ADDENDUM TO BID DOCUMENTS

Pleasanton Unified School District Achievement Partnerships Communication	ADDENDUM 01
	Project: CTE Workshop Modular Increment 2 Foothill High School Project (2021-22.06)
	Date: November 29, 2021

The following clarifications are provided based on questions received or changes in District requirements and must be added/considered when completing your submittal:

Acknowledgement of receipt of this **ADDENDUM** is required in the bid form. Please clearly note the addendum date and number.

CHANGES TO SPECIFICATION AND DRAWINGS

1. Subject: ARCHITECTURAL DRAWINGS

   Reference: A0.1

   Attachment: A0.1

   Description of Change:
   Deleted reference sheet "E1.01 ELECTRICAL SITE PLAN – FOR REFERENCE ONLY" from Electrical Drawing Index

2. Subject: ARCHITECTURAL DRAWINGS

   Reference: A0.1

   Attachment: A0.1

   Description of Change:
   Added section to sheet index entitled "ELECTRICAL – FOR REFERENCE ONLY FROM INCREMENT 1 SET." And includes drawing list

3. Subject: ARCHITECTURAL DRAWINGS

   Reference: A2.01

   Attachment: A2.01

   Description of Change:
   Change General Note to "SEE SHEET **A10.01** FOR WINDOW, DOOR, AND HARDWARE SCHEDULE."

4. Subject: ARCHITECTURAL DRAWINGS

   Reference: A2.01

   Attachment: A2.01

   Description of Change:
   Add Sheet Note 2.02 "REMOVE (E) GUARDRAIL AND SALVAGE FOR REUSE AT WALKWAY EXTENSION", Add Sheet Note 2.02 to plan that calls out demolition location of guardrail.

5. Subject: ARCHITECTURAL DRAWINGS

   Reference: A2.01

   Attachment: A2.01

   Description of Change:
   Change Sheet Note 3.03 to "EXTENSION OF CONCRETE WALKWAY" This work will now be part of this Increment 2 scope of work.

6. Subject: ARCHITECTURAL DRAWINGS

   Reference: A2.01

   Attachment: A2.01

   Description of Change:
   Change Sheet Note 5.08 to "VERTICAL SEISMIC JOINT ALUM COVER AND GUARDRAIL EXTENSION FROM SALVAGED GUARDRAIL".

7. Subject: ARCHITECTURAL DRAWINGS

Reference: INTERIOR FINISH LEGEND/A2.02

Attachment: n/a

Description of Change:
Change description of to
Manufacturer: Tarkett / Tandus Centiva
Style: Aftermath II 03026
Color: Flannel 23509

8. Subject: ARCHITECTURAL DRAWINGS

Reference: INTERIOR FINISH SCHEDULE PHASE 1/A2.02

Attachment: n/a

Description of Change:
For rooms "102, DUST COLLECTOR" and "202A, ROOF ACCESS" change Floor Material to "CONC" and Finish to "SEAL".

9. Subject: ARCHITECTURAL DRAWINGS

Reference: A3.01

Attachment: n/a

Description of Change:
Add General Note B.
"ALLOW FOR THE FOLLOWING COLORS AT BUILDING EXTERIOR,
1.. (3) AT STUCCO - P-2 KM 5015 TECH WAVE, P-4 KM 27 BONE,
AND P-5 KM 5820-2 ALUMINUM SKY
2.. (1) AT UNDERSIDE OF WALKWAY - P-5 KM 5820-2 ALUMINUM SKY
3. (1) AT RAILINGS AND VERTICAL EXPANSION JOINTS AT RAILINGS- P-1 KM 5016 WATER CHI
4. (1) AT DOOR AND WINDOW FRAMES POWDER COAT - P-9 US ALUMINUM CHARCOAL UC74712
5. (1) AT PARAPET COPING, RWL, AND GUTTERS - P-1 KM 5016 WATER CHI"

10. Subject: ARCHITECTURAL DRAWINGS

Reference: A3.01

Attachment: n/a

Description of Change:
Delete "Color Legend"

11. Subject: ARCHITECTURAL DRAWINGS

Reference: A4.01

Attachment: n/a

Description of Change:
Change General Note B. to "SEE SHEET **A9.01** FOR ACCESSIBILITY DIAGRAMS FOR PLUMBING, FIXTURES, AND TOILET ACCESSORIES."

12. Subject: ARCHITECTURAL DRAWINGS

Reference: A4.01

Attachment: n/a

Description of Change:
Change General Note B. to "SEE SHEET **A10.01** FOR DOOR AND HARDWARE SCHEDULE, WINDOW, AND STOREFRONT SCHEDULE."

13. Subject: ARCHITECTURAL DRAWINGS

Reference: Details 11 and 12/A8.01

Attachment: A8.01

Description of Change:
Change Notes to indicate guardrail extension and walkway extension are by Modular Manufacturer.

14. Subject: ELECTRICAL DRAWINGS

Reference: E0.1

Attachment: E0.1

Description of Change:
Deleted low voltage symbols from legend and ow voltage sheets from drawing list (E2.02 and E7.01)

15. Subject: ELECTRICAL DRAWINGS

    Reference: E0.1

    Attachment: E0.1

    Description of Change:
    Revised note at 3/E0.01 to include low voltage

16. Subject: ELECTRICAL DRAWINGS

    Reference: E0.1

    Attachment: E0.1

    Description of Change:
    Added Increment 1 reference sheets

17. Subject: ELECTRICAL DRAWINGS

    Reference: INCREMENT 1 ELECTRICAL DRAWINGS – FOR REFERENCE ONLY

    Attachment: Sheets E0.01, E1.01, E2.02, E4.01, E5.01, E5.02, E6.00, and E7.01

    Description of Change:
    Added Increment 1 Electrical Drawings to provide a reference for the location of devices to be provided under Increment 1 to show locations for rough-in work to be provided under the Increment 2 scope of work.

18. Subject: Revised Schedule

    Reference: Revised Appendix A

    Attachment: Appendix A

    Description of Changes:
    Added Interview Time Frame, DSA Submittal Date, Construction start and finish dates.

END OF ADDENDUM 01

11/23/2021 4:16:28 PM

FOOTHILL HIGH SCHOOL
MODULAR CTE WORKSHOP BUILDING
INCREMENT 2

4375 FOOTHILL RD, PLEASANTON, CA 94588

OWNER — **PLEASANTON UNIFIED SCHOOL DISTRICT**
4665 BERNAL AVE., PLEASANTON, CA 94566

ARCHITECT — **HKIT ARCHITECTS**
538 NINTH STREET, SUITE 240, OAKLAND, CA 94607 510.625.9800

CIVIL ENGINEER — **BELLECCI & ASSOCIATES**
2290 DIAMOND BLVD, SUITE 100, CONCORD, CA 94520 925.685.4569

MECHANICAL ENGINEER — **H&M MECHANICAL GROUP**
8517 EARHART RD # 230, OAKLAND CA 94612 510.569.2000

ELECTRICAL ENGINEER — **BWF CONSULTING ENGINEERS**
220 SO. SPRUCE AVENUE, SUITE 203, SO. SAN FRANCISCO, CA 94080 650.871.0220

FIRE PROTECTION — **CYPRESS ENGINEERS**
8 HARRIS COURT, SUITE A8, MONTERRY, CA 93940 831.218.1802

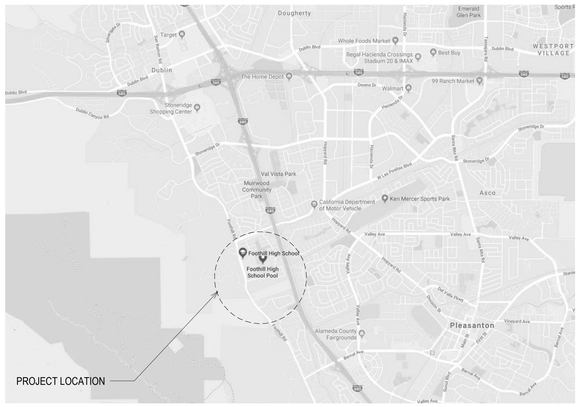
LANDSCAPE ARCHITECT — **KELLER MITCHELL & CO. LANDSCAPE ARCHITECTURE**
302 FOURTH STREET, OAKLAND, CA 94607 510.451.9987

SUMMARY OF WORK

CONSTRUCTION OF A NEW 2-STORY MODULAR CLASSROOM BUILDING.

DEFFERED APPROVAL ITEMS

N/A



PROJECT LOCATION

GENERAL

A0.1	GENERAL NOTES, ABBREVIATIONS, DRAWING INDEX

CIVIL

C2.1	**FOR REFERENCE ONLY** GRADING PLAN - CTE
C3.1	**FOR REFERENCE ONLY** UTILITY PLAN - CTE

ARCHITECTURAL INCREMENT 2

A1.01	SITE PLAN **FOR REFERENCE ONLY**
A1.02	ENLARGED CODE COMPLIANCE SITE PLAN **FOR REFERENCE ONLY**
A2.01	FIRST & SECOND FLOOR PLAN PLANS
A2.02	ROOF PLAN
A3.01	EXTERIOR ELEVATIONS
A3.02	BUILDING SECTIONS
A4.01	ENLARGED PLANS AND INT. ELEV
A4.02	ENLARGED PLANS
A6.01	REFLECTED CEILING PLANS
A8.01	WALL TYPES & ASSEMBLY DETAILS
A9.01	ACCESSIBILITY & SIGNAGE DETAILS
A10.01	DOOR & WINDOW SCHEDULE

MECHANICAL

M0.01	MECHANICAL COVER SHEET
M2.01	MECHANICAL FIRST AND SECOND FLOOR PLAN
M2.02	MECHANICAL ROOF PLAN

PLUMBING

P0-01	GENERAL NOTES, LEGENDS, AND SCHEDULES
P2-00	PLUMBING UNDERFLOOR PLAN
P2-01	PLUMBING FIRST FLOOR PLAN
P2-00	PLUMBING SECOND FLOOR PLAN
P2-03	PLUMBING ROOF PLAN

ELECTRICAL

E0.01	ELECTRICAL LEGEND, AND NOTES
E2.01	ELECTRICAL POWER PLAN
E3.01	ELECTRICAL LIGHTING PLAN
E6.01	ELECTRICAL SINGLE LINE DIAGRAM, LOAD SUMMARY, AND NOTES

ELECTRICAL **FOR REFERENCE ONLY FROM INCREMENT 1 SET**

E0.01	ELECTRICAL LEGEND, SCHEDULES, NOTES, AND DETAILS
E1.01	ELECTRICAL SITE PLAN
E2.02	ELECTRICAL LOW VOLTAGE PLAN
E4.01	ELECTRICAL FIRE ALARM PLAN
E5.01	ELECTRICAL FIRE ALARM DETAILS
E5.02	ELECTRICAL FIRE ALARM RISER DIAGRAM AND ADDRESS LIST
E6.00	ELECTRICAL SINGLE LINE DIAGRAM
E7.01	ELECTRICAL LOW VOLTAGE DETAILS

FIRE PROTECTION **FOR REFERENCE ONLY**

FP1.1	SITE PLAN - FIRE PROTECTION
FP2.1	PIPING PLAN - FIRE PROTECTION BUILDING K

REGULATORY REQUIREMENTS

REFERENCES

A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/ THE FOLLOWING GOVERNING CODES:
1. 2016 CALIFORNIA ADMINISTRATIVE CODE. PART 1, TITLE 24, C.C.R.
2. 2016 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, C.C.R. (BASED ON 2015 INTERNATIONAL BUILDING CODE (IBC) W/ CA. AMENDMENTS)
3. 2016 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, C.C.R. (BASED ON 2014 NATIONAL ELECTRICAL CODE (NEC) W/ CA. AMENDMENTS)
4. 2016 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, C.C.R. (BASED ON 2015 UNIFORM MECHANICAL CODE (IMC) W/ CA. AMENDMENTS)
5. 2016 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, C.C.R. (BASED ON 2015 UNIFORM PLUMBING CODE W/ CA. AMENDMENTS)
6. 2016 CALIFORNIA ENERGY CODE (CFC) PART 6, TITLE 24, C.C.R.
7. NOT USED
8. NOT USED
9. 2016 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, C.C.R. (BASED ON 2012 INTERNATIONAL FIRE CODE W/ CA. AMENDMENTS (IFC))
10. 2016 CALIFORNIA EXISTING BUILDING CODE (CEBC) PART 10, TITLE 24, C.C.R. (BASED ON 2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC))
11. 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24, C.C.R.
12. 2016 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, C.C.R.
13. NFPA 13 - 2016 EDITION, THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS, AS AMENDED.
14. NFPA 14 - 2016 EDITION, THE INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS.
15. NFPA 24 - 2016 EDITION, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES.
16. NFPA 72 - 2016 EDITION, NATIONAL FIRE ALARM CODE, AS AMENDED
17. FEDERAL AMERICANS WITH DISABILITIES (ADA) ACT STANDARDS

QUALITY ASSURANCE

A. THE PROJECT FALLS UNDER THE JURISDICTION OF THE DEPARTMENT OF THE STATE ARCHITECT (DSA), STATE OF CALIFORNIA.

B. DSA WILL INSPECT THE WORK PERIODICALLY PURSUANT TO TITLE 24, PART 1, SECTION 4-334, CCR.

C. MATERIAL TESTING SHALL BE CONDUCTED PER TITLE 24, PART 1, SECTION 4-335.
1. ALL TESTING MUST BE DONE BY AN INDEPENDENT TESTING SERVICE EMPLOYED BY THE OWNER, AND APPROVED BY THE ARCHITECT.
2. THE OWNER SHALL PAY FOR ALL TESTING PER TITLE 24, PART 1, SECTION 335(C), CCR.
3. WHERE TEST RESULTS DO NOT MEET PROJECT REQUIREMENTS, THE CONTRACTOR SHALL BEAR ALL COSTS OF THE TESTING, INCLUDING REIMBURSEMENT OF THE TESTING FEES, TO THE OWNER.
4. SPECIAL INSPECTIONS, WHERE REQUIRED, WILL BE PERFORMED PER TITLE 24, PART 1, SECTION 4-333(C), CCR.

PERMITS, FEES, AND NOTICES

A. PURSUANT TO THE GENERAL CONDITIONS, THE CONTRACTOR (OR THE SUBCONTRACTORS IT MAY ASSIGN) SHALL OBTAIN REQUIRED PERMITS FROM GOVERNING AUTHORITIES.

B. ANY REQUIREMENTS ISSUED WITH A PERMIT OR MARKED ON THE PERMIT SET OF CONSTRUCTION DOCUMENTS BY THE ISSUING AGENCY, AS CONDITIONS OF THE AGENCY'S PERMIT APPROVAL, SHALL BE REFERRED TO THE ARCHITECT FOR DIRECTION.

REPORTS AND APPROVALS

B. VERIFIED REPORTS MUST BE FILED BY THE ARCHITECT, INSPECTOR, AND CONTRACTOR.
1. THE INSPECTOR SHALL FILE VERIFIED REPORTS PER TITLE 24, PART 1, SECTION 4-336.
2. THE ARCHITECT SHALL FILE VERIFIED REPORTS PER TITLE 24, PART 1, SECTION 4-336.
3. THE CONTRACTOR SHALL FILE VERIFIED REPORTS PER TITLE 24, PART 1, SECTION 4-336 AND 4-343(C).

C. IN ADDITION TO THE REQUIREMENTS OF THE GENERAL CONDITIONS, ALL ADDENDA AND CONSTRUCTION CHANGE DOCUMENTS REQUIRE DSA APPROVAL PURSUANT TO TITLE 24, PART 1, SECTION 4-338, CCR.
1. CONSTRUCTION CHANGE DOCUMENTS AND ADDENDA SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL AND APPROVED BY DSA

DUTIES OF THE ARCHITECT AND CONTRACTOR

A. THE FOLLOWING SHALL PERFORM THE DUTIES DESCRIBED:
1. THE ARCHITECT, PER TITLE 24, PART 1, SECTION 4-333(A) AND 4-341, CCR.
2. THE CONTRACTOR, PER TITLE 24, PART 1, SECTION 4-343, CCR. 2.
3. THE MECHANICAL AND ELECTRICAL ENGINEERS PER 4-344

OTHER REQUIREMENTS

A. A COPY OF PARTS 1 TO 5 TITLE 24, C.C.R. SHALL BE KEPT ON JOB SITE DURING CONSTRUCTION.

B. DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE (SECTION 4-331), PART 1).

C. A DSA CLASS 1 PROJECT INSPECTOR MUST BE EMPLOYED BY THE OWNER AND APPROVED BY THE ARCHITECT AND DSA. INSPECTION SHALL BE PREFORMED IN ACCORDANCE WITH SECTION 4-333(b), PART1, TITLE 24. THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342, PART1, TITLE 24.

D. DSA IS NOT SUBJECT TO ARBITRATION.

E. ANY SUBSTITUTION SHALL BE CONSIDERED A CHANGE TO THE APPROVED APPLICATION AND SHALL BE SUBJECT TO FURTHER REVIEW AND APPROVAL BY DSA PRIOR TO FABRICATION, CONSTRUCTION, OR USE. SUBSTITUTION OF MAJOR STRUCTURAL ELEMENTS SUCH AS FRAMING ETC. MUST BE STAMPED AND SIGNED BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

F. BUILDINGS SHALL BE GROUNDED TO THE SITE PER TITLE 24, CCR.

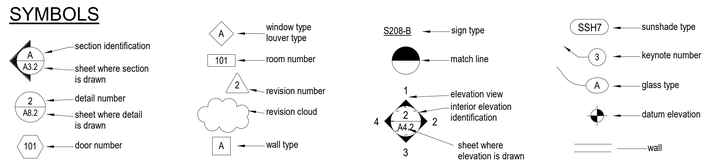
G. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE SCHOOL BUILDING IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH SAID TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.

NOTE:
"DETERIORATION OR EXISTING NON-COMPLIANT CONSTRUCTION: IF ANY CONDITION IS DISCOVERED WHICH, IF LEFT UNCORRECTED, WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, THE CONDITION MUST BE CORRECTED IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS. A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK."

ABBREVIATIONS

&	AND
∠	ANGLE
@	AT
℄	CENTER LINE
[	CHANNEL
Ø	DIAMETER OR ROUND
⊥	PERPENDICULAR
#	POUND OR NUMBER
(E)	EXISTING
(F)	FUTURE
(N)	NEW
(R)	REMOVED
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.	ASPHALT CONCRETE
A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
AC.T.	ACOUSTICAL TILE
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALT.	ALTERNATE
AL. /ALUM.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BM.	BEAM
BOT.	BOTTOM
BTWN.	BETWEEN
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CEM. PLA.	CEMENT PLASTER
CER.	CERAMIC
CFS	COLD FORMED STEEL
CI.	CAST IRON
C.J.	CONTROL JOINT
CLG.	CEILING
CLKG.	CAULKING
CLO.	CLOSET
CLR.	CLEAR
CMU.	CONC. MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CNTR.	COUNTER
CT.	CERAMIC TILE
CTR.	CENTER
CTSK.	COUNTERSUNK
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN
D.FIR	DOUGLAS FIR
DIA.	DIAMETER
DIM.	DIMENSION
DIST.	DISTANCE
DN.	DOWN
DR.	DOOR
DS.	DOWNSPOUT
DWG.	DRAWING
DWR.	DRAWER
E.	EAST
EA.	EACH
ED.	EDITION
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
E.P.	ELECTRICAL PANELBOARD
EPDM	SYNTHETIC RUBBER
EPS	EXPANDED POLYSTYRENE
EQ.	EQUAL
EQPT.	EQUIPMENT
EXP.	EXPANSION
EXPO.	EXPOSED
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CAB.
FF	FACTORY FINISH
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FL./FLR.	FLOOR
FLASH.	FLASHING
FLUOR.	FLUORESCENT
F.O.C.	FACE OF CONCRETE/ FACE OF CURB
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUD
FPRF.	FIREPROOF
FRT	FIRE RETARDANT TREATED
F.S.	FULL SIZE
F.S.#	FINISH SYSTEM NUMBER
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
G.I.	GALVANIZED IRON
GL.	GLASS
GND.	GROUND
GR.	GRADE
GSM	GALVANIZED SHEET METAL
GWB	GYPSUM WALL BOARD
GYP.	GYPSUM
G.A.	GYPSUM ASSOCIATION
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HDWD.	HARDWOOD
HDWR.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
H.P.	HEAT PUMP
HR.	HOUR
HS.	HEAT STRENGTHENED
HT.	HEIGHT
I.D.	INSIDE DIAMETER (DIM.)
I.D.F.	INTERMEDIATE DIST. FRAME
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
LAB.	LABORATORY
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LT.	LIGHT
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
MR.	MOISTURE RESISTANT
MTD.	MOUNTED
MUL.	MULLION
N.	NORTH
N.I.C	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S	NOT TO SCALE
O/	OVER
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER (DIM.)
O.F.D.	OVERFLOW DRAIN
OFF.	OFFICE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPNG.	OPENING
OPP.	OPPOSITE
P.D.F.	POWER DRIVEN FASTENER
PL.	PLATE
P.LAM	PLASTIC LAMINATE
PLAS.	PLASTIC
PLYWD.	PLYWOOD
PNT.	PAINT
PR.	PAIR
PRCST.	PRE-CAST
PSF	POUNDS PER SQUARE FOOT
PT.	POINT
PTN.	PARTITION
P.T.R.	PAPER TOWEL RECEPTACLE
QT.	QUARRY TILE
R.	RISER
RAD.	RADIUS
RAT.	RATING
R.D.	ROOF DRAIN
REF.	REFERENCE/REFRIGERATOR
RGTR.	REGISTER
REINF.	REINFORCED
REQ'D	REQUIRED
RET.	RETARDANT
RESIL.	RESILIENT
RM.	ROOM
R.O.	ROUGH OPENING
RTD.	RATED
RWD.	REDWOOD
R.W.L.	RAIN WATER LEADER (PIPE)
S.	SOUTH
SAF	SELF ADHERED FLASHING
S.A.P.	SUSPENDED ACOUSTICAL PANEL
S.C.D.	SEE CIVIL DOCUMENTS/ SEAT COVER DISPENSER
SCHED.	SCHEDULE
S.C.WD.	SOLID CORE WOOD
S.D.	SOAP DISPENSER
SDS	SELF DRILLING SCREW
SECT.	SECTION
S.E.D.	SEE ELECTRICAL DOCUMENTS
SFRM	SPRAYED FIRE RESISTIVE MATERIAL
SH.	SHELF
SHT.	SHEET
SHWR.	SHOWER
SIM.	SIMILAR
S.L.D.	SEE LANDSCAPE DOCUMENTS
S.M.D.	SEE MECHANICAL DOCUMENTS
SMS	SHEET METAL SCREW
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SOG	SLAB ON GRADE
SPEC.	SPECIFICATIONS
S.P.D.	SEE PLUMBING DOCUMENTS
SPF	SPRAYED POLYURETHANE FOAM
SQ.	SQUARE
S.S.	STAINLESS STEEL
S.S.D.	SEE STRUCTURAL DOCUMENTS
S.SK.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRL	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
T.	TILE
T.B.	TACKBOARD
TEL.	TELEPHONE
TEMP.	TEMPERATURE
THK.	THICK (THICKNESS)
TLT.	TOILET
T.O.C.	TOP OF CURB/ TOP OF CONCRETE
T.O.S.	TOP OF SLAB
T.O.P.	TOP OF PAVEMENT
T.O.W	TOP OF WALL
T.P.D	TOILET PAPER DISPENSER
TRD.	TREAD
TV.	TELEVISION
TYP.	TYPICAL
T.W.B.	TACKABLE WALLBOARD
T & G	TONGUE AND GROOVE
U.L.	UNDERWRITERS LABORATORIES
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
VCT.	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
V.G.	VERTICAL DRAIN
V.W.C.	VINYL WALL COVERING
W.	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W/O	WITHOUT
W.O.	WHERE OCCURS
WP.	WATERPROOF (WEATHERPROOF)
WSCT.	WAINSCOT
WT.	WEIGHT

SYMBOLS



HKIT ARCHITECTS
538 NINTH STREET SUITE 240 • OAKLAND, CA 94607
T 510 625 9800 • F 510 625 9801 • WWW.HKIT.COM

FOOTHILL HS MODULAR CTE WORKSHOP BUILDING

JOB NO.	70125.11
DRAWN	JF
CHECKED	-
JOB CAPTAIN	-

ISSUE

△	DATE	DESCRIPTION
	4/28/21	100% DD
	10/29/21	INC. 2 BID SET NOT FOR CONSTRICTION
1	11/29/21	ADDENDUM 1

DRAWING TITLE

GENERAL NOTES, ABBREVIATIONS, DRAWING INDEX

SCALE 12" = 1'-0"

A0.1

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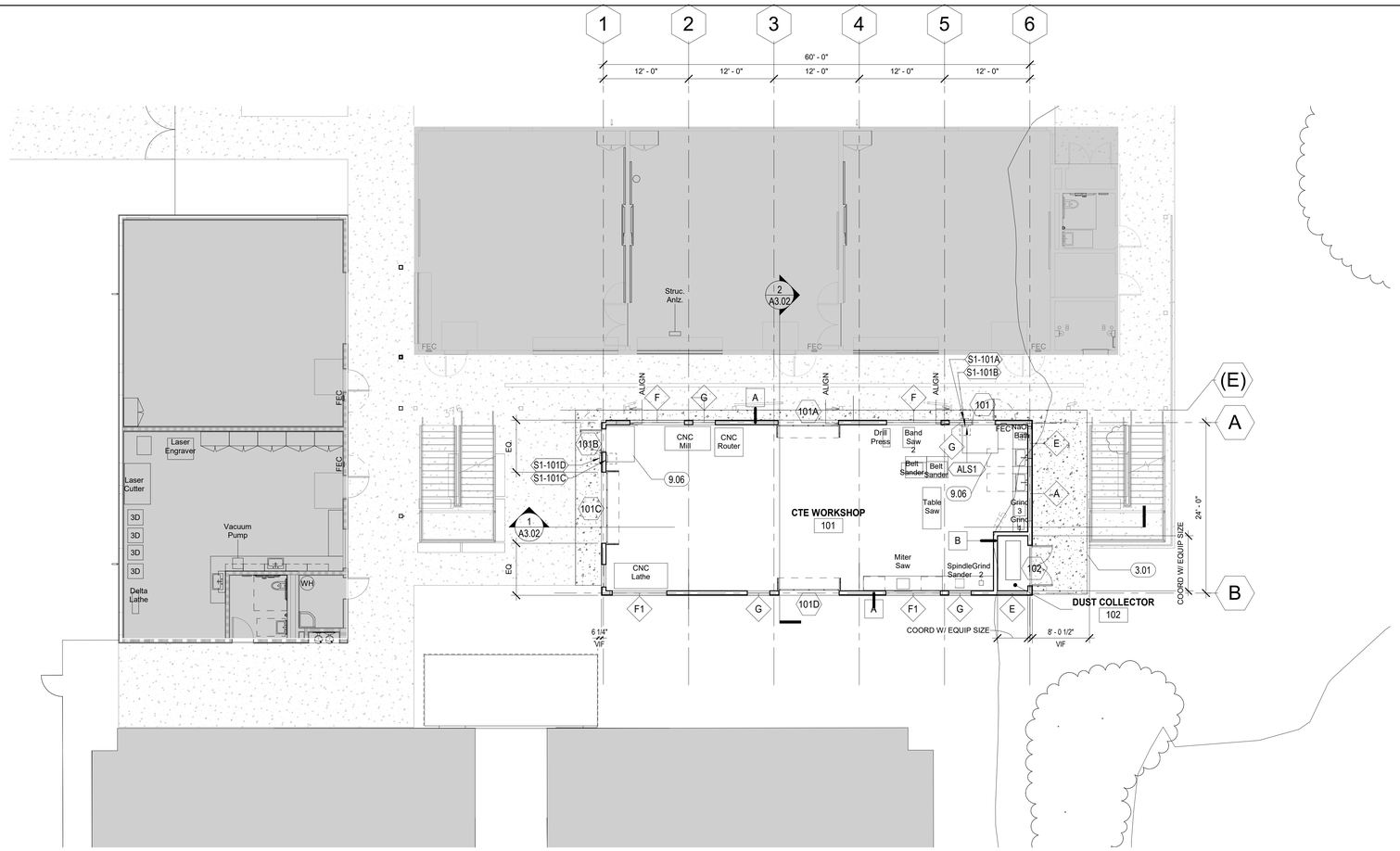
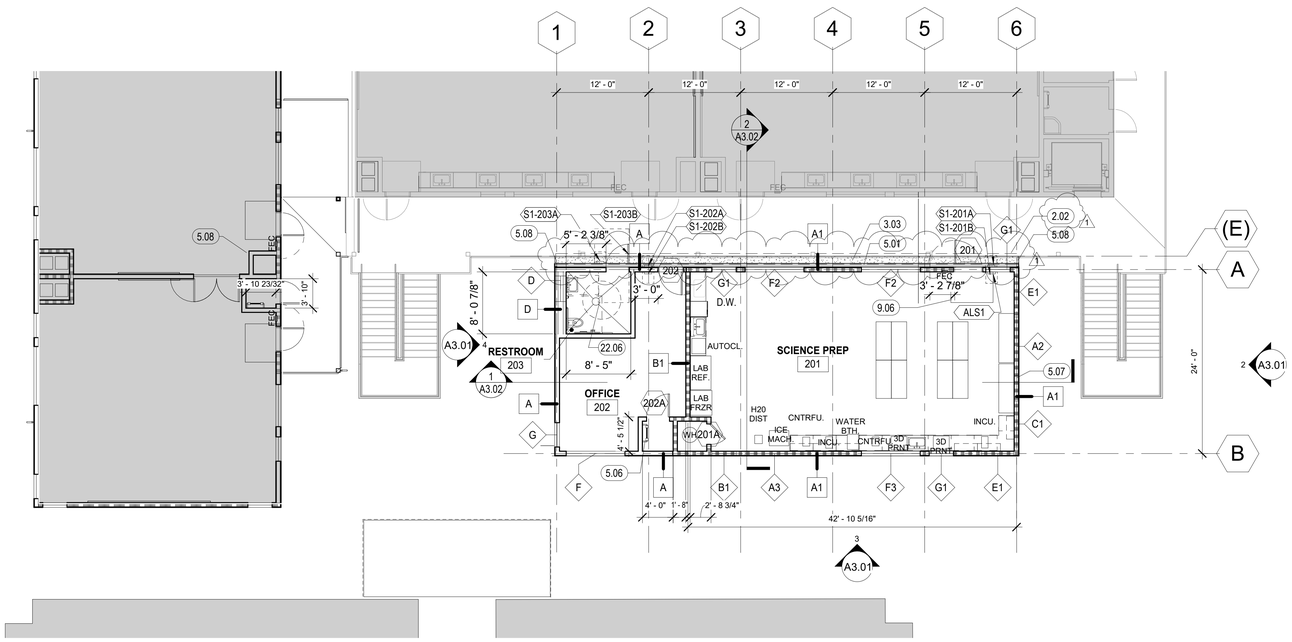


1 FIRST FLOOR PLAN
1/8" = 1'-0"



2 SECOND FLOOR PLAN
1/8" = 1'-0"

GENERAL NOTES

A. SEE FLOOR PLANS AND SHEET A8.01 FOR WALL TYPES AND ASSEMBLIES
B. SEE SHEET A10.01 FOR WINDOW, DOOR AND HARDWARE SCHEDULE, AND SIGNAGE SCHEDULE
C. SEE SHEET A2.02 FOR INTERIOR AND EXTERIOR FINISH SCHEDULE
D. SEE CIVIL, MECHANICAL, PLUMBING, ELECTRICAL, FIRE PROTECTION AND LANDSCAPE DRAWINGS FOR COMPLETE SCOPE OF WORK
E. SEE SHEET A4.01 FOR SPECIAL EQUIPMENT SCHEDULE

SHEET NOTES

2.02 1	REMOVE (E) GUARDRAIL AND SALVAGE FOR REUSE AT WALKWAY EXTENSION
3.01 1	CONC. PAVING BY INCREMENT, 1 GC, S.C.D.
3.03	EXTENSION OF CONCRETE WALKWAY
5.01	SEISMIC JOINT WITH ALUM COVER
5.06	FIXED LADDER WITH HATCH
5.07	PROVIDE BLOCKING IN WALL FOR FUTURE FULL HEIGHT SHELVES
5.08 1	VERTICAL SEISMIC JOINT ALUM COVER AND GUARDRAIL EXTENSION FROM SALVAGED GUARDRAIL
9.06	4'X4' WALK-OFF CARPET MAT, TYP.
22.06	FLOOR DRAIN, S.P.D.

LEGEND

DOOR CLEARANCE AREA

FIRE EXTINGUISHER CABINET

1t — WINDOW TYPE TAG - SEE WINDOW SCHEDULE

1 HR FIRE RATED EXTERIOR WALL

1 HR FIRE BARRIER WALL

SX-XXX — SIGNAGE - SEE SIGNAGE SCHEDULE

18" X 18" MIN. CLR FLOOR SPACE CENTERED ON TACTILE CHARACTERS

D.S. — DOWNSPOUT

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FOOTHILL HS MODULAR CTE WORKSHOP BUILDING

JOB NO.	70125.11
DRAWN	-
CHECKED	-
JOB CAPTAIN	-

ISSUE

	DATE	DESCRIPTION
	4/28/21	100% DD
	10/29/21	INC. 2 BID SET NOT FOR CONSTRICTION
1	11/29/21	ADDENDUM 1

DRAWING TITLE
FIRST & SECOND FLOOR PLAN PLANS

SCALE 1/8" = 1'-0"

A2.01

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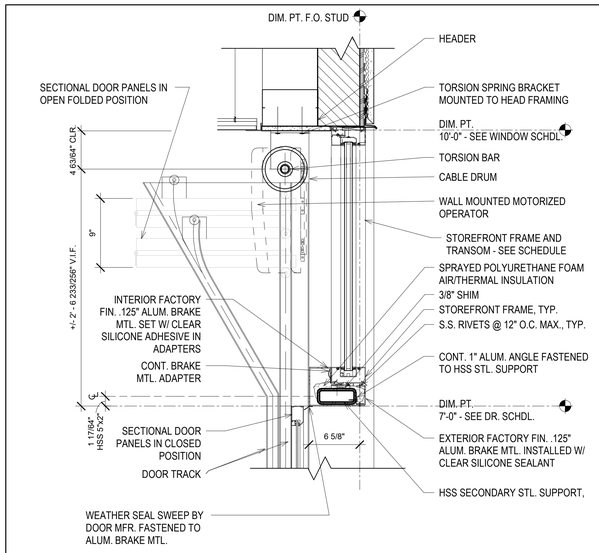
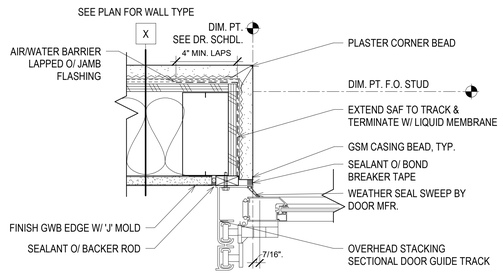
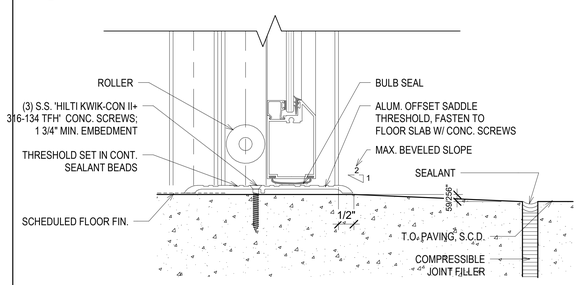


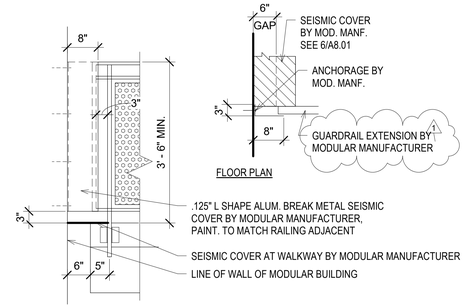
2 STACKING SECTIONAL DOOR HEAD
1 1/2" = 1'-0"



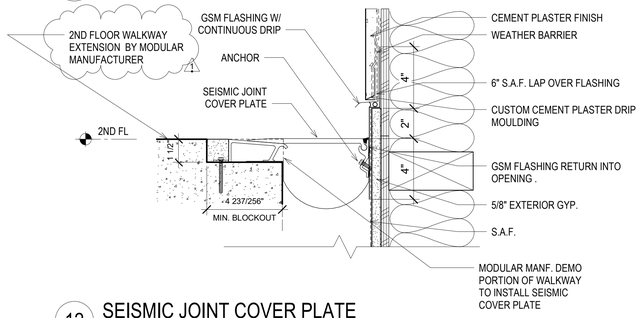
3 STACKING SECTIONAL DOOR JAMB
3" = 1'-0"



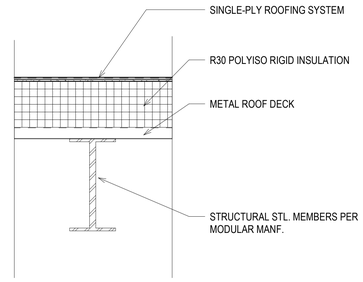
4 STACKING SECTIONAL DOOR THRESHOLD
6" = 1'-0"



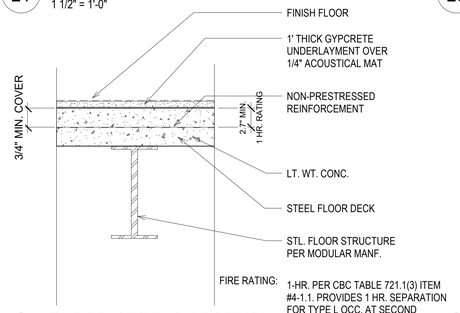
11 SEISMIC JOINT AT GUARDRAIL
3/4" = 1'-0"



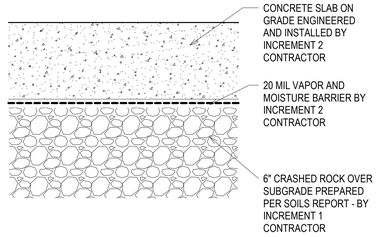
12 SEISMIC JOINT COVER PLATE
3" = 1'-0"



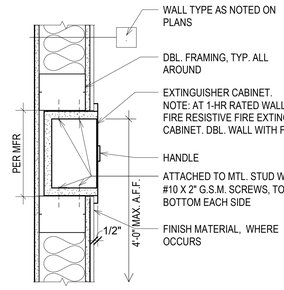
21 ROOF ASSEMBLY
1 1/2" = 1'-0"



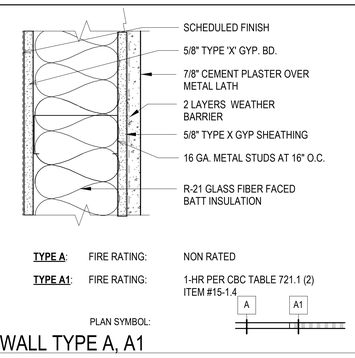
22 FLOOR CEILING ASSEMBLY
1 1/2" = 1'-0"



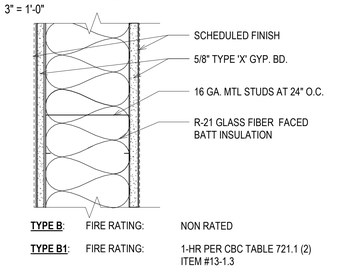
23 SLAB ON GRADE
3" = 1'-0"



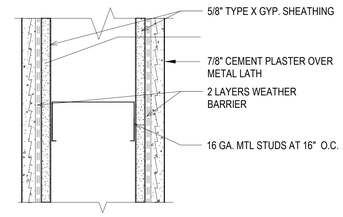
24 RECESSED FEC CABINET
1 1/2" = 1'-0"



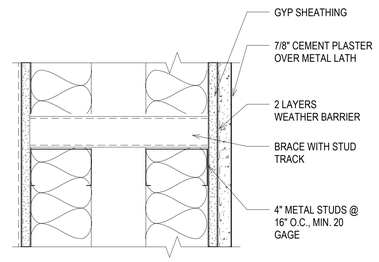
26 WALL TYPE A, A1
3" = 1'-0"



27 WALL TYPE B
3" = 1'-0"



28 WALL TYPE C
3" = 1'-0"



29 WALL TYPE D
3" = 1'-0"

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FOOTHILL HS MODULAR CTE WORKSHOP BUILDING

Enter address here

JOB NO.	70125.11
DRAWN	Author
CHECKED	Checker
JOB CAPTAIN	Approver

ISSUE

	DATE	DESCRIPTION
	4/28/21	100% DD
	10/29/21	INC. 2 BID SET NOT FOR CONSTRICTION
1	11/29/21	ADDENDUM 1

DRAWING TITLE
WALL TYPES & ASSEMBLY DETAILS

SCALE As indicated

A8.01

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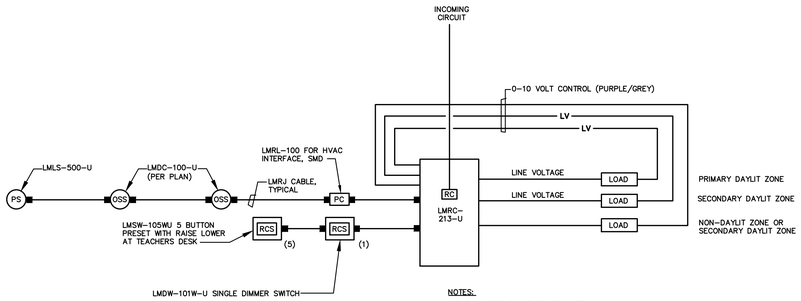
5 / E0.01 LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER	WATTS	VOLTS	MOUNTING	NOTES
B	4' ENCLOSED LED	LITHONIA #EML4E-3000-IMAFL-WD-MV-35K-80CRI	18	277	SURFACE	
C	4' STRIP LED	LITHONIA #ZL1N-L48-3000LM-FST-MVOLT-35K-80CRI-WH	18	277	SURFACE	
C1	8' STRIP LED	LITHONIA #ZL1N-L96-10000LM-FST-MVOLT-35K-80CRI-WH	68	277	CHAIN HUNG	
C2	2' STRIP LED	LITHONIA #ZL1N-L24-1500LM-FST-MVOLT-35K-80CRI-WH	15	277	SURFACE	
E	2'x4' HIGH PERFORMANCE RECESSED LED	FINELITE #HPR-LED-A-2X4-DCO-LED-V-3500K-277-SC-C1	55.1	277	RECESSED T-BAR MOUNTED	
X	EXIT SIGN LED WITH LIGHT HEADS	CHLORIDE #CLCN-G-2R	3	277	WALL	
Y	EMERGENCY BATTERY UNIT	CHLORIDE #CLU2NW	10	277	WALL MOUNT	

FIXTURE SCHEDULE NOTES:

1. VERIFY MOUNTING HEIGHT & LOCATIONS OF ALL FIXTURES WITH ARCHITECT BEFORE ROUGH-IN.
2. ALL INTERIOR LED FIXTURES SHALL HAVE COLOR RENDITION OF 3500K KELVIN.
3. ALL T-BAR MOUNTED FIXTURES SHALL BE SLACK SUPPORTED WITH #12 HANGER WIRE IN OPPOSITE CORNERS TO STRUCTURE ABOVE & SCREWED TO GRID WITH 4 TEK SCREWS OR SIESMIC CLIPS.



NOTES:

1. SEE PLAN FOR EXACT DEVICES PER ROOM.
2. DEVICES ARE WATTSTOPPER DLM OR EQUAL.
3. PC CONTROLLED WITH OCCUPANCY AND 30 MINUTE DELAY OFF.

6 / E0.01 TYPICAL ROOM CONTROLLER

2 / E0.01 GENERAL NOTES

1. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC ARTICLE 230-8.
2. ALL PENETRATIONS THRU RATED ASSEMBLIES SHALL BE FIRE CAULKED.
3. ALL FEEDERS AND BRANCH CIRCUITS SHALL BE CU WIRE WITH THW OR THWN INSULATION.
4. VERIFY EXACT CIRCUIT BREAKER & FUSE SIZE WITH ACTUAL MECHANICAL & PLUMBING EQUIPMENT SUPPLIED & PROVIDE ACCORDINGLY.
5. SEE ARCHITECTURAL DRAWINGS FOR WALL & FLOOR RATING.
6. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY & PROPERLY LABELED CEC110-2.
7. COORDINATE ALL POWER REQUIREMENTS WITH LOW VOLTAGE CONTRACTORS PRIOR TO BID & PROVIDE AS REQUIRED.
8. COORDINATE ALL FIRE SPRINKLER, FSD, & HVAC SHUTDOWN WITH RESPECTIVE CONTRACTOR PRIOR TO BID & PROVIDE CONTROLS AS REQUIRED.
9. ALL PULLBOXES SHALL BE LABELED WITH SERVICE. CABLES INSIDE SHALL BE LABELED WITH SERVICE. SEE SPECIFICATION. PROVIDE AS-BUILT SUMMARY OF PULLBOXES (INTERIOR & EXTERIOR).
10. ALL LOW VOLTAGE OUTLETS SHALL HAVE MINIMUM 1"C FROM DEVICE TO ACCESSIBLE CEILING SPACE OR TO EQUIPMENT ROOM AT HARD CEILING AREAS OR UNDER GROUND.
11. PROVIDE NEUTRAL CONDUCTOR TO ALL SWITCH OUTLETS PER CEC.
12. ALL COPPER DATA CABLES SHALL BE CAT6A.
13. EMERGENCY LIGHTING MINIMUM 90 MINUTE BACK UP.
14. 2019 CBC, CEC, CMC, CPC AND CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.

3 / E0.01 LOW VOLTAGE AND FIRE ALARM SYSTEM

LOW VOLTAGE SYSTEM AND FIRE ALARM SYSTEM PROVIDED UNDER INCREMENT 1. PROVIDE ALL ROUGH-IN UNDER THIS WORK. 1

4 / E0.01 ELECTRICAL DRAWING LIST

E0.01	ELECTRICAL LEGEND AND NOTES
E1.01	ELECTRICAL SITE PLAN (FOR REFERENCE ONLY)
E2.01	ELECTRICAL POWER PLAN 1
E3.01	ELECTRICAL LIGHTING PLAN
E6.01	ELECTRICAL SINGLE LINE DIAGRAM, LOAD SUMMARY AND NOTES 1

REFERENCE DRAWINGS SEE INCREMENT 1

E0.01	ELECTRICAL LEGEND, SCHEDULES, NOTES AND DETAILS
E1.01	ELECTRICAL SITE PLAN
E2.02	ELECTRICAL LOW VOLTAGE PLAN
E4.01	ELECTRICAL FIRE ALARM PLAN
E5.00	ELECTRICAL FIRE ALARM LEGEND, SCHEDULES AND NOTES 1
E5.01	ELECTRICAL FIRE ALARM DETAILS
E5.02	ELECTRICAL FIRE ALARM RISER DIAGRAM AND ADDRESS LIST
E6.00	ELECTRICAL SINGLE LINE DIAGRAM
E7.01	ELECTRICAL LOW VOLTAGE DETAILS

1 / E0.01 LEGEND

AFF	ABOVE FINISHED FLOOR
AFC	AVAILABLE FAULT CURRENT
C	CONDUIT
CEC	CALIFORNIA ELECTRICAL CODE
CKT	CIRCUIT
C.O.	EMPTY CONDUIT WITH PULL WIRE
(E)	EXISTING
GFCI OR GFI	GROUND FAULT CIRCUIT INTERRUPTER DO NOT FEED THRU PROVIDE INDIVIDUAL GFI RECEPTACLES WHERE NOTED
H	HOT
IDF	INTERMEDIATE DATA FACILITY
K	1000
LTG	LIGHTING
MSB	MAIN SWITCHBOARD
N	NEUTRAL
(N)	NEW
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OSP	OUTSIDE PLANT
PNL	PANEL
PB	PULL BOX
(R)	REMOVE
REC, RECEPT	RECEPTACLE
SAD	SEE ARCHITECTURAL DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SPD	SEE PLUMBING DRAWINGS
SSD	SEE STRUCTURAL DRAWINGS
SWBD	SWITCHBOARD
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
V.L.	VERIFY LOCATION WITH ARCHITECTURAL DRAWINGS
WAP	WIRELESS ACCESS POINT
WP	WEATHERPROOF
XFMR	TRANSFORMER
# / E#	DETAIL OR SHEET REFERENCE
A	LIGHT FIXTURE DESIGNATION SEE LIGHT FIXTURE SCHEDULE.
1	SHEET NOTE REFERENCE
	LED LIGHT FIXTURE. SEE PLANS AND SCHEDULE
	EXIT SIGN WALL MOUNT, +8'-0"
	EMERGENCY BATTERY UNIT
	LIGHT LINES AND SYMBOLS INDICATE EXISTING WORK TO REMIAN OR WORK BY OTHER TRADES.
	HEAVY LINES AND SYMBOLS INDICATE NEW WORK.
	277/480 VOLT 3ø, 4W MAIN SWITCHBOARD
	SURFACE MOUNTED CONTROL/TERMINAL CABINET MOUNTED ON WALL. VERIFY MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGH-IN
	FLUSH MOUNTED PANELBOARD/TERMINAL CABINET VERIFY MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGH-IN
	120/208 VOLT 3ø, 4W PANELBOARD
	277/480 VOLT 3ø, 4W PANELBOARD
	GROUND CONNECTION
	CONDUIT WITH CONDUCTORS IN SLAB, UNDERFLOOR, OR BELOW GRADE WITH MARKINGS AS INDICATED ABOVE.
—D—	DATA RACEWAY AND/OR CABLE MIN 1"C.
	HOMERUNS CONTINUING TO PANEL. SLASH MARKS INDICATE NUMBER OF CONDUCTORS. NOT COUNTING GROUND WIRE. NO SLASH MARKS INDICATE 2 #12 COPPER CONDUCTORS AND #12 GROUND IN 3/4" CONDUIT. PROVIDE GROUND CONDUCTOR IN ALL POWER CONDUIT RUNS.
J	JUNCTION BOX. SIZE JUNCTION BOX AS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE. PROVIDE WEATHERPROOF BOXES AT ALL EXTERIOR LOCATIONS.
	20 AMPERE GFCI 5-20R DUPLEX RECEPTACLE MOUNT +18"AFF U.O.N. DO NOT FEED THRU FOR GFCI RECEPTACLES.
WP	20A 120 VOLT WEATHERPROOF DUPLEX RECEPTACLE OUTLET WITH LOCKABLE SELF CLOSING COVER. ALL WEATHERPROOF OUTLETS SHALL BE GFCI TYPE. + 18"AFF U.O.N. DO NOT FEED THRU FOR GFCI RECEPTACLES.
	20A, 120 VOLT DUPLEX RECEPTACLE OUTLET AT +18" AFF. U.O.N. NEMA 5-20R.
	20A, 250 VOLT SINGLE PHASE RECEPTACLE NEMA 6-20R.
	20 AMPERE 120 VOLT FOURFLEX RECEPTACLE OUTLET AT +18"AFF. U.O.N. (2) NEMA 5-20R.
	1
PB	PULL BOX MINIMUM SIZE AS INDICATED OR PER CEC. REFER TO DRAWINGS FOR USE
OS	WALL MOUNTED OCCUPANCY SENSOR. +42" U.O.N. WATTSTOPPER #DW-100-W. SET AT 15 MINUTE DELAY OFF.
RC	ROOM CONTROLLER
RCS	ROOM CONTROLLER SWITCH, +42"AFF, U.O.N.
PC	ROOM CONTROLLER RELAY CONTROLLER (FOR HVAC INTERFACE).
PS	ROOM CONTROLLER PHOTO SENSOR.
OSS	ROOM CONTROLLER OCCUPANCY SENSOR CEILING. (NOMINAL 15 MINUTE DELAY OFF)
CR	PULL DOWN CORD REEL WITH TRIPLEX OUTLET.

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18071.02
JOB NUMBER
BWF CONSULTING ENGINEERS
ELECTRICAL ENGINEERS
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SO. SAN FRANCISCO, CALIFORNIA 94080
(650) 871-0220

PUSD - FOOTHILL HS 2ND CTE INCREMENT 2 SCIENCE PREP BUILDING

4375 FOOTHILL RD
PLEASANTON, CA 94588

JOB NO.	70125.01
DRAWN	S.M.
CHECKED	M.V.
JOB CAPTAIN	M.V.

ISSUE

	DATE	DESCRIPTION
	04-06-21	100% DD
1	11-29-21	ADDENDUM 1

DRAWING TITLE

ELECTRICAL
LEGEND AND NOTES

SCALE: AS NOTED

E0.01

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PLOTTED: Nov 23, 2021-8:18am

3 / E0.01 ELECTRICAL DRAWING LIST

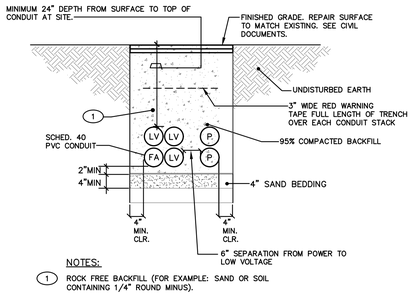
E0.01	ELECTRICAL LEGEND, SCHEDULES, NOTES AND DETAILS
E1.01	ELECTRICAL SITE PLAN
E2.02	ELECTRICAL LOW VOLTAGE PLAN
E4.01	ELECTRICAL FIRE ALARM PLAN
E5.00	ELECTRICAL FIRE ALARM LEGEND, SCHEDULES AND NOTES
E5.01	ELECTRICAL FIRE ALARM DETAILS
E5.02	ELECTRICAL FIRE ALARM RISER DIAGRAM AND ADDRESS LIST
E6.00	ELECTRICAL SINGLE LINE DIAGRAM
E7.01	ELECTRICAL LOW VOLTAGE DETAILS

2 / E0.01 GENERAL NOTES

1. VERIFY EXISTING CONDITIONS IN FIELD.
2. AREAS DAMAGED OR AFFECTED BY THIS WORK SHALL BE PATCHED, REPAIRED OR RECONSTRUCTED TO MATCH (E) U.O.N.
3. BEFORE DIGGING CALL THE UNDERGROUND SERVICE ALERT (USA) 1-800-642-2444 FOR LOCATIONS AND MARK OUT OF EXISTING UNDERGROUND UTILITIES.
4. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC ARTICLE 230-8.
5. ALL FEEDERS AND BRANCH CIRCUITS ARE BASED ON CU WIRE WITH THW OR THWN INSULATION U.O.N.
6. ALL EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY & PROPERLY LABELED CEC110-2.
7. ALL PULLBOXES SHALL BE LABELED WITH SERVICE. CABLES INSIDE SHALL BE LABELED WITH SERVICE. SEE SPECIFICATION. PROVIDE AS-BUILT SUMMARY OF PULLBOXES
8. EXISTING CONDUIT ROUTING SHALL BE FIELD VERIFIED AND WIRING CORRECTED TO MATCH CONDUIT ROUTING.
9. MINIMUM SIZE CONDUIT SHALL BE 3/4" FOR INTERIOR AND 2" FOR UNDERGROUND U.O.N.
10. ALL WORK IS NEW U.O.N.
11. PROVIDE CODE SIZED GROUND CONDUCTOR IN ALL POWER CIRCUIT RUNS.
12. ALL LOW VOLTAGE OUTLETS SHALL HAVE MINIMUM 1"C FROM DEVICE TO ACCESSIBLE CEILING SPACE OR TO EQUIPMENT ROOM AT HARD CEILING AREAS OR UNDERGROUND.
13. ALL COPPER DATA CABLES SHALL BE CAT6A.

1 / E0.01 LEGEND

A	AMPERE
C	CONDUIT
C.O.	EMPTY CONDUIT WITH PULL WIRE
DDCV	DOUBLE DETECTOR CHECK VALVE ASSEMBLY
(E)	EXISTING
IDF	INTERMEDIATE DATA FACILITY
K	1000
LTG	LIGHTING
MDF	MAIN DATA FACILITY
N	NEUTRAL
(N)	NEW
NTS	NOT TO SCALE
PNL	PANEL
PB	PULL BOX
(R)	REMOVE
REC, RECEPT	RECEPTACLE
SAD	SEE ARCHITECTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SWBD	SWITCHBOARD
TC	TERMINAL CABINET
UG	UNDERGROUND
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
XFMR	TRANSFORMER
# / E#	DETAIL OR SHEET REFERENCE
1	SHEET NOTE REFERENCE
	PULLBOX SEE SCHEDULE AND NOTES
	277/480 VOLT 3ø, 4W MAIN SWITCHBOARD
	120/208 VOLT 3ø, 4W PANELBOARD
	FLUSH MOUNTED PANELBOARD
	SURFACE MOUNTED CONTROL/TERMINAL CABINET MOUNTED ON WALL. VERIFY MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGH-IN
	WALL DATA/VOICE OUTLET +18" U.O.N. (#) INDICATES NUMBER OF JACKS, IF GREATER THAN 2. NO NUMBER INDICATES 2 JACKS PROVIDE CAT6A CABLES TO IDF. PROVIDE CONCEALED 1"C. TO ACCESSIBLE CEILING SPACE OR PULL BOX AT EXPOSED CEILING. 4 11/16" SQ. BOX WITH SINGLE GANG PLATE.
	MAGNETIC DOOR CONTACT ROUGH-IN. PROVIDE 3/4"C. TO ACCESSIBLE CEILING SPACE OR PULL BOX AT EXPOSED CEILING.
MS	SECURITY MOTION SENSOR. PROVIDE RECESSED BOX AT +8'-0" AND 3/4"C. TO ACCESSIBLE CEILING OR PULL BOX AT EXPOSED CEILING. NO BOX OR CONDUIT REQUIRED AT T-BAR CEILING AREAS.
KP	SECURITY KEY PAD +48" TO TOP OF BOX. PROVIDE 1"C. TO ACCESSIBLE CEILING SPACE OR PULL BOX AT EXPOSED CEILING.
C	CAMERA OUTLET. PROVIDE FLUSH OUTLET & 1" C. TO CEILING SPACE OR PULL BOX AT EXPOSED CEILING AND CAT6A CABLE TO IDF.
BG	BREAK GLASS SENSOR IN CEILING.
C S	WALL MOUNT IP BASED CLOCK/SPEAKER +8'-0". PROVIDE 1"C. TO ACCESSIBLE CEILING SPACE OR PULL BOX AT EXPOSED CEILING & CAT6A CABLE TO IDF. SAD ELEVATIONS FOR EXACT LOCATION. ATLAS IED #IP-SDMF. PROVIDE 11.63" SQ. x 13.7" H x 4" DEEP BACKBOX ATLAS IED #IP-FEST-SD. +8'-0" AFF.
S WP	WEATHERPROOF IP BASED SPEAKER. PROVIDE 1"C. TO CEILING SPACE OR PULL BOX AT EXPOSED & CAT6A CABLE TO IDF. ATLAS IED #IP-HVP. PROVIDE 9.63" SQ. x 6" DEEP BACKBOX ATLAS IED #IP-FEST-IH. +8'-0" AFF.
S # H M	FIRE ALARM DEVICES. SEE E5.01
EOL	END OF LINE DEVICE FOR FIRE ALARM. COORDINATE WITH INCREMENT 2 FIRE ALARM SYSTEM.
	GROUND CONNECTION
	CONDUIT WITH CONDUCTORS/CABLE BELOW GRADE.
	CONDUIT WITH CONDUCTORS/CABLE ABOVE GRADE CONCEALED WHERE APPLICABLE.
	CONDUIT RISER, UP OR DOWN
	SLASH MARKS INDICATE # OF CONDUCTORS (POWER) IN CONDUIT. LONG SLASH INDICATES GROUND CONDUCTOR. # INDICATES AWG SIZE (COPPER THWN)
F	FIRE ALARM CONDUIT AND & WIRE 3/4"C. MINIMUM.

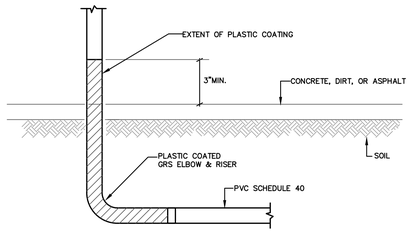


NOTES:

1. ROCK FREE BACKFILL (FOR EXAMPLE: SAND OR SOIL CONTAINING 1/4" ROUND MINUS).

5 / E0.01 JOINT TRENCH DETAIL

SCALE: NTS



4 / E0.01 TYPICAL CONDUIT RISER FROM BELOW GRADE

SCALE: NTS

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MICHAEL JOHN VOISTADOUT
No. E 11460
Exp. 12/31/19
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: Nov 23,21

BWF
18071-02
JOB NUMBER
BWF CONSULTING ENGINEERS
ELECTRICAL ENGINEERS
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PUSD - FOOTHILL HS 2ND CTE BUILDING INCREMENT 1 SITE WORK

4375 FOOTHILL RD
PLEASANTON, CA 94588

JOB NO.	70125.01
DRAWN	S.M.
CHECKED	M.V.
JOB CAPTAIN	M.V.

ISSUE

△	DATE	DESCRIPTION
	04-06-21	100% DD
	11-29-21	

DRAWING TITLE

ELECTRICAL
LEGEND, SCHEDULES
NOTES AND DETAILS

SCALE: AS NOTED

E0.01

1

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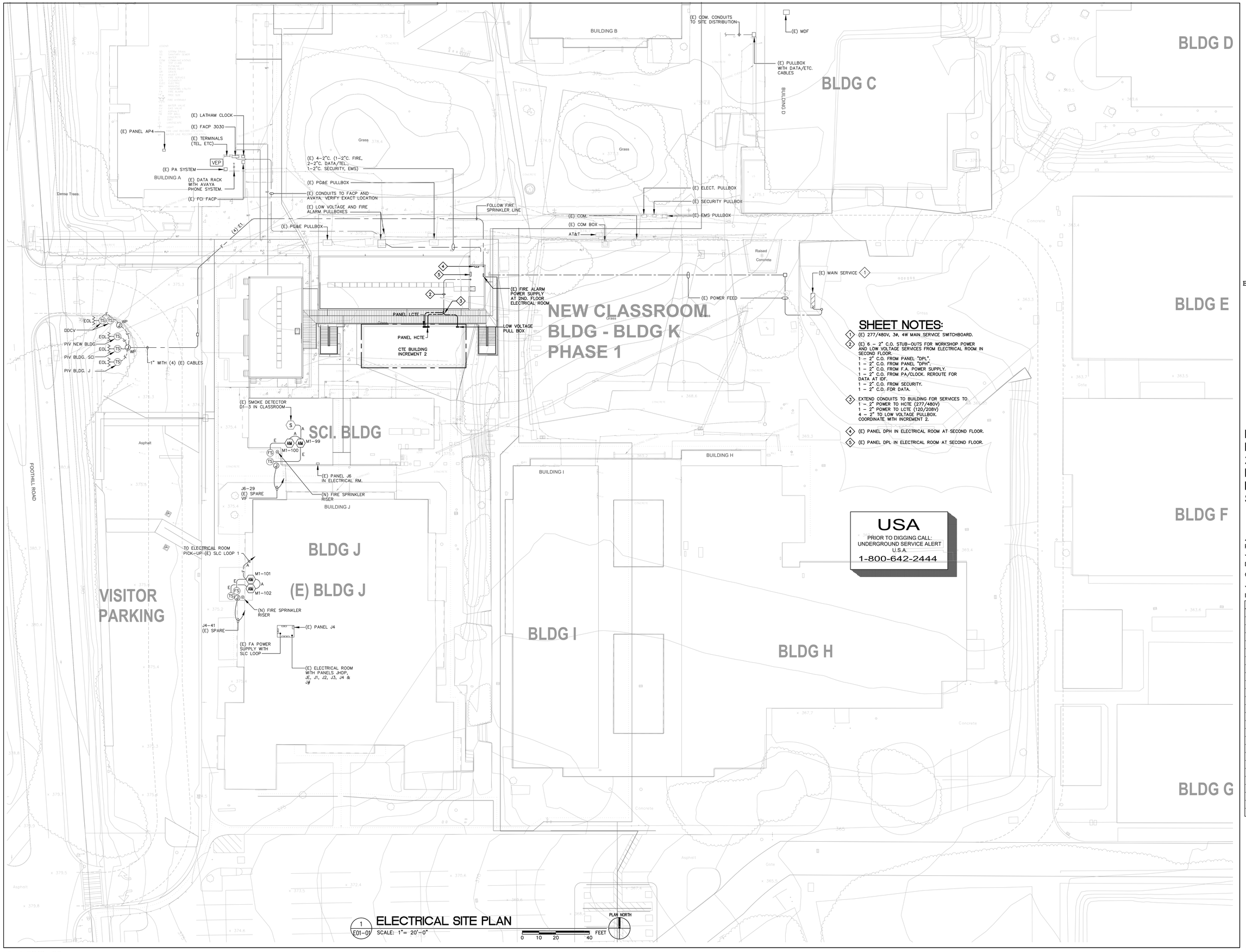

SHEET NOTES:

1. (E) 277/480V, 3ø, 4W MAIN SERVICE SWITCHBOARD.
2. (E) 6 – 2" C.O. STUB-OUTS FOR WORKSHOP POWER AND LOW VOLTAGE SERVICES FROM ELECTRICAL ROOM IN SECOND FLOOR.
   1 – 2" C.O. FROM PANEL "DPL".
   1 – 2" C.O. FROM PANEL "DPH".
   1 – 2" C.O. FROM F.A. POWER SUPPLY.
   1 – 2" C.O. FROM PA/CLOCK. REROUTE FOR DATA AT IDF.
   1 – 2" C.O. FROM SECURITY.
   1 – 2" C.O. FOR DATA.
3. EXTEND CONDUITS TO BUILDING FOR SERVICES TO
   1 – 2" POWER TO HCTE (277/480V)
   1 – 2" POWER TO LCTE (120/208V)
   4 – 2" TO LOW VOLTAGE PULLBOX.
   COORDINATE WITH INCREMENT 2.
4. (E) PANEL DPH IN ELECTRICAL ROOM AT SECOND FLOOR.
5. (E) PANEL DPL IN ELECTRICAL ROOM AT SECOND FLOOR.

1 E01-01 ELECTRICAL SITE PLAN
SCALE: 1"= 20'-0"

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DRAWING TITLE
ELECTRICAL SITE PLAN

SCALE: AS NOTED

E1.01

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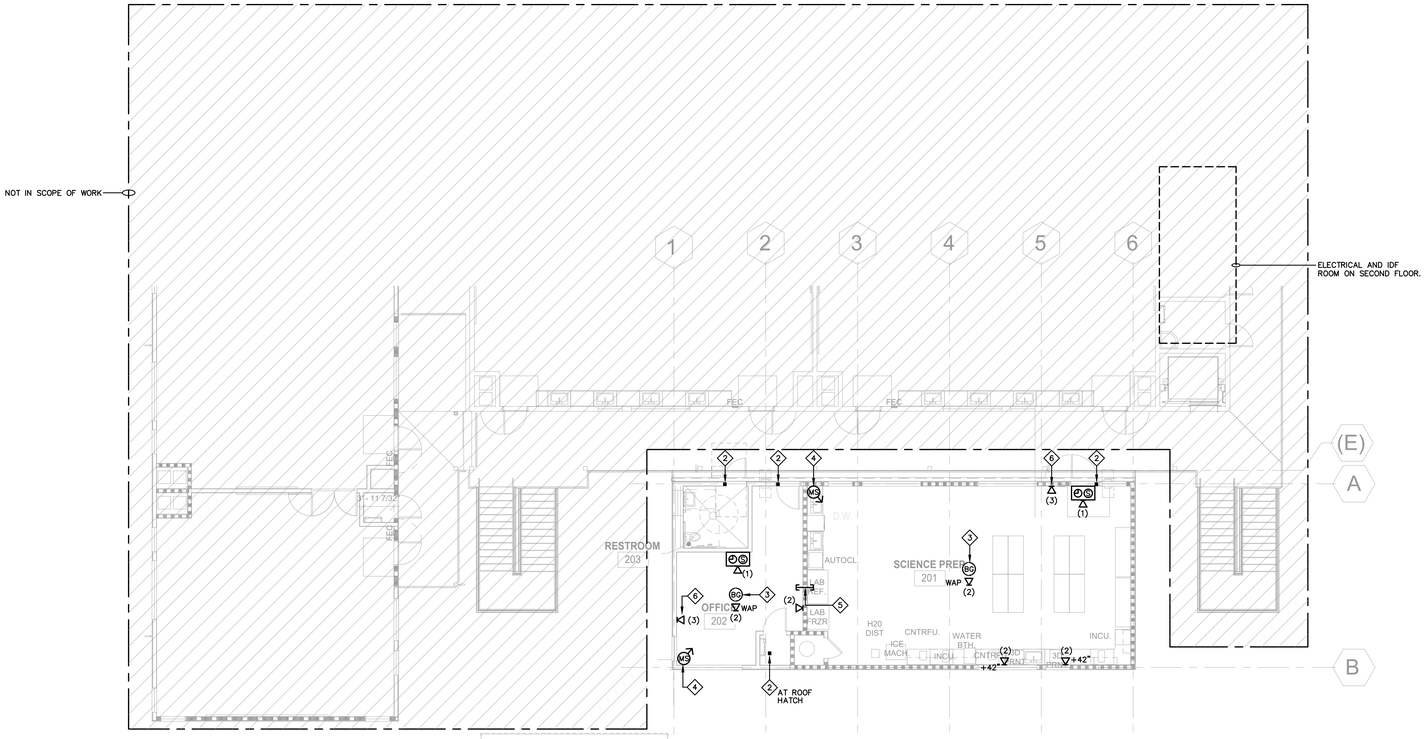
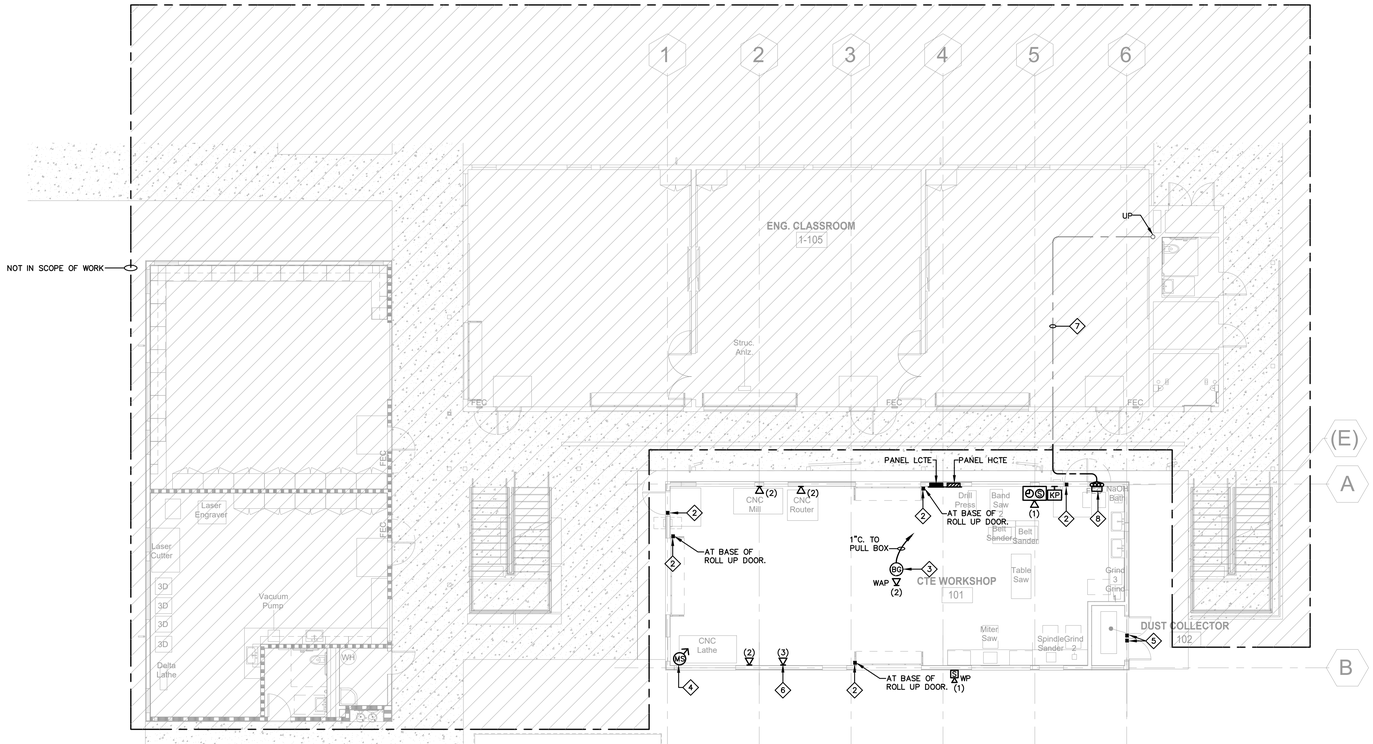


2 E2.02 ELECTRICAL SECOND FLOOR LOW VOLTAGE PLAN

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

PLAN NORTH

0 4' 8' 16' FEET



1 E2.02 ELECTRICAL FIRST FLOOR LOW VOLTAGE PLAN

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

PLAN NORTH

4' 8' 16' FEET

SHEET NOTES:

1. NOT USED.
2. MAGNETIC DOOR CONTACT.
3. BREAK GLASS STATION.
4. MOTION DETECTOR.
5. PROVIDE (1) 2" SLEEVE ABOVE CEILING FOR LOW VOLTAGE CABLES. HILTI #CFS-SL-SK SERIES, OR STI EQUAL.
6. ONE JACK FOR TELEPHONE.
7. EXISTING AND NEW CONDUITS FOR CTE FROM ADJACENT BUILDING. SEE E1.01.
8. PULL BOX FOR LOW VOLTAGE CONDUITS & CABLES. COORDINATE WITH INCREMENT 2. 24"x24"x6" AT TOP OF WALL. PROVIDE 2-2"C. FROM PULL BOX TO SECOND FLOOR CEILING SPACE FOR LOW VOLTAGE CABLES.

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JOB CAPTAIN	M.V.

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DRAWING TITLE

ELECTRICAL LOW VOLTAGE PLAN

SCALE: AS NOTED

E2.02

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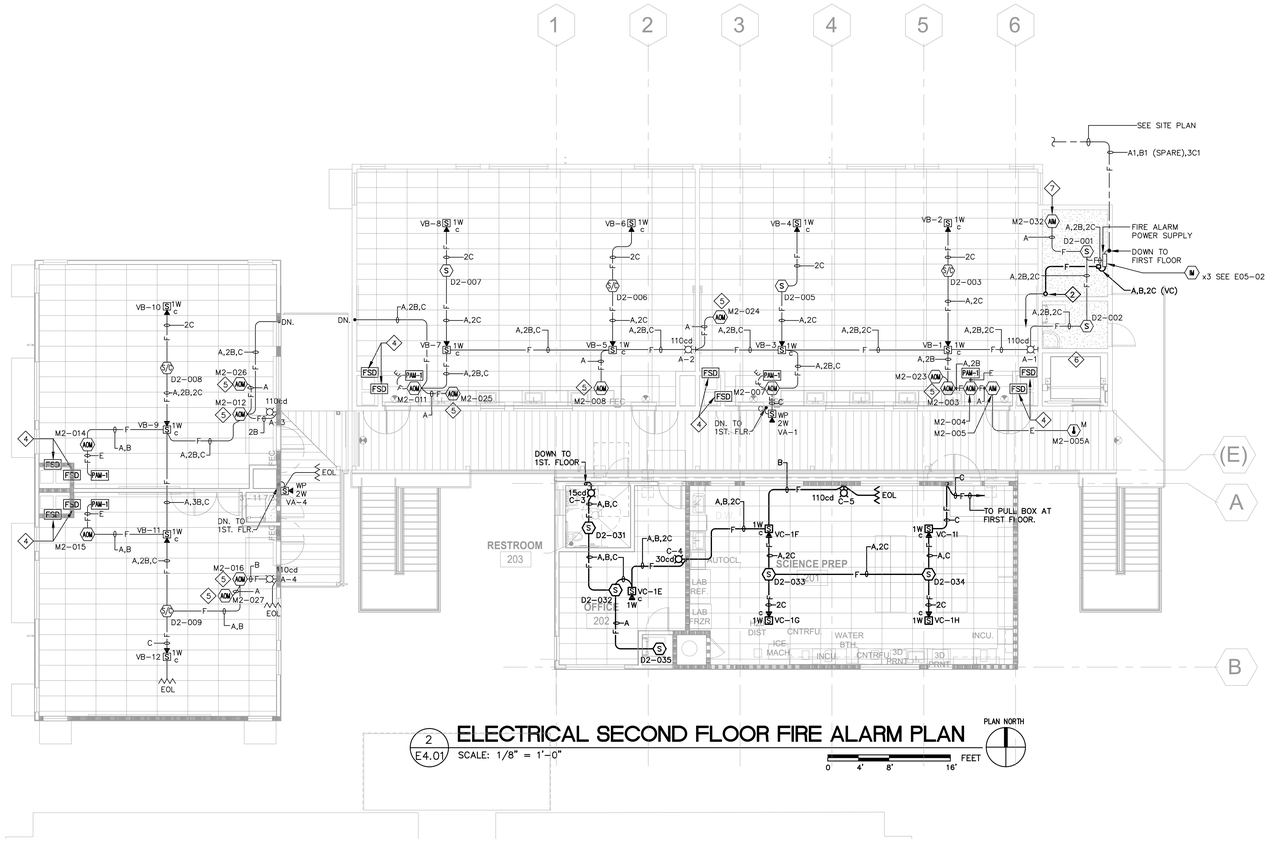


2 E4.01 ELECTRICAL SECOND FLOOR FIRE ALARM PLAN

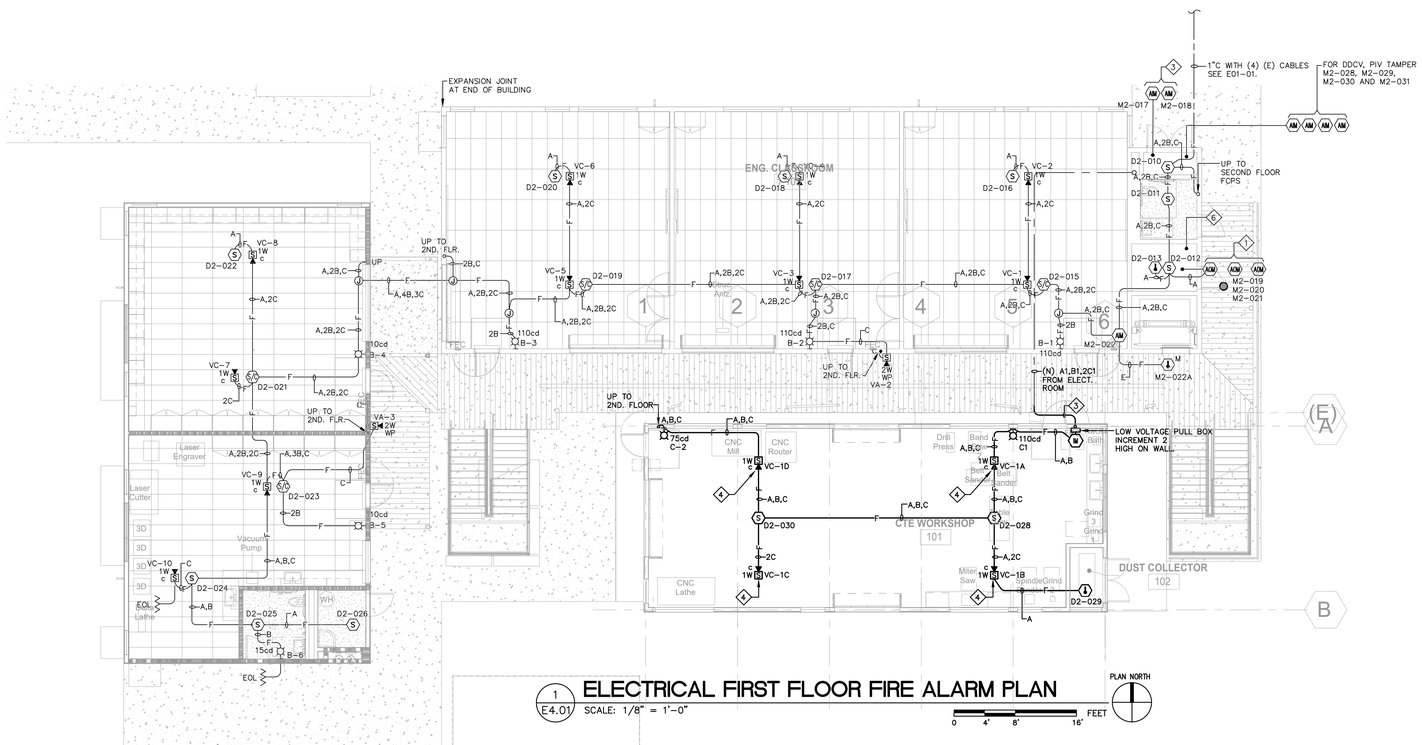
SCALE: 1/8" = 1'-0"

PLAN NORTH

0 4' 8' 16' FEET

SHEET NOTES:

1. PROVIDE J-BOX FOR F.A. CABLES TO CTE WORKSHOP.
2. PICK UP (E) 2" C. AND EXTEND TO NEW PULL BOX NEAR FCPS FOR FIRE ALARM TO CTE BUILDING.
3. PICK UP AND EXTEND 2" C. AND EXTEND TO PULL BOX AT CTE. PROVIDE FIRE ALARM CABLES. COORDINATE WITH INCREMENT 2.
4. PROVIDE SURFACE BACK BOX.



1 E4.01 ELECTRICAL FIRST FLOOR FIRE ALARM PLAN

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

PLAN NORTH

0 4' 8' 16' FEET

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ELECTRICAL
FIRE ALARM PLAN

SCALE: AS NOTED

E4.01

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11 / E5.00 FIRE ALARM REMOTE POWER SUPPLY BATTERY CALCULATIONS TYPICAL

(INPUT POWER 5.0 AMPS MAX. @ 120 VOLT AC) FCPS

24 HOURS X STANDBY + 15 MINUTES ALARM
24 x 0.13A + .25 x 6.13A = 4.63 AH x 1.2 (SF) = 5.58 AH
SPARE CAPACITY = 12–5.58= 6.42AH (53%)

FCPS SHALL HAVE MINIMUM OF 2 x 12 AH 12 VOLT BATTERIES. SIZED FOR FULLY LOAD CIRCUITS.

NFC-50/100 Battery Calculation

Secondary Power Source Requirements

E	Standby Current (amps)					Secondary Alarm Current (amps)				
Device Type	Qty		Current Draw		Total	Qty		Current Draw		Total
1. System										
NFC-50/100 Primary Console	1	X	0.2720	=	0.2720	1	X	0.4460	=	0.4460
NFC-50W-25V/70V*1	1	X	0.1000	=	0.1000	1	X	0.2350	=	0.2350
NFC-50W-25V/70V (As Backup)*1	0	X	0.1000	=		0	X	0.0000	=	
NFC-CE6 Circuit Expander	1	X	0.0200	=	0.0200	1	X	0.1890	=	0.1890
NFC-RTZM	0	X	0.0550	=		0	X	0.0600	=	
NFC-FFT Firefighter Telephone	0	X	0.1200	=		0	X	0.2300	=	
2. Operator Interface Devices (Maximum of 8 total)										
NFC-LOC Local Operator Console	0	X	0.0850	=		0	X	0.1000	=	
NFC-RM Remote Microphone	1	X	0.0500	=	0.0500	1	X	0.0640	=	0.0640
NFC-RPU Remote Page Unit	0	X	0.0500	=		0	X	0.0680	=	
Total Devices:	1									
3. Additional Amplifiers (Maximum of 8 total)										
NFC-50DA	1	X	0.0120	=	0.0120	1	X	0.0120	=	0.0120
NFC-125DA	0	X	0.0120	=		0	X	0.0120	=	
NFC-50BDA	0	X	0.0120	=		0	X	0.0120	=	
Total Amplifiers:	1									
4. Speakers (Maximum 100 Watts)										
1/4 Watt	0	X	0.0000	=		0	X	0.0170	=	
1/2 Watt	0	X	0.0000	=		0	X	0.0330	=	
3/4 Watt	0	X	0.0000	=		0	X	0.0500	=	
1 Watt	31	X	0.0000	=	0.0000	31	X	0.0680	=	2.1080
2 Watt	4	X	0.0000	=	0.0000	4	X	0.1320	=	0.5280
Custom Watt Tap Description	0	X	0.0000	=		0	X	0.0000	=	
Total Watts:	39									
5. Output Circuits										
NAC Output (2 amps maximum)			0.00000	=				0.00000	=	
Non-Resettable Output (0.5 amps max)			0.00000	=				0.00000	=	
6. Additional Devices										
Power Supervision Relays	1	X	0.0250	=	0.0250	1	X	0.0250	=	0.0250
SP-SVC Volume Control	1	X	0.0100	=	0.0100	1	X	0.0100	=	0.0100
			Total Standby Load		**0.4890**			**Total Alarm Load**		**3.6170**

*1 Select only one Additional Amplifier based on whether or not it will be used for backup purposes.

NFC-50/100 Battery Calculation

Calculation in Total Sheet

			Required Standby Time in Hours		
			24 Hours		
Standby Load Current (Amps)	**0.4890 Amps**	X	24	=	11.736 AH
			Required Alarm Time in Hours		
			15 Minutes		
Alarm Load Current (Amps)	**3.6170 Amps**	X	0.25	=	0.904 AH
			Total Current Load		**12.64 AH**
	*Multiply by the Derating Factor		1.2	=	x 1.20
			Total Ampere Hours Required		**15.17 AH**

Recommended Batteries:	**BAT-12180 - 18AH Batteries**

* Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

7 / E5.00 FACP BATTERY CALCULATION

QTY.	DESCRIPTION	AMPS STANDBY		AMPS ALARM	
		EACH	TOTAL	EACH	TOTAL
1	(E) NOTIFIER 3030 WITH ADDED LEM & (N) LOOP	.588	.588	10.570	10.570
23	(E) & (N) SMOKE DETECTORS (S)	.0003	(0.0027)**	.0065	(0.0585)**
9	SMOKE/CO DETECTORS (SC)	.0003	(0.0027)**	.0065	(0.0585)**
3	(E) & (N) HEAT DETECTORS (H)	.0003	(0.0006)**	.0065	(0.0130) **
1	(E) FIRE ALARM POWER SUPPLY FCPS	0	(0) **	0	0
2	(E) ISOLATION (IM)	.0004	(0.0008)**	.005	(0.010) **
23	(E) RELAY MODULE (RM)	.0004	(0.0072)**	.005	(0.090) **
5	(E) MONITOR MODULE (MM)	.0004	(0.0020)**	.005	(0.025) **
7	PAM RELAYS	.015	(0.075) ****	.015	(0.075) ****
		TOTALS	.588		10.570

BATTERY SIZE= STANDBY .588 AMPS x 24 HOURS + 10.570 AMPS x .25 HOURS = 16.75 AH + 20% SPARE = 20.1AH

PROVIDE (N) (2) 26 AH BATTERIES

SPARE CAPACITY = 26AH – 20.1AH = 5.9 AH (22.6%)

* CALCULATED AT FULL LOOP/LOAD CAPACITY
** DEVICE AMPERES LISTED FOR REFERENCE. INCLUDED IN LOOP LOAD AND MAXIMUM ALARM LOAD.
*** CONTRACTOR SHALL SUBMIT FINAL BATTERY CALCULATIONS BASED ON FINAL EQUIPMENT ACCESSORIES, ETC.
**** PAM–1 RELAYS TURN–OFF AFTER 15 SECONDS OF POWER FAILURE. NEGLIGIBLE IMPACT ON BATTERY <0.001AH.

8 / E5.00 NOTIFICATION DEVICE LOAD IN AMPS

(24VDC FOR NAC, 70VDC FOR AUDIO)

SYMBOL	15cd	30cd	60cd	75cd	95cd	110cd	1/2 WATT	1 WATT	2 WATT	4 WATT	8 WATT
	0.057	0.085	–	0.135	0.163	0.182	–	–	–	–	–
S C	–	–	–	–	–	–	.007	0.014	0.028	–	–
S WP	–	–	–	–	–	–	.007	0.014	0.028	0.056	.112

SEE E05–02 FOR VOLTAGE DROP CALCULATIONS

5 / E5.00 FIRE ALARM EQUIPMENT LEGEND ***

COMPONENT	SYMBOL	MFG./MODEL *	CSFM LISTING
(E) FIRE ALARM CONTROL PANEL PROVIDE NEW BATTERIES	FACP	(E) NOTIFIER 3030 PROVIDE LEM–320–LOOP 2 EXPANDER	7165–0028:0224
(E) VOICE EVACUATION PANEL	VEP	(E) NOTIFIER #NFC–50/100,70V, NFC BDA–70V, NFC–LOC, NFC–XRM–70V, NFC–CE6	6911–0028:0265
(E) ADDRESSABLE POWER SUPPLY WITH (2) AH BATTERIES	FCPS	(E) NOTIFIER #ACPS–610/CAB–PS1	7315–0028:0248
SMOKE DETECTOR ADDRESSABLE	S	NOTIFIER #FSP851/B710LPBP	7272–0028:0206
SPEAKER CEILING ****	S C	WHEELOCK #E60H–W SURFACE BACK BOX SURFACE BACK BOX	7320–0785:0171
STROBE (15/30/60/75/110cd) ****		WHEELOCK #STR (WALL MOUNTED)	7125–0785:0168 7125–0785:0168
ISOLATION MODULE	IM	NOTIFIER #ISO–X	7165–0028:0244
END OF LINE DEVICE	EOL OR	–	

* PANELS, AMPLIFIERS AND ALL INITIATING DEVICES ARE NOTIFIER U.O.N., SIGNAL DEVICES ARE WHEELOCK.
** SEE REMOTE POWER, REMOTE SUPPLY SYSTEM BATTERY CALCULATION, 11/E05–00
*** GENERAL PANEL AND REMOTE EQUIPMENT REQUIREMENTS LISTED CONTRACTOR SHALL PROVIDE ALL REQUIRED ACCESSORIES, MODULES, FIBER OPTIC MODULES, CONNECTORS, ETC. FOR A COMPLETE AND OPERATIONAL SYSTEM.
**** #W = WATTS, #CD = CANDELA

6 / E5.00 CONDUIT SIZES

3/4"	UP TO	3	CABLES
1"	UP TO	6	CABLES
1 1/4"	UP TO	10	CABLES
1 1/2"	UP TO	13	CABLES

2 / E5.00 STATEMENT OF WORK

1. THE SCOPE OF THIS PROJECT IS TO PROVIDE AN ADDITION TO THE AUTOMATIC FIRE ALARM SYSTEM AT NEW SCHOOL BUILDING WITH VOICE EVACUATION.
2. WORK SHALL COMPLY WITH THE GREEN OAKS FAMILY ACADEMY ELEMENTARY SCHOOL FIRE PROTECTION ACT. SB575.
3. COORDINATE WITH DISTRICT TO PROVIDE U.L. CERTIFIED CENTRAL STATION MONITORING.

3 / E5.00 APPLICABLE CODES

1. THE SYSTEM SHALL BE INSTALLED PER LATEST ACCEPTED CODES AS FOLLOWS:
   - CBC (PART 2, TITLE 24); 2019
   - CEC (PART 3, TITLE 24); 2019
   - CMC (PART 4, TITLE 24); 2019
   - CFC (PART 9, TITLE 24); 2019
   - CA REFERENCE STANDARDS CODE (PART 12, TITLE 24);
   - PUBLIC SAFETY (TITLE 19), STATE FIRE MARSHALL
   - NFPA 72 FIRE ALARM CODE 2016

4 / E5.00 DEVICE LABELING

1. ADDRESS LABELS SHALL FOLLOW THE FOLLOWING FORMAT: BUILDING NAME/FLOOR/ROOM NUMBER/TYPE OF DEVICE/ADDRESS. SUBMIT COMPLETE LIST TO DISTRICT FOR APPROVAL PRIOR TO PROGRAMMING ALLOW 4 WEEKS FOR REVIEW. EXAMPLE: MULTI–USE BLDG. FLOOR 1, KITCHEN, HEAT DETECTOR SLC1–D150 COORDINATE ROOM NAMES & NUMBERS WITH ARCHITECTURAL DRAWINGS.
2. INITIATING DEVICES ARE INDICATED BY:
   - # = SLC LOOP (CIRCUIT)
   - LETTER = DEVICE TYPE
   - –# = DEVICE NUMBER
   - (EXAMPLE; 1D–1 = SLC LOOP 1 DETECTOR–1)
3. INDICATING DEVICES ARE INDICATED BY:
   - LETTER(S) = FCPS/FACP DEVICE
   - # = FCPS/FACP CIRCUIT
   - –# = DEVICE
   - (EXAMPLE; A1–1 = FCPS "A", CIRCUIT 1, FIRST DEVICE)
5. ALL DEVICES SHALL BE LABELED. LABELS SHALL BE MACHINE MANUFACTURED, RED IN COLOR & 1/2 INCH IN HEIGHT. LABELS ON SMOKE OR HEAT DETECTORS SHALL BE AFFIXED TO SIDE OF BASE.

FIRE ALARM SYSTEM DESIGNER

MICHAEL J. VOIGTLANDER
PE #E11460

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SO. SAN FRANCISCO, CALIFORNIA 94080

TELEPHONE: (650) 871–0220

1 / E5.00 GENERAL SYSTEM NOTES

1. THE SCOPE OF THIS PROJECT IS TO PROVIDE AN ADDITION TO AUTOMATIC VOICE EVACUATION FIRE ALARM SYSTEM AT NEW SCHOOL BUILDING.
2. WHEN THE FACP GOES INTO AN ALARM STATE, AN EVACUATION SIGNAL IS SOUNDED THROUGHOUT THE SCHOOL SITE.
3. ALL CIRCUITS SHALL BE SUPERVISED.
4. INDICATING APPLIANCES SHALL BE LIKE SOUNDING, BUT SHALL BE OF A DIFFERENT SOUND THAN ANY OTHER DEVICE THAT IS INTENDED FOR OTHER USES. THE INDICATING APPLIANCES FOR THE FIRE ALARM SYSTEM SHALL SOUND THE CALIFORNIA UNIFORM FIRE CODE SIGNAL AS REQUIRED BY SECTION 32000 OF THE CALIFORNIA STATE EDUCATION CODE. PROVIDE A TEMPORAL SIGNAL.
5. ALL WIRING SHALL MEET THE REQUIREMENTS OF ARTICLE 300 OF THE CALIFORNIA ELECTRICAL CODE.
6. JUNCTION BOXES AND FITTINGS SHALL MEET THE REQUIREMENTS OF ARTICLE 370 OF THE CALIFORNIA ELECTRICAL CODE.
7. ALL JUNCTION BOXES AND FITTINGS WHICH ARE TO BE INSTALLED OUTSIDE SHALL BE RATED FOR OUTDOOR USE.
8. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS.
9. MOUNTING HEIGHTS:
   PULL STATION: 48" TO TOP OF BOX FROM FINISH FLOOR
   SPEAKER: 96" TO TOP OF DEVICE ABOVE FINISH FLOOR, NOT LESS THAN 6" FROM CEILING.
   STROBE OR SPEAKER/STROBE 80" TO BOTTOM OF DEVICE AND NOT GREATER THAN 96" ABOVE FINISH FLOOR, NOT LESS THAN 6" FROM CEILING.
10. AUDIBLE DEVICE(S) TO BE AT LEAST 15dBA ABOVE THE EQUIVALENT SOUND LEVEL BUT NOT LESS THAN 75 dBA AT 10' OR MORE THAN 110dBA AT THE MINIMUM HEARING DISTANCE.
11. AUDIBLE DEVICE SHALL SOUND THE CALIFORNIA UNIFORM FIRE ALARM SIGNAL. PROVIDE A TEMPORAL MODE.
12. VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
13. THE CONDUIT AND WIRE RUNS SHOWN ON THESE PLANS ARE SHOWN DIAGRAMMATICALLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD TO SUITE FIELD CONDITIONS. AS BUILT PLANS SHALL BE PROVIDED AS REQUIRED BY THE CALIFORNIA STATE FIRE MARSHAL.
14. PRIMARY POWER SUPPLY SHALL BE PROVIDED BY A DEDICATED BRANCH CIRCUIT RATED AT NO LESS THAN 15 AMPS, AND PROVIDING 120VAC NOMINAL TO FIRE ALARM CONTROL PANEL. SECONDARY POWER SUPPLY TO BE PROVIDED BY INTEGRAL BATTERIES SIZED AS INDICATED
15. THE FACP SHALL BE INSTALLED WITHIN A SUPERVISED AREA. THE FRONT COVER OF THE FACP SHALL PROVIDE DEVICE INFORMATION IN THE EVENT OF AN ALARM OR TROUBLE SIGNAL. THE ANNUNCIATOR THAT IS TO BE INSTALLED IS AUXILIARY TO THE SYSTEM, AND IS FOR THE USE OF THE RESPONDING FIRE DEPARTMENT.
16. LOCAL FIRE AUTHORITY SHALL WITNESS THE FINAL ACCEPTANCE TEST TEST OF THE ENTIRE SYSTEM PRIOR TO OCCUPANCY WITHIN THE NEW STRUCTURES WITH INSPECTOR OF RECORD.
   - FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
   - FIRE ALARM CONTRACTOR SHALL PROVIDE A "RECORD OF COMPLETION" TO THE INSPECTOR OF RECORD (IOR)/DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS.
17. CONTRACTOR / EQUIPMENT MANUFACTURER SHALL PROVIDE COMPLETE PROGRAMMING OF SYSTEM AS DIRECTED BY OWNER. PROVIDE 4 HOURS OF TRAINING FOR SCHOOL PERSONNEL. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
18. HVAC SYSTEMS THAT ARE 2000 CFM OR GREATER AND SERVE ROOMS WITHOUT DIRECT EXTERIOR EGRESS WITHIN 100' SHALL BE PROVIDED WITH RELAY FOR SHUT DOWN UPON SMOKE DETECTION.
19. SUPERVISING STATION: AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72, AS AMENDED BY ARTICLE 91. THE SUPERVISION STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.
20. NFPA 72 (2016) SEC. 24.3.2.1 ALL USERS OF SYSTEMS THAT HAVE MICROPHONES FOR LIVE VOICE ANNOUNCEMENTS SHALL BE PROVIDED WITH POSTED INSTRUCTIONS FOR USING THE MICROPHONE. PROVIDE SIGNAGE ON FACE OF VOICE EVACUATION PANEL AND REMOTE MICROPHONE CABINET. "MIC TRANSMITS TO FULL SITE".
21. NFPA 72 (2016) SEC. 7.7.2.1 WITH EVERY NEW SYSTEM, A DOCUMENTATION CABINET SHALL BE INSTALLED AT THE SYSTEM CONTROL UNIT OR AT ANOTHER APPROVED LOCATION AT THE PROTECTED PREMISES.
22. NFP1 72 (2016) SEC. 7.7.2.2 ALL RECORD DOCUMENTATION SHALL BE STORED IN THE DOCUMENTATION CABINET.
23. NFPA 72 (2016) SEC. 7.7.2.4 THE DOCUMENTATION CABINET SHALL BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS".
24. NFPA 72 (2016) SEC. 7.5.6.4 THE RECORD OF COMPLETION DOCUMENTATION SHALL BE UPDATED TO REFLECT ALL SYSTEM ADDITIONS OR MODIFICATIONS AND MAINTAINED IN A CURRENT CONDITION AT ALL TIMES.
25. NFPA 72 (2016) SEC. 7.5.6.5 THE UPDATED COPY OF THE RECORD OF COMPLETION DOCUMENTS SHALL BE MAINTAINED IN A DOCUMENTATION CABINET WITH SEC. 7.7.2
26. PROJECT INSPECTOR SHALL FIELD VERIFY CORRECT CANDELA SETTINGS ON STROBES DUE TO FIELD ADJUSTABILITY
27. CO DETECTION: NEW CLASSROOMS HAVE NO FUEL BURNING APPLIANCES SERVING THE SPACE. CO DETECTION IS NOT REQUIRED.
28. NFPA 72 (2016) SEC. 18.4.10 VOICE INTELLIGIBILITY. WITHIN THE ACOUSTICALLY DISTINGUISHABLE SPACES (ADS) WHERE VOICE INTELLIGIBILITY IS REQUIRED, VOICE COMMUNICATIONS SYSTEMS SHALL REPRODUCE PRERECORDED, SYNTHESIZED, OR LIVE MESSAGES WITH VOICE INTELLIGIBILITY.

10 / E5.00 WIRE AND CABLE SCHEDULE

TYPE		SERVICE
#16 TWISTED PAIR UNSHIELDED UNDERGROUND FPL CABLE AQUA SEAL #AQ245 OR EQUAL AT EXTERIOR LOCATIONS	A1	COMMUNICATION LOOP
#16 TWISTED PAIR UNSHIELDED FPL WEST PENN #D990 OR EQUAL	A	COMMUNICATION LOOP (ALARM)
2 CONDUCTOR #12 MIN. FPL WEST PENN #998 OR EQUAL	B	NAC AND MISC.
2 CONDUCTOR #12 FPL MIN. AQUA SEAL WEST PENN #AQ227 AT EXTERIOR LOCATION	B1	NAC SIGNAL TO FCPS
2 CONDUCTOR #12 MIN. SHEILDED FPLR AUDIO CABLE WEST PENN #999	C	SPEAKER WIRE
2 CONDUCTOR #12 MIN. SHEILDED AQUA SEAL WEST PENN #AQ296 AT UNDERGROUND LOCATIONS	C1	SPEAKER WIRE

9 / E5.00 SEQUENCE OF OPERATION

CAUSE \ EFFECT	ALARM: ALARM AT FACP	ALARM: TRANSMIT SIGNAL VIA MUNICIPAL TIE	ALARM: ACTIVATE AUDIBLES THROUGHOUT	ALARM: ACTIVATE VISUALS THROUGHOUT	ALARM: RECALL ELEVATOR TO DESIGNATED FLOOR	ALARM: ACTIVATE FIREFIGHTERS FLASHING HELMET INSIDE ELEV. CAB	ALARM: ELEVATOR POWER SHUNT TRIP	ALARM: SHUT DOWN HVAC UNITS AND CLOSE FSD	TROUBLE: TROUBLE AT FACP	TROUBLE: TROUBLE AT ANNUNCIATOR	TROUBLE: TROUBLE SIGNAL TO CENTRAL MONITORING STATION	SUPERVISORY: SUPERVISORY AT FACP	SUPERVISORY: SUPERVISORY AT ANNUNCIATOR	SUPERVISORY: SIGNAL TO CENTRAL MONITORING STATION	MISC.: SILENCE SOUNDER BASE	MISC.: DEACTIVATE AUDIBLES	MISC.: DEACTIVATE VISUALS	MISC.: SYSTEM NORMAL	REMARKS
(E) MASTER MANUAL PULL STATION	•	•	•	•	•			•											
AREA SMOKE DETECTOR	•	•	•	•	•			•											
HEAT DETECTOR AT ELEVATOR LANDINGS	•	•	•	•	•	•													
SMOKE DETECTOR ELEV. MACH. ROOM OR SHAFT	•	•	•	•	•	•	•												
HEAT DETECTOR	•	•	•	•	•														
HEAT DETECTOR ELEV. MACH. ROOM OR SHAFT	•	•	•	•	•		•												
CARBON MONOXIDE DETECTOR												•	•	•	•				CO ALARM SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN ON–SITE LOCATION THAT IS STAFFED BY SCHOOL PERSONNEL AND HAVE SOUNDER BASE FOR LOCAL NOTIFICATION. (TEMPORAL 4 PULSE)
WATERFLOW SWITCH	•	•	•	•	•			•											
TAMPER SWITCH									•	•	•	•	•	•					SUPERVISORY SIGNAL
SYSTEM RESET																•	•	•	
SIGNAL SILENCE																•			
AC POWER FAILURE									•	•	•								
FIRE ALARM WIRING:																			
SIGNALING LINE CIRCUIT (SLC) – CLASS B/STYLE 4:																			
SINGLE OPEN									•	•	•								
SINGLE GROUND									•	•	•								
WIRE–TO–WIRE SHORT									•	•	•								
NOTIFICATION APPLIANCE CIRCUIT (NAC) – CLASS B/STYLE Y:																			
SINGLE OPEN									•	•	•								
SINGLE GROUND									•	•	•								
WIRE–TO–WIRE SHORT									•	•	•								

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REGISTERED PROFESSIONAL ENGINEER
MICHAEL JOHN VOIGTLANDER
No. E 11460
Exp. 12/31/19
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: Nov 23,21

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18071–02
JOB NUMBER
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ELECTRICAL ENGINEERS
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PUSD - FOOTHILL HS 2ND CTE BUILDING INCREMENT 1 SITE WORK

4375 FOOTHILL RD
PLEASANTON, CA 94588

JOB NO.	70125.01
DRAWN	S.M.
CHECKED	M.V.
JOB CAPTAIN	M.V.

ISSUE

△	DATE	DESCRIPTION
	04-06-21	100% DD
	11-29-21	

DRAWING TITLE

ELECTRICAL
FIRE ALARM LEGEND, SCHEDULES AND NOTES

SCALE: AS NOTED

E5.00

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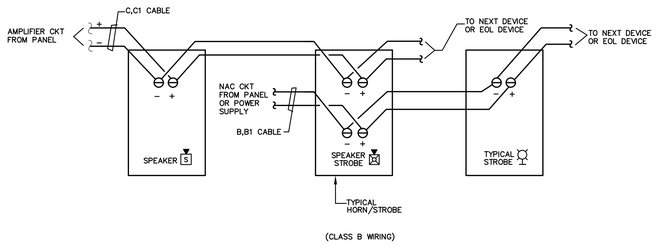
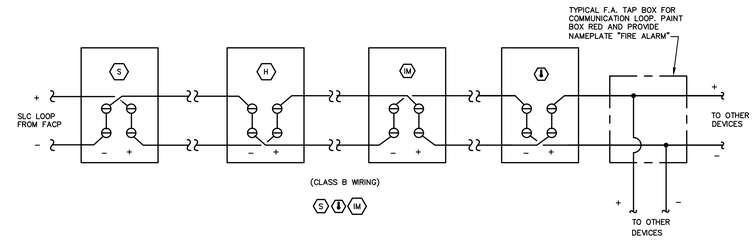
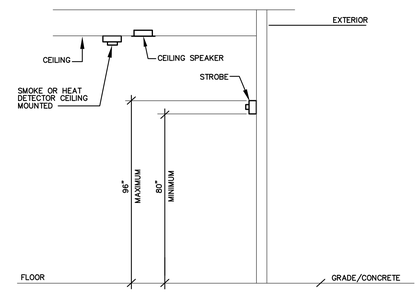


2 E05-01 TYPICAL SIGNAL DEVICE WIRING
SCALE: NTS



1 E05-01 TYPICAL COMMUNICATION (SLC) LOOP WIRING
SCALE: NTS



6 E05-01 TYPICAL FIRE ALARM DEVICE MTG. HEIGHTS
SCALE: NTS

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JOB CAPTAIN	M.V.

ISSUE

△	DATE	DESCRIPTION
	04-06-21	100% DD
	11-29-21	

DRAWING TITLE
ELECTRICAL
FIRE ALARM DETAILS

SCALE: AS NOTED

E5.01

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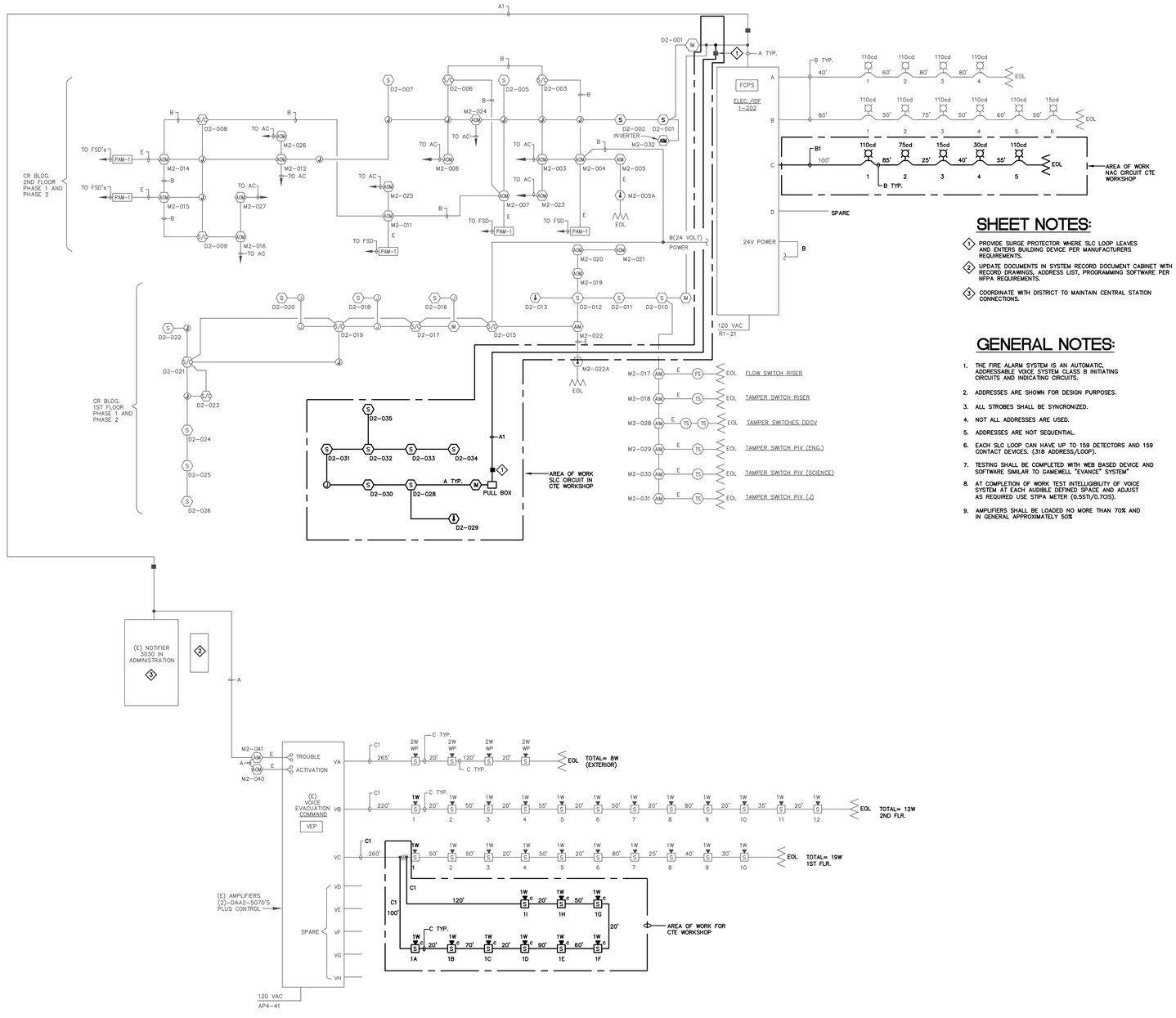

1 E5.02 **FIRE ALARM RISER DIAGRAM**

SCALE: NTS

SHEET NOTES:

1. PROVIDE SURGE PROTECTOR WHERE SLC LOOP LEAVES AND ENTERS BUILDING DEVICE PER MANUFACTURERS REQUIREMENTS.
2. UPDATE DOCUMENTS IN SYSTEM RECORD DOCUMENT CABINET WITH RECORD DRAWINGS, ADDRESS LIST, PROGRAMMING SOFTWARE PER NFPA REQUIREMENTS.
3. COORDINATE WITH DISTRICT TO MAINTAIN CENTRAL STATION CONNECTIONS.

GENERAL NOTES:

1. THE FIRE ALARM SYSTEM IS AN AUTOMATIC, ADDRESSABLE VOICE SYSTEM CLASS B INITIATING CIRCUITS AND INDICATING CIRCUITS.
2. ADDRESSES ARE SHOWN FOR DESIGN PURPOSES.
3. ALL STROBES SHALL BE SYNCRONIZED.
4. NOT ALL ADDRESSES ARE USED.
5. ADDRESSES ARE NOT SEQUENTIAL.
6. EACH SLC LOOP CAN HAVE UP TO 159 DETECTORS AND 159 CONTACT DEVICES. (318 ADDRESS/LOOP).
7. TESTING SHALL BE COMPLETED WITH WEB BASED DEVICE AND SOFTWARE SIMILAR TO GAMEWELL "EVANCE" SYSTEM"
8. AT COMPLETION OF WORK TEST INTELLIGIBILITY OF VOICE SYSTEM AT EACH AUDIBLE DEFINED SPACE AND ADJUST AS REQUIRED USE STIFA METER (0.55T/0.70S).
9. AMPLIFIERS SHALL BE LOADED NO MORE THAN 70% AND IN GENERAL APPROXIMATELY 50%

VOLTAGE DROP CALCULATION FOR : Foothill High School
DESCRIPTION: INDICATING CIRCUIT # FCPS NAC C

Node Ref	Unit AMP	Total AMP	Conductor Length (ft.)	AWG Size	Circular Mils	OHM Resistance per Foot	Voltage Drop *
5	0.182	0.182	70	12	6530	0.0020	0.0510
4	0.085	0.267	50	12	6530	0.0020	0.0534
3	0.057	0.324	25	12	6530	0.0020	0.0324
2	0.135	0.459	100	12	6530	0.0020	0.1836
1	0.182	0.641	130	12	6530	0.0020	0.3333

TOTAL VOLTAGE DROP 0.6537
PERCENT VOLTAGE DROP 2.72%

BASED ON A 24 VOLT CIRCUIT OPERATING AT 50 DEGREES

* (CIRCUIT LENGTH x 2)(LOAD IN AMPS)(RESISTANCE PER FOOT)

SPEAKER VOLTAGE DROP CALCULATION: Foothill High School
70 VOLT CIRCUIT - SPEAKER CIRCUITS VA, VB, VC

Speaker Circuit	Total watts	Total AMP	Circuit Length (ft.)	AWG Size	OHM Resistance	Voltage Drop *	% Voltage Drop *
VA	8.0	0.114	420	14	0.0032	0.3062	0.5147
VB	12.0	0.171	610	14	0.0032	0.6672	1.1213
VC	**19.0**	**0.271**	**1500**	**14**	**0.0032**	**2.5976**	**4.3657**

*BASED ON 59.5 VOLTS OPERATING AT 75 DEGREES AND FULL LOAD FOR FULL LENGTH

FOOTHILL HIGH SCHOOL CLASSROOMS BUILDING FIRE ALARM ADDRESS LIST SLC - D2

ADDRESS	TYPE	CODE LABEL	DEVICE LOCATION
D2-001	Smoke	Photo	Elect. Rm. 1-202
D2-002	Smoke	Photo	Custodial 1-201
D2-003	Smoke	Photo/CO	Sci. Classroom 1-203
D2-004			
D2-005	Smoke	Photo	Sci. Classroom 1-203
D2-006	Smoke	Photo/CO	Sci. Classroom 1-204
D2-007	Smoke	Photo	Sci. Classroom 1-204
D2-008	Smoke	Photo/CO	Computer Lab 2-201
D2-009	Smoke	Photo/CO	Computer Lab 2-202
D2-010	Smoke	Photo	Fire Riser Rm. 1-103
D2-011	Smoke	Photo	Restroom 1-102
D2-012	Smoke	Photo	Machine Room 1-101
D2-013	Heat	Heat	Machine Room 1-101
D2-014			
D2-015	Smoke	Photo/CO	Eng. Classroom 1-104
D2-016	Smoke	Photo	Eng. Classroom 1-104
D2-017	Smoke	Photo/CO	Eng. Classroom 1-105
D2-018	Smoke	Photo	Eng. Classroom 1-105
D2-019	Smoke	Photo/CO	Eng. Classroom 1-106
D2-020	Smoke	Photo	Eng. Classroom 1-106
D2-021	Smoke	Photo/CO	Eng. Classroom 2-101
D2-022	Smoke	Photo	Eng. Classroom 2-101
D2-023	Smoke	Photo/CO	Science Prep
D2-024	Smoke	Photo	Science Prep
D2-025	Smoke	Photo	Restroom 2-104
D2-026	Smoke	Photo	Custodial 1-103
D2-027			
D2-028	Smoke	Photo	CTE Workshop 101
D2-029	Heat	Heat	Dust Collector 102
D2-030	Smoke	Photo	CTE Workshop 101
D2-031	Smoke	Photo	Restroom 203
D2-032	Smoke	Photo	Office 202
D2-033	Smoke	Photo	Sci. Prep 201
D2-034	Smoke	Photo	Sci. Prep 201
D2-035	Smoke	Photo	Roof Access Rm.
D2-036	Smoke	Photo	Vice Principal 6
D2-037	Smoke	Photo	Office 7
D2-038	Smoke	Photo	Office 8
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FOOTHILL HIGH SCHOOL CLASSROOMS BUILDING FIRE ALARM ADDRESS LIST SLC - M2

ADDRESS	TYPE	CODE LABEL	DEVICE LOCATION
M2-001			
M2-002			
M2-003	Monitor	Relay/Shutdown HVAC	SCI Classroom 1-203
M2-004	Monitor	Relay FSD	SCI Classroom 1-203
M2-005	Monitor	Monitor Module-Heat	SCI Classroom 1-203
M2-006			
M2-007	Monitor	Relay/Shutdown-FSD	SCI Classroom 1-203
M2-008	Monitor	Relay/Shutdown	SCI Classroom 1-204
M2-009			
M2-010			
M2-011	Monitor	Relay/Shutdown-FSD	SCI Classroom 1-204
M2-012	Monitor	Relay/Shutdown	Computer lab 2-201
M2-013			
M2-014	Monitor	Relay/Shutdown-FSD	Computer lab 2-201
M2-015	Monitor	Relay/Shutdown-FSD	Computer lab 2-202
M2-016	Monitor	Relay/Shutdown	Computer lab 2-202
M2-017	Monitor	Monitor. Module Flow	Fire Riser. 1-103
M2-018	Monitor	Monitor Module Tamp.	Fire Riser. 1-103
M2-019	Monitor	Relay Recall	Machine Room. 1-101
M2-020	Monitor	Relay Alt. Recall	Machine Room. 1-101
M2-021	Monitor	Relay F.M. Hat	Machine Room. 1-101
M2-022	Monitor	Monitor Module	Eng. Classroom 1-104
M2-023	Monitor	Relay Shutdown AC	1-203 for Eng. Classroom 1-104
M2-024	Monitor	Relay Shutdown AC	1-203 for Eng. Classroom 1-105
M2-025	Monitor	Relay Shutdown AC	1-204 for Eng. Classroom 1-106
M2-026	Monitor	Relay Shutdown AC	2-201 for Eng. Classroom 1-101
M2-027	Monitor	Relay Shutdown AC	2-202 for SCI Prep. 2-102
M2-028	Monitor	Monitor Mod. Tamper	1-103 for DDCV
M2-029	Monitor	Monitor Mod. Tamper	1-103 for PIV (N) CR BLDG
M2-030	Monitor	Monitor Mod. Tamper	1-103 for PIV SCIENCE
M2-031	Monitor	Monitor Mod. Tamper	1-103 for PIV BLDG. J
M2-032	Monitor	Monitor Inverter	Elec/DF 1-102
M2-033			
M2-034			
M2-035			
M2-036			
M2-037			
M2-038			
M2-039			
M2-040	Monitor	Relay VEP Activate	FACP Room Bldg. A
M2-041	Monitor	Monitor VEP Trouble	FACP Room Bldg. A
M2-042			
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DRAWING TITLE
ELECTRICAL
FIRE ALARM
RISER DIAGRAM
AND ADDRESS LIST

SCALE: AS NOTED

E5.02

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PLOTTED: Nov 23, 2021-11:01am

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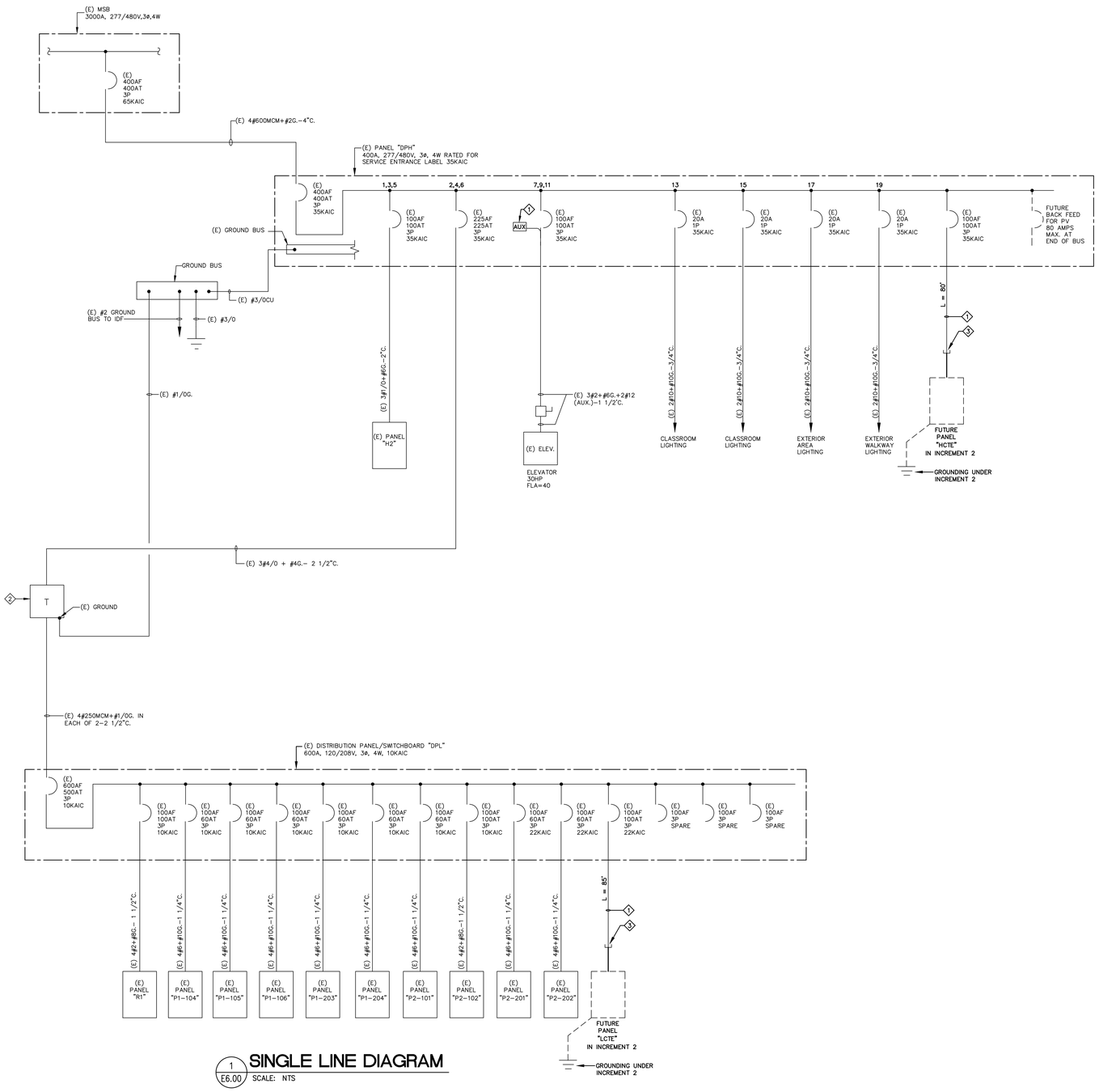

1 E6.00 **SINGLE LINE DIAGRAM**
SCALE: NTS

SHEET NOTES:

1. 4 #2 + #8G. - IN (E) & (N) 2"C.
2. (E) 150KVA 480-120/208V, 3ø, 4W TRANSFORMER,
3. PICK UP (E) 2" C.O. EXTEND AND CONNECT TO PANEL WHEN BUILDING IS INSTALLED. PROVIDE 4 #2 + #8G.

HKIT ARCHITECTS
538 NINTH STREET SUITE 240 • OAKLAND, CA 94607
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REGISTERED PROFESSIONAL ENGINEER
MICHAEL JOHN VOISTADOUR
No. E 11460
Exp. 12/31/19
ELECTRICAL
STATE OF CALIFORNIA

DATE SIGNED: Nov 23,21

18071-02
JOB NUMBER

BWF CONSULTING ENGINEERS
ELECTRICAL ENGINEERS
220 SO. SPRUCE AVENUE, SUITE 203
SO. SAN FRANCISCO, CALIFORNIA 94080
(650) 871-0220

PUSD - FOOTHILL HS 2ND CTE BUILDING INCREMENT 1 SITE WORK

4375 FOOTHILL RD
PLEASANTON, CA 94588

JOB NO.	70125.01
DRAWN	S.M.
CHECKED	M.V.
JOB CAPTAIN	M.V.

ISSUE

△	DATE	DESCRIPTION
	04-06-21	100% DD
	11-29-21	

DRAWING TITLE

ELECTRICAL SINGLE LINE DIAGRAMS

SCALE: AS NOTED

E6.00

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PLOTTED: Nov 23, 2021-11:01am

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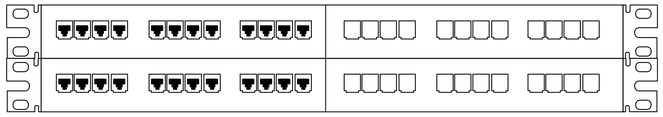


STANDARD PATCH PANEL DETAIL NOTES

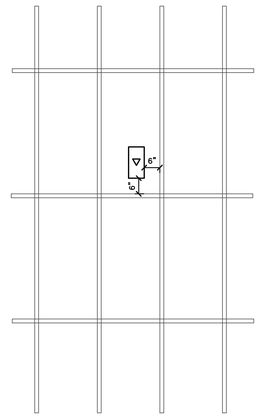
1. CONTRACTOR SHALL SUBMIT TO THE DISTRICT FOR APPROVAL A COMPLETE NUMBERING SCHEDULE INCLUDING ROOM NUMBERING LAYOUT. NO LABELING SHALL BE PERFORMED WITHOUT SIGNED APPROVAL FROM THE DISTRICT TECHNOLOGY PROJECT MANAGER.
2. CLASSROOM NUMBERS USED FOR LABELING SHALL BE THE FINISHED ROOM NUMBERS. ARCHITECTURAL ROOM NUMBERS ARE SHOWN FOR ID NUMBER EXAMPLES. CONTRACTOR SHALL HAVE SIGNED APPROVAL FROM THE SRVUSD TECHNOLOGY PROJECT MANAGER BEFORE LABELING.
3. STANDARD CLASSROOMS SHALL BE ARRANGED IN LINEAR ORDER ON EACH PATCH PANEL ON THE IDF RACK.
4. PROVIDE 15% SPARE PATCH PORTS.
5. GROUP SERVICES (TELEPHONE, DATA, CLOCK/SPEAKER, CAMERAS).

SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION AND PLANS FOR NUMBER OF PORTS

2 / E7.01 GENERAL PATCH PANEL LAYOUT

SCALE: NTS

TYP "K" JACK CEILING PLACEMENT



1 / E7.01 WAP OUTLET MOUNTING AT T-BAR CEILING

SCALE: NTS

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DRAWING TITLE

ELECTRICAL LOW VOLTAGE DETAILS

SCALE: AS NOTED

E7.01

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APPENDIX A
Project Description

Project Name:

FOOTHILL HIGH SCHOOL CTE WORKSHOP BUILDING, INCREMENT 2 MODULAR BUILDING

Preconstruction and design services to create and submit construction documents from Architect provided criteria documents to the Division of State Architect on behalf for a two-story modular CTE Workshop building at Foothill High School.

After stamped approval by the Division of State Architect, inclusive construction services for building the Two-story modular science classroom building on campus.

Schedule Dates:

LLB Packages Due 12-2-2021
Interviews week of 12-13-2021
DSA Submittal 03-15-2022
Construction Start 06-2022
Construction Complete.....03-2023

Project Estimate: $2,000,000,00 (TWO MILLION DOLLARS)

Architect: HKIT Architect