

PROJECT: MESA ELEMENTARY SCHOOL  
RELOCATION OF MODULAR CLASSROOMS  
DSA File No.: 19-25  
DSA Application No.: 03-117500  
GBA Project No.: 1633

The clarifications, modifications, changes, additions, and/or deletions contained herein shall be incorporated within the construction documents for the project. Such information shall take precedence over that previously published.

**BID OPENING DUE DATE TIME CHANGE:**

The bid opening due date remains on Friday, April 19, 2019. The time of the bid opening has changed from 10:00am to 4:30pm.

See attached Addendum No. 2 Document dated April 15, 2019 issued by Ghataode Bannon Architects.

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RELOCATION OF MODULAR CLASSROOMS  
DSA File No.: 19-25  
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ADDENDUM NO. 2

Date: April 15, 2019  
Owner: Covina Valley Unified School District  
519 E. Badillo Street  
Covina, CA 91723  
Architect: Ghataode Bannon Architects LLP  
760 W. 16th Street - Unit B  
Costa Mesa, CA 92627  
(714) 665-8030

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GENERAL MODIFICATION:

Item No. 2.1

Description: Refer to attached Sketch SK-1 for improvements at Sierra Vista Middle School as follows:

Remove, move and re-install four (4) (E) relocatable buildings from the Sierra Vista Middle School to the Mesa Elementary School. Re-program the existing fire alarm system at Sierra Vista Middle School to remove the four buildings from the program.

Remove existing C.L. fencing and pull wire as indicated.

Provide AC paving and base patch-back as indicated. Provide C.L. fencing and gates.

CHANGES TO THE SPECIFICATIONS:

Item No. 2.2

Specification Reference: 09 90 00 EXTERIOR/INTERIOR PAINTING  
Description: Add Specification Section 09 90 00 Exterior/Interior Painting.

CHANGES TO THE DRAWINGS:

Item No. 2.3

Drawing Reference:

G002 FIRE ACCESS SITE PLAN

Description:

Paint over the south end of the (E) fire lane marking and paint new hammerhead perimeter marking and FIRE LANE as indicated on 1/G002.

Item No. 2.4

Drawing Reference:

A001 OVERALL SITE PLAN

Description:

Remove the note "RELOCATED PLAYGROUND EQUIPMENT. REMOVE PORTIONN OF (E) TURF AND PREPARE FOR (N) RUBBER SAFETY SURFACING. COORDINATE EXACT LOCATION W/ DISTRICT." Playground equipment shall be removed, salvaged, delivered and unloaded at the District M&O yard at 519 E. Badillo St., Covina, CA 91723.

Item No. 2.5

Drawing Reference:

A002 ENLARGED SITE PLAN AND SITE DETAILS

Description:

Delete Details 24 and 25/A002.

Item No. 2.6

Drawing Reference:

E001 SITE ELECTRICAL PLAN

Description:

Reroute power and data pathways per attached E001 Site Electrical Plan.

PRE-BID RFC'S:

Item No. 2.7

RFC From:

R.Jensen Co. Inc

RFC No.:

01

Date:

4/4/2019

Question:

*Is there a Spec book for this project? Are there any specs for low voltage ...P/A Clock, Data/Phone, Security?*

Response:

No, there are no book specifications for this project. There are sheet specifications. See sheet SCS101 for all low voltage system requirements and E401, E402 and E403 covering Basic Electrical and Fire Alarm.

Item No. 2.8

RFC From:

R.Jensen Co. Inc

RFC No.:

02

Date:

4/4/2019

Question:

*Specs requested...*

*Please provide specs for the required drinking fountain.*

*Please provide specs for the required carpet and cove base.*

*Please provide specs for the interior and exterior paint required.*

Response: Drinking Fountain: Provide Haws Model 1117L  
Carpet and Base: Owner Furnished Owner Installed (OFOI)  
Painting: See attached Specification Section 09 90 00 Exterior/Interior  
Painting.

Item No. 2.9

RFC From: R.Jensen Co. Inc

RFC No.: 03

Date: 4/4/2019

*Question: Can you please supply the contact name and number of your Simplex  
Rep that is familiar with this site?*

Response: Contractor shall ask questions through the RFC process.

ATTACHMENTS:

Sheets (8-1/2" X 11"):

09 90 00 EXTERIOR/INTERIOR PAINTING

Sheets (11" X 17"):

SK-1 SIERRA VISTA MIDDLE SCHOOL PATCHBACK PLAN

Sheets (30" X 42"):

E001 SITE ELECTRICAL PLAN

END OF ADDENDUM NO. 2

## SECTION 09 90 00 - EXTERIOR/INTERIOR PAINTING

## PARTS 1 - GENERAL

## 1.01 SUMMARY:

- A. Section Includes: Painting and finishing of all exterior items and surfaces, unless otherwise indicated or listed under exclusions below:
  - 1. Paint all exposed surfaces, except as otherwise indicated, whether or not colors are designated. Include field painting of exposed exterior and interior plumbing, mechanical and electrical work, except as indicated below.
- B. Work Included:
  - 1. The intent and requirements of this Section is that all work, items and surfaces which are normally painted and finished in a building of this type and quality, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.
- C. The following general categories of work and items that are included under other sections shall not be a part of this section:
  - 1. Shop prime painting of structural and miscellaneous iron or steel.
  - 2. Shop prime painting of hollow metal work.
  - 3. Shop finished items.
- D. Thoroughly examine specifications, site of work and conditions under which work will be performed before submitting a proposal. Surfaces which cannot be prepared or painted as specified shall be immediately brought to the attention of the owner or owner's representative in writing.
  - 1. Starting of work without such notification will be considered acceptance by the contractor of surface involved.
  - 2. The contractor shall replace unsatisfactory work caused by improper or defective surfaces, as directed by the owner's representative at no additional cost.

## 1.02 SUBMITTALS:

- A. Product Data: Submit complete manufacturer's descriptive literature and specifications.
  - 1. Materials List: Submit complete lists of materials proposed for use, giving the manufacturer's name, catalog number, and catalog cut for each item when applicable. When required, provide a list of paint and coating materials proposed for use, which equates such materials with the design-basis products specified.
- B. Samples: Submit, on 8-1/2 inch by 11 inch hardboard, samples of each color, gloss, texture and material selected by the Architect from standard colors available for the coatings required.
  - 1. For natural and stained finishes, provide sample on each type and quality of wood used on the project.

- C. Manufacturer's Instructions: Submit the manufacturer's current recommended methods of installation, including relevant limitations, safety and environmental cautions, application rates, and composition analysis.

1.03 QUALITY ASSURANCE:

- A. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this Specification, comply with the more stringent provisions.

Regulatory changes may affect the formulation, availability, or use of specified coatings. Confirm availability of coatings to be used prior to job going out to bid and before start of painting project.

- a. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
  - b. Comply with South Coast Air Quality Management District (SCAQMD) Rule 1113. A copy of this regulation can be obtained from <http://www.aqmd.gov/rules/reg/reg11/r1113.pdf>.
- B. Field Sample: When and as directed by the Architect, apply one complete coating system for each color, gloss and texture required. When approved, the sample panel areas will be deemed incorporated into the Work and will serve as the standards by which the subsequent Work of this Section will be judged.
- C. WORKMANSHIP:
    - 1. All paints and coatings shall be mixed and applied strictly in accordance with the manufacturer's printed instructions.
    - 2. All material shall be applied evenly with proper film thickness and free of runs, sags, skips and other defects. Enamel shall be sanded lightly between coats, dusted and cleaned before recoating.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Storage and Protection: Use all means necessary to protect the materials of this Section before, during, and after installation.
- B. Deliver materials to job site in new, original, and unopened containers bearing manufacturer's name and trade name. Store where directed in accordance with manufacturer's instructions.

1.05 PROJECT CONDITIONS:

Do not apply exterior materials during fog, rain or mist, or when inclement weather is expected within the dry time specified by the manufacturer. No exterior or interior painting shall be done until the surfaces are thoroughly dry and cured. Do not apply paint when temperature is below 50o F. Avoid painting surfaces when exposed to direct sunlight.

PART 2 - PRODUCTS

## 2.01 MANUFACTURERS:

- A. Manufacturer's catalog names and number of paint types in this Section herein are based on products manufactured or distributed by the Dunn-Edwards Corporation [www.dunnedwards.com](http://www.dunnedwards.com) and are the basis of design.

## 2.02 MATERIALS:

- A. Paints: Provide ready-mixed, except field catalyzed coatings. Pigments shall be fully ground maintaining soft paste consistency, capable of being readily and uniformly dispersed to complete homogeneous mixture. Paints shall have good flowing and brushing properties and be capable of drying or curing free of streaks and sags.
- B. Accessory Materials: Linseed oil, shellac, solvents, and other materials not specified but required to achieve required finishes shall be of high quality and approved by manufacturer.
- C. Colors shall be selected from color chip samples provided by manufacturer of paint system approved for use. Match approved samples for color, texture and coverage.
- D. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
- E. Restricted Components: Paints and coatings shall not contain any of the following.
1. Acrolein.
  2. Acrylonitrile.
  3. Antimony.
  4. Benzene.
  5. Butyl benzyl phthalate.
  6. Cadmium.
  7. Di (2-ethylhexyl) phthalate.
  8. Di-n-butyl phthalate.
  9. Di-n-octyl phthalate.
  10. 1,2-dichlorobenzene.
  11. Diethyl phthalate.
  12. Dimethyl phthalate.
  13. Ethylbenzene.
  14. Ethylene Glycol.
  15. Formaldehyde.
  16. Hexavalent chromium.
  17. Isophorone.
  18. Lead.
  19. Mercury.
  20. Methyl ethyl ketone.
  21. Methyl isobutyl ketone.
  22. Methylene chloride.
  23. Naphthalene.
  24. Toluene (methylbenzene).
  25. 1,1,1-trichloroethane.

26. Vinyl chloride.

2.04 MIXES:

- A. Mix, prepare, and store painting and finishing materials in accordance with manufacturer's directions.

PART 3-EXECUTION

3.01 EXAMINATION:

- A. Examine surfaces to be painted before beginning painting work. Work of other trades that has been left or installed in a condition not suitable to receive paint, stain other specified finish shall be repaired or corrected by the applicable trade before painting. Painting of defective or unsuitable surface implies acceptance of the surfaces.
- B. Beware of a condition known as critical lighting. This condition causes shadows that accentuate even the slightest surface variations. A pigmented sealer will provide tooth for succeeding decorative coating, but "does not" equalize smoothness or surface texture. Any corrective action to drywall must be done by the drywall contractor prior to decorating.

3.02 PROTECTION:

- A. Protect previously installed work and materials, which may be affected by Work of this Section.
  - 1. Protect prefinished surfaces, lawns, shrubbery and adjacent surfaces against paint and damage.
  - 2. Furnish sufficient drop cloths, shields, and protective equipment to prevent spray or splatter from fouling surfaces not being painted.
  - 3. Protect surfaces, equipment, and fixtures from damage resulting from use of fixed, movable and hanging scaffolding, planking, and staging.
- B. Provide wet paint signs, barricades, and other devices required to protect newly finished surfaces. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

3.03 PREPARATION:

- A. Perform preparation and cleaning procedures in strict accordance with coating manufacturer's instructions for each substrate condition.
- B. Concrete and Masonry: Clean all exterior walls and surfaces of loose and scaly paint, rust, mildew, dirt, dust, chalk, efflorescence, encrustation, and other foreign matter by waterblasting, followed by wire brushing, sanding and scraping as required to provide a clean, sound surface for the new paint coatings.. Glazed surfaces on concrete shall be roughened or etched to uniform texture.
- C. Ferrous Metal: Clean oil, grease, and foreign matter with solvent. Surface shall be primed within 3 hours after preparation.
- D. Sand and scrape metal to remove loose primer and rust.



- E. Non-Ferrous Metal: Chemically or solvent clean and then treat with an etching-type solution if recommended by the finish manufacturer. Cleaned and retreated Non-Ferrous Metal shall be primed the same day that cleaning has been performed.
- F. Wood Surfaces: Remove dust, grit and foreign matter. Sand surfaces and dust clean. Spot coat knots, pitch streaks, and sappy section with pigmented stain sealer when surfaces are to be painted. Fill nail holes, cracks and other defects after priming and spot prime repairs when fully cured.
- G. Remove hardware and accessories, machined surfaces, plates, lighting fixtures and similar items in place and not-to-be-finish painted, or provide surface-applied protection. Reinstall removed items upon completion of work in each area.
- H. Existing surfaces to be recoated shall be thoroughly cleaned and deglossed by sanding or other means prior to painting. Patched and bare areas shall be spot primed with same primer as specified for new work.

### 3.03 PREPARATION:

- A. Bare and covered pipes, ducts, hangers, exposed steel and ironwork, and primed metal surfaces of equipment installed under mechanical and electrical work shall be cleaned prior to priming.
- B. Preparation of other surfaces shall be performed following specific recommendations of the coatings manufacturer.
- C. Bond breakers and curing agents shall be removed and the surface cleaned before primers, sealers or finish paints can be applied.
- D. All drywall surfaces shall be completely dry and dust free before painting. Skim coated drywall shall be sealed with a sealer recommended by the paint manufacturer for this surface. Use the appropriate light or medium tack masking tape.

### 3.04 APPLICATION:

- A. Apply painting and finishing materials in accordance with the manufacturer's recommendations.
  - 1. The number of coats specified is the minimum that shall be applied. Apply additional coats when undercoats, stains or other conditions show through final paint coat, until paint film is of uniform finish, color and appearance.
- B. Apply each material at not less than the manufacturer's recommended spreading rate:
- C. Apply prime coat to surface which is required to be painted or finished.
- D. Finish exterior doors on tops, bottoms, and edges same as exterior faces, after fitting.
- E. Sand lightly and dust clean between succeeding coats.

### 3.05 CLEANING, TOUCH-UP AND REFINISHING:

- A. Carefully remove all spattering, spots and blemishes caused by work under this section from surfaces throughout the project.
- B. Upon completion of painting work remove all rubbish, paint cans, and accumulated materials resulting from work in each space or room. All areas shall be left in a clean, orderly condition.
- C. Runs, sags, misses, holidays, stains and other defects in the painted surfaces, including inadequate coverage and mil thickness shall be satisfactorily touched up, or refinished, or repainted as necessary.

3.06 FINISH SCHEDULE

- A. Apply the following finishes to the surfaces specified on the finish schedule or on the drawings. Apply all materials in accordance with manufacturer's instructions on properly prepared surfaces and foundation coats. All intermediate undercoats must be tinted to approximate the final color.

- B. Exterior Systems:

- 1. Wood – Plywood Eaves, T-111, Wood Beams, Wood Doors and Frames, Fascia, Tongue and Groove

- a. Semi-Gloss – 100% Acrylic

First Coat	EZ-PRIME Premium, Exterior Wood Primer (EZPR00)
Second Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)
Third Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)

Or

First Coat	ULTRA-GRIP Premium Primer/Sealer (UGPR00-1)
Second Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)
Third Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)

Only use EZ-Prime on bare wood. Use Ultra-Grip Premium Primer on previously painted substrates.

- 2. Ferrous Metal

- a. Semi-Gloss

First Coat	Ultrashield Galvanized Metal Primer (ULGM00-0-W)
Second Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)
Third Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)

- 3. Non-Ferrous Metal (Galvanized, Aluminum) Flashing, Corrugated Metal and Enclosures, Conduits, Louvered Vents, Galvanized Metal Awning, Metal End Caps, Conduit Covers

- a. Semi-Gloss – Alkyd / 100% Acrylic

First Coat	ROC Primer Rust-Oleum 263501-1
Second Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)
Third Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)

C. Interior Systems:

1. Wood – Doors, Door Trim, Painted Casework, etc.

Semi-Gloss – Alkyd Urethane

First Coat	EZ-PRIME Premium, Exterior Wood Primer (EZPR00)
Second Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)
Third Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)

2. Gypsum Board

Semi-Gloss

First Coat	EZ-PRIME Premium, Exterior Wood Primer (EZPR00)
Second Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)
Third Coat	EVERSHIELD, Exterior Semi-Gloss Paint (EVSH50)

3. Ferrous Metal

Semi-Gloss – Alkyd Urethane

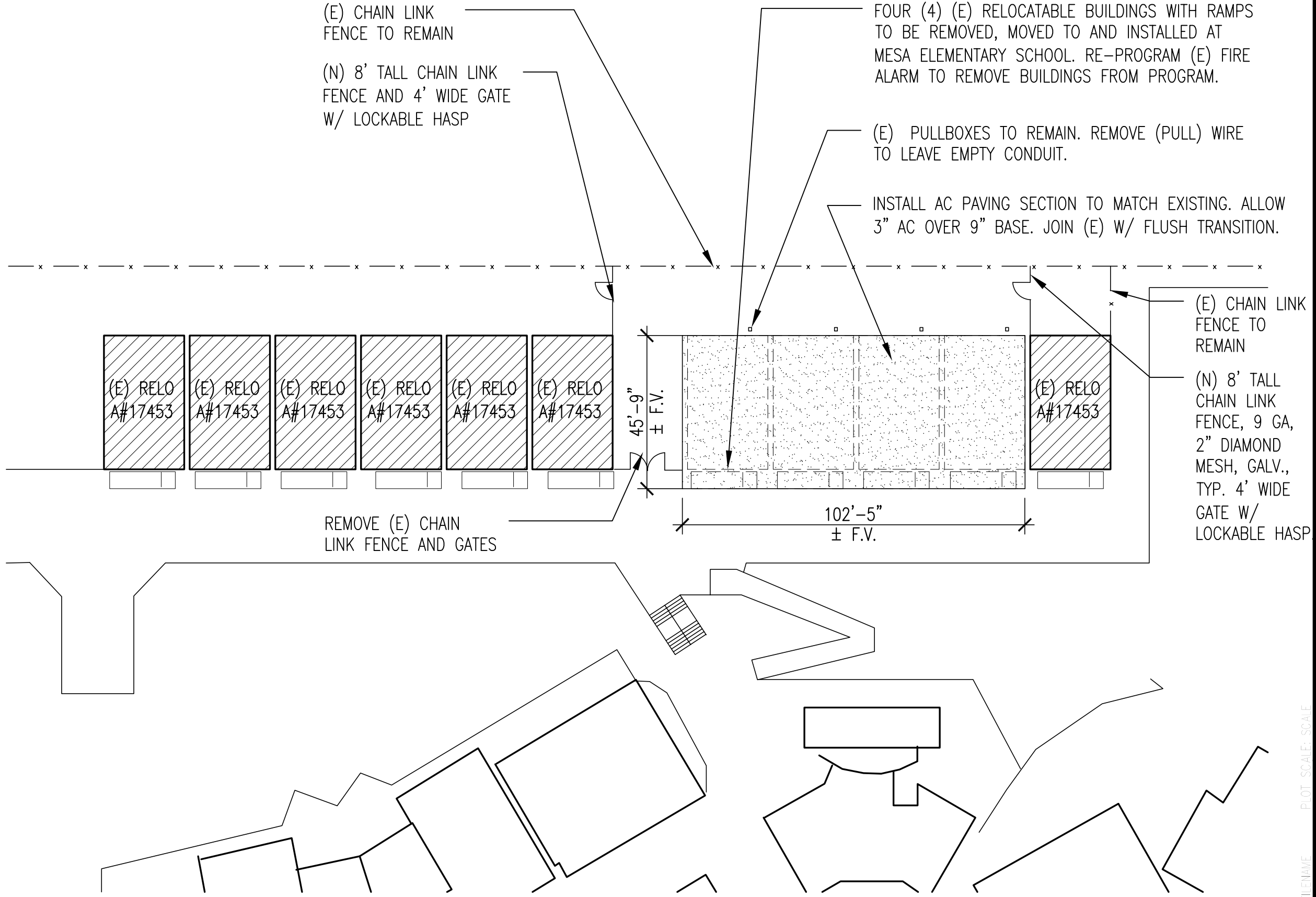
First Coat	Ultrashield Galvanized Metal Primer (ULGM00-0-WH)
Second Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)
Third Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)

4. Non-Ferrous Metal (Galvanized, Aluminum) Conduits, Ductwork, etc.

Semi-Gloss – Alkyd / 100% Acrylic

First Coat	ROC Primer Rust-Oleum 263501-1
Second Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)
Third Coat	Aristoshield Interior Exterior Semi-Gloss Paint (ASHL50)

END OF SECTION



(E) CHAIN LINK FENCE TO REMAIN

(N) 8' TALL CHAIN LINK FENCE AND 4' WIDE GATE W/ LOCKABLE HASP

FOUR (4) (E) RELOCATABLE BUILDINGS WITH RAMPS TO BE REMOVED, MOVED TO AND INSTALLED AT MESA ELEMENTARY SCHOOL. RE-PROGRAM (E) FIRE ALARM TO REMOVE BUILDINGS FROM PROGRAM.

(E) PULLBOXES TO REMAIN. REMOVE (PULL) WIRE TO LEAVE EMPTY CONDUIT.

INSTALL AC PAVING SECTION TO MATCH EXISTING. ALLOW 3" AC OVER 9" BASE. JOIN (E) W/ FLUSH TRANSITION.

(E) CHAIN LINK FENCE TO REMAIN

(N) 8' TALL CHAIN LINK FENCE, 9 GA, 2" DIAMOND MESH, GALV., TYP. 4' WIDE GATE W/ LOCKABLE HASP

REMOVE (E) CHAIN LINK FENCE AND GATES

45'-9" ± F.V.

102'-5" ± F.V.

FILE NO.: ELEMNAME PLOT SCALE: SCALE

**PROJECT**

MESA ELEMENTARY SCHOOL  
RELOCATION OF MODULAR CLASSROOMS  
COVINA VALLEY UNIFIED SCHOOL DISTRICT

**ADDENDUM-2**

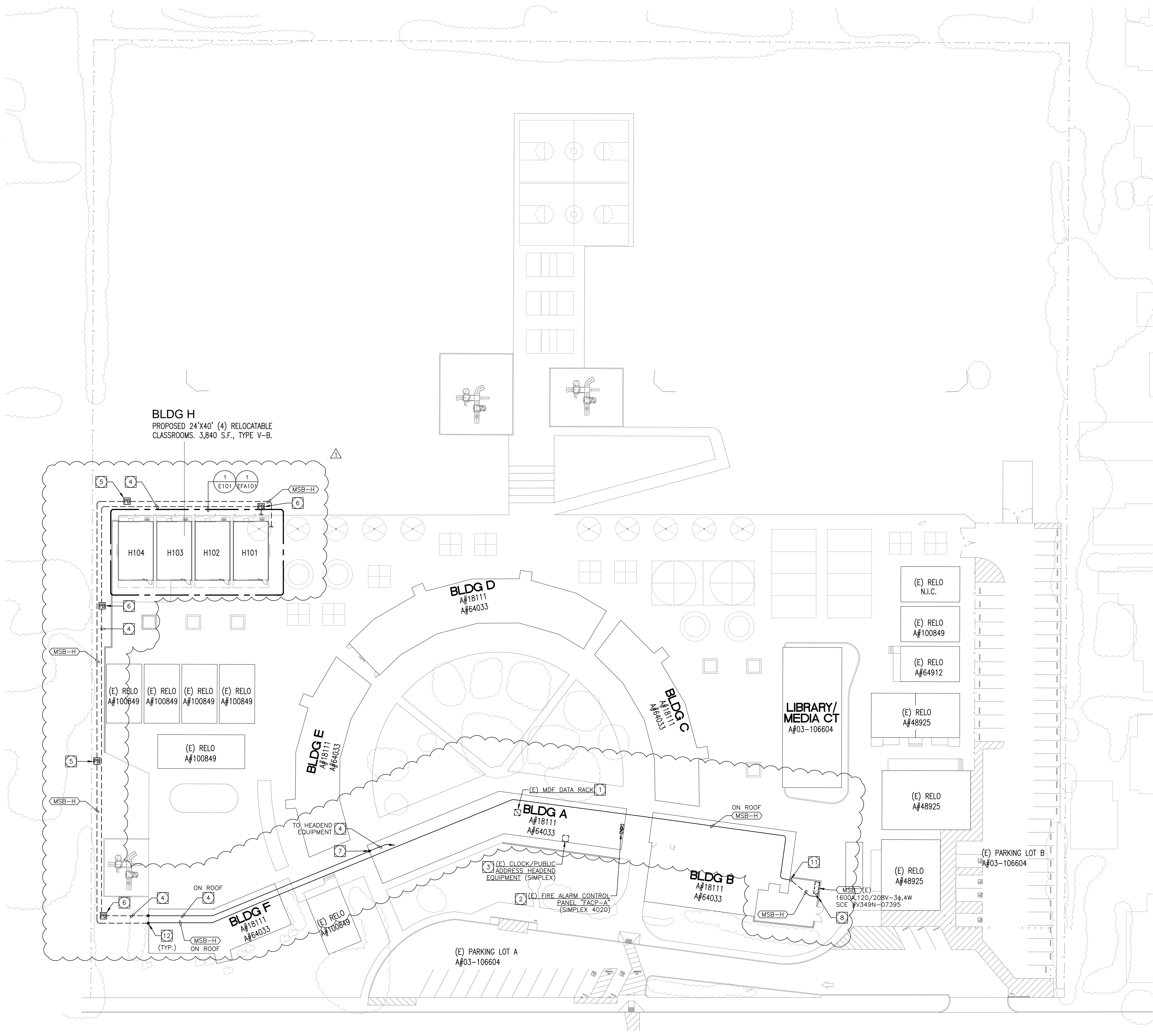
**SKETCH NO. SK-1**

Date: 04-15-19  
App. # 03-117500  
Scale: 1"=30'-0"

**DESCRIPTION**

PATCH BACK AT SIERRA VIST MIDDLE SCHOOL

**CBR** CHATRODE BRANNON ARCHITECTS  
Architecture • Planning • Interior Design  
11500 N. GARDEN ST. SUITE 200  
DANA POINT, CA 92629  
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BLDG H  
PROPOSED 24'X40' (4) RELOCATABLE  
CLASSROOMS, 3,840 S.F., TYPE V-B.

BARRANCA STREET

**SITE UTILITY PLAN  
CONSTRUCTION NOTES:**

- THESE NOTES ESTABLISH MINIMUM QUALITY LEVELS AND COORDINATION REQUIREMENTS. RESPECTIVE UTILITY COMPANY PLANS AND REQUIREMENTS TAKE PRECEDENCE OVER THESE NOTES WITH REGARD TO RESPECTIVE UTILITY COMPANY CONDUIT AND UNDERGROUND STRUCTURE SYSTEMS.
- CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
  - COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
  - VAULTS, MAINTENANCE HOLES (MH's), FORMERLY KNOWN AS MANHOLES, AND CONDUITS SHALL MAINTAIN A MINIMUM COVER OF 24" BELOW FINAL SURFACE AT ALL CONDITIONS. INCLUDE ALL COSTS IN BASE BID TO MEET UTILITY COMPANY REQUIREMENTS WHICH MAY REQUIRE GREATER MINIMUM CONDUIT DEPTHS.
  - VAULTS, MH'S AND PULLBOXES (PB'S) SHALL BE EQUIPPED WITH KNOCKOUT PANELS OR PRE-CAST INDIVIDUAL CONDUIT OPENINGS. CONDUITS SHALL ONLY ENTER AND EXIT ON END/SHORT WALLS. CONDUITS MAY NOT ENTER AND EXIT ON SIDE/LONG WALLS, CEILINGS OR FLOORS UNLESS OTHERWISE NOTED.
  - CUT DUCTS FLUSH WITH INTERIOR VAULT/MH/PB WALL.
  - SLURRY BACKFILL AROUND DUCTS WITHIN 5 FEET OF VAULT/MH/PB TO PREVENT SHEARING.
  - CONDUITS PASSING UNDER THE BUILDING PERIMETER SHALL BE ENCASED IN LIGHTWEIGHT CONCRETE OR WATER-IMPERVIOUS CLAY TO PREVENT WATER INFILTRATION. SEE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
  - CONDUIT BEND RADIUS FOR BUILDING ENTRANCES AND AT POLES SHALL BE A MINIMUM OF 24" FOR CONDUITS WITH LESS THAN 2" INTERNAL DIAMETER AND A MINIMUM OF 48" FOR CONDUITS WITH MORE THAN 2" INTERNAL DIAMETER.
  - PREFERRED CONDUIT SWEEP RADIUS BETWEEN VAULTS IS 25 FEET. UNDER NO CIRCUMSTANCES SHALL THE CONDUIT SWEEP RADIUS BE LESS THAN 12.5 FEET. MAXIMUM OF 90 DEGREES PER SWEEP AND LIMITED TO NO MORE THAN 2) 90 DEGREE SWEEPS BETWEEN VAULTS.
  - VAULTS/MH'S/PB'S ARE TO BE EQUIPPED WITH RACKING, GROUNDING LUGS, AND BOLT-DOWN LIDS UNLESS OTHERWISE NOTED.
  - VAULTS AND MH'S TO BE EQUIPPED WITH ROUND COVERS, EXTENSION RINGS AS REQUIRED, LADDERS AND (3) SEGMENTS OF 6 FOOT HIGH CABLE RACKING PER EACH LONG WALL.
  - LABEL ALL NON-UTILITY COMMUNICATION VAULT/MH/PB COVERS WITH "COMMUNICATIONS" UNLESS OTHERWISE NOTED ON PLANS.
  - COORDINATE FINAL VAULT/MH/PB OPENING HEIGHT WITH G.C. PRIOR TO ROUGH-IN TO ENSURE FINAL GRADE DOES NOT SLOPE INTO VAULT/MH/PB OPENING.
  - CONTRACTOR TO PROVIDE A MINIMUM OF 8" DEEP COMPACTED 1/2" DIAMETER GRAVEL UNDER ALL VAULTS, MH'S OR PB'S TO ENSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON THE FLOOR AND BE ABLE TO DISSIPATE WATER OUT OF THE VAULT, MH OR PB.
  - ALL VAULTS/MH'S/PB'S WITHOUT GROUNDING LUGS SHALL HAVE AN 8" x 3/4" COPPER GROUND ROD DRIVEN THRU THE FLOOR TO ALLOW GROUNDING OF ITEMS WITHIN.
  - ALL VAULTS/MH'S/PB'S SHALL BE PROVIDED WITH TRAFFIC RATED COVERS WHEN LOCATED IN PAVED AREAS UTILIZED FOR VEHICLE TRAFFIC.
  - IF THE WATER OR MOISTURE BARRIER ON OR NEAR THE FOUNDATION OF A BUILDING IS DISTURBED IN ANY MANNER BY EXCAVATION OR OTHER CONSTRUCTION WORK, THE MOISTURE BARRIER MUST BE REPAIRED FOLLOWING THE RECOMMENDATIONS OF THE MANUFACTURER OF THE ORIGINAL BARRIER PRODUCT.
  - THE CONTRACTOR SHALL INCLUDE IN BASE BID ALL COSTS TO COMPLY WITH ALL REQUIREMENTS FOR CONFINED SPACE ENTRY PER THE OSHA REQUIREMENTS 29 CFR-1910.146, 29 CFR-1910.268, ETC. DURING ANY CONFINED SPACE ENTRY.
  - ANY DUCTS LEAVING A VAULT, MH OR PB ROUTED INTO A FACILITY SHALL BE PLUGGED AT EACH END USING REMOVABLE MECHANICAL PLUGS DESIGNED TO PREVENT WATER AND GAS FROM ENTERING THE FACILITY.
  - SEE ELECTRICAL SPECIFICATIONS AND PLAN DETAILS FOR ADDITIONAL REQUIREMENTS REGARDING UNDERGROUND CONDUITS AND IN-GRADE VAULT/MH/PB/JUNCTION BOXES.

**SITE PLAN GENERAL NOTES:**

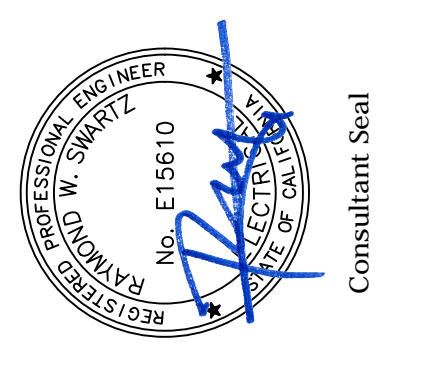
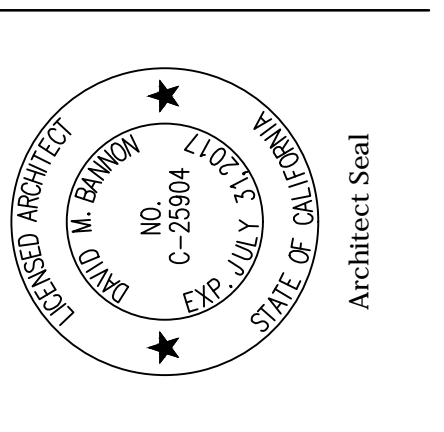
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING OR CONDUITS, ETC., AND TO PREVENT HAZARDS TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.
- CALL UNDERGROUND SERVICE ALERT (USA) AT 1 (800) 422-4133 OR APPLICABLE STATE AND LOCAL DIG SAFE OR UNDERGROUND ALERT HOTLINES PRIOR TO CONSTRUCTION START.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" - U.O.N.
- MINIMUM CONDUCTOR SIZE SHALL BE #10 AWG. - U.O.N.
- ALL SITE BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR THAT, AT MINIMUM, MATCHES THE SIZE OF THE ASSOCIATED BRANCH CIRCUIT CONDUCTOR WHERE MULTIPLE BRANCH CIRCUITS ARE ROUTED/GROUPED TOGETHER, THE EQUIPMENT GROUNDING CONDUCTOR SHALL MATCH THE SIZE OF THE LARGEST BRANCH CIRCUIT CONDUCTOR IN THE GROUP.
- ALL ELECTRICAL EQUIPMENT MOUNTED OUTDOORS SHALL BE WEATHERPROOF (NEMA #3R).
- ALL CONDUIT ONLY SHALL BE PROVIDED WITH A NYLON PULL STRING.
- SEE ARCHITECTURAL/LANDSCAPE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF FIXTURES, PULLBOXES, MANHOLES, OTHER ELECTRICAL DEVICES, ETC. COORDINATE ALL UNDERGROUND STRUCTURES AND CONDUIT ROUTING WITH LANDSCAPE ARCHITECT PRIOR TO ROUGH-IN TO ENSURE THAT SUCH ITEMS ARE NOT PLACED IN CRITICAL LANDSCAPE PLANTING/HARDSCAPE AREAS.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.

KEYNOTES GENERALLY CORRESPOND TO SPECIFICATION SECTIONS BY MEANS OF THE FIVE-DIGIT NUMBER IDENTIFYING THE SPECIFICATION SECTION AS A MATTER OF REFERENCE AND CONVENIENCE. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WORK INDICATED HEREIN PERMANENT TO THE GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS OF THE CONTRACT, REGARDLESS OF WHETHER OR NOT THE KEYNOTES(S) SPECIFICALLY CORRESPOND TO ANY SPECIFICATION DIVISION PROVIDED IN THE TECHNICAL SPECIFICATIONS.

**PLAN NOTES:**

- MODIFY EXISTING DATA MFD RACK AS REQUIRED TO SERVE THE NEW CONSTRUCTION. PROVIDE ADDITIONAL FIBER ENCLOSURES, PATCH PANELS, CONNECTION, ETC. AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM.
- EXISTING FIRE ALARM CONTROL PANEL TO REMAIN PROTECTED IN PLACE. MODIFY EXISTING FIRE ALARM PANEL AS REQUIRED TO INTERCONNECT WITH NEW FIRE ALARM CONTROL PANEL. PROVIDE ADDITIONAL HARDWARE, PROGRAMMING, CONNECTIONS, ETC. AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM.
- MODIFY EXISTING HEADEND EQUIPMENT AS REQUIRED TO SERVE THE NEW CONSTRUCTION. PROVIDE ADDITIONAL HARDWARE, CONNECTIONS, ETC. AS NEEDED FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY EXACT LOCATION IN MAIN SIGNAL ROOM IN FIELD.
- PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUITS WITH CONDUCTORS AS SPECIFIED:  
3" C. DATA/TELEPHONE  
2" C. CLOCK/PUBLIC ADDRESS  
2" C. FIRE ALARM  
1" C.O. EMS  
1" C.O. SPARE
- PROVIDE 2'x3' CONCRETE PULLBOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "POWER". DEPTH AS REQUIRED.
- PROVIDE ONE (1) 2'x3' AND ONE (1) 11"x17" CONCRETE PULLBOXES WITH BOLT-DOWN TRAFFIC RATED COVERS, ENGRAVED "SIGNAL" AND "FIRE ALARM", RESPECTIVELY. DEPTHS AS REQUIRED.
- ROUTE CONDUIT FROM ROOF EXPOSED ON BUILDING EXTERIOR TO AN ELEVATION ABOVE THE ACCESSIBLE CEILING SPACE. PROVIDE A WEATHERPROOF "LB" FITTING AND SEALED PENETRATION THROUGH THE BUILDING EXTERIOR AS REQUIRED TO PERFORM WORK INDICATED. PAINT CONDUIT TO MATCH THE SURROUNDING SURFACE.
- PROVIDE NEMA-3R ENCLOSURE MOUNTED ON WALL ADJACENT TO "MSB". PROVIDE ONE (1) 400A CIRCUIT BREAKER WITHIN ENCLOSURE TO SERVE NEW CONSTRUCTION. 10'-0" MAX TAP DISTANCE. REFER TO SINGLE LINE DIAGRAM ON SHEET E201 FOR FURTHER INFORMATION.
- PROVIDE ONE (1) 2'x3' AND ONE (1) 11"x17" NEMA 3R PULLBOXES ON TOP OF EXISTING ROOF. DEPTHS AS REQUIRED.
- PROVIDE ONE (1) 2'x3' NEMA 3R PULLBOX ON TOP OF EXISTING ROOF. DEPTH AS REQUIRED.
- ROUTE CONDUIT FROM BELOW GRADE EXPOSED ON BUILDING EXTERIOR TO ROOF. PAINT CONDUIT TO MATCH THE SURROUNDING SURFACE.
- ROUTE CONDUIT FROM ROOF EXPOSED ON BUILDING EXTERIOR TO BELOW GRADE. PAINT CONDUIT TO MATCH THE SURROUNDING SURFACE.

**GHATRODE BRANNON ARCHITECTS**  
Architecture • Planning • Interior Design  
11000 BARRANCA STREET, SUITE 100  
COSTA MESA, CA 92627  
Tel: 714.445.8827  
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Architect Seal



**MESA ELEMENTARY SCHOOL - MODULAR CLASSROOMS**  
409 S. BARRANCA STREET, WEST COVINA, CA 91791  
COVINA-VALLEY UNIFIED SCHOOL DISTRICT

REVISIONS:

NO.	DATE	DESCRIPTION
1		ADDENDUM #1

Date: 04/11/19  
Job: 1633  
Scale: AS NOTED  
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**ASSISTIVE LISTENING SYSTEM:**

PROVIDE PORTABLE ASSISTIVE LISTENING SYSTEM BY LISTEN TECHNOLOGIES OR EQUIVALENT AS SPECIFIED HEREIN. THE LT-700 TRANSMITTERS AND LR-400 RECEIVERS SHALL PROVIDE AMPLIFICATION WITHIN A ROOM FOR INDIVIDUALS WITH NORMAL HEARING AND FOR THOSE WITH MINIMUM TO MILD HEARING LOSS IN 10 TO 25 dB RANGE. THE RECEIVERS SHALL BE ABLE TO AMPLIFY THE SPEAKER'S VOICE 100-120 dB ABOVE ROOM NOISE. THEY SHALL HAVE AN AUXILIARY INPUT JACK TO BROADCAST EXTERNAL SOUNDS FROM AN AUDIBLE DEVICE OR TELEVISION. THE RECEIVERS SHALL HAVE AN AUXILIARY VOLUME CONTROL TO CONTROL THE SOUND LEVEL OF INPUT RECEIVED FROM EXTERNAL SOURCES. THE UNITS SHALL HAVE AN FM VOLUME CONTROL TO ALLOW FOR ADJUSTMENT OF THE SOUND LEVEL OF THE FM SIGNAL RECEIVED FROM THE LT-700 WIRELESS TRANSMITTER. THE RECEIVER MUST HAVE A TONE CONTROL TO ADJUST THE FREQUENCY RESPONSE FOR A VARIETY OF USERS AND LISTENING ENVIRONMENTS. THEY SHALL HAVE COLOR-CODED SPEAKER OUTPUT TERMINALS AND MUST BE CAPABLE OF RECEIVING ANY OF 40FC AND INDUSTRY CANADA APPROVED NARROW BAND CHANNEL IN THE 72 TO 76 MHZ RANGE. PROVIDE TRANSMITTERS AND RECEIVERS WITH RECHARGEABLE BATTERIES. LISTENING ACCESSORIES AND CHARGING UNITS EQUAL TO 4% OF THE TOTAL SEATING BUT NO LESS THAN A QUANTITY OF TWO. LA-323 OR LA-321 AS REQUIRED. LISTENING ACCESSORIES SHALL INCLUDE STANDARD EAR SPEAKERS #LA-164; STENOCLIPS #LA-220; LAVALIER MICROPHONES #LA-261 AND CARRYING CASES #LA-323 OR LA-321 AS REQUIRED. REFER TO ARCHITECTURAL FLOOR PLANS FOR MINIMUM OCCUPANCY SEATING.

**POWER PLAN GENERAL NOTES:**

- ALL RECEPTACLES ON COMMON WALLS SHALL BE SEPARATE BOXES AND OFFSET 24" MINIMUM.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRESTOP SYSTEM EQUAL OR GREATER THAN THE FIRE RATING OF THE WALL.
- ALL WALL-MOUNTED DEVICE HEIGHTS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- ALL FURNITURE FEED LOCATIONS TO BE VERIFIED WITH ARCHITECT AND FURNITURE VENDOR PRIOR TO ROUGH-IN.
- ALL FURNITURE WHIPS SHALL BE TRIMMED TO REDUCE EXCESS WHIP LENGTH.
- WHEN EXPOSED CEILINGS OR OPEN GRID CONDITIONS OCCUR, THE CONTRACTOR WILL NEED TO PROVIDE THE FOLLOWING ITEMS:
  - ALL BRANCH CIRCUITS SHALL BE IN EMT.
  - ALL BRANCH CIRCUITS SHALL BE ROUTED NEATLY AND IN PARALLEL TO STRUCTURES OR DUCT WORK.
- EXPOSED CABLE/CONDUCTORS INSTALLED IN A PLENUM SPACE SHALL CONFORM TO NEC, OR CEC WHERE ADOPTED, ARTICLE 300.22(C).
- PROVIDE G.F.C.I. TYPE RECEPTACLE(S) OR RECEPTACLE(S) PROTECTED BY A GFCI CIRCUIT BREAKER(S) WHEN LOCATED WITHIN 6 FEET OF ANY SINK OR THERAPEUTIC TUB, SERVING ANY DRINKING FOUNTAIN OR VENDING MACHINE, WITHIN ANY KITCHEN SPACE AND/OR LOCATED OUTDOORS, WHERE RECEPTACLES ARE NOT READILY ACCESSIBLE. PROVIDE GFCI CIRCUIT BREAKER(S) TO PROTECT THE RESPECTIVE BRANCH CIRCUIT AND PROVIDE ADDITIONAL NEUTRAL CONDUCTORS IN THE BRANCH CIRCUITING AS REQUIRED TO ENSURE PROPER GFCI FUNCTION.
- PROVIDE OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM CONTROLLED RECEPTACLE RELAY(S) AS REQUIRED TO SWITCH CONTROLLED RECEPTACLES. CONNECT BRANCH CIRCUITRY AND CONTROL WIRING AS REQUIRED TO ALLOW OCCUPANCY SENSOR/LIGHTING CONTROL SYSTEM RELAY TO SWITCH STANDALONE AND/OR SYSTEMS FURNITURE CONTROLLED RECEPTACLES AS INDICATED ON PLANS. PROVIDE ADDITIONAL CONDUIT, WIRING AND PATHWAYS NECESSARY TO CONNECT BRANCH CIRCUITRY AND CONTROL WIRING TO REMOTE RELAYS TO INCLUDE RELAY(S) LOCATED ON ALTERNATE FLOORS, IN ELECTRICAL ROOMS, ETC.
- PROVIDE ADDITIONAL J-BOX NEAR PANEL FOR MULTIPLE HOMERUN CIRCUITRY.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
- PROVIDE REDUNDANT GROUND PATH IN ALL BRANCH CIRCUITS SERVING PATIENT CARE AREAS CONSISTING OF A SEPARATE, INSULATED EQUIPMENT GROUNDING CONDUCTOR PER NEC, OR CEC WHERE ADOPTED, ART 517.13.

**COMMUNICATIONS PATHWAYS GENERAL NOTES:**

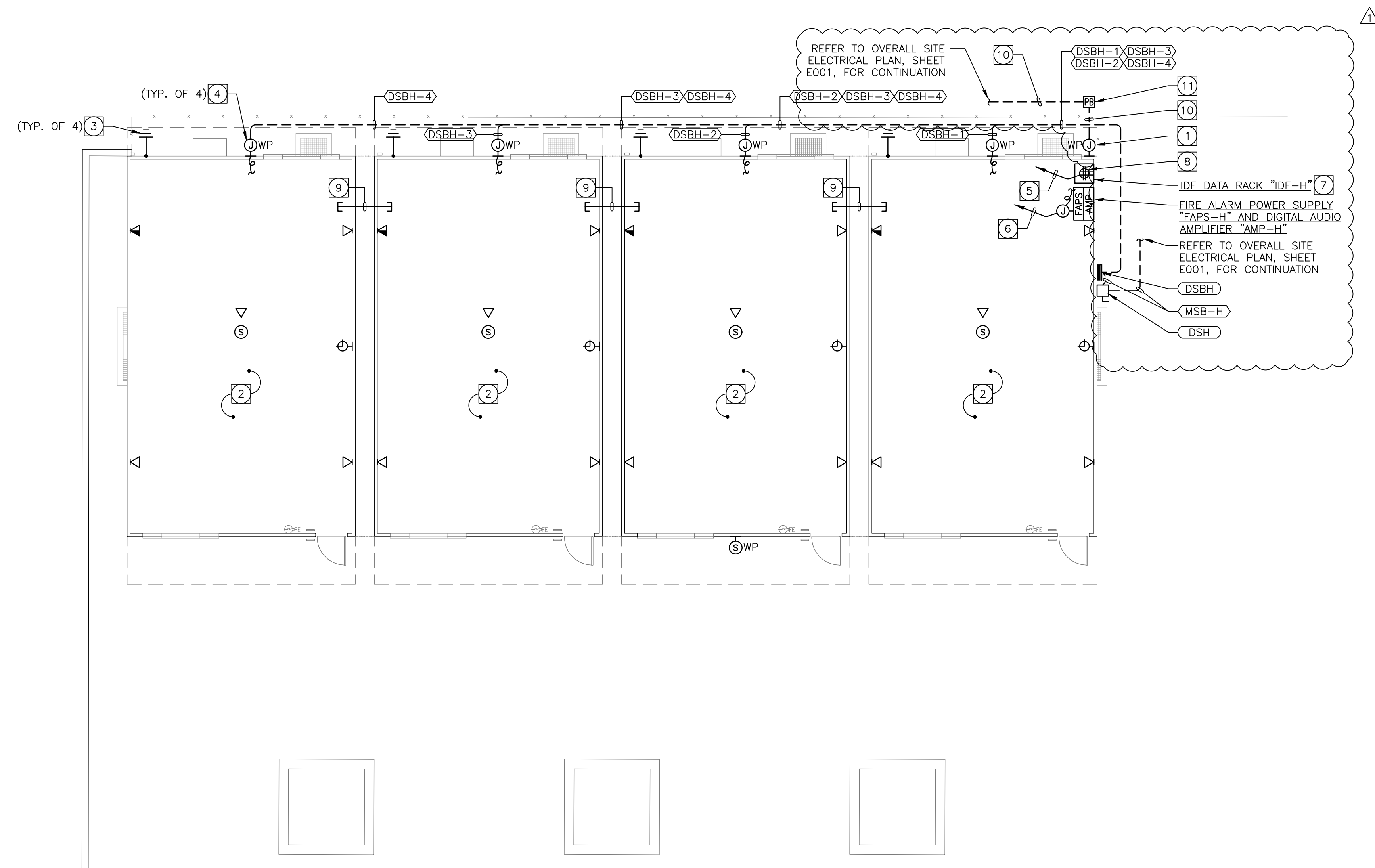
- CONDUITS SHALL, (a) CONTAIN NO CONTINUOUS SECTIONS LONGER THAN 30' (98 FT.), AND (b) CONTAIN NO MORE THAN (2) 90° BENDS OR (1) REVERSE BEND WITHOUT INSTALLING A PULLBOX. SPLIT CONDUITS IN PLACE OF PULLBOXES ARE UNACCEPTABLE.
- CONDUITS SHALL CONTAIN PLASTIC OR NYLON PULL TAPE RATED AT 200 LBS. WITH MINIMUM OF 5 FEET OF EXTRA PULL TAPE COILED AT EACH END.
- CONDUIT BEND RADIUS SHALL BE (a) A MINIMUM OF 6 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS 2" IN DIAMETER OR LESS, AND, (b) 10 TIMES THE INTERNAL CONDUIT DIAMETER FOR CONDUITS MORE THAN 2" IN DIAMETER.
- TERMINATE CONDUIT STUBS AND SLEEVES THAT PROTRUDE THROUGH STRUCTURAL FLOORS 2"-3" ABOVE THE FLOOR SURFACE.
- INSTALL BUSHINGS OR BELL ENDS AS REQUIRED ON ALL CONDUITS.
- FLEX CONDUIT IS UNACCEPTABLE FOR USE AS A COMMUNICATIONS CONDUIT EXCEPT AT SEISMIC JOINTS AND/OR IF APPROVED IN WRITING BY THE ENGINEER.
- ALL UNDER SLAB OR IN-SLAB CONDUITS SHALL BE INSTALLED IN A MANNER THAT PREVENTS WATER INFILTRATION OF THE CONDUIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE GROUND WATER, RAIN WATER OR CONSTRUCTION WATER IS PREVENTED FROM ENTERING AND/OR REMOVED FROM THE CONDUITS PRIOR TO PLACEMENT OF COMMUNICATIONS CABLES. SEE ELECTRICAL SPECIFICATIONS, DETAILS AND PLANS FOR ADDITIONAL CONDUIT SEALING REQUIREMENTS.
- ALL PULLBOXES SHALL BE SIZED AND INSTALLED PER ANSI-TIA-569-C. PULLBOXES FOR IN/UNDER SLAB CONDUIT RUNS ARE NOT PERMITTED UNLESS OTHERWISE NOTED. PULLBOXES FOR OVERHEAD CONDUIT RUNS SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS WITHIN THE ACCESSIBLE CEILING SPACE AND SUPPORTED INDEPENDENTLY FROM THE STRUCTURE AND CONDUIT SUPPORTS. PULLBOXES FOR ROOF MOUNTED OR EXTERIOR ABOVE GRADE APPLICATIONS SHALL BE NEMA 3R RATED. PULLBOXES SHALL BE SIZED ACCORDING TO THE FOLLOWING:
 

CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	6"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"
- CONDUIT(S) SHALL EXIT A PULLBOX ON THE WALL OPPOSITE THE WALL ENTERED.
- PROVIDE LABELING OF EACH CONDUIT PER GENERAL ELECTRICAL SPECIFICATIONS.
- PROVIDE INTERNAL/EXTERNAL GAS AND WATER TIGHT MECHANICAL SEALING/PLUGGING OF EACH BUILDING ENTRY CONDUIT AS SPECIFIED ELSEWHERE IN THE DRAWINGS AND SPECIFICATIONS.

KEYNOTES GENERALLY CORRESPOND TO SPECIFICATION SECTIONS BY MEANS OF THE FIVE-DIGIT NUMBER IDENTIFYING THE SPECIFICATION SECTION AS A MATTER OF REFERENCE AND CONVENIENCE. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WORK INDICATED HEREIN PERSANT TO THE GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS OF THE CONTRACT, REGARDLESS OF WHETHER OR NOT THE KEYNOTES SPECIFICALLY CORRESPOND TO ANY SPECIFICATION DIVISION PROVIDED IN THE TECHNICAL SPECIFICATIONS.

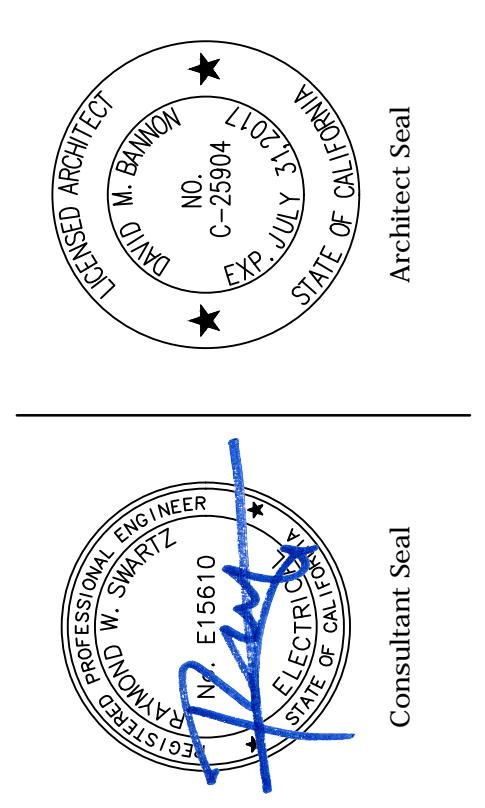
**PLAN NOTES:**

- PROVIDE ONE (1) 24"x24"x6"D. (DATA/TELEPHONE) AND THREE (3) 12"x12"x6"D. (CLOCK/PUBLIC ADDRESS, FIRE ALARM, EMS/SPARE) NEMA 3R TERMINAL CABINETS WITH SCREW COVER FOR LOW VOLTAGE SYSTEMS. PROVIDE 3°C. (DATA) & (3) 2°C. TO RELOCATABLE BUILDING ACCESSIBLE CEILING SPACE.
- VERIFY LOCATION OF SIGNAL DEVICES WITHIN CLASSROOM WITH DISTRICT AND RELOCATABLE BUILDING MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE GROUNDING PER DETAIL 3, SHEET E301.
- CONNECT TO RELOCATABLE BUILDING PANELBOARD PER MANUFACTURERS REQUIREMENTS.
- PROVIDE 3/4"C. WITH 2#12, 1#12 GRD. TO 120V DEDICATED CIRCUIT WITHIN BUILDING PANEL FOR POWER. PROVIDE ONE (1) 20AMP, 1-POLE CIRCUIT BREAKER IN SPACE OF BUILDING PANEL AND CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED.
- PROVIDE 3/4"C. WITH 3#12, 1#12 GRD. TO (2) 120V DEDICATED CIRCUITS WITHIN BUILDING PANEL FOR POWER. PROVIDE 20AMP, 1-POLE CIRCUIT BREAKERS IN SPACE OF BUILDING PANEL WITH APPROVED LOCK-ON DEVICES, RED INDICATOR AND IDENTIFIED AS "FIRE ALARM CONTROL CIRCUIT" (NFPA 72, 10.6). CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED.
- MOUNT IDF DATA RACK ON WALL AS HIGH AS POSSIBLE.
- PROVIDE RECEPTACLE MOUNTED WITHIN DATA RACK.
- PROVIDE THE FOLLOWING CONDUIT SLEEVES WITH CONDUCTORS AS SPECIFIED. SEE DETAIL 4, SHEET E301.
  - 2"C. DATA/TELEPHONE
  - 2"C. CLOCK/PUBLIC ADDRESS
  - 1"C. FIRE ALARM
  - 1"C.O. SPARE
- PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUITS WITH CONDUCTORS AS SPECIFIED:
  - 3"C. DATA/TELEPHONE
  - 2"C. CLOCK/PUBLIC ADDRESS
  - 2"C. FIRE ALARM
  - 1"C.O. SPARE
- PROVIDE ONE (1) 2'x3' AND ONE (1) 11"x17" CONCRETE PULLBOXES WITH BOLT-DOWN TRAFFIC RATED COVERS, ENGRAVED "SIGNAL" AND "FIRE ALARM", RESPECTIVELY. DEPTHS AS REQUIRED.



CONDUIT SIZE	WIDTH	LENGTH	DEPTH	WIDTH INCREASE PER ADDITIONAL CONDUIT
1"	4"	16"	3"	2"
2"	6"	36"	4"	5"
3"	12"	48"	5"	6"
4"	15"	60"	8"	8"

FOR OTHER CONDUIT SIZES REFER TO ANSI/TIA-569-C TABLE 12. - LATEST PUBLISHED EDITION.



REVISIONS:

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Date: 04/11/19  
 Job: 1633  
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### FEEDER SCHEDULE

FEEDER	CONDUIT AND CONDUCTORS	LOAD	DISTANCE	V.D. (%)	A.I.C.	NOTES
MSB-H	(3) 4" C-4#500MCM, 1#2/0 GRD.	224A	1050'	1.75%	8,039A	
DSBH-1	2" C-4#1, 1#8 GRD.	56A	30'	0.18%	7,502A	
DSBH-2	2" C-4#1, 1#8 GRD.	56A	60'	0.35%	6,002A	
DSBH-3	2" C-4#1, 1#8 GRD.	56A	90'	0.53%	5,002A	
DSBH-4	2" C-4#1, 1#8 GRD.	56A	120'	0.71%	4,288A	
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### GENERAL FEEDER SCHEDULE NOTES:

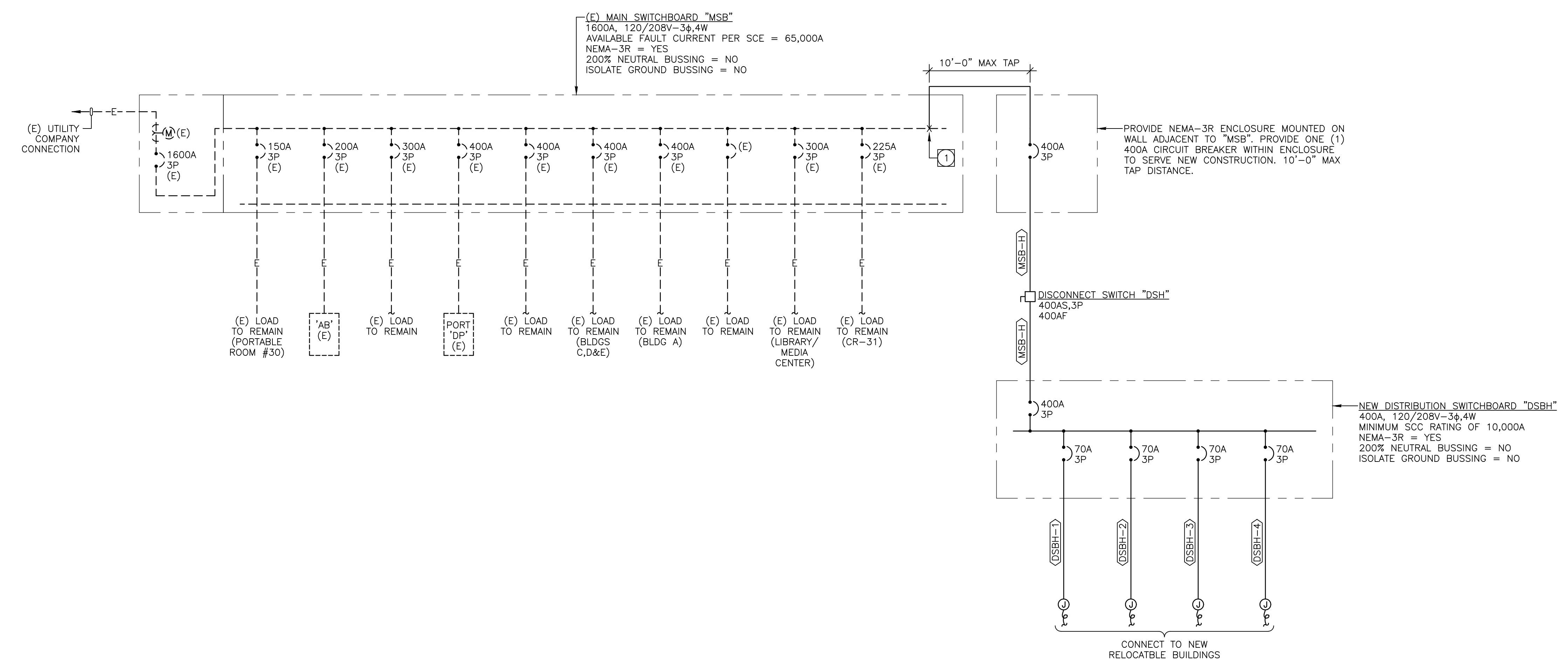
- ALL FEEDERS SHOWN, UNLESS SPECIFICALLY NOTED OTHERWISE, ARE PRESUMED TO BE ROUTED IN METAL RACEWAYS. IF P.V.C. CONDUITS ARE UTILIZED, THE CONTRACTOR SHALL PROVIDE AN EQUIPMENT GROUND PER NEC, OR CEC WHERE ADOPTED, TABLE 250.122 OR, WHERE REQUIRED, PROVIDE A MAIN BONDING JUMPER PER TABLE 250.66 AND INCREASE THE CONDUIT SIZE ACCORDINGLY.
- LOADS INDICATED WITH " ( ) " REPRESENT WORST CASE LOAD IN AMPS.
- DISTANCE SHOWN IS FOR DESIGN PURPOSES ONLY. IT IS NOT A MATERIAL TAKEOFF.
- VOLTAGE DROP VALUE INDICATED IS AT THE END OF THE FEEDER.
- AVAILABLE FAULT CURRENT VALUE AT THE END OF THE FEEDER INDICATED. CALCULATIONS ARE BASED UPON INITIAL VALUES RECEIVED FROM THE SERVING UTILITY AND THE LENGTH AND IMPEDANCE OF THE FEEDER.

### GENERAL SINGLE LINE DIAGRAM NOTES:

- ALL SWITCHGEAR SHALL BE SQUARE D OR EQUAL BY CUTLER-HAMMER, RSE-SIERRA, G.E., SIEMENS, OR Z-POWER & DISTRIBUTION.
- ALL ITEMS DEPICTED ON THE SINGLE LINE DRAWINGS SHALL BE ASSUMED AS NEW U.O.N.
- ALL OVERCURRENT DEVICES IN AN INDIVIDUAL PIECE OF EQUIPMENT SHALL HAVE AN AIC RATING EQUAL TO THE OVERALL RATING OF THE EQUIPMENT-SERIES RATING OF DEVICES WITHIN A PIECE OF EQUIPMENT IS NOT ALLOWED. SEE SPECIFICATIONS FOR MORE INFORMATION.
- SERIES RATED DEVICES SHALL HAVE BEEN INVESTIGATED BY UL IN COMBINATION WITH THE END USE EQUIPMENT AND IN THE EQUIPMENT IN WHICH THESE DEVICES ARE USED SHALL BE MARKED WITH A SERIES RATING. ALL EQUIPMENT SHALL BE MARKED IN ACCORDANCE WITH NEC (OR CEC-WHERE ADOPTED) REQUIREMENTS. SEE SPECIFICATIONS FOR MORE INFORMATION. WHERE SERIES RATINGS ARE ALLOWED, THE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE A SERIES COMBINATION RATING. WHICH SHALL BE READILY VISIBLE AND STATE THE FOLLOWING:  
**CAUTION - SERIES COMBINATION SYSTEM RATED AT ??,???, AMPERES. USE ONLY IDENTIFIED REPLACEMENT COMPONENTS IN THIS SYSTEM.**
- WHERE ??,???, REPRESENTS AVAILABLE FAULT CURRENT. SEE SPECIFICATIONS FOR PLACARD REQUIREMENTS.
- ALL TERMINATIONS AND ENCLOSURES SHALL BE RATED FOR USE WITH 75 DEGREE CELSIUS CONDUCTORS.
- ALL SERVICE ENTRANCE EQUIPMENT RATED AT 400A OR GREATER SHALL BE PROVIDED WITH A BACKFEED-RATED, SOLID STATE MAIN OVERCURRENT DEVICE AND BUSSING RATED AT 100% OPERATION (1000A/94 IN. FOR CU, 750A/94 IN. FOR AL). NO HEAT RISE, RATED BUSSING ALLOWED. NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARDS LARGER THAN 600A SHALL BE PROVIDED WITH BUSSING RATED FOR 100% OPERATION - SEE SPECIFICATION FOR CIRCUIT BREAKER REQUIREMENTS. ALL NON-SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION BOARD MAIN OVERCURRENT DEVICES SHALL BE BACKFEED-RATED. BACKFEED RATINGS SHALL COMPLY WITH NEC OR CEC WHERE ADOPTED, 690.10 (E) & 705.12(D)(5). SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS REGARDING CIRCUIT BREAKERS.
- ALL SWITCHBOARDS AND DISTRIBUTION BOARDS SHALL HAVE:
  - TIN-PLATED ALUMINUM BUSSING WITH RECTANGULAR CROSS SECTION. HORIZONTAL AND VERTICAL BUSSING SHALL BE FULL LENGTH AND SHALL HAVE PROVISIONS FOR FUTURE EXTENSIONS. ALL BUSSING SHALL HAVE MINIMUM WITHSTAND RATING EQUAL TO THE AVAILABLE FAULT CURRENT INDICATED. ALL VERTICAL AND HORIZONTAL BUSSING SHALL BE RATED AT FULL CAPACITY IN ALL SWITCHBOARD AND DISTRIBUTION BOARD SECTIONS. PROVIDE 100% NEUTRAL BUSSING MINIMUM UNLESS OTHERWISE NOTED. PROVIDE FULL LENGTH GROUND BUS AND, WHERE INDICATED ON PLANS, ISOLATED GROUND BUSSING. PROVIDE REAR WIRE WAY IN ALL SWITCHBOARD SECTIONS.
  - LUGS SUITABLE FOR USE WITH COPPER OR ALUMINUM CONDUCTORS LISTED FOR USE WITH 75 DEGREE CELSIUS AMPACITY CONDUCTORS.
  - PERMANENT PLACARD(S) MARKED PER THE SPECIFICATIONS AND PER NEC (OR CEC-WHERE ADOPTED) SECTIONS 225.37, 230.2(E), 690.56(A) & (B), 692.56, 700.7, 701.7, 702.7, AND 705.10 DENOTING THE PRESENCE OF ADDITIONAL SERVICES, PHOTOVOLTAIC SYSTEMS, FUEL CELLS, EMERGENCY OR STAND-BY POWER SOURCES AS APPLICABLE.
- CONTRACTOR SHALL SUBMIT SWITCHBOARD SHOP DRAWINGS TO THE SERVING UTILITY FOR APPROVAL PRIOR TO FABRICATION. CONTRACTOR SHALL SECURE CONFIRMATION THAT THE PROPOSED SWITCHBOARD COMPLIES WITH ELECTRIC UTILITY COMPANY REGULATIONS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS FOR SWITCHBOARDS, DISTRIBUTION BOARDS TRANSFORMERS, PANEL BOARDS AND ALL OTHER DEVICES SHOWN ON THE SINGLE LINE PRIOR TO FABRICATION.
- ALLOWABLE DIMENSIONS IN MAIN ELECTRICAL ROOM ARE A CRITICAL COORDINATION ITEM. CONTRACTOR SHALL PROVIDE 1/4" = 1'-0" SCALE DRAWINGS WITH SWITCHGEAR SUBMITTALS SHOWING THAT ALL PROPOSED EQUIPMENT WILL FIT IN THE SPACE PROVIDED. SUBMITTALS WITHOUT THIS DRAWING SHALL BE REJECTED AS INCOMPLETE.
- UNLESS SPECIFICALLY SHOWN AS (E), (R), (ER), (D), EXISTING OR NON-BOLD, ALL ELECTRICAL DEVICES SHOWN ARE NEW.
- WHERE REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OR WHERE A NEW GROUND FAULT PROTECTIVE DEVICE IS BEING INSTALLED, A GROUND FAULT SYSTEM TEST SHALL BE CONDUCTED BY AN INDEPENDENT TESTING AGENCY PER NEC (OR CEC-WHERE ADOPTED) 230.95(C). THE GROUND FAULT SYSTEM TEST SHALL BE PERFORMED IN THE PRESENCE OF THE LOCAL AUTHORITY HAVING JURISDICTION. VERIFICATION OF DEVICE SETTINGS PER THE POWER SYSTEMS STUDY SPECIFICATION SHALL BE PERFORMED BY THE SAME INDEPENDENT TESTING AGENCY. THE GROUND FAULT TEST RESULTS SHALL BE DELIVERED TO THE ENGINEER OF RECORD.
- SEE POWER SYSTEMS STUDY SPECIFICATION FOR ADDITIONAL REQUIREMENTS. ALL REQUIRED POWER SYSTEMS STUDIES MUST BE COMPLETED AND SUBMITTED WITH SWITCHGEAR SUBMITTAL. FAILURE TO DO SO WILL PREVENT THE ENGINEER FROM EFFECTIVELY EVALUATING THE SUBMITTAL AND SHALL RESULT IN REJECTION OF THE SWITCHGEAR SUBMITTAL AS INCOMPLETE.

### SPECIFIC SINGLE LINE NOTES:

- INTERCEPT EXISTING SWITCHBOARD BUS AND EXTEND TO NEW ENCLOSURE AS INDICATED.



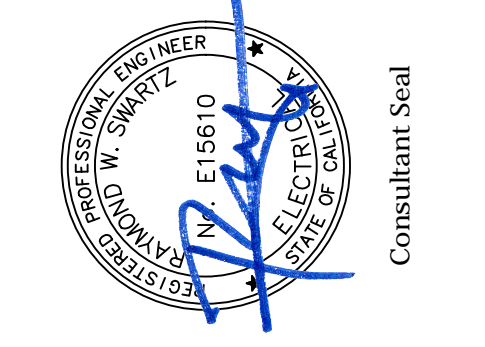
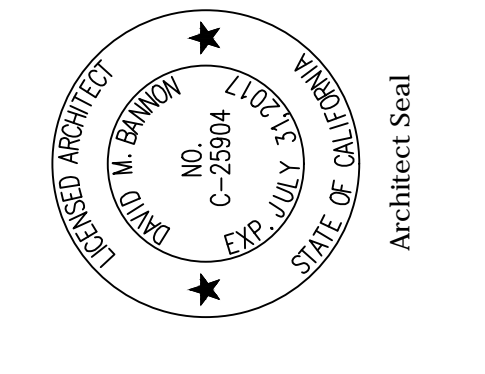
NOTE:  
EXISTING SOURCE OF POWER HAS BEEN INVESTIGATED AND IS ADEQUATE FOR THE NEW ADDITIONAL LOAD AS INDICATED ON DRAWINGS.

### SINGLE LINE DIAGRAM

SCALE: N.T.S.

1

**GHATRODE BRANNON ARCHITECTS**  
Architecture • Planning • Interior Design  
1100 S. BARRANCA STREET, SUITE 200  
COSTA MESA, CA 92627  
Tel: 714.443.8229



**MESA ELEMENTARY SCHOOL - MODULAR CLASSROOMS**  
409 S. BARRANCA STREET, WEST COVINA, CA 91791  
COVINA-VALLEY UNIFIED SCHOOL DISTRICT

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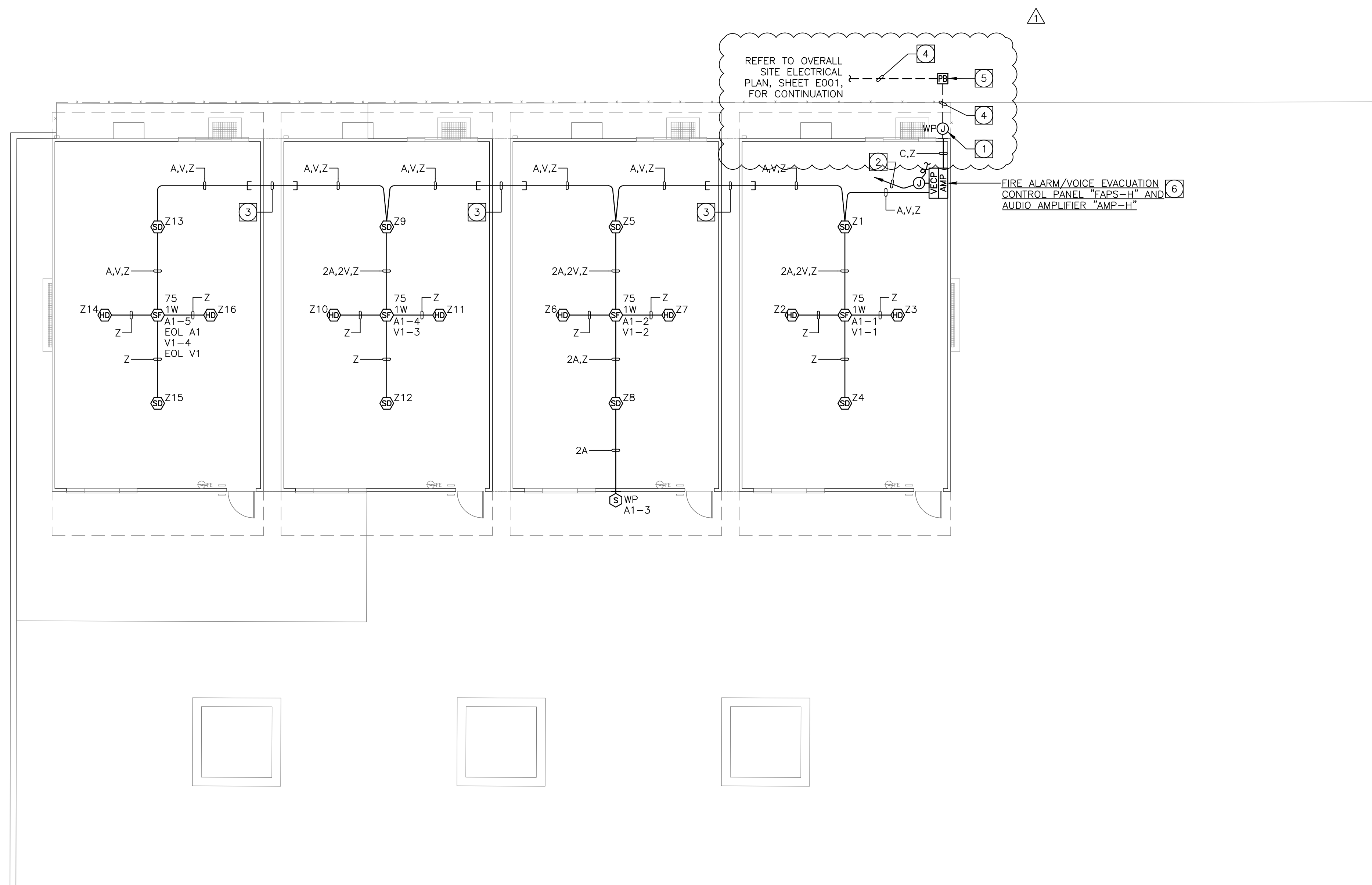
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**tkisc**  
COLLABORATIVE  
11870 Pierce Street, Suite 160  
Riverside, California 92505  
951.299.4160 www.tkisc.com  
Bill Voller - Electrical  
tkisc Job #: 2016-0263

SINGLE LINE DIAGRAM

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**FIRE ALARM GENERAL NOTES:**

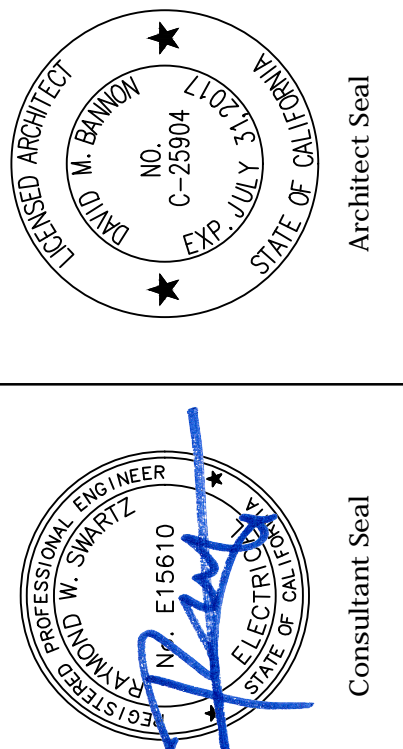
- ALL WALL-MOUNTED AUDIBLE SIGNALING APPLIANCES SHALL HAVE THEIR HEIGHTS ABOVE THE FINISHED FLOOR AT NOT LESS THAN 90" TO FINISHED FLOOR AND AT NOT LESS THAN 6" TO FINISHED CEILING, AS CEILING HEIGHT PERMITS (NFPA 72, 2013, CH. 18.4.8.1). ALL WALL MOUNTED VISUAL APPLIANCES AND COMBINATION AUDIBLE/VISUAL APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" ABOVE FINISHED FLOOR (NFPA 72, 2013, CH. 18.5.5.1).
- DO NOT DEVIATE FROM CONDUIT RUNS AS SHOWN ON FLOOR PLANS WITHOUT PRIOR APPROVAL FROM SYSTEM SUPPLIER / ENGINEER. FACTORS SUCH AS EXCESSIVE VOLTAGE DROP, ADDITIONAL PARTS, ENGINEERING, ETC. THAT ARE A RESULT OF CONDUIT RUN DEVIATIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR-FLOW, NOR CLOSER THAN 3 FEET (915 mm) FROM ANY AIR SUPPLY DIFFUSER.
- THE AUDIBLE ALARM NOTIFICATION APPLIANCES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING DURATION OF AT LEAST 60 SECONDS, WHICH IS GREATER, IN EVERY OCCUPIED SPACE WITHIN THE BUILDING, THE MINIMUM SOUND PRESSURE LEVEL SHALL BE 60 dBA PER CFC 907.5.2.1.1.
- THE FIRE ALARM EVACUATION SIGNAL SHALL BE THE STANDARD THREE-PULSE TEMPORAL PATTERN PER THE "EXCEPTION" OF THE 2013 CALIFORNIA BUILDING CODE 907.5.2.1.3 AND ANSI S3.41.
- REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR PRECISE OUTLET LOCATIONS.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED DEVICES.
- IF SHIELDED WIRE IS USED, THE FOLLOWING MUST BE OBSERVED.
  - METALLIC CONTINUITY OF THE SHIELD MUST BE MAINTAINED AND INSULATED THROUGHOUT THE ENTIRE LENGTH OF THE CABLE.
  - THE ENTIRE LENGTH OF THE CABLE MUST HAVE A RESISTANCE GREATER THAN 1 MEGOHM TO EARTH.
- ALL PENETRATIONS THROUGH FIRE RATED WALLS SHALL BE PROTECTED FROM THE SPREAD OF FIRE WITH AN APPROVED FIRE STOP SYSTEM EQUAL TO OR GREATER THAN THE FIRE RATING OF THE STRUCTURE / SURFACE BEING PENETRATED.
- A SYSTEM GROUND MUST BE PROVIDED FOR EARTH DETECTION AND LIGHTNING PROTECTION DEVICES. THIS CONNECTION SHALL BE MADE TO AN APPROVED DEDICATED EARTH CONNECTION PER CEC, ARTICLE 250.
- WIRING IN DUCTS, PLENUMS AND OTHER AIR HANDLING SPACES MUST BE INSTALLED IN ACCORDANCE WITH CEC 2013.
- UNDERGROUND WIRING MUST BE FREE OF ALL WATER.
- ALL FIRE ALARM SYSTEM CONDUCTORS SHALL BE RUN IN A DEDICATED FIRE ALARM CONDUIT SYSTEM.
- WHERE A DETECTOR IS INDICATED TO BE INSTALLED ABOVE THE CEILING AND NO ACCESS TO THE CEILING SPACE EXISTS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS, THE DETECTOR SHALL BE EASILY ACCESSIBLE AND THE LOCATION OF THE DETECTOR SHALL BE CLEARLY MARKED.
- COORDINATE ALL FIRE ALARM DEVICES, ESPECIALLY REMOTE LED'S FOR DUCT SMOKE DETECTORS, WITH ARCHITECT PRIOR TO ROUGH-IN.
- WIRING OTHER THAN THAT CONNECTED TO ELEVATOR CABS MUST NOT BE RUN IN ELEVATOR SHAFTS (REF. CEC, ARTICLE 620).
- FIRE ALARM SYSTEM UTILIZES A COMPLETE COVERAGE, FULLY AUTOMATIC SYSTEM. PROVIDE RELAY MODULE(S) AT FATC/FACP LOCATIONS FOR CONTROL OF HVAC SHUT DOWN, SMOKE/FIRE DAMPER CLOSURE AND DOOR HOLD RELEASES.
- WHERE NEW DEVICES (AND ASSOCIATED CONDUIT) CANNOT PHYSICALLY BE MOUNTED CONCEALED IN WALLS, RUN IN PANDUIT SURFACE RACEWAY/WIREWAY (AND DEVICES SHALL BE MOUNTED ON SURFACE OUTLET BOXES). REFER TO SPECIFICATIONS. PROVIDE SIZE OF RACEWAY TO ACCOMMODATE THE REQUIRED CONDUCTORS. WHERE CONDUIT IS INDICATED, PROVIDE SURFACE RACEWAY WITH AN EQUAL CROSS SECTION TO THE DIAMETER OF THE CONDUIT INDICATED.
- DETECTOR SENSITIVITY SHALL BE TESTED USING MANUFACTURER'S CALIBRATED SENSITIVITY INSTRUMENT OR OTHER CALIBRATED TESTING METHOD. (CFC 907.8.4.1)
- THE EXISTING CAMPUS FIRE ALARM SYSTEM SHALL BE MAINTAINED AND OPERATIONAL AT ALL TIMES DURING ALTERATIONS AND CONSTRUCTION. WHEN PORTIONS OF THE SYSTEM REQUIRE ALTERATIONS, THE REMAINDER OF THE SYSTEM SHALL BE KEPT IN SERVICE. IF NECESSARY TO SHUT DOWN ENTIRE FIRE ALARM SYSTEM, CONTRACTOR SHALL PROVIDE FIREWATCH FOR ALL OCCUPIED AREAS OF WORK UNTIL THE FIRE ALARM SYSTEM IS RETURNED TO OPERATIONAL SERVICE. FIREWATCH AND SYSTEM/EQUIPMENT IDENTIFICATION SHALL BE PER THE 2010 CFC, CHAPTER 14. LOCAL FIRE AUTHORITY AND OWNER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF ANY SHUT DOWN.

KEYNOTES GENERALLY CORRESPOND TO SPECIFICATION SECTIONS BY MEANS OF THE FIVE-DIGIT NUMBER IDENTIFYING THE SPECIFICATION SECTION AS A MATTER OF REFERENCE AND CONVENIENCE. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL WORK INDICATED HEREIN PERTAINING TO THE GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS OF THE CONTRACT, REGARDLESS OF WHETHER OR NOT THE KEYNOTES SPECIFICALLY CORRESPOND TO ANY SPECIFICATION DIVISION PROVIDED IN THE TECHNICAL SPECIFICATIONS.

**PLAN NOTES:**

- PROVIDE ONE 24" X 24" X 6"D. (DATA) AND THREE 12" X 12" X 6"D. WP TERMINAL BOXES WITH SCREW COVER TYPE "SRT" FOR SIGNAL SYSTEMS (FIRE ALARM, INTRUSION DETECTION, ENERGY MANAGEMENT SYSTEM (EMS)/SPARE). PROVIDE 2"C. (DATA) & (3) 2"C. TO RELOCATABLE BUILDING ACCESSIBLE CEILING SPACE.
- PROVIDE 3/4"C. WITH 3#12, 1#12 GRD. TO (2) 120V DEDICATED CIRCUITS WITHIN BUILDING PANEL FOR POWER. PROVIDE TWO (2) 20AMP, 1-POLE CIRCUIT BREAKERS IN SPACE OF BUILDING PANEL WITH APPROVED LOCK-ON DEVICES, RED INDICATORS AND IDENTIFIED AS "FIRE ALARM CONTROL CIRCUIT" (NFPA 72, 10.6). CONNECT AS REQUIRED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. MATCH A.I.C. RATING OF DEVICES USED.
- PROVIDE THE FOLLOWING CONDUIT SLEEVES WITH CONDUCTORS AS SPECIFIED. SEE DETAIL 4, SHEET E301.
  - 2"C. DATA/TELEPHONE
  - 2"C. CLOCK/PUBLIC ADDRESS
  - 1"C. FIRE ALARM
  - 1"C.O. SPARE
- PROVIDE THE FOLLOWING SIGNAL SYSTEM CONDUITS WITH CONDUCTORS AS SPECIFIED:
  - 3"C. DATA/TELEPHONE
  - 2"C. CLOCK/PUBLIC ADDRESS
  - 2"C. FIRE ALARM
  - 1"C.O. EMS
  - 1"C.O. SPARE
- PROVIDE ONE (1) 2"x3' AND ONE (1) 11"x17" CONCRETE PULLBOXES WITH BOLT-DOWN TRAFFIC RATED COVERS, ENGRAVED "SIGNAL" AND "FIRE ALARM", RESPECTIVELY. DEPTHS AS REQUIRED.
- INTERCONNECT NEW FIRE ALARM CONTROL PANEL AND EXISTING FIRE ALARM CONTROL PANEL ON CAMPUS FOR SYSTEM INTERFACE. PROVIDE ALL NECESSARY RELAYS, MODULES, CABINETS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM. REFER TO FIRE ALARM INTERCONNECTION DETAIL 2 ON SHEET EFA003.

**GHATRODE BRANNON ARCHITECTS**  
 Architecture • Planning • Interior Design  
 1000 S. BARRANCA STREET, SUITE 100  
 COSTA MESA, CA 92627  
 Tel: 714.443.8229  
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**MESA ELEMENTARY SCHOOL - MODULAR CLASSROOMS**  
 409 S. BARRANCA STREET, WEST COVINA, CA 91791  
 COVINA-VALLEY UNIFIED SCHOOL DISTRICT  
**RELOCATABLE BUILDINGS FIRE ALARM PLAN**

REVISIONS:

ADDENDUM #1

Date: 04/11/19  
 Job: 1633  
 Scale: AS NOTED  
 Drawn: \_\_\_\_\_

COMPLETE FIRE ALARM SUBMITTAL  
 AUTOMATIC ADDRESSABLE FIRE ALARM SYSTEM WITH EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM



11870 Pierce Street, Suite 160  
 Riverside, California 92505  
 951.299.4160 www.tkisc.com  
 Bill Voller - Electrical  
 tkisc Job #: 2016-0263

**E002**  
 SHEET - OF XXX  
 XREF: \_\_\_\_\_