

ADDENDUM NO. 3

DATE: July 7, 2021

BID NO. 2858

**RELOCATABLE CLASSROOM AT VARIOUS SITES
& SITE IMPROVEMENTS**

**CLOVIS UNIFIED SCHOOL DISTRICT
CLOVIS, CALIFORNIA**

G.A. PROJECT NO. 2112, 2114 & 2115

NOTICE TO ALL CONTRACTORS SUBMITTING BIDS FOR THIS WORK AND TO ALL PLAN HOLDERS:

You are hereby notified of the following changes, clarifications or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and subsequent Addenda. This Addendum shall supersede the original Contract Documents, and previous Addenda wherein it contradicts the same and shall take precedence over anything to the contrary therein. All other conditions remain unchanged.

INDEX OF ADDENDA TRANSMITTED HEREWITH

Addendum Item AD3-A01 thru AD3-A04

AD3-A01: ADDITIONAL PORTABLE @ CEDARWOOD:

Refer to Sheet A-3

An additional portable building is being added to the Cedarwood Campus.
Remove and replace the following sheets with attached sheets.
C, C-1, A-1, A-3, E-3, E-4, E-5, & E-6.

Note #1: Addendum No. 2 items apply to the portable being added to Cedarwood; except AD2-A10.

Note #2: The New Transformer Unit shown on Sheet E-4 and Keynote #9 plus Detail 3/E-3 is provided by District and installed by Contractor under this contract. The Distribution Board is provided and installed by Contractor.

AD3-A02: ELECTRICAL ADDENDUM:

See attached HDE Addendum No. 3 Summary and Sheets noted under AD3-A01.

AD3-A03: INTERIOR PAINTING CLARIFICATION:

Refer to Addendum No. 2 Item AD2-A02, #4.

Both the T-bar grid and ceiling panels shall be painted.

AD3-A04: **LANDSCAPING AND EARTHWORK CLARIFICATION:**
Refer to Sheet C-1 & Note #7

Subject final earthwork grading and landscaping work is within the scope of work.

END OF ADDENDUM



HARDIN-DAVIDSON ENGINEERING

356 Pollasky Ave. • Suite 200 • Clovis, CA 93612

559.323.4995 tel • 559.323.4928 fax

Date: July 01, 2021

To: Gonzalez Architects
7545 N. Del Mar Ave., Suite 203
Fresno, CA 93711

Re: Relocatable Classroom at Cedarwood Elementary School
Clovis Unified School District

Addendum 3

Please issue the following items as part of the addendum:

Refer to sheet E-3

1. Revised Power Single Line Diagram for additional relocatable classroom.
2. Revised Site Comm/Signal Line Diagram for additional relocatable classroom.

Refer to sheet E-4

1. Revised Electrical Site Plan for additional relocatable classroom.
2. Revised Enlarged Elec. Site Plan for additional relocatable classroom.

Refer to sheet E-5

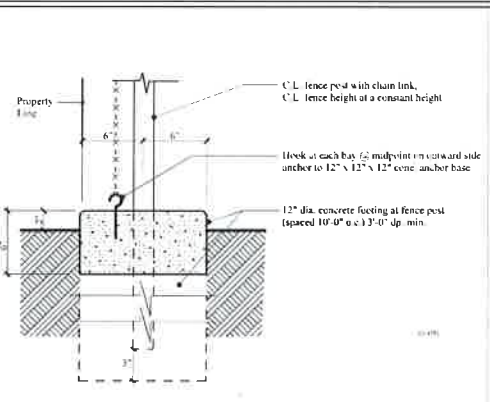
1. Revised Fire Alarm Calculations to include additional relocatable classroom.

Refer to sheet E-6

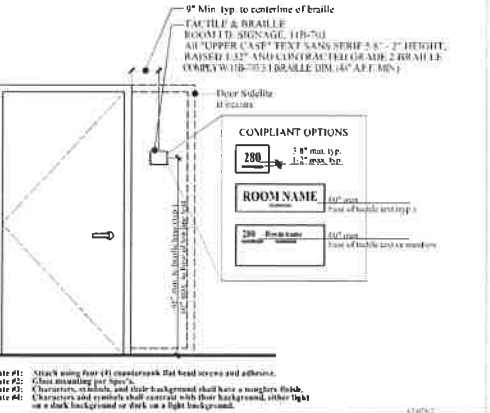
1. Revised Fire Alarm Site Plan for additional relocatable classroom.
2. Revised Fire Alarm Single Line Diagram for additional classroom.

Sincerely,

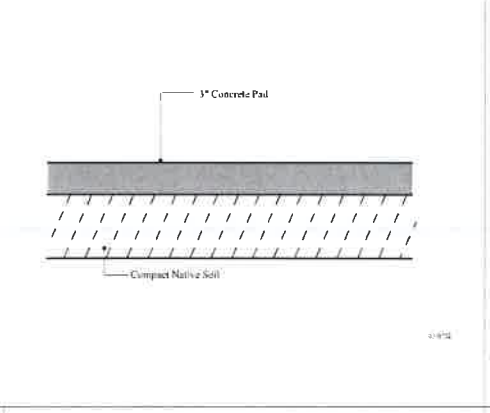
C. Scott Davidson, P.E.



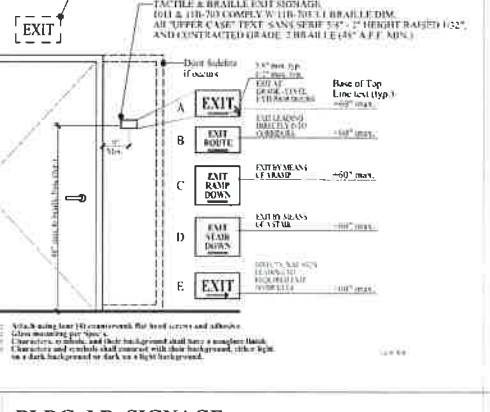
1 C.L. FENCE W/ CONCRETE MOWSTRIP SCALE: N.T.S.



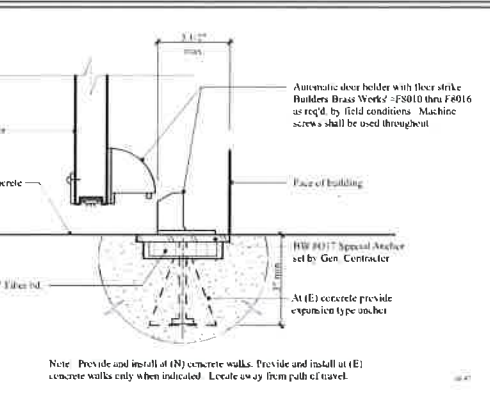
2 ROOM IDENTIFICATION SIGN SCALE: N.T.S.



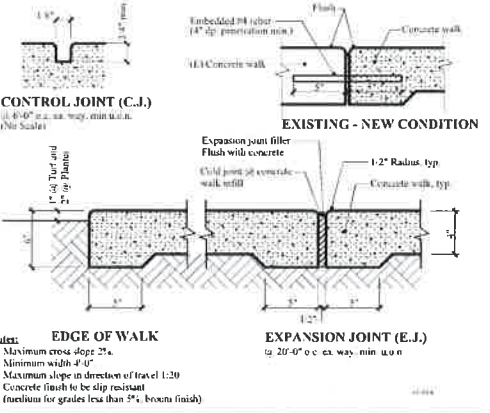
3 CONCRETE PAD SCALE: 1" = 1'-0"



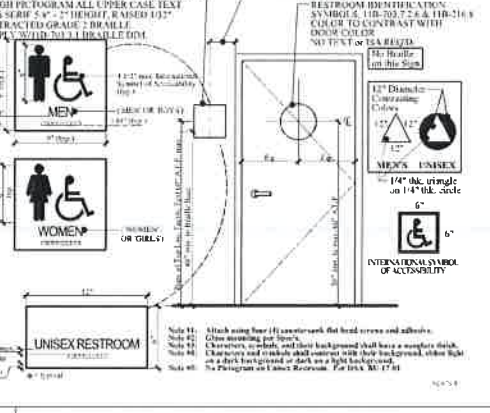
4 BLDG. I.D. SIGNAGE SCALE: N.T.S.



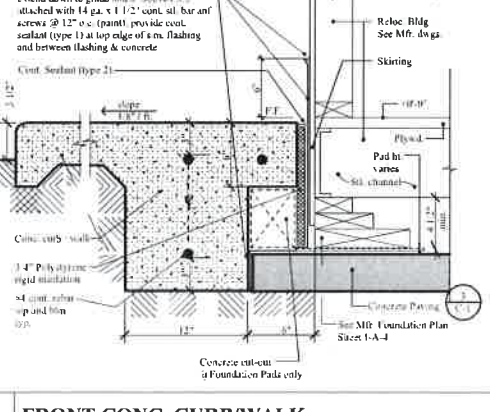
5 DOOR STOP / FLOOR STRIKE SCALE: N.T.S.



6 CONCRETE WALK SCALE: N.T.S.



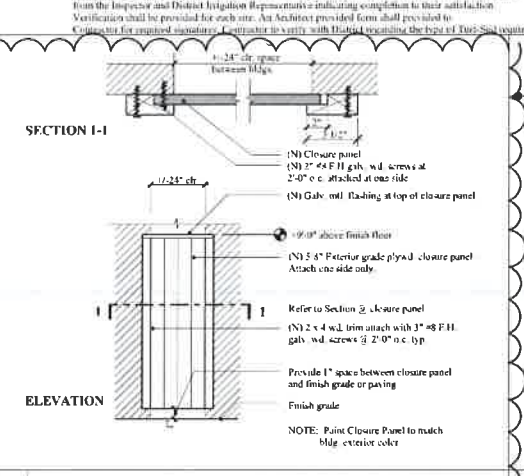
7 TOILET ROOM SIGNAGE SCALE: N.T.S.



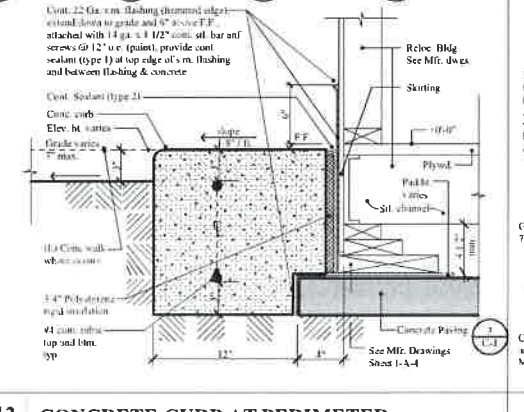
8 FRONT CONC. CURB/WALK SCALE: 1 1/2" = 1'-0"

GENERAL NOTES

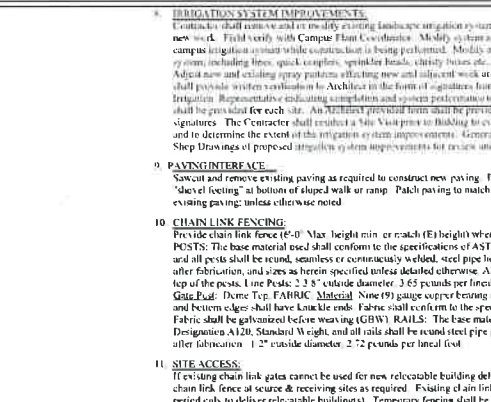
- GOVERNING CODES:**
 - Compliance shall comply with Title 24, California Code of Regulations (CCR) including the following:
 - Title 19 CCR, Public Safety, State Fire Marshal Regulations
 - Title 24 CCR, Part 1 - 2019 Building Standards Administrative Code
 - Title 24 CCR, Part 2 - 2019 California Building Code, Vol. 1 & 2 (CBC) (2019 IBC, as amended by CA)
 - Title 24 CCR, Part 3 - 2019 California Electrical Code (CEC) (2014 NEC, as amended by CA)
 - Title 24 CCR, Part 4 - 2019 California Mechanical Code (CMC) (2015 IMC, as amended by CA)
 - Title 24 CCR, Part 5 - 2019 California Plumbing Code (CPC) (2015 UPC, as amended by CA)
 - Title 24 CCR, Part 6 - 2019 California Energy Code (CEC) (2019 EEC, as amended by CA)
 - Title 24 CCR, Part 9 - 2019 California Fire Code (CFC) (2018 IFC, as amended by CA)
 - Title 24 CCR, Part 11 - 2019 California Green Building Standards Code (CALGreen) (2019 IBC, as amended by CA)
 - Title 24 CCR, Part 12 - 2019 California Referenced Standards
 - Comply with CFC Chapter 31 - Fire Safety during Construction & Demolition
- List of Applicable Standards:**
 - 2016 NFPA 13, Installation of Sprinkler Systems (CA amended)
 - 2016 NFPA 14, Installation of Standpipe and Hose Systems
 - 2016 NFPA 72, National Fire Alarm Code (CA amended); See UL 1971 for "Visual Devices"
- DSA Certified Project Inspector** employed by the District (Owner) and approved by the DSA shall provide continuous inspection of the work. The duties of the Inspector are defined in Section 4-342, Part 1, Title 24, CCR.
- CONCRETE WORK SCHEDULE:**
 - Concrete Work shall consist of Walkway Paving
 - A. Required Compressive Strength (F_c) = 3,000 PSI at 28 days
 - B. Mix Design and Material Properties shall be in accordance with C.P.C. Section 1906A.2.3. Maximum Aggregate size = 1". Maximum slump allowed = 4".
 - C. Licensed Weightmasters shall identify materials and quantities and shall certify each load by ticket. Tickets shall be transmitted to the Project Inspector per Title 24, Section 5024 (e) 2.
 - D. Existing utilities and site elements damaged during construction shall be repaired immediately. Coordinate repair work with Site Inspector and District Staff. Schedule utility orientation with Inspector 48 hrs. prior to start of construction.
 - E. Reinforcing Steel shall be ASTM A615, F_y = 40,000 psi min.
- GENERAL IMPROVEMENTS:**
 - Site improvements such as concrete walks, building pads, irrigation system adjustments, landscaping repair and upgrading of immediate relocatable building area are in the Contract or a n., including graded swales necessary for proper water drainage. Match existing conditions.
- RELOCATABLE BUILDING LOCATION, PAD ELEVATION & FINISH FLOOR ELEVATION:**
 - Contractor shall provide and install wood stakes at pad indicating proposed relocatable building location. Call four corners of unit shall be indicated, pad elevations shall be indicated and finish floor elevations shall be indicated and approved by Inspector two (2) days prior to installation. Building Pad adjustments may be necessary per existing Plumbing lines of relocated building, field verify and make necessary adjustments on pad. Coordinate relocatable building delivery time frame with Inspector.
- RELOCATABLE BUILDING PAD COMPACTION:**
 - Pad excavation shall be by General Contractor unless otherwise noted. Compact to 92% density. Compaction shall apply to recessed and elevated pads. District to provide Geotechnical Engineer for compact density.
- LANDSCAPE IMPROVEMENTS:**
 - Provide all labor and materials necessary to interface new landscaping and existing landscaping required for Relocatable Buildings. Landscaping interface is defined as all work necessary to provide a complete finished product: bare soil will not be accepted. Topsoil shall be applied to bare soil within immediate (100' radius) area. All surfaces shall use Turf-Soil. Existing turf shall be removed to sub-grade level. A 60-day maintenance period is required for this work. The extent of this work is to be 2'-0" above perimeter of relocatable building and any areas on site damaged by the Contractor (e.g. fire). Protective barriers shall be provided. Battery operated timers at valves may be used to assist with maintenance watering. Contractor shall provide written notification to Architect in the form of signature from the Inspector and District Irrigation Representative indicating completion to their satisfaction. Notification shall be provided for each site. An Architect provided form shall be provided to Contractor for required signature. Contractor to verify with District regarding the type of Turf-Soil required.



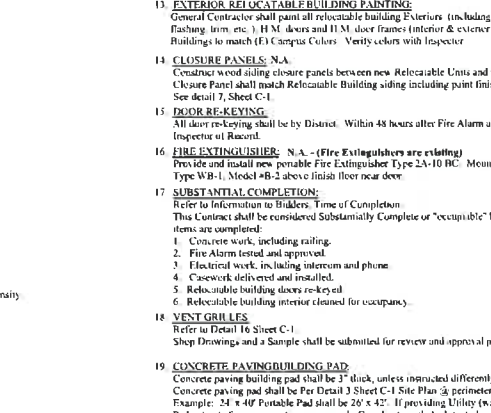
11 CLOSURE PANEL SCALE: 1/2" = 1'-0"



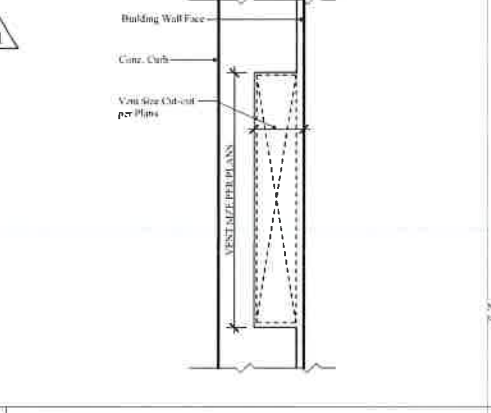
12 CONCRETE CURB AT PERIMETER SCALE: 1 1/2" = 1'-0"



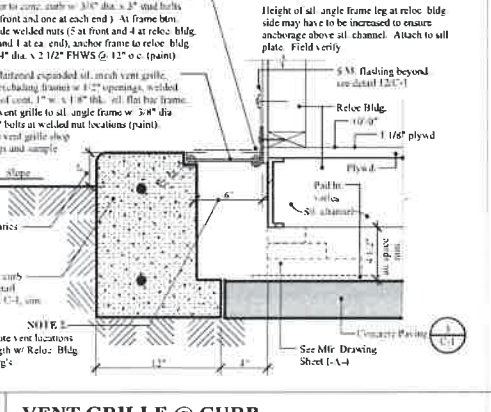
15 VENT CUT OUT PLAN SCALE: 1" = 1'-0"



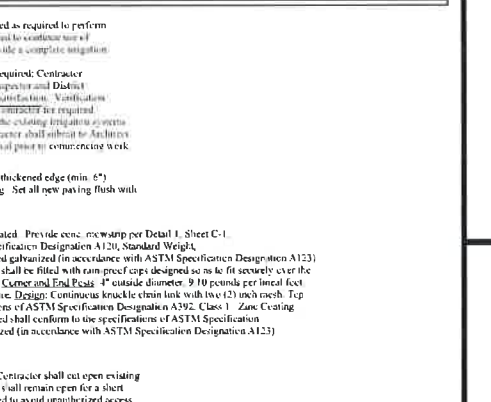
16 VENT GRILLE @ CURB SCALE: 1 1/2" = 1'-0"



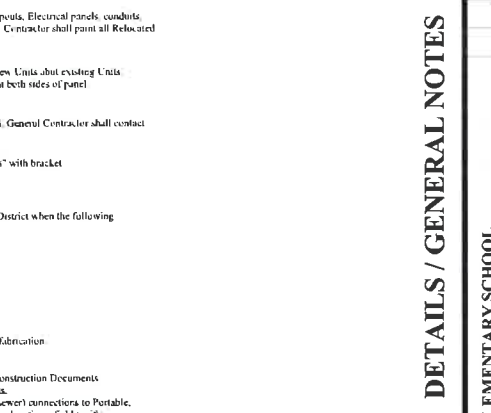
19 DRAIN (UNDER PORTABLE) SCALE: 1" = 1'-0"



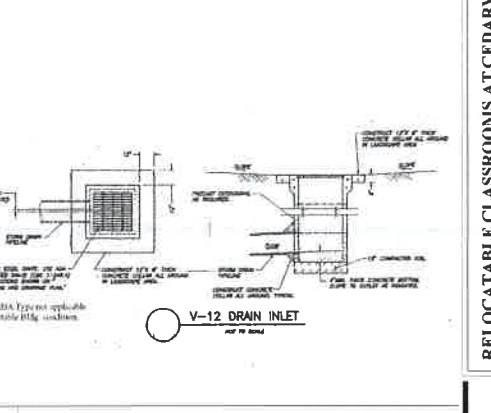
20 THRESHOLD SCALE: 1" = 1'-0"



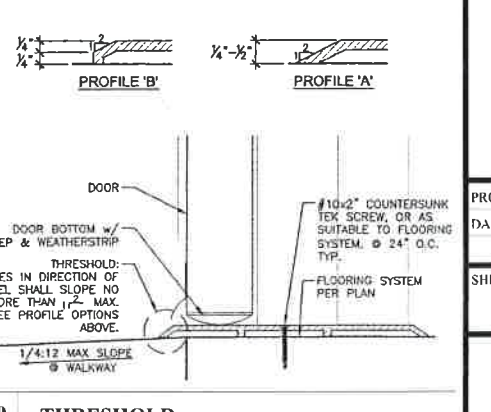
17 RELOCATABLE BUILDING LOCATION, PAD ELEVATION & FINISH FLOOR ELEVATION SCALE: N.T.S.



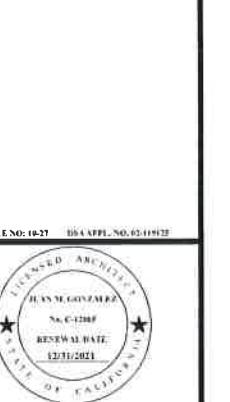
18 RELOCATABLE BUILDING PAD COMPACTION SCALE: N.T.S.



19 DRAIN (UNDER PORTABLE) SCALE: 1" = 1'-0"



20 THRESHOLD SCALE: 1" = 1'-0"



MARK	DATE	DESCRIPTION
▲	7-5-21	Arch Building W. Relocated Classroom Work

RELOCATABLE CLASSROOMS AT CEDARWOOD ELEMENTARY SCHOOL
 CLOVIS UNIFIED SCHOOL DISTRICT
 CLOVIS, CALIFORNIA

JUAN M. GONZALEZ ARCHITECTS
 ARCHITECTURE PLANNING
 JUAN M. GONZALEZ, A.I.A.
 7545 N. DEL MAR AVENUE, SUITE 203
 FRESNO CALIFORNIA 93711
 TEL: 559-497-1542
 FAX: 559-497-1549

PROJECT NO: 2114
DATE: 7/7/2021
SHEET TITLE: DETAILS & GENERAL
C-1

SDSA 810
FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Submitter: Cedarwood Elementary School
Project Name: Cedarwood Elementary School
City: Clovis, California 93611

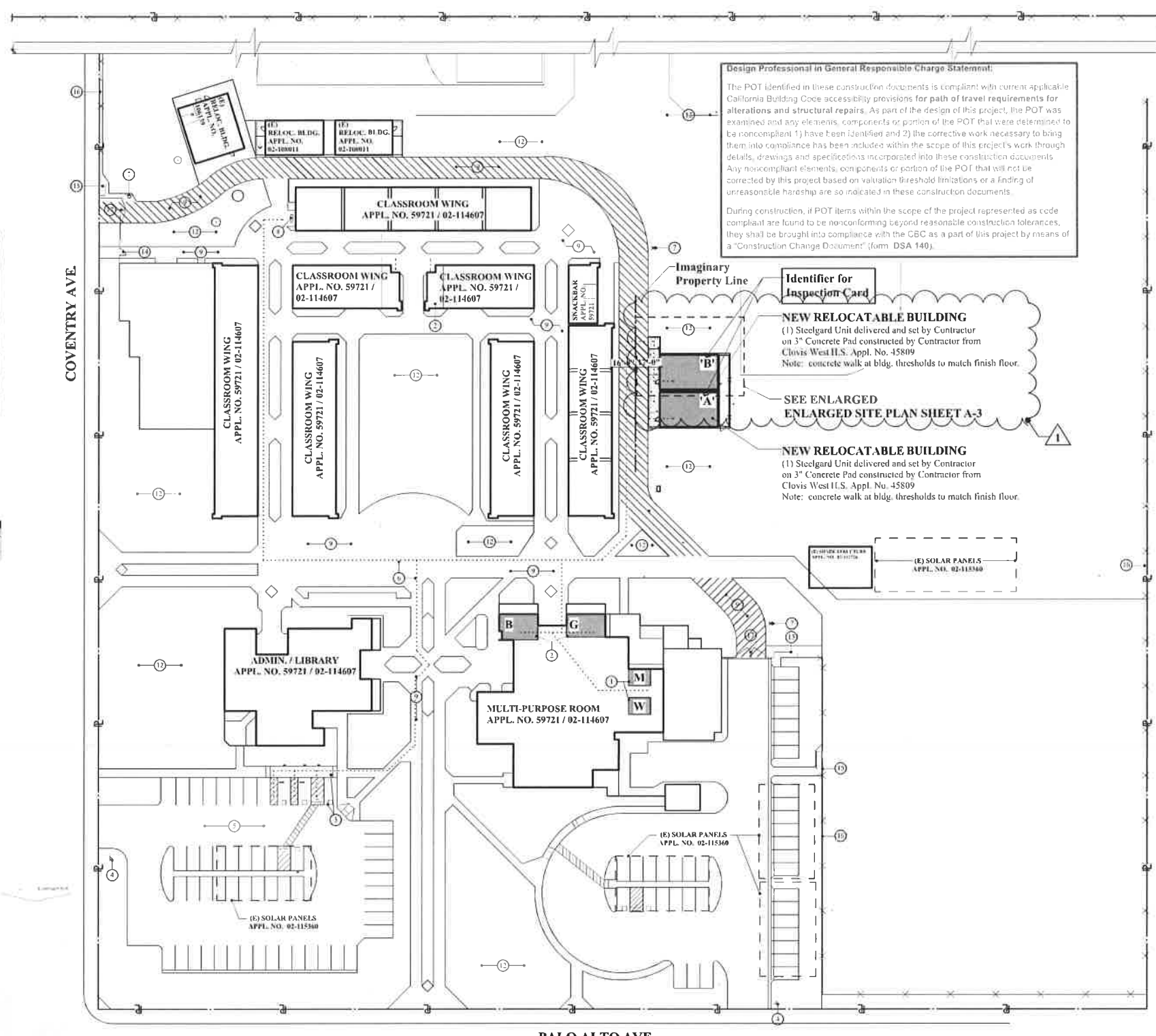
Item	Description	Compliance
1	Fire hydrant	Compliant
2	Fire alarm pull station	Compliant
3	Fire alarm control panel	Compliant
4	Fire alarm notification system	Compliant
5	Fire alarm system	Compliant
6	Fire alarm system	Compliant
7	Fire alarm system	Compliant
8	Fire alarm system	Compliant
9	Fire alarm system	Compliant
10	Fire alarm system	Compliant
11	Fire alarm system	Compliant
12	Fire alarm system	Compliant
13	Fire alarm system	Compliant
14	Fire alarm system	Compliant
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41	Fire alarm system	Compliant
42	Fire alarm system	Compliant
43	Fire alarm system	Compliant
44	Fire alarm system	Compliant
45	Fire alarm system	Compliant
46	Fire alarm system	Compliant
47	Fire alarm system	Compliant
48	Fire alarm system	Compliant
49	Fire alarm system	Compliant
50	Fire alarm system	Compliant

DATE: 7-5-21
DRAWN BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]

PROJECT LOCATION
CEDARWOOD ELEMENTARY SCHOOL
2851 Palo Alto Avenue
Clovis, California 93611



VICINITY MAP



Design Professional in General Responsible Charge Statement:
The POT identified in these construction documents is compliant with current applicable California Building Code accessibility provisions for path of travel requirements for alterations and structural repairs. As part of the design of this project, the POT was examined and any elements, components or portion 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 portion 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" (form DSA 140).

- SITE PLAN KEY NOTES:**
- (E) Men's and Women's Accessible Toilet Rooms, Appl. No. 59721-114607. Remove & replace Door & Wall signage 7-C-1.
 - (E) Boys and Girls Accessible Toilet Rooms, Appl. No. 59721-114607. Remove & replace Door & Wall signage 7-C-1.
 - (E) Van Accessible Parking, Appl. No. 59721-114607.
 - (E) Accessible Two-Way Sign, Appl. No. 59721.
 - (E) Accessible Parking, Appl. No. 59721-114607.
 - (E) 51-75 parking stalls require 2 hand-cap parking stalls, 3 accessible parking stalls provided (1 van accessible).
 - Barrier Free Path of Travel. See Site Plan Note 24, 51d, C-2.
 - (E) Fire Hydrant.
 - (E) Hot Le Drinking Fountain, Appl. No. 166139.
 - (E) Concrete walk.
 - (E) Drain.
 - (E) Christy bus.
 - (E) Turf.
 - Provide 6'0" by 5'0" conc. level landing w/ doors, typ.
 - 4' x 1' gate w/ c.l. fence.
 - (E) c.l. zig-zag.
 - (E) C.I. Fence.
 - (E) 20' w. ubl. c.l. gate. Provide knob bus per City of Clovis Fire Dept.

BUILDING	APPL. NO.	SERIAL NO.
BLDG. 'A'	45809	2023/2024
BLDG. 'B'	45809	2025/2029

- LEGEND:**
- EXISTING BUILDINGS
 - NEW BUILDINGS
 - (E) PAINT STRIPING
 - BARRIER FREE PATH OF TRAVEL
 - (E) FIRE ACCESS LANE

CAMPUS SITE PLAN
SCALE: 1" = 40'-0"

- SITE PLAN NOTES:**
- BARRIER FREE PATH OF TRAVEL:**
Accessible path of travel as indicated on plan is a barrier free access POT without any abrupt level changes exceeding 1/2" beveled at 1:2 max. slope, or vertical level changes not exceeding 1/4" max. and at least 48" wide. Surface is slip resistant, stable, firm, and smooth. Cross slope does not exceed 2% and slope in the direction of travel is less than 5% unless otherwise indicated. POT shall maintain free of overhanging obstructions to minimum 80" and protruding objects greater than 4" projection from wall and above 27" and less than 80" (11B-307.3). Fixing Spaces at least 60"x60" are located not more than 200' apart (11B-403.5.3) and continuous gradients have 60" level areas not more than 400' apart (11B-403.7).
 - The Architect has inspected / surveyed the Path of Travel (P.O.T.) as indicated on the plans and has found it to be, or has indicated on the plans remedial work which will cause it to be, a barrier-free accessible route.
 - Where works abuts existing concrete curb and/or walk match existing concrete elevation, (L.O.M.)
 - Storm Drain Lines to be installed prior to placement of Reloc. Bldg.



MARK	DATE	DESCRIPTION
1	7-5-21	8-Bldg. Relocated from Clovis West H.S.

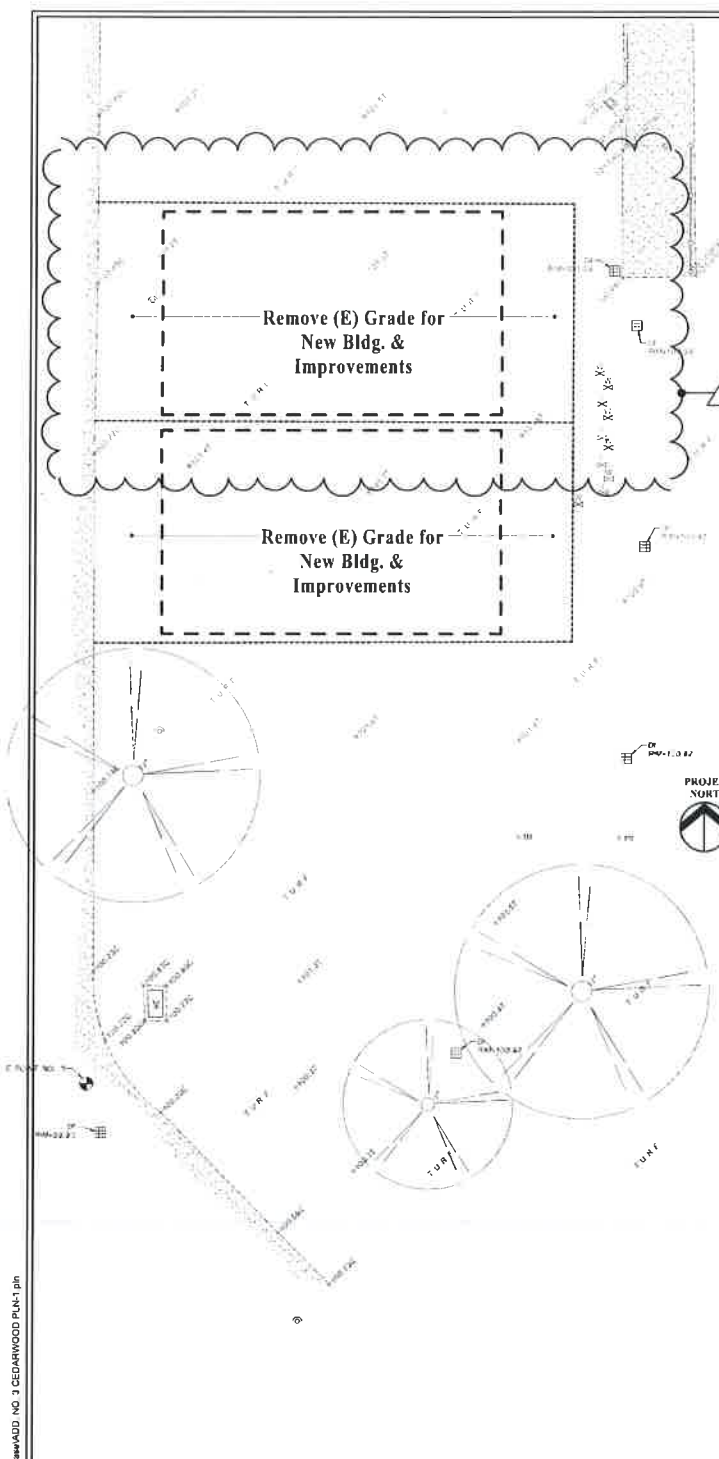
CAMPUS SITE PLAN
RELOCATABLE CLASSROOMS AT CEDARWOOD ELEMENTARY SCHOOL
CLOVIS UNIFIED SCHOOL DISTRICT
CLOVIS, CALIFORNIA

GONZALEZ ARCHITECTS
7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711
TEL: 559-497-1542
FAX: 559-497-1549
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2114
DATE: 7/7/2021

SHEET TITLE:
CAMPUS SITE PLAN

A-1



TOPOGRAPHIC LEGEND:

⊙	BENCHMARK	□	CONCRETE
⊕	ELECTRICAL BOX	⊕	POLE/POST
⊖	FIRE HYDRANT	⊖	PLAY EQUIPMENT
⊗	IRRIGATION CONTROL VALVE	⊗	TURF/GRASS
⊘	PALE POST	⊘	ELECTRICAL WALL
⊙	SEWER CULVERT		
⊙	STORM DRAIN HOLE		
⊙	TREE, TRUNK SIZE AS NOTED		
⊙	WATER VALVE		
⊙	FENCE CHAIN LINK		
⊙	CONCRETE		
⊙	EXISTING CONCRETE		

NOTES:

- THE TOPOGRAPHIC SURVEY WAS PERFORMED ON MAY 12, 2021
- THE TOPOGRAPHIC SURVEY IS ONLY A PARTIAL SURVEY OF THE SPECIFIC PHYSICAL FEATURES OF THE SITE AND FINISH ELEVATIONS. NOT ALL AREAS OF WORK WERE COVERED IN THE TOPOGRAPHIC SURVEY.
- THE SURFACE FEATURES OF THE UTILITIES SHOWN WERE OBTAINED AT THE TIME OF THE TOPOGRAPHIC SURVEY AND FROM A UTILITY SEARCH OF PLANS PROVIDED BY THE OWNER. IT IS POSSIBLE THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT WERE NOT REVEALED THROUGH THE UTILITY SEARCH. NO GUARANTEE CAN BE MADE ON THE ACCURACY OR COMPLETENESS OF THE UTILITIES SHOWN.
- THE EXISTENCE AND LOCATION OF ALL APPROXIMATE UTILITIES, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING SPOTS, PAVEMENTS, SERVITUDES AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE.

SITE BENCHMARK:

ARL POINT NO. 1

SET PAINT MARK ON SIDEWALK, 10' SW CORNER OF ELECTRICAL VAULT 580

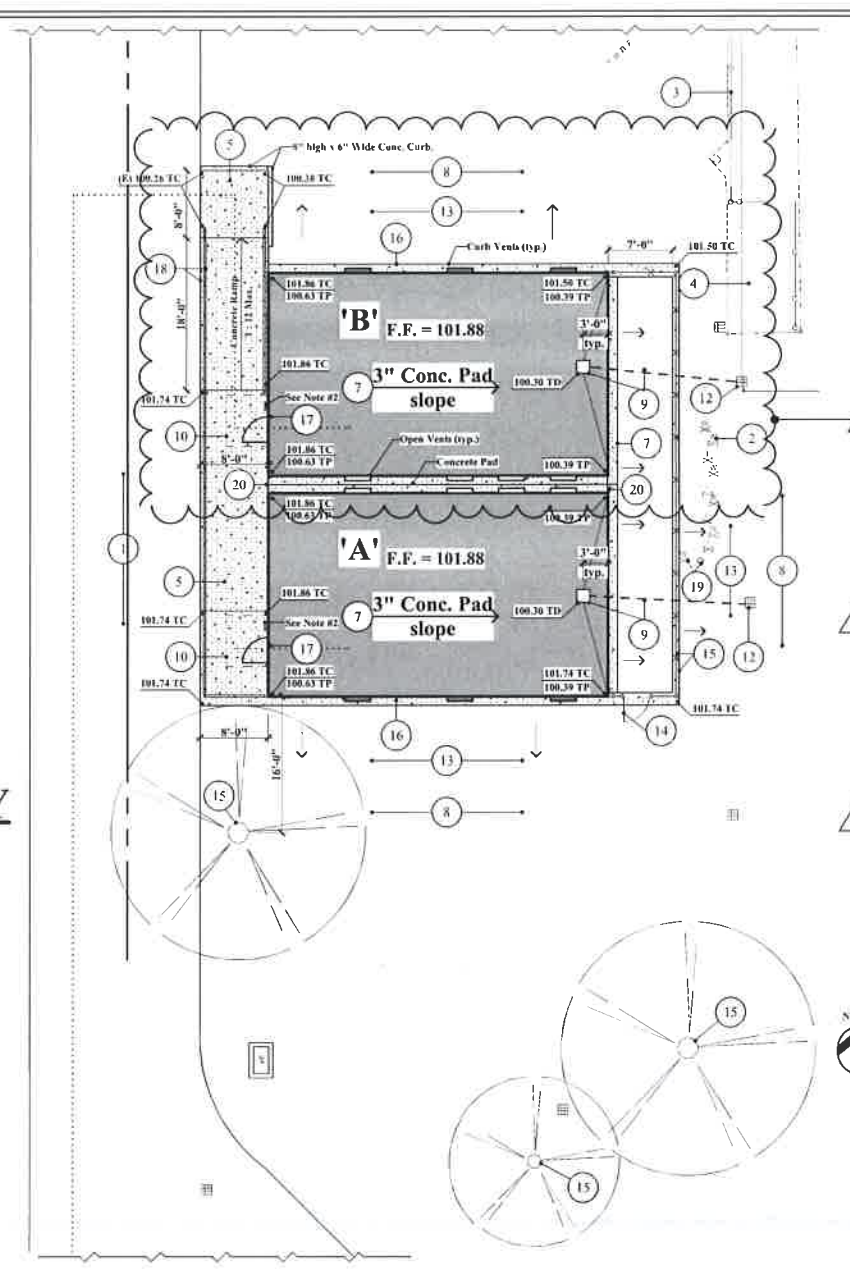
6.5' NW OF DRAINAGE INLET TO SOUTH

ELEVATION = 100.00'

PROJECT NORTH

TOPOGRAPHIC SURVEY

SCALE: 1" = 10'-0"



PARTIAL SITE PLAN KEY NOTES:

- (E) Concrete walk
- (E) Irrigation Valves to remain (typ)
- (E) C.L. Fence to remain
- (E) Concrete to remain
- Concrete walk, finish w/ (E) Concrete Wall (C-1)
- N.A.
- Concrete Pad (C-1)
- (E) Turf
- Storm drain Christy V.I. drain with C.L. grate connect w/ 4" PVC drain line to (E) Storm Drain, Slope drain line 1/8" per foot (C-1)
- Provide 6'-0" by 5'-0" concrete level landing of decks, typ
- N.A.
- (E) Storm Drain
- Regrade (E) Turf to feather away (15' Min.) from Postable and New Improvements and Reloc.
- 3' Wide C.L. Gate
- 6' High C.L. Fence w/ slats & Conc. Mowstrip (C-1)
- PORTABLE 'A' & 'B': APPL# 45809**
Vent Area Required = 6.4 s.f. portable
Vent Area Provided = 4.5' x 36" = 162 = 144 = 1.12 x 144 = 161.28 s.f.
Open Vent Area Provided = 4.5' x 36" = 162 = 144 = 1.17 x 144 (slate open) = 168.72 s.f.
Vent Grill 4'-0" x 36" = 144 = 144 = 1.16 x 160 (metal grill percentage open area) = 187.2 s.f. (slate vent) = 208.8 s.f. Total s.f. provided = 376.72 s.f.
- Threshold (C-1)
- Concrete Ramp with Metal Hand Railing (C-1)
- Remove & relocate (E) Irrigation Water Valve (C-1)
- Closure panels, typ. front & rear (C-1)

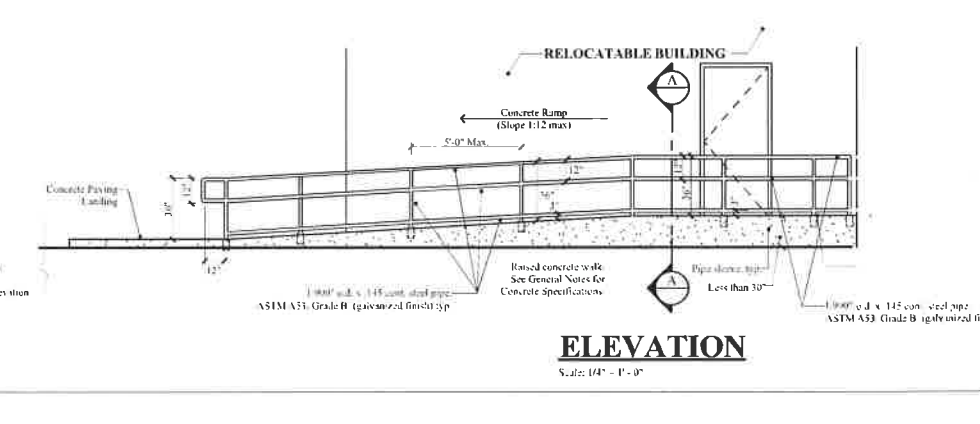
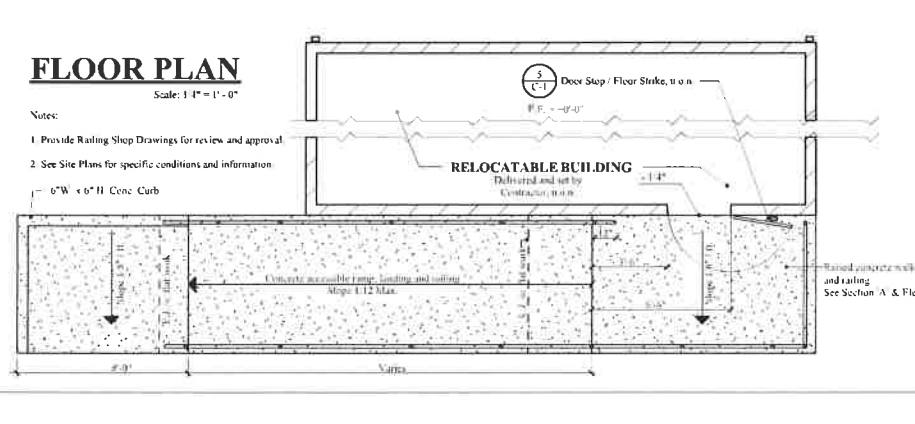
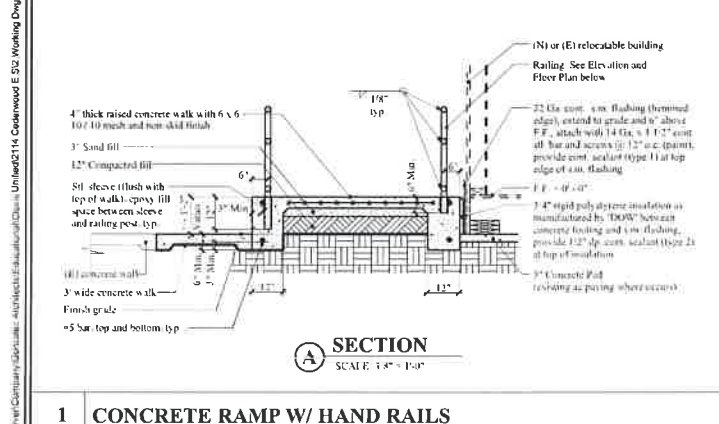
ENLARGED SITE PLAN

SCALE: 1" = 10'-0"

ENLARGED SITE PLAN NOTES:

- Provide and install door strike / holder at Relocated Buildings 'A'.
- Provide and install 'Room I.D.' at Relocated Building 'A'.
Retrofit and irrigation adjustments required.
- See General Notes #7 and 8, Sheet C-1.
- Contractor to provide survey grade points to confirm grades shown.
- See Electrical Plans for additional work.
- Storm Drain Lines to be installed prior to placement of Reloc. Bldg.
- Field verify existing fire extinguisher (Min. 2A10BC or provide new)
- Buildings shall be moved as separate modules and be reconnected at the new location.

NOTE:
ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IN BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT, CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN DIFFERENT DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MIN. AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL ABOVE 27" AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.



FILE NO. 16-27 APPL. NO. 02-119199

JUAN M. GONZALEZ ARCHITECTS
No. C-12942
RENEWAL DATE 12/31/2021
STATE OF CALIFORNIA

MARK	DATE	DESCRIPTION
1	7-5-21	Add Building W/ Relocated from Clovis School S

ENLARGED SITE PLAN / DEMO. TOPO. SURVEY

RELOCATABLE CLASSROOMS AT CEDARWOOD ELEMENTARY SCHOOL
CLOVIS UNIFIED SCHOOL DISTRICT
CLOVIS, CALIFORNIA

GONZALEZ ARCHITECTS

7545 N. DEL MAR AVENUE, SUITE 203
FRESNO CALIFORNIA 93711

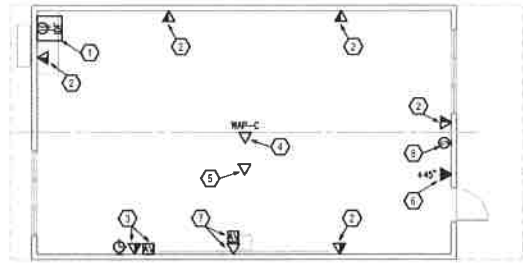
TEL: 559-497-1542
FAX: 559-497-1549

ARCHITECTURE PLANNING
JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 114
DATE: 7/7/2021

SHEET TITLE:
PARTIAL SITE PLAN

A-3



GENERAL NOTES

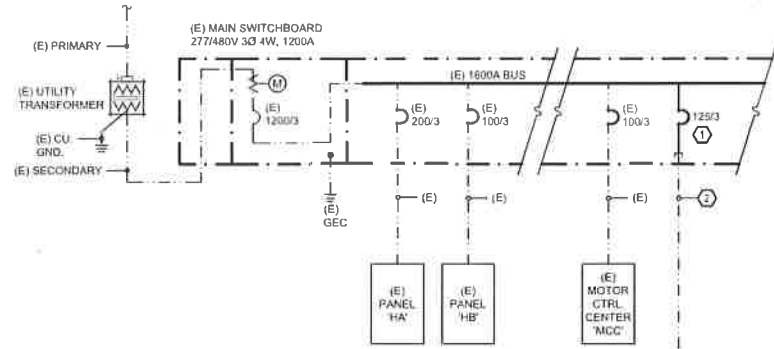
- ALL WORK SHALL BE IN ACCORDANCE WITH CUSD SPECIFICATIONS. PROVIDE COMPLETE AND OPERATIONAL SYSTEMS. ANY DISCREPANCIES MUST BE ADDRESSED BY RFI PRIOR TO BID.
- NOTIFY ENGINEER OF ANY CONDITIONS THAT MAY PREVENT INSTALLATION AS SHOWN IN THIS DRAWING.
- CUSD REQUIRES CONCEALED RACEWAYS AND FLUSH INSTALLATION OF DEVICES IN WALLS. WHERE THIS IS PARTICULARLY DIFFICULT, AND WITH APPROVAL FROM DISTRICT, THE CONTRACTOR MAY USE SURFACE RACEWAYS.

RELO BUILDING KEY NOTES

- PROVIDE IDF AT CORNER ABOVE COUNTER, GATTY CORNER FROM THE DOOR. INSTALL PER DETAIL 2/E-2. BLDG. PROVIDE DUPLEX OUTLET INSIDE CABINET AND DEDICATED 120V 20A CIRCUIT.
- PROVIDE INDICATED JACKS AT PRE-INSTALLED BOX BY BLDG. MFG'R AND CONNECT TO IDF.
- PROVIDE INDICATED JACKS FOR TEACHER STATION ON SAME WALL AS DOOR, OPPOSITE SIDE OF ROOM.
- PROVIDE INDICATED JACKS FOR WIRELESS ACCESS POINT. INSTALL PER DETAIL 5/E-2.
- PROVIDE INDICATED JACKS FOR FUTURE CEILING PROJECTOR. COIL UP 6 FT. EXTRA CABLE WITH JACK ATTACHED AND SECURE IN ATTIC SPACE.
- PROVIDE WALL MOUNTED VOICE JACK FOR VoIP HANDSET AT PRE-INSTALL BOX BY BLDG. MFG'R, ADJACENT TO DOOR.
- PROVIDE INDICATED JACKS AND DEVICES FOR WALL MOUNTED PROJECTOR AT PRE-INSTALLED BOXES BY BLDG. MFG'R. PROVIDE QUAD POWER OUTLET. SEE TEACHING WALL ELEVATION, DETAIL 6/E-2. INSTALL PROJECTOR MOUNT PER DETAIL 3/E-2.
- PROVIDE PA SPEAKER AS SHOWN.

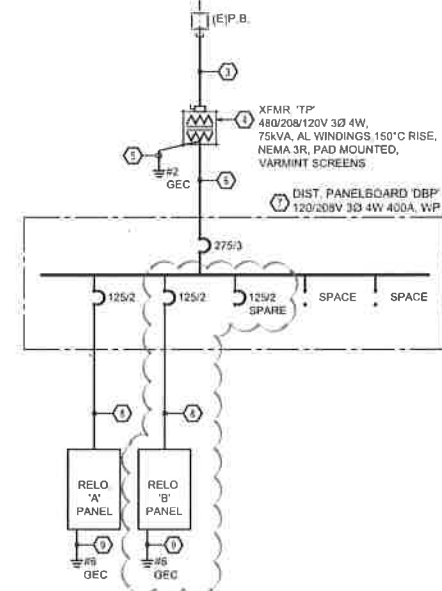
TYPICAL RELO BUILDING ELECTRICAL PLAN

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



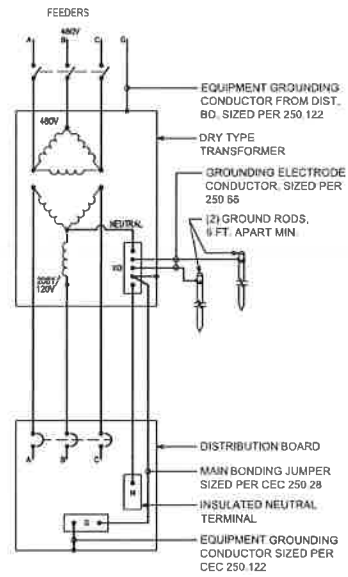
KEY NOTES

- ADD NEW CIRCUIT BREAKER TO EXISTING MAIN SWITCHBOARD. PROVIDE ALL REQUIRED MOUNTING HARDWARE.
- EXISTING SPARE 2"C. PULL 3#1, 1#6G.
- INTERCEPT AND EXTEND EXISTING SPARE 2"C. PULL 3#1, 1#6G.
- TRANSFORMER 'TP' WITH PRIMARY FUSED DISCONNECT SWITCH AND CONCRETE PAD PER DETAIL 3/E-3.
- GROUND PER DETAIL 2/E-3.
- 3"C. 4#250CMIL, 1#2G.
- DISTRIBUTION PANELBOARD 'DBP', SEE DETAIL X/XX.
- 1 1/2"C. 3#1, 1#6G.
- GROUND PER DETAILS 1/E-1 & 2/E-1. AT RELOS, BOND BUILDING MODULES TOGETHER PER DETAIL 3/E-1.



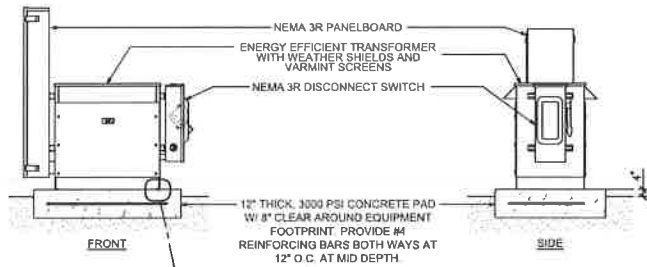
POWER SINGLE LINE DIAGRAM

NO SCALE



TRANSFORMER GROUNDING DETAIL

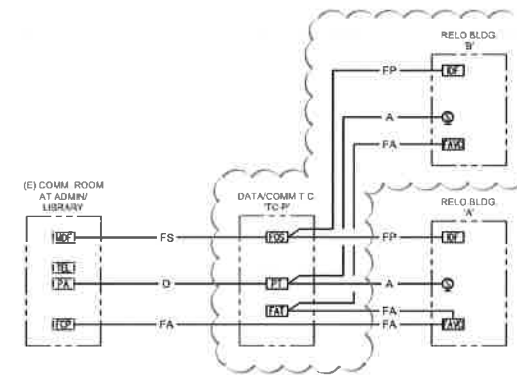
NO SCALE



PAD MOUNTED TRANSFORMER DETAIL

NO SCALE

kVA RATING	VOLTAGE	WEIGHT	DIMENSIONS
75	480/208/120V 3Ø 4W	510	28 3/4" W x 27" D x 36" H



SITE COMM/SIGNAL LINE DIAGRAM

NO SCALE

SIGNAL CABLES

- PA: 4 PAIR PUBLIC ADDRESS CABLE TO MATCH EXISTING SITE CABLE
- DB: 25 PAIR PUBLIC ADDRESS CABLE TO MATCH EXISTING SITE CABLE
- FA: FIRE ALARM: SEE FA SHEETS
- FS: DATA: 36-STR SM FO CABLE PER SPECS
- FP: IDF DATA: 6-STR SM FO CABLE PER SPECS



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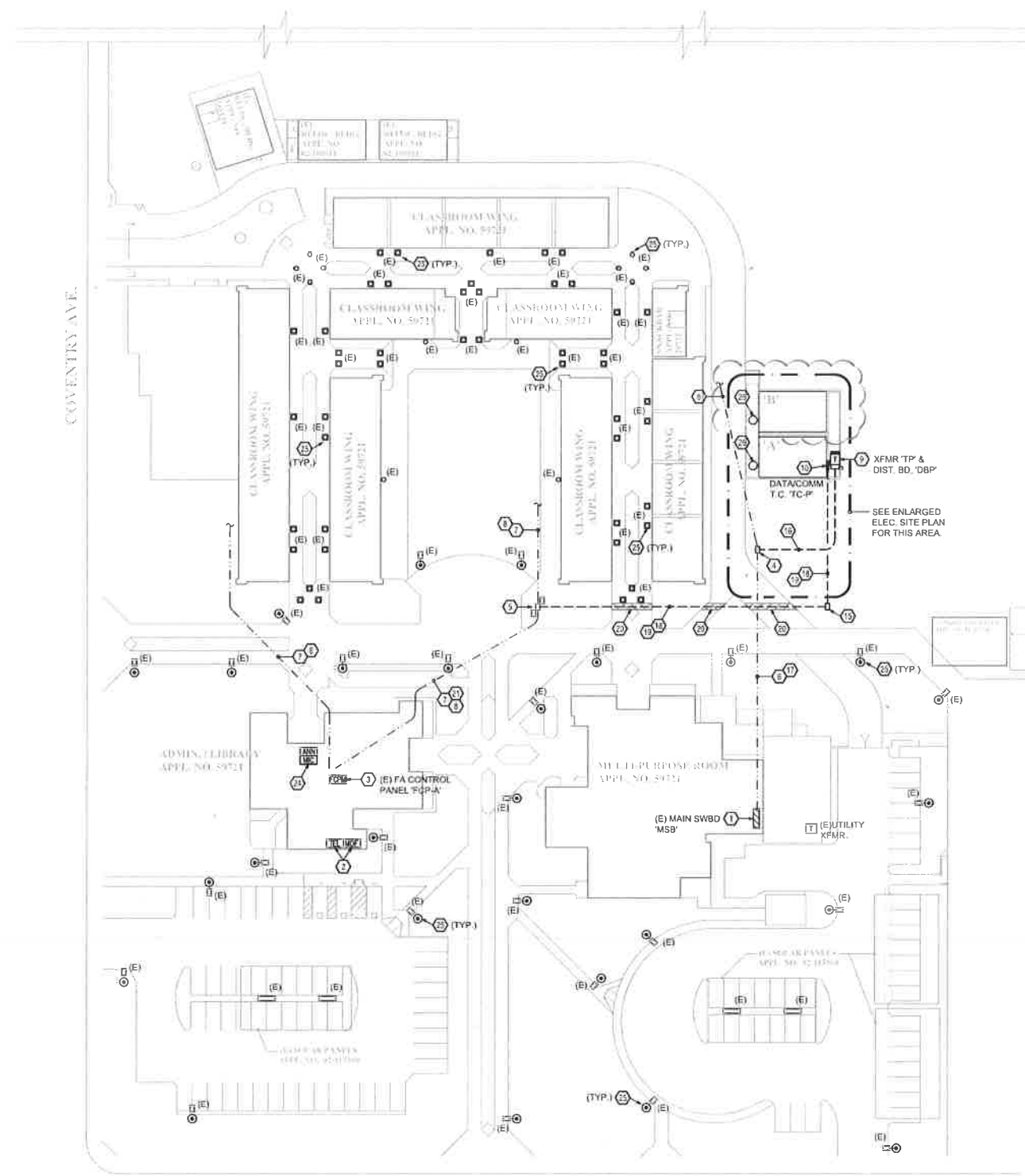
PROJECT NO: 2114
DATE: 5/21/2021

SHEET TITLE:
ELECTRICAL DETAILS AND
LINE DIAGRAMS

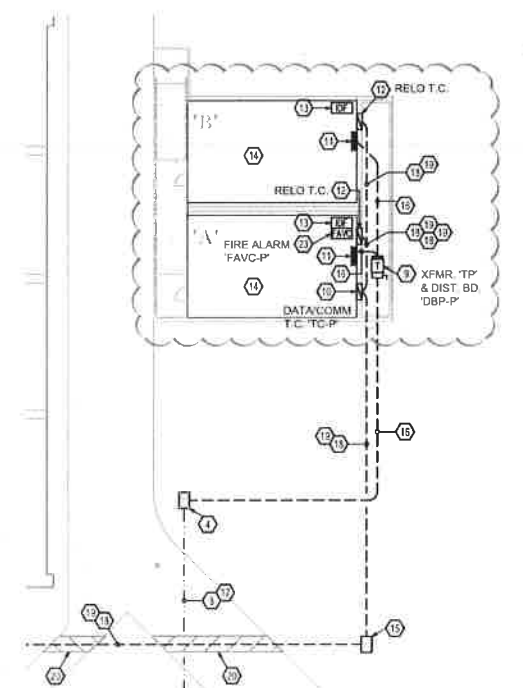
E-3



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LOCATION: Z:\Clients\Gonzalez Architects\3185 - CUSD 2021 Red\Clasroom\dwg\3185 - Electrical_Architect.dwg



NORTH
ELECTRICAL SITE PLAN
 SCALE: 1" = 40'-0"



NORTH
ENLARGED ELEC. SITE PLAN
 SCALE: 1" = 20'-0"

KEY NOTES

- EXISTING MAIN SWITCHBOARD. SEE POWER SINGLE LINE DIAGRAM 4/E-3.
- EXISTING LOW VOLTAGE SYSTEMS HEAD ENDS: MDF, MPOE, FA, TEL. CONNECT DATA AND LOW VOLTAGE. SEE SITE COMM/SIGNAL LINE DIAGRAM 5/E-3.
- EXISTING FIRE ALARM CONTROL PANEL MASTER. CONNECT FA. SEE FIRE ALARM SHEETS.
- EXISTING POWER PULL BOX.
- EXISTING SIGNAL PULL BOX(ES).
- EXISTING POWER FEEDER(S).
- EXISTING LOW VOLTAGE SYSTEMS CONDUITS AND CABLING.
- EXISTING FA CONDUITS AND CABLING.
- PAD MOUNTED TRANSFORMER 'TP' AND DISTRIBUTION BOARD 'DBP'. SEE POWER SINGLE LINE DIAGRAM 4/E-3 AND DETAIL 3/E-3.
- SURFACE MOUNTED WEATHERPROOF 24"W x 30"H x 9"D DATA/COMM TERMINAL CABINET 'TC-P'. SEE DETAIL 1/E-2. TERMINATE COMM/SIGNAL CABLING TO 66 BLOCK AND CROSS CONNECT TO RELO BUILDING. SEE SITE COMM/SIGNAL LINE DIAGRAM 5/E-3. CONNECT FA. SEE FIRE ALARM SHEETS.
- CONNECT POWER TO RELO. PANELBOARD PRE-INSTALLED BY MANUFACTURER GROUND PANEL AND BUILDING PER DETAILS 1, 2, 3E-1.
- RELO. SIGNAL T.C.: NEMA 3R HINGED AND LOCKABLE ENCLOSURE AT +66" TO TOP. INSTALL WIRE GUTTER AT ATTIC HEIGHT WITH (3) 2" EXTERIOR RISERS AND NIPPLES INTO ACCESSIBLE ATTIC; PAINT TO MATCH BUILDING. INSTALL PATCH PANELS AND MAKE TERMINATIONS AT INTERIOR. SEE SITE COMM/SIGNAL LINE DIAGRAM 5/E-3 AND DETAIL 1/E-2.
- PROVIDE IDF PER DETAIL 2/E-2 AND SPECIFICATIONS. INSTALL OUTLET AT INTERIOR AND CONNECT TO DEDICATED 120V 20A CIRCUIT IN RELO PANELBOARD.
- ASSEMBLE RELO. BUILDING. RECONNECT POWER AND LIGHTING SYSTEMS SEPARATED PRIOR TO TRANSPORT. PROVIDE INTERIOR ELECTRICAL IMPROVEMENTS PER DETAIL 1/E-3. PROVIDE FIRE ALARM SYSTEM PER FIRE ALARM SHEETS.
- B1017 POWER PULL BOX.
- POWER FEEDER. SEE POWER SINGLE LINE DIAGRAM 4/E-3.
- PULL POWER FEEDER THROUGH EXISTING POWER CONDUIT. SEE POWER SINGLE LINE DIAGRAM 4/E-3.
- 2" C. FIBER. PROVIDE CABLING AND CONNECTIONS PER SITE COMM/SIGNAL LINE DIAGRAM 5/E-3.
- 2" C. SIGNAL, 2" C. FA. PROVIDE CABLING AND CONNECTION PER SITE COMM/SIGNAL LINE DIAGRAM 5/E-3.
- SAW-CUT EXISTING ASPHALT/ CONCRETE PAVING AND PATCH TO MATCH EXISTING.
- PULL FIBER OPTIC & LOW VOLTAGE CABLING THROUGH EXISTING CONDUITS. SEE SITE COMM/SIGNAL LINE DIAGRAM 5/E-3.
- PULL FA CABLING THROUGH EXISTING CONDUIT. SEE FIRE ALARM SHEETS.
- FIRE ALARM EVAC NETWORK TRANSPONDER. CONNECT TO DEDICATED 120V 20A 1-POLE CIRCUIT BREAKER WITH RED HANDLE LOCK-ON DEVICE AT RELO PANELBOARD. CONNECT FA. SEE FIRE ALARM SHEETS.
- ADD FA REMOTE MICROPHONE ADJACENT TO EXISTING ANNUNCIATOR AT ADMIN OFFICE. CONNECT FA, SEE FIRE ALARM SHEETS.
- EXISTING AREA LIGHTING.
- EXISTING EXTERIOR LIGHT PRE-INSTALLED BY BUILDING MANUFACTURER.

PLS. NO. 18-27 APP. NO. 82-119199

MARK	DATE	DESCRIPTION

RELOCATABLE CLASSROOM AT CEDARWOOD ELEMENTARY SCHOOL
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 ARCHITECTURE PLANNING
 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2114
 DATE: 5/21/2021

SHEET TITLE:
ELECTRICAL SITE PLAN

E-4

PLOTTED: 7/10/21 7:28:41 PM
 LOCATION: Z:\Client\Gonzalez_Architects\2114ES - CEDARWOOD\CAD\Rev\2114ES - Electrical_Architect.dwg

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 356 Pollasky Ave.
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 Clovis, CA 93612
 559.323.4995 tel
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FIRE ALARM GENERAL NOTES

- FIRE ALARM SYSTEM: ADDRESSABLES, CLASS B, AUTOMATIC.
- ALL WORK SHALL CONFORM TO THE 2016 EDITION OF NFPA 72, AND 2019 EDITION OF CBC, CEC, AND CFC.
- INSTALLATION OF THE FIRE ALARM SYSTEM (FAS) SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATIONS INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
- UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR. (THE LOCAL FIRE AUTHORITY MAY WITNESS THE TEST).
- A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR THE INSTALLATION.
- ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
- DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
- ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL, OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
- MICROPHONE ACCESSIBILITY SHALL COMPLY WITH CBC 11B-305 AND 11B-308.
- WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR ENTIRE LENS WITHIN AT 80" MINIMUM AND 56" MAXIMUM FROM FINISHED FLOOR.
- WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
- AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (dBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL, HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, IN EVERY SPACE WITHIN A BUILDING THAT MAY BE OCCUPIED AND BE INTELLIGIBLE.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, PRIOR TO "EVAC" ANNOUNCEMENT. THE CARBON MONOXIDE SIGNAL SHALL SOUND A FOUR-PULSE TEMPORAL PATTERN PER NFPA 720, 5.9.6.5.1.
- THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH PER SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
- UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS AND WIRE APPROVED FOR WET LOCATIONS.
- ALL FIRE ALARM WIRING SHALL BE FLP OR FLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
- PER CEC STANDARDS, ALL WIRING SHALL BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE WIRE. ANY CONNECTION SHALL BE BY LUG CONNECTION AT A DEVICE OR AT A FATC TERMINAL BLOCK ONLY. ALL BOXES TO BE SIZED PER CEC.
- SMOKE DETECTORS SHALL NOT BE CLOSER THAN 12" FROM FIRE SPRINKLERS NOR 36" FROM SUPPLY AIR DIFFUSERS. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION, NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY, OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS, AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS. OWNER STANDARDS MAY BE MORE STRINGENT.
- FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS' SPECIFICATIONS. ANY SINGLE DEVICE SHALL NOT EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
- A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A LOCKING DEVICE WITH RED MARKING PER NFPA 72, SECTION 16.5.4 AND 16.5.5.2.3 TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL" CIRCUIT ID TO BE LABELED AT THE FIRE PANEL/EXTENDERS.
- THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION IN COMPLIANCE WITH NFPA 72, SECTION 7.5.6.
- CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48".
- THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC 901.6.2.
- SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTIONS WITH FINAL TEST. FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATIONS SHALL BE LISTED AS EITHER ULFX (CENTRAL STATION) OR ULJS (REMOTE AND PROPRIETARY) BY UNDERWRITERS LABORATORY (UL) OR SHALL COMPLY WITH THE REQUIREMENTS OF STANDARD FM 3011. A COPY OF ALL DEVICES REPORTED TO THE CENTRAL STATION SHALL BE PROVIDED TO THE OWNER'S ELECTRONICS DEPARTMENT.

- OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.
- ALL WIRING IS SHOWN DIAGRAMMATICALLY. SUBJECT TO DSA APPROVAL, CONTRACTOR MAY VARY SEQUENCE OF CIRCUITRY; HOWEVER, ALL CIRCUITS SHALL BE CONTINUOUS AND SUPERVISED.
- ALL CONNECTIONS SHALL BE PROPERLY LABELED BY CONDUCTOR AND SHALL HAVE STA-KON LUG CONNECTORS. PANOUT TAG (TIE WRAP) SEPARATELY.
- FIRE ALARM TERMINAL CABINETS SHALL HAVE SUFFICIENT SPACE, TERMINAL BOARDS AND SCREW TERMINAL CONNECTORS TO ALLOW CONNECTION OF ALL CONDUCTORS SHOWN. PROVIDE BARRIER TO SEPARATE FIRE ALARM SYSTEM WHEN TERMINAL CABINET IS SHARED WITH NON-FIRE ALARM SYSTEMS. CONTRACTOR SHALL BE REQUIRED TO SUBMIT WITH HIS OTHER SHOP DRAWINGS DETAILED DRAWINGS OF HIS PROPOSED CONNECTIONS AT EACH FIRE ALARM TERMINAL CABINET PRIOR TO COMMENCING ANY WORK.
- ALL NAC CIRCUIT CONDUCTORS SHALL BE #12 AWG, STRANDED (19 STRANDS OR LESS) COPPER, UNLESS OTHERWISE NOTED.
- SET END-OF-LINE RESISTORS IN DISTRIBUTION TERMINAL CABINETS.
- BATTERIES SHALL BE STAMPED WITH DATE OF MANUFACTURE.
- INSTALLATION OF FAS EQUIPMENT SHALL BE BY AN AUTHORIZED ENGINEERED SYSTEM DISTRIBUTOR FOR THE EQUIPMENT SPECIFIED BY THE MANUFACTURER FOR SALES, SERVICE, INSTALLATION AND MAINTENANCE. PROVIDE CERTIFICATIONS WITH EQUIPMENT SUBMITTALS. SUBMITTALS BY FIRMS NOT FULFILLING THIS REQUIREMENT WILL BE AUTOMATICALLY REJECTED.
- THE FAS INSTALLER SHALL BE NICET LEVEL 2 CERTIFIED.
- THE FAS INSTALLER SHALL PROVIDE ALL FACTORY WARRANTIES TO THE OWNER AT THE CLOSE UP OF THE PROJECT.
- THE FAS INSTALLER SHALL PROVIDE WRITTEN CERTIFICATION USING NFPA 72 INSPECTION AND TESTING FORMS AND SHALL CERTIFY THAT THE INSTALLATION, TESTING, AND OPERATION CONFORM IN ALL RESPECTS TO THE REQUIREMENTS AS SET FORTH IN TITLE 19 OF THE CALIFORNIA CODE OF REGULATIONS AND PART 3, ARTICLE 760 OF TITLE 24 OF THE C.C.R. AND C.B.C. SECTION 907. THE CONTRACTOR SHALL SUBMIT THE COMPLETED FAS CERTIFICATION AND DESCRIPTION FORM TO DIVISION OF STATE ARCHITECT.
- INCLUDE ALL DEMOLITION OF EXISTING FIRE ALARM SYSTEM WHETHER SPECIFICALLY SHOWN OR NOT. REMOVE ALL CABLING & UNUSED EXPOSED RACEWAY & OUTLETS. BLANK OFF ALL UNUSED WALL & HARD CEILING OUTLETS. REMOVE ALL UNUSED OUTLETS IN TEE-BAR CEILING & REPLACE ACOUSTIC TILES. RETURN ALL DEVICES, APPLIANCES, & CONTROL PANELS TO OWNER IF REQUESTED BY OWNER DURING CONSTRUCTION.
- WHEN FIRE ALARM WORK WILL DISABLE PORTIONS OF THE EXISTING FAS, PROVIDE ALL REQUIRED OVERTIME AND FIRE WATCH IN SCOPE OF WORK.
- WHERE FIRE ALARM DEVICES ARE BEING INSTALLED IN OTHERWISE INACCESSIBLE AREAS, PROVIDE AN ALLOWANCE FOR THE INSTALLATION OF ACCESS PANELS AND ALL WORK ASSOCIATED WITH THE INSTALLATION. THE CONTRACTOR SHALL CUT ALL THE OPENINGS. THE SIZE OF THE ACCESS PANEL SHALL BE DETERMINED BY THE MAN ACCESS REQUIREMENTS. PROVIDE PAINT GRADE ACCESS DOORS AND PAINT TO MATCH THE COLOR & SHEEN OF THE EXISTING CEILING.
- FIRE ALARM SYSTEM INSPECTION, TESTING, AND MAINTENANCE SHALL COMPLY WITH NFPA 72, CHAPTER 14.
- PROVIDE FIRE ALARM RECORD DOCUMENTS CABINET 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, "FIRE ALARM SYSTEM RECORD DOCUMENTS"

ALL RECORD 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.

PROVIDE SYSTEM DOCUMENTS AS APPLICABLE:

- RECORD DRAWINGS/AS-BUILTS
- EQUIPMENT CUT SHEETS & CA SFM LISTINGS
- ALTERNATIVE MEANS AND METHODS
- PERFORMANCE BASED DESIGN DOCUMENTATION (NFPA 72, 7.3.7)
- SYSTEM RECORD 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)
- RISK ANALYSIS DOCUMENTATION (NFPA 72, 7.3.6)
- SOFTWARE & FIRMWARE CONTROL DOCUMENTATION (NFPA 72, 23.2.2)

FIRE ALARM SYMBOLS

SYMBOL	NAME	DESCRIPTION	CSFM
	(E) FIRE ALARM CONTROL PANEL MASTER W/ EMERGENCY VOICE/ALARM COMMUNICATION	GAMEWELFCI #E3 SERIES	7165-1703-0125
	FIRE ALARM EMERGENCY VOICE/ALARM COMMUNICATION NETWORK TRANSPONDER	GAMEWELFCI #NX W/ IL4MB-E3, RPT-E3-UTP, INI-VGX, AM-50-70, PM-9, LCD-E3, FML-E3	7165-1703-0125
	(E) ANNUNCIATOR	GAMEWELFCI #NGA	7165-1703-0125
	REMOTE PAGING MICROPHONE W/ ADDRESSABLE SWITCH MODULE	GAMEWELFCI #INCC-MIC W/ ASM-16, INI-VGC	7165-1703-0125
	SMOKE DETECTOR, PHOTOELECTRIC DETECTOR BASE	GAMEWELFCI #ASD-PL2F GAMEWELFCI #B501	7272-1703-0121 7300-1653-0109
	ATTIC HEAT DETECTOR, 190°F DETECTOR BASE	GAMEWELFCI #ATD-HL2F GAMEWELFCI #B501	7270-1703-0115 7300-1653-0109
	MONITOR MODULE	GAMEWELFCI #AMM-2F	7300-1703-0102
	RELAY MODULE	GAMEWELFCI #AOM-2SF	7300-1703-0102
	SPEAKER/VISIBLE NAC DEVICE, CEILING MTD (WATTS & cd INDICATED ON PLANS)	EATONWHEELCOK #ELSPSTWC	7320-0785-0505
	(E) EXTERIOR SPEAKER, W.P., WALL MTD	EATONWHEELCOK #ET-1010-R	7320-0785-0105

FIRE ALARM CABLE SCHEDULE

SYMBOL	NAME	DESCRIPTION
A	SIGNALING LINE CIRCUIT (SLC) CABLE WEST PENN #D990	16/2 TWISTED PAIR, STRANDED, LOW CAPACITANCE FA POWER LIMITED, RISER CABLE (FPLR)
AW	SIGNALING LINE CIRCUIT (SLC) CABLE, OSP WEST PENN #AQ225	16/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
B	NOTIFICATION APPLIANCE CKT (NAC) CABLE WEST PENN #998S	12/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
BA	NOTIFICATION APPLIANCE CKT (NAC) CABLE, OSP WEST PENN #AQ227	12/2 TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
C	EM. VOICE/ALARM COMM (EVIAC) CABLE WEST PENN #HF955	14/2 SHIELDED TWISTED PAIR, STRANDED FA POWER LIMITED CABLE (FPL)
CA	EM. VOICE/ALARM COMM (EVIAC) CABLE, OSP WEST PENN #AQ235	14/2 SHIELDED TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
D	INITIATING DEVICE CKT (IDC) CABLE WEST PENN #994S	14/2 TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
DA	INITIATING DEVICE CKT (IDC) CABLE, OSP WEST PENN #AQ228	14/2, TWISTED PAIR, STRANDED, AQUASEAL FA POWER LIMITED CABLE (FPL)
F	NETWORK COMM CABLE	8-STR MM ISP FIBER OPTIC CABLE
FA	SITE NETWORK COMM CABLE	8-STR MM OSP FIBER OPTIC CABLE
G	POWER CABLE WEST PENN #998S	12/2, TWISTED PAIR, STRANDED FA POWER LIMITED, RISER CABLE (FPLR)
M	MIC CABLE	16/6, TWISTED SHIELDED PAIR, PLENUM RATED

	INITIATION CONDITION	SMOKE, HEAT DETECTOR	POWER LOSS, SHORT CIRCUIT, GROUND FAULT
ACTION			
ANNUNCIATE TROUBLE			
ANNUNCIATE ALARM		•	•
ANNUNCIATE SUPERVISORY			
INITIATE NOTIFICATION APPLICANCES		•	•
INITIATE EVIAC APPLICANCES		•	•
TRANSMIT TO CENTRAL STATION		•	•

F.A. SEQUENCE OF OPERATION MATRIX

NO SCALE

2

BATTERY CALCULATION

EVAC Network Transponder Panel 'FAVC-P'

POWER REQUIREMENTS

	CURRENT [A]	
	SUPERVISORY	ALARM
LHMB-E3 (SLCs at max. output)	0.0810	0.1500
LCD-E3 (Panel Display)	0.0240	0.2800
PM-9 (Power Supply)	0.0500	0.0500
RPT-E3-UTP (Network Repeater)	0.0160	0.0170
FML-E3 (MM FO Module)	0.0530	0.0530
INI-VG (Voice Gateway)	0.1500	0.1500
AM-50-70 (Amp)	0.0490	2.3000
AUDIO Circuit 1	-	0.0283
NAC Circuit 1	-	0.1200
TOTALS	0.4230	3.1483

BATTERY CAPACITY

SUPERVISORY POWER (24 HOURS)	= 24 Hr * 0.423A	= 10.152 AHr
ALARM POWER (15 MINUTES)	= 0.25 Hr * 3.1483A	= 0.787 AHr
TOTAL POWER REQUIREMENT		= 10.939 AHr
MINIMUM BATTERY CAPACITY (includes 25% safety factor)		= 14 AHr

VOLTAGE DROP CALCULATION

NAC Circuit 'nP1'

VD = Voltage Drop [V]
 I = Current [A] (0.12A)
 K = 11 (Copper Constant)
 L = Distance to Load [ft.] (248')
 CM = Circular Mils (#12 AWG = 6530)
 V = Voltage [V] (24VDC)

$$VD = \frac{K \cdot I \cdot 2L}{CM} = \frac{11 \cdot 0.12 \cdot 2 \cdot 248}{6530} = 0.100 V$$

$$VD\% = \frac{VD}{24} = 0.4\%$$

VOICE EVACUATION SPEAKER VOLTAGE DROP

Volt Drop Common Parameters

Volts 16.7 Volts
 Wire Size 16 AWG
 Wire Resistance 6.45 ohm/Kt

Type	INDOOR				OUTDOOR				CIRCUIT LENGTH		
	1/8 W	1/4 W	1/2 W	1 W	2 W	4 W	6 W	Total Watts	Max Length	Actual Length	
et				2				2	17524	248	

FIRE ALARM CALCULATIONS

NO SCALE

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RELOCATABLE CLASSROOM AT CEDARWOOD ELEMENTARY SCHOOL
 CLOVIS UNIFIED SCHOOL DISTRICT
 CLOVIS, CALIFORNIA

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 JUAN M. GONZALEZ, A.I.A.

PROJECT NO: 2114
 DATE: 5/21/2021

SHEET TITLE:
 FIRE ALARM SYMBOLS,
 NOTES, & CALCULATIONS

E-5



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