EXTERIOR SIDE OF ROOM U.N.O.
4. INSTALL ALL EXIT AND EXIT ROUTE SIGNAGE ON WALL AT INTERIOR SIDE OF ROOM
5. SIGN BACKGROUND SHALL HAVE A 70% MIN. CONTRAST COLOR W/ TEXT LETTERS AND BORDER W/ NON GLARE FINISH.
6. SIGNS ADHESIVELY APPLIED TO GLASS SHALL HAVE ADDITIONAL PLASTIC BACKING SAME SIZE AS SIGN ADHESIVELY APPLIED TO OTHER SIDE OF GLASS.
7. ALL SIGNAGE TO BE ATTACHED WITH 3M VHB TAPE AND SILCONE ADHESIVE.
8. VERIFY SIGN TEXT AND ROOM NUMBER WITH OWNER.
9. REFER TO DETAIL 5G/- FOR MULTI LINE TEXT SIGNAGE REQUIREMENTS.
10. PROVIDE EASED EDGES ON ALL SIDES OF SIGNAGE.

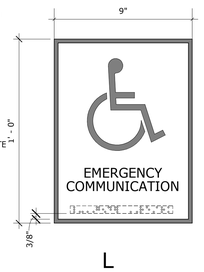
ROOM SIGNAGE NOTES 1/2" = 1'-0" | 2



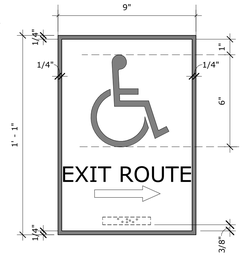
NOTES:

1) THE CHARACTERS AND BACKGROUND OF THE SIGN SHALL BE EGGSHELL, MATTE OR OTHER NON-GLARE FINISH AND CHARACTERS SHALL CONTRAST W/ THEIR BACKGROUND.
2) MOUNT W/ 3M HIGH BOND TAPE AND SILICONE GLUE.
3) SEE (2/-) AND SIGNAGE PLANS FOR LOCATIONS

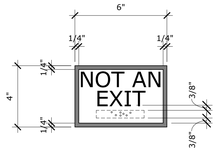
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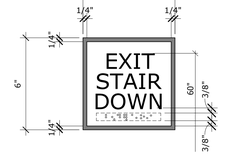
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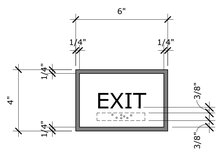
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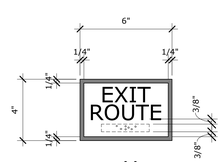
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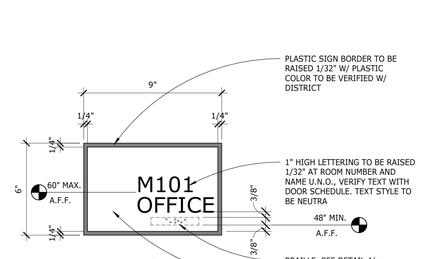
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N



H

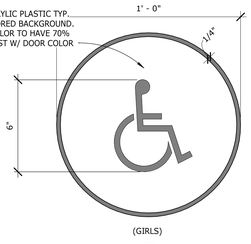


G

F (ALL-GENDER)

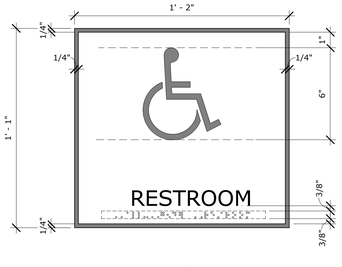
(BOYS)

E

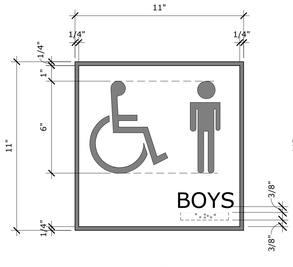


(GIRLS)

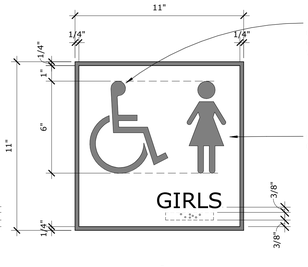
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C



B



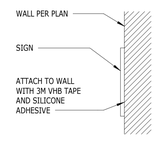
A

NOTE:
1)REFER TO 2/- FOR ALL SIGN DESIGN AND ACCESSIBILITY REQUIREMENTS
2)REFER TO 1/- FOR INSTALLATION NOTES

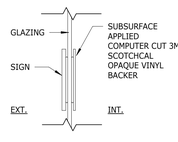
ROOM SIGNAGE 3" = 1'-0" | 5

GENERAL NOTES

1. FOR MOUNTING SIGNAGE AT WINDOW SEE DETAIL B.
2. VERIFY ALL SIGN TEXT AND COLOR WITH ***DISTRICT*** PRIOR TO MANUFACTURING SIGNAGE.
3. PROVIDE AN ADDITIONAL 10 BUILDING SIGNS WITH 40 CHARACTERS PER SIGN TO BE DETERMINED DURING CONSTRUCTION PER THE ***DISTRICT***'S DIRECTION.



DETAIL A



NOTE: FOR APPLICATION TO GLASS PROVIDE A MATCHING BACK-UP PLATE & MOUNT TO INTERIOR SURFACE OF GLASS WITH ADHESIVE.

DETAIL B

SIGNAGE INSTALLATION NOTES 3" = 1'-0" | 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2021 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

DSA APPROVAL PLANS

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

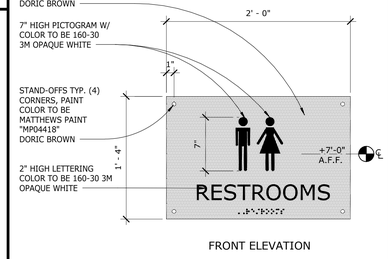
JOB NO:	22029.01
DATE:	2/27/2024
DRAWN:	RR / EM / MS
CHECK:	JG / RR
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
SIGNAGE DETAILS

SHEET NO:
G002

SIDE ELEVATION

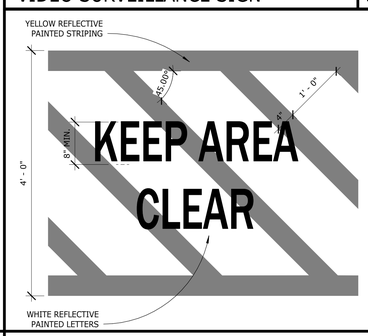
VIDEO SURVEILLANCE SIGN 1 1/2" = 1'-0" 3



FRONT ELEVATION

BLOCKING PER 15/S1-4

RESTROOM SIGNAGE 1 1/2" = 1'-0" 6



CLEARANCE STRIPING 1" = 1'-0" 2

D

C

B

NOTE: REFER TO G002 FOR ALL SIGN DESIGN AND ACCESSIBILITY REQUIREMENTS

A

ROOM SIGNAGE 3" = 1'-0" 1

10/8/2024 11:04:02 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

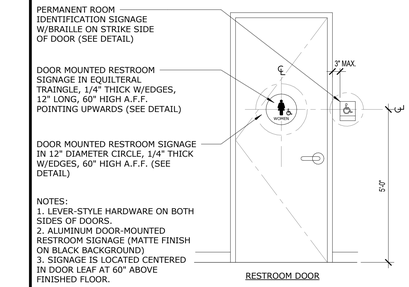
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

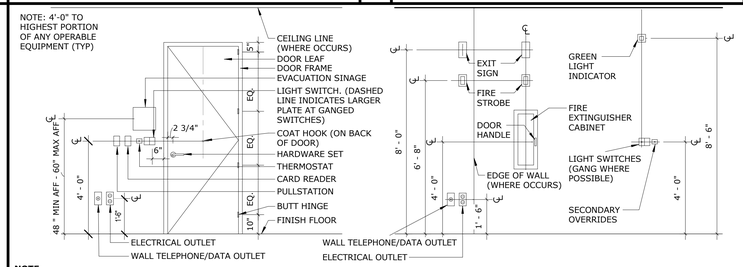
JOB NO: 22029.01
DATE: 2/27/2024
DRAWN:
CHECK:
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SIGNAGE DETAILS

SHEET NO:
G003

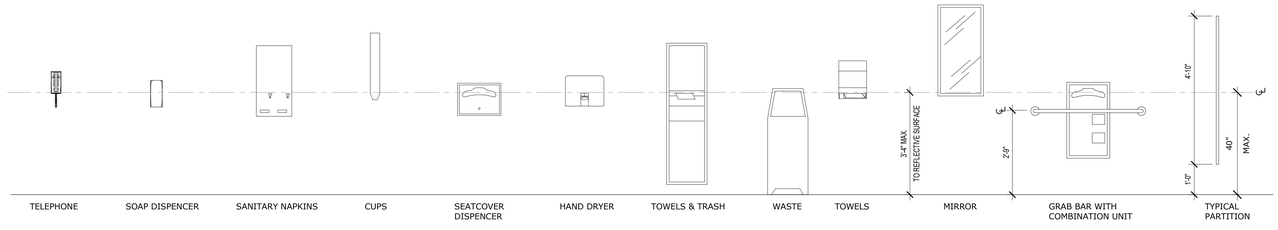


ACCESSIBLE RESTROOM SIGNAGE 1/2" = 1'-0" 4



NOTE:
TOP OF SWITCH TO BE AT 48" A.F.F. MAXIMUM. CENTER ALL OTHER DEVICES ON CENTERLINE OF LIGHT SWITCHES. TOP OF SWITCH TO BE AT 40" A.F.F. MAXIMUM WHERE SWITCH IS LOCATED ABOVE A COUNTER. INSTALL ELECTRICAL AND TELEPHONE WALL OUTLETS AND SWITCH PLATES TO NEAREST STUD LOCATION AS SCALED ON PLAN, UNLESS DIMENSIONED
ABAAS 308.2.1 UNOBSTRUCTED FORWARD REACH

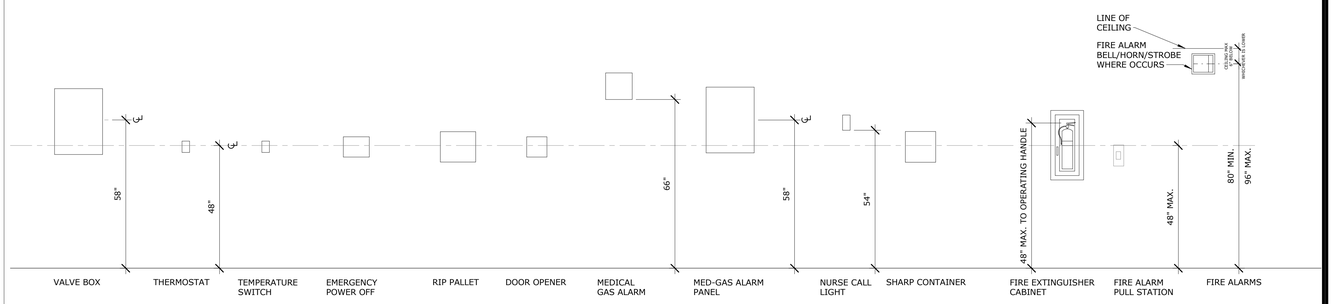
DEVICE MOUNTING HEIGHTS 3/8" = 1'-0" 3



ACCESSORIES - WHERE TOWEL OR SANITARY NAPKIN DISPENSERS, WASTE RECEPTACLES, OR OTHER ACCESSORIES ARE PROVIDED IN TOILET FACILITIES, AT LEAST ONE OF EACH TYPE SHALL BE LOCATED ON AN ACCESSIBLE ROUTE. ALL OPERABLE PARTS, INCLUDING COIN SLOTS, SHALL BE 40 INCHES (1016 MM) MAXIMUM ABOVE THE FINISH FLOOR.**CBC 2022 FIRGURE 11B-603.5**

CBC 2022 FIGURE 11B-603.3 **CBC 2022 FIGURE 11B-604.5.1** **CBC 2022 FIGURE 11B-604.8.14** **CBC 2022 FIGURE 11B-604.7**

ACCESSIBLE WALL MOUNTED ACCESSORIES 1/2" = 1'-0" 2



ACCESSIBLE MOUNTING HEIGHTS 1/2" = 1'-0" 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

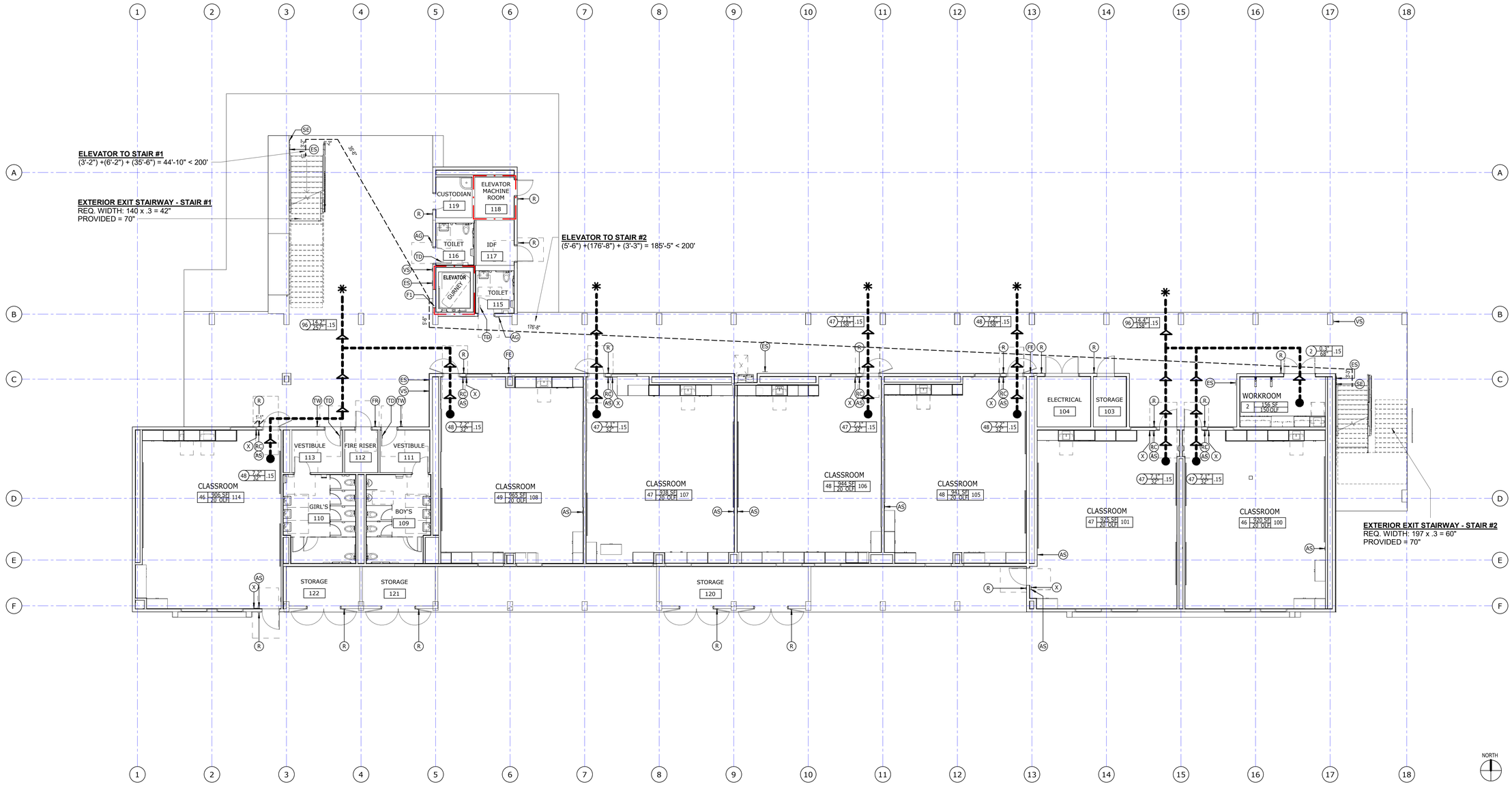
NO.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN:
CHECK:
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
GENERAL MOUNTING HEIGHTS

SHEET NO:

G004



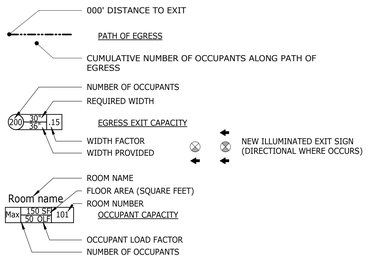
FIRST FLOOR - EGRESS AND SIGNAGE PLAN

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

SIGNAGE LEGEND

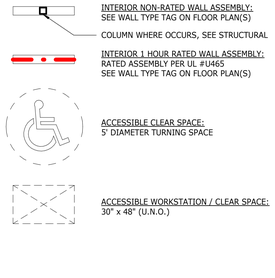
- (R) ROOM NAME/# SEE 5G/G002
- (X) EXIT SEE 5N/G002
- (XR) EXIT ROUTE SEE 5B/G0042
- (AG) ALL GENDER TOILET SEE 5C/G002
- (NX) NOT AN EXIT SEE 5J/G002
- (AS) ASSISTIVE LISTENING SEE 7/G002
- (RC) ROOM CAPACITY SEE 5Q/G002
- (VS) VIDEO SURVEILLANCE SEE 3/G003
- (SD) EXIT STAIR DOWN SEE 5O/G002
- (SL) STAIR LEVEL SEE 1B/G003
- (SE) STAIR ELEVATION SEE 1C/G003
- (FR) FIRE RISER SEE 5R/G002
- (FA) MAINTENANCE/FIRE ACCESS SEE 5P/G002
- (FE) FIRE EXSTINGUISHER INSIDE SEE 1D/G003
- (CS) TWO WAY COMMUNICATION SYSTEM SEE 15/A670
- (ES) EVACUATION SIGN SEE 20/G002
- (AR) ASSISTED RESCUE SEE 5T/G002
- (TW) TOILET WALL SEE 5A, 5B, 5C/G002
- (TD) TOILET DOOR SEE 5D, 5E, 5F/G002
- (F1) FIRST FLOOR SEE 5/A671
- (F2) SECOND FLOOR SEE 5/A671
- (RN) ROOM NAME SEE 5G/G002
- (AS) ASSISTED LISTENING SYSTEM SIGNAGE SEE 5N/G002 *NOTE: MIN. (2) RECEIVERS PER CLASSROOM

EGRESS LEGEND

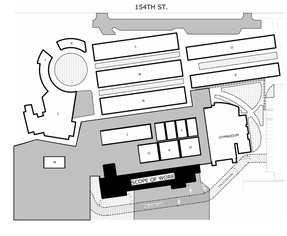


NOTE:
FOR WALL TYPES SEE FLOOR PLANS SHEETS IN A100 SERIES

GRAPHIC LEGEND



KEYMAP



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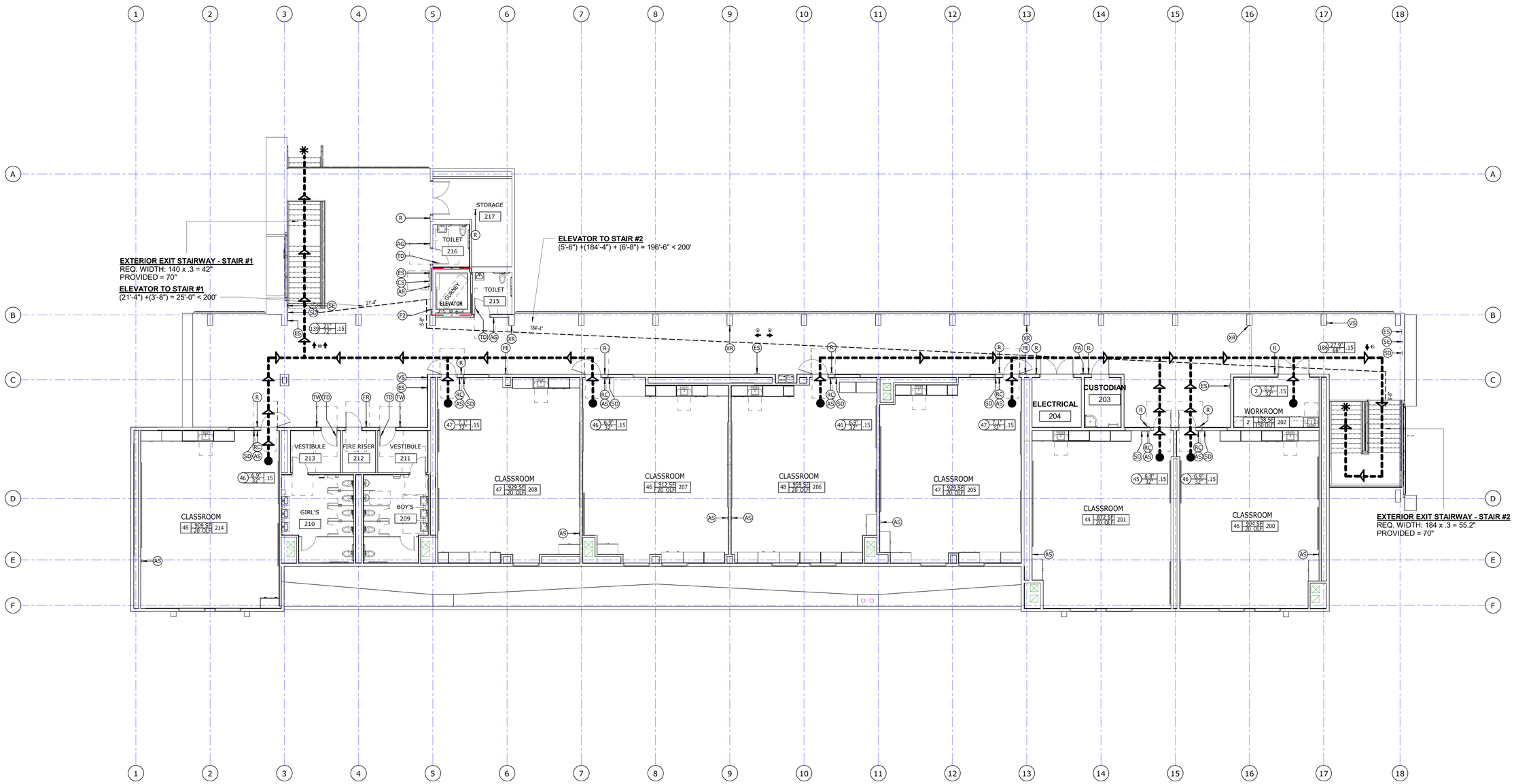
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
BUILDING EGRESS AND SIGNAGE PLAN - FIRST FLOOR PLAN

SHEET NO:
G101



SECOND FLOOR - EGRESS AND SIGNAGE PLAN

1/8" = 1'-0"

1

SIGNAGE LEGEND

- (R) ROOM NAME/# SEE 5G/G002
- (X) EXIT SEE 5N/G002
- (XR) EXIT ROUTE SEE 5B/G0042
- (AG) ALL GENDER TOILET SEE 5C/G002
- (NX) NOT AN EXIT SEE 5J/G002
- (AS) ASSISTIVE LISTENING SEE 7/G002
- (RC) ROOM CAPACITY SEE 5Q/G002
- (VS) VIDEO SURVEILLANCE SEE 3/G003
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- (SL) STAIR LEVEL SEE 1B/G003
- (SE) STAIR ELEVATION SEE 1C/G003
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- (FA) MAINTENANCE/FIRE ACCESS SEE 5P/G002
- (FE) FIRE EXSTINGUISHER INSIDE SEE 1D/G003
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- (ES) EVACUATION SIGN SEE 20/G002
- (AR) ASSISTED RESCUE SEE 5T/G002
- (TW) TOILET WALL SEE 5A, 5B, 5C/G002
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- (F1) FIRST FLOOR SEE 5/A671
- (F2) SECOND FLOOR SEE 5/A671
- (RN) ROOM NAME SEE 5G/G002
- (AS) ASSISTED LISTENING SYSTEM SIGNAGE SEE 5N/G002 *NOTE: MIN. (2) RECEIVERS PER CLASSROOM

EGRESS LEGEND

- 000' DISTANCE TO EXIT
- PATH OF EGRESS
- CUMULATIVE NUMBER OF OCCUPANTS ALONG PATH OF EGRESS
- NUMBER OF OCCUPANTS
- REQUIRED WIDTH
- EGRESS EXIT CAPACITY
- WIDTH FACTOR
- WIDTH PROVIDED
- NEW ILLUMINATED EXIT SIGN (DIRECTIONAL WHERE OCCURS)
- ROOM NAME
- FLOOR AREA (SQUARE FEET)
- ROOM NUMBER
- OCCUPANT CAPACITY
- OCCUPANT LOAD FACTOR
- NUMBER OF OCCUPANTS

NOTE:
FOR WALL TYPES SEE FLOOR PLANS SHEETS IN A100 SERIES

10/8/2024 11:04:13 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

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LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

CONSULTANT:

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
BUILDING EGRESS AND SIGNAGE - SECOND FLOOR PLAN

SHEET NO:

G102

COUNTY OF LOS ANGELES FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Fire Prevention Engineering
5823 Rickenbacker Road
Los Angeles, CA 90040
Telephone (323) 890-4125 Fax (323) 890-4129

FORM 196
Rev. 09/20

Information on Fire Flow Availability for Building Permit

For All Buildings Other Than One and Two Family Dwellings (R-3), Townhomes, and Accessory Dwelling Unit's

INSTRUCTIONS:

Complete parts I & II:

Verifying fire flow, fire hydrant location and fire hydrant size.

PROJECT INFORMATION
(To be completed by applicant)

PART I

Building Address: 4110 W. 154TH ST. LAWNDALE, CA 90260

City or Area: LAWNDALE APN: 4076-022-900

Nearest Cross Street: 154TH STREET

Distance of Nearest Cross Street to Property Line: AROUND 50 FT

Applicant: Howard Ho, Assistant Superintendent of Business Service Telephone: ( ) 310-973-1300, x 50026

Address: 4161 W. 147th St

City: Lawndale, CA 90260

Occupancy (Use of Building): E Fire Sprinklered: Yes ☒ No ☐

Type of Construction: II-B

Square Footage: 28157 Number of Stories: 2

Applicant's Signature 12/06/2023 Date

PART II **INFORMATION ON FIRE FLOW AVAILABILITY**
(Part II to be completed by Water Purveyor)

Location of hydrant: On W. 154th St ~73' W/o Prairie Ave — Hydrant Number 4333

Distance from Nearest Property Line ~30' — Size of Hydrant 6" — Size of Water main 6"

Static PSI 80 — Residual PSI 62 — Orifice size 4" — Pitot 25 psi

Fire Flow at 20 PSI 4111 gpm — Duration 4 Hours — ☐ Flow Test Date / Time 10/24 10:00AM — ☐ Hydraulic model

Location of hydrant: On W. 154th St ~55' W. Osage Ave — Hydrant Number 3223

Distance from Nearest Property Line ~50' — Size of Hydrant 6" — Size of Water main 6"

Static PSI 78 — Residual PSI 66 — Orifice size 4" — Pitot 34 psi

Fire Flow at 20 PSI 5859 gpm — Duration 4 Hours — ☐ Flow Test Date / Time 10/24 12:54AM — ☐ Hydraulic model

☐ (Check box if Simultaneous/ Dual flow test was performed) Combined flow at 20 psi ____

Location of hydrant ____ — Hydrant Number ____

Distance from Nearest Property Line ____ — Size of Hydrant ____ — Size of Water main ____

Static PSI ____ — Residual PSI ____ — Orifice size ____ — Pitot ____

Fire Flow at 20 PSI ____ — Duration ____ — ☐ Flow Test Date / Time ____ — ☐ Hydraulic model

☐ (Check box if Simultaneous/ Triple flow test was performed) Combined flow at 20 psi ____

Golden State Water Company — Water Purveyor
Michael Carbajal — Signature
310- 767- 8200 — Phone Number
1/26/2024 — Date
Operations Engineering Assistant — Title

This Information is Considered Valid for Twenty Four Months

Fire Department approval of building plans shall be required prior to the issuance of a Building Permit by the jurisdictional Building Department. Any deficiencies in water systems will need to be resolved by the Fire Prevention Division only prior to this department's approval of building plans.

Project Address: 4110 W. 154th St

Golden State Water Company (GSWC)

FIRE FLOW TEST APPLICATION Ff-1

Golden State Water Company GSWC) charges $300.00 for each fire flow test that is performed by GSWC personnel. Discounts for multiple tests being requested are not available. The $300.00 fee is due in advance of GSWC performing the fire flow test.

(This section is to be completed by the Applicant (One fire flow test request per Application Form)

Print Applicant or Contact First and Last Name: Include Company Name if Applicable

Howard Ho, Assistant Superintendent of Business Service, LAWNDALE ELEMENTARY SCHOOL DISTRICT

Print Applicant or Contact Mailing Address: Street or PO Box

4161 W. 147th St

Print Applicant or Contact City, State, Zip

Lawndale, CA 90260

Print Applicant or Contact Phone Number and E-mail Address

310-973-1300, Ext 50026, howard_ho@lawndalesd.net

Print Address/Location where Fire Flow Test is requested (Use back of page section for additional location information)

4110 W. 154TH ST. LAWNDALE, CA 90260

Check the appropriate box below and provide the information needed to indicate how the test results are to be sent by GSWC. Please note that some local fire agencies require original signed forms, in which case the test results will be returned by mail.

☒ One and Two Family Dwellings, Townhomes, and Accessory Dwelling Units total building size more than 3600 ft²

☐ One and Two Family Dwellings, Townhomes, and Accessory Dwelling Units total building size less than 3600 ft²

Mailing Address: LESD, 4161 W. 147th Street, Lawndale, CA 90260

E-Mail: howard_ho@lawndalesd.net

Signature ____ 12/6/2023 Date

Please return the completed GSWC form and the Fire Department fire flow test form to:
Customer Service Group csg@gswater.com
A customer service representative will contact you for payment.

(See the Reverse Side of this Page for More Information)

1 | Page Revision Date: 02/16/2023

SoCal Flow Testing
3741 Rose Dr, Yorba Linda, CA 92886
714-261-5716
email: info@socalflowtest.com

Hydrant Flow Test Report

Project: Will Rogers Middle School — Test date 1/16/24
Address: 4110 W 154th St — Test time 15:30
City: Lawndale State: CA — File no.

Test hydrant location: Parking lot east of campus — Hydr # ____ Elev (ft +/-) Grade

Flow hydrant location: Same as test. See section 4.5.1 of NFPA 291. — Hydr # ____ Elev (ft +/-) Grade

Static Pressure 66 PSI — Report Date 1/16/24

Outlet	C-value	Diam	Pitot	Volume
A	0.9	2.0	0 PSI	0 GPM
B	0.9	2.5	0 PSI	0 GPM
C	0.9	3.0	0 PSI	0 GPM
D	0.83	4.0	12 PSI	1372 GPM

Residual Pressure 17 PSI at an observed volume of 1372 GPM

Projected Pressure 20 PSI calculates to a volume of 1326 GPM

Although the results are accurate for the date and time given, they may not accurately reflect higher or lower readings which vary due to seasonal conditions and time of day.
Per NFPA 24-10, Table C.4.10.1(a), note 1, Q=29.84 x cd(d²)(p)^1/2
Per NFPA 24-10, Paragraph C.4.10.1.2, Q_r = Q_t x (h_r/h_t)^1.85

Test by: Hildebrandt

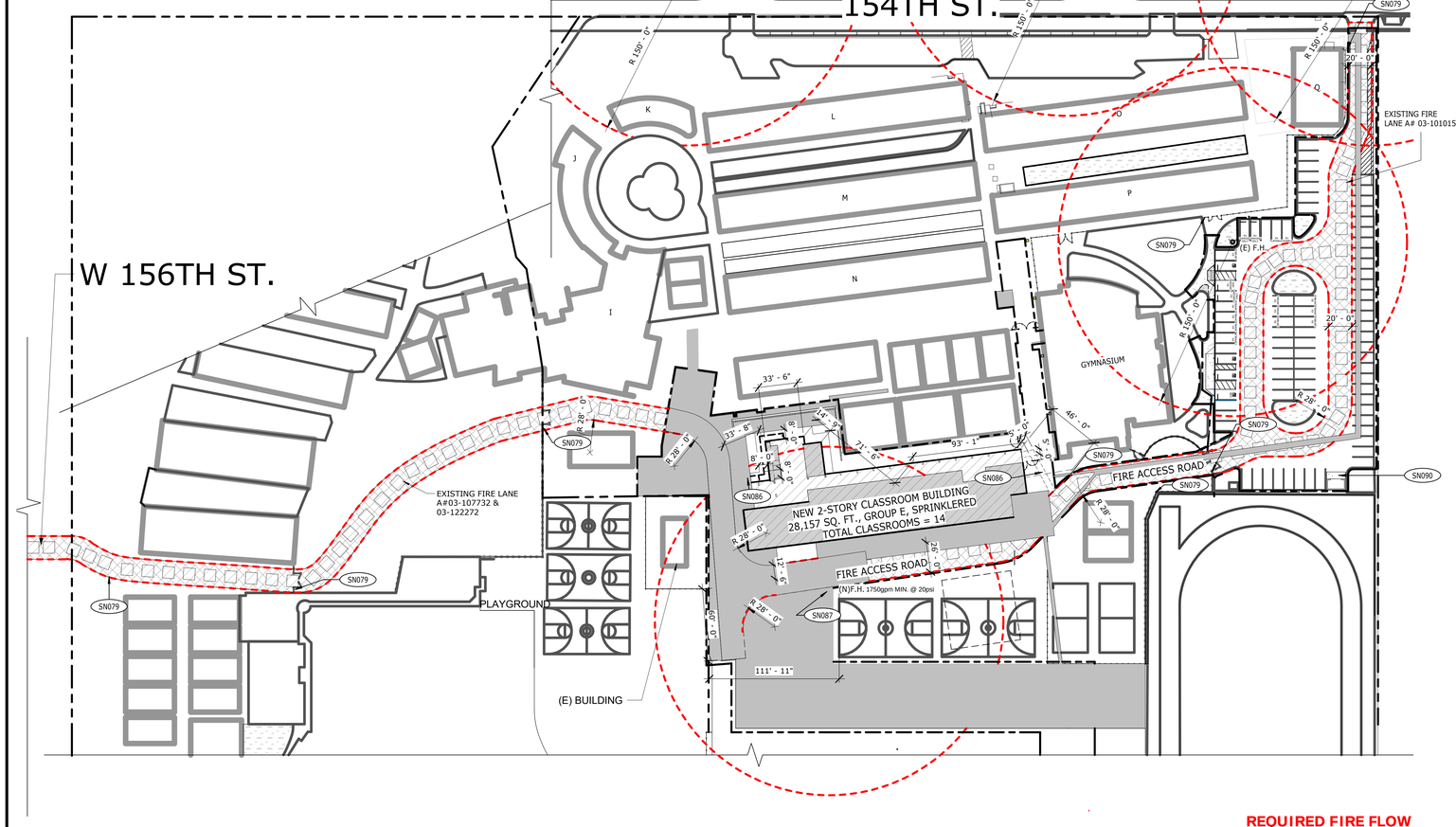
Witness Stephen Ford — Lawndale Elementary SD — (619) 719-0046

Client: Howard Ho — Lawndale Elementary SD

cc: howard_ho@lawndalesd.net
gchen@wearch.com
karla_bertran@lawndalesd.net
et al.

Symbols: Test hydrant; Flow hydrant





COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION ENGINEERING

APPROVED
ACCESS REQUIREMENTS ONLY
By *Marion Jaikowski*
Fire Prevention Engineer
Date 01/29/2024

Install_____Public
Install_____On-Site
6" x 4" x 2 ½" Fire Hydrants
Conforming to American Waterworks Association Standard C503

REQUIRED FIRE FLOW
1750 GPM @ 20 PSI FOR 2 HOURS
UPDATED BY RB FOR MARION JAIKOWSKI ON 10/24/2024

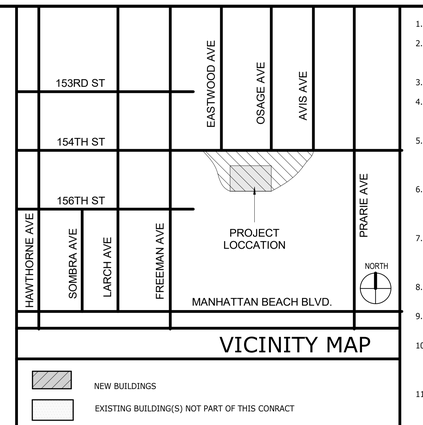
**Install 7" x 4" x 2 ½" Fire Hydrants Conforming to American Waterworks Association Standard C503

One printed set of stamped approved plans are required to be brought to the jurisdictional Fire Inspection Office upon approval and prior to any inspection requests.

ACTION REQUIRED: Provide the jurisdictional Fire Inspection Office with one printed set of approved plans upon approval and 48 hours prior to any inspection request.

All on-site fire hydrants shall be installed, tested and approved prior to building occupancy. Fire Code 501.3 and 901.5.1

FIRE ACCESS PLAN 1" = 50'-0" 2



VICINITY MAP

NEW BUILDINGS

EXISTING BUILDING(S) NOT PART OF THIS CONRACT

NEW ASPHALT REFER TO 15/A002, C-2.0, C-2.1

(N) CONCRETE PAVING

NEW 20' WIDE (U.N.O.) FIRE ACCESS LANE WITH MINIMUM UNOBSTRUCTED VERTICAL CLEARANCE OF 13'-6" ALL PAVING IN FIRE LANE IS HEAVY DUTY SEE 1/C5.0

EXISTING MIN. 20' WIDE FIRE ACCESS LANE WITH MINIMUM UNOBSTRUCTED VERTICAL CLEARANCE OF 13'-6"

PROPERTY LINE

LIMIT OF WORK

F.H. FIRE HYDRANT OR OTHER FIRE SUPRESSION EQUIPMENT AS INDICATED

SHADE STRUCTURE SEE A005 FOR MORE INFORMATION

SITE ILLUMINATION ALONG POT SEE ELECTRICAL

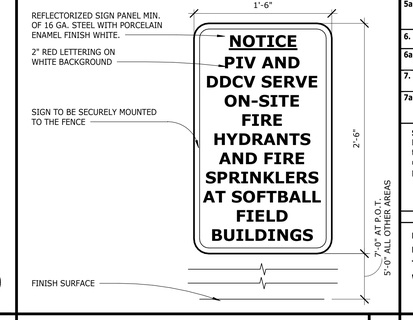
LEGEND

1. ALL ON-SITE FIRE HYDRANTS SHALL BE INSTALLED, TESTED AND APPROVED PRIOR TO BUILDING OCCUPANCY. FIRE CODE 501.3 AND 901.5.1
2. INSTALL ONE (1) ON-SITE 6" X 4" X 2 1/2" FIRE DRANT, CONFORMING TO AMERICAN WATER WORKS ASSOCIATION STANDARD C503
3. REQUIRED FIRE FLOW: 1,750 GPM@20 PSI FOR 2 HOURS.
4. ONE PRINT SET OF STAMPED APPROVED PLANS ARE REQUIRED TO BE BROUGHT TO THE JURISDICTIONAL FIRE INSPECTION OFFICE UPON APPROVAL AND PRIOR TO ANY INSPECTION REQUESTS. ACTION REQUIRED: PROVIDE THE JURISDICTIONAL FIRE INSPECTION OFFICE UPON APPROVAL AND 48 HOURS PRIOR TO ANY INSPECTION REQUEST.
5. LA COUNTY FIRE DEPARTMENT PLAN NUMBER FOR THIS PROJECT: FEPC 2023-3470

LA COUNTY FIRE DEPT NOTES

SN079	FIRE DEPT. KNOX BOX.
SN085	SLOPE (N) SHADE STRUCTURE AND SOLAR PANELS TOWARD THE SOUTH TO MAXIMIZE SOLAR EXPOSURE. REFER TO 9/A005, S2-2 & E101
SN086	A MINIMUM 5 FOOT WIDE APPROVED FIREFIGHTER ACCESS WALKWAY LEADING FROM THE FIRE DEPARTMENT ACCESS ROAD TO ALL REQUIRED OPENINGS IN THE BUILDING'S EXTERIOR WALLS SHALL BE PROVIDED FOR FIREFIGHTING AND RESCUE PURPOSES. FIRE CODE 504.1. THE SURFACE OF THE FIREFIGHTER WALKWAY ACCESS ROUTES SHALL BE EITHER CONCRETE OR ASPHALT PAVING, AND THE SLOPE SHALL BE LESS THAN 5%, AND THE CROSS SLOPE SHALL BE LESS THAN 2%.
SN087	ALL FIRE HYDRANTS SHALL MEASURE 6" X 4" X 2-1/2", BRASS OR BRONZE, CONFORMING TO AMERICAN WATER WORKS ASSOCIATION STANDARD C503, OR APPROVED EQUAL AND FH SHALL PROVIDE 1,750 GPM @ 20 PSI.
SN090	NEW TRASH ENCLOSURE

KEYNOTE



PIV AND DDCV SIGN 1 1/2" = 1'-0" 1

1. ASSESSOR'S PARCEL NUMBERS: 7182-026-904 AND 7182-027-904
2. AN UNDERGROUND FIRE PROTECTION PLAN SUBMITTAL IS REQUIRED FOR THE INSTALLATION OF AN AUTOMATIC FIRE SPRINKLER SYSTEM OR FOR PRIVATE FIRE HYDRANT SYSTEM.
3. THE REQUIRED FIRE FLOW SHALL BE VERIFIED.
4. EMERGENCY ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT AN IMPOSED LOAD OF 68,000 POUNDS AND WILL HAVE A SURFACE THAT PROVIDES ALL-WEATHER DRIVING CAPABILITIES.
5. ALL-WEATHER ACCESS ROADS AND HYDRANT LOCATIONS SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY AND SHALL BE IN PLACE AND OPERATIONAL BEFORE ANY COMBUSTIBLE MATERIALS ARE PLACED ON SITE. ACCESS ROADS AND HYDRANTS SHALL BE MAINTAINED AND REMAIN CLEAR OF OBSTRUCTIONS AT ALL TIMES.
6. THE GRADE OF FIRE DEPARTMENT ACCESS ROADS SHALL NOT EXCEED 10% FOR UNSPRINKLERED STRUCTURES. A MAXIMUM OF 15% GRADE, AS APPROVED BY THE LOCAL FIRE AUTHORITY, MAY BE ALLOWED FOR STRUCTURES WITH AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM.
7. FIRE LANE WIDTHS SHALL BE MEASURED FROM TOP OF FACE OF THE CURB TO TOP FACE OF THE CURB FOR FIRE LANES WITH CURBS AND GUTTERS AND FROM THE FLOWLINE TO FLOWLINE FOR FIRE LANES WITH MODIFIED CURB DESIGNS (E.G., ROLLED, RAMPED, ETC...). CFC 503.2.1, AS AMENDED
8. ALL VEGETATION AND OTHER OBSTRUCTIONS OVERHANGING A FIRE ACCESS ROADWAY SHALL BE MAINTAINED TO A CLEAR HEIGHT OF 13'-6".
9. ALL POLES, BACKBOARDS AND OTHER OBSTRUCTIONS ON PLAYGROUNDS NEAR A FIRE ACCESS ROADWAY SHALL BE PROVIDED WITH REFLECTIVE TAPE OR PAINT.
10. ACCESS GATES SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE IN COMPLIANCE WITH SECTION 503.5 OF THE 2016 CFC AND LOCAL FIRE AUTHORITY GUIDELINES. ACCESS GATE(S) SHALL BE OPERABLE WITH AN LOCAL FIRE AUTHORITY KNOX KEY.
11. KNOX KEY SWITCHES, KNOX LOCKS, OR FRANGIBLE PADLOCKS/CHAINS SHALL BE PROVIDED FOR ALL GATES AND BARRIERS IN THE PATH OF VEHICLE OR FIRE FIGHTER ACCESS.
12. PRIVATE FIRE HYDRANTS, SPRINKLER CONTROL AND POST INDICATOR VALVES, RISERS AND FIRE DEPARTMENT CONNECTIONS SHALL BE PAINTED OSHA SAFETY RED. ALL FIRE HYDRANTS SHALL HAVE A "BLUE REFLECTIVE PAVEMENT MARKER" INDICATING THE LOCATION. ON PRIVATE PROPERTY MARKERS ARE TO BE MAINTAINED IN GOOD CONDITION BY THE PROPERTY OWNER.
13. APPROVED ACCESS WALKWAYS SHALL BE PROVIDED TO ALL REQUIRED OPENINGS AND ALL RESCUE WINDOWS. VEGETATION SHALL BE SELECTED AND MAINTAINED IN SUCH A MANNER AS TO ALLOW ACCESS TO AND THE LADDERING OF RESCUE WINDOWS AND STRUCTURES. CFC 504
14. ALL-WEATHER ACCESS ROADWAYS AND ALL FIRE HYDRANTS SHALL BE IN PLACE AND OPERATIONAL BEFORE BRINGING COMBUSTIBLE BUILDING MATERIALS OR PORTABLE UNITS ON-SITE.
15. ANY FUTURE MODIFICATION TO THE APPROVED FIRE MASTER PLAN OR APPROVED PLAN, INCLUDING BUT NOT LIMITED TO ROAD WIDTH, GRADE, SPEED HUMPS, TURNING RADII, GATES OR OTHER OBSTRUCTIONS, SHALL REQUIRE REVIEW AND APPROVAL BY THE LOCAL FIRE AUTHORITY.
16. THE CAMPUS IN IDENTIFIED WITH 6" HIGH ADDRESS NUMBERS EASILY VISIBLE FROM THE PUBLIC ROAD FRONTING THE PROPERTY. INDIVIDUAL STRUCTURES ARE IDENTIFIED WITH 6" HIGH ADDRESS NUMBERS OR LETTERS EASILY VISIBLE FROM THE PUBLIC WAY OR FIRE ACCESS ROADWAY.
17. KNOX BOX ACCESS SHALL BE PROVIDED TO ALL BUILDINGS
18. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT AS REQUIRED BY SECTION 1010.1.9 OF THE 2016 CBC.
19. EXIT DOORS SHALL BE CLEARLY IDENTIFIED WITH EXIT SIGNS. SUCH SIGNS MUST HAVE EMERGENCY POWER BACK-UP.
20. THE EXIT PATH FROM OCCUPIED SPACES SHALL BE ILLUMINATED AT ALL TIMES IN ACCORDANCE WITH CBC 1008
21. PANIC HARDWARE SHALL BE PROVIDED FOR ALL EXIT DOORS FROM ROOMS WITH 50 OR MORE OCCUPANTS AND ON ALL CORRIDOR DOORS.
22. SMOKE DETECTORS SHALL BE REQUIRED IN ROOMS WITH A COMMON ATMOSPHERE WHEN THE SINGLE REQUIRED EXIT PATH OF ONE ROOM PASSES THROUGH ANOTHER.
23. DUMPSTERS AND TRASH CONTAINERS LARGER THAN 1.5 CUBIC YARDS SHALL NOT BE STORED IN BUILDINGS OR PLACED WITHIN 5 FEET OF COMBUSTIBLE WALLS, OPENINGS OR COMBUSTIBLE ROOF EAVE LINES UNLESS PROTECTED BY AN APPROVED SPRINKLER SYSTEM.

CFC TABLE B105.1 MINIMUM REQUIRED FIRE FLOW DURATIONS FOR BUILDINGS

AREA	TYPE OF CONSTRUCTION	SQUARE FEET	FIRE FLOW	FLOW DURATION
BUILDING 'W1' (2-STORY)	IIB	23,239	3,250 GPM	3 HOURS
BUILDING 'W2' (1-STORY)	IIB	8,453	2,000 GPM	2 HOURS
BUILDING 'Y' (1-STORY)	IIB	5,193	1,500 GPM	2 HOURS

EXCEPTION: A REDUCTION IN REQUIRED FIRE FLOW UP TO 75 PERCENT, AS APPROVED, IS ALLOWED WHEN THE BUILDING IS PROVIDED WITH AN APPROVED AUTOMATIC FIRE SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1 OR 903.3.1.2. THE RESULTING FIRE FLOW SHALL NOT BE LESS THAN 1,500 GALLONS PER MINUTE FOR THE PRESCRIBED DURATION AS SPECIFIED IN TABLE B105.1.

FIRE PROTECTION NOTES

DSA FORM 810 (REV. 12-29-20) - LOCAL FIRE AUTHORITY REVIEW
FOR INSTRUCTIONS, SEE DSA 810 INSTRUCTIONS AND DSA POLICY 09-01

PROJECT INFORMATION

SCHOOL DISTRICT/OWNER: LAWNDALE ELEMENTARY SCHOOL DISTRICT
PROJECT NAME/SCHOOL: WILL ROGERS MIDDLE SCHOOL
PROJECT ADDRESS: 4110 W 154TH STREET, LAWNDALE, CA 90260

FIRE & LIFE SAFETY INFORMATION

1	Has a fire hydrant flow test been performed within the past 12 months? (If yes, provide a copy of the test data.)	YES ☒ NO ☐
2	Was the fire hydrant water flow test performed as part of this LFA review?	YES ☒ NO ☐
3	Is the project located within a designated fire hazard severity zone as (FHSZ) established by Cal-Fire? (If yes, indicate FHSZ classification below.)	YES ☐ NO ☒
	Refer to the following for FHSZ locations: www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps	MODERATE ☐ HIGH ☐ VERY HIGH ☐
	Wildland Interface Area (WIFA) (If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)	WIFA ☐

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		YES	NO	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.			☒	☐
4a.	Acceptable Alternate: Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.	☒	☐	REVISED BY RB PER MARION JAIKOWSKI 10/24/2024	
5.	Fire Hydrants: Number and spacing does not meet CFC requirements.			☒	☐
5a.	Acceptable Alternate: Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.	☐	☐		
6.	Fire Hydrants: Water flow and pressure are less than CFC minimum.			☒	☐
6a.	Acceptable Alternate: The available flow and pressure is acceptable for providing fire suppression and protection of life and property.	☐	☐		
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.			☒	☐
7a.	Acceptable Alternate: The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.	☐	☐		

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

Accepted by: Howard Ho Title: Assistant Supt., Business
Signature: ____ Date: 10/24/2024

LOCAL FIRE AUTHORITY (LFA)

LFA AGENCY NAME: LA County Fire Department
LFA REVIEWER NAME: Marion H. Jaikowski
TITLE: Fire Prevention Engineer **WORK PHONE:** 323-890-4125
WORK EMAIL: Marion.Jaikowski@fire.lacounty.gov
LFA Reviewer's Signature: *Marion Jaikowski* Date: 1-29-24

LOCAL FIRE AUTHORITY REVIEW 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT — ST. PAUL DENNIS WESTBERG — C-11045 EXP. 9-2025 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: EM/JC
CHECK: JG
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE ACCESS PLAN

SHEET NO:
F001

10/8/2024 11:03:55 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

GENERAL NOTES:

ALL WORK PERFORMED IN THIS CONTRACT SHALL CONFORM TO:

1.
   A. PROJECT SPECIFICATIONS.

   B. ALL SHALL CONFORM TO THE LATEST EDITION AND SUPPLEMENTS OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) AND AMERICAN PUBLIC WORKS ASSOCIATION (APWA).

   C. LAWNDALE ELEMENTARY SCHOOL DISTRICT STANDARDS AND SPECIFICATIONS.

   D. CALIFORNIA BUILDING CODE, 2022.

2. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE WORK SPECIFIED ON THE DRAWINGS AND WITHIN THE VARIOUS NOTES SHOWN HEREIN.

3. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES IN THE AREA OF WORK WHICH ARE NOT INCLUDED IN THIS CONSTRUCTION. ANY DAMAGE RESULTING FROM THIS WORK SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.

REMOVALS:

4. EXISTING STRUCTURES AND SUBSTRUCTURES WHICH ARE INDICATED TO BE REMOVED IN THESE CONSTRUCTION DOCUMENTS SHALL BE TOTALLY REMOVED AND DISPOSED OF OFFSITE, UNLESS OTHERWISE INDICATED. EXISTING FACILITIES WHICH ARE DISCOVERED DURING CONSTRUCTION (INCLUDING WALLS, FOOTINGS AND FOUNDATIONS) SHALL BE REPORTED TO AND COORDINATED WITH THE ARCHITECT/IOR/OAR TO THEIR REMOVAL. CONTRACTOR WILL NOTIFY THE IOR/OAR IN WRITING PRIOR TO COMMENCING THE WORK.

5. ALL SITE PREPARATION AS INDICATED SHALL BE MADE UNDER THE CONTINUOUS INSPECTION OF THE IOR. SECURE THE REQUIRED PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY FOR THE CONSTRUCTION OF TRENCHES, SHORING OR EXCAVATIONS WHICH ARE 5 FEET OR DEEPER OR WORK THAT MAY JEOPARDIZE THE WORKERS. SHORING CALCULATIONS SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR APPROVAL AND PERMITTING.

6. THE CONTRACTOR SHALL KEEP THE CONSTRUCTION AREA SUFFICIENTLY DAMPENED TO CONTROL DUST CAUSED BY WORK ACTIVITIES AS REQUIRED BY THE CITY AND JURISDICTIONAL AGENCY.

7. ALL FILL OR BACKFILL SHALL BE COMPACTED 90% DENSITY PER ASTM D1557.

8. CONSTRUCTION STAKING FOR IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR PAID FOR BY THE CONTRACTOR AND AND INCLUDED IN THE CONTRACT.

9. VOIDS RESULTING FROM REMOVAL WORK SHALL BE FILLED WITH SUITABLE MATERIALS APPROVED BY THE OWNER RETAINED GEOTECHNICAL ENGINEER AND COMPACTED TO 90% DENSITY PER ASTM D1557.

10. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL REMOVE EXISTING CONSTRUCTION FENCING, APPURTENANCES AND OFFICE TRAILERS FROM THE SITE. PAVEMENT SHALL BE PATCHED AND REPAIRED TO MATCH ADJACENT PAVEMENT AND APPROVED BY THE INSPECTOR OF RECORD AS APPLICABLE.

11. ANY ADDITIONAL SURVEYS OR TESTING AS A RESULT OF CONTRACTOR ERROR OR MISINFORMATION WILL BE CHARGED TO THE CONTRACTOR.

12. CONSTRUCT STRAIGHT GRADES BETWEEN ELEVATIONS SHOWN ON PLAN UNLESS INTERRUPTED BY A GRADE CHANGE LINE. ANY DEVIATION FROM THE GRADING PLAN MUST HAVE PRIOR APPROVAL FROM THE ENGINEER.

13. GRADE LAWN, TURF, AND PLANTING AREA 1-1/2" BELOW DESIGN GRADES INDICATED.

14. MAINTAIN A RECORD OF LOCATION OF UTILITY MARKERS ON THE AS-BUILT PLAN AND REINSTALL THEM AFTER PAVING. REPLACE BENT OR UNUSABLE MARKERS FOR ALL UTILITY LINES DISCOVERED WITHIN THE WORK AREA. INSTALL BRASS UTILITY MARKERS INDICATING DIRECTIONS OF LINES AT ALL CHANGES IN DIRECTIONS AFTER PAVING. INFORM THE SURVEYOR TO LOCATE AND RECORD ACTUAL LOCATIONS.

15. IF EXISTING UTILITIES ARE EXPOSED OR DETERMINED TO EXIST UNDER THE ROUGH GRADING SITE, CONTRACTOR SHALL PROVIDE A FLAGGED STAKE THAT INDICATES THEIR LOCATION, TYPE OF UTILITY, SIZE, PIPE MATERIAL AND DEPTH. STAKES SHALL BE INSTALLED NO LESS THAN 50' ON CENTER ON STRAIGHT LINES AND AT BENDS.

16. UNCLOG, CLEAN AND FLUSH THE WORK AREA DRAINAGE SYSTEM AFTER PAVING AND IMMEDIATELY BEFORE A RAIN FORECAST.

17. THE PROPOSED GRADE IS THE FINAL GRADE AND NOT THE ROUGH GRADE. THE CONTRACTOR SHALL SUBTRACT THE THICKNESS OF THE PAVED SECTION AND/OR LANDSCAPE TOPSOIL SECTION TO ARRIVE AT THE ROUGH GRADE ELEVATION.

18. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE INSPECTOR OF RECORD UPON REQUEST.

19. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLANS MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE AT ALL TIMES.

20. SITE BOUNDARIES, EASEMENTS, DRAINAGE DEVICES, RESTRICTED USE AREAS SHALL BE LOCATED PER CONSTRUCTION STAKING BY A LICENSED SURVEYOR. PRIOR TO GRADING, AS REQUESTED BY THE INSPECTOR OF RECORD, ALL PROPERTY LINES, EASEMENTS, AND RESTRICTED USE AREAS SHALL BE STAKED.

21. IF GRADING AUTHORIZED BY THIS PLAN IS TO EXTEND THROUGH THE RAINY SEASON, OCTOBER 1 THROUGH APRIL 15 OF THE FOLLOWING YEAR, SEPARATE UPDATED PLANS FOR EROSION CONTROL MUST BE SUBMITTED PRIOR TO OCTOBER TO THE ARCHITECT/IOR FOR APPROVAL. CONTRACTOR TO PROVIDE STORM WATER PREVENTION PLAN, PRE-CONSTRUCTION AND POST CONSTRUCTION BMPs AND UPDATE FROM TIME TO TIME TO COMPLY WITH THE REQUIREMENTS.

22. CONTRACTOR SHALL INSTALL TEMPORARY FENCING AROUND THE PERIMETER OF THE CONSTRUCTION SITE AND STAGING AREA. FENCING SHALL BE MINIMUM 8' TALL AND SHALL HAVE A DUST/VISION BARRIER ALONG THE FULL LENGTH. THE DUST/VISION BARRIER SHALL EXTEND THE LENGTH OF THE CONSTRUCTION SITE. THE FENCING SHALL BE ANCHORED TO THE SURFACE AND SHALL BE ABLE TO WITHSTAND A 200-POUND HORIZONTAL POINT LOAD IN ANY DIRECTION. WORK AREA AND STAGING AREA SHALL BE SECURE AT ALL TIMES.

23. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INCLUDING NPDES, FROM THE APPROPRIATE JURISDICTIONAL AGENCIES FOR DISCHARGE OF GROUND WATER THAT MAY BE NECESSARY TO ACCOMPLISH EXCAVATIONS SHOWN ON THESE PLANS.

24. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.

GEOTECHNICAL NOTES:

GENERAL CONSIDERATIONS

1. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE PROJECT SITE'S GEOTECHNICAL CONSULTANT'S REPORT.
   TITLE: REPORT OF GEOTECHNICAL INVESTIGATION,
   PROPOSED CLASSROOM BUILDING - WILL ROGERS MIDDLE SCHOOL
   4110 WEST 154TH STREET, CITY OF LAWNDALE, CALIFORNIA
   PREPARED BY: ASSOCIATED SOILS ENGINEERING, INC.
   2860 WALNUT AVENUE, SIGNAL HILL, CA- 90755
   PROJECT NO.: 7083.22
   DATE: NOVEMBER 18, 2022

SITE PREPARATION:

2. PRIOR TO THE PLACEMENT OF THE NEW PAVEMENTS, VARIOUS FLATWORK AND SITE WORK, THE SITE SHALL BE CLEARED OF THE EXISTING ASPHALT AND CONCRETE PAVING, AND ANY REMNANTS OF PREVIOUS CONSTRUCTION. STRIPPED OFF ASPHALT AND CONCRETE SHALL BE DISPOSED OF OFF SITE.

SITE GRADING:

UNDOCUMENTED FILL / DISTURBED NATIVE SOILS:

3. ANY UNDOCUMENTED FILL SOIL ENCOUNTERED DURING SITE GRADING SHALL BE EXCAVATED FULL DEPTH UNDER THE OBSERVATION AND CONFIRMATION BY THE GEOTECHNICAL CONSULTANT. LATERAL EXTENT OF OVEREXCAVATION BEYOND THE PERIMETERS OF THE BUILDING, WHERE POSSIBLE, SHALL BE TO A MINIMUM DISTANCE EQUAL TO THE DEPTH OF UNDOCUMENTED FILL/ DISTURBED SOIL ENCOUNTERED OR TWO (2) FEET, WHICHEVER IS GREATER.

4. FOR OTHER SECONDARY IMPROVEMENTS SUCH AS FREE-STANDING WALLS OR HARDSCAPE, THE LATERAL EXTENT OF REMOVAL SHALL BE TO A MINIMUM DISTANCE EQUAL TO THE DEPTH OF UNDOCUMENTED FILL/ DISTURBED SOILS ENCOUNTERED OR ONE (1) FOOT, WHICHEVER IS GREATER.

5. THE EXPOSED BOTTOM SHALL BE SCARIFIED / REWORKED TO A MINIMUM ONE (1) FOOT DEPTH AND RECOMPACTED TO A MINIMUM 90 PERCENT RELATIVE COMPACTION WITH A MINIMUM MOISTURE CONTENT OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT, PRIOR TO BACKFILLING WITH APPROVED SOILS.

EXPANSIVE SOILS:

6. THE RECOMMENDATION OF REMEDIAL GRADING AND DESIGN OF STRUCTURAL ELEMENTS IN CONTACT WITH ON-SITE SOILS SHALL TAKE THE "VERY HIGH" EXPANSION POTENTIAL INTO CONSIDERATION, AS APPROPRIATE. LIGHTLY LOADED STRUCTURAL ELEMENTS SUCH AS SHALLOW FOUNDATIONS AND SLABS ARE LIKELY TO UNDERGO SIGNIFICANT MOVEMENTS DUE TO THE "VERY HIGH" EXPANSION POTENTIAL OFSITE CLAYEY SOILS.

REMEDIAL GRADING:

7. ON-SITE SOILS WITHIN THE FOOTPRINTS OF THE BUILDING PADS SHALL BE OVEREXCAVATED AND REMOVED UNIFORMLY TO A MINIMUM DEPTH OF FIVE (5) FEET BELOW EXISTING OR FINISHED GRADE, WHICHEVER IS LOWER, AND FIVE (5) FEET LATERALLY BEYOND THE BUILDING FOOTPRINT, AND REPLACED WITH PROPERLY COMPACTED SOIL SUCH THAT THE BUILDING FOUNDATIONS ARE SUPPORTED ON A RE-ENGINEERED COMPETENT FILL LAYER.

8. SOILS EXPOSED AT EXCAVATION BOTTOMS TO A DEPTH OF SIX (6) INCHES SHALL BE SCARIFIED, REWORKED AND RECOMPACTED TO EXHIBIT A MINIMUM 90 PERCENT RELATIVE COMPACTION WITH A MINIMUM MOISTURE CONTENT OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT, PRIOR TO RECEIVING FILL PLACEMENT. THE EXPOSED EXCAVATION BOTTOM SHALL BE OBSERVED, TESTED, AND APPROVED BY THE GEOTECHNICAL CONSULTANT PRIOR TO PLACING THE COMPACTED FILL.

9. IN CASE OF THE PRESENCE OF LOCALIZED LOOSE SOILS, THE OVEREXCAVATION NEEDS TO BE DEEPENED ACCORDINGLY TO DELETE THE LOOSE SOIL CONDITION. HOWEVER, THIS DEEPENED OVEREXCAVATION MAY BE TERMINATED WHEN THE EXPOSED NATIVE, UNDISTURBED SOILS EXHIBIT A NATURAL RELATIVE COMPACTION GREATER THAN 85 PERCENT, SUBJECT TO THE TESTING AND INSPECTION BY THE GEOTECHNICAL CONSULTANT REPRESENTATIVE.

PUMPING AND HEAVING OF SUBGRADE SOILS:

10. IF EXCAVATED SOILS ARE HIGHLY MOIST OR WET AT THE TIME OF SITE GRADING, THE EXCAVATED SOILS SHALL BE EVENLY SPREAD AND LEFT AERATED FOR A PERIOD OF TIME TO REDUCE MOISTURE CONTENT PRIOR TO BEING RE-USED.

11. WHEN PUMPING AND HEAVING CONDITIONS ARE OBSERVED WITH THE SOILS EXPOSED AT THE OVEREXCAVATION BOTTOM, IT WILL BE NECESSARY TO DEEPEN THE OVEREXCAVATION WITHIN THE AREA OF OBSERVED PUMPING AND HEAVING AN ADDITIONAL 12 TO 18 INCHES, UNDER THE EVALUATION OF THE GEOTECHNICAL CONSULTANT. THE AREA OF THE DEEPENED OVEREXCAVATION SHALL SUBSEQUENTLY BE BACKFILLED WITH $\frac{3}{4}$" TO 1" OPEN GRADED CRUSHED ROCKS COMPLYING WITH THE CRITERIA OF SECTION 200-1.2 OF THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE GREENBOOK) RAMMED TIGHTLY AND SHALL BE UNDERLAIN AND OVERLAIN BY A LAYER OF FILTERING GEOFABRIC (SUCH AS MIRAFI 140N OR EQUIVALENT) PRIOR TO THE PLACEMENT OF CRUSHED ROCKS.

TEMPORARY EXCAVATION:

12. IT IS RECOMMENDED THAT EXCAVATED SOILS SHALL BE PLACED A MINIMUM LATERAL DISTANCE FROM TOP OF SLOPE EQUAL TO THE HEIGHT OF SLOPE. A MINIMUM SETBACK DISTANCE EQUIVALENT TO THE SLOPE HEIGHT SHALL BE MAINTAINED BETWEEN THE TOP SLOPE AND HEAVY EXCAVATION/ GRADING EQUIPMENT.

EXTERIOR SLAB-ON-GRADE/ FLATWORK/ PAVEMENT/ HARDSCAPE SUPPORT:

13. IT IS RECOMMENDED THAT SUBGRADE SOILS TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES BELOW THE BOTTOM OF AND EIGHTEEN (18) INCHES LATERALLY BEYOND THE FOOTPRINT EXTERIOR CONCRETE SLAB-ON-GRADE/CONCRETE FLATWORK/ PAVEMENT/ HARDSCAPE SHALL BE OVEREXCAVATED THEN BACKFILLED AND RECOMPACTED WITH SUITABLE FILL SOILS CONSISTING OF "VERY LOW" TO "LOW" EXPANSIVE, SUITABLE SITE, IMPORTED, BLENDED MATERIAL, COMPACTED TO AT LEAST 90 PERCENT COMPACTION WITH A MINIMUM MOISTURE CONTENT OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE PRIOR TO PLACEMENT OF COMPACTED FILL, THE UPPER SIX (6) INCHES OF EXPOSED, NATIVE SUBGRADE SHALL BE REWORKED TO AT LEAST 90 PERCENT RELATIVE COMPACTION WITH A MINIMUM MOISTURE OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT.

BACKFILLING AND COMPACTION REQUIREMENTS:

14. ON-SITE SOILS, BLENDED SOILS AND IMPORT MATERIALS APPROVED FOR USE AS FILL SHALL BE PLACED IN HORIZONTAL LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS, MOISTURE CONDITIONED TO A MINIMUM OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT FOR "LOW" EXPANSIVE IMPORT OR BLENDED MATERIAL, AS WELL AS FOR UNTREATED SITE CLAYEY SOILS, TO A MINIMUM OF ONE (1) PERCENTAGE POINT ABOVE OPTIMUM MOISTURE CONTENT FOR "VERY LOW" EXPANSIVE IMPORT MATERIAL, AND COMPACTED TO A MINIMUM 90 PERCENT RELATIVE COMPACTION AND IN ACCORDANCE WITH ASTM D1557-12 TEST METHOD.

SLABS-ON-GRADE:

15. EXTERIOR CONCRETE FLATWORK/ HARDSCAPE SHALL BE SUPPORTED IN PROPERLY COMPACTED SOILS AS RECOMMENDED IN THE SECTION 6.2.6 OF THE GEOTECHNICAL REPORT. EXTERIOR SLABS SHALL BE PROPERLY JOINTED TO LIMIT THE NUMBER OF CONCRETE SHRINKAGE CRACKS.

ASPHALTIC CONCRETE (AC) FLEXURAL PAVEMENT DESIGN:

16. THE AGGREGATE BASE SHALL CONFORM TO THE CRITERIA OF CAB PER SECTION 200-2.2 OF THE GREENBOOK. THE BASE COURSE SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95% AT A MINIMUM OF 1 PERCENTAGE POINT ABOVE THE OPTIMUM MOISTURE CONTENT. COMPACTION, AGGREGATE GRADATION, AND COMPACTED THICKNESS SHALL BE VERIFIED IN FIELD.

17. THE ASPHALT CONCRETE PAVEMENT SHALL BE COMPACTED TO 95% OF THE UNIT WEIGHT AS TESTED IN ACCORDANCE WITH THE HVEEM PROCEDURES STIPULATED IN THE CURRENT CALIFORNIA TEST METHOD (CTM) 304. THE ASPHALT CONCRETE MATERIAL SHALL CONFORM TO TYPE III, CLASS C2 OR C3, OF THE GREENBOOK. ALL SUBGRADE AND AGGREGATE BASE MATERIAL SHALL BE PROOF-ROLLED BY HEAVY RUBBER TIRE EQUIPMENT TO VERIFY THAT THE SUBGRADE AND BASE GRADE ARE IN A NON-YIELDING CONDITION.

GEOTECHNICAL NOTES (CONT.):

SITE DRAINAGE:

18. PER SECTION 1804A.4 OF 2022 CBC, A MINIMUM 5% DESCENDING GRADIENT AWAY FROM THE BUILDING FOR A MINIMUM DISTANCE OF 10 FEET SHALL BE INCORPORATED FOR EARTH GRADE PLACED ADJACENT TO THE FOUNDATION. THIS DESCENDING GRADIENTMAY BE REDUCED TO 2% FOR ANY IMPERVIOUS AREA, SUCH AS CONCRETE PAVED WALKWAYS, WITHIN THE 10-FOOT ZONE. FOR AREAS WHERE THE 10-FOOT DRAINAGE DISTANCE IS NOT ATTAINABLE, ALTERNATIVE MEASURES SUCH AS CONCRETE-LINED SWALES HAVING A MINIMUM 2% GRADIENT MAY BE ADOPTED TO DIVERT WATER AWAY FROM THE BUILDING, PROVIDED THAT A MINIMUM 5% GRADIENT IS MAINTAINED IN THE DISTANCE BETWEEN THE BUILDING FOOTPRINT AND THE DIVERSION MEASURES SUCH AS SWALES. THE PROJECT CIVIL CONSULTANT SHALL REFER TO THE PERTINENT SECTION IN 2022 CBC FOR MORE SPECIFIC SITE DRAINAGE GUIDELINES.

19. ANY PLANTER AREAS TO BE PLACED ADJACENT TO STRUCTURE PERIMETERS SHALL BE PROVIDED WITH IMPERVIOUS BOTTOMS AND A DRAINAGE PIPE, OR SHALL BE PLANTED WITH DROUGHT-TOLERANT PLANTS, TO DIVERT WATER AWAY OR MINIMIZE MOISTURE INFILTRATION FROM FOUNDATION AND SLAB SUBGRADE SOILS.

SOIL CORROSIVITY EVALUATION:

CONCRETE CORROSION:

20. AS PER THE GEOTECHNICAL EVALUATION, THE CONCRETE CORROSION TEST CONDUCTED ON THE ON-SITE SOILS, AS INDICATED IN THE REPORT, SOILS EXHIBITING SOLUBLE CONTENT LESS THAN 0.1% BY WEIGHT ARE CLASSIFIED AS HAVING "SO" SULFATE EXPOSURE CATEGORY. AS SUCH, FOR STRUCTURAL FEATURES TO BE IN DIRECT CONTACT WITH ON-SITE SOILS, THE SPECIAL GEOTECHNICAL REQUIREMENTS ON THE TYPE OF PORTLAND CEMENT OR WATER CEMENT RATIO CORRESPONDING TO THE TESTED "SO" SULFATE EXPOSURE CATEGORY AS PER STIPULATED IN TABLE 19.3.2.1 OF ACI 318-19 SHALL BE CONSIDERED.

ADDITIONAL RECOMMENDATIONS

21. ALL WORK MUST BE IN COMPLIANCE WITH THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL CONSULTANT'S REPORT.
    TITLE: ADDENDUM REGARDING AC AND PCC PAVEMENT RECOMMENDATIONS FOR PROPOSED CLASSROOM BUILDING
    PREPARED BY: ASSOCIATED SOILS ENGINEERING, INC. CONSULTING GEOTECHNICAL ENGINEERS
    PROJECT NO.: 7083.22
    TITLE: SEPTEMBER 28, 2023

ASPHALTIC CONCRETE (AC) FLEXURAL PAVEMENT DESIGN:

22. R-VALUE OF 5 HAS BEEN UTILIZED CONSIDERING THE SITE CLAYEY SOILS AS SUBGRADE SOILS. THREE (3) TRAFFIC INDICES (TI'S) OF 4.5, 5.5 AND 7.0, TOGETHER WITH THE ASSUMED R-VALUE, HAVE BEEN UTILIZED FOR THE PAVEMENT SECTIONS.

23. R-VALUE TESTING SHALL BE PERFORMED ON REPRESENTATIVE SOIL SAMPLES AFTER ROUGH GRADING OPERATIONS ON THE UPPER 2 FEET TO CONFIRM/MODIFY APPLICABILITY OF THE ABOVE PAVEMENT SECTIONS. SHALL THE ALTERNATIVES 1) OF REPLACING THE UPPER 18 INCHES OF SUBGRADE SOILS WITH "VERY LOW" TO "LOW" EXPANSIVE (EI ≤ 50) SOILS, BLENDING "VERY LOW" EXPANSIVE (EI ≤ 20) SANDY SOILS, PULVERIZED PCC OR AC, OR CAB MATERIAL WITH THE EXCAVATED ON-SITE SOILS SITE SOILS OR 3) TREATING THE SITE SOILS WITH QUICK LIME DURING SUBGRADE PREPARATION BE ADOPTED, THE SUBGRADE R-VALUE IS ANTICIPATED TO INCREASE, WHICH COULD RESULT IN REDUCTION IN AC PAVEMENT THICKNESSES FOR DIFFERENT TI'S. THE GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR FURTHER AC PAVEMENT SECTION ANALYSIS BASED ON TESTING ON THE "VERY LOW" TO "LOW" EXPANSIVE (EI ≤ 50) FILL SOILS, BLENDED, OR LIME-/CEMENT-TREATED SUBGRADE SOILS.

24. THE BASE COURSE SHALL BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 95% AT A MINIMUM OF 1 PERCENTAGE POINT ABOVE THE OPTIMUM MOISTURE CONTENT. FIELD TESTING SHALL BE USED TO VERIFY COMPACTION, AGGREGATE GRADATION, AND COMPACTED THICKNESS.

25. THE ASPHALT CONCRETE PAVEMENT SHALL BE COMPACTED TO 95% OF THE UNIT WEIGHT AS TESTED IN ACCORDANCE WITH THE HVEEM PROCEDURES STIPULATED IN THE CURRENT CALIFORNIA TEST METHOD (CTM) 304. THE ASPHALT CONCRETE MATERIAL SHALL CONFORM TO TYPE III, CLASS C2 OR C3, OF THE GREENBOOK. ALL SUBGRADE AND AGGREGATE BASE MATERIALS SHALL BE PROOF-ROLLED BY HEAVY RUBBER TIRE EQUIPMENT TO VERIFY THAT THE SUBGRADE AND BASE GRADE ARE IN A NON-YIELDING CONDITION.

PORTLAND CEMENT CONCRETE (PCC) PAVEMENTS:

26. THE CONCRETE (PCC) PAVEMENT SECTIONS ARE BASED ON LOAD SAFETY FACTORS OF 1.0 AND 1.1, AND A MODULUS OF SUBGRADE REACTION ("K" VALUE) OF 80 POUNDS PER CUBIC INCH (PCI) FOR SITE SOILS COMPACTED AS SUBGRADE MATERIAL, SHALL THE ALTERNATIVES OF 1) REPLACING THE UPPER 18 INCHES OF SUBGRADE SOILS WITH "VERY LOW" TO "LOW" EXPANSIVE (EI ≤ 50) SOILS, 2) BLENDING "VERY LOW" EXPANSIVE (EI ≤ 20) SANDY SOILS, PULVERIZED PCC OR AC, OR CAB MATERIAL WITH THE EXCAVATED ON-SITE SOILS SITE SOILS OR 3) TREATING THE SITE SOILS WITH QUICK LIME/CEMENT DURING SUBGRADE PREPARATION BE ADOPTED, THE SUBGRADE "K" VALUE IS ANTICIPATED TO INCREASE, WHICH COULD RESULT IN REDUCTION IN PCC PAVEMENT THICKNESSES. THE GEOTECHNICAL ENGINEER SHALL BE CONSULTED FOR FURTHER PCC PAVEMENT SECTION ANALYSIS BASED ON TESTING ON THE "VERY LOW" TO "LOW" EXPANSIVE (EI ≤ 50) FILL SOILS OR LIME/CEMENT-TREATED SUBGRADE SOILS. EDGES OF CONCRETE PAVEMENTS WHICH ARE NOT ADJACENT TO EXISTING BUILDINGS, OR ARE ADJACENT TO PLANTER AREAS, BE DOWNTURNED A MINIMUM OF 12 INCHES OR BE CONSTRUCTED WITH CURBING TO PREVENT WATER INFILTRATION TO SUBGRADE SOILS.

27. THE UPPER ONE (1) FOOT OF EXPOSED SUBGRADE SOILS BENEATH CONCRETE PAVEMENTS SHALL BE FURTHER COMPACTED TO A MINIMUM 95 PERCENT RELATIVE COMPACTION WITH A MINIMUM MOISTURE CONTENT OF TWO (2) PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT. FINAL COMPACTION AND TESTING OF PAVEMENT SUBGRADE SHALL BE PERFORMED JUST PRIOR TO PLACEMENT OF AGGREGATE BASE AND/OR CONCRETING. OTHER PERTINENT SUBGRADE PREPARATION MEASURES STIPULATED IN THE "THICKNESS DESIGN FOR CONCRETE HIGHWAY AND STREET PAVEMENTS" (EB109.01P), 1984, OR REQUIRED BY THE JURISDICTIONAL MUNICIPAL AUTHORITIES SHALL BE FOLLOWED ACCORDINGLY.

SHEET INDEX:

SHEET NO.	SHEET TITLE
C-1.0	GENERAL NOTES, LEGENDS AND ABBREVIATIONS
C-1.1	EXISTING CONDITION
CD-1.0	SITE DEMOLITION PLAN
CD-1.1	SITE DEMOLITION PLAN
C-2.0	SITE CONTROL PLAN
C-2.1	SITE CONTROL PLAN
C-3.0	SITE GRADING PLAN
C-3.1	SITE GRADING PLAN
C-3.2	ENLARGED SITE GRADING PLAN
C-3.3	SITE GRADING SECTION
C-4.0	SITE UTILITY PLAN
C-4.1	SITE UTILITY PLAN
C-4.2	STORMDRAIN PROFILE
C-5.0	MISCELLANEOUS DETAILS
C-5.1	MISCELLANEOUS DETAILS
C-5.2	MISCELLANEOUS DETAILS
C-5.3	MISCELLANEOUS DETAILS
C-5.4	MISCELLANEOUS DETAILS
C-6.0	EROSION CONTROL PLAN
C-6.1	EROSION CONTROL PLAN
C-6.2	EROSION CONTROL DETAILS
C-7.0	OVEREXCAVATION PLAN
C-7.1	OVEREXCAVATION PLAN

ABBREVIATIONS:

AC	ASPHALT	EPB	ELECTRICAL PULLBOX	OAR	OWNER AUTHORIZED REPRESENTATIVE
APRN	APRON OF DRIVEWAY	EPIPE	ELECTRICAL PIPE	PA	PLANTER AREA
BFP	BACK FLOW PREVENTER	EPNL	ELECTRICAL PANEL	PB	PULLBOX
BLD	BUILDING	FDC	FIRE DEPARTMENT CONTROL	PCC	PORTLAND CEMENT CONCRETE
BRAMP	BOTTOM OF RAMP	FF	FINISHED FLOOR	PIV	POST INDICATOR VALVE
BS	BLUE STRIPE	FH	FIRE HYDRANT	PP	POWER POLE
BSW	BACK OF WALK	FL	FLOWLINE	RDRAIN	ROOF DRAIN
BWAL	BOTTOM OF WALL	FS	FINISHED SURFACE	RS	RED STRIPE
BX	BOTTOM OF CURB AT X	GB	GRADE BREAK	SCO	SEWER CLEANOUT
CAB	COARSE AGGREGATE BASE	GM	GAS METER	SDMH	STORM DRAIN MANHOLE
CB	CATCH BASIN	GPR	GROUND PENETRATING RADAR LOCATED LINE	SLPB	STREET LIGHT PULLBOX
CC OR CONC	CONCRETE	GRD	GROUND	SMH	SEWER MANHOLE
CDRAIN	CURB DRAIN	GSWC	GOLDEN STATE WATER COMPANY	SPB	SEWER PULLBOX
CLF	CHAIN LINK FENCE	ICV	IRRIGATION CONTROL VALVE	TC	TOP OF CURB
CO	CLEANOUT	INV	INVERT	TE	TOP OF ELEVATION
COMMPB	COMMUNICATION PULLBOX	IOR	INSPECTOR OF RECORD	TG	TOP OF GRADE
CPB	CABLE PULLBOX	EIPB	IRRIGATION PULLBOX	TH	THRESHOLD
CSLAB	CONCRETE SLAB	LP	LIGHT POLE	TRANSFRM	TRANSFORMER
DF	DRINKING FOUNTAIN	MH	MANHOLE	TRAMP	TOP OF RAMP
DI	DROP INLET	MOW	MOWSTRIP	TSPB	TRAFFIC SIGNAL PULLBOX
DS	DOWNSPOUT	NA	NO ACCESS	TTS	TOP OF STEP
EC	EDGE OF CONCRETE	NLP	NO LONGER PUSH	TWAL	TOP OF WALL
EG	EDGE OF GUTTER	NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	TX	TOP OF CURB AT X
ELEC	ELECTRICAL	NT	NO TONE	VIF	VERIFY IN FIELD
EOS	END OF SIGNAL			WIF	WROUGHT IRON FENCE
EP	EDGE OF PAVEMENT			WM	WATER METER
				WS	WHITE STRIPE
				WV	WATER VALVE
				YS	YELLOW STRIPE

LEGENDS:

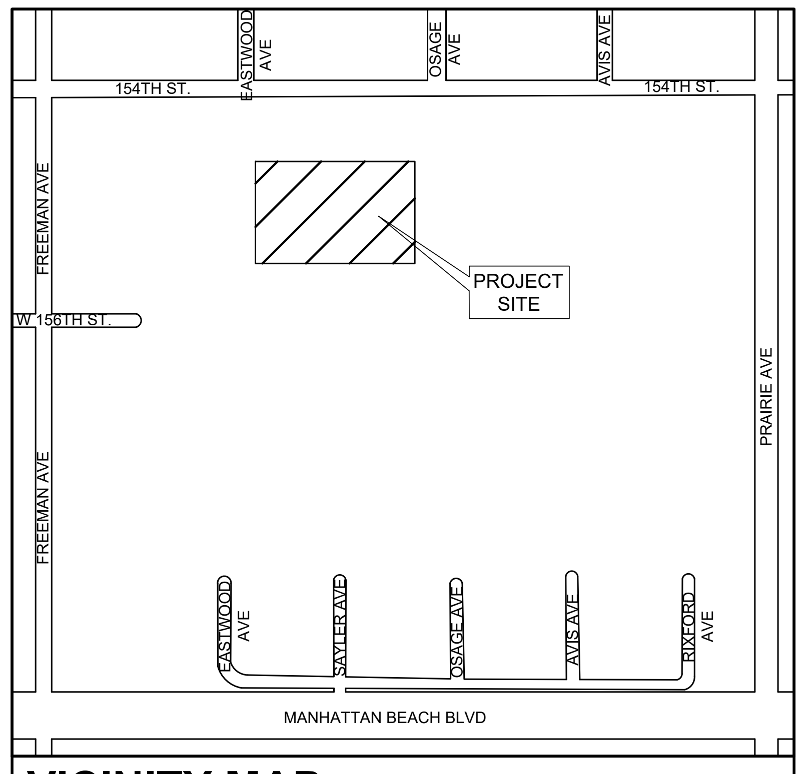
▩	3" THICK AC SURFACING OVER 12" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
▩	5" THICK AC SURFACING OVER 13.5" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
░	5.5" THICK CONCRETE PAVEMENT OVER 4" BASE PER DETAIL 2 ON SHEET C-5.0.
▒	7" THICK CONCRETE PAVEMENT OVER 6" BASE PER DETAIL 2 ON SHEET C-5.0.
▢	CONSTRUCT NEW BUILDING PER ARCHITECTURAL AND STRUCTURAL DRAWINGS .
▨	APPLY SLURRY COAT OVER EXISTING ASPHALT PAVEMENT PER SPECIFICATION.
░	INSTALL NEW DETECTABLE WARNING SURFACE PER DETAIL 8 ON SHEET C-5.0.
▩	NEW VEGETATED SWALE PER DETAIL 9 ON SHEET C-5.2.
▨	INSTALL NEW STRIPING PER ARCHITECTURAL DRAWINGS.
▨	CONSTRUCT NEW CONCRETE TRASH ENCLOSURE WALL AND FOOTING PER PER DETAIL 16 ON SHEET S1-3.
— - —	LIMIT OF WORK

AIR CONDITIONER	A/C
BASKET BOARD	B
BUILDING	▨
CAR STOP	▭
CHAIN LINK FENCE	—×—×—
COLUMN	⊠
CONCRETE	░
DRAINAGE INLET	▤
DRAINAGE INLET	⊜
DOWNSPOUT	◁
ELECTRICAL	Ⓔ
ELECTRICAL PANEL	EPNL
ELECTRICAL PULLBOX	EPB
FIRE DEPARTMENT CONTROL	⊗—⊗
FIRE HYDRANT	+O+
GAS METER	GM
GAS VALVE	G
GUIDE WIRE	⊂—
IRRIGATION CONTROL VALVE	ICV
IRRIGATION PULLBOX	IPB
LIGHT POLE	✹
LIGHT POLE	☼—●
PALM	✱
POST	⊗
POWER POLE	—●—
STREET LIGHT PULLBOX	SLPB
RAIL	o—o—
SEWER MANHOLE	Ⓢ
SEWER PULLBOX	SPB
SIGN	┤
STORM DRAIN MANHOLE	SD
SURVEY CONTROL POINT	△
TRAFFIC SIGNAL PULLBOX	TSPB
TREE	✿
DETATCHABLE WARNING SURFACE	░
VALVE	V
VAULT	VAULT
WALL	▨
WATER PULLBOX	WPB
WATER METER	WM
WATER VALVE	⋈
WOODEN OR WROUGHT IRON FENCE	—□—□—

REMOVAL LEGENDS:

▨	REMOVE EXISTING AC PAVEMENT AND BASE MATERIAL, FULL DEPTH.
░	REMOVE EXISTING CONCRETE PAVEMENT AND BASE MATERIAL, FULL DEPTH.
░	CLEAR, GRUB AND REMOVE EXISTING TURF/PLANTER/SHRUBS/EXPOSED SUBGRADE AREA. REMOVE EXISTING SHRUBS AND ROOTS IN THEIR ENTIRETY.
▧	REMOVE EXISTING BUILDING, FOOTINGS, SERVICE UTILITIES, AND ALL APPURTENANCES IN ITS ENTIRETY. CAP AND PLUG IN PLACE ALL AFFECTED EXISTING UTILITIES 5 FEET LATERALLY FROM BUILDING LINE AND/OR BELOW GRADE.
— — —	LIMIT OF REMOVAL
┼┼┼┼┼	DEMO UTILITY

TEL/COMM	——TEL——
ELECTRICAL	——E——
TRAFFIC SIGNAL	——TS——
SITE LIGHT	——SL——
WATER	——W——
SEWER	——SS——
STORM DRAIN	——SD——
GAS	——G——
POSSIBLE LINE LOCATION (UNK)	——U——
BACKFLOW	▭
OFFSET FROM REFERENCE	←→ 10'–8"
DEPTH FROM SURFACE	1'–6"
FIRE HYDRANT	●
METER/PULL BOX	▭
SITE LIGHT	☼
STREET LIGHT	⬡
VAULT	☐
VALVE	⊗



VICINITY MAP

NOT TO SCALE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL ● STRUCTURAL
Quality Service Commitment
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

VIRGILIO C. AGANAN
No. C36079
Exp. 6/30/26
CIVIL

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS
MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:

GENERAL NOTES, LEGENDS AND ABBREVIATIONS

SHEET NO:

C-1.0



TOPOGRAPHIC SURVEY NOTES:

SURVEYOR — DATE : 01-17-2023

FERRER & ASSOCIATES
LAND SURVEYING AND ENGINEERING
16388 COLIMA RD. #206 UNIT L HACIENDA HEIGHTS,
CA 91745 (626) 437-0038

THIS MAP REPRESENTS A TOPOGRAPHIC SURVEY OF VISIBLE FIELD CONDITIONS AT THE TIME OF THIS SURVEY. NO EASEMENTS, COVENANTS, CONDITIONS, OR RESTRICTIONS HAVE BEEN DETERMINED FOR THIS SURVEY.

BASIS OF BEARING

THE HORIZONTAL BASIS OF BEARING IS THE CENTERLINE OF 154TH STREET, BEING N 89°56'10" E AS SHOWN ON TRACT MAP NO. 21367, MAP BOOK 569, PAGES 20-22, RECORDED IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY.

BENCHMARK

THE VERTICAL BASIS IS A LOS ANGELES COUNTY PUBLIC WORKS BENCHMARK QY1102A, BEING A L&SPK IN N CB 6FT E/O BCR @ NE COR PRAIRIE AVE. AND MANHATTAN BEACH BL.

DATUM: NVD 1988 (2013 ADJUSTMENT)
ELEVATION = 50.435 FEET

CONTOUR INTERVAL = 0.50'

LEGAL DESCRIPTION

TRACT NO. 21367,
M.B. 569, PAGES 20-22

APN: 4076-022-900

UTILITY SURVEY NOTES:

SURVEYOR — DATE : 01-23-2023

ULTRA ENGINEERING
36806 PEBLEY CT. WINCHESTER,
CA 92596 (951) 223-3552

1. FACILITY (UTILITY LINES) SHALL BE LOCATED AND MARKED PRIOR TO EXCAVATION. CALL 811 FOR DIG ALERT.
2. CONTRACTOR SHALL HAND-EXPOSE TO A POINT OF NO CONFLICT 24" ON EITHER SIDE OF THE UNDERGROUND FACILITY, REGARDLESS OF THE ESTIMATED DEPTH.
3. DEPTHS SHOWN ARE APPROXIMATE. ESTIMATED DEPTHS ARE FROM THE GROUND SURFACE TO THE CENTER OF THE FACILITY, INVERT OF WASTE LINES, OR TO THE FACILITY TRACER WIRE. DEPTH ESTIMATES SHOULD BE USED WITH CAUTION AND MAY VARY ALONG THE LENGTH OF THE FACILITY.
4. THE SCOPE OF THIS SURVEY DOES NOT INCLUDE FACILITY SIZE OR NUMBER OF CONDUIT IN MULTIPLE CONDUIT RUNS. IRRIGATION LINES ARE NOT INCLUDED IN THIS SURVEY.
5. THE BACKGROUND SITE PLAN USED IN PREPARING THIS MAP WAS PREPARED BY OTHERS AND PROVIDED TO ULTRA ENGINEERING BY THE CLIENT. ULTRA ENGINEERING MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE PLAN.
6. IN THE EVENT THE INFORMATION SHOWN IN THIS PLAN VARIES FROM THE ACTUAL SITE CONDITIONS, ULTRA ENGINEERING SHALL BE NOTIFIED WITHIN 24 HOURS AFTER DISCOVERY OF THE CONFLICT.

ABBREVIATIONS:

AC	ASPHALT	EOS	END OF SIGNAL	PA	PLANTER AREA
APRN	APRON OF DRIVEWAY	EP	EDGE OF PAVEMENT	PB	PULLBOX
BFP	BACK FLOW PREVENTER	EPB	ELECTRICAL PULLBOX	PP	POWER POLE
BLD	BUILDING	EPIPE	ELECTRIC PIPE	RDRAIN	ROOF DRAIN
BRAMP	BOTTOM OF RAMP	EPNL	ELECTRIC PANEL	RS	RED STRIPE
BS	BLUE STRIPE	FDC	FIRE DEPARTMENT CONTROL	SCO	SEWER CLEANOUT
BSW	BACK OF WALK	FF	FINISHED FLOOR	SDMH	STORM DRAIN MANHOLE
BWAL	BOTTOM OF WALL	FH	FIRE HYDRANT	SLPB	STREET LIGHT PULLBOX
BX	BOTTOM OF CURB AT X	FL	FLOWLINE	SMH	SEWER MANHOLE
CB	CATCH BASIN	GB	GRADE BREAK	SPB	SEWER PULLBOX
CC OR CONC	CONCRETE	GM	GAS METER	TC	TOP O CURB
CDRAIN	CURB DRAIN	GPR	GROUND PENETRATING RADAR LOCATED LINE	TH	THRESHOLD
CLF	CHAIN LINK FENCE	GRD	GROUND	TRANSFRM	TRANSFORMER
CO	CLEANOUT	ICV	IRRIGATION CONTROL VALVE	TRAMP	TOP OF RAMP
COMMPB	COMMUNICATION PULLBOX	INV	INVERT	TSPB	TRAFFIC SIGNAL PULLBOX
CPB	CABLE PULLBOX	IPB	IRRIGATION PULLBOX	TTS	TOP OF STEP
CSLAB	CONCRETE SLAB	LP	LIGHT POLE	TWAL	TOP OF WALL
DF	DRINKING FOUNTAIN	MH	MANHOLE	TX	TOP OF CURB AT X
DI	DROP INLET	MOW	MOWSTRIP	WIF	WROUGHT IRON FENCE
DS	DOWNSPOUT	NA	NO ACCESS	WM	WATER METER
EC	EDGE OF CONCRETE	NLP	NO LONGER PUSH	WS	WHITE STRIPE
EG	EDGE OF GUTTER	NT	NO TONE	WV	WATER VALVE
ELEC	ELECTRICAL			YS	YELLOW STRIPE

LEGENDS:

AIR CONDITIONER (A/C)
BASKET BOARD
BUILDING
CAR STOP
CHAIN LINK FENCE
COLUMN
CONCRETE
DRAINAGE INLET
DRAINAGE INLET
DOWNSPOUT
ELECTRICAL (E)
ELECTRICAL PANEL (EPNL)
ELECTRICAL PULLBOX (EPB)
FIRE DEPARTMENT CONTROL
FIRE HYDRANT
GAS METER (GM)
GAS VALVE
GUIDE WIRE
IRRIGATION CONTROL VALVE (ICV)
IRRIGATION PULLBOX (IPB)
LIGHT POLE
LIGHT POLE

PALM
POST
POWER POLE
STREET LIGHT PULLBOX (SLPB)
RAIL
SEWER MANHOLE (S)
SEWER PULLBOX (SPB)
SIGN
STORM DRAIN MANHOLE (SD)
SURVEY CONTROL POINT
TRAFFIC SIGNAL PULLBOX (TSPB)
TREE (XXX)
DETECTABLE WARNING SURFACE
VALVE (V)
VAULT (VAULT)
WALL
WATER PULLBOX (WPB)
WATER METER (WM)
WATER VALVE
WOODEN OR WROUGHT IRON FENCE

TEL/COMM — TEL
ELECTRICAL — E
TRAFFIC SIGNAL — TS
SITE LIGHT — SL
WATER — W
SEWER — SS
STORM DRAIN — SD
GAS — G
POSSIBLE LINE LOCATION (UNK) — U
BACKFLOW
OFFSET FROM REFERENCE — 10'–8"
DEPTH FROM SURFACE — 1'–6"
FIRE HYDRANT
METER/PULL BOX

SITE LIGHT
STREET LIGHT
VAULT
VALVE

EXISTING CONDITION
30 15 0 30 60
GRAPHIC SCALE
SCALE: 1" = 30'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL • STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.726.6066
Fax. 323.726.6043

REGISTERED PROFESSIONAL ENGINEER
YIGUO C. XIAN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

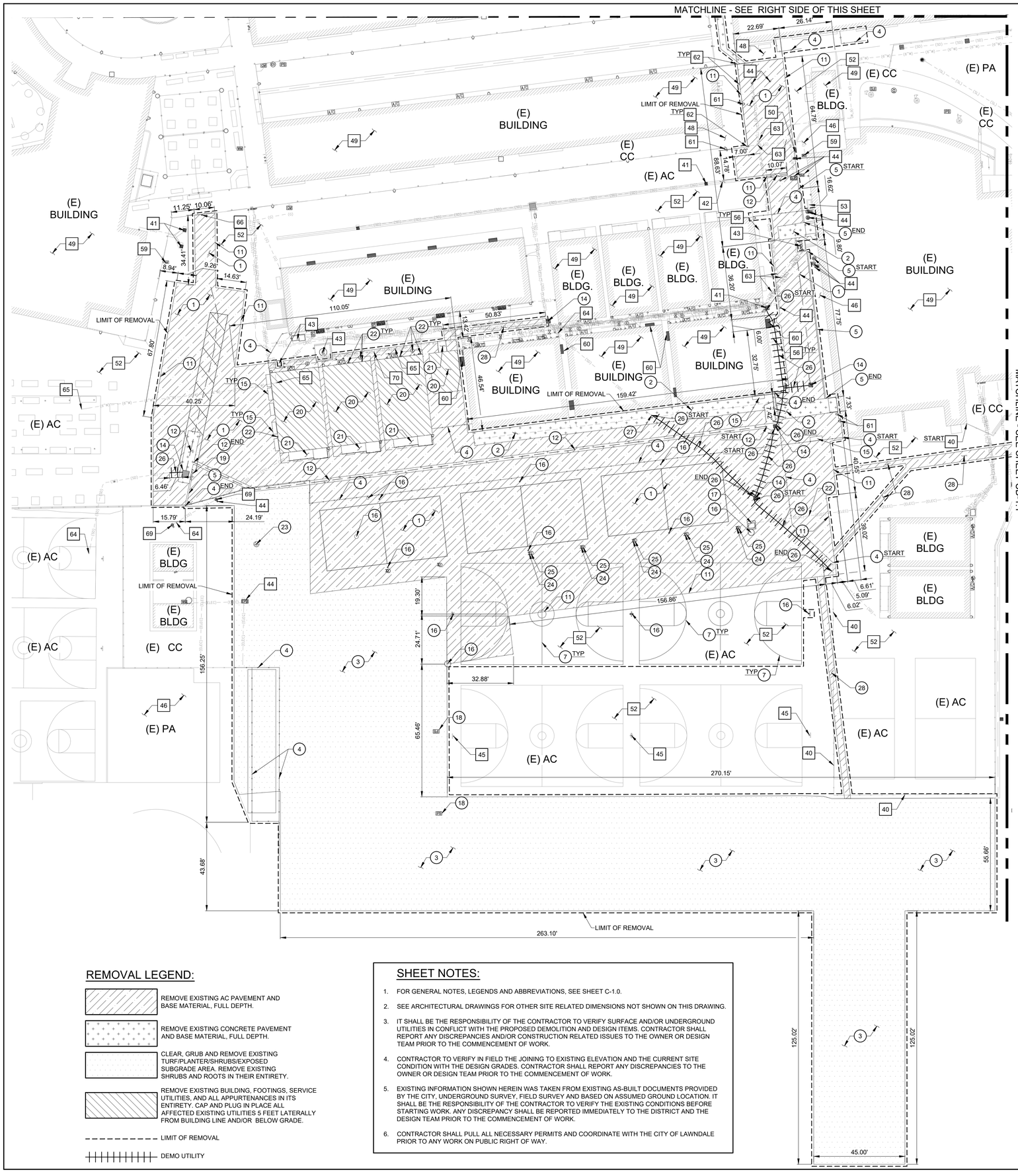
WILL ROGERS MIDDLE SCHOOL

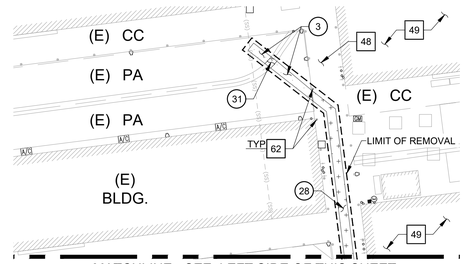
4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:
SHEET DESCRIPTION:
EXISTING CONDITION
SHEET NO:

C-1.1





REMOVAL NOTES:

1. REMOVE EXISTING AC PAVEMENT AND BASE MATERIAL, FULL DEPTH.
2. REMOVE EXISTING CONCRETE PAVEMENT AND BASE MATERIAL, FULL DEPTH.
3. CLEAR, GRUB AND REMOVE EXISTING TURF/PLANTER/EXPOSED SUBGRADE AREA. REMOVE EXISTING SHRUBS AND ROOTS.
4. REMOVE EXISTING CHAINLINK FENCE, GATE, FOOTINGS AND SILT FABRIC IN ITS ENTIRETY.
5. REMOVE EXISTING CURB IN ITS ENTIRETY.
7. REMOVE EXISTING STRIPING.
11. SAWCUT & JOIN TO MATCH EXISTING CONDITIONS.
12. REMOVE EXISTING CONCRETE V-GUTTER IN ITS ENTIRETY.
14. REMOVE EXISTING CATCH BASIN. VERIFY IN FIELD EXISTING PIPE PRIOR TO CAPPING AND PLUGGING. IF THE INLET AND OUTLET IS EXISTING AT CATCH BASIN, PROVIDE PIPE CONNECTION/FITTINGS FROM BOTH ENDS AND ENCASE WITH CONCRETE.
15. REMOVE EXISTING BENCH.
16. REMOVE EXISTING SPORT COURT ACCESSORIES.
17. REMOVE EXISTING ELECTRICAL CABINET IN ITS ENTIRETY.
18. REMOVE EXISTING IRRIGATION PULL BOX. COORDINATE WITH ARCHITECT DRAWINGS PRIOR TO REMOVAL AND DEMOLITION.
19. REMOVE EXISTING CONCRETE WALL AND FOOTING IN ITS ENTIRETY.
20. REMOVE EXISTING BUILDING, FOOTINGS, SERVICE UTILITIES, AND ALL APPURTENANCES IN ITS ENTIRETY. CAP AND PLUG IN PLACE ALL AFFECTED EXISTING UTILITIES 5 FEET LATERALLY FROM BUILDING LINE AND/OR BELOW GRADE.
21. REMOVE EXISTING RAMP, FOOTINGS AND HAND RAILS IN ITS ENTIRETY.
22. REMOVE EXISTING ELECTRICAL UTILITY COMPONENTS / LINES. COORDINATE WITH DISTRICT AND ELECTRICAL DRAWINGS PRIOR TO REMOVAL.
23. REMOVE EXISTING TREE IN ITS ENTIRETY. COORDINATE WITH ARCHITECTURAL DRAWINGS AND DISTRICT PRIOR TO REMOVAL.
24. REMOVE EXISTING WATER VALVE.
25. REMOVE EXISTING ELECTRICAL PULL BOX.
26. REMOVE EXISTING STORM DRAIN LINE AND ALL APPURTENANCES IN ITS ENTIRETY.
27. CAP AND PLUG UTILITY LINE. VERIFY IN FIELD EXACT LOCATION.
28. REMOVE AND REPLACE EXISTING PAVEMENT PER TRENCH SECTION DETAIL 1 ON SHEET C-5.2.
31. REMOVE AND REPLACE EXISTING CONCRETE V-GUTTER.

PROTECT-IN-PLACE NOTES:

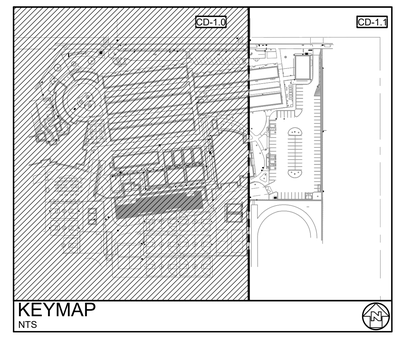
40. PROTECT IN PLACE EXISTING CHAINLINK FENCE AND GATE.
41. PROTECT IN PLACE CATCH BASIN / DRAIN INLET. ADJUST TO NEW DESIGN GRADES AS REQUIRED.
42. PROTECT IN PLACE EXISTING CONCRETE V-GUTTER.
43. PROTECT IN PLACE EXISTING ELECTRICAL PAD, EQUIPMENTS, CABINET, AND VAULTS. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXISTING ELECTRICAL ITEMS TO REMAIN.
44. PROTECT IN PLACE EXISTING UTILITY PULL BOX, MANHOLE, VALVES, AND CLEANOUTS. ADJUST TO NEW DESIGN GRADES AS REQUIRED.
45. PROTECT IN PLACE EXISTING BASKETBALL HOOP POST FOOTING.
46. PROTECT IN PLACE EXISTING PLANTER AREA.
48. PROTECT IN PLACE EXISTING ADJACENT CONCRETE WALKS.
49. PROTECT IN PLACE EXISTING BUILDING FOUNDATION AND ITS APPURTENANCES.
50. PROTECT IN PLACE EXISTING CONCRETE CURB IN ITS ENTIRETY.
52. PROTECT IN PLACE EXISTING AC PAVEMENT IN ITS ENTIRETY.
53. PROTECT IN PLACE EXISTING BACKFLOW PREVENTER.
56. PROTECT IN PLACE EXISTING CONCRETE BENCH.
59. PROTECT IN PLACE EXISTING GAS METER.
60. PROTECT IN PLACE EXISTING VENT.
61. PROTECT IN PLACE EXISTING ROOF DRAIN PIPE.
62. PROTECT IN PLACE EXISTING STEEL POST IN ITS ENTIRETY.
63. PROTECT IN PLACE EXISTING UNDERGROUND UTILITY LINE.
64. PROTECT IN PLACE EXISTING SANITARY SEWER LINE.
65. PROTECT IN PLACE EXISTING WATER LINE.
66. PROTECT IN PLACE EXISTING OUTLET PIPES.
69. PROTECT IN PLACE EXISTING SANITARY SEWER CLEANOUT.
70. PROTECT IN PLACE EXISTING ELECTRICAL LINE.

REMOVAL LEGEND:

- REMOVE EXISTING AC PAVEMENT AND BASE MATERIAL, FULL DEPTH.
- REMOVE EXISTING CONCRETE PAVEMENT AND BASE MATERIAL, FULL DEPTH.
- CLEAR, GRUB AND REMOVE EXISTING TURF/PLANTER/SHRUBS/EXPOSED SUBGRADE AREA. REMOVE EXISTING SHRUBS AND ROOTS IN THEIR ENTIRETY.
- REMOVE EXISTING BUILDING, FOOTINGS, SERVICE UTILITIES, AND ALL APPURTENANCES IN ITS ENTIRETY. CAP AND PLUG IN PLACE ALL AFFECTED EXISTING UTILITIES 5 FEET LATERALLY FROM BUILDING LINE AND/OR BELOW GRADE.
- LIMIT OF REMOVAL
- DEMO UTILITY

SHEET NOTES:

1. FOR GENERAL NOTES, LEGENDS AND ABBREVIATIONS, SEE SHEET C-1.0.
2. SEE ARCHITECTURAL DRAWINGS FOR OTHER SITE RELATED DIMENSIONS NOT SHOWN ON THIS DRAWING.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SURFACE AND/OR UNDERGROUND UTILITIES IN CONFLICT WITH THE PROPOSED DEMOLITION AND DESIGN ITEMS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND/OR CONSTRUCTION RELATED ISSUES TO THE OWNER OR DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
4. CONTRACTOR TO VERIFY IN FIELD THE JOINING TO EXISTING ELEVATION AND THE CURRENT SITE CONDITION WITH THE DESIGN GRADES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE OWNER OR DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
5. EXISTING INFORMATION SHOWN HEREIN WAS TAKEN FROM EXISTING AS-BUILT DOCUMENTS PROVIDED BY THE CITY, UNDERGROUND SURVEY, FIELD SURVEY AND BASED ON ASSUMED GROUND LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTING CONDITIONS BEFORE STARTING WORK. ANY DISCREPANCY SHALL BE REPORTED IMMEDIATELY TO THE DISTRICT AND THE DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
6. CONTRACTOR SHALL PULL ALL NECESSARY PERMITS AND COORDINATE WITH THE CITY OF LAWNDALE PRIOR TO ANY WORK ON PUBLIC RIGHT OF WAY.



SITE DEMOLITION PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL • STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. PARDEN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01

DATE:

DRAWN:

CHECK: Checker

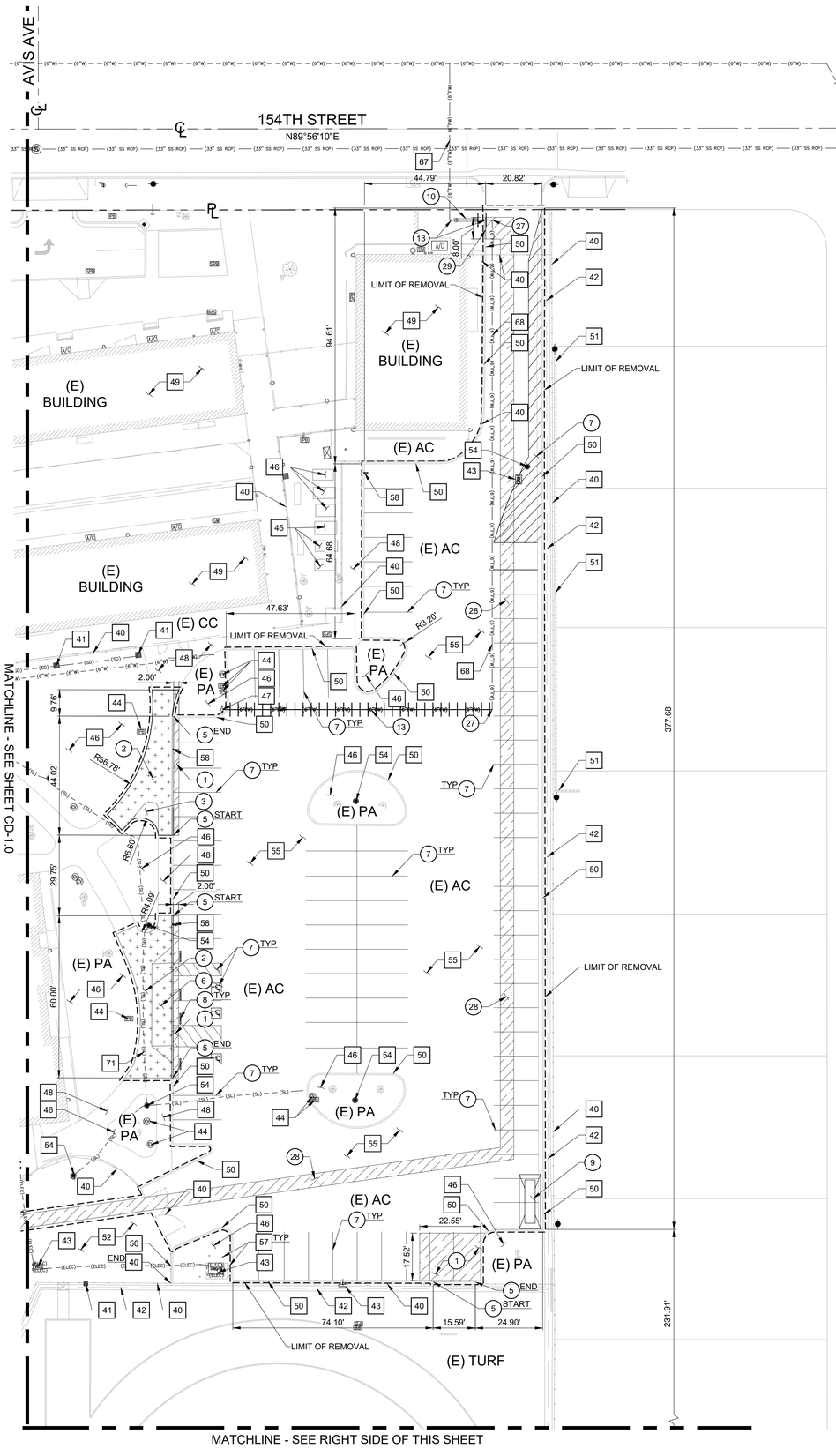
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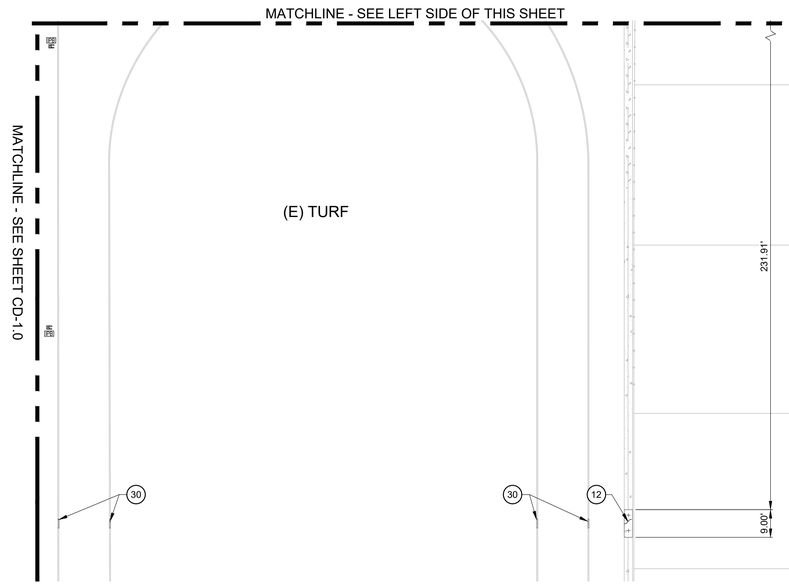
ENGINEER:

SHEET DESCRIPTION:
SITE DEMOLITION PLAN

SHEET NO:

CD-1.0





REMOVAL NOTES:

1. REMOVE EXISTING AC PAVEMENT AND BASE MATERIAL, FULL DEPTH.
2. REMOVE EXISTING CONCRETE PAVEMENT AND BASE MATERIAL, FULL DEPTH.
3. CLEAR, GRUB AND REMOVE EXISTING TURF/PLANTER/EXPOSED SUBGRADE AREA. REMOVE EXISTING SHRUBS AND ROOTS.
5. REMOVE EXISTING CURB IN ITS ENTIRETY.
6. REMOVE EXISTING CURB RAMP IN ITS ENTIRETY.
7. REMOVE EXISTING STRIPING.
8. REMOVE AND SALVAGE EXISTING WHEELSTOP.
9. REMOVE AND RELOCATE EXISTING CONTAINER.
10. REMOVE EXISTING BACKFLOW PREVENTER.
12. REMOVE EXISTING CONCRETE V-GUTTER IN ITS ENTIRETY.
13. REMOVE EXISTING FIRE WATER LINE AND ALL ITS APPURTENANCES IN ITS ENTIRETY.
27. CAP AND PLUG UTILITY LINE. VERIFY IN FIELD EXACT LOCATION.
28. REMOVE AND REPLACE EXISTING PAVEMENT PER TRENCH SECTION DETAIL 1 ON SHEET C-5.2.
29. REMOVE AND REPLACE EXISTING CONCRETE CURB.
30. REMOVE AND REPLACE EXISTING MOW STRIP.

REMOVAL LEGEND:

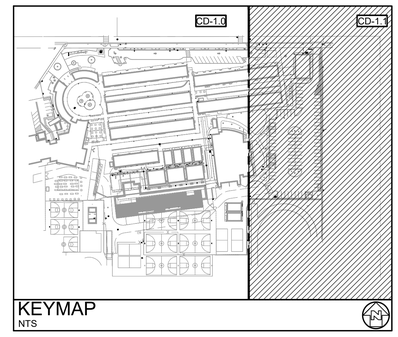
- REMOVE EXISTING AC PAVEMENT AND BASE MATERIAL, FULL DEPTH.
- REMOVE EXISTING CONCRETE PAVEMENT AND BASE MATERIAL, FULL DEPTH.
- CLEAR, GRUB AND REMOVE EXISTING TURF/PLANTER/SHRUBS/EXPOSED SUBGRADE AREA. REMOVE EXISTING SHRUBS AND ROOTS IN THEIR ENTIRETY.
- LIMIT OF REMOVAL
- DEMO UTILITY

PROTECT-IN-PLACE NOTES:

40. PROTECT IN PLACE EXISTING CHAINLINK FENCE AND GATE.
41. PROTECT IN PLACE CATCH BASIN / DRAIN INLET. ADJUST TO NEW DESIGN GRADES AS REQUIRED.
42. PROTECT IN PLACE EXISTING CONCRETE V-GUTTER.
43. PROTECT IN PLACE EXISTING ELECTRICAL PAD, EQUIPMENTS, CABINET, AND VAULTS. COORDINATE WITH ELECTRICAL DRAWINGS FOR EXISTING ELECTRICAL ITEMS TO REMAIN.
44. PROTECT IN PLACE EXISTING UTILITY PULL BOX, MANHOLE, VALVES, AND CLEANOUTS. ADJUST TO NEW DESIGN GRADES AS REQUIRED.
46. PROTECT IN PLACE EXISTING PLANTER AREA.
47. PROTECT IN PLACE EXISTING FIRE HYDRANT.
48. PROTECT IN PLACE EXISTING ADJACENT CONCRETE WALKS.
49. PROTECT IN PLACE EXISTING BUILDING FOUNDATION AND ITS APPURTENANCES.
50. PROTECT IN PLACE EXISTING CONCRETE CURB IN ITS ENTIRETY.
51. PROTECT IN PLACE EXISTING WALL IN ITS ENTIRETY.
52. PROTECT IN PLACE EXISTING AC PAVEMENT IN ITS ENTIRETY.
54. PROTECT IN PLACE EXISTING LIGHT POST, BASE AND FOUNDATION
55. PROTECT IN PLACE EXISTING ASPHALT, PREPARE SURFACE AND FILL CRACKS PER SPECIFICATION 320117.
57. PROTECT IN PLACE EXISTING GUARD POST / BOLLARD.
58. PROTECT IN PLACE EXISTING DRAIN PIPE AND CURB DRAIN.
67. PROTECT IN PLACE EXISTING WATER LATERAL. CONTRACTOR PULL NECESSARY PERMITS WITH THE WATER PURVEYOR PRIOR TO WORK TO BE DONE.
68. ABANDON EXISTING FIRE WATER LINE. REMOVE PORTION OF THE EXISTING FIRE WATER LINE THAT CONFLICTS WITH THE CONNECTION OF NEW FIRE WATER LINE TO THE EXISTING HYDRANT.
71. PROTECT IN PLACE EXISTING CONDUIT LINE.

SHEET NOTES:

1. FOR GENERAL NOTES, LEGENDS AND ABBREVIATIONS, SEE SHEET C-1.0.
2. SEE ARCHITECTURAL DRAWINGS FOR OTHER SITE RELATED DIMENSIONS NOT SHOWN ON THIS DRAWING.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SURFACE AND/OR UNDERGROUND UTILITIES IN CONFLICT WITH THE PROPOSED DEMOLITION AND DESIGN ITEMS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND/OR CONSTRUCTION RELATED ISSUES TO THE OWNER OR DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
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6. CONTRACTOR SHALL PULL ALL NECESSARY PERMITS AND COORDINATE WITH THE CITY OF LAWNDALE PRIOR TO ANY WORK ON PUBLIC RIGHT OF WAY.



KEYMAP
NTS

SITE DEMOLITION PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

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REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. PARAS
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01

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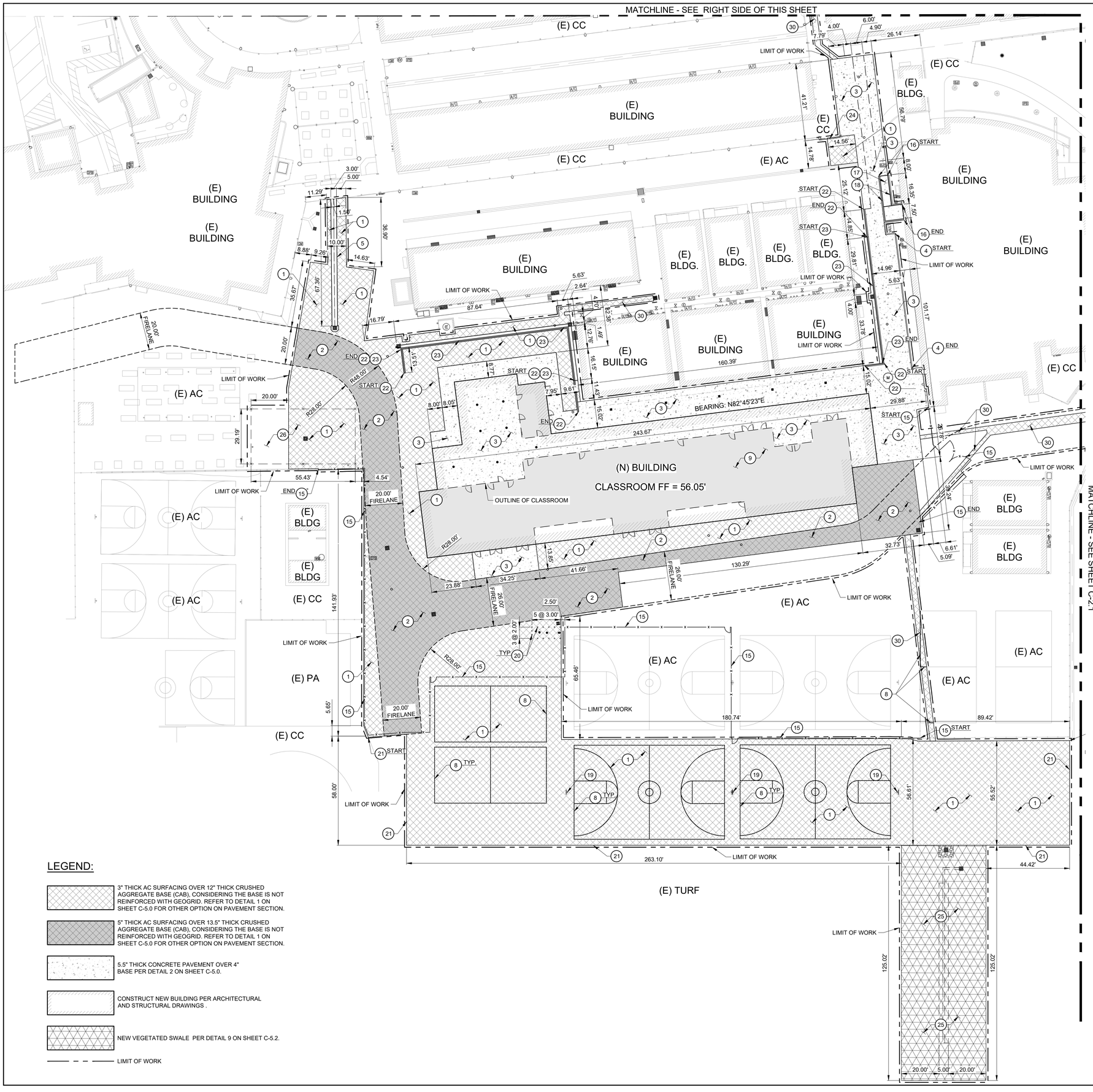
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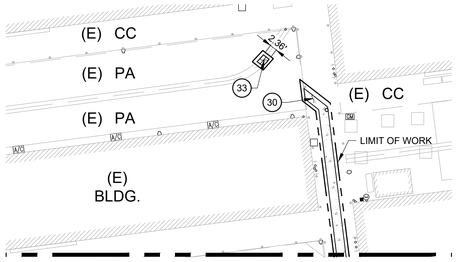
SHEET DESCRIPTION:

SITE DEMOLITION PLAN

SHEET NO:

CD-1.1





CONSTRUCTION NOTES:

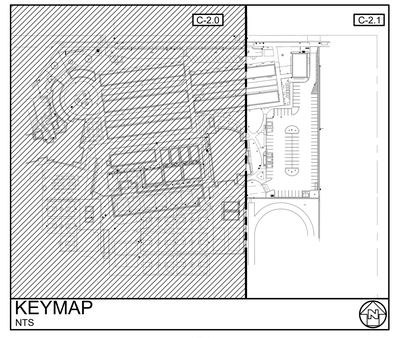
1. 3" THICK AC SURFACING OVER 12" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
2. 5" THICK AC SURFACING OVER 13.5" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
3. 5.5" THICK CONCRETE PAVEMENT OVER 4" BASE PER DETAIL 2 ON SHEET C-5.0.
4. CONSTRUCT CONCRETE CURB PER DETAIL 5 ON SHEET C-5.0.
5. CONSTRUCT CONCRETE V-GUTTER PER DETAIL 7 ON SHEET C-5.0.
8. INSTALL NEW STRIPING PER DETAIL 9 ON SHEET A004.
9. CONSTRUCT NEW BUILDING PER ARCHITECTURAL AND STRUCTURAL DRAWINGS.
15. INSTALL FENCE/ GATE PER DETAIL 2 AND 4 ON SHEET A005.
16. CONSTRUCT CONCRETE GRAVITY WALL DETAIL 6 ON SHEET C-5.0.
17. CONSTRUCT NEW ACCESSIBLE CONCRETE RAMP PER DETAIL 1 ON SHEET C-5.1.
18. INSTALL RAMP HANDRAIL PER DETAIL 7 ON SHEET A006.
19. CONSTRUCT BASKETBALL HOOP POST PER DETAIL 2 ON SHEET A008.
20. INSTALL DETERRENT BOLLARD PER DETAIL 7 ON SHEET C-5.2.
21. INSTALL AC PAVEMENT EDGING PER DETAIL 6 ON SHEET C-5.2.
22. CONSTRUCT CONCRETE CURB WITH GUARDRAIL PER DETAIL 3 ON SHEET C-5.1.
23. CONSTRUCT CONCRETE CURB & GUTTER WITH GUARDRAIL PER DETAIL 2 ON SHEET C-5.1.
24. INSTALL GUARDRAIL PER DETAIL 4 ON SHEET C-5.1.
25. NEW VEGETATED SWALE PER DETAIL 9 ON SHEET C-5.2.
26. NEW SOLAR SHADE STRUCTURE PER DETAIL 11 ON SHEET A005.
30. CONSTRUCT NEW PAVEMENT TO MATCH EXISTING PAVEMENT PER TRENCH SECTION DETAIL 1 ON SHEET C-5.2.
33. CONSTRUCT NEW CONCRETE V-GUTTER TO MATCH EXISTING CONCRETE GUTTER.

SHEET NOTES:

1. FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET C-1.0.
2. REFER TO ARCHITECTURAL DRAWINGS FOR OTHER SITE DIMENSIONS AND IMPROVEMENTS NOT SHOWN ON THIS DRAWING.

LEGEND:

- 3" THICK AC SURFACING OVER 12" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
- 5" THICK AC SURFACING OVER 13.5" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
- 5.5" THICK CONCRETE PAVEMENT OVER 4" BASE PER DETAIL 2 ON SHEET C-5.0.
- CONSTRUCT NEW BUILDING PER ARCHITECTURAL AND STRUCTURAL DRAWINGS .
- NEW VEGETATED SWALE PER DETAIL 9 ON SHEET C-5.2.
- LIMIT OF WORK



SITE CONTROL PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

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westbergwhite
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IRVINE, CA 92618
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CONSULTANT:

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REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. PARAS
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

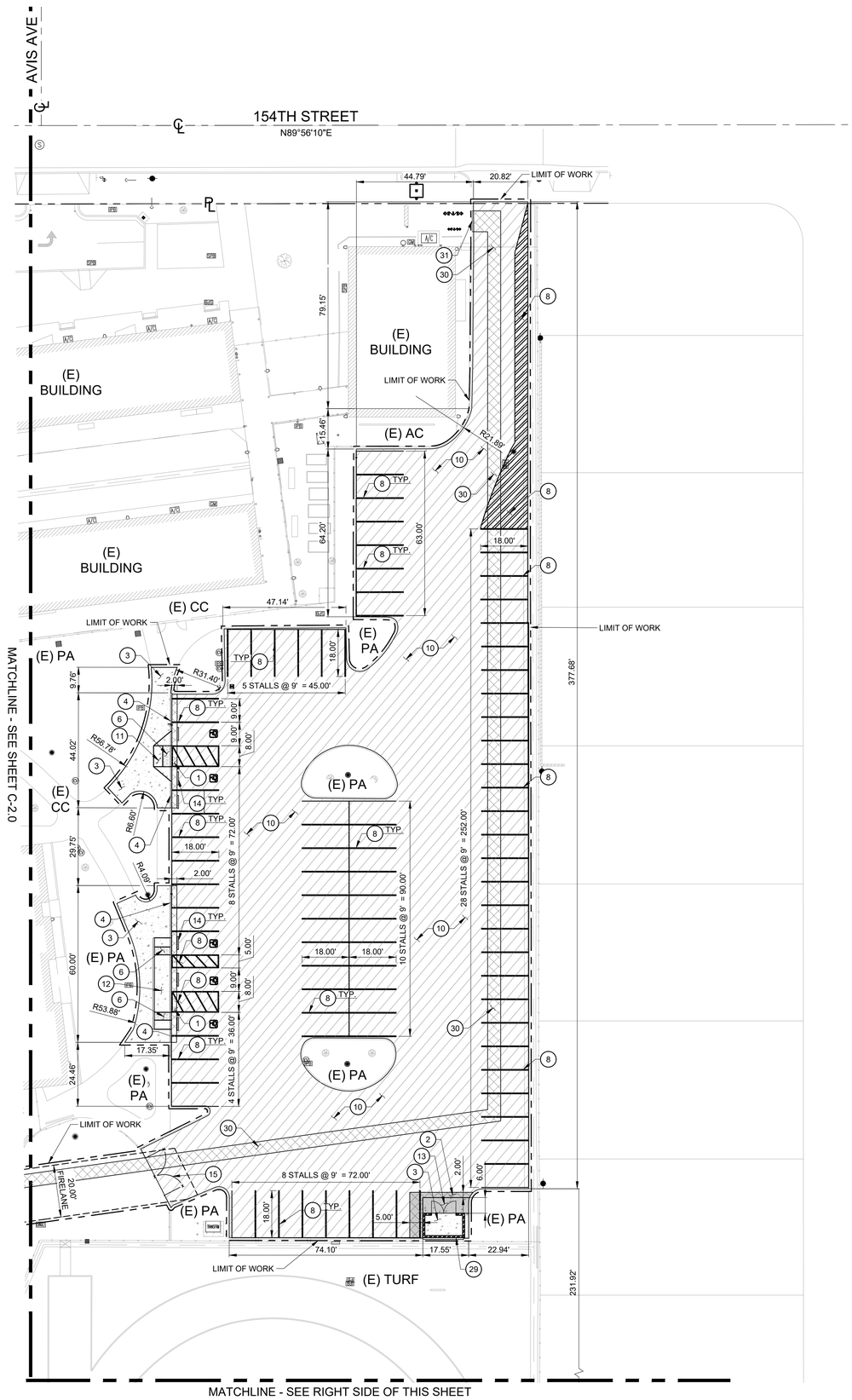
4110 W 154TH ST.
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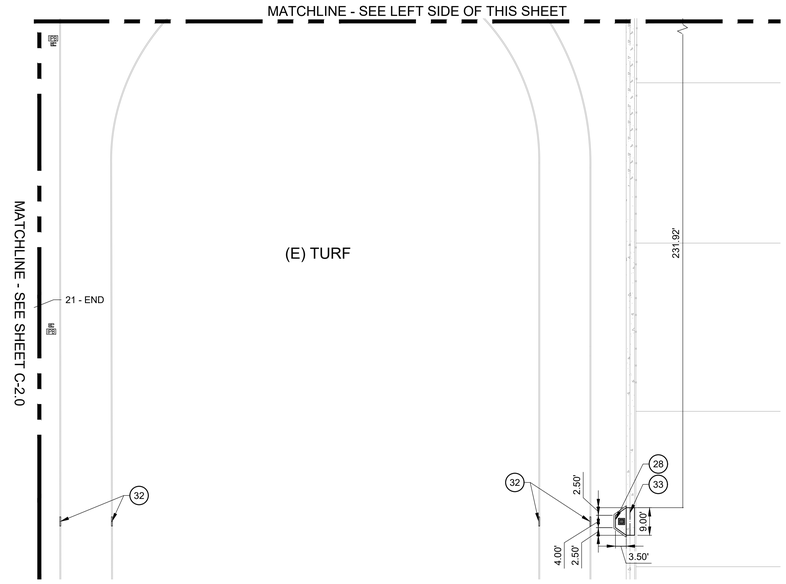
No.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SITE CONTROL PLAN

SHEET NO:
C-2.0





CONSTRUCTION NOTES:

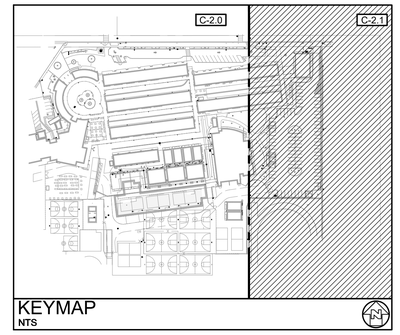
1. 3" THICK AC SURFACING OVER 12" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
2. 5" THICK AC SURFACING OVER 13.5" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
3. 5.5" THICK CONCRETE PAVEMENT OVER 4" BASE PER DETAIL 2 ON SHEET C-5.0.
4. CONSTRUCT CONCRETE CURB PER DETAIL 5 ON SHEET C-5.0.
6. INSTALL NEW DETECTABLE WARNING SURFACE PER DETAIL 8 ON SHEET C-5.0.
8. INSTALL NEW STRIPING PER DETAIL 9 ON SHEET A004.
10. APPLY SLURRY COAT OVER EXISTING ASPHALT PAVEMENT PER SPECIFICATION.
11. CONSTRUCT CURB RAMP PER DETAIL 9 ON SHEET C-5.0.
12. CONSTRUCT PARALLEL CURB RAMP PER DETAIL 10 ON SHEET C-5.0.
13. 7" THICK CONCRETE PAVEMENT OVER 6" BASE PER DETAIL 2 ON SHEET C-5.0.
14. CONCRETE WHEEL STOPS PER DETAIL 12 ON SHEET A004.
15. INSTALL FENCE/ GATE PER DETAIL 2 AND 4 ON SHEET A005.
28. CONSTRUCT HEADWALL STRUCTURE PER DETAIL 2 ON SHEET C-5.3.
29. CONSTRUCT CONCRETE TRASH ENCLOSURE PER DETAIL 1 ON SHEET A007, AND NEW TRASH ENCLOSURE WALL AND FOOTING PER DETAIL 16 ON SHEET S1-3.
30. CONSTRUCT NEW PAVEMENT TO MATCH EXISTING PAVEMENT PER TRENCH SECTION DETAIL 1 ON SHEET C-5.2.
31. CONSTRUCT NEW CONCRETE CURB TO MATCH EXISTING CONCRETE CURB.
32. CONSTRUCT NEW CONCRETE MOW STRIP TO MATCH EXISTING CONCRETE MOW STRIP.
33. CONSTRUCT NEW CONCRETE V-GUTTER TO MATCH EXISTING CONCRETE GUTTER.

SHEET NOTES:

1. FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS, SEE SHEET C-1.0.
2. REFER TO ARCHITECTURAL DRAWINGS FOR OTHER SITE DIMENSIONS AND IMPROVEMENTS NOT SHOWN ON THIS DRAWING.

LEGEND:

- 3" THICK AC SURFACING OVER 12" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
- 5" THICK AC SURFACING OVER 13.5" THICK CRUSHED AGGREGATE BASE (CAB), CONSIDERING THE BASE IS NOT REINFORCED WITH GEOGRID. REFER TO DETAIL 1 ON SHEET C-5.0 FOR OTHER OPTION ON PAVEMENT SECTION.
- 5.5" THICK CONCRETE PAVEMENT OVER 4" BASE PER DETAIL 2 ON SHEET C-5.0.
- 7" THICK CONCRETE PAVEMENT OVER 6" BASE PER DETAIL 2 ON SHEET C-5.0.
- APPLY SLURRY COAT OVER EXISTING ASPHALT PAVEMENT PER SPECIFICATION.
- INSTALL NEW DETECTABLE WARNING SURFACE PER DETAIL 8 ON SHEET C-5.0.
- INSTALL NEW STRIPING PER ARCHITECTURAL DRAWINGS.
- CONSTRUCT NEW CONCRETE TRASH ENCLOSURE WALL AND FOOTING PER DETAIL 16 ON SHEET S1-3.
- LIMIT OF WORK





SITE CONTROL PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

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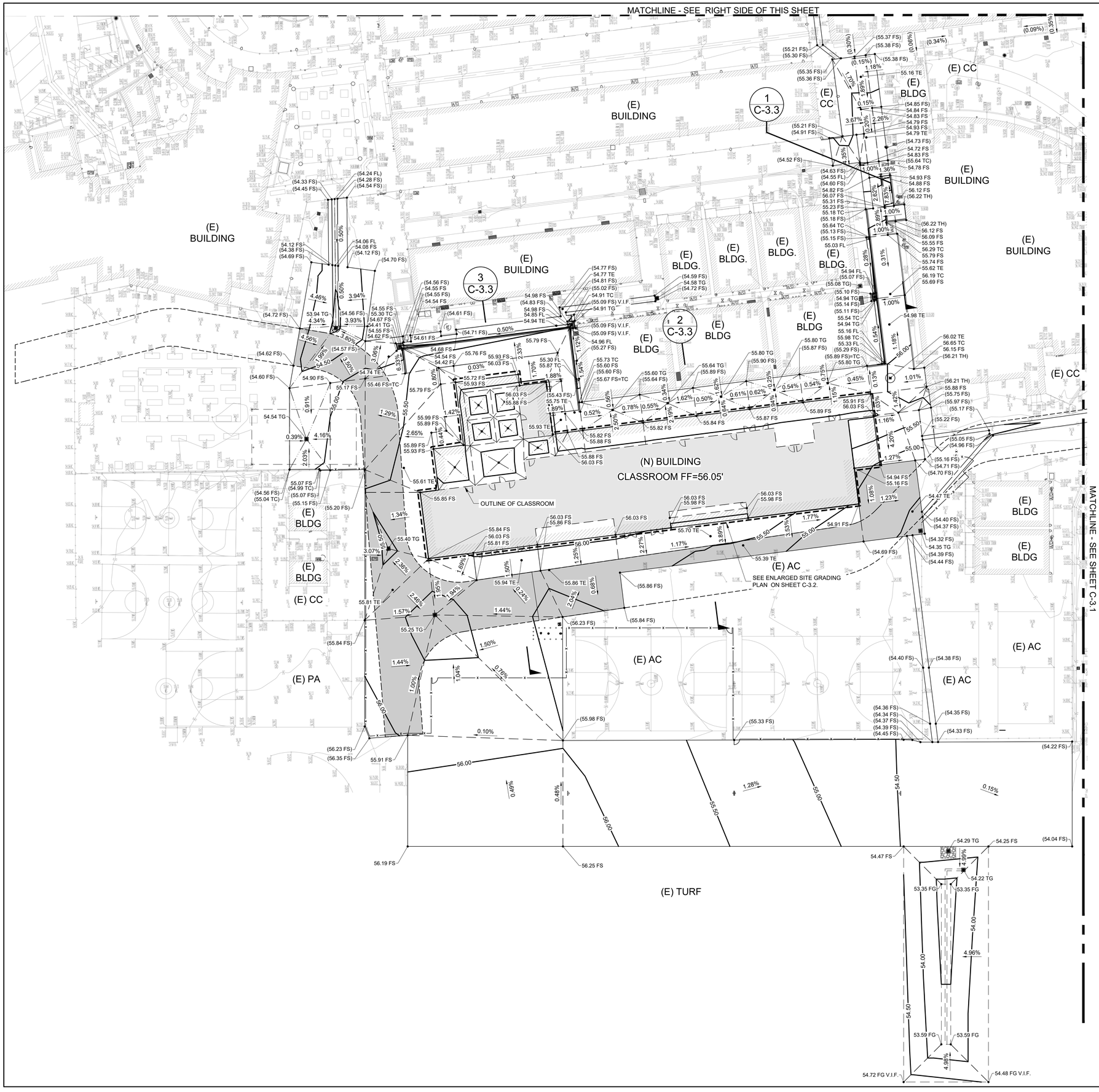
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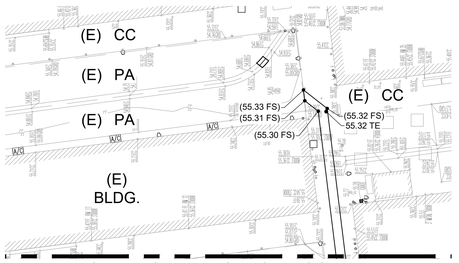
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No.	Rev. Date	Description

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DRAWN:
CHECK: Checker
ARCHITECT: PDW
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SHEET DESCRIPTION: SITE CONTROL PLAN
SHEET NO: **C-2.1**





ESTIMATED EARTHWORK QUANTITY

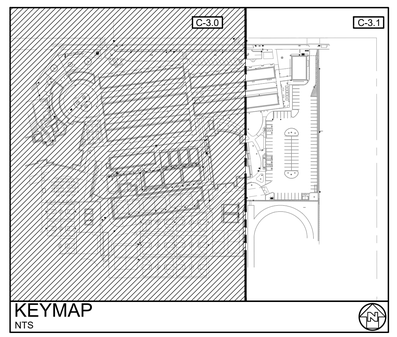
ESTIMATED CUT = 369.00 CY
ESTIMATED FILL = 303.00 CY
NET VOLUME = 66.00 CY (FILL)

NOTES:

1. THE ESTIMATED QUANTITIES PROVIDED ABOVE ARE FOR REFERENCE ONLY TO BE USED FOR JURISDICTIONAL PLAN CHECKING AND PERMITTING PURPOSES ONLY.
2. ESTIMATED EARTHWORK ABOVE IS BASED ON DESIGN FINISH GRADES TO EXISTING GRADES IN TOPOGRAPHICAL SURVEY. THE ESTIMATED EARTHWORK DOES NOT CONSIDER THE THICKNESS OF EACH PAVEMENT MATERIAL, FOUNDATION AND SLAB ON GRADE VOLUMES, THE REMOVAL OF ANY UNSUITABLE MATERIAL, AND THE REMOVAL OF EXISTING BASEMENTS, PITS, VAULTS, TOP SOIL OR VEGETATION.
3. THE ESTIMATED EARTHWORK QUANTITIES DO NOT INCLUDE SHRINKAGE FACTORS DUE TO COMPACTION OR ANY OVER EXCAVATION QUANTITIES.
4. CONTRACTOR SHALL PERFORM DETAILED QUANTITY TAKE-OFF BASED ON THE EXISTING AND NEW ELEVATIONS PROVIDED ON THESE DOCUMENTS AND INFORMATION PROVIDED IN THE SPECIFICATIONS AND GEOTECHNICAL REPORTS NECESSARY FOR HIS BID AND WORK. VCA IS NOT RESPONSIBLE AND LIABLE FOR THE CONTRACTOR'S EARTHWORK CALCULATIONS.
5. ESTIMATED EARTHWORK QUANTITIES ABOVE ASSUME THAT ALL ON-SITE MATERIALS ARE SUITABLE FOR BACKFILLING. HOWEVER, ACTUAL EXISTING ON-SITE MATERIALS AND IMPORTED MATERIALS MUST FIRST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION, REMOVAL, OR REPLACEMENT.
6. THE ESTIMATED EARTHWORK QUANTITIES DO NOT INCLUDE OVEREXCAVATION.
7. CONTRACTOR TO VERIFY IN FIELD THE JOINING TO EXISTING ELEVATION AND THE CURRENT SITE CONDITION WITH THE DESIGN GRADES. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE OWNER OR DEIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.

SHEET NOTES:

1. ALL GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTIONAL AGENCIES.
2. PROVIDE A HAUL ROUTE AS REQUIRED BY THE JURISDICTIONAL AGENCIES.
3. NO GRADING WORK SHALL BE PERFORMED AT ANY TIME WITHOUT AN EROSION SYSTEM APPROVED BY THE ENGINEER AND THE JURISDICTIONAL DISTRICT.
4. CONSTRUCT DESIGN GRADES SHOWN ON PLAN. CONSTRUCT STRAIGHT GRADES BETWEEN INDICATED ELEVATIONS UNLESS INTERRUPTED BY A GRADE CHANGE LINE. ANY DEVIATIONS FROM THE GRADING PLAN MUST HAVE PRIOR APPROVAL OF THE ARCHITECT.
5. THE CONTRACTOR SHALL NOT BEGIN THE PAVING OPERATION UNTIL THE SUB GRADE HAS BEEN APPROVED BY THE DISTRICT RETAINED GEOTECHNICAL ENGINEER AND IOR.
6. THE CONTRACTOR IS ADVISED THAT THE APPROVAL OF THIS PLAN DOES NOT WAIVE THE REQUIREMENTS FOR EXCAVATIONS CONTAINED IN THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE DIVISION OF INDUSTRIAL SAFETY.
7. NO FILL TO BE PLACED, UNTIL THE GEOTECHNICAL ENGINEER OR IOR HAS INSPECTED AND APPROVED THE BOTTOM OF EXCAVATION.
8. ALL FILL OR BACK FILL SHALL BE COMPACTED BY MECHANICAL MEANS TO A MINIMUM 90% RELATIVE COMPACTION AS DETERMINED BY THE ASTM D1557. ALL FILL INSTALLATION SHALL REQUIRE CERTIFICATION BY THE GEOTECHNICAL ENGINEER PRIOR TO FOUNDATION INSTALLATION.



SITE GRADING PLAN

20 10 0 20 40
GRAPHIC SCALE
SCALE: 1" = 20'

STATE:

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APP: 03-123867 INC:
REVIEWED FOR
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DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:
VCA ENGINEERS INC
CIVIL STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

REGISTERED PROFESSIONAL ENGINEER
VIGIL IO C. AGUAN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

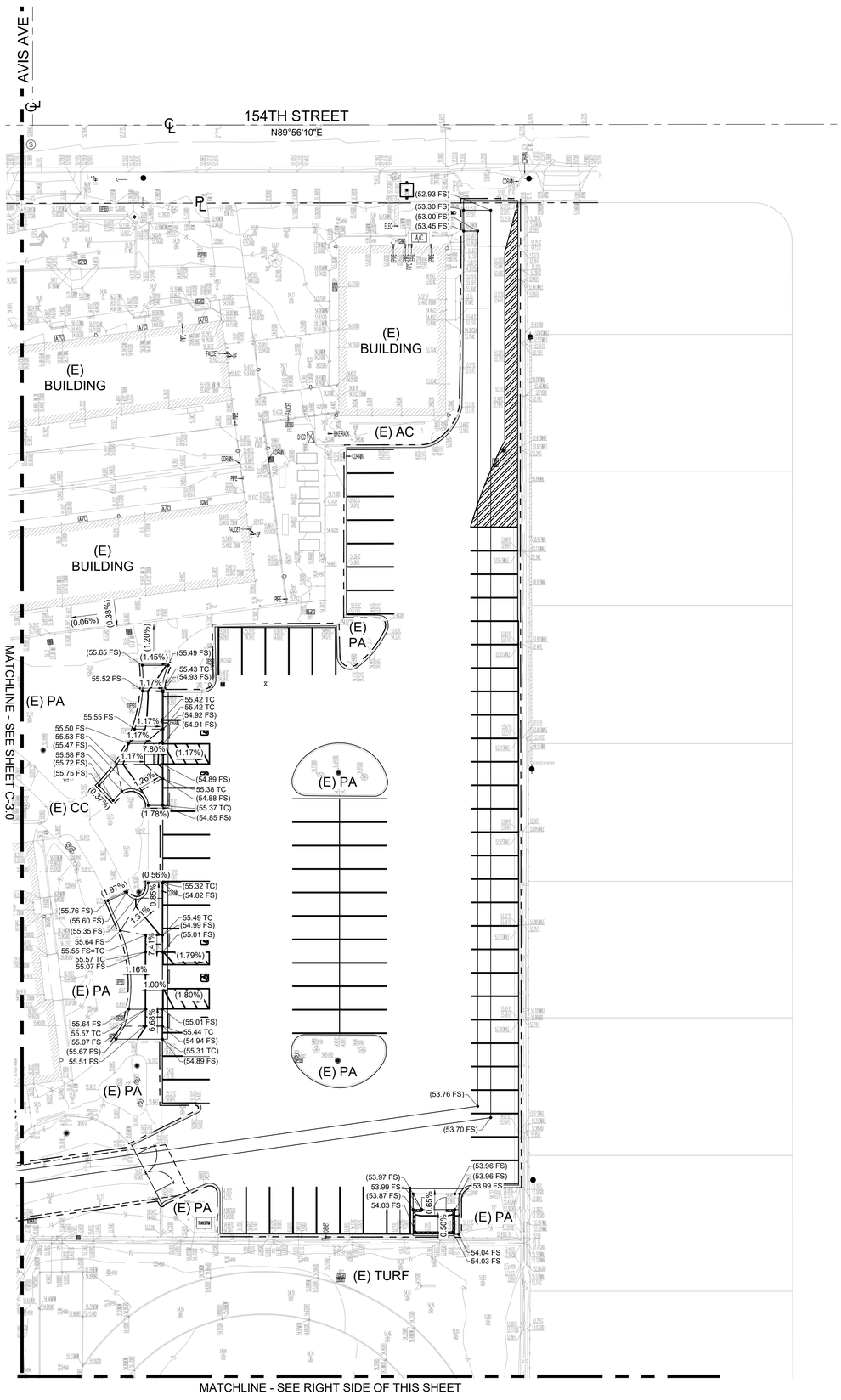
WILL ROGERS MIDDLE SCHOOL

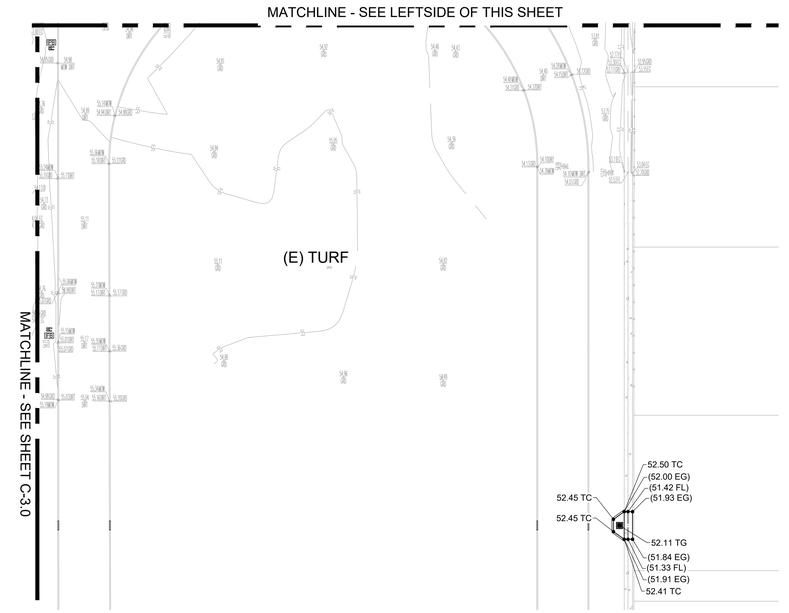
4110 W 154TH ST.
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SHEET NO:

C-3.0





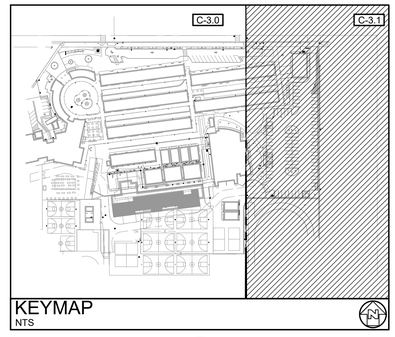
ESTIMATED EARTHWORK QUANTITY

ESTIMATED CUT	=	369.00 CY
ESTIMATED FILL	=	303.00 CY
NET VOLUME	=	66.00 CY (FILL)

1. THE ESTIMATED QUANTITIES PROVIDED ABOVE ARE FOR REFERENCE ONLY TO BE USED FOR JURISDICTIONAL PLAN CHECKING AND PERMITTING PURPOSES ONLY.
2. ESTIMATED EARTHWORK ABOVE IS BASED ON DESIGN FINISH GRADES TO EXISTING GRADES IN TOPOGRAPHICAL SURVEY. THE ESTIMATED EARTHWORK DOES NOT CONSIDER THE THICKNESS OF EACH PAVEMENT MATERIAL, FOUNDATION AND SLAB ON GRADE VOLUMES, THE REMOVAL OF ANY UNSUITABLE MATERIAL, AND THE REMOVAL OF EXISTING BASEMENTS, PITS, VAULTS, TOP SOIL OR VEGETATION.
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KEYMAP
NTS

SITE GRADING PLAN

20 10 0 20 40

GRAPHIC SCALE
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REGISTERED PROFESSIONAL ENGINEER
VIRGIL I. O. C. ANDERSEN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

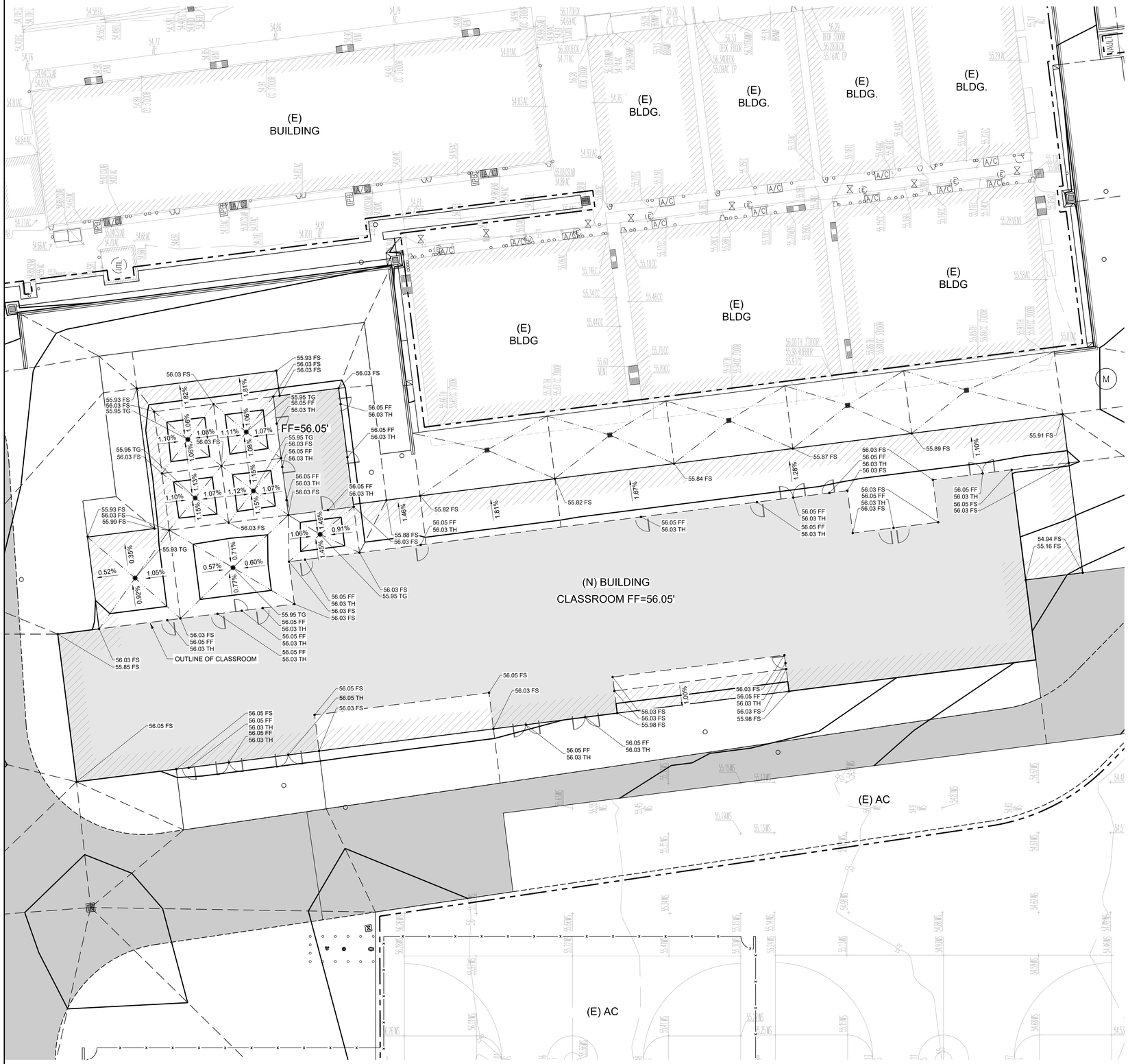
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ENLARGED SITE GRADING PLAN

10 5 0 10 20

GRAPHIC SCALE
SCALE: 1" = 10'

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westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

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CIVIL STRUCTURAL
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REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. ADAN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

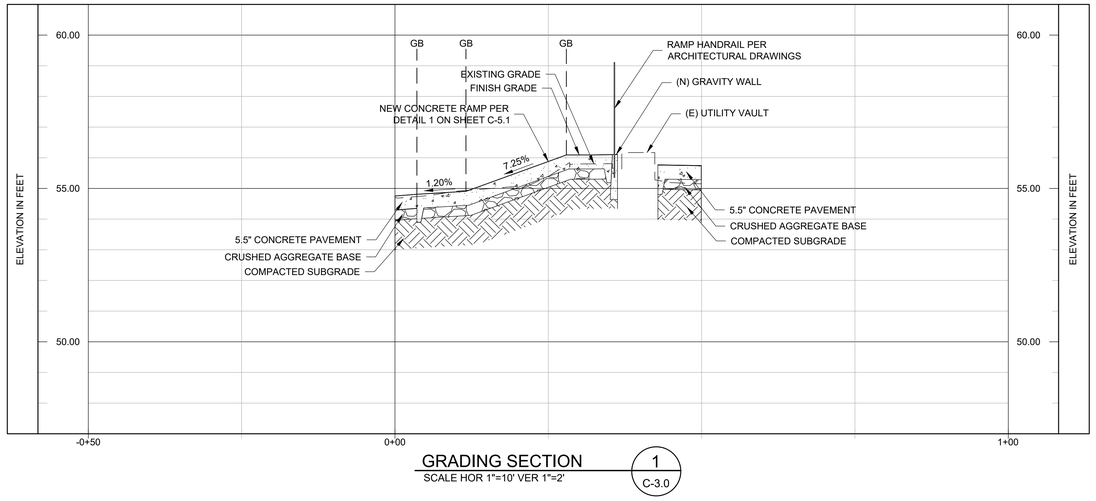
WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
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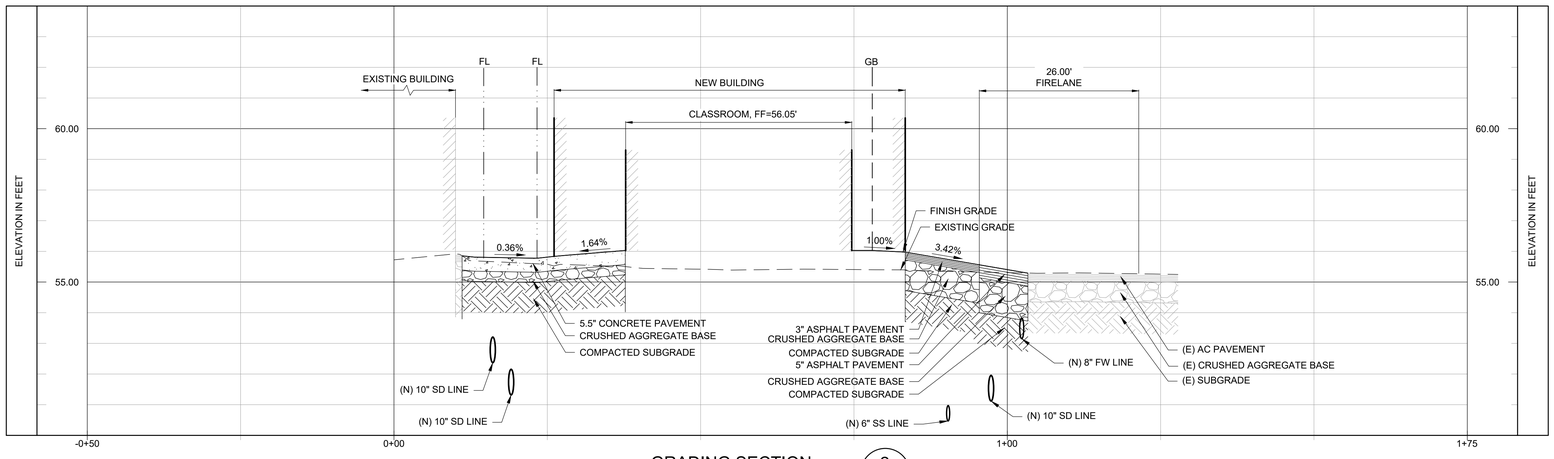
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ENLARGED SITE GRADING PLAN
SHEET NO:

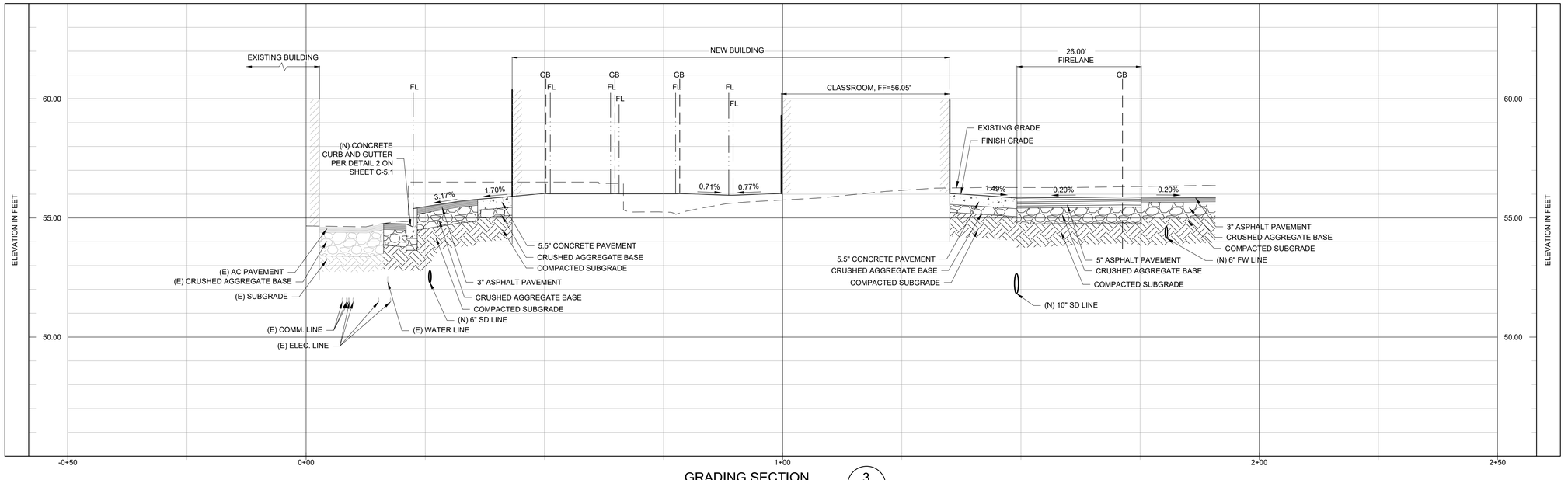
C-3.2



GRADING SECTION (1 / C-3.0)
SCALE HOR 1"=10' VER 1"=2'



GRADING SECTION (2 / C-3.0)
SCALE HOR 1"=10' VER 1"=2'



GRADING SECTION (3 / C-3.0)
SCALE HOR 1"=10' VER 1"=2'

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VIRGIL I. O. CARLSON
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

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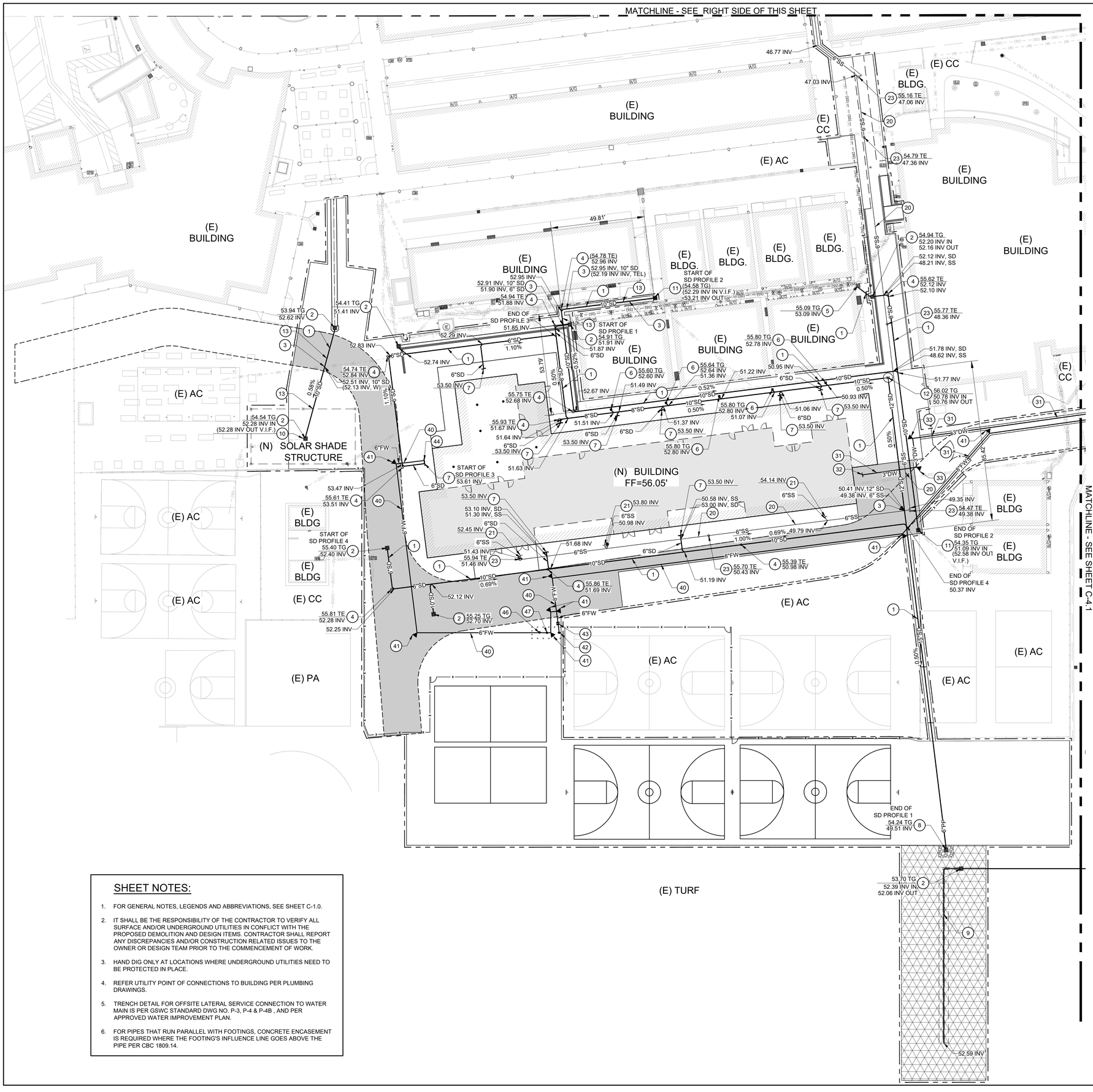
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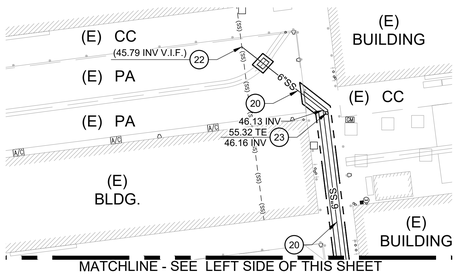
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SHEET DESCRIPTION:
SITE GRADING SECTION

SHEET NO:
C-3.3





STORM DRAIN:

1. INSTALL PVC SDR-35 STORM DRAIN LINE, SEE PLAN FOR SIZES. FOR TRENCH SECTION REFER TO DETAIL 1 ON SHEET C-5.2.
2. INSTALL 24"X24" CATCH BASIN PER DETAIL 6 ON SHEET C-5.1.
3. INSTALL FELT PAD PER DETAIL 4 ON SHEET C-5.3 FOR CROSSING UTILITIES.
4. INSTALL CLEANOUT PER DETAIL 5 ON SHEET C-5.1.
5. CONNECT TO EXISTING CATCH BASIN. VERIFY IN FIELD EXACT LOCATION, INVERT AND DEPTH PRIOR TO CONSTRUCTION.
6. CONNECT 12"X12" CATCH BASIN PER DETAIL 6 ON SHEET C-5.1.
7. CONNECT TO BUILDING ROOF DRAIN CONNECTION. PROVIDE REDUCING FITTINGS AND COUPLINGS AS NEEDED. FOR CONTINUATION, SEE PLUMBING PLANS.
8. INSTALL 24"X24" BUBBLER CATCH BASIN PER DETAIL 10 ON SHEET C-5.2. SURROUND WITH 3"-5" COBBLESTONE EMBEDDED IN 4" THICK CONCRETE WITHIN 3 FT OF THE CATCH BASIN'S SIDE ADJACENT TO SWALE'S SLOPE.
9. INSTALL PVC 6" SDR-35 PERFORATED PIPE PER DETAIL 9 ON SHEET C-5.2.
10. CONNECT EXISTING STORM DRAIN PIPE TO NEW CATCH BASIN. IF REQUIRED, PROVIDE NEW PIPE EXTENSION TO MATCH EXISTING PIPE SIZE. VERIFY IN FIELD THAT THE OUTLET INVERT LEVEL IS LOWER THAN INLET INVERT LEVEL.
11. INSTALL NEW BUBBLER CATCH BASIN PER DETAIL 10 ON SHEET C-5.2.
12. INSTALL NEW MANHOLE PER DETAIL 1 ON SHEET C-5.4.
13. INSTALL CONCRETE ENCASEMENT AROUND PIPE FOR PIPES WITH COVER LESS THAN 18" FROM FINISH SURFACE, PER DETAIL 5 ON SHEET C-5.3.

SANITARY SEWER:

20. INSTALL PVC SCHEDULE 40 DWV SANITARY SEWER LINE, SEE PLAN FOR SIZES. FOR TRENCH SECTION REFER TO DETAIL 1 ON SHEET C-5.2.
21. CONNECT TO BUILDING SANITARY SEWER LINE. COORDINATE AND MATCH LOCATION WITH THE BUILDING PLUMBING DRAWINGS. PROVIDE A REDUCING FITTING AS APPLICABLE.
22. CONNECT TO EXISTING ONSITE SEWER MAIN. CONTRACTOR TO VERIFY IN FIELD THE EXISTING INVERT ELEVATION AND LOCATION PRIOR TO CONSTRUCTION PER SSPWC STD PLAN 222-2.
23. INSTALL SEWER CLEANOUT PER DETAIL 5 ON SHEET C-5.1.

DOMESTIC WATER:

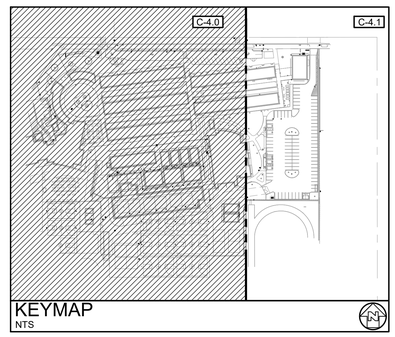
31. INSTALL DR7 HDPE DOMESTIC WATER LINE PER DETAIL 1 ON SHEET C-5.2. SEE PLAN FOR SIZES.
32. CONNECT TO BUILDING DOMESTIC WATER CONNECTION. PROVIDE REDUCING FITTINGS AND COUPLINGS AS NEEDED. FOR CONTINUATION, SEE PLUMBING PLANS.
33. INSTALL CONCRETE THRUST BLOCK AND TIES FOR WATERLINE PER DETAIL 7 ON SHEET C-5.1.

FIRE WATER:

40. INSTALL AWWA C900 FIRE WATER LINE PER DETAIL 1 ON SHEET C-5.2. SEE PLAN FOR SIZES.
41. INSTALL CONCRETE THRUST BLOCK AND TIES FOR WATERLINE PER DETAIL 7 ON SHEET C-5.1.
42. INSTALL NEW ON-SITE PRIVATE FIRE HYDRANT JONES J-4048 OR APPROVED EQUAL PER DETAIL 2 ON SHEET C-5.2.
43. INSTALL NEW GATE VALVE PER DETAIL 3 ON SHEET C-5.2.
44. CONNECT TO BUILDING FIRE WATER CONNECTION. PROVIDE REDUCING FITTINGS AND COUPLINGS AS NEEDED. FOR CONTINUATION, SEE PLUMBING PLANS.
46. INSTALL NEW FDC PER DETAIL 4 ON SHEET C-5.2.
47. INSTALL NEW PIV PER DETAIL 5 ON SHEET C-5.2.

SHEET NOTES:

1. FOR GENERAL NOTES, LEGENDS AND ABBREVIATIONS, SEE SHEET C-1.0.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURFACE AND/OR UNDERGROUND UTILITIES IN CONFLICT WITH THE PROPOSED DEMOLITION AND DESIGN ITEMS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND/OR CONSTRUCTION RELATED ISSUES TO THE OWNER OR DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
3. HAND DIG ONLY AT LOCATIONS WHERE UNDERGROUND UTILITIES NEED TO BE PROTECTED IN PLACE.
4. REFER UTILITY POINT OF CONNECTIONS TO BUILDING PER PLUMBING DRAWINGS.
5. TRENCH DETAIL FOR OFFSITE LATERAL SERVICE CONNECTION TO WATER MAIN IS PER GSWC STANDARD DWG NO. P-3, P-4 & P-4B , AND PER APPROVED WATER IMPROVEMENT PLAN.
6. FOR PIPES THAT RUN PARALLEL WITH FOOTINGS, CONCRETE ENCASEMENT IS REQUIRED WHERE THE FOOTING'S INFLUENCE LINE GOES ABOVE THE PIPE PER CBC 1809.14.



SITE UTILITY PLAN

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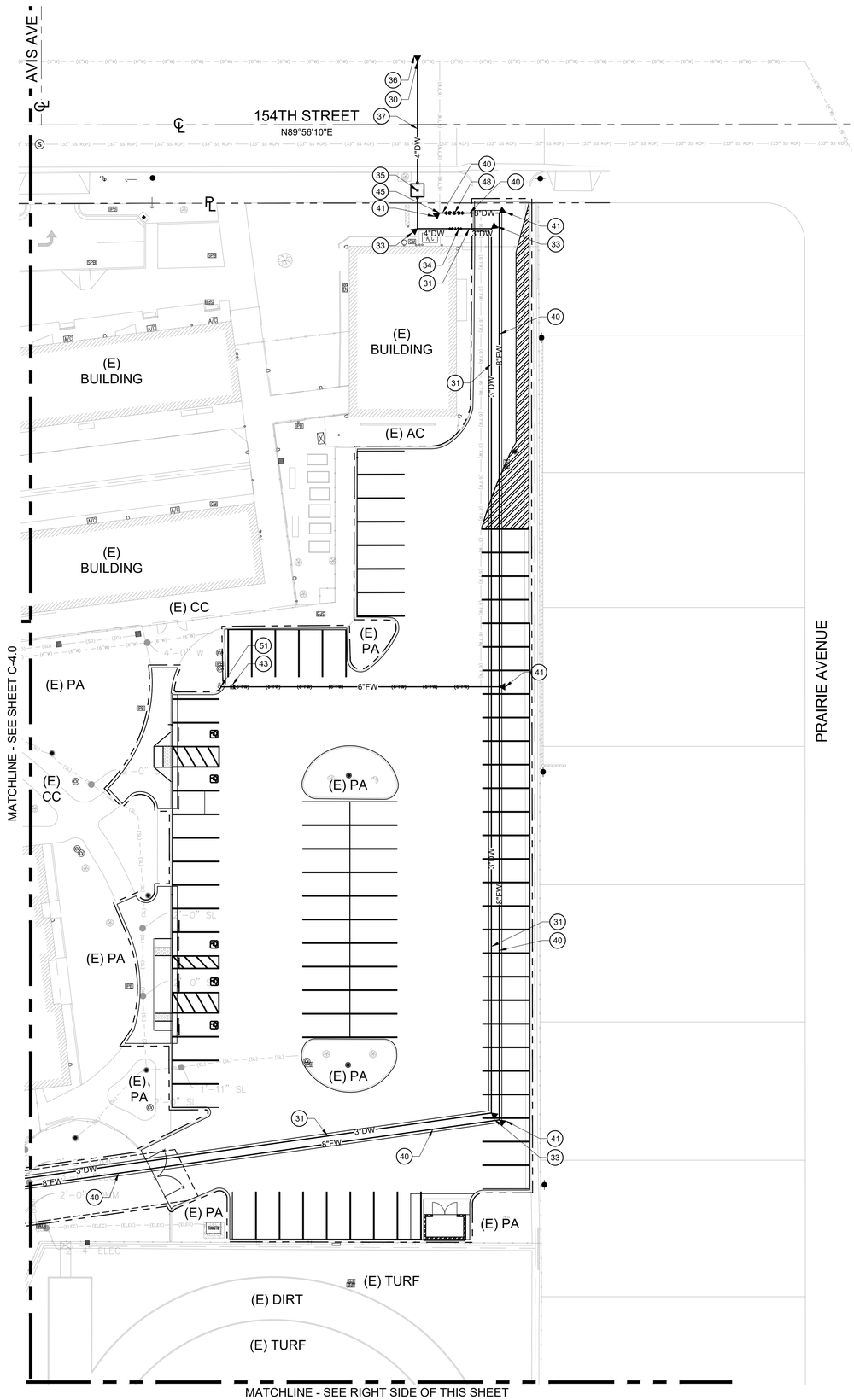
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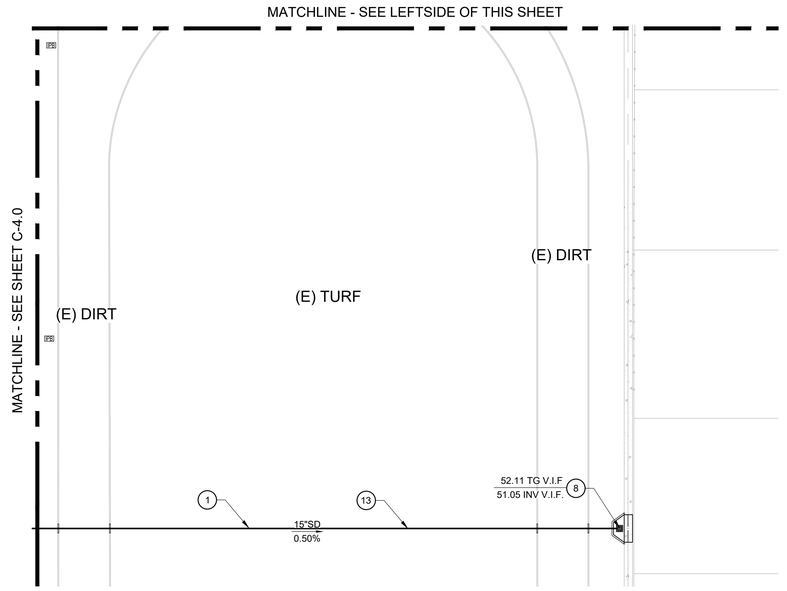
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C-4.0





STORM DRAIN:

(1) INSTALL PVC SDR-35 STORM DRAIN LINE, SEE PLAN FOR SIZES. FOR TRENCH SECTION REFER TO DETAIL 1 ON SHEET C-5.2.

(8) INSTALL 24"X24" BUBBLER CATCH BASIN PER DETAIL 10 ON SHEET C-5.2. SURROUND WITH 3"-5" COBBLESTONE EMBEDDED IN 4" THICK CONCRETE WITHIN 3 FT OF THE CATCH BASIN'S SIDE ADJACENT TO SWALE'S SLOPE.

DOMESTIC WATER:

(30) CONNECT TO EXISTING WATER MAIN. VERIFY IN FIELD EXACT LOCATION AND COORDINATE WITH WATER PURVEYOR FOR CONNECTION AND OTHER REQUIREMENTS PRIOR TO INSTALLATION.

(31) INSTALL DR7 HDPE DOMESTIC WATER LINE PER DETAIL 1 ON SHEET C-5.2. SEE PLAN FOR SIZES.

(33) INSTALL CONCRETE THRUST BLOCK AND TIES FOR WATERLINE PER DETAIL 7 ON SHEET C-5.1.

(34) INSTALL REDUCED PRESSURE ASSEMBLY PER DETAIL 3 ON SHEETC-5.3.

(35) INSTALL NEW WATER METER PER GSWC STANDARD DWG NO. P-30, SEE DETAIL 1 ON SHEET C-5.3. CONTRACTOR TO COORDINATE WITH THE WATER PURVEYOR AND PULL ALL NECESSARY PERMITS.

(36) INSTALL CONCRETE THRUST BLOCK PER GSWC STANDARD DWG NO. P-18.

(37) CONSTRUCT NEW 4" WATER LATERAL. COORDINATE WITH WATER PURVEYOR FOR PIPE MATERIAL AND REQUIREMENTS PRIOR TO INSTALLATION.

FIRE WATER:

(40) INSTALL AWWA C900 FIRE WATER LINE PER DETAIL 1 ON SHEET C-5.2. SEE PLAN FOR SIZES.

(41) INSTALL CONCRETE THRUST BLOCK AND TIES FOR WATERLINE PER DETAIL 7 ON SHEET C-5.1.

(43) INSTALL NEW GATE VALVE PER DETAIL 3 ON SHEET C-5.2.

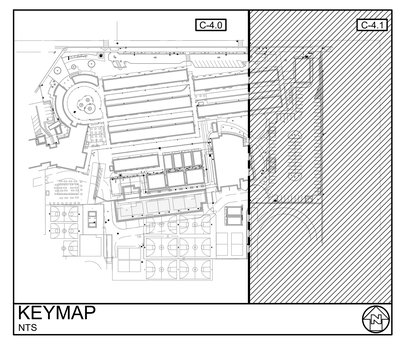
(45) CONNECT TO EXISTING PUBLIC WATER LATERAL. VERIFY IN FIELD EXACT LOCATION AND COORDINATE WITH WATER PURVEYOR FOR CONNECTION AND OTHER REQUIREMENTS PRIOR TO INSTALLATION.

(48) INSTALL DOUBLE CHECK VALVE DETECTOR ASSEMBLY PER DETAIL 8 ON SHEET C-5.2.

(51) CONNECT TO EXISTING FIRE HYDRANT.

SHEET NOTES:

1. FOR GENERAL NOTES, LEGENDS AND ABBREVIATIONS, SEE SHEET C-1.0.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL SURFACE AND/OR UNDERGROUND UTILITIES IN CONFLICT WITH THE PROPOSED DEMOLITION AND DESIGN ITEMS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND/OR CONSTRUCTION RELATED ISSUES TO THE OWNER OR DESIGN TEAM PRIOR TO THE COMMENCEMENT OF WORK.
3. HAND DIG ONLY AT LOCATIONS WHERE UNDERGROUND UTILITIES NEED TO BE PROTECTED IN PLACE.
4. REFER UTILITY POINT OF CONNECTIONS TO BUILDING PER PLUMBING DRAWINGS.
5. TRENCH DETAIL FOR OFFSITE LATERAL SERVICE CONNECTION TO WATER MAIN IS PER GSWC STANDARD DWG NO. P-3, P-4 & P-4B , AND PER APPROVED WATER IMPROVEMENT PLAN.
6. FOR PIPES THAT RUN PARALLEL WITH FOOTINGS, CONCRETE ENCASEMENT IS REQUIRED WHERE THE FOOTING'S INFLUENCE LINE GOES ABOVE THE PIPE PER CBC 1809.14.



KEYMAP
NTS

SITE UTILITY PLAN

20 10 0 20 40

GRAPHIC SCALE
SCALE: 1" = 20'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL ★ STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

REGISTERED PROFESSIONAL ENGINEER
VIRGIL I. O. C. ANDERSON
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

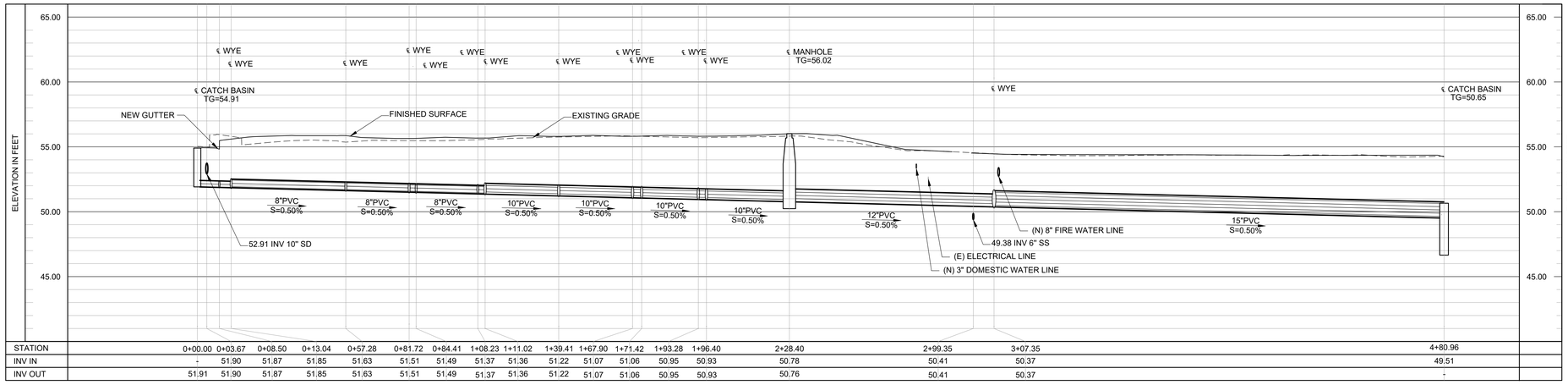
No.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:
SHEET DESCRIPTION:

SITE UTILITY PLAN

SHEET NO:

C-4.1

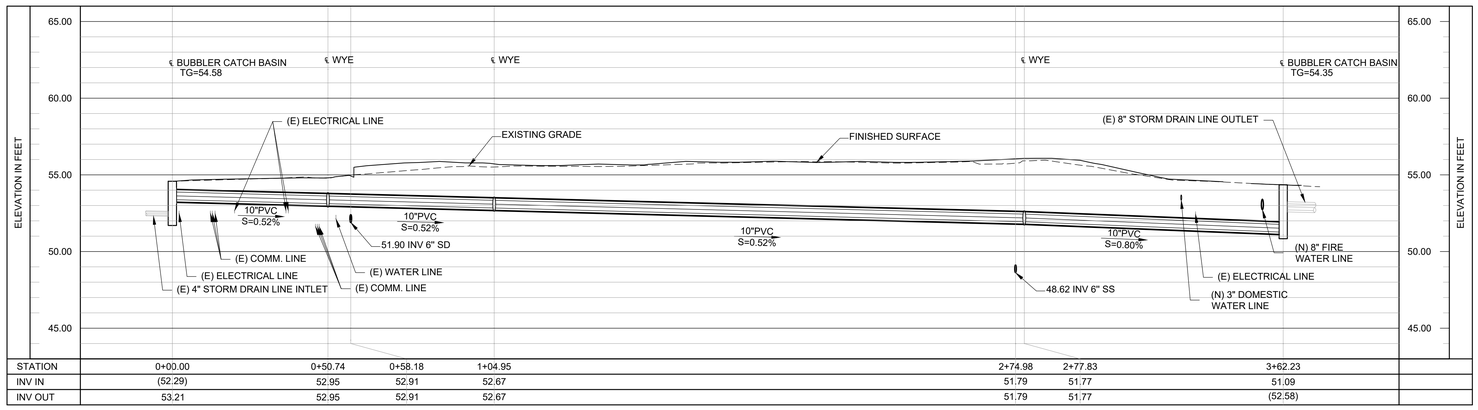


STATION	0+00.00	0+03.67	0+08.50	0+13.04	0+57.28	0+81.72	0+84.41	1+08.23	1+11.02	1+39.41	1+67.90	1+71.42	1+93.28	1+96.40	2+28.40	2+99.35	3+07.35	4+80.96	
INV IN	-	51.90	51.87	51.85	51.63	51.51	51.49	51.37	51.36	51.22	51.07	51.06	50.95	50.93	50.78	50.41	50.37	49.51	
INV OUT	51.91	51.90	51.87	51.85	51.63	51.51	51.49	51.37	51.36	51.22	51.07	51.06	50.95	50.93	50.76	50.41	50.37	-	

STORM DRAIN PROFILE - 1

SCALE HOR 1"=20' VER 1"=4'

1 / C-4.0

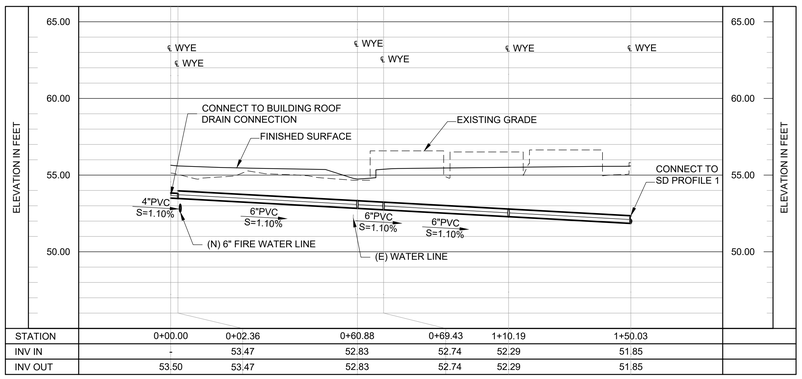


STATION	0+00.00	0+50.74	0+58.18	1+04.95	2+74.98	2+77.83	3+62.23	
INV IN	(52.29)	52.95	52.91	52.67	51.79	51.77	51.09	
INV OUT	53.21	52.95	52.91	52.67	51.79	51.77	(52.58)	

STORM DRAIN PROFILE - 2

SCALE HOR 1"=20' VER 1"=4'

2 / C-4.0

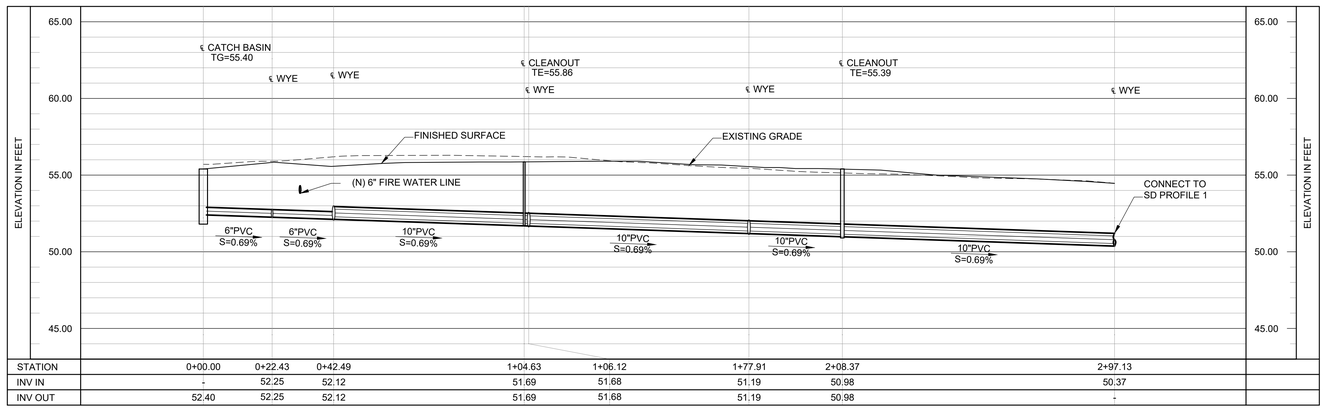


STATION	0+00.00	0+02.36	0+60.88	0+69.43	1+10.19	1+50.03	
INV IN	-	53.47	52.83	52.74	52.29	51.85	
INV OUT	53.50	53.47	52.83	52.74	52.29	51.85	

STORM DRAIN PROFILE - 3

SCALE HOR 1"=20' VER 1"=4'

3 / C-4.0



STATION	0+00.00	0+22.43	0+42.49	1+04.63	1+06.12	1+77.91	2+08.37	2+97.13	
INV IN	-	52.25	52.12	51.69	51.68	51.19	50.98	50.37	
INV OUT	52.40	52.25	52.12	51.69	51.68	51.19	50.98	-	

STORM DRAIN PROFILE - 4

SCALE HOR 1"=20' VER 1"=4'

4 / C-4.0

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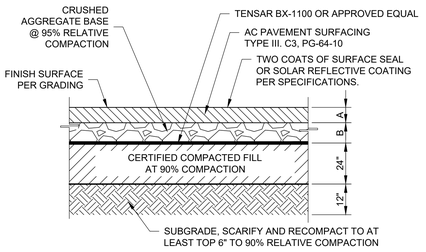
ARCHITECT: PDW

ENGINEER:

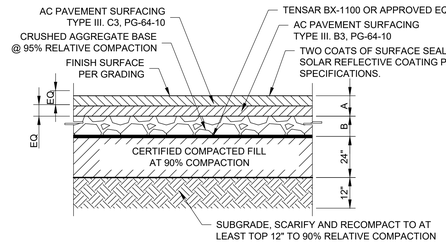
SHEET DESCRIPTION:
STORMDRAIN PROFILE

SHEET NO:

C-4.2



3" THICK OR LESS AC PAVEMENT



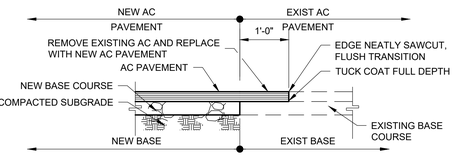
OVER 3" THICK AC PAVEMENT

TRAFFIC INDEX (TI)	ASPHALT CONCRETE THICKNESS "A" (INCHES)	CRUSHED AGGREGATE BASE THICKNESS "B" (INCHES)	REMARKS
5.5	3.0	12.0 / 8.0[2]	FOR AUTO PARKING STALLS
7.0	5.0	13.5 / 9.0[2]	FOR FIRE LANES AND TRUCK ACCESS WAYS/ ENTRY AND EXITS

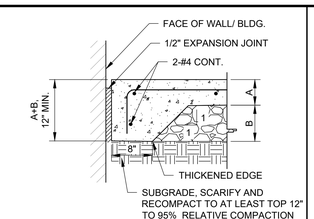
NOTES:

1. FOR PAVEMENT TRANSITIONAL DETAIL REFER TO DETAIL 4 ON THIS SHEET.
2. AGGREGATE BASE WITH A LAYER OF GEOGRID (TENSAR BX-1100, MIRAFI BXG-11 OR EQUIVALENT) PLACED AT BOTTOM OF AB LAYER.

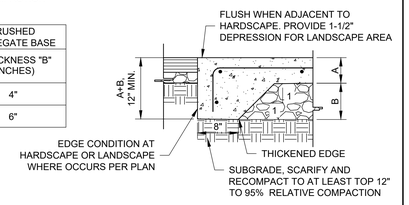
1 ASPHALT PAVEMENT DETAIL
NOT TO SCALE



LOCATION	CONCRETE PAVEMENT THICKNESS "A" (INCHES)	CRUSHED AGGREGATE BASE THICKNESS "B" (INCHES)
PEDESTRIAN WALKWAYS	5.5"	4"
TRUCK TRAFFIC AREAS	7"	6"



EDGE CONDITION AT BLDG. FACE

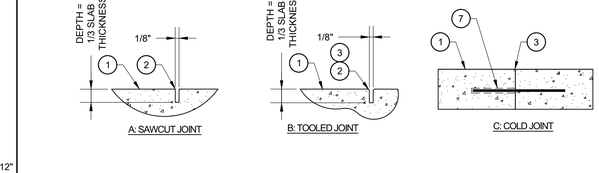


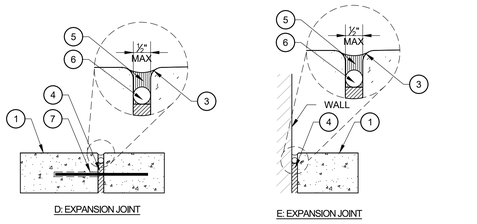
EDGE CONDITION AT HARDSCAPE / LANDSCAPE

NOTES:

1. FOR CONSTRUCTION JOINTS, EXPANSION JOINTS, AND FINISH SURFACE REQUIREMENTS, REFER TO DETAIL 3 ON THIS SHEET.
2. CONCRETE, F'C=4,500 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.
3. CONCRETE FINISHES TO BE BROOMED FINISH FOR SLOPES OF LESS THAN 6%, AND SLIP RESISTANT FOR SLOPES 6% OR GREATER.
4. FOR PAVEMENT TRANSITIONAL DETAIL REFER TO DETAIL 4 ON THIS SHEET.
5. LANDSCAPE, TURF AND PLANTING AREA TO BE 1-1/2" BELOW ADJACENT CONCRETE PAVEMENT.
6. PROVIDE THICKENED EDGE FOR ALL EDGE CONDITIONS.
7. FOR CONCRETE PAVEMENT WITHIN THE BUILDING FOOTPRINT, REFER TO DETAIL 9 ON SHEET S-1.2, OR OVEREXCAVATION PLAN ON SHEET C-7.0 FOR REQUIRED DEPTH OF CERTIFIED COMPACTED FILL.

2 CONCRETE PAVEMENT SECTION DETAIL
NOT TO SCALE

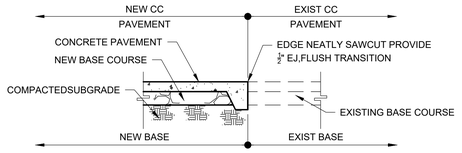


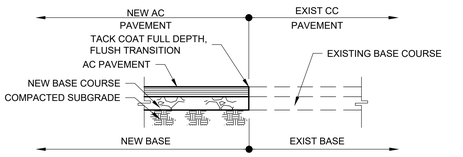


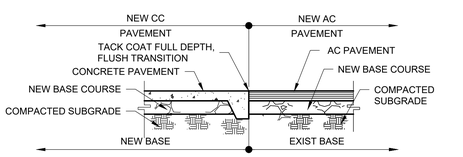
LEGEND

1. FINISH SURFACE.
2. SAWCUT.
3. 1/8" R. @ EDGES. TYP.
4. PREMOLDED E.J. FILLER.
5. JOINT SEALANT. COLOR TO BE SELECTED BY ARCHITECT. SUBMIT COLOR SAMPLES PRIOR TO INSTALLATION.
6. BACKER ROD.
7. 18" #4 REBAR W/ 'SPEED DOWEL' @ 36" OC, CENTER IN CONC. AT COLD JOINTS & E.J.'S
8. EXPANSION JOINTS 20' O.C. MAX. FOR CONTROL JOINTS, MAXIMUM SPACING SHOULD NOT EXCEED TWICE THE WIDTH OF THE PAVEMENT. COORDINATE WITH ARCHITECT DRAWING FOR JOINT LOCATIONS.
9. CONTRACTOR TO SUBMIT SHOP DRAWINGS OF CONTROL JOINT AND EXPANSION JOINT LAYOUT.

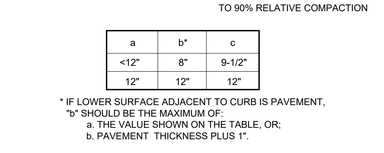
3 JOINT DETAIL
NOT TO SCALE







4 PAVEMENT TRANSITION DETAIL
NOT TO SCALE



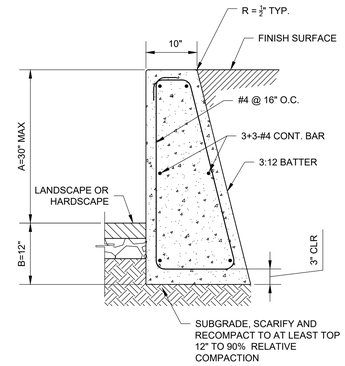
a	b*	c
<12"	8"	9-1/2"
12"	12"	12"

* IF LOWER SURFACE ADJACENT TO CURB IS PAVEMENT, "b" SHOULD BE THE MAXIMUM OF:
a. THE VALUE SHOWN ON THE TABLE, OR;
b. PAVEMENT THICKNESS PLUS 1".

NOTES:

1. PROVIDE CONTRACTION JOINTS CONSISTING OF ONE INCH DEEP CUT SCORES AT 20' O.C. MAX.
2. WHERE A WALK IS ADJACENT TO THE CURB, THE JOINTS SHALL LINE WITH JOINTS IN THE WALK.
3. CONCRETE, F'C=3,000 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.

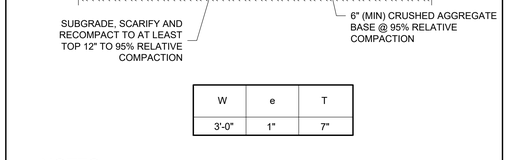
5 CONCRETE CURB DETAIL
SCALE: NOT TO SCALE



NOTES:

1. FOR CURB FACE LESS THAN OR EQUAL TO 12", PROVIDE CONTRACTION JOINTS CONSISTING OF ONE INCH DEEP CUT SCORES AT 20' O.C. MAX.
2. FOR CURBFACE GREATER THAN 12", PROVIDE EXPANSION JOINTS AT 30'-0" O.C. MAX.
3. WHERE A WALK IS ADJACENT TO THE CURB, THE JOINTS SHALL LINE WITH JOINTS IN THE WALK.
4. CONCRETE, F'C=3,000 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.
5. WHEN THE SUM OF "A" PLUS "B" IS GREATER THAN 18", PLYWOOD FORMS ARE REQUIRED.
6. TERMINATE REBAR 1-1/2" FROM EXPANSION JOINT.

6 GRAVITY WALL DETAIL
NOT TO SCALE

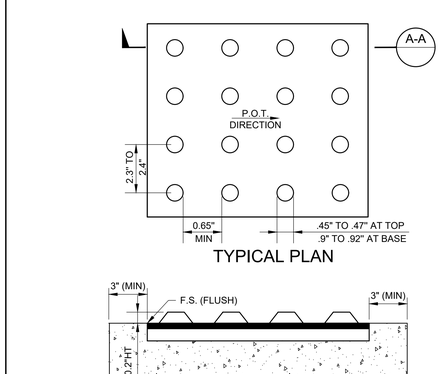


W	e	T
3'-0"	1"	7"

NOTES:

1. PROVIDE CONTRACTION JOINTS CONSISTING OF ONE INCH DEEP CUT SCORES AT 20' O.C. MAX.
2. CONCRETE, F'C=4,500 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.

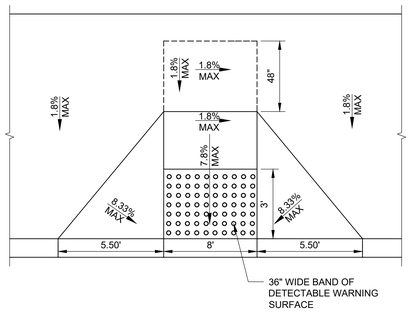
7 CONCRETE V-GUTTER DETAIL
SCALE: NOT TO SCALE



NOTE:

1. INSTALL FEDERAL YELLOW, CAST IN PLACE TACTILE SYSTEM ARMOR TILE OR APPROVED EQUAL.

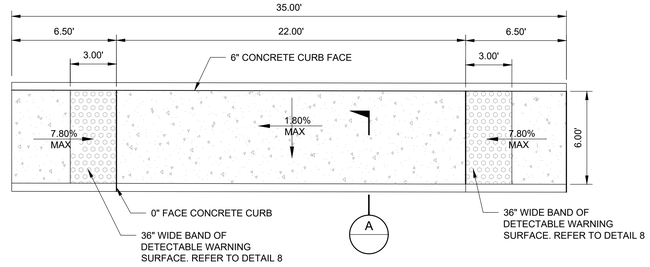
8 DETECTABLE WARNING SURFACE DETAIL
NOT TO SCALE

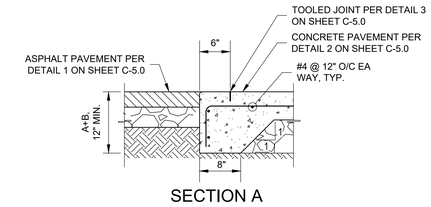


NOTE:

1. ALL CURB RAMPS SHALL CONFORM TO CBC 2022 CHAPTER 11B STANDARDS.

9 CURB RAMP WITH FLARE DETAIL
SCALE: NOT TO SCALE





NOTE:

1. ALL CURB RAMPS SHALL CONFORM TO CBC 2022 CHAPTER 11B STANDARDS.

10 PARALLEL CURB RAMP DETAIL
SCALE: NOT TO SCALE

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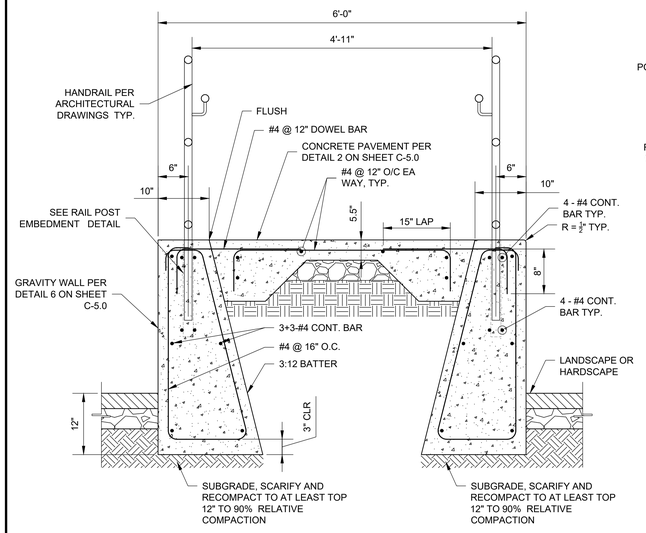
No.	Rev. Date	Description

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ENGINEER:
SHEET DESCRIPTION:

MISCELLANEOUS DETAILS

SHEET NO:

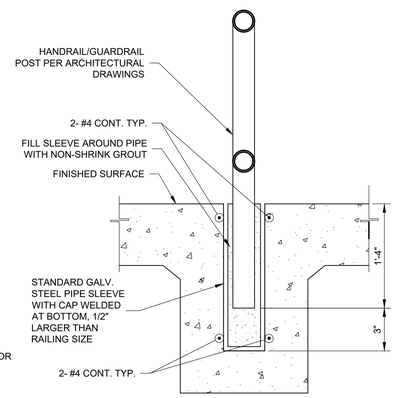
C-5.0



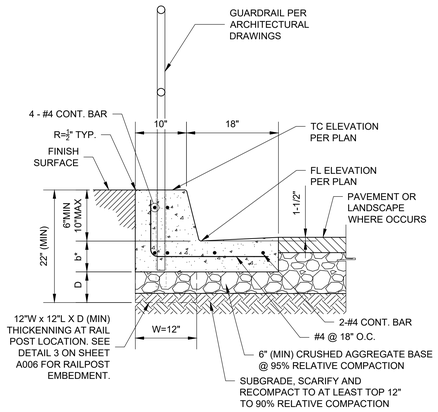
NOTES:

1. FOR CONSTRUCTION JOINTS, EXPANSION JOINTS, AND FINISH SURFACE REQUIREMENTS, REFER TO DETAILS 3 & 4 ON SHEET C-5.0.
2. CONCRETE FINISHES TO BE A MEDIUM BROOM FINISH FOR SLOPES OF LESS THAN 6%, AND SLIP RESISTANT.

1 ACCESSIBLE CONCRETE RAMP DETAIL
NOT TO SCALE



RAIL POST EMBEDMENT DETAIL

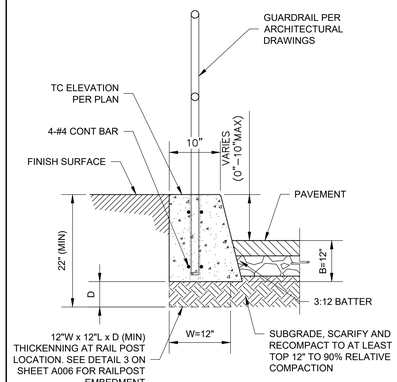


* GUTTER THICKNESS "b" SHOULD BE MAXIMUM OF, (a) ADJACENT PAVEMENT THICKNESS PLUS 1 INCH OR; (b) 6 INCHES.

NOTES:

1. PROVIDE 1/4" EXPANSION JOINT WITH PREFORMED JOINT FILLER AT ALL ANGLE POINTS AND THE BEGINNING AND END OF ALL CURVES.
2. PROVIDE CONTRACTION JOINTS CONSISTING OF ONE INCH DEEP CUT SCORES AT 20' O.C. MAX.
3. WHERE A WALK IS ADJACENT TO THE CURB, THE JOINTS SHALL LINE WITH JOINTS IN THE WALK.
4. CONCRETE, F'C=3000 PSI @ 28 DAYS PER SSPWC.
5. REBARS, FY=60,000 PSI ASTM A615, GRADE 60.

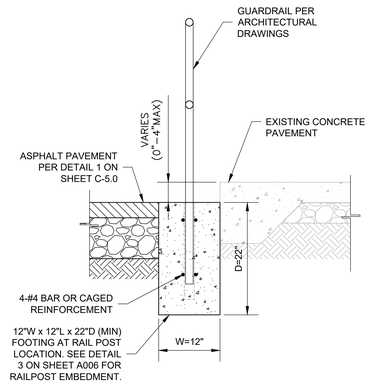
2 CONCRETE CURB AND GUTTER DETAIL
NOT TO SCALE



NOTES:

1. CONCRETE, F'C=3000 PSI @ 28 DAYS PER SSPWC.
2. REBARS, FY=60,000 PSI ASTM A615, GRADE 60.

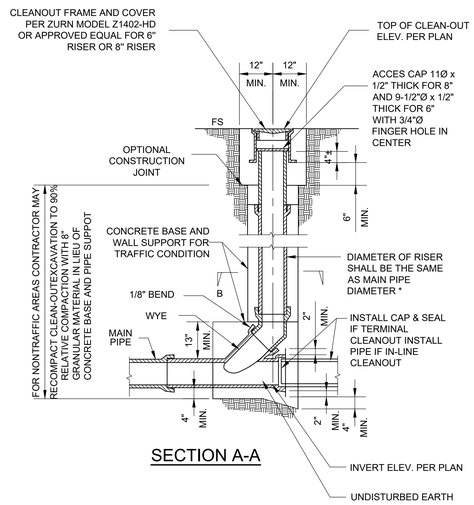
3 CONCRETE CURB WITH HANDRAIL DETAIL
NOT TO SCALE



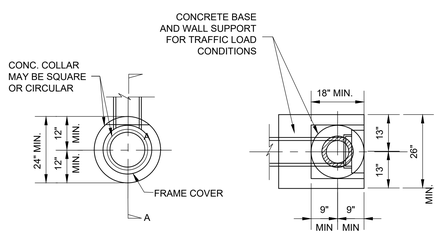
NOTES:

1. CONCRETE, F'C=3000 PSI @ 28 DAYS PER SSPWC.
2. REBARS, FY=60,000 PSI ASTM A615, GRADE 60.

4 GUARDRAIL DETAIL
NOT TO SCALE



SECTION A-A

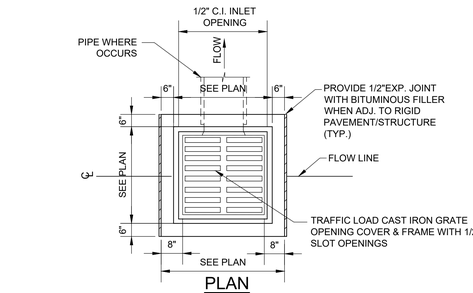


PLAN SECTION B-B

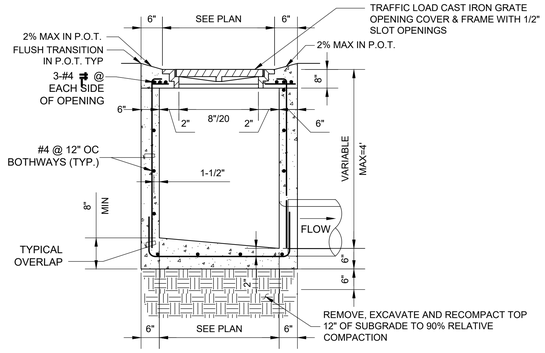
* FOR 10" MAIN PIPE DIAMETER, RISER DIAMETER SHALL BE 8".

NOTE:

5 CLEANOUT DETAIL
SCALE: NOT TO SCALE



PLAN

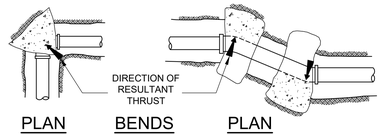


SECTION

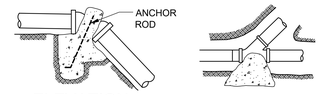
NOTES:

1. USE 3/4" DIA. PIPE BAR SPACERS ASSEMBLED ON (2) 1/2" DIA. RODS WITH THREADS AND NUTS AT BOTH ENDS.
2. ALL METAL PARTS SHALL BE GALVANIZED AFTER FABRICATION AND WELDING, AND BEFORE ASSEMBLING.
3. FRAME AND GRATE SHALL BE SIMILAR TO ALHAMBRA FOUNDRY CO. LTD. SERIES MODEL NO. 2010 AND 2012 OR BROOKS PRODUCTS, INC. OR APPROVED EQUAL. GRATES MUST COMPLY WITH ALL ADA REQUIREMENTS.
4. GRATES SHALL BE OF VANDAL-RESISTANT CONSTRUCTION WITH ½" MAX OPENINGS AND HEEL PROOF.
5. FRAME AND GRATE SHALL BE TRAFFIC-RATED WHEN INSTALLED IN VEHICLE, PARKING AREAS.
6. GRATE MUST COMPLY WITH ADA REQUIREMENTS.
7. PROVIDE 1/2" MAX GRID/OPENINGS IN GRATING IN THE DIRECTION OF TRAFFIC FLOW.
8. SLOPE ADJACENT PAVEMENT AT 2% MAX TOWARDS GRATE WHEN PLACED WITHIN ACCESSIBLE PATH OF TRAVEL PER ARCHITECTURAL DRAWINGS.
9. CONCRETE, F'C=3000 PSI @ 28 DAYS PER SSPWC.
10. REBARS, FY=60,000 PSI ASTM A615, GRADE 60.

6 CATCH BASIN DETAIL
SCALE: NOT TO SCALE

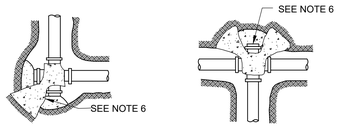


PLAN BENDS PLAN

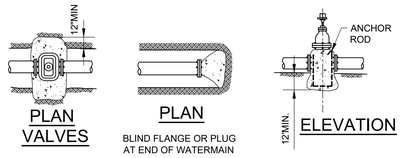


ELEVATION VERTICAL BEND

PLAN WYE

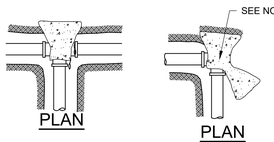


PLAN CROSSES PLAN



PLAN VALVES PLAN ELEVATION

BLIND FLANGE OR PLUG AT END OF WATERMAIN



PLAN PLAN

TEES

TABLE 1

MINIMUM BEARING AREAS IN SQ.FT.				
MAIN SIZE	TEE	90° BEND	45° BEND	22 1/2° BEND
6"	4	4	4	3
8"	5	7	4	3
10"	9	12	6	4
12"	12	16	9	6

BASED ON 150 PSI W.W.R. (WORKING WATER PRESSURE RATING) & SOIL BEARING LOADS OF 2000 PSF THE RATIO OF WIDTH TO HEIGHT SHALL NOT EXCEED 1 1/2 TO 1

TEES,PLUGS,CAPS & HYDRANTS.

TABLE II

SOIL TYPE	MAX. ALLOWABLE SOIL BEARING VALUES	FACTORS FOR INCREASING AREAS IN TABLE 1
LOOSE SAND	500 PSF	4
SOFT SANDY CLAY	1000 PSF	2
ADOBE	1000 PSF	2
COMPACT FINE SAND	2000 PSF	1
COMPACT COARSE SAND	2000 PSF	1
MEDIUM STIFF CLAY	2000 PSF	1

PER GEOTECHNICAL REPORT MENTIONED IN GEOTECHNICAL NOTES ON SHEET C-1.0, ALLOWABLE SOIL BEARING CAPACITY IS 2,000 PSF.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE SAFE SOIL BEARING VALUES AND SIZE OF BEARING AREAS. THE ABOVE TABLE IS BASED ON 2 FEET MINIMUM DEPTH OF COVER OVER THE PIPE.

NOTES:

1. ALL ANCHOR AND THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED SOIL.
2. MINIMUM ALLOWABLE WATER PRESSURE FOR DESIGN OF THRUST BLOCKS IS 150 PSI. BEARING AREA INCREASE IN PRESSURE.
3. ALL CONCRETE USED IN THRUST BLOCKS SHALL ATTAIN 2000 PSI STRENGTH.
4. ALL ANCHOR RODS SHALL BE REINFORCING STEEL AND A MINIMUM OF 1/2-INCH IN DIAMETER.
5. USE ANCHOR BLOCKS AT VERTICAL BENDS WHEN PIPE IS ABOVE OR BELOW GROUND. SIZE OF BLOCK AND ROD SHALL BE AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER IN THE FIELD.
6. USE 30 POUND FELT TO INSURE COLD JOINT.
7. CONCRETE SHALL NOT COME INTO DIRECT WITH ASBESTOS CEMENT PIPE.
8. FOR PIPE 14" IN DIAMETER OR LARGER ENGINEER IS TO SUBMIT CALCULATIONS.

7 THRUST BLOCK DETAIL
SCALE: NOT TO SCALE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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1041 S. Garfield Avenue, Suite 210
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REGISTERED PROFESSIONAL ENGINEER
VIRGIL O. C. ABREN
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

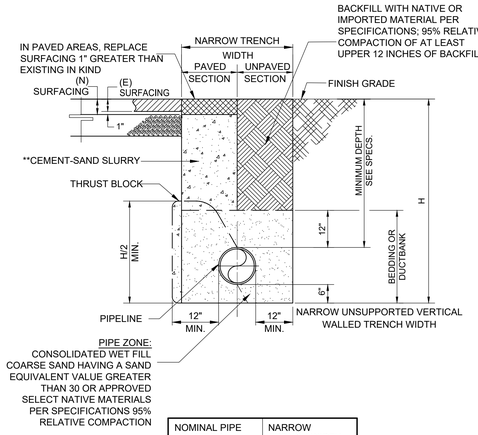
PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:
WILL ROGERS MIDDLE SCHOOL
4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:
SHEET DESCRIPTION:
MISCELLANEOUS DETAILS
SHEET NO:
C-5.1



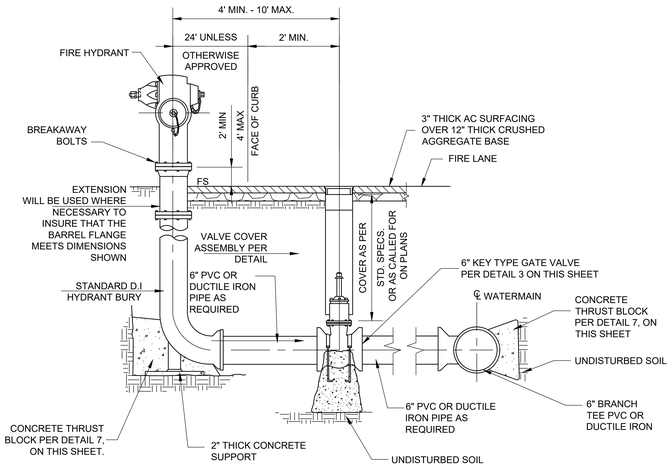
NOMINAL PIPE DIAMETER (INCHES)	NARROW TRENCH WIDTH MIN. (INCHES)
4	18
6	18
8	24
10	30
12	36
15	36

** CEMENT-SAND SLURRY = MIN. 2-SACK MIX HAVING A SLUMP NO GREATER THAN 5 INCHES

NOTES:

1. PAVEMENT FINISH SURFACE SHALL BE A SMOOTH CONTINUATION OF ADJOINING PAVED SURFACE.
2. PIPELINE BEDDING MATERIAL, TRENCH BACKFILL MATERIAL, AND COMPACTION SHALL COMPLY WITH THE SOIL REPORT.
3. TRENCH BACKFILL SHALL CONSIST OF EXCAVATED ON-SITE SOILS FREE OF OVERSIZE PARTICLES (LARGER THAN 1 IN. IN MAXIMUM DIMENSION IN THE UPPER 12 IN. OF SUBGRADE SOILS AND LARGER THAN 3 INCHES IN THE LARGEST DIMENSION IN THE TRENCH BACKFILL BELOW). IMPORTED BACKFILL SHOULD BE APPROVED BY PROJECT GEOTECHNICAL CONSULTANT PRIOR TO DELIVERY AT THE SITE. NO MORE THAN 30% OF BACKFILL VOLUME SHOULD BE LARGER THAN 3/4" IN THE LARGEST DIMENSION.
4. TRENCH BACKFILL SHALL BE COMPACTED TO 90% OF THE LABORATORY MAXIMUM DRY DENSITY. AT LEAST UPPER 12" OF TRENCH UNDERLYING PAVEMENTS SHOULD HAVE 95% RELATIVE COMPACTION.
5. PIPELINE BEDDING MAY BE LEAN CONCRETE CONSISTING OF TWO SACKS OF PORTLAND CEMENT PER CUBIC YARD OF SLURRY IN LEIU OF SAND AS LONG AS SLURRY IS VIBRATED IN PLACE.
6. PROVIDE METALLIC WARNING TAPE 12-INCHES BELOW GRADE ABOVE UTILITIES.

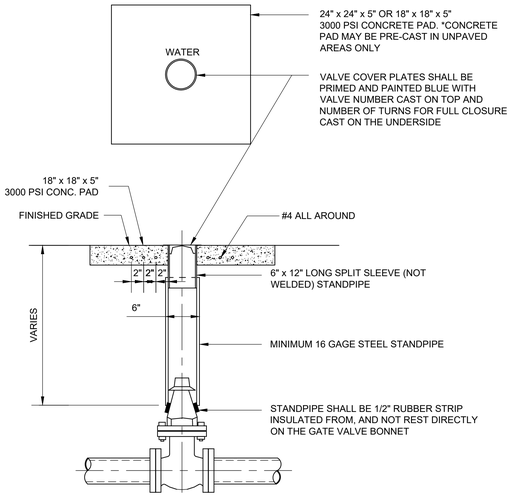
1 TRENCH SECTION
SCALE: NOT TO SCALE



NOTES:

1. BARRICADES, FENCES, WALLS, LANDSCAPING, ETC. SHALL NOT BE INSTALLED OR PLANTED WITHIN 3' OF A HYDRANT.
2. FIRE HYDRANT SHALL BE ONE OF THE FOLLOWING
   A. CLOW / RICH - NO. 550, 555 OR 850.
   B. JAMES JONES - NO. J3700 - FLUTED BARREL
   C. MUELLER - A480 - E
3. HYDRANT SHALL BE SUPPLIED WITH 2-1/2" x 4" OUTLETS AND 1-1/4" OR 1-3/4" PENTAGON NUTS ON CUPS AND OPERATING VALVES.
4. HYDRANT SHALL BE PAINTED WITH O.S.H.A. SAFETY YELLOW AMERITONE 719 OR APPROVED EQUAL.
5. HYDRANT BURY, VALVE AND TEE SHALL HAVE EITHER RING-TITE JOINTS OR MECHANICAL JOINTS COMPATIBLE WITH PIPE MATERIAL USED.
6. ALL PIPE AND FITTINGS FOR HYDRANT INSTALLATION SHALL BE CLASS 200.
7. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURIED IN THE GROUND.

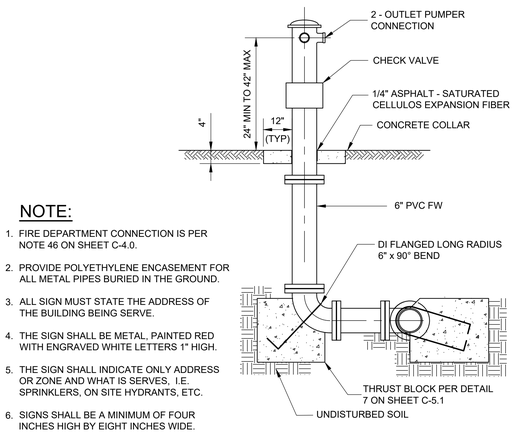
2 FIRE HYDRANT DETAIL
SCALE: NOT TO SCALE



NOTE:

1. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURIED IN THE GROUND.

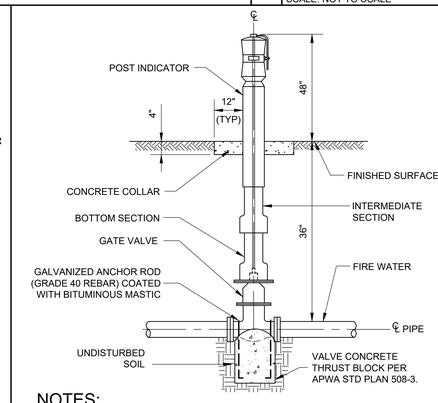
3 GATE VALVE AND VALVE BOX DETAIL
SCALE: NOT TO SCALE



NOTE:

1. FIRE DEPARTMENT CONNECTION IS PER NOTE 46 ON SHEET C-4.0.
2. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURIED IN THE GROUND.
3. ALL SIGN MUST STATE THE ADDRESS OF THE BUILDING BEING SERVE.
4. THE SIGN SHALL BE METAL, PAINTED RED WITH ENGRAVED WHITE LETTERS 1" HIGH.
5. THE SIGN SHALL INDICATE ONLY ADDRESS OR ZONE AND WHAT IS SERVES, I.E. SPRINKLERS, ON SITE HYDRANTS, ETC.
6. SIGNS SHALL BE A MINIMUM OF FOUR INCHES HIGH BY EIGHT INCHES WIDE.
7. SIGNS SHALL BE PERMANENTLY BANDED TO THE VALVE WITH U-BOLTS.

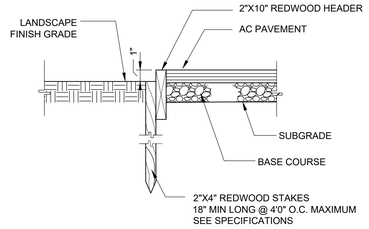
4 FIRE DEPARTMENT CONNECTION DETAIL
SCALE: NOT TO SCALE



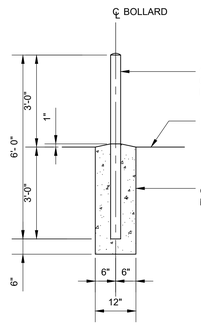
NOTES:

1. POST INDICATOR VALVE IS PER NOTE 47 ON SHEET C-4.0.
2. POST INDICATOR VALVE TO BE PROTECTED WITH ABOVEGROUND BOLLARD / GUARD POSTS PER FIRE DEPARTMENT REQUIREMENTS.
3. CONNECT TO ELECTRICAL TAMPER SWITCH.
4. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURIED IN THE GROUND.

5 POST INDICATOR VALVE DETAIL
SCALE: NOT TO SCALE



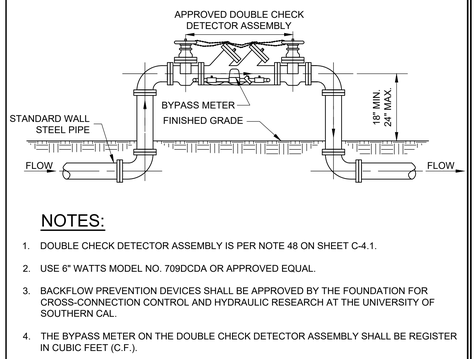
6 REDWOOD HEADER DETAIL
NOT TO SCALE



NOTES:

1. SEE PLANS FOR NUMBER OF GUARD POST TO BE USED.
2. THE EXACT LOCATION OF BOLLARD MAY BE CHANGED BY THE INSPECTOR IN THE FIELD.
3. THE STEEL PIPE ABOVE GROUND SHALL BE A MINIMUM OF TWO FIELD COATS OF ZINC CHROMATE PRIMER.

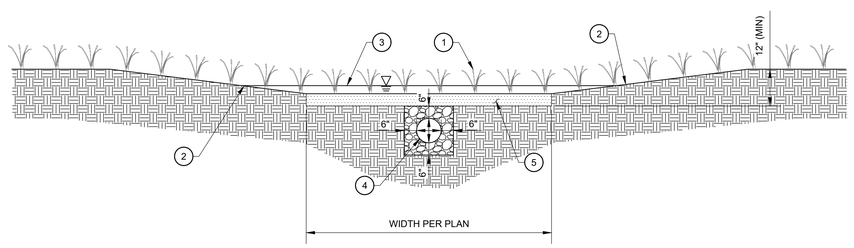
7 DETERRENT BOLLARD DETAIL
SCALE: NOT TO SCALE



NOTES:

1. DOUBLE CHECK DETECTOR ASSEMBLY IS PER NOTE 48 ON SHEET C-4.1.
2. USE 6" WATTS MODEL NO. 709DCDA OR APPROVED EQUAL.
3. BACKFLOW PREVENTION DEVICES SHALL BE APPROVED BY THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH AT THE UNIVERSITY OF SOUTHERN CAL.
4. THE BYPASS METER ON THE DOUBLE CHECK DETECTOR ASSEMBLY SHALL BE REGISTER IN CUBIC FEET (C.F.).
5. WHEN INSTALLATION IS NEAR A BUILDING OR WALL, THE BACKFLOW PREVENTER SHALL BE ACCESSIBLE FOR TESTING, MAINTENANCE, REPAIR OR REPLACEMENT.
6. PIPING MATERIALS SHALL BE APPROVED BY THE GSWC WATER QUALITY DEPARTMENT-WATER SECTION.
7. THE INSTALLATION WILL BE INSPECTED BY THE GSWC BACKFLOW INSPECTOR PRIOR TO BEING PLACED IN SERVICE.
8. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURIED IN THE GROUND.

8 DOUBLE CHECK DETECTOR ASSEMBLY
SCALE: NOT TO SCALE

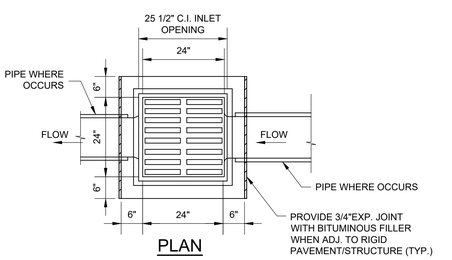


SECTION WITH UNDERDRAIN

NOTES:

1. MAINTAIN GRASS HEIGHT AT 4" - 6" HIGH.
2. SIDE SLOPES SHALL BE CONSTRUCTED AT 5.0% MAX. SEE GRADING PLANS.
3. MAX DEPTH OF PONDING NOT TO EXCEED 4" FOR INFREQUENTLY MOWED TURF.
4. 6" PERFORATED PVC PIPE WITH 0.5" DIAMETER HOLES AND 6" SPACING. GRAVEL TO BE FILLED 6" TOP, BOTTOM AND SIDES OF THE PVC PIPE. GRAVEL TO BE WRAPPED IN MIRAFI 140N.
5. AMEND SOILS WITH 2" OF COMPOST TILLED INTO 6" OF NATIVE SOIL UNLESS NATIVE SOIL ORGANIC CONTENT >10%.
6. REFER TO UTILITY PLANS FOR LOCATION OF OVERFLOW CATCH BASINS.
7. INSTALL ENERGY DISSIPATOR (COBBLESTONE EMBEDDED IN CONCRETE) AT THE BUBBLER CATCH BASIN LOCATION (INLET OF VEGETATED SWALE)

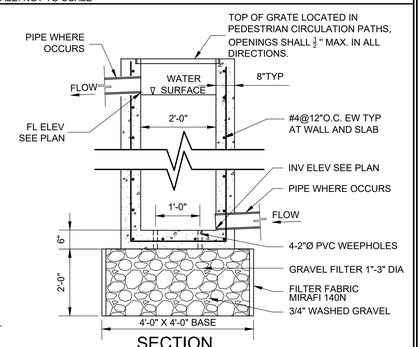
9 VEGETATED SWALE DETAIL
NOT TO SCALE



PLAN

NOTE:

1. THE CONTRACTOR SHALL BE ABLE TO INSTALL AN APPROVED EQUAL PREFABRICATED CATCH BASIN.
2. CONCRETE, F'C=3,000 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.



SECTION

10 24"X24" BUBBLER CATCH BASIN DETAIL
SCALE: NOT TO SCALE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

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REGISTERED PROFESSIONAL ENGINEER
VIRGIL O. C. ANDERSON
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

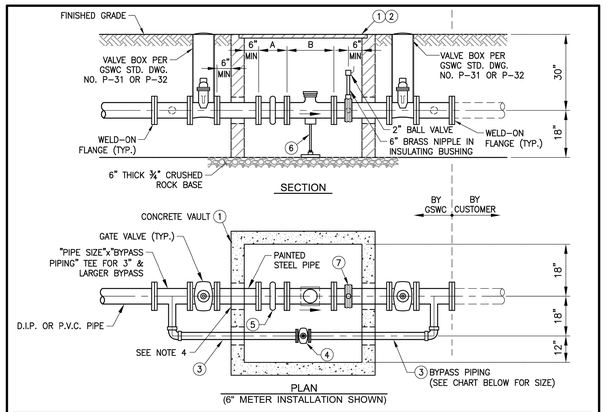
Rev.	Rev. Date	Description

JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:
SHEET DESCRIPTION:

MISCELLANEOUS DETAILS

SHEET NO:

C-5.2



ITEM	DESCRIPTION
1	Non-traffic bearing 20k rated vault located behind curb and/or parkway, with open bottom. Lid shall be lockable, torsion spring assisted aluminum design for 10K loading. Use 20K rated vault and lid in traffic locations. See Potable Water Materials Guidelines for acceptable manufacturers and GSWC Std. Dwg. No. P-36 for vault details.
2	Alternate hatch cover: 3 piece steel bolt down traffic/parkway cover. See GSWC Std. Dwg. No. P-36.
3	Bypass piping shall be wrapped and epoxy lined Sch. 80 steel for 3" or larger bypass pipe.
4	Bypass shut off valve shall be epoxy lined gate valve for 3" or larger bypass pipe.
5	Victaulic coupling shall be AWWA approved Style 31 for DI pipe or style 77 for steel pipe.
6	Pipe support per GSWC Std. Dwg. No. C-2.
7	Service saddle with ball curb stop for meter testing.
8	All dissimilar metals shall be insulated from each other by insulated flanges or bushings.
9	Install tracer wire from main to inside the vault.

VAULT DESCRIPTION					
PIPE/ METER SIZE	A (UPSTREAM SPOOL)	B (METER)	VAULT SIZE	FLOW RANGE (GPM)	BYPASS PIPE
3"	5"	12"	4'x4'	1–500	3"
4"	7"	14"	4'x4'	1½–1,000	3"
6"	12"	18"	4'x4'	3–1,600	3"
8"	16"	20"	4'x5'	5–2,800	4"
10"	20"	18"	4'x5'	14–5,500	6"

NOTE:

1. Bypass piping not required for irrigation services.
2. Ultra sonic meter shall be of a type approve by N.S.F., F.M. and A.W.W.A.
3. Ultra sonic meter body shall be Type 316 stainless steel or epoxy coated ductile iron.
4. See GSWC Std. Dwg. No. P–37 for sealing of pipe openings.
5. All pipes on both sides of vault shall be fully restrained.

APPROVED BY:
GSWC STANDARDS COMMITTEE

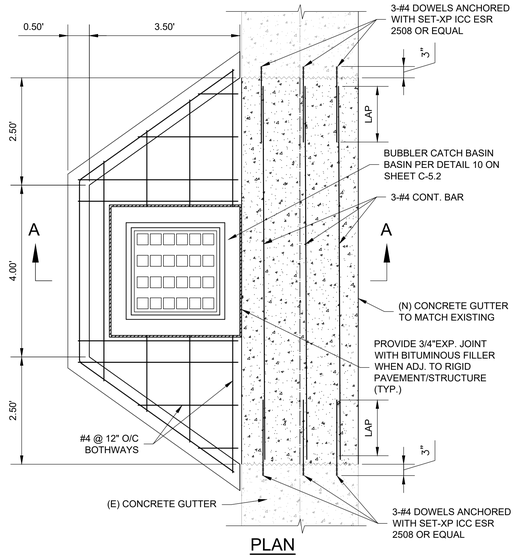
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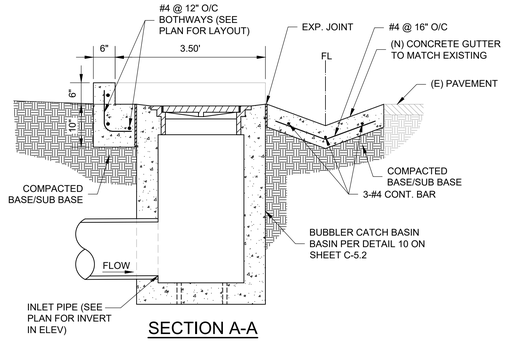
Golden State Water Company
A Subsidiary of American States Water Company

TITLE: LARGE METER WITH BYPASS (3–INCH AND LARGER METER)

SCALE:	DATE:	REV	STANDARD DWG NO.
NONE	1/18	1.3	P–30

1 NEW WATER METER DETAIL
NOT TO SCALE

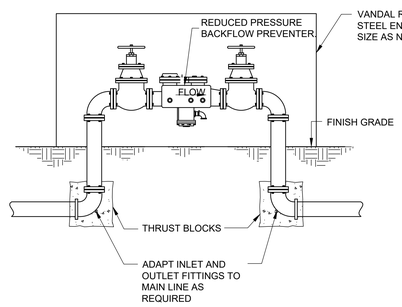




NOTES:

1. CONCRETE, F'C=3,000 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.

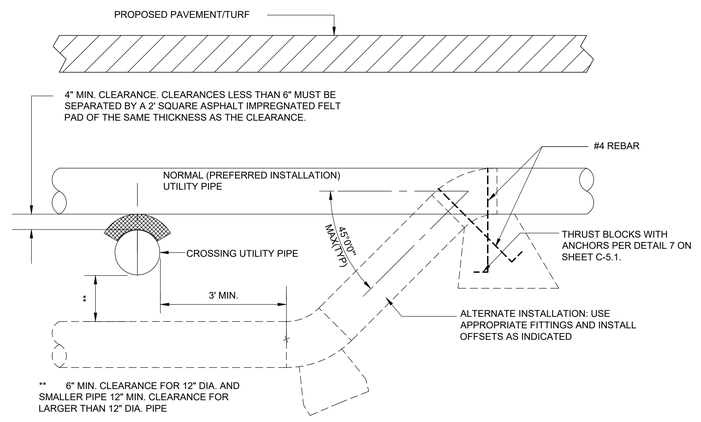
2 HEADWALL STRUCTURE DETAIL
NOT TO SCALE



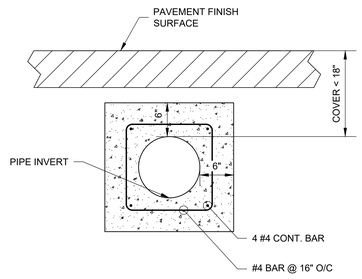
NOTE:

1. REDUCE PRESSURE DETECTOR ASSEMBLY IS PER NOTE 34 ON SHEET C-4.1
2. USE 4" WATTS MODEL NO. LF909 OR APPROVED EQUAL.
3. PROVIDE POLYETHYLENE ENCASEMENT FOR ALL METAL PIPES BURRIED IN THE GROUND.

3 REDUCED PRESSURE DETECTOR ASSEMBLY DETAIL
NOT TO SCALE



4 ALTERNATIVE PIPE INSTALLATION FOR VERTICAL OBSTRUCTION
NOT TO SCALE



NOTES:

1. CONCRETE ENCASEMENT IS REQUIRED FOR PIPES WITH COVER FROM FINISH SURFACE LESS THAN 18".
2. FOR PIPES THAT RUN PARALLEL WITH FOOTINGS, CONCRETE ENCASEMENT IS REQUIRED WHERE THE FOOTING'S LOAD INFLUENCE LINE GOES ABOVE THE PIPE PER CBC 1809.14.
3. CONCRETE, F'C=3,000 PSI @ 28 DAYS. REBARS, FY=60,000 PSI ASTM A615.

5 CONCRETE ENCASEMENT DETAIL
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CIVIL
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MISCELLANEOUS DETAILS

SHEET NO:

C-5.3

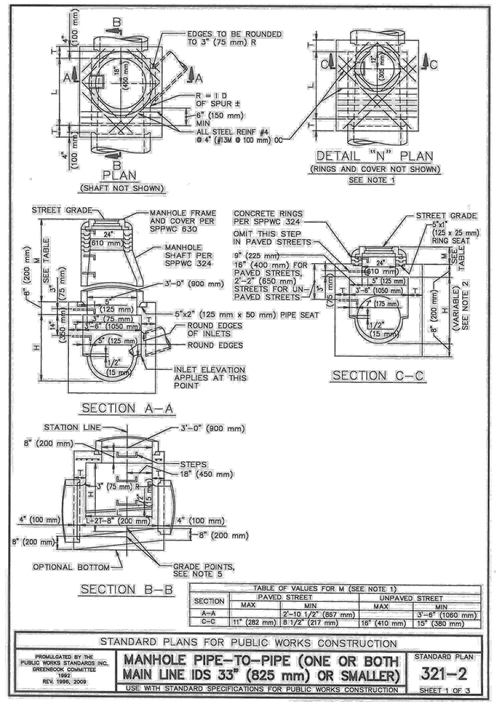


TABLE OF VALUES FOR M (SEE NOTE 1)

SECTION	PAVED STREET		UNPAVED STREET	
	MAX	MIN	MAX	MIN
A–A		2'–10 1/2" (867 mm)		3'–6" (1060 mm)
C–C	11" (282 mm)	8 1/2" (217 mm)	16" (410 mm)	15" (380 mm)

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION		
PROMULGATED BY THE PUBLIC WORKS STANDARDS INC. GREENBOOK COMMITTEE 1992 REV. 1996, 2009	MANHOLE PIPE–TO–PIPE (ONE OR BOTH MAIN LINE IDS 33" (825 mm) OR SMALLER) USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN 321–2 SHEET 1 OF 3

NOTES

1. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'–10 1/2" (867 mm) FOR PAVED STREETS OR 3'–6" (1060 mm) FOR UNPAVED STREETS, CONSTRUCT SHAFT PER SECTION C–C AND DETAIL "N". DEPTH M MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 8" (150 mm) WHEN LARGER VALUES OF M WOULD REDUCE H IN SECTION C–C TO 3'–6" (1060 mm) OR LESS.
2. H (IN SECTION A–A AND B–B) SHALL NOT BE LESS THAN 4'–0" (1.2 m), BUT MAY BE INCREASED PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SECTION C–C) SEE NOTE 1.
3. L SHALL BE 4'–0" (1.2 m) UNLESS OTHERWISE SHOWN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, BUT ANY CHANGE IN LOCATION OF THE SPUR MUST BE APPROVED BY THE ENGINEER.
4. T SHALL BE 8" (200 mm) FOR VALUES OF H UP TO AND INCLUDING 8'–0" (2.4 m) AND 10" (250 mm) FOR VALUES OF H OVER 8'–0" (2.4 m).
5. STATIONS OF MANHOLES SHOWN ON PLANS APPLY AT CENTERLINE OF SHAFT. ELEVATIONS ARE SHOWN AT CENTERLINE OF SHAFT AND REFER TO THE PROLONGED INVERT GRADE LINES. SEE NOTE 3.
6. REINFORCEMENT SHALL CONFORM TO ASTM A 615, GRADE 40 (ASTM A 615M, GRADE 300), AND SHALL TERMINATE 1 1/2" (40 mm) CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
7. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
8. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT SPRING LINE.
9. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN 8" (200 mm).
10. STEPS SHALL CONFORM TO SPPWC 635 OR 636, UNLESS OTHERWISE SHOWN. STEPS SHALL BE UNIFORMLY SPACED 14" (350 mm) TO 15" (375 mm) OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" (600 mm) ABOVE THE LEDGE AT THE SIDE OF THE MANHOLE.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN
MANHOLE PIPE–TO–PIPE (ONE OR BOTH MAIN LINE IDS = 33" (825 mm) OR SMALLER)	321–2 SHEET 2 OF 3

11. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
    A. MAIN LINE = 33" (825 mm) INSIDE DIAMETER OR LESS. (EXCEPTION — IF THE MAIN LINE RCP DOWNSTREAM OF THE MANHOLE IS 36" (900 mm) TO 42" (1050 mm) INSIDE DIAMETER AND THE MAIN LINE RCP UPSTREAM IS 33" (825 mm) OR LESS.) SPPWC 320 OR 322 IS NOT APPLICABLE WHERE THE MAIN LINE CONDUIT IS LESS THAN 36" (900 mm) IN DIAMETER.
    B. SEE SECTION A — A. THE MAXIMUM SIZE LATERAL THAT MAY BE CONNECTED TO THIS MANHOLE IS SUCH THAT THE DISTANCE FROM THE OUTSIDE (TOP) OF THE LATERAL TO THE BOTTOM OF THE 8" (200 mm) THICK TOP OF THE MANHOLE CHAMBER, MEASURED VERTICALLY FROM THE END OF THE RCP, SHALL BE A MINIMUM OF 6" (150 mm).
    C. IF THE SIZE OF THE LATERAL IS SUCH THAT THE ABOVE–SPECIFIED MINIMUM DISTANCES CANNOT BE MAINTAINED, THEN ONE OF THE FOLLOWING ALTERNATE SOLUTIONS MUST BE USED.
        1. PROVIDE A SPECIAL STRUCTURE.
        2. PROVIDE TWO STANDARD STRUCTURES, CONSISTING OF THIS MANHOLE PLACED UPSTREAM OR DOWNSTREAM FROM THE APPLICABLE JUNCTION STRUCTURE OR TRANSITION STRUCTURE.
12. MANHOLE FRAME AND COVER SHALL CONFORM TO SPPWC 630 UNLESS OTHERWISE SHOWN.
13. MANHOLE SHAFT SHALL CONFORM TO SPPWC 324 UNLESS OTHERWISE SHOWN.
14. WHERE A MANHOLE SHAFT — 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 336.
15. WHERE A PRESSURE MANHOLE SHAFT — WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO SPPWC 328.
16. WHERE A PRESSURE MANHOLE SHAFT — 36" (900 mm) WITHOUT REDUCER IS SPECIFIED REFER TO SPPWC 329.
17. THE FOLLOWING SPPWC ARE INCORPORATED HEREIN:
    324 MANHOLE SHAFT — WITH ECCENTRIC REDUCER
    326 MANHOLE SHAFT — 36" (900 mm) WITHOUT REDUCER
    328 PRESSURE MANHOLE SHAFT — WITH ECCENTRIC
    329 PRESSURE MANHOLE SHAFT — 36" (900 mm) WITHOUT REDUCER
    630 24" (610 mm) MANHOLE FRAME AND COVER
    633 36" (900 mm) MANHOLE FRAME AND COVER
    635 STEEL STEP
    636 POLYPROPYLENE PLASTIC STEP

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION	STANDARD PLAN
MANHOLE PIPE–TO–PIPE (ONE OR BOTH MAIN LINE IDS = 33" (825 mm) OR SMALLER)	321–2 SHEET 3 OF 3

1 STORMDRAIN MANHOLE DETAIL
NOT TO SCALE

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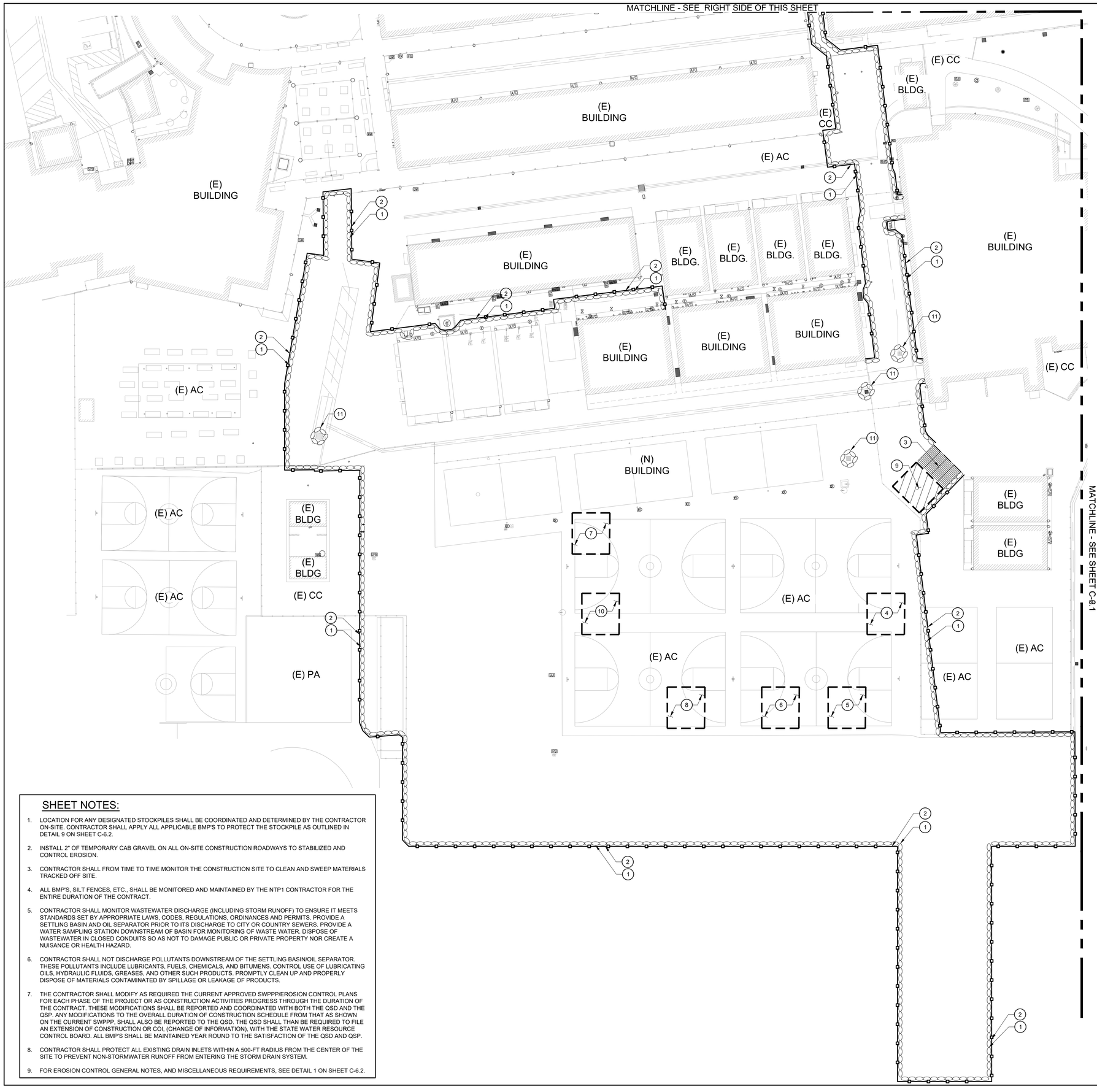
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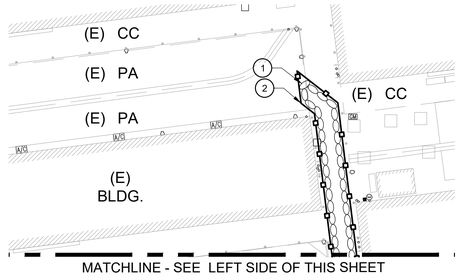
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SHEET DESCRIPTION:
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SHEET NO:
C-5.4





CONSTRUCTION NOTES:

1. INSTALL GRAVEL BAGS UNTIL THE COMPLETION OF THE SITE CONSTRUCTION. REFER TO DETAIL 3 ON SHEET C-6.2.
2. SILT FENCE PER DETAIL 8 ON SHEET C-6.2.
3. STABILIZED CONSTRUCTION ENTRANCE/EXIT PER DETAIL 5 ON SHEET C-6.2.
4. PROPOSED AREA FOR EQUIPMENT REPAIR/MAINTENANCE. CONTRACTOR TO VERIFY EXACT LOCATION AND COORDINATE WITH THE CPM. REFER TO DETAIL 10 ON SHEET C-6.2.
5. PROPOSED AREA FOR FUELING/OILING. CONTRACTOR TO VERIFY ACTUAL AREA NEEDED AND COORDINATE WITH THE CPM. REFER TO DETAIL 6 ON SHEET C-6.2.
6. PROPOSED AREA FOR LOADING. CONTRACTOR TO VERIFY EXACT LOCATION AND COORDINATE WITH THE CONTRACTOR PROJECT MANAGER.
7. PROPOSED AREA FOR TEMPORARY TOILETS. CONTRACTOR TO VERIFY EXACT LOCATION AND COORDINATE WITH THE CONTRACTOR PROJECT MANAGER.
8. PROPOSED AREA FOR MATERIAL STORAGE. CONTRACTOR TO VERIFY EXACT LOCATION AND COORDINATE WITH THE CPM. REFER TO DETAIL 9 ON SHEET C-6.2.
9. TIRE WASH PER DETAIL 7 ON SHEET C-6.2.
10. PROPOSED AREA FOR VEHICLE AND EQUIPMENT CLEANING. CONTRACTOR TO VERIFY EXACT LOCATION AND COORDINATE WITH CPM.
11. CATCH BASIN PROTECTION PER DETAIL 2 ON SHEET C-6.2.

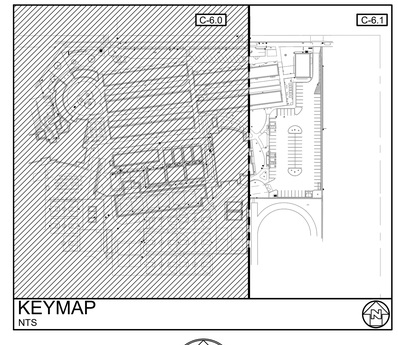
LEGENDS:

GRAVEL BAG

SILT FENCE

SHEET NOTES:

1. LOCATION FOR ANY DESIGNATED STOCKPILES SHALL BE COORDINATED AND DETERMINED BY THE CONTRACTOR ON-SITE. CONTRACTOR SHALL APPLY ALL APPLICABLE BMP'S TO PROTECT THE STOCKPILE AS OUTLINED IN DETAIL 9 ON SHEET C-6.2.
2. INSTALL 2" OF TEMPORARY CAB GRAVEL ON ALL ON-SITE CONSTRUCTION ROADWAYS TO STABILIZED AND CONTROL EROSION.
3. CONTRACTOR SHALL FROM TIME TO TIME MONITOR THE CONSTRUCTION SITE TO CLEAN AND SWEEP MATERIALS TRACKED OFF SITE.
4. ALL BMP'S, SILT FENCES, ETC., SHALL BE MONITORED AND MAINTAINED BY THE NTP1 CONTRACTOR FOR THE ENTIRE DURATION OF THE CONTRACT.
5. CONTRACTOR SHALL MONITOR WASTEWATER DISCHARGE (INCLUDING STORM RUNOFF) TO ENSURE IT MEETS STANDARDS SET BY APPROPRIATE LAWS, CODES, REGULATIONS, ORDINANCES AND PERMITS. PROVIDE A SETTLING BASIN AND OIL SEPARATOR PRIOR TO ITS DISCHARGE TO CITY OR COUNTRY SEWERS. PROVIDE A WATER SAMPLING STATION DOWNSTREAM OF BASIN FOR MONITORING OF WASTE WATER. DISPOSE OF WASTEWATER IN CLOSED CONDUITS SO AS NOT TO DAMAGE PUBLIC OR PRIVATE PROPERTY NOR CREATE A NUISANCE OR HEALTH HAZARD.
6. CONTRACTOR SHALL NOT DISCHARGE POLLUTANTS DOWNSTREAM OF THE SETTLING BASIN/OIL SEPARATOR. THESE POLLUTANTS INCLUDE LUBRICANTS, FUELS, CHEMICALS, AND BITUMENS. CONTROL USE OF LUBRICATING OILS, HYDRAULIC FLUIDS, GREASES, AND OTHER SUCH PRODUCTS. PROMPTLY CLEAN UP AND PROPERLY DISPOSE OF MATERIALS CONTAMINATED BY SPILLAGE OR LEAKAGE OF PRODUCTS.
7. THE CONTRACTOR SHALL MODIFY AS REQUIRED THE CURRENT APPROVED SWPPP/EROSION CONTROL PLANS FOR EACH PHASE OF THE PROJECT OR AS CONSTRUCTION ACTIVITIES PROGRESS THROUGH THE DURATION OF THE CONTRACT. THESE MODIFICATIONS SHALL BE REPORTED AND COORDINATED WITH BOTH THE QSD AND THE QSP. ANY MODIFICATIONS TO THE OVERALL DURATION OF CONSTRUCTION SCHEDULE FROM THAT AS SHOWN ON THE CURRENT SWPPP, SHALL ALSO BE REPORTED TO THE QSD. THE QSD SHALL THAN BE REQUIRED TO FILE AN EXTENSION OF CONSTRUCTION OR COI, (CHANGE OF INFORMATION), WITH THE STATE WATER RESOURCE CONTROL BOARD. ALL BMP'S SHALL BE MAINTAINED YEAR ROUND TO THE SATISFACTION OF THE QSD AND QSP.
8. CONTRACTOR SHALL PROTECT ALL EXISTING DRAIN INLETS WITHIN A 500-FT RADIUS FROM THE CENTER OF THE SITE TO PREVENT NON-STORMWATER RUNOFF FROM ENTERING THE STORM DRAIN SYSTEM.
9. FOR EROSION CONTROL GENERAL NOTES, AND MISCELLANEOUS REQUIREMENTS, SEE DETAIL 1 ON SHEET C-6.2.



EROSION CONTROL PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

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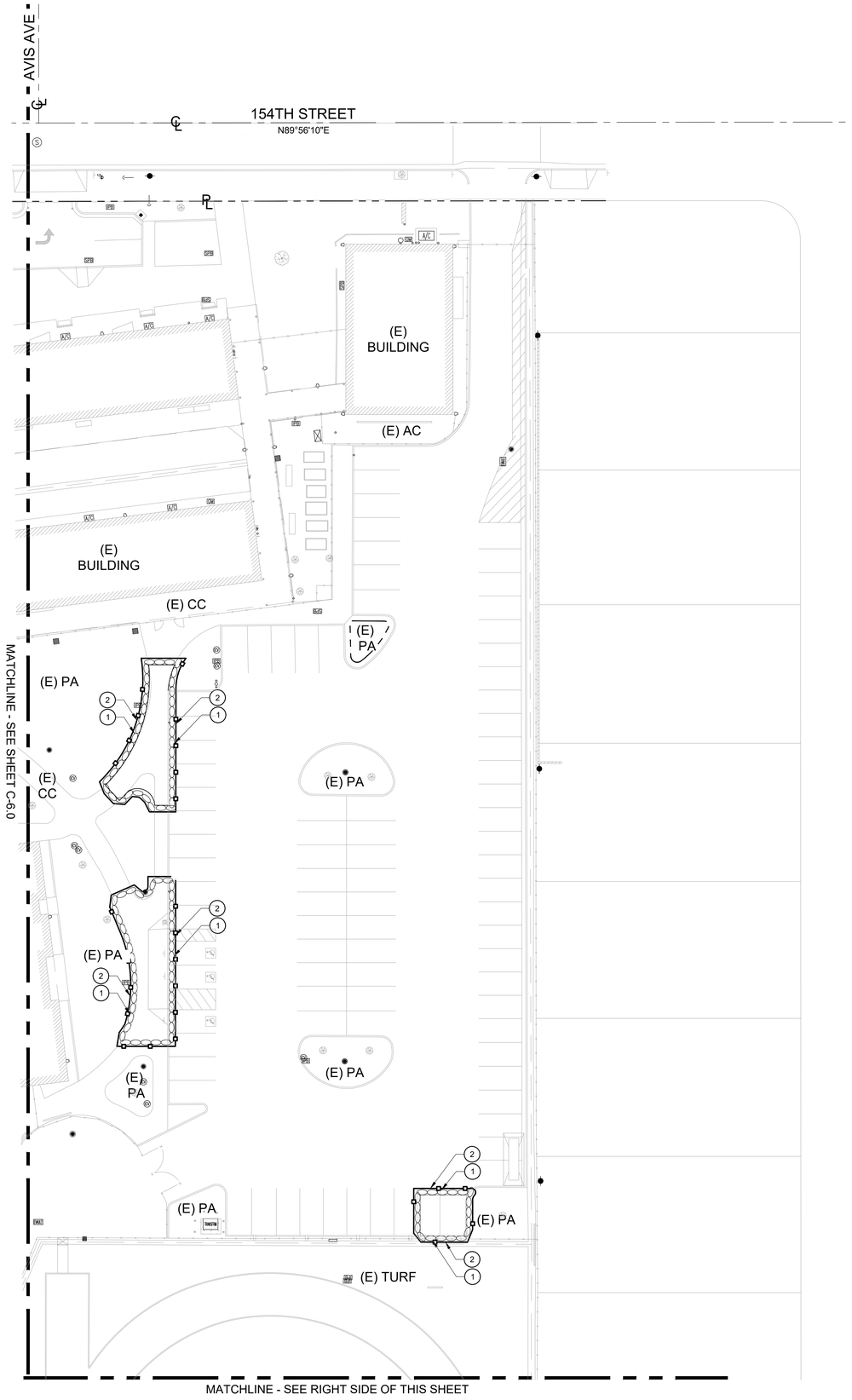
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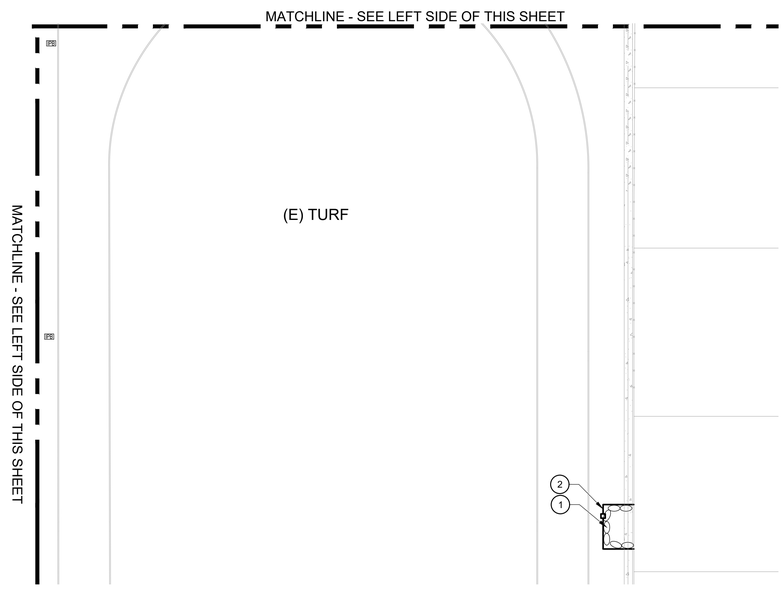
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C-6.0





CONSTRUCTION NOTES:

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2. SILT FENCE PER DETAIL 8 ON SHEET C-6.2.

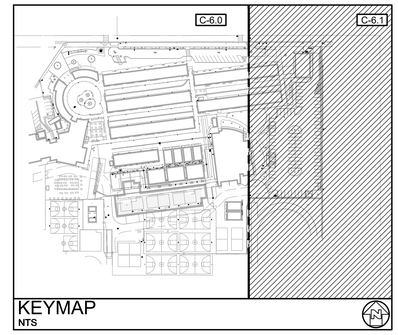
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SILT FENCE

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EROSION CONTROL PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

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ENGINEER:

SHEET DESCRIPTION:
EROSION CONTROL PLAN

SHEET NO:

C-6.1

GENERAL NOTES:

1. IN CASE OF EMERGENCY, CALL 911.
2. A STAND-BY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON (NOVEMBER 1 TO APRIL 15). NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF EMERGENCY DEVICES WHEN RAIN IS IMMINENT.
3. EROSION CONTROL DEVICES SHOWN ON THIS PLAN MAY BE REMOVED WHEN APPROVED BY THE BUILDING OFFICIAL IF THE GRADING OPERATION HAS PROGRESSED TO THE POINT WHERE THEY ARE NO LONGER REQUIRED.
4. GRADED AREAS ADJACENT TO FILL SLOPES LOCATED AT THE SITE PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY. ALL LOOSE SOILS AND DEBRIS THAT MAY CREATE A POTENTIAL HAZARD TO OFF-SITE PROPERTY SHALL BE STABILIZED OR REMOVED FROM THE SITE ON A DAILY BASIS.
5. ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY.
6. A GUARD SHALL BE POSTED ON SITE WHEREVER THE DEPTH OF WATER IN ANY DEVICE EXCEEDS TWO FEET. THE DEVICE SHALL BE DRAINED OR PUMPED DRY WITHIN 24 HOURS AFTER EACH RAINSTORM. PUMPING AND DRAINING OF ALL BASINS AND DRAINAGE DEVICES MUST COMPLY WITH THE APPROPRIATE BMP FOR DEWATERING OPERATIONS.
7. THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE AND CONTAIN POLLUTANTS WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE QSP. ADDITIONAL DEVICES AS NEEDED SHALL BE INSTALLED TO RETAIN SEDIMENTS AND OTHER POLLUTANTS ON SITE.
8. DESILTING BASINS MAY NOT BE REMOVED OR MADE INOPERABLE BETWEEN NOVEMBER 1 AND APRIL 15 OF THE FOLLOWING YEAR WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL.
9. STORM WATER POLLUTION AND EROSION CONTROL DEVICES ARE TO BE MODIFIED, AS NEEDED, AS THE PROJECT PROGRESSES, THE DESIGN AND PLACEMENT OF THESE DEVICES IS THE RESPONSIBILITY OF THE FIELD ENGINEER. PLANS REPRESENTING CHANGES MUST BE SUBMITTED FOR APPROVAL IF REQUESTED BY THE BUILDING OFFICIAL.
10. EVERY EFFORT MUST BE MADE TO ELIMINATE THE DISCHARGE OF NONSTORM WATER FROM THE PROJECT SITE AT ALL TIMES.
11. ERODED SEDIMENTS AND OTHER POLLUTANTS MUST BE RETAINED ON-SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEET FLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
12. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS MUST BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND OR WATER.
13. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS MUST BE STORED IN ACCORDANCE WITH THEIR LISTINGS AND ARE NOT TO CONTAMINATE THE SOILS AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS ARE TO BE PROTECTED FROM THE WEATHER. SPILLS MUST BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS MAY NOT BE WASHED INTO THE DRAINAGE SYSTEM.
14. EXCESS OR WASTE CONCRETE MAY NOT BE WASTED INTO THE PUBLIC WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON-SITE UNTIL THEY CAN BE DISPOSED OF AS SOLID WASTE.
15. DEVELOPERS/CONTRACTORS ARE RESPONSIBLE TO INSPECT ALL EROSION CONTROL DEVICES AND BMP's ARE INSTALLED AND FUNCTIONING PROPERLY IF THERE IS A 40% CHANCE OF 0.25 INCHES OR GREATER OF PREDICTED PRECIPITATION, AND AFTER ACTUAL PRECIPITATION. A CONSTRUCTION SITE INSPECTION CHECKLIST AND INSPECTION LOG SHALL BE MAINTAINED AT THE PROJECT SITE AT ALL TIMES AND AVAILABLE FOR REVIEW BY THE BUILDING OFFICIAL (COPIES OF SELF-INSPECTION CHECKLIST AND INSPECTION LOGS ARE AVAILABLE UPON REQUEST). AT HIS/HER EXPENSE THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A QUALIFIED SWPPP PRACTITIONER FOR THE DURATION OF THE PROJECT.
16. TRASH AND CONSTRUCTION-RELATED SOLID WASTES MUST BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL BY WIND.
17. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
18. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
19. AS THE ENGINEER OF RECORD, I HAVE SELECTED APPROPRIATE BMPs TO EFFECTIVELY MINIMIZE THE NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORM WATER QUALITY. THE PROJECT OWNER AND CONTRACTOR ARE AWARE THAT THE SELECTED BMPs MUST BE INSTALLED, MONITORED, AND MAINTAINED TO ENSURE THEIR EFFECTIVENESS. THE BMPs NOT SELECTED FOR IMPLEMENTATION ARE REDUNDANT OR DEEMED NOT APPLICABLE TO THE PROPOSED CONSTRUCTION QUALITY."
20. THE FOLLOWING BMPs AS OUTLINED IN, BUT NOT LIMITED TO, THE "CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICES HANDBOOK" - JANUARY 2003, OR THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY THE PROJECT ENGINEER OR THE BUILDING OFFICIAL). ALL WORK TO CONFORM TO SPECIFICATION SECTION 01022 "ENVIRONMENTAL PROCEDURES - ENVISION AND LEED".

EROSION CONTROL

EC1 - SCHEDULING
EC2 - PRESERVATION OF EXISTING VEGETATION
EC3 - HYDRAULIC MULCH
EC4 - HYDROSEEDING
EC5 - SOIL BINDERS
EC6 - STRAW MULCH
EC7 - GEOTEXTILES AND MATS
EC8 - WOOD MULCHING
EC9 - EARTH DIKES AND DRAINAGE SWALES
EC10 - VELOCITY DISSIPATION DEVICES
EC11 - SLOPE DRAINS
EC12 - STREAMBANK STABILIZATION
EC13 - POLYACRYLAMIDE

TEMPORARY SEDIMENT CONTROL

SE1 - SILT FENCE
SE2 - SEDIMENT BASIN
SE3 - SEDIMENT TRAP
SE4 - CHECK DAM
SE5 - FIBER ROLLS
SE6 - GRAVEL BAG BERM
SE7 - STREET SWEEPING AND VACUUMING
SE8 - GRAVEL BAG BARRIER
SE9 - STRAW BALE BARRIER
SE10 - STORM DRAIN INLET PROTECTION

WIND EROSION CONTROL

WE1 - WIND EROSION CONTROL

EQUIPMENT TRACKING CONTROL

TC1 - STABILIZED CONSTRUCTION ENTRANCE EXIT
TC2 - STABILIZED CONSTRUCTION ROADWAY
TC3 - ENTRANCE/OUTLET TIRE WASH

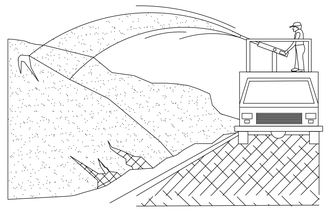
NON-STORMWATER MANAGEMENT

NS1 - WATER CONSERVATION PRACTICES
NS2 - DEWATERING OPERATIONS
NS3 - PAVING AND GRINDING OPERATIONS
NS4 - TEMPORARY STREAM CROSSING
NS5 - CLEARWATER DIVERSION
NS6 - ILLICIT CONNECTION/DISCHARGE
NS7 - POTABLE WATER/IRRIGATION
NS8 - VEHICLE AND EQUIPMENT CLEANING
NS9 - VEHICLE AND EQUIPMENT FUELING
NS10 - VEHICLE AND EQUIPMENT MAINTENANCE
NS11 - PILE DRIVING OPERATIONS
NS12 - CONCRETE CURING
NS13 - CONCRETE FINISHING
NS14 - MATERIAL AND EQUIPMENT USE
NS15 - DEMOLITION ADJACENT TO WATER
NS16 - TEMPORARY BATCH PLANTS

WASTE MANAGEMENT & MATERIAL POLLUTION CONTROL

WM1 - MATERIAL DELIVERY AND STORAGE
WM2 - MATERIAL USE
WM3 - STOCKPILE MANAGEMENT
WM4 - SPILL PREVENTION AND CONTROL
WM5 - SOLID WASTE MANAGEMENT
WM6 - HAZARDOUS WASTE MANAGEMENT
WM7 - CONTAMINATION SOIL MANAGEMENT
WM8 - CONCRETE WASTE MANAGEMENT
WM9 - SANITARY/SEPTIC WASTE MANAGEMENT
WM10 - LIQUID WASTE MANAGEMENT

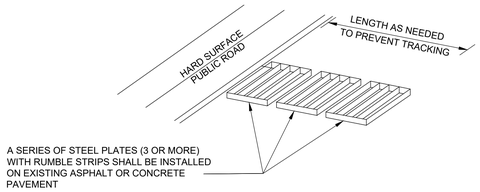
1 GENERAL NOTES
SCALE: NOT TO SCALE



NOTES:

1. SOIL/SLOPE STABILIZATION PRACTICES SHALL BE DESIGNED TO PRESERVE EXISTING VEGETATION WHERE FEASIBLE AND TO REVEGETATE OPEN AREAS AS SOON AS FEASIBLE AFTER GRADING. THESE CONTROL PRACTICES SHALL INCLUDE TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, OR OTHER SOIL STABILIZATION PRACTICES.
2. SOIL STABILIZATION SHALL BE IMPLEMENTED ON ALL INACTIVE DISTURBED AREAS FROM NOVEMBER 1 THRU APRIL 15 AND ON ALL DISTURBED AREAS DURING A RAIN EVENT OR POTENTIAL RAIN.
3. STABILIZATION PRACTICES SHALL CONTROL/PREVENT EROSION FROM THE FORCES OF WIND AND WATER.
4. STABILIZATION PRACTICES SHALL BE IMPLEMENTED IN CONJUNCTION WITH SEDIMENT TRAPPING/FILTERING PRACTICES AND PRACTICES TO REDUCE THE TRACKING OF SEDIMENT ONTO PAVED ROADS.
5. WHEN USING STRAW MULCHING, THE MINIMUM APPLICATION SHALL BE 2 TONS/ACRE. MULCH MUST BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.
6. WHEN USING HYDROSEEDING/MULCHING, THE MINIMUM APPLICATION OF WOOD FIBER SHALL BE 1,500 LBS/ACRE, THAT DOES NOT CONTAIN MORE THAN 50 PERCENT NEWSPRINT.
7. FOR SEEDING RECOMMENDATIONS, USDA, NATURAL RESOURCES CONSERVATION SERVICE.

4 EROSION CONTROL
SCALE: NOT TO SCALE



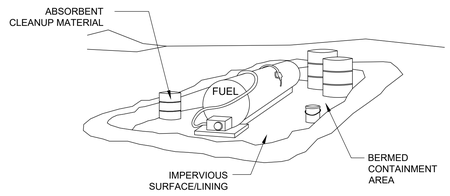
NOTES:

1. SEDIMENTS AND OTHER MATERIALS SHALL NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO PREVENT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC ROADS. DEPOSITIONS MUST BE SWEPT UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS INTO THE STORM DRAIN SYSTEM.
2. STABILIZED CONSTRUCTION ENTRANCE SHALL BE:
   A. LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE RD OR FROM A PUBLIC RIGHT OF WAY, STREET, ALLEY, AND SIDEWALK OR PARKING AREA.
   B. A SERIES OF STEEL PLATES WITH "RUMBLE STRIPS", AND/OR MIN 4" COARSE AGGREGATE WITH LENGTH, WIDTH & THICKNESS AS NEEDED TO ADEQUATELY PREVENT ANY TRACKING ONTO PAVED SURFACES.
3. ADDING A WASH RACK WITH A SEDIMENT TRAP LARGE ENOUGH TO COLLECT ALL WASH WATER CAN GREATLY IMPROVE EFFICIENCY.
4. ALL VEHICLES ACCESSING THE CONSTRUCTION SITE SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE SITES.

STREET MAINTENANCE

1. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS IMMEDIATELY.
2. SWEEP PAVED AREAS THAT RECEIVE CONSTRUCTION TRAFFIC WHENEVER SEDIMENT BECOMES VISIBLE.
3. PAVEMENT WASHING WITH WATER IS PROHIBITED IF IT RESULTS IN A DISCHARGE TO THE STORM DRAIN SYSTEM.

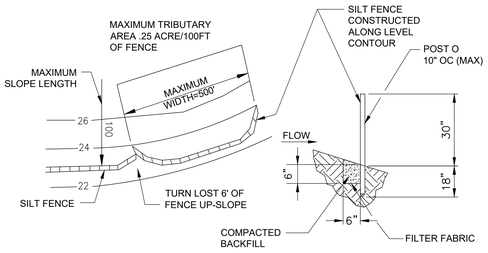
5 STABILIZED CONSTRUCTION ENTRANCE / EXIT
SCALE: NOT TO SCALE



NOTE:

FUELING SHALL BE PERFORMED IN A DESIGNATED AREA, AWAY FROM COURSES. ABSORBENT CLEANUP MATERIAL SHALL BE ON SITE AND USED IMMEDIATELY IN THE EVENT OF A SPILL.

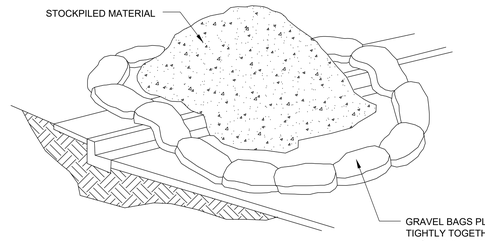
6 VEHICLE/EQUIPMENT FUELING
SCALE: NOT TO SCALE



NOTES:

1. CONSTRUCT THE SILT FENCE ALONG A LEVEL CONTOUR.
2. SILT FENCES SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED.
3. PROVIDE SUFFICIENT ROOM FOR RUNOFF TO POND BEHIND THE FENCE AND ALLOW SEDIMENT REMOVAL EQUIPMENT TO PASS BETWEEN THE SILT FENCE AND TOE OF SLOPE OR OTHER OBSTRUCTIONS. ABOUT 1200 SQ. FT. OF PONDING AREA SHALL BE PROVIDED FOR EVERY ACRE DRAINING TO THE FENCE.
4. TURN THE ENDS OF THE FILTER FENCE UPHILL TO PREVENT STORMWATER FROM FLOWING AROUND THE FENCE.
5. LEAVE AN UNDISTURBED OR STABILIZED AREA IMMEDIATELY DOWNSLOPE FROM THE FENCE.
6. DO NOT PLACE IN LIVE STREAM OR INTERMITTENTLY FLOWING CHANNELS.
7. WHEN STANDARD FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG. TIE WIRES OR HOG RINGS.

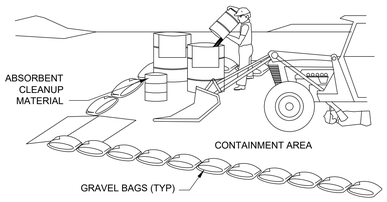
8 SILT FENCE
SCALE: NOT TO SCALE



NOTES:

1. DIRT AND OTHER CONSTRUCTION RELATED MATERIALS PLACED IN THE STREET OR ON OTHER IMPERVIOUS SURFACES MUST BE CONTAINED WITH SANDBAGS OR OTHER MEASURES TO PREVENT TRANSPORT TO THE STORMDRAIN SYSTEM.
2. ANY CONSTRUCTION MATERIAL STORED OR STOCKPILED ON-SITE SHALL BE PROTECTED FROM BEING TRANSPORTED BY THE FORCE OF WIND OR WATER.

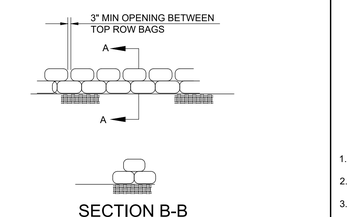
9 MATERIAL STORAGE
SCALE: NOT TO SCALE



NOTES:

1. LEAKING VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED ON-SITE. EQUIPMENT AND VEHICLES SHALL BE INSPECTED FREQUENTLY FOR LEAKS AND SHALL BE REPAIRED IMMEDIATELY. CLEAN UP SPILLS AND LEAKS PROMPTLY WITH ABSORBENT; DO NOT FLUSH WITH WATER.
2. VEHICLES AND EQUIPMENT SHALL BE MAINTAINED AND REPAIRED ON-SITE ONLY IN DESIGNATED AREAS. PREVENT RUN-ON AND RUN-OFF FROM DESIGNATED AREAS. CONTAINMENT DEVICES SHALL BE PROVIDED AND AREAS SHALL BE COVERED IF NECESSARY.
3. DESIGNATE ON-SITE VEHICLE AND EQUIPMENT MAINTENANCE AREAS, WAY FROM STORM DRAIN INLETS AND WATERCOURSES.
4. ALWAYS USE SECONDARY CONTAINMENT, SUCH AS A DRAIN PAN OR DROP CLOTH, TO CATCH SPILLS AND LEAKS WHEN REMOVING OR CHANGING FLUIDS.
5. LEGALLY DISPOSE OF USED OILS, FLUIDS, AND LUBRICANTS.
6. PROVIDE SPILL CONTAINMENT DIKES OR SECONDARY CONTAINMENT AROUND STORED OIL, FUEL, AND CHEMICAL DRUMS.
7. MAINTAIN ON ADEQUATE SUPPLY OF ABSORBENT SPILL CLEANUP MATERIALS IN DESIGNATED AREA.

10 EQUIPMENT REPAIR / MAINTENANCE
SCALE: NOT TO SCALE

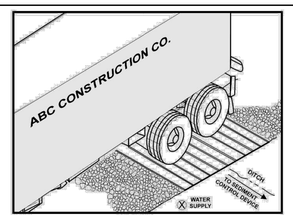


SECTION A-A

2 GRAVEL BAG CHECKDAM
SCALE: NOT TO SCALE

SECTION B-B

3 GRAVEL BAG DETAIL
SCALE: NOT TO SCALE



NOTES:

1. THE TIRE WASH REQUIRES A SUPPLY OF WASH WATER.
2. A TURNOUT OR DOUBLEWIDE EXIT IS REQUIRED TO AVOID HAVING ENTERING VEHICLES DRIVE THROUGH THE WASH AREA.
3. DO NOT USE WHERE WET TIRE TRUCKS LEAVING THE SITE LEAVE THE ROAD DANGEROUSLY SLICK.
4. INCORPORATE WITH A STABILIZED CONSTRUCTION ENTRANCE/EXIT.
5. CONSTRUCT ON LEVEL GROUND WHEN POSSIBLE, ON A PAD OF COARSE AGGREGATE GREATER THAN 3 IN. BUT SMALLER THAN 6 IN. A GEOTEXTILE FABRIC SHOULD BE PLACED BELOW THE AGGREGATE.
6. WASH RACK SHOULD BE DESIGNED AND CONSTRUCTED/MANUFACTURED FOR ANTICIPATED TRAFFIC LOADS.

7 ENTRANCE/OUTLET TIRE WASH
SCALE: NOT TO SCALE

OWNER STATEMENT OF UNDERSTANDING:

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, I HAVE READ AND UNDERSTAND THE REQUIREMENTS TO CONTROL STORM WATER POLLUTION FROM SEDIMENTS, EROSION, AND CONSTRUCTION MATERIALS, AND I CERTIFY THAT I WILL COMPLY WITH THESE REQUIREMENTS. I, OR MY REPRESENTATIVE, CONTRACTOR, DEVELOPER, OR ENGINEER, WILL MAKE CERTAIN THAT ALL BMP SHOWN ON THIS PLAN WILL BE FULLY IMPLEMENTED, AND ALL EROSION CONTROL DEVICES WILL BE KEPT CLEAN AND FUNCTIONING. PERIODIC INSPECTIONS OF THE BMPs WILL BE CONDUCTED AND A CURRENT LOG, SPECIFYING THE EXACT NATURE OF THE INSPECTION AND ANY REMEDIAL MEASURES, WILL BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES AND WILL BE AVAILABLE FOR THE REVIEW BY THE BUILDING OFFICIAL.

AS THE PROJECT OWNER OR AUTHORIZED AGENT OF THE OWNER, "I CERTIFY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INFORMATION SUBMITTED IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT SUBMITTING FALSE AND/OR INACCURATE INFORMATION, FAILING TO UPDATE THE LOCAL SWPPP TO REFLECT CURRENT CONDITIONS, OR FAILING TO PROPERLY AND/OR ADEQUATELY IMPLEMENT THE LOCAL SWPPP MAY RESULT IN REVOCATION OF GRADING AND/OR OTHER PERMITS OR OTHER SANCTIONS PROVIDED BY THE LAW."

OWNER OR AUTHORIZED REPRESENTATIVE (PERMITEE) _____ DATE _____

11 STATEMENT UNDERSTANDING
SCALE: NOT TO SCALE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL ★ STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

REGISTERED PROFESSIONAL ENGINEER
VIRGILIO C. YABSON
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

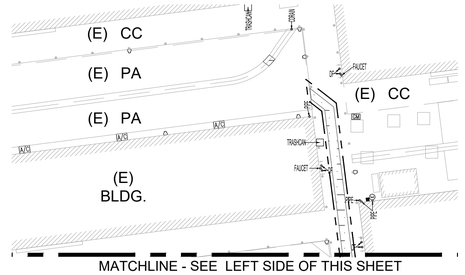
No.	Rev. Date	Description

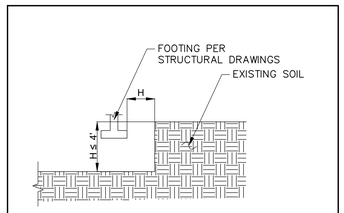
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DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
EROSION CONTROL DETAILS

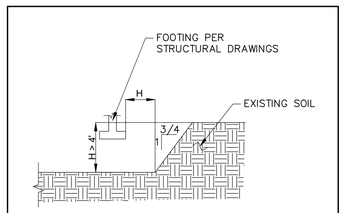
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C-6.2







TEMPORARY EXCAVATION FOR H ≤ 4'
NOT TO SCALE

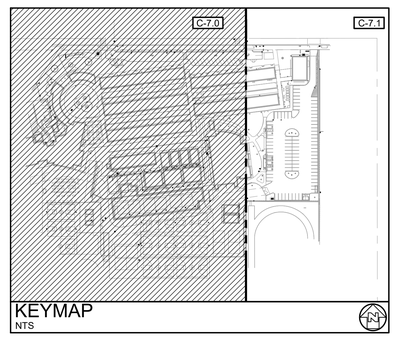


TEMPORARY EXCAVATION FOR H > 4'
NOT TO SCALE

OVER EXCAVATION LEGENDS:

REMOVE UNDOCUMENTED FILL SOIL ENCOUNTERED FULL DEPTH UNDER THE OBSERVATION AND CONFIRMATION BY THE GEOTECHNICAL CONSULTANT. THE LATERAL EXTENT OF REMOVAL SHOULD BE TO A MINIMUM DISTANCE EQUAL TO THE DEPTH OF UNDOCUMENTED FILL DISTURBED SOILS ENCOUNTERED OR TWO (2) FOOT, WHICHEVER IS GREATER.

OVEREXCAVATE AND REMOVE TO A MINIMUM DEPTH OF FIVE (5) FEET BELOW EXISTING OR FINISH GRADE, WHICHEVER IS LOWER, AND FIVE (5) FEET LATERALLY BEYOND THE BUILDING FOOTPRINT AND REPLACED WITH PROPERLY COMPACTED FILL SUCH THAT THE BUILDING FOUNDATIONS ARE SUPPORTED ON A RE-ENGINEERED, COMPETENT FILL LAYER.



KEYMAP
NTS

OVEREXCAVATION PLAN

20 10 0 20 40
GRAPHIC SCALE
SCALE: 1" = 20'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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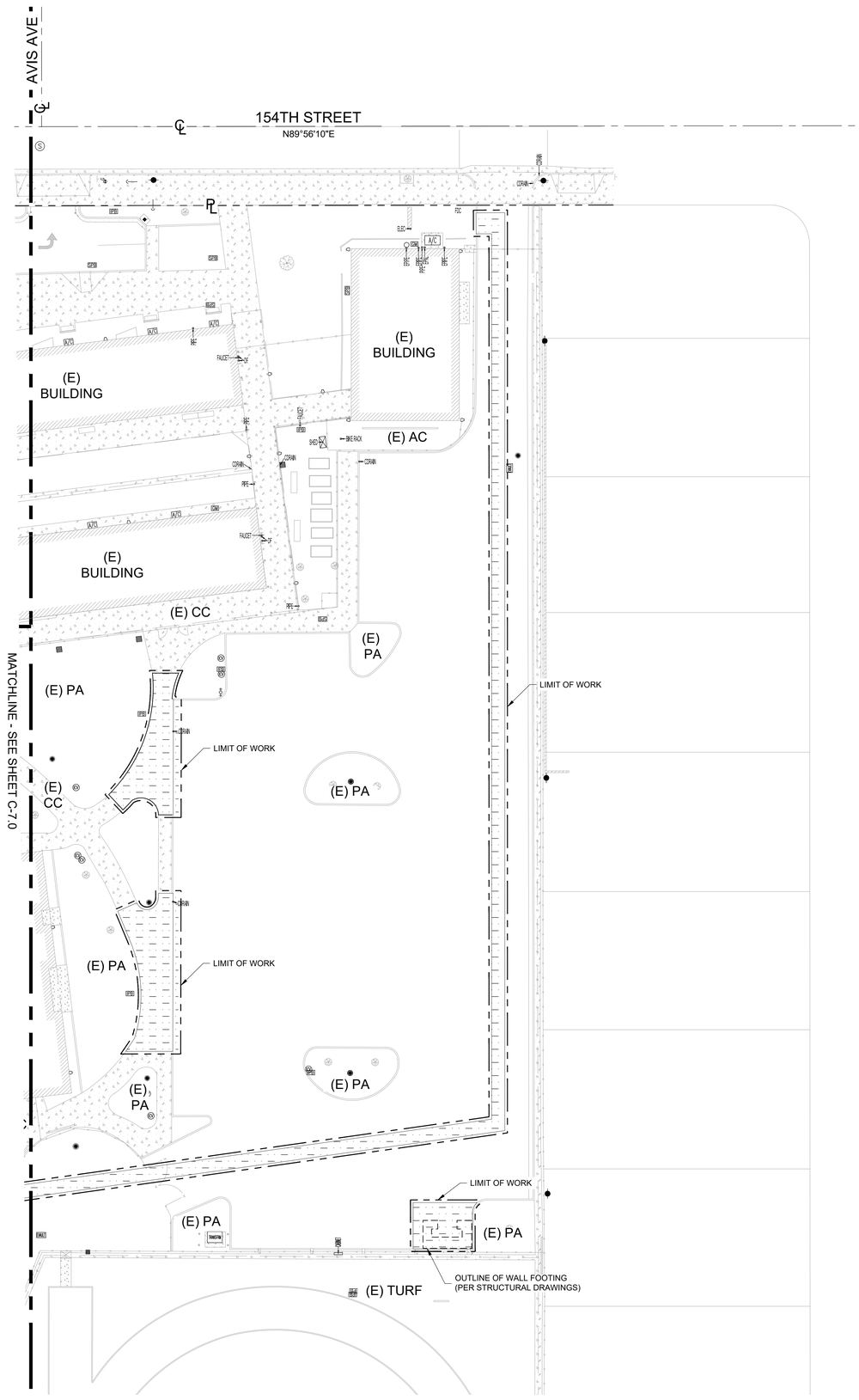
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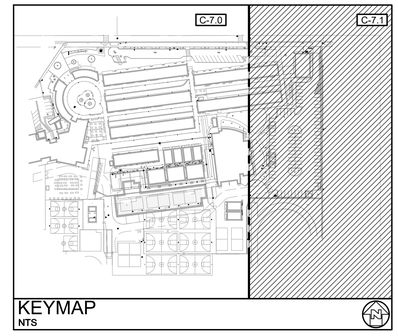
JOB NO: 22029.01
DATE:
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:
SHEET DESCRIPTION:
OVEREXCAVATION PLAN
SHEET NO:

C-7.0



OVER EXCAVATION LEGENDS:

REMOVE UNDOCUMENTED FILL SOIL ENCOUNTERED FULL DEPTH UNDER THE OBSERVATION AND CONFIRMATION BY THE GEOTECHNICAL CONSULTANT. THE LATERAL EXTENT OF REMOVAL SHOULD BE TO A MINIMUM DISTANCE EQUAL TO THE DEPTH OF UNDOCUMENTED FILL DISTURBED SOILS ENCOUNTERED OR TWO (2) FOOT, WHICHEVER IS GREATER.



OVEREXCAVATION PLAN

20 10 0 20 40

GRAPHIC SCALE

SCALE: 1" = 20'

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

MCA ENGINEERS INC
CIVIL • STRUCTURAL
1041 S. Garfield Avenue, Suite 210
Alhambra, CA 91801
Tel. 323.729.6098
Fax. 323.729.6043

REGISTERED PROFESSIONAL ENGINEER
VIRGIL I. O. CARLSON
No. C36079
Exp. 6/30/26
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

4110 W 154TH ST.
LAWNDALE CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01

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SHEET DESCRIPTION:

OVEREXCAVATION PLAN

SHEET NO:

C-7.1



1. SEE CIVIL PLANS CD-1.0 AND CD-1.1 FOR MORE DEMO INFO

GENERAL NOTES

SD001	SAWCUT AND REMOVE PORTION OF (E) NON-COMPLIANT CONCRETE PAVING. SEE CD-1.0 AND CD-1.1 FOR LIMITS
SD016	PREPARE (E) A.C. PAVING FOR SLURRY COAT
SD019	REMOVE (E) CHAINLINK FENCE MESH, FENCE POST(S), FOOTING(S), ALL ASSOCIATED ACCESSORIES AND ALL PLANTING ALONG FENCE LINE
SD030	REMOVE (E) GRATE AND CATCH BASIN
SD031	REMOVE (E) PLANTING, REROUTE (E) IRRIGATION, CLEARING AND GRUBBING AS REQUIRED TO INSTALL NEW CONCRETE WALK PER RENOVATION PLANS
SD044	REMOVE (E) ACCESSIBLE METAL PARKING SIGNAGE AND ANY ASSOCIATED PARTS. IF POST MOUNTED REMOVE POST
SD045	SAWCUT AND REMOVE PORTION OF (E) NON-COMPLIANT A.C. PAVING. SEE CIVIL PLANS FOR LIMITS
SD069	REMOVE (E) COURT ACCESSORIES AND REMOVE STRIPPING WHERE REQUIRED PER RENOVATION PLANS.
SD070	REMOVE (E) GRASS PER PLANS AND PREPARE FOR NEW CONCRETE OR AC PAVING.
SD071	(E) RELOCATABLES TO BE REMOVED. PREPARE FOR NEW CONC. POUR.
SD072	(E) RELOCATABLES TO BE REMOVED RIGHT AFTER THE COMPLETION OF CONSTRUCTION AND OCCUPY OF THIS PROJECT.
SD074	REMOVE (E) CONCRET DRAINAGE CHANNEL. SEE CD-1.0 AND CD-1.1 FOR MORE INFO.
SE062	(E) PARKING TO REMAIN PREPARE FOR (N) STRIPING PER RENOVATION PLANS.
SE063	(E) CHAINLINK FENCING TO BE PROTECTED AND REMAIN IN PLACE.

KEYNOTE LEGEND

- OUTLINE OF NEW BUILDING
- EXISTING BUILDING(S) NOT PART OF THIS CONRACT
- EXISTING CONC. PAVING TO REMAIN
- EXISTING ASPHALT PAVING TO BE REMOVED
- EXISTING CONCRETE PAVING TO BE REMOVED
- EXISTING LANDSCAPE TO BE REMOVED
- LIMIT OF WORK LINE
- DASHED LINE REFLECTS ITEMS TO BE REMOVED

SITE DEMOLITION PLAN 1" = 30'-0" | 1 | SITE DEMOLITION LEGEND

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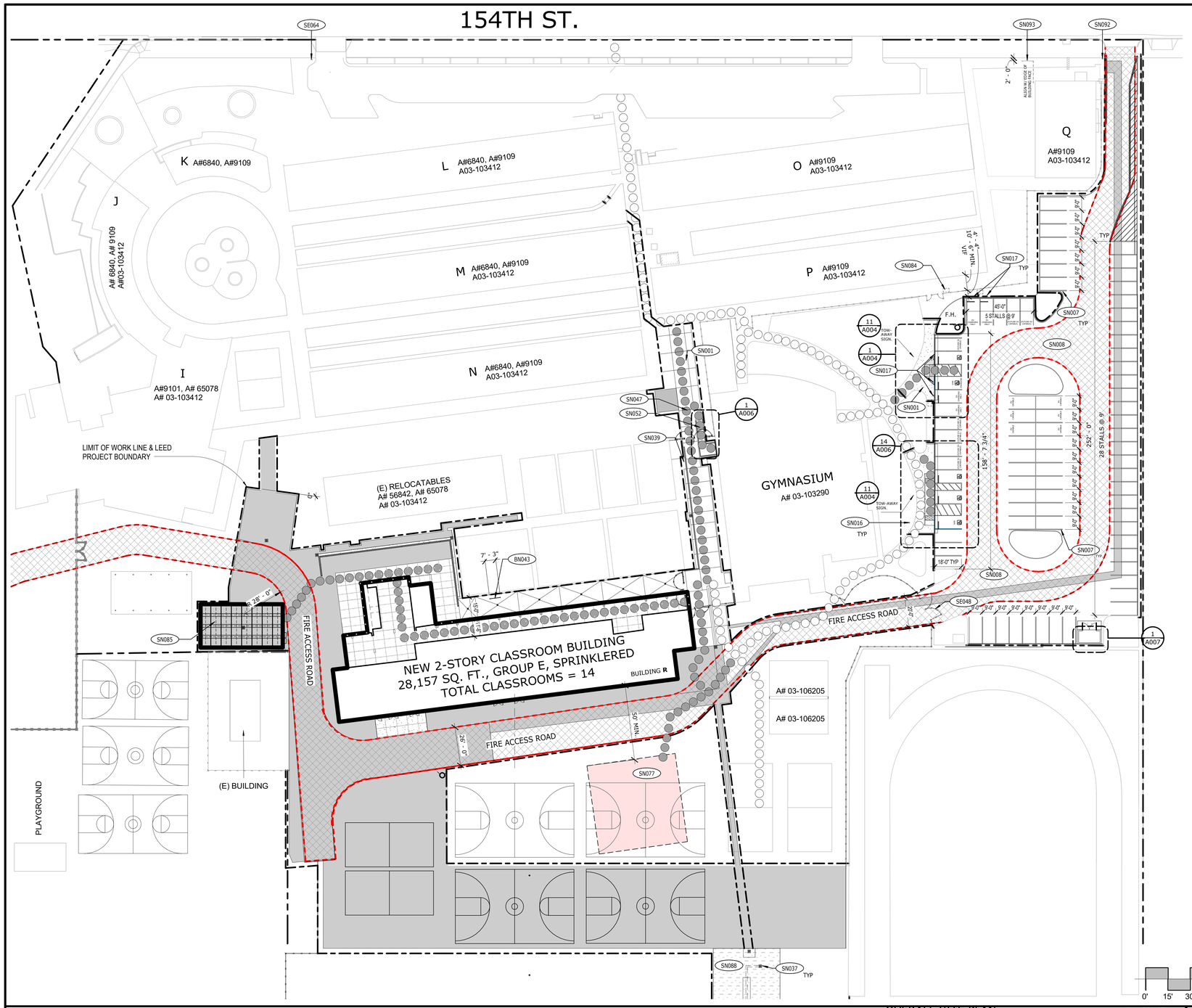
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ENGINEER:	

SHEET DESCRIPTION:
ENLARGED DEMO PLAN

SHEET NO:

D001



OVERALL SITE PLAN

1" = 30'-0" 1

KEYNOTES

BN043	FLOOR MOUNTED BIKE RACK. SEE DETAIL 15/A004.
SE048	(E) GATE/FENCES POSTS TO BE PROTECTED IN PLACE.
SE064	(E) TOW AWAY SIGNAGE TO REMAIN, PROTECT IN PLACE
SN001	PROVIDE CONCRETE PAVING PER DETAILS 7, 10, 15 AND 16/A002. PAVING THICKNESS PER C-2.0 AND C-2.1.
SN007	PAINT STANDARD STALL PARKING LOT STRIPING. SEE DETAIL 9/A004
SN008	APPLY SLURRY COAT OVER (E) A.C. PAVING FOR THE ENTIRE PARKING LOT. TYP.
SN016	PROVIDE ACCESSIBLE POST MOUNTED SIGNAGE W/ VAN SIGN INCLUDED. SEE DETAIL 3/A004
SN017	PROVIDE ELECTRIC VEHICLE CHARGING STATION SIGN PER DETAIL 2/A007. MOUNT ON SURFACE MOUNTED POST PER 2/A007
SN037	PROVIDE GRATE FLUSH W/ GRADE. GRATE SHALL BE INSTALLED SO ELONGATED OPENINGS IN SURFACE ARE PLACED PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL. REFER TO C-2.0 AND C-2.1 FOR MORE INFO.
SN039	PROVIDE CONCRETE V-GUTTER PER CIVIL PLANS
SN047	PROVIDE CONC SLOPED WALK PER SHEET C-2.0
SN052	PROVIDE CONCRETE RAMP AND HANDRAIL SYSTEM SEE DETAIL 3/A006. REFER TO CIVIL PLANS FOR EXTENT OF RAMP REQUIREMENTS
SN077	MIN 3,440 SF OF DISPERSAL AREA, MIN 50' FROM ANY BUILDING PER CBC SECT. 1028.5.
SN084	PROVIDE 30"X48" MIN REFUGE AREA.
SN085	SLOPE (N) SHADE STRUCTURE AND SOLAR PANELS TOWARD THE SOUTH TO MAXIMIZE SOLAR EXPOSURE, REFER TO 9/A005, S2-2 & E101
SN088	NEW VEGETATED SWALVE PER C-2.0
SN092	(N) TOW AWAY SIGNAGE PER 11/A004
SN093	(N) PROJECT IDENTIFICATION SIGNAGE PER 16/A004

SITE RENOVATION LEGEND

- EARTH/LANDSCAPE
- EXISTING BUILDING(S) NOT PART OF THIS CONRACT
- NEW BUILDINGS
- NEW ASPHALT REFER TO 15/A002, C-2.0, C-2.1
- (N) CONCRETE PAVING
- (N) GRASS
- LIMIT OF WORK
- PROPERTY LINE
- FIRE LANE
- PATH OF TRAVEL
- EXISTING PATH OF TRAVEL: A03-103412, A03-106205
- FIRE ACCESS ROAD
- NEW CONC. PAVING W/ CONTROL AND EXPANSION JOINTS SEE 16,12,8/A002
- SAFETY DISPERSAL AREA

PARKING TABULATION

PARKING LOT 'P'

STANDARD STALLS:	64
VAN ACCESSIBLE STALLS (11B-208.2.4):	01
STANDARD ACCESSIBLE STALLS (TABLE 11B-208.2):	03
ACCESSIBLE EV CHARGING STATIONS (CG TABLE 5.106.5.3.1 & CBC TABLE 11B-228.3.2.1):	01
STANDARD EV CHARGING STATIONS (CG TABLE 5.106.5.3.1 & CBC TABLE 11B-228.3.2.1):	03
EV CAPABLE STALLS (CG TABLE 5.106.5.3.1):	13
TOTAL:	81

REQUIRED EV CHARGING STATIONS PER CALGREEN CODE TABLE 5.106.5.3.3
- TOTAL NUMBER OF PARKING SPACES IS 76-100 = 4 REQUIRED EV CHARGING SPACES.
REQUIRED ACCESSIBLE EV CHARGING STATIONS PER CBC TABLE 11B-228.3.2.1
- TOTAL NUMBER OF EV CHARGING STATIONS IS 1-5 = 1 VAN ACCESSIBLE

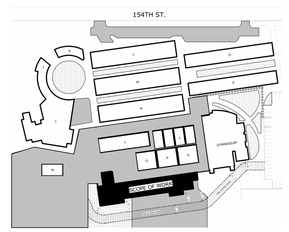
REQUIRED BICYCLE PARKING - PER CAL GREEN CODE SECTION 5.106.4.2
- STUDENT BICYCLE PARKING = 8 BIKE CAPACITY RACK PER NEW BUILDING
- STAFF BICYCLE PARKING = 2 PERMANENT, SECURE STAFF BIKE RACKS PER NEW BUILDING

GENERAL NOTES

1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. ALL ITEMS SHOWN OR NOTED ARE NEW, UNLESS INDICATED OTHERWISE.
3. SEE SHEET ***F001*** FOR FIRE ACCESS PLAN AND CODE ANALYSIS
4. PROTECT AND SAFEGUARD FROM DAMAGE ALL EXISTING FINISHES AND WORK TO REMAIN.
5. PROVIDE TEMPORARY 8' HIGH CHAIN LINK FENCE ENCLOSURES WITH LOCKABLE GATES AS REQUIRED FOR CONSTRUCTION ACCESS AT CONTRACTOR'S STAGING AREA AND AROUND ALL CONSTRUCTION SITES AS DICTATED BY THE PHASING SCHEDULE.
6. WHERE REMOVAL OF CONCRETE WALKS, MOWSTRIPS, CURBS AND GUTTERS IS REQUIRED TO INSTALL UNDERGROUND UTILITIES, REMOVE THE CONCRETE WORK TO THE NEAREST EXISTING EXPANSION OR CONTROL JOINT (SAWCUT IF REQUIRED). MOWSTRIPS, CURBS AND GUTTERS MAY BE REMOVED IN MINIMUM LENGTHS OF 6' IF THE DISTANCE BETWEEN EXISTING JOINTS IS 12' OR MORE. REPLACE REMOVED WORK WITH REINFORCED CONCRETE TO MATCH ADJACENT EXISTING WORK IN PROFILE, JOINT LAYOUT AND FINISH.
7. COORDINATE THE REMOVAL, RELOCATION OR MODIFICATION OF EXISTING IRRIGATION LINES WITH THE DISTRICT PRIOR TO ANY TRENCHING, CLEARING AND GRUBBING, OR OTHER SITE EXCAVATIONS REQUIRED FOR NEW CONSTRUCTION.
8. RUN-OFF FROM PETROLEUM PRODUCTS, LIME AND MORTAR, SOIL STERILANTS, AND THE WASHING OF EQUIPMENT USED TO APPLY THESE MATERIALS, IS PROHIBITED WITHIN PLANTED AREAS.
9. CONTRACTOR SHALL MAINTAIN EXISTING PLANTING WITHIN THE JOB SITE FENCE ENCLOSURE DURING DEMOLITION AND CONSTRUCTION PHASES. EXISTING IRRIGATION SYSTEMS SHALL EITHER REMAIN OPERATIONAL FOR CONTRACTOR'S USE OR CONTRACTOR SHALL HAND-WATER EXISTING PLANT MATERIALS AT LEAST TWICE A WEEK. TURF SHALL BE MOWED AT LEAST ONCE EVERY TWO WEEKS.
10. FOR SITE REPAIR WORK NOT SHOWN ON ARCHITECTURAL PLANS, SEE CIVIL, LANDSCAPE, ELECTRICAL, PLUMBING AND MECHANICAL SITE PLANS.
11. REPAIR EXISTING IRRIGATION SYSTEMS DAMAGED DURING THE EXECUTION OF THIS CONTRACT. REPLACE PLANT MATERIALS DAMAGED, DECLINING IN HEALTH, SUFFERING DIEBACK, THAT HAVE LOST FORM AND SIZE, OR THAT DIE DURING THE CONSTRUCTION PERIOD, WITH THE SAME SPECIE OF EQUAL OR GREATER SIZE.
12. REPAIR ASPHALT PARKING LOTS, SPEED BUMPS AND PAINTED CROSSWALKS DAMAGED BY THE EXECUTION OF THIS CONTRACT TO ORIGINAL OR BETTER CONDITION. REPAINT CROSSWALKS AND SPEED BUMP STRIPING THEIR FULL LENGTHS ACROSS ROADWAYS.
13. PROVIDE SPLASH BLOCKS AT ALL DOWNSPOUTS IN PLANTED AREAS.
14. MAXIMUM SLOPE ON NON-RAMPED CONCRETE IS 5% IN THE DIRECTION OF TRAVEL AND 2% CROSS-SLOPE.
15. PROVIDE IRRIGATION SLEEVES UNDER HARDSCAPE AT "PLANTED AREAS" (WITHIN PROJECT LIMITS) - COORDINATE WITH DISTRICT.
16. TREES, SHRUBS, TURF, AND IRRIGATION ARE BY THE DISTRICT. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL COORDINATE PLANTING AND IRRIGATION WITH DISTRICT.
17. FOR WATER SERVICE DURING CONSTRUCTION, CONTRACTOR SHALL OBTAIN TEMPORARY WATER METER FROM THE CITY FOR CONNECTION TO EXIST. FIRE HYDRANT.
18. ALL UNCERTIFIED (E) P.O.T. IN THE PROJECT SCOPE SHALL NOT EXCEED 5% MAXIMUM RUNNING SLOPE AND 2% MAXIMUM CROSS SLOPE UNLESS OTHERWISE NOTED. MAXIMUM SLOPE SHALL NOT EXCEED 2% IN ALL DIRECTIONS WHERE P.O.T. TRAFFIC FLOW IS MULTIDIRECTIONAL. AT CHANGE OF DIRECTIONS, OR IN ANY ACCESSIBLE SPACE OR AREA WITH SLOPES TO DRAINS OR CATCH BASINS, ETC. CONTRACTOR IS TO VERIFY P.O.T. SHOWN IS IN COMPLIANCE, SEE NOTE 19 BELOW.
19. ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED, WILL BE REMOVED, OR MODIFIED TO COMPLY WITH CBC SECTION 11B-402 UNDER THIS PROJECT. CONTRACTOR TO NOTIFY ARCHITECT IF ANY BARRIERS ARE DISCOVERED PRIOR TO PROCEEDING WITH WORK.
20. PATH OF TRAVEL (P.O.T.) AS INDICATED IS A BARRIER FREE ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEEDS 1/4" VERTICAL AND IS AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS-SLOPE DOES NOT EXCEEDS 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED (11B-403.3). (POT) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307.2) ARCHITECT TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 11B-206.
21. GRATINGS LOCATED IN THE SURFACE OF ANY PEDESTRIAN WAY IN THE PATH OF TRAVEL, GRID/OPENINGS IN GRATINGS SHALL BE LIMITED TO 1/2" MAXIMUM CLEAR IN THE DIRECTION OF TRAFFIC FLOW. IF SUCH CONDITION OCCURS, PROVIDE MANUFACTURERS CUT-SHEETS REVIEW.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:
THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS. DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT."

KEYMAP



STATE:

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LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

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NEW 2-STORY CLASSROOM BUILDING
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LAWNDALE, CA 90260

CLIENT:

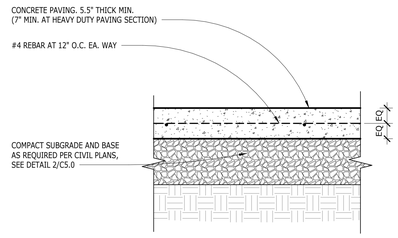
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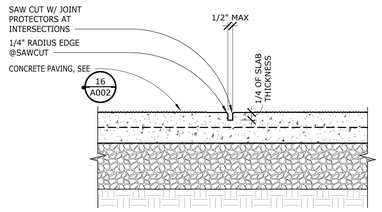
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A001



NOTES:

1. SEE PLANS FOR ADDITIONAL INFORMATION
2. FINISHING OF CONCRETE SHALL BE DONE AFTER SURFACE BLEED WATER HAS EVAPORATED.
3. CONCRETE SHALL HAVE AIR ENTERTAINMENT OF 2% TO 3% BY VOLUME
4. MOISTEN SUB-GRADE PRIOR TO PLACING CONCRETE
5. FILLS SHALLS BE COMPACTED THROUGHOUT TO A MINIMUM RELATIVE COMPACTION OF 90%.

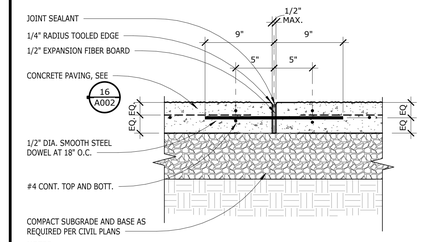
CONCRETE PAVING — 1 1/2" = 1'-0" — 16



NOTES:

1. SAWCUT CONTROL JOINTS ARE GENERALLY SPACE AT 10'-0" O.C. EA. WAY. JOINT SHALL NOT BE LESS THAN 5'-0".
2. SAWCUT JOINTS SHALL BE MADE IMMEDIATELY AFTER FINISHING OPERATION AND PRIOR TO DRYING SHRINKAGE. SAWCUT JOINTS SHALL BE MADE WITH "EARLY ENTRY" SAW EQUIPMENT

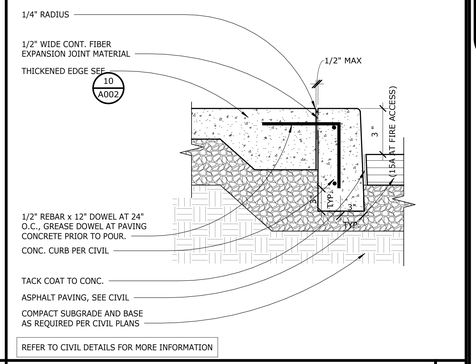
CONTROL JOINT — 1 1/2" = 1'-0" — 12



NOTES:

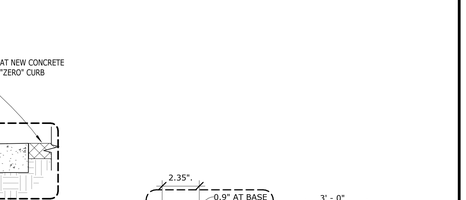
1. DOWELED CONSTRUCTION JOINT NOT TO EXCEED 15' O.C. U.N.O
2. DOWELS SHALL BE GREASED ON ONE SIDE TO PREVENT CONCRETE BOND
3. DOWELS SHALL BE HELD LEVEL AND PARALLEL TO ONE ANOTHER BY POSITIVE MECHANICAL MEANS
4. DOWEL SHALL BE SMOOTH CUT, NOT SHEARED

EXPANSION JOINT - TYP. — 1 1/2" = 1'-0" — 8



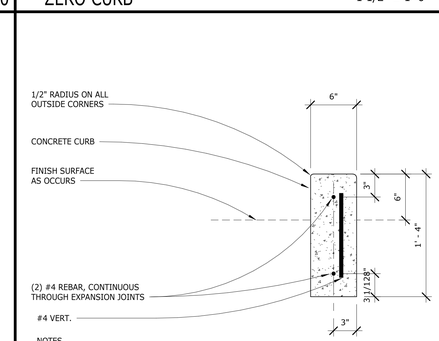
REFER TO CIVIL DETAILS FOR MORE INFORMATION

CONC. PAVING AT CURB — 1 1/2" = 1'-0" — 4



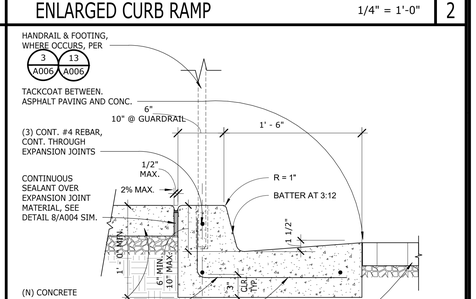
(N) A.C. PAVING TO (E) A.C. PAVING — 1" = 1'-0" — 15

EXP. JOINT AT BLDG OR WALL — 1 1/2" = 1'-0" — 11

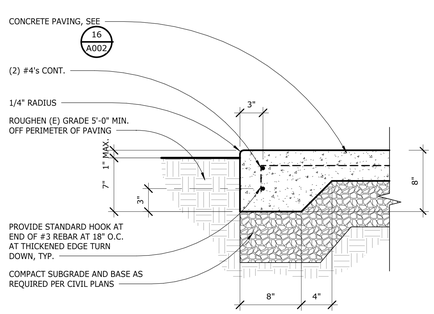


NOTE:
1)SAWCUT AND REMOVE EXISTING CONCRETE AT NEAREST JOINT
2) SURFACE 2% MAX. IN ALL DIRECTIONS

(N) CONCRETE TO (E) — 1 1/2" = 1'-0" — 7

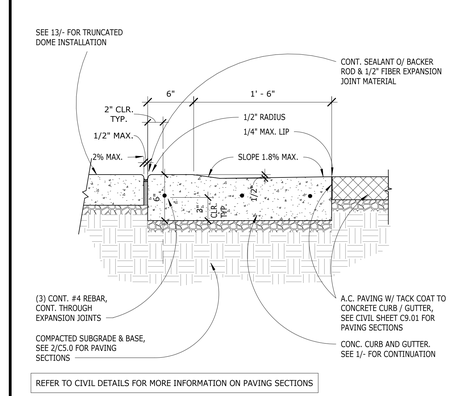


CONC. CURB AT SIDEWALK — 1 1/2" = 1'-0" — 3



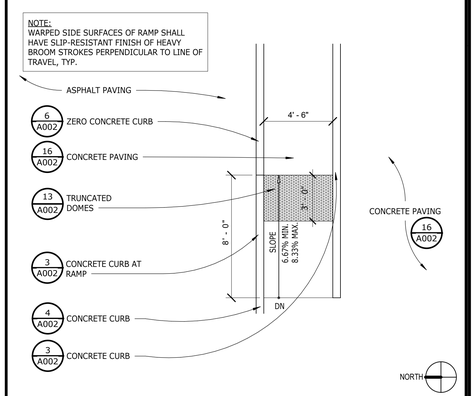
SEE CIVIL DWGS FOR REQUIRED THICKNESSES

THICKENED EDGE — 1 1/2" = 1'-0" — 10



REFER TO CIVIL DETAILS FOR MORE INFORMATION ON PAVING SECTIONS

ZERO CURB — 1 1/2" = 1'-0" — 6



ENLARGED CURB RAMP — 1/4" = 1'-0" — 2

NOTES:
1. WHEN USING DETECTABLE WARNING DOME TILE PRODUCTS; DEMONSTRATE THAT DOME SPACING WILL BE CONSISTENT AS SPECIFIED ACROSS TILE JOINTS WHEN THE PRODUCT IS INSTALLED. THE ACCEPTED RANGE FOR IN-LINE DETECTABLE WARNING DOMES IS 2.35" ON CENTER.

2. PROVIDE YELLOW COLOR #33538 PER FED STD 595B

DETECTABLE WARNING DOME SURFACE REQUIREMENTS

CAST IN PLACE DETECTABLE WARNING DOMES — 1" = 1'-0" — 13

NOTES

1. INSTALL 1/2" FIBER EXPANSION JOINTS AT 24'-0" MAX., INCLUDING ALL CURVES, TANGENTS, AND CORNERS.
2. SACK FINISH ALL EXPOSED SURFACES SMOOTH.

CONCRETE CURB (STRAIGHT) — 1 1/2" = 1'-0" — 5

CURB AND GUTTER — 1 1/2" = 1'-0" — 1

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LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

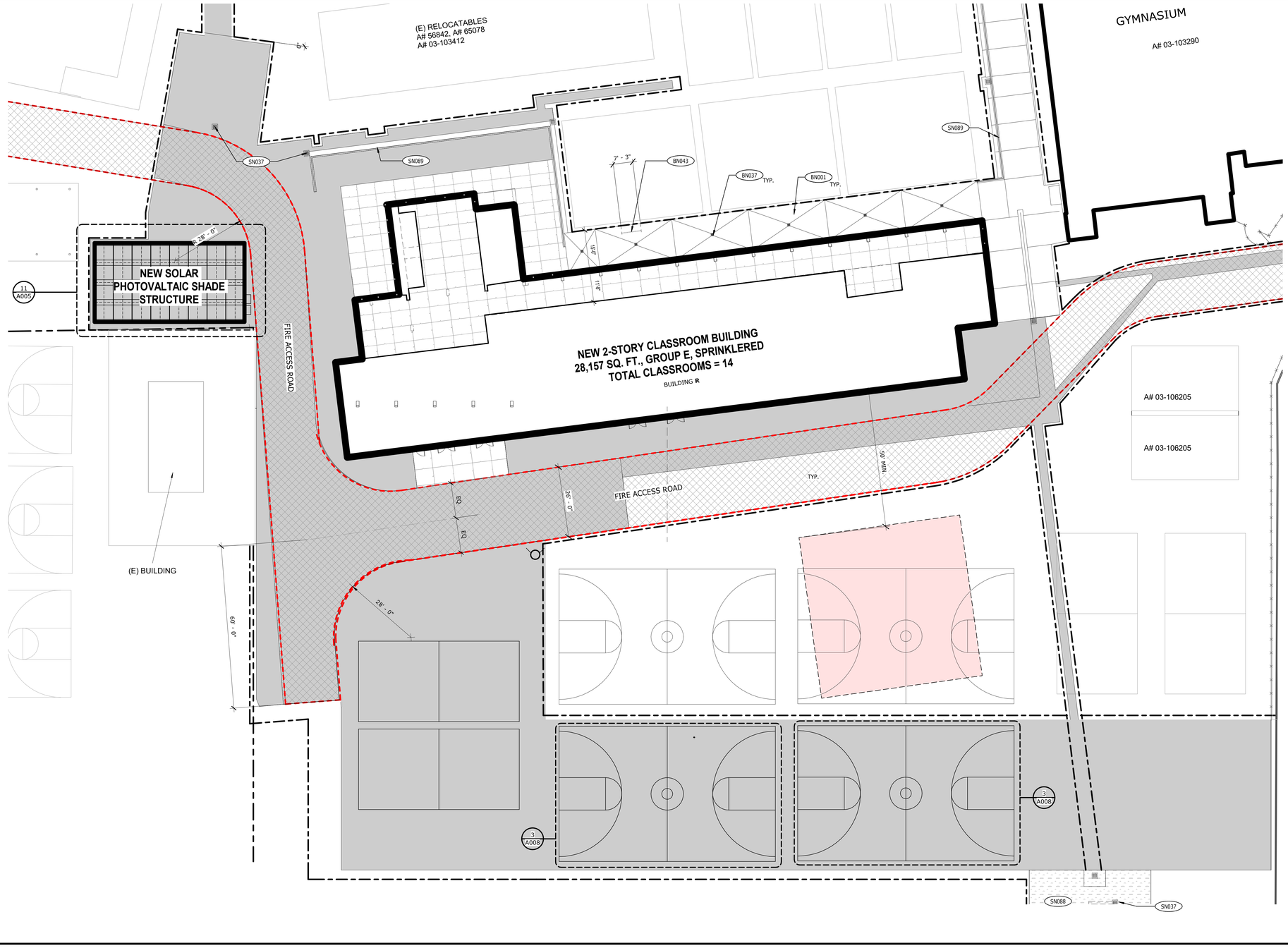
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: RR
CHECK: JG
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SITE DETAILS

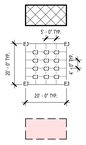
SHEET NO:

A002



SITE RENOVATION LEGEND

- EARTH/LANDSCAPE
- EXISTING BUILDING(S) NOT PART OF THIS CONRACT
- NEW BUILDINGS
- NEW ASPHALT REFER TO 15/A002, C-2.0, C-2.1
- (N) CONCRETE PAVING
- (N) GRASS
- LIMIT OF WORK
- PROPERTY LINE
- FIRE LANE
- PATH OF TRAVEL
- EXISTING PATH OF TRAVEL: A03-103412, A03-106205



- FIRE ACCESS ROAD
- NEW CONC. PAVING W/ CONTROL AND EXPANSION JOINTS SEE 16,12,8/A002
- SAFETY DISPERSAL AREA

KEYNOTE

BN001	CLASS A TPO ROOFING OVER 2 1/2" LW CONCRETE OVER 2" METAL DECK OVER R-30 BATT INSULATION, SEE SPEC SECTION 07 5416. TYPICAL FOR MAIN ROOF
BN037	ALUMINUM WINDOWS WITH SHOP-APPLIED FINISH, SEE SPEC AND COLOR SCHEDULE.
BN043	FLOOR MOUNTED BIKE RACK. SEE DETAIL 15/A004.
SN037	PROVIDE GRATE FLUSH W/ GRADE. GRATE SHALL BE INSTALLED SO ELONGATED OPENINGS IN SURFACE ARE PLACED PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL. REFER TO C-2.0 AND C-2.1 FOR MORE INFO.
SN088	NEW VEGETATED SWALVE PER C-2.0
SN089	NEW CONCRETE CURB WITH GUARDRAIL PER C-2.0

STATE:

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DATE: 10/24/2024

ARCHITECT:

architecture
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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

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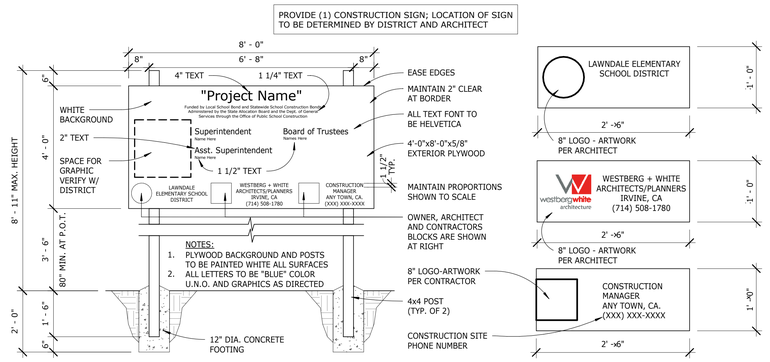
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DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

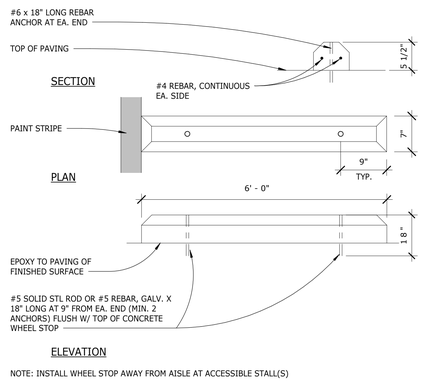
SHEET DESCRIPTION:
ENLARGED SITE PLAN

SHEET NO:

A003

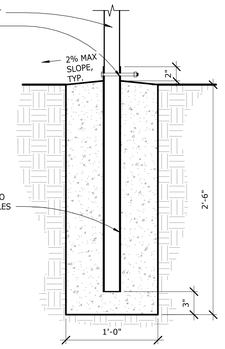


PROJECT IDENTIFICATION SIGN — 1/2" = 1'-0" — 16

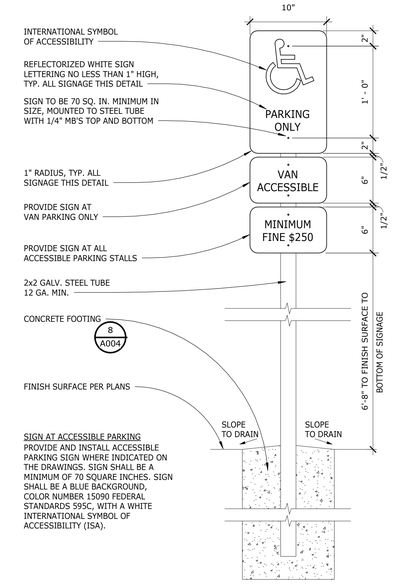


NOTE: INSTALL WHEEL STOP AWAY FROM AISLE AT ACCESSIBLE STALL(S)

CONC. WHEEL STOP — 1" = 1'-0" — 12



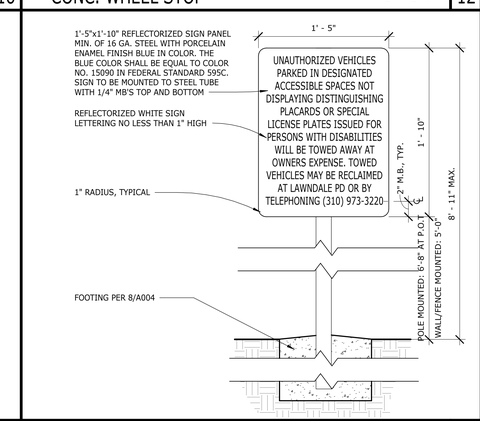
SIGN POST FOOTING — 1 1/2" = 1'-0" — 8



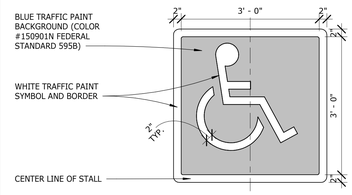
SIGN AT ACCESSIBLE PARKING
PROVIDE AND INSTALL ACCESSIBLE PARKING SIGN WHERE INDICATED ON THE DRAWINGS. SIGN SHALL BE A MINIMUM OF 70 SQUARE INCHES. SIGN SHALL BE A BLUE BACKGROUND, COLOR NUMBER 15090 FEDERAL STANDARDS 595C, WITH A WHITE INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA).

ACCESSIBLE PARKING SIGN — 1 1/2" = 1'-0" — 3

BICYCLE RACK — 3/4" = 1'-0" — 15



TOW-AWAY SIGN — 1 1/2" = 1'-0" — 11

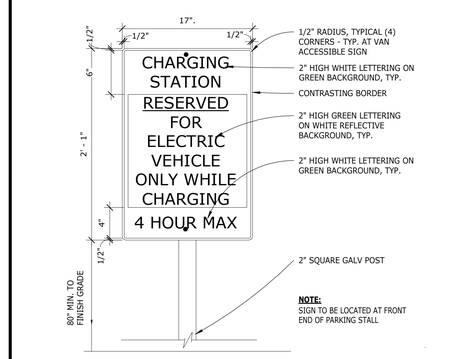


NOTE:
A 36 BY 36-INCH BLUE BACKGROUND COLOR #15090 IN FEDERAL STANDARD 595B WITH A WHITE INTERNATIONAL SYMBOL OF ACCESSIBILITY PAINTED ON THE PARKING SPACE SURFACE VISIBLE TO TRAFFIC ENFORCEMENT OFFICERS WHEN VEHICLES ARE PROPERLY PARKED IN THE SPACE.

THE PARKING SPACE SHALL BE OUTLINED OR PAINTED BLUE WITH THE INTERNATIONAL SYMBOL OF ACCESSIBILITY OUTLINE IN WHITE OR OTHER SUITABLE CONTRASTING COLOR.

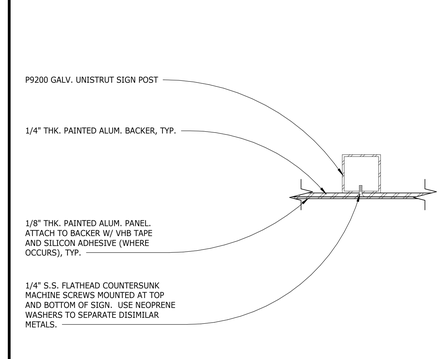
PROVIDE TWO (2) COATS OF TRAFFIC PAINT

ACCESS. PRK'G STALL SYMBOL — 3/4" = 1'-0" — 7

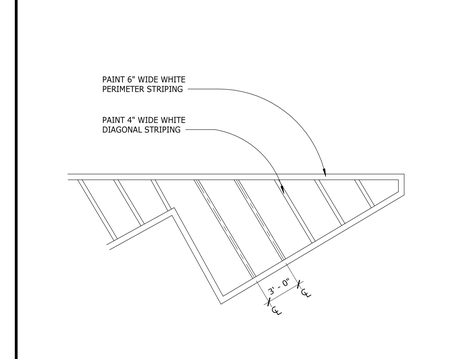


NOTE:
1. FOR INFORMATION REGARDING THE FOOTING REFER TO 8/A004

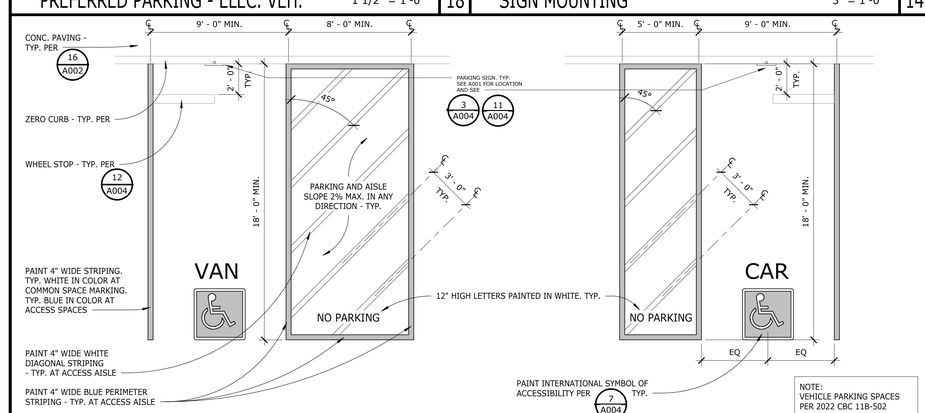
PREFERRED PARKING - ELEC. VEH. — 1 1/2" = 1'-0" — 18



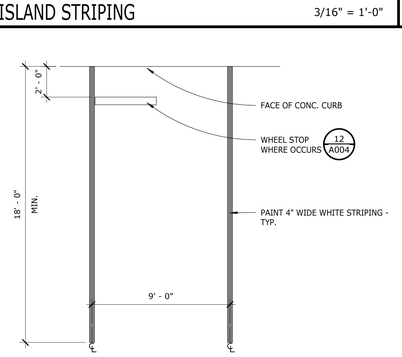
SIGN MOUNTING — 3" = 1'-0" — 14

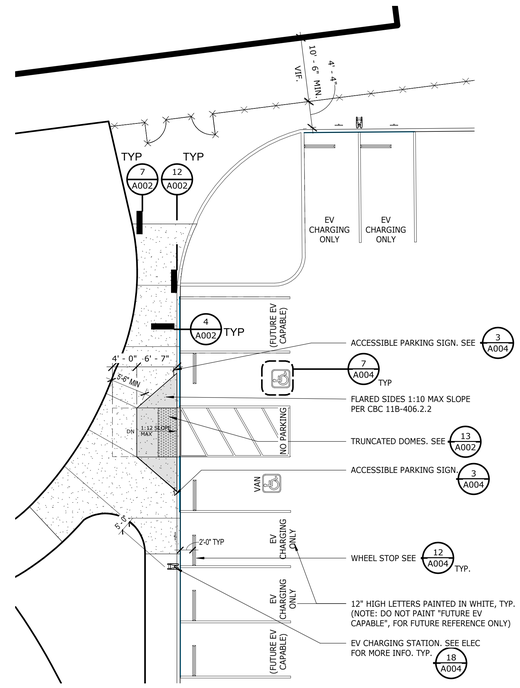


ISLAND STRIPING — 3/16" = 1'-0" — 10



TYPICAL ACCESSIBLE PARKING PLAN — 1/4" = 1'-0" — 9





ENLARGED PARKING PLAN — 1" = 10'-0" — 1

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LICENSED ARCHITECT — PAUL DENNIS WESTBERG — C-11045 EXP.9-2025 — STATE OF CALIFORNIA

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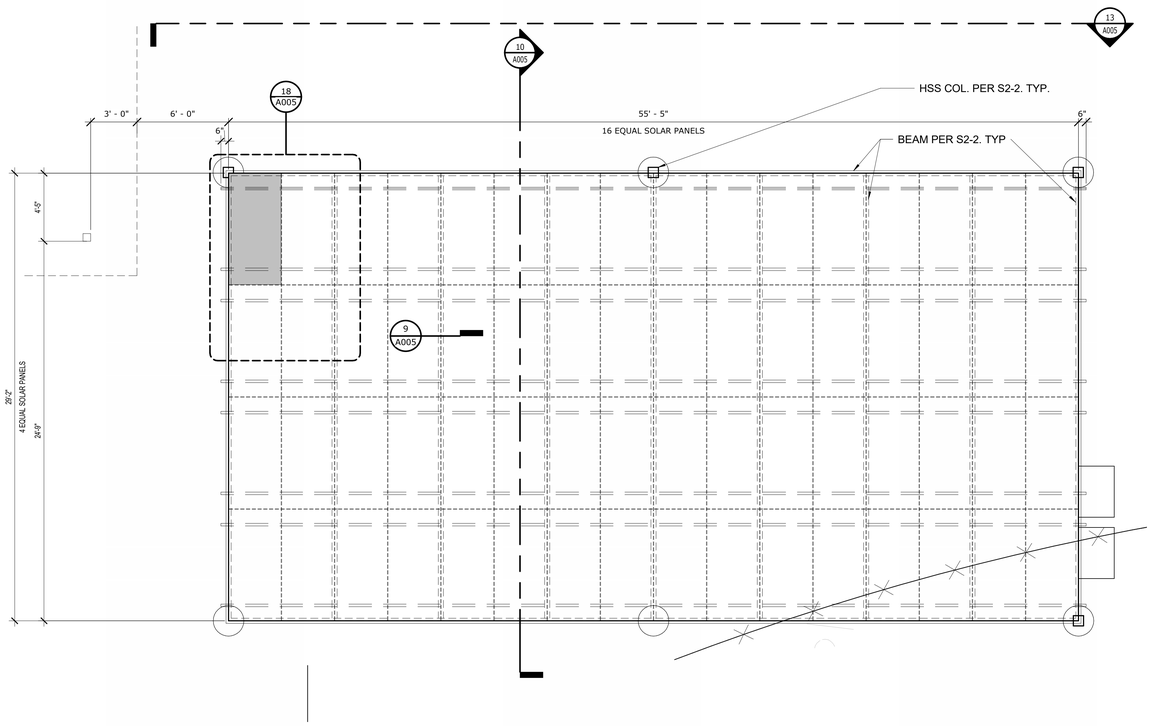
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN:
CHECK:
ARCHITECT: PDW
ENGINEER:

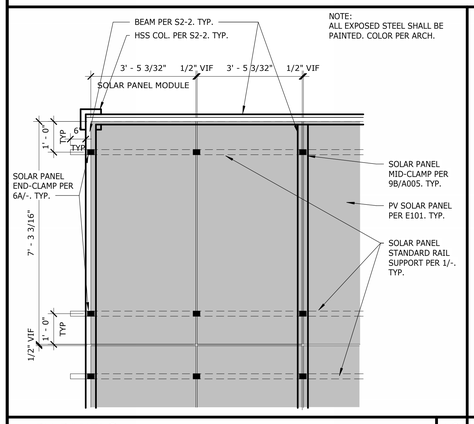
SHEET DESCRIPTION:
SITE DETAILS

SHEET NO:
A004

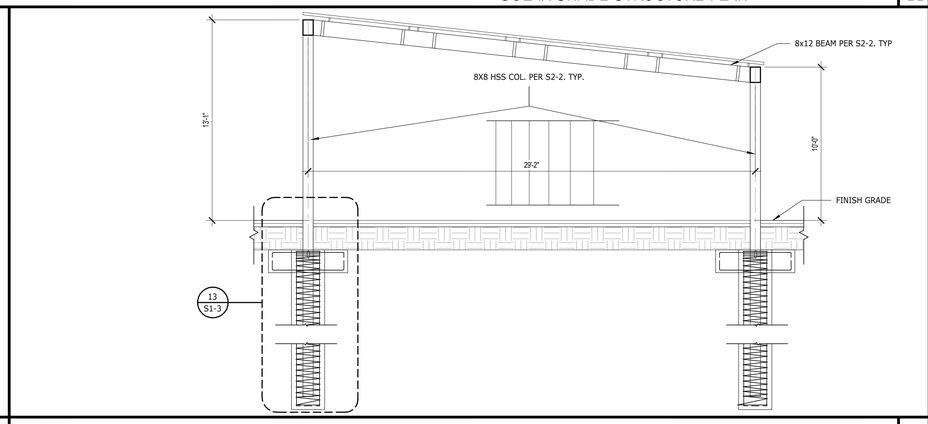
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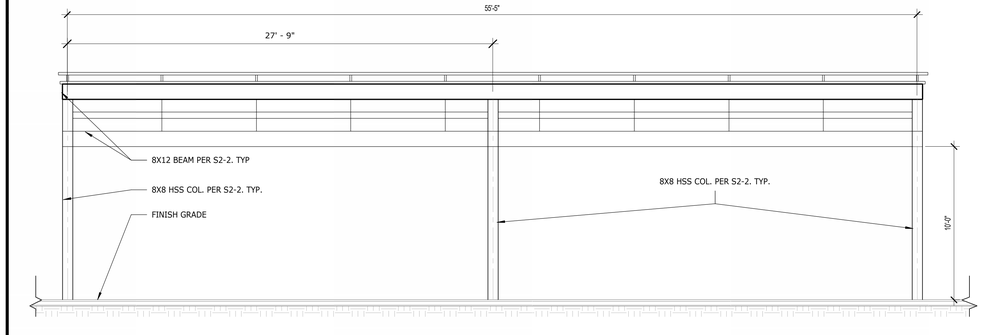
SOLAR SHADE STRUCTURE PLAN — 1/4" = 1'-0" — 11



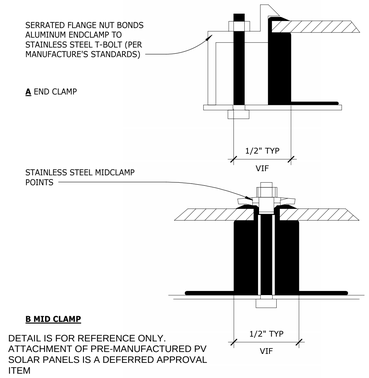
PV PANELS — 1/2" = 1'-0" — 18



SOLAR SHADE STRUCTURE SECTION — 1/4" = 1'-0" — 10

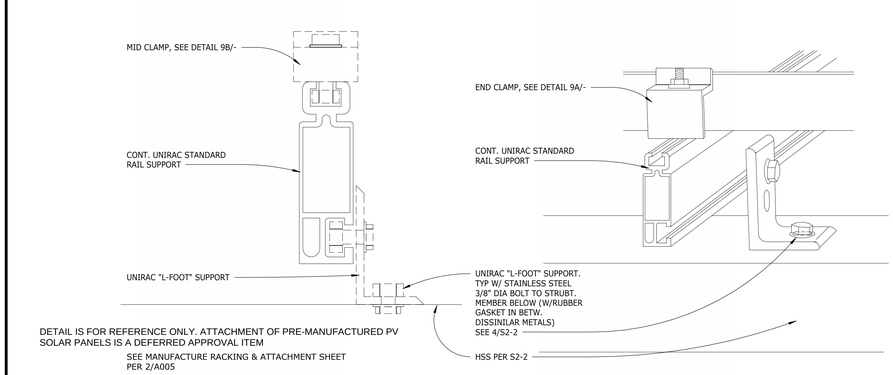


SOLAR STRUCTURE NORTH ELEVATION — 1/4" = 1'-0" — 13



DETAIL IS FOR REFERENCE ONLY. ATTACHMENT OF PRE-MANUFACTURED PV SOLAR PANELS IS A DEFERRED APPROVAL ITEM

SOLAR PANEL - CLAMPS — 12" = 1'-0" — 9



DETAIL IS FOR REFERENCE ONLY. ATTACHMENT OF PRE-MANUFACTURED PV SOLAR PANELS IS A DEFERRED APPROVAL ITEM

SEE MANUFACTURE RACKING & ATTACHMENT SHEET PER 2/A005

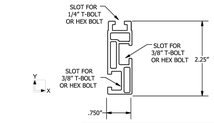
SOLAR PANEL - STANDARD RAIL SUPPORT — 6" = 1'-0" — 1

ATTACHMENT LAYOUT & RACKING & ATTACHMENT DATA SHEET — 2

SWH Racking System Data Sheet Version 12.10.v2

(PROVIDED BY MANUFACTURER)

SWH Solar Mount Rail
MFG-PN: MR-SW-SR-10.5, MR-SW-SR-12, MR-SW-SR-14, MR-SW-SR-14B, MR-SW-SR-17



- **Rail material:** 6063-T5 extruded aluminum alloy
- **Finish:** Clear or black anodized

CONFORMS TO UL STD 2703

Intertek 4009330

Properties	Units	Solar Mount
Beam Height	in	2.250
Approximate Weight	plf	0.700
Total Cross Sectional Area	in²	0.588
Area Moment of Inertia X-Axis	in⁴	0.299[1]
Area Moment of Inertia Y-Axis	in⁴	0.038[1]
Tensile Strength	MPa	190.249[1]
Yield Stregth	MPa	165.732[1]
Elongation (G.L.=25mm)	%	17.2
Hardness (HR15T)		71

[1]updated 6/12/2012

Typical Composition

Material	% Si	% Fe	% Cu	% Mn	% Mg	% Zn	% Ni	% Cr	% Pb	% Sn	% Ti	% Al
6063	0.3972	0.2679	0.0449	0.0666	0.4936	0.0436	0.0056	0.0205	0.0010	0.0044	0.0188	98.6

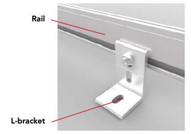
Solar Warehouse™ is a registered trademark and DBA of Calmonte Corporation.

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SWH Racking System Data Sheet Version 12.10.v2

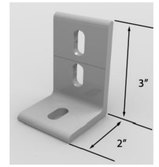
(PROVIDED BY MANUFACTURER)

SWH Solar Mount L-Bracket 2x3
Part No: MR-SW-LB-90, MR-SW-LB-90B MR-SW-LB-90M



UL2703 Listed
Intertek #4009330

L-Bracket material: 6005-T5 extruded aluminum alloy
Finish: Mill finish, clear or black anodized
Bolt & nut material: 304 and/or 316 stainless steel
L-bracket weight: 0.245 lbs with hardware
Tighten 3/8" flange nut to 20 ft-lbs.

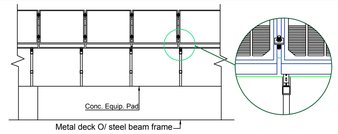


Aluminum 6005-T5:
Tensile Strength, Ultimate :260 MPa
Tensile Strength, Yield :240 MPa
Shear Strength: 205 MPa
Shear Modulus: 26 GPa
Electrical Resistivity:3.49e-006 ohm-cm

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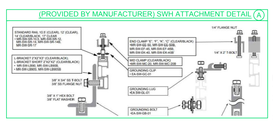
SOLAR PANEL ELEVATION AND DETAILS

DETAIL IS FOR REFERENCE ONLY.
ATTACHMENT OF PRE-MANUFACTURED PV SOLAR PANELS IS A DEFERRED APPROVAL ITEM

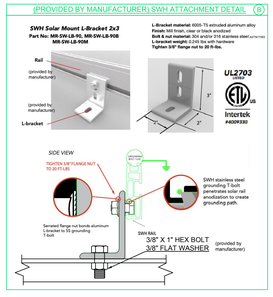


POINT LOAD CALCULATION PER ARRAY	
Module Weight (lbs)	40.81
# Of Modules	10
Total Module Weight (lbs)	408.1
Rack Weight (lbs)	81.62
Microinverters Weight (lbs)	23.8
Total System Weight (lbs)	513.52
# Of Standoffs	18
Max Span Between Standoffs (in)	48
Loading Per Standoff (lbs)	28.52
Total Area (sq.ft.)	180
Loading (PSF)	2.85

(PROVIDED BY MANUFACTURER) SWH ATTACHMENT DETAIL (A)



(PROVIDED BY MANUFACTURER) SWH ATTACHMENT DETAIL (B)



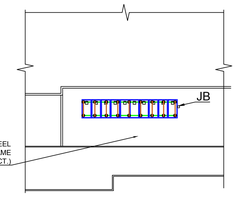
Prior to the commencement of work, the contractor shall verify the existing roof and framing conditions. Notify support@SolarPaperwork.com of any Discrepancies prior to starting construction. Prior to the commencement of work, the contractor shall inspect framing for any damage such as water damage, cracked framing, etc. and These Plans are stamped for structural code compliance of the roof framing supporting the proposed PV installation reference only. These plans are not stamped for water leakage. PV modules, racking, and attachment components must follow manufacturer guidelines and requirements. Attachments to be installed in a staggered orientation to properly distribute loads

NOTES:
- See structural calculation for wind design data and seismic design data and rail section properties.

Fasteners:
1) No screws are used in this assembly
2) High strength bolts shall conform to ASTM A-325 U.N.O, Nuts shall conform to ASTM A-563, Washers shall conform to ASTM F-436
3) All bolts shall be galvanized to prevent corrosion between two dissimilar material (steel and aluminum) U.N.O.

Dissimilar Metals:
- Provide rubber gasket where dissimilar metals contact each other or corrosive substrates, protect against galvanic action of dissimilar metals.

ATTACHMENT
RAIL
RAIL SUPPORT



DESIGN CRITERIA

Modules: 10 **Max Distributed Load:** 3 PSF

1. BASIC DESIGN LIVE LOADS:
   - Roof 20 PSF (reducible)
   - Classrooms 50 PSF (reducible)
   - Corridors 100 PSF (reducible)
   - Partitions 15 PSF
2. WIND LOADS
   - Risk category: III
   - Exposure category: C
   - Ultimate design wind speed (3-seconds gust), V_{ULT} = 115 MPH
   - Nominal design wind speed, V_{ASD} = 89 MPH
   - Velocity pressure exposure coefficient, K_z = 0.85 (MIN.)
   - Topographic factor K_{zt} = 1.0
   - Wind directionality factor, K_D = 0.85

A. MWFRS – directional procedure (AASCE 7-10, CH. 27)
- q_z = 0.00256 K_z K_{zt} K_d V_{ULT}^2 = 24.5. PSF (MIN.)
- $P = qGC_p - q(GC_{pi})$

Gust effect factor, G = 0.85
External pressure coefficient, C_p = [FIG. 27.4-1 THRU 27.4-3]
Internal pressure coefficient, (GC_{pi} = TABLE 26.11-1

B. Components & cladding (ASCE 7-10, CH. 30)
q_h = 0.00256 K_h K_{zt} K_d V_{ULT}^2 = 30.0 PSF (AT HT.=40)
$P = q_h$ [$(GC_p) – (GC_{pi})$]
External pressure coefficient, (G_{CP}) = [FIG. 30.4-1 THRU 30.4-7]
Internal pressure coefficient, (GC_{pi}) = ± 0.18 (TABLE 26.11-1)

3. EARTHQUAKE LOADS

Seismic Design Criteria
- S_s = 1.534
- SI = 0.596
- Site class: D
- F_a = 1.0
- F_v = 1.5
- S_{ms} = 1.022
- S_{ds} = 0.596
- Risk category: III
- Seismic design category: D

Seismic Design Requirements
- Design base shear $V = C_sW$
- Where $C_s = S_{DS}/(R/I_e)$
- But shall not be less than $C_s = 0.044S_{DS}I_e > 0.01$
- But need not exceed $C_s = S_{D1}/[T(R/I_e)]$

V_{ULS} = 537[#] [steam center]
V_{ULW} = 537[#] [steam center]
V = 9.5[#] [mech yard]

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LICENSED ARCHITECT PAUL WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

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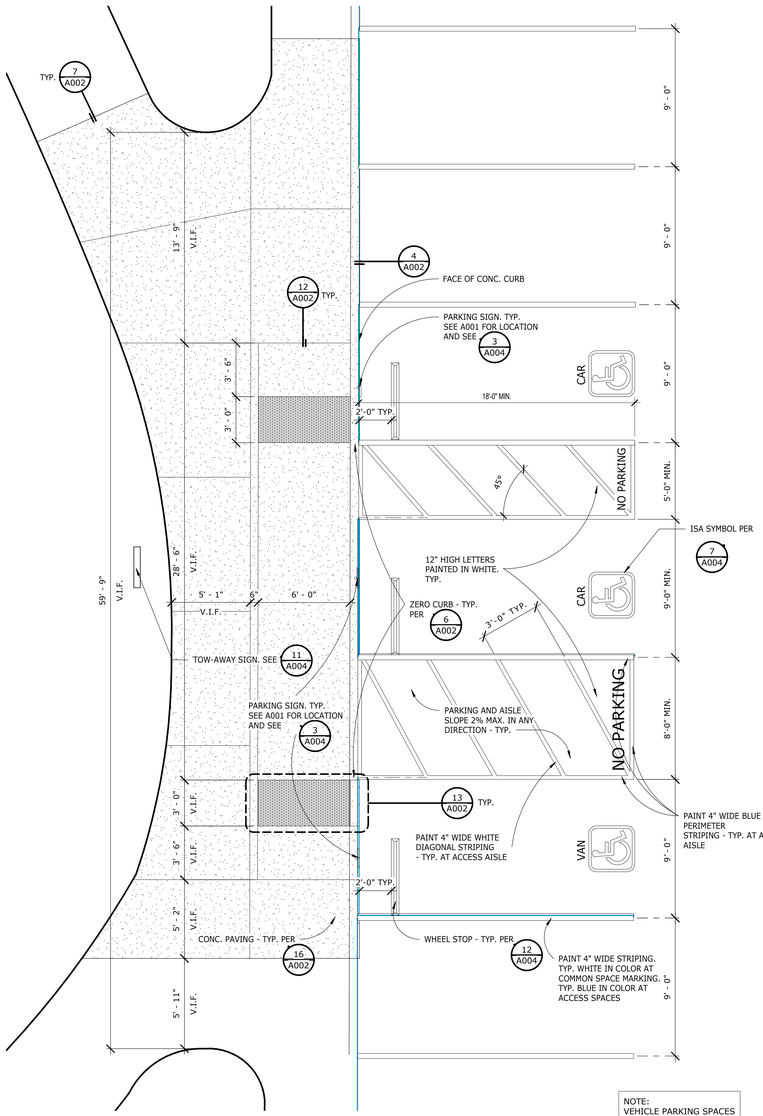
No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	2/27/2024
DRAWN:	EM/MS
CHECK:	JG/JC
ARCHITECT:	PDW
ENGINEER:	

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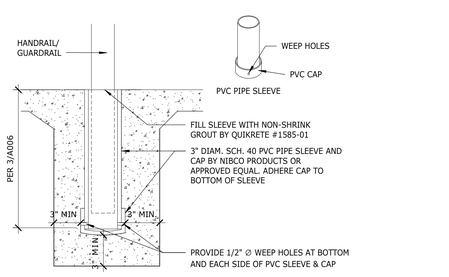
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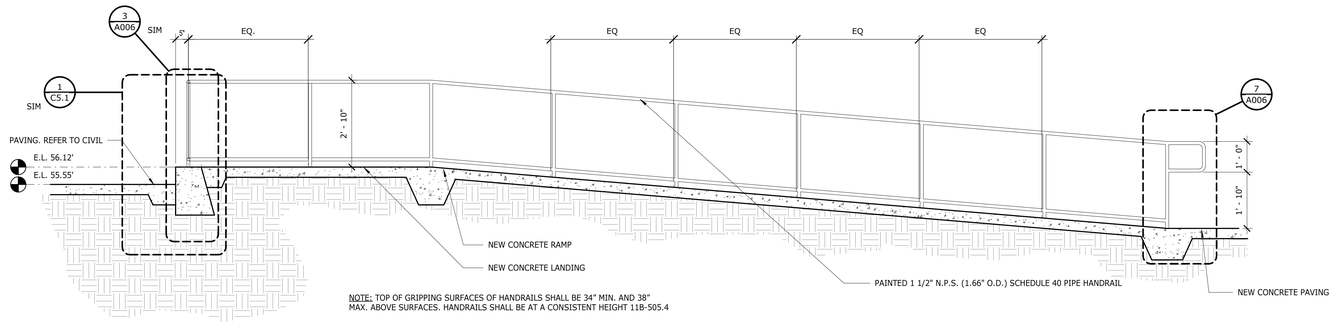
NOTE:
VEHICLE PARKING SPACES
PER 2022 CBC 11B-502

ENLARGED PARKING PLAN 1/4" = 1'-0" | 14



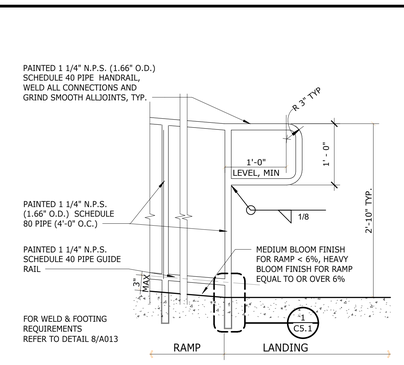
NOTE:
CONTRACTOR TO PROVIDE A CONTROL JOINT INTO THE CONCRETE ON BOTH SIDES FOR EACH POST.
CONTRACTOR TO FOLLOW SOLVENT WELDING INSTRUCTIONS PER MANUFACTURER'S SPECIFICATIONS WHEN ADHERING PVC CAP TO BOTTOM OF SLEEVE.

TYP. POST RAIL EMBED 3" = 1'-0" | 13



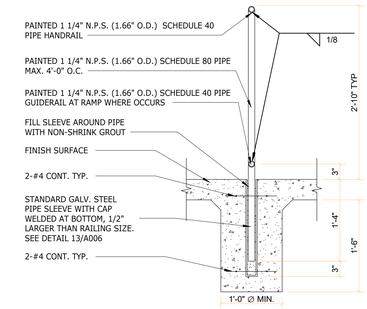
NOTE: TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34" MIN. AND 38" MAX. ABOVE SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT 11B-505.4

SECTION - RAMP 1/2" = 1'-0" | 4



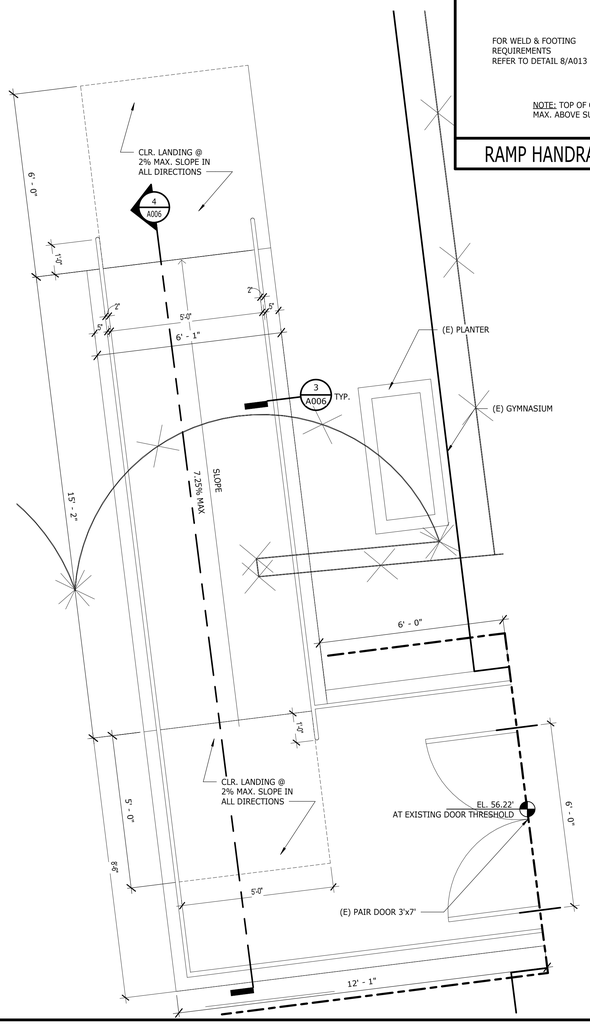
NOTE: TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34" MIN. AND 38" MAX. ABOVE SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT 11B-505.4

RAMP HANDRAIL ELEVATION 1" = 1'-0" | 7



NOTE: TOP OF GRIPPING SURFACES OF HANDRAILS SHALL BE 34" MIN. AND 38" MAX. ABOVE SURFACES. HANDRAILS SHALL BE AT A CONSISTENT HEIGHT 11B-505.4

HANDRAIL SECTION 1" = 1'-0" | 3



ENLARGED RAMP 1/2" = 1'-0" | 1

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architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

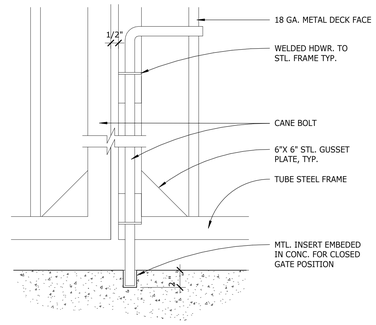
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: EM
CHECK: JG
ARCHITECT: PDW
ENGINEER:

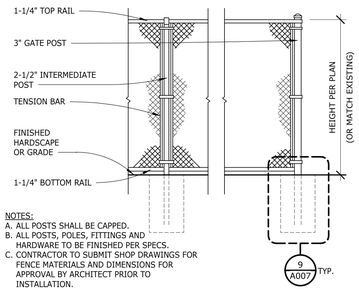
SHEET DESCRIPTION:
SITE DETAILS

SHEET NO:
A006



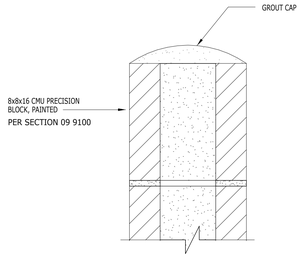
NOTE: CANE BOLT ON ONE GATE ONLY ON INSIDE FACE

CANE BOLT 3" = 1'-0" 4

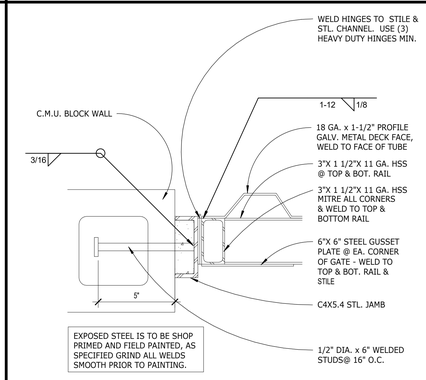


NOTES:
A. ALL POSTS SHALL BE CAPPED.
B. ALL POSTS, POLES, FITTINGS AND HARDWARE TO BE FINISHED PER SPECS.
C. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR FENCE MATERIALS AND DIMENSIONS FOR APPROVAL BY ARCHITECT PRIOR TO INSTALLATION.

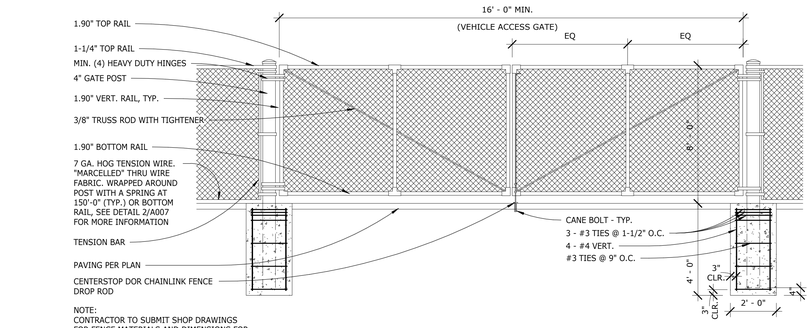
CHAIN LINK FENCE 3/8" = 1'-0" 11



WALL CAP - C.M.U. 3" = 1'-0" 7

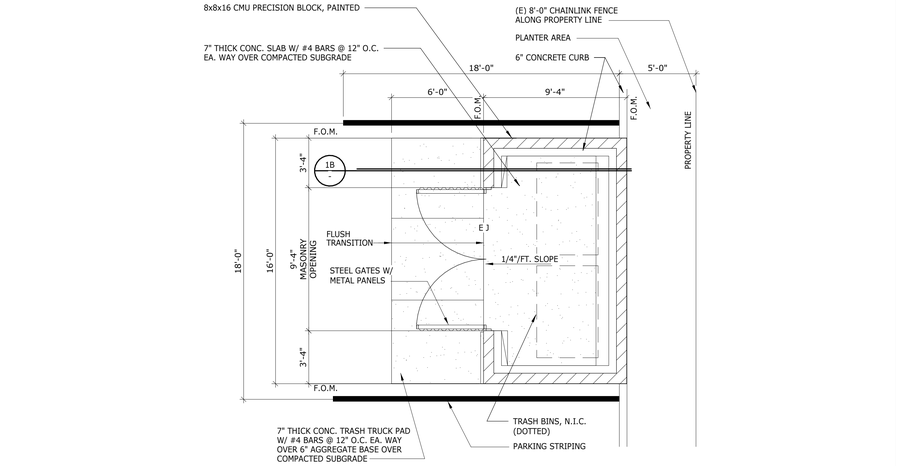


GATE HINGE 3" = 1'-0" 3

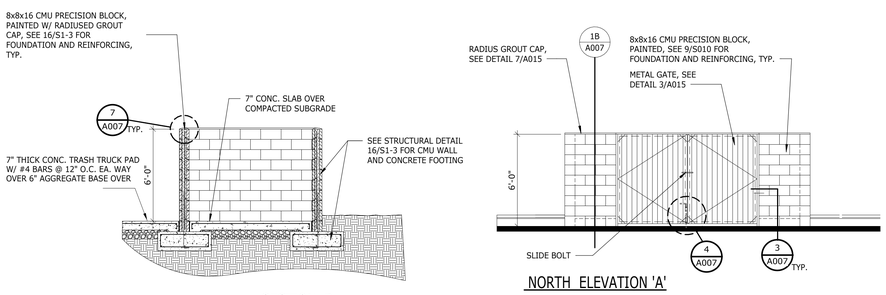


NOTE:
CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR FENCE MATERIALS AND DIMENSIONS FOR APPROVAL BY ARCHITECT PRIOR TO INSTALLATION. SEE SPECIFICATIONS SECTION 32 3113 FOR MORE INFORMATION ON CHAINLINK FENCE AND GATES.

CHAIN LINK (VEHICLE ACCESS) GATES 3/8" = 1'-0" 10

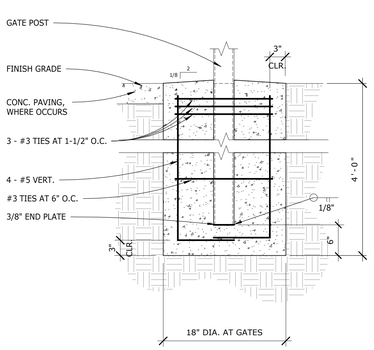


PLAN

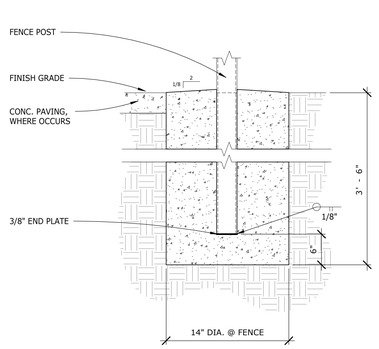


SECTION B

NORTH ELEVATION 'A'



GATE POST FOOTING 1" = 1'-0" 13



FENCE POST FOOTING 1" = 1'-0" 9

TRASH ENCLOSURE (PLAN, SECTION & ELEVATION) 1/4" = 1'-0" 1

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westbergwhite
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IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

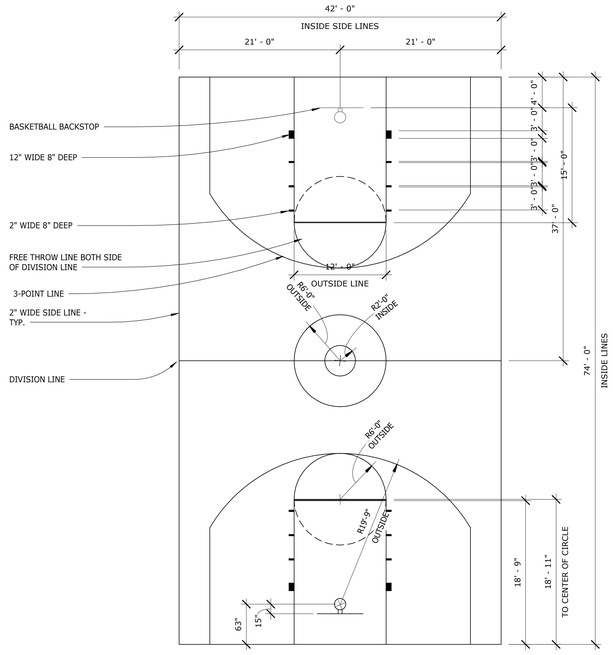
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MS/ EM / RR
CHECK: JG
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TRASH ENCLOSURE AND MISC. SITE DETAILS

SHEET NO:

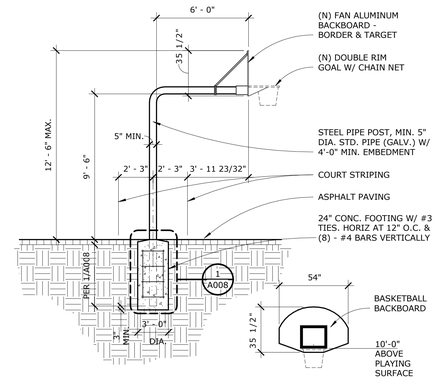
A007



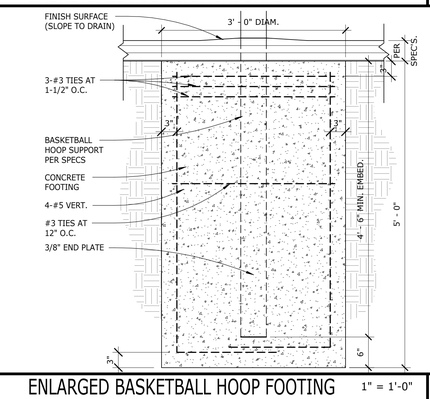
NOTES:

1. BASKETBALL COURT STRIPING SHALL BE PAINTED WHITE (U.N.O.)
2. COURT DIMENSIONS ARE TO INSIDE OF LINES U.N.O. ALL LINES ARE 2" WIDE U.N.O.
3. PAVING: NEW ASPHALT: REFER TO DETAIL 1/C-5.0
4. BASKET BALL HOOP: REFER TO DETAIL 2/A008

ENLARGED BASKETBALL COURT(SMALL) 1/8" = 1'-0" 3



BASKETBALL POST & BACKBOARD 1/4" = 1'-0" 2



ENLARGED BASKETBALL HOOP FOOTING 1" = 1'-0" 1

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ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	2/27/2024
DRAWN:	Author
CHECK:	Checker
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
BASKETBALL COURTS PLANS & DETAILS

SHEET NO:

A008

FIRST FLOOR PLAN

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

FLOOR PLAN GENERAL NOTES

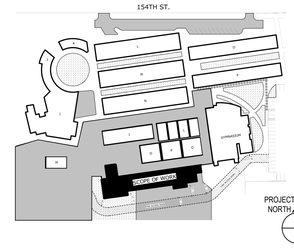
1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. STRUCTURAL COLUMNS ARE SHOWN FOR REFERENCE ONLY. FOR ACTUAL SIZE AND ORIENTATION, SEE STRUCTURAL DRAWINGS
3. ALL GYPSUM BOARD SHALL BE 5/8" THICK TYPE "X" (U.N.O.).
4. SEE ROOM & COLOR SCHEDULES A700 & A720 FOR FINISHES
5. PROVIDE FIRE-RESISTANT SEALANT MATERIAL AT ALL PENETRATIONS THROUGH FIRE WALLS, FIRE BARRIERS, CORRIDOR WALLS AND RATED HORIZONTAL ASSEMBLIES.
6. PROVIDE SOLID BACKING INSIDE WALLS FOR THE SUPPORT OF CASEWORK, MARKER BOARDS, LIGHT FIXTURES, AND MISC. ELEC. AND MECH. EQUIPMENT AS OCCURS, SEE STRUCTURAL DETAILS. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE DSA OR FIELD INSPECTOR.
7. ALL DIMENSIONS TO EXTERIOR WALLS ARE TO FACE OF STUD U.N.O.
8. FOR ADDITIONAL ROOM SIGNAGE NOT SHOWN, SEE SHEETS G002 AND G003.
9. SEE REFLECTED CEILING PLANS ON A200 SHEETS FOR CEILING HEIGHTS AND FINISHES.
10. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL CABINET DIMENSIONS.
11. MILL WORK SUPPLIER SHALL ISSUE A WOODWORK INSTITUTE CERTIFIED COMPLIANCE CERTIFICATE WITH SHOP DRAWINGS AND STAMP ON EACH UNIT.
12. ALL CABINET LOCKS SHALL BE KEYED TO MATCH THE ROOM ENTRY DOOR.
13. FOR TYPICAL DIMENSIONS AND MOUNTING HEIGHTS OF ACCESSIBLE FIXTURES, ACCESSORIES, AND TYPICAL ACCESSIBILITY REQUIREMENTS SEE ACCESSORY MOUNTING LEGEND ON G002, A601, A671 & A860 SHEETS.
14. PROVIDE SOLID BACKING PER STRUCTURAL DETAILS INSIDE WALLS AS REQUIRED FOR THE SUPPORT OF CASEWORK, MARKER BOARDS, DISTRICT INSTALLED WINDOW COVERINGS, LIGHT FIXTURES, AND MISC. ELEC. AND MECH. EQUIPMENT AS OCCURS.
15. FLOOR AREA(S) WITH DRAIN(S) SHALL HAVE 2% MAX. SLOPE IN ALL DIRECTIONS.
16. FLOOR DRAIN(S) SHALL HAVE 1/2" MAX. STRAINER OPENINGS IN ALL DIRECTIONS.
17. ALL DIMENSIONS FOR ACCESS COMPLIANCE ARE TO FACE OF FINISH SURFACE U.N.O.
18. ALL SECOND FLOOR FINISH SURFACES ELEVATIONS ARE NOTED AS ELEVATIONS ABOVE THE FIRST FLOOR MAIN FINISH FLOOR ELEVATION OF 56.05'
19. REFER TO CIVIL GRADING PLANS FOR MORE INFORMATION.

BN061	CANE RAIL. SEE DETAIL 2/A842.
BN065	DIAGONAL BRACING. SEE STRUCTURAL PLANS.
BN069	SEAL AROUND BRACING PENETRATION AND PAIN TO MATCH ADJACENT SURFACE. TYPICAL AT ALL STRUCTURAL DIAGONAL BRACING PENETRATION.
BN070	EXTERIOR SLAB PER GEOTECHNICAL REPORTS AND CIVIL PLANS

FLOOR PLAN LEGEND

- INTERIOR NON-RATED WALL ASSEMBLY: SEE WALL TYPE TAG ON FLOOR PLAN(S)
- COLUMN WHERE OCCURS, SEE STRUCTURAL
- INTERIOR 1 HOUR RATED WALL ASSEMBLY: RATED ASSEMBLY PER UL #U465 SEE WALL TYPE TAG ON FLOOR PLAN(S)
- WALL TYPE TAG: SEE WALL TYPES - SEE SHEET A841
- ACCESSIBLE CLEAR SPACE: 5' DIAMETER TURNING SPACE
- ACCESSIBLE WORKSTATION / CLEAR SPACE: 30" x 48" (U.N.O.)
- A — WINDOW TYPE TAG: SEE WINDOW SCHEDULE ON A700

KEYMAP



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(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DEWAYNE WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

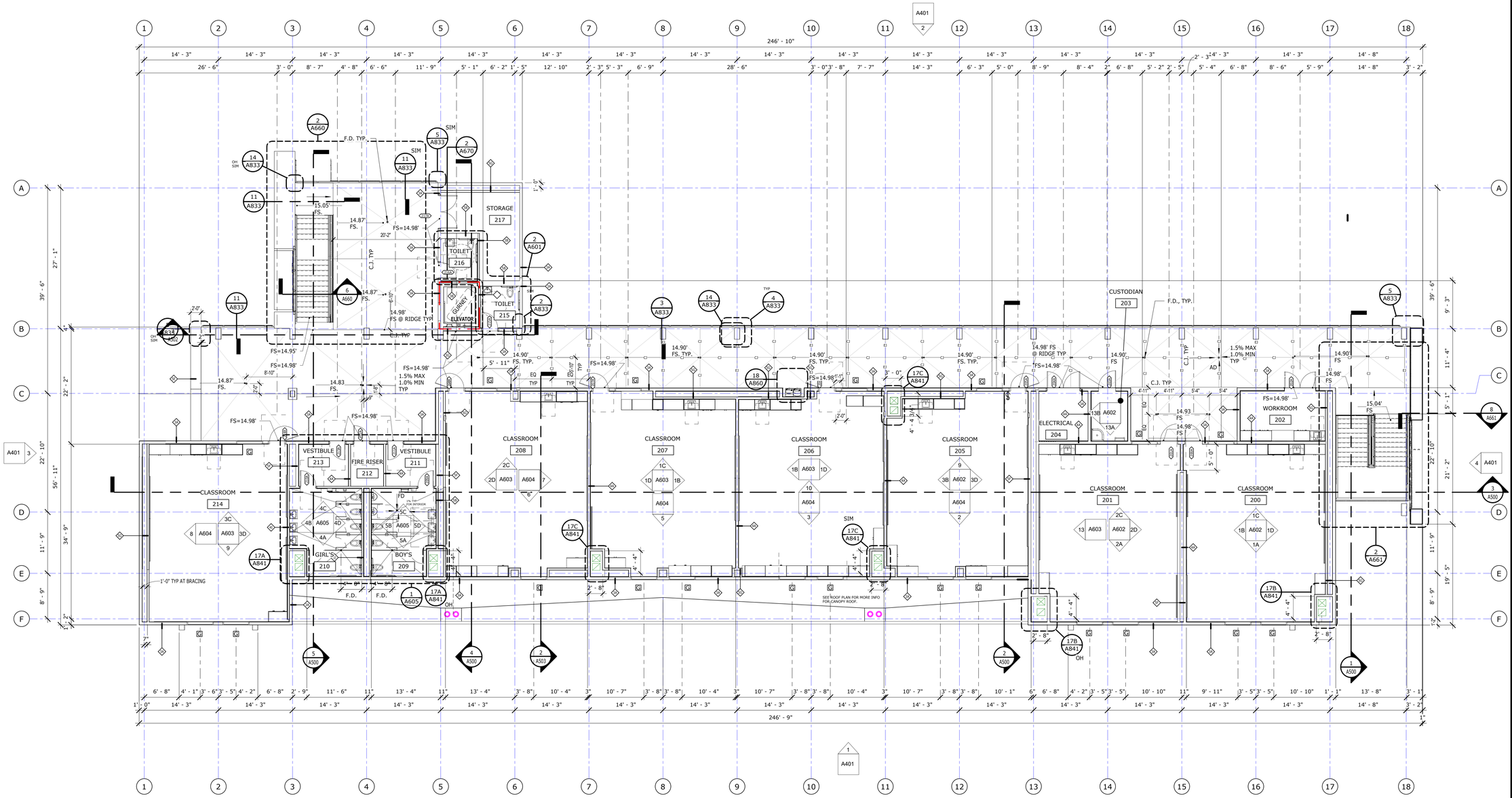
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	2/27/2024
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CHECK:	-
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
FIRST FLOOR PLAN

SHEET NO:
A101



SECOND FLOOR PLAN

1/8" = 1'-0"

1

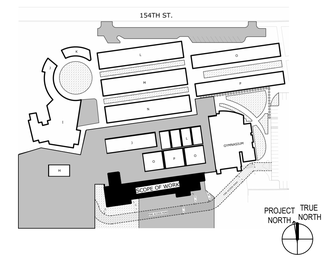
FLOOR PLAN GENERAL NOTES

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3. ALL GYPSUM BOARD SHALL BE 5/8" THICK TYPE "X" (U.N.O.).
4. SEE ROOM & COLOR SCHEDULES A700 & A720 FOR FINISHES
5. PROVIDE FIRE-RESISTANT SEALANT MATERIAL AT ALL PENETRATIONS THROUGH FIRE WALLS, FIRE BARRIERS, CORRIDOR WALLS AND RATED HORIZONTAL ASSEMBLIES.
6. PROVIDE SOLID BACKING INSIDE WALLS FOR THE SUPPORT OF CASEWORK, MARKER BOARDS, LIGHT FIXTURES, AND MISC. ELEC. AND MECH. EQUIPMENT AS OCCURS, SEE STRUCTURAL DETAILS. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS, INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE DSA OR FIELD INSPECTOR.
7. ALL DIMENSIONS TO EXTERIOR WALLS ARE TO FACE OF STUD U.N.O.
8. FOR ADDITIONAL ROOM SIGNAGE NOT SHOWN, SEE SHEETS G002 AND G003.
9. SEE REFLECTED CEILING PLANS ON A200 SHEETS FOR CEILING HEIGHTS AND FINISHES.
10. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL CABINET DIMENSIONS.
11. MILL WORK SUPPLIER SHALL ISSUE A WOODWORK INSTITUTE CERTIFIED COMPLIANCE CERTIFICATE WITH SHOP DRAWINGS AND STAMP ON EACH UNIT.
12. ALL CABINET LOCKS SHALL BE KEYED TO MATCH THE ROOM ENTRY DOOR.
13. FOR TYPICAL DIMENSIONS AND MOUNTING HEIGHTS OF ACCESSIBLE FIXTURES, ACCESSORIES, AND TYPICAL ACCESSIBILITY REQUIREMENTS SEE ACCESSORY MOUNTING LEGEND ON G002, A601, A671 & A860 SHEETS.
14. PROVIDE SOLID BACKING PER STRUCTURAL DETAILS INSIDE WALLS AS REQUIRED FOR THE SUPPORT OF CASEWORK, MARKER BOARDS, DISTRICT INSTALLED WINDOW COVERINGS, LIGHT FIXTURES, AND MISC. ELEC. AND MECH. EQUIPMENT AS OCCURS.
15. FLOOR AREA(S) WITH DRAIN(S) SHALL HAVE 2% MAX. SLOPE IN ALL DIRECTIONS.
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17. ALL DIMENSIONS FOR ACCESS COMPLIANCE ARE TO FACE OF FINISH SURFACE U.N.O.
18. ALL SECOND FLOOR FINISH SURFACES ELEVATIONS ARE NOTED AS ELEVATIONS ABOVE THE FIRST FLOOR MAIN FINISH FLOOR ELEVATION OF 56.05'
19. REFER TO CIVIL GRADING PLANS FOR MORE INFORMATION.

FLOOR PLAN LEGEND

- INTERIOR NON-RATED WALL ASSEMBLY: SEE WALL TYPE TAG ON FLOOR PLAN(S)
- COLUMN WHERE OCCURS, SEE STRUCTURAL
- INTERIOR 1 HOUR RATED WALL ASSEMBLY: RATED ASSEMBLY PER UL #U465 SEE WALL TYPE TAG ON FLOOR PLAN(S)
- WALL TYPE TAG: SEE WALL TYPES - SEE SHEET A841
- ACCESSIBLE CLEAR SPACE: 5' DIAMETER TURNING SPACE
- ACCESSIBLE WORKSTATION / CLEAR SPACE: 30" x 48" (U.N.O.)
- A — WINDOW TYPE TAG: SEE WINDOW SCHEDULE ON A700

KEYMAP



NORTH

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architecture
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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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CLIENT:

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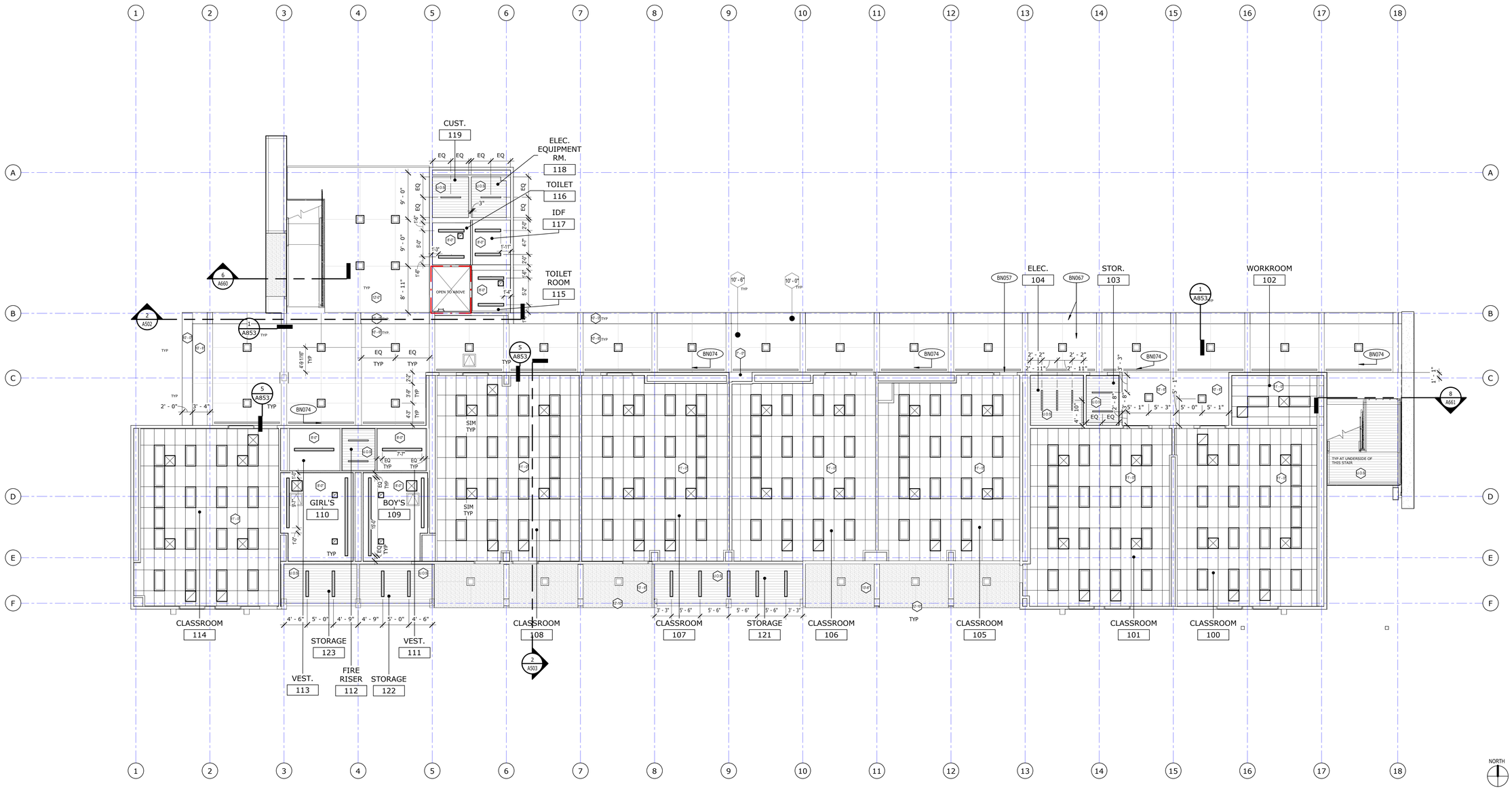
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MG
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SECOND FLOOR PLAN

SHEET NO:

A102



FIRST FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

1

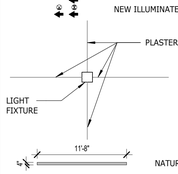
NEW 2X4 LAY IN LIGHT FIXTURE

NEW 1' X 1' RECESSED LIGHT FIXTURE

NEW 4" x VARIED LENGTH RECESSED LIGHT FIXTURE

NEW 4' STRIP FLUORESCENT PENDANT LIGHT FIXTURE

NEW ILLUMINATED EXIT SIGN (DIRECTIONAL WHERE OCCURS)



NOTE: REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS ON INDIVIDUAL FIXTURES

NEW RETURN AIR REGISTER

NEW EXHAUST FAN REGISTER

NEW SUSPENDED CEILING TILES SYSTEM, SEE DETAILS: ***2.12/A851 AND 2.60/A851***

2'X4

NEW 5/8" TYPE 'X' GYPSUM BOARD, SEE SHEETS: ***2/A853 and 4/A853***

EXPOSED METAL DECKING WITH BATT INSULATION AS OCCURS, SEE FINISH SCHEDULE, STRUCTURAL DWGS AND SPECS.

FIRE SPRINKLER HEAD

NEW 24" x 30" CEILING ACCESS PANEL. SEE DETAILS: ***3/A853***

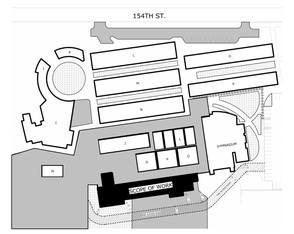
NEW SUPPLY AIR DIFFUSER

CEILING PLAN LEGEND

1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. FOR WALL TYPES, SEE "WALL LEGEND" ON CORRESPONDING FLOOR PLAN.
3. FOR TYPICAL CEILING NOTES, SEE SHEET A850, AND DETAILS SEE SHEETS A851, A852 AND A853
4. HEIGHTS INDICATED ARE TO THE UNDERSIDE OF THE FINISH CEILING OR SOFFIT FROM THE F.F. .
5. PRIOR TO THE INSTALLATION OF MECHANICAL, PLUMBING, ELECTRICAL AND ARCHITECTURAL EQUIPMENT AND COMPONENTS, ALL SUBCONTRACTORS SHALL COORDINATE WITH THE CONTRACTOR AND OTHER SUBCONTRACTORS USING THE SAME SPACE FOR SUCH INSTALLATION TO ENSURE THAT ALL COMPONENTS FIT WITHIN THE SPACE AVAILABLE.
6. ALL LIGHTS SHALL BE CENTERED IN SPACES AS SHOWN, UNLESS NOTED OTHERWISE BY DIMENSION.
7. PROVIDE CEILING ACCESS PANELS (NOT SHOWN) AT HARD CEILINGS WHERE REQUIRED TO ACCESS PLUMBING AND MECHANICAL CONTROLS.
8. LIGHT FIXTURES, MECHANICAL REGISTERS AND SPRINKLER HEADS ARE SHOWN FOR LOCATION ONLY. FOR ACTUAL TYPES AND SIZES, SEE ELECTRICAL AND MECHANICAL PLANS.
9. FOR VISUAL INSPECTION AND TESTING, PROVIDE ATTIC/ CEILING ACCESS IN ALL HARD SURFACE CEILINGS WHERE HEAT DETECTORS OR SPRINKLER HEADS OCCUR ABOVE CEILING.
10. LIGHT FIXTURES NOT DIMENSIONALLY LOCATED OR IN A SUSPENDED CEILING GRID CANNOT BE INSTALLED UNTIL DIMENSIONALLY LOCATED BY ARCHITECT.

CEILING PLAN GENERAL NOTES

BN057	4" WIDE SOFFIT VENT.
BN067	DIRECT APPLIED EXTERIOR FINISHING SYSTEM (DEFS) AT SOFFITS.
BN074	PLASTER CONTROL JOINT SEE DETAIL 1/A853.



KEYMAP

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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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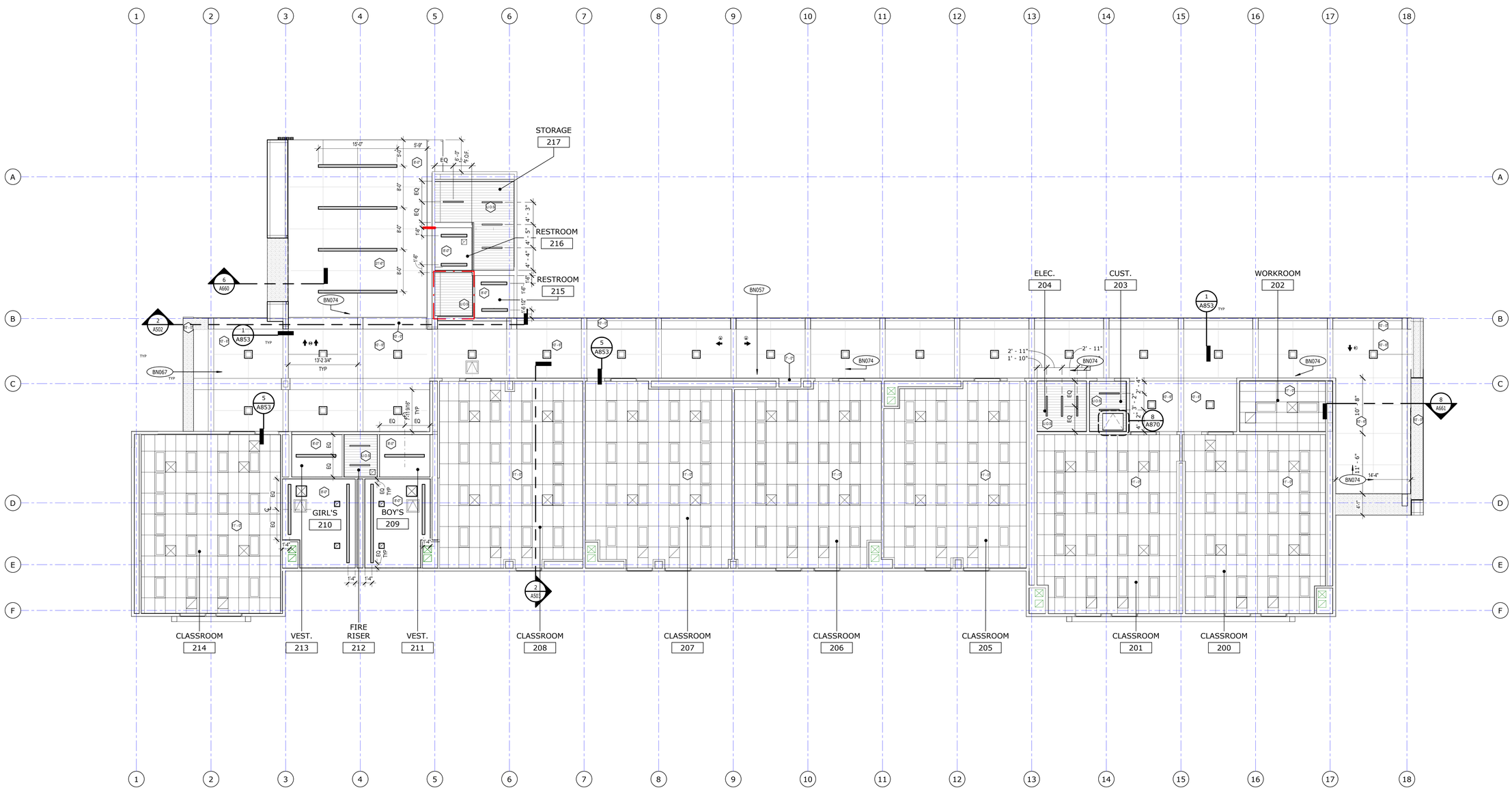
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MG
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR REFLECTED CEILING PLANS

SHEET NO:

A201



SECOND FLOOR REFLECTED CEILING PLAN

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

CEILING PLAN LEGEND

- NEW 2X4 LAY IN LIGHT FIXTURE
- NEW 1' X 1' RECESSED LIGHT FIXTURE
- NEW 4' x VARIED LENGTH RECESSED LIGHT FIXTURE
- NEW 4' STRIP FLUORESCENT PENDANT LIGHT FIXTURE
- NEW ILLUMINATED EXIT SIGN (DIRECTIONAL WHERE OCCURS)
- PLASTER CONTROL JOINTS SEE 4/A841
- NATURAL VENT SEE 5/A853
- NEW RETURN AIR REGISTER
- NEW EXHAUST FAN REGISTER
- NEW SUSPENDED CEILING TILES SYSTEM, SEE DETAILS: ***2.11/A851 AND 2.60/A851*** (2'X4)
- NEW 5/8" TYPE 'X' GYPSUM BOARD, SEE SHEETS: ***2/A853 and 4/A853***
- EXPOSED METAL DECKING WITH BATT INSULATION AS OCCURS, SEE FINISH SCHEDULE, STRUCTURAL DWGS AND SPECS.
- FIRE SPRINKLER HEAD
- NEW 24" x 30" CEILING ACCESS PANEL. SEE DETAILS: ***3/A853***
- NEW SUPPLY AIR DIFFUSER

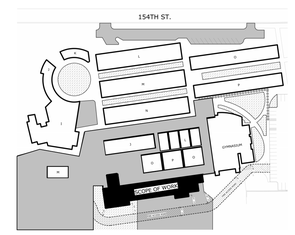
NOTE: REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS ON INDIVIDUAL FIXTURES

CEILING PLAN GENERAL NOTES

1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. FOR WALL TYPES, SEE "WALL LEGEND" ON CORRESPONDING FLOOR PLAN.
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9. FOR VISUAL INSPECTION AND TESTING, PROVIDE ATTIC/ CEILING ACCESS IN ALL HARD SURFACE CEILINGS WHERE HEAT DETECTORS OR SPRINKLER HEADS OCCUR ABOVE CEILING.
10. LIGHT FIXTURES NOT DIMENSIONALLY LOCATED OR IN A SUSPENDED CEILING GRID CANNOT BE INSTALLED UNTIL DIMENSIONALLY LOCATED BY ARCHITECT.

BN067 DIRECT APPLIED EXTERIOR FINISHING SYSTEM (DEFS) AT SOFFITS.

KEYMAP



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LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

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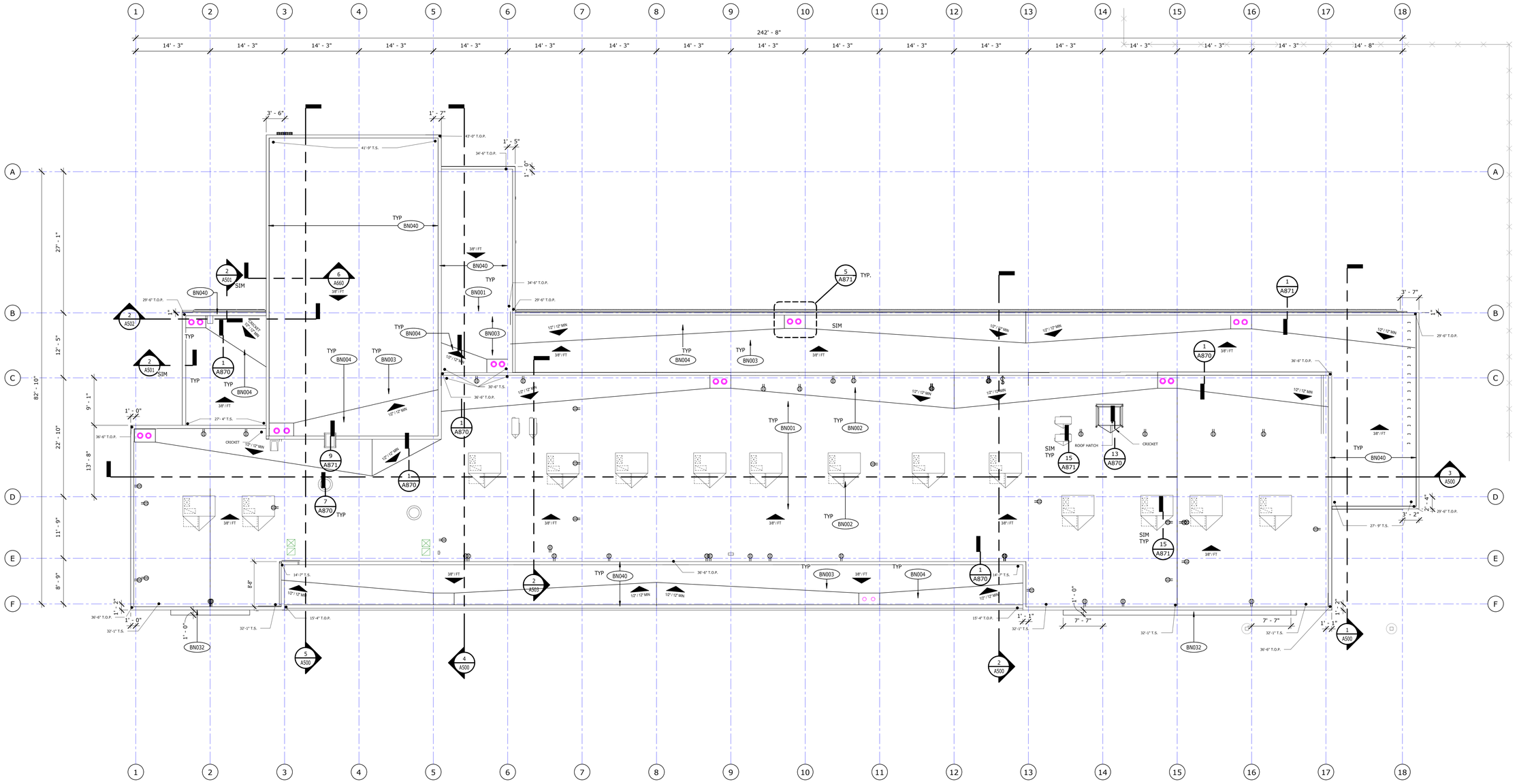
No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	2/27/2024
DRAWN:	MG
CHECK:	Checker
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
SECOND REFLECTED CEILING PLANS

SHEET NO:

A202



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

BN001	CLASS A TPO ROOFING OVER 2 1/2" LW CONCRETE OVER 2" METAL DECK OVER R-30 BATT INSULATION, SEE SPEC SECTION 07 5416. TYPICAL FOR MAIN ROOF
BN002	TYP. CRICKET AT MAIN ROOF. CLASS A TPO ROOFING OVER RIGID INSULATION 4 1/2" CONCRETE OVER METAL DECK OVER R-30 BATT INSULATION.
BN003	CLASS A TPO ROOFING OVER 1/2" GLASS-MATT ROOF BOARD OVER METAL DECK. TYPICAL FOR CANOPY ROOF
BN004	TYP. CRICKET AT CANOPY ROOF. CLASS A TPO ROOFING OVER 1/2" GLASS-MAT ROOF BOARD OVER RIGID INSULATION OVER METAL DECK.
BN032	SMOOTH FINISH PORTLAND EXTERIOR CEMENT PLASTER
BN040	PRE-FINISHED SHEET METAL FLASHING, COPING OR TRIM.

ROOF PLAN LEGEND

ROOF MOUNTED HVAC EQUIPMENT - SEE MECHANICAL PLANS. SEE DETAIL ***15/A871*** FOR MOUNTING

ROOF ACCESS HATCH. SEE DETAIL ***13/A870***

ROOF MOUNTED EXHAUST OR RELIEF FAN - SEE MECHANICAL PLANS. SEE DETAIL ***7/A870*** FOR MOUNTING

ROOF DRAIN AND OVERFLOW - SEE MECHANICAL PLANS. SEE DETAIL ***5/A870*** FOR MOUNTING

INDICATES DIRECTION OF ROOF SLOPE

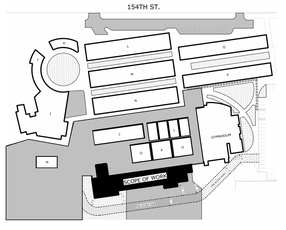
ABBREVIATIONS:
TOS - TOP OF SHEATHING, TOP - TOP OF PARAPET, TOD - TOP OF DRAIN, DS - DOWNSPOUT, (E) - EXISTING

NOTE: REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFICATIONS ON INDIVIDUAL ITEMS

ROOF PLAN GENERAL NOTES

1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. PROVIDE CRICKETS AS REQUIRED TO DIVERT WATER AROUND ROOF MOUNTED EQUIPMENT. SLOPE CRICKETS 1/2" MIN. PER FOOT.
3. ROOF-MOUNTED MECHANICAL EQUIPMENT IS SHOWN FOR REFERENCE ONLY. SEE MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
4. THE TOP OF ALL EQUIPMENT CURBS AND PADS SHALL BE LEVEL.
5. ALL ROOF ELEVATIONS ARE NOTED AS ELEVATIONS ABOVE THE FIRST FLOOR MAIN FINISH FLOOR ELEVATION OF 56.05'

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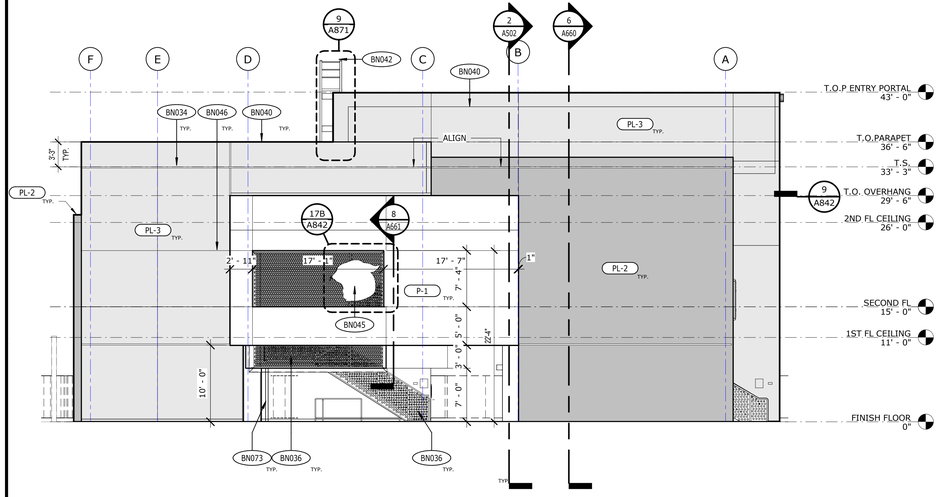
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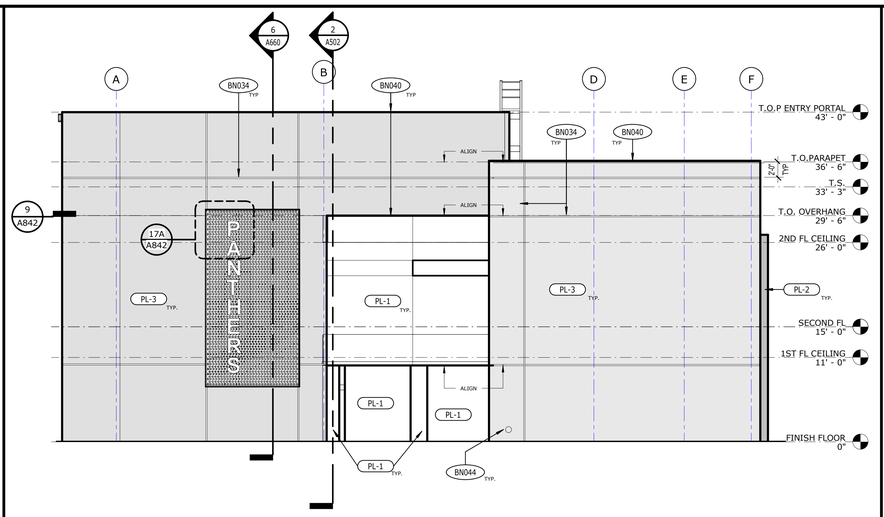
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ROOF PLAN

SHEET NO:

A301

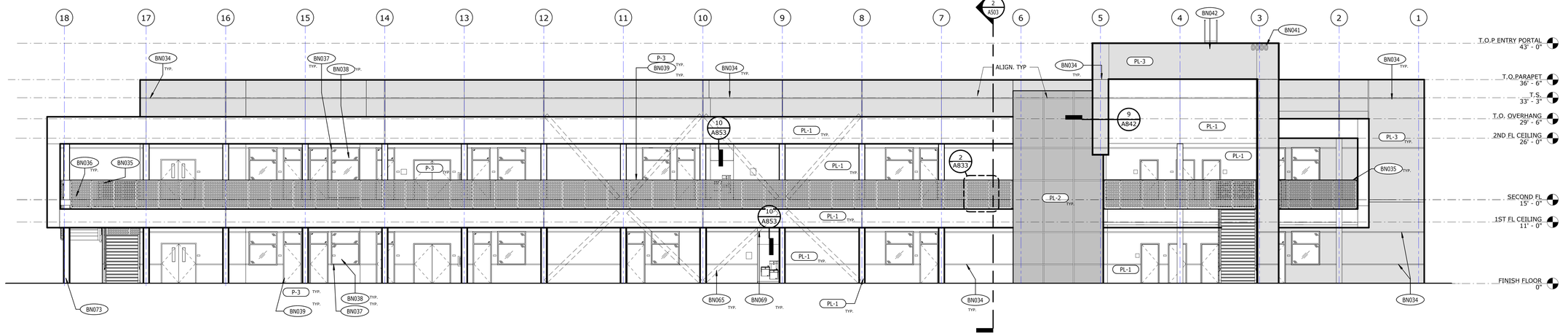


EAST ELEVATION 1/8" = 1'-0" | 4

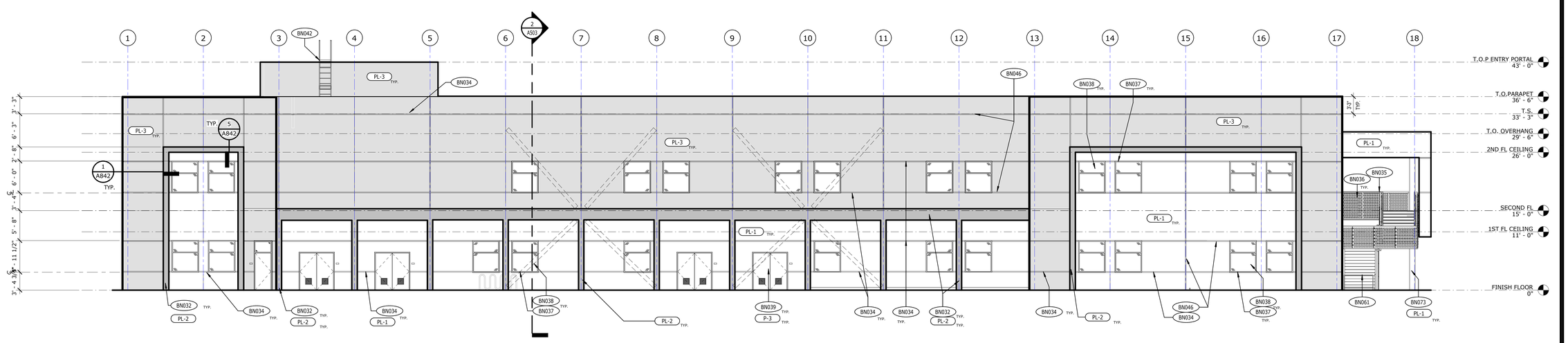


WEST ELEVATION 1/8" = 1'-0" | 3

BN032	SMOOTH FINISIH PORTLAND EXTERIOR CEMENT PLASTER
BN034	PLASTER REVEAL. SEE 6/A841.
BN035	METAL RAILING. SEE 2/A833.
BN036	PERFORATED METAL PANEL.
BN037	ALUMINUM WINDOWS WITH SHOP-APPLIED FINISH, SEE SPEC AND COLOR SCHEDULE.
BN038	INSULATED GLAZING.
BN039	HOLLOW METAL DOOR AND FRAME.
BN040	PRE-FINISHED SHEET METAL FLASHING, COPING OR TRIM.
BN041	ALUMNIN BUILDING LETTERING, CONFIRM BUILDING NUMBER WITH THE DISTRICT. SEE 20/A842.
BN042	HIGH PARAPET ACCESS LADDER.
BN044	OVERFLOW OUTLET
BN045	CARBON STEEL IMAGE OR LETTERS WELDED TO PERFORATED METAL. SEE 17/A842.
BN046	PLASTER CONTROL JOINT. SEE 5/A841.
BN061	CANE RAIL. SEE DETAIL 2/A842.
BN065	DIAGONAL BRACING. SEE STRUCTURAL PLANS.
BN069	SEAL AROUND BRACING PENETRATION AND PAIN TO MATCH ADJACENT SURFACE. TYPICAL AT ALL STRUCTURAL DIAGONAL BRACING PENETRATION.
BN073	PAINTED EXPOSED FRAMING MEMBERS. REFER TO STRUCTURAL PLANS.



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



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

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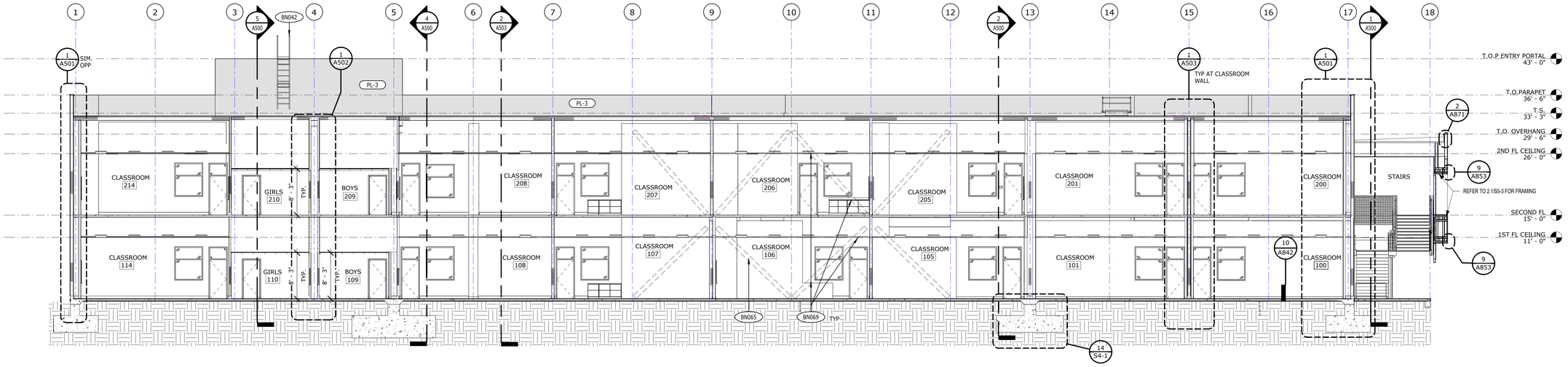
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DRAWN:	Author
CHECK:	Checker
ARCHITECT:	PDW
ENGINEER:	

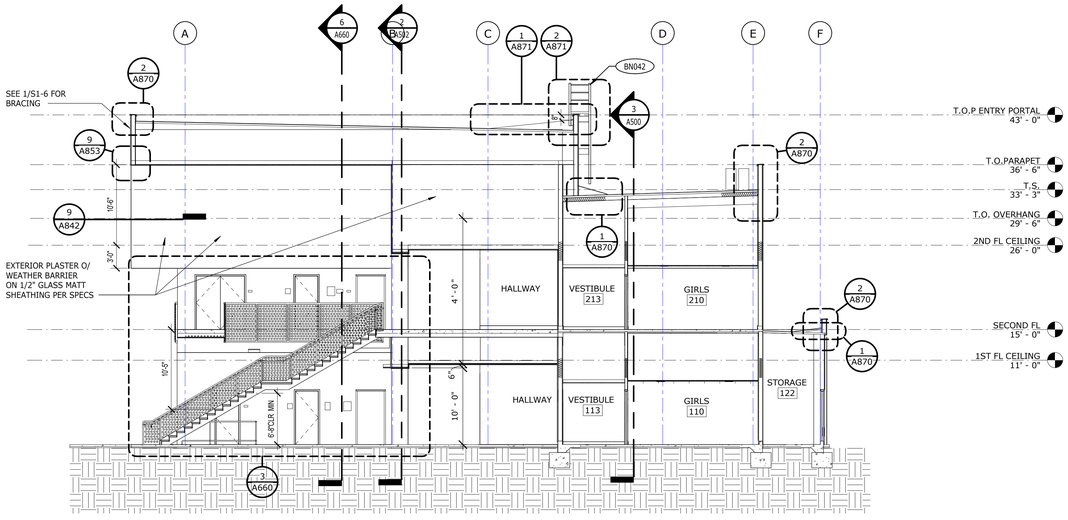
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EXTERIOR ELEVATION

SHEET NO:

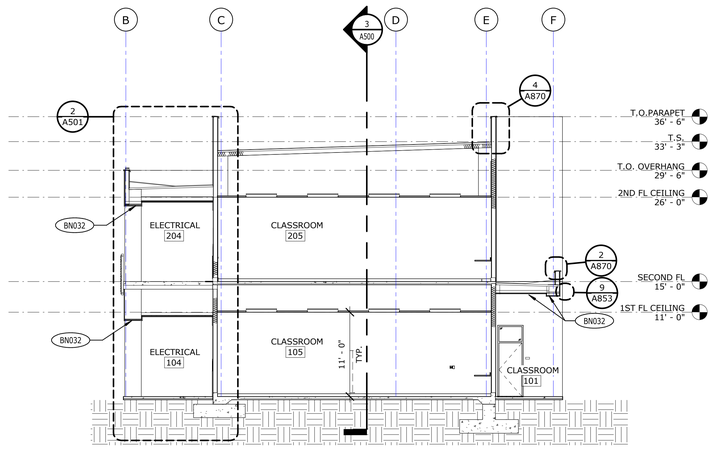
A401



BUILDING SECTION 1/8" = 1'-0" | 3



BUILDING SECTION 1/8" = 1'-0" | 5

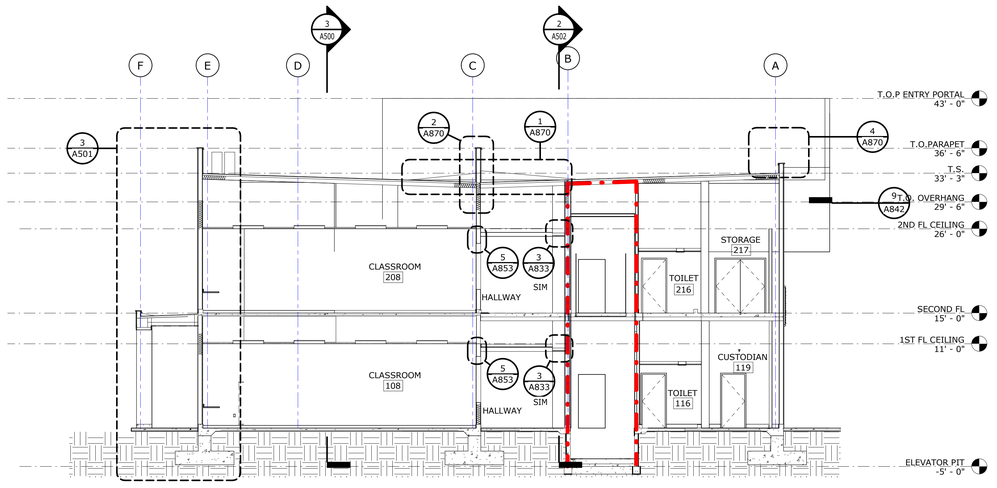


BUILDING SECTION 1/8" = 1'-0" | 2

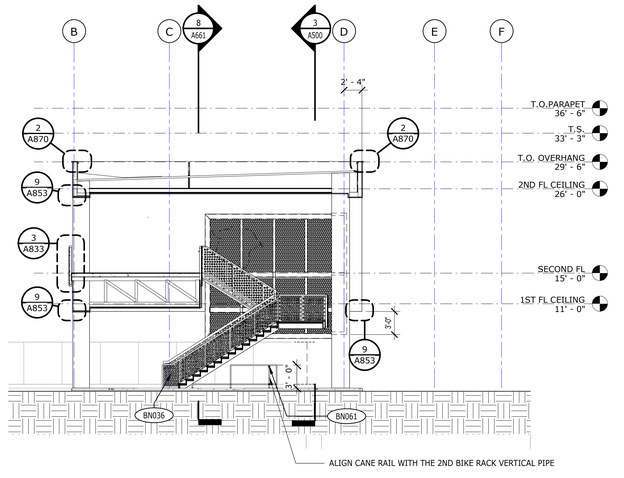
1. ALL INTERIOR WALLS SHALL BE FULL HEIGHT WITH 5/8" TYP 'X' GYP BD ON THE INTERIOR SIDES TO UNDERSIDE OF THE STRUCTURE. U.N.O.

NOTES | 8

BN032	SMOOTH FINISIH PORTLAND EXTERIOR CEMENT PLASTER
BN036	PERFORATED METAL PANEL.
BN042	HIGH PARAPET ACCESS LADDER.
BN061	CANE RAIL. SEE DETAIL 2/A842.
BN065	DIAGONAL BRACING. SEE STRUCTURAL PLANS.
BN069	SEAL AROUND BRACING PENETRATION AND PAIN TO MATCH ADJACENT SURFACE. TYPICAL AT ALL STRUCTURAL DIAGONAL BRACING PENETRATION.



BUILDING SECTION 1/8" = 1'-0" | 4



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

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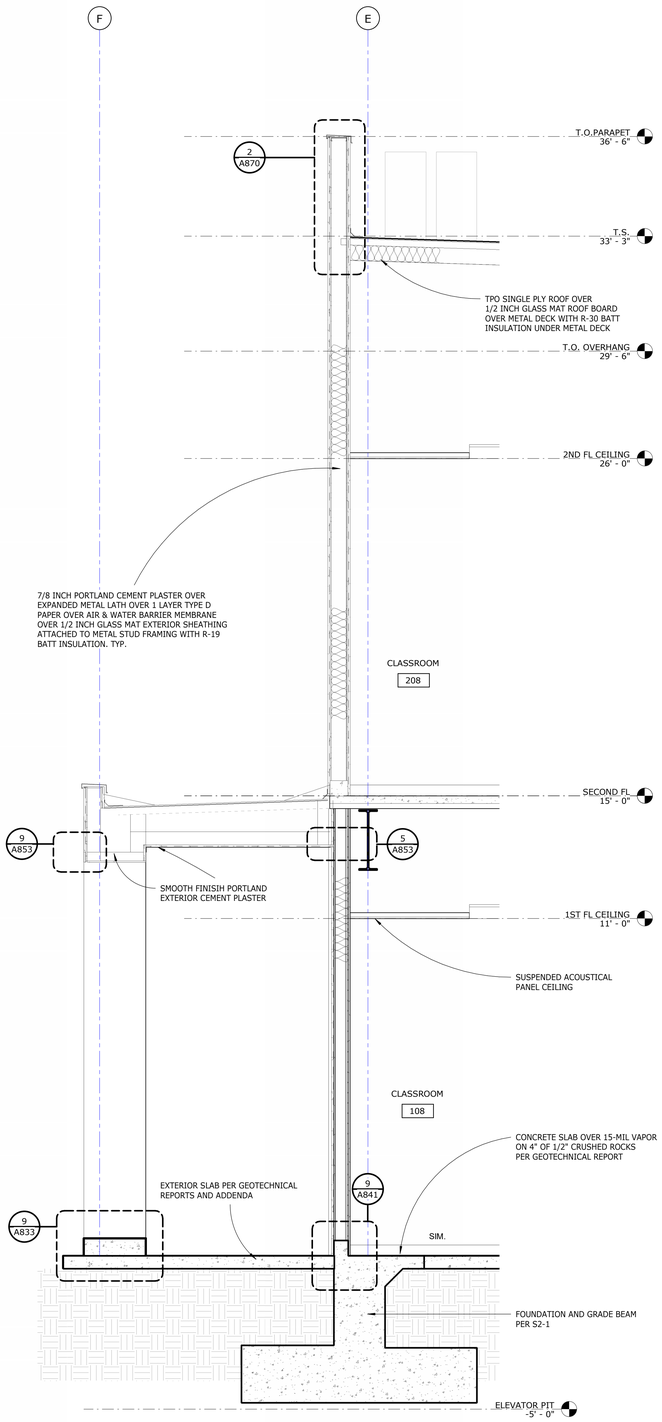
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ENGINEER:	

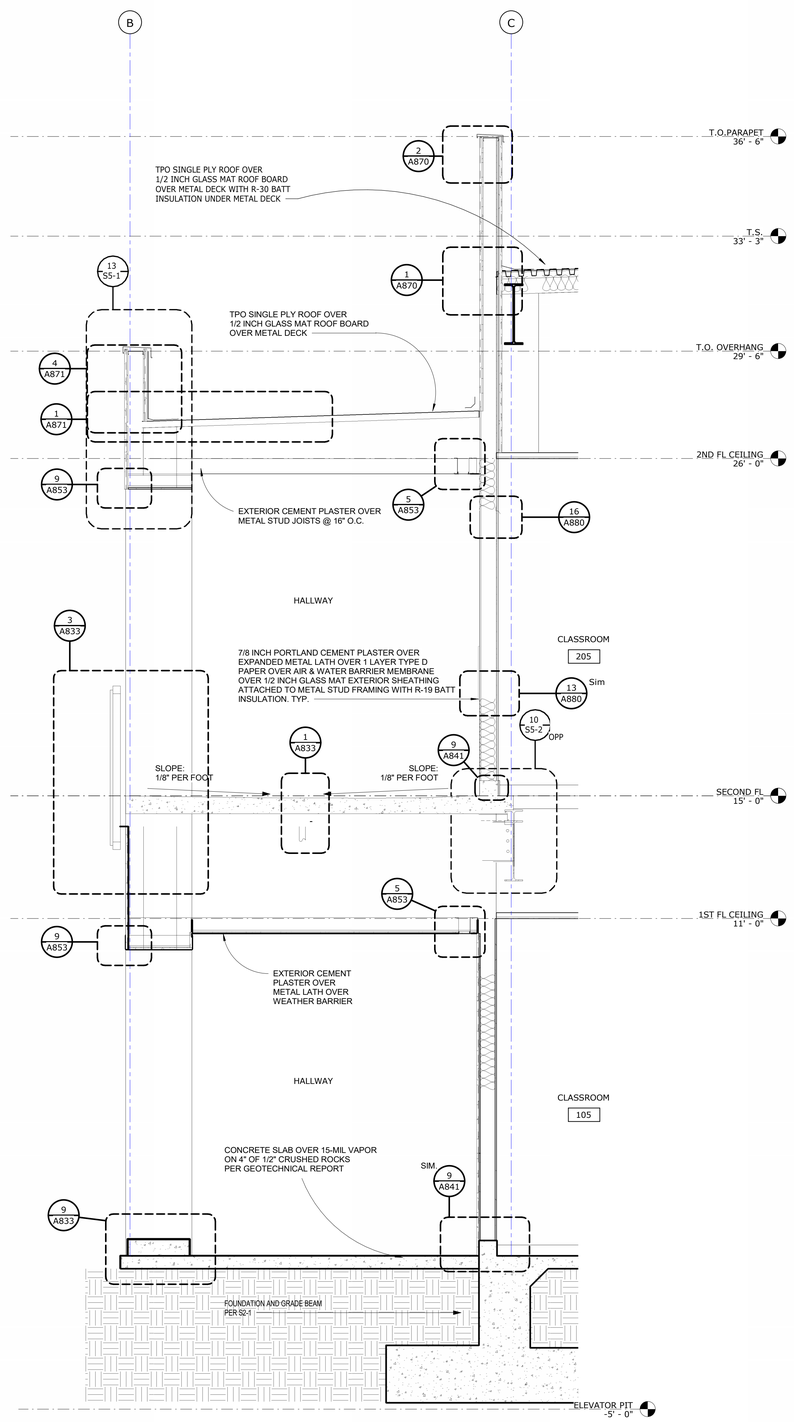
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BUILDING SECTIONS

SHEET NO:

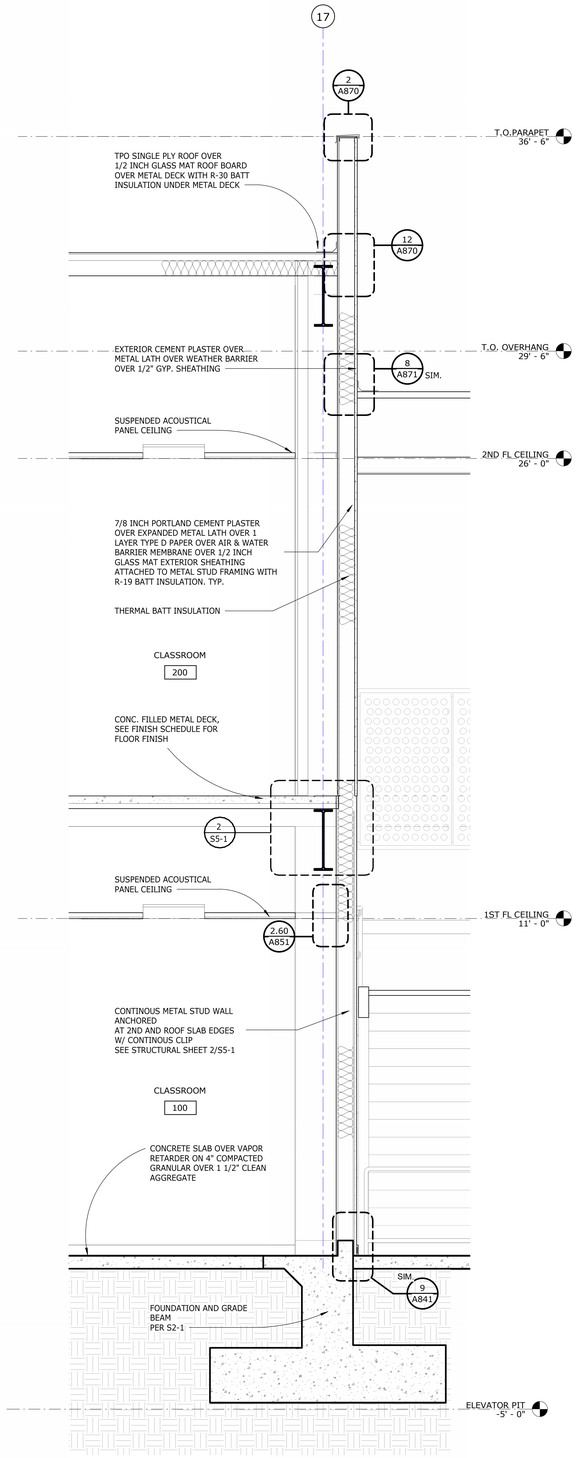
A500



WALL SECTION.3 1/2" = 1'-0" 3



WALL SECTION.2 1/2" = 1'-0" 2



WALL SECTION.1 1/2" = 1'-0" 1

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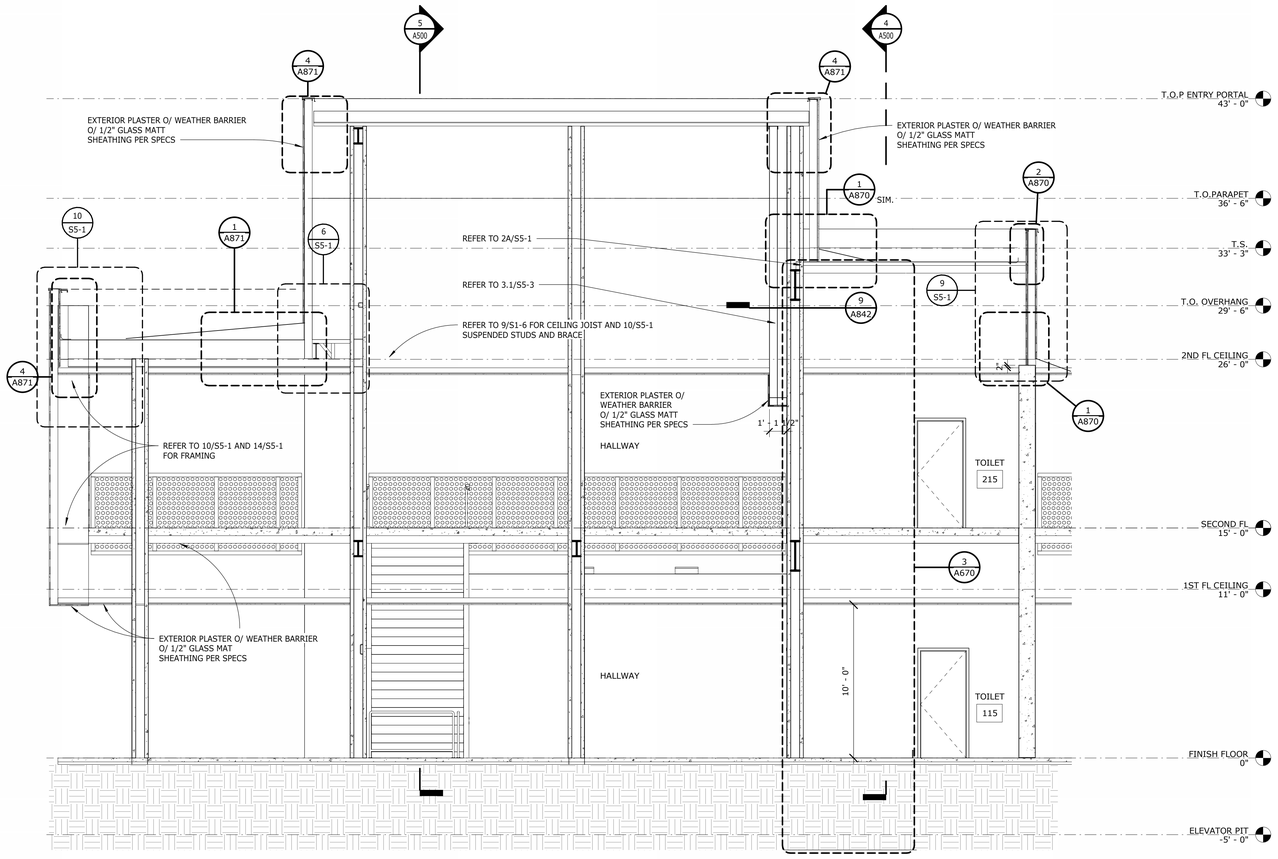
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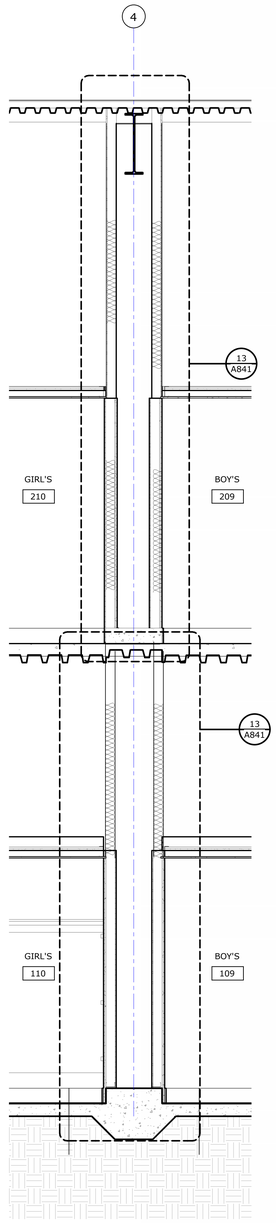
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WALL SECTIONS

SHEET NO:
A501

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SECTION AT HALLWAY 1/4" = 1'-0" 2



RESTROOM SECTION 1/2" = 1'-0" 1

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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

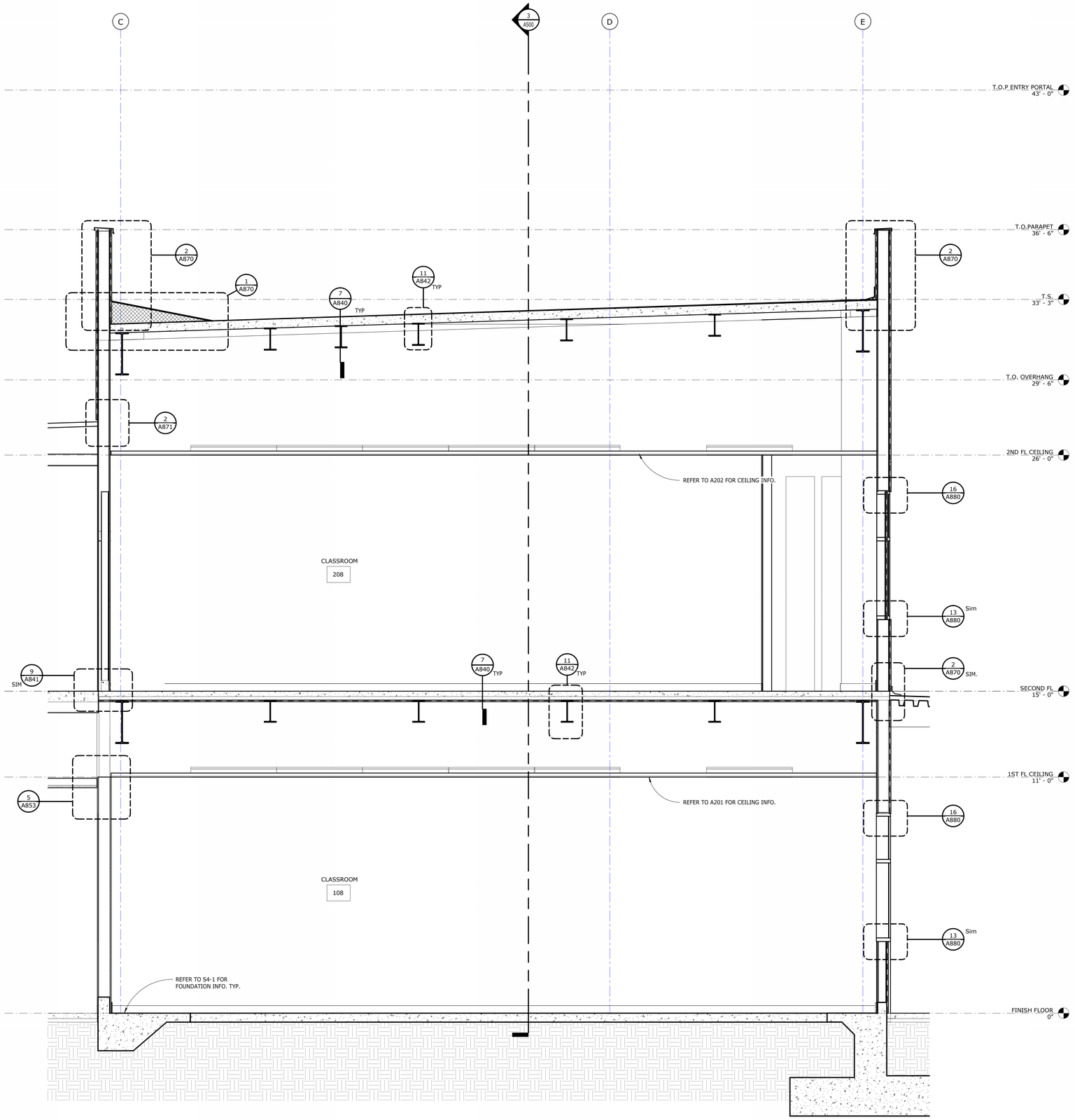
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

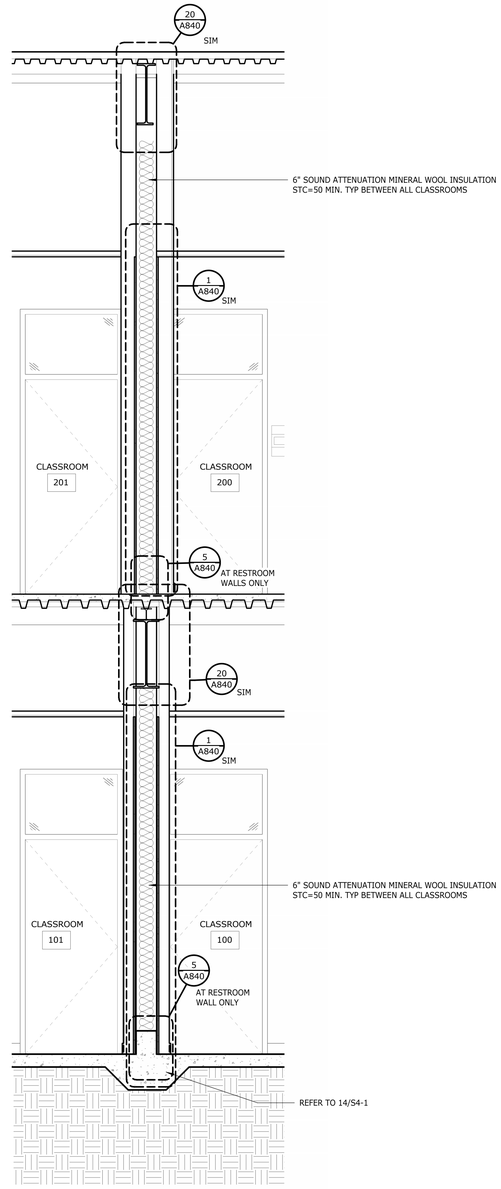
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DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
WALL SECTIONS

SHEET NO:
A502



BEAM PERPENDICULAR TO WALL 1/2" = 1'-0" 2



BEAM PARALLEL TO WALL 1/2" = 1'-0" 1

10/8/2024 11:02:34 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2023 STATE OF CALIFORNIA

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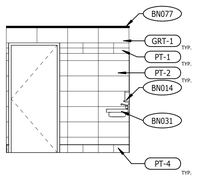
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
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No.	Rev. Date	Description

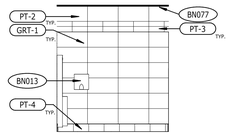
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DATE: 2/27/2024
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ENGINEER:

SHEET DESCRIPTION:
WALL SECTIONS

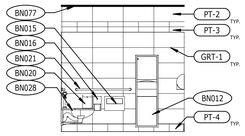
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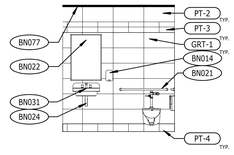
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7C



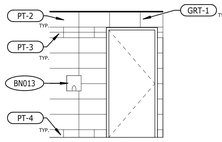
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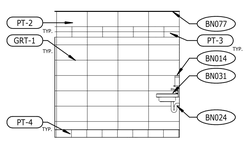
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116 /216 - ALL GENDER RESTROOM - INTERIOR ELEVATIONS

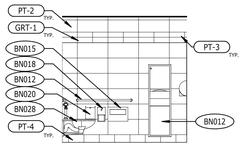
1/4" = 1' - 0" | 7



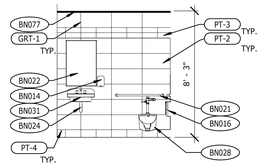
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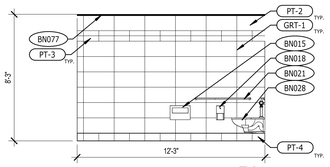
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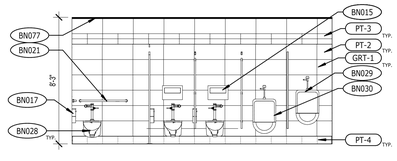
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115 /215 - ALL GENDER RESTROOM - INTERIOR ELEVATIONS

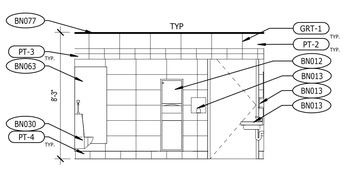
1/4" = 1' - 0" | 6



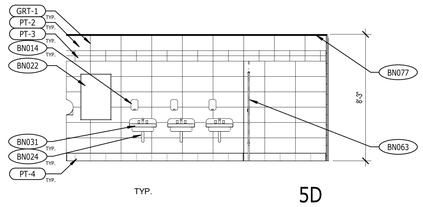
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5B



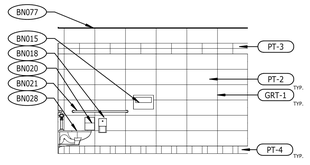
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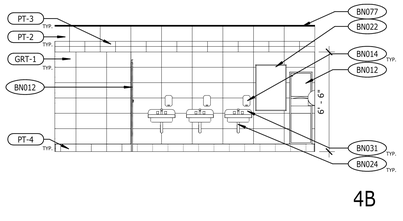
5D

109 - BOY'S RESTROOM - INTERIOR ELEVATIONS

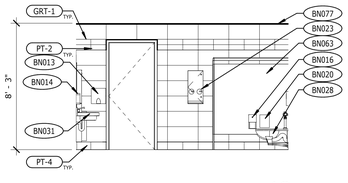
1/4" = 1' - 0" | 5



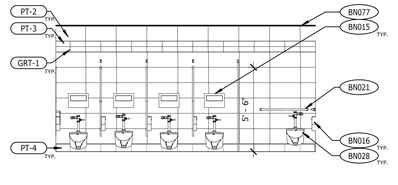
4A



4B



4C



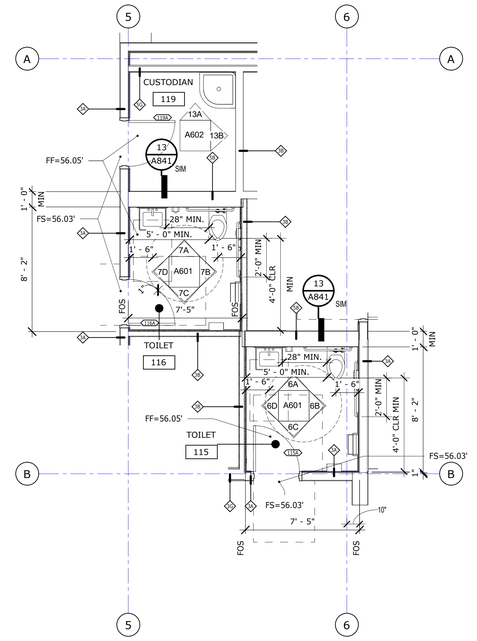
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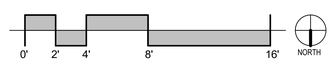
110 - GIRL'S RESTROOM INTERIOR ELEVATIONS

1/4" = 1' - 0" | 4

NOTE:

1) FOR TYPICAL TOILET FIXTURE AND ACCESSORY MOUNTING HEIGHTS SEE 'ACC. MOUNTING LEGEND' NOTES ON THIS SHEET.
2) FOR TYPICAL CLEARANCES OF TOILET ROOM FIXTURES AND ACCESSORIES SEE "ACC. REQUIREMENTS LEGEND' ON THIS SHEET.
3) TYP. CABINET ANCHORAGE, REFER TO DETAILS 5/A860 (METAL STUD)
4) ALL FLOORS SLOPING TO DRAIN TO BE NO MORE THAN 1/8" PER FOOT (1% MAX.) IN ALL DIRECTIONS
5) PROVIDE COAT HOOKS ON INSIDE FACE OF STALL DOOR IN BOY'S/GIRL'S TOILET ROOMS.
6) PROVIDE COAT HOOKS ON INSIDE FACE OF DOORS IN ALL GENDER TOILET ROOMS, REFERT TO SECTION 102813.

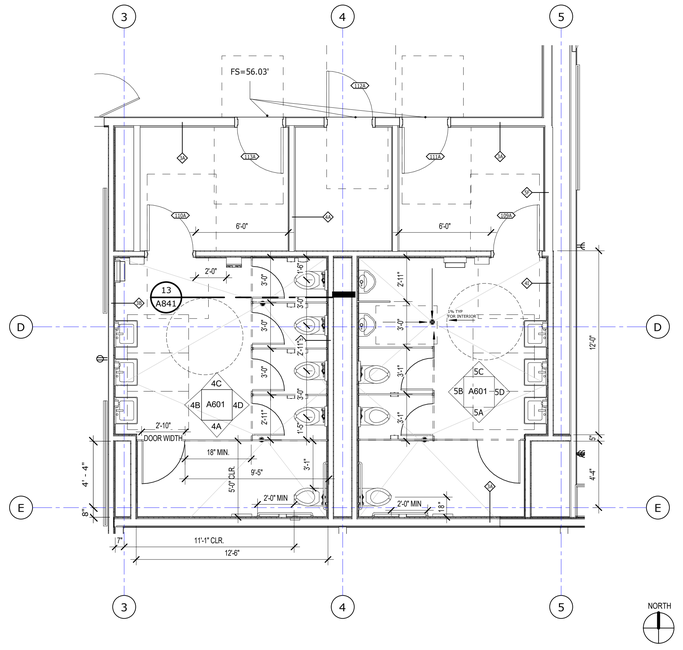




ENLARGED TOILET FLOOR PLANS & CUSTODIAN - #115 & 116 & 119

1/4" = 1' - 0" | 2

NOTE:
1) FOR TYPICAL TOILET FIXTURE AND ACCESSORY MOUNTING HEIGHTS SEE 'ACC. MOUNTING LEGEND' NOTES ON THIS SHEET.
2) FOR TYPICAL CLEARANCES OF TOILET ROOM FIXTURES AND ACCESSORIES SEE "ACC. REQUIREMENTS LEGEND' ON THIS SHEET.
3) TYP. CABINET ANCHORAGE, REFER TO DETAILS 5/A860 (METAL STUD)
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5) PROVIDE COAT HOOKS ON INSIDE FACE OF STALL DOOR IN BOY'S/GIRL'S TOILET ROOMS.
6) PROVIDE COAT HOOKS ON INSIDE FACE OF DOORS IN ALL GENDER TOILET ROOMS. REFER TO SECTION 10 2813 OF SPECS

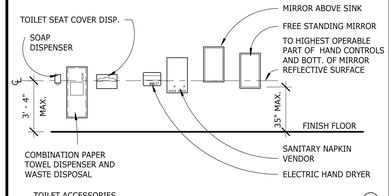


ENLARGED TOILET FLOOR PLANS - #109-110

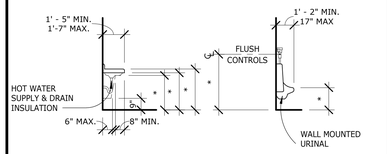
1/4" = 1' - 0" | 1

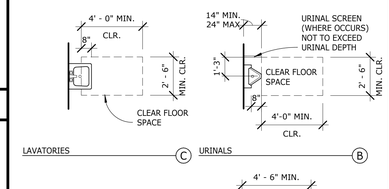
BN012	COMBINATION PAPER TOWEL DISPENSER/WASTE RECEPTACLE.
BN013	WARM AIR ELECTRIC HAND DRYER, AUTOMATIC NO-TOUCH OPERATION, SURFACE MOUNTED
BN014	SOAP DISPENSER, SURFACE-MOUNTED
BN015	SEAT COVER DISPENSER, SURFACE-MOUNTED
BN016	TOILET TISSUE DISPENSER
BN017	TOILET TISSUE DISPENSER, MULTI-ROLL, SURFACE MOUNTED
BN018	TOILET TISSUE DISPENSER, MULTI-ROLL, PARTITION-MOUNTED, SERVES 2 COMPARTMENTS
BN020	SANITARY NAPKIN DISPOSAL, FLOOR
BN021	STAINLESS STEEL GRAB BAR, SEE MOUNTING DETAIL 17/A840
BN022	STAINLESS STEEL FRAMED MIRROR, 24" WIDE x 36" TALL
BN023	SANITARY NAPKIN VENDOR, 25 CENTS COIN OPERATION, RECESSED
BN024	UNDER LAVATORY COVERS, MOLDED VINYL COVERING FOR SUPPLY AND DRAIN PIPING, REFER TO SECTION 22 4200
BN028	WALL MOUNTED TOILET, SEE PLUMBING DRAWINGS
BN029	STANDARD URINAL, SEE PLUMBING DWGS
BN030	ACCESSIBLE URINAL, SEE PLUMBING DWGS
BN031	LAVATORY. SEE MOUNTING TABLE HEIGHT AND PLUMBING DWGS FOR MORE INFORMATION
BN063	PROVIDE TOILET PARTITION PER ENLARGED PLAN AND ELEVATION ON SHEET A601.
BN077	FILL THE GAP BETWEEN THE TILES AND CILING WITH GRT-1.

KEYNOTES

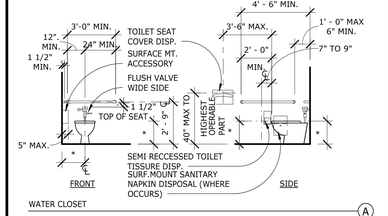


TOILET ACCESSORIES D





LAVATORIES C URINALS B



WATER CLOSET A

* REFER TO ACCESSIBLE MOUNTING HEIGHTS TABLE FOR FIXTURE MOUNTING HEIGHTS.

ALL DIMENSIONS TO FACE OF FINISH, UNLESS NOTED OTHERWISE

ACC. REQUIREMENTS LEGEND

ITEM	A* ADULT DIMENSIONS (AGE 12 AND OVER) A (Inches)
TOILET CENTERING FROM WALL	17 - 18
TOILET SEAT HEIGHT/DIMENSIONS TO TOP OF SEAT	17 - 19
GRAB BAR HEIGHT	33 - 36
TOILET PAPER IN FRONT OF TOILET	7 - 9
NAPKIN DISPOSAL AT TOILET	SEE ELEV. A/- ABOVE
PAPER TOWEL DISPENSER OR MIRROR HEIGHT	40 MAX.
LAVATORY/SINK TOP HEIGHT	34 MAX.
LAVATORY KNEE CLEARANCE	27 MIN.
SINK KNEE CLEARANCE AT LAVATORY LIP EDGE	29 MIN.
URINAL LIP HEIGHT	17 MAX.
URINAL FLUSH HANDLE HEIGHT	44 MAX.
DRINKING FOUNTAIN BUBBLER HEIGHT	36 MAX.
DRINKING FOUNTAIN KNEE CLEARANCE	27 MIN.

ACC. MOUNTING HEIGHTS

ACCESSIBLE WORKSTATION / CLEAR SPACE: 30" x 48" (U.N.O.)

ACCESSIBLE CLEAR SPACE: 5' DIAMETER TURNING SPACE

12" 30" 302 28" CASEWORK TAG, SEE 1/A860 FOR ADDITIONAL INFORMATION, AND SEE DETAILS 5 AND 6/A860 FOR ANCHORAGE.

PT-7 COLOR TAG, SEE COLOR SCHEDULE SHEET A704

ACC. SYMBOL LEGEND

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
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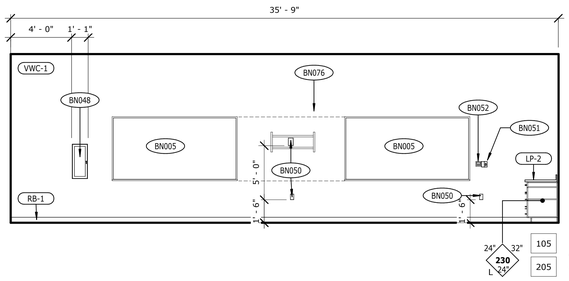
No.	Rev. Date	Description

JOB NO:	22029.01
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DRAWN:	MG
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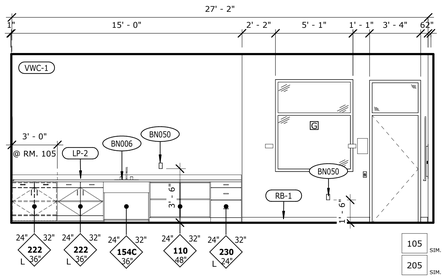
SHEET DESCRIPTION:
ENLARGED TOILET PLANS & INTERIOR ELEVATIONS

SHEET NO:

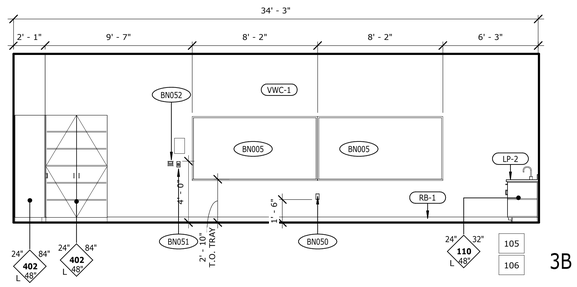
A601



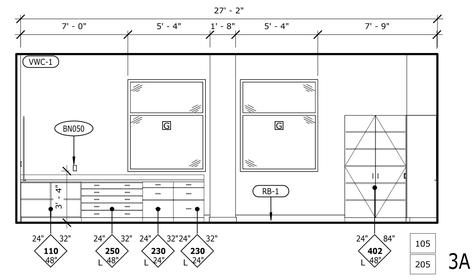
3D



3C

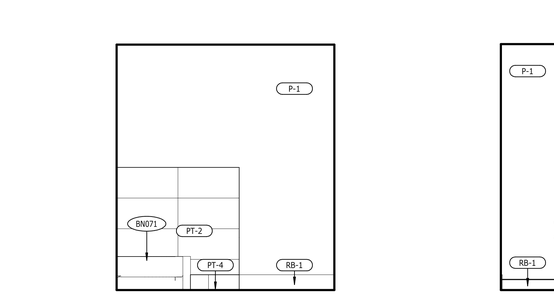


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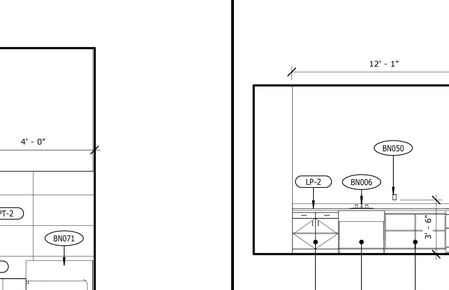


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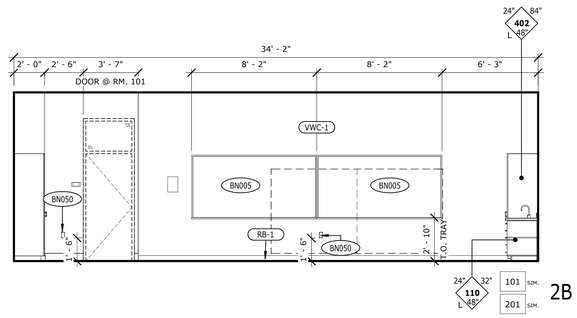
CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 205 | 105 | 3



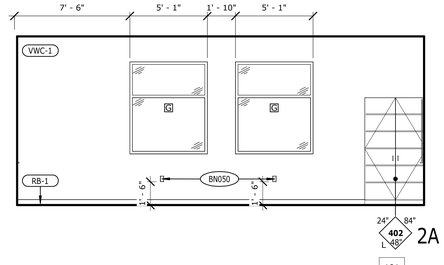
2D



2C

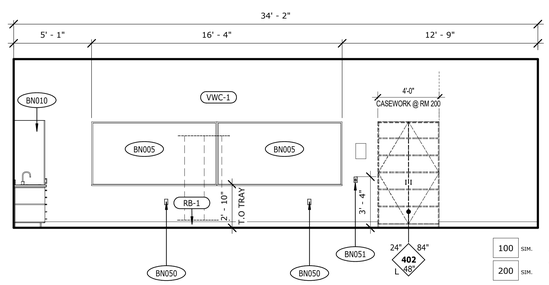


2B

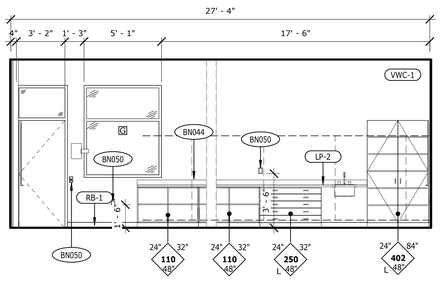


2A

CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 201 | 101 SIM. | 2

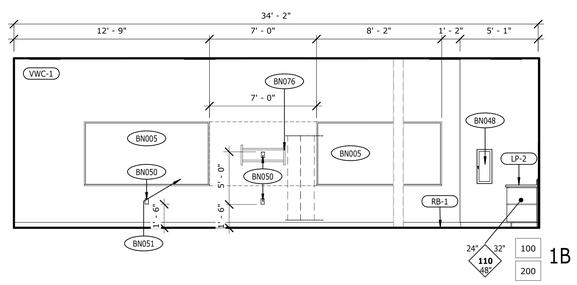


1D

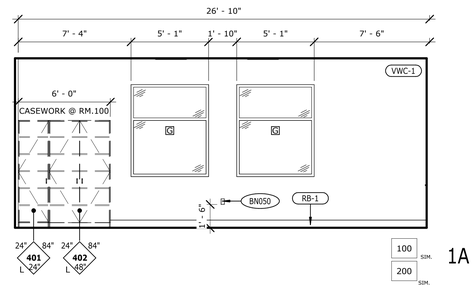


1C

100
200



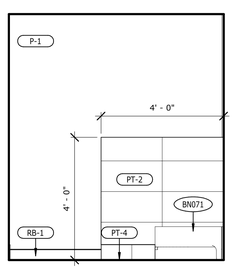
1B



1A

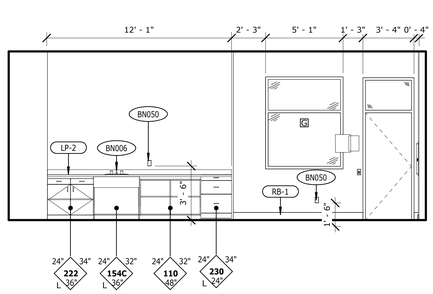
CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 100 SIM. | 200 SIM. | 1

13B

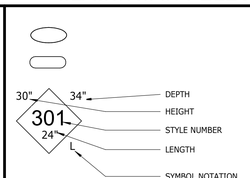


13A

CUSTODIAL ELEVATIONS | 1/4" = 1' - 0" | 112,212 | 13



NORTH CLASSROOM ELEVATION 205 | 1/4" = 1'-0" | 9



KEYNOTE TAG.

COLOR TAG. SEE A720.

CASEWORK TAG. SEE A860 FOR DETAILS

LEGEND

BN005	MARKERBOARD WITH MAP RAIL, 4'x8' WHITE. SEE PER 4/A860
BN006	COUNTERTOP MOUNTED SINK WITH BUBBLER.
BN010	FULL HEIGHT SUPPLY CABINET. SEE PER 5/A860
BN044	OVERFLOW OUTLET
BN048	PROVIDE FIRE EXTINGUISHER CABINET. SEE 14/A840.
BN050	PROVIDE RECEPTACLE. SEE ELECTRICAL DRAWINGS.
BN051	PROVIDE 3-WAY LIGHT INSTRUCTOR CONTROL. SEE ELECTRICAL DRAWINGS.
BN052	PROVIDE THERMOSTAT. SEE ELECTRICAL DRAWINGS.
BN071	PROVIDE AND INSTALL NEW MOP SINK.
BN076	PROVIDE TV MOUNT PER DETAIL 7/A860. O.F.C.I. TV MONITORS.

KEYNOTE LEGEND

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

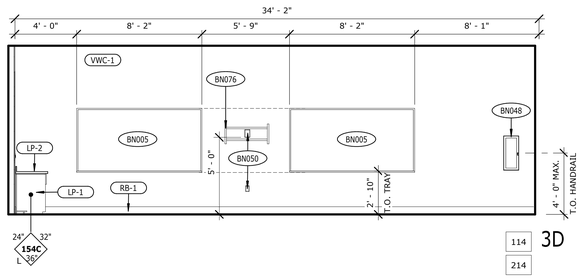
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
INTERIOR ELEVATIONS

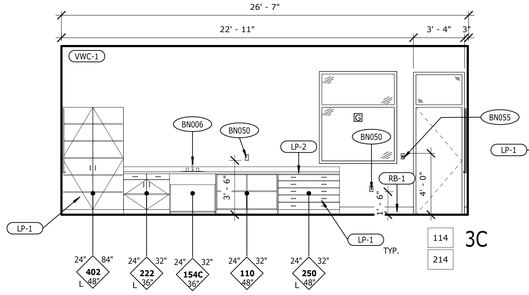
SHEET NO:

A602



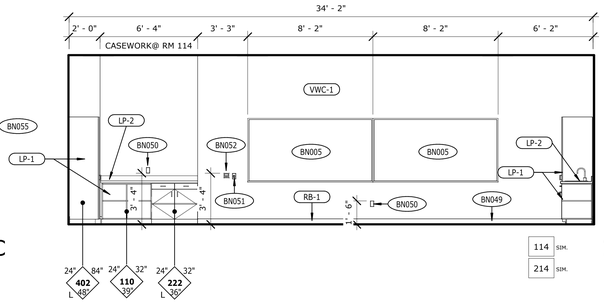
114
214

3D



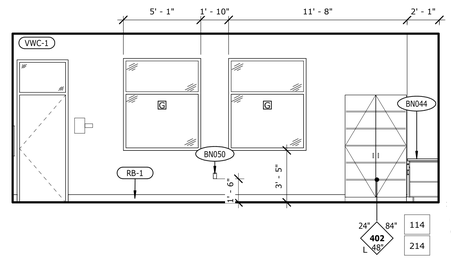
114
214

3C



114 SIM.
214 SIM.

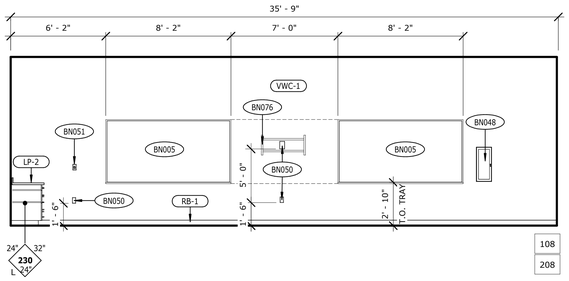
3B



114
214

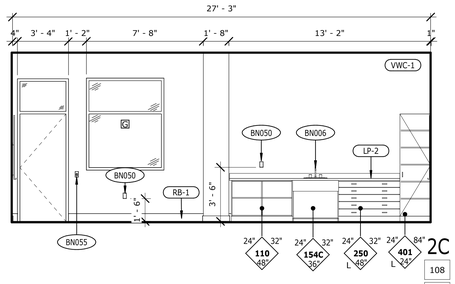
3A

CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 114 SIM. | 214 SIM. | 3



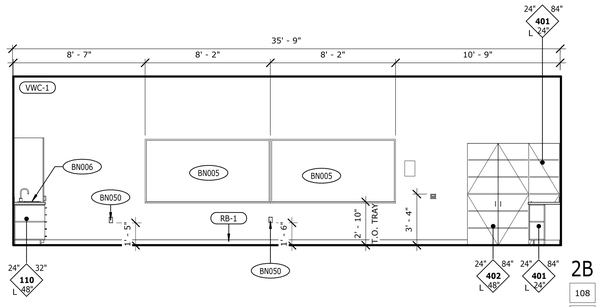
108
208

2D



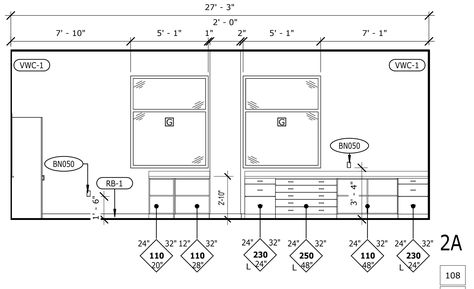
108
208

2C



108
208

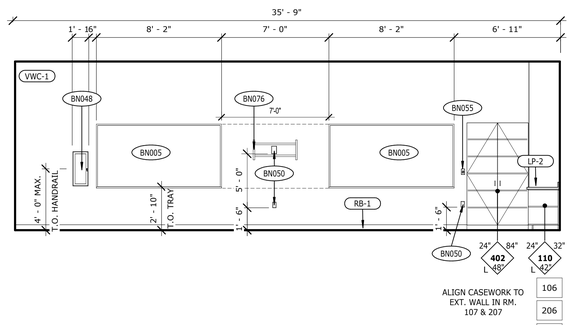
2B



108
208

2A

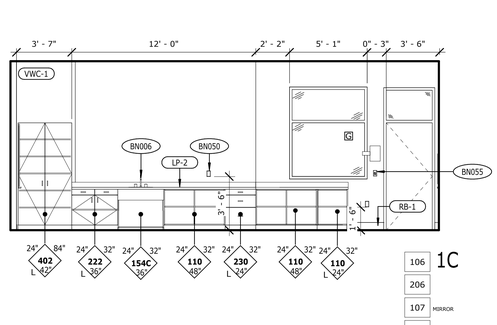
CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 108 | 208 | 2



ALIGN CASEWORK TO EXT. WALL IN RM. 107 & 207

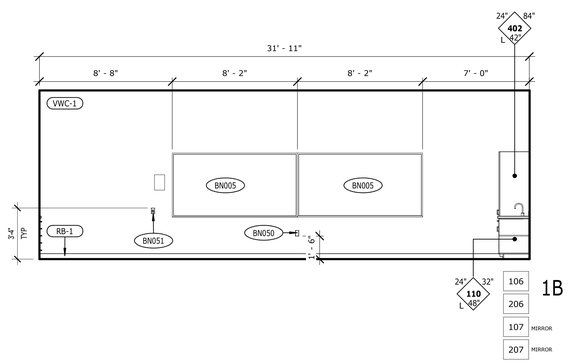
106
206
107 MIRROR
207 MIRROR

1D



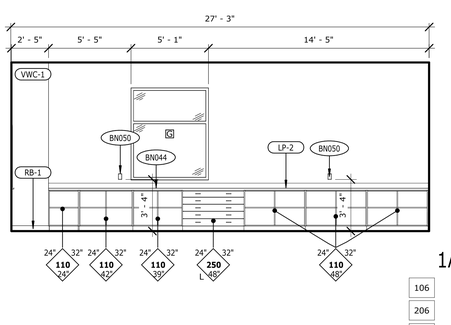
106
206
107 MIRROR
207 MIRROR

1C



106
206
107 MIRROR
207 MIRROR

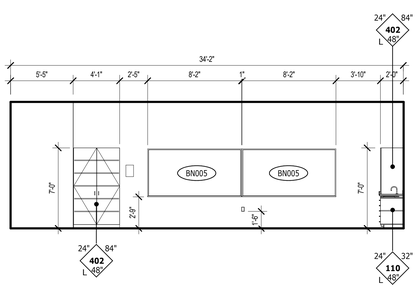
1B



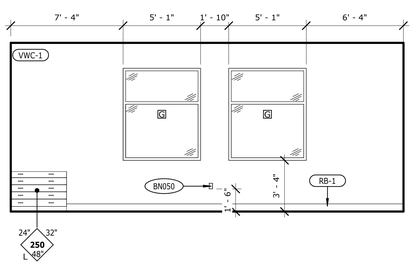
106
206
107 MIRROR
207 MIRROR

1A

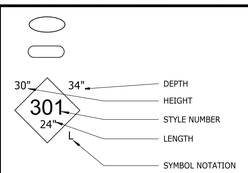
CLASSROOM ELEVATIONS | 1/4" = 1' - 0" | 106 | 206 | 107 MIRROR | 207 MIRROR | 1



CLASSROOM ELEVATION 201 | 3/16" = 1'-0" | 13



SOUTH CLASSROOM ELEVATION 214 | 1/4" = 1'-0" | 9



KEYNOTE TAG.

COLOR TAG. SEE A720.

CASEWORK TAG. SEE A860 FOR DETAILS

LEGEND

BN005	MARKERBOARD WITH MAP RAIL, 4'x8' WHITE. SEE PER 4/A860
BN006	COUNTERTOP MOUNTED SINK WITH BUBBLER.
BN044	OVERFLOW OUTLET
BN048	PROVIDE FIRE EXTINGUISHER CABINET. SEE 14/A840.
BN049	PROVIDE 4" RESILIANT BASE. SEE FINISH SCHEDULE.
BN050	PROVIDE RECEPTACLE. SEE ELECTRICAL DRAWINGS.
BN051	PROVIDE 3-WAY LIGHT INSTRUCTOR CONTROL. SEE ELECTRICAL DRAWINGS.
BN052	PROVIDE THERMOSTAT. SEE ELECTRICAL DRAWINGS.
BN055	PROVIDE LIGHT ENTRANCE CONTROL PER ELECTRICAL DRAWINGS.
BN076	PROVIDE TV MOUNT PER DETAIL 7/A860. O.F.C.I. TV MONITORS.

KEYNOTE LEGEND

STATE:

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architecture
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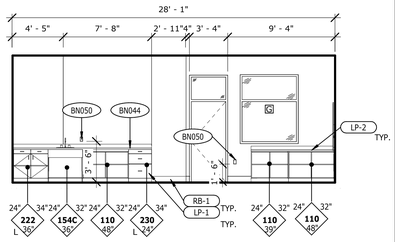
JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
INTERIOR ELEVATIONS

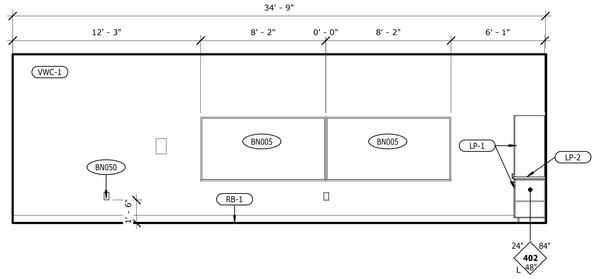
SHEET NO:

A603

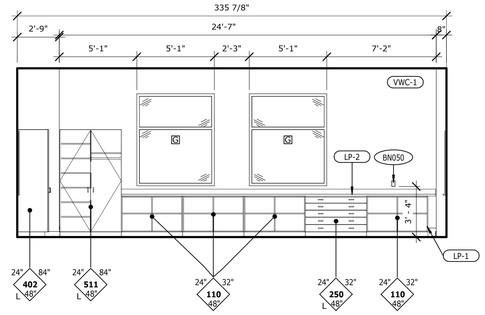
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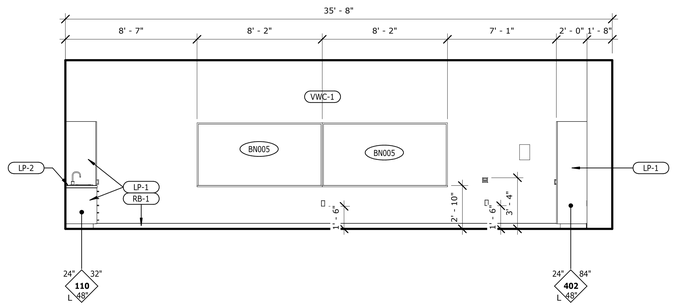
CLASSROOM ELEVATION 206 3/16" = 1'-0" 10



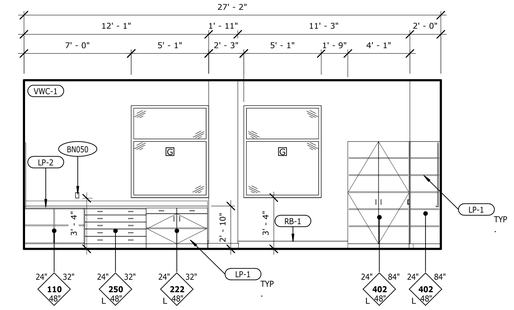
WEST CLASSROOM ELEVATION 214 1/4" = 1'-0" 8



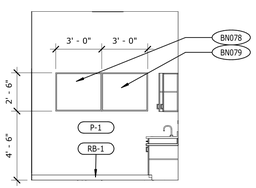
SOUTH CLASSROOM ELEVATION 206 1/4" = 1'-0" 3



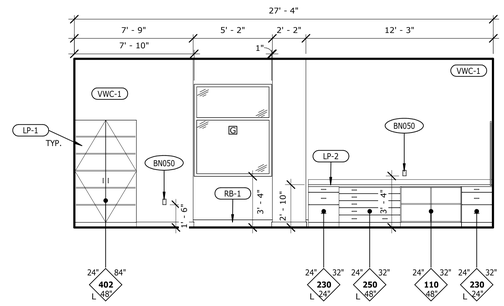
EAST CLASSROOM ELEVATION 208 1/4" = 1'-0" 7



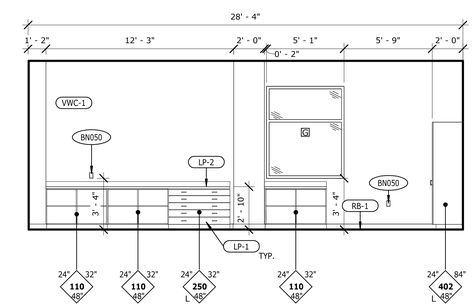
SOUTH CLASSROOM ELEVATION 205 1/4" = 1'-0" 2



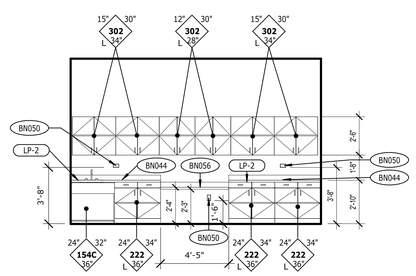
WORKROOM 102, 202 1/4" = 1'-0" 9B



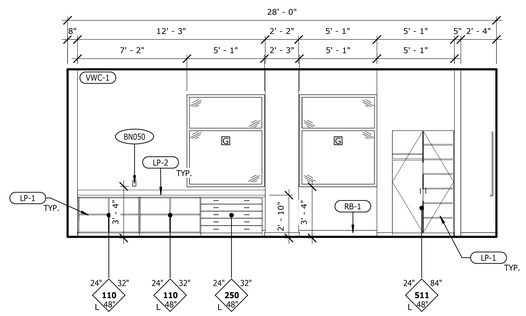
SOUTH CLASSROOM ELEVATION 208 1/4" = 1'-0" 6



SOUTH CLASSROOM ELEVATION 107 1/4" = 1'-0" 1



WORKROOM ELEVATION 102, 202 1/4" = 1'-0" 9A

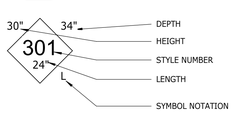


CLASSROOM ELEVATION 207 1/4" = 1'-0" 5

KEYNOTE TAG.

COLOR TAG. SEE A720.

CASEWORK TAG. SEE A860 FOR DETAILS



LEGEND

BN005	MARKERBOARD WITH MAP RAIL, 4'x8' WHITE. SEE PER 4/A860
BN044	OVERFLOW OUTLET
BN050	PROVIDE RECEPTACLE. SEE ELECTRICAL DRAWINGS.
BN056	WORK TABLE, COLOR AND TEXTURE TO BE SELECTED BY THE ARCHITECT.
BN078	PROVIDE A NEW TACKABLE BOARD SEE 4/A860.
BN079	PROVIDE A NEW WHITE BOARD SEE 4/A860.

KEYNOTE

STATE:

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LICENSED ARCHITECT PAUL WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

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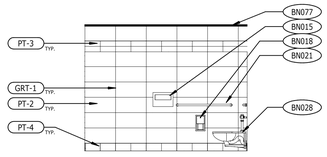
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

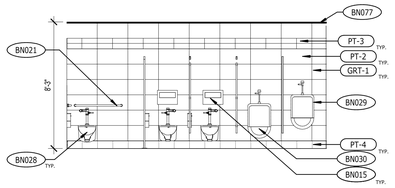
SHEET DESCRIPTION:
INTERIOR ELEVATIONS

SHEET NO:

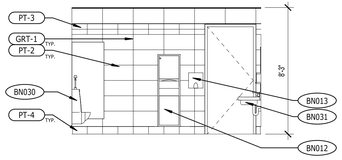
A604



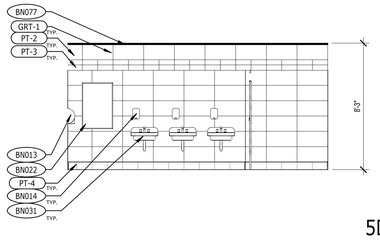
5A



5B



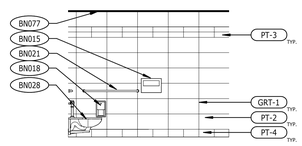
5C



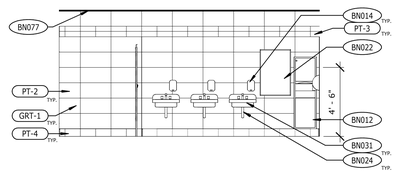
5D

209 - BOY'S RESTROOM - INTERIOR ELEVATIONS

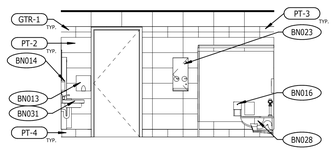
1/4" = 1' - 0" | 3



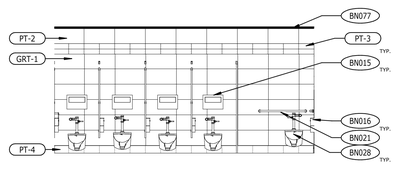
4A



4B



4C



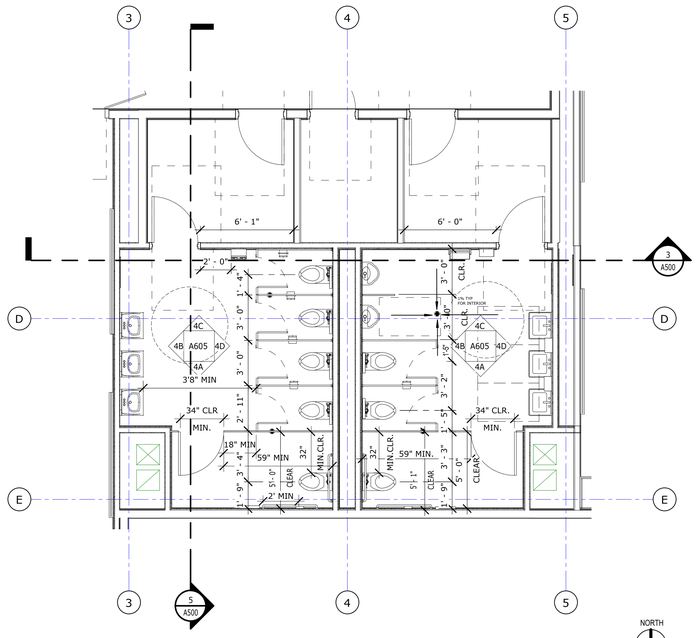
4D

210 - GIRL'S RESTROOM INTERIOR ELEVATIONS

1/4" = 1' - 0" | 2

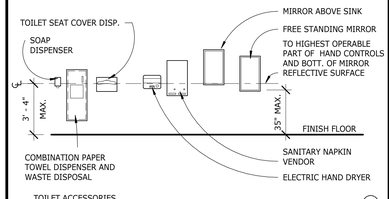
NOTE:

1) FOR TYPICAL TOILET FIXTURE AND ACCESSORY MOUNTING HEIGHTS SEE 'ACC. MOUNTING LEGEND' NOTES ON THIS SHEET.
2) FOR TYPICAL CLEARANCES OF TOILET ROOM FIXTURES AND ACCESSORIES SEE "ACC. REQUIREMENTS LEGEND' ON THIS SHEET.
3) TYP. CABINET ANCHORAGE, REFER TO DETAILS 5/A860 (METAL STUD)
4) ALL FLOORS SLOPING TO DRAIN TO BE NO MORE THAN 1/8" PER FOOT (1% MAX.) IN ALL DIRECTIONS
5) PROVIDE COAT HOOKS ON INSIDE FACE OF STALL DOOR IN BOY'S/GIRL'S TOILET ROOMS.
6) PROVIDE COAT HOOKS ON INSIDE FACE OF DOORS IN ALL GENDER TOILET ROOMS. REFETR TO SECTIOM 10 2813 OF SPECS

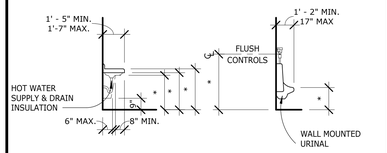


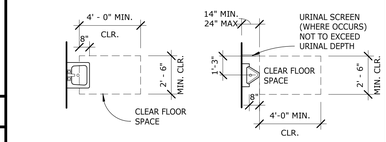
BN012 COMBINATION PAPER TOWEL DISPENSER/WASTE RECEPTACLE.
BN013 WARM AIR ELECTRIC HAND DRYER, AUTOMATIC NO-TOUCH OPERATION, SURFACE MOUNTED
BN014 SOAP DISPENSER, SURFACE-MOUNTED
BN015 SEAT COVER DISPENSER, SURFACE-MOUNTED
BN016 TOILET TISSUE DISPENSER
BN018 TOILET TISSUE DISPENSER, MULTI-ROLL, PARTITION-MOUNTED, SERVES 2 COMPARTMENTS
BN021 STAINLESS STEEL GRAB BAR, SEE MOUNTING DETAIL 17/A840
BN022 STAINLESS STEEL FRAMED MIRROR, 24" WIDE x 36" TALL
BN023 SANITARY NAPKIN VENDOR, 25 CENTS COIN OPERATION, RECESSED
BN024 UNDER LAVATORY COVERS, MOLDED VINYL COVERING FOR SUPPLY AND DRAIN PIPING, REFER TO SECTION 22 4200
BN028 WALL MOUNTED TOILET, SEE PLUMBING DRAWINGS
BN029 STANDARD URINAL, SEE PLUMBING DWGS
BN030 ACCESSIBLE URINAL, SEE PLUMBING DWGS
BN031 LAVATORY, SEE MOUNTING TABLE HEIGHT AND PLUMBING DWGS FOR MORE INFORMATION
BN077 FILL THE GAP BETWEEN THE TILES AND CILING WITH GRT-1.

KEYNOTES

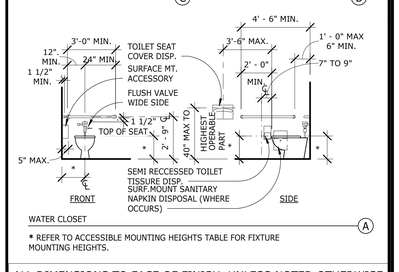


TOILET ACCESSORIES — D





LAVATORIES — C URINALS — B



WATER CLOSET — A

* REFER TO ACCESSIBLE MOUNTING HEIGHTS TABLE FOR FIXTURE MOUNTING HEIGHTS.

ALL DIMENSIONS TO FACE OF FINISH, UNLESS NOTED OTHERWISE

ACC. REQUIREMENTS LEGEND

ITEM — A= ADULT DIMENSIONS (AGE 12 AND OVER)	A (Inches)
TOILET CENTERING FROM WALL	17 - 18
TOILET SEAT HEIGHT/DIMENSIONS TO TOP OF SEAT	17 - 19
GRAB BAR HEIGHT	33 - 36
TOILET PAPER IN FRONT OF TOILET	7 - 9
NAPKIN DISPOSAL AT TOILET	SEE ELEV. A/- ABOVE
PAPER TOWEL DISPENSER OR MIRROR HEIGHT	40 MAX.
LAVATORY/SINK TOP HEIGHT	34 MAX.
LAVATORY KNEE CLEARANCE	27 MIN.
SINK KNEE CLEARANCE AT LAVATORY LIP EDGE	29 MIN.
URINAL LIP HEIGHT	17 MAX.
URINAL FLUSH HANDLE HEIGHT	44 MAX.
DRINKING FOUNTAIN BUBBLER HEIGHT	36 MAX.
DRINKING FOUNTAIN KNEE CLEARANCE	27 MIN.

ACC. MOUNTING HEIGHTS

ACCESSIBLE WORKSTATION / CLEAR SPACE: 30" x 48" (U.N.O.)

ACCESSIBLE CLEAR SPACE: 5' DIAMETER TURNING SPACE

12" 30" / 302 / 28" — CASEWORK TAG, SEE 1/A860 FOR ADDITIONAL INFORMATION, AND SEE DETAILS 5 AND 6/A860 FOR ANCHORAGE.

PT-7 — COLOR TAG, SEE COLOR SCHEDULE SHEET A704

ACC. SYMBOL LEGEND

ENLARGED TOILET FLOOR PLANS - #209-210

1/4" = 1' - 0" | 1

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architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT — PAUL DENNIS WESTBERG — C-11045 EXP.9-2025 — STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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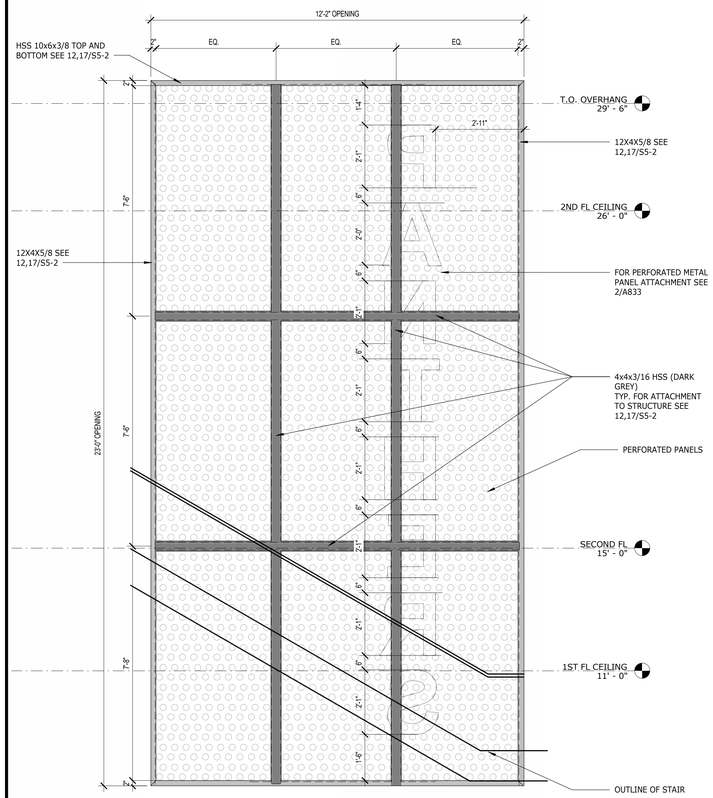
No.	Rev. Date	Description

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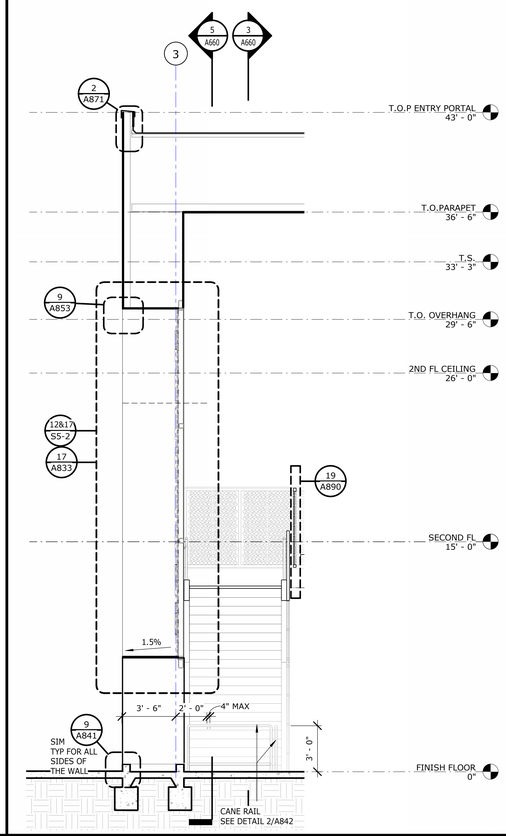
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ENLARGED TOILET PLANS & INTERIOR ELEVATION

SHEET NO:

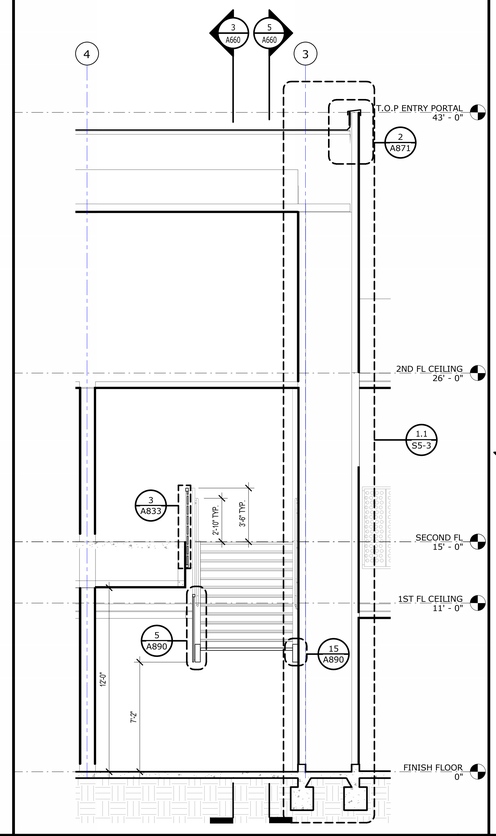
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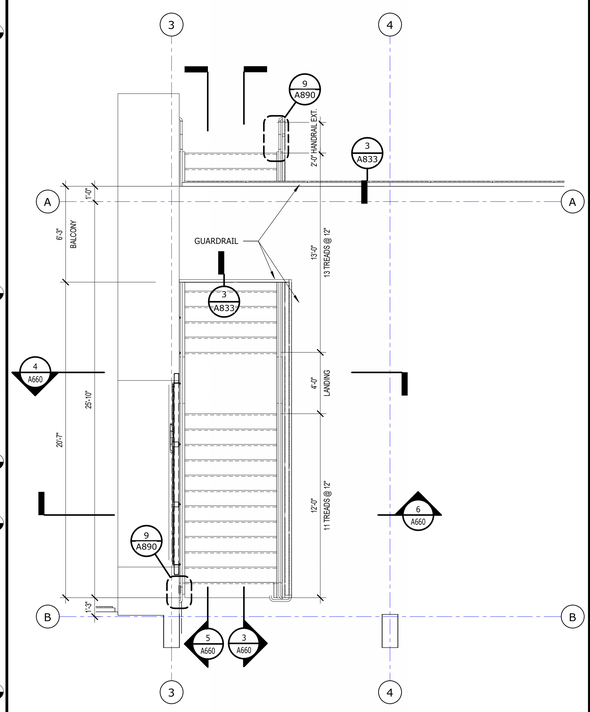
STAIR#1 PERFORATED PANEL 1/2" = 1'-0" | 7



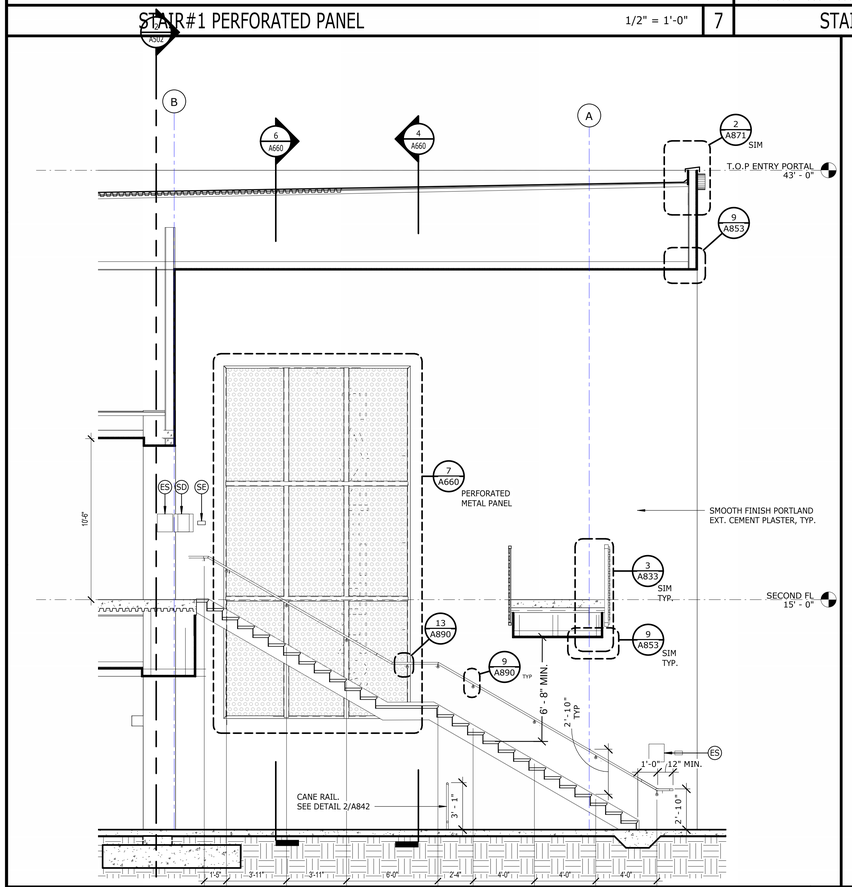
STAIR #1 SECTION 4 1/4" = 1'-0" | 6



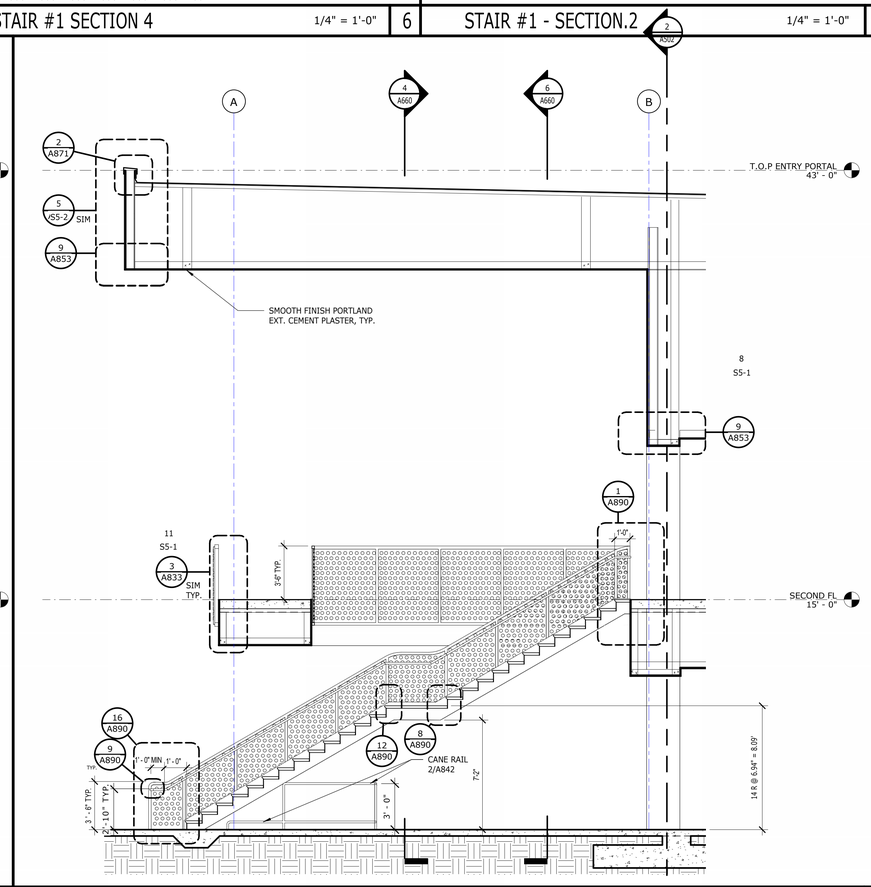
STAIR #1 - SECTION.2 1/4" = 1'-0" | 4



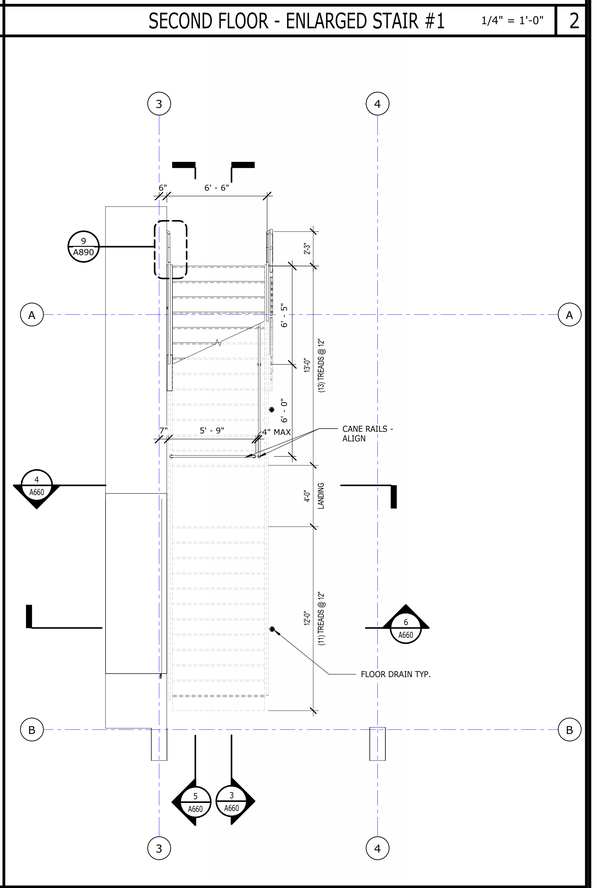
SECOND FLOOR - ENLARGED STAIR #1 1/4" = 1'-0" | 2



STAIR #1 - SECTION.3 1/4" = 1'-0" | 5



STAIR #1 - SECTION.1 1/4" = 1'-0" | 3



FIRST FLOOR - ENLARGED STAIR #1 1/4" = 1'-0" | 1

10/8/2024 11:02:50 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

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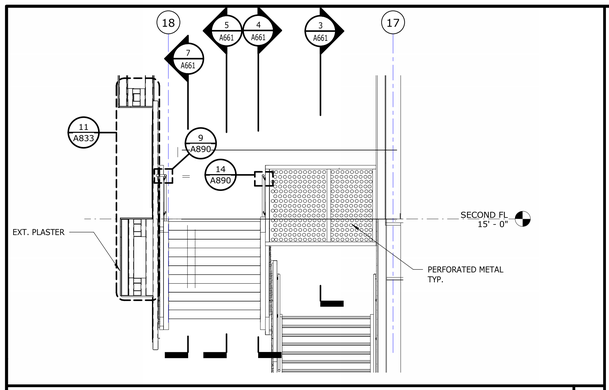
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ENGINEER:	

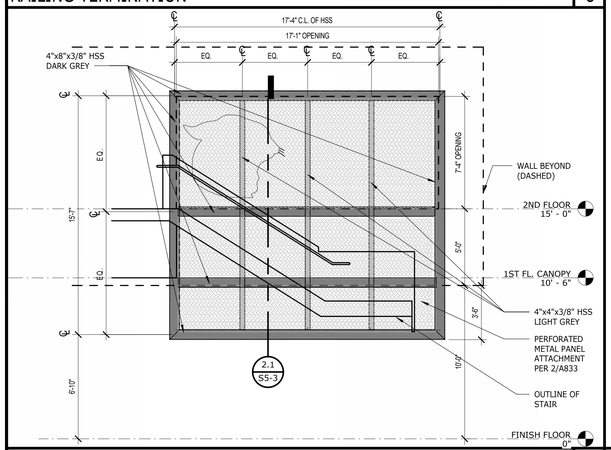
SHEET DESCRIPTION:
STAIR #1 ENLARGED PLAN AND SECTIONS

SHEET NO:

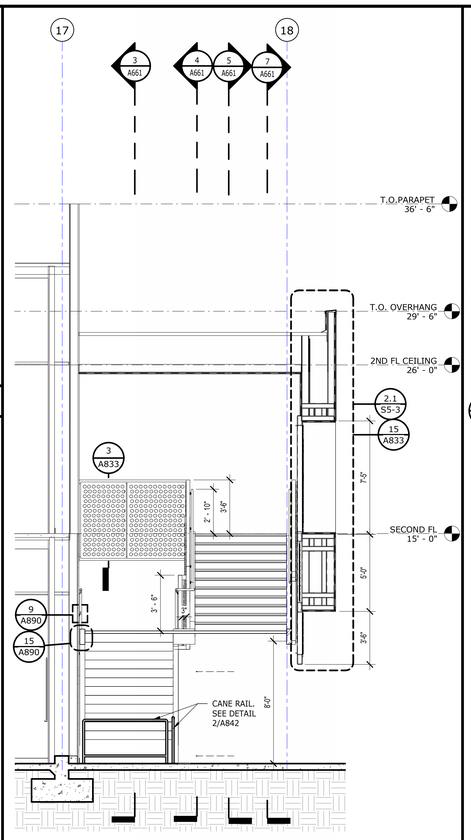
A660



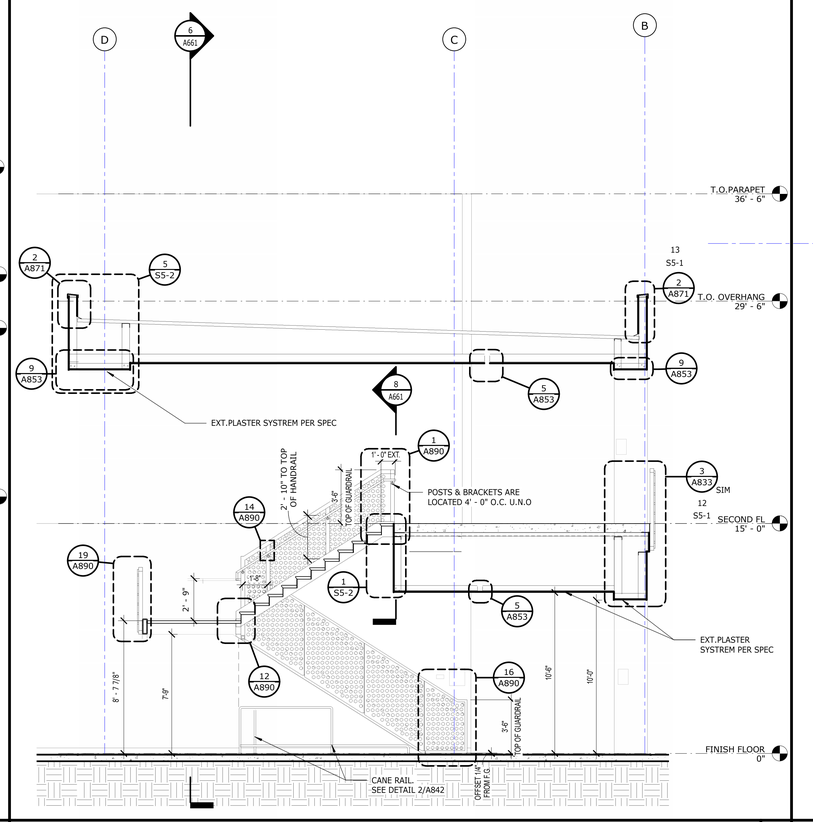
RAILING TERMINATION 1/4" = 1'-0" 8



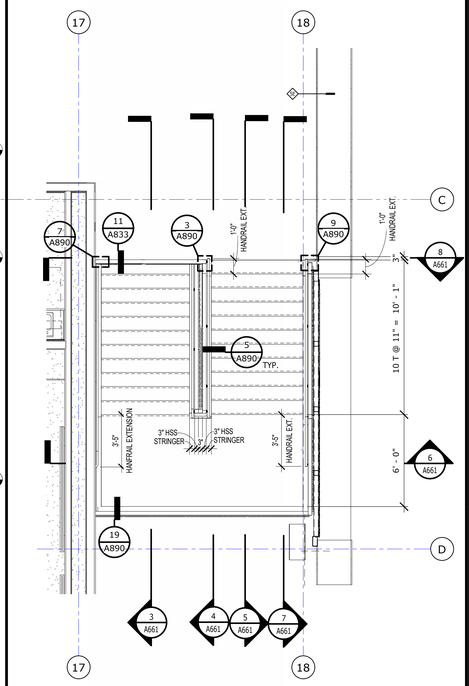
PERFORATED PANEL 1/4" = 1'-0" 7



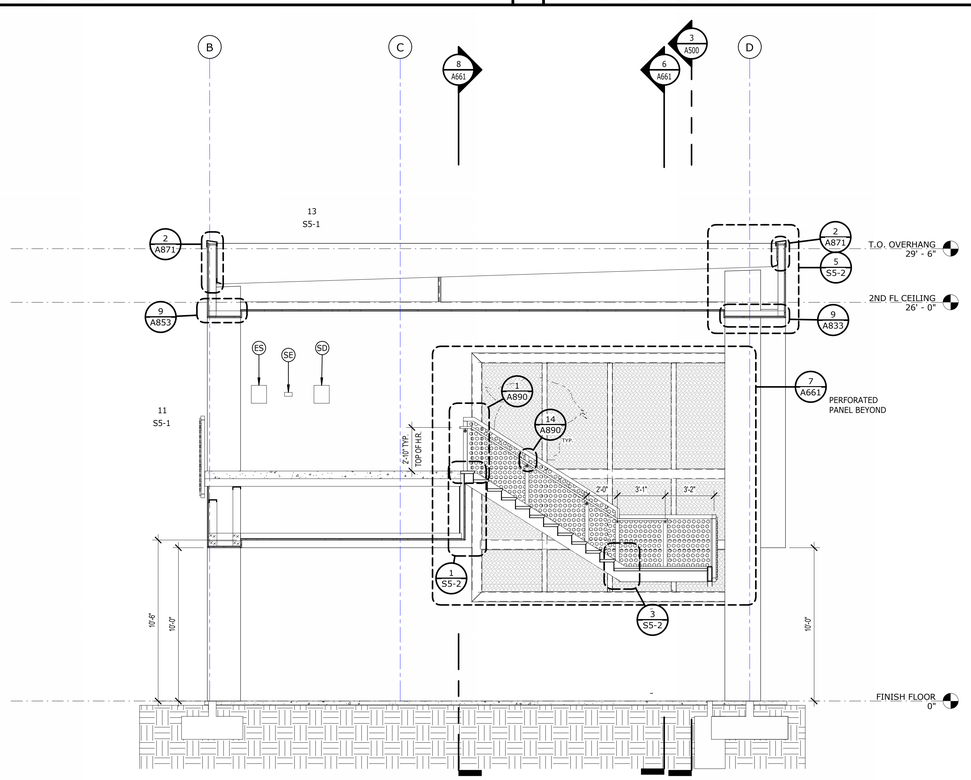
STAIR #2 - SECTION.3 1/4" = 1'-0" 6



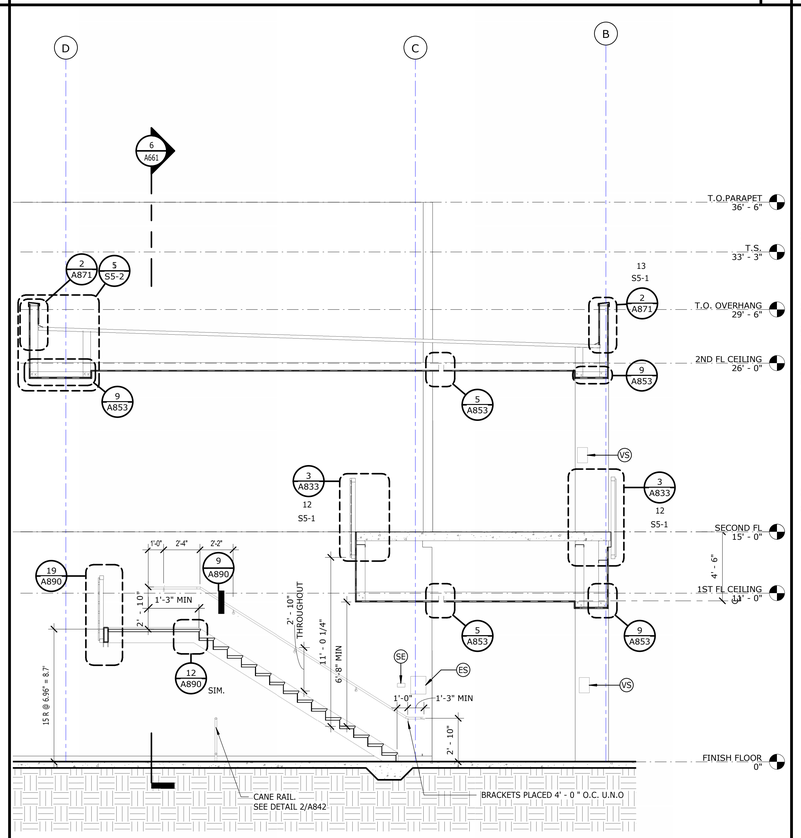
STAIR #2 - SECTION.2 1/4" = 1'-0" 4



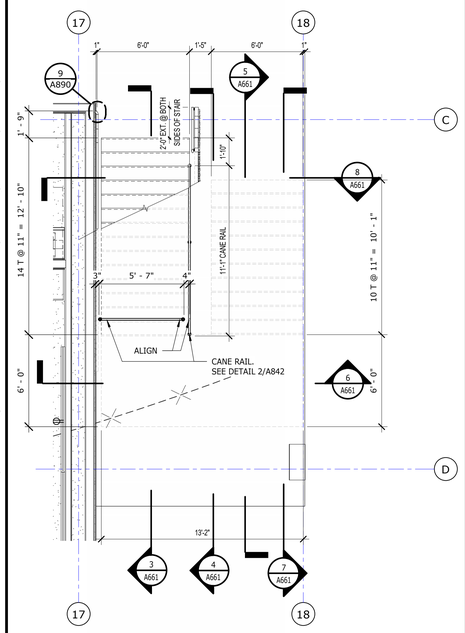
2ND FLOOR - ENLARGED STAIR #2 PLAN 1/4" = 1'-0" 2



Section 8 1/4" = 1'-0" 5



STAIR #2 - SECTION.1 1/4" = 1'-0" 3



1ST FLOOR - ENLARGED STAIR #2 PLAN 1/4" = 1'-0" 1

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IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL WESTBERG
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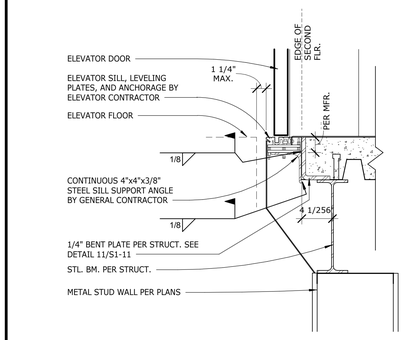
WILL ROGERS MIDDLE SCHOOL
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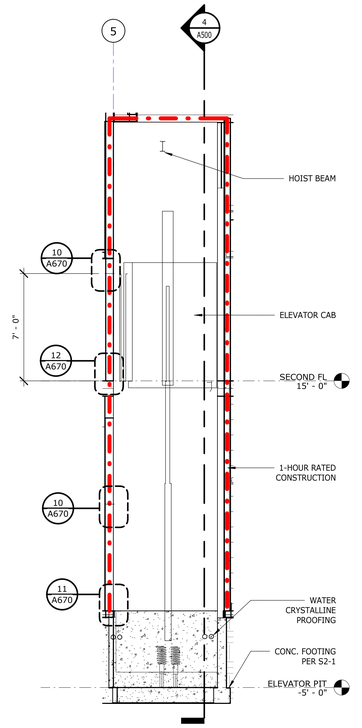
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DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
STAIR #2 ENLARGED PLAN AND SECTIONS

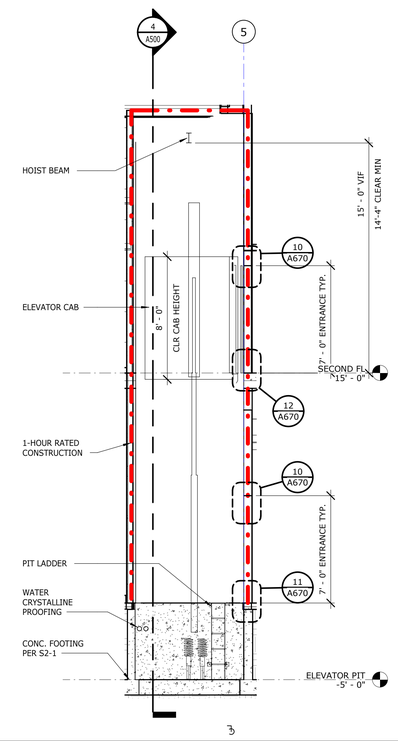
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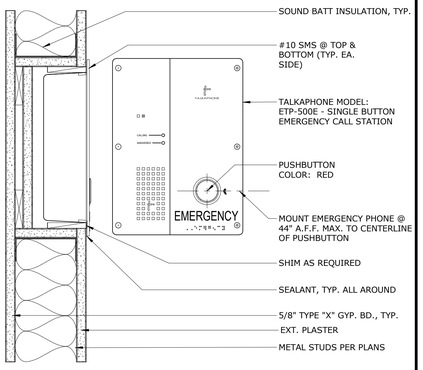
SECOND FLOOR SILL 1 1/2" = 1'-0" 12



ELEVATOR SECTION B2 1/4" = 1'-0" 7

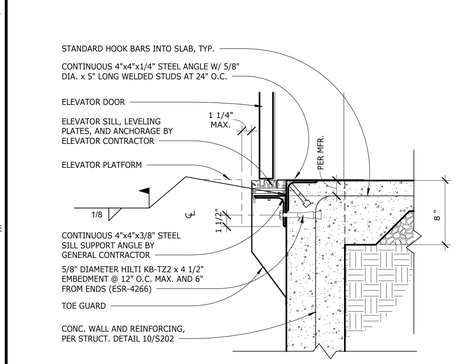


ELEVATOR SECTION A 1/4" = 1'-0" 3



U.L. DESIGN # U465

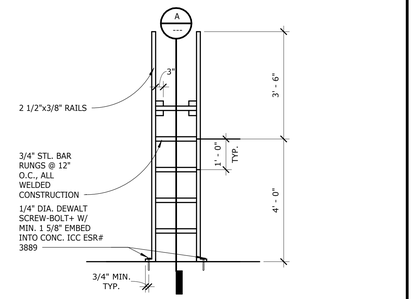
EMERG. 2-WAY PHONE - FLUSH MNT 3" = 1'-0" 15



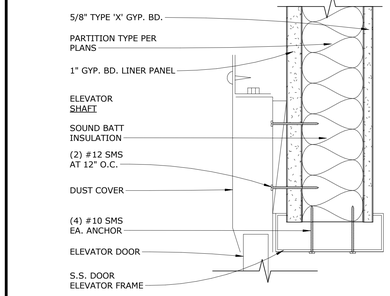
FIRST FLOOR SILL 1 1/2" = 1'-0" 11

LADDER WALL BRACKET AT CONC 3" = 1'-0" 6

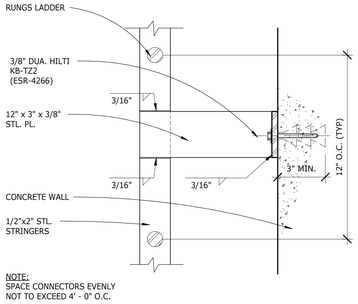
ENLARGED ELEVATOR PLAN - 2ND FLOOR 1/4" = 1'-0" 2



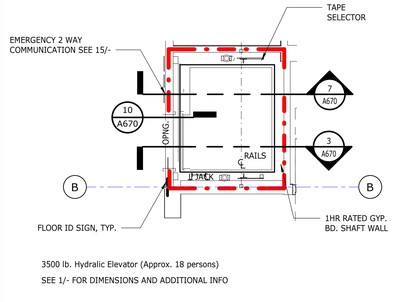
ELEVATOR PIT LADDER 1/2" = 1'-0" 13



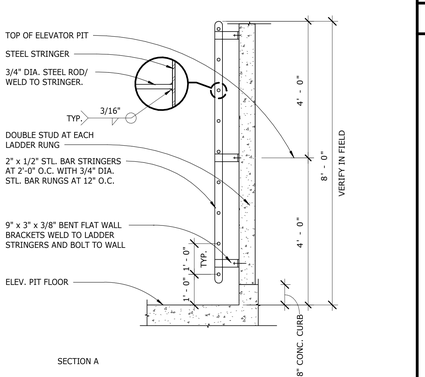
ELEVATOR HEAD/JAMB AT STUDS 3" = 1'-0" 10



LADDER WALL BRACKET AT CONC 3" = 1'-0" 6

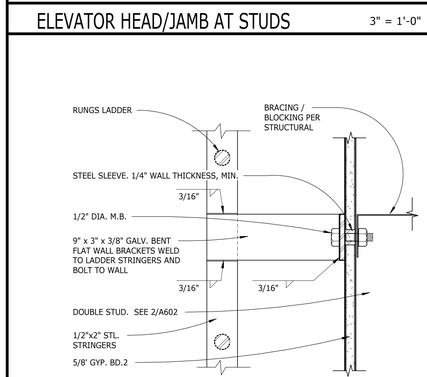


ENLARGED ELEVATOR PLAN - 2ND FLOOR 1/4" = 1'-0" 2

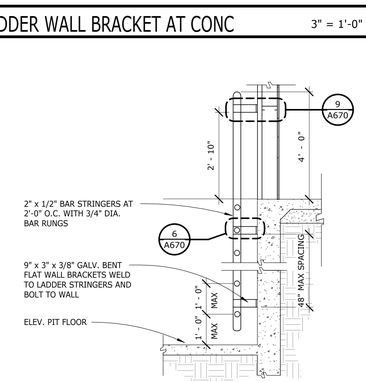


SECTION A

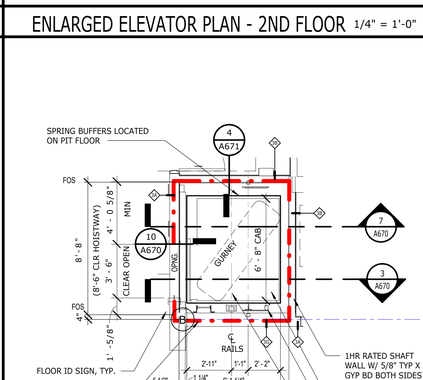
ELEVATOR PIT LADDER 1/2" = 1'-0" 13



LADDER WALL BRACKET AT STUDS 3" = 1'-0" 9



ELEVATOR PIT LADDER 1/2" = 1'-0" 5



ENLARGED ELEVATOR PLAN - 1ST FLOOR 1/4" = 1'-0" 1

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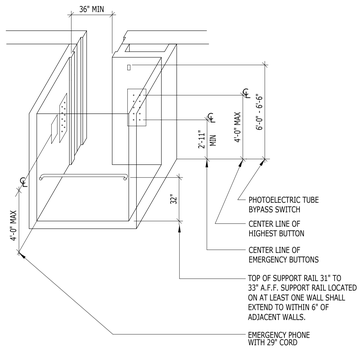
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JOB NO: 22029.01
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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
ELEVATOR PLANS AND SECTIONS

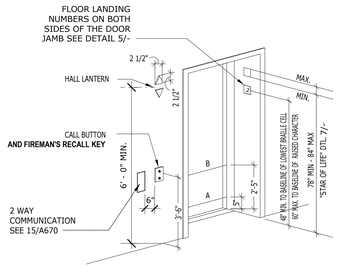
SHEET NO:

A670



NOTE: FOR INTERIOR CAB DIMENSIONS SEE DETAIL 19/A895

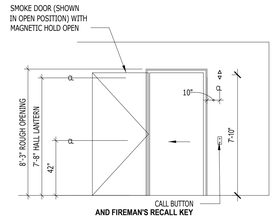
ELEVATOR CAB 1/4" = 1'-0" 16



NOTES:

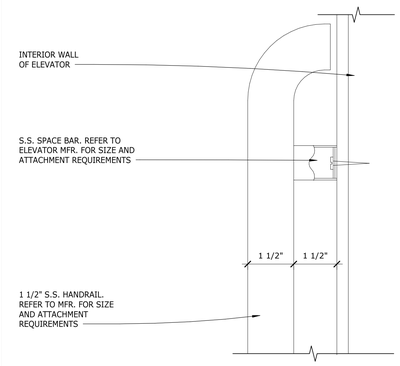
1. LINE A AND LINE B REPRESENT THE VERTICAL LOCATION OF THE DOOR REOPENING DEVICE.
2. DOOR-REOPENING DEVICES SHALL REMIAN EFFECTIVE FOR A PERIOD OF NOT LESS THAN 20 SECONDS.
3. THE MINIMUM ACCEPTABLE TIME FOR DOORS TO REMAIN FULLY OPEN SHALL NOT BE LESS THAN 5 SECONDS.

ELEVATOR CONTROL AND SIGNAGE 1/4" = 1'-0" 12

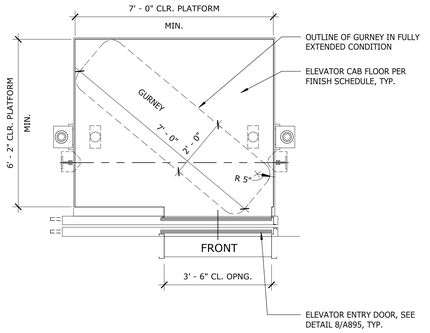


REFER TO DETAILS 5 AND 6 FOR ELEVATOR CONTROLS AND SIGNAGE

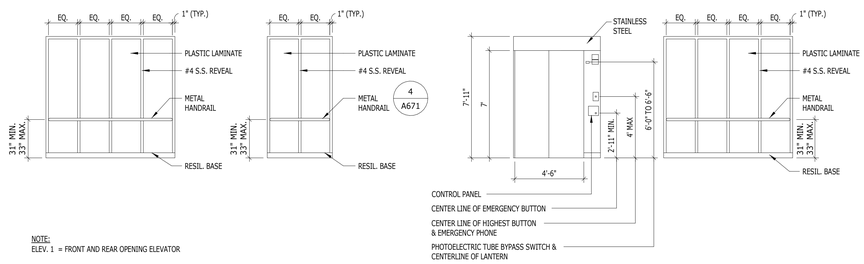
TYPICAL ELEVATOR ENTRY ELEVATION 1/4" = 1'-0" 8



ELEVATOR HANDRAIL DETAIL 6" = 1'-0" 4



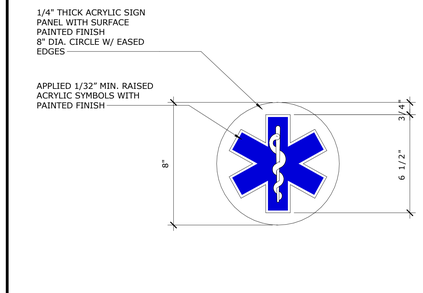
ELEVATOR CAB FLOOR PLAN 1/2" = 1'-0" 19



NOTE:
ELEV. 1 = FRONT AND REAR OPENING ELEVATOR

ELEV. 1 | ELEV. 1 | ELEV. 1 | ELEV. 1

ELEVATOR CAB ELEVATIONS 1/4" = 1'-0" 11



NOTE #1: MOUNT ON ELEVATOR DOOR FRAME, SEE MOUNTING INSTRUCTION
NOTE #2: COLOR OF STAR SHALL CONTRAST WITH THE COLOR OF THE CIRCLE. STAR TO BE BLUE AND CIRCLE TO BE WHITE
NOTE #3: PROVIDE EASED EDGES ON GEOMETRIC SYMBOLS.

STAR OF LIFE 3" = 1'-0" 7

PASSENGER ELEVATOR REQUIREMENTS,
TYPICAL FOR ALL ELEVATORS CHAPTER 11B, 2022 CALIFORNIA BUILDING CODE

GENERAL. SIZE OF CAB AND CONTROL LOCATIONS AND REQUIRMENTS FOR ACCOMMODATION OF PERSONS WITH DISABILITIES. IN BUILDINGS TWO OR MORE STORIES IN HEIGHT, SERVED BY AN ELEVATOR, OR A BUILDING SERVED BY AN ELEVATOR REQUIRED BY CHAPTER 11B, OR A BUILDING SERVED BY AN ELEVATOR REQUIRED FOR ACCESSIBILITY BY SECTION (11B-407.1). IF MORE THAN ONE PASSENGER ELEVATOR IS PROVIDED, EACH FULL PASSENGER ELEVATOR SHALL COMPLY WITH CHAPTER 11B.
OPERATION AND LEVELING. THE ELEVATOR SHALL BE AUTOMATIC PROVIDED WITH A SELF-LEVELING FEATURE THAT WILL AUTOMATICALLY BRING THE CAR TO THE FLOOR LANDINGS WITHIN A TOLERANCE OF PLUS OR MINUS 1/2 INCH UNDER NORMAL LOADING AND UNLOADING CONDITIONS. THE CLEARANCE BETWEEN THE CAR PLATFORM SILL AND THE EDGE OF THE HOISTWAY LANDING SHALL BE NO GREATER THAN 1 1/4 INCHES. (11B-407.1)

DOOR SIZE. MINIMUM CLEAR WIDTH FOR ELEVATOR DOORS SHALL BE 36 INCHES. (11B-407.4.1)

DOORS CLOSED BY AUTOMATIC MEANS SHALL BE PROVIDED WITH A DOOR-REOPENING DEVICE THAT WILL FUNCTION TO STOP AND REOPEN A CAR DOOR AND ADJACENT HOISTWAY DOOR IN CASE THE CAR DOOR IS OBSTRUCTED WHILE CLOSING. THIS DEVICE SHALL BE CAPABLE OF SENSING AN OBJECT OR PERSON IN THE PATH OF A CLOSING DOOR WITHOUT REQUIRING CONTACT FOR ACTIVATION AT A NOMINAL 5 INCHES AND 29 (127MM AND 737MM) INCHES ABOVE THE FLOOR. (11B-407.3.3.1, 11B-407.3.3.2, 11B-407.3.3.3)

PROVIDE MINIMUM ACCEPTABLE TIME FROM NOTIFICATION THAT A CAR IS ANSWERING A CALL (LANTERN AND AUDIBLE SIGNAL) UNTIL THE DOORS OF THE CAR START TO CLOSE USING FORMULA GIVEN IN SECTION (11B-407.3.4).

THE MINIMUM ACCEPTABLE TIME FOR THE DOORS TO REMAIN OPEN SHALL BE NOT LESS THAN FIVE SECONDS. (11B-407.3.4)

THE CAR INSIDE SHALL ALLOW FOR THE TURNING OF A WHEELCHAIR. THE MINIMUM CLEAR DISTANCE BETWEEN WALLS OR BETWEEN WALL AND DOOR, EXCLUDING RETURN PANELS, SHALL BE NOT LESS THAN 80 INCHES BY 54 INCHES (1727MM BY 1372MM) FOR SIDE-SLIDE OPENING DOORS. THE CENTERLINE OF ELEVATOR FLOOR BUTTONS SHALL BE NO HIGHER THAN 54 INCHES (1372MM) ABOVE THE FINISH FLOOR FOR SIDE APPROACH AND 48 INCHES (1219MM) FOR FRONT APPROACH. (11B-407.4.1, 11B-407.4.2, 11B-407.4.6.1, 11B-407.4.6.4, 11B-407.4.7.1.4, 11B-407.4.9, 11B-408.4.6, 11B-409.4.6.2)

FLOOR BUTTONS SHALL BE PROVIDED WITH VISUAL INDICATORS TO SHOW WHEN EACH CALL IS REGISTERED. THE VISUAL INDICATORS SHALL BE EXTINGUISHED WHEN EACH CALL IS ANSWERED. (11B-407.4.7.1.4)

THE EMERGENCY TELEPHONE HANDSET SHALL BE POSITIONED NO HIGHER THAN 4 FEET (1219MM) ABOVE THE FLOOR, AND THE HANDSET CORD SHALL BE A MINIMUM OF 2 FEET 5 (737MM) INCHES IN LENGTH. IF THE TELEPHONE SYSTEM IS LOCATED IN A CLOSED COMPARTMENT, THE COMPARTMENT DOOR HARDWARE SHALL BE LEVER TYPE CONFORMING TO THE PROVISIONS OF SECTION (11B-407.4.9), TYPE OF LOCK OR LATCH.

PASSENGER ELEVATOR CAR CONTROLS SHALL HAVE A MINIMUM DIMENSION OF 3/4 INCH (19.1MM) AND SHALL BE RAISED 1/8 INCH (3.2MM) PLUS OR MINUS 1/32 INCH (0.8MM) ABOVE THE SURROUNDING SURFACE. (11B-407.4.7.1.3)

CONTROL BUTTONS SHALL BE ILLUMINATED, SHALL HAVE SQUARE SHOULDERS, AND SHALL BE ACTIVATED BY A MECHANICAL MOTION THAT IS DETECTABLE. ALL CONTROL BUTTONS SHALL BE DESIGNATED BY 5/8 INCH MINIMUM (15.9MM) RAISED CHARACTERS AND STANDARD RAISED SYMBOLS THAT CONFORM TO SECTIONS (11B-407.4.7.1.3) IMMEDIATELY TO THE LEFT OF THE CONTROL BUTTON. GRADE 2 BRAILLE THAT CONFORMS TO SECTION (11B-703.3) SHALL BE LOCATED IMMEDIATELY BELOW THE CHARACTER OR SYMBOL. A MINIMUM CLEAR SPACE OF 3/8 INCH (9.5MM) OR OTHER SUITABLE MEANS OF SEPARATION SHALL BE PROVIDED BETWEEN ROWS OF CONTROL BUTTONS. THE RAISED CHARACTERS SHALL BE WHITE ON A BLACK BACKGROUND. (11B-703.2)

CONTROLS AND EMERGENCY EQUIPMENT IDENTIFIED BY RAISED SYMBOLS SHALL INCLUDE, BUT NOT BE LIMITED TO, "DOOR OPEN", "DOOR CLOSE", "ALARM BELL", "EMERGENCY STOP" AND "TELEPHONE". THE CALL BUTTON FOR THE MAIN ENTRY FLOOR SHALL BE DESIGNATED BY A RAISED STAR AT THE LEFT OF THE FLOOR DESIGNATION. (11B-407.4.6.2) - SEE 6/A895 FOR ELEVATOR CONTROL PANEL DETAIL.

THE CENTERLINE OF THE HALL CALL BUTTON SHALL BE 42 INCHES (1067MM) ABOVE THE FLOOR. BUTTONS SHALL BE A MINIMUM OF 3/4 INCH (19.1MM) IN SIZE AND SHALL BE RAISED 1/8 INCH (3.2MM) PLUS OR MINUS 1/32 INCH (0.8MM) ABOVE SURROUNDING SURFACE. VISUAL INDICATION SHALL BE PROVIDED TO SHOW EACH CALL REGISTERED AN EXTINGUISHED WHEN ANSWERED. OBJECTS ADJACENT TO, AND BELOW, HALL CALL BUTTONS SHALL NOT PROJECT MORE THAN 4 INCHES (102MM) FROM THE WALL. (11B-407.2.1.1)

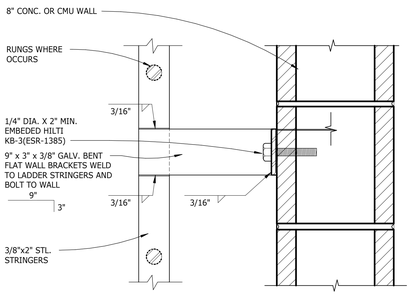
MINIMUM ILLUMINATION. THE MINIMUM ILLUMINATION AT THE CAR CONTROLS, THRESHOLD AND THE LANDING WHEN THE CAR AND LANDING DOORS ARE OPEN SHALL NOT BE LESS THAN 5 FOOT-CANDLES (541X). (11B-407.4.5)

HALL LANTERN. A VISUAL AND AUDIBLE SIGNAL SHALL BE PROVIDED AT EACH HOISTWAY ENTRANCE INDICATING TO THE PROSPECTIVE PASSENGER THE CAR ANSWERING THE CALL AND ITS DIRECTION OF TRAVEL AS FOLLOWS:
THE VISUAL SIGNAL FOR EACH DIRECTION SHALL BE A MINIMUM OF 2 1/2 INCHES(64MM) HIGH BY 2 1/2 INCHES (64MM) WIDE AND VISIBLE FROM THE PROXIMITY OF THE HALL CALL BUTTON.
THE AUDIBLE SIGNAL SHALL SOUND ONCE FOR THE UP DIRECTION AND TWICE FOR THE DOWN DIRECTION OR SHALL HAVE VERBAL ANNUNCIATORS THAT SAY UP OR DOWN.
THE CENTERLINE OF THE FIXTURE SHALL BE LOCATED A MINIMUM OF 6 FEET (1829MM) IN HEIGHT FROM THE LOBBY FLOOR.
THE USE OF IN-CAR LANTERNS, LOCATED IN OR ON THE CAR DOOR JAMBS, VISIBLE FROM PROXIMITY OF THE HALL CALL BUTTONS AND CONFORMING TO THE ABOVE REQUIREMENTS SHALL OR WILL BE ACCEPTABLE.
THE USE OF ARROW SHAPES IS PREFERRED FOR VISIBLE SIGNALS. (11B-407.2.2.1)

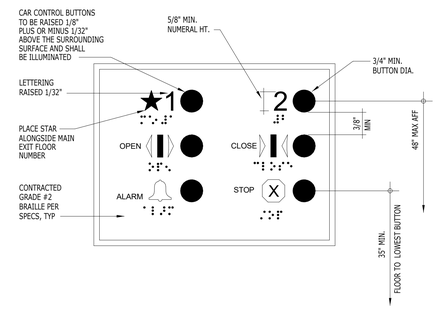
PASSENGER ELEVATOR LANDING JAMBS ON ALL ELEVATOR FLOORS SHALL HAVE THE NUMBER OF THE FLOOR ON BOTH JAMBS OF ELEVATOR HOISTWAY ENTRANCES DESIGNATED BY RAISED CHARACTERS THAT ARE A MINIMUM OF 2 INCHES (51MM) IN HEIGHT AND CONFORM TO SECTION (11B-703.2) AND GRADE 2 BRAILLE THAT CONFORMS TO SECTION (11B-703.3) LOCATED 48 INCHES (1219 MM) MINIMUM AND 60 INCHES (1524MM) MAXIMUM ON CENTER ABOVE THE FLOOR ON THE JAMB PANELS ON BOTH SIDES OF THE DOOR SO THAT THEY ARE VISIBLE FROM WITHIN THE ELEVATOR. ON THE GRADE LEVEL, A RAISED FIVE-POINTED STAR SHALL BE PLACED TO THE LEFT OF THE RAISED CHARACTER AT THE FIRST FLOOR. THE OUTSIDE DIAMETER OF THE STAR SHALL BE 2 INCHES. BRAILLE SHALL BE PLACED DIRECTLY BELOW OF THE CORRESPONDING RAISED CHARACTERS. BRAILLE TRANSLATION FOR THE STAR SHALL BE "MAIN". (11B-407.2.3.1)

PASSENGER ELEVATORS SHALL BE LOCATED ON AN ACCESSIBLE ROUTE, LOCATED NEAR A MAJOR PATH OF TRAVEL AND PROVISIONS SHALL BE MADE TO ENSURE THAT THEY REMAIN ACCESSIBLE AND USABLE AT ALL TIMES THE BUILDING IS OCCUPIED. (11B-402.2, 11B-108)

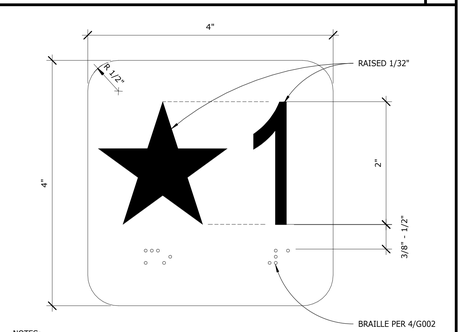
ELEVATOR GENERAL NOTES 1/4" = 1'-0" 1



PIT LADDER WALL BRACKET 3" = 1'-0" 18



ELEVATOR CONTROL PANEL 6" = 1'-0" 6



NOTES:

1. SIGN SHALL BE PERMANENTLY ATTACHED TO EACH SIDE OF HOISTWAY DOOR FRAME ON THE PORTION OF THE FRAME AT RIGHT ANGLES TO THE LANDING AREA.
2. SEE DETAIL 12 FOR MOUNTING HEIGHT.
3. STAR SYMBOL AT FIRST FLOOR ONLY. BRAILLE TRANSLATION FOR THE STAR SHALL BE "MAIN"

ELEVATOR FLOOR SIGNAGE 12" = 1'-0" 5

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN:
CHECK:
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
ELEVATOR PLANS AND SECTIONS

SHEET NO:
A671

DOOR SCHEDULE

NO.	DOOR DESCRIPTION: OPENING SIZE	TYPE	MATERIAL	FINISH	COLOR	DOOR FRAME: MATERIAL	FINISH	COLOR	CLOSER	Hardware Group	DETAILS: HEAD	JAMB HINGE	JAMB STRIKE	THRESHOLD	REMARKS	SIGNAGE TEXT (EXTERIOR SIDE)
100A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTES #13 & #14	100 CLASSROOM
101A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTES #13 & #14	101 CLASSROOM
101B	3'-0" x 7'-0" x 1 3/4"	D	HM	PSG	P-3	HM	PSG	P-3	Yes	06	8/A880	12/A880	12/A880	2/A880		101 CLASSROOM
102A	6'-0" x 7'-0" x 1 3/4"	DP	HM	PSG	P-3	HM	PSG	P-3	Yes	10	8/A880	12/A880	12/A880	2/A880		102 WORK ROOM
103A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	No	05	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	103 STORAGE
104A	6'-0" x 7'-0" x 1 3/4"	BP	HM	PSG	P-3	HM	P	P-3	Yes	10	8/A880	12/A880	12/A880	2/A880		104 ELECTRICAL ROOM
105A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	105 CLASSROOM
106A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	106 CLASSROOM
107A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	107 CLASSROOM
108A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	108 CLASSROOM
109A	3'-0" x 7'-0" x 1 3/4"	B	SC	PSG	P-3	HM	PSG	P-3	Yes	01	11/A880	10/A880	10/A880	6/A880		109 BOY'S RESTROOM
110A	3'-0" x 7'-0" x 1 3/4"	B	SC	PSG	P-3	HM	PSG	P-3	Yes	01	11/A880	10/A880	10/A880	6/A880		110 GIRL'S RESTROOM
111A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880		111 BOY'S RESTROOM
112A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	112 FIRE RISER
113A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880		113 GIRL'S RESTROOM
114A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	114 CLASSROOM
114B	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	07*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	114 CLASSROOM
115A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	115 RESTROOM
116A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	116 RESTROOM
117A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880		117 I.D.F.
118A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880		118 ELEVATOR MACHINE ROOM
119A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	119 CUSTODIAN
120A	6'-0" x 7'-0" x 1 3/4"	CP	HM	PSG	P-3	HM	PSG	P-3	Yes	09	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	121 STORAGE
120B	6'-0" x 7'-0" x 1 3/4"	CP	HM	PSG	P-3	HM	PSG	P-3	Yes	09	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	121 STORAGE
121A	6'-0" x 7'-0" x 1 3/4"	CP	HM	PSG	P-3	HM	PSG	P-3	Yes	09	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	122 STORAGE
122A	6'-0" x 7'-0" x 1 3/4"	CP	HM	PSG	P-3	HM	PSG	P-3	Yes	09	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	123 STORAGE
200A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTES #13 & #14	200 CLASSROOM
201A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTES #13 & #14	201 CLASSROOM
202A	3'-0" x 7'-0" x 1 3/4"	DP	HM	PSG	P-3	HM	PSG	P-3	Yes	10	8/A880	12/A880	12/A880	2/A880		202 WORK ROOM
203A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	203 STORAGE
204A	6'-0" x 7'-0" x 1 3/4"	BP	HM	PSG	P-3	HM	P	P-3	Yes	10	8/A880	12/A880	12/A880	2/A880		204 ELECTRICAL ROOM
205A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	205 CLASSROOM
206A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	206 CLASSROOM
207A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	207 CLASSROOM
208A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	208 CLASSROOM
209A	3'-0" x 7'-0" x 1 3/4"	B	SC	PSG	P-3	HM	PSG	P-3	Yes	01	11/A880	10/A880	10/A880	6/A880		209 BOY'S RESTROOM
210A	3'-0" x 7'-0" x 1 3/4"	B	SC	PSG	P-3	HM	PSG	P-3	Yes	01	11/A880	10/A880	10/A880	6/A880		210 GIRL'S RESTROOM
211A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880		211 BOY'S RESTROOM
212A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	05	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	212 FIRE RISER
213A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880		213 GIRL'S RESTROOM
214A	3'-0" x 7'-0" x 1 3/4"	A	HM	PSG	P-3	HM	PSG	P-3	Yes	08*	8/A880	12/A880	12/A880	2/A880	SEE DOOR NOTE #13	214 CLASSROOM
215A	3'-0" x 7'-0" x 1 3/4"	C	HM	PSG	P-3	HM	PSG	P-3	Yes	08	8/A880	12/A880	12/A880	2/A880	12" x 12" MIN. DOOR LOUVER, SEE MECH.	215 RESTROOM
216A	3'-0" x 7'-0" x 1 3/4"	C							Yes	08	8/A880	12/A880	12/A880	2/A880		
217A	6'-0" x 7'-0" x 1 3/4"	BP	HM				P		Yes	10	8/A880	12/A880	12/A880	2/A880		

FIRST FLOOR

NO.	ROOM NAME	FLOOR & WALL BASE: FINISH	BASE	WALL FINISH: NORTH FIN	NORTH MAT'L	EAST FIN	EAST MAT'L	SOUTH FIN	SOUTH MAT'L	WEST FIN	WEST MAT'L	CEILING: MAT'L	CEILING: FIN	REMARKS
100	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
101	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
102	WORKROOM	SEALED CONC. CF-1	RB-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	ACP 1	ACP-1	
103	STORAGE	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER TO SPECIFICATION 03 3000
104	ELECTRICAL	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000
105	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
106	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
107	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
108	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
109	BOY'S	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR PT-2 ACCENT TILE PATTERN
110	GIRL'S	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR PT-2 ACCENT TILE PATTERN
111	VESTIBULE	SEALED CONC. CF-1	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	
112	FIRE RISER	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000
113	VESTIBULE	SEALED CONC. CF-1	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	
114	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
115	TOILET	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR PT-2 ACCENT TILE PATTERN
116	TOILET	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR PT-2 ACCENT TILE PATTERN
117	IDF	VCT	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	GB	PSG	
118	ELEVATOR MACHINE ROOM	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000
119	CUSTODIAN	SEALED CONC. CF-1	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	TILE AND TILE BASE NEAR MOB SINK PER 13/A602
120	STORAGE	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000
121	STORAGE	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000
122	STORAGE	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	CONC. SEALER TYPE 2 - REFER SPECIFICATION 03 3000

SECOND FLOOR

NO.	ROOM NAME	FLOOR & WALL BASE: FINISH	BASE	WALL FINISH: NORTH FIN	NORTH MAT'L	EAST FIN	EAST MAT'L	SOUTH FIN	SOUTH MAT'L	WEST FIN	WEST MAT'L	CEILING: MAT'L	CEILING: FIN	REMARKS
200	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
201	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
202	WORKROOM	VCT-1	RB-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	PSG, P-1	ACP 1	ACP-1	
203	CUSTODIAN	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	TILE AND TILE BASE NEAR MOB SINK PER 13/A602
204	ELECTRICAL	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	
205	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
206	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
207	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
208	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
209	BOY'S	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR CT-2 ACCENT TILE PATTERN
210	GIRL'S	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR CT-2 ACCENT TILE PATTERN
211	VESTIBULE	SEALED CONC. CF-1	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	GB	PSG	
212	FIRE RISER	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	
213	VESTIBULE	SEALED CONC. CF-1	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	GB	PSG	
214	CLASSROOM	VCT-1	RB-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	VWC-1	ACP 1	ACP-1	
215	TOILET	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR CT-2 ACCENT TILE PATTERN
216	TOILET	PT	CT-1	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	CT-1/CT-2	CT	GB	PSG	SEE INTERIOR ELEVATIONS FOR CT-2 ACCENT TILE PATTERN
217	STORAGE	LIGHT BROOM FINISH	RB-1	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	PSG, P-1	GB	U.O.S.	U.O.S.	

ROOM FINISH SCHEDULE

FINISH GENERAL NOTES

1. FOR TYPICAL SYMBOLS AND ABBREVIATIONS, SEE SHEET G001.
2. SEE INTERIOR ELEVATIONS SHEETS FOR MULTIPLE FINISHES.
3. SEE REFLECTED CEILING PLANS FOR CEILING HEIGHTS.
4. ALL GROUT TO BE SEALED PER SPECIFICATIONS.
5. ALL FINISHES WILL COMPLY WITH CBC, CFC, AND TITLE 19 CCR.
   - (a) Class C interior finish materials shall be permitted for wainscotting or paneling of not more than 1,000 square feet of applied surface area in the grade lobby where applied directly to a noncombustible base or over furring strips applied to a noncombustible base and fireblocked as required by Section 803.4.1.
   - (b) In exit enclosures of buildings less than three stories in height of other than Group I-3, Class B interior finish for nonsprinklered buildings and Class C interior finish for sprinklered buildings shall be permitted.
   - (c) Requirements for rooms and enclosed spaces shall be based upon spaces enclosed by partitions. Where a fire-resistant rating is required for structural elements, the enclosing partitions shall extend from the floor to the ceiling. Partitions that do not comply with this shall be considered enclosing spaces and the rooms or spaces on both sides shall be considered one. In determining the applicable requirements for rooms and enclosed spaces, the specific occupancy thereof shall be the governing factor regardless of the group classification of the building or structure.

FINISH ABBREVIATIONS

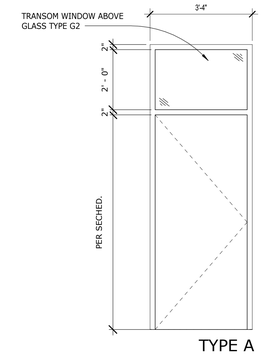
FLOOR/BASE:

(E)	EXISTING
BBT	BIO BASED TILE
CONC	CONCRETE
CPT	CARPET
LB	LIGHT BROOM (CONCRETE FINISH ONLY)
RB	RESILIENT BASE
TSVB	TOP SET VINYL BASE
VCT	VINYL COMPOSITION TILE
PT	PORCELAIN TILE
PTCB	PORCELAIN TILE COVE BASE

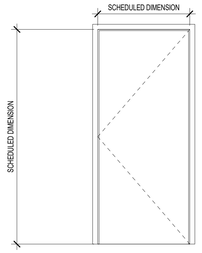
WALL/CEILING:

ACT	2x4 ACOUSTICAL CEILING TILE SYSTEM
ACP	2x4 ACOUSTICAL CEILING PANEL SYSTEM
ARGB	ABUSE RESISTANT GYPSUM BOARD
CBB	CEMENTITIOUS BACKER BOARD
CONC	CONCRETE
CP	CEMENT PLASTER
CT	CERAMIC TILE
F	FACTORY FINISH
FRP	FIBERGLASS REINFORCED PANEL
GB	GYPSUM BOARD
HIGB	HI-IMPACT GYPSUM WALLBOARD
HIMGB	HI-IMPACT MOISTURE AND MOLD RESISTANT GYPSUM BOARD
MGB	MOISTURE AND MOLD RESISTANT GYPSUM BOARD
PE	PAINT EGGSHELL
PSG	PAINT SEMI-GLOSS
PL	PLASTIC LAMINATE
PT	PORCELAIN TILE
SGB	SUSPENDED GYPSUM BOARD CEILING SYSTEM
SMGB	SUSPENDED MOISTURE AND MOLD RESISTANT GYPSUM BOARD CEILING SYSTEM
SS	STAINLESS STEEL
U.O.S.	UNDERSIDE OF STRUCTURE
VFTB	VINYL FABRIC TACKBOARD

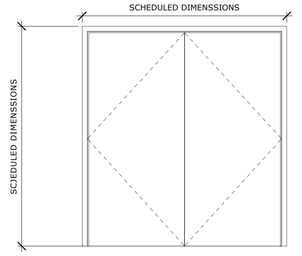
DOOR TYPE



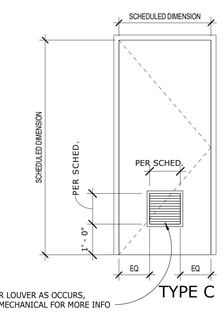
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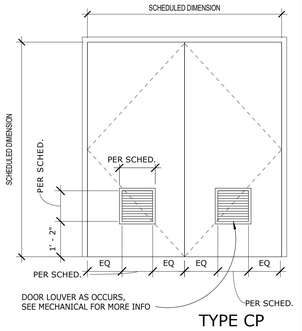
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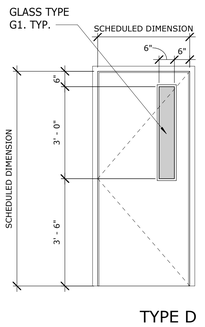
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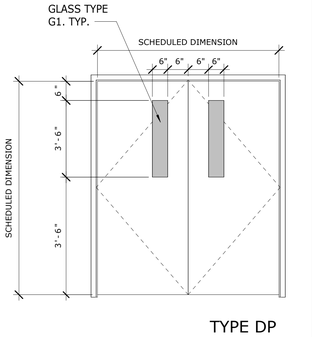
TYPE C



TYPE CP



TYPE D



TYPE DP

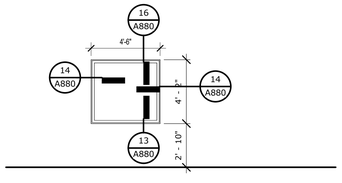
DOOR:

CL	CHAIN LINK
EP	EPOXY PAINT
F	FACTORY FINISH
GL	GLASS
GYP.	GYPSUM
HM	HOLLOW METAL
PE	PAINT, EGGSHELL FINISH
PF	PAINT, FLAT FINISH
P.H.	EMERGENCY PANIC HARDWARE
PR	PAIR
PSG	PAINT, SEMI-GLOSS FINISH
SC	SOLID CORE, PAINT FINISH
STN	STAIN FINISH
STL	STEEL

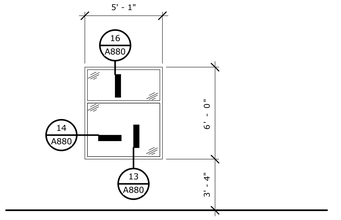
ABBREVIATIONS

1. SCHEDULE DIMENSIONS REFER TO TOTAL DOOR OPENING.
2. DOOR SHALL BE 1-3/4" THICK, UNLESS OTHERWISE NOTED.
3. SEE MECHANICAL PLANS FOR DOOR LOUVER SIZES AND ADDITIONAL REQUIREMENTS. LOUVERS IN EXTERIOR DOORS SHALL BE VANDAL-PROOF, SECURITY TYPE.
4. ALL FRAMES ARE HOLLOW METAL WITH FACTORY PRIME AND FIELD PAINT.
5. IF DOOR CLOSERS ARE USED, MAXIMUM EFFORT TO OPERATE DOOR SHALL NOT EXCEED 5 LBS.
6. FLOOR-MOUNTED DOORSTOPS AND SIMILAR OBSTRUCTIONS TO BE INSTALLED 4" MAXIMUM FROM THE FACE OF THE WALL OR PARTITION.
7. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE CENTERED BETWEEN 42" AND 44" ABOVE FINISH FLOOR.
8. EXTERIOR DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, ANY SPECIAL KNOWLEDGE OR EFFORT.
9. DEAD BOLTS ARE NOT PERMITTED UNLESS OPERABLE WITH A SINGLE EFFORT LEVER TYPE HARDWARE.
10. ALL DOORS IN THE BUILDING, (INCLUDING BUT NOT LIMITED TO DOORS AT TOILETS AND STORAGE ROOMS), SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
11. GLAZING IN DOORS SHALL BE 1/4" THICK CLEAR TEMPERED GLASS.
12. THE LETTER 'P' FOLLOWING THE 'DOOR TYPE' LETTER IN THE DOOR SCHEDULE INDICATES PAIR OF DOORS. BOTH DOOR LEAVES ARE THE SAME SIZE, UNLESS NOTED OTHERWISE.
13. *PROVIDE INTERNAL CLASSROM HARDWARE LOCK AS REQUIRED BY CBC 1010.1.11 GROUP E LOCKABLE DOORS FROM THE INSIDE.
14. FLOOR ANCHORED DOOR STOPS REQUIRED.

DOOR GENERAL NOTES



B	GLAZING TYPE	G2
	FRAME MATL.	AL
	FRAME FIN.	FACTORY
	FRAME COLOR	FACTORY



G	GLAZING TYPE	G2
	FRAME MATL.	AL
	FRAME FIN.	FACTORY
	FRAME COLOR	FACTORY

* NONE OF THE PROVIDED WINDOW TYPES ARE TO BE OPERABLE

WINDOW SCHEDULE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
DOOR, WINDOW AND ROOM FINISH SCHEDULE

SHEET NO:

A700

SPECIFICATION SECTION	MFG / PRODUCT	LOCATION	DESIGNATION	COLOR	FINISH / MATERIAL	REMARKS
03 3000 CAST-IN-PLACE CONCRETE	-	-	-	-	-	-
	DAVIS COLORS	-	CF-2	1117 SANGRIA	CONCRETE HALLWAY	INTEGRAL COLOR
05 5000 METAL FABRICATIONS	RAILINGS	-	HR-1	TO MATCH TIGER DRYLAC 99010, **SILVER ORE**	HIGH PERFORMANCE COATING	REFER TO DECTION 09 9600
	MCNICHOLS/ PERROFERATED METAL PANELS	-	HR-2	TO MATCH TIGER DRYLAC 99010, **SILVER ORE**	POWDER COATED/ PERFORATED METAL PANEL	REFER TO SECTION 05 0513
06 4100 ARCHITECTURAL WOODWORK	WILSONART	CLASSROOMS, TEACHER'S WORK ROOM	LP-1	Y0833-60 PALACE - MATTE FINISH	DECORATIVE LAMINATE	CABINETS
	WILSONART	CLASSROOMS, TEACHER'S WORK ROOM	LP-2	5045K-15 ICE MIST - FIELDSTONE FINISH	DECORATIVE LAMINATE	COUNTERTOP
07 6200 SHEET MTAL FLASHING AND TRIM		-	MF-1	DUNN EDWARDS DE6381 SILVER BULLET	PRE-FINISHED COIL COATED STEEL	REFER TO SECTION 05 0513
		-	MF-2	DUNN EDWARDS DE5951 EXOTIC EVENING	PRE-FINISHED COIL COATED STEEL	REFER TO SECTION 05 0513
08 1113 HOLLOW METAL DOOR AND FRAMES		-	DR-1	DUNN EDWARDS DE5951 EXOTIC EVENING	FACTORY PRIMED METALLIC COATED (GALVANNEALED) STEEL	
		-	DR-2	DUNN EDWARDS DE5951 EXOTIC EVENING	FACTORY PRIMED METALLIC COATED (GALVANNEALED) STEEL	
08 1400 WOOD DOORS		-	WD-1	DUNN EDWARDS DE5951 EXOTIC EVENING	PAINT FINISH	
08 5115 ALUMINUM WINDOWS	ARCADIA, INC.	EXTERIOR WINDOW FRAMES	ALS-1	DURANAR XL BRIGHT SILVER METALLIC,		REFER TO SECTION 05 0513
09 2513 PORTLAND CEMENT PLASTER	OMEGA	-	PL-1	DUNN EDWARDS DE6226 FOGGY DAY	EXTERIOR CEMENT PLASTER SYSTEM, FINE SAND FLOAT FINISH	
	OMEGA	-	PL-2	DUNN EDWARDS DE5951 EXOTIC EVENINGS	EXTERIOR CEMENT PLASTER SYSTEM, FINE SAND FLOAT FINISH	
	OMEGA		PL-3	DUNN EDWARDS DE6381 SILVER BULLET	EXTERIOR CEMENT PLASTER SYSTEM, FINE SAND FLOAT FINISH	
					WALL TILE FIELD	
09 3000 TILE	AMERICAN OLEAN (DALTILE (COLOR STORY))	RESTROOMS , TOILET ROOMS	PT-2	ICE WHITE 0025 (1)		12" x 24" WHITE GLOSS
	AMERICAN OLEAN (DALTILE (COLOR STORY))	RESTROOMS , TOILET ROOMS	PT-3	GRACE 0068 (3)	WALL TILE ACCENT	4" x 12" ACCENT BAND W/ GLOSS FINISH
	PORTFOLIO DALTILE	RESTROOMS , TOILET ROOMS	PT-1	PF06 IRON GREY STRAIGHT JOINT	FLOOR TILES	2"x2" FLOOR TILES
	PORTFOLIO DALTILE	RESTROOMS , TOILET ROOMS	PT-4	PF06 IRON GREY STRAIGHT JOINT	COVED BASE	6" x 12" COVED BASE
	MAPEI	RESTROOMS , TOILET ROOMS	GRT-1	27 SILVER	FLOOR AND WALL GROUT	
09 5100 ACOUSTICAL CEILING PANELS	ARMSTRONG	SEE CELING PLANS	ACP-1	ULTIMA HIGH NRC TEGULAR - WHITE	-	REFER TO SPECIFICATION
09 650 RESILIENT FLOORING	ARMSTRONG EXCELON SDT	SEE FINISH SCHEDULE	VCT-1	541957 RIDGE	VCT FIELD	12"x12" TILE
RESILIENT BASE	JOHNSONITE/TARKETT	-	RB-1	TH3 INKWELL	RUBBER BASE	6" HEIGHT BASE
WALK OFF MATT	CONSTRUCTION SPECIALTIES		CPT-1	PEDIMAT W/ CLEAR FINISH W/ GUNMETAL CARPET INSERT	WALKOFF MATT	3' - 4" x 4' - 0"
09 7200 VINYL WALL COVERING	KOROSEAL	-	VWC-1	DETROIT 1064.25	TACKABLE WALL COVERING	
09 9100 PAINTING	DUNN EDWARDS PAINTS	FIELD	P-1	DE6226 FOGGYDAY	PAINT	
	DUNN EDWARDS PAINTS	ACCENT	P-2	DE6381 SILVER BULLET	PAINT	
	DUNN EDWARDS PAINTS	EXTERIOR ACCENT, DOOR AND FRAME	P-3	DUNN EDWARDS DE5951 EXOTIC EVENINGS	PAINT	
09 9600 HIGH PERFORMANCE COATING	CARRBOLINE CO.	EXPOSED STRUC. STL. AND METAL FABRICATIONS		TO MATCH DUNN EDWARDS	PAINT	REFER TO SECTIONS 05 1200 & 05 5000 FOR SHOP PRIMER
10 1100 VISUAL DISPLAY UNITS	CLARIDGE PRODUCTS	CLASSROOMS	MB-1	WHITE	MARKER BOARD	
10 2117 SOLID PHENOLIC TOILET COMPARTMENTS	ASI ACCURATE PARTITIONS	RESTROOMS	TCP-1	SMOKE #845C COLOR THRU PHENOLIC	SOLID PHENOLIC TOILET COMPARTMENTS	OR EQUAL
12 2413 ROLLER SHADES	DRAPER	CLASSROOMS	WC-1	SW7000-V41 CANYON	BLACK OUT	
14 2423 HYDRAULIC PASSENGER ELEVATOR	OTIS ELEVATOR COMPANY OR MITSUBISHI ELECTRIC US, INC.	-	LP-3	DUNN EDWARDS DE5951 EXOTIC EVENINGS	DECORATIVE LAMINATE	SIDE AND REAR WALLS
					FRONT WALL AND TRANSOM STAINLESS STEEL	NO. 4 FIN. S.S. INCLUDING CAR DOORS
					CEILING- SATIN STAINLESS STEEL LAMINATED SQ. PANELS	NO. 4 FIN. S.S. DOWNLIGHT, INCANDESCENT FIXTURES
					1 1/2" O.D. HANDRAILS - SATIN STAINLESS STEEL	NO. 4 FIN. S.S.

COLOR SCHEDULE

COLOR SCHEDULE

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

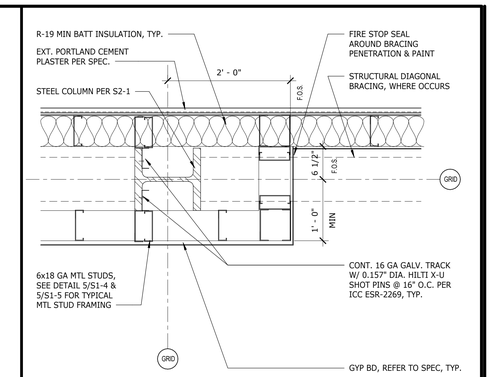
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

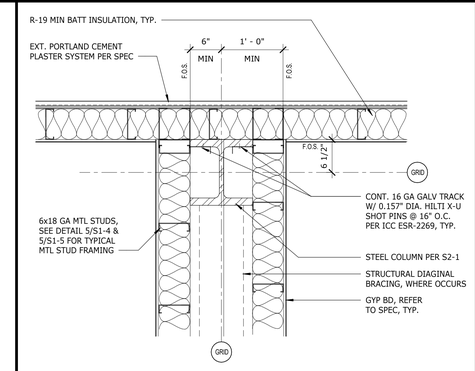
JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
COLOR SCHEDULE

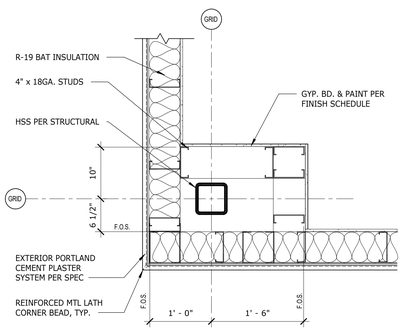
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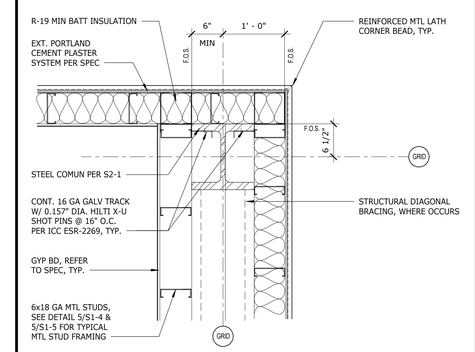
EXTERIOR COL. AT EXT/INT WALL 1" = 1'-0" 4



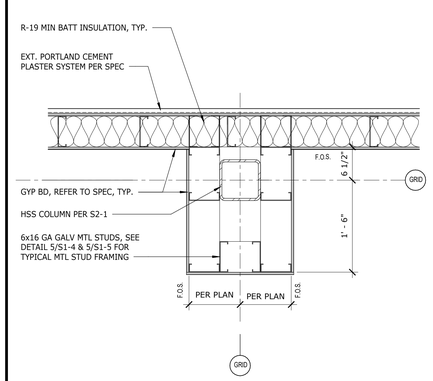
EXTERIOR COL. AT DOUBLE INTS WALLS 1" = 1'-0" 3



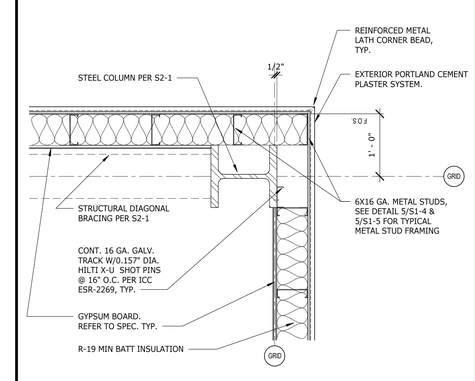
EXTERIOR COL. AT EXT/FURRED WALL 1" = 1'-0" 6



EXTERIOR COL. AT EXT/INT WALL 1" = 1'-0" 2



EXTERIOR COLUMN (TS) 1" = 1'-0" 5



EXTERIOR COLUMN AT CORNER 1" = 1'-0" 1

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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

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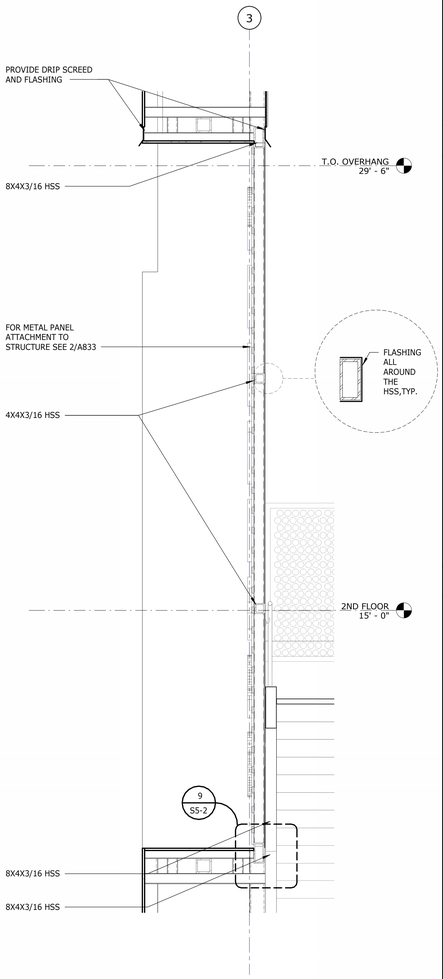
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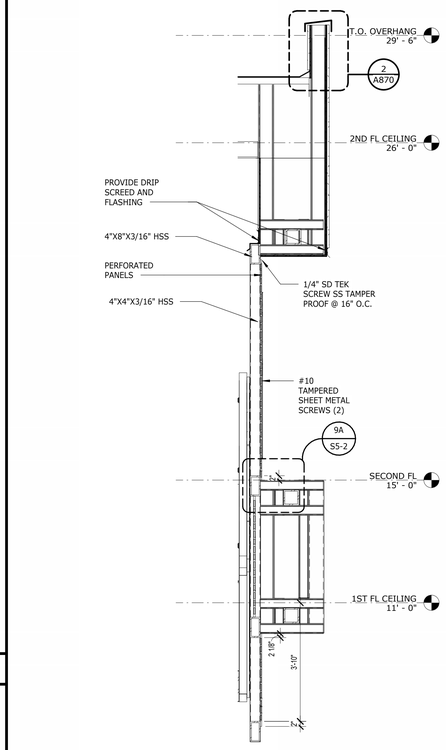
SHEET DESCRIPTION:
COLUMN DETAILS

SHEET NO:

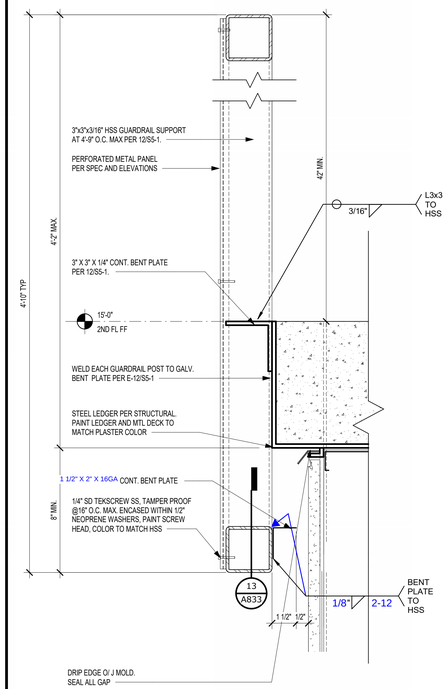
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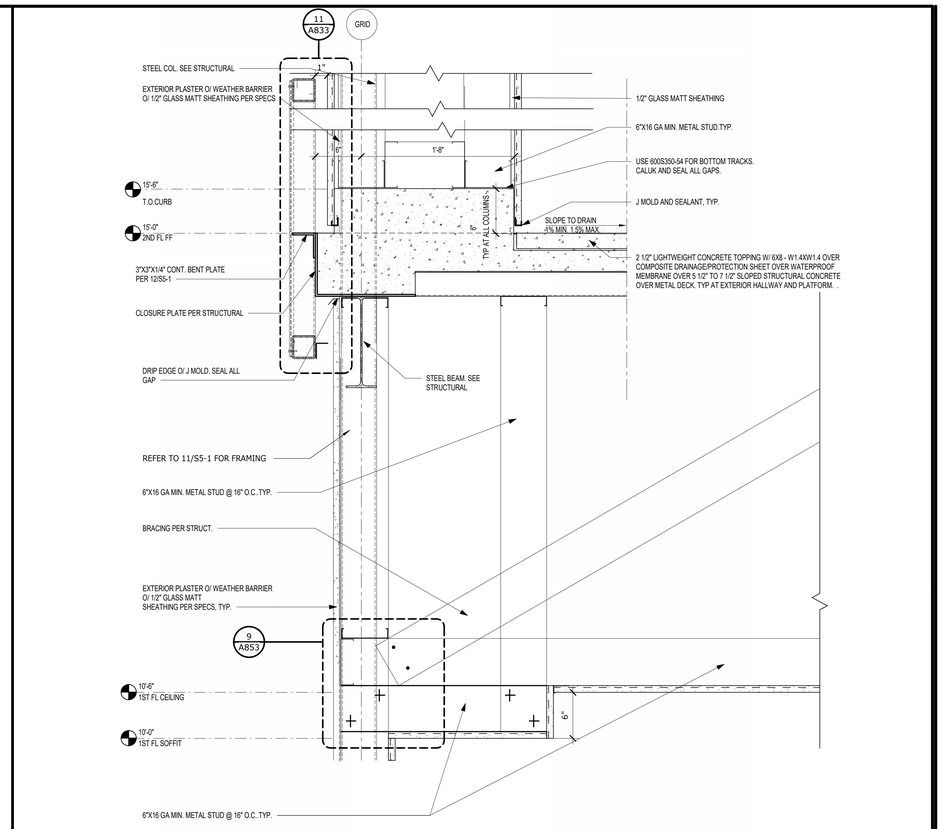
STAIR #1 PERF. METAL PANEL CONN. 1/2" = 1'-0" | 17



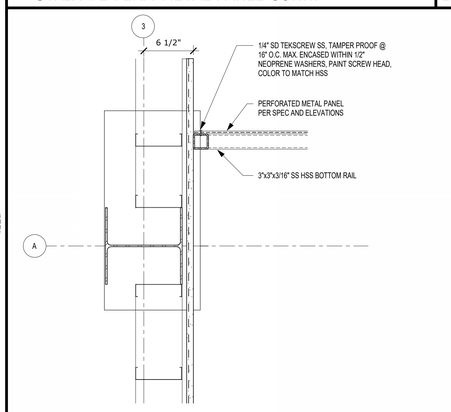
STAIR #2 PERF. METAL PANEL CONN. 1/2" = 1'-0" | 15



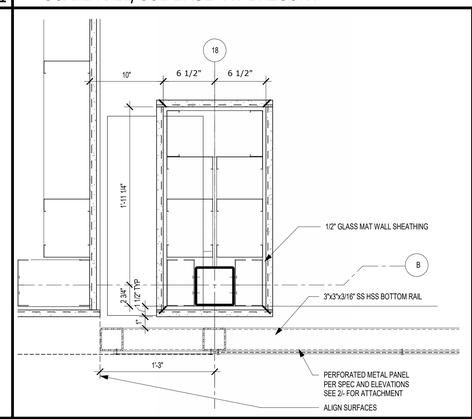
GUARDRAIL DETAIL @ BALCONY CORRIDOR 3" = 1'-0" | 11



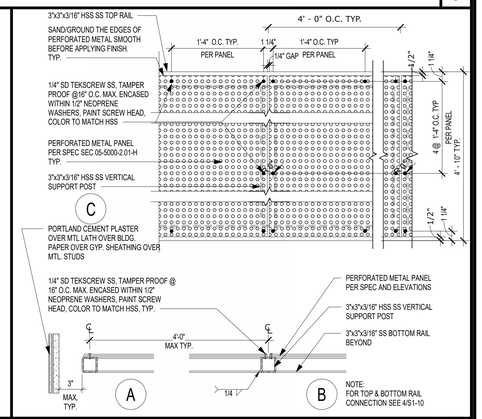
GUARDRAIL/COL BASE AT BALCONY 1 1/2" = 1'-0" | 3



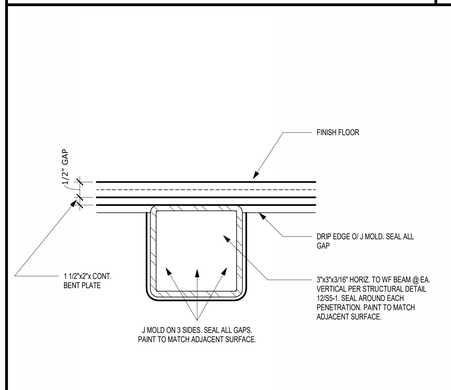
END OF RAILING AT WALL 1 1/2" = 1'-0" | 14



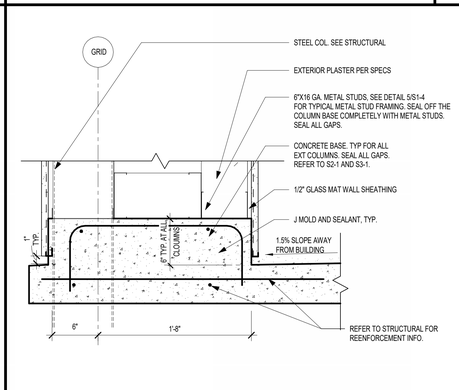
END OF RAILING AT WALL/COLUMN 1 1/2" = 1'-0" | 5



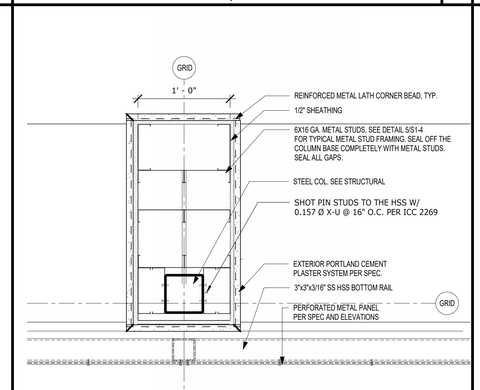
METAL PANEL DETAILS 1 1/2" = 1'-0" | 2



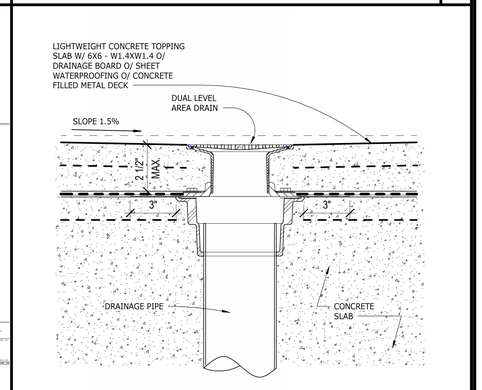
FRONT VIEW AT PENETRATION 6" = 1'-0" | 13



CONC COL BASE 1 1/2" = 1'-0" | 9



COLUMN BASE 1 1/2" = 1'-0" | 4



DECK DRAIN AT BALCONIES 3" = 1'-0" | 1

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IRVINE, CA 92618
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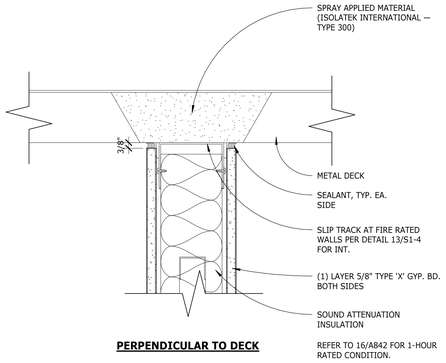
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ENGINEER:

SHEET DESCRIPTION:
BALCONY DETAILS

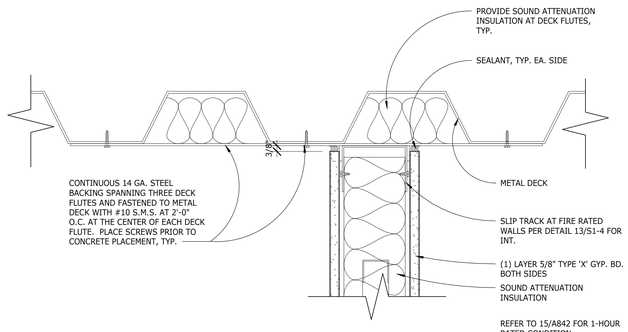
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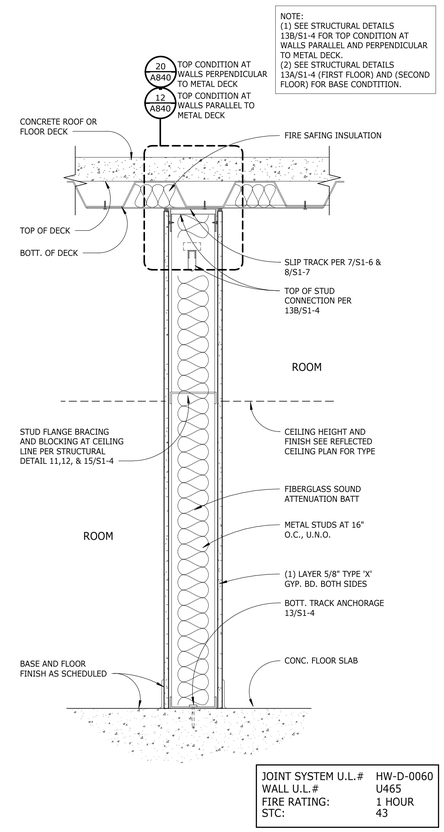
PERPENDICULAR TO DECK

PARTITION PERPENDICULAR TO DECK 3" = 1'-0" 20



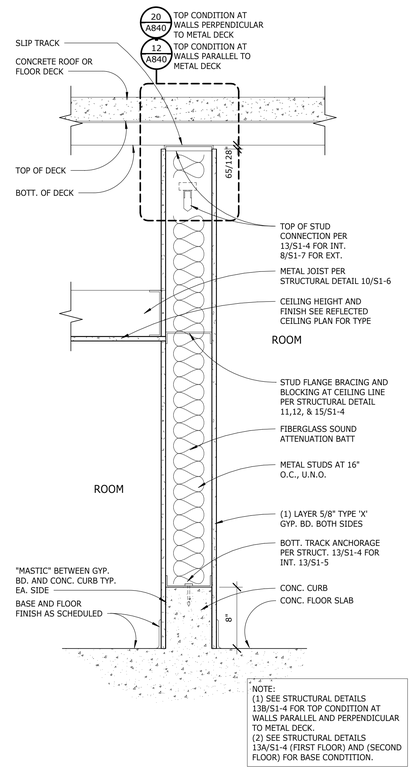
PARALLEL TO DECK

PARTION PARALLEL TO DECK 3" = 1'-0" 12

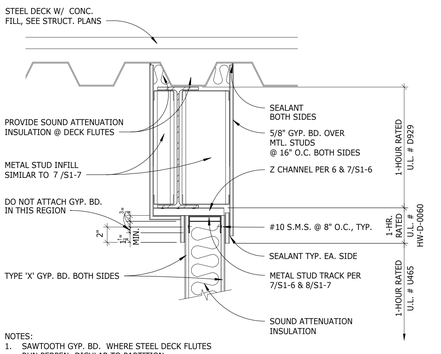


JOINT SYSTEM U.L.#	HW-D-0060
WALL U.L.#	U465
FIRE RATING:	1 HOUR
STC:	43

1-HOUR RATED WALL 1 1/2" = 1'-0" 7

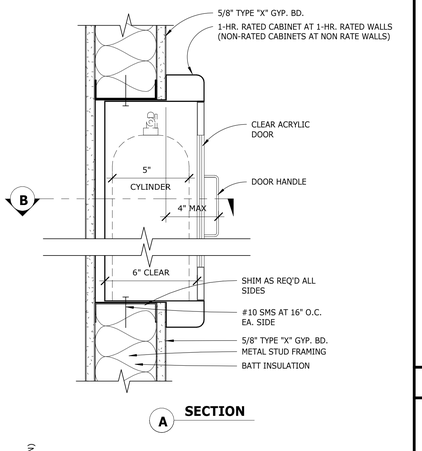


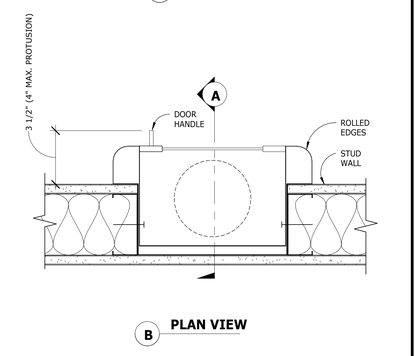
TYPICAL METAL STUD WALL W/ CURB 1 1/2" = 1'-0" 3



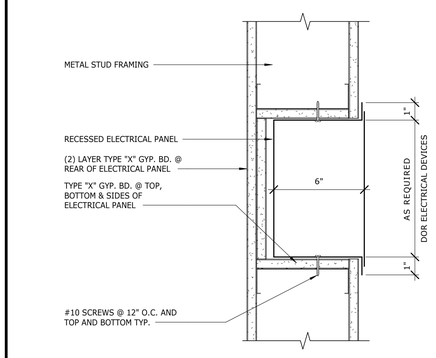
NOTES:
1. SAWTOOTH GYP. BD. WHERE STEEL DECK FLUTES RUN PERPEN- DICULAR TO PARTITION

NON-RATED WALL UNDE STL. BEAM 1 1/2" = 1'-0" 19

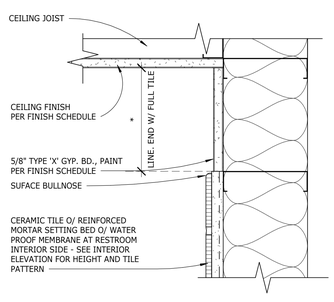




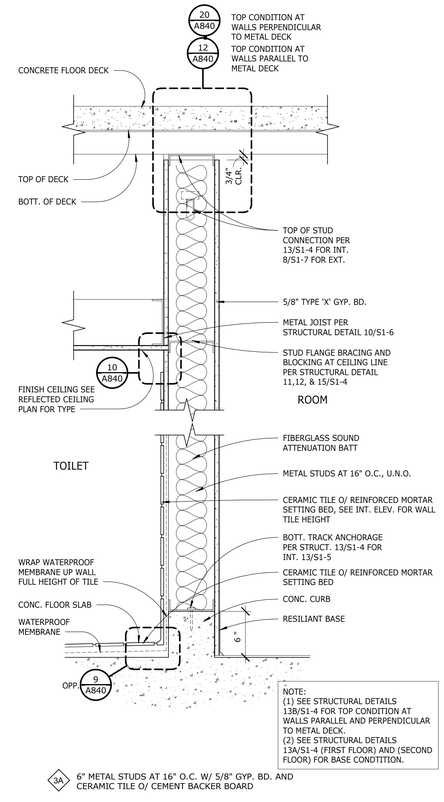
FIRE EXTINGUISHER CAB. IN MET. STUD 3" = 1'-0" 14



RECESSED ELECTRICAL PANEL - PLAN 3" = 1'-0" 11

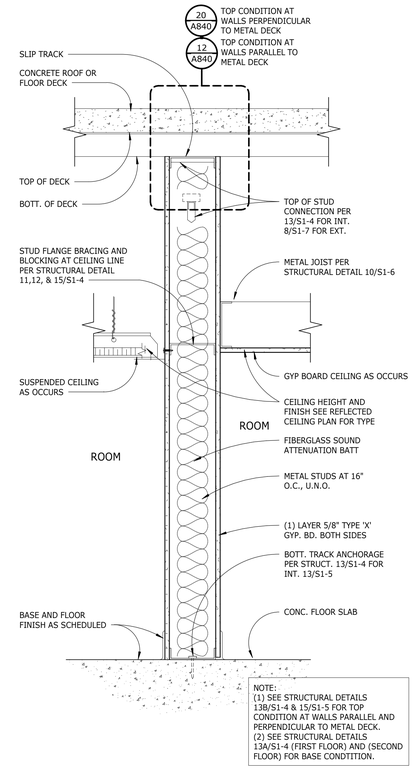


TILE WAINSCOT 3" = 1'-0" 10

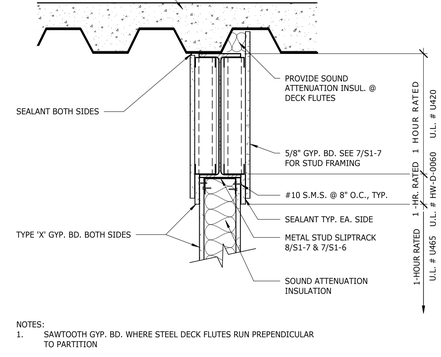


3A 6" METAL STUDS AT 16" O.C. W/ 5/8" GYP. BD. AND CERAMIC TILE O/ CEMENT BACKER BOARD

RESTROOM WALL 1 1/2" = 1'-0" 5

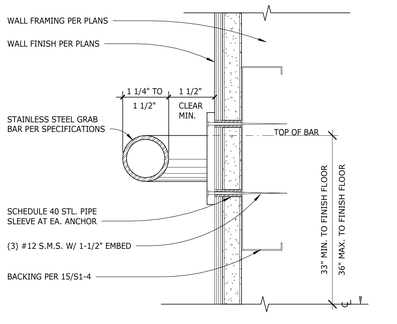


TYPICAL METAL STUD WALL 1 1/2" = 1'-0" 1

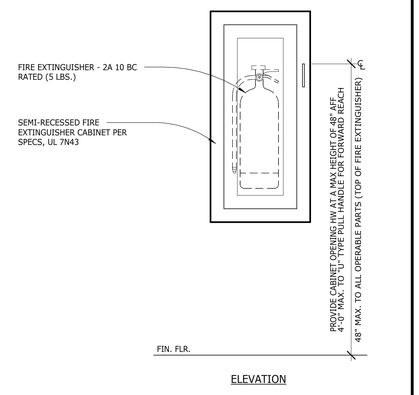


NOTES:
1. SAWTOOTH GYP. BD. WHERE STEEL DECK FLUTES RUN PREPENDICULAR TO PARTITION

NON-RATED WALL UNDER STEEL BEAM 1 1/2" = 1'-0" 18

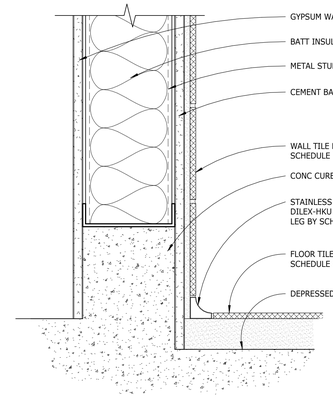


GRAB BAR ANCHORAGE 6" = 1'-0" 17



ELEVATION

FIRE EXTINGUISHER ELEVATION 1 1/2" = 1'-0" 13



CERAMIC TILE - BASE 3" = 1'-0" 9

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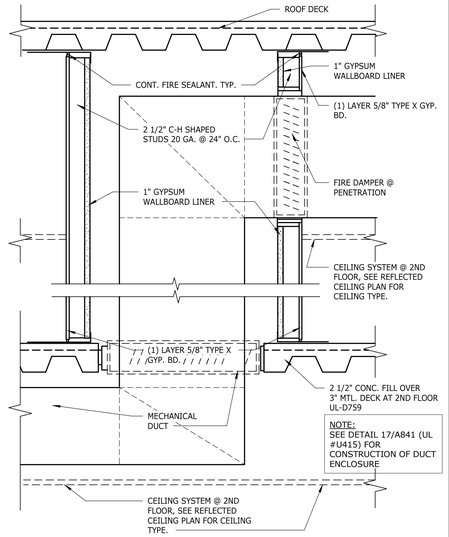
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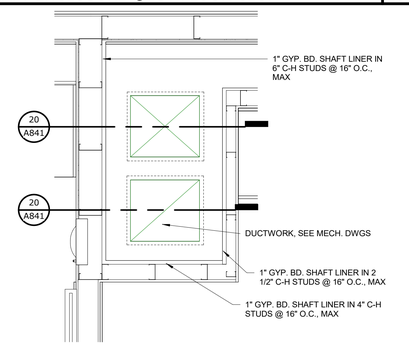
SHEET DESCRIPTION:
INTERIOR WALL AND PARTITION DETAILS

SHEET NO:

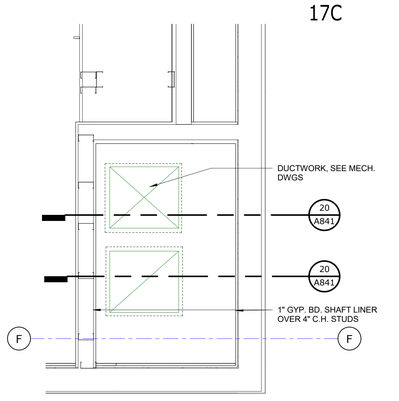
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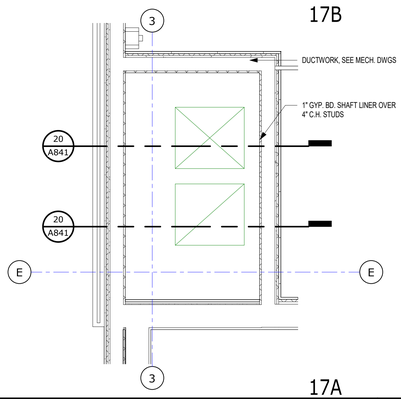
SHAFT ENCLOSURE @1ST FLOOR CLG. 1 1/2" = 1'-0" | 20



17C

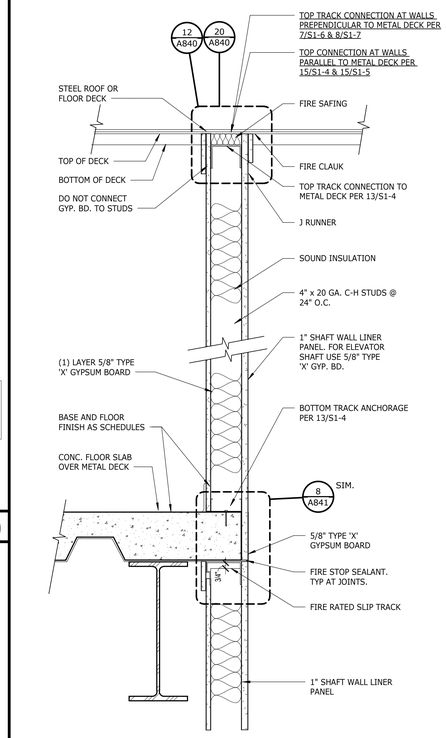


17B

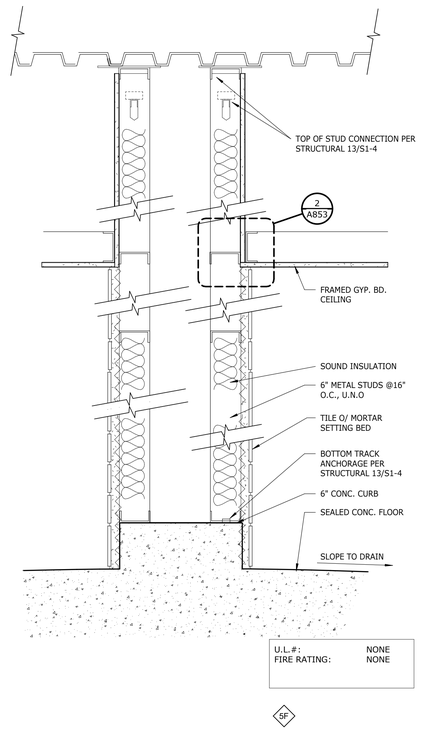


17A

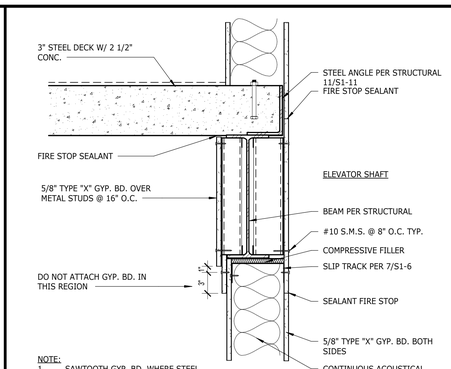
1 HR. RATED DUCT SHAFT CHASE DETAILS 3/4" = 1'-0" | 17



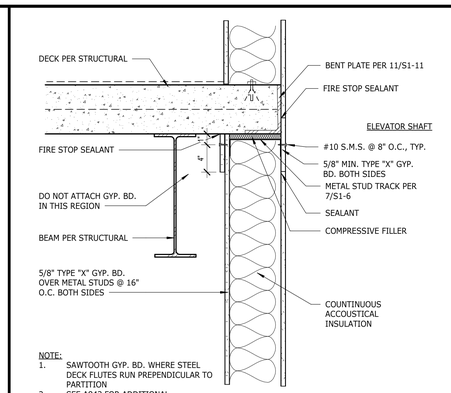
1-HR SHAFT WALL 1 1/2" = 1'-0" | 15



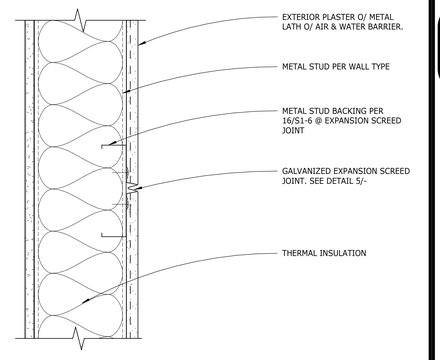
PLUMBING WALL 1 1/2" = 1'-0" | 13



1-HR RATED PARTITION @ ELEV. SHAFT 1 1/2" = 1'-0" | 12

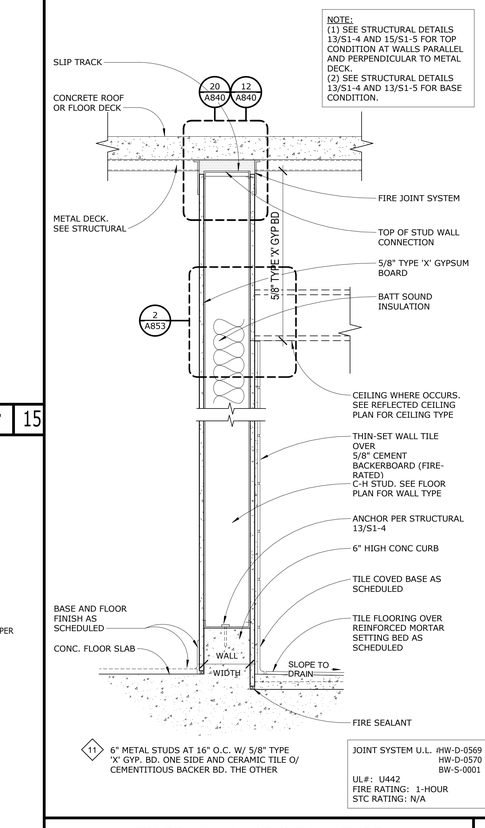


1 HR RATED PARTIOTION @ELEV. SHAFT 1 1/2" = 1'-0" | 8

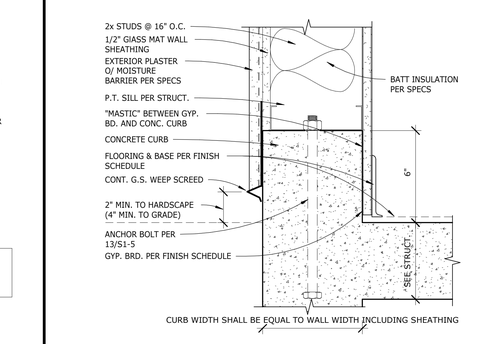


HORIZONTAL JOINT

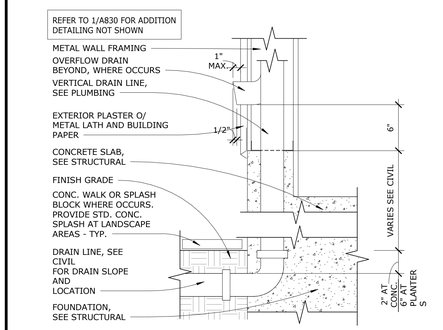
Wall - Plaster Control Joint 3" = 1'-0" | 4



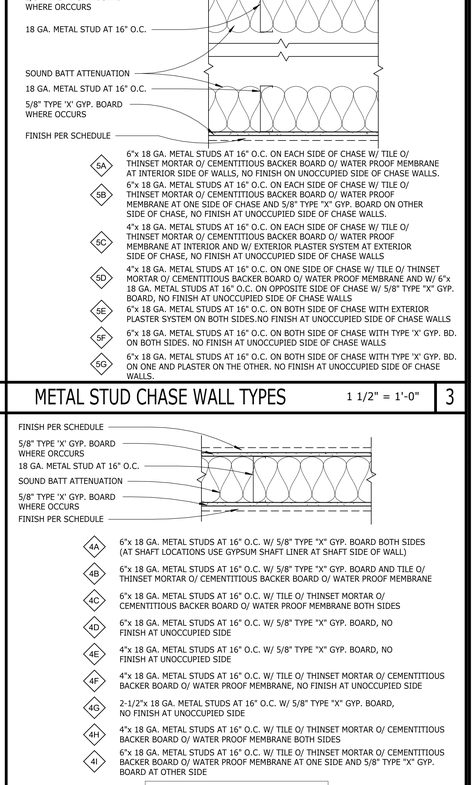
TILED WALL (CBC 713) TYPE 6 1 1/2" = 1'-0" | 11



SCREED 3" = 1'-0" | 9



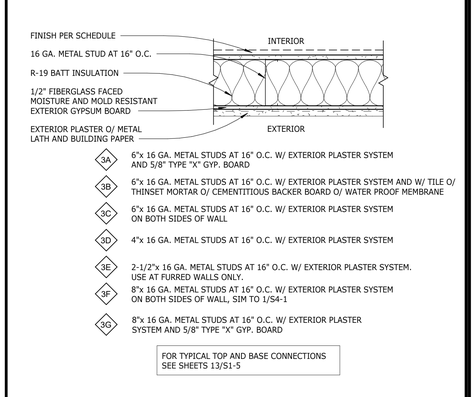
OVERFLOW DRAIN OUTLET AT STUD WALL 1/2" = 1'-0" | 7



METAL STUD CHASE WALL TYPES 1 1/2" = 1'-0" | 3

HORIZONTAL REVEAL 6" = 1'-0" | 6

INTERIOR METAL STUD WALL TYPES 1 1/2" = 1'-0" | 2



EXTERIOR METAL STUD WALL TYPES 1 1/2" = 1'-0" | 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
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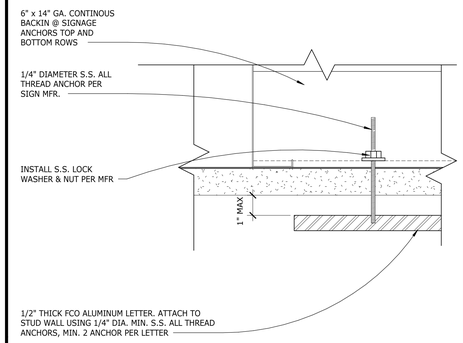
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
WALL TYPES AND DETALS

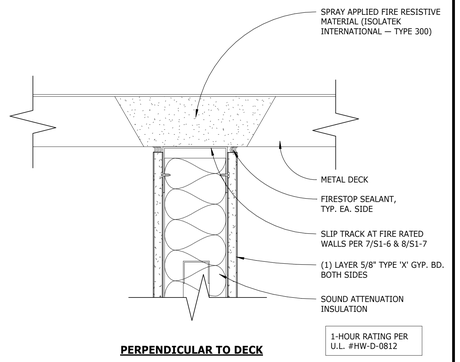
SHEET NO:

A841



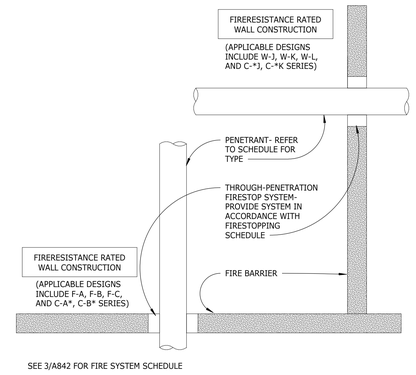
PLAN

ALUMINUM LETTER ATTACHMENT 6" = 1'-0" | 20



PERPENDICULAR TO DECK

1-HOUR RATED PARTION 3" = 1'-0" | 16



SEE 3/A842 FOR FIRE SYSTEM SCHEDULE

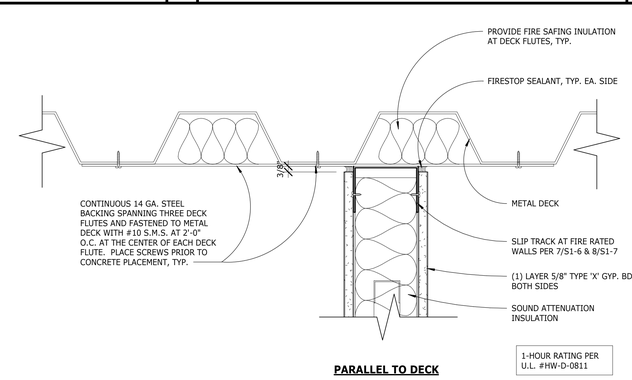
THROUGH PEN. FIRESTOP SYSTEMS KEY 3" = 1'-0" | 12

THROUGH-PENETRATION FIRESTOP SYSTEM SCHEDULE

Firestop Systems Are Listed Using the Alpha-Alpha-Numeric identification System Published in UL's Fire Resistence Directory, Vol. 2

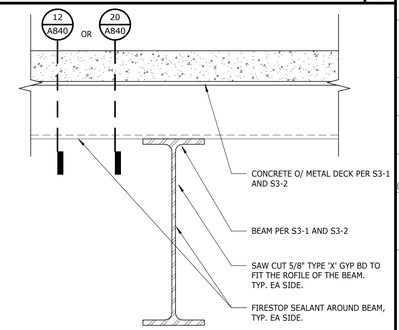
TYPE OF PENETRANT	APPLICABLE CONSTRUCTION: FLOOR PENETRATION SYSTEMS (First Alpha Component = C or W)			WALL PENETRATION SYSTEMS (First Alpha Component = C or W)		
	Concrete Floors with a Minimum Thickness Less Than or Equal to 5 Inches					Framed Walls
NO PENETRATING ITEMS	C-AJ-0001-0999 OR F-A-0001-0999					W-L-0001-0999
METALLIC PIPE, CONDUIT, OR TUBING	C-AJ-1001-1999 OR F-A-1001-1999					W-L-1001-1999
NONMETALLIC PIPE, CONDUIT, OR TUBING	C-AJ-2001-2999 OR F-A-2001-2999					W-L-2001-2999
ELECTRICAL CABLES	C-AJ-3001-3999 OR F-A-3001-3999					W-L-3001-3999
CABLE TRAYS WITH ELECTRICAL CABLES	C-AJ-4001-4999 OR F-A-4001-4999					W-L-4001-4999
INSUALTED PIPES	C-AJ-5001-5999 OR F-A-5001-5999					W-L-5001-5999
MISC. ELECTRICAL PENETRANTS	C-AJ-6001-6999 OR F-A-6001-6999					W-L-6001-6999
MISC. MECHANICAL PENETRANTS (EXCEPT DUCTWORK - DAMPERED)	C-AJ-7001-7999					W-L-7001-7999
GROUPINGS OF PENETRATIONS	C-AJ-8001-8999 OR F-A-8001-8999					W-L-8001-8999

FOR EACH LOCATION WHERE A FIRE-RESISTANCE-RATED FLOOR OR WALL ASSEMBLY IS PENETRATED, PROVIDE A UL-LISTED THROUGH-PENETRATION FIRESTOP SYSTEM SELECTED FROM THE APPLICABLE UL NUMBER RANGE LISTED ABOVE THAT COMPLIES WITH SPECIFICATION SECTION 07 84 00 "THROUGH-PENETRATION FIRESTOP SYSTEMS' AND IS SUITABLE FOR THE PENETRATION CONDITIONS INDICATED FOR THE PROJECT.



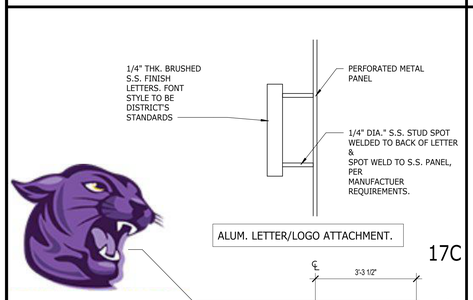
PARALLEL TO DECK

1-HOUR RATED PARTION 3" = 1'-0" | 15

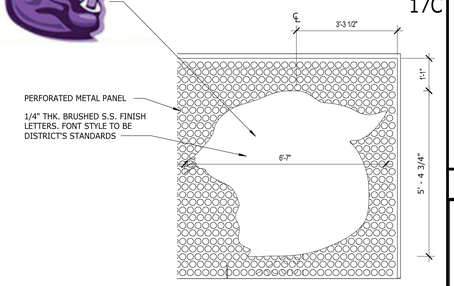


BEAM AT DRYWALL 3" = 1'-0" | 11

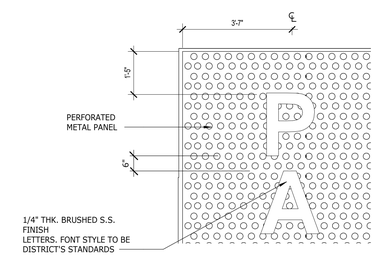
FIRESTOP SYSTEM SCHEDULE 3" = 1'-0" | 3



ALUM. LETTER/LOGO ATTACHMENT. 17C



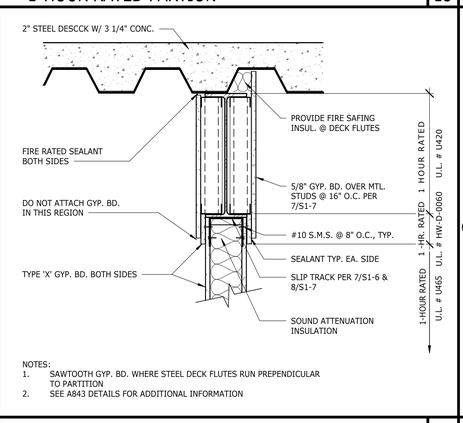
17B



17A

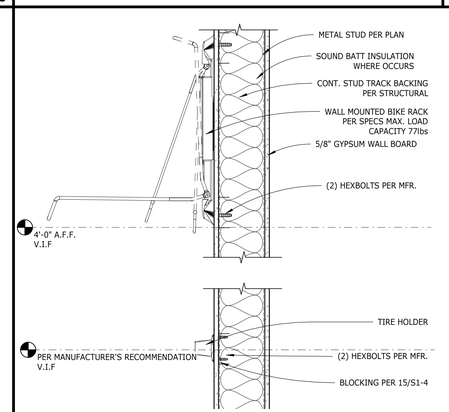
NOTE: VERIFY LOGO COLORS, FONTS, DIMENSSIONS WITH DISTRICT'SSTANDARDS

ALUM DECORATIVE LETTERING/LOGO 1/2" = 1'-0" | 17

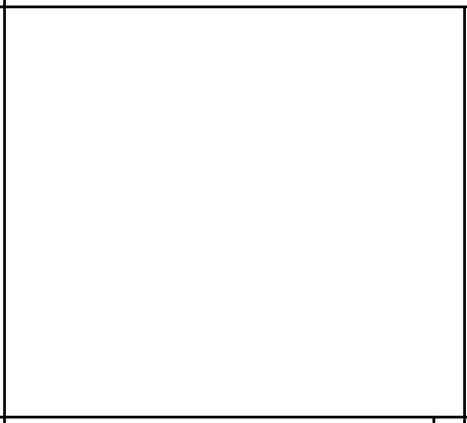


NOTES:
1. SAWTOOTH GYP. BD. WHERE STEEL DECK FLUTES RUN PREPENDICULAR TO PARTITION
2. SEE A843 DETAILS FOR ADDITIONAL INFORMATION

1-HR RATED WALL UNDER STEEL BEAM 1 1/2" = 1'-0" | 14

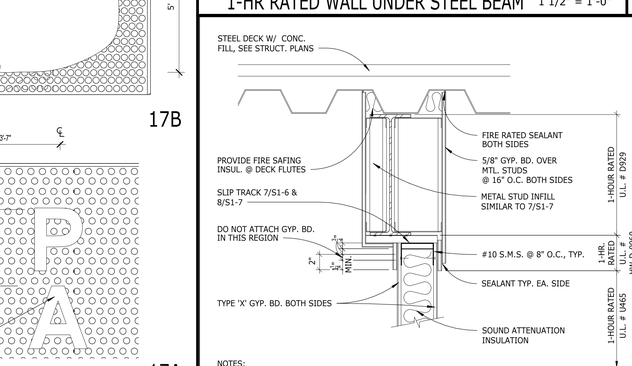


BIKE RACK DETAIL 1 1/2" = 1'-0" | 10



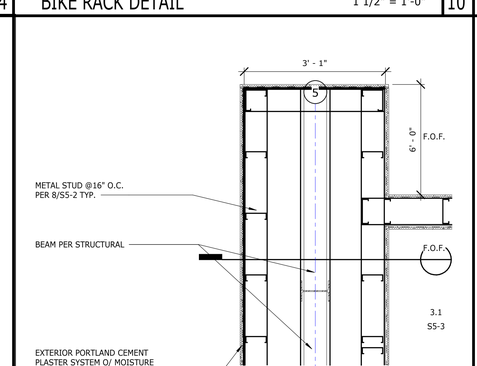
BOTTOM RAIL ONLY WHERE HEAD ROOM UNDER STAIR IS LESS THAN 36"

CANE RAIL 1 1/2" = 1'-0" | 2

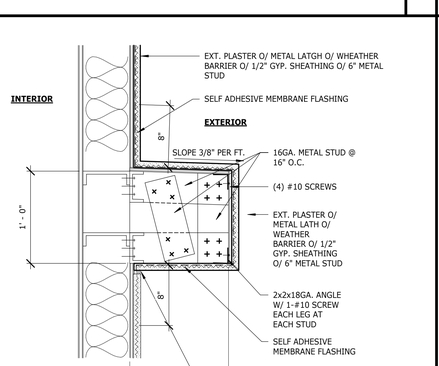


NOTES:
1. SAWTOOTH GYP. BD. WHERE STEEL DECK FLUTES RUN PERPEN- DICULAR TO PARTITION

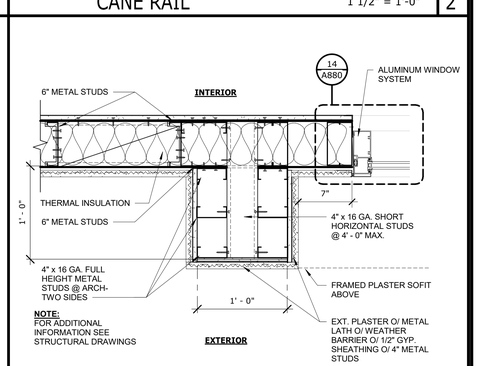
FIRE RATED WALL UNDE STL. BEAM 1 1/2" = 1'-0" | 13



PLAN DETAIL @ ENTRY PORTICO 3/4" = 1'-0" | 9



EXT. ETRUDED FRAME HEAD DETAIL 1 1/2" = 1'-0" | 5



EXT. EXTRUDED FRAME JAMP DETAIL 1 1/2" = 1'-0" | 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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LICENSED ARCHITECT PAUL WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
WALL TYPES AND DETAILS

SHEET NO:

A842

REFERENCES:

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24
PART 2, 2022 CALIFORNIA BUILDING CODE (CBC), SECTION 1617A.1.21, 1617.10.16* PART 3, 2022 CALIFORNIA ELECTRICAL CODE (CEC), ARTICLE 410.36
ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES ASTM C635.07, C636-08, AND E580-10A DSA IR 25-2.13
ICC-ES REPORT ESR-1308 (VALID UNTIL 12/24)

1. **GENERAL REQUIREMENTS:** CBC SECTION 1617A.1.21 (1617.10.16*) REQUIRES THE DESIGN AND INSTALLATION TO BE IN COMPLIANCE WITH ASTM C635, C636, AND E580, SECTION 5, WITH MODIFICATIONS.
NOTE: AMENDMENTS IN CBC SECTION 1617A.1.21 (1617.10.16*) REPLACE AND APPEND ASCE 7, SECTION 13.5.6.
THE REQUIREMENTS IN THIS IR APPLY TO FLAT AND LEVEL CEILING SYSTEMS WHOSE TOTAL WEIGHT, INCLUDING CEILING MOUNTED AIR TERMINALS, SERVICES AND LIGHT FIXTURES, DOES NOT EXCEED FOUR (4) PSF. HEAVIER SYSTEMS, SYSTEMS THAT ARE NOT FLAT AND LEVEL, THOSE SUPPORTING LATERAL LOADS FROM PARTITIONS, AND FREE FLOATING CEILINGS SUPPORTED BY CHAINS OR CABLES, ARE BEYOND THE MINIMUM REQUIREMENTS OF THIS IR AND WILL REQUIRE SPECIAL DESIGN AND DETAILS.

2. CEILING DESIGN & INSTALLATION REQUIREMENTS.

2.1 CEILING SYSTEM COMPONENTS:

a) SHALL COMPLY WITH ASTM C635 AND SECTION 5.1 OF ASTM E580.
b) THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635.
c) MAIN RUNNERS, CROSS RUNNERS, SPLICES, EXPANSION DEVICES, AND INTERSECTION CONNECTORS SHALL BE DESIGNED TO CARRY A MEAN ULTIMATE TEST LOAD OF NOT LESS THAN 180 LBS. IN COMPRESSION AND TENSION PER ASTM E580 SECTION 5.1.2.
d) CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI. THE MAXIMUM ALLOWABLE (ASD) TENSION LOAD FOR WIRE MEETING THIS SPECIFICATION IS 350 POUNDS.
  - FOUR (4) TURNS OF THE WIRE WITHIN 1.5" WILL DEVELOP THE WIRE ALLOWABLE LOAD.
  - THREE (3) TURNS OF THE WIRE WITHIN 3" IS ASSUMED TO DEVELOP NO MORE THAN 50 PERCENT OF WIRE ALLOWABLE LOAD.

2.2 SUSPENSION SYSTEM INSTALLATION:

a) SHALL COMPLY WITH ASTM C636 AND SECTION 5.2 OF ASTM E580.
b) #12 GAGE HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING A 4 FOOT BY 4 FOOT GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS. SPLICES IN HANGER WIRES SHALL DEVELOP 50 PERCENT OF THE WIRE ALLOWABLE LOAD.
c) PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
d) CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS PER ASTM E580, SECTION 5.2.3. CEILING GRID MEMBERS SHALL BE AT LEAST 3/4 INCH CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4 INCH CLEAR OF WALL.
e) THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL BE NOT LESS THAN TWO (2) INCHES. USE OF ANGLES WITH SMALLER WIDTHS IN CONJUNCTION WITH PROPRIETARY PERIMETER CLIPS MAY BE ACCEPTABLE IN ACCORDANCE WITH SECTION 5 OF THIS IR.
f) AT THE PERIMETER OF THE CEILING AREA, WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STABILIZER OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER MAY BE USED AND PLACED WITHIN EIGHT (8) INCHES OF THE WALL. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS EIGHT (8) INCHES OR LESS, THE STABILIZER OR #16 GAGE WIRE IS NOT REQUIRED.

2.3 LATERAL FORCE BRACING ASSEMBLY INSTALLATION:

a) LATERAL FORCE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) #12 GAGE SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER ARE REQUIRED FOR ALL CEILING AREAS.
EXCEPTION: LATERAL FORCE BRACING MAY BE OMITTED FOR SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA NOT TO EXCEED 144 SQUARE FEET, FOR ALL VALUES OF S_{DS} WHEN PERIMETER SUPPORT IS PROVIDED IN ACCORDANCE WITH SECTION 2.2 OF THIS IR AND PERIMETER WALLS ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES.
b) LATERAL FORCE BRACING ASSEMBLIES SHALL BE SPACED PER DETAIL 2.12/A851 FOR ALL VALUES OF THE COMPONENT IMPORTANCE FACTOR (I_P) OF THE CEILING.
c) THERE SHALL BE A BRACE ASSEMBLY A DISTANCE OF NOT MORE THAN ONE HALF OF THE ABOVE SPACING FROM EACH SURROUNDING WALL, EXPANSION JOINT AND AT THE EDGES OF ANY CEILING VERTICAL OFFSET. FOR EXAMPLE, WHERE THE BRACE SPACING IS 8' X 12', THE EDGE DISTANCE SHALL BE 4 FEET IN THE DIRECTION OF THE 8 FOOT SPACING AND 6 FEET IN THE DIRECTION OF THE 12 FOOT SPACING.
d) THE SLOPE OF BRACING WIRES SHALL NOT EXCEED 45 DEGREES FROM THE HORIZONTAL PLANE AND WIRES SHALL BE TAUT. SPLICES IN BRACING WIRES SHALL DEVELOP THE WIRE ALLOWABLE LOAD.
e) COMPRESSION STRUTS SHALL MEET THE FOLLOWING REQUIREMENTS:
  - THE STRUT SHALL BE SIZED TO ADEQUATELY RESIST THE VERTICAL COMPONENT FORCE INDUCED BY THE CEILING BRACING WIRES AND HAVE A MAXIMUM KL/R NOT TO EXCEED 300. THE STRUTS LISTED IN APPENDIX A MEET THIS REQUIREMENT FOR CEILINGS COMPLYING WITH THE GENERAL REQUIREMENTS OF THIS IR.
  - THE STRUT SHALL NOT BE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB.

FOOTNOTES:
a. WHERE, AS DEFINED IN ASCE 7, SECTION 13.3.1: Z = HEIGHT IN STRUCTURE OF POINT OF ATTACHMENT OF CEILING WITH RESPECT TO THE BASE. H = AVERAGE ROOF HEIGHT OF THE STRUCTURE WITH RESPECT TO THE BASE.
b. IT SHALL BE PERMITTED TO USE THE BRACE ASSEMBLY SPACING FOR “Z/H > 0.5” FOR THE FULL BUILDING HEIGHT.

2.4 ATTACHMENT OF HANGER AND BRACING WIRES:

a) FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS IN THREE (3) INCHES. HANGER WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION OF THE MEMBER WITHIN THE LOOPS (SEE ASTM E580, SECTION 5.2.7.2).
b) FASTEN BRACING WIRES WITH NOT LESS THAN FOUR (4) TIGHT TURNS IN ONE AND ONE-HALF (1-1/2) INCHES.
c) HANGER AND BRACING WIRE ANCHORAGE TO THE STRUCTURE SHALL BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHORAGE ALIGNS CLOSELY WITH THE DIRECTION OF THE WIRE. (E.G. BRACING WIRE CEILING CLIPS MUST BE BENT AS SHOWN IN THE DETAILS AND ROTATED AS REQUIRED TO ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, SCREW EYES IN WOOD MUST BE INSTALLED SO THEY ALIGN CLOSELY WITH THE DIRECTION OF THE WIRE, ETC.).
d) SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
e) HANGER AND BRACING WIRES SHALL NOT ATTACH TO OR BEND AROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO: PIPING, DUCTWORK, CONDUIT AND EQUIPMENT. PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO ALLOW TYPICAL HANGER SPACING. BRACE ASSEMBLIES MUST BE CONFIGURED AND/OR LOCATED IN ORDER TO AVOID OBSTRUCTIONS IN ADDITION TO MAINTAINING THE REQUIRED BRACE ASSEMBLY SPACING.
f) PROVIDE ADDITIONAL HANGERS, STRUTS AND BRACE ASSEMBLIES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS, OR DISCONTINUOUS AREAS.
g) HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES.
NOTE: SEE ASTM C636, FIGURE 1, FOR COUNTER-SLOPING METHODS.
h) ATTACHMENT OF THE BRACING WIRES TO THE STRUCTURE ABOVE AND TO THE MAIN RUNNERS SHALL BE ADEQUATE FOR THE LOAD IMPOSED. THE WEIGHT (W_P) SHALL BE TAKEN AS NOT LESS THAN FOUR (4) PSF FOR CALCULATING SEISMIC FORCES (F_P).
i) POST-INSTALLED ANCHORS (E.G. EXPANSION ANCHORS, SCREW ANCHORS AND POWER ACTUATED FASTENERS) SHALL HAVE A CURRENT EVALUATION REPORT ACCEPTABLE TO DSA IN ACCORDANCE WITH IR A-5.
j) POWER-ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.
k) DSA APPROVAL OF A CONSTRUCTION PLAN IS REQUIRED PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PRESTRESSED CONCRETE. THE CONSTRUCTION PLAN SHALL DEMONSTRATE HOW THE LOCATION OF EXISTING PRESTRESSING TENDONS AND STRANDS WILL BE LOCATED AND DENOTED AS NECESSARY TO AVOID INTERFERENCE.

2.5 EXPANSION JOINTS, SEISMIC SEPARATION JOINTS:

a) EXPANSION JOINTS SHALL BE PROVIDED IN THE CEILING AT INTERSECTIONS OF CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND LOBBIES OR OTHER SIMILAR AREAS.
b) FOR CEILING AREAS EXCEEDING 2,500 SQUARE FEET, A SEISMIC SEPARATION JOINT SHALL BE PROVIDED TO DIVIDE THE CEILING INTO AREAS NOT EXCEEDING 2,500 SQUARE FEET IN ACCORDANCE WITH ASTM E580, SECTION 5.2.9.

2.6 CEILING FIXTURES, TERMINALS, AND DEVICES:

a) ALL FIXTURES, TERMINALS, AND OTHER DEVICES SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE IN ACCORDANCE WITH SECTION 13.5.6.2.2 ITEM 5 OF ASCE 7 AS AMENDED BY CBC SECTION 1617A.1.20 (1617.10.16*) AND ASTM E580 SECTIONS 5.3 AND 5.4.
b) CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
c) PENETRATIONS THROUGH THE CEILING FOR SPRINKLER HEADS AND OTHER SIMILAR DEVICES THAT ARE NOT INTEGRALLY TIED TO THE CEILING SYSTEM IN THE LATERAL DIRECTION SHALL HAVE A TWO (2) INCH OVERSIZED RING, SLEEVE OR ADAPTER THROUGH THE CEILING TILE TO ALLOW FREE MOVEMENT OF ONE (1) INCH IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, PER ASTM E580, SECTION 5.2.8.5, A FLEXIBLE SPRINKLER HOSE FITTING THAT CAN ACCOMMODATE ONE (1) INCH OF CEILING MOVEMENT SHALL BE PERMITTED TO BE USED IN LIEU OF THE OVERSIZED RING, SLEEVE, OR ADAPTER.
d) SLACK SAFETY WIRES SHALL BE CONSIDERED HANGER WIRES FOR INSTALLATION AND TESTING REQUIREMENTS.

2.6.1 LIGHT FIXTURES:

a) ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS PER CEC ARTICLE 410.36 TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.
b) SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES ON EACH FIXTURE. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.
c) LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
d) LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE.
EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.
e) ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.

2.6.2 SERVICES WITHIN THE CEILING:

a) ALL FLEXIBLE SPRINKLER HOSE FITTING MOUNTING BRACKETS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE COMPONENT. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.
b) CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
c) FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES (AT DIAGONAL CORNERS) CONNECTED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
d) FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES ATTACHED FROM THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.

2.6.3 OTHER DEVICES WITHIN THE CEILING:

ALL LIGHTWEIGHT MISCELLANEOUS DEVICES, SUCH AS STROBE LIGHTS, OCCUPANCY SENSORS, SPEAKERS, EXIT SIGNS, ETC., SHALL BE ATTACHED TO THE CEILING GRID PER SECTION 2.6.2 A) OF THIS IR. IN ADDITION, DEVICES WEIGHING MORE THAN 10 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE ANCHORED TO THE STRUCTURE ABOVE PER SECTION 2.6.1 B) OF THIS IR. DEVICES WEIGHING MORE THAN 20 LBS. SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE USING DETAILS PROVIDED BY THE REGISTERED DESIGN PROFESSIONAL (RDP).

3. ADDITIONAL REQUIREMENTS:

3.1 PENDANT MOUNTED LIGHT FIXTURES:

a) WHERE PENDANT MOUNTED LIGHT FIXTURES ARE TO BE INSTALLED IN AREAS WITH A SUSPENDED CEILING, THE CONSTRUCTION DOCUMENTS SHALL INCLUDE COMPLETE SUPPORT DETAILS COMPLYING WITH THIS IR AND DSA IR 16-9.
b) SUPPORT PENDANT-MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING TWO
(1) TIMES THE WEIGHT OF THE FIXTURE.
c) IF A PENDANT MOUNTED LIGHT FIXTURE IS DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING (I.E., AIRCRAFT CABLES TO WALLS), THEN A BRACE ASSEMBLY IS NOT REQUIRED ABOVE THE CEILING.
d) IF A PENDANT MOUNTED LIGHT FIXTURE IS FREE TO SWING 45 DEGREES FROM VERTICAL IN ALL DIRECTIONS, AND IS NOT DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING, THEN A BRACING ASSEMBLY IS ONLY REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT THE HORIZONTAL AND VERTICAL FORCES.
EXCEPTION: WHERE THE WEIGHT OF THEFIXTURE IS LESS THAN 20 POUNDS, THE VERTICAL COMPONENT OF THE BRACE FORCE NEED NOT BE CONSIDERED SO NO COMPRESSION STRUT/POST IS REQUIRED.
e) RIGID CONDUIT SHALL NOT BE USED FOR ATTACHMENT OF THE FIXTURES.

3.2 FIRE RATED CEILINGS:

a) PROVIDE A DETAIL AND TESTED ASSEMBLY NUMBER FOR RATED CEILING ASSEMBLIES FROM AN AUTHORIZED TESTING AGENCY. THE COMPONENTS AND INSTALLATION DETAILS MUST CONFORM IN EVERY RESPECT WITH THE LISTED DETAIL AND NUMBER. DETAILS SHALL CLEARLY DEPICT ALL COMPONENTS, INCLUDING INSULATION MATERIALS, FRAMING AND ATTACHMENT OF THE DESIGN SO THAT THE ASSEMBLY CAN BE CONSTRUCTED AND INSPECTED ACCORDINGLY.
b) POP RIVETS, SCREWS, OR OTHER ATTACHMENTS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY DETAILED IN THE DRAWINGS OR AN APPROVED LISTING BY A STATE FIRE MARSHAL (SFM) RECOGNIZED LABORATORY.

3.3 ACOUSTICAL CEILING TILE PANEL INSTALLATION

FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE ¾" CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP.

3.4 OTHER PANEL TYPES:

PANELS WEIGHING MORE THAN ONE-HALF (1/2) PSF, OTHER THAN MINERAL FIBER AND GLASS FIBER ACOUSTICAL TILE, AND ALL METAL AND WOOD PANELS SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION RUNNERS BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, OR RIVETS, AND EACH ATTACHMENT SHALL HAVE THE ALLOWABLE DESIGN STRENGTH TO SUPPORT 100 PERCENT OF THE WEIGHT OF THE PANEL ACTING IN ANY DIRECTION. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED FOR EACH PANEL. FOR CEILING INSTALLATIONS UTILIZING PANELS OTHER THAN MINERAL OR GLASS FIBER, ¾" CLEARANCE SHALL BE PROVIDED BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING AREA WHICH ARE FREE TO SLIP, UNLESS OTHERWISE JUSTIFIED BY SEISMIC QUALIFICATION INDICATED BELOW.
THE USE OF OTHER TYPES OF ATTACHMENT, SUCH AS CLIPS, SNAP-IN DEVICES, PERFORATED LIPS, CLAMPING DEVICES, OR SPRING LOADED DEVICES OR HOOKS, SHALL BE LISTED PER DSA IR A-5 AND IDENTIFIED FOR USE WITH THE TYPE OF CEILING FRAMING MEMBERS AND PANELS. THE LISTING SHALL BE SEISMICALLY QUALIFIED IN ACCORDANCE WITH ASCE 7 SECTION 13.2.5 OR 13.2.6.
AN ALTERNATE MEANS OF COMPLIANCE PER CAC 4-304 MAY BE PROPOSED AND REVIEWED ON A PROJECT BY PROJECT BASIS WHEN USING UNLISTED MEANS OF ATTACHMENT. THE ALTERNATE MEANS OF ATTACHMENT SHALL HAVE THE ALLOWABLE DESIGN STRENGTH TO SUPPORT 100 PERCENT OF THE WEIGHT OF THE PANEL ACTING IN ANY DIRECTION AND SHALL BE CAPABLE OF MAINTAINING THAT STRENGTH IF THE CEILING GRID IS DISTORTED OR OUT OF LEVEL. IT IS ALSO ALTERNATELY PERMITTED TO PROVIDE A SECONDARY MEANS OF CONNECTING THE PANEL TO THE GRID OR STRUCTURE TO RETAIN THE PANEL IN CASE OF PANEL DROPOUT, CEILING GRID DISTORTION, AND CEILING GRID BECOMING OUT-OF-LEVEL. THE SECONDARY ATTACHMENT SHALL HAVE THE ALLOWABLE DESIGN STRENGTH TO SUPPORT TWO (2) TIMES THE WEIGHT OF THE PANEL ACTING IN ANY DIRECTION, SUCH AS A SLACK WIRE OR CABLE. SPECIAL ATTACHMENT DETAILS COMPLYING WITH ONE OF THE METHODS OUTLINED ABOVE, SUCH AS SCREWS OR CABLES, SHALL BE PROVIDED AT THE PERIMETER OF THE CEILING, WHERE PANELS ARE CUT OR ALTERED, OR WHERE NON-STANDARD PANEL SIZES OR EDGE CONDITIONS OCCUR.

3.5 EXITWAYS: EXITWAYS OF ESSENTIAL SERVICES BUILDINGS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 13.5.6.2.2 ITEM 1 OF ASCE 7 AS AMENDED BY CBC SECTION 1616A.1.20 (1616.10.16*). A MAIN OR CROSS RUNNER SHALL BE INSTALLED ON ALL SIDES OF EACH PIECE OF TILE, BOARD OR PANEL AND EACH LIGHT FIXTURE OR GRILL. SPLICES OR INTERSECTION OF SUCH RUNNERS SHALL BE ATTACHED WITH THROUGH CONNECTORS SUCH AS POP RIVETS, SCREWS, PINS, PLATES WITH END TABS OR OTHER APPROVED CONNECTORS.

3.6 FREE FLOATING CEILINGS:

FREE FLOATING CEILINGS (CEILINGS NOT ATTACHED TO ANY WALLS) SUPPORTED BY WIRES IN ACCORDANCE WITH THIS IR SHALL BE BRACED IN ACCORDANCE WITH THIS IR, REGARDLESS OF THE CEILING AREA, UNLESS IT CAN BE DEMONSTRATED THE THE CEILING COMPONENTS OR FAILURE OF MECHANICAL, ANTICIPATED CEILING MOVEMENT WILL NOT CAUSE FAILURE OF ELECTRICAL, PLUMBING, AND FIRE AND LIFE SAFETY COMPONENTS/SYSTEMS WITHIN THE CEILING AREA AND WITHIN THE AREA OF ANTICIPATED MOVEMENT.
THE PERIMETER OF FREE FLOATING CEILINGS SHALL BE SUPPORTED BY A CONTINUOUS RUNNER WHICH IS SPLICED IN ACCORDANCE WITH ASTM E580 SECTION 5.1.2.

4. **CEILING SYSTEM ALTERATION:** THE ENTIRE CEILING IN THE AFFECTED SPACE SHALL BE UPGRADED TO MEET THE CURRENT REQUIREMENTS OF THE CBC IF ANY PORTION OF THE GRID SYSTEM IS CUT OR ALTERED AND THE CEILING HAS NO LATERAL BRACING ASSEMBLIES (4-WAY SPLAY WIRES AND COMPRESSION POST) OR HAS LATERAL BRACING ASSEMBLIES SPACED MORE THAN 12 FEET ON-CENTER.
EXEPTION: IF THE CEILING HAS LATERAL BRACING ASSEMBLIES SPACED NO MORE THAN 12 FEET ON-CENTER, A CEILING UPGRADE WILL ONLY BE REQUIRED IF THE AREA CUT OR ALTERED EXCEEDS 10 PERCENT OF THE ENTIRE CEILING AREA.
NOTES:
1. THE "ENTIRE" CEILING IN THE AFFECTED SPACE IS DEFINED AS THE AREA OF CEILING BOUNDED BY FOUR WALLS OR A COMBINATION OF WALLS AND EXPANSION JOINTS OR SEISMIC SEPARATION JOINTS.
2. WITH DSA CONCURRENCE, OTHER EXISTING LATERAL BRACING SYSTEMS MAY BE DEEMED EQUIVALENT TO A 4-WAY SPLAY WIRE AND COMPRESSION POST LATERAL FORCE BRACING SYSTEM.

4.1 WHERE THE CEILING GRID IS NOT CUT OR ALTERED, AND THE SCOPE OF WORK INCLUDES ONLY THE FOLLOWING:
- REPLACEMENT OF EXISTING CEILING PANELS WITH LIKE PANELS OF EQUAL OR LESSER WEIGHT.
- REPLACEMENT OF LIGHT FIXTURES AND/OR TERMINALS WITH LIKE UNITS (UNITS OF EQUAL SIZE AND OF EQUAL OR LESSER WEIGHT) PLACED IN THE SAME LOCATION.

NO UPGRADE TO THE CEILING GRID, SUSPENSION SYSTEM OR LATERAL FORCE BRACE ASSEMBLIES IS REQUIRED.

4.2 RE-USE OF EXISTING CEILING HANGER WIRES AND BRACING WIRES: EXISTING CEILING HANGER AND BRACING WIRES MAY BE REUSED PROVIDED THEY COMPLY WITH THE FOLLOWING:
a) THE GAGE AND SPACING OF THE WIRES MUST COMPLY WITH THE CURRENT APPLICABLE CODES AND THIS IR.
b) IF A NEW WIRE IS TO BE SPLICED TO AN EXISTING WIRE, THE ARCHITECT OR STRUCTURAL ENGINEER IN GENERAL RESPONSIBLE CHARGE MUST SUBMIT TO THE DSA FOR APPROVAL A DETAIL AND SPECIFICATION DESCRIBING HOW THE SPLICE IS TO BE MADE. ACCEPTABLE WIRE SPLICE DETAILS ARE PROVIDED IN APPENDIX A.
c) SEE SECTION 7 FOR TESTING REQUIREMENTS FOR THE RE-USE OF EXISTING HANGER AND BRACING WIRE ASSEMBLIES.

5. **DSA ACCEPTANCE OF EVALUATION REPORTS:** CEILING GRID SYSTEMS OR COMPONENTS, WITH VALID EVALUATION REPORTS ISSUED BY QUALIFIED EVALUATION AGENCIES, IN ACCORDANCE WITH DSA IR A-5, ARE ACCEPTED BY THE DSA, PROVIDED THE SYSTEM OR COMPONENT MEETS THE REQUIREMENTS OF CBC SECTION 1616A.1.20 (1616.10.16*), ASTM C635, C636 AND E580. WHERE A QUALIFIED EVALUATION REPORT IS UTILIZED, THE INSTALLATION SHALL COMPLY WITH ALL THE REQUIREMENTS SPECIFIED IN THE EVALUATION REPORT, I.E., CONNECTIONS, MEMBER SIZES, PERIMETER DETAILS, SPECIAL CLIPS TO WALL ANGLES, ETC.
IN ACCORDANCE WITH DSA IR A-5, DSA WILL ACCEPT OSHPD PREAPPROVED DETAILS (OPD) “2013 CBC STANDARD SUSPENDED CEILING DETAILS FOR ACOUSTICAL TILE OR LAY-IN PANEL CEILINGS.”

6. **TESTING:** ALL FIELD TESTING MUST BE PERFORMED IN THE PRESENCE OF THE PROJECT INSPECTOR OR A SPECIAL INSPECTOR.

6.1 NEW INSTALLATIONS:

POST-INSTALLED ANCHORS IN CONCRETE USED TO SUPPORT HANGER WIRES SHALL BE TESTED AT A FREQUENCY OF 10 PERCENT. POWER ACTUATED FASTENERS IN CONCRETE SHALL BE FIELD TESTED FOR 200 LBS. IN TENSION. ALL OTHER POST-INSTALLED ANCHORS IN CONCRETE SHALL BE TESTED IN ACCORDANCE WITH CBC SECTION 1913A.7. POST-INSTALLED ANCHORS IN CONCRETE USED TO ATTACH BRACING WIRES SHALL BE TESTED AT A FREQUENCY OF 50 PERCENT IN ACCORDANCE WITH CBC SECTION 1913A.7.

6.2 RE-USE OF EXISTING CEILING HANGER WIRES AND BRACING WIRES:

a) ALL EXISTING CEILING HANGER WIRE/ANCHOR ASSEMBLIES MUST BE TESTED TO 200 LBS.
b) ALL EXISTING BRACING WIRE/ANCHOR ASSEMBLIES MUST BE FIELD TESTED TO 440 LBS.
c) WHERE A NEW WIRE IS SPLICED TO AN EXISTING WIRE, EACH SPLICED WIRE/ANCHOR ASSEMBLY MUST BE FIELD TESTED TO THE LOADS GIVEN FOR EXISTING ASSEMBLIES ABOVE.

APPENDIX A

1. CEILING SYSTEM GENERAL NOTES:

1.1 CEILING SYSTEM COMPONENTS SHALL COMPLY WITH ASTM C635-07 AND SECTION 5.1 OF ASTM E580-10A.
1.2 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635-08.
1.3 CEILING SYSTEMS. THE FOLLOWING CEILING SYSTEM(S) IS/ARE PART OF THE SCOPE OF THIS PROJECT: REFER TOSPECIFICATION SECTION 09 5100.
MANUFACTURER'S NAME: SEE SPECIFICATION SECTION 09 5100.
PRODUCT EVALUATION REPORT TYPE AND NUMBER: REFER TO SPECIFICATION SECTION 09 5100.
MANUFACTURER'S MODEL NUMBER - MAIN RUNNER: REFER TO SPECIFICATION SECTION 09 5100.
MANUFACTURER'S CATALOG NUMBER - CROSS RUNNER: REFER TO SPECIFICATION SECTION 09 5100.
1.4 SEISMIC WALL CLIP: SEE SPECIFICATIONS
1.5 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
1.6 FOR CEILING INSTALLATIONS UTILIZING ACOUSTICAL TILE PANELS OF MINERAL OR GLASS FIBER, IT IS NOT MANDATORY TO PROVIDE ¾” CLEARANCE BETWEEN THE ACOUSTICAL TILE PANELS AND THE WALL ON THE SIDES OF THE CEILING WHICH ARE FREE TO SLIP. FOR ALL OTHER CEILING PANEL TYPES, PROVIDE ¾” CLEARANCE BETWEEN THE CEILING PANEL AND THE WALL ON THE SIDES OF THE CEILING FREE TO SLIP.

2. MATERIALS:

2.1 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL CONFORMING TO ASTM A641-09A. WIRE SHALL BE #12 GAGE (0.106” DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.
2.2 GALVANIZED SHEET STEEL (INCLUDING THAT USED FOR METAL STUD AND TRACK COMPRESSION STRUTS/POST) SHALL CONFORM TO ASTM A653-11, OR OTHER EQUIVALENT SHEET STEEL LISTED IN SECTION A2.1 OF THE NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2007, INCLUDING SUPPLEMENT 2 DATED 2010 (AISI S100-07/S2-10). MATERIAL 43 MIL (18 GAGE) AND LIGHTER SHALL HAVE MINIMUM YIELD STRENGTH OF 33 KSI. MATERIAL 54 MIL (16 GAGE) AND HEAVIER SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.
2.3 ELECTRICAL METALLIC TUBE (EMT) SHALL BE ANSI C80.3/UL 797 CARBON STEEL WITH G90 GALVANIZING. EMT SHALL HAVE MINIMUM YIELD STRENGTH (FY) OF 30 KSI AND MINIMUM ULTIMATE STRENGTH (FU) OF 48 KSI.

3. ATTACHMENT OF HANGER AND BRACING WIRES:

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

4. FASTENERS AND WELDING:

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

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

6. LIGHT FIXTURES:

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

7. SERVICES WITHIN THE CEILING:

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

8. OTHER DEVICES WITHIN THE CEILING:

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

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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LICENSED ARCHITECT
PAUL DENNIS WESTBERG
C-11045
EXP.9-2025
STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

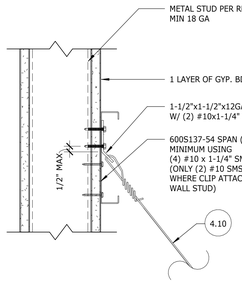
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

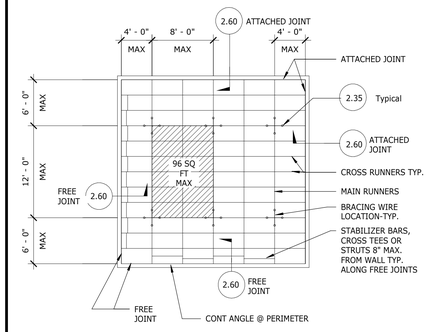
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DATE: 2/27/2024
DRAWN: RR
CHECK: JG
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
CEILING NOTES

SHEET NO:
A850



CONN TO METAL STUD WALL 3" = 1'-0" 4.34

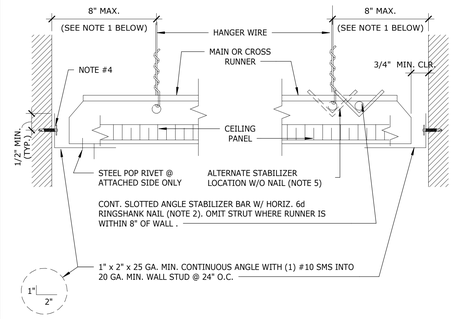


NOTE:
BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 96 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

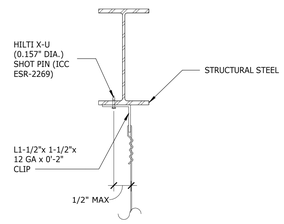
TYP. 8'-0"X12'-0" CEILING PLAN 1/8" = 1'-0" 2.11

CHANNEL COMPRESSION STRUT	MAXIMUM LENGTH
250S125-33	5'-0"
250S137-33	6'-10"
362S137-33	8'-0"
250137-43	8'-10"
400S137-43	10'-10"

COMPRESSION STRUT TABLE 1 1/2" = 1'-0" 3.21



ATTACHED JOINT FREE JOINT

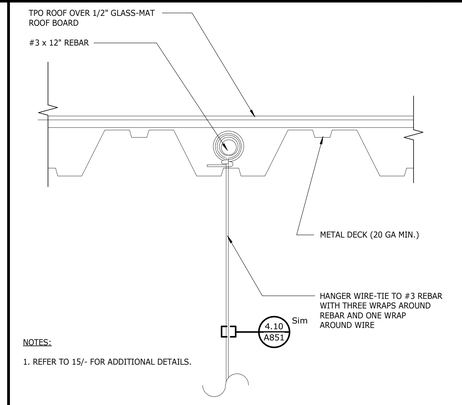


HANGER WIRE

NOTES :

1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16".
2. IOR AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER. SEE ANSI/AISC 341-10
3. REFER TO 4.10 FOR ADDITIONAL DETAILS

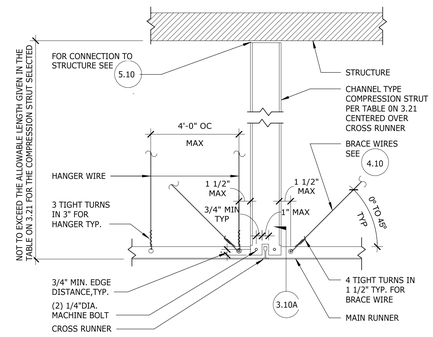
HGR WIRE CONN TO STRUCT STEEL 1 1/2" = 1'-0" 4.23



NOTES:

1. REFER TO 15/- FOR ADDITIONAL DETAILS.

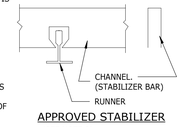
HANGER WIRE CONN TO METAL DECK 3" = 1'-0" 4.20



ACT - CHANNEL TYPE STRUT 1 1/2" = 1'-0" 3.10

NOTES:

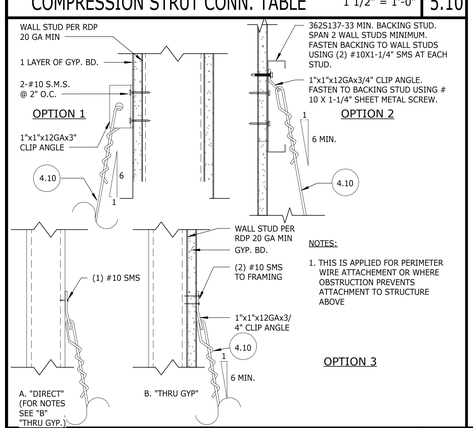
1. PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
2. NAILS AT ENDS OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. STABILIZER BAR MAY BE SLOTTED APPROVED ANGLES OR CHANNELS WITH "DIAMOND POINTS" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
4. (1) #10 SMS TO 20 GA. MIN. WALL STUD @ 24" O.C.



APPROVED STABILIZER
(SEE NOTE 3)

CEILING PERIMETER 3" = 1'-0" 2.60

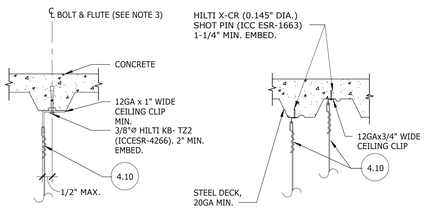
STRUCTURAL CONDITION OF FLOOR / ROOF ABOVE COMPRESSION STRUT	APPLICABLE DETAIL
METAL DECK	5.20
CONCRETE OVER METAL DECK	5.21
STRUCTURAL STEEL	5.40

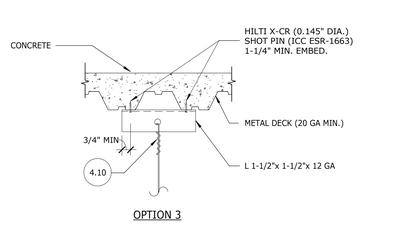


NOTES:

1. THIS IS APPLIED FOR PERIMETER WIRE ATTACHEMENT OR WHERE OBSTRUCTION PREVENTS ATTACHMENT TO STRUCTURE ABOVE

COMPRESSION STRUT CONN. TABLE 1 1/2" = 1'-0" 5.10





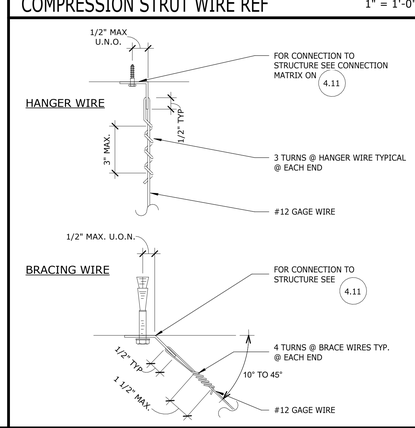
NOTES:

1. REFER TO 4.10 FOR ADDITIONAL DETAILS.
2. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE
3. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.01.

HGR WIRE CONN TO METAL STUD WALL 3" = 1'-0" 4.24

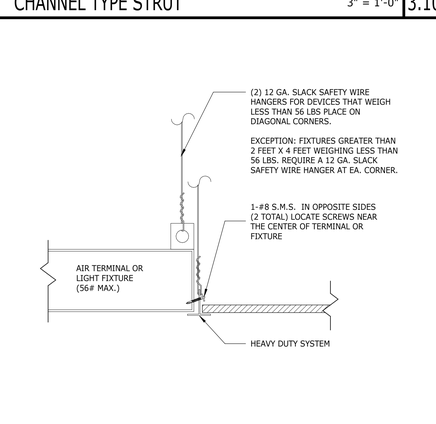
HGR WIRE CONN TO CONC OVER MTL DECK 1 : 10 4.21

STRUCTURAL CONDITION OF FLOOR/ ROOF ABOVE SUSPENDED CEILING	APPLICABLE HANGER WIRE DETAIL	APPLICABLE BRACING WIRE DETAIL
METAL DECK	4.20	4.30
CONCRETE OVER METAL DECK	4.21	4.30,4.31
STRUCTURAL STEEL	4.23	4.33
METAL STUD WALL	4.24	4.34

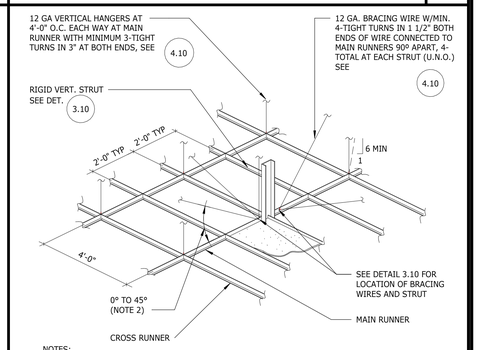


COMPRESSION STRUT WIRE REF 1" = 1'-0" 4.11

TYP. WIRE TURNS 3" = 1'-0" 4.10



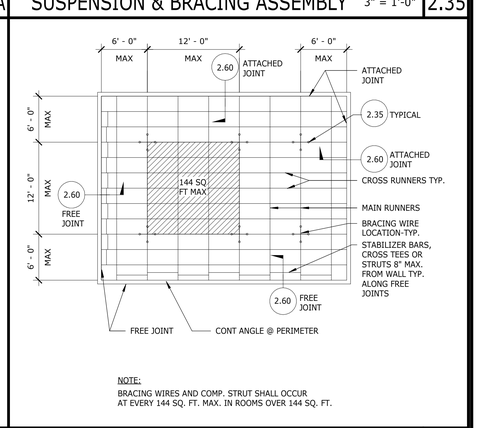
LIGHT FIXT/AIR TERMINAL SUPPORT 3" = 1'-0" 2.80



NOTES:

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

CHANNEL TYPE STRUT 3" = 1'-0" 3.10A



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

SUSPENSION & BRACING ASSEMBLY 3" = 1'-0" 2.35

TYP. 12'-0"X12'-0" CEILING PLAN 1/8" = 1'-0" 2.12

10/8/2024 11:03:28 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

STATE:

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APP: 03-123867 INC:
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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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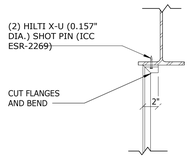
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN:
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
CEILING DETAILS AND NOTES

SHEET NO:

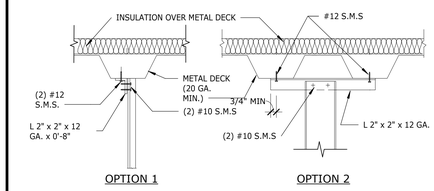
A851



NOTES:

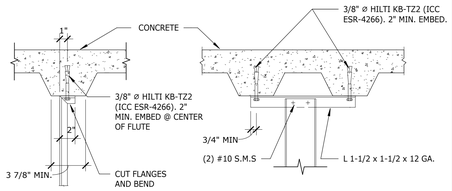
1. STRUCTURAL STEEL MEMBER SHALL NOT BE LESS THAN 3/16".
2. I.O.R. AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER, SEE ANSI/AISC 341-10.
3. REFER TO 5.20 AND 5.30 FOR ADDITIONAL INFORMATION.

STRUT CONN TO STRUCTURAL STEEL 1 1/2" = 1'-0" 5.40



CHANNEL STRUT

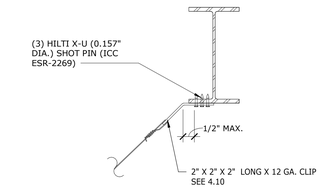
STRUT CONN TO METAL DECK 1 1/2" = 1'-0" 5.20



CHANNEL STRUT

NOTES:
1. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE
2. TEST POST INSTALLED ANCHORS IN ACCORDACE WITH CEILING NOTE 5.01

STRUT CONN TO CONC OVER MTL DECK 1 1/2" = 1'-0" 5.21

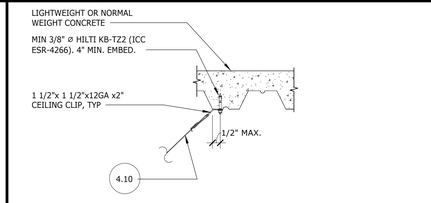


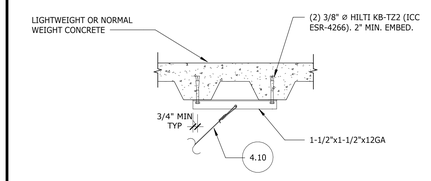
BRACING WIRE

NOTES :

1. BEAM FLANGE THICKNESS SHALL NOT BE LESS THAN 3/16".
2. RDP IN RESPONSIBLE CHARGE, IOR, AND CONTRACTOR SHALL VERIFY THAT NO PAF IS INSTALLED IN THE PROTECTED ZONE OF ANY STEEL MEMBER. SEE ANSI/AISC 341-10
3. REFER TO 4.10 FOR ADDITIONAL DETAILS

BRACING WIRE CONN TO STRUCT STL 1 1/2" = 1'-0" 4.33

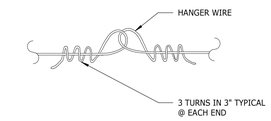




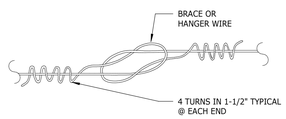
NOTES:

1. TEST POST INSTALLED ANCHORS IN ACCORDANCE WITH CEILING NOTE 5.02
2. REFER TO 4.10 FOR ADDITIONAL DETAILS
3. POST INSTALLED ANCHORS TO BE PLACED NO MORE THAN 1" OFFSET FROM CENTERLINE OF DECK LOW FLUTE.

CONN TO CONC OVER METAL DECK 1 : 10 4.31



HANGER WIRE ONLY

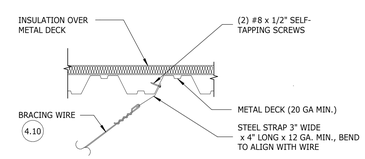


HANGER OR BRACE WIRE

NOTES:

WIRE SPLICES ARE SHOWN LOOSELY TIED FOR ILLUSTRATIVE PURPOSES ONLY AND SHALL BE DRAWN TIGHT TO COMPLETE INSTALLATION WHEN CONSTRUCTED.

CEILING WIRE SPLICES 3" = 1'-0" 6.10



NOTES:

1. IF SELF-TAPPING SCREWS ARE USED WITH CONCRETE FILL, SET SCREWS BEFORE PLACING CONCRETE.

BRACING WIRE CONN AT METAL DECK 1 : 10 4.30

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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL DENNIS WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

CONSULTANT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

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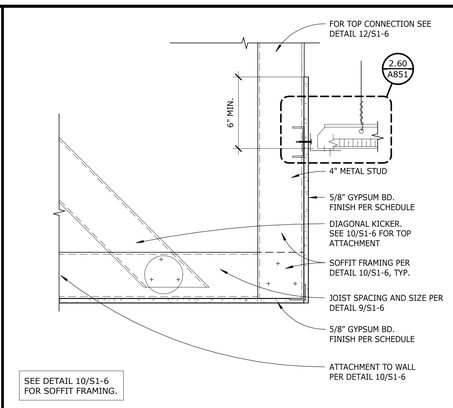
WILL ROGERS MIDDLE SCHOOL
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LAWNDALE, CA 90260

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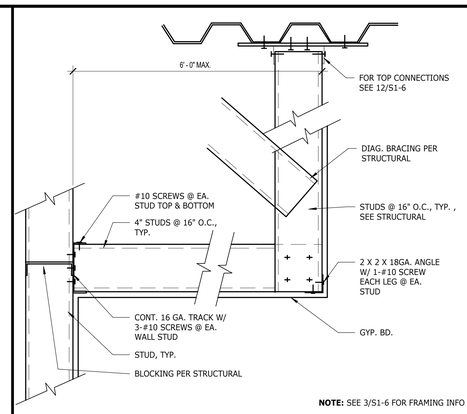
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DATE: 2/27/2024
DRAWN:
CHECK:
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
CEILING DETAILS

SHEET NO:
A852

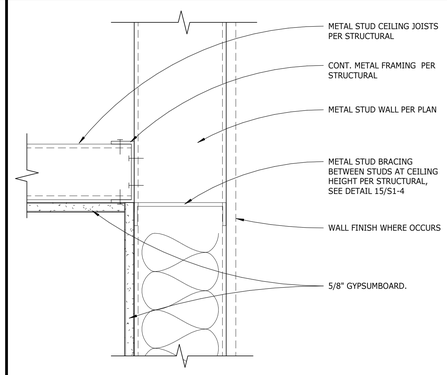


GYP. BD. CLG. DETAIL 1 1/2" = 1'-0" 12

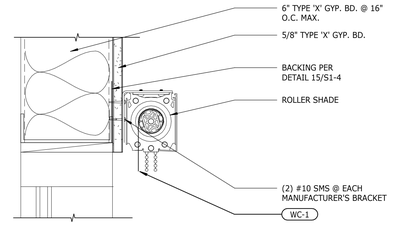


NOTE: SEE 3/S1-6 FOR FRAMING INFO

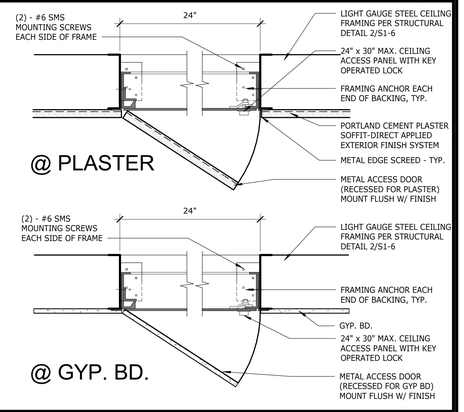
TYPICAL SOFFIT FRAMING 1 1/2" = 1'-0" 8



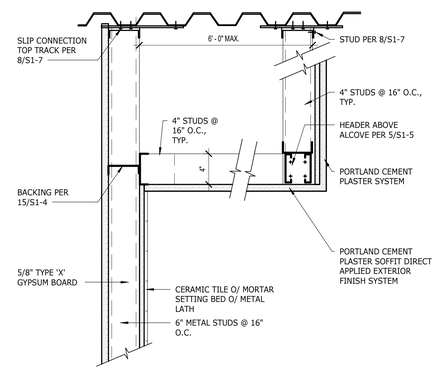
FRAMED GYP. BD. CLG. 3" = 1'-0" 11



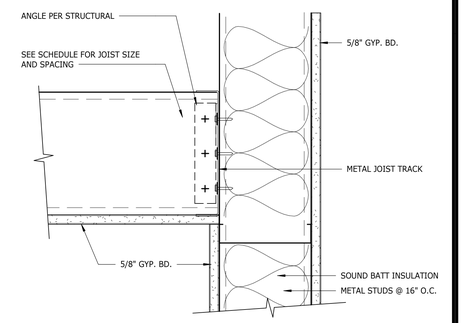
ROLLER SHADE SURFACE MTD. 3" = 1'-0" 7



ACCESS DOOR DETAIL 1 1/2" = 1'-0" 3

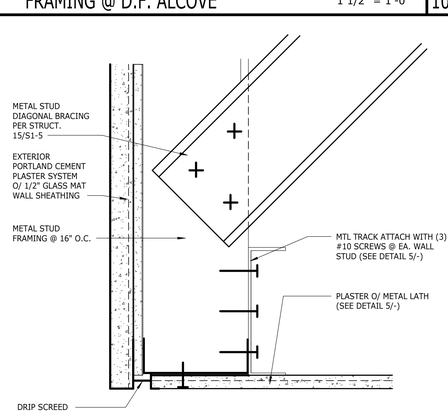


FRAMING @ D.F. ALCOVE 1 1/2" = 1'-0" 10

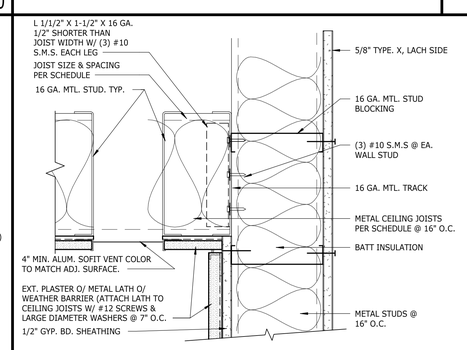


SEE 9/S1-6 FOR BALANCE OF INFO

FRAMED GYP. BD. CEILING CONN.@ WALL 3" = 1'-0" 2

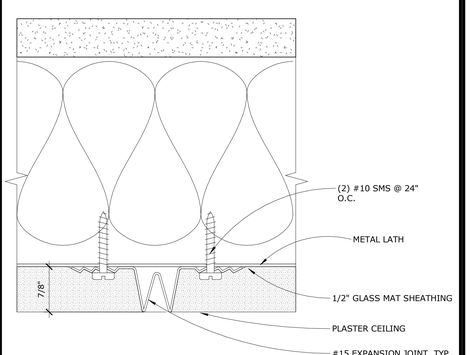


FRAMED PLASTER SOFIT 3" = 1'-0" 9



SEE 9/S1-6 FOR BALANCE OF INFO

METAL JOIST FRAMED PLASTER CEILING 3" = 1'-0" 5



PLASTER CONTROL JOINT 12" = 1'-0" 1

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4110 W. 154TH ST.
LAWNDALE, CA 90260

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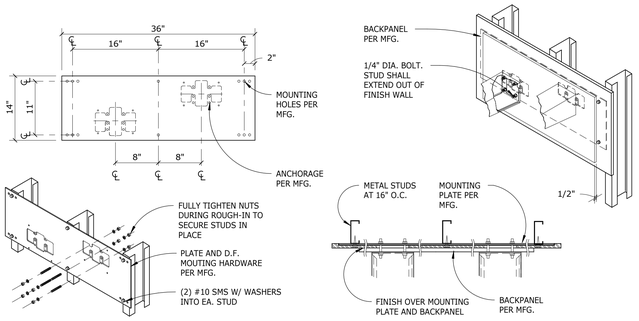
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

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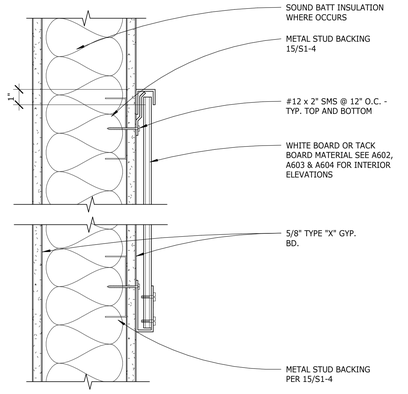
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DATE: 2/27/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

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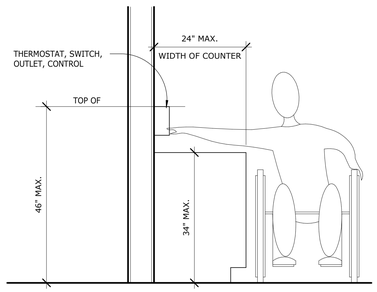
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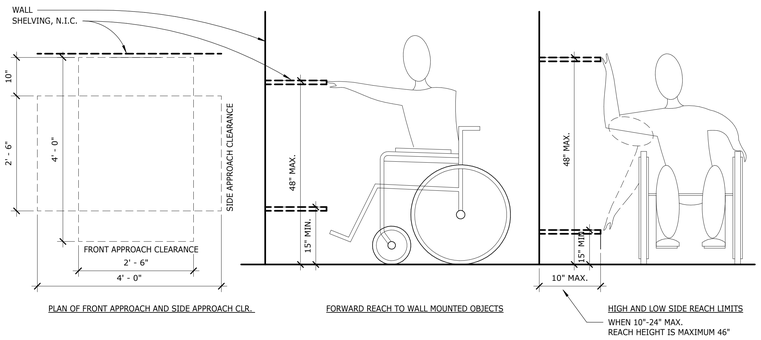
DRINKING FOUNTAIN ANCHORAGE 3/4" = 1'-0" 12



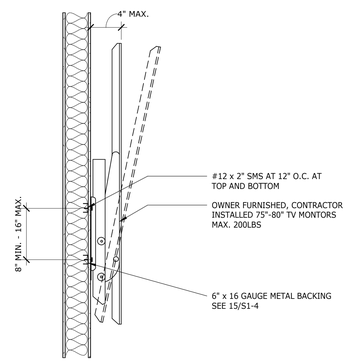
WHITE BOARD DETAIL 3" = 1'-0" 4



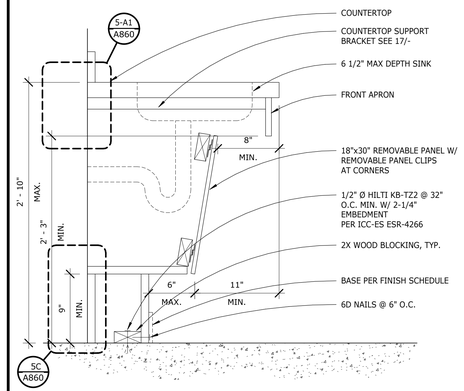
MTG. OVER OBSTRUCTION 3/4" = 1'-0" 19



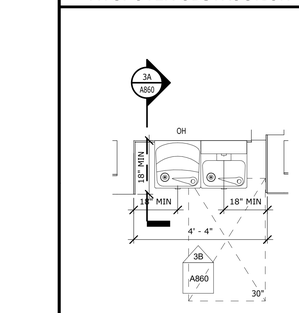
ADA CLEARANCE AND REACH RANGE REQUIREMENTS 3/4" = 1'-0" 11

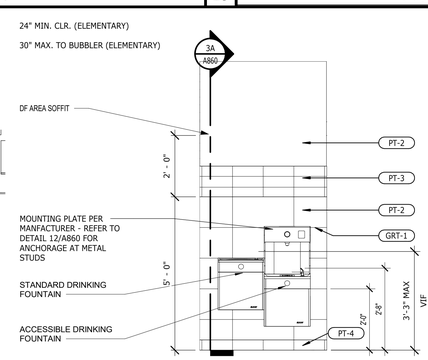


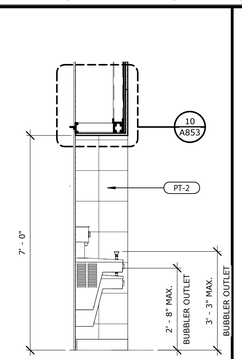
TV MOUNT DETAIL 3/4" = 1'-0" 7



ACCESSIBLE SINK 1 1/2" = 1'-0" 3

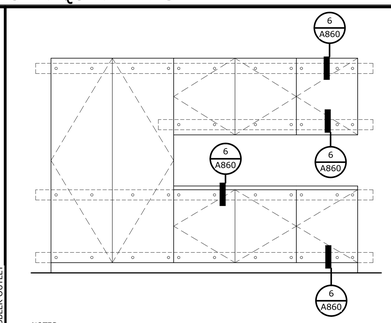






3C PLAN VIEW 3B FRONT VIEW 3A SIDE VIEW

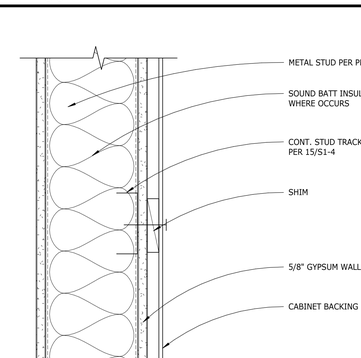
ACCESSIBLE DRINKING FOUNTAIN 1/2" = 1'-0" 18



NOTES:

1. #12 TEK SCREWS - SPACE ANCHORS AT 16" O.C. MINIMUM OF (1) SCREW AT EACH TOP AND BOTTOM CORNER OF EACH CABINET UNIT.
2. SEE INTERIOR ELEVATIONS AND FLOOR PLANS FOR CABINET CONFIGURATION AND DIMENSIONS.
3. STUDS OF WALLS BACKING CABINETS SHALL RUN FROM SLAB TO STRUCTURE ABOVE.
5. SEE DETAIL 15/S1-4 FOR WALL HUNG BACKING AT METAL STUDS.

CASEWORK BACKING AND ANCHORAGE 1/2" = 1'-0" 10



CASEWORK BACKING SECTION 3" = 1'-0" 6

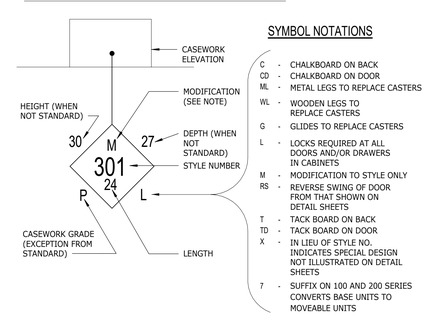
CASEWORK

1. ONLY THOSE CABINETS CALLED OUT ON BUILDING INTERIOR ELEVATIONS AND FLOOR PLANS SHALL BE PROVIDED.
2. DOOR SWINGS SHALL BE AS SHOWN ON INTERIOR ELEVATIONS. IF NOT ELEVATED, SWINGS SHALL BE AS SHOWN ON DETAIL SHEET ILLUSTRATIONS. SYMBOL 'RS' INDICATES REVERSE SWING.
3. ALL CABINET DIMENSIONS INDICATED ARE NOMINAL OUTSIDE DIMENSIONS, AND SHALL NOT BE EXCEEDED; (EXCEPTION - CABINETS ADJACENT TO WALLS MAY BE INCREASED IN LENGTH TO ELIMINATE THE NEED FOR FILLER STRIPS). A 3/4" TOLERANCE IS PERMITTED ON DIMENSIONS OVER 48". FOR 48" AND SMALLER DIMENSIONS, TOLERANCE IS LIMITED TO 1 1/2%. HEIGHT DIMENSION OF BASE CABINETS INCLUDES FINISHED TOP.
4. ALIGN SIDE OF CABINET WITH EDGE OF DOOR FRAME WHERE OCCURS.
5. PAPER AND CHART STORAGE UNITS SHALL BE 27" DEEP UNLESS OTHER WISE NOTED.

COUNTERTOPS AND BACKSPLASHES

1. WHERE BACKSPLASH IS INDICATED, IT SHALL BE 4" HIGH @ NON-SINK AREAS & 6" HIGH OR TO UNDERSIDE OF UPPER CABINETS AT WET AREAS (SEE INTERIOR ELEVATIONS), TOP MOUNTED TYPE, HAVING SQUARE TOP WITH SHELF EDGE.

SYMBOLS AND NOTATIONS FOR CABINETS



SYMBOL NOTATIONS

C	-	CHALKBOARD ON BACK
CD	-	CHALKBOARD ON DOOR
ML	-	METAL LEGS TO REPLACE CASTERS
WL	-	WOODEN LEGS TO REPLACE CASTERS
G	-	GLIDES TO REPLACE CASTERS
L	-	LOCKS REQUIRED AT ALL DOORS AND/OR DRAWERS IN CABINETS
M	-	MODIFICATION TO STYLE ONLY
RS	-	REVERSE SWING OF DOOR FROM THAT SHOWN ON DETAIL SHEETS
T	-	TACK BOARD ON BACK
TD	-	TACK BOARD ON DOOR
X	-	IN LIEU OF STYLE NO. INDICATES SPECIAL DESIGN NOT ILLUSTRATED ON DETAIL SHEETS
7	-	SUFFIX ON 100 AND 200 SERIES CONVERTS BASE UNITS TO MOVEABLE UNITS

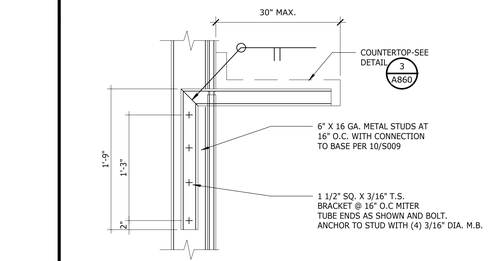
COUNTERTOP NOTATIONS

LAM. PLAS.	-	LAMINATED PLASTIC
HD. BD.	-	HARDBOARD
HDWD.	-	HARDWOOD
CST	-	COMPOSITION STONE
LAB. GRADE	-	ACID-RESISTANT LAMINATED PLASTIC
EP. RES.	-	EPOXY RESIN

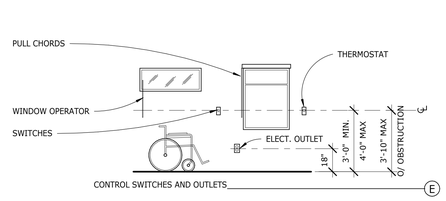
CASEWORK GRADES

P	-	PREMIUM
C	-	CUSTOM (TYPICAL GRADE U.N.O.)
E	-	ECONOMY
LAB	-	LABORATORY

CASEWORK GENERAL NOTES 12" = 1'-0" 1

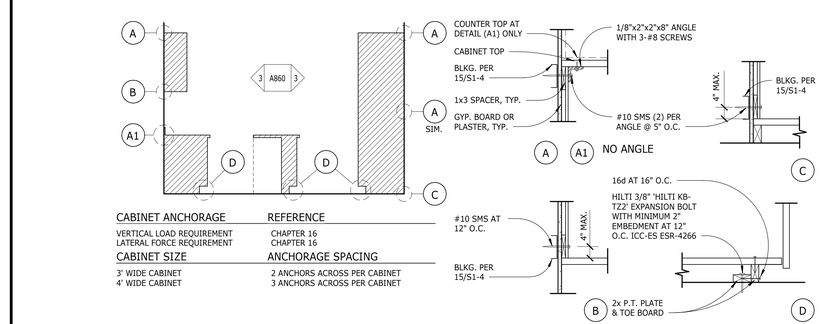


TYP. STEEL ANGLE UNDER COUNTERTOP 12" = 1'-0" 17



NOTE: REFER TO WINDOW SCHEDULE FOR EXACT WINDOW CONFIGURATION.

ACCESSIBLITY REQUIREMENTS 1/4" = 1'-0" 13



CABINET ANCHORAGE	REFERENCE
VERTICAL LOAD REQUIREMENT	CHAPTER 16
LATERAL FORCE REQUIREMENT	CHAPTER 16
CABINET SIZE	**ANCHORAGE SPACING**
3' WIDE CABINET	2 ANCHORS ACROSS PER CABINET
4' WIDE CABINET	3 ANCHORS ACROSS PER CABINET

CABINET ANCHORAGE AT METAL STUD 1 1/2" = 1'-0" 5

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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2025

CONSULTANT:

PROJECT NAME:

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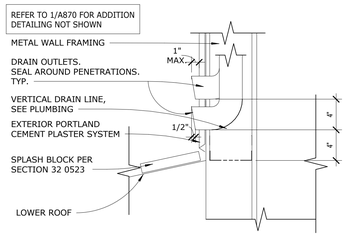
No.	Rev. Date	Description

JOB NO: 22029.01
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CHECK:
ARCHITECT: PDW
ENGINEER:

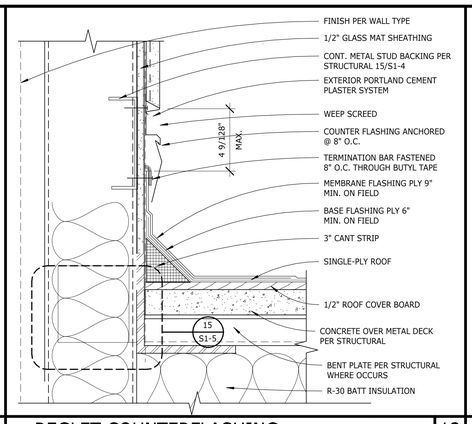
SHEET DESCRIPTION:
CASEWORK DETAILS

SHEET NO:

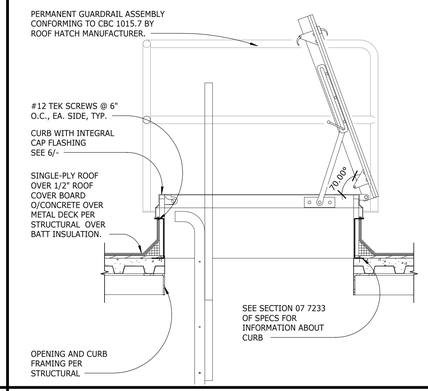
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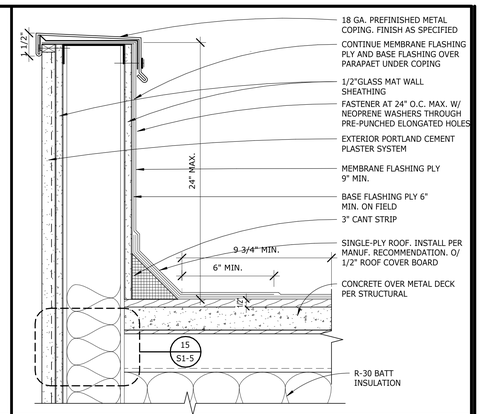
DRAIN OUTLET AT STUD WALL 1 1/2" = 1'-0" 16



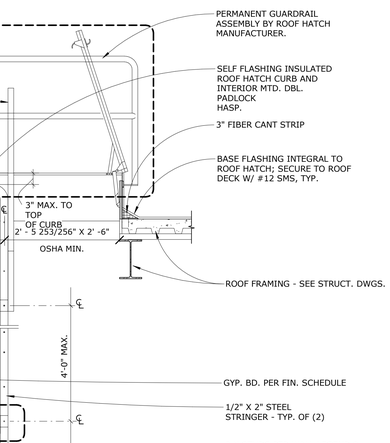
REGLET COUNTERFLASHING 3" = 1'-0" 12



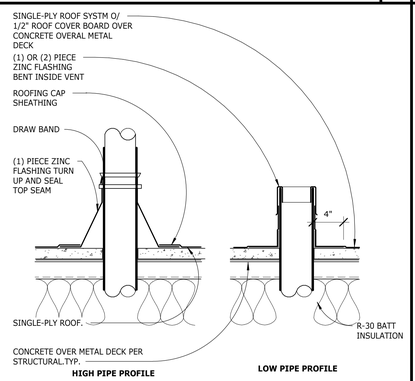
ROOF HATCH 1" = 1'-0" 8



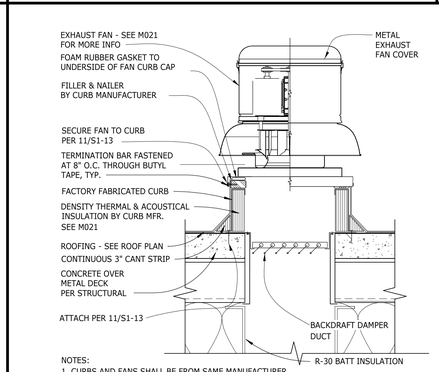
COPING AT METAL STUD 3" = 1'-0" 4



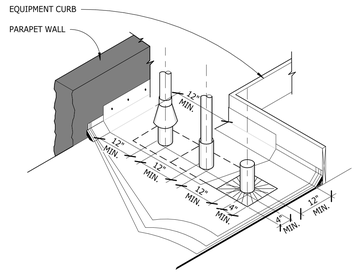
SINGLE-PLY O/ MTL DECK 3" = 1'-0" 9



TYP. ROOF PENETRATIONS 1 1/2" = 1'-0" 11

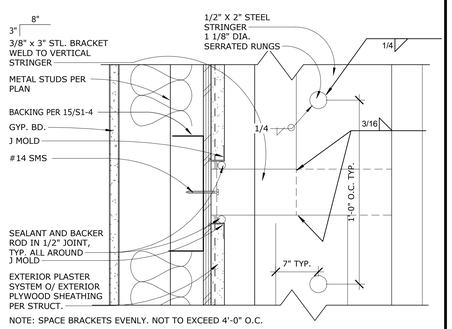


EXHAUST FAN 3" = 1'-0" 7

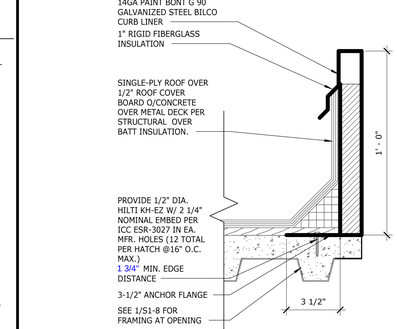


PENETRATION CLEARANCES 1/2" = 1'-0" 3

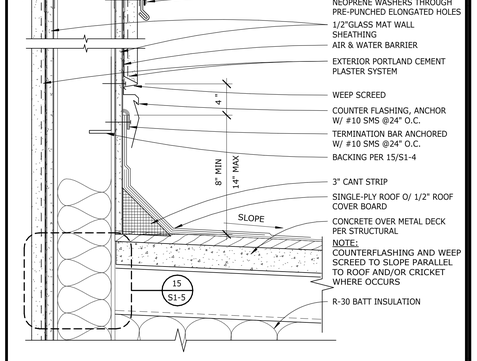
ROOF ACCESS LADDER - ROOF 3/4" = 1'-0" 13



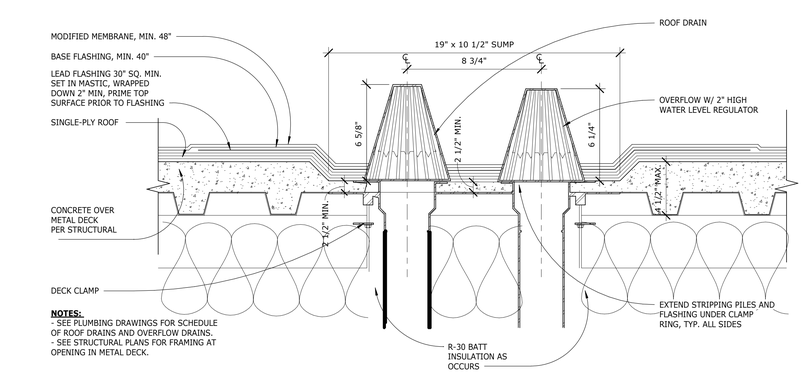
LADDER WALL BRACKET N.T.S. 10



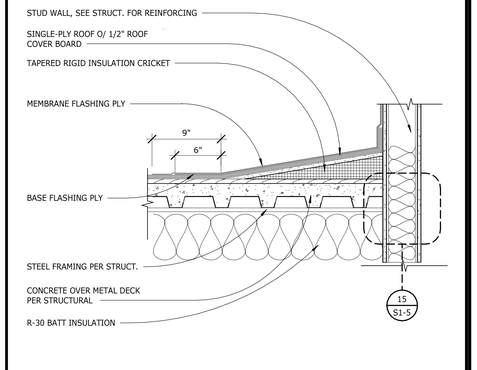
CURB @ ROOF HATCH 3" = 1'-0" 6



COPING AT PLASTER 3" = 1'-0" 2



ROOF DRAIN AND OVERFLOW DRAIN SUMP 3" = 1'-0" 5



CRICKET 1 1/2" = 1'-0" 1

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ARCHITECT:

architecture
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(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL WESTBERG C-11045 EXP.9-2025 STATE OF CALIFORNIA

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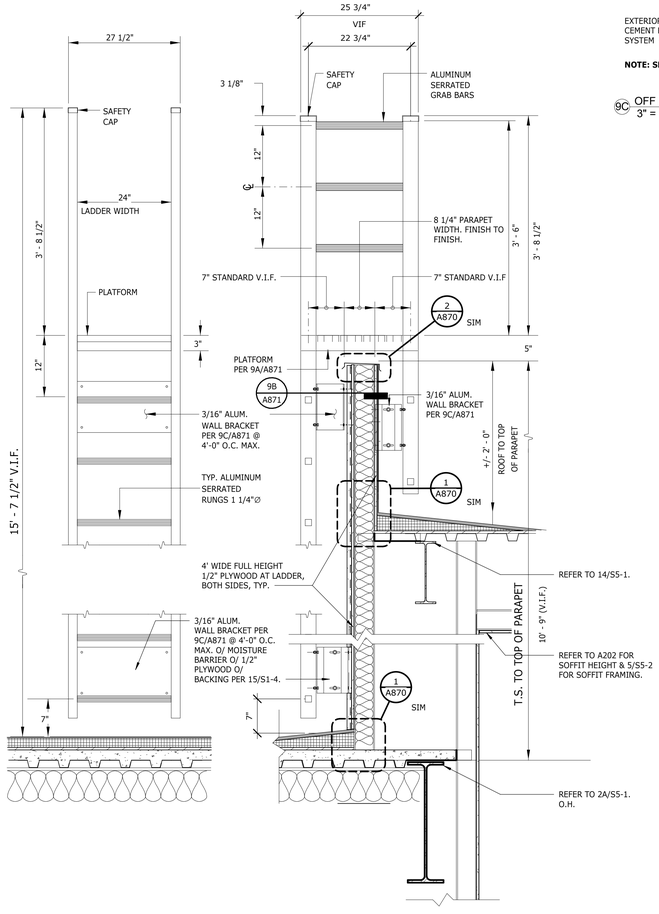
No.	Rev. Date	Description

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DRAWN:	MG/AV/GC
CHECK:	GC/JG/RB
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
ROOF DETAILS (CONCRETE OVER METAL DECK)

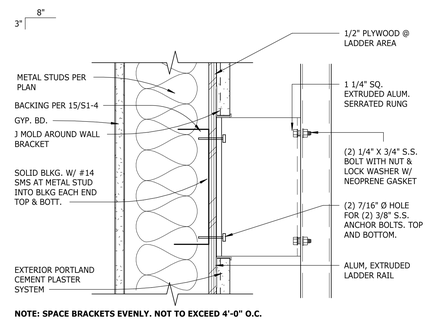
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A870



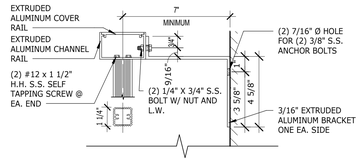
FRONT ELEVATION
N.T.S.

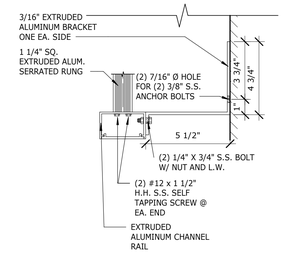
SIDE ELEVATION
N.T.S.



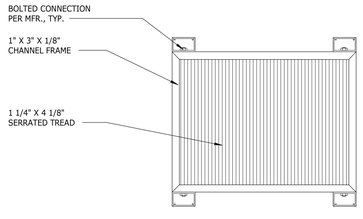
NOTE: SPACE BRACKETS EVENLY. NOT TO EXCEED 4'-0" O.C.

9C OFF FLOOR/ TOP BRACKET SIDE VIEW1
3" = 1'-0"





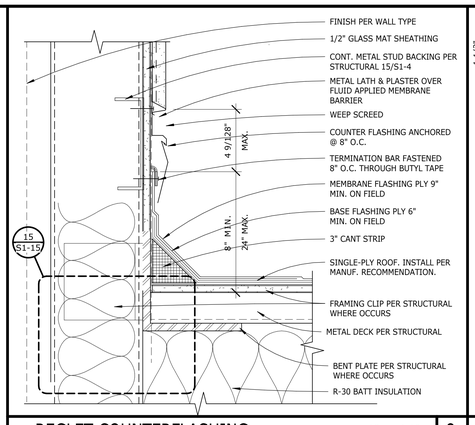
9B OFF FLOOR/TOP BRACKET TOP VIEW1
3" = 1'-0"



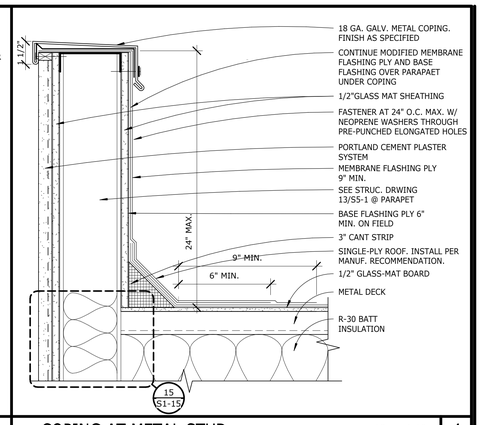
9A PLATFORM PLAN1
6" = 1'-0"

NOTE: LADDER ASSEMBLY INCLUDING PLATFORM COMES PRE-ASSEMBLED FROM MFR.

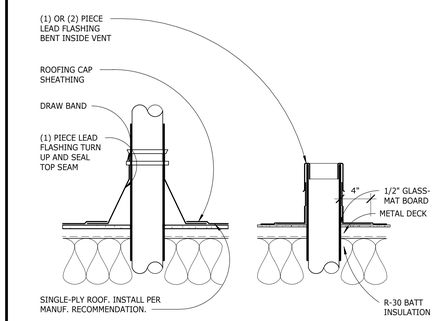
HIGH PARAPET ACCESS LADDER1 — 1" = 1'-0" — 9



REGLET COUNTERFLASHING — 3" = 1'-0" — 8



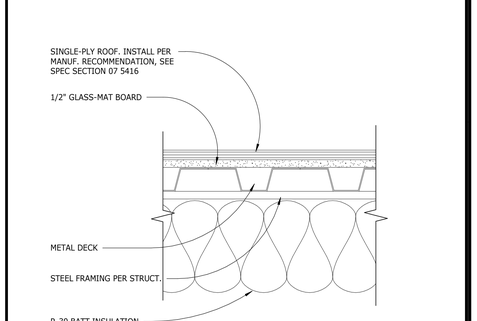
COPING AT METAL STUD — 3" = 1'-0" — 4



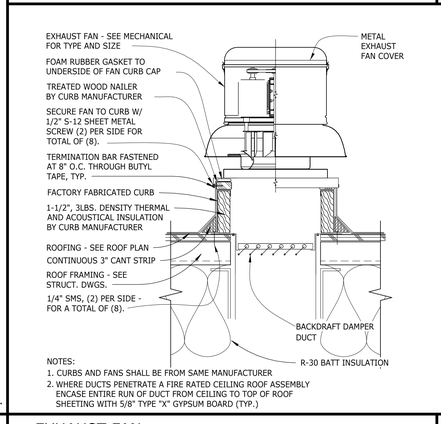
HIGH PIPE PROFILE

LOW PIPE PROFILE

TYP. ROOF PENETRATIONS — 1 1/2" = 1'-0" — 7

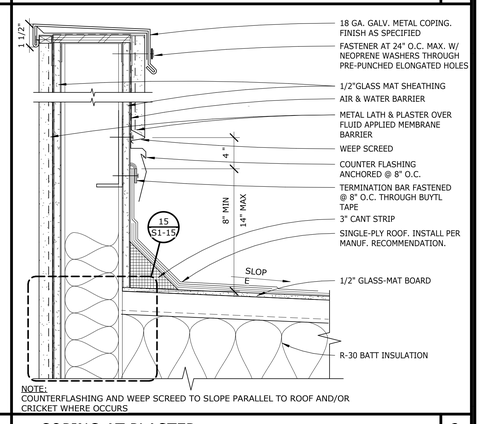


SINGLE-PLY O/ MTL DECK — 3" = 1'-0" — 3



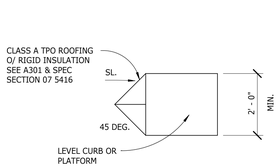
NOTES:
1. CURBS AND FANS SHALL BE FROM SAME MANUFACTURER
2. WHERE DUCTS PENETRATE A FIRE RATED CEILING ROOF ASSEMBLY ENCASE ENTIRE RUN OF DUCT FROM CEILING TO TOP OF ROOF SHEETING WITH 5/8" TYPE "X" GYPSUM BOARD (TYP.)

EXHAUST FAN — 3" = 1'-0" — 6



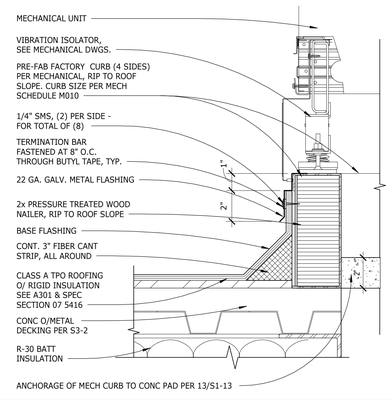
NOTE:
COUNTERFLASHING AND WEEP SCREED TO SLOPE PARALLEL TO ROOF AND/OR CRICKET WHERE OCCURS

COPING AT PLASTER — 3" = 1'-0" — 2

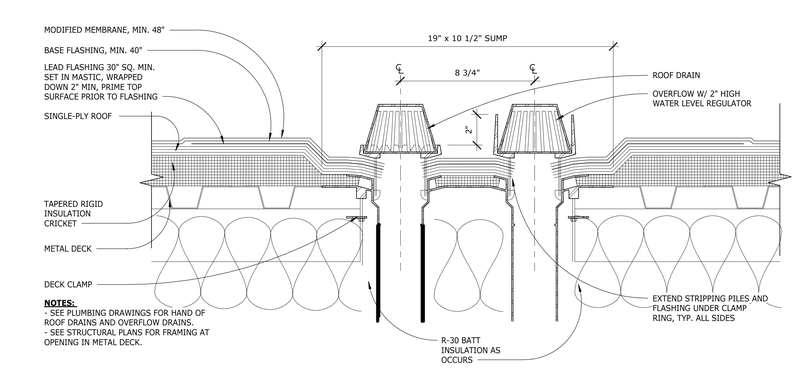


CRICKET PLAN A
NO SCALE

NOTES:
1. ANY SECUREMENT OF UNITS OR SUPPORTS INTO THE HORIZONTAL PLATFORM SURFACE SHALL BE THROUGH SOLID 1/4" NEOPRENE GASKET. APPLY ELASTOMERIC SEALANT ON UNDERSIDE AND TOP OF GASKET IMMEDIATELY PRIOR TO INSTALLING BOLTS.
2. INSTALL CRICKET ON HIGH SIDE OF PLATFORMS 24" OR WIDER. MITER CRICKET TO MEET FLUSH WITH DECK AND PLATFORM. PLATFORM SHALL BE RAISED AS NECESSARY TO EXTEND A MINIMUM 7 1/2" ABOVE THE CRICKET (WHERE REQUIRED).
3. PROVIDE SOLID BLOCKING AT ISOLATORS.

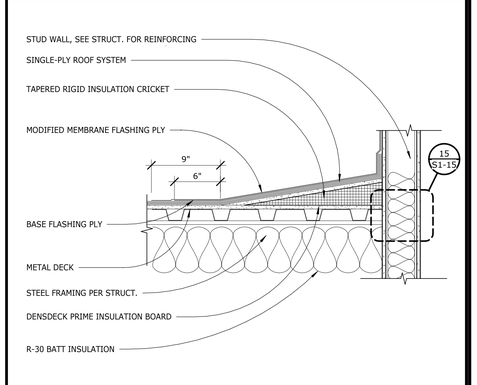


MECHANICAL UNIT CURB — 3" = 1'-0" — 15



NOTES:
- SEE PLUMBING DRAWINGS FOR HAND OF ROOF DRAINS AND OVERFLOW DRAINS.
- SEE STRUCTURAL PLANS FOR FRAMING AT OPENING IN METAL DECK.

ROOF DRAIN AND OVERFLOW DRAIN SUMP — 3" = 1'-0" — 5



CRICKET — 1 1/2" = 1'-0" — 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

LICENSED ARCHITECT PAUL WESTBERG STATE OF CALIFORNIA C-11045 EXP.9-2023

CONSULTANT:

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

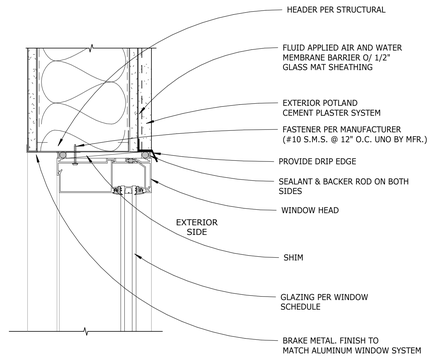
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No.	Rev. Date	Description

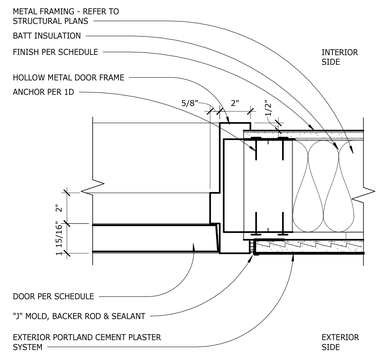
JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MG
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
ROOF DETAILS (METAL DECK ONLY)

SHEET NO:
A871

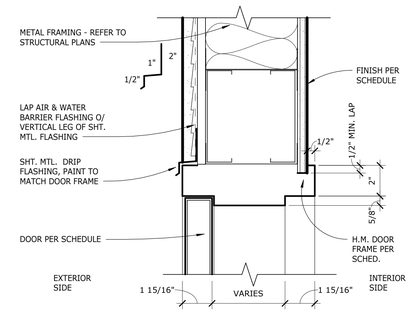


ALUM. HEAD @ PLASTER 3" = 1'-0" 16



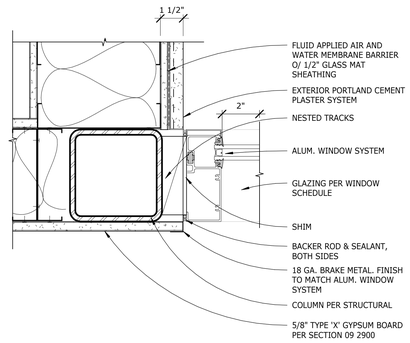
SEE DETAIL 1A/A880 FOR ANCHORS AND SPACING

DOOR-EXT. HM JAMB 3" = 1'-0" 12



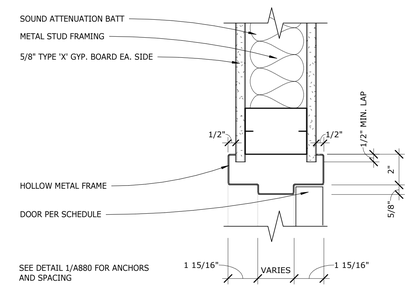
SEE DETAIL 1/A880 FOR ANCHORS AND SPACING

DOOR-EXT. HM HEAD 3" = 1'-0" 8

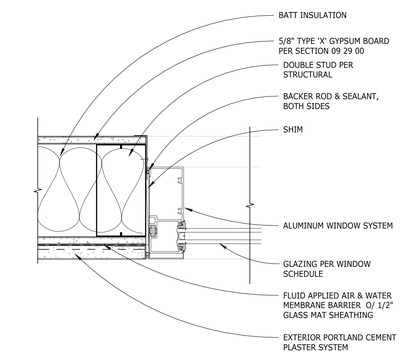


PLAN VIEW

ALUM. JAMB @ COLUMN 3" = 1'-0" 15

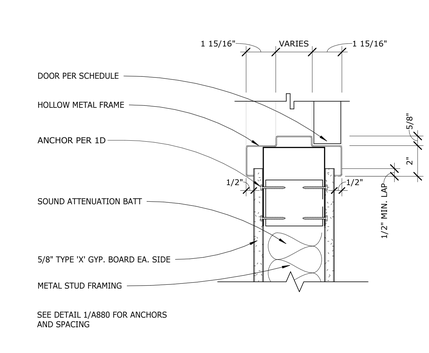


DOOR-INT HM HEAD 3" = 1'-0" 11

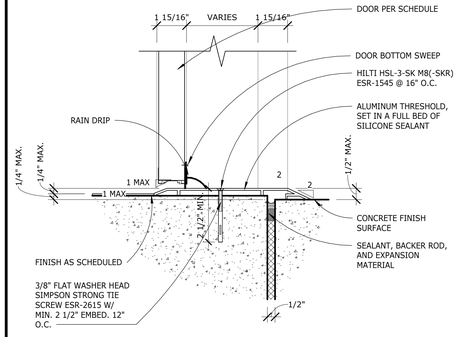


PLAN VIEW

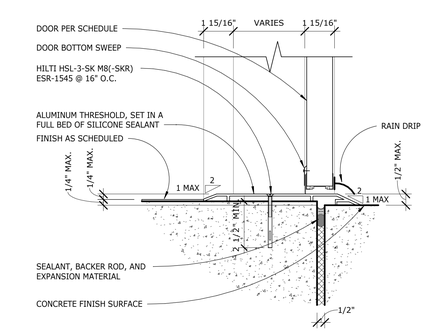
ALUM. JAMB @ PLASTER 3" = 1'-0" 14



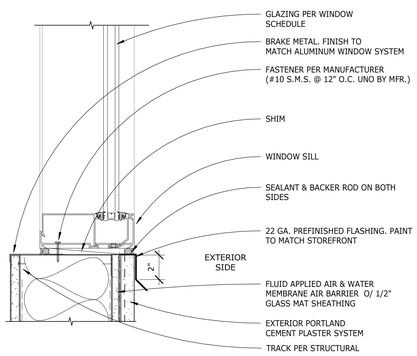
DOOR-INT HM JAMB 3" = 1'-0" 10



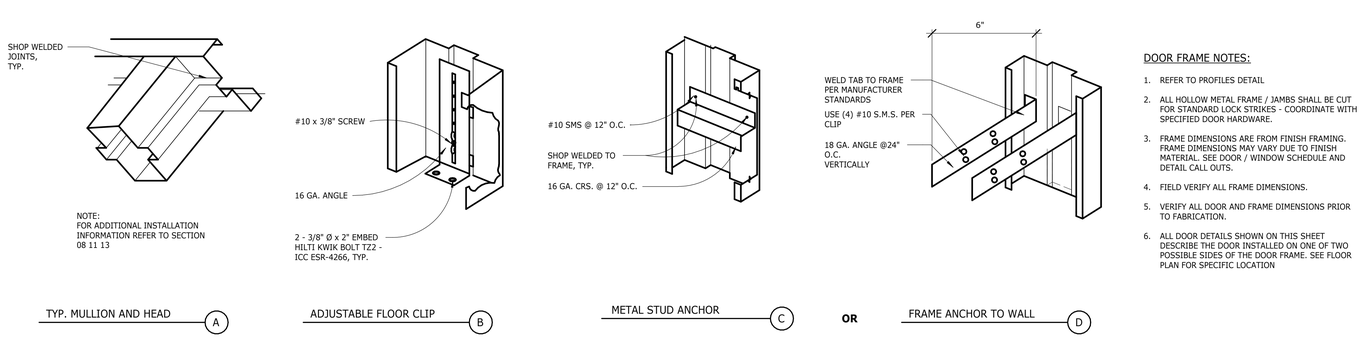
THRESHOLD AT TRANSITION 3" = 1'-0" 6



EXTERIOR THRESHOLD 3" = 1'-0" 2



ALUM. SILL AT PLASTER 3" = 1'-0" 13



HOLLOW METAL FRAME DETAILS AND NOTES 12" = 1'-0" 1

DOOR FRAME NOTES:

1. REFER TO PROFILES DETAIL
2. ALL HOLLOW METAL FRAME / JAMBS SHALL BE CUT FOR STANDARD LOCK STRIKES - COORDINATE WITH SPECIFIED DOOR HARDWARE.
3. FRAME DIMENSIONS ARE FROM FINISH FRAMING. FRAME DIMENSIONS MAY VARY DUE TO FINISH MATERIAL. SEE DOOR / WINDOW SCHEDULE AND DETAIL CALL OUTS.
4. FIELD VERIFY ALL FRAME DIMENSIONS.
5. VERIFY ALL DOOR AND FRAME DIMENSIONS PRIOR TO FABRICATION.
6. ALL DOOR DETAILS SHOWN ON THIS SHEET DESCRIBE THE DOOR INSTALLED ON ONE OF TWO POSSIBLE SIDES OF THE DOOR FRAME. SEE FLOOR PLAN FOR SPECIFIC LOCATION

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ARCHITECT:

architecture
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7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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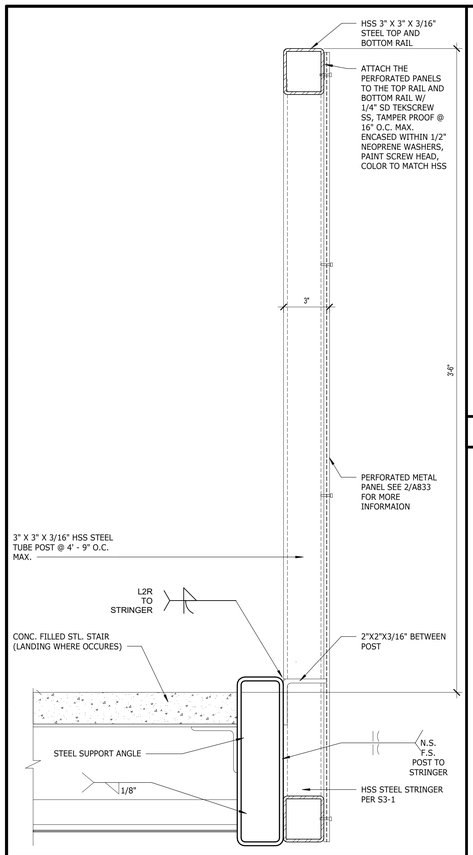
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: RR / DC
CHECK: JG
ARCHITECT: PDW
ENGINEER:

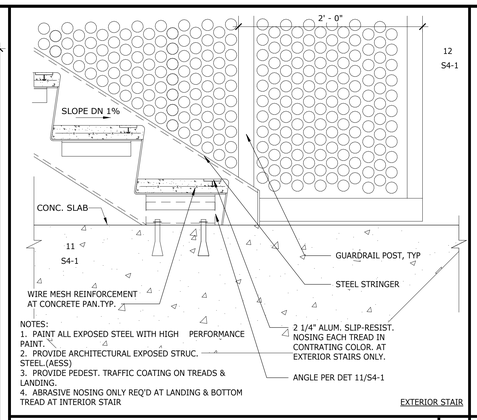
SHEET DESCRIPTION:
DOOR AND ALUMINUM WINDOW DETAILS

SHEET NO:

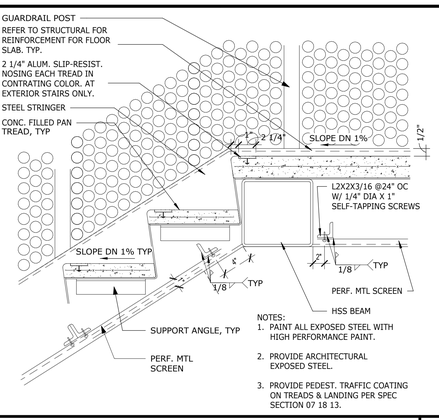
A880



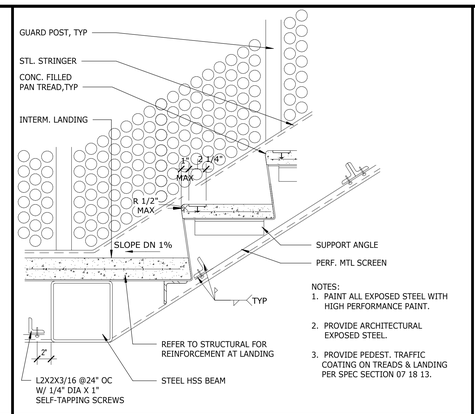
GUARDRAIL AT STRINGER 3" = 1'-0" | 19



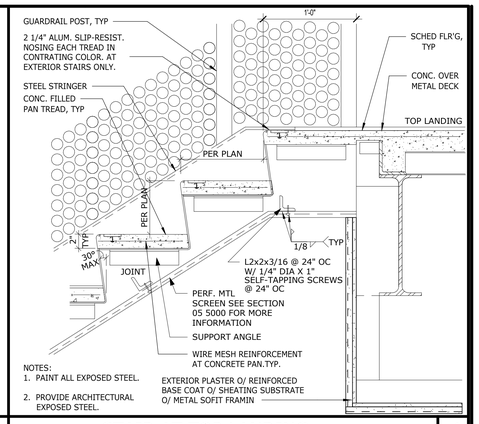
STAIR AT BOTTOM LANDING 1 1/2" = 1'-0" | 16



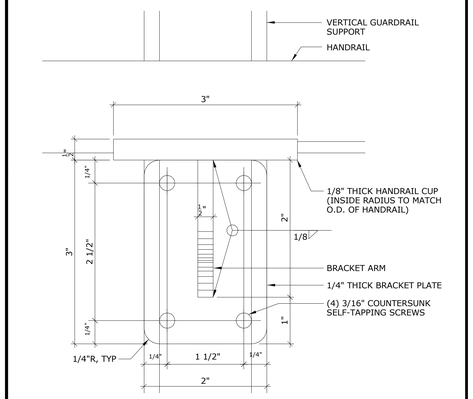
STAIR TOP @ INTERMED. LANDING 1 1/2" = 1'-0" | 12



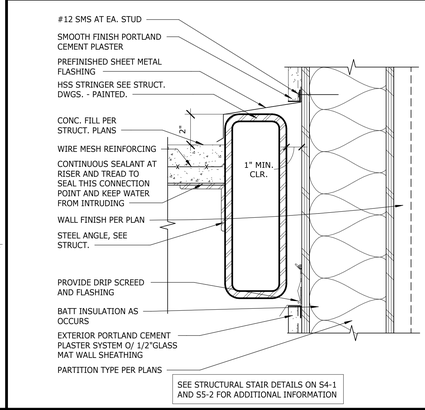
STAIR BOT. @ INTERMED. LANDING 1 1/2" = 1'-0" | 8



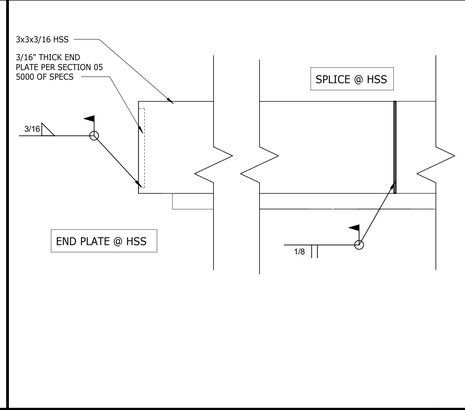
STAIR AT TOP LANDING 1 1/2" = 1'-0" | 4



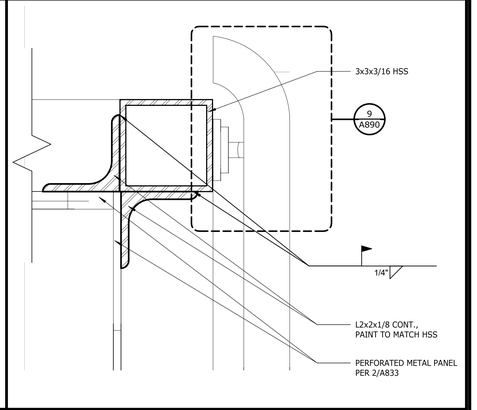
HANDRAIL BRACKET ELEVATION 12" = 1'-0" | 18



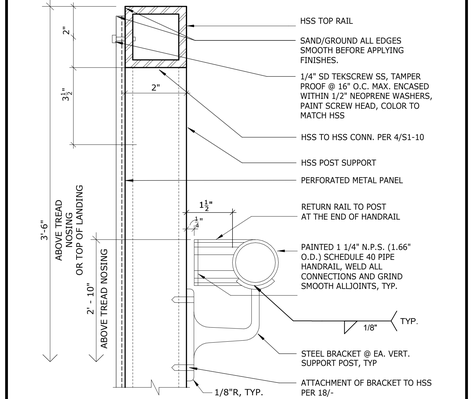
SECTION AT RISER AT MTL. STUD WALL 3" = 1'-0" | 15



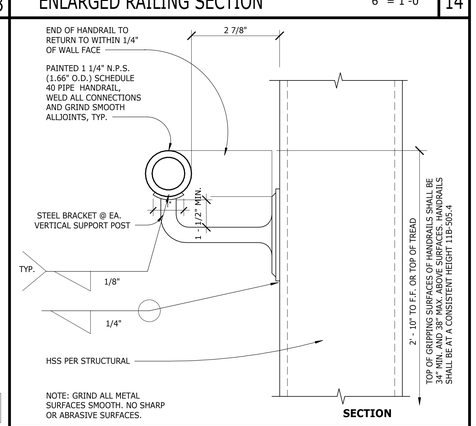
DETAILS @ TOP/BOTTOM HSS 6" = 1'-0" | 7



PERF. PANEL ATTACH. @STAIR & LANDING 6" = 1'-0" | 3

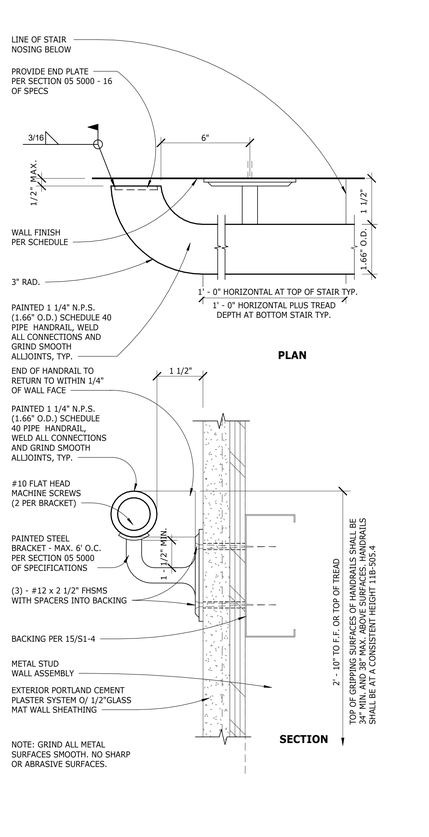


ENLARGED RAILING SECTION 6" = 1'-0" | 14

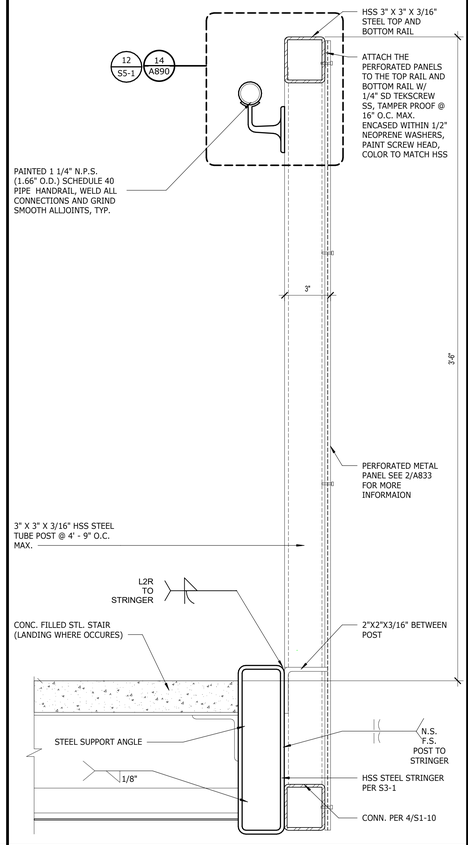


SECTION AT RISER AT HSS 3" = 1'-0" | 17

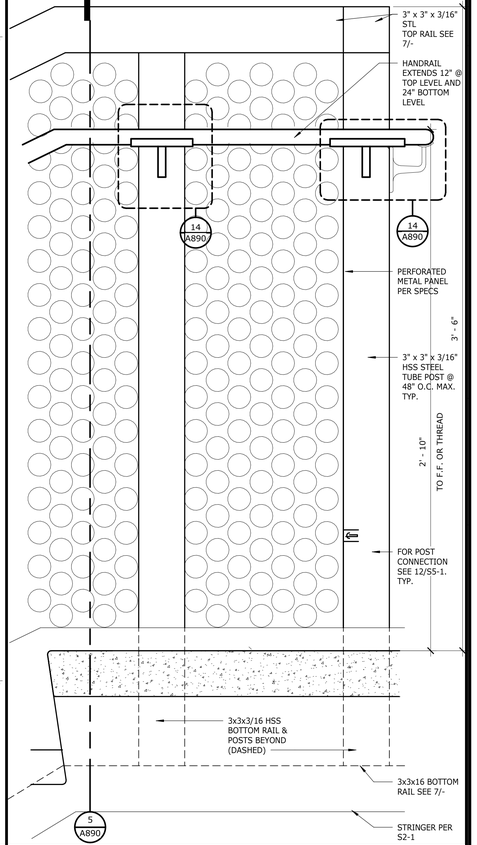
HANDRAIL AT MTL. STUD WALL 6" = 1'-0" | 13



HANDRAIL AT MTL. STUD WALL 6" = 1'-0" | 9



GUARDRAIL AT STRINGER 3" = 1'-0" | 5



GUARDRAIL AT TOP LANDING 3" = 1'-0" | 1

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No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 2/27/2024
DRAWN: MH
CHECK: SW
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
STAIR DETAILS

SHEET NO:

A890

10/8/2024 11:03:48 AM C:\Users\avalipour\Documents\22029 LESD ROGERS MS_ROTATED_avalipour.rvt

GENERAL NOTES:

1. DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE OF SAME NATURE AS THOSE SHOWN FOR SIMILAR CONDITIONS. REFER TO THE TYPICAL DETAIL SHEETS FOR TYPICAL DETAILS OF CONSTRUCTION. TYPICAL DETAILS APPLY TO ALL CONSTRUCTION UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. WHERE CONDITIONS REQUIRE MODIFICATIONS OF A TYPICAL DETAIL, THE CONTRACTOR SHALL SUBMIT MODIFIED DETAIL FOR APPROVAL BY THE ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE OF SAME NATURE AS THOSE SHOWN FOR SIMILAR CONSTRUCTION.

2. CONTRACTOR SHALL CONSIDER THE PROJECT SPECIFICATIONS A PART OF THE CONTRACT DOCUMENTS. WHERE INFORMATION IS CONFLICTING, SPECIFIC DETAILS SHALL GOVERN OVER TYPICAL DETAILS WHICH SHALL GOVERN OVER THESE NOTES WHICH SHALL GOVERN OVER SPECIFICATIONS.

3. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE CHECKED AGAINST ARCHITECTURAL DIMENSIONS. DO NOT SCALE DRAWINGS. IF DIMENSIONS ARE OMITTED OR NOT CLEAR, CONTACT THE ARCHITECT (ARCH) OR STRUCTURAL ENGINEER OF RECORD (SEOR). ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. DIMENSIONS ARE TO THE FACE OF STUDS, AND TO CENTERLINE OF COLUMNS UNO.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY NOTIFY THE SEOR OF ANY CONFLICTS BETWEEN THE STRUCTURAL DRAWINGS AND OTHER DRAWINGS; OR EXISTING CONDITIONS NOT SHOWN OR DIFFERENT FROM THOSE SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDING THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.

5. THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE CONSTRUCTION AND ALL ADJACENT PROPERTIES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR SEOR SHALL NOT INCLUDE OBSERVATION OF THE ABOVE ITEMS.

6. SUBSTITUTION REQUESTS FOR MATERIALS SPECIFIED ON THE STRUCTURAL DRAWINGS MAY BE CONSIDERED WITH MATERIALS HAVING EQUIVALENT OR GREATER CAPACITY AND PERFORMANCE. CURRENT EVALUATION REPORTS AND PRODUCT INFORMATION SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER DEMONSTRATING THE REQUIRED CAPACITY AND PERFORMANCE OF THE MATERIAL TO BE SUBSTITUTED. WRITTEN APPROVAL FROM THE SEOR SHALL BE OBTAINED PRIOR TO THE SUBSTITUTION OF ANY MATERIAL SPECIFIED ON THE STRUCTURAL DOCUMENTS.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA, LATEST EDITION, AND ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT. THE ARCHITECT, SEOR, AND THE OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.

8. ALL WORK IS NEW (N) UNLESS INDICATED AS EXISTING (E).

9. CONSTRUCTION MATERIALS SHALL BE DISTRIBUTED WHEN PLACED ON THE STRUCTURE SUCH THAT LOADS DO NOT EXCEED DESIGN LIVE LOADS OR RESULT IN AN UNBALANCED CONDITION.

10. REFER TO THE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS AND SUBMITTALS.

STRUCTURAL DESIGN CRITERIA:

1. CODES:
   ALL WORK SHALL BE IN CONFORMANCE WITH THE CALIFORNIA BUILDING CODE (CBC) 2022 EDITION, INCLUDING ALL AMENDMENTS. ALL STANDARDS USED SHALL BE THE LATEST VERSION APPROVED BY THE CODE ENFORCEMENT AGENCY ON THE DATE OF THE PERMIT ISSUANCE UNLESS SPECIFICALLY NOTED OTHERWISE.

2. DESIGN LIVE LOAD

	LOAD
ROOF	20 PSF
FLOOR	80 PSF

3. WIND DESIGN INFORMATION

RISK CATEGORY = III	Kd =0.85 Kzt = 1.0	
BASIC WIND SPEED V = 101 MPH (3 SEC GUST)		EXPOSURE = C
INTERNAL PRESSURE COEFF. = +/- 0.18		

4. SEISMIC DESIGN INFORMATION

I = 1.25	RISK CATEGORY = III		SITE CLASS = D	
S_S = 1.799	S1 = 0.635	SDS = 1.199	SD1 = 0.720	
SEISMIC DESIGN CATEGORY = D				
ANALYSIS PROCEDURE = MODAL RESPONSE SPECTRUM ANALYSIS				
HORIZONTAL IRREGULARITIES = 1a, 2				
VERTICAL IRREGULARITIES = 2				
SLRS : B3: STEEL SPECIAL CONCENTRIC BRACED FRAMES				
Rho = 1.3	R = 6.0	Cd = 5	Ω = 2.0	Cs = 0.250

5. FLOOD ZONE CATEGORIZATION: X (UNSHADED)

EXISTING UNDERGROUND UTILITY NOTES:

1. THE ARCHITECT AND ENGINEERS ARE NOT RESPONSIBLE FOR THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES WHETHER OR NOT SHOWN ON THE DRAWINGS. THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES WHICH MAY RESULT FROM HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ALL EXISTING UNDERGROUND UTILITIES.

CONTRACTOR RESPONSIBILITY NOTE: (DSA)

1. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN LATERAL-FORCE-RESISTING SYSTEM, DESIGNATED ON PLANS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

   A. ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS.

   B. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.

   C. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS.

   D. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

FOUNDATION AND SLAB ON GRADE NOTES:

1. SEE SOIL REPORT BY: ASSOCIATED SOILS ENGINEERING, INC.
   REPORTNO.: 7083.22 DATED: NOVEMBER 18, 2022

   SOILS REPORT SHALL BE CONSIDER A PART OF THESE CONSTRUCTION DOCUMENTS.

2. CONTINUOUS (WALL OR STRIP) FOOTING BEARING:
   A. BEARING PRESSURE, DEAD + LIVE = 2000 PSF (MAY BE INCREASED BY 200 PSF FOR EACH ADDT'L FOOT OF FOUNDATION WIDTH, WITH A MAX OF 3500 PSF)
   B. BEARING PRESSURE, DEAD + LIVE + SHORT TERM= 2000 X1.33 =2660 PSF (MAY BE INCREASED BY 200 PSF FOR EACH ADDT'L FOOT OF FOUNDATION WIDTH, WITH A MAX OF 4655 PSF)
3. ISOLATED (COLUMN) FOOTING BEARING:
   A. BEARING PRESSURE, DEAD + LIVE = SEE CONTINUOUS FOOTINGS
   B. BEARING PRESSURE, DEAD + LIVE + SHORT TERM= SEE CONTINUOUS FOOTINGS
4. LATERAL CAPACITY:
   A. ALLOWABLE PASSIVE PRESSURE, PASSIVE ONLY = 200 PSF/FT (2000 PSF MAX). WHEN INCLUDING SEISMIC USE 200 X 1.33 = 266PSF/FT
   B. ALLOWABLE PASSIVE PRESSURE, PASSIVE + FRICTION= 200 X (0.67) = 133 PSF/FT. WHEN INCLUDING SEISMIC USE 133 X 1.33 = 177PSF/FT
   C. COEFFICIENT OF FRICTION = 0.25
5. THE CONTRACTOR SHALL CONFORM TO ALL RECOMMENDATIONS AND CONDITIONS INDICATED IN THE SOIL REPORT. THE GEOTECHNICAL ENGINEER SHALL OBSERVE ALL FOOTING EXCAVATIONS PRIOR TO PLACING CONCRETE.

6. SUBSURFACE SOIL PREPARATION:
   A. ALL EXISTING UNDOCUMENTED FILL SHALL BE REMOVED AND RECOMPACTED. ALL TOPSOILS SHALL BE REMOVED AS REQUIRED BY THE GEOTECHNICAL ENGINEER.
   B. GEOTECHNICAL ENGINEER SHALL BE RETAINED DURING THE OVEREXCAVATION PROCESS. THE ACTUAL DEPTH OF REMOVAL WILL BE DETERMINED DURING GRADING OPERATIONS.
   C. OFFSITE FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

7. SPREAD FOOTINGS ARE CENTERED UNDER WALLS AND COLUMNS, UNO.

8. FOOTING ELEVATIONS ARE NOTED ON THE PLANS AND DETAILS . IN ANY CASE, FOOTINGS SHALL BEAR ON FIRM UNDISTURBED SOIL OR ENGINEERED FILL OR BEDROCK , IN ACCORDANCE WITH THE SOIL REPORT AND DETAILS SHOWN.

9. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.

10. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER. FLOODING IS NOT PERMITTED.

11. ALL TRENCHES SHALL COMPLY WITH APPLICABLE OSHA REQUIREMENTS.

12. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED WITH NON-EXPANSIVE SOIL BUT NOT BEHIND RETAINING WALLS BEFORE CONCRETE OR MASONRY ATTAINS ITS FULL DESIGN STRENGTH.

13. CONSTRUCTION JOINTS (CJ) AND SAWCUT (SC) JOINTS IN SLABS SHALL OCCUR WHERE LOCATED ON PLANS AND DETAILS. CJ'S SHALL HAVE FORMED POUR STOPS. CONSTRUCTION JOINTS IN WALLS AND FOOTINGS NEED NOT OCCUR AT THE SAME LOCATION, UNO.

14. SEE ARCHITECT'S PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.

REINFORCING STEEL NOTES:

1. REINFORCING GRADES FOR CONCRETE OR MASONRY:

ALL BARS EXCEPT THOSE TO BE WELDED	ASTM A615, GRADE 60
TIES AND STIRRUPS	ASTM A615, GRADE 60
ALL BARS TO BE WELDED	ASTM A706, GRADE 60
ALL BARS IN THE CONCRETE SHEARWALL INDICATED ON WALL ELEVATION INCLUDING SUPPORTING WALL FOOTING LONGITUDINAL BARS (WF), AND ALL GRADE BEAMS (GB)	A706, GRADE 60

2. MAINTAIN MINIMUM CONCRETE COVER FROM FACE OF CONCRETE TO EDGE OF ALL REINFORCEMENT AS FOLLOWS (UNO):
   (SEE PLAN/ SECTION FOR CONCRETE W/ FIRE RATING.)

CONDITION		COVER
CONCRETE POURED AGAINST EARTH		3"
CONCRETE POURED IN FORMS AND EXPOSED TO WEATHER OR EARTH		
	-#6 BARS AND LARGER	2"
	-#5 BARS AND SMALLER	1 1/2"
INTERIOR COLUMNS AND BEAMS		1 1/2"
INTERIOR WALL FACES AND RAISED SLABS		1"
STRUCTURAL SLABS ON GRADE		
	-FROM BOTTOM OF SLAB	2"
	-FROM TOP OF SLAB	1 1/2"
OTHER CONCRETE NOT EXPOSED TO WEATHER OR EARTH FOR #11 BARS AND SMALLER		1"

   PROVIDE THE LARGEST COVER REQUIRED FOR ALL APPLICABLE CONDITIONS. WHERE #3 STIRRUPS OR TIES ARE USED, ENSURE THAT THE COVER FOR LONGITUDINAL BARS IS ADEQUATE.

3. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICE". EACH REINFORCING BAR SHALL BE WIRED TO A CROSS BAR AT A MAXIMUM SPACING OF 24" OC. PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN POSITIONS SHOWN ON THE PLANS.

4. SPLICES IN CONTINUOUS REINFORCEMENT SHALL HAVE A CLASS "B" LAP (1'-6" MIN) AND THE SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. VERTICAL WALL BARS SHALL BE SPLICED AT OR NEAR FLOOR LINES. BARS MAY BE WIRED TOGETHER AT SPLICES OR LAPS EXCEPT FOR TOP REINFORCING OF BEAMS AND SLABS OR WHERE SPECIFICALLY DETAILED TO BE SEPARATED. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.

5. ALL DOWELS, ANCHOR BOLTS AND OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE PERFORMED DURING PLACEMENT OF CONCRETE.

6. BEND REINFORCING BARS COLD AND REINFORCEMENT SHALL BE IN PLACE PRIOR TO POURING CONCRETE. (SEE NOTE 5 ABOVE)

7. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.

8. DOWELS BETWEEN FOOTING AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE MAIN REINFORCING UNO.

9. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN PLACE INSPECTION IS MADE.

10. CHAIRS OR SPACERS FOR REINFORCING SHALL BE NON-FERROUS OR PLASTIC COATED WHEN RESTING ON EXPOSED SURFACES.

STRUCTURAL CONCRETE NOTES:

1. CONCRETE SHALL BE MIXED, PLACED AND CURED IN ACCORDANCE WITH ACI 318, 2014 EDITION, AND PROJECT SPECIFICATIONS.

2. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES, HOPPERS AND VERTICAL CHUTES OR TRUNKS SHALL BE USED. CHUTES OR TRUNKS SHALL BE OF VARIABLE LENGTHS SO THAT FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED SIX FEET. A SUFFICIENT NUMBER OF CHUTES OR TRUNKS SHALL BE USED TO ENSURE THE CONCRETE IS KEPT LEVEL AT ALL TIMES.

3. CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE TO EXPOSE CLEAN AGGREGATE SOLIDLY EMBEDDED IN THE MORTAR MATRIX. SLUSH WITH A COAT OF NEAT CEMENT BEFORE PLACING CONCRETE. SEE PLANS AND DETAILS FOR LOCATION AND TYPE OF CONSTRUCTION JOINT. LOCATIONS OF ADDITIONAL CONSTRUCTION JOINTS NOT SHOWN ON THESE PLANS SHALL BE SUBMITTED FOR APPROVAL BY THE EOR PRIOR TO PLACING ANY CONCRETE.

4. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING DESIGN CRITERIA:

LOCATION	MIN 28-DAY COMP STRENGTH	CONC TYPE[a]	MAX AGGR. SIZE	MAX W/C RATIO	MAX SLUMP[b]	CEMENT TYPE
FOUNDATIONS STEM WALLS, PILASTER	4000 PSI	NWC	1 1/2"	0.45	4"	II / V
SLAB ON GRADE	4000 PSI	NWC	1"	0.45	4"	II / V
FILL OVER METAL DECK, LWC TOPPING SLAB AND PADS OVER MTL DECK	4500 PSI	LWC/	3/8"	0.45	6"	II
ALL OTHER STRUCTURAL CONCRETE NO NOTED..	4000 PSI	NWC	1"	0.50	6"	II / V

   a. MAXIMUM DRY WEIGHT OF LIGHTWEIGHT CONCRETE SHALL BE 110 PCF .
   b. SLUMP MEASURED PRIOR TO SUPERPLASTICIZER, WHERE OCCURS.

5. CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF THE BUILDING CODE, AND SPECIFICATIONS. ALL CONCRETE MIXES SHALL BE DESIGNED BY A RECOGNIZED TESTING LAB STAMPED AND SEALED BY A LICENSED CALIFORNIA CIVIL ENGINEER AND SUBMITTED TO THE SEOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT. STRUCTURAL CONCRETE MIXES SHALL CONSIST OF 5 SACK MINIMUM UNO.

6. AGGREGATES IN NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (HARDROCK). AGGREGATES IN LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.

7. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND THE SEOR.

8. PORTLAND CEMENT SHALL BE AS NOTED ABOVE FOR ALL CONCRETE CONFORMING TO ASTM C150, LOW ALKALI. MILL TESTS WITH CERTIFICATES OF COMPLIANCE SHALL BE SUBMITTED.

9. FLY ASH OR OTHER POZZOLANS CONFORMING TO ASTM C618 CLASS N OR F MAY BE USED AS A PARTIAL SUBSTITUTION FOR PORTLAND CEMENT UP TO A MAXIMUM OF 15% TOTAL CEMENTITIOUS MATERIALS BY WEIGHT IF THE MIX DESIGN IS PROPORTIONED PER ACI 318, SECTION 26.4.3.

10. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C94.

11. LEAN CONCRETE, WHERE SPECIFICALLY INDICATED, SHALL CONTAIN 2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.

12. DRYPACK OR NONSHRINK GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2 TIMES THE SUPPORTING CONCRETE STRENGTH, AND SHALL BE OF FIVE STAR GROUT, SIKA GROUT 212, OR APPROVED EQUAL WITH VALID CODE REPORT (LARR,ICC,ESR,IAPMO ER). FOR THICK GROUT LAYERS FOLLOW MANUFACTURER'S GUIDELINES TO ATTAIN THE REQUIRED STRENGTH, WHICH MAY INCLUDE THE ADDITION OF PEA GRAVEL.

13. DO NOT USE ANY CONCRETE OR GROUT CONTAINING CHLORIDES. WATER USED IN MIX SHALL BE CLEAN AND POTABLE.

14. FOR INTERIOR SLABS-ON-GRADE AND ALL OTHER SLABS RECEIVING ADHERED FLOORING FINISHES (I.E., GLUED, ETC.), THE MAXIMUM W/C RATIO SHALL NOT EXCEED 0.45. CURING COMPOUNDS USED ON CONCRETE THAT IS TO RECIEVE FINISHES SHALL BE COMPATIBLE WITH TILE AND ADHESIVES OR GROUTS IN ACCORDANCE WITH MANUFACTURER'S DATA AND BE APPROVED BEFORE USE.

15. MAINTAIN CONCRETE ABOVE 50 DEGREES FAHRENHEIT AND IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT UNLESS OTHERWISE ACCEPTED BY SEOR.

16. SEE ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, WALL OFFSETS, CHAMFERS, KERFS, DRIPS AND FOR EXTENT OF DEPRESSIONS, RAMPS, ETC. PROVIDE SLEEVES FOR ALL PIPES THROUGH CONCRETE WALLS AND FOOTINGS WHERE SHOWN ON THESE DRAWINGS. CORING IS NOT PERMITTED WITHOUT PRIOR APPROVAL BY THE SEOR.

17. SEE ARCHITECT'S PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE STRUCTURAL PLANS.

18. EXPOSED CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4" CHAMFER, UNO.

19. CONSTRUCTION JOINTS (CJ) AND SAWCUT (SC) JOINTS IN SLABS SHALL OCCUR WHERE LOCATED ON PLANS AND DETAILS. CJ'S SHALL HAVE FORMED POUR STOPS. CONSTRUCTION JOINTS IN WALLS AND FOOTINGS NEED NOT OCCUR AT THE SAME LOCATION, UNO.

STRUCTURAL STEEL NOTES:

1. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), AS CONTAINED IN THE 15TH EDITION OF "AISC MANUAL OF STEEL CONSTRUCTION".

2. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.

3. PROVIDE THE FOLLOWING MATERIALS FOR STRUCTURAL STEEL UNO:

STRUCTURAL STEEL GRADES:		
A.	ALL WIDE FLANGE SECTIONS	ASTM A992, (F_Y= 50 KSI)
B.	SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS)	ASTM A500, GRADE C (F_Y= 50 KSI)
C.	ROUND HOLLOW STRUCTURAL SECTION (HSS)	ASTM A500,GRADE C (F_Y= 46KSI)
D.	PIPES	ASTM A53 TYPE E OR S, GRADE B (F_Y=35 KSI)
E.	PLATES, ANGLES, CHANNELS & TEES	ASTM A36
F.	ALL PLATES PART OF SLRS	ASTM 572, GRADE 50
G.	MACHINE BOLTS (MB)	ASTM A307
H.	HIGH STRENGTH BOLTS (HSB)	ASTM A325 TYPE N, A490
I.	WELDED HEADED STUDS	ASTM A108
J.	THREADED RODS FOR ANCHOR BOLTS	ASTM F1554, GRADE 36

4. 1/8" THICK PLATES AND THICKER SHALL BE GAS CUT OR SAW CUT EXCEPT AS OTHERWISE NOTED, ALL BOLTS SHALL BE HIGH STRENGTH BOLTS. EXCEPT OTHERWISE NOTED, ALL BOLT HOLES SHALL BE STANDARD HOLES.

5. ALL CONNECTIONS NOT SHOWN SHALL CONFORM TO THE "AISC MANUAL OF STEEL CONSTRUCTION" AND SHALL BE SUBMITTED ON SHOP DRAWINGS FOR REVIEW BY SEOR PRIOR TO FABRICATION.

6. ALL WELDED HEADED STUDS, THREADED STUDS, AND DEFORMED BARS SHALL BE NELSON, OR EQUIVALENT, AND WELDED (IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS BY CERTIFIED WELDERS) SO AS TO FULLY DEVELOP THE TENSILE CAPACITY OF THE CONNECTOR.

7. BOLTS WITH UPSET THREADS ARE NOT ALLOWED. USE THE APPROPRIATE NUT AND WASHER TYPE FOR THE SPECIFIED BOLT.

8. ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR.

9. ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL PERMANENTLY EXPOSED TO THE ELEMENTS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS A WEATHER PROOF COATING IS SPECIFIED BY THE ARCHITECT UNO. STAINLESS AND WEATHERING STEELS ARE EXCEPTED WHERE SPECIFIED.

10. SEE ARCHITECTURAL DRAWINGS FOR NAILER HOLES, WELDED STUDS OR OTHER ITEMS NOT SHOWN IN THESE DRAWINGS. WHERE STEEL IS EMBEDDED IN CONCRETE OR MASONRY, PROVIDE HOLES AS REQUIRED FOR PASSAGE OF CONTINUOUS REINFORCING BARS WHERE INDICATED ON DRAWINGS. DO NOT CUT HOLES IN STRUCTURAL STEEL WITHOUT PRIOR APPROVAL OF SEOR.

11. ALL ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.

12. PLACE NON-SHRINK OR DRYPACK GROUT UNDER ALL BASE PLATES AND ALLOW TO CURE BEFORE APPLYING LOADS.
    (SEE STRUCTURAL CONC. NOTE 12)

13. ALL OPEN HSS ENDS SHALL BE CAPPED. MIN. 1/4" STL CAP. PROVIDE SQUARE WELD ALL AROUND, CAP PLATE TO HSS.

14. FOR STRUCTURAL STEEL, IN ADDITION TO THE REQUIREMENTS OF SPECIFICATION SECTION A3.1c, HOT ROLLED SHAPES WITH FLANGES 1 1/2" THICK AND THICKER SHALL HAVE MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20FT-LB AT 70°F. PLATES 2" THICK AND THICKER SHALL HAVE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20FT-LB AT 70°F.

HIGH-STRENGTH BOLT NOTES:

1. SEE STRUCTURAL STEEL NOTES THIS SHEET FOR ADDITIONAL INFORMATION.

2. ALL HIGH-STRENGTH BOLTS SHALL CONFORM TO ASTM A-325 OR ASTM A-490, NUTS SHALL CONFORM TO ASTM A-563 AND WASHERS SHALL CONFORM TO ASTM F-436.

3. HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF THE "AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". SLIP CRITICAL BOLTS (SC) SHALL BE USED FOR ALL "SEISMIC LOAD RESISTING SYSTEM" (SLRS) MEMBER STEEL-TO-STEEL CONNECTIONS.

4. PAINT SHALL NOT BE PERMITTED ON CONTACT SURFACES UNLESS NOTED OTHERWISE. CONTACT SURFACES OF BOLTED PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS, AND OTHER DEFECTS WHICH PREVENT SOLID SEATING OF PARTS.

5. FAYING SURFACE SHALL BE "CLASS A" FOR SLIP CRITICAL BOLTS (SC).

6. SLIP-CRITICAL JOINT ASSEMBLIES SHALL BE FULLY PRE-TENSIONED BY TURN-OF-NUT TIGHTENING, CALIBRATED WRENCH TIGHTENING, INSTALLATION OF ALTERNATE DESIGN BOLTS OR BY DIRECT TENSION INDICATOR TIGHTENING.

TYPICAL ABBREVIATIONS

AB	ANCHOR BOLT	INT	INTERIOR
ABV	ABOVE	JST	JOIST
ADDT'L	ADDITIONAL	KLF	KIPS PER LINEAR FOOT
ADJ	ADJACENT	KSL	KIPS PER SQUARE FOOT
AFF	ABOVE FINISH FLOOR	KSI	KIPS PER SQUARE INCH
ALT	ALTERNATE	L	ANGLE
ARCH	ARCHITECT(URAL)	LFRS	LATERAL FORCE
BLDG	BUILDING		RESISTING SYSTEM
BLKG	BLOCKING	LLH	LONG LEG HORIZONTAL
BLW	BELOW	LLV	LONG LEG VERTICAL
BM	BEAM	LP	LOW POINT
BN	BOUNDARY NAILING	LWC	LIGHTWEIGHT CONCRETE
B.O.	BOTTOM OF	MAX	MAXIMUM
BOTT	BOTTOM	MB	MACHINE BOLT
BRG	BEARING	MECH	MECHANICAL
BS	BOTH SIDES	MFR	MANUFACTURER
BTWN	BETWEEN	MIN	MINIMUM
C	CAMBER	MTL	METAL
CIP	CAST IN PLACE	(N)	NEW
CJ	CONTROL/	NS	NEAR SIDE OR NON-SHRINK
	CONSTRUCTION JOINT	NTS	NOT TO SCALE
CL	CENTERLINE	NWC	NORMAL WEIGHT CONCRETE
CLR	CLEAR	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	O.F.	OUTSIDE FACE
COL	COLUMN	OH	OPPOSITE HAND
CONC	CONCRETE	OPN'G	OPENING
CONN	CONNECTION	PDF	POWDER DRIVEN FASTENER
CONT	CONTINUOUS	PENE.	PENETRATION
CP	COMPLETE PENETRATION	PJ	PANEL JOIST
CSK	COUNTERSINK	PL	PLATE
CTR(D)	CENTER(ED)	PLC(S)	PLACE(S)
DB	BAR OR BOLT DIAMETER	PLF	POUND PER LINEAR FOOT
DBL	DOUBLE	PLYWD	PLYWOOD
DC	DEMAND CRITICAL	PREFAB	PREFABRICATED
DEMO	DEMOLITION	PSF	POUND PER SQUARE FOOT
DET	DETAIL	PSI	POUND PER SQUARE INCH
DIA	DIAMETER	PT	PRESSURE TREATED OR
DIAG	DIAGONAL		POST TENSION
DIM	DIMENSION	QTY	QUNATITY
DO	DITTO	RAD, R	RADIUS
DWG	DRAWING	REF	REFERENCE
(E)	EXISITNG	REINF	REINFORCING
EA	EACH	REQ'D	REQUIRED
EF	EACH FACE	SB	SILL BOLT
EJ	EXPANSION JOIST	SC	SAW CUT OR SLIP CRITICAL
EMBED	EMBEDMENT	SCHED	SCHEDULE
ELEC	ELECTRICAL	SEOR	STRUCTURAL ENGINEER
ELEV	ELEVATION		ON RECORD
EN	EDGE NAILING	SHT'G	SHEATHING
E.O.	EDGE OF	SIM	SIMILAR
EOR	ENGINEER OF RECORD	SLRS	SEISMIC LOAD
EQ	EQUAL		RESISTING SYSTEM
EQUIP	EQUIPMENT	SMS	SHEET METAL SCREW
ES	EACH SIDE/ EDGE SCREW	SN	SILL NAIL
EW	EACH WAY	SOG	SLAB ON GRADE
EXP	EXPANSION	SQ	SQUARE
EXT	EXTERIOR	SS	STAINLESS STEEL
FIN	FINISH	STD	STANDARD
FLR	FLOOR	STGRD	STAGGERED
FN	FEILD NAILING	SITFF	STIFFENER
FND	FOUNDATION	STL	STEEL
F.O.	FACE OF	STRUCT	STRUCTURAL
FS	FAR SIDE OR FIELD SCREW	T&B	TOP AND BOTTOM
FRMG	FRAMING	THK	THICK
FT	FOOT OR FEET	T.O.	TOP OF
FTG	FOOTING	TOM	TOP OF MASONRY
G	GIRDER	TOS	TOP OF STEEL
GA	GAGE	TYP	TYPICAL
GALV	GALVANIZED	UNO	UNLESS NOTED OTHERWISE
HAB	HEADED ANCHOR BOLT	VERT	VERTICAL
HD	HOLDOWN	W/	WITH
HDR	HEADER	W/O	WITHOUT
HGR	HANGER	WF	WIDE FLANGE
HK	HOOK	WLD	WELDED
HORIZ	HORIZONTAL	WO	WHERE OCCURS
HP	HIGH POINT	WP	WORK POINT
HS	HIGH STRENGTH	WT	WEIGHT
HSS	HOLLOW STRUCTURAL	WWF	WELDED WIRE FABRIC
	STEEL	⌀	DIAMETER
HT	HEIGHT	⊕	REFERENCE ELEVATION OR
IN	INCH		WORK POINT

SHEET LIST

S0-1	GENERAL NOTES
S0-2	GENERAL NOTES
S1-1	TYPICAL REBAR & S.O.G DETAILS
S1-2	TYP EXCAVATION & FOOTING DETAILS
S1-3	TYPICAL FOUNDATION DETAILS
S1-4	TYPICAL METAL STUD DETAILS
S1-5	TYPICAL METAL STUD DETAILS
S1-6	TYPICAL METAL STUD DETAILS
S1-7	TYPICAL METAL STUD DETAILS
S1-8	TYPICAL METAL DECK DETAILS
S1-9	TYPICAL STEEL DETAILS
S1-10	TYPICAL STEEL DETAILS
S1-11	TYPICAL STEEL DETAILS
S1-12	TYPICAL STEEL DETAILS
S1-13	TYPICAL MECHANICAL EQUIPMENT DETAILS
S1-14	TYPICAL BRACE FRAME DETAILS
S1-15	TYPICAL BRACE FRAME DETAILS
S1-16	TYPICAL SMF DETAILS
S2-1	FOUNDATION PLAN
S2-2	SOLAR SHADE CANOPY FOUNDATION AND ROOF FRAMING PLANS
S3-1	SECOND FLOOR FRAMING PLAN
S3-2	ROOF FRAMING PLAN
S3-3	HIGH ROOF FRAMING PLAN
S4-1	FOUNDATION DETAILS
S5-1	FRAMING DETAILS
S5-2	FRAMING DETAILS
S5-3	FRAMING DETAILS
S6-1	FRAME ELEVATIONS

STATE:

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YOUNG-KEUN NA
No. S4029
Exp. 9/30/24

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
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No. Rev. Date Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
GENERAL NOTES

SHEET NO:
S0-1

WELDING NOTES:

1. WELDING PROCEDURES, ELECTRODES AND WELDER QUALIFICATIONS SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION", AMERICAN WELDING SOCIETY (AWS), D1.1, D1.8 AND THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

2. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE AWS STANDARD QUALIFICATION TESTS, AND SHALL BE CERTIFIED FOR THE WORK THEY ARE PERFORMING.

3. PROJECT WELDING SHALL BE PERFORMED ONLY IN ACCORDANCE WITH WELDING PROCEDURE SPECIFICATIONS (WPS) SUBMITTED BY THE CONTRACTOR AND REVIEWED BY THE SEOR AND PROJECT WELDING INSPECTOR. THE WPS SHALL BE IN ACCORDANCE WITH AWS D1.1-D1.4 & D1.8 CURRENT EDITION.

4. ALL WELDS WITHIN MEMBERS DESIGNATED AS PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS) SHALL CONFORM TO THE DETAILING, MATERIALS, WORKMANSHIP, TESTING, AND INSPECTION REQUIREMENTS PER AWS D1.8 AND MUST HAVE A MIN. CVN TOUGHNESS OF 20 FT-LB @ 0°F PER AISC 341 A3.4B
.

5. WHERE WELDS ARE DESIGNATED AS DEMAND CRITICAL, THEY SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CHARPY V-NOTCH (CVN) TOUGHNESS OF 20 FT-LB AT 0°F AND 40 FT-LB AT 70°F. SEE AISC 341-16 SECTION A3.4B FOR ADDITIONAL REQUIREMENTS.

6. WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS D1.1 & D1.8 USING E70XX ELECTRODES UNLISS OTHERWISED NOTED.

7. WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AWS D1.4 USING E80XX ELECTRODES.

8. WELDING OF METAL DECK AND LIGHT GAGE STEEL SHALL BE IN ACCORDANCE WITH AWS D1.3.

9. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.

10. ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE, SECTION 10.

11. FIELD WELDS HAVE BEEN INDICATED WHERE THEY ARE EXPECTED TO OCCUR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL FIELD WELDING NECESSARY TO COMPLETE THE PROJECT AND INCLUDE ALL ASSOCIATED COSTS WITHIN THE BASE BID.

12. ALL WELDS (SHOP AND FIELD) REQUIRE SPECIAL INSPECTION.

13. ALL FULL PENETRATION WELDS SHALL BE ULTRA-SONIC TESTED PER AWS D1.1 & AISC 341 J6.2.

COMPLETE JOINT PENETRATION CONNECTION NOTES:

WELDING ELECTRODES
A. SMAW E8018*
B. FCAW E80 SERIES*

* WELD METAL SHALL BE CAPABLE OF DELIVERING A MINIMUM OF 20 FT-LBS AT -0°F AND 40FT-LBS @ 70°F AS MEASURED BY A CHARPY V-NOTCH IMPACT TEST PER AWS D1.1AND D1.8, APPENDIX III.

* BASE METAL FOR STRUCTURAL SHAPES IN SIZE GROUP 4 & 5 W/ t/f > 11/2" SHALL BE CAPABLE OF DELIVERING A MINIMUM OF 20 FT-LBS AT 70°. F AS MEASURED BY A CHARPY V-NOTCH IMPACT TEST PER A.I.S.C. MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.

STRUCTURAL STEEL
1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE FOR STEEL AWS D1.1-15 AND D1.8.

2. WELDING PROCEDURE SPECIFICATIONS (WPS) SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL, PRIOR THE ENGINEER FOR APPROVAL, PRIOR TO THE BEGINNING OF WELDING OPERATIONS. THE WPS SHALL INCLUDE THE WELDING PARAMETERS RECOMMENDED BY THE ELECTRODE MANUFACTURER. SEE AWS D1.1 APPENDIX E, FORM E-1. JOINT DETAILS TO SUIT EXISTING CONDITIONS. THE WELDING ELECTRODE MANUFACTURER'S SPECIFICATIONS SHALL BE ATTACHED TO THE WPS. ALL WELDERS AND INSPECTORS SHALL BE INFORMED OF THE WPS AND SHALL RETAIN A COPY.

3. SEE AWS FOR PREQUALIFIED SMAW WPS'S.

4. SEE AWS FOR PREQUALIFIED FCAW WPS'S.

5. WELDING TO BE DONE BY WELDERS CERTIFIED BY AWS.

6. ONLY SHIELDED METAL ARC WELDING (SMAW) WITH LOW HYDROGEN ELECTRODES OR FLUX CORE ARC WELDING (FCAW), EITHER GAS SHIELDED OF SELF SHIELDED, SHALL BE USED. FOR SMAW, THE TYPICAL REQUIREMENTS SHALL BE ACCORDING TO NOTE #3 ABOVE. WELDING PROCEDURES SHALL MEET THE REQUIREMENTS OF AWS D1.1 4.6.2, OR SHALL BE QUALIFIED BY TEST. FOR FCAW, THE TYPICAL REQUIREMENTS SHALL BE ACCORDING TO NOTE #4 ABOVE. THE WELDING PROCEDURE SHALL MEET THE REQUIREMENTS OF AWS D1.1 4.14.1.6.

7. INDIVIDUAL WELDS SHALL BE CARRIED CONTINUOUSLY TO COMPLETION BEFORE THE JOINT IS ALLOWED TO COOL BELOW THE MINIMUM SPECIFIED PREHEAT AND INTERPASS TEMPERATURE.

8. AT ALL COMPLETE PENETRATION WELDS, WELD BEADS SHALL BE PEENED AFTER EACH PASS, WITH THE EXCEPTION OF THE ROOT PASS AND THE SURFACES PASSES, AS FOLLOWS: TURN SLAG GUN 90 DEG. AND MAKE A MINIMUM OF 4 PASSES WITH DULL CHISEL.

9. PREHEATING IS REQUIRED ON ALL TACK WELDS NOT INCORPORATED INTO FINAL WELDS. SEE AWS D1.1, SECTION 3.3.7.

10. FOR BEAM FLANGE REINFORCEMENT PLATES, THE ROLLING DIRECTION OF GRAIN SHALL BE INDICATED ON THE PLATE AND INSTALLED SO THAT THE GRAIN DIRECTION IS PARALLEL TO THE LONGITUDINAL AXIS OF THE MEMBER.

11. FULL TIME VISUAL INSPECTION BY AN AWS QC-1 QUALIFIED INSPECTOR IS REQUIRED FOR ALL WELDING.

12. 100% ULTRASONIC WELD TESTING BY THE INSPECTOR IS REQUIRED FOR ALL COMPLETE PENETRATION WELDS.

13. AMPEREAGE, VOLTAGE, POLARITY AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS.

14. REMOVE B.U. BARS AND WELD TABS AT ALL FLANGE COMPLETE JOINT PENETRATION (CJP) WELDS AT DUCTILE MOMENT FRAME CONNECTIONS. TYPICAL UNLESS NOTED OTHERWISE.

METAL DECK NOTES (FILLED & UNFILLED):

1. MATERIAL FOR METAL DECK SHALL HAVE A MIN YIELD STRENGTH OF 50 KSI AND CONFORM TO ASTM A653-SS GRADE 33 WITH GALVANIZED G60 COATING COMPLYING WITH ASTM A525.

2. SEE TYPICAL DETAILS FOR REINFORCING OF DECK AROUND OPENINGS. CONTRACTOR SHALL COORDINATE SIZE AND LOCATIONS OF OPENINGS WITH THE VARIOUS TRADES. NO LOADS SHALL BE HUNG FROM DECK WITHOUT APPROVAL OF SEOR.

3. FLOOR AND ROOF DECK IS DESIGNED FOR UNSHORED CONSTRUCTION, UNO. MAINTAIN 3 SPAN CONDITION WHEREVER POSSIBLE (2 SPAN MIN) EXCEPT AT STAIR LANDING AND WHERE NOTED OTHERWISE ON PLANS.

4. PROVIDE 2" MINIMUM BEARING AT ALL SUPPORTS. END LAPS OF METAL DECK SHALL BE A MINIMUM OF 2" AND SHALL OCCUR ONLY OVER SUPPORTS. DECK SHALL BE LAID OUT SO THAT A LOW FLUTE FALLS ON EACH PARALLEL SUPPORT.

5. INSTALL DECK BY WELDING. USE 3/4" DIAMETER PUDDLE WELDS OR WELDED STUDS TO SUPPORTS SPACED AS SHOWN ON CONSTRUCTION DRAWINGS. SPACING FOR TOP SEAM, SIDE SEAM, BUTTON PUNCH, OR PUNCHLOK CONNECTION SHALL BE IN ACCORDANCE WITH DRAWINGS. SEE TYPICAL METAL DECK DETAILS.

6. SUBMIT SHOP DRAWINGS FOR METAL DECK TO THE SEOR FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW TYPE OF DECK, LAYOUT OF DECK, THE SIZE AND LOCATION OF ANY OPENINGS OF WIDTH GREATER THAN 1'-0", AND ATTACHMENT METHOD.

7. ALTERNATES TO TYPE OF DECK AND FASTENING MAY BE USED WITH THE APPROVAL OF THE SEOR. DECK PROPERTIES SHALL BE EQUAL TO OR GREATER THAN THOSE SHOWN ON THE PLANS. ANY DECK OR METHOD OF FASTENING SHALL HAVE LATEST EVALUATION REPORT PER CURRENT CODE APPROVING THE DECK FOR THE APPLICATION.

8. METAL DECK WITH CONCRETE FILL SHALL HAVE POSITIVE VENTING. DO NOT EMBED PIPES, SLEEVES, CONDUIT, ETC IN CONCRETE TOPPING UNO.

9. CONCRETE FILL OVER METAL DECK SHALL NOT BE OVER-POURED TO ACHIEVE LEVEL FLOOR. IF POUR IS NOT LEVEL AND OUTSIDE THE ALLOWED TOLERANCE NOTED IN THE SPECIFICATIONS (033000 SECTION 3.03), CONTRACTOR IS TO IDENTIFY DEFICIENT AREAS AND SUBMIT REPAIR FOR SEOR REVIEW.

10. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO SLRS MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) ARE REQUIRED TO BE A FULL WIDTH SHEET

COLD-FORMED STEEL FRAMING NOTES:

1. DESIGN, FABRICATION AND ERECTION OF COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE SPECIFICATIONS AND STANDARD OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI), AS CONTAINED IN THE "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", LATEST EDITION, INCLUDING ALL APPLICABLE AMENDMENTS.

2. ALL COLD-FORMED STEEL FRAMING SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND LEFT IN PLACE UNTIL OTHER MEANS IS PROVIDED TO ADEQUATELY BRACE THE STRUCTURE.

3. COLD-FORMED STEEL GRADES:
   A. 18 GA (43 MILS) OR THINNER .....ASTM A1003 GRADE 33 (FY = 33 KSI)
   B. 16 GA (54 MILS) AND THICKER .....ASTM A1003 GRADE 50 (FY = 50 KSI)

4. ALL COLD-FORMED STEEL FRAMING SHALL BE BRACED AS REQUIRED BY SECTION D3 OF THE AISI SPECIFICATION.

5. SUBMIT COLD-FORMED STEEL FRAMING SHOP DRAWINGS AND SPECIFICATIONS TO THE SEOR FOR REVIEW PRIOR TO FABRICATION.

6. COLD-FORMED STEEL STUDS AND TRACKS ARE TO BE ATTACHED WITH SHEET METAL SCREWS (SMS) WITH SIZES CALLED OUT ON THE DETAILS. PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHOULD NOT BE LESS THAN 3 EXPOSED THREADS. SCREWS ARE TO BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH SCREW MANUFACTURER'S RECOMMENDATIONS. SHEET METAL SCREWS SHALL BE PER ICC ESR 1408.

7. ALL HOLES FOR BOLTS SHOULD BE SHALL BE STANDARD HOLES.

8. GALVANIZED COATING SHALL COMPLY WITH ASTM A924.

9. COLD-FORMED STEEL FRAMING SHALL BE PER STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA), ICC ER-3064P.

10. FOR STUD DESIGNATION AND MINMUM SECTION PROPERTIES SHALL BE PER DETAIL 1 / S1-7

POST INSTALLED ANCHORS NOTES:

1. INSTALL POST-INSTALED ANCHORS IN ACCORDANCE WITH THE APPLICABLE ICC-ES REPORT AND THE MANUFACTURER'S RECOMMENDATIONS.

2. ALL POST-INSTALLED ANCHORS SHALL BE TESTED PER CBC 1910A.5

3. APPLY PROOF TEST LOADS TO EXPANSION & ADHESIVE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT & INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH & APPLY LOAD.

4. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).

5. THE TESTING OF THE POST-INSTALLED ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY.

6. TESTING SHOULD OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.

7. TEST EQUIPMENT IS TO BE CALIBATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

8. TESTING FREQUENCY:
   A. WHEN POST-INSTALLED ANCHORS ARE USED FOR SILL PLATE BOLTING APPLICATIONS, 10 PERCENT OF THE ANCHORS SHALL BE TESTED.
   B. WHEN POST-INSTALLED ANCHORS ARE USED FOR OTHER STRUCTURAL APPLICATIONS, ALL SUCH ANCHORS SHALL BE TESTED.
   C. WHEN POST-INSTALLED ANCHORS ARE USED FOR NONSTRUCTURAL COMPONENTS, SUCH AS EQUIPMENT ANCHORAGE, 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.
   D. EXEMPTIONS:
      a. TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLABS ON GRADE, WHERE THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM TESTING IS NOT EQUIRED.
      b. FOR POWER ACTUATED FASTENERS USED TO ATTACH TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY, WHERE THERE ARE AT LEAST THREE FASTENERS PER SEGMENT OF TRACK, TESTING IS NOT REQUIRED .

9. TEST ACCEPTANCE CRITERIA: ACCEPTANCE CRITERIA FOR POST-INSTALLED ANCHORS SHALL BE BASED ON AN APPROVED EVALUATION REPORT USING CRITERIA ADOPTED IN THE LATEST BUILDING CODE. FIELD TESTS SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:
   A. HYDRAULIC RAM METHOD:
      a. ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED APPARATUS SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCERNIBLE MOVEMENT DURING THE TENSION TEST, E.G., AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT.
      b. FOR ADHESIVE ANCHORS, WHERE OTHER THAN BOND IS BEING TESTED, THE TESTING APPARATUS SUPPORT SHALL NOT BE LOCATED WITHIN 1.5 TIMES THE ANCHOR'S EMBEDMENT DEPTH TO AVOID RESTRICTING THE CONCRETE SHEAR CONE TYPE FAILURE MECHANISM FROM OCCURRING.

   B. TORQUE WRENCH METHOD:
      a. TORQUE-CONTROLLED POST-INSTALLED ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH SHALL ATTAIN THE SPECIFIED TORQUE WITHIN ½ TURN OF THE NUT; OR ONE-QUARTER (¼) TURN OF THE NUT FOR A ⅜ INCH SLEEVE ANCHOR ONLY.
      b. SCREW-TYPE ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH SHALL ATTAIN THE SPECIFIED TORQUE WITHIN ONE-QUARTER (¼) TURN OF THE SCREW AFTER INITIAL SEATING OF THE SCREW HEAD.

10. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE SHALL BE TESTED, WHICH ARE INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.

11. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE- OR POST- TENSIONED) LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.

12. TEST LOADS SHALL BE AS NOTED BELOW UNLESS NOTED OTHERWISE IN SPECIFIC DETAILS:

EPOXY/ADHESIVE ANCHOR PULL/TENSION TEST LOAD:

THREADED RODS (GRADE 36)

ROD DIAM.	TENSION TEST LOAD UNO
3/8"	3,180 LBS
1/2"	5,652 LBS
5/8"	8,831 LBS
3/4"	12,717 LBS
7/8"	17,309 LBS
1"	22,608 LBS

REBAR (GRADE 60)

REBAR SIZE	TENSION TEST LOAD UNO
#3	5,299 LBS
#4	9,420 LBS
#5	14,719 LBS
#6	21,195 LBS
#7	28,849 LBS
#8	37,680 LBS

SCREW/EXPANSION ANCHOR TORQUE TEST LOAD:
TORQUE TEST LOAD SHALL BE BASED ON AN APPROVED EVALUATION REPORT USING CRITERIA ADOPTED IN THE LATEST BUILDING CODE

POWDER-ACTUATED FASTENER (PAF):
POWDER-ACTUATED FASTENERS SHALL BE ONE OF THE FOLLOWING, UNO:
HILTI X-U (ICC-ESR 2269) AT METAL.
HILTI X-CP72(ICC-ESR 2379) AT PTDF.

PROVIDE 0.08" THK X 1.1" SQUARE OR 1.425" ROUND WASHERS FOR ALL POWDER-ACTUATED FASTENERS.

FASTENER DIAMETER AND EMBEDMENT SHALL BE AS SPECIFICALLY DETAILED ELSEWHERE IN THE DRAWINGS.

STRUCTURAL OBSERVATIONS:

1. VISUAL OBSERVATIONS WILL BE PERFORMED AT THE DISCRETION OF THE OWNER, ARCHITECT, SEOR, AND AS REQUIRED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE BUILDING CODE.

2. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO NOTIFY THE STRUCTURAL ENGINEER AS TO WHEN EACH MAJOR PHASE OF CONSTRUCTION IS READY FOR OBSERVATION A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE.

3. THE FOLLOWING MAJOR PHASES OF CONSTRUCTION REQUIRE A SITE VISIT AND STRUCTURAL OBSERVATION REPORT FROM THE SEOR:

   ☐ FOUNDATION REBAR AND ANCHORS - PRIOR TO POUR OF CONCRETE

   ☐ STRUCTURAL FRAMING - AFTER ERECTION AND PRIOR TO CLOSING IN

   ☐ RAISED FLOOR SLABS AND REBAR - PRIOR TO POUR OF CONCRETE

   ☐ COMPLETION OF THE STRUCTURAL SYSTEM

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT REINFORCEMENT, WELDS, CONNECTIONS, ETC. ARE VISIBLE FOR OBSERVATION WHEN THE SEOR IS ON SITE AND FOR ANY SCHEDULING DELAYS DUE TO NONCOMPLIANT ITEMS FOUND DURING THE OBSERVATION.

STATEMENT OF SPECIAL INSPECTIONS (DSA):

1. THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

2. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION. APPROVED FABRICATORS MUST SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFFSITE FABRICATIONS SUCH AS STRUCTURAL STEEL, PRECAST CONCRETE, GLUED LAMINATED TIMBER, ETC.

3. ALL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT SPECIAL INSPECTORS. JOB SITE VISITS BY THE STRUCTURAL ENGINEER OR BUILDING OFFICIAL DO NOT CONSTITUTE AND ARE NOT A SUBSTITUTE FOR INSPECTIONS BY A SPECIAL INSPECTOR.

4. ALL INSPECTION REPORTS SHALL BE SUBMITTED TO DSA AND SEOR THE FINAL REPORTS BY THE SPECIAL INSPECTOR(S) MUST CERTIFY THAT THE ENTIRE STRUCTURAL SYSTEM COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS.

5. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THESE INSPECTIONS ARE PERFORMED.

6. WORK REQUIRING SPECIAL INSPECTION SHALL BE INSPECTED BY THE SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS PERFORMED AND AT THE COMPLETION OF WORK. CONTINUOUS INSPECTION CONSISTS OF FULL-TIME INSPECTION; PERIODIC INSPECTION CONSISTS OF PART-TIME OR INTERMITTENT INSPECTION.

7. REFER TO DSA 103 SPECIAL INSPECTION FORM FOR ALL TEST AND INSPECTION REQUIRED, AS WELL AS CALIFORNIA BUILDING CODE CHAPTER 17A.

MASONRY NOTES:

1. MASONRY UNITS SHALL DEVELOP THE FOLLOWING MINIMUM 28 DAY PRISM COMPRESSIVE STRENGTHS IN ACCORDANCE WITH THE BUILDING CODE:

MINIMUM 28 DAY COMPRESSIVE STRENGTH			
LOCATION	fm	TYPE S MORTAR PER ASTM C270	GROUT PER CBC 2103A.3
ALL MASONRY U.N.O	2000 PSI	1800 PSI	2000 PSI

2. CONCRETE BLOCK SHALL CONFORM TO ASTM C90 MEDIUM WEIGHT. CLAY BRICK LOCK SHALL CONFORM TO ASTM C652

3. PRISM TEST SHALL BE PERFORMED FOR MASONRY WITH f'm OVER 2000 PSI FOR CBC 2105A.2

4. VERTICAL REINFORCING SHALL BE FULL HEIGHT OF WALL AND SHALL BE BRACED AT 6' - 8" MAXIMUM TO PREVENT MOVEMENT WHILE GROUTING.

5. HORIZONTAL REINFORCING SHALL BE IN BOND BEAM UNITS AND TIED SECURELY TO VERTICAL REINFORCING.

6. DOWELS, ANCHORS, AND OTHER EMBEDDED ITEMS SHALL BE TIED SECURELY IN PLACE TO PREVENT MOVEMENT WHILE GROUTING. WET SETTING OR STABBING IS NOT ALLOWED.

7. GROUTING NOTES:
   A. PROVIDE CLEAN OUTS IN THE BOTTOM COURSE OF MASONRY FOR EACH GROUT POUR WHEN GROUT POUR EXCEEDS 4 FEET OR 5 FEET 4 INCHES FOR 10-INCH NOMINAL OR WIDER HOLLOW UNIT MASONRY AS FOLLOWS:
      a. CLEANOUT OPENINGS IN HOLLOW UNIT MASONRY SHALL BE PROVIDED IN EVERY CELL AT THE BOTTOM OF EACH POUR OF GROUT. ALTERNATIVELY, IF THE COURSE AT THE BOTTOM OF THE POUR IS CONSTRUCTED ENTIRELY OF INVERTED DOUBLE OPEN-END BOND BEAM UNITS, CLEANOUT OPENINGS NEED ONLY BE PROVIDED FOR ACCESS TO EVERY REINFORCED CELL AT THE BOTTOM OF EACH POUR OF GROUT.
      b. CLEANOUTS IN MULTI-WYTHE MASONRY SHALL BE PROVIDED FOR EACH POUR BY LEAVING OUT EVERY OTHER UNIT IN THE BOTTOM WYTHE OF THE SECTION BEING POURED OR BY CLEANOUT OPENINGS IN THE FOUNDATION.
      c. THE FOUNDATION OR OTHER HORIZONTAL CONSTRUCTION JOINTS AT THE CLEANOUTS SHALL BE CLEANED OF ALL LOOSE MATERIAL AND MORTAR DROPPINGS BEFORE EACH POUR. THE CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
   B. FOR GROUT POURS NOT GREATER THAN 4 FEET OR 5 FEET 4 INCHES FOR 10-INCH NOMINAL OR WIDER HOLLOW UNIT MASONRY, THE TOP OF GROUT POUR SHALL BE AT THE TOP OF CONSTRUCTED MASONRY, OR WITHIN 8 INCHES OF THE TOP OF THE CONSTRUCTED MASONRY. GROUT POURS NOT TERMINATED AT THE TOP OF CONSTRUCTED MASONRY SHALL COMPLY WITH TMS 602, ARTICLES 3.5 C.3.A THROUGH 3.5 C.3.E.
   C. GROUT POURS IN EXCESS OF 4 FEET OR 5 FEET 4 INCHES FOR 10-INCH NOMINAL OR WIDER HOLLOW UNIT MASONRY SHALL BE SUBJECT TO THE FOLLOWING:
      a. GROUTING SHALL BE DONE IN A CONTINUOUS POUR IN LIFTS NOT EXCEEDING 4 FEET OR 5 FEET 4 INCHES FOR 10-INCH NOMINAL OR WIDER HOLLOW UNIT MASONRY (FOR HIGH LIFT GROUTING SEE DSA IR 21-2).
      b. AN APPROVED ADMIXTURE OF A TYPE THAT REDUCES EARLY WATER LOSS AND PRODUCES AN EXPANSIVE ACTION SHALL BE USED.
      c. THE GROUTING OF ANY SECTION OF WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.
      d. FOR MULTIPLE GROUT LIFTS WITHIN A GROUT POUR, EACH GROUT LIFT HEIGHT OF WALL, COLUMN, PIER OR BEAM SHALL BE INSPECTED BEFORE PLACEMENT OF ADDITIONAL UNITS.
      e. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF EACH POUR OF GROUT.
   D. WHERE GROUTING HAS BEEN STOPPED FOR MORE THAN AN HOUR, GROUT SHALL BE STOPPED 1 ½ INCH BELOW A MORTAR JOINT. WHERE A BOND BEAMS OCCUR, THE GROUT POUR SHALL BE STOPPED A MINIMUM OF ½ INCH BELOW THE TOP OF THE MASONRY WITH A MINIMUM GROUT COVER ABOVE THE HORIZONTAL REBAR OF 1 INCH.
   E. ALL GROUT SHALL BE THOROUGHLY CONSOLIDATED BY VIBRATING IMMEDIATELY AFTER PLACING. SHAKING OR RODDING REBAR IS NOT ALLOWED. CONSOLIDATE POURS BY MECHANICAL VIBRATION, AND RECONSOLIDATE BY MECHANICAL VIBRATION AFTER INITIAL WATER LOSS AND SETTLEMENT HAS OCCURRED, BUT BEFORE PLASTICITY IS LOST.

8. BLOCK SHALL BE PLACED IN RUNNING BOND AND SHALL BE 8"x8"x16" NOMINAL UNITS, UNO. WHERE BLOCK IS REQUIRED TO BE PLACED IN STACK BOND (SEE ARCH), OPEN-ENDED UNITS (I.E., "SPEED BLOCK") SHALL BE USED.

9. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SAFETY OF LIFT HEIGHT FOR OPEN ENDED OR FIELD MODIFIED BLOCKS.

10. LAYOUT OF MASONRY BLOCK UNITS SHALL BE RUNNING BOND, U.N.O. BLOCK MODULES/MORTAR JOINTS SHOWN ON THESE DRAWINGS ARE FOR PRESENTATION PURPOSES ONLY, AND NOT INTENDED TO SUPERSEDE ARCHITECTURAL DESIGN REQUIREMENTS.

11. WALL REINFORCEMENT SEE PLANS & ELEVATIONS

12. PROVIDE VERTICAL CONTROL JOINTS IN CMU WALLS AS SHOWN ON PLAN. UNLESS NOTED OTHERWISE VERTICAL CONTROL JOINTS SHALL OCCUR AT 25' - 0" O.C. MAXIMUM ALONG WALL LENGTH, AT FOUNDATION STEPS, FLOOR OR ROOF JOINTS, WALL HEIGHT CHANGES, AND 24" MINIMUM PAST ONE SIDE OF OPENINGS > 6' - 0" WIDE, U.N.O. ON PLANS

13. WHEN THE AMBIENT TEMPERATURE FALLS BELOW 40°F, OR EXCEEDS 100°F, PROVSIONS OF TMS602 / ACI 530 / ASCE6. ARTICLE 1.8C OR ARTICLE 1.8D SHALL BE IMPLEMENTED.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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Project No.: J908

PROFESSIONAL ENGINEER
PEDRAM DEHGHANI
No. S4029
Exp. 9/30/24
STRUCTURAL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

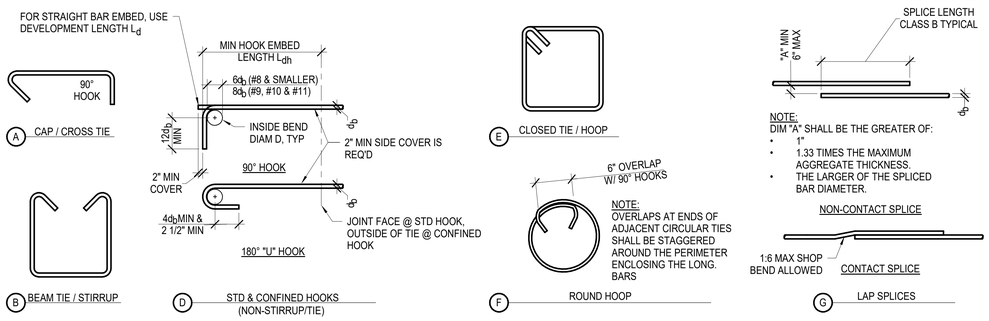
CLIENT:
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

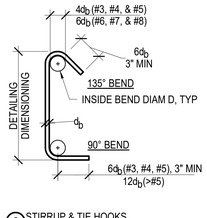
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
GENERAL NOTES

SHEET NO:
S0-2



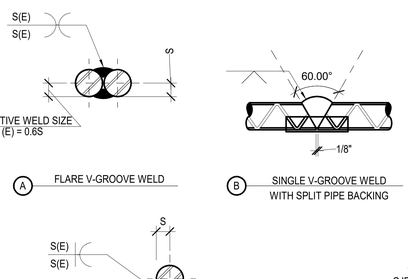


BAR SIZE	FINISHED BEND DIAMETER "D" IN INCHES
#3	2 1/4"
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	8"
#9	9 1/2"
#10	10 3/4"
#11	12"
#14	18 1/4"
#18	24"

STANDARD HOOKS

NOTES:
1. L_{dh} HOOK DEVELOPMENT LENGTH.
2. L_d = DEVELOPMENT LENGTH.
3. SEE BUILDING CODE AND ACI 318-14 VERSION FOR ALL REQUIREMENTS NOT NOTED.
4. FOR LIGHTWEIGHT CONCRETE MULTIPLY L_{dh}, LAP SPLICE AND L_d VALUES SHOWN BY 1.3.
5. "TOP" BARS ARE HORIZONTAL WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS. ALL OTHER BARS ARE "OTHER" BARS.
6. STD HOOK L_{dh}DOES NOT ACCOUNT FOR THE EFFECT OF TIES. CONFINED HOOK L_{dh} MAY BE USED WHERE ACI 318-14 25.4.3 APPLIES.
7. VALUES SHOWN ABOVE ARE FOR GRADE 60 (FY=60 KSI) REINFORCEMENT.
8. SPLICE LENGTHS SHOWN ARE FOR CLEAR SPACING NOT LESS THAN $2d_b$, CONCRETE COVER NOT LESS THAN d_b.
9. FOR EPOXY-COATED REINFORCEMENT, SEE BUILDING CODE.

	BAR SIZE	L_{dh}(in) STD HOOK	LAP SPLICE (in) CLASS B		L_d(in) DEVELOPMENT LENGTH	
			TOP	OTHER	TOP	OTHER
3000 PSI NWC	#3	6	29	23	22	17
	#4	8	38	29	29	22
	#5	10	47	37	36	28
	#6	12	56	43	43	33
	#7	14	82	63	63	48
	#8	16	94	72	72	55
	#9	18	106	81	81	62
	#10	20	119	91	91	70
	#11	22	132	102	101	78
4000 PSI NWC	#3	6	25	20	19	15
	#4	7	33	25	25	19
	#5	9	41	32	31	24
	#6	10	49	38	37	29
	#7	12	71	55	54	42
	#8	14	81	63	62	48
	#9	15	91	71	70	54
	#10	17	103	80	79	61
	#11	19	114	88	87	67
5000 PSI NWC	#3	6	23	17	17	13
	#4	6	30	23	23	17
	#5	8	37	29	28	22
	#6	9	45	34	34	26
	#7	11	64	50	49	38
	#8	12	73	56	56	43
	#9	14	82	63	63	48
	#10	16	93	71	71	54
	#11	17	102	78	78	60

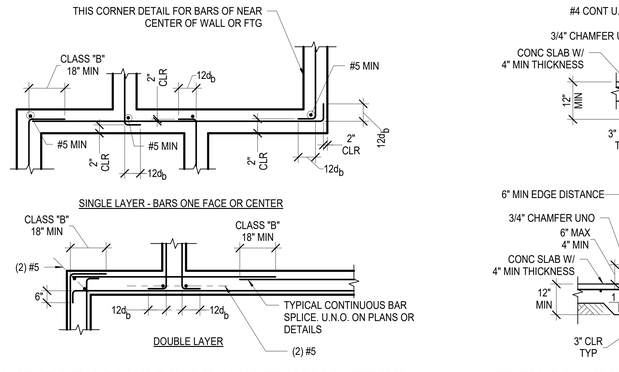


WELD SCHEDULE	
BAR SIZE	MIN WELD LENGTH
#3	3"
#4	3"
#5	3"
#6	4"
#7	5"
#8	5"
#9	6"
#10	6"

NOTES:
1. WELDING SHALL BE WITH LOW HYDROGEN ELECTRODES E90XX AND SHALL CONFORM TO AWS-D1.4.
2. ALL WELDING SHALL BE SUBJECT TO CONTINUOUS INSPECTION.
3. REINFORCING BARS TO BE WELDED SHALL MEET THE REQUIREMENT OF ASTM A706.
4. RADIUS OF REINFORCING BAR = S.
5. THESE ARE SECTIONAL VIEWS. BAR DEFORMATIONS ARE SHOWN ONLY FOR ILLUSTRATIVE PURPOSES.

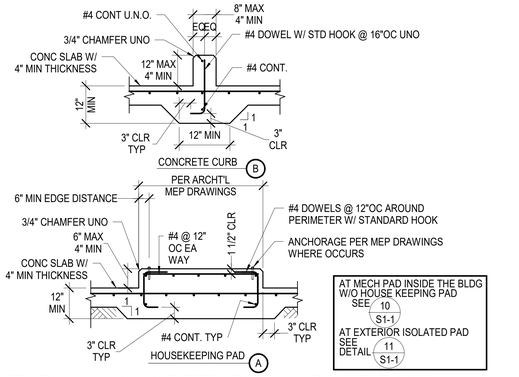
3 S1-1 TYPICAL REINFORCING BAR WELDING

SCALE: N.T.S.



REINF BAR SPLICES AT CONT WALL FTGS INTERSECTIONS

7 S1-1 SCALE: N.T.S.

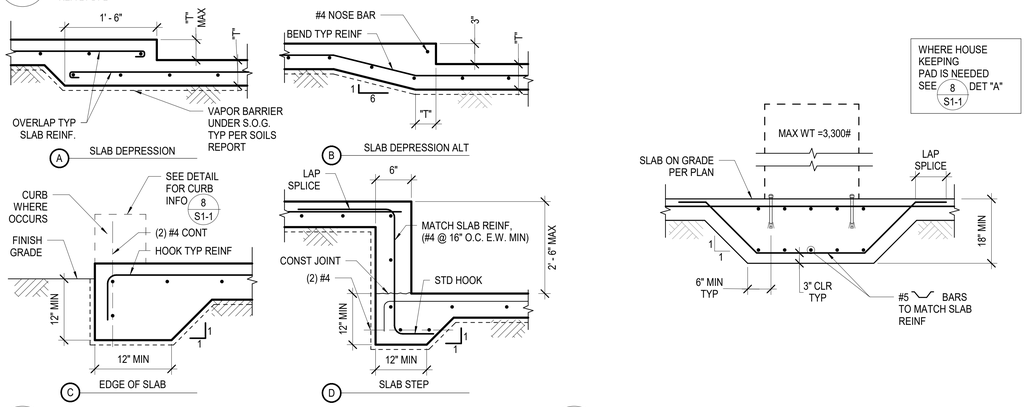


TYPICAL CONCRETE PAD AND CURB ON GRADE

8 S1-1 SCALE: N.T.S.

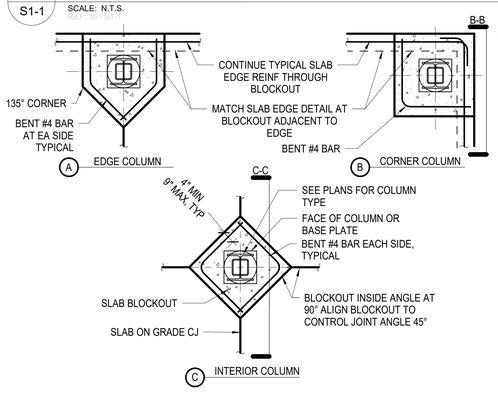
5 S1-1 TYPICAL REINFORCEMENT DETAILS AND DEVELOPMENT LENGTHS

SCALE: N.T.S.



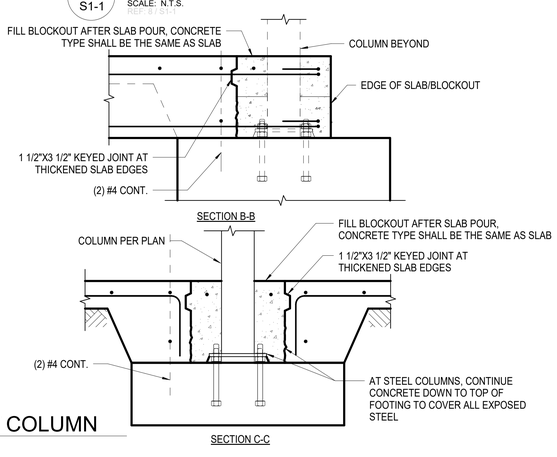
TYPICAL SLAB ON GRADE DETAILS

9 S1-1 SCALE: N.T.S.



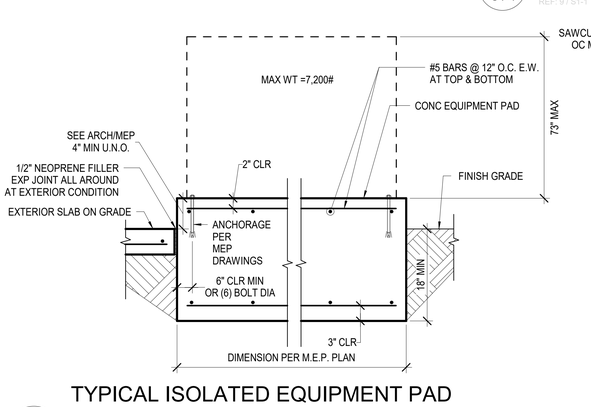
10 S1-1 EQUIPMENT PAD ON GRADE (INTERIOR)

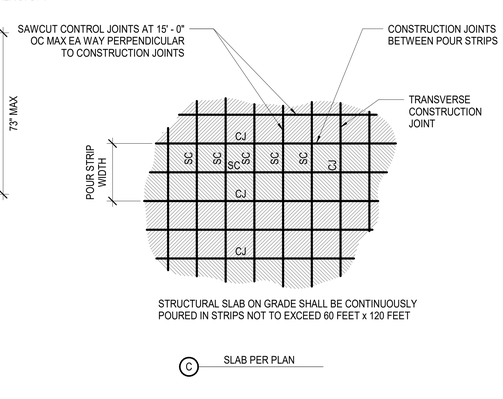
SCALE: N.T.S.



TYPICAL ISOLATED EQUIPMENT PAD (EXTERIOR)

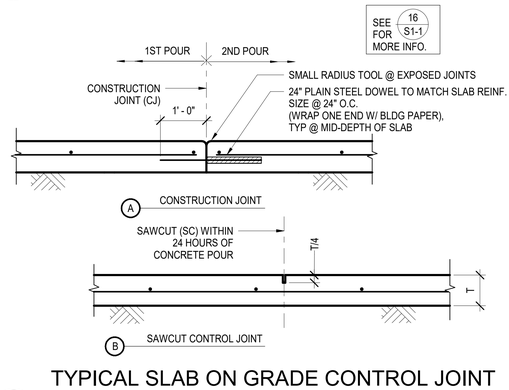
11 S1-1 SCALE: N.T.S.

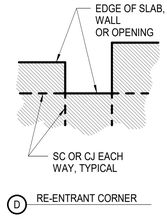




TYPICAL SLAB ON GRADE CONTROL JOINT (FOR SLAB THICKNESS 4" TO 6")

15 S1-1 SCALE: N.T.S.





NOTES:
1. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF VISUALLY EXPOSED CONTROL JOINTS.
2. FOR POURING SEQUENCE OTHER THAN THAT SHOWN ON THESE PLANS, SUBMIT SHOP DRAWINGS TO SEOR FOR REVIEW 7 DAYS PRIOR TO POUR.
3. SEE DETAIL 15 S1-1 FOR SC AND CJ DETAIL.
4. FOR TYPICAL SLAB EDGE DETAILS SEE 9 S1-1

13 S1-1 TYPICAL SLAB ON GRADE BLOCKOUT AT COLUMN

SCALE: N.T.S.

16 S1-1 TYPICAL SLAB ON GRADE CONTROL JOINT

SCALE: N.T.S.

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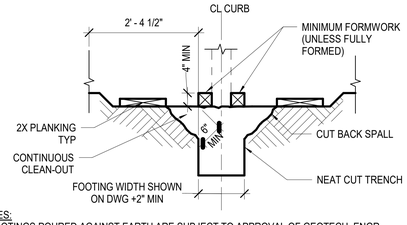
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ENGINEER:

SHEET DESCRIPTION:
TYPICAL REBAR & S.O.G DETAILS

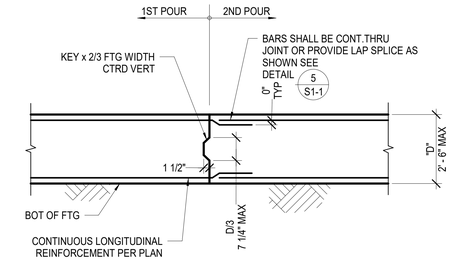
SHEET NO:
S1-1



NOTES:
1. FOOTINGS POURED AGAINST EARTH ARE SUBJECT TO APPROVAL OF GEOTECH. ENGR.
2. FOOTING WIDTHS SHALL NOT BE MORE THAN 4" WIDER THAN SHOWN ON PLAN.
3. FORMWORK NOT PERMITTED BELOW GRADE UNLESS FULLY FORMED.
4. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THE MINIMUM FORMWORK SHOWN ON THE DRAWINGS IS MANDATORY TO ENSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE.
5. CONT CLEAN-OUT STAKES NOT PERMITTED IN THE FTG AREA.
6. AFTER CONCRETE HAS SET, REMOVE LAITANCE AND SCUM.

1 S1-2 FOOTING POURED AGAINST EARTH

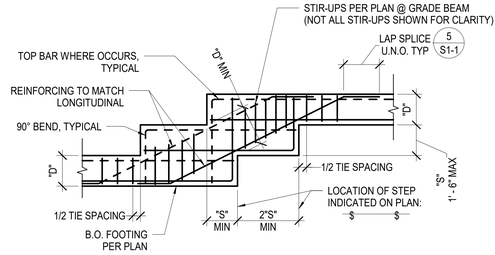
SCALE: N.T.S.



NOTES:
1. PROVIDE ADEQUATE SUPPORT FOR LONGITUDINAL REINF WITHIN 6" OF JT USING FTG TIES, VERT DOWELS OR OTHER MEANS.
2. SECTIONS SHOWN ARE AT CENTER OF FTG IN LONGITUDINAL DIRECTION.

2 S1-2 CONSTRUCTION JOINT AT FOOTING/ GRADE BEAM

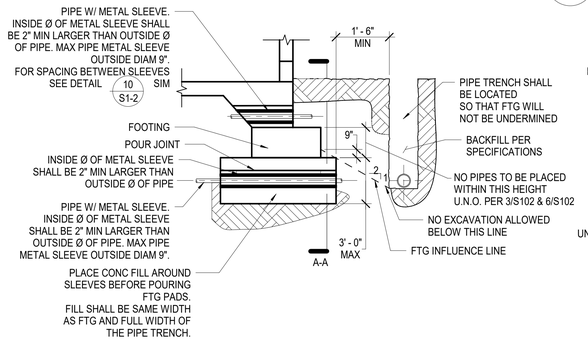
SCALE: N.T.S.



NOTES:
1. FOR FTG REINFORCING SEE PLANS AND DETAILS.
2. VERTICAL WALL DOWELS SHALL EXTEND TO BOTTOM OF FOOTING.
3. TRANSVERSE STEEL NOT SHOWN FOR CLARITY.
4. TWO STEPS ARE SHOWN, DETAIL FOR SINGLE STEP OR ADDITIONAL STEPS IS SIMILAR.

3 S1-2 TYPICAL STEPPED FOOTING GRADE BEAM

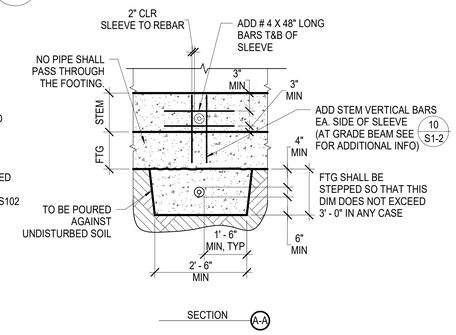
SCALE: N.T.S.



NOTES:
1. CONTRACTOR SHALL COORDINATE ALL PIPE LOCATIONS WITH BUILDING FOUNDATION REQUIREMENTS.
2. IF REQUIREMENTS AS SHOWN CANNOT BE MET, STEP FOOTING PER TYPICAL 'STEPPED FOOTING' DETAIL.
3. REFERENCE CBC SECTION 1805A.4.7

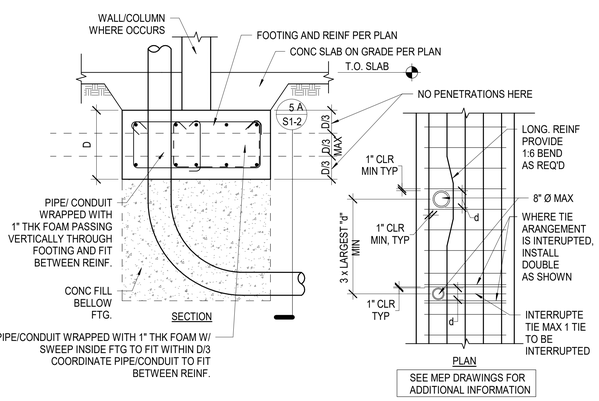
5 S1-2 PIPE TRENCH FOOTING DETAIL

SCALE: N.T.S.



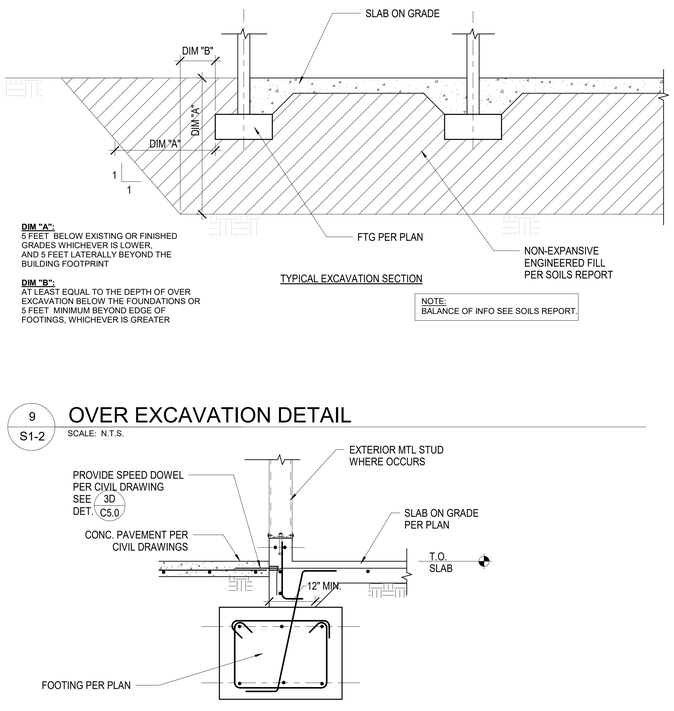
6 S1-2 CONCRETE SLEEVE DETAIL

SCALE: N.T.S.



8 S1-2 PIPE/ CONDUIT SWEEP THRU FOOTING

SCALE: N.T.S.



DIM "A":
5 FEET BELOW EXISTING OR FINISHED GRADES WHICHEVER IS LOWER, AND 5 FEET LATERALLY BEYOND THE BUILDING FOOTPRINT

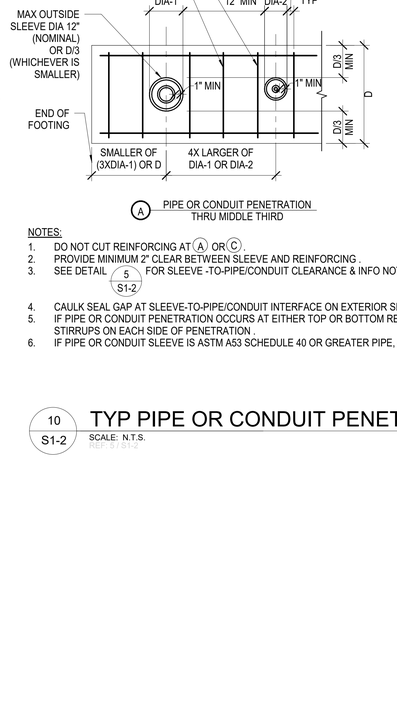
DIM "B":
AT LEAST EQUAL TO THE DEPTH OF OVER EXCAVATION BELOW THE FOUNDATIONS OR 5 FEET MINIMUM BEYOND EDGE OF FOOTINGS, WHICHEVER IS GREATER

TYPICAL EXCAVATION SECTION

NOTE:
BALANCE OF INFO SEE SOILS REPORT.

7 S1-2 OVER EXCAVATION DETAIL

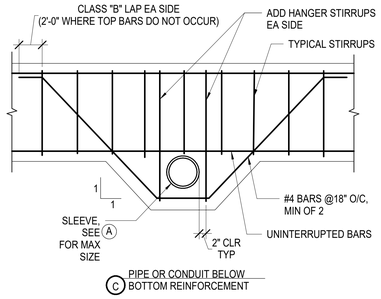
SCALE: N.T.S.



NOTES:
1. DO NOT CUT REINFORCING AT (A) OR (C).
2. PROVIDE MINIMUM 2" CLEAR BETWEEN SLEEVE AND REINFORCING .
3. SEE DETAIL 5 S1-2 FOR SLEEVE -TO-PIPE/CONDUIT CLEARANCE & INFO NOT NOTED.
4. CAULK SEAL GAP AT SLEEVE-TO-PIPE/CONDUIT INTERFACE ON EXTERIOR SIDE OF FOOTING .
5. IF PIPE OR CONDUIT PENETRATION OCCURS AT EITHER TOP OR BOTTOM REBAR SPLICE LOCATION PROVIDE 2 ADDITIONAL SHEAR STIRRUPS FOR A TOTAL OF 4 SHEAR STIRRUPS ON EACH SIDE OF PENETRATION .
6. IF PIPE OR CONDUIT SLEEVE IS ASTM A53 SCHEDULE 40 OR GREATER PIPE, ADDITIONAL STIRRUPS MAY BE ELIMINATED. SLEEVE SHALL BE GALVANIZED.

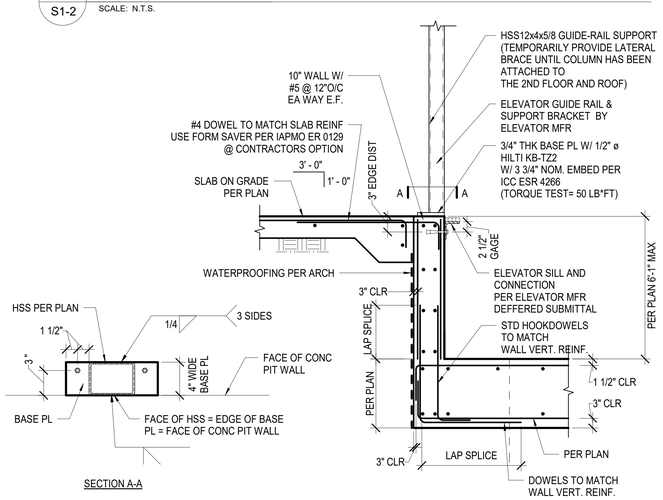
10 S1-2 TYP PIPE OR CONDUIT PENETRATIONS THRU CONTINUOUS FTG

SCALE: N.T.S.



12 S1-2 ELEVATOR PIT DETAIL

SCALE: N.T.S.



13 S1-2 SPEED DOWEL AT BLDG PERIMETER

SCALE: 3/4" = 1'-0"

SIMILAR AT DIFFERENT CONDITIONS

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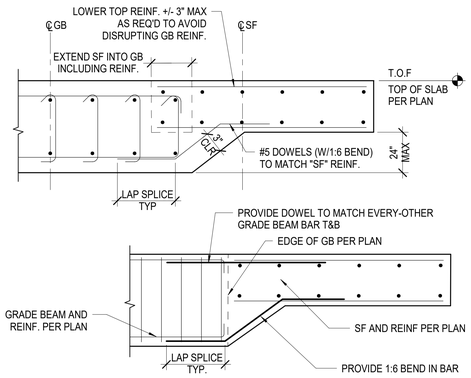
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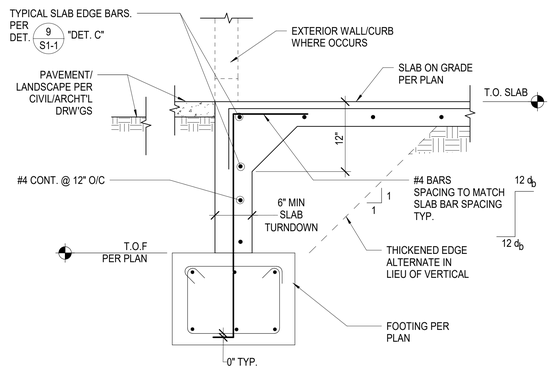
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TYP EXCAVATION & FOOTING DETAILS

SHEET NO:
S1-2



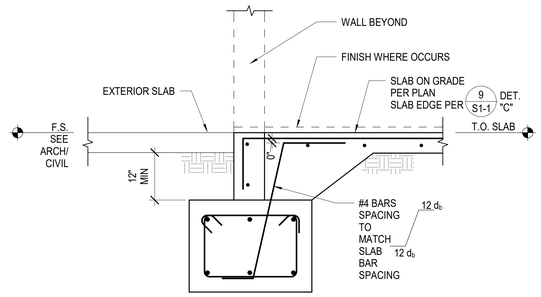
2 S1-3 SPREAD FOOTING AT GRADE BEAM

SCALE: N.T.S.



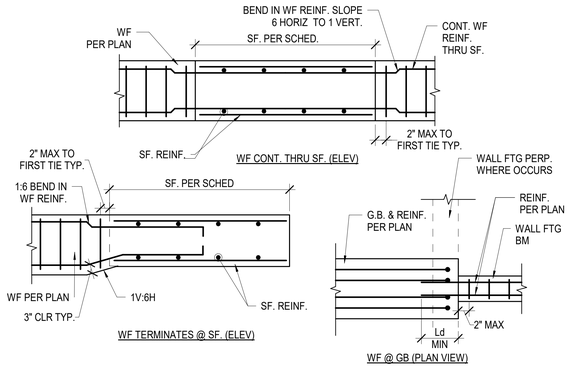
3 S1-3 TYP SLAB TURNDOWN AT DEEPENED FOOTING

SCALE: N.T.S.



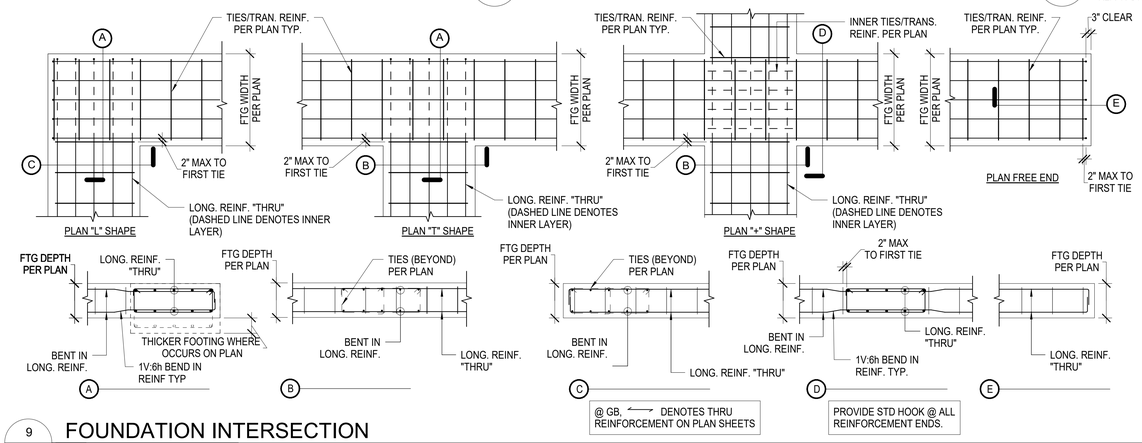
4 S1-3 FOOTING @ OPENING

SCALE: N.T.S.



6 S1-3 WALL FTG SPREAD FTG/GB

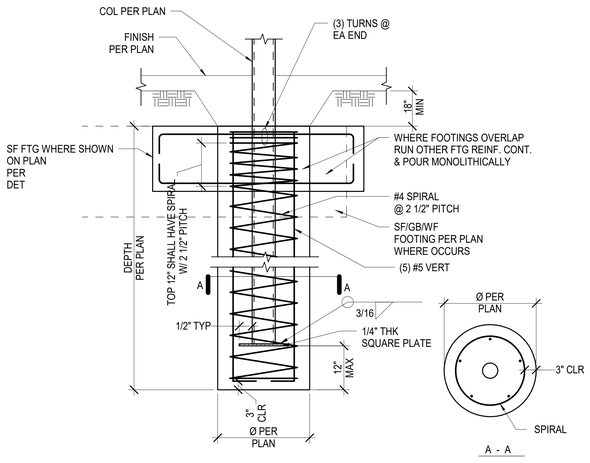
SCALE: N.T.S.



9 S1-3 FOUNDATION INTERSECTION

SCALE: N.T.S.

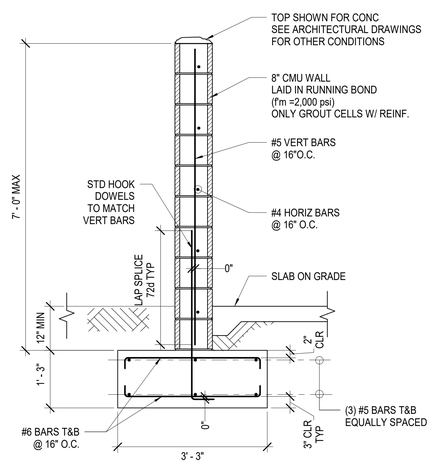
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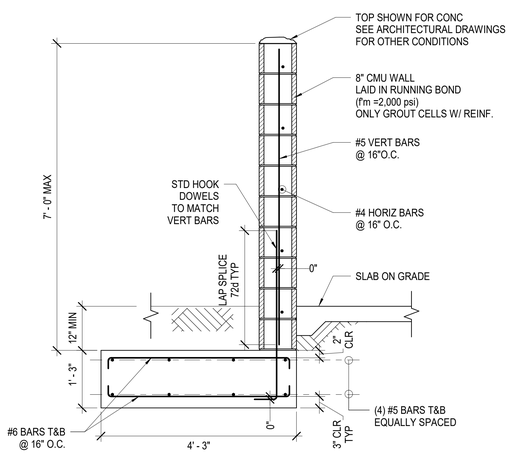


13 S1-3 POLE FOOTING

SCALE: N.T.S.

REF: 1 / S2-1





16 S1-3 TYPICAL FREE-STANDING CMU WALLS

SCALE: 3/4" = 1'-0"

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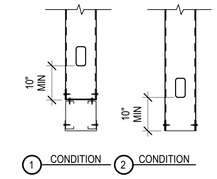
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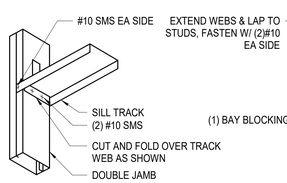
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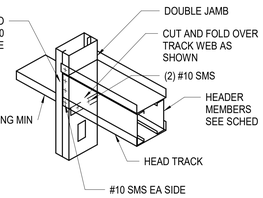
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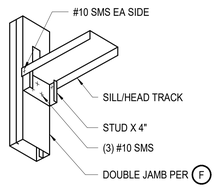


NON-BEARING - HEADER DIRECTLY OVER OPENING

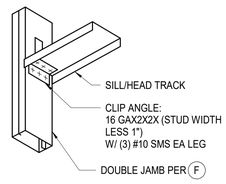


NOTE:
SEE DETAILS D & E FOR ALTERNATE CONNECTION AS CONTRACTORS OPTION.

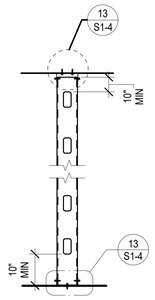




D ALTERNATE

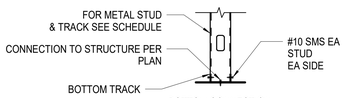


A HEADER DETAIL



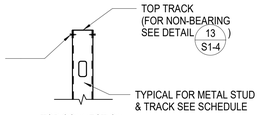
TYPICAL SECTION

B DETAIL

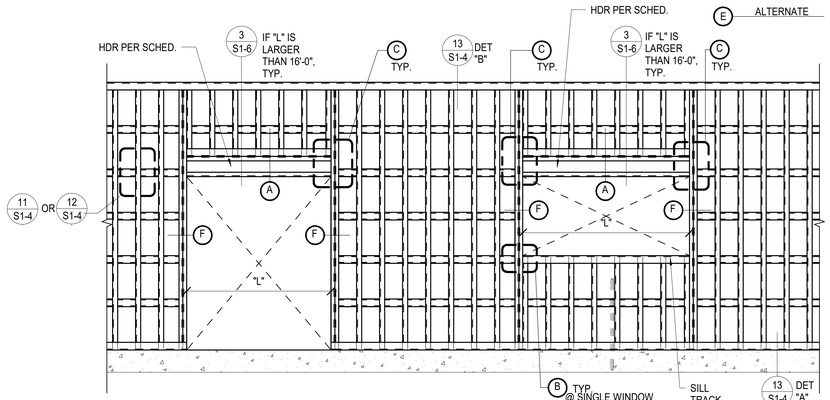


BOTTOM CONNECTION

C DETAIL



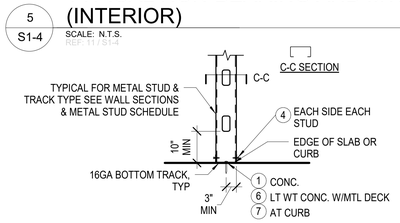
TOP CONNECTION



TYPICAL NON-BEARING AND MTL STUD SCHED. & WALL FRAMING (INTERIOR)

5 S1-4 SCALE: N.T.S.

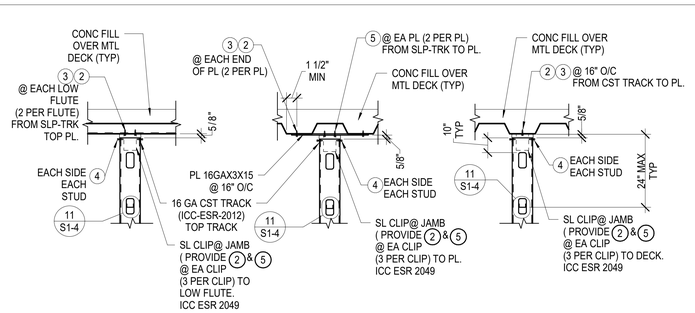
REF: 11 / S1-4



STUD TO BOTTOM TRACK A

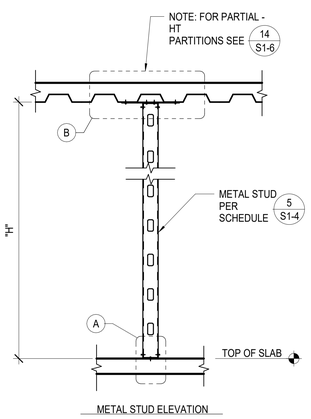
NOTES:

1. FOR STEEL STUD AND TRACK TYPE SEE PLANS, SECTIONS AND METAL STUD SIZE SCHEDULE ON DETAIL 5 S1-4
2. FOR METAL STUD FASTENERS, SEE METAL STUD FASTENER SCHEDULE.
3. ALL POWER DRIVEN FASTENERS TO HAVE A MINIMUM PENETRATION OF 1 1/4".

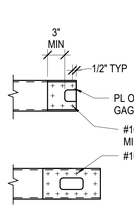


STUD PERPENDICULAR TO STEEL DECK | STUD PARALLEL TO STEEL DECK BETWEEN FLUTES | STUD PARALLEL TO STEEL DECK ON FLUTE

STUD TO DECK DETAIL B



METAL STUD ELEVATION



REINF. OF STUD AT PUNCHOUT C

METAL STUD FASTENER SCHEDULE		
MARK	FASTENERS SIZE & SPACING	REMARKS
1	HILTI 0.157" DIA. X-U SHOT PIN @ 32" O/C W. 1 1/2 " MIN EMBED	ESR-2269
2	HILTI 0.157" DIA. X-U SHOT PIN @COMPOSITE DECK W/ 1 1/2" MIN EMBED	ESR-2269
3	#10 SMS AT ROOF METAL DECK	ESR-1408
4	#10 SHEET METAL SCREW (W/ WAFER HEAD)	ESR-1408
5	#12 SHEET METAL SCREW	ESR-1408
6	HILTI KH-EZ 1/4" X 1.18" EMBED. SCREW ANCHOR @ 24" O/C	ESR-3027
7	5/8" HEADED BOLT @ 32"O/C W/ STD WASHER TYP. (MIN.7"EMBED)	-

PAF: POWER ACTUATED FASTENER (LOW VELOCITY) OR POWER DRIVEN FASTENER HOLES FOR A.B. SHALL BE 1/16" LARGER THAN BOLT SIZE.

NOTES:

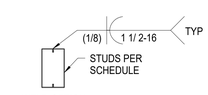
1. MAXIMUM STUD HEIGHT "H" FOR STUDS @ 16" O/C PER SCHEDULE 5 S1-4
2. SEE ARCHITECTURAL FOR OTHER CONDITIONS.
3. LIMIT PER (CBC TABLE 1604A.3)
   L/360 - W/ PLASTER AND STUCCO FINISHES.
   L/240 - W/ OTHER BRITTLE FINISHES.
   L/120 - W/ FLEXIBLE FINISHES.

ALL FRAMING SUPPORTING CASEWORK, OR EQUIPMENT WEIGHING 40 LBS OR MORE SHALL BE 16 GA MINIMUM

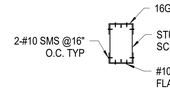
STEEL STUD FLANGE BRACING DETAIL (INTERIOR ONLY)

13 S1-4 SCALE: N.T.S.

REF: 11 / S1-4



WELD OPTION



SCREW OPTION

JAMB STUD SCHEDULE		
MAX OPENING "L" OR COMBINED OPENING L= L(RIGHT) + L (LEFT) AT ADJACENT OPENING	HT < 16'-0" (INTERIOR)	
	STUDS	CONN AT TOP TRACK
L ≤ 6'-0"	(2) 400S162-33	SL400"
	(2) 600S162-33	SL600"
6'-0" ≤ L ≤ 10'-0"	(2) 400S162-33	SL400"
	(2) 600S162-43	SL600"
10'-0" ≤ L ≤ 16'-0"	(2) 400S162-43	SL400"
	(2) 600S162-43	SL600"

NOTES:

1. JAMB STUDS DEPTHS SHALL MATCH TYPICAL WALL STUD DEPTHS.
2. * DENOTES TSN (THE STEEL NETWORK) CLIPS. (ICC-ESR-2049)

SEE DETAIL B ON 13 S1-4 FOR ATTACHMENT.

ALL FRAMING SUPPORTING CASEWORK, OR EQUIPMENT WEIGHING 40 LBS OR MORE SHALL BE 16 GA MINIMUM

F TYP. JAMB SHCEDULE

NOTES:

1. PROVIDE STUDS, TRACKS AND BRACING PER SCHEDULE BELOW:

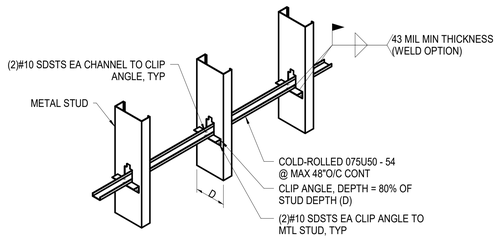
METAL STUD SCHEDULE UNLESS NOTED OTHERWISE ON PLAN REF: STEEL STUD MANUFACTURER'S ASSOCIATION (ESR-3064P)	
TRACK	NOMINAL STUD SIZE
BOTTOM TRACK	16GA W/ 1 1/2" FLANGE (DEPTH TO MATCH STUD)
TOP TRACK	16GA W/ 1 1/2" FLANGE (DEPTH TO MATCH STUD)

MAX HT FOR INTERIOR METAL STUD SIZE (1 5/8" FLANGE WIDTH) @ 16" O/C					
GAUGE	MEMBER WEB DEPTH				
	2 1/2"	3 5/8"	4"	6"	8"
14	11'-5"	17'-5"	18'-10"	26'-2"	33'-4"
16	-	16'-4"	17'-8"	24'-6"	31'-1"
18	-	15'-3"	16'-6"	22'-10"	29'-0"

HEADER BEAM SCHEDULE (INTERIOR NON-BEARING PARTITIONS) MAX WIND = 5PSF		
SPAN "L"	CONDITION	LINTEL SIZE
≤ 4' 0"	DET. A - 2	16 GA TRACK, WIDTH TO MATCH
> 4' 0" ≤ 8' 0"	DET. A - 1	(2) 6"X20 GA METAL STUDS (600S162-33)
> 8' 0" ≤ 12' 0"	DET. A - 1	(2) 6"X18 GA METAL STUDS (600S162-43)
> 12' 0" ≤ 16' 0"	DET. A - 1	(2) 8"X16 GA METAL STUDS (800S162-54)

2. ALL STUDS AND TRACKS SHALL CONFORM TO ASTM A1003.
   a. 18GA AND LIGHTER: MINIMUM YIELD POINT OF 33 KSI
   b. 16GA AND HAVIER: MINIMUM YIELD POINT OF 50 KSI.
   c. ALL STUDS AND TRACKS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) LISTED IN ICC REPORT NO. ESR-3064P. ALL STUDS AND TRACKS SHALL COMPLY WITH ICC REPORT NO. ESR-3064P.
3. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR ON ANGLE (SUCH AS BRACING) TO SQUARELY FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY POSITION UNTIL PROPERLY FASTENED.
4. STUD AND TRACKS SHALL BE ATTACHED BY WELDING AND SHEET METAL SCREWS AS NOTED ON THE DRAWINGS.
5. MANUFACTURER PROVIDED PUNCH-OUTS MAY BE LOCATED ALONG THE CENTERLINE OF THE WEBS OF THE FRAMING MEMBERS. PUNCH-OUTS SHALL HAVE A MINIMUM CENTER-TO-CENTER SPACING OF 24". PUNCH-OUT SHALL HAVE A MAXIMUM WIDTH OF HALF THE MEMBER DEPTH OR 2 1/2", WHICHEVER IS LESS, AND MAXIMUM LENGTH OF 4 1/2".
6. SPLICES IN STUDS AND BRACES SHALL NOT PERMITTED.
7. ALL FRAMING SHALL BE COORDINATED WITH GLAZING MANUFACTURERS, MECHANICAL, ELECTRICAL, PLUMBING AND OTHER TRADES.
8. PROVIDE 0.08" THICK x 1.1" SQUARE OR 1.425" ROUND WASHERS FOR ALL POWDER ACTUATED FASTENERS.
9. LOCATE PUNCHOUTS 10" CLEAR OF CONNECTIONS. IF PUNCH IS CLOSER THAN 10" TO CONNECTION, SEE DETAIL 13 S1-4 DET. "C"

ALL FRAMING SUPPORTING CASEWORK, OR EQUIPMENT WEIGHING 40 LBS OR MORE SHALL BE 16 GA MINIMUM

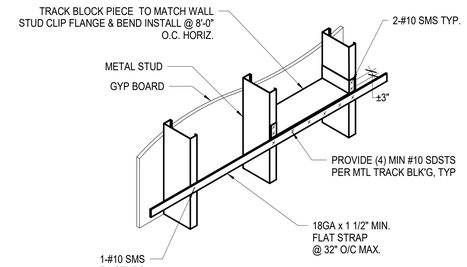


SEE SCHEDULE ON 5 S1-4 FOR METAL STUD & TRACK SIZES

BRIDGING CHANNEL W/ CLIP ANGLE (WITHOUT PLYWOOD/GYP BOARD)

11 S1-4 SCALE: N.T.S.

REF: 5 / S1-4

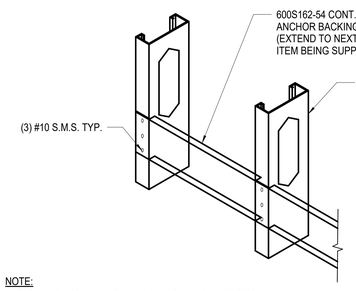


SEE SCHEDULE ON 5 S1-4 FOR METAL STUD & TRACK SIZES

SINGLE FLAT STRAP BRIDGING W/ BLOCKING (WITH PLYWOOD/GYP BOARD ON ONE SIDE)

12 S1-4 SCALE: N.T.S.

REF: 5 / S1-4



NOTE:

1. @ GRAB BARS, MAX LOAD = 250 LBS IN ANY DIRECTION
2. @ OTHER CONDITIONS, MAX VERTICAL/HORIZONTAL LOAD = 80 LBS

BACKING DETAIL

15 S1-4 SCALE: N.T.S.

REF: 11 / S1-4

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

CONSULTANT:

VCA ENGINEERS INC
CIVIL • STRUCTURAL
2151 Michelson Dr. #240
Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

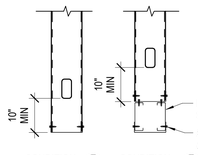
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TYPICAL METAL STUD DETAILS

SHEET NO:

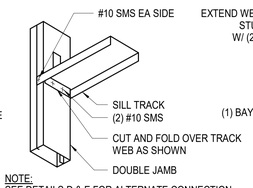
S1-4



CONDITION 2 CONDITION 1

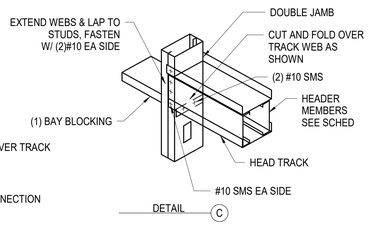
NON-BEARING - HEADER DIRECTLY OVER OPENING

HEADER DETAIL A

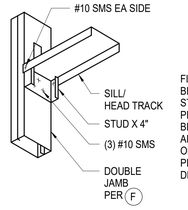


NOTE:
SEE DETAILS D & E FOR ALTERNATE CONNECTION AS CONTRACTORS OPTION.

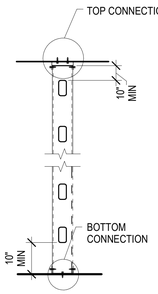
DETAIL B



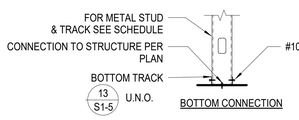
DETAIL C



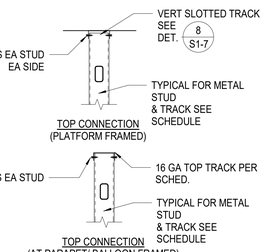
ALTERNATE D



TYPICAL SECTION

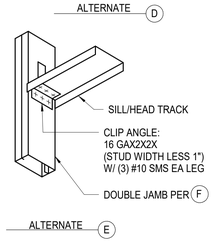


BOTTOM CONNECTION



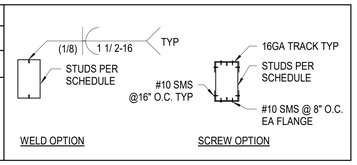
TOP CONNECTION (PLATFORM FRAMED)

TOP CONNECTION (AT PARAPET/ BALLOON FRAMED)



ALTERNATE E

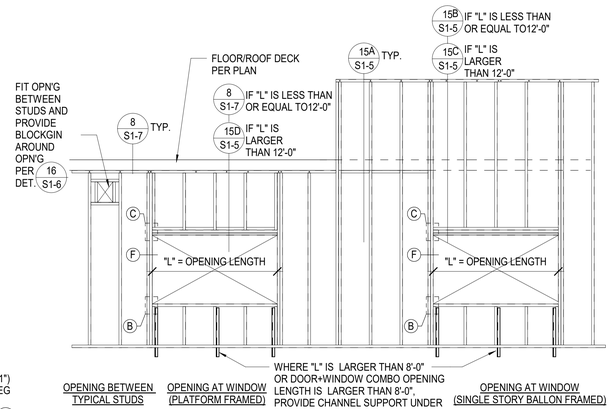
JAMB STUD SCHEDULE		
MAX OPENING "L"	HT ≤ 16'-0"	
	STUDS	CONN AT TOP TRACK
L ≤ 12'-0"	(2) 600S162-54	SL600*



WELD OPTION SCREW OPTION

NOTES:
1. JAMB STUDS DEPTHS SHALL MATCH TYPICAL WALL STUD DEPTHS.
2. * DENOTES TSN (THE STEEL NETWORK) CLIPS. (ICC-ESR-2049)
3. IF "L" IS GREATER THAN 12'-0", THEN IS CONSIDERED A STRIP WINDOW WITH SUSPENDED STUDS. PROVIDE (2)600S162-54 AT EA END OF OPENING.

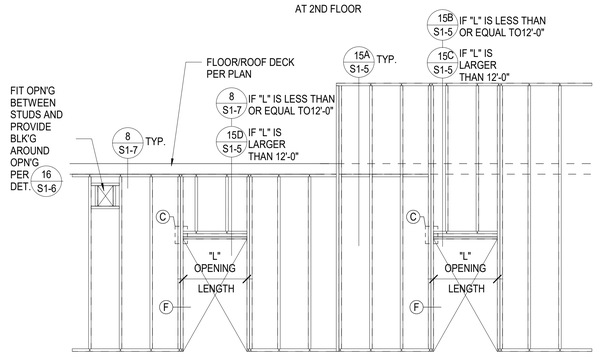
TYP. JAMB SHCEDULE F



OPENING BETWEEN TYPICAL STUDS | OPENING AT WINDOW (PLATFORM FRAMED) | OPENING AT WINDOW (SINGLE STORY BALLON FRAMED)

AT GROUND FLOOR

AT 2ND FLOOR



OPENING BETWEEN TYPICAL STUDS | OPENING AT DOOR (PLATFORM FRAMED) | OPENING AT DOOR (SINGLE STORY BALLON FRAMED)

NOTE:
1. PROVIDE STUDS PER PLAN AND TRACKS AND BRACING PER SCHEDULE BELOW:

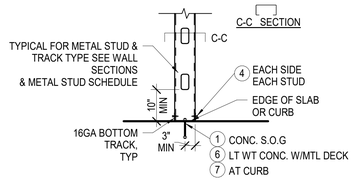
METAL STUD SCHEDULE UNLESS NOTED OTHERWISE ON PLAN REF: STEEL STUD MANUFACTURER'S ASSOCIATION (ESR-3064P)	
TRACK	NOMINAL STUD SIZE
BOTTOM TRACK	16GA W/ 1 1/2" FLANGE (DEPTH TO MATCH STUD)
TOP TRACK	16GA W/ 1 1/2" FLANGE (DEPTH TO MATCH STUD)

HEADER BEAM SCHEDULE UNO ON PLAN (EXTERIOR CURTAIN WALLS) MAX WIND = 43PSF		
SPAN "L"	CONDITION	LINTEL SIZE
≤ 6' 0"	DET. A - 1	(2) 6"X16 GA METAL STUDS (600S162-33)
> 6' 0" ≤ 8' 0"	DET. A - 1	(2) 6"X14 GA METAL STUDS (600S162-43)
> 8' 0" ≤ 12' 0"	DET. A - 1	(2) 6"X12 GA METAL STUDS (600S162-54)

2. ALL STUDS AND TRACKS SHALL CONFORM TO ASTM A1003.
   a. 18GA AND LIGHTER: MINIMUM YIELD POINT OF 33 KSI.
   b. 16GA AND HEAVIER: MINIMUM YIELD POINT OF 50 KSI.
   c. ALL STUDS AND TRACKS SHALL BE MANUFACTURED BY CURRENT MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) LISTED IN ICC REPORT NO. ESR-3064P. ALL STUDS AND TRACKS SHALL COMPLY WITH ICC REPORT NO. ESR-3064P.
3. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY OR ON ANGLE (SUCH AS BRACING) TO SQUARELY FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD FIRMLY POSITION UNTIL PROPERLY FASTENED.
4. STUD AND TRACKS SHALL BE ATTACHED BY WELDING AND SHEET METAL SCREWS AS NOTED ON THE DRAWINGS.
5. MANUFACTURER PROVIDED PUNCH-OUTS MAY BE LOCATED ALONG THE CENTERLINE OF THE WEBS OF THE FRAMING MEMBERS. PUNCH-OUTS SHALL HAVE A MINIMUM CENTER-TO-CENTER SPACING OF 24". PUNCH-OUT SHALL HAVE A MAXIMUM WIDTH OF HALF THE MEMBER DEPTH OR 2 1/2", WHICHEVER IS LESS, AND MAXIMUM LENGTH OF 4 1/2".
6. SPLICES IN STUDS AND BRACES SHALL NOT PERMITTED.
7. ALL FRAMING SHALL BE COORDINATED WITH GLAZING MANUFACTURERS, MECHANICAL, ELECTRICAL, PLUMBING AND OTHER TRADES.
8. NOT USED.
9. LOCATE PUNCHOUTS 10" CLEAR OF CONNECTIONS.
10. PROVIDE BRIDGING PER DET 11 / S1-4 OR 12 / S1-4 AS APPLICABLE.

TYPICAL NON-BEARING AND MTL STUD SCHED.& WALL FRAMING (EXTERIOR)

5 S1-5 SCALE: N.T.S.



A STUD TO BOTTOM TRACK

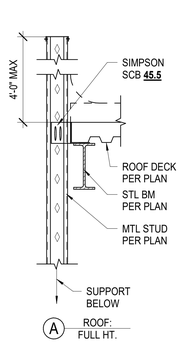
METAL STUD FASTENER SCHEDULE		
MARK	FASTENERS SIZE & SPACING	REMARKS
1	5/8" X 12" HEADED BOLT @ 32"O/C W/ STD WASHER TYP. (MIN.7"EMBED)	-
2	-	-
3	#10 SMS AT ROOF METAL DECK (2 PER LOW FLUTE)	ESR-1408
4	#10 SHEET METAL SCREW	ESR-1408
5	-	-
6	HILTI KH-EZ 3/8" X 2" EMBED. SCREW ANCHOR @ 24" O/C	ESR-3027
7	5/8" X 12" HEADED BOLT @ 32"O/C W/ STD WASHER TYP. (MIN.7"EMBED)	-

HOLES FOR A.B. SHALL BE 1/16" LARGER THAN BOLT SIZE.

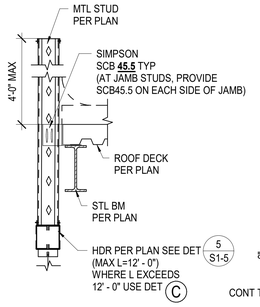
NOTES:
1. MAXIMUM STUD HEIGHT "H" FOR STUDS @ 16" O/C PER SCHEDULE 5 S1-5
2. SEE ARCHITECTURAL FOR OTHER CONDITIONS.
3. LIMIT PER (CBC TABLE 1604A.3)
   L/360 - W/ PLASTER AND STUCCO FINISHES.
   L/240 - W/ OTHER BRITTLE FINISHES.
   L/120 - W/ FLEXIBLE FINISHES.
4. STUDS CARRYING EQUIPMENT OR CASEWORK WEIGHING 40 LBS OR MORE SHALL BE 16GA MIN.
5. LOCATE PUNCHOUTS 10" CLEAR OF CONNECTIONS.

STEEL STUD BOTTOM CONNECTION (EXTERIOR ONLY)

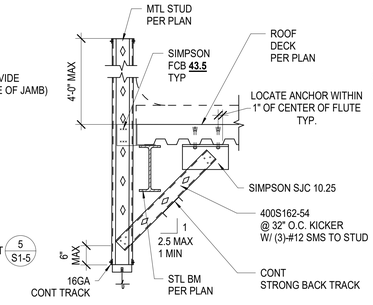
13 S1-5 SCALE: N.T.S.



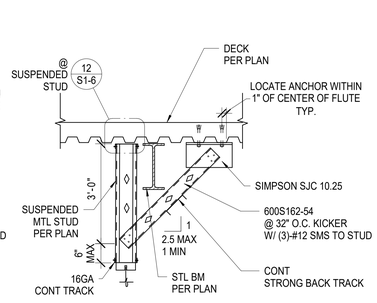
A ROOF: FULL HT.



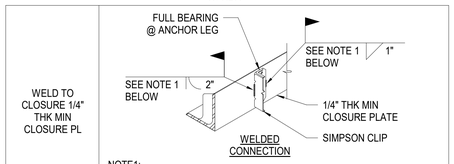
B ROOF: WINDOW OPENING LENGTH < 12' - 0" W/ HDR



C ROOF: WINDOW OPENING LENGTH > 12'-0"



D ROOF/FLOOR (PLATFORM FRAMED): WINDOW OPENING LENGTH > 12'-0"



NOTE1:
THROAT SIZE OF COMPLETED WELD SHALL BE EQUAL TO OR GREATER CLIP THICKNESS

SIMPSON SCB 45.5 (ICC ESR 4294)	W/ (3)-#14 SHOULDERED SCREWS INTO STUD & WELD TO CLOSURE 1/4" THK MIN CLOSURE PL
SIMPSON FCB 43.5 (ICC ESR 4294)	W/ (6)-#12 SMS INTO STUD & WELD TO CLOSURE 1/4" THK MIN CLOSURE PL

SIMPSON SJC 10.25 (ICC ESR 4294)	W/ (6)-#10 TO STUD & (2)-3/8"ø TITEN HD W/ 2 1/2" NOM. EMBED PER ICC ESR 2713
STRONG BACK	400S162-54 W/ (2)-#10 SMS TO EA BRACE IF BRACE EXCEEDS 9' - 0" LONG

TYPICAL EXT WALL CONNECTION TO BLDG

15 S1-5 SCALE: N.T.S.

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Tel. 949.679.0870
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Project No.: J908

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
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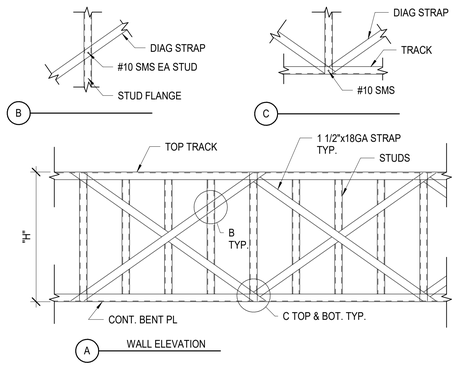
No.	Rev. Date	Description

JOB NO: 22029.01
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SHEET DESCRIPTION:
TYPICAL METAL STUD DETAILS

SHEET NO:

S1-5

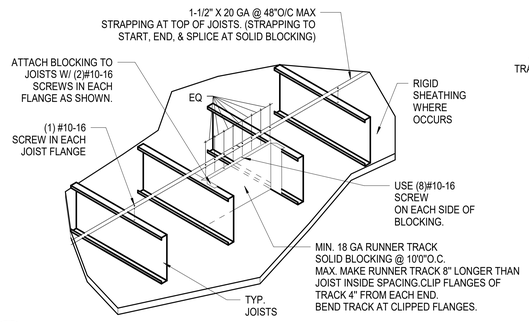


1 S1-6 METAL STUD WALL IN-PLANE BRACING

SCALE: N.T.S.

REF: 3 / S1-6

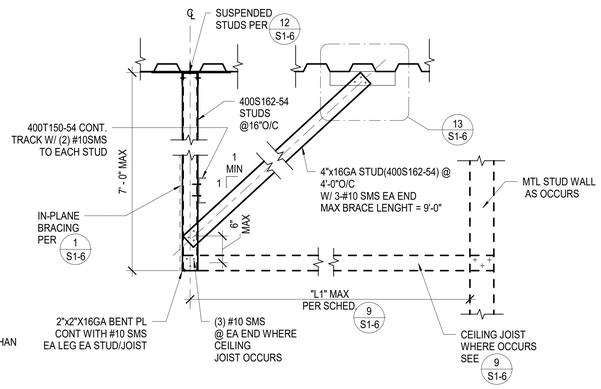
BLOCKING NOTE:	STRAP NOTE:
PLACE SOLID BLOCKING AT ENDS OF FLOOR SYSTEM, ADJACENT TO ALL OPENINGS, AND AT 10'-0"O.C. MAX.	TOP STRAP NOT REQ'D. IF CONTINUOUSLY ATTACHED RIGID SHEATHING IS USED. TEMPORARY BRACING OF TOP FLANGE DURING CONSTRUCTION MAY BE REQ'D.



2 S1-6 CEILING JOISTS FLANGE BRACING

SCALE: N.T.S.

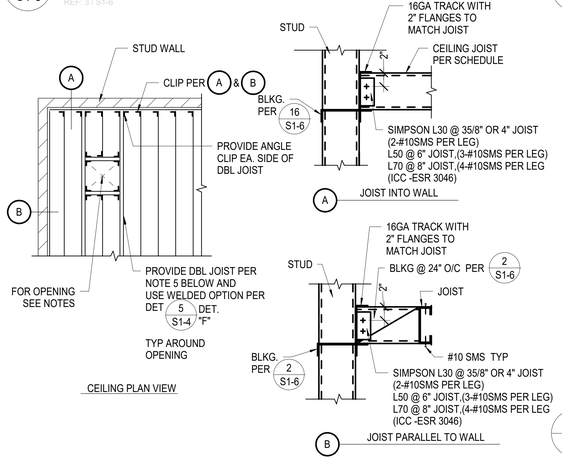
REF: 9 / S1-6



3 S1-6 STUD BRACING (INTERIOR ONLY)

SCALE: N.T.S.

REF: 5 / S1-4



INTERIOR METAL CEILING JOIST SCHEDULE					
NOMINAL SIZE	SSMA PRODUCT IDENTIFICATION	Ixx(IN⁴)	Sxx(IN³)	SPACING (IN)	MAXIMUM SPAN (L1)
3 5/8"x20GA	362S162-33	0.551	0.304	16	8'-6"
4"x18GA	400S162-43	0.892	0.446	16	9'-6"
6"x18GA	600S162-43	2.316	0.772	16	11'-0"
8"x18GA	800S162-43	4.633	1.158	16	12'-0"

NOTES:

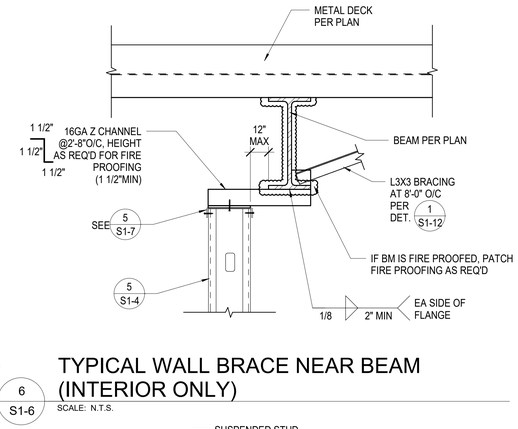
1. JOIST AND TRACK DESIGNATIONS ARE BASED ON STEEL STUD MANUFACTURER'S ASSOCIATION (ICC ER-3064P).
2. DESIGN LOADS:
   DEAD LOAD = 20 PSF
3. SEE TYP. CEILING JOIST FRAMING DETAIL 10 S1-6
4. WHERE JOIST IS CUT, PROVIDE DOUBLE JOIST TO ADJ. CEILING JOIST NEXT TO CUT JOIST (DO NOT CUT MORE THAN ONE JOIST).
5. SEE DETAIL 2 S1-6 FOR BRACING REQUIREMENTS.

SEE DET 15 S1-7
FOR TYP EXTERIOR CEILING

9 S1-6 METAL CEILING JOIST SCHEDULE (INTERIOR ONLY)

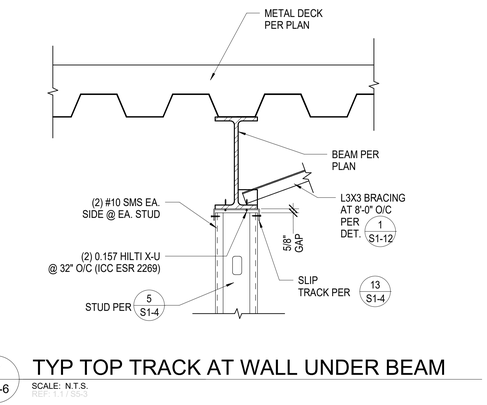
SCALE: N.T.S.

REF: 3 / S1-6



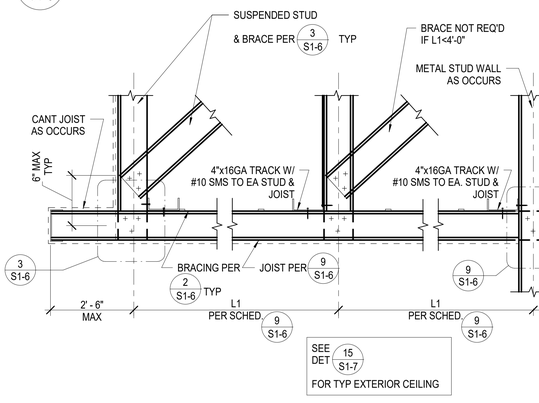
6 S1-6 TYPICAL WALL BRACE NEAR BEAM (INTERIOR ONLY)

SCALE: N.T.S.



7 S1-6 TYP TOP TRACK AT WALL UNDER BEAM

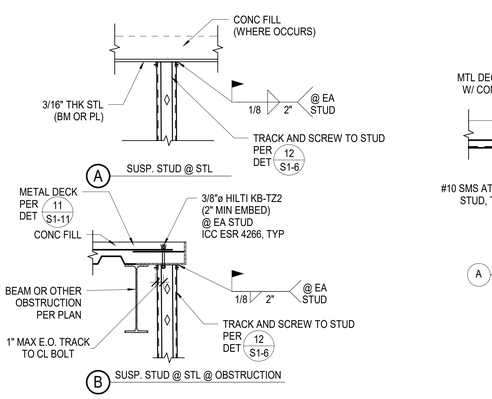
SCALE: N.T.S.



10 S1-6 INTERIOR CEILING FRAMING

SCALE: N.T.S.

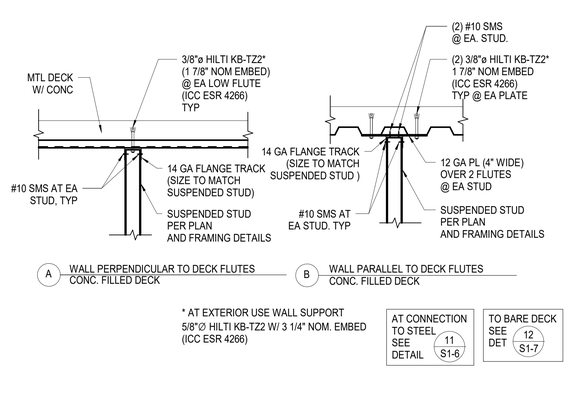
REF: 9 / S1-6



11 S1-6 SUSPENDED STUD AT STEEL

SCALE: N.T.S.

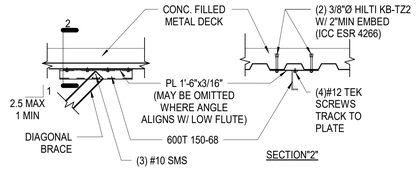
REF: 12 / S1-6

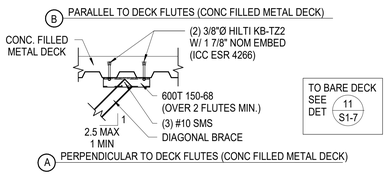


12 S1-6 SUSPENDED STUD TO METAL DECK DETAIL

SCALE: N.T.S.

REF: 15 / S1-5

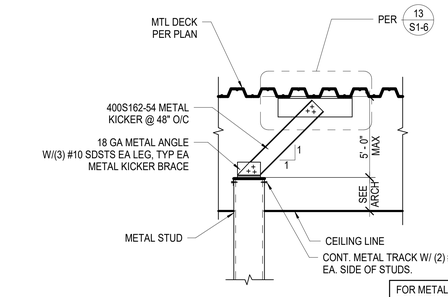




13 S1-6 WALL BRACE TO DECK

SCALE: N.T.S.

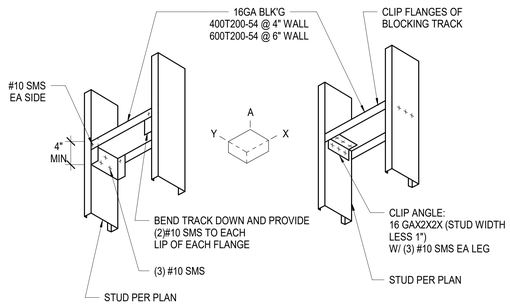
REF: 3 / S1-6



14 S1-6 NON-LOAD BEARING INTERIOR WALL FRAMED TO CEILING W/ DIAGONAL KICKER

SCALE: N.T.S.

REF: 13 / S1-4



16 S1-6 NON-STRUCTURAL BLOCKING

SCALE: N.T.S.

REF: 1 / S1-5

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SHEET DESCRIPTION:
TYPICAL METAL STUD DETAILS

SHEET NO:

S1-6

DESIGNATION AS FOLLOWS:

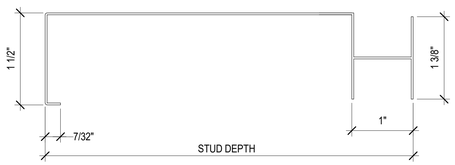
600 S 250 - 54

- 600 — MEMBER DEPTH, "D" (E.G. 600 X 1/100 = 6.00 IN)
- S — SECTION TYPE (S=STUD, Z=ZEE PURLIN, F=FURRING/HAT CHANNEL AND T=TRACK)
- 250 — FLANGE WIDTH, "W" (E.G. 250 X 1/100 = 2.50 IN)
- 54 — MATERIAL THICKNESS, "T" (E.G. 54 MILS = 0.054 IN)

NOTES:
1. STUDS AND TRACKS SHALL BE PER STEEL STUD MANUFACTURER'S ASSOCIATION (SSMA), PER ICC ER-3064P.
2. STUD AND TRACK SECTION PROPERTIES SHALL MEET OR EXCEED THE VALUES LISTED IN THE LATEST SSMA CATALOG. MINIMUM SECTION PROPERTIES ARE LISTED IN DETAIL 13/S1-7

1 S1-7 TYPICAL COLD-FORMED STEEL MEMBER PROPERTIES

SCALE: N.T.S.

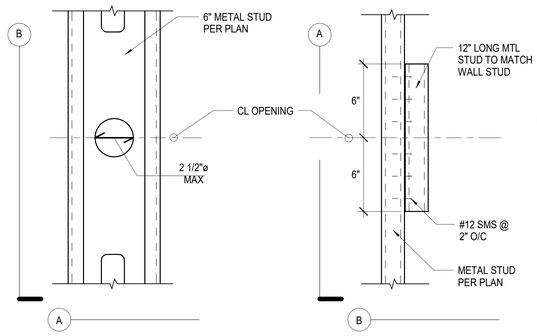


4" STEEL C-H STUD: DESIGN THICKNESS = 0.0359 in
AREA = 0.3433 in2/
Ix = 0.730 in4/
Sx = 0.318 in3/

6" STEEL C-H STUD: DESIGN THICKNESS = 0.0359 in
AREA = 0.6364 in2/
Ix = 3.4 in4/
Sx = 1.094 in3/

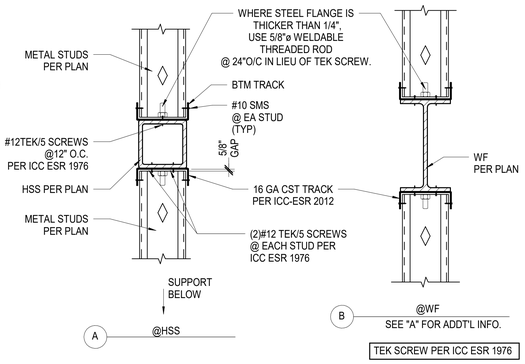
2 S1-7 COLD FORMED STEEL STUD AER-09038

SCALE: N.T.S.



3 S1-7 REINFORCING OF OPENING IN METAL STUD FOR PLUMBING

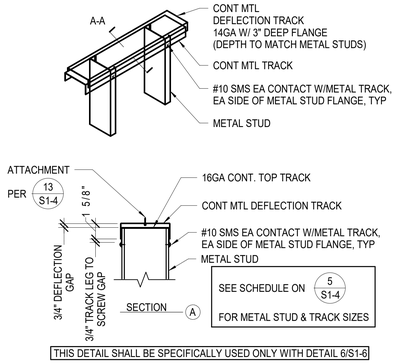
SCALE: N.T.S.



4 S1-7 METAL STUD TO HSS BEAM CONNECTION (SIM @WF)

SCALE: N.T.S.

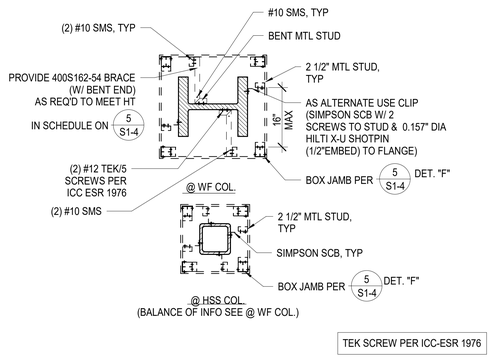
REF: T4 / S5-1



5 S1-7 DEFLECTION TRACK ASSEMBLY DOUBLE DEFLECTION TRACK

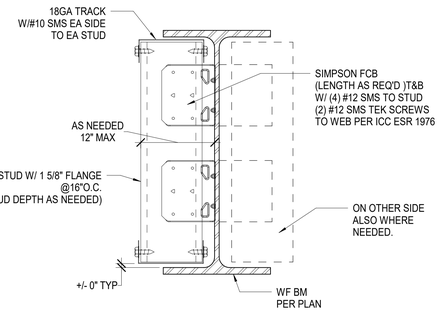
SCALE: N.T.S.

REF: 6 / S1-6



6 S1-7 METAL STUD COLUMN ENCLOSURE

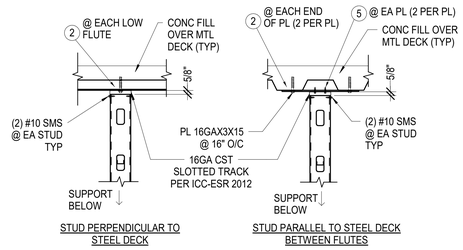
SCALE: N.T.S.



7 S1-7 WF BEAM WEB FILLER

SCALE: N.T.S.

METAL STUD FASTENER SCHEDULE		
MARK	FASTENERS SIZE & SPACING	REMARKS
2	HILTI KH-EZ 3/8"X2 1/2"EMBED. @COMPOSITE DECK	ESR-3027
5	#12 SHEET METAL SCREW	ESR-1408



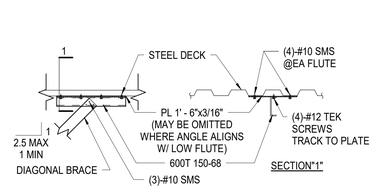
8 S1-7 EXTERIOR STUD WALL TO BOT. OF DECK

SCALE: N.T.S.

SECTION DESIGNATION	DESIGN THICKNESS (IN)	FY (KSI)	AREA (IN^2)	IX (IN^4)	SX (IN^3)	IY (IN^4)
250S162-68	0.0713	50	0.443	0.450	0.360	0.162
250T150-54	0.0566	50	0.311	0.368	0.273	0.072
250T200-54	0.0566	50	0.367	0.466	0.346	0.157
362S162-43	0.0451	33	0.340	0.710	0.392	0.127
362S162-54	0.0566	50	0.422	0.873	0.481	0.154
362S162-68	0.0713	50	0.524	1.069	0.590	0.186
362T150-54	0.0566	50	0.374	0.823	0.431	0.080
362T200-54	0.0566	50	0.431	1.024	0.536	0.177
400S162-43	0.0451	33	0.357	0.892	0.446	0.131
400S162-54	0.0566	50	0.443	1.098	0.549	0.159
400S168-68	0.0713	50	0.550	1.346	0.673	0.192
400T150-54	0.0566	50	0.396	1.025	0.489	0.082
400T200-54	0.0566	50	0.452	1.268	0.604	0.182
600S162-33	0.0346	33	0.344	1.793	0.598	0.116
600S162-43	0.0451	33	0.447	2.316	0.772	0.148
600S162-54	0.0566	50	0.556	2.860	0.953	0.180
600S162-68	0.0713	50	0.693	3.525	1.175	0.218
600T150-54	0.0566	50	0.509	2.611	0.843	0.091
600T200-54	0.0566	50	0.565	3.145	1.015	0.203
800S162-43	0.0451	33	0.537	4.633	1.158	0.160
800S162-54	0.0566	50	0.670	5.736	1.434	0.194
800S162-68	0.0713	50	0.836	7.089	1.772	0.235
800T150-54	0.0566	50	0.622	5.214	1.272	0.096
800T200-54	0.0566	50	0.679	6.152	1.501	0.218

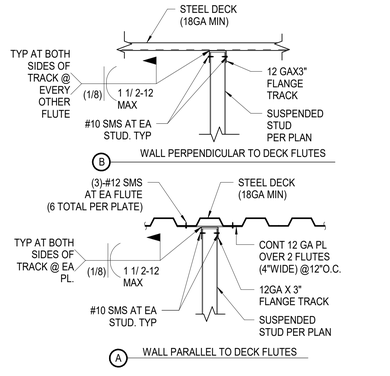
13 S1-7 METAL STUD MINIMUM SECTION PROPERTIES

SCALE: N.T.S.



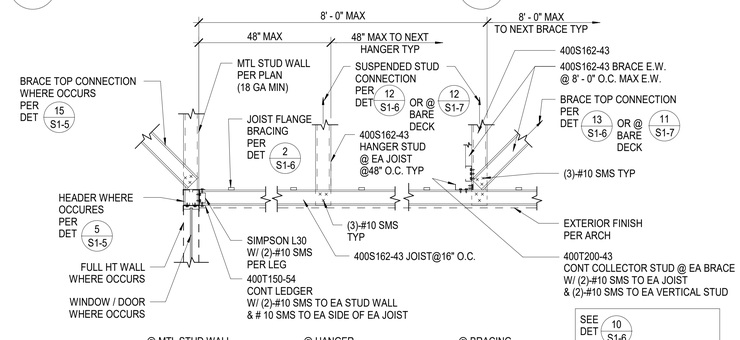
11 S1-7 WALL BRACE @ BARE DECK

SCALE: N.T.S.



12 S1-7 SUSPENDED STUD @ BARE DECK

SCALE: N.T.S.



15 S1-7 EXTERIOR CEILING FRAMING

SCALE: N.T.S.

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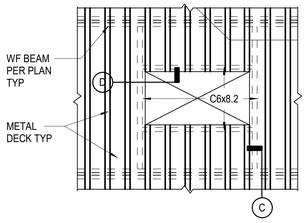
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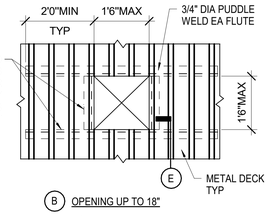
SHEET DESCRIPTION:
TYPICAL METAL STUD DETAILS

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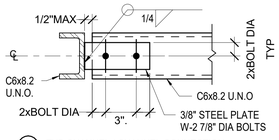
S1-7



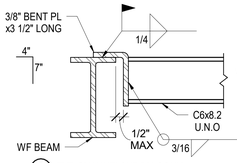
A OPENING GREATER THAN 18" TO 60"



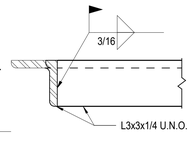
B OPENING UP TO 18"



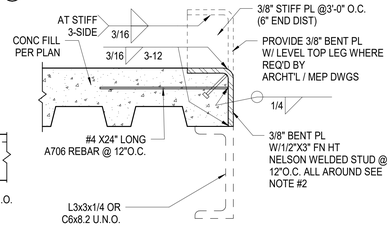
D TYP CHANNEL / CHANNEL CONNECTION



C TYP CHANNEL/WF BM CONN



E TYP ANGLE / ANGLE CONN

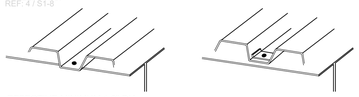


F TYP BENT PL / ANGLE CONN AT ROOF

NOTES:
1. FRAMING AROUND DECK OPENINGS TO BE FURNISHED AND INSTALLED BY STRUCTURAL STEEL CONTRACTOR.
2. PROVIDE CONT BENT PLATE ALL AROUND OPENINGS AT ROOF EXHAUST FAN, DUCT & PIPE PENETRATIONS, GRAVITY RELIEF VENT, & WHERE SHOWN ON MEP DRAWINGS.
3. FOR MINOR OPENINGS SEE DETAIL

1 S1-8 TYP FRAMING AT OPENINGS IN STEEL DECK

SCALE: N.T.S.



A ROOF DECK PUDDLE WELD

B DECK PLUG WELD

WELDS TO SUPPORT



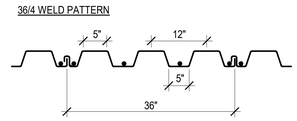
WELD CLINCH FIRST TO GET CONTACT OF LIPS - 1 1/2" LONG WELD MUST ENGAGE TOP OF INNER LEG PER SCHEDULE

C TOP SEAM

SIDE LAP FASTENING

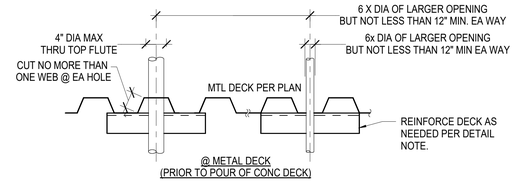
3 S1-8 TYP. METAL DECK WELDING / PATTERN

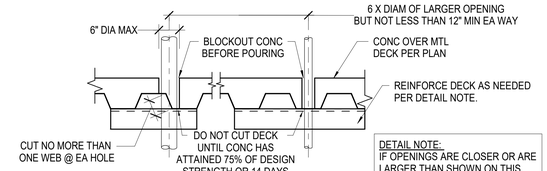
SCALE: N.T.S.



4 S1-8 PIPE PENETRATIONS AT DECK WITH FILL

SCALE: N.T.S.

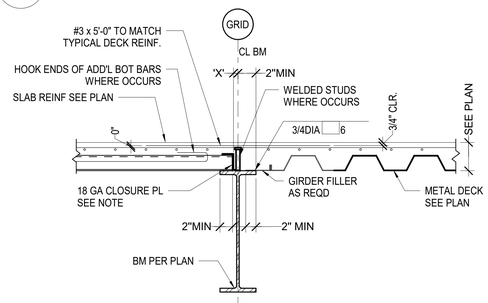




DETAIL NOTE:
IF OPENINGS ARE CLOSER OR ARE LARGER THAN SHOWN ON THIS DETAIL, OR IF DECK WEB IS CUT, THEN REINFORCE DECK PER TYPICAL FRAMING OPENING IN STL DECK PER 1 / S1-8

5 S1-8 TYP METAL DECK WELDING

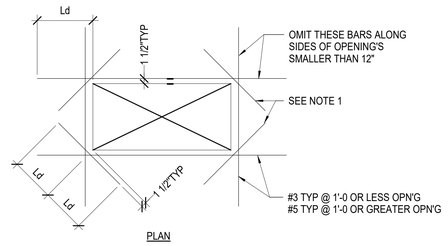
SCALE: N.T.S.



NOTE:
AT LOCATIONS WHERE CLEARANCE 'X' TO STUD IS LESS THAN 1 1/2", PROVIDE CLOSURE BELOW HIGH FLUTES ONLY AND PLACE STUDS ADJACENT TO LOW FLUTES.

7 S1-8 TYP SLAB ON METAL DECK OPENING

SCALE: N.T.S.

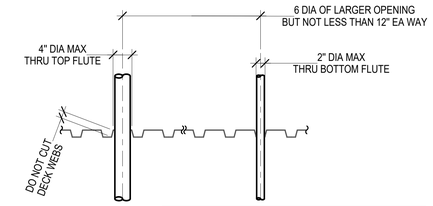


PLAN

NOTES:
1. PROVIDE (2)-#3 X 5' - 0" AT ALL RE-ENTRANT CORNERS AND AT ALL OPENINGS GREATER THAN 6' - 0" SUCH AS ELEVATOR, STAIR OPENINGS AND AIR SHAFTS.
2. ALL OPENINGS LARGER THAN 2' - 0" SQ REQUIRE PERIMETER SUPPORT AND ARE TO BE PER PLAN. WHERE PLAN DOES NOT SHOW SUPPORT SIZES/FRAMING, SEE DETAIL 1 / S1-8 FOR TYPICAL OPENING DETAIL AND FRAMING.

8 S1-8 PIPE PENETRATIONS AT DECK W/O FILL

SCALE: N.T.S.

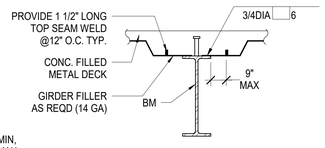


IF OPENINGS ARE CLOSER OR LARGER THAN SHOWN, REINFORCE DECK PER TYP OPENINGS IN METAL DECK DETAIL 1 / S1-8

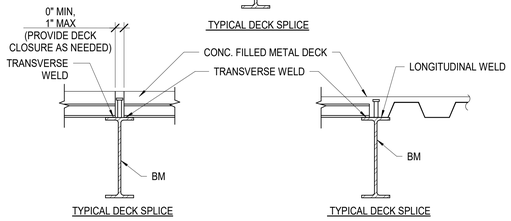
FOR PENETRATIONS AT DECKS THAT ARE CONCRETE FILLED METAL DECK, SEE DETAIL 4 / S1-8

9 S1-8 METAL DECK TRANSITION

SCALE: N.T.S.



TYPICAL DECK SPLICE



TYPICAL DECK SPLICE TYPICAL DECK SPLICE

METHOD OF CONNECTIONS:

1. ROOF DECK:
   - A. STEEL DECK SHALL BE FASTENED TO STEEL FRAMING AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS BY MINIMUM (4) 3/4" DIAMETER FUSION (PUDDLE) WELDS EACH PANEL. WHEN TWO PANELS ABUT, EACH PANEL SHALL BE SO ATTACHED.
   - B. SIDESEAMS SHALL BE AS NOTED ON DECK SCHEDULE ON THE FRAMING PLAN.
   - C. AT ALL LONGITUDINAL SUPPORTS AND MEMBERS PARALLEL TO FLUTES, FASTEN WITH 3/4" DIAMETER FUSION (PUDDLE) WELDS @ 12"O/C
2. FLOOR:
   - A. STEEL DECK SHALL BE FASTENED TO STEEL FRAMING AT ENDS OF UNITS AND AT ALL INTERMEDIATE SUPPORTS BY (4) 3/4" DIA. FUSION (PUDDLE) WELDS EACH PANEL. WHEN TWO PANELS ABUT, EACH PANEL SHALL BE SO ATTACHED.
   - B. SIDESEAMS SHALL BE AS NOTED ON DECK SCHEDULE ON THE FRAMING PLAN.
   - C. AT ALL LONGITUDINAL SUPPORTS AND MEMBERS PARALLEL TO FLUTES, FASTEN WITH 3/4"Ø FUSION (PUDDLE) WELDS @ 12" O/C

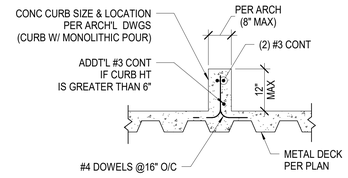
NOTES:
1. PLACE REINFORCEMENT 3/4" CLEAR FROM TOP OF CONCRETE.
2. SEE DET. 9 / S1-8 FOR METAL DECK TRANSITION.
3. SEE DET. 13 / S1-11 FOR TYPICAL WELDED STUD DETAIL FOR WELDED HEADED STUDS.
4. NOT USED.
5. SEE DET. 9 / S1-10 FOR TYPICAL DECK SUPPORT @ COLUMN
6. NOT USED.
7. SEE DET. 1 / S1-11 FOR TYP. ELEVATOR OPENING.
8. SEE DET. 2 / S1-11 FOR SLOPED DECK TO STEEL BEAM.
9. SEE DET. 5 / S1-8 FOR DECK WELD/SIDE LAP DETAIL.
10. SEE DET. 3 / S1-8 FOR WELD / PATTERN.
11. THE FIRST SHEET OF STEEL DECKING ADJACENT AND PARALLEL TO SLRS MEMBERS (ON ONE OR BOTH SIDES AS APPLICABLE) ARE REQUIRED TO BE A FULL WIDTH SHEET

13 S1-8 TYPICAL METAL DECK CONNECTION & PROPERTIS

SCALE: N.T.S.

16 S1-8 TYPICAL CURB DERAIL AT STUD WALL

SCALE: N.T.S.



STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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CONSULTANT:

VCA ENGINEERS INC
CIVIL • STRUCTURAL
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Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

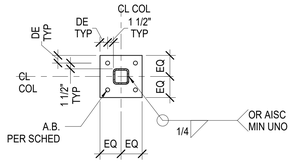
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TYPICAL METAL DECK DETAILS

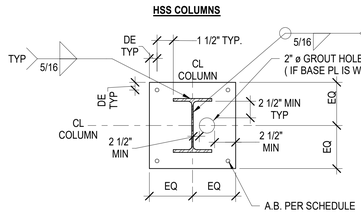
SHEET NO:

S1-8



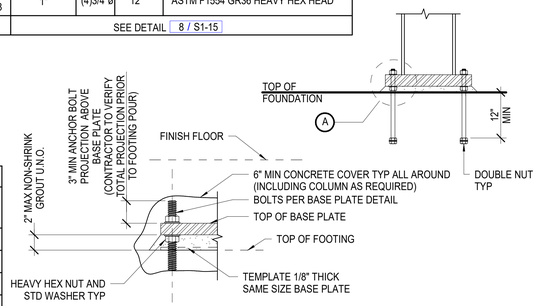
COLUMN BASE PLATE SCHEDULE				
COLUMN SIZE	BASE PLATE t (in)	ANCHOR ROD DIA	ANCHOR ROD EMBED(in)	REMARKS
HSS5X5, HSS6X6, HSS7X7 & HSS12x8	1"	(4)3/4"ø	12"	ASTM F1554 GR36 HEAVY HEX HEAD
W10x	SEE DETAIL 8 / S1-15			

HSS COLUMNS



WF GRAVITY COLUMNS

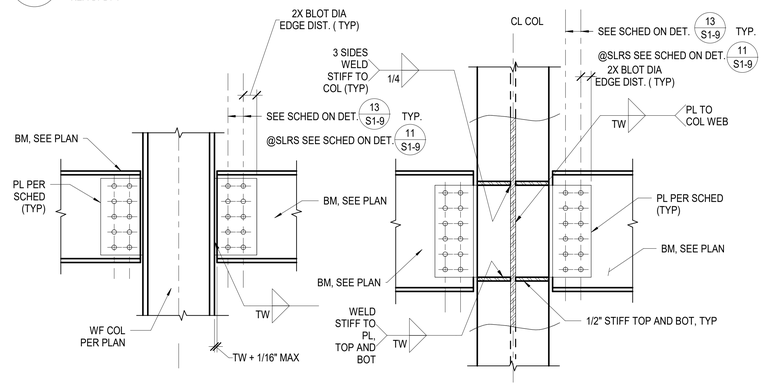
EDGE DISTANCE SCHEDULE	
BOLT DIAMETER (IN)	EDGE DISTANCE, "DE" (IN)
3/4"ø , 7/8"ø	1 1/2"
1"ø	1 3/4"
1 1/8"ø	2"
1 1/4"ø	2 1/4"



NOTE:
TEMPLATE TO BE REMOVED PRIOR TO INSTALLATION OF COLUMN

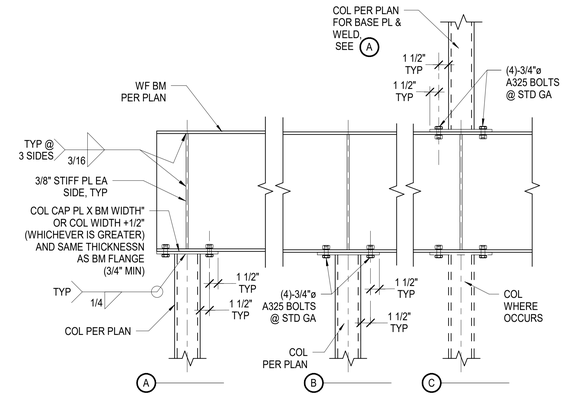
1 S1-9 GRAVITY COLUMN BASE PLATE DETAIL

SCALE: N.T.S.
REF: 9 / S1-9



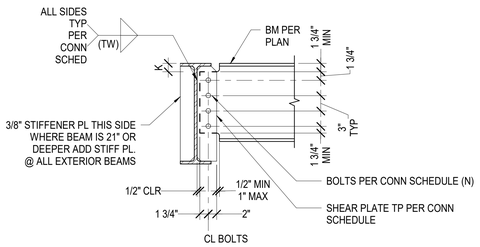
4 S1-9 WF BEAM TO COL

SCALE: N.T.S.
REF: 9 / S1-9



5 S1-9 TYPICAL BEAM TO WF COL

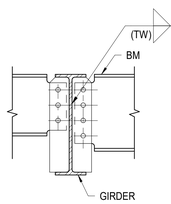
SCALE: N.T.S.
REF: 9 / S1-9



ONE-SIDED CONNECTION OCCURS WHERE OPPOSITE BEAMS ARE OFFSET BY 12" OR MORE

NOTE:
1. USE STANDARD BOLT HOLES

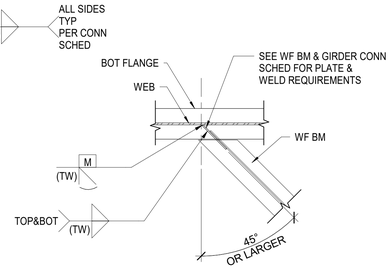
BEAM ONE SIDE



BEAM EACH SIDE

FOR ITEMS NOT SHOWN OR NOTED SEE "BEAM ONE SIDE"

TYP WF BEAM TO WF BEAM

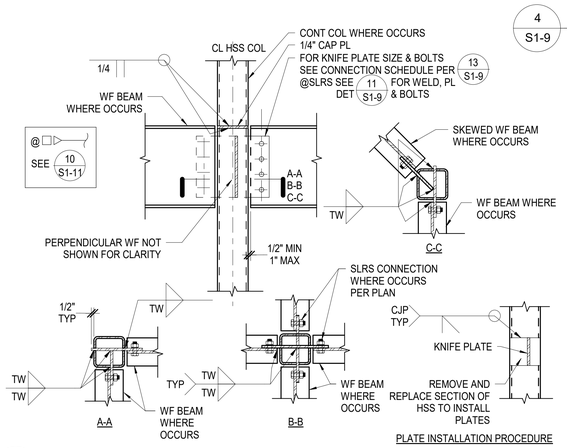


PLAN VIEW

SKEWED BEAM CONNECTION

7 S1-9 TYPICAL BEAM TO HSS COL

SCALE: N.T.S.
REF: 9 / S1-9

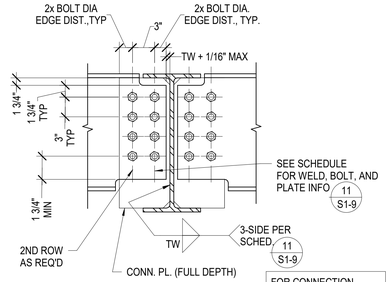


DRAG STRUT CONNECTION SCHEDULE				
MEMBER	CONN. PL THICKNESS "t" U.N.O.	# OF BOLTS A490 - SC PER ROW	NO. OF ROWS	WELD SIZE TW
W12-14	1/2"	3 - 1" DIA	SEE PLAN	3/8"
W16	3/4"	4 - 1" DIA		1/2"
W18	3/4"	5 - 1" DIA		1/2"
W21	1"	6 - 1" DIA		1/2"
W24	1"	6 - 1" DIA		3/4"
W27	1"	7 - 1" DIA		3/4"

NOTES:
1. FILLET WELDS INDICATED PER SCHEDULE SHALL BE REPLACED WITH COMPLETE PENETRATION GROOVE WELDS WHERE SKEWED BEAM CONNECTIONS WITH ANGLES SMALLER THAN 60° (BETWEEN BEAM AND GIRDER) OCCUR, TYP. U.N.O.
2. INSTALLATION OF HIGH STRENGTH BOLTS SHALL BE TESTED BY USING CALIBRATED WRENCH AS PER AISC SPECIFICATIONS. WRENCH SHALL BE CALIBRATED AT LEAST TWICE A DAY
3. 64 KIP MIN BOLT PRE-TENSION FOR 1" DIA A490 BOLT

11 S1-9 DRAG STRUT CONNECTION SCHEDULE

SCALE: N.T.S.
REF: 9 / S1-9

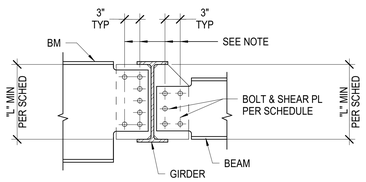


DRAG STRUT CONNECTION

FOR CONNECTION @ COLUMN SEE 5 S1-9

12 S1-9 DRAG STRUT CONNECTION AT GIRDER

SCALE: N.T.S.
REF: 11 / S1-10



DROP BEAM OR DEEPER BEAM THAN GIRDER CONNECTION

WF BM & GIRDER CONNECTION SCHEDULE				
WF BM	(N) A325N BOLTS U.N.O.	(L) MIN PLATE / WELD LENGTH	(TP) MIN PLATE THICKNESS	(TW)[1] MIN WELD THICKNESS
W8	(2) 3/4"ø	5 1/2"	3/8"	1/4"
W10	(2) 3/4"ø	6"	3/8"	1/4"
W12	(3) 1"ø	9"	3/8"	1/4"
W14	(3) 1"ø	9"	3/8"	1/4"
W16	(4) 1"ø	12"	3/8"	1/4"
W18	(5) 1"ø	15"	1/2"[2]	3/8"
W21,24	(6) 1"ø	18"	1/2"[2]	3/8"
W27	(7) 1"ø	21"	1/2"[2]	3/8"
W30	(8) 1"ø	24"	1/2"[2]	3/8"
W33	(9) 1"ø	27"	1/2"[2]	3/8"
W36	(10) 1"ø	31"	1/2"[2]	3/8"

NOTES:
1. 5/16" MIN FOR COLUMN FLANGES GREATER THAN 3/4" THICK
2. PL 1/2" & THICKER SHALL BE GAS OR SAW CUT
3. ALL BOLT HOLES SHALL BE STD HOLES UNO.

NOTE:
WHERE NUMBER OF REQUIRED BOLTS PER PLAN OR SCHEDULE ARE MORE THAN NUMBER OF BOLTS THAT FIT AT ONE ROW, USE MAXIMUM BOLTS AT FIRST ROW & BALANCE IN SECOND ROW (2 BOLTS MIN AT SECOND ROW).

13 S1-9 TYPICAL BEAM TO BEAM CONNECTION

SCALE: N.T.S.
REF: 9 / S1-9

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
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CONSULTANT:
VCA ENGINEERS INC
CIVIL • STRUCTURAL
2151 Michelson Dr. #240
Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

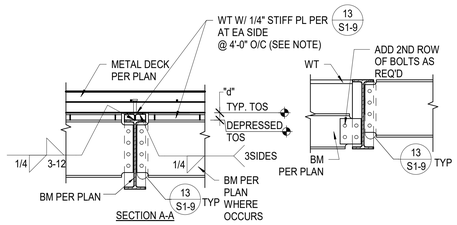
No.	Rev. Date	Description

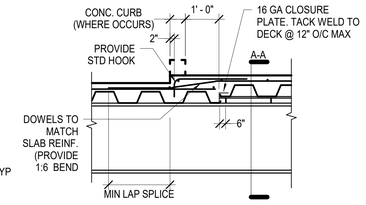
JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

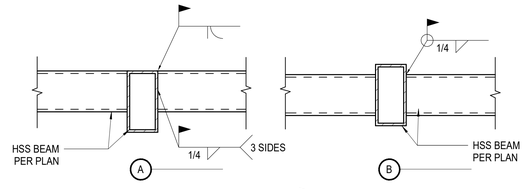
SHEET DESCRIPTION:
TYPICAL STEEL DETAILS

SHEET NO:

S1-9







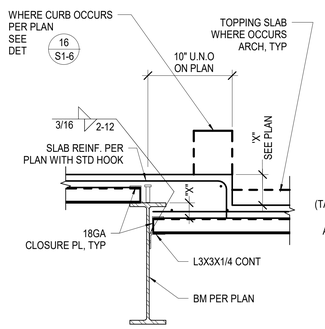
NOTES:
1. PROVIDE WT/ANGLE WHERE NOTED ON PLAN. NOTE THAT WT IS NOT SHOWN ON PLAN.

WT/ANGLE SCHED. (CUT VERTICAL LEG/WEB AS NEDED)

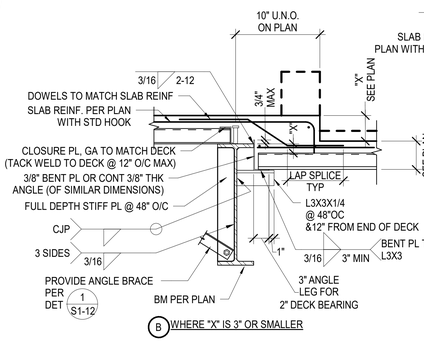
"d"	WT	ANGLE
2"	WT 2X6.5	L3x2x3/8 (LLH)
3"	WT 3X8	L3x3x3/8 (LLV)
4"	WT 4X10.5	L4x3x3/8 (LLV)
5"	WT X9.5	L5x3x3/8 (LLV)

2 S1-10 DROPPED BEAM WITH WT/ANGLE

SCALE: N.T.S.

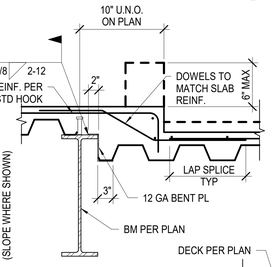


A WHERE "X" IS LARGER THAN 3"



B WHERE "X" IS 3" OR SMALLER

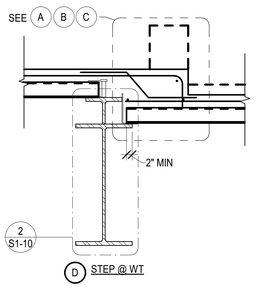
TYPICAL SLAB DEPRESSION
DECK PERPENDICULAR TO SUPPORT



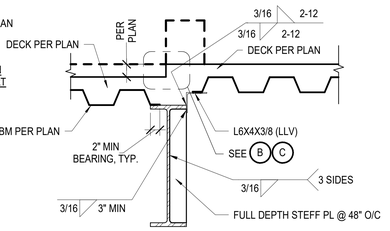
C TYPICAL SLAB DEPRESSION
DECK PARALLEL TO SUPPORT

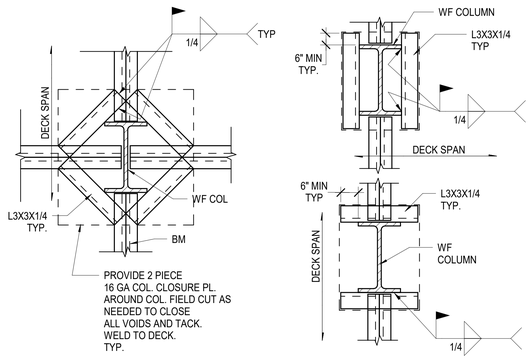
4 S1-10 HSS BEAM TO HSS BEAM CONNECTION

SCALE: N.T.S.



D STEP @ WT



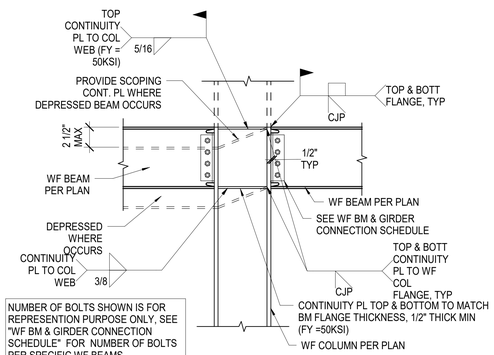


9 S1-10 TYP. DECK SUPPORT AT COLUMN

SCALE: N.T.S.

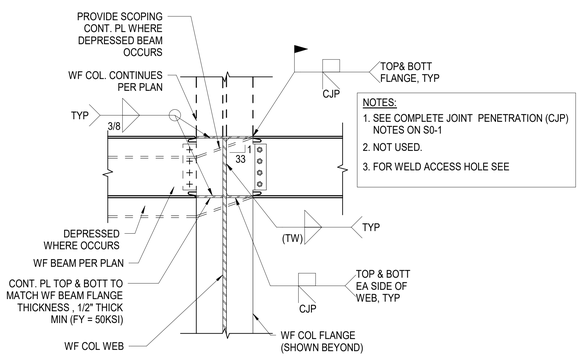
6 S1-10 TYPICAL STEPPED SLAB

SCALE: N.T.S.



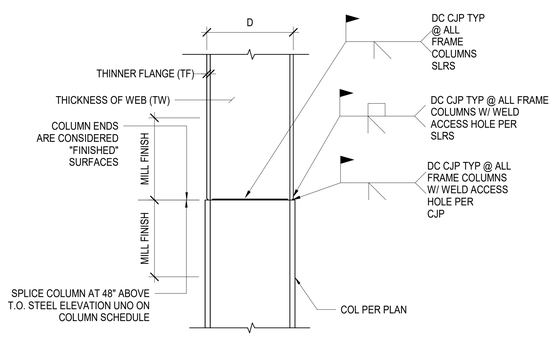
NUMBER OF BOLTS SHOWN IS FOR REPRESENTION PURPOSE ONLY, SEE "WF BM & GIRDER CONNECTION SCHEDULE" FOR NUMBER OF BOLTS PER SPECIFIC WF BEAMS. DETAIL 13 S1-9

BEAM TO COLUMN FLANGE



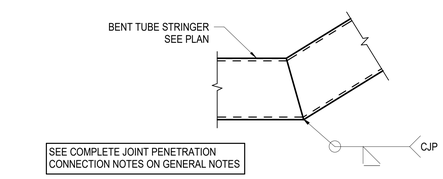
NOTES:
1. SEE COMPLETE JOINT PENETRATION (CJP) NOTES ON S0-1
2. NOT USED.
3. FOR WELD ACCESS HOLE SEE

BEAM TO COLUMN WEB



NOTES:
1. NOT USED.
2. STEEL FABRICATOR TO DESIGN AND PROVIDE ALL REQUIRED ERECTION PLATES
3. FOR FINISHED SURFACES AT COLUMN ENDS SEE AISC "CODE OF STANDARD PRACTICE" SECTION 6.2.2.

SEE COMPLETE JOINT PENETRATION CONNECTION NOTES ON S0-2



TUBE STRINGER

13 S1-10 TYPICAL BENT CAHNNELS / TUBE STL.

SCALE: N.T.S.

15 S1-10 WF BEAM TO WF COL. MOMENT CONNECTION

SCALE: N.T.S.

16 S1-10 TYP COLUMN SPLICE U.N.O.

SCALE: N.T.S.

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14471 CHAMBERS RD, SUITE 210
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2151 Michelson Dr. #240
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Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

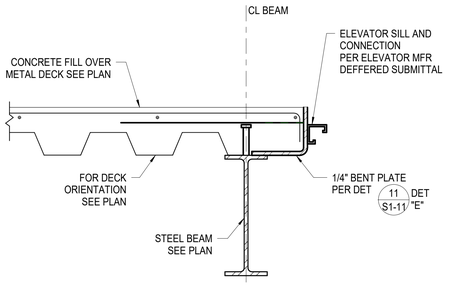
CLIENT:
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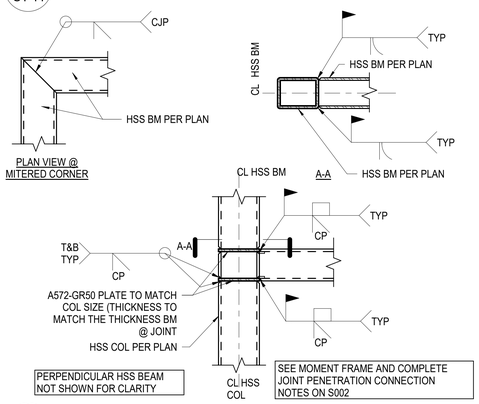
SHEET DESCRIPTION:
TYPICAL STEEL DETAILS

SHEET NO:
S1-10



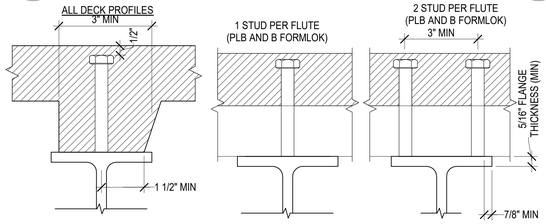
1 S1-11 EDGE CLOSURE AT ELEV SILL SUPPORT

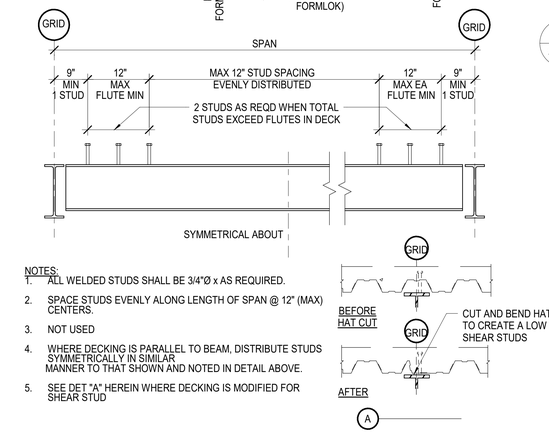
SCALE: N.T.S.



5 S1-11 HSS TO HSS MOMENT CONNECTION

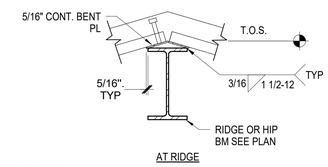
SCALE: N.T.S.





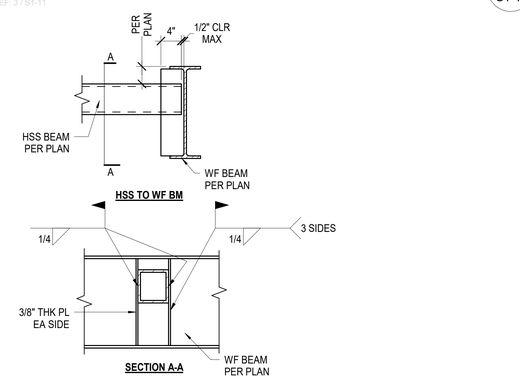
13 S1-11 WELDED STUDS

SCALE: N.T.S.



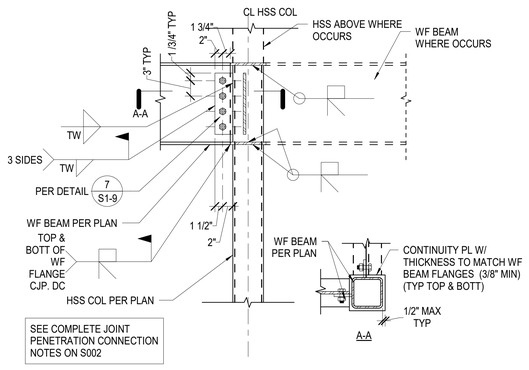
2 S1-11 TYP SLOPED DECK TO BEAM DETAIL

SCALE: N.T.S.
REF: 3 / S1-11



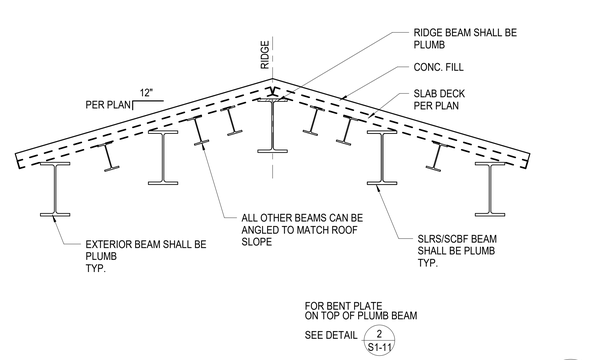
6 S1-11 HSS BEAM TO WF BEAM CONNECTION

SCALE: 3/4" = 1'-0"
REF: 12 / SS-1



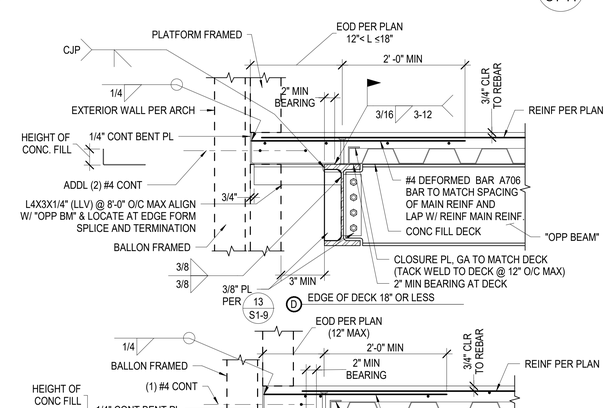
10 S1-11 WF BEAM TO HSS COL. MOMENT CONNECTION

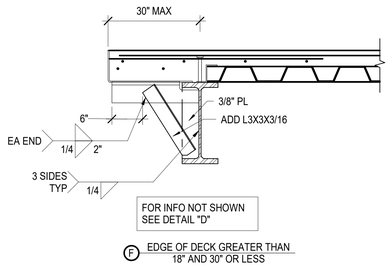
SCALE: N.T.S.
REF: 7 / S1-9



3 S1-11 TYPICAL SLOPED STEEL SECTION

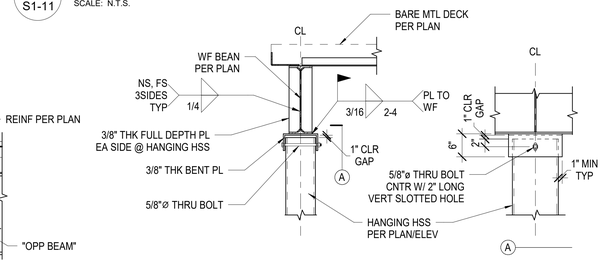
SCALE: N.T.S.





11 S1-11 EDGE OF CONC FILL DECK (EOD) AT FLOOR/ROOF

SCALE: N.T.S.
REF: 11 / S1-6

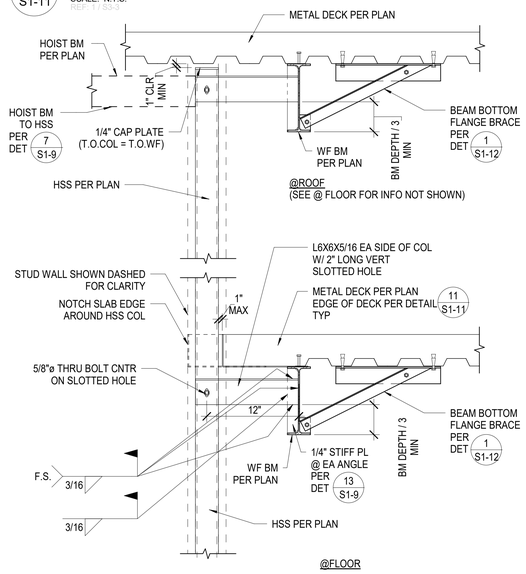


4 S1-11 OPTIONAL SPLICE DETAIL

SCALE: N.T.S.

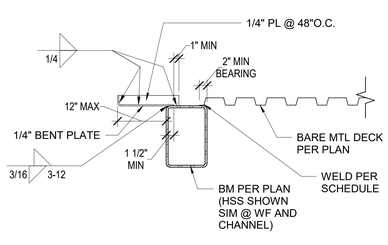
8 S1-11 EXTERIOR HSS @ GL-3

SCALE: N.T.S.
REF: 1 / SS-1



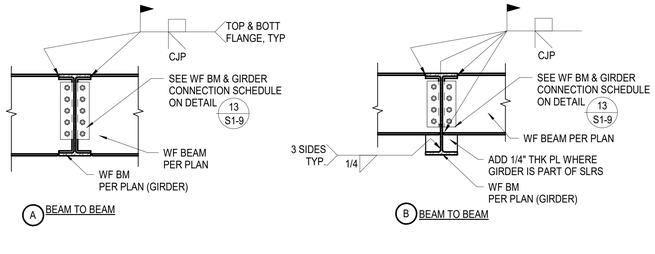
12 S1-11 COL LATERAL SUPPORT

SCALE: N.T.S.
REF: 1 / S3-2



14 S1-11 TYP EDGE OF DECK @ BARE DECK

SCALE: N.T.S.
REF: 9 / SS-1



15 S1-11 TYPICAL CANTILEVER BEAM CONNECTION

SCALE: N.T.S.

FOR HSS TO HSS MOMENT CONNECTION SEE DETAIL 5 S1-11

FOR CANTILEVER BM @ HSS COL SEE DETAIL 10 S1-11

SEE COMPLETE JOINT PENETRATION CONNECTION NOTES S002

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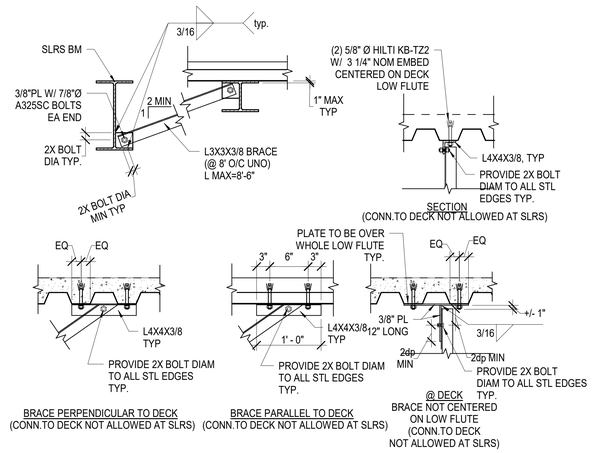
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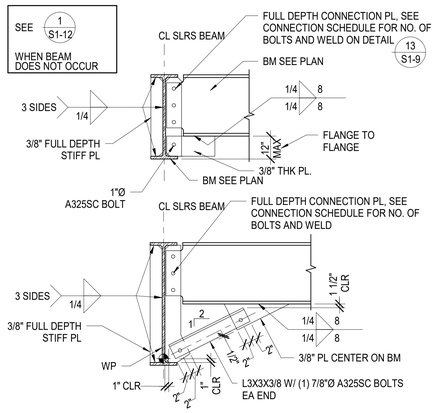
SHEET DESCRIPTION:
TYPICAL STEEL DETAILS

SHEET NO:
S1-11



1 S1-12 BEAM BOTTOM FLANGE BRACE DETAILS

SCALE: N.T.S.



2 S1-12 BEAM BOTTOM FLANGE BRACING DETAIL

SCALE: N.T.S.

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PROFESSIONAL ENGINEER — PAUL D. WESTBERG — No. 54029 — Exp. 9/30/24 — STATE OF CALIFORNIA

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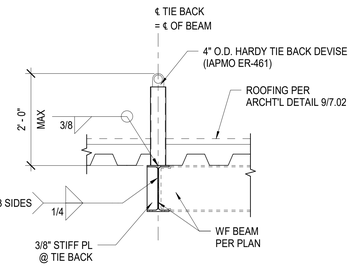
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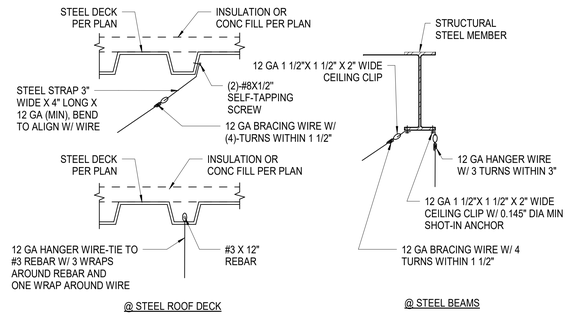
SHEET DESCRIPTION:
TYPICAL STEEL DETAILS

SHEET NO:

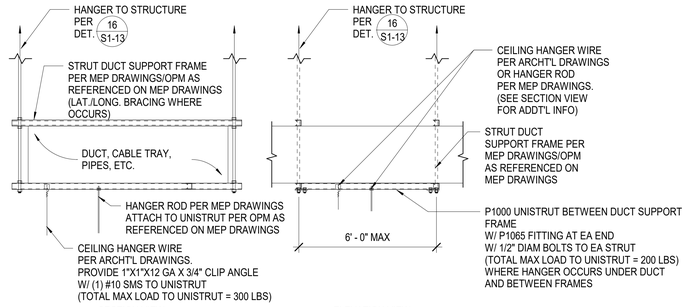
S1-12



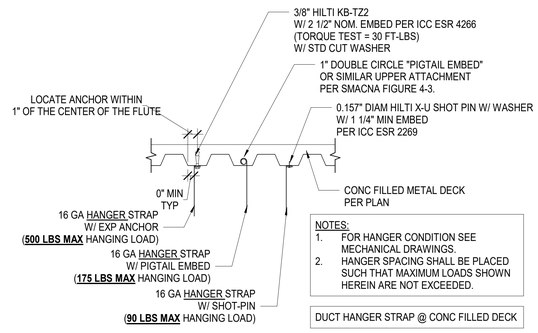
1 S1-13 **TIE BACK DETAIL**
SCALE: N.T.S.



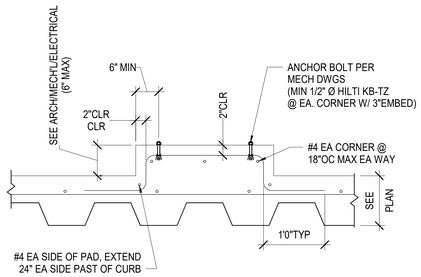
2 S1-13 **TYP WIRE CONNECTION TO STEEL FRAMING**
SCALE: N.T.S.



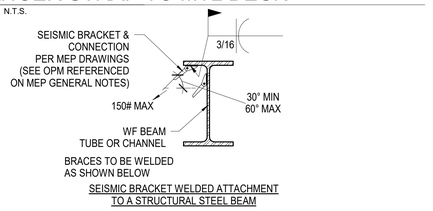
3 S1-13 **CEILING / MISC. EQUIPMENT (150 LBS MAX) HANGER AT OBSTRUCTION**
SCALE: N.T.S.



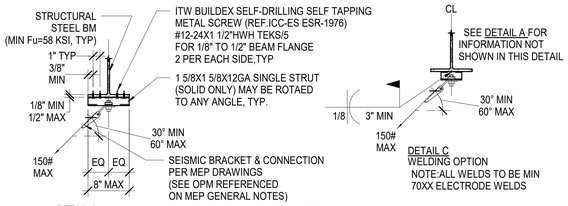
4 S1-13 **HANGER STRAP TO MTL DECK**
SCALE: N.T.S.



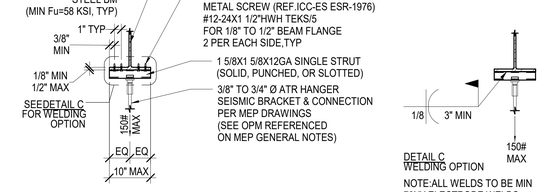
5 S1-13 **EQUIPMENT PAD**
SCALE: N.T.S.



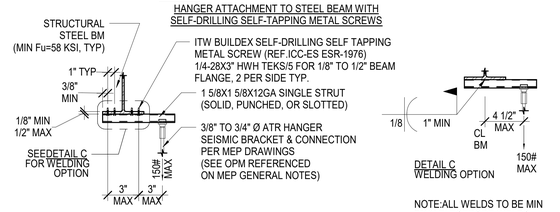
SEISMIC BRACKET WELDED ATTACHMENT TO A STRUCTURAL STEEL BEAM



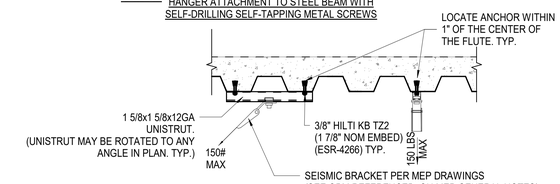
DETAIL A SEISMIC BRACKET ATTACHMENT TO STEEL BEAM WITH SELF-DRILLING FASTENERS OR WELDING



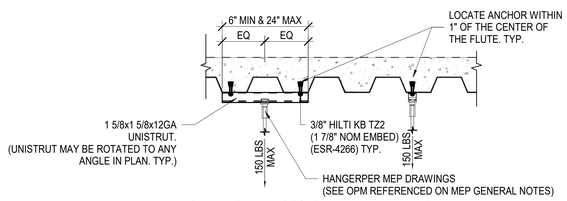
DETAIL A HANGER ATTACHMENT TO STEEL BEAM WITH SELF-DRILLING SELF-TAPPING METAL SCREWS



DETAIL A HANGER ATTACHMENT TO STEEL BEAM WITH SELF-DRILLING SELF-TAPPING METAL SCREWS

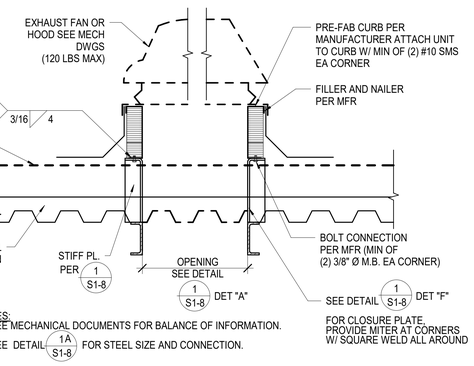


SEISMIC BRACKET ATTACHMENT TO CONCRETE FILLED METAL DECK



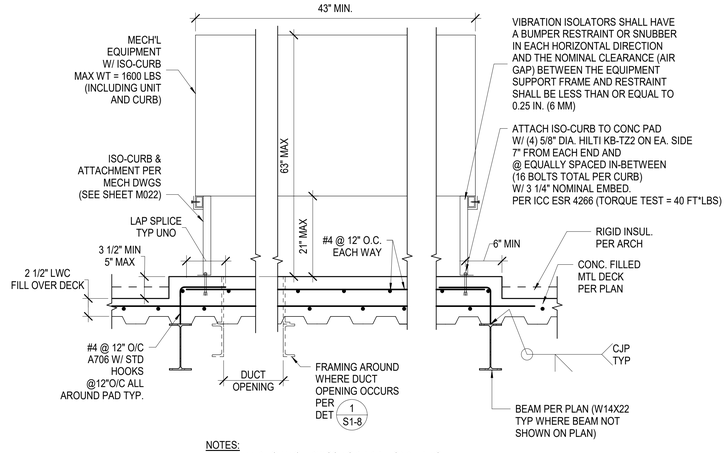
HANGER ATTACHMENT TO CONCRETE FILLED METAL DECK

16 S1-13 **HANGER AND BRACE ATTACHMENT TO STRUCTURE**
SCALE: N.T.S.



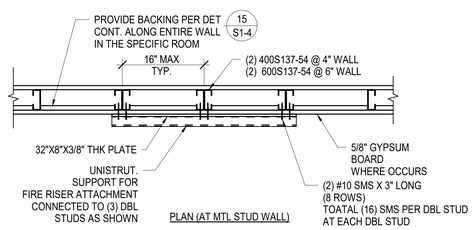
NOTES:
1. SEE MECHANICAL DOCUMENTS FOR BALANCE OF INFORMATION.
2. SEE DETAIL 1A S1-8 FOR STEEL SIZE AND CONNECTION.

11 S1-13 **TYP EXHAUST FAN & INTAKE HOOD ANCHORAGE DETAIL**
SCALE: N.T.S.

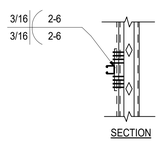


NOTES:
1. REFER TO MECH DWGS FOR ADDITIONAL INFO.
2. REFER TO ARCH DWGS FOR DIMENSIONS & LOCATIONS

13 S1-13 **SECTION AT EQUIPMENT PAD**
SCALE: N.T.S.



PLAN (AT MTL STUD WALL)



SECTION

14 S1-13 **UNISTRUT TO METAL STUD/CONC WALL CONNECTION**
SCALE: N.T.S.

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APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
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CONSULTANT:
VCA ENGINEERS INC
CIVIL • STRUCTURAL
2151 Michelson Dr. #240
Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

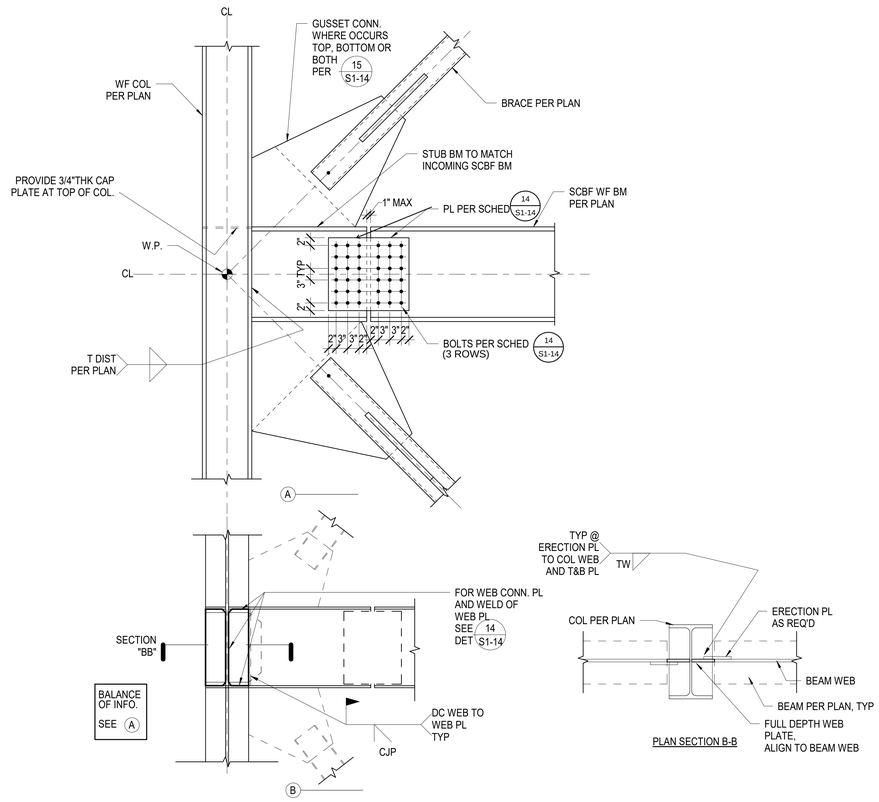
No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	02/20/2024
DRAWN:	AQ
CHECK:	YN
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
TYPICAL MECHANICAL EQUIPMENT DETAILS

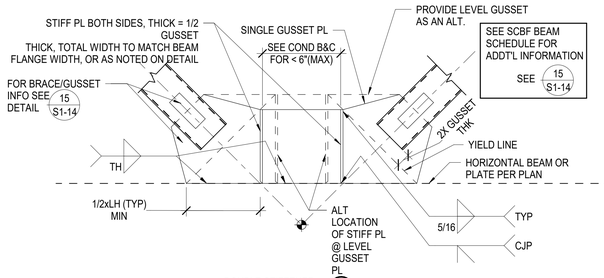
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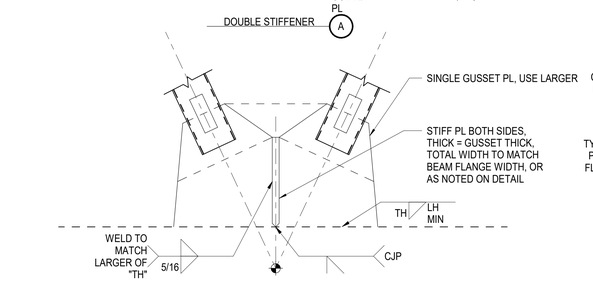
S1-13

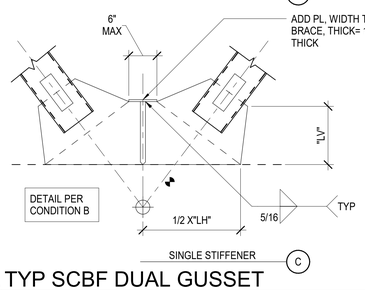


6 S1-14 SCBF BM TO COL (PINNED CONN.)

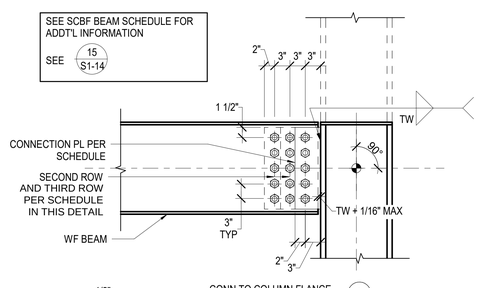
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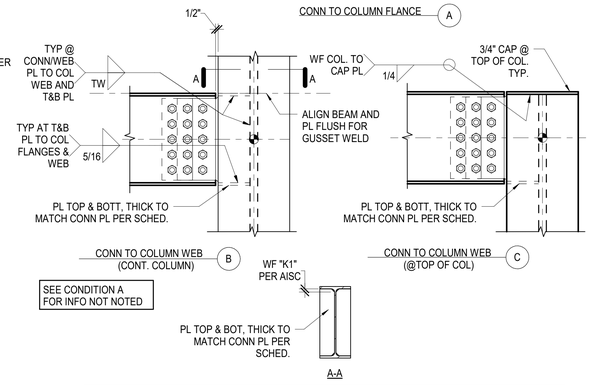






ALL WELDS, PLATES, BRACE INFORMATION NOT NOTED HERE IN SHALL BE PER SCHEDULE ON ELEV.SHEETS (S-6 SERIES)





SCBF BM CONNECTION SCHEDULE						
BEAM SIZE	A490 SC BOLTS				CONN WEB PL THICKNESS	WELD TW
	DIA.	1ST ROW	2ND ROW	3RD ROW		
W24X76 TO W24X131	1"	7	7	7	1 1/4	13/16"
W24X207	1 1/8"	7	7	7	2"	1 1/4
W12X35	1"	3	3	3	3/4"	3/4"

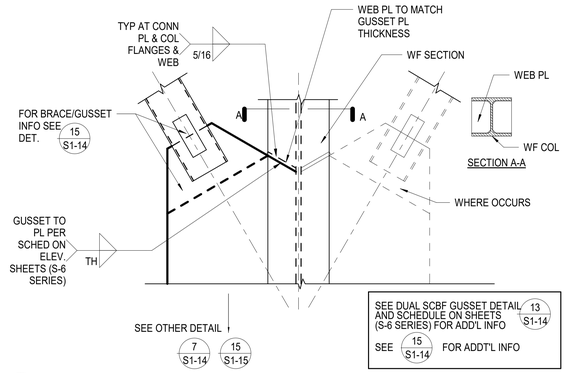
NOTES
1. SEE TYPICAL STEEL SCBF GUSSET DETAIL 15 S1-14 FOR ADDITIONAL NOTES.
2. SPECIFY ERECTION PROCEDURES FOR FITTING AND WELDING OF THIS CONNECTION ON SHOP DRAWINGS.

13 S1-14 TYP SCBF DUAL GUSSET

SCALE:N.T.S.
REF DET:3 S1-14

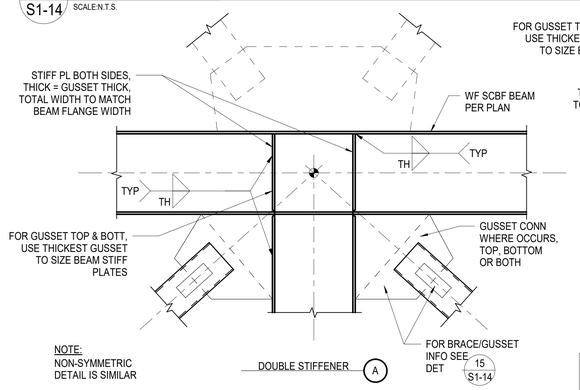
14 S1-14 TYPICAL SCBF BEAM TO COLUMN

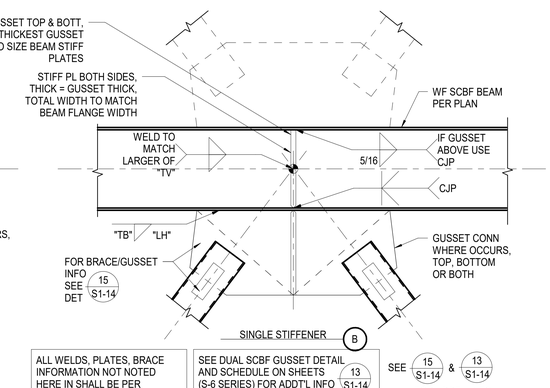
SCALE:N.T.S.
REF DET:6 S1-14



3 S1-14 GUSSET CONNECTION TO WF WEB

SCALE:N.T.S.





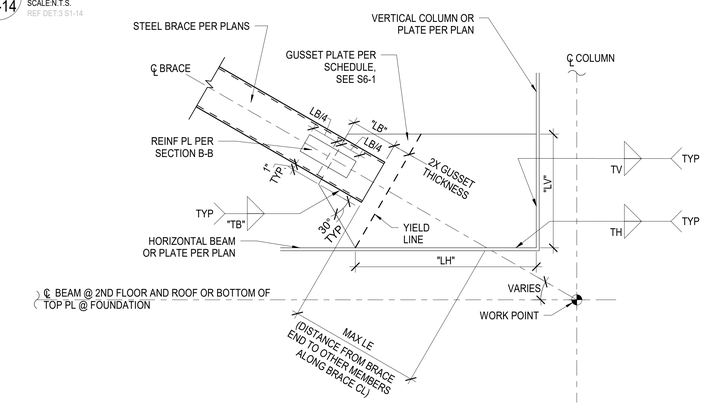
ALL WELDS, PLATES, BRACE INFORMATION NOT NOTED HERE IN SHALL BE PER SCHEDULE ON ELEV.SHEETS (S-6 SERIES)

SEE DUAL SCBF GUSSET DETAIL AND SCHEDULE ON SHEETS (S-6 SERIES) FOR ADDT'L INFO 13 S1-14

SEE 15 S1-14 & 13 S1-14 FOR ADDT'L INFO

7 S1-14 TYPCIAL SCBF GUSSET TO BEAM

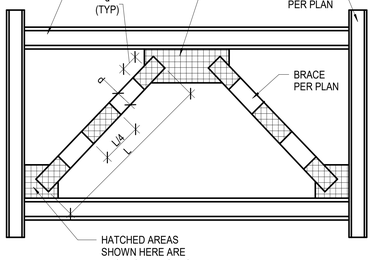
SCALE:N.T.S.
REF DET:3 S1-14



NOTE:
SQUARE TUBE SECTION SIMILAR

PROTECTED ZONE CONNECTION NOTES:
1. WITHIN THE PROTECTED ZONE, HOLES, TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING, AND UNSPECIFIED THERMAL CUTTING FROM FABRICATION OR ERECTION OPERATIONS ARE NOT PERMITTED.
2. STEEL HEADED STUD ANCHORS AND DECKING ATTACHMENTS THAT PENETRATE THE BEAM FLANGE ARE NOT PERMITTED AT BEAM FLANGES WITHIN THE PROTECTED ZONE. ARC SPOT WELDS AS REQUIRED TO SECURE DECKING SHALL BE PERMITTED.
3. WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS FOR PERIMETER EDGE ANGLES, EXTERIOR FACADES, PARTITIONS, DUCT WORK, PIPING OR OTHER CONSTRUCTION ARE NOT PERMITTED WITHIN THE PROTECTED ZONE

SCBF NOTES
1. ALL DIMENSIONS ARE IN INCHES.
2. SCBF RELATED STEEL PLATES SHALL BE ASTM A572 GRADE 50, THIS INCLUDES GUSSETS, SIDE PLATES, STIFFENERS, SHEAR TABS, BASE PLATES, SPLICES, ETC.
3. REVIEW ALL GUSSET PLATE DETAILS ON THIS SHEET AND S0-1.9A FOR ADDTL CONN. INFORMATION NOT SHOWN ON THIS DETAIL.
4. UNLESS OTHERWISE NOTED, THE TOLERANCE FOR WELDED LENGTHS SHOWN IN THIS TABLE ARE ± 5% OR 1/2" MAXIMUM.
5. WELDED LENGTHS LH AND LV SHOWN ARE MIN. LENGTHS, REVIEW THE GUSSET GEOMETRY FOR ACTUAL WELDED LENGTH.
6. THE WELD LENGTHS LH AND LV ACCOUNT FOR GAPS NOTED ON DETAILS, BACKUP BARS MAY BE USED AND LEFT IN PLACE TO AID IN LAYING WELDS AT THESE AREAS.
7. WORK POINT LOCATIONS ARE NOTED ON FRAME ELEVATIONS AND DETAILS, AND ARE BASED ON AS BUILT CENTERLINE DIMENSIONS OF ERECTED AND FABRICATED MEMBERS. THE CONTRACTOR SHALL FIELD MEASURE ERECTED FRAME GEOMETRY TO VERIFY THAT THE REQUIRED GUSSET AND BRACE TOLERANCES HAVE BEEN ACHIEVED. THE TOLERANCE FOR A BRACE CENTERLINE MISSING A WORKPOINT IS ±3/4" IN THE PLANE OF THE BRACE. NOTIFY THE INSPECTOR AND ENGINEER OF RECORD OF ALL NONCOMPLIANT CONNECTIONS.
8. CLEARLY NOTE ERECTION AIDS SUCH AS TEMPORARY BOLTS AND TACK WELDS ON SHOP DWGS FOR SCBF CONN.
9. DO NOT WELD ITEMS TO OR CUT PASS THROUGH HOLES AT SCBF GUSSETS, BRACES, BEAMS OR COLUMNS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER OF RECORD.
10. SHOW THE YIELD LINE ON ALL SCBF GUSSET PLATE SHOP DRAWINGS. DRAW THE BRACE CENTERLINE AND YIELD LINE ON BOTH SIDES OF ALL FABRICATED SCBF GUSSET PLATES.
11. SEE 1 / S1-15 & 2 / S1-15 FOR ISOLATION DETAILS



PROTECTED ZONES DIAGRAM
(AISC 341-16 FIG C-F2.14, PROTECTED ZONE OF INVERTED V-BRACED FRAME) SIMILAR AT V-BRACED FRAME

PROTECTED ZONES :
1. FOR BRACES, THE CENTER ONE-QUARTER OF THE BRACE LENGTH AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE BRACE DEPTH IN THE PLANE OF BUCKING
2. ELEMENTS THAT CONNECT BRACES TO BEAMS AND COLUMNS.
3. PROTECTED ZONES SHALL BE PERMANENTLY MARKED AND MAINTAINED

15 S1-14 TYPICAL STEEL SCBF GUSSET

SCALE:N.T.S.
REF DET:3 S1-14

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Project No.: J908

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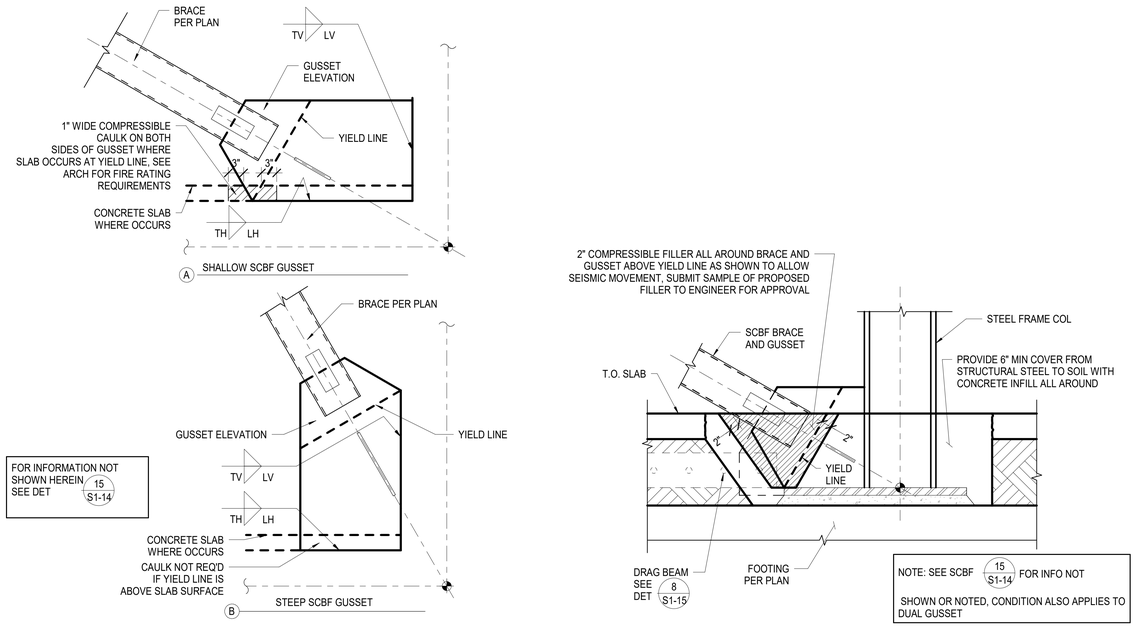
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ENGINEER:

SHEET DESCRIPTION:
TYPICAL BRACE FRAME DETAILS

SHEET NO:
S1-14



1 S1-15 GUSSET PLATE ISOLATION DETAIL

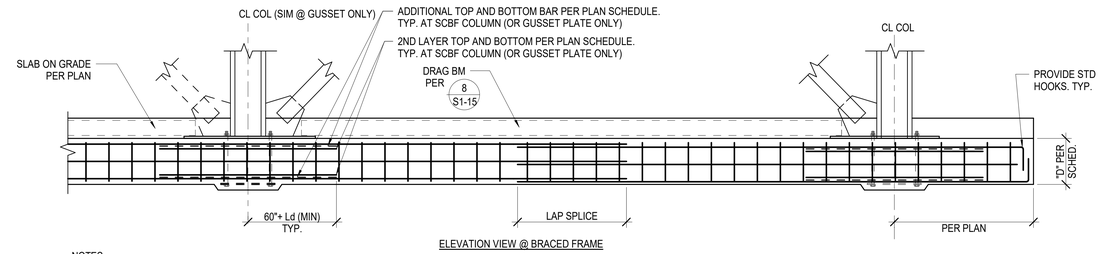
SCALE:N.T.S.

REF DET:1 S5-2

2 S1-15 TYPICAL SCBF ISOLATION AT FOOTING

SCALE:N.T.S.

REF DET:3 S1-15



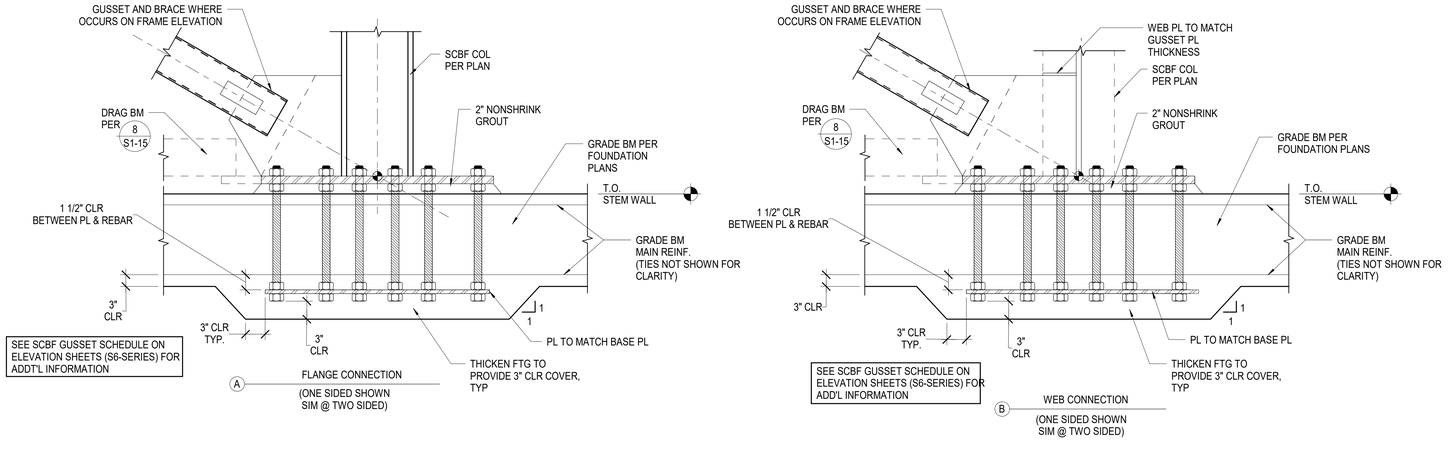
ELEVATION VIEW @ BRACED FRAME

NOTES:

1. NOT USED.
2. ALL REINFORCEMENT SHALL BE ASTM A706.
3. TYP TIE: ALTERNATE CAP TIE
4. TYPE 2 MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES @ GRADE BEAM REINF. (IAPMO ER #0129)
5. SEE 9 S1-3 FOR GB CROSSING DETAIL
   AND FOR ISOLATION @ FTG/SLAB ON GRADE SEE 2 S1-15
6. SEE ELEVATION ABOVE FOR LOCATIONS WHERE CONSTRUCTION JOINTS ARE ALLOWED

5 S1-15 GRADE BEAM ELEVATION SCBF

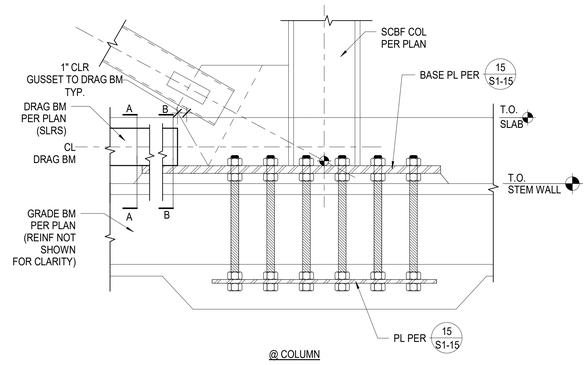
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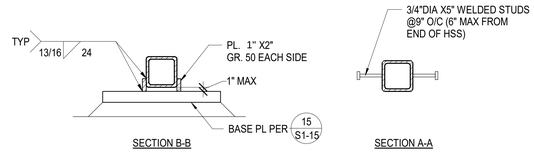
15 S1-15 SCBF BASE PLATE

SCALE:N.T.S.

REF DET:3 S1-14

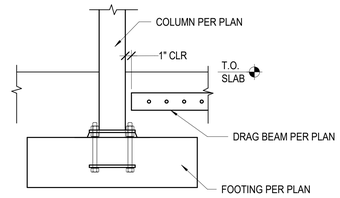


@ COLUMN



SECTION B-B

SECTION A-A

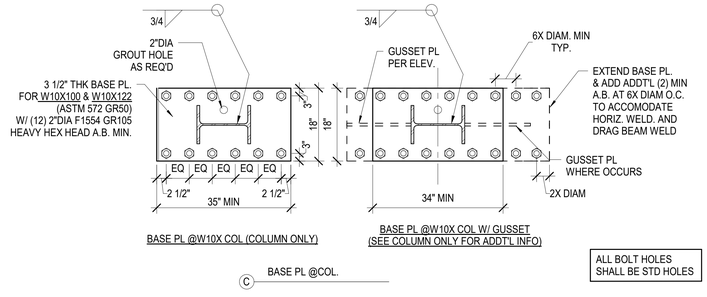


@ COLUMN ONLY

8 S1-15 DRAG BEAM AT FOUNDATION

SCALE:N.T.S.

REF DET:2 S1-15



BASE PL @W10X COL (COLUMN ONLY)

BASE PL @W10X COL W/ GUSSET (SEE COLUMN ONLY FOR ADDT'L INFO)

C BASE PL @COL.

ALL BOLT HOLES SHALL BE STD HOLES

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PROFESSIONAL ENGINEER — No. 54029 — Exp. 9/30/24 — STRUCTURAL — STATE OF CALIFORNIA

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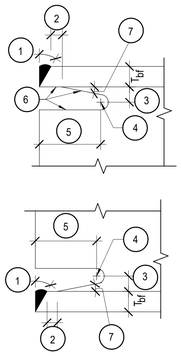
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SHEET DESCRIPTION:
TYPICAL BRACE FRAME DETAILS

SHEET NO:

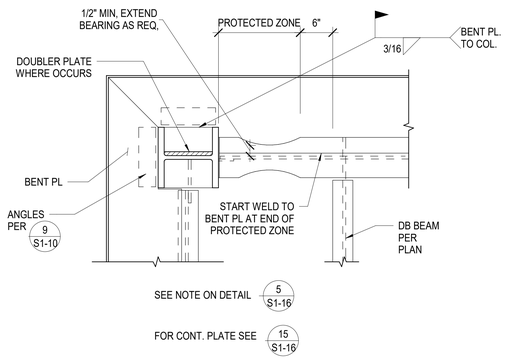
S1-15



NOTES:
1. BEVEL AS REQD BY AWS D1.1 FOR GROOVE WELD PROCEDURE.
2. LARGER OF Tbf or 1/2", + 1/2 Tbf, or - 1/4 Tbf.
3. THE MINIMUM DIMENSION SHALL BE 3/4 Tbf, or 3/4", WHICHEVER IS GREATER. THE MAXIMUM DIMENSION SHALL BE Tbf.
4. 3/8" MIN RADIUS.
5. 3 Tbf ±1/2"
6. SEE AWS D1.8. FOR SURFACE ROUGHNESS REQUIREMENTS.
7. TOLERANCES SHALL NOT ACCUMULATE TO THE EXTENT THAT THE ANGLE OF THE ACESS HOLE CUT TO THE FLANGE SURFACE EXCEEDS 25º.

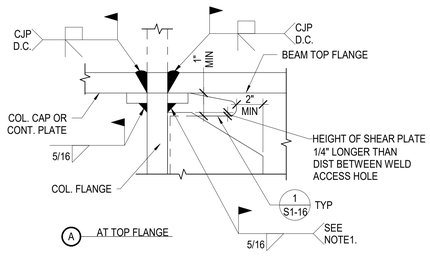
1 S1-16 WELD ACCESS HOLE

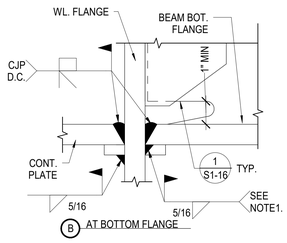
SCALE:N.T.S.
REF DET:3 S1-16



2 S1-16 SMRF RBS CONNECTION

SCALE:N.T.S.

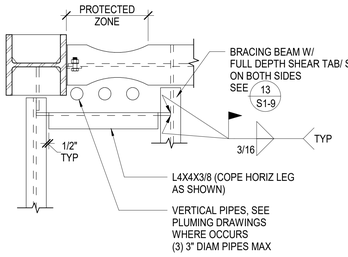




NOTES:
1. REMOVE BACKING THE ROOT PASS SHALL BE BACKGOUGED TO SOUND WELD METAL AND BACKWELDED WITH A REINFORCING FILLET.(MIN.5/16")
2. WHERE STEEL BACK IS USED AT THE CONTINUITY PLATE, THE BACKING NEED NOT TO BE REMOVED, BUT FOR BACKING LEFT IN PLACE SHALL BE ATTACHED TO COLUMN. FLANGE WITH A 5/16" FILLET WELD BELOW THE CJP WELD (CONT PLATE TO COLUMN FLANGE, NON DC WELD PER AISC 341 E4.6F)EDGE. (AISC 358-16 3.3.1)
3. CJP WELDS OF BEAM FLANGES AND BEAM WEBS TO COLUMNS SHALL BE DEMAND CRITICAL WELDS PER AISC 3410-16 E3.6
4. AT WELDING IN THE K AREA, TEST WEB FOR CRACKS USING MAGNETIC PARTICLE TESTING (MT). THE MT INSPECTION AREA SHALL INCLUDE THE K-AREA BASE METAL WITHIN 3" OF THE WELD. REF, AISC 341-16 J6.2A.
5. NON-DESTRUCTIVE TESTING (NDT) FOR SMF CONNECTIONS: SHALL BE PROVIDED FOR ALL CJP WELDED CONNECTION, K-AREA WELDS, ETC PER AISC 341-16 J6.2 IN ADDITION TO AISC 360-16 N5.5, AND PER DSA IR 17-2 QA REQUIREMENTS.

3 S1-16 SMRF BEAM TO COL FLANGE WELDS

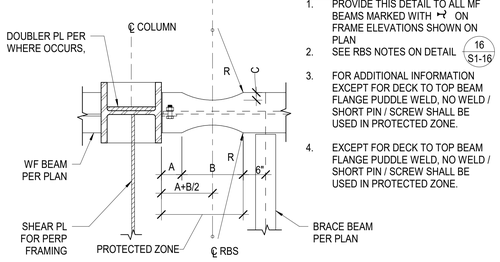
SCALE:N.T.S.
REF DET:13 S1-16



NOTE:
EXCEPT FOR DECK TO TOP BEAM FLANGE PUDDLE WELD, NO WELD / SHORT PIN / SCREW SHALL BE USED IN PROTECTED ZONE.

BRACING AND SUPPORT FOR OPENINGS ADJACENT TO SMRF BEAM

5 S1-16
SCALE:N.T.S.
REF DET:2 S1-16

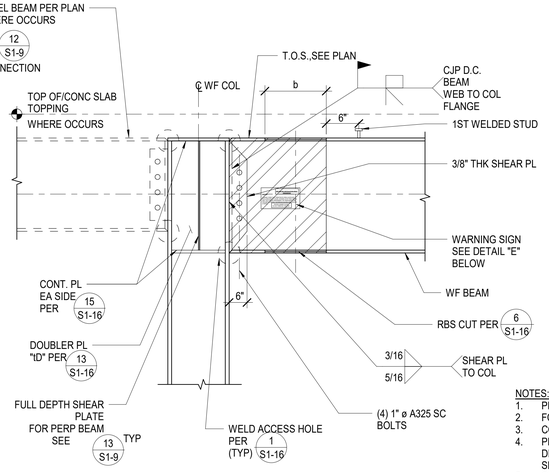


NOTES:
1. PROVIDE THIS DETAIL TO ALL MF BEAMS MARKED WITH ↦ ON FRAME ELEVATIONS SHOWN ON PLAN
2. SEE RBS NOTES ON DETAIL 16 S1-16
3. FOR ADDITIONAL INFORMATION EXCEPT FOR DECK TO TOP BEAM FLANGE PUDDLE WELD, NO WELD / SHORT PIN / SCREW SHALL BE USED IN PROTECTED ZONE.
4. EXCEPT FOR DECK TO TOP BEAM FLANGE PUDDLE WELD, NO WELD / SHORT PIN / SCREW SHALL BE USED IN PROTECTED ZONE.

RBS SCHEDULE			
BEAM SIZE	"A"	"B"	"C"
W12x96	6 1/4"	8 1/2"	2 1/2"

6 S1-16 SMRF RBS CONNECTION

SCALE:N.T.S.
REF DET:11 S1-16

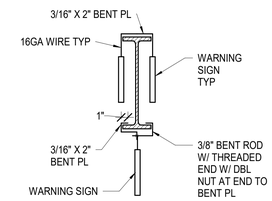


NOTICE:

BEFORE ANY INSTALLATION READ THIS NOTICE

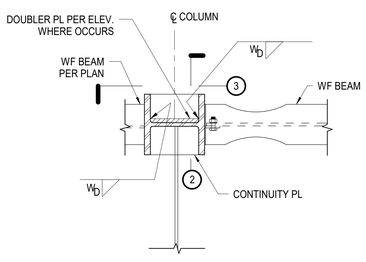
CONNECTIONS THAT PENETRATE STEEL SURFACES INCLUDING BOLTS, HOLES, SCREWS, SHOT PINS, WELDS, AND TACK WELDS (PERMANENT OR TEMPORARY) ARE PROHIBITED WITHIN THE REGION SHOWN WITH YELLOW STRIPES.

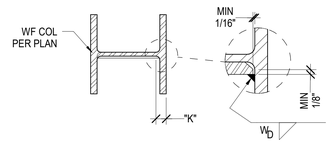
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WARNING SIGN

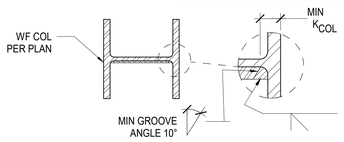
NOTES:
1. PERPENDICULAR FRAMING NOT SHOWN FOR CLARITY.
2. FOR WELD AND PLATE SIZES NOTED SEE 13 / S1-16
3. CONNECTIONS SHOWN THUS: ↦ ON PLAN & ELEVATION.
4. PROVIDE SLOPED CONTINUITY PLATES WHEN BEAMS ON BOTH SIDES OF COLUMN HAVE NOMINAL DEPTHS DIFFERENCE OF LESS THAN OR EQUAL TO 3 INCHES. OTHERWISE, PROVIDE 2 (PAIRS) OF CONTINUITY PLATES AS SHOWN IN DASH LINES IN SECTION
5. CJP WELDS OF BEAM FLANGES AND BEAM WEBS TO COLUMNS SHALL BE DEMAND CRITICAL WELDS PER AISC 341-16 E3.6
6. AT WELDING IN THE K AREA, TEST WEB FOR CRACKS USING MAGNETIC PARTICLE TESTING (MT). THE MT INSPECTION AREA SHALL INCLUDE THE K-AREA BASE METAL WITHIN 3" OF THE WELD. REF, AISC 341-16 J6.2A.
7. NON-DESTRUCTIVE TESTING (NDT) FOR SMF CONNECTIONS: SHALL BE PROVIDED FOR ALL CJP WELDED CONNECTION, K-AREA WELDS, ETC PER AISC 341-16 J6.2 IN ADDITION TO AISC 360-16 N5.5, AND PER DSA IR 17-2 QA REQUIREMENTS.
8. SEE S0.03 FOR ADDITIONAL TESTING AND INSPECTION NOTES.
9. PROTECTED ZONE SHALL BE SPRAYED WITH YELLOW STRIPS AND LOCATE WARNING SIGN SHOWN IN DETAIL "E".
10. PROTECTED ZONE SHALL BE PERMANENTLY MARKED AND MAINTAINED.





FILLET WELDED NOTES:
1. THE PLATE SHALL BE CHAMFERED TO MISS RADIUS OF COLUMN
2. THE FILLET WELD, IN BOTH THROAT AND LEG SIZE SHALL BE EQUAL TO OR LARGER THAN THE CHAMFER DIMENSIONS USED FOR THE PLATE
3. (REFER TO FIGURE C-E3.6 FROM AISC 341-16) FOR ADDITIONAL INFORMATION

FILLET WELDED DOUBLER PLATE DETAIL

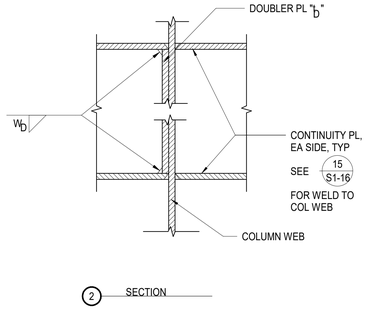


GROOVE WELDED NOTES:
1. A SQUARE-EDGE PLATE AND SQUARE GROOVE WELD BETWEEN DOUBLER PLATE AND COLUMN IS NOT PERMITTED
2. K-AREA SHALL BE INSPECTED BY MAGNETIC PARTICLE TESTING (MT) FOR ANY CRACK.
3. (REFER TO FIGURE C-E3.6 FROM AISC 341-16) FOR ADDITIONAL INFORMATION

NOTES:
PROVIDE THIS DETAIL ONLY WHERE INDICATED ON FRAME ELEVATIONS.

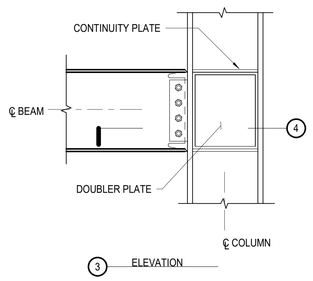
1 PLAN NIEW

DBL PL THICKNESS tD	WELD THICKNESS WD
3/4"	5/8"



2 SECTION

4 GROOVE WELDED DOUBLER PLATE DETAIL



3 ELEVATION

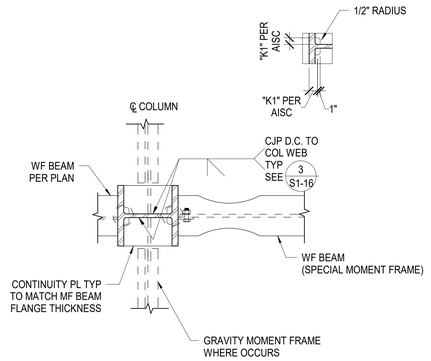
DETAIL NOTES:
THIS DETAIL IS INTENDED TO ILLUSTRATE DOUBLER PLATE CONNECTION TO COLUMN. DOUBLER PLATE EXTEND BETWEEN THE TOP OF THE CONTINUITY PLATES. (REFER TO COMMENTARY E3.6e OF AISC 341-16)

13 S1-16 SMRF DOUBLER PLATES

SCALE:N.T.S.
REF DET:11 S1-16

11 S1-16 SMRF BEAM TO COLUMN FLANGE MOMENT CONNECTION

SCALE:N.T.S.



HOLES AND ATTACHMENTS TO REDUCED BEAM SECTION (RBS):

1. NO HOLES MAY BE DRILLED OR PUNCHED IN EITHER FLANGE OF THE BEAM WITHIN THE LENGTH THAT HAS RECEIVED THE RADIUS CUT, OR BETWEEN THE RBS CUT AND THE COLUMN. SHEAR STUDS AND MECHANICAL DECK FASTENERS TO THE BEAM FLANGE WITHIN THE LENGTH OF THE RADIUS CUT ARE PROHIBITED. SPOT WELDS FOR THE ATTACHMENT OF METAL DECKING ARE PERMITTED.

2. **RBS CUT TOLERANCES:**
THE TOLERANCE ON THE DEPTH OF EACH RBS CUT IS PLUS OR MINUS 1/4 INCH, MEASURED AT THE MID-THICKNESS OF THE FLANGE AT THE NARROWEST POINT OF THE CUT FLANGE. THE LENGTH OF THE CUT SHALL BE WITHIN PLUS OR MINUS 15% OF THE SPECIFIED LENGTH. THE DEPTH OF CUT ON EACH SIDE SHALL BE BALANCED, WITH NO MORE THAN 3/8 INCH TOTAL VARIATION IN THE DEPTH OF CUT FROM ONE SIDE TO THE OTHER. (EXAMPLE: PLUS 1/8 INCH ON ONE SIDE, MINUS 1/4 INCH ON OTHER SIDE) THE BALANCE OF REMAINING FLANGE WIDTH ABOUT THE WEB OF THE BEAM IS NOT A CONSIDERATION.

3. **CUT SURFACE ROUGHNESS:**
AFTER THERMAL CUTTING, THE RBS SURFACE SHALL HAVE A SURFACE ROUGHNESS OF NO MORE THAN 500 MICROINCHES (AWS SAMPLE 3). GRINDING OF THERMALLY CUT EDGES SHALL BE PROVIDED ONLY AS NECESSARY TO MEET THIS CRITERIA. CORNERS BETWEEN THE CUT RBS SURFACE AND THE TOP AND BOTTOM OF THE FLANGES SHALL BE GROUND IN THE DIRECTION OF THE FLANGE LENGTH TO REMOVE SHARP EDGES, BUT A MINIMUM RADIUS CHAMFER IS NOT REQUIRED.

4. **GOUGES AND NOTCHES:**
GOUGES AND NOTCHES THAT OCCUR IN THE THERMAL CUT RBS SURFACE MAY BE REPAIRED BY GRINDING IF NOT MORE THAN 1/4 INCH DEEP. THE GOUGED OR NOTCHED AREA SHALL BE FAIRED BY GRINDING SO THAT A SMOOTH TRANSITION EXISTS, AND THE TOTAL LENGTH OF THE AREA GROUND FOR THE TRANSITION SHALL BE NO LESS THAN 5 TIMES THE DEPTH OF THE REMOVED GOUGE. IF A SHARP NOTCH EXISTS, THE AREA SHALL BE INSPECTED BY MT AFTER GRINDING TO ENSURE THAT THE ENTIRE DEPTH OF GOUGE OR NOTCH HAS BEEN REMOVED. GRINDING MAY NOT INCREASE THE DEPTH OF THE RBS CUT SECTION MORE THAN 1/4 INCH BEYOND THE SPECIFIED DEPTH OF CUT.

5. **WELDED REPAIR OF GOUGE AND NOTCHES:**
GOUGES AND NOTCHES THAT EXCEED 1/4 INCH IN DEPTH, BUT NOT TO EXCEED 1/2 INCH IN DEPTH, AND THOSE GOUGES AND NOTCHES WHERE REPAIR BY GRINDING WOULD INCREASE THE EFFECTIVE DEPTH OF THE RBS CUT BEYOND TOLERANCE, MAY BE REPAIRED BY WELDING. GOUGES AND NOTCHES EXCEEDING 1/2 INCH IN DEPTH MAY BE REPAIRED ONLY WITH THE APPROVAL OF THE STRUCTURAL ENGINEER. THE NOTCH OR GOUGE SHALL BE REMOVED AND GROUND TO PROVIDE A SMOOTH RADIUS OF NOT LESS THAN 1/4 INCH FOR WELDING. THE REPAIR AREA SHALL BE PREHEATED TO A TEMPERATURE OF 150°F (65°C) OR THE VALUE SPECIFIED IN AWS D1.1/D1.1M, WHICHEVER IS GREATER, MEASURED AT THE LOCATION OF THE WELD REPAIR. REPAIR WELDINGSHALL BE DONE WITH NOTCH-TOUGH ELECTRODES MEETING THE REQUIREMENTS PER AISC 358-16, SECTION 5.7. A REPAIR WPS IS REQUIRED. FOLLOWING WELDING, THE REPAIR WELD SHALL BE GROUND TO A SMOOTH CONTOUR MEETING THE RBS REQUIREMENTS, WITH A SURFACE ROUGHNESS NOT TO EXCEED 500 MICROINCHES. THE WELDED REPAIR AREA SHALL BE INSPECTED USING MAGNETIC PARTICLE TESTING.

15 S1-16 SMRF CONTINUITY PLATES

SCALE:N.T.S.
REF DET:2 S1-16

16 S1-16 RBS NOTES

SCALE:N.T.S.
REF DET:6 S1-16

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Project No.: J908

PROJECT NAME:
WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:
WILL ROGERS MIDDLE SCHOOL
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LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TYPICAL SMF DETAILS

SHEET NO:
S1-16

FOUNDATION NOTES:

1. FOR GENERAL NOTES, SEE S0-## SERIES.
2. FOR TYPICAL DETAILS, SEE S1-## SERIES, SEE REFERENCES BELOW.
3. FOR OVER EXCAVATION DETAIL SEE 9 / S1-2 .
4. DRAWING DATUM = 0'-0" @ GROUND FLOOR FINISH FLOOR
   (SEE CIVIL & ARCH FOR ACTUAL ELEVATION)
5. FOR GRADE BEAM / WALL FTG CROSSING, SEE 9 / S1-3
   & FOR SPREAD FTG AT GRADE BEAM, SEE 2 / S1-3
6. FOR WALL FOOTING THRU / TERMINATION DETAIL SEE 6 / S1-3
7. TYPICAL SLAB ON GRADE UNDERLAYMENT:
   15 MIL VAPOR BARRIER OVER A MINIMUM OF 4 INCHES OF 1/2" COMPACTED, CRUSHED ROCK LAYER.
   CONTRACTOR TO PROTECT VAPOR BARRIER FROM PUNCTURE.
8. FOR SLAB SAWCUT AND CONTROL JOINT, SEE DETAIL 16 / S1-1
   & FOR TYPICAL SLAB EDGE, SEE 9 / S1-1
9. UNDERGROUND UTILITY NOTE:
   CONTRACTOR SHALL COORDINATE ALL NEW AND EXISTING UTILITIES PRIOR TO ANY FOUNDATION WORK PER 5 / S1-2 & 8 / S1-2
   STEP FOOTINGS AS REQUIRED PER DETAIL 3 / S1-2
   @ SLRS FRAMES, STEPS NOT NOTED HEREIN REQUIRE SEOR & DSA APPROVAL.
   WHERE ADDITIONAL STEPS ARE REQUIRED, NOTIFY SEOR.
10. INDICATES STEP IN FOOTING PER DETAIL 3 / S1-2
    @ SLRS FRAMES, STEPS NOT NOTED HEREIN
    REQUIRE SEOR & DSA APPROVAL.
11. INDICATES DEPRESSED SLAB (2" UNO). SEE DETAIL 9 / S1-1
    REFER TO ARCHT'L DRAWINGS FOR DEPRESSIONS NOT SHOWN AND ANY ADDITIONAL INFORMATION.
12. SHOWS ELEVATION OF FRAME ELEVATION
13. DENOTES WALL W/ CONC CURB (NOT SHOWN UNDER WINDOW FOR CLARITY),SEE ARCHT'L FOR CURB HEIGHT)
    8 / S1-1 @ CURB ON GRADE
    1 / S4-1 @ EXTERIOR WALL AT GRADE UNO

FOOTING SCHEDULES:

SF-# INDICATES SPREAD FOOTING. SEE SPREAD FOOTING SCHEDULE FOR ADDITIONAL INFO.

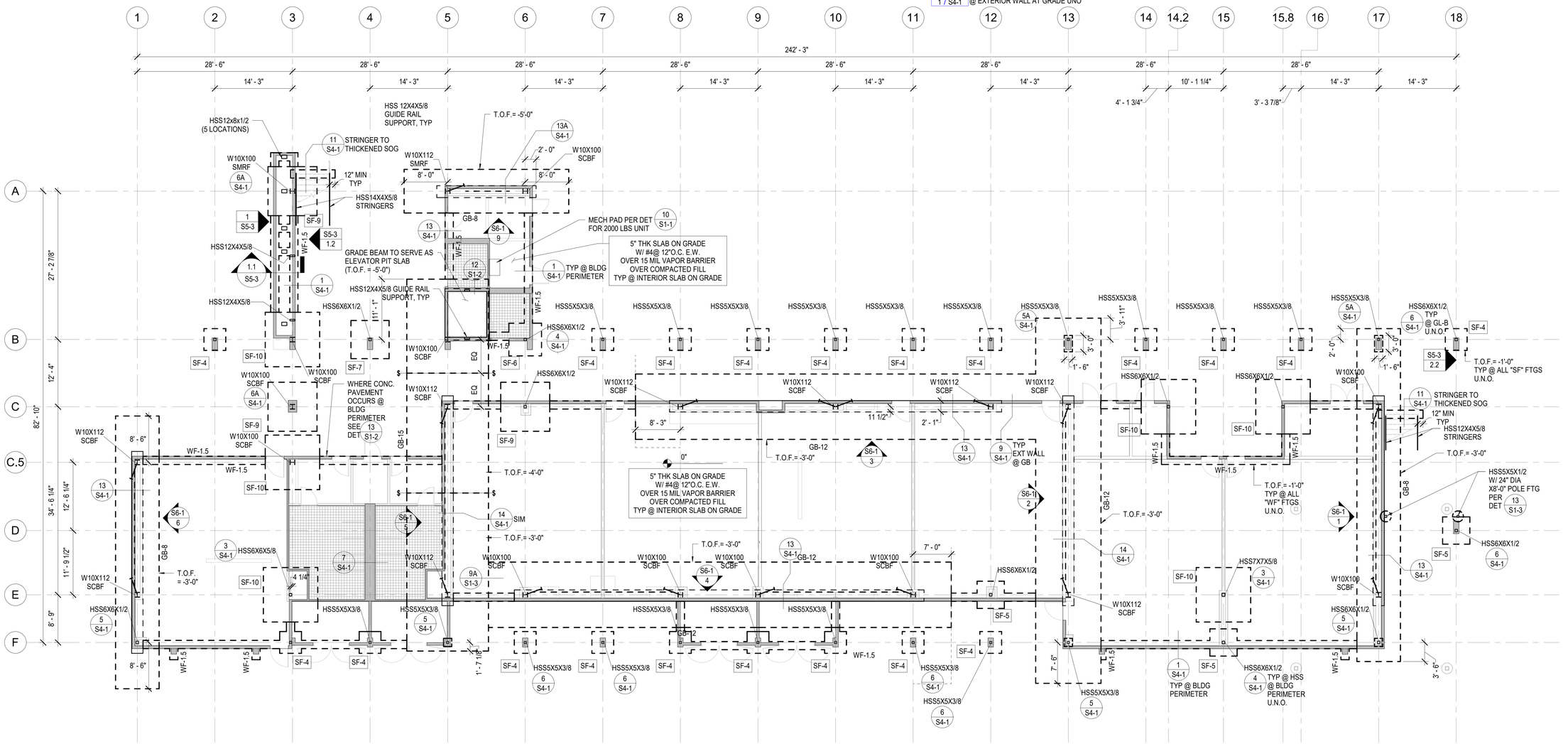
SPREAD FOOTING SCHEDULE					
MARK	DIMENSIONS			REINFORCEMENT	
	LENGTH	WIDTH	DEPTH	BOTTOM	TOP
SF-4	4' - 0"	4' - 0"	18"	(7)-#6 E.W.	(4)-#6 E.W.
SF-5	5' - 0"	5' - 0"	18"	(7)-#6 E.W.	(5)-#6 E.W.
SF-8	8' - 0"	8' - 0"	18"	(8)-#6 E.W.	(8)-#6 E.W.
SF-9	9' - 0"	9' - 0"	30"	(10)-#7 E.W.	(10)-#7 E.W.
SF-10	10' - 0"	10' - 0"	30"	(11)-#7 E.W.	(11)-#7 E.W.

WF-# INDICATES WALL FOOTING.

WALL FOOTING SCHEDULE					
MARK	DIMENSIONS		REINFORCEMENT		#4 TIES @ 16"O/C, U.N.O
	WIDTH	DEPTH	TOP BARS	BOTTOM BARS	
WF-1.5	1'-6"	18"	(3) #5	(3) #5	CAP TIE, ALT CAP TIE

GB-# INDICATES WALL GRADE BEAM.

GRADE BEAM SCHEDULE							
MARK	DIMENSIONS		LONG. REINF.		TRANV. REINF.		#4 TIES @ 16" O.C., U.N.O.
	WIDTH	DEPTH	TOP BARS	BOTT. BARS	TOP BARS @12" O.C. @ EA COL	BOTT. BARS @12" O.C. @ EA COL	ALT. CAP, 3 INTERMED U.N.O., ALT HOOK LOCATION, EQ EQ, TYP. TIE LAYOUT U.N.O.
GB-8	8' - 0"	3' - 6"	(6) #10	(9) #10	(8) #4	(8) #10	
GB-12	12' - 0"	3' - 9"	(11) #10	(13) #10	(12) #5	(12) #10	
GB-15	15' - 0"	4' - 0"	(13) #10	(19) #10	(15) #6	(15) #10	



1 / S2-1 FOUNDATION PLAN

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

REF DET:1 S5-3

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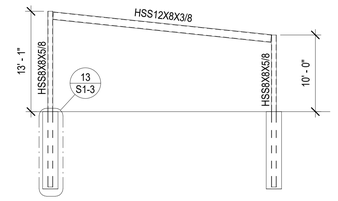
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: AQ
CHECK: YN
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FOUNDATION PLAN

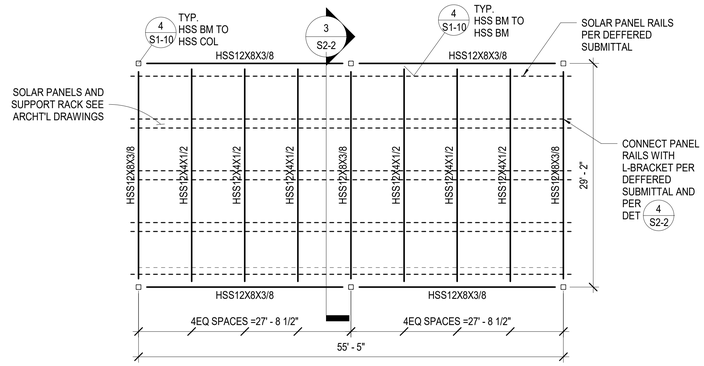
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S2-1



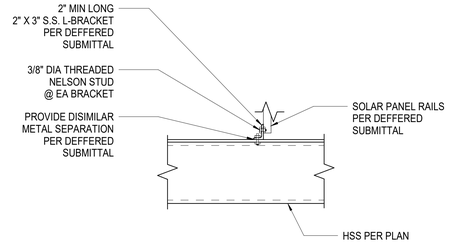
3 / S2-2 SECTION-SOLAR CANOPY

SCALE: 1/8" = 1'-0"
REF DET:1 S2-2



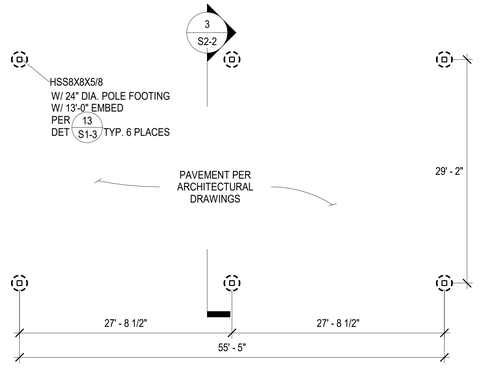
2 / S2-2 ROOF FRAMING PLAN-SOLAR CANOPY

SCALE: 1/8" = 1'-0"
REF DET:1 S5-3



4 / S2-2 SOLAR PANEL SUPPORT RAIL TO HSS

SCALE: N.T.S.



1 / S2-2 FOUNDATION PLAN-SOLAR CANOPY

SCALE: 1/8" = 1'-0"
REF DET:1 S5-3

SHEET NOTES:
FOR LOCATION OF THE SOLAR CANOPY SEE ARCHITECTURAL DRAWINGS
FOR FOUNDATION NOTES, SEE S2-1
FOR ROOF FRAMING NOTES, SEE S3-2

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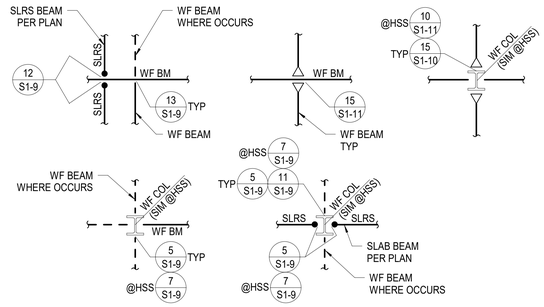
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ENGINEER:

SHEET DESCRIPTION:
SOLAR SHADE CANOPY FOUNDATION AND ROOF FRAMING PLANS

SHEET NO:

S2-2

TYPICAL BM TO BM & BM TO COL. LEGEND

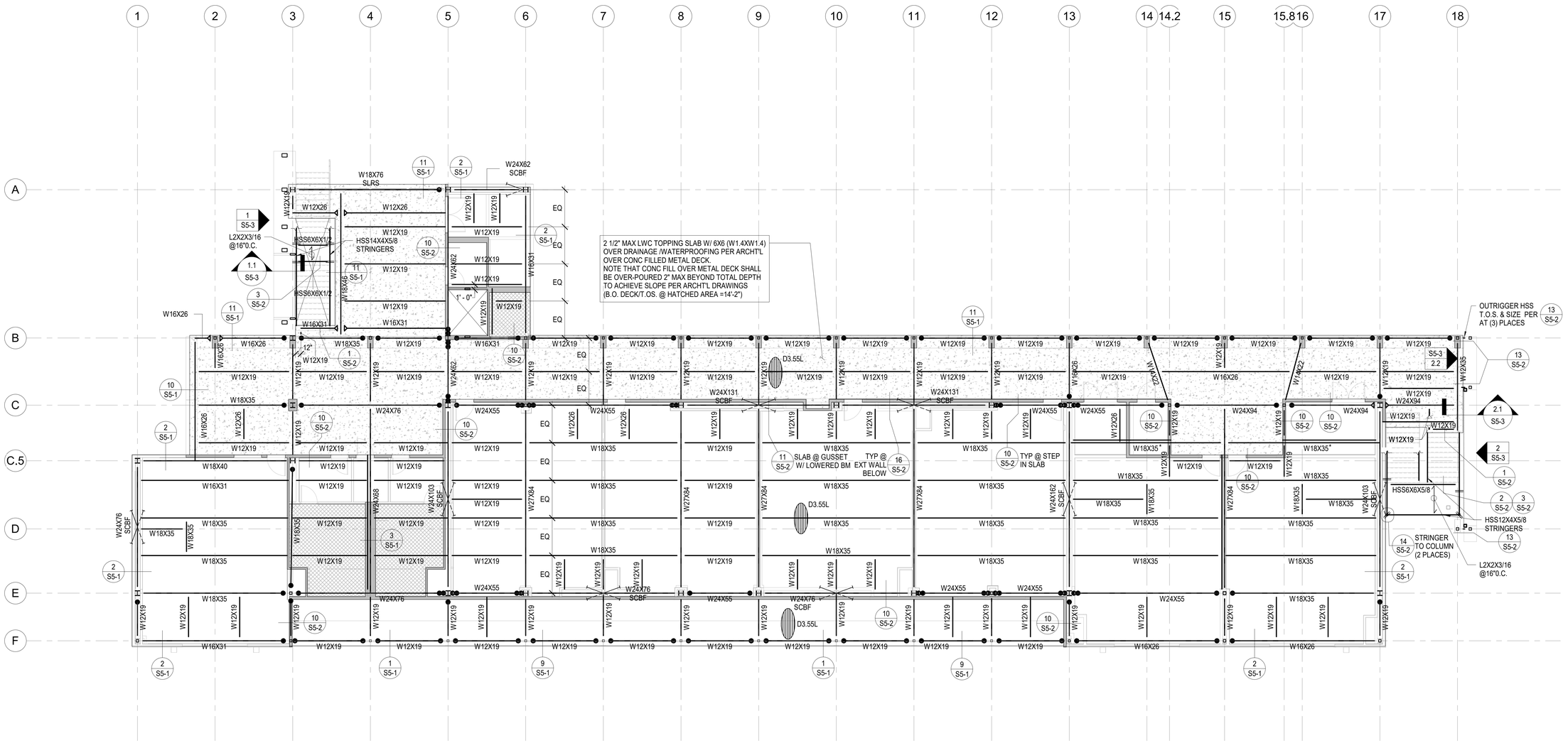


FLOOR FRAMING NOTES:

1. FOR GENERAL NOTES, SEE S0-## SERIES.
2. FOR TYPICAL DETAILS, SEE S1-## SERIES, SEE REFERENCES BELOW.
3. STEEL BEAMS NOT ON A GRID LINE SHALL BE LOCATED 1' - 1" FROM EDGE OF DECK UNO.
4. DECK PER DECK SCHEDULE BELOW
   SEE 13 / S1-8 FOR ADDITIONAL INFORMATION.
5. SEE PLAN FOR T.O.S. NOTE, COORDINATE T.O.S. NOTED WITH ARCHITECTURAL DRAWINGS
6. FOR TYPICAL BEAM TO BEAM CONNECTIONS, SEE DETAIL 13 / S1-9
7. CANTILEVER BEAM MOMENT
   CONNECTION SEE DET TYP BM TO BM & BM TO COL LEGEND.
8. COLUMNS : SEE FLOORS BELOW FOR SIZES NOT NOTED ON THIS SHEET.
9. SPLICE @WF BEAMS. SEE DETAIL 4 / S1-11
   & SPLICE @ TUBE STL SEE DETAIL 13 / S1-10
   MITER CORNER IN TUBE STL SEE DET. 5 / S1-11
10. INDICATES BOLT CONNECTION AT SLRS SEE DETAIL 12 / S1-9
    INDICATES (3) ROWS OF A490SC, ●●●
    INDICATES (2) ROWS OF A490SC, ●●
    INDICATES (1) ROW OF A490SC, ●
11. INDICATES DEPRESSED SLAB (2" UNO). SEE DETAIL 6 / S1-10
    REFER TO ARCHT'L DRAWINGS FOR
    ADDT'L INFO. LOCATE MISC. W12X STEEL 10" FROM EDGE OF STEP
12. * NEXT TO BM SIZE INDICATES LOWERED BEAM AROUND DEPRESSED AREA
    SEE 2 / S1-10 FOR BEAM WITH WT SECTION.
    NOTE: DOUBLE LINE DENOTES EXTENT OF WT.
13. ALL STEEL BEAMS SHALL HAVE WELDED STUDS. SEE DETAIL 13 / S1-11
14. FRAME OPENINGS IN SLAB PER DET 1 / S1-8
15. DENOTES FLOOR/ROOF PENETRATION.
    FOR TRIM REINF SEE DETAIL 7 / S1-8
    SEE ARCHT'L / MEP DRAWINGS FOR ACTUAL
    LOCATION AND ADDITION INFO AND ADDITIONAL
    PENETRATIONS NOT SHOWN IN THESE DRAWINGS
16. AT ALL SLRS BEAMS (DRAG BEAMS, SCBF/SMF BEAMS) PROVIDE BRACING @ 8'-0" O/C MAX
    PER DETAIL 1 / S1-12 & 2 / S1-12
17. DENOTES WALL W/ CONC CURB (NOT SHOWN
    UNDER WINDOW FOR CLARITY, SEE ARCHT'L FOR CURB HEIGHT)
    16 / S1-8 @ METAL DECK
    10 / S5-2 @ EXTERIOR WALL ON METAL DECK

DECK SCHEDULE

DECK MARK	TYPE	GAGE	I (IN4/FT)	S (TOP +) (IN3/FT)	S (BOT -) (IN3/FT)	TOTAL DEPTH(IN)	CONC FILL TYPE	REINF.	SIDE-SEAM ATTACHMENT	ATTACHMENT PATTERN	WELDED STUDS
D1.50B	ASC B IAPMO 0329	18	0.287	0.311	0.329	1 1/2"	N/A	N/A	TOP SEAM WELD @ 12" O/C	36/4	N/A
D2.45L	ASC 2W IAPMO 0329	18	0.570	0.472	0.488	4 1/2"	LWC	#3 @ 12" O/C E.W.	TOP SEAM WELD @ 24" O/C	36/4	3/4 DIAM. X 4" FN HT @ 12" O/C
D3.55L	ASC 3W IAPMO 0329	18	1.230	0.761	0.781	5 1/2"	LWC	#3 @ 12" O/C E.W.	TOP SEAM WELD @ 24" O/C	36/4	3/4 DIAM. X 5" FN HT @ 12" O/C



1 / S3-1 2ND FLOOR FRAMING PLAN

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

REF DET:1 S5-3

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PROFESSIONAL ENGINEER — No. 54029 — Exp. 9/30/24 — STRUCTURAL — STATE OF CALIFORNIA

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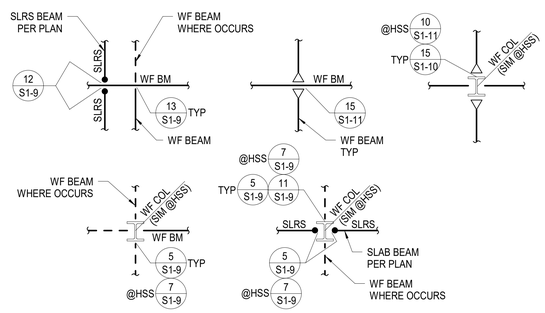
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ENGINEER:

SHEET DESCRIPTION:
SECOND FLOOR FRAMING PLAN

SHEET NO:

S3-1

TYPICAL BM TO BM & BM TO COL. LEGEND



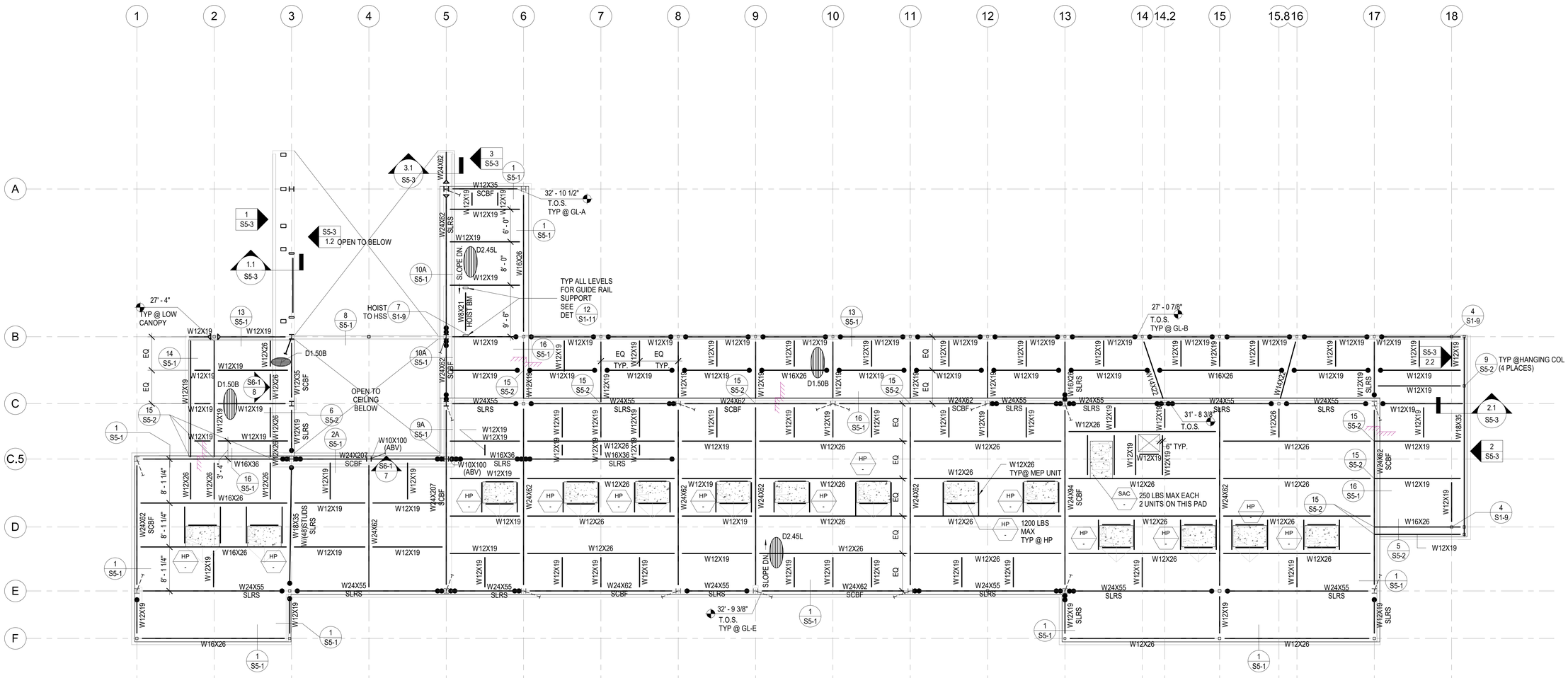
ROOF FRAMING NOTES:

1. FOR GENERAL NOTES, SEE S0-## SERIES.
2. FOR TYPICAL DETAILS, SEE S1-## SERIES, SEE REFERENCES BELOW.
3. NOT USED.
4. DECK PER DECK SCHEDULE BELOW SEE 13 / S1-8 FOR ADDITIONAL INFORMATION.
5. TOS = VARIES, SEE PLAN & VERIFY WITH ROOF SLOPES NOTED ON ARCHT'L DRAWINGS SEE DET. 3 / S1-11 FOR TYP. SLOPE SECTION. PROVIDE BENT PL @ SKEWED BEAMS PER PLAN DET. 2 / S1-11
6. FOR TYPICAL BEAM TO BEAM CONNECTIONS, SEE DETAIL 13 / S1-9
7. CANTILEVER BEAM MOMENT CONNECTION SEE DET TYP BM TO BM & BM TO COL LEGEND.
8. INDICATES BOLT CONNECTION AT SLRS SEE DETAIL 11 / S1-9
   INDICATES (3) ROWS OF A490SC, ●●●
   INDICATES (2) ROWS OF A490SC, ●●
   INDICATES (1) ROW OF A490SC, ●
9. INDICATES LOCATION OF MECH UNIT CONC PAD. SEE DET. 13 / S1-13 REFER TO MECH AND ARCH DWGS FOR ADDITIONAL INFO.
11. ALL STEEL BEAMS SHALL HAVE WELDED STUDS. SEE DETAIL 13 / S1-11
12. SHOWS EXTERIOR WALL ELEVATION
13. AT ALL SLRS BEAMS & SMF/SCBF BEAMS PROVIDE BRACING @ 8'-0" O/C MAX PER DETAIL 1 / S1-12 & 2 / S1-12
10. FRAME OPENING IN ROOF FOR & ROOF DRAINS, E.F, ETC. PER DETAIL 1 / S1-8
14. DENOTES FLOOR/ROOF PENETRATION. FOR TRIM REINF SEE DETAIL 7 / S1-8 SEE ARCH'T'L / MEP DRAWINGS FOR ACTUAL LOCATION AND ADDITION INFO AND ADDITIONAL PENETRATIONS NOT SHOWN IN THESE DRAWINGS
15. # MAX / # UNIT WT DENOTES MECH'L UNIT PER MECH'L DRAWINGS. SEE MECHANICAL DRAWINGS FOR ANCHORAGE

UNIT	MAX WT
TYP HP UNIT	1200 LBS
TYP SAC UNIT	250 LBS

DECK SCHEDULE

DECK MARK	TYPE	GAGE	I (IN4/FT)	S (TOP +) (IN3/FT)	S (BOT -) (IN3/FT)	TOTAL DEPTH(IN)	CONC FILL TYPE	REINF.	SIDE-SEAM ATTACHMENT	ATTACHMENT PATTERN	WELDED STUDS
D1.50B	ASC B IAPMO 0329	18	0.287	0.311	0.329	1 1/2"	N/A	N/A	TOP SEAM WELD @ 12" O/C	36/4	N/A
D2.45L	ASC 2W IAPMO 0329	18	0.570	0.472	0.488	4 1/2"	LWC	#3 @ 12" O/C E.W.	TOP SEAM WELD @ 24" O/C	36/4	3/4 DIAM. X 4" FN HT @ 12" O/C
D3.55L	ASC 3W IAPMO 0329	18	1.230	0.761	0.781	5 1/2"	LWC	#3 @ 12" O/C E.W.	TOP SEAM WELD @ 24" O/C	36/4	3/4 DIAM. X 5" FN HT @ 12" O/C



1 S3-2 ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"
REF DET:1 S5-3

10/7/2024 12:47:57 PM C:\Users\bjimenez\Documents\S-LESD_Will Rogers 2 Story Classroom_R22_robert.gonzalesPS6HX.rvt

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DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
14471 CHAMBERS RD, SUITE 210
TUSTIN, CA 92780
(714) 508-1780 508-1790 FAX

CONSULTANT:

VCA ENGINEERS INC
CIVIL • STRUCTURAL
2151 Michelson Dr. #240
Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

PROFESSIONAL ENGINEER — No. 54029 — Exp. 9/30/24 — STRUCTURAL — STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

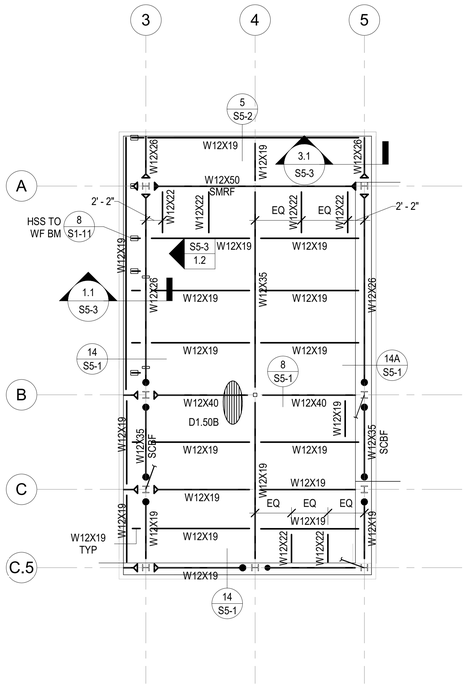
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/20/2024
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
ROOF FRAMING PLAN

SHEET NO:

S3-2



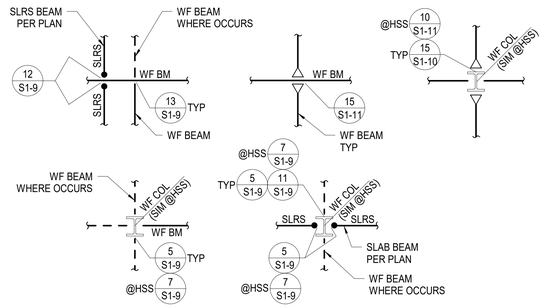
1 S3-3 HIGH ROOF FRAMING PLAN

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

REF DET1.S5.0

NORTH

TYPICAL BM TO BM & BM TO COL. LEGEND



ROOF FRAMING NOTES:

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2. FOR TYPICAL DETAILS, SEE S1-## SERIES, SEE REFERENCES BELOW.
3. NOT USED.
4. DECK PER DECK SCHEDULE BELOW
   SEE 13 / S1-8 FOR ADDITIONAL INFORMATION.
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   PROVIDE BENT PL @ SKEWED BEAMS PER PLAN DET. 2 / S1-11
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   INDICATES (3) ROWS OF A490SC, ●●●
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UNIT	MAX WT
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DECK MARK	TYPE	GAGE	I (IN4/FT)	S (TOP +) (IN3/FT)	S (BOT -) (IN3/FT)	TOTAL DEPTH(IN)	CONC FILL TYPE	REINF.	SIDE-SEAM ATTACHMENT	ATTACHMENT PATTERN	WELDED STUDS
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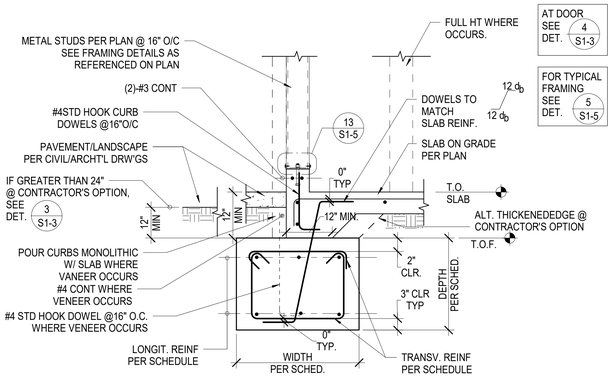
WILL ROGERS MIDDLE SCHOOL
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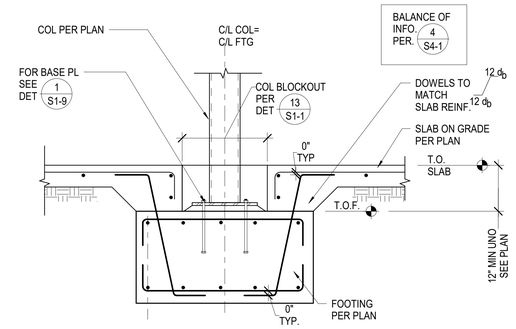
SHEET DESCRIPTION:
HIGH ROOF FRAMING PLAN

SHEET NO:
S3-3



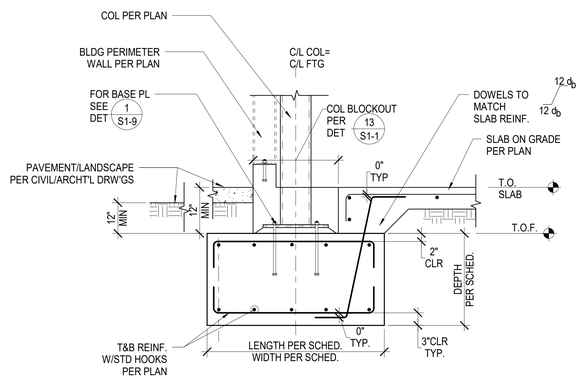
1 S4-1 MTL STUD WALL AT BLDG PERIMETER

SCALE: N.T.S.



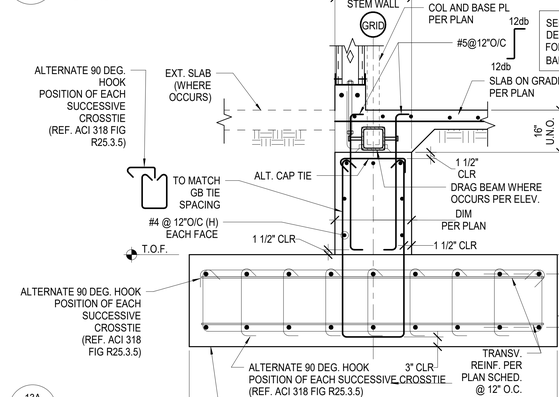
3 S4-1 HSS COL AT BLDG INTERIOR

SCALE: N.T.S.



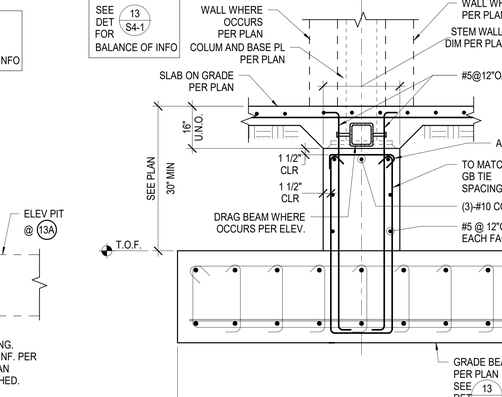
4 S4-1 HSS COL AT BLDG PERIMETER

SCALE: N.T.S.



5A S4-1 / 5 S4-1 PILASTER DETAIL

SCALE: N.T.S.



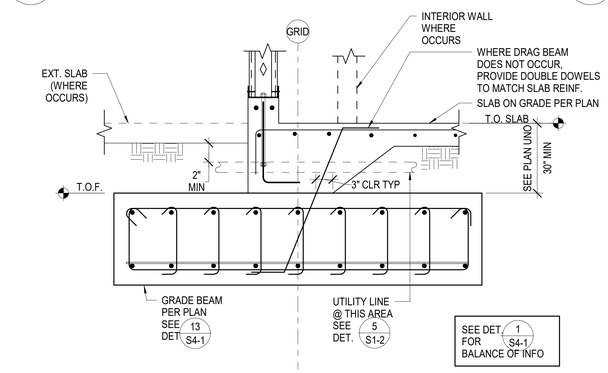
6A S4-1 / 6 S4-1 HSS COL AT EXTERIOR OF BLDG

SCALE: N.T.S.



7 S4-1 DOUBLE WALL AT CURB (MTL STUD)

SCALE: N.T.S.



9 S4-1 GRADE BEAM @ BLDG PERIMETER

SCALE: N.T.S.

13A S4-1 / 13 S4-1 LOWERED GRADE BEAM @ BLDG PERIMETER

SCALE: N.T.S.

14 S4-1 LOWERED GRADE BEAM @ BLDG INTERIOR

SCALE: N.T.S.

11 S4-1 STRINGER TO SLAB (SLOTTED)

SCALE: N.T.S.

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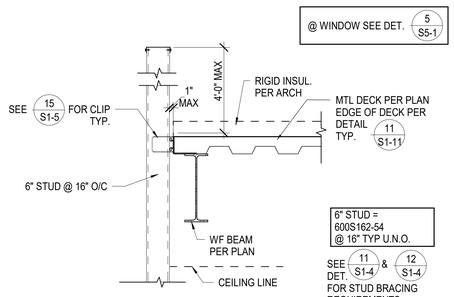
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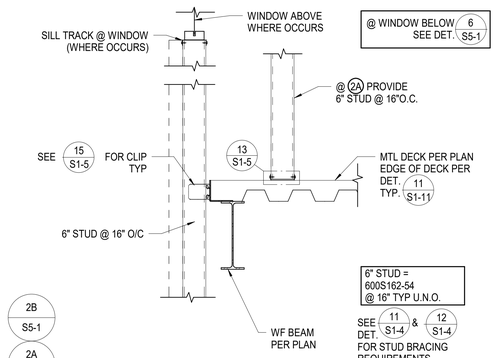
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FOUNDATION DETAILS

SHEET NO:

S4-1

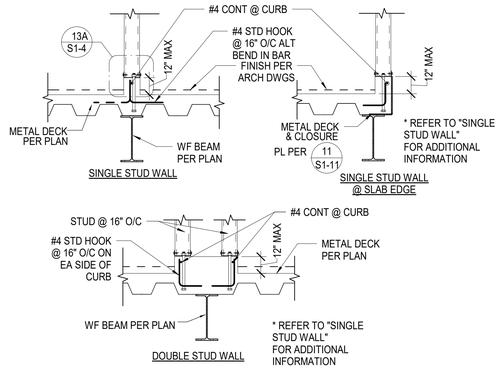


1 S5-1 **FULL HEIGHT STUD WALL @ ROOF**
SCALE: N.T.S.
REF: 1 / S5-1

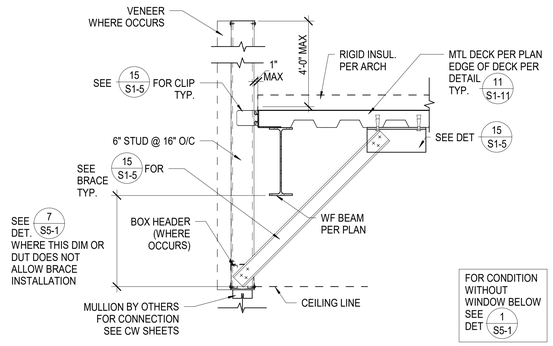


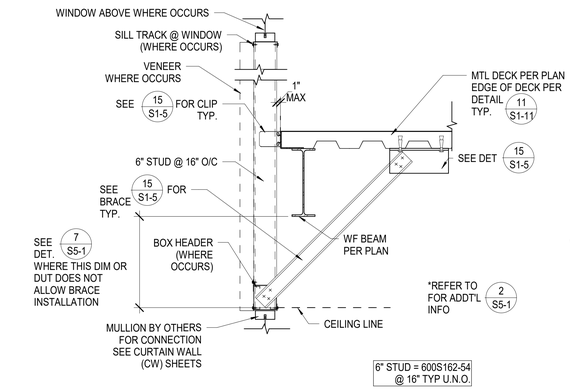
2B S5-1
2A S5-1

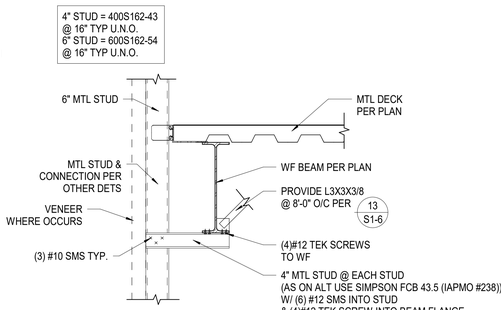
2 S5-1 **FULL HEIGHT STUD WALL @ FLOOR**
SCALE: N.T.S.
REF: 2 / S5-1

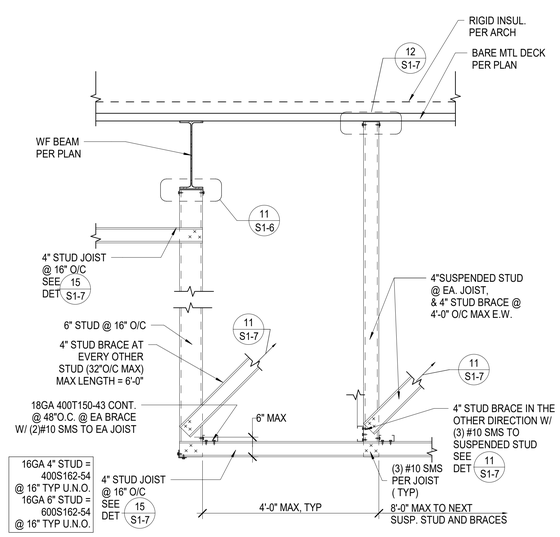


3 S5-1 **STUD WALL @ METAL DECK W/ CURB**
SCALE: N.T.S.
REF: 1 / S5-1

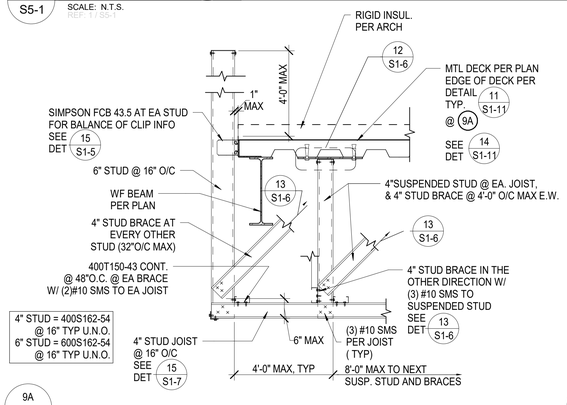




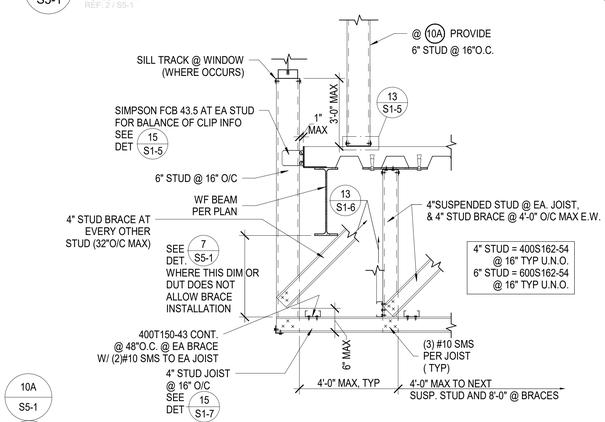




8 S5-1 **EXTERIOR SOFFIT DETAIL**
SCALE: 3/4" = 1'-0"
REF: 1 / S3-2

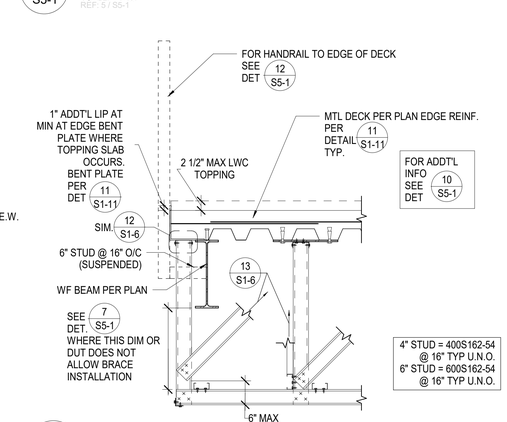


5 S5-1 **STUD WALL @ ROOF OVER WINDOW**
SCALE: N.T.S.
REF: 1 / S5-1

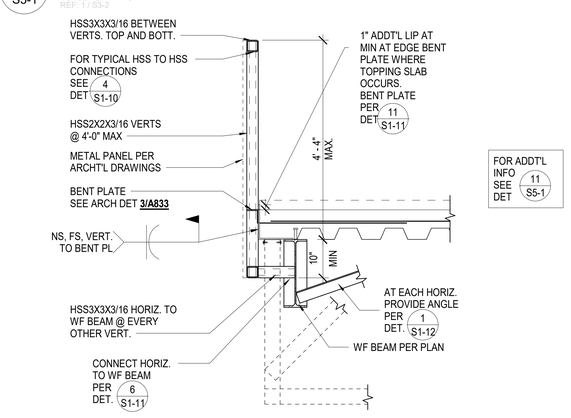


10A S5-1

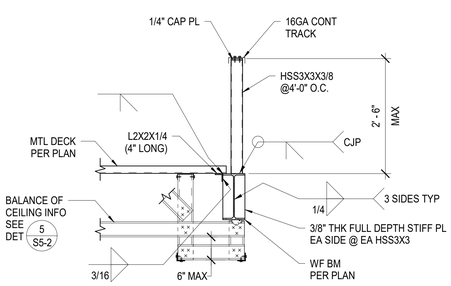
6 S5-1 **STUD WALL @ FLOOR OVER WINDOW**
SCALE: N.T.S.
REF: 2 / S5-1



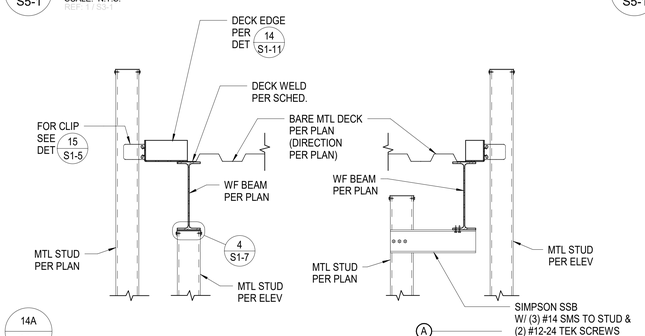
11 S5-1 **SUSPENDED STUD WALL @ BALCONY**
SCALE: N.T.S.
REF: 1 / S5-1



12 S1-7 **HANDRAIL AT 2ND FLOOR**
SCALE: N.T.S.
REF: 1 / S3-2

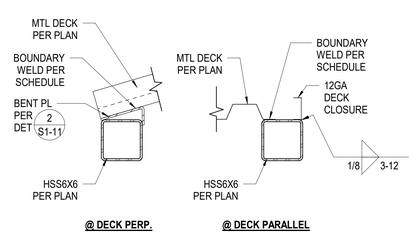


13 S5-1 **FRAMING @ CANOPY**
SCALE: N.T.S.
REF: 1 / S3-2

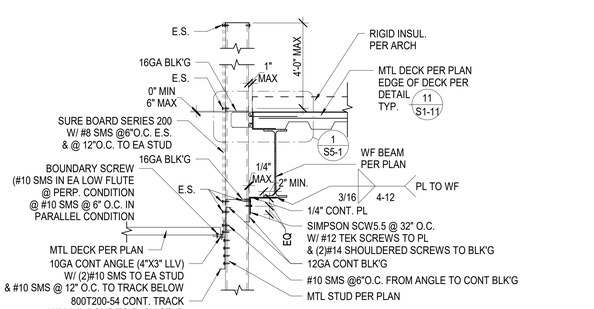


14A S5-1

14 S5-1 **DECK TO WALL @ CANOPY**
SCALE: N.T.S.
REF: 1 / S3-2



15 S5-1 **HSS @ CANOPY EDGE**
SCALE: N.T.S.



16 S5-1 **EXTERIOR WALL @ CANOPY**
SCALE: N.T.S.
REF: 1 / S3-2

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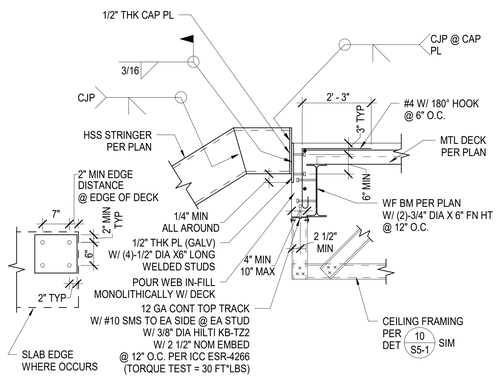
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ENGINEER:

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FRAMING DETAILS

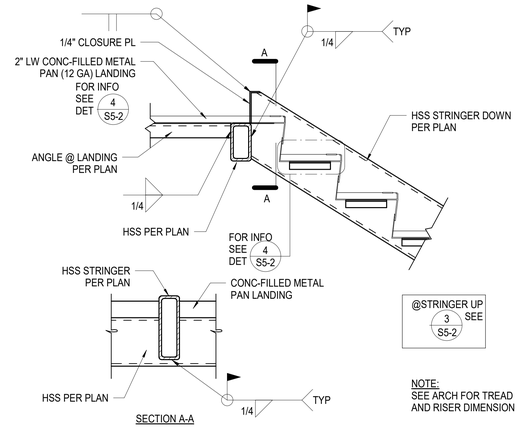
SHEET NO:
S5-1



1 S5-2 STRINGER TO MTL DECK

SCALE: N.T.S.

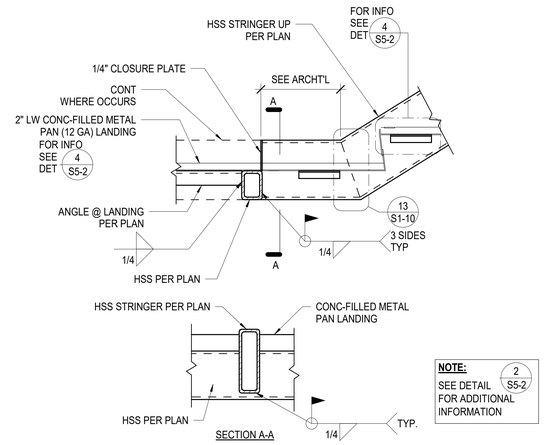
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2 S5-2 STAIR @ INTERMEDIATE LANDING (STRINGER DN)

SCALE: N.T.S.

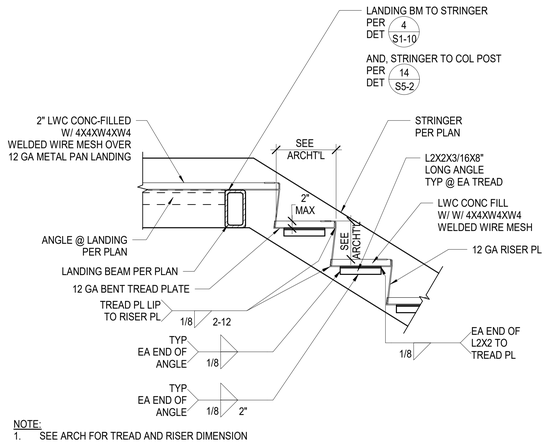
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3 S5-2 STAIR @ INTERMEDIATE LANDING (STRINGER UP)

SCALE: N.T.S.

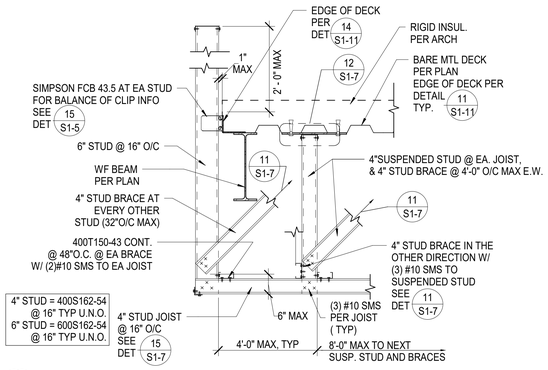
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4 S5-2 TYP STAIR THREAD AND LANDING DETAIL

SCALE: N.T.S.

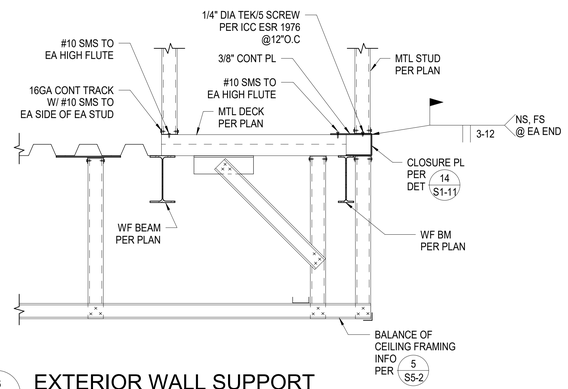
REF: 2 / S5-2



5 S5-2 STUD WALL @ ROOF W/SOFFIT @ BARE DECK

SCALE: N.T.S.

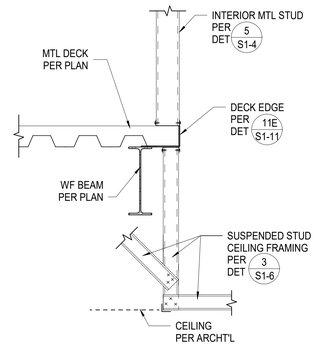
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6 S5-2 EXTERIOR WALL SUPPORT

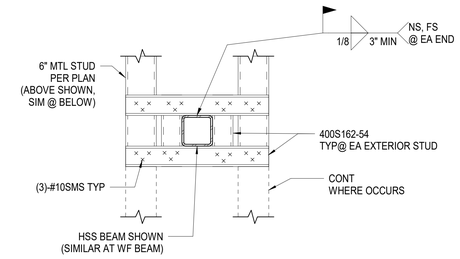
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7 S5-2 SHAFT WALL AT 2ND FLOOR

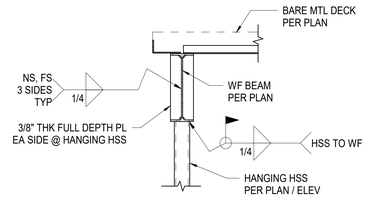
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8 S5-2 MTL STUD BRACING DETAIL @ HSS

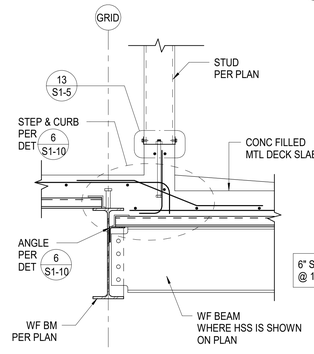
SCALE: N.T.S.

REF: 12 / S5-2

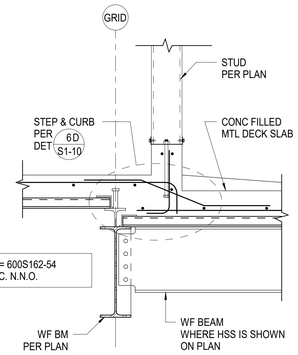


9 S5-2 HANGING HSS @ BARE DECK

SCALE: N.T.S.



TYPICAL CONDITION

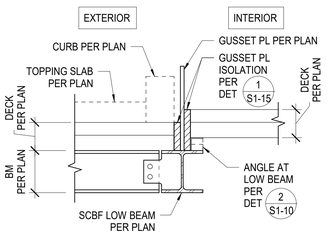


CONDITION @ BEAM W/ WT
(FOR INFO NOT SHOWN SEE TYPICAL CONDITION)

10 S5-2 STEP @ EXT WALL

SCALE: N.T.S.

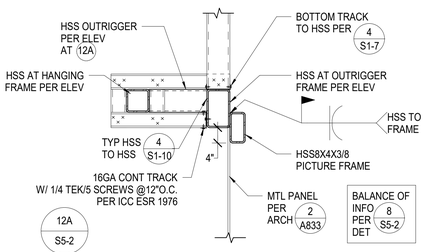
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11 S5-2 SLAB AT GUSSET W/ LOWERED BM

SCALE: N.T.S.

REF: 1 / S3-1

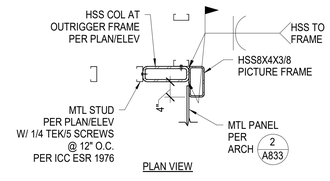


12A S5-2

12 S5-2 MTL PANEL SUPPORT

SCALE: 3/4" = 1'-0"

REF: 12 / S5-3

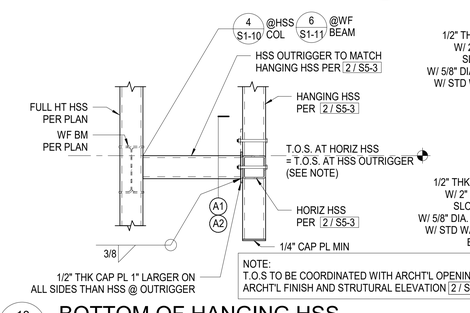


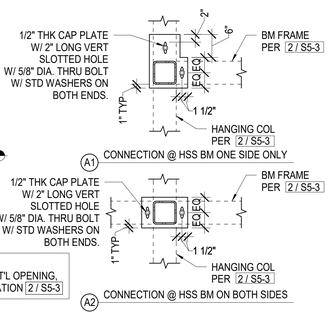
PLAN VIEW

17 S5-2 MTL PANEL SUPPORT

SCALE: 3/4" = 1'-0"

REF: 12 / S5-3

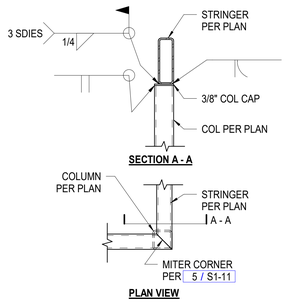




13 S5-2 BOTTOM OF HANGING HSS

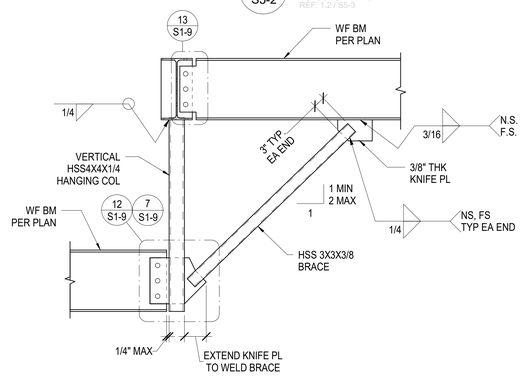
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REF: 1 / S3-1



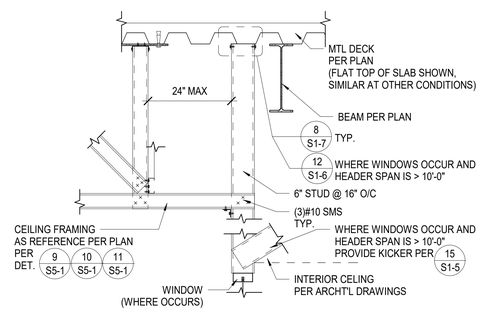
14 S5-2 STAIR STRINGER TO COL

SCALE: N.T.S.



15 S5-2 HANGING HSS COLUMN

SCALE: N.T.S.



16 S5-2 UPPER CONNECTION AT EXTERIOR PLATFORM FRAMED WALL

SCALE: N.T.S.

10/7/2024 12:48:08 PM C:\Users\bjimenez\Documents\S-LESD_Will Rogers 2 Story Classroom_R22_robert.gonzalesPS6HX.rvt

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Fax. 949.679.9370
Project No.: J908

PROFESSIONAL ENGINEER — KEVIN A. PAUL — No. 54029 — Exp. 9/30/24 — STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL

NEW 2-STORY CLASSROOM BUILDING

4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

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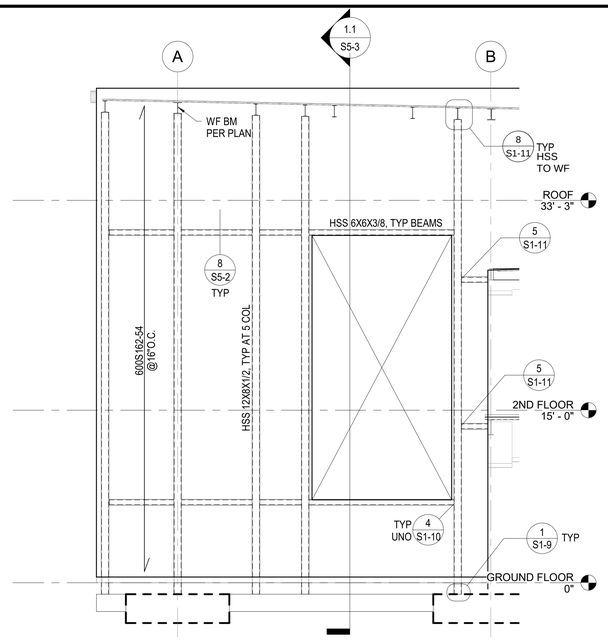
No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	02/20/2024
DRAWN:	Author
CHECK:	Checker
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
FRAMING DETAILS

SHEET NO:

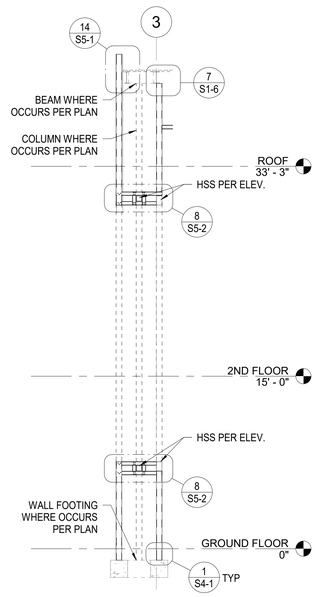
S5-2



1 S5-3 EXTERIOR WALL ELEVATION

SCALE: 3/16" = 1'-0"

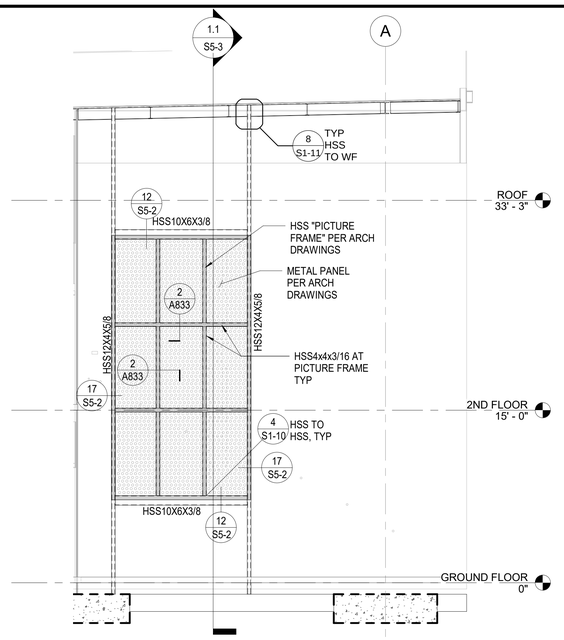
REF DET:1 S2-1



1.1 S5-3 EXTERIOR WALL SECTION

SCALE: 3/16" = 1'-0"

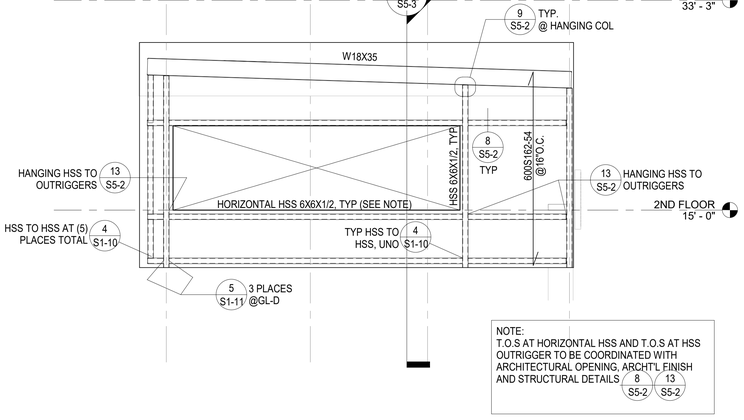
REF DET:1 S2-1



1.2 S5-3 METAL PANEL FRAME ELEV

SCALE: 3/16" = 1'-0"

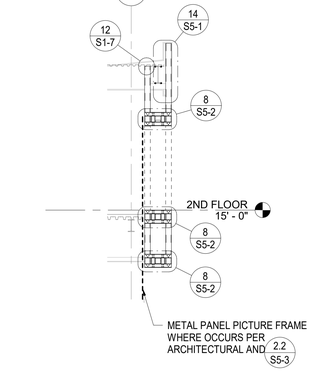
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2 S5-3 EXTERIOR WALL ELEV (HANGING FRAME)

SCALE: 3/16" = 1'-0"

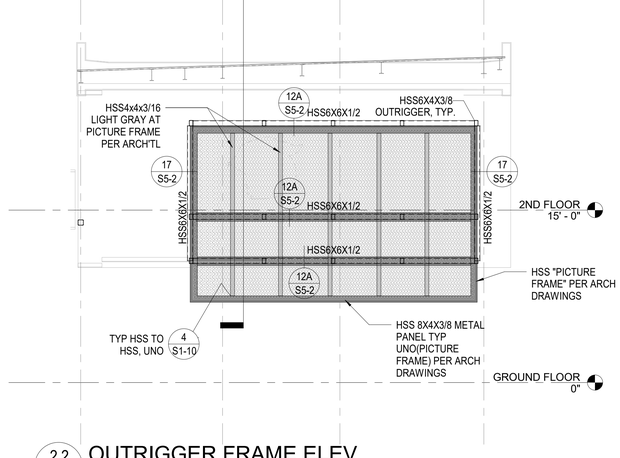
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2.1 S5-3 EXTERIOR WALL SECTION

SCALE: 3/16" = 1'-0"

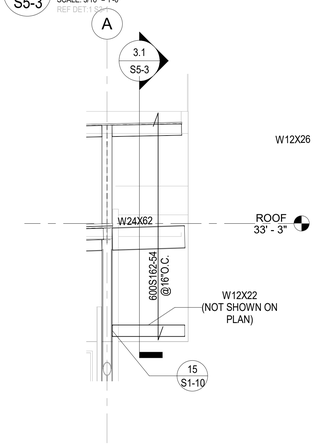
REF DET:1 S3-1

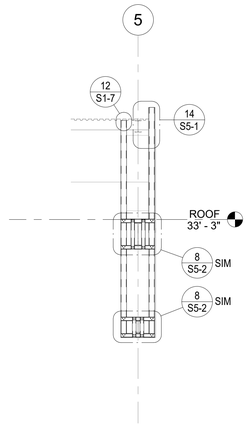


2.2 S5-3 OUTRIGGER FRAME ELEV

SCALE: 3/16" = 1'-0"

REF DET:1 S2-1





3 S5-3 EXTERIOR WALL ELEVATION

SCALE: 3/16" = 1'-0"

REF DET:1 S3-2

3.1 S5-3 EXTERIOR WALL SECTION

SCALE: 3/16" = 1'-0"

REF DET:1 S3-2

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Irvine, CA 92612
Tel. 949.679.0870
Fax. 949.679.9370
Project No.: J908

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
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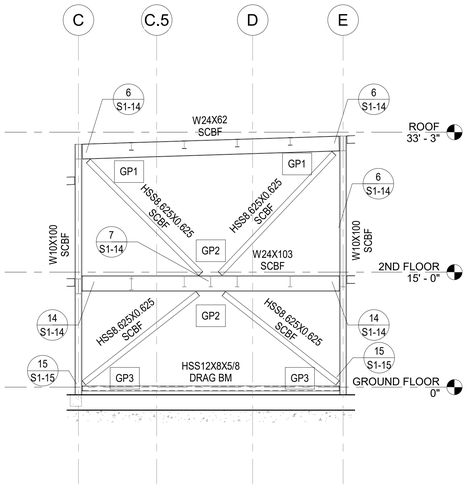
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CHECK: Checker
ARCHITECT: PDW
ENGINEER:

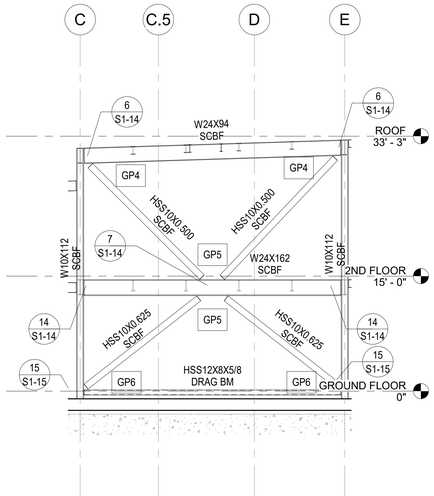
SHEET DESCRIPTION:
FRAMING DETAILS

SHEET NO:

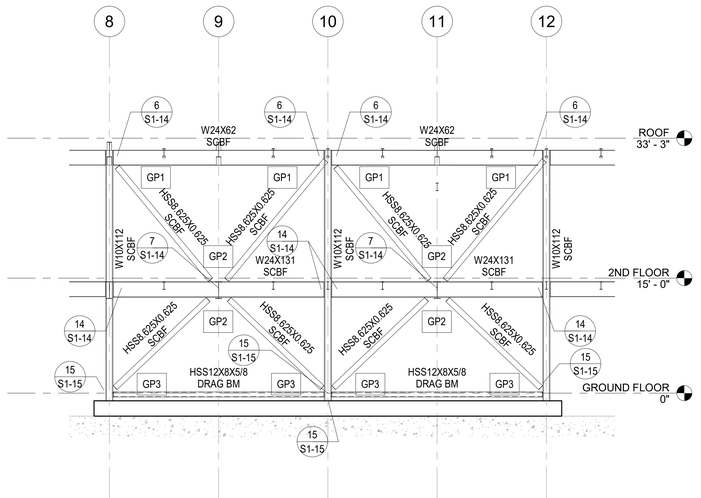
S5-3



1 S6-1 **BRACE FRAME ELEVATION ON GL-17**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1



2 S6-1 **BRACE FRAME ELEVATION ON GL-13**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1



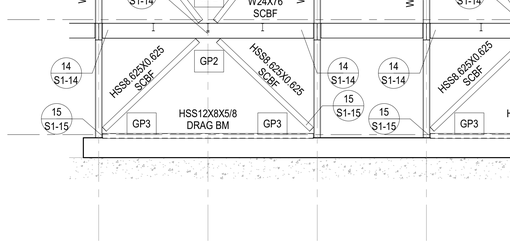
3 S6-1 **BRACE FRAME ELEVATION ON GL-C**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1

ELEVATION SHEET NOTES:

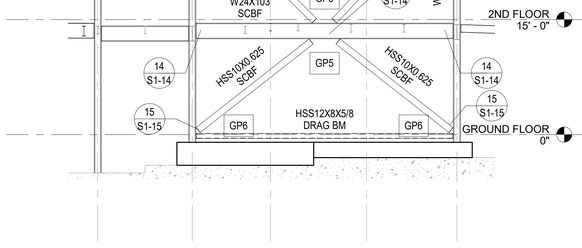
1. COLUMN CAN BE SPLICED @ 48" ABOVE 2ND FLOOR PER DETAIL 16 / S1-10
2. SCBF GUSSET PLATE SCHEDULE. (FOR DETAIL SEE 15/S1-14)
3. FOR TYPICAL GRADE BEAM ELEVATION SEE DETAIL 5/S1-15.

SCBF GUSSET PLATE SCHEDULE

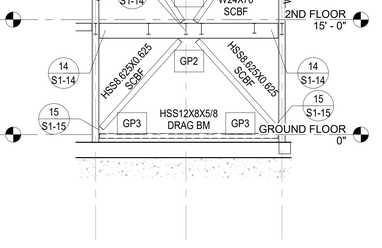
CONN ID	GUSSET PL THICKNESS	TB	LB	TH	LH	TV	LV	MAX LE	NOTES
GP1	1 1/4"	1/2"	28"	1"	44"	1"	35"	24"	
GP2		1/2"	28"	1"	52"	-	-	29"	
GP3		1/2"	28"	1"	35"	1"	36"	21"	BASE PL
GP4		1/2"	28"	1"	47"	1"	37"	27"	
GP5		1/2"	28"	1"	52"	-	-	24"	
GP6		1/2"	28"	1"	36"	1"	37"	22"	BASE PL
GP7	1"	5/16"	16"	15/16"	32"	15/16"	17"	21"	
GP8	1"	7/16"	12"	7/8"	31"	7/8"	13"	20"	



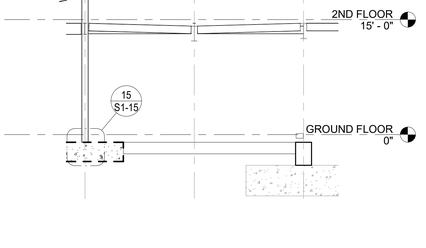
4 S6-1 **BRACE FRAME ELEVATION ON GL-E**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1



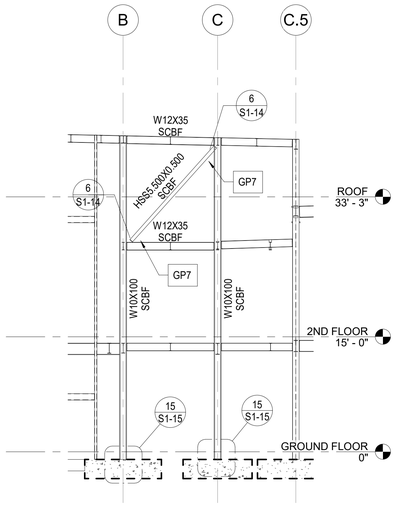
5 S6-1 **BRACE FRAME ELEVATION ON GL-5**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1



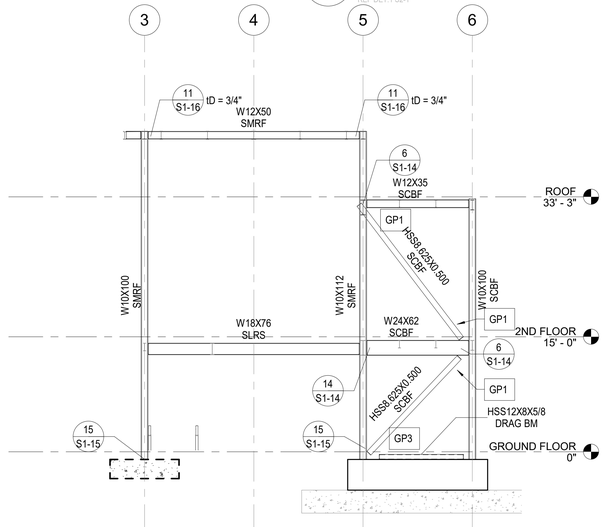
6 S6-1 **BRACE FRAME ELEVATION ON GL-1**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1



7 S1-1 **BRACE FRAME ELEVATION ON GL-C.5**
SCALE: 1/8" = 1'-0"
REF DET-1 S3-2



8 S6-1 **BRACE FRAME ELEVATION ON GL-3**
SCALE: 1/8" = 1'-0"
REF DET-1 S3-2



9 S6-1 **BRACE FRAME ELEVATION ON GL-A**
SCALE: 1/8" = 1'-0"
REF DET-1 S2-1

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PROFESSIONAL ENGINEER — No. S4029 — Exp. 9/30/24 — STATE OF CALIFORNIA

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DRAWN: Author
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SHEET DESCRIPTION:
FRAME ELEVATIONS

SHEET NO:
S6-1

MECHANICAL ABBREVIATIONS AND SYMBOLS LIST

MECHANICAL ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
AC	AIR CONDITIONING
ACD	AUTOMATIC CONTROL DAMPER
ACU	AIR CONDITIONING UNIT
ACV	AUTOMATIC CONTROL VALVE
AD	ACCESS DOOR
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AFS	AUTOMATIC FIRE SPRINKLER
AHU	AIR HANDLING UNIT
AMB	AMBIENT
AMD	AIR MEASURING DEVICE
AN	PIPE ANCHOR
ANV	ANGLE VALVE
AP	ACCESS PANEL
ARCH	ARCHITECTURAL
AT	AIR TERMINAL
ATC	AUTOMATIC TEMPERATURE CONTROL
BC	BALANCING COCK
BDD	BACK DRAFT DAMPER
BFV	BUTTERFLY VALVE
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BIW	BACKWARD INCLINED WHEEL
BLV	BALL VALVES
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
BV	BALANCING COCK
BOP	BOTTOM OF PIPE
BOD	BOTTOM OF DUCT
CC	COOLING COIL
CD	CEILING DIFFUSER
CFM	CUBIC FEET PER MINUTE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	CEILING
COMP	COMPRESSOR
COND	CONDENSATE
CONT	CONTINUATION
COP	COEFFICIENT OF PERFORMANCE
CT	FACTORY-FABRICATED COOLING TOWER
CU	CONDENSING UNIT
CV	CHECK VALVE
C	FLOW COEFFICIENT
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
DCV	DEMAND CONTROLLED VENTILATION
D	DROP
D-D	DOUBLE DEFLECTION (PATTERN)
DAD	DUCT ACCESS DOOR
DB	DRY BULB
DCV	DEMAND CONTROLLED VENTILATION
DIAM	DIAMETER
DIFF	DIFFUSER
DL	DOOR LOUVER
DR	DRAIN
E (NAME)	EXISTING PIPE
ESP	EXTERNAL STATIC PRESSURE
EA	EXHAUST AIR
EAR	EXHAUST AIR REGISTER
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
ENT	ENTERING
ER	ECCENTRIC REDUCER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FILTER
°F	DEGREE FAHRENHEIT
F&BP	FACE AND BYPASS DAMPERS
F&T	FLOAT AND THERMOSTATIC TRAPS
FLA	FULL LOAD AMPERAGE
FA	FREE AREA
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FIN	FINISHED
FLR	FLOOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FEET
FF	FINISHED
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GAS COCK
GLV	GLOBE VALVE
GPM	GALLONS PER MINUTE
GV	GATE VALVE
H	HIGH
HB	HOSE BIBB
HC	HEATING COIL
HEPA-AF	HIGH EFFICIENCY PARTICULATE AIR FILTERS
HP	HORSEPOWER
HPR	HIGH PRESSURE RETURN
HPS	HIGH PRESSURE STEAM
HVAC	HEATING, VENTILATING AND AIR-CONDITIONING
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
KW	KILOWATT
L	LONG
LRA	LOCKED ROTOR (AMPERAGE)
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LD	LINEAR DIFFUSER
LDB	LEAVING DB TEMPERATURE
LIN FT	LINEAR FEET
LPR	LOW-PRESSURE RETURN
LPS	LOW-PRESSURE STEAM
LVG	LEAVING
LWB	LEAVING WB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MB	MIXING BOX
MBH	THOUSAND BTU PER HOUR
MCC	MOTOR CONTROL CENTER
MG	GAS - MEDIUM PRESSURE
MIN	MINIMUM
MOT	MOTOR
MPR	MEDIUM PRESSURE RETURN
MPS	MEDIUM PRESSURE STEAM
MU	MAKE-UP WATER
MV	MOTOR OPERATED VALVE
MVD	MANUAL VOLUME DAMPER
MZ-AHU	MULTI-ZONE AIR HANDLING UNITS
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OAI	OUTSIDE AIR INTAKE
OD	OUTSIDE DIAMETER
OPW	OPERATING WEIGHT
OSA	OUTSIDE AIR
OV	OUTLET VELOCITY
OPNG	OPENING
PD	PRESSURE DROP
PF	PERFORATED (FACE)
PG	PRESSURE GAUGE
PH	PHASE (ELECTRICAL)
POC	POINT OF CONNECTION
POR	POINT OF REMOVAL
PRSS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
PT	PLUGGED TEE
PTR	PRESSURE-TEMPERATURE RELIEF VALVE
PVC	POLYVINYL CHLORIDE PIPE
R	RISE
RLA	RATED LOAD (AMPERAGE)
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RAG	RETURN AIR GRILLE
RCT	RECTANGULAR (FACE)
RD	REFRIGERANT DISCHARGE LINE
RD	ROOF DRAINS
REG	REGISTER
RG	RELIEF GRILLE
RHC	REHEATING COIL
RL	REFRIGERANT LIQUID LINE
RPM	REVOLUTION PER MINUTE
RS	REFRIGERANT SUCTION LINE
RV	RELIEF VALVE
SA	SUPPLY AIR
SAC	SPLIT AIR CONDITIONER
SAD	SUPPLY AIR DIFFUSER
SAR	SUPPLY AIR REGISTER
SD	SMOKE DETECTOR
SEER	SEASONAL ENERGY-EFFICIENCY RATIO
SENS	SENSIBLE
SF	SUPPLY FAN
SHR	SENSIBLE HEAT RATIO
SMACNA	SHEET METAL & AC NATIONAL ASSOCIATION
SMD	AUTOMATIC SMOKE DAMPER
SOH	SHUT OFF HEAD
SOV	SHUT OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE (FACE)
SQ.FT.	SQUARE FOOT
ST	SOUND TRAP
STR	STRAINER
TA	THROW AWAY (FILTER)
TC	TEMPERATURE CONTROL
TCP	TEMPERATURE CONTROL PANEL
TCV	AUTOMATIC TEMPERATURE CONTROL VALVE
TD	TRANSFER DUCT
TDH	TOTAL DYNAMIC HEAD
TEFC	TOTALLY ENCLOSED FAN-COOLED MOTOR
TOP	TOP OF PIPE
TOD	TOP OF DUCT
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TH	THERMOMETER
TV	TURNING VANES
TW	THERMOMETER WELL
TYP	TYPICAL
UC	UNDERCUT (DOOR)
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UN	UNION
UTR	UP THRU ROOF
UV	UNIT VENTILATOR
V	VENT OR ATMOSPHERIC RELIEF
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VIL	VERTICAL IN-LINE
VTR	VENT THRU ROOF
W	WIDE
W/	WITH
W-CLR	WATER COOLER
W C	WATER COOLED
W G	WATER GAUGE (PRESSURE)
W/O	WITHOUT
WB	WET BULB
WBT	WET BULB TEMPERATURE
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WP	WORKING PRESSURE

APPLICABLE CODES

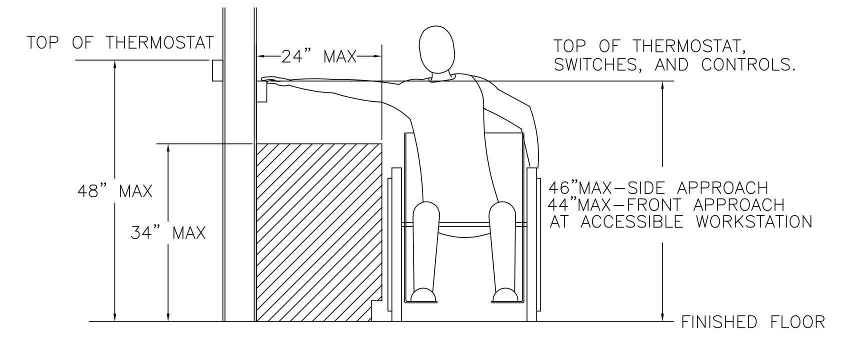
LIST OF APPLICABLE CODES

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR
2022 CALIFORNIA MECHANICAL CODE (CMC). PART 4, TITLE 24 CCR
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR
2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR
2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen), PART 11, TITLE 24 CCR
2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

THERMOSTAT MOUNTING HEIGHTS / OVER OBSTRUCTIONS



NOTE:
PROVIDE A 30"Wx27"Hx19"D MIN. TOE/KNEE CLEARANCE FOR FRONT APPROACH OVER OBSTRUCTION.

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 SYSTEM, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENT 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 THE 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25 AND 1616A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENT TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENT 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☐ E☐ OPTION 1: DETAILED ON THE APPROVED DRAWING WITH PROJECT SPECIFIC NOTES AND DETAILS.

MP☐ MD☐ PP☐ E☐ OPTION 2: SHALL COMPLY WITH HCAi (OSHPD) PRE-APPROVAL (OPM#) #______.

POLLUTANT CONTROL NOTES

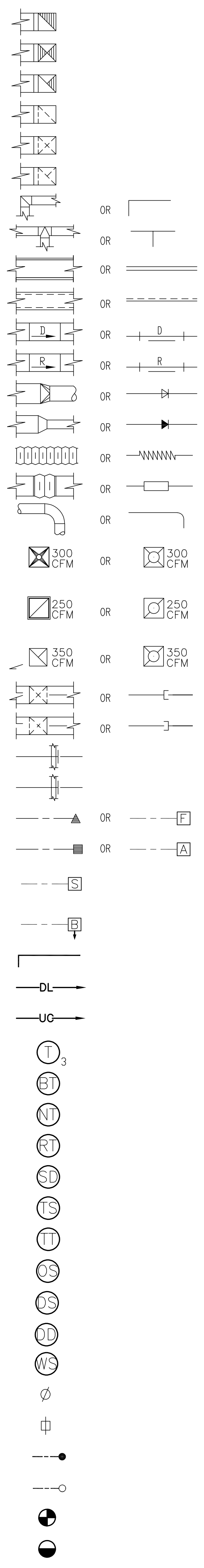
FOR THE PERIOD OF ROUGH INSTALLATION, OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, PROVIDE COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY. (5.504.3 CAL GREEN)

ADHESIVES, SEALANTS, AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF THE CALIFORNIA GREEN BUILDING STANDARDS (5.504.4.1 CAL GREEN)

DUCT LINING NOTE

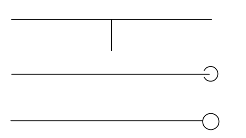
1- ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE ACOUSTICALLY LINED FROM CONNECTION POINT OF UNIT TO MIN. 20 FEET DOWN STREAM OF THE UNIT OPENING. SEE MECHANICAL DRAWINGS FOR EXTENDED (MORE THAN 20')REQUIREMENT OF DUCT LINING. ALL BRANCH DUCTWORK WITH TAKEOFF FROM MAIN SUPPLY/RETURN DUCTS WITHIN 20 FEET OF THE UNIT OPENING SHALL BE ACOUSTICALLY LINED IN ITS ENTIRETY INCLUDING ANY DUCT FITTINGS, ELBOWS, SUB-BRANCH DUCTS, AND SUPPLY/RETURN DIFFUSER/GRILLE PLENUMS. ALL DUCT FITTINGS AND ELBOWS WHERE SHOWN TO BE CONNECTED TO A LINED DUCTWORK SHOULD BE PROVIDED WITH THE SAME LINING SPECIFIED FOR THE DUCT. DUCT LINING AND INSULATION MATERIAL AND THICKNESS SHALL BE PER SPECIFICATION BOOK. SEE MECHANICAL FLOOR PLANS FOR EXTENDED (MORE THAN 20') DUCT LINING REQUIREMENTS.

DUCTWORK SYMBOLS



RETURN AIR DUCT UP
SUPPLY AIR DUCT UP
EXHAUST AIR DUCT UP
RETURN AIR DUCT DOWN
SUPPLY AIR DUCT DOWN
EXHAUST AIR DUCT DOWN
ELBOWS WITH TURNING VANES
TEE DUCT WITH TURNING VANES
DUCT WITH INSULATION WRAP
DUCT WITH ACOUSTICAL LINING
DUCT DROP
DUCT RISE
SQUARE TO ROUND TRANSITION
ROUND TO ROUND TRANSITION
FLEXIBLE DUCT
FLEXIBLE CONNECTION
RADIUS ELBOW
SUPPLY AIR RECTANGULAR CEILING DIFFUSER 4-WAY AIR FLOW UNLESS SPECIFIED ON THE FLOOR PLANS, 300 CFM, SEE AIR DISTRIBUTION SCHEDULE FOR SIZE AND MODEL
RETURN AIR RECTANGLAR CEILING REGISTER /GRILLE, 250 CFM, SEE AIR DISTRIBUTION SCHEDULE FOR SIZE AND MODEL
EXHAUST AIR GRILLE, 350 CFM, SEE AIR DISTRIBUTION SCHEDULE FOR SIZE AND MODEL.
VERTICAL DUCT DROP
VERTICAL DUCT RISE
SIDE WALL REGISTER SUPPLY AIR
SIDE WALL REGISTER RETURN AIR
SMOKE/FIRE DAMPER
AUTOMATIC CONTROL DAMPER
DUCT SMOKE DETECTOR
BACK DRAFT DAMPER (w/ direction of flow)
MANUAL VOLUME DAMPER
DOOR LOUVER
UNDERCUT (DOOR)
THERMOSTAT # CORRESPONDS WITH UNIT NUMBER, SEE DETAIL BELOW.
BY-PASS TIMER
NIGHT THERMOSTAT
RETURN AIR THERMOSTAT
DUCT SMOKE DETECTOR
TIME SWITCH
TWIST TIMER
OVERRIDE SWITCH
DOOR SENSOR
DUCT DETECTOR
WALL SWITCH
DIAMETER / ROUND
SQUARE FEET
ZONE CONTROL DAMPER
BY-PASS DAMPER
POINT OF CONNECTION
POINT OF REMOVAL

PIPING SYMBOLS



PIPING BRANCH
PIPE DROP
PIPE RISE

COORDINATION

1- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW IN GENERAL WHERE THE DUCTWORK, PIPING AND OTHER WORK SPECIFIED IN THE HVAC SECTIONS OF THE SPECIFICATIONS IS TO BE LOCATED. THE DRAWINGS DO NOT NECESSARILY INDICATE ANY AND ALL OFFSETS AND CONFIGURATIONS REQUIRED FOR COORDINATION WITH THE SPACE REQUIREMENTS OF OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT PLACING, LOCATION, AND CONNECTION OF THIS WORK IN RELATION TO THE WORK OF OTHER TRADES.

2- THE CONTRACTOR SHALL EXAMINE AND COORDINATE WITH ALL MECHANICAL, PLUMBING, CIVIL, ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS THAT HAVE BEEN PREPARED FOR THIS PROJECT, AND ACCEPT SUCH CONDITIONS, AND MAKE ALLOWANCES FOR THEM IN PREPARING THE BID.

3- COORDINATE FINISHING COLOR OF ALL AIR TERMINALS WITH ARCHITECT. FINISHING COLOR SPECIFIED ON EQUIPMENT SCHEDULE IS FOR REFERENCE ONLY.

4- CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR FOR SIZE AND LOCATION OF DUCTWORK ROOF/WALL OPENINGS AND WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL REQUIREMENTS OF ALL MECHANICAL EQUIPMENT.

GENERAL DEMOLITION NOTES

REFER TO ARCHITECTURAL DEMOLITION DRAWINGS IN THIS PHASE AND FOR DEMOLITION AREAS AND EXISTING WALLS. THE SCOPE OF THE DEMOLITION WORK SHALL INCLUDE ALL LABOR, MATERIALS, SERVICES AND EQUIPMENT REQUIRED FOR THE REMOVAL OF EXISTING HVAC EQUIPMENT AND SYSTEMS. VERIFY ALL SPECIFIC DEMOLITION WORK PRIOR TO COMMENCING. THIS WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

1- REMOVE ALL DUCTWORK, DUCTWORK ACCESSORIES, DIFFUSERS, GRILLES, HVAC SYSTEM INSULATION AND SUPPORTS, TEMPERATURE CONTROL DEVICES, HVAC EQUIPMENT AND SPECIALTIES.

2- PERFORM CUTTING AND PATCHING OF THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF MECHANICAL WORK OR REMOVAL OF EXISTING MECHANICAL EQUIPMENT AND SYSTEMS. PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS AND ACCURATELY MATCH SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT.

3- WHERE NEW PARTITIONS OR OTHER CONSTRUCTION AND/OR INSTALLATION OF NEW CEILING INTERFERES WITH THE EXISTING AIR DISTRIBUTION SYSTEM, MODIFY THE AIR OUTLETS / INLETS AND ASSOCIATED DUCTWORK AND ACCESSORIES AS REQUIRED TO MATCH THE NEW ARCHITECTURAL LAYOUT TO SATISFACTION OF THE ARCHITECT.

4- ALL REMOVED MATERIALS AND EQUIPMENT WHICH, IN THE OPINION OF THE ARCHITECT, ARE SALVAGEABLE SHALL REMAIN THE PROPERTY OF THE DISTRICT. DELIVER SUCH SALVAGED MATERIALS AND EQUIPMENT ON PREMISES AS DIRECTED, AND NEATLY PILE OR STORE THEM AND PROTECT FROM DAMAGE. WHERE MATERIALS AND EQUIPMENT HAVE BEEN REMOVED AND NOT REPLACED THE EXPOSED SURFACE BEHIND MATERIAL OR EQUIPMENT SHALL BE PAINTED TO MATCH SURROUNDING SURFACES. DO NOT REUSE MATERIALS AND EQUIPMENT, UNLESS SPECIFICALLY SPECIFIED ON PLANS. REMOVE FROM PREMISES AND DISPOSE OF ALL MATERIALS CONSIDERED BY ARCHITECT TO BE SCRAP.

5- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL FEATURES OF THE BUILDING AND SITE, WHICH MAY AFFECT THE PROPER PERFORMANCE OF THIS WORK.

6- EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING UNDERGROUND UTILITIES, AND TO PREVENT HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY, WHICH IS THE RESPONSIBILITY OF THE CONTRACTOR.

SELECTIVE DEMOLITION NOTES

1. THIS SECTION INCLUDES LIMITED SCOPE OF SELECTIVE MECHANICAL DEMOLITION WORK AS FOLLOWS:
   A. NONDESTRUCTIVE REMOVAL OF MATERIALS AND EQUIPMENT FOR REUSE OR SALVAGE AS INDICATED.
   B. DISMANTLING MECHANICAL MATERIALS AND EQUIPMENT MADE OBSOLETE BY THESE INSTALLATIONS.

2 GENERAL CONDITIONS
   A. GENERAL: SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 01 AND 23 SPECIFICATION SECTIONS.
   B. SCHEDULES INDICATING PROPOSED METHODS AND SEQUENCE OF OPERATION FOR SELECTIVE DEMOLITION PRIOR TO COMMENCEMENT OF WORK. INCLUDE COORDINATION FOR SHUT-OFF OF UTILITY SERVICES AND DETAILS FOR DUST AND NOISE CONTROL.
      1. COORDINATE SEQUENCING AND OWNER OCCUPANCY SPECIFIED IN DIVISION 01.
      2. COORDINATE OTHER SELECTIVE DEMOLITION WORK AS OUTLINED IN DIVISION 01.

3 PROJECT CONDITIONS
   A. CONDITIONS AFFECTING SELECTIVE DEMOLITION: THE FOLLOWING PROJECT CONDITIONS APPLY:
      1. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE.
      2. LOCATE, IDENTIFY, AND PROTECT MECHANICAL SERVICES PASSING THROUGH DEMOLITION AREA AND SERVING OTHER AREAS OUTSIDE THE DEMOLITION LIMITS. MAINTAIN SERVICES TO AREAS OUTSIDE DEMOLITION LIMITS. WHEN SERVICES MUST BE INTERRUPTED, INSTALL TEMPORARY SERVICES FOR AFFECTED AREAS. PROVIDE MINIMUM OF 72-HOUR NOTICE TO OWNER PRIOR TO UTILITY INTERRUPTION.

4 SEQUENCE AND SCHEDULING
   A. COORDINATE THE SHUT-OFF AND DISCONNECTION OF UTILITY SERVICES WITH THE OWNER AND THE UTILITY COMPANY.
   B. NOTIFY THE ARCHITECT AT LEAST 5 DAYS PRIOR TO COMMENCING DEMOLITION OPERATIONS.
   C. PERFORM DEMOLITION IN PHASES AS INDICATED.

5 EXAMINATION
   A. EXAMINE AREAS WHERE SELECTIVE DEMOLITION IS TO OCCUR. DETERMINE EXTENT OF WORK AND AFFECT ON EXISTING CONDITIONS TO REMAIN. ADVISE ARCHITECT OF ANY CONDITIONS THAT MIGHT CREATE EXTENSIVE ALTERATIONS BEYOND INDICATED SCOPE.

6 SELECTIVE DEMOLITION
   A. GENERAL: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT ABANDONED MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND NOT INDICATED TO BE SALVAGED OR SAVED.
   B. MATERIALS AND EQUIPMENT TO BE SALVAGED: REMOVE, DEMOUNT, AND DISCONNECT EXISTING MECHANICAL MATERIALS AND EQUIPMENT INDICATED TO BE REMOVED AND SALVAGED, AND DELIVER MATERIALS AND EQUIPMENT TO THE LOCATION DESIGNATED FOR STORAGE.
   C. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS AND EQUIPMENT NOT INDICATED TO BE SALVAGED.
   D. MECHANICAL MATERIALS AND EQUIPMENT: DEMOLISH, REMOVE, DEMOUNT, AND DISCONNECT THE FOLLOWING ITEMS:
      1. INACTIVE AND OBSOLETE PIPING, FITTINGS AND SPECIALTIES, EQUIPMENT, DUCTWORK, CONTROLS, FIXTURES, AND INSULATION.
         a. PIPING AND DUCTS EMBEDDED IN FLOORS, WALLS, AND CEILINGS MAY REMAIN IF SUCH MATERIALS DO NOT INTERFERE WITH NEW INSTALLATIONS. REMOVE MATERIALS ABOVE ACCESSIBLE CEILINGS. DRAIN AND CAP PIPING AND DUCTS ALLOWED TO REMAIN.
      2. PERFORM CUTTING AND PATCHING REQUIRED FOR DEMOLITION.

STRUCTURAL NOTES

1- UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT/AUTHORITIES HAVING JURISDICTION.

2- CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAIL IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT WITH THE APPROVAL OF DSA/AHJ.

3- ALL WELDING SHALL BE SPECIALLY INSPECTED BY AN AWS-CWI QUALIFIED INSPECTOR APPROVED BY DSA/AHJ.

4- ALL BRACING OF DUCTWORK AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA MANUAL. SEE SEISMIC RESTRAINT NOTES ON THIS SHEET.

5- WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE SMACNA GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER OR AHJ.

6- A COPY OF THE MANUAL PUBLISHED BY SMACNA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

7- FOR STRUCTURAL DESIGN CRITERIA, SEE SHEET S0-1.

COMBINATION SMOKE/FIRE DAMPER NOTE

1- FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED, UL LISTED AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND LISTING. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY. DETAILS SHOWN ARE FOR REFERENCE ONLY.

GENERAL NOTES

1- ALL DUCT DIMENSIONS ON DRAWINGS TO BE INSIDE CLEAR.
2- ALL ROOM THERMOSTATS TO BE MOUNTED AT ELEVATION SHOWN ON THIS SHEET. SEE DETAIL BELOW.
3- ALL INDIVIDUAL DUCTWORK BRANCH CONNECTING TO SUPPLY, RETURN, EXHAUST, OUTSIDE AIR, ETC.. AIR TERMINAL SHALL BE EQUIPPED WITH A MANUAL VOLUME DAMPER.
4- ALL SQUARE ELBOWS TO BE PROVIDED WITH TURNING VANES UNLESS OTHERWISE INDICATED.
5- DO NOT USE SQUARE ELBOW WITH TURNING VANES AT THE FIRST CHANGE IN DIRECTION OF AIR AFTER THE FAN DISCHARGE. INSTALL ACOUSTICALLY LINED RADIUS ELBOW.
6- TO DETERMINE THE EXACT NUMBER AND LOCATION OF FIRE DAMPERS AND COMBINATION SMOKE/FIRE DAMPERS THAT MAY BE REQUIRED, THE CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS WHICH INDICATE THE LOCATION OF FIRE RATED WALLS, PARTITIONS AND CEILINGS.
7- COORDINATE LOCATION OF CEILING DIFFUSERS, REGISTERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN AND ELECTRICAL LIGHTING PLAN.
8- FOR BUILDING LOCATIONS, DIMENSIONS AND GRADE ELEVATIONS SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
9- PROVIDE WATER-PROOFING FOR ALL EQUIPMENT ANCHORAGE ON ROOF AND DUCT PENETRATIONS THRU ROOF PER ARCHITECTURAL DETAILS.
10- ROUND AND RECTANGULAR DUCTWORK IS INTERCHANGEABLE UPON APPROVAL OF MECHANICAL ENGINEER. CONTRACTOR IS TO VERIFY THE EXACT CEILING SPACE AND INTERCHANGE THE DUCT SIZE TO FIT THE CEILING SPACE WITHOUT ADDITIONAL FEE.
11- PROVIDE BACK-DRAFT DAMPER FOR ALL EXHAUST AIR DUCT THRU BUILDING ENVELOPE UNLESS OTHERWISE NOTED.
12- PROVIDE ALL FRESH AIR INTAKES AND EXHAUST OUTLETS WITH HOOD, 1/2" GALVANIZED MESH SCREENS.
13- EXHAUST DUCT TERMINATION SHALL BE MINIMUM 10'-0" AWAY OR 3'-0" ABOVE FROM ANY FRESH AIR INTAKE, OPENABLE WINDOWS, DOORS AND 10'-0" MINIMUM ABOVE GRADE.
14- CONTRACTOR SHALL COORDINATE MOUNTING HEIGHT OF ALL DUCTWORK WITH THE WORK OF ALL OTHER TRADES SUCH AS STRUCTURAL BEAMS, PLUMBING PIPING, FIRE SPRINKLER PIPING, ELECTRICAL CONDUITS, LIGHT FIXTURES, ETC.. WHERE REQUIRED OR NOTED ON DRAWINGS, RUN DUCTWORK BETWEEN LIGHT FIXTURES, BEAMS, ETC..
15- PROVIDE WATER PROOFING FOR ALL FLASHING AND COUNTERFLASHING FOR MECHANICAL WORK.
16- THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
17- SYMBOLS AND ABBREVIATIONS ON THIS SHEET ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED.
18- ALL NOTES ON THIS SHEET REMAIN PART OF THE CONTRACT DOCUMENTS.
19- ASBESTOS OR HAZARDOUS WASTE: IT IS UNDERSTOOD AND AGREED THAT THIS CONTRACT DOES NOT CONTEMPLATE THE HANDLING OF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL. IF ASBESTOS OR ANY HAZARDOUS WASTE MATERIAL IS ENCOUNTERED, NOTIFY THE OWNER IMMEDIATELY. DO NOT DISTURB, HANDLE OR ATTEMPT TO REMOVE.
20- FOR ACTUAL DIMENSIONS OF LOUVER SIZES SEE ARCHITECTURAL DRAWINGS, PROVIDE AND ATTACH PLENUMS AND OR DUCTS TO ACCOMMODATE THOSE DIMENSIONS AS NEEDED.
21- UNIT NUMBERS FOR MECHANICAL EQUIPMENT SHOWN IN SCHEDULES ARE FOR TYPE OF UNIT ONLY. FOR QUANTITIES & LOCATIONS OF MECHANICAL UNITS, SEE MECHANICAL DRAWINGS.
22- ALL ZONE DAMPERS AND COMBINATION SMOKE FIRE DAMPERS TO BE PERMANENTLY LABELED TO INDICATE THE ROOM(S) THEY SERVE.
23- ALL WORK SHALL CONFORM TO THE 2022 EDITION OF THE CALIFORNIA MECHANICAL CODE, INCLUDING ALL APPLICABLE STATE TITLE 24 AMENDMENTS, CITY AND COUNTY LAWS AND ORDINANCES.
24- THE CONTRACTOR SHALL FURNISH AND INSTALL ACCESS DOORS AND/OR ACCESS PANELS AT LOCATIONS AS NECESSARY TO PROVIDE ACCESSIBILITY FOR SERVICE/ MAINTENANCE OF FIRE/SMOKE DAMPERS, MECHANICAL EQUIPMENT AND DEVICES. ALL ACCESS DOORS AND PANEL LOCATIONS AND SIZES SHALL BE PROVIDED BY CONTRACTOR AND SUBMITTED TO ARCHITECT PRIOR TO INSTALLATION FOR VERIFICATION PURPOSES.
25- CONTRACTOR SHALL VISIT SITE PRIOR TO BID TO VERIFY OPERABILITY, LOCATION AND SIZES OF ALL EXISTING EQUIPMENT/ SERVICES AND INFORM THE ARCHITECT OF ANY DISCREPANCIES.
26- THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATIONS AND MEET THE APPROVAL OF THE LOCAL JURISDICTION, OR DIVISION OF STATE ARCHITECT, WHERE APPLICABLE.
27- TAKE ALL PRECAUTIONS NECESSARY TO PROTECT THE MATERIALS BEFORE, DURING AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE, IMMEDIATELY REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
28- ALL SPACE CONDITIONING EQUIPMENT SHALL BE CERTIFIED BY MANUFACTURER TO COMPLY WITH ALL APPLICABLE REQUIREMENTS OF CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.
29- INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION.
30- PROVIDE AIR DIFFUSERS AND GRILLES TO MATCH THE CURVATURE WHEN AIR DIFFUSERS AND GRILLES APPEAR TO BE CURVED OR TO BE INSTALLED ON A CURVED SURFACE.
31- ALL PARTS OF AN EXPOSED AIR DISTRIBUTION SYSTEM TO BE PAINTED AS REQUIRED PER ARCHITECT. COORDINATE FINISHING COLOR WITH ARCHITECT.

MANUAL VOLUME DAMPER NOTE

1- PROVIDE MANUAL VOLUME DAMPERS WITH REMOTE CONTROL WHERE HARD LID CEILING IS INSTALLED OR ACCESS TO TYPICAL MANUAL VOLUME DAMPER IS NOT POSSIBLE. PROVIDE PRODUCTS OF METROPOLITAN AIR TECHNOLOGY, ROTO-TWIST MODEL NUMBER RT-250 SERIES III FOR ROUND DUCT AND MODEL RT-100 SP/CC FOR RECTANGULAR DUCT APPLICATION OR APPROVED EQUAL PRODUCTS. PROVIDE GUIDE CABLE OF REQUIRED LENGTH FOR INSTALLATION OF THE CEILING CUP AND COVER PLATE AT LOCATIONS APPROVED BY ARCHITECT. CONTRACTOR SHALL SUBMIT ON PROPOSED LOCATIONS OF CEILING CUPS FOR REVIEW AND APPROVAL BY THE ARCHITECT.

THERMOSTAT NOTES

1- TEMPERATURE THERMOSTAT: TEMPERATURE RANGE 55°F TO 85°F SEQUENCE HEATING AND COOLING, ADJUSTABLE TO 10°F BETWEEN HEATING AND COOLING, CAPABILITY TO TERMINATE ALL HEATING AT NO MORE THAN 70°F AND TERMINATE ALL COOLING AT NOT LESS THAN 78°F OR PROVIDE T-STAT TO MEET THE OWNER'S STANDARDS, WHERE APPLICABLE.
2- THE LOCATION OF THERMOSTATS TO BE FINALIZED DURING CONSTRUCTION. IF THE LOCATION OF THE THERMOSTATS SHOWN ON MECHANICAL DRAWINGS ARE IN CONFLICT WITH BUILDING ELEMENTS OR DESIGN, CONTRACTOR SHALL RELOCATE THE THERMOSTAT AND RUN REQUIRED WIRING FOR A SUCCESSFUL INSTALLATION TO ANOTHER LOCATION APPROVED BY MECHANICAL ENGINEER AND ARCHITECT AT NO ADDITIONAL COST TO THE OWNER UP TO MAXIMUM 20' AWAY FROM ORIGINAL LOCATION SHOWN ON MECHANICAL DRAWINGS.
3- DO NOT INSTALL THERMOSTATS WHERE THE OPERATION OF THE DEVICE MAY BE EFFECTED BY:
   a. DIRECT SUNSHINE EFFECT.
   b. MINIMIZED AIR CIRCULATION (BEHIND THE DOORS OR CABINETS OR SIMILAR LOCATIONS).
   c. OUTDOOR TEMPERATURE (ON EXTERIOR WALLS, OR SIMILAR LOCATIONS).
   d. HEAT GENERATING EQUIPMENT (PROVIDE PROPER DISTANCE FROM HEAT GENERATING EQUIPMENT).
   e. LOCATIONS SHOWN ON THE DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE BETWEEN DRAWINGS AND WORKS OF OTHER TRADES AND ENSURE PROPER LOCATION SELECTION FOR INSTALLATION OF THE THERMOSTAT FOR SATISFACTORY OPERATION OF THE DEVICE.
   f. THERMOSTATS SHALL BE INSTALLED AT HEIGHTS SHOWN ON CONTRACT DOCUMENTS AND AS REQUIRED FOR ACCESSIBILITY REGULATIONS.
4- PROVIDE INSULATED THERMOSTAT BOX IF THERMOSTAT TO BE INSTALLED ON EXTERIOR WALL.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

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MATTHEW M. PEZESHKI
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL ABBREVIATIONS AND SYMBOLS LIST

SHEET NO:
M001

HEAT PUMP SCHEDULE (PACKAGED)

UNIT SYMBOL		HP-1-1	HP-1-2	HP-1-3	HP-1-4	HP-1-5	HP-1-6	HP-1-7	HP-2-1	HP-2-2	HP-2-3	HP-2-4	HP-2-5	HP-2-6	HP-2-7
LOCATION		ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF	ROOF
SERVICE		CLASSROOM 100/ WORKROOM 102	CLASSROOM 101	CLASSROOM 105	CLASSROOM 106	CLASSROOM 107	CLASSROOM 108	CLASSROOM 114	CLASSROOM 200/ WORKROOM 202	CLASSROOM 201	CLASSROOM 205	CLASSROOM 206	CLASSROOM 207	CLASSROOM 208	CLASSROOM 214
MANUFACTURER		CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER	CARRIER
MODEL		50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05	50GCQJ05
TYPE		HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE	HEAT PUMP/ DOWN DISCHARGE
SUPPLY FAN	INDOOR FAN - CFM	1700	1500	1440	1600	1440	1440	1440	1700	1500	1440	1440	1440	1440	1440
	OUTSIDE AIR - CFM	615	615	600	600	600	600	600	615	615	600	600	600	600	600
	EXTERNAL S.P. - "WG	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.25	1.25	1.25	1.25	1.25	1.25	1.25
	FAN HP / RPM	1.23 / 2254	1.12 / 2184	1.09 / 2164	1.18 / 2218	1.09 / 2164	1.09 / 2164	1.09 / 2164	1.02 / 2114	0.91 / 2039	0.89 / 2018	0.89 / 2018	0.89 / 2018	0.89 / 2018	0.89 / 2018
COOLING	EVAP. EAT - °F - DB	82.6	83.6	83.8	82.9	83.8	83.8	83.8	82.6	83.6	83.8	83.8	83.8	83.8	83.8
	EVAP. EAT - °F - WB	65.4	65.8	65.8	65.5	65.8	65.8	65.8	65.4	65.8	65.8	65.8	65.8	65.8	65.8
	CND. EAT - °F - DB	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0	92.0
	COOLING CAPACITY - MBH	49.57	48.64	48.30	49.05	48.30	48.30	48.30	49.54	48.64	48.24	48.24	48.24	48.24	48.24
	COOLING CAPACITY SENSIBLE - MBH	45.61	43.48	42.63	44.46	42.63	42.63	42.63	45.65	43.48	42.73	42.73	42.73	42.73	42.73
	REFRIGERANT TYPE / CAPACITY (LBS-OZ)	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8	R410A / 12-4.8
	ARI SEER / SEER2	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00	17.00 / 16.00
	COMPRESSOR INPUT - KW	3.13	3.12	3.12	3.13	3.12	3.12	3.12	2.99	3.12	3.12	3.12	3.12	3.12	3.12
HEATING	INDOOR COIL EAT - °F - DB	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	INDOOR COIL LAT - °F - DB	95.1	97.8	98.8	96.4	98.8	98.8	98.8	95.1	97.8	98.8	98.8	98.8	98.8	98.8
	OUTDOOR AMBIENT TEMP. - °F - DB	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0	47.0
	HEATING CAPACITY - MBH	46.00	45.08	44.76	45.60	44.76	44.76	44.76	46.00	45.08	44.76	44.76	44.76	44.76	44.76
	COP / HSPF	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7	3.70 / 8.7
	HEATING POWER INPUT - KW	2.99	3.09	3.12	3.04	3.12	3.12	3.12	2.99	3.09	3.12	3.12	3.12	3.12	3.12
ELECTRICAL	COMPRESSOR NO. / RLA (EA)	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7	1 / 7.7
	OUTDOOR FAN MOTOR NO. / FLA (EA)	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8	1 / 0.8
	INDOOR FAN MOTOR NO. / FLA (EA)	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4	1 / 2.4
	COMBUSTION FAN MOTOR FLA (EA)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MCA / MOCP	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20	13 / 20
	VOLTAGE / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
FILTER TYPE		MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13	MERV-13
CONDENSER COIL HAIL GUARD (LOUVERED)		REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED	REQUIRED
FLUE DEFLECTOR		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ECONOMIZER		INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED	INCLUDED
CURB MANUFACTURER / MODEL / HEIGHT		MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL	MICROMETL CRBV-SRT12HA-0812-P10 18" TALL
OPERATING WEIGHT (LBS)		1120	1120	1120	1120	1120	1120	1120	1120	975	975	975	975	975	975
DIMENSIONS (L"xW"xH")		74.4 x 46.4 x 41.4	74.4 x 46.4 x 41.4	74.4 x 46.4 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.6 x 41.4	74.4 x 46.4 x 41.4	74.4 x 46.4 x 41.4	74.4 x 46.4 x 41.4
DETAIL REFERENCE		9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020	9/M020
INTERLOCK WITH EF UNIT		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
REMARKS		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

◯ REMARKS

1- UNIT COMPLETE WITH MODULATING ECONOMIZER WITH 100% OUTSIDE AIR INTAKE CAPABILITY, LOUVERED HAIL GUARD.
2- OPERATING WEIGHT INCLUDES WEIGHT OF BASE UNIT, ACCESSORIES, AND ROOF CURB.
3- PROVIDE FACTORY MOUNTED AND TESTED BIPOLAR IONIZATION SYSTEM PER SPEC SECTION REQUIREMENTS.
4- ROOFTOP HEAT PUMP MANUFACTURER SHALL PROVIDE A TRANSFORMER PACKAGE TO INTERNALLY POWER THE BIPOLAR IONIZATION.

POWER EXHAUST SCHEDULE (FOR PACKAGED AIR CONDITIONER UNITS)

UNIT SYMBOL	PE-1-1	PE-1-2	PE-1-3	PE-1-4	PE-1-5	PE-1-6	PE-1-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SERVICE	HP-1-1	HP-1-2	HP-1-3	HP-1-4	HP-1-5	HP-1-6	HP-1-7	HP-2-1	HP-2-2	HP-2-3	HP-2-4	HP-2-5	HP-2-6	HP-2-7
MANUFACTURER	MICROMETL	MICROMETL	MICROMETL	MICROMETL	MICROMETL	MICROMETL	MICROMETL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MODEL	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	PCD-SRT12CA-D-4LH	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CONTROL TYPE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	DIFFERENTIAL DRY BULB TEMPERATURE	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TYPE	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MOTOR SIZE - HP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOLTAGE / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FLA	1.5	1.5	1.5	1.5	1.5	1.5	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MCA / MOCP	1.9 / 3.4	1.9 / 3.4	1.9 / 3.4	1.9 / 3.4	1.9 / 3.4	1.9 / 3.4	1.9 / 3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WEIGHT (LBS.)	152	152	152	152	152	152	152	N/A	N/A	N/A	N/A	N/A	N/A	N/A
REMARKS	1,2	1,2	1,2	1,2	1,2	1,2	1,2	N/A	N/A	N/A	N/A	N/A	N/A	N/A

◯ REMARKS

1- PROVIDE SEPARATE POWER SOURCE AND DISCONNECT TO POWER EXHAUST UNIT. PASS-THRU POWER FROM AIR CONDITIONING UNIT TO POWER EXHAUST IS NOT ACCEPTABLE.
2- POWER EXHAUST SHALL RELIEVE THE EXCESS AIR TO MAINTAIN BUILDING PRESSURE DURING UNIT OPERATION. POWER EXHAUST SHALL BE CAPABLE OF 100% ECONOMIZER MODE TO RELIEVE 100% AIR.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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architecture
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PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
No. M 29929
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:
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No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL
SCHEDULES

SHEET NO:
M010

AIR DISTRIBUTION SCHEDULE - PLAQUE SUPPLY DIFFUSER

SYMBOL					
CFM RANGE	0 – 120	121 – 240	241 – 380	381 – 550	551–750
TYPE	PLAQUE	PLAQUE	PLAQUE	PLAQUE	PLAQUE
NECK SIZE	6"	8"	10"	12"	14"
MAX NC LEVEL	15	22	22	22	22
PANEL SIZE (T–BAR)	24" X 24"	24" X 24"	24" X 24"	24" X 24"	24" X 24"
MANUFACTURER/MODEL	KRUEGER/5PLQ 24X24	KRUEGER/5PLQ 24X24	KRUEGER/5PLQ 24X24	KRUEGER/5PLQ 24X24	KRUEGER/5PLQ 24X24

REMARKS
1– FOR FRAME STYLE COORDINATE WITH ARCHITECTURAL CEILING REQUIREMENTS.
2– PROVIDE 12" MINIMUM ACOUSTICALLY LINED PLENUM. SEE DETAIL 9/M021 FOR ADDITIONAL INFORMATION.

AIR DISTRIBUTION SCHEDULE - CONSTANT AIR VOLUME - RETURN / EXHAUST / TRANSFER

SYMBOL					
CFM RANGE	0 – 150	151 – 300	301 – 450	451 – 700	701–900
TYPE	EGGCRATE	EGGCRATE	EGGCRATE	EGGCRATE	EGGCRATE
NECK SIZE	8 X 8	12" X 12"	14" X 14"	16" X 16"	18" X 18"
MAX NC LEVEL	–	–	–	13	14
FRAME SIZE (T–BAR)	24" X 24"	24" X 24"	24" X 24"	24" X 24"	24" X 24"
FRAME SIZE (HARD LID)	10" X 10"	14" X 14"	16" X 16"	18" X 18"	20" X 20"
MANUFACTURER/MODEL	KRUEGER/EGC5	KRUEGER/EGC5	KRUEGER/EGC5	KRUEGER/EGC5	KRUEGER/EGC5

REMARKS
1– FOR BORDER TYPE AND FINISH COLOR, CONTRACTOR TO COORDINATE WITH ARCHITECT.
2– PROVIDE 12" MINIMUM ACOUSTICALLY LINED PLENUM. SEE DETAILS 9/M021 FOR ADDITIONAL INFORMATION.

AIR DISTRIBUTION SCHEDULE - SUPPLY AIR AND RETURN AIR

SYMBOL	
CFM RANGE	SEE FLOOR PLAN
TYPE	SIDEWALL
NECK SIZE	SEE FLOOR PLAN
MAX NC LEVEL	35
MANUFACTURER/MODEL	KRUEGER/S–5480

REMARKS

SPLIT AIR CONDITIONER SCHEDULE

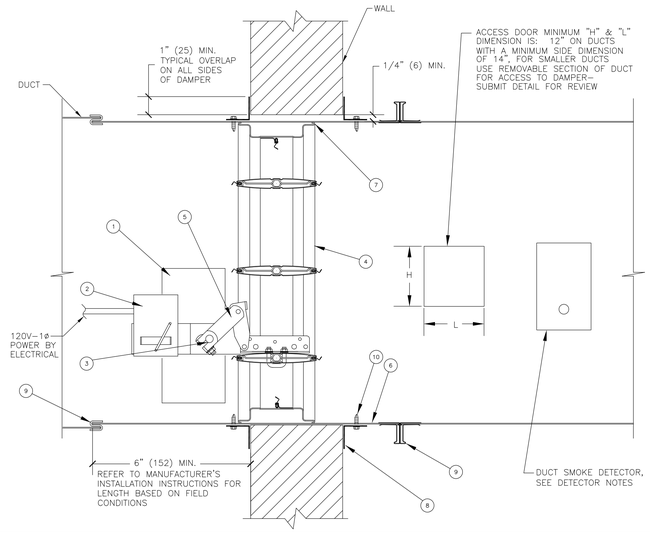
			SAC–1	SAC–2	SAC–3	SAC–4
UNIT SYMBOL			SAC–1	SAC–2	SAC–3	SAC–4
MANUFACTURER			TOSHIBA CARRIER	TOSHIBA CARRIER	TOSHIBA CARRIER	TOSHIBA CARRIER
TYPE			HIGH WALL	HIGH WALL	HIGH WALL	HIGH WALL
INDOOR UNIT	MODEL		RAV–SM122KRTP–UL	RAV–SM242KRTP–UL	RAV–SM362KRTP–UL	RAV–SM122KRTP–UL
	LOCATION		ELECTRICAL 104	IDF 117	ELEVATOR EQUIPMENT ROOM 119	ELECTRICAL 204
	BLOWER – CFM		477 / 355 / 250	706 / 530 / 353	970 / 910 / 735	477 / 355 / 250
	COOLING	RATED CAPACITY – MBH	12.0	24.0	36.0	12.0
		EER2 / SEER2	15.70 / 25.20	11.80 / 22.70	10.50 / 22.00	15.70 / 25.20
	HEATING	RATED CAPACITY (47°F)–MBH	14.0	34.0	47.0	14.0
		HSPF2	11.10	10.30	8.90	11.10
		COP2 (47°F)	3.90	3.20	3.00	3.90
	DIMENSIONS (H"xW"xD")		13" x 42" x 10"	13" x 42" x 10"	14" x 48" x 11"	13" x 42" x 10"
	WEIGHT – LBS		33	33	44	33
OUTDOOR UNIT	MODEL		RAV–SP122AT2P–UL	RAV–SP242AT2P–UL	RAV–SP362AT2P–UL	RAV–SP122AT2P–UL
	LOCATION		ROOF	ROOF	ROOF	ROOF
	REFRIGERANT TYPE		R410A	R410A	R410A	R410A
	MCA / MOCP		14 / 25	17 / 25	30 / 40	14 / 25
	VOLTS / PHASE		208–230 / 1	208–230 / 1	208–230 / 1	208–230 / 1
	DIMENSIONS (H"xW"xD")		22" x 31" x 12"	35" x 36" x 13"	53" x 36" x 13"	22" x 31" x 12"
	WEIGHT – LBS		106	152	232	106
DETAIL REFERENCE			2,3,4/M021	2,3,4/M021	2,3,4/M021	2,3,4/M021
REMARKS			1 2 3	1 2 3	1 2 3	1 2 3

REMARKS
1– INDOOR UNIT POWERED FROM OUTDOOR UNIT.
2– REFRIGERANT AND SUCTION LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATION BASED ON ACTUAL DISTANCE BETWEEN INDOOR AND OUTDOOR UNITS.
3– PROVIDE WIRED THERMOSTAT.

EXHAUST FAN SCHEDULE

UNIT SYMBOL	EF–1	EF–2
LOCATION	ROOF	ROOF
SERVICE	BOYS 109/ GIRLS 110	BOYS 209/ GIRLS 210
TYPE	ROOF MOUNTED	ROOF MOUNTED
MANUFACTURER	COOK	COOK
MODEL	150 ACEB	135 ACEB
FAN – CFM	1250	1050
EXTERNAL S.P. – "WG	.625	.375
DRIVE TYPE	BELT	BELT
FAN MOTOR – HP	0.25	0.167
FAN MOTOR – RPM	995	944
OUTLET VELOCITY – FPM	848	880
TIP SPEED – FPM	3907	3336
SONES	7.7	5.8
DISCHARGE LOCATION	DOWNBLAST	DOWNBLAST
WHEEL TYPE	BACKWARD INCLINED	BACKWARD INCLINED
VOLTAGE / PHASE	115 / 1	115 / 1
CURB TYPE	RCG	RCG
OPERATING WEIGHT – LBS	95	85
DETAIL REFERENCE	1/M021	1/M021
INTERLOCK	2	2
REMARKS	1 3 4	1 3 4

REMARKS
1– UNIT COMPLETE WITH BACKDRAFT DAMPER, BIRDSCREEN, AND MANUFACTURER'S PREFABRICATED GALVANIZED ROOF CURB.
2– INTERLOCK FAN OPERATION WITH LIGHT SWITCH/LIGHTING CONTROL.
3– PROVIDE UNIT WITH TIME DELAY SET FOR 5 MINUTES TO KEEP THE EXHAUST FAN ON AFTER LIGHTS TURN OFF.
4– PROVIDE UNIT WITH FAN SPEED CONTROLLER.



KEYNOTED ITEMS
1– ACTUATOR (LOCATION MAY VARY). DAMPER MAY BE SUPPLIED WITHOUT ACTUATOR INSTALLED. MANUFACTURER'S UL LISTED FIRE DAMPER ACTUATORS MAY BE FIELD INSTALLED IF PROPERLY LABELED. SEE MANUFACTURER'S ACTUATOR INSTALLATION INSTRUCTIONS FOR FIELD MOUNTING OF DAMPER ACTUATORS.
2– OPTIONAL FIRESTAT OR SP100(RUSKIN)
3– AUXILIARY OPERATING JACK SHAFT
4– DAMPER
5– OVER CENTER LOCK
6– SLEEVE–GAGE OF SLEEVE PER UL LISTING, SFM LISTING, AND MANUFACTURER'S INSTALLATION INSTRUCTION.
7– APPROVED CAULKING MATERIAL. SEE MANUFACTURER'S INSTALLATION INSTRUCTION FOR APPLICATION OF CAULKING.
8– PFMA OR CONVENTIONAL MOUNTING ANGLES
9– S–JOINT/DUCT MATE, SLEEVE TO DUCT
10– #8 SHEET METAL SCREWS @ 12" O.C. TO DUCT. NO SCREWS TO WALL (TYPICAL)

DETECTOR NOTES:
1– WHEN A TOTAL COVERAGE SMOKE–DETECTION SYSTEM IS PROVIDED WITH AREAS SERVED BY AN HVAC SYSTEM, DAMPERS SHALL BE CONTROLLED BY THE SMOKE–DETECTION SYSTEM. NO DUCT SMOKE DETECTOR IS REQUIRED. ALL SMOKE DAMPER ACTUATION SHALL COMPLY WITH 2022 CBC SECTION 717.3.3.2.
2– REFER TO CBC ARTICLE 717 FOR ADDITIONAL INFORMATION.

ANGLE TABLE	
WALL OPENING	ANGLE SIZE
UP TO 30"	1" x 1" x 1/8"
31" TO 54"	1–1/2"x1–1/2"x1/8"
55" TO 84"	3" x 2" x 3/16"

LISTING NOTES:
1– INSTALL COMBINATION FIRE AND SMOKE DAMPER AS MANUFACTURED BY RUSKIN MODEL FSD36 OR EQUAL. RATING FOR 1–½ HOURS UL555 RATED, UL555S LEAKAGE CLASS 2.
2– UL CLASSIFIED, UL555 LISTING R5531, UL555S LISTING R5531
3– NFPA STANDARDS 90A, 92A, 92B AND 101
4– CSFM CALIFORNIA STATE FIRE MARSHAL LISTING #3235–0245:0124.

GENERAL NOTES:
1– COMBINATION SMOKE/FIRE DAMPER TO BE U.L. LABELED, N.F.P.A. 90 A & STATE FIRE MARSHAL APPROVED.
2– N.F.P.A. APPROVED INSTALLATION DETAILS TO BE PART OF SUBMISSION OF FIRE DAMPER FOR APPROVAL, WHICH SHALL MEET N.F.P.A. STANDARD 90 A.
3– DETAILS SHOWN ARE FOR FIRE DAMPERS IN HORIZONTAL DUCTWORK.
4– ACCESS DOOR IS SHOWN IN SIDE OF DUCT, IF FUSIBLE LINK IS MORE ACCESSIBLE FROM BOTTOM OF DUCT RELOCATE ACCESS DOOR.
5– LABEL ACCESS DOOR WITH 1/2" LETTERS "FIRE DAMPER".
6– SMOKE FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY. DETAILS SHOWN ARE FOR REFERENCE ONLY.

PROVIDE COMBINATION FIRE SMOKE DAMPER AS REQUIRED FOR EACH APPLICATION. THIS DETAIL IS FOR REFERENCE ONLY. THE ABOVE DETAIL SHOWS VERTICAL MOUNT DAMPER ONLY.

NOT TO SCALE

COMBINATION SMOKE/FIRE DAMPER DETAIL 1

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PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JETTER
No. M 29925
Exp. 06–30–2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2–STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

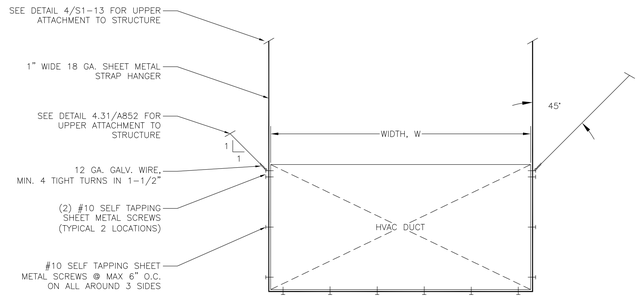
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL SCHEDULES

SHEET NO:
M011

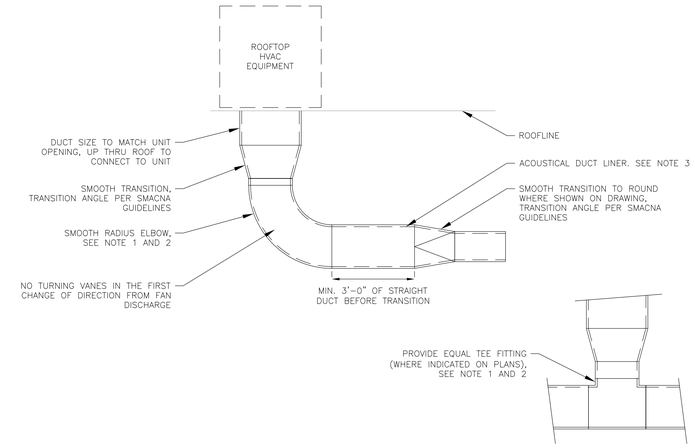


LOWER HANGER ATTACHMENT

NOTES:
1. PROVIDE DUCT SUPPORT AND BRACING MAXIMUM 8'-0" O.C.

NOT TO SCALE

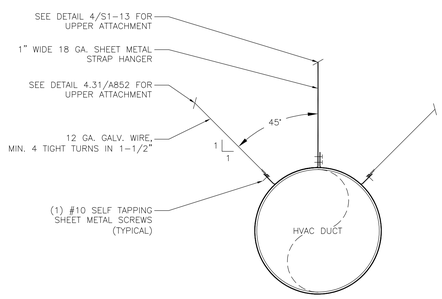
CONCEALED RECT. DUCTWORK - UP TO 20" WIDE (1)



NOTES:
1. USE OF PLENUM IN LIEU OF DUCT TRANSITION AND/OR ELBOW IS NOT ACCEPTABLE.
2. NO TURNING VANES IN THE FIRST CHANGE OF DIRECTION FROM FAN DISCHARGE.
3. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE ACOUSTICALLY LINED FROM CONNECTION OF UNIT TO MIN. 20'-0" DOWN STREAM OF UNIT OPENING. ALL BRANCH DUCTWORK AND TAKEOFF FROM MAIN WITHIN 20'-0" OF UNIT OPENING SHALL ALSO BE ACOUSTICALLY LINED IN ITS ENTIRETY (INCLUDING BUT NOT LIMITED TO SUB BRANCH DUCT, SUPPLY/RETURN DIFFUSER/GRILLES PLENUMS. DUCT LINING AND INSULATION MATERIAL/THICKNESS SHALL BE PER SPECIFICATION BOOK.

NOT TO SCALE

DUCT THRU ROOF TO EQUIPMENT ON ROOF DETAIL (2)



LOWER HANGER ATTACHMENT

NOTES:
1. PROVIDE DUCT SUPPORT AND BRACING MAXIMUM 8'-0" O.C.

NOT TO SCALE

ROUND DUCTWORK - MAX. 20" DIA. (3)

NOTES:
1. PROVIDE MANUAL VOLUME DAMPER FOR ALL BRANCH DUCTWORK.

NOT TO SCALE

RECTANGULAR TO ROUND BRANCH TAP DETAIL (4)

DIAMETER	4"–20"	22"–30"	32"–40"	
FRAME	20 GA.	20 GA.	20 GA.	GALV. STEEL
BLADES	16 GA.	16 GA.	10 GA.	GALV. STEEL
AXLES	3/8"ø	1/2"ø	3/4"ø	FULL LENGTH PLATED STEEL AXLE
REGULATOR	VENTLOK 635	VENTLOK 555	VENTLOK 560	FOR NON-INSULATED DUCT
REGULATOR W/ INSUL	VENTLOK 639	VENTLOK 555	VENTLOK 560	2" STANDOFF BRACKET
END BEARING	HVEL 609	HVEL 609	STEEL SLEEVE	CLOSED END
END BEARING	VENTLOK 607	VENTLOK 607	STEEL SLEEVE	OPEN END

NOT TO SCALE

ROUND VOLUME DAMPER DETAIL (5)

NOTES:
1. PROVIDE MANUAL VOLUME DAMPER FOR ALL BRANCH DUCTWORK.
2. USE FOR SYMBOL ⊥ WHERE BRANCH DUCT IS ROUND FROM ROUND MAIN AND BRANCH DUCT AIR QUANTITY IS 50% OR LESS OF TOTAL AIR FLOW.

NOT TO SCALE

CIRCULAR DUCT LATERAL TAP W/ VOLUME DAMPER (6)

NOTES:
1. PROVIDE MANUAL VOLUME DAMPER FOR ALL BRANCH DUCTWORK.
2. USE FOR SYMBOL ⊥ WHERE BRANCH DUCT IS ROUND FROM ROUND MAIN AND BRANCH DUCT AIR QUANTITY IS 50% OR LESS OF TOTAL AIR FLOW.
3. DEPTH AT "W" MUST BE AT LEAST 2" LESS THAN DEPTH AT "W"

NOT TO SCALE

RECTANGULAR DUCT ANGULAR TAP W/ VOLUME DAMPER (7)

NOTES:

1– ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE ACOUSTICALLY LINED FROM CONNECTION TO THE UNIT UP TO MIN. 20 FEET DOWN STREAM OF THE UNIT OPENING. ALL BRANCH DUCTWORK WITH TAKEOFF FROM MAIN SUPPLY/RETURN DUCTS WITHIN 20 FEET OF THE UNIT OPENING SHALL BE ACOUSTICALLY LINED IN ITS ENTIRETY INCLUDING ANY SUB BRANCH DUCTS AND SUPPLY/RETURN DIFFUSER/GRILL PLENUMS. DUCT LINING AND INSULATION MATERIAL AND THICKNESS SHALL BE PER SPECIFICATION BOOK.

2– PROVIDE FIRE MARSHAL APPROVED DUCT SMOKE DETECTOR FOR AIR MOVING SYSTEM SUPPLYING IN EXCESS OF 2000 CFM FOR AUTOMATIC SHUT OFF. IF BUILDING IS SERVED BY TOTAL COVERAGE SMOKE-DETECTION SYSTEM, AUTOMATIC UNIT SHUT OFF CAN BE ACCOMPLISH BY INTERCONNECTION TO SUCH SYSTEM. REFER TO FIRE ALARM DRAWINGS FOR ADDITIONAL INFORMATION.

3– PROVIDE NECESSARY TRANSITION FROM THE UNIT DISCHARGE AND RETURN OPENING TO THE ASSOCIATED SUPPLY AND RETURN AIR DUCTWORK.

4– WHERE DUCTS PENETRATE A FIRE RATED CEILING ROOF ASSEMBLY ENCASE ENTIRE RUN OF DUCT FROM CEILING TO TOP OF ROOF SHEETING WITH 5/8" TYPE "X" GYPSUM BOARD (TYP.)

5– SEE ARCHITECTURAL SHEET FOR MORE INFORMATION ON CURB AND WATERPROOFING.

6– WHERE UNIT IS INSTALLED ON A SLOPED ROOF PROVIDE A PREFABRICATED PITCHED ROOF CURB TO MATCH THE SLOPE OF THE ROOF FOR A LEVEL INSTALLATION OF THE AC UNIT. ROOF CURB MUST BE A MANUFACTURED PITCHED ROOF CURB. SITE BUILT CURBS ARE NOT ACCEPTABLE. IF THE MANUFACTURER OF ROOF CURB CAN NOT PROVIDE A PITCHED ROOF CURB DUE TO THE EXCESSIVE SLOPE OF THE ROOF, PROVIDE A STRUCTURAL LEVELING PLATFORM, THEN INSTALL A LEVEL ROOF CURB. COORDINATE THIS EFFORT WITH WORK OF ALL OTHER TRADES INVOLVED.

NOT TO SCALE

AIR CONDITIONER UNIT INSTALLATION DETAIL (DOWN DISCHARGE) (9)

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ARCHITECT:

architecture
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PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JETTER
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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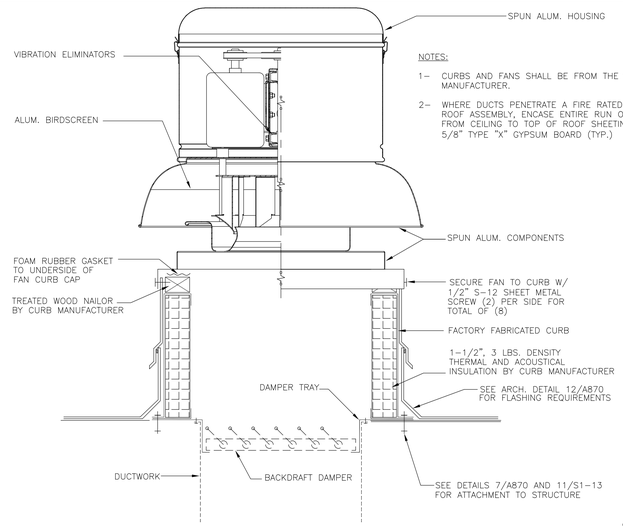
JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL DETAILS

SHEET NO:

M020

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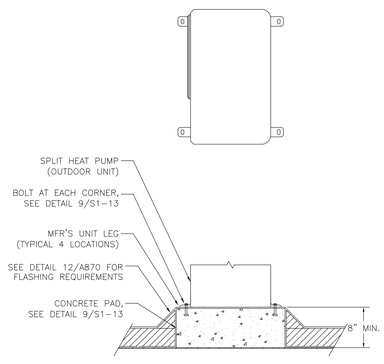
NOTES:

1- CURBS AND FANS SHALL BE FROM THE SAME MANUFACTURER.

2- WHERE DUCTS PENETRATE A FIRE RATED CEILING ROOF ASSEMBLY, ENCASE ENTIRE RUN OF DUCT FROM CEILING TO TOP OF ROOF SHEETING WITH 5/8" TYPE "X" GYPSUM BOARD (TYP.)

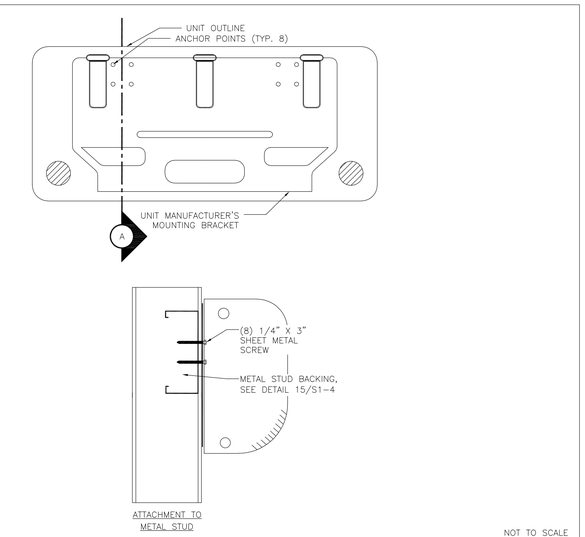
NOT TO SCALE

EXHAUST FAN DETAIL 1



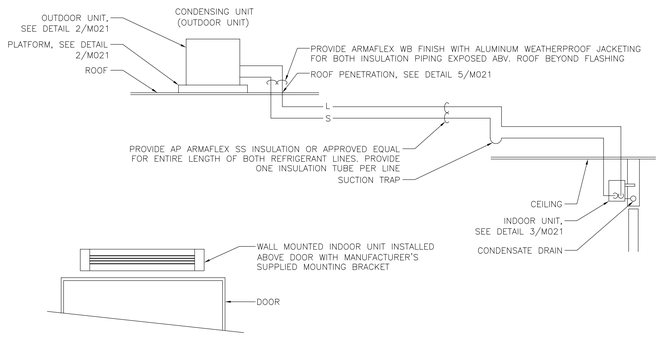
NOT TO SCALE

SPLIT AIR CONDITIONER-OUTDOOR UNIT INSTALLATION 2



NOT TO SCALE

SPLIT AIR CONDITIONER - INDOOR UNIT INSTALLATION 3



NOTES:

1- ALL LIQUID AND SUCTION LINES IN THE CEILING SPACE AND INSIDE THE WALL SHALL BE FULLY INSULATED.

2- ALL REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATION BASED ON ACTUAL DISTANCE BETWEEN THE INDOOR AND OUTDOOR UNITS.

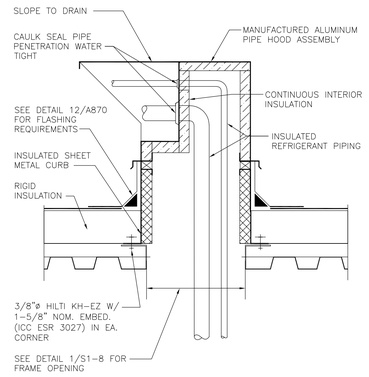
3- RUN ALL REFRIGERANT, SUCTION AND CONDENSATE DRAIN PIPES OUTSIDE OF THE ELECTRICAL ROOM, DATA ROOM OR ELEVATOR MECHANICAL ROOM.

4- PROVIDE CONDENSATE PUMP WHERE THE CONDENSATE CANNOT BE HANDLED BY GRAVITY. CONDENSATE PUMP SHALL BE EQUAL TO LITTLE GIANT VCC20 SERIES. SHP MANUFACTURER'S CONDENSATE PUMP IS NOT ACCEPTABLE.

5- PROVIDE CONDUIT FOR COMMUNICATION WIRING BETWEEN INDOOR AND OUTDOOR UNITS AS REQUIRED.

NOT TO SCALE

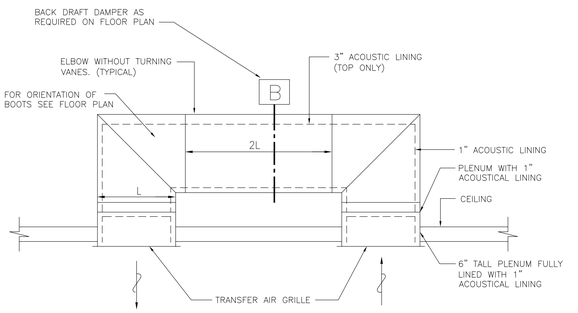
SPLIT AIR CONDITIONER - INSTALLATION DETAIL 4



AT STEEL FRAMING

NOT TO SCALE

REFRIGERANT PIPING THRU ROOF DETAIL 5



NOT TO SCALE

TRANSFER AIR DUCT DETAIL 6

NOTES:

1- DO NOT USE REDUCER COOKIE CUTTER FOR CONNECTION OF FLEX DUCT TO THE SHEET METAL DUCT.

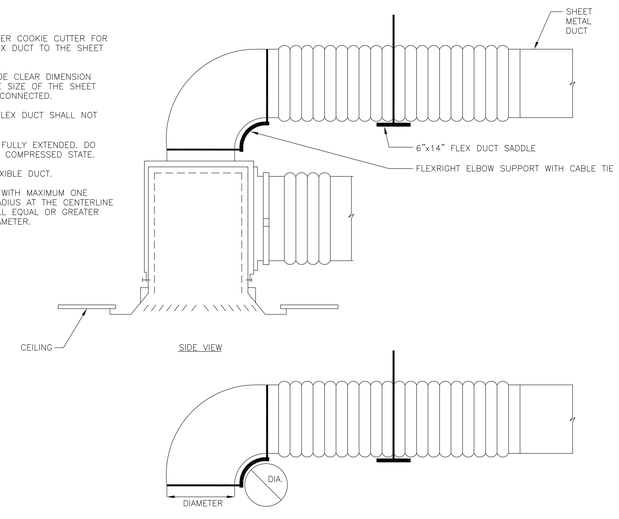
2- FLEXIBLE DUCT INSIDE CLEAR DIMENSION SHALL BE THE SAME SIZE OF THE SHEET METAL DUCT BEING CONNECTED.

3- TOTAL LENGTH OF FLEX DUCT SHALL NOT EXCEED 5'-0".

4- INSTALL FLEX DUCT FULLY EXTENDED. DO NOT INSTALL IN THE COMPRESSED STATE.

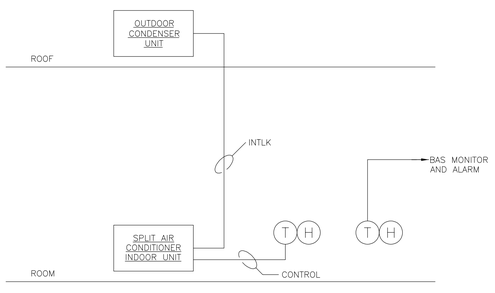
5- DO NOT CRUSH FLEXIBLE DUCT.

6- INSTALL FLEX DUCT WITH MAXIMUM ONE BEND. THE BEND RADIUS AT THE CENTERLINE OF FLEX DUCT SHALL EQUAL OR GREATER THAN ONE DUCT DIAMETER.



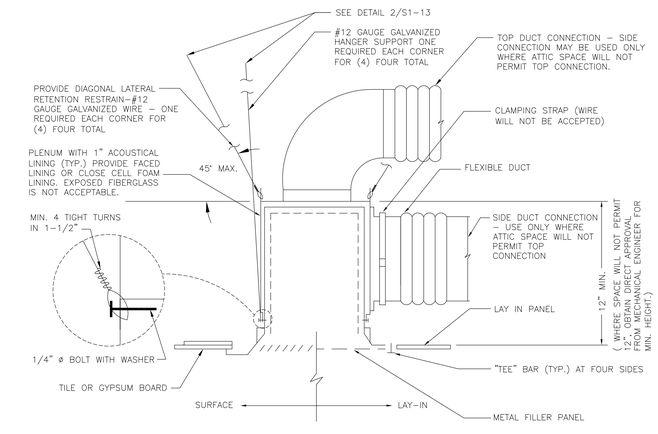
NOT TO SCALE

FLEXIBLE DUCTWORK INSTALLATION DETAIL 7



NOT TO SCALE

SPLIT AIR CONDITIONER CONTROL DETAIL 8



NOTE:
FOR GRILLES/DIFFUSERS IN LOCATIONS WHERE THERE ARE HARD LID CEILINGS, FLEXIBLE DUCT CONNECTIONS ARE NOT ACCEPTABLE.

NOT TO SCALE

SUPPLY/RETURN/EXHAUST DIFFUSER/GRILLE DETAIL 9

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No. M 29925
Exp. 06-30-2026

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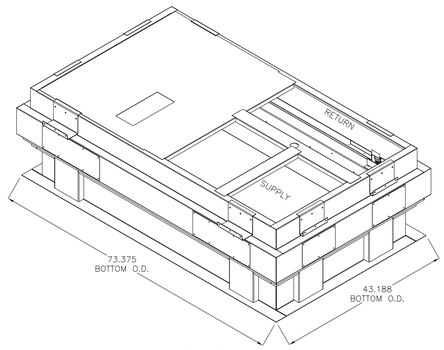
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ENGINEER:

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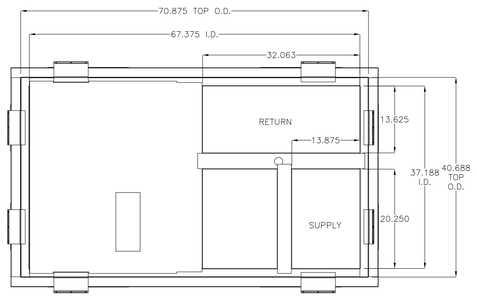
SHEET NO:
M021

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MARK	MAKE	TYPE	SIZE	CURB MAKE	CURB MODEL	BASE CURB HT.	ISO CURB HT.	TOTAL CURB HT.	CURB WT.
HP-1-1 THRU HP-2-7	CARRIER	50GCQJ	05	MICROMETL	CRBV-SRT12GA-0812-P10	8"	10"	18"	329 #



PLAN VIEW





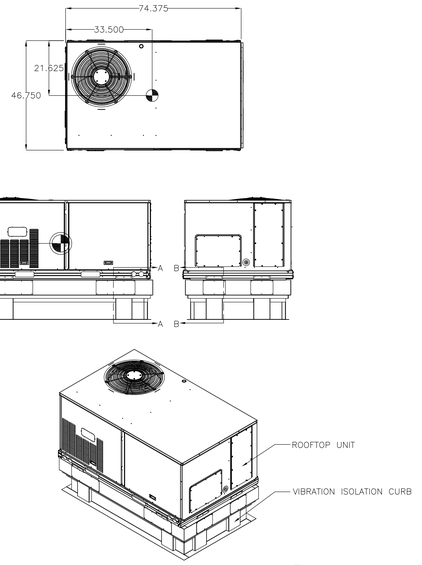
CURB ISOLATOR/STIFFENER MINIMUM REQUIREMENTS:
1. (2) STIFFENERS, (2) MICROHOLDS, (2) ISOLATORS PER LONG SIDE.
2. (2) STIFFENERS, (2) MICROHOLDS, (2) ISOLATORS PER SHORT SIDE.

NOTES:
1. ROOF SLOPE SHALL BE VERIFIED FOR A LEVEL TOP SURFACE OF CURB. A/C UNIT SHALL BE INSTALLED LEVEL.
2. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CURB FABRICATION BY CURB MANUFACTURER.
3. FOR ANCHORAGE OF ROOF CURB TO STRUCTURE, SEE DETAIL 13/S1-13.

NOT TO SCALE

ISO CURB (HP-1-1 THRU HP-2-7) DETAIL 4

CURB TO UNIT ATTACHMENT DETAIL



SECTION B-B
FULL SECTION NOT SHOWN FOR CLARITY

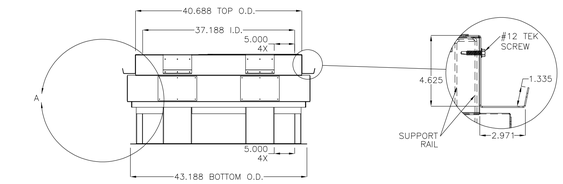
SECTION A-A
FULL SECTION NOT SHOWN FOR CLARITY

NOT TO SCALE

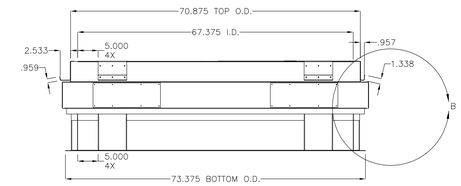
ISO CURB (HP-1-1 THRU HP-2-7) DETAIL 5

FRONT VIEW

MICROHOLD DETAIL

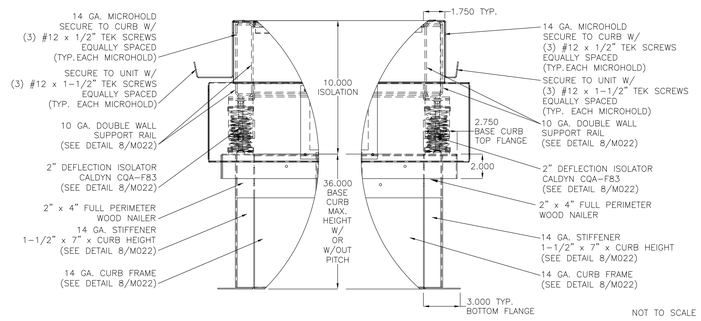


SIDE VIEW



DETAIL A
LONG SIDE

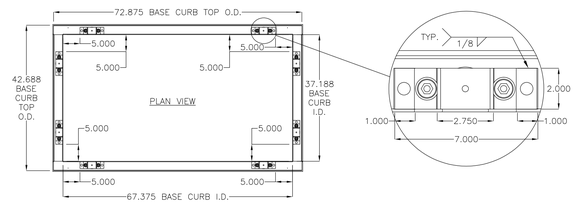
DETAIL B
SHORT SIDE

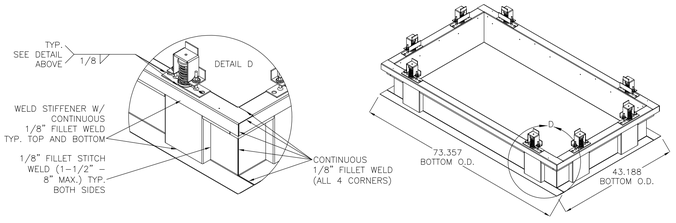


NOT TO SCALE

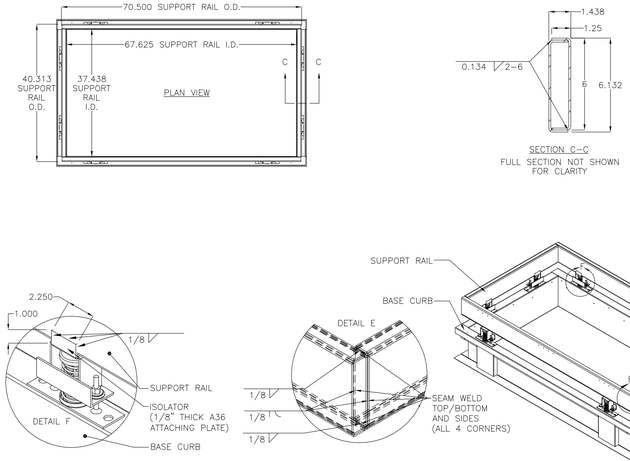
ISO CURB (HP-1-1 THRU HP-2-7) DETAIL 6

BASE CURB WELDING DETAILS





SUPPORT RAIL WELDING DETAILS



NOT TO SCALE

ISO CURB (HP-1-1 THRU HP-2-7) DETAIL 8

NOT TO SCALE

9

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1700 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite 3-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JETTER
No. M 29925
Exp. 06-30-2024

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL
DETAILS

SHEET NO:
M022

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Mechanical\M022.dwg Oct 07, 2024 - 9:06am iggy

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Date Prepared:** 2023-10-26

A. General Information

1	Project Name	Will Rogers MS - New 2-Story Classroom Bldg			
2	Run Title	Title 24 Analysis			
3	Project Location	4110 W. 154th St.			
4	City	Lawndale	5	Standards Version	Compliance 2022
6	Zip code	90260	7	Compliance Software (version)	EnergyPro 9.2
8	Climate Zone	8	9	Building Orientation (deg)	0
10	Building Type(s)	• Nonresidential	11	Weather File	FULLERTON_STYP20.epw
12	Project Scope	• New mechanical	13	Number of Dwelling Units	0
14	Total Conditioned Floor Area in Scope (ft²)	15911	15	Total # of hotel/motel rooms	0
16	Total Unconditioned Floor Area (ft²)	0	17	Fuel Type	Natural gas
18	Nonresidential Conditioned Floor Area	15911	19	Total # of Stories (Habitable Above Grade)	2
20	Residential Conditioned Floor Area	0			

B. PROJECT SUMMARY

Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within the permit application.

Building Components Complying via Performance					Building Components Complying Prescriptively	
Envelope (See Table G)	Nonres	Not Included	Solar Thermal Water Heating (See Table I3)	☐ Performance	The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).	
	MultiFam	Not Included		☒ Not Included		
Mechanical (See Table H)	Nonres	Performance	Covered Process: Commercial Kitchens (see Table J)	☐ Performance	Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	NRCC-LTI-E is required
	MultiFam	Not Included		☒ Not Included	Outdoor Lighting 140.7 & 170.2(e)	NRCC-LTO-E is required
Domestic Hot Water (See Table I)	Nonres	Not Included	Covered Process: Laboratory Exhaust (see Table J)	☐ Performance	Sign Lighting 140.8 & 170.2(e)	NRCC-LTS-E is required
	MultiFam	Not Included		☒ Not Included	**Building Components Complying with Mandatory Measures**	
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table F)	☒ Performance	Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)	
	MultiFam	Not Included		☐ Not Included	Electrical Power Distribution 110.11	NRCC-ELC-E is required
			Battery (see Table F)	☒ Performance	Commissioning 120.8	NRCC-CXR-E is required
				☐ Not Included	Solar and Battery :10.10	NRCC-SAB-E is required

C1. COMPLIANCE SUMMARY

COMPLIES[1]

	Time Dependent Valuaton (TDV)		Source Energy Use
	Efficiency[3] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)
Standard Design	301.36	237.79	17.61
Proposed Design	236.59	181.4	14.51
Compliance Margins	**64.77**	**56.39**	**3.1**
	Pass	**Pass**	**Pass**

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *New Construction, Complete Addition Scope: Building complies when all efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*
Existing, Addition and Alteration Scope: Building complies when efficiency compliance margin is greater than or equal to zero and unmet load hour limits are not exceeded

C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)

COMPLIES[2]

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	3.84	3.2	0.64
Space Cooling	103.38	76.49	26.89
Indoor Fans	133.4	96.17	37.23
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	28.83	28.82	0.01
Indoor Lighting	31.91	31.91	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**301.36**	**236.59**	**64.77 (21.5%)**
Photovoltaics	-60.59	-43.41	-17.18
Batteries	-2.98	-11.78	8.8
TOTAL COMPLIANCE	**237.79**	**181.4**	**56.39 (23.7%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	66.84	66.84	---
Process	170.68	170.68	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**475.31**	**418.92**	**56.39 (11.3%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² /yr)

COMPLIES[2]

Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Space Heating	0.51	0.42	0.09
Space Cooling	4.31	3.02	1.29
Indoor Fans	10.93	8.27	2.66
Heat Rejection	0	0	0
Pumps & Misc.	0	0	0
Domestic Hot Water	2.29	2.29	0
Indoor Lighting	2.57	2.57	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**20.61**	**16.57**	**4.04 (19.6%)**
Photovoltaics	-2.19	-1.54	-0.65
Batteries	-0.81	-0.52	-0.29
TOTAL COMPLIANCE	**17.61**	**14.51**	**3.1 (17.6%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Receptacle	4.92	4.92	---
Process	12.56	12.56	---
Other Ltg	---	---	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**35.09**	**31.99**	**3.1 (8.8%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

C6. 'ABOVE CODE' QUALIFICATIONS

☐ This project is pursuing CalGreen Tier 1 ☐ This project is pursuing CalGreen Tier 2

C7. ENERGY USE SUMMARY

Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	1.7	1.4	0.3	---	---	---
Space Cooling	54	39.1	14.9	---	---	---
Indoor Fans	73.6	55.7	17.9	---	---	---
Heat Rejection	---	---	---	---	---	---
Pumps & Misc.	---	---	---	---	---	---
Domestic Hot Water	19.1	19.1	0	---	---	---
Indoor Lighting	19.5	19.5	0	---	---	---
Flexibility	---	---	---	---	---	---
EFFICIENCY TOTAL	**167.9**	**134.8**	**33.1**	**0**	**0**	**0**
Photovoltaics	-42.4	-30.6	-11.8	---	---	---
Batteries	0.4	1.5	-1.1	---	---	---
ENERGY USE SUBTOTAL	**125.9**	**105.7**	**20.2**	**0**	**0**	**0**
Receptacle	42.1	42.1	0	---	---	---
Process	107.6	107.6	0	---	---	---
Other Ltg	---	---	---	---	---	---
Process Motors	---	---	---	---	---	---
ENERGY USE TOTAL	**275.6**	**255.4**	**20.2**	**0**	**0**	**0**

C8. ENERGY USE INTENSITY (EUI)

	Standard Design (kBtu/ft² / yr)	Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI[1]	68.19	61.33	6.86	10.06
NET EUI[1]	59.1	54.77	4.33	7.33

[1] *Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.*

D1. EXCEPTIONAL CONDITIONS

• The building does not include service water heating. Verify that service water heating is not required and is not included in the design.
• The user model includes space(s) that are designed to be served by mechanical cooling systems, but the cooling systems were not included in the simulation model. A cooling system has been modeled for both the proposed and standard cases.
• The user model includes space(s) without sufficient cooling equipment. Cooling equipment has been added to the model to meet cooling loads.
• DesignedOccupancyUsedForCalculatingVentilation

F1. REQUIRED PV SYSTEMS

01 DC System Size (kWdc)	02 Exception[1]	03 Module Type	04 Array Type	05 Power Electronics	06 CFI	07 Azimuth (deg)	08 Tilt Input	09 Array Angle (deg)	10 Tilt: (x in 12)	11 Inverter Eff. (%)	12 Annual Solar Access (%)
23.18	n/a	Standard (14-17%)	Fixed	none	false	135.27	Degrees	10.4	2.2	80	100

[1] *See Table D1 for any PV exceptions used.*

F1B. PV BATTERY BUILDING TYPE(S)

01 Building Occupancy Type* (From Table 140.10-A/B and 170.2-U/V)	02 Conditioned Floor Area (ft²)	03 Unconditioned Floor Area (ft²)
Grocery	0	0
High-Rise Multifamily	0	0
Office, Financial Institutions, Unleased Tenant Space	0	0
Retail	0	0
School	15911	0
Warehouse	0	0
Auditorium, Convention Center, Hotel/Motel, Library, Medical Office Building/Clinic, Restaurant, Theater	0	0
None	0	0

**Building Occupancy Types are defined in Section 100.1 of the Energy Code*

F2. BATTERY SYSTEMS[1]

01 Control	02 Capacity (kWh)	03 Charging Efficiency	04 Charging Rate (kW)	05 Discharging Efficiency	06 Discharging Rate (kW)	07 Round Trip Efficiency
AdvancedDR	54.1	N/A	10.6	N/A	8.5	0.9

[1] *See Table D1 for any Battery exceptions used.*

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
			Heating				Cooling				
Equipment Name	Equipment Type	Qty	Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency	Economizer Type (if present)	Status[1]
HP-1-1	Single Zone Heat Pump (SZHP) Air System	1	46	0	COP HSPF2	3.3 7.1	49.57	EER2 SEER2	12 16	Fixed DB	N
HP-1-2	Single Zone Heat Pump (SZHP) Air System	1	45.08	0	COP HSPF2	3.3 7.1	48.64	EER2 SEER2	12 16	Fixed DB	N
HP-1-3	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.3	EER2 SEER2	12 16	Fixed DB	N
HP-1-4	Single Zone Heat Pump (SZHP) Air System	1	45.6	0	COP HSPF2	3.6 8	49.05	EER2 SEER2	12 16	Fixed DB	N
HP-1-5	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.6 8	48.3	EER2 SEER2	12 16	Fixed DB	N
HP-1-6	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.6 8	48.3	EER2 SEER2	12 16	Fixed DB	N
HP-1-7	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.3	EER2 SEER2	12 16	Fixed DB	N
HP-2-1	Single Zone Heat Pump (SZHP) Air System	1	46	0	COP HSPF2	3.3 7.1	49.54	EER2 SEER2	12 16	Fixed DB	N

[1] *Status: N - New, A - Altered, E - Existing*

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
			Heating				Cooling				
Equipment Name	Equipment Type	Qty	Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency	Economizer Type (if present)	Status[1]
HP-2-2	Single Zone Heat Pump (SZHP) Air System	1	45.08	0	COP HSPF2	3.3 7.1	48.64	EER2 SEER2	12 16	Fixed DB	N
HP-2-3	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.24	EER2 SEER2	12 16	Fixed DB	N
HP-2-4	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.24	EER2 SEER2	12 16	Fixed DB	N
HP-2-5	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.24	EER2 SEER2	12 16	Fixed DB	N
HP-2-6	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.24	EER2 SEER2	12 16	Fixed DB	N
HP-2-7	Single Zone Heat Pump (SZHP) Air System	1	44.76	0	COP HSPF2	3.3 7.1	48.24	EER2 SEER2	12 16	Fixed DB	N
SAC-1	Single Zone Heat Pump (SZHP) Air System	1	14.58	0	COP HSPF2	4.6 11.1	11.52	EER2 SEER2	15.7 25.2	No Economizer	N
SAC-2	Single Zone Heat Pump (SZHP) Air System	1	35.41	0	COP HSPF2	4.35 10.3	23.04	EER2 SEER2	11.8 22.7	No Economizer	N

[1] *Status: N - New, A - Altered, E - Existing*

H1. DRY SYSTEM EQUIPMENT (FURNACES, AIR HANDLING UNITS, HEAT PUMPS, VRF, ECONOMIZERS ETC.)

01	02	03	04	05	06	07	08	09	10	11	12
			Heating				Cooling				
Equipment Name	Equipment Type	Qty	Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency	Economizer Type (if present)	Status[1]
SAC-3	Single Zone Heat Pump (SZHP) Air System	1	48.95	0	COP HSPF2	3.85 8.9	34.56	EER2 SEER2	10.5 22	No Economizer	N
SAC-4	Single Zone Heat Pump (SZHP) Air System	1	14.58	0	COP HSPF2	4.6 11.1	11.52	EER2 SEER2	15.7 25.2	No Economizer	N

[1] *Status: N - New, A - Altered, E - Existing*

H3. NONRESIDENTIAL / COMMON USE AREA FAN SYSTEMS SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13
			Supply Fan				Return / Relief Fan					
Name or Item Tag	Qty	Design OA CFM	CFM	Power	Power Units	Control	Fan Type	CFM	Power	Power Units	Control	Status[1]
HP-1-1	1	615	1,700	1.23	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-2	1	615	1,500	1.12	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-3	1	600	1,440	1.09	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-4	1	615	1,010	1.18	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-5	1	600	1,000	1.09	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-6	1	600	1,000	1.09	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-1-7	1	600	1,440	1.09	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-1	1	615	1,700	1.02	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-2	1	600	1,500	0.91	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-3	1	600	1,440	0.89	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-4	1	600	1,440	0.89	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-5	1	600	1,440	0.89	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-6	1	600	1,440	0.89	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
HP-2-7	1	600	1,440	0.89	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
SAC-1	1	15.75	450	0.03	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
SAC-2	1	28.8	600	0.03	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
SAC-3	1	24.6	900	0.07	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N
SAC-4	1	9.15	450	0.03	BHP	Constant Vol	N/A	N/A	N/A	N/A	N/A	N

[1] *Status: N - New, A - Altered, E - Existing*

H8. SYSTEM SPECIAL FEATURES

01 System Name	02 Equipment Type	03 Interlocks per 140.4(o)[1]	04 Other Special Features and Controls
HP-1-1	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-2	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-3	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-4	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-5	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-6	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-1-7	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-1	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-2	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-3	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-4	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-5	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

H8. SYSTEM SPECIAL FEATURES

01 System Name	02 Equipment Type	03 Interlocks per 140.4(o)[1]	04 Other Special Features and Controls
HP-2-6	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB
HP-2-7	Single Zone Heat Pump (SZHP) Air System	N/A	Zone(s) With CO2 Sensor Vent. Control Fixed DB

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

[1] *Yes = interlocks are provided, No = interlocks are not provided, NA means no operable openings.*

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
		Mechanical Ventilation				
Zone Name	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
1-Classroom 100	Education - Classrooms (ages 9-18)	41	615	0	1129	DCV
2-Classroom 101	Education - Classrooms (ages 9-18)	41	615	0	1004	DCV
3-Classroom 105	Education - Classrooms (ages 9-18)	40	600	0	967	DCV
4-Classroom 106	Education - Classrooms (ages 9-18)	41	615	0	1171	DCV
5-Classroom 107	Education - Classrooms (ages 9-18)	40	600	0	926	DCV
6-Classroom 108	Education - Classrooms (ages 9-18)	40	600	0	1421	DCV
7-Classroom 114	Education - Classrooms (ages 9-18)	40	600	0	1349	DCV
8-Classroom 200	Education - Classrooms (ages 9-18)	41	615	0	1114	DCV

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Mechanical\M030.dwg Oct 07, 2024 - 9:20am iggy

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC: A
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite I-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PE) # 530.204

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY M. JEFFERY — No. M 29929 — Exp. 06-30-2024

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

Rev.	Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TITLE 24 CALCULATIONS

SHEET NO:

M030

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 17 of 22)

H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation				Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM		
9-Classroom 201	Education - Classrooms (ages 9-18)	40	600	0	957	DCV
10-Classroom 205	Education - Classrooms (ages 9-18)	40	600	0	949	DCV
11-Classroom 206	Education - Classrooms (ages 9-18)	40	600	0	962	DCV
12-Classroom 207	Education - Classrooms (ages 9-18)	40	600	0	925	DCV
13-Classroom 208	Education - Classrooms (ages 9-18)	40	600	0	1288	DCV
14-Classroom 214	Education - Classrooms (ages 9-18)	40	600	0	1227	DCV
15-Electrical 104	Education - Classrooms (ages 9-18)	0	15.75	0	105	N/A
16-IDF 117	Education - Classrooms (ages 9-18)	0	28.8	0	192	N/A
17-Elev Equipment Rm 119	Education - Classrooms (ages 9-18)	0	24.6	0	164	N/A
18-Electrical 204	Education - Classrooms (ages 9-18)	0	9.15	0	61	N/A

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Limits	Cycles	
1-Classroom 100-Trm	Uncontrolled	1	N/A	N/A	1,700	N/A	0	N/A	N/A	N/A	☐

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 18 of 22)

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Limits	Cycles	
2-Classroom 101-Trm	Uncontrolled	1	N/A	N/A	1,500	N/A	0	N/A	N/A	N/A	☐
3-Classroom 105-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
4-Classroom 106-Trm	Uncontrolled	1	N/A	N/A	1,010	N/A	0	N/A	N/A	N/A	☐
5-Classroom 107-Trm	Uncontrolled	1	N/A	N/A	1,000	N/A	0	N/A	N/A	N/A	☐
6-Classroom 108-Trm	Uncontrolled	1	N/A	N/A	1,000	N/A	0	N/A	N/A	N/A	☐
7-Classroom 114-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
8-Classroom 200-Trm	Uncontrolled	1	N/A	N/A	1,700	N/A	0	N/A	N/A	N/A	☐
9-Classroom 201-Trm	Uncontrolled	1	N/A	N/A	1,500	N/A	0	N/A	N/A	N/A	☐
10-Classroom 205-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
11-Classroom 206-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
12-Classroom 207-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
13-Classroom 208-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
14-Classroom 214-Trm	Uncontrolled	1	N/A	N/A	1,440	N/A	0	N/A	N/A	N/A	☐
15-Electrical 104-Trm	Uncontrolled	1	N/A	N/A	450	N/A	0	N/A	N/A	N/A	☐
16-IDF 117-Trm	Uncontrolled	1	N/A	N/A	600	N/A	0	N/A	N/A	N/A	☐
17-Elev Equipment Rm 119-Trm	Uncontrolled	1	N/A	N/A	900	N/A	0	N/A	N/A	N/A	☐
18-Electrical 204-Trm	Uncontrolled	1	N/A	N/A	450	N/A	0	N/A	N/A	N/A	☐
PropNoClg-NonResZnSys	Single Zone Air Conditioner	1	0	44.43	1,379.23	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-2	Single Zone Air Conditioner	1	0	42.72	1,312.53	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-3	Single Zone Air Conditioner	1	0	40.82	1,248.93	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-4	Single Zone Air Conditioner	1	0	48.1	1,542.29	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-5	Single Zone Air Conditioner	1	0	38.52	1,165.2	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-6	Single Zone Air Conditioner	1	0	50.56	1,639.82	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-7	Single Zone Air Conditioner	1	0	47.78	1,502.88	N/A	N/A	0	W/cfm	Cycling	☐

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 19 of 22)

H11. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12
System ID	System Type	Qty	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			VSD
			Heating	Cooling	Design	Min.	Min. Ratio	Power	Power Limits	Cycles	
PropNoClg-NonResZnSys-8	Single Zone Air Conditioner	1	0	51.36	1,627.77	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-9	Single Zone Air Conditioner	1	0	48.36	1,500.64	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-10	Single Zone Air Conditioner	1	0	46.21	1,423.28	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-11	Single Zone Air Conditioner	1	0	46.47	1,432.61	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-12	Single Zone Air Conditioner	1	0	47.27	1,492.7	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-13	Single Zone Air Conditioner	1	0	55.53	1,758.79	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-14	Single Zone Air Conditioner	1	0	50.33	1,572.11	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-15	Single Zone Air Conditioner	1	0	13.25	432.3	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-16	Single Zone Air Conditioner	1	0	14.64	477.44	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-17	Single Zone Air Conditioner	1	0	10.87	354.49	N/A	N/A	0	W/cfm	Cycling	☐
PropNoClg-NonResZnSys-18	Single Zone Air Conditioner	1	0	10.34	337.27	N/A	N/A	0	W/cfm	Cycling	☐

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections made by Documentation Author indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

Building Component	Form/Title
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-E - For all buildings with Mechanical Systems

M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections made by Documentation Author indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Building Component	Form/Title
Mechanical	NRCA-MCH-03-A - Constant Volume Single Zone HVAC
Mechanical	NRCA-MCH-05-A - Air Economizer Controls
Mechanical	NRCA-MCH-06-A Demand Control Ventilation Systems must be submitted for all systems required to employ demand controlled ventilation (refer to) can vary outside ventillation flow rates based on maintaining interior carbon dioxide (CO2) concentration setpoints.

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 20 of 22)

N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Selections made by Documentation Author indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online

There are no Certificates of Verification applicable to this project

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 21 of 22)

Documentation Author's Declaration Statement

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

Documentation Author Name: Matthew Pezeshki	Documentation Author Signature:
Company: Pezeshki Engineering, Inc.	Signature Date:
Address: 1920 E. Warner Ave 3-H	CEA/HERS Certification Identification (if applicable):
City/State/Zip: Santa Ana, CA 92705	Phone: 714-884-3803

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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Paul D. Westberg	Responsible Designer Signature:
Company: Westberg and White, Inc.	
Address: 7700 Irvine Center Dr., Suite 100	Date Signed:
City/State/Zip: Irvine, CA 92618	License #: C-11045
Phone: 714-508-1780	Title: Scope:
Responsible Designer Name: Nestor C. Ignacio	Responsible Designer Signature:
Company: IMEG	
Address: 901 Via Piemonte, Suite 400	Date Signed:
City/State/Zip: Ontario, CA 91764	License #: E16934
Phone: 909-477-6915	Title: Scope:

CERTIFICATE OF COMPLIANCE - NONRESIDENTIAL PERFORMANCE COMPLIANCE METHOD NRCC-PRF-E

Nonresidential Performance Compliance Method (Page 22 of 22)

Responsible Designer Name: Matthew Pezeshki	Responsible Designer Signature:
Company: Pezeshki Engineering, Inc.	
Address: 1920 E. Warner Ave., Suite 3-H	Date Signed:
City/State/Zip: Santa Ana, CA 92705	License #: M29925
Phone: 714-884-3803	Title: Scope:

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-PLB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 1 of 3)

Project Address: 4110 W. 154th St **Date Prepared:** 10/26/2023

This document is used to demonstrate compliance for nonresidential occupancies with requirements in 110.1, 110.3, 120.3, and 140.5, and with requirements in 141.0 for additions and alterations, for domestic water heating scopes using the prescriptive path. For high-rise residential and hotel/motel occupancies compliance is demonstrated with requirements in 110.1, 110.3, 160.4 and 170.2(d), and with requirements 180.1 for additions and 180.2 for alterations.

A. GENERAL INFORMATION

01	Project Location (city)	Lawndale	02	Climate Zone	8
03	Occupancy Types Within Project (select all that apply):				

• Classroom

B. PROJECT SCOPE

This table includes domestic water heating systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive paths outlined in 140./170.2(d) and 141.0(a)/ 180.1, or 141.0(b)2N / 180.2 for additions or alterations. Solar water heating systems are documented on the NRCC-SAB compliance document. Combined hydronic water heating systems are documented on the NRCC-MCH compliance document.

01	02	03
My project consists of (check all that apply):	System Type[1,2]	System Components
☐ New system (DHW system being installed for the first time)		☐ Equipment ☐ Distribution ☐ Controls
☐ System Alteration (equipment, distribution or controls)		☐ Equipment ☐ Distribution ☐ Controls

[1]FOOTNOTES: Point of use water heaters, or other non-central systems used to serve nonresidential spaces, are considered individual systems.
[2] Dwelling units refers to hotel/motel guest rooms and units in a multifamily residential occupancy.
[3] DHW systems serving 2 or more dwelling units are considered "Central Systems" for multifamily occupancies

C. COMPLIANCE RESULTS

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

01	02	03	04
Domestic Hot Water Equipment	Distribution Systems	Controls	Compliance Results
Table F	Table G	Table H	
Yes	Yes	Yes	COMPLIES

D. EXCEPTIONAL CONDITIONS

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

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-PLB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 2 of 3)

Date Prepared: 10/26/2023

E. ADDITIONAL REMARKS

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

G. DOMESTIC HOT WATER DISTRIBUTION SYSTEM

This section does not apply to this project.

H. DOMESTIC HOT WATER CONTROLS

This section does not apply to this project.

I. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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

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

J. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no forms required for this project.

STATE OF CALIFORNIA

Domestic Water Heating System

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-PLB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 3 of 3)

Project Address: 4110 W. 154th St **Date Prepared:** 10/26/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Matthew Pezeshki	Documentation Author Signature:
Company: Pezeshki Engineering, Inc.	Signature Date: 2023-10-26
Address: 1920 E. Warner Ave 3-H	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Santa Ana CA 92705	Phone: 714-884-3803

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: Matthew Pezeshki	Responsible Designer Signature:
Company: Pezeshki Engineering, Inc.	Date Signed: 2023-10-26
Address: 1920 E. Warner Ave., Suite 3-H	License: M29925
City/State/Zip: Santa Ana CA 92705	Phone: 714-884-3803

STATE OF CALIFORNIA

Solar And Battery

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SAB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 1 of 4)

Project Address: 4110 W. 154th St **Date Prepared:** 10/26/2023

This document is used to demonstrate compliance with prescriptive PV and battery requirements in 140.10/ 170.2 for nonresidential, multifamily and mixed-use buildings and prescriptive solar thermal requirements in 170.2(d)3C for multifamily and hotel/ motel occupancies. When PV/battery/solar thermal requirements don't apply or are traded using the performance approach, this document demonstrates compliance with mandatory solar readiness requirements in 110.10/ 160.8 for newly constructed buildings which are either multifamily ten stories or fewer, hotel/motel ten stories or fewer or all other nonresidential buildings three stories or fewer. It is also used to demonstrate compliance with solar readiness in 110.10/ 160.8 for additions to nonresidential, multifamily or hotel/motel building types which add more than 2,000 ft² of roof area. Alterations, or additions of less than 2,000 ft² of roof area, are not required to comply with solar readiness, solar PV and battery requirements and do not need to complete this document.

A. GENERAL INFORMATION

01	Project Location (city)	Lawndale	04	Building Occupancies	All Other Occupancies
02	Climate Zone	8	05	Construction Type	New construction
03	Conditioned Floor Area (ft²)	15911	06	Number of Stories	Bldg <= 3 stories

B. PROJECT SCOPE

The compliance path the project is using to comply per 110.10(b)1B/ 140.10/ 170.2(g and h) is indicated below.

Compliance with Solar Photovoltaic (PV) and Battery Requirements in 140.10/ 170.2(g and h)

	01
☐	Provided PV system and battery storage sized per 140.10/ 170.2 (g and h)
☐	Exception to PV and Battery: Not enough Solar Access Roof Area
☐	Exception to PV and Battery: Required PV < 4kW
☐	Exception to PV and Battery: No contiguous Solar Access Roof Area
☐	Exception to PV and Battery: Can't meet snow load
☐	Exception to PV and Battery: Multi-tenant without VNEM or Community Solar
☒	The prescriptive PV/battery requirement has been traded off using the performance compliance approach as documented on the PRF Certificate of Compliance form.

STATE OF CALIFORNIA

Solar And Battery

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SAB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 2 of 4)

Date Prepared: 10/26/2023

Compliance with Solar Thermal Water Heating Requirements in 170.2(d)3C (Multifamily and hotel/ motel occupancies only)

	01
☐	The project includes a hotel/motel or multifamily occupancy with a gas or propane central water-heating system (serves 2+ dwelling units) and includes a permanently installed domestic solar water-heating system to comply with 170.2(d)3C and Reference Residential Appendix RA4, as documented in Table H. Compliance meets Exception 2 to solar ready requirements in 110.10(b).

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance or see the applicable Table referenced below.

Allocated Solar Zone				Installed PV System				Installed SWH System				Smart Tstat and Alternative EE Measure		Compliance Results
01		02		03		04		05		06		07	08	
Required Minimum Area (ft²)	<=	Designated Area (ft²)	OR	Required Minimum DC Power Rating (Watts)	<=	Designed DC Power Rating (Watts)	OR	Required Minimum Solar Savings Fraction	<=	Designed/Rated Solar Savings Fraction	OR	JA5 Compliant Thermostat Specified?	Alternative Energy Efficiency Measure	
(See Table F)				(See Tables G or J)				(See Table H)				(See Table I)		
<=			OR	<=			OR	<=			OR			
Location in construction documents showing the location for inverters and metering equipment and a pathway for the routing of conduit/ plumbing to the electrical service/ water heating system per §110.10(c).														
Battery storage system design meets the minimum requirements in Joint Appendix JA12 and the minimum energy (kWh)/ power (kW) capacity per Table J.														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 is includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA

Solar And Battery

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SAB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 3 of 4)

Date Prepared: 10/26/2023

F. ALLOCATED SOLAR ZONE

This section does not apply to this project.

G. PERMANENTLY INSTALLED SOLAR PV FOR SOLAR READY EXCEPTION

This section does not apply to this project.

H. PERMANENTLY INSTALLED SOLAR HOT WATER SYSTEMS

This section does not apply to this project.

I. SMART THERMOSTATS AND ALTERNATIVE EFFICIENCY MEASURE FOR SOLAR READY EXCEPTION

This section does not apply to this project.

J. PHOTOVOLTAIC (PV) AND BATTERY SYSTEMS

This section does not apply to this project.

K. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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 Table E. Additional Remarks and ExceptionalConditionMessageCCSABE += UserChangedSelectionInCI. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-SAB-01-E - Must be submitted for all buildings that must comply with solar readiness or PV/Battery requirements.

L. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no forms required for this project.

STATE OF CALIFORNIA

Solar And Battery

CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE NRCC-SAB-E

Project Name: Will Rogers MS - New 2-Story Classroom Bldg **Report Page:** (Page 4 of 4)

Date Prepared: 10/26/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Matthew Pezeshki	Documentation Author Signature:
Company: Pezeshki Engineering, Inc.	Signature Date:
Address: 1920 E. Warner Ave 3-H	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Santa Ana CA 92705	Phone: 714-884-3803

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: Paul D. Westberg	Responsible Designer Signature:
Company: Westberg and White, Inc.	Date Signed: 2023-10-26
Address: 7700 Irvine Center Dr., Suite 100	License: C-11045
City/State/Zip: Irvine CA 92618	Phone: 714-508-1780

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Mechanical\M031.dwg Oct 07, 2024 - 10:57am iggy

STATE:

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SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite 3-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PE) # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. PEZESHKI
No. M 29925
Exp. 06-30-2024

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

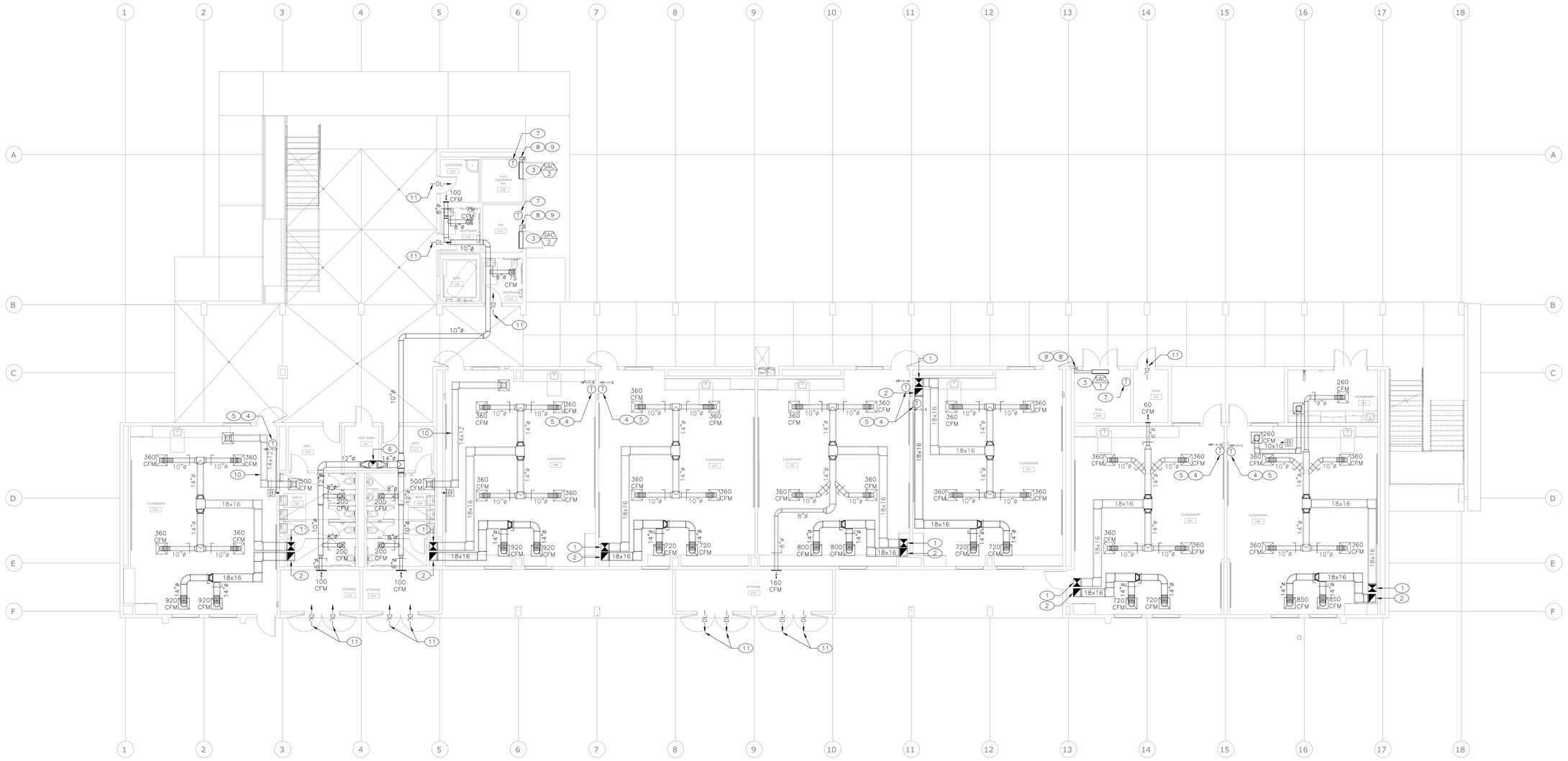
Rev.	Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TITLE 24 CALCULATIONS

SHEET NO:

M031



DUCT LINING NOTE

ALL SUPPLY AND RETURN AIR DUCTWORK, DUCT FITTING, ELBOWS, TRANSITIONS, AND BRANCH DUCTS SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER IN THEIR ENTIRETY FROM THE POINT OF CONNECTION TO THE AC UNIT TO THE POINT OF CONNECTION TO THE SUPPLY/RETURN DIFFUSERS/GRILLES.

0' 4' 8' 16' 32'

NORTH

MECHANICAL FIRST FLOOR PLAN

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

PLAN NOTES

1.– 18x16 SUPPLY AIR DUCT UP INSIDE THE SHAFT TO FLOOR ABOVE. SEE SHEET M102 FOR CONTINUATION.

2.– 18x16 RETURN AIR DUCT UP INSIDE THE SHAFT TO FLOOR ABOVE. SEE SHEET M102 FOR CONTINUATION.

3.– INSTALL SPLIT AIR CONDITIONER INDOOR FAN UNIT ON MANUFACTURER'S MOUNTING BRACKET. SEE DETAIL 3/M021.

4.– PROVIDE CARRIER NO. 33CONNECTSTAT43FX TOUCHSCREEN THERMOSTAT (24 VAC), WI–FI COMPATIBLE, 2–HOUR OVERRIDE BUTTON AND C02 SENSOR SENVA NO. W–ACAAAAD C02 SENSOR (24 VAC) WITH ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET M001.

5.– COORDINATE THE FINAL LOCATION OF THERMOSTAT AND C02 SENSOR WITH ROOM FURNITURE AND OBTAIN ARCHITECT / MECHANICAL ENGINEERS APPROVAL PRIOR TO INSTALLATION. SEE SHEET M001 "THERMOSTAT NOTES" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

6.– 16x16 EXHAUST AIR DUCT UP INSIDE THE SHAFT TO FLOOR ABOVE. SEE SHEET M102 FOR CONTINUATION.

7.– MANUFACTURED PROVIDED THERMOSTAT FOR SPLIT AC UNIT. SEE SPLIT AC SCHEDULE ON SHEET M011 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

8.– REFRIGERATION AND SUCTION LINES SIZED PER MANUFACTURER'S RECOMMENDATIONS AND GUIDELINES BASED ON ACTUAL DISTANCE BETWEEN THE INDOOR AND OUTDOOR UNITS.

9.– REFRIGERATION AND SUCTION LINES UP IN WALL TO FLOOR ABOVE. SEE SHEET M102 FOR CONTINUATION.

10.– TRANSFER AIR DUCT. SEE DETAIL 6/M021 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

11.– NON–VISION, PAINTABLE FINISH DOOR LOUVER WITH MINIMUM 0.5 SQ. FT. OF FREE AREA. PROVIDE INSECT SCREEN. CONTRACTOR TO COORDINATE WITH OTHER TRADES FOR INSTALLATION.

KEYMAP



P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Mechanical\M101.dwg Oct 07, 2024 - 1:16pm iggy

STATE:

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DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite 3-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. JETTER
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

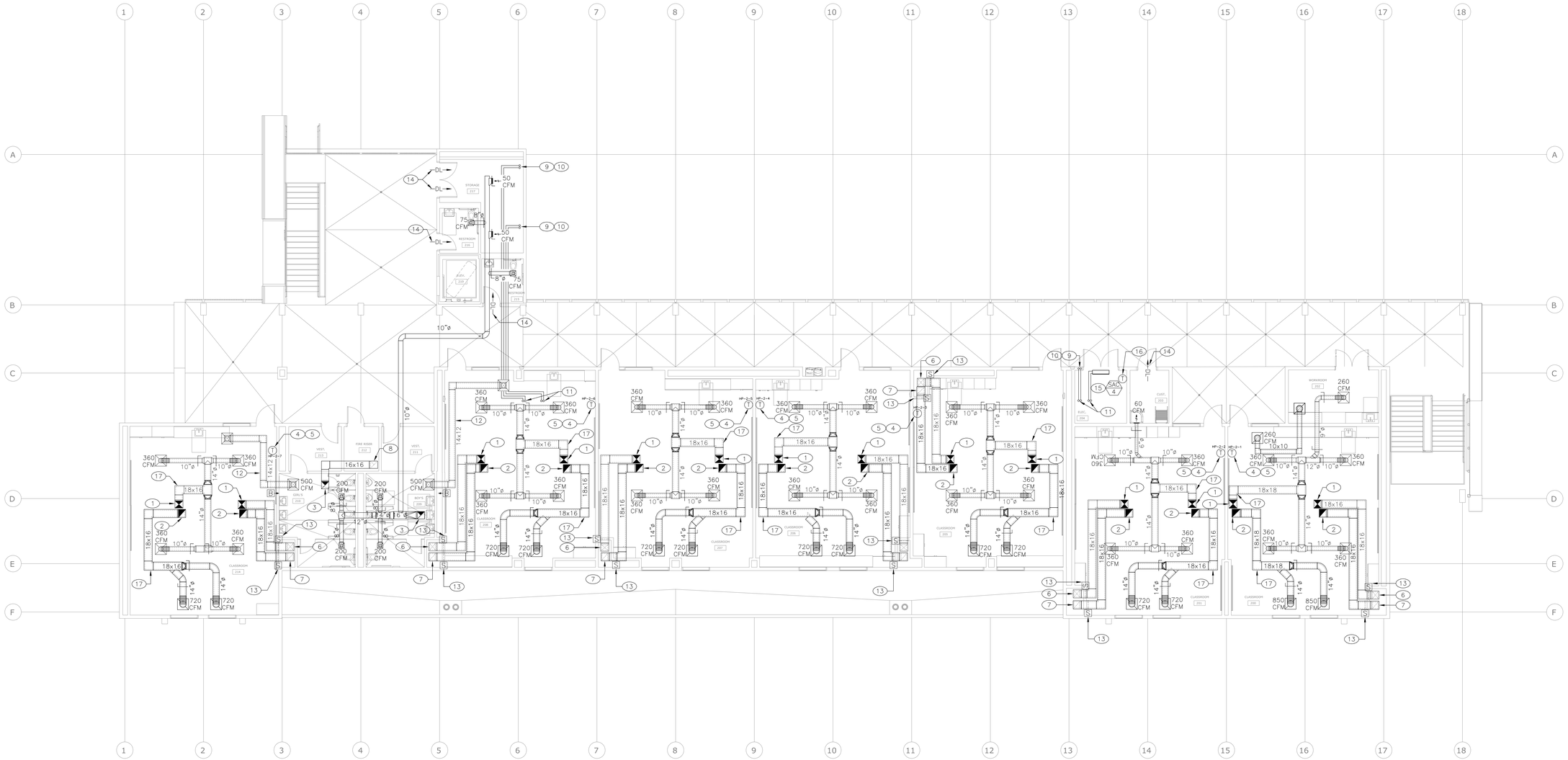
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL
FIRST FLOOR PLAN

SHEET NO:

M101



DUCT LINING NOTE

ALL SUPPLY AND RETURN AIR DUCTWORK, DUCT FITTING, ELBOWS, TRANSITIONS, AND BRANCH DUCTS SHALL BE LINED WITH 1" ACOUSTICAL DUCT LINER IN THEIR ENTIRETY FROM THE POINT OF CONNECTION TO THE AC UNIT TO THE POINT OF CONNECTION TO THE SUPPLY/RETURN DIFFUSERS/GRILLES.

DUCT LAGGING NOTE

ALL RECTANGULAR DUCTWORK SHALL BE PROVIDED WITH DUCT LAGGING EQUAL TO SOUND SEAL B-20 LAG/QFA-3 INSTALL PER MANUFACTURER'S RECOMMENDATION.

0' 4' 8' 16' 32'

NORTH

MECHANICAL SECOND FLOOR PLAN

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

16.- MANUFACTURED PROVIDED THERMOSTAT FOR SPLIT AC UNIT. SEE SPLIT AC SCHEDULE ON SHEET M011 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

17.- ALL ELBOWS SHOWN ARE REQUIRED FOR ACOUSTICAL PURPOSES. DO NOT ELIMINATE ANY OF THE ELBOWS. PROVIDE MINIMUM OF (4) 90° ELBOWS DOWNSTREAM OF THE UNIT OPENING TO EACH GRILLE / DIFFUSER.

8.- 16x16 EXHAUST AIR DUCT DOWN THRU FLOOR TO FLOOR BELOW. SEE SHEET M101 FOR CONTINUATION.

9.- REFRIGERATION AND SUCTION LINES DOWN INSIDE WALL TO FLOOR BELOW. SEE SHEET M101 FOR CONTINUATION.

10.- REFRIGERATION AND SUCTION LINES SIZED PER MANUFACTURER'S RECOMMENDATIONS AND GUIDELINES BASED ON ACTUAL DISTANCE BETWEEN THE INDOOR AND OUTDOOR UNITS. RUN LINES INSIDE THE WALL.

11.- REFRIGERATION AND SUCTION LINES UP THRU ROOF AND CONNECT TO SAC UNIT ON THE ROOF. SEE DETAIL 4/M021 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

12.- TRANSFER AIR DUCT. SEE DETAIL 6/M021 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

13.- INSTALL COMBINATION SMOKE FIRE DAMPER. SMOKE FIRE DAMPERS SHALL BE STATE FIRE MARSHAL APPROVED, UL LISTED, AND INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THEIR LISTING. MANUFACTURER'S INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITY. DETAILS SHOWN ARE FOR REFERENCE ONLY.

14.- NON-VISION, PAINTABLE FINISH DOOR LOUVER WITH MINIMUM 0.5 SQ. FT. OF FREE AREA. PROVIDE INSECT SCREEN. CONTRACTOR TO COORDINATE WITH OTHER TRADES FOR INSTALLATION.

15.- INSTALL SPLIT AIR CONDITIONER INDOOR FAN UNIT ON MANUFACTURER'S MOUNTING BRACKET. SEE DETAIL 3/M021.

1.- 18x16 SUPPLY AIR DUCT UP THRU ROOF. TRANSITION IN RISE TO AC UNIT SUPPLY AIR OPENING SIZE AND CONNECT TO AC UNIT. SEE DETAIL 2/M020 AND 9/M020. (USE OF DUCT PLENUM IN LIEU OF DUCT TRANSITION, ELBOW AND FITTING IS NOT ACCEPTABLE.)

2.- 18x16 RETURN AIR DUCT UP THRU ROOF. TRANSITION IN RISE TO AC UNIT RETURN AIR OPENING SIZE AND CONNECT TO AC UNIT. SEE DETAIL 2/M020 AND 9/M020. (USE OF DUCT PLENUM IN LIEU OF DUCT TRANSITION, ELBOW AND FITTING IS NOT ACCEPTABLE.)

3.- 16x16 EXHAUST AIR DUCT UP THRU ROOF. TRANSITION IN RISE TO EXHAUST FAN UNIT OPENING AND CONNECT TO EXHAUST FAN UNIT. SEE DETAIL 3/M020. (USE OF DUCT PLENUM IN LIEU OF DUCT TRANSITION, ELBOW AND FITTING IS NOT ACCEPTABLE.)

4.- PROVIDE CARRIER NO. 33CONNECTSTAT43FX TOUCHSCREEN THERMOSTAT (24 VAC), WI-FI COMPATIBLE, 2-HOUR OVERRIDE BUTTON AND SENVA NO. W-ACAAAAD CO2 SENSOR (24 VAC) WITH ADJUSTMENT BUTTON. FOR MOUNTING HEIGHT SEE SHEET M001.

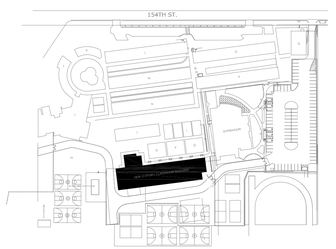
5.- COORDINATE THE FINAL LOCATION OF THERMOSTAT AND CO2 SENSOR WITH ROOM FURNITURE AND OBTAIN ARCHITECT / MECHANICAL ENGINEERS APPROVAL PRIOR TO INSTALLATION. SEE SHEET M001 "THERMOSTAT NOTES" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

6.- 18x16 SUPPLY AIR DUCT DOWN INSIDE SHAFT TO FLOOR BELOW. SEE SHEET M101 FOR CONTINUATION.

7.- 18x16 RETURN AIR DUCT DOWN INSIDE SHAFT TO FLOOR BELOW. SEE SHEET M101 FOR CONTINUATION.

PLAN NOTES

KEYMAP



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ARCHITECT:

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westbergwhite
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REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JEFFERSON
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

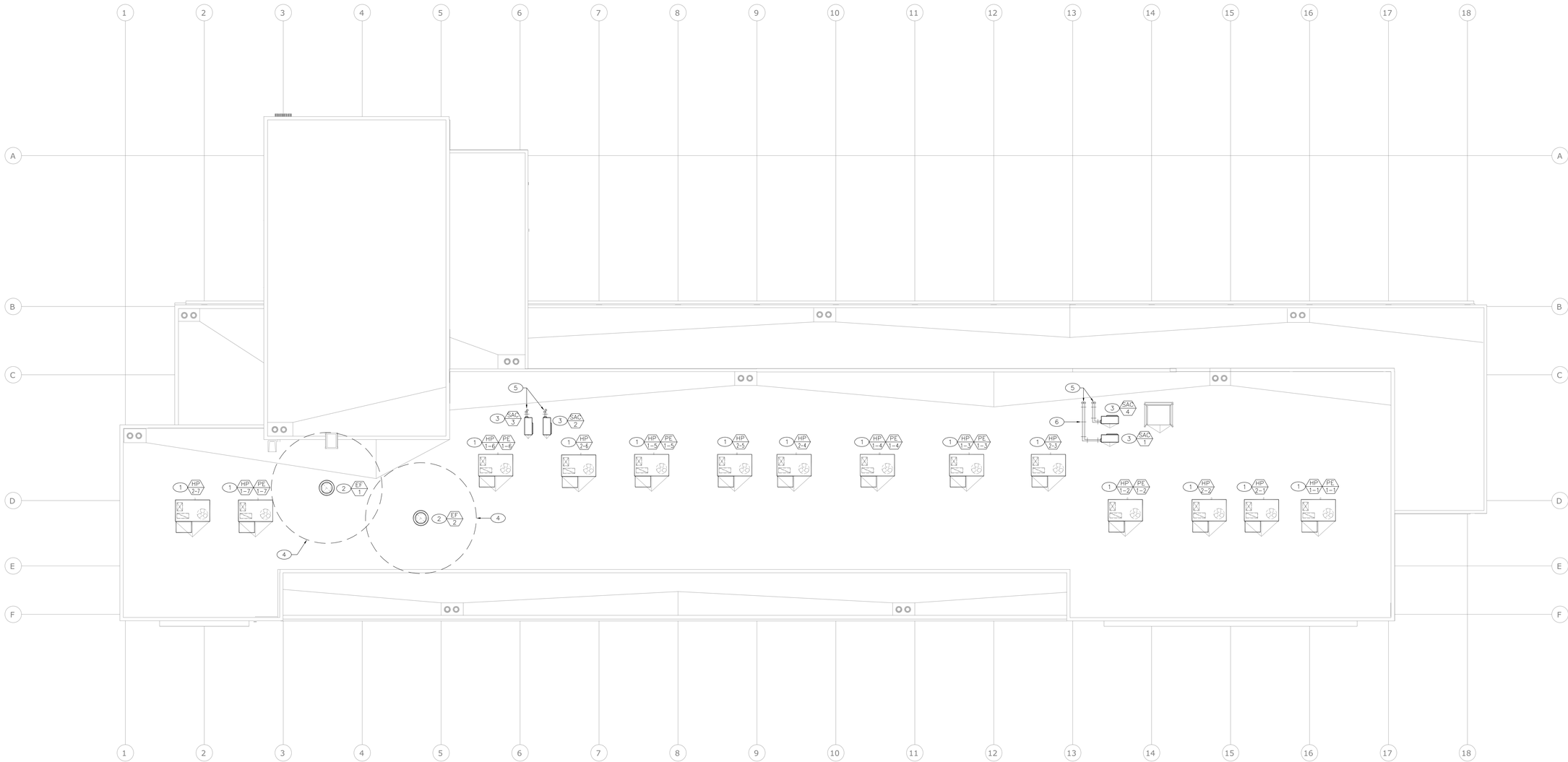
WILL ROGERS MIDDLE SCHOOL
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Rev.	Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL
SECOND FLOOR PLAN

SHEET NO:
M102





MECHANICAL ROOF PLAN

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

1

1.– PACKAGED ROOFTOP AIR CONDITIONER UNIT. SEE SCHEDULE AND DETAIL 9/M020 FOR MORE INFORMATION ON INSTALLATION OF THE UNIT.

2.– EXHAUST FAN UNIT ON ROOF. SEE SCHEDULE AND DETAIL 1/M021 FOR MORE INFORMATION ON INSTALLATION.

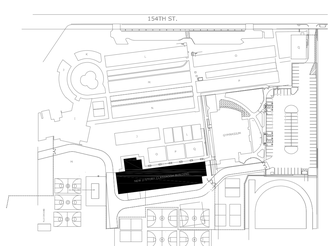
3.– SPLIT AIR CONDITIONER CONDENSER UNIT ON ROOF. SEE SCHEDULE AND DETAIL 2 & 4/M021 FOR MORE INFORMATION ON INSTALLATION OF THE UNIT.

4.– ALL EXHAUST FANS TO MAINTAIN A 10'–0" MIN. CLEARANCE FROM ALL OUTSIDE AIR INTAKES (TYP.).

5.– FULLY INSULATED REFRIGERANT LINES DOWN THRU ROOF TO SAC INDOOR UNIT. SEE DETAILS 4 & 6/M021 FOR ADDITIONAL INFORMATION.

6.– REFRIGERANT PIPE SUPPORT EQUAL TO ERICO PYRAMID SERIES. PROVIDE EVERY 6'–0" O.C. (TYP.).

PLAN NOTES



KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Mechanical\M201.dwg Oct 07, 2024 - 11:02am iggy

STATE:

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REGISTERED PROFESSIONAL ENGINEER
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No. M 29925
Exp. 06-30-2026

PROJECT NAME:

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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
MECHANICAL
ROOF PLAN

SHEET NO:

M201

PLUMBING ABBREVIATIONS AND SYMBOLS LIST

PLUMBING ABBREVIATIONS

ABV	ABOVE
ABV CLG	ABOVE CEILING
AC	AIR CONDITIONING
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFSR	AUTOMATIC FIRE SPRINKLER RISER
AP	ACCESS PANEL
@	AT
BEL	BELOW
BFP	BACKFLOW PREVENTOR
BLV	BALL VALVE
CD	CONDENSATE
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CLG	CEILING
CO	CLEANOUT
COP	CLEANOUT PLUG
CONC	CONCRETE
CONN	CONNECT OR CONNECTION
CONT	CONTINUE OR CONTINUATION
COTG	CLEAN OUT TO GRADE
CW	COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DR	DRAIN
DS	DOWNSPOUT
ELEC	ELECTRICAL
EXIST	EXISTING
F	FIRE
°F	DEGREES FAHRENHEIT
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FLR	FLOOR
FOC	FACE OF CURB
FPM	FEET PER MINUTE
FR	FROM
FS	FLOOR SINK
FSH	FIRE SPRINKLER HEAD
FT	FEET
FTR	FLUE THRU ROOF
FU	FIXTURE UNITS
G	GAS–LOW PRESSURE
GA	GAUGE
GAL	GALLON
GC	GAS COCK
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GR	GRADE
GV	GATE VALVE
H	HIGH
HB	HOSE BIBB
HDR	HEADER
HP	HORSEPOWER
HW	HOT WATER
IE	INVERT ELEVATION
KW	KILOWATT
LAV	LAVATORY
LBS	POUNDS
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
MPG	GAS–MEDIUM PRESSURE
NO	NORMALLY OPEN
NO.	NUMBER
NTS	NOT TO SCALE
OD	OVERFLOW DRAIN
OPWT	OPERATING WEIGHT
PG	PRESSURE GAUGE
PH	PHASE (ELECTRICAL)
℄	PROPERTY LINE
POC	POINT OF CONNECTION
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI GAUGE
PT	PLUGGED TEE
PTRV	PRESSURE/TEMPERATURE RELIEF VALVE
PVC	POLYVINYL CHLORIDE
PW	PLUGGED WYE
RD	ROOF DRAIN
REQ'D	REQUIRED
RHB	RECESSED HOSE BIBB
RI&C	ROUGH–IN AND CONNECT
RPM	REVOLUTIONS PER MINUTE
S	SINK
SD	STORM DRAIN
SHT	SHEET
SOV	SHUT OFF VALVE
SPEC	SPECIFICATION
SQ. FT.	SQUARE FEET
SS	SERVICE SINK
STL	STEEL
STR	STRAINER
TEMP	TEMPERATURE
TP	TRAP PRIMER
TYP	TYPICAL
U	URINAL
UL	UNDERWRITERS LABORATORY
UN	UNION
UTR	UP THRU ROOF
V	VENT
VB	VACUUM BREAKER
VBF	VENT BELOW FLOOR
VTR	VENT THRU ROOF
W	WIDE OR WASTE
W/	WITH
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER
W/O	WITHOUT
WTR	WATER
WCO	WALL CLEANOUT
WC	WATER CLOSET
WT	WEIGHT
YB	YARDBOX

1. SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED.
2. ALL NOTES ON THIS SHEET REMAIN PART OF THE CONTRACT DOCUMENTS.

PLUMBING SYMBOLS

- PIPING BRANCH
- PIPE DROP
- PIPE RISE
- RISER OR DROP
- BRANCH – TOP CONNECTION
- BRANCH – BOTTOM CONNECTION
- UNION (SCREWED)
- PLUGGED TEE
- FLANGED CONNECTION
- CAP ON END OF PIPE
- RED BRASS NIPPLE
- VALVE IN RISER
- GATE VALVE OR SHUT–OFF VALVE
- PRESSURE – TEMPERATURE RELIEF VALVE
- GAS COCK
- WATER HAMMER ARRESTER
- CHECK VALVE, SWING OR LIFT
- SLOPE – IN DIRECTION OF ARROW
- FLOW – IN DIRECTION OF ARROW
- GAS/WATER SHUT–OFF VALVE IN YARDBOX
- FLOOR CLEANOUT
- CLEANOUT IN YARDBOX – TRAFFIC WEIGHT
- WALL CLEANOUT
- HOSE BIBB WITH VACUUM BREAKER
- CAP PIPING FOR RECONNECTION

- SANITARY WASTE ABOVE GRADE
- SANITARY WASTE BELOW GRADE
- SANITARY VENT ABOVE GRADE
- SANITARY VENT BELOW GRADE
- STORM DRAIN ABOVE GRADE (SD)
- STORM DRAIN BELOW GRADE (SD)
- OVERFLOW DRAIN (OD)
- INDIRECT DRAIN (D)
- CONDENSATE DRAIN (CD)
- DOMESTIC COLD WATER ABOVE GRADE
- DOMESTIC COLD WATER BELOW GRADE (CW)
- DOMESTIC HOT WATER ABOVE GRADE
- DOMESTIC HOT WATER BELOW GRADE (HW)
- GAS – LOW PRESSURE (G)
- EXISTING GAS – LOW PRESSURE (E)G
- GAS – MEDIUM PRESSURE (MPG)
- EXISTING GAS – MEDIUM PRESSURE (E)MPG
- HOT WATER RETURN ABOVE GRADE
- EXISTING PIPING TO BE ABANDONED
- EXISTING PIPING TO BE REMOVED
- REPRESENTS REMODEL NOTES (#)
- REPRESENTS DETAIL NUMBER / REPRESENTS PLUMBING SHEET (# / #)
- REPRESENTS PLUMBING FIXTURE / REPRESENTS QUANTITY (# / #) (#)

GENERAL NOTES

1.– THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.

2.– FOR BUILDING LOCATIONS, FINISH FLOOR, AND GRADE ELEVATIONS, SEE ARCHITECTURAL AND CIVIL DRAWINGS.

3.– FOR PIPING RUNNING THROUGH AND PARALLEL TO FOOTING, SEE STRUCTURAL DRAWINGS.

4.– BEFORE COMMENCEMENT OF WORK, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF ALL UTILITIES AND PIPING, PRIOR TO START OF ANY TRENCHING, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

5.– FOR SERVICE CONNECTIONS TO INDIVIDUAL FIXTURES REFER TO SPECIFICATIONS.

6.– ALL HOSE BIBBS SHALL BE INSTALLED 18" ABOVE FINISH FLOOR OR GRADE, UNLESS OTHERWISE NOTED.

7.– FOR EXACT LOCATION OF ROOF DRAINS, SEE ARCHITECTURAL DRAWINGS.

8.– ALL PLUGGED TEES AND PLUGGED WYES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.

9.– ALL PLUMBING FIXTURE VENTS TO TERMINATE A MIN. OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM, OR 3 FEET ABOVE, ANY OUTSIDE AIR INTAKES.

10.– THE CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING ACCESS PANELS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN AND THE ELECTRICAL LIGHTING LAYOUT.

11.– EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS

12.– CONNECTION BETWEEN INCOMPATIBLE MATERIALS ABOVE GRADE AND INSIDE BUILDING SHALL BE MADE WITH TWO (2) DIELECTRIC UNIONS SEPARATED BY A 12" SECTION OF RED BRASS PIPE.

13.– ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL BE BY MACHINE SAW CUTTING. HOLES FOR PIPING IN CONCRETE WALLS OR FLOORS SHALL BE DONE BY CORE DRILLING EQUIPMENT.

14.– THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL PAVED AREAS WHICH ARE EXCAVATED AND/OR DAMAGED BY HIS OPERATIONS.

15.– ALL CONNECTIONS TO EXISTING SERVICES SHALL BE MADE SUCH THAT INTERRUPTION TIME WILL BE AS SHORT AS POSSIBLE. THE CONTRACTOR SHALL GIVE THE OWNER'S REPRESENTATIVE SUFFICIENT NOTICE OF SUCH INTERRUPTION AND THE ACTUAL SHUT–DOWN TIME SHALL BE AT A TIME DESIGNATED BY THE OWNER'S REPRESENTATIVE.

16.– COORDINATE LOCATION OF GAS AND CONDENSATE CONNECTIONS ON MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.

17.– FOR CONTINUATION OF STORM DRAINS OUTSIDE OF BUILDING, SEE CIVIL DRAWINGS.

18.– ALL SHUT–OFF VALVES, OUTSIDE THE BUILDINGS, SHALL BE IN CONCRETE YARD BOXES WITH THE NAME OF THE SERVICE CONSPICUOUSLY CAST IN THE COVER.

19.– DURING THE PROGRESS OF WORK THE PLUMBING CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL CHANGES MADE IN THE PLUMBING SYSTEMS. THE RECORD DRAWING SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND TRADE NAMES), MATERIALS, SIZES, LOCATIONS AND HOOK–UP POINTS. AS–BUILTS SHALL BE GIVEN TO THE OWNER'S CONSTRUCTION MANAGER AT COMPLETION OF JOB.

20.– INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN PIPING PERMITTED OVER OR UNDER ELECTRICAL PANELS.

21.– ALL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT DSA RULES AND REGULATIONS AS SET FORTH BY THE AUTHORITY HAVING JURISDICTION.

22.– SEE ARCHITECTURAL DRAWINGS FOR ACCESSIBLE FIXTURE LOCATIONS AND MOUNTING HEIGHTS. (INSULATE ALL EXPOSED WATER AND DRAIN PIPING BELOW ACCESSIBLE LAVATORIES AND SINKS WITH PREFORMED INSULATED FITTING COVERS (TRUEBRO OR EQUAL) WITH A MAX. FLAME SPREAD RATING OF 25, MAX. SMOKE RATING OF 50 PER ASTM E–84) OFFSET P–TRAP AGAINST WALL. ALSO, ALL ACCESSIBLE WATER CLOSET FLUSH VALVES SHALL BE ON WIDE SIDE OF STALL.

23.– ALL CONDENSATE PIPING IN ATTIC SPACES SHALL BE INSULATED WITH 3/4" MICRO–LOK INSULATION OR APPROVED EQUAL. WITH A MAX. FLAME SPREAD RATING OF 25, MAX. SMOKE RATING OF 50 PER ASTM E–84 25/50.

24.– ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC., AND THE ARCHITECT PRIOR TO ANY INSTALLATION.

25.– ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.

26.– UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW–TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.

27.– BEFORE FABRICATION OR INSTALLATION THIS CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT AND EQUIPMENT PROVIDED UNDER ANOTHER SECTION OF SPECIFICATIONS. EXACT ROUGH–IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN FIELD.

28.– THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO BID.

29.– ALL WASTE AND VENT PIPING SHALL SLOPE AT 2% MIN. UNLESS OTHERWISE INDICATED.

30.– ALL VALVES, TRAP PRIMER, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON–ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.

31.– ALL LAVATORIES TO BE EQUIPPED WITH PRESSURE COMPENSATING FLOW CONTROL DEVICES RESTRICTING THE FLOW TO 0.35 GPM., FAUCET CONTROLS SHALL REQUIRE NO MORE THAN 5 LBS/FORCE TO OPERATE.

32.– WATER OR SOIL PIPE BELOW GRADE OUTSIDE SHALL HAVE MINIMUM COVER AS RECOMMENDED BY LOCAL AUTHORITIES.

33.– BEFORE ANY USE OF WATER SYSTEM IS MADE FOR DOMESTIC PURPOSES, IT SHALL BE STERILIZED BY SLOWLY FILLING THE SYSTEM WITH A WATER–CHLORINE SOLUTION CONTAINING AT LEAST FIFTY (50) PPM OF CHLORINE, AND THE SYSTEM OR PART THEREOF SHALL BE VALVED OFF AND ALLOWED TO STAND FOR TWENTY FOUR (24) HOURS; OR, THE SYSTEM OR PART THEREOF SHALL BE FILLED WITH A WATER–CHLORINE SOLUTION CONTAINING AT LEAST TWO HUNDRED (200) PPM OF CHLORINE AND ALLOWED TO STAND FOR THREE (3) HOURS. FOLLOWING THE ALLOWED STANDING TIME, THE SYSTEM SHALL BE FLUSH WITH CLEAN POTABLE WATER UNTIL THE CHLORINE RESIDUAL IN THE WATER COMING FROM THE SYSTEM DOES NOT EXCEED THE CHLORINE RESIDUAL IN THE FLUSHING WATER. THIS PROCEDURE OF FLUSHING THE SYSTEM SHALL BE REPEATED IF IT IS SHOWN BY BACTERIOLOGICAL EXAMINATION MADE BY AN APPROVED AGENCY THAT CONTAMINATION PERSIST IN THE SYSTEM.

34.– ALL ELECTRICAL DEVICES, WIRING AND CONDUITS, ETC., SERVING PLUMBING FIXTURES, INCLUDING BUT NOT LIMITED TO SENSOR OPERATED FAUCETS AND FLUSH VALVES SHALL BE INSTALLED RECESSED, PROVIDED WITH REQUIRED ACCESS PANEL AND COVER. COORDINATE WITH ARCHITECT FOR INSTALLATION LOCATION, DIMENSION AND THE FINISH COLOR OR MATERIAL OF THESE PANELS.

35.– ALL PLUMBING WORK SHALL CONFORM TO 2022 CPC.

36.– UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

37.– 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 OR STRUCTURAL ENGINEER WITH THE APPROVAL OF DSA REPRESENTATIVE.

38.– THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO ASCE 7–16 SECTION 13.3 AND TABLE 13.3–1: ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.

39.– ALL BRACING OF DUCTS AND PIPING SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES AS APPROVED BY DSA.

GENERAL NOTES

40.– WHERE BRACING DETAILS ARE NOT SHOWN ON THE DRAWING OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECTED TO THE APPROVAL OF THE ARCHITECT, STRUCTURAL ENGINEER AND DSA FIELD ENGINEER.

41.– A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY THE CITY BUILDING DEPARTMENT SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB AT ALL TIMES.

42.– ALL WORK SHALL BE IN CONFORMANCE WITH TITLE 24, 2022 CALIFORNIA CODE OF REGULATIONS (CCR), 2022 CALIFORNIA BUILDING CODE, PART 2, TITLE 24 CCR, 2022 CALIFORNIA PLUMBING CODE, PART 5, TITLE 24, CCR.

SPECIAL NOTE

ALL PLUMBING DRAWINGS CONTAINED IN THIS SET SHALL DISPLAY THE DIVISION OF THE STATE ARCHITECT APPROVAL STAMP BEFORE THESE DRAWINGS CAN BE USED AS CONSTRUCTION DOCUMENTS.

COORDINATION

THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW IN GENERAL WHERE THE PIPING AND OTHER WORK SPECIFIED IN THE DIVISION 22 SECTIONS OF THE SPECIFICATIONS IS TO BE LOCATED. THE DRAWINGS DO NOT NECESSARILY INDICATE ANY AND ALL OFFSETS AND CONFIGURATIONS REQUIRED FOR COORDINATION WITH THE SPACE REQUIREMENTS OF OTHER TRADES. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT PLACING, LOCATION AND CONNECTION OF THIS WORK IN RELATION TO THE WORK OF OTHER TRADES.

THE CONTRACTOR, SHALL EXAMINE ALL MECHANICAL, ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS THAT HAVE BEEN PREPARED FOR THIS PROJECT, AND ACCEPT SUCH CONDITIONS, AND MAKE ALLOWANCES FOR THEM IN PREPARING THE BID.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS.

THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7–16 CHAPTERS 13, 26 AND 30:

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

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

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

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

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

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

MP ☐ 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 OSHPD PRE–APPROVAL (OPM#) # .

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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CONSULTANT:

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PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JEFFERY
No. M 29925
Exp. 06–30–2024
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2–STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO:	22029.01
DATE:	02/27/2024
DRAWN:	-
CHECK:	-
ARCHITECT:	PDW
ENGINEER:	

SHEET DESCRIPTION:
PLUMBING ABBREVIATIONS AND SYMBOLS LIST

SHEET NO:

P001

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Plumbing\P001.dwg Oct 07, 2024 - 9:01am iggy

PIPE MATERIAL SCHEDULE

AG: ABOVE GRADE
BG: BELOW GRADE

SERVICES		PIPE MATERIALS: C.I. NO-HUB	DUCTILE IRON	COPPER DWV	SCH. 40 BLACK STEEL	SDR-35	COPPER TYPE M	COPPER TYPE L	COPPER TYPE K	SCH. 10 BLACK STEEL	YELLOW PE PIPE	STAINLESS STEEL	REMARKS
WATER	AG						●						IAPMO IS 3-2006
	BG							●					IAPMO IS 3-2006 WRAPPED
WASTE	AG	●											IAPMO IS 6-2006
	BG	●											IAPMO IS 6-2006
VENT	AG	●											IAPMO IS 6-2006
	BG	●											IAPMO IS 6-2006
INDIRECT WASTE	AG					●							IAPMO IS 3-2006 CD
	BG					●							IAPMO IS 3-2006 CD WRAPPED
STORM DRAIN	AG	●											IAPMO IS 6-2006
	BG	●											IAPMO IS 6-2006
FIRE	AG				●				●				IAPMO IS 6-2006
	BG		●									●	

FIXTURE UNIT LOAD CALCULATION

FIXTURE	QTY.	WSFU	TWSFU	DFU	TDFU
WATER CLOSET (FV)	20	–	265.0	4.0	80.0
URINAL (FV)	4	–	53.0	2.0	8.0
LAVATORY	16	1.0	16.0	1.0	16.0
SERVICE SINK	2	3.0	6.0	3.0	6.0
DRINKING FOUNTAIN	4	0.5	2.0	0.5	2.0
SINK	14	2.0	28.0	2.0	28.0
HOSE BIBB	13	2.5 / 1.0	14.5	–	–
TOTAL			384.5 @ 123 GPM		140 @ 78 GPM

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	ROUGH-IN CONNECTIONS: COLD WATER	HOT WATER	WASTE	VENT	AS NOTED	DESCRIPTION
WC 1	WATER CLOSET	1"	–	4"	2"	–	AMERICAN STANDARD NO. 3351.101, "AFWALL FLOWISE", WALL MOUNTED, ELONGATED BOWL, 1-1/2" TOP SPUD, EVERCLEAN AND SIPHON JET ACTION. PROVIDE SLOAN "ROYAL" NO. 111-1.28, HIGH EFFICIENCY MANUAL FLUSHOMETER VALVE, 1.28 GPF, J.R. SMITH WATER CLOSET CARRIER, BOLT CAPS AND CHURCH NO. 295SSCT, OPEN FRONT SEAT. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
WC 2	WATER CLOSET (ACCESSIBLE)	1"	–	4"	2"	–	AMERICAN STANDARD NO. 3351.101, "AFWALL FLOWISE", WALL MOUNTED, ELONGATED BOWL, 1-1/2" TOP SPUD, EVERCLEAN AND SIPHON JET ACTION. PROVIDE SLOAN "ROYAL" NO. 111-1.28, HIGH EFFICIENCY MANUAL FLUSHOMETER VALVE, 1.28 GPF, J.R. SMITH WATER CLOSET CARRIER, BOLT CAPS AND CHURCH NO. 295SSCT, OPEN FRONT SEAT. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
U 1	URINAL	3/4"	–	2"	1-1/2"	–	AMERICAN STANDARD NO. 6590.001, "WASHBROOK FLOWISE", 3/4" TOP SPUD, WALL HUNG AND WASHOUT FLUSH ACTION, PROVIDE SLOAN "ROYAL" NO. 186-0.125 DBP, HIGH EFFICIENCY MANUAL FLUSHOMETER VALVE, 0.125 GPF AND J.R. SMITH NO. 0617 URINAL SUPPORT. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
U 2	URINAL (ACCESSIBLE)	3/4"	–	2"	1-1/2"	–	AMERICAN STANDARD NO. 6590.001, "WASHBROOK FLOWISE", 3/4" TOP SPUD, WALL HUNG AND WASHOUT FLUSH ACTION, PROVIDE SLOAN "ROYAL" NO. 186-0.125 DBP, HIGH EFFICIENCY MANUAL FLUSHOMETER VALVE, 0.125 GPF AND J.R. SMITH NO. 0617 URINAL SUPPORT. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
L 1	STUDENT LAVATORY (ACCESSIBLE)	1/2"	–	2"	1-1/2"	–	AMERICAN STANDARD NO. 0355.012, "LUCERNE", WHITE, VITREOUS CHINA, WALL HUNG, 20-1/2"x18-1/4"x6-1/2" DEEP, 4" CENTERS AND SUPPORT ARMS. PROVIDE CHICAGO NO. 857-E2805-665PSHAB, METERING FAUCET WITH NO. E39VPJKABCP, 0.35 GPM, McGUIRE NO. HD155WC, OFF-SET GRID STRAINER, McGUIRE NO. V8090CNC, VANDAL-PROOF CHROME PLATED 17 GA. L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON, CHICAGO NO. 1017-ABCP, STOPS AND RIGID SUPPLIES AND TRUEBRO "LAV SHIELD" COVER ENCLOSURE. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
L 2	ADULT LAVATORY (ACCESSIBLE)	1/2"	1/2"	2"	1-1/2"	–	AMERICAN STANDARD NO. 0355.012, "LUCERNE", WHITE, VITREOUS CHINA, WALL HUNG, 20-1/2"x18-1/4"x6-1/2" DEEP, 4" CENTERS AND SUPPORT ARMS. PROVIDE CHICAGO NO. 802-VE39VPABCP FAUCET WITH LEVER HANDLES, 0.35 GPM, McGUIRE NO. HD155WC, OFF-SET GRID STRAINER, McGUIRE NO. V8090CNC, VANDAL-PROOF CHROME PLATED 17 GA. L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON, CHICAGO NO. 1017-ABCP, STOPS AND RIGID SUPPLIES AND TRUEBRO "LAV SHIELD" COVER ENCLOSURE. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
S 1	CLASSROOM SINK (ACCESSIBLE)	1/2"	–	2"	1-1/2"	–	JUST NO. CRA-ADA-1725-A65-J-LM, COUNTERTOP, SINGLE COMPARTMENT, STAINLESS STEEL, 1-HOLE PUNCHING LEFT SIDE, 1-HOLE PUNCHING RIGHT SIDE, 25"x17"x6-1/2" DEEP, CHICAGO NO. 350-E35VPABCP 1.5 GPM GOOSENECK FAUCET WITH LEVER HANDLE, NO. JSB-10-FLX-R BUBBLER, NO. J-ADA-35-SSF-VR OFF-SET GRID STRAINER, McGUIRE NO. V8090CNC, VANDAL-PROOF CHROME PLATED 17 GA. L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON, CHICAGO NO. 1017-ABCP, STOP AND RIGID SUPPLY. PROVIDE TRUEBRO FITTING COVERS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
S 2	WORKROOM SINK (ACCESSIBLE)	1/2"	–	2"	1-1/2"	–	JUST NO. SLN-ADA-2019-16-I-SSF, COUNTERTOP, SINGLE COMPARTMENT, STAINLESS STEEL, 1-HOLE PUNCHING, 20"x19"x5-1/2" DEEP, CHICAGO NO. 350-E35VPABCP 1.5 GPM GOOSENECK FAUCET WITH LEVER HANDLE, NO. J-ADA-35-SSF-VR OFF-SET GRID STRAINER, McGUIRE NO. V8090CNC, VANDAL-PROOF CHROME PLATED 17 GA. L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON, CHICAGO NO. 1017-ABCP, STOP AND RIGID SUPPLY. PROVIDE TRUEBRO FITTING COVERS. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
SS 1	SERVICE SINK	3/4"	3/4"	3"	2"	–	AMERICAN STANDARD NO. 7745.811, "FLORWELL", CORNER-TYPE, FLOOR MOUNTED, ENAMELED CAST IRON, COMPLETE WITH CHICAGO NO. 897-CCP, WALL MOUNTED FAUCET WITH VACUUM BREAKER, SPOUT WITH PAIL HOOK AND WALL BRACE, NO. 369 INDEXED LEVER HANDLES AND 3/4" MALE HOSE THREAD OUTLET, FLAT STRAINER, STAINLESS STEEL MOP RACK, RIM GUARD. PROVIDE 3' LONG BLACK RUBBER HOSE.
DF 1	DRINKING FOUNTAIN WITH BOTTLE FILLER (ACCESSIBLE)	3/4"	–	2"	1-1/2"	–	ELKAY NO. VRCTLDDWSC/VRCWSX, DUAL-HEIGHT, STAINLESS STEEL, LEAD-FREE, NON-FILTERED, NON-REFRIGERATED COMPLETE WITH MOUNTING PLATE, ELKAY NO. VRCWSX BOTTLE FILLER, McGUIRE NO. V8090CNC, VANDAL-PROOF CHROME PLATED 17 GA. L.A. PATTERN CAST BRASS P-TRAP WITH SECURED ESCUTCHEON AND CHICAGO NO. 1017-ABCP, LOOSE KEY STOP AND RIGID SUPPLY. SET A.D.A. BUBBLER HEIGHT AT +36" MAX.
HB 1	HOSE BIBB (OUTDOOR/INDOOR)	3/4"	–	–	–	–	ACORN NO. 8151CP-SSLF, RECESSED, STAINLESS STEEL, LEAD-FREE HOSE BOX COMPLETE WITH VACUUM BREAKER.
HB 2	HOSE BIBB (ROOF)	3/4"	–	–	–	–	ACORN NO. 8126CR-LF, LEAD FREE, VERTICAL STANDPIPE, ROUGH CHROME-PLATED WITH VACUUM BREAKER AND LOOSE TEE KEY.
FD 1	FLOOR DRAIN	1/2"	–	2"	1-1/2"	–	J.R. SMITH NO. 2005Y(A)-P050-U-HP-NB, CAST IRON BODY, TRAP PRIMER CONNECTION, INTEGRAL FLASHING DEVICE, HEEL-PROOF GRATE WITH 1/2" MAX. GRATE OPENINGS IN ALL DIRECTIONS, 5" ROUND ADJUSTABLE NICKEL BRONZE STRAINER WITH VANDAL-PROOF SCREWS.
AD 1	AREA DRAIN	SEE FLOOR PLANS FOR SIZES					J.R. SMITH NO. 2005Y(SS)-U-SSHD, CAST IRON BODY, HEAL-PROOF GRATE, SEEPAGE HOLES, FLASHING CLAMP, HEEL-PROOF GRATE WITH 1/2" MAX. GRATE OPENINGS IN ALL DIRECTIONS, 5" ROUND STAINLESS STEEL STRAINER WITH VANDAL-PROOF SCREWS.
WHA 1	WATER HAMMER ARRESTOR	1"	–	–	–	–	PPP NO. SC, COPPER BODY, SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. INSTALL COMPLETE WITH ACCESS PANEL.
TP 1	TRAP PRIMER	1/2"	–	–	–	–	PPP NO. PR-500, PROVIDE DISTRIBUTION UNIT (WHERE APPLICABLE). INSTALL COMPLETE WITH SHUT-OFF VALVE AND ACCESS PANEL.
WH 1	ELECTRIC WATER HEATER	3/4"	3/4"	–	–	–	A.O. SMITH NO. DEL-20, 20 GALLON STORAGE, SINGLE ELEMENT AT 2.5 KW COMPLETE WITH T&P VALVE, 23" TALL x 22" DIA., 17 GALS. RECOVERY AT 60°F DELTA T, APPROX. OPER. WT= 240 LBS. PROVIDE "APOLLO" RV SERIES THERMAL EXPANSION VALVE IN LIEU OF EXPANSION TANK. 208V-1Ø-60Hz. PROVIDE HOLDRITE NO. 5-SWHP-WM WALL MOUNT EQUIPMENT PLATFORM. SEE DETAIL 4/P020 FOR ADDITIONAL INFORMATION.
RD 1	ROOF/OVERFLOW COMBO UNIT	SEE ROOF PLAN FOR SIZES					J.R. SMITH NO. SQ-1-1481, NO-HUB OUTLET, SUMP RECEIVER, UNDERDECK CLAMP AND VANDAL PROOF CAST IRON DOMES. PROVIDE ZURN NO. Z199-DC, DOWNSPOUT COVER WITH HINGED STRAINER FOR THE OVERFLOW DRAIN.
WM 1	PRIVATE WATER METER	SEE FLOOR PLANS FOR SIZES					NEPTUNE NO. 'HP TURBINE', HIGH PERFORMANCE TURBINE LEAD-FREE, HIGH COPPER ALLOY AWWA CLASS II TURBINE MEASURING 3" WATER METER, 98.5-101.5% ACCURACY, COMPLETE WITH NEPTUNE NO. '53120-000', LEAD-FREE, HIGH-COPPER ALLOY 3" STRAINER AND NEPTUNE NO. 'TRICON/E 3" WITH 4-20mA ANALOG OPTION AND ELECTRONIC PULSE OUTPUT TRANSMITTER.
WM 2	DOMESTIC HOT WATER SUB-METER	SEE FLOOR PLANS FOR SIZES					ONICON NO. F-4600, WATER FLOW METER WITH BACKLIT DETACHABLE DISPLAY WITH NEMA4 CONDUIT READY ENCLOSURE AND SINGLE 4-20mA OUTPUT, LCD DISPLAY WITH BACNET MS/TP, BUILT-IN INTERVAL DATA LOGGER, IP65 ENCLOSURE, 1" (SUB-METER LOCATED AT WATER HEATER).

NOTES:
1- THE ABOVE ITEMS SHALL BE PROVIDED AND INSTALLED IN FULL ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2- COORDINATE LOCATION AND ARRANGEMENT OF ACCESSIBLE FIXTURES WITH THE ARCHITECTURAL PLANS.
3- MANUAL FAUCET CONTROLS AT LAVS/SINKS SHALL REQUIRE NO GREATER THAN 5 LBS. OF FORCE TO ACTIVATE CONTROLS.
4- ALL FAUCET TRIM SHALL COMPLY WITH LATEST AB1953 REQUIREMENTS.
5- THE ABOVE ITEMS SHALL COMPLY WITH THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE.
6- PROVIDE PRE-FORMED INSULATED COVERS BY "TRUBRO" TO ALL EXPOSED PIPING BELOW ACCESSIBLE LAV/SINK.
7- METERING MANUAL CONTROL FAUCETS SHALL REMAIN OPEN/OPERATE FOR AT LEAST 10 SECONDS FOR A.D.A. COMPLIANCE.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

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PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JEFFERY
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

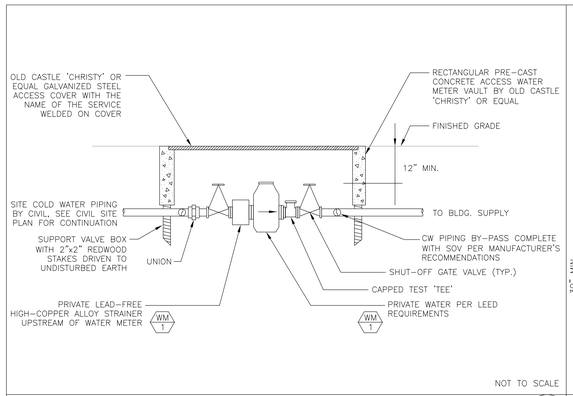
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PLUMBING SCHEDULES

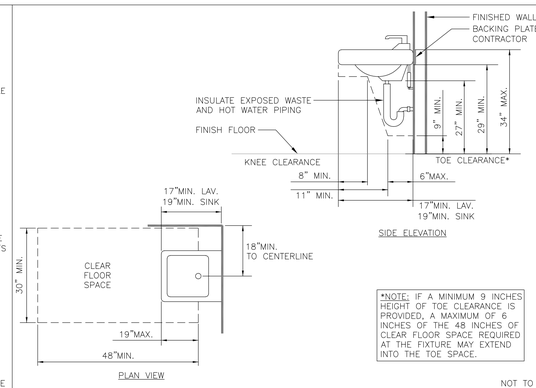
SHEET NO:

P010



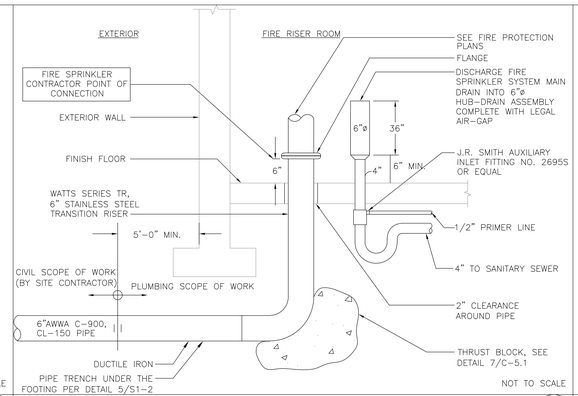
NOT TO SCALE

OUTDOOR PRIVATE WATER METER DETAIL 1



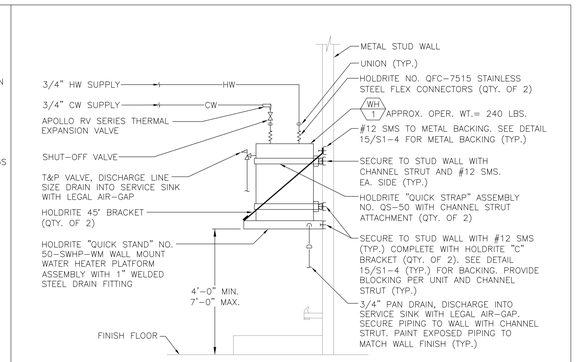
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A.D.A. LAVATORY/ SINK COMPLIANCE DETAIL 2



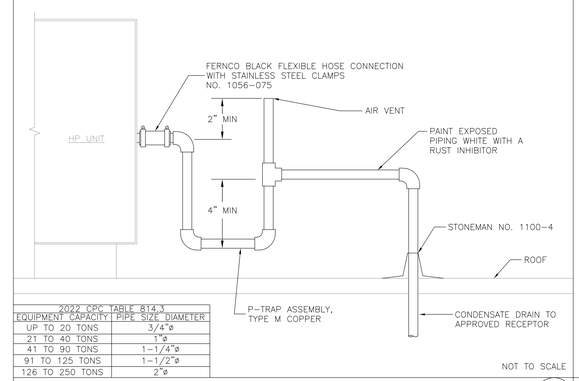
NOT TO SCALE

HUB DRAIN DETAIL 3



NOT TO SCALE

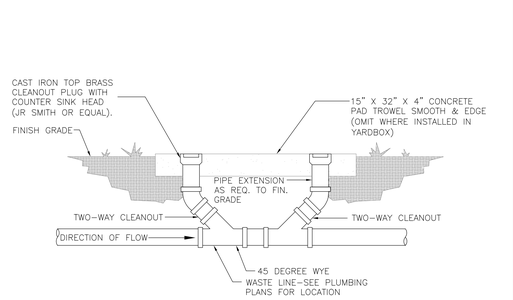
ELECTRIC WATER HEATER DETAIL 4



2022 CPC TABLE 814.3	
EQUIPMENT CAPACITY	PIPE SIZE DIAMETER
UP TO 20 TONS	3/4"ø
21 TO 40 TONS	1"ø
41 TO 90 TONS	1-1/4"ø
91 TO 125 TONS	1-1/2"ø
126 TO 250 TONS	2"ø

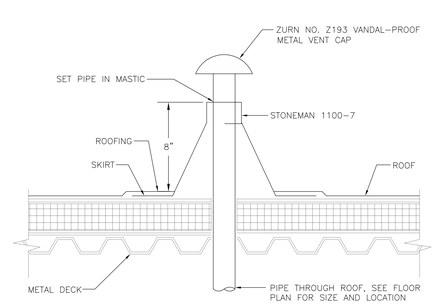
NOT TO SCALE

CONDENSATE DRAIN DETAIL 5



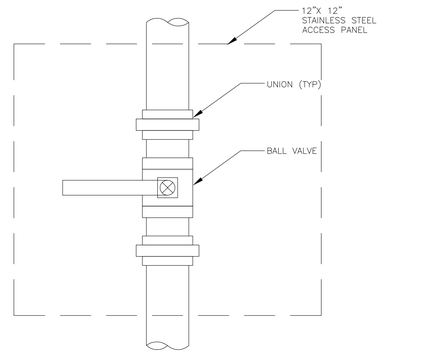
NOT TO SCALE

2-WAY CLEANOUT DETAIL 6



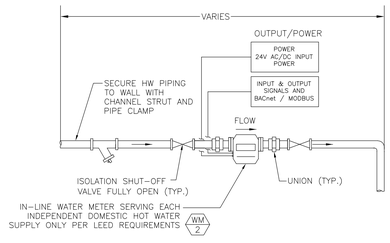
NOT TO SCALE

VENT THRU ROOF DETAIL 7



NOT TO SCALE

RECESSED VALVE DETAIL 8



NOTE: ISOLATION SHUT-OFF VALVE FULLY OPEN IN-LINE WATER METER SHALL BE INSTALLED ON THE HW SUPPLY, PER THE MANUFACTURER'S RECOMMENDATIONS.

NOT TO SCALE

HW SUB-METER DETAIL 9

NOT TO SCALE

10

NOT TO SCALE

11

NOT TO SCALE

12

NOT TO SCALE

13

NOT TO SCALE

14

NOT TO SCALE

15

NOT TO SCALE

16

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Plumbing\P020.dwg Oct 07, 2024 - 9:10am iggy

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ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
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(714) 508-1780 508-1790 FAX

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Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. JEFFERY
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

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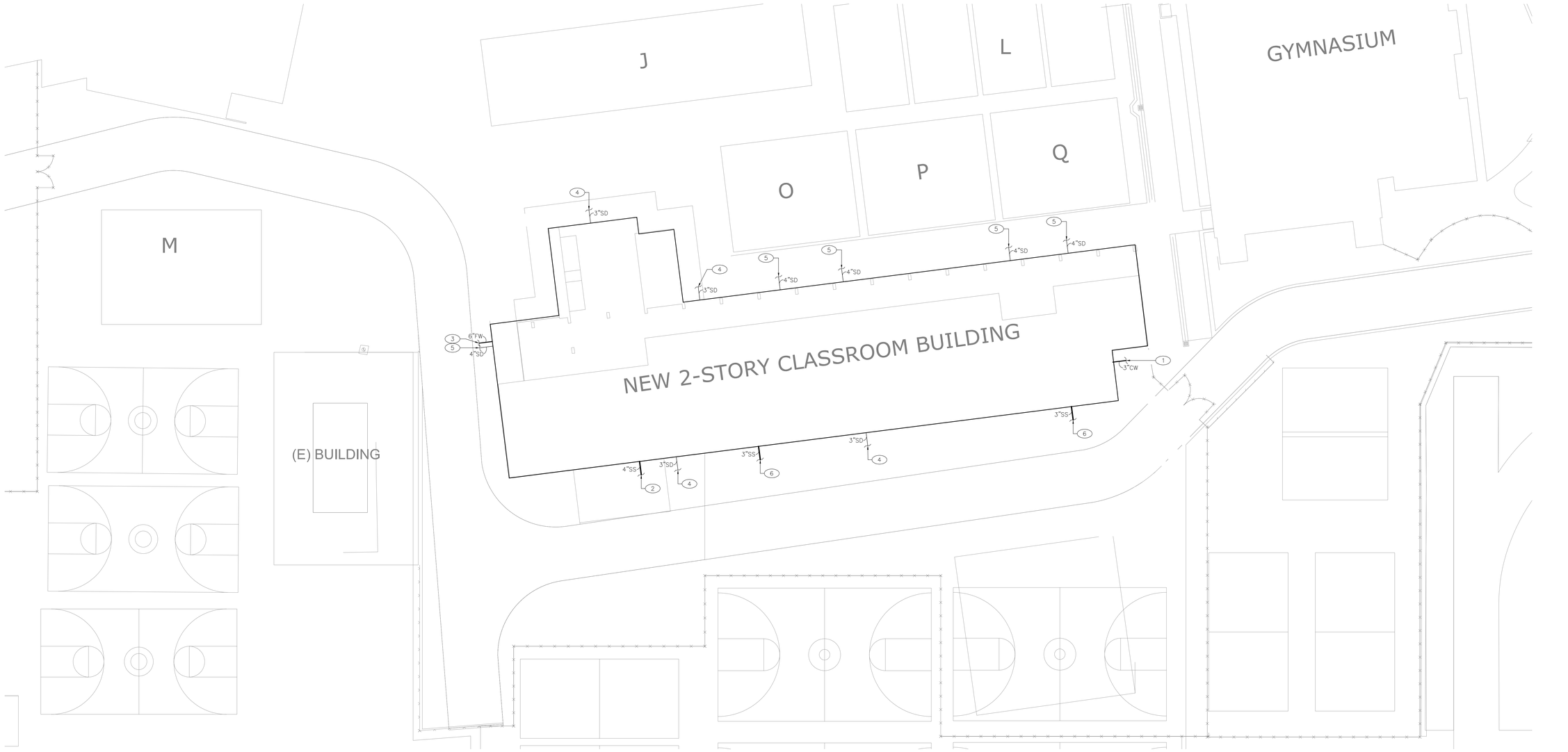
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PLUMBING DETAILS

SHEET NO:

P020



NORTH

PLUMBING SITE PLAN

SCALE: 1/16" = 1'-0"

1

1.– 3" CW, CONNECT TO SITE DOMESTIC COLD WATER, SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE DOMESTIC COLD WATER.

2.– 4" SS, TRANSITION TO SDR–35 UPSTREAM OF 2–WAY CLEANOUT AND CONNECT TO SITE SANITARY SEWER. SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE SANITARY SEWER.

3.– 6" FW, CONNECT TO SITE FIRE WATER, SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE FIRE WATER.

4.– 3" SD, CONNECT TO SITE STORM DRAIN, SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE STORM DRAIN.

5.– 4" SD, CONNECT TO SITE STORM DRAIN, SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE STORM DRAIN.

6.– 3" SS, TRANSITION TO SDR–35 UPSTREAM OF 2–WAY CLEANOUT AND CONNECT TO SITE SANITARY SEWER. SEE CIVIL DRAWINGS FOR CONTINUATION AND CONSTRUCTION OF SITE SANITARY SEWER.

PLAN NOTES

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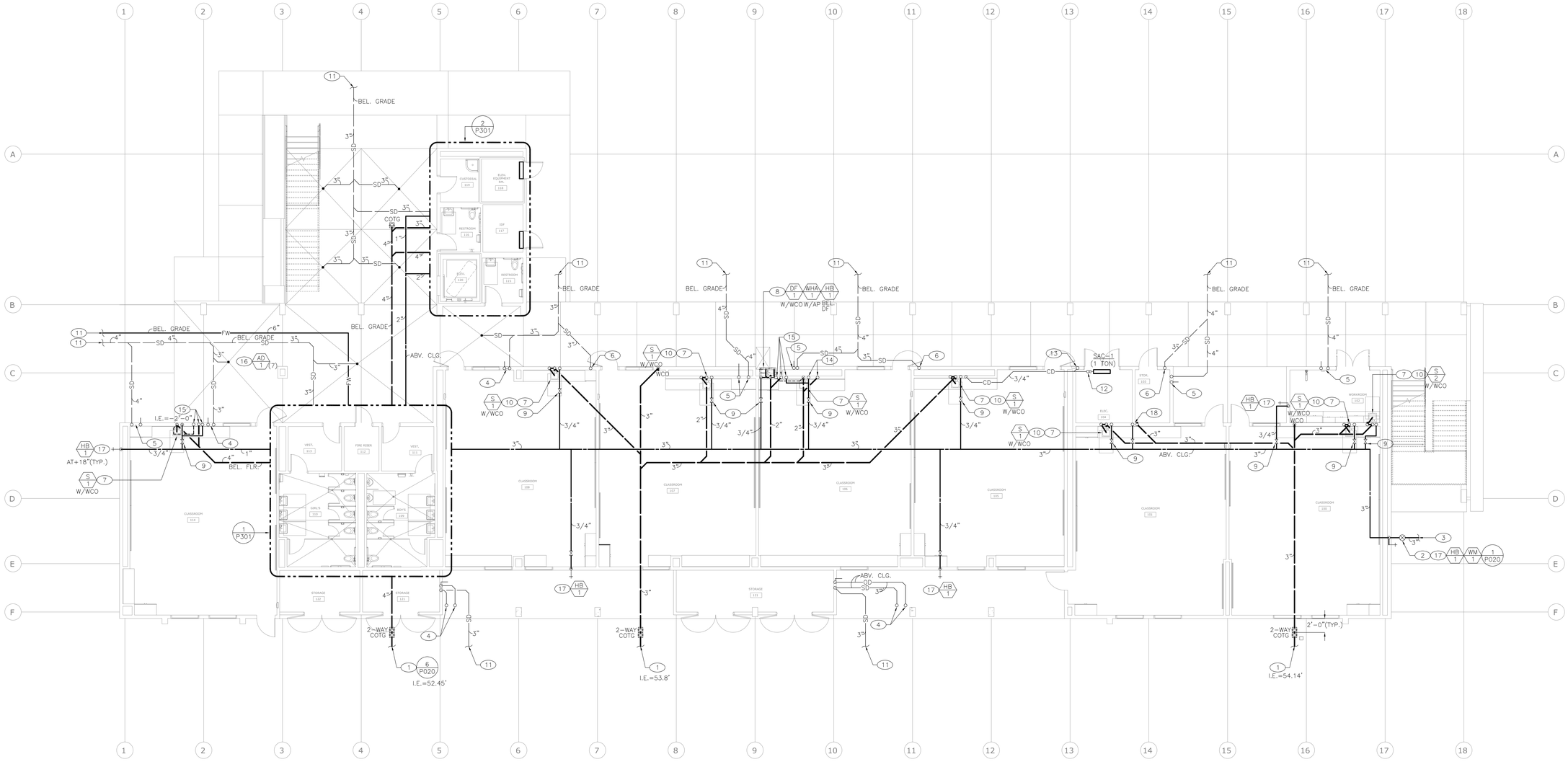
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PLUMBING
SITE PLAN

SHEET NO:

P030



PLUMBING FIRST FLOOR PLAN

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

PLAN NOTES

11.– FOR CONTINUATION, SEE PLUMBING SITE PLAN SHEET P030.

12.– 3/4" CD COMPLETE WITH TRAP AND VENT. EXTEND SERVICE AS INDICATED. 3/4" CD DN. IN WALL AND CONNECT TO SINK TAILPIECE.

13.– 3/4" CD UP IN WALL TO SECOND FLR.

14.– 2" WASTE AND 3/4" CW UP IN WALL TO DRINKING FOUNTAIN ON SECOND FLR.

15.– 2" WASTE, 1–1/2" VENT AND 3/4" CW UP IN WALL TO SECOND FLR.

16.– PROVIDE 3" SD.

17.– PROVIDE 3/4" CW.

18.– 3" WASTE (W/WCO) AND 1" CW UP TO SERVICE SINK AND ELECTRIC WATER HEATER ON SECOND FLR.

1.– 4" SANITARY SEWER, FOR CONTINUATION AND CONSTRUCTION OF SITE SEWER, SEE CIVIL SITE PLAN SHEET C–4.0.

2.– 3" CW COMPLETE WITH SHUT–OFF VALVE IN YARDBOX.

3.– FOR CONTINUATION AND CONSTRUCTION OF SITE WATER, SEE CIVIL SITE PLAN SHEET C–4.0.

4.– 3" SD AND OD UP TO SECOND FLR. WITH 3" SD & OD DN. IN WALL. DAYLIGHT 3" OD THRU FACE OF WALL AT +6". 3" SD DN. TO BEL. GRADE. PAINT EXPOSED PIPING TO MATCH WALL FINISH.

5.– 4" SD AND OD UP TO SECOND FLR. WITH 4" SD & OD DN. IN WALL. DAYLIGHT 4" OD THRU FACE OF WALL AT +6". 4" SD DN. TO BEL. GRADE. PAINT EXPOSED PIPING TO MATCH WALL FINISH.

6.– 3" SD UP TO SECOND FLR. WITH 3" SD DN. IN WALL TO BEL. GRADE.

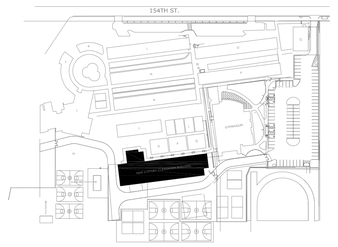
7.– PROVIDE 2" WASTE, 1–1/2" VENT AND 3/4" CW TO EACH PAIR OF STACKED SINKS.

8.– PROVIDE 2" WASTE, 1–1/2" VENT AND 3/4" CW TO EACH PAIR OF DRINKING FOUNTAINS. EXTEND 3/4" CW TO HOSE BIBB.

9.– LINE SIZE SHUT–OFF VALVE ABV. 'T–BAR' CLG. PROVIDE ACCESS PANEL IF VALVE IS LOCATED ABV. HARD LID CLG. (TYP.)

10.– 2" WASTE DN. TO BEL. FLR. WITH W.C.O. 2" WASTE DN. FROM FIXTURE ABV. 1–1/2" VENT UP AND 3/4" CW UP AND DN. TO SERVE STACKED FIXTURES.

KEYMAP



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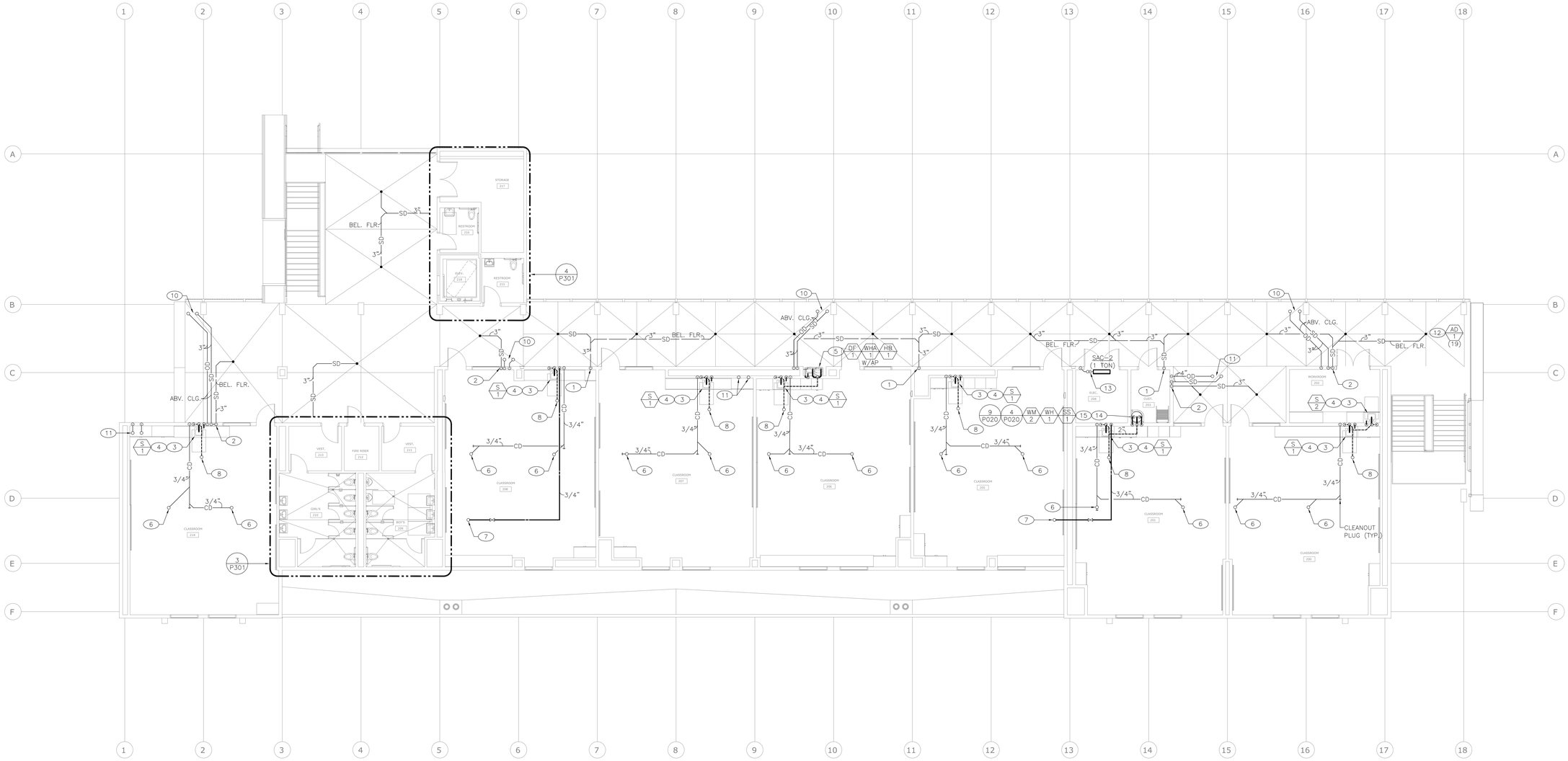
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PLUMBING
FIRST FLOOR PLAN

SHEET NO:

P101



0' 4' 8' 16' 32'

NORTH

PLUMBING SECOND FLOOR PLAN

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

PLAN NOTES

1.– 3" SD DN. TO FIRST FLR.

2.– 3" SD DN. AND CONNECT TO SD FROM ROOF DRAIN AS INDICATED.

3.– 3/4" CD DN. IN WALL. CONNECT TO SINK TAILPIECE.

4.– PROVIDE 2" WASTE, 1–1/2" VENT AND 3/4" CW TO EACH SINK. 2" WASTE AND 3/4" CW DN. TO FIRST FLR.

5.– PROVIDE 2" WASTE, 1–1/2" VENT AND 3/4" CW TO EACH PAIR OF DRINKING FOUNTAINS. EXTEND 3/4" CW TO HOSE BIBB.

6.– 3/4" CD UP TO A/C UNIT ON ROOF.

7.– 3/4" CW UP TO HOSE BIBB ON ROOF COMPLETE WITH SHUT–OFF VALVE.

8.– 2" VENT UP. FOR CONTINUATION SEE SHEET P201.

10.– 3" SD UP TO ROOF AND DN. IN WALL TO FIRST FLR.

11.– 4" SD UP TO ROOF AND DN. IN WALL TO FIRST FLR.

12.– PROVIDE 3" SD.

13.– 3/4" CD COMPLETE WITH TRAP AND VENT. EXTEND SERVICE AS INDICATED DN. IN WALL TO FIRST FLR.

14.– PROVIDE 3" WASTE, 2" VENT AND 3/4" HW & CW. 3" WASTE AND 1" CW DN. TO FIRST FLR.

15.– PROVIDE 3/4" CW AND HW TO ELECTRIC WATER HEATER. DISCHARGE DRAIN(S) INTO SERVICE SINK WITH LEGAL AIR–GAP

KEYMAP



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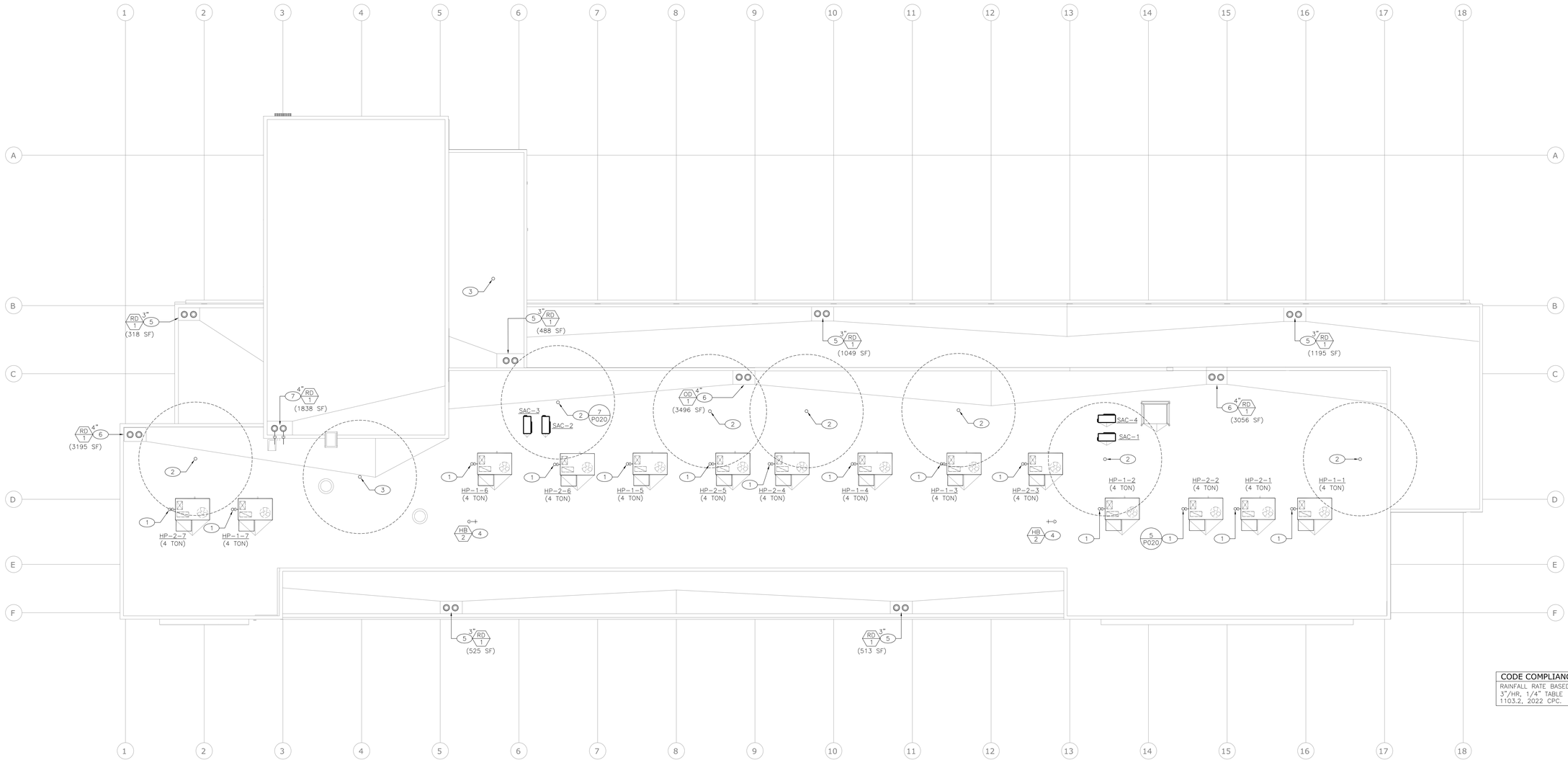
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No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PLUMBING
SECOND FLOOR PLAN

SHEET NO:
P102



CODE COMPLIANCE

RAINFALL RATE BASED ON 3"/HR, 1/4" TABLE 1103.2, 2022 CPC.

0' 4' 8' 16' 32'

NORTH

PLUMBING ROOF PLAN

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

1.– 3/4" CD COMPLETE WITH TRAP AND VENT. 3/4" CD DN. THRU ROOF.

2.– 2" VTR.

3.– 4" VTR.

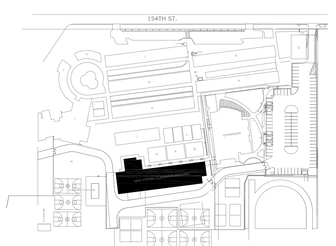
4.– PROVIDE 3/4" CW.

5.– 3" SD AND OD DN.

6.– 4" SD AND OD DN.

7.– 4" SD AND OD DN. IN WALL, DAYLIGHT THRU WALL AND DISCHARGE INTO LOWER ROOF.

PLAN NOTES



KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Plumbing\P201.dwg Oct 07, 2024 - 9:26a iggy

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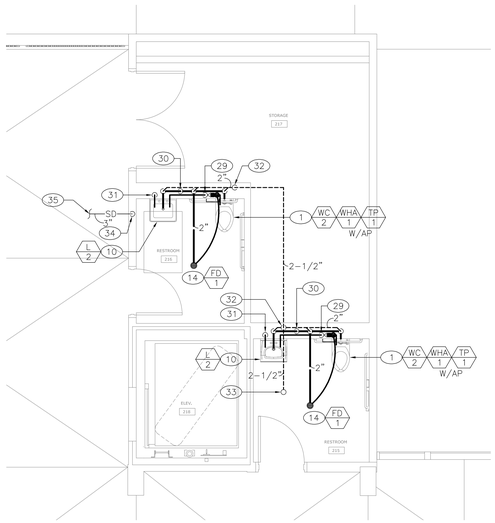
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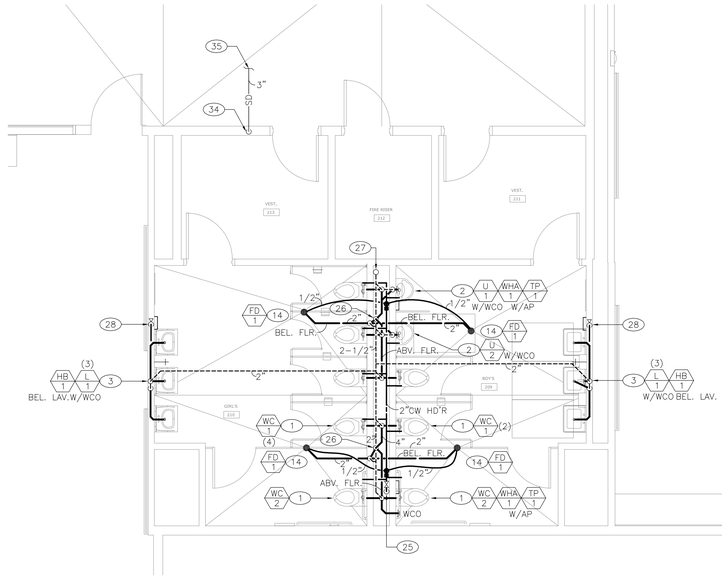
SHEET DESCRIPTION:
PLUMBING
ROOF PLAN

SHEET NO:

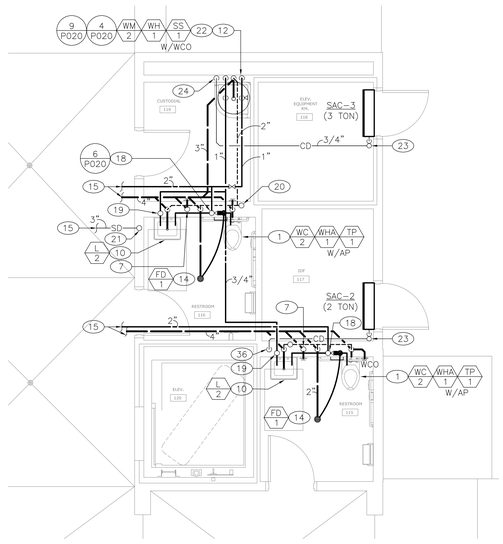
P201



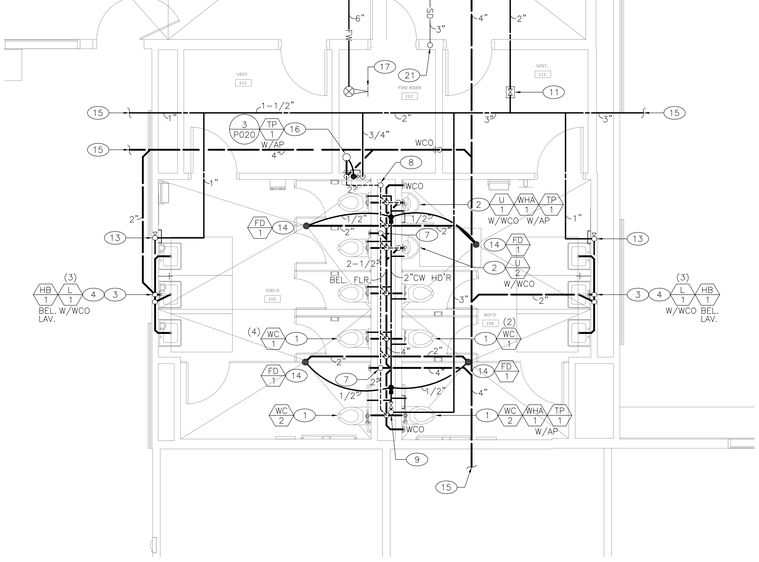
RESTROOMS 215 AND 216 ENLARGED TOILET PLAN SCALE: 1/4" = 1'-0" 4



BOY'S 209 AND GIRL'S 210 ENLARGED TOILET PLAN SCALE: 1/4" = 1'-0" 3



RESTROOMS 115 AND 116 ENLARGED TOILET PLAN SCALE: 1/4" = 1'-0" 2



BOY'S 109 AND GIRL'S 110 ENLARGED TOILET PLAN SCALE: 1/4" = 1'-0" 1

28.– 1" CW UP IN WALL TO SECOND FLR.

29.– 1–1/2" CW DN. TO FIRST FLR. COMPLETE WITH SHUT–OFF VALVE BEHIND ACCESS PANEL.

30.– 4" WASTE DN. TO FIRST FLR.

31.– 3/4" HW DN. TO FIRST FLR.

32.– 2" VENT DN. TO FIRST FLR.

33.– 4" VENT THRU ROOF.

34.– 3" SD DN. TO FIRST FLR.

35.– FOR CONTINUATION SEE SHEET P102.

36.– 3/4" CD DN. IN WALL AND CONNECT TO LAVATORY TAILPIECE.

14.– PROVIDE 2" WASTE, 1–1/2" VENT AND 1/2" CW TRAP PRIMER LINE.

15.– FOR CONTINUATION SEE SHEET P101.

16.– 6"ø HUB DRAIN ASSEMBLY, TRANSITION TO 4" WASTE COMPLETE WITH W.C.O.

17.– FIRE RISER ASSEMBLY, SEE FIRE PROTECTION PLANS.

18.– 1–1/2" CW UP TO SECOND FLR.

19.– 3/4" HW UP TO SECOND FLR.

20.– 2" VENT UP TO SECOND FLR.

21.– 3" SD UP IN WALL AND DN. TO BEL. GRADE.

22.– PROVIDE 3/4" CW AND HW TO ELECTRIC WATER HEATER. DISCHARGE DRAIN(S) INTO SERVICE SINK WITH LEGAL AIR–GAP.

23.– 3/4" CD COMPLETE WITH TRAP AND VENT.

24.– 3/4" CD DN. IN WALL AND DISCHARGE INTO SERVICE SINK WITH LEGAL AIR–GAP.

25.– 2–1/2" CW DN. TO FIRST FLR.

26.– 4" WASTE DN. TO FIRST FLR.

27.– 4" VENT DN. TO FIRST FLR. AND 4" VENT UP THRU ROOF.

1.– PROVIDE 4" WASTE, 2" VENT AND 1" CW TO EACH WATER CLOSET.

2.– PROVIDE 2" WASTE WITH W.C.O., 1–1/2" VENT AND 3/4" CW TO EACH URINAL.

3.– PROVIDE 2" WASTE, 1–1/2" VENT AND 1/2" CW TO EACH LAVATORY. PROVIDE 3/4" CW TO HOSE BIBB.

4.– 2" WASTE UP TO SECOND FLR. AND DN. TO BEL. FLR. WITH W.C.O.

7.– 4" WASTE UP TO SECOND FLR. AND DN. TO BEL. FLR. WITH W.C.O.

8.– 4" VENT UP TO SECOND FLR.

9.– 2" CW DN. IN WALL COMPLETE WITH SOV BEHIND AP. 2–1/2" CW UP TO SECOND FLR.

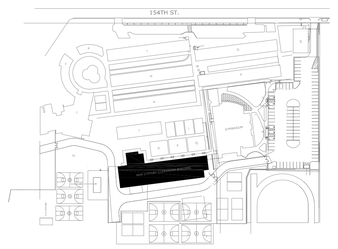
10.– PROVIDE 2" WASTE, 1–1/2" VENT, 1/2" CW AND HW TO EACH LAVATORY.

11.– LINE SIZE SHUT–OFF VALVE ABV. 'T–BAR' CLG. PROVIDE ACCESS PANEL IF VALVE IS LOCATED ABV. HARD LID CLG. (TYP.).

12.– PROVIDE 3" WASTE, 2" VENT AND 3/4" HW & CW.

13.– 1" CW UP TO SECOND FLR. WITH 1" CW DN. IN WALL COMPLETE WITH SOV BEHIND AP. LOCATE AP BEL. LAV.

PLAN NOTES



KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Plumbing\P301.dwg Oct 07, 2024 - 9:12am iggy

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite I–H
Santa Ana, CA 92705
Telephone (714) 884–3803
Fax (714) 884–3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. PETERSEN
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

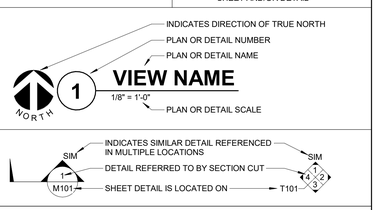
SHEET DESCRIPTION:
PLUMBING
ENLARGED TOILET PLANS

SHEET NO:
P301

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL



LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
NEW
EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN
EXISTING (NARROW LINE PATTERN)
EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

WORK BY OTHERS (NARROW LINE)
WORK BY OTHERS (NARROW LINE)
EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-(E) TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

'TAG'-(R) TAGS WITH DASH 'R' INDICATES THE REFERENCED OBJECT IS REMOVED

TAG-1 UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

APPLICABLE CODES AND STANDARDS:

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1

2022 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2
(2021 INTERNATIONAL BUILDING CODE (IBC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
(2020 NATIONAL ELECTRICAL CODE (NEC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4
(2021 UNIFORM MECHANICAL CODE (UMC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5
(2021 UNIFORM MECHANICAL CODE (UPC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6

2022 CALIFORNIA HISTORICAL BUILDING CODE (CHBC)
CALIFORNIA CODE OF REGULATIONS (CHBC) TITLE 24, PART 8

2022 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA CODES OF REGULATIONS (CRR) TITLE 24, PART 9
(2021 INTERNATIONAL FIRE CODE (IFC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 10
(2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC))

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
CALIFORNIA CODES OF REGULATIONS (CCR) TITLE 24, PART 11

2022 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA DOE OF REGULATIONS (CCR) TITLE 24, PART 12

AMERICANS WITH DISABILITIES ACT (ADA)
TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2022 EDITION (CA AMENDED)

NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE 2022 EDITION (CA AMENDED)

CALIFORNIA DSA MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENT ANCHORAGE NOTES:

1. 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, SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13.2&, 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 CONNECTION 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 MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

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

   THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF STRUCTURAL ENGINEER OF RECORD AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

2. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS BRACING NOTE.

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

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

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

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

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

ELECTRICAL ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
C.O.	CONDUIT AND BOX ROUGH-IN ONLY (ROUGH-IN ONLY)
GFI	GROUND FAULT INTERRUPTER
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED

LUMINAIRE SYMBOL KEY

SYMBOL:	DESCRIPTION:
	NORMAL BRANCH LUMINAIRE
	EMERGENCY BRANCH LUMINAIRE

CALIFORNIA BRANCH CIRCUIT SCHEDULE

SYMBOL:	DESCRIPTION:
PANEL - CIRCUIT	CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	REC-DUP-EM	26 27 26	DUPLEX RECEPTACLE, 125V - EMERGENCY
	REC-QUAD-EM	26 27 26	QUAD RECEPTACLE, 125V - EMERGENCY

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
E	ECONN	26 05 33	ELECTRICAL CONNECTION
J	JB	26 05 33	JUNCTION BOX
	PANEL '###'	26 24 16	PANELBOARD - RECESS MOUNT
	PANEL '###'	26 24 16	PANELBOARD - SURFACE MOUNT
	TR-#/DTR-#	26 22 00	TRANSFORMER. REFER TO TRANSFORMER SCHEDULE
	DS-#/FDS-#/DSS-#	26 28 16	DISCONNECT. REFER TO DISC/STA SCHEDULE

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	REC-DUP-Q	26 27 26	DUPLEX RECEPTACLE CONTROLLED BY OCCUPANCY
	REC-QUAD-O	26 27 26	QUAD RECEPTACLE CONTROLLED BY OCCUPANCY
	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
W	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V
	REC-QUAD	26 27 26	QUAD RECEPTACLE, 125V

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
S	SW-1P	26 09 33	SWITCH - SINGLE POLE
S_K	SW-1P-K	26 09 33	SWITCH - SINGLE POLE - KEY LOCK
D_D	SW-D-LED	26 09 33	DIMMER - LED
D	SW-OC-D	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY
S_O	SW-OC-P-O	26 09 33	SWITCH - OCCUPANCY SENSOR WALL SWITCH
	LCS-#	26 09 33	LIGHTING CONTROL STATION

ELECTRICAL SYMBOL LIST

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
	REFER TO LUMINAIRE SCHEDULE		LINEAR LUMINAIRES
			TROFFER
			WALL SCONCE LUMINAIRE
			DOWNLIGHT LUMINAIRE
			AIMABLE OR WALL WASH LUMINAIRE
			INDUSTRIAL LUMINAIRE
			WALL BRACKET LUMINAIRE
			POLE MOUNTED LUMINAIRE
			SINGLE FACE EXIT SIGN
			DOUBLE FACE EXIT SIGN
			WALL/CEILING EMERGENCY EXIT SIGN
			EMERGENCY UNIT

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS.

1. EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS.
2. NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS AND REPORT CONFLICTS.
3. CONTRACTOR SHALL REVIEW EXISTING CONDITIONS PRIOR TO FABRICATION OF CABLE TRAY, BUSWAY, CONDUIT RACKS, AND OTHER SYSTEMS. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS. NTD: KEEP FOR WORK IN CONGESTED RENOVATIONS
4. ELECTRICAL CONTRACTOR SHALL REVIEW EXISTING CONDITIONS TO VERIFY ACCESSIBILITY TO THE AREAS OF THEIR WORK INCLUDING WALLS, FLOOR, CEILINGS, CEILING TILES/GRID, AND ROOF. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE CUTTING, REMOVAL, PATCHING, AND REINSTALLATION OF AFFECTED AREAS ASSOCIATED WITH THEIR WORK BY COORDINATING WITH THE GENERAL CONTRACTOR OR QUALIFIED CONTRACTOR. CONTRACTOR SHALL NOTIFIY THE PRIME CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
5. WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

ELECTRICAL PHASING NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS.

1. REFER TO ARCHITECTURAL DRAWINGS FOR GENERAL DESCRIPTION OF PHASES.
2. REFER TO CONSTRUCTION MANAGER'S/GENERAL CONTRACTOR'S/ARCHITECT'S INSTRUCTIONS FOR MORE DETAILS AND PHASING SCHEDULES AND FOR CONCURRENT WORK. MECHANICAL, ELECTRICAL AND TECHNOLOGY DRAWINGS DEPICT THE INTENT OF THE FINAL DESIGN. THE MECHANICAL, ELECTRICAL, AND TECHNOLOGY DRAWINGS DO NOT DEPICT THE MEANS AND METHODS TO MEET THE REQUIREMENTS OF THE PHASING CRITERIA.
3. REVIEW PROJECT PHASING PLANS TO COORDINATE DEMOLITION WORK, OUTAGES, ETC. WITH AFFECTED ADJACENT AREAS.
4. PROVIDE TEMPORARY LIGHTING, POWER, FIRE ALARM, AND OTHER LOW VOLTAGE SYSTEMS, ETC. AS NEEDED TO MAINTAIN SERVICE TO ALL AREAS DURING ALL PHASES OF PROJECT.

ELECTRICAL GENERAL NOTES:

1. REFER TO THE LIGHTING SEQUENCE OF OPERATION MATRIX ON SHEET E004.
2. SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT.
3. REFER TO SHEET E004 FOR LIGHTING CONTROL ONE-LINE DIAGRAM.
4. REFER TO SHEET E004 FOR LUMINAIRE SCHEDULE.

LUMINAIRE KEY:

LUMINAIRE — F1 = FIXTURE TAG
1 = CIRCUIT NUMBER
a = SWITCH DESIGNATION
NL INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.
SE INDICATES LUMINAIRE IS SWITCHED/CONTROLLED DURING NORMAL OPERATION AND OPERATES FROM **EMERGENCY CIRCUIT** UPON LOSS OF POWER.

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1 / 1 / a / NL

DEVICE KEY:

DEVICE — # = MOUNTING (IF APPLICABLE)
1 = CIRCUIT NUMBER

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:

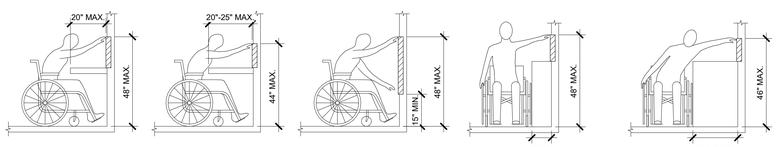
A	MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
C	MOUNT AT CEILING
H	MOUNT ORIENTED HORIZONTALLY
L	MOUNT IN CASEWORK
M	MOUNT IN MODULAR FURNITURE
R	MOUNT IN SURFACE RACEWAY
EWC	ELECTRIC WATER COOLER

ELECTRICAL INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.] [CHICAGO. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF CHICAGO MAYOR'S OFFICE FOR PEOPLE WITH DISABILITIES (MOPD).] [CALIFORNIA . THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA ACCESSIBLITY CODE REQUIREMENTS. REFER TO THE ARCHITECTUAL DRAWINGS ACCESSIBILITY STANDARDS.
2. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
3. EMERGENCY, LEGALLY REQUIRED, OPTIONAL STANDBY LIFE SAFETY, CRITICAL, EQUIPMENT BRANCH WIRING FOR FEEDERS AND BRANCH CIRCUITS SHALL BE ROUTED IN SEPARATE RACEWAY, JUNCTION BOXES, PULL BOXES, AND CABINETS. WIRING FOR EACH BRANCH SHALL BE INDEPENDENT FROM OTHER BRANCHES, INCLUDING THE NORMAL BRANCH.
4. FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED.
5. FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE.
6. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 27 05 03 AND 28 05 03 DIVISION 7 26 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
7. CONNECTION FOR ELECTRIC WATER COOLERS (EWC) SHALL BE A JUNCTION BOX CONCEALED BEHIND WATER COOLER ACCESS PLATE OR BE A GFI RECEPTACLE LOCATED DIRECTLY BELOW AND CENTERED ON EWC. CONTRACTOR SHALL VERIFY TYPE OF EWC TO BE INSTALLED.
8. MOUNT ALL FIRE ALARM PULL STATIONS AT +42" FROM FLOOR (CENTERLINE DIMENSION) EXCEPT WHERE OTHERWISE NOTED.
9. INSTALL ALL WALL MOUNTED FIRE ALARM NOTIFICATION DEVICES AT 90" ABOVE FINISHED FLOOR OR 6" BELOW THE CEILING, WHICHEVER IS LOWER, EXCEPT WHERE OTHERWISE NOTED. HEIGHT SHALL BE MEASURED TO THE TOP OF THE DEVICE.
10. CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
11. CONTRACTOR SHALL VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL ELECTRICAL INSTALLATION, THIS CONTRACTOR SHALL ADJUST RECEPTACLES, OUTLETS, OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
12. ELECTRICAL AND TECHNOLOGY EQUIPMENT SHALL BE MOUNTED TO AVOID IMPEDANCE OF, OPERATION OF, AND/OR ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF ELECTRICAL AND TELECOMMUNICATIONS EQUIPMENT, ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR, SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
14. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH. NTD: EDIT TO MATCH SCOPE
15. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
16. ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

ELECTRICAL SHEET INDEX

E001	ELECTRICAL COVERSHEET
E002	SINGLE LINE DIAGRAM
E004	LIGHTING FIXTURE SCHEDULE
E005	PANEL SCHEDULES
E006	PANEL SCHEDULES
E007	TITLE 24- INDOOR
E008	TITLE 24 -OUTDOOR
E100	SITE PLAN - ELECTRICAL DEMOLITION
E101	SITE PLAN - ELECTRICAL REMODEL
E101P	SITE PLAN - ELECTRICAL REMODEL EGRESS PHOTOMETRIC
E201	FIRST FLOOR PLAN - LIGHTING
E201P	FIRST FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC
E202	SECOND FLOOR PLAN - LIGHTING
E202P	SECOND FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC
E301	FIRST FLOOR PLAN - POWER
E302	SECOND FLOOR PLAN - POWER
E303	ROOF PLAN - POWER
E501	ELECTRICAL DETAILS
E502	ELECTRICAL DETAILS
GRAND TOTAL: 19	



ADA STANDARDS FOR ACCESSIBLE DESIGN

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR.# 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:
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901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO JR.
Lic. E16934
Exp. 8-30-2025
ELECTRICAL
OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

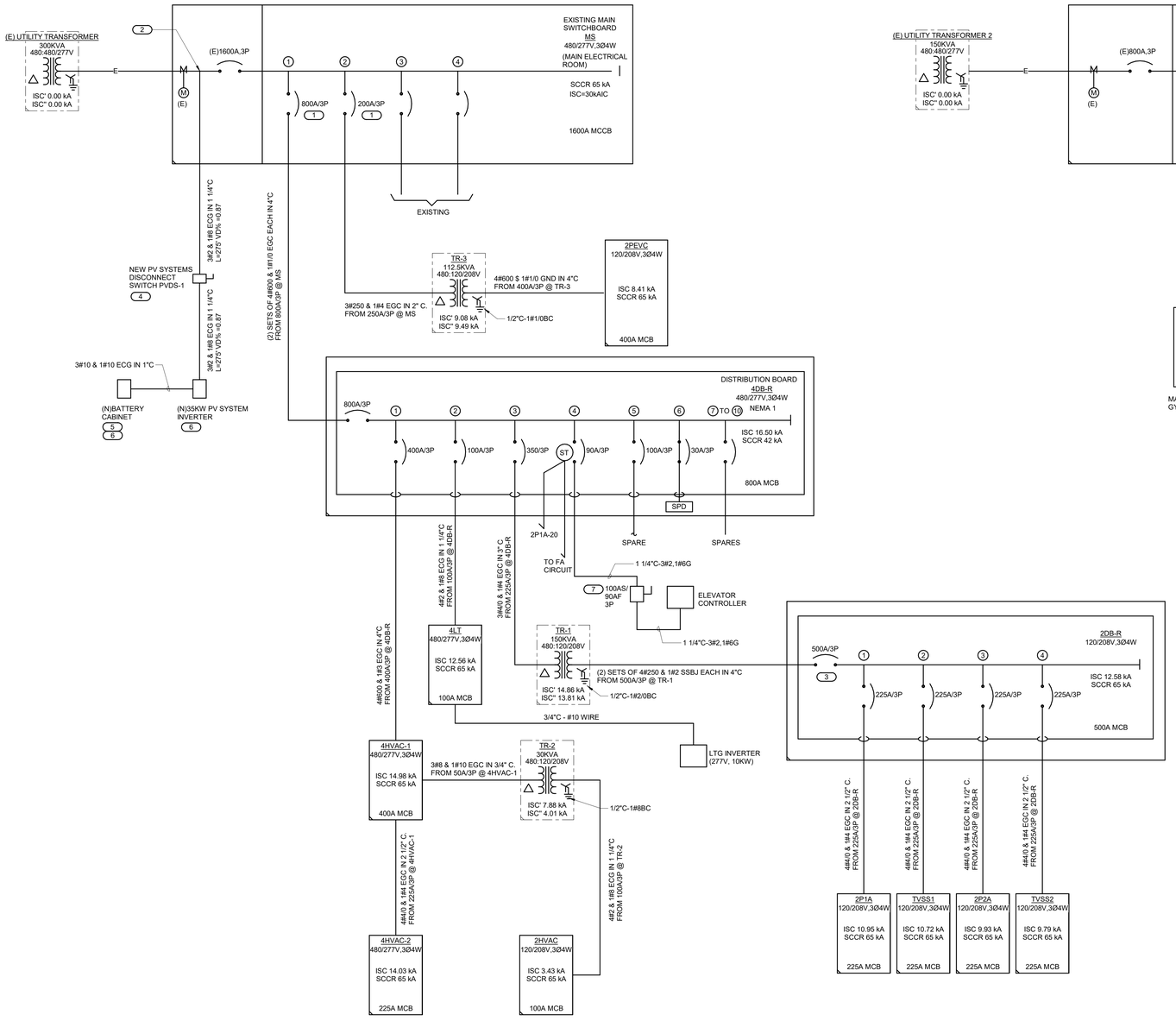
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
ELECTRICAL COVERSHEET

SHEET NO:
E001



1 SINGLE LINE DIAGRAM

NO SCALE

KEYNOTES: (#)

1. PROVIDE NEW SOLID STATE CIRCUIT BREAKER WITH ADJUSTABLE TRIP TO MATCH (E) SWBD MS AIC & MANUFACTURER.
2. MAKE CONNECTION TO EXISTING MS SECTION BETWEEN THE EXISTING METER AND MAIN CIRCUIT BREAKER. RECERTIFY EXISTING BOARD AFTER PV SYSTEMS CONNECTION TO EXISTING "MS" BUS.
3. PROVIDE LUGS TO ACCOMODATE 2 SETS.
4. 480V,3PH,3W WITH VIEW WINDOW NEMA 1. LOCATED IN MAIN ELECTRICAL ROOM.
5. NEW BATTERY CABINET IN NEMA 3R ENCLOSURE MOUNTED AT THE BASE OF THE PV PANEL SUPPORT BELOW THE INVERTER UNIT. PROVIDE CONCRETE PAD AS REQUIRED.
6. PV SYSTEM INCLUDING UL1741 LISTED INVERTERS, AND UL61730 LISTED PV PANELS SHALL BE PROVIDED BY OTHERS.
7. DISCONNECT TO HAVE AUXILIARY CONTACTORS FOR ELEVATOR CONNECTIONS.

VOLTAGE DROP SCHEDULE

ITEM	FEEDER: UPSTREAM OCPD OR TERMINATION	FEEDER: WIRE AND RACEWAY	CIRCUIT LENGTH	VOLTAGE DROP: FEEDER VOLTAGE DROP	VOLTAGE DROP: FEEDERS: UPSTREAM FEEDERS VOLTAGE DROP	VOLTAGE DROP: FEEDERS: TOTAL FEEDER VOLTAGE DROP	VOLTAGE DROP: BRANCH CIRCUITS: MAX BRANCH VOLTAGE DROP	VOLTAGE DROP: BRANCH CIRCUITS: TOTAL VOLTAGE DROP AT MAX BRANCH
INV	20 A	4#12 & 1#12 EGC IN 3/4" C.					1.37%	
L▶	100 A	2#1/0 & 1#4 EGC IN 1 1/4" C.	167'-3 201/256"	1.60%		1.60%		1.60%
L▶4DB-R	800 A	(2) SETS OF 4#600 & 1#1/0 EGC EACH IN 3 1/2" C.	279'-3 5/256"	1.18%		1.18%		1.18%
L▶4HVAC-1	400 A	4#600 & 1#3 EGC IN 3 1/2" C.	31'-6 13/256"	0.10%	1.18%	1.28%	1.91%	3.19%
L▶TR-2	50 A	3#8 & 1#10 EGC IN 3/4" C.	21'-3 11/16"	0.22%	1.28%	1.50%		1.50%
L▶2HVAC	100 A	4#3 & 1#8 SSBJ IN 1 1/4" C.	19'-8 7/128"	0.33%	1.50%	1.83%	2.79%	4.62%
L▶4HVAC-2	225 A	4#4/0 & 1#4 EGC IN 2 1/2" C.	15'-5 223/256"	0.06%	1.28%	1.34%	0.37%	1.71%
L▶4LT	100 A	4#3 & 1#8 EGC IN 1 1/4" C.	20'-5 15/16"	0.15%	1.18%	1.33%	0.74%	2.07%
L▶TR-1	225 A	3#4/0 & 1#4 EGC IN 2" C.	22'-10 151/256"	0.12%	1.18%	1.30%		1.30%
L▶2DB-R	500 A	(2) SETS OF 4#250 & 1#2 SSBJ EACH IN 2 1/2" C.	22'-8 29/32"	0.27%	1.30%	1.57%		1.57%
L▶2P1A	225 A	4#4/0 & 1#4 EGC IN 2 1/2" C.	17'-6 217/256"	0.21%	1.57%	1.78%	2.92%	4.70%
L▶TVSS1	225 A	4#4/0 & 1#4 EGC IN 2 1/2" C.	20'-4 65/128"	0.24%	1.57%	1.81%	3.00%	4.81%
L▶2P2A	225 A	4#4/0 & 1#4 EGC IN 2 1/2" C.	31'-5 163/256"	0.37%	1.57%	1.94%	2.83%	4.77%
L▶TVSS2	225 A	4#4/0 & 1#4 EGC IN 2 1/2" C.	33'-7 163/256"	0.40%	1.57%	1.97%	2.69%	4.66%
L▶	100 A	4#3 & 1#8 EGC IN 1 1/4" C.	169'-0 67/128"	1.22%	1.18%	2.40%		2.40%
L▶TR-3	250 A	3#250 & 1#4 EGC IN 2" C.	283'-10 113/256"	0.75%		0.75%		0.75%
L▶2PEVC	400 A	4#600 & 1#1/0 SSBJ IN 3 1/2" C.	29'-11 11/16"	0.20%	0.75%	0.95%		0.95%

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

IMEG
www.imegcorp.com
901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

Rev.	Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SINGLE LINE DIAGRAM

SHEET NO:
E002

LED LUMINAIRE SCHEDULE

(DESC) DOOR:	**DISTRIBUTION:**	**BEAMWIDTH:**	**(L/L) LENS/LOUVER:** K19 - KSH19 .156"...
FA - FLAT ALUMINUM	II - ANSIIES TYPE 2...	NSP - VERY NARRO...	A - .125" ACRYLIC M - MATTE DIFFUSE...
FS - FLAT STEEL	III - ANSIIES TYPE 3...	SP - SPOT	B - BAFFLE/LOUVER N - NONE
RA - REGRESSED...	IV - ANSIIES TYPE 4...	MD - MEDIUM	C - CLEAR ALZAK P - POLYCARBONATE
RS - REGRESSED...	V - ANSIIES TYPE 5...	WD - WIDE	F - FROSTED ACRYLIC R - HIGH IMPACT DR...
FINISH:		VWD - VERY WIDE	G - TEMPERED GLASS SS - SEMI-SPECULAR...
PAF - PAINT AFTER...		WW - WALL WASH	K - KSH12 .125"... O - OTHER (SEE...
CFSA - COLOR-FINISH SELECTION BY...			[DESIGN SPECIFIC...
(MTG) MOUNTING:	RE - RECESSED		**(WATT)...** FIX - FIXTURE, FT - FOOT, LAMP
CL - CEILING...	SP - SUSPENDED		**(TYPE) LED** RGB - COLOR...
CV - COVE	SU - SURFACE		LED - LIGHT EMITTING... RGBW - COLOR...
FR - FLANGED...	UC - UNDER CABINET		TLED - TUBULAR LED... RGBA - COLOR...
P - PERIMETER	WL - WALL		OLED - ORGANIC LED RLED - RETROFIT LED
PL - POLE	O - OTHER (SEE...		DLED - DYNAMIC... WLED - WARM DIM LED
(TYPE) DRIVER:			
0-10V - 0-10V...	EB - ELECTRONIC	HL - HIGH/LOW...	MV - MULTI-VOLTAGE...
DALI - DIGITAL...	ELV - ELECTRONIC LO...	LINE - LINE VOLTAG...	REM - REMOTE
DMX - DIGITAL...	EM - EMERGENCY...	ML - MULTI-LEVEL...	O - OTHER (SEE...

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.

VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER.
CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER...

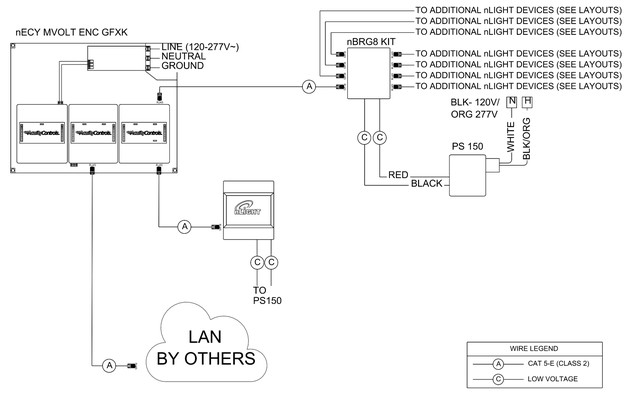
REFER TO SPECIFICATION SECTIONS [LED LIGHTING 26 51 19] [AND EMERGENCY LIGHTING INVERTER 26 52 15] FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
INTERIOR CORRELATED COLOR TEMPERATURE [2700, 3000, 3500, 4000/4100]K, COLOR RENDERING INDEX (CRI) AT OR ABOVE [80, 85, 90], UNLESS NOTED OTHERWISE...:

ITEM	DESCRIPTION	WATT ANSI WATTS	LED TYPE	DRIVER VOLTS	MANUFACTURER AND MODEL
A	2' x 4' RECESSED LIGHTING FIXTURE	23 W	LED	277 V	LITHONIA LIGHTING ENVX-2X4-HRG-4000LM-80CRI-40K -MIN1-EZT -MVOLT
AE	2' x 4' RECESSED LIGHTING FIXTURE VIA CENTRAL INVERTER	23 W	LED	277 V	LITHONIA LIGHTING ENVX-2X4-HRG-4000LM-80CRI-40K -MIN1-EZT -MVOLT
B	LINEAR LED STIP LIGHTING FIXTURE	4 W	LED	277 V	ALIGHT D5XXLS40UHEGXD
B2	LINEAR LED STIP LIGHTING FIXTURE EXTERIOR RATED	4 W	LED	277 V	ALIGHT D5XXLS40UHEGXDQ
B2E	LINEAR LED STIP LIGHTING FIXTURE EXTERIOR RATED VIA CENTRAL INVERTER	4 W	LED	277 V	LITHONIA LIGHTING CLX-L48-3000LM-SEF-SBLW-WDL-WD-MVOLT-EDAB-80CRI-WH-E10W LCP
BE	LINEAR LED STIP LIGHTING FIXTURE VIA CENTRAL INVERTER	4 W	LED	277 V	LITHONIA LIGHTING CLX-L48-3000LM-SEF-SBLW-WDL-WD-MVOLT-EDAB-80CRI-WH-E10W LCP
C	LINEAR LED STIP LIGHTING FIXTURE	4 W	LED	277 V	LITHONIA LIGHTING CLX-L48-3000LM-SEF-SBLW-WDL-WD-MVOLT-EDAB-80CRI-WH
CE	LINEAR LED STIP LIGHTING FIXTURE VIA CENTRAL INVERTER	4 W	LED	277 V	LITHONIA LIGHTING CLX-L48-3000LM-SEF-SBLW-WDL-WD-MVOLT-EDAB-80CRI-WH-E10W LCP
D	LED DOWNLIGHT LIGHTING FIXTURE WET RATED	7 W	LED	277 V	ALPHABET LIGHTING NUE4-QD-SW-15LM-40K-90-60D-HE T-WH-WH-NC-UNV-DIM10
DE	LED DOWNLIGHT LIGHTING FIXTURE VIA CENTRAL INVERTER WET RATED	7 W	LED	277 V	ALPHABET LIGHTING NUE4-QD-SW-15LM-40K-90-60D-HE T-WH-WH-NC-UNV-DIM10
E	WALL MONUTED LED LIGHTING FIXTURE FOR ELEVATOR PIT	15 W	LED	277 V	LITHONIA LIGHTING OLVTWM-4000K-MVOLT-GREY.
EX1	WALL MONUTED LED LIGHTING FIXTURE	19 W	LED	277 V	LUMINIS LIGHTING L1L13-1346-K40-277V-BKT
EX2	WALL MONUTED LED LIGHTING FIXTURE	270 W	LED	277 V	LITHONIALIGHTING DSX2-LED-P4-40K-T4-MVOLT-WBA-XX
EX3	LED POLE MOUNTED LIGHT FIXTURE. 12FT. POLE.	46 W	LED	277 V	ANP LIGHTING AL262-1-R5-PO46LD4D-T5-40K FINISH BY ARCHITECT POLE: BD3STLS12-7 FINISH BY ARCHITECT
X	CEILING MOUNTED LED EXIT SIGN	5 W	LED	277 V	BEGHELL LIGHTING CYC-HT-LR-1-CLR-WCS-120SA

LIGHTING SEQUENCE OF OPERATION

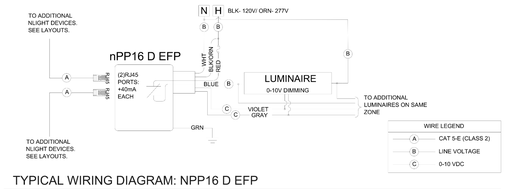
CLASSROOMS	CEILING OCCUPANCY SENSOR TO TURN ON LIGHTS WHEN OCCUPIED. DIM TO 50% AFTER 20 MINUTES OF VACANCY, FULL OFF AFTER 1 HOUR OF VACANCY. DAYLIGHT SENSOR TO DIM LIGHTS. MANUAL WALL DIMMER SWITCH CONTROL.
WORKROOM /BOYS & GIRLS RR	CEILING OCCUPANCY SENSOR TO TURN ON LIGHTS WHEN OCCUPIED. DIM TO 50% AFTER 20 MINUTES OF VACANCY, FULL OFF AFTER 1 HOUR OF VACANCY. WALL DIMMER SWITCH CONTROL.
FACULTY RR /STORAGE /CUSTODIAN /VESTIBULES	WALL OCCUPANCY SENSOR SWITCH TO TURN ON LIGHTS WHEN OCCUPIED. DIM TO 50% AFTER 20 MINUNTES OF VACANCY, FULL OFF AFTER 1 HOUR OF VACANCY. MANUAL ON/OFF PUSHBUTTON SWITCH.
ELECTRICAL RM /IDF RM / ELEV MACH. RM /FIRE RISER RM /ELEV PIT & SHAFT	TOGGLE SWITCH
EXTERIOR CANOPY /EXTERIOR BLDG PERIMETER /POLE LIGHTS	ASTRONOMICAL TIME CLOCK CONTROL WITH OVERRIDE SWITCH. TIME SCHEDULE TO BE COORDINATED WITH OWNER.
EMERGENCY ENABLED LIGHT FIXTURES /EXIT SIGNS	LIGHTING INVERTER SHALL PROVIDE MINIMUM 90 MINUTE BATTERY BACKUP IN THE EVENT OF NORMAL POWER FAILURE.

LIGHTING WIRING DIAGRAM



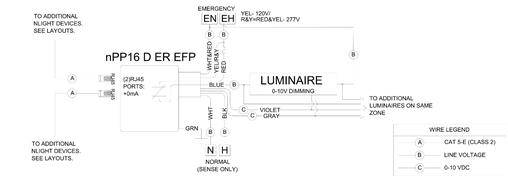
TYPICAL WIRING DIAGRAM: nECY MVOLT ENC GFXK

N.T.S.



TYPICAL WIRING DIAGRAM: NPP16 D EFP

N.T.S.



TYPICAL WIRING DIAGRAM: NPP16 D ER EFP

N.T.S.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
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PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER NESTOR C. IGNACIO, JR. Lic. E16934 Exp. 6-30-2025 STATE OF CALIFORNIA

PROJECT NAME:

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CLIENT:

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4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
LIGHTING FIXTURE SCHEDULE

SHEET NO:
E004

(E) MAIN SWITCHBOARD- MS

ENCLOSURE: NEMA 1
FED FROM: 0 A/0P @
LOCATION:

SOLID NEUTRAL
GROUND BUS

MAIN: 1,600... MCCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 30.00 kA

NOTES:

CKT	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	4DB-R	236.32 kVA	3	800 A	800 A			(2) SETS OF 4#600 & 1#1/0 EGC EACH IN 3 1/2" C.	
2	TR-3	0 kVA	3	250 A	250 A			3#250 & 1#4 EGC IN 2" C.	
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	11.245 kVA	125.00%	14.057 kVA		
Other	5.824 kVA	100.00%	5.824 kVA	**TOTAL CONNECTED LOAD:**	236.32 kVA
Power	164.868 kVA	100.00%	164.868 kVA	**TOTAL ESTIMATED DEMAND LOAD:**	216.993 kVA
Receptacles	54.2 kVA	59.23%	32.1 kVA	**TOTAL CONNECTED AMPS:**	284.25 A
Spare	0.18 kVA	80.00%	0.144 kVA	**TOTAL ESTIMATED DEMAND AMPS:**	261 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

DISTR. BOARD 4DB-R

ENCLOSURE: NEMA 1
FED FROM: 800 A/3P @ MS
LOCATION: ELECTRICAL 104

SOLID NEUTRAL
GROUND BUS

MAIN: 800 A MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 42 kA
ISC: 16.50 kA

NOTES: SEE SHEET E002, SINGLE LINE DIAGRAM FOR SPD CIRCUIT BREAKER AND WIRING SIZE.

CKT	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	4HVAC-1	155.49 kVA	3	400 A	400 A			4#600 & 1#5 EGC IN 3 1/2" C.	
2	4LT	11.25 kVA	3	150 A	100 A			4#3 & 1#8 EGC IN 1 1/4" C.	
3	TR-1	69.58 kVA	3	250 A	225 A			3#4/0 & 1#4 EGC IN 2" C.	
4	SPD	--	1	--	--	--	--	--	--
5	ELEVATOR...	0 kVA	3	150 A	100 A			4#3 & 1#8 EGC IN 1 1/4" C.	
6									
7									
8									
9									
10									
11									
12									

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	11.245 kVA	125.00%	14.057 kVA		
Other	5.824 kVA	100.00%	5.824 kVA	**TOTAL CONNECTED LOAD:**	236.32 kVA
Power	164.868 kVA	100.00%	164.868 kVA	**TOTAL ESTIMATED DEMAND LOAD:**	216.993 kVA
Receptacles	54.2 kVA	59.23%	32.1 kVA	**TOTAL CONNECTED AMPS:**	284.25 A
Spare	0.18 kVA	80.00%	0.144 kVA	**TOTAL ESTIMATED DEMAND AMPS:**	261 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 4LT

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 100 A/3P @ 4DB-R
LOCATION: ELECTRICAL 104

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 100 A MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 12.56 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	CLASSROOM 100,101 -1ST-LTG	20 A	1	12	12	12	0.49	0.82	0.82		0.74	12	12	12	1	20 A	CLASSROOM 207,208 -2ND-LTG	2	
	3	CLASSROOM 105,106 -1ST-LTG	20 A	1	12	12	12	0.49			0.82 0.55	0.64	12	12	12	1	20 A	2ND FLR-RM 214,217,218,RESTROOM,	4	
	5	STOREAGE,WORKROOM,RM	20 A	1	12	12	12	0.24			0.12 0.24	0.43	12	12	12	1	20 A	2ND FLR-CANOPY LTG	6	
	7	CLASSROOM 107,108 -1ST-LTG	20 A	1	12	12	12	0.68	0.82	0.84		0.6	12	12	12	1	20 A	CLASSROOM 201,200 -2ND-LTG	8	
	9	ROOM 115,117,118,119, RM104	20 A	1	12	12	12	0.43			0.41 0.82	0.55	12	12	12	1	20 A	CLASSROOM 205,206 -2ND-LTG	10	
	11	RESTROOM- 109,VESTS, FIRE...	20 A	1	12	12	12	0.26			0.29 4.5	0.4	10	10	10	1	50 A	LIGHTING INVERTER	12	
--	13	SPACE	--	1	--	--	--		--	0.2		0.41	12	12	12	1	20 A	EXTERIOR POLE LTS	14	
--	15	SPACE	--	1	--	--	--				-- --		--	--	--	1	--	SPACE	16	--
--	17	SPACE	--	1	--	--	--				-- --		--	--	--	1	--	SPACE	18	--
--	19	SPACE	--	1	--	--	--		--	--			--	--	--	1	--	SPACE	20	--
--	21	SPACE	--	1	--	--	--				-- --		--	--	--	1	--	SPACE	22	--
--	23	SPACE	--	1	--	--	--				-- --		--	--	--	1	--	SPACE	24	--
--	25	SPACE	--	1	--	--	--		--	--			--	--	--	1	--	SPACE	26	--
--	27	SPACE	--	1	--	--	--				-- --		--	--	--	1	--	SPACE	28	--
--	29	SPACE	--	1	--	--	--				-- --		--	--	--	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:	3.50 kVA						2.60 kVA		5.15 kVA									
		Total Amps:	13.14						9.37		19.09									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	11.245 kVA	125.00%	14.057 kVA		
				TOTAL CONNECTED LOAD:	11.25 kVA
				TOTAL ESTIMATED DEMAND LOAD:	14.057 kVA
				TOTAL CONNECTED AMPS:	13.53 A
				TOTAL ESTIMATED DEMAND AMPS:	16.9 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 2HVAC

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 100 A/3P @ TR-2
LOCATION: ELECTRICAL 204

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 100 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 3.43 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	SAC-4	30 A	2	10	--	10	0.69	1.46	1.46		0.75	10	--	10	2	30 A	SAC-1	2	
--	3	--	--	--	--	--	--	--			1.46 1.46	--	--	--	--	--	--	--	4	--
	5	SAC-2	30 A	2	10	--	10	2.72			1.77 3.12	2.79	10	--	10	2	40 A	SAC-3	6	--
--	7	--	--	--	--	--	--	--	1.77	3.12		--	--	--	--	--	--	--	8	--
	9	Fan EF (2)	20 A	1	12	12	12	0.69			0.15 0.9	2.4	10	10	10	1	20 A	ROOF Receptacles	10	
	11	WH-1	20 A	2	12	--	12	0.27			1.25								12	
--	13	--	--	--	--	--	--	--	1.25										14	
	15																		16	
	17																		18	
	19																		20	
	21																		22	
	23																		24	
	25																		26	
	27																		28	
	29																		30	
	31																		32	
	33																		34	
	35																		36	
	37																		38	
	39																		40	
	41																		42	
		Total Load:	9.05 kVA						3.96 kVA		6.14 kVA									
		Total Amps:	78.21						33.02		53.94									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	0 kVA	0.00%	0 kVA		
Other	5.824 kVA	100.00%	5.824 kVA	**TOTAL CONNECTED LOAD:**	19.15 kVA
Power	12.426 kVA	100.00%	12.426 kVA	**TOTAL ESTIMATED DEMAND LOAD:**	19.15 kVA
Receptacles	0.9 kVA	100.00%	0.9 kVA	**TOTAL CONNECTED AMPS:**	53.16 A
				TOTAL ESTIMATED DEMAND AMPS:	53.2 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 4HVAC-1

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 400 A/3P @ 4DB-R
LOCATION: ELECTRICAL 204

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 400 A MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 14.98 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	TR-2	50 A	3	8	--	10	0.22	9.05	6.49		0.06	4	4/0	4/0	3	225 A	4HVAC-2	2	
--	3	--	--	--	--	--	--	--			3.96 6.49	--	--	--	--	--	--	--	4	--
	5	--	--	--	--	--	--	--			6.14 6.49	--	--	--	--	--	--	--	6	--
	7	HP-1-1	30 A	3	10	--	10	0.42	3.71	3.71		0.39	12	--	12	3	20 A	HP-1-2	8	
	9	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	10	--
	11	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	12	--
	13	HP-1-3	20 A	3	12	--	12	0.59	3.71	3.71		0.74	12	--	12	3	20 A	HP-1-4	14	
	15	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	16	--
	17	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	18	--
	19	HP-1-5	20 A	3	12	--	12	1.14	3.71	3.71		1.41	12	--	12	3	20 A	HP-1-6	20	
	21	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	22	--
	23	--	--	--	--	--	--	--			3.71 3.71	--	--	--	--	--	--	--	24	--
	25	HP-1-7	20 A	3	12	--	12	1.91	3.71	3.24		0.32	12	--	12	3	20 A	HP-2-3	26	
--	27	--	--	--	--	--	--	--			3.71 3.24	--	--	--	--	--	--	--	28	--
--	29	--	--	--	--	--	--	--			3.71 3.24	--	--	--	--	--	--	--	30	--
	31	HP-2-4	20 A	3	12	--	12	0.71	3.24	0		12	--	12	3	20 A	HP-2-5	32		
--	33	--	--	--	--	--	--	--			3.24 0	--	--	--	--	--	--	--	34	--
--	35	--	--	--	--	--	--	--			3.24 0	--	--	--	--	--	--	--	36	--
	37	HP-2-6	20 A	3	12	--	12	1.05	3.24	3.24		1.74	12	--	12	3	20 A	HP-2-7	38	
--	39	--	--	--	--	--	--	--			3.24 3.24	--	--	--	--	--	--	--	40	--
--	41	--	--	--	--	--	--	--			3.24 3.24	--	--	--	--	--	--	--	42	--
		Total Load:	54.50 kVA						49.41 kVA		51.59 kVA									
		Total Amps:	197.95						178.37		187.44									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	0 kVA	0.00%	0 kVA		
Other	5.824 kVA	100.00%	5.824 kVA	**TOTAL CONNECTED LOAD:**	155.49 kVA
Power	148.768 kVA	100.00%	148.768 kVA	**TOTAL ESTIMATED DEMAND LOAD:**	155.492 kVA
Receptacles	0.9 kVA	100.00%	0.9 kVA	**TOTAL CONNECTED AMPS:**	187.03 A
				TOTAL ESTIMATED DEMAND AMPS:	187 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 4HVAC-2

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 225 A/3P @ 4HVAC-1
LOCATION: ELECTRICAL 204

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MCB
VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 14.03 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	OCPD P	AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	HP-2-2	30 A	3	10	--	10	0.32	3.24	3.25		0.37	10	--	10	3	30 A	HP-2-1	2	
	3	--	--	--	--	--	--	--			3.24 3.25	--	--	--	--	--	--	--	4	--
	5	--	--	--	--	--	--	--			3.24 3.25	--	--	--	--	--	--	--	6	--
	7																		8	
	9																		10	
	11																		12	
	13																		14	
	15																		16	
	17																		18	
	19																		20	
	21																		22	
	23																		24	
	25																		26	
	27																		28	
	29																		30	
	31																		32	
	33																		34	
	35																		36	
	37																		38	
	39																		40	
	41																		42	
		Total Load:	6.49 kVA						6.49 kVA		6.49 kVA									
		Total Amps:	23.44						23.44		23.44									

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Power	19.482 kVA	100.00%	19.482 kVA		
				TOTAL CONNECTED LOAD:	19.48 kVA
				TOTAL ESTIMATED DEMAND LOAD:	19.482 kVA
				TOTAL CONNECTED AMPS:	23.43 A
				TOTAL ESTIMATED DEMAND AMPS:	23.4 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

LTG INVERTER

LTG-INV

ENCLOSURE: NEMA 1
FED FROM: 100A/4W @ 4LT
LOCATION: STORAGE 103

SOLID NEUTRAL
GROUND BUS

MAIN: 100A MCB
VOLTS: 227/277 VOLTAGE
PHASE: 1
WIRE: 3
SCCR: 65 kA
ISC UNKNOWN 0.00 kA
5 KVA

NOTES:

CKT	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	ELECT-WORK ROOM-1ST & 2ND FLR	0.24 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
2	1ST-FLR-ROOM-EM-LTG	0.77 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
3	1ST FLR-CANOPY LTG	0.13 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
4	2ND-FLR-ROOM-EM-LTG	0.66 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
5	EXIT SIGN-1ST FLR-LTG	0.03 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
6	2ND FLR-CANOPY LTG	0.23 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
7	EXIT SIGN-2ST FLR-LTG	0.02 kVA	1	20 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
8	ELEVATOR LIGHT	0.07 kVA	1	20 A	100 A			2#1/0 & 1#4 EGC IN 1 1/4" C.	
9	1ST FL-WALLPACK	0.08 kVA	1	150 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
10	2ND FL-WALLPACK	2.72 kVA	1	150 A	20 A			2#12 & 1#12 EGC IN 3/4" C.	
11	SPACE	--	1	--	--	--	--	--	--
12	SPACE	--	1	--	--	--	--	--	--
13	SPACE	--	1	--	--	--	--	--	--
14	SPACE	--	1	--	--	--	--	--	--

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*	
Lighting	4.965 kVA	125.00%	6.207 kVA		
				TOTAL CONNECTED LOAD:	4.97 kVA
				TOTAL ESTIMATED DEMAND LOAD:	6.207 kVA
				TOTAL CONNECTED AMPS:	5.97 A
				TOTAL ESTIMATED DEMAND AMPS:	7.5 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

IMEG
www.imegcorp.com
901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

Rev.	Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PANEL SCHEDULES

SHEET NO:

E005

DISTR. BOARD 2DB-R

ENCLOSURE: NEMA 1
FED FROM: 500 A/3P @ TR-1
LOCATION: ELECTRICAL 104

SOLID NEUTRAL
GROUND BUS

MAIN: 500 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 12.58 kA

NOTES:

CKT	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1	2P1A	21.62 kVA	3	250 A	225 A			4#4/0 & 1#4 EGC IN 2 1/2" C.	
2	TVSS1	25.6 kVA	3	250 A	225 A			4#4/0 & 1#4 EGC IN 2 1/2" C.	
3	2P2A	16.06 kVA	3	250 A	225 A			4#4/0 & 1#4 EGC IN 2 1/2" C.	
4	TVSS2	6.3 kVA	3	250 A	225 A			4#4/0 & 1#4 EGC IN 2 1/2" C.	
5									
6									
7									
8									
9									
10									
11									

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	16.1 kVA	100.00%	16.1 kVA
Receptacles	53.3 kVA	59.38%	31.65 kVA
Spare	0.18 kVA	80.00%	0.144 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	69.58 kVA
TOTAL ESTIMATED DEMAND LOAD:	47.894 kVA
TOTAL CONNECTED AMPS:	193.13 A
TOTAL ESTIMATED DEMAND AMPS:	132.9 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 2P1A

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 225 A/3P @ 2DB-R
LOCATION: ELECTRICAL 104

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 10.95 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	WORK ROOM 102 RECEPT	20 A	1	12	12	12	2.27	1.78	0.9		2.92	10	10	10	1	20 A	EXTERIOR RECEPT-1ST-FLR	2	
	3	ELEC. STORAGE-RECEPT	20 A	1	12	12	12	0.1			0.36	0.18				1	20 A	REC - DRINKING FOUNTAIN	4	
	5	FIRE RISER, VEST RECEPT	20 A	1	12	12	12	2.04					0.54	0.72	2.01	10	10	10	1	20 A	RESTROOM STORAGE RECEPT	6	
	7	115,116,118,119-RECEPT	20 A	1	10	10	10	2.09	0.9	1.08					2.92	12	12	12	1	20 A	STORAGE 121, EXTERIOR-RECEPT	8	
	9	HAND DRYER-109	20 A	1	8	8	8	2.51			1.5	0.36			1.47	12	12	12	1	20 A	IDF RECEPT	10	
	11	HAND DRYER-110	20 A	1	8	8	8	2.8					1.5	0.36	1.45	12	12	12	1	20 A	IDF RECEPT	12	
	13	ELEVATOR PIT RECEPT	20 A	1	12	12	12	0.77	0.18	0.36					1.45	12	12	12	1	20 A	IDF RECEPT	14	
	15	CLASSROOM 100-CONV-RECEPT	20 A	1	12	12	12	0.78			0.54	1.5							1	20 A	HAND DRYER-115	16	--
	17	CLASSROOM 105-CONV-RECEPT	20 A	1	12	12	12	0.85					0.72	1.5					1	20 A	HAND DRYER-116	18	--
	19	CLASSROOM 107-CONV-RECEPT	20 A	1	12	12	12	1.52	0.54	0.72					0.87	12	12	12	1	20 A	CLASSROOM 101-CONV-RECEPT	20	--
	21	CLASSROOM 114-CONV-RECEPT	20 A	1	10	10	10	2.23			0.72	0.72			1.35	12	12	12	1	20 A	CLASSROOM 106-CONV-RECEPT	22	--
	23	WH1	20 A	2	10	--	10	2.1					2.5	0.72	2.65	12	12	12	1	20 A	CLASSROOM 108-CONV-RECEPT	24	--
--	25	--	--	--	--	--	--	--	0	0.18					0.71	12	12	12	1	20 A	REC - INTRUSION PANEL	26	--
--	27	SPACE	--	1	--	--	--					0.18				--	--	--	1	20 A	ELEC SHUNT TRIP	28	--
--	29	SPACE	--	1	--	--	--							0.36					1	20 A	FIRE ALARM BELL	30	1
--	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:	6.64 kVA		6.06 kVA			8.92 kVA							
								Total Amps:	56.08		50.50			75.08							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	8.86 kVA	100.00%	8.86 kVA
Receptacles	12.58 kVA	89.75%	11.29 kVA
Spare	0.18 kVA	80.00%	0.144 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	21.62 kVA
TOTAL ESTIMATED DEMAND LOAD:	20.294 kVA
TOTAL CONNECTED AMPS:	60.01 A
TOTAL ESTIMATED DEMAND AMPS:	56.3 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. PROVIDE LOCK-ON DEVICE AND MARK RED.

PANEL- TVSS1

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 225 A/3P @ 2DB-R
LOCATION: ELECTRICAL 104

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 10.72 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	CLASSROOM 100-COMP-RECEPT	20 A	1	8	8	8	2.2	3	0.8					1.13	12	12	12	1	20 A	CLASSROOM 100-PROJECTOR	2	
	3	CLASSROOM 101-COMP-RECEPT	20 A	1	10	10	10	2.78			3	0.8			1.06	12	12	12	1	20 A	CLASSROOM 101-PROJECTOR	4	
	5	CLASSROOM 105-COMP-RECEPT	20 A	1	12	12	12	2.29					2	0.8	0.89	12	12	12	1	20 A	CLASSROOM 105-PROJECTOR	6	
	7	CLASSROOM 106-COMP-RECEPT	20 A	1	8	8	8	2.7	3	0.8					1.39	12	12	12	1	20 A	CLASSROOM 106-PROJECTOR	8	
	9	CLASSROOM 107-COMP-RECEPT	20 A	1	6	6	6	2.1			3	0.8			1.96	12	12	12	1	20 A	CLASSROOM 107-PROJECTOR	10	
	11	CLASSROOM 108-COMP-RECEPT	20 A	1	6	6	6	2.75					3	0.8	3	12	12	12	1	20 A	CLASSROOM 108-PROJECTOR	12	
	13	CLASSROOM 114-COMP-RECEPT	20 A	1	4	4	4	2.56	3	0.8					2.28	10	10	10	1	20 A	CLASSROOM 114-PROJECTOR	14	
--	15	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	16	--
--	17	SPACE	--	1	--	--	--						--	--		--	--	--	1	--	SPACE	18	--
--	19	SPACE	--	1	--	--	--		--	--						--	--	--	1	--	SPACE	20	--
--	21	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	22	--
--	23	SPACE	--	1	--	--	--						--	--		--	--	--	1	--	SPACE	24	--
--	25	SPACE	--	1	--	--	--		--	--						--	--	--	1	--	SPACE	26	--
--	27	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	28	--
--	29	SPACE	--	1	--	--	--						--	--		--	--	--	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:	11.40 kVA		7.60 kVA			6.60 kVA							
								Total Amps:	96.28		64.62			55.00							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Receptacles	25.6 kVA	69.53%	17.8 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	25.60 kVA
TOTAL ESTIMATED DEMAND LOAD:	17.8 kVA
TOTAL CONNECTED AMPS:	71.06 A
TOTAL ESTIMATED DEMAND AMPS:	49.4 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

PANEL- 2P2A

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 225 A/3P @ 2DB-R
LOCATION: ELECTRICAL 204

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 9.93 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	WORK ROOM 202 RECEPT	20 A	1	12	12	12	1.39	1.08	0.72		1.65	12	12	12	1	20 A	EXTERIOR RECEPT-2ND-FLR	2	
	3	ELEC. STORAGE-RECEPT	20 A	1	12	12	12	0.07			0.36	0.9			2.11	10	10	10	1	20 A	RESTROOM, STORAGE...	4	
	5	RESTROOM, FIRE RISER,VEST-...	20 A	1	10	10	10	2.16					1.08	0.36	1.08	12	12	12	1	20 A	EXTERIOR RECEPT-2ND-FLR	6	
	7	HAND DRYER-209	20 A	1	8	8	8	2.37	1.5	1.5					2.83	8	8	8	1	20 A	HAND DRYER-216	8	
	9	HAND DRYER-209	20 A	1	8	8	8	2.76			1.5	1.5			2.4	8	8	8	1	20 A	HAND DRYER-215	10	
	11	CLASSROOM 200-CONV-RECEPT	20 A	1	12	12	12	1.24					0.72	0.54	0.51	12	12	12	1	20 A	CLASSROOM 201-CONV-RECEPT	12	
	13	CLASSROOM 205-CONV-RECEPT	20 A	1	12	12	12	0.65	0.54	0.54					1.01	12	12	12	1	20 A	CLASSROOM 206-CONV-RECEPT	14	
	15	CLASSROOM 207-CONV-RECEPT	20 A	1	12	12	12	1.53			0.54	0.9			1.92	10	10	10	1	20 A	CLASSROOM 206-CONV-RECEPT	16	
	17	CLASSROOM 214-CONV-RECEPT	20 A	1	12	12	12	2.56					0.54	0.18					1	20 A	FIRE ALARM PANEL	18	1
--	19	SPACE	--	1	--	--	--		--	0.36									1	20 A	FIRE ALARM BELL	20	1
--	21	SPACE	--	1	--	--	--				--	0.7							1	20 A	FIRE DAMPER	22	1
--	23	SPACE	--	1	--	--	--						--	--					1	--	SPACE	24	--
--	25	SPACE	--	1	--	--	--		--	--						--	--	--	1	--	SPACE	26	--
--	27	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	28	--
--	29	SPACE	--	1	--	--	--						--	--		--	--	--	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:	6.24 kVA		6.40 kVA			3.42 kVA							
								Total Amps:	55.62		56.95			28.50							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	7.24 kVA	100.00%	7.24 kVA
Receptacles	8.82 kVA	100.00%	8.82 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	16.06 kVA
TOTAL ESTIMATED DEMAND LOAD:	16.06 kVA
TOTAL CONNECTED AMPS:	44.58 A
TOTAL ESTIMATED DEMAND AMPS:	44.6 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: 1. PROVIDE LOCK-ON DEVICE AND MARK RED.

PANEL- TVSS2

MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FED FROM: 225 A/3P @ 2DB-R
LOCATION: ELECTRICAL 204

SINGLE TUB
SOLID NEUTRAL
GROUND BUS

MAIN: 225 A MCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 65 kA
ISC: 9.79 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H	N	G	VD %	A	B	C	VD %	WIRE SIZE G	N	H	P	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
	1	CLASSROOM 200-COMP-RECEPT	20 A	1	12	12	12	0.88	0.54	0.36					0.49	12	12	12	1	20 A	CLASSROOM 200-PROJECTOR	2	
	3	CLASSROOM 201-COMP-RECEPT	20 A	1	12	12	12	0.86			0.54	0.36			0.46	12	12	12	1	20 A	CLASSROOM 201-PROJECTOR	4	
	5	CLASSROOM 205-COMP-RECEPT	20 A	1	12	12	12	0.49					0.54	0.36	0.39	12	12	12	1	20 A	CLASSROOM 205-PROJECTOR	6	
	7	CLASSROOM 206-COMP-RECEPT	20 A	1	12	12	12	0.89	0.54	0.36					0.62	12	12	12	1	20 A	CLASSROOM 206-PROJECTOR	8	
	9	CLASSROOM 207-COMP-RECEPT	20 A	1	12	12	12	1.47			0.54	0.36			1.12	12	12	12	1	20 A	CLASSROOM 207-PROJECTOR	10	
	11	CLASSROOM 208-COMP-RECEPT	20 A	1	12	12	12	1.93					0.54	0.36	1.15	12	12	12	1	20 A	CLASSROOM 208-PROJECTOR	12	
	13	CLASSROOM 214-COMP-RECEPT	20 A	1	12	12	12	2.69	0.54	0.36					1.69	12	12	12	1	20 A	CLASSROOM 214-PROJECTOR	14	
--	15	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	16	--
--	17	SPACE	--	1	--	--	--						--	--		--	--	--	1	--	SPACE	18	--
--	19	SPACE	--	1	--	--	--		--	--						--	--	--	1	--	SPACE	20	--
--	21	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	22	--
--	23	SPACE	--	1	--	--	--						--	--		--	--	--	1	--	SPACE	24	--
--	25	SPACE	--	1	--	--	--		--	--						--	--	--	1	--	SPACE	26	--
--	27	SPACE	--	1	--	--	--				--	--				--	--	--	1	--	SPACE	28	--
--	29	SPACE	--	1	--	--	--						--	--		--	--	--	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:	2.70 kVA		1.80 kVA			1.80 kVA							
								Total Amps:	22.50		15.00			15.00							

LOAD SUMMARY

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Receptacles	6.3 kVA	100.00%	6.3 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	6.30 kVA
TOTAL ESTIMATED DEMAND LOAD:	6.3 kVA
TOTAL CONNECTED AMPS:	17.49 A
TOTAL ESTIMATED DEMAND AMPS:	17.5 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

(E) MAIN SWITCHBOARD- MSB

ENCLOSURE: NEMA 3
FED FROM: 800 A/3P @
LOCATION:

SOLID NEUTRAL
GROUND BUS

MAIN: 800 A MCCB
VOLTS: 120/208 Wye
PHASE: 3
WIRE: 4
SCCR: 42 kA
ISC: 30.00 kA

NOTES:

CKT	LOAD DESCRIPTION	Load	POLES	FRAME	TRIP	TYPE	ACC.	WIRE AND RACEWAY	CIRCUIT KEY
1									
2									
3									
4									
5	EVP-1	32 kVA	3	400 A	20 A				
6									
7									
8									
9									
10									
11									
12									

LOAD SUMMARY (INCLUDES ALL TUBS IN THIS PANEL)

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
Power	32 kVA	100.00%	32 kVA

TOTALS*	
TOTAL CONNECTED LOAD:	32.00 kVA
TOTAL ESTIMATED DEMAND LOAD:	32 kVA
TOTAL CONNECTED AMPS:	88.82 A
TOTAL ESTIMATED DEMAND AMPS:	88.8 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES:

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:
IMEG
www.imegcorp.com
901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

PROFESSIONAL ENGINEER — NESTOR C. IGNACIO, JR. — Lic. E16934 — Exp. 6-30-2025 — STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
PANEL SCHEDULES

SHEET NO:

E006

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: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 1 of 7)**
Project Address: NEW 2-STORY CLASSROOM BUILDING, 4110 W. 154TH ST.	**Date Prepared:**	12/16/2023

A. GENERAL INFORMATION

01	Project Location (city)	04	Total Conditioned Floor Area (ft²)	15,818
02	Climate Zone	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):	06	# of Stories (Habitable Above Grade)	1

● Classroom ● Office ● Support Areas ● Warehouse ● All Other Occupancies

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	Area Category Method	15818	Area Category Method	0
☐ New Lighting System - Parking Garage				
Total Area of Work (ft²)	15818		0	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 2 of 7)**
	Date Prepared:	12/16/2023

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		9,347.5	0		=	9,348	7,178	0	=	7178	COMPLIES
Unconditioned					=				=		
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000 Schema Version: rev 20220101
Compliance ID: EnergyPro-9900-1223-0646 Report Generated: 2023-12-15 11:58:34

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 3 of 7)**
	Date Prepared:	12/16/2023

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
A	A	No	NA	23	Mfr. Spec	256	No	5,888	☐	☐
C	C	No	NA	17	Mfr. Spec	75	No	1,275	☐	☐
E	E	No	NA	15	Mfr. Spec	1	No	15	☐	☐
Total Designed Watts: CONDITIONED SPACES								7,178		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C		
Required >= 4,000W subject to multilevel	Whole Building Auto Time Switch	☐	☐

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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 4 of 7)**
	Date Prepared:	12/16/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
					13				
					Plan Sheet Showing Daylit Zones:				

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
CLASSROOM	Classroom, Lecture, or Training Vocational	0.6	12,897	7,738.2	No	No
OFFICE AREA>250	Office (>250 square feet)	0.6	314	188.4	No	No
STORAGE	Commercial Industrial Warehouse	0.4	757	302.8	No	No
ELECTRICAL	Electrical Mechancial Telephone Room	0.4	413	165.2	No	No
RESTROOM	Restroom	0.65	1,060	689	No	No
LOBBY	Main Entry Lobby	0.7	377	263.9	No	No
	TOTALS:		15,818	9,347.5	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

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Compliance ID: EnergyPro-9900-1223-0646 Report Generated: 2023-12-15 11:58:34

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 5 of 7)**
	Date Prepared:	12/16/2023

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

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Compliance ID: EnergyPro-9900-1223-0646 Report Generated: 2023-12-15 11:58:34

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 6 of 7)**
	Date Prepared:	12/16/2023

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

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

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

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Whole Building Time Switch;
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	Whole Building Demand Response;

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000 Schema Version: rev 20220101
Compliance ID: EnergyPro-9900-1223-0646 Report Generated: 2023-12-15 11:58:34

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-LTI-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:**	**(Page 7 of 7)**
Project Address: NEW 2-STORY CLASSROOM BUILDING, 4110 W. 154TH ST.	**Date Prepared:**	12/16/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: NESTOR IGNACIO	Documentation Author Signature:
Company: IMEG Corp	Signature Date: 12-16-2023
Address: 901 VIA PIEMONTE, SUTE 400	CEA/ HERS Certification Identification (if applicable): 16934
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-5544

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: NESTOR IGNACIO	Responsible Designer Signature:
Company: IMEG CORP.	Date Signed: 2023-12-16
Address: 901 VIA PIEMONTE, SUTE 400	License: 16934
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-5544

Generated Date/Time: Documentation Software: EnergyPro
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance
Report Version: 2022.0.000 Schema Version: rev 20220101
Compliance ID: EnergyPro-9900-1223-0646 Report Generated: 2023-12-15 11:58:34

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

IMEG
www.imegcorp.com
901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO JR.
Lic. E16934
Exp. 6-30-2025
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TITLE 24- INDOOR

SHEET NO:
E007

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:** (Page 1 of 7)
Project Address: NEW 2-STORY CLASSROOM BUILDING, 4110 W. 154TH ST.	**Date Prepared:** 12/16/2023

A. GENERAL INFORMATION

01	Project Location (city)	LAWNDALE	04	Total Illuminated Hardscape Area (ft²)	17042
02	Climate Zone	8			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐ LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval			
☐ LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas				
05	Occupancy Types within Project				
● Classroom ● Office ● Support Areas ● Warehouse ● Warehouse					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No		
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:** (Page 2 of 7)
	Date Prepared: 12/16/2023

C. COMPLIANCE RESULTS

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

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results		
01		02		03		04		05	OR	06	=	07	≥	08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
949	+	---	+	---	+	---	+	---	OR	---	=	949	≥	922	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															Not applicable

D. EXCEPTIONAL CONDITIONS

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

E. ADDITIONAL REMARKS

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

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:** (Page 3 of 7)
	Date Prepared: 12/16/2023

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
C	C	☐ Linear	17	Mfr. Spec	15	New	☐	255	NA: < 6200 lumens	☐	☐
D	D	☐ Linear	7.3	Mfr. Spec	55	New	☐	401.5	NA: < 6200 lumens	☐	☐
EX1	EX1	☐ Linear	19	Mfr. Spec	14	New	☐	266	NA: < 6200 lumens	☐	☐
							Total Design Watts:	922			

* *NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.*
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
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H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:** (Page 5 of 7)
	Date Prepared: 12/16/2023

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
OUTDOOR	17042	0.019	323.8	2832	0.2	424.8	749
					Initial Wattage Allowance for Entire Site (Watts):		200
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		949

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
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	Date Prepared: 12/16/2023

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has 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-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: WILL ROGERS MIDDLE SCHOOL	**Report Page:** (Page 7 of 7)
Project Address: NEW 2-STORY CLASSROOM BUILDING, 4110 W. 154TH ST.	**Date Prepared:** 12/16/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
NESTOR IGNACIO	
Company: IMEG Corp	Signature Date: 2023-12-16
Address: 901 VIA PIEMONTE, SUTE 400	CEA/ HERS Certification Identification (if applicable): 16934
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-5544

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:	Responsible Designer Signature:
NESTOR IGNACIO	
Company: IMEG CORP.	Date Signed: 2023-12-16
Address: 901 VIA PIEMONTE, SUTE 400	License: 16934
City/State/Zip: ONTARIO CA 91764	Phone: (909)942-5544

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO JR.
Lic. E16934
Exp. 6-30-2025
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

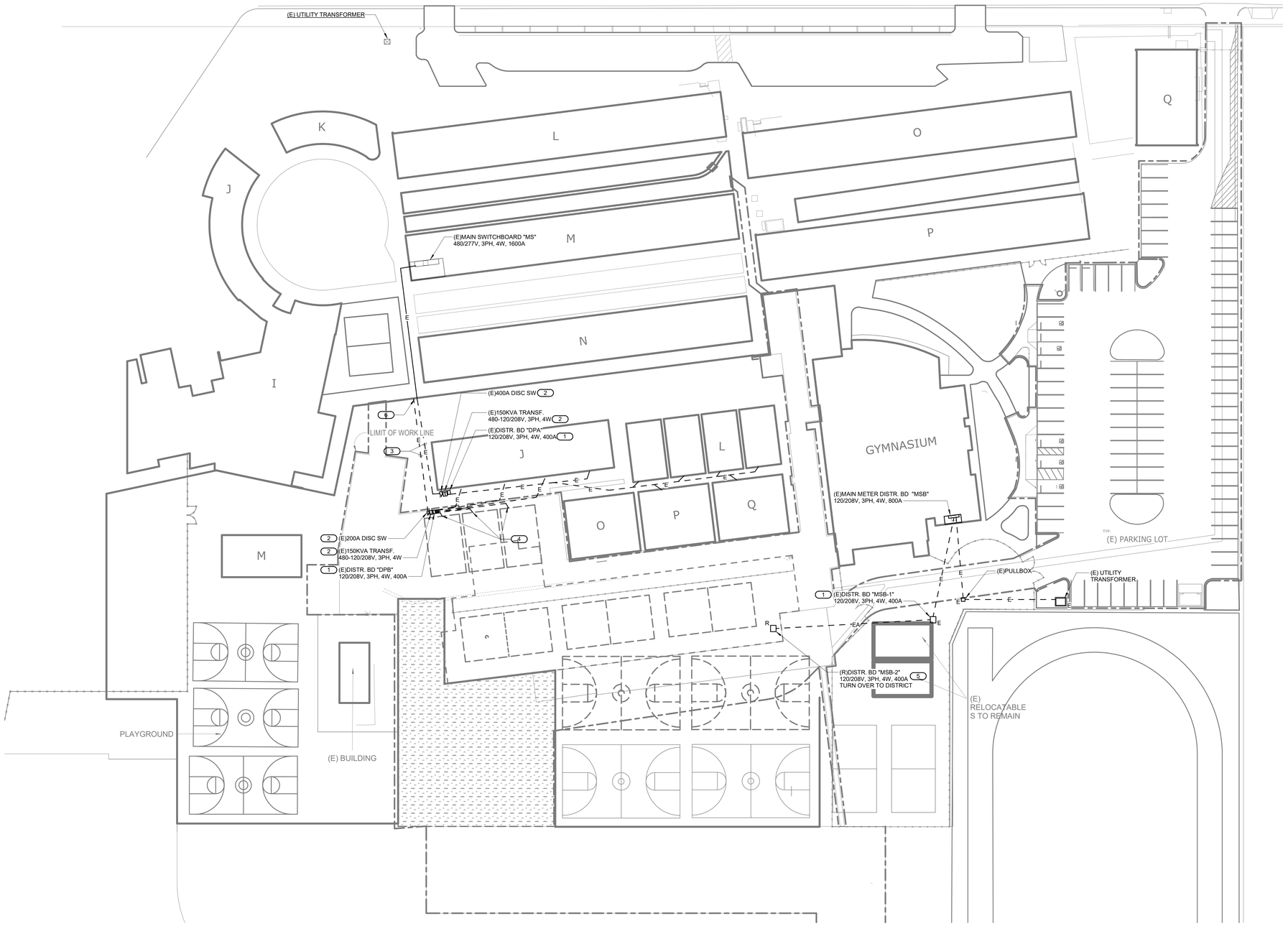
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TITLE 24 -OUTDOOR

SHEET NO:
E008



NORTH 1 **SITE PLAN - ELECTRICAL DEMOLITION**
1" = 30'-0"

ELECTRICAL SITE DEMOLITION NOTES: #

1. EXISTING DISTRIBUTION BOARD TO REMAIN ENERGIZED AND PROTECTED DURING CONSTRUCTION. FIELD VERIFY EXACT LOCATIONS.
2. EXISTING TRANSFORMER AND DISCONNECT SWITCH TO REMAIN ENERGIZED AND PROTECTED DURING CONSTRUCTION. FIELD VERIFY EXACT LOCATIONS.
3. EXISTING UNDERGROUND DUCTBANK TO REMAIN. FIELD VERIFY EXACT LOCATION.
4. EXISTING RELOCATABLE CLASSROOM BUILDING POWER CONNECTIOIN TO BE REMOVED. EXISTING CONDUIT AND WIRES TO BE REMOVED BACK TO SOURCE DISTRIBUTION PANEL.
5. EXISTING DISTRIBUTION BOARD TO BE REMOVED AND RETURNED BACK TO THE DISTRICT. EXISTING WIRES TO BE REMOVED BACK TO SOURCE PANEL. EXISTING CONDUIT TO REMAIN ABANDONED, CUT FLUSH WITH GRADE, FILLED IN WITH DIRT AND CAPPED IN PLACE. FIELD VERIFY EXACT LOCATION.
6. EXISTING CONDUIT ROUTED ABOVE GRADE ON TOP OF WALKWAY CANOPY TO THE MAIN ELECTRICAL ROOM IN BUILDING M. FIELD VERIFY EXACT LOCATION.

STATE:

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ARCHITECT:
architecture
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PROJECT #22003237.00

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Exp. 6-30-2025
OF CALIFORNIA

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NEW 2-STORY CLASSROOM BUILDING
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LAWNDALE, CA 90260

CLIENT:

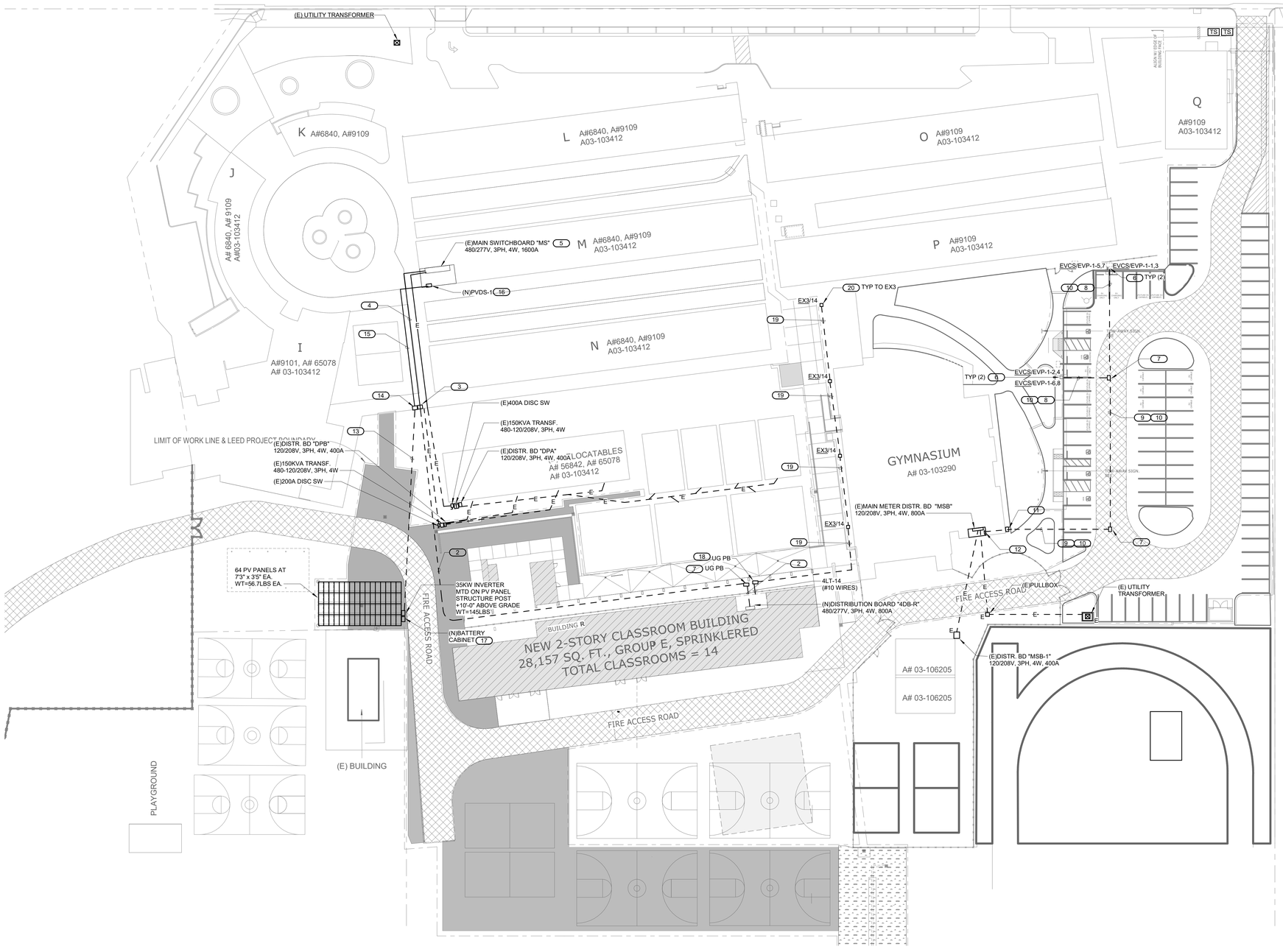
WILL ROGERS MIDDLE SCHOOL
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LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SITE PLAN - ELECTRICAL DEMOLITION

SHEET NO:
E100



SITE PLAN - ELECTRICAL REMODEL

1" = 30'-0"

ELECTRICAL SITE REMODEL NOTES:

1. NEW DISTRIBUTION BOARD LOCATED IN FIRST FLOOR ELECTRICAL ROOM. FIELD VERIFY EXACT
2. ROUTE NEW BUILDING SERVICE FEEDERS UNDERGROUND. REFER TO SINGLE LINE DIAGRAM SHEET E002 FOR FEEDER CONDUIT AND WIRE SIZE. FIELD VERIFY EXACT LOCATIONS. REFER TO 10/E501 FOR UNDERGROUND CONDUIT DETAIL.
3. ROUTE NEW BUILDING SERVICE FEEDERS FROM UNDERGROUND DUCTBANK UP TO EXISTING WALKWAY CANOPY ROOF. FIELD VERIFY EXACT LOCATION.
4. ROUTE NEW BUILDING SERVICE FEEDERS ON TOP OF EXISTING WALKWAY CANOPY ROOF TO EXISTING MAIN SWITCHBOARD "MS" IN BUILDING M ELECTRICAL ROOM. FIELD VERIFY EXACT LOCATION.
5. CONNECT NEW FEEDERS TO EXISTING MAIN SWITCHBOARD. REFER TO SINGLE LINE DIAGRAM SHEET E002 FOR CONNECTION DETAILS.
6. LEVEL-2 SINGLE EV CHARGER (40A, 208,1PH) PROVIDED BY THE OWNER AND INSTALL BY THE CONTRACTOR. STUB UP CONDUIT 6" ABOVE GRADE AND CAP. PROVIDE TRIP PROTECTION AS REQUIRED. REFER TO 2/E502 & 3/E502 FOR MOUNTING DETAIL.
7. 24"X36"X36" PRECAST CONCRETE PULLBOX WITH TRAFFIC RATED ENGRAVED.
8. 1 1/4"C-2#8,1#8G
9. (2)1 1/4"C-2#8,1#8G AND (4) 1-1/4"C PVC SCHED 40 SPARE.
10. SEE SHEET E006, MSB PANEL SCHEDULE FOR WIRING AND CONDUIT SIZE AND QUANTITY.
11. PROVIDE 20"x20"x10D SURFACE MOUNTED PULLBOX NEMA 3R AT +10'-0" ABOVE GRADE ON THE EXTERIOR BUILDING WALL. ROUTE NEW EV CHARGER RGS CONDUIT SURFACE MOUNTED FROM DUCTBANK UP TO NEW PULL BOX. ROUTE (6)1 1/4" CONDUITS FROM NEW PULLBOX TO NEW PANEL EVP-1 IN THE BUILDING ELECTRICAL ROOM.
12. NEW EVP-1 PANEL 120/208V, 3PH, 4W, 300A SURFACE MOUNTED IN ELECTRICAL ROOM.
13. 1 1/4"C PVC SCHED 40 WITH 3#8, 1#8G FROM INVERTER TO NEW PULLBOX ON TOP OF CANOPY.
14. 1-0"x10"x10" NEMA 3R PULLBOX MOUNTET ON THE CANOPY ROOF. FIELD VERIFY EXACT LOCATION.
15. 1 1/4"C RGS WITH 3#2, 1#8G FROM NEW PULLBOX ON TOP OF CANOPY TO NEW PV SYSTEM DISCONNECT SWITCH PVDS-1 IN MAIN ELECTRICAL ROOM. ROUTE CONDUITS ON TOP OF CANOPY AND PROVIDE SUPPORT AS REQUIRED. FIELD VERIFY EXACT LOCATION.
16. NEW 480V,3PH,3W WITH VIEW WINDOW PV SYSTEMS DISCONNECT SWITCH PVDS-1, PROVIDE FLOOR MOUNTING AS REQUIRED.FIELD VERIFY EXACT LOCATION.
17. NEW PV BATTERY CABINET PAD MOUNTED UNDER INVERTER UNIT. PROVIDE NEMA 3R WEATHERPROOF ENCLOSURE. REFER TO 4/E502 FOR MOUNTING DETAIL. FIELD VERIFY EXACT LOCATION.
18. 12"X18"X36" PRECAST CONCRETE PULLBOX WITH TRAFFIC RATED ENGRAVED.
19. 1 "C-2#10,1#10G.
20. REFER TO DETAIL 5/E502 FOR POLE MOUNTING DETAIL.

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PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER NESTOR C. IGNACIO, JR. Lic. E16934 Exp. 6-30-2025 CIVIL STATE OF CALIFORNIA

PROJECT NAME:

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NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SITE PLAN - ELECTRICAL REMODEL

SHEET NO:

E101



Schedule								
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Light Loss Factor	Wattage
	A	5	Lithonia Lighting	DSXW1 LED 40L 40K 70CRI T4M MVOLT	2-FT WALL MOUNT	10362	0.95	272.65
	B	4	MP Lighting	MPWPSS04xxxL24xT5xx-xxx	2-FT POST TOP	2277	0.95	43.92

Statistics						
Description	Symbol	Avg	Min	Avg/Min	Max/Min	Max
PATH OF EGRESS TO REFUGE AREA	+	3.2 fc	0.2 fc	16.0:1	31.5:1	6.3 fc
PATH OF EGRESS 2	+	1.7 fc	0.2 fc	8.5:1	24.0:1	4.8 fc

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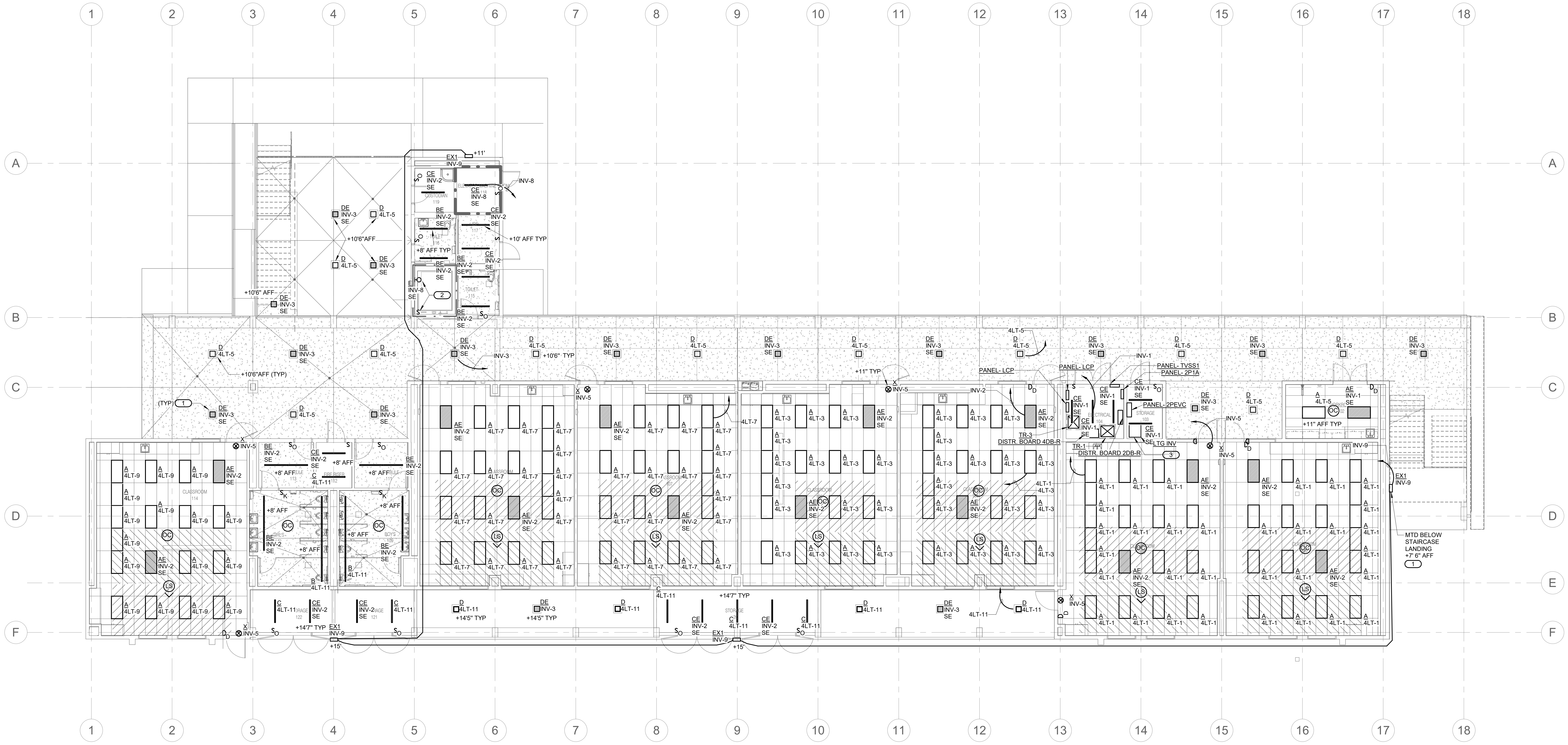
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SITE PLAN - ELECTRICAL
REMODEL EGRESS
PHOTOMETRIC

SHEET NO:

E101P



FIRST FLOOR PLAN - LIGHTING

1 — 1/8" = 1'-0"

NORTH

GENERAL NOTES:

▨ PRIMARY DAYLIGHT ZONE

▧ SECONDARY DAYLIGHT ZONE

A. COORDINATE EXACT LOCATION OF EACH LIGHT FIXTURE WITH MECHANICAL PIPING, CONDUIT, HVAC GRILLES, ETC. FIELD ADJUST ANY LIGHT TO AVOID CONFLICT

B. ALL ELECTRICAL CONTROL DEVICES SHALL BE MOUNTED AT A HEIGHT THAT IS ACCESSIBLE TO THE DISABLED IN ACCORDANCE WITH THE CALIFORNIA ACCESSIBILITY CODE.

C. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT TYPE AND HEIGHT OF CEILING IN EACH ROOM. COORDINATE WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN OF ANY FIXTURES. COORDINATE ALL CONTROL JOINTS LOCATIONS WITH LIGHT FIXTURES PRIOR TO ANY ROUGH-IN OF FIXTURES.

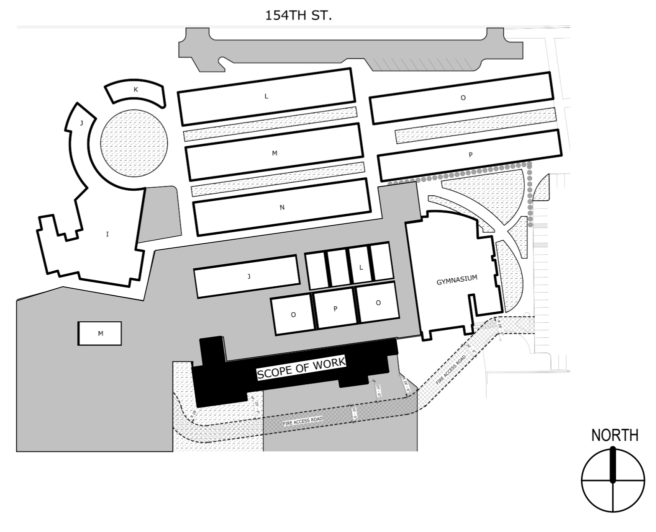
D. PROVIDE CONDUIT AND WIRING AS REQUIRED TO MEET CIRCUITING SHOWN TO CONFORM TO NEC REQUIREMENTS. PROVIDE EQUIPMENT GROUND CONDUCTOR IN ALL RACEWAYS.

E. REFER TO ELECTRICAL DETAIL DRAWINGS FOR MOUNTING HEIGHTS OF ALL WALL MOUNTED ELECTRICAL DEVICES.

F. ALL 2x4 LIGHT FIXTURE, OCCUPANCY SENSOR, AND DAYLIGHT SENSOR ARE IN CLASSROOM LOCATION SHALL BE LOCATED AS +11' AFF, OTHEWISES WILL BE NOTED.

KEYNOTES: (#)

1. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED VIA LIGHTING CONTROL PANEL.
2. DEVICES ARE IN THE ELEVATOR PIT LOCATION.
3. 10 KVA LIGHTING INVERTER IPS.



KEYMAP

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

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P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL

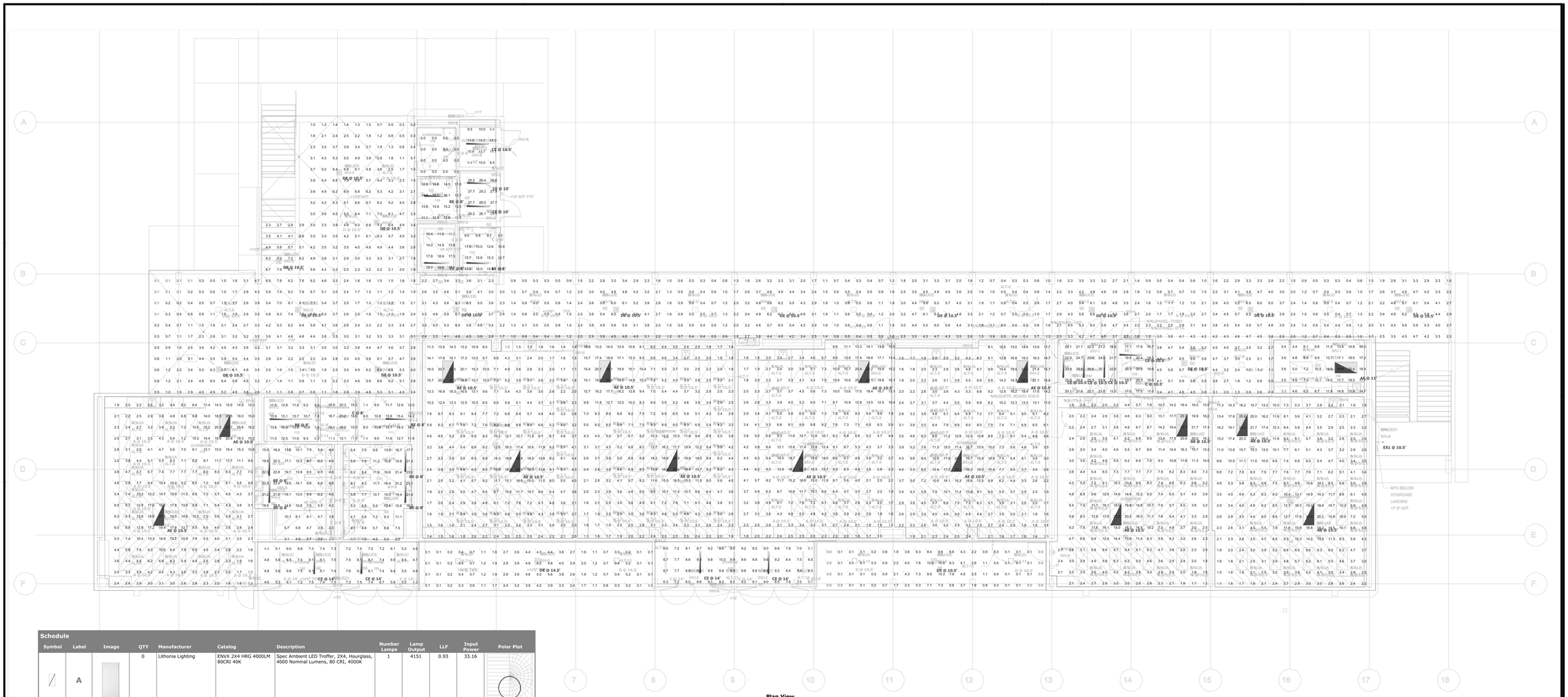
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR PLAN - LIGHTING

SHEET NO:
E201



Plan View
Scale - 1" = 7ft

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		0	Lithonia Lighting	ENVX 2X4 HRG 4000LM 80CRI 40K	Spec Ambient LED Troffer, 2X4, Hourglass, 4000 Nominal Lumens, 80 CRI, 4000K	1	4151	0.93	33.16	Max: 1412cd
	AE		15	Lithonia Lighting	ENVX 2X4 HRG 4000LM 80CRI 40K	Spec Ambient LED Troffer, 2X4, Hourglass, 4000 Nominal Lumens, 80 CRI, 4000K	1	4151	0.93	33.16	Max: 1412cd
	BE		8	a.light			1	2271	0.91	20	Max: 838cd
	C		2	Lithonia Lighting	CLX L48 3000LM SEF WDL MVOLT 40K 80CRI	CLX LED linear 48", 3000 lumens, Standard efficiency, Less louver, Wide diffuse, General, MVOLT, 4000K, 80CRI	1	3061	0.93	18.5164	Max: 985cd
	CE		12	Lithonia Lighting	CLX L48 3000LM SEF WDL MVOLT 40K 80CRI	CLX LED linear 48", 3000 lumens, Standard efficiency, Less louver, Wide diffuse, General, MVOLT, 4000K, 80CRI	1	3061	0.93	18.5164	Max: 985cd
	D		0	LEDRABRANDS	NUE4-QD-SW-15LM-30K--90-60D-DL-WH-WH	NUE 4 inch Downlight 60 degrees,Diffused Lens	1	1194	0.93	15.2	Max: 757cd
	DE		16	LEDRABRANDS	NUE4-QD-SW-15LM-30K--90-60D-DL-WH-WH	NUE 4 inch Downlight 60 degrees,Diffused Lens	1	1194	0.93	15.2	Max: 757cd
	E		0	Lithonia Lighting	OLVTWM	OUTDOOR LED VAPOR TIGHT WALL MOUNT WITH 4000K LEDS WITH CAST ALUMINUM HOUSING	1	588	0.89	15.4	Max: 110cd
	EX1		1	Luminis Canada Inc.	SN1105-L1L13	Scena - Surface Round 11in	1	1343	0.89	30.37	Max: 1237cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Classroom 100 @ Task Level	+	7.3 fc	22.4 fc	1.4 fc	16.0:1	5.2:1
Classroom 101 @ Task Level	+	7.5 fc	22.7 fc	1.5 fc	15.1:1	5.0:1
Classroom 105 @ Task Level	+	7.1 fc	22.5 fc	1.3 fc	17.3:1	5.5:1
Classroom 106 @ Task Level	+	7.2 fc	22.2 fc	1.4 fc	15.9:1	5.1:1
Classroom 107 @ Task Level	+	6.9 fc	22.1 fc	1.5 fc	14.7:1	4.6:1
Classroom 108 @ Task Level	+	6.9 fc	22.5 fc	1.0 fc	22.5:1	6.9:1
Classroom 114 @ Task level	+	7.6 fc	22.7 fc	1.5 fc	15.1:1	5.1:1
Custodial	+	13.7 fc	16.5 fc	10.5 fc	1.6:1	1.3:1
Elect 104	+	22.7 fc	26.6 fc	18.8 fc	1.4:1	1.2:1
Elev Machine Rm	+	10.4 fc	11.7 fc	9.4 fc	1.2:1	1.1:1
Elev Pit	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Exterior Canopy	+	2.4 fc	10.8 fc	0.0 fc	N/A	N/A
Exterior Canopy	+	1.7 fc	5.2 fc	0.0 fc	N/A	N/A
Fire Riser 112	+	16.4 fc	20.3 fc	11.4 fc	1.8:1	1.4:1
girls 110	+	10.7 fc	23.4 fc	2.9 fc	8.1:1	3.7:1
IDF	+	26.9 fc	29.2 fc	25.0 fc	1.2:1	1.1:1
North Exterior Under Canopy	+	3.0 fc	8.2 fc	0.1 fc	82.0:1	30.0:1
Restoom 116	+	15.4 fc	19.9 fc	10.3 fc	1.9:1	1.5:1
Stoage 103	+	18.8 fc	20.8 fc	16.6 fc	1.3:1	1.1:1
Storage 121	+	8.5 fc	10.0 fc	6.1 fc	1.6:1	1.4:1
Storage 123	+	6.6 fc	8.1 fc	4.4 fc	1.8:1	1.5:1
Storage 123(Copy)	+	6.6 fc	8.2 fc	4.3 fc	1.9:1	1.5:1
Toilet 115	+	12.5 fc	16.0 fc	8.8 fc	1.8:1	1.4:1
Vest 111	+	11.5 fc	15.4 fc	7.4 fc	2.1:1	1.6:1
Vest 113	+	11.3 fc	15.1 fc	6.9 fc	2.2:1	1.6:1
Work Room 102 @ Task Level	+	11.0 fc	20.4 fc	3.3 fc	6.2:1	3.3:1
Boys 109	+	11.0 fc	23.2 fc	3.6 fc	6.4:1	3.1:1

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Exp. 6-30-2025
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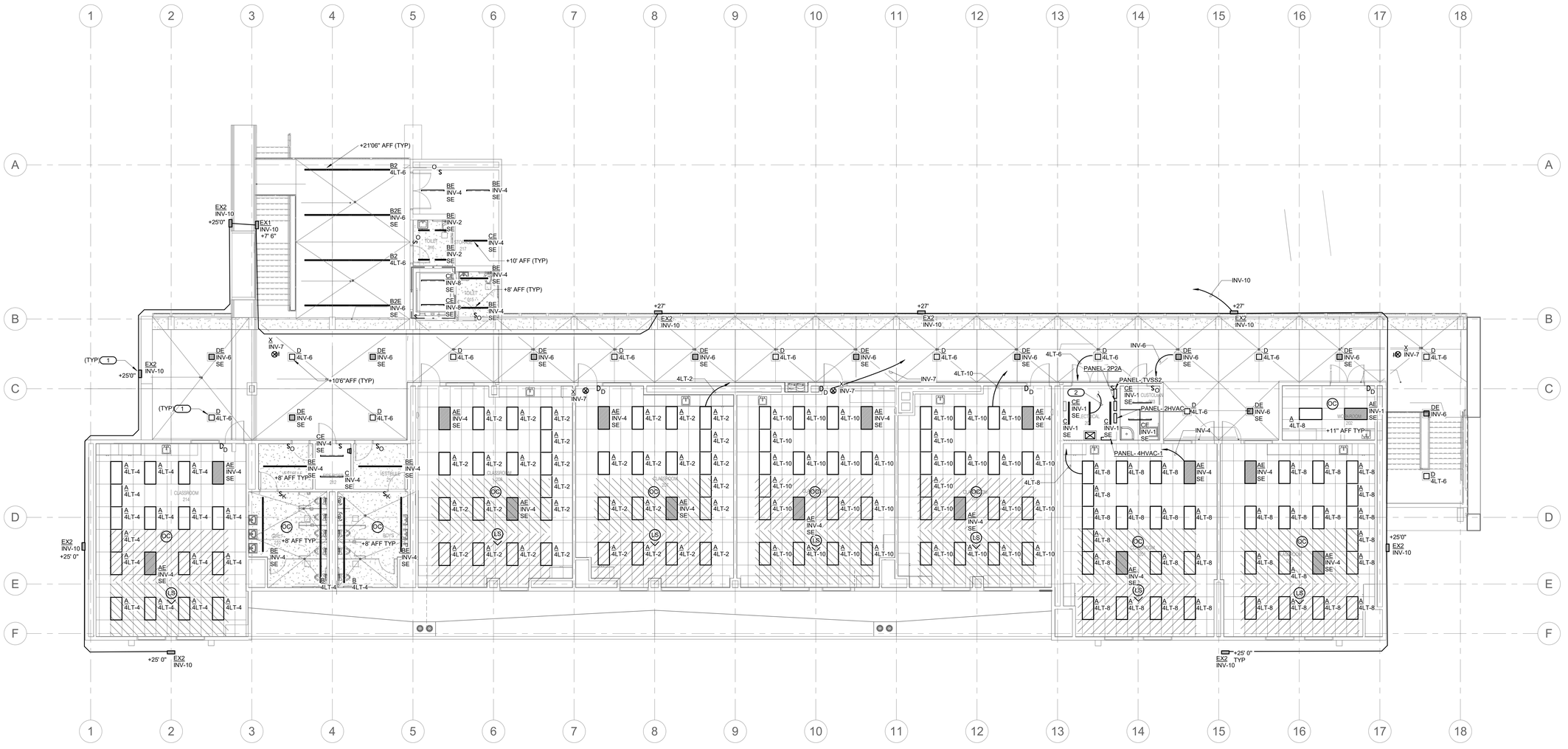
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC

SHEET NO:

E201P



1 SECOND FLOOR PLAN - LIGHTING

1/8" = 1'-0"

NORTH

GENERAL NOTES:

PRIMARY DAYLIGHT ZONE

SECONDARY DAYLIGHT ZONE

A. COORDINATE EXACT LOCATION OF EACH LIGHT FIXTURE WITH MECHANICAL PIPING, CONDUIT, HVAC GRILLES, ETC. FIELD ADJUST ANY LIGHT TO AVOID CONFLICT

B. ALL ELECTRICAL CONTROL DEVICES SHALL BE MOUNTED AT A HEIGHT THAT IS ACCESSIBLE TO THE DISABLED IN ACCORDANCE WITH THE CALIFORNIA ACCESSIBILITY CODE.

C. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT TYPE AND HEIGHT OF CEILING IN EACH ROOM. COORDINATE WITH ARCHITECT/ENGINEER PRIOR TO ROUGH-IN OF ANY FIXTURES. COORDINATE ALL CONTROL JOINTS LOCATIONS WITH LIGHT FIXTURES PRIOR TO ANY ROUGH-IN OF FIXTURES.

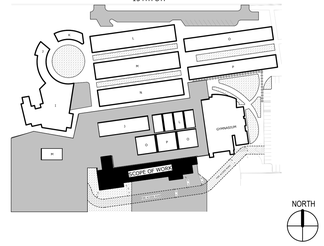
D. PROVIDE CONDUIT AND WIRING AS REQUIRED TO MEET CIRCUITING SHOWN TO CONFORM TO NEC REQUIREMENTS. PROVIDE EQUIPMENT GROUND CONDUCTOR IN ALL RACEWAYS.

E. REFER TO ELECTRICAL DETAIL DRAWINGS FOR MOUNTING HEIGHTS OF ALL WALL MOUNTED ELECTRICAL DEVICES.

F. ALL 2x4 LIGHT FIXTURE, OCCUPANCY SENSOR, AND DAYLIGHT SENSOR ARE IN CLASSROOM LOCATION SHALL BE LOCATED AS +11' AFF, OTHEWISES WILL BE NOTED.

KEYNOTES: (#)

1. ALL EXTERIOR LIGHTING SHALL BE CONTROLLED VIA LIGHTING CONTROL PANEL.



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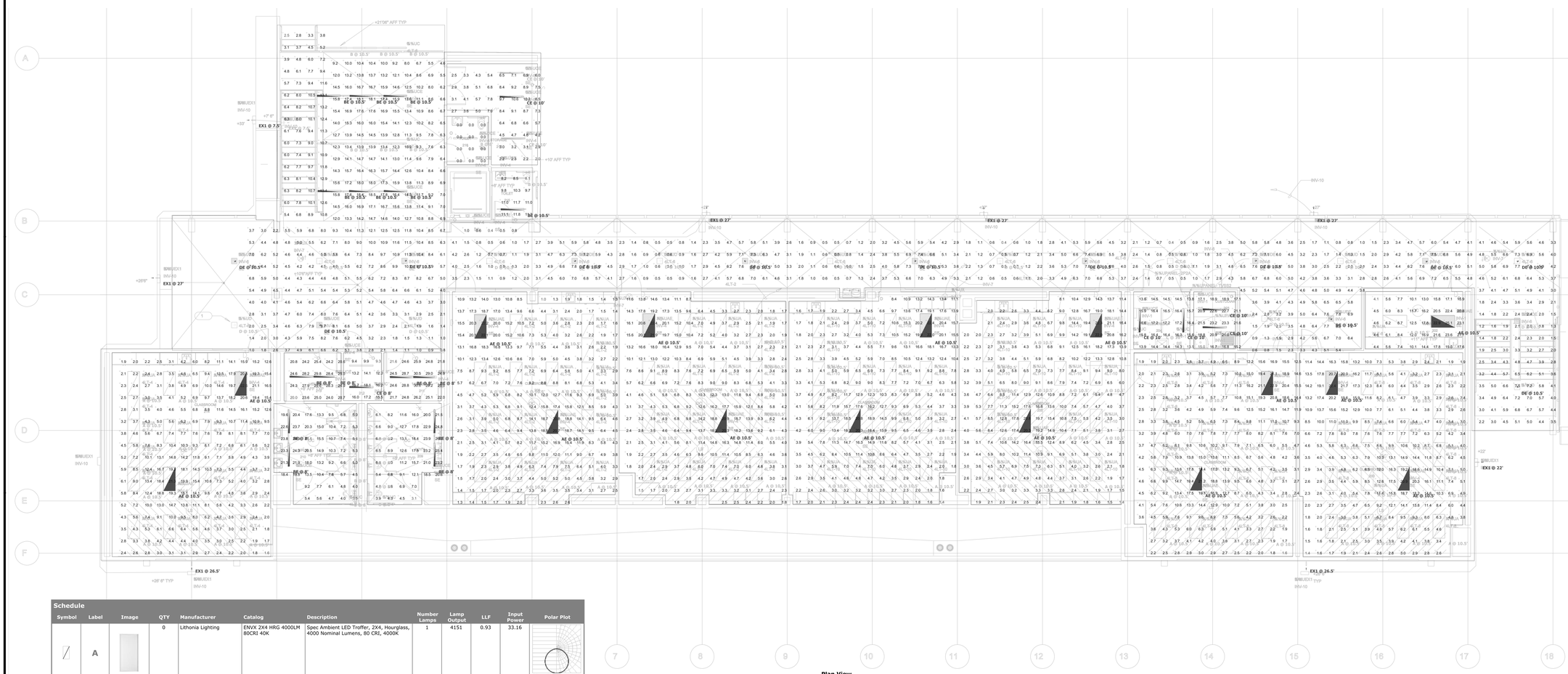
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SECOND FLOOR PLAN - LIGHTING

SHEET NO:

E202



Plan View
Scale - 1" = 7ft

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		0	Lithonia Lighting	ENVX 2X4 HRG 4000LM 80CRI 40K	Spec Ambient LED Troffer, 2X4, Hourglass, 4000 Nominal Lumens, 80 CRI, 4000K	1	4151	0.93	33.16	Max: 1412cd
	AE		15	Lithonia Lighting	ENVX 2X4 HRG 4000LM 80CRI 40K	Spec Ambient LED Troffer, 2X4, Hourglass, 4000 Nominal Lumens, 80 CRI, 4000K	1	4151	0.93	33.16	Max: 1412cd
	B		0	a.light		DS4LS40UHE	1	2271	1	20	Max: 838cd
	BE		15	a.light		DS4LS40UHE	1	2271	1	20	Max: 838cd
	C		0	Lithonia Lighting	CLX L48 3000LM SEF WDL MVOLT 40K 80CRI	CLX LED linear 48", 3000 lumens, Standard efficiency, Less louver, Wide diffuse, General, MVOLT, 4000K, 80CRI	1	3061	0.93	18.5164	Max: 985cd
	CE		6	Lithonia Lighting	CLX L48 3000LM SEF WDL MVOLT 40K 80CRI	CLX LED linear 48", 3000 lumens, Standard efficiency, Less louver, Wide diffuse, General, MVOLT, 4000K, 80CRI	1	3061	0.93	18.5164	Max: 985cd
	D		0	LEDRABRANDS	NUE4-QD-SW-1SLM-30K--90-60D-DL-WH-WH	NUE 4 inch Downlight 60 degrees,Diffused Lens	1	1194	0.93	15.2	Max: 757cd
	DE		12	LEDRABRANDS	NUE4-QD-SW-1SLM-30K--90-60D-DL-WH-WH	NUE 4 inch Downlight 60 degrees,Diffused Lens	1	1194	0.93	15.2	Max: 757cd
	E		0	Lithonia Lighting	OLVTWM	OUTDOOR LED VAPOR TIGHT WALL MOUNT WITH 4000K LEDS WITH CAST ALUMINUM HOUSING	1	588	0.89	15.4	Max: 110cd
	EX1		8	Luminis Canada Inc.	SN1105-L1L13	Scena - Surface Round 11in	1	1343	0.89	30.37	Max: 1237cd

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Classrom 200 @ Task Level	+	7.4 fc	22.4 fc	1.4 fc	16.0:1	5.3:1
Classroom 201 @ Task Level	+	7.5 fc	22.9 fc	1.6 fc	14.3:1	4.7:1
Classroom 205 @ Task Level	+	7.2 fc	22.3 fc	1.4 fc	15.9:1	5.1:1
Classroom 206 @ Task Level	+	7.1 fc	22.4 fc	1.4 fc	16.0:1	5.1:1
Classroom 207 @ Task Level	+	7.3 fc	22.4 fc	1.5 fc	14.9:1	4.9:1
Classroom 208@ Task Level	+	7.1 fc	22.2 fc	1.0 fc	22.2:1	7.1:1
Classroom 214 @ Task Level	+	7.6 fc	22.5 fc	1.6 fc	14.1:1	4.8:1
Custodian	+	19.6 fc	23.3 fc	15.0 fc	1.6:1	1.3:1
Electrical 204	+	15.5 fc	17.2 fc	13.5 fc	1.3:1	1.1:1
Fire Riser 212	+	14.0 fc	18.1 fc	9.3 fc	1.9:1	1.5:1
Grils 210	+	12.3 fc	24.9 fc	3.5 fc	7.1:1	3.5:1
North exterior Canopy	+	5.6 fc	18.5 fc	0.4 fc	46.3:1	14.0:1
Restoom 215	+	10.2 fc	11.8 fc	8.1 fc	1.5:1	1.3:1
Stairs	+	7.9 fc	13.4 fc	2.5 fc	5.4:1	3.2:1
Storage 217	+	5.6 fc	10.6 fc	2.0 fc	5.3:1	2.8:1
Toilet 216	+	0.0 fc	0.0 fc	0.0 fc	N/A	N/A
Vest 211	+	25.7 fc	30.6 fc	21.6 fc	1.4:1	1.2:1
Vest 213	+	25.0 fc	29.8 fc	20.0 fc	1.5:1	1.3:1
Workroom @ Task level	+	13.3 fc	25.1 fc	4.1 fc	6.1:1	3.2:1
Boys 209	+	12.9 fc	26.0 fc	3.1 fc	8.4:1	4.2:1

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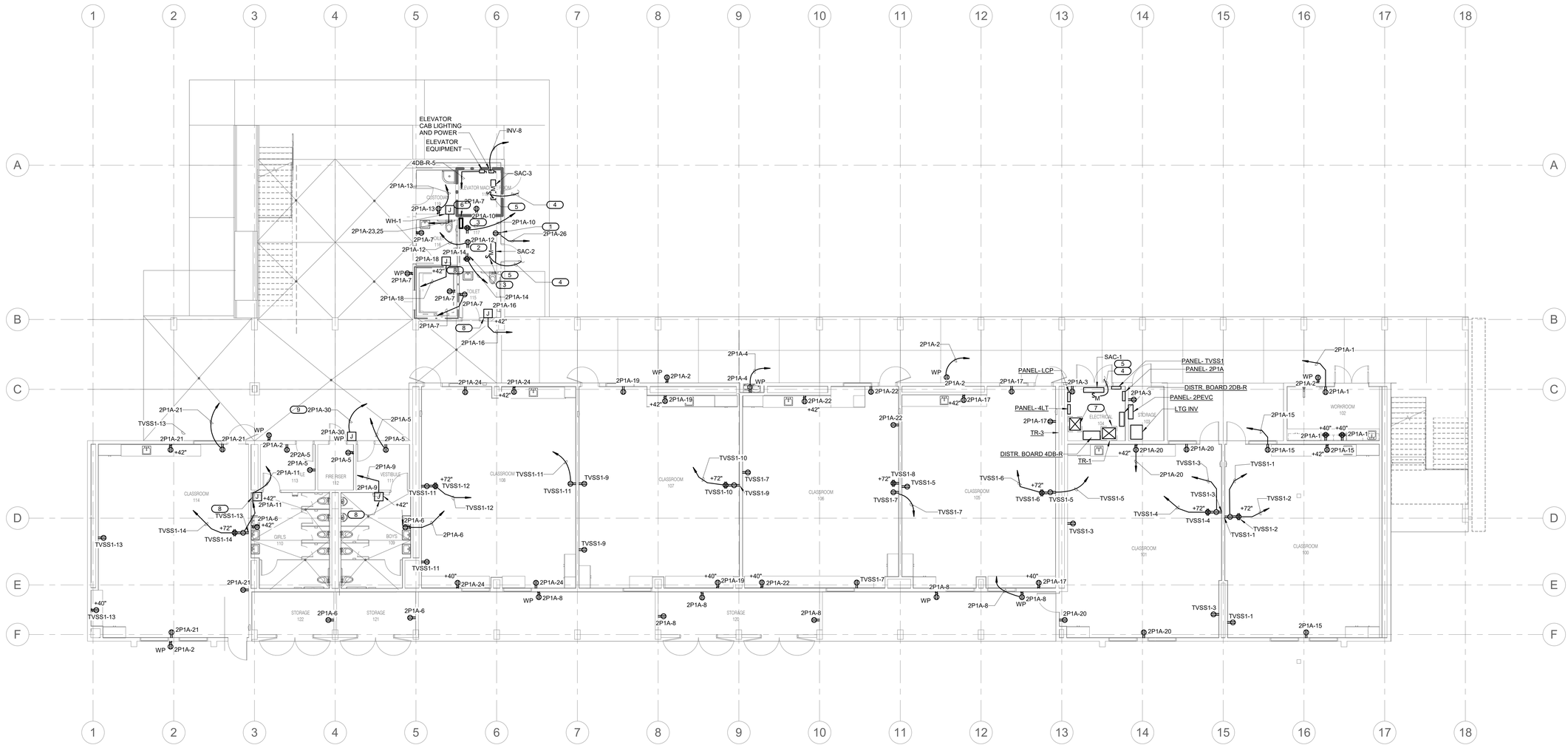
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SECOND FLOOR PLAN - LIGHTING EGRESS PHOTOMETRIC

SHEET NO:

E202P



FIRST FLOOR PLAN - POWER

1/8" = 1'-0"

GENERAL NOTES:

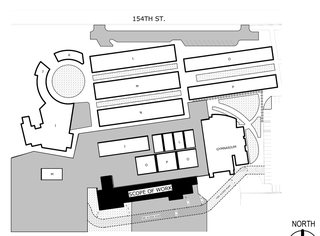
A. ALL RECEPTACLE OUTLETS IN CLASSROOM AND BATHROOMS SHALL BE TAMPER RESISTANT ROOF RECEPTACLE TYPE.

B. ALL RECEPTACLE SHALL BE MOUNTED AT 18" AFF TO THE TOP OF THE OUTLET BOX TO MEET ADA SECTION 4.27. 3. OTHERWISE WILL BE NOTED ON THE PLAN.

C. ALL EXTERIOR RECEPTACLE, OR RECEPTACLE IN RESTROOM, WET LOCATION SHALL BE GFCI, TAMPER RESISTANT, WEATHER PROOF RECEPTACLE TYPE.

KEY NOTES: (#)

1. SINGLE DATA OUTLET AT INTRUSION PANEL. REFER TO 1/T301 FOR EXACT LOCATION REQUIRED.
2. PROVIDE (1) L6-30R RECEPTACLE FOR OFOI RACK ELECTRONICS. REFER TO 3/T301 FOR EXACT LOCATION REQUIRED.
3. PROVIDE 5-30R RECEPTACLE FOR OFOI RACK ELECTRONICS. REFER TO 3/T301 FOR EXACT LOCATION REQUIRED.
4. CONTINUATION TO OUTDOOR SPLIT UNIT RESPECTIVELY ON THE ROOF. REFER TO ROOF PLAN E203 FOR WIRING DIAGRAM.
5. PROVIDE 240V, 20A, 2P MECHANICAL TOGGLE SWITCH.
6. 1" C LONG WALL-MOUNTED GROUND BAR AT +24". RUN 1"C 1#6 GND TO DISTRIBUTIONBOARD-DBS.
7. PROVIDE HOUSEKEEPING PAD. REFER TO 6/E501.
8. HAND DRYER, REFER TO A601 FOR ELEVATION MOUNTING DETAIL.
9. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM BELL' TO CIRCUIT ID.



KEYMAP

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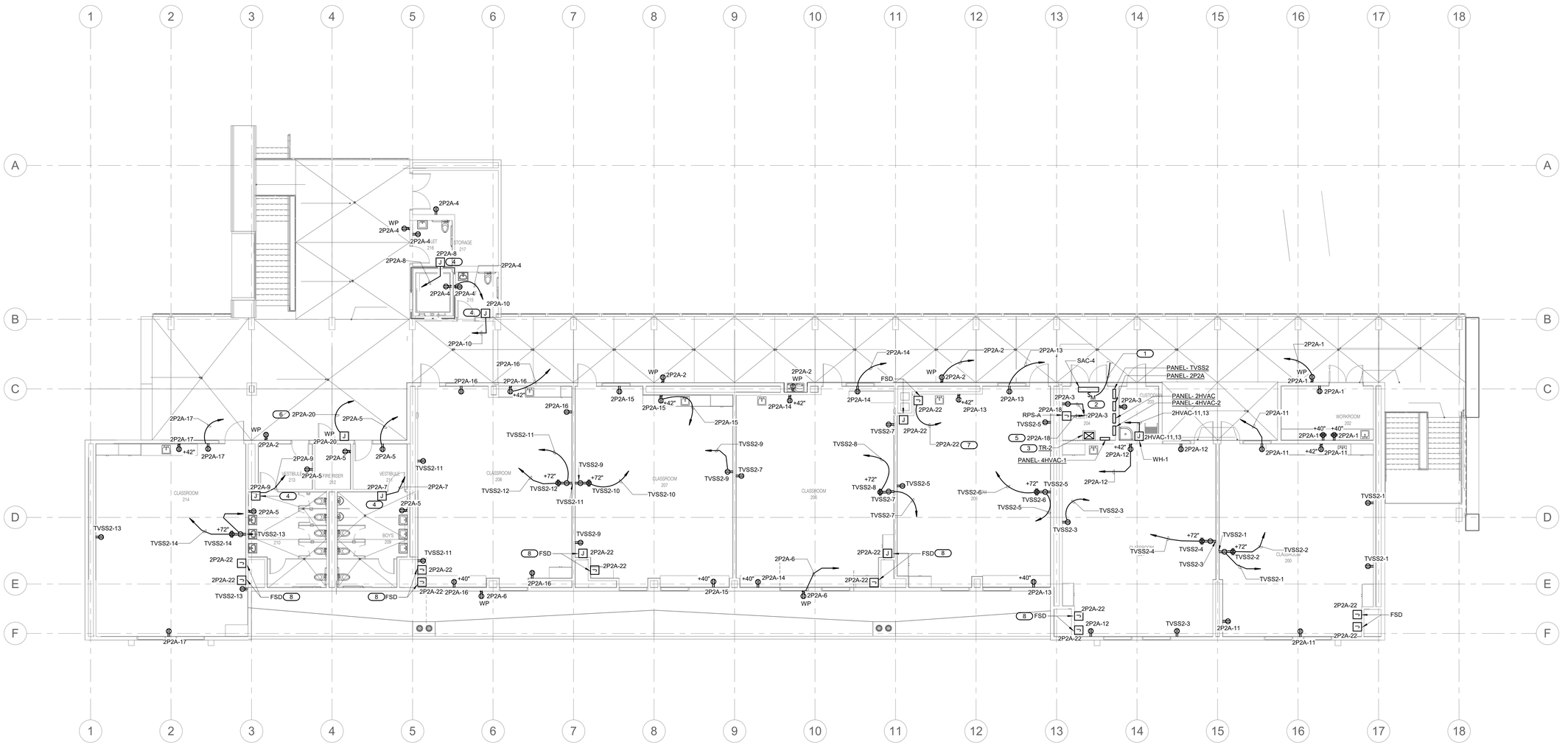
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ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR PLAN - POWER

SHEET NO:

E301



NORTH

1 SECOND FLOOR PLAN - POWER

1/8" = 1'-0"

GENERAL NOTES:

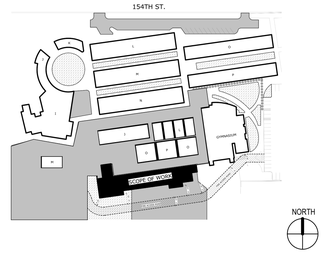
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B. ALL RECEPTACLE SHALL BE MOUNTED AT 18" AFF TO THE TOP OF THE OUTLET BOX TO MEET ADA SECTION 4.27. 3. OTHERWISE WILL BE NOTED ON THE PLAN.

C. ALL EXTERIOR RECEPTACLE, OR RECEPTACLE IN RESTROOM, WET LOCATION SHALL BE GFCI, TAMPER RESISTANT, WEATHER PROOF RECEPTACLE TYPE.

KEY NOTES: (#)

1. CONTINUATION TO OUTDOOR SPLIT UNIT RESPECTIVELY ON THE ROOF. REFER TO ROOF PLAN E203 FOR WIRING DIAGRAM.
2. PROVIDE 240V, 20A, 2P MECHANICAL TOGGLE SWITCH.
3. PROVIDE HOUSEKEEPING PAD. REFER TO 6/E501.
4. HAND DRYER, REFER TO A601 FOR ELEVATION MOUNTING DETAIL.
5. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM PANEL' TO CIRCUIT ID.
6. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM BELL' TO CIRCUIT ID.
7. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE DAMPER' TO CIRCUIT ID.
8. PROVIDE 1P MOTOR RATED SWITCH AT EACH FIRE SMOKE DAMPER FOR POWER DISCONNECT.



KEYMAP

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PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

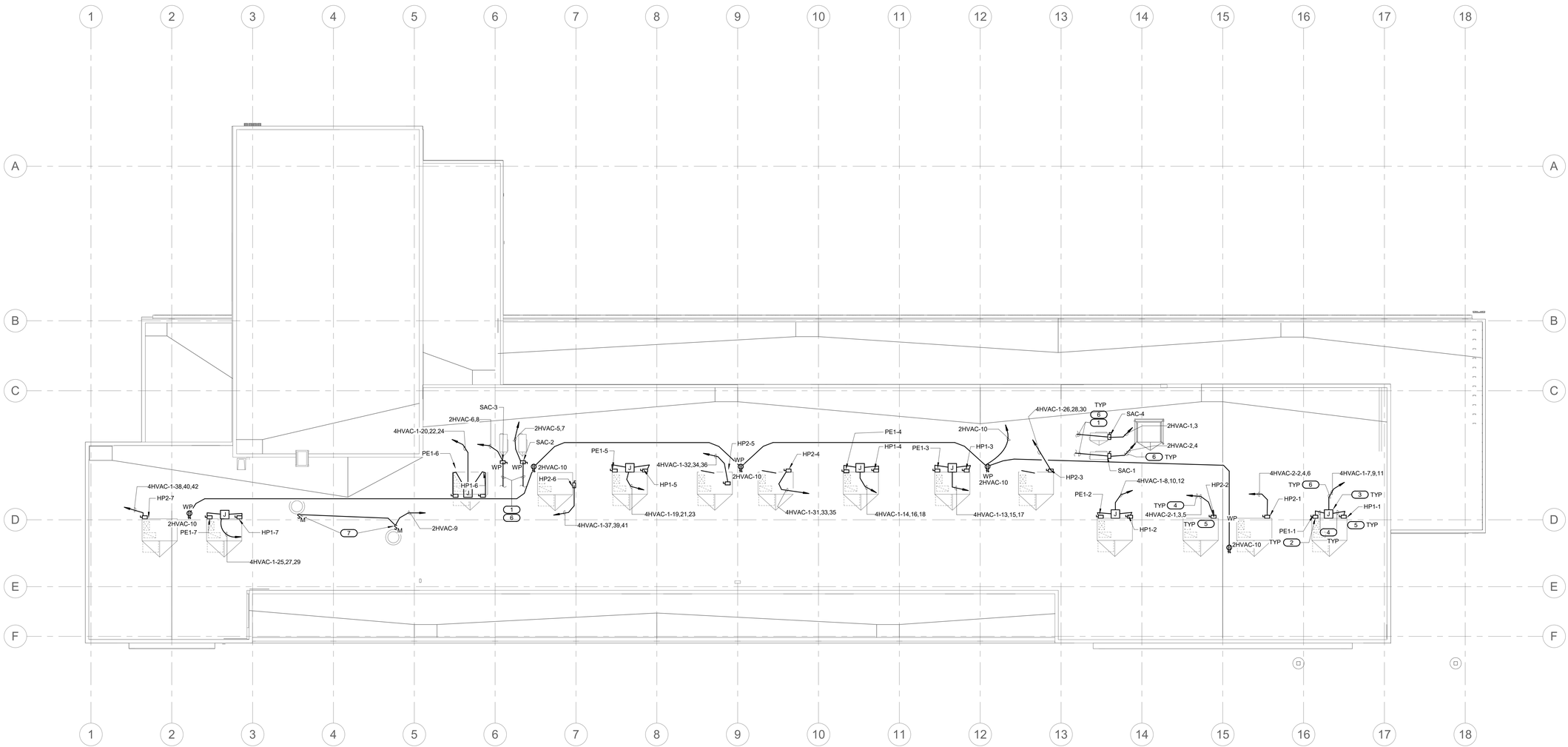
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
SECOND FLOOR PLAN - POWER

SHEET NO:

E302



ROOF PLAN - POWER

1/8" = 1'-0"

ELECTRICAL EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	SUPPLY EQUIPMENT RATING						DISC SW	WIRE AND RACEWAY
		VOLTS	PH	(W)	FLA	MCA	MOCP		
HP-1-1	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-2	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-3	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-4	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-5	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-6	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-1-7	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#12 & 1#12 GND - 3/4"C
HP-2-1	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-2	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-3	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-4	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-5	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-6	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
HP-2-7	HEAT PUMP UNIT	480	3	9715.68	10.4	13	20	30AS/30AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-1	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-2	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-3	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-4	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-5	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-6	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
PE-1-7	POWER EXHAUST	480	3	1419.984	1.5	1.9	3.4	30AS/5AF/3P	3#10 & 1#10 GND - 3/4"C
SAC-1	SPLIT UNIT	208	1	2912		14	25	30AS/25AF/2P	2#10 & 1#10 GND - 3/4"C
SAC-2	SPLIT UNIT	208	1	3536		17	25	30AS/25AF/2P	2#10 & 1#10 GND - 3/4"C
SAC-3	SPLIT UNIT	208	1	6240		30	40	60AS/40AF/2P	2#10 & 1#10 GND - 3/4"C
SAC-4	SPLIT UNIT	208	1	2912		14	25	30AS/25AF/2P	2#10 & 1#10 GND - 3/4"C
EF-1-1	FAN	115	1	75				$(20)	2#12 & 1#12 GND - 1/2"C
EF-1-2	FAN	115	1	75				$(20)	2#12 & 1#12 GND - 1/2"C

AC-UNIT SCHEDULE

12" = 1'-0"

GENERAL NOTES:

A. ALL RECEPTACLE, J-BOX, AND DISCONNECT SWITCH LOCATED ON THE ROOF PLAN SHALL BE WEATHER PROOF RATED.

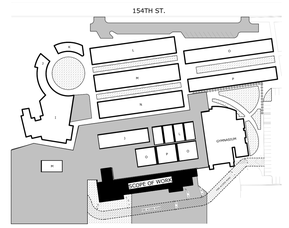
B. ALL ROOF RECEPTACLE SHALL BE GFCI RECEPTACLE WEATHER PROOF TYPE WHILE IN USE.

C. COORDINATE WITH MECHANICAL AND ARCHITECTURAL DRAWING TO VERIFY EXACT LOCATION OF EQUIPMENTS PRIOR TO MOUNTING ELECTRICAL DEVICE, EQUIPMENT, AND DISCONNECT SWITCHES.

D. CONTRACTOR SHALL COORDINATE WITH MECHANICAL AND FIELD VERIFY FOR EXACT ROOF UNITS LOCATION FOR MOUNTING ELECTRICAL EQUIPMENT AND ROUTING CONDUIT.

KEYS NOTE: (#)

1. CONTINUATION TO INDOOR SPLIT UNIT. REFER TO FLOOR PLAN POWER FOR WIRING DIAGRAM.
2. MOUNT POWER EXHAUSTED FUSED DISCONNECT ON UNIT. COORDINATE WITH UNIT MANUFACTURE.
3. MOUNT WALLED-MOUNTED JUNCTION BOX ON THE UNIT.
4. SEE AC-UNIT SCHEDULE 2/E303 FOR CONDUIT WIRING SIZE, AND DISCONNECT SWITCH SIZE PRIOR TO ROUTE CONDUIT.
5. MOUNT UNIT FUSED DISCONNECT ON UNIT. COORDINATE WITH UNIT MANUFACTURE.
6. RUN 3#10, 1#10 GND IN 3/4" C TO ELECTRICAL PANEL. SEE 6/E303 FOR ROOF CONDUIT PENETRATION DETAIL.
7. PROVIDE 120V/20A/1P MOTOR RATED WEATHERPROOF TOGGLE SWITCH FOR EF UNIT TYPICALLY. STUB UP 3/4" GRS CONDUIT AND MOUNT WEATHERPROOF MOTOR RATED SWITCH ON TOP AT 15".



KEYMAP

STATE:

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APP: 03-123867 INC:
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DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

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www.imegcorp.com
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P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
STATE OF CALIFORNIA

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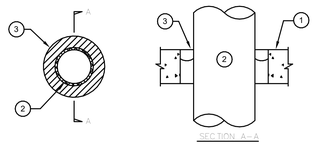
SHEET DESCRIPTION:
ROOF PLAN - POWER

SHEET NO:

E303

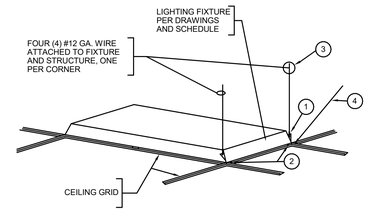
KEY NOTES:

1. CONCRETE FLOOR OR WALL PER ARCHITECTURAL/STRUCTURAL DRAWINGS. MAX. DIA. OF THROUGH OPENING IS 12 1/4".
2. CONDUIT SIZE PER DRAWINGS.
3. FIRE STOP SYSTEM-TWO HOUR MOLDABLE PUTTY MATERIAL KNEADED BY HAND AND PACKED TIGHTLY INTO ANNULAR SPACE, FLUSH WITH FLOOR. IN WALL ASSEMBLIES, REQUIRED PUTTY THICKNESS TO BE INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL.



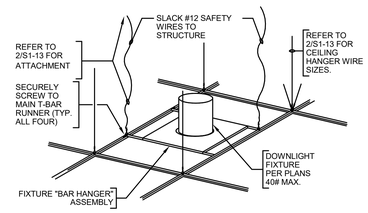
NOTES:
a. MAX. DIA. OF OPENING IS 12 1/4". MINIMUM FILL MATERIAL THICKNESS OF 1/2" IS REQUIRED.
b. MUST BE U.L. APPROVED SYSTEM.

CONDUIT PENETRATION THRU 2-HOUR CONCRETE FLOOR/WALL DETAIL — NTS — 1

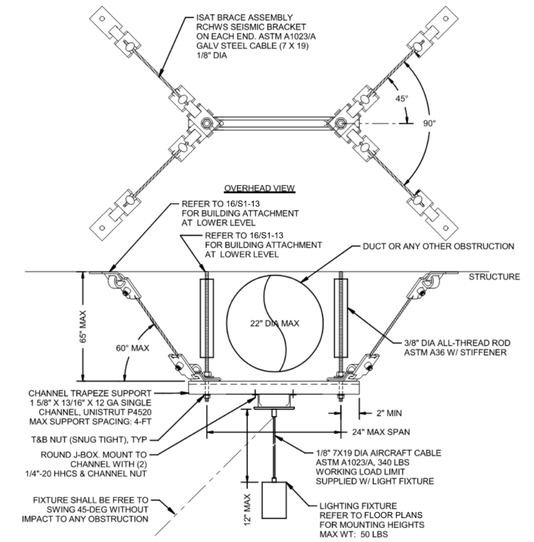


NOTES:
1. ATTACH WIRE TO FIXTURE (3 TIGHT TURNS MIN. IN 1 1/2" MAX.).
2. "TEK" SCREW GRID TO FIXTURE @ EACH CORNER.
3. ATTACH HANGER WIRES TO STRUCTURE AS PER 2/S1-13.
4. CEILING SYSTEM SPLAY/HANGER WIRES AS OCCURS, SEE PLANS.

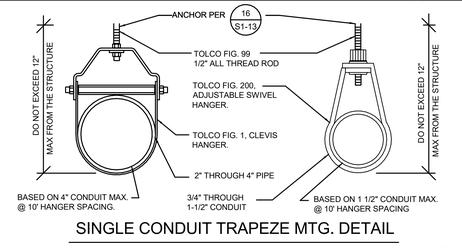
RECESSED LAY-IN CEILING FIXTURE MOUNTING DETAIL — NTS — 2



RECESSED DOWNLIGHT GRID DETAIL — NTS — 3

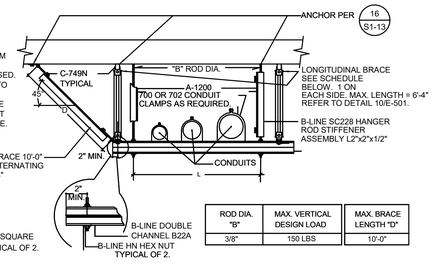


SUSPENDED LIGHT MOUNTING I.W.O OPEN TO STRUCTURE — NTS — 4



SINGLE CONDUIT TRAPEZE MTG. DETAIL

NOTES:
1. TRAPEZE SHALL BE SPACED 10'-0" MAXIMUM ON CENTER.
2. MIN. 3/8" ROD TO BE USED.
3. TRANSVERSE BRACE TO BE PROVIDED ON ONE SIDE AT EACH TRAPEZE ALTERNATING SIDES AT EVERY OTHER TRAPEZE.

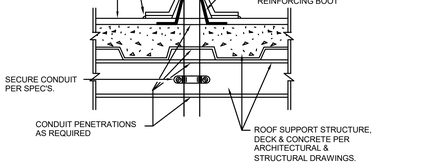


ROD DIA. "B"	MAX. VERTICAL DESIGN LOAD	MAX. BRACE LENGTH "D"
3/8"	150 LBS	10'-0"

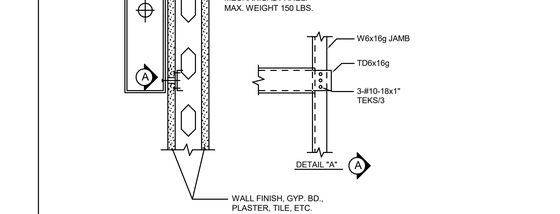
MULTI-CONDUIT TRAPEZE MTG. DETAIL

CONDUIT TRAPEZE MOUNTING DETAIL — NTS — 5

CONDUIT SUPPORT ON ROOF DETAIL — NTS — 6



CONDUIT ROOF PENETRATION DETAIL — NTS — 7



SURFACE MOUNTED PANEL/CABINET STEEL FRAMING — NTS — 8

2'-0"x3'-0"x3'6" DEEP PULL BOX — NTS — 9

UNDERGROUND CONDUIT PLACEMENT DETAIL — NTS — 10

SYMBOL	A H"	B W"	C D"	WEIGHT LBS	MIN. NO ANCHORS	SIZE OF ANCHORS	MINIMUM EMBEDMENT	MOUNTING ANCHORS	NOTE
TR-1 (150KVA)	46.5"	28"	23"	870	4	1/2" ø	3 3/4"	FLOOR	2
TR-2 (30KVA)	30.13"	20.13"	14.13"	300	4	1/2" ø	3 3/4"	FLOOR	1
TR-3 (112.5KVA)	39.38"	26.13"	23"	675	4	1/2" ø	3 3/4	FLOOR	2

NOTES: 1. REFER TO 5/ S1-13 AT 2ND FLOOR DECK PAD.
2. REFER TO 8/ S1-1 FOR SLAB ON GRADE PAD.

TRANSFORMER MOUNTING DETAIL — NTS — 11

GROUND BUS MOUNTING DETAIL — NTS — 12

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ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

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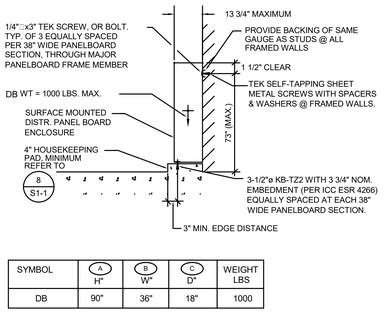
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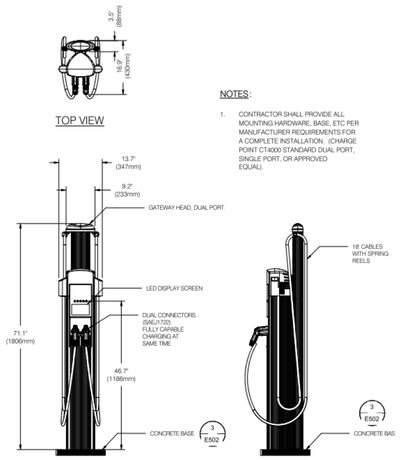
SHEET DESCRIPTION:
ELECTRICAL DETAILS

SHEET NO:
E501

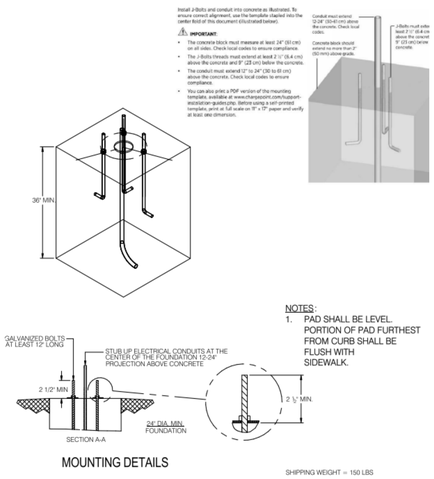


SYMBOL	A H"	B W"	C D"	WEIGHT LBS
DB	90"	36"	18"	1000

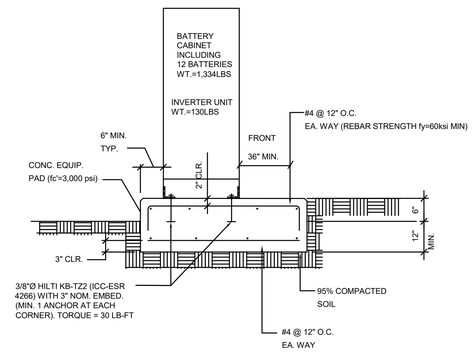
DISTRIBUTION PANELBOARD ANCHORAGE | NTS | 1



EV CHARGING STATION ELEVATION DETAIL | NTS | 2



EV CHARGING STATION MOUNTING DETAIL | NTS | 3



INVERTER/BATTERY CABINET ANCHORAGE DETAIL | NTS | 4

POLE BASE DETAIL | NTS | 5

NOT USED | NTS | 6

NOT USED | NTS | 7

NOT USED | NTS | 8

NTS | 9

NOT USED | NTS | 10

NOT USED | NTS | 11

NOT USED | NTS | 12

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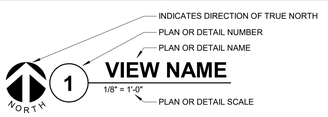
SHEET DESCRIPTION:
ELECTRICAL DETAILS

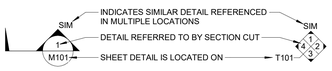
SHEET NO:
E502

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
——— NEW
– – – – – – EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
— — — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)
——— EXISTING
– – – – – – EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)
— — — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG-1 UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1

2022 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2
(2021 INTERNATIONAL BUILDING CODE (IBC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
(2020 NATIONAL ELECTRICAL CODE (NEC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4
(2021 UNIFORM MECHANICAL CODE (UMC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5
(2021 UNIFORM MECHANICAL CODE (UPC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6

2022 CALIFORNIA HISTORICAL BUILDING CODE (CHBC)
CALIFORNIA CODE OF REGULATIONS (CHBC) TITLE 24, PART 8

2022 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA CODES OF REGULATIONS (CRR) TITLE 24, PART 9
(2021 INTERNATIONAL FIRE CODE (IFC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 10
(2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC))

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
CALIFORNIA CODES OF REGULATIONS (CCR) TITLE 24, PART 11

2022 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA DOE OF REGULATIONS (CCR) TITLE 24, PART 12

AMERICANS WITH DISABILITIES ACT (ADA)
TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE
ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2022 EDITION
(CA AMENDED)

NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE 2022 EDITION (CA AMENDED)

CONTRACTOR ABBREVIATION KEY

ABBR:	DESCRIPTION:
A.V.C.	AUDIO/VISUAL CONTRACTOR
C.C.	CIVIL CONTRACTOR
C.M.	CONSTRUCTION MANAGER
E.C.	ELECTRICAL CONTRACTOR
F.P.C.	FIRE PROTECTION CONTRACTOR
G.C.	GENERAL CONTRACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
S.C.	SECURITY CONTRACTOR
T.C.	TECHNOLOGY CONTRACTOR

APPLICABLE CODE: 2022 CBC

MEP COMPONENT ANCHORAGE NOTE

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

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

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

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

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

APPLICABLE CODE: 2022 CBC

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

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

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

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

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

MP ☐ MD ☐ PP ☐ E ☐ OPTION 2: SHALL COMPLY WITH HCAI (OSHPD) PREAPPROVAL (OPM #) #_____, AS INCLUDED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS.

TECHNOLOGY SYMBOL LIST

SYMBOL:	EQUIPMENT LIST ABBREV.:	DESCRIPTION:	NOTE:
C#	SC-IO-W	INFORMATION OUTLET (WALL)	1.
RI	SC-RI-W	INFORMATION OUTLET ROUGH-IN (WALL)	.
W	SC-IO-W	INFORMATION OUTLET WALL PHONE (WALL)	1.
C#	SC-IO-C	INFORMATION OUTLET (CEILING)	1.
###	AV-###-W	AV WALLPLATE/BACKBOX (WALL)	3.
CSS	N/A	CONTROLLED SECURITY SCHEME SCHEDULE IDENTIFIER	2.
R#	AC-R#-W	SECURITY CREDENTIAL READER (WALL)	.
K#	ID-K#-W	INTRUSION DETECTION KEYPAD (WALL)	.
M	ID-MD#-C	INTRUSION DETECTION MOTION DETECTOR (CEILING)	.
S	PA-S1-C	FACILITY PAGING SPEAKER (CEILING)	.
S S#	PA-S#-W	FACILITY PAGING SPEAKER (WALL)	3.
AMS	AR-AMS-W	ASSISTANCE MASTER STATION	.
AA1	AR-AA1-W	AREA OF RESCUE CALL STATION (WALL)	.
WIDTH X HEIGHT		CABLE TRAY, CHANNEL TRAY, BASKET TRAY	
WIDTH X HEIGHT		LADDER RACK	
DIAMETER⌀ C		CONDUIT	
		CONDUIT DOWN	
		CONDUIT UP OR UP/DOWN	
		CONDUIT SLEEVE	
		CONTINUATION	

GENERAL NOTES:

1. ALL SYMBOLS AND ABBREVIATIONS LISTED MAY NOT BE APPLICABLE TO THIS PROJECT. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR MORE COMPLETE DESCRIPTION AND ITEMS.
2. ALL SYMBOLS AND ABBREVIATIONS REFER TO TECHNOLOGY SHEETS ONLY AS DEFINED ON THE SHEET INDEX. REFER TO THE GENERAL TECHNOLOGY NOTES FOR ADDITIONAL INFORMATION.
3. ALL SYMBOLS LISTED ABOVE ARE FOR REFERENCE ONLY. REFER TO PLANS AND LINE TYPE KEY FOR NEW, EXISTING TO REMAIN AND TO BE REMOVED ITEMS FOR ADDITIONAL INFORMATION.
4. REFER TO RISERS ON SHEET(S): T601.

TECHNOLOGY SYMBOL NOTES:

1. "C#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION. REFER TO INFORMATION OUTLET SCHEDULE ON T401 FOR ADDITIONAL INFORMATION.
2. REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE ON T401 FOR ADDITIONAL INFORMATION.
3. SYMBOL SUBSCRIPT INDICATES DEVICE TYPE. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE T401 FOR ADDITIONAL INFORMATION.

TECHNOLOGY ABBREVIATION KEY

ABBR:	DESCRIPTION:
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFC	BELOW FINISHED CEILING
C	CONDUIT
DE	DELAYED EGRESS
DPDT	DOUBLE POLE DOUBLE THROW
FOV	FIELD OF VIEW
J-BOX	JUNCTION BOX
POE	POWER OVER ETHERNET
PTZ	PAN TILT ZOOM
SIM	SIMILAR
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
+#	MOUNTING HEIGHT ABOVE FINISHED FLOOR
MC-#	MAIN CROSS-CONNECT
TR-#	TELECOMMUNICATIONS ROOM

SUGGESTED MATRIX OF RESPONSIBILITY

ITEM:	SHOWN ON:	FURNISHED BY:	INSTALLED BY:	NOTES:
TECHNOLOGY ROUGH-IN, REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR DEFINITION	T-SERIES	E.C.	E.C.	3. 4.
INFORMATION OUTLET FACEPLATES, JACKS, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CONDUIT SLEEVES (WHEN SHOWN ON DRAWINGS)	T-SERIES	E.C.	E.C.	
CONDUIT SLEEVES (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	T.C.	2. 4.
TELECOMMUNICATION SYSTEMS ROUGH-IN	T-SERIES	E.C.	E.C.	1.
TELECOMMUNICATION EQUIPMENT, CABLING, AND TERMINATIONS	T-SERIES	T.C.	T.C.	
CABLE TRAY (INCLUDING WIRE BASKET TRAY) REFER TO SPECIFICATION SECTION 27 05 28 FOR DEFINITION	T-SERIES	E.C.	E.C.	
LADDER RACK	T-SERIES	T.C.	T.C.	5.
GROUNDING LUGS ON TECHNOLOGY EQUIPMENT	T-SERIES	T.C.	E.C.	6.
BONDING SYSTEM FOR TECHNOLOGY SYSTEM, REFER TO SPECIFICATION SECTION 27 05 26 FOR DEFINITION	T-SERIES	E.C.	E.C.	7. 8.
CONNECTION OF TECHNOLOGY BONDING SYSTEM TO THE ELECTRICAL GROUND SYSTEM	T-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (+120V OR GREATER)	E-SERIES	E.C.	E.C.	
LINE VOLTAGE POWER (NOT SHOWN BUT REQUIRED FOR PROPER INSTALLATION OF SYSTEM)	N/A	T.C.	E.C.	2. 4.
LOW VOLTAGE CABLING FOR TECHNOLOGY SYSTEMS	T-SERIES	T.C.	T.C.	
CABLE HANGERS AND SUPPORTS OR OTHER CABLE ROUTING METHODS (OTHER THAN CONDUIT AND CABLE TRAY)	T-SERIES	T.C.	T.C.	5.
TECHNOLOGY SERVICE ENTRANCE CONDUITS, HANDHOLES, AND MANHOLES	T-SERIES	E.C.	E.C.	

SUGGESTED MATRIX OF RESPONSIBILITY NOTES

1. LOCATIONS OF TELECOMMUNICATIONS ROUGH-INS SHALL BE INDICATED BY THE INFORMATION OUTLET SYMBOLS ON THE DRAWINGS. REFER TO THE TECHNOLOGY SYMBOL LIST FOR ADDITIONAL INFORMATION.
2. BASED ON THE INHERENT DIFFERENCES IN PRODUCTS FROM VARIOUS MANUFACTURERS, ALL REQUIRED EQUIPMENT MAY NOT BE SHOWN ON THE DRAWINGS FOR ALL ACCEPTABLE MANUFACTURERS.
3. INCLUDES BACKBOXES AND CONDUIT REQUIRED FOR THE TECHNOLOGY SYSTEMS INSTALLATION. THE E.C. SHALL BASE THE BID ON THE BASIS OF DESIGN SHOWN ON THE CONTRACT DOCUMENTS.
4. ALL CHANGES TO THE SLEEVES, BACKBOXES, CONDUITS, AND POWER REQUIRED BECAUSE OF THE T.C.'S SELECTION OF AN ALTERNATE ACCEPTABLE MANUFACTURER OR FROM SYSTEM CONFIGURATIONS THAT ARE LEFT TO THE CHOICE OF THE CONTRACTOR SHALL BE INCLUDED IN THE T.C.'S BID. THIS BID SHALL INCLUDE INSTALLATION BY A LICENSED ELECTRICIAN.
5. UNLESS TRADE RULES DICTATE OTHERWISE.
6. FURNISHED AS PART OF THE EQUIPMENT WHEN POSSIBLE, OR FURNISHED TO THE E.C. FOR INSTALLATION IN THE FIELD.
7. INCLUDES ALL CONDUCTORS, GROUND BARS, AND TERMINATIONS FOR THE COMPLETE BONDING SYSTEM REQUIRED BY THE SPECIFICATIONS.
8. REFER TO ELECTRICAL DRAWINGS FOR LOCATIONS OF PANELS AND SWITCHBOARDS SHOWN IN THE TECHNOLOGY BONDING RISER DIAGRAM AND TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

TELECOM ROOM REFERENCES

TELECOM ROOM	DETAIL / SHEET REFERENCE	FLOOR PLAN REFERENCE	ARCH ROOM NUMBER
TR-1	1/T301	T201	IDF 117

TECHNOLOGY SHEET INDEX

T001	TECHNOLOGY COVERSHEET
T100	SITE PLAN - TECHNOLOGY DEMOLITION
T101	SITE PLAN - TECHNOLOGY
T201	FIRST FLOOR PLAN - TECHNOLOGY
T202	SECOND FLOOR PLAN - TECHNOLOGY
T301	ENLARGED PLANS - TECHNOLOGY
T401	TECHNOLOGY SCHEDULES
T501	TECHNOLOGY DETAILS
T601	TECHNOLOGY DIAGRAMS
GRAND TOTAL: 9	

TECHNOLOGY GENERAL NOTES:

1. ###-###-# INDICATES TECHNOLOGY EQUIPMENT SCHEDULE ITEM LABELED AS "EQUIPMENT LIST ABBREVIATION"
2. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE AND SPECIFICATIONS FOR FULL DESCRIPTIONS AND MANUFACTURERS OF ALL DEVICES.

TECHNOLOGY MOUNTING SUBSCRIPT KEY:
A MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPLASH
H MOUNT ORIENTED HORIZONTALLY
L MOUNT IN CASEWORK
M MOUNT IN MODULAR FURNITURE
S MOUNT IN SURFACE RACEWAY

A SLASH IS USED BETWEEN TWO SUBSCRIPTS, E.G., A/H.

TECHNOLOGY INSTALLATION NOTES:

1. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN. REFER TO THE ADA GUIDELINES FOR ALL CONFIGURATION DETAILS ON THIS PAGE FOR ADDITIONAL INFORMATION.
2. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, IN FLOOR SLAB, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
3. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. BOXES ON OPPOSITE SIDES OF FIRE RATED WALLS SHALL BE OFFSET A MINIMUM OF 24" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
4. VERIFY ALL FURNITURE, MODULAR FURNITURE, AND EQUIPMENT LOCATIONS WITH ARCHITECTURAL PLANS, ELEVATIONS, AND REVIEWED SHOP DRAWINGS. PRIOR TO MAKING THE ACTUAL TELECOMMUNICATIONS INSTALLATION, ADJUST OUTLETS OR CONNECTION LOCATIONS TO ACCOMMODATE FURNITURE AND/OR EQUIPMENT.
5. TELECOMMUNICATIONS EQUIPMENT SHALL BE MOUNTED TO ALLOW ACCESS TO ELECTRICAL AND MECHANICAL EQUIPMENT. ALL MOUNTING OF TELECOMMUNICATION DEVICES ON EQUIPMENT SUPPLIED BY ANOTHER CONTRACTOR SHALL BE APPROVED IN ADVANCE BY THE OTHER CONTRACTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
7. ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 27 05 03 AND 28 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
8. THE TECHNOLOGY CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF THE CEILINGS, CEILING TILES, AND CEILING GRID ASSOCIATED WITH THE AREAS OF WORK BY ALL CONTRACTORS.
9. ALL LADDER RACK AND CABLE TRAY SIZES ARE AS DEFINED ON THE DRAWINGS. REFER TO SPECIFICATION SECTION 27 05 28 AND 27 11 00 FOR APPROVED MANUFACTURERS AND INSTALLATION REQUIREMENTS.
10. EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.

TECHNOLOGY OUTSIDE PLANT NOTES

1. THE LOCATION OF THE CONDUIT, HAND HOLES AND/OR MAINTENANCE HOLES SHOWN ARE APPROXIMATE LOCATIONS. FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIVATE AND/OR PUBLIC PRIOR TO THE INSTALLATION OF THE COMPONENT. FIELD COORDINATE THE FINAL LOCATION WITH THE OWNER AND ENGINEER PRIOR TO INSTALLATION.
2. POTHOLING TO LOCATE EXISTING UNDERGROUND UTILITIES, IF APPLICABLE, SHALL BE INCLUDED IN THE CONTRACTOR'S BID. CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT OF HAND HOLES AND/OR MAINTENANCE HOLES AND SHALL NOTIFY THE ENGINEER OF FINAL LOCATIONS PRIOR TO INSTALLATION.
3. HAND HOLES AND/OR MAINTENANCE HOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE GROUND LINE.
4. REMOVAL AND REPLACEMENT OF THE EXISTING UNDERGROUND UTILITIES THAT ARE REQUIRED TO COMPLETE THE INSTALLATION SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
5. CONTRACTOR SHALL INCLUDE IN THEIR BID ANY REMOVAL AND REPLACEMENT OF EXISTING SIDEWALK, PAVEMENT, GRASS, SHRUBS, TREES, ETC. THAT WILL BE IMPACTED BY THE INSTALLATION OF THE NEW CONDUITS SHOWN ON THE DRAWINGS. IF TREES ARE REQUIRED TO BE REMOVED THE CONTRACTOR SHALL CONTACT THE OWNER AND DISCUSS OPTIONS PRIOR TO CUTTING DOWN ANY TREE OR SHRUB OVER 5' IN HEIGHT.
6. NO ADDITIONAL COST SHALL BE APPROVED FOR PLACING CONDUITS DEEPER THAN REQUIRED MINIMUM DEPTH TO AVOID EXISTING UNDERGROUND UTILITIES.
7. PROVIDE A MINIMUM OF 25'-0" SLACK LOOP WITHIN EACH HAND HOLES AND/OR MAINTENANCE HOLES. SLACK LOOP SHALL BE SECURE SO FIBER IS NOT RESTING ON EARTH AFTER FINAL INSTALLATION.

TECHNOLOGY DEMOLITION NOTES

1. THE DRAWINGS INDICATE EXISTING ITEMS TO BE REMOVED. THE DRAWINGS ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED AND DO NOT INDICATE EVERY BOX, CONDUIT, OR WIRE THAT MUST BE REMOVED. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID AND VERIFY EXISTING CONDITIONS.
2. ITEMS (i.e. SPEAKERS, SWITCHES, ETC.) REMOVED AND NOT RELOCATED REMAIN THE PROPERTY OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MATERIAL THE OWNER DOES NOT WANT TO REUSE OR RETAIN. (i.e., FOR MAINTENANCE PURPOSES).
3. EXISTING TO REMAIN DEVICES WITHIN OR ADJACENT TO THE PATH OF CONSTRUCTION SHALL BE PROTECTED IN PLACE. DEVICES THAT MUST BE REMOVED SHALL BE TESTED PRIOR TO REMOVAL, PROTECTED FROM DAMAGE, AND RE-INSTALLED IN ITS ORIGINAL LOCATION DURING THE NEW CONSTRUCTION PHASE OF THE PROJECT.
4. OBTAIN APPROVAL FROM THE OWNER BEFORE TURNING OFF THE POWER TO EQUIPMENT, SYSTEMS, PANELS, ETC. COORDINATE ALL OUTAGES WITH OWNER. CONDUIT CONCEALED IN WALL CONSTRUCTION MAY BE ABANDONED IN PLACE IF NOT AFFECTED BY OTHER CONSTRUCTION.
5. ALL CONDUIT SHALL BE REMOVED WHERE WALLS ARE BEING REMOVED. WHERE CONDUIT IS IN THE CONCRETE SLAB, CUT OFF FLUSH, PULL OUT WIRE, AND PLUG. WHERE CONDUIT IS RUN EXPOSED, ALL ASSOCIATED CLAMPS, SUPPORTS, HANGERS, ETC., SHALL ALSO BE REMOVED.
6. COORDINATE ALL WORK WITH OTHER CONTRACTORS AT THE JOB SITE BEFORE REMOVING EXISTING EQUIPMENT AND INSTALLING NEW ITEMS.
7. EXISTING CONDUIT IN GOOD CONDITION, MAY BE REUSED IN PLACE. RELOCATING EXISTING CONDUIT SHALL NOT BE ALLOWED. BONDING CONDUCTORS SHALL BE INSTALLED IN ALL REUSED CONDUIT TO ASSURE PROPER GROUND PATH.
8. EQUIPMENT REMOVAL IN CERTAIN LOCATIONS MAY REQUIRE THE INSTALLATION OF A JUNCTION BOX TO RECONNECT CIRCUITS THAT REMAIN IN OPERATION. EXTEND CONDUIT AND WIRING AS REQUIRED TO MAINTAIN POWER TO REMAINING EQUIPMENT.
9. DEVICES TO BE REMOVED SHALL HAVE ALL CONNECTED WIRING REMOVED TO THE SOURCE.
10. DEVICES NOT TO BE REMOVED SHALL BE PROTECTED FROM THE ENVIRONMENT, AND ALL ASSOCIATED CABLE/RACEWAYS ARE TO REMAIN AND BE PROTECTED. T.C. SHALL BE RESPONSIBLE FOR REPAIR OF ANY INTERRUPTIONS TO PROTECTED DEVICES.
11. REFER TO SPECIFICATIONS SECTION 27 05 00 FOR ADDITIONAL INFORMATION.

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
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REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
ELECTRICAL
OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
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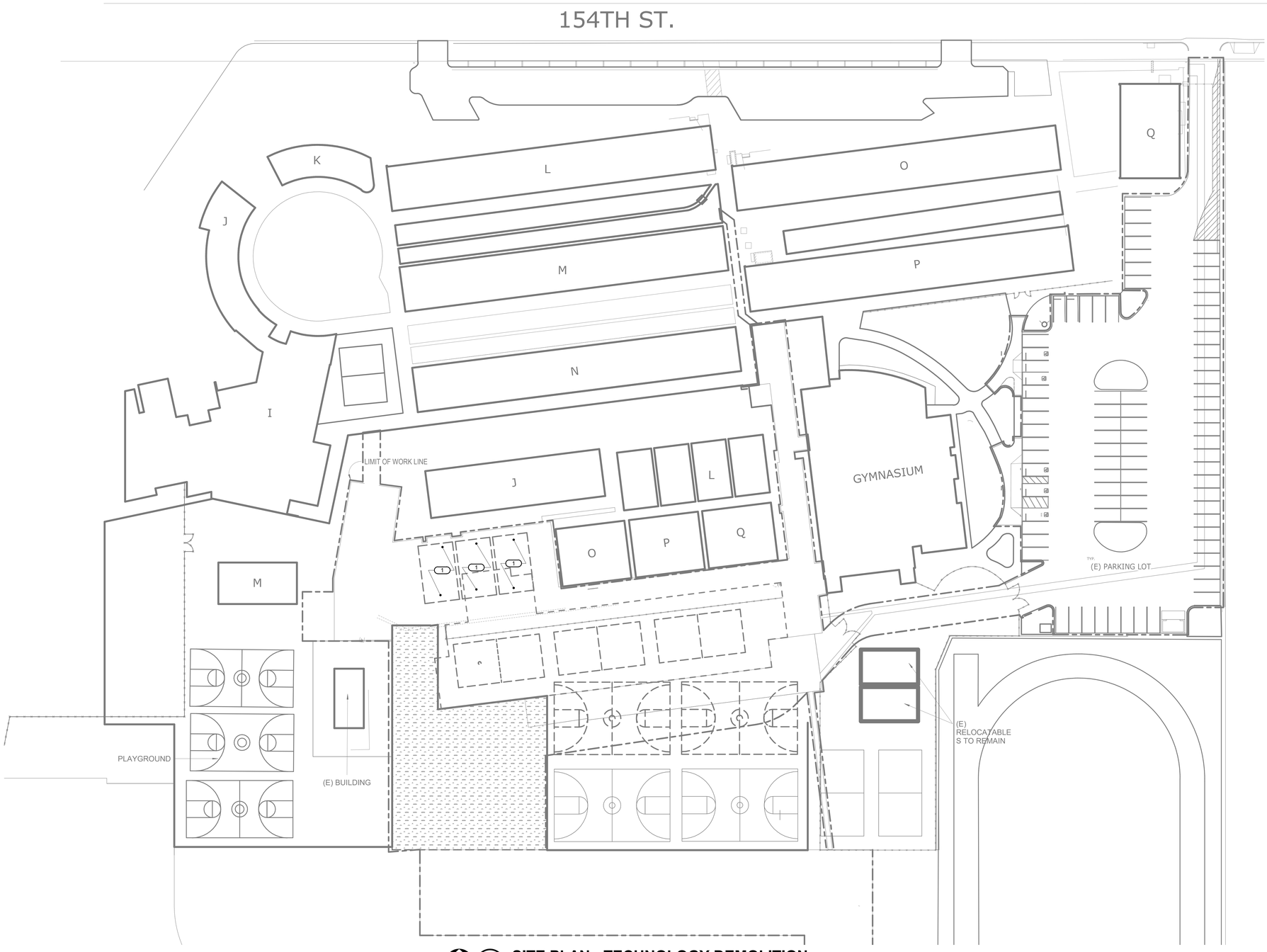
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DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
TECHNOLOGY COVERSHEET

SHEET NO:

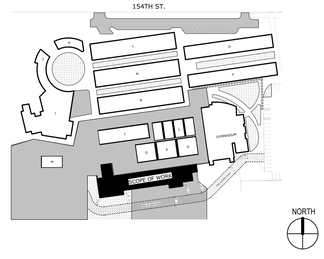
T001



NORTH 1 **SITE PLAN - TECHNOLOGY DEMOLITION**
1" = 30'-0"

KEYNOTES: #

1. DEMO ALL EXISTING EQUIPMENT AND CABLING BACK TO SOURCE. REFER TO TECHNOLOGY DEMO NOTES ON T001.



KEYMAP

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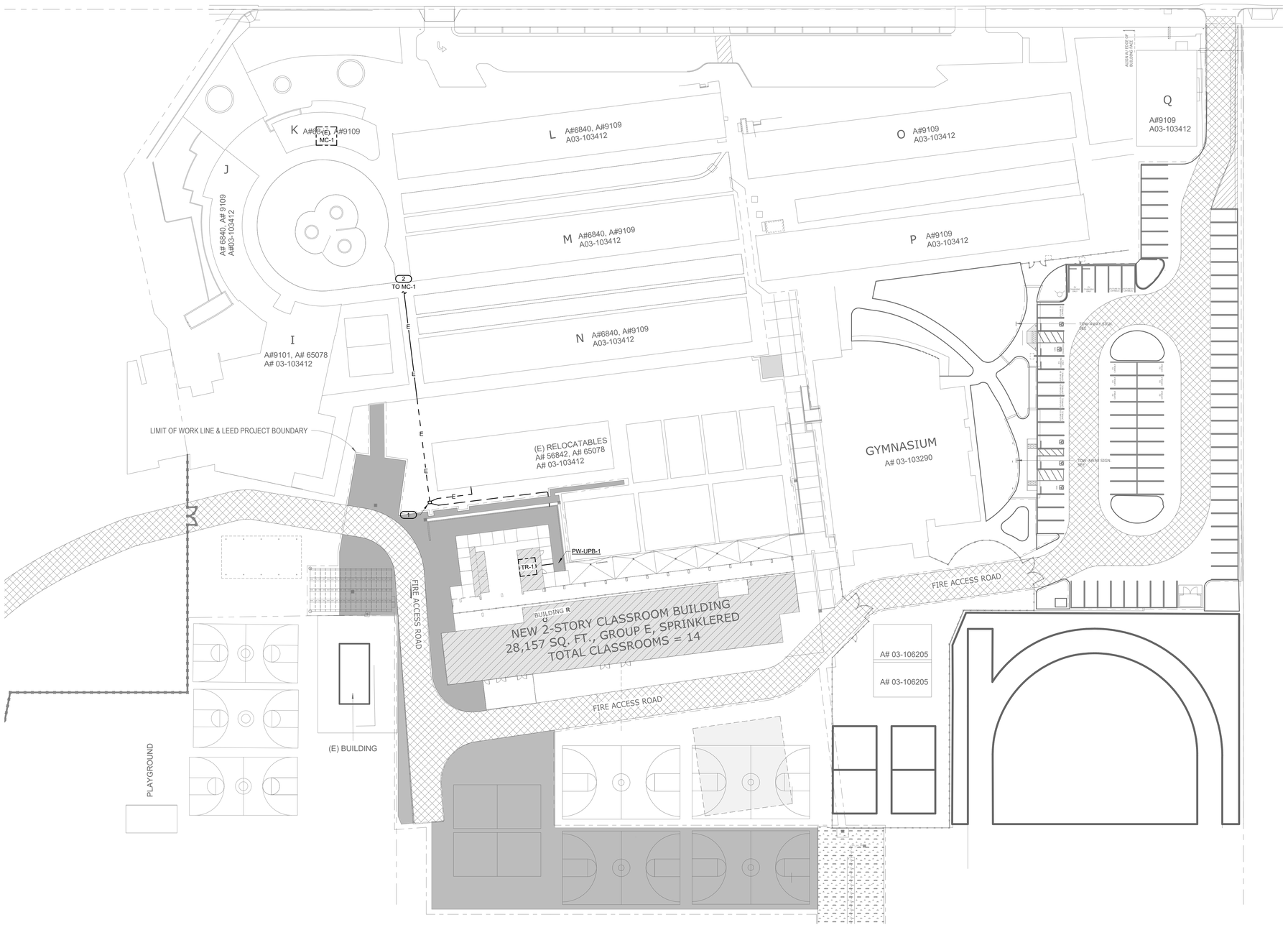
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SHEET DESCRIPTION:
SITE PLAN - TECHNOLOGY DEMOLITION

SHEET NO:

T100

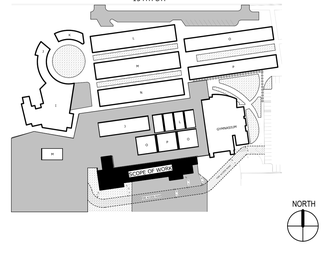


1 SITE PLAN - TECHNOLOGY

1" = 30'-0"

KEYNOTES: (#)

1. PROVIDE AND INSTALL PW-UPB-1 AND INTERCEPT EXISTING LOW VOLTAGE UNDERGROUND CONDUIT.
2. UTILIZE EXISTNG PATHWAYS TO MC-1.



KEYMAP

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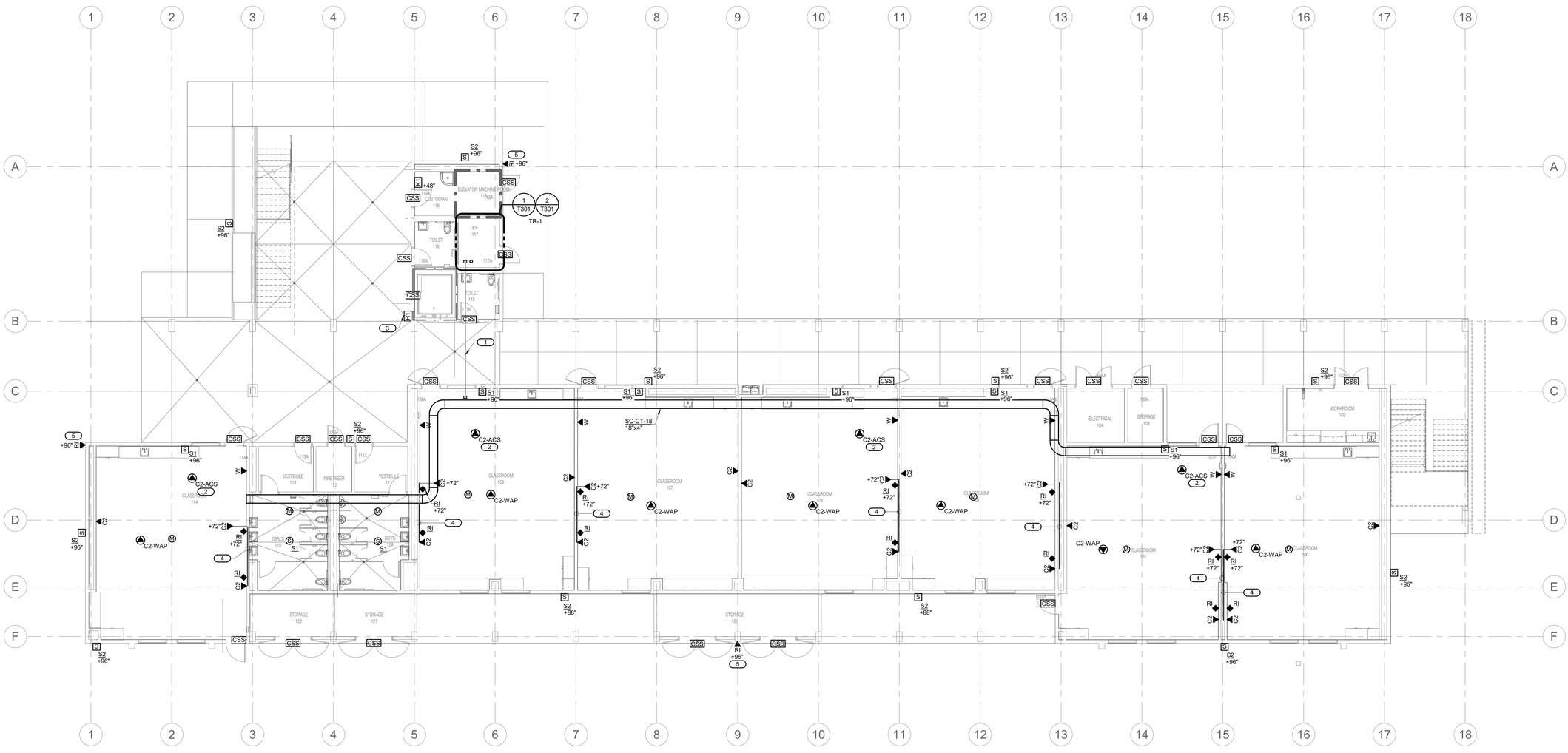
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SHEET DESCRIPTION:
SITE PLAN - TECHNOLOGY

SHEET NO:

T101

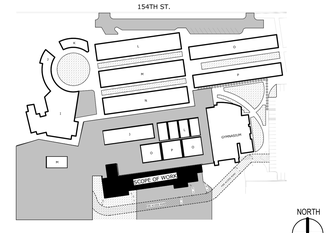


FIRST FLOOR PLAN - TECHNOLOGY

1/8" = 1'-0"

KEYNOTES: @

1. PROVIDE AND INSTALL TWO (2) 2-1/2"C RESERVED FOR STRUCTURED CABLING AND ONE (1) 1-1/2"C RESERVED FOR INTRUSION CABLING. TERMINATE CONDUIT TO CABLE TRAY IN CLASSROOM 108. TERMINATE CONDUIT TO LADDER RACK IN IDF 117.
2. C2-ACS TO BE USED FOR INSTALLATION OF AC-WG-C. LOCATE AC-WG-C WITHIN AREA OF C2-ACS DETERMINED BY DEVICE WIRELESS SURVEY.
3. COORDINATE WITH ELEVATOR CONTRACTOR TO LOCATE ADJACENT TO ELEVATOR CALL BUTTON.
4. PROVIDE MIN 1-1/4"C FROM AV-RI-W BEHIND FUTURE DISPLAY TO AV-RI-W AT TEACHER STATION FOR FUTURE HDMI CABLING.
5. ROUGH-IN BOX RESERVED FOR FUTURE OFOI VIDEO SURVEILLANCE CAMERAS.



KEYMAP

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
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CONSULTANT:

IMEG
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P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

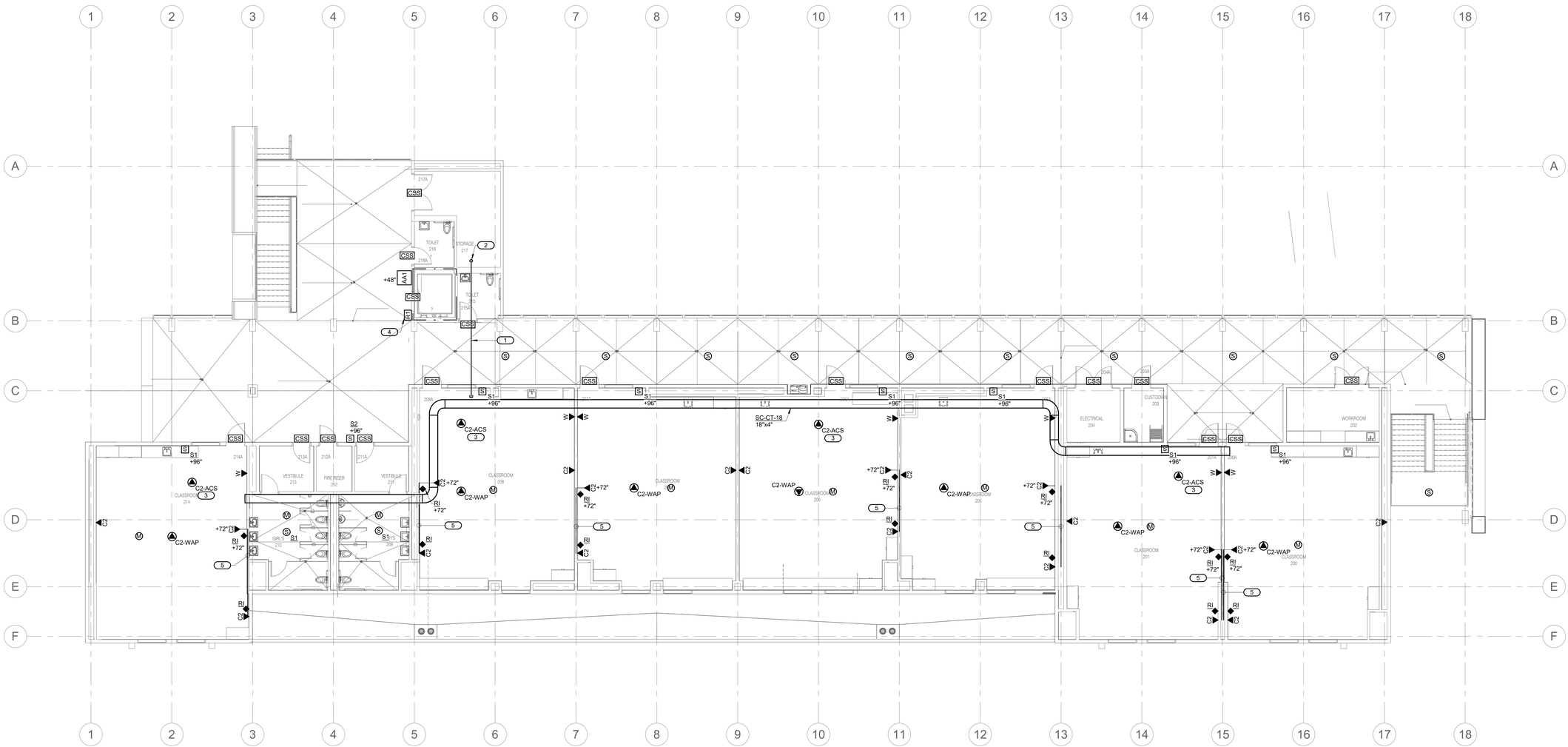
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
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ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR PLAN - TECHNOLOGY

SHEET NO:
T201

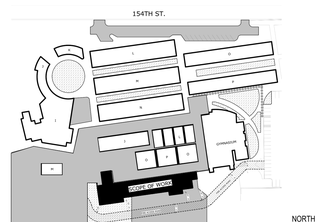


SECOND FLOOR PLAN - TECHNOLOGY

1/8" = 1'-0"

KEYNOTES: (#)

1. PROVIDE AND INSTALL TWO (2) 2-1/2"C RESERVED FOR STRUCTURED CABLING AND ONE (1) 1-1/2"C RESERVED FOR INTRUSION CABLING. TERMINATE CONDUIT TO CABLE TRAY IN CLASSROOM 208.
2. PROVIDE AND INSTALL TWO (2) 2-1/2"C RESERVED FOR STRUCTURED CABLING AND ONE (1) 1-1/2"C RESERVED FOR INTRUSION CABLING FROM IDF 117 UP TO CEILING SPACE OF STORAGE 217. PROVIDE 12" X 12" X 8" JUNCTION BOX TO INTERCEPT HORIZONTAL CONDUITS.
3. C2-ACS TO BE USED FOR INSTALLATION OF AC-WG-C. LOCATE AC-WG-C WITHIN AREA OF C2-ACS DETERMINED BY DEVICE WIRELESS SURVEY.
4. COORDINATE WITH ELEVATOR CONTRACTOR TO LOCATE ADJACENT TO ELEVATOR CALL BUTTON.
5. PROVIDE MIN 1-1/4"C FROM AV-RI-W BEHIND FUTURE DISPLAY TO AV-RI-W AT TEACHER STATION FOR FUTURE HDMI CABLING.



KEYMAP

10/4/2024 11:01:29 AM Autodesk Docs://22003237.00 - LESD-Lawndale- CA-Will Rogers MS CR ADD/ET22_22003237.00_LESD-Lawndale- CA-Will Rogers MS CR ADD_C.rvt

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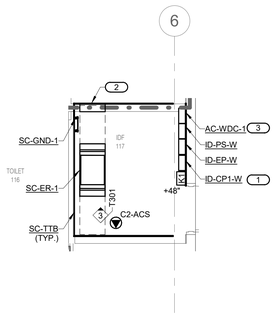
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SHEET DESCRIPTION:
SECOND FLOOR PLAN - TECHNOLOGY

SHEET NO:

T202



1 EQUIPMENT ROOM ENLARGEMENT - TR-1

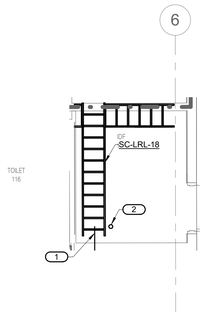
1/4" = 1'-0"

NOTES:

1. REFER TO 2/T501 FOR BONDING BUS BAR DETAIL.

KEYNOTES: (#)

1. PROVIDE SINGLE DATA OUTLET AT INTRUSION PANEL FOR NETWORK CONNECTIVITY.
2. PROVIDE SHELVES AND MOUNTING EQUIPMENT AS REQUIRED FOR AREA OF RESCUE POWER SUPPLY AND MONITORING EQUIPMENT. PROVIDE SINGLE DATA OUTLET AT AREA OF RESCUE EQUIPMENT FOR NETWORK CONNECTIVITY.
3. PROVIDE QUANTITY AS REQUIRED TO SUPPORT ELEVATOR DOORS ON FIRST AND SECOND FLOORS.



2 EQUIPMENT ROOM PATHWAY ENLARGEMENT - TR-1

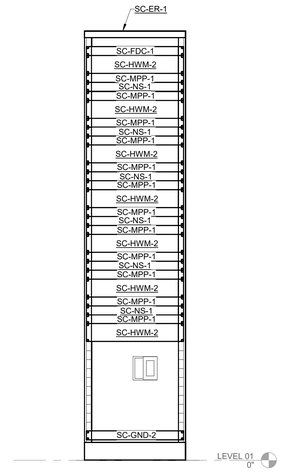
1/4" = 1'-0"

NOTES:

1. REFER TO 4/T501 FOR LADDER RACK ANCHORAGE DETAIL.
2. REFER TO 5/T501 FOR HEAVY DUTY SPLICE KIT ANCHORAGE DETAIL.

KEYNOTES: (#)

1. TWO (2) 2-1/2"C RESERVED FOR STRUCTURED CABLING, ONE (1) 1-1/2"C RESERVED FOR INTRUSION CABLING TO FIRST FLOOR.
2. TWO (2) 2-1/2"C RESERVED FOR STRUCTURED CABLING, ONE (1) 1-1/2"C RESERVED FOR INTRUSION CABLING TO SECOND FLOOR.



3 EQUIPMENT RACK ELEVATION - TR-1

1" = 1'-0"

NOTES:

1. REFER TO 1/T501 FOR TECHNOLOGY EQUIPMENT ANCHORAGE SCHEDULE.
2. MOUNT SC-GND-2 ON REAR RACK RAILS. REFER TO 3/T501 FOR RACK MOUNT BONDING BUS BAR DETAIL.
3. COORDINATE WITH E.C. TO PROVIDE ONE (1) L6-30R AND TWO (2) INDEPENDENT 5-20R DUPLEX TO PROVIDE POWER FOR OFOI RACK ELECTRONICS.

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SHEET DESCRIPTION:
ENLARGED PLANS - TECHNOLOGY

SHEET NO:
T301

CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE

1. ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, ELECTRIC LATCH RETRACTION, ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS.
2. REFER TO THE TECHNOLOGY EQUIPMENT SCHEDULE FOR CREDENTIAL READER TYPE INFORMATION.

		CREDENTIAL READER	INTEGRATION												REQUEST TO EXIT		DOOR HARDWARE / MONITORING												OTHER (REFER TO NOTES)			
DOOR #	ROUGH-IN ONLY	CREDENTIAL READER TYPE	MULTIPLE CREDENTIAL READERS OPERATES SINGLE DOOR	OPERATES MULTIPLE DOORS	AUTOMATIC DOOR OPERATOR	ELEVATOR	LOCKED BY EMERGENCY DURESS SEQUENCE	REMOTE UNLOCK VIA INTERCOM MASTER	REMOTE UNLOCK VIA PUSHBUTTON	INTRUSION DETECTION	REMOTE UNLOCK VIA FIRE COMMAND CENTER	VIDEO SURVEILLANCE	MOTION DETECTOR	LOCAL PUSHBUTTON DOOR HARDWARE OVERRIDE	INTERNAL ELECTRIFIED HARDWARE CONNECTION (BY OTHERS)	ELECTRONIC LOCKING HARDWARE (BY OTHERS)	MAG LOCK	LATCH STATUS DETECTION (BY OTHERS)	LOCAL ALARM HORN	MONITOR LATCH BOLT (BY OTHERS)	MONITOR DOOR POSITION SWITCH SPDT	MONITOR DOOR POSITION SWITCH DPDT	MONITOR DOOR POSITION SWITCH - OVERHEAD DOOR	MONITOR DOOR POSITION SWITCH - ROOF HATCH	DELAYED EGRESS (BY OTHERS)	LOCAL 120VAC POWER SUPPLY	SCHEDULE BASED LOCKING	NOTES
100A		N/A													•	•														WIRELESS DOOR HARDWARE
101A		N/A													•	•														WIRELESS DOOR HARDWARE
101B		N/A													•	•														WIRELESS DOOR HARDWARE
102A		N/A													•	•														WIRELESS DOOR HARDWARE
103A		N/A													•	•														WIRELESS DOOR HARDWARE
104A		N/A													•	•														WIRELESS DOOR HARDWARE
105A		N/A													•	•														WIRELESS DOOR HARDWARE
106A		N/A													•	•														WIRELESS DOOR HARDWARE
107A		N/A													•	•														WIRELESS DOOR HARDWARE
108A		N/A													•	•														WIRELESS DOOR HARDWARE
111A		N/A													•	•														WIRELESS DOOR HARDWARE
112A		N/A													•	•														WIRELESS DOOR HARDWARE
113A		N/A													•	•														WIRELESS DOOR HARDWARE
114A		N/A													•	•														WIRELESS DOOR HARDWARE
114B		N/A													•	•														WIRELESS DOOR HARDWARE
115A		N/A													•	•														WIRELESS DOOR HARDWARE
116A		N/A													•	•														WIRELESS DOOR HARDWARE
117A		N/A													•	•														WIRELESS DOOR HARDWARE
118A		N/A													•	•														WIRELESS DOOR HARDWARE
119A		N/A													•	•														WIRELESS DOOR HARDWARE
120A		N/A													•	•														WIRELESS DOOR HARDWARE
120B		N/A													•	•														WIRELESS DOOR HARDWARE
121A		N/A													•	•														WIRELESS DOOR HARDWARE
122A		N/A													•	•														WIRELESS DOOR HARDWARE
200A		N/A													•	•														WIRELESS DOOR HARDWARE
201A		N/A													•	•														WIRELESS DOOR HARDWARE
202A		N/A													•	•														WIRELESS DOOR HARDWARE
203A		N/A													•	•														WIRELESS DOOR HARDWARE
204A		N/A													•	•														WIRELESS DOOR HARDWARE
205A		N/A													•	•														WIRELESS DOOR HARDWARE
206A		N/A													•	•														WIRELESS DOOR HARDWARE
207A		N/A													•	•														WIRELESS DOOR HARDWARE
208A		N/A													•	•														WIRELESS DOOR HARDWARE
211A		N/A													•	•														WIRELESS DOOR HARDWARE
212A		N/A													•	•														WIRELESS DOOR HARDWARE
213A		N/A													•	•														WIRELESS DOOR HARDWARE
214A		N/A													•	•														WIRELESS DOOR HARDWARE
215A		N/A													•	•														WIRELESS DOOR HARDWARE
216A		N/A													•	•														WIRELESS DOOR HARDWARE
217A		N/A													•	•														WIRELESS DOOR HARDWARE
ELEVATOR LEVEL 01		R1				•									•	•														
ELEVATOR LEVEL 02		R1				•																								

TECHNOLOGY EQUIPMENT SCHEDULE

THE EQUIPMENT LIST ABBREVIATIONS AND THE GENERAL TECHNOLOGY EQUIPMENT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITIES AND SHALL FURNISH ALL MATERIAL REQUIRED, WHETHER SPECIFIED OR NOT, TO PRODUCE A SATISFACTORY WORKING SYSTEM.

CATALOG NUMBERS ARE NOT TO BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.

EQUIPMENT LIST ABBREVIATION	EQUIPMENT LIST DESCRIPTION	MANUFACTURER AND MODEL
AC-R1-W	CARD READER. WALL MOUNT, PROVIDED AS INTEGRAL PART OF SECURITY MANAGEMENT SYSTEM. REFER TO CONTROLLED SECURITY SCHEME (CSS) TYPE SCHEDULE FOR ADDITIONAL INFORMATION. CARD READERS SHOWN ON PLANS TO IDENTIFY INTENDED MOUNTING LOCATION.	HID SE RP40
AC-WG-C	ACCESS CONTROL WIRELESS GATEWAY. PROVIDE AS REQUIRED TO SUPPORT QUANTITY OF DOORS THAT ARE SERVED BY THE GATEWAY LOCATION. C2-ACS DATA OUTLET LOCATIONS PROVIDED ON FLOOR PLAN TO SERVE AC-WG-C. POWER PROVIDED BY OFOI POE SWITCHES. PROVIDE EXTENDED ANTENNA AS REQUIRED TO SUPPORT QUANTITY OF DOORS THAT ARE SERVED BY THE GATEWAY LOCATION.	DORMAKABA WQXM-PG-C WQD-ACMO
AR-AA1-W	AREA OF RESCUE ASSISTANCE CALL STATION. BRUSHED STAINLESS STEEL, FLUSH MOUNT. PROGRAMMABLE WITH UP TO 2 EMERGENCY NUMBERS. RECORDABLE LOCATION MESSAGE, AUTOMATIC DIALER, AUTOMATIC ANSWER FEATURE WITH AUDIBLE RING. PROVIDE WITH 1" CONDUIT TO AREA SERVING TELECOM ROOM. OPWN CABLING IS NOT PERMITTED. INSTALL AT 48" AFF TO PUSH BUTTON.	RATH 2100-958NSIP
AR-AMS-W	AREA OF RESCUE COMMAND CENTER. 10-ZONE, POWDER COATED STEEL ENCLOSURE, FLUSH MOUNT. INCLUDES HANDSET AND SPEAKER PHONE. AUDIBLE ALERTS, LED INDICATORS IDENTITY INDIVIDUAL CALLING STATION. DISTRIBUTION MODULE SHALL BE LOCATED IN TELECOM ROOM. COORDINATE LOCATION WITH OWNER. PROVIDE WITH 1" CONDUIT TO AREA SERVING TELECOM ROOM. OPWN CABLING IS NOT PERMITTED. INSTALL AT 60" AFF TO PUSH BUTTON.	RATH 2500-10RCFV
AV-RI-W	AUDIO/VIDEO ROUGH-IN (WALL) 4" SQUARE DEEP BACKBOX WITH SINGLE GANG PLASTER RING. INSTALL A 1-1/4" EMT CONDUIT TO ACCESSIBLE CEILING, UNLESS OTHERWISE NOTED, TERMINATE WITH NYLON BUSHING.	N/A
ID-CP1-W	INTRUSION CONTROL PANEL; UP TO 32 PROGRAMMABLE AREAS, UP TO 96 SUPERVISED DOOR ACCESS POINTS AND/OR KEYPADS .UP TO 16 SUPERVISED KEYPADS, FULLY SUPERVISED NETWORK, CELLULAR AND WI-FI COMMUNICATION , 10,000 USER CODES WITH 99 PROFILES,506 OUTPUTS , 1.5 AMP 12 VDC SMOKE AND AUXILIARY OUTPUT WITH OVC PROTECTION , BANK FEATIVITY ACCESS ,LIL BANK, SAFE AND VAULT, CARD PLUS PIN ,USER INACTIVITY AUDIT ,DUAL AUTHORITY ,PANIC BUTTON TEST ,EARLY MORNING AMBUSH, ENCRYPTION FEATURES ,128- OR 256-BIT AES ENCRYPTION ,NIST CERTIFIED MEETS ICD 705 ,IPV6 SUPPORT	DMP XR550
ID-EP-W	INTRUSION EXPANSION MODULE - SIXTEEN (16) CLASS B ZONES WITH ROTARY SWITCH ADDRESSING, SCREW TERMINAL CONNECTIONS, 8.8-15VDC.	DMP 714-16
ID-K1-W	INTRUSION KEYPAD WALLMOUNT: 32 CHARACTER LCD KEYPAD, SELF DIAGNOSTIC, THREE (3) 2-BUTTON PANIC KEYS, SUPERVISED OR UNSUPERVISED OPERATION, ALERT SOUNDER, ARMED AND AC LED, BUILT-IN PROXIMITY CARD READER (8.5-15VDC).	DMP 7063A-W
ID-MD1-C	MOTION DETECTOR, CEILING MOUNT, 360° DETECTION AREA, PASSIVE INFRARED, 62 DETECTION ZONES, DETECTION SPEED, 1"–5FT/SEC. (0.3–1.5M/SEC.), POWER INPUT 9.5–18VDC, CURRENT DRAW 17MA-18MA AT 12VDC, WEIGHT 4.9OZ.	OPTEX FX-360
ID-PS-W	INPUT: 24VAC, 40VA, UL LISTED TRANSFORMER; OUTPUT: 12VDC, 1.75A CONTINUOUS SUPPLY CURRENT, BATTERY BACKUP, AUTOMATIC SWITCH OVER TO STAND-BY BATTERY WHEN AC FAILS, SUPERVISION: AC FAIL SUPERVISION (FORM "C" CONTACTS), LOW BATTERY SUPERVISION (FORM "C" CONTACTS), DIMENSIONS 7.5"W X 8.5"H X 3.5"D, WEIGHT: 4.25 LBS.	ALTRONIX AL201UL
PA-S1-C	FACILITY PAGING SPEAKER. CIELING MOUNT, 8" CONE, 86HZ - 15.5KHZ, IP SPEAKER COMPATIBLE WITH SINGLEWIRE NOTIFICATION SYSTEM. PoE POWERED, 15-WATT NET WEIGHT 6.37 LBS. PROVIDE WITH CEILING MOUNT HARDWARE AS INDICATED.	SPEAKER: ATLAS/IED IP-SM CEILING ENCLOSURE: ATLAS/IED IP-STBE
PA-S1-W	INDOOR CLOCK/SPEAKER COMBO UNIT. LCD DISPLAY WITH 8.66"W X 2.23"H. POWER SUPPLY: 24VDC PROVIDE CUSTOM FLUSH BACK BOX.	ATLAS/IED SPEAKER IP-SDMF
PA-S2-W	FACILITY PAGING SPEAKER. VANDAL PROOF, WEATHER RESISTANT, WALL/CEILING MOUNT. 15 WATT IP COMMUNICATION COMPATIBLE WITH SINGLEWIRE NOTIFICATION SUSTEM. PROVIDE WITH WALL MOUNT ENCOSURE (IP-FEST-HVP). NET WEIGHT: 5.21LBS.	ATLAS/IED IP-HVP
PW-UPB-1	UNDERGROUND PULL BOX; POLYMER CONCRETE 24" W X 24" L X 36"H, PROVIDE WITH ADDITIONAL EXTENSIONS TO ACHIEVE DEPTH SHOWN ON PLANS, PROVIDE WITH SOLID POLYMER STEEL LID (FL23 SERIES) WITH "COMMUNICATIONS" LOGO AND VANDAL RESISTANT LOCKING SCREW, NON TRAFFIC RATED.	OLDCASTLE INFRASTRUCTURE BOX 242436
SC-CT-18	CABLE TRAY, WIRE MESH TYPE, 4" LOADING DEPTH, 18" WIDTH, COMPLETE WITH ALL FITTING AND MOUNTING HARDWARE, PROVIDE TRAPEZE SUPPORT WITH PLASTIC RETAINER. CUTTING OF THE MESH CABLE TRAY SHALL BE DONE WITH OFFSET BOLT CUTTERS ONLY. 10'MAXIMUM SUPPORT SPAN. EITHER SPLICE WASHERS OR TERMINAL GROUND SUPPORT AND JUMPER WIRE SHALL BE USED TO ATTAIN GROUNDING CONTINUITY THROUGHOUT. Z-BRACKETS SHALL BE USED FOR WALL MOUNTED APPLICAITONS. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND SPECIFICATION SECTION 27 05 28 FOR ADDITIONAL INFORMATION.	LEGRAND CF105/450EZ
SC-ER-1	4 POST EQUIPMENT RACK, 45RU MOUNTING SPACE, 84"H X 30"D X 20.3"W, AVAILABLE WITH 3" DEEP HOLES. #12-24 TAPPED MOUNTING RAILS. DURABLE BLACK POWDER COAT FINISH, MEETS EIA-310-E REQUIREMENTS, 2000 LB WEIGHT CAPACITY. REFER TO DETAIL 1/T501 FOR RACK MOUNTING DETAILS.	CHATSWORTH PRODUCTS 15251-703
SC-FDC-1	FIBER OPTIC DISTRIBUTION CABINET, RACK MOUNT 1 RU MOUNTING SPACES, ACCOMMODATES A MIN. OF 3 SDX ADAPTER PLATES OR MODULES. WELDED STEEL CONSTRUCTION, BLACK POWDER-COAT FINISH, INTEGRATED FRONT CABLE MANAGEMENT TROUGH, LOCKABLE.	LEVITON 5R1UH-S03
SC-GND-1	GROUNDING BUSBAR, WALL MOUNT. 2" H X 12" L X 1/4" D COPPER, ELECTRICALLY ISOLATED BY INSULATORS INTEGRAL TO MOUNTING BRACKETS. COPPER GROUND BAR IS 1/4" THICK AND STAND OFF 2.75" FROM WALL. THE 12" BUSBAR PROVIDES CONNECTION FOR NINE (9) 2-HOLE COMPRESSION LUGS RESPECTIVELY WITH 5/8" OR 1" CENTERS. ANSI/TIA-607 AND BICSI COMPLIANT. UL LISTED.	CHATSWORTH 13622-012
SC-GND-2	<varies>	<varies>
SC-HWM-2	HORIZONTAL WIRE MANAGER DOUBLE-SIDED, 2 RU MOUNTING SPACES, T-SHAPED CABLE GUIDES WITH SNAP-ON FRONT COVER.	CHATSWORTH 30529-719

TECHNOLOGY EQUIPMENT SCHEDULE

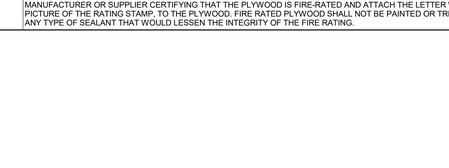
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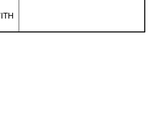
CATALOG NUMBERS ARE NOT TO BE CONSIDERED COMPLETE BUT ARE GIVEN ONLY TO AID THE CONTRACTOR IN THE SEARCH FOR MATERIAL. NO MATERIAL SHALL BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. EACH CONTRACTOR SHALL FIRST READ THE COMPLETE DESCRIPTION OF THE MATERIAL ON THESE DRAWINGS AND SPECIFICATIONS. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN. "STANDARD COLOR" INDICATES FACTORY FINISH AVAILABLE AT NO ADDITIONAL CHARGE.

EQUIPMENT LIST ABBREVIATION	EQUIPMENT LIST DESCRIPTION	MANUFACTURER AND MODEL
SC-IO-C	INFORMATION OUTLET, CEILING MOUNT, 2-PORT SURFACE MOUNT BOX AS INDICATED ON DRAWINGS. "#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO SHEET T401 FOR INFORMATION OUTLET SCHEDULE FOR PIN CONFIGURATION. INSTALL J-HOOK AND PROVIDE 20' COIL OF UTP CABLE AT WIRELESS OUTLET LOCATION. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS (SYSTMAX M20AP SERIES OR APPROVED EQUAL).	SURFACE MOUNT BOX: COMMSCOPE SMB-2P-262 JACK: COMMSCOPE MGS600 (YELLOW)
SC-IO-W	INFORMATION OUTLET, WALL MOUNT, COVERPLATE AS INDICATED ON DRAWINGS. "#" INDICATES INFORMATION OUTLET FACEPLATE CONFIGURATION AS INDICATED ON THE FLOOR PLANS. REFER TO SHEET T401 FOR INFORMATION OUTLET SCHEDULE FOR PIN CONFIGURATION. "W" PROVIDE (1) RJ-45 JACK FOR VOICE AT +48" AFF FOR WALL HUNG PHONE. PROVIDE WITH STAINLESS STEEL FACEPLATE, MATING LUGS. FOR SINGLE GANG INSTALL INFORMATION OUTLET IN A 4-11/16" SQUARE BACKBOX WITH SINGLE GANG PLASTER RING. INSTALL A 1 1/4" EMT CONDUIT TO ACCESSIBLE CEILING. PROVIDE REMOVABLE BLANK INSERTS FOR UNUSED PORTS. REFER TO SPECIFICATION SECTION 27 15 00 FOR ADDITIONAL INFORMATION.	JACK: COMMSCOPE MGS600 (BLUE) FACEPLATE - SINGLE GANG: COMMSCOPE M12L-266
SC-LRL-18	HORIZONTAL/VERTICAL LADDER RACK, 18"W TUBULAR STEEL CONSTRUCTION, RUST RESISTANT ENAMEL FINISH, REMOVE SHARP BURS FROM LADDER RACK AND REPAINT ALL AREAS THAT HAVE BEEN FIELD MODIFIED, CUT OR EXPOSED. U.L. LISTED. REFER TO DETAIL 4/T501 FOR MOUNTING DETAILS.	CHATSWORTH 10250-718
SC-MPP-1	MODULAR CAT 6 & 6A FLAT PATCH PANEL, 24-MODULAR RJ-45 TERMINATIONS, 1RU, MOUNTS DIRECTLY TO EIA/TIA STANDARD 19" RELAY RACK, PORT IDENTIFICATION NUMBERS, PROVIDED WITH COLOR CODING AND LABEL HOLDER KITS, U.L. LISTED.	COMMSCOPE M2400-1U-GS
SC-NS-1	OFOI NETWORK SWITCH	OFOI
SC-TTB	TELECOMMUNICATIONS TERMINAL BOARD, 3/4" THICK A-C GRADE FIRE-RATED PLYWOOD. EXPOSED SIDE SHALL BE SMOOTH. MOUNT VERTICALLY WITH TOP OF PLYWOOD AT 8'-0" AFF. IN THE EVENT THE MANUFACTURER'S RATING STAMP IS NOT VISIBLE ON THE SMOOTH SIDE, THE CONTRACTOR SHALL PROVIDE A LAMINATED LETTER FROM THE MANUFACTURER OR SUPPLIER CERTIFYING THAT THE PLYWOOD IS FIRE-RATED AND ATTACH THE LETTER WITH A PICTURE OF THE RATING STAMP, TO THE PLYWOOD. FIRE RATED PLYWOOD SHALL NOT BE PAINTED OR TREATED WITH ANY TYPE OF SEALANT THAT WOULD LESSEN THE INTEGRITY OF THE FIRE RATING.	N/A

INFORMATION OUTLET SCHEDULE

SINGLE GANG WALLPLATES





ANSI/TIA/EIA T568B PIN/PAIR ASSIGNMENT

NOTES:
1. PROVIDE REMOVABLE BLANK INSERT(S) FOR ALL UNUSED PORTS.
2. REFER TO SPECIFICAITONS SECTION 27 05 53 FOR ADDITIONAL INFORMATION ON LABELING REQUIREMENTS.

SCHEDULE NOTES:
1. LOCATION OF FUTURE OR OWNER PROVIDED WIRELESS ACCESS POINT. PROVIDE A 20' SLACK COIL AT THE NEAREST CABLE SUPPORT FOR POSSIBLE RELOCATION AFTER WIRELESS SURVEY.
2. LOCATION OF WIRELESS ACCESS CONTROL GATEWAY. PROVIDE A 20' SLACK COIL AT THE NEAREST SUPPORT FOR POSSIBLE RELOCATION AFTER WIRELESS SURVEY.

LEGEND

DATA	CAT 6A RJ-45
BLANK	BLANK FILLER MODULE
VOICE	CAT 6A RJ-45

CONFIGURATION	FACEPLATE PORTS	FACEPLATE PORT IDENTIFICATION: POSITION 1 JACK TYPE	POSITION 2 JACK TYPE	POSITION 3 JACK TYPE	POSITION 4 JACK TYPE	POSITION 5 JACK TYPE	POSITION 6 JACK TYPE	NOTES
C2	2	DATA	DATA					
C2-ACS	2	DATA	DATA					2.
C2-WAP	2	DATA	DATA					1.
W	1	VOICE						

STATE:

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APP: 03-123867 INC:
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DATE: 10/24/2024

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PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
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Exp. 6-30-2025
REGISTERED
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

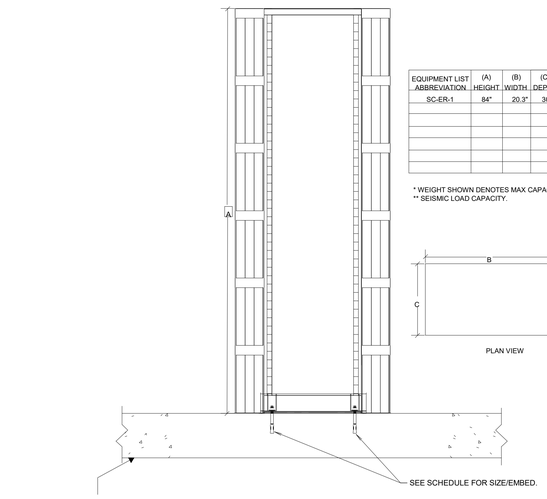
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
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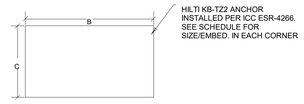
SHEET DESCRIPTION:
TECHNOLOGY SCHEDULES

SHEET NO:
T401



EQUIPMENT LIST ABBREVIATION	(A) HEIGHT	(B) WIDTH	(C) DEPTH	WEIGHT (LBS) *	MIN NO. ANCHORS	SIZE OF ANCHORS	EFFECTIVE EMBEDMENT
SC-ER-1	84"	20.3"	30"	2000	4	1/2"Ø	2"

* WEIGHT SHOWN DENOTES MAX CAPACITY OF EQUIPMENT.
** SEISMIC LOAD CAPACITY.

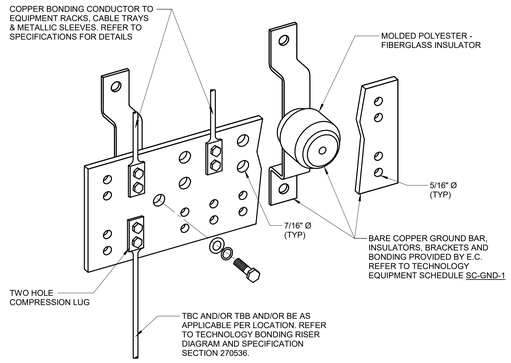


PLAN VIEW

REFER TO STRUCTURAL DETAIL 10/S1-1.

1 TECHNOLOGY EQUIPMENT ANCHORAGE SCHEDULE

NO SCALE

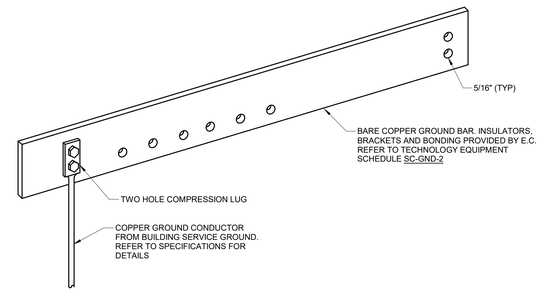


2 BONDING BUS BAR DETAIL

NO SCALE

NOTES:

1. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE SC-GND-1 FOR MINIMUM DIMENSION REQUIREMENTS.
2. REFER TO IT601 FOR TYPICAL TELECOM ROOM BONDING FLOW DIAGRAM.

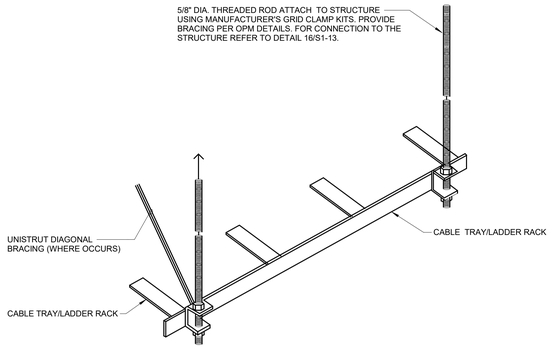


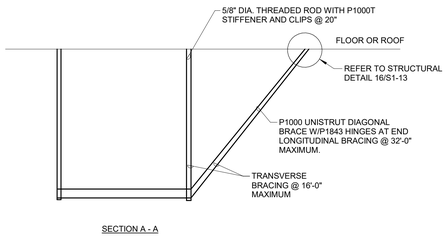
3 RACK MOUNT BONDING BUS BAR DETAIL

NO SCALE

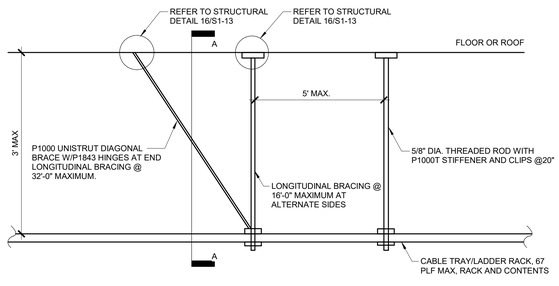
NOTES:

1. REFER TO TECHNOLOGY EQUIPMENT SCHEDULE SC-GND-2 FOR WIDTH REQUIREMENTS.



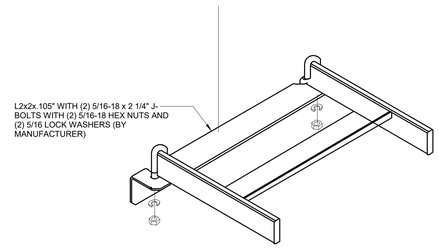


SECTION A - A

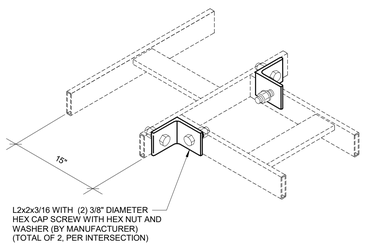


4 LADDER RACK/CABLE TRAY ANCHORAGE DETAIL

NO SCALE

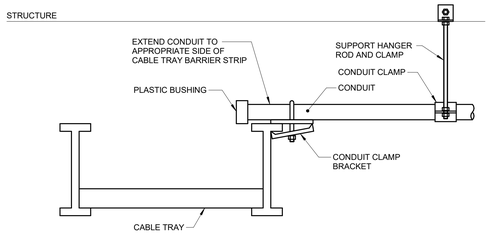


WALL MOUNT SPLICE KIT



5 HEAVY DUTY SPLICE KIT ANCHORAGE DETAILS

NO SCALE

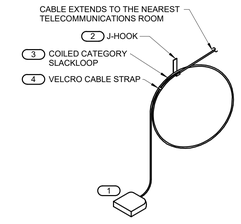


6 CONDUIT TO CABLE TRAY DETAIL

NO SCALE

NOTES:

1. PROVIDE PULL STRINGS IN ANY UNUSED CONDUITS.



7 ABOVE CEILING INFORMATION OUTLET MOUNTING DETAIL

NO SCALE

NOTES:

1. THIS DIAGRAM MAY NOT REPRESENT THE QUANTITY OF CABLES TO EACH INFORMATION OUTLET JUNCTION BOX. REFER TO THE DRAWINGS AND THE INFORMATION OUTLET SCHEDULE FOR ADDITIONAL INFORMATION.
2. ALL DEVICES ARE INSTALLED ABOVE THE CEILING UNLESS OTHERWISE NOTED.

KEYNOTES: (#)

1. 1 OR 2-PORT PLENUM RATED SURFACE MOUNTED BOX, SUPPORT FROM J-HOOK. REFER TO THE INFORMATION OUTLET SCHEDULE AND TECHNOLOGY EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
2. MOUNT A DEDICATED J-HOOK TO THE NEAREST CEILING SUBSTRUCTURE, COLUMN, JOIST, OR WALL ABOVE THE CEILING AS SHOWN ON THE DRAWINGS. PROVIDE THE PROPER SUPPORT WHEN HANGING FROM THE CEILING SUBSTRUCTURE OR COLUMN WALL OR JOIST. REFER TO SPECIFICATION SECTION 27 05 28 FOR ADDITIONAL REQUIREMENTS.
3. REFER TO SECTION 27 15 00 FOR SLACKLOOP LENGTH. MAINTAIN THE MANUFACTURERS BEND RADIUS FOR SLACKLOOP SIZE.
4. PROVIDE AND INSTALL A VELCRO CABLE STRAP ON THE SLACKLOOP APPROXIMATELY EVERY 6" ALONG THE SLACKLOOP. FOR SLACKLOOPS GREATER THAN 3' A MINIMUM OF (4) STRAPS WILL BE INSTALLED.

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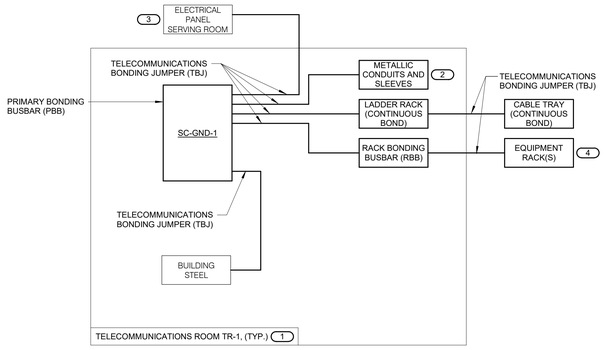
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T501



1 TELECOM ROOM BONDING FLOW DIAGRAM

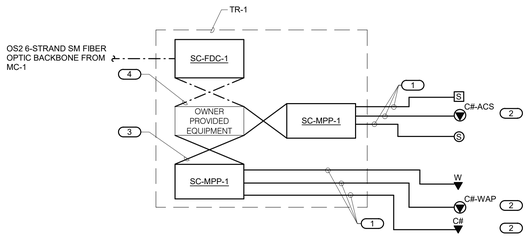
NO SCALE

NOTES:

1. THIS FLOW DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS. THIS FLOW DIAGRAM IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CONDUCTOR TYPE. ALL CONNECTIONS AND SYSTEM DEVICES SHOWN ARE TYPICAL AND NOT REPRESENTATIVE OF ACTUAL PROJECT QUANTITIES. REFER TO FLOOR PLANS AND ENLARGED FLOOR PLANS FOR ACTUAL QUANTITIES AND LOCATIONS OF DEVICES AND SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. ALL CONDUCTORS IN THE TECHNOLOGY BONDING SYSTEM SHALL BE PLENUM RATED COPPER (GREEN OR MARKED WITH A DISTINCTIVE GREEN COLOR). REFER TO BONDING CONDUCTOR SIZING SCHEDULE FOR SIZING CRITERIA FOR CONDUCTORS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. ALL BONDING CONDUCTORS AND BONDING JUMPERS SHALL BE CONNECTED BY COMPRESSION LUGS, EXOTHERMIC WELDING, OR IRREVERSIBLE COMPRESSION CONNECTORS. SOLDER IS NOT AN ACCEPTABLE MEANS OF CONNECTION. SHEET METAL SCREWS SHALL NOT BE USED TO CONNECT COMMUNICATIONS BONDING CONDUCTORS TO EQUIPMENT. WHERE NECESSARY, REMOVE PAINT AND/OR USE PAINT-PIERCING WASHERS TO PROVIDE PROPER ELECTRICAL BOND AT ALL CONNECTIONS.

KEYNOTES: (#)

1. REFER TO TELECOM ROOM REFERENCES SCHEDULE FOR TELECOMMUNICATIONS ROOM NUMBER AND LOCATION INFORMATION.
2. INCLUDES HORIZONTAL AND VERTICAL CONDUIT SLEEVES FOR TECHNOLOGY CABLING.
3. REFER TO THE ELECTRICAL DRAWINGS FOR LOCATION.
4. PROVIDE SC-GND-2 RACK MOUNT TELECOMMUNICATIONS BONDING BUSBAR AT EACH EQUIPMENT RACK.



2 FIBER AND COPPER RISER DIAGRAM

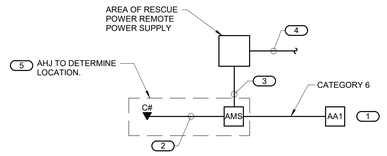
NO SCALE

NOTES:

1. THIS RISER IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO FLOOR PLANS FOR MORE SPECIFIC ROUTING AND QUANTITY INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO SHEET T401 FOR GENERAL TECHNOLOGY EQUIPMENT SCHEDULE.

KEYNOTES: (#)

1. 23 GAUGE, 4-PAIR, CATEGORY 6A, UNSHIELDED TWISTED PAIR CABLE, SEE SPECIFICATIONS.
2. REFER TO INFORMATION OUTLET SCHEDULE ON SHEET T401 AND THE FLOOR PLANS FOR QUANTITY OF CABLES AND JACKS TO BE INSTALLED AT EACH INFORMATION OUTLET.
3. RJ-45 TO RJ-45 CATEGORY CAT 6A UTP PATCH CORD. SEE SPECIFICATIONS.
4. FIBER PATCH CORD. SEE SPECIFICATIONS.



3 AREA OF REFUGE RISER DIAGRAM

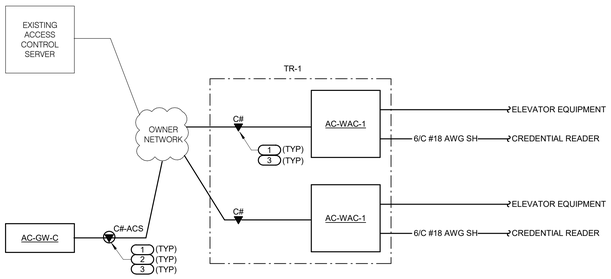
NO SCALE

NOTES:

1. THIS RISER IS DIAGRAMMATIC AND NOT INTENDED TO SHOW ACTUAL ROUTING OR QUANTITIES OF MATERIALS SHOWN. THIS RISER IS SHOWN FOR CLARIFICATION OF CONNECTION LOCATIONS AND CABLE TYPE. ALL INFORMATION OUTLETS ARE TYPICAL OF THE OUTLETS IN THE AREA SHOWN. REFER TO PLANS FOR MORE SPECIFIC ROUTING INFORMATION. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

KEYNOTES: (#)

1. REFER TO FLOOR PLANS FOR QUANTITIES AND LOCATIONS.
2. CATEGORY 6 DATA PATCH CORD.
3. ONE (1) 2/16 AWG FOR REMOTE MONITORING OF THE AREA OF REFUGE MASTER STATION.
4. 110V POWER CONNECTION. COORDINATE LOCATION WITH E.C. PRIOR TO INSTALLATION.
5. FINAL LOCATION DETERMINED BY AHJ. COORDINATE WITH AHJ PRIOR TO INSTALLATION.



4 ACCESS CONTROL RISER DIAGRAM

NO SCALE

NOTES:

1. THIS DIAGRAM IS DIAGRAMMATIC AND MAY NOT SHOW ACTUAL DEVICE QUANTITIES OR LOCATIONS. ALL DEVICES SHOWN ARE TYPICAL AND MAY NOT REFLECT EVERY WIRE OR CONNECTION THAT MUST BE MADE. WIRING SHOWN ON THIS DIAGRAM REFLECTS THE REQUIREMENTS FOR THE BASIS OF DESIGN MANUFACTURER. ANY CHANGES REQUIRED DUE TO THE T.C.'S SELECTION OF AN ALTERNATE MANUFACTURER, INCLUDING ANY POWER REQUIRED FOR FIELD LOCATED SECURITY CONTROLLERS, SHALL BE INCLUDED IN THE T.C.'S BID.
2. ALL CONDUCTOR SIZES ARE LISTED A MINIMUM SIZES.
3. MULTICONDUCTOR COMPOSITE CABLES ARE ACCEPTABLE.

KEYNOTES:

1. CATEGORY 6A RJ-45 TO RJ-45 PATCH CABLE.
2. REFER TO FLOOR PLANS FOR LOCATIONS AND LAYOUT OF INFORMATION OUTLETS TO BE PROVIDED BY T.C.
3. CATEGORY 6A CABLING FROM INFORMATION OUTLET TO MODULAR PATCH PANEL IN AREA SERVING TELECOM ROOM.

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T601

FIRE ALARM NOTES

1. THIS IS A COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL PER 2022 CFC 907.2.3.
2. THE NEW FIRE ALARM SYSTEM EXTENSION IS CONFIGURED TO A FULLY AUTOMATIC SYSTEM.
3. THE FIRE ALARM SYSTEM INDICATED ON THESE DRAWINGS IS APPROVED BY CALIFORNIA STATE FIRE MARSHAL AND SHALL BE INSTALLED AS DESCRIBED ON THESE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS. ANY CHANGES TO THESE PLANS, I.E., DELETION, RELOCATION OR ADDING OF DEVICES SHALL BE RESUBMITTED TO THE STATE FIRE MARSHAL FOR APPROVAL.

   INSTALLATION OF FIRE ALARM SYSTEM MAY START AFTER IMEG RECEIVES THESE APPROVED DRAWINGS. A.O.R. SHALL STAMP AND SIGN ALL DRAWINGS.
4. ALL WIRING AND INITIATING DEVICES SHALL BE SUPERVISED TO THE PRINCIPAL POINT OF ANNUNCIATION (F/A PANEL TO SUPERVISE ALL CIRCUITS AND INITIATING DEVICES).
5. WIRING SHALL NOT BE LOOPED THROUGH DEVICES: WIRE MUST BE CUT FOR IN AND FOR OUT.
6. ALL WIRING TO BE IN CONDUIT.
7. ALL TERMINATIONS IN JUNCTION BOXES. PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS. DO NOT USE WIRE NUTS FOR SPLICING. DO NOT SPLICE WIRES IN ANY BOXES.
8. ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUM. CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS BUT SHALL NOT BE SMALLER THAN 3/4 INCH.
9. ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
10. FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY. CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
11. CONDUIT AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
12. THE SYSTEM SHALL CONFORM TO TITLES 19 AND 24 AS APPLICABLE TO THIS PROJECT.
13. UPON COMPLETION OF SYSTEM INSTALLATION. THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF, AND IN A MANNER ACCEPTABLE TO, THE ENFORCING AGENCY.
14. THE CONTRACTOR SHALL REPROGRAM AND CERTIFY ADDRESSABLE FIRE ALARM CONTROL PANEL TO ACCOMMODATE ADDITIONAL DEVICES.
15. FIRE ALARM SYSTEM SHALL BE INSTALLED BY FACTORY AUTHORIZED REPRESENTATIVE.
16. CONDUCTOR LENGTHS AND DEVICE QUANTITIES ARE SHOWN SOLELY FOR CALCULATION PURPOSES ONLY, AND SHALL NOT BE USED FOR BID TAKE-OFF.
17. THE FIRE ALARM SYSTEM SHALL CONFORM TO ARTICLE 760 OF CALIFORNIA ELECTRICAL CODE. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAVE BEEN APPROVED BY DSA-ORS, UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE FIRE AUTHORITY HAVING JURISDICTION.
18. PENETRATIONS OF PIPES, CONDUITS, ETC., IN WALLS REQUIRING PROTECTED OPENINGS SHALL BE FIRE STOPPED. FIRE STOP MATERIAL SHALL BE A TEST ASSEMBLY ACCEPTABLE TO CBC 1705A.17.1 PROVISIONS AND DSA-ORS.
19. ALL FIRE ALARM AND COMMUNICATIONS WIRES AND CABLES SHALL BE ONE CONTINUOUS LENGTH FROM A BUILDING TERMINAL CABINET TO ANOTHER BUILDING TERMINAL CABINET OR JUNCTION BOX. ABSOLUTELY NO SUBGRADE SPLICES WILL BE PERMITTED! PROVIDE TERMINAL BLOCKS WITH MOUNTING IN TERMINAL CABINETS ONLY AS REQUIRED.
20. EVERY ALARM SIGNALING DEVICE INSTALLED SHALL BE OF THE SAME BASIC TYPE (BELLS, HORNS, CHIMES, SPEAKERS, ETC.) AS ALL OTHER SIGNALING DEVICES IN THE FACILITY, (EXCEPTION: ANY SIGNALING DEVICES REQUIRED FOR THE DEAF OR HEARING IMPAIRED PER 2022 NFPA-72.
21. INSULATED CONDUCTORS USED IN WET LOCATIONS SHALL BE (1) LEAD-COVERED, (2) TYPES RHW,TW, THW,114W, THWN, XHHW; OR (3) OF A TYPE LISTED FOR USE IN WET LOCATIONS. CABLES OF ONE OR MORE CONDUCTORS USED IN WET LOCATIONS SHALL BE OF A TYPE LISTED FOR USE IN WET LOCATIONS. CONDUCTORS USED FOR DIRECT BURIAL APPLICATIONS SHALL BE OF A TYPE LISTED FOR SUCH USE (PER 2022 CEC ARTICLE 310).
22. THE FIRE ALARM DEVICE SUPPLIER SHALL FURNISH ALL SURFACE MOUNT ENCLOSURES FOR PULLSTATIONS AND SKIRTS FOR ALL VISUAL AND AUDIO VISUAL DEVICES TO CONCEAL 4S BACK BOXES.
23. AFTER THE SYSTEM IS COMPLETED, ALL ADDRESSABLE DEVICES SHALL BE PROGRAMMED AT THE FACP ACCORDING TO THE ACTUAL BUILDING ROOM NUMBER. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE SCHOOL DISTRICT TO OBTAIN ACCURATE ROOM NUMBER INFORMATION.
24. PROVIDE CALIFORNIA TEMPORAL-THREE TONE DISTINCTIVE FIRE ALARM SOUND. (2022 CFC SEC. 907.6.2.1.3 & 2022 NFPA 72 SEC. 18.4.2.1)
25. POWER SERVICES SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING & LOCKING DEVICE AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL".
26. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL IN ALL OCCUPIABLE AREAS (2022 NFPA 72 SEC. 18.4.3.1) I.E. CLASSROOM AVERAGE AMBIENT ROOM NOISE IS45dBA PLUS 15dBA EQUAL = 60dBA MINIMUM ALARM TONE REQUIRED)
27. STROBES SHALL FLASH AT A RATE NOT EXCEEDING TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH EVERY SECOND. (2022 NFPA 72 SEC. 18.5.3.1)
28. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (10R). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
29. FIRE ALARM CONTRACTOR SHALL PROVIDE A 'RECORD OF COMPLETION' TO THE INSPECTOR OF RECORD (10R)yDSA AFTER COMPLETION OF OPERATION ACCEPTANCE TEST. (2022 NFPA 72 SEC. 7.5.6. & 2022 CFC 901.6.2)
30. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
31. THE INSTALLING CONTRACTOR SHALL PROVIDE A STATEMENT OF COMPLIANCE ALONG WITH THE REQUEST FOR ACCEPTANCE TESTING PER 2022 NFPA-72.
32. OCCUPANCY OF THE BUILDINGS IS PROHIBITED UNTIL THE FIRE ALARM SYSTEM IS COMPLETED, TESTED, AND APPROVED PER 2022 NFPA 72.
33. SMOKE DETECTORS SHALL BE TESTED PER THE METHOD SHOWN IN 2022 CFC.
34. REACCEPTANCE TESTING SHALL BE PERFORMED AS REQUIRED BY 2022 NFPA 72.
35. ALL BACKUP BATTERIES FOR FIRE ALARM SYSTEM EQUIPMENT SHALL BE VISUALLY CHECKED FOR DATE OF INSTALLATION. ALL BATTERIES OVER 5 YEARS OLD SHALL BE REPLACED WITH NEW BATTERIES OF THE SAME MANUFACTURER, TYPE. AND AMP-HOUR RATING.
36. FIRE ALARM SYSTEMS SHALL BE SUPERVISED BY AN APPROVED UL LISTED CENTRAL STATION, OR REMOTE STATION (UUFX) MONITORING COMPANY (UUJS) (CFC, 907.2.3.5, 907.6.5.3.)
37. A SINGLE FAULT ON A PATHWAY CONNECTED TO THE ADDRESSABLE DEVICES SHALL NOT CAUSE THE LOSS IN MORE THAN ONE ZONE (2022 NFPA 72 SECTION 23.6.1)
38. THE DISTRICT SHALL RETAIN RECORD DRAWINGS ON THE PREMISES FOR A MINIMUM OF 3 YEARS, IN A DEDICATED FIRE ALARM RECORD DOCUMENT CABINET IN ACCORDANCE WITH NFPA 72. 7.7.2.

    • EVERY NEW FIRE ALARM SYSTEM SHALL PROVIDE A DOCUMENTATION CABINET. INSTALLED AT THE SYSTEM CONTROL PANEL OR OTHER APPROVED LOCATION.
    • THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED. 'SYSTEM RECORD DOCUMENTS'.
    • ALL RECORED AND TESTING DOCUMENTATION SHALL BE STORED IN THE CABINET.
    • CONTENTS SHALL BE ACCESSIBLE BY AUTHORIZED PERSONNEL ONLY.
    • WHERE CABINET IS INSTALLED IN A LOCATION OTHER THAN THE SYSTEM CONTROL UNIT. ITS LOCATION SHALL BE IDENTIFIED AT THE SYSTEM CONTROL UNIT.

    SYSTEM DOCUMENTS AS APPLICABLE:
    • RECORD DRAWINGSIAS-BUILTS
    • EQUIPMENT CUT SHEETS & CA SFM LISTINGS
    • ALTERNATIVE MEANS AND METHODS
    • PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72. 7.3.7)
    • SYSTEM RECORED OF COMPLETION & ANY SUPPLEMENTAL INSPECTION AND TESTING DOCUMENTATION (NFPA 72. 7.8.2)
    • EMERGENCY RESPONSE PLAN (NFPA 72.7.3.8)
    • EVALUATION DOCUMENTATION (NFPA 72. 7.3.9)
    • SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72. 23.2.2)
39. EXTRA DEVICES

    DUE TO UNFORESEEN CONDITION. THE FOLLOWING EXTRA DEVICES SHALL BE INCLUDED IN THE CONTRACTORS BID:

a. SMOKE DETECTORS	15 EACH
b. HEAT DETECTORS	3 EACH
c. SPEAKER/STROBE	10 EACH
d. STROBE	2 EACH
e. EXTERIOR SPEAKER	3 EACH
f. MODULES	2 EACH

40. NOT USED
    FOR BID PURPOSES. ALLOW TWENTY (20) FEET OF CONDUIT AND ITS SUPPORT SYSTEM TO INCLUDE FITTINGS. WIRES AND LABOR FOR EACH OF THE DEVICES LISTED ABOVE.
41. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.
42. FIRE ALARM SYSTEMS SHALL BE SUPERVISED BY AN APPROVED UL LISTED CENTRAL STATION, OR REMOTE STATION (UUFX) MONITORING COMPANY (UUJS). (REF: CFC, 907.2.35, 907.6.6.3)
43. NOTIFICATION APPLIANCES SED FOR SIGNALING OTHER THAN FIRE SHALL NOT HAVE THE WORD "FIRE" OR ANY FIRE SYMBOL, IN ANY FORM (I.E. STAMPED, IMPRINTED, ETC.) ON THE APPLIANCE VISIBLE TO THE PUBLIC. NOTIFICATION APPLIANCES WITH MULTIPLE VISIBLE ELEMENTS SHALL BE PERMITTED TO HAVE FIRE MARKING ONLY ON THOSE VISIBLE ELEMENTS USED FOR FIRE SIGNALING, PER NFPA 72, 18.3.3.2/ NFPA 720, 6.3.3.2/ IR 9-2, 5.4.4 & 5.4.5.

FIRE ALARM SYMBOL LIST

SYMBOL:	MAF.	MODEL NO.	DESCRIPTION:	CSFM LISTING NO.
COMMON AND SEQUENCE OF OPERATION SUBSCRIPTS			SUBSCRIPTS: TYPE / PROGRAMMING WG = WIRE GUARD IS REQUIRED WP = WEATHERPROOF D = HVAC CONTROL # = 15, 30, 75, 110, 177 CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER	
	GAMEWELL FCI	E3 SERIES	(E) FIRE ALARM CONTROL PANEL WITH EMERGENCY EVACUATION AND DIGITAL ALARM COMMUNICATOR TRANSMITTER WITH HONEYWELL HON-CGW-MBB CELOUAR DIA	7165-1703:0125
	GAMEWELL FCI	LDC-SLP	(E) FIRE ALARM ANNUNCIATOR	
	SPACE AGE	TC2 32	(E) FIRE ALARM DOCUMENT CABINET	7300-0553:0110
	GAMEWELL FCI	GFPS-9	REMOTE POWER SUPPLY	7300-1703:0167
	GAMEWELL FCI	INX	INTELLIGENT NETWORK TRANSPONDER-CABINET	
	GAMEWELL FCI	AM-50	AMPLIFIER (AM-50-25)	
	GAMEWELL FCI	INI-VGX	COMMAND CENTER VOICE GATEWAY	7165-1703:0125
	GAMEWELL FCI	PM-9	POWER SUPPLY FOR THE INX	
S, S#	GAMEWELL FCI SYSTEM SENSOR	ASD-PL2F MCS-COF B210LP	FIRE ALARM SMOKE DETECTOR, CEILING OR WALL MOUNT BLANK - PHOTOELECTRIC CO = COMBINATION SMOKE / CARBON MONOXIDE SB = SOUNDER BASE	7272-1703:0121 7275-1703:0175 7300-1653:0109
H, H#	GAMEWELL FCI SYSTEM SENSOR	ATD-L2F B210LP	FIRE ALARM HEAT DETECTOR BLANK = COMBINATION RATE OF RISE / FIXED TEMP	7270-1703:0115 7300-1653:0109
	SYSTEM SENSOR	SCR/TR-HS	VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER	7125-1653:0186
S, S#	SYSTEM SENSOR	SPSR/TR SPSCR	COMBINATION AUDIO (VOICE) AND VISUAL ALARM DEVICE, CEILING OR WALL MOUNTED # = CANDELA RATING CD = CANDELA RATING SELECTED BY NICET DESIGNER	7320-1653:0201
F, F#	SYSTEM SENSOR	SPRK-MWBB	AUDIO (SPEAKER) ALARM DEVICE, CEILING OR WALL MOUNTED	7320-1653:0201
F	GAMEWELL FCI	MS-7AF	MANUAL PULL STATION	7150-1703:0119
TS	POTTER	OSYSU-2	FIRE ALARM TAMPER SWITCH TO MONITOR SPRINKLER SYSTEM	7770-0328:0010
TS PIV	POTTER	PCVS-2	FIRE ALARM TAMPER SWITCH TO MONITOR POST INDICATOR VALVE	7770-0328:0010
FS	SYSTEM SENSOR	WFD	FIRE ALARM FLOW SWITCH TO MONITOR SPRINKLER SYSTEM	7770-1653:0231
MM	GAMEWELL FCI	AMM-2F	FIRE ALARM ADDRESSABLE MONITOR MODULE	7300-1703:0102
CM	GAMEWELL FCI	AOM-2RF	FIRE ALARM ADDRESSABLE CONTROL MODULE	7300-1703:0102
R	APOLLO	MR-101/C/R	MULTI VOLTAGE RELAY (24VDC,24VAC,120VAC)	7300-1004:0101
F	SYSTEM SENSOR	SSV120-10	FIRE ALARM BELL	7135-1653:0217
FSD			FIRE SMOKE DAMPER TO INCLUDE DUCT DETECTOR, REMOTE LIGHT INDICATOR AND TOGGLE SWITCH FOR EACH ACTUATOR POWER TO DISCONNECTING MEANS	
			FIRE ALARM WIRING REFER TO DRAWINGS AND SPECIFICATION.	7161-0859:0101 7160-0859:0102 7160-0859:0103
EOL			END OF LINE RESISTOR "EOLR"	

FIRE ALARM WIRE DESIGNATION CHART

SYMBOL	DESCRIPTION	NUMBER OF CONDUCTORS	SIZE	TYPE
N	NOTIFICATION APPLIANCE CIRCUIT	TWO	#12	THHN/THWN
S	VOICE EVACUATION CIRCUIT - ABOVE GRADE	TWISTED PAIR	#14	WEST PENN #0990
D	SIGNALING LINE CIRCUIT (SLC) - ABOVE GRADE	TWISTED PAIR	#14	WEST PENN #AQC225
DD	SIGNALING LINE CIRCUIT (SLC) - BELOW GRADE	TWISTED PAIR	#14	WEST PENN #0991
SS	VOICE EVACUATION CIRCUIT - BELOW GRADE	AQUA SEAL TWISTED SHIELDED PAIR	#16	WEST PENN #AQC224
P	24 POWER	TWISTED SHIELDED PAIR	#16	THHN/THWN

NOTES:

1. SYMBOL INDICATES QTY & I.D. OF CIRCUIT. I.E. 2N2, INDICATES (2) 2#12 CI CABLE FOR N CIRCUIT.
2. ALL CONDUIT USED FOR FIRE ALARM SHALL BE 3/4" MINIMUM ABOVE GRADE AND 1" MINIMUM BELOW GRADE UNLESS NOTED OTHERWISE.
3. ALL WIRING USED IN UNDERGROUND CONDUITS SHALL BE LISTED FOR WET AREA APPLICATION, IN ACCORDANCE WITH CEC 760.

SEQUENCE OF OPERATION

	BUILDING POWER FAILURE	MANUAL PULL STN	SMOKE DETECTOR	HEAT DETECTOR	TAMPER SWITCH	FLOW SWITCH	OPEN SHORT OR GROUND	ELEVATOR LOBBY & MACHINE ROOM SMOKE DETECTOR	ELEVATOR MACHINE ROOM HEAT DETECTOR
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM, SUPERVISION & TROUBLE)	YES	YES	YES	YES	YES	YES	YES	NO	NO
SOUND CONTROL PANEL TROUBLE BUZZER	YES	ON WIRING FAULT	ON WIRING FAULT	ON WIRING FAULT	YES	YES	YES	NO	NO
ACTIVATE AUDIBLE ALARM SIGNALS (UNTIL SILENCE)	NO	YES	YES	YES	NO	YES	NO	NO	NO
ACTIVATE VISUAL ALARM SIGNALS (UNTIL RESET)	NO	YES	YES	YES	NO	YES	NO	NO	NO
ACTIVATE EMERGENCY VOICE SYSTEM SIGNALS (UNTIL RESET)	NO	YES	YES	YES	NO	YES	NO	NO	NO
REPORT TO CENTRAL STATION	YES	YES	YES	YES	YES	YES	NO	NO	NO
ANNUNCIATE AT REMOTE ANNUNCIATOR PANEL (LOCATED IN ADMIN LOBBY)	YES	YES	YES	YES	YES	YES	YES	NO	NO
CLOSE FIRE-SMOKE DAMPERS	NO	NO	YES	NO	NO	NO	NO	NO	NO
SHUTDOWN HVAC UNIT	NO	NO	YES	NO	NO	NO	NO	NO	NO
ACTIVATE FIRE SPRINKLER BELL	NO	NO	NO	NO	NO	YES	NO	NO	NO
LOCAL ALARM AT ROOM	NO	NO	NO	NO	NO	NO	NO	NO	NO
RE-CALL ELEVATOR	NO	NO	NO	NO	NO	NO	NO	YES	NO
SHUT-DOWN ELEVATOR POWER	NO	NO	NO	NO	NO	NO	NO	NO	YES

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 1

2022 CALIFORNIA BUILDING CODE (CBC)
CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 2
(2021 INTERNATIONAL BUILDING CODE (IBC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 3
(2020 NATIONAL ELECTRICAL CODE (NEC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 4
(2021 UNIFORM MECHANICAL CODE (UMC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC)
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 5
(2021 UNIFORM MECHANICAL CODE (UPC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 6

2022 CALIFORNIA HISTORICAL BUILDING CODE (CHBC)
CALIFORNIA CODE OF REGULATIONS (CHBC) TITLE 24, PART 8

2022 CALIFORNIA FIRE CODE (CFC)
CALIFORNIA CODES OF REGULATIONS (CRR) TITLE 24, PART 9
(2021 INTERNATIONAL FIRE CODE (IFC) W/ 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE
CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, PART 10
(2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC))

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)
CALIFORNIA CODES OF REGULATIONS (CCR) TITLE 24, PART 11

2022 CALIFORNIA REFERENCED STANDARDS CODE
CALIFORNIA DOE OF REGULATIONS (CCR) TITLE 24, PART 12

AMERICANS WITH DISABILITIES ACT (ADA)
TITLE II - ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAG)
1990 STATE FIRE MARSHAL REGULATIONS AND AMENDMENTS TO-DATE

CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, CALIFORNIA STATE ACCESSIBILITY STANDARDS CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 19

NFPA 13 STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS 2022 EDITION (CA AMENDED)

NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE 2022 EDITION (CA AMENDED)

EQUIPMENT ANCHORAGE NOTES:

1. 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, SECTION 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTERS 13,26, AND 30.

   1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
   2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTION 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 MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

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

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

   THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF STRUCTURAL ENGINEER OF RECORD AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.
2. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS BRACING NOTE.

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

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

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

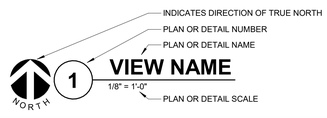
   MP [] MD [] PP [] E [X] OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.

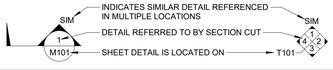
   MP [] MD [] PP [] OPTION 2: SHALL COMPLY WITH THE APPLICABLE HCAI PRE-APPROVAL (OPM#) # _____, AS INCLUDED IN THESE DRAWINGS WITH PROJECT-SPECIFIC NOTES AND DETAILS.

VIEW KEY

NAME — LEVEL NAME
10'-0" — HEIGHT ABOVE PROJECT 0'-0"

1 — INDICATES NOTE USED TO DESCRIBE ADDITIONAL INFORMATION ABOUT WORK REQUIED, SPECIFIC TO THE SHEET AND/OR DETAIL





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)
———— NEW
- - - - - - - - EXISTING TO BE REMOVED (SHORT DASHED PATTERN)
— — — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN
———— EXISTING (NARROW LINE PATTERN)
— — — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

WORK BY OTHERS (NARROW LINE)
———— WORK BY OTHERS (NARROW LINE)
- - - - - - - - EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

'TAG'-(E) TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

'TAG'-(R) TAGS WITH DASH 'R' INDICATES THE REFERENCED OBJECT IS REMOVED

TAG-1 UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

ELECTRICAL SHEET INDEX

FA001	FIRE ALARM COVERSHEET
FA002	FIRE ALARM RISER DIAGRAM AND CALCULATIONS
FA100	SITE PLAN - FIRE ALARM DEMOLITION
FA101	SITE PLAN - FIRE ALARM REMODEL
FA201	FIRST FLOOR PLAN - FIRE ALARM
FA202	SECOND FLOOR PLAN - FIRE ALARM
FA501	FIRE ALARM DETAILS
GRAND TOTAL: 7	

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:
IMEG
www.imegcorp.com
901 VIA PIEMONTE
SUITE 400
ONTARIO, CA 91764
P: 909.477.6915 F: 909.477.6916
PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER
NESTOR C. IGNACIO, JR.
Lic. E16934
Exp. 6-30-2025
CIVIL
STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

Rev.	Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE ALARM COVERSHEET

SHEET NO:

FA001

BATTERY CALCULATION FOR FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLIES

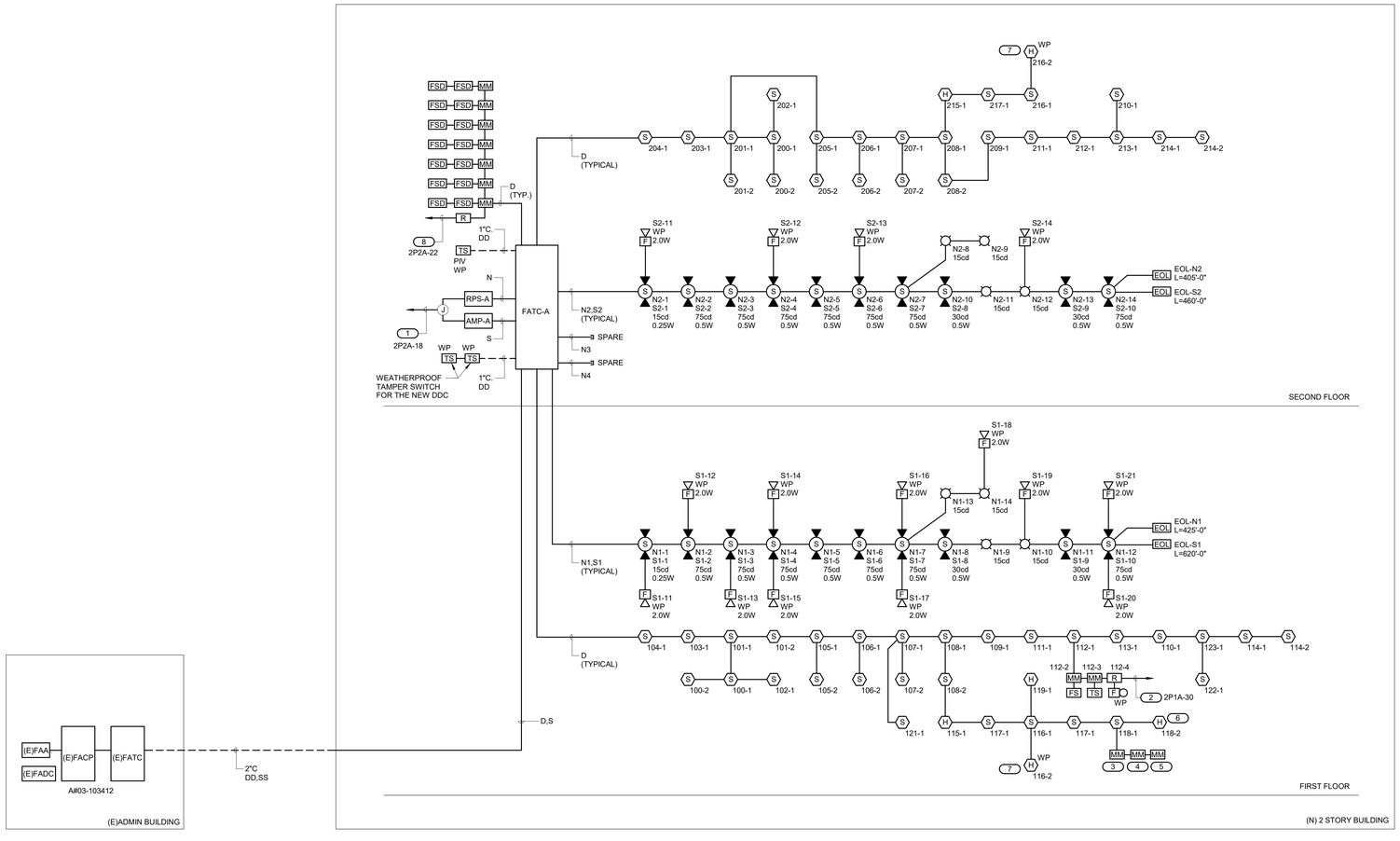
DESCRIPTION	(E)FACP					RPS-A				
		SUPERVISORY CURRENT		ALARM CURRENT			SUPERVISORY CURRENT		ALARM CURRENT	
	QTY	UNIT	TOTAL	UNIT	TOTAL	QTY	UNIT	TOTAL	UNIT	TOTAL
EXISTING FACP	1	0.30310	0.30310	0.42810	0.42810					
EXISTING FIRE ALARM ANNUNCIATOR	1	0.02000	0.02000	0.02500	0.02500					
REMOTE POWER SUPPLY	0		0.00000		0.00000	1	0.07500	0.07500	0.17500	0.17500
MANUAL PULL STATION	0	0.00030	0.00000	0.00300	0.00000					
SMOKE DETECTOR	53	0.00030	0.01590	0.00650	0.34450					
HEAT DETECTOR	6	0.00030	0.00180	0.00650	0.03900					
TAMPER & FLOW SWITCH WITH DUAL MONITOR MODULE	4	0.00010	0.00040	0.00010	0.00040					
FA BELL	2	0.00530	0.010600	0.00530	0.01060					
RELAY MODULE	3	0.00036	0.001071	0.00065	0.00195					
MONITOR MODULE	10	0.00036	0.003570	0.00060	0.00600					
STROBE (15cd) - CEILING						8			0.04100	0.32800
STROBE (30cd) - CEILING						0			0.06300	0.00000
SPEAKER/STROBE COMBO (15cd)						2			0.06600	0.13200
SPEAKER/STROBE COMBO (30cd)						4			0.09400	0.37600
SPEAKER/STROBE COMBO (75cd)						14			0.15800	2.21200
SPEAKER/STROBE COMBO (110cd)						0			0.20200	0.00000
SPEAKER - WEATHERPROOF						15			0.09000	1.35000
TOTAL			0.356		0.856			0.075		4.573
		0.356 A		0.856 A			0.075 A		4.573 A	
		x 24 H		x 0.25 H			x 24 H		x 0.25 H	
		8.555 AH		0.214 AH			1.800 AH		1.143 AH	
		8.555 AH, STANDBY					1.800 AH, STANDBY			
FIRE ALARM DEVICE QUANTITIES ARE SHOWN		0.214 AH, ALARM					1.143 AH, ALARM			
SOLELY FOR ENGINEERING CALCULATIONS.		8.768 AH, SUB TOTAL					2.943 AH, SUB TOTAL			
IT SHALL NOT BE USED FOR BID QUANTITY TAKEOFFS.		1.754 (20% SAFETY FACTOR)					0.589 (20% SAFETY FACTOR)			
		10.522 TOTAL					3.532 TOTAL			
		PROVIDE 28AH BATTERY CAPACITY MIN.					7 AH, BATTERY CAPACITY			
		17.478 AH, SPARE CAPACITY					3.468 AH, SPARE CAPACITY			

SPEAKER CIRCUIT LOAD CALCULATION

SPEAKER CIRCUIT DESCRIPTION	PANEL CIRCUIT NUMBER	WIRE GAUGE (18, 16, 14, 12)	CIRCUIT VOLTAGE (25 OR 70 VRMS)	APPLIANCES QUANTITIES / TAP VALUES: SPEAKER TAP .25 Watt	SPEAKER TAP .5 Watt	SPEAKER TAP 1. Watt	SPEAKER TAP 2. Watt	TOTAL CIRCUIT LOAD (WATTS)	ESTIMATED CIRCUIT LENGTH (FEET)	MAXIMUM -3 dB DROP PER CIRCUIT: ACTUAL WIRE/LOSS (dB)	MAXIMUM ALLOWABLE CKT. LENGTH (FEET)	TOTAL CIRCUIT RESISTANCE (OHMS)
AMP-A	S1	16	70 vrms	1	9	0	11	26.75 Watts	620 ft.	-.26 db	8435 ft.	5.574 Ohms
AMP-A	S2	16	70 vrms	1	9	0	4	12.75 Watts	460 ft.	-.09 db	17698 ft.	4.136 Ohms
AMP-A	S3 (SPARE)	16	70 vrms	0	0	0	0	. Watts	ft.	. db	ft.	. Ohms
AMP-A	S4 (SPARE)	16	70 vrms	0	0	0	0	. Watts	ft.	. db	ft.	. Ohms
				Appliance Summary				Total Load (Watts)				
				2	18	0	15	39.50				
				Amplifier Total (Watts)		Total Load (Watts)		Spare Load (Watts)		Spare Percentage		
			AMP-A	50		39.50		10.50		21.00%		

STROBE SIGNAL CIRCUIT SCHEDULE

BLDG. NO.	PANEL NO.	CIRCUIT NO.	15cd STROBE 0.041 AMPS NO.	15cd STROBE 0.041 AMPS AMPS	30cd STROBE 0.063 AMPS NO.	30cd STROBE 0.063 AMPS AMPS	15cd STROBE/SPEAKER 0.066 AMPS NO.	15cd STROBE/SPEAKER 0.066 AMPS AMPS	30cd STROBE/SPEAKER 0.094 AMPS NO.	30cd STROBE/SPEAKER 0.094 AMPS AMPS	75cd STROBE/SPEAKER 0.158 AMPS NO.	75cd STROBE/SPEAKER 0.158 AMPS AMPS	110cd STROBE/SPEAKER 0.202 AMPS NO.	110cd STROBE/SPEAKER 0.202 AMPS AMPS	TOTAL CIRCUIT AMPS	WIRE SIZE (CU) #	CIRC. MILS	FEEDER LENGTH IN FT. (FROM PANEL TO EOL)	VOLTAGE DROP (%)	REMARKS
BLDG	RPS-A	N1	4	0.164	0	0.000	1	0.066	2	0.188	7	1.106	0	0.000	1.524	12	6530	425	8.93	N1
BLDG	RPS-A	N2	4	0.164	0	0.000	1	0.066	2	0.188	7	1.106	0	0.000	1.524	12	6530	405	8.51	N2
BLDG	RPS-A	N3	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0.000	12	6530	0	0.00	SPARE
BLDG	RPS-A	N4	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0.000	12	6530	0	0.00	SPARE



1 FIRE ALARM RISER
NO SCALE

KEY NOTES: (#)

1. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM PANEL' TO CIRCUIT ID.
2. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM BELL' TO CIRCUIT ID.
3. ADDRESSABLE MODULE FOR PRIMARY AND SECONDARY RECALL.
4. MODULE FOR ELEVATOR SHUNT-TRIP BREAKER.
5. MODULE FOR THE FIREMANS HAT FLASH.
6. HEAT DETECTOR FOR ELEVATOR SHUNT-TRIP.
7. WEAHERPROOF HEAT DETECTOR FOR ELEVATOR RECALL.
8. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM DAMPER' TO CIRCUIT ID.

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PROJECT #22003237.00

REGISTERED PROFESSIONAL ENGINEER NESTOR C. IGNACIO, JR. Lic. E16934 Exp. 6-30-2025 STATE OF CALIFORNIA

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

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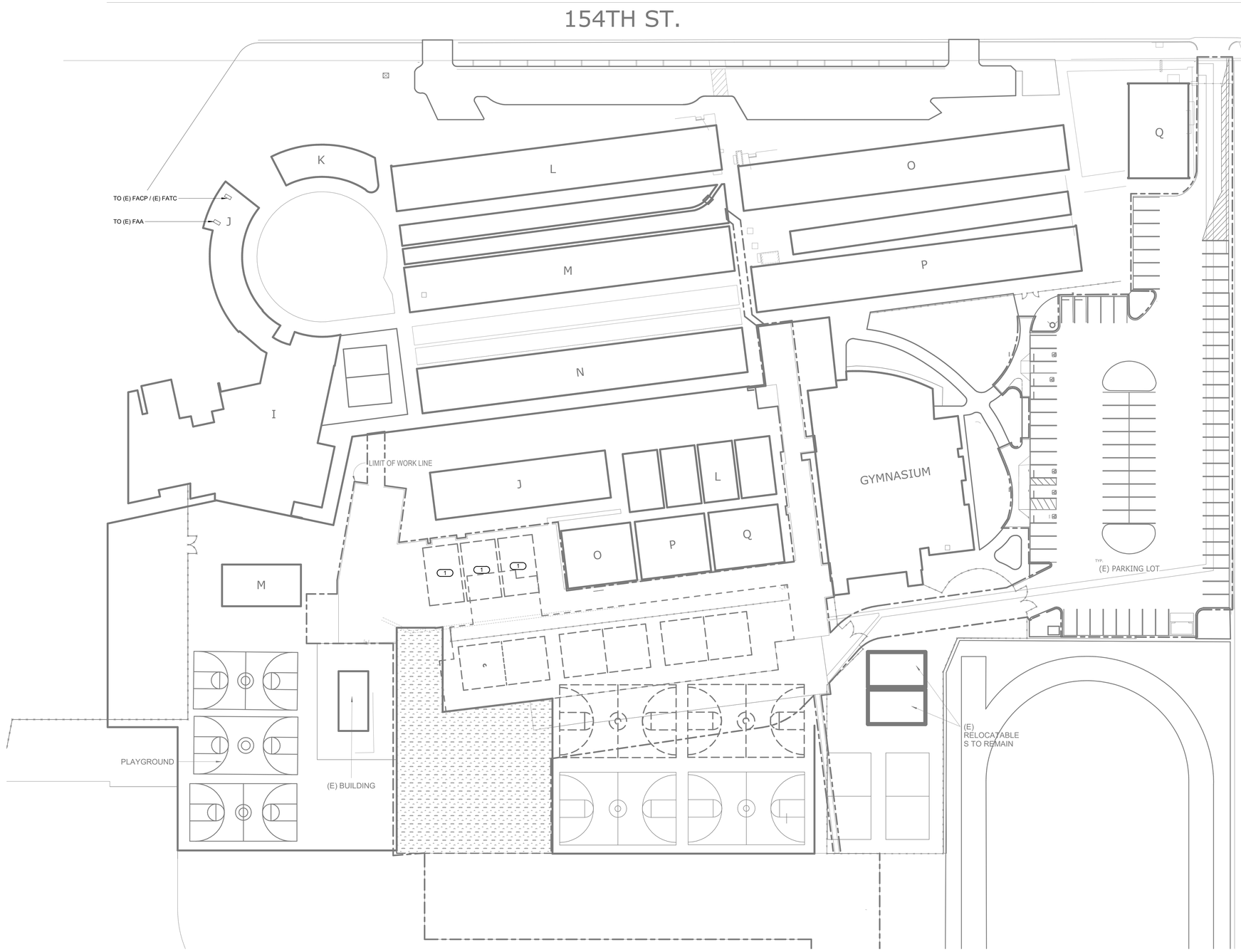
NO.	Rev. Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE ALARM RISER DIAGRAM AND CALCULATIONS

SHEET NO:

FA002



SITE PLAN - FIRE ALARM DEMOLITION

1" = 30'-0"

FIRE ALARM SITE DEMOLITION NOTES: (#)

1. EXISTING FIRE ALARM DEVICES IN REMOVED RELOCATABLE BUILDINGS TO BE DISCONNECTED FROM THE EXISTING CAMPUS FIRE ALARM SYSTEM. FIELD VERIFY EXISTING FIRE ALARM CONNECTIONS TO RELOCATABLE BUILDINGS.

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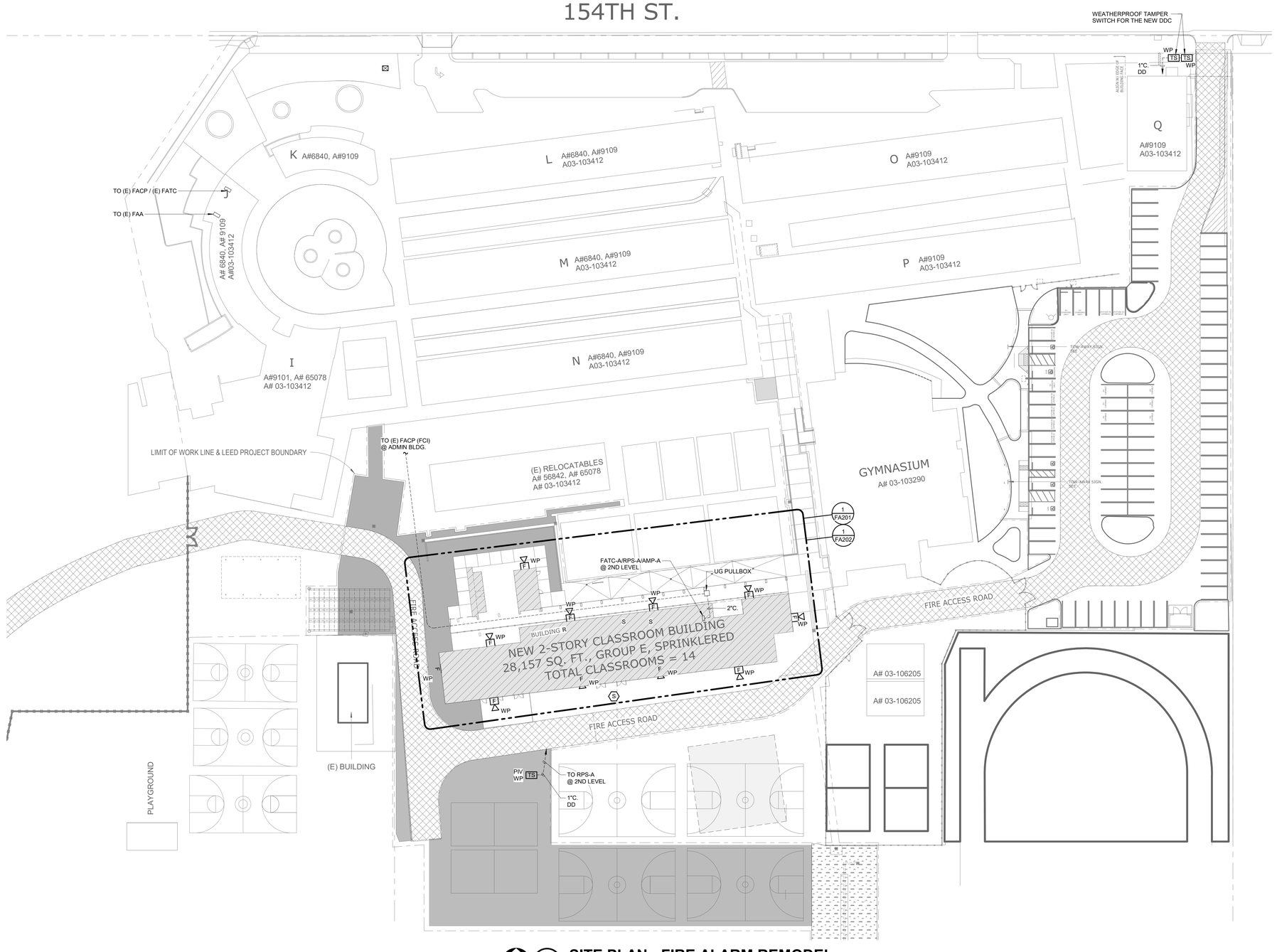
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ENGINEER:

SHEET DESCRIPTION:
SITE PLAN - FIRE ALARM DEMOLITION

SHEET NO:

FA100



1 **SITE PLAN - FIRE ALARM REMODEL**
1" = 30'-0"

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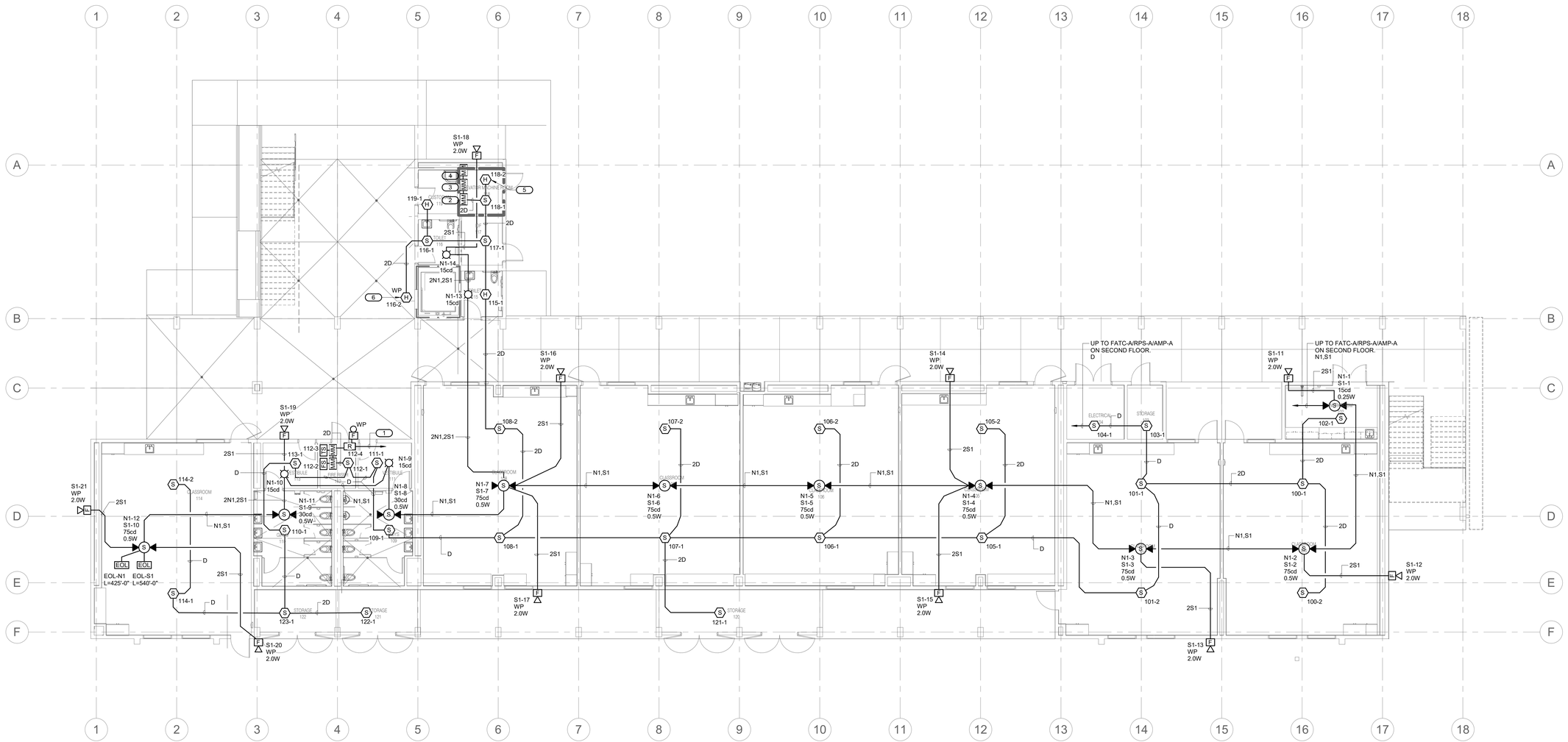
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SHEET DESCRIPTION:
SITE PLAN - FIRE ALARM REMODEL

SHEET NO:
FA101



FIRST FLOOR PLAN - FIRE ALARM

1/8" = 1'-0"

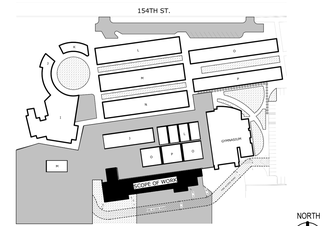
NORTH

GENERAL NOTES:

A. THE BUILDING IS NON-COMBUSTIBLE, THEREFORE, NO ATTIC HEAT DETECTOR ARE PROVIDED INSIDE CEILING SPACE.

KEY NOTES: (#)

1. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL "FIRE ALARM BELL" TO CIRCUIT ID.
2. ADDRESSABLE MODULE FOR PRIMARY AND SECONDARY RECALL.
3. MODULE FOR ELEVATOR SHUNT-TRIP BREAKER.
4. MODULE FOR THE FIREMANS HAT FLASH.
5. HEAT DETECTOR FOR ELEVATOR SHUNT-TRIP.
6. WEAHERPROOF HEAT DETECTOR FOR ELEVATOR RECALL.



KEYMAP

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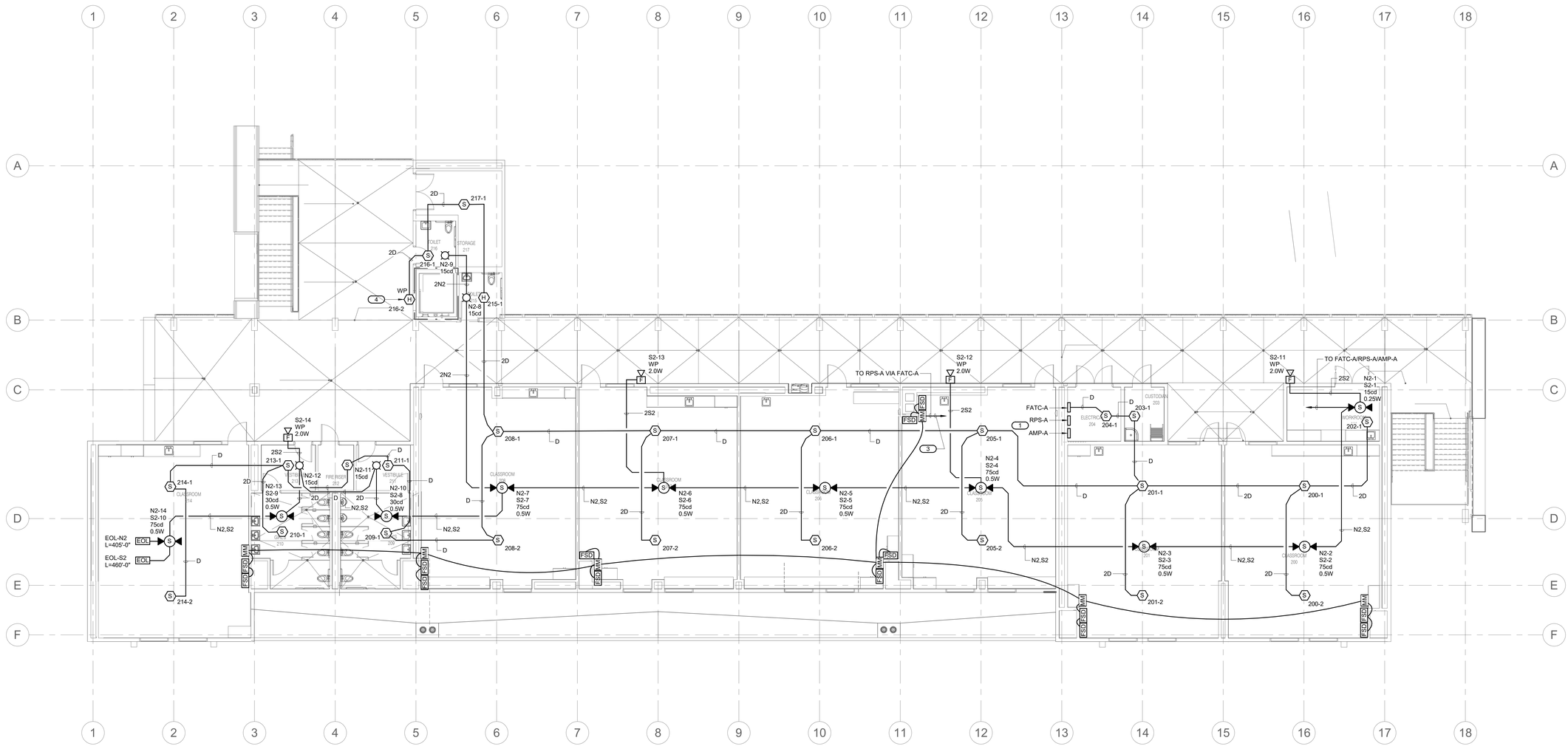
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DATE: -
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CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRST FLOOR PLAN - FIRE ALARM

SHEET NO:

FA201



NORTH

1 **SECOND FLOOR PLAN - FIRE ALARM**

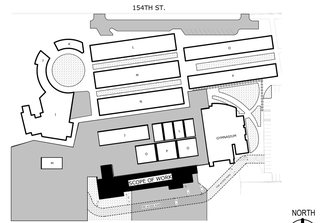
1/8" = 1'-0"

GENERAL NOTES:

A. THE BUILDING IS NON-COMBUSTIBLE, THEREFORE, NO ATTIC HEAT DETECTOR ARE PROVIDED INSIDE CEILING SPACE.

KEY NOTES: (#)

1. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE ALARM PANEL' TO CIRCUIT ID.
2. NOT USED.
3. TO A DEDICATED 120V CIRCUIT. PROVIDE 'LOCK-ON' DEVICE TO BREAKER AND RED LABEL 'FIRE DAMPER' TO CIRCUIT ID.
4. WEAHERPROOF HEAT DETECTOR FOR ELEVATOR RECALL.



KEYMAP

10/4/2024 11:59:31 AM Autodesk Docs://22003237.00 - LESD-Lawndale- CA-Will Rogers MS CR ADD/ET22_22003237.00_LESD-Lawndale- CA-Will Rogers MS CR ADD_C.rvt

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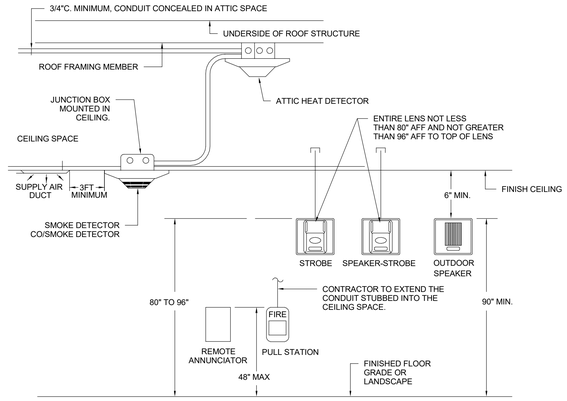
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JOB NO:	22029.01
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ENGINEER:	

SHEET DESCRIPTION:
SECOND FLOOR PLAN - FIRE ALARM

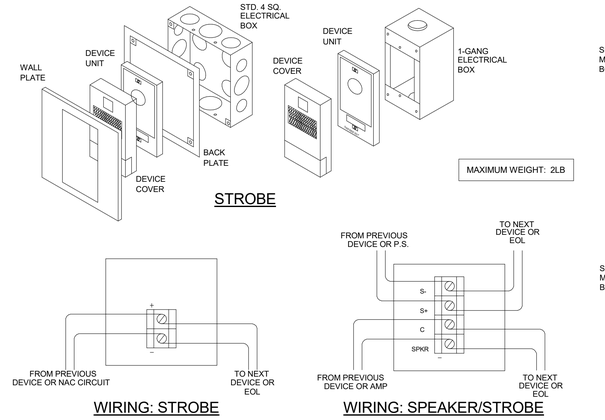
SHEET NO:

FA202



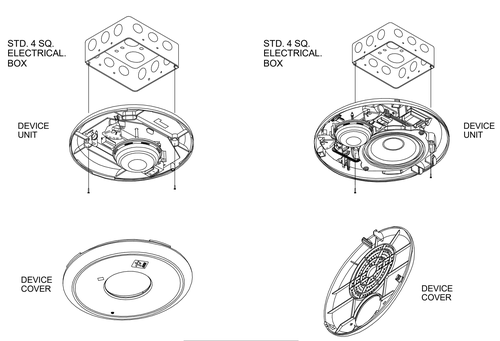
FIRE ALARM DEVICE ELEVATION

NTS | 8



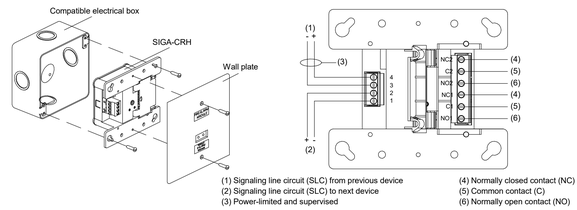
WALL MOUNT AUDIO/VISUAL DEVICE DETAIL

NTS | 5



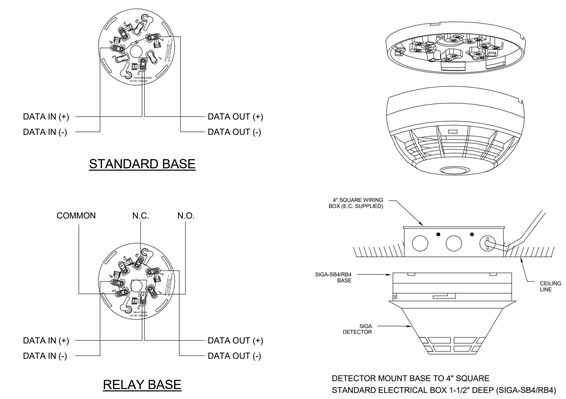
CEILING MOUNT AUDIO/VISUAL DEVICE DETAIL

NTS | 1



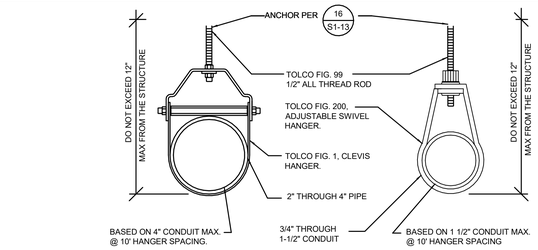
HIGH POWER CONTROL RELAY WIRING DETAIL

NTS | 2



SMOKE/HEAT DETECTOR BASE WIRING DETAIL

NTS | 3



SINGLE CONDUIT TRAPEZE MTG. DETAIL

NOTES:

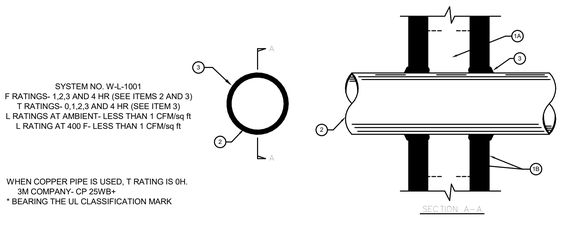
1. TRAPEZE SHALL BE SPACED 10'-0" MAXIMUM ON CENTER.
2. MIN. 3/8" ROD TO BE USED.
3. TRANSVERSE BRACE TO BE PROVIDED ON ONE SIDE AT EACH TRAPEZE ALTERNATING SIDES AT EVERY OTHER TRAPEZE.

ROD DIA. "B"	MAX. VERTICAL DESIGN LOAD	MAX. BRACE LENGTH "D"
3/8"	150 LBS	10'-0"

MULTI-CONDUIT TRAPEZE MTG. DETAIL

CONDUIT TRAPEZE MOUNTING DETAIL

NTS | 9



1. WALL ASSEMBLY- THE 1,2,3 OR 4 HOUR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR 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 (MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF MON 2 BY 4 IN. LUMBER SPACED 16 INCHES OC WITH NOM 2 BY 4 INCH LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3-3/5 INCH WIDE BY 1-3/8 INCH DEEP CHANNELS SPACED MAX 24 INCH OC.
   B. GYPSUM BOARD*- NOM 1/2 OR 5/8 INCH THICK, 4 FEET WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM OF OPENING IS 13-1/2 IN.
2. PIPE OR CONDUIT- NOM 12 INCHES DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE. NOM 12 IN DIAM. (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE. NOM 12 IN. DIAM. (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM 6 IN. DIAM (OR SMALLER) STEEL CONDUIT, NOM 4 IN DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM 6 IN. DIAM (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING OR NOM 1 IN. DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM 4 IN DIAM MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
3. FILL, VOID OR CAVITY MATERIAL*- CAULK- CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN DIAM BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT IT'S EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING ON THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

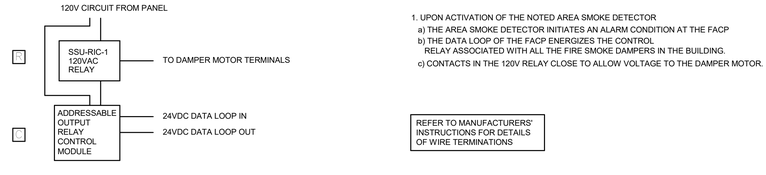
MAX PIPE OR CONDUIT DIAM. IN.	ANNULAR SPACE IN	F RATING HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1-1/2	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

CONDUIT PENETRATION THRU WALL

NTS | 10

TYPICAL FIRE ALARM DEVICE WIRING DIAGRAM

NTS | 6



FIRE-SMOKE DAMPER OPERATION

NTS | 7

TYPICAL POWER SUPPLY LAYOUT

NTS | 4

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LAWNDALE, CA 90260

CLIENT:

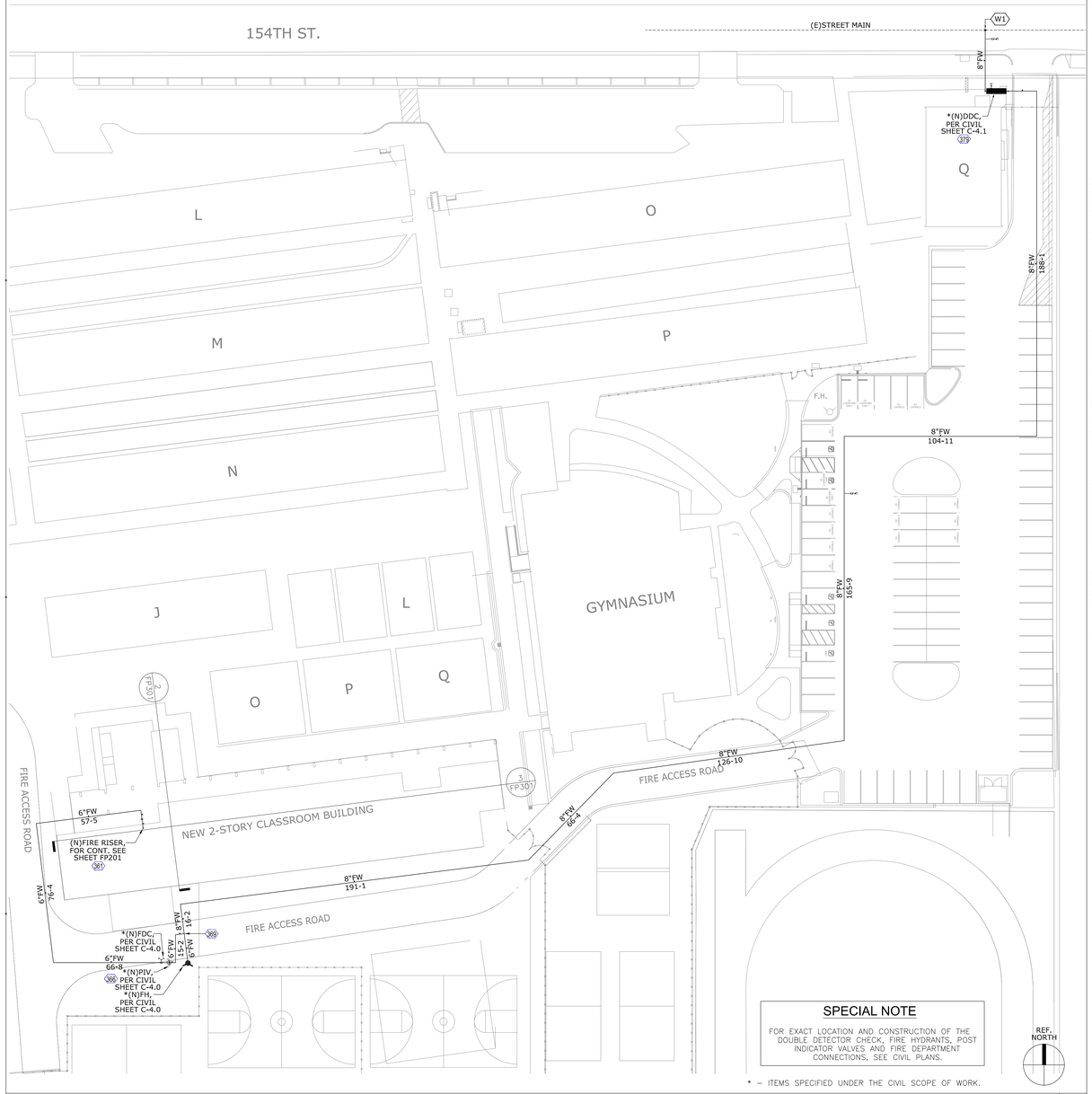
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

Rev.	Date	Description

JOB NO: 22029.01
DATE: -
DRAWN: Author
CHECK: Checker
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE ALARM DETAILS

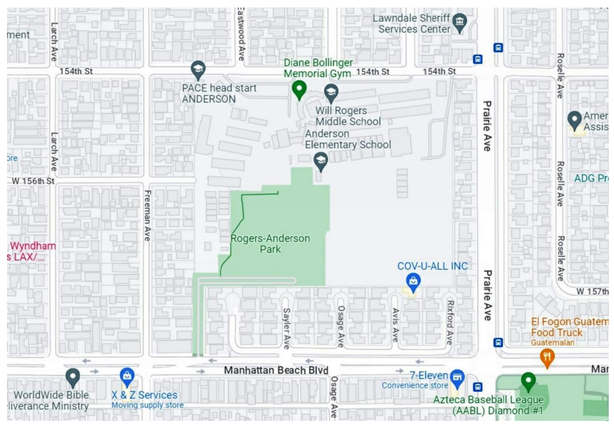
SHEET NO:
FA501



* – ITEMS SPECIFIED UNDER THE CIVIL SCOPE OF WORK.

FIRE PROTECTION PARTIAL SITE PLAN

SCALE: 1" = 30'-0" | 3



VICINITY MAP

NOT TO SCALE | 2

HYDRAULIC CALCULATIONS PERFORMED BY SPRINKCAD SOFTWARE PROGRAM.

MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS.

THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7–16 CHAPTERS 13, 26 AND 30:

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE 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 300 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

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

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORECES AND DISPLACEMENTS PRESCRIVED 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 INSTALLTION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLTION GUIDE OR MANUAL SHALL BE AVAILABEL ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

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

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

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

MATERIAL NOTES

ALL PIPING AND ACCESSORIES SHALL BE NEW AND OF DOMESTIC MANUFACTURE

1. ALL PIPE 1" – 2" TO BE BLACK STEEL, SCHEDULE 40 STANDARD WALL THREADED OR ROLL GROOVED, C=120 (USE GALVANIZED PIPE FOR DRAINS).
2. ALL 2–1/2" AND LARGER PIPE TO BE BLACK STEEL, SCHEDULE 10, ROLL GROOVED, C=120.
3. ALL 1" – 2" FITTINGS TO BE BLACK CAST IRON, SCREWED, 125# CAST OR DUCTILE IRON, SCREWED, 150# WWP (USE GALVANIZED FITTINGS FOR DRAINS). ALL FITTINGS FOR ROLL GROOVED BRANCH LINES ARE TO BE DUCTILE IRON, GROOVED, 175# AND WELDED OUTLETS (UNLESS NOTED OTHERWISE).
4. ALL 2–1/2" AND LARGER FITTINGS TO BE DUCTILE IRON, GROOVED, 175# WITH GROOVED ENDS AND WELDED OUTLETS FOR LINES (UNLESS OTHERWISE NOTED).
5. ALL GROOVED COUPLINGS ARE TO BE RIGID NON–FLEXIBLE TYPE (UNLESS OTHERWISE NOTED).
6. GROOVED FLEXIBLE COUPLINGS SHALL BE INSTALLED WITHIN 24" OF THE TOP AND BOTTOM OF ALL RISERS AND WITHIN 24" OF THE TOP OF DROPS EXCEEDING 15" IN LENGTH SUPPLYING MORE THAN ONE SPRINKLER HEAD.
7. ALL PIPE SUPPORTS TO BE PER NFPA 13 REQUIREMENTS. ACTUAL SIZE, TYPE AND ROD LENGTHS TO BE PER DETAILS OR AS NOTED ON PLANS.
8. THE LENGTH OF AN UNSUPPORTED ARM–OVER TO A SPRINKLER/DROP SHALL NOT EXCEED 12" IF THE STATIC PRESSURE IS GREATER THAN 100 PSI.
9. ALL MATERIALS TO BE UL LISTED AND/OR FM APPROVED FOR FIRE PROTECTION SYSTEMS. ALL MATERIALS SHALL BE IN ACCORDANCE WITH NFPA STANDARDS.
10. ALL MATERIALS SHOWN AND/OR LISTED AS SPECIFIED SHALL BE SUBSTITUTED WITH AN EQUAL OR BETTER PRODUCT DUE TO AVAILABILITY.

CURRENT CODES AND STANDARDS

2022 CA BUILDING CODE – TITLE 24 PART 2 VOLUME #1 AND #2
2022 CA ELECTRICAL CODE – TITLE 24 PART 3
2022 CA MECHANICAL CODE – TITLE 24 PART 4
2022 CA PLUMBING CODE – TITLE 24 PART 5
2022 CA FIRE CODE – TITLE 24 PART 9
2022 CA BUILDING STANDARDS – TITLE 24 PART 12
2018 NFPA 10 PORTABLE FIRE EXTINGUISHERS
2022 NFPA 13 INSTALLATION OF SPRINKLERS SYSTEMS PLUS CALIFORNIA AMENDMENTS
2019 NFPA 14 INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS
2022 NFPA 72 NATIONAL FIRE ALARM CODE – SEE CALIFORNIA AMENDMENTS
2019 NFPA 20 INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2023 NFPA 22 WATER TANKS FOR PRIVATE FIRE PROTECTION
2019 NFPA 24 INSTALLATION OF PRIVATE FIRE SERVICE MAINS PLUS CALIFORNIA AMENDMENTS
2011 NFPA 25 STANDARD FOR THE INSPECTION, TESTING, AND MAINTENANCE OF WATER–BASED FIRE PROTECTION SYSTEMS
2019 NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVES
2019 NFPA 110 EMERGENCY AND STANDBY POWER SYSTEMS
ICC 300–07 STANDARD ON BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS
2021 NFPA 17A–UL 300 FOR CLASS I HOOD FIRE SUPPRESSION SYSTEM (WET CHEMICAL SYSTEM)
2018 NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
TITLE 19 CCR STATE FIRE MARSHAL REGULATIONS

DSA CODES AND STANDARDS

(UNDER THE 2022 CALIFORNIA BUILDING CODE)
TITLE 19, STATE FIRE MARSHAL – PUBLIC SAFETY
TITLE 24, CALIFORNIA BUILDING AND FIRE CODE (PARTS 1–9 INCLUSIVE)
NFPA 13, INSTALLATION OF FIRE SPRINKLER SYSTEMS
NFPA 14, STANDARD FOR THE INSTALLATION OF PRIVATE SERVICE MAINS
NFPA 25, INSPECTION, TESTING AND MAINTENANCE OF WATER–BASED FIRE PROTECTION SYSTEMS (WITH CALIFORNIA AMENDMENTS)

SHEET INDEX

FP001 – FIRE PROTECTION GENERAL NOTES AND SITE PLAN
FP101 – FIRE PROTECTION FIRST FLOOR REFLECTED CEILING PLAN
FP102 – FIRE PROTECTION SECOND FLOOR REFLECTED CEILING PLAN
FP201 – FIRE PROTECTION FIRST FLOOR PIPING PLAN
FP202 – FIRE PROTECTION SECOND FLOOR PIPING PLAN
FP301 – FIRE PROTECTION BUILDING SECTIONS AND SEISMIC BRACING

FIRE TEST INFORMATION

STATIC PSI: 80 (72 10% CUSHION)
RESIDUAL PSI: 62
FLOW GPM: 20 @ 5,859 PSI
DATE: 01/03/2024

INFORMATION FROM: GOLDEN STATE WATER COMPANY

DESIGN CRITERIA

BRACING DESIGN: Ss= 1.799/Cp= 1.0095

LIGHT HAZARD (.10 OVER 1,500 SQ. FT.) (COVERAGE: 225 SQ. FT. MAX.)
ORDINARY HAZARD (GROUP 1) (.20 OVER 1,500 SQ. FT.) (COVERAGE: 130 SQ. FT. MAX.)

AREA ABOVE THE CEILING: 1. NON–COMBUSTIBLE OBSTRUCTED (ATTIC SPRINKLERS NOT REQUIRED)

AREA BELOW THE CEILING: 1. UN–OBSTRUCTED (SPRINKLERS: 225 SQ. FT. MAX.)
2. LABS, PREP. ROOMS, STORAGE AND UTILITY ROOMS (SPRINKLERS: 130 SQ. FT. MAX.)

PART II **INFORMATION ON FIRE FLOW AVAILABILITY**
(Part II to be completed by Water Purveyor)

Location of hydrant: On W. 154th St ~73' W/o Prairie Ave — Hydrant Number: 4333
Distance from Nearest Property Line: ~30' — Size of Hydrant: 6" — Size of Water main: 6"
Static PSI: 80 — Residual PSI: 62 — Orifice size: 4" — Pitot: 25 psi
Fire Flow at 20 PSI: 4111 gpm — Duration: 4 Hours — ☒ Flow Test Date / Time: 1/3/24 10:00AM — ☐ Hydraulic model

Location of hydrant: On W. 154th St ~55' W. Osage Ave — Hydrant Number: 3223
Distance from Nearest Property Line: ~50' — Size of Hydrant: 6" — Size of Water main: 6"
Static PSI: 78 — Residual PSI: 66 — Orifice size: 4" — Pitot: 34 psi
Fire Flow at 20 PSI: 5859 gpm — Duration: 4 Hours — ☒ Flow Test Date / Time: 1/26/24 12:56AM — ☐ Hydraulic model
☐ (Check box if Simultaneous/ Dual flow test was performed) Combined flow at 20 psi

Location of hydrant: — Hydrant Number:
Distance from Nearest Property Line: — Size of Hydrant: — Size of Water main:
Static PSI: — Residual PSI: — Orifice size: — Pitot:
Fire Flow at 20 PSI: — Duration: — ☐ Flow Test Date / Time: — ☐ Hydraulic model
☐ (Check box if Simultaneous/ Triple flow test was performed) Combined flow at 20 psi

Golden State Water Company — Water Purveyor
310- 767- 8200 — Phone Number
1/26/2024 — Date
Michael Carbajal — Signature
Operations Engineering Assistant — Title

This Information is Considered Valid for Twenty Four Months

Fire Department approval of building plans shall be required prior to the issuance of a Building Permit by the jurisdictional Building Department. Any deficiencies in water systems will need to be resolved by the Fire Prevention Division only prior to this department's approval of building plans.

Project Address: 4110 W. 154th St

FIRE FLOW INFORMATION

JOB SPECIFIC & GENERAL NOTES

1. SCOPE OF WORK: INSTALL NEW WET PIPE FIRE SPRINKLER SYSTEM IN NEW BUILDING AS SHOWN. P.O.C. IS AT A FLANGE, 0'–6" A.F.F. INSIDE BUILDING. ALL UNDERGROUND WORK IS BY SITE/PLUMBING CONTRACTOR.
2. THE SYSTEM HAS BEEN HYDRAULICALLY CALCULATED TO PROVIDE .20 GPM/SQ. FT. OVER THE MOST DEMANDING 1500 SQ. FT. FOR ORDINARY HAZARD OCCUPANCIES. A MINIMUM 10% CUSHION SHALL BE MAINTAINED. AREAS ARE INCREASED BY 30% WHERE CEILING SLOPE EXCEEDS 2:12.
3. THE SPRINKLER SYSTEMS SHALL COMPLY WITH NFPA 13, 2022 ED., CITY OF LAWNDALE AND DSA REQUIREMENTS (TITLE 24 PART 1, 2, 5, 9 & 12).
4. ALL MATERIAL SHALL BE UL LISTED/FM APPROVED FOR FIRE PROTECTION AND OF DOMESTIC MANUFACTURE.
5. BRANCH LINE PIPING (1"–2"): BLACK SCH. 40 THREADED (ASTM A–53) WITH CAST OR DUCTILE IRON SCREWED FITTINGS OR ROLL–GROOVED (ASTM A–795) WITH WELDED OUTLETS AND GROOVED FITTINGS.
6. SPRINKLER MAIN PIPING (2–1/2"–6"): BLACK SCH. 10 ROLL–GROOVED (ASTM A–795) WITH WELDED OUTLETS AND GROOVED FITTINGS.
7. NO SPRINKLERS ARE INSTALLED BELOW EXTERIOR NON–COMBUSTIBLE WALKWAYS AND OVERHANGS.
8. END HANGERS SHALL BE RESTRAINED (SEE DETAIL ON PLANS).
9. ALL PAINTING AND PRIMING IS BY GENERAL CONTRACTOR.
10. ALL WIRING IS BY ELECTRICAL CONTRACTOR.
11. PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED IN ACCORDANCE WITH UL LISTING AND THE LATEST CBC REQUIREMENTS IN CHAPTER 7, SECTION 714.
12. ALL VALVES SHALL BE EQUIPPED WITH A TAMPER SWITCH AND LOCKED IN THE OPEN POSITION.
13. ALL BRANCH LINES SHALL BE LATERALLY RESTRAINED AGAINST EXCESSIVE MOVEMENT.
14. BRANCH LINE HANGERS SHALL NOT RESTRAIN BRANCH LINES FROM LONGITUDINAL MOVEMENT DURING AN EARTHQUAKE.
15. SYSTEM COMPONENTS SHALL BE RATED AT 175 PSI MINIMUM.
16. AT VARIOUS STAGES AND UPON COMPLETION, THE SYSTEMS SHALL BE TESTED IN THE PRESENCE OF THE DSA REPRESENTATIVE.
17. THE SPACING AND DETAILS OF THE SUPPORT AND BRACING OF FIRE SPRINKLER PIPING SHALL COMPLY WITH THE 2022 EDITION OF NFPA 13 AND DSA REQUIREMENTS.
18. NFPA 13 (2022) SEC. 10.10.2.1, UNDERGROUND MAINS AND LEAD–IN CONNECTIONS TO SYSTEM RISER SHALL BE COMPLETELY FLUSHED BEFORE CONNECTION IS MADE TO OVERHEAD SPRINKLER PIPING SYSTEMS (WITNESSED BY THE INSPECTOR OF RECORD) – BY OTHERS.
19. NFPA 13 (2022) SEC. 10.10.2.2.1, ALL INTERIOR PIPING AND APPURTENANCES SUBJECT TO SYSTEM WORKING PRESSURE SHALL BE HYDROSTATICALLY TESTED AT 200 PSI AND SHALL MAINTAIN THE PRESSURE WITHOUT LOSS FOR 2 HOURS (WITNESSED BY THE INSPECTOR OF RECORD). LOCAL FIRE DEPARTMENT SHALL BE NOTIFIED OF DATE AND TESTING SO THAT THEY MAY OBSERVE TESTING.
20. NFPA (2022) SEC. 6.2.9, PROVIDE SPARE SPRINKLER HEAD CABINET, SPRINKLER WRENCH AND NO FEWER THAN 6 SPARE SPRINKLER HEADS MATCHING THE TYPES AND TEMPERATURE RATINGS IN EACH PROTECTED BUILDING FOR SYSTEMS LESS THAN 300 SPRINKLERS (12 SPARE SPRINKLER HEADS FOR SYSTEMS 300 TO 1000 SPRINKLERS).
21. NFPA 13 (2022) SEC. 9.3.6.3, THE END SPRINKLER ON A LINE SHALL BE RESTRAINED AGAINST EXCESSIVE VERTICAL AND LATERAL MOVEMENT.
22. NFPA 13 (2022) SEC. 9.3.5.5.10.1(1), LATERAL SWAY BRACING REQUIRED SHALL BE PERMITTED TO BE OMITTED WHEN BRANCH LINES SHALL BE INDIVIDUALLY SUPPORTED WITHIN 6" OF THE STRUCTURE, MEASURED BETWEEN THE TOP OF THE PIPE AND THE POINT OF ATTACHMENT TO THE BUILDING STRUCTURE.
23. NFPA 72 (2022), SPRINKLER FLOW SWITCH SHALL BE TESTED BY IOR TO CONFIRM THAT WHEN THE INSPECTOR'S TEST VALVE IS ACTIVATED, AN ALARM WILL SOUND NO LESS THAN 20 SECONDS AND NOT MORE THAN 90 SECONDS.
24. CBC SEC. 903.4.1, MAIN FIRE ALARM PANEL VALVE MONITORING AND WATER–FLOW ALARM AND TROUBLE SIGNALS SHALL BE DISTINCTLY DIFFERENT AND SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION MONITORING COMPANY (BY OTHERS).
25. NFPA 13 (2022) FLOW SWITCH SHALL BE CONNECTED TO A 10" DIAMETER OUTSIDE ALARM BELL AT THE RISER. APPROVED IDENTIFICATION SIGNS SHALL BE PROVIDED FOR OUTSIDE ALARM BELL, "SPRINKLER FIRE ALARM – WHEN BELL RINGS CALL 911/FIRE DEPARTMENT".
26. NFPA 13 (2022) SEC. 25.5.1, ALUMINUM PLATE OR RIGID PLASTIC HYDRAULIC CALCULATION INFORMATION SIGN SHALL BE SECURED ON THE FIRE SPRINKLER RISER. SIGN INFO PER SEC. 25.5.2.
27. NFPA 13 (2022) SEC. 25.1, SPRINKLER CONTRACTOR (C16) SHALL COMPLETE AND SIGN CONTRACTOR'S MATERIAL TEST CERTIFICATE FOR THE OVERHEAD SPRINKLER SYSTEM USING FORM IN FIGURE 25.1. THIS FORM SHALL BE GIVEN TO THE INSPECTOR OF RECORD (IOR) WHO WILL TURN IN FOR DSA RECORDS.
28. NFPA 13 (2022) SEC. 25.2.3.4, THE MAIN DRAIN VALVE SHALL BE OPENED AND REMAIN OPEN UNTIL THE SYSTEM PRESSURE STABILIZES. THE STATIC AND RESIDUAL PRESSURE SHALL BE RECORDED ON THE CONTRACTOR'S TEST CERTIFICATE (WITNESSED BY THE IOR).
29. TITLE 19 ARTICLE 906(a), A LABEL OF THE SELF–ADHESIVE TYPE SHALL BE PLACED ON THE FIRE DEPARTMENT CONNECTION OR ON THE RISER FOR THE FIRE SPRINKLER SYSTEM WITH THE DATE OF SERVICE AND/OR DATE OF INSTALLATION WAS PERFORMED AND LICENSE NUMBER OF PERSON PERFORMING SERVICE WORK.
30. INSTALL APPROVED TYPE PROTECTIVE METAL BASKET HEAD GUARDS AT ALL EXPOSED HEADS.

GENERAL NOTES

1. THE FIRE SPRINKLER SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 (2022 EDITION).
2. IT IS THE RESPONSIBILITY OF THE BUILDING OWNER TO MAINTAIN THE INTEGRITY OF THE SPRINKLER SYSTEM.
3. THE SPRINKLER CONTRACTOR WILL PROVIDE THE OWNER WITH THE NECESSARY INSTRUCTION MANUALS FOR THE UP–KEEP OF THE SYSTEM AS WELL AS A COPY OF NFPA 25 AT PROJECT CLOSEOUT.
4. ONLY NEW SPRINKLERS SHALL BE USED IN THE INSTALLATION OF THE SPRINKLER SYSTEM.
5. STAMPED AND APPROVED SPRINKLER PLANS SHALL BE MAINTAINED AT ALL TIMES ON THE JOBSITE.
6. AN APPOINTMENT SHALL BE MADE A MINIMUM OF 48 HOURS IN ADVANCE WITH THE APPROPRIATE FIRE PREVENTION OFFICE FOR ALL INSPECTIONS AND TESTS.
7. ALL SYSTEM PIPING SHALL BE HYDROSTATICALLY TESTED AT 200 PSI FOR 2 HOURS, OR AT 50 PSI ABOVE THE SYSTEM OPERATING PRESSURE WHICH EVER IS GREATER.
8. ALL UNDERGROUND MAINS AND LEAD–IN CONNECTIONS SHALL BE FLUSHED AS INDICATED PER NFPA 13 PRIOR TO CONNECTION TO THE OVERHEAD PIPING. THE FLUSHING SHALL CONTINUE UNTIL THE WATER IS CLEAR.
9. ALL UNDERGROUND MAINS SHALL BE INSPECTED, PRESSURE TESTED AND FLUSHED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION.
10. FIRE DEPARTMENT CONNECTIONS SHALL BE VISIBLE AND ACCESSIBLE. THEY SHALL HAVE NO FEMALE OUTLETS WITH PROTECTIVE CAPS AND AN APPROVED CHECK VALVE LOCATED AS CLOSE TO THE FDC AS POSSIBLE.
11. ALL VALVES SHALL HAVE A PERMANENT AFFIXED SIGN INDICATING ITS FUNCTION AND/OR AREA OF USE.
12. A STOCK OF SPARE SPRINKLERS OF EACH STYLE, TYPE AND TEMPERATURE RATING ALONG WITH A SPRINKLER WRENCH SHALL BE LOCATED NEXT TO THE MAIN BUILDING RISER.
13. ANY PORTION OF THE SPRINKLER SYSTEM WHICH IS EXPOSED TO FREEZING SHALL BE ADEQUATELY PROTECTED AGAINST EXPOSURE.
14. WHEN SERVING MORE THAN 100 SPRINKLERS, AUTOMATIC SPRINKLER SYSTEMS SHALL BE SUPERVISED BY AN APPROVED CENTRAL PROPRIETARY OR REMOTE STATION SERVICE AND/OR LOCAL ALARM WHICH WILL GIVE AN AUDIBLE SIGNAL AT A CONSTANTLY ATTENDED LOCATION.
15. ALL WALLS SHOWN ON PLANS ARE FULL HEIGHT WALLS (UNLESS NOTED OTHERWISE).
16. HYDRAULIC CALCULATIONS ARE PROVIDED TO THE SUPPLY SOURCE WITH A FIXED PRESSURE LOSS FOR THE BACKFLOW DEVICE AND A MINIMUM 10% REDUCTION OF THE WATER SUPPLY CURVE.
17. FOR THROUGH–PENETRATION FIRESTOP SYSTEMS, SEE ARCHITECTURAL DETAILS 14 AND 15/A860.
18. DEVIATION FROM APPROVED PLANS SHALL REQUIRE PERMISSION OF DSA (NFPA 13, SEC. 23.1.2).
19. CUTTING, BORING, SAWCUTTING OR DRILLING THROUGH THE NEW 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 PROTECTION GENERAL NOTES

1 |

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:
architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1700 508-1790 FAX

CONSULTANT:
1920 E. Warner Ave., Suite 3–H
Santa Ana, CA 92705
Telephone (714) 884–3803
Fax (714) 884–3834
PEI # 530.204
REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JESTER
No. M 29925
Exp. 06–30–2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

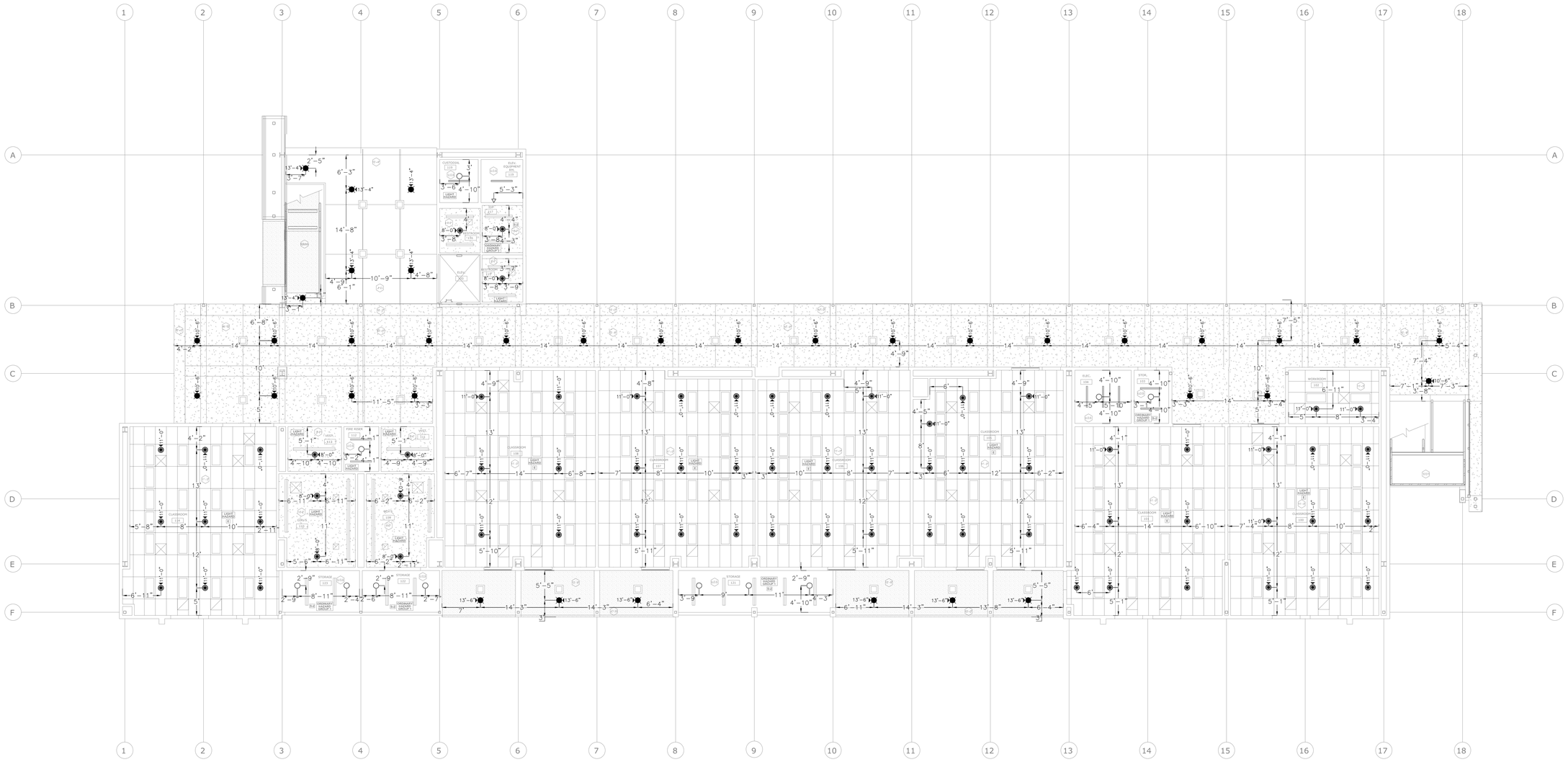
CLIENT:
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4110 W. 154TH ST.
LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION GENERAL NOTES AND SITE PLAN

SHEET NO:
FP001



LEGEND

A.F.F.: ABOVE FINISH FLOOR
BFP: BACKFLOW PREVENTER
BOP: BOTTOM OF PIPE
DSP: DRY STANDPIPE
(E): EXISTING
GPM: GALLONS PER MINUTE
FDC: FIRE DEPARTMENT CONNECTION
FH: FIRE HYDRANT
FHC: FIRE HOSE CABINET
L.F.: LINEAR FEET
N.I.C.: NOT IN CONTRACT
PSI: POUNDS PER SQUARE INCH
PVC: POLYVINYL CHLORIDE
(R): RELOCATED
SQ. FT.: SQUARE FEET
TYP: TYPICAL
WSP: WET STANDPIPE

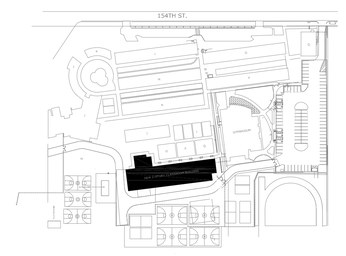
- REPRESENTS DETAIL NUMBER / REPRESENTS FIRE PROTECTION SHEET
- REPRESENTS WATER SUPPLY NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS HEAD ELEVATION
- REPRESENTS PIPE ELEVATION
- REPRESENTS PIPE HANGAR
- REPRESENTS END LINE RESTRAINT
- REPRESENTS 4-WAY BRACE WHERE OCCURS
- REPRESENTS LATERAL OR LONGITUDINAL SWAY BRACE WHERE OCCURS
- REPRESENTS PIPE SIZE
- REPRESENTS PIPE LENGTH
- REPRESENTS PIPE SLOPE DIRECTION
- REPRESENTS PIPE END CAP
- REPRESENTS PIPE RISE
- REPRESENTS PIPE DROP
- REPRESENTS EXISTING PIPING
- REPRESENTS POINT OF CONNECTION

SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED

SPRINKLER LEGEND

SYMBOL	SIN/MODEL	QUANTITY	K-FACTOR	TYPE	ORIFICE	FINISH	TEMP.	NOTES
○	TY 3131	14	5.6	UPRIGHT	1/2"	BRASS	155'F	EXPOSED**
◉	TY 3531	69	5.6	PENDENT	1/2"	CUSTOM*	155'F	CONCEALED****
●	TY 3531	36	5.6	PENDENT	1/2"	CUSTOM*/***	155'F	CONCEALED****
◁	TY 3331	1	5.6	SIDEWALL	1/2"	BRASS	155'F	EXPOSED
		TOTAL = 120						

* : CUSTOM COVER PLATE FINISH FROM MANUFACTURER TO BE SELECTED BY OWNER/ARCHITECT. NO FIELD PAINTING ALLOWED.
** : INSTALL APPROVED TYPE PROTECTIVE METAL BASKET HEAD GUARDS AT ALL EXPOSED HEADS.
*** : PROVIDE WITH CORROSION-RESISTANT COATING FROM MANUFACTURER.
**** : PROVIDE WITH OVERSIZED SEISMIC ESCUTCHEON PLATE.



NORTH

FIRE PROTECTION FIRST FLOOR REFLECTED CEILING PLAN — SCALE: 1/8"=1'-0" — 1 — KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Fire Protection\FP001.DWG Oct 07, 2024 - 11:06am iggy

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite I-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY M. JEFFERS
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:

WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

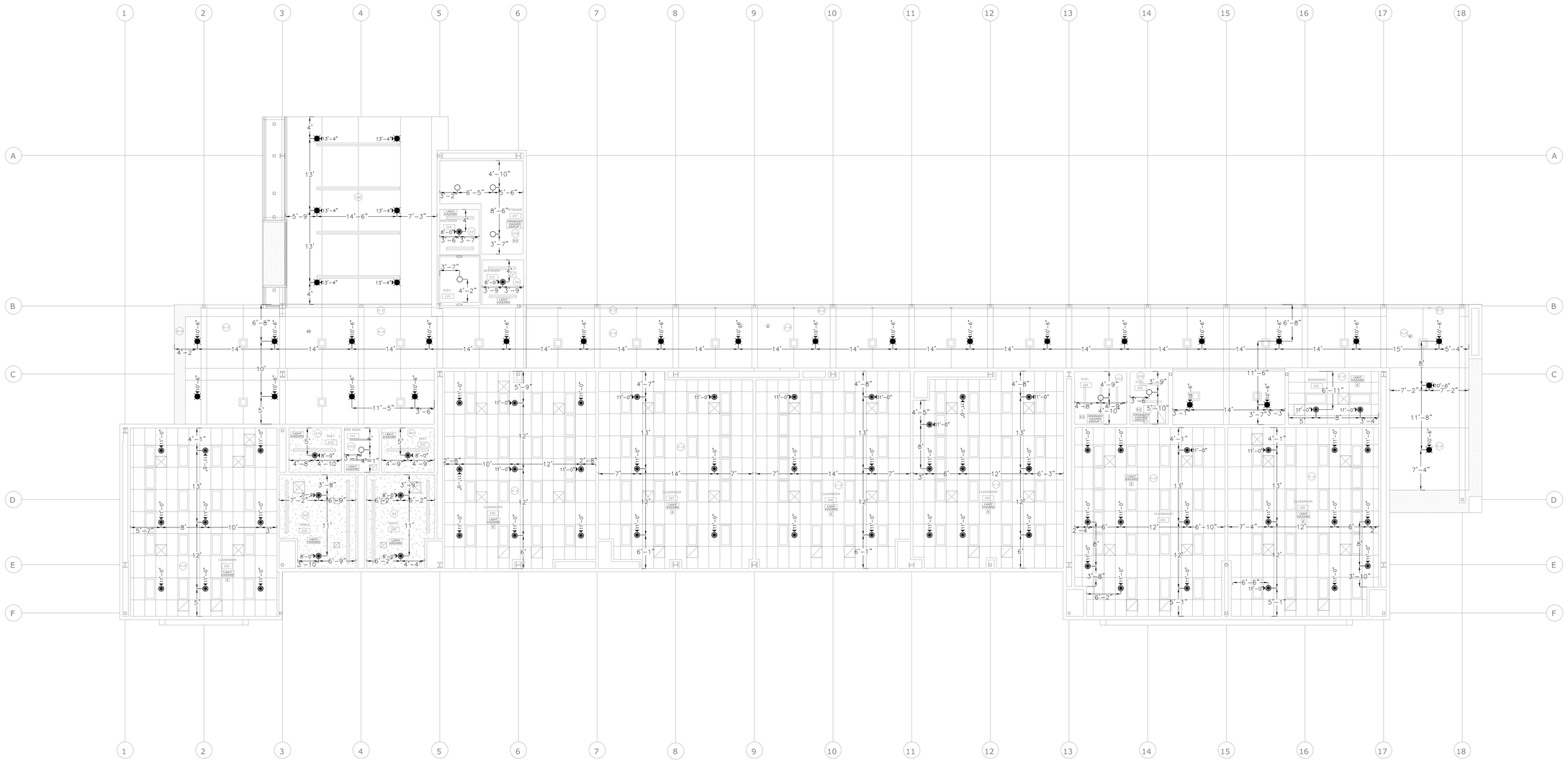
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION
FIRST FLOOR
REFLECTED CEILING PLAN

SHEET NO:

FP101



LEGEND

A.F.F.: ABOVE FINISH FLOOR
BFP: BACKFLOW PREVENTER
BOP: BOTTOM OF PIPE
DSP: DRY STANDPIPE
(E): EXISTING
GPM: GALLONS PER MINUTE
FDC: FIRE DEPARTMENT CONNECTION
FH: FIRE HYDRANT
FHC: FIRE HOSE CABINET
L.F.: LINEAR FEET
N.I.C.: NOT IN CONTRACT
PSI: POUNDS PER SQUARE INCH
PVC: POLYVINYL CHLORIDE
(R): RELOCATED
SQ. FT.: SQUARE FEET
TYP.: TYPICAL
WSP: WET STANDPIPE

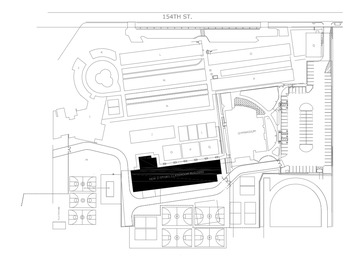
- REPRESENTS DETAIL NUMBER / REPRESENTS FIRE PROTECTION SHEET
- REPRESENTS WATER SUPPLY NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS NODE NOTED ON HYDRAULIC CALCULATIONS
- #'-#" REPRESENTS HEAD ELEVATION
- +#'-#" REPRESENTS PIPE ELEVATION
- #2 / #1 REPRESENTS PIPE HANGAR
- REPRESENTS END LINE RESTRAINT
- REPRESENTS 4-WAY BRACE WHERE OCCURS
- REPRESENTS LATERAL OR LONGITUDINAL SWAY BRACE WHERE OCCURS
- REPRESENTS PIPE SIZE
- REPRESENTS PIPE LENGTH
- REPRESENTS PIPE SLOPE DIRECTION
- REPRESENTS PIPE END CAP
- REPRESENTS PIPE RISE
- REPRESENTS PIPE DROP
- REPRESENTS EXISTING PIPING
- REPRESENTS POINT OF CONNECTION

SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED

SPRINKLER LEGEND

SYMBOL	SIN/MODEL	QUANTITY	K-FACTOR	TYPE	ORIFICE	FINISH	TEMP.	NOTES
○	TY 3131	6	5.6	UPRIGHT	1/2"	BRASS	155°F	EXPOSED**
✺	TY 3531	67	5.6	PENDENT	1/2"	CUSTOM*	155°F	CONCEALED****
●	TY 3531	31	5.6	PENDENT	1/2"	CUSTOM*/***	155°F	CONCEALED****
		TOTAL = 104						

* : CUSTOM COVER PLATE FINISH FROM MANUFACTURER TO BE SELECTED BY OWNER/ARCHITECT. NO FIELD PAINTING ALLOWED.
** : INSTALL APPROVED TYPE PROTECTIVE METAL BASKET HEAD GUARDS AT ALL EXPOSED HEADS.
*** : PROVIDE WITH CORROSION-RESISTANT COATING FROM MANUFACTURER.
**** : PROVIDE WITH OVERSIZED SEISMIC ESCUTCHEON PLATE.



NORTH

FIRE PROTECTION SECOND FLOOR REFLECTED CEILING PLAN SCALE: 1/8"=1'-0" | 1 | KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Fire Protection\FP001.DWG Oct 07, 2024 - 1109am iggy

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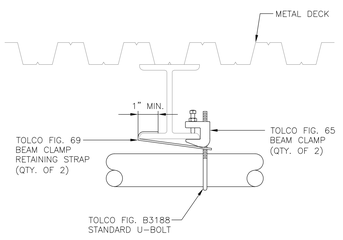
No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION
SECOND FLOOR
REFLECTED CEILING PLAN

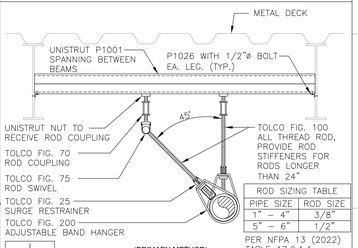
SHEET NO:

FP102



BEAM CLAMP AND U-BOLT
(ALTERNATE/SECONDARY HANGER)

#2 PLAN SYMB

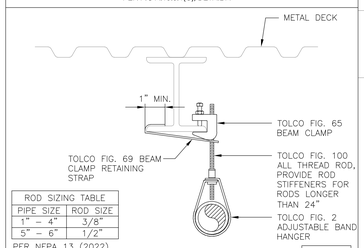


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

(PRIMARY METHOD)
END OF LINE RESTRAINT
(NFPA 13, 2022 ED, 18.6.1)
PER FIG A.18.6.1(C), DETAIL A

PLAN SYMB

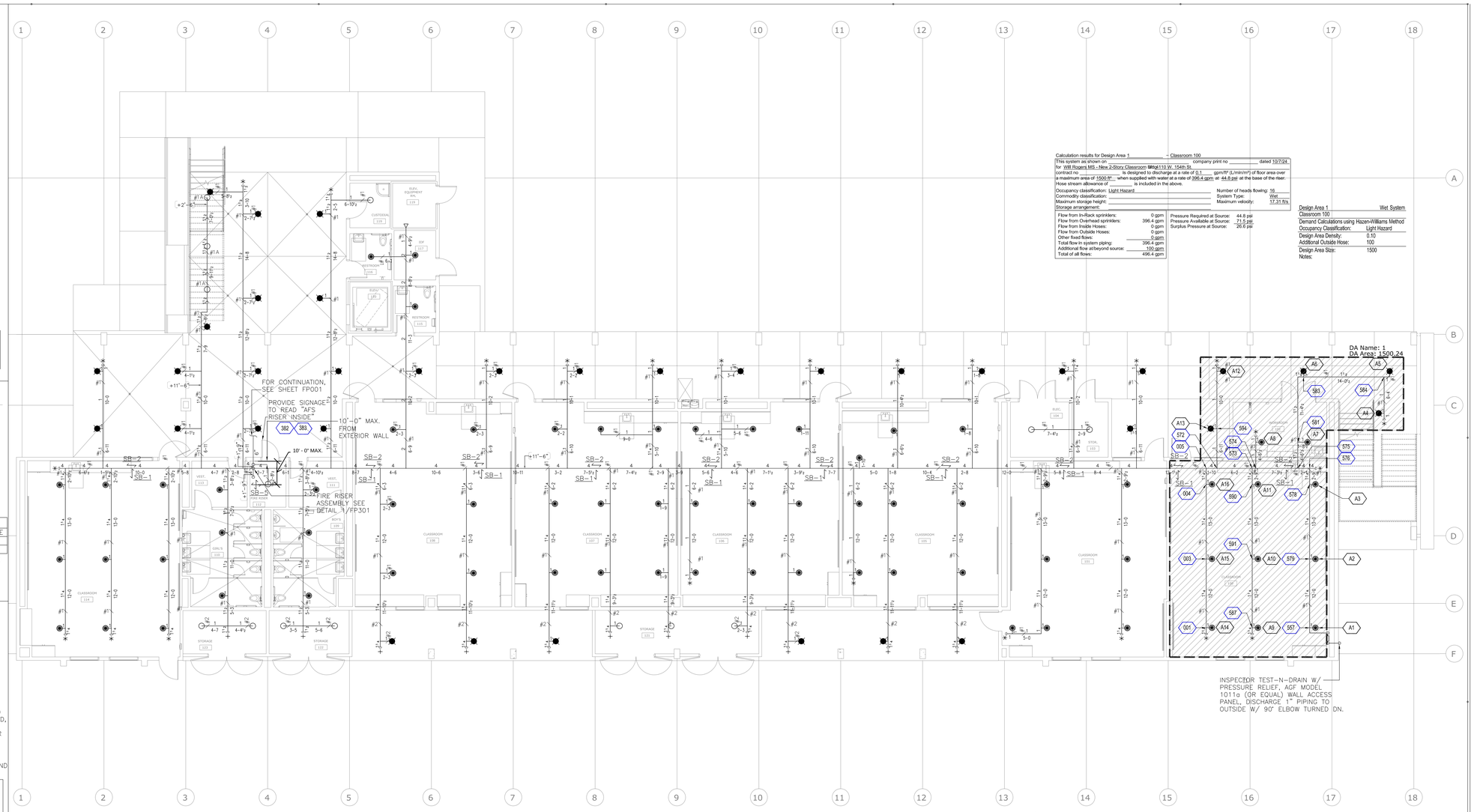


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

BEAM CLAMP, ROD, AND RING
(ALTERNATE/SECONDARY HANGER)

#2 PLAN SYMB



Calculation results for Design Area 1 – Classroom 100
This system as shown on company print no dated 10/7/24
for Will Rogers MS - New 2-Story Classroom Bldg 4110 W. 154th St.
contract no is designed to discharge at a rate of 0.1 gpm/ft² (L/min/m²) of floor area over a maximum area of 1500 ft² when supplied with water at a rate of 396.4 gpm at 44.8 psi at the base of the riser.
Hose stream allowance of is included in the above.

Occupancy classification: Light Hazard
Commodity classification:
Maximum storage height:
Storage arrangement:
Number of heads flowing: 16
System Type: Wet
Maximum velocity: 17.31 ft/s

Flow from In-Rack sprinklers:	0 gpm
Flow from Overhead sprinklers:	396.4 gpm
Flow from Inside Hoses:	0 gpm
Flow from Outside Hoses:	0 gpm
Other fixed flows:	0 gpm
Total flow in system piping:	396.4 gpm
Additional flow at/beyond source:	100 gpm
Total of all flows:	496.4 gpm

Pressure Required at Source:	44.8 psi
Pressure Available at Source:	71.5 psi
Surplus Pressure at Source:	26.6 psi

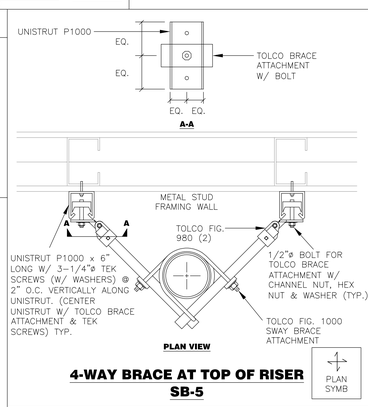
Design Area 1	Wet System
Classroom 100	
Demand Calculations using Hazen-Williams Method	
Occupancy Classification:	Light Hazard
Design Area Density:	0.10
Additional Outside Hose:	100
Design Area Size:	1500
Notes:	

LEGEND

A.F.F.: ABOVE FINISH FLOOR
BFP: BACKFLOW PREVENTER
BOP: BOTTOM OF PIPE
DSP: DRY STANDPIPE
(E): EXISTING
GPM: GALLONS PER MINUTE
FDC: FIRE DEPARTMENT CONNECTION
FH: FIRE HYDRANT
FHC: FIRE HOSE CABINET
L.F.: LINEAR FEET
N.I.C.: NOT IN CONTRACT
PSI: POUNDS PER SQUARE INCH
PVC: POLYVINYL CHLORIDE
(R): RELOCATED
SQ. FT.: SQUARE FEET
TYP.: TYPICAL
WSP: WET STANDPIPE

- REPRESENTS DETAIL NUMBER
- REPRESENTS FIRE PROTECTION SHEET
- REPRESENTS WATER SUPPLY NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS HEAD ELEVATION
- REPRESENTS PIPE ELEVATION
- REPRESENTS PIPE HANGAR
- REPRESENTS END LINE RESTRAINT
- REPRESENTS 4-WAY BRACE WHERE OCCURS
- REPRESENTS LATERAL OR LONGITUDINAL SWAY BRACE WHERE OCCURS
- REPRESENTS PIPE SIZE
- REPRESENTS PIPE LENGTH
- REPRESENTS PIPE SLOPE DIRECTION
- REPRESENTS PIPE END CAP
- REPRESENTS PIPE RISE
- REPRESENTS PIPE DROP
- REPRESENTS EXISTING PIPING
- REPRESENTS POINT OF CONNECTION

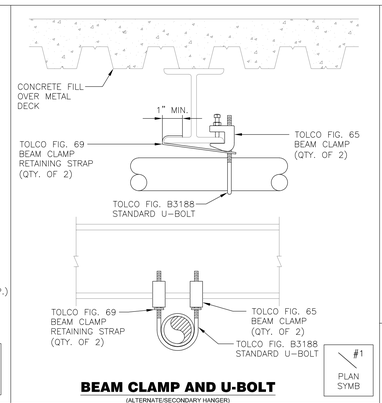
SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED



PLAN VIEW

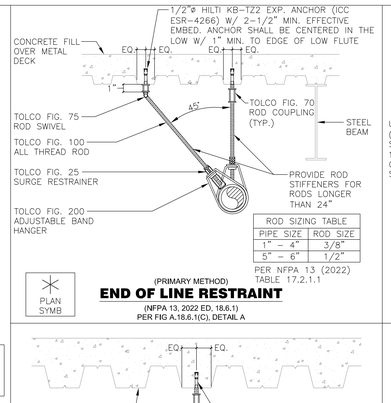
4-WAY BRACE AT TOP OF RISER
SB-5

PLAN SYMB



BEAM CLAMP AND U-BOLT
(ALTERNATE/SECONDARY HANGER)

#1 PLAN SYMB

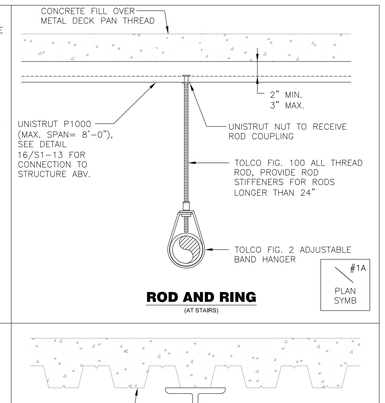


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

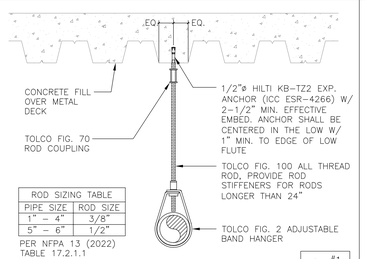
(PRIMARY METHOD)
END OF LINE RESTRAINT
(NFPA 13, 2022 ED, 18.6.1)
PER FIG A.18.6.1(C), DETAIL A

PLAN SYMB



ROD AND RING
(AT STAIRS)

#1A PLAN SYMB

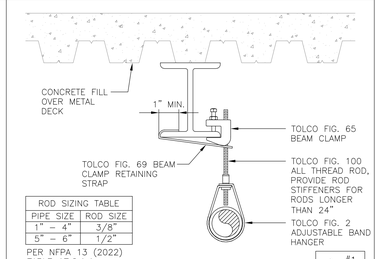


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

ROD AND RING
(PRIMARY HANGER)

#1 PLAN SYMB



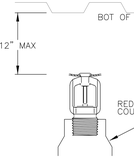
ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

BEAM CLAMP, ROD, AND RING
(ALTERNATE/SECONDARY HANGER)

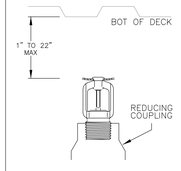
#1 PLAN SYMB

UNOBSTRUCTED CONSTRUCTION

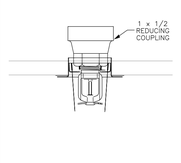


TYCO
MODEL TY - FRB
UPRIGHT TY 3131

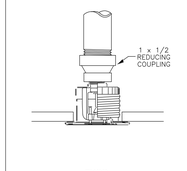
OBSTRUCTED CONSTRUCTION



TYCO
MODEL TY - FRB
UPRIGHT TY 3131



TYCO
MODEL TY - FRB
SEMI-RECESSED
PENDENT TY 3231



TYCO
MODEL RF- II (ROYAL FLUSH)
(WHITE CONCEALED ESCUTCHEON)
TY 3531

SPRINKLER LEGEND

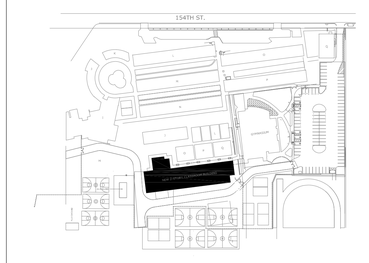
SYMBOL	SIN/MODEL	QUANTITY	K-FACTOR	TYPE	ORIFICE	FINISH	TEMP.	NOTES
○	TY 3131	14	5.6	UPRIGHT	1/2"	BRASS	155°F	EXPOSED**
◉	TY 3531	69	5.6	PENDENT	1/2"	CUSTOM*	155°F	CONCEALED****
●	TY 3531	36	5.6	PENDENT	1/2"	CUSTOM*/***	155°F	CONCEALED****
◁	TY 3331	1	5.6	SIDEWALL	1/2"	BRASS	155°F	EXPOSED
		TOTAL = 120						

* : CUSTOM COVER PLATE FINISH FROM MANUFACTURER TO BE SELECTED BY OWNER/ARCHITECT. NO FIELD PAINTING ALLOWED.
** : INSTALL APPROVED TYPE PROTECTIVE METAL BASKET HEAD GUARDS AT ALL EXPOSED HEADS.
*** : PROVIDE WITH CORROSION-RESISTANT COATING FROM MANUFACTURER.
**** : PROVIDE WITH OVERSIZED SEISMIC ESCUTCHEON PLATE.

COORDINATE W/ FIRE ALARM FOR ALL FLOW & TAMPER SWITCHES (TYP.)

FOR SB-1 AND SB-2 SWAY BRACE DETAILS, SEE SHEET FP301

NOTE:
EXPOSED PIPING THROUGHOUT BUILDING TO BE PAINTED TO MATCH UNDERSIDE FINISH.



FIRE PROTECTION FIRST FLOOR PIPING PLAN
SCALE: 1/8"=1'-0"
1
KEYMAP

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Fire Protection\FP001.DWG Oct 07, 2024 - 1109am iggy

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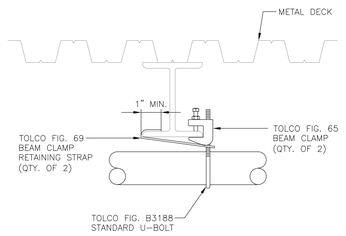
CLIENT:
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

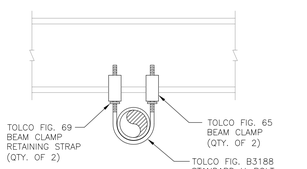
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JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION
FIRST FLOOR
PIPING PLAN

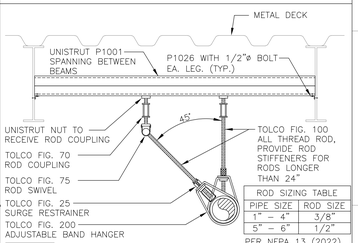
SHEET NO:
FP201





BEAM CLAMP AND U-BOLT
(ALTERNATE/SECONDARY HANGER)

#2 PLAN SYMB

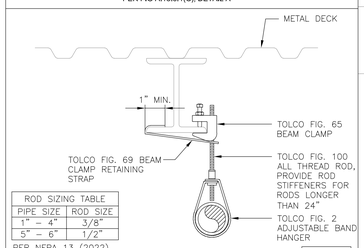


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

(PRIMARY METHOD)
END OF LINE RESTRAINT
(NFPA 13, 2022 ED, 18.6.1)
PER FIG A.18.6.1(C), DETAIL A

PLAN SYMB

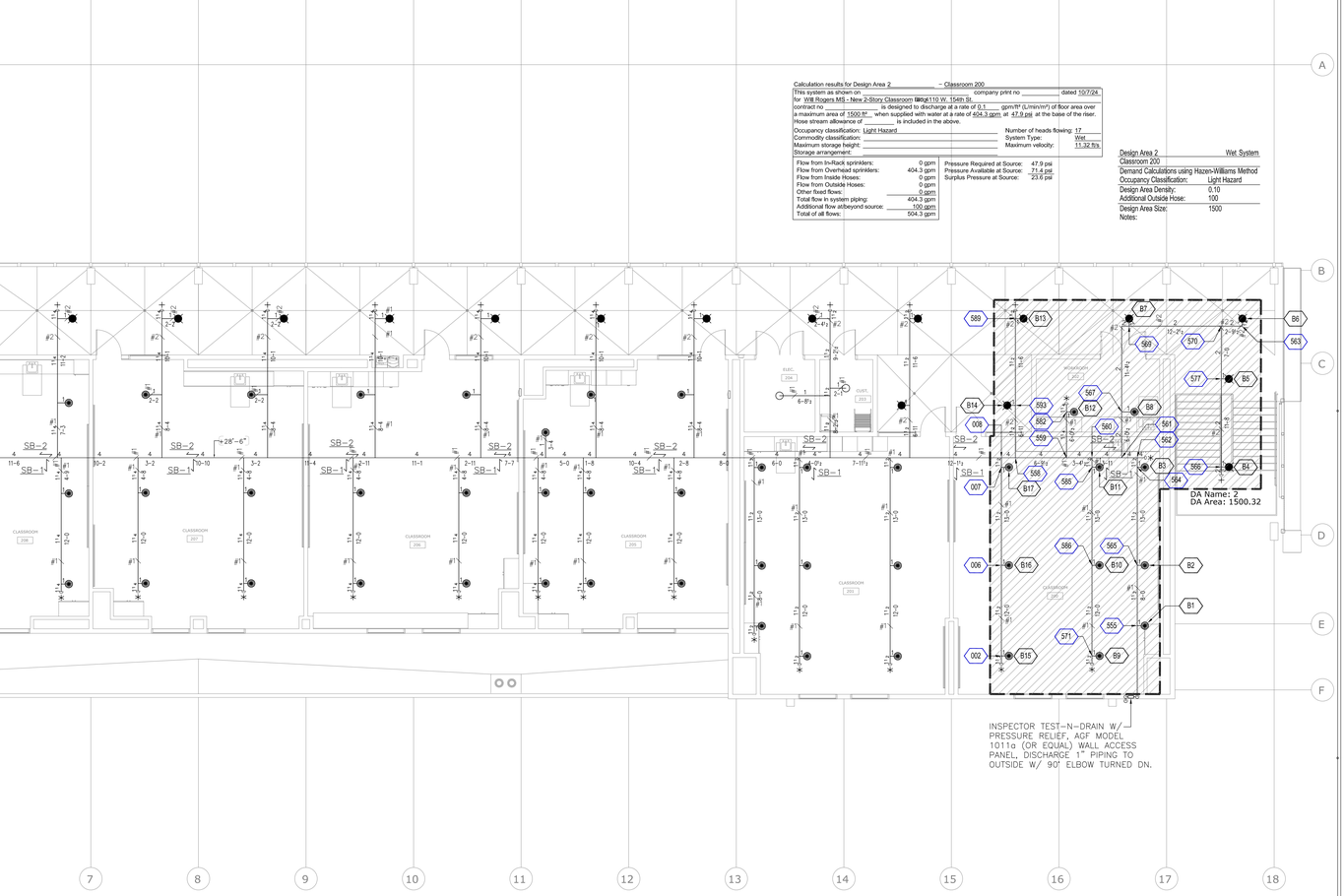


ROD SIZING TABLE	
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5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

BEAM CLAMP, ROD, AND RING
(ALTERNATE/SECONDARY HANGER)

#2 PLAN SYMB



Calculation results for Design Area 2 – Classroom 200
This system as shown on _____ company print no _____ dated 10/7/24
for Will Rogers MS - New 2-Story Classroom Bldg at 110 W. 154th St.
contract no _____ is designed to discharge at a rate of 0.1 gpm/ft² (L/min/m²) of floor area over a maximum area of 1500 ft² when supplied with water at a rate of 404.3 gpm at 47.9 psi at the base of the riser.
Hose stream allowance of _____ is included in the above.
Occupancy classification: Light Hazard
Commodity classification: _____
Maximum storage height: _____
Storage arrangement: _____
Number of heads flowing: 17
System Type: Wet
Maximum velocity: 11.32 ft/s

Flow from In-Rack sprinklers:	0 gpm
Flow from Overhead sprinklers:	404.3 gpm
Flow from Inside Hoses:	0 gpm
Flow from Outside Hoses:	0 gpm
Other fixed flows:	0 gpm
Total flow in system piping:	404.3 gpm
Additional flow at beyond source:	100 gpm
Total of all flows:	504.3 gpm

Pressure Required at Source:	47.9 psi
Pressure Available at Source:	71.4 psi
Surplus Pressure at Source:	23.6 psi

Design Area 2 – Wet System
Classroom 200
Demand Calculations using Hazen-Williams Method

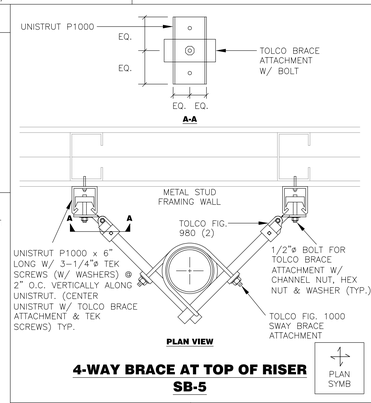
Occupancy Classification:	Light Hazard
Design Area Density:	0.10
Additional Outside Hose:	100
Design Area Size:	1500
Notes:	

LEGEND

A.F.F.: ABOVE FINISH FLOOR
BFP: BACKFLOW PREVENTER
BOP: BOTTOM OF PIPE
DSP: DRY STANDPIPE
(E): EXISTING
GPM: GALLONS PER MINUTE
FDC: FIRE DEPARTMENT CONNECTION
FH: FIRE HYDRANT
FHC: FIRE HOSE CABINET
L.F.: LINEAR FEET
N.I.C.: NOT IN CONTRACT
PSI: POUNDS PER SQUARE INCH
PVC: POLYVINYL CHLORIDE
(R): RELOCATED
SQ. FT.: SQUARE FEET
TYP.: TYPICAL
WSP: WET STANDPIPE

- REPRESENTS DETAIL NUMBER / REPRESENTS FIRE PROTECTION SHEET
- REPRESENTS WATER SUPPLY NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS NODE NOTED ON HYDRAULIC CALCULATIONS
- REPRESENTS HEAD ELEVATION
- REPRESENTS PIPE ELEVATION
- REPRESENTS PIPE HANGAR
- REPRESENTS END LINE RESTRAINT
- REPRESENTS 4-WAY BRACE WHERE OCCURS
- REPRESENTS LATERAL OR LONGITUDINAL SWAY BRACE WHERE OCCURS
- REPRESENTS PIPE SIZE
- REPRESENTS PIPE LENGTH
- REPRESENTS PIPE SLOPE DIRECTION
- REPRESENTS PIPE END CAP
- REPRESENTS PIPE RISE
- REPRESENTS PIPE DROP
- REPRESENTS EXISTING PIPING
- REPRESENTS POINT OF CONNECTION

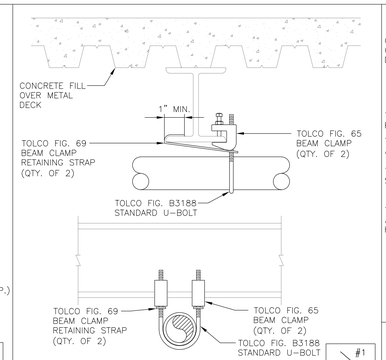
SYMBOLS AND ABBREVIATIONS ARE SHOWN FOR REFERENCE; NOT ALL SYMBOLS AND ABBREVIATIONS MAY BE USED



PLAN VIEW

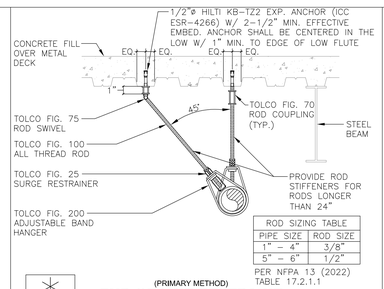
4-WAY BRACE AT TOP OF RISER
SB-5

PLAN SYMB



BEAM CLAMP AND U-BOLT
(ALTERNATE/SECONDARY HANGER)

#1 PLAN SYMB

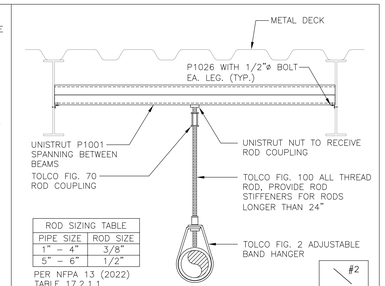


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

(PRIMARY METHOD)
END OF LINE RESTRAINT
(NFPA 13, 2022 ED, 18.6.1)
PER FIG A.18.6.1(C), DETAIL A

PLAN SYMB

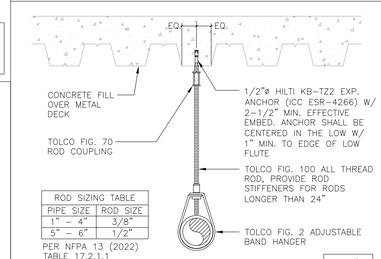


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

ROD AND RING
(PRIMARY HANGER)

#2 PLAN SYMB

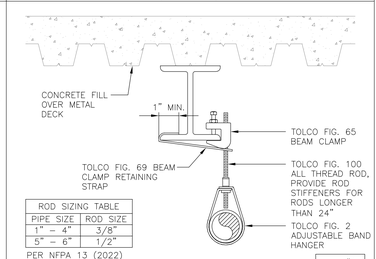


ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

ROD AND RING
(PRIMARY HANGER)

#1 PLAN SYMB



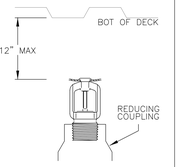
ROD SIZING TABLE	
PIPE SIZE	ROD SIZE
1" – 4"	3/8"
5" – 6"	1/2"

PER NFPA 13 (2022) TABLE 17.2.1.1

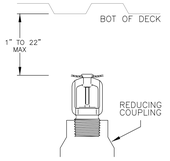
BEAM CLAMP, ROD, AND RING
(ALTERNATE/SECONDARY HANGER)

#1 PLAN SYMB

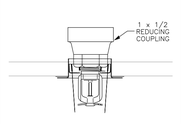
UNOBSTRUCTED CONSTRUCTION



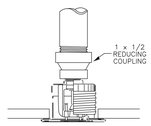
OBSTRUCTED CONSTRUCTION



TYCO
MODEL TY - FRB
UPRIGHT TY 3131



TYCO
MODEL TY - FRB
SEMI-RECESSED
PENDENT TY 3231



TYCO
MODEL RF- II (ROYAL FLUSH)
(WHITE CONCEALED ESCUTCHEON)
TY 3531

SPRINKLER LEGEND

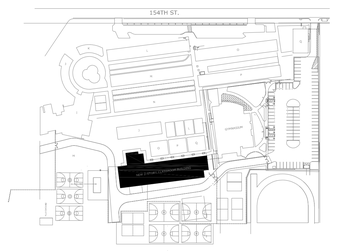
SYMBOL	SIN/MODEL	QUANTITY	K-FACTOR	TYPE	ORIFICE	FINISH	TEMP.	NOTES
○	TY 3131	6	5.6	UPRIGHT	1/2"	BRASS	155°F	EXPOSED**
◉	TY 3531	67	5.6	PENDENT	1/2"	CUSTOM*	155°F	CONCEALED****
●	TY 3531	31	5.6	PENDENT	1/2"	CUSTOM*/***	155°F	CONCEALED****
		TOTAL = 104						

* : CUSTOM COVER PLATE FINISH FROM MANUFACTURER TO BE SELECTED BY OWNER/ARCHITECT. NO FIELD PAINTING ALLOWED.
** : INSTALL APPROVED TYPE PROTECTIVE METAL BASKET HEAD GUARDS AT ALL EXPOSED HEADS.
*** : PROVIDE WITH CORROSION-RESISTANT COATING FROM MANUFACTURER.
**** : PROVIDE WITH OVERSIZED SEISMIC ESCUTCHEON PLATE.

COORDINATE W/ FIRE ALARM FOR ALL FLOW & TAMPER SWITCHES (TYP.)

FOR SB-1 AND SB-2 SWAY BRACE DETAILS, SEE SHEET FP301

NOTE:
EXPOSED PIPING THROUGHOUT BUILDING TO BE PAINTED TO MATCH UNDERSIDE FINISH.



FIRE PROTECTION SECOND FLOOR PIPING PLAN

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

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Fire Protection\FP001.DWG Oct 07, 2024 - 11:09am iggy

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

architecture
westbergwhite
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite 3-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MATTHEW M. JEFFERS
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

WILL ROGERS MIDDLE SCHOOL
NEW 2-STORY CLASSROOM BUILDING
4110 W. 154TH ST.
LAWNDALE, CA 90260

CLIENT:
WILL ROGERS MIDDLE SCHOOL
4110 W. 154TH ST.
LAWNDALE, CA 90260

NO.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION
SECOND FLOOR
PIPING PLAN

SHEET NO:
FP202

TOLBrace™ Seismic Bracing Calculations

V8.8.124

Project Address: Will Rogers MS - New 2-Story Classr
4110 W. 154th St.
Lawndale, CA
Job # 530.204

Contractor: Pezeshki Engineering, Inc.
Address: 1920 E. Warner Ave., Suite 3-I
Santa Ana, CA 92705
Phone: 714-884-3803
Licence: M 29925

Calculations based on 2022 NFPA Pamphlet #13

Brace Information

Maximum Brace Length	7' 0" (2.134 m)
Diameter of Brace	1"
Type of Brace	Sch.40
Angle of Brace	45° Min.
Least Rad. of Gyration	0.42" (11 mm)
L/R Value	200
Max Horizontal Load	1310 lbs (594 kg)
Other Requirements - FM Approved Loads	

Fastener Information

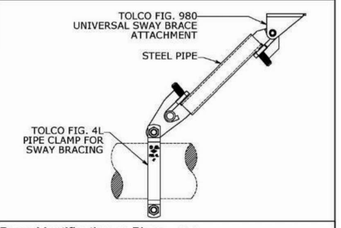
Orientation to Connecting Surface	NFPA Type B
Fastener	
Type	Hilti KB-TZ2
Diameter	1/2"
Length	2"
Maximum Load	532 lbs (241 kg)
Prying Factor	

TOLCO™ Brace Components

TOLCO™ Component	Listed Load	Adjusted Load
Fig. 4L Clamp	650 lbs (295 kg)	650 lbs (295 kg)
Fig.980 - 1/2" Universal Swive	2790 lbs (1266 kg)	2790 lbs (1266 kg)
See Fastener Information		

*Calculation Based on CONCENTRIC Loading
*Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.

Seismic Brace Assembly Detail



Brace Identification on Plans SB-2
Brace Type Lateral [ ] Longitudinal [X] 4-Way [ ]

Sprinkler System Load Calculation (Fpw = CpWp)

Cp = 1.0095

Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	20 ft (6.1 m)	20 ft (6.1 m)	11.78 lb/ft (17.53 kg/m)	236 lbs (107 kg)
1.25" (32 mm)	Sch. 40	10 ft (3 m)	10 ft (3 m)	2.93 lb/ft (4.36 kg/m)	29 lbs (13 kg)
1" (25 mm)	Sch. 40	87 ft (26.5 m)	87 ft (26.5 m)	2.05 lb/ft (3.05 kg/m)	178 lbs (81 kg)

Subtotal Weight	443 lbs (201 kg)
Wp (incl. 15%)	509 lbs (231 kg)
Total (Fpw)	514 lbs (233 kg)
Maximum Fpw per 18.5.5.2 (if applicable)	N/A

Main Size	Type/Sch.	Spacing (ft)
4"	Sch. 10	20

(TOLBrace™ Version 8) Use of TOLBrace™ is subject to terms and conditions per the end user license agreement

TOLBrace™ Seismic Bracing Calculations

V8.8.124

Project Address: Will Rogers MS - New 2-Story Classr
4110 W. 154th St.
Lawndale, CA
Job # 530.204

Contractor: Pezeshki Engineering, Inc.
Address: 1920 E. Warner Ave., Suite 3-I
Santa Ana, CA 92705
Phone: 714-884-3803
Licence: M 29925

Calculations based on 2022 NFPA Pamphlet #13

Brace Information

Maximum Brace Length	7' 0" (2.134 m)
Diameter of Brace	1"
Type of Brace	Sch.40
Angle of Brace	45° Min.
Least Rad. of Gyration	0.42" (11 mm)
L/R Value	200
Max Horizontal Load	1310 lbs (594 kg)
Other Requirements - FM Approved Loads	

Fastener Information

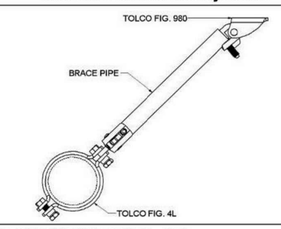
Orientation to Connecting Surface	NFPA Type B
Fastener	
Type	1/2in. Unfinished Steel Bolt
Diameter	1/2in.
Length	N/A
Maximum Load	2050 lbs (930 kg)
Prying Factor	N/A

TOLCO™ Brace Components

TOLCO™ Component	Listed Load	Adjusted Load
Fig. 4L Clamp	1990 lbs (903 kg)	1990 lbs (903 kg)
Fig.980 - 1/2" Universal Swive	2790 lbs (1266 kg)	2790 lbs (1266 kg)
See Fastener Information		

*Calculation Based on CONCENTRIC Loading
*Please Note: These calculations are for TOLCO™ components only. Use of any other components voids these calculations and the listing of the assembly.

Seismic Brace Assembly Detail



Brace Identification on Plans SB-1
Brace Type Lateral [X] Longitudinal [ ] 4-Way [ ]

Sprinkler System Load Calculation (Fpw = CpWp)

Cp = 1.0095

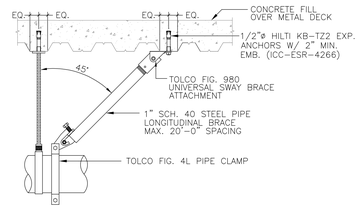
Diameter	Type	Length	Total Length	Weight Per Unit Length	Total Weight
4" (100 mm)	Sch. 10	20 ft (6.1 m)	20 ft (6.1 m)	11.78 lb/ft (17.53 kg/m)	236 lbs (107 kg)
1.25" (32 mm)	Sch. 40	10 ft (3 m)	10 ft (3 m)	2.93 lb/ft (4.36 kg/m)	29 lbs (13 kg)
1" (25 mm)	Sch. 40	87 ft (26.5 m)	87 ft (26.5 m)	2.05 lb/ft (3.05 kg/m)	178 lbs (81 kg)

Subtotal Weight	443 lbs (201 kg)
Wp (incl. 15%)	509 lbs (231 kg)
Total (Fpw)	514 lbs (233 kg)
Maximum Fpw per 18.5.5.2 (if applicable)	1635 lb (741 kg)

Main Size	Type/Sch.	Spacing (ft)
4"	Sch. 10	20

(TOLBrace™ Version 8) Use of TOLBrace™ is subject to terms and conditions per the end user license agreement

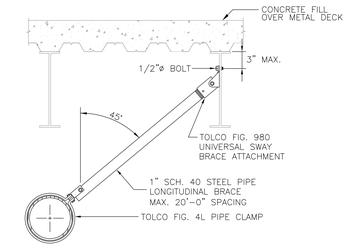
Sway Brace Detail (SB-2)



PLAN SYMB

Orientation of Brace	Longitudinal

Sway Brace Detail (SB-1)

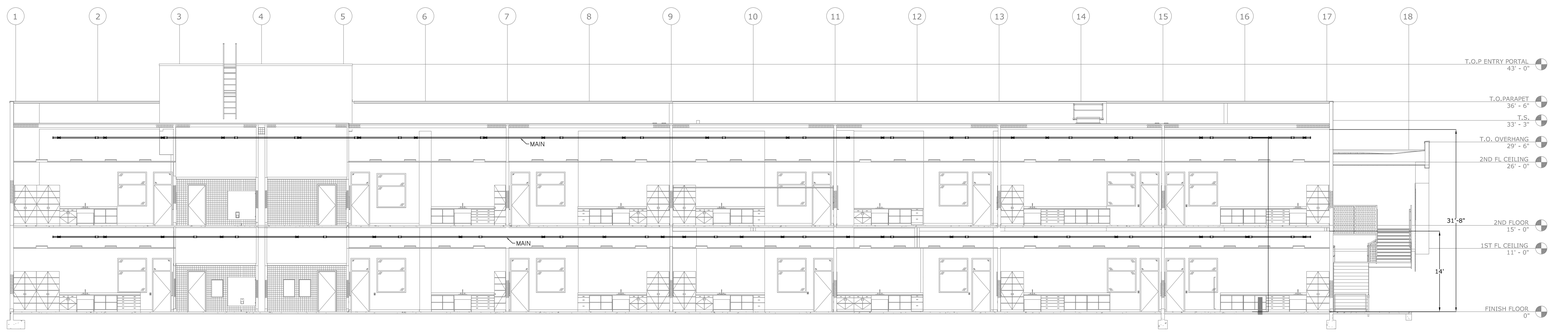


PLAN SYMB

Orientation of Brace	Lateral

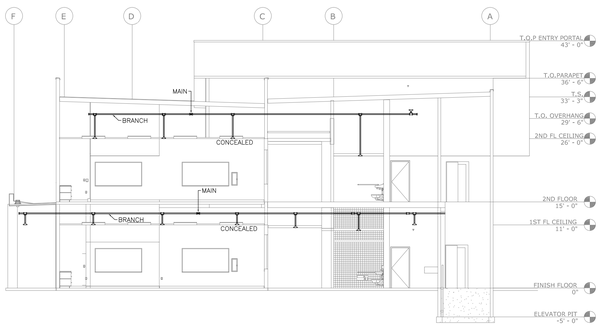
SEISMIC BRACING DETAILS AND CALCULATIONS

NOT TO SCALE | 4



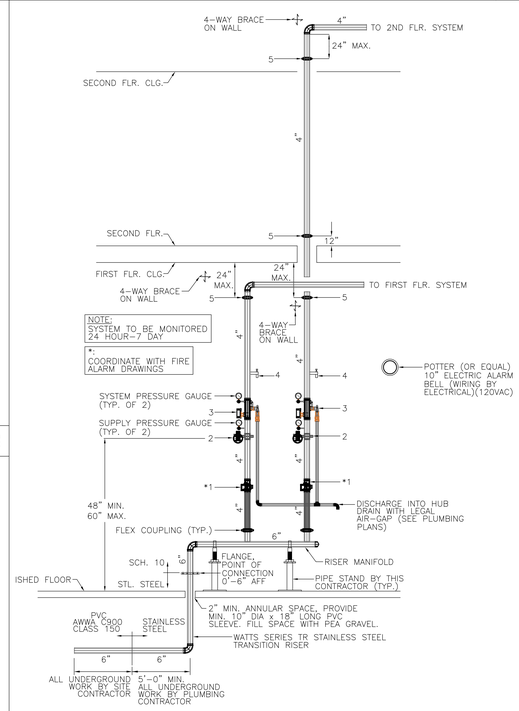
LONGITUDINAL SECTION

SCALE: 3/32" = 1'-0" | 3



CROSS SECTION

SCALE: 3/32" = 1'-0" | 2



#	PARTS LEGEND
1	4" TYCO MODEL CV-1F CHECK VALVE
2	4" TYCO MODEL BFV-N BUTTERFLY VALVE
3	4" TYCO MODEL RM-1 COMMERCIAL RISER MANIFOLD
4	PRESSURE RELIEF VALVE (SET AT 175 PSI OR 10 PSI IN EXCESS OF MAX. SYSTEM PRESSURE, WHICH EVER IS GREATER). DRAIN INTO HUB DRAIN.
5	4" FLEXIBLE COUPLING

RISER DETAIL

NOT TO SCALE | 1

STATE:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 03-123867 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 10/24/2024

ARCHITECT:

westbergwhite architecture
7700 IRVINE CENTER DR # 100
IRVINE, CA 92618
(714) 508-1780 508-1790 FAX

CONSULTANT:

1920 E. Warner Ave., Suite 3-H
Santa Ana, CA 92705
Telephone (714) 884-3803
Fax (714) 884-3834
PEI # 530.204

REGISTERED PROFESSIONAL ENGINEER
MEHRDAD M. PEZESHKI
No. M 29925
Exp. 06-30-2026

PROJECT NAME:

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LAWNDALE, CA 90260

No.	Rev. Date	Description

JOB NO: 22029.01
DATE: 02/27/2024
DRAWN: -
CHECK: -
ARCHITECT: PDW
ENGINEER:

SHEET DESCRIPTION:
FIRE PROTECTION BUILDING SECTIONS AND SEISMIC BRACING

SHEET NO:

FP301

P:\530\530-204_LESD_Will_Rogers_MS_2-Story_Classroom_Building\Drawings\Fire Protection\FP001.DWG Oct 07, 2024 - 11:10am iggy